



2005 Rear Shock Owner's Manual

FLOAT - FLOAT R - FLOAT RP3

Vanilla - Vanilla R

DHX 3.0 - DHX 4.0 - DHX 5.0

FOX RACING SHOX

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Introduction

Thank you for choosing FOX Racing Shox for your bicycle. In doing so, you have chosen the number one shock absorber in the industry! All FOX Racing Shox products are designed, manufactured and assembled by the finest professionals in the industry. As a consumer and supporter of FOX Racing Shox products, you need to be aware of the importance of setting up your new shock correctly to ensure maximum performance. This manual will provide you with the step-by-step instructions of how to set up your shock. It is a good idea to keep your receipts with this manual and refer to it for service and warranty issues.

Contact Information

FOX Racing Shox
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Phone: 831.768.1100
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Business Hours: Monday-Friday
8:00AM-5:00PM Pacific Time

Shipping Method

FOX uses UPS ground service in the USA.

Payment Methods

Visa, MasterCard,
American Express,
Cashier's Check

Service & Warranty

FOX Racing Shox USA is pleased to offer 48-hour* turnaround for product service, provided the following steps are taken.

1. Contact FOX Racing Shox at 831.768.1100 or Authorized Service Center to obtain a Return Authorization Number (R.A. number) and shipping address. For Authorized Service Centers, please refer to the list on page 107 of this manual, contact FOX Racing Shox or go to www.foxracingshox.com to determine the Service Center nearest you.
 2. Satisfactory proof of purchase receipt is required for warranty consideration.
 3. Mark the R.A. number and the Return Address clearly on the outside of the package and send the item(s) to FOX Racing Shox or your Authorized Service Center with shipping charges pre-paid by sender.
 4. Include a description of the problem, bicycle information (manufacturer, year and model), type of FOX Racing Shox product, spring rate and return address with daytime phone number.
- *Authorized Service Centers operate independently. Service and Warranty turnaround times may vary.

Consumer Safety

RIDING A BICYCLE CAN BE DANGEROUS AND CAN RESULT IN DEATH OR SERIOUS INJURY. TAKE YOUR RESPONSIBILITY TO YOURSELF AND OTHERS SERIOUSLY.

- Maintain your bicycle and suspension.
- Wear protective clothing, eye protection and a helmet.
- Know and ride within your limits.
- Follow IMBA's Rules of the Trail - 1) Ride on open trails only 2) Leave no trace 3) Control your bicycle 4) Always yield trail 5) Never scare animals 6) Plan ahead.

Your bike is equipped with FOX Racing Shox suspension. Before riding take time to read this manual on set-up, use and service of the shock. Contact FOX Racing Shox or an authorized Service Center with questions.

If the shock ever loses oil or makes unusual noise, stop riding and have the shock inspected by qualified personnel. A BROKEN OR MALFUNCTIONING SHOCK CAN RESULT IN LOSS OF CONTROL, CRASHING AND POSSIBLE DEATH OR SERIOUS INJURY. Don't modify your bike frame or shock. Use only genuine FOX Racing Shox parts. Modification, improper service or use of after-market replacement parts voids the warranty and could cause the shock to malfunction and cause loss of control resulting in serious injury or death. Follow the scheduled maintenance recommendations in this Manual. Shock service should be performed by FOX Racing Shox in the USA or an authorized Service Center outside the USA. The exception is Air Sleeve service on air shocks which can be performed by the end user.

FOX Racing Shox CONTAIN A NITROGEN CHARGE. DO NOT PRY OUT THE WHITE NYLON (PLASTIC) PLUG AT THE EYELET END OF THE SHOCK. THE CHARGED PORTION OF THE SHOCK SHOULD ONLY BE OPENED BY A QUALIFIED FOX Racing Shox TECHNICIAN. OPENING A NITROGEN PRESSURIZED SHOCK CAN BE DANGEROUS AND CAN RESULT IN INJURY. DO NOT DO IT!

ON AIR SHOCKS, THE PORTION OF THE SHOCK THAT IS CHARGED WITH NITROGEN DOES NOT NEED TO BE OPENED TO PERFORM AIR SLEEVE SERVICE.

WARNING: DO NOT ATTEMPT TO PULL APART, OPEN, DISASSEMBLE OR SERVICE A SHOCK IF IT IS COMPRESSED OR HAS NOT RETURNED (WILL NOT RETURN) TO ITS ORIGINAL NEUTRAL LENGTH (WITH NO LOAD ON THE SHOCK). THIS CAN RESULT IN SERIOUS INJURY.

Warranty Policy

The factory warranty period for your shock is one year from the original date of purchase of the bicycle or shock. A copy of the original purchase receipt must accompany any shock being considered for warranty service. Warranty is at the full discretion of FOX Racing Shox and will cover only defective materials and workmanship. Warranty duration and laws may vary from state to state and/or country to country.

FLOAT, FLOAT R, FLOAT RP3 Warranty: To maintain high performance, product longevity, and preserve warranty rights, periodic end user maintenance is required. (See the Maintenance Schedule for further instructions)

DHX 3.0, DHX 4.0, DHX 5.0 Warranty: DHX shocks require a minimum of 75psi in the Boost Valve to function properly. If the shock is cycled or ridden with less than 75psi in the Boost Valve emulsification will occur. FOX Racing Shox will not repair shocks in this condition under warranty.

To ensure peak performance, repairs and service to the shock must be performed by FOX Racing Shox in the USA or outside the USA by a FOX Racing Shox Authorized Service Center. Parts, components and assemblies subject to normal wear and tear are not covered under this warranty.

FOX Racing Shox reserves the right to all final warranty or non-warranty decisions.

General exclusions from this warranty shall include but are not limited to any failures caused by:

Installation of parts or accessories that are not qualitatively equivalent to genuine FOX Racing Shox parts.

Abnormal strain, neglect, abuse and/or misuse.

Accident or collision damage.

Modification of original parts.

Lack of proper maintenance. (very important - see Maintenance Schedule)

Any attempt to disassemble damper assembly.

Shipping damages or loss (purchase of full value insurance is recommended).

Damage to interior or exterior caused by improper cable routing, seatpost, rocks, crashes or improper installation.

Oil changes or service not performed by FOX Racing Shox or an Authorized Service Center.

Coil bind / Excessive spring preload (two turns maximum) *Unless otherwise specified.*

Specific exclusions from this warranty shall include:

Parts replaced due to normal wear and tear and/or routine maintenance.

Parts subject to normal wear and tear and/or routine maintenance: Bushings and reducers, Seals, Suspension fluids

DHX shocks damaged by riding with less than 75psi in Boost Valve.

FOX Racing Shox makes no other warranty of any kind, expressed or implied. All implied warranties of merchantability and fitness for a particular purpose which exceed the obligations and time limits stated in this warranty are hereby disclaimed by FOX Racing Shox and excluded from this warranty.

Warranty Q & A

Q. What costs are my responsibility during the warranty period?

A. The customer is responsible for all costs of maintenance services, non-warranty repairs, accident and collision damages, oil, seals, bushings and reducers, and mounting hardware.

Q. What are some examples of "abnormal" strain, neglect or abuse?

A. These terms are general and overlap each other in areas. Specific examples are: Hucking, ghost riding, big drop, stunt / dare-devil riding, riding with broken parts, riding without oil in shock, too much preload, wrong spring rate, etc.

Q. Does the warranty cover incidental costs such as shipping or transportation?

A. No. The warranty is limited to repair of materials and/or workmanship.

Q. May I perform any or all of the recommended maintenance shown in the owner's manual?

A. You may perform FLOAT Air Sleeve, bushing and reducer maintenance only. Oil changes, damper service and repairs must be performed by FOX Racing Shox or an Authorized Service Center.

Disclaimer

FOX Racing Shox is not responsible for any damages to you or others arising from riding, transporting, or other use of your shock or bicycle. In the event that your shock breaks or malfunctions, FOX Racing Shox shall have no liability or obligation beyond repair or replacement of your shock, pursuant to the terms outlined in the warranty provisions of this manual.

General Set-Up Instructions

Shock Terminology

Shock Sag: The amount the shock compresses with the rider on the bicycle in a normal riding position.

Compression Damping: The oil damping resistance felt when trying to compress the shock.

Rebound Damping: The oil damping resistance which controls the rate at which the shock will extend after being compressed.

Preload: The initial amount of force placed on a spring.

Spring Rate: The force needed to compress a spring one inch.

FLOAT: The acronym for FOX Load Optimum Air Technology which delivers the performance of a coil spring with the adjustability and light weight of an air shock.

ProPedal Damping: Technology that provides pedaling efficiency as well as control and sensitivity for big and small hits.

Measuring Sag

To get the best performance from your FOX Racing Shox, it is necessary to adjust sag. Sag is how much the shock compresses or “sags” when you sit on the bicycle.

Use this procedure to measure the sag on your FOX Racing Shox FLOAT and Vanilla shocks.

Measurement #1

1. Before sitting on the bicycle, measure and record the distance from the center of one mounting bolt to the center of the other mounting bolt. This is known as the “eye to eye” measurement. Air shocks have an o-ring on the shock body. The o-ring should be pushed up against the scraper lip of the air sleeve. If there is no o-ring, use the “eye to eye” method.

Measurement #2

2. Sit on the bicycle in a normal riding position. Your weight should be distributed on the saddle, handlebars and pedals. It may be necessary to hold yourself up against a wall or post to steady yourself. Do not bounce on the pedals or saddle.

3. Have an assistant measure and record the eye to eye distance. Subtract Measurement #2 from Measurement #1. The difference is the sag. For an air shock, dismount the bicycle and measure from the scraper lip to the o-ring. This is the sag.

Maintenance

Maintenance Schedule

Item	New	Every Ride	Every 8 hours	Every 40 hours	Every 100 hours
Set sag (All shocks)	X				
Set rebound (shocks w/ rebound adjust)	X				
Clean shock body (all shocks)		X			
Air sleeve maintenance (FLOAT shocks)	Wet & muddy conditions		X		
	Dry & dusty conditions			X	
Clean/inspect bushings & reducers				X	
Suspension fluid service (must be performed by Service Center)					X

Other Maintenance Considerations

On FLOAT shocks there may be a small amount of air sleeve lubricant residue on the body. This is normal. If this residual air sleeve lubricant is not present, this is an indication that the FLOAT air sleeve should be re-lubed.

If you ride in extreme conditions, service your shock more frequently.

Wash your shock with soap and water ONLY.

DO NOT USE A HIGH PRESSURE WASHER ON YOUR SHOCK!

Extensive internal service should be performed by FOX Racing Shox or an Authorized FOX Racing Shox Service Center.

Pump

A FOX Racing Shox high pressure air pump is available for your FLOAT shock. It is used to add and release air pressure from your FLOAT shock. FOX Racing Shox part number is 027-00-001-A.



Remove the air valve cap from the shock.

Thread the pump's valve chuck onto the shock's air valve until pressure registers on the pump gauge. This takes approximately 6 turns. Do not over-tighten pump on air valve as this will damage the pump chuck seal.

Stroke the pump a few cycles. The pressure should increase slowly. If pressure increases rapidly check to make sure the pump is properly fitted and tightened onto the air valve.

Note: If shock has no air pressure, the gauge will not register pressure.

Pump to desired pressure setting. You can decrease pressure by pushing the black bleed valve. Pushing the bleed valve half way down, and holding it there, will allow pressure to escape from the pump and shock. Pushing the bleed valve all the way down and releasing it will allow only a small amount of pressure to escape (micro adjust). When unthreading the pump from the air valve fitting, the sound of the air loss is from the pump hose, not the shock itself.

Note: When you attach the pump to the shock, the hose will need to fill with air. This will result in a lower pressure registering approximately 10 to 20 PSI on the gauge.

Note: Average air pressure range is from 50 to 300 PSI. DO NOT EXCEED 300 PSI. Replace the air valve cap before riding.

"Stuck Down" FLOAT Shock

Under certain circumstances a FLOAT shock can become "stuck down". This is a rare condition but if it occurs, please follow the instructions below.

If your FLOAT shock has not returned to its original neutral length (eye to eye position), DO NOT attempt to disassemble the outer air sleeve or any other part of the shock. Air has become trapped in the Air Negative chamber and can cause serious injury if the shock is disassembled. This condition is known as "stuck down". If the shock is stuck down, return it immediately to FOX Racing Shox or an Authorized FOX Racing Shox Service Center for service. (see Service / Warranty for details)

Procedure to check for a stuck down shock:

1. Release air pressure from the shock.
2. Using a FOX Racing Shox high pressure pump, pressurize the shock to 250 psi.
3. If the shock does not extend it has become stuck down.

DO NOT ATTEMPT TO PULL APART, OPEN, DISASSEMBLE OR SERVICE A SHOCK THAT IS STUCK DOWN. SERIOUS INJURY CAN RESULT. Contact FOX Racing Shox or an Authorized FOX Racing Shox Service Center for assistance.

FLOAT Shocks

Adjusting Air Pressure and Sag

To get the best performance from your FLOAT shock, it is necessary to adjust sag. On your FLOAT shock this is done by adjusting the air pressure. The air pressure needed is determined by the rider's weight and riding conditions. Sag is how much the shock compresses when you sit on the bicycle. Increasing air pressure will make the shock stiffer. Decreasing the air pressure will make the shock softer. (Note: It might be necessary to change air pressure to achieve the proper sag setting). The smoothest ride will be attained by running the air pressure low enough to occasionally bottom out.

Note: Proper air pressure is subject to personal preferences as well. Some people prefer a softer shock and others a firm one. During the first few rides, experiment with different pressures and find the one that best suits your riding style.

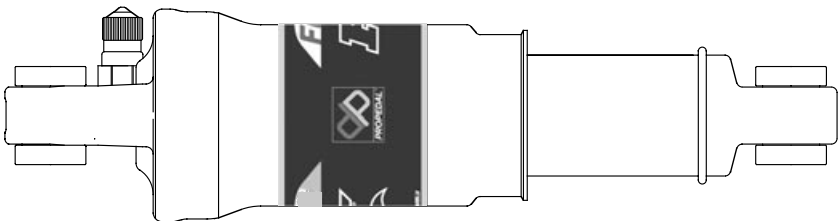
1. Locate the Schrader air valve on the shock and remove the valve cap.
 2. Screw the FOX Racing Shox pump onto the air valve until the pump shows pressure on the gauge. Do not over-tighten.
 3. Add air pressure until desired pressure is shown on the gauge.
 4. Unthread the pump from the air valve and measure the sag.
- Repeat steps 2-4 until proper sag is achieved. Replace valve cap.

FLOAT Sag Table					
Common shock lengths		Shock travel		Recommended sag	
inches	millimeters	inches	millimeters	inches	millimeters
5.500	139.7	1.00	25.4	.25	6.4
6.000	152.4	1.25	31.8	.31	7.9
6.500	165.1	1.50	38.1	.38	9.5
7.250	184.2	1.75	44.4	.44	11.1
7.875	200.0	2.00	50.8	.50	12.7

FLOAT

Shock Features

Adjustable Air Spring - High Volume Air Sleeve - Internal Floating Piston - Oil Damping
Self Adjusting Air Negative Spring - Nitrogen Charged - Speed Sensitive Compression
Damping - Light-weight Chassis - Factory ProPedal



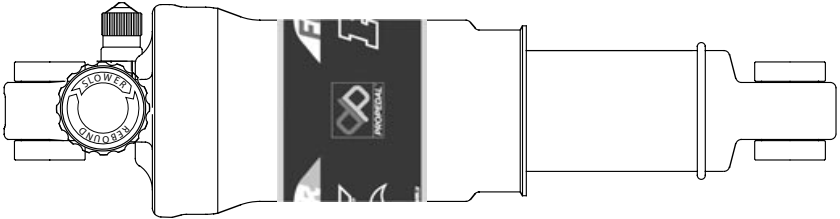
FLOAT Air Spring Set-up

Follow the instructions above in the Adjusting Air Pressure and Sag Section.

FLOAT R

Shock Features

Adjustable Air Spring - High Volume Air Sleeve - Internal Floating Piston - Oil Damping
Self Adjusting Air Negative Spring - Nitrogen Charged - Speed Sensitive Compression
Damping - Light-weight Chassis - Factory ProPedal
Externally Adjustable Rebound Damping - Speed Sensitive Rebound Valve Stack



FLOAT Air Spring Set-up

Follow the instructions on page 8 in the Adjusting Air Pressure and Sag Section.

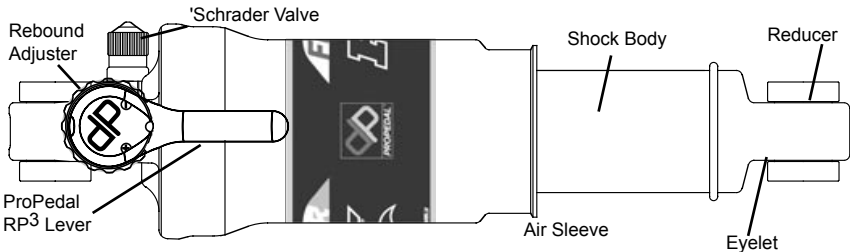
Rebound Adjustment

Rebound damping controls the rate at which the shock returns after it has been compressed. The red adjuster dial can be turned clockwise for slower rebound and counter-clockwise for faster rebound. There is a wide range of adjustment enabling the rider to tune the shock to any air pressure and riding condition. The proper rebound setting is a personal preference and varies depending on rider weight, riding style and riding conditions. As a general rule, rebound should be as fast as possible without kicking back and pushing the rider off the saddle when riding the bicycle in rough terrain. If rebound is too slow the suspension will not function properly and the wheel will not follow the changing terrain. Determining the proper rebound setting may take a number of rides. Use the "curb test" to start dialing in your rebound setting. Do this test on flat ground where there is little auto traffic and plenty of room. Ride at normal cruising speed and stay seated. Ride off a curb and monitor the rebound. If the bike oscillates a few times after landing the rebound is too fast. If the shock does not return promptly it is too slow. Start with the dial in the middle (about 6 clicks from full slow) and adjust 2 clicks in the direction needed. Single clicks of adjustment can be used to fine tune the rebound damping. During the first few rides, adjust the rebound damping and note the different ride characteristics. Your necessary or optimum rebound damping setting may change with different riding conditions.

FLOAT RP3

Shock Features

Adjustable Air Spring - High Volume Air Sleeve - Internal Floating Piston - Oil Damping
Self Adjusting Air Negative Spring - Nitrogen Charged - Speed Sensitive Compression
Damping - Light-weight Chassis - 3 External Positions of ProPedal - Externally Adjustable
Rebound Damping Speed Sensitive Rebound Valve Stack - Dual Overhead Cam



FLOAT Air Spring Set-up

Follow the instructions on page 8 in the Adjusting Air Pressure and Sag Section.

Rebound Adjustment

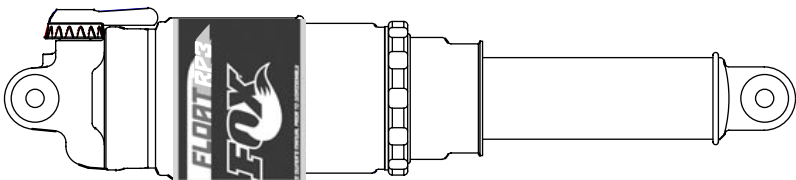
Please refer to Rebound Adjustment for FLOAT R.

ProPedal RP3 Damping Adjustment

The FLOAT RP3 features a three position ProPedal tuning lever allowing on-the-fly ProPedal tuning. ProPedal damping reduces pedal induced suspension bob. The three settings of the lever are full ProPedal, light ProPedal and Plush. Use the different settings to tune the shock to different riding conditions and situations. For example, use the full ProPedal position for riding to the top of the mountain and then switch to the Plush position for the descent. Because suspension designs vary, some pedal inherently better than others. To determine which ProPedal position is best, pedal the bicycle at about 15 mph and monitor the shock movement. Switch between positions and select the one that reduces suspension movement most effectively while providing the desired amount of bump absorption. The setting may change depending on conditions and riding styles.

Air Volume Adjuster - AVA

Some FLOAT shocks feature an Air Volume Adjuster or AVA. AVA technology affords a new level of fine tuning adjustment for mountain bike rear shocks. Turning the AVA ring increases or decreases the volume of the positive air spring chamber allowing the rider to alter the shape of the spring curve. The AVA system creates a shock that, in its smallest setting, is up to 30% more linear spring rate than a standard FLOAT shock. AVA allows as much as 200 lbs of adjustment in spring rate from fully closed to fully open when fully compressed. AVA is a pre-ride tuning feature. The AVA system is not intended to be used on the trail or on the fly. It is important to clean your shock, especially the threads of the AVA air sleeve prior to adjustment. In most cases, maximum air volume will be desired. Rotation of the AVA ring requires near complete deflation of the shock. Using a shock pump, let most or all of the air from the shock so that the AVA ring can be easily turned. Turn the ring until it just touches the wire ring which is snapped onto the air sleeve. This is the maximum volume setting. Pressurize the shock and set sag as normal. AVA does not affect sag. If the shock seems to bottom out too easily or too often, deflate the shock, rotate the ring to the next setting on the air sleeve. Pressurize the shock, set sag and test again for full stroke performance. Repeat this process until the setting that best fits your riding style and terrain is determined. Air sleeve service can be performed as on other FLOAT shocks. Clean AVA seals after every other normal FLOAT seal service, especially if riding conditions are muddy or dusty. Carefully remove wire rings and air sleeves. Clean and inspect seals and parts for damage or wear. Re-lubricate and carefully re-assemble. Refer to diagram for areas with critical sealing and lubrication needs.



Air Sleeve Maintenance

See www.foxracingshox.com for downloadable video instructions.

Release all air pressure from Air Valve.

Cycle shock a few times to release pressure from the air negative spring.

Release all air pressure from Air Valve again.

Remove shock from bike

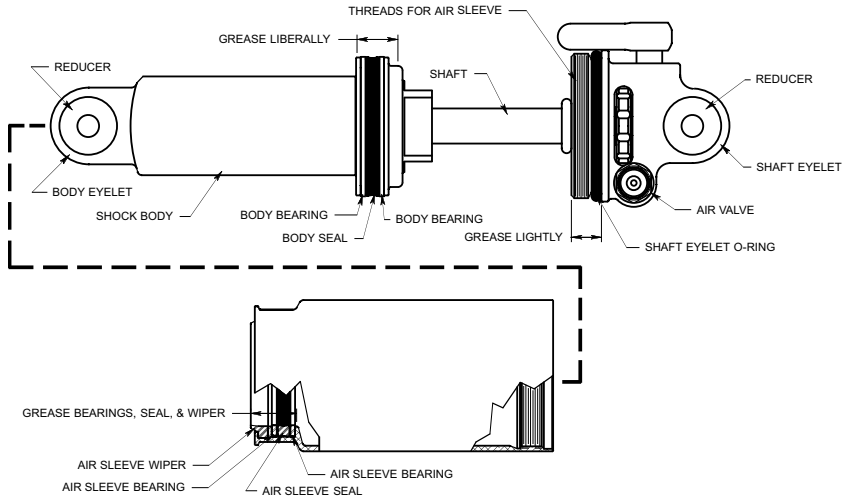
Remove mounting hardware.

Clamp shaft eyelet in a vise with soft jaws being careful not to crush the air valve, RP3 lever, or rebound knob.

Slide a screwdriver or punch through the body eyelet to keep the air sleeve from coming off the body.

Loosen air sleeve by turning counter clockwise and slide it down the body.

Remove screwdriver or punch and remove air sleeve from shock.



Cleaning and Inspecting

Clean inside of the air sleeve with parts cleaner. Inspect the seal and bearing inside of the air sleeve. Replace if damaged or worn.

Clean body, body seal, body bearings and shaft with parts cleaner.

Inspect body seal and body bearings for wear or damage. Replace if damaged or worn.

Greasing and Reassembling

Lightly lube the shaft eyelet O-ring and shaft eyelet threads with FLOAT Fluid or Multi-purpose Lithium based grease (NLGI #2).

Liberaly lube the body seal and body bearing, leaving a reservoir of lube above the body bearing. Lightly grease the air sleeve seal, air sleeve bearing, and air sleeve wiper. Use Slick Honey on this part of the shock for best results.

Slide the air sleeve over the body until the air sleeve wiper is at the end of the body. Leave the air sleeve unthreaded at this time.

(The air sleeve will be very difficult to compress because there is pressure trapped in the air negative chamber. Waiting until after the shock is mounted in the bike will allow the leverage of the bike to easily compress the shock.)

Dry bushings and reducers.

Install reducers in eyelet bushings and install shock in bike.

Carefully compress shock until you can screw on the air sleeve. Don't let the air sleeve slip off the body.

Thread air sleeve onto shaft eyelet hand tight.

Inflate shock using inflation instructions listed in the *Pump Instructions*.

Note: If needed, the Air Sleeve Seal Kit part number is 803-00-050-B.

FLOAT Fluid part numbers: 025-03-002-A 5 cc Pillow Pack

025-03-003-A 8 oz. Bottle

Specialized Bicycles with Brain and Brain Adjust Technology

Brain technology senses bumps in the trail and activates the suspension giving the rider the efficiency of a hardtail with all the benefits of a full suspension bicycle.

To optimize the performance of the shock, it is important to set it up correctly. Taking the time to tune the spring rate (air pressure) and rebound damping (rate at which the shock returns) will greatly enhance the riding experience.

The method for setting sag on a Brain-equipped bicycle is slightly different than that used for traditional shocks.

1. Begin by sliding the travel indicator o-ring to the scraper lip.
2. Sit on the bicycle in a normal riding position. It is best to wear normal riding gear during this step. Remain steady and still in this position for ten (10) seconds. This will allow the shock to "sit" into its travel.
3. Dismount the bicycle and measure between the scraper lip and the travel indicator o-ring.
4. Recommended sag is 10mm. Adjust air pressure in 5psi increments until sag is achieved.

An alternative to setting sag is to set the air pressure according to the air spring chart below.

1. Find the rider's weight in the left column and set air pressure per the middle column.
2. Set the rebound dial per the column on the right of the air spring chart.

Setting Rebound

Rebound damping controls the rate at which the shock returns after it has compressed. The red adjuster dial is used to speed up or slow down the rebound damping.

1. Turn the Rebound Adjuster Dial clockwise until it stops.
2. Consult the air pressure chart below and find the rider's weight in the left column. Read across to the column on the right and find the corresponding number of clicks and set the Rebound Adjuster Dial by turning the dial counter-clockwise and counting the number of clicks.

Bump Threshold Adjustment

Some Brain-equipped shocks feature a bump threshold adjustment. This changes the Brain's sensitivity to bumps allowing a firmer (race) or softer (comfy) ride.

1. Rotate the blue lever at the base of the Brain towards the left chainstay to increase the bump threshold. This will make the Brain less sensitive thus requiring a larger bump to activate.
2. Rotate the blue lever away from the left chainstay to decrease the bump threshold. This will increase the sensitivity of the Brain. Smaller bumps will now activate the suspension.

Rider weight Pounds (Kilograms)	Air pressure PSI	Rebound clicks from closed
90-100 (41-45)	60-62	21-20
100-110 (45-50)	62-65	21-20
110-120 (50-54)	65-68	20-18
120-130 (54-60)	68-71	20-18
130-140 (60-64)	71-74	18-16
140-150 (64-68)	74-79	18-16
150-160 (68-73)	79-84	18-16
160-170 (73-77)	84-89	16-14
170-180 (77-82)	89-94	16-14
180-190 (82-86)	94-99	16-14
190-200 (86-91)	99-104	14-12
200-210 (91-95)	104-114	14-12
210-220 (95-100)	114-124	14-12
220-230 (100-104)	124-134	12-10
230-240 (104-109)	134-144	12-10
240-250 (109-113)	144-154	10-8
250-265 (113-120)	154-169	10-8
265-280 (120-127)	169-184	8-6
280-295 (127-134)	184-199	6-4

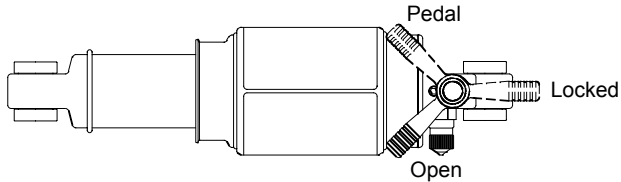


Air sleeve service can be performed as on other FLOAT rear shocks (see pages 10&11). The strut must be removed before removing the air sleeve. A 22mm open end wrench is required to remove the strut. Torque to 175-200 in-lb (19.5-22.5 N-m) when reinstalling. A 22mm crowfoot torque wrench is required to install the strut.

Note: Most repairs and warranty issues related to the FOX FLOAT R shock with Brain Technology must be performed through an Authorized Specialized Dealer in your country. Please contact your Specialized Dealer for service, repair or warranty issues. Some FOX Racing Shox Service Centers can service and repair Brain shocks. Please see www.foxracingshox.com for Service Center updates.

Specialized Bicycles with Triad Shocks

Some Specialized bicycles feature a FOX Racing Shox Triad shock. The Triad has three on-the-fly suspension adjustment settings - 1) Fully locked out 2) ProPedal for a more efficient ride and 3) Fully open and plush. Generally, the locked out position is used for climbing and road riding, the ProPedal position is used for pedalling sections where a combination of compliance and efficiency is still needed and the fully open and plush position is used for descending.



K2 Razorback Pull Shock

The K2 Razorback is equipped with a FOX Racing Shox FLOAT RL Pull Shock. To get the best performance from your K2 Razorback, it is necessary to adjust the suspension. The first step is to adjust the air pressure using the Schrader valve on the shock. The proper air pressure is a personal preference and varies upon your weight and riding style. During the first few rides adjust the air pressure to find your personal preference. Set air pressure (psi) equal to your body weight as a starting point. If necessary, adjust in 5psi increments to suit your personal preference.

Rebound Adjustment

K2 Razorbacks have a shock with rebound adjustment. Rebound damping is adjusted by the red rebound wheel. Rebound damping controls the speed at which the shock returns to its original position after the shock is compressed. The shock has 12 clicks of adjustment from fully closed. Turning the knob clockwise will cause the rebound to be slower.

The proper rebound setting is a personal preference and varies upon your weight and riding style. Experts agree that rebound should be as fast as possible without kicking back and pushing the rider off the saddle when riding the bike in rough terrain. If rebound is set too slow, the suspension will not have the time to extend before hitting the next bump



Note: When the red rebound wheel is advanced to positions towards full in, or full clock-wise, the blue lock-out lever will feel slack. This is normal.

Rider weight Pounds (kilograms)	Air pressure (psi)
90-100 (41-45)	90-100
100-110 (45-50)	100-110
110-120 (50-54)	110-120
120-130 (54-60)	120-130
130-140 (60-64)	130-140
140-150 (64-68)	140-150
150-160 (68-73)	150-160
160-170 (73-77)	160-170
170-180 (77-82)	170-180
180-190 (82-86)	180-190
190-200 (86-91)	190-200

Compression Enhancement

Razorbacks come with a shock with compression enhancement. The purpose of the compression enhancement is to limit suspension movement when desired by the rider. It is adjusted with the blue lever at the end of the shock. The shock can be oriented two ways on the bike. If the lever is located on the right side of the shock and bike (from the rider's perspective) rotate the lever until it is pointing up and back for normal compression damping. From that position, rotate the lever 90° until it points down and back for compression enhancement. If the lever is on the bottom of the shock, when it points left and back there will be extra compression damping limiting suspension movement. Rotate the lever 90° until it points right and back for normal compression damping.

Vanilla Shocks

To get the best performance from your Vanilla shock, it is necessary to adjust sag. On the coil-over shocks this is done by adjusting the spring preload or changing springs. Sag is how much the shock compresses when you sit on the bicycle. Increasing spring preload will make the shock compress less. Decreasing the preload will make the shock compress more. The smoothest ride will be achieved with one turn of preload. (Note: it might be necessary to change spring rate to achieve the proper sag setting.) Adjusting sag setting is easiest with two people, the bike rider and an assistant. See page 6 for Sag Measurement instructions.

If more than 2 turns of preload are required to achieve the correct amount of sag, it is recommended that a higher rate spring be installed.

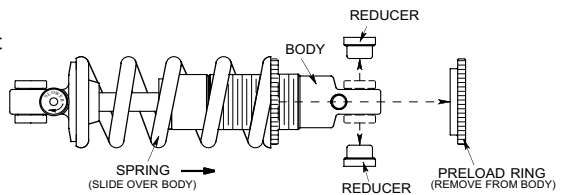
Vanilla & DHX Sag Table	
Shock travel	Recommended sag
Inches (Millimeters)	Inches (Millimeters)
1.00 (25.4)	.25 (6.4)
1.25 (31.7)	.31 (7.9)
1.50 (38.1)	.38 (9.5)
1.75 (44.4)	.44 (11.1)
2.00 (50.8)	.50 (12.7)
2.25 (57.1)	.56 (14.3)
2.50 (63.5)	.63 (15.9)
2.75 (69.9)	.69 (17.5)
3.00 (76.2)	.76 (19.0)

To set preload it is necessary to adjust the spring preload ring. FOX Racing Shox recommends no more than two (2) turns of preload. Increase preload by turning the ring clockwise. Decrease preload by turning the ring counter-clockwise. Make sure the preload ring is always in contact with the spring. If desired preload cannot be achieved with the preload ring, change the spring. (See Installing and Removing Springs) A stiffer spring (higher spring rate) decreases sag and a softer spring (lower spring rate) increases sag. Springs are available from FOX Racing Shox (800-FOX-SHOX) and authorized dealers and Service Centers. Numbers are printed on the outside of the spring coils indicating the rate (in pounds) and travel (in inches) Example: 550-1.95 is a 550 pound-per-inch spring rate with 1.95 inches of travel. Please note this number when ordering springs. Also be prepared with the make, model and year of the bicycle plus shock travel, rider weight and riding style.

Installing and Removing Springs

Vanilla & Vanilla R

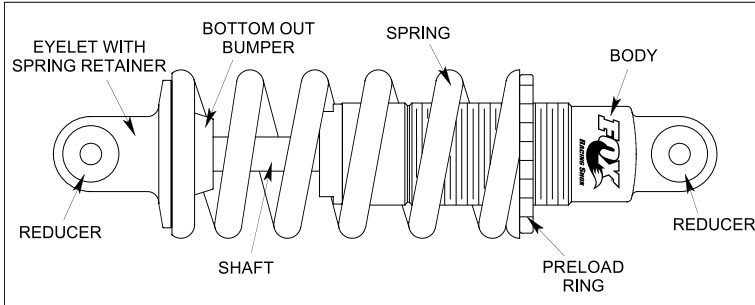
Loosen and remove the preload ring from the body. Note: It might be necessary to remove the reducers from the body end of the shock to remove the spring. Slide the spring over the shock body. Install your new spring by sliding the spring over the shock body. Tighten the preload adjuster one full turn to keep the preload ring from shaking loose.



Vanilla

Shock Features

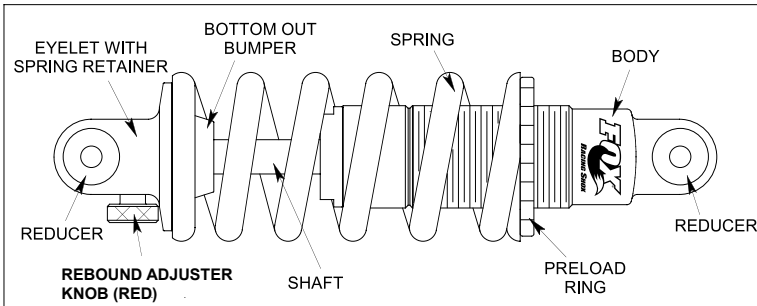
Adjustable Spring Preload - External Coil Spring - Internal Floating Piston - Oil Damping
One Piece Aluminum Body - One Piece Eyelet - Nitrogen Charged
Speed Sensitive Compression Damping



Vanilla R

Shock Features

Adjustable Spring Preload - External Coil Spring - Internal Floating Piston - Oil Damping
One Piece Aluminum Body - One Piece Eyelet - Nitrogen Charged
Speed Sensitive Compression Damping - Factory Tuned ProPedal - Multi-Valve Piston
12 Click Externally Adjustable Rebound Damping - Speed Sensitive Rebound Valve Stack



Rebound Adjustment

Rebound damping controls the rate at which the shock returns after it has been compressed. The red adjuster dial can be turned clockwise for slower rebound and counter-clockwise for faster rebound. There is a wide range of adjustment enabling the rider to tune the shock to any air pressure and riding condition. The proper rebound setting is a personal preference and varies depending on rider weight, riding style and riding conditions. As a general rule, rebound should be as fast as possible without kicking back and pushing the rider off the saddle when riding the bicycle in rough terrain. If rebound is too slow the suspension will not function properly and the wheel will not follow the changing terrain. Determining the proper rebound setting may take a number of rides. Use the "curb test" to start dialing in your rebound setting. Do this test on flat ground where there is little auto traffic and plenty of room. Ride at normal cruising speed and stay seated. Ride off a curb and monitor the rebound. If the bike oscillates a few times after landing the rebound is too fast. If the shock does not return promptly it is too slow. Start with the dial in the middle (about 7 clicks from full slow) and adjust 2 clicks in the direction needed. Single clicks of adjustment can be used to fine tune the rebound damping. During the first few rides, adjust the rebound damping and note the different ride characteristics. Your rebound damping setting may change with different riding conditions.

DHX

Installing DHX Shocks

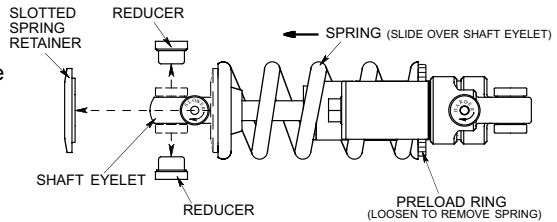
If installing a DHX shock on a bicycle that was not originally supplied with a DHX shock, it is very important to install the shock without the spring and carefully cycle the suspension through its travel. Check that all parts of the shock are clear of the frame and swingarm through the full travel of the suspension.

Setting Sag on DHX Shocks

Set sag on DHX shocks the same as Vanilla shocks. See instructions and Sag table on page 14. Sag on DHX shocks can be as much as 33% of shock travel.

Changing Springs

Back off preload ring to loosen the spring until the slotted spring retainer can be removed from the shock. Note: It might be necessary to remove the reducers from the shaft end of the shock to remove the spring. Slide the spring over the eyelet. Slide the new spring on over the eyelet,

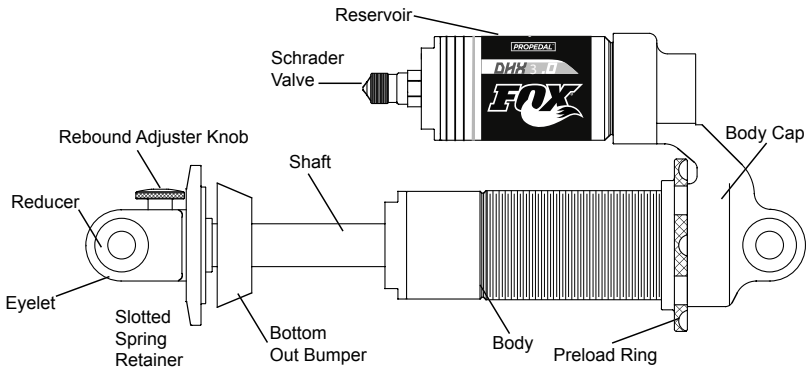


and re-install the spring retainer. Note: The slotted spring ring retainer slot must rest on the flat side of the spring. If the slot is straddling the gap caused by the end of the spring wire the slotted spring retainer may bend. Tighten the preload adjuster one full turn to keep the spring retainer from shaking loose. Align the slotted spring retainer so that the rebound knob is in the middle of the slot.

DHX 3.0

Shock Features

Adjustable Spring Preload - External Coil Spring - Internal Floating Piston - Oil Damping
Nitrogen Charged - Speed Sensitive Shim Controlled Compression Damping
12 Click Externally Adjustable Velocity Sensitive Rebound Damping - Speed Sensitive Rebound Valve Stack - Boost Valve Position Sensitive Adjustment - Factory Tuned ProPedal



Rebound Adjustment

Please refer to Rebound Adjustment for the Vanilla R on Page 15.

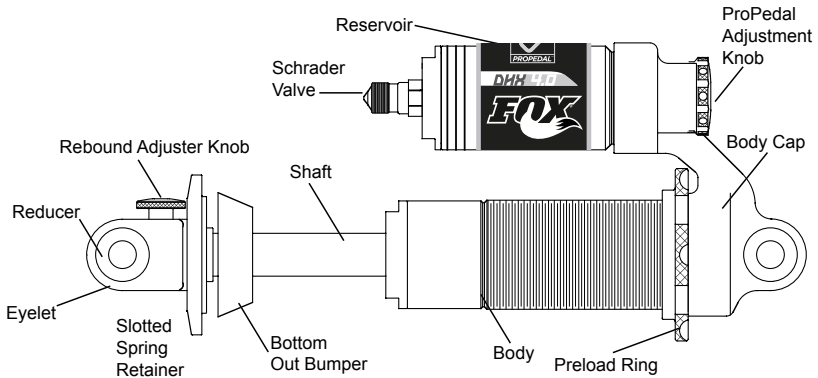
Boost Valve Adjustment

The Boost Valve controls the shock's compression damping. On the 3.0 model you can alter the pedaling efficiency and bottoming resistance of the shock via the Schrader valve. The pressure range of the Boost Valve is 75-200psi and is factory set at 150psi which should be a good starting point for most riders. Ride the bicycle on rough terrain and note the compression characteristics of the shock. If it seems that the ride is too firm and there is too much compression damping, attach a shock pump to the schrader valve and reduce the air pressure 10-15psi. Repeat this procedure until desired compression damping is achieved. If compression damping is too light, add 10-15psi until desired compression damping is achieved. Use care when attaching and removing the pump not to lose too much air pressure. The Boost Valve uses high pressures in a small volume so small pressure losses can affect performance. **Important Note:** DO NOT ride or cycle the DHX shock with less than 75 psi in the Boost Valve. This will damage the shock requiring repairs that are NOT covered under warranty.

DHX 4.0

Shock Features

Adjustable Spring Preload - External Coil Spring - Internal Floating Piston - Oil Damping
Nitrogen Charged - Speed Sensitive Shim Controlled Compression Damping
12 Click Externally Adjustable Velocity Sensitive Rebound Damping - Speed Sensitive
Rebound Valve Stack - Boost Valve Position Sensitive Adjustment - ProPedal Adjustment



Installing DHX Shocks

Please see the note about DHX Shock installation on Page 17.

Rebound Adjustment

Please refer to Rebound Adjustment for the Vanilla R on Page 15.

Setting Sag on DHX Shocks

Set sag on DHX shocks the same as Vanilla shocks. See instructions and Sag table on page 14. Sag on DHX shocks can be as much as 33% of shock travel.

Boost Valve Adjustment

Please refer to Boost Valve Adjustment for the DHX 3.0 on Page 17.

ProPedal Adjustment

The ProPedal Adjustment knob allows the rider to adjust the amount of ProPedal damping. ProPedal damping affects the first part of the compression stroke and is designed to control pedal induced suspension bob. Since suspension designs vary not all bicycles require the same degree of ProPedal damping. There are 15 clicks of adjustment. Rotate the knob all the way counter-clockwise for the lightest ProPedal setting and all the way clockwise for the most ProPedal damping.

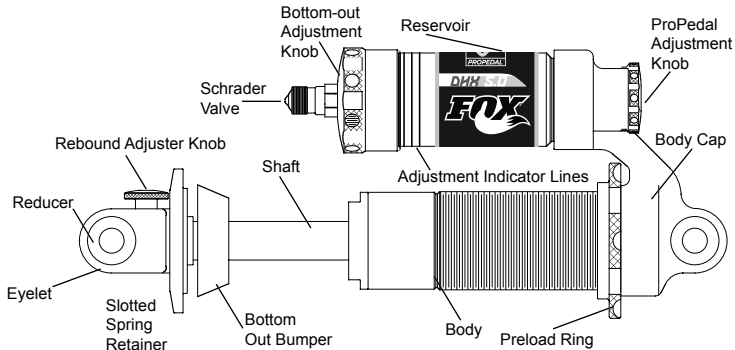
ProPedal and Boost Valve Interaction

While they are separate adjustments, aspects of the Boost Valve can influence the ProPedal adjustment. If the ProPedal Adjustment Knob is all the way counter-clockwise in the lightest ProPedal damping position and the compression damping is still too strong, attach a shock pump to the Schrader Valve on the Boost Valve and reduce the pressure 10-15psi. Repeat these steps to achieve the desired compression damping. If there is not enough compression damping with the ProPedal knob fully clockwise, add 10-15psi to the Boost Valve until desired compression damping is achieved.

DHX 5.0

Shock Features

Adjustable Spring Preload - External Coil Spring - Internal Floating Piston - Oil Damping
Nitrogen Charged - Speed Sensitive Shim Controlled Compression Damping
12 Click Externally Adjustable Velocity Sensitive Rebound Damping - Speed Sensitive
Rebound Valve Stack - Boost Valve Position Sensitive Adjustment - ProPedal Adjustment
Bottom-out Adjustment



Installing DHX Shocks

Please see DHX Shock installation instructions for the DHX 3.0.

Setting Sag on DHX Shocks

Set sag on DHX shocks the same as Vanilla shocks. See instructions and Sag table on page 14. Sag on DHX shocks can be as much as 33% of shock travel.

Rebound Adjustment

Please refer to Rebound Adjustment for the Vanilla R on Page 15.

Boost Valve Adjustment

Please refer to Boost Valve Adjustment for the DHX 3.0.

ProPedal Adjustment

Please refer to ProPedal Adjustment for the DHX 4.0.

ProPedal and Boost Valve Interaction

Please refer to ProPedal and Boost Valve Interaction for the DHX 4.0.

Bottom-out Adjustment

The blue knob on the end of the reservoir is used to adjust bottom-out resistance and affects the last part of the compression stroke. Bottom-out should be adjusted with a maximum of 125psi in the Boost Valve. The knob can be turned by hand or with a 4mm hex key inserted into one of the holes around the perimeter. **Do not use any other tool to turn the knob - 4mm hex key only!** Turn the knob all the way clockwise for the most bottom-out resistance and counter-clockwise for the least. There are three (3) rotations of adjustment and three (3) corresponding Adjustment Indicator Lines on the reservoir.

Note: If the knob feels gritty during rotation, set the knob to maximum volume and then use a 2mm (8-32) hex key to loosen the set screws in the perimeter holes and remove the knob. Clean thoroughly, grease and re-install.