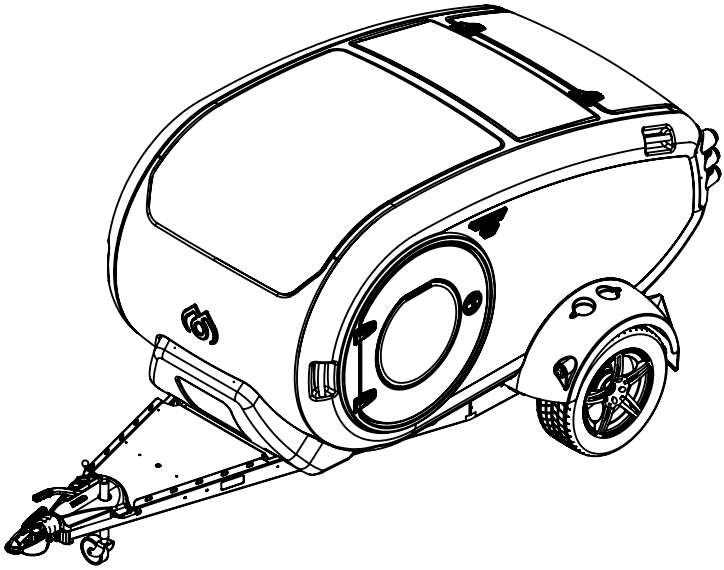
MINK 2.0
OWNER´S MANUAL

2020



MINK CAMPERS

Mink Campers Head Office Sidumuli 22, 108 Reykjavik, Iceland

Welcome to the MINK family!

We can't wait for you to set sail and explore the wild, but before you do it's important to get acqauinted with your MINK and learn the ropes of operating it and keeping it in mint condition.

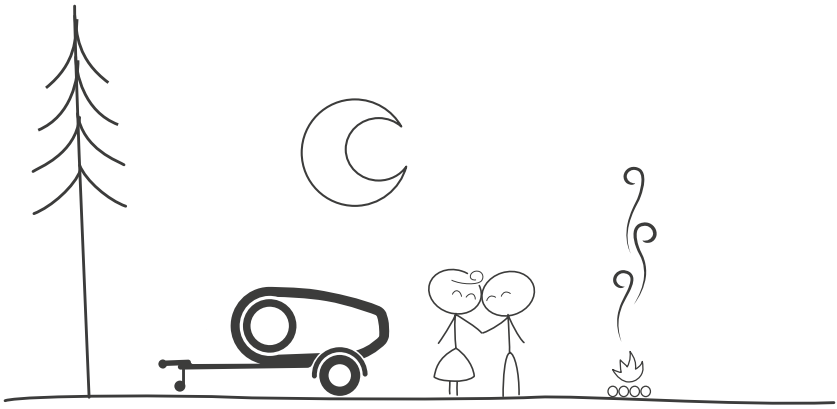
Not all sections of the manual may apply to your camper as it may be equipped with various optional extras. We also continuously strive to improve our products to stay at the forefront of adventure.

Should anything come up that needs more clarification we encourage you to be in touch with your MINK dealer.

We'd love to be part of your adventures beyond this guide and beyond the MINK. Share your story on social media with #minkcampers or send us a message at team@minkcampers.com

We wish you a safe and adventurous journey with your MINK camper.

The MINK Team



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General information

Our campers are continuously being developed. Please understand that we reserve the right to make changes to their equipment, shape and technology.

These instructions also describe equipment which may vary from the standard scope of delivery.

Therefore, MINK shall not be liable for any claims arising from the contents of this handbook. The equipment that has been implemented at the time of printing is described in these operating instructions. Equivalent equipment has been implemented in all of the different layouts. Please understand that we cannot describe all of the individual variations. Your MINK dealer will be pleased to answer any special questions regarding the equipment and technology of your camper.

Your MINK camper has been built in accordance with the latest technology and recognised safety regulations. Despite all of these safety measures, it is possible that people may be hurt or the caravan damaged if the safety instructions in this user's manual are not followed.



We would explicitly like to point out that we do not accept any liability for damages or malfunctions that arise because these operating instructions have been ignored.

Only operate the trailer if it is in perfect technical condition.

- Malfunctions that impair the safety of people or the camper itself must be repaired immediately by a qualified firm.
- The brake system and the electrial system may only be inspected and repaired by an authorised specialist.
- Specified inspection and MOT deadlines must be met.

Specifations

Dimensions

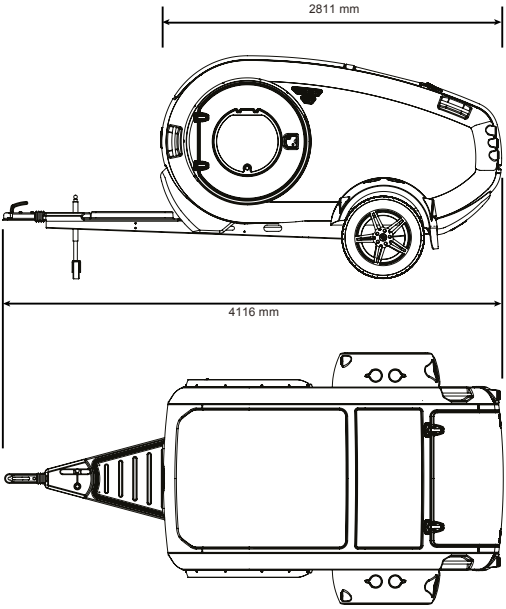
Overall length: 4116 mm (162 inches)
Overall height: 1829 mm (72 inches)
Overall width: 2080 mm (81.9 inches)
Cabin width: 1511 mm (59.5 inches)

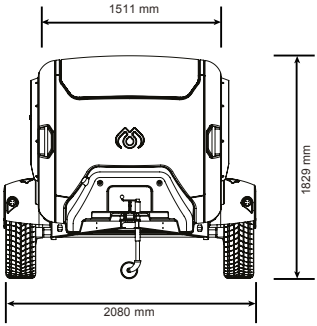
Wheels: 17 x 8, 5 x 112
Tires: 225 / 55 R 17

Tongue height: 450 mm (18 inches)
Road clearance: 330 mm (13 inches)

Weight

Gross weight: 750 kg
Net weight: 510 kg
Tongue weight: 75 kg

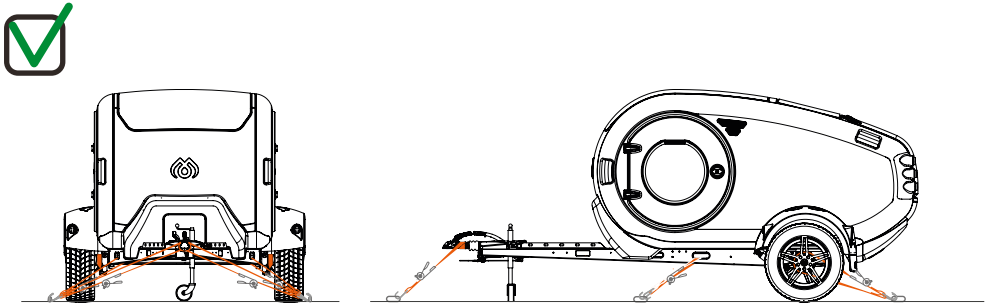




Instructions for Transporters

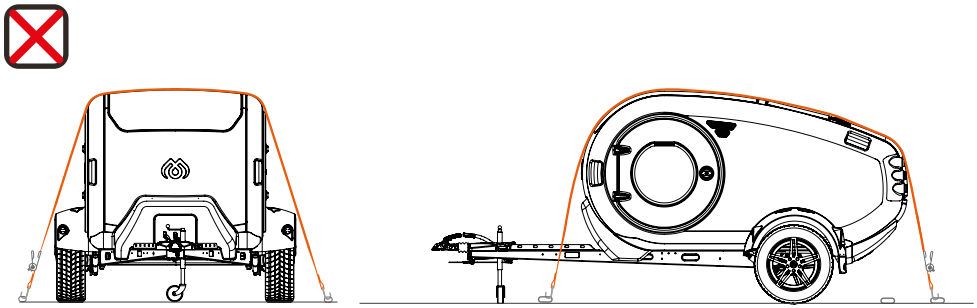
Correct way of fastening

In order to fasten the caravan for transport, make sure you fasten all fasteners to the under-carriage. Use the tongue, axle and anchor points as shown below.



Do not do this

Do not in any way fix the caravan by leading the rathcet strap over the shell. This may casue damage to the shell! Fasteners must be fixed to the under-carriage like shown above.



Before the first trip

You should certainly familiarize yourself thoroughly with the contents of this handbook; it is much more than a reference book.

Fill out the guarantee cards for the built-in appliances in the separate instructions, and send the guarantee cards to the respective manufacturers. In doing so, you secure your right to a guarantee for all devices.



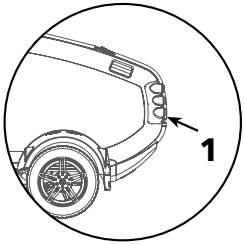
MINK grants a 3-year guarantee on the watertightness of the caravan in accordance with guarantee conditions.
When you accept the vehicle you will receive the guarantee booklet, "Three-Year Guarantee on Watertightness" from your MINK dealer.



Annual leak checks are not free of charge.
Warning: If no leak inspection is performed, your right to the 3-year guarantee loses its validity.

Designations in these operating instructions

Texts and illustrations
The texts which accompany illustrations are found directly to the left or right of the illustrations. Details in illustrations (here: Light) are marked with position numbers **1**.



Lists
Lists are set out in bullet-point form, indicated by a hyphen "-" in front of the first word of each point.

Procedural guidelines
Procedural guidelines are also based on key points and begin with a round sentence opener. "•".

Should there be any equipment or model that is not described in this user manual, please note the enclosed additional operating instructions.

Timeliness of This Manual
The high level of quality and security for caravans is ensured by means of continuous further development. In very rare cases, there may be a difference between the description and the vehicle itself.

Safety

Intended use

This camper has been designed as a mobile travel accommodation. It is not intended for permanent residence. Furthermore, no more than the number of people for which this camper has been planned may spend the night in the vehicle.
When the camper is on the road, it may only be used in accordance with road traffic regulations and national vehicle safety standards. This camper is exclusively suited to being towed by a car, not by lorries, buses or similar vehicles. It may not be used to transport people/animals and/or goods. While driving, people/animals may not remain in the camper. When the camper is on the road, it may only be used for carrying personal equipment. Transporting unsecured loads and/or packages is forbidden.
Please ensure that the technically permissible maximum weight of the camper and the permitted axle load is exceeded.
No use of the camper other than that described here is permitted; any other use is regarded as contrary to the intended use.

General information

- The camper may only be driven on public roads by someone with a valid driving licence category for such vehicles.
- The individual manufacturer's operating and instruction manual(s) must be observed when using built-in devices (heating system, cooker, etc.).
- The measurements, weight and driving performance of the trailer may change if accessories or optional extras have been installed. Some accessories that are fitted after purchase of the vehicle must be entered in the registration document.
- Use only tyres and rims that have been approved for your camper. Information on tyre and rim sizes can be found in the vehicle's registration document or on page 31 "Tyres and Wheels".



Warnings and information labels are attached both inside and outside the vehicle. These are meant for your safety and may not be removed.

Fire prevention measures

- Never leave children unattended in the vehicle.
- Keep flammable materials away from all heating and cooking appliances.
- Changes to the electrical system or built-in devices may only be carried out by professional, authorised workshops.
- Make sure to have a fire extinguisher close by.
- Ensure that everyone is familiar with the guidelines on the fire extinguisher.
- Place a fire cover near the gas cooker.
- Keep all escape routes clear.
- Ensure that everyone is familiar with the fire prevention measures on site.

Emergency equipment

To be prepared in case of an emergency, you should always carry the three emergency devices on board and familiarize yourself with them.

- First-aid kit
- Reflectve jacket
- Warning triangle

First-aid kit

The first-aid kit should alwyas be kept handy and should be placed in the carvan or base vehicle. Objects removed from the firs-aid kit should be replaced right away. Make sure to check the expiry date regularly.

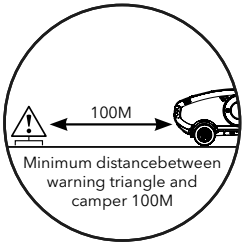
Reflective jacket

Please refer to the local regulations for carrying and wearing a high-visibility vest with white retro-reflective stripes in accordance with EN 471 whenever you step outside the vehicle on roads outside built-up areas or on the hard shoulder.

The driver must put on this high-visibility vest when the vehicle

• comes to a stop outside city limits on an obscure rural road because of an accident or breakdown, if the view is poor due to bad weather, in twilight or darkness, or

• when it must be secured by means of a warning triangle on the emergency strip of the engineway because of an accident or breakdown.



Warning triangle

The warning triangle should also be kept handy in a fixed place in the base vehicle/camper, preferably together with the first aid kit.

- Place the contact-braking cable around the coupling ball; in the case of detachable tow couplings, possibly around the eyelet provided for that purpose.

In an emergency

- Set up the warning triangle at least 100 m in front of the danger zone!

Please observe the national regulations of the countries you are driving through with regard to carrying and wearing emergency equipment.

Minimum distance between warning triangle and camper should be 100 m.

What to observe before your first drive

Vehicle registration

Every vehicle which uses public roads is subject to registration. This includes your new caravan. Most caravans are registered by your Mink Dealer. If needed, you can register the caravan at your local registration office.
The following documents are required to initiate the registration process:

- Motor Vehicle Registration Certificate Part II and/or Certificate of Conformity (CoC)
- Electronic Insurance Certificate/eIC Number
- Personal identification or proof of residence
- Possibly, power of attorney to have someone else register the caravan.
- If applicable: direct debit mandate for taxes

If required, please do not forget to apply for a „100" speed sticker

General inspection

Make sure to comly with local regulations in regards to inspection intervals. Many countries require a major inspection every two years.

A general vehicle inspection can be carried out by an officially recognised expert (e.g. DEKRA Expert mobile home inspection).

The following documents must be presented at each inspection:
- motor vehicle registration certificate, Part I.



Any changes made to the camper that fall under national traffic regulations must be approved and entered in the registration document!
If you have any further questions or difficulties, your authorised MINK dealer will always be available to assist you.



Fit for a Speed of 100 k/mh (60 mph)

Your Mink caravan is technically equipped for a maximum speed of 100 km/h (60 mph). Under no circumstances may this speed be exceeded!

Note the permissible maximum speeds for trailer carriages in the country in which you are travelling!

The following points must be observed, because you are responsible for adhering to them. If they are not met, the maximum speed for the caravan is 80 km/h (50 mph)!

a) The base vehicle must be equipped with an antilocking system/anti-lock device and may not exceed an overall mass of 3.5 tons.

b) The caravan must be equipped with hydraulic vibration dampers (shock absorbers); naturally, your new MINK caravan is equipped with these.

c) The caravan's tires may be no more than six years old. They must be marked at least with an L (= 75 mph) for the appropriate speed category.

d) The caravan must be equipped with a stabilising unit in accordance with ISO 11555-1.

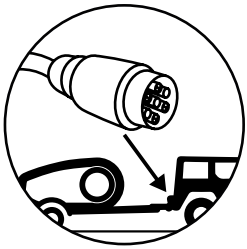
The overall mass of the caravan may not exceed the unladen mass of the car.

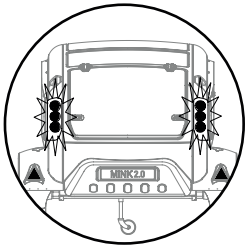
Free interchangeability of base vehicle and caravan: Different caravans may be combined with different base vehicles.
You are responsible for ensuring that the preceding regulations are met if you plan to drive at 100 km/h.



Tighten the nuts on the wheels after driving the first 50 km with your camper.

Before each drive





Road safety

- The electric connection between the base vehicle (your car) and the trailer must function perfectly.
- Before driving, check that the signalling and lighting systems and brakes function correctly.
- If the vehicle has been standing for a longer period of time (approx. 10 months) have an authorised workshop check the brake system and the accelerator system.
- Set the vehicle's wing mirror.
- In winter, the roof must be cleared of snow and ice before driving.
- Regularly check the tyre pressure before driving. False tyre pressure can cause excessive wear, damage to the tyres or even lead to a burst tyre.

Only begin to drive when your camper fulfils all of the conditions for roadworthiness.

As the driver of this vehicle, you are responsible for the state of the car and trailer. Therefore, you must note the following points:

Exterior

Go around the carriage and prepare for the drive as follows:

Preparation of the vehicle:

- The caravan must be hitched properly. Release the handbrake for the caravan and place the contactbraking cable around the ball neck of the permanently attached tow coupling. If the tow coupling is detachable, the contact-breaking cable must be hooked into the eyelet provided on towing bracket the for that purpose.
- Plug the 13-channel plug in the socket of the base vehicle.
- Turn the winding stanchions and the front landing

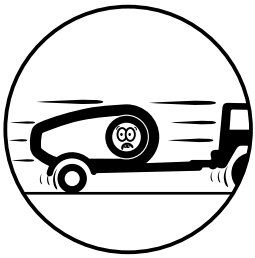
wheel up ward and secure them.
- Close and firmly lock all of the windows. Close and lock the entrance doors and rear hatch.
- If necessary, pull the electrical cord to the 230V mains supply out of the exterior socket.
- If necessary, secure all bicycles and lash them to prevent slip - ensuring that they do not cover any lighting equipment.

Interior

You must also prepare the interior of the caravan.

Preparing the interior:

- Sort all loose objects and store them in their respective compartments.
- Store heavy and / or voluminous objects (e.g. radio, beverage cases) safely before you start your journey, securing them to prevent them from shifting.
- Shut off all interior lighting.
- Ensure that all fluids are secured to prevent leakage.
- Shut off the heating.



Staying in the caravan during the drive is prohibited by law!

Ensure that there is sufficient ventilation.

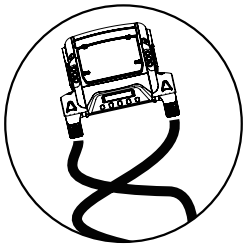
Never cover up built-in forced ventilation. Ensure that forced ventilation is not covered by snow or leaves as this increases the danger of suffocation.

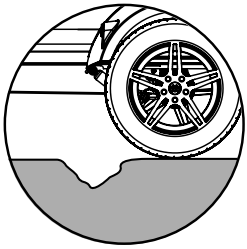
Driving

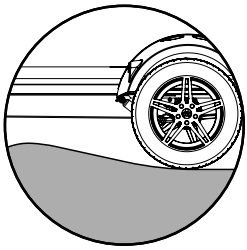
Your carriage is considerably longer than a car.

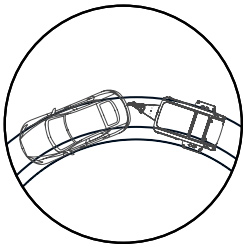
Rules for driving

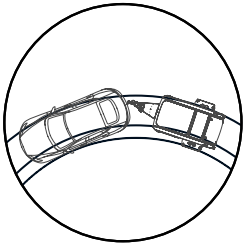
- Do not underestimate the length of the carriage. Due to the relatively long rear overhang, larger trailers can swing out and, under adverse conditions, the rear end of the trailer can hit the ground.
- Exercise special caution when driving toward yards and through gates.
- In conditions with strong side winds, slick ice or wet roads, the carriage could move back and forth.
- Adjust driving speed to overall street and traffic conditions.
- Long, lightly sloping roads are potentially dangerous. Measure your speed from the outset in such a manner that the carriage can be accelerated, if necessary, without endangering other drivers or pedestrians.
- If the carriage moves back and forth on a sloping road, brake carefully but rapidly if the carriage forms a line, i.e. if it is stretched.
- Never increase speed if the carriage becomes pendulous.
- Do not drive down a hill any faster than you would drive up one.
- Long, gently sloping downhill slopes can be dangerous. Calculate your speed from the very beginning so that, if necessary, it is still possible to accelerate without endangering other road users.
- When overtaking or being overtaken by trucks or buses, the carriage can be caught up in air suction. This could cause the caravan to sling or become pendulous.
- Drive with foresight; on longer trips, stop at regular intervals for breaks.
- Drive carefully over potholes as the carriage may bounce and behae irratically.
- Drive with caution over speed bumps as the carriage may loose contact with with the ground and behave pendulous when settling when not being cautious.
- The carriage does not follow the path of the card. Instead it may follow a tighter path.











Driving around curves

Your carriage is considerably longer than a car.

Rules for driving around curves

- Do not take curves too quickly or too sharply!
- Take the curve at a somewhat wider radius when turning.
- Note that the caravan can sheer out of line over the rear.

Brakes

A trailer carriage behaves differently from an individual vehicle while braking. Therefore, it is advis-able (especially for inexperienced drivers) to conduct several braking tests on a suitable surface. The braking distance for a carriage is longer than that of an individual vehicle. The load in the caravan also has a significant influence on the braking distance.

Rules for braking

- Note the longer braking distance on wet roads.
- When driving down a mountain, do not select a gear that is higher than the one used when driving up a mountain.
- During long drives over passes, permanently overrunning the caravan can cause the wheel brakes to heat up considerably. If necessary, you should allow enough time to enable them to cool down again.

Due to the design of the brakes, there may be increased wear in the brake lining during the initial brake-in phase. Despite carrying out automatic brake adjustments on all MINK trailers, the basic setting for the brakes must be checked by an authorised specialist and adjusted if necessary (initial inspection) after having driven 500 km.

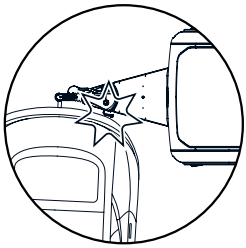
Should there be any defects or malfunctions in the driving performance of the camper, please notify roadside assistance and have any maintenance and repair work carried out by an authorised specialist.

Driving in reverse

Your MINK caravan has a braking system with automatic reverse. It enables you to drive backwards without applying the brakes, because the overrun coupling does not differentiate between overrunning or reversing the caravan. When you back up the caravan, you must first overcome a slight residual brake torque in order to activate the automatic reverse. You can then back up the caravan without any difficulty. The next time the caravan moves forward, the normal braking facility is then automatically applied again.

The caravan's brakes are deactivated when you drive in reverse.

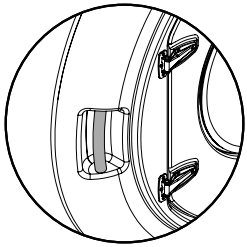
Rules for driving in reverse



- The caravan tilts in the opposite direction in which you steer.
- Use a guide when driving in reverse.

If you corner too tight the tongue of the caravan may hit the car, causing damage.
The rear view is limited when the caravan is attached. Make sure you are clear to steer.

Shunting (moving caravan by hand)



Your camper is significantly larger than a car.

Rules for moving caravan

- There is a significant blind spot when moving the camper, even when the exterior mirrors are properly adjusted.

- Use a another person when turning into difficult parking spots.

When positioning the caravan manually, only use the steering handles at the front and rear ends of the caravan. Never push on the plastic parts or the walls.

After the drive

Choosing a parking place

Rules for choosing a parking place:

- If at all possible, check the place selected for parking in daylight.
- The parking place should be as horizontal as possible.
- Check to see that the entry step is positioned horizontally.
- Balance the lengthwise slant with the front landing wheel.
- Balance the crosswise slant by laying appropriate boards or a ramp under a wheel.



Do not use the rotating stanchions to compensate for any differences in height.

Securing the vehicle

Rules for securing the vehicle:

- Set the parking brake.
- Extend the nose wheel to the point when the camper is level.
- If the ground is soft, place supports under the nose wheel
- It is advisable to secure the camper with chocks to secure the wheels.



A spring brake on the brake lever ensures that the brakes will not disengage by itself, even if the rotation direction is reversed from driving forwards to backwards. If you have activated automatic reverse, the brake lever must be moved beyond the dead centre position to its final position.

Chassis

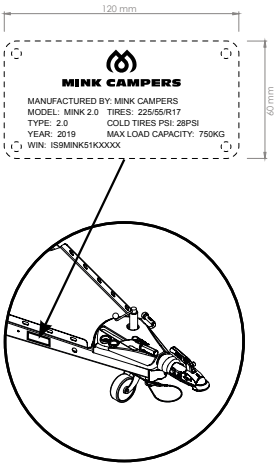
General information

Frame parts and axles are components of the undercarriage. No technical modifications are allowed; otherwise, the terms of operation are no longer valid!

Technical changes are possible only with the manufacturer released .

For the sake of traffic safety, the vehicle undercarriage must be maintained just as conscientiously as the base vehicle itself. This maintenance should be carried out by your MINK dealer. If spare parts are required, use only the original parts designated by the manufacturer.

Generally, campers are not suitable for pulling by lorries or buses. If this is done permanently, they will be damaged.



Name plate

Permit number
Vehicle ID number (FIN)
Max. drawbar load
Permissible axle load, 1st axle
Permissible axle load, 2nd axle
Permissible maximum weight

Do not remove or change the name plate.

Loading - General information

Rules for loading:

- Spread the load evenly between the left and right-hand side of the caravan. Heavy or bulky objects belong in the lower storage compartments and near the axle.
- Never focus the load in the caravan to the rear (danger of swinging back and forth).
- Store baggage securely and make sure it does not tumble and slip. If necessary, stow heavy objects in the base vehicle.
- Heavy objects should be stowed securely to prevent them from slipping.
- Objects in the kitchen should be stowed away in the boxes and not placed on the workbench.
- Secure doors and flaps.
- Check the technically permissible maximum weight and the axle load(s) after you have finished loading.



The maximum axle loads entered in the documentation for this vehicle as well as the technically permissible maximum weight must not be exceeded. Overloading can cause the tyres to break down or even burst! This increases the danger that you may lose control of the vehicle. Therefore, you endanger yourself and other road users.



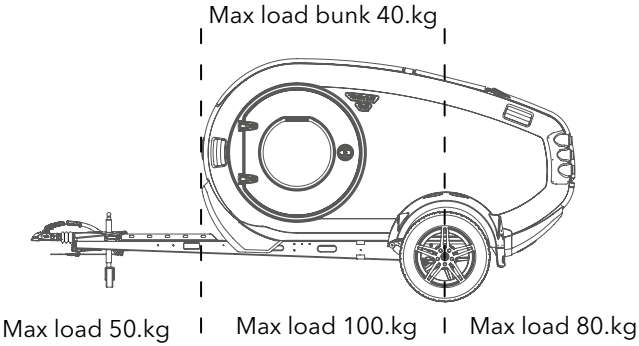
If you are not sure whether or not you have overloaded the vehicle, you should have it weighed at a public weighing facility.

The lower the caravan's centre of gravity, the better its driving performance and response in curves.

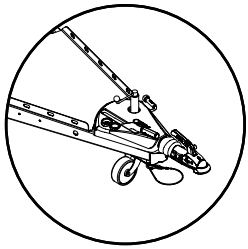
Weight distribution when stowing

When stowing objects in the MINK we suggest following the guidelines below for the distribution of weight. Try to ensure equal distribution of weight between the left and right side.

When adding weight to the front of the Mink, bear in mind that you do not exceed the maximum allowed tongue weight for your vehicle.



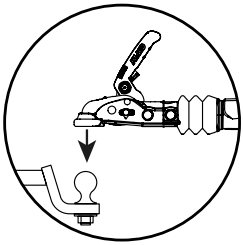
Safety coupling



The caravan has been fitted with a safety coupling with tracking stabiliser to prevent it from becoming pendulous or pitching. This system conforms to ISO 11555-1. It has been permitted for use up to a maximum speed of 100 km/h.
Please note the additional operating instructions and the manufacturer's safety instructions.

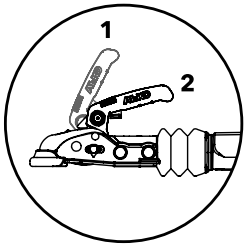
WARNING: A safety coupling does not suspend the laws of physics. If the limits (of speed and weight conditions) are exceeded, traction and cornering force are reduced, which then becomes the responsibility of the driver. Therefore, avoid elevated risks.

Preparation for hitching/unhitching



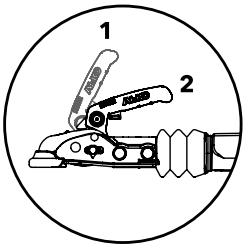
WARNING: Ensure that the metal of your ball coupler is bright and free of grease.

Hitching



- To hitch and unhitch, open the tension ball coupler (lever in position **1**).
- Place the contact-breaking cable around the coupling ball; in the case of detachable tow couplings, possibly around the eyelet provided for that purpose.
- The open tension ball coupler is set onto the coupling ball of the base vehicle. The tension ball coupler usually closes by applying downward pressure since the support load is sufficient (lever in position **2**).
- Insert the 13-pole plug while turning, in accordance with the screw thread.

WARNING: Do not step on the drawbar cover when the camper is hitched. The maximum loads for the camper and/or base vehicle could be exceeded and the combination could buckle. When dealing with higher drawbar loads hitching and unhitching is simplified by the use of a support wheel.



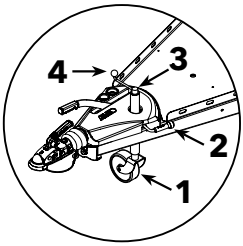
Unhitching

- Release the overrun coupling so that the gangways bellow are expanded.
- Release the contact-breaking cable and pull out the 13-pole plug.
- Slowly pull the lever upwards into position **1** to switch off the stabilizing device and the coupling opens.
- After the front landing wheel has been rotated out, the caravan can be disconnected from the base vehicle.

Only uncouple the camper when it is in a horizontal position, never anywhere near uphill or downhill slopes.

If you do not plan on using the caravan for a longer period of time, you should store it with the ball coupling closed.

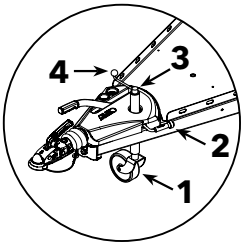
Front landing wheel



- Hitch the caravan to the base vehicle, aligning the front landing wheel **1** to the rear end of the caravan.
- Loosen the tommy screw **2**.
- Pull the spindle tube **3** up as far as possible.
- Tighten the tommy screw **2**.
- Turn the crank of the front landing wheel **4** clockwise to raise the wheel as far as possible and secure it to prevent it from twisting.

Before driving, always make sure that the front landing wheel has been rotated upwards as far as possible and secure it.

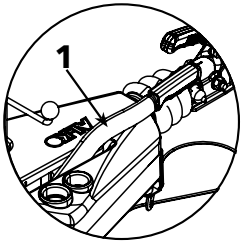
To lower the landing wheel



- Loosen the tommy screw **2**.
- Lower the spindle tube **3** as far as possible until the front landing wheel is approx. 70 mm above the ground.
- Tighten the tommy screw **2**.
- Turn the crank of the front landing wheel **4** counter-clockwise to lower the wheel until it touches the ground.
- Unhitch the caravan from the base vehicle and, if necessary, lower the front land wheel further.

Locking brake facilities

The components of the brake system, especially the overrun coupling, transmission and wheel brakes have been checked in accordance with the corresponding EU directives and may only be used in the licensed combination.
If you alter or modify any components of the brake facilities, the operation permission loses its validity. Modifications may only be made with the manufacturer's permission.



Parking the caravan

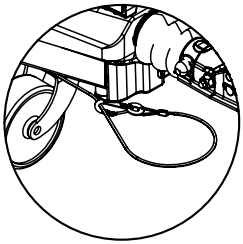
When parking the caravan, the locking brake of the caravan must be activated.

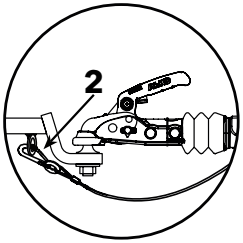
To lock

- Pull the locking brake lever upward by the handle **1** until it locks into place. The locking brake lever is pressed into the final position by the gas pressure spring.

To release

- Push the hand brake forward to the starting position.





Rapid-emergency brake

The rapid-emergency brake is combined with the hand brake. If the caravan is involuntarily disconnected from the base vehicle, the hand brake will be tightened or moved beyond the dead centre position by the traction force of the rapid-emergency brake **2**. The hand brake will be employed and the caravan will do an emergency brake. This prevents the caravan from continuing to roll without braking after it has been disconnected.



Before driving, the rapid-emergency brake must be fastened to the base vehicle.

Overrunning equipment and wheel brakes

The overrunning brake facility consists of the overrun coupling, a transmission and the wheel brakes. Should the caravan bump into the base vehicle, the overrunning brake facility ensures that it will automatically brake. In other words, the overrunning brake facility functions independently from the base vehicle's brake system. The brake force that is generated depends mainly on how intensely the base vehicle brakes and how heavily the caravan has been loaded. A shock absorber integrated in the overrun coupling and with a defined response threshold ensures, on the one hand, a smooth overrun while, on the other hand, preventing the caravan from braking if you only take your foot off the gas or change gears in the base vehicle.



We recommend that you always check this is functioning correctly before using the caravan.

Checking the overrunning equipment

1. If it is possible to push the towbar more than halfway (approx. 5 mm) in when the locking brake has been activated, the braking system must be regulated immediately by an experienced shop.

2. To check the reaction point: Activate the locking brake and push the caravan backwards until the hand brake lever is completely tilted. Then push the safety clutch into the overrunning equipment. The towbar must extend into the neutral position by itself by means of the gas cushion in the hydraulic shock absorber. Should this procedure take longer than 30 seconds, the overrunning equipment must be checked by an experienced shop.

Wheel brakes

The MINK has an automatic brake adjustment that independently compensates for wear in the brake lining.

- Regular adjustment of the brakes is not necessary.
- Brake adjustment is automatically deactivated when driving in reverse.

Despite this brake adjustment, the brake linings are generally wear and tear parts. Therefore, their condition must be checked every 5,000 km, but no later than once every year. Visual inspection is carried out through the small inspection holes on the rear of the wheel brakes.
Please go to an authorised specialist if, when checking the overrunning brakes, the drawbar can be pushed in more than 60 mm.



Every trailer must undergo an initial inspection by an authorised specialist after the first 500 km



- When driving downhill on a mountain pass, check to ensure that the brakes are cooled sufficiently.
- Put the base vehicle into a lower gear and drive downhill at slow speed.
- Stretch the car and trailer as often as possible to prevent the trailer from continuously bumping into the car.
- Always make use of parking areas and passing points to give the brakes a chance to cool off.

Wheels and Tyres

The following applies for tyre bolts:



If you are driving a new vehicle, or after changing a tyre, tighten the wheel bolts or nuts after you have driven the first 50 km and then again after the following 100 km.

For your safety, do not use any tyres or fixing material other than what was originally stipulated. Wheel bolts and nuts should then be checked regularly to ensure that they fit tightly.

Tightening torque for wheel nuts and bolts:

Rim	Tightening torque
Metal wheel rim	110 Nm
Light alloy rim	120 Nm

Check the tightening torques every 5,000 km or at least once a year.

Tyres

Only use those tyres designated in the registration documents. Other tyre sizes may only be used with the permission of the manufacturer.

- Check tyres regularly to ensure that the tread is worn down evenly; check tread depth; check for external damages.
- Always use the same make and model of tyres (summer or winter tyres).
- Drive carefully on new tyres for a stretch of approx. 100 km to enable them to develop a full road grip.

Wheel size and tyre size / pressure:

Tyre pressure: 172 kPa (25 psi)
Tyre size: 225 / 55 R17
Speed rating: minimum L
Load index: minimum 75
Wheels: 8J17H2 Et. 26

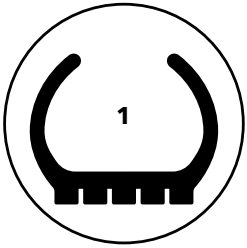
Driving to protect the tyres

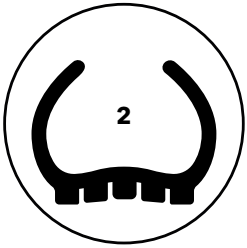
Only use those tyres designated in the registration documents. Other tyre sizes may only be used with the permission of the manufacturer.

- Avoid braking sharply or driving off with a racing start.
- Avoid long drives on poor roads.
- Never drive when the vehicle is overloaded.

Tyre pressure

Only one tyre size is now entered in the motor vehicle registration certificate, Parts I and II. This must not necessarily correspond with the size of the tyres mounted on the vehicle. Should you have any queries, please contact your dealer.







Rules for checking tyre pressure:

- Tyres must be checked when they are cold.
- When inspecting or correcting warm tyres, the pressure must be 0.3 bar higher than when the tyres are cold.
- Check and fix tyre pressure every four weeks (but at least every three months) and before every drive.
- If driving on low tyre pressure is unavoidable (i.e., from the campsite to the nearest service station) you should drive at a maximum speed of 20 km/h.

Rules for tyre pressure:

- correct tyre pressure **1 (25 psi)**
- tyre pressure too low **2**
- tyre pressure too high **3**

If the tyre pressure is too low, the tyre can overheat. This can result in serious damage.

Profile depth and age of tyres

New tyres are needed (at the latest) when the profile depth measures 1.6 mm. Pattern depth regulations can vary from country to country.

The minimum tread depth only guarantees minimum safety while driving!

Tyres may never be exchanged from one side to the other, i.e. from the right-hand side of the vehicle to the left-hand side and vice versa.

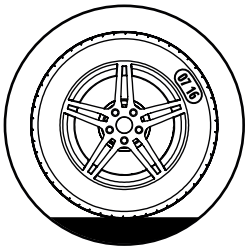
Tyres age even when used rarely or not at all.

Tyre manufacturers' recommendation

- Change tyres after six years, regardless of profile depth.
- Avoid striking curbs, potholes or other obstacles.

Age of tyres

Tyres should not be more than 6 years old, because on the one hand your permission to drive the caravan at 100 km/h will elapse after this period and, on the other hand, the material wears out due to age and if the tyres stand too long in one spot. The 4-digit DOT number on the side of the tyre (if necessary, check the inside) shows the date of manufacture. The first 2 digits refer to the week, the last 2 to the year it was manufactured.



Example:

DOT 0716 means week 7 in the year of manufacture (here: 2016)

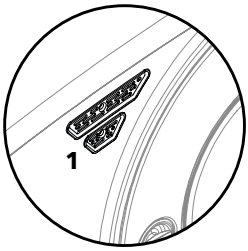
Rims

Only use rims that are covered by the vehicle licence. Should you wish to use other rims, please note the following:

Rules for the use of other rims:

- Size,
- mechanisms,
- compression depth and
- the load/bearing capacity must be sufficient for the permissible total mass.
- The chuck cone of the fastening screw must correspond to the rim mechanisms.

Exterior structure



The following applies for ventilation

Proper ventilation and de-aerating of the vehicle is a prerequisite for ideal living comfort. Vents for draft-free forced ventilation have been integrated in the sides of the Mink **1**.

Under no circumstances may the safety ventilation be shut, not even slightly.

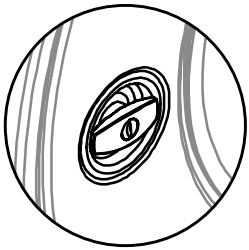
Opening and closing doors

Keys
The following keys are provided with the caravan:
Two keys which fit into the following locks:
- entry door
- rear hatch

The entry door is your escape route in an emergency. Therefore, never block the door from the outside!

Only drive when the entry door and rear hatch are shut and secured.

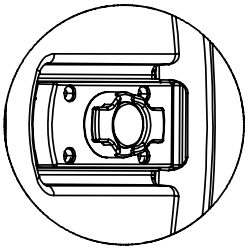
External entry door



To unlock
- Turn the key to the left until you hear the lock open.
- Turn the key back to an upright position and pull it out.
- Pull on the door handle.
- Open the door.

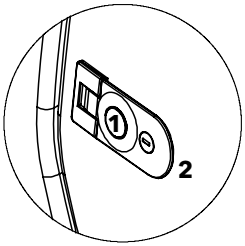
To lock
- Close the door.
- Turn the key to the right until you hear the latch click into place.
- Turn the key back to an upright position and pull it out.

Internal entry door



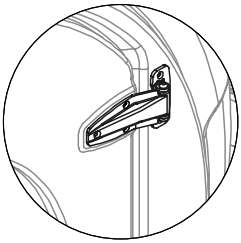
Opening the door
- Turn the handle to an angle of about 45° upwards and push out to open the door.

Locking the door from the inside
- Turn the door handle to an angle of about 45° downwards (see illustration).



Kitchen hatch lock

To open the rear hatch, press the button **1** on each side of the hatch and pull the hatch upwards. Be aware of strong winds that might forcefully open the hatch and damage it.
When closing the hatch, pull it down and press the handle **2** so it snaps in place.



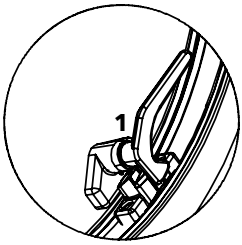
Hinges

Make sure to lubricate hinges on the rear hatch and on each side door, in order to keep them operating sufficiently. Be aware that strong wind can slam open the door if not being cautious.

Interior structure

Windows

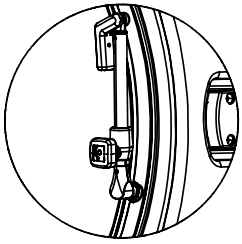
All of the window latches **1** on the long bottom edge of the window have locking knobs. To open these window latches **1**, press the locking knobs.



Adjusting the window

To open

- Turn all of the window latches by 90°.
- Press the window latch outwards with your hand until it is open as far as you would like. Then use your other hand to tighten the turn screw k until you feel the resistance and the window is held in place.



To close

- Loosen the knob and window will drop down.
- Turn all of the window latches to the original position so that they clasp behind the brackets and pull the pane into the seal.

Be aware that the window latches have the option to lock in a semi-closed position for increased ventilation. Windows must be shut while driving.

Never use de-icing spray or an ice scraper for the windows in the camper.

Watch your hands in strong wind so you don't harm yourself.



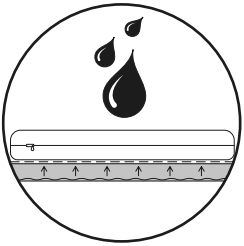
High humidity may cause a light mist to form within the window panes. This will disappear by itself when the weather is drier.



Ventilation

Proper ventilation and de-aerating of the vehicle is a prerequisite for ideal living comfort. Vents for draft-free forced ventilation have been integrated in the sides of the Mink **1**.

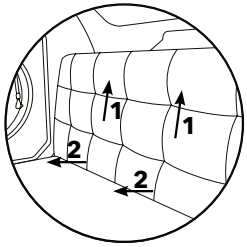
Under no circumstances may the safety ventilation be shut, not even slightly.



Mattress

The mattress should be vaccumed. If necessary place the mattress in such a way that it is kept away from condensation.

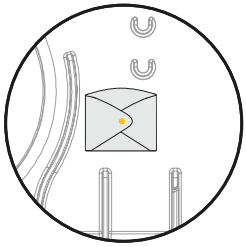
Size of mattress
200 x 140 cm



Head rest

In order to access electricity behind the head rest, slide your fingers down between the mattress and head rest and slide up **1** and pull the lower edge towards you **2**.

Maintenance
Use soapy water and a cloth to clean the head rest surface.



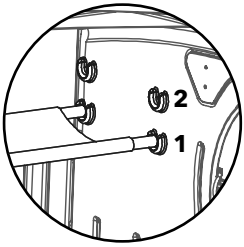
Pocket

Do not load more than 2 kg int othe pocket

Overloading of the pocket may cause damage to it.

Bunk

The max load on the bunk is 40kg.

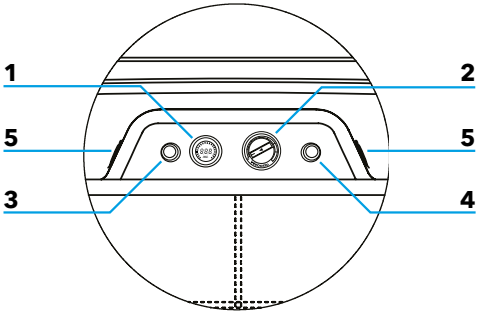


Adjusting the bunk

The bunk can be adjusted in height by moving the wooden rods from position **1** to position **2**. Make sure to adjust all corners of the bunk to the same height.

Buttons

The control unit for lights, battery indicator, heating (optional) and usb plugs is placed above the back rest in the main cabin.



1. Battery indicator for the current status on the battery. Display can be turned on/off with button **3**.

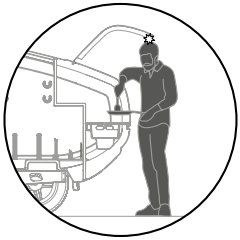
2. Knob **2** to turn on / off the heating unit in the camper. This is an optional accessory.

3. Button **3** to turn on / off the battery indicator for a discreet setting.

4. Light switch to turn on / off the lights in the cabin - vbutton **4**.

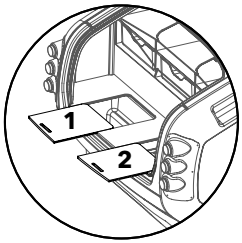
5. Two double USB socket, **5**, to charge USB compatible devices on 5V.

Kitchen



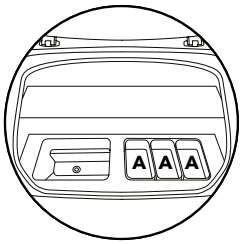
Watch your head when opening the rear hatch and when you ener the kitchen area.

Kitchen



Working the worktop

- 2 sliding lids to access ice chest **1** and storage **2**.
- Use the grooves to pull out the lid with your fingers.
- Make sure to close the lids before closing the hatch.
- Do not place hot items directly on top of the worktop. The gas stove can be used on the worktop.



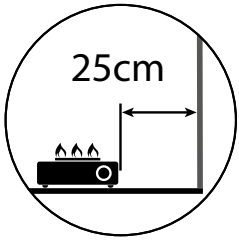
Ice chest

- Use ice to keep things cool in the ice chest.
- You can use our small boxes to store items in the ice chest.
- Max load is 10 kg
- The ice chest has a bottom drain that can be sealed with a plug if needed. Use the drain to flush out water.

Worktop storage

- Fits up to 3 small Mink storage boxes **A**.
- Shallow elongated storage area underneath the boxes - for instance for fish.
- Max load is 15 kg.
- Do not place hot items (eg. gas stove) in the worktop storage.

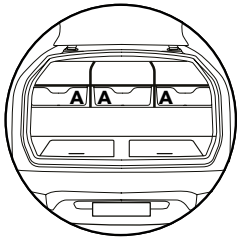
Make sure the gas stove is placed at least 25cm from the side walls in the kitchen when in use. Unless you have a gas stove with protection. then 15cm is sufficient. Otherwise the use can cause damage to the structure.



In low temperatures, below 0°C, the performance of the gas canister can be reduced. It may be necessary to warm up the gas canister, for instance with body heat, to keep up the perfromance.

Shelves

- The shelves can store up to 3 large Mink boxes **A**.
- Rubber bands keep the boxes in place in the lower shelf.
- A safety net keeps the items secure in the top shelf.
- Max load on upper shelf is 20 kg.
- Max load on lower shelf is 25 kg.

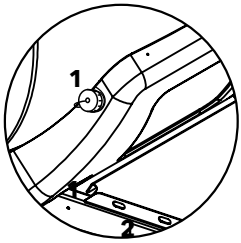


Do not load the kitchen storage more than 25 kg in total even though the combined max load of the storage is higher.

Heating System

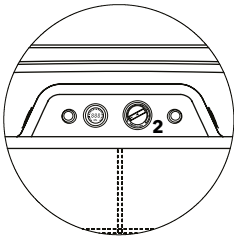
Make sure to shut down the heating system before refuelling.

Heating



Refuelling

- The heating system runs on **DIESEL**.
- The fuel tank is placed at the front of the Mink shell and it holds **12 liters**.
- Make sure to shut down the heating before refuelling.
- Make sure to close the lid **(1)** after refuelling.



Turning on / off the heating

- The heating controls are located on the control unit above the back rest inside the cabin.
- To turn on the heating, simply turn the knob **2** clockwise to the chosen setting.
- To turn off the heating, simply turn the knob counter clockwise back to zero.

Heating tips

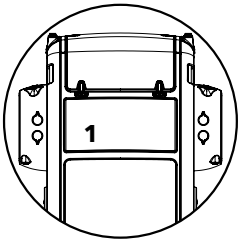
- It may take the heating system a couple of minutes to warm up and start heating properly.
- It may take a couple of minutes for the heating system to shut down after the knob is turned to zero.
- Often it is enough to heat up the camper for appr. 20 minutes before going to bed.
- The heating system has a heating sensor that will turn the system on and off automatically, depending on the chosen setting.
- Always drive with the heating system turned **OFF** and while refuelling.

Make sure to use diesel that is suited for low temperatures, below -20°C. Additives may be needed to prevent the diesel from freezing up.

Solar Panel

It's advicable to clear the solar panel from dust and snow in order to ensure high performance.

Solar panel



Using the solar panel

- Nothing is required from you in order to use the solar panel **1**. It automatically charges the battery onboard the Mink.
- Make sure to wipe off the solar panle from time to time to ensure the best possible performance.

Connecting

- It is possible to connect to the solar panel via the VictronConnect app (Apple App store and Google Play store).
- Through the app you can monitor how much the solar panel charges etc.

Installation of Electrical Devices

Safety tips

The installation of electrical devices in the Mink caravan has been carried out in accordance with the valid regulations and standards.



- Do not remove the signs on electrical components giving safety instructions or danger warnings. The installation spaces around electrical equipment such as distribution fuse boards, electric power supply, etc., may not be used as additional storage spaces.
- Smoking and naked flame are forbidden when checking electrical equipment.
- Inexpert handling of the vehicle's electrical system may endanger your own life as well as that of others.
- The standard version of the caravan is not equipped for internal battery supply (self-sufficient operation). To connect to an external 230 V mains connection, use only a weather-proof, 3-wire extension cord with a CEE plug and connector.
- To operate 12V devices (e.g. refrigerator, etc.) safely while driving, please ensure that the car delivers sufficient voltage. In some cars, the vehicle's operating system protects the battery by switching off devices. For further information, please contact the manufacturer of your car.

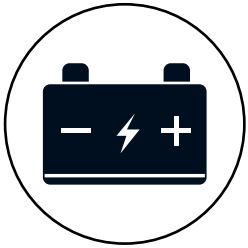
Elements of the electrical system

Advice and instructions

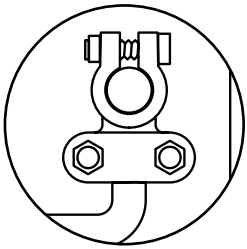
Important

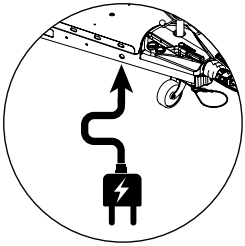
- The trailer's electric system should preferably be inspected within a period of less than three years. If the trailer is used frequently, a competent electrician should inspect the electric system every year and issue a report on the state of the system.
- Any changes to the electrical installations may only be carried out by a professional electrician.
- If necessary, disconnect the battery and switch off the 230V mains before carrying out maintenance work.

Battery



- Please observe the battery manufacturer's operating instructions.
- The acid in the battery is poisonous and corrosive. Avoid contact with eyes and skin.
- The completely discharged battery must be recharged for at least 24 hours. The battery may be damaged if it has been discharged for more than 8 weeks.
- Avoid total discharge since this significantly reduces the performance capacity and service life of the batteries. This may be especially important during winter and low temperatures.
- Check that the battery clamps are secure and remove any layers of oxide.
- If the battery is not used for a longer period of time (e weeks or more) press the pushbutton (see page 87). The standby current used continuously by some electrical devices discharges the battery. Even if the main switch on the control panel has been switched off, the battery can still be charged by the battery charger.
- If the battery has been removed, isolate the positive pole (to prevent short circuits).





Battery charger

- The charger functions in accordance with IU1U0 charging technology.
- In the case of misuse the guarantee and manufacturer's liability will no longer apply.
- Ensure that the battery charger is sufficiently ventilated.

230V automatic circuit breaker with an earth leakage circuit breaker

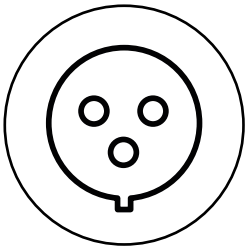
The 230V automatic circuit breaker supplies and protects the 230V devices.

- To switch off the 230V power supply in the entire system, set the 230V automatic circuit breaker to "0" (OFF).

Fuses

- Only replace defective fuses after the cause of the defect has been remedied by a professional electrician.
- The new fuse must have the same amperage as the old one.

Electrical supply



Electricity for the caravan can be obtained from the following connections:

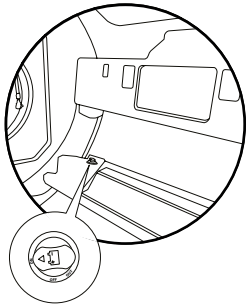
- 230 V mains connection 50 Hz
- via the base vehicle if it is connected using the 13-pole plug (limited functions)
- via a built-in auxiliary battery.
- via solar panel on the roof (optional).

Supply via mains connection

The caravan receives its electric power supply via the 230V DEFA plug on the non-drive side of the tongue.

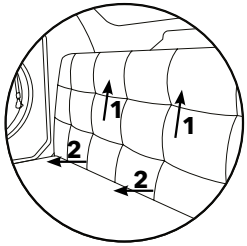
To disconnect the electric connection
The caravan receives its electric power supply via the 230V CEE feeder plug on the side of the vehicle.

In order to switch off the electricity you need to turn the red switch, which is placed behind the head rest. The head rest can be removed by lifting it up and pulling the bottom outwards.



Protecting the 230V system

The 230 V system is protected by a two-pole 13 A automatic circuit breaker I, which is located behind the headrest.



Rules for the mains connection

- Use only a 3 x 2.5 mm² cable with a maximum length of 25 m, a CEEconnector plug and connector to connect the camper to an external 230V mains.

When obtaining electricity via a cable drum, this must be completely unwound, as otherwise induction may cause the cable to heat up, which could lead to burning (provided there is no protection against overheating).

- The 230 V mains connection in the caravan has been designed for a total power consumption of 2300 W. If additional devices requiring electricity are connected, such as a water heater, etc., you must ensure that this electric power value is not exceeded, taking other electrical equipment in use into account.

Operation via base vehicle

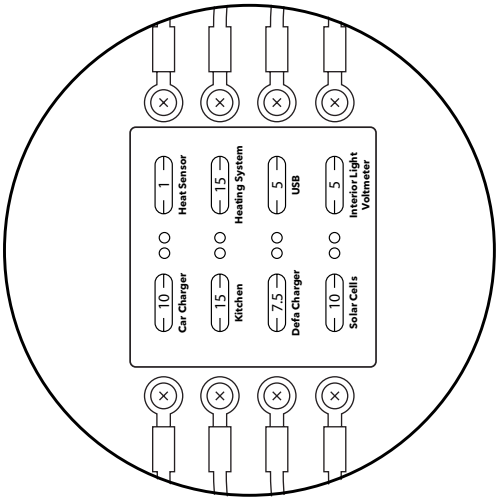
During the drive, the battery of the base vehicle takes over the supply of the 12V devices if pin 9 of the 13-pin socket system on the base vehicle has been equipped. Use the main switch on the control panel to switch off 12V operation (when the trailer is hooked to the car) on longer stopovers and breaks to conserve power in the car's battery.
When running on 12 volts, the refrigerator only functions if the motor of the base vehicle is turned on. Contacts 10 and 11 of the 13-pole socket system.



Always switch off the electric connection between the base vehicle and the caravan before hooking the caravan up to a low-voltage supply.

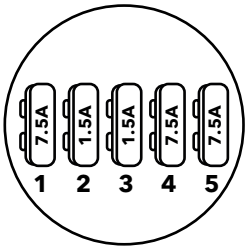
Fuse box setup

The fuse box is located behind the backrest (see page 47). In order to exchange a fuse you need to remove the backrest. Depending on the specification level of your camper, you may not have all wires attached as per the below image.



Assignment of fuses

The fuses for the individual internal electric circuits are located in the lighting control module. They are assigned as follows (from left to right):



Electric circuit 1 (7,5A):
children's bedside lights, clothes cupboard light (only WLU), outer tent light, wall lights, ceiling light, bedside lights

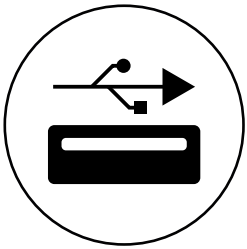
Electric circuit (15 A):
children's bedside lights

Electric circuit (7,5 A):
clothes cupboard light, left bedside light (only WLU), ambience 2, kitchen, shower

Electric circuit (7,5 A):
fan, washstand, ambience 3, ambience 1

Electric circuit (7,5 A):
water supply, Porta Potti, refrigerator illumination

Only replace defect fuses if you know what caused the fuse to blow and have fixed this



USB charging socket
The USB charging socket is suitable only for charging USBcompatible devices.

The 5V USB connection is supplied with power from the 12V electric system.

Lights
The switches for the lights described here are located on the control unit above the head rest in the main cabin and in the kitchen on the wall above the top shelf.

Maintenance and upkeep

Maintenance intervals

Fixed maintenance intervals apply to the caravan and the devices installed in it.

Rules for maintenance intervals

- Have the first maintenance performed by a MINK dealer 12 months after the initial registration.
- Have all further maintenance performed once annually at a MINK dealer.
- Have all maintenance on built-in devices performed in accordance with the corresponding maintenance intervals indicated in the operating instructions.



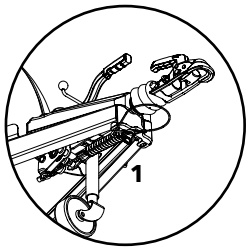
MINK grants a 3-year guarantee on the absence of leaks in the caravan in accordance with the guarantee conditions.

To this end, the vehicle must be taken to your MINK dealer every 12 months for a chargeable inspection for leak tightness.

MINK recommends that you contact a service partner before driving there and inquire whether they have the necessary capacity (e.g. an adequate car lift) in order to avoid any misunderstanding.

Greasing and oiling

Regularly examine and grease the sliding parts and stationary parts of the chassis. If the caravan is used seldom, yearly maintenance is required.



Rules for greasing and oiling

- Movable parts such as pins and hinged parts on the hand brake lever and deflexion lever of the ramp should be oiled lightly.
- Lightly grease the stationary parts on the case of the overrunning equipment **1** after every 5,000 kilometres of driving. **IMPORTANT: The friction elements of the WS 3000 safety hitch may NEVER be oiled or greased.**
- Check from time to time to ensure that the bearing surfaces of the thrust rod are not jammed.
- Clean and oil all movable and stationary parts regularly.

For safety reasons, the spare parts for heating devices must conform with the manufacturer's instructions. They must be installed by the manufacturer or an authorised representative.

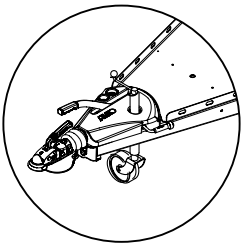
Rubber spring axles require no maintenance.

The axle(s) of the caravan is (are) fitted with compact wheel bearings. The cylinder hub, compact bearings and axle nuts form a closed unit. The compact bearings are free of maintenance due to their special grease.

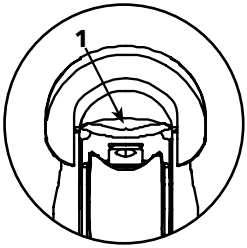
You can find further guidelines in the operating instructions from the axle supplier.

Drawgear

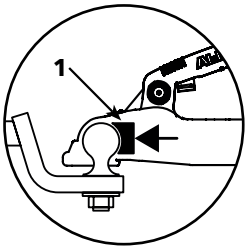
Coupling ball on base vehicle
Ensure that the coupling ball meets the required dimensions and is undamaged, clean and free of grease. When using dacromet-coated (dull silver anti-corrosion coating) as well as lacquered coupling balls, the coating must be removed completely with sandpaper (200-240 grain) so that it does not create deposits on the friction lining. The metal surface of the coupling ball must be bright. A damaged or dirty coupling ball causes increased wear and tear on the friction pads; a greased coupling ball negates the stabilizing effect. Thinning solvents or spirit are both suitable for cleaning.



Tension ball coupler
Keep the friction linings inside the tension ball coupler clean and free of grease. When the friction linings are dirty, the surface can be cleaned with 200-240 grain sandpaper. Then clean with petroleum ether or spirit. All movable bearings and bolts are easy to grease. By regular upkeep and maintenance of your WS 3000, you increase its overall life span, function and safety.



Changing the friction lining
It is very easy to exchange the friction pads **1** when they are worn out. Messrs. Winterhoff offer a corresponding set of spare parts. Please note the detailed instructions for assembly in the manufacturer's spare part kit. Certain noises can occur during the course of the drive; these noises, however, have no influence on the operative effectiveness of the tension ball coupler.



Possible causes of these noises can be:

1. A dacromet-coated coupling ball on the base vehicle.
2. A galvanized or varnished coupling ball on the base vehicle.
3. A damaged, rusty or dirty coupling ball on the base vehicle.
4. Dirty friction elements on the tension ball coupler.
5. The towbar or tie rod in the linings of the overrunning equipment are running dry.

Hints
For 1., 2. and 3.:
Sand down the surfaces of the coupling ball and clean them with a thinning solvent or spirit.

for 4:
Clean the surface of the friction elements with sandpaper (200-240 grain) and then clean with petroleum ether or spirit.

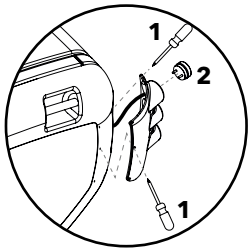
for 5:
Use a lubricating nipple to grease the linings. Pull back the shock absorber and grease the bare towbar.

Brakes

Initial inspection
The brakes must first be inspected after you have driven 500 km. Inspections must be documented in the KNOTT service manual by the authorised specialist who carries out the inspection. A documented report is just as much a prerequisite for any possible guarantee claims as is the compliance with the regulations for maintenance and upkeep.

Changing the taillight LED

Changing the 'ONTOUR' rear light bulbs
Unscrew the 6 screws **1** in the defect lighting unit. Remove the rear light from the lighting beam **2**.



Ventilation and Condensation

Sufficient ventilation and de-aeration of the vehicle interior is essential to maintaining a comfortable climate. In addition, corrosion damage from sweat residue can be avoided.

Moisture residue forms most readily

- in tight spaces,
- from the breath and perspiration of the passengers,
- by carrying in damp clothing.

Tips to control condesation

- Make sure air vents are not covered.
- Make sure air is circulated and air from the outside can flow in. For instance by opening windows.
- Keep temperature reasonably low, as is poosible, during cold weather.
- Remove damp clothes from the space.

The Mink is not designed, nor intended, for permanent housing. Be prepared to deal with condensation and potential humid conditions under prolonged occupancy.

Upkeep



The following applies for their care:

- Clean plastic parts (e.g. fenders, skirts) with water of up to 60° C and mild household cleansers.
- Clean greasy or oily surfaces with spirits.

Only wash the vehicle at specially designed wash sites.

Use cleaning solvents as sparingly as possible. Aggressive cleaners such as rim cleaner pollute our environment.

Use only dishwashing liquid or commercial cleaning agents, always taking care to follow the instructions for use, and test the cleaning agent to make sure it is suitable.

Cleaning products not recommended for use:

- abrasive cleaning agents (scratch the surface)
- cleaning agents that contain acetone (immediately damage the plastic)
- dry cleaning products
- diluents
- alcohols
- aggressive or solvent-based cleaners
- cleaners from the chemical group such as ketone, ester and aromatic solvents
- aromatic hydrocarbons (e.g. all automotive fuels)

Direct contact with plastics such as PVC, soft PVC and similar products (e.g. stickers) must be avoided at all cost. It is not possible to avoid transmitting plasticizers when solvent-based contents come into contact with the aforementioned plastics and this causes the parts to become brittle.

Cleaning the exterior

The vehicle should not be washed more often than necessary.

Rules for cleaning the exterior

- Rinse the vehicle with a light stream of water.
- Wash the vehicle with a soft sponge and commercial cleaning agents. Rinse the sponge often in the process.
- Afterwards, rinse with a great deal of water.
- Dry the vehicle with a suede cloth.
- Allow the vehicle to stand out in the open after washing to let it dry.

Cleaning with a high-pressure cleaner



Labels and exterior decorations should not be sprayed directly with a high-pressure cleaner, because they may come off.



Note the instructions for the high-pressure cleaner before washing the caravan with it.

Keep a minimum distance of 700 mm between the caravan and the high-pressure nozzle.

Note that the water jet comes out of the cleaning nozzle with a great deal of pressure. Incorrect use of the high-pressure cleaner can damage the caravan. The temperature of the water must not exceed 60° C..

Keep the water jet constantly moving during the entire washing process.

The spray from the high-pressure cleaner must never be pointed directly at the cracks of the doors or windows, acrylic windows, service flaps or skylights. This may damage the vehicle or water could get inside the vehicle.

Rules for waxing the surfaces

- Treat the paint surfaces periodically with wax. Note the guidelines for use from the wax manufacturer

Rules for polishing surfaces

- In exceptional cases, treat damaged paint surfaces with polish. We recommend paste polishes free of solvents



Do not polish too often since polishing removes the top layer of paint. Frequent polishing causes more damage than it remedies.

Rules for treating tar and resin stains

- Remove residues from tar and resin as well as other organic stains with petroleum ether or spirit.



Do not use aggressive solvents such as products containing esters or ketone.

Rules for damage repair

- All damage should be repaired immediately to avoid further damage from corrosion. Consult your MINK dealer.

Chassis

The chassis of the caravan has been specially coated. If the protective coating is damaged, repair it immediately. Coated areas should not be treated with spray oil.



The combustion air intake duct for the heating system is located underneath the floor of the vehicle. Under no circumstances may liquid sprays, underbody protection or similar products be allowed to interfere with it.

Chassis

Should salt adhere to the hot-dip galvanised chassis, it will damage it and may cause white rust. However, white rust is not a defect, but merely an optical impairment. After driving in winter or through salty water, the hot-dip galvanised surfaces should be rinsed with clear water

Skylights, windows and doors

Panes require particularly careful treatment.

Rules for upkeep

- Rub the rubber seals lightly with talcum power.
- Only clean acrylic glass window panes with a clean, moist sponge and a soft towel. Dry cleaning can scratch the panes.

Cleaning the interior



To reduce problems arising from dampness, use water sparingly when cleaning inside.

Rules for cleaning seat covers, upholstery covers and curtains

- Clean seat covers with a soft brush or vacuum cleaner.
- Have heavily soiled upholstery covers, bedspreads and curtains dry cleaned; do notwash them yourself!
- Clean with the foam of a gentle detergent if required.

Cleaning instructions for materials that contain Teflon



- Always treat spots immediately.
- Sponge spots, but do not rub them.
- Work from the edge towards the middle of the spot.
- Never use household cleaners to remove spots.
- Hoover cushions regularly to remove any dirt that may have collected.

We recommend the following methods for cleaning:

Method A:

- Use only commercial cleaning agents that have a water basis.
- Alternatively, add two tablespoons of ammonia to 1 litre. Dip a cloth into this solution and gently sponge the spot. Turn the cloth over so that you are using a clean cloth to touch the spot.

This method is particularly suitable for removing:

- wine, milk, lemonade
- blood
- biro, ink
- urine, sweat
- mud
- vomit

Method B:

- Use only mild, water-free solvents for dry cleaning.
- Dampen the cloth and proceed as described in method A.

This method is particularly suitable for removing:

- wax, candles
- pencil

Chocolate or coffee should only be washed out with luke-war water.

Rules for cleaning the carpet:

- Clean with a hoover or brush.
- If necessary, treat or shampoo with carpet foam.

Rules for cleaning PVC surfaces:



Sand and dust can damage the surface of a PVC surface that is walked on regularly. When in use, clean the floor daily with a Hoover or broom.

- Clean the surface with a special solvent for PVC surfaces. Do not place carpets on wet PVC surfaces. Carpets and PVC surfaces could stick together.
- Never use chemical cleaners or steel wool, because they will damage the PVC surface.

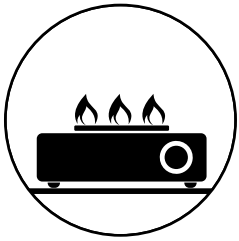
Rules for furniture surfaces:

- Clean wooden furniture finishes with a moist cloth or sponge. Rub dry with a soft, dust-free cloth.
- Use mild furniture polish.

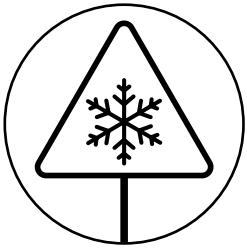
Do not pour corrosive cleaners down the drain. Do not pour boiling water down the drain. Corrosive cleaners and boiling water will damage the drainpipes and siphon traps.

The following applies for the cooker:

- Only clean the cooker with typical household cleaners or special stainless steel cleaners.
- Cube heating system (model-specific): The boiler must be descaled regularly (at least twice a year). We recommend using suitable commercial agents for cleaning, disinfecting and taking care of the boiler. Products that contain chlorine are unsuitable.



Winter Lay Up for the Caravan



For many people, the camping season ends when the temperature starts to fall. Your caravan must be properly prepared for its winter lay up.

The following general rules apply:

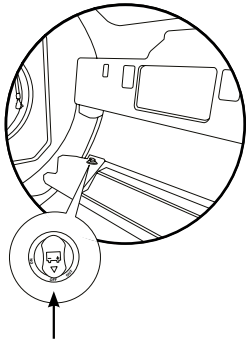
- Only leave your caravan in a closed space if it is dry and well aired. Otherwise, it is better to leave your caravan in the open.
- Cover the safety coupling. Grease the brake linkage and winding stanchions.
- Jack up the caravan if possible. If possible, use axle stands to support the chassis.
- If you use an auxiliary battery it should be disconnected; ideally, remove it and store it safe from frost. Check it about once a month to see if it is still charged; if not, charge it.
- Leave space between tarpaulins and the camper so as not to hamper ventilation.

The following applies for the external structure:

- Wash the caravan thoroughly (see 61-63).
- Check the vehicle for damages to the varnish and other damages. If necessary, repair these damages and carry out any other necessary repairs.
- The exterior should be treated with wax or a special polish for varnish.
- Use a protective agent to protect the metal parts of the chassis against rust.
- Check the chassis for damage and, if necessary, repair it.
- Ensure that no water can get into the venting and heating system.

The following applies for the interior fittings:

- Clean the interior of your caravan. Hoover cushions and mattresses. If possible, store them outside the caravan. Otherwise, place them in such a way inside the caravan that they do not come into contact with condensation.
- Use soapy water to clean head rest and smooth surfaces.
- Leave vents for forced ventilation open.
- Air the caravan thoroughly every four to six weeks when the weather is dry.
- Set up a dehumidifier (such as salt) inside the caravan and dry the granulate or change it regularly.
- If necessary, heat the camper to prevent the build-up of mould from condensation.
- Switch off the 12 V main switch.



Winter Operation



Preparations
Your caravan has been designed to allow you to use it to a certain extent in winter. If you really wish to camp in winter, we recommend that you optimize your caravan to meet your personal requirements. Your dealer will be pleased to advise you.

The following applies for your preparations:
- Check the vehicle for damage to the paintwork or from rust and, if necessary, repair it.
- Ensure that water cannot run into the ventilation and de-aerating and heating systems.
- Use a wax-based protective agent to protect the metal parts of the undercarriage against rust.
- Preserve varnished external surfaces with suitable agents.
- Do not let snow build up on the skylight. Regularly wipe the skylight so it is free of snow.

➢ Please also refer to the information given by the manufacturers of built-in devices regarding winter.

The following applies for ventilation:
During operation in winter, condensation is caused when using the caravan in low temperatures. Sufficient ventilation is extremely important to ensure that the quality of the air inside the caravan is good and to avoid damages to the vehicle caused by condensation.

- Do not shut vents for forced ventilation.
- Set the heating to maximum power when heating up the caravan. Open stowage spaces and curtains. This enables you to achieve optimum ventilation and de-aerating.
- Every morning, air all of the cushions, mattresses and stowage spaces and dry any damp spots.
- Air thoroughly with fully opened doors and windows several times a day.

➢ If, despite all of these measures, condensation forms somewhere, simply wipe it away.

Before entering, remove the snow from your clothes and shoes to prevent an increase in humidity.

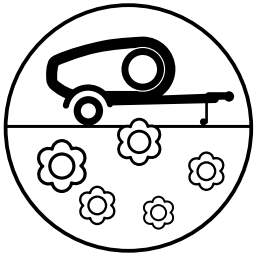
The following applies for heating:

- Both the air intake as well as the exhaust gas openings of the heating system must be kept free of snow and ice (if necessary, use flue extensions).
- It takes longer to heat up the caravan in winter.

At the end of the winter season

The following applies for the care of the vehicle:

- Clean the exterior and use normal car wax to preserve metal parts.
- Do not forget to remove flue extensions, etc.



Saving energy in winter

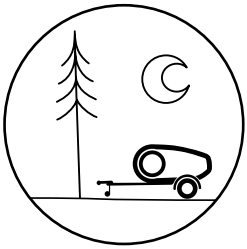
It is very easy to save energy inside your caravan. This applies especially to heating in winter.

The following applies for saving energy:

- Meter the exact use of ventilation in the vehicle and the heating valve.
- Open the door as little and as briefly as possible.

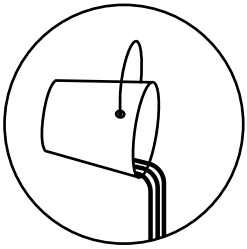
Waste disposal / environmental protection

The environment and mobile travel



Environmentally sound use
By nature of their activities, caravan users bear a considerable responsibility towards the environment. Therefore, you should always use your caravan in an environmentally sound manner.

Rules for environmentally sound use
- If you plan on spending a longer period of time in cities and communities, find out in advance about special campsites for cars with trailers and use them.
- Do not interfere with the quietude and cleanliness of nature.
- Dispose of waste water, faeces and trash properly.
- Act as a role model, so that caravans are not stereotyped as environmental polluters.



Rules for waste water disposal:
- Never dispose of waste water in greenery or in gullies! Street sewer lines often do not lead to waste water treatment plants.

Rules for trash disposal
- Separate trash and bring recycleable materials to the appropriate collection sites.
- Empty trash containers in designated areas as often as possible. This prevents unpleasant odours and trash build-up.

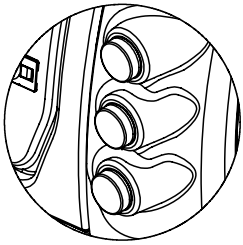
Rules for rest areas
- Always clean up picnic spots before you leave, even if the rubbish has been left by someone else.
- Never dispose of your household trash in the containers provided in rest areas.
- Do not let the motor of your base vehicle run unnecessarily while standing still. A cold motor causes a lot of contamination while idling. The quickest way to reach operating temperature is while driving.

The preservation of the environment is not just in the best interests of nature, but also in the best interests of all caravaners!

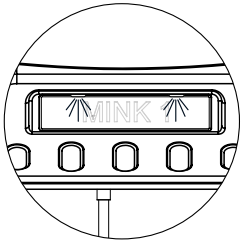
Exterior lights



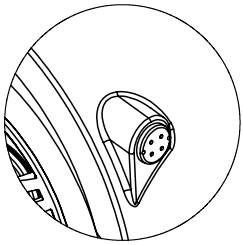
Tail light
The tail lights comprise of three units on each side.
Left side from the top; fog, turn blinker, brake light.
Right side from the top; Reverse, turn blinker, brake light.



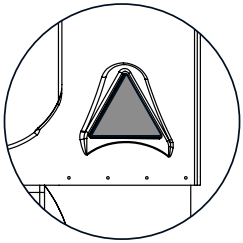
Number plate light
Two bulbs light up the number plate.



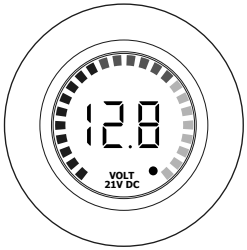
Front light
The front light is a static white light that indicates the widht of the caravan.



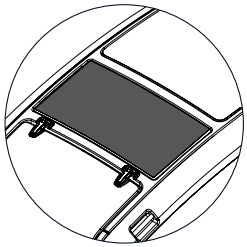
Reflectors
Red reflectors are placed on the back of the wheelhouses.



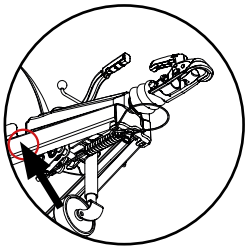
Charging the battery



Battery indicator
The battery indicator, on the control unit, in the main cabin shows how status of the battery. If the indicator is in the read area you may need to recharge the battery. If the indicator does not display any text or light - charge the battery. If the indicator still does not turn on, have the battery serviced with an authorised dealer.



Solar cell
The solar cell charges the auxiliary battery. Although the solar cell does charge when it is overkast, the best conditions are clear skies. The solar cell will not charge in the shadows without direct sunlight.



Plug-in 220V
The battery can be charged via 220V with the included charger. Plug the charger into a socket with 220V and charge it until the battery indicator displays a fully charged battery.