ROCKSHOX

ZEB

2021-2022 ZEB



SERVICE MANUAL

GEN.0000000007201 Rev B © 2024 SRAM, LLC



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.

TABLE OF CONTENTS

ROCKSHOX SERVICE **3**

SUSPENSION SAFETY PRECAUTIONS AND WARNINGS **3**

PART PREPARATION AND SERVICE PROCEDURES **5**

PART PREPARATION 5
SERVICE PROCEDURES 5
MODEL CODE IDENTIFICATION 6
WARRANTY AND TRADEMARK 6
PARTS, TOOLS, AND SUPPLIES 7
RECOMMENDED SERVICE INTERVALS 8
RECORD YOUR SETTINGS 8
TORQUE VALUES 9
OIL VOLUME AND LUBRICANT 9

EXPLODED VIEW **10**

ZEB (A1) ULTIMATE CHARGER 2.1 RC2 DAMPER - DEBONAIR 10
ZEB (A1) SELECT+ CHARGER 2.1 RC DAMPER - DEBONAIR 11
ZEB (A1) SELECT CHARGER RC DAMPER - DEBONAIR 12
ZEB (A1) CHARGER R DAMPER - DEBONAIR 13
ZEB (A1) DUAL POSITION AIR 14

LOWER LEG REMOVAL AND SERVICE - ALL FORKS **15**

50/200 HOUR SERVICE

LOWER LEG REMOVAL 15

50 HOUR SERVICE

LOWER LEG SERVICE 21

200 HOUR SERVICE

LOWER LEG SEAL SERVICE 23

AIR SPRING SERVICE - DEBONAIR **26**

DEBONAIR - AIR SPRING REMOVAL 26
DEBONAIR - AIR SPRING TRAVEL CHANGE AND BOTTOMLESS TOKENS (OPTIONAL) 30
DEBONAIR - TRAVEL AND BOTTOMLESS TOKEN TUNING 30
DEBONAIR - BOTTOMLESS TOKENS INSTALLATION (OPTIONAL) 30
DEBONAIR - AIR SPRING INSTALLATION 31

AIR SPRING SERVICE - DUAL POSITION AIR (DPA) **35**

DPA - AIR SPRING REMOVAL 35
DPA AIR SPRING TRAVEL CHANGE AND BOTTOMLESS TOKENS (OPTIONAL) 39
AIR SPRING SERVICE 39
DPA - AIR SPRING TRAVEL CHANGE AND BOTTOMLESS TOKENS (OPTIONAL) 41
DPA - TRAVEL AND BOTTOMLESS TOKEN TUNING 41
DPA - BOTTOMLESS TOKENS INSTALLATION (OPTIONAL) 41
DPA - AIR SPRING INSTALLATION 42

CHARGER 2.1 DAMPER RC2 AND RC - DAMPER SERVICE **46**

CHARGER 2.1 DAMPER - CONTROLS REMOVAL 46
CHARGER 2.1 DAMPER - DAMPER REMOVAL 48
CHARGER 2.1 DAMPER - DAMPER SERVICE 49
CHARGER 2.1 DAMPER - DAMPER ASSEMBLY 53
CHARGER 2.1 DAMPER - DAMPER BLEED 55
CHARGER 2.1 DAMPER - TEST COMPRESSION 58
CHARGER 2.1 DAMPER - DAMPER INSTALLATION 59
CHARGER 2.1 DAMPER - CONTROLS INSTALLATION 60

CHARGER RC DAMPER - DAMPER SERVICE **61**

CHARGER RC DAMPER - DAMPER REMOVAL 61
CHARGER RC DAMPER - DAMPER SERVICE 62
CHARGER RC DAMPER - DAMPER ASSEMBLY 65
CHARGER RC DAMPER - TEST COMPRESSION 70
CHARGER RC DAMPER - DAMPER INSTALLATION 71

CHARGER R DAMPER - DAMPER SERVICE **72**

CHARGER R DAMPER - DAMPER REMOVAL 72
CHARGER R DAMPER - DAMPER SERVICE 73
CHARGER R DAMPER - DAMPER ASSEMBLY 78
CHARGER R DAMPER - TEST COMPRESSION 82
CHARGER R DAMPER - DAMPER INSTALLATION 83

LOWER LEG ASSEMBLY **84**

50/200 HOUR SERVICE

LOWER LEG INSTALLATION 84

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.

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.





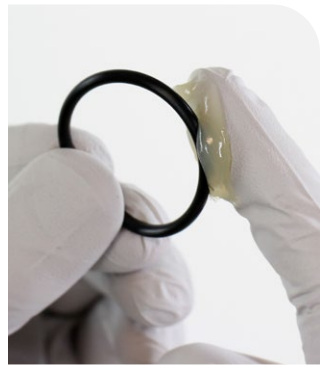
Replace the o-ring or seal with a new one from the service kit. Use your fingers or a pick to pierce and remove the old seal or o-ring.

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 spare parts catalog to replace the damaged part.



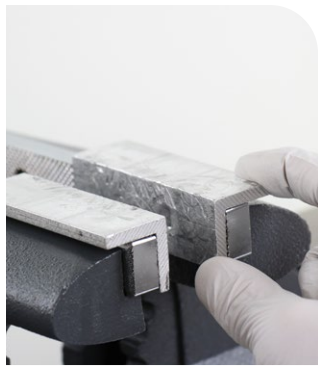


Use aluminum soft jaws when placing a part in a bench vise.

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.





Specified torque value in N·m (in-lb)

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: **FS-ZEB-SELP-A1**

FS = Product Type - **Front Suspension**
ZEB = Platform/Series - **ZEB**
SELP = Model - **Select+**
A1 = Version - (**A** - first 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.

Parts, Tools, and Supplies

Parts

- AM SVC KIT 200H/1YR DEBONAIR ZEB R/SELECT (2021-2022, A1)
- AM SVC KIT 200H/1YR DEBONAIR ZEB SELECT+/ULT (2021-2022, A1)
- AM SVC KIT 200H/1YR DPA ZEB R/SELECT (2021-2022, A1)
- AM SVC KIT 200H/1YR CHGR2 DPA ZEB (2021-2022, A1)

Safety and Protection Supplies

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

Lubricants and Fluids

- Loctite 2760 High Strength Threadlocker Red
- Maxima PLUSH Dynamic Suspension Lube Heavy or RockShox 0w-30 Suspension Oil
- Maxima PLUSH Dynamic Suspension Lube Light or RockShox 0w-30 Suspension Oil
- Maxima PLUSH 3wt or RockShox 3wt Suspension Oil
- RockShox Dynamic Seal Grease or SRAM Butter Grease
- RockShox Suspension Cleaner or Isopropyl alcohol

RockShox Tools

- RockShox Bleed Syringe
- RockShox Charger Vise Blocks
- Fork Lower Leg Dust Seal Installation Tool 38 mm
- RockShox Shock Pump
- RockShox Top Cap/Cassette tool (3/8" / 24 mm) or RockShox x Abbey Bike Tools Top Cap/Cassette Tool
- RockShox Schrader Valve Tool

Bicycle Tools

- Bicycle work stand
- Downhill tire lever
- Shock pump

Common Tools

- Air compressor with air gun nozzle
- Bench vise and aluminum soft jaw inserts
- Crowfoot: 23 mm
- Hex bit sockets: 2, 2.5, 5
- Hex wrenches: 2, 2.5, 5, 8 mm
- Internal retaining ring pliers - large
- Long plastic or wooden dowel
- Open end wrenches: 12, 19, 23 mm
- Pick
- Rubber or plastic mallet
- Sockets: 10, 12, 13, 24 mm or RockShox x Abbey Bike Tools 24 mm Socket
- Socket wrench
- TORX bit socket: T10
- TORX wrench: T10
- Torque wrench

SAFETY INSTRUCTIONS

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

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

⚠CAUTION

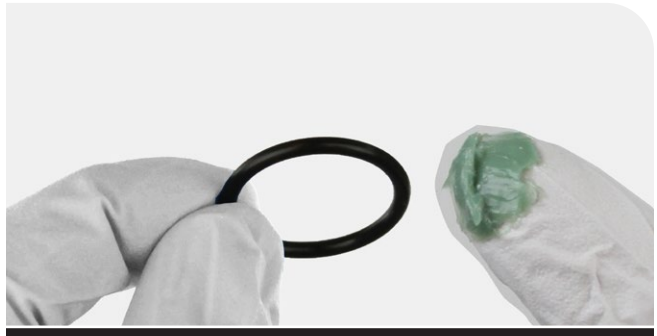
Place an oil pan on the floor underneath the product during service to catch any drained or spilled fluids. To avoid a slip and fall, and possible injury or harm, immediately clean any oil, fluid, grease, or lubricant from the floor in your work area.

NOTICE

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

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

Apply RockShox Dynamic Seal Grease or SRAM Butter grease to the new seals and o-rings.



RockShox Dynamic Seal Grease or SRAM Butter Grease

Recommended Service Intervals

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

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

Record Your Settings

Use the table below to record your suspension settings to return your suspension to its pre-service settings. Record your service dates 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.	Low (LSC) and High (HSC) Speed Compression settings - Count the number of clicks while turning the compression adjusters fully counter-clockwise.	
				LSC	HSC (RC2)
50					
100					
150					
200					

Torque Values

Part	Tool	Torque
Air spring shaft nut	8 mm hex and 12 mm socket	3.3 N•m (29 in-lb)
Bleed screw - rebound damper seal head (Charger 2.1 Damper)	T10 TORX bit socket	1.7 N•m (15 in-lb)
Bottom bolts	5 mm hex bit socket	7.3 N•m (65 in-lb)
Bottomless Tokens	8 mm hex and 24 mm or RockShox Top Cap/ Cassette Tool (or standard cassette tool)	4 N•m (35 in-lb)
Compression damper into cartridge tube (Charger Damper RC)	24 mm socket or RockShox Top Cap/Cassette Tool (or standard cassette tool)	9 N•m (80 in-lb)
Retaining nut - Dual Position Air (DPA) adjuster knob	10 mm socket	2 N•m (18 in-lb)
Retaining screw - compression knob (Charger 2.1 Damper)	2 mm hex bit socket	1.2 N•m (10 in-lb)
Retaining screw - compression knob (Charger Damper RC)	2.5 mm hex bit socket	1.4 N•m (12 in-lb)
Seal head - rebound damper (Charger 2.1 Damper)	23 mm crowfoot	5.1 N•m (45 in-lb)
Set screw - rebound adjuster knob	2.5 mm hex bit socket	0.9 N•m (8 in-lb)
Top caps	24 mm socket or RockShox Top Cap/Cassette Tool (or standard cassette tool)	28 N•m (250 in-lb)

Oil Volume and Lubricant

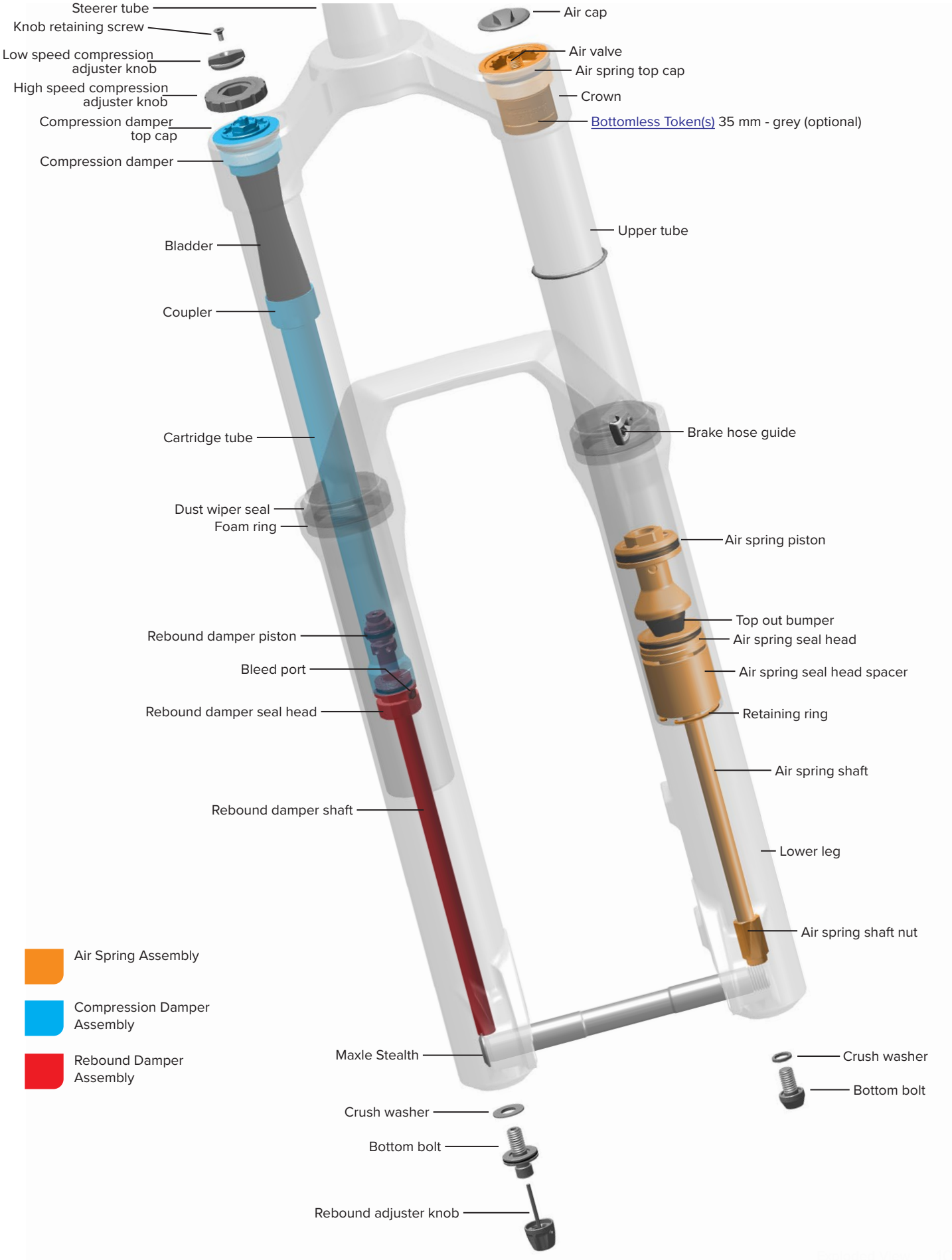
		Damper					Spring							
Model Year	Fork	Damper	Upper Tube		Lower Leg		Spring	Upper Tube				Lower Leg		
			Oil Weight	Volume (mL)	Oil**	Volume (mL)		Oil**	Volume (mL) (+)	Volume (mL) (–)	Grease	Oil**	Volume (mL)
2021-2022	ZEB Ultimate	Charger 2.1 RC2	Maxima PLUSH 3wt	Bleed	Maxima PLUSH Dynamic Suspension Lube Light	20	DebonAir Dual Position Air	Maxima PLUSH Dynamic Suspension Lube Heavy	3	1	SRAM Butter Grease Grease Air Piston	Maxima PLUSH Dynamic Suspension Lube Light	20
	ZEB Select+	Charger 2.1 RC											
	ZEB Select	Charger RC											
	ZEB	Charger R											

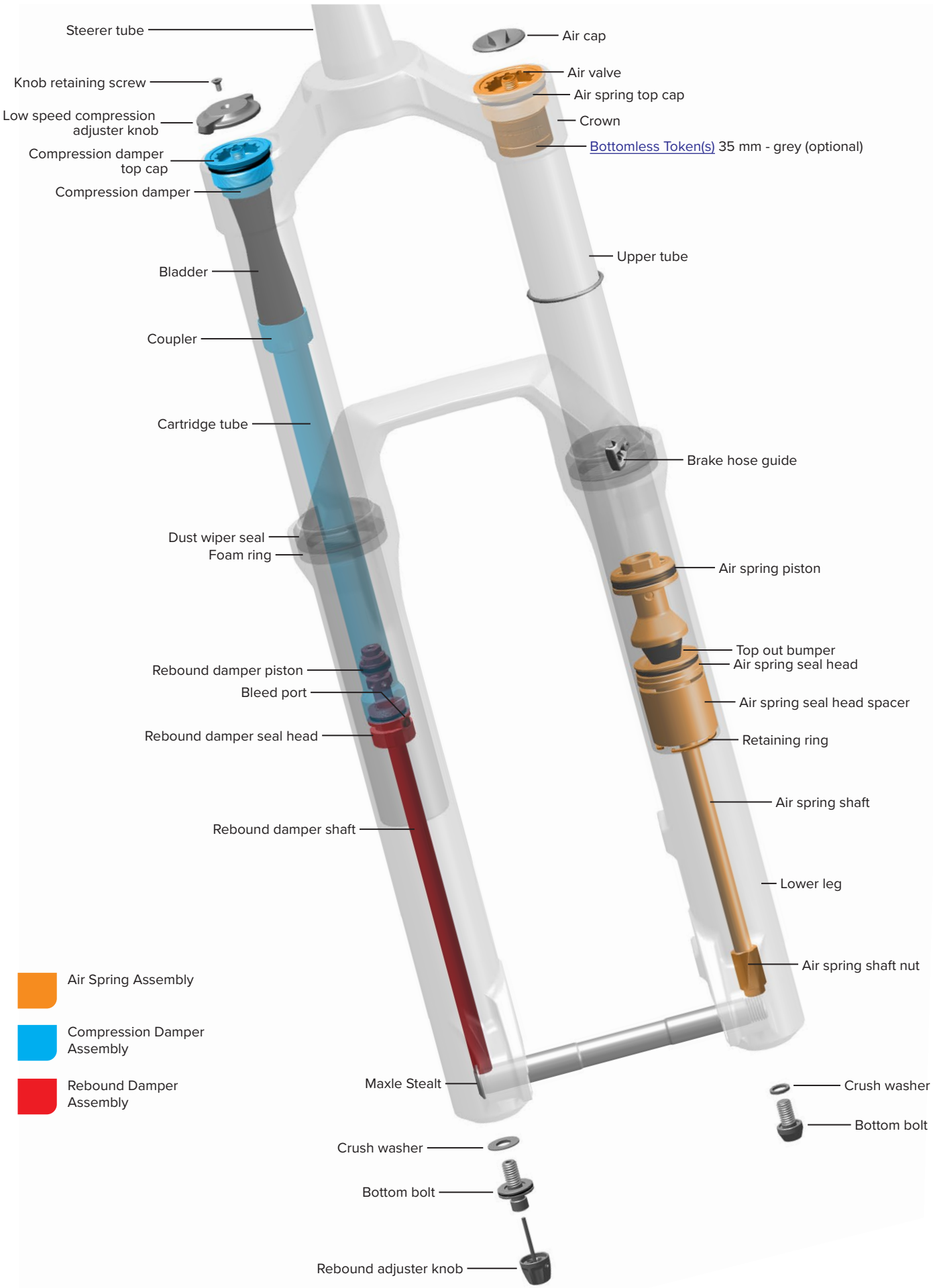
**Suspension oil/fluid - Maxima PLUSH Dynamic Suspension Lube and RockShox 0w-30 suspension oils/fluids are forward and backward compatible with RockShox Dynamic Seal Grease and SRAM Butter Grease.

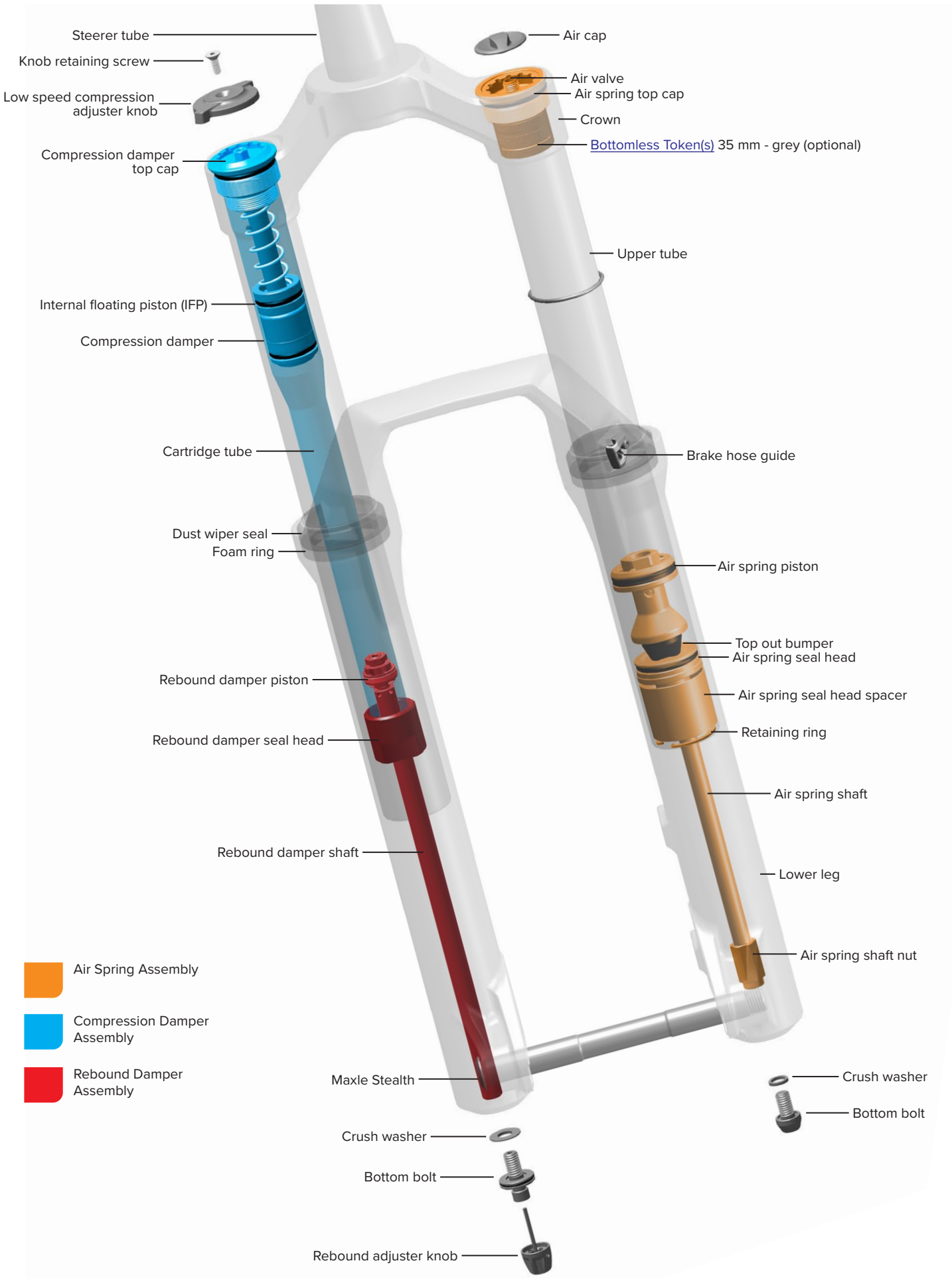
Use ONLY RockShox, SRAM, and Maxima suspension oils/fluids and grease, unless otherwise specified. Use of any other lubricants can damage seals and decrease performance.

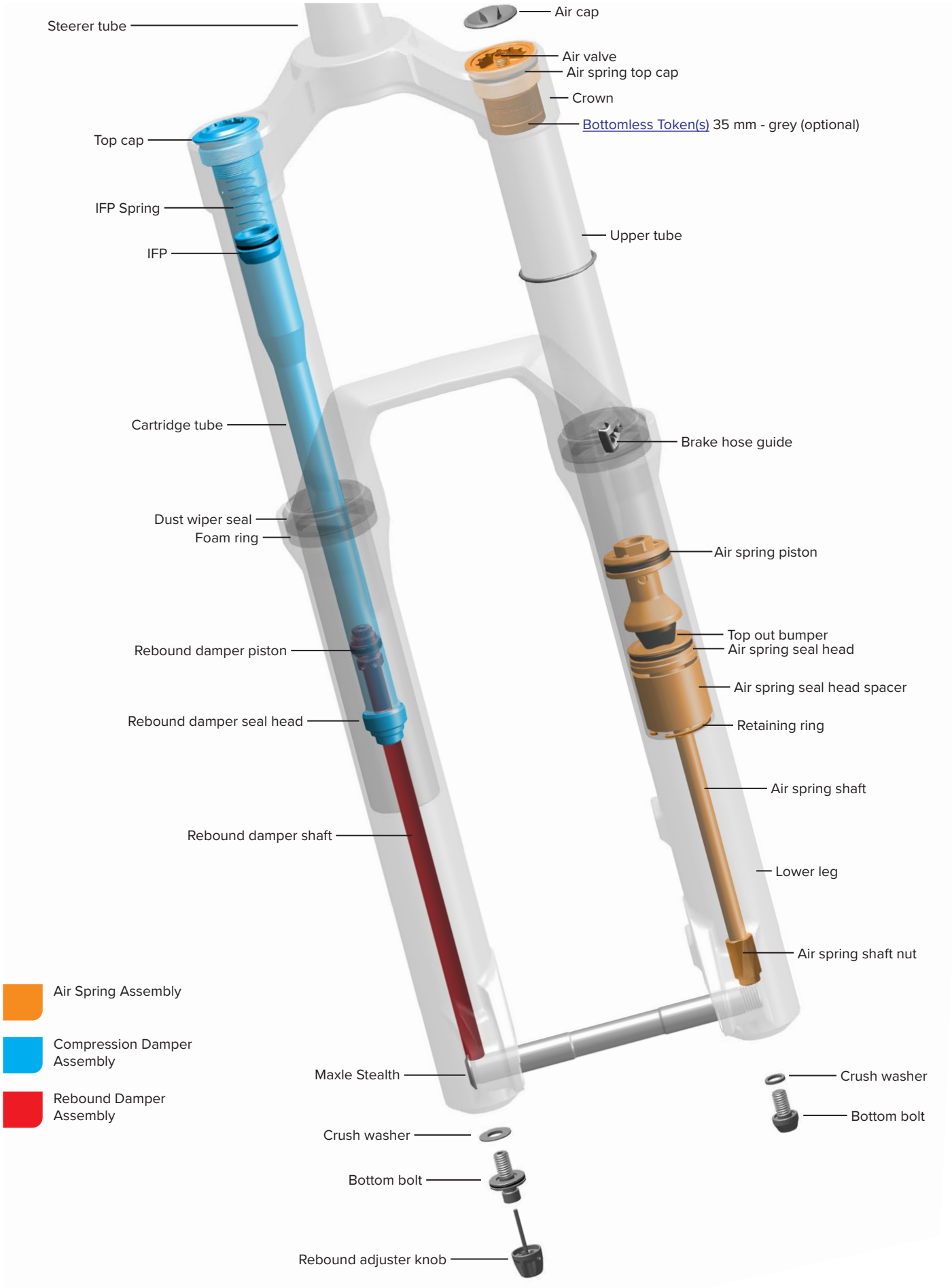
Exploded View

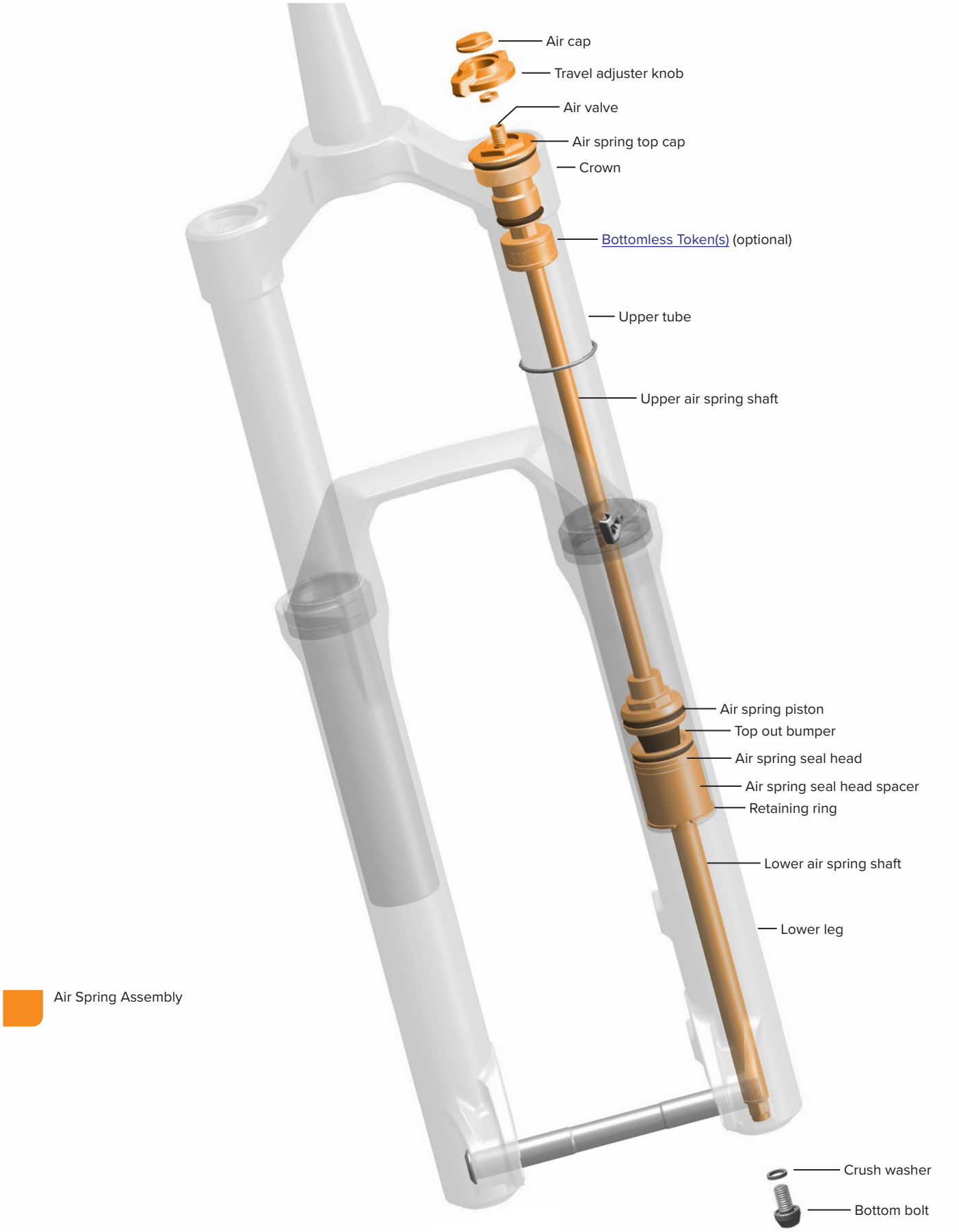
ZEB (A1) Ultimate Charger 2.1 RC2 Damper - DebonAir




Steerer tube
Knob retaining screw
Low speed compression adjuster knob
Compression damper top cap
Compression damper
Bladder
Coupler
Cartridge tube
Dust wiper seal
Foam ring
Rebound damper piston
Bleed port
Rebound damper seal head
Rebound damper shaft
Maxle Stealt
Crush washer
Bottom bolt
Rebound adjuster knob
Air cap
Air valve
Air spring top cap
Crown
Bottomless Token(s) 35 mm - grey (optional)
Upper tube
Brake hose guide
Air spring piston
Top out bumper
Air spring seal head
Air spring seal head spacer
Retaining ring
Air spring shaft
Lower leg
Air spring shaft nut
Crush washer
Bottom bolt
Air Spring Assembly
Compression Damper Assembly
Rebound Damper Assembly


Steerer tube
Knob retaining screw
Low speed compression adjuster knob
Compression damper top cap
Internal floating piston (IFP)
Compression damper
Cartridge tube
Dust wiper seal
Foam ring
Rebound damper piston
Rebound damper seal head
Rebound damper shaft
Maxle Stealth
Crush washer
Bottom bolt
Rebound adjuster knob
Air cap
Air valve
Air spring top cap
Crown
Bottomless Token(s) 35 mm - grey (optional)
Upper tube
Brake hose guide
Air spring piston
Top out bumper
Air spring seal head
Air spring seal head spacer
Retaining ring
Air spring shaft
Lower leg
Air spring shaft nut
Crush washer
Bottom bolt
Air Spring Assembly
Compression Damper Assembly
Rebound Damper Assembly


Steerer tube
Air cap
Air valve
Air spring top cap
Crown
Bottomless Token(s) 35 mm - grey (optional)
Top cap
IFP Spring
IFP
Upper tube
Cartridge tube
Brake hose guide
Dust wiper seal
Foam ring
Air spring piston
Top out bumper
Air spring seal head
Rebound damper piston
Air spring seal head spacer
Rebound damper seal head
Retaining ring
Air spring shaft
Rebound damper shaft
Lower leg
Air spring shaft nut
Air Spring Assembly
Compression Damper Assembly
Rebound Damper Assembly
Maxle Stealth
Crush washer
Bottom bolt
Crush washer
Bottom bolt
Rebound adjuster knob



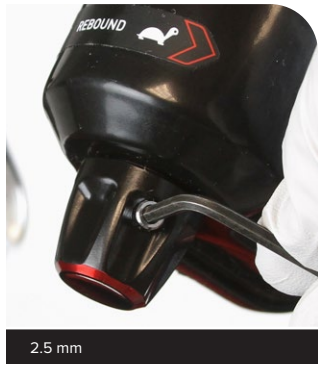
Air Spring Assembly

50/200 Hour Service Lower Leg Removal

1 Turn the rebound adjuster knob counter-clockwise until it stops. This is the full open/fast rebound setting.

Loosen the rebound adjuster knob screw and remove the rebound adjuster knob.







2 **DebonAir fork models:** Proceed to the next step.

ZEB Dual Position Air (DPA): Adjust and confirm the fork is in the MAXIMUM travel setting before the lower leg and the Dual Position Air spring top cap are removed.

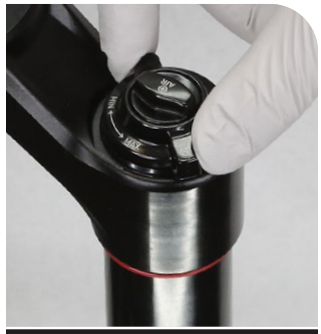


Minimum travel setting



Maximum travel setting

Rotate the Dual Position Air adjuster knob to the MAXIMUM travel setting.



Minimum travel setting

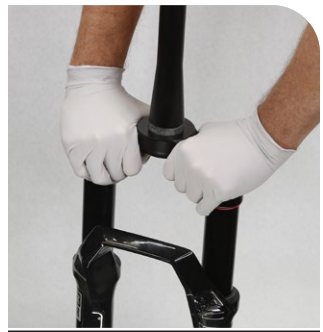


Maximum travel setting

Position the fork vertically on the floor with a thin rubber mat under each end of the lower leg assembly. Compress the fork to at least 50% of full travel, then allow the fork to fully extend. Confirm the fork is set to its maximum travel setting (180 mm, 170 mm, or 160 mm) before proceeding.



Compress fork 75% travel



Release fork - full extension



Compress fork 50% travel



Release fork - full extension

3 **All fork models:** Clamp the fork in a bicycle work stand vertically with the steerer tube oriented upward.

⚠WARNING - PRESSURIZED DEVICE

To avoid possible SERIOUS INJURY OR DEATH, position the fork vertically with the steerer tube upward so the top cap is directed upward and away from you and others.



Bicycle work stand Dual Position Air



Bicycle work stand DebonAir

4 Remove the air valve cap.



ZEB Dual Position Air



ZEB DebonAir

5

⚠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.

Perform the following air transfer and purge process to depressurize the positive and negative air spring chambers.

While holding the lower leg arch and pushing the lower leg down, depress the Schrader valve and slowly release air pressure. While depressing the Schrader valve, slowly allow the lower leg to compress while applying opposing pressure until you feel a sudden decrease in compressing resistance, then hold the lower leg in place to allow both air chambers to depressurize. As air transfers from the negative to the positive air chamber, air transfer should be heard.

While depressing the Schrader valve, push the lower leg down to extend the fork until there is no resistance and the fork can be fully extended. The negative air spring chamber is fully depressurized when the fork can fully be extended and no resistance is felt.

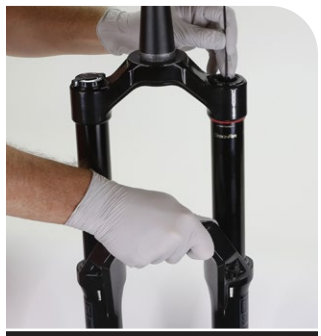
Repeat the process two to three times.


Pick or small hex wrench — Dual Position Air


Pick or small hex wrench — Dual Position Air


Pick or small hex wrench — Dual Position Air


Pick or small hex wrench — Dual Position Air


Pick or small hex wrench — DebonAir


Pick or small hex wrench — DebonAir


Pick or small hex wrench — DebonAir


Pick or small hex wrench — DebonAir

6 Remove the Schrader valve core from the top cap and set it aside.

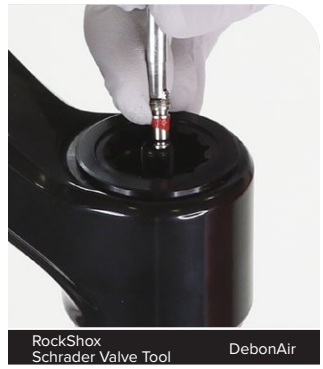
⚠WARNING - PRESSURIZED DEVICE

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.



RockShox Schrader Valve Tool — Dual Position Air



RockShox Schrader Valve Tool — DebonAir

7 Compress and extend the fork to confirm the negative air chamber has been depressurized.



Dual Position Air



Dual Position Air



DebonAir



DebonAir

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

Loosen both bottom bolts 3 to 4 turns.

⚠CAUTION

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.



Spring Side — 5 mm



Damper Side — 5 mm

9 Strike each bottom bolt to dislodge the shafts from the lower leg on each side. The bolt head should contact the bottom of the lower leg.

Remove each bottom bolt. Clean each bolt and set them aside.

NOTICE

Do not strike the fork arch with any tool when removing the lower leg as this could damage the lower leg.



Spring Side



Damper Side



Spring Side



Damper Side

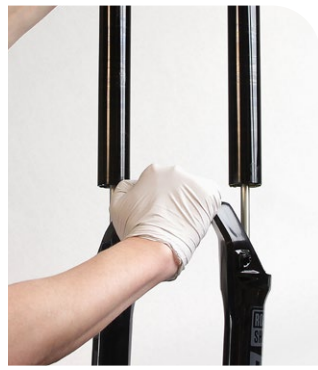
10 Firmly pull the lower leg downward until fluid begins to drain. Continue pulling downward to remove the lower leg.

If the lower leg does not slide off of the upper tube or if oil does not drain from either side, the press fit of the shaft(s) into the lower leg may still be engaged. Reinstall the bottom bolts 2 to 3 turns and repeat the previous step.

NOTICE

Do not strike the fork arch with any tool when removing the lower leg as this could damage the lower leg.





50 Hour Service Continue the 50 Hour Service with Lower Leg Service.

200 Hour Service Continue the 200 Hour Service with Lower Leg Seal Service.

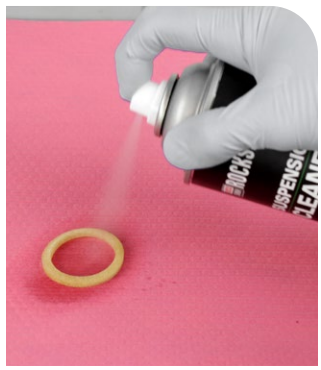
1 Remove the foam rings.



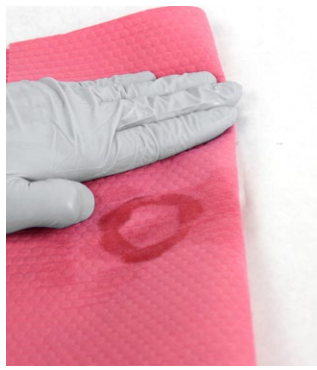


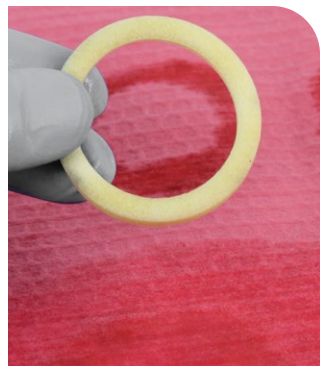
2 Clean the foam rings.

Replace the foam rings if worn, damaged, or excessively contaminated.

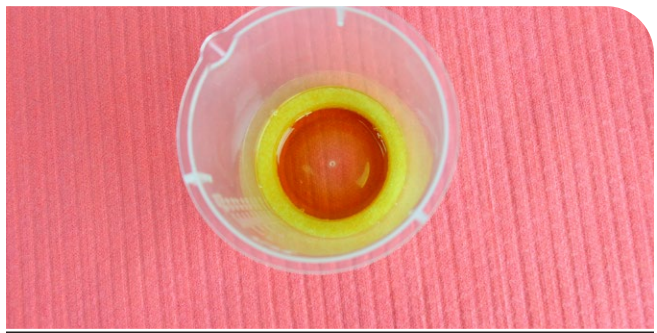








3 Soak the foam rings in suspension oil.



Maxima PLUSH Dynamic Suspension Lube Light

4 Clean the inside and outside of the lower leg.

Clean the wiper seals.









5 Install the foam rings under the wiper seals.

Confirm the foam rings are installed evenly in the space under the wiper seals and do not protrude over the bushings.





50 Hour Service Continue the 50 Hour Service with Lower Leg Installation.

1 Remove and discard the foam rings.

Remove the outer wire springs from the dust wiper seals.





2 Stabilize the lower leg on a bench top. Place the tip of a downhill tire lever under the wiper seal. Press down on the downhill tire lever handle to remove the seal.

Repeat on the other side. Discard the wiper seals.

NOTICE

Keep the lower leg stable. Do not allow the lower leg to twist in opposite directions, compress toward each other, or be pulled apart. This will damage the lower leg.





Downhill Tire Lever



3 Clean the inside and outside of the lower leg.



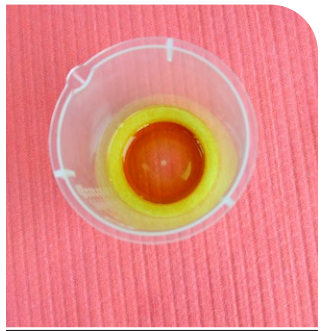
RockShox Suspension Cleaner



Dowel

4 Soak the new foam rings in suspension oil.

Install the new foam rings into the lower leg.



Maxima PLUSH Dynamic Suspension Lube Light



5 Remove the outer wire spring from each new dust wiper seal and set them aside.



6 Insert the narrow end of a new wiper seal into the recessed end of the 38 mm Dust Seal Installation tool.



RockShox 38 mm Dust Seal Installation Tool



7 Stabilize the lower leg on a bench top. Hold the lower leg steady and press the wiper seal into the lower leg until the top of the seal is flush with the top of the lower leg.

Repeat on the other side.

NOTICE

Only press the wiper seal into the lower leg until it is flush with the top surface of the lower leg. Pressing the wiper seal below the top surface of the lower leg will compress the foam ring.





8 Install the outer wire springs.



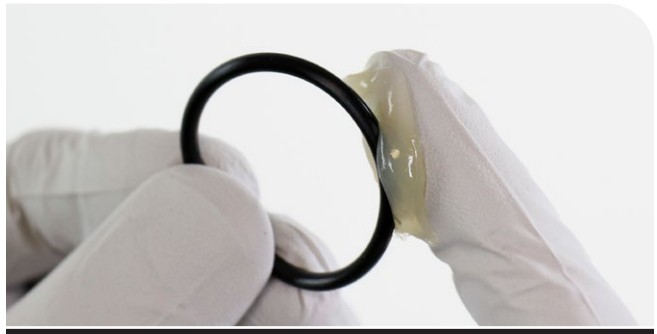


200 Hour Service DebonAir - Air Spring Removal

NOTICE

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

When replacing seals and o-rings, use your fingers or a pick to remove the seal or o-ring. Spray RockShox Suspension Cleaner or isopropyl alcohol onto each part and clean with a clean lint-free shop towel.

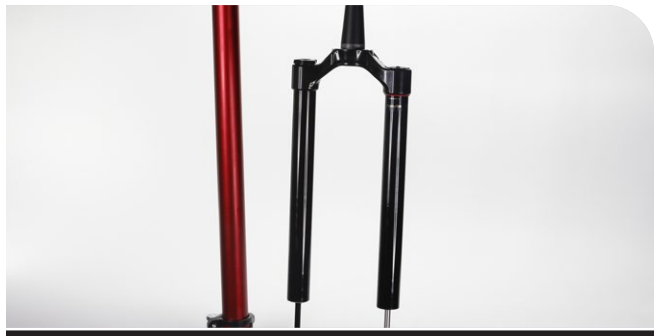


SRAM Butter Grease

1 Clamp the fork in a bicycle work stand vertically with the steerer tube oriented upward.

⚠WARNING - PRESSURIZED DEVICE

To avoid possible SERIOUS INJURY OR DEATH, position the fork vertically with the steerer tube upward so the top cap is directed upward and away from you and others.



Bicycle work stand

2 Confirm the Schrader valve core is NOT INSTALLED in the air spring top cap before proceeding. Remove the Schrader valve core if installed.

⚠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.



DebonAir



RockShox Schrader Valve Tool DebonAir

3 The positive and negative air spring chambers **must be FULLY depressurized** before removing the air spring top cap assembly.

Slowly compress and extend (push up/pull down) the air spring shaft to allow any remaining negative air pressure to bypass the air transfer dimple on the inside surface of the upper tube.

The negative air spring chamber is fully depressurized when the shaft can be pulled to full extension. When released, the air spring shaft will retract into the upper tube slightly due to pressure created when the air piston is extended past the air bypass dimple in the upper tube. This is normal.

Repeat the process two to three times.





4

⚠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.

Unthread and remove the air spring top cap. Press down firmly when loosening the top cap.

NOTICE

The fork top caps are tightened to a high torque value. Ensure the fork is held securely in the bicycle stand. To avoid damage to the top cap, press the top cap / cassette tool squarely and firmly down when loosening. Use a socket wrench with a long handle for extra leverage.

Clean the upper tube threads.



Top cap / Cassette tool



5

Remove the top cap o-ring and discard it.

Apply grease to a new o-ring and install it.



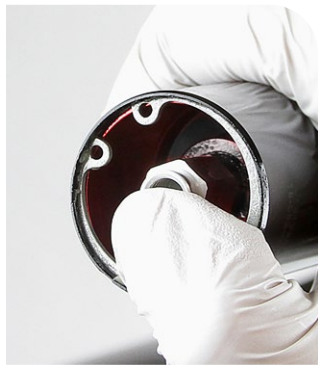


6

Push the air shaft into the upper tube with your thumb. While holding the shaft in, remove the retaining ring. Slide the retaining ring onto your thumb and carefully release the air spring shaft.

NOTICE

Do not scratch the air spring shaft. Scratches on the air shaft will allow air to bypass the seal head into the lower leg, resulting in reduced spring performance.




Retaining ring pliers

7 Thread a bottom bolt into the end of the air shaft.

Wrap a shop towel around the end of the air shaft for extra grip

Push the shaft half way into the upper tube, then quickly and firmly pull the shaft out to dislodge the seal head. Remove the air spring assembly from the upper tube.

Remove the red seal head spacer and the bottom bolt from the air shaft

Note: Some earlier ZEB forks were built with a red seal head. A silver seal head is shown in this Service Manual and is included in the service kits.

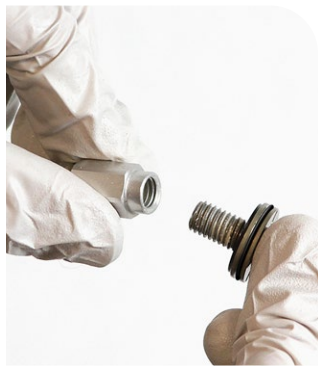
NOTICE

Do not scratch the inside of the upper tube. Scratches will allow air to bypass the seals resulting in reduced spring performance.









8 Clamp an 18 mm socket into a vise. Position the air piston onto the socket. While holding the air shaft, unthread and remove the air shaft nut from the air spring shaft.

Remove the air assembly from the vise.



18 mm



12 mm



9 Remove the seal head and top out bumper from the air spring shaft. Discard the seal head.

Clean and inspect the shaft for damage.

Clean the top out bumper.

NOTICE

Scratches on the air spring shaft can cause air to leak. If a scratch is visible the air spring assembly may need to be replaced.





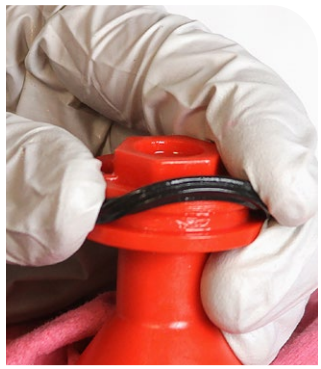
10 Remove the quad ring seal from the air piston and discard it.

Clean the air piston.

Apply grease to a new quad ring seal and install it.

NOTICE

Do not scratch the air piston. Scratches will cause air to leak.





11 Clean the inside and outside of the upper tube.

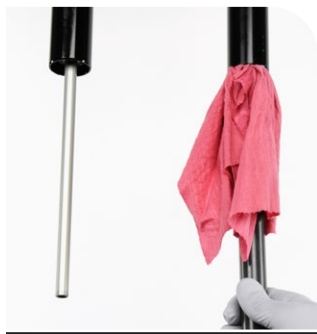
Inspect the inside and outside of the upper tube for damage.

NOTICE

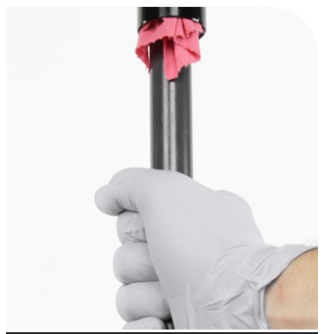
Scratches on the inside surface of the upper tube can cause air to leak. If an internal scratch is visible, the crown steerer upper tube assembly may need to be replaced.



RockShox Suspension Cleaner



Dowel



Dowel

DebonAir - Air Spring Travel Change and Bottomless Tokens (optional)

To increase or decrease the travel in your RockShox ZEB fork, the air spring must be replaced with the appropriate length air spring shaft assembly. For example, to change a ZEB with a maximum of 160 mm of travel to a maximum of 180 mm of travel, a 180 mm air spring shaft assembly must be installed.

Bottomless Tokens can be added to, or removed from the DebonAir (DA) top cap to fine-tune the bottom-out feel and spring curve. Use the chart below to help determine the number of Bottomless Tokens that can be used with each maximum fork travel option. If fork travel is changed from stock, it may be necessary to add or remove Bottomless Tokens.

Refer to the RockShox Spare Parts Catalog at www.sram.com/service for available air spring and Bottomless Token kits.

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

DebonAir - Travel and Bottomless Token Tuning

	27.5" Boost		29" Boost	
Fork Travel	Bottomless Tokens Factory Installed	Bottomless Tokens Maximum	Bottomless Tokens Factory Installed	Bottomless Tokens Maximum
190	0	4	0	4
180	0	4	0	4
170	1	4	1	4
160	2	5	2	5
150	2	5	2	5

DebonAir - Bottomless Tokens Installation (optional)

Bottomless Tokens reduce air volume in your fork and create greater ramp at the end of the fork travel. Add tokens to tune your fork's bottomless feel. See Air Spring Travel Change and Bottomless Tokens for the maximum number of Tokens for your fork.

Thread a Bottomless Token into another Bottomless Token, or into the the bottom of the top cap, and tighten.

⚠WARNING - CRASH HAZARD

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



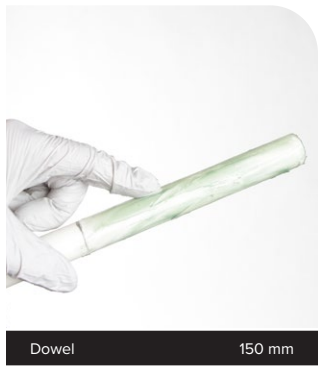
8 mm	4 N•m (35 in-lb)	Top cap / Cassette tool

DebonAir - Air Spring Installation

It is optional to change maximum fork travel by replacing the stock air spring shaft assembly with a shorter or longer air spring shaft assembly. If maximum travel is increased or reduced, use the new complete air spring shaft assembly in the following installation steps. It may also be necessary to add or remove Bottomless Tokens. Refer to Air Spring Travel Change and Bottomless Tokens for details.

Refer to the RockShox Spare Parts Catalog available at www.sram.com/service for the required spare part kits. For part ordering information, please contact your local SRAM distributor or dealer.

1 Apply a liberal amount of grease evenly around the end of a clean plastic dowel, approximately 150 mm from one end. Use the dowel to apply the grease to the inside surface of the upper tube, approximately 150 mm into the tube.







2 Install the top out bumper onto the shaft.



3 Apply a liberal amount of grease to the air spring shaft.



4 Apply grease to the new seal head inner seal.



5 Install the new seal head assembly onto the air shaft.



6 Apply red Loctite 2760 to the first two to three full threads on the end of the air shaft.

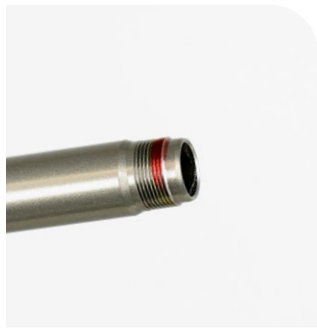
Clamp an 18 mm socket into a vise. Insert the air piston onto the socket to secure it. Install the air shaft nut onto the air shaft and tighten it.

⚠WARNING - CRASH HAZARD

To avoid separation of parts, threadlocker must be applied as instructed. Failure to apply threadlocker could result in separation of the parts, and possible SERIOUS INJURY OR DEATH.

⚠WARNING - CRASH HAZARD

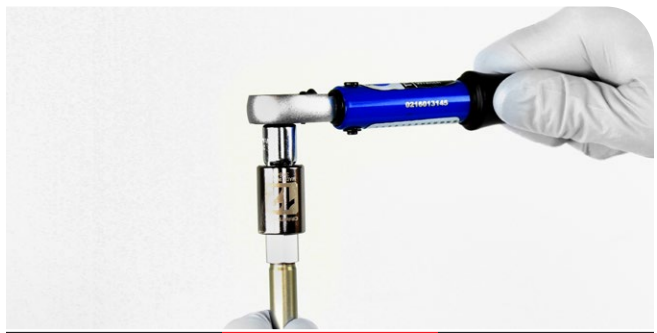
Parts must be tightened to the specified torque. Failure to do so can result in SERIOUS INJURY OR DEATH.



Loctite 2760



18 mm



18 mm | 3.3 N•m (29 in-lb) | 12 mm

7 Apply grease to the air piston and seal head outer o-rings/seals.

Apply suspension oil to the spring shaft, above the seal head.

⚠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.





8 Insert the air spring assembly into the upper tube. Firmly push the air piston into the upper tube.

Insert the red spacer into the upper tube and firmly press it into the upper tube until it stops.





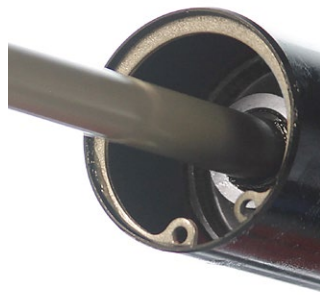
9 *Retaining rings have a sharper-edged side and a rounder edged side. Installing retaining rings with the sharper-edged side facing the tool will allow for easier installation and removal.*

Place the tips of the retaining ring pliers into the eyelets of the retaining ring. Guide the retaining ring with your finger to prevent the shaft from getting scratched while installing the retaining ring.

Use the pliers to push the seal head into the upper tube while installing the retaining ring into the groove. Release the retaining ring pliers when the ring is fully seated in the groove.

Confirm the retaining ring is properly seated in the retaining ring groove by using the retaining ring pliers to rotate the retaining ring and seal head back and forth a few times, then firmly pull down on the air shaft.





NOTICE

Do not scratch the air spring shaft. Scratches on the air shaft will allow air to bypass the seal head into the lower leg, resulting in reduced spring performance.

⚠WARNING - CRASH HAZARD

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. Failure to do so can result in SERIOUS INJURY OR DEATH.

10 Pull the shaft out until it stops.



11 Inject or pour suspension oil into the air spring upper tube.

⚠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 Dynamic Suspension Lube Heavy 3 mL

12 Install the air spring top cap into the upper tube and tighten it. Press down firmly when tightening the top cap.

⚠WARNING - CRASH HAZARD

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



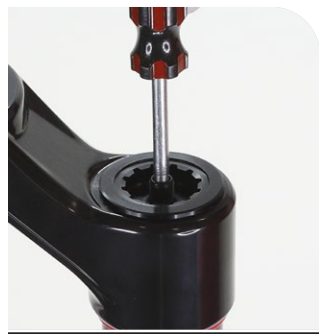


Top cap / Cassette tool 28 N•m (250 in-lb)

13 Install the Schrader valve core into the top cap and tighten it finger tight.



RockShox Schrader Valve Tool



RockShox Schrader Valve Tool

200 Hour Service To continue with Charger 2.1 Damper service, go to Charger 2.1 Damper Service.

200 Hour Service To continue with Charger RC Damper service, go to Charger RC Damper Service.

200 Hour Service To continue with Charger R Damper service, go to Charger R Damper Service.

ButterCups are NOT compatible with Dual Position Air. Do NOT install a ButterCups assembly onto a Dual Position Air spring shaft.

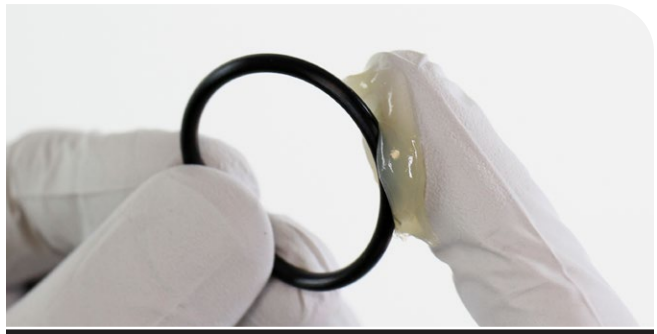
200 Hour Service DPA - Air Spring Removal

NOTICE

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

When replacing seals and o-rings, use your fingers or a pick to remove the seal or o-ring. Spray RockShox Suspension Cleaner or isopropyl alcohol onto each part and clean with a clean lint-free shop towel.

Apply SRAM Butter grease to the new seals and o-rings.

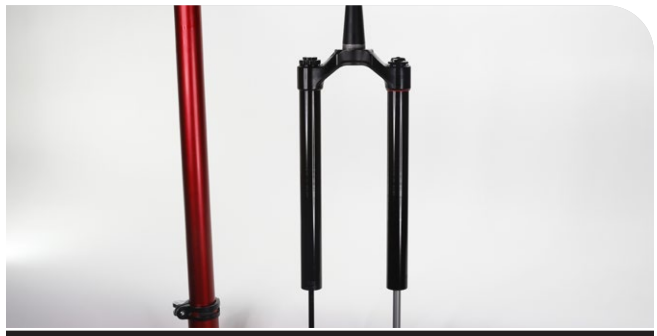


SRAM Butter Grease

1 Clamp the fork in a bicycle work stand vertically with the steerer tube oriented upward.

⚠WARNING - PRESSURIZED DEVICE

To avoid possible SERIOUS INJURY OR DEATH, position the fork vertically with the steerer tube upward so the top cap is directed upward and away from you and others.



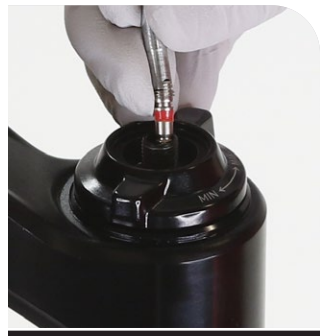
Bicycle work stand

2 Confirm the Dual Position Air adjuster knob is set to the Maximum Travel position (full counterclockwise).

Confirm the Schrader valve core is NOT INSTALLED in the air spring top cap before proceeding. Remove the Schrader valve core if installed.



Maximum Travel Setting



RockShox Schrader Valve Tool

3 The positive and negative air spring chambers **must be FULLY depressurized** before removing the air spring top cap/upper air shaft assembly.

Slowly compress and extend (push up/pull down) the air spring shaft to allow any remaining negative air pressure to bypass the air transfer dimple on the inside surface of the upper tube.

The negative air spring chamber is fully depressurized when the shaft can be pulled to full extension. When released, the air spring shaft will retract into the upper tube slightly due to pressure created when the air piston is extended past the air bypass dimple in the upper tube. This is normal.

Repeat the process two to three times.





4 Remove the travel adjuster knob retaining nut.





Remove the travel adjuster knob.



5

⚠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.





Unthread and remove the air spring top cap and upper air spring shaft assembly. Press down firmly when loosening the top cap.

NOTICE

The fork top caps are tightened to a high torque value. Ensure the fork is held securely in the bicycle stand. To avoid damage to the top cap, press the top cap / cassette tool squarely and firmly down when loosening. Use a socket wrench with a long handle for extra leverage.

Do not scratch the upper air spring shaft. Scratches can cause air to leak.

Clean the upper tube threads.

6 Remove the top cap o-ring and discard it.

Apply grease to a new o-ring and install it.





7 Push the lower air shaft into the upper tube to prevent it from getting scratched while removing the retaining ring.

Remove the retaining ring.

NOTICE

Do not scratch the air spring shaft. Scratches can cause air to leak. Replace the air spring assembly if a scratch is visible.



Retaining ring pliers



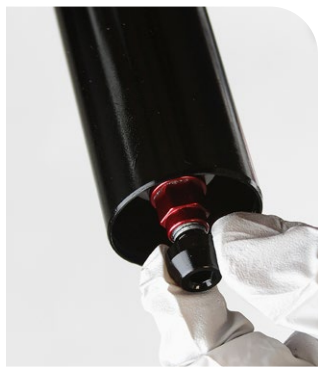
Retaining ring pliers

8 Thread the shaft bolt into the end of the air spring shaft for added grip.

With the shaft pushed half way into the upper tube, quickly and firmly pull the shaft out to remove the seal head and air spring assemblies from the upper tube.

Remove the shaft bolt from the air spring shaft.

Note: Some earlier ZEB forks were built with a red seal head. A silver seal head is shown in this Service Manual and is included in the service kits.





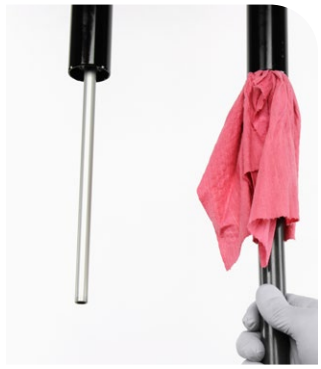
9 Clean the inside and outside of the upper tube.

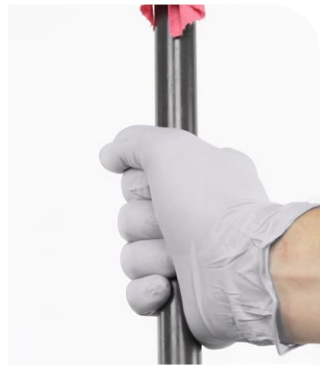
Inspect the inside and outside of the upper tube for damage.

NOTICE

Scratches on the inside surface of the upper tube can cause air to leak. If an internal scratch is visible, the crown steerer upper tube assembly may need to be replaced.









RockShox Suspension Cleaner



DPA Air Spring Travel Change and Bottomless Tokens (optional)

It is optional to change maximum fork travel by replacing the stock air spring shaft assembly with a shorter or longer air spring shaft assembly. If maximum travel is increased or reduced, use the new complete air spring shaft assembly in the following installation steps. It may also be necessary to add or remove Bottomless Tokens. Refer to Air Spring Travel Change and Bottomless Tokens for details.

Refer to the *RockShox Spare Parts Catalog* available at www.sram.com/service for the required spare part kits.

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

200 Hour Service Air Spring Service

1 Remove the seal head and top out bumper from the air spring shaft.

Discard the seal head.

Clean and inspect the shaft for damage.

Clean the top out bumper.





NOTICE

Scratches on the air spring shaft can cause air to leak. If a scratch is visible the air spring assembly may need to be replaced.

2 Remove the inner and outer air piston o-rings and discard them. Clean the air piston.





Apply grease to new o-rings and install them.



SRAM Butter Grease

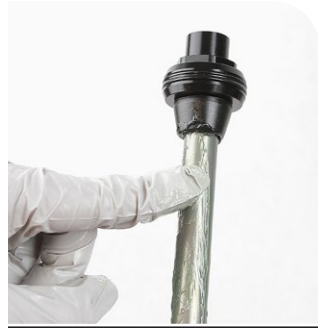
NOTICE

Do not scratch the air piston. Scratches will cause air to leak.

3 Install the top out bumper onto the shaft.

Apply a liberal amount of grease to the air spring shaft.





SRAM Butter Grease

4 Apply grease to the new seal o-ring and wiper seal.

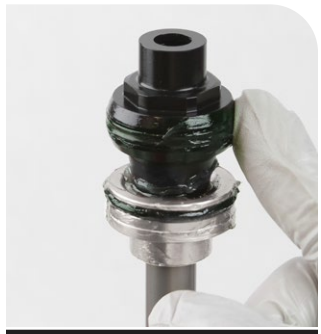


SRAM Butter Grease

5 Install the retaining washer/backup ring, a new wave spring, and the new seal head assembly, in that order, onto the air shaft.



6 Apply grease to the air piston and seal head outer o-ring/seals.



SRAM Butter Grease



SRAM Butter Grease

DPA - Air Spring Travel Change and Bottomless Tokens (optional)

To increase or decrease the travel in your RockShox ZEB fork, the air spring must be replaced with the appropriate length air spring shaft assembly. For example, to change a ZEB with a maximum of 160 mm of travel to a maximum of 180 mm of travel, a 180 mm air spring shaft assembly must be installed.

Bottomless Tokens can be added to, or removed from, the Dual Position Air (DPA) air spring assembly to fine-tune the bottom-out feel and spring curve. Use the chart below to help determine the number of Bottomless Tokens that can be used with each maximum fork travel option. If fork travel is changed from stock, it may be necessary to add or remove Bottomless Tokens.

Refer to the RockShox Spare Parts Catalog at www.sram.com/service for available air spring and Bottomless Token kits.

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

DPA - Travel and Bottomless Token Tuning

	27.5" Boost		29" Boost	
Fork Travel	Bottomless Tokens Factory Installed	Bottomless Tokens Maximum	Bottomless Tokens Factory Installed	Bottomless Tokens Maximum
180	0	4	0	4
170	0	5	0	5
160	1	5	1	5

DPA - Bottomless Tokens Installation (optional)

Bottomless Tokens reduce air volume in your fork and create greater ramp at the end of the fork travel. Add tokens to tune your fork's bottomless feel. Do not install more than the maximum number of Bottomless Tokens for your fork.

Install Bottomless Token onto the DPA air spring shaft, as desired.



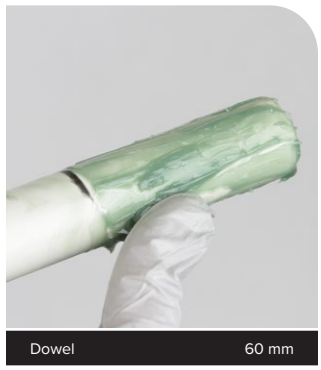


DPA - Air Spring Installation

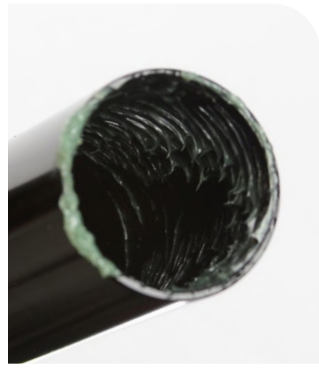
It is optional to change maximum fork travel by replacing the stock air spring shaft assembly with a shorter or longer air spring shaft assembly. If maximum travel is increased or reduced, use the new complete air spring shaft assembly in the following installation steps. It may also be necessary to add or remove Bottomless Tokens. Refer to Air Spring Travel Change and Bottomless Tokens for details.

Refer to the RockShox Spare Parts Catalog available at www.sram.com/service for the required spare part kits. For part ordering information, please contact your local SRAM distributor or dealer.

1 Apply a liberal amount of grease evenly around the end of a clean plastic dowel, approximately 60 mm from one end. Use the dowel to apply the grease to the inside surface of the upper tube, approximately 60 mm into the tube.







2 Insert the air spring piston into the upper tube. Firmly push the air spring piston into the upper tube.

Inject 1 mL of Maxima PLUSH Dynamic Suspension Lube Heavy into the upper tube, between the piston and seal head, in the negative chamber.

Insert the seal head into the upper tube. Firmly press the seal head into the upper tube until it stops.

Insert the seal head spacer into the upper tube. Firmly press the seal head spacer into the upper tube until it stops.







3 *Retaining rings have a sharper-edged side and a rounder edged side. Installing retaining rings with the sharper-edged side facing the tool will allow for easier installation and removal.*

Push the air shaft into the upper tube to prevent it from getting scratched while installing the retaining ring.

Place the tips of the retaining ring pliers into the eyelets of the retaining ring, then use the pliers to push the seal head into the upper tube while installing the retaining ring into the groove.

Confirm the retaining ring is properly seated in the retaining ring groove by using the retaining ring pliers to rotate the retaining ring and seal head back and forth a few times, then firmly pull down on the air shaft.

NOTICE

Do not scratch the air spring shaft. Scratches on the air shaft will allow air to bypass the seal head into the lower leg, resulting in reduced spring performance.







4 Thread a bottom bolt into the shaft 2 to 3 turns and pull the lower air shaft out to approximately half way.

Remove the bolt.



5 Apply a liberal amount of grease to the top cap upper air spring shaft.



6 Install the upper air spring shaft into the upper tube and into the air piston and lower air spring shaft.

The upper air spring shaft must be installed into the air piston and lower air spring shaft before oil is added to the positive air chamber.

NOTICE

Do not scratch the air spring shaft. Scratches can cause air to leak. Replace the air spring assembly if a scratch is visible.





7 Inject or pour 3 mL Maxima PLUSH Dynamic Suspension Lube Heavy into the air spring upper tube.

⚠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.

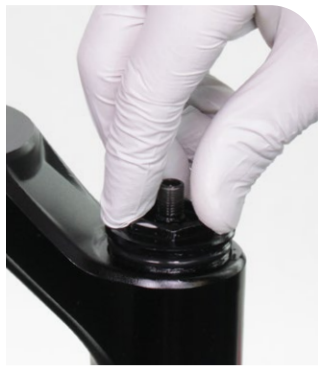


3 mL	RockShox Bleed Syringe

8 Thread the top cap assembly into the upper tube and tighten it. Press down firmly when tightening the top cap.

⚠WARNING - CRASH HAZARD

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





24 mm	28 N·m (250 in-lb)

9 Place the adjuster knob onto the top cap with the long tab near the back of the crown. Turn the adjuster knob counter-clockwise until it engages the first detent space.

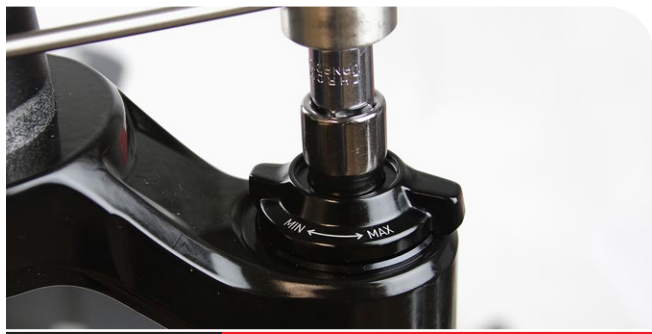
Thread the knob retaining nut onto the threaded air valve body and tighten the knob retaining nut.

⚠WARNING - CRASH HAZARD

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





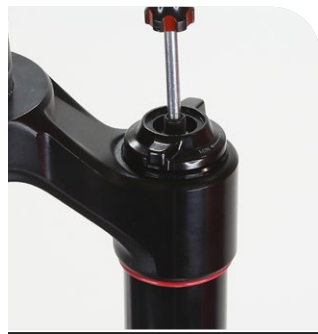


10 mm	2 N•m (18 in-lb)

10 Install the Schrader valve core into the top cap and tighten it finger tight.



RockShox Schrader Valve Tool



RockShox Schrader Valve Tool

200 Hour Service To continue with Charger 2.1 Damper service, go to Charger 2.1 Damper Service.

200 Hour Service To continue with Charger RC Damper service, go to Charger RC Damper Service.

200 Hour Service To continue with Charger R Damper service, go to Charger R Damper Service.

200 Hour Service | Charger 2.1 Damper - Controls Removal

1 The compression damper must be in the full open position in order to perform bleed procedure.

Turn the compression adjuster knobs counter-clockwise, to the full open position, until they stop.



Charger 2.1 RC2



Charger 2.1 RC2



Charger 2.1 RC

2 Remove the knob retaining screw.



2.5 mm Charger 2.1 RC2



2.5 mm Charger 2.1 RC2



2.5 mm Charger 2.1 RC

3 **Charger 2.1 RC2:** Remove the low speed compression adjuster knob and the high speed compression adjuster knob.

Charger 2.1 RC: Remove the high speed compression adjuster knob.



Charger 2.1 RC2



Charger 2.1 RC2



Charger 2.1 RC2

1 Unthread the damper top cap and remove the Charger 2.1 Damper assembly. Press down firmly when loosening the top cap.

Clean the upper tube threads.



Top cap / Cassette tool





⚠CAUTION

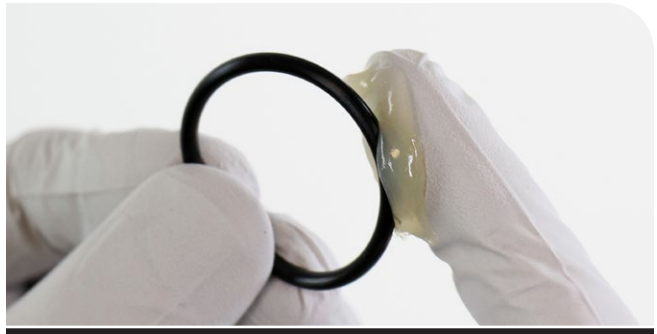
Place an oil pan on the floor underneath the product during service to catch any drained or spilled fluids. To avoid a slip and fall, and possible injury or harm, immediately clean any oil, fluid, grease, or lubricant from the floor in your work area.

NOTICE

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

When replacing seals and o-rings, use your fingers or a pick to remove the seal or o-ring. Spray RockShox Suspension Cleaner or isopropyl alcohol onto each part and clean with a clean lint-free shop towel.

Apply SRAM Butter grease to the new seals and o-rings.



SRAM Butter Grease

1 Remove the o-ring from the top cap. Clean the top cap threads and o-ring groove. Apply grease to a new o-ring and install it.

⚠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.

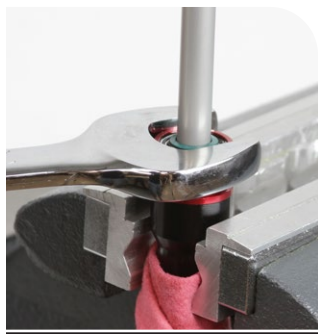


2 Clamp the cartridge tube wrench flats in a vise with flat soft jaw inserts, with the rebound damper oriented upwards.

Wrap a shop towel around the cartridge tube to absorb oil.



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



23 mm



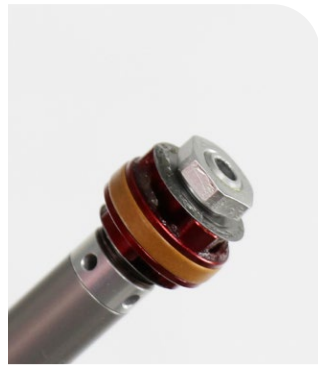
4 Remove the seal head from the rebound damper shaft and discard it.





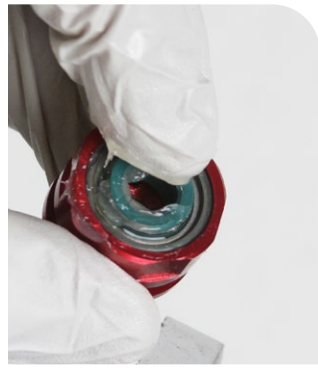
5 The solid band glide ring is not removable and only requires cleaning. Do not remove.





6 Apply grease to the new rebound damper seal head seals.





7 Install the new seal head onto the rebound damper shaft, threaded end first, and slide it towards the piston until it stops.



8 Remove the bleed screw from the seal head.



T10

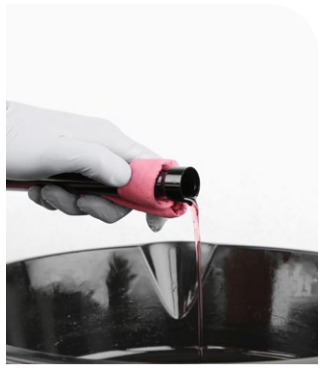


9 Remove the cartridge tube from the vise and pour the oil into an oil pan.

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

⚠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.





10 Clamp the cartridge tube, on the bladder coupler wrench flats, back into the vise.

Spray RockShox Suspension Cleaner or isopropyl alcohol into the cartridge tube.





RockShox Suspension Cleaner

11 Squeeze the bladder 5-6 times to circulate the cleaner into the damper.



12 Remove the tube from the vise. Orient the tube downward and squeeze the bladder until the cleaner and any remaining oil is drained into an oil pan.

Place the tube on a shop towel for a few minutes to allow any excess cleaner to drain.





13 Dry the cartridge tube and compression damper assembly with compressed air.



Air Compressor and Air Gun Nozzle

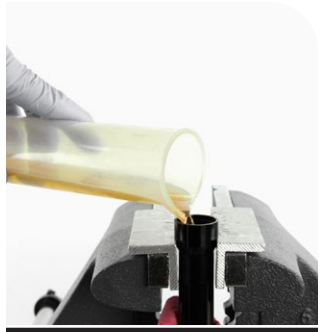
1 Clamp the cartridge tube wrench flats lightly into the vise and soft jaw inserts. Wrap a shop towel around the tube to absorb any oil.

Pour 3wt suspension oil into the cartridge tube until it is full.

Squeeze the bladder until trapped bubbles stop purging. Pour additional oil into the cartridge tube until full.

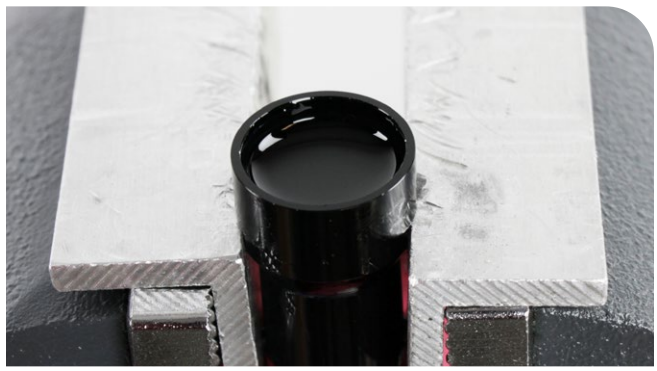
⚠CAUTION

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 3wt





2 The rebound damper must be in the full open/fastest rebound setting before installation.

Insert the rebound adjuster knob into the rebound damper shaft until it contacts the rebound adjuster screw. Turn the knob counter-clockwise until it stops.

Remove the adjuster knob from the shaft.





3 Insert the rebound damper piston slowly into the cartridge tube and thread the seal head into the tube.

Tighten the seal head.

⚠WARNING - CRASH HAZARD

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







23 mm	5.1 N·m (45 in-lb)

4 Thread the rebound bottom bolt into the shaft 3-4 turns.





1 Draw 3wt suspension oil into a RockShox Bleed syringe until it is half full.

Hold the syringe upright, cover the tip with a shop towel, and gently depress the plunger to purge any air bubbles from the syringe.

NOTICE

Only use a RockShox bleed syringe.

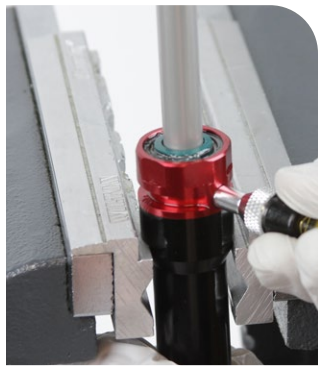
Do not use syringes that have been in contact with DOT brake fluid. DOT brake fluid will permanently damage the seals and will cause the fork to malfunction.



Maxima PLUSH 3wt RockShox Bleed Syringe

2 Thread the syringe bleed fitting into the seal head bleed port.

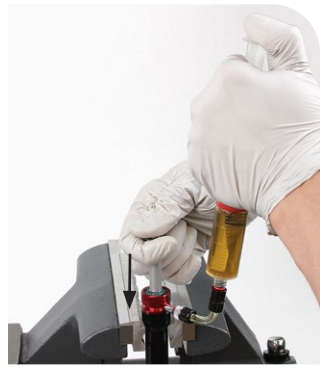
Depress the plunger to pressurize the damper assembly.





3 Push the rebound damper shaft into the cartridge tube while applying opposing pressure on the syringe plunger as the syringe fills with oil.





Pull the rebound damper shaft slowly out of the cartridge tube while applying opposing pressure on the syringe plunger as oil fills the damper.

Repeat this process until bubbles are no longer pulled from the damper into the syringe.





4 Fully extend the rebound damper shaft. Push the syringe plunger down, then release the plunger. Allow the bladder to expand and retract until it stops in a resting position.









5 Unthread the syringe bleed fitting from the bleed port.

⚠CAUTION - EYE HAZARD

Oil may eject from the bleed port if the bladder is not in a resting position. Wear safety glasses.





6 Install the bleed screw and tighten it.

Wipe away any excess oil.

⚠WARNING - CRASH HAZARD

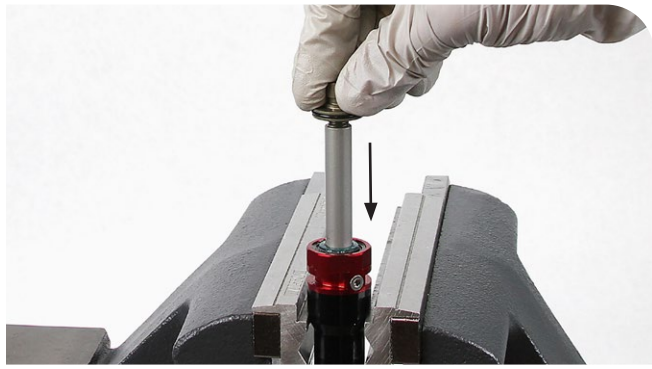
Parts must be tightened to the specified torque. Failure to do so can result in SERIOUS INJURY OR DEATH.

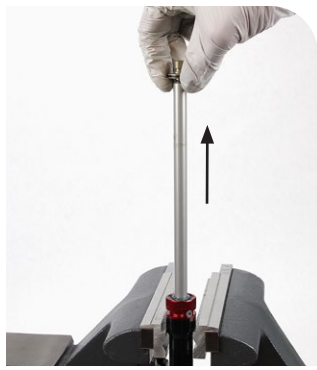


T10	1.7 N·m (15 in-lb)

7 Cycle the rebound shaft a few times.

Remove the bottom bolt and clean the Charger 2.1 Damper assembly.







1 While compressing the damper, use a 13 mm socket to rotate the compression cam clockwise until it stops in the firm position

Consistent resistance should be felt with no gaps in movement. If gaps are felt during compression, repeat the bleed process.

If the bleed was successful, rotate the compression cam counter-clockwise until it stops, to the unlocked position.



1 Install the Charger 2.1 Damper assembly into the damper side upper tube. Thread the top cap into the upper tube.







Top cap / Cassette tool

2 Tighten the top cap. Press down firmly when tightening the top cap.

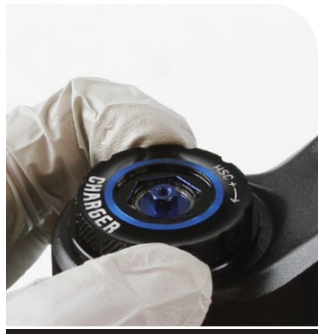
⚠WARNING - CRASH HAZARD

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



Top cap / Cassette tool	28 N·m (250 in-lb)

1 Install the high speed compression adjuster knob.



Charger 2.1 RC2



Charger 2.1 RC

2 Install the low speed compression adjuster knob onto the hex adjuster rod.



Charger 2.1 RC2

3 Install and tighten the retaining screw.

⚠WARNING - CRASH HAZARD

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



2.5 mm Charger 2.1 RC2



2.5 mm 1.2 N·m (10 in-lb)



2.5 mm Charger 2.1 RC



2.5 mm 1.2 N·m (10 in-lb)

200 Hour Service Continue the 200 Hour Service with Lower Leg Installation.

200 Hour Service | Charger RC Damper - Damper Removal

1 Turn the compression adjuster knob counter-clockwise, to the full open position, until it stops.



2 Remove the retaining screw and remove the knob (RC).



2.5 mm



3 Unthread the damper top cap and remove the damper assembly. Press down firmly when loosening the top cap.

NOTICE

The fork top caps are tightened to a high torque value. Ensure the fork is held securely in the bicycle stand. To avoid damage to the top cap, press the top cap / cassette tool squarely and firmly down when loosening. Use a socket wrench with a long handle for extra leverage.



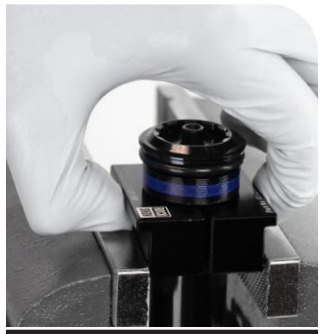
Top cap / Cassette tool



Clean the upper tube threads.



1 Clamp the cartridge tube in a vise with Charger Vise Blocks.



Charger Vise Blocks



2 Unthread the top cap from the tube.

NOTICE

The cartridge tube and vise blocks must be dry and free of oil to provide enough grip to unthread the top cap. If the cartridge tube slips, clean and dry the tube and vise blocks.



Top cap / Cassette tool

3 Wrap a shop towel around the cartridge tube under the top cap to absorb oil.

Carefully remove the compression damper.





4 Remove the cartridge tube and rebound damper assembly from the vise and pour the oil into an oil pan.

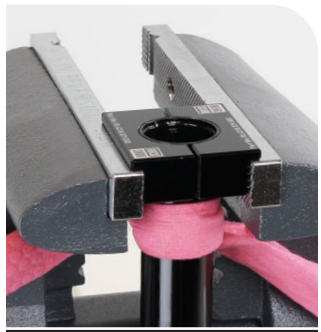
Clean the exterior of the cartridge tube.



5 Clamp the cartridge tube into a vise with Charger Vise Blocks.

Remove the rebound damper seal head and rebound damper.

Remove the cartridge tube from the vise.



Charger Vise Blocks



19 mm





6 Remove the seal head from the rebound damper shaft.

Discard the seal head.

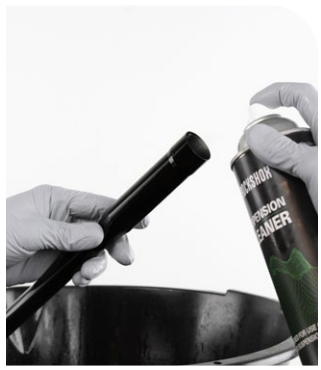


7 Spray RockShox Suspension Cleaner or isopropyl alcohol into the cartridge tube and clean the inside of the tube with a clean shop towel and a thin dowel (≤16 mm diameter).

Inspect the inside of the cartridge tube for scratches.

NOTICE

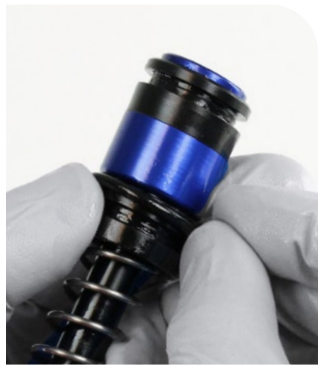
Scratches on the inside surface of the tube can cause oil to leak. If an internal scratch is visible, the cartridge tube may need to be replaced.

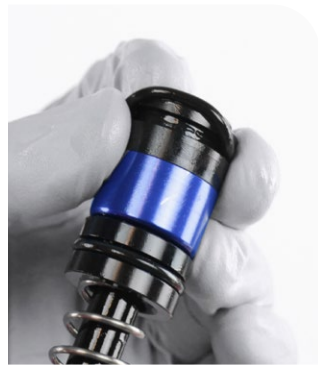




8 Remove the o-rings from the compression damper and discard them.

Apply grease to new o-rings and install them.







9 The solid band glide ring is not removable and only requires cleaning. Do not remove.





10 Apply grease to the inner seal and bushing in the new rebound damper seal head.

Apply grease to the end of the rebound damper shaft.







1 Insert the rebound damper shaft into the recessed end of the seal head.

Slide the seal head toward the piston.

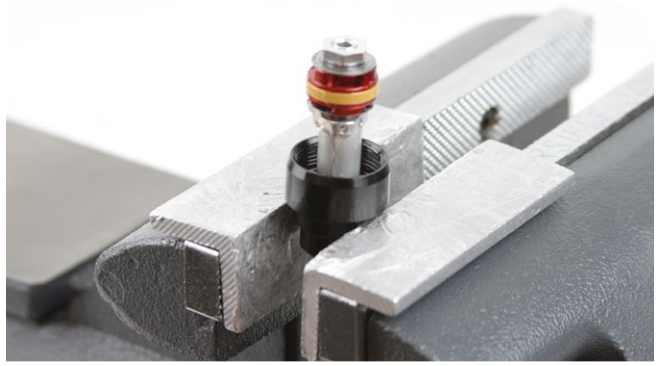




2 Insert the rebound adjuster knob into the rebound damper shaft and rotate it counter clockwise until it stops. This is the full open position.

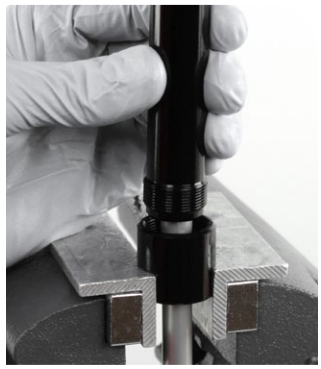


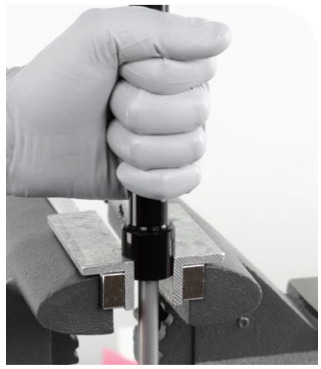
3 Clamp the seal head into the vise.



4 Insert the rebound damper shaft into the cartridge tube. Tighten the seal head hand tight.

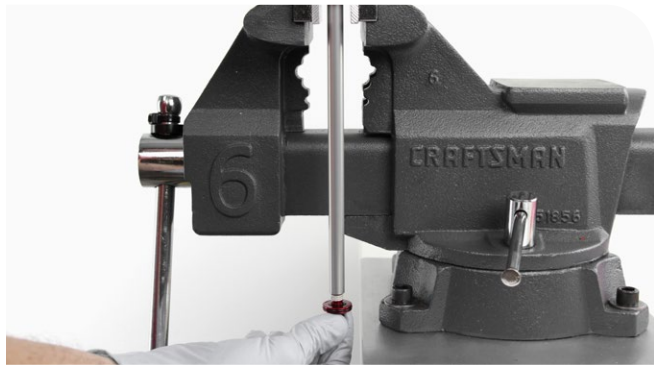






5 Pull the damper shaft to full extension.

Thread a bottom bolt into the rebound damper shaft.



6 Secure a shop towel around the cartridge tube to absorb oil.

Pour 3wt suspension oil into the tube until it is approximately half full.

⚠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 3wt

7 Slowly cycle the rebound damper in and out half way to remove air bubbles trapped under the rebound damper piston.

Stop when no bubbles are visible in the oil.

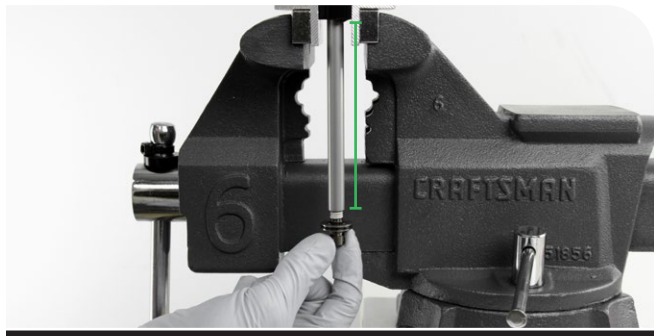
⚠CAUTION

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.





8 Push the rebound damper into the cartridge tube until there is **100 mm** (length) of shaft extended. Do not push the damper into the tube any further.



100 mm

9 Pour 3wt suspension oil into the tube until the oil is just below the purge holes.

⚠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.



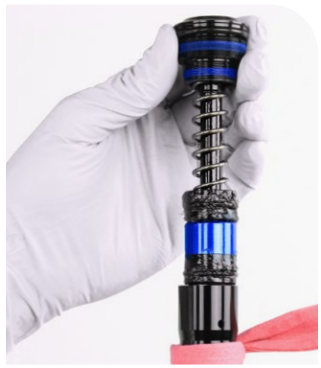
Maxima PLUSH 3wt

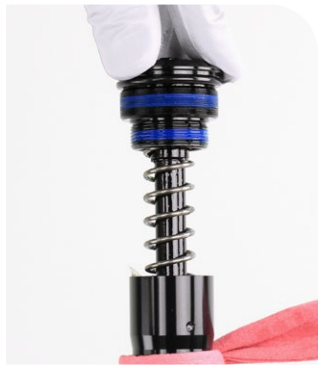
10 Insert the compression damper into the cartridge tube and slowly push it into the tube. The rebound damper will slowly extend as the compression damper is installed; this is normal.

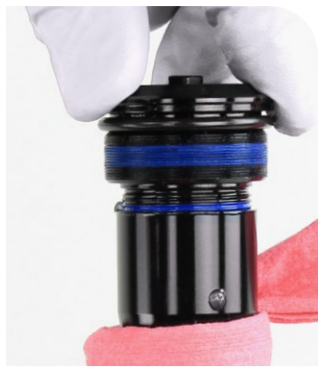
Firmly push down and thread the top cap into the tube.

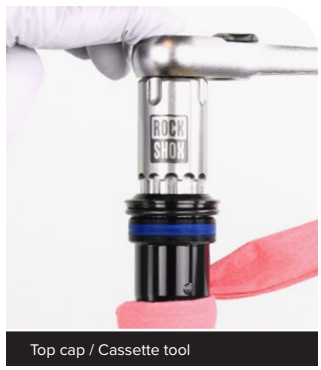
⚠CAUTION

Always wear safety glasses. Oil will exit the cartridge tube bleed hole when installing the damper. Do not allow oil, fluid, grease, lubricant, or cleaner to contact your eyes or face. Seek immediate medical attention if irritation occurs.









Top cap / Cassette tool

11 Tighten the top cap to the specified torque. The rebound damper seal head will be tightened onto the other end of the cartridge tube simultaneously.

⚠WARNING - CRASH HAZARD

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



Top cap / Cassette tool | 9 N·m (80 in-lb)

12 Pull the rebound damper to full extension.

Secure a plastic cable tie around the shaft **19 mm** from the end of the shaft.





19 mm

13 Cover the purge hole(s) with the secured towel.

⚠CAUTION

Always wear safety glasses. Oil will exit the cartridge tube bleed hole when installing the damper. Do not allow oil, fluid, grease, lubricant, or cleaner to contact your eyes or face. Seek immediate medical attention if irritation occurs.



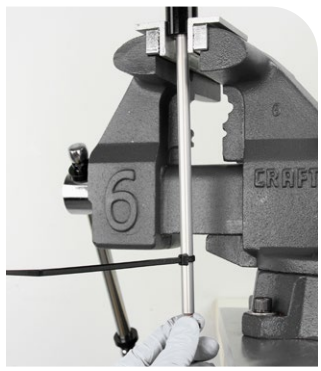
14 Slowly push the rebound damper shaft into the tube until the cable tie contacts the seal head, then stop. **Do not push the damper in any further.**

Slowly, pull the shaft out to full extension.

Repeat 3-5 more times. This will allow any excess oil and air to escape from system.

Remove the bottom bolt. Remove the damper assembly from the vise and clean it with a shop towel.

Do not remove the cable tie.





1 Use the adjuster knob to rotate the compression cam clockwise, until it stops, to the firm position.

The cable tie must be **19 mm** from the end of the shaft. **Do not compress the rebound damper further than this point.**

Cover the oil purge hole(s) with the secured towel.

⚠CAUTION

Always wear safety glasses. Oil may exit the cartridge tube bleed hole when compressing the damper. Do not allow oil, fluid, grease, lubricant, or cleaner to contact your eyes or face. Seek immediate medical attention if irritation occurs.

Push down on the damper assembly slowly to test the firmest compression setting. Firm and consistent resistance should be felt with no gaps in movement.

Rotate the compression damper to open setting and repeat the compression test. Light consistent resistance should be felt with no gaps in movement.

If gaps are felt during compression, repeat the oil fill and purge process. If the assembly process was successful, set the compression damper to the open setting and remove the cable tie.



1 Install the damper assembly into the damper side upper tube. Thread the top cap into the upper tube and tighten it. Press down firmly when tightening the top cap.

⚠WARNING - CRASH HAZARD

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

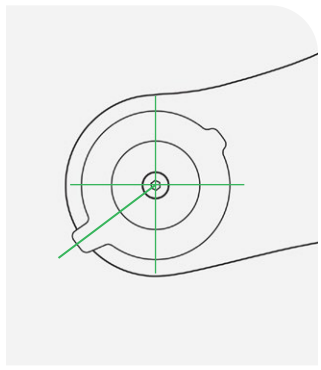




Top cap / Cassette tool	28 N·m (250 in-lb)

2 Install the adjuster knob with the tab in the 7-8 o'clock, unlocked, position.

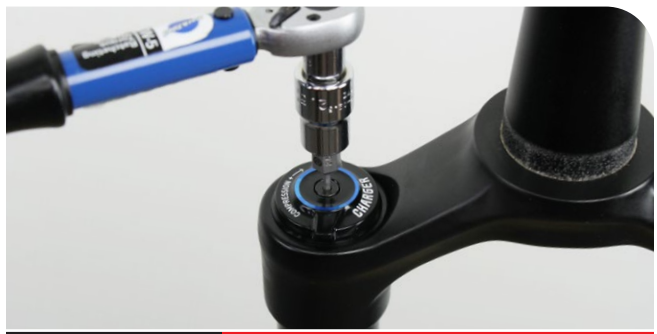




Install and tighten the retaining screw.

⚠WARNING - CRASH HAZARD

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



2.5 mm	1.4 N·m (12 in-lb)

1 Unthread the damper top cap and remove the damper assembly. Press down firmly when loosening the top cap.

NOTICE

The fork top caps are tightened to a high torque value. Ensure the fork is held securely in the bicycle stand. To avoid damage to the top cap, press the top cap / cassette tool squarely and firmly down when loosening. Use a socket wrench with a long handle for extra leverage.



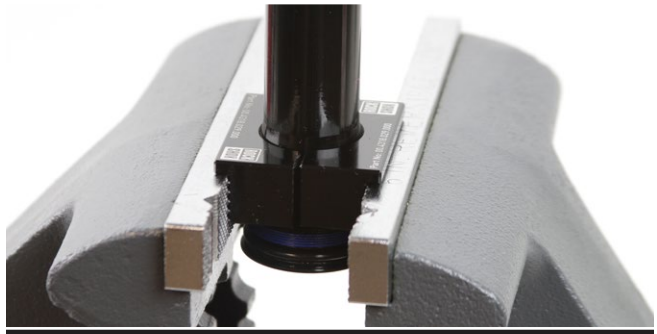
Top cap / Cassette tool

Clean the upper tube threads.





1 Clamp the cartridge tube in a vise with Charger Vise Blocks.



Charger Vise Blocks

2 Unthread the seal head from the tube.

NOTICE

The cartridge tube and vise blocks must be dry and free of oil to provide enough grip to unthread the top cap. If the cartridge tube slips, clean and dry the tube and vise blocks.



19 mm

3 Wrap a shop towel around the cartridge tube under the top cap to absorb oil.

Carefully remove the compression damper.



4 Remove the seal head from the rebound damper shaft.

Discard the seal head.



5 The solid band glide ring is not removable and only requires cleaning. Do not remove.





6 Apply grease to the inner seal and bushing in the new rebound damper seal head.

Apply grease to the end of the rebound damper shaft.







7 Remove the cartridge tube and rebound damper assembly from the vise and pour the oil into an oil pan.

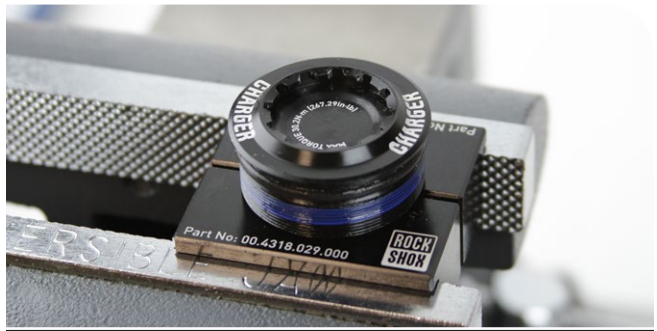
Clean the exterior of the cartridge tube.

⚠CAUTION

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.



8 Clamp the cartridge tube in a vise with Charger vise blocks.



Charger Vise Blocks

9 Unthread the top cap from the tube.

NOTICE

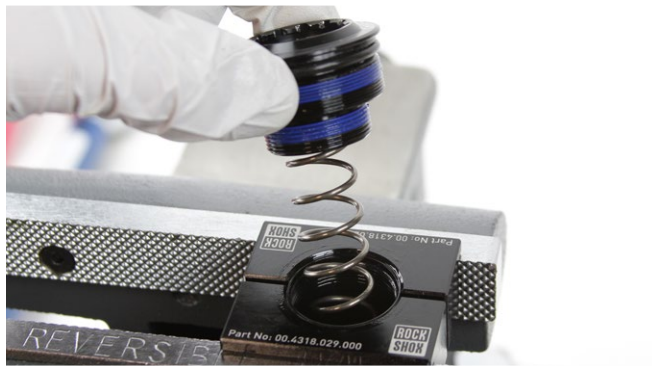
The cartridge tube and vise blocks must be dry and free of oil to provide enough grip to unthread the top cap. If the cartridge tube slips, clean and dry the tube and vise blocks.



Top cap / Cassette tool

10 Wrap a shop towel around the cartridge tube below the top cap to absorb oil.

Carefully remove the top cap and IFP spring.



11 Remove the o-rings from the top cap and discard them.
Apply grease to new o-rings and install them.







12 Insert a dowel into the bottom of the damper tube and remove the IFP.
Replace the IFP o-ring.



Dowel





13 Spray RockShox Suspension Cleaner or isopropyl alcohol into the cartridge tube and clean the inside of the tube with a clean shop towel and a thin dowel (≤16 mm diameter).

Inspect the inside of the cartridge tube for scratches.

NOTICE

Scratches on the inside surface of the tube can cause oil to leak. If an internal scratch is visible, the cartridge tube may need to be replaced.





1 Insert the rebound damper shaft into the recessed end of the seal head.

Slide the seal head toward the piston.

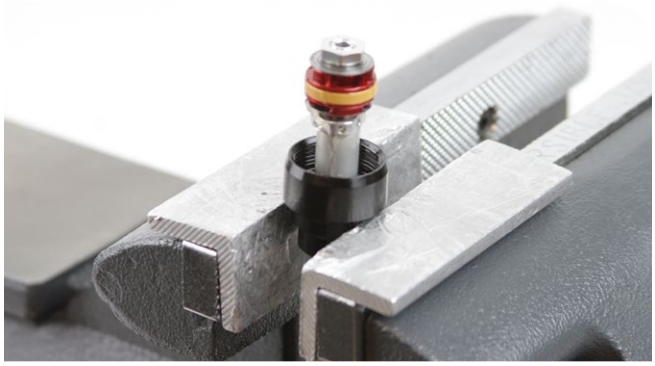




2 Insert the rebound adjuster knob into the rebound damper shaft and rotate it counter clockwise until it stops. This is the full open position.

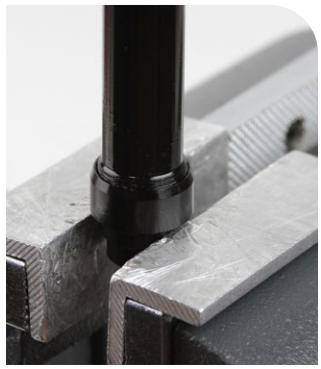


3 Clamp the seal head into the vise.



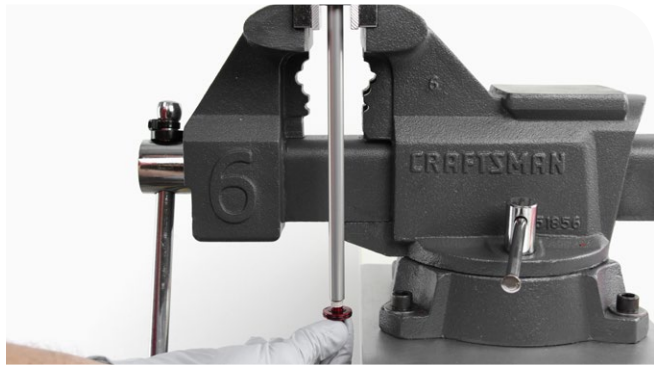
4 Insert the rebound damper shaft into the cartridge tube. Tighten the seal head hand tight.





5 Pull the damper shaft to full extension.

Thread a bottom bolt into the rebound damper shaft.



6 Secure a shop towel around the cartridge tube to absorb oil.

Pour 3wt suspension oil into the tube until it is approximately half full.

⚠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 3wt

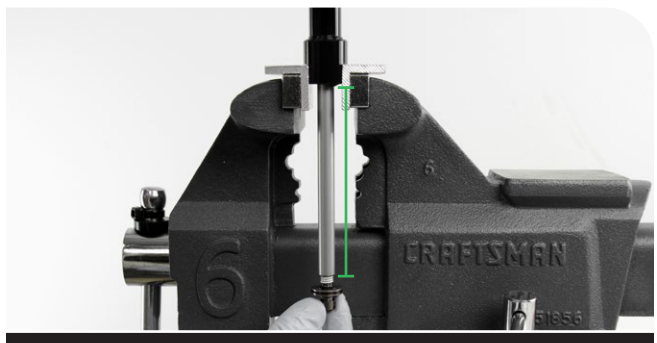
7 Slowly cycle the rebound damper in and out half way to remove air bubbles trapped under the rebound damper piston.

Stop when no bubbles are visible in the oil.





8 Push the rebound damper into the cartridge tube until there is **100 mm** (length) of shaft extended. Do not push the damper into the tube any further.



100 mm

9 Pour additional 3wt suspension oil into the tube until the oil is just below the purge holes.

⚠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 3wt

10 Insert the IFP into the cartridge tube, with the recessed of the IFP facing away from the cartridge tube.

Slowly insert the compression damper into the cartridge tube.

Firmly push down and thread the top cap into the tube. Insert and tighten the top cap into the cartridge tube.







11 Tighten the top cap to the specified torque. The rebound damper seal head will be tightened onto the other end of the cartridge tube simultaneously.

⚠WARNING - CRASH HAZARD

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



Top cap / Cassette tool	9 N·m (80 in-lb)

12 Pull the rebound damper to full extension.

Secure a plastic cable tie around the shaft **19 mm** from the end of the shaft.





13 Cover the purge hole(s) with the secured towel.

⚠CAUTION

Always wear safety glasses. Oil may exit the cartridge tube bleed hole when compressing the damper. Do not allow oil, fluid, grease, lubricant, or cleaner to contact your eyes or face. Seek immediate medical attention if irritation occurs.



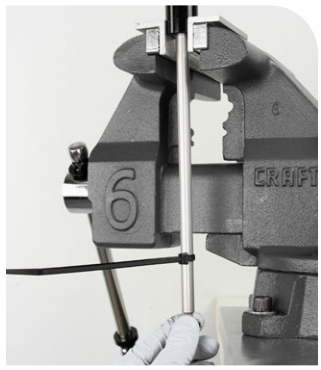
14 Slowly push the rebound damper shaft into the tube until the cable tie contacts the seal head, then stop. **Do not push the damper in any further.**

Slowly, pull the shaft out to full extension.

Repeat 3-5 more times. This will allow any excess oil and air to escape from system.

Remove the bottom bolt. Remove the damper assembly from the vise and clean it with a shop towel.

Do not remove the cable tie.





1 The cable tie must be **19 mm** from the end of the shaft. **Do not compress the rebound damper further than this point.**

Cover the oil purge hole(s) with the secured towel.

⚠CAUTION

Always wear safety glasses. Oil may exit the cartridge tube bleed hole when compressing the damper. Do not allow oil, fluid, grease, lubricant, or cleaner to contact your eyes or face. Seek immediate medical attention if irritation occurs.

If gaps are felt during compression, repeat the oil fill and purge process.

If the assembly process was successful, set the compression damper to the open setting and remove the cable tie.



1 Install the damper assembly into the damper side upper tube. Thread the top cap into the upper tube and tighten it. Press down firmly when tightening the top cap.

⚠WARNING - CRASH HAZARD

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





Top cap / Cassette tool	28 N·m (250 in-lb)

1 Clean the upper tubes.





2 Apply grease to the inner surfaces of the dust wiper seals.

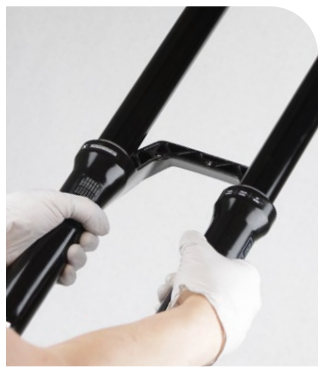


3 Install the lower leg assembly onto the upper tubes and slide it just enough to engage the upper bushings with the upper tubes.

NOTICE

Make sure both wiper seals slide onto the tubes without folding the outer lip of either seal.

The inside bottom of the lower leg should not contact the spring or damper shafts. A gap between the shaft ends and the lower leg bolt holes should be visible.





4 Position the fork at an angle with the bolt holes oriented upward.

Inject suspension oil into **each lower leg** through the bottom bolt holes.

NOTICE

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

⚠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 Dynamic Suspension Lube Light 20 mL

5 Slide the lower leg assembly toward the crown until it stops.



The spring and damper shafts should be visible through the bottom bolt holes.

Verify each shaft is centered and seated in the lower leg shaft/bolt hole and no gap is visible between the lower leg and the shaft end.



6 **200 Hour Service** Remove the old crush washers from each bottom bolt.

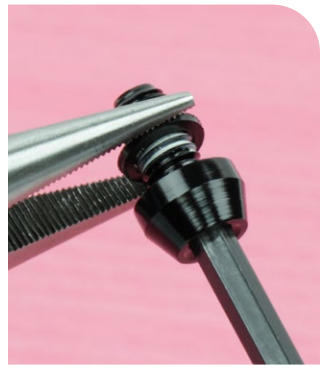
Hold the crush washer with needle nose pliers and unthread it from the bolt by turning the bolt counter-clockwise. Discard the crush washers.

Clean the bolts and install new crush washers.

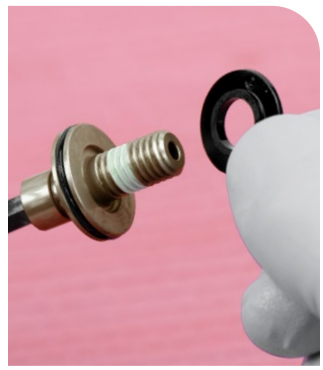
NOTICE

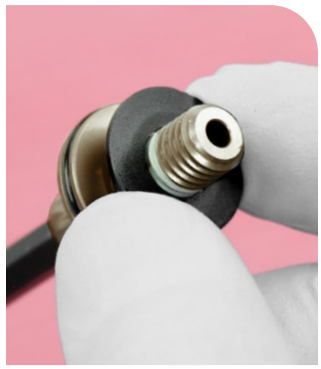
Dirty or damaged crush washers can cause oil to leak from the fork.













7 Install the black bottom bolt into the spring side shaft.

Install the silver or red bottom bolt into the damper side shaft.

⚠WARNING - CRASH HAZARD

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



5 mm Spring side



5 mm 7.3 N·m (65 in-lb)



5 mm Damper side



5 mm 7.3 N·m (65 in-lb)

8 Install the rebound damper knob and tighten the set screw.

Do not over-tighten the set screw. Over-tightening will seize the adjuster knob and it will not turn.

Refer to your pre-service recorded rebound setting to adjust the rebound damping.

⚠WARNING - CRASH HAZARD

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



Charger



2.5 mm 0.9 N·m (8 in-lb)

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

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

Cycling the fork will equalize the positive and negative air chambers. After the fork is cycled 3-4 times, check the pressure and add air as needed.

Install the air valve cap.



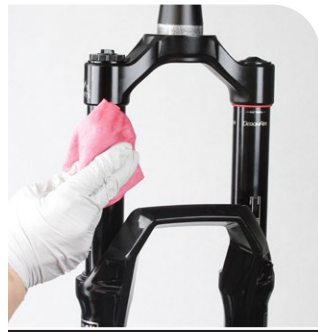
RockShox Shock Pump



10 Clean the entire fork.



RockShox Suspension Cleaner



Shop Towel

This concludes the service of your RockShox ZEB suspension fork.

ASIAN HEADQUARTERS
SRAM Taiwan
No. 1598-8 Chung Shan Road
Shen Kang Hsiang, Taichung City
Taiwan

WORLD HEADQUARTERS
SRAM, LLC
1000 W. Fulton Market, 4th Floor
Chicago, Illinois 60607
U.S.A.

EUROPEAN HEADQUARTERS
SRAM Europe
Paasbosweg 14-16
3862ZS Nijkerk
The Netherlands