1999 SID Rear Shock
Owner's Manual

ROCK SHOX®

At A Glance Maintenance Interval Checklist

Check the following for each maintenance interval. For further details see page 8.

Every Ride (Inspect)	Eight Hours of Riding	Annually
Wipe shock body clean	Clean and grease body eye	Change oil
Check for damage		Overhaul shock
Check air pressure in positive and negative chamber		

IMPORTANT: TO MAINTAIN HIGH PERFORMANCE, SAFETY AND LONG LIFE, PERIODIC MAINTENANCE IS REQUIRED. PERFORM MAINTENANCE MORE OFTEN IF YOU RIDE IN EXTREME CONDITIONS.

Table of Contents

Congratulations! You have purchased the best in suspension components. RockShox products are made of lightweight, high-strength materials, and are designed to balance high performance with ease of maintenance. This manual contains important information about the safe installation, operation, and maintenance of your purchase. We urge you to read it carefully, become familiar with its contents, and follow our recommendations to help make your bicycling experience enjoyable and trouble free.

SID Rear Shock Features

- New air spring technology with a positive and negative chamber
- External positive and negative air spring adjustment
- External rebound adjustment (some models)
- Super light integrated design
- Tango tuned to perform in conjunction with RockShox front forks

Standard Equipment (Supplied With SID Rear Shocks)

Mounting Hardware

Owner's Manual

Constant fill air adapter

Optional Equipment

Pump (with Schrader valve)

Consumer Safety Information

Riding a bike is dangerous. Not properly maintaining or inspecting your bike is even more dangerous. It's also dangerous not to read these Instructions.

1. Before riding the bicycle, be sure the brakes are properly installed and adjusted. If the brakes don't work properly, the rider could suffer serious and/or fatal injuries.
2. If the shock ever loses oil or if it makes sounds of excessive topping out, stop riding the bicycle immediately and have the shock inspected by a dealer or call RockShox. Continuing to ride with the shock in either of these conditions could result in loss of control of the bicycle with possible serious and/or fatal injuries.
3. Always use genuine RockShox parts. Use of after-market replacement parts voids the warranty and could cause structural failure to the shock. Structural failure could result in loss of control of the bicycle with possible serious and/or fatal injuries.

Installation Instructions

It is extremely important that your RockShox Deluxe shock is installed correctly by a qualified technician with proper tools. Consult your bicycle manufacturers instructions for proper installation of your SID shock. Improperly installed Deluxe shocks can be extremely dangerous and can result in severe injuries.

Tuning Your Rear Shock

By adjusting the air pressure, the RockShox Sid rear shock can be tuned to your particular weight, riding style and terrain.This shock is designed to be tuned for the soft, plush downhill ride or the long climbs, or a combination of both.

When tuning suspension, always make one change at a time and write it down. This takes patience, but allows you to understand how each change affects your ride. Use a familiar trail to make small adjustments at a time. To understand the tuning range it may also help if you ride one extreme to the other (low vs. high pressure or maximum vs. minimum rebound). Keeping a record lets you know what changes you have tried that work and suggests what changes you might try. Ask a shop or local riders what they have found works well. These resources are typically your best bet, but don't hesitate to call RockShox about specific tuning needs when necessary. A list of phone numbers is on page 12.

Selecting Air Pressure (Spring Rates)

The air pressure you run in the shock varies depending on weight and riding style. Air pressure can be changed in either the positive or negative air chamber (see fig. 1). The following sections will explain the differences between the positive and negative air pressure as well as how to adjust both features.

Fig. 1

Compression Air Chamber (Positive)

The valve on the large diameter of the shock is for positive air pressure (fig. 1). Adjusting positive air pressure determines the spring rate or stiffness of the shock. The more air you put in, the firmer your shock will get.

For heavier, more aggressive riders, we recommend increasing the air pressure in the compression chamber.

By using a hand pump, you may change the air pressure in the positive air chamber (main spring).

Goal:

Find the air pressure that allows you to use the maximum travel available. Ideally you want the shock to occasionally bottom out.

Do the following to adjust the positive air chamber for proper spring rate:

1. Locate the positive (compression) air valve (fig. 1).

Tip: Around the shock is a decal listing air pressure range. This range is recommended for your particular bicycle and should be used as a starting point when choosing air pressure. Lighter riders should start at the bottom of the range while heavier riders should start at the top. We recommend starting out softer and working your way up.

2. Remove the positive air valve cap. Slight air pressure may build up under the cap causing it to pop off, this is normal. Be careful not to lose the cap.

3. Lightly thread constant fill adapter onto positive air valve. Do not over-tighten.
4. Fill shock to desired spring rate (air pressure).
5. Carefully push down on seat with pump installed. You may feel what the extra air does.
6. Record the final PSI rating.
7. Remove the pump once the spring rate is achieved.
8. Reinstall the cap, tightening by hand.

Negative Air Chamber

The negative air valve (fig. 1) sets the characteristics (feel) of your bike. You may change the air pressure for the negative spring using a hand pump.

Increasing the negative spring pressure is ideal for plush downhill riding. Decreasing the air is ideal for climbing.

Do the following to adjust the negative air spring for desired ride characteristics:

1. Locate the negative air valve.

Tip: the decal around the valve includes pressure ranges. This will give you your starting point for the negative air pressure which Equals positive pressure +/-20 psi. For example, if there is 150 psi in the positive air valve then:

150 psi - 20 psi = 130 psi for a cross country ride
150 psi + 20 psi = 170 psi for a plush downhill ride
Between 130 to 170 psi gives you a mixture of cross country and downhill

2. Remove the negative air valve cap. Slight air pressure may build up under the cap causing it to pop off, this is normal. Be careful not to lose the cap.
3. Lightly thread the constant fill adapter onto the negative air valve. Do not over-tighten.
4. Fill the shock to the desired air pressure. We recommend starting with equal or slightly less pressure than that of the positive air chamber. Notice the sag increases and the shock gets more supple as you add more air into the shock. Add the desired negative air pressure.
5. Remove the pump when the spring rate is achieved.
6. Reinstall the cap.

Advanced Tuning Hints

- Negative air pressure tunes sag. Typically, sag is 25 percent of all available wheel travel for cross country and 33 percent for downhill.
- Aggressive riding or rough terrain may warrant a higher spring rate.
- Faster, more responsive steering can be achieved by decreasing the sag at the rear of the bike (increases head angle). Slower and more stable steering can be achieved by increasing the sag at the rear of the bike (decreases head angle).

∫ Using less negative air pressure than positive air pressure will give you an easier climbing ride.

∫ Using more negative air pressure than positive air pressure will give you a plush downhill ride.

- To determine maximum travel, leave 50 psi in each air chamber (positive and negative). Place a zip-tie around the body so that when the shock is compressed it moves the tie down on the body to mark maximum travel. Push on the seat or ride the bike to determine maximum travel (be sure shock is filled with air before riding).

Rebound Damping Adjustment (some models)

The SID shock includes a red rebound damping adjustment knob. The rebound controls the extension or return of the shock. The shock's rebound is quickest when the adjustment knob is in the full counterclockwise position. Rebound is slowest when the adjustment knob is in the full clockwise position.

Downhill Tuning:

To optimize the downhill rebound, do a washboard test. Use a typical ride that has washboard or braking bumps. Go through the washboard or braking bumps a couple times to feel for consistency through the bumps. The rebound is just right when the wheel follows each bump and feels smooth throughout. The first bump should be as smooth as the last bump.

Symptoms of too much rebound:

Slow shock return, where the shock feels good through the first few bumps and gets harder as you continue, means there is too much rebound. In addition, while breaking, the rear wheel will tend to skip over the bumps. To adjust it for more consistency and better breaking, turn the rebound knob a half turn counterclockwise and test it again.

Symptoms of too little rebound:

Too little rebound is when the shock returns too fast and the bike seems to want to buck you off or the rear wheel skips out. Turn the rebound knob a half turn clockwise to slow the rebound down for more consistency and better braking through the bumps.

Advanced Hints

For bikes that need to be adjusted for rebound when climbing, turn in the rebound until the bobbing disappears.

Maintenance

RockShox SID shock is designed for high performance. To insure this, we recommend keeping the shock body as clean as possible. It is also recommended that the shock be overhauled by a qualified mechanic with proper tools once a year or more often if you ride in extreme conditions. A service manual explaining overhaul procedures is available through your local dealer or from RockShox direct at 1.800.677.7177.

Over time, the oil inside the shock will degrade and the shock will start to lose damping. The shock will compress and rebound too fast when damping loss is significant. This indicates the shock needs to be serviced. This service should only be performed by a RockShox dealer or call RockShox direct.

Lubrication of Air Spring - Once per year. This service requires the current RockShox Deluxe Service Manual.

Seal Inspection and Replacement - This service requires the current RockShox Deluxe Service Manual.

Air Spring Pressure - Check every ride, slight air loss might occur over a few days.

General Upkeep:

Washing Your Deluxe Shock: Clean your shock with mild soap and a toothbrush. Keep the body and body eye bushings cleaned and greased.

Important: Never use a high-powered washer for cleaning the shock

Oil Change Intervals: We recommend that the oil be changed in your shock annually. However, if you ride in extreme conditions the oil should be changed more often than once a year.

Oil Leaks: One hundred percent serviceable. Contact a local RockShox dealer or RockShox direct to have your rear shock serviced.

Glossary of Terms

Bottoming Out – the condition when all suspension travel has been used up.

Compression Stroke – the "upward" motion of a fork which is moving in response to a bump impact.

Damping Force – the force required to move a shock absorber/damper (general oil) at any given speed.

Forged – a metal forming process which optimizes material structure using very large forces acting on a die mold in which material to formed is placed.

Geometry – Descriptive term for the lengths and angles used in a bicycle design.

Head angle – Angle the steering axis leans back from vertical. Increased head angle makes steering faster and decreased head angle makes steering slower.

One piece – unitized lower leg assembly with both fork legs and fork brace cast as one piece.

Preload – The amount either in pounds or inches, a spring is compressed when fitted to an extended shock absorber.

Rebound – The extension or return direction of the shocks or suspension.

Sag – compression of the suspension caused by the rider's weight.

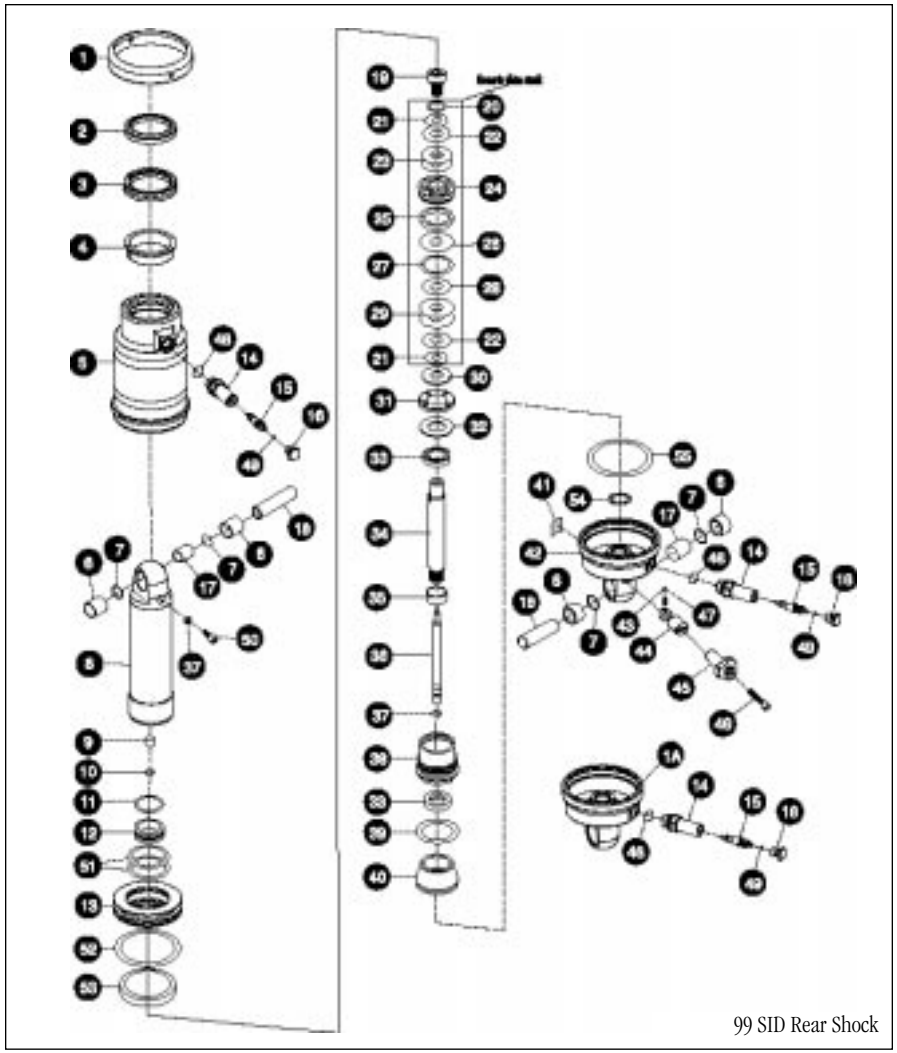
Spring rate – The amount of force required to deflect a spring a given distance.

Tapered – varying wall thickness of a tube. A design to optimize placement of material, allowing most efficient design considering the loads.

Topping out – the position of the fork at the "top" of the travel, or when the fork is fully extended. The action of complete extension of the fork.

IMBA Rules of the Trail

- Ride on open trails only
- Leave no trace
- Control your bicycle
- Always yield trail
- Never spook animals



99 SID Rear Shock

1 Lock Can
2 Rod Wiper
3 U-cup
4 Bearing
5 Can
6 Mount Sleeve
7 Mount O-ring
8 Body
9 Air Valve
10 Ring Aluminum Air Valve
11 Floating Piston O-ring
12 Floating Piston
13 Fixed Piston
14 Air Valve
15 Valve Core
16 Cap
17 Mount Bushing
18 Mount Spacer
19 Piston Bolt
20 Shim
21 Shim
22 Shim
23 Shim
24 Piston
25 Piston Ring
26 Shim
27 Shim
28 Shim
29 Shim
30 Stop Washer
31 Top Out Pad
32 Seal Head Washer
33 Seal U-cup
34 Shock Shaft, 1.25T
34 Shock Shaft, 1.50T
34 Shock Shaft, 2.0T
35 Shaft Bushing
36 Adjuster Rod, 1.25T
36 Adjuster Rod, 1.50T
36 Adjuster Rod, 2.0
37 Adjuster Rod O-ring
38 Seal Head
39 Seal U-cup
40 SealHead O-ring
41 Bottom-out Bumper
42 Decal Cover
43 Shaft Eyelet
44 Rebound Detent Ball
45 Adjuster Screw
46 Adjuster Knob
47 Rebound Knob Screw
48 Rebound Detent Spring
49 Air Valve O-ring
50 Air Cap O-ring
51 Air Plug
52 Fixed Piston O-ring
53 Quad Ring
54 Glide Ring
55 Shaft O-ring
56 Can O-ring

Warranty

ROCKSHOX, INC. WARRANTS ITS PRODUCTS FOR A PERIOD OF ONE YEAR FROM ORIGINAL DATE OF PURCHASE TO BE FREE FROM DEFECTS IN MATERIALS OR WORKMANSHIP. ANY ROCKSHOX PRODUCT THAT IS RETURNED TO THE FACTORY AND IS FOUND BY ROCKSHOX TO BE DEFECTIVE IN MATERIALS OR WORKMANSHIP WILL BE REPAIRED OR REPLACED AT THE OPTION OF ROCKSHOX, INC. THIS WARRANTY IS THE SOLE AND EXCLUSIVE REMEDY. ROCKSHOX SHALL NOT BE HELD LIABLE FOR ANY INDIRECT, SPECIAL, OR CONSEQUENTIAL DAMAGES.

THE WARRANTY DOES NOT APPLY TO PRODUCTS WHICH HAVE NOT BEEN PROPERLY INSTALLED AND ADJUSTED ACCORDING TO ROCKSHOX INSTALLATION INSTRUCTIONS. THE WARRANTY DOES NOT COVER ANY PRODUCT THAT HAS BEEN SUBJECT TO MISUSE OR WHOSE SERIAL NUMBER HAS BEEN ALTERED, DEFACED OR REMOVED. THIS WARRANTY DOES NOT COVER PAINT DAMAGE OR MODIFICATIONS TO THE PRODUCT. PROOF OF PURCHASE IS REQUIRED.

WARRANTY REPAIR

IF FOR ANY REASON IT SHOULD BE NECESSARY TO HAVE WARRANTY WORK DONE, RETURN THE PRODUCT TO THE PLACE OF PURCHASE. IN THE USA, DEALERS SHOULD CALL FOR A RETURN AUTHORIZATION NUMBER (RA#) PRIOR TO RETURNING PRODUCT. PRODUCTS RETURNED FOR INSPECTION MUST BE SENT FREIGHT PREPAID TO:

RockShox, Inc.

401 Charcot Ave. FAX 408.428.9757

San Jose, CA 95131

www.rockshox.com

e-mail us at TechSupport@rockshox.com

Toll-Free Technical Support in the USA 800.677.7177

Customers in countries other than the USA should contact their local dealer or distributor.

International Distributor List

Argentina
Broni S.A.
Phone: 54 12 92 3000
FAX: 54 12 92 4453

Australia
Bell Sports Australia
Phone: 61 2 9700 1655
FAX: 61 2 9700 1656

Austria
Barisitz-Austria
Phone: 43 512 39 22 87
FAX: 43 512 39 45 19

Belgium
Vertex Cycle Systems BV
Phone: 31 23 57 18184
FAX: 31 23 57 18606

Brazil
Pacific Bicycle Company
Phone: 55 11 816 2249
FAX: 55 11 816 0544

Canada
Bell Sports Canada
Phone: 514 378 0452
FAX: 514 378 9934

Chile
Bicicletas Belda Limitada
Phone: 56 32 881799
FAX: 56 32 978799

Colombia
Disandina Ltda.
Phone: 576 320 5162
FAX: 576 320 4816

Costa Rica
SPC Bicicletas
Phone: 506 296 3383
FAX: 506 220 3580

Czech Republic
Velo Gepard Ltd.
Phone: 4202 243 15631
FAX: 4202 243 16189

Denmark
ETTOL Bike A/S
Phone: 458 621 4555
FAX: 458 621 4255

Ecuador
Bici Sport
Phone 5932 248737
FAX: 5932 253691

Estonia
Estonian Unidream
Phone 372 223 2976
FAX: 372 636 74 70

Finland
Mr. Cool OY
Phone: 358 9 320817
FAX: 358 9 320609

France
Philamy S.A.
Phone: 33 492 70 9700
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