



Dear Camper Owners,

Congratulations on the purchase of your new HOBBY camper! We trust that it will always be a dependable companion for the most enjoyable days of the year.

Please read this manual carefully, even if you have been driving a camper for a longer period of time. It will help you to avoid operating errors and damage to the vehicle and its equipment. Correct handling of all technical details will increase your driving comfort and maintain the value of your camper.

A dense network of dealer service points throughout Europe is always available for assistance. Take advantage of your authorised dealer's experience and technical knowledge - we recommend speaking to him in detail before taking your first trip with your HOBBY camper.

We wish you and your fellow travellers many enjoyable trips and hope you will always have a safe journey with your new HOBBY camper.

Your
HOBBY Camper Plant
Ing. Harald Striewski GmbH

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1. Introduction

Our campers are continuously being further developed. Please understand that we reserve the right to make changes to their equipment, shape and technology. Therefore, HOBBY shall not be liable for any claims arising from the contents of this handbook. The equipment used at the time of printing is described in this handbook and should be transferred accordingly to the layouts of all the different camper variations. Please understand that we cannot describe all of the individual variations. Your dealer will be pleased to answer any special questions regarding the equipment and technology of your camper.

1.1 General information

Your HOBBY 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 camper damaged if the safety instructions in this handbook and the warnings posted on adhesive labels in the camper are not followed.

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.

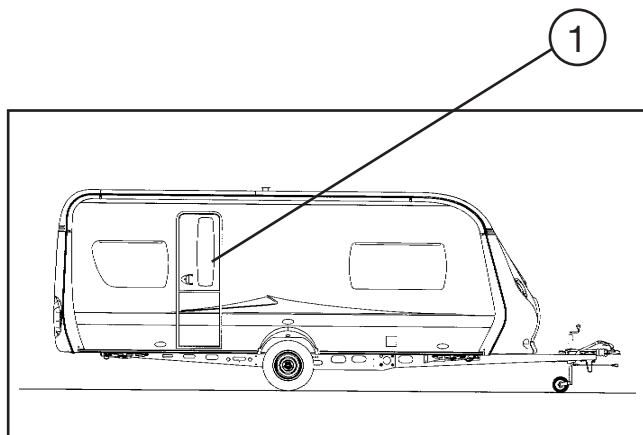


HOBBY grants a 5-year guarantee on the watertightness of the camper in accordance with guarantee conditions. When you accept the vehicle you will receive the guarantee booklet, "Five-Year Guarantee on Watertightness" from your HOBBY dealer.



Annual leak checks are not free of charge. Warning: If no leak inspection is performed, your right to the 5-year guarantee loses its validity.

1.2 Markings in these operation instructions



Markings in these operation instructions

The handbook explains the camper as follows

Texts and illustrations

The texts which accompany illustrations are found directly to the right of the illustrations. Details in illustrations (here: entry door) are marked with position numbers ①.

Lists

- Lists are based on key points and are preceded by a dash.

Procedural guidelines

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

Guidelines



Guidelines point out important details which ensure the trouble-free function of the camper and its equipment. Please bear in mind that various models have different equipment; therefore, varying descriptions are possible.

Warnings



Warnings point out dangers which, if they are not followed, could cause damage to equipment and/or injury to persons.

Environmental tips



Environmental tips show possible ways to reduce strain on the environment.

2. Safety

2.1 General information

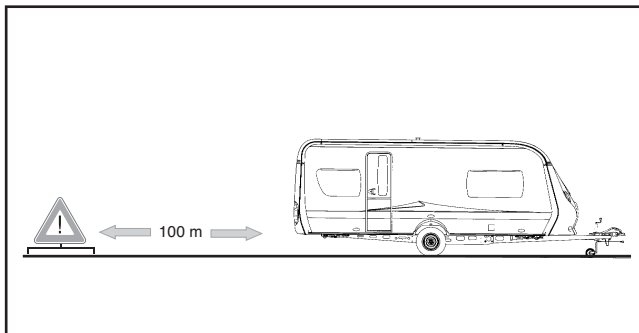
Keys

The following keys are provided with the camper:

- Two keys which fit into the following locks:
 - entry door,
 - service flaps,
 - toilet flap.
- gas-bottle container lid
- fresh-water tank lid



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



Emergency equipment

To be prepared for an emergency, you need at least three basic items of rescue equipment (first aid kit, warning triangle and fire extinguisher) which you should carry at all times and know how to use.

- first aid kit
- warning triangle
- high-visibility vest

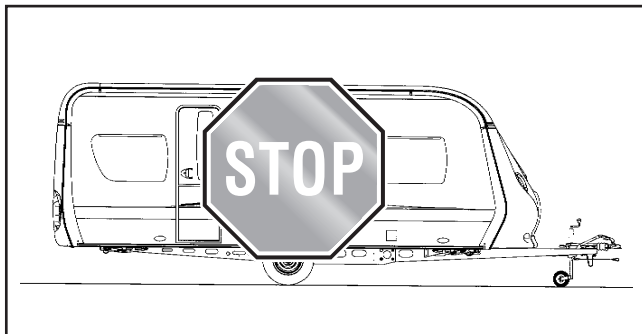
Fire prevention measures

- Never leave children unattended in the vehicle.
- Keep flammable materials away from all heating and cooking appliances.
- Changes to the electrical system, gas system or built-in devices may only be carried out by professional, authorised workshops.
- Place a fire extinguisher at the main entry door.
- 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.

Fighting a fire

- Evacuate all passengers immediately.
- Close the main shut-off valve on the gas bottle as well as the shut-off valves on gas-powered appliances.
- Shut off the electrical supply
- Sound alarm and call the fire department.
- Only fight the fire yourself if this is possible without risk.

2.2 Before the drive



As the owner and driver, you are responsible for the condition of your vehicle. Therefore, you must note the following points:

Exterior

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

Preparation of the vehicle

- The camper must be hitched properly (see guidelines for the safety hitch WS3000).
- Release the handbrake of the camper and attach the contact-breaking cable to the coupling ball of the base vehicle.
- Tighten the tire bolts after driving the first 50 km.
- Plug the 13-channel plug in the socket of the base vehicle.
- Inspect the vehicle lighting.
- Turn the winding stanchions and the front landing wheel upward and secure them.
- Close gas bottles (heating is forbidden while driving).
- Empty the waste water tank.
- Close gas bottle compartment.
- Adjust outer mirrors on base vehicle.
- Check camper's tire pressure (see tire pressure table).
- Close all windows.
- Close the service flaps.
- Close and firmly lock roof bonnet.
- Shut off the light on the outer tent.
- Close and secure entry door.
- If necessary, pull the electrical cord to the 230 V mains supply out of the exterior socket.
- If necessary, pull the television antenna inward as far as possible or fold over the satellite dish.

- If necessary, secure the roof load and lash it to prevent slippage.
- If necessary, secure all bicycles and lash them to prevent slippage, ensuring that they do not cover any lighting equipment.
- In winter, the roof must be free of snow and ice before you begin to drive.

Interior

You must also prepare the interior of the vehicle

Preparing the interior:

- Sort all loose objects and store them in their respective compartments.
- Store heavy and / or voluminous objects (e.g. radio, outer tent, beverage cases) safely before you start your journey, securing them to prevent them from shifting.
- If necessary, redirect refrigerator to 12-volt operation.
- Shut off all interior lighting.
- Ensure that all fluids, including those in refrigerator, are secured to prevent leakage.
- Close main valve on gas container and quick-close valves on all gas-powered appliances.
- Close all doors (incl. refrigerator door), drawers and flaps tightly.
- Lock the central lock on the kitchen drawers.
- Latch the sliding door.
- Lower table and secure it.
- Secure the extendable media shelf, media oval or TV mount.



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

2.3 Loading

Rules for loading:

- Spread the load evenly between the left and right-hand side of the camper. Heavy or bulky objects belong in the lower storage compartments and near the axle.
- If your camper has a tandem axle: distribute the centre of weight between the two axles.
- Never focus the load in the camper to the rear (danger of swinging back and forth).
- Heavy objects should be stowed securely to prevent them from slipping.
- Lighter objects (clothing) should be stowed in the wall cupboards.
- You may not always be able to follow the recommended stowing arrangement, because storage possibilities are distributed throughout the entire interior of the camper. If necessary, stow heavy objects in the base vehicle.
- Store baggage in the interior in cupboards and storage compartments.
- Secure doors and flaps.
- Check the technically permissible maximum weight and the axle load(s) after you have finished loading.



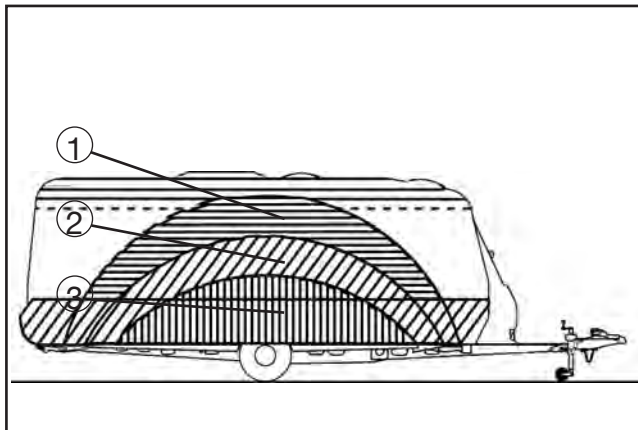
The gross vehicle weight rating indicated in the vehicle documents as well as the permitted drawbar load may not be exceeded. Also note the permissible drawbar load of your base vehicle.



The permissible maximum weight and the permissible drawbar load entered in the vehicle's registration documents may not be exceeded.



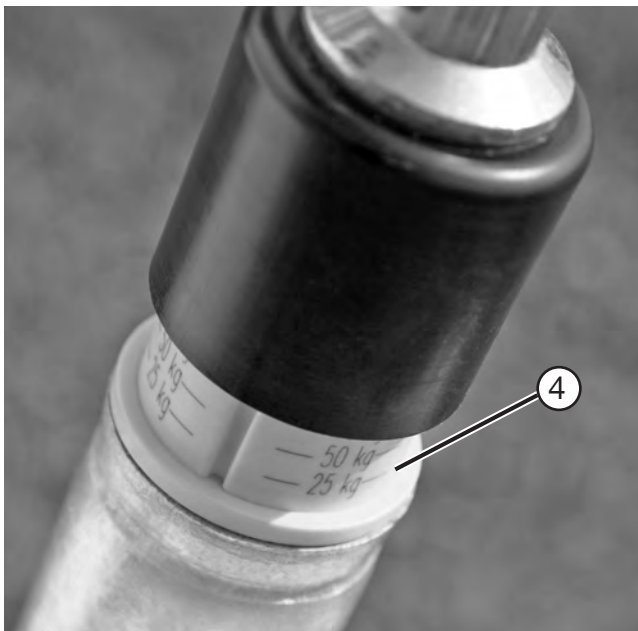
The lower the camper's centre of gravity, the better its driving performance and response in curves.



Stowage areas in the camper

- Light objects ① such as towels and light-weight laundry.
- Medium-weight objects ② such as clothing, laundry and food.
- Heavy objects ③ such as the outer tent, boat motor or crates of drinks.

If your camper is equipped with a rear bicycle rack, the reduction in the drawbar load created by the bicycles must be compensated by the rest of the load.



Drawbar load

You will only achieve optimum driving stability and decisively increase your safety on the road if the drawbar load has been properly adjusted for your combination of base vehicle and the camper being pulled. The drawbar load indicates the power the camper's drawbar exerts on the car's clutch.

Rules for the drawbar load:

- Set the drawbar load correctly! You can, for example, use normal bathroom scales: use a strip of wood (approx. 400 mm long) to position them vertically under the coupling jaw. It may also be possible to roughly estimate the drawbar load by means of the drawbar load scales ④ integrated in the front landing wheel, whereby the drawbar of the camper must be in a horizontal position.
- Always check the drawbar load before you start to drive!
- The specified drawbar load (see handbook or type plate) and the permissible overall mass of the base vehicle and the camper may not be exceeded!

How to adjust the correct drawbar load:

1. Determine the maximum drawbar load of your base vehicle by checking its documentation, the type plate or the drawbar plate.
2. **Your HOBBY camper has a maximum permissible drawbar load of 100 kg.**
3. Adjust the drawbar load on the camper to the lower of the two values by loading it carefully. At the same time, try to make full use of this value.
4. The lower of the two specified values for the drawbar load, i.e. that of the base vehicle or the camper, may not be exceeded.

2.4 Handling Performance

Driving

Take a test drive or a safety training course before the first long drive to better acquaint yourself with the carriage in driving conditions.

Rules for driving

- Do not underestimate the length of the carriage.
- 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.
- When overtaking or being overtaken by trucks or buses, the carriage can be caught up in air suction. This could cause the camper to sling or become pendulous.

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 camper can sheer out of line over the rear.

Brakes

A trailer carriage behaves differently from an individual vehicle while braking. Therefore, it is advisable (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 mountains or steep hills, do not use a higher gear than when driving uphill.
- During long drives over passes, permanently overrunning the camper can cause the wheel brakes to heat up considerably. If necessary, you should allow enough time to enable them to cool down again.

Driving in reverse

Your HOBBY camper 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 camper. When you back up the camper, you must first overcome a slight residual brake torque in order to activate the automatic reverse. You can then back up the camper without any difficulty. The next time the camper moves forward, the normal braking facility is then automatically applied again.



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

Rules for driving in reverse

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

Shunting

Your carriage is significantly larger than a car.

Rules for shunting

- There is a significant blind spot in shunting, even when the exterior mirrors are properly adjusted.
- Use a guide when turning into difficult parking spots.



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

2.5 After the drive

Choosing a parking place

Rules for choosing a parking place:

- The parking place should be as horizontal as possible.
- Check to see that the entry step is positioned horizontally (important for refrigerator function).
- 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 compensate differences in height with the lift stanchions.

Securing the vehicle

Rules for securing the vehicle:

- Set the parking brake.
- Only extend the rotating stanchions as far as necessary so that the axle still bears part of the weight. (The crank is clipped to the bottom of the gas-bottle container.)
- Lay mats under the lifting stanchions when on soft ground.
- Use stop-blocks to secure the wheels.



A spring brake on the brake lever ensures that the brakes will not disengage by themselves, 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.

Redirecting electrical devices

Rules for redirecting electrical devices

- Open the main shut-off valve on the gas bottle as well as the shut-off valves on the gas-powered appliances you require.
- Redirect the refrigerator from 12 V to gas or 230 V.



If the camper socket has been attached to the base vehicle in a manner conforming to standards (DIN ISO 146), the battery of the base vehicle will not be discharged when the ignition has been switched off and you have forgotten to switch the refrigerator from 12V operation.

Water installation

Water left standing in the fresh water tank or the pipes quickly becomes undrinkable.

Therefore, check the water pipes and the fresh water tank before each drive to ensure they are clean. If necessary, use a tank cleaner and rinse with sufficient fresh water.



The use of denture cleaners (1 tablet per litre of water) is also very effective for disinfecting and cleaning the pipes and the tank.



The water supply system corresponds at least to the state of the art as of 03/2009 (Directive 2002/72/EC).

3. Undercarriage and vehicle registration

3.1 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!

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 HOBBY 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.

3.2 Drawbars/ Longitudinal beams

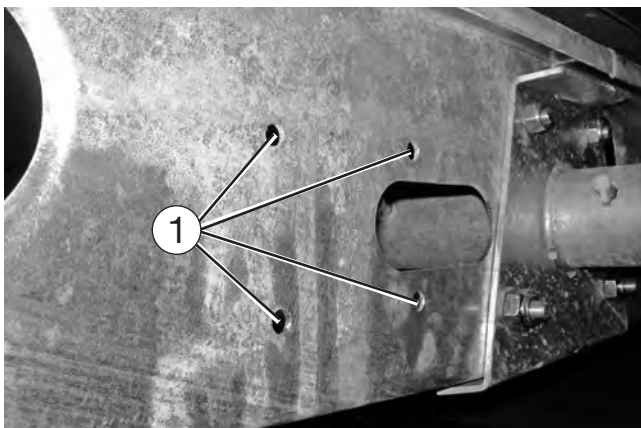
The main chassis beam and the towbar are connected by cone washer bolts (with the exception of the one-piece chassis). During regular maintenance, all of the screws must be checked and retightened, if necessary (105 Nm).



Bent or damaged drawbars must be replaced immediately. You are not allowed to repair damaged components.

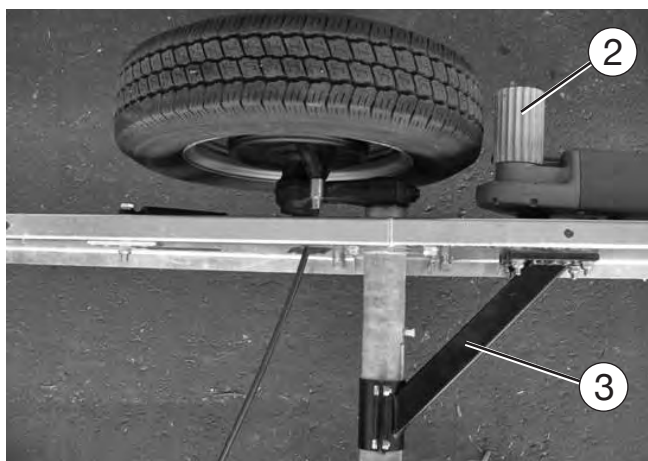


You may neither drill into or weld onto the chassis.



Preparing the mover

All camper chassis have been prepared at the factory for the subsequent fitting of a special Truma mover. Four mounting holes have been drilled into each of the two longitudinal beams ① for mounting the mover ② to the model H SE (single axle) or H TE (tandem axle). Depending on the profile of the longitudinal beam, the size of the tires and the mounted axle, the mover must be stabilised using an angle bracket ③ which connects the mover to the axle tube.



The Truma mover H SE / H TE has been type-approved and a general operating licence has been issued for Germany. In Germany, approval is not required by a technical support organisation (TÜV, DEKRA). However, the general operating licence must be kept in the vehicle at all times.



Only the Truma mover for the models H SE and H TE may be mounted in the existing holes.



Mounting the mover without angle brackets ③ is not permitted.



It is not possible to mount the mover H SE / H TE to any of the WLU models, because the installation space is blocked by the hot air ducts.



The Truma standard mover SE or TE may be used as an alternative for all vehicles where the mover H SE / H TE may not or cannot be mounted.



Please see your Hobby dealer for further information or to have the complete system mounted.

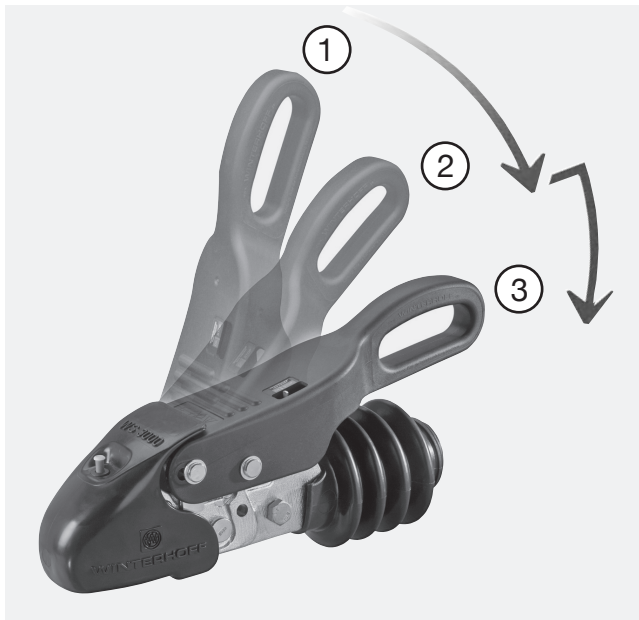
3.3 Safety coupling WS 3000



The camper 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

- To hitch and unhitch, open the tension ball coupler (lever in position ①).



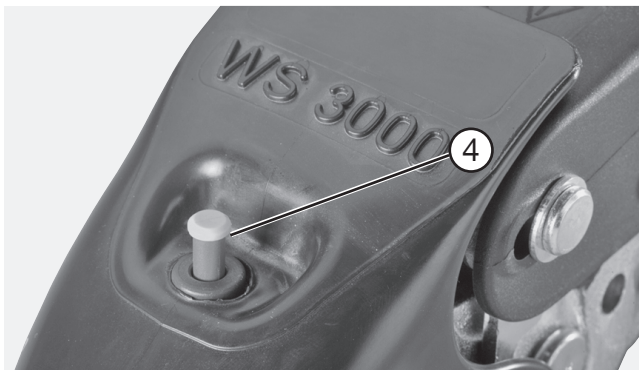
WARNING: Ensure that the metal of your ball coupler is bright and free of grease.

Hitching

- 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).



When dealing with higher drawbar loads hitching and unhitching is simplified by the use of a support wheel.



Inspection of hitch

- The ball coupling is closed when the lever rests in position ② or ③ and the green pin of the hitching display ④ is visible.



If the WS 3000 is not properly attached to the coupling ball, the camper can detach from the base vehicle.



Activation of the stabilization system

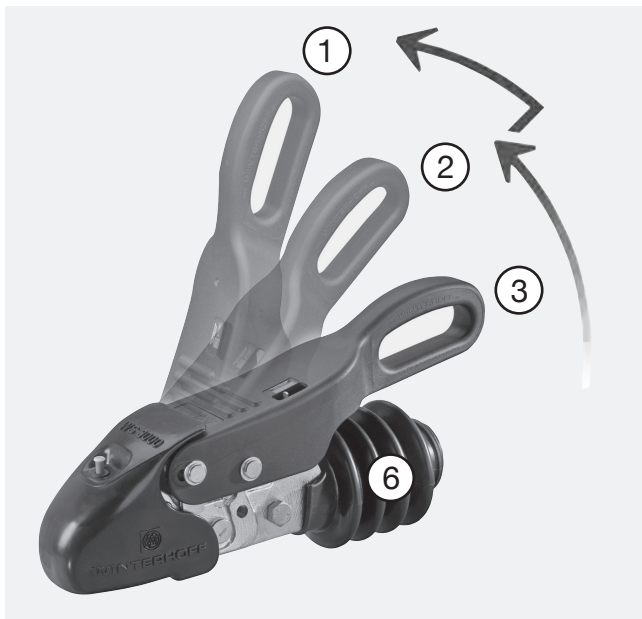
- To activate the stabilization system, the operation lever must be moved downward out of the closed position ② until it locks in ③. The spring corpus will become tense in the process, so that contact pressure is created on the coupling ball via the friction elements. Afterward, the operation lever lies approximately parallel to the drawbar axle.

Shutoff of the stabilization system

- Bring the operation lever slowly upward into the open position (position ②) to shut off the system.



Although it is possible to drive without activating the stabilizing device, e.g. when shunting, we do not recommend that you do so.



Unhitching

- Release the overrun coupling so that the gangway bellows ⑥ are expanded.
- Release the contact-breaking cable and pull out the 13-pole plug.
- Slowly pull the lever upwards into position ② to switch off the stabilizing device.
- Pull the lever backwards and, at the same time, further into position ① so that the coupling opens.
- After the front landing wheel has been rotated out, the camper can be disconnected from the base vehicle.



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

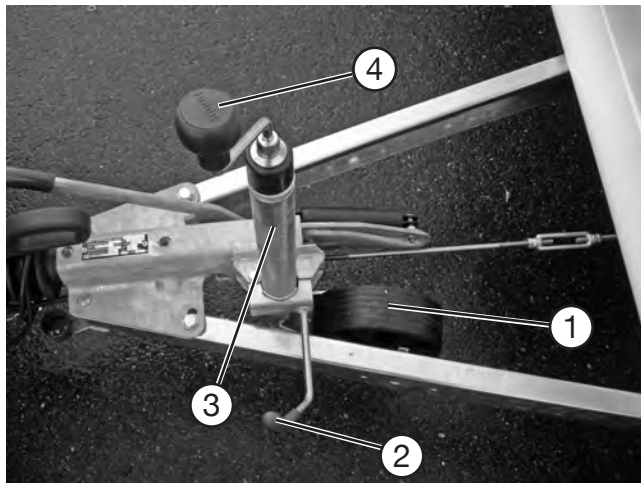


Controlling the stabilizing device

Nach Ankuppeln und Aktivieren der Stabilisierungseinrichtung kann der Zustand der Reibelemente kontrolliert werden:

- After having hitched and activated the stabilizing device, you can then control the state of the friction pads:
- If the wear indicator ⑤ is in the green (OK) zone, the friction pads are suitable for driving.
- If the indicator is in the yellow transition zone, the friction pads must be replaced without delay.
- If the indicator is in the red (STOP) zone, there is no stabilizing function. Permission to drive at 100 km/h is immediately cancelled.

3.4 Front landing wheel

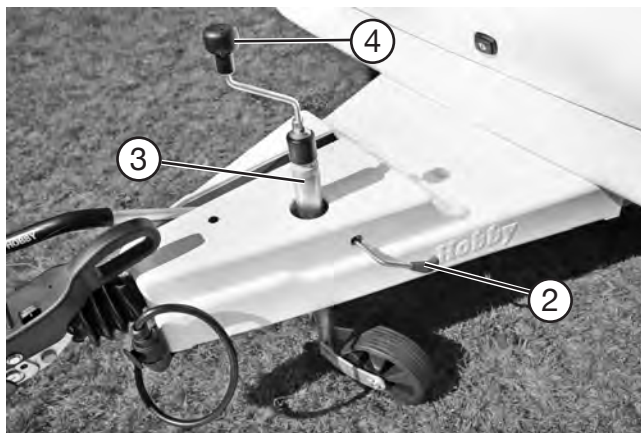


Rotating it upwards and securing it

- Hitch the camper to the base vehicle, aligning the front landing wheel ① to the rear end of the camper.
- 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.



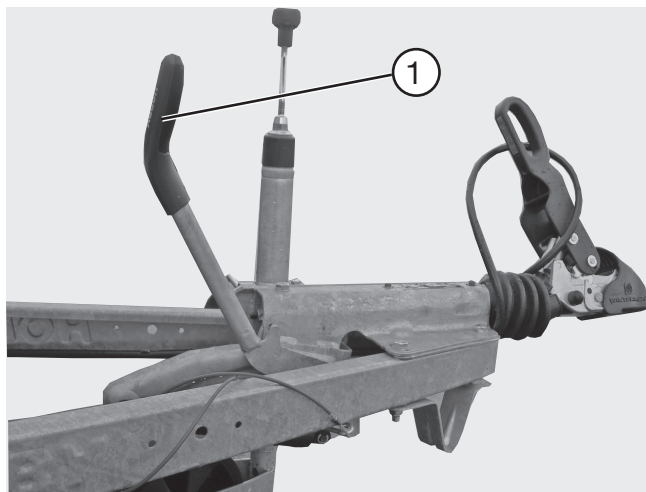
To lower

- 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 camper from the base vehicle and, if necessary, lower the front land wheel further.

3.5 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 carriage

When parking the carriage, the locking brake of the camper 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.



When you park the camper after reversing it, the hand brake must be moved beyond the dead centre position to its final position in order to ensure that it is fully effective.



Rapid-emergency brake

The rapid-emergency brake is combined with the hand brake. If the camper 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 camper will do an emergency brake. This prevents the camper from continuing to roll without braking after it has been disconnected.



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

3.6 Overrunning equipment and wheel brakes

The overrunning brake facility consists of the overrun coupling, a transmission and the wheel brakes. Should the camper 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 camper 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 camper from braking if you only take your foot off the gas or change gears in the base vehicle.

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 camper 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 wheel brakes that have been used are drum brakes that do not automatically adjust. They have an automatic reverse that is sensitive to the course you drive. The linings of the wheel brakes are wear and tear parts; therefore, they must be checked every 5,000 km or at least once every year. One sure sign of strong brake lining wear is described in the aforementioned check for the overrunning equipment: if the safety clutch can be pushed in more than approx. 45 mm.



It is mandatory that the brake pads are regularly adjusted by an authorised specialist to compensate for wear in the brake lining and minimise brake pedal travel on the wheel brakes and, therefore, the overrun coupling, keeping it as consistent as possible.



- 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 trailer combination as often as possible to avoid continuous buffing by the camper.
- Always make use of parking areas and passing points to give the brakes a chance to cool off.

3.7 Rotating stanchions



The rotating stanchions are located in the front and rear under the camper.

Turning the rotating stanchions outward

- Park the vehicle as horizontally as possible.
- On soft ground, lay a sturdy mat or suitably sized board under the rotating stanchions to prevent the camper from sinking.
- Turn the rotating stanchions outward.



The rotating stanchions may only be used for support, and not for leveling out or raising.

Turning the rotating stanchions inward

- With the crank, turn the rotating stanchions inward to the horizontal position.

The crank for the rotating stanchions is located at the front in the gas-bottle container. It is attached firmly to the bottom of the container.

3.8 Vehicle registration

Every vehicle which uses public roads is subject to registration. This includes your new camper. You can register the camper at your local registration office.

The following documents are required to initiate the registration process:

- motor vehicle registration certificate, Part II
- insurance card
- personal identification or proof of residence
- possibly, power of attorney to have someone else register the camper

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

3.9 General inspection

In accordance with Section 29 of German Road Traffic Licensing Regulations, your camper must undergo a major inspection every two years. This major inspection may be carried out by the TÜV (Technical Inspection Authority), DEKRA Vehicle Inspections or another accredited technical support organisation.

The following documents must be presented at each inspection:

- motor vehicle registration certificate, Part I
- valid certificate of inspection for gas facilities, documenting installation. The initial certificate is located in the service package for the camper.

Vehicle ID number (FIN)

The 17-digit vehicle ID number, legible from the right, is located either on the front right-hand side of the forked drawbar (models 400 - 650) or on the right-hand side of the front crossmember (models 695/780).

Furthermore, the FIN is etched on the name plate.

Please have your VIN at hand for any inquiries or whenever visiting your dealer.



Name plate

Permit number

Vehicle ID number (FIN)

Permissible maximum weight

Permissible axle load, 1st axle

Permissible axle load, 2nd axle



The name plate is located in the lower front area on the right-hand side wall.



Do not remove or change the name plate.

3.10 Fit for a Speed of 100 km/h



1. Your HOBBY camper is technically equipped for a maximum speed of 100 km/h. Under no circumstances may this speed be exceeded!
2. Note the permissible maximum speeds for trailer carriages in the country in which you are travelling!
3. Road traffic regulations in **Germany** were changed on 22 October 2005. Your camper was already set to a speed of 100 at the factory, and this has been entered in the camper's registration documents. Upon request, the 100 km/h sticker will be issued by the road traffic authority when the camper is initially registered and attached to the back of the vehicle.
4. The following points must be observed, because you are responsible for adhering to them. If they are not met, the maximum speed for the camper is no more than 80 km/h!
 - a) The base vehicle must be equipped with an anti-locking system/anti-lock device and may not exceed an overall mass of 3.5 tons.

- b) The camper must be equipped with hydraulic vibration dampers (shock absorbers); naturally, your new HOBBY camper is equipped with these.
- c) The camper's tires may be no more than six years old. They must be marked at least with an L (= 120 km/h) for the appropriate speed category.
- d) The camper must be equipped with a stabilising unit in accordance with ISO 11555-1 (standard in this HOBBY series since 1997).

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

5. Free interchangeability of base vehicle and camper:

Different campers 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.

6. The correct drawbar load gives you more safety:

Please refer to page 02-5 for the recommended drawbar load.

3.11 Definition of mass

Definition of masses (weights) for campers

The EG regulation 97/27/EG applies for calculating the masses (weights) and for the loading which results from these calculations. The EG regulations correspond to a great extent to the norm DIN EN 1645-2. The terms and basic calculation elements used in this description are explained in the following:

1. Gross vehicle weight rating (g.v.w.r.)

The indication of the gross vehicle weight rating is taken directly from the HOBBY factory. These weights were calculated as a result of lengthy and detailed experiments; for safety reasons, they may not be exceeded.

2. Mass in running order

The mass in running order corresponds to the weight of the standard vehicle including all standard equipment installed at the factory (e.g. all-inclusive package) plus the basic equipment (see Item 3).

3. Basic equipment

The basic equipment consists of all objects and fluids which are necessary for the safe and proper use of the vehicle. These include the masses for gas, water and electrical supply (see Item 13.3 for a detailed specification).

4. Additional load

The additional load is the difference between the "gross vehicle weight rating minus the mass in running order". The remaining additional load must be large enough to cover the weights of possible additional equipment and personal equipment.

5. Additional equipment

Additional equipment includes all items not part of the standard equipment preinstalled in the HOBBY factory or by the dealer. This also includes installations by special request.

The mass in running order refers to the vehicle as originally equipped by the dealer or factory. This increases accordingly if special equipment is installed.

Before the first use, we recommend that you weigh your vehicle on a calibrated vehicle scale. In this manner, you can determine the maximum permissible additional load for your vehicle.



If you are not sure whether you have overloaded the vehicle, weigh your vehicle on a public vehicle scale.



Overloading can lead to malfunction or even tire blowout!
This presents the danger of the vehicle spinning out of control, which endangers you as well as other drivers and pedestrians.

4. Wheels, tires

4.1 Tires

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

- Check tires 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 tires (summer or winter tires).
- Drive carefully on new tires for a stretch of approx. 100 km to enable them to develop a full road grip.



Due to the type of construction, the tires on campers with a tandem axle may wear out more quickly.

If snow chains are used, note the manufacturer's assembly instructions.



You may not use snow chains if you are using tire size 195/70 R 15 C.

4.2 Tire pressure

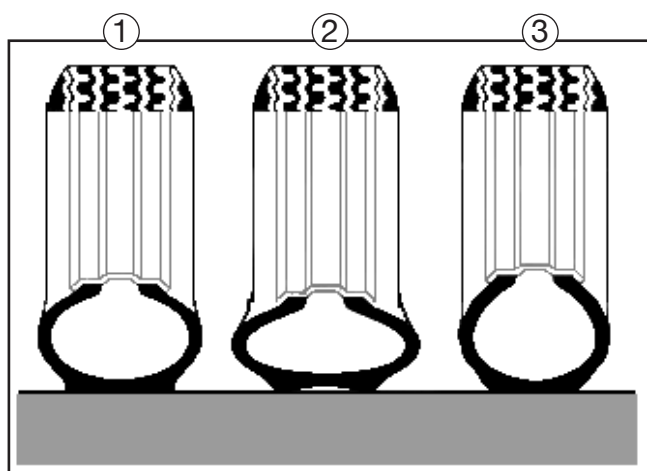
Only one tire size is now entered in the motor vehicle registration certificate, Parts I and II. This must not necessarily correspond with the size of the tires mounted on the vehicle. Should you have any queries, please contact your dealer.

Rules for checking tire pressure:

- Check and fix tire pressure every four weeks (but at least every three months) and before every drive.
- If driving on low tire pressure is unavoidable (i.e., from the campsite to the nearest service station) you should drive at a maximum speed of 20 km/h.
- Tires must be checked when they are cold.

Rules for tire pressure:

- correct tire pressure ①
- tire pressure too low ②
- tire pressure too high ③





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



The correct tire pressure is given in the table on wheels/tire pressure found under "Technical Information" or on the labels in the gas-bottle container and on the wheel cover.

4.3 Profile depth and age of tires

New tires are needed (at the latest) when the profile depth measures 1.6 mm.



Tires age even when used rarely or not at all.

Tire manufacturers' recommendation

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

Age of tires

Tires should not be more than 6 years old, because on the one hand your permission to drive the camper at 100 km/h will elapse after this period and, on the other, the material wears out due to age and if the tires stand too long in one spot. The 4-digit DOT number on the side of the tire (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 0408 means week 04 in production year 2008.

4.4 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.



Modifications can only be made with the manufacturer's permission.

Rules for wheel screws:

- wheel bolts must first be checked after a distance of 50 km and then checked during regular maintenance.

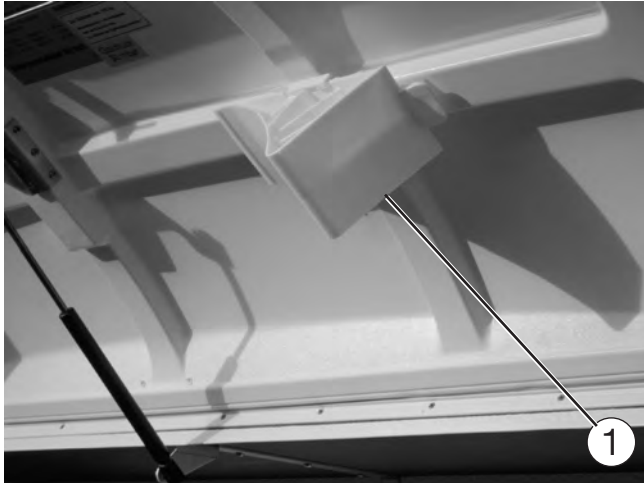
Adjusting torque

- for steel rims: 110 Nm
- for aluminium rims: 120 Nm



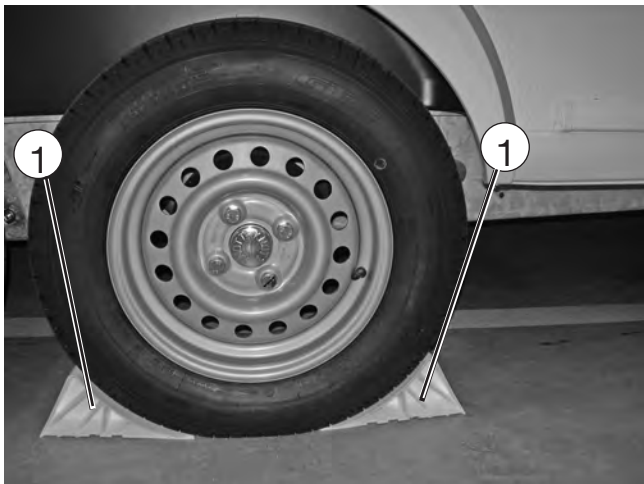
WARNING: When changing rims (steel -> aluminium / aluminium -> steel) ensure that you are using the correct wheel screws.

4.5 Changing the tire

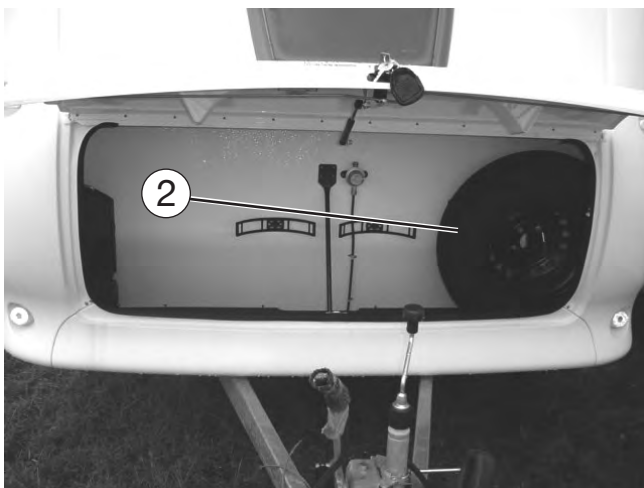


Preparing to change the tire

- If possible, only change the tire when the base vehicle is coupled to the camper.
- Park the trailer carriage on as firm and even a surface as possible.
- If you have tire trouble on a public road, turn on your hazard warning signal lights and set up the warning triangle.
- Base vehicle: Pull the handbrake, set the wheels straight, put the vehicle in gear or, if you are driving an automatic, set the gear to P.
- Caravan: Pull the handbrake, leave the support wheel in its driving position, deactivate the stabilization system (note: do not open completely).
- Remove the wheel chocks ① from the bottle compartment.



- To secure the vehicle, place the wheel chock ① in front of and behind the wheel that is still intact.
- Before jacking up the vehicle, turn the wheel screws once to loosen them, but do not unscrew them any further.



- The spare tire (not included, Fig. ②) can be stored in the same compartment at the front of the camper as the gas container (special fasteners required).



If the camper has alloy rims, note that the correct wheel screws are used when installing the spare tire affixed to a steel rim.

Warnings for changing the tire:



Only use the specifically designated jack for the corresponding frame parts.

For example, on the axle pipe corresponding to the swinging lever group or on the stringer in the area of the axle fasteners.

Damage or even an accident resulting from the vehicle's toppling over can occur if the jack is applied to other parts of the vehicle.



The jack is only to be used for changing tires. It may not be used for working under the vehicle!



The rotating stanchions may not be used as a jack!



The jack is not part of the standard equipment in this series, and is therefore not included.



After changing the tire, the wheel screws must be examined (after a 50 km drive) to ensure that they are tight enough (tighten if necessary).

Changing the wheel

- Set the corresponding jack onto the axle pipe of the swinging lever group or on the longitudinal beam in the area of the axle attachments of the wheel to be changed.
- On campers with a double axle, always set the jack onto the rear axle; a hydraulic jack (not included) is recommended.
- If the vehicle is parked on soft ground, lay a stable reinforcement under jack (i.e., a board).
- Lift the vehicle until the wheel is 2 or 3 cm off the ground.
- Reposition the ratchet jack handle if it should slant when you jack up the vehicle.
- Remove the wheel fastening screws and the wheel.
- Attach the spare tire to the hub and adjust it.
- Reattach the wheel screws and tighten them lightly over the transversal.
- Lower the jack and remove it.
- Tighten the wheel fastening screws evenly with the wheel wrench. The nominal value of

the attachment torque is 110 nm for steel rims and 120 nm for aluminium rims.

- Release the handbrake and reactivate the stabilization system.



You should have a functional spare tire available at all times. Therefore, have the spare tire replaced without delay.



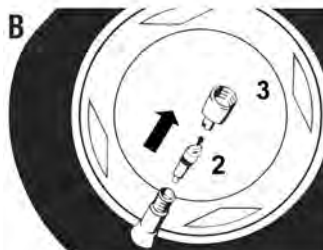
Tire repair kit



Do not use the tire repair kit if the tire was damaged as a result of driving without air. Small cuts, especially in the tire tread, can be resealed using the tire repair kit. Do not remove foreign objects (such as screws or nails) from the tire. The tire repair kit can be used as long as the outside temperature is approx. -30°C or higher.



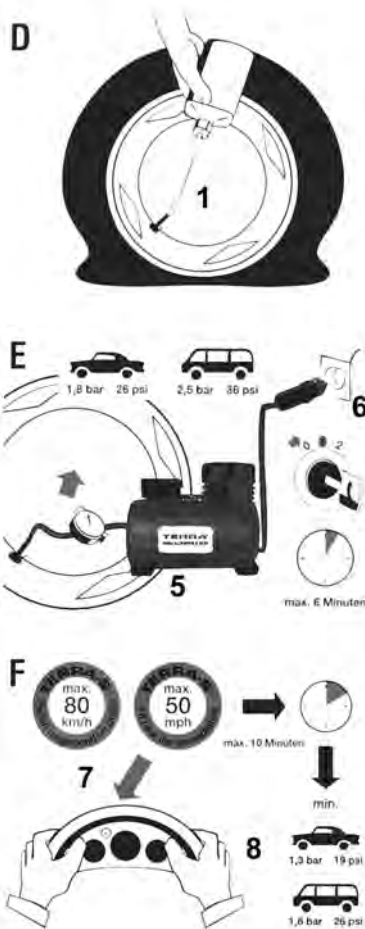
- A** Shake the bottle. Open the fill hose ① on the bottle (foil seal is thereby punctured).



- B** Unscrew the valve cap from the tire valve. Remove the valve insert ② with the valve-core remover ③. Do not lay the valve insert ② down in sand or dirt.



- C** Pull the stopper ④ from the fill hose ①. Push the fill hose onto the tire valve.



D Hold the bottle down with the filling tube and then press them together. Press the entire bottle contents into the tire. Pull the fill hose off ① and screw the valve insert ② tightly into the tire valve with the valve-core remover ③.

E Open the air hose ⑤ on the tire valve. Insert the plug ⑥ into the cigar lighter socket. Then pump the tires (Fig. ⑦). do not operate the electric air pump longer than 8 minutes! Danger of overheating! If sufficient air pressure is unattainable, drive 10 meters (either forward or in reverse) so that the sealant can be evenly distributed within the tire. Repeat the pumping process. Resume driving immediately, so that the sealant can be evenly distributed within the tire.

Maximum speed: 80 km/h. Drive carefully, especially in curves.

Check tire pressure after driving 10 minutes. If the tire pressure has fallen under this minimum value ⑧, you may not drive any further.

If the minimum value is still indicated ⑧, correct the tire pressure according to the tire pressure table in the gas bottle container. Drive carefully to the nearest mechanic and have the tire replaced.



Danger of accidents! If the required tire pressure is still unattainable, the tire is too severely damaged. In this case, the tire repair kit can no longer provide an effective seal. Therefore, do not drive any further. Notify a service station or the 24-hour service hotline.

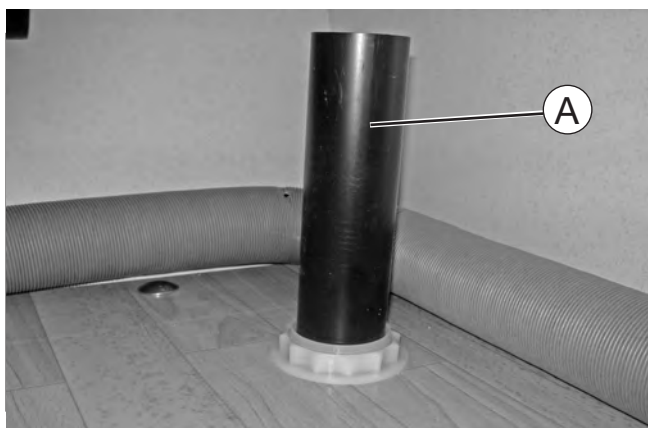
F Adhere the provided sticker to the combination instrument within sight of the driver. Dispose of used tire repair kit at a service station.



Danger of accidents! Have the tires replaced at the nearest service station.

5. Exterior structure

5.1 Ventilation and De-aerating



Rules for forced ventilation

Proper ventilation and de-aerating of the vehicle is a prerequisite for ideal living comfort. A draft-free forced-ventilation system is located in the floor (A) and a forced de-aerating system is located in the ceiling (B) which should not be interfered with.



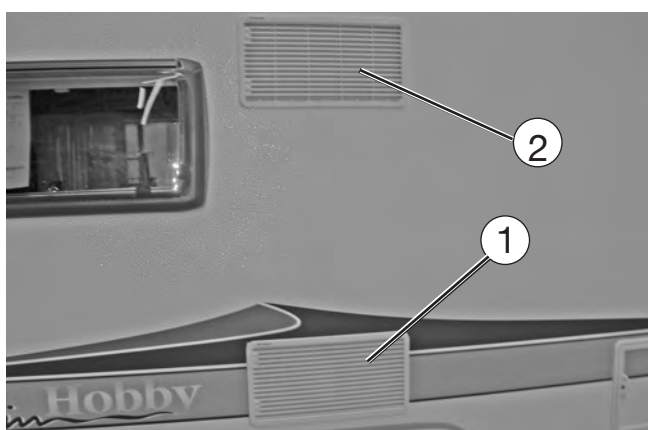
We recommend that you open the roof bonnets whenever you live in the camper.



Cooking, wet clothing, etc., produces vapor. Every person loses up to 35 g of water per hour. Therefore, depending on the relative humidity, please ventilate and de-aerate through the windows and roof bonnets (see also "Winter operation").



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



Refrigerator

The ventilation bars provide the refrigerator with fresh air from outside to ensure sufficient cooling performance. The ventilation bar is located at the bottom of the exterior vehicle wall. The de-aeration bar is located above the ventilation bar.



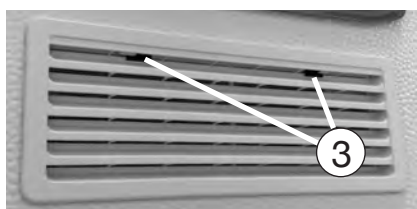
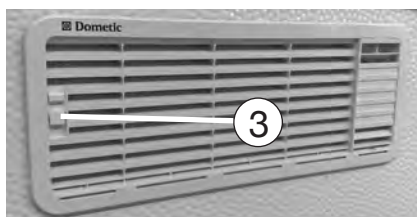
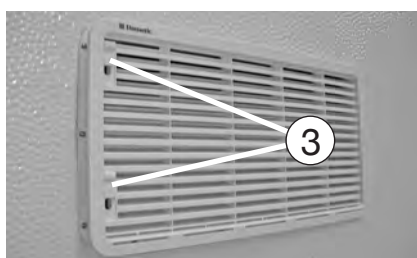
There is a danger of suffocation if ventilation openings are blocked! Therefore, do not block ventilation openings.



Special cover plates should be used during winter operation. You can buy these cover plates from your dealer.

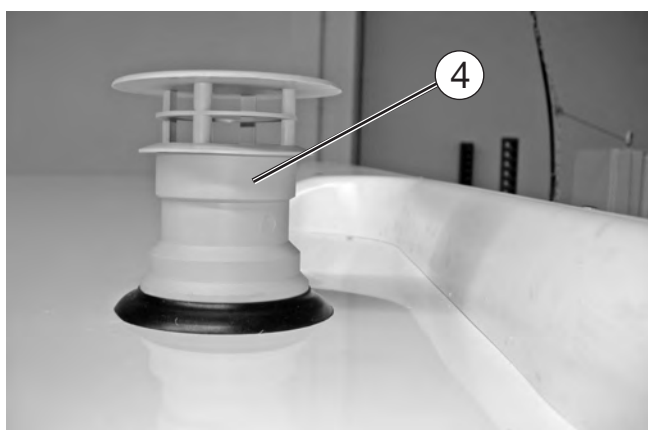


We recommend that you remove the ventilation bars when outside temperatures are very high. This creates a high air circulation on the refrigerator and increases cooling capacity. Bei Niederschlag oder im Fahrbetrieb müssen die Lüftungsgitter fest montiert sein.



Removing the ventilation grids

- Push the lock(s) ③ up as far as they will go (for Thetford: push both locks towards the centre).
- Carefully lift open the ventilation grid on the left-hand side (Thetford: lift up).
- Then pull the right-hand side out of the bracket (Thetford: press the lower edges down out of the bracket).



Heating element

A ventilation flap provides the heating element under the floor of the vehicle with fresh air. The air from the heating element is carried outside by a flue. The flue ④ is located on the roof of the camper.



There is danger of suffocation if flue openings are blocked! Therefore, do not block flue openings.



Ensure unobstructed outflow from the flue during winter operation.

5.2 Entry door



External entry door

To open

- 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 close

- 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.



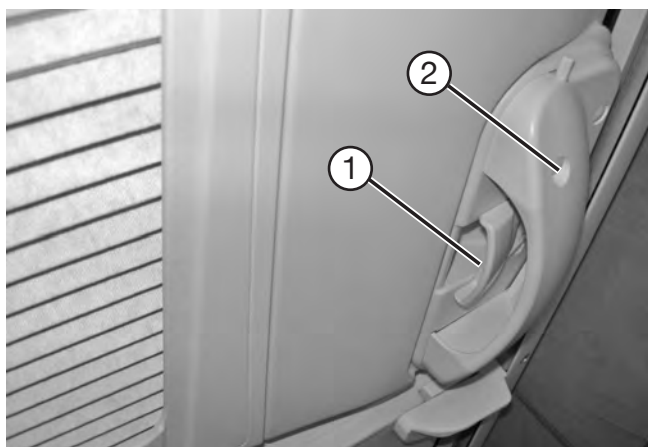
To avoid damage, do not use the track for the insect screen as assistance when entering the camper.



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



Only drive when the entry door is shut.



Internal entry door

To open

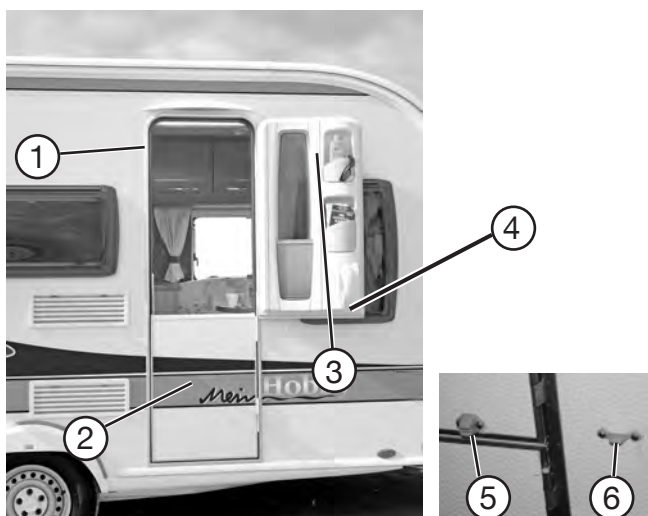
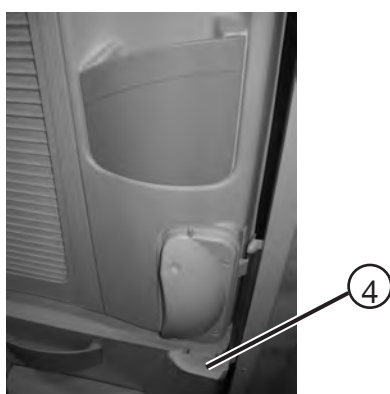
- Reach into the grip plate ①, pull the release lever, open the door and let go of the lever.

To close

- Pull the door shut.
- Press the locking button ②.



In this manner, a door locked from the outside can be opened from the inside.



Stable entry door

The upper ③ and lower ② parts of the entry door can be opened and closed separately by opening the door and then unlocking the upper part ③ of the door from the lower part.

Unlocking the upper part of the door

- Turn the lever ④ 90° to the left and place it in an upright position to separate the upper and lower parts of the door.
- Open the upper part of the door completely and press it against the outer wall of the vehicle. The door catch ⑤ will snap into its counterpart ⑥ on the outer wall of the vehicle and prevent the upper part of the door from shutting inadvertently.
- The door frame and the lower part of the door can now be swung back separately from the upper part of the door and leaned against the outer wall of the vehicle.



Never close the upper part of the door if the insect screen is closed. The insect screen must always be open when you lock the door.

Locking the upper part of the door

- Turn the lever ④ 90° to the right and back into an upright position to connect the upper and lower parts of the door.
- To close the whole door, use the handle to press it into the frame ①.



Entry step tread

When entering and exiting the vehicle:

- Place step tread in front of the entry door to the camper.
- Ensure that the step tread is placed on a level surface; this prevents the step tread from falling over.



Note the varied tread heights and, when exiting, ensure you will step onto firm and even ground.

5.3 Service flap

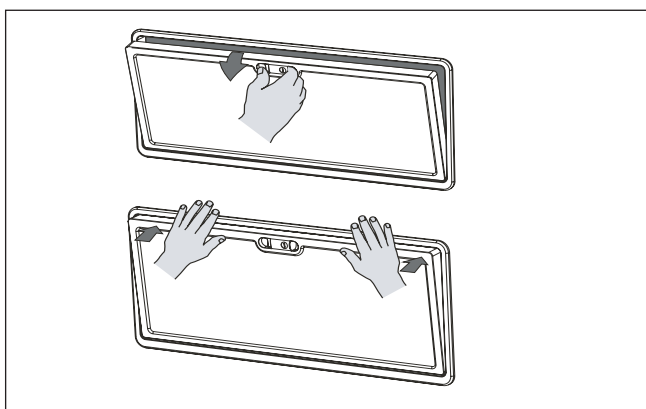


To open

- Unlatch the lock with the key.
- Hold the locking knob between your thumb and index finger and press firmly.
- Open the flap downward.

To close

- Close the flap upward.
- Press the flap on the upper left and right-hand corners to ensure that all of the locks actually click into place.
- Latch the lock with the key.



All of the fastenings on the service flap must lock into place when closing to ensure that the flap will always be closed tight. If the flap is not closed correctly, it could become permanently deformed, especially when the camper stands unused for a longer period of time.



Spray the sealing gaskets of the service flaps regularly with silicon to ensure that they will always move easily and operate reliably.

5.4 Gas-bottle container flap



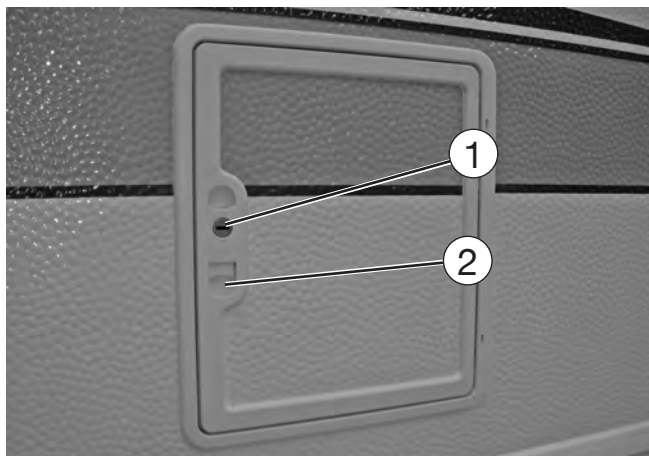
To open

- Unlatch the lock ① with the key.
- To unlock, turn the knob that pops out in a counter-clockwise direction and open the gas-bottle container lid.

To close

- Shut the lid of the gas-bottle container.
- Lock the lid by turning the knob in a clockwise direction.
- Latch the lock ① with the key.
- Press the knob until it snaps in and secure it.

5.5 Toilet flap



To open

- Unlatch the lock ① with the key.
- Press the knob ② and swing the flap to the side.

To close

- Push the toilet flap to the side until it snaps in.
- Latch the lock ① with the key.

5.6 Roof



The following applies for the roof load

- Use only standardised and licensed ladders that can be positioned firmly to climb onto the roof.
- The roof has not been made for concentrated loads. Place a large-scale cover over the area you wish to step on before standing on the roof. Materials with a soft and smooth surface (such as a large piece of styrofoam) are suitable for this purpose.
- Do not step too close to the roof bonnets or the air conditioning systems on the roof (stay at least 30 cm away).
- Do not step on the rounded areas at the front and rear ends of the camper.



The maximum total load for the roof rail is 80 kg!



Be careful when standing on the roof. There is a great danger that you will slip if the roof is wet or icy.

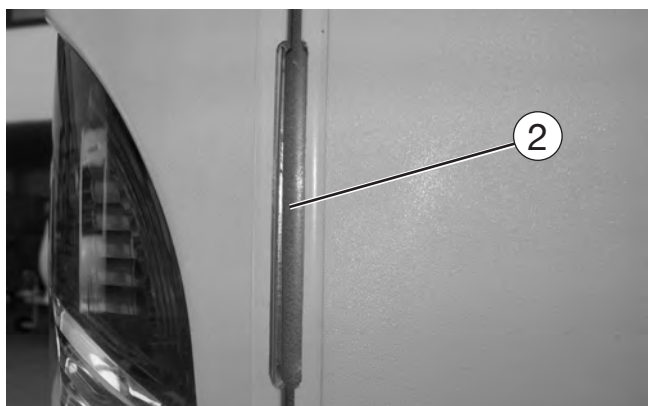
5.7 Guide rail for outer tent and skirting



The keder of the outer tent slides into the guide rail for the outer tent on both sides of the camper, both at the front and rear ends.



The seal under the guide rail for the outer tent has deliberately been left hanging somewhat behind the guide rail for the outer tent at the front and rear ends to ensure that rain and moisture will drip off completely. The projecting seal must never be removed.



The rail channel of the outer tent rail is wider ② at the rear end of the camper (above the rear lights). This makes it easier to insert the outer tent.



The camper has guide rails for skirting in the lower area of the superstructure. Always slide the skirting in from the middle of the vehicle towards the outer edges.



Fastening for the outer tent

Use the specially developed Hobby Vario Clip as a ridgepole bracket to securely attach an outer tent to the camper. The clip can be attached without screws and has been specially adapted to the contour of the moulding. The moulding is lined in the relevant places with a pressure and moisture-resistant plastic honeycomb design. **(cf. diagram in Chapter 14.7)**



Your Hobby dealer will be pleased to answer any questions regarding the fastening of the outer tent.



5.8 Bicycle carrier

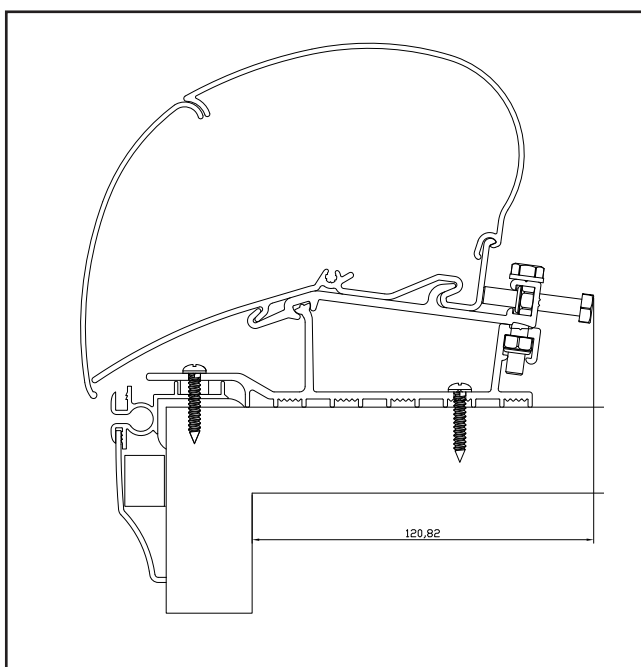


The handling of the trailer carriage changes considerably when the bicycle carrier has been loaded. You should adjust your speed to take this into consideration:

- Ensure that you make full use of the permitted towbar load when the bicycle carrier has been loaded and correct it accordingly.
- Your critical speed will be dramatically reduced even if you have loaded the bicycle carrier optimally.
- The driver of the vehicle is responsible for ensuring that bicycles are fastened securely. The loading system must be folded up and secured with the available clips even when it is not loaded.
- Ensure that existing lighting equipment is not covered partially or completely by the load.

The maximum permissible load for the bicycle carrier is 50 kg.

5.9 Roof awning



Appropriate adapters and fitting components are available for subsequent assembly of roof awnings. Please speak to your HOBBY dealer.

The roof awning should always be assembled by an authorised specialist.

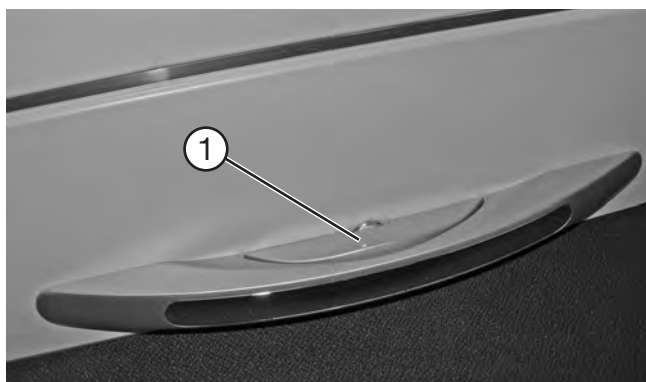
The maximum permissible total width and total height may not be exceeded by installing an awning.



Installing an awning may have a negative influence on the trailer/driving performance of the camper.

6. Interior structure

6.1 Doors, flaps and drawers



Stowage and wall cabinets

To open

- Press the pushbutton ① on the handle to unlock the flap.
- Pull on the handle until the flap opens.

To close

- Use the handle to press the flap shut until you can feel it lock.



Only the flaps on the kitchen wall cabinets have an extra lock. The other wall cabinets are shut using the spring force of the hinges.



Furniture doors with magnetic safety catches

To open

- Pull firmly on the handle until the flap or door opens.

To close

- Press on the flap or handle until you can feel that it is held shut by the magnets.



Furniture doors with handle

Washroom door

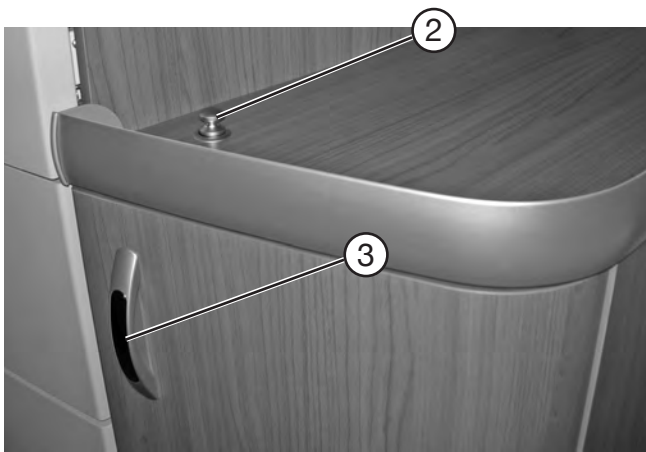
- Push the handle to open and shut the door.



Furniture doors with knob

Wardrobe

- Turn the knob to open and shut the door.



Push-lock drawers

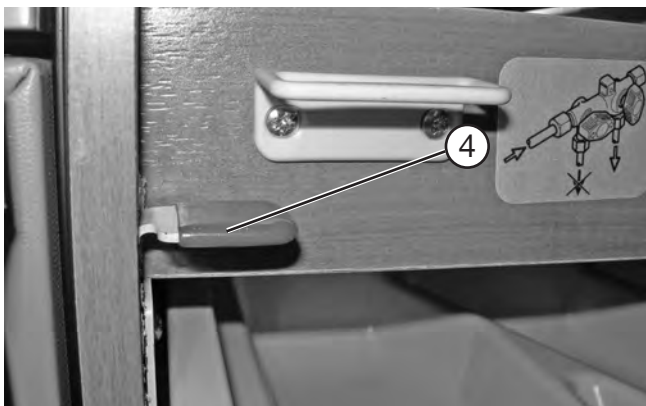
Kitchen drawer

To open

- Press the push-lock ② until the knob jumps up.
- Pull on the handle ③ until the drawer slides out.

To close

- Using the handle ③, push the drawer closed.
- Press the push-lock ② until the knob snaps into place and the drawer is securely shut.



Kitchen drawers

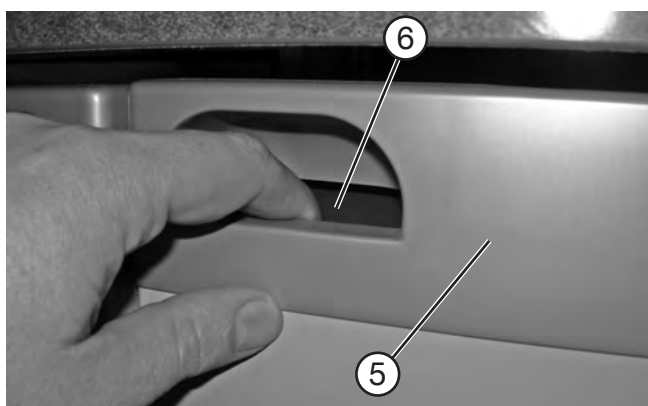
The drawers in the kitchen have a central locking system ④.

To lock

- Open the cutlery drawer ⑤.
- Press the central lock ④ as far down as it will go.
- Close the cutlery drawer.

To unlock

- Open the cutlery drawer ⑤.
- Pull the central lock ④ as far up as it will go.
- Close the cutlery drawer.



Cutlery drawer

Cutlery drawer

The cutlery drawer ⑤ has its own lock. The drawer can be unlocked by pressing the button ⑥. It will lock automatically when you close the drawer.



Close all flaps and drawers properly before driving. This will prevent accidental opening during the drive which could cause objects to fall out.

6.2 Pivoting TV cabinet



Media oval (model-specific)

The media oval is a room divider, mounted on a pivot, which can be used as both a bar and a TV cupboard for flat screens.

To swing the media oval, pull the catch ① and, after swinging out the media oval, press and snap the catch back into place to secure the media oval.

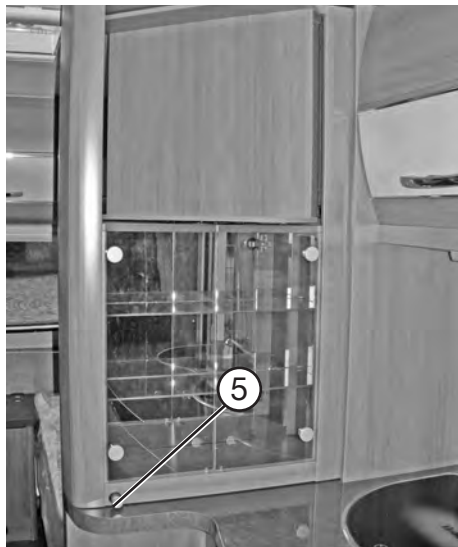
The switch ② for turning the LED lighting for the bar on and off is located directly beneath the media oval next to the 230 V sockets for the kitchen. In most models, the lighting for the bar cannot be turned on and off using the control panel.

The 230 V sockets as well as the antenna terminal ③ for the television and the receiver are located underneath the media oval in the top compartment of the kitchen L-element. The 12 V socket ④ shown in the photo is not included in standard delivery. (It can be ordered as an option.)



While driving, the media oval must always be well secured and locked into place.

6.3 Extendable media shelf (model-specific)

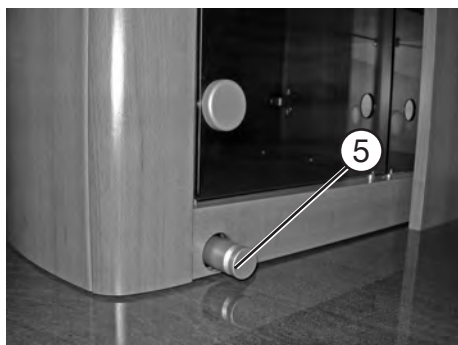


The extendable media shelf is an extendable, pivot-mounted room divider which can be used both as a bar and as a TV cabinet for flat screens.

To pull out the room divider, pull the knob ⑤ out; to secure the room divider when it has been pulled out, push the knob back in. To pivot the upper part of the media unit, pull on the pin ①; after turning the unit 180°, press and lock the pin to secure the unit.

The LED lighting in the bar is switched on and off using the „Ambience 3“ key on the control panel.

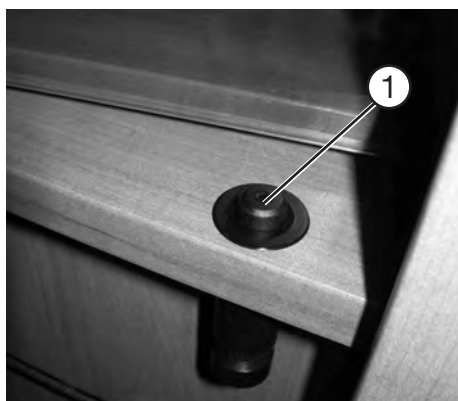
The 230 V sockets and the antenna terminal ③ for the TV and the receiver are located under the extendable media shelf in a separately accessible compartment.



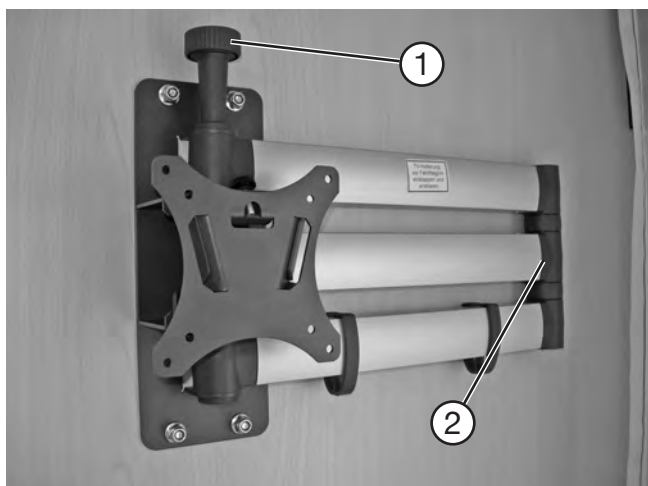
While driving, the extendable media shelf must be recessed and secured.



The cables for the antenna terminals of both the TV cupboards and the external socket of the outer tent converge loosely in the clothes cupboard to enable you to hook up the 5 TV sets individually.



6.4 TV mount



As an option, all of the models that are not fitted with an extendable media shelf or media oval can be fitted with a TV mount.

To unlock

- Pull the pin ① up.
- Swivel the support arms ② to the desired position.

To lock

- Fold up the TV mount until you can hear the pin ① click into place.



Before you start your journey, retract the TV mount and lock it into place.

6.5 Tables



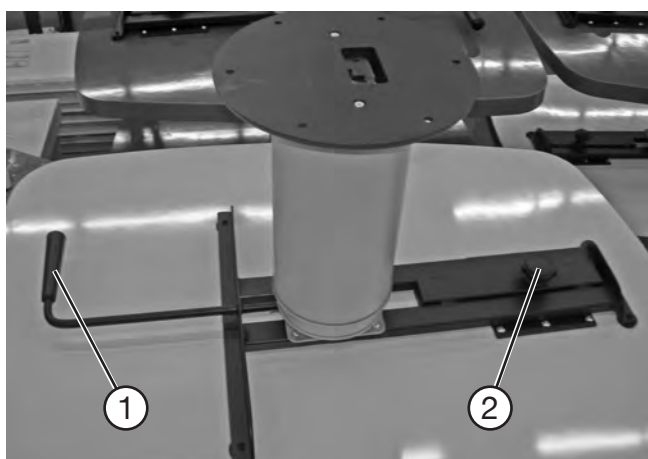
Elevating table

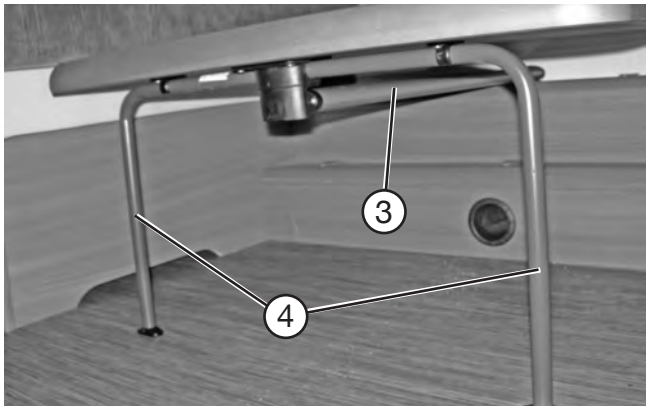
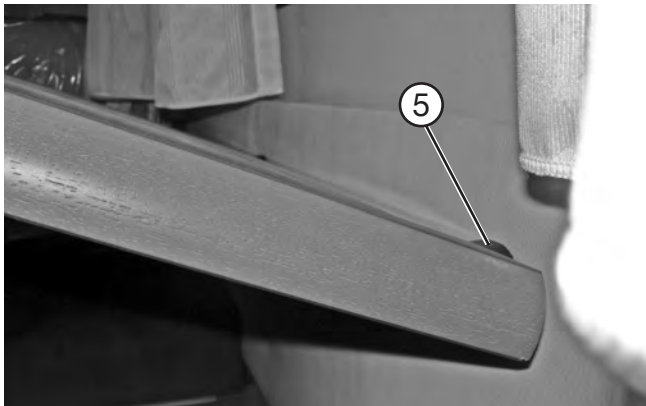
To lower

- Turn the locking bolt ① 180°.
- Press on table top to lower the table.
- Turn the locking bolt ① back and secure the table top.

To turn

- Loosen the knurled screw ②.
- Turn the table in the desired (excentric) direction.
- To lock the table, tighten the knurled screw ②.





Hanging table

To lower

- Raise the front end of the table top by approx. 30°.
- Pull down the lower part of the table leg ③, fold it over by 90° and lay it alongside.
- Fold out the supporting legs ④ by 90°.
- Pull the table top out of the upper wall brackets ⑤.
- Raise the front end of the table top by approx. 30° and hook it into the lower wall brackets.
- Place the supporting legs at the front edge of the table top on the floor.



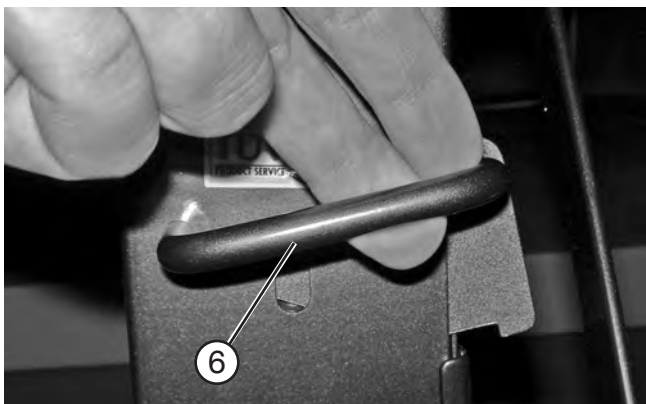
Swivelling table

To lower

- Push the handle ⑥ upwards.
- Swivel the table top downwards in an arc until the handle locks into place.

To turn

- There are rollers on the table legs, shifted 45°, which enable the table to be turned around its centre point in any desired direction.



The swivelling table is not fastened to the floor. Before driving, lower the table and secure the rollers by means of the attached transportation locks.

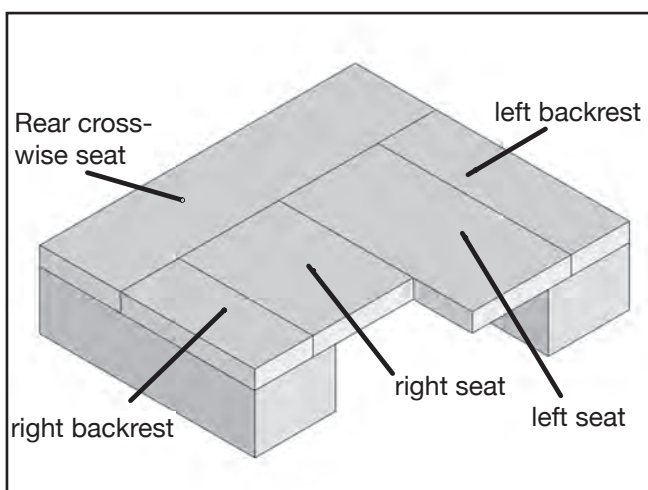
6.6 Conversion of seats and beds



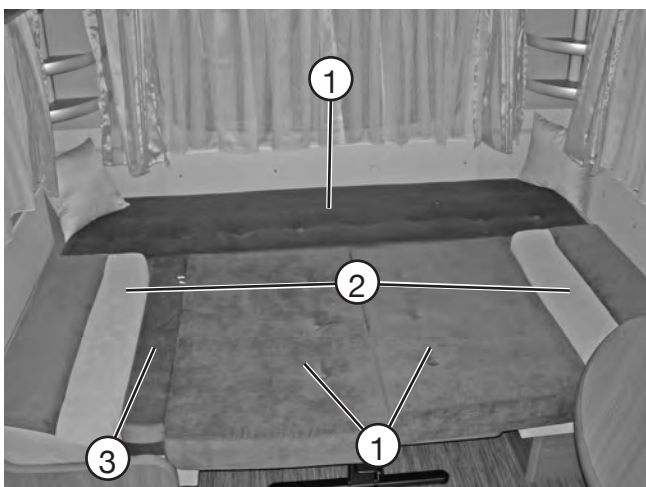
The seat groups can be converted into comfortable beds.

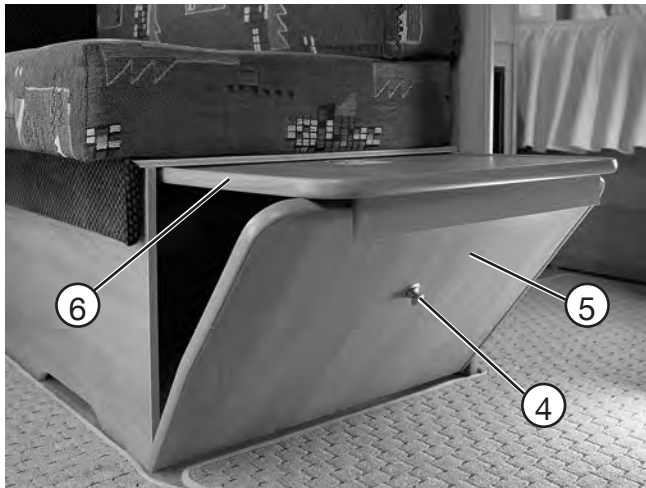
Conversion

- Remove the seat ① and back cushions ②.
- Lower the table.
- Replace the seat cushions and pull them to the middle of the table.
- Fill the empty spaces with the back cushions. To do this, turn the back cushions ② around and lay them with the wider side against the front or standing wall.
- In vehicles with a width of 2.5 m, an additional cushion ③ should be placed vertically into the gap to fill the remaining space.



Ensure that the tabletop, seat chests and/or covers as well as cushions are well secured so that nothing falls.





Bed expansion for vehicles with side seating arrangement

- To open, press the push lock ④.
- Carefully place the external panel ⑤ on the floor.
- Place the additional panel for the bed ⑥ in a horizontal position or tilt its longitudinal side slightly upwards.
- Raise the external panel ⑤ by approx. 60° and lower the additional panel for the bed ⑥ until the two parts support each other.

6.7 Children's beds



- Windows by the children's beds are secured against accidental opening, to effectively prevent children from falling out.



Be careful when using the upper bed for small children, as there is a danger that they may fall out. Never leave small children unattended in the caravan.



The permissible maximum load for the upper bunk bed is 75 kg.

6.8 Windows



Hinged windows

To open

The window can be adjusted to open at varying degrees:

- Turn the latch into the vertical position.
- Press the window outward until you hear a click. The window automatically remains in this position.



Windows by the children's beds are secured against accidental opening, to effectively prevent children from falling out.

To close

- Lift the window slightly outward so that the hinge disengages.
- Close the window.
- Turn the latches into the vertical position.

6.9 Roof bonnets

Safety instructions



- Never open the roof bonnets in a strong wind or when it is raining, hailing, etc., or if the outside temperature is below -20° C!
- Never use force to open the roof bonnets if they are frozen or covered with snow, because you may break the hinges and the opening mechanism.
- Before opening, remove snow, ice or heavy dirt. Make a note of the required space needed before opening the roof bonnet under a tree, in a garage, etc.
- Do not step on the roof bonnet.
- Close and lock roof bonnets before driving. Open insect screen and shade (home position).
- Close shade only 3/4 of the way if the sun shines in strongly; danger of heat accumulation!



The openings for the forced ventilation system must always be left open! Never close or cover forced ventilation systems!



Large roof bonnet

To open the roof bonnet

Before opening the bonnet, ensure that the area above the opening of the bonnet is free. The bonnet can be opened to an angle of 60°.

- Reach into the opening of the crank bag and fold the crank to the user position by pulling it out. Turn the crank clockwise to open the bonnet to the desired position. When you have reached the maximum opening angle you will feel the resistance.

To close the roof bonnet

- Turn the crank counter-clockwise until the bonnet is closed and you feel the resistance. When the bonnet is closed, you can fold the crank back into the crank bag. To be locked securely, the crank must be folded into the crank bag.



Small roof bonnet

To open the roof bonnet

- This roof bonnet can be opened to three different settings in the opposite direction to traffic. Press the locking knob on the side and use the adjusting lever to move the roof bonnet to the desired position; then click it into place. The bonnet has a maximum opening angle of 50°.

To close the roof bonnet

- Release the adjusting lever from its catch position and close the roof bonnet. The bonnet is automatically locked when it has been completely closed.



Black-out pleating and insect screens

The shades and insect screens are integrated in the window frame. The black-out pleating can be adjusted to any desired position.

To close the black-out pleating

- Using the handle strip, pull the black-out pleating to the desired position and let go of the handle strip. The shade remains in this position.

To open the black-out pleating

- Use the handle strip to pull up or down lightly on the black-out pleating. The shade rolls upward automatically.

To shut the insect screen

- Pull the insect screen completely down with the strap and let go. The screen remains in this position.

To open the insect screen

- Pull the insect screen slightly down with the strap and then guide it upward. The screen rolls upward automatically.



Do not let the shade or the insect screen fly upward!



To avoid consequential damage, leave the shades and pleatings open when the caravan is not in use.

Shade

The shade is infinitely variable; simply pull the handle to the desired position or until the lock snaps into the handle of the insect screen.

Opening/closing the insect screen

Push the handle strip of the insect screen against the handle strip of the pleating until the lock snaps into the handle strips.



Roof fan

The roof fan can be set up either on one or both sides.

To open

- Press the spring lock towards the inside of the roof fan while, at the same time, using the handle to press the roof fan upwards.

To close

- Use both handles to pull the roof fan firmly downwards until both spring locks have latched into place.

Shade/insect screen

When the insect screen is shut and locked together with the shade, it is still possible to pull down the shade. When you pull down the shade, the insect screen will automatically be pulled with it.

To close

- Press the lock towards the outside of the roof fan.
- Pull the handle of the screen towards the handle of the opposite screen and let it latch into place.

To open

- Press the handle together; this releases the lock.
- Take hold of the handle and slowly guide the screen back.

7. Installation of electrical devices

7.1 Safety tips

The installation of electrical devices in the HOB-BY camper has been carried out in accordance with the valid regulations and standards.

Please note



Do not remove safety tips and warnings on the electrical equipment.



The installation spaces for electrical equipment such as distribution fuse boards, electric power supply, etc., may not be used as additional storage spaces.

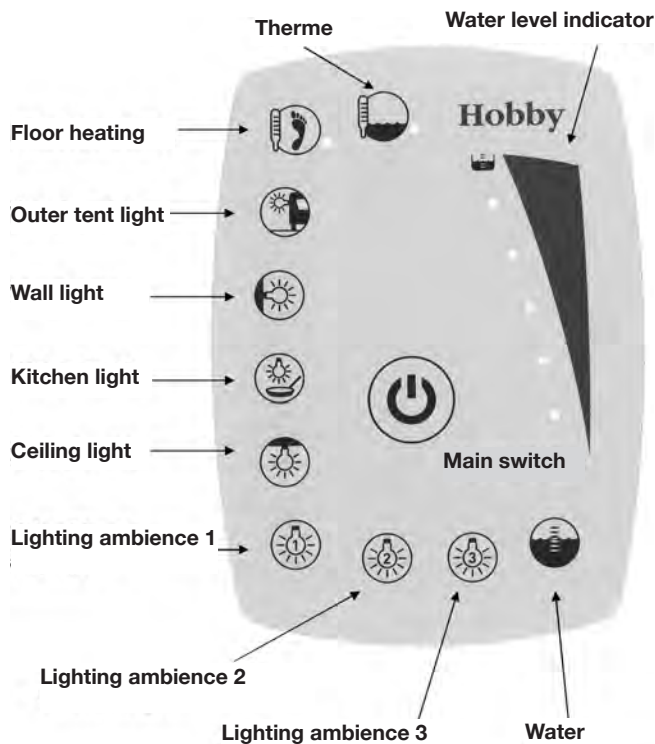


The standard version of the camper is not equipped for internal battery supply (self-sufficient operation).

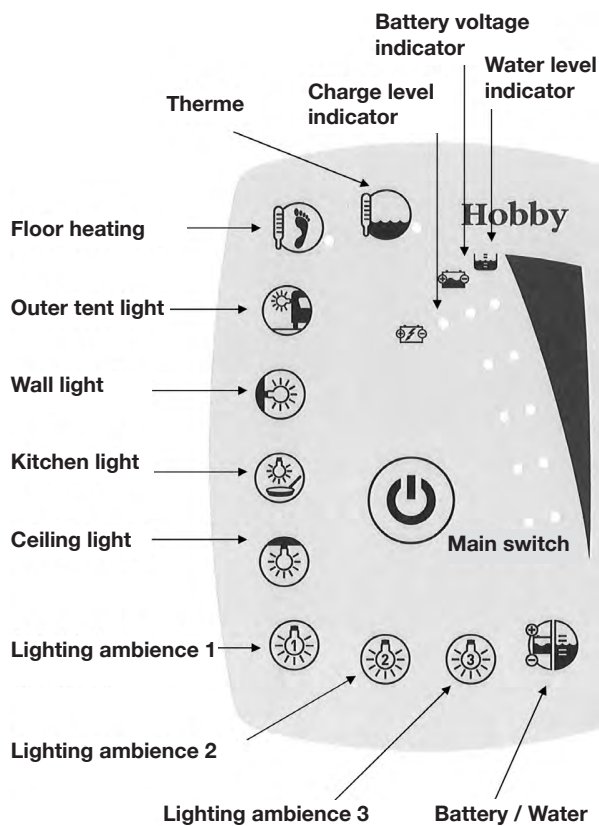


Only authorised specialists may work on the electrical system.

7.2 Control panel



Standard control panel



**12 V or self-sufficient control panel
(special request)**

Functions of the main switch

- After initially connecting the camper to the 230 V mains, you must press either the main switch or any other control key in order to activate all of the 12 V electrical devices and the 230 V electrical devices that are switched by the system (e.g. therme, floor heating).
- Once the system is in operation, press the main switch briefly to turn all of the lights off. All of the 12 V steady electrical devices (e.g. water supply, refrigerator control, heat blower) remain activated. The devices that were previously switched on are stored in the system; pressing on the main switch reactivates them.
- Pressing the main switch for at least four seconds while the system is switched on will turn off not only the presently activated devices, but also the entire 12 V system (in self-sufficient campers, this will not cut off the charging of the battery).
- If there should be a power failure, the system will remember whether the main switch was on or off. As soon as the power is back on, the main switch will automatically switch itself back on. Electrical devices that continuously use current, such as the heating, will then begin to operate again.



If the ignition of the base vehicle has been switched on, the refrigerator will operate automatically on 12 V, i.e. it is not necessary to press the main switch. All other 12 V electrical devices will only operate on the battery of the base vehicle if the main switch has been activated.

Switching the devices and lights

- Lights, the therme and, if applicable, the floor heating can be switched on and off using the appropriate function key.
- Press the appropriate key for a longer period of time to dim the ceiling and wall lights.
- In addition, you can control up to three different lighting ambiances by using the appropriate keys (ambience 1 -3). These have been individually adapted at the factory for each model.



Indicators

- The indicator for the water level as well as the combined indicator for the water level and the battery voltage in the 12 V vehicle (special request) are activated by pressing on the appropriate key. The LEDs on the scale indicate the level of water and the voltage of the battery, respectively.
- The charge level indicator (only self-sufficient) shows the current charge level of the battery.

Blinking red light:

The battery is not connected or has been exhaustively discharged; the battery will not be charged. Start to charge the battery by pressing on the activation key on the charge controller.

Blazing red light:

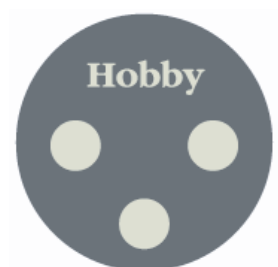
The battery is empty and is being charged.

Blazing yellow light:

The battery is in a state of conservation charging.

Blazing green light:

The battery is charged.



Remote control, bed

- Switching and dimming the spotlights to the left and right of the bed.
- Switching and dimming the ceiling lights (centre key).

Remote control, washroom

- Left: switching the recessed spotlights above the toilet.
- Centre: for models with washroom on the side and a hot-water heating system: switching the power convector. Otherwise: not allocated.
- Right: switching the washroom light

Remote control (special accessory)

- The hand-held transmitter is used to switch six functions on the control panel via remote control.



To conserve the capacity of the battery being used, press the keys on the hand-held transmitter only until the desired function has been carried out.



For further instructions, please refer to the manufacturer's separate operating instructions.



7.3 Electrical supply

Electricity for the camper 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 (special request)
- Everything that uses 12 V, such as lighting, water supply, etc., is available.

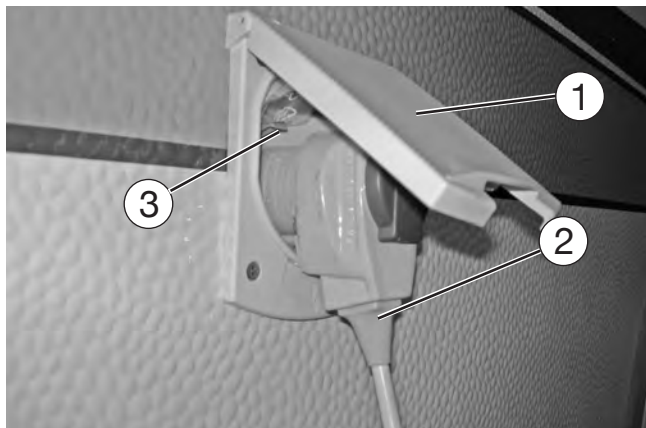


Supply via mains connection

The camper receives its electric power supply via the 230 V CEE feeder plug on the side wall of the vehicle.



The external 230 V supply must be protected by a residual current device (RCD).

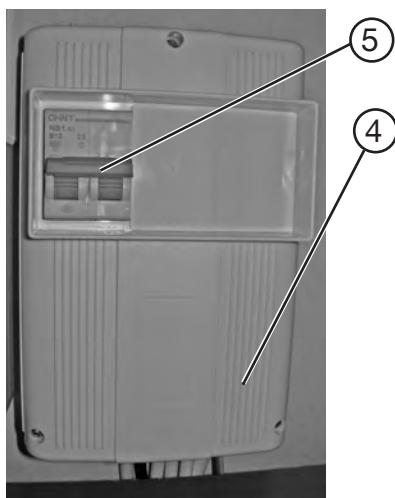


To set up an electric connection

- Pull out the 13-pole plug that connects to the base vehicle.
- Switch off the automatic circuit breaker ④ by pressing the rocker button down ⑤.
- Take hold of the bottom of the cover flap of the external socket ① and pull it up.
- Completely unwind the connector cable, attach the plug ② and click it into place.
- Switch the automatic circuit breaker ④ back on.

To disconnect the electric connection

- Switch off the automatic circuit breaker ④ by pressing the rocker button down ⑤.
- Press the lever ③ in the external socket down.
- Remove the CEE plug ②.
- Press the cover flap ① down until it clicks into place.



The 230 V system is protected by a two-pole 13 A automatic circuit breaker ④, which is located in the clothes cupboard. (Exceptions to this include special installations, such as ultraheat, hot-water heating, etc.. In this case, an additional two-pole 16 A circuit breaker has been installed.) If there are two automatic circuit breakers, both must be switched on.

Rules for the mains connection

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

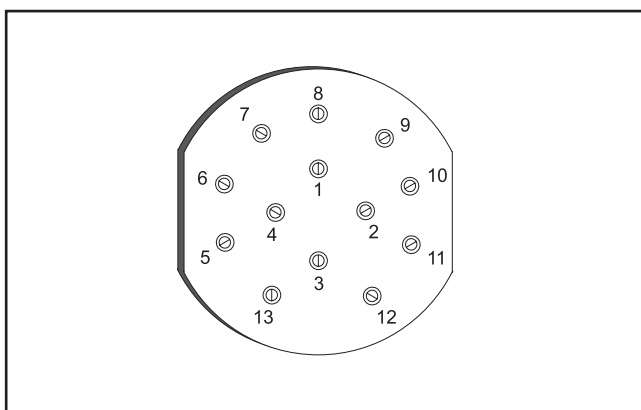


When obtaining electricity via a cable drum, this **must** be completely unwound, as otherwise induction may cause the cable to heat up, which could lead to burning.

- The 230 V mains connection in the camper 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, such as the refrigerator, therme, etc., into account.



If a residual current operated device (special installation) has been installed in your camper, it must be checked regularly by activating the test button.



Connector pin assignment of the 13-pole plug („Jäger“ outlet)

Contact	Circuit
1	direction indicator, left
2	fog lamp
3	mass (for circuits 1 through 9)
4	direction indicator, right
5	right taillight, silhouette light, limitation lamp, and license-plate illumination
6	brake lights
7	left taillight, silhouette light, limitation lamp, and license-plate illumination
9	electrical supply (constant positive)
10	electrical supply, ignition switch controlled
11	mass for circuit 10
12	mass for trailer recognition
13	mass for circuit 9

Operation via base vehicle

During the drive, the battery of the base vehicle takes over the supply of the 12 V devices if contact 9 of the 13-pole socket system on the base vehicle has been equipped.

Use the main switch on the control panel to switch off the 12 V operation during the drive, on longer stopovers and breaks to conserve power in the base vehicle's battery.

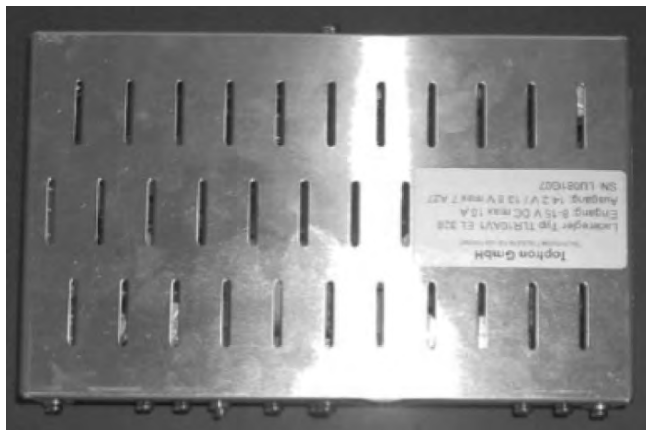
When running on 12 volts, the refrigerator only functions if the motor of the base vehicle is turned on. Contacts 10 and 11 of the 13-pole socket system.



If operation is carried out via the base vehicle, a maximum of 3 electrical devices in the camper can be switched at the same time using the control panel (exception: the self-sufficient package has been installed). This limits power consumption.



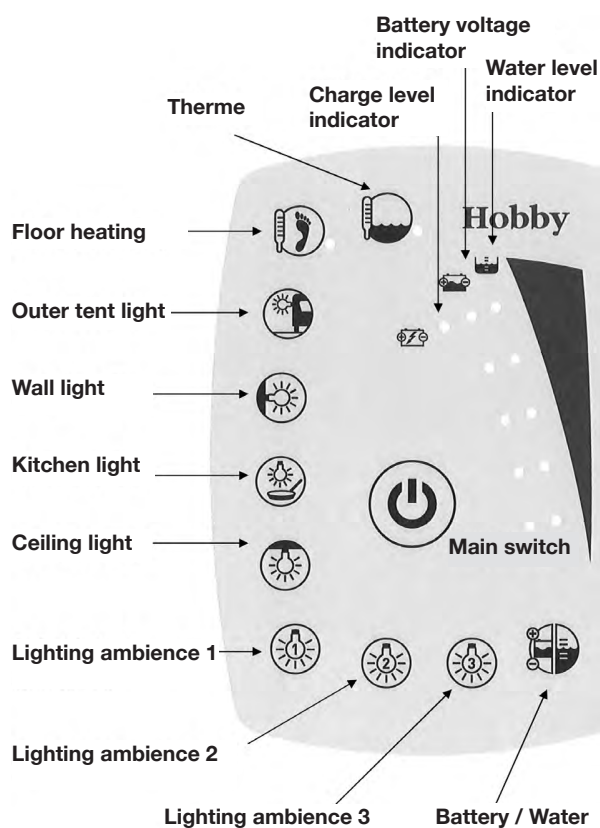
Always switch off the electric connection between the base vehicle and the camper before hooking the camper up to a low-voltage supply.



Operation via auxiliary battery (self-sufficient package)



- Only accumulator batteries with bound electrolytes (gel batteries) may be installed in those positions specified by the manufacturer.
- The installed gel battery may not be opened.
- When changing auxiliary batteries, use only batteries of the same make and capacity.
- Before disconnecting or connecting the auxiliary battery, disconnect the electric connection to the base vehicle and switch off the 230 V supply, the 12 V supply as well as all electrical devices.
- Before replacing fuses you must first de-energise the charge controller.
- Before replacing a blown fuse you must first fix whatever caused the fuse to blow.
- Fuses may only be replaced by fuses with the same fuse protection value.
- Airing the charge controller insufficiently will cause a reduction of the charge current.
- The surface of the charge controller casing may become hot when the device is in operation.



Operating and loading the auxiliary battery

If the camper is not connected to the 230 V mains supply, the auxiliary battery will supply the electrical system with 12 V DC voltage. Since the battery only has a limited capacity, the electrical devices should not be operated for a longer period of time without charging the battery or connecting the camper to the 230 V mains connection. The charge controller is used to charge the battery. There are three possible sources of input: 230 V mains connection, generator of the base vehicle or possibly a solar panel, whereby the source of input with the highest input voltage supplies the charge current for the connected battery. The battery is charged in different phases; these are signalled by the control LED for the charge level indicator on the control panel (**see 7.2 Control panel**). The current value of the battery voltage is displayed by the LED chain on the control panel.



- Always charge the auxiliary battery for at least 20 hours before each journey, directly after each journey and before you take the camper temporarily out of service.
- Use every opportunity during your journey to charge the battery.
- The battery loses its capacity after having been used for a while and at low temperatures.
- The battery is only charged if it has a minimum voltage of 8 V. The red control LED on the control panel will blink if the battery should fall below this level.
- For further information, please refer to the separate operating instructions for the charge controller.

7.4 Electrical system



As soon as there is a mains connection, the electrical system will switch from battery operation to mains operation.

The electrical supply unit uses a converter to transform the external mains voltage for the 12 Volt electrical devices.

All of the lamps in the camper use 12V. Only large electrical devices such as the therme, floor heating, air conditioner, etc., use 230V.



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):



In some models, there may be slight deviations in this assignment.

Electric circuit 1 (15 A):

children's bedside lights, clothes cupboard light (only WLU), outer tent light, wall lights, ceiling light, bedside lights

Electric circuit 2 (15 A):

children's bedside lights

Electric circuit 3 (15 A):

clothes cupboard light, left bedside light (only WLU), ambience 2, kitchen, shower

Electric circuit 4 (15 A):

fan, washstand, ambience 3, ambience 1

Electric circuit 6 (7.5 A):

water supply, Porta Potti, refrigerator illumination



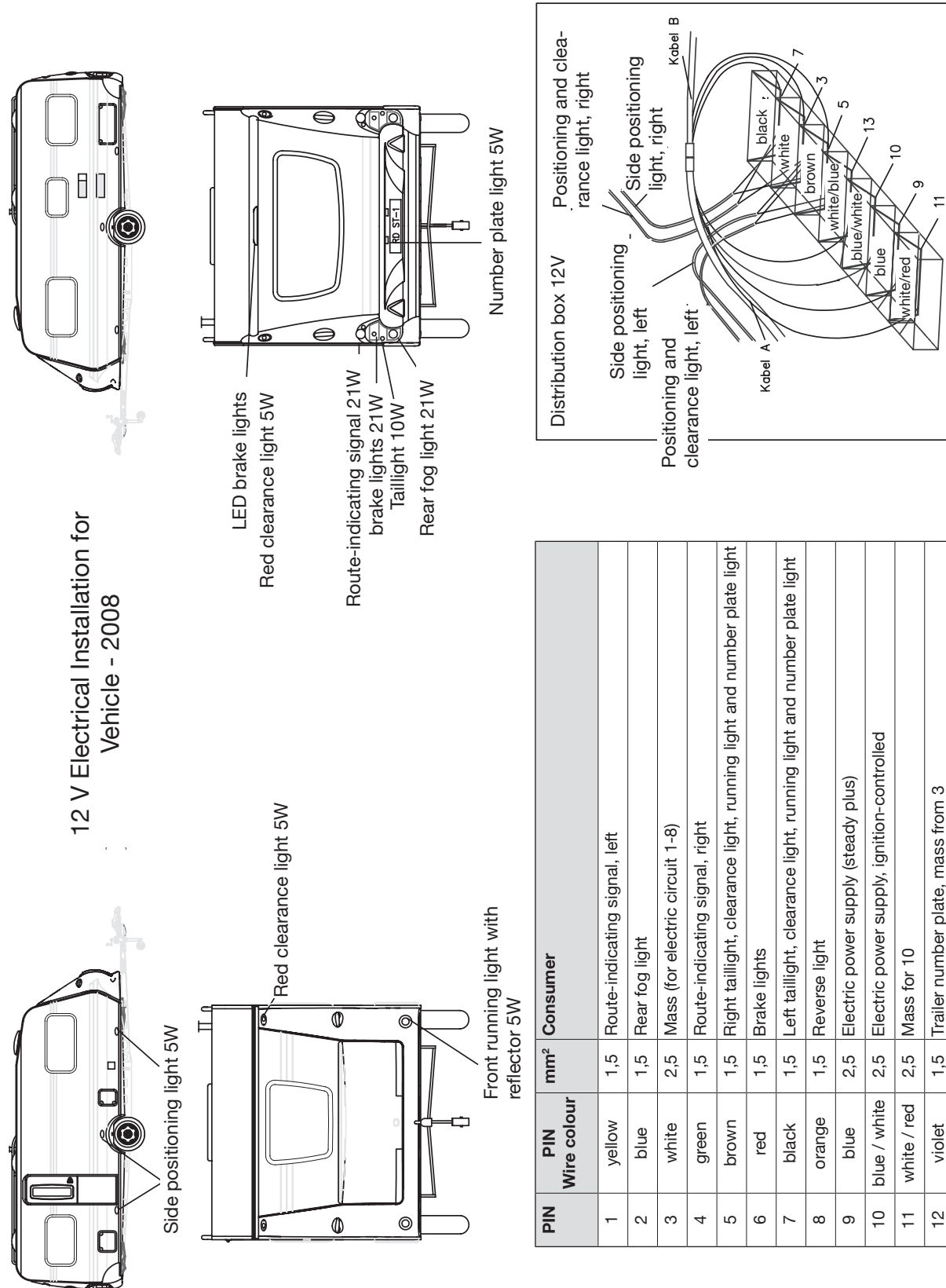
Only replace defect fuses if you know what caused the fuse to blow and have fixed this.



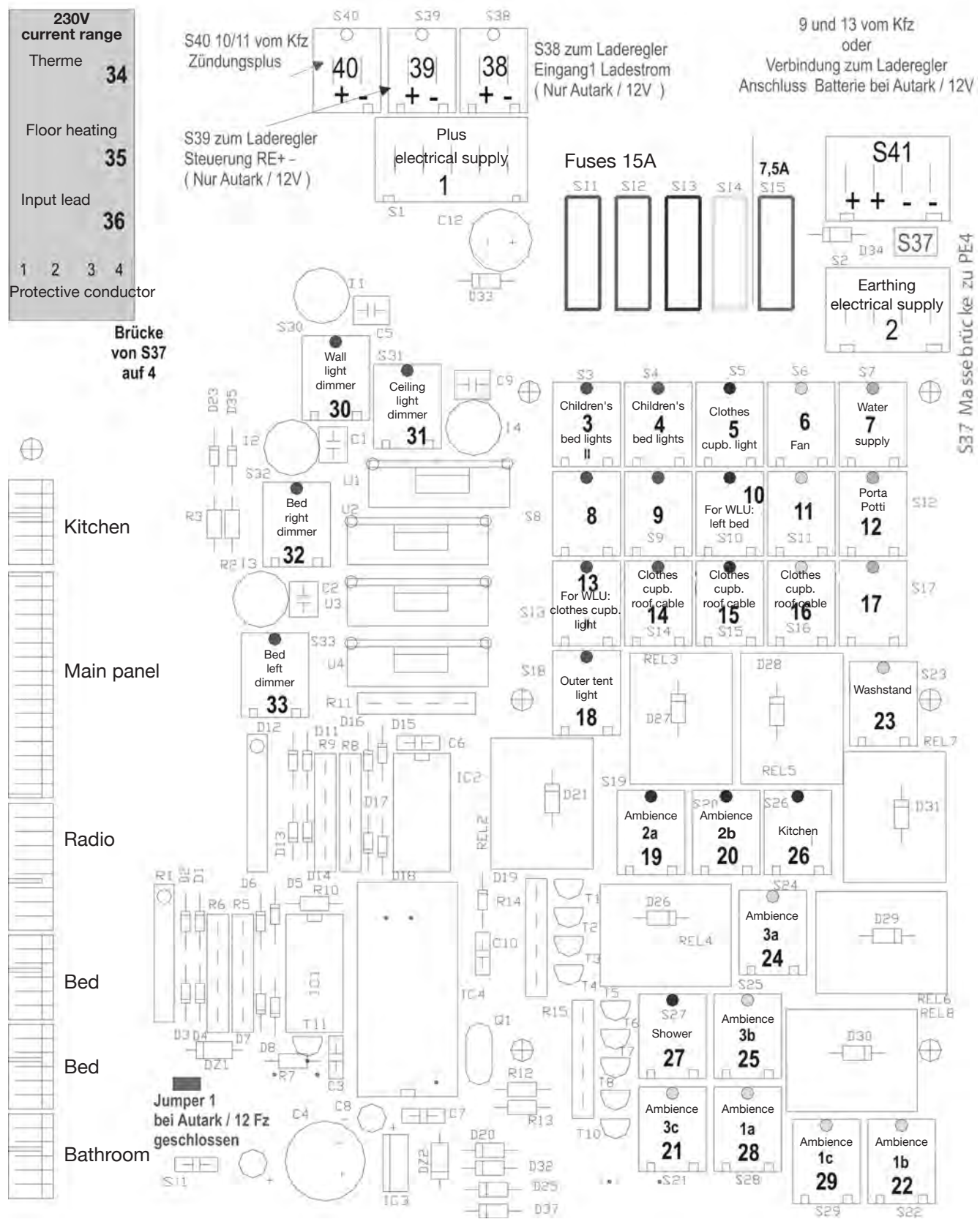
Only replace defect fuses if you know what caused the fuse to blow and have fixed this. Your camper also has a combined external socket and antenna terminal in the outer tent (deluxe special accessory).

This can be used, for example, to set up a TV in the outer tent. Depending on how you wire it, the integrated antenna terminal can be used as either an input or an output socket. For further information, please speak to your Hobby dealer (also see 6.2).

7.5 External circuit diagram



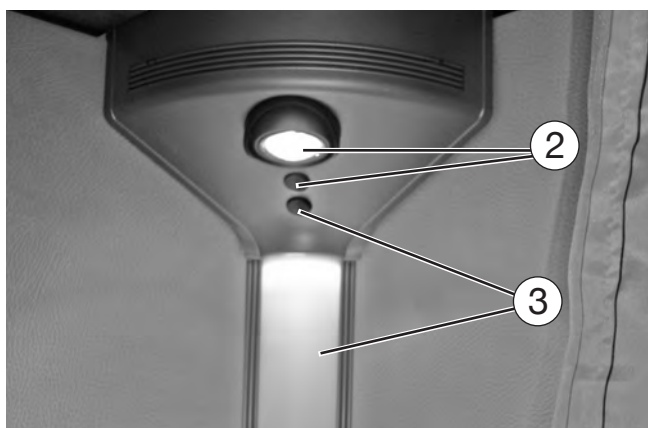
7.6 Contact plan for the light control system



7.7 Lighting in the camper

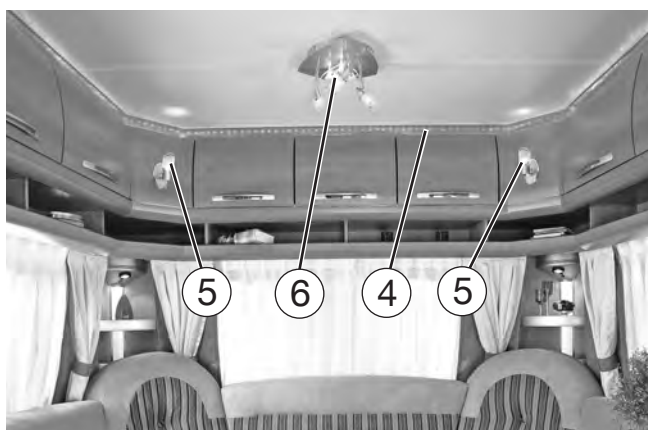


Circumferential recessed spotlights ① by the seating arrangement



Corner shelf:

Spotlight ② and integrated lighting columns ③ can be switched separately.



Indirect lighting ④ above the stowage cabinets:

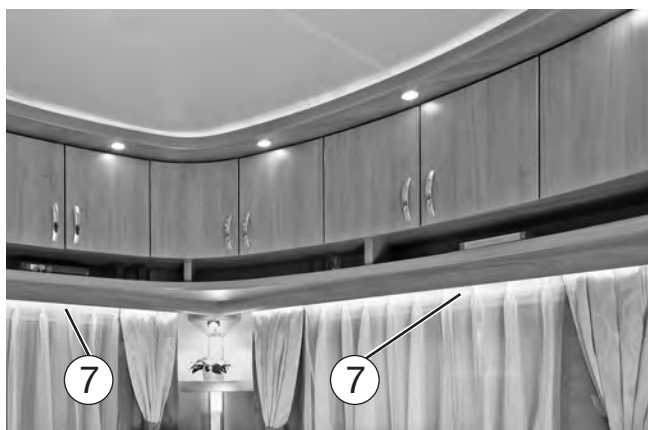


Dimmable wall lights ⑤:



Dimmable ceiling light ⑥:





Indirect lighting ⑦ above the window by the main seating arrangement



Ceiling light above the middle seating arrangement (depending on the model) can be switched manually directly on the lamp.



Oval light ⑧ and kitchen light above the kitchen worktop:



The clothes cupboard light ⑨ is switched on and off by opening the doors of the cupboard (integrated contact switch - cannot be switched on the control panel). The LED light is battery-operated. Before initial operation, pull off the foil that prevents battery contact.



The clothes cupboard light is operated by means of two 3V lithium button cells, size CR 2025, which can be replaced as required in the slot on the side.



Children's bed light is switched on and off by turning the bear's nose.

This light can be dimmed and set as a night light („blue ears“ - cannot be switched on the control panel). The night light is switched on and off separately by means of a switch underneath the children's bed light.



The outer tent light is switched on the control panel.



The outer tent light must be switched off when the camper is on the road.

If the camper socket has been attached to the base vehicle in a manner conforming to standards, HOBBY's light control system will automatically switch off the outer tent light when an electric connection is set up for the camper using the 13-pole plug.

8. Water

8.1 General information



The entire water system in your camper consists mainly of materials suitable for drinking water and, in part, of food-safe materials. Despite this, we recommend that you inspect any water you have filled in very critically before using it.



Please note

- Water that is suitable for drinking should always be used with working with food. This also applies to washing your hands and cleaning the objects that have come into contact with food.
- To ensure that the quality of the water is faultless, the water should be taken directly from the public drinking water system.
- Under no circumstances should garden hoses, watering cans and similar materials that are unsuitable for drinking water be used to fill the mobile system.
- If the caravan will not be used for a longer period of time, the entire water system must be emptied completely.
- After long periods of stagnation, the water system must be rinsed thoroughly before it is used again. If you find that it is contaminated, the material should be disinfected using cleaning agents that are permitted and suitable.

Function of the water supply

Water is provided to the kitchen and toilet area via an immersion pump. The immersion pump functions on electricity:

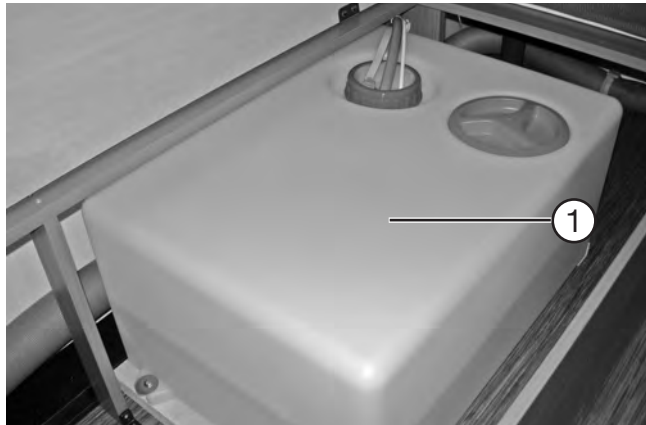
- via a 12 volt automobile battery if the camper is connected via a plug to the base vehicle,
- via a transformer if the camper is connected to the 230 volt main.
- In self-sufficient mode (special accessory) via the installed auxiliary battery.

Rules for the immersion pump

- The immersion pump is only suitable for water.
- The immersion pump tolerates temperatures up to 60° C for a short time.
- Avoid dry runs.

- Protect the pump from freezing.
- Hard blows or hits as well as very dirty water can destroy the pump.
- The pump can transmit at most 8.5 l/min.

8.2 Tanks



Built-in fresh water tank

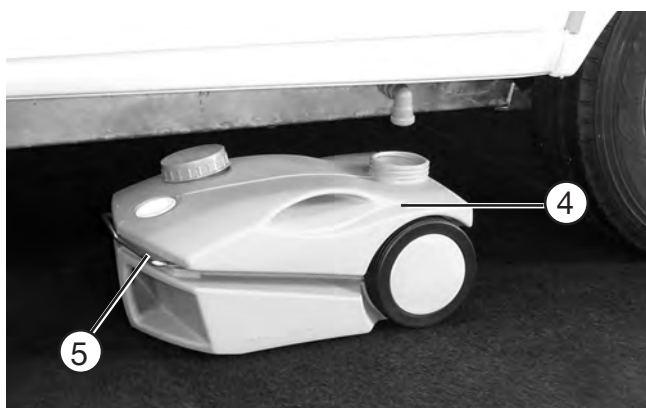
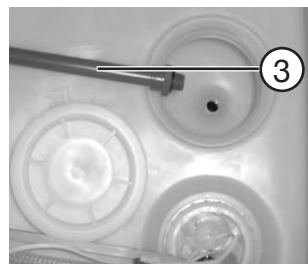
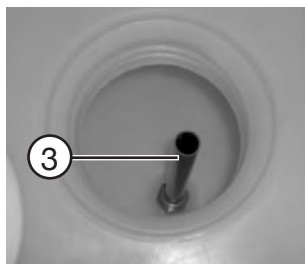
The tank ① has a model-specific volume of 25 or 50 litres.

The tank is filled with fresh water by means of the filler neck ② on the side wall.

The fresh water filler neck is identified by a blue screw cap as well as a water faucet symbol on the lower edge of the frame. The screw cap is opened and closed by means of the enclosed key for exterior flap locks and the door of the structure.

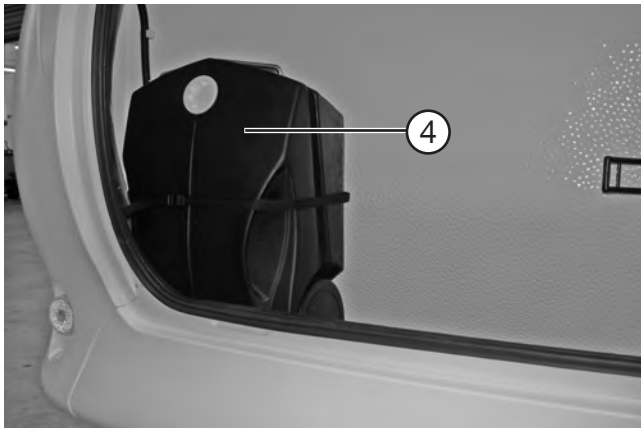
Should the tank overflow, the excess water is drained off underneath the vehicle by means of an overflow.

The water can be emptied from the tank by unscrewing the overflow pipe ③.



Rolling waste water tank

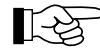
The rollable waste water tank ④ can be pushed beneath the vehicle when the camper is stationary. It collects the waste water and holds 22 litres. The waste water tank can be transported on wheels and has an extendable transport handle ⑤, allowing you to transport it to the appropriate waste disposal place for emptying.



During the trip, the waste water tank ④ can be stored in the gas-bottle container to save space.



Empty the waste water tank before beginning your journey and then use the belt in the gas-bottle container to secure it.



Empty the waste water tank if there is danger of frost.

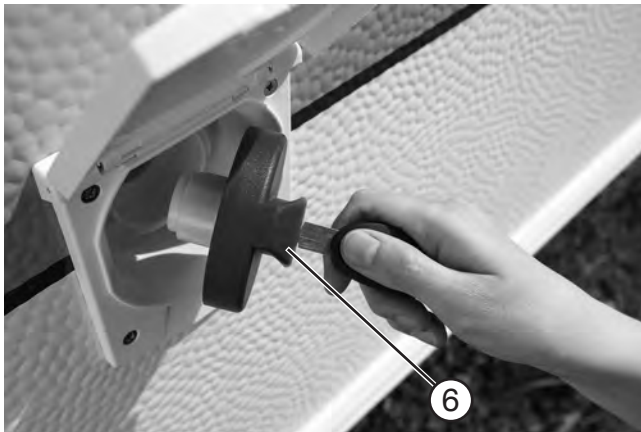


Never pour boiling water into the sink drain. This can lead to deformities and leakages in the waste water system.



Only empty the waste water tank at waste disposal stations, camping grounds or specially marked waste disposal facilities.

8.3 Water supply

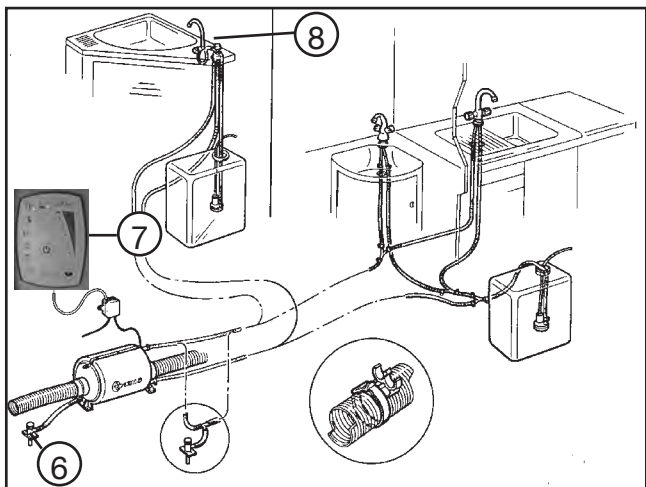
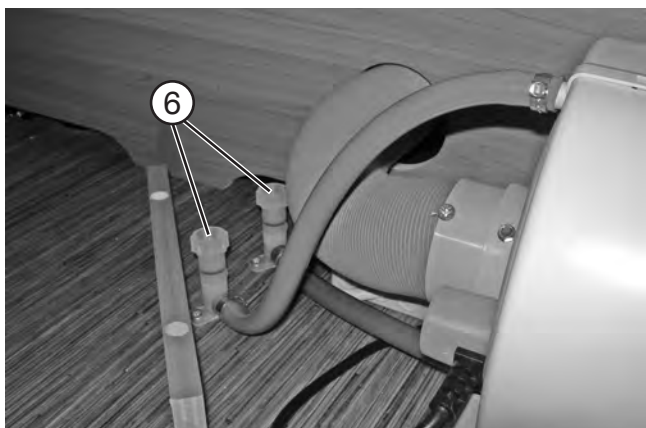


Filling the water system

- Place the camper in a horizontal position.
- Switch on the main switch on the control panel (press for at least 4 sec.).
- Shut the outlet valves on the therme.
- Shut all of the water taps.
- Unlock the petrol cap ⑥ and turn it counter-clockwise to open it.
- Fill the water tank using the fresh water filler neck.
- Turn all of the water taps to „hot“ and open them. The water pump will be switched on.
- Leave the water taps open until the water flows out of the taps without any bubbles. This is the only way to ensure that the therme will also be filled with water.
- Turn all of the taps to „cold“ and leave them open. The cold water pipes will be filled with water.
- Leave the water taps open until the water flows out of the fixtures without any bubbles.
- Shut all of the water taps.
- Shut the filler neck.



The fill quantity of the fresh water tank can be controlled on the control panel by pressing the key („Water“ symbol).



Plan for warm water supply

To remove water

- The water will be mixed to the desired temperature according to the position of the pre-mixing unit.

Emptying the water system

- Use the control panel to switch off the electricity for the water pump (7) by pressing the main switch for a longer period of time (4 sec.).
- Open all of the water taps (8) to the centre setting.
- Hang up the adjustable shower head in the shower.
- Open the outlet valves (6) on the therme.
- Unscrew the cap on the cleaning port of the fresh water tank (1).
- Unscrew the overflow pipe (2) in the fresh water tank.
- Remove the lid of the water tank. Take out the water pump and hold it up until the water pipes have emptied completely.
- Check whether the tank, therme, faucets and pipes have emptied completely. If necessary, blow out any remaining water in the pipes using compressed air (max. 0.5 bar).
- Re-insert the overflow pipe and the water pump in the fresh water tank and close the openings.
- Leave the faucets (8) and the outlet valves (6) open.



Hot water supply

- Use the control panel to switch on the therme. The temperature of the water is regulated by means of a thermostat via 230V mains supply to 55° C.
- The therme will hold approx. 5 litres.
- If you have turned on the heating system, the water in the therme will also be heated by the air circulation of the heating; in self-sufficient mode, it will be heated solely in this manner.

Rules for the therme

- Use the control panel to switch off this equipment whenever the camper is not in use.

- Empty the therme at the risk of frost. Frozen water can cause the therme to burst!
- A depressuriser must be used if the pump is connected to a central water supply, or on stronger pumps. The pressure in the therme may not exceed 1.2 bar. In addition, a safety valve or runoff valve ① must be used in the cold water tap.

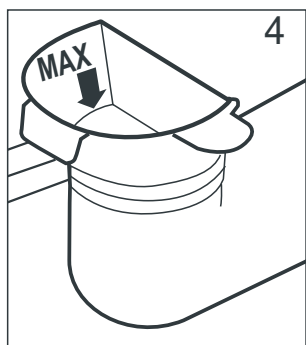
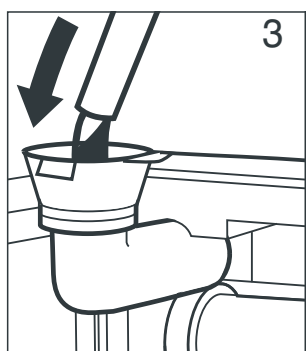
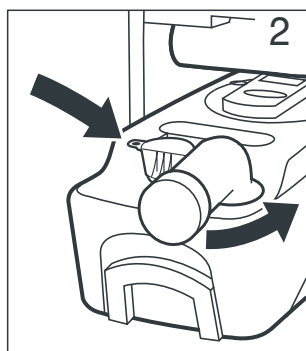
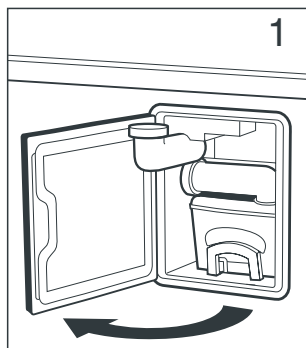


Never operate the therme electrically when it is empty.



Please also note the manufacturer's separately enclosed operating instructions.

8.4 Water flushing toilet



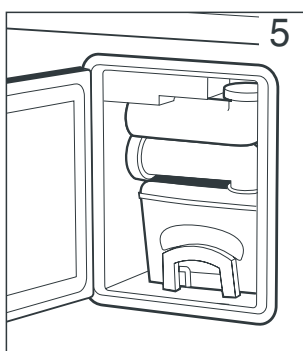
Toilets with fixed seat and fresh water tank

To prepare the toilet

1. Open the service flap on the exterior wall of your camper.
2. Swing the fill stanchions of the faeces tank in a 90° arch and remove the water tank extension (located under the handle closest to the drain nozzle).
3. Turn the water funnel outwards, remove the cap and place the extension over the funnel. Pour the required amount of Thetford toilet additive into the water tank. This ensures better flushing and cleansing and keeps the water in the fresh water tank fresh.
4. Fill the water tank with fresh water.



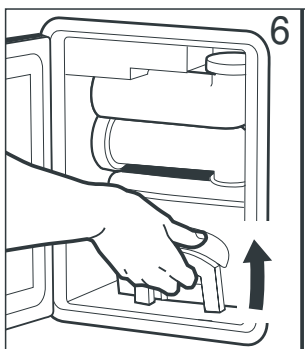
Ensure that the water level is below the water funnel.



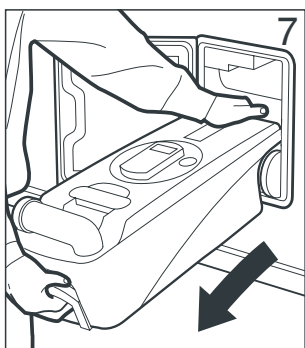
5. Remove the extension and return it to its original position on the faeces tank.



Depending on the amount of space between the door and the faeces tank, you can also use a peg to fasten the extension to the door. Screw the cap back onto the water funnel and press it back inside towards the fresh water tank.



150 ml of water are left in the water funnel when the water tank is empty.

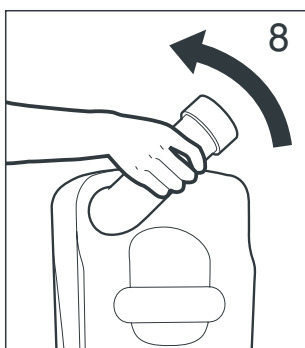


6. Remove the faeces tank by pulling the holder clamp up.

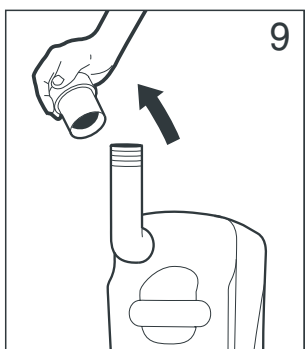
7. Pull the faeces tank outward until it clicks. Tilt it slightly and then pull it out completely.

8. Set the faeces tank upright and turn the pouring stanchion upward.

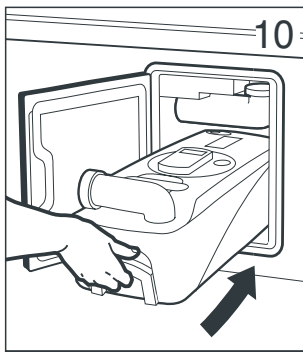
9. Turn the lid of the pouring stanchion with the measuring cup on the inside, and pour the required amount of toilet-bowl cleaner into the faeces tank. This prevents odours in the faeces tank and keeps the inside of the tank clean. Add about two more litres of water so that the floor of the faeces tank is completely covered. Then screw the measuring cup back onto the pouring stanchion and turn the pouring stanchion back to its original position.



The measuring cup for the pouring stanchion is in the same package as these instructions.



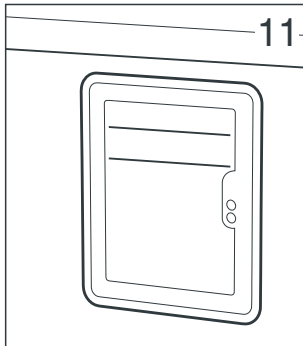
Never pour toilet-bowl cleaner through the valve or the toilet bowl. In the faeces tank, the liquid mixes immediately with water.



10. Push the faeces tank through the door back to its original position.



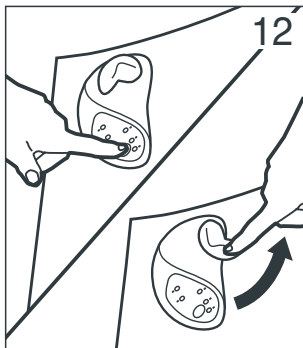
Do not use force the faeces tank back in; this could lead to severe damage.



11. Use the securing clamp to ensure that the faeces tank is locked into place and close the service flap.

Operation

12. Let some water run into the toilet-bowl by pressing briefly on the flush knob or open the valve by turning the lever counterclockwise. Your Thetford toilet is now ready for use.



13. After use, open the valve (if it is still closed) by turning the lever counterclockwise. Flush the toilet by pressing the flush knob for several seconds. Close the valve after use.



Never leave water in the bowl when the toilet is not in use. This does not reduce odours and can only lead to a blockage.



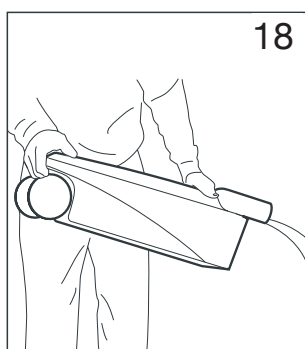
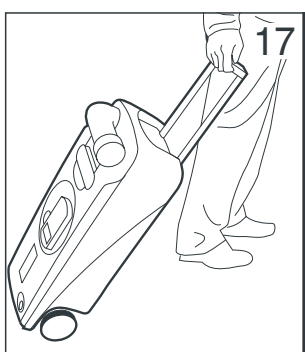
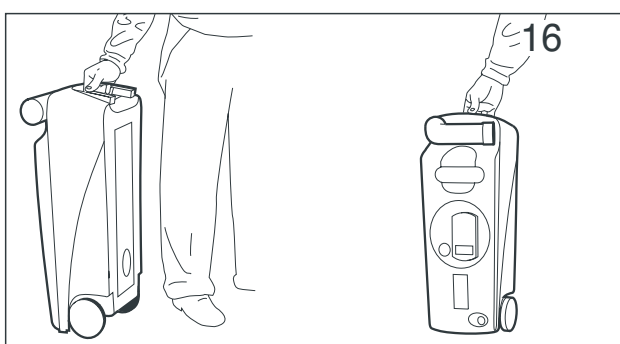
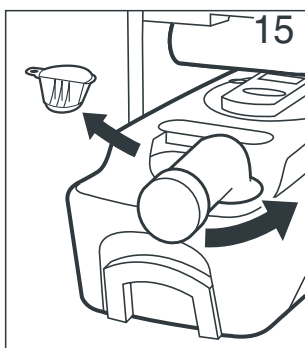
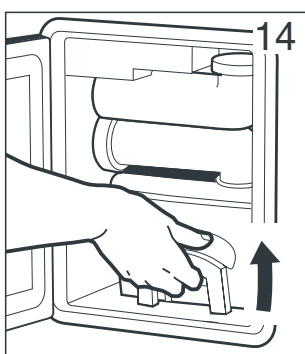
To avoid blockage, we recommend you use Aqua Soft, Thetford's fast-dissolving toilet paper.

Emptying the faeces tank:

The faeces tank holds 19 litres. It must be emptied at the latest when the the level indicator lights up red. This happens when about 2 litres are left in the faeces tank (can be used approx. +/- 3 more times). We recommend that you empty the faeces tank before.



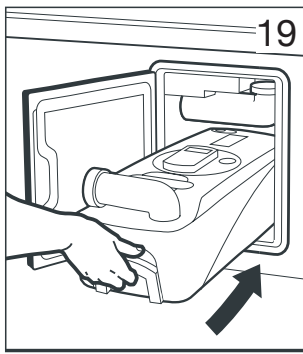
Never let the faeces tank get too full.



14. Ensure that the valve is closed. Open the service flap on the outside of the camper. Pull the holder clamp up and remove the faeces tank.
15. Remove the water tank extension first to prevent its being lost when emptying the faeces tank.
16. Place the faeces tank in a vertical position (tiltable lever on the top, wheels on the bottom). Press the lever down and move it away from the faeces tank so that the tank jumps out of its locked position.
17. Pull the lever up and wheel the faeces tank to a designated and approved disposal site.
18. Push the lever back. Turn the pouring stanchion upwards and remove the cap from the pouring stanchion. Hold the faeces tank in one hand, using its upper handle, and keep the other hand on the rear handle, enabling you to operate the ventilation knob with your thumb when you empty the tank. To empty the tank without splashing, press the ventilation knob carefully while emptying the tank. After emptying, rinse the tank thoroughly with water. Use water to clean the valve as well.



Only press the ventilation knob when the pouring stanchion is facing down!



19. If necessary, prepare the toilet once again for use. Replace the water tank extension in its original position on the faeces tank. Push the faeces tank back into the toilet and close the service flap.

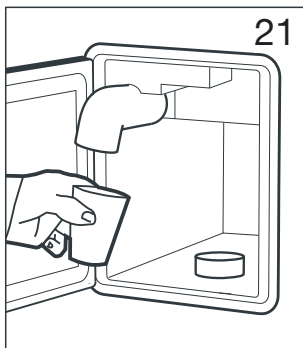
Storage

If you do not plan to use your Thetford toilet for a longer period of time, it is important that you follow these instructions first:



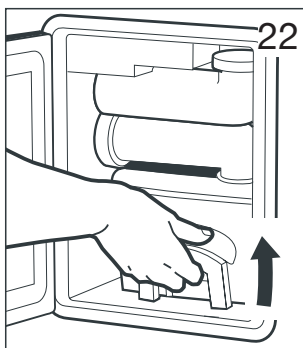
Drain the water from your camper's central water system.

20. Open the valve by turning the lever on the toilet counterclockwise. Now continue pressing on the blue knob until no more water runs into the toilet-bowl. Shut the valve.

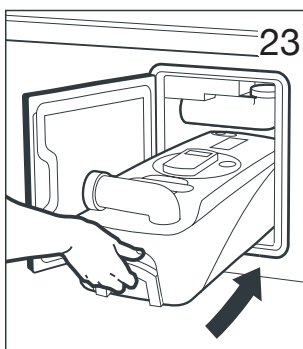


21. Open the flap on the outside of the camper and turn the water funnel outwards. Remove the cap and empty the water funnel by giving it a quarter turn counterclockwise.

22. Remove the faeces tank and empty it at a designated and approved disposal site. Follow the instructions for cleaning and maintenance.

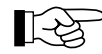


23. Return the faeces tank to its position and open the valve by turning the lever on the toilet to the left.



9. Gas system

9.1 General safety rules for the use of liquid gas facilities



The gas operation pressure is 30 mbar.

Inspection of the gas facilities

- Have the gas facilities checked by an expert before the first use.
- The gas facilities should be inspected by an expert every two years. This inspection should be documented on the inspection certificate in accordance with the German Association of Gas and Water Experts, worksheet G 607, and EN 1949.
- Regulator knobs, hoses and waste gas outlets should also be inspected.
- We recommend that you replace the safety regulator knob and hose pipes after 10 years at the latest.
- The owner/operator is responsible for arranging the inspection. This also applies for vehicles that are not licensed to drive on public roads.



Installations and modifications

- Installations and modifications may only be conducted by an expert.
- Only devices with a uniform inlet pressure of 30 mbar may be operated.
- Any change in the gas facilities requires a new inspection by an expert and written documentation of this inspection.



Regulator knobs and valves

- Only use those regulator knobs custom-made for vehicles, with a safety valve. Other regulator knobs are not permissible in accordance with the German Association of Gas and Water Experts, worksheet G 607, and EN 1949. They are not sufficient to tolerate the immense strain.



Connections on gas pressure regulators are screwed on counterclockwise.

-
- Pressure regulators must have a fixed output pressure of 30 mbar. The requirements of EN 12864, Appendix D, apply accordingly. The regulator must have a rate of flow of 1.2 kg/h.
 - Connect the regulator knobs very carefully by hand. do not use keys, pliers or similar tools.
 - Use the de-icing system (Eis-Ex) for the regulator knobs when the temperature drops below 5° C.

Before first use

- Ventilation openings should remain unobstructed.
- If necessary, remove snow from the flue.
- Remove any dirt and snow/debris mixture from the suction openings under the vehicle floor; otherwise, the levels of carbon monoxide could increase to dangerous levels.
- The safety ventilation openings may not be closed.
- We recommend that you keep a fire extinguisher that uses drying powder, with a capacity of at least 1 kg, by the entry door, as well as a fire blanket by the cooker. Ensure that everyone is familiar with the fire prevention measures on site (see also 2.1 General information).



Read the operating instructions from the manufacturer carefully.

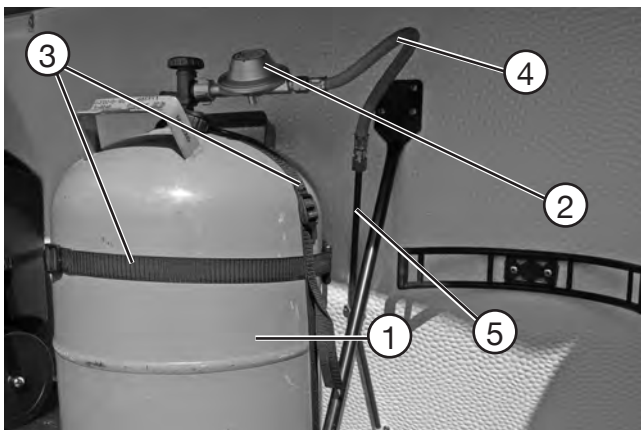


Never use portable cooking or heating equipment, except for electrical heating equipment (note the power consumption), but not radiant heaters, because these may cause a fire or risk of suffocation.

9.2 Gas supply

The camper is equipped with propane gas facilities. These facilities operate the following devices:

- cooker
- refrigerator
- heating element
- warm water boiler, if necessary
- special equipment, if necessary
- baking oven, if necessary



Bottle container

The gas bottle container holds two 11 kg propane cylinders ①. Via a safety regulator ②, the gas bottles are attached by a hose ④ to the supply line ⑤. Each bottle is fastened by two separate belts ③ to the floor of the gas bottle container and the wall at the front end of the camper.



Gas bottles may only be carried in the gas-bottle container.

Rules for the gas-bottle container:

- Before every trip, check that gas bottles are securely fastened. Place them in an upright position and shut the valves.
- Re-lash all loose belts.
- Using a leak indicator, inspect the regulator connection for leaks every time you change a bottle.
- The gas-bottle container is not suitable for transporting accessories (e.g. outer tent).
- The main shutoff valves on the gas bottles must always be easily accessible.
- The ventilation of the gas-bottle container (gap between the bottom of the bottle container and the front wall) must not be closed.
- Lock the gas-bottle container to prevent unauthorised people from obtaining access.



Gas bottles must be closed whenever you are driving.

Changing gas bottles



Never smoke or light open fires when changing gas bottles. After changing bottles, check whether gas is escaping from the points of attachment by spraying these with a leak indicator.

- Open the flap of the gas-bottle container.
- Shut the main shutoff valve on the gas bottle.
- Manually unscrew the gas pressure regulator and gas hose from the gas bottle (left-handed thread).
- Loosen the belts and remove the gas bottle.
- Put full gas bottle back in the bottle container.
- Lash belts securely.
- Manually screw gas pressure regulator and gas hose onto the gas bottle (left-handed thread).
- Close the lid of the gas-bottle container.



Shutoff spigots and valves

The gas circulation to the corresponding device can be cut off with these spigots. The spigots are marked with stickers for the corresponding devices.

Place of installation of gas shutoff spigots

- These are located in the kitchen in the upper drawer.

Rules for shutoff spigots and valves:

- Close all spigots on gas-powered devices during the drive.
- The gas shutoff spigots shown on the adjoining photos are closed. To open the valves, they must be turned to a vertical position.
- No inflammable devices may be in operation when filling the petrol tank of the base vehicle, on ferries and in the garage.

The symbols on the gas shutoff spigots have the following meanings:



Heating
element

Baking
oven

Gas
range

Refrigerator



If you suspect a leak in the gas system, you must immediately close all the shutoff spigots in the camper and the gas bottle valves in the bottle compartment.

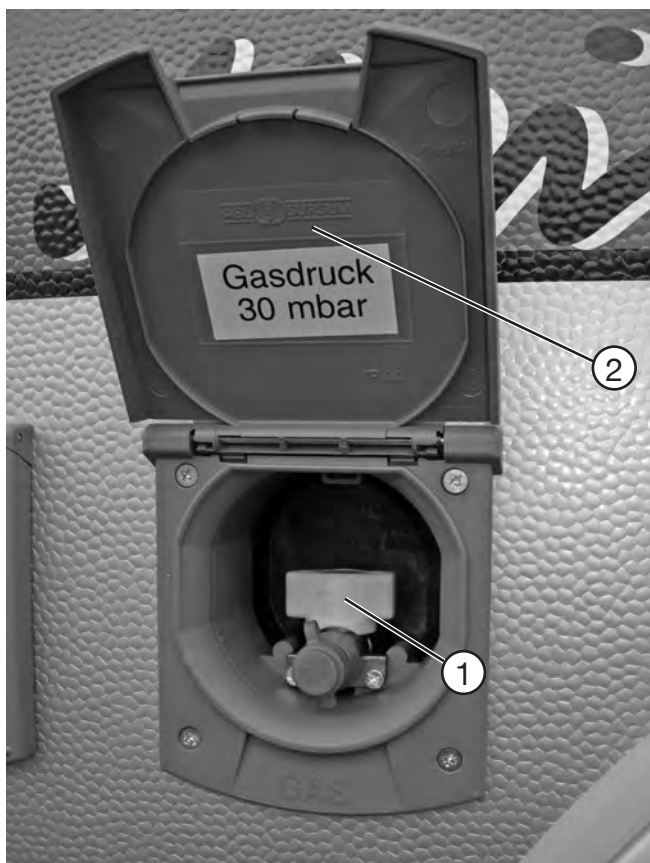


If you suspect leaks, have your dealer or another expert inspect for leaks.



Such an inspection may never be conducted in the presence of open flames.

9.3 External gas socket



The external gas socket (optional) can be used for connecting gas devices (such as the barbecue).

When hitching, the plug connection is plugged into the safety coupling. The plug connection can only be hitched when the emergency shutoff valve ① has been closed. Push back the clutch sleeve to undo the safety latch.



- The operating pressure of devices to be connected must be 30 mbar.
- Maximum performance of devices to be connected: 1.5 kW



Shut the cap ② of the valve opening when the clutch is not in use.

10. Built-in devices

10.1 General information

In this chapter, you will find information on the devices that have been built into the camper. This information refers only to the operation of these devices. To some extent, the devices described are special accessories. For further information on the individual built-in devices, please refer to the separate operating instructions that have been included in the blue service bag found in the vehicle.



Built-in devices may only be repaired by specialists.



Only the device manufacturer's original spare parts may be used for maintenance and repair work.



Any changes to the built-in devices as well as non-compliance with the rules for use will cause the guarantee to become void and lead to the exclusion of liability claims. Furthermore, the operating licence for the device will become void and, in some countries, this means that the operating licence for the vehicle is also void.



Please also refer to the instructions in Chapter 9 for operating gas devices, gas regulators and gas bottles.



Please observe the instructions in **Chapter 7** for operating electrical devices.

10.2 Hot-air heating



Heating while driving is forbidden.

Place of installation

- In the closet or the corner of the flue

Before first use

- Several air outlet nozzles have been built into the camper. Pipes lead the hot air to the air outlet nozzles. Turn the nozzles so that the hot air is expelled where you want it.
- Check whether the flue is unobstructed. Any covers must always be removed.
- Before the first ignition, ensure that the batteries in the automatic ignitor are working properly.



The space behind the heating may not be used as stowage space.

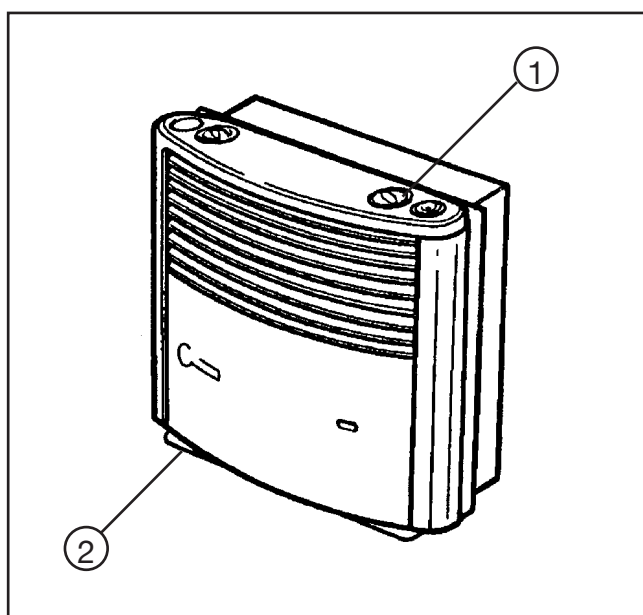


Operation

- Open the bottle valve and the quick-close valve in the gas line.
- Turn the operation handle ① to the thermostat position 1-10.
- Press the operation handle ① down until it locks. The ignition is automatic from this position, until the flame burns. The ignition spark is audible. The control light on the automatic ignitor blinks during ignition.
- Hold the operation handle in for up to 10 seconds, so that the ignition fuse kicks in.
- If the gas line is filled with air, it can take up to a minute until the gas is ready to burn. Hold the operation lever ① in during this period, until the flame burns.



Never re-ignite before two minutes have passed. Otherwise, there is a danger of deflagration! This also applies when the flame on an already operational heating element extinguishes and is reignited.



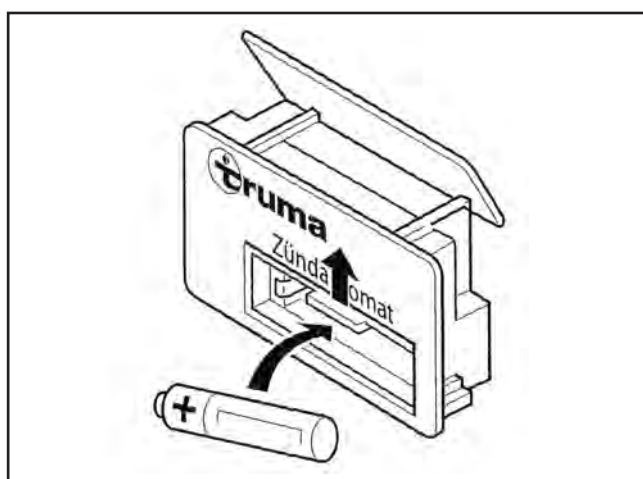
- If the flame extinguishes again, re-ignition takes place during the closing phase of the fusible cut-out of the ignition safety switch (approx. 30 seconds).
- If no flame is ignited, the automatic ignitor ② will continue to work until the operation handle ① is switched to "0".



During initial operation of the heating system, there will be a slight nuisance caused by smoke and odours. Immediately turn the operating handle on the heating ① to position „10“ and set the circulation fan to the highest position. Open all doors and windows and air the camper well. The smoke and odours will disperse after a short while.

To shut off

- Turn the operation handle ① to position "0". The automatic ignitor is thereby shut off.
- If necessary, let the circulation fan continue to run for a while.
- Close the bottle valve and the quick-close valve if the unit is not used for a longer period of time.



Changing batteries on the automatic ignitor ②

If you cannot hear any ignition sparks or only hear them in intervals of more than one second, then you must insert a new battery.

- Ensure that the heating has been switched off.
- Remove the radiator cover (see Truma operating instructions).
- Push the cover of the battery compartment up and exchange the battery (take special note of plus and minus).
- Close the battery compartment.
- Use only a temperature-resistant (+70° C) and leakproof mignon battery.



Insert new batteries before the beginning of each heating season.



Also note the separate operating instructions from the manufacturer.

Circulation fan



Fig. 1

The heating system in your camper has been fitted with a recirculation air system which distributes the hot air throughout the entire interior by means of several air vents. The air vents can be turned and opened individually, enabling the hot air to escape with the corresponding intensity to where it is required. The desired heating power can be regulated by using the adjusting knob ①. The adjusting knob ① is located on the reflecting panel of the heater (Fig. 1 and 2).



Always turn on the circulation fan when you set the heater to positions 3, 4 or higher. Otherwise there is a danger that the heater will overheat.

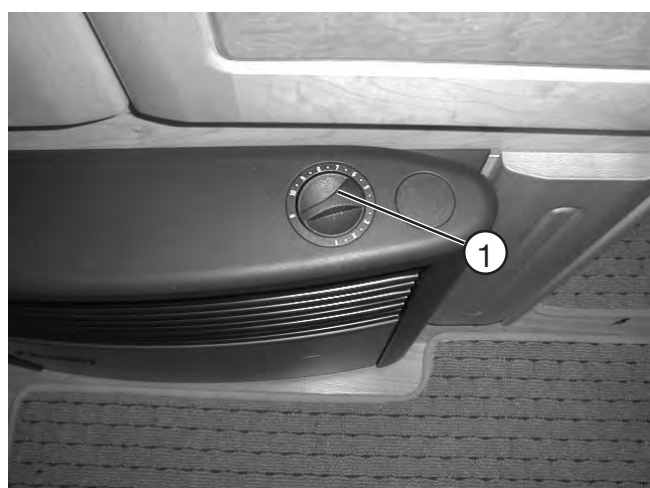


Fig. 2

Adjustment by hand

- Set the switch ⑤ to position (1) (Fig. 3).
- Adjust the desired level via the turning knob ④.

To turn off

- Set switch ⑤ to position ②.

Automatic operation

- Set switch ⑤ to position ③. The level adjusts itself continuously to the corresponding release of warmth by the heating element. The highest level can be limited by the turning knob. The adjustment between this value and the slow-running setting takes place automatically.



Fig. 3



If less air is circulated or the noise from the blower increases, this means that the ventilation wheel is dirty. As a rule, the heating element casing and vacuum pipe should be removed from the heating element approximately every 500 hours of operation and the ventilation wheel should be gently cleaned with a thin brush.

10.3 Electric auxiliary heating



The electric auxiliary heating (Ultraheat) operates only when the camper is connected to the 230V mains supply.



The electric auxiliary heating is integrated in the hot-air heating system. This allows for three possible heating methods:

- just the gas heater
- gas heater + electric heater
- just the electric heater

The electric auxiliary heating allows you to heat up the vehicle more quickly. It has three power settings:

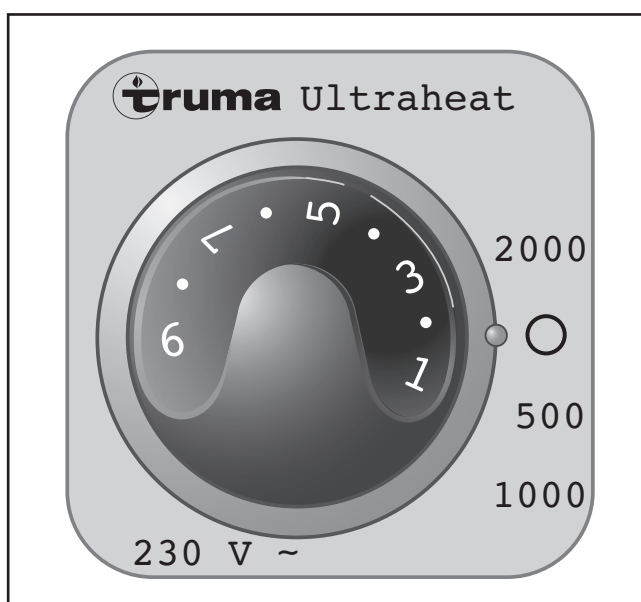
- 500 W
- 1000 W
- 2000 W



Before switching on the Ultraheat, please ensure that the fuse protection of the electrical supply at the campsite corresponds to the power setting you have selected.



During operation, the reflecting panel of the heater will get very hot in some places.



To switch on

- Set the rotary switch to the desired power setting (green indicator light will light up during „Operation“).
- Set the desired room temperature using the rotary switch.

To switch off

- Use the rotary switch to turn off the heater.



To distribute hot air evenly and quickly and ensure that the surface temperature on the heater is reduced, the heater should be operated only when the circulation fan has been switched on.

10.4 Electrical floor heating

The heating system is located in the middle walking space of the floor. It is 60 cm wide; the length depends on the type of vehicle. This heating system is not meant to heat the room; instead, it reduces the loss of heat via the floor.

To turn on the 24 V floor heating

You will find the switch on the service panel. The floor heating operates only when the caravan has been attached to a 230 V power supply.



Technical data

Voltage 24V~ from its own 230V/24V transformer.

Depending on the length of the camper, power consumption lies between 150W and 320W.



To prevent local hot spots, do not place objects for a longer period of time on the floor if the floor heating system has been turned on. Do not drill any holes in the floor or screw in any screws.

10.5 Hot-water heating system



You are not permitted to operate the hot water heater while driving.

The Compact 3010 LPG heater is a hot-water heating system which heats hot water separately (contents: 8.5 l). It is possible to heat up the heating system without filling the hot-water heater with fresh water.

Location

- In the wardrobe.

Important information

- Please read the separate operating instructions carefully before initial operation of the heating system.
- Always turn off the main switch for the heating system whenever the vehicle is not in use.
- If there is danger of frost, always drain off the fresh water in the hot-water heater.
- You may not start the heating if the device has not been filled with glycol.
- To make the best possible use of the convection principle, the air must not be prevented from circulating throughout the camper, e.g. behind the back cushions, winter ventilation slots, in the bed frame and behind the storage cupboards.

Modes of operation

- LPG operation
- Heating cartridge operation (230 V)
- Combined LPG and heating cartridge operation

Function modes

- Water heating
- Heating and water heating
- Heating

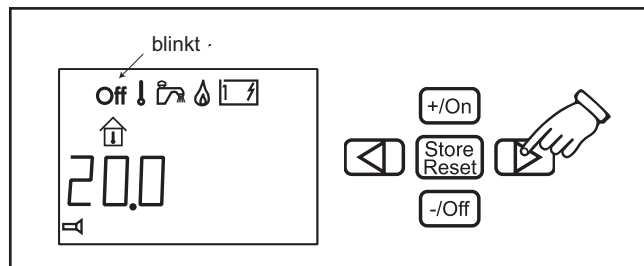
Operating device

When in the idle position, the device shows which heating functions have been activated; the background lighting of the display is off. After two minutes, the operating device automatically switches from the set position to the idle position if no button has been pressed or if the idle position has been set using the arrows. Begin by pressing any button. The background

lights up and those functions that can be set will start to blink. Use the arrows to select the function you wish to set. Settings are saved automatically.

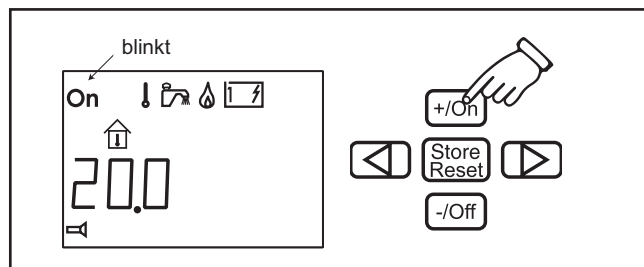


For further detailed information on operation, handling and maintaining the hot-water heating system, please refer to the separate operating instructions for “Alde Compact 3010”.

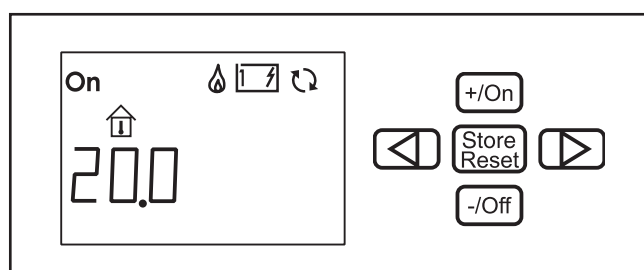


To start the hot water heater

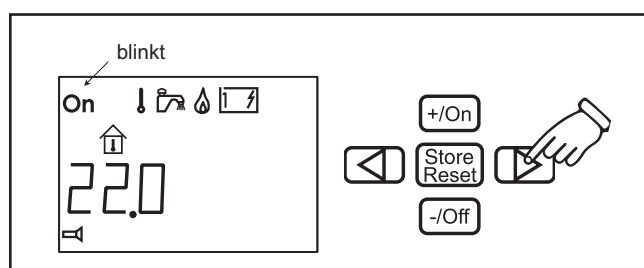
Press the button with the arrow until the „Off“ sign (main switch) blinks on the display.



Press the +/On button. The „On“ sign (main switch) will blink on the display.

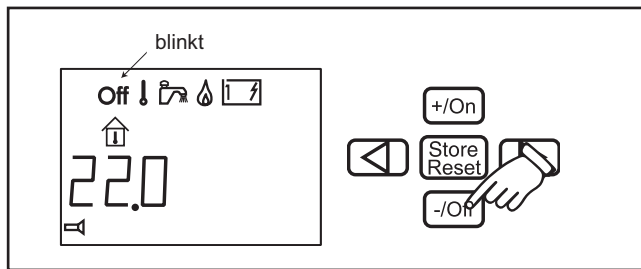


The settings are now complete. The „On“ sign (main switch) is shown on the display when the control unit is in an idle state.

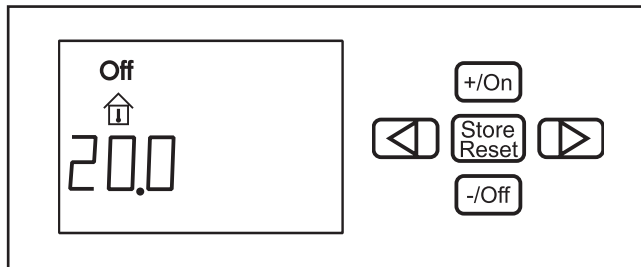


To shut off the hot water heater

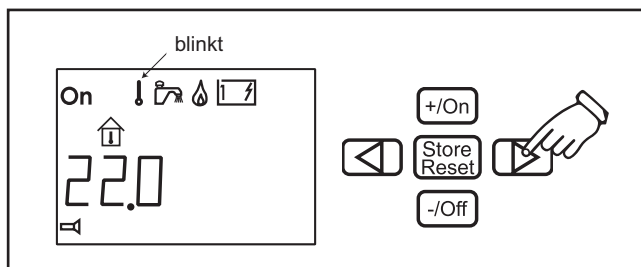
Press the button with the arrow until the „On“ sign (main switch) blinks on the display.



Press the -/Off button. The „Off“ sign (main switch) will blink on the display.

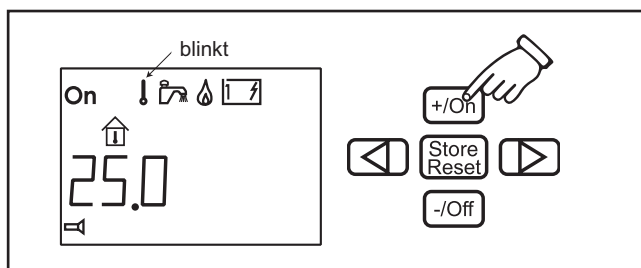


The settings are now complete. The „Off“ sign (main switch) is shown on the display when the control unit is in an idle state.



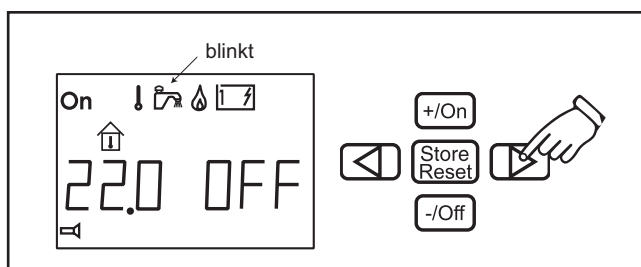
Setting the desired temperature

Press the button with the arrow until the symbol for temperature selection blinks. The temperature shown is the temperature presently set (in this case: 22.0° C).



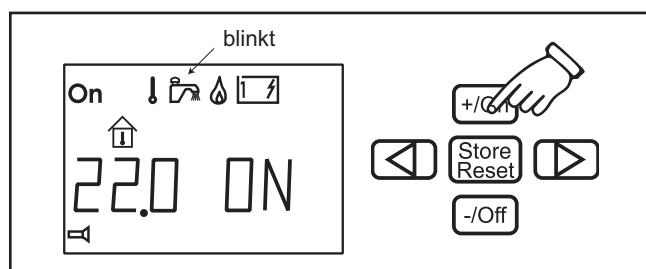
Raise the temperature by pressing on the +/On button. Lower the temperature by pressing on the -/Off button. In the illustration, the temperature has been set to 25.0° C.

The settings are complete and the heating will run until the set temperature has been reached.

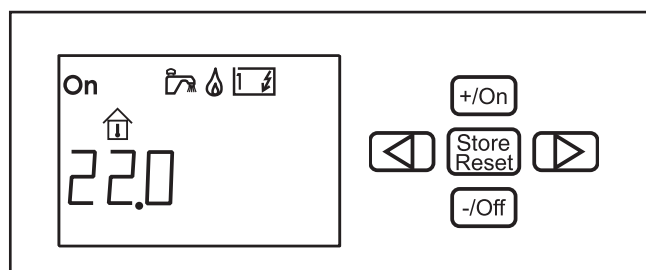


Hot water

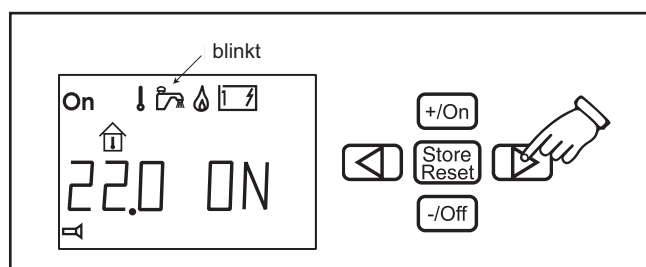
Press the button with the arrow until the symbol for hot water blinks. „OFF“ appears on the display next to the temperature.



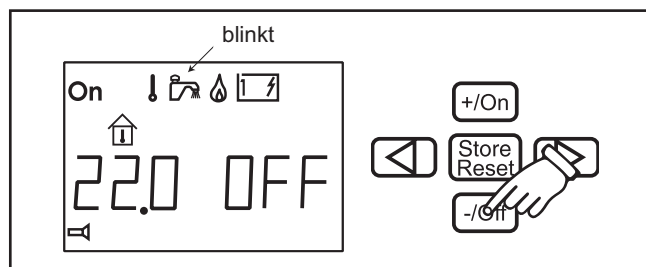
Turn on the hot water by pressing on the +/ON button. „ON“ appears on the display next to the temperature.



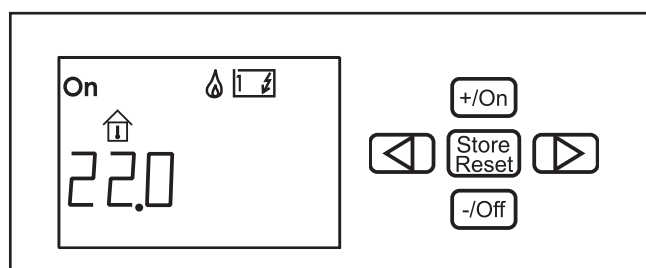
The symbol for hot water is shown when the control unit is back in an idle state.



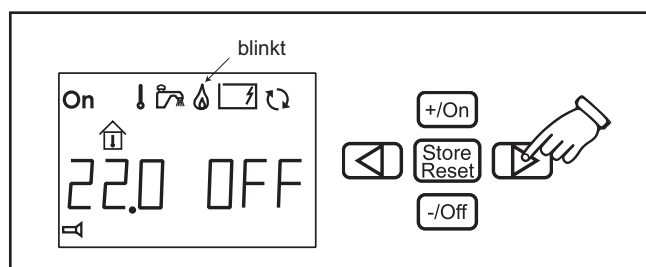
Press the button with the arrow until the symbol for hot water blinks. „ON“ appears on the display next to the temperature.



Turn off the hot water by pressing on the -/Off button. „OFF“ appears on the display next to the temperature.

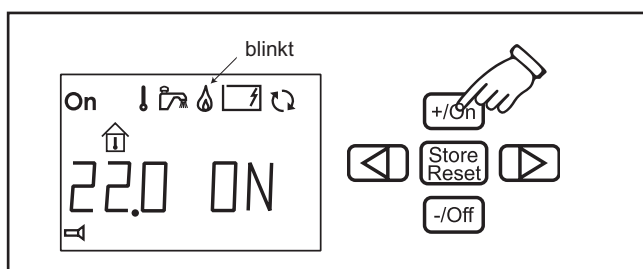


The symbol for hot water disappears when the control unit is back in an idle state.

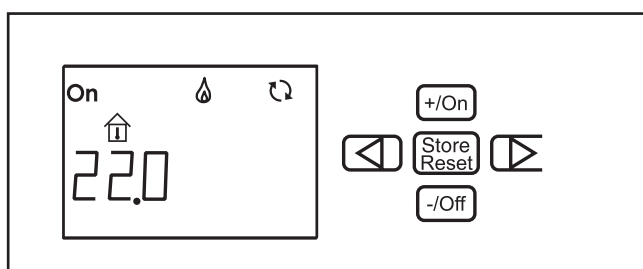


Heating with gas

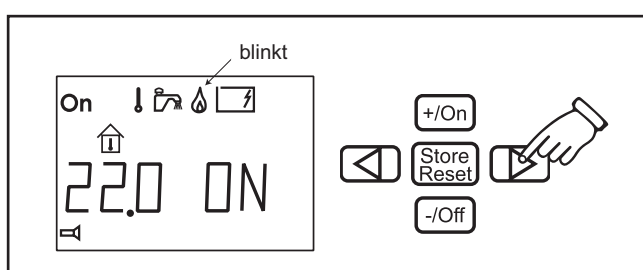
Press the button with the arrow until the symbol for heating with gas blinks. „OFF“ appears on the display next to the temperature.



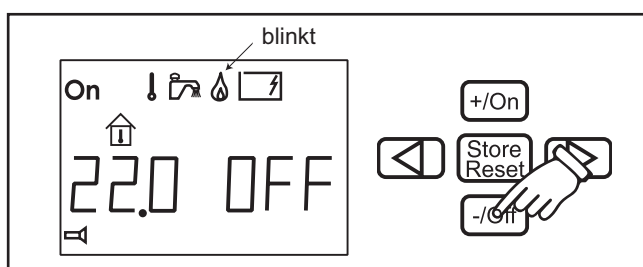
Activate heating with gas by pressing on the +/On button. „ON“ appears on the display next to the temperature.



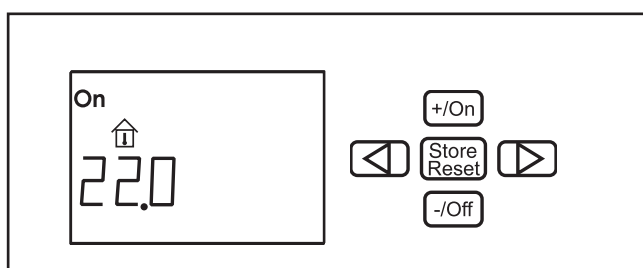
The symbol for heating with gas is shown on the display when the control unit is in an idle state again.



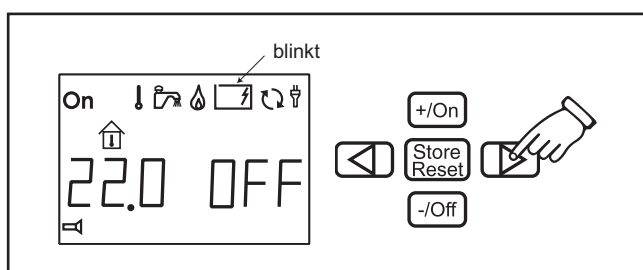
Press the button with the arrow until the symbol for heating with gas blinks. „ON“ appears on the display next to the temperature.



Deactivate heating with gas by pressing on the -/Off button. „OFF“ appears on the display next to the temperature.

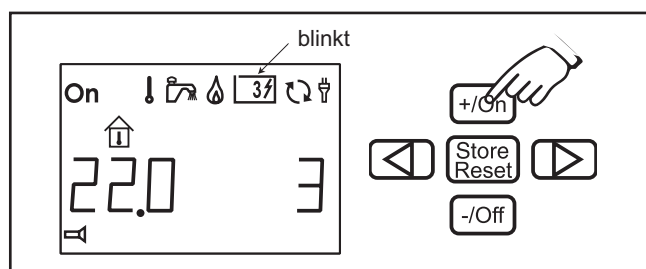


The symbol for heating with gas disappears when the control unit is in an idle state again.

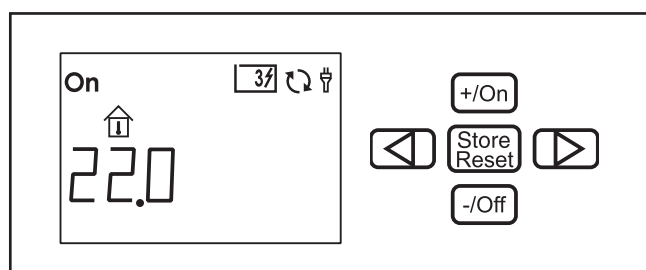


Electric heating

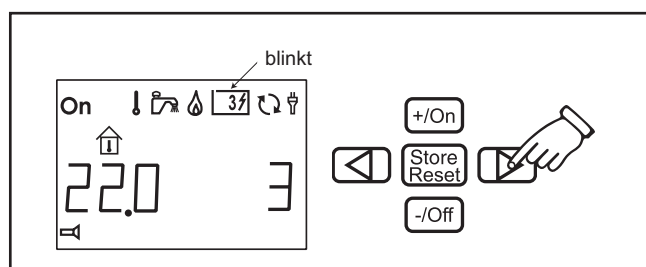
Press the button with the arrow until the symbol for electric heating blinks. „OFF“ appears on the display next to the temperature.



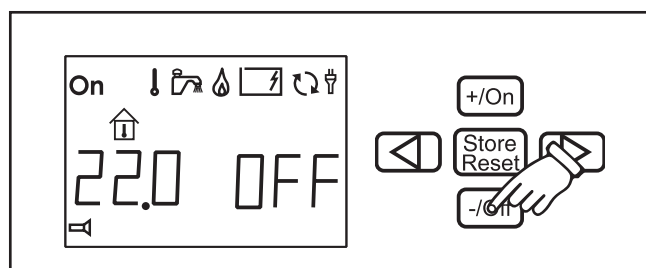
Select the power setting (1kW, 2kW or 3kW) by pressing the +/On or the -/Off button. In the illustration, the 3kW power setting has been selected (some heaters are only equipped with 1-2kW).



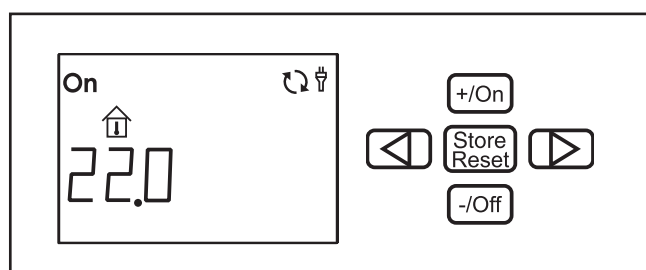
The symbol for electric heating is shown when the control unit is back in an idle state.



Press the button with the arrow until the symbol for electric heating blinks.



Switch the electric heating off by pressing the -/Off button until all of the power settings have been deleted. „OFF“ appears on the display next to the temperature.



The symbol for electric heating disappears when the control unit is back in an idle state.

10.6 Boiler



The boiler holds approx. 14 litres of water. It uses gas to heat the water or, depending on the model, there is also an option to heat it electrically using an integrated heating rod.



Before each journey, make sure the boiler has been switched off and then attach the chimney cap.



Before operating the boiler you must remove the chimney cap.



Empty the boiler if there is a danger of frost.



Never operate the boiler if it is empty.



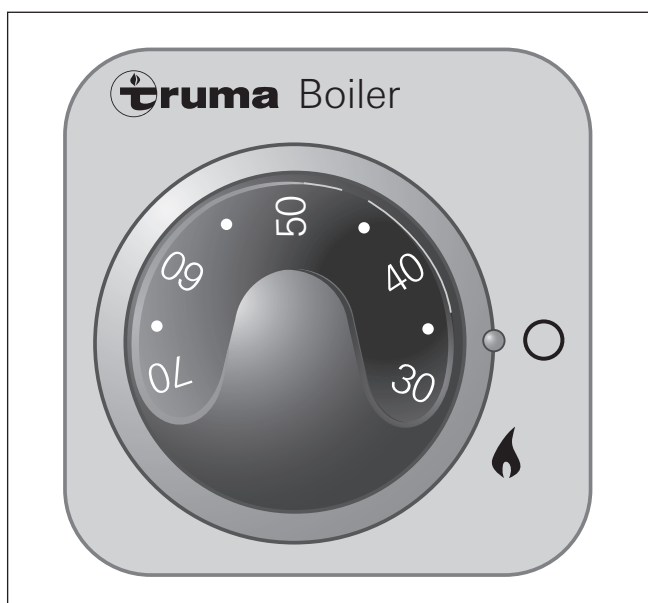
Should you operate the cold water system without the boiler, the boiler will also be filled with water. To avoid damage due to frost, empty the contents even if the boiler has not been used.

Filling the boiler

- Shut the outlet valve on the cold water intake pipe. Set the lever in a horizontal position.
- Switch on the energy supply by pressing the main switch on the control panel.
- Open at least one faucet and leave it open until the boiler has been filled by displacing the air and the water flows.
- Shut the faucet.

Emptying the boiler

- Use the control panel to switch off the energy supply.
- Open the faucets in the kitchen and the bathroom.
- Open the outlet valve on the boiler. Set the lever in a vertical position.
- Empty the water directly outside.



Operating on gas

- Remove the chimney cap.
- Open the gas bottle and the emergency shut-off valve on the gas pipe.
- Use the rotary switch on the control panel to switch on the boiler. The green control light will shine.
- Use the rotary switch to set the desired temperature (approx. 30° C – 70° C).



Operating on electricity

- Use the control panel to switch on the boiler. The control light will shine.



When operating on electricity, it is not possible to preselect the water temperature. This is automatically set to approx. 70° C.

Switching off the boiler

- Use the rotary switch to turn off the boiler.
- Attach the chimney cap and close the emergency shutoff valve and, if necessary, the gas bottle (only when operating on gas).

10.7 Refrigerator



Your camper is installed with a refrigerator made by Dometic or Thetford.

If the external temperature is high, full refrigerating capacity can only be ensured by means of sufficient ventilation. If necessary, to achieve better ventilation, the refrigerator's ventilation grille can be removed at the campsite.



Turn on the refrigerator at least 12 hours before putting anything in it and, if possible, store only goods that have already been cooled.

Methods of operation

The refrigerator can be operated in three different ways. The desired mode of operation is set using the energy source selector switch.

- 12 V operation: electrical supply from the battery of the base vehicle (ignition lock on),
- 230 V operation: electrical supply from an external source,
- liquid gas: gas bottles from the camper.

12 V operation

- Set the energy selection switch to the battery symbol.
- 12 V operation will only work when the motor of the base vehicle is running.
- The refrigerator operates without regulating the thermostat (continuous operation). Therefore, 12 V operation should only serve to maintain the temperature that has already been reached.
- To switch off, turn the energy selection switch to 0.

230 V operation

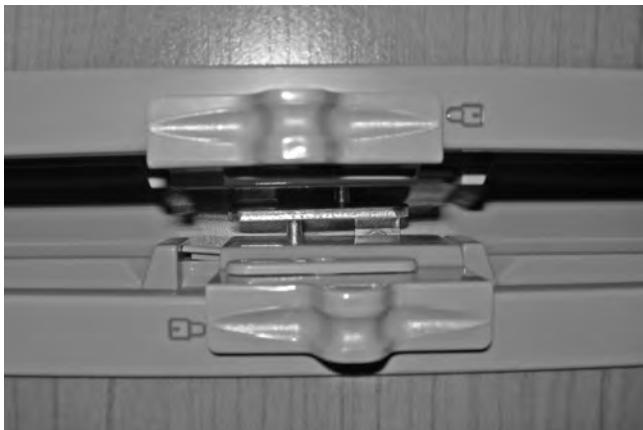
- Set the energy selection switch to mains operation.
- Use the thermostat to regulate the temperature.
- To switch off, turn the energy selection switch to 0.

Gas operation

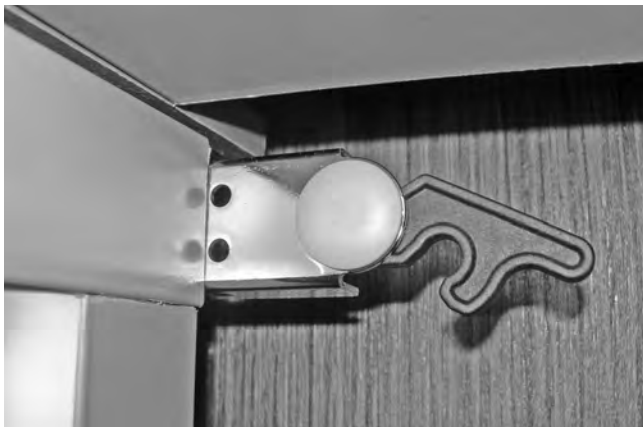
- Set the energy selection switch to gas operation.



- Open the main shutoff valve on the gas bottle and the gas shutoff spigot marked “refrigerator”.
- Turn the thermostat up full and keep it pressed down. The refrigerator will either ignite automatically or by using the knob for manual ignition (depending on your model).
- When it is ignited, let go of the thermostat. Repeat the previous step if it has not ignited.
- Use the thermostat to regulate the cooling efficiency.
- To switch off, turn the energy selection switch to 0.
- Close the main shutoff valve on the gas bottle and the gas shutoff spigot marked “refrigerator”.



Lock on the Dometic model



Lock on the Thetford model

Lock on the refrigerator door



The refrigerator door must always be kept shut and locked while driving.

There is an automatic lock on the refrigerator door.

If you close the refrigerator and press the door firmly shut, it will lock automatically.

On Thetford models, there is an additional safety catch underneath the refrigerator.

Dometic refrigerators may be additionally secured by means of a locking bolt on the door.

The refrigerator door can be locked in two settings

- closed door while driving and when the refrigerator is in use;
- slightly opened door as a ventilation position when the refrigerator has been turned off.



To prevent mould and unpleasant odours from arising, also lock the refrigerator door in the ventilation position whenever the refrigerator has been turned off.



Freezer compartment

If the outside temperature and the rate of humidity are very high, drops of water may form on the metal frame of the separate freezer compartment. For this reason, it has been fitted with a frame heater (Dometic only). If the outside temperature and the rate of humidity are very high, switch the frame heater on by pressing ①. This helps to avoid corrosion. When the frame heater is on, the control light ② will shine.

10.8 Gas cooker



The kitchen segment of the camper is equipped with a 3-flame gas cooker.

Before first use:

- Open the bottle valve and the quick-close valve in the gas line.
- The roof ventilation or the window must be open while operating the gas cooker.
- Operation handles, which must be pressed to ignite gas devices, must automatically spring back into the original position upon release.
- Before using the cooker, the enclosed protective device must be set up or permanently attached to provide effective heat insulation for components and equipment that are at risk from fire.
- The sockets above the cooker may not be used when cooking. Shut the protective caps.



Cookers or other devices which use combustion air from the interior may never be used to heat the vehicle; this would cause a potentially life-threatening lack of oxygen due to carbon-monoxide build-up.



The cooker may not be used when the glass covering is still on it.



Operation

- Open the cover ①.
- Set the turning knob ② of the desired burner in the ignition position (large flame) and press.
- Ignite the burner with gas lighter fluid, a match and/or lighter.
(Spinflo cooker: press the igniter ③.)
- Hold the turning knob ② in for an additional 10-15 seconds.
- Release the turning knob ② and position it to the desired setting (large or small flame).
- If the ignition is unsuccessful, repeat the process from the beginning.



"Spinflo" cooker



Use potholders or mitts when handling hot pots, pans and similar objects. Danger of injury!



Never allow gas to escape without burning. Danger of explosion!



Keep the cover ① open after cooking for as long as the burners are still giving off heat.



Do not store easily inflammable objects such as dish towels, napkins, etc., near the cooker. Use the protective device on the cooker at all times when cooking. Danger of fire!

10.9 Fume hood



As an option, the kitchen can be fitted with a fume hood. The built-in fan blows kitchen odours directly outside.

Press the right button to turn on the fume hood. Hold the fan button firmly to select the speed of the fan from among 15 different speeds.



The kitchen light, which is operated via the control panel, can also be switched on using the left button.



Clean the filter of the fume hood regularly, as it collects the fat from kitchen odours.



The Prestige and Excelsior models have been outfitted with the Dometic fume hood CK155. Please refer to the separate operating instructions.

10.10 Oven



- The ventilation openings on the oven must never be closed.
- Only operate the oven when it has been connected to the 230 V mains (automatic ignition).
- A skylight or window must be opened when operating the oven.
- The oven door must remain open while igniting the oven.
- If it has not ignited, repeat this procedure from step 1.
- Should the flame on the burner accidentally be extinguished, turn the switch back to the neutral position and leave the burner off for at least one minute before igniting it again.



"Spinflo" oven



- Never operate the oven when it is empty (i.e., without food that is to be heated).
- The grill (special equipment; not part of standard delivery) should never be used for longer than 25 minutes and only operated when the oven door is open.
- Never use the oven to heat the camper.

Turning on the oven

- Switch on the 12 V power supply using the main switch on the control panel.
- Open the main shutoff valve on the gas bottle and the gas shutoff spigot marked "oven".
- Open the oven door completely.
- Position the baking tray or grill so that it is not in direct contact with the flame.
- Press the switch lightly and set it to the desired ignition position (oven or grill, if available).
- Press the switch. Gas flows to the burner and the flame will ignite automatically.
(Spinflo oven: must be ignited manually.)
- Press the switch for several seconds until the safety pilot valve keeps the gas flow open.
- Let go of the switch and turn it to the desired setting (oven only).
- Close the oven door carefully to prevent the flame from extinguishing.

Turning off the oven

- Turn the switch to the neutral position. The flame will extinguish.
- Close the main shutoff valve on the gas bottle and the gas shutoff spigot marked "oven".

11. Accessories

Note the detailed operation instructions, installation instructions and circuit diagrams from the manufacturers when using accessories. These are located in your service package.

- Any changes to the status of the camper as delivered by the manufacturer may endanger driving performance and roadworthiness.
- Any accessories, add-ons, modifications or mounted parts that have not been approved by HOBBY may cause damage to the vehicle and impair its roadworthiness. Even if an expertise, general type approval or design approval has been provided for these parts, this does not ensure the orderly condition of the product.
- HOBBY cannot accept liability for any damages caused by parts or changes that have not been approved by HOBBY.

The following table includes a list of weights for accessories. If these parts are carried in or on the camper and are not included in the standard scope of delivery, they must be taken into consideration when determining the full load.

Object	Weight [kg]	Object	Weight [kg]
Additional roof bonnet 400 x 400	3.4	External socket for gas	1.5
Air-conditioning HobbyCool 25 (Dometic)	25.0	Floor heating	5.0
Air-conditioning Truma Saphir Comfort	20.0	Heavy-duty stanchions	1.6
Alde hot-water heater Compact 3010	14.0	LCD television - universal mount	0.5
AL-KO spare tire holder EH 1 Model C	7.7	Leather interior	7.0
Antenna mast Teleco	0.9	Memory foam mattress	2.9
Audio system, Blaupunkt	11.5	Mover H SE / H TE	26.0
Battery container	2.0	Oven with grill	14.1
Bed expansion for single beds	5.0	Queen-size bed, centric, crossways	8.0
Bedspread	1.5	Residual current device	0.3
Bicycle carrier	6.8	SAT angled mast	2.0
Boiler	15.0	SAT receiver, digital (Kathrein)	3.0
Bunk bed, 3-storey	15.0	Self-sufficient package	29.0
Car jack with box	6.0	Spare tire incl. mount	20.0
Carpet (deluxe)	7 - 10.5	Tire repair kit	2.2
Charge controller	2.8	Truma Airmix convenience package	1.0
Children's bunk bed instead of centre seating arrangement	14.0	Truma electric auxiliary heating Ultraheat	2.0
City water connection	0.5	Truma electric boiler instead of therme	5.0
Dometic fume hood	3.0	Truma gas boiler instead of therme	15.0
Drawbar anti-theft device Robstop	3.0	Truma gas/electric boiler instead of therme	16.0
Electrical supply 600 VA	0.6	Truma hot-air system Isotherm	3.0

12. Maintenance and upkeep

12.1 Maintenance

Maintenance intervals

fixed maintenance intervals apply to the camper and the devices installed in it.

Rules for maintenance intervals

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



HOBBY grants a 5-year guarantee on the absence of leaks in the camper in accordance with the guarantee conditions.

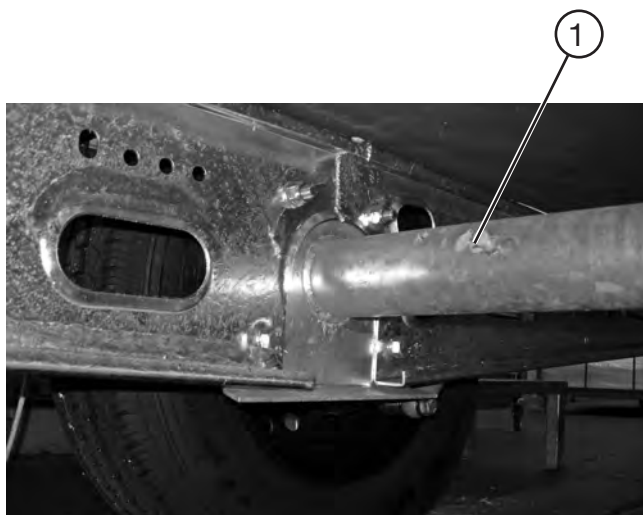
The vehicle is to be presented to your HOBBY dealer once a year for inspection. After 12 months, the first inspection for leaks is free of charge.



The inspection of the gas facilities (subject to extra cost) is to be repeated every two years by a liquid gas expert. This inspection is to be conducted and certified in accordance with the German Association of Gas and Water Experts, worksheet G 607, and EN 1949. The operator is responsible for scheduling this inspection.



Replace safety regulator knobs and hoses after 10 years at the latest!

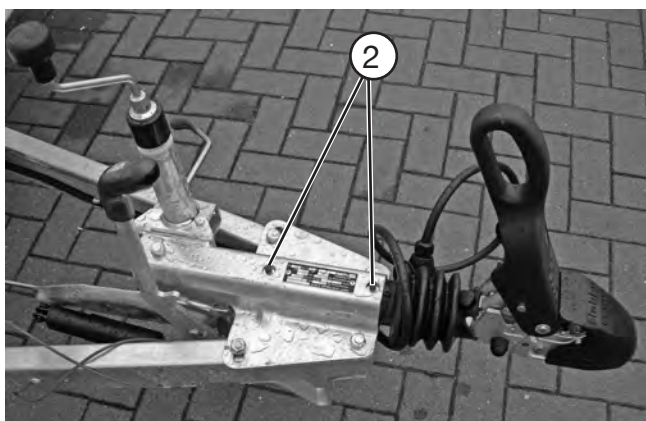


Greasing and oiling

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

Rules for greasing and oiling

- After every 5,000 kilometers driven, but at least once a year, grease the swinging lever bearings on the turning rod spring axle unit.
- 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 ② 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.



The camper's turning rod spring axle unit is equipped 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.



The wheel brake may never be repositioned on the fixing lock or on the yoke end of the bars!
Only reposition the wheel brake on the self-securing stationary hexagonal nut!



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



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.

12.2 Drawgear

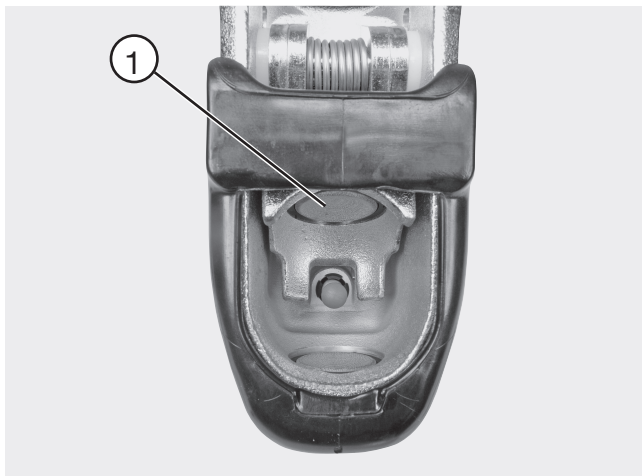
Coupling ball on base vehicle

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 of the friction linings; a greasy one greatly diminishes the stabilization 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 (Fig. 5). 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.

Noises

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 ① on the tension ball coupler.
5. the towbar or tie rod in the linings of the over-running equipment are running dry.

Hints

For 1., 2. and 3.:

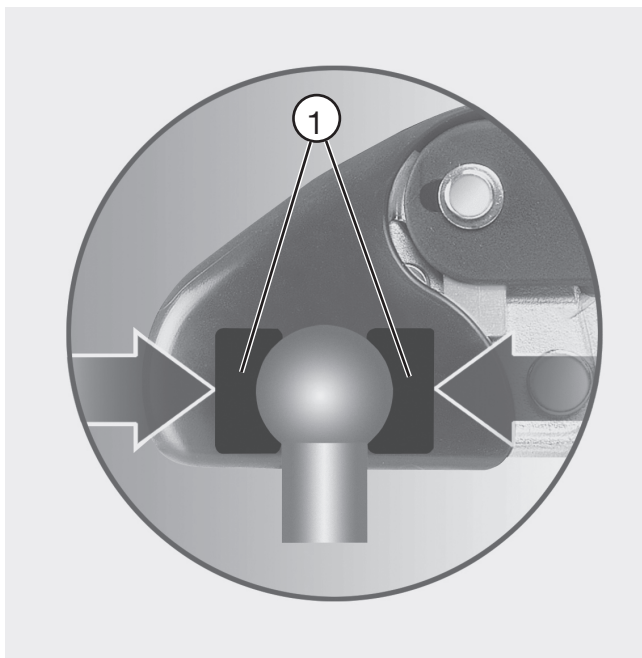
Sand down the surfaces of the coupling ball and clean them with a thinning solvent or spirit.

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.



12.3 Changing the taillight bulbs



Carefully remove the protective caps with a screwdriver.



Remove the four fastening screws with a crosstip screwdriver.



Now you can remove the taillight from the frame.



Remove the holder by loosening the screw.



The bulbs are now freely accessible.
Put the taillight back together by repeating the process in reverse.

12.4 Ventilation

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.

Sweat residue forms most readily

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



Ensure sufficient air circulation to prevent damage from the collection of sweat residue!

12.5 Upkeep

Cleaning the exterior

The vehicle should not be washed more often than necessary.



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.



Do not use cleaners which contain solvents.

Rules for cleaning the exterior

- Rinse the vehicle with a light stream of water.
- Wipe the vehicle down with a soft sponge and typical shampoo solution.
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.



Dry spotlight and lamp frames thoroughly, since water can build up in these areas very easily.



Never use caustic cleaners or cleaners which contain solvents.

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 camper with it. Keep a minimum distance of 700 mm between the camper 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 camper. The temperature of the water must not exceed 60° C.

Keep the water jet constantly moving during the entire washing process. The water jet must not be aimed directly at the clearance between the door frame and door leaf or the window frame and window leaf, electrical add-ons, pin-and-socket connectors, gaskets, sealing grill for refrigerator or the roof bonnets. This can damage the vehicle or allow water to seep into the interior.

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 HOBBY dealer.

Undercarriage

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

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.

Windows and doors

Window panes requires particularly careful treatment.

Rules for upkeep

- Rub the insulation of doors and windows lightly with talcum.
- Only clean acrylic glass window panes with a clean, moist sponge and a soft towel. Dry cleaning can scratch the panes.



Do not use strong and aggressive cleaners which contain softeners or solvents!



Talcum is available in auto specialty stores.

Cleaning the interior

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 not wash them yourself!
- Clean with the foam of a gentle detergent if required.

Rules for cleaning the carpet

- Clean with a vacuum cleaner 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 use scouring solvents or intensive cleaners since these can scratch the surface!

Rules for cleaning the toilet area

- Clean with neutral liquid soap and a non-scouring cloth.
- Do not use a vinegar concentrate to clean the toilet and the water system or to decalcify the water system. Vinegar concentrate can damage gaskets or parts of the system.



Do not use scouring cleaners in the toilet area either!



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.

Rules for cleaning the sink

- Only clean the sink with typical household cleaners or special stainless steel cleaners.

Accessories

Rules for upkeep

- Clean synthetic parts (i.e. bumpers, protective covers) with warm water (up to 60° C) and mild household cleaner.
- Clean greasy or oily surfaces with spirit.
- Grease door hinges and rotating stanchions as required.
- Clean the fresh water taps, fresh water tank and waste water tank annually.



Do not use scouring solvents since these could scratch the surface!



Remove all spray cans with cleaners and polishes from the vehicle after finishing the upkeep! Otherwise, there is a danger of explosion at temperatures over 50° C!

12.6 Winter operation



Preparation

Due to the overall vehicle conception, (aluminium sandwich construction with insulated windows) your camper is suitable for winter operation.

WARNING: We recommend that you optimise your camper in accordance with your personal tastes for winter camping.

Your dealer will gladly advise you in these matters.

Rules for preparation

- Examine the vehicle for damage to paint or through rust, and repair if necessary.
- Ensure that no water can seep into the forced de-aeration system in the floor or into the heating element.
- Protect the metal parts of the lower floor against rust with a wax-based protective agent.
- Preserve lacquered surfaces with a suitable agent.

Perform all necessary winter-proofing

General rules

- Only leave the camper in an enclosed space if this space is dry and well ventilated. Otherwise, park the camper out in the open.

Rules for inner furnishings

- Empty and clean the refrigerator. Leave the refrigerator door open.
- Leave storage spaces and closets open for ventilation purposes.
- Position cushions and mattresses in such a way that they do not come into contact with condensation.
- If necessary, heat the entire camper to prevent mould build-up from condensation moisture.
- Set up a dehumidifier inside the vehicle and dry or change the granulate material regularly.
- Disconnect (or ideally, remove) batteries and check the energy level at least once a month, recharging if necessary.
- Completely empty the entire water system.

Winter operation

In the course of winter operation, condensation forms at low temperatures when the vehicle is occupied. Sufficient ventilation plays a very significant role in ensuring a suitable air quality within the vehicle and preventing damage by condensation.

Rules for ventilation

- Set the heating element to the highest position and open ceiling barriers, curtains and shades while the vehicle is initially being heated. In doing this, you ensure optimum ventilation and de-aeration.
- Only operate the heating element when the air circulation unit is on.
- In the morning, remove all cushions, ventilate all storage compartments and dry moist spots.
- Install a chimney extension with a minimum length of 10 cm.



If condensation should build up somewhere in spite of these preventive measures, just wipe it away.

Frost protection measures

If the interior is sufficiently heated, it is unlikely that the fresh water tank, taps and warm water boiler would freeze. Only fill the fresh water tank after the vehicle has been heated. We do recommend, however, an additional heating element for the tank when exterior temperatures drop sharply. Your dealer will show you several possibilities. (Not included)

Rules for the waste water tank

- Add antifreeze or table salt to the waste water in low temperatures.
- Catch waste water outside the vehicle.
- Keep the spout of the waste water tank open.

After the end of the winter season

Rules for upkeep

- Carry out a thorough undercarriage wash. This removes thawing agents (salts, lye residue).
- Clean the exterior of the camper and use commercially available car wax to preserve steel parts.
- Should you have installed one, do not forget to remove the chimney extension.



Only wash the vehicle at specially designated sites.



Use cleaners as sparingly as possible. Aggressive cleaners (i.e., rim cleaner) pollute the environment.

Rules for the exterior structure

- Turn stanchions down; afterwards, relieve pressure on wheels and axles.
- Preserve painted exterior surfaces with a suitable material.
- Treat the metal parts of the undercarriage with a wax-based anti-rust agent.
- Cover with tarpaulins, ensuring that ventilation is not obstructed.
- Leave the forced ventilation system open.
- Air the camper thoroughly every three to four weeks.

Rules for containers

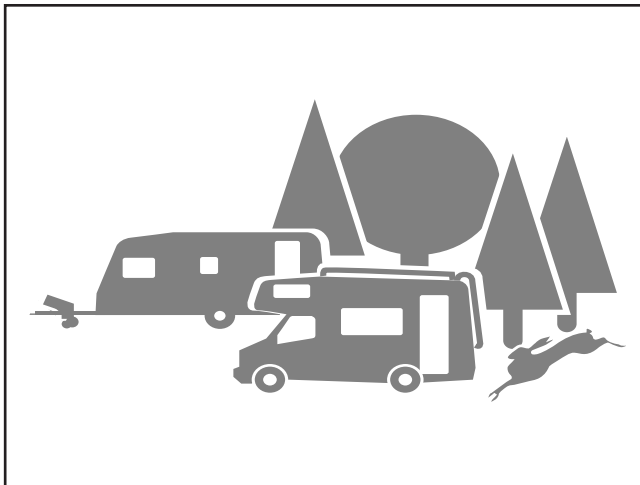
- Unscrew the overflow pipe to empty and clean the fresh water tank.
- Empty and clean the waste water tank.
- Empty and clean the toilet tank.
- Completely empty the hot-water boiler (therme) by switching the 12V electric supply off at the main switch and opening all of the water taps. In addition, we recommend that you separate the water pump from the fresh water system.
- Ensure that water cannot run into the forced venting on the floor and the heating system.



Also note the guidelines and operating instructions from the manufacturers of all built-in devices.

13. Waste disposal and environmental protection

13.1 The environment and mobile travel



Environmentally sound use

By nature of their activities, camper users bear a considerable responsibility towards the environment.

Therefore, you should always use your camper in an environmentally sound manner.

Rules for environmentally sound use

- 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 campers are not stereotyped as environmental polluters.
- If you plan to stay longer in cities and municipalities, please park in an area that is specifically marked for trailer combinations. Find out in advance where these areas are located.

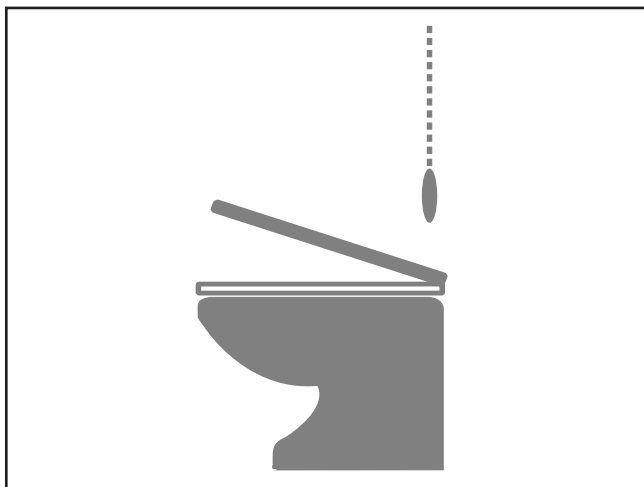


Rules for waste water disposal

- Only collect waste water in the built-in tanks or, if absolutely necessary, in similarly suitable containers!
- Never dispose of waste water in greenery or in gullies! Street sewer lines often do not lead to waste water treatment plants.
- Empty the waste water tank as often as possible, even if it is not yet full (for hygienic reasons). If possible, rinse the waste water tank out with fresh water each time after emptying.



Only empty the faeces tank at designated sites, never out in the open! Disposal stations are typically located at highway rest stops, campsites or service stations.



Rules for the disposal of faeces

- Only add approved cleaners to the faeces tank.



The use of other cleaners can be avoided by the installation of an active charcoal filter system.



Apply cleaning fluid very sparingly. Excessive application does not guarantee the prevention of odour build-up!

Disposal

- Never allow the faeces tank to become too full. Empty the tank immediately, at the latest when the fill indicator lights up.
- Never dispose of waste water in gullies! Street sewer lines often do not lead to waste water treatment plants.



Only empty the faeces tank in the designated areas, not out in the open!



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 keep rest areas clean, even if the mess was created by others.
- 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 campers!

14. Technical data

14.1 Tire pressure values

As a rule of thumb, it may be assumed that a filled tire suffers a loss of pressure of 0.1 bar every two months. Check the pressure regularly to avoid damage to tires or a burst.

Tire size	Air pressure in bar
155 R 13 C 6PR	3,8
165 R 13 C	3,8
185 R 14 C	4,5
195/70 R 15 C	4,5
185/70 R 13	3,0
195/70 R 14	3,0

14.2 Weights in accordance with 97/27/EG

Type	Weight empty [kg]	Basic equipment [kg]	Mass in running order [kg]	g.v.w.r. [kg]	Add. load [kg]
400 SF De Luxe	907	61	968	1100	132
440 SF De Luxe	1010	61	1071	1200	129
455 UF De Luxe	1037	61	1098	1300	202
460 UFe De Luxe	1059	61	1120	1300	180
460 LU De Luxe	1040	61	1101	1300	199
490 UL De Luxe	1125	61	1186	1350	164
540 UL De Luxe	1192	86	1278	1500	222
540 KMFe De Luxe	1251	86	1337	1500	163
560 KMFe De Luxe	1339	86	1425	1600	175
400 SF Excellent	910	61	971	1100	129
410 SFe Excellent	989	61	1050	1200	150
440 SF Excellent	1014	61	1075	1200	125
440 SFr Excellent	1025	61	1086	1200	114
455 UF Excellent	1039	61	1100	1300	200
460 UFe Excellent	1069	61	1130	1300	170
495 UL Excellent	1168	61	1229	1400	171

Type	Weight empty [kg]	Basic equipment [kg]	Mass in running order [kg]	g.v.w.r. [kg]	Add. load [kg]
495 UFe Excellent	1155	61	1216	1400	184
540 UL Excellent	1213	86	1299	1500	201
540 WLU Excellent	1225	71	1296	1500	204
540 UFe Excellent	1228	86	1314	1500	186
540 Uff Excellent	1189	86	1275	1500	225
540 KMFe Excellent	1262	86	1348	1500	152
545 KMF Excellent	1320	71	1391	1600	209
560 UL Excellent	1306	86	1392	1600	208
560 UFe Excellent	1311	86	1397	1600	203
560 Uff Excellent	1297	86	1383	1600	217
560 KMFe Excellent	1350	86	1436	1600	164
560 WLU Excellent	1368	71	1439	1600	161
650 KMFe Excellent	1501	86	1587	1900	313
720 UKFe Excellent	1765	86	1851	2000	149
400 SF La Vita bionda	919	61	980	1100	120
440 SF La Vita bionda	1019	61	1080	1200	120
455 UF La Vita veneto	1047	61	1108	1300	192
455 UF La Vita Bionda	1042	61	1103	1300	197
460 UFe La Vita veneto	1076	61	1137	1300	163
460 UFe La Vita Bionda	1071	61	1132	1300	168
495 UL La Vita veneto	1179	61	1240	1400	160
495 UL La Vita Bionda	1167	61	1228	1400	172
545 KMF La Vita veneto	1327	71	1398	1600	202
545 KMF La Vita bionda	1324	71	1395	1600	205
560 KMFe La Vita Bionda	1355	86	1441	1600	159
575 VIP (La Vita bionda)	1370	86	1456	1600	144
645 VIP (La Vita Bionda)	1661	86	1747	1900	153
560 UFe Excelsior	1362	86	1448	1600	152
610 UL Excelsior	1580	86	1666	1900	234
650 Uff Excelsior	1596	86	1682	1900	218
495 UFe Prestige	1158	61	1219	1500	281
540 UL Prestige	1237	86	1323	1600	277
540 WLU Prestige	1240	71	1311	1600	289
540 UFe Prestige	1230	86	1316	1600	284
560 UL Prestige	1331	86	1417	1600	183
560 UFe Prestige	1335	86	1421	1600	179
560 WLU Prestige	1347	71	1418	1600	182

Type	Weight empty [kg]	Basic equipment [kg]	Mass in running order [kg]	g.v.w.r. [kg]	Add. load [kg]
610 UL Prestige	1525	86	1611	1800	189
640 FMU Prestige	1679	86	1765	1900	135
650 KFU Prestige	1630	86	1716	1900	184
650 WFU Prestige	1560	71	1631	1900	269
650 UMFe Prestige	1570	86	1656	1900	244
650 KMFe Prestige	1580	86	1666	1900	234
695 VIP Prestige	1790	86	1876	2000	124
720 UML Prestige	1714	86	1800	2000	200
720 UKFe Prestige	1780	86	1866	2000	134
780 WLU Prestige	1872	86	1958	2200	242
780 WFU Prestige	1880	86	1966	2200	234

14.3 Basic equipment

The basic equipment includes all of the equipment objects and fluids that are required for the safe and correct use of the vehicle.

This includes the weights of:

	400 - 495	400 - 500	520 - 750
a) liquid gas supply			
Number of built-in gas regulators	1	1	1
weight of an aluminium gas bottle	5,5	5,5	5,5 kg
weight of an 11 kg gas filling	11	11	11 kg
Total:	16,5	16,5	16,5 kg
b) fluids			
25 l fixed fresh water tank	25	--	-- kg
50 l fixed fresh water tank	--	50	50 kg
Toilette flushing C 402	15	15	-- kg
Toilette flushing C 200	--	--	-- kg
Total:	40	65	50 kg
c) electric supply			
connecting cable for low voltage	4	4	4 kg
Total basic equipment:	60,5	85,5	70,5 kg

14.4 Technical data

Trade name	Technical designation	De Luxe	Excellent	Prestige	La Vita	La V. bionda	Excelsior	g.v.w.r. [kg]	Permitted axle load	Axle	Leading equipment	Towbar	Wheel brake
400 SF	30 A	•	•	•				1100	1100	DB 13 M	KFL 12 B	One Piece	20-2425/1
410 SFe	30 G		•					1200	1200	DB 13 M	KFL 12 B	One Piece	20-2425/1
440 SF	30 F	•	•	•				1200	1200	DB 13 M	KFL 12 B	One Piece	20-2425/1
440 SFr	30 F		•					1200	1200	DB 13 M	KFL 12 B	One Piece	20-2425/1
455 UF	30 N	•	•	•	•			1300	1300	DB 13 M	KFL 12 B	One Piece	20-2425/1
460 UFe	30 C	•	•	•	•			1300	1300	DB 13 M	KFL 12 B	One Piece	20-2425/1
460 LU	30 J	•						1300	1300	DB 13 M	KFL 12 B	One Piece	20-2425/1
490 UL	30 R	•						1350	1350	DB 15 MV/M	KF 20 A	One Piece	20-2425/1
495 UL	30 D		•	•	•			1400	1400	DB 15 MV/M	KF 20 A	One Piece	20-2425/1
495 UFe	30 E		•					1400	1400	DB 15 MV/M	KF 20 A	One Piece	20-2425/1
495 UFe	24 F					•		1500	1500	DB 15 MV/M	KF 20 A	ZHL 15 A1	20-2425/1
540 UL	24 M	•	•					1500	1500	DB 15 MV/M	KF 20 A	ZHL 15 A1	20-2425/1
540 UL	24 M					•		1600	1600	DB 16 MV	KF 20 A	ZHL 15 A1	20-2425/1
540 UFe	24 E		•					1500	1500	DB 15 MV/M	KF 20 A	ZHL 15 A1	20-2425/1
540 UFe	24 E					•		1600	1600	DB 16 MV	KF 20 A	ZHL 15 A1	20-2425/1
540 WLU	24 J		•					1500	1500	DB 15 MV/M	KF 20 A	ZHL 15 A1	20-2425/1
540 WLU	24 J					•		1600	1600	DB 16 MV	KF 20 A	ZHL 15 A1	20-2425/1
540 UFf	24 K		•					1500	1500	DB 15 MV/M	KF 20 A	ZHL 15 A1	20-2425/1
540 KMFe	24 P	•	•					1500	1500	DB 15 MV/M	KF 20 A	ZHL 15 A1	20-2425/1
545 KMF	24 R		•	•	•			1600	1600	DB 16 MV	KF 20 A	ZHL 15 A1	20-2425/1
560 UL	24 B		•			•		1600	1600	DB 16 MV	KF 20 A	ZHL 15 A1	20-2425/1
560 KMFe	24 C	•	•	•				1600	1600	DB 16 MV	KF 20 A	ZHL 15 A1	20-2425/1
560 UFf	24 D		•					1600	1600	DB 16 MV	KF 20 A	ZHL 15 A1	20-2425/1
560 UFe	24 G		•			•	•	1600	1600	DB 16 MV	KF 20 A	ZHL 15 A1	20-2425/1
560 WLU	24 H		•			•		1600	1600	DB 16 MV	KF 20 A	ZHL 15 A1	20-2425/1
575 VIP	24 S			•				1600	1600	DB 16 MV	KF 20 A	ZHL 15 A1	20-2425/1
610 UL	27 A					•		1800	1000/1000	DB 10 L	KF 20 A	ZHL 20 A1	20-2425/1
610 UL	27 H						•	1900	1000/1000	DB 10 L	KF 20 A	ZHL 20 A1	20-2425/1
650 UMFe	27 B					•		1900	1000/1000	DB 10 L	KF 20 A	ZHL 20 A1	20-2425/1
650 KMFe	27 B		•			•		1900	1000/1000	DB 10 L	KF 20 A	ZHL 20 A1	20-2425/1
650 KFU	27 C					•		1900	1000/1000	DB 10 L	KF 20 A	ZHL 20 A1	20-2425/1
640 FMU	27 K			•				1900	1000/1000	DB 10 L	KF 20 A	ZHL 20 A1	20-2425/1
645 VIP	27 N			•				1900	1000/1000	DB 10 L	KF 20 A	ZHL 20 A1	20-2425/1
650 UFf	27 J						•	1900	1000/1000	DB 10 L	KF 20 A	ZHL 20 A1	20-2425/1
650 WFU	27 G					•		1900	1000/1000	DB 10 L	KF 20 A	ZHL 20 A1	20-2425/1
695 VIP	19 K					•		2000	1050/1050	DB 13 M	KF 20 A	ZHL 20 C	20-2425/1
720 UML	19 D					•		2000	1050/1050	DB 13 M	KF 20 A	ZHL 20 C	20-2425/1
720 UKFe	19 G		•			•		2000	1050/1050	DB 13 M	KF 20 A	ZHL 20 C	20-2425/1
780 WFU/WLU	19 J					•		2200	1200/1200	DB 13 M	KF 25 A	ZHL 27 C1	20-2425/1

Trade name	Tire size	Fitting dimensions	Wheel rim	Air [bar]	Floor length	Total width	Track	Distance tow-bar	Length of caravan	Length	Total length
400 SF	195/70 R 14	5/112, ET 30	5½ J x 14	3,0	3833	2200	1950	3610	4109	4702	5899
410 SFe	195/70 R 14	5/112, ET 30	5½ J x 14	3,0	4076	2300	2050	3729	4352	4945	6142
440 SF	195/70 R 14	5/112, ET 30	5½ J x 14	3,0	4195	2300	2050	3807	4471	5064	6261
440 SFr	195/70 R 14	5/112, ET 30	5½ J x 14	3,0	4195	2300	2050	3807	4471	5064	6261
455 UF	185 R 14 C	5/112, ET 30	5½ J x 14*	4,5	4534	2300	2050	3886	4810	5403	6600
460 UFe	185 R 14 C	5/112, ET 30	5½ J x 14*	4,5	4534	2300	2050	3972	4810	5403	6600
460 LU	185 R 14 C	5/112, ET 30	5½ J x 14	4,5	4534	2300	2050	3972	4810	5403	6600
490 UL	185 R 14 C	5/112, ET 30	5½ J x 14	4,5	4928	2300	2050	4236	5204	5797	7000
495 UL	185 R 14 C	5/112, ET 30	5½ J x 14*	4,5	5015	2300	2050	4283	5291	5884	7087
495 UFe	185 R 14 C	5/112, ET 30	5½ J x 14	4,5	4810	2300	2050	4102	5086	5679	6882
495 UFe	185 R 14 C	5/112, ET 30	5½ J x 14	4,5	4810	2300	2050	4106	5086	5679	6876
540 UL	185 R 14 C	5/112, ET 30	5½ J x 14	4,5	5314	2300	2050	4349	5590	6183	7380
540 UL	185 R 14 C	5/112, ET 30	5½ J x 14	4,5	5314	2300	2050	4349	5590	6183	7380
540 UFe	185 R 14 C	5/112, ET 30	5½ J x 14	4,5	5314	2300	2050	4308	5590	6183	7380
540 UFe	185 R 14 C	5/112, ET 30	5½ J x 14	4,5	5314	2300	2050	4308	5590	6183	7380
540 WLU	185 R 14 C	5/112, ET 30	5½ J x 14	4,5	5314	2300	2050	4332	5590	6183	7380
540 WLU	185 R 14 C	5/112, ET 30	5½ J x 14	4,5	5314	2300	2050	4332	5590	6183	7380
540 Uf	185 R 14 C	5/112, ET 30	5½ J x 14	4,5	5314	2300	2050	4495	5590	6183	7380
540 KMFe	185 R 14 C	5/112, ET 30	5½ J x 14	4,5	5485	2300	2050	4431	5761	6354	7551
545 KMF	185 R 14 C	5/112, ET 30	5½ J x 14*	4,5	5485	2500	2250	4497	5759	6352	7530
560 UL	185 R 14 C	5/112, ET 30	5½ J x 14	4,5	5523	2500	2250	4431	5797	6390	7568
560 KMFe	185 R 14 C	5/112, ET 30	5½ J x 14	4,5	5573	2500	2250	4453	5847	6440	7618
560 Uf	185 R 14 C	5/112, ET 30	5½ J x 14	4,5	5573	2500	2250	4528	5847	6440	7618
560 UFe	185 R 14 C	5/112, ET 30	5½ J x 14	4,5	5523	2500	2250	4379	5797	6390	7568
560 WLU	185 R 14 C	5/112, ET 30	5½ J x 14	4,5	5553	2500	2250	4459	5827	6420	7598
575 VIP	185 R 14 C	5/112, ET 30	5½ J x 14	4,5	5755	2500	2250	4639	6029	6622	7800
610 UL	155 R 13 C	4/100, ET 30	4½ J x 13	3,8	6050	2500	2250	4370	6324	6917	8095
610 UL	155 R 13 C	4/100, ET 30	4½ J x 13	3,8	6247	2500	2250	4460	6521	7114	8292
650 UMFe	155 R 13 C	4/100, ET 30	4½ J x 13	3,8	6384	2500	2250	4486	6658	7251	8429
650 KMFe	155 R 13 C	4/100, ET 30	4½ J x 13	3,8	6384	2500	2250	4486	6658	7251	8429
650 KFU	155 R 13 C	4/100, ET 30	4½ J x 13	3,8	6435	2500	2250	4552	6709	7302	8480
640 FMU	155 R 13 C	4/100, ET 30	5 J x 13	3,8	6485	2500	2250	4555	6759	7352	8530
645 VIP	155 R 13 C	4/100, ET 30	5 J x 13	3,8	6485	2500	2250	4555	6759	7352	8530
650 Uf	155 R 13 C	4/100, ET 30	4½ J x 13	3,8	6435	2500	2250	4607	6709	7302	8480
650 WFU	155 R 13 C	4/100, ET 30	4½ J x 13	3,8	6385	2500	2250	4535	6659	7252	8430
695 VIP	155 R 13 C	4/100, ET 30	5 J x 13	3,8	7123	2500	2250	5003	7397	7990	9169
720 UML	155 R 13 C	4/100, ET 30	4½ J x 13	3,8	7085	2500	2250	4820	7359	7952	9148
720 UKFe	155 R 13 C	4/100, ET 30	4½ J x 13	3,8	7085	2500	2250	4878	7359	7952	9148
780 WFU/WLU	165 R 13 C	4/100, ET 30	5 J x 13	3,8	7123	2500	2250	4964	7397	7990	9169

14.5 Possibilities for increasing loads

Basic version

Trade name	Technical designation	De Luxe	Excellent	Prestige	La Vita	La V. bionda	Excelsior	g.v.w.r. [kg]	Axle load [kg]	Axle	Tires	Brakes	Leading equipment	Forked drawbar
400 SF	30 A	•	•	•				1100	1100	DB 13 M	195/70 R 14 LI 91	20-2425/1	KFL 12 B	One-Piece
410 SFe	30 G		•					1200	1200	DB 13 M	195/70 R 14 LI 91	20-2425/1	KFL 12 B	One-Piece
440 SF	30 F	•	•	•				1200	1200	DB 13 M	195/70 R 14 LI 91	20-2425/1	KFL 12 B	One-Piece
440 SFr	30 F		•					1200	1200	DB 13 M	195/70 R 14 LI 91	20-2425/1	KFL 12 B	One-Piece
455 UF	30 N	•	•	•	•			1300	1300	DB 13 M	185 R 14 C LI 102	20-2425/1	KFL 12 B	One-Piece
460 UFe	30 C	•	•	•	•			1300	1300	DB 13 M	185 R 14 C LI 102	20-2425/1	KFL 12 B	One-Piece
460 LU	30 J	•						1300	1300	DB 13 M	185 R 14 C LI 102	20-2425/1	KFL 12 B	One-Piece
490 UL	30 R	•						1350	1350	DB 15 MV/M	185 R 14 C LI 102	20-2425/1	KF 20 A	One-Piece
495 UL	30 D		•	•	•			1400	1400	DB 15 MV/M	185 R 14 C LI 102	20-2425/1	KF 20 A	One-Piece
495 UFe	30 E		•					1400	1400	DB 15 MV/M	185 R 14 C LI 102	20-2425/1	KF 20 A	One-Piece
495 UFe	24 F					•		1500	1500	DB 15 MV/M	185 R 14 C LI 102	20-2425/1	KF 20 A	ZHL 15 A1
540 UL	24 M	•	•					1500	1500	DB 15 MV/M	185 R 14 C LI 102	20-2425/1	KF 20 A	ZHL 15 A1
	24 M	•	•											
540 UL	24 M					•		1600	1600	DB 16 MV	185 R 14 C LI 102	20-2425/1	KF 20 A	ZHL 15 A1
540 UFe	24 E		•					1500	1500	DB 15 MV/M	185 R 14 C LI 102	20-2425/1	KF 20 A	ZHL 15 A1
	24 E		•											
540 UFe	24 E					•		1600	1600	DB 16 MV	185 R 14 C LI 102	20-2425/1	KF 20 A	ZHL 15 A1
540 WLU	24 J		•					1500	1500	DB 15 MV/M	185 R 14 C LI 102	20-2425/1	KF 20 A	ZHL 15 A1
	24 J		•											
540 WLU	24 J					•		1600	1600	DB 16 MV	185 R 14 C LI 102	20-2425/1	KF 20 A	ZHL 15 A1
540 UFf	24 K		•					1500	1500	DB 15 MV/M	185 R 14 C LI 102	20-2425/1	KF 20 A	ZHL 15 A1
	24 K		•											
540 KMFe	24 P	•	•					1500	1500	DB 15 MV/M	185 R 14 C LI 102	20-2425/1	KF 20 A	ZHL 15 A1
	24 P	•	•											
545 KMF	24 R		•	•	•			1600	1600	DB 16 MV	185 R 14 C LI 102	20-2425/1	KF 20A	ZHL 15 A1
560 UL	24 B		•			•		1600	1600	DB 16 MV	185 R 14 C LI 102	20-2425/1	KF 20A	ZHL 15 A1
560 KMFe	24 C	•	•	•				1600	1600	DB 16 MV	185 R 14 C LI 102	20-2425/1	KF 20 A	ZHL 15 A1
560 UFf	24 D		•					1600	1600	DB 16 MV	185 R 14 C LI 102	20-2425/1	KF 20 A	ZHL 15 A1
560 UFe	24 G		•			•	•	1600	1600	DB 16 MV	185 R 14 C LI 102	20-2425/1	KF 20A	ZHL 15 A1
560 WLU	24 H		•			•		1600	1600	DB 16 MV	185 R 14 C LI 102	20-2425/1	KF 20 A	ZHL 15 A1
575 VIP	24 S			•				1600	1600	DB 16 MV	185 R 14 C LI 102	20-2425/1	KF 20 A	ZHL 15 A1
610 UL	27 A					•		1800	1000/1000	DB 10 L	155 R 13 C LI 85	20-2425/1	KF 20 A	ZHL 20
610 UL	27 H						•	1900	1000/1000	DB 10 L	155 R 13 C LI 85	20-2425/1	KF 20 A	ZHL 20
650 UMFe	27 B					•		1900	1000/1000	DB 10 L	155 R 13 C LI 85	20-2425/1	KF 20 A	ZHL 20
650 KMFe	27 B		•			•		1900	1000/1000	DB 10 L	155 R 13 C LI 85	20-2425/1	KF 20 A	ZHL 20
650 KFU	27 C					•		1900	1000/1000	DB 10 L	155 R 13 C LI 85	20-2425/1	KF 20 A	ZHL 20
640 FMU	27 K			•				1900	1000/1000	DB 10 L	155 R 13 C LI 85	20-2425/1	KF 20 A	ZHL 20
645 VIP	27 N			•				1900	1000/1000	DB 10 L	155 R 13 C LI 85	20-2425/1	KF 20 A	ZHL 20
650 UFf	27 J						•	1900	1000/1000	DB 10 L	155 R 13 C LI 85	20-2425/1	KF 20 A	ZHL 20
650 WFU	27 G					•		1900	1000/1000	DB 10 L	155 R 13 C LI 85	20-2425/1	KF 20 A	ZHL 20
695 VIP	19 K					•		2000	1050/1050	DB 13 M	155 R 13 C LI 85	20-2425/1	KF 20 A	ZHF 20
720 UML	19 D					•		2000	1050/1050	DB 13 M	155 R 13 C LI 85	20-2425/1	KF 20 A	ZHF 20
720 UKFe	19 G		•			•		2000	1050/1050	DB 13 M	155 R 13 C LI 85	20-2425/1	KF 20 A	ZHF 20
780 WFU / WLU	19 J					•		2200	1200/1200	DB 13 M	165 R 13 C LI 91	20-2425/1	KF 25 A	ZHL 27 C1

Possible increased load

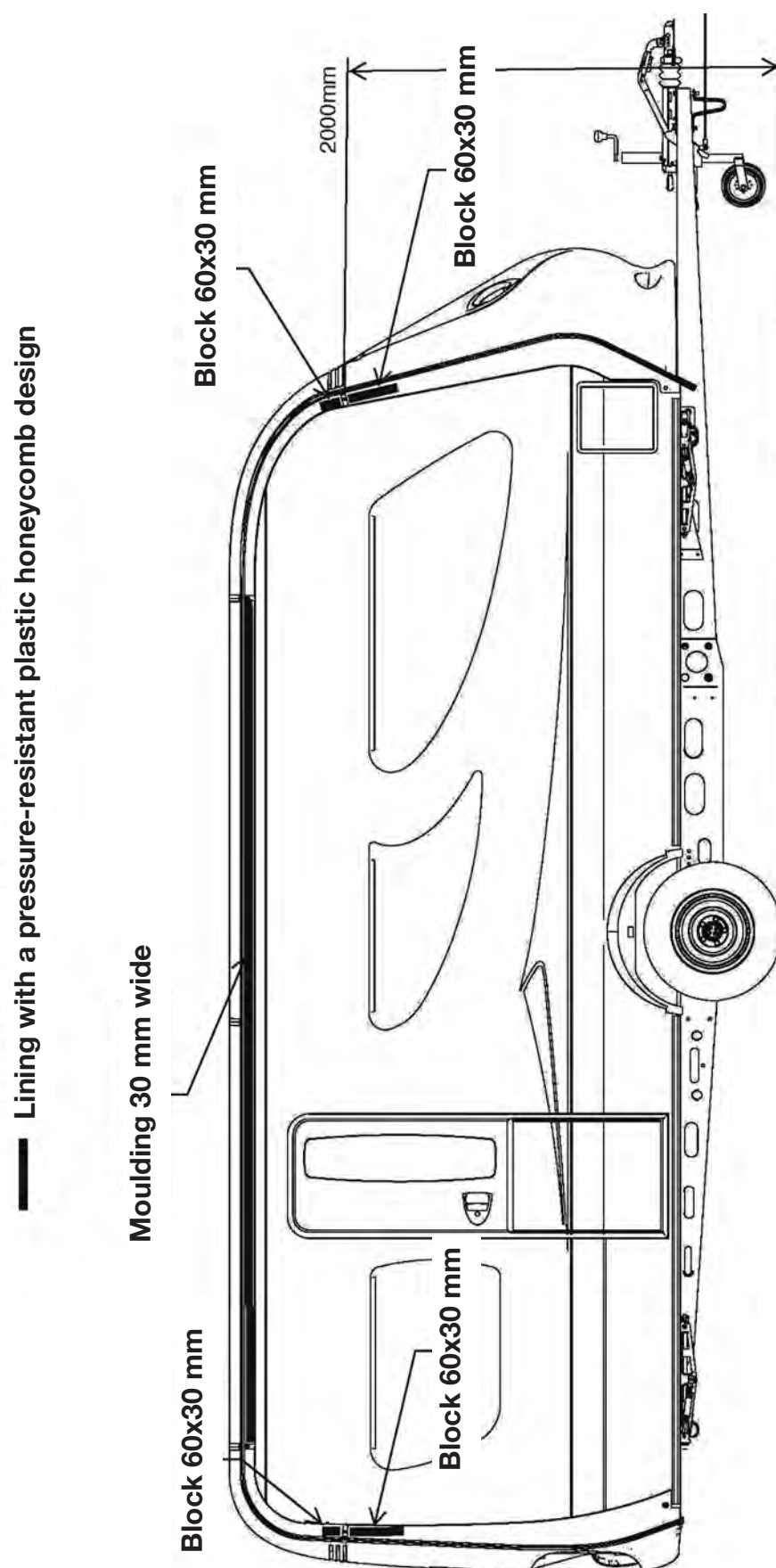
Trade name	g.v.w.r. [kg]	Axle load [kg]	Axle New !	Additional rear crossbar	Wheels New !	Brakes New !	Leading equipment	Forked drawbar New !	Weight
400 SF	1350	1350	no	no	185 R 14 C LI 102	no	no	no	2,0
410 SFe	1350	1350	no	no	185 R 14 C LI 102	no	no	no	2,0
440 SF	1350	1350	no	no	185 R 14 C LI 102	no	no	no	2,0
440 SFr	1350	1350	no	no	185 R 14 C LI 102	no	no	no	2,0
455 UF	1350	1350	no	no	no	no	no	no	0,0
460 UFe	1350	1350	no	no	no	no	no	no	0,0
460 LU	1350	1350	no	no	no	no	no	no	0,0
490 UL	1500	1500	no	no	no	no	no	no	0,0
495 UL	1500	1500	no	no	no	no	no	no	0,0
495 UFe	1500	1500	no	no	no	no	no	no	0,0
495 UFe	1600	1600	DB 16 MV	no	no	no	no	no	4,5
540 UL	1600	1600	DB 16 MV	no	no	no	no	no	4,5
	1700	1700	DB 18 MV	34 1462 93 03	195/70 R 15 C LI 104	25-2025	no	ZHL 15 A	23,6
540 UL	1700	1700	DB 18 MV	34 1462 93 03	195/70 R 15 C LI 104	25-2025	no	ZHL 15 A	19,1
540 UFe	1600	1600	DB 16 MV	no	no	no	no	no	4,5
	1700	1700	DB 18 MV	34 1462 93 03	195/70 R 15 C LI 104	25-2025	no	ZHL 15 A	23,6
540 UFe	1700	1700	DB 18 MV	34 1462 93 03	195/70 R 15 C LI 104	25-2025	no	ZHL 15 A	19,1
540 WLU	1600	1600	DB 16 MV	no	no	no	no	no	4,5
	1700	1700	DB 18 MV	34 1462 93 03	195/70 R 15 C LI 104	25-2025	no	ZHL 15 A	23,6
540 WLU	1700	1700	DB 18 MV	34 1462 93 03	195/70 R 15 C LI 104	25-2025	no	ZHL 15 A	19,1
540 UFf	1600	1600	DB 16 MV	no	no	no	no	no	4,5
	1700	1700	DB 18 MV	34 1462 93 03	195/70 R 15 C LI 104	25-2025	no	ZHL 15 A	21,6
540 KMFe	1600	1600	DB 16 MV	no	no	no	no	no	4,5
	1700	1700	DB 18 MV	34 1462 93 03	195/70 R 15 C LI 104	25-2025	no	ZHL 15 A	23,6
545 KMF	1750	1750	DB 18 MV	no	195/70 R 15 C LI 104	25-2025	no	ZHL 15 A	17,1
560 UL	1750	1750	DB 18 MV	no	195/70 R 15 C LI 104	25-2025	no	ZHL 15 A	17,1
560 KMFe	1750	1750	DB 18 MV	no	195/70 R 15 C LI 104	25-2025	no	ZHL 15 A	17,1
560 UFf	1750	1750	DB 18 MV	no	195/70 R 15 C LI 104	25-2025	no	ZHL 15 A	17,1
560 UFe	1750	1750	DB 18 MV	no	195/70 R 15 C LI 104	25-2025	no	ZHL 15 A	17,1
560 WLU	1750	1750	DB 18 MV	no	195/70 R 15 C LI 104	25-2025	no	ZHL 15 A	17,1
575 VIP	1750	1750	DB 18 MV	no	195/70 R 15 C LI 104	25-2025	no	ZHL 15 A	17,1
610 UL	2000	1050/1050	DB 11 M	no	165 R 13 C LI 91	no	no	no	16,0
610 UL	2000	1050/1050	DB 11 M	no	165 R 13 C LI 91	no	no	no	16,0
650 UMFe	2000	1050/1050	DB 11 M	no	165 R 13 C LI 91	no	no	no	16,0
650 KMFe	2000	1050/1050	DB 11 M	no	165 R 13 C LI 91	no	no	no	16,0
650 KFU	2000	1050/1050	DB 11 M	no	165 R 13 C LI 91	no	no	no	16,0
640 FMU	2000	1050/1050	DB 11 M	no	165 R 13 C LI 91	no	no	no	16,0
645 VIP	2000	1050/1050	DB 11 M	no	165 R 13 C LI 91	no	no	no	16,0
650 UFf	2000	1050/1050	DB 11 M	no	165 R 13 C LI 91	no	no	no	16,0
650 WFU	2000	1050/1050	DB 11 M	no	165 R 13 C LI 91	no	no	no	16,0
695 VIP	2200	1200/1200	no	no	165 R 13 C LI 91	no	KF 25 A	ZHL 27 C1	15,9
720 UML	2200	1200/1200	no	no	165 R 13 C LI 91	no	KF 25 A	ZHL 27 C1	15,9
720 UKFe	2200	1200/1200	no	no	165 R 13 C LI 91	no	KF 25 A	ZHL 27 C1	15,9
780 WFU / WLU	---	---	---	---	---	---	---	---	---

14.6 Lighting

12V Vehicle lighting			
Position	Description	Voltage	Watt
exterior	left blinker	12	21
exterior	right blinker	12	21
exterior	stationary light	12	5
exterior	brake light	12	21
exterior	license plate	12	5
exterior	silhouette lamp	12	3
exterior	side marker lamp	12	3
exterior	side marker	12	3
exterior	3rd brake light	12	–

12V Interior lighting	
Lampe	Leuchtmittel
Ceiling lamp, round, grey	3 x 5W + 3 x 10W
Halogen ceiling lamp	3 x 10W
Closet lamp	LED
Children's bed lamp	3 x 5W
Washroom lamp	3 x 10W
Corner lamp	2 x 10W
Kitchenlamp silver 12V	4 x 10W
Kitchenlamp silver 230/12V	5 x 5W
Built-in spotlight 1980/12H/G/chrom	1 x 10W
Built-in spotlight silber	1 x 5W
Spotlight	1 x 10W
Wall lamp	1 x 10W
LED recessed spotlight	1 x 0,2W
Entry lamp	2 x 5W

14.7 Moulding



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