

BOSS
SUSPENSION

KIRN
mtbenduracingshock

User Manual

Warranty

Terms and conditions

BOS Suspension offers warranty on its products on the following terms:

BOS guarantees to the original purchaser that the BOS product for which they received this warranty is free from defects in material and workmanship for one year from the date of original retail purchase. A proof of purchase will be asked for any warranty claim. This warranty is not transferable to a subsequent purchaser.

Wear and tear parts such as dust seals, O-rings, bushings, rear shock mounting hardware, stanchions, threaded parts and bolts are not covered under this warranty.

Terms

This warranty is subject to legal jurisdictional or warranty rights of the country where it has been originally purchased, which will prevail if different from the terms herein listed.

Limits

BOS Suspension cannot be liable for any loss, inconvenience damages, whether direct, incidental, consequential, resulting from the use of its products, local legislation prevailing.

Warranty exclusions

This warranty does not cover the following cases:

- Damage to products resulting from improper assembly other than listed below
- Products that have been modified by the owner or a third party
- Improper use
- Damages resulting from an accident or a crash under any circumstances
- Invalid servicing procedures and servicing time frame not respected
- Replacement of the original parts by parts from others manufacturers
- Products whose serial numbers has been altered, defaced or removed.

Warranty procedure

The owner should always refer to an approved BOS service center for any warranty claim. A proof a purchase is compulsory for any warranty claim. Otherwise the warranty claim will not be considered. Always contact BOS Suspension warranty department before returning any products that may fall under this warranty. If “the faulty parts” do not fall under warranty, the customer will be charged for any costs in respect with warranty such as transport and package back and forth.



1. Introduction

The KIRK shock that you've bought was designed and developed to fit most bikes on the market; nevertheless you should refer to the tuning section of this manual to fit it perfectly to your bike, your weight, and your riding style.

Caution :

Never try to disassemble your shock. Limit yourself to the instructions given in this manual. This shock is pressurized, for your own safety, do not try to open it. You also risk damaging the shock and its internal mechanisms as well as voiding your warranty.
Contact an authorized service center for any maintenance operation.

2. Assembly

Your KIRK shock is delivered with the correct mounting kits for the bike specified while ordering.
If you want to change or replace it please refer to the following plan:



Standard mounting kit: MKP-XX-YY

Example: MKP-30-08

It's necessary to measure precise dimensions for each side of the shock.

Check the mounting direction

By referring to the compatibility table, available on the BOS MTB website download page.

Refer to the bike's user manual

To follow your bike specific shock mounting procedure.

3.1 AIR PRESSURE

In order to get the best performance from your BOS product, it's essential to set up the shock to an optimum air pressure based on your weight and your bike's rear suspension geometry before using the shock. Refer to the compatibility table in the download area of BOS website for the base recommended air pressure.

Connect a shock pump to the Schrader valve located on the side of the upper part of the body, and inflate to the recommended pressure.



It's recommended to use our BOS high pressure pump with a digital gauge for more accuracy, available on our website:

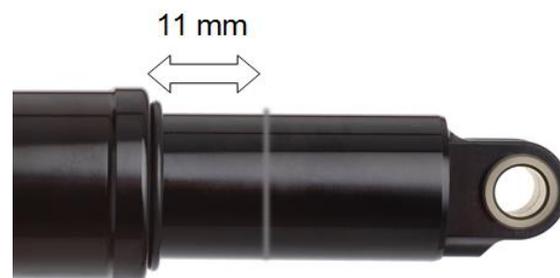
<http://boutique.bosmtb.com/>

3.2 EQUALIZING AIR CHAMBERS

In order for your shock to function correctly, you must equalize the air chambers after setting your pressure.

To equalize the chambers, the shock must be fitted on the bike.

Place the travel checker O-ring at 11 mm from the shock seal, sit on your bike, and slowly compress the suspension until the seal comes to the O-ring. Let the suspension slowly extend to its full travel. Slowly cycle the shock 15 times over the first 11mm of its travel to complete the equalization process.



3.3 SETTING YOUR SAG

The sag is the amount of travel used by your suspension from your weight on the bike. It is set by adjusting the air pressure.

BOS recommends a sag percentage of 30 to 35 %, depending on your use and your riding style.

The bike manufacturer may also indicate a sag percentage. Please refer to your bike's user manual for this value. If the manufacturer recommendation differs from ours, you should test the bike on the trail at different sag values to find the right amount for your riding style.

How to measure and set your sag

Slide the travel checker O-ring up to the shock's dust seal.

Sit on your bike (if possible dressed with your riding outfit) feet on the pedals - horizontal position, and let the suspension compress under your weight. Get off the bike without pushing on the suspension any more, extend the rear suspension to its full travel by pulling up the saddle, and measure the distance between the O-ring and the seal. This distance allows you to check the percentage of sag obtained with the current air pressure.

To convert the distance into percentage, refer to the table below.

Length x travel (mm)	200x51		200x57		216x63		222x69	
SAG (%)	30	35	30	35	30	35	30	35
Shock travel (mm)	15	18	17	20	19	22	21	24

If the sag is not correct, adjust the air pressure in 15 PSI steps. Equalize the air chambers after each adjustment.

Too much SAG: Increase the air pressure.

Not enough SAG: Reduce the air pressure.

3.4 HYDRAULIC SETTINGS

The KIRK shock is a three-ways adjustable shock, which means there are three different damping adjustments: rebound, low-speed compression, high-speed compression and a lock out lever that affects low speed compression only. Your shock's base setting (internal) is set up for your bike's geometry when you purchase the shock. We use three basic settings which cover the majority of bikes on the market.

The purpose of damping adjustments is to use all the shock's travel without bottoming-out (or only very occasionally), to give rear wheel grip, but also to avoid the bike stalling out in holes, and finally to maintain a good chassis position.

Below you will find the base settings for your shock, then it's up to you to analyze its performance on the trail and tune the settings to suit your riding style. Do this carefully and methodically, step by step. Only change one setting at a time and only by a few clicks. When it's done, note the setting and type of terrain.

If you get confused with the settings, return to the base settings and start again.

Low-speed compression (A) and low-speed compression lock out lever (B)

The low-speed compression (A) affects the shock's compression performance over small bumps or through the beginning of the travel. It might be useful to harden the low-speed compression (by turning the knob clockwise) on rolling terrain with big compressions and pedaling sections.

It might be useful to soften the low-speed compression (by turning the knob counter-clockwise) on steep gradients.

The lock out lever (B) acts on the low-speed compression and affects the shock's threshold. It is useful to lock it out on pedaling sections and uphill to maintain the bike's balance.

High-speed compression (C)

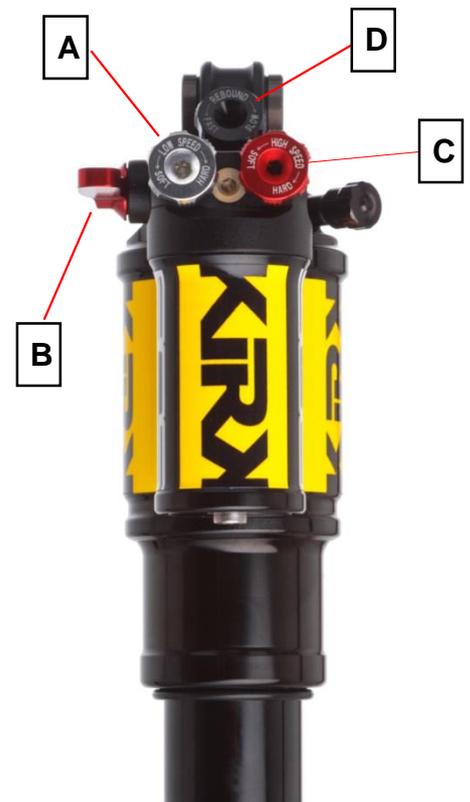
The high-speed compression acts mainly on harsh hits (jump landings, rough sections). It should be soft enough to get all the travel without bottoming-out. If, on a given track, you bottom-out frequently, harden the high-speed compression by turning the knob clockwise. However, don't get hung up on bottoming-out if it only happens once or twice during your run. You risk setting your shock for 3% of the course and losing efficiency on the other 97%. If your shock doesn't get full travel, soften the high-speed compression by turning the knob counter-clockwise.

Rebound (D)

The main factor in adjusting the rebound is the position of the bike. A bike shouldn't be "sunken down" all the time, although the back does need to be fairly low. Adjusting the rebound will allow you to maintain this balance.

If you feel like the back of the bike is pushing you forward on a slope or when braking, slow down the rebound (turn the knob clockwise). It can be useful to go along with this adjustment (especially if the problem persists) by slightly soften the low-speed compression.

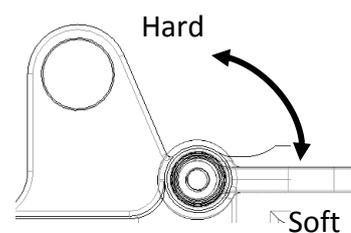
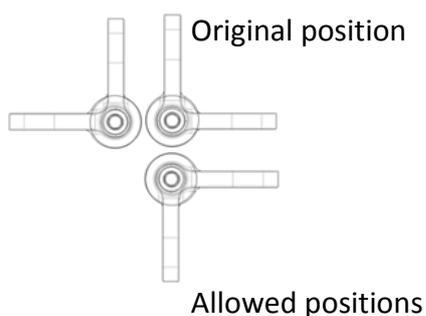
However, if the bike seems too low at the back and/or the front end has a tendency to drift offline, speed up the rebound.



Lockout lever repositioning:

It's possible for your comfort and to fit all the bikes to move the initial position of the lockout lever.

Please unscrew the screw (1), pull the lever and place it at the desired position. Then put back the screw and tighten until contact.



Important :

To start your adjustment, turn the knob clockwise until it stops (clicks = 0). Then count the clicks while turning the knob counterclockwise.

Base settings (regardless of internal shock setting):

Low-speed compression: 12 clicks from the fully closed position
High-speed compression: 12 clicks from the fully closed position
Rebound: 12 clicks from the fully closed position

Please refer to the shock chart list available to download at BOS website for specific pressure and setting suggestions for your bike and weight.

Important :

With a significant hydraulic compression support, the KIRK shock allows the bike to maintain a high dynamic balance, as well as giving good response, and improved handling. BOS recommends setting up the bike with a fast rebound to keep the chassis balanced, and avoid the bike sitting low in its travel.

The feeling of «fast» or «slow» rebound will differ from one rider to another. Thus it's difficult to define it precisely. We advise you to define your own range of correct rebound - the range of settings between «too fast» and «too slow». Then, always choose a setting in the faster part of that range, for example the three last clicks (counterclockwise) on a range of nine.

3.5 AJUSTING AIR VOLUME

The progressivity adjustment featured on the KIRK, allows you to adjust the air spring rate on the last third of stroke. Thus, if you have found satisfying settings (air pressure and hydraulic) on the first half of the stroke, you can adjust the feel of the last millimeters of travel.

The most frequent and simplest cases are:

The shock has an overall setup to single out comfort and grip, and the bike sits low: by increasing the end-stroke rate you will get a better control of the chassis through the shock and avoid bottoming out. The rate curve should be more progressive (increasing at the end) by adding o-rings.

The overall setup of the shock is more responsive, with a high chassis balance. By decreasing the end stroke rate by removing o-rings, you can make sure that you use all the travel.

This setting is adjusted by adding or removing O-rings placed inside the air can.

We suggest you to go about the set-up step by step. First add or remove two O-rings, then fine-tune the setting with one O-ring at a time. Adding one O-ring in the chamber increases the end of stroke spring rate by 2%.

Usually, the correct setting is between 0 and 4 O-rings. However, the range can go up to 10 O-rings depending on the bike

Caution :

Only use O-rings provided by BOS. The dimensions and the material are specifically chosen for this purpose.

Procedure

Place the head of the shock in a soft-jawed vice (figure 1).

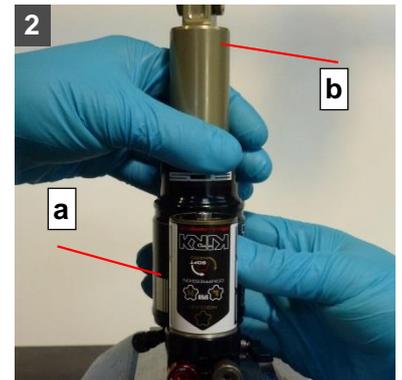
Caution :

Before tightening the vice, make sure the jaws grip a flat surface and are not touching the rebound knob.

Lightly tighten the vice jaws to prevent damaging the shock.

Note your shock pressure, taking into account the loss of pressure when connecting your pump. Slowly deflate the shock. The shock body will retract slightly.

Unscrew the air can (a) while keeping the body (b) in its initial position (figure 2).



Caution :

The shock body must not be unscrewed.
The air can is unscrewed by hand without additional tools.

Remove the air can (figure 3)

Insert the O-ring(s) from the body side of the shock (figure 4) and put them in position.

Make sure that the O-ring(s) do not block the hole in the shock (figure 5).

Make sure you have aligned the air can (a) sticker with the rebound knob.

Replace the air can by screwing back by hand until the stickers align to ensure the proper torque (image 6).

Mount the shock on your bike re-inflate it shock and equalize the shock air chambers (chapter 3.2)



3. Maintenance

Service

It is essential to clean your shock after each day of riding without waiting! Nothing is worse for the life of your seals than dirt and dust.

The cleaning process is also extremely simple: wipe off the body and the seal with a clean, soft rag. You can occasionally lubricate the exterior of the seal with fork oil.

Do not under any circumstances use degreaser, solvent, or any abrasive material.

On the same note, do not ever power wash the seals.

	Cleaning	Oil service	Full service
Recreational use	After each ride	Once per year	Every two years
Racing use	After each ride	Once per year	Once per year

Caution :

Oil changes and service should be performed at an official BOS service center. These are the only locations able to identify and resolve damaged or worn parts on your product, especially in the case of extreme shocks or premature wear on structural elements such as body, mounting kits, and shaft.

What is the basic set up?

Your KIRK shock was delivered with intermediate external hydraulic settings and inflated to a 80 to 100psi pressure; nevertheless you should refer to the tuning section of this manual to fit it perfectly to your bike, your weight, and your riding style.

You can find all the information about standard settings for your bike in the chartlist on the BOS website download section.

There is air leaking when I connect the high pressure pump, what can I do?

Check that your pump is correctly connected to the valve shell. Make sure that the Shrader valve core is correctly tightened.

My shock is too stiff on the first inches of travel and / or the rebound is very fast. What can I do?

The two air chambers are not correctly equalized. Check out chapter 3.2 to see how to equalize your air chambers.

Once reassembled, the shock stickers are not aligned. What can I do?

To be sure that the stickers will be correctly aligned, check out chapter 3.5.

My shock has a slight negative travel. Is that normal?

The BOS air spring is designed to lower the engagement threshold as much as possible. Therefore, it is possible on some bikes that there will be a small negative travel.

Where can I purchase replacement stickers and valve cap?

You can purchase these items through your approved BOS center, or on the BOS store on bosmtb.com.

I noticed some play between my shock and the frame, what can I do?

Check that your mounting hardware is torqued to your manufacturer's specifications. If it is, the rear shock mounting hardware must be replaced. Contact an approved BOS service center, or connect on BOS website.

My shock is compressing when I deflate it, is that normal?

When you deflate your shock from the air valve, you are only deflating the positive air chamber. The negative air chamber is still pressurized and pulls on the shock's shaft. If you want to avoid this, deflate step by step (30 to 40psi), and balance the air chambers between each step (5 to 6 slow compressions and extensions over the first 11mm of the shock's travel).

My shock makes a whistling or clicking sound when I compress it.

These sounds are normal to the functioning of the hydraulics when the rebound or low-speed compression circuit is closed or almost closed. Check your settings and bring them closer to the base settings in your product's user manual to reduce this noise.

I've not had success in setting up my shock. What can I do?

The internal tuning (settings/air damper) it's a preset tuning to correspond to a maximum of peoples, however it's possible to adapt all of this parameters to match with your weight, your use and your style, even so to optimize your set up please contact your BOS service center.

For any other questions, please visit our FAQ page on the BOS website or send us a message to customerservice@bosmtb.com.

