Liteville
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MANUAL

Liteville 901 MK3
Compatibility, Mounting & Service

Registration & Warranty

In case you need us and in order to help you as efficient as possible (with a repair, warranty or service) you should register your bike at Liteville. This way, you automatically extend your warranty to 10 years.

Please find the full warranty policy and a registration guideline attached in the Warranty & Voucher leaflet.

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Further information on your Liteville can be found at:
www.liteville.com/en/72/faq-support/general/

For the latest manual for your bike, please refer to:
www.liteville.com/en/77/faq-support/manuals/

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2. Usage as intended

The Liteville 901 MK3 frame does not have a restriction as to the rider's weight or the usage of the bike. Make sure all components are compatible with your Liteville frame and mind the instructions and manuals of the individual components' manufacturers.

Additional components such as an electric engine may be mounted only after a reaffirmation by Syntace and after they have been approved.

3. Mounting compatibility

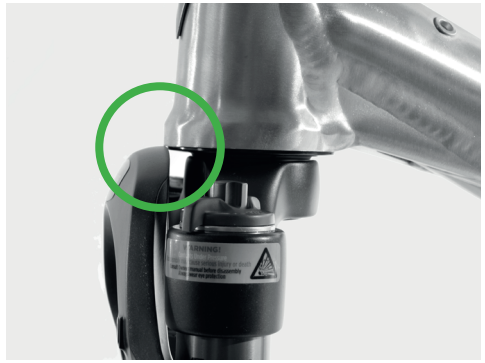
Suspension fork

You may mount double crown suspension forks with a maximum insert length of 581 mm.

Boost- and B+ forks having equal measurements can also be mounted.

Note: single crown forks can damage the down tube, which is why we recommend the usage of double crown forks exclusively. Please also refer to the manual of the fork manufacturer.

The picture shows clearance at down tube.



The picture shows clearance at steering tube.

Damper

The 901 MK4 can be ridden with dampers measuring a length of 241 or 250 mm. Changing the damper, the damper socket is to be adapted correspondingly.

- Article # 128057 for 241x76 mm dampers
- Article # 128040 for 250x75 mm dampers

The frame comes with needle bearings in the damper sockets as standard.

The maximum air pressure of the main chamber of the RockShox Vivid Air should not exceed 375 PSI (about 19 bar). For adjusting the fork, please use nothing but an appropriate damper pump.

Wheel size

Regardless of the frame length, the Liteville 901 MK3 frame is designed for 27,5" wheels.

Hub measurements

Generally, all rear hubs with the measurements 148 x 12 mm can be mounted. We do not recommend adapter solutions for different measurements.

Advice: The Liteville 901 MK3 features an EVO6 rear frame. An EVO6 wheel, as opposed to a conventional Boost 148 mm wheel, is built with a 3 mm off-center spoke design which makes it fully symmetrical and thus a lot more durable thanks to identical spoke tensions on both sides.

Tire width
We recommend the following tire widths:

Frame length S and L
27,5“: up to 2,5“ width

Riding wider tires, make sure the tire scratches the seat tube only slightly if the damper is fully compressed.

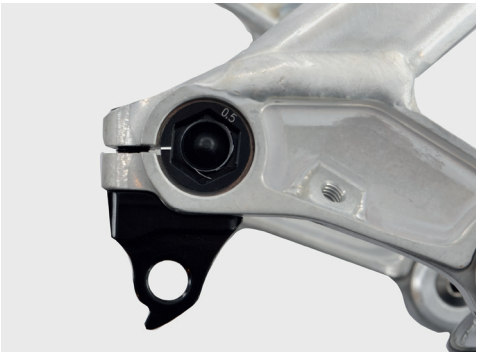
Advice: In case the tire touches the seat tube slightly, this does not result in anything but minimal scratches on the frame and is nothing to be worried about. However, please also mind the restrictions as declared by the fork manufacturer.

X-12 through axle
The Liteville 901 MK3 comes with a Syntace X-12 through axle 148 mm. The thread pitch is M12 x 1 mm.

The Syntace X-12 trough axle design is the only one on the market that allows for an individual tuning of the toe and camber. As a result of this option, we are able to manufacture our frames even more accurately.

The screw (Allen Key/ 5 mm) next to the right hand dropout is only meant to fixate the rear derailleur hanger and does not have to be unscrewed if the axle shall come out of the frame.

Note: The axle insert is tuned precisely for your frame. The 0.5 mm or 1.0 mm insert is aligned correctly as long as the indication groove is parallel to the clamping groove of the dropout..



The picture shows the correct position of the clamping grove.

Bottom bracket and crankset
The bottom bracket housing of the Liteville 901 MK3 is 83 mm wide and thus compatible with common BSA bottom brackets. The ISCG 05 socket allows for the mounting of ISCG 05 chain guides.

The 901 MK3 frame is designed for one-speed cranks with a Q-factor of at least 167 mm. Two- and three-speed cranksets are not compatible. Other cranksets must be approved as to their frame clearance. Also refer to “Bottom bracket/ crankset/ rear derailleur”.

Drivetrain
The Liteville 901 MK3 frame is optimized for one-speed chain drivetrains.

Rear derailleur/ hanger:
The 901 MK3 is designed for the rear derailleur hanger „Typ3“ and comes with both options for Standard and Direct Mount rear derailleurs.

Typ3 Standard rear derailleur hanger for Shimano-Shadow and SRAM

Typ3 Shimano Direct Mount rear derailleur hanger

SRAM rear derailleurs can be mounted with the “Typ3” Standard rear derailleur hanger.

Cable housing rear derailleur
Exclusively use cable housings with a 4 mm diameter such as Shimano SIS- SP41.

Brakes
The Liteville 901 MK3 frame is designed for disc brakes only.

The rear frame features a 7“-Postmount socket. Using a 180 disc, the brake caliper can be mounted without an extra adapter. Possible disc diameters for the rear brake are 180 mm and 203 mm.

Seatpost
All Liteville frames have a seat tube with a 34.9 mm inner diameter. In order to avoid the frame to be damage, the following insert measurements must be minded:

Minimum insert length = 120 mm

Refer to the distance from the end of the seat tube to the top of the saddle.

Seatpost reduction shims
Using a reduction shim, the minimum insert length is still to be minded!

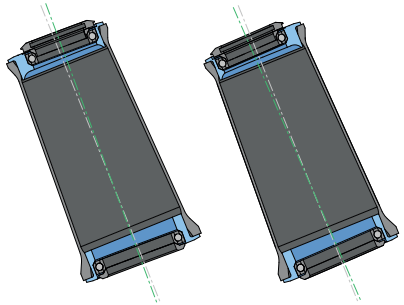
Advice: In case of doubt, choose the longer reduction shim such as Art.113299 Syntace Post Shim Light 31.6 or Art.114203 Syntace Post Shim 30.9.

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

Seatpost clamp
We advice you to use a Syntace SuperLock2 seat post clamp or a MicroLock 38. In case you use a different one, this is to feature a diameter of 38 mm. Make sure the seat post clamp does not interfere with the damping system of your frame. In order to reaffirm this, entirely deflate your damper and compress it.

Headset
The Liteville 901 MK3 comes with a Syntace VarioSpin headset. As delivered originally, this, the bearings are placed in a 0° bearing housing. Using a Syntace VarioSpin Tuning headset (displayed in blue), the steering tube angle can be altered by +/- 1.5° and will thus be optimally adapted to the rider's personal requirements.

Steering angle +1,5° *Steering angle -1,5°*



Note: For the 901 MK3 the VarioSpin cup set 4 article #114906 must be used.

Find an instruction video here:
https://www.youtube.com/watch?v=NpAF1IG7fuw

4. Assembly

Frame preparation
The bottom bracket, the brake sockets and the seat tube are prepared in a way that one can directly start assembling. In case you face problems assembling your bike, please contact Syntace directly.

Seatpost/ Saddle
Reaffirm that the inside of the seat tube is free of sharp edges before you insert the seatpost. Remove possible production leftovers with grinding paper (180 grain).

Advice: Note the insert length as in the section „Seatpost".

Advice: Also mind the wear limit of your seatpost.

Riding a conventional seatpost, the frequent adjustment of the seatpost, particularly in wet and muddy conditions, leads to a certain wear of your seat tube and seatpost.

This counts for carbon fiber seatposts with the Epoxymatrix surface more than for Aluminum seatposts.

In order to minimize this wear, please clean the seatpost and the inside of the seat tube after every ride in wet conditions. The diameter of the seatpost must not be below 34.7 mm. If this is the case, the seatpost is to be exchanged. If the seatpost is used anyways, the frame can be damaged irreversibly leading to cracks in the frame.

Headset / suspension fork
The frame comes with the cones and cover caps for tapered and 1 1/8" fork steer tubes (see the picture below).

Before the assembly, grease all components. Mount the bigger 1.5" cone to the fork tube. The bottom cone should lay evenly on the fork crown thereafter. Now insert the fork into the frame. In the next step, slip the second cone (1 1/8") on the fork tube and do the same with the cover cap in the end.

Advice: Mounting a Syntace MegaSpacer, a silver 0.6 mm washer needs to be inserted between the SuperSpin cover cap and the MegaSpacer. The MegaSpacer comes with the washer as standard, yet it can also be ordered separately

Advice: Tighten the adjustment screw of the ahead clamp slightly. Loosen it again thereafter by ¾ of a revolution and only then adjust the bearing clearance. This way you make sure the bearings sit tightly. You should be able to turn the fork without bearing clearance. A readjustment might be necessary after the first ride.

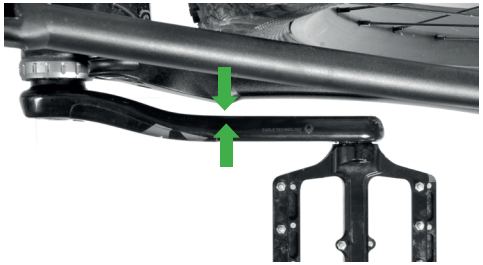
Handlebar/ stem
Mount the handlebar and the stem according to the manual.

Shift and brake levers
Mount and adjust the shift and brake levers according to the manufacturer's manuals.

Advice: Tighten the screws of the brake and shift levers only so much that they can still turn in case of a crash. This might avoid a lever to brake apart and additionally protects the thin walls of your handlebar.

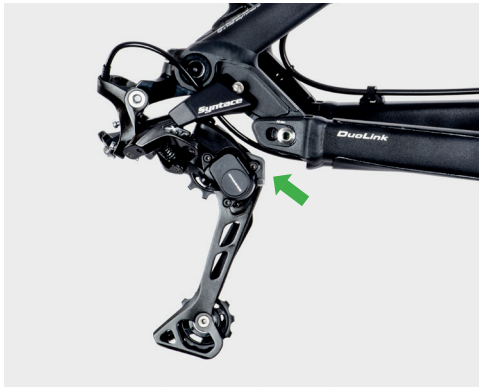
Bottom bracket, crankset and rear derailleur
Mount the two bearing shells and the crankset according to the manufacturer's manual and do not forget to grease the system thoroughly.

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.



The picture displays the clearance between the chain stay and the crank arm

Mount and adjust the rear derailleur according to the manufacturer's manual. Use the correct rear derailleur hanger - Direct Mount or Standard.



Hinweis: Achte bei der Einstellung des Schaltwerkes, speziell bei der kurzen Einstellung der Kettenstrebe am DuoLink, auf ausreichenden Freigang in Schwenkrichtung der Kettenstrebe.

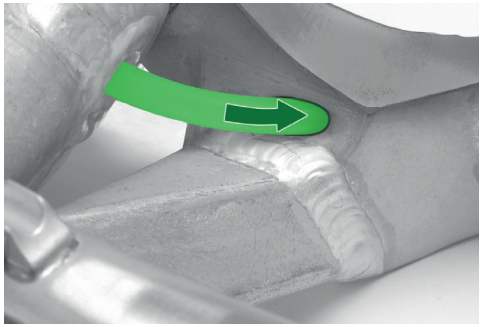
Shift cable and brake hose routing

The picture displays the internal routing in the down tube.

Cable routing rear derailleur

The cable for the rear derailleur lays inside the down tube all the way to the bottom bracket and into the right chain tube thereafter. In order to protect the cable from wearing out even further, we added a flexible protection tube.

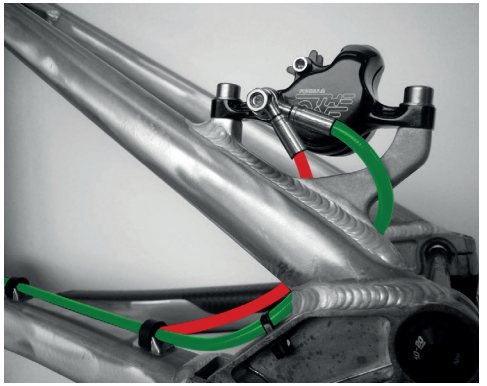
Hint: Do not remove the black plastic protection tube. In case you did remove it or in case the rear end got detached, reinstall it by pushing it thoroughly into its seat (as displayed in green).



The picture displays protection tube for the shift cable.

The cable exits the frame at the rear end of the chain tube.

The picture displays the cable exit at the chain tube.



The picture displays PM Shimano brake caliper.

Brake hose

The brake hose for the rear brake lays inside the down tube and is attached to the chain tube with special fixation clips.

The picture displays the brake hose routing.

The brake caliper can be mounted in different ways and depending on the brake model. Refer to the pictures below.

The picture displays PM SRAM brake caliper.

SCS-III EVO6 chain guide
The SCS-III EVO6 chain guide (Art. 131040) is mounted with a single screw at the right-hand chain tube.

The picture displays a Syntace SCSIII EVO6 chain guide.

RockGuard SL
Your frame features an integrated socket for the Syntace RockGuard SL

Art.: 116757, black
Art.: 117013, works finish

The picture shows RockGuard SL

Damper preload and SAG adjustment
In order to guarantee for an optimal function of the Rock Shox Vivid Air, it is necessary to ride it with a negative travel of aprx. 30% - 40% (75 mm).

The rear frame can function perfectly only with a correct adjustment of the rear damper.

For the adjustment procedure, follow the steps below:

- Look for an even place and have a second person with you that can hold you sitting on your bike.
- The blue adjustment wheel for the preload is to be opened entirely (turn counterclockwise).
- Move the red ring on the piston rod entirely towards the air chamber.
- Sit on your bike carrying your entire equipment (including backpack, drinking bottle, helmet, etc.) and avoid moving on the bike.
- The second person holds you sitting on the bike.
- Release the brake.
- Get of the bike slowly and read the SAG at the scale on the compensation reservoir.

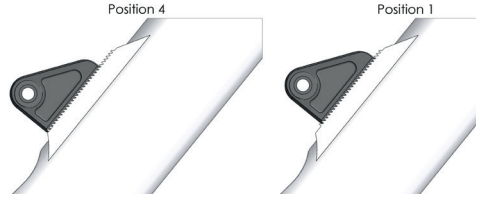
The picture shows SAG measurement on the damper.

Advice: Begin with a SAG of aprx. 33 %.

Depending on the intended riding style and your personal preferences, the SAG should be between 30 % and 40 %.

Damper rebound adjustment
Sitting on your bike, ride down a sidewalk. The rear frame should "bounce" only once. In case it does so more often, close the rebound of your damper further. In case the rear frame works too fast, open the rebound. The rear frame should not go back into its original position too fast. This is because it should be "prepared" for further obstacles to come as soon as possible. With most dampers, the direction of the adjustment is indicated with a "+" or symbolized with a "turtle". The adjustment wheel in the middle, with most modals, is painted red. Please additionally refer to the manufacturers' manuals for further adjustment advices.

MicroAdjust Shockmount



The MicroAdjust Shockmount of the 901 MK3 features four different positions for the overall geometry adaption. In order to loosen the front screw, the damper screw needs to be removed.

Note: The Shockmount and the frame must be aligned perfectly.

Position 4 of the front socket (at the bottom) stands for: steep steering and seat tube angle and highest BB position.

Position 1 of the front socket (at the top) stands for: flat steering and seat tube angle and lowest BB position.

The adaption described can not only be used for a tuning of the general geometry but also, for example, for generating different SAG settings without altering the overall geometry.

Advice: Take your time to find your individual geometry and ultimate setup. Thanks to the Geometry-Tuning-Option, a wide variety of options can be realized.

5. Maintenance and care

The bearings of the frame and headset – when used in normal conditions – do not need to be dismounted or greased.

In case you notice a bearing default anyways, you can order replacement bearings in your Liteville WorksStation or at Syntace directly.

The Horstlink bearing (the connection between seat and chain tube) can be greased from the outside.

Abb. zeigt: Abschmierbare Lagerstalle am Horst-Link

Advice: We recommend the Syntace GreaseGun (Art. #116931) for an optimized greasing efficiency.

Cleaning the bike, it should never be hit by a hard jet of water. Even if intended differently, too much care can ruin the bearings following the idea: “bearings can not be ridden to death, but cared to death”.

Screws

The screws in your frame are high-durable Titanium and Aluminum screws and are produced specifically for Liteville frames. Initially, they are all secured with screw lock. You should still frequently check the correct torque meter of them, particularly after rebuilding the bike.

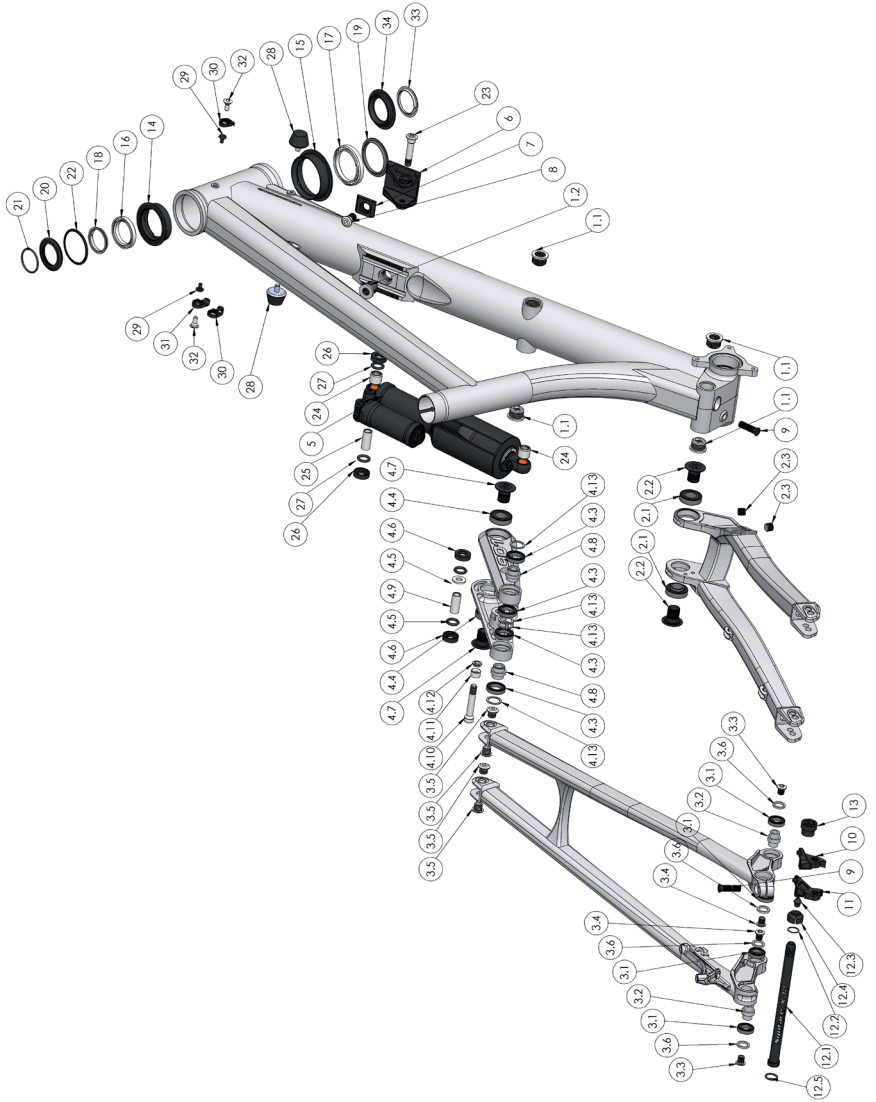
Advice: Checking the frame screws, they should not actually twist. In case they do, dismount them, clean them and apply new screw lock. The screw lock needs a certain amount of time to cure. Please find our „Loctite - 1x1“ at: www.liteville.de -> FAQ.

WorksFinish surface

The Liteville WorksFinish surface is a genuine “raw” surface without any coating or protection. It is not an Aluminum imitation. 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-Bite 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 if you do not.

Picture shows Liteville stickers.

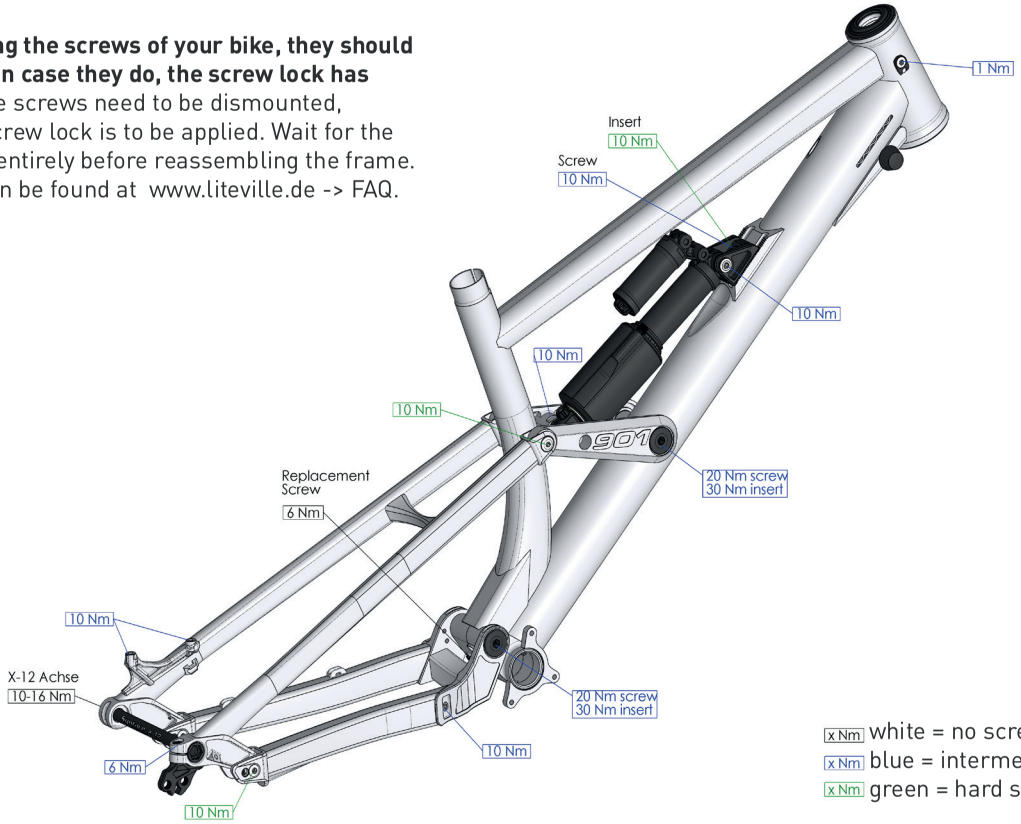


POS-NR.	Description	Article No.	Qtty
1	MF_LV-901-DH_MK02_L		1
1.1	BB-pivot-threadinsert_M15x1	116863	4
1.2	Shockmount-plate-insert_T-01	127241	1
2	CS_LV-901-DH_MK02		1
2.1	BB_15x28x7_61902-2rs_EXI	110526	2
2.2	screw_Al_ M15x1x18.5_ 13.5t_HEX8	140844	2
2.3	screw_POM_M10x1x8_HEX5_plug	127043	2
3	SS_LV-901-DH_MK02		1
3.1	BB_12x21x5_61801-2rs	114449	4
3.2	Horstlink-axle_T-01	127050	2
3.3	screw_Ti_M8x0.75x11.0_HEX5_GP	120396	2
3.4	screw_Ti_M8x0.75x11.0_HEX5_plug	120389	2
3.5	screw_Ti_M10x1x8.5_HEX5	127258	4
3.6	washer_POM_16x12x2	140684	4
4	Rocker_LV-901-DH_MK02		1
4.1	Rocker_LV-901-DH_T-01		1
4.2	washer_SS_17x8.2x2	140752	1
4.3	BB_15x24x5_61802-2rs	114487	4
4.4	BB_15x28x7_61902-2rs_EXI	110526	2
4.5	O-Ring_11x3.0	110281	2
4.6	washer_POM_20x11.1x5.925	128187	2
4.7	screw_Al_ M15x1x18.5_ 13.5t_HEX8	140844	2
4.8	Rockerarm-axle-15x5x16-T-01	127302	2
4.9	axle_SS_8x11x24.9	128217	1
4.10	screw_Ti_M8x1x43_shock-cone	128026	1
4.11	shock-cone_shim_Ti_8x12x7	128019	1
4.12	Shock-cone_8x12x3.3mm	128194	1
4.13	washer_Al_19x15x1	128767	4
5	Rock Shox Vivid Air R2C 240x76mm	112490	1
6	Shockmount-Slidingpart_T-02 240x76mm	128057	1
7	Shockmount_Plate_25	128064	1
8	screw_Ti_ M10x1x16.3_ 10.5t_HEX5	103764	1
9	X-12_hanger_screw_Typ2_26mm	116849	2
10	X-12_hanger_Typ3_Std	128118	1
11	X-12_hanger_Typ3_D-Mount	128101	1
12	X-12_axle_assembly_148mm_allen-key	119017	1
12.1	X-12_axle_148mm_EVO6	127081	1
12.2	X-12_stainless-steel_washer 12mm	127098	1
12.3	X-12_axle_end-plug	127104	1
12.4	X-12_axle_cone	127111	1
12.5	X-12_axle_O-ring_small	127128	1
13	X-12_thread-insert_0mm	105683	1
14	Headset-cup_1-1-8_48.8x41	127135	1
15	Headset-cup_1.5_57x52	127142	1
16	BB_30x41x6.5_2RS_cone	103870	1
17	BB_40x52x7_2RS_cone	103887	1
18	Topplate-cone_1-1-8	127166	1
19	Baseplate-cone_1.5_39.8	127159	1
20	VarioSpin-Top-Cap_1-1-8	127173	1
21	O-Ring_28.6x2.0	127203	1
22	VarioSpin-Top-seal_1-1-8	127210	1
23	screw_Ti_ M8x1x40.5_ HEX5	128071	1
24	NB_11x15x12.7	110571	2
25	axle_SS_8x11x24.9	128217	1
26	washer_POM_20x11.1x5.925	128187	2
27	O-Ring_11x3.0	110281	2
28	Fork-stop_MGK_M6_25x17-modified for 901	140851	2
29	rubber plug cable spot DT	120006	2
30	Cable-holder_1	119987	2
31	Cable-holder_2-down	140868	1
32	screw_VA_M5x12.5_HEX5	127937	2
33	Baseplate-cone_1-1-8_29.7	140766	1
34	Reducer_1.5_to1-1-8	140783	1

Screws: maximum torque load

Working on your bike, use a torque meter at all times such as the Syntace Torque Tool.

Watch out! Checking the screws of your bike, they should not actually twist. In case they do, the screw lock has been damaged. The screws need to be dismounted, cleaned and new screw lock is to be applied. Wait for the screw lock to cure entirely before reassembling the frame. A „Loctite - 1x1" can be found at www.liteville.de -> FAQ.



x Nm white = no screwlock
x Nm blue = intermediate screwlock
x Nm green = hard screwlock

Notes:

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