



VIPER 2.1

Model Year 2015

User Manual

Warranty

Terms and conditions

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

BOS MTB 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 a 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 MTB 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, 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 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 MTB 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 back and forth.



1. Introduction

Thank you for purchasing a BOS VIP'R 2.1 shock. Your shock has been assembled specifically for one bike - yours! - which means that the internal valving and the air chamber volume are adjusted for your bike. The correct mounting kit is also provided with the shock.

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 VIP'R 2.1 shock is delivered with the correct mounting kits for the bike specified while ordering.

Check the mounting direction

By referring to the compatibility table, available on the BOS MTB website : <http://www.bosmtb.com>.

Refer to the bike's user manual

To follow the specific shock mounting procedures of your bike.

3. Settings

3.1 AIR PRESSURE

Before using the shock, you must set up the air pressure based on your weight and your bike's rear suspension geometry.

Refer to the compatibility table on BOS MTB's website, in the download area on <http://www.bosmtb.com> for the base recommended air pressure.

Connect a pump equipped with a precise dial to the Schrader valve located on the side of the upper part of the body, and inflate at the recommended pressure.



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 mounted on the bike.

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



3.3 SETTING YOUR SAG

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

BOS recommends a sag percentage of 25 to 30 %.

The bike manufacturer may also indicate a percentage of SAG. 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 your 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 (%) | 25 | 30 | 25 | 30 | 25 | 30 | 25 | 30 |
| Shock travel (mm) | 12,5 | 15 | 12.5 | 15 | 14 | 17 | 16 | 19 |

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

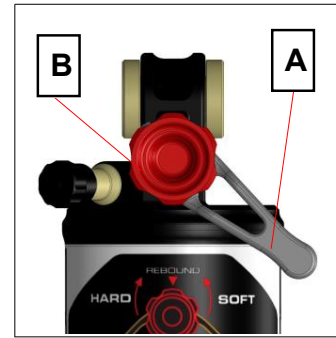
Too much SAG: increase the air pressure.

Not enough SAG: reduce the air pressure.

3.4 HYDRAULIC SETTINGS

The VIP'R 2.1 shock is a two-way adjustable shock.

The **compression** is adjusted through the lever A.
The **rebound** is adjusted through the knob B



COMPRESSION

The compression setting offers two positions: "hard" and "soft".
The lever must be turned on one of these two positions, never between.
The soft position is used for normal riding conditions. The suspension is 100% efficient.
The hard position changes the whole compression curve. The shock becomes stiffer across the whole travel. It should be used for better pedaling efficiency, while climbing, or on flat, high-speed sections.

HARD position
better pedaling efficiency



FORBIDDEN!



SOFT position (standard)
fully active suspension



NOTE

The hard position does not lock the shock out.
As with the TRC system featured on the Deville fork, it reduces the suspension movement by stiffening it, but the suspension remains efficient, which guarantees good traction.

Rebound

The rebound can be adjusted through the red knob, which has 30 clicks. The closed position (turned fully clockwise), offers a stiff or SLOW rebound.

The open position (turned fully counterclockwise) offers a soft or FAST rebound.

Prior to changing the settings, turn the knob clockwise completely, then unscrew by 15 clicks to reach the intermediate position.

From that position, on the trail, adjust the rebound depending on your riding style.

Start setting up the rebound in steps of 3 clicks at a time. When you feel that you've reached a close to perfect setting, start making finer adjustments.

IMPORTANT

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

Base settings (regardless of internal shock setting):

Rebound : 15 clicks

Please refer to the chartlist available to download at bosmtb.com for specific pressure and setting suggestions for your bike and weight.

ATTENTION

BOS has worked hard to develop our compression curve, which allows the VIP'R 2.1 shock to maintain the balance of the bike, as well as giving good response, and improving 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. This will make the bike less nervous, and more comfortable.

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 VIP'R 2.1, 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 chassis balance high. 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. The installation procedure can be found on the following page.

WARNING

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

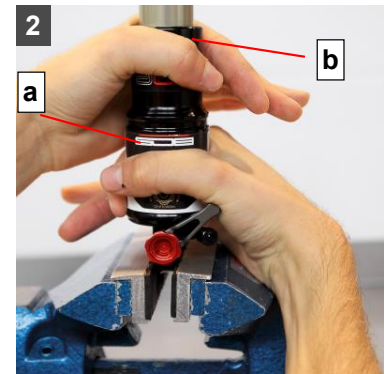
Procédure

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

Lightly tighten the vice jaws to prevent damaging the shock.

WARNING

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



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).

WARNING

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



Remove the air can (figure 3)

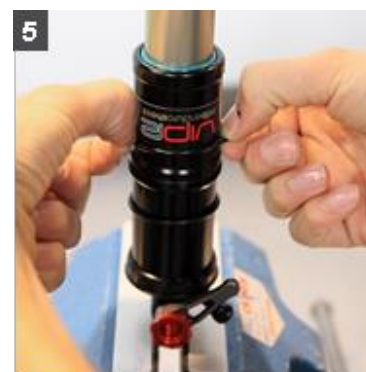
Insert the O-ring(s) from the body side of the shock (figure 4 and 5) and put them in position. Make sure that the O-ring(s) do not block the hole in the shock (figure 6).

Replace the air can by screwing back by hand until the stickers align to ensure the proper torque and air sealing (figure 7). If the stickers do not align when the air can is hand tight, reinflate and equalize the shock air chambers (chapter 3.2) then finish tightening the air can.

Reinflate the shock.

Mount the shock on your bike.

Equalize the shock air chambers (chapter 3.2).



3. Maintenance

Service

It is compulsory to clean your shocks immediately after every use! Nothing is worse for your shock's seals than dry mud.

It is very simple to clean your shocks: wipe off the body and the seal with a clean, soft rag. Occasionally lube the stanchion (with fork oil). Warning: Do not under any circumstances use degreaser, solvent, or any abrasive material.

If you power wash your bike, do not point the hose toward the seals! It will only push the mud inside the seal and get it stuck between the body and the seals and scratch your stanchions.

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

Caution :

We recommend doing the oil service and full service at a BOS approved center. Only the BOS approved centers are able to identify and appraise a damaged or worn part, especially in case of shock or wear on structural elements such as the body, the mounting kits, and the shaft.

What is the basic set up?

Your shock has been set up for your bike, with a specific internal valving and air chamber volume. It is delivered with a pressure of 80 to 100psi. You can find all the information about standard settings for your bike in the chartlist on the BOS website bosmtb.com.

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

Check that your pump is correctly connecting 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.

I added/removed anti-volume O-rings. Once reassembled, the shock stickers are not aligned. What can I do?

To be sure that the stickers will be correctly aligned, the rebound knob must be perfectly aligned with the air can stickers when you start to screw the air chamber back in place. Check out chapter 3.5.

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

The air spring of the VIP'R 2.1 is designed to obtain the best sensibility on the first inches of travel. As a result, on some types of bikes, you may notice some negative travel.

Where can I purchase original 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 bosmtb.com.

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.

For any other questions, please visit our FAQ page at <http://www.bosmtb.com/faq.html> or send a message to customerservice@bosmtb.com