



Instruction manual for Velomobil Bülk MK1

Content

1. Introduction.....	3
2. Before you set off.....	3
2.1 Check before driving a new vehicle.....	3
2.2 Additional check before driving for used vehicles	4
3. While driving	5
4. Information on the special features of the vehicle	5
4.1 Brakes	5
4.2 Steering	6
4.3 Cornering	6
4.4 Speed.....	7
4.5 Lighting.....	7
4.6 Body.....	7
4.7 Behaviour in traffic	7
4.8 Loading	8
4.9 Hold-down device.....	8
4.10 The tiller cable	8
4.11 Awareness of road conditions.....	8
4.12 The turning Circle	8
4.13 Ground Clearance	9
4.14 Boarding and disembarking	9
4.15 Behavior in a storm.....	9
4.16 Behaviour in the rain.....	10

5. Maintenance and Self-Help.....	10
5.1 Brakes	10
5.1 Chassis	11
5.2 Drive	11
5.4 Setting the track	11
5.5 Idlers	12
5.6 Flat tires and tire changes	12
5.7 Correct adjustment of the seat.....	12
5.7.1 Basic settings	12
5.7.2 Quick settings.....	13
5.8 Correct setting of the tiller cable.....	13
6. Hoods and lids.....	13
6.1 Foam combi-lid.....	13
6.2 Hood for daily use with moped-visor	14
6.3 Racehood.....	14
7. Other accessories	15
7.1 Luggage Compartments	15
7.2 Air-Suspension	15
7.3 Headrest Adapter.....	15
7.4 Armrests	15
7.5 Hotspot safety Module.....	15
7.6 Chain cover behind the seat	16

1. Introduction

Dear customer, congratulations on purchasing your Bülk-MK1!

With the Bülk MK1 you have acquired a velomobile that has been uncompromisingly optimized in terms of aerodynamic efficiency, suitability for everyday use and safety. It was originally designed for use in races, but can still be used in public transport if used properly.

Velomobile World hopes that you will discover the diverse possibilities of sporty and practical use of this velomobile and thus enrich your life.

Velomobiles are still very rare around the world, although they represent an innovation that is in tune with the times.

So you can see yourself as a pioneer!

A velomobile can play an important role in a decarbonized and sustainable world, in which the joy of movement and self-sufficient mobility are required.

Whether commuting to work, daily sport, alternative travel or transport, the velomobile is a multi-talent and can conquer your everyday life!

To ensure that you enjoy driving and do not endanger your physical well-being, it is important to read these operating instructions very carefully and to follow them.

The Bülk-MK1 has (like velomobiles in general) some special riding characteristics that are not known from normal bicycles and that can lead to dangerous situations if the rules given in these instructions are not observed.

All parts of the Bülk velomobile are built to be weight-optimized. In order to avoid damage or destruction, you should follow the relevant rules of use and never use force or rudeness when handling the vehicle

General: All instructions should always be read through to the end, as important information is often only found at the end and premature use can lead to damage. All designations: front, rear, right, left, top and bottom always refer to the upright vehicle seen in the direction of travel.

There are a number of videos at Velomobile World that explain individual service jobs and repairs. Use this. The videos are continuously updated and promote your independence in using the Bülk.

We wish you a lot of joy with this vehicle!

2. Before you set off

A new vehicle from a dealer has gone through a safety check and a handover inspection. A quick check should still be done before you start:

2.1 Check before driving a new vehicle

- Is there enough air in the tires? Maximum pressure according to the tire manufacturer makes sense

- Can you see any damage to the tire, especially on the side surfaces? (Maybe chafing from transport?)
- Apply the brakes with full force: did the brake cables slip?
- Has the bottom bracket slide been re-tightened after adjusting to your size? Otherwise it can move forward while driving and the chain can be too short for shifting. However, the clamps (4 screws in total) must not be overtightened, so that the carbon mast is not damaged.
- Fix the hatch cover with the rubber loops by hanging them on the bollards on the coaming. Driving without a fixed hatch cover involves the risk that the wind will tear the cover open during the journey. This leads to very dangerous situations. Also check that the hinge at the front of the hatch cover is correctly attached on both sides.
- All luggage and the like must be stowed in such a way that they cannot get into the front footwell or the rear drive, otherwise this could lead to a jamming of the drive or an accident.
- Is your seat adjusted so that you have a good view of the road ahead?
- Is the rear view mirror adjusted correctly?
- Are the hold-down devices correctly set?

2.2 Additional check before driving for used vehicles

If you have bought a vehicle used, carry out a few checks before you start. In particular, vehicles that have not been serviced regularly or have been modified by previous owners pose a safety hazard.

- Make sure that all screws on the chassis are tight and that no screws are missing. Check that all angle joints are screwed tight. If necessary, open the small inspection hatch in the middle under the vehicle floor. The nuts on all rod ends must be tight. If work has been carried out on the rod ends, it is essential to ensure that the threaded rods are screwed sufficiently far into the rod ends. It should never be less than 6 mm. The end of the trailing arm, which leads through the wheel housing, should definitely be screwed on with a self-locking nut and have a sufficient thread protruding.
- The compression discs and the rubber mounting of the trailing arms must not be clamped too tightly when screwing the trailing arms to the carbon dome. The trailing arm must remain slightly movable so that no bending forces are transferred to the threaded rod.
- Check the tire pressure. Do not fall below the maximum tire pressure specified by the manufacturer on the tires. Too little pressure increases the driving resistance significantly and can cause the tire to jump off the rim when cornering.
- Check the condition of the tires, this applies in particular to the rear wheel. Is there any chafing, dent, larger cut, cracked carcass? Remove splinters. A bursting rear wheel at full speed is difficult to control. Therefore, change the tire in good time before it is worn out.
- Before setting off on a journey, the brake handles should be pulled with all you might while stationary. If a brake cable breaks now, it can be replaced before a journey becomes dangerous. Even cracked trains must always be replaced immediately.
- Adjust the bottom bracket position and the seat to your size. To do this, adjust the bottom bracket to your leg length: Loosen the 4 screws on the clamps and move the bottom bracket slide until the setting is correct. Do not use force when tightening the clamps on the carbon mast. It is enough if the bottom bracket slide does not move while riding. When adjusting the bottom bracket, the chain length may also have to be changed: The chain length is correct if, with the largest chain-ring in front and largest rear sprocket, the chain tensioner of the rear derailleur is approximately vertical up to 45 degrees to the front. The chain must be able to be tightened further by at least one double chain link (under force). When pedaling, the feet must

not touch the body above, below or on the side. If necessary, shorter cranks, other pedals or shoes must be fitted. The seating position must be chosen so that you can safely see over the edge of the body to the front. Are all controls set correctly and can they be operated without any problems?

- It is important that the steering pivot lever is firmly clamped to the steering column pin so that the steering can never slip. You can access the clamping screw through the service opening under the vehicle.
- Check the central screw on the mono swing-arm. This screw clamps the rear wheel on the axle and must be secured with safety screw varnish.
- Check whether the rear shock absorber is screwed tight.

3. While driving

- Please note the rules set out in the sections above. If you notice anything strange while driving, anything seems loose, or you hear a suspicious noise, stop and inspect the vehicle.
- Keep in mind that the braking distance increases disproportionately at high speeds. In particular, avoid driving through potholes or over train tracks at high speeds. Remember, the Bülk MK1 is an ultra-light vehicle and can be damaged if subjected to excessive loads.
- The vehicle has derailleur gears. You can only change gears if you pedal along when shifting (without strong force). Attention: if you roll backwards or push backwards and the rear derailleur is not positioned correctly (e.g. because you shifted while stationary), the chain can jam with the rear derailleur and cause damage. Stop the backward movement immediately if you feel resistance or hear a suspicious noise. Since the chain is not guided during return, it can jump off and get jammed. Never force yourself backwards if you feel resistance. Only drive off with a safely engaged gear.

4. Information on the special features of the vehicle

The Bülk MK1 offers many advantages over a normal single-track bicycle when it comes to safety in city traffic and on long tours. This includes effective rollover support, an effective restraint system through the coaming and a stable body that offers good protection in the event of a fall.

Nevertheless, there are some things that should be considered.

4.1 Brakes

The standard-braking system of the Bülk MK1 is not designed for larger mountains, i.e. the drum brakes can overheat on longer descents and temporarily lose their effectiveness. Since you can easily reach very high speeds with the Bülk MK1 even on small gradients due to its excellent aerodynamics, it is important that you as a driver approach the braking properties of the Bülk MK1. The braking distance is also heavily dependent on the load and the weight of the driver.

There are the standard drum brakes (70 mm) or the 90 mm brakes for mountainous terrain. The strong brakes can also be retrofitted.

Do not brake on descents by constantly pulling the brakes, but with short, powerful brake bursts. Do not allow high speeds when descending if you have to brake hard before the next bend anyway.

Schedule cool-down breaks for the brakes. If you stop with the brakes very hot, never leave the parking brake on for a long period of time because the brake drums can permanently warp as they cool.

With centre steering (steering via a central steering column), both front wheel brakes are controlled via a brake lever.

With tank- steering (planned), the front wheel brakes are controlled separately: left brake lever for the left front wheel, right brake lever for the right front wheel.

When braking, always apply both brake levers (for the left and right front wheel) so that you can develop the full braking effect and the vehicle does not change its direction.

Familiarize yourself with the braking characteristics of the Bülk MK1 and the braking distances by performing braking exercises in a safe place.

Like every tricycle, the Bülk MK1 must always be secured against rolling away: this can be done with one or more parking brakes (clamp toggle for central steering, clamping bracket for tank-steering). Be aware that when you are loading or entering the vehicle, braking may be insufficient on a downhill slope. If the parking brake is no longer effective, this is a sign that the brake cables must be readjusted.

It can also happen that the Bülk MK1 is parked in a very windy place and is moved by the wind. Unoccupied, the Bülk MK1 is a very light vehicle and offers the wind a large surface to attack.

4.2 Steering

With centre steering, the Bülk MK1 is steered by turning the steering column; tilting to the side or swivelling the steering column forwards has no effect on the steering.

With tank steering using the steering levers on the front wheel housing, it is in principle possible to steer with one lever, but note that in braking situations both hands are needed to operate the left and right brakes.

The chassis is designed in such a way that very little steering effort is required when driving. Accordingly, the steering levers are lightweight. Do not steer when the vehicle is stationary and never use force when steering to avoid damaging the steering system.

The steering angle is limited by the laterally closed front wheel housing (this is necessary for aerodynamic reasons). Therefore, drive with foresight and turn in early on tight bends. It is best to practice cornering on an area where there is no traffic. If you turn hard when manoeuvring, the front wheels will rub against the fairing. This is easy to hear and gives the driver a signal not to turn further. Again, do not use force when steering.

4.3 Cornering

The Bülk MK1 is a three-track vehicle with a relatively small track width. It behaves completely differently in curves than a normal bicycle and can tip over to the side if the curve speed is too high in conjunction with unfavourable steering behaviour on the part of the driver. Therefore, approach these properties slowly and get to know the curve properties through practice. If the wheel on the inside of the curve lifts in curves, you should immediately counter steer accordingly so that the vehicle does not tip over. This is often not possible (especially in right-hand bends), especially when oncoming traffic doesn't allow it. Therefore, avoid such situations at all costs and adjust your speed.

In principle, caution is advised on slippery roads, as the rear wheel can break out if corners are taken too quickly. This can be the case with black ice, leaves or wet conditions.

4.4 Speed

The Bülk MK1 is built in such a way that you can reach speeds with little pedal effort that can only be achieved with a normal bicycle with great effort.

Even a hobby cyclist can quickly develop a life-threatening speed on a slight incline, since the wind hardly slows the vehicle down.

So drive in a manner appropriate to the environment and traffic so as not to endanger yourself or others. Regularly check your tires for chafing, cuts or broken-in splinters and thorns. A burst tire (especially the rear wheel) can quickly lead to loss of control of the vehicle!! If the rear tire loses air, this is noticeable through a spongy driving experience. In such a case, stop immediately and check the condition of the tires.

When mounting the tires, make sure that the inner tube does not get caught under the tire. A good "slipping of the hose into the jacket" is achieved by talcum powder that is distributed in the jacket. Don't use cheap hoses.

Change the coats in good time, this applies in particular to the rear wheel.

4.5 Lighting

In order to be allowed to drive on public roads, an approved lighting system is required on the vehicle. The Bülk MK1 is not automatically equipped with this from the factory (this also depends on the regulations of the respective country) and those who use public transport may need to supplement the lighting system. In any case, it is advisable to use high-visibility lighting even during the day in order to be clearly visible in traffic.

4.6 Body

With the Bülk MK1, the body takes on a supporting function and is not only responsible for wind and weather protection. However, so that the body can be built as lightly as possible, reinforcements are only incorporated in stressed areas. For this reason, the body must not be subjected to heavy loads either from the inside or from the outside, and point loads in particular should be avoided. Only the reinforced edge of the hatch is suitable for absorbing limited supporting forces when getting in and out.

4.7 Behaviour in traffic

Velomobiles are a very rare phenomenon on the road and usually cause great astonishment or uncertainty. You have to assume that it is difficult for drivers to estimate their speed.

From behind or directly from the front, the visibility of the Bülk MK1 may be worse than with a normal bike due to its small frontal area and its low height. Therefore, always ride with eye-catching lights even during the day and keep an eye on the traffic behind you through the rear-view mirror.

When using the road, do not allow yourself to be pushed too far to the side of the road while being overtaken. If you slide off the road surface with a front wheel and get caught on the edge of the road, this can lead to difficult situations.

If you use bike lanes, consider their low elevation and the fact that motorists may not see them in time. Hedges or cars easily obscure the view of such a low vehicle.

Therefore, always drive carefully, especially on exits, and be ready to brake, even if you have the right of way.

The Bülk MK1 has a low ground clearance for reasons of aerodynamics and cornering stability. In

particular, the foot protuberance on the bow can easily touch down when passing sinks or bollards. If in doubt, get out or drive around these obstacles. Keep in mind that normal road building regulations do not take into account the special features of such vehicles.

If you want to cross rails, approach them at the greatest possible angle so that your wheels don't slide into the rails.

4.8 Loading

The load must always be well secured and stowed in such a way that it cannot get to any moving parts, i.e. it cannot impede steering, drive or leg and arm movements. The maximum payload is 120 kg for non-reinforced Bülk MK1.

4.9 Hold-down device

The hold-down devices are adjustable foam pads that you attach over your shoulders with Velcro. These hold-down devices are very important for safety in the event of an accident.

With the right setting, they prevent you from slipping out of the vehicle when it rolls over and leaving the vehicle's rollover protection.

Furthermore, correctly adjusted hold-down devices prevent the driver from sitting up in the event of a frontal crash and thus from accelerating forward. In this way you avoid facial injuries and collisions with the steering column.

The hold-down devices should be placed over your shoulders so that you do not feel any pressure while riding, but the distance to your shoulders is no more than about 1 cm.

4.10 The tiller cable

The steel cable, with which the steering column (tiller) is adjusted in its inclination and position to you, has a steering-stabilizing effect as well as a safety-relevant aspect.

In the event of a frontal crash, it prevents the steering column from colliding with your body. Read point 5.8 on how to set the steering column correctly.

4.11 Awareness of road conditions

Another special feature of the handling is the following: thanks to the protective bodywork and the 3 tracks, you are much better protected against slipping and falling than on a single-track bike. But:

One circumstance requires special attention! If the rear wheel of a velomobile no longer tracks the vehicle (keeps it on track), the rear can break out and cause skidding. This can be caused by a blown rear tire (see Precautions to take before driving) or by losing contact with the road.

This can happen in 2 situations in particular:

- You drive at high speed from smooth asphalt onto a paved road or:
- You are driving on the right-hand side of a road that slopes down to the right and has a very poor surface (pits, roughness).

In both cases it can happen that the rear wheel with suspension resonates with the bumps and starts to jump. If the road then slopes down to the right, the rear can wander off to the right.

So be sure to adjust your speed to such circumstances.

4.12 The turning Circle

Due to its closed wheelhouses, the Bülk has a relatively large turning circle (depending on the tire width used).

That is the price for the enormously high efficiency of the vehicle.

With a little practice, however, you can easily find your way around with it in everyday life.

- Familiarize yourself with the turning circle by first going over to a parking lot or similar. If you hear the rubbing noises of the coats on the wheel housing when you turn the steering wheel, you have turned the wheel fully. You should avoid this condition.
- In everyday traffic, you should know your turning circle and not try to turn on a street. 90-degree turns are no problem and U-turns at intersections usually work if you turn the steering early enough.
- Sometimes you need more steering angle when manoeuvring than you have, what can you do then? You can drive backwards by pushing off the road with your hands. You can also use slightly uphill driveways or similar to drive back and forth and reach your desired driving direction. Or you get out and move the vehicle.

4.13 Ground Clearance

Another special feature is the ground clearance of the vehicle. Especially with the sport tuning of the chassis, it can happen that the protuberances at the front of the vehicle touch down on prominent bumps. Also jambs can be higher than the ground clearance. This can be defused by approaching them as obliquely as possible. Do not under any circumstances drive over deadlocks at high speed.

Potholes can also lead to bottoming. Feel your way towards these conditions.

4.14 Boarding and disembarking

The best way to get on board is as follows:

- Apply the parking brake.
- Sit with your bottom on the back part of the coaming and swing your (usually) right leg into the Bülk. Place your foot on the transverse tunnel of the front wheel arch while supporting yourself with your hands on the rear part of the coaming. Now lower yourself into the vehicle onto the seat. In order to get into the vehicle with your shoulders, you have to turn a little sideways so that your shoulders can get under the coaming and its hold-down devices.

If they want to get out, this is helpful:

- Apply the parking brake.
- Snap the Tiller handlebar into its holder on the coaming.
- Open the hood fully.
- Snap the Tiller handlebar into its holder on the coaming so that it doesn't bother you when you get out.
- Now bend your upper body as far forward as possible and place your hands as far back as possible on the coaming. Now you can pull yourself up until you can sit on the coaming in front of the head rest. Once you reach this seat, you can easily swing your legs out of the vehicle. Avoid getting out of the vehicle by taking your legs out from behind your body. If you then lose your balance, it is difficult to hold on. Especially not with the hood open.

4.15 Behavior in a storm

The Bülk is one of the least sensitive velomobiles to side winds and gusts. Nevertheless, there are a

few things to keep in mind when traveling in a storm.

- When parking the vehicle, always set the parking brake and place the bow of the Bülk into the wind. This prevents the hood from being opened by the wind. Caution: the hood can also be pulled up in cross winds. Secure them.
- When getting out and opening the hood with the rear in the wind, the hood can be yanked forward very sharply. It is therefore essential to control the movement of the hood with the hood safety cable. Otherwise the hood can be damaged by the knee lever effect. A hood that is torn open by the storm and rolls over can also damage the hinge area of the body.
- While driving, there may be a loss of control in a storm if the wind suddenly hits the vehicle from side corridors or, for example, oncoming truck traffic causes stalls. Therefore, adjust your speed during a storm or refrain from driving. Familiarize yourself with the characteristics of the vehicle in a storm.

4.16 Behaviour in the rain

When it rains and is wet, you are much better prepared with a three-lane vehicle than with a one-lane one. Nevertheless, here are a few tips.

- Especially with new tires you should consider that the grip on a wet road is significantly lower than on a dry one. Adjust your speed.
- In the wet, the braking distance is generally significantly longer and the potential cornering speeds are lower. If the rear wheel skids, vehicle control becomes difficult.
- Make sure that the water drains in the hinge area and in the hood are permeable.
- If visibility with the visor becomes too poor, you should open the visor a little.
-

5. Maintenance and Self-Help

The wear on the drive components is significantly lower than on a normal bicycle. This is because the chain and the drive are encapsulated and are therefore very insensitive to the effects of the weather.

But: The safety-relevant components of the vehicle must be serviced regularly. Contact your dealer and coordinate the maintenance with him. VelomobileWorld provides a series of explainer videos to provide customers and dealers with important maintenance information.

When you are traveling with the velomobile and far away from outside help, it is important to know the relevant parts of the vehicle in order to be able to act yourself in an emergency.

That's why we advise you to spend a while with the vehicle and understand it before you go on a longer first tour.

Fortunately, there is hardly any complicated technology in the Bülk and even laypeople will quickly understand how it works. This chapter is intended to support maintenance and repairs.

5.1 Brakes

The SA drum brakes used at the factory are generally very insensitive to weather influences and wear. Nevertheless, there are a few things to consider here, because the brakes are vital.

The tension of the brake cables can be adjusted on the brake levers. It should always be as high as possible without the brake starting to drag. A cable with insufficient tension can cause the cable holder on the drum brake to disengage if, for some reason, the cable return to the brake plate no longer works. We recommend servicing the brakes every 5000 km.

It should be checked whether the drum brakes are still working properly. To do this, the front wheel is

removed, the wheel is removed from the brake plate and the ease of movement of the brake lever on the brake plate is checked. The brake cams may need to be relubricated so that they can move smoothly again. With heavy use, for example by regularly driving uphill, the brake pads can wear down to such an extent that mere tightening with the cable tensioner is no longer sufficient. In these cases, it can happen that the brake cams turn past their dead centre and no longer reset themselves.

5.1 Chassis

The rod ends used in the chassis are subject to wear depending on driving style, mileage and weather conditions. Worn angle joints can impair the driving characteristics and must be replaced. We recommend checking the angle joints every 5000 km. Even when new, the transmission parts of the steering and front axle already show a noticeable minimal play. If this play increases significantly, the angle joints must be replaced. For all assembly work on the front axle, the track must be checked again and readjusted if necessary (see chapter "Adjusting the track"). The track can also be misaligned during extreme driving maneuvers where the front wheels collide with edges. Safety note: bent front axle parts must never be straightened, they must be replaced. Even corrosion damage is safety-relevant here and must be avoided by taking appropriate precautions (cleaning from salt and dirt, sealing, checks)

Trailing arms: These are the M-6 threaded rods with rod ends that run in the direction of travel from the foot of the strut to the front through the wheel housing. When passing through the wheel arch, there is an elastomeric rubber inside and outside as well as a rubber grommet. These buffer the steering and spring movements of the trailing arm and ensure that there are no significant bending forces on the trailing arm. When these elastomeric rubbers are worn out, they must be replaced. Sometimes simply tightening the screw connection is enough. The important thing here is that the screw connection must not be tightened too tightly, as this would result in excessive bending moments on the threaded rod. After tightening the screw connection, you should still be able to turn the trailing arm in the elastic bearing with your fingers.

5.2 Drive

Despite the encapsulation of the drive, it is unavoidable that dust and dirt get into the chain and gears. Therefore, clean and re-oil the chain every 1000 km. A well-maintained drive can last a very long time. If you put a lot of sand and dirt in the vehicle with your shoes and you lay the vehicle on its side (e.g. due to maintenance or repair work), the sand can get into the drive. Therefore, remove the sand before turning it over. Make sure that no small parts fall into the drive train and are taken along by the chain. The water that collects in the water box drains down through the front frame through drainage holes. This passage can become clogged. Then check the drain and remove the incrustations if necessary.

5.4 Setting the track

Precise alignment of the track is crucial for the smooth running of the vehicle and the life expectancy of the tyres. The track is set at the factory with a gauge.

The track is set at the factory so that the distance between the rims at the front (measured at underbody level) is about 2-4 mm less than behind the axle (measured at underbody level).

This means that the wheels come together 2-4 mm in the direction of travel. If you want to readjust the track, dismantle the joint head of the tie rod at the spring strut foot. If you turn the joint further onto the threaded rod, you shorten the tie rod and the wheels point further apart towards the front. If you want to bring the wheels closer together towards the front, you have to lengthen the track linkage, i.e. turn the joint head to the left. Attention !: At least 6 mm of thread must remain in the joint head and

the joint head must be carefully locked with the lock nut after the adjustment. For larger adjustments, they distribute the changes in length to both tie rods so that the steering swivel arm is not crooked.

Note: if you notice signs of wear on the front tires after less than 600 km, you should check your wheel alignment!

5.5 Idlers

The tight strand chain runs under 2 idlers.

In very rare cases, the chain may pop out from under these idlers.

This can be the case with extreme potholes if you pedal at the same time or if the vehicle is lying on its side and you crank the chain with a relaxed chain.

Driving with a jumped off chain makes loud rattling noises.

In such cases, you should not use force to step on, as this could damage the side windows of the U-roller.

What to do in such cases?

Slide the chain back under the pulley. It is helpful to push the chain backwards at the same time. A screwdriver or stick can help. It is advisable to have a pair of disposable gloves in the vehicle for such cases, otherwise the chain oil will be spread everywhere.

5.6 Flat tires and tire changes

You can change the tires and inner tubes of the wheels without dismantling the wheels because they are hung on one side. For all work under the vehicle, it is easiest to place the Bülk on the side or rotated 180 degrees on 2 trestles. The bucks should be padded with a soft pad and secured against each other so that they cannot tip over. The support points should be chosen so that the stiffened parts of the Bülk are supported so that the body does not buckle.

Remove luggage, seat and battery beforehand.

For safety, it is very important that when mounting the tires and tubes, no part of the tube is pinched by the casing, that the tube is not installed twisted and that the valve is exactly 90 degrees to the rim.

To be on the safe side, 2 layers of rim tape are always installed in the Bülk, keep this if you change anything on the wheels. Use talcum powder to keep the hoses supple and slip well into the jacket.

5.7 Correct adjustment of the seat

With its modular concept, the Bülk offers various adjustment options for small to large drivers. A distinction must be made between basic settings and quick settings. The basic setting should be made for the main user and always includes the setting of the bottom bracket slide and the chain length. The quick settings are intended more for friends or family members who want to share the vehicle but are not the primary user.

5.7.1 Basic settings

Adjust the bottom bracket slide and the seating position so that you sit as far forward in the vehicle as possible. As a result, they have more stable driving dynamics and make optimal use of the sporty advantages of the vehicle.

To do this, they sit in the vehicle, loosen the clamp screws of the bottom bracket slide and push the slide far enough forward that they still have enough space forward with their toes. Lock the sled and

adjust the seat to a position that suits your leg length and bottom bracket sled position. The legs should not be fully extended when pedaling. Straight legs often lead to knee pain and are also not effective. So if you have found a position for yourself as far forward in the vehicle as possible, you still have to adjust the angle of inclination of the seat and the head rest area. You can find information about this here:

5.7.2 Quick settings

Quick settings include seat position, seatback angle, and headrest.

You can snap the seat into different positions in the locking rail. Choose a position where you have the correct distance to the bottom bracket (see previous paragraph).

Now choose the right headrest adapter according to the following scheme:

- Persons from 145-165 cm choose the adapter small
- Persons from 165-180 cm choose the adapter medium
- People over 180 cm usually do not need an adapter at all.

The adapter is fixed using the Velcro fastener, as far back as possible, so that the inner foam block also grips with its Velcro.

The adapter still receives the pillow, which is also attached with Velcro.

The seat back inclination is now adjusted using a rigid foam board (a stack of foam boards located behind the seat) so that it fits the head position in the head rest adapter. The head should neither be looking too far into the sky (poor vision with varifocals) nor should it be bent too far forward (impaired breathing). However, a comfortable resting of the head is favorable for longer comfortable driving. The flat seating position in connection with the well-adjustable headrest allow long and relaxed driving. Experiment with fine tuning. Driving pleasure is largely dependent on the optimum overall setting.

5.8 Correct setting of the tiller cable

The steel cable that holds the steering column away from the driver can be lengthened or shortened using a clamping screw.

The optimal setting will be with the steering column about 10-15 from your stomach and chest area.

This prevents your body from hitting the steering column in a frontal crash.

Furthermore, this enables good breathing and, in conjunction with side armrests, creates a stable steering triangle.

The armrests should be adjusted so that they support the arms when your hands are on the steering column.

6. Hoods and lids

6.1 Foam combi-lid

This two-piece hood has been developed for those who prefer to drive with an open head, but also for flexible everyday use with stowability. The combi-lid can be stowed in the rear on the left-hand side. So you can decide while driving whether you want to make an adjustment to the weather conditions.

This hood also has the advantage that with your head outside you can communicate very well with other drivers while driving.

Carbon part: hang the carbon front part with the hinge stick and secure the canopy with the safety cable. This must be adjusted so that the hood does not tilt too far forward and the hinge does not jam. If you want to ride like this, you also attach the upper edge protection tape (included in the scope of delivery) to the carbon edge so that both carbon edges are now secured.

Foam Part: Install the foam part by removing the top edge protection tape and inserting the foam hood into the slot. Push it in as far as it will go and secure it with the Velcro strips on the left and right. When driving, the hood parts should be secured with the rubber loops, as the hood can flap up, especially in strong winds.

6.2 Hood for daily use with moped-visor

This hood allows driving with very good protection against all weather conditions. The scratch-resistant visor allows the use of an optional wiper.

The Naca-Duct in front of the visor can be infinitely adjusted and thus the ventilation can be regulated. You adjust the Naca-Duct at the point at the bottom of the duct. You can pull the actuator down, then the inlet will open. When you push the actuator back up, you close it again. Under no circumstances should you try to open it by turning the actuator. The actuator may only be pulled or pushed, otherwise the attachment of the actuator to the inlet can break off.

What should be considered during operation?

- Always secure the hood with the rubber loops. Cross winds can raise the hood and create very dangerous situations.
- If the visor fogs up and Naca-Duct-ventilation doesn't help, open it a little until you have good vision again. There are problems especially in cold, damp weather when you stop at full speed. Open your visor at traffic lights when these problems arise.
- Use the adjustment of the Naca-Duct for comfortable ventilation while driving. Penetrating rain should be automatically routed outside through the side drainage holes. If necessary, check the permeability of the openings.
- Caution: the side view is restricted by the A-pillar. You should drive very carefully at confusing intersections and turning situations, especially if the side windows are fogged up. In such situations, you can get a good view to the side by lifting the hood slightly.

6.3 Racehood

The racing hood is used in the same way as the everyday hood with moped visor. It is still slightly more efficient than the everyday hood and has a slightly better side view due to the narrower A-pillar. However, the front visor is not scratch-resistant.

7. Other accessories

7.1 Luggage Compartments

The optional luggage compartments allow additional loading of the vehicle in the front. They are particularly suitable for items that are not used that often, e.g. B. Tools, spare jackets and spare parts. Loading the compartments further improves driving stability, as more weight is stored near the front axle. They can access the compartments while seated in the vehicle. However, if their arms are too short, they can reach into it from the side while standing next to the vehicle. You don't necessarily have to open the service hatch in the bow. Just try it while standing to the side of the vehicle.

If you use third-party pedals with a higher Q-factor or shoes with side shoe trees, you may come into contact with the compartments.

7.2 Air-Suspension

The optional air suspension allows the suspension to be adjusted via an auto valve. This allows you to adapt the suspension to larger luggage loads.

7.3 Headrest Adapter

With the headrest adapters, you can quickly adapt the vehicle to different driver sizes. Read how to use them in chapter 5.7. Here are the approximate sizes again:

- Persons from 145-165 cm choose the adapter small
- Persons from 165-180 cm choose the adapter medium
- People over 180 cm usually do not need an adapter at all.

7.4 Armrests

The armrests are a very valuable tool to drive comfortably and safely. You can adjust the supports to your exact size using the Velcro on the side. For the settings, please read chapter 5.8

Try what suits you better: The armrests can support the elbow tips directly. If this causes tenderness and numbness, you can also position the crutches to support your upper arms (triceps).

7.5 Hotspot safety Module

The optional hotspot is an extension of the security features. The following aspects are included:

The hotspot acts as additional rollover protection in the event of a sideways tipping over.

It contains the lighting system and achieves better visibility in traffic due to its exposed high position. The high position of the headlight illuminates the road more effectively.

The hotspot illuminates the front part of the vehicle at night and makes its contours more visible to other road users.

Possible disadvantages: Some users do not get along with these effects (illumination of the vehicle) so well and driving in fog also causes slightly poorer visibility.

7.6 Chain cover behind the seat

This cover protects the chain tubes behind the seat. It comes in handy when you want to position luggage behind the seat. Don't put heavy luggage on the bare chain tubes, because then they will be pushed out of your ideal line and the drive will no longer run efficiently. The chain then rubs in the chain tube. With the carbon cover you can avoid this and use the space behind the seat for luggage.

We hope that with these instructions we have given you a safe introduction to the world of Bülk MK1 driving.

We wish you a lot of fun and driving pleasure!

Your Velomobile World Team!