

BOS

SUSPENSION

VOID3

User Manual



BOS Suspension
4 Impasse Léonce Couture
ZA du Mont Blanc
31200 Toulouse - FRANCE



Congratulations, you have just acquired one of our suspensions.

We have a common passion, the Mountain Bike!

This passion has led us to design our products with all the care and expertise you can expect as a user.

Our suspensions are the result of advanced research from our engineering office, test bench and many hours spent with our professional riders.

Our goal is to provide you with the best technologies and the greatest outdoor experience.

In order to make the most of your new acquisition, please read this user manual carefully. The mounting instructions and tips for use contained on it will allow you to make the most out of your suspensions.

Thank you for choosing BOS suspension!



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WARRANTY

Bos Suspension’s limited warranty

Bos Suspension warrants to the original owner that the Bos Suspension product when new, is free from defects in material and workmanship. This limited warranty expires one year from the date of the original retail purchase.

A copy of the original proof of purchase will be required for any warranty claim.

This limited warranty is only applicable to Bos Suspension purchased new from an authorized Bos Suspension source. The limited warranty is made only to the original customer and is not transferable to subsequent owners.

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

TERMS

This limited warranty is subject to legal jurisdiction or warranty rights of the original purchase country which will prevail if different from the terms herein listed.

LIMITS

This limited warranty is conditioned on the Bos Suspension product being operated under normal conditions and properly maintained as specified by Bos. The liability of Bos Suspension will not be implied for any and all other damages, including but not limited to, incidental, consequential or punitive damages.

EXCLUSIONS

This warranty doesn’t cover :

- Damages resulting from improper assembly
- Damages resulting from an accident, crash or collision under any circumstances
- Malfunctions that results from abuse
- Modification, alteration, improper or unauthorized repair by the owner or a third party
- Improper or excessive use.
- Violation of the maintenance procedures and/or the time allowance between service.
- Replacement of the original parts
- Warranty is void is the serial number is removed or altered.

PROCEDURE

When making a claim under this limited warranty to the Bos Warranty Department you’ll be required to provide a copy of the original proof of purchase otherwise the claim will not be considered. Please contact the Bos Suspension Warranty Department before returning a product that may be covered by this limited warranty. If the warranty doesn’t apply the packaging and shipping costs will be charged to the customer.

MANUAL SYMBOLS



CAUTION your safety is involved and special precautions must be taken to avoid damage to the shock absorber.



IMPORTANT the following information is important regarding procedures. Failure to follow the warning instructions can result in severe damages.

GENERAL WARNINGS

The shock absorber is an important part of your bicycle. Make sure you read and understand the following warnings and any other technical documents provided by Bos before using the product.

Install the shock onto your bicycle frame using the appropriate hardware. Before riding, inspect the exterior of your product it should not be used if any of the exterior parts appear to be damaged.

Contact us or your local Bos Suspension retailer for further inspection, maintenance or repair. This manual should be considered as a part of the product and should be kept throughout its lifetime.

You will need the following tools for settings and maintenance :

Tools	Symbol
2 mm hexagonal wrench	
4 mm hexagonal wrench	
11 mm open-end wrench	
Ruler	
By hand	
Flat screwdriver	

Shock	1 Piece
Air volume adjustment core	5 Pieces
User manual	1 Piece

This section details the installation of your BOS VOID.

First of all, safely remove the original suspension from your bike frame (please refer to your bike manual instructions).

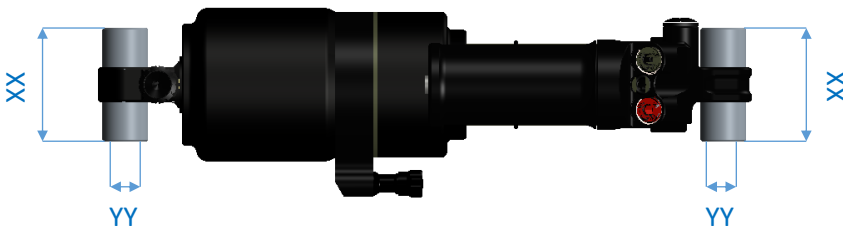
IMPORTANT

Make sure you work in a clean and safe environment and keep track of your parts in order to facilitate the assembly.



Never try to disassemble your shock and limit yourself to the instructions given in this manual. This product contains pressurized air. Do not open, service or modify this product without the proper hardware. You will risk damaging the shock and voiding the warranty.

Your product is delivered with the correct mounting kit for the bike information you provided. If you wish to change or replace it, please refer to the following schema.



Standard mounting kit:

MKP2-XX-YY

Example: MKP2-30-08

Make sure to take accurate measurements on each side of the shock.

2.1 Air spring

The first adjustment that should be done on the shock is to set the air pressure. This adjusts the stiffness of the air spring according to your weight. The stiffness of the air spring induces a degree of shock travel when you sit on your bike. This value, commonly called sag, can vary based on your usage.

To achieve the best performance from your BOS product, it is important to set your personal optimal pressure. **You will find on our website a chartlist specifying the values of your shock pressure based on your weight and type of bike. Your specific pressure may vary based on your riding style and personal preference.** However, do not stray too far from the indicated pressures, or you may risk changing the performance of your shock.



The digital manometer of our Bos Suspension high pressure pump is easier to use and more accurate. Check our website.

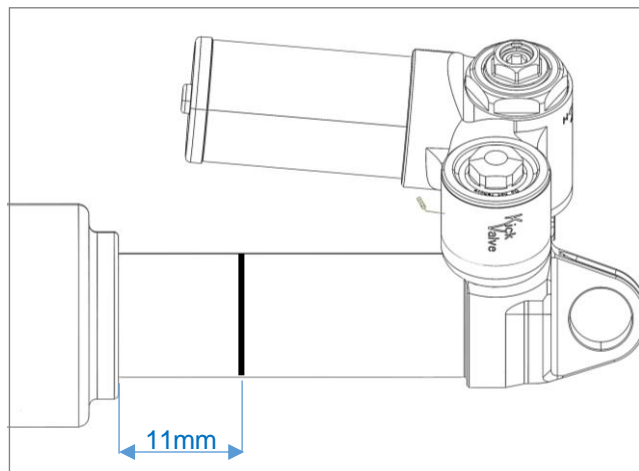


2.2 Air chambers set up

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

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

Place the indicator 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 set up process.



2.3 Setting your SAG

The sag is the amount the shock absorber moves under the weight of your body when sited on your bike and fully geared up.

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. 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 (set on your bike dressed in full riding gear), 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.

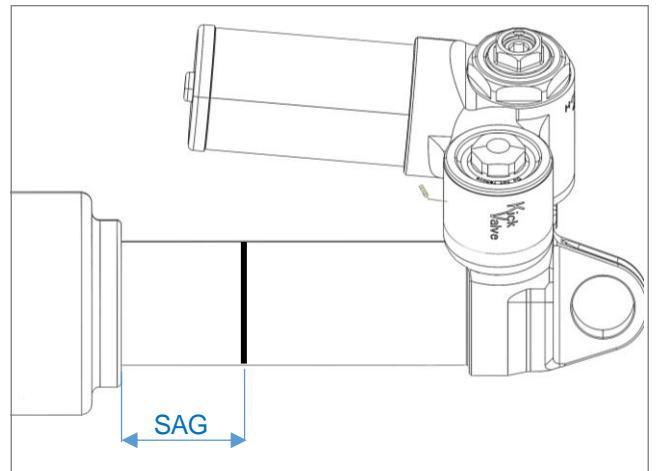
To convert the distance into percentage, refer to the board below.

Total stroke (mm)	60		65		70		75	
	SAG (%)							
SAG (%)	30	35	30	35	30	35	30	35
Shock travel (mm)	18	21	20	23	21	25	23	27

If the sag is not correct, adjust the air pressure in 15psi steps. Set up the air chambers after each adjustment.

Too much SAG: increase the air pressure.

Not enough SAG: reduce the air pressure.



2.4 Air pressure adjustments

VOID3 progressive adjustment allows you to setup the stiffness of the pneumatic spring over the last third of the travel.

Based on the satisfying settings (air & hydraulic pressure) over the first two-thirds of the stroke, the simplest and most common cases are :

- Shock absorber set rather « comfort/grip », low chassis : Increase the stiffness to give support and avoid tailgating. The stiffness curve will be more progressive at the end of the stroke by adding gaskets
- Damper set « dynamic », high frame : Decrease the end stroke rate by removing the o-rings (inside the air can) and make sure that you use all the travel.

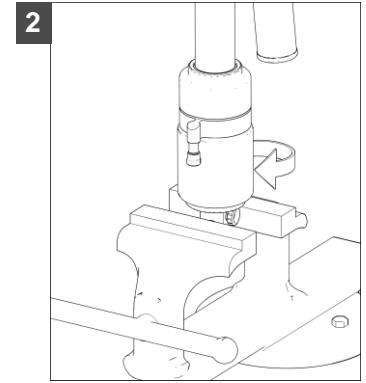
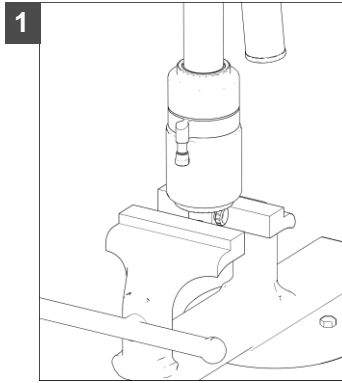
We recommend you to remove or add the O’rings two-by-two to tune your setting. Adding one O-ring in the chamber increases the end of stroke spring rate by 2%. The usual setting is between 0 and 4 O-rings. However, the range can go up to 10 O-rings depending on the bike.



Make sure to use Bos Suspension O’rings which are specifically made for this purpose.

Procedure

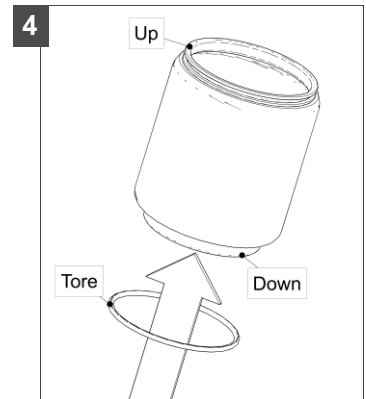
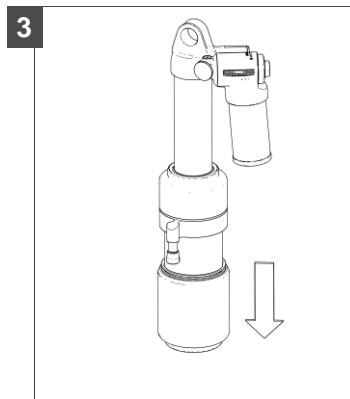
Place the head of the shock in a soft-jawed vice (figure 1).



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).



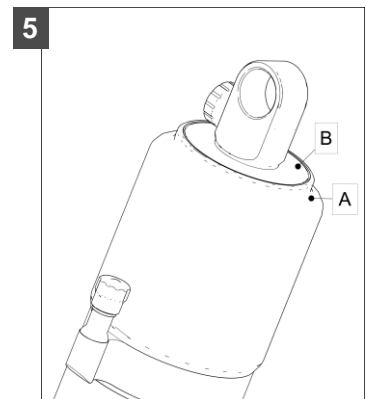
The shock body must not be unscrewed. The air can is unscrewed by hand without additional tools.

Remove the air can (figure 3)

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

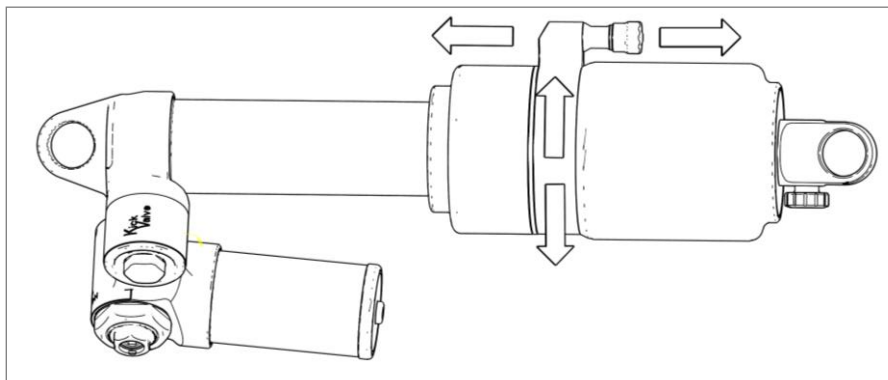
Make sure that O-ring(s) do not block the hole in the shock.

Replace the air can by screwing back by hand until the stickers align to ensure the proper torque (figure 5). If the stickers do not align when the air can is hand tight, re-inflate and equalize the shock air chambers (chapter 2.2) then finish tightening the air can.



Mount the shock on your bike frame, re-inflate it and set up the air chambers (chapter 2.2).

2.5 VALVE ADJUSTMENTS



It is possible to place your VOID air valve around the air can, and also position it toward or away from the piggyback. This allows the shock to be fitted on almost all bikes.



Do not align the valve to the piggy back, it may hit the valve and seriously damage your shock.

To modify the direction of your valve, or rotate it around the air can follow the instructions below :

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



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, take 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).

Lightly tighten the vice jaws to prevent damaging the shock.



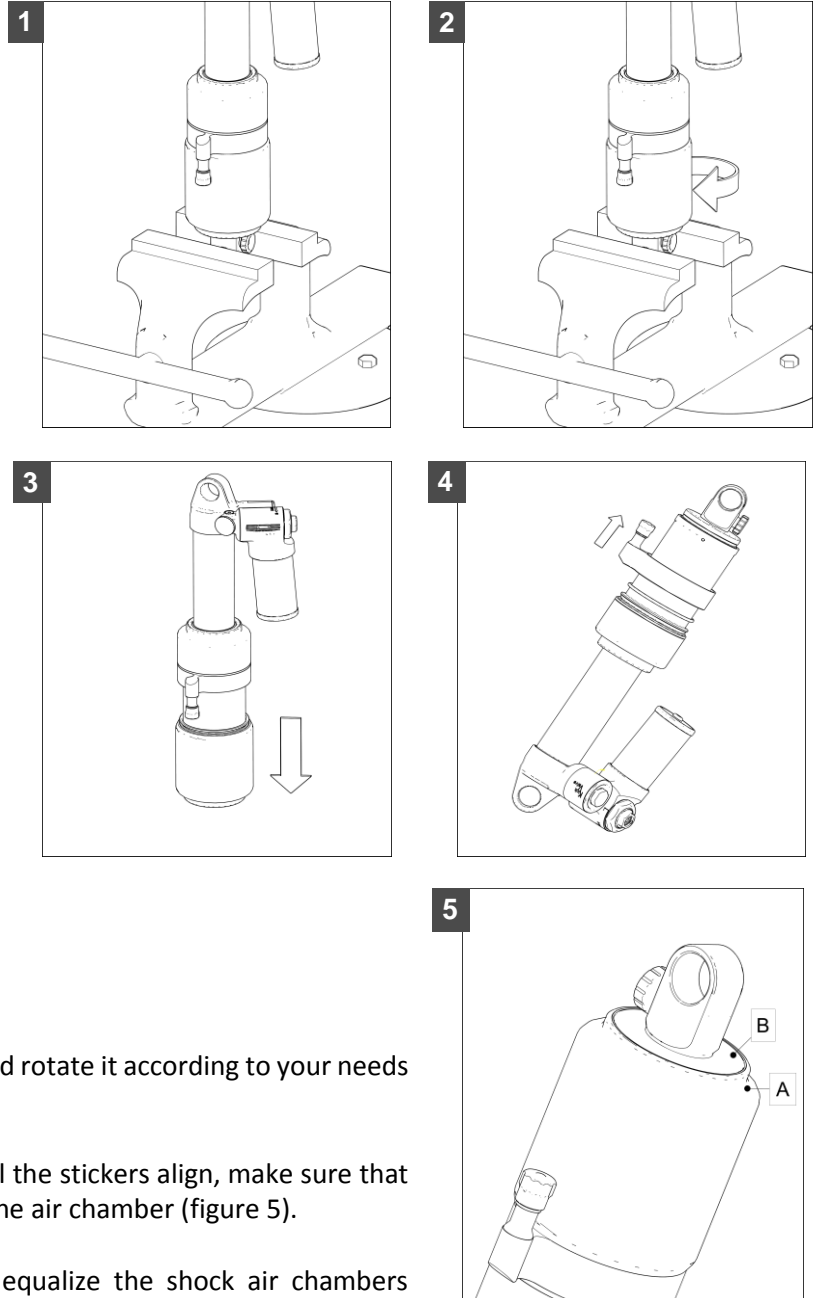
The shock body must not be unscrewed. Unscrew the air can by hand without additional tools.

Remove the air can (figure 3)

Change the position of the valve sleeve if needed and rotate it according to your needs (figure 4).

Replace the cylinder on the shock and screw in until the stickers align, make sure that the cylinder (A) is tangent with the partition (B) of the air chamber (figure 5).

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



2.6 Hydraulic settings

The VOID shock is adjustable in 3 different ways : rebound, low-speed compression, high-speed compression.

The shock original internal adjustments are made for your bike's geometry.

Damping adjustments controls the energy absorption when the shock is being compressed or extended. Good adjustments will give grip to the rear wheel, stability to the bike and will help maintain a good chassis position.

Below you will find the basic 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.

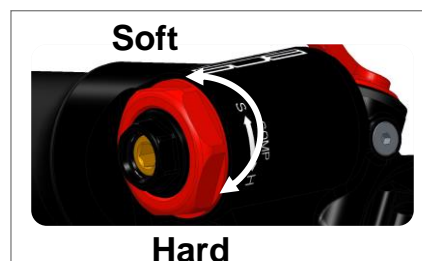
If you get confused with the settings, return to the basic settings and start again.

Low speed compression (4 mm golden hexagonal screw on head)

The low-speed compression affects the shock's performance in compression over small bumps or through the beginning of the travel.

Harden the low-speed compression (by turning the screw clockwise) on rolling terrain with big compressions and kickers.

Soften the low-speed compression (by turning the screw counter-clockwise) when riding on steep trails.



High speed compression (11 mm black nut on head)

The high-speed compression is effective on hard hits (jumps, rough sections). If the bike feels harsh and not comfortable turn the knob clockwise and harden the high-speed compression.



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%.

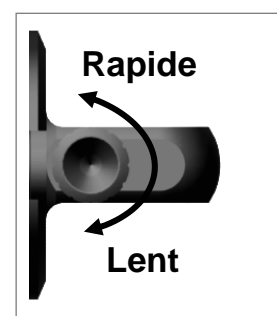
If your shock doesn't get full travel, turn the knob to counterclockwise and soften the high-speed compression.

Rebound

Rebound adjustments is all about the bike's position. 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



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

Basic settings – VOID 3

Rebound	Low speed compression	High speed compression
10 clics	10 clics	10 clics

With a significant hydraulic compression support, the VOID 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.

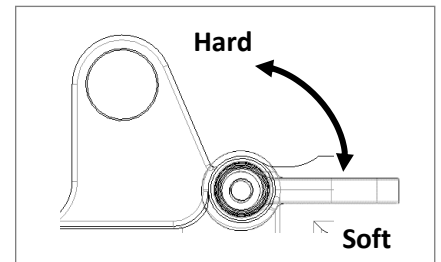
IMPORTANT

The feeling of «fast» or «slow» rebound is difficult to define precisely as it will differ from one rider to another. We advise you to define your own range of comfortable 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 (counter clockwise) on a range of nine.

Platform lever (option)



Optionally, your VOID shock can be equipped with a locking lever to reduce the hydraulic flow in the compression system. Helpful when pedalling, the shock will reduce the work and keep all its performances.

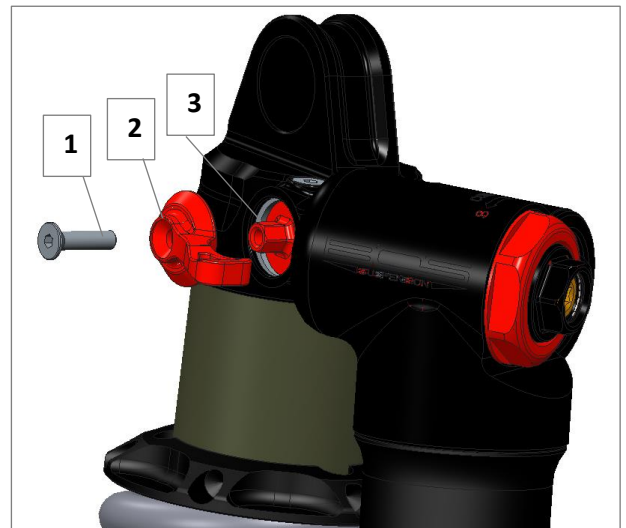
This adjustment carried out by the red lever on shock's head has two positions: **Hard / Soft**



It is possible to change the place of the lever at your convenience.

In order to achieve this, please respect the following steps:

- 1 Loose the locking screw 1 
- 2 Remove the lever 2 from the hexagonal nut 3 by pulling manually the lever
- 3 Position the lever 2 in one of the six available positions on the hexagonal nut
- 4 Tight the locking screw 1 with a moderate tightening torque 



It is essential to clean your shock after each ride using without waiting long time! There is nothing more dangerous for damper seal than dry mud. Maintenance is easy : clean the outside of your shock with soapy water and wipe dry with a soft rag. Occasionally lubricate the exterior with fork oil.



Do not use solvents or degreasers they can damage your shock. Do not use high pressure washer directly on the seal or body junction.

		After each ride	Every 6 months	Each year	Every 2 years
Cleaning		x			
Simple revision	Wet / muddy conditions		x		
	Race / Frequent use		x		
	Dry / Dusty Conditions			x	
Full maintenance	Wet / muddy conditions			x	
	Race / Frequent use			x	
	Dry / Dusty Conditions				x
Inspecting the guide rings	Wet / muddy conditions		x		
	Race / Frequent use		x		
	Dry / Dusty Conditions			x	



The oil service and full service should be performed by a BOS-approved service center. Only BOS service centers are able to identify a damaged or worn part, especially in case of shock on structural elements such as the chamber, the shaft, the body.

What is the basic set up?

Your shock has been set up for your bike, with a specific internal valving spring weight. You can find all the information about standard settings for your bike in the chartlist on the BOS website. However, you should refer to the adjustment section of this manual in order to adapt it perfectly to your type of riding.

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-suspension.com.

Where can I buy replacement stickers ?

You can go to the BOS Suspension website on the online shop to find all the spare parts for your shock.

I have grease/oil coming out of my well-ridden seals.

It's time for a service! Contact your nearest BOS authorized service center for a full service, or order a light or full service on our website and send us your product.

But I haven't reached your recommended service interval yet

Our recommended service intervals cannot cover 100% of customer's usage cases. Use in wet/muddy conditions; a prolonged storage out in the sunlight; frequent use; or improper care can all cause a quicker wear out of the seals.

For any other questions, please feel free to contact us by e-mail at sales@bos-suspension.com

www.bos-suspension.com



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