

INSTRUCTION MANUAL
 KILO NO.1 / NO.1+
 KILO 1.2 / 1.3



1. SAFETY INSTRUCTION	2
2. INSTALLATION	3
2.1 PREPARATION	3
2.2 MOUNTING DIRECTION	3
2.3 HEAD TUBE AND FORK STEM.....	3
2.4 V-BRAKES	3
2.5 DISC-BRAKES	3
2.6 HUBS.....	3
2.7 TIRES	3
3. OVERVIEW KILO FORK MODELS	4
3.1 GA-FORCE KILO HISTORY	4
3.2 CURRENT KILO SERIES	4
4. BUILD UP OF A KILO FORK	5
5. PRODUCT DISCRIPTION SHOCK	5
6. GENERAL SHOCK INFORMATION	6
6.1 SHOCK ADJUSTMENT	6
6.2 REBOUND ADJUSTMENT	6
6.3 SPRING PRELOAD	6
6.4 LOCKOUT DEFINITION	7
6.5 DISMANTLING SHOCK	7
6.6 SHOCK POSITION	8
7. AIR-FORCE KILO	8
7.1 AIR PRESSURE	8
7.2 PRIMARY FILLING	9
7.3 INSTALLING THE LOCKOUT REMOTE CONTROL	10
8. SLR:LIGHT	11
9. SPRING SHOCK	11
10. MAINTENANCE AND REBUILDING	12
10.1 DISMANTLING OF PARTS	12
10.2 CLEANING AND MAINTENANCE	12
10.3 WARRANTY	12
11. TECHNICAL INFORMATION	13
12. OPTIONAL EQUIPMENT (MOUNTING AREAS)	13
13. IMPRESSUM	13

1. Safety instruction

- 1) The forks of the "Kilo" series are designed for Cross-country (XC), Touring and Marathon use only. The 29inch fork is designed exclusively for the trekking area and should not be used for other purposes.
- 2) **Attention!** Always ascertain that the steel / air spring is adjusted properly to bear the riders weight for the purpose intended, to avoid bottoming out. This may seriously damage the fork. If the fork has bottomed out, it should be sent in for a check
- 3) During use (ride) do not reach into the area of the moving four-link system. This may lead to serious injuries!
- 4) **Attention!** The user is responsible that the fork and shock are operating freely and have no undue contact.
- 5) Gearshift, brake cables and tires should not touch/scratch any aluminium of the fork at any time
- 6) Do not use the active lockout for driving off-road and/or non-stop! This may seriously damage the fork.
- 7) Carefully regard specifications of all components or products attached to the fork
- 8) The air shock contains an oil hydraulic shock. When dismantling a pressurized unit, an explosion-like pressure release may result. Always wear safety goggles when dismantling the shock!
- 9) You need special confirmation of the producer for dismantling fork and/or shock beyond normal maintenance. The warranty is void if unauthorized maintenance work is done on your fork.
- 10) The different versions of the product may differ from the illustration.
- 11) **Attention!** Please regularly control all screws of the fork, especially the shock mount and the threaded pins in the levers (see red arrows)! **Especially both screws of the shock mount have to be controlled regularly:** At the upper shock mount please use a small amount of low strength thread locking on the top of the screw, use only low strength thread locking. Do not use thread locking at the lower shock mount! Just make sure to tighten both screws with 12NM!



UPPER SHOCK MOUNT (indicated by red arrows) socket screw M6 x 25 DIN 912 :

Put a little bit low strength thread locking on the top of the screw.

LOWER SHOCK MOUNT (red arrow), socket screw M6 x 12 DIN 912 (or M6 x 18 depends on version)

Fastening torque: **12 Nm!**

If you intend to use thread locking, the "steel threaded insert" (Helicoil) will be removed with the Screw and will need to be replaced.

Setscrews (indicated by blue arrows) M6 x 16 DIN 913: Use low strength thread locking for all 4 pieces.

2. Installation

2.1 Preparation

Check before beginning:

- Compatibility of frame and all add-ons
- Length of fork stem
- Proper seat of all headset parts

2.2 Mounting direction

Compare picture to the right. The product can differ from the illustration.

2.3 Head tube and fork stem

The fork stem fits only 1 1/8" headsets. It measures 28,6 mm (= 1 1/8"). The length of the fork stem is adjusted with a standard tube cutter. How much you cut depends on the length of the head tube, the headset, stem and spacers.

ATTENTION! Don't use a claw fastener for carbon steerer! (KILO No.1). Alternative you can use products for carbon steerer from a specialized shop.

2.4 V-brakes

Kilo 1.2 / 1.3: The V-brake version is only available in V-brake & disc. It's a system with clamps. The clamps are already mounted with the sockets. The sockets are standard metric thread (M8 x 1,25) with a hole length of 47mm, the thread is 23 mm long.

NOTE! The „fastening torque“ is **12 – max. 15 Nm!** Do not tighten more than 15 Nm otherwise the aluminium stanchion (leg) will brake!

Kilo no.1: The clamps are already mounted; it is impossible to remove them.

ATTENTION! The fastening torque is **max. 4,5 Nm.** Otherwise the carbon tube(leg) will brake.

V-brake-clip

V-brake-socket



2.5 Disc-brakes

Kilo forks are prepared for international standard (IS) 2000, version "disc" and designed for max. 180 mm disc rotator. For all further details, please follow the specific instructions of the brake manufacturer.

2.6 Hubs

Use only standard hubs (Ø 9mm) intended for an assembly dimension of 100mm.

2.7 Tires

Since the fork model of 2010 you can use tires with total width of 60mm. But this size depends on the pressure, the diameter and the pattern of the tire. Information about the tire clearance in the horizontal and vertical directions please refer to the product image.

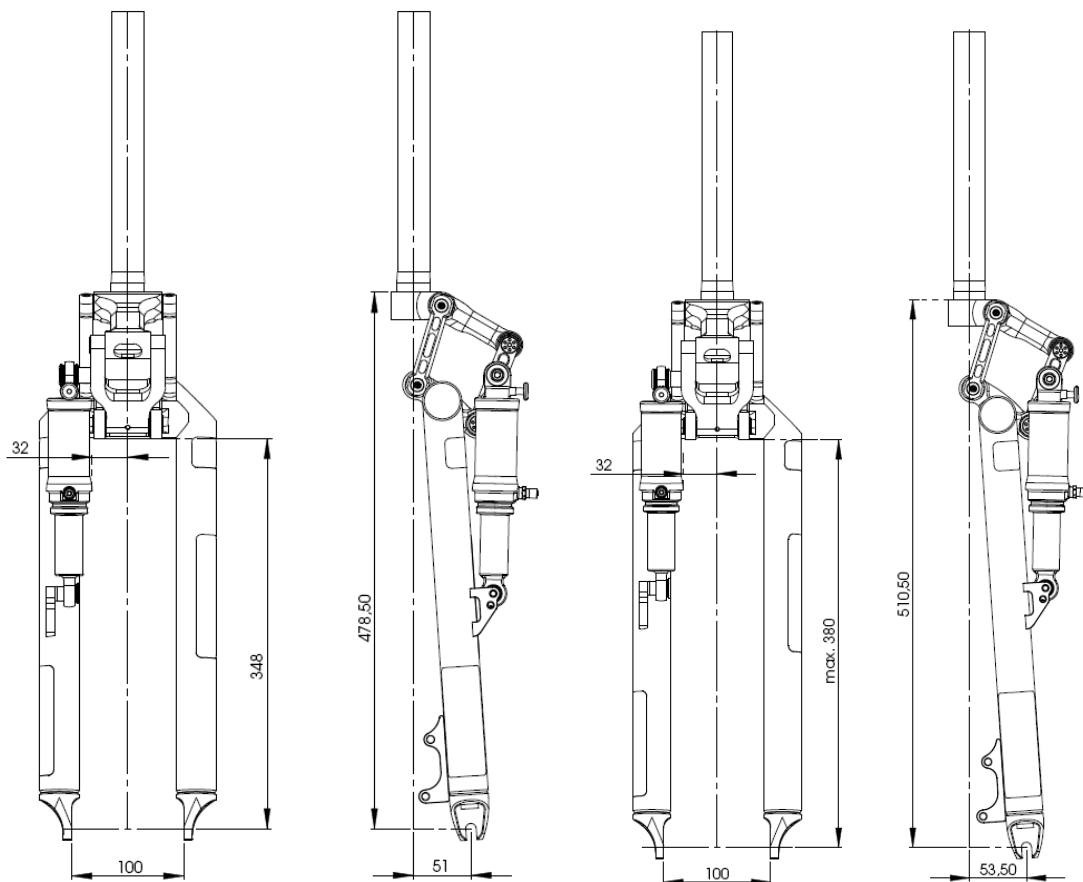
The older versions of the fork have to be checked: Please make sure that the tire to be used can rotate freely throughout the whole travel. Therefore you have deflate the airshock or dismantle the spring of the springshock.

3. Overview KILO fork models

3.1 GA-force kilo history



3.2 Current KILO series



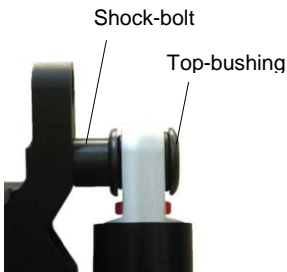
KILO 29"

KILO 26"

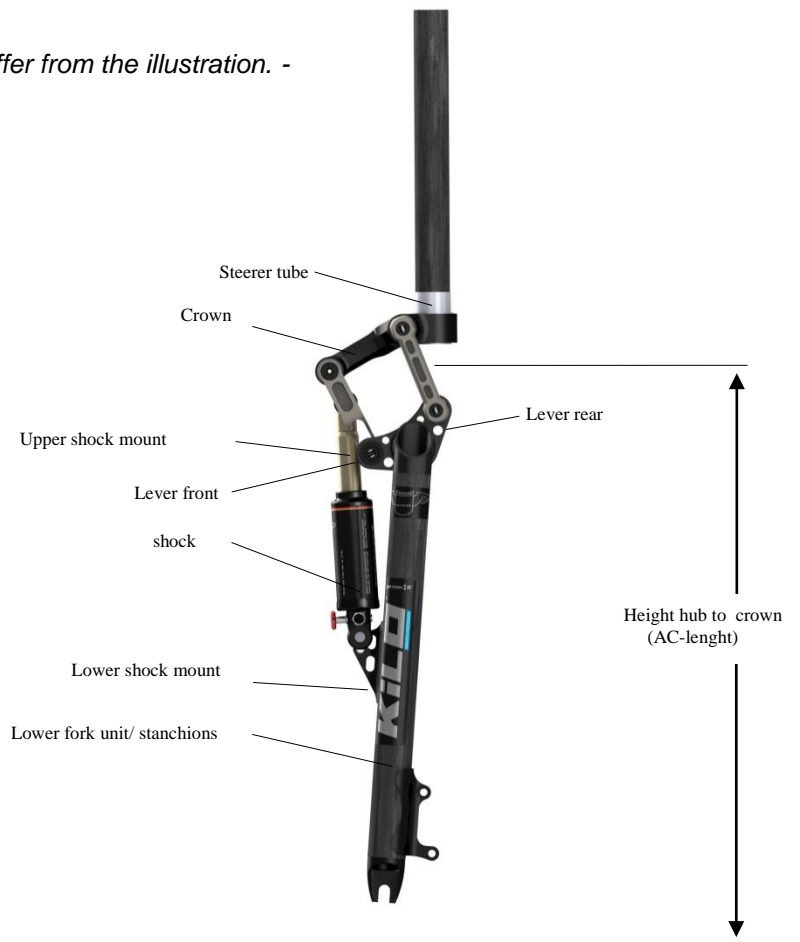
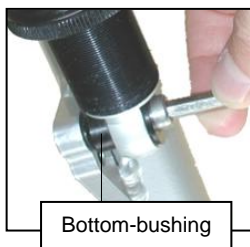
4. Build up of a Kilo fork

- Depending on version the product can differ from the illustration. -

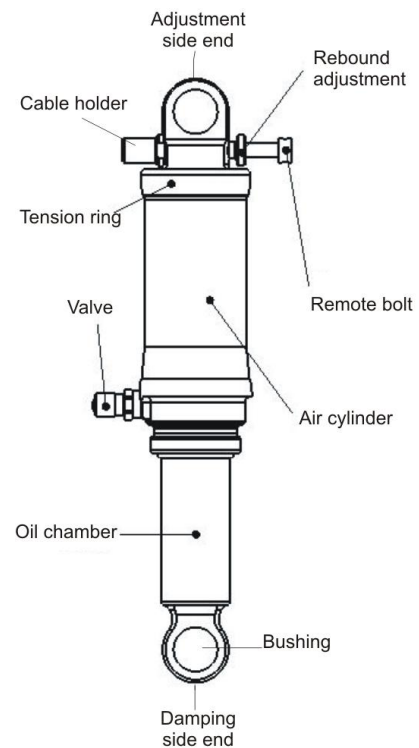
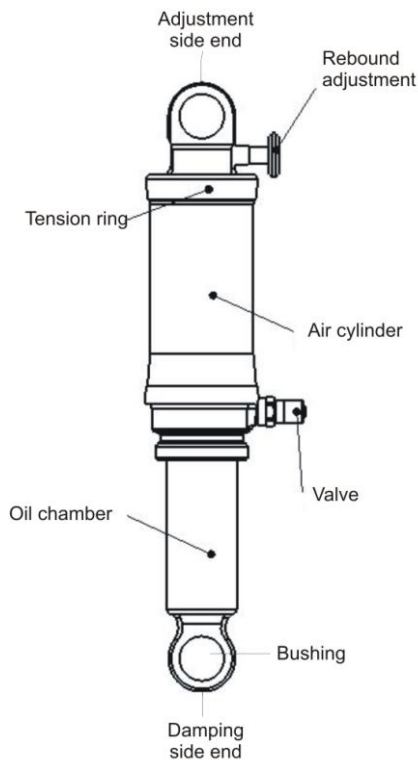
Upper shock mount:

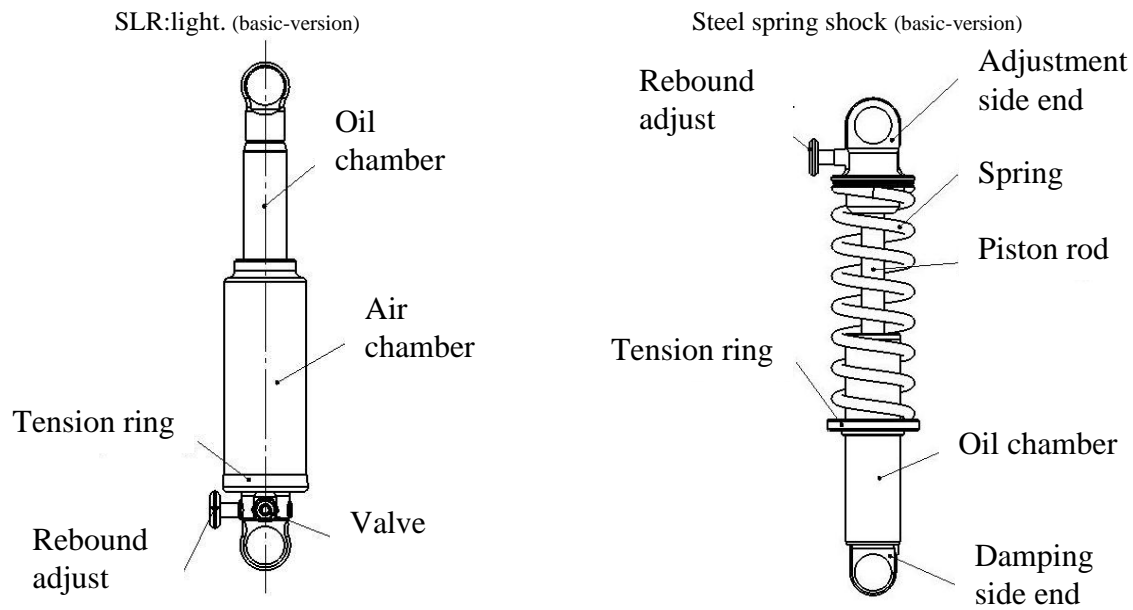


Lower shock mount:



5. Product discription shock





6. General shock information

6.1 Shock adjustment

Please test the fork/shock first if the spring rate is sufficient. Otherwise, you may adjust according to the attached table in the respective chapters on shock settings.

NOTE! If you do not like the guideline specifications for your application or personal taste, you can customize the respective pressures. Please make sure that it is not carbon copies (especially for very soft set up), as well as the position of the shock assembly is taken into account.

Please check if your hand pump has an adapter. The pump adapter avoids the loss of air when removing the pump after filling. Pump with adapter or a special shock pumps are available in stores.

6.2 Rebound adjustment

The adjustment is done by the red knurl. Try the different types of adjustment by turning the knurl and compress the fork and check the rebound. Both, air and steel spring shocks offer a wide range of rebound damping adjustments.

Recommended general adjustment guide:

- Low damping: For highest sensitivity, fast response, for repeated fast deflections on fast downhill and bad track.
- High damping: Typical to avoid rocking action on asphalt

6.3 Spring preload

Spring preload (sag) describes how much the shock is compressed when a rider sits on the bike. The rider must be seated in a normal riding position, then the spring preload should be set between 15 - 25 % of the overall travel.

Sag	15 %	20 %	25 %
Travel 90 mm	13,5 mm	18 mm	22,5 mm

6.4 Lockout definition

The lockout mode of the Kilo is an over-damped rebound, i.e. when activated, the fork is compressed. The use of other kinds of lockouts is not permitted for this system.

When deactivating the lockout, the fork expands again. In order to adjust the rebound control during normal mode (non lockout mode) you can adjust the rebound using the red rebound adjust knurl. If you turn the screw towards the casing the damping is increased. In the opposite direction you reduce the damping, consequently the rebound is faster.

Attention! Do not use the active lockout for driving off-road and/or non-stop!

6.5 Dismantling shock



Pic. 1

Avoid a sudden sag while dismantling the shock from the fork by putting a towel, paper or something similar between the levers.

The terms upper and lower shock mount can be found in chapter 4 "Product Description fork".

Dismantling1: Remove upper M5 (5mm) hex socket bolt
(Pic. 1) (M 6 x 25 DIN 912 A2 with M5 allen key)



Pic. 2

With swivelling: Remove upper M5 (5mm) hex socket bolt
(Pic. 2) (Axle bolts made from stainless steel for 18mm open-end wrench)

Dismantling 2: Remove lower M5 (5mm) hex socket bolt of shock
(Pic. 3) Carefully lower front end (do not drop)!
(M6 x 12 DIN 912 A2 with M5 allen key)
(M6 x 18 DIN 912 A2 depends on version of bottom bushing)



Pic. 3

Assembling 1: Mount allen screw with middle strong thread guard (Locktite). Please Note! Only one drop of thread guard!
Torque 12Nm (lbf in 106)

With swivelling: Tighten the steel bolt with a 18mm open-end wrench.
Torque 12Nm (lbf in 106)

Assembling 2:

Lower shock mount:

It is not recommended to use thread locking, make sure to tighten the screw with **torque 12Nm (lbf in 106)**! If you like to use thread locking, the "steel threaded insert" (Helicoil) will be removed with the screw and need to be replaced



Pic. 4

NOTE! Put a little bit thread locking (low strength!) on the top of the screw. The O-rings at the upper shock mount in corresponding order (see to the arrows at pic.5).

2 O-ring positions! Upper shock-fixation consisting of: shock-bolt and top-bushing, M6 x 25 screw, 2 x o-rings (black rings).

According to shock version AiR-force kilo + steel-spring shock:
1 x o-ring 12 x 2,5 (inside), 1 x o-ring 10,5 x 2,5 (outside)

According to SLR:light., AiR-force SLR (old model): 2 x o-rings 12 x 2



Pic. 5

6.6 Shock position

The lower shock mount has 2 different shock positions:

NOTE! The following specifications are only for fork version 2008-2012! For prior fork versions (2003 – 2007) the position of shock is different, due to a change in geometry, there is a new position of the low shock mount and different shock lengths.

Kilo 1.2: The basic model of the aluminium version is the air shock “AiR-force kilo”. The shock has to be mounted in the upper position (see to the picture). It’s mounted in the same position as the air shock “SLR:light.”. The length of both shocks is 195 mm.

Kilo 1.3: The basic model of the aluminium version is the steel spring shock. The shock has to be mounted in the down position (see to the picture). The shock length is 200 mm.

Kilo no.1:

The basic model of the carbon version is the air shock “SLR:light.“. The shock has to be mounted in the upper position (compare with the picture). It’s the same position as for the air shock “AiR-force kilo.” The length of both shocks is 195 mm.

Please **NOTE!** If you use the wrong position you can damage the fork and the shock. So be sure to use the right position.



7. AiR-force KILO

7.1 Air pressure

The Air Force KILO has a negative chamber which is filled automatically using the valve in the main chamber. The rebound is controlled by the rebound adjustment. The lockout version has a remote control.

Weight of biker (kg)	Air pressure (bar/psi)	Air pressure(bar/psi) for racing
Up to 70	~ 6 / 87	7 – 8 / 101 - 116
70 – 75	~ 7 / 101	8 – 9 / 116 – 130
75 – 80	~ 8 / 116	9 – 10 / 130 – 145
80 – 85	~ 9 / 130	10 – 11 / 145 – 159
85 – 90	~ 10 / 145	11 – 12 / 159 - 174
90 – 95	~ 11 / 159	12 – 14 / 174 - 203
Pressure minimum 4 bar – max. 20 bar		
NOTE! The pressure table contains only recommended values!		
Air Pressure also depends on the intended use, riding style and personal preferences		

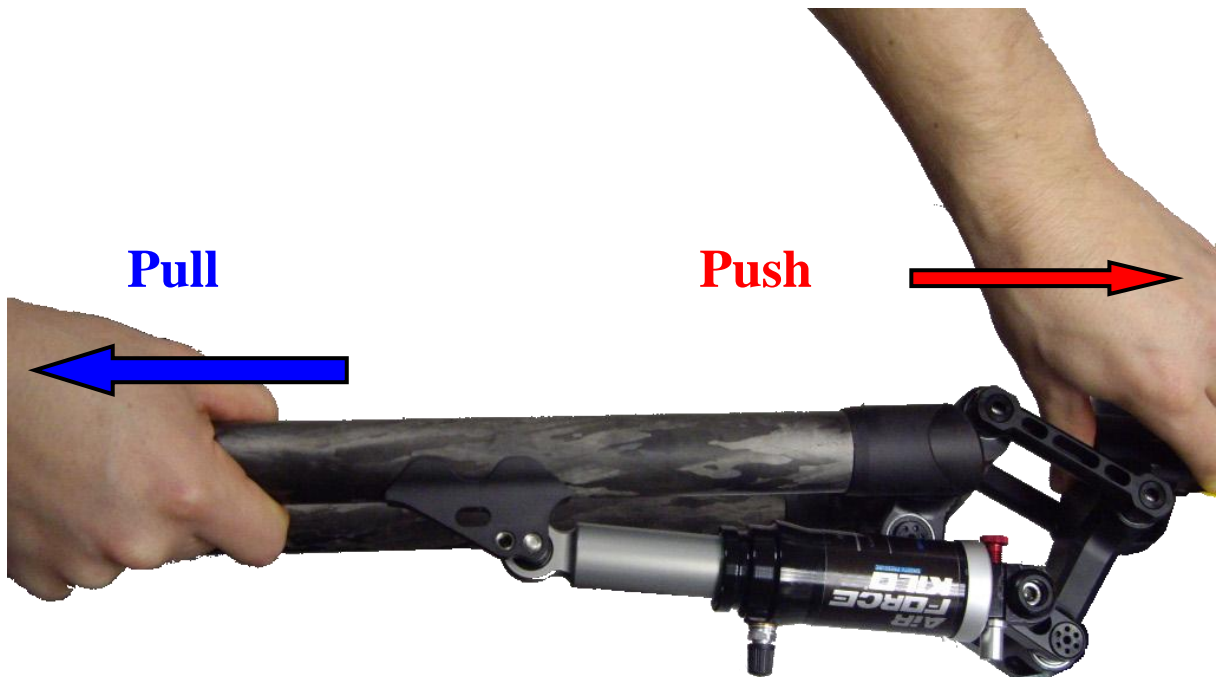
7.2 Primary filling

The AiR-force kilo shock is already inflated with 6-8 bar pressure by delivery. Before the first ride, please make sure that the fork can move through its entire travel without undue contact. To adjust the shock to your weight or turn the position of the valve you have to release the air and refill.

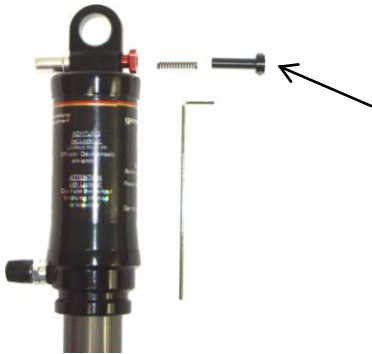
1. Release air: Put off the valve cap, hitting the valve and the air pressure will escape.
Attention! The shock is under pressure!
2. Before you start filling: **The shock has to be in maximum travel position. NOTE! Check at first that the shock is not compressed.**
3. Filling: The necessary pressure depends on your weight, the ratio of the bike and the application area. Fit your suspension pump and fill the shock by pumping according to table (picture 1.3).

NOTE!

Sometimes the shock is pushed together by filling in the pressure,
in that case you have to release the air,
pull it apart until the shock is no longer compressed
and refill again!



7.3 Installing the lockout remote control



Provided parts:

Remote bolt, spring, end cap (not pictured). (See also shock description page before.)

NOTE! Before mounting the red rebound adjustment has to be turned towards the casing until dead stop

TIP: The turning in of the red rebound adjustment is much easier, if you push the black remote bolt into the red rebound adjust screw till dead stop.

NOTE! First, activate the lockout at the remote control lever until the lever is locked in place!



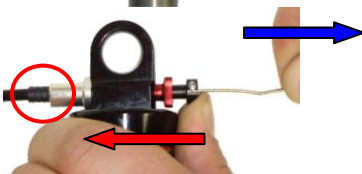
Fit the wire through the shock.

Insert the spring and the remote bolt into the red rebound adjust screw.

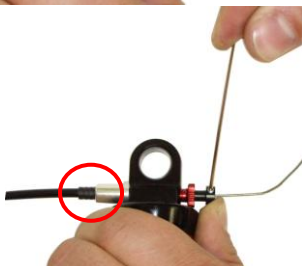


Push the black bolt into the shock (indicated by the red arrow, PIC. 4) till dead stop and pull the wire into opposite direction (indicated by the blue arrow).

NOTE! The wire counter bracket (red encircled) has to slip into the cable holder (silver aluminium part at the shock).



After stretching the wire you have to seize both M3 tread bolts in the black rebound bolt with a socket wrench 1.5 mm. Finally you can fix the tread bolts with liquid screw lock (shown at PIC. 5). It's not necessary to stretch the wire until the tread bolts are seized. The easiest way will be to put your thumb to the black part and fix the wire too.



At last you will have to trim the wire. The wire should have a maximum length of 10 mm in (compare with PIC. 6). As a last step position the end cap.



Concluding the assembling as described:

Turn the rebound adjust knurl 5-6 mm out of the shock (your rebound will get faster).

Pull the lock lever out of lockout position, the shock is ready for use.

With the red knurl, you are able to adjust the rebound without changing the lockout performance.

8. SLR:light

Air pressure

The advantage of the SLR: light is (apart from weight) the characteristic curve, which is placed between the AiR-force KILO and the steel spring shock. Thereby the SLR:light is less progressive and can use more travel. Furthermore the SLR:light features a negative chamber which is filled automatically via main chamber(patented setback valve system).

Air pressure SLR:light. (guidelines only)		
Weight of biker (kg)	Air pressure in bar (bar/psi)	Air pressure (bar/psi) for racings (with stairs)
Up to 70	till 6,5 bar / till 94 psi	till 8,0 bar / till 116 psi
70 – 75	6,5 – 7,5 / 94 – 108	8,0 – 8,5 / 116 – 123
75 – 80	7,5 – 8,5 / 108 - 123	8,5 – 9,5 / 123 – 138
80 – 85	8,5 – 9,5 / 123 - 138	9,5 – 10,5 / 138 – 152
85 – 90	9,5 – 10,5 / 138 - 152	10,5 – 11,5 / 152 – 167
90 – 95	10,5 – 11,5 / 152 - 167	11,5 – 12,5 / 167 - 181
Pressure minimum 4 bar – max. 15 bar		

9. Spring shock

The basic setup of the spring pre-load results from the choice of spring rate. In general: The more the spring is pre-loaded, the tighter the fork response. However the spring is only allowed to be pre-loaded max. 10mm. If it is too soft despite max. spring pre-load you have to mount the next harder spring.

Spring rate	Weight spring	Weight Shock incl. spring	Complete weight fork, version disc incl. shock (version v-brake & disc plus 40g, lockout + 60g)
27 N/mm < 70 kg	ca. 130 g (black) (green mark)	259 g	1.125 + 259 = 1.384 g
32 N/mm < 80 kg	ca. 142 g (black) (yellow mark)	271 g	1.125 + 271 = 1.396 g
38 N/mm < 90 kg	ca. 172 g (silver)	301 g	1.125 + 301 = 1.426 g
42 N/mm > 90 kg	ca. 181 g (black) (no mark)	310 g	1.125 + 310 = 1.435 g
For lightweight: 15,7 N/mm (black) und 12 N/mm (silver)			

10. Maintenance and rebuilding

Note! Please observe the safety instructions described in chapter 1!

Shocks are subject to wear and tear and must be serviced (depending on usage and type of use) at least once a year. Service means dismantling, change of (silicon) oil, exchange of seals and parts if they

are worn out. Due to the modular build-up of the fork almost any worn parts can be exchanged if necessary (you will be given an estimate) and the unit will be as good as new afterwards.

For a proper service please send in the fork including the original papers to your dealer or directly to the address you'll find on our homepage. Please check first the address and the service costs on our homepage or webshop: www.german-a.de.

10.1 Dismantling of parts

Any further dismantling of parts requires the agreement of the manufacturer.

All warranties are invalid when dismantling parts of the fork or shock on a private base without a written consent of the manufacturer.

10.2 Cleaning and maintenance

Fork and shock may be cleaned with cleaners generally used for bicycles. Ascertain that valve caps are properly seated on valves. Solvents and aggressive cleaners may attack labels and surfaces. Ball bearings should be lubricated regularly (together with chain and sprockets). Do not use water, just a clean cloth or a soft brush. Apply a drop of oil to each bearing, wipe off any excessive oil.

10.3 Warranty

Applicable are the general terms and conditions of German Answer as well as the warranty rules defined by law. Above this German Answer is ready to tolerate special cases.

The warranty does not apply if un-purposeful usage takes place or in case of:

- Ignorance of safety precautions defined by chapter 1
- If the shock is disassembled for reasons that do not include servicing
- Broken valve casings
- Over tightened and therefore broken threads of the valve casings
- Flow and normal function sounds when all seals are working
- Worn shock mounts
- Parts that are subject to wear and tear (seals/bushings/surfaces)
- Mechanical damage / bent dials
- Mechanical damage on the surfaces
- Missing serial number
- Missing registry card: The registration card is in the manual. With this, each customer can receive personal attention and information. Each fork has a unique serial number to which all specific production data are stored. From these data can be obtained in connection with the customer data in service inspection and wear behavior, life cycle analysis and insights for the optimal use and maintenance Abrasion of aluminium by shifting/brake cables or tire
- All unauthorized work on fork or shocks (Improper maintenance and service)
- Damage due to crashes, jumps and competitions
- Disc brakes with a diameter larger than 180 mm

11. Technical information

System	Trapezoid multiple link system
Sizes*	26", 650B, 29" Disc / V-brake
Height hub to crown	approx. 478 (26"), 489 (650B), 510 (29") mm
Steerer tube size	1 1/8" ahead aluminium / carbon
Damping	Oil, adjustable in tension
Transmission ratio	1 : 1,4
Spring type	Air with negative chamber or steel spring
Travel	ca. 90 mm Long Travel
Bearings	Sealed ball bearings
Brakes	V-brake / disc Standard IS 2000 (max. 180 mm)
Version GA-force kilo no. 1+ Carbon	Weight of driver max. 85 kg (95 kg aluminium steerer)
Optional	Rebound lockout with remote control, other colours (aluminium version / down part)
Shock AiR-force KILO	Weight: 172g, lockout 60g
Shock SLR:light	Weight 130g
Spring shock	Weight without spring: 130g, (spring see chapter 8.0)

Weight

	Kilo No. 1+	Kilo No. 1	Kilo 1.2	Kilo 1.3
Kilo with SLR light	1098g	1187g	1246g	1390g
Air-Force Kilo	+40g	+40g	+40g	+40g
Spring shock	+150g	+150g	+150g	+150g
Lockout & Remote	+77g	+77g	+77g	+77g
650B		+19g	+25g	+25g
29 Zoll		+41g	+59g	+59g

12. Optional equipment (mounting areas)

The mounting options are thread clinches (eyelets) made of galvanized steel, each mounted individually on request from the factory. TIP! Please mount steel screws with some grease to prevent oxidation

- 12.1 Fender mounting areas
- 12.2 Modified mud guard (SKS fender -snap-on system)
- 12.3 Mounting areas for fenders at the front wheel (3 pcs)
- 12.4 Mounting areas for carrier mounts (Low-Rider)
- Total Luggage payload max. 10 kg! -
- 12.5 Mounting area for lighting installation



13. Impressum

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