



Belva

User Manual –

This user manual contains all the relevant information regarding the correct use and maintenance of the Belva fork.








BELVA




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Important Informations

IMPORTANT	
	<p>Constantly referring to this manual ensures the best performance, a long-lasting fork and ensures avoiding the most common cause of inconvenience and accidents that could happen during its use or maintenance.</p> <p>Repeatedly using our products in extreme conditions requires more frequent servicing. Using unrecommended high-pressure washing methods, using unrecommended spare parts, solvents and lubricants not recommended by  Formula reduces the life span of our products.</p>

IMPORTANT	
	<p> Formula recommends only ORIGINAL spare parts and lubricant products.</p> <p>Do not attempt assembly and disassembly operations on this product.  Formula recommends consulting servicing technicians for these activities and finding eventual cracks, deformations, or evidence of damage due to fatigue or wear: if the inspection shows the presence of such problems, even if minor, immediately replace the component – with no attempts of repair.</p>

SAFETY INFORMATION	
 Formula HSE Health-Safety-Environment  	<p>Always wear nitrile gloves and safety glasses when working on the fork. Ensure correct disposal of waste materials and liquids.</p>

Safety Guidelines

- Accidents and excessive or improper use of the bike can alter the structural integrity of the forks, greatly affecting their life span.
- Parts that have been bent or damaged following an accident must be replaced immediately with original Formula spare parts.
- Formula products and tools could be incompatible with third-party products or tools and vice-versa. Before using third-party items, ensure compatibility with a qualified technician or a tool manufacturer. The company declines any responsibility for malfunctions caused by improper tool use;
- The fork's user is aware that there are risks from riding a bike, including, but not limited to, failure of the bike components which could lead to accidents with personal injuries or death.
- By buying and using the shock absorber, the user explicitly accepts, voluntarily and consciously and knows the risks, including passive negligence from Formula, such as hidden defects and exempts Formula from their responsibility in the highest measure allowed by the law against any damage derived from their use.
- Before driving the bicycle ensure that brakes are installed and set up properly. Incorrect set-up could cause severe accidents.
- When riding the bicycle in the wet remember that the handling is significantly reduced making it harder to ride and the braking power could alter quickly due to the gradual drying of the brakes.

Maintenance Intervals

To keep the fork efficient during normal usage and ensure proper maintenance, follow the maintenance intervals chosen by 🌸 Formula:

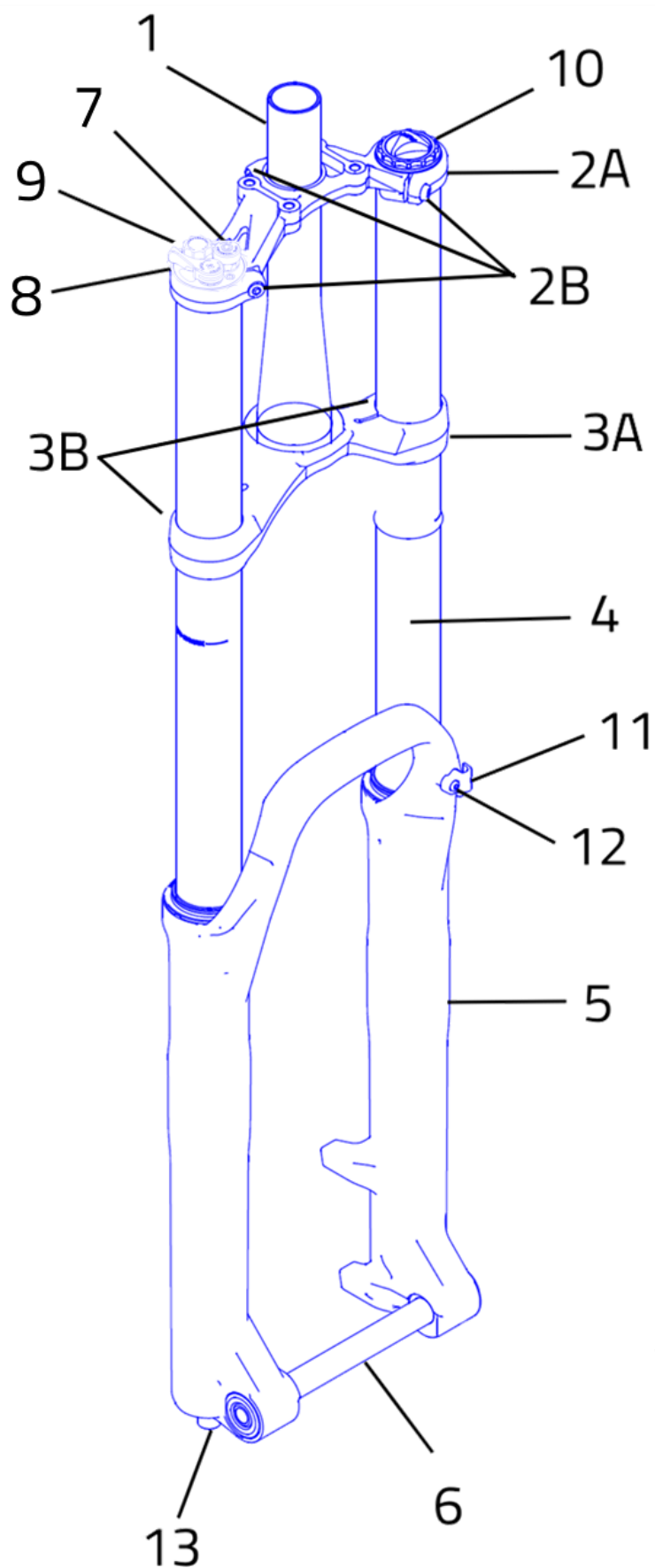
Procedure	Before and After any use	Every 30 Hours 6 Month	Every 100 Hrs 1 Year
Washing with water and mild soap. Visual inspection.			
Cleaning legs and checking oil and dust seals			
Replacement of oil cartridge			
Pneumatic spring maintenance			

Required Tools

- Hex key 4 mm;
- Formula oil;
- Formula grease;
- Formula pump;
- Bench vise.

Belva Fork Specifications

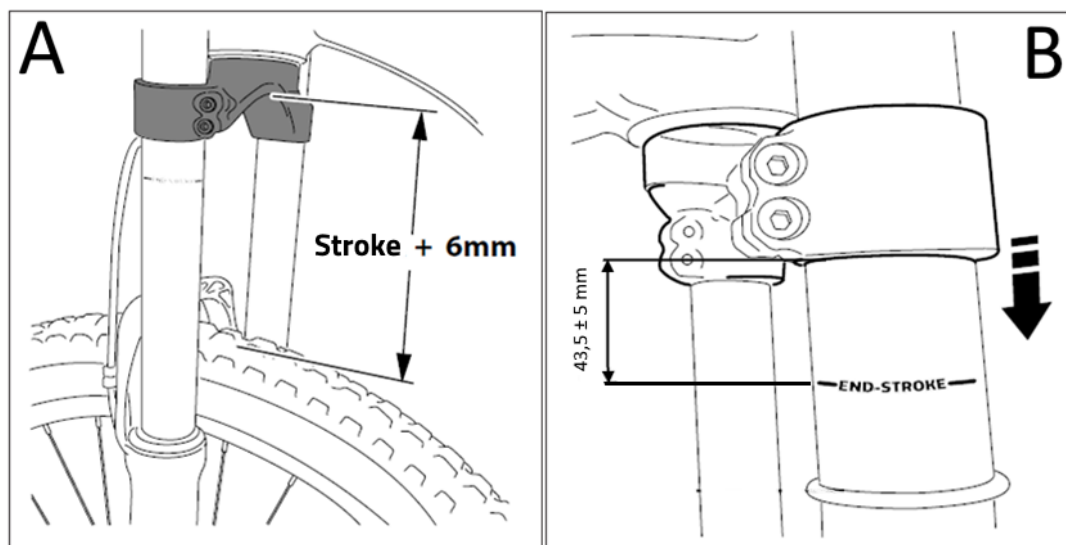
Ref.	Descrizione	Description
Componenti strutturali		Structural components
1	Cannotto di sterzo	Steerer tube
2A	Piastra superiore	Upper crown
2B	Viti piastra superiore	Upper crown screws
3A	Piastra inferiore	Lower crown
3B	Viti piastra inferiore	Lower crown screws
4	Stelo	Stanchion tube
5	Fodero	Lower leg
6	Perno ruota	Axle
Componenti funzionali		Functional components
7	Lock-out force	Lock-out force
8	Lock-out	Lock-out
9	Compressione	Compressione
10	Valvola aria	Air valve
11	Fermacavo	Cable clip
12	Vite fermacavo	Cable clip screw
13	Pomello di rebound	Rebound knob



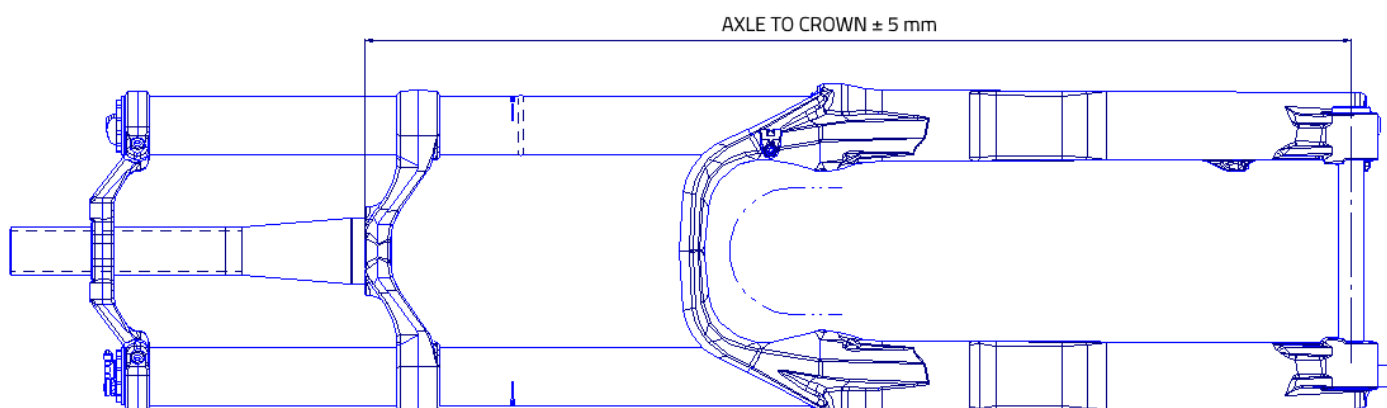
Fork Installation

⚠ Every time the Axle to Crown value is changed it's important to ensure that:

- A. The space between the crown and the wheel is higher than the **fork stroke + 6 mm**;
- B. The text "end stroke" on the stanchion tube distance from the lower crown is **43,5 mm ± 5 mm**;



Reference sheet for Axle to Crown

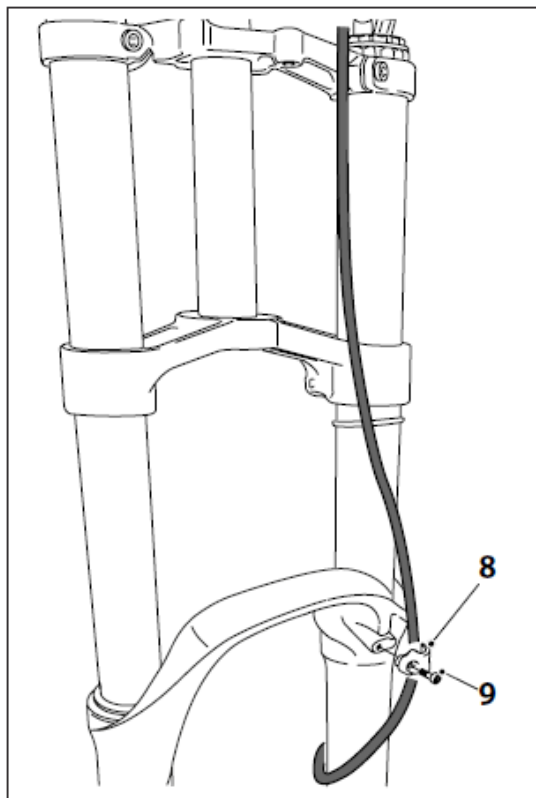


Stroke	Axle to Crown ± 5 mm	Max. Wheel Size
160	575	29 x 2,5 27,5 x 3.0
170	585	
180	595	

⚠ The Axle to Crown value can change depending on the pressure of the fork, to understand the positioning boundaries refer to point A.

1. Hose Clamp Installation

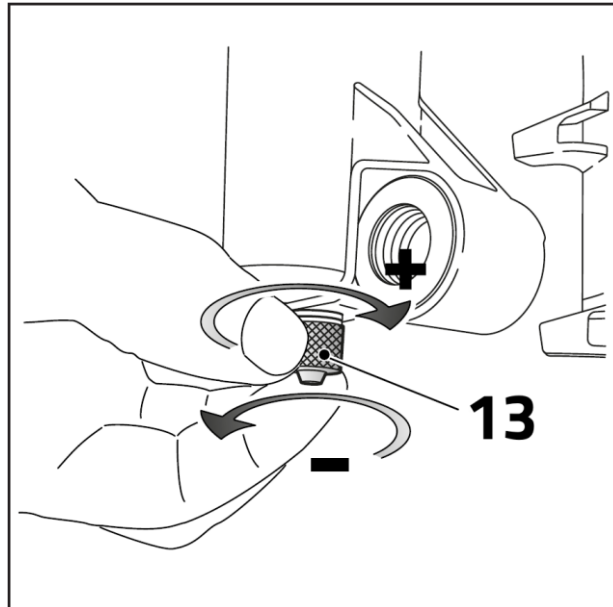
- a. The hose needs to be blocked on the fork with the hose clamp (8). Remove the screw (9) with a 2,5 mm hex key. Insert the hose in the clamp. Tighten the screw at 2/3 Nm.



-End of Procedure-

Extension Adjuster (Rebound)

1. The extension adjuster (13) allows to adjust the rebound speed of the fork after a compression.
 - a. Correctly setting the rebound speed ensures the bike is stable and able to correctly follow the obstacles on the ground.
 - b. Setting a fast rebound causes the fork to have an unstable front end and a wobbly bike.
 - c. Setting a slow rebound, instead, causes issues when going over multiple obstacles because the fork is unable to completely extend between one obstacle and the other.

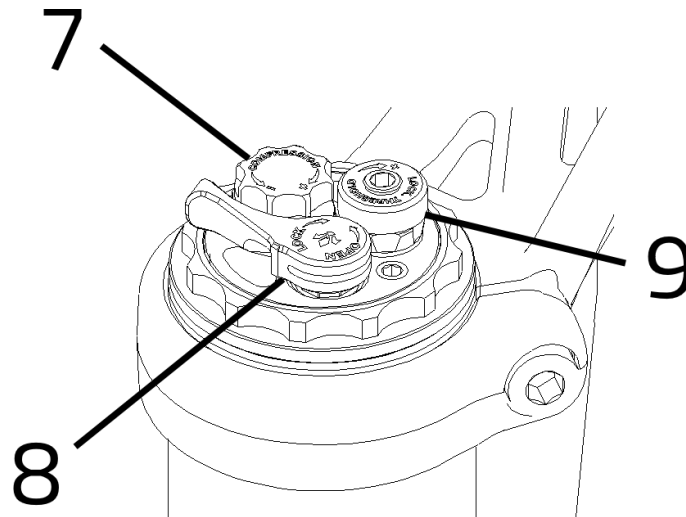


2. Rotate the adjuster clockwise to increase the rebound braking, making the fork slower in the rebound phase.
3. Rotate the adjuster anti-clockwise to decrease the rebound braking, making the fork quicker in the rebound phase.

-End of Procedure-

Compression Adjuster (CTS)

1. The blue adjuster (7) allows for an accurate adjustment of the hydraulic compression.
2. The gold lever (8) allows to open and close the lock-out.
 - a. Don't use the lever (8) in the closed position while descending since the hydraulic suspension won't react appropriately when hitting obstacles making it easier to lose control of the fork which could cause severe or lethal injuries;
3. The black adjuster (9) allows to adjust the blocking force when the fork is in the locked-out setting;



Thanks to the CTS (Compression Tuning System) you can fine-tune your suspension quickly with extreme accuracy. You decide what's the best setting for you and your fork, choosing among 8 different behaviors. You set it up by yourself in five minutes, in your workshop.



Figure 1QR Web Site



Figure 2 CTS Installation Tutorial

-End of Procedure-

Pressure check

Required Tools:

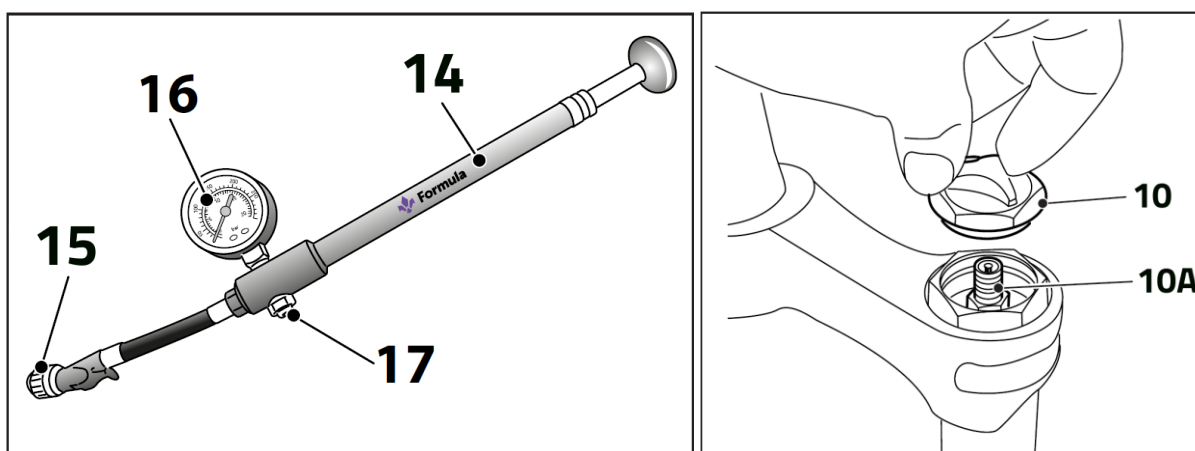
Formula Pump

Procedure:

1. It's recommended to use a 🌸 Formula Pump (14);
2. Unscrew the air valve cap (10);
3. Attach the pump to the air valve (10A) to allow the manometer to read the pressure;

⚠ When attaching the pump the manometer (16) reads 2-8 PSI (0,114-0,55 BAR) less than expected due to the air that enters the pump tube. Do not excessively tighten the pump to avoid damage to the pump's internal seal. The maximum suggested pressure is **85 psi**.

🌸 For a stiffer fork change your CTS or add a Neopos.



If the fork isn't pressurized the manometer doesn't register any value. Use the pump a few times to increase the pressure, which should slowly increase.

- If the pressure increases rapidly ensure the pump is correctly attached the the valve (10A).
 - The pressure can be reduced by pressing the discharge valve (17).
 - Slightly press the discharge valve to allow a continuous air discharge.
 - Fully press the discharge valve to allow a small air discharge (micro regulation).
4. Unscrew the pump (15) and screw the air valve cap (10).

Rider Weight		Pressure	
KG	LBS	BAR	PSI
50	110	3.4	50
70	155	4.5	65
90	200	5.5	80

-End of Procedure-

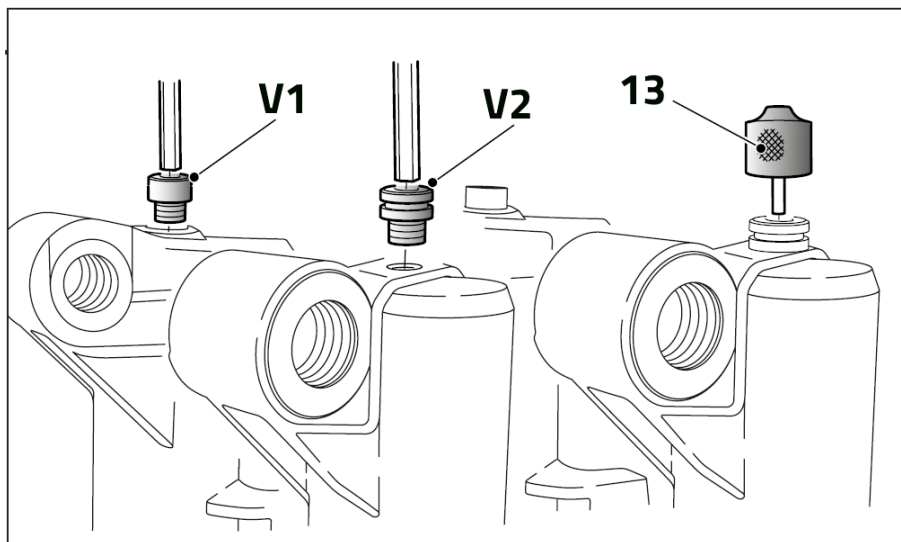
Change fork stroke

Required Tools:

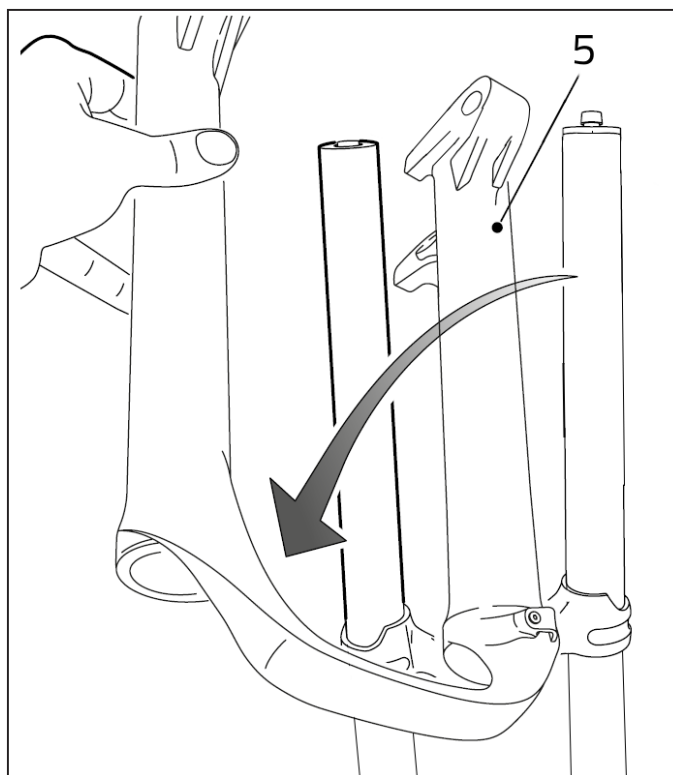
Bench Vise, Formula Grease, Hex key 4 mm.

Procedure:

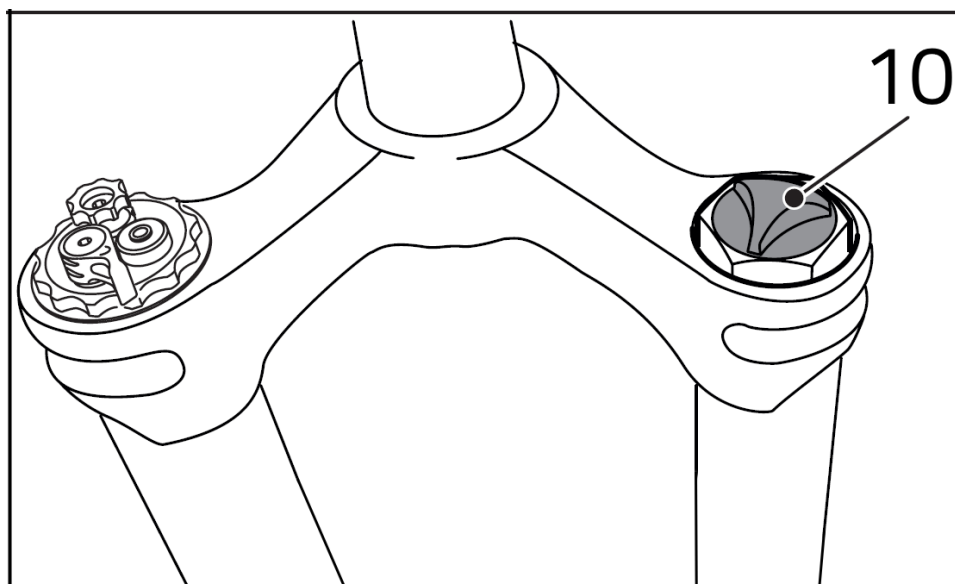
1. Pull out the rebound adjuster (13). Remove with a 4 mm hex key the air side (V1) and the cartridge screws (V2);
2. Remove the exhausted oil from the fork so that it comes out from the lower leg holes and dispose of it according to local laws;



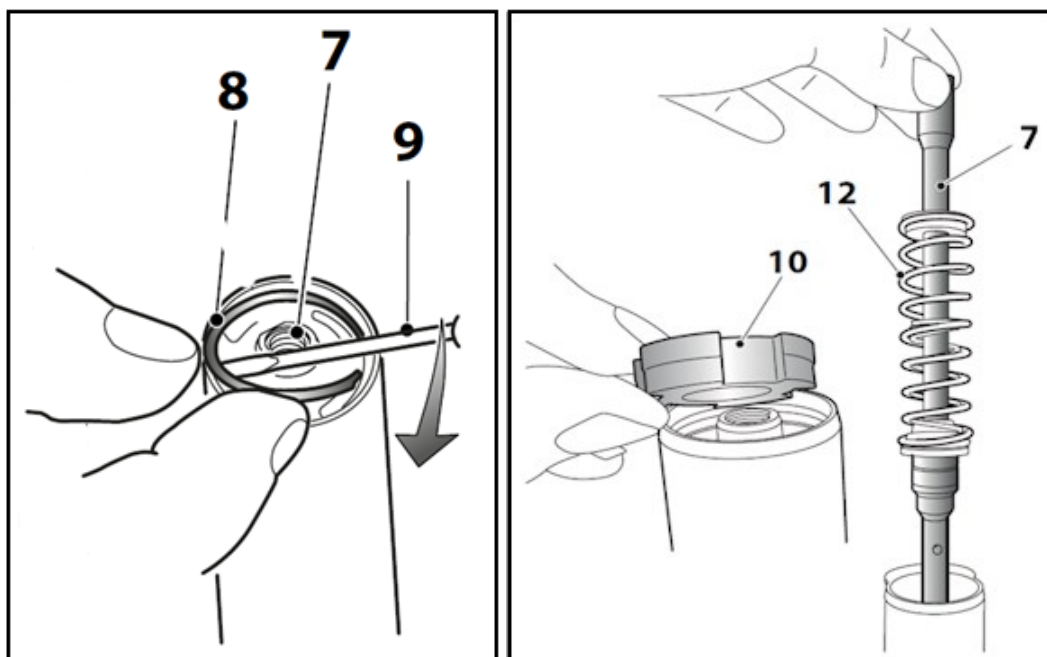
3. Remove the lower leg (5) by pulling it upwards paying attention to not damage the oil and dust seals;



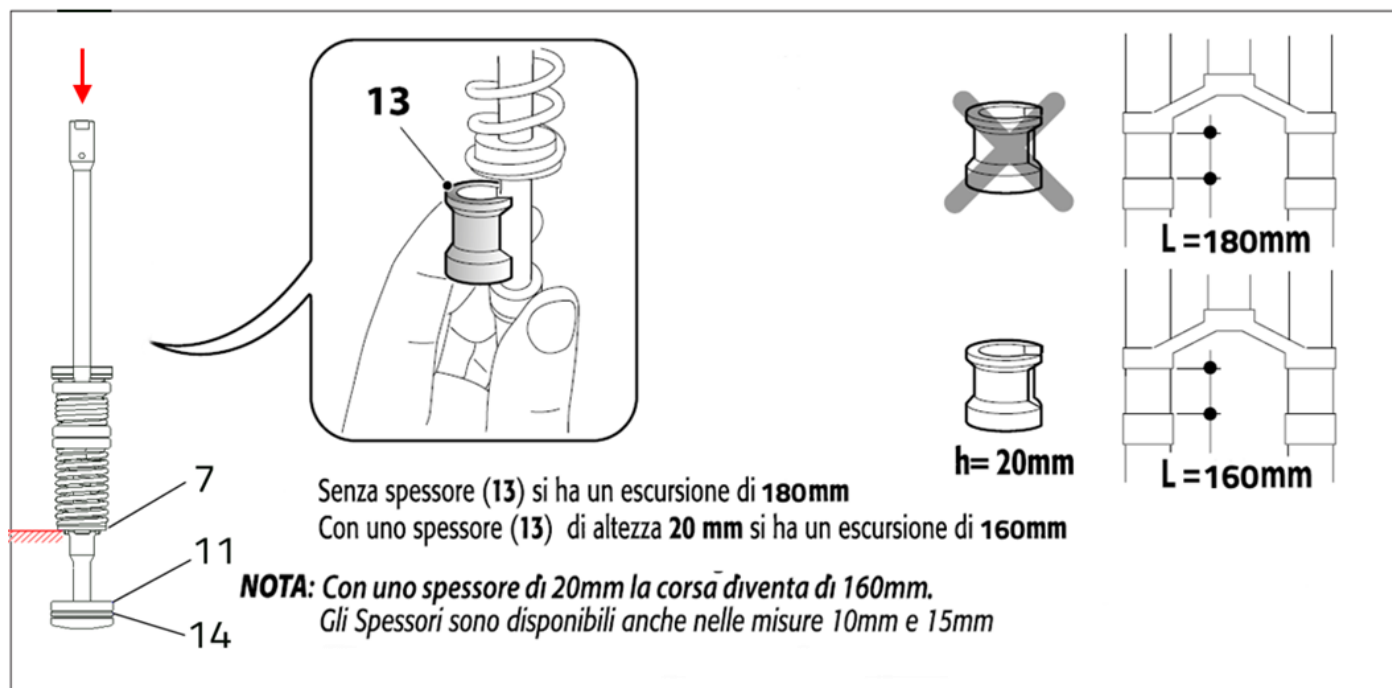
4. ⚠ Lower the pressure in the positive air chamber to zero. Not following this step could cause severe or fatal injuries during the next steps;



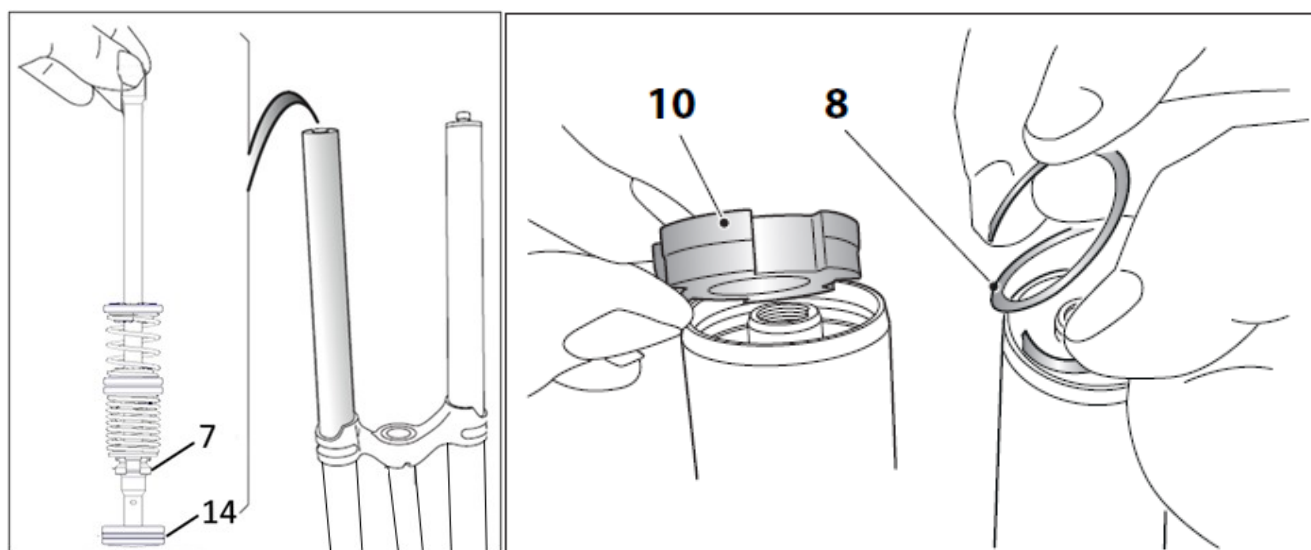
5. Push the stem of the (7) of the air cartridge inside the stanchion tube and remove the seeger ring (8) with a screwdriver (9). Remove the cap (10). Remove the air cartridge;



6. Put the flat face of the piston support (7) on a rigid plate. Push downwards the springs group by pushing the stem without changing the springs group. This allows you to detach the spring group from the piston. Insert the spacers (13) depending on your needs and couple together the components;



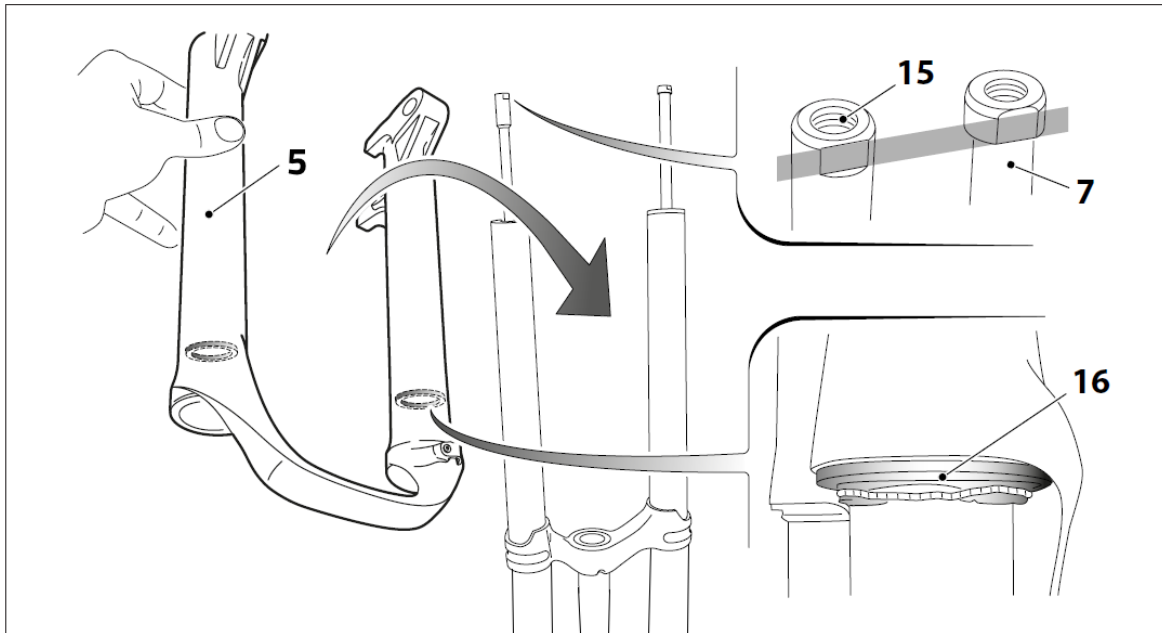
7. Lubricate the seal (14) with Formula grease. Insert the air cartridge (7) inside the stanchion tube, until the stem is at the same height as the stanchion tube. Insert the cap (10) and block it with the seeger ring (8) with a screwdriver, **ensuring the seeger ring is properly sitting in its housing**;



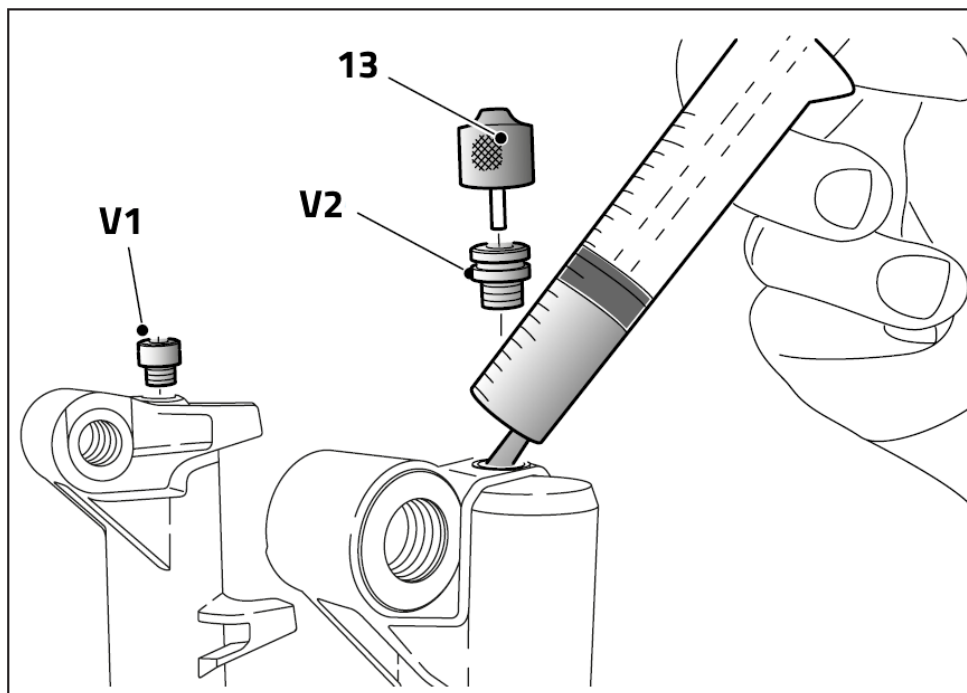
8. Pressurize the fork at the desired pressure using the (10A).

⚠ During the pressurization ensure the stanchion tube is not facing towards people, animals, or objects. If the seeger ring (8) has been assembled improperly, the internal components could be shot out of the fork at high speed due to the air pressure.

9. Close the lock-out. Apply Formula grease on the internal diameters of the dust seals (10). Ensure the flat face of the cartridge and the air cartridge are facing upwards. Ensure they stay in the same position to ensure a correct assembly of the lower screws. Insert the lower leg on the stanchion tubes, ensuring that the dust seals do not get bent or damaged during this step. Push the lower leg along the stanchion tube;



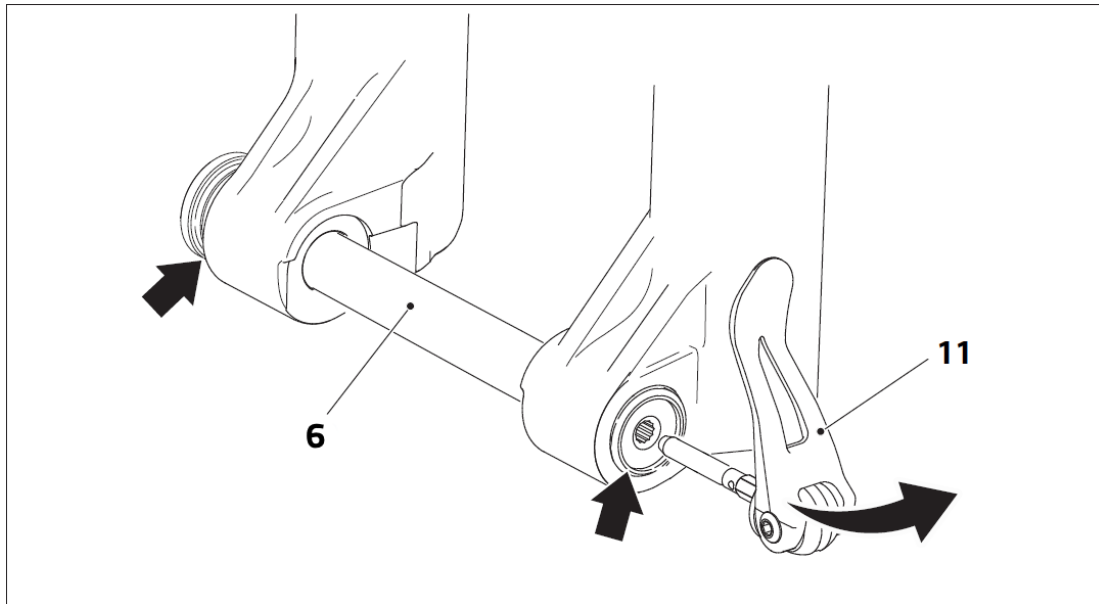
10. Insert in both sides 15 mL of FX oil from the lower hole with a syringe, then push the lower leg until the cartridge is touching its housing inside the leg;
11. Assemble the lower screws. Ensure you have applied Formula grease on the o-rings and the seeger ring and ensure the threadlock is on the screws. Screw the cartridge screw with a 4 mm hex key and a 6 Nm tightening torque. Insert the rebound adjuster (13) and apply Formula grease on its stem;
12. Open the lock-out of the cartridge and push the lower leg so that the air cartridge is touching its housing inside the leg. Screw the air cartridge screw with a 4 mm hex key and a 6 Nm tightening torque.



-End of Procedure-

Procedure:

- The wheel axle (6) needs to be disassembled after every use and when washing the bicycle it needs to be properly dried and lubricated if necessary;
 - If the axle is not dried up properly the aluminium of the axle and the magnesium of the lower leg could oxidate;
- If the wheel axle is difficult to unscrew, remove the lever (11) and use a lubricant (like svitol) on both sides, then unscrew with a 5mm hex key;
 - If the lever is also hard to remove, it's necessary to pull it with harder with constant pulling force.



-End of Procedure-

Troubleshooting

Problem	Root Cause	Solution
The fork can't perform through the entire stroke	The oil level is too high	Check the oil level. Reduce air pressure
The fork extends too quickly, rebound is excessive after bumps	Insufficient rebound damping	Increase the rebound damping
Lowsiding during turns	Rebound damping too high	Reduce rebound damping
The fork blocks during the extension or sits low during multiple bumps	Rebound damping too high	Reduce rebound damping
Noise during the rebound, without excessive rebound	Rebound damping too high	Rebound damping too high
Oil leak from the oil seals	Damaged oil seal	Replace oil seal
Huge quantity of oil on the stanchion tubes	Oil seals or stanchion tubes are damaged	Replace oil seals and inspect stanchion tubes
The fork is sticky, doesn't feel as brand new	Seals dirty, fork requires maintenance	Replace all seals
Oil loss from bottom of fork	Bottom nut/screw loose O-ring damaged	Tighten the nut or screw Replace O-ring
Loss of sensitivity	Bushings are worn out Oil is too old	Replace bushings Oil change

<https://www.rideformula.com/it/>

FORMULA SRL

Via Erbosa, 63 - 59100 Prato (Italia)

Tel. +39 0574 603 609

Fax +39 0574 611 046

Reg. Imprese Prato / C.F. / P.IVA 02081070977

PEC: formula-italy@legalmail.it

Cap. Soc. 500.000,00 € i.v.

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