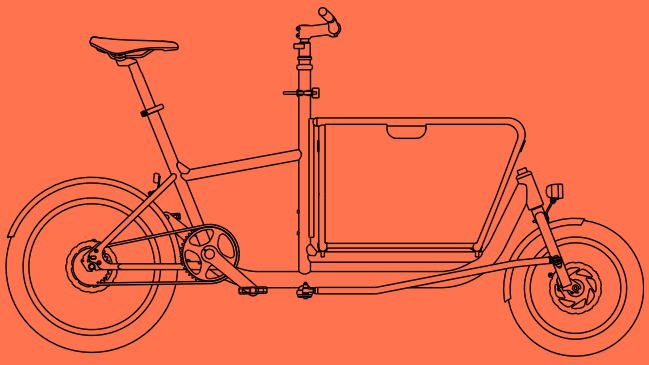
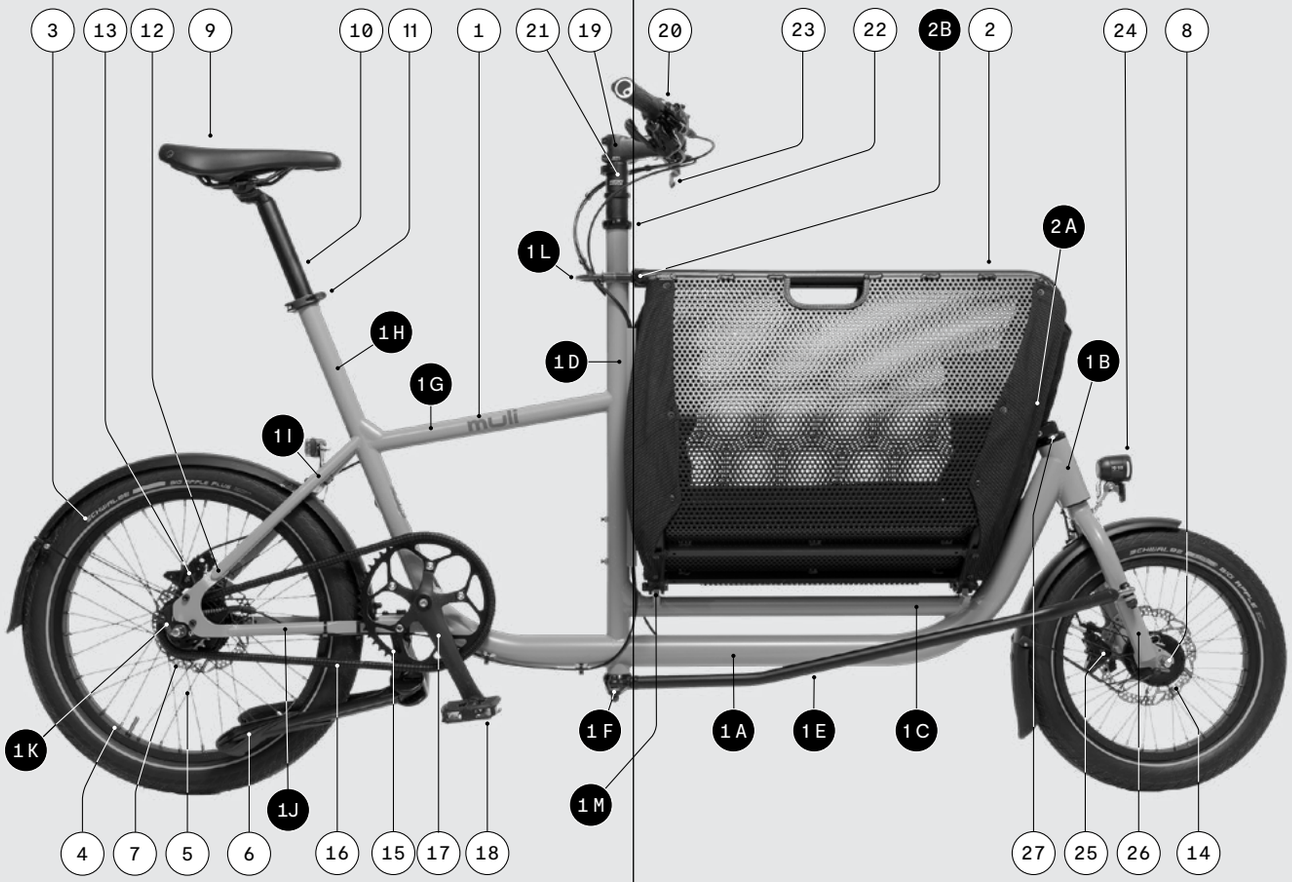
muli

VERSION DE 2024.1

Translation of the original operating manual muli Muskel



muli Muskel



1	Frames
1 A	Down tube
1 B	Head tube
1 C	Top tube load
1 D	Steering tube
1 E	Steering linkage
1 F	Boom - steering tube
1 G	Top tube rider
1 H	Saddle tube
1 I	Seat stays
1 J	Chain stays
1 K	Dropouts
1 L	Locking bracket
1 M	Basket holder

2	Basket
2 A	Basket cover
2 B	basket plugs
3	Tires
4	Rims
5	Spokes
6	Double leg stand
7	Gear hub
8	Front wheel hub
9	Saddle
10	Seatpost
11	Seatpost clamp
12	Frame lock
13	Rear brakes
14	Brake discs

15	Chainring
16	Chain/Belts
17	Crank set
18	Pedal
19	Stem
20	Handlebar
21	Stem adapter
22	Steering bearing
23	Brake lever
24	Front headlights
25	Brake
26	Fork
27	Steering bearing

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Printed on 100% recycling paper, FSC®certifiedand awarded with the blue environmental angel.

Table of contents

THE MULI SETS A NEW STANDARD WHEN IT COMES TO COMPACTNESS, IT IS CARGO BIKE AND EVERYDAY BIKE IN ONE.

The muli invented the compact cargo bike class. With a length of only 195 cm it is exactly as long as a normal bicycle. Moreover, muli sets new standard in terms of sustainability – the tubes are manufactured from 100% recycled steel and the entire production of the muli, from welding of the frames to the final assembly, takes place entirely in Germany. Enjoy your ride!

01 Safety

General information on original operating manual 1.1

This original operating manual (hereinafter referred to as the “Manual”) is part of the muli Muskel. The instructions and warnings in this manual exclusively refer to the model mentioned and cannot be transferred to other bicycles.

The manual contains all the important information for the end-user of the muli Muskel. However, it does not convey the skills of professional bike mechanics.

Depending on the equipment of your muli Muskel in addition to this manual the available separate instructions of the component manufacture must also be observed for use. This applies to the instructions for the following components: Hub gear (Shimano), belts (Gates), lighting. You can find the corresponding manufacturer instructions on our Download Portal (see Item 1.1.1).

→ Read the manual and all the applicable documents carefully and keep the documents so that you can access them at all times.

→ Pass on the manual with the muli Muskel when you hand it over to other users.

Disregarding the information of the manual voids the guarantee and liability on the part of the manufacturer and the dealer. This applies in particular in case of disregarding the safety instructions, overloading, installation errors, wilful misconduct and non-compliance with maintenance and care specifications.

Download Portal 1.1.1

You can find this original operating manual as pdf in German and other languages on our Download Portal. This digital version always indicates the current status. In the Download Portal you will find all other, additionally applicable instructions of the component manufacturer.

https://muli-cycles.de/de/downloads

→ Check on regular basis whether a more up-to-date version of your manual is available in the portal.

Texts/lists used 1.1.2

This manual uses the following text types and lists:

1 Guidelines (in specified order)
→ Guidelines (in any order)
• Listing

Symbols/labels used 1.1.3

This manual uses the following symbols and/or labels:

 The warning triangle in combination with the word “WARNING” indicates hazards that could result in sever personal injuries or death.

 The warning triangle in combination with the word “CAREFUL” indicates hazards that could result in slight personal injuries and property damages.

 The circled exclamation mark indicates important additional information.

 The adjacent symbol points to burning hazard. The temperature is over 45°C (coagulation of protein) and can cause burns in humans.

Proper use 1.2

The muli Muskel is designed to be used as:

- Bicycle for urban areas
- To be used on paved bicycle lanes on which the tires are in constant contact with the ground.

The muli Muskel is not suitable for:

- Driving in rough terrain
- High-speed downhill
- Jumps
- Driving with extreme lateral positions

→ Note the information for proper use, otherwise you risk exceeding the load limits of muli Muskel. This can result in damages to the muli Muskel, there is risk of falling and injury.

→ Do not make any changes to and/or manipulate the muli Muskel.

The information on maintenance and servicing as well as on the proper operation of the muli Muskel in this manual are part of the proper use.

(!) In case of improper use all claims to statutory guarantee are void and result in exclusion of liability of the manufacturer and the dealer.

(!) A Crowdfunding video from 2017 shows images where the muli Muskel is moved on the rear wheel (“wheelie”). These are promotional images. They present a use or limitation recommendation! Riding on the rear wheel (“wheelie”) is not considered proper use!

Rider characteristic:

- The rider weight, including clothing and backpack should be max. 100kg.
- The maximum permissible size of the rider is defined based on the maximum seatpost length. Maximum seatpost with 400mm length may be used on the muli Muskel. The muli muli Muskel is not suitable for riders who need a longer seatpost for a correct seat position.
- We recommend the transporting of children in muli muli Muskel only for adults and experienced riders.

Transporting persons:

- Children up to the age of 7 must be transported in a suitable child seat with restraint function. The muli child seat is such a system.
- muli child seat is not suitable for babies/children who are still unable to sit independently.
- Maximum of 2 children may be transported in muli child seat.
- The seat can carry a load of maximum 40kg. A single child in the seat may weight a maximum of 22kg. These load limits may not be exceeded.
- Each child must be secured with a restraining system and must wear a helmet.
- When transporting a child in a child seat on the rear luggage rack the instructions and the load limits of the child seat manufacturer must be observed.
- It is not allowed to transport persons and children in the rear luggage rack without proper seat.
- It is basically possible to transport children over 7 years of age in the muli child seat provided the specified load limits are not exceeded.
- Basically, you must ensure that the children sit comfortably in their seat considering their size without impairing the rider during steering and braking.
- For taller children it is basically advisable to install the muli child seat against the driving direction because this way sufficient headroom can be ensured.

Commercial use:

- Since commercial use represents a significantly higher stress and an unpredictable use it is excluded.
- The muli muli Muskel is not approved for commercial use or rental operation.
- However, commercial use can be approved in individual cases by means of a separate contractual agreement. Please contact the muli cycles Sales Department if needed.

Safety instructions 1.3

⚠ WARNING! Risk of accident and injury
The following action recommendations help to reduce general risks of accident and injury when using the muli Muskel and participation in road traffic.

→ Use your muli Muskel only if you are familiar with its handling and its functions. Practice driving on peaceful and traffic-free roads until you feel confident and that you can control the muli Muskel.

→ Follow the guidelines on proper use.

→ Adjust your riding style and speed to roadway features and weather conditions.

→ Keep in mind the extended braking distance with heavy loads and with wet or dirty roadways.

→ Ride proactively and be mindful of road users.

→ Please note that cycling is basically a dangerous activity.

→ Wear a suitable cycling helmet when riding. Always have the children transported in the cargo basket wear a suitable cycling helmet.

⚠ WARNING! Risk of injury
As with all mechanical components the muli Muskel is exposed to wear and high stress. Different materials and components can react differently to wear and continuous stress.
If the period of use of a component is exceeded it can suddenly fail and cause harm to the rider.

→ Check your muli Muskel before every use (see Chapter 3.4 “Before every ride”). Any kind of cracks, scratches or discolouration in heavily use areas points to the end of the service life of the component; the component must be replaced.

→ Have your muli Muskel checked at a specialist workshop for (hidden) damages after an accident/ fall or if it has been exposed to excessive stress.

⚠ WARNING! Risk of falling and injury
Overloading the muli Muskel can lead to material failure and functional impairment of important components.

→ Always comply with specified load limits for frames and components.

⚠ CAUTION! Risk of damage
Mounting of the child seat on the saddle tube, on the seatpost, on the upper tube or on the handlebar is not allowed. This can result in the deformation of the frames or very insecure driving dynamic.

→ An additional child seat may be mounted only on the muli luggage rack.

(!) As with all other bicycles ensuring continuous fitness for driving requires muli Muskel regular maintenance and care. Check the brakes, tire pressure, steering, rims and all parts subject to heavy wear in regular intervals. You can find more relevant information in Chapter 5.4 “Care and maintenance intervals” as well as in the chapters for individual components.

Statutory requirements 1.4

For the use of muli Muskel on public roadways you must meet the statutory requirements of the county where you want to ride.

→ Familiarise yourself with the relevant country-specific laws and possible nationally or regionally applicable statutory regulations

As per StVZO (German Road Traffic Licensing Regulations) three points are prescribed:

- The bicycle has two brakes functioning independently from each.

- The bicycle must have the following lighting equipment:
  - White front and red taillight, which cannot be switched on together.
  - A white front reflector.
  - A red rear Z-reflector.
  - Lateral reflectors on the wheel either in the form of reflecting rings all around the wheel circumference
  or
  two spoked reflectors per wheel.
  - Two yellow reflectors per pedal aligned forwards and
  backwards.

- The bicycle must have a bright ringing bell.

The German StVZO is continuously revised and updated.

→ Regularly familiarise yourself with the current status of the law in Germany.

For participation in public road traffic in Austria you must comply with Regulation 146/Bicycle Regulation. These are available in the Austria Federal Law Gazette.

In Switzerland the applicable regulations are available in ordinance on the technical requirements for road vehicles in Articles 213 to 218.

02 About your muli Muskel

Frame number 2.1

The frame number is milled in the frame and is located on marked locations in the Fig. 1.

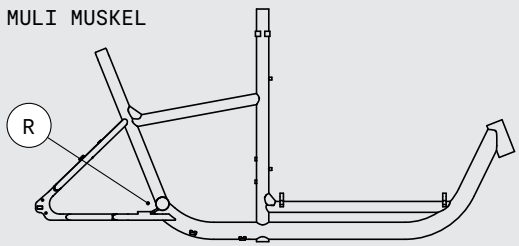


FIG.1 R FRAME NUMBER

Permissible total weight 2.2

⚠ WARNING! Risk of falling and injury
Overloading can result in damages or breaking of components; this can give rise to risk of serious falls and injuries.

→ Do not exceed permissible total weight for the muli Muskel and the respective load limits for the individual load handling points under any circumstances.

ⓘ The respective load limits for the individual load handling points may be restricted further by the use recommendation of the component manufacturer.

The maximum permissible total weight of the muli Muskel is 200 kg.

These 200kg thus form the permissible framework for the following weight components:

Dead weight of the muli Muskel: 25 kg
+ Weight of the rider
+ Weight of the payload

The weight of the rider and the weight of the payload must always be determined such that together with the 25kg dead weight the 200kg is not exceeded.

The maximum permissible load limit for the various load handling points is indicated in the graphic on the following page (Fig. 2).

MAX. PERMISSIBLE
TOTAL WEIGHT

200 kg

MAX. WEIGHT
DRIVER

100 kg

MAX.
BASKET LOAD

70 kg

MAX. LUGGAGE
RACK LOAD

27 kg

DEAD WEIGHT
OF THE MULI

25 kg

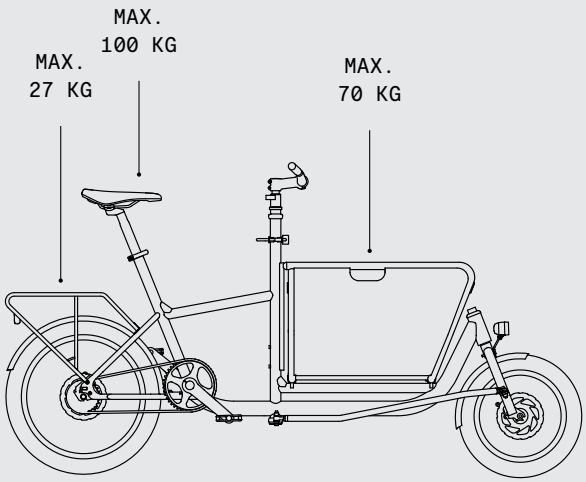


FIG.2

Example for load distribution 2.2.1

EXAMPLE A

80 kg rider + 25 kg dead weight of the muli Muskel
(Fig. 3)

- According to the maximum permissible total weight of 200 kg here maximum 95 kg can be loaded (200 kg – 25 kg – 80 kg = 95 kg).
- From the 95 kg, maximum 70 kg can be loaded in the cargo basket.
- The remaining 25 kg can be placed in part or in whole on the seatpost (e.g. In the form of a backpack) or on the luggage rack.

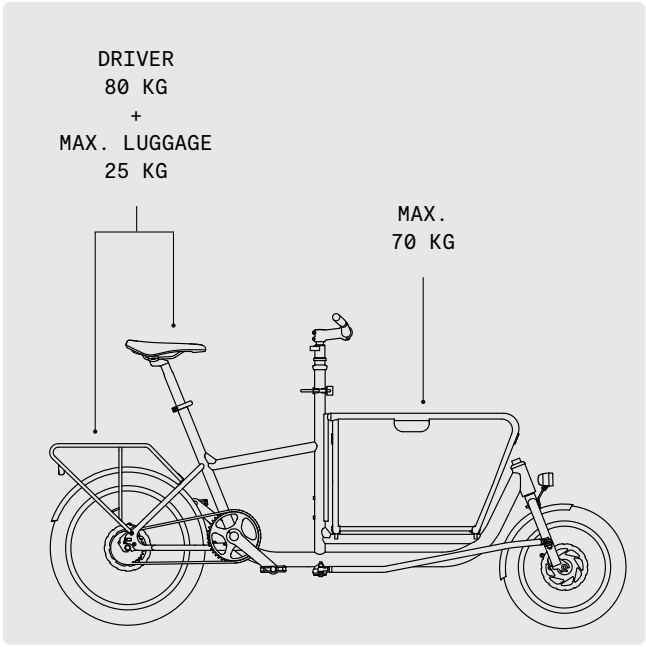


FIG.3

EXAMPLE B

100 kg rider + 25 kg dead weight of the muli Muskel
(Fig. 4)

- According to the maximum permissible total weight of 200 kg a maximum 75 kg
  (200 kg – 25 kg – 100 kg = 75 kg) can be loaded.
- The 75 kg can be loaded completely in the cargo basket or divided on the cargo basket and luggage rack, whereby the luggage rack load may not exceed 27 kg.
- Other further load must be placed on the seatpost.

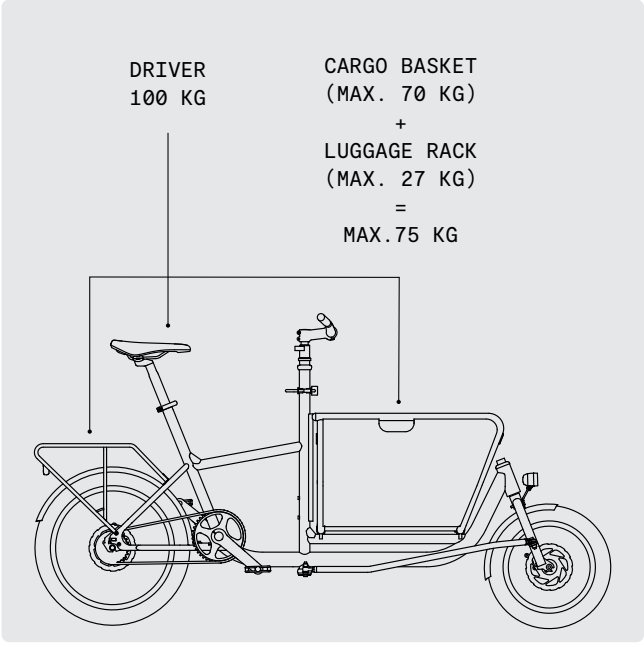


FIG.4

Information on suspension seatpost 2.2.2

The suspension seatpost, which functions as configuration option for the muli Muskel, is equipped with a spring for a maximum rider weight of 85 kg.
The spring stiffness can be adjusted using an inbus key in the tube end of the seatpost (Fig. 5).

Further spring elements with weight allowances from 70 kg and up to 90 kg are available in retail or through our Webshop at https://muli-cycles.de/shop.

→ Adjust the spring to your respective weight.

FIG.5

FIG.6

FIG.7

Information on usage 2.3

Information on child seat 2.3.1

The muli Muskel is not permissible for the installation of the Handlebar or top tube child seats.

The muli Muskel is not approved for installation of child seats for frame mounting.

In addition to the original muli child seat for the basket (Instructions on original muli child seat in Download Portal, see Item 1.1.1) only child seats for rear luggage rack are approved.

The maximum permissible load for the muli luggage rack is 27 kg and may not be exceeded.

We recommend the child seat Yepp Maxi from Thule. The Easyfit adapter mount is already integrated in the luggage rack. (Fig. 6/Fig. 7).

Information on bicycle trailers 2.3.2

The muli Muskel is not approved for use with bicycle trailers.

Information on quick release 2.3.3

A quick release consists of a pretension nut and a hand lever (Fig. 8) that are connected to each other via an axle. Tension is built up in the connection using the pretension nut V, generating a clamping force by turning the lever H.

To open the quick release turn the hand lever and release the tension in the connection by turning the pretension nut counterclockwise.

To close the quick release first turn the pretension nut V clockwise and then close the hand lever. You have set the correct pretension if when closing the hand lever from the middle of the entire lever path you can feel a counter-pressure and the end of the lever path the force of the palm of the hand is required in order to fully close the lever.

A fully closed hand lever fits fully with the component in question. If the hand lever does not close completely or the component in question is not securely fixed the pretension nut must be readjusted.

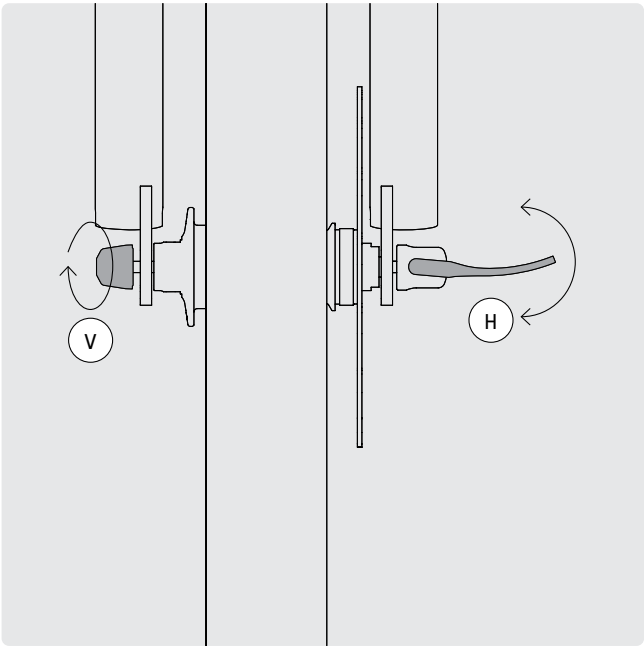


FIG.8

V PRETENSION NUT
H HAND LEVER

Vibration loads 2.3.4

Depending on the construction the use of the muli Muskel can result in vibration stresses on the body of the rider. Decisive for the magnitude of vibrations is the ride track surface.

The following relationships apply:

- The higher the speed, the higher the magnitude of vibrations.
- The lighter the rider, the higher the vibration stress.

- The highest vibration values are reached in unloaded conditions.
- The stress of the whole-body vibrations is stronger than the hand-arm vibration. In case of whole-body vibration the limit values are reached in shorter time.
- The lower the tire pressure the less the vibration stress.

The suspension seatpost can reduce the stress caused by whole-body vibrations.

- A suspension seatpost for the muli Muskel can be optionally chosen during ordering or to be retrofitted later.

The A-rated emission sound pressure level on the ears of the rider is less than 70 dB(A).

Key rim lock 2.3.6

Your muli Muskel is equipped with an AXA rim lock on the rear wheel. On the key there is a number using which a key can be reordered if lost. Note this number at the end of this manual in the specified rim or another place.

Reorder via the following website:
https://keyservice.axasecurity.com/de-DE

03 Before use

Unpacking muli Muskel 3.1

1 Open the box on the side of the front wheel, remove the wheel triangle and pull the muli Muskel carefully out of the box.

Keep the muli Muskel when pulling out and make sure that it does not tip over.

2 For installation fold out the double leg stand in order to put the muli Muskel on it (see Chapter 4.14.1 “Use double leg stand”).

FIG. 9

Assembly instructions 3.2

Before use, you must carry out a few assembly steps and check the tire pressure.

WARNING! Risk of falling and injury
Unprepared use can result in falling and serious injuries.

→ Before making the first ride with your muli Muskel after the completion of the assembly make sure to read the Chapter 3.3 “Before the first ride” carefully and follow all the instructions in it as well as those in Chapter 3.4 “Before every ride”.

Installing steering linkage 3.2.1

WARNING! Risk of falling and injury
Loose screw connections can result in falls and serious injuries.

→ Tighten the screw connections with great care and regularly check their tight fitting.

The extension of the steering tube and the steering linkage are disassembled for the transport (Fig. 9) and now must be carefully connected according to the following steps.

1 Position the steering tube extension and the steering linkage eyebolt on top of each other and put the individual elements in the correct order on top of each other according the Fig. 10 on the following page.

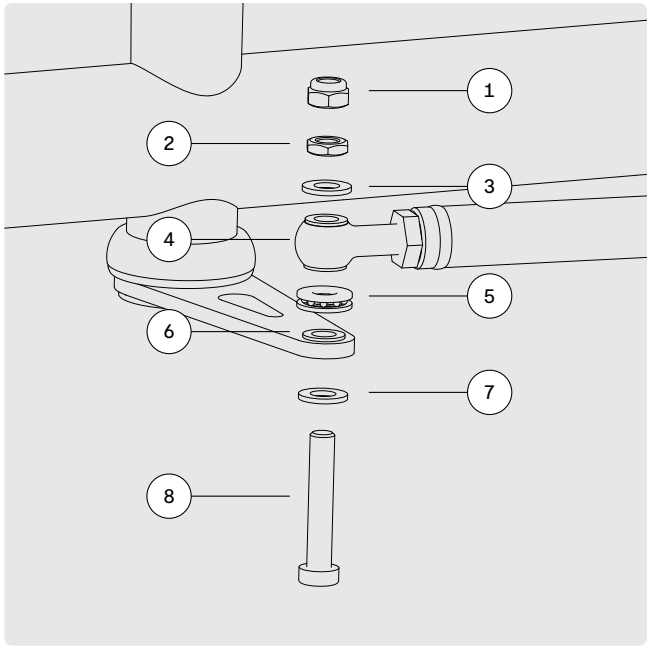


FIG.10

1 Self-locking nut M8
2 Counter nut M8
3 Washer
4 Eyebolt with 2x pressed-in sliding bushes
5 Axial ball bearing
6 Extension with 1x pressed-in sliding bushes
7 Washer
8 Screws M8

2 Tighten the counter nut with a 6 mm Allen key and a 13 mm open-end spanner such that the handlebars can be easily turned (Fig. 11).

3 To fix the counter nut in the correct position, screw the self-locking nut up to the counter nut on the screw.

Hold the counter nut with a flat open-end spanner and tighten the self-locking nut with a second open-end spanner very tight on the counter nut (Fig. 12).

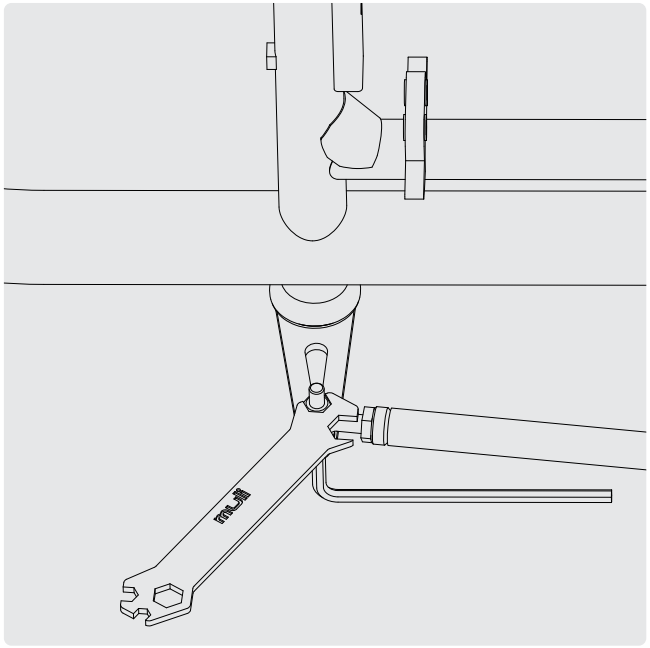


FIG.11

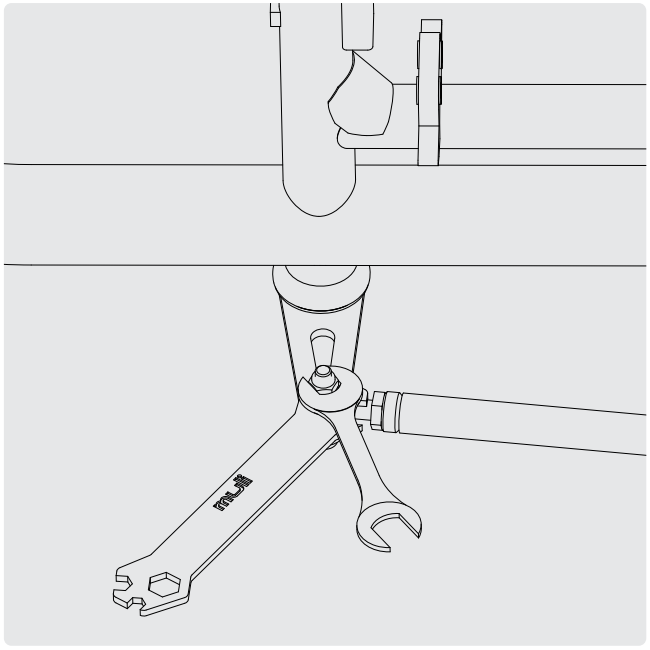


FIG.12

Installing pedals 3.2.2

⚠ CAUTION! Risk of damage
A loose or crooked pedal can damage the thread.

→ Make sure not to jam the pedal when screwing it in.

→ Check the tight fitting of the pedal after 100 km ride.

ⓘ On the axles of the pedal there is a marking for the side assignment: “R” for the the right-hand , “L” for the left.hand (Fig. 13). Note that the left-hand pedal has a left-hand thread and must be turned in the crank clockwise.

1 Grease the pedal threads with commercial installation grease. On the pedal there is a right-hand and left-hand marking

2 Screw the pedal with marking L in the left crank arm.

3 Tighten the pedals with the wrench. For pedals with outer hexagon nuts use a 15 open-ended spanner.

For pedals with hexagon socket screws use 6 inner Allen key (Fig. 14).

ⓘ You will find the corresponding torques in Chapter 5.5 “Recommended screw torques”.

FIG.13

FIG.14

Installing the bell 3.2.3

→ Mount the supplied bell on the desired position on the handlebar.

→ Mount the bell such that it can be quickly accessed and operated without taking the hand off the handle.

Before the first ride 3.3

Depending on the design the muli Muskel has specific driving characteristics. Especially in terms of weight and weight distribution the muli Muskel differs significantly from conventional bicycles.

→ Before the first ride make all the adjustments for the respective rider (see Chapter 3.3 “Before the first ride”).

→ Try riding with the muli Muskel on a traffic-free road, quiet location on paved roads and level ground. Even if you have already ridden other bicycles or even cargo bikes with similar design.

Note the relevant information regarding the various driving situations and components (see Chapter 3.3.2 “Get to know the muli Muskel”).

Adjust the muli Muskel to the riders 3.3.1

⚠ CAUTION! Risk of falling and injury
Unusual or faulty adjustments can result in falling and injuries.

→ Adjust the muli Muskel always to the respective driving person.

→ Perform a function test after making all the adjustments. For this follow the instructions in section “Before every ride”.

With the following settings adjust the muli Muskel to you as the rider:

- Handlebar height (see Chapter 4.3.1 “Adjust the handlebar height”),
- Seat height (see Chapter 4.3.3 “Set seat height”),
- Seat width (see Chapter 4.4.4 “Set seat width”),
- Alignment of shift and brake levers (see Chapter 4.3.2 “Align the shift and brake levers to the handlebar”),
- Brake lever reach (see Chapter 4.3.3 “Set brake lever reach”).

Get to know the muli Muskel 3.3.2

ASCENDING/STARTING

1 Step over the upper tube with one leg and set your foot on the ground.

2 Pedal hard and start your ride. Do not direct your view on the basket or the front wheel but rather to something in the distance on the roadway.

(!) Slow, hesitant start makes it difficult to maintain the balance. Make your initial ride on a route which allows for good straight driving without tight curves.

STEERING BEHAVIOUR

(!) With muli Muskel, the steering movement is not transferred directly to the handlebar but via the steering linkage to the front wheel. This influences the steering behaviour and results in a larger turning radius than with conventional bicycles.

→ Get to know the steering mechanism by testing the handlebar when stationary and practice on a traffic-free area.

As a rule, you can hardly see the front wheel while driving (depending on whether the basket is open or closed); you have to get used to this.

BRAKING SYSTEM

(!) The muli Muskel is equipped with disc brakes on the front and rear wheel.

→ Learn how to handle the brakes (see Chapter 4.5.1 “Operate the brakes”).

→ Brake the disc brake(see Chapter 4.5.2 “Brake the disc brakes”).

GEARSHIFT

→ Lean how to handle the gearshift (see Chapter 4.6.1 “Operating the gearshift” or Chapter 4.7.1 “Operating the gearshift”).

CARGO BASKET

→ Familiarise yourself with the cargo basket before the first ride. Open and close the basket and test the various perspectives and the various handling of the muli Muskel standing in the ride position.

→ Keep in mind the great width of the muli Muskel with the basket unfolded.

Unfolded basket has a width of about 60 cm and thus provides much larger trapping points than the conventional bicycle.

When riding with the muli Muskel it is therefore important that you keep an eye on the riding track width and always maintain a safe distance to the road or riding track edge, particularly with divided bike and pedestrian paths. Even in case of driveways and passages or other obstacles or riding track tapering you should maintain particular mindfulness to avoid bumping into the cargo basket. It may be necessary to stop the ride, get off and push the muli Muskel around an obstacle.

→ Practice riding with various loading conditions with opened and with closed basket.

→ Note the changed riding and braking behaviour according to the loading. High speed and heavy load lengthen the braking distance and make short-term steering and driving manoeuvres difficult.

→ If you want to transfer children with the muli Muskel make sure to practice extensively for riding with children in the basket on a traffic-free, secure location.

→ The transport of children in the basket is allowed only in a suitable seat with secure restraining system. The muli child seat is such a system.

→ Buckle up the child with a safety belt provided for this purpose.

→ Transport children in public roadways only if you have sufficiently practised riding with children in the muli Muskel on a traffic-free location and feel absolutely confident.

(!) For more information on the cargo basket refer to Chapter 4.12 “Cargo basket”.

Before every ride 3.4

The following points must be checked for every ride with the muli Muskel:

1 Check all screws, quick release on the front and rear wheel, on the seatpost, stem and stem adapter for safe and correct fastening.

Carry out these checks even if you have left the muli Muskel unattended only for a short time!

The quick release wing of the front wheel must be closed with strong hand pressure and positioned parallel to the fork tube (see Ch. 2.3.3. “Information on the quick release”).

2 Make sure that the steering linkage is properly connected with the extensions on the steering tube and fork. Check the correct fitting of the screws and nuts. Loosening of the connections during the ride can result in serious falls and left-threatening injuries.

3 Check the wheels for spoke integrity and for correct air pressure. Information on the correct air pressure is available on the flanks of the tire (see Ch. 4.12.2 “Check tires and pump up”).

4 Check the correct function of the brakes.

The brakes must grip before the brake lever reaches the handlebar - otherwise they are set too loose and need to be readjusted. Make sure that there is no leakage of brake fluid anywhere.

5 Carry out a brief visual inspection of the frame connection and cargo basket especially when you transport children.

Open the cargo basket and lift the rubber mat. Now you can see the fastening screws of the cargo basket.

8 Check the correct function of the lighting system. With built-in battery lights make sure that the batteries of the front and rear lights are charged.

9 Make sure that the saddle is firmly connected with the seatpost. The seatpost must also be clamped firmly in the saddle tube. With closed seat clamp the saddle and the seatpost should note twist, title or loosen.

10 Carry out a brief visual inspection for signs of material fatigue, cracks, discolourations and scratches on the components saddle tube, seat rail and dropouts, fork and steering linkages. Do not ride off in case of such signs! Have the points checked by a specialist workshop.

11 Make sure that the handlebar and the steering linkage have no play, by lifting the muli Muskel by the handlebar.

12 If you ride with child seat and want to transport children, check the child seat before the ride for damages. Check the screws, rivets, clamps, plastic strap connector and belt for integrity and for firm seat.

13 Make sure that the double leg stand is fully folded before riding off.

04 Components

Handlebar and stem 4.1

⚠ CAUTION! Material breakage
Overtightening of the screw connections can damage the steering tube shaft and break it.

→ Note the torque specifications on the component.

ⓘ The handlebar, stem and stem adapter must be screwed according to the torques specified on the components. The torques are also available in Chapter 5.5 “Recommended screw torques”.

The muli Muskel has a heigh-adjustable stem adapter using which the handlebar height can be adjusted up to 10 cam with a few hand grips. This way the handlebar height can be adjusted to different riders and loading conditions in the cargo basket.

Also when transporting children in the basket this height adjustment allows for more headroom for the children when the child seat is mounted in the riding direction.

Adjust the handlebar height 4.1.1

⚠ WARNING! Risk of falling and injury
In case of incorrect closing of the quick release the corresponding component can come loose while riding.
This can lead to falls and sever injuries.

→ Before riding off always make sure that all quick releases are firmly closed and fit tightly on the associated component.

⚠ CAUTION! Risk of injury
A stem adapter which is extended too far can break.

→ Make sure never to fix the stem adapter for the ride above the MIN.INSERT marking shown in Fig. 24. The maximum extension position beyond the marking is merely for turning the handlebar in the park situations.

1 Open the quick release lever on the steering stem (Fig. 24).

2 Pull the handlebar upwards, above, as needed for your desired riding position but never beyond the maximum extension (Fig. 23).

3 Tighten the quick release again.

FIG.23

FIG.24

Align the shift and brake levers to the handlebar 4.1.2

You can adjust the shift and brake lever on the handlebar to your sitting and hand position.

1 Loosen the hexagon socket screws S and B on the shift and brake lever (Fig. 25).

2 Turn the shift and brake lever in the desire position.

3 Tighten the screws again.

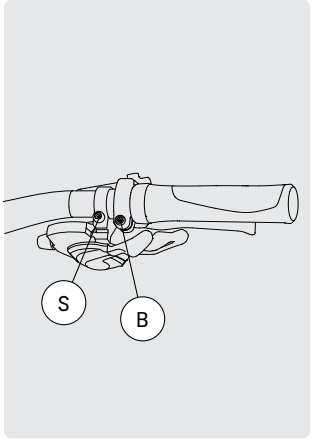


FIG.25

4 From the riding position test whether the shift and brake lever is easily accessible with the fingers.

Make sure that the forearm and brake lever form a line in the riding position (Fig. 26).

5 After completing the adjustments make sure that the shift and brake lever does not get twisted.

ⓘ Do not install any bar ends on the muli Muskel.

Brake lever reach 4.1.3

⚠ WARNING! Risk of falling and injury
Too loosely set brake lever can lead to function impairment or brake failure.

→ The brake lever should not be able to pulled through up to the handlebar. With fully tightened brake lever there must be a minimum of 1 cm distance between the brake lever and the handlebar grip.

The brake lever grip width can be adjusted to the respective hand size. The adjustment is made using an hexagon socket screw in the brake lever (Fig. 27).

→ To reduce the grip width turn the hexagon socket screw counter-clockwise.

→ To enlarge the grip width turn the screw clockwise.

Turn in the handlebars 4.1.4

In addition to height adjustment the stem adapter also makes it possible to turn the handlebar sideways by 90° and to make the muli Muskel even compacter for parking – for example in a hallway (Fig. 28).

FIG.26

FIG.27

⚠ CAUTION! Risk of damage
Only in the the top position can the handlebar be turned in and out again. Forceful turning on the handlebar, if it is not in the top position, can lead to bending and breaking of the stem adapter.

→ Proceed as described when turning the handlebars in and out. Do not use force.

⚠ WARNING! Risk of falling and injury
The stem adapter must never be pulled out beyond the marking of the maximum extension length when riding.

TURN THE HANDLEBARS 90°.

1 Open the quick release on the stem adapter.

2 Pull the handlebar upwards up to the stop and turn it sideways in this highest position. (Fig. 28).

3 Guide the turned-in handlebar downward again.

4 Close the quick release again.

TURN THE HANDLEBAR BACK IN THE RIDE POSITION

1 Open the quick release on the stem adapter.

2 Pull the handlebar upwards up to the stop and turn it off again (Fig. 28).

3 Bring the handlebar to the desired height again.

4 Close the quick release again securely and tightly.

FIG. 28

Adjust the bearing clearance of the steering tube 4.1.5

1 Make sure that the quick release is tightened and the screw under it is tightened with the specified 10 Nm.

2 Tighten the lower clamp ring with 3 Nm.

ⓘ For more information on this refer to the instructions of the component manufacturer. These available on our Download Portal (see Chapter 1.1.1 “Download Portal”).

Steering linkage 4.2

The steering linkage translates the steering movement of the handlebar to the front wheel. It is connected with the boom on the steering tube and the boom on the fork via a ball joint and a swivel joint.

⚠ WARNING! Risk of falling and injury
The steering linkage is a safety component. Damaged or loose connections can result in serious falling and injuries.

→ Check the screws and nuts on the steering linkages before every ride.

→ Do not start riding in case of rattling or wobbling of the steering linkage.

Have a specialist make the settings on the steering linkages if necessary.

Tracking adjustment 4.2.1

The toe of the front wheel is correctly set upon delivery. Should the toe change over time it must be readjusted.

Toe adjustment is necessary if the boom A with straight aligned handlebar L and straight front wheel is no longer at a 90° angle to the frame as in Fig. 29.

Observe the following rules:

- If with correctly aligned handlebar the boom is not at a 90° angle to the frame but rather somewhat in the direction of the rear wheel, then the eyebolts on the steering linkage must be slightly screwed in.
- If the boom is slightly in the direction of the front wheel, the steering linkage must be extended by slightly unscrewing the eyebolts.

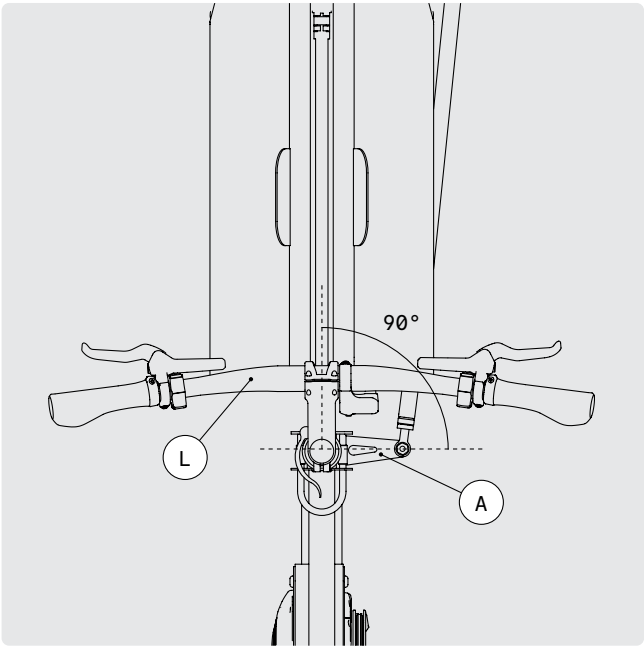


FIG.29

L Handlebar
A Boom - steering tube

ⓘ If you must extend or shorten the steering linkage, do not turn only the eyebolts in or out on just one side. Always adjust the eyebolts to both ends so that both screws are screwed in and out at the same way.

Proceed with adjusting the linkages such that you always leave one end of the steering linkage bolted to the wheel while you adjust the eyebolt on the loosened side.

1 Loosen the counter nut of the eyebolt with a 17 mm open-ended spanner (Fig. 30).

2 If needed, turn the eyebolt in and out accordingly (Fig. 31).

3 Tighten the eyebolt again on the boom and repeat the process on the other side of the linkage.
After the correction the boom must be at 90° angle to the frame again.

4 The counter nuts are glued in place with liquid screw lock at the factory. Therefore, also apply the corresponding screw lock before tightening the counter nuts again.

5 Re-tighten the counter nuts on both sides with a 17 mm open-ended spanner.

FIG.30

FIG.31

Steering resistance 4.2.2

With contact pressure of the screw on the steering linkage you can adjust the steering resistance.

→ If you prefer a stiffer steering tighten the flat nut K on the steering linkage slightly stronger (Fig. 32). For this you must first remove the self-locking nut S.

Note that a stronger contact pressure increases the wear of the plastic slide bearings.

→ If you prefer easy steering tighten the screw connect of the linkage and the boom less.

⚠ WARNING! Risk of falling and injury
Never forget to firmly counter the flat nut K with the self-locking nut S! Otherwise you risk the loosening of screws during the ride which could result in dangerous falling.

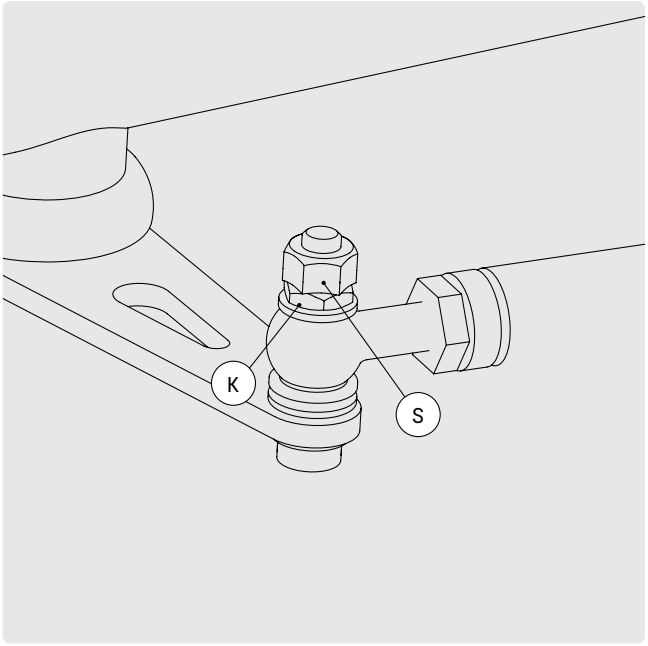


FIG.32

K Counter nut
S Self-locking nut

→ Overall, make sure that the screw is not tightened neither too tight or not too loose. A too high a contact pressure endangers secure riding ability on the road.

ⓘ The plastic slide bearings on the screwing connection of of the steering linkage (Fig. 9 Chapter 3.2.1.) can wear and in case of corresponding wear must be replaced. Wear may appear in various forms: through play in the screw connection, an oval shape of the bearing, a rough surface or cracks.

Saddle 4.3

Set seat height 4.3.1

⚠ CAUTION! Risk of injury
A too far pulled out seatpost can break, a too far pushed seatpost can not be correctly fixed.

⚠ WARNING! Risk of falling and injury
In case of incorrect closing of the quick release the corresponding component can come loose while riding. This can lead to falls and sever injuries.

→ Always make sure that all quick releases are firmly closed and fit tightly on the associated component.

→ Make sure that the seatpost is not pulled out beyond the MIN/MAX marking out of the saddle tube
(Fig. 33, 34).

→ Make sure that the seatpost does not sit too deep in the steering tube. With some seatposts the tube is tapered on upper end and can no longer be securely clamped (Fig. 35, 36).

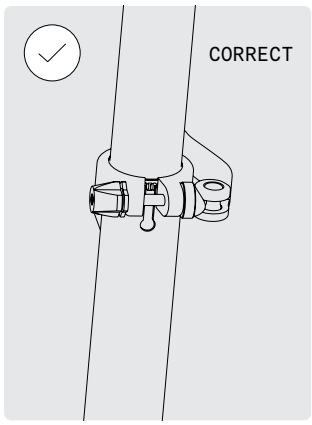


FIG.33

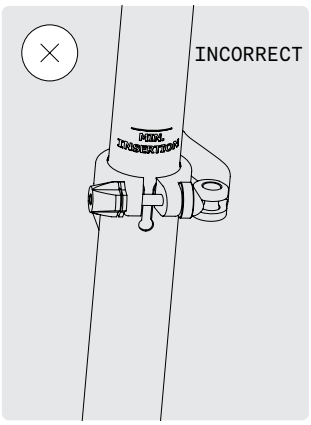


FIG.34

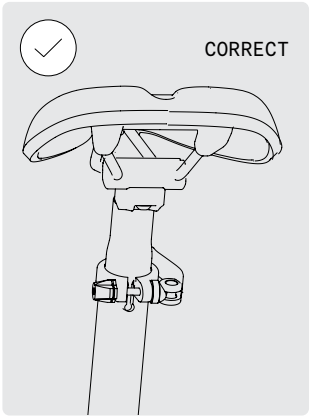


FIG.35

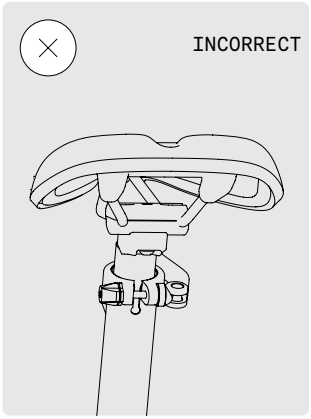


FIG.36

DETERMINE THE OPTIMAL SEAT HEIGHT

→ Sit on the saddle and place one leg with the heel on the pedal. The pedal is in the deepest position. In the optional seat height (Fig. 37):

- The leg should be straight.
- You should be able to reach the ground with your toes when seating on the saddle.

SET SEAT HEIGHT

1 Open the quick release and set the desired seat height (see “Determine the optimal seat height”).

2 Align the saddle so that it is in one line with the upper tube.

3 Close the quick release again.

4 Make sure that the quick release is correctly closed and it securely fixes the seatpost.

The saddle should not twist or tilt with closed quick release.

FIG.37

Set seat width 4.3.2

By loosening the screws on the seatpost slider the distance between the saddle and the steering grips can be adjusted and the seat angle of the saddle adjusted.

ⓘ By moving the saddle the pedalling angle also changes on the pedal.

⚠ CAUTION! Risk of injury
The saddle must never be fixed in a backward tilted position.

→ Align the saddle horizontally straight or tilted slightly forward.

1 Loosen the hexagon socket screws on the seatpost slides with a 5 m Allen key by 2–3 turns (Fig. 38).
Make sure that the screw is not fully unscrewed.

2 Set the desired position and the desired angle of the saddle.
Make sure to align the saddle in horizontal line.

3 Tighten the screw again.

4 After adjustment make sure that the saddle does not twist or tilt by pulling and pushing on the front and back with the hands.

FIG.38

Braking system 4.4

The muli Muskel has two hydraulic disc brakes on front and rear wheel that are independent from each other.

⚠ WARNING! Risk of falling and injury
Improper use of the brakes poses the risk of falling.

→ Never apply the front brakes alone, even with small steering angle. This can cause the front wheel to slip away, leading to sever falling.

→ Always apply both brakes simultaneously for braking.

→ The built-in, hydraulic disc brakes have a high braking effect. Use the braking power carefully.

→ Heavy loads as well as wet or slippery road surfaces can impair the braking behaviour and braking path. Adjust your riding and braking behaviour to the respective riding situation.

⚠ CAUTION! Functional failure of the brake
Greasy brake lining can impair the function of the brakes up to total failure of the brake.

→ Make sure that the brake linings do not come into contact with oil. Should this nevertheless take place change the brake linings.

⚠ CAUTION! Risk of injury

→ Hydraulic disc brakes must be braked before the first use (seethe information under Item 4.5.2 “Brake the disc brakes“).

CAUTION! Risk of burns
The disc brakes can heat up after heavy use, you can burn yourself on them.

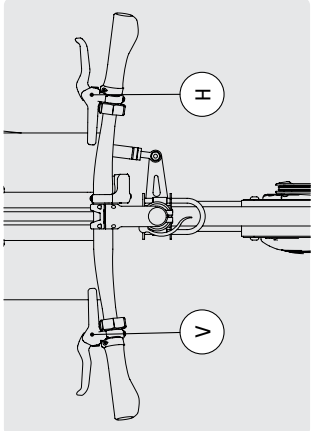
→ Allow the brake discs to cool down sufficiently before you handle them.

Operate the brakes 4.4.1

You operate the brakes using both brake levers on the handlebar (Fig. 39).

- The left brake lever V activates the front wheel brake.
- The right brake lever H activates the rear wheel brake.

If you are not familiar with the brake lever assignment or you have previously ridden bikes with a back pedal, carefully get used to the brake system and the brake behaviour of the muli Muskel.



V Front wheel brake
H Rear wheel brake

FIG.39

Brake the disc brakes 4.4.2

Hydraulic disc brakes must be braked before the first use. The pressure point of the brake lever is very squishy before the first use and does not build up any brake force.

→ To define the pressure point pull both brake levers in stationary so often and until you feel the solidification of the pressure point, about 10 times.

Once the pressure point is defined the brakes must be braked on a stretch away from road traffic.

→ For this accelerate the bike to 25kmh brake at full speed. Repeat this process at least 15 times.

Check the brakes 4.4.3

The brake linings are part of the most heavily stressed components. They are wear parts and must be replaced on regular basis. Resin pads from Shimano are installed on muli Muskel.

→ Replace the brake linings if they are less than 1 mm thick (Fig. 40). The brake linings should never be lowered so far that the support plates of the linings rubs against the brake disc.

→ Should the brake linings rub against the brake discs continuously the position of the brake calliper can be adjusted. Seek a specialist workshop for this.

→ Check the brake system for tightness on regular basis.

For more information on this refer to the instructions of the component manufacturer. These available on our Download Portal (see Chapter 1.1.1 “Download Portal”).

When replacing the brake linings or other parts of the brake system use exclusively original spare parts of the component manufacturer!

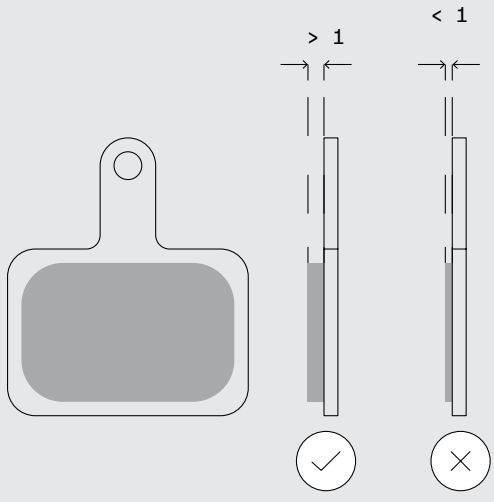


FIG.40

Gearshift on the muli Muskel 4.5

A Shimano Alfine 8-gear or 11-gear hub gear is installed on the muli Muskel.

The currently shifted gear can be read on the display on the shift lever. The highest digit indicates the highest gear.

FIG.41

Operating the gearshift 4.5.1

CAUTION! Risk of damage
Improper handling can damage the gearshift.

→ When shifting, make sure to briefly interrupt the pedalling or at least to reduce the pedal pressure.

Shift the Shimano Alfine 8 and 11 gear via the mechanical lever on the right handlebar grip.

In order to shift into an easier shift press the X lever with the thumb until it clicks once.

To shift into a higher gear press the X lever with the index finger.

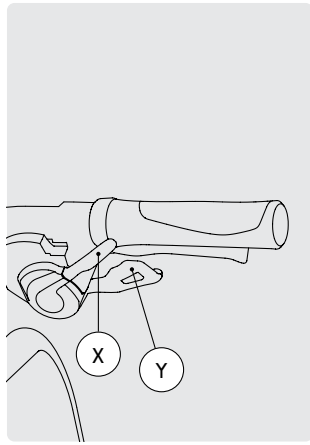


FIG.42

Adjust the gearshift 4.5.2

There are two yellow markings on the rear wheel hub (Fig. 45). Both markings must be precisely face to face in the fourth or sixth gears (Fig. 43).

1 Switch on the muli Muskel:

With Alfine 8-gear hub gear into the fourth gear.

With Alfine 11-gear hub gear into the sixth gear.

2 If the markings are not on top of each other in the fourth and sixth gears adjust the cable tension on the adjusting screw on the front ton the shift lever.

For this, turn the adjusting screw further in or out such that both markings approach each other and do not move further away from each other.

FIG.43

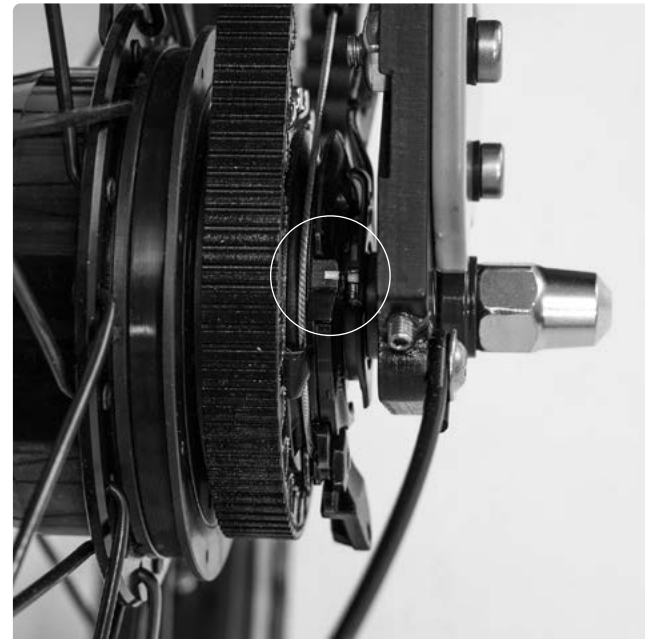


FIG.44

3 Stop turning when both yellow markings are once again on the same level (Fig. 44).

Chain and chain guard 4.6

Chain wear 4.6.1

The chain is under constant stress when pedalling. The chain is extended over time as a result of which the interlocking with the chainring and sprockets of the cassette no longer functions correctly. This can result in the chain slipping over the teeth while pedalling.

→ The chain as well as the chain ring and sprockets wear out to the same extent. Therefore, replace all the parts at the same time as soon as you notice an extended chain and sharpened sprockets.

→ Regularly clean and grease the bike chain for a perfect operation.

Tightening the chain 4.6.2

1 Loosen both M6 hexagon socket screws A on the holder of the dropout with a 5 mm hexagon wrench (Fig. 45).

2 Turn the grub screw B in the dropout with a 2 mm inner hexagon wrench and press the dropout forward until the correct chain tension is achieved.

The line markings C on the dropout help you to determine the same position of the dropout for the right-hand and left-hand side.

3 When the chain is tensioned and both dropouts are on the same position tighten both M6 hexagon socket screws A on the holder of the dropout with a 5 mm inner hexagon wrench again.

(!) Chain protection “Chainrunner” is installed on the muli Muskel. It consists of a slotted hose which lies on the entire chain and turns rotates with the chain around the chainring. The initial soft crackling decreases during operation. Grease the chain regularly but sparingly – this way you also reduce the accumulation of rust particles.

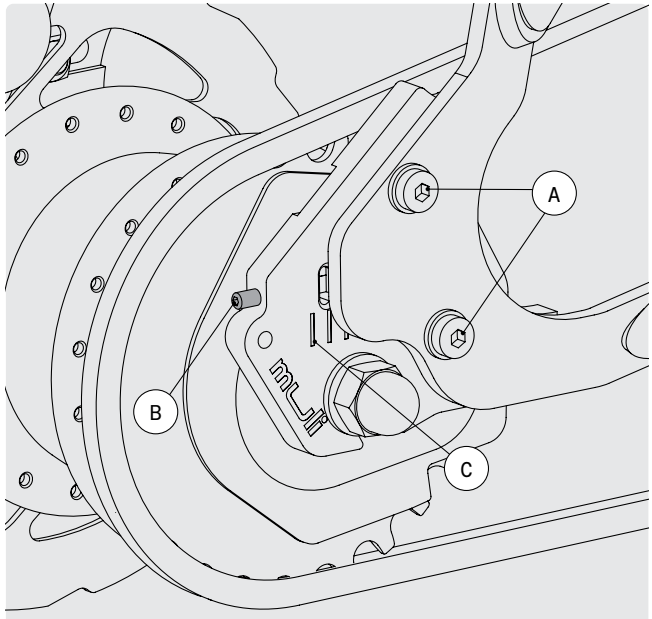


FIG. 45

A Allen screws M6
B Grub screw
C Line markings

Belt drive and frame lock 4.7

⚠ CAUTION! Risk of damage
The belt must not be oiled or lubricated. This impairs the function of the belt drive.

→ If necessary, you can clean the belt with water and a soft brush.

→ For detailed instructions on handling read instructions of the component manufacturer. This is available in our Download Portal (see chapter 1.1.1 “Download Portal”).

⚠ WARNING! Risk of injury
Improper installation or adjustment of the belt may result in personal injury. If you yourself do not have the necessary experience and specialist know-how, have the belt changed by a specialist workshop.

→ The belt must not be kinked, twisted or turned inside out - there is a risk of breakage.

If your muli Muskel is equipped with belt drive (Gates Carbon Drive System), the belt replaces the conventional chain.

The durability of the individual components of the Gates Carbon Drive Systems depends significantly on the outer influences and ambient conditions. Basically, the belt is one of the heavily used components and is a wear part.

→ Check the condition of the belt on regular basis.

ⓘ When starting a new belt system the blue layer on the inner side of the belt wears out quickly. This wearing out does not represent a wearing of the belt. The blue layer is on the belt merely for production engineering reasons. It is a separating agent in order to loosen the belt from its shape during production. The blue layer has no technical importance for the function of the belt.

Belt tension 4.7.1

TENSION THE BELT

For tensioning the belt proceed as with tensioning the chain. For better understanding take a look at the illustrations there (Fig. 46) for the following steps.

1 Loosen both M6 hexagon socket screws on the holder of the dropouts with a 5 mm hexagon wrench.

2 Turn the grub screw in the dropout with a 2 mm hexagon wrench and press the dropout forward until the correct belt tension is achieved.

The line markings C on the dropout help you to determine the same position of the dropout for the right-hand and left-hand side.

3 When the belt is tensioned and both dropouts are on the same position tighten both M6 hexagon socket screws on the holder of the dropout with a 5 mm hexagon wrench again.

DETERMINE THE CORRECT BELT TENSION

Determine the correct belt tension with the help of the Gates Carbon Drive™ Mobile App or manual.

To determine using the App, follow the instructions in the App. For manual determination refer to the following reference values:

→ Press the belt in the middle between the front and rear belt disc on its upper side with one finger and a force of 20–45 Nm (2–4.5 kg) downwards.
The belt tension is correct if the belt can be pressed down by about 10 mm at the specified pressure.

Since the tension values along the belt can vary slightly, this procedure must be carried out with a step-by-step further transporting of the belt. For this turn the crank by a ¼ turn and repeat the measuring process.

ⓘ For more information on this refer to the instructions of the component manufacturer. These available on our Download Portal (see Chapter 1.1.1 “Download Portal”).

Frame lock 4.7.2

To replace the belt in case of damages or after wearing out you must open the frame lock on the muli Muskel.

⚠ CAUTION! Risk of damage
If the thread in the frame is damaged the entire frame may be unsuitable.

→ Open the frame lock as rarely as possible.

→ Proceed gently when opening and close the frame lock to avoid damaging the thread in the frame. Under no circumstance should the screws cant when being screwed in.

→ When you have opened the frame lock always use new and clean screws to close it again.

1 Loosen both screws A of the frame lock (Fig. 46).

2 Guide the belt flat through Ö opening. Press the frames slightly apart if needed for the belt to pass through.

3 Close the frame lock again with new and clean screws. Add screw lock to the screws and tighten with

ⓘ For more information on this refer to the instructions of the component manufacturer. These available on our Download Portal (see Chapter 1.1.1 “Download Portal”).

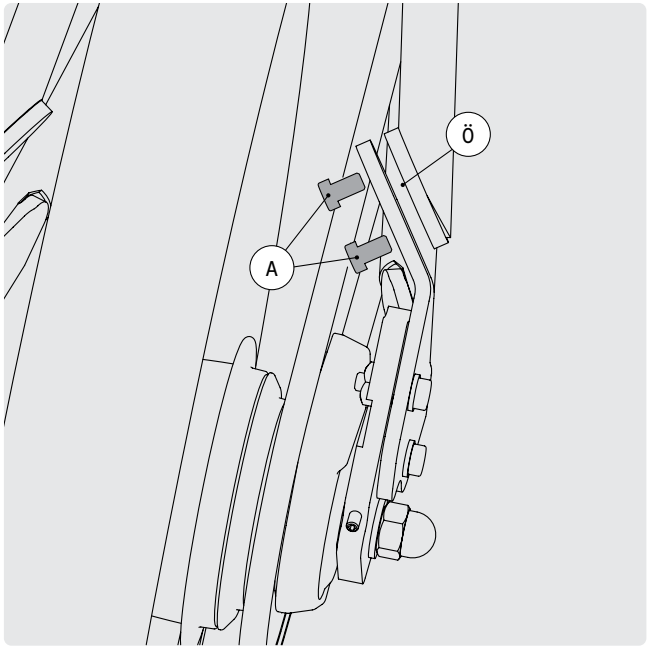


FIG.46

Lighting system

⚠ WARNING! Risk of falling and injury
Riding in the dark with not functioning or impaired functioning lighting system is life-threatening.

→ Never ride without functioning lighting system.

→ Make sure that your lighting system is clean and that all reflectors can be clearly seen.

ⓘ We recommend to set non-battery lights permanently to ON and to ride with the light even in daytime. This way you can ensure that you do not forget the turning on of the light in poor weather conditions or upcoming darkness.

The muli Muskel has the following lighting components:

- Two dynamo lights
- A red taillight with an integrated Z reflector
- A white front light with an integrated reflector
- Two yellow reflectors per pedal
- Ring reflectors on the tire flanks

The lighting system is thus StVZO compliant.

→ Turn on the lights so soon as it starts getting dark - this way your are better visible for other road users and can avoid accidents.

→ Make sure that the taillight is always clearly visible.

→ Keep in mind that the illuminants in the lamps wear out and in case of functional failure must be replaced.

Adjust the front light 4.8.1

The taillight is fixed on a rigid bracket and must not be adjusted. The front light can still be tilted in its bracket upwards and downwards.

⚠ WARNING! Risk of falling and accidents.
If the oncoming road users are blinded this can result in falling and sever accidents.

→ Make sure that the lights are never titled such that they shine upwards. (Fig. 48)

1 Loosen the adjustment screw J on the front light. (Fig. 47).

2 Align the lights such that the light cone hits the ground in the area 5-8 m in front of the front wheel (Fig. 48).

3 Tighten the adjusting screw again.

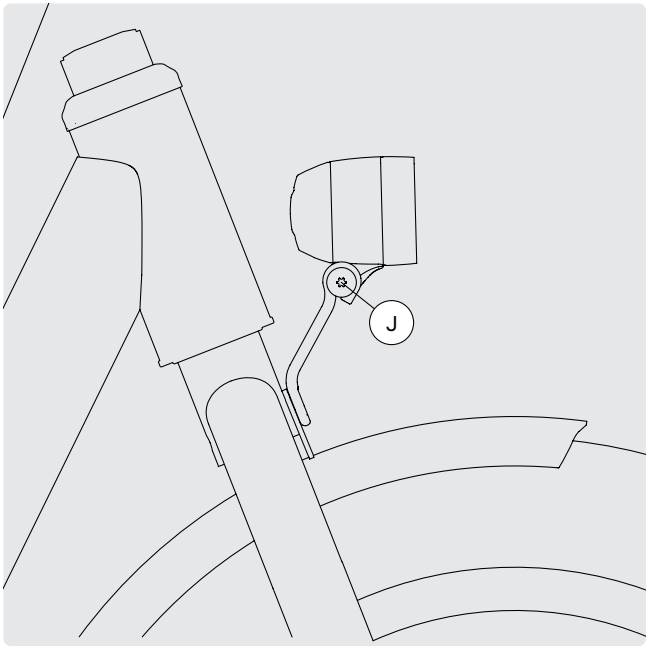


FIG.47

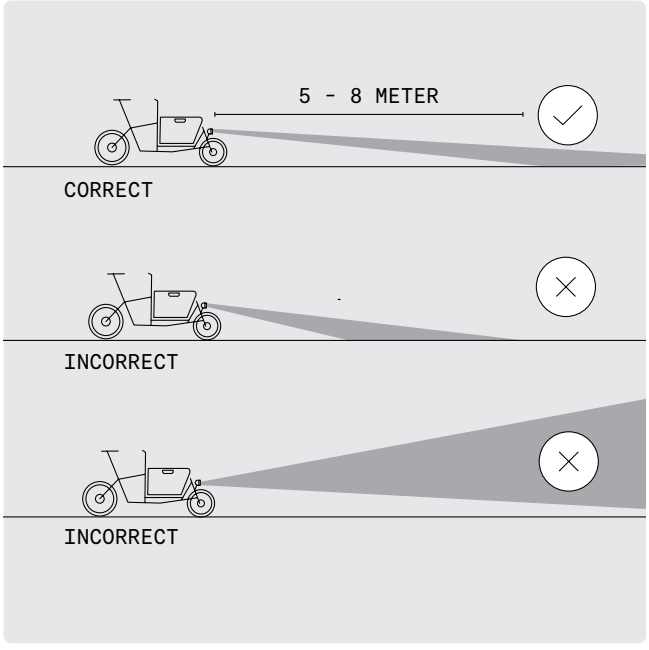


FIG.48

Cargo basket

4.9

The muli Muskel has a foldable cargo basket made of aluminium. The basket consists of two basket wings separated from each other that are connected with the steel frames of the muli Muskel at the bottom via pivot bearing. The basket floor is therefore not a continuous surface but rather divided in the centre. The basket floor is designed with a rubber mat which covers the centre gap and the pivot bearings.

4 eyelets are welded on the basket tubes that are used for tensioning the load, for fastening the child seat and as support points of a standard Eurobox (dimensions 40×60 cm) (Fig. 49).

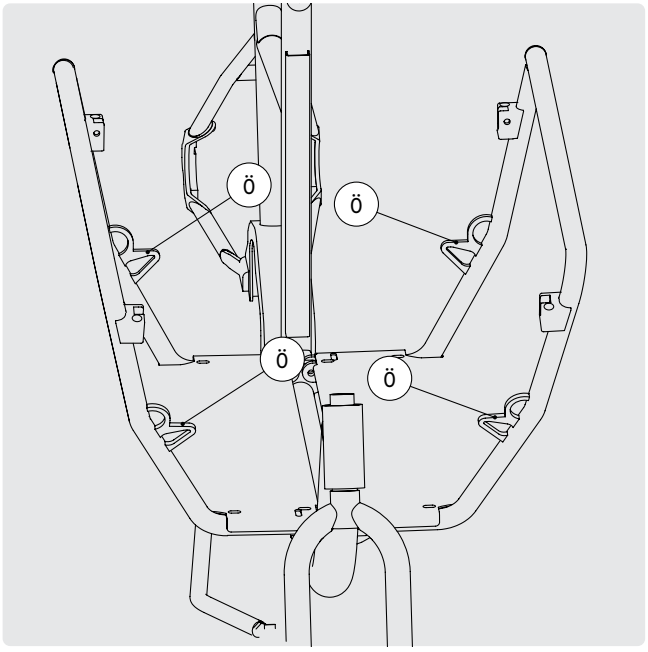


FIG.49

⚠ WARNING! Risk of injuries and falling
Moving children and slipping loads can result in spontaneous shifting of the weight which make controlling the muli Muskel more difficult. Unfavourable weight distribution can negatively impact the braking behaviour and the ride stability of the muli Muskel.

→ Practice riding with children in the muli Muskel on a traffic-free location before you transport children on the public roads.

→ Make sure the loads you transport in the basket are always lashed down firmly and securely.

⚠ WARNING! Risk of accidents
The unfolded basket forms enlarged trapping points.

→ Always keep in mind the increased width of your muli Muskel with unfolded basket.

→ Always ride with sufficient lateral distance to the persons and obstacles, otherwise you risk causing sever accidents.

⚠ CAUTION! Risk of damage
Overloading the muli Muskel can lead to material failure and functional impairment of important components.

→ Before riding the muli Muskel with payload check the information on permissible total weight in Chapter 2.2 “Permissible total weight”.

⚠ CAUTION! Risk of injury
The cargo basket is not locked in opened condition without installed child seat, i.e. it can collapse at any time.

→ Transport children only in the muli child seat in the basket.

⚠ CAUTION! Risk of damage
The cargo basket of the muli Muskel is not a rigid construction, but rather a moving part. Improper use, forceful tugging or pressing on the basket wings or blows and bumps on the basket wings e.g.

by falling, can result in bending of the components and that the basket can no longer be closed.

→ Always open and close the basket carefully.

⚠ CAUTION! Risk of injury
No one-sided, high, vertical pressure should be exerted on the opened basket wing. This can result in the muli Muskel falling sideways over the stand and falling over. This stress must be particularly avoided on the front and upper corners, this can quickly cause the entire wheel to tip over.

Loading and load securing 4.9.1

The cargo basket allows for a maximum load of 70 kg.

→ Note the information in Chapter 2.2 “Permissible total weight” on the loading as well as for applicable load limits.

→ Follow the following guidelines for loading and load securing:

- The centre of gravity of the load must lie as deeply as possible and centred on the longitudinal centreline of the muli Muskel as much as possible.
- The loading of the muli Muskel must be carried out within the permissible total weight and the permissible axle loads.
- Even with partial loading try to achieve an even weight distribution so that each axle is stressed proportionally.
- Always carefully secure your load using e.g. lashing or tension belts, such that it cannot move during the ride.

Transporting children in the cargo basket 4.9.2

→ Children may be transported in the basket only in muli child seat. Strap the kids securely into the seat for every ride. Follow the instructions of the child seat in our Download Portal, see Chapter 1.1.1 “Download Portal” and the instructions for child transport under section 1.2 “Proper use”.

→ Secure the muli Muskel against tipping over when children get in and out by holding it firm by the handlebar. The double leg stand can not keep the muli Muskel secure on its own when getting in and out.

→ Get help from a person who firmly holds the muli Muskel while you sit or lift the child out of the cargo basket.

→ Have the children transported in the cargo basket to always wear a suitable bike helmet and always buckle up the children.

Recessed grips of the basket wings 4.9.3

The recessed grips in the basket wings are used as anchor points when lifting the muli Muskel.

⚠ CAUTION! Risk of injury
You can injure yourself when the metal edges of the recessed grip are exposed.

→ Always make sure that edge protection is mounted in the recessed grip.

→ To lift the muli Muskel grab the upper tube with one hand and in the recessed grip on the closed basket with the other hand (Fig. 50).

FIG.50

Operate the folding mechanism 4.9.4

In closed condition the basket is held by the suspension locking bar on the steering tube.

→ To open the basket pull slightly on the locking bar (Fig. 51). The basket opens without any further effort.

→ To close the basket move the basket wings together, hold the basket wing in one hand and pull the locking bar back with the other hand to then let is snap into both basket wings (Fig. 52).

→ Make sure that the locking bar snaps in both basket plugs. If needed, give the locking bar a slight tap in order to push it fully into the basket plugs.

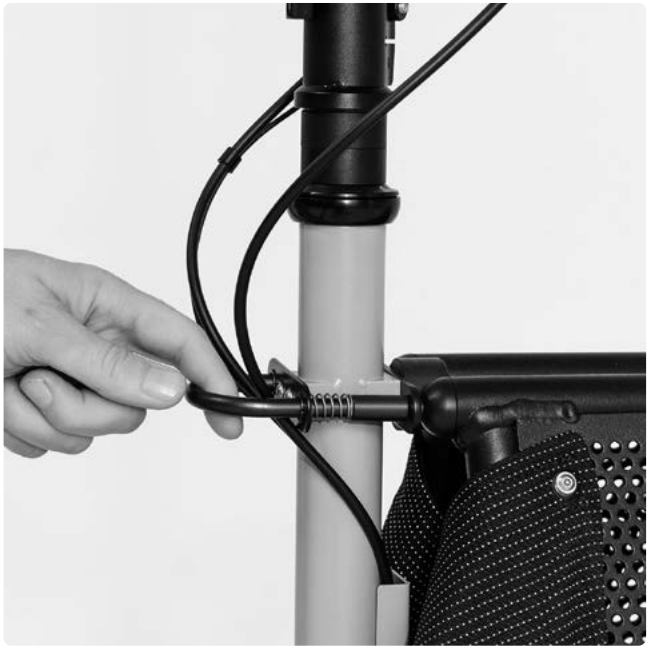


FIG.51

FIG.52

Tighten the basket cover 4.9.5

The basket cover on the front and rear side of the basket are made of waterproof textile. Small and large pockets are mounted on the inside which provide storage space.

The textiles can loose in tension somewhat over time and due to heavy use. You can tighten the covers by slightly relocating the fastening screws in the perforated plate.

1 Loosen the fastening screws of the basket cover on both basket wings (Fig. 53).

2 To tighten the covers slightly move the fastening screws by one hole.

3 Make sure not to tighten the covers too much. The basket wings F must be opened fully and in the open state lie on the frame pad R (Fig. 54).

4 Tighten the screws again.

⚠ CAUTION! Risk of damage!
Loosen the Torx fastening screws on the basket very gently. It is very important to press the wrench with high pressure in the screw and then turn as otherwise the button head of the screws can be damaged.

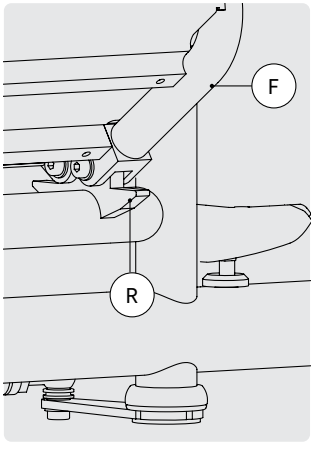


FIG.53

FIG.54

Make sure that the rider side basket cover is fastened centred to the cable conduit with a screw.

CAUTION! Risk of damage!
If the covers are stretched too tight the basket will have lateral play. This way it keeps tilting continuously in and out and thereby heavily stresses various components and the covers. This way it can bend, tear or break.

Optional accessories for the cargo basket 4.9.6

→ For the installation and use of the optimal accessories for the cargo basket such as child seat and rain cover observe the specifications in the respective instructions of the accessory manufacturer.

Tires 4.10

Custom-made 4.10.1

The tires from Schwalbe, installed on your muli Muskel as of the construction year 2020, are custom-made. These tires have a higher maximum load capacity than otherwise commercially available tires of the brand and type: The 20-inch tire has a maximum load capacity of 130 kg, the 16-inch tires have a maximum load capacity of 100 kg.

Should the tires be worn out we recommend you these custom-made tires. You can purchase the tires from us.

→ Contact our Customer Service, preferably par email at: info@muli-cycles.de

→ If you would like to replace your tubes purchase the size AV3, 47/62-305 for the front tires and AV7, 40/62-406 for the rear tires.

CAUTION! Risk of damage!
If you do not want to use our custom-made tires when replacing the tires, please note the possible lower maximum load capacity of the tires you use. These load limits of the tires must not be exceeded.

Check tires and pump up 4.10.2

→ Regularly check the tires and the rims for damages, tear and deformation.

→ Regularly check the air pressure of the tires.

Tires have a Schrader valve (also known as auto valve)

The specifications for the prescribed tire pressure are available on the side faces of the tires (Fig. 58). The permissible tire pressure for Schwalbe Big Apple is 2.0 – 4.0 bar.

FIG.55

ⓘ The tires on the muli Muskel are selected with relatively large volume so that with a somewhat lower air pressure you can achieve a comfortable shock absorption when driving. Always comply with the specifications of the minimum and maximum pressure.

Double leg stand 4.11

⚠ CAUTION! Risk of tipping over and damage
Not securely fixed double leg stand can result in the twisting of the stand and rubbing on the rear tire causing tire abrasion and quicker tearing or bursting. Failure of the double leg stand can result in the tipping over of the muli Muskel.

→ Regularly check the screw connection of the double leg stand (see Chapter 5.4 “Care and maintenance intervals”).

→ Note that the double leg stand is under is used heavily and wears out over time and at some point must be replaced.

→ Do not seat on the saddle of the muli Muskel with double leg stand unfolded.

The muli Muskel has a robust double leg stand with which the muli Muskel can be parked tipping-proof.

Use double leg stand 4.11.1

PARK THE MULI MUSKEL

→ To set the muli Muskel on the double leg stand press the stand with the foot on the ground. Then pull the muli downwards and at the same time lift it slightly by the saddle so that the double leg stand of the muli Muskel jacks up. (Fig. 56)

BRING THE MULI MUSKEL IN RIDING POSITION

→ To bring the muli Muskel out of the park position into the riding position once gain set one foot in front of a standing leg and push the muli Muskel forwards, so that it moves out of the jacked up position and the double leg stand folds in. No lifting required.

FIG.56

Load bearing capacity 4.11.2

The double leg stand can support loads of up to 80 kg . This means that in the park position with unfolded stands the muli Muskel can be loaded with up to maximum 55 kg so as not to exceed the maximum load baring capacity of the double leg stand.

	80 kg load capacity limit of the double leg stand
-	25 kg muli Muskel dead weight
=	55 kg possible loading with double stand unfolded

05 Maintenance

Collisions and accidents 5.1

Collisions and high stress can weaken and damage the muli Muskel. Often the damages after a sever shock or falling are not immediately noticeable.

⚠ WARNING! Risk of falling and injury
Deformed parts can suddenly break. They may also not be straightened, i.e. not be bent straight, because even then there is a risk of serious breakage.

→ Never ride your muli Muskel, if it shows deformations or cracks on a component.

→ Make sure to have your muli Muskel inspected in a specialist workshop after a fall. Also make sure to check the accessories such as the child seat if involved in the fall or collision.

ⓘ Further information on error messages and troubleshooting is available in the instructions of the component manufacturer. These available on our Download Portal (see Chapter 1.1.1 “Download Portal”).

Cleaning 5.2

→ Regularly clean your muli Muskel with water and a soft rag.

The chain must be serviced on regular basis in order to reduce the friction and thereby the wear between the chain links and the teeth of the sprockets and chainrings.

1 Clean the chain from dirt (e.g. with a brush).

2 Turn the crank in stationary backwards and apply chain oil on the chain inner side.

3 Move over the chain with a cloth and remove the excess oil. This way you can prevent oil drops or splashes when riding off.

Information on cleaning of the belts is available in manufacturer manual. This is available on our Download Portal (see under Item 1.1.1.)

Inspection 5.3

⚠ WARNING! Risk of falling and injury
A bike is exposed to high stress and wear. If the stress level of a component is exceeded it can suddenly fail, break or burst and possible cause serious injuries to the rider or other persons.

→ Pay attention to all cracks, indentations, discolouration and dents on the fames, fork and cargo basket. These indicate that the usage period of a part might be exceeded and probably must be replaced.

⚠ WARNING! Risk of falling and injury
Spare parts from other manufacturers can make the muli Muskel unsafe. There is risk of accidents!

→ Use only original spare parts if you want to replace individual parts in your muli Muskel because they have reached their service life.

The muli Muskel must be serviced in a specialist workshop at regular intervals (Inspection). The specialist workshop detects damages and worn out components and ensures a professional repair.

→ Have an initial inspection carried out after:
400km mileage

→ Subsequently, perform an inspection every 2000km or at least once a year. At the end of this manual there are fields for documentation of the first three inspections. Have the first inspection documented there by a specialist workshop. Also enter the serial number and other muli data.

Care and maintenance intervals 5.4

With an average annual mileage of 1500 - 2000 km we recommend the bellow listed maintenance intervals.

⚠ CAUTION! Risk of damages and injuries
These are approximate specifications – should you cover significantly more kilometres annually and the muli Muskel is heavily used, you must perform maintenance earlier or more often accordingly.

→ Keep in mind that rims also wear out. Since no rim brakes are installed on the muli Muskel, their wear must remain within the limits, but here too you should check for integrity in regular intervals.

Component	Activity	V	M	J	Other intervals
Brakes	Brake test while stationary	S			
	Check pad thickness			W	S regular
	Replace brake fluid			W	
Brake lines	Check for damage	S		W	
Impellers	Check spoke tension and concentricity		S	W	
	Re-centre the rim				if warped
	Check wear			W	
Lighting	Check for function	S		W	
	Check the taillight fastening	S		W	
	Check cables + connections for damage		S	W	
Tires	Check air pressure	S		W	
	Check profile height and condition		S	W	
Gear hub	Check bearing play			W	
	Change oil			W	W from 1,000 km
Gear cables	Check and grease or replace			W	

W Specialist workshop V Before every ride J Annually
S Self-employed M Monthly

Component	Activity	V	M	J	Other intervals
Pedal bearing	Bearing play checked			W	S regular
	Re-grease			W	
Crank	Tighten screws			W	
Chain	Check and grease		S	W	
	Check for wear and replace if necessary		S	W	W from 600 km
	Check tension		S	W	
Belts	Check for wear		S	W	W from 600 km
	Check tension			W	S regular
Paint	Cleaning				S regular
Cargo basket	Check fastening	S		W	
Steering bearing	Check bearing play		S	W	
	Grease			W	
Steering linkage	Check slide bearings for wear		S	W	
	Check the tightness of the screws	S		W	
Front hub	Check bearing play			W	S regular
	Re-grease			W	
Pedals	Check bearing play and screws			W	S regular
Seatpost	Re-grease			W	S regular
Quick release/ axle nuts	Check for tight fit	S		W	

W Specialist workshop V Before every ride J Annually
S Self-employed M Monthly

Compo-nent	Activity	V	M	J	Other inter-vals
Stand	Check screw connection		S	W	
	Check for friction on the tire	S		W	
Stem adapter	Check the tightening torque of the screws		S	W	S after 500 km
Child seat	Check for damages	S			
Dropout	Check the tightness of the screws		S	W	tighten after the first 100 km
Frames	Check for cracks and dam-age	S		W	
All nuts + bolts	Check for tight fit	S		W	

W Specialist workshop
S Self-employed
V Before every ride
M Monthly
J Annually

Recommended screw torques 5.5

Component	Connection	Torques
Stem – handlebar mount	Clamping screws	6 – 8 Nm
Stem - Shaft mounting	Clamping screws	6 Nm
Stem adapter	Clamping screws	9 – 10 Nm
Gear hub	Axle nut	25 Nm
Shift lever	Mounting screw steering bracket	5 Nm
Hub		6 – 8 Nm
Pedal crank	Crank bolt	40 Nm
Front wheel with SH hub dynamo	Axle nut	25 Nm
Chainring	Mounting screws	9 Nm
Pedal	Pedal axle	35 Nm
Brake calliper to frame	Mounting screws	9 Nm
Frame lock	Mounting screws	10 – 13 Nm, screw lock
Seat clamp	Quick release on the seat tube	9 – 12 Nm
Seatpost head - suspension post	Allen screw	8 Nm
Seatpost head - un-sprung post	Allen screw	8 Nm
Dropout HR	Mounting screw	9 Nm
Front wheel with SON hub dynamo	Axle nut	9 Nm
Rear wheel	Axle nut	40 Nm
Luggage rack on the dropout	Mounting screw	9 Nm
Luggage rack on the knot tube	Mounting screw	14 Nm
Crank clamp screw	Clamping screw	12 – 14 Nm

Component	Connection	Torques
Protective plate	Mounting screw	5 Nm

Disposal

5.6

The tires and tubes of your muli Muskel also consist of valuable raw materials and can be recycled. Schwalbe has implemented its own recycling system in 2023 so that your old tires and tubes can be returned via the bike shops. All participating dealers are available on our website: https://www.schwalbe.com/haendlersuche/

EC Declaration of Conformity 5.7

by the installation company

in accordance with EC Machinery Directive 2006/42/EC of 17 May 2006, Annex II A
We hereby declare that the machine specified below, by reason of its design and construction and in the version in which we have placed it on the market, complies with basic health and safety requirements of the relevant EC Directive 2006/42/EC.

In the event of modifications of the machine not approved by us this declaration shall lose its validity.

Manufacturer:
muli-cycles GmbH
Widdersdorfer Str. 190
50825 Köln

Description and identification of the machine:
Function: Pedelec up to 25 km/h
Model: muli Muskel st + px

Compliance is also declared with other guidelines/regulations applicable to the product:
RoHS Directive (2011/65/EU) of June 08, 2011
EMC Directive (2014/30/EU) of February 26, 2014

Applied harmonised standards in particular:
Design principles: Basic terminology, methodology, risk assessment

Other guidelines, standards and technical specifications applied:
REACH Directive 1907/2006 of 12/18/2006
Battery and accumulator directive 2006/66/EC from September 06, 2006
WEEE Directive 2012/19/EU of July 04, 2012
DIN 79010 - Bicycles - Transport and cargo bike - Requirements and test methods for single and multi-track bicycles
DIN EN 15194 - Bicycles - Electrically assisted wheels - EPAC bicycles
DIN 4210:2014 - Bicycles - Safety requirements for bicycles
DIN EN ISO 11243 - Bicycles - Luggage racks for bicycles - Requirements and test methods

Placer, date
15.01.2023

Authorised Representative Signatory:
Mr. Sören Gerhardt, CEO

muli

Liability for Material Defects 5.8

The muli Muskel has been manufactured with great care. However, the statutory guarantee is applicable in the first 2 years after the purchase should your muli be fraught with production related errors or defects. The requirement for our obligation to indemnify is that the use and maintenance of the muli Muskel and the accessories have complied with all specified conditions. These conditions are available in this manual and, where needed, in the accompanying instructions of the component manufacturer.

We wish you a safe ride with your muli Muskel.

For further inquiries please contact:
info@muli-cycles.de

Legal notice

BA-EX-01 V24.1

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This is your muli Muskel manual. Please read it carefully and keep it safe. If for incomprehensible reasons you decide to resell your muli, please hand over this manual to the next user.

We wish you lots of fun with the muli Muskel - every day!