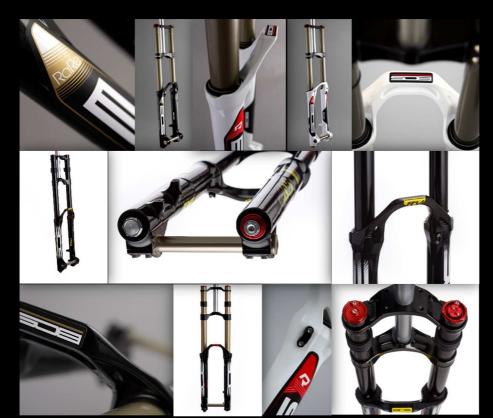


# İDYLLE

# IDYLLE since year 2014

All serial numbers



Service manual



SM 150707 A



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## BOS S.A.R.L. Warranty

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 and package back and forth.



#### 1 Environment

Mountain biking is a marvelous sport which gives you a lot of happiness. However it is potentially a source of environmental conflict with other people.

A responsible behavior when using your bicycle automatically defuse problems and conflicts.

To ensure the sustainability of the mountain bike sport, be sure that you stay in the legal framework, be respectful towards the environment and recognize the rights of the others.



## 2 Glossary of terms

**Base Valve:** Base valves are located at the base of the fork leg or on the shock's reservoir and generally function to control high speed compression. Base valves or "BV" are fixed & the piston that is attached to a shaft is referred to as the mid-valve or "MV". Both forks and shocks can have a "BV" and a "MV".

**Bottoming Out:** When your suspension reaches the end of its travel on an impact. You generally want to reach full bottom on occasion but NOT all the time. Continual bottoming can wreak havoc on the suspension system leading to breakage.

**Closed Cartridge Dampers:** Closed Cartridge Dampers are the opposite of an Open Bath Damper, in a closed system the oil solely contained within a cartridge tube and does not flow into the fork leg. Therefore, additional oil or lubricant is added to the inside of the leg to lubricate the seals and bushings.

**Compression Damping:** This is what gives your bike it's feeling of plushness, or stiffness. Compression determines how fast the suspension can compress when hitting a bump. If your suspension is too "stiff", the system won't compress fast enough to absorb a bump force. When there is not enough damping, the bike has soft, mushy feeling to it and will compress through its travel with little damping resistance.

**Fork Oil Level:** The level of oil inside the fork. It's typically measured in cc's by fully compressing the fork without the spring installed. It is used in tuning the amount of air contained inside the fork. Since compressing air acts like a spring, raising the oil level leaves less room for air, resulting in a rising rate throughout the fork's travel.

**Free Sag:** The amount the bike settles under its own weight without the rider. With mountain bikes becoming lighter and lighter, free sag is really not a critical tuning element but still worth mentioning.

**High-Speed Damping:** Damping feature that controls fast suspension movements. High-speed damping comes into effect on fast, rough, technical trails, g-outs, hard landings. HSD refers to the shaft speed of the suspension and not the actual riding speed. HSD is controlled through a high speed oil circuit best located in the base valve.

Low-Speed Damping: Damping feature to control slower vertical movements such as climbing or slower paced trails and bumpy whoop sections. A good example of low speed is rolling slowly over a large rock and riding to its downside, this is where the suspension will fully compress but at a slower rate and low speed compression circuit comes into play. LSD refers to the shaft speed of the suspension and not the actual riding speed. LS damping is best controlled through a low speed oil circuit and or shim stack.

**Mid-Valve:** Mid valves are located on the piston shaft and function in the middle part of the stroke. Mid valves can play an important function in keeping a long travel fork from diving too far into its travel. Mid valves ""MV" function when oil passes through the "MV" from one side of the chamber to the other. The rebound valve is also located on the "MV".

#### Service Manual IDYLLE since year 2014



**Negative Spring:** A negative spring functions to control the return of the suspension when it reaches full extension. Negative springs can be air, coil spring, rubber bumper or a combination of both. A negative spring also functions to soften the "top out feel" when the wheel/suspension rapidly extends and it also helps initiate compression providing a smoother or more sensitive initial feel. An adjustable negative spring offers the greatest tuning range for rider's weight, for example a heavy rider will need a higher or stiffer spring to resist pre-compression, but the high spring rate may also completely compress the negative spring rendering it ineffective to control top out.

**Open Bath Dampers:** Open Bath refers to a cartridge that is NOT closed and allows oil to flow from the inside of the damper to the outside of the cartridge or inside of the fork legs. Open Bath Dampers use oil for damping, lubrication, cooling, and end stroke "ramp up" or "progression". But the downside of all this oil is the added weight of all the excess oil that is used to fill the entire fork leg.

**Packing:** An issue caused from too much rebound damping. When a series of bumps are encountered, the suspension doesn't rebound fast enough to absorb the next bump. The suspension keeps compressing more and more after each bump and it gives the rider a very harsh feeling and even loss of traction and control because the wheels no longer follows the contour of the terrain.

**Platform Damping:** A platform is generally referred to as resistance to initial suspension compression usually generated by pedaling or rider induced forces. A platform can be achieved by various methods and usually the best way to limit suspension "bobbing" is to restrict oil flow through the low speed circuit. Depending on what technology you have and there are various designs out there, choking off the low speed circuit can be achieved by either adjusting a pressure spring on the shim stack, adjusting the depth of a bleed needle or changing the size of an orifice via a slide. These are just a few of the most common methods to deliver platform damping feel to improve pedaling efficiency.

Rebound Damping: Once your suspension has hit a bump and compresses, now it's time for your rebound damping to kick in. Rebound controls how fast the fork extends back from compression to keep the wheel on the ground. Rebound can affect your traction as well. Too much rebound damping will keep the suspension compressed when it should be extending to stay on the ground on the downside of a bump, and the wheel will lose contact with the ground. This is called "Packing". Too little rebound damping will cause the suspension to "bounce" and "hop" also causing a loss of traction and control. Proper rebound control is equally important as compression and it is very important to properly tune this performance feature. The rebound valve is best located on the "MV" with a tapered shim stack controlling oil flow. Damping systems that use orifice or small holes to control damping simply cannot control the dynamics of high performance suspension.

**Spring Preload:** The preload ring or collar compresses the shock or fork spring and either shortens or extends the spring to its original length. Preload is used to adjust the suspension to the correct range of operation within the suspension's travel- more spring preload will the raise the bike up and less preload will lower it.

**Spring Type:** Springs can either be coil or air and both are widely used in mountain bike suspension systems. Springs work to resist precompression of the suspension under the rider's weight and is independent of the compression system which refers to damping. Too stiff of a spring rate delivers a harsh and uncontrolled feel, if your spring rate is too soft, the suspension will sit too far into its travel and will feel mushy and easily bottom out. It's important to have the correct spring rate for each rider and setting up "SAG" will determine whether you have the correct rate or not.

**Stiction:** Or static friction, is a term that describes friction that occurs from parts rubbing or gliding across one another. For example, on both the rebound and compression stroke, the stanchion tubes must glide against the bushings, O-rings, seals, and other parts. The parts that come in contact with one another create friction and when a bending load is applied the stiction can increase causing the suspension to bind and feel notchy. Stiction can also dramatically increase after seals become dry resulting in the loss of small bump sensitivity.

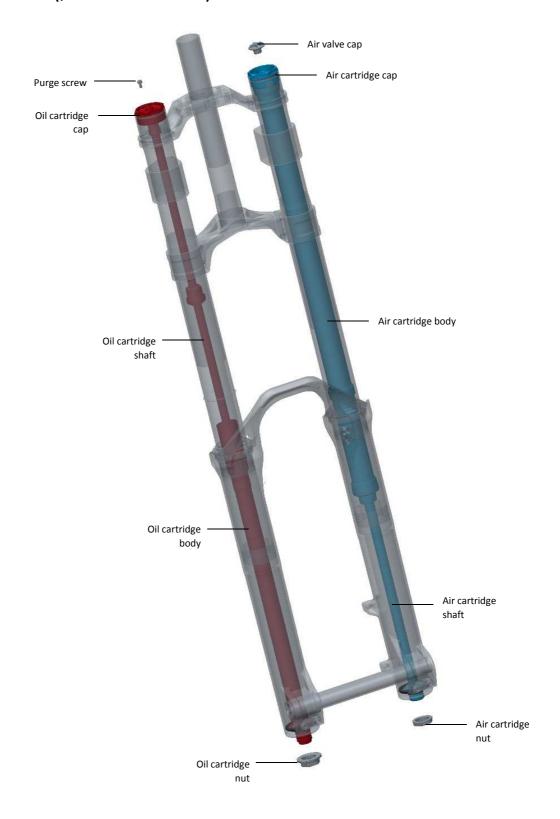
**Twin Tube Dampers:** Twin Tube systems generally combine the technology of an "Open Bath" Damper and a "Closed Cartridge" system. With a Twin Tube design, the cartridge damper is inside of a tube (hence twin tube) allowing oil to flow from the cartridge damper into and from the twin tube providing additional oil flow and damping performance without the added weight of "excess" oil that is needed to fill the fork leg.

Valving: The mechanical hardware that creates compression or rebound damping. Valving is a combination of check valves, holes, ports, shims, springs, etc. The best valving arises out of piston with a series of tapered shim stacks which are very thin high quality steel "washers" that when combined together produce a smooth yet linear flex pattern when oil flows around them. Shims provide the resistance to the oil flowing through the piston at various speeds. The lower amount of shims used typically means the damping quality is less. Systems that use one or two shims deliver a harsh feel on high speed hits, unfortunately, many so-called high performance suspension designs use very few shims and/or only small holes to control damping forces. If your clickers are ineffective or have a very small range, this is due to improper piston & shim stack design.



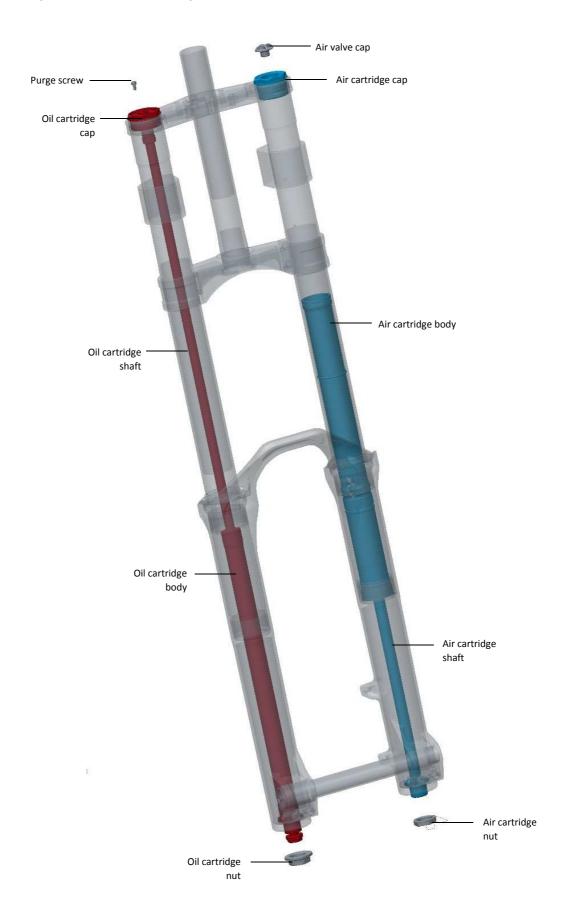
## 3 Exploded views of the fork

#### 3.1 IDYLLE RARE FCV (Ø37MM STANCHIONS)





## 3.2 IDYLLE AIR (Ø36MM STANCHIONS)

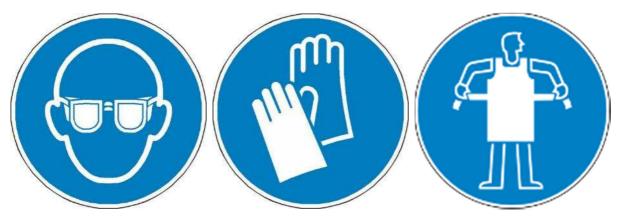




### 4 BOS Suspension Service

#### 4.1 SAFETY

While working on BOS suspension please wear appropriate safety equipment's as apron, safety gloves and glasses.



When manipulating suspension oil, please wear nitrile gloves and glasses.

#### 4.2 CLEANLINESS

When servicing your BOS suspension, be sure that you are working in conditions that will not affect the performance:

- Work in dust free environment
- Work on clean and organized workstation
- Use aluminum soft jaws to protect the equipment when using a vice
- Do not scratch any of the surface when using tools
- Clean elements when your disassemble them
- Drop sub-assemblies on your station in order to easily find how to reassemble them together
- Wear long sleeves is recommended or shaved arms

If you are servicing your BOS suspension outside a workshop, you should have at least:

- · Avoid dust and air flow around your working area
- A clean tarpaulin to place underneath the suspension on the floor
- A bicycle repair stand to lock and maintain the suspension
- An oil pan
- All necessary tools listed below



#### 4.3 TOOLS REQUIRED FOR SERVICE

#### Cleaning + Safety:

Safety glasses
 Clean, lint-free rags
 Nitrile gloves
 Apron
 Bottlebrush
 Clean, lint-free rags
 Long plastic or wooden dowel
 Pressure washer
 Isopropyl alcohol
 Spray bottle
 Oil fountain (optional)

#### **Standard tools:**

- 1.5 / 4 / 6 mm HEX wrenches - 10 / 13 / 14 / 16 / 19 / 21 / 24 mm open end wrenches - Torque wrench - Socket wrench - Large internal retaining ring pliers - 10mm socket - 21mm socket (6 sides) - Small screwdriver grounded - 13mm open end socket - 19mm open end socket - 24mm open end socket - Bench vise with aluminum soft jaws - Reglet - Silicone paint brush - Air pump - Syringe - Rubber mallet - Graduated pitcher - Internal extending micrometer 30-40mm - Universal grease

- Downhill tire lever - Bicycle stand (optional)

#### **BOS** specific tools - Pack 1:

- 32mm socket / ref. 150707-O-108 - BOS suspension vise block / ref. 150707-O-011 - Oil level gauge / ref. 150707-SEO-002 - BOS Push air shaft / ref. 150707-O-063

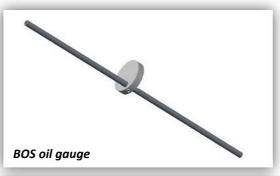
#### **BOS specific tools - Pack 2:**

- BOS seal installation tools / ref. 150707-SEO-001 - BOS slide bushing extractor / ref. 150707-SE-003A

## BOS specific tools – Pack 3:

- Half shell Ø10 / ref. 150707-O-058 - Half shell Ø21 / ref. 150707-O-060 - Half shell Ø27 / ref. 150707-O-061













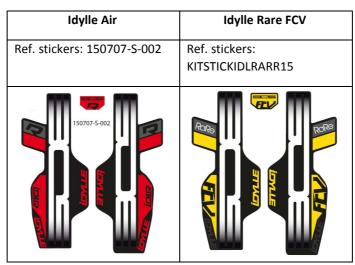


#### 4.4 COMPONENTS REQUIRED FOR SERVICE

For operations on the suspension, you may have to order components according to the table below:

Operations	Components	Quantity	Tools required	Step by step
Basic Service: Change Oil	Bio Oil	0.4 L	Standard + Pack 1	§ 6.1, 6.2, 6.4:
Complete service: Change Oil Traveler checker replacement Scraper seals replacement Air piston O-ring replacement Stickers replacement	Bio Oil  IDYLLE service kit ref. 151108-SE-002  Kit stickers*	0.4 L 1	Standard + Pack 1 / 2	§ 6.1, 6.2, 6.4:
Slide bushings replacement	IDYLLE bushing kit	1	Standard + Pack 1 / 2	§ 6.3
Oil cartridge opening			Standard + Pack 1 / 2 / 3	§ 6.5
Stickers replacement	Kit stickers*	1	Standard	§ 6.6

<sup>\*</sup>Choose your sticker kit following this table:



Older versions and OEM stickers exists, please contact BOS for more information.

#### 4.5 PERIODICAL SERVICE INFORMATION

To ensure that your fork will keep its best performance, be sure to respect the following program:

	ltem	New	Every ride	Every 6 months	Every year	Every two years
	Set sag	Х				
Se	t adjustments	Х				
Clea	an fork exterior		Х			
	Wet/Muddy conditions			Х		
Basic Service	Racing/frequent use			Х		
	Dry/dusty conditions				Х	
	Wet/Muddy conditions				Х	
Complete service	Racing/frequent use				X	
	Dry/dusty conditions					X
	Wet/Muddy conditions				X	
Inspect Bushings	Racing/frequent use			X		
	Dry/dusty conditions					X



#### 4.6 FLUID TABLE

			Cartridge		Lubricatio	n
Serial n°	Product	Oil quantity (ml)	Oil level (mm)	Oil type	Oil quantity left air (ml)	Oil quantity right (ml)
002xxxx	IDYLLE 2014	330	185	Bio Oil	155	Х
006xxxx	IDYLLE Rare 2014	380	130	Bio Oil	10	Х
007xxxx	IDYLLE Air 2014	330	185	Bio Oil	10	Х
000	IDYLLE SC Air Tapered	270	55	Bio Oil	10	Х
008xxxx	IDYLLE SC Air Tapered YT03	270	55	Bio Oil	10	Х
009xxxx	IDYLLE SC Air	270	55	Bio Oil	10	Х
012xxxx	IDYLLE SCR 3 Voies Tapered					
0.1.0	IDYLLE Air 650B	330	185	Bio Oil	10	Х
013xxxx	IDYLLE Air 650B COM06	330	185	Bio Oil	10	Х
04.4	IDYLLE Rare 650B	380	130	Bio Oil	10	Х
014xxxx	IDYLLE Rare 650B COM07	380	130	Bio Oil	10	Х
	IDYLLE Rare FCV 2015	365	155	Bio Oil	20 in the casting + 3 in the cartridge	х
015xxxx	IDYLLE Rare FCV 2015 RM03	365	155	Bio Oil	20 in the casting + 3 in the cartridge	х
	IDYLLE Rare FCV 2015 YT06	365	155	Bio Oil	20 in the casting + 3 in the cartridge	х
	IDYLLE Air 650B 3 Voies	330	185	Bio Oil	10	Х
017xxxx	IDYLLE Air 650B 3 Voies RM02					
0.1.0	IDYLLE 650B COM08	330	185	Bio Oil	155	х
018xxxx	IDYLLE 650B RM01S/M/L	330	185	Bio Oil	155	Х



## 4.7 TRAVELER FOR SERVICE CONTROL (PRINTABLE DOCUMENT)

Owner of the product:				Date of service:		
Technician:		VIS	A:		Shop Order #:	
Customer initial settings						
Customer initial settings:	l avv ana	ad (aliaka)	/ P. I			aliaka\
Pressure (psi)	Low speed (clicks)		High speed (clicks)		Rebound (clicks)	
Services check list						
Basic service operations:						
Cleaning:	YES	□ NO -	Note:			
Oil change:	YES	□ NO -	Note:			
Basic control:	YES	□ NO -	Note:			
Travel checker replacement:	YES	□ NO -	Note:			
Complete service operations	s:					
Cleaning:	YES	□ NO -	Note:			
Oil change:	YES	□ NO -	Note:			
Complete control:	YES	□ NO -	Note:			
Travel checker replacement:	YES	■ NO -	Note:			
Oil and dust seals replacement	: YES	■ NO -	Note:			
Air piston O-ring replacement:	YES					
Stickers replacement:	YES					
Slide bushing replacement						
Comments / Parts changed:						



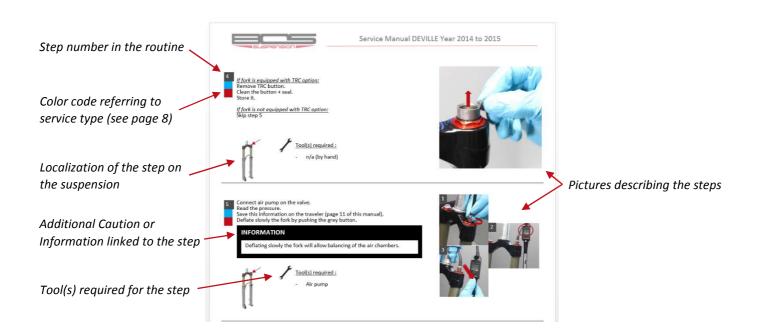
## 5 Operations Summary

#### 5.1 STEP BY STEP CHART

For all BOS suspension's service, the following chart is followed:

- 1. Receive the suspension
  - a. Fill the traveler included in this manual page 10
  - b. Attribute a shop order #, apply this # on the traveler and on the suspension thanks to a tape
- 2. Control the suspension
  - a. Oil leakages
  - b. General condition (scratches, damages...)
  - c. Establish a potential quotation for repairing the suspension
  - d. Check settings consistency
- 3. Clean the suspension. There is multiple way to clean:
  - a. Pressure washing
  - b. Hot water + soap
  - c. Oil bath + brush
  - d. Alcohol spray
- 4. Note the customer's settings of the suspension. You could use page 10 of this manual to do so.
- 5. Disassemble the suspension following the §6 Step by Step
- 6. Clean the sub-assemblies and control them when removing from the suspension
- 7. Change parts, reassemble and control the suspension
- 8. Apply back the suspension's settings.
- 9. Clean the suspension before packaging
- 10. Complete traveler with all information and join it with the suspension

#### 5.2 HOW TO USE THIS DOCUMENT?





## 6 Step by Step

#### 6.1 CLEANING

Cleaning is very important and part of the BOS service. Do not forget the cleaning steps during service.

1 Inspec

Inspect the fork:

- Check eventual loose
- Control parts damaged
- Seek for oil leakages (see picture)

If one of those inspection points shows that something needs to be replaced, you should quote it to the customer and replace it.

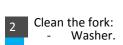






Tool(s) required:

n/a (by hand)



OR (if not equipped):

- Hot water + soap.







#### 6.2 **DISASSEMBLE**

Unscrew the 4x screws from axle wheel. Remove the wheel axle.

Clean the quick release system and wheel axle.

Use sand paper to remove rust on the wheel axle if necessary.





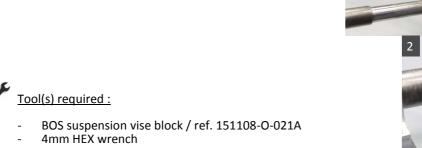


#### Tool(s) required:

- 4mm HEX wrench
- 6mm HEX wrench
- 600 sand paper



Place the fork on the vise block thanks to the specific tool. Tighten the screws to hold the fork on the vise block.









Loosen the air valve cap. Clean it. Store it.





#### Tool(s) required:

n/a (by hand)





Connect air pump on the valve.

Read the pressure.

Save this information on the traveler (page 10 of this manual).

Deflate slowly the fork by pushing the grey button.

#### **INFORMATION**

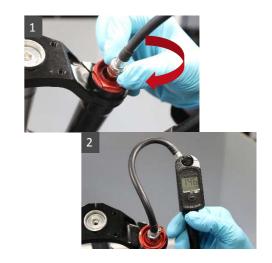
Deflating slowly the fork will allow balancing of the air chambers.





#### Tool(s) required:

Air pump



5

Save the rebound setting:

- Screw clockwise the knob
- While screwing, count the number of clicks until the stop
- Write down the number of clicks on the traveler (included in this manual)







#### Tool(s) required:

Screwdriver



Remove the superior crown:

- Untighten the screws
- Extract the crown from the fork

 $\label{lem:continuous} \mbox{Remove the bumpers if installed.}$ 





#### Tool(s) required:

4mm HEX wrench



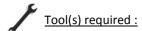


7 Untighten the oil and air cartridge cap.

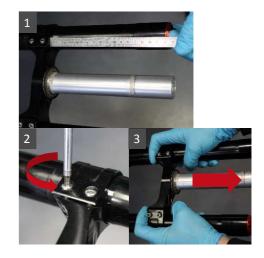








- 32mm socket
- Socket wrench
- Remove the inferior crown:
  - Measure and save the height from the cap to the crown
  - Untighten the screws
  - Extract the crown from the fork

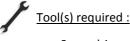






- Rotate the fork upside down on its vise block.
  Save the low speed compression setting (grey knob):
  - Screw clockwise the knob
  - While screwing, count the number of clicks until the stop
  - Write down the number of clicks on the traveler (included in this manual) Unscrew the grey knob (anticlockwise) at its maximum





Screwdriver





Save the high speed compression setting (red knob):

- Screw clockwise the knob
- While screwing, count the number of clicks until the stop
- Write down the number of clicks on the traveler (included in this manual)

#### **INFORMATION**

The low comp setting will turn with the high speed. This is normal!





#### Tool(s) required:

21mm open ends wrench



11

Loosen the air cartridge nut. Clean the bolt and seals (x2). Store it.

#### **CAUTION**

While loosening the nut, oil may drop from the bottom of the fork. Be sure to apply oil pan under the fork.





#### Tool(s) required:

21mm open ends wrench



12

Untighten the high speed compression screw and remove the knob. Loosen the oil cartridge nut.

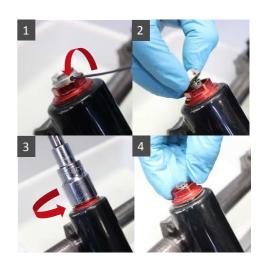
Clean it.

Store it.





- 21mm socket
- Socket wrench
- 1.5mm HEX wrench





Place an oil pan under the fork. Pull the stanchion out from the fork.

#### **CAUTION**

Act slowly to avoid splash.





#### Tool(s) required:

n/a (by hand)



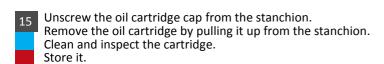
- Purge the oil cartridge:
   Let the cartridge inside the stanchion.
  - Pull back and forth the cartridge until no more oil comes out.







n/a (by hand)









#### Tool(s) required:

n/a (by hand)





Clean the stanchion, use a long dowel to clean inside. Store it.





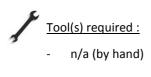
- Spray of isopropyl alcohol
- Rag
- Long dowel

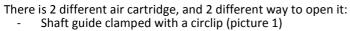


Remove the air stanchion from the fork. Empty the oil from the stanchion into an oil pan. Clean and inspect the cartridge.



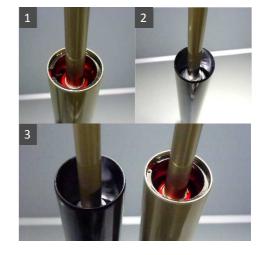






- Shaft guide screwed on the cartridge (picture 2)

Follow the **bold** description on the next steps according to your fork.





n/a (by hand)



Shaft guide clamped with a circlip (skip to step 23 if shaft guide screwed) Unscrew and remove the cartridge cap.







#### Tool(s) required:

Large retaining ring pliers



Place the tips of large retaining ring pliers into the eyelets of the retaining ring. Press firmly on the pliers and remove the retaining ring.

#### CAUTION

Scratches on the air shaft will reduce spring performance. Maximum attention should be taken while removing retaining ring.



#### Tool(s) required:

Large retaining ring pliers





#### Shaft guide clamped with a circlip

Pull the air shaft to remove the cartridge from the stanchion. If difficult, you could use a dowel to push the cartridge from the other side.







#### Tool(s) required:

BOS Dowel / ref. 150707-O-062





#### 22 Shaft guide clamped with a circlip

Push the air shaft through the cartridge.

You should see the piston coming out of the cartridge to remove the O-ring.





#### Tool(s) required :

n/a (by hand)



23 Shaft guide screwed on the cartridge (skip to step 25 if shaft guide clamped) Unscrew the cap and extract the cartridge from the stanchion.

Squeeze the top of the cartridge (close to the cartridge cap) into a vise block, thanks to half shells.

Heat the shaft guide to melt the Loctite and unscrew the shaft guide.







- BOS half shells Ø27mm / ref. 150707-0-061
- 19mm open ends wrench
- Heat gun



#### Shaft guide screwed on the cartridge

Pull out the shaft from the cartridge. Empty the oil from the cartridge into an oil pan. Clean and inspect the air shaft + pistons.

Store it.

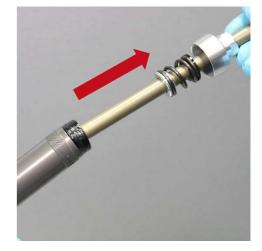


Oil will drop from the cartridge (3ml).



#### Tool(s) required:

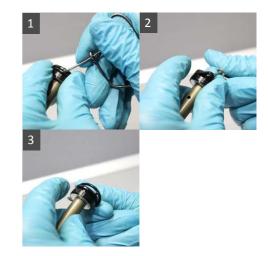
n/a (by hand)





Take the air shaft with pistons.

Change the O-ring of the piston mounted at the end of the shaft. Slide a small screwdriver grounded (remove sharp edges) between the O-ring and the piston, and extract it.





#### Tool(s) required:

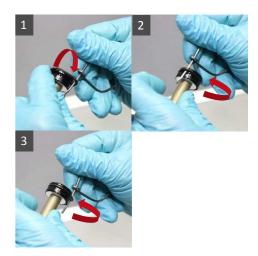
Small screwdriver grounded

Take a new O-ring.

Insert one side in the groove by hand and maintain it.

Use a small screwdriver grounded to insert the other side of the O-ring into the groove.

Keep your screwdriver between the shaft and the O-ring and turn around the shaft 2-3 times. This will ensure that the O-ring is not twisted on itself.





#### Tool(s) required:

Small screwdriver grounded



Apply universal grease on this piston + O-ring with a silicone brush. Remove excess of grease.



- Universal grease
- Silicone brush



The groove should be full of grease!

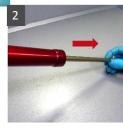


Shaft guide clamped with a circlip (skip to step 32 if shaft guide screwed) Push the piston back inside the cartridge.

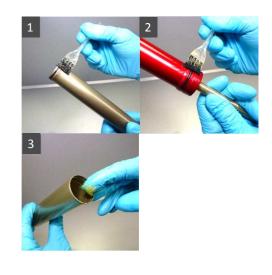
Pull the shaft until the equilibration point to balance air chambers.



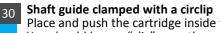




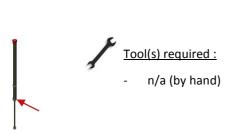
Shaft guide clamped with a circlip Apply grease on ALL the O-rings on the cartridge with the silicone brush. Apply grease on the stanchion by hand.

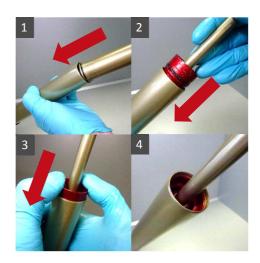






Place and push the cartridge inside the stanchion.
You should hear a "clic" once the cartridge is well in place.
The groove for the retaining ring should be visible.







Shaft guide clamped with a circlip

Place the tips of large retaining ring pliers into the eyelets of the retaining ring. Press firmly on the pliers and install the retaining ring into the groove. Check with a screwdriver that the retaining ring is well positioned in the groove.

#### **CAUTION**

Scratches on the air shaft will reduce spring performance. Maximum attention should be taken while removing retaining ring.



#### Tool(s) required:

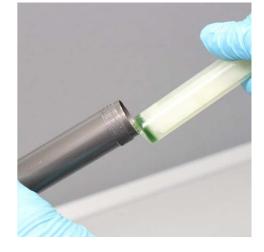
- Large retaining ring pliers
- Small screwdriver





**Shaft guide screwed on the cartridge** (skip to step 36 if shaft guide clamped) Insert X ml\* of oil\*\* in the cartridge (see Fluid table, page 9 of this document). Clean the shaft guide thread and the cartridge thread with a rag and alcohol.

- \* Refers to "Oil quantity" column in Fluid table, page 9 of this document. \*\* Refers to "Oil type" column in Fluid table, page 9 of this document.





#### Tool(s) required:

- Syringe
- Oil\*
- Spray of Isopropyl alcohol
- Rag



#### Shaft guide screwed on the cartridge

Insert the air shaft inside the cartridge, greased piston first. Put a drop of Loctite on the first threads of the cartridge. Screw the shaft guide on the cartridge by hand.







#### Tool(s) required:

Loctite 243



34 Shaft guide screwed on the cartridge

Squeeze the top of the cartridge (close to the cartridge cap) into a vise block, thanks to half shells.

Screw the shaft guide at torque.

#### **CAUTION**

Scratches on the air shaft will reduce spring performance. Maximum attention should be taken while screwing shaft guide.





- BOS half shells Ø27mm / ref. 150707-O-061
- 19mm open ends socket
- Torque wrench





Torque = 15Nm

Shaft guide screwed on the cartridge Place back the air cartridge inside the stanchion. Screw the cartridge cap on the stanchion.





No torque – Hand tight

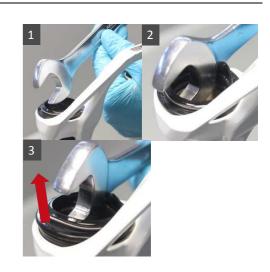
- Remove the scraper seals from the casting:
  - Place the inferior beak of the open wrench under the seal.
  - Pry on the seal itself to remove the scraper seal from the casting.
  - Do the same operation on the other seal.





#### Tool(s) required:

22mm open wrench





#### Clean the stanchions:

- Spray isopropyl alcohol inside and outside stanchions.
- Clean with a rag outside the stanchions.
- Wrap a rag around a long dowel to clean inside stanchions or use a bottle brush.

#### **CAUTION**

Scratches on stanchions will generate oil leakages.

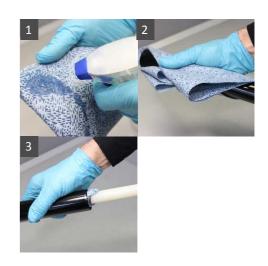
Maximum attention should be taken while cleaning stanchions.





#### Tool(s) required:

- Spray of isopropyl alcohol
- Rag
- Long dowel / Bottle brush





#### Clean the casting:

- Oil fountain with brush + bottlebrush.
- Washer.

#### OR (if not equipped):

- Isopropyl alcohol + brush + bottle brush.
- Hot water + soap.





#### Tool(s) required:

- Oil fountain with brush
- Bottlebrush
- Washer
- Isopropyl alcohol + brush
- Soap





#### Take off the stickers from the casting:

- Peel off the sticker from the casting by hand (you could use a plastic tool to start in an angle).
- Clean the casting with isopropyl alcohol and rag.

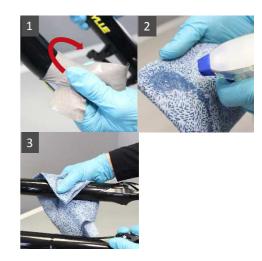
#### **INFORMATION**

Doing this operation after HOT washing will make it easier to remove the adhesive.





- Spray of isopropyl alcohol
- Rag





#### 6.3 SLIDE BUSHINGS REPLACEMENT

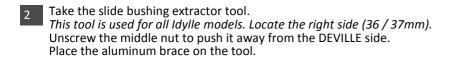
Place the fork on the vise block. Rotate the fork at 45° in front of you.

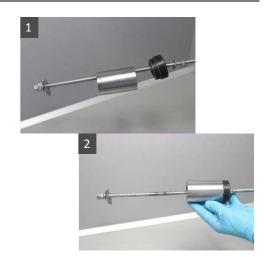






BOS suspension vise block / ref. 151108-O-021A



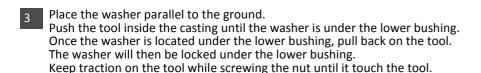






#### Tool(s) required:

BOS slide bushing extractor / ref. 150707-SEO-003







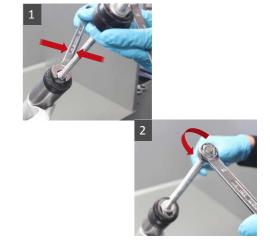


#### Tool(s) required:

BOS slide bushing extractor / ref. 150707-SE-003A



Maintain the central nut with a 16mm or 17mm open wrench. Place a 16mm open wrench at the bottom of the tool. Unscrew (anticlockwise) the bottom of the tool. You will feel that the lower slide bushing will release from its housing. Keep traction on the tool to keep washer under this bushing.







#### Tool(s) required:

- 2x 16mm open wrench
- OR
- 1x 16mm & 1x 17mm open wrenches

Pull on the tool until the lower bushing will stop on the upper bushing. Keep traction on the tool while screwing the nut until it touch the tool.

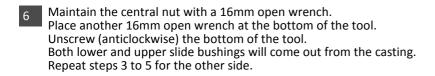


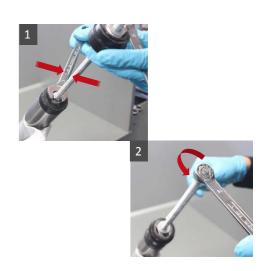




#### Tool(s) required:

BOS slide bushing extractor / ref. 150707-SE-003A









#### Tool(s) required:

2x 16mm open wrench



- 7 Clean the tool and throw away the old bushings Clean the casting:
  - Oil fountain with brush + bottlebrush OR (if not equipped):
    - Isopropyl alcohol + brush + bottlebrush





#### Tool(s) required:

- Oil fountain with brush
- Bottlebrush



Lower slide bushing are thinner than upper slide bushings. Take lower slide bushing and orient its joint inside the fork. Drop it inside the casting. Do the same for the other lower slide bushing.





#### Tool(s) required:

n/a (by hand)





Take the lower slide bushing tool and insert it inside the casting. Place the strike tip on the tool.

Hit the tool with the rubber mallet to insert the bushing. Stop to strike the tool once it touch the casting. Repeat these operations for the other side of the casting.





- BOS lower slide bushing tool 36 / ref. 150707-0-006
- BOS lower slide bushing tool 37 / ref. 151613-O-001
- Rubber mallet





Insert the upper slide bushing and the strike tip on the tool.
Place the tool on the casting and orient its joint to the outside of the fork.
Hit the tool with the rubber mallet to insert the bushing.
Stop to strike the tool once it touch the casting.
Repeat these operations for the other side of the casting.

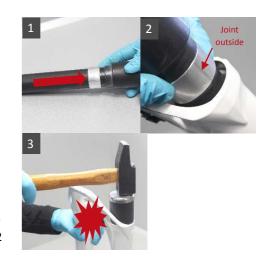
#### **INFORMATION**

Joints from lower and upper bushings should be mounted opposite.





- BOS upper slide bushing tool 36/ ref. 150707-O-007
- BOS lower slide bushing tool 37 / ref. 151613-O-002
- Hammer





#### 6.4 REASSEMBLE

1

Degrease the scraper seal groove on the casting. Use isopropyl alcohol and rag to clean the groove.

#### **CAUTION**

Greasy surface will generate scraper seal extraction while riding!





#### Tool(s) required:

- Spray of isopropyl alcohol
- Rag



2

Remove the spring from the scraper seals.

Take the upper slide bushing tool and apply the scraper seal tool & the strike tip. Place a new scraper seal on the tool and apply the tool on the casting. Hit the tool until the scraper seal has touched all around the casting. Repeat operations for the other scraper seal.

#### **CAUTION**

Do not squeeze the scraper seal, stop hitting once it touch the casting.





#### Tool(s) required:

- BOS lower slide bushing tool / ref. 151108-O-007C
- BOS scraper seal tool / ref. 151108-O-009C
- Rubber mallet





Apply universal grease on the inside of the scraper seal. Remove excess of grease.





- Universal grease
- Teflon brush







Mount the casting on the vise block. Insert the oil stanchion inside the casting. Insert the oil cartridge inside the stanchion.







#### Tool(s) required:

BOS suspension vise block / ref. 151108-O-021A



5

Screw the oil cartridge nut by hand.







#### Tool(s) required:

n/a (by hand)



6

Screw the oil cartridge cap on the first threads by hand. Rotate the fork upside down. Screw the oil cartridge nut at torque.







- 21mm socket
- Torque wrench



Torque = 10Nm



Screw back the high speed setting. Be sure that the screw will point the hole in the shaft before screwing.





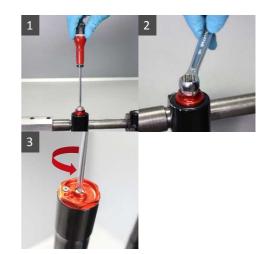


1.5mm HEX wrench



- Apply back the customer's settings:
  - High speed compression
  - Low speed compression

Open the rebound setting at the maximum (fully unscrewed).

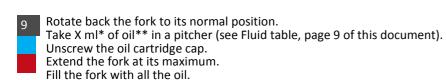






#### Tool(s) required:

- Screwdriver
- 14mm open ends wrench



- \* Refers to "Oil quantity" column in Fluid table, page 9 of this document. \*\* Refers to "Oil type" column in Fluid table, page 9 of this document.





- Graduated pitcher
- Oil\*\*







Screw by hand the oil cartridge cap until the stop. Compress and release slowly the fork 4-5 times.

#### **INFORMATION**

To facilitate, put the rebound setting at 2 clics from closed.







#### Tool(s) required:

n/a (by hand)



Check oil level according to column "Oil level" from Fluid table, page 9 of this document.

Take the oil level gauge.

Use a reglet to set the oil level as the distance between the stop and the end of the tube.

Mount the oil level gauge on the syringe.



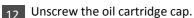






#### Tool(s) required:

- Oil level gauge / ref. 150707-SEO-002
- Syringe
- Reglet



Compress the fork at its maximum and pull the cartridge.

Place the syringe + oil gauge on the fork.

Aspirate oil with the syringe until air bubbles appears (you may add some oil if only air is coming in the syringe).



Oil level is always done suspension compressed and cartridge extended





- Oil level gauge / ref. 150707-SEO-002
- Syringe

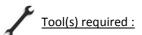




Screw the oil cartridge cap on the first thread.
Pull the fork to reach the maximum length of the fork and maintain.
Screw the oil cartridge cap with the wrench + 32mm socket.
Apply back the rebound setting from the customer.

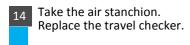






- Socket wrench
- 32mm socket
- Small screwdriver











#### Tool(s) required:

n/a (by hand)



Insert the air cartridge stanchion in the fork (left side).







#### Tool(s) required:

n/a (by hand)





Take off the oil level gauge from the syringe. Fill the syringe with Y ml\* of oil (see Fluid table, page 9 of this document). Place the fork horizontally.

Empty the oil from the syringe into the air fork leg for lubrication.

- \* Refers to "Oil quantity left air" column in Fluid table, page 9 of this document. \*\* Refers to "Oil" column in Fluid table, page 9 of this document.

### **CAUTION**

Keep the suspension horizontal until the air cartridge bolt has not been tighten.





### Tool(s) required:

- Syringe
- ۰ Oil \*\*



Push the air cartridge to see the shaft threads out from the casting. Screw the nut on the shaft with a torque wrench + 5mm HEX socket.



Keep the suspension horizontal until the air cartridge bolt has not been tighten.





# Tool(s) required:

- Torque wrench
- 21mm socket





Torque = 10Nm

- Place back the inferior crown:
  - Insert the crown on the stanchion
  - Measure the height from the top of the stanchion to the crown
  - Tighten the screw at torque

Place back the bumpers if present at the disassembling step.





### Tool(s) required:

- 4mm HEX wrench
- Torque wrench



Torque = 3Nm



Place back the superior crown:

- Insert the crown on the stanchions
- Tighten the screws to contact

Remove the bumpers if installed.

# **INFORMATION**

It is not necessary to tighten at torque the superior crown as it will be disassembled to mount the fork back on the bicycle.





# Tool(s) required:

4mm HEX wrench





No torque – Tighten to contact

20 Screw wheel axle back on the fork.
Tighten the 4x screws on the wheel axle.





# Tool(s) required:

4mm HEX wrench





Torque = 3Nm

Connect the air pump on the fork. Increase pressure 50 psi per 50 psi. Every 50 psi; cycle 3-4 times the fork on the

Every 50 psi; cycle 3-4 times the fork on the first centimeters to balance the air (release gently during the rebound, balancing period)

# **INFORMATION**

Balancing air chambers is important to soften the fork and avoid preload.





# Tool(s) required:

Air pump



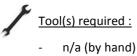




Screw air valve cap by hand.







Tool(s) required:



Clean the casting with a rag and alcohol.







# Tool(s) required:

- Spray of isopropyl alcohol



Install the stickers on the casting (see §7 for templates).

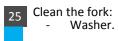




# Tool(s) required:







OR (if not equipped):
- Hot water + soap.





- Washer
- Soap





### 6.5 OIL CARTRIDGE OPENING

Place half-shells on the oil cartridge.
Squeeze them moderately on the cartridge thanks to the vise block.

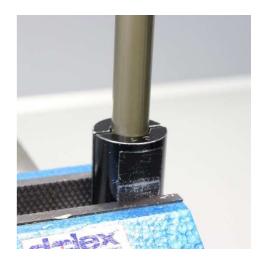
# **CAUTION**

Take care to the position of the half-shells on the cartridge before squeezing.





- Half shell Ø21 / ref. 150707-O-060
- Vise block



2 Unscrew and remove the compression block. Take the cartridge off the vise block.







Turn around the cartridge and place the half-shells on the shaft. Squeeze them moderately thanks to the vise block.

# **CAUTION**

Take care to the position of the half-shells on the cartridge before squeezing.





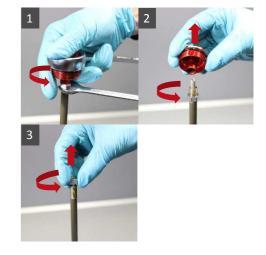
# Tool(s) required:

- Half shell Ø10 / ref. 150707-O-058
- Vise block





Lock the cartridge cap with the 26mm open end wrench. Unscrewing the nut under the cap.
Unscrew the cap.
Screw the nut to remove it from the shaft.
Take the cartridge off the vise block.







# Tool(s) required:

- 32mm open end wrench
- 13mm open end wrench

Hold the hydraulic stop piston with a 16mm open ends wrench. Unscrew the counter nut under the piston with a 14mm open ends wrench. Save the position of the lock ring on the shaft and remove it. Remove the piston and nut from the shaft. Dry clean the threads to remove the Loctite.

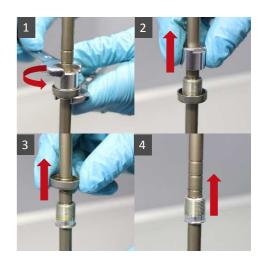
### **INFORMATION**

Changing the height of the piston will modify its effect. The highest you place the lock ring, the less effect the hydraulic stop will have.



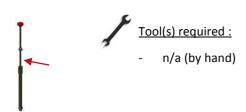
### Tool(s) required:

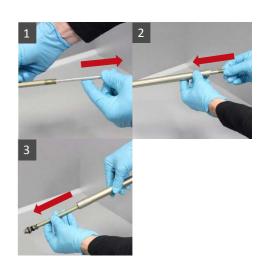
- 16mm open ends wrench
- 14mm open ends wrench



- 5 Open the cartridge:
  - Pull the rebound transmission
  - Push the shaft through the cartridge
  - Grab back the shaft and extract it from the cartridge

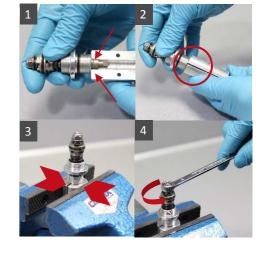
Clean, inspect and store the parts.







- Open the compression block:
  - Squeeze the 14mm socket into a vise block thanks to the half shells
  - Place the compression block into the socket
  - Unscrew the nut

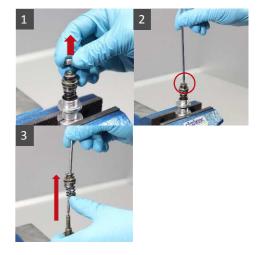






- 10mm open ends wrench Half shell Ø10 / ref. 150707-O-058

Take a long and thin tool to extract the stack-up from the compression block. Place the tool on the compression block. Slide the stack-up from the block to the tube.







Long and thin tube OR tool

Take off each part from the stack-up and sort them shipshape on a clean workstation.

Control the elements.

If necessary, replace elements or change the setting.

# **CAUTION**

Each element may have an asymmetric shape. Be sure to keep the right side at the right place when you take them off.





# Tool(s) required:





9 Reassemble the stack-up on the compression block following the order that you took it off.

Screw the nut by hand on the first threads.

# **CAUTION**

Clean the elements before putting them back on the compression block (remove dust, foreign objects, fibers...).





# Tool(s) required:

n/a (by hand)





Push by hand the stack-up to compress the spring and engage stack-up. Ensure that the complete stack-up is well centered on the shaft. Screw the nut with the torque wrench while still pressing the stack-up. Check that the stack-up is well centered and free to turn.

### **CAUTION**

If once screwing, the stack up is not centered or locked in rotation on the shaft, you must go back to step 7 and replace damaged elements.

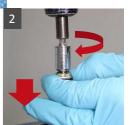




# Tool(s) required:

- 10mm socket
- Torque wrench





Torque = 3Nm

Reassemble the shaft inside the cartridge.
Insert the rebound transmission inside the shaft.





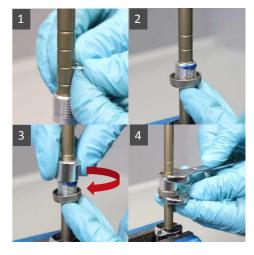
# Tool(s) required:





Put a drop of Loctite on the first thread of the nut.
Slide the nut on the shaft.
Place back the lock ring in the groove where you found it.
Mount the piston, then screw it while holding the counter nut.

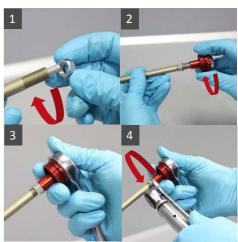




No torque – tighten to contact

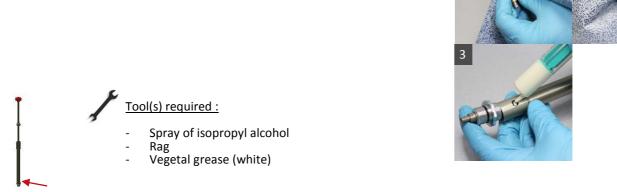
Screw the nut on the shaft until the end of the thread, do not tighten. Screw the cartridge cap, tighten by hand.
Hold the cartridge cap with the 32mm open end wrench.
Screw the nut against the cartridge cap with the torque wrench.





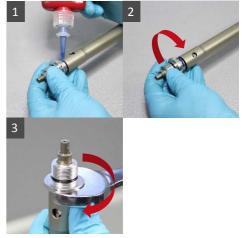
Torque = 7Nm

Degrease and dry clean the threads with isopropyl alcohol and a rag. Insert the compression bloc in the cartridge, then apply vegetal grease on the stack-up through the hole.





Apply Loctite 243: 1cm on the 1<sup>st</sup> threads.
Screw the compression block by hand.
Place half shell on the cartridge and squeeze it into the vise block.
Screw the compression block with a torque wrench.







# Tool(s) required:

- 24mm open end socket Torque wrench
- Loctite 243
- Half shell Ø21 / ref. 150707-O-060



# **6.6 STICKERS REPLACEMENT**

- Clean the fork/casting:
  - Washer.

OR (if not equipped):

- Hot water + soap.





- Washer
- Soap



- Take off the stickers from the casting:
  - Peel off the sticker from the casting by hand (you could use a plastic tool to start in an angle).
  - Clean the casting with isopropyl alcohol and rag.

# **INFORMATION**

Doing this operation after HOT washing will make it easier to remove the adhesive.





# Tool(s) required:

- Spray of isopropyl alcohol
- Rag



Install the stickers on the casting (see §7 for templates).



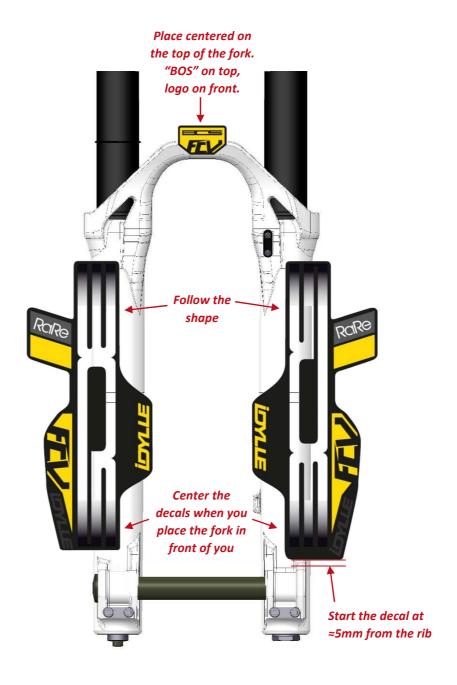


# Tool(s) required:





# 7 Stickers templates





# 8 Additional Information

### 8.1 SETTINGS



To start setting your fork, turn clockwise completely the knobs (=click 0). Then turn counterclockwise one click at a time.

#### 8.1.1 Idylle FCV

Weight (kg)	55	60	65	70	75	80	85	90	95	100	105	110	115	120
Weight (lbs)	120	132	143	154	165	176	187	198	210	220	231	242	254	265
Recreational use : Pressure (psi)	143	153	163	171	180	187	194	201	207	212	217	222	226	229
Racing use : Pressure (psi)	149	160	169	179	187	195	202	209	216	221	226	231	235	238

### **Recreational Use:**

Low-speed compression: 15 clicks High-speed compression: 20 clicks

Rebound: 20 clicks

### **Racing Use:**

Low-speed compression: 11 clicks High-speed compression: 16 clicks

Rebound: 19 clicks

### 8.1.2 Idylle R 2016

Weight (kg)	55	60	65	70	75	80	85	95	105	110
Weight (lbs)	120	132	143	154	165	176	187	210	231	242
Recreational use : Pressure (psi)	155	160	165	170	175	180	185	190	195	205
Racing use : Pressure (psi)	160	165	170	175	185	190	195	200	210	215

### **Recreational Use:**

Low-speed compression: 15 clicks High-speed compression: 18 clicks

Rebound: 18 clicks

# **Racing Use:**

Low-speed compression: 10 clicks High-speed compression: 20 clicks

Rebound: 16 clicks

# 8.1.3 Idylle Rare 2014

Weight (kg)	55	60	65	70	75	80	85	95	105	110
Weight (lbs)	120	132	143	154	165	176	187	210	231	242
Recreational use : Pressure (psi)	155	160	165	170	175	180	185	190	195	205
Racing use : Pressure (psi)	160	165	170	175	185	190	195	200	210	215

### **Recreational Use:**

Low-speed compression: 15 clicks High-speed compression: 18 clicks

Rebound: 18 clicks

### **Racing Use:**

Low-speed compression: 10 clicks High-speed compression: 20 clicks

Rebound: 16 clicks



### 8.1.4 Idylle Air 2014

Weight (kg)	55	60	65	70	75	80	85	95	105	110
Weight (lbs)	120	132	143	154	165	176	187	210	231	242
Recreational use : Pressure (psi)	155	160	165	170	175	180	185	190	195	205
Racing use : Pressure (psi)	160	165	170	175	185	190	195	200	210	215

**Recreational Use:** 

Compression: 15 clicks Rebound: 18 clicks **Racing Use:** 

Compression: 8 clicks Rebound: 16 clicks

# 8.1.5 Idylle SC 2014

Weight (kg)	55	60	65	70	75	80	85	95	105	110
Weight (lbs)	120	132	143	154	165	176	187	210	231	242
Recreational use : Pressure (psi)	175	180	185	190	195	200	205	210	215	220
Racing use : Pressure (psi)	180	185	190	195	200	205	210	215	220	225

**Recreational Use:** 

Compression: 15 clicks Rebound: 18 clicks **Racing Use:** 

Compression: 8 clicks Rebound: 15 clicks

### 8.1.6 Idylle

Weight	m < 60 kg m < 132 lbs	60 < m < 80 kg 132 < m < 176 lbs	80 < m < 105 kg 176 < m < 231 lbs	m > 105 kg m > 131 lbs
Spring	green	orange	grey	purple
Availibility	extra	origin	extra	option

**Recreational Use:** 

Compression: 15 clicks Rebound: 18 clicks **Racing Use:** 

Compression: 8 clicks Rebound: 16 clicks

# 8.2 F.A.Q.

# My fork loses pressure when I remove the pump, what can I do?

Check the valve core tightness using a Schrader valve core tool.

# My fork has negative travel, is this 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 buy original stickers or a valve cap?

These items and more are available in our online store.

### My fork has bushing play from new, what should I do?

The unique bushing alignment and tolerance on BOS forks results in less friction, more sensitivity, and some bushing play from new. If the bushing play feels abnormally excessive, please contact a BOS certified service center for expertise.



### My fork is lowering as I deflate it, what is happening?

When you deflate the fork by the Schrader valve, you are only emptying the positive air chamber. The negative air chamber stays under pressure and exerts an opposing force on the air piston and pulls the fork down. To avoid this phenomenon, deflate the fork in steps of 30-40 PSI and equalize the air chambers between steps (compress and release the fork 5-10 times over the first 20mm - 1 inch) of travel.

#### I just inflated my fork for the first time and it is really hard, what can I do?

Have you equalized your fork's air chambers? If not, check how it's done in the setup section of your product's user manual.

Did you change your fork's settings? Check that your low-speed and high-speed compression are at our recommended base settings given in the setup section of your product's user manual.

If you've equalized your fork, you may have some internal pressure from the production process. You can eliminate this pressure by slipping a thin zip tie between your left dust seal and your stanchion until you hear the sound of air escaping. Then reset your pressure and equalize your air chambers.

If you've tried all that and your fork is still hard, email customer service and they'll give you a hand.

### My fork was upside down or on its side and now it feels like there's no hydraulic control.

Your cartridge has depurged – air has entered the hydraulic system. Open bath cartridges like the one used in your fork allow air to mix with oil. The cartridge purges itself as you ride. You can purge the fork even faster by cycling it through its full travel 5-10 times.

If it is becoming increasingly difficult to purge your cartridge, it may be time for an oil change. Contact your closest BOS authorized service center for a basic or a full service.

### I have about 5mm of travel unused when I ride normally.

Our forks are designed to be very progressive at the end of travel to give you a bottomless feeling. This means that those last couple millimeters of travel might only be used on the biggest hits or when you case a landing. You can think of them as insurance to get you out of the trickiest situations. If you have more than about 5% of your travel unused, try lowering your air pressure by 5PSI and check your compression settings. If your compression settings are much harder than our recommended values, try bringing them closer to the base settings in your product's user manual.

### I have grease/oil coming out of my brand new fork seals.

This is not unusual at the beginning of the life of a fork. Clean off the stanchions and the seals and it will stop after a few rides.

# My fork has been sitting for a couple of weeks and some oil came out of the seal when I rode it the first time.

BOS seals can let out a little bit of oil when they have been sitting and dried out. Wipe off any oil, and none more will come out when the seal is lubricated again.

### I have grease/oil coming out of my used fork seals.

It's time for a service! Contact your nearest BOS authorized service center for a full service.

### 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; storage out in the sun; frequent use; or improper care can all cause your seals to wear out more quickly.

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