Liteville

Light your fire.

MANUAL

H-3 Mk 3

Compatibilities, Assembly & Maintenance

REGISTRATION & WARRANTY

In order for us to help you efficiently in case of an accident (with a repair, a warranty case or a general service) you should register your bike. This way, you also automatically extend the warranty of your Liteville to 10 years.

The full warranty policy as well as information on how to register your bike can be found online at https://www.liteville.com/en/252/support/faq/

Further information on your Liteville can be found here:
https://www.liteville.com/en/38/bikes/

Please find the latest updates of your H-3 manual here:
http://www.liteville.com/en/77/faq-support/manuals/

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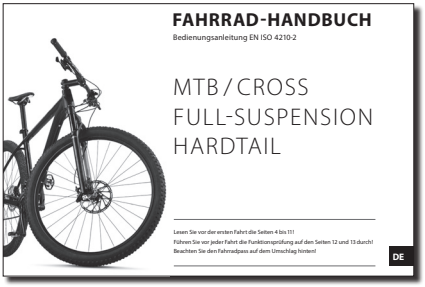

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A. DELIVERY CONTENTS

- 1 **1 pcs.** Liteville bicycle user manual
- 2 **1 pcs.** polish pad works finish frames
- 3 **2 pcs.** Liteville 301 sticker works finish frames #130050
- 4 **1 pcs.** VarioSpin top cap
- 5 **1 pcs.** headset bearing 1 1/8" #103870
- 6 **1 pcs.** topplate cone 1 1/8 #127166
- 7 **1 pcs.** headset bearing 1.5" #147843
- 8 **1 pcs.** baseplate cone 1.5" #127159
- 9 **5 pcs.** screw for cable inlet #148260
  2 pcs. cable inlet single type 2 5 mm #148253
- 11 **1 pcs.** cable inlet single type 2 6 mm #158085
- 12 **2pcs.** cable inlet double type 2 5 mm #153110
- 13 **1 pcs.** cable inlet closed #148246
- 14 **1 pcs.** foam tube #141209

B. USAGE AS INTENDED

There is no restrictions for your Liteville H-3 Mk3 frame as to the maximum rider weight or the range of usage of the bike, however you need to assure that all components are compatible with the frame and that they are mounted according to the manufacturers' manuals.

Additional component extensions such as an engine retrofit are not allowed..

C. COMPATIBILITIES

1. Fork

Suspension forks may be mounted with a maximum insert length of 572 mm . Double crown forks must not be mounted. The same counts for Boost- and B+ forks with a maximum insert length of 572 mm.

Make sure that the fork, when fully compressed, does neither interfere with the steering tube nor with the down tube.

Illustration: Clearance at the down tube

Illustration: Clearance at the steering tube

2. Wheel sizes

Your Liteville H-3 frame – depending on the frame length – is compatible with different wheel sizes.

REAR WHEEL:

S, M, L: 27,5"
XL, XXL: 27,5" (29" is compatible only with a maximum tire width of 2.35")

FRONT WHEEL:

S, M, L: 27,5"
XL, XXL: 27,5" or 29"

3. Tire width

For choosing the correct tire width, please refer to the chart below. When mounting a different size tire, make sure it still has enough clearance with all possible tire pressures. .

	27.5" x 2.6	27.5" x 2.8	27.5" x 3.0	29" x 2.35
S	+	•	-	-
M	+	+	•	-
L	+	+	•	-
XL	+	+	•	+
XXL	+	+	•	+

+ = compatible without restrictions
• = compatible with restrictions
- = not compatible

The chart refers to a wheelset in combination with a Schwalbe Nobby Nic.

4. Hub measurements

Any rear hub with the 148 x 12mm axle standard can be ridden. We recommend not to use adapter solutions.

ADVICE: The Liteville H-3 is designed with the EV06 rear frame standard. An EV06 rear wheel, in comparison to a Boost 148mm rear wheel features a different spoke pattern that allows for a fully symmetrical and thus more stable rear wheel thanks to identical spoke tensions on both sides.

5. X-12 through axle

The Liteville H-3 Mk3 is designed with the X-12 through axle design with a width of 148mm. The thread pitch is M12 x 1mm. The Syntace X-12 through axle design – as the only solution on the market – allows for the toe adjustment and thus for an even more precise production of the frame.

The clamp thread (Allen Key, 5mm) in the right-hand end of the construction is meant exclusively for the fixation of the rear derailleur hanger as well as for the axle insert. It does not have to be opened when the axle or the rear wheel is removed.

ADVICE: The axle insert is adapted individually to your frame and marked respectively. The 0.5mm or 1.0mm insert is aligned correctly if the notch of the clamping system and the one of the dropout is parallel.

Illustration: The picture displays the insert and the clamping notch aligned correctly.

6. Bottom bracket / crankset

The bottom bracket shell of the Liteville H-3 Mk3 measures 73 mm and fits common BSA GXP, 24 mm and DUB bottom brackets. ISCG adapter solutions can not be mounted. The H3 Mk3 frame is designed for one and two-speed Boost cranksets with a minimum Q-factor of 167mm. DUB cranksets are compatible, 3-speed cranksets are not.

NOTE: Mounting a SRAM DUB bottom bracket, use the ParkTool BBT-79.

For other cranksets, please mind the clearance between the crankset and the frame. Find further information in the chapter "Bottom bracket/ crankset/front and rear derailleur".

Illustration: Boost SRAM

Illustration: Boost Shimano

CHAIN LINE:
SRAM one- and two-speed – 52 mm
Shimano one-speed – 52 - 55 mm
Shimano two-speed – 51,8 mm

CHAIN RING:
SRAM one-speed – 26 to 34 teeth
Shimano one-speed – 30 to 34 teeth
Shimano two-speed – 24 to 38 teeth

7. Drivetrain

The Liteville H-3 frame is designed for one- and two-speed drivetrains.

8. Rear derailleur hanger / rear derailleur:

The Liteville H-3 comes with a "Type 3 Standard" rear derailleur hanger that is compatible with all SRAM and Shimano rear derailleurs.

Illustration: Type 3 Standard rear derailleur hanger

9. Front derailleur

The Liteville H-3 exclusively fits Low Direct Mount two-speed front derailleurs with front pull shifting cable routing.

EXAMPLES:

Shimano XT:	FD-M8020E6X (11S)
	FD-M8100E6 (12S)
Shimano XTR:	FD-M9020E6X (11S)
	FD-M9100E6 (12S)

10. Shifting cable housing

Do not mount anything but shifting cable housings with a diameter of 4 mm such as Shimano SIS-SP41.

11. Brakes

The Liteville H-3 Mk3 frame is designed exclusively for disc brakes.

For the rear brake caliper, it comes with a 7"-Postmount-socket. Using a 180 mm disc, the caliper can be mounted without an adapter. The minimum diameter for the rear disc is 180 mm, the maximum diameter is 203 mm. .

12. Seat post

As with all Liteville frames, the inner diameter of the seat tube is 34.9 mm. The Mk3 features a specific Eightpins variable seat post interface. Different variable seat post with inner cable routing are compatible, too.

NOTE: The geometry of the H-3 Mk3 requires a seatpost without offset. If a seatpost with setback is mounted, both the seat angle and the top tube length is altered.

In order to protect the frame, both for conventional and for variable seatposts (Eightpins variable seatpost excluded), the following minimum insert lengths are to be minded:

Seatpost length up to 200 mm: minimum insert length 120 mm

Seatpost length more than 200 mm: minimum insert length 140 mm

The seatpost length is measured between the top end of the seat tube and the top of the saddle.

13. Seatpost reduction shims

Using a seatpost reduction shim, the minimum insert lengths are still to be minded.

ADVICE: In case of doubt, choose the longer reduction shim and rely on high quality components such as Art.113299 Syntace Post Shim Light 31.6 or Art.114203 Syntace Post Shim 30.9

NOTE: In case the minimum insert length of 120 mm or 140 mm can not be realized, the PostShim 30.9 (Art.No. 114203) is to be used. This is the only way the insert length can be reduced to 90 mm.

14. Seatpost clamp

We recommend to mount our SuperLock2 or MicroLock 38 seatpost clamp. If you want to mount a different clamp, it is to fit a seat tube with a 38 mm outer diameter.

15. Headset

The Liteville H-3 frame features a Syntace SuperSpin headset. The headset bearings are mounted in the frame without bearing shells.

D. ASSEMBLY

1. Preparation of the frame

The contact surfaces (bottom bracket, disc brake socket, seat tube) are fully prepared for the assembly. In case you face problems during the assembly, please directly contact Syntace.

NOTE: : In case of maintenance work or in case the frame is painted during an after-market customization, it is to be minded that the adjustment screw of the Eightpins dropper post is not altered. The adjustment screw can be found on the bottom right hand end of the seat tube, close to the bottom bracket.

2. Seatpost/saddle

The H-3 is designed for variable seatposts with internal cable routing. The assembly is simplified thanks to the ServicePort at the lower end of the down tube close to the bottom bracket.
Please refer to the extra manual of Eightpins that exemplifies the assembly process with a Liteville 301 MK15.
www.eightpins.at/en/service-einbau-ngs2-en/

NOTE: The standard Eightpins variable seatpost interface (Postpin) at the seat tube is adapted already and does not need to be changed.

Using a common seatpost, the frequent changing of the seat height leads to a certain wear of the seatpost and the seat tube. For carbon fiber seatposts, this wear is considerably higher than for Aluminum seatposts. In order to minimize the wear, please clean the seatpost and seat clamp after every ride in the rain. The diameter of the seatpost must never become less than 34.7 mm at any point. If this is the case, please exchange the seatpost as it might result in damages of the frame.

3. Headset/fork

The frame comes with nothing but the cone and the cover cap for tapered fork steer tubes (see picture).

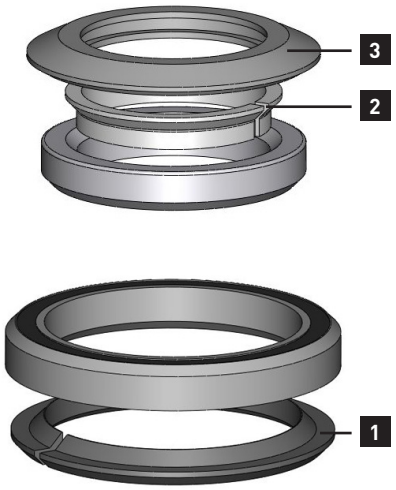


Illustration 07: Headset components.

ADVICE: Reduction kit for 1 1/8"-fork steer tube: Syntace Art. 114593

Make sure all parts of the headset, including the bearings, are greased before the assembly.

Put the bigger (1,5") cone 1 on the fork laying evenly on the fork crown. The fork can now be inserted into the frame before the smaller (1 1/8") cone 2 is put on the fork steering tube. Installing the cover cap is the last step of the headset assembly 3.

ADVICE: Using a Syntace MegaSpacer, a silver 0.6 mm washer needs to be added between the SuperSpin cover cap and the MegaSpacer. The washer is included in the MegaSpacer package or can be ordered separately as a spare part at Syntace.

ADVICE: Tighten the adjustment screw of the Ahead star nut hand-tight. Loosen it again thereafter with about ¾ revolutions and only in the next step adjust the bearing play of the headset bearing. Following this procedure, you make sure that the bearings sit properly in the bearing shells. The result should be that the fork can be turned easily without any bearing play. It may be necessary to repeat this process after the first ride.

4. Handlebar / stem

Mount the handlebar and the stem according to the manufacturer's instructions.

5. Shift and brake levers

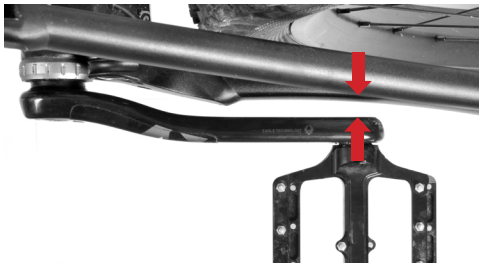
Mount and adjust the shift and brake levers according to the manufacturers' manuals.

ADVICE: Tighten the levers only so much that in case of a crash, they can turn away rather than breaking apart. Apart from this, the handlebar is protected, too.

6. Bottom bracket / crankset / front derailleur / rear derailleur

Mount the two bearing shells and the crankset according to the manufacturer's manual and do not forget to grease the system thoroughly.

NOTE: : Mind the clearance between the crank arm and the chain stay as well as between the right-hand crank arm and the Syntace SCS chain guide.

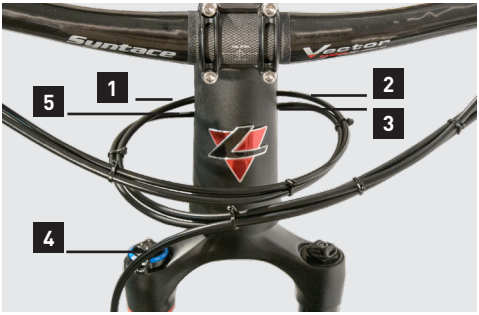


Picture displays the clearance between the chain stay and the crank arm

- Mount the low Direct Mount front derailleur at the intended socket
- Mounting Shimano front derailleurs, use two raised countersunk head screws (M5 x 10 mm / TX25/ ISO 7380). The Shimano derailleur comes with the two screws as standard or can be ordered at Syntace (Art. #140882). For SRAM front derailleurs, only one of these screws is needed.
- Make sure that the guide plate of the front derailleur is parallel with the big chain ring.

7. Cable routing

NOTE: Please mind the different cable routing options of front derailleurs offered. The Liteville H-3 Mk3 is compatible with front pull design solutions only. For the assembly we recommend the Park Tool "Internal Cable Rounting Kit" IR-1.2.



Picture displays exemplified 2x11 drivetrain, brake and variable seatpost housing.

1. Dropper post
2. Rear derailleur
3. Rear brake
4. Front brake
5. Front derailleur (side swing)

8. Cable routing front derailleur

- As you insert the cable housing into the top or down tube, it is helpful to cut the housing with a 45° angle and bend it at 2 cm as displayed in the illustration

- Insert the cable housing in the right-hand front hole of the down tube and guide it all the way to the bottom bracket and have it come out at the right-hand hole next to the bottom bracket.

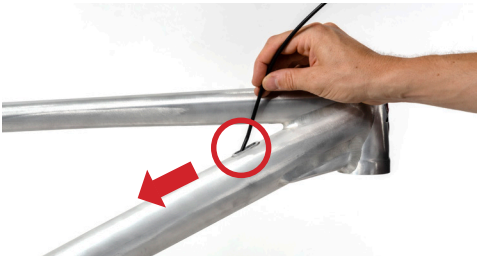


Illustration: inserting the housing in the down tube.

Illustration: pulling the housing out of the down tube above the bottom bracket

- Put a foam tube (Pos. 12) over the cable housing starting at the bottom end.
- The cable housing including the foam tube now is to be guided through the bottom hole next to the bottom bracket
- Cut the bent part of the cable housing with Bowden pliers and attach it to the front derailleur

Illustration: Inserting the foam tube

9. Cable housing rear derailleur

The cable housing for the rear derailleur is guided through the down tube and into the right-hand chainstay where it exists the tube at the rear derailleur hanger.

Insert the cable housing for the rear derailleur at the bottom part of the top tube and through the chain stay all the way to the cable hole.

The exit for the cable housing of the rear derailleur is placed at the bottom end of the right-hand chain stay.

The cable housing can be guided through the tubes easier by simultaneously being twisted and pushed.

Illustration: cable housing rear derailleur insert and exit.

10. Brake hose

The brake hose is guided inside the left-hand towards the top tube.

Open the screw for the rear brake at the brake lever and remove the clamping capsule as well as the screw nut.

Insert the brake hose in the cable hole at the bottom end of the left-hand chain stay. Do not forget to mount the cable inlet single (Pos. 11).

Illustration: Brake hose routing at the chain stay..

The brake hose exits the frame again at the bottom part of the top tube.

The brake hose finds its way through the exit hole by simultaneously being twisted and pushed. Pull the hose out of the frame with a thin, pointed tool.

Illustration: Exit of the brake hose at the top tube.

Mount the brake caliper and adjust the angle of the brake hose as displayed.

Illustration: Brake caliper mounted on PM standard socket with Shimano components.

Illustration: Brake caliper mounted on PM standard socket with SRAM components.

11. Variable seatpost

- Guide the cable housing or hydraulic hose through the right-hand cable hole next to the headset of the frame and pull it out of the frame at the right-hand hole next to the bottom bracket
- Cover the housing or hose with a foam tube (Pos. 14)

- Guide the housing or hose through the bottom bracket shell into the seat tube

- For the exact assembly and adjustment of your seatpost, refer to the manufacturer's manual

NOTE: The seat tube is manufactured particularly accurately for the Eightpins variable seatpost with very small tolerances only. This is why it must not be changed in any way.

NOTE: In case the frame is painted or anodized after the purchase, make sure that the inner diameter of the seat tube remains the same for the entire 140 mm insert length.

E. MAINTENANCE AND CARE

1. Headset bearing

At normal usage, the bearings of the headset do not have to be dismounted or greased.

In case you notice a defect bearing anyways, you may order the specific bearing in your Liteville WorksStation or directly at Syntace.

Never point at your bearings with a high-pressure water jet as this can easily damage them.

2. Screws

The screws in your frame are all made from Titanium or Aluminum and are produced specifically for Liteville frames. They are all mounted with screwlock. Control your screws frequently, particularly after having built your bike.

ADVICE: In case the screws actually move, the original screw lock does no longer work. If this is the case, you need to apply new screw lock. Make sure you mind the time for the screw lock to cure.
We have summed up a "Loctite – 1x1" which you may find here: www.liteville.de > FAQ

3. WorksFinish surface

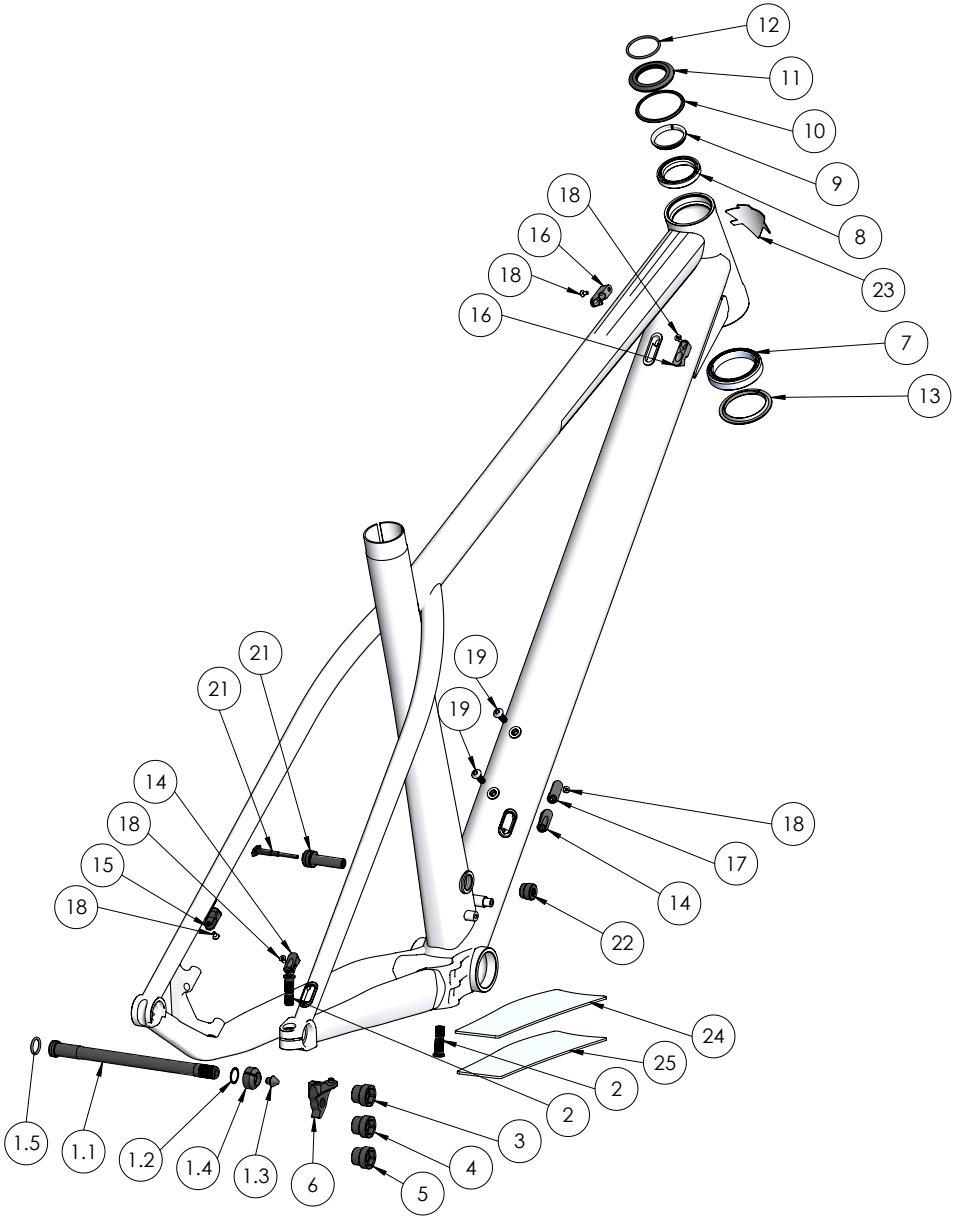
The Liteville WorksFinish is a genuine raw Aluminum surface, free of any kind of protection paint, meaning it is no Aluminum simulation. The frame actually shows the signs of the original manufacturing process. Stains are thus common, the frame may even change its color slightly which leads to the natural charm of a grown patina.

The surface can be reprocessed at all times either chemically or mechanically with a Scotch-Brite-Finish or by being polished manually. The frame comes standard with two Scotch-Brite grinding fleeces. Try applying it on a spot that is not seen directly.

NOTE: The WorksFinish frame comes with 3M stickers. It is your choice if you put them on your frame or not.

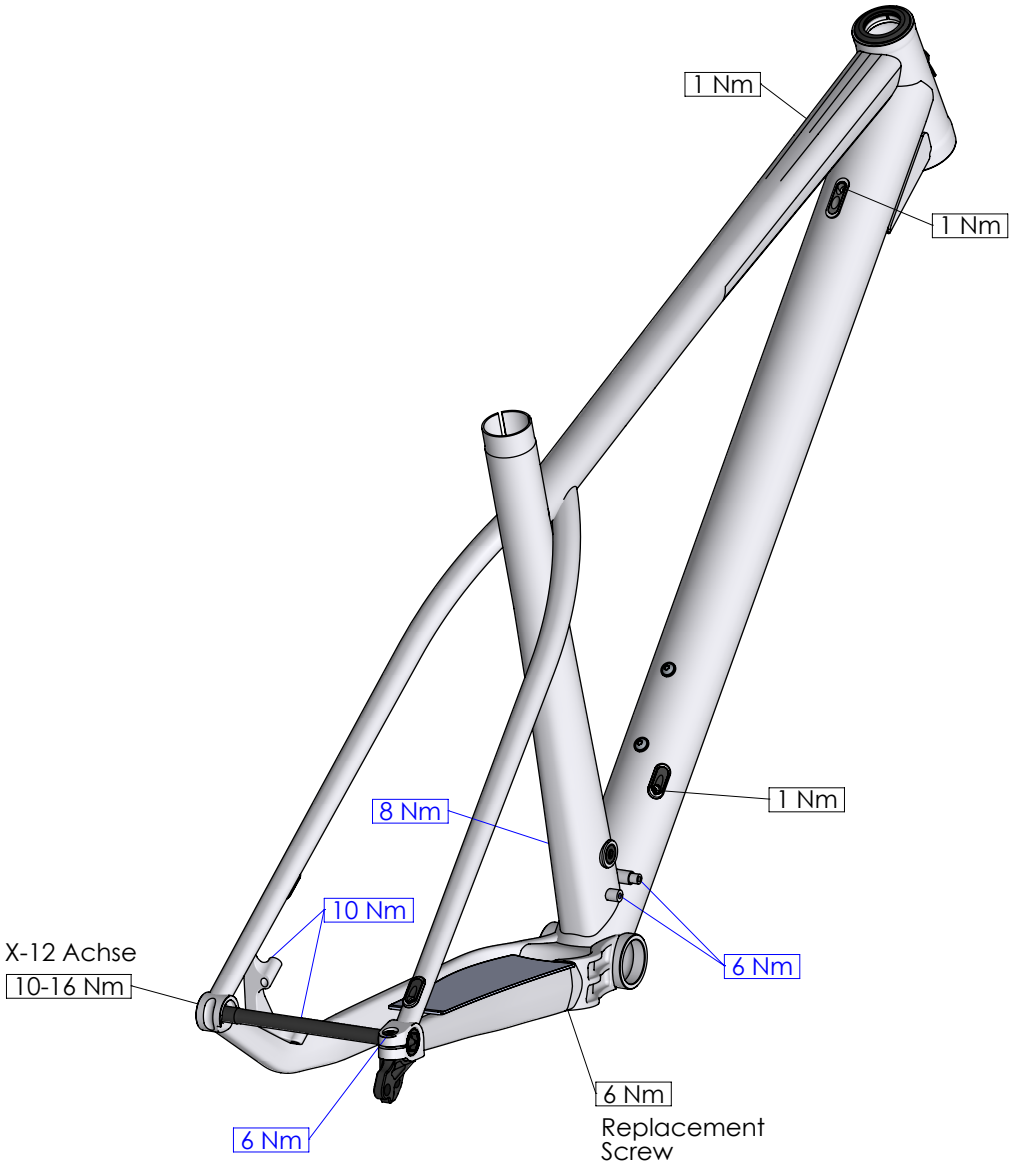
Illustration: Liteville stickers.

F. SPARE PARTS



POS-NR.	Description	Article No.	Qtty
1	X-12_axle_assembly_148mm_allen-key	119017	1
1.1	X-12_axle_148mm_EVO6	127081	1
1.2	X-12_stainless-steel_washer 12mm	127098	1
1.3	X-12_axle_end-plug	127104	1
1.4	X-12_axle_cone	127111	1
1.5	X-12_axle_O-ring_small	127128	1
2	X-12_hanger_screw_Typ2_26mm	116849	2
3	X-12_thread-insert_0mm	105683	1
4	X-12_thread-insert_0.5mm	105690	1
5	X-12_thread-insert_1mm	105706	1
6	X-12_hanger_Typ3_Std	128118	1
7	BB_40x52x9_45x45_4RS_cone	147843	1
8	BB_30x41x6.5_2RS_cone	103870	1
9	Topplate-cone_1-1-8	127166	1
10	VarioSpin-Top-seal_1-1-8	127210	1
11	VarioSpin-Top-Cap_1-1-8	127173	1
12	O-Ring_28.6x2.0	127203	1
13	Baseplate-cone_1.5_39.8	127159	1
14	cable-inlet_single_5mm_Typ2	148253	2
15	cable-inlet_single_6mm_Typ2	158085	1
16	cable-inlet_double_Typ2	153110	2
17	cable-inlet_closed_Typ2	148246	1
18	screw-sc_M3x6_HEX2	148260	5
19	screw_Al_M5x16_TX25	153400	2
21	Mounting_Pin_Assembly	153103	1
21	Cylinder-Tool		1
22	Adjusting_Ring_V2	153486	1
23	headbadge	120518	1
24	CS-Protector_H3_M-XL	127739	1
25	CS-Protector_H3_S	127746	1

SCREWS: MAXIMUM TORQUE AND SCREW LOCK



x Nm black = no screwlock

x Nm blue = medium power screwlock

x Nm green = high power screwlock

NOTES

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