ROCKSHOX

DELUXE

2023+ Deluxe Coil Select



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ROCKSHOX 79(450) X 47.5-55MM

55MI



SAFETY FIRST!

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

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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 <u>www.sram.com/service</u> 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 <u>www.sram.com/company/environment</u>.

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 <u>www.sram.com/service</u>.

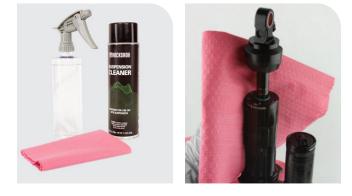
Clean the exterior of the product with mild soap and water to avoid contamination of internal sealing part surfaces.

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.

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



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

Apply RockShox Dynamic Seal Grease to the new seal or o-ring. If a brush is used to apply grease, confirm there are no loose bristles in the grease or on the part.

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.





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

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.





Specified torque value in N·m (in-lb)

Model Code Identification

Product model code and specification details can be identified with the serial number etched onto 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.

Model Code example: RS-DLXC-SEL-B1

RS = Product Type - Rear Suspension

DLXC = Series - Deluxe Coil

SEL = Model - Select

B1 = Version - (B - second generation, 1 - first iteration); the version of the product is important for part and lubricant compatibility.

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 <u>www.sram.com/service</u>.

Warranty and Trademark

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

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

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 <u>www.sram.com/service</u>.

Service Hours Interval	Maintenance	Benefit
Every ride Clean dirt from shock damper body a wiper seal		Extends wiper seal lifespan
	Clean dirt from shock damper body and wiper seal	Minimizes damage to shock damper body
		Minimizes oil contamination
Every 200 Hours Perform damper service		Extends suspension lifespan
	Restores damping performance	

Record Your Settings

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

Service Hours Interval	Date of Service	Rebound setting - Count the number of clicks while turning the rebound adjuster fully counter-clockwise.
200		
200		
200		

Torque Values

Part	ТооІ	Torque
Sealhead	Counter Measure Wrench	34 N•m (300 in-lb)
Check Nut	15 mm socket	8 N•m (75 in-lb)

IFP Depth

Shock Stroke (mm)	IFP Depth (mm)
37.5 - 45	71
47.5 - 55	79
57.5 - 65	87
67.5 - 75	95

Parts

- Super Deluxe Coil / Deluxe Coil B1 Service Kit 200 hours
- Rear Shock Eyelet Bearing Kit
- Rear Shock Bushing Kit

Safety and Protection Supplies

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

Lubricants and Oils

- Isopropyl alcohol or RockShox Suspension Cleaner
- Maxima PLUSH Suspension Oil 7wt
- RockShox Dynamic Seal Grease
- Loctite 2760 Threadlocker (Red)

RockShox Tools

- RockShox 1/2" x 1/2" rear shock bushing removal/installation tool
- RockShox Air Valve Adapter Tool Rear Shock (red adapter)
- RockShox Deluxe IFP Height Tool
- RockShox Rear Shock Body Vise Blocks 35 mm
- RockShox Super Deluxe Coil / Deluxe Coil B1 Compression Tools
 (Counter Measure)

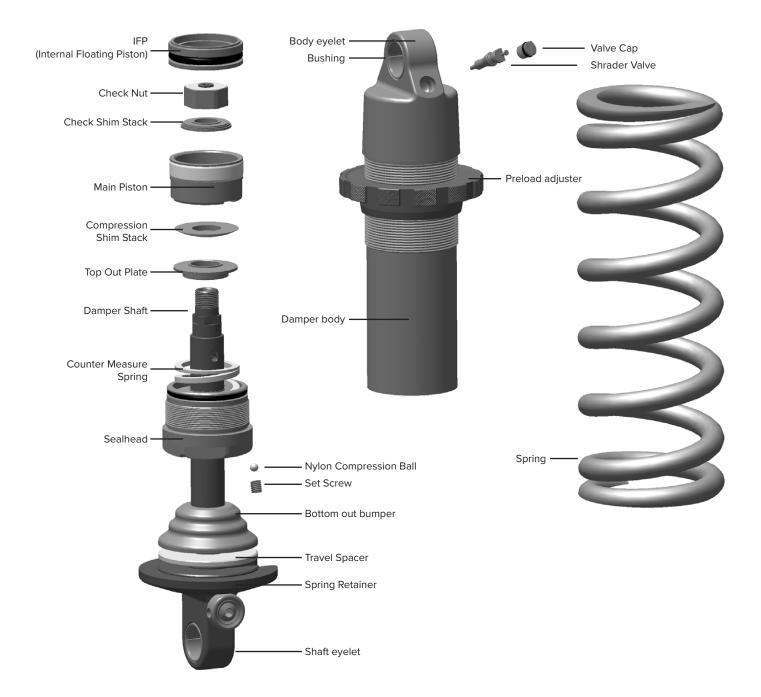
Bicycle Tools

- Shock pump
- Schrader valve core tool

Common Tools

- Bearing press tool: 22 mm (OD) x 10 mm (ID)
- · Bench vise with aluminum soft jaws and grooved soft jaws
- Guide Pin/Punch: 1.5 mm
- Hammer
- · Hex wrenches: 2 mm, 2 additional small hex wrenches
- Open end wrenches: 13 mm (x2)
- Metal Pick
- Plastic Pick
- Socket wrench: 15 mm, 19 mm
- Torque wrench

Exploded View



Mounting Hardware and Bushing Service

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

Parts, Tools, and Supplies

Parts

• Super Deluxe Coil / Deluxe Coil B1 Service Kit - 200 hours

Safety and Protection Supplies

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

Lubricants and Oils

RockShox Dynamic Seal Grease

RockShox Tools

• RockShox 1/2" x 1/2" rear shock bushing removal/installation tool

Common Tools

- Open end wrenches: 13 mm (x2) or an adjustable wrench
- · Bench vise with aluminum soft jaws

Mounting Hardware Removal

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

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





Threaded rod

Rear shock bushing removal/installation tool

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





3

4

5

Insert the threaded rod through the shaft eyelet until the push pin rests against the bushing pin.

Thread the large, open end of the catcher along the rod until it rests on the end spacer.





Hold the catcher secure with a 13 mm open end or adjustable wrench.

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

Unthread the push pin from the threaded rod to remove the end spacer and the bushing pin if it slides out easily.



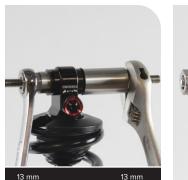


If the bushing pin did not remove easily, unthread the push pin from the threaded rod to remove the end spacer, then reinstall the push pin onto the threaded rod.

Thread the large, open end of the catcher along the rod until it rests against the shaft eyelet.

Use a 13 mm wrench to thread the push pin along the rod until it stops against the eyelet shaft.

Unthread the push pin from the threaded rod to remove the bushing pin.





Unthread the catcher from the threaded rod.

Remove the end spacer and bushing pin from the tool.

Repeat steps 2-5 for the damper eyelet.

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



Eyelet Bushing Removal

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



Insert the threaded rod through the shaft eyelet until the base of the push pin rests against the bushing.

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



2

3

Hold the catcher secure with a 13 mm open end or adjustable wrench. Use a second 13 mm wrench to thread the push pin along the rod until the push pin pushes the eyelet bushing out of the eyelet.



Unthread the catcher from the threaded rod. Remove the tool from the shaft eyelet and discard the bushing.

Repeat steps 1-3 for the damper body eyelet.





Eyelet Bushing Installation

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



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

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

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

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





Bearing Mount Service

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

Parts, Tools, and Supplies

Parts

2

• Rear Shock Bearing Kit

Safety and Protection Supplies

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

Lubricants and Oils

Isopropyl alcohol or RockShox Suspension Cleaner

Bearing Removal

Remove the dust cover.

Common Tools

- Bearing press tool: 22 mm (OD) x 10 mm (ID)
- Bench vise with aluminum soft jaws
- Hammer
- Small diameter punch



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







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





4 Clean the bearing bores.



Bearing Installation



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

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

NOTICE

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

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





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



Bearing Press Tool

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

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

NOTICE

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

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







Bearing Press Tool



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

Install dust covers before installing the shock on the bicycle.



Upgrade (optional) - Standard Eyelet to Bearing Adapter Installation

The bearing mount upgrade adapter is only compatible with a bearing mounting frame. Confirm compatibility with the frame manufacturer before installation.

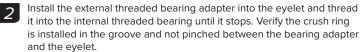
Shaft eyelet end is pictured. The bearing mount adapter is NOT compatible with the Deluxe Coil damper body eyelet.

The standard eyelet bushing must be removed before the Bearing Adapter can be installed.

Confirm the crush rings are seated in the grooves on the adapters. Insert the internal threaded bearing adapter into the eyelet and press it in squarely. Verify the crush ring is installed in the groove and not pinched between the bearing adapter and the eyelet.















Place the bearing adapter socket onto the bearing.







5 Tighten the bearing to the specified torque.



RockShox Bearing Adapter Socket

10 N·m (88 in-lb



If a bearing mount adapter is installed, remove before performing shock service.

Parts, Tools and Supplies

Parts

Super Deluxe Coil / Deluxe Coil B1 Service Kit - 200 hours

Safety and Protection Supplies

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

Lubricants and Oils

- Isopropyl alcohol or RockShox Suspension Cleaner
- Maxima PLUSH Suspension Oil 7wt
- RockShox Dynamic Seal Grease

RockShox Tools

- RockShox Air Valve Adapter Tool Rear Shock (red adapter)
- RockShox Super Deluxe Coil / Deluxe Coil B1 Compression Tools (Counter Measure)

Bicycle Tools

- Schrader valve core tool
- Shock pump

Common Tools

- Bench vise with aluminum soft jaws and grooved soft jaws
- · Hex wrenches: 2 mm
- Metric caliper or small metric ruler
- Pick
- Socket wrench: 8 mm, 15 mm, 19 mm
- Torque wrench

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

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

SAFETY INSTRUCTIONS

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

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

Spring Removal



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



2

Turn the preload adjuster counter-clockwise until there is a large gap between it and the spring.



3

Remove the spring retainer and spring.



Damper and IFP Service

Remove the damper body valve cap. Depress the Schrader valve and release all air pressure from the damper body.

ACAUTION - EYE HAZARD

Verify all pressure is removed from the shock before proceeding. Failure to do so can cause the pressurized oil to spray from the shock during disassembly. Wear safety glasses.





Clamp the body eyelet into the vise.





4

2

Move the bottom out bumper away from the seal head.

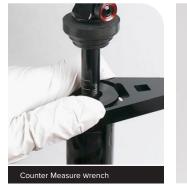


Loosen and slowly remove the shaft assembly from the damper body.

NOTICE

Hold the Counter Measure wrench in place with your hand as you turn the seal head to prevent damage to the seal head wrench flats.

Oil will spill from the damper body and the reservoir mount as the shaft assembly is removed. Wrap a shop towel around the damper body.







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



6

Remove the Schrader valve core from the damper body.



Thread a shock pump into the damper body, then clamp the body eyelet in the vise or hold the damper body by hand.



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7

Inflate the damper body to dislodge the IFP. Continue adding air until the IFP comes to the top of the damper body. Remove the IFP.





Remove and discard the IFP o-ring. Install a new o-ring onto the IFP. Apply RockShox Dynamic Seal Grease to the o-ring.

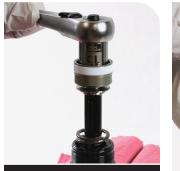




Clamp the shaft eyelet into the vise.



11 Remove the check nut.



15 mm



12

Slide shims and piston off the shaft and onto a hex wrench or pick.

NOTICE

Keep the piston assembly parts in the order they were removed. Do not separate any parts from the piston assembly.

If any piston assembly parts are installed in the incorrect order, the piston assembly, including the tune shim stacks, must be reassembled in the correct order for proper shock function. Refer to the Rear Suspension Shim Tuning Guide for piston assembly and shim stack configurations.





13

Slide the compression shims and top out plate from the shaft and onto a hex wrench or pick.

NOTICE

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







Remove the top out plate from the shaft.







Remove the sealhead from the damper shaft.











18 Use a 1.5 mm guide pin to push the nylon compression ball out of the back of the seal head through the bleed port.

Discard the compression ball.

NOTICE

To ensure proper function, do not reuse the compression ball.







Pierce and remove the rod wiper seal.

Install a new wiper seal. Install the wiper seal with the stepped face away from the seal head.

NOTICE

Do not scratch the seal head with the pick.







Remove and discard the o-ring from the sealhead, then install a new o-ring.







Apply grease to the o-ring, bushing, and into the cavity of the wiper seal.



22

23

24

Insert the Counter Measure spring into the sealhead.

Place a 19 mm socket over the spring. Press down on the socket until the spring snaps into the sealhead.





Remove the bottom out bumper from the shaft. Clean and inspect the shaft for damage and replace if necessary.

Reinstall the bottom out bumper on the shaft assembly.





Remove the check nut. Clean the nut and the threads of the shaft assembly to remove all traces of Loctite.

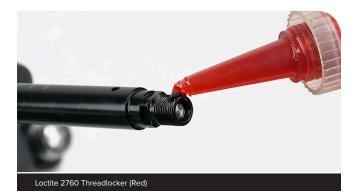
NOTICE

Make sure all traces of Loctite have been removed from the shaft assembly before proceeding. Failure to remove Loctite can restrict movement in the main piston assembly and reduce functionality in the shock.











Install the sealhead assembly onto the damper shaft.





28

Install the top out plate onto the damper shaft.



Slide the compression shim stack off the hex wrench and onto the damper shaft.

NOTICE

Keep the piston assembly parts in the order they were removed. Do not separate any parts from the piston assembly.

If any piston assembly parts are installed in the incorrect order, the piston assembly, including the tune shim stacks, must be reassembled in the correct order for proper shock function. Refer to the *Rear Suspension Shim Tuning Guide* for piston assembly and shim stack configurations.





29

30

Install the main piston onto the damper shaft. Slide the check shim stack from the hex wrench onto the damper shaft.

NOTICE

Keep the piston assembly parts in the order they were removed. Do not separate any parts from the piston assembly.

If any piston assembly parts are installed in the incorrect order, the piston assembly, including the tune shim stacks, must be reassembled in the correct order for proper shock function. Refer to the *Rear Suspension Shim Tuning Guide* for piston assembly and shim stack configurations.





Thread the check nut onto the damper shaft and tighten to 8.4 Nm (75 in-lbs).

Remove the damper shaft assembly from the vise.



Deluxe Coil Assembly and Bleed

Remove the damper body assembly from the vise.

Clean the interior of the damper body. Inspect for scratches.

NOTICE

Scratches in the damper body can cause leaks. If the damper body is scratched it must be replaced.



2

3

Clean the exterior of the damper body.



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

▲CAUTION - EYE HAZARD

Do not look directly at the reservoir as you push on the IFP. Oil may be ejected from the IFP reservoir if you push the IFP down too fast. Wear safety glasses.

Shock Stroke (mm)	IFP Depth (mm)
37.5 - 45	71
47.5 - 55	79
57.5 - 65	87
67.5 - 75	95









Thread the outer compression tool onto the inner compression tool until the ends are flush.

5

6

Note: There are two lengths of inner compression tools. Use the tool that best fits your shock length when installed on the Counter Measure wrench.



Install the Counter Measure wrench onto the the damper shaft sealhead. Make sure the wrench does not obstruct the bleed port in the sealhead.

Install the Counter Measure compression tool onto the damper assembly, with the tab on the compression tool inserted into the notch in the wrench.



Counter Measure Wrench



Counter Measure Compression Tool

Install the spring retainer between the compression tool and the shaft eyelet





Turn the Counter Measure compression tool counterclockwise until it stops and the damper is fully extended.



9

10

11

Clean the RockShox vise blocks, then install them around the damper body threads and clamp in the vise.

NOTICE

The clamp should be at the same level as the IFP, and will hold the IFP in place while the damper is bled. Adjust the preload adjuster as necessary to allow the vise blocks to clamp the IFP in the damper body.



RockShox Rear Shock Body Vise Blocks - 35 mm

Pour oil into the damper body until it is level with the top of the damper body.



Maxima PLUSH Suspension Oil

Slowly install the shaft assembly into the damper body until the threads of the sealhead contact the damper body.

Oil will overflow from the damper body. Wrap a shop towel around the shock.

▲CAUTION - EYE HAZARD

Oil can eject from the damper body. Wear safety glasses.







13

Remove the shock and vice blocks from the vice. Install softjaws in the vice and clamp the shaft eyelet.



Tighten the sealhead to 34 N·m (300 in-lb).



15

14

Insert a new nylon compression ball into the bleed port.

Install the bleed screw into the bleed port and thread it in until you feel it contact the nylon compression ball, then tighten the bleed screw an additional $\frac{1}{2}$ turn.

NOTICE

Overtightening the bleed screw can damage the nylon compression ball.





16

Install the RockShox air valve adaptor tool onto the shock pump and thread the adapter into the reservoir air valve. Inflate the damper body to 200 psi.

Remove the adapter and pump from the damper body.

Separating the pump from the adapter first will allow all of the air to escape from the damper body.

You may substitute nitrogen if you have the proper fill equipment.





Install a new IFP reservoir fill cap o-ring, and install the fill cap into the damper body.



Turn the outer compression tool clockwise to remove pressure on the system. Remove the spring retainer, both compression tools, and the Counter Measure wrench from the damper body.





18

Clean the shock.



Coil Spring Installation

1 Install the coil spring and spring retainer.

Adjust the spring preload adjuster until the coil spring contacts the spring retainer. Ensure that there is no vertical play between the coil spring and the retainer by holding the spring and trying to pull on the shock body.

NOTICE

Do not exceed 5 mm (or five full turns of rotation) on the spring preload adjuster as this will damage the shock. If more than 5 turns are necessary to achieve proper sag, use a higher weight spring.



2

Refer to the rebound and compression settings that you wrote down for your shock at the beginning of the service. Set each adjuster to the recorded number of clicks/turns.



Mounting Hardware Installation

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

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



1

2

3

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



Insert the threaded rod through the shaft eyelet until the push pin rests against the bushing pin.



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





Clamp the catcher in a vise or hold it secure with a 13 mm wrench.

Use a second 13 mm wrench to thread the push pin along the rod until it pushes the bushing pin into the shock eyelet bushing.

Continue to thread the push pin until the bushing pin protrudes from both sides of the eyelet an equal amount.

You may need to unthread the catcher slightly to check the bushing pin spacing.





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





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

This concludes the service for the RockShox Deluxe Select Coil rear shock.



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