



Operation Guide

Version 11/2012

DE LUXE • EXCELLENT • PRESTIGE • LANDHAUS • PREMIUM

Hobby



Dear Camper,

Congratulations on the purchase of your new HOBBY camper. The trust you have placed in us is both an incentive and an obligation to continuously implement new ideas, technical innovations and fine touches to make our campers even better. Our fully fitted and highly sophisticated models enable us to offer you the perfect setting 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.

If this user manual should be unable to provide the required assistance, a close, pan-European network of dealers is available for further help. 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. 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.

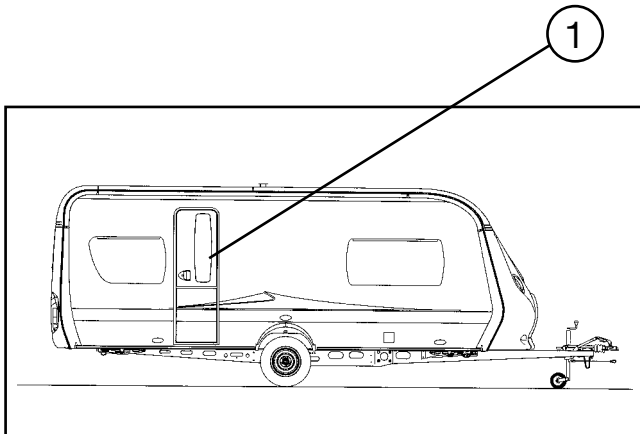


HOBBY grants a 5-year guarantee on the watertightness of the camper in accordance with guarantee conditions. When you accept the vehicle you will receive the guarantee booklet, "Five-Year Guarantee on Watertightness" from your HOBBY dealer.



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

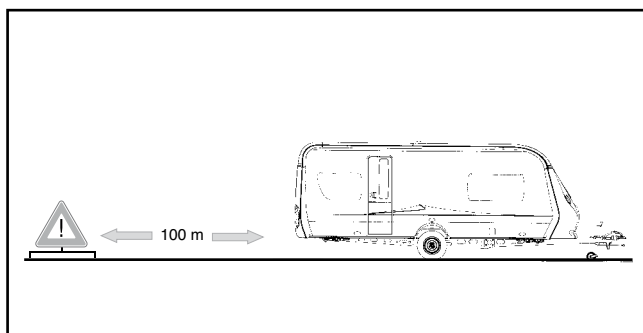
Keys

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
- Rear Storage Locker (Premium)



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

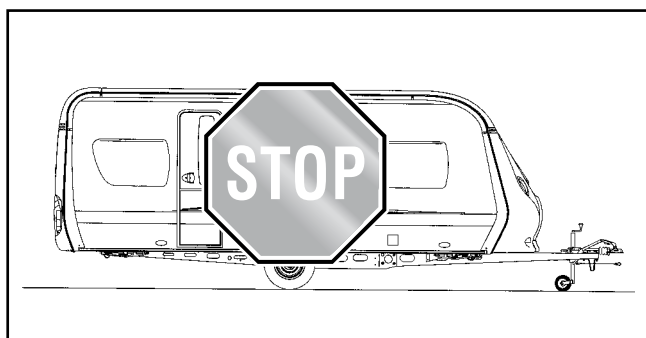
To be prepared for an emergency, you need at least three basic items of rescue equipment (first aid kit, warning triangle and fire extinguisher) which you should carry at all times and know how to use.

- 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.

2.2 Before the drive



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.

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 for the camper and place the contact-breaking cable around the ball neck of the permanently attached tow coupling. If the tow coupling is detachable, the contact-breaking cable must be hooked into the eyelet provided on towing bracket for that purpose.
- Tighten the tyre 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.
- Shut rear storage locker (Premium).
- Adjust outer mirrors on base vehicle.
- Check camper's tyre pressure (see tyre 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.
- If necessary, secure the spare tyre holder (Premium) to ensure it does not become unhoked.
- 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 TV mount.
- If necessary, dismantle the TV and store it securely.



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.



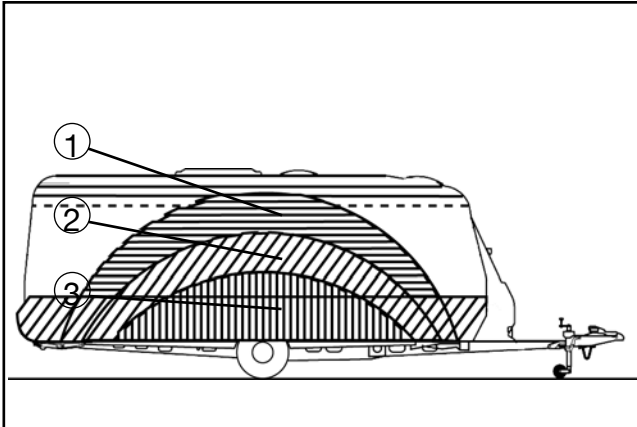
Do not store additional loads of more than 30 kg in the rear storage locker compartment (Premium).



The technically permissible maximum weight and the permissible drawbar load must 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 (380 bis 660) or 150 kg (695 bis 770).**
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.



Due to the design of the brakes, there may be increased wear in the brake lining during the initial break-in phase. After having driven 500 km, the basic setting for the brakes must be checked by an authorised specialist and adjusted if necessary (initial inspection).



Although the Premium models have an automatic brake adjustment, this must be checked after having driven the first 500 km.

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.



Please empty any residual water from the water tank before filling it with fresh water.

Therefore, check the water pipes and the fresh water tank before each drive to ensure they are clean. Disinfect and rinse the drinking water facility regularly, and always before each journey.

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

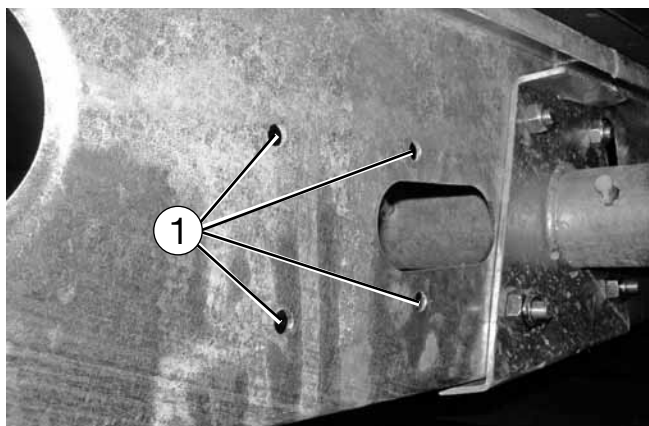
The main chassis beam and the towbar are connected by cone washer bolts (with the exception of the one-piece chassis). During regular maintenance, all of the screws must be checked and retightened, if necessary (105 Nm).



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

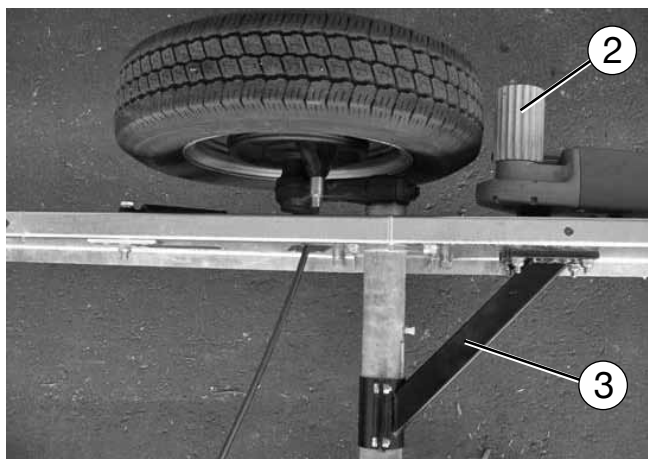


You may neither drill into or weld onto the chassis.



Preparing the mover

Almost 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 H SE or the H TE movers 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.



It is not possible to mount the H SE mover on the following models; alternatively, however, the Truma SE R standard mover can be mounted:

- 400 SFe (longitudinal beam is too short; therefore, not enough room in front of the axle)
- 770 CL and all WLU and WFU (space for mounting blocked by the styrofoam insulating case made by Düker)
- All of the models with a technically permissible maximum weight of 2,300 kg or 2,500 kg (the Mover H TE has been approved up to a max. of 2,250 kg).



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).



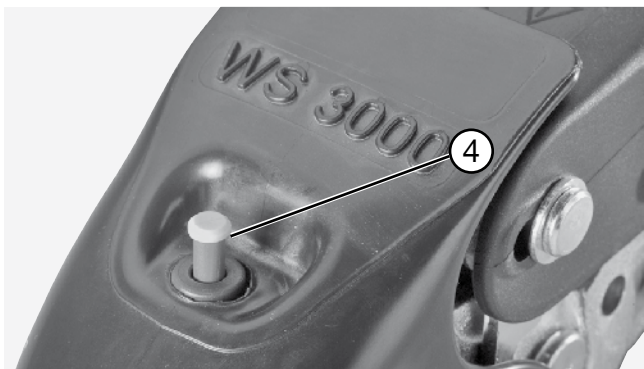
WARNING: Ensure that the metal of your ball coupler is bright and free of grease.

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

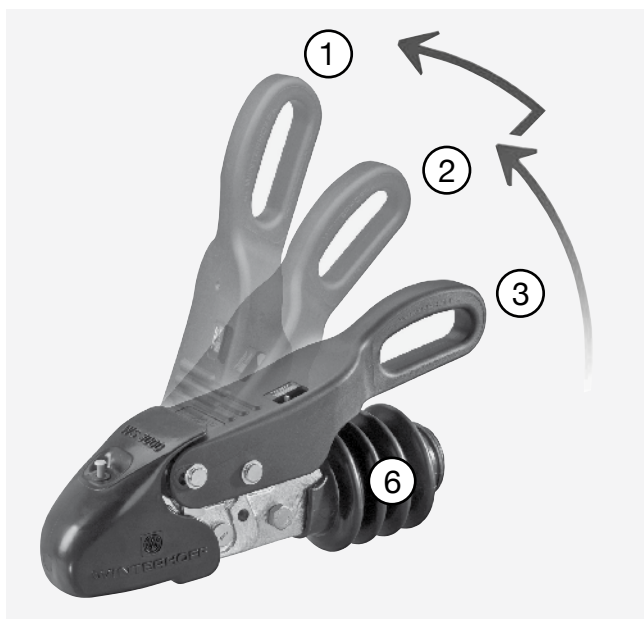
- To activate the stabilization system, the operation lever must be moved downward out of the closed position ② until it locks in ③. The spring corpus will become tense in the process, so that contact pressure is created on the coupling ball via the friction elements. Afterward, the operation lever lies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

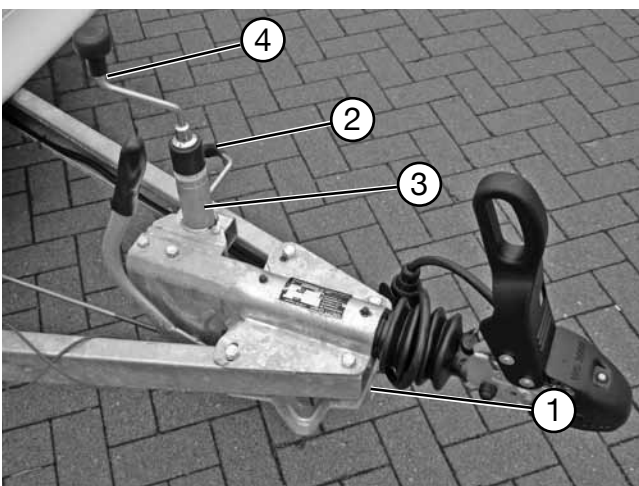


Controlling the stabilizing device

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

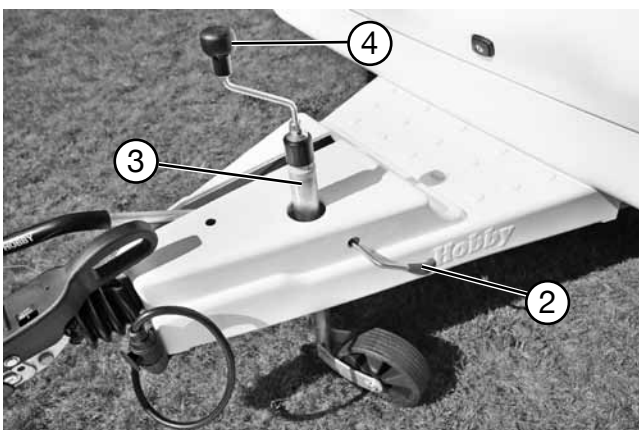


Rotating it upwards and securing it

- 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

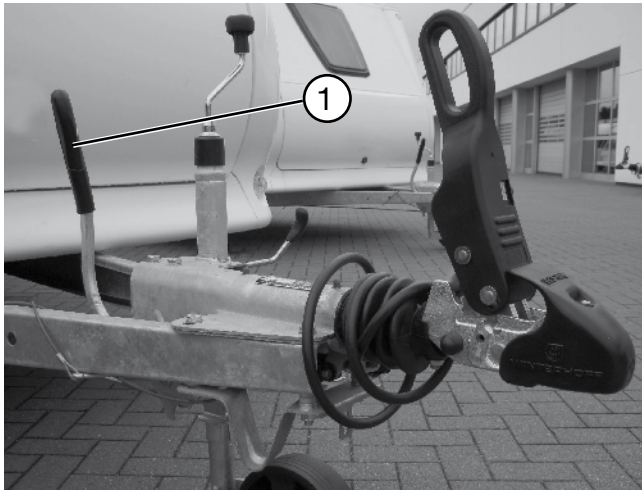
When parking the carriage, the locking brake of the camper must be activated.

To lock

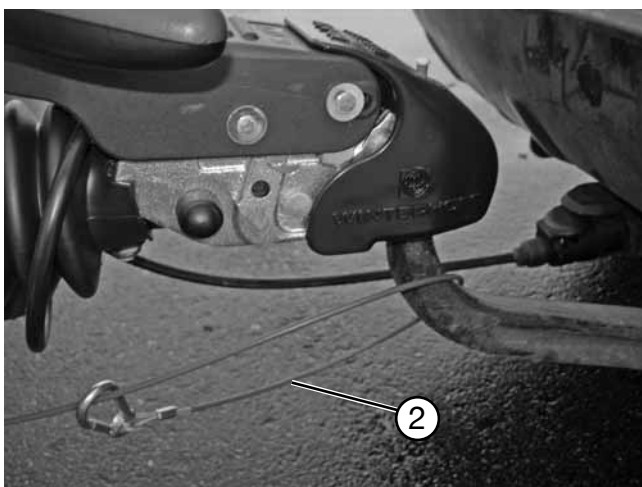
- Pull the locking brake lever upward by the handle ① until it locks into place. The locking brake lever is pressed into the final position by the gas pressure spring.

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.



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

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 following information regarding brake adjustment applies for all models with the exception of Premium vehicles.

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.

Automatic Brake Adjustment (Premium)

All Premium models have an automatic brake adjustment that independently compensates for wear in the brake lining.

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

Despite this brake adjustment, the brake linings are generally wear and tear parts. Therefore, their condition must be checked every 5,000 km, but no later than once every year. Visual inspection is carried out through the small inspection holes on the rear of the wheel brakes.

Please go to an authorised specialist if, when checking the overrunning brakes, the drawbar can be pushed in more than 60 mm.



It is mandatory that the brake pads (**exception: Premium models**) are regularly adjusted by an authorised specialist (initial inspection after 500 km) 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. **(See also 12.3 Brakes)**



- 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.



Please read the separately enclosed operating manual of the axle/brake manufacturer (Knott).

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 and/or Certificate of Conformity (CoC)
- 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:

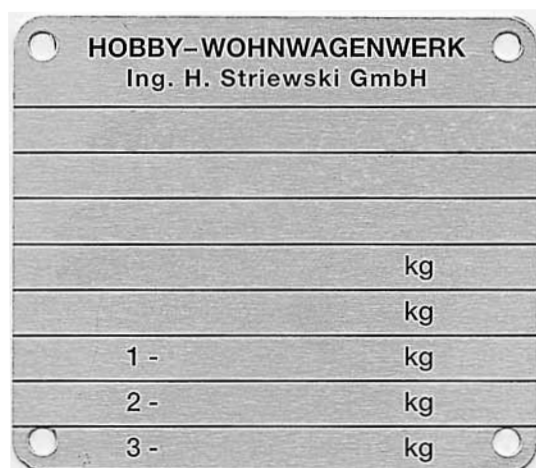
- motor vehicle registration certificate, Part I
- valid certificate of inspection for gas facilities, documenting installation. The initial certificate is located in the service package for the camper.

Vehicle ID number (FIN)

The 17-digit vehicle ID number is located at the front right-hand side of the forked drawbar.

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.



Premium



De Luxe, Excellent, Prestige, Landhaus



Premium:

The name plate is located in the gas locker box, above the bottle holder.



De Luxe, Excellent, Prestige, Landhaus:

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.

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, tyres

4.1 Tyres

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

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



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

4.2 Tyre pressure

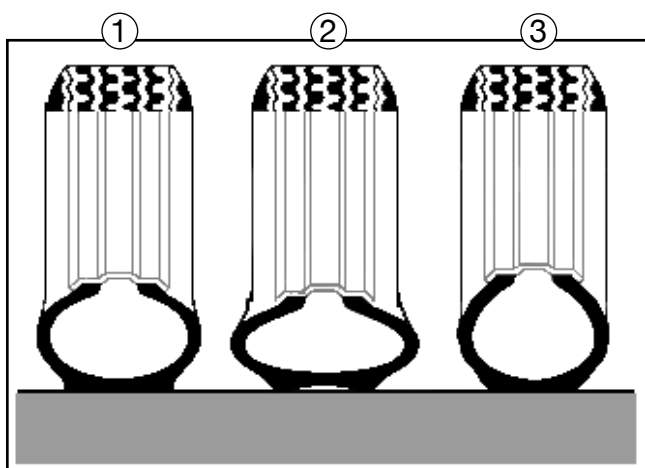
Only one tyre size is now entered in the motor vehicle registration certificate, Parts I and II. This must not necessarily correspond with the size of the tyres mounted on the vehicle. Should you have any queries, please contact your dealer.

Rules for checking tyre pressure:

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

Rules for tyre pressure:

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





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



The correct tyre pressure is given in the table on wheels/tyre 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 tyres

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



Tyres age even when used rarely or not at all.



The minimum tread depth only guarantees minimum safety while driving!

Tyre manufacturers' recommendation

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

Age of tyres

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



Example:

DOT 2612 means week 26 in the year of manufacture (here: 2012)

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.



Please note:

Tyre bolts for all 13" + 14" metal wheel rims and all light alloy rims (incl. 15"):
cone washer

Tyre bolts for all 15" metal wheel rims:
spherical wheel bolt

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.



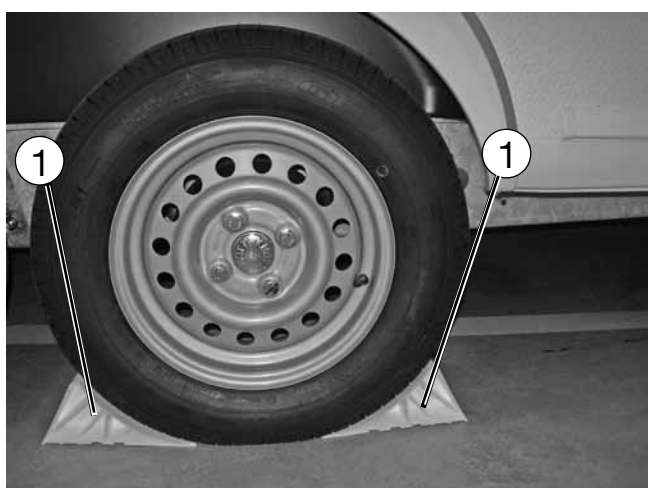
Check specified torque every 5,000 km or at least once a year.

4.5 Changing the tyre

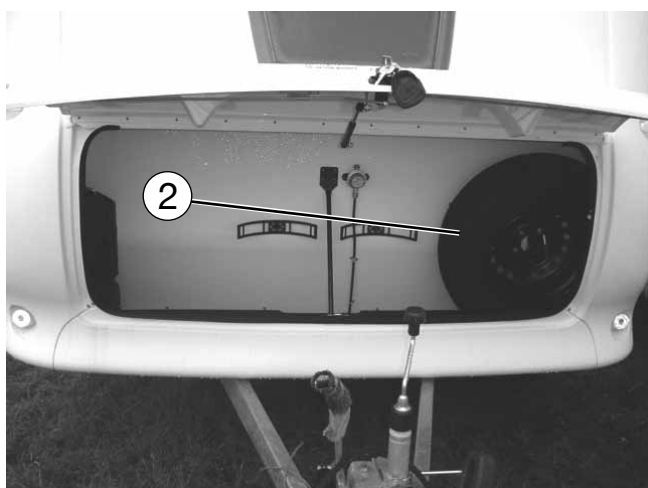


Preparing to change the tyre

- If possible, only change the tyre 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 tyre 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.

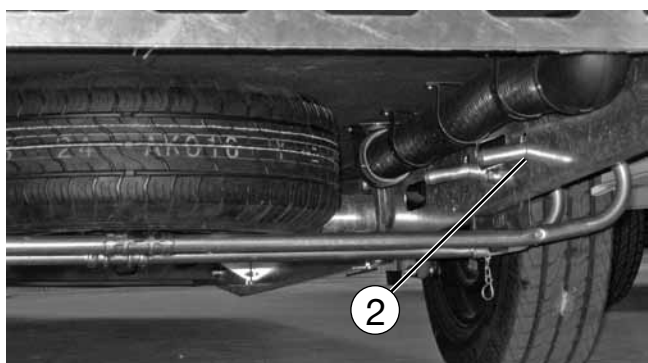
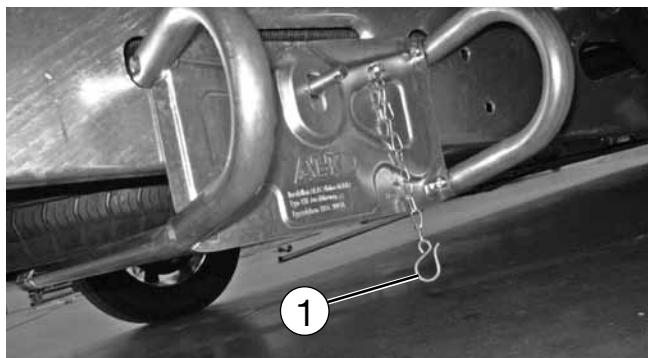


- In the de Luxe, Excellent and Prestige models, the spare tyre (**optional extra**) ② is attached by means of a tommy screw to a special holder in the gas bottle container at the front left-hand side of the camper. The spare tyre can be removed after the tommy screw has been unscrewed.



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

Spare Tyre for Premium and Landhaus (Special Accessory)



A spare tyre is available as a special accessory for all Premium models. It can be mounted underneath the vehicle.

To remove the spare tyre, the vehicle must be unhitched and placed on the coupling jaw in order to raise the rear end of the vehicle.

Remove the spare tyre

- Unhitch the vehicle and raise it.
- Loosen the thread locker ①.
- Unhook the spare tyre mount from the longitudinal beam ②.
- Carefully lower the mount.
- Loosen the thread locker on the spare tyre.
- Remove the spare tyre from its mount.



It takes some skill and strength to remove the spare tyre. If necessary, request technical assistance (e.g. from the AA) to remove the spare tyre and mount it.

Warnings for changing the tyre:



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 tyres. 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 tyre, 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 tyre 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 tyre available at all times. Therefore, have the spare tyre replaced without delay.



Tyre repair kit



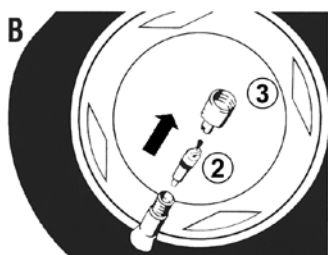
Do not use the tyre repair kit if the tyre was damaged as a result of driving without air. Small cuts, especially in the tyre tread, can be resealed using the tyre repair kit. Do not remove foreign objects (such as screws or nails) from the tyre. The tyre repair kit can be used as long as the outside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



There is an expiry date on the tyre repair kit. Therefore, please note this date. Kits that have expired no longer offer a guarantee that they will function properly.



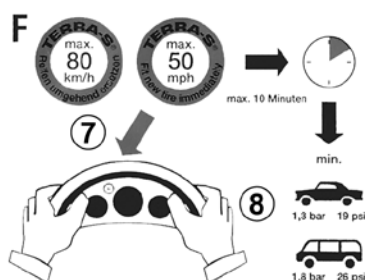
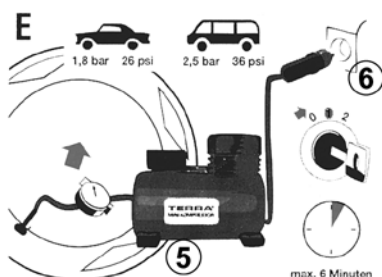
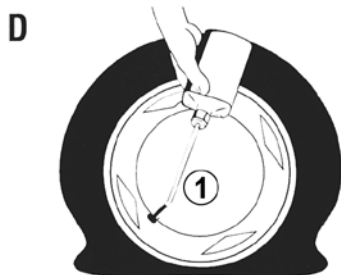
A Shake the bottle. Open the fill hose ① on the bottle (foil seal is thereby punctured).



B Unscrew the valve cap from the tyre 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 tyre valve.



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

E Open the air hose ⑤ on the tyre valve. Insert the plug ⑥ into the cigar lighter socket. Then pump the tyres (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 tyre. Repeat the pumping process. Resume driving immediately, so that the sealant can be evenly distributed within the tyre.

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

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

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



Danger of accidents! If the required tyre pressure is still unattainable, the tyre is too severely damaged. In this case, the tyre 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.

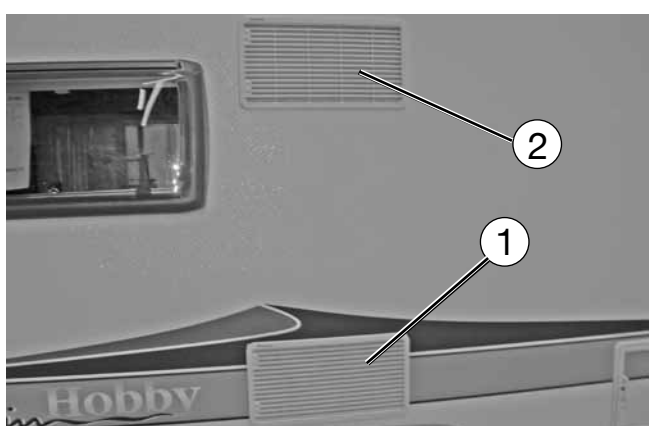
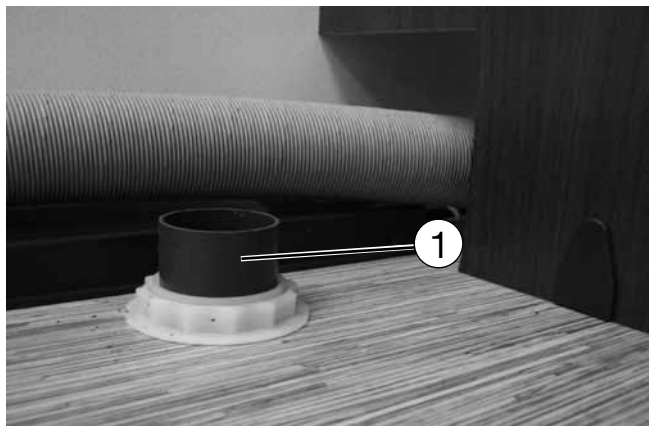
F Adhere the provided sticker to the combination instrument within sight of the driver. Dispose of used tyre repair kit at a service station.



Danger of accidents! Have the tyres 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 ① and a forced de-aerating system is located in the ceiling ② 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 ① is located at the bottom of the exterior vehicle wall. The de-aeration bar ② is located above the ventilation bar.

In the Premium model, the refrigerator is de-aerated by means of a flue ③ on the roof.



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



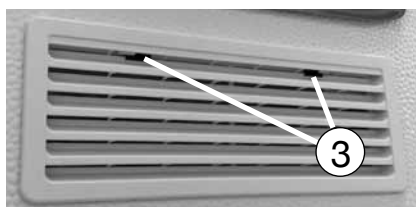
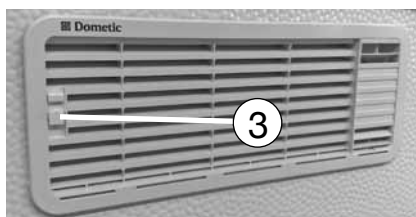
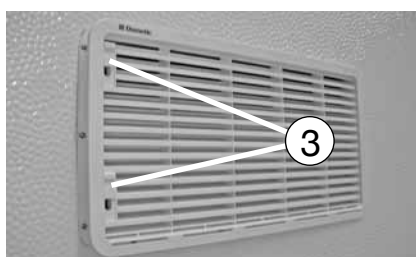
Use the special cover panels for the air vents on the side of the vehicle when operating the camper in winter. These winter panels are a chargeable option; they can be ordered from your dealer.



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

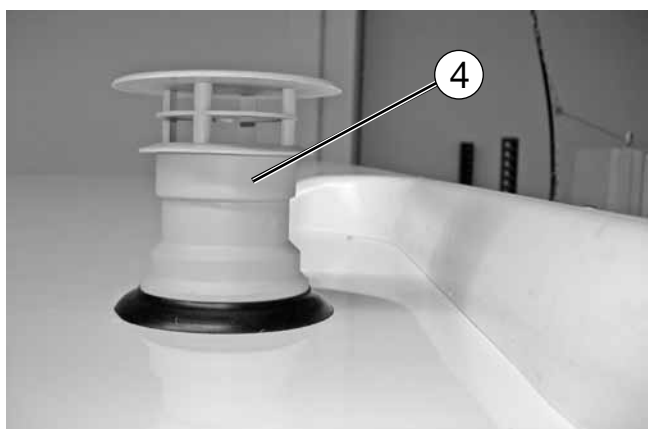


We recommend that you remove the ventilation bars when outside temperatures are very high. This creates a high air circulation on the refrigerator and increases cooling capacity. Bei Niederschlag oder im Fahrbetrieb müssen die Lüftungsgitter fest montiert sein.



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



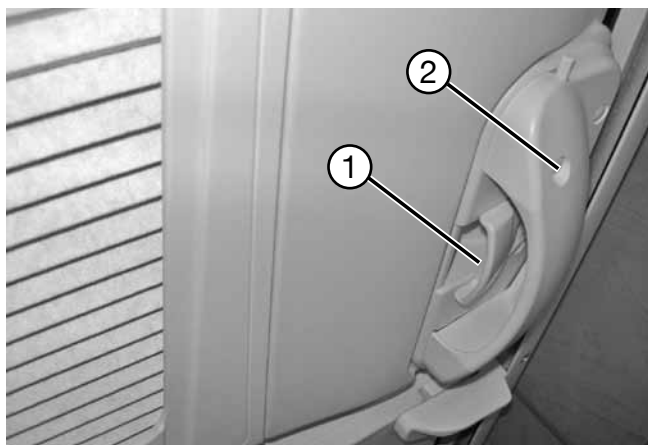
To avoid damage, do not use the track for the insect screen as assistance when entering the camper.



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.

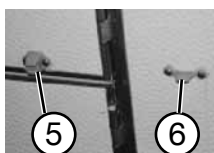
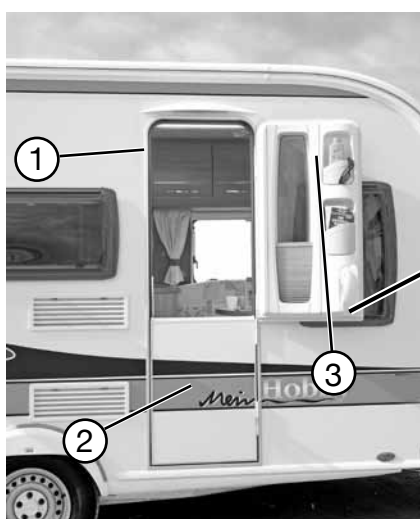


Stable entry door

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.



Pull the pleated (upper part of the door) and the insect screen on the entry door to the desired position.



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

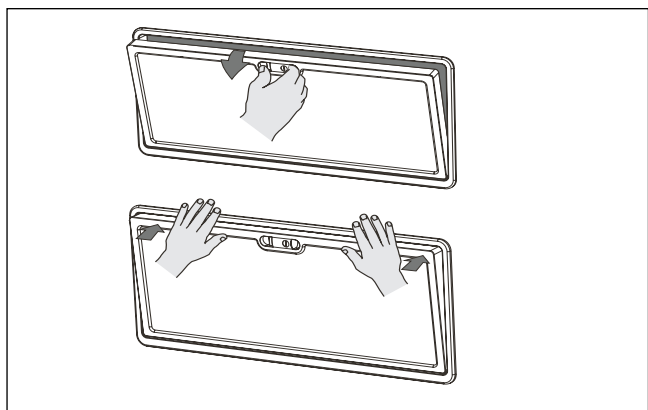


To open

- 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.



Gas-bottle Container Flap Premium

To open

- Unlatch the lock ① with the key.
- Turn the handle down by 90° to a vertical position.
- Swing the gas-bottle container flap slowly upwards.

To close

- Close the gas-bottle container flap and turn the handle by 90° to a horizontal position.
- Latch the lock with the key to secure it.



5.5 Rear Storage Compartment Premium



To open

- Unlatch the lock ① with the key.
- Turn the handle down by 90° to a vertical position.
- Slowly lift up the rear storage locker lid.

To close

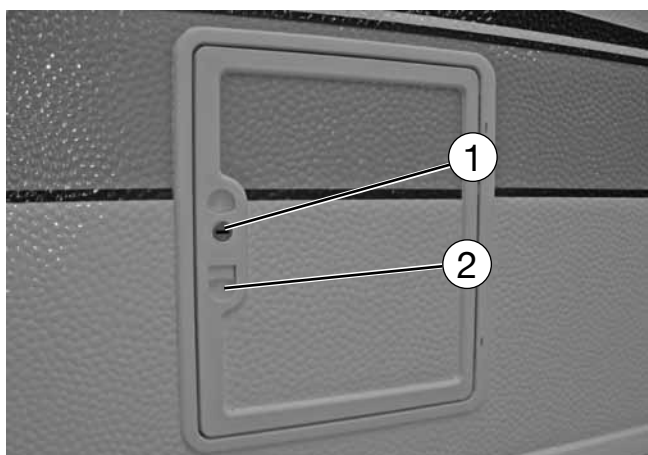
- Close the rear storage locker lid and turn the handle by 90° to a horizontal position.
- Latch the lock with the key to secure it.



If you load too much in the rear storage locker compartment, the vehicle will be considerably more difficult to handle; this endangers all road users.

Therefore, a load of no more than 30 kg may be placed in the storage locker compartment! Furthermore, when loading the storage locker, please ensure that sufficient storage space is also loaded at the front of the vehicle to balance the drawbar load.

5.6 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.

5.7 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.

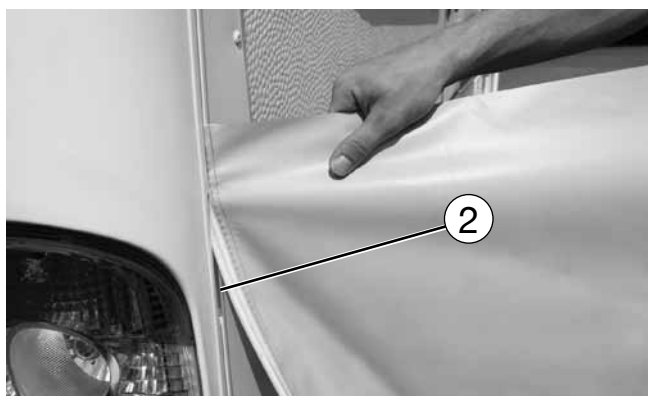
5.8 Guide rail for outer tent and skirting



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 ① 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.



The wheel cover has an integrated keder strip for sliding in the mudguard.



Fastening for the outer tent

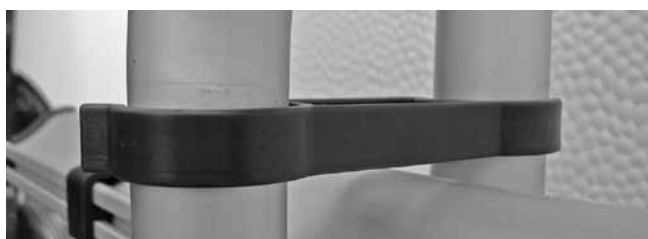
Use the specially developed Hobby Vario Clip as a ridgepole bracket to securely attach an outer tent to the camper. The clip can be attached without screws and has been specially adapted to the contour of the moulding. The moulding is lined in the relevant places with a pressure and moisture-resistant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



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



5.9 Bicycle carrier (Special Accessory)



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 30 kg.



Bicycle Carrier Premium (Special Accessory)

The bicycle carrier on the Premium models is mounted on the drawbar.

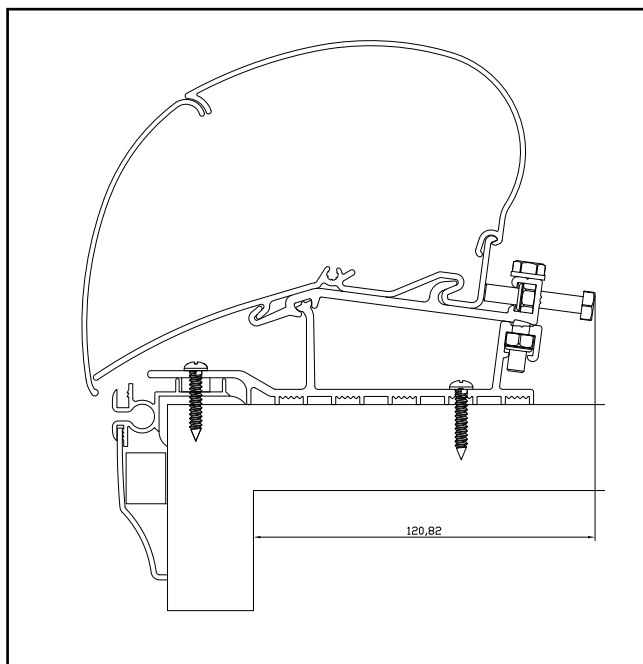


When shunting or driving around curves, you should leave a wide angle, because otherwise, depending on the model, the bicycle (carrier) may collide with the base vehicle. Before driving for the first time, take some time to practise so as to familiarise yourself with driving conditions.



After loading the bicycles, please check the drawbar load and, if necessary, regulate it (**see also Chapter 2.3**).

5.10 Roof awning (Special Accessory)



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.

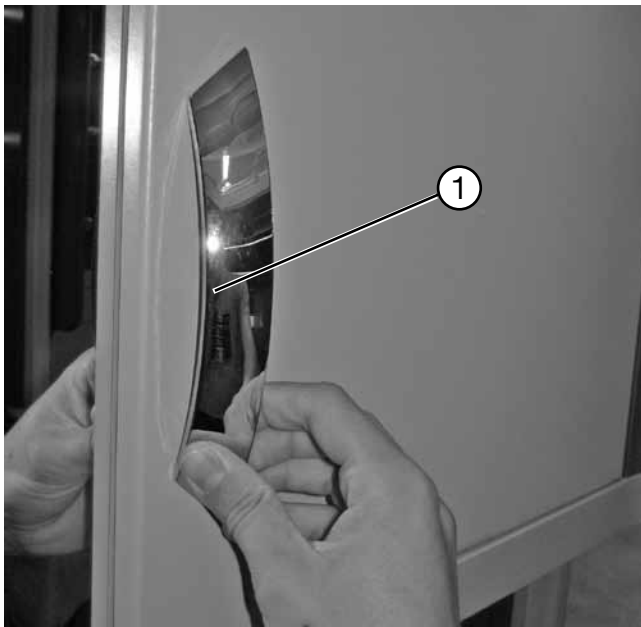
The maximum permissible total width and total height may not be exceeded by installing an awning.



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



Kitchen Wall Cabinet Premium

To open

- Pull the long edge of the handle ① forwards and fold it in towards the short edge.
- Pull on the handle until the flap opens.

To close

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



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

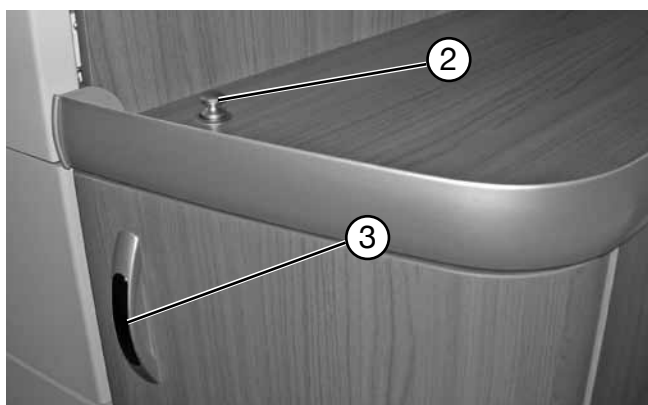
- Push the handle to open and shut the door.



Furniture doors with knob

Wardrobe

- Turn the knob to open and shut the door.



Push-lock drawers

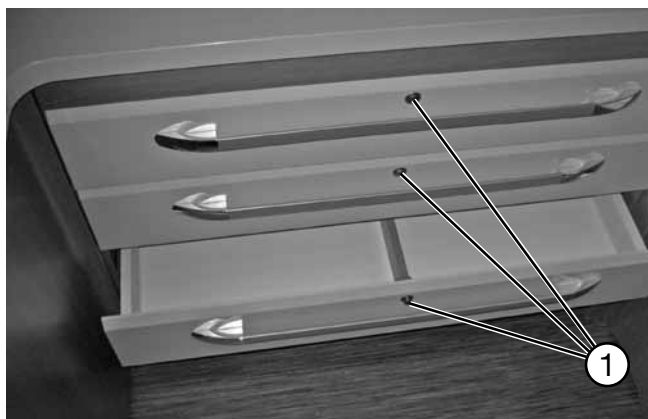
Kitchen drawer

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.



Drawers in the Kitchen

Each individual drawer is secured by a separate pushlock ①.

To unlock

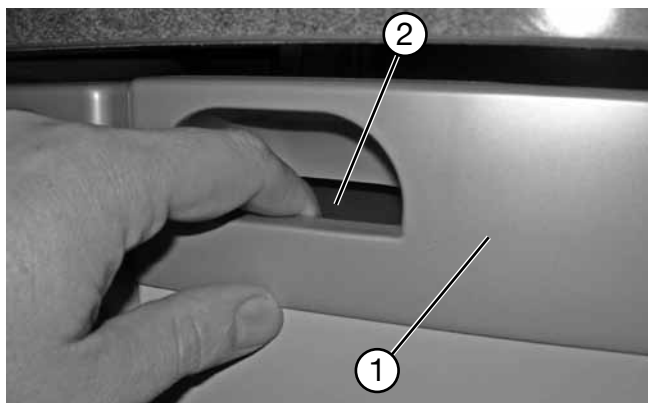
- Open the pushlock on the drawer you wish to open and pull the drawer out.

To lock

- Push the drawer in (soft close) and use the pushlock to secure it.

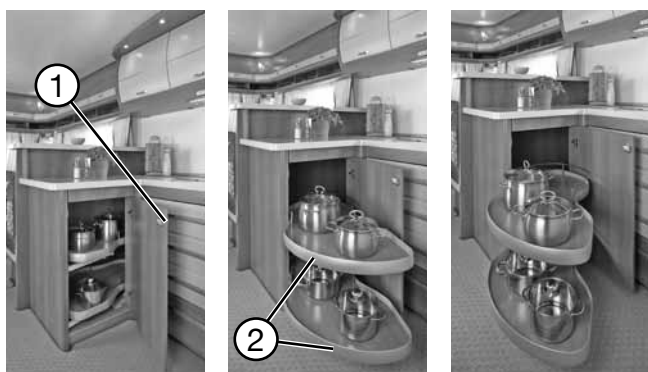


Please observe the maximum load of 10 kg per drawer.



Standard Kitchen

The cutlery drawer ① has its own lock. The drawer can be unlocked by pressing the button ②. It will lock automatically when you close the drawer.



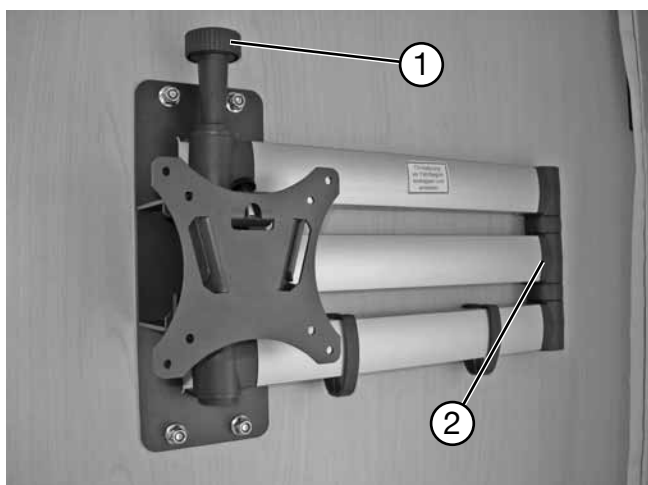
Carousel in the Corner Kitchen

Open the door of the corner base cabinet by pressing the pushlock ①. Pull gently on the two storage shelves ② to pull them carefully out of the cabinet. Carry out this procedure in reverse order to shut the cabinet.



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 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.



The mounted TV may not weigh more than 8 kg.
When driving, we recommend that you remove the TV from the mount and store it securely.

6.3 Tables



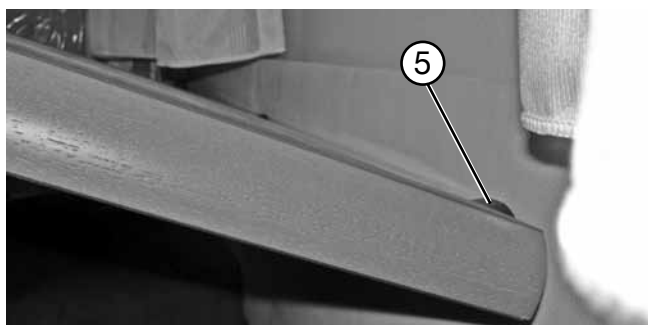
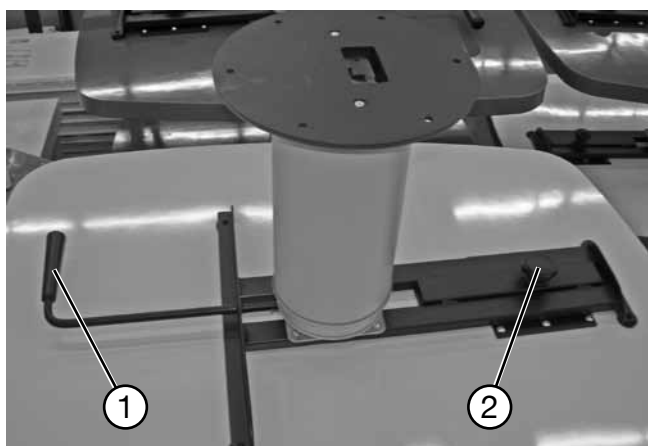
Elevating table

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

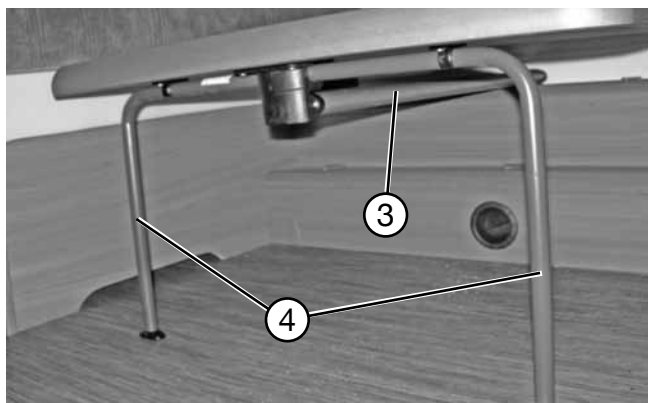
- Loosen the knurled screw ②.
- Turn the table in the desired (excentric) direction.
- To lock the table, tighten the knurled screw ②.



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

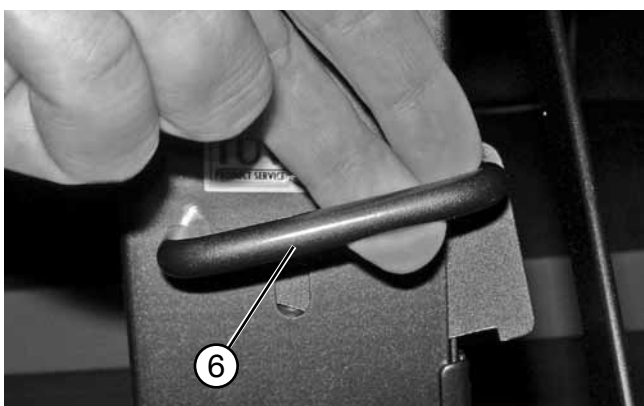
- Pull upwards on the bow handle ⑥ on the right-hand side.
- Swivel the table top downwards towards the centre of the vehicle until the handle locks into place.

To turn

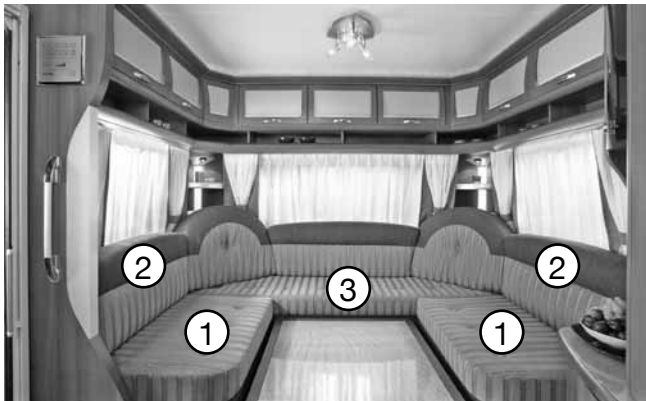
- There are rollers on the table legs, shifted 45°, which enable the table to be turned around its centre point in any desired direction.



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.



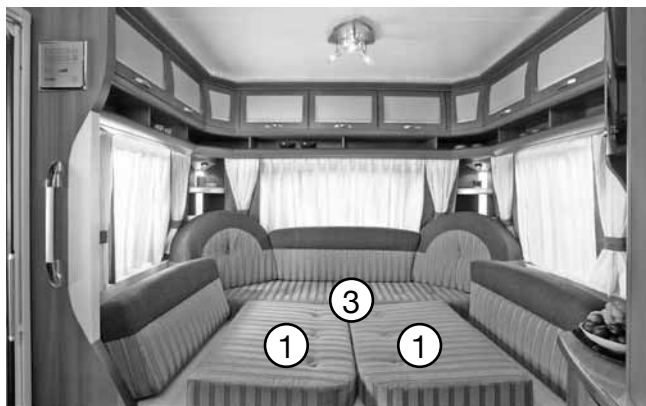
6.4 Conversion of seats and beds



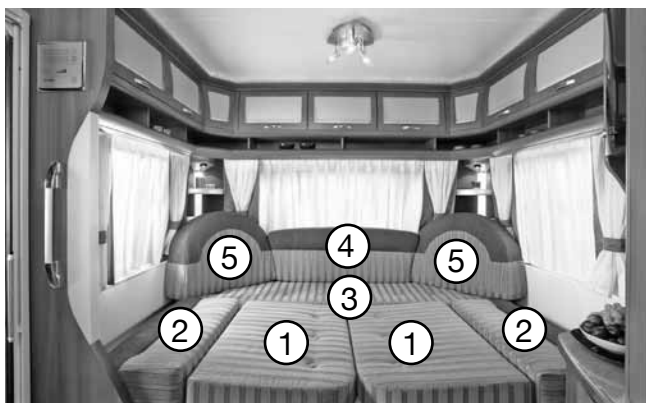
The seat groups can be converted into comfortable beds.

Converting the Round Seating Arrangement

- Remove the seat ① and back cushions ②.
- Lower the table.
- Replace the seat cushions ① and pull them to the middle of the table.
- Fill the outside areas with the side back cushions ②.
- The rear transverse seat cushion ③ as well as the rear back cushion ④ with the two corner cushions ⑤ are left in place.



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



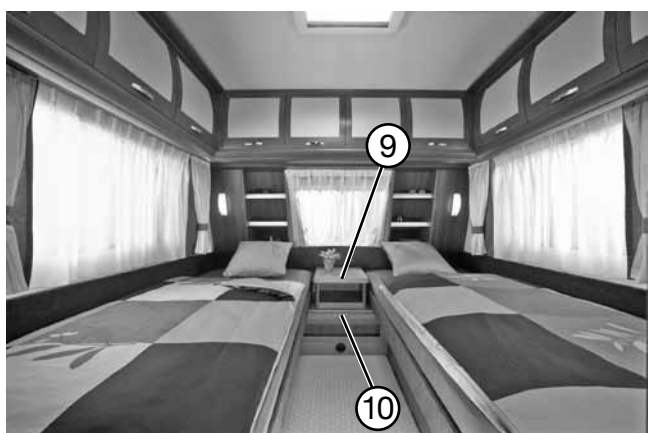
When converting seating arrangements into beds, do not place the cushions directly on the tabletop as this may cause scratches or mildew due to condensation. We recommend that you use an absorbent cloth (e.g. terry cloth or cotton).





Bed expansion for vehicles with side seating arrangement

- To open, press the push lock ⑥.
- Carefully place the external panel ⑦ on the floor.
- Place the additional panel for the bed ⑧ in a horizontal position or tilt its longitudinal side slightly upwards.
- Raise the external panel ⑦ by approx. 60° and lower the additional panel for the bed ⑧ until the two parts support each other.



Bed Expansion for Long Beds

It is possible to obtain an optional bed expansion with which to widen the two long beds, turning them into a double bed.

- Lift up the night table attachment ⑨ and remove it.
- Pull on the handle ⑩ and pull out the slatted frame ⑪ to its full horizontal position.
- Place the additional cushion ⑫ on the slatted frame.





Head rests (Landhaus)

The head rests can be manually locked into different positions.

Depending on your requirements, lift the head rests until they lock into the desired position and press on them lightly to lower them.



Head rests are only available together with the optional leather interior.

6.5 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.

6.6 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.

To close

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



Windows next to children's beds can only be opened slightly to effectively prevent children from falling out.



Pleated Blinds and Shades

Pleated Blind or shades are integrated together with the insect screen in the window frame.

To close the black-out pleating

- Use the handle to pull the plissé up to the desired position and then let go. 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 open when the caravan is not in use.



The shade on the kitchen window is shut by pulling it up. It is fully adjustable.



Partition for sleeping area

Release the clip ① that fastens the partition and slowly and carefully slide the partition along the rail guide to close it. The magnetic lock will automatically lock the partition.

6.7 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.

Insect screens and shades (plissés)

Both plissés are fully adjustable by sliding them horizontally from side to side.



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

To close

- Pull the handle of the screen to the opposite side and let it latch into place on the locking tab.

To open

- Press the catch hook down and release it from the locking tab.
- 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.

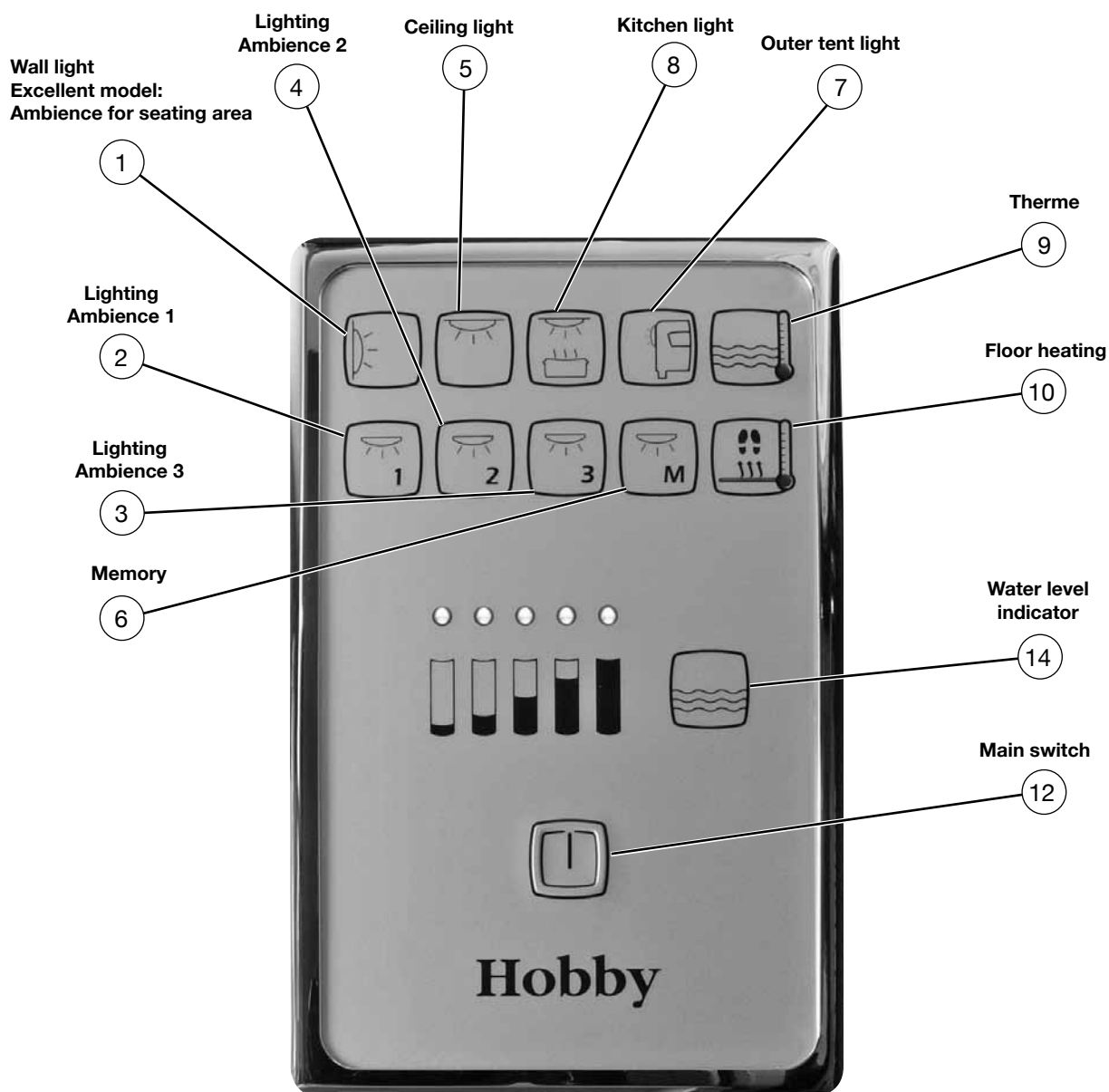


The standard version of the camper is not equipped for internal battery supply (self-sufficient operation).



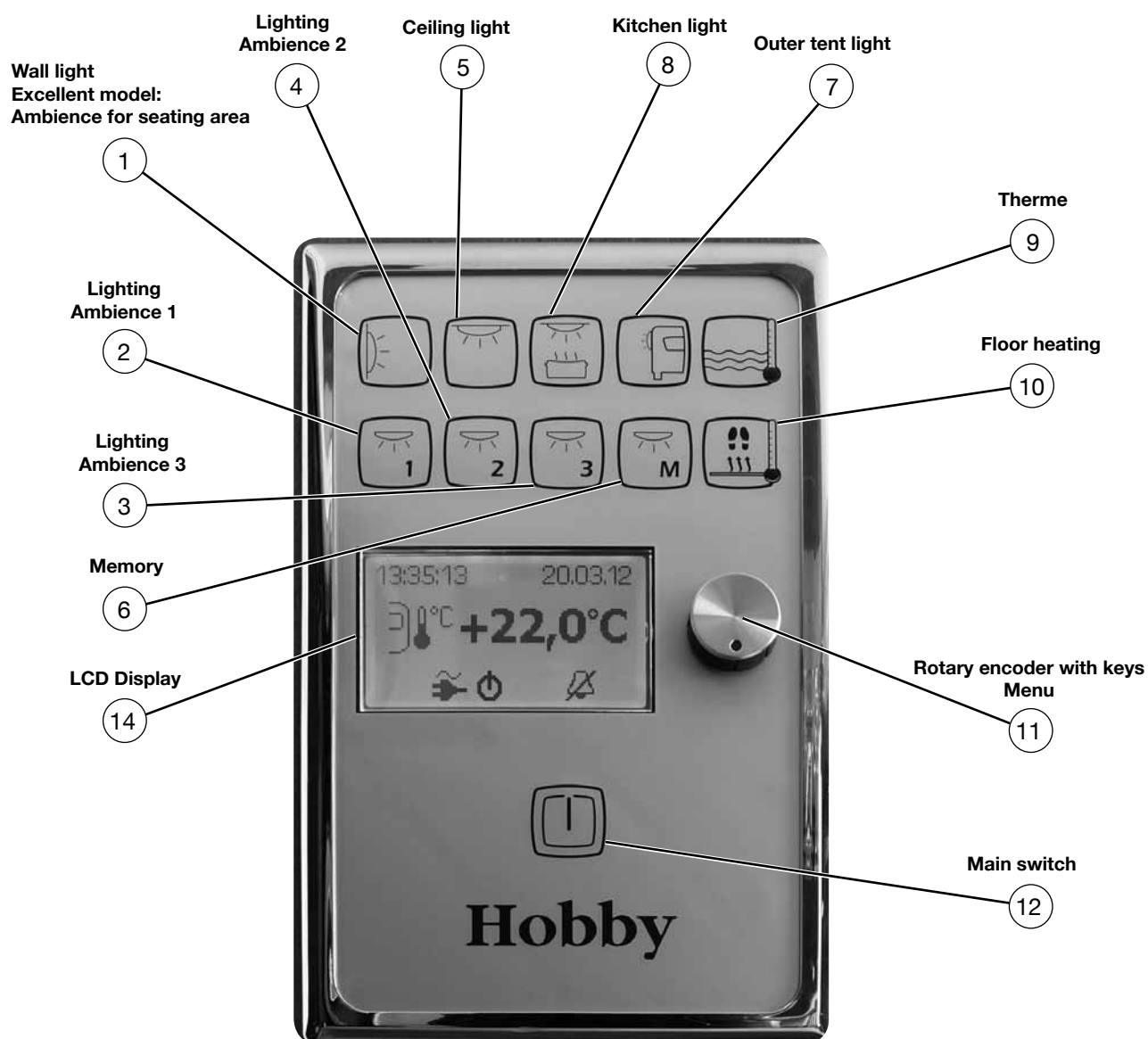
Only authorised specialists may work on the electrical system.

7.2 Control panel



Standard control panel

The system consists of control electronics, a standard or LCD panel (optional) with a keypad and several 3-key control panels. It enables you to operate the different lamps and several 230 V devices. Furthermore, various kinds of information and measured values are shown on the (optional) LCD display.



LCD control panel (model-specific)

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. This also resets the degree to which those lights were dimmed that can be regulated.
- 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 selector switch of the Dometic refrigerator has been set to 12 V, the refrigerator will operate automatically on 12 V when the ignition of the base vehicle has been switched on, i.e. it is not necessary to press the main switch. Thetford refrigerators and all other 12 V electrical devices will only operate on the battery of the base vehicle if they have been centrally activated using the main switch (12) on the control panel.



Wall Lamps, ambience for seating area and Ceiling Lamp ¹ ⁵

- Briefly press the key to switch each lamp on and off. Press longer on the key to regulate how brightly you want the lights to shine. The brightness you set will be saved; when the lights are switched on again, the brightness you originally set will also be switched on again. If the system's power supply is interrupted, the wall light will shine full strength the first time you switch it on.



Ambience ² ³ ⁴

- Press briefly on the key to switch the electric circuit of each ambience (indirect lighting) on and off.

Key Memory ⁶

- This key is used to save and recall the state of individual lights. Press briefly on this key to recall the last saved state of all switchable 12 V lights. Press longer on this key to save the lighting state of a lamp. This key is not used to save the state of the 230 V electrical devices (therme and floor heating).



Outer tent light ⁷

- Press the key to switch the outer tent light on and off. It is not possible to switch this light on if the base vehicle is coupled up and the motor is running.



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



Kitchen light ⑧

- Briefly press the key to switch the kitchen lamp on and off.



Therme with LED display ⑨

- Press the key to switch the therme on and off. An illuminated LED signals that the therme has been switched on.
- When the main switch ⑫ is pressed, the therme will also be switched off.
- If your camper has an electric boiler (special request) rather than a therme, the electric boiler will be switched on and off.



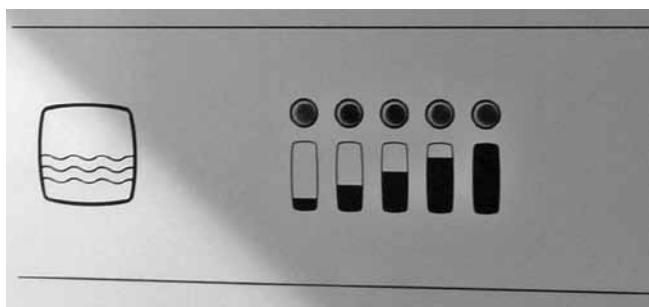
In the case of some special requests (e.g. Alde heating) this switch has no function.

Floor heating with LED display ⑩

- Press the key to switch the floor heating on and off. An illuminated LED signals that it has been switched on. When the main switch is pressed, the therme will also be switched off.
- If the main switch ⑫ is pressed to deactivate the electric power supply, the floor heating will also be switched off.



Both the therme and the floor heating (optional extra) are 230 V electrical devices. These devices cannot be switched on and off if there is no mains connection.



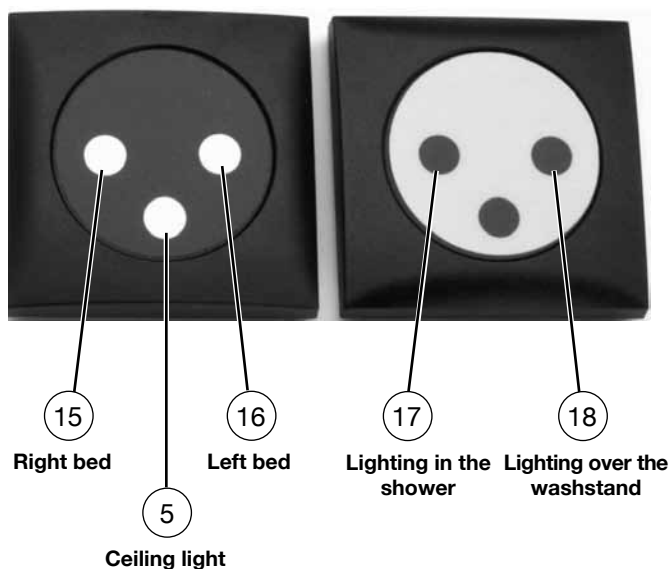
Filling level indicator ¹⁴

When you press this key, the filling level of the fresh water tank is displayed via an LED chain. The level of the fresh and waste water tanks is displayed in 5 steps:

empty	only the left red LED lights up
1/4	left red LED off; 1 yellow LED on
1/2	left red LED off; 2 yellow LEDs on
3/4	left red LED off; 2 yellow and 1 green LED on
full	left red LED off; 2 yellow and 2 green LEDs on



Align the vehicle horizontally to obtain a meaningful result from the filling level indicator.

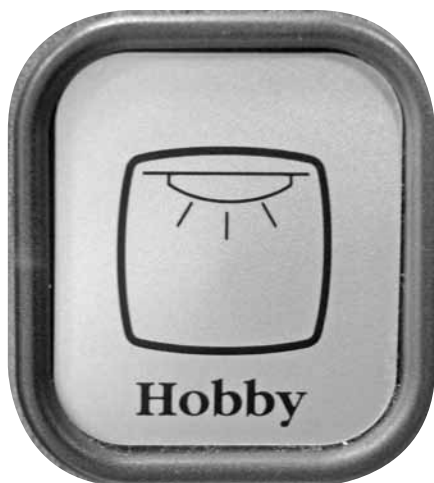


Remote control, washroom / bed

- Press briefly on the key to switch the ceiling light ⁵, the light over the right-hand bed ¹⁵ and the light over the left-hand bed ¹⁶ on and off. Press longer on the key to regulate how brightly you want these lights to shine. The brightness you set will be saved; when the lights are switched on again, the brightness you originally set will also be switched on again.
- Press briefly on the key to switch the lighting in the shower ¹⁷ and over the washstand ¹⁸ on and off.



If the vehicle includes the optional extra "Hot-water heater", the fan convector in models with a washroom on the side is activated by pressing key ¹⁷.



Children's switch

All of the vehicles with a entry partition have a special switch in the entrance area at a height that can be reached by children.

This switch enables them to turn the main lights on and off.

Children's switch (model-specific)

With the exception of models 400 SFe, 440 SF and 490 SFf, your vehicle has a children's switch at a lower height in the entrance area.

This switch can be used to switch the ceiling light on and off.



Left bed

Right bed

Wall light

Ceiling light

Main switch

Outer tent light

Remote control (special accessory)

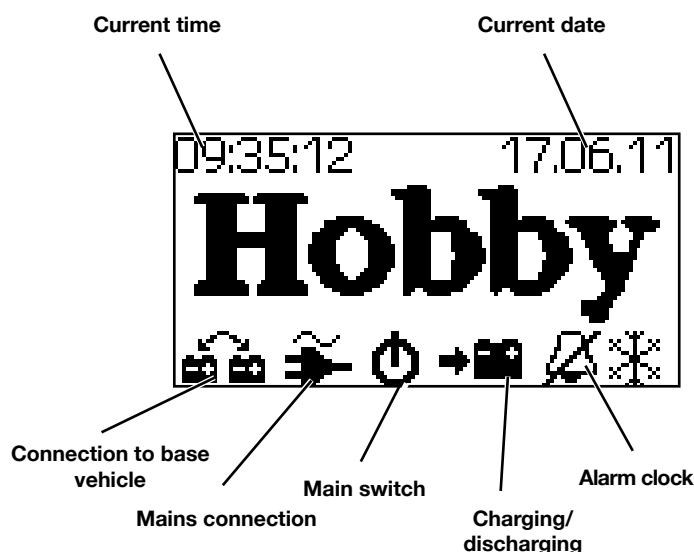
- The hand-held transmitter is used to switch six functions on the control panel via remote control.



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.



Standard functions on the LCD display

Basic menu

- The basic menu appears if you have not pressed a navigation key during the past 30 seconds (approximately). This menu is not illuminated.

Time

- The current time is displayed in this field.

Date

- The current date is displayed in this field.

Connection to base vehicle

- This icon appears if the camper is connected to the base vehicle and the motor of the base vehicle has been started. This function is only displayed when the vehicle has been equipped with a "self-sufficient package".

Mains connection

- This icon appears if the camper is connected to the 230 V mains.

Main switch

- The icon for the main switch always appears when the system's 12 V main switch has been switched on.

Charging/discharging

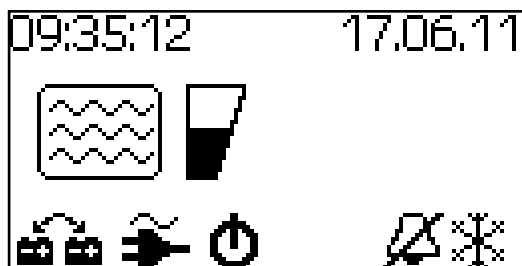
- This icon only appears when the system is connected to a battery sensor and equipped with its own battery. Accordingly, the battery is discharged when the arrow points away from the battery. This function is only displayed when the vehicle has been equipped with a "12 V-Autarkpaket".

Alarm clock

- This icon is used to activate the alarm clock. The example shows the alarm clock when it has been deactivated. When it is activated, there is no line through the icon.

Air conditioning

- The air conditioning icon only appears when the camper has been fitted with an air conditioning system that is CI bus compatible and it is in operation. The basic functions of the air conditioning system can be controlled in a submenu using the control dial and keys. Various operating states can be displayed.



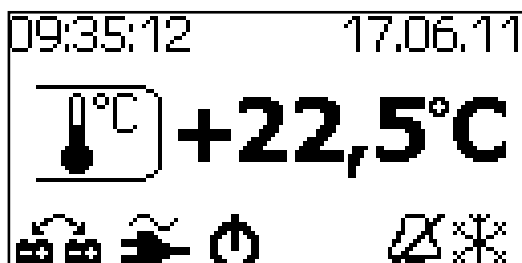
Level of the tank

- After turning once to the right or left, the menu for displaying the level of the fresh water tank appears.
- In the example, the tank is 1/2 full. The values measured and displayed are shown as: empty, 1/4, 1/2, 3/4 and full.



Outside temperature

- After once again turning to the right, the menu for displaying the outside temperature appears. The sensor for the outside temperature is located below the floor of the vehicle to the left or right of the door sill.
- The display is shown in increments of 0.5° C.

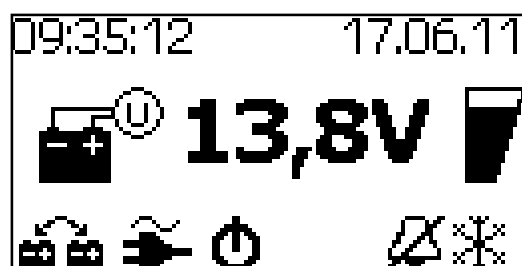


Inside temperature

- After once again turning to the right, the menu for displaying the inside temperature appears.
- The display is shown in increments of 0.5° C.



The sensor for the inside temperature is located on the reverse of the circuit board of the LCD panel. Possible heat build-up here may cause an incorrect temperature to be displayed.



Battery voltage

- After once again turning to the right, the battery voltage of the connected battery is displayed.
- Under normal circumstances (i.e. no battery has been built into the camper) this will be the voltage of the base vehicle battery.
- If the base vehicle is not coupled to the camper, a voltage of "0.0" V will be displayed.



The battery voltage is only displayed if there is a connection to the base vehicle.



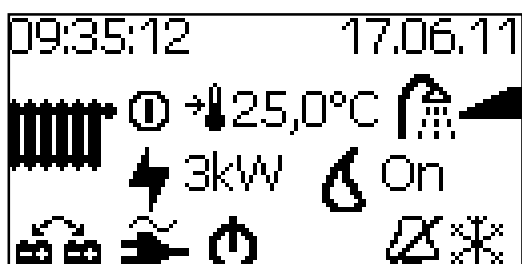
Air conditioning

The following functions for the air-conditioning system can be set on the control unit:

- On/Off
- Cool Mode: cooling and ventilation
Cool Low / Cool / Cool High
- Fan Mode: ventilation only
Fan Low / Fan High



The aforementioned functions are only available for air conditioning systems that are CI bus compatible.




Alde hot water heating system

The Alde hot-water heating system can be controlled using its own control unit (in the clothes cupboard) or the LCD control unit.

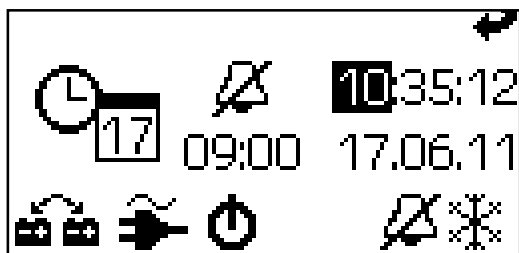
The hot water menu is symbolized by the radiator icon.

Settings:

- Setting the desired room temperature:
in steps of 0.5° from +5°C to +30°C
- Shower icon:
short-term increase in the amount of hot water. Temporarily increases the hot water temperature from 50°C to 65°C if there is an increase in hot water consumption.
- Electric heating (lightning flash)::
performance can be set to Off, 1kW, 2kW or 3kW
- Flame icon:
heating with gas On / Off
- To quit the menu, switch to the Return icon  and confirm your settings by pressing on the rotary knob. Only now will the changes be implemented by the heating system; after a brief delay, they will appear on the display.



The individual items on the display and the settings correspond to the Alde control panel (**see also 10.5**).



Setting the time, alarm clock and date

- After pressing the menu button for a longer period of time (approx. 2 seconds) the menu for setting the current time, date, wake-up time and activating or deactivating the alarm clock appears.
- Within the menu's you move left or right by turning to the various setting value.



Calibrating the temperature

It is possible to calibrate the indoor and outdoor temperatures shown, as temperature effects on the sensors may lead to a deviation between the temperature displayed and the actual temperature.

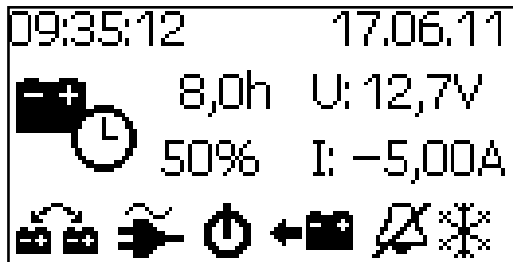
- To calibrate the displayed temperatures, please switch to the temperature display. It is irrelevant whether the indoor or the outdoor temperature is displayed.
- Press the rotary/selector switch for several seconds. The system will now switch automatically to calibration mode.
- Switch to the desired area (indoor or outdoor) by turning the selector switch. Press briefly on the switch to select the area.
- You can now increase or decrease the temperature shown by up to $\pm 7^{\circ}\text{C}$ in steps of 1°C . When the desired value has been set, quit the menu item by pressing briefly on the selector switch.
- Quit the calibration menu by using the selector switch to select the Return icon. The changed value is now shown on the temperature display.

Additional functions on the LCD display for 12 V self-sufficient mode



Temperature display

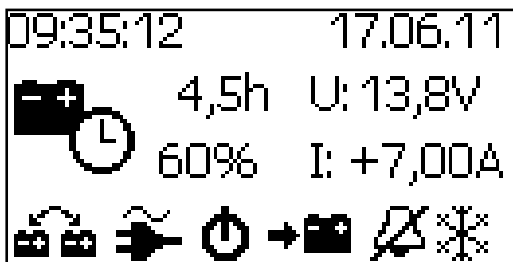
- If your vehicle has a self-sufficient package or a 12V connection, the temperature will be displayed. Inside temperature (above) and outside temperature (below)
- The display is shown in increments of 0.5°C .



Battery charge

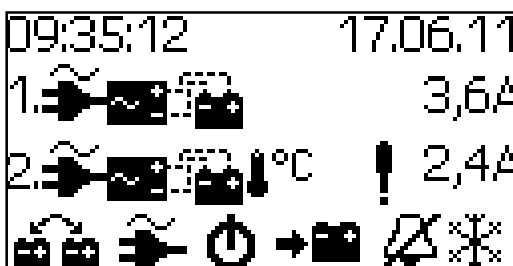
Battery is discharged:

Drain on charging current: 5A
 Remaining time until discharge: 8 h
 Charge level: 50%



Battery is charged:

Charging current: 7A
 Expected recharging time: 4.5 h
 Charge level: 60%



Recognising regulators (IBS-guided)

1. standard regulator
2. power control unit

If CI bus compatible chargers have been installed and are in operation, the operating states of the charging units will be shown on the display by turning the rotary encoder. Up to two charging units can be displayed.

No settings can be made in this menu.



Setting the battery type

To reach this part of the menu, go to the "Loading the Battery" menu and press the button for approx. 2 seconds.

The first time it is used, the battery must be set once to the type being used.



General information regarding the LCD display

The time and date are buffered by a 3V 210 mAh, CR2032 type button cell. If, therefore, the time should be incorrect or the clock should stop working, this button cell must be replaced. It is mounted on the reverse of the circuit board of the LCD display. To replace this button cell, the LCD display must be removed from the furniture front by carefully clipping the chrome-plated frame out of its holder. You will then see the screws that fasten the plastic part to the furniture. Loosen these screws to detach the display.



When replacing the button cell, please ensure that plus and minus are in the right direction. Incorrect polarity may cause the display to become defect.

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.



In some models, the outlet is located underneath the bed.

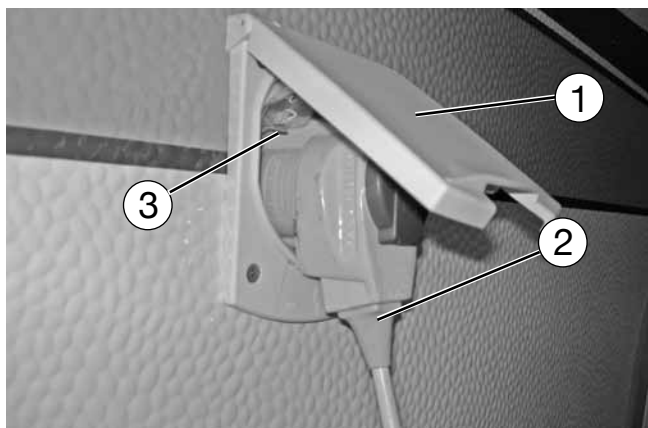


Supply via mains connection

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

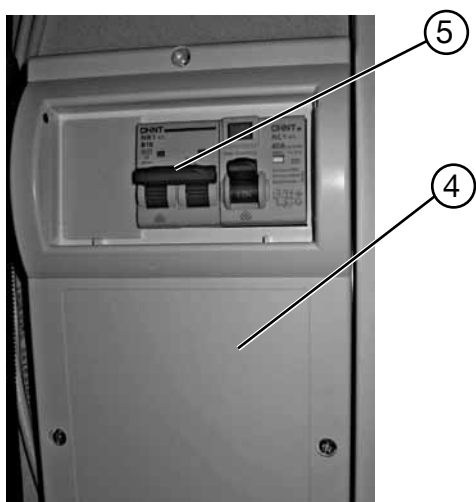


The standard version of your vehicle has a residual current device (RCD).



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.

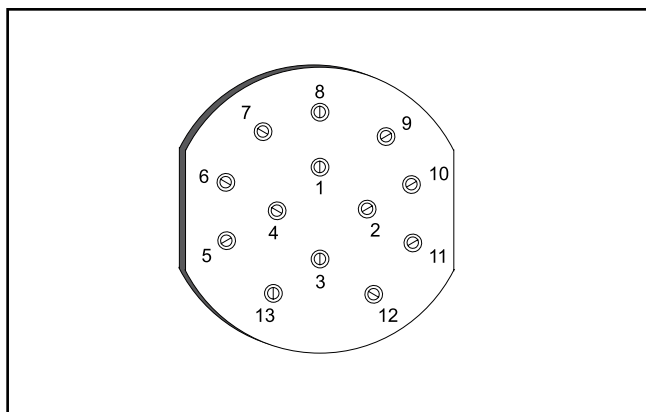
Rules for the mains connection

- 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.



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.

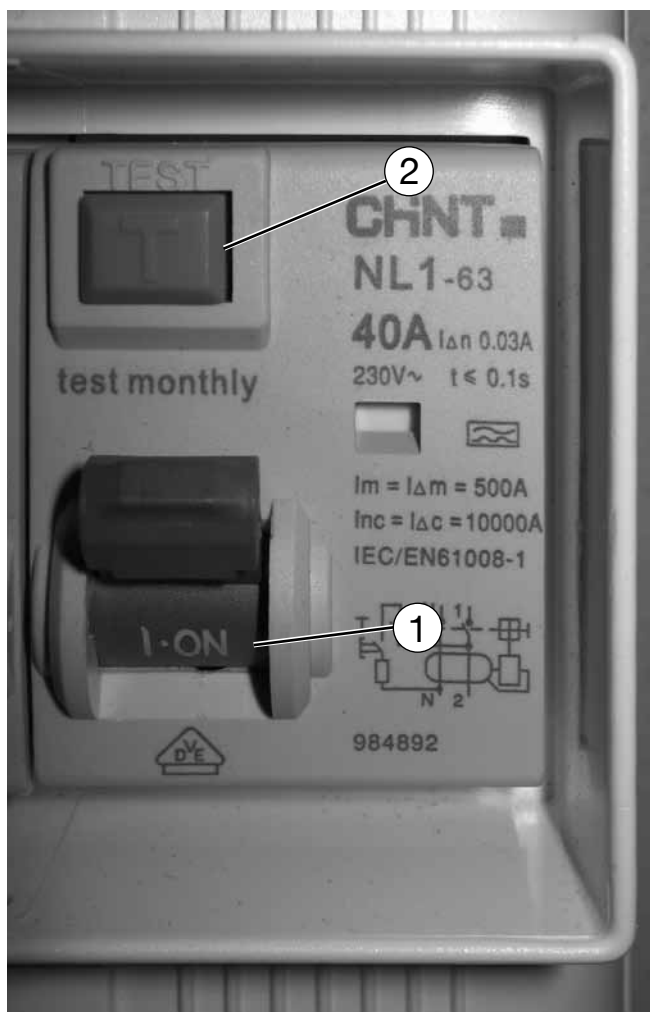
When running on 12 volts, the refrigerator only functions if the motor of the base vehicle is turned on. Contacts 10 and 11 of the 13-pole socket system.



If operation is carried out via the base vehicle, a maximum of 2 electrical devices in the camper can be switched at the same time using the control panel (exception: the self-sufficient package has been installed).



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



Residual current device

The standard version of your vehicle is equipped with a residual current device that will interrupt the electric circuit in case of a possible residual current. This device is built into the clothes cupboard of every vehicle.



Repairs must not be carried out on the residual current device.

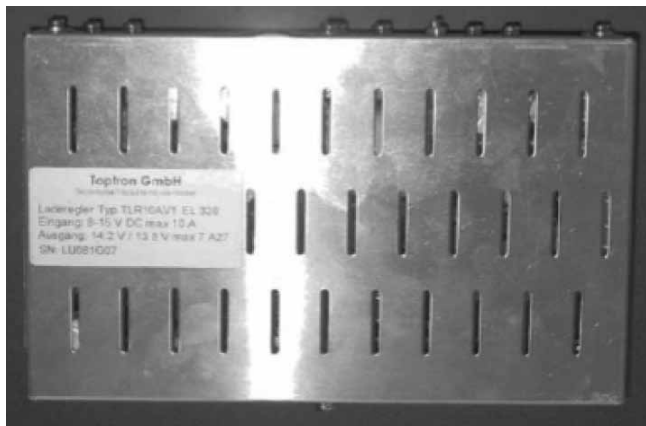


A residual current device does not guarantee any protection against the danger from an electric shock.

After putting the electric system into operation, the function of the residual current device must be checked. After voltage has been applied to the switch ① and it is on (set to I-ON) it must set off when you press the test button ②.

This check should be carried out at least once a month to ensure that the residual current device functions perfectly in case there should be a fault in the current.

Devices that set off during operation show that there is a defect; they must be checked and/or repaired by an electrical engineering specialist.



Charge controller in the clothes cupboard on the wall

Operation via auxiliary battery (self-sufficient package)

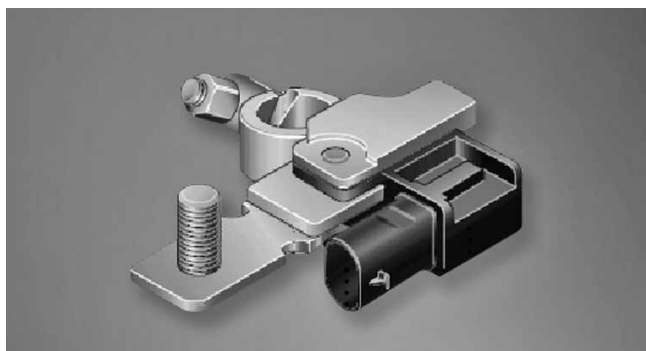


- Only accumulator batteries with bound electrolytes (gel or AGM batteries) may be installed in those positions specified by the manufacturer.
- The installed battery may not be opened.
- When changing auxiliary batteries, use only batteries of the same make and capacity.
(Setting the battery type on the control panel: **see 07-13**)
- 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

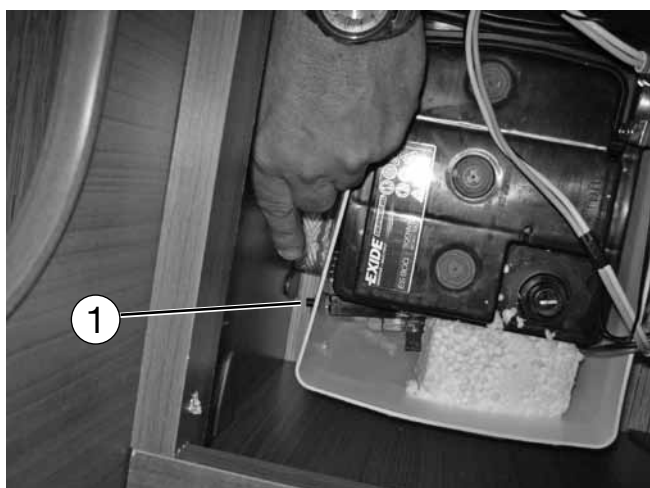
If the camper is not connected to the 230 V mains supply, the auxiliary battery will supply the electrical system with 12 V DC voltage. Since the battery only has a limited capacity, the electrical devices should not be operated for a longer period of time without charging the battery or connecting the 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.



An Intelligent Battery Sensor (IBS) has been connected to the battery terminal. It monitors the actual current and the actual voltage in a highly precise manner.

It is possible to precisely predetermine the operating time of the battery based on the actual consumption. The IBS ensures that the battery will be changed in good time and assists in providing active energy management so that the performance requirements of the different electrical devices can be coordinated with the charging of the battery.

The charge state of the battery, age or remaining time until discharge are all shown on the LCD display of the control panel. Charging is carried out gently in accordance with the steady-state principle by an "intelligent" charger.



A pushbutton ① is located directly on the battery container. It is used to disconnect the battery from the 12 V electrical system. At the same time, this button serves as a 30 A automatic circuit breaker.

If the camper is not used for a longer period of time, please disconnect the battery from the electrical system in order to prevent the battery from being excessively discharged.



- Before each journey, please check that the battery is charged (**see p. 07-13**). If necessary, connect it to the mains and press the main switch to start charging the battery.
- Leave the main switch on whenever the camper is being used so that the battery is charged regularly.
- Do not forget to activate the pushbutton on the battery container.
- 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.
- An acoustic warning signal will be given off if the remaining time during discharge operation is less than 1 hour.
- If the battery voltage should be less than 10.0 V, all devices will automatically be switched off.
- A warning will go off if the battery ages to a value less than 50% of its nominal capacity.
- If the vehicle is not in use for a longer period of time, the battery should be disconnected or the main switch should be switched off after the battery has been optimally charged.

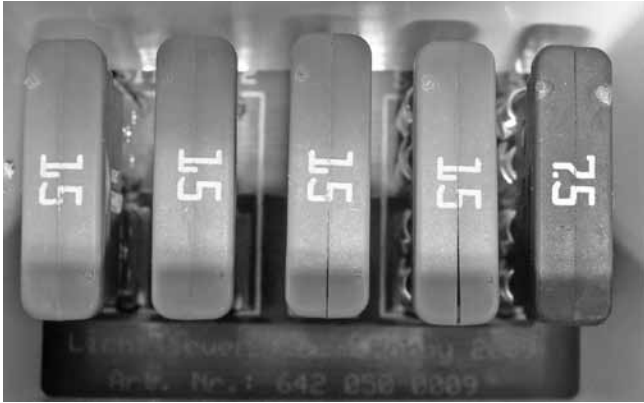
7.4 Electrical system



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 12 V. Only large electrical devices such as the therme, floor heating, air conditioner, etc., use 230 V.



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 5 (7.5 A):

water supply, Porta Potti, refrigerator illumination



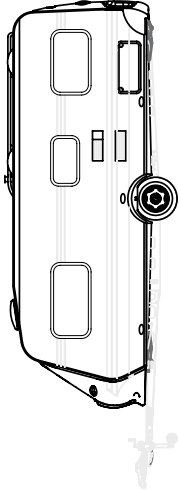
Only replace defect fuses if you know what caused the fuse to blow and have fixed this.



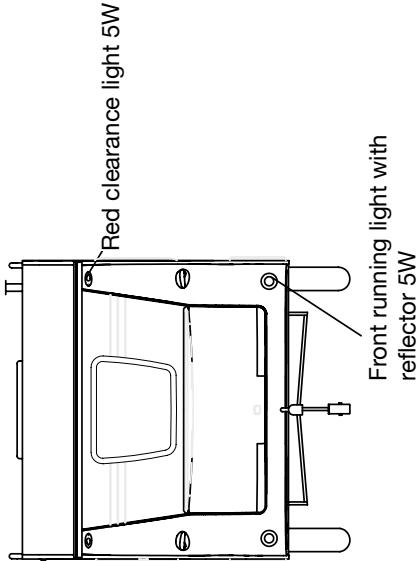
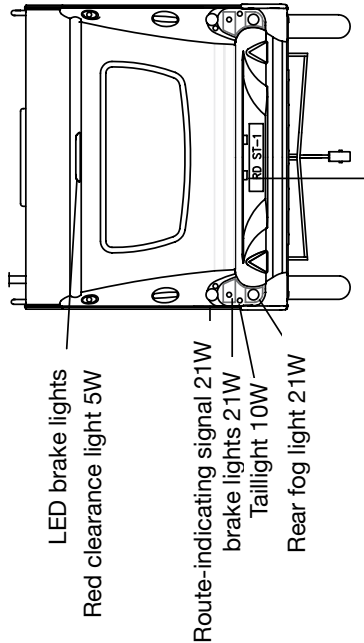
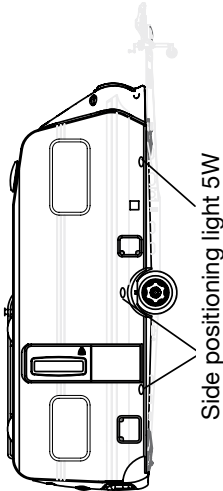
Only replace defect fuses if you know what caused the fuse to blow and have fixed this. Your camper also has a combined external socket and antenna terminal in the outer tent (deluxe special accessory).

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**).

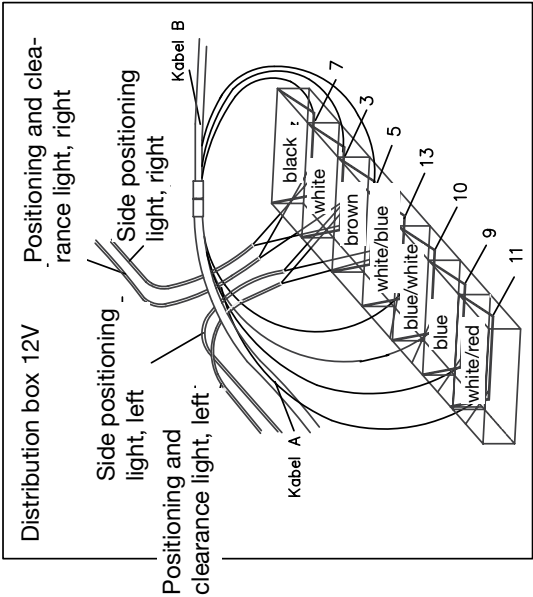
7.5 External circuit diagram



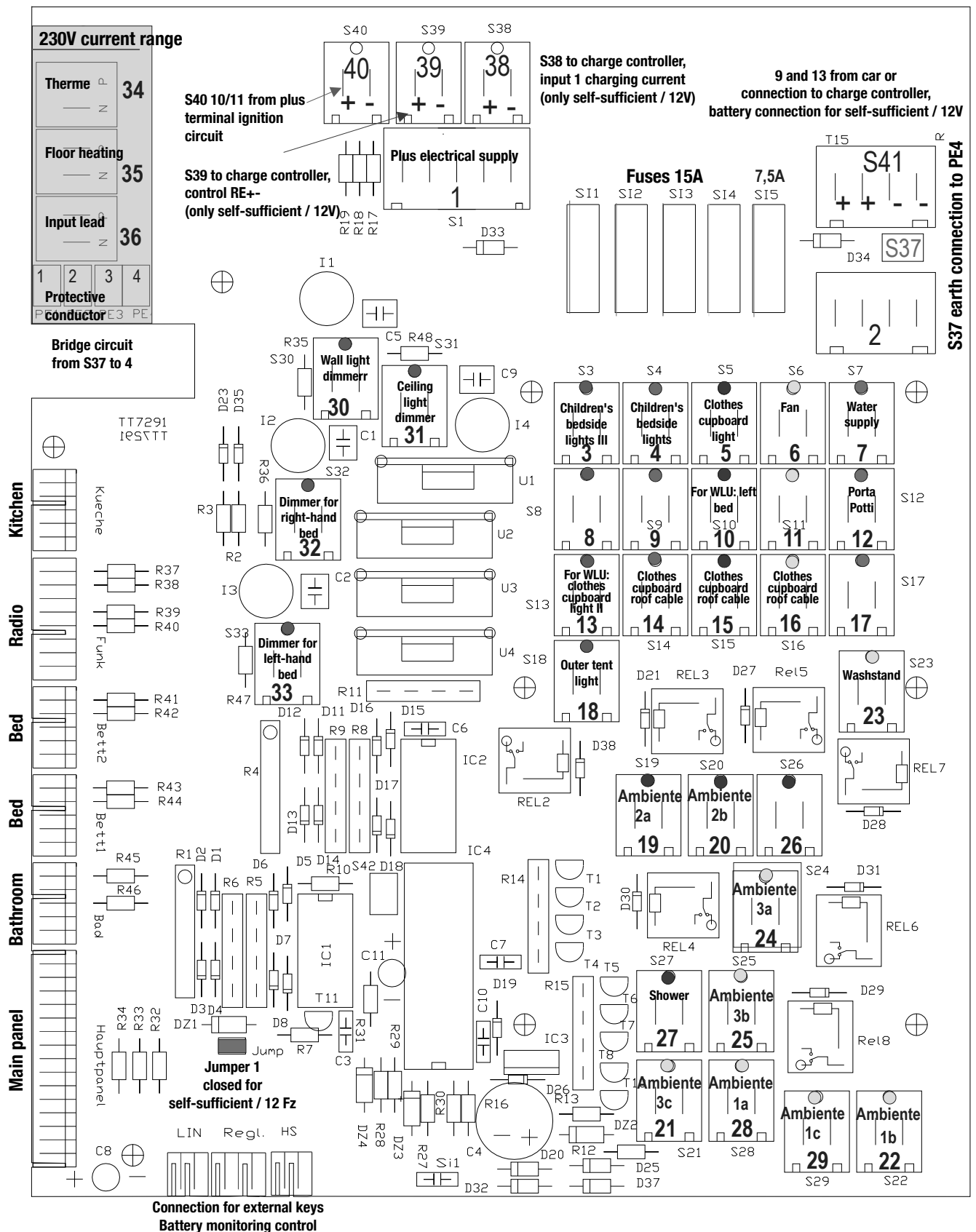
12 V Electrical Installation for Vehicle



PIN	PIN Wire colour	mm²	Consumer
1	yellow	1,5	Route-indicating signal, left
2	blue	1,5	Rear fog light
3	white	2,5	Mass (for electric circuit 1-8)
4	green	1,5	Route-indicating signal, right
5	brown	1,5	Right taillight, clearance light, running light and number plate light
6	red	1,5	Brake lights
7	black	1,5	Left taillight, clearance light, running light and number plate light
8	orange	1,5	Reverse light
9	blue	2,5	Electric power supply (steady plus)
10	blue / white	2,5	Electric power supply, ignition-controlled
11	white / red	2,5	Mass for 10
12	violet	1,5	Trailer number plate, mass from 3
13	white/blue	2,5	Mass for 9



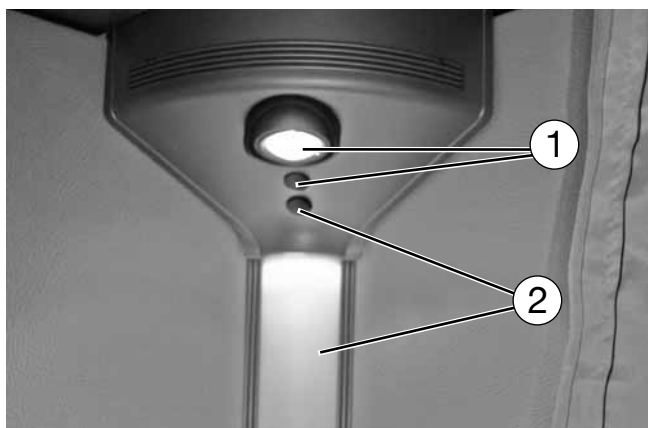
7.6 Contact plan for the light control system



Contact assignments may differ slightly in some models.

7.7 Special Lights

The switches for the lights described here are located directly on the lights themselves; they are not controlled via the control panel.



Corner lights

Spotlight ① and integrated lighting columns ② can be switched separately.



The clothes cupboard light ③ 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.



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.

8. Water

8.1 General information



We recommend that you inspect any water you have left in the tank, this is very critical before using the water again.



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

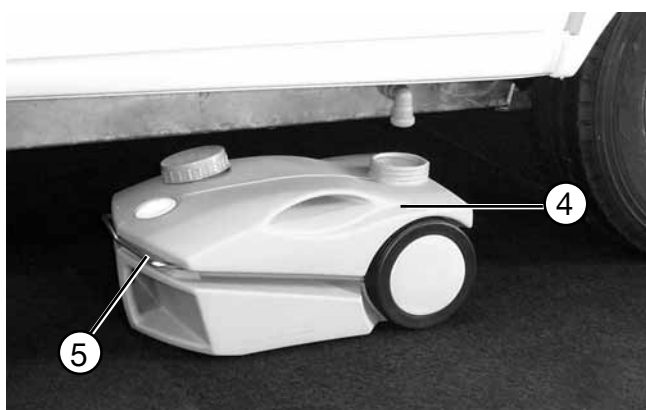
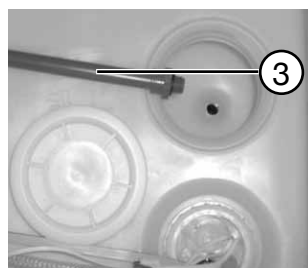
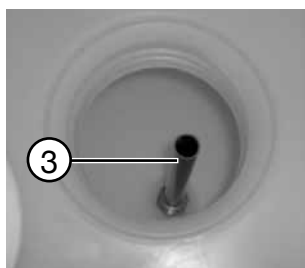
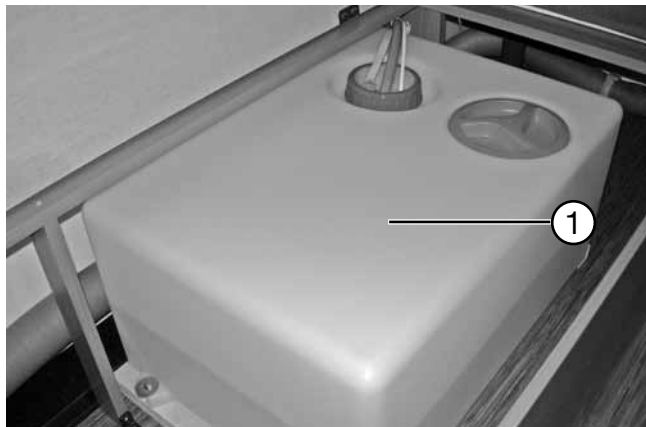
Water is provided to the kitchen and toilet area via an immersion pump. The immersion pump functions on electricity:

- 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.

8.2 Water supply



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.

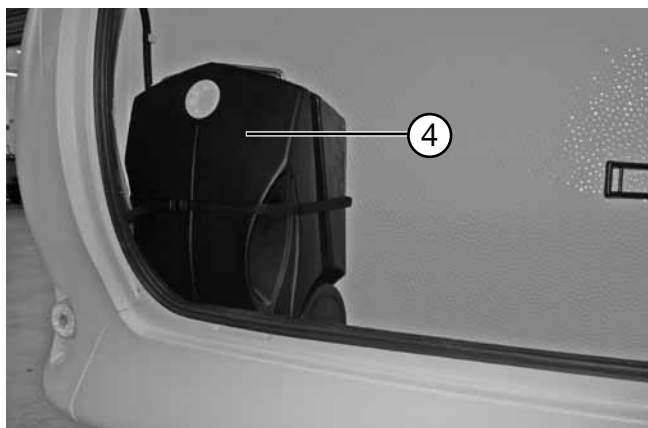
The fresh water filler neck is identified by a blue screw cap as well as a water faucet symbol on the lower edge of the frame. The screw cap is opened and closed by means of the enclosed key for exterior flap locks and the door of the structure.

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.

Exception: In the Landhaus model, the waste water tank is stored under the queen-size bed (accessible via the service flap).



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



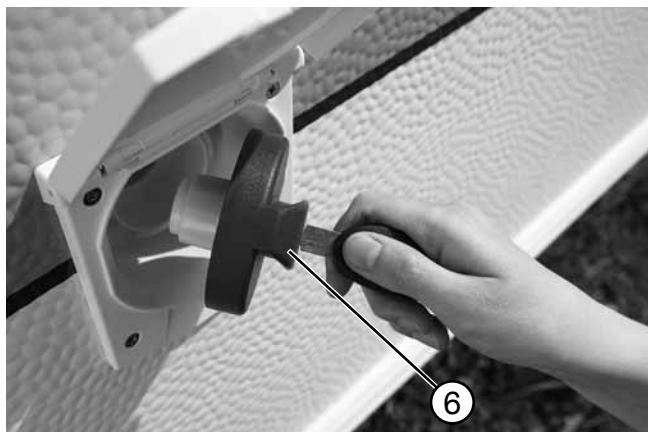
Empty the waste water tank if there is danger of frost.



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

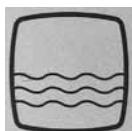


Only empty the waste water tank at waste disposal stations, camping grounds or specially marked waste disposal facilities.

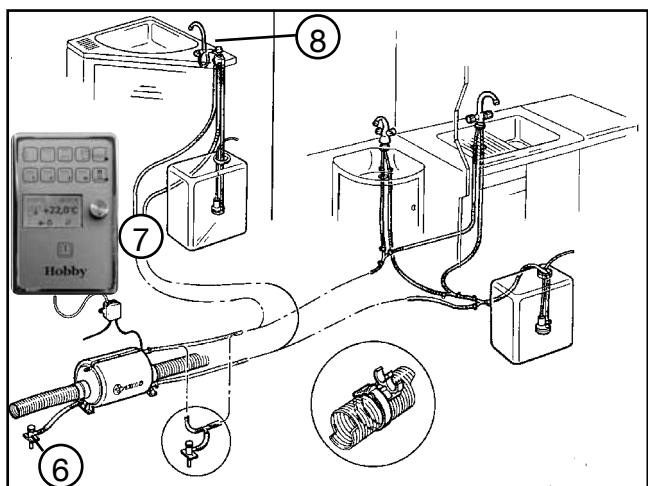
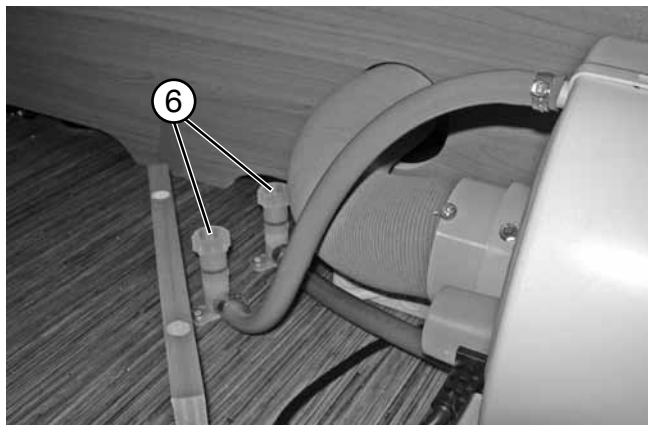


Filling the water system

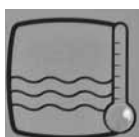
- Place the camper in a horizontal position.
- Switch on the main switch on the control panel.
- Shut the outlet valves on the therme.
- Shut all of the water taps.
- Unlock the petrol cap ⑥ and turn it counter-clockwise to open it.
- Fill the water tank using the fresh water filler neck.
- Turn all 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.



Use the control panel to check the amount of water in the fresh water tank.



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 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.

Hot-water function in the shower in Premium vehicles

- The shower regulator in the Premium vehicles first regulates the amount of cold water up to a certain point.
If you turn the regulator beyond this point, you will get hot water.



However, the amount of hot water can then no longer be regulated. This is only possible when the regulator is turned to cold water.

8.3 Boiler



The optional 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. It replaces the standard Truma therme.



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.



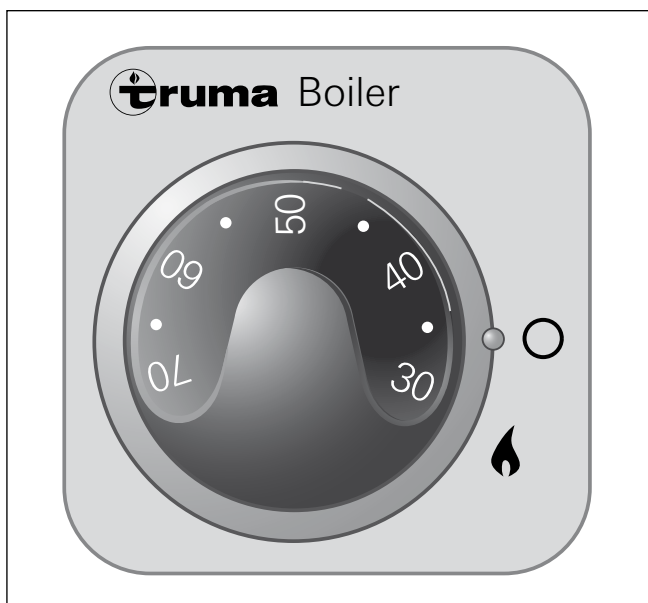
Should you operate the cold water system without the boiler, the boiler will also be filled with water. To avoid damage due to frost, empty the contents even if the boiler has not been used.

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).



When operating on electricity, the boiler functions only when the camper is connected to the 230 V mains supply.

8.4 Toilet



Preparing the excrement tank

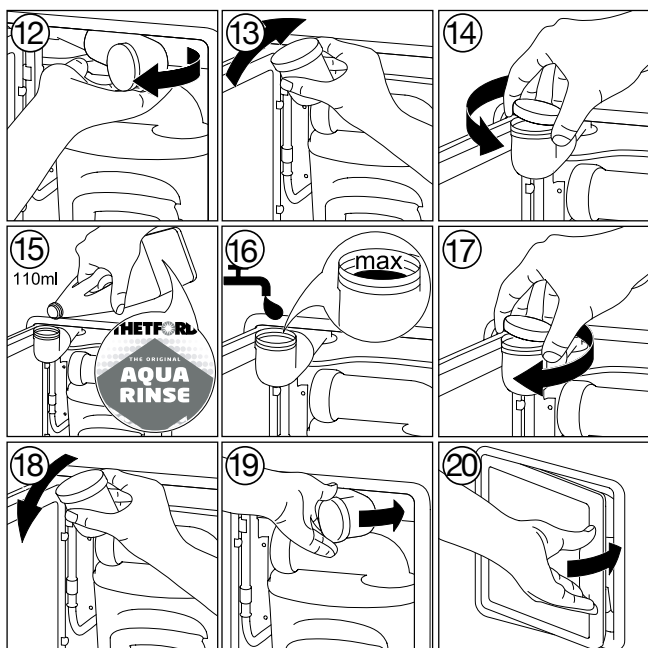
Before you can use the toilet, you must first prepare the excrement tank. How to do this is shown in Figures 1 to 11 on the left.



Never add sanitary liquids directly through the valve or into the toilet bowl, because this may damage the washer of the valve in the excrement tank. Always add liquids through the emptying support (Fig. 6).



We recommend that you press the ventilation button (Fig. 10) before putting the excrement tank back into its correct position.



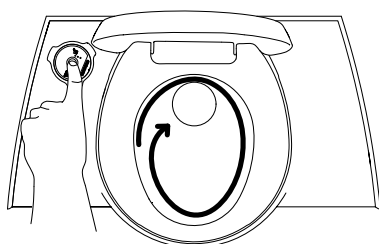
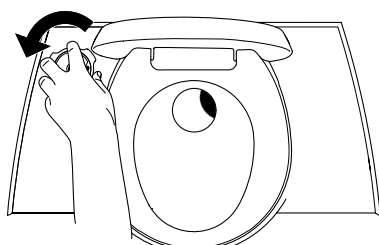
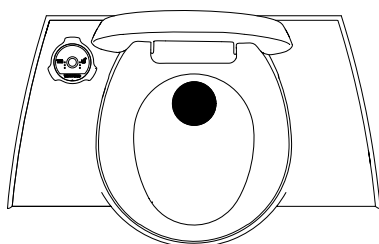
Preparing the flushing water tank

The next step is to prepare the flushing water tank as shown in Figures 12 to 20.



To avoid water damage in your camper, ensure that you are not travelling with a flushing water tank that is too full (Fig. 16).

Check the emptying hose or the filling level indicator on the adjusting knob (C-500 only) to determine how much water is in the tank.



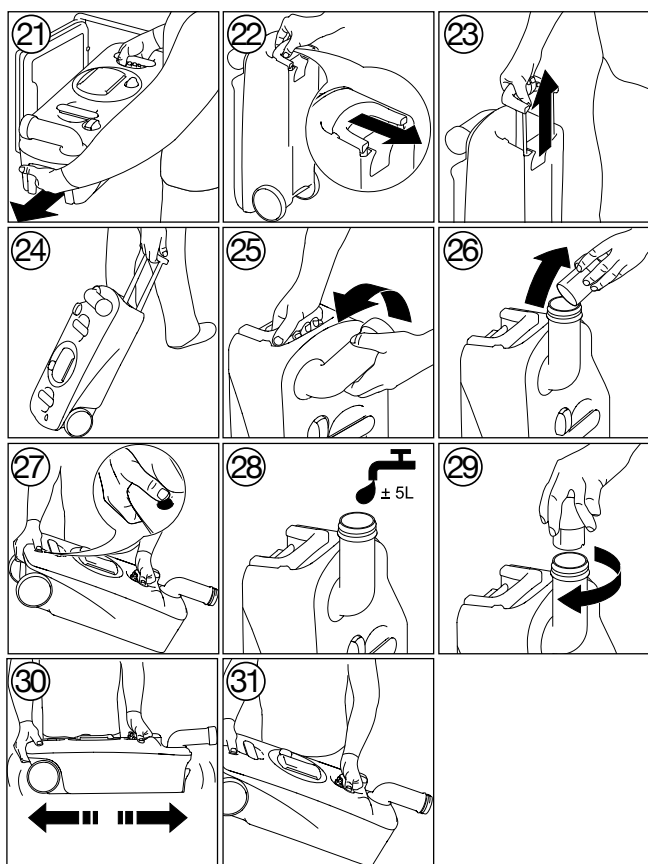
Using the toilet

The toilet can be used when the valve is either open or closed. To open the valve, turn the control knob counter-clockwise or push the lever to the left (depending on your model).



Never leave any water in the bowl when the toilet is not being used. This prevents unpleasant odours.

Flush the toilet by pressing the flush knob for several seconds. Shut the valve every time you have finished using the toilet.



Emptying the excrement tank

The excrement tank has a capacity of approx. 19 litres. It must be emptied when the filling level indicator lights up red. Once this lights up, the tank can be used no more than two times. Ensure that the valve is closed, open the Porta Potti flap and follow the instructions shown in Figures 21 to 31 on the left.



To empty the tank without spraying, press the ventilation button while you are emptying the contents of the tank. Only press the ventilation button when the emptying support is in a downward position!



Empty the excrement tank only in special places for sanitary disposal.



Please refer also to the manufacturer's operating manual, included in this package.

9. Gas system

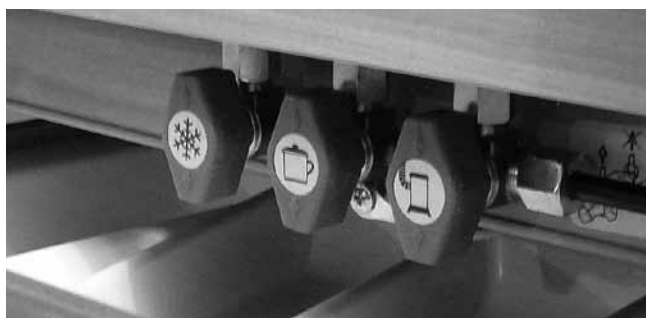
9.1 General safety rules for the use of liquid gas facilities



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.

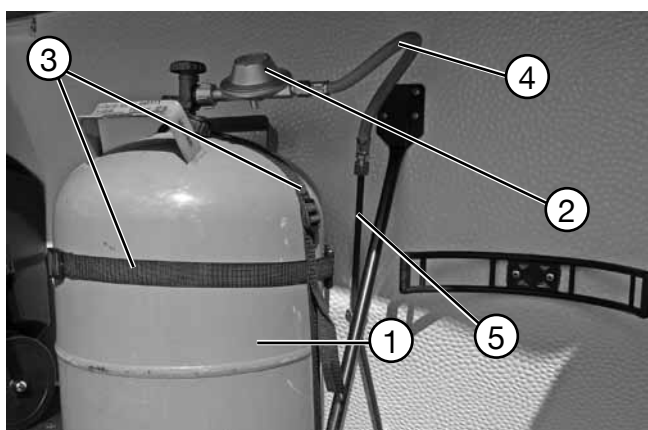


Never use portable cooking or heating equipment, except for electrical heating equipment (note the power consumption), but not radiant heaters, because these may cause a fire or risk of suffocation.

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.



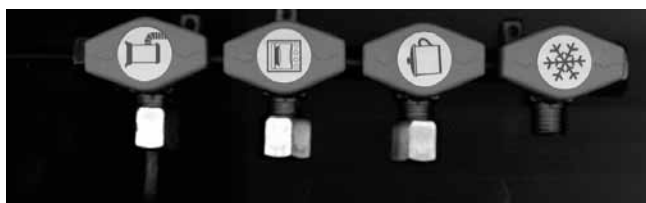
Gas bottles must be closed whenever you are driving.

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.

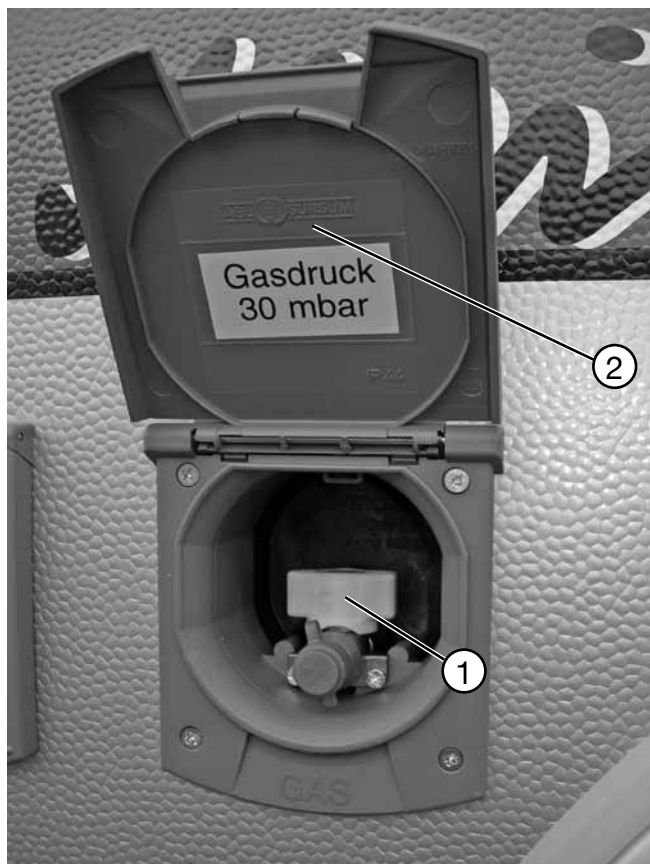


If you suspect leaks, have your dealer or another expert inspect for leaks.



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

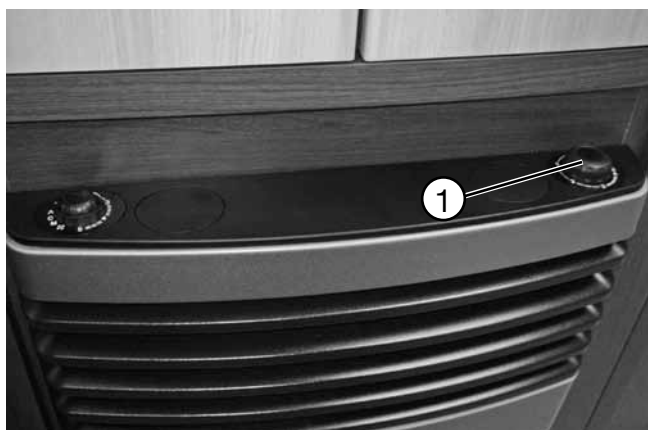
- In the closet or the corner of the flue

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.



To operate



Due to its design, the radiator cover gets hot when the heating is on. The operator is responsible for exercising due diligence so that third parties (**especially small children**) are not hurt.

- 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.



Should there be any difficulty, please wait at least 3 minutes before re-attempting ignition; otherwise, there is a danger of explosion.



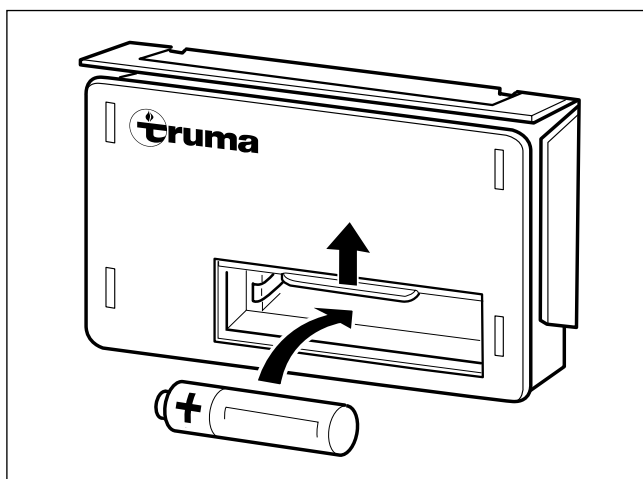
- If the flame goes out again, it will immediately be re-ignited during the closing time of the safety pilot (approx. 30 seconds).
- If no flame is ignited, the automatic ignitor will continue to work until the operation handle ① is switched to "0".



During initial operation of the heating system, there will be a slight nuisance caused by smoke and odours. Immediately turn the operating handle ① on the heating to position „5“ 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.
- Switch off the fan (set the rotary switch to "0").
- 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

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.
- Reattach the external panel.
- 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

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 ②. The adjusting knob ② is located on the reflecting panel of the heater.



Adjustment by hand

- Turn the rotating ring ③ to "M".
- Adjust the desired level via the turning knob ④.

To turn off

- Turn the rotating ring ③ to "O".

Automatic operation

- Turn the rotating ring ③ to "A".

The electronic system regulates the required blower speed and limits the RPM to the value set on the adjusting knob ②.

Booster Stage

- Turn the rotating ring ③ to "☸".
- Set the blower speed on the adjusting knob ② to "5" (for maximum air flow volume).

Room Thermostat

- For an average room temperature of approx. 22° C without using the fan, set the thermostat ② to about "3". To feel comfortable and distribute the warm air evenly, Truma recommends that you use the fan and set the thermostat ② to about "4".
- The exact thermostat setting must be determined in accordance with the floor plan and your personal comfort.



The thermostat sensor is located at the bottom of the heater. Please note that a cold draft will adversely affect the thermostat. Such sources of interference must be eliminated; otherwise, there is no guarantee that you will be able to adjust the temperature to your satisfaction.

Fig. 3

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.



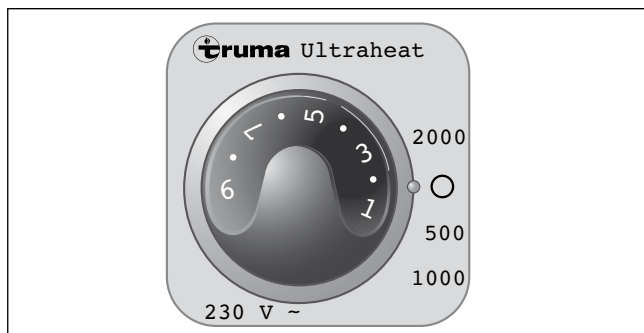
The power feed lead for the camper must be completely unwound from the cable drum.



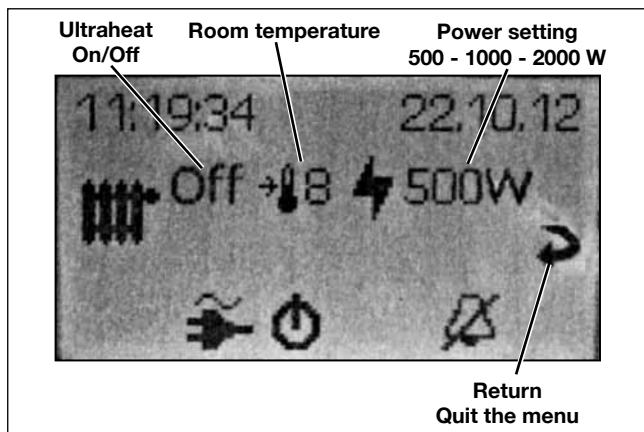
During operation, the reflecting panel of the heater will get very hot in some places.



If you operate on electricity and gas at the same time to heat, the electric component will switch itself off to prevent the stronger gas burner from possibly overheating.



Standard rotary switch



Menu for LCD panel

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 stowage cupboards.



Check the amount of liquid in the expansion tank at regular intervals. When the heating is off, the liquid should be approx. 1 cm above the "Min" mark.

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.

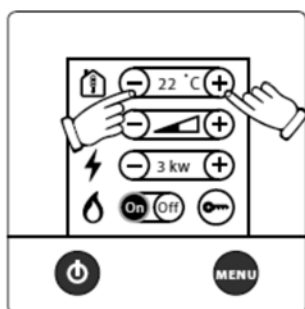
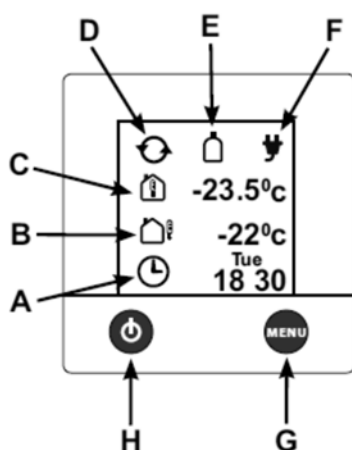
After two minutes, the operating device automatically switches from the set position to the idle position if no button has been pressed or if the idle position has been set using the arrows.



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”.



If the vehicle is equipped with an LCD control panel, the basic functions of the hot water heating system can be controlled using the panel next to the entrance (see p. 07-11).



To start the hot water heater

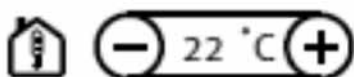
Press the On/Off button. The heater will start, using the settings that were last selected. The Alde logo appears on the display.

Idle state

- A Clock
- B Outside temperature
- C Inside temperature
- D Circulation pump
- E Remote indicator
- F 230V connection
- G Menu button
- H On/Off button

Settings menu

Press the menu button to reach the Settings menu. Any settings you make will be automatically saved after 10 seconds. If no buttons are pressed, the control unit will return to the idle state after 2 minutes.



Setting the desired temperature

(+5°C to +30°C)

by pressing – or + in steps of 0.5°C.

Hot water (50°C) is always available when this is switched on. The hot-water system is operated electrically or uses LPG.



Setting the hot water

Should you require more hot water, the temperature can be increased temporarily from 50°C to 65°C. After 30 minutes, the hot-water heater will switch back to normal operation. Increase the amount by pressing +; turn the hot water off by pressing –.



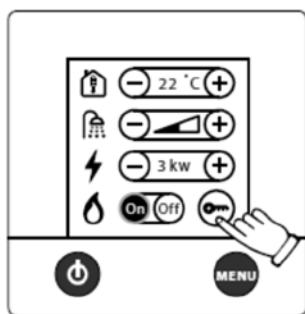
Setting the electric heating system

Use the – and + buttons to select the output (Off, 1/2/3 kW). Preference is given to electrical operation when selecting whether to operate on electricity or gas.



Setting for heating with gas

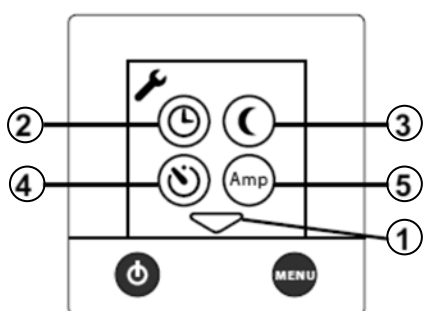
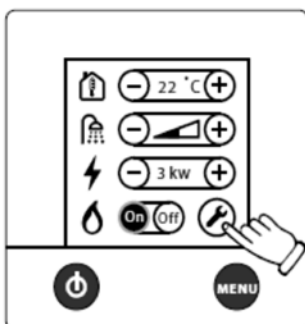
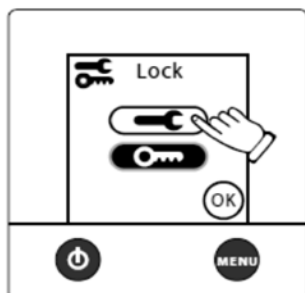
Set the heating to gas operation. Start operation with gas by pressing the On button. The heating system will operate until the temperature you have set has been reached. Turn gas operation off by pressing the Off button.



Activating the Tools menu

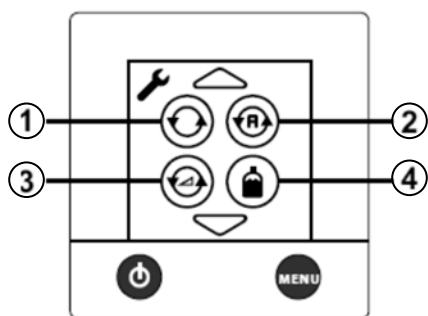
The Tools menu is used to control the remaining functions of the control unit.

To activate the Tools menu, the following icons must be pressed, as shown on the left:

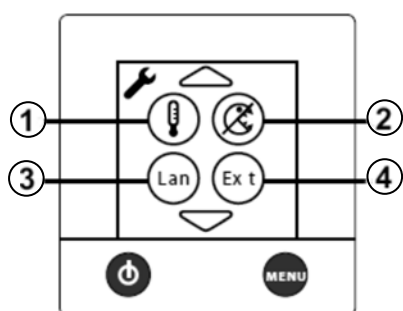


Functions of the Tools menu

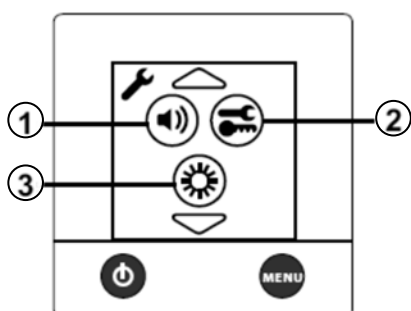
- ① Arrow icons enabling you to switch between the individual Tools fields.
- ② Setting the clock to use functions such as automatic start or automatic temperature.
- ③ Automatic temperature change to set temperatures, e.g. at night or on individual days.
- ④ Automatic start at a later time. The heating system will run for 24 hours and repeats this procedure every week at the same time. The On/Off button must be set to Off.
- ⑤ Overload protection prevents 230V fuses from overloading. If power consumption exceeds the value that has been set, the electric output of the heating system will automatically be reduced.



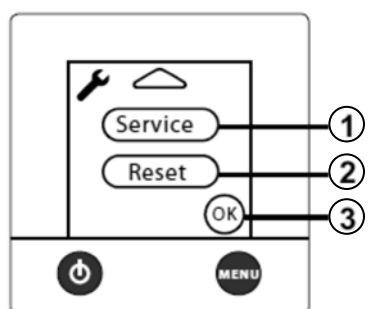
- ① Continuous operation of the pumps to limit the volume of hot water, especially if little heating is required.
- ② Pump Auto / 12V – the 230V pump will run if this is set to the auto position; if the 230V electric power supply is interrupted, the 12V pump will start up. If set to 12V, the 12V pump will run even if the 230V electric power supply has been connected.
- ③ Setting the pump speed.
- ④ This function is used in combination with the automatic gas-bottle change-over (Duo-Comfort). It indicates whether the liquid gas bottle is empty..



- ① Temperature setting for calibrating the temperature using the control unit.
- ② Automatic increase in temperature at 2.00 a.m. to reduce danger of Legionella bacteria.
- ③ Language setting (German, English, French)
- ④ Function for external start, e.g. using GSM.



- ① Setting for key tone.
- ② Lock/Activate access to Tools menu.
- ③ Setting the light intensity from 1-10.



- ① The Service function allows you to view certain values on the display (only in English).
- ② Resets the system to the manufacturer's default settings (heating Off; electrical operation 1kW; heating with LPG On; inside temperature 22°C).
- ③ Quits the Tools menu

Error messages

Error messages are shown on the display (panel in idle state).

Battery low:	if voltage sinks to under 10.5V, the heating system will switch off. Automatic reset to above 11V.
Fan failure:	incorrect fan speed. Automatic reset after 5 minutes.
Gas failure:	gas bottle is empty. Reset by switching off or restart.
Overheating is red:	to reset, interrupt the 12V electric power supply and connect it again.
Overheating is blue:	to reset, interrupt the 12V electric power supply and connect it again.
Window is open:	the heating system interrupts the gas supply when the window is open. Shut the window.
Connection failure:	connection error between the heating system and the panel. Switch the main voltage off and then on again.
Panel failure 1:	panel error
Panel failure 2:	panel error

10.6 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 ways. The desired mode of operation is set using the energy selection 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”.



It is not permitted to operate the refrigerator with gas

- at petrol stations
- while driving
- when transporting the camper by means of a transport or towing vehicle.

This may cause a fire.



Lock on the Thetford model

Lock on the refrigerator door



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

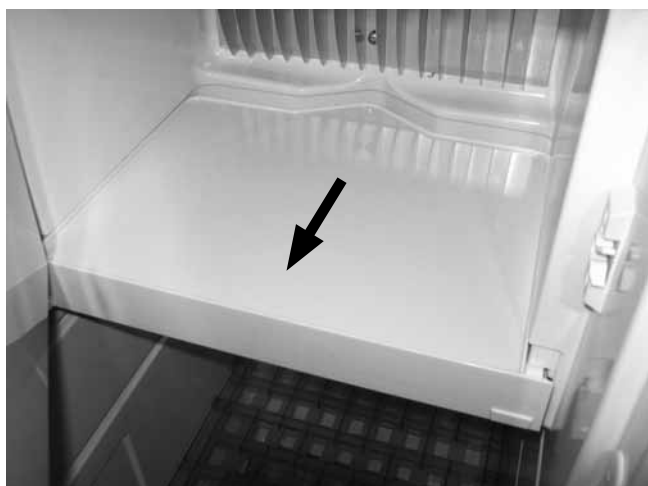
There is an automatic lock on the door of the 'Slim Tower' and the door of the refrigerator made by Thetford.

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

An additional safety catch is located underneath the Thetford models.



Lock on the Slim Tower model



Removable freezer (Slim Tower)

To make the best use of space, the freezer can be removed.

To remove the freezer

- Fold down the locking clamps underneath the freezer.
- Push both clamps towards the middle.
- Pull the freezer slightly out.
- Unhinge the door.
- Remove the floor panel of the freezer.

Storing food

- Food should always be stored in closed containers, aluminium foil or similar materials.
- Never store heated food in the refrigerator; always let it cool off first.
- Goods that might emit readily volatile or flammable gases must not be stored in the refrigerator.
- Always store perishable food directly next to the cooling fins or as close to the bottom of the refrigerator as possible.

The freezer compartment is suitable for making ice cubes or for storing frozen food for a short period of time. It is not suitable for freezing food.



It is not suitable for freezing food nor for the proper storage of medication.



Turn on the refrigerator at least 12 hours before putting anything in it.

10.7 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 you use the gas cooker for the first time, any flame guards that may be provided must be set up or permanently fastened so as to provide effective heat protection for components and furnishings that may be endangered by 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.
- 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.



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!

10.8 Fume hood



As an option, the kitchen can be fitted with an extractor fan. 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.

10.9 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.



- 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.

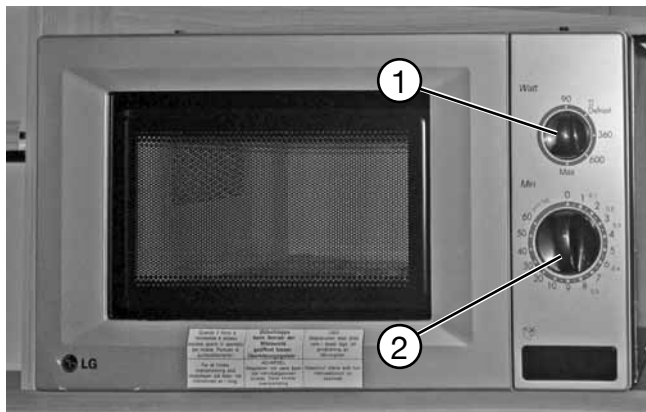
Turning on the oven

- 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.
- 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”.

10.10 Microwave



As an option, the kitchen of your camper may be outfitted with a 230 V microwave, which is installed behind a flap in the kitchen wall cabinet. This device is suitable for defrosting, heating up and cooking food for your personal use.



Leave the flap open when operating the microwave. Risk of overheating!

To operate

- Turn the upper knob to the desired level of power ① .
- Select the desired cooking time by turning the lower knob, taking the recommendations into account ② .
- The microwave will automatically start to heat up once the time and level of power have been entered.
- The device will make a beeping signal when the time has expired.
- When not in use, please set the time (2) to "0".



Please refer to the separate operating instructions for safety instructions and detailed information on how to operate, use and care for the microwave.

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]
50 l instead of 25 l built-in fresh water tank	28.0	Increased load, single axle	0 - 24.0
7-zone cold foam mattress	2.9	Increased load, tandem axle	16.0
Additional service flap	0.5	LCD control panel	0.0
Air-conditioning Dometic HB 2500	25.0	Leather interior	10.0
Air-conditioning Truma Sapphire Compact	20.0	Microwave	12.0
Alde hot-water heater Compact 3010	27.5	Mover H SE / H TE	26.0
AL-KO spare tire holder	7.7	Oven incl. light, grill and electric ignition	15.0
Antenna mast, Teleco	0.9	Queen-size bed, crossways in the rear	8.0
Bed expansion for single beds	5.0	Rear panorama window	1.5
Bedsprad	1.5	Remote control for lighting system	0.3
Bicycle carrier	6.8 - 9.2	Removable carpeting	
Boiler	15.0	for de Luxe models	7.0 - 10.0
Bunk bed, 3-storey	15.0	Residual current device	0.3
Car jack with box	6.0	Roof awning	23.0 - 49.0
Charge controller incl. 600 VA electrical supply	2.8	Self-sufficient package	29.0
Children's bunk bed (UFK + bunk bed)	11.0	Sound system	11.0
Children's bunk bed, 3-storey	15.0	Spare tire incl. mount for bottle container	22.2
City water supply	0.5	TELECO antenna mast	0.9
Dinette instead of centre seating arrangement	0.0	Tire repair kit	2.2
Dometic fume hood	3.0	Truma electric auxiliary heating Ultraheat	2.0
Drawbar anti-theft device Robstop	3.0	Truma electric boiler instead of therme	16.0
Floor heating	4.0 - 6.0	Truma gas boiler instead of therme	15.0
Front landing wheel with load indicator	0.6	Truma gas/electric boiler instead of therme	16.0
Garage	5.0	Truma heating S5004 instead of S3004	8.0
Gas, external socket	1.5	Truma hot-air system Isotherm	3.0
Heavy-duty stanchions	1.6	UFK model	15.0
		Universal mount for LCD television	3.5

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.

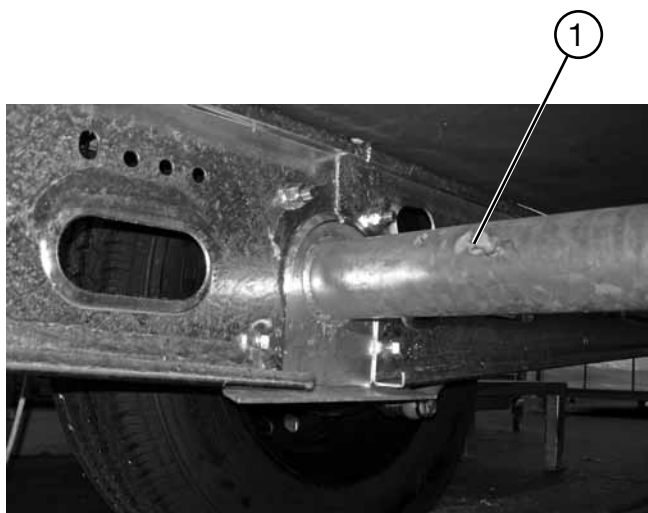
To this end, the vehicle must be taken to your HOBBY dealer every 12 months for a chargeable inspection for leak tightness.



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!

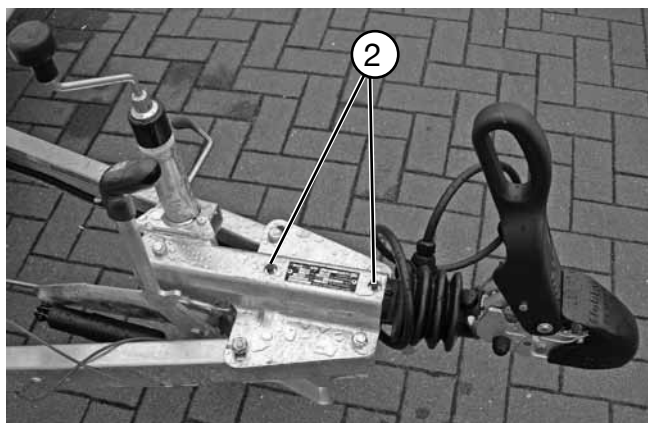


Greasing and oiling

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

- Grease the bearings on the rocker arm ① on the axle shaft every 5,000 kilometres travelled or at least once a year.
- 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 axle(s) of the camper is (are) fitted with compact wheel bearings. The cylinder hub, compact bearings and axle nuts form a closed unit. The compact bearings are free of maintenance due to their special grease.



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

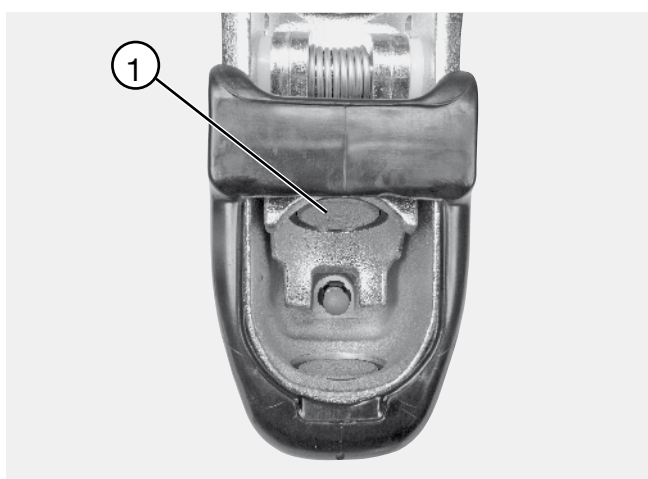
Coupling ball on base vehicle

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 and tear on the friction pads; a greased coupling ball negates the stabilizing effect. Thinning solvents or spirit are both suitable for cleaning.



Tension ball coupler

Keep the friction linings inside the tension ball coupler clean and free of grease (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.:

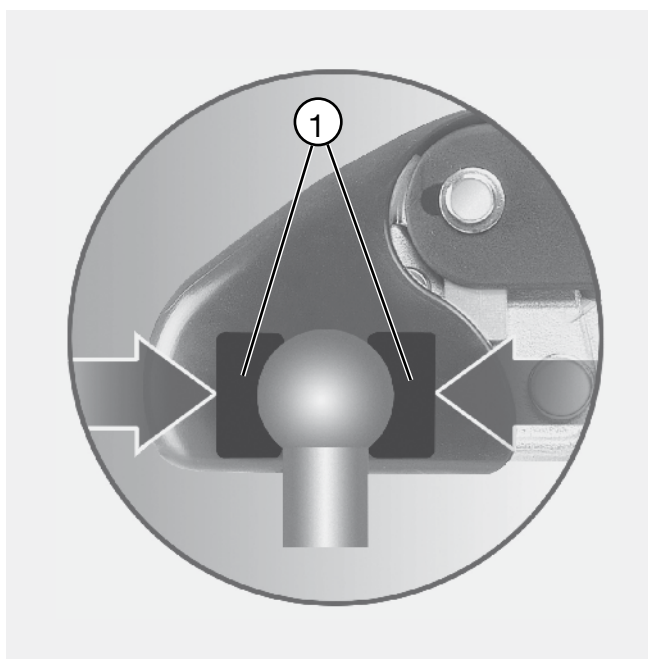
Sand down the surfaces of the coupling ball and clean them with a thinning solvent or spirit.

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 Brakes

Initial inspection

The wheel brakes that have been installed are drum brakes that do not adjust automatically.
(Exception: Premium)

To ensure trouble-free brake performance, the wheel brakes must be adjusted regularly.

The brakes must first be inspected after you have driven 500 km. Have them inspected again after every 10,000 km of driving, but at least once every year. Inspections must be documented in the KNOTT service manual by the authorised specialist who carries out the inspection. These documented reports are just as much a prerequisite for any possible guarantee claims as is the compliance with the regulations for maintenance and upkeep.

12.4 Changing the taillight bulbs

The following description for changing the rear light bulbs refers to the De Luxe, Excellent and Prestige models. Different rear lights are used in the Premium and Landhaus models. Unfortunately, it is not possible to replace these light bulbs easily. In this case, please speak to your dealer, who will be pleased to assist you in changing these light bulbs.



Some of the rear lights in the Premium models are fitted with LED lights, whereby each individual light has a standardised alignment. Therefore, due to the authorisation required, individual LED lights may not be changed. Should they be defect, the entire rear light must be replaced.



- 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.

12.5 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!

12.6 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.



Thoroughly dry the light sockets, because water collects there 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.

Cleaning products not recommended for use:

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

Direct contact with plastics such as PVC, soft PVC and similar products (e.g. stickers) must be avoided at all cost.

It is not possible to avoid transmitting plasticizers when solvent-based contents come into contact with the aforementioned plastics and this causes the parts to become brittle.

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.



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

Chassis

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

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



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

Rules for cleaning seat covers, upholstery covers and curtains

- Clean seat covers with a soft brush or vacuum cleaner.
- Have heavily soiled upholstery covers, bedspreads and curtains dry cleaned; do not wash them yourself!
- Clean with the foam of a gentle detergent if required.

Cleaning instructions for materials that contain Teflon



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

We recommend the following methods for cleaning:

Method A:

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

This method is particularly suitable for removing:

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

Method B:

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

This method is particularly suitable for removing:

- wax, candles
- pencil

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

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.
- The rubber seals of the toilet should be cleaned regularly with plain water and a lubricant for seals (not Vaseline or any other vegetable fats) should be applied. Applying this regularly to the washer of the valve and other seals in the toilet will ensure that they stay flexible and function longer.



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.

The following applies for built-in equipment:

- Heating: remove all of the dust that has collected on the heat exchanger, base plate and fan wheel of the hot-air system at least once a year before the camper season begins. Clean the fan wheel carefully with a brush or small scrubber.
- The glycol mixture in the hot-water heating system should be replaced every two years, because certain properties such as protection against corrosion deteriorate.
- The space behind the refrigerator should be hoovered and cleaned regularly. The ventilation grille should also be kept clean. The door seal should be rubbed once a year with talcum powder to keep it supple and the expandable fold should be checked for tears.
- The filter in the fume hood must be cleaned occasionally, because cooking fat collects there. We recommend that you use warm water with a bit of dishwashing liquid to clean it.



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!

12.7 Winter Lay Up for the Camper



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

The following general rules apply:

- Only leave your camper in a closed space if it is dry and well-aired. Otherwise, it is better to leave your camper in the open.
- Cover the safety coupling. Grease the brake linkage and winding stanchions.
- Jack up the camper if possible. Extend the levelling supports to relieve the burden on wheels and axles to some extent. If possible, use axle stands to support the chassis.
- Close all gas bottles and emergency shutoff valves.
- If you use an auxiliary battery (self-sufficient package), it should be disconnected; ideally, remove it and store it safe from frost. Check it about once a month to see if it is still charged; if not, charge it.

The following applies for the external structure:

- Wash the camper thoroughly.
- Check the vehicle for damages to the varnish and other damages. If necessary, repair these damages and carry out any other necessary repairs.
- The exterior should be treated with wax or a special polish for varnish.
- Use a protective agent to protect the metal parts of the chassis against rust.
- Check the undercarriage for damage and, if necessary, repair it.
- Use a special cleaner for cleaning the plexiglass windows, because normal window cleaner makes the material cracked and brittle.
- Rub an acid-free rubber cleaning agent onto the seals around windows, doors and service flaps to keep them supple.
- Ensure that no water can get into the venting on the floor, heating system and refrigerator venting (mount winter covers).



Wash the vehicle only in special places provided for this purpose.



Use cleaning materials sparingly. Aggressive cleansers, such as wheel rim cleaners, damage the environment.

The following applies for tanks and containers:

- Clean, disinfect, descale and completely empty all water pipes and faucets. Leave faucets open.
- Clean the fresh water tank and empty it by unscrewing the overflow pipe.
- Clean and empty the waste water tank.
- Clean and empty the toilet flushing tank and the excrement tank. Clean the toilet valve, apply a lubricant for seals and leave it open.
- Completely empty the therme/boiler.
- If your camper is equipped with a hot-water heater: rinse the water heater thoroughly and empty all of the water.

The following applies for the interior fittings:

- Clean the interior of your camper. Hoover carpets, cushions and mattresses. If possible, store them outside the camper. Otherwise, place them in such a way inside the vehicle that they do not come into contact with condensation.
- Use soapy water to clean linoleum and smooth surfaces.
- Empty and clean the refrigerator. Leave the refrigerator door open.
- After cleaning them, leave stowage spaces, cupboards, drawers and furniture flaps open to facilitate air circulation.
- Leave vents for forced ventilation open. If the camper is kept in a closed space, you can leave the skylight open.
- Air the camper thoroughly every four to six weeks when the weather is dry.
- Set up a dehumidifier (such as salt) inside the camper and dry the granulate or change it regularly.

12.8 Winter Operation



Your camper has been designed to allow you to use it in winter.



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



With regard to camping in winter, we recommend that you optimize your camper to meet your personal requirements. Your Hobby dealer will be pleased to advise you.

The following applies for heating:

- Both the air intake as well as the exhaust gas openings of the heating system must be kept free of snow and ice (if necessary, use flue extensions).
- It takes longer to heat up the camper in winter, especially to heat hot water.
- Do not let the interior cool down completely when you are away or at night; set the heating to low and leave it on.



Continue to heat the vehicle while you are sleeping!

- The camper uses considerably more gas in winter than in summer. Two 11 kg bottles of gas will be used up in just under one week.
- Therefore, should you stay longer in one place, it is worthwhile to set up an outer tent. It will help to acclimatise the camper and keep the dirt out.

The following applies for ventilation:

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

- Do not shut vents for forced ventilation.
- Set the heating to maximum power when heating up the camper. Open stowage spaces, cupboards, drawers, furniture flaps, curtains, shades and plissés. This enables you to achieve optimum ventilation and de-aerating.
- Only heat the camper when the recirculation air system is switched on.
- Every morning, air all of the cushions, mattresses and stowage spaces and dry any damp spots.
- Air thoroughly with fully opened doors and windows several times a day.
- If the outside temperature is under 8° C, winter covers should be mounted over the ventilation grilles of the refrigerator.



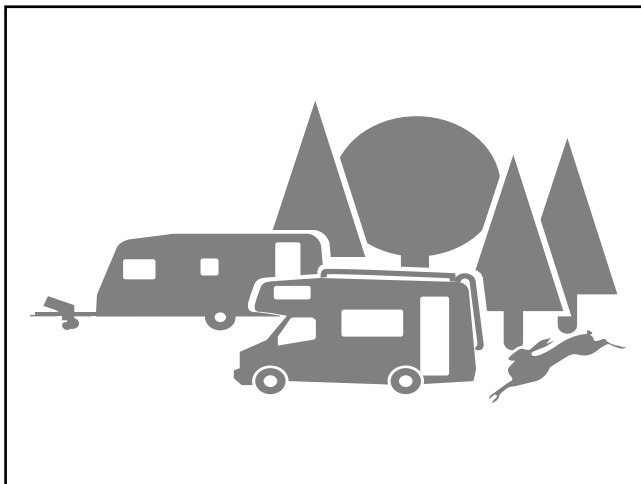
If, despite all of these measures, condensation forms somewhere, simply wipe it away.

The following applies for containers:

- If the interior is sufficiently heated, the fresh water tank, water pipes and therme/boiler should not freeze. Fill all of the water containers only after the interior has been thoroughly heated.
- Since waste water is collected outside the vehicle, add antifreezer or common salt to it. The drain cock of the sewage pipe must be kept clear.
- The toilet can be used normally, even in cold weather, as long as the interior of the camper is heated. If there is a danger of frost, both the excrement and the flushing water tanks should be emptied.

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 Tyre pressure values

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

Tyre size	Air pressure in bar
155/80 R 13 XL *	3,3
165 R 13 C	3,8
185 R 14 C	4,5
195/70 R 14 XL *	3,2
195/70 R 14 C	4,5
195/70 R 15 C	4,5

* XL oder reinforced

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]
380 TB De Luxe	902	61	963	1100	137
400 SF De Luxe	913	61	974	1200	226
400 SFe De Luxe	988	62	1050	1200	150
420 KB De Luxe	1050	62	1112	1300	188
440 SF De Luxe	1025	62	1087	1300	213
460 UFe De Luxe	1118	62	1180	1350	170
490 KMF De Luxe	1181	62	1243	1400	157
495 UL De Luxe	1215	62	1277	1400	123
540 UL De Luxe	1240	87	1327	1500	173
540 KMFe De Luxe	1253	87	1340	1500	160
545 KMF De Luxe	1335	71	1406	1600	194
560 KMFe De Luxe	1357	87	1444	1600	156
560 CFDe De Luxe	1330	87	1417	1600	183
650 KMFe De Luxe	1539	87	1626	1900	274

Type	Weight empty [kg]	Basic equipment [kg]	Mass in running order [kg]	g.v.w.r. [kg]	Add. load [kg]
455 UF Excellent	1085	62	1147	1350	203
460 UFe Excellent	1130	62	1192	1350	158
460 LU Excellent	1088	62	1150	1350	200
490 SFf Excellent	1188	62	1250	1400	150
495 UL Excellent	1224	62	1286	1400	114
495 UFe Excellent	1175	62	1237	1400	163
540 WLU Excellent	1248	71	1319	1500	181
540 UFe Excellent	1253	87	1340	1500	160
560 UL Excellent	1360	87	1447	1600	153
560 KMFe Excellent	1370	87	1457	1600	143
560 UFf Excellent	1324	87	1411	1600	189
560 CFe Excellent	1342	87	1429	1600	171
560 UFf Excellent	1324	87	1411	1600	189
560 CFe Excellent	1342	87	1429	1600	171
455 UF Prestige	1100	62	1162	1350	188
495 UL Prestige	1226	62	1300	1500	200
560 UL Prestige	1383	87	1470	1600	130
560 WLU Prestige	1379	71	1450	1600	150
610 UL Prestige	1555	87	1642	1900	258
650 KFU Prestige	1590	87	1677	1900	223
650 WFU Prestige	1610	71	1681	1900	219
650 UMFe Prestige	1550	87	1637	1900	263
720 UKFe Prestige	1741	87	1828	2200	372
720 KFU Prestige	1745	87	1832	2200	368
440 SFr Premium	1202	87	1289	1500	211
460 UFe Premium	1264	87	1351	1600	249
495 UL Premium	1360	87	1447	1700	253
540 UFe Premium	1384	87	1471	1800	329
540 KMFe Premium	1398	87	1485	1800	315
560 UL Premium	1508	87	1595	1800	205
560 WLU Premium	1520	87	1607	1800	193
560 CFe Premium	1513	87	1600	1800	200
610 UL Premium	1676	87	1763	2000	237
645 VIP Premium	1783	87	1870	2000	130
650 UFf Premium	1711	87	1798	2000	202
650 UKFe Premium	1732	87	1819	2000	181
695 VIP Premium	1860	87	1947	2300	353
720 UML Premium	1895	87	1982	2300	318
770 CFe Landhaus	1893	88	1981	2300	319
770 CL Landhaus	1908	88	1996	2300	304

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:

a) liquid gas supply	380 TB / 400 SF	400 SFe - 495	540 - 720	WLU, WFU, 720 KFU, 545 KMF	770 CFe, CL
Number of built-in gas regulators: (kg)	1	1	1	1	1
weight of an aluminium gas bottle: (kg)	5,5	5,5	5,5	5,5	5,5
weight of an 11 kg gas filling: (kg)	11	11	11	11	11
Total: (kg)	16,5	16,5	16,5	16,5	16,5
b) fluids					
25 l fixed fresh water tank: (kg)	25	25	---	---	
50 l fixed fresh water tank: (kg)	---	---	50	50	50
Toilet flushing C 500: (kg)	---	16,5	16,5	---	---
Toilet flushing C 402: (kg)	15	---	---	---	---
Toilet flushing C 200 S: (kg)	---	---	---	---	---
Toilet flushing C250/C260: (kg)	---	---	---	---	17,5
Total: (kg)	40	41,5	66,5	50	67,5
c) electric supply					
connecting cable for low voltage:	4	4	4	4	4
Total basic equipment: (kg)	60,5	62	87	70,5	88

14.4 Technical data

Trade name	Technical name	De Luxe	Excellent	Presige	Premium	Landhaus	g.v.w.r. [kg]	Permitted axle load	Axle(s)	Wheel brake	Leading equipment	Safety coupling	Towbar
380 TB	30 M	•					1100	1100	VGB12-M	20-2425/1	KFL 12 B	WS 3000 H45	One Piece
400 SF	30 A	•					1200	1200	DB 13 M	20-2425/1	KFL 12 B	WS 3000 H45	One Piece
400 SFe	30 S	•					1200	1200	DB 13 M	20-2425/1	KFL 12 B	WS 3000 H45	One Piece
420 KB	30 T	•					1300	1300	DB 13 M	20-2425/1	KFL 12 B	WS 3000 H45	One Piece
440 SF	30 F	•					1300	1300	DB 13 M	20-2425/1	KFL 12 B	WS 3000 H45	One Piece
455 UF	30 N		•	•			1350	1350	DB 13 M	20-2425/1	KFL 20 A	WS 3000 H50	One Piece
460 UFe	30 C	•	•				1350	1350	DB 13 M	20-2425/1	KFL 20 A	WS 3000 H50	One Piece
460 LU	30 J		•				1350	1350	DB 13 M	20-2425/1	KFL 20 A	WS 3000 H50	One Piece
490 SFf	30 H		•				1400	1400	DB 15 MV/M	20-2425/1	KFL 20 A	WS 3000 H50	One Piece
490 KMF	30 U	•					1400	1400	DB 15 MV/M	20-2425/1	KFL 20 A	WS 3000 H50	One Piece
495 UL	30 D	•	•				1400	1400	DB 15 MV/M	20-2425/1	KFL 20 A	WS 3000 H50	One Piece
495 UFe	30 E		•				1400	1400	DB 15 MV/M	20-2425/1	KFL 20 A	WS 3000 H50	One Piece
440 SFr	24 Y				•		1500	1500	DB 15 MV/M	20-2425/1	KFL 20 A	WS 3000 H50	ZHL 15 A
460 UFe	24 X				•		1600	1600	DB 16 MV	20-2425/1	KFL 20 A	WS 3000 H50	ZHL 15 A
495 UL	24 Z				•		1700	1700	DB 18 MV	25-2025	KFL 20 A	WS 3000 H50	ZHL 15 A
495 UL	24 L			•			1500	1500	DB 15 MV/M	20-2425/1	KFL 20 A	WS 3000 H50	ZHL 15 A
540 UL	24 M	•					1500	1500	DB 15 MV/M	20-2425/1	KFL 20 A	WS 3000 H50	ZHL 15 A
540 UFe	24 E		•				1500	1500	DB 15 MV/M	20-2425/1	KFL 20 A	WS 3000 H50	ZHL 15 A
540 UFe	24 W				•		1800	1800	DB 18 MV	25-2025	KFL 20 A	WS 3000 H50	ZHL 15 A
540 WLU	24 J		•				1500	1500	DB 15 MV/M	20-2425/1	KFL 20 A	WS 3000 H50	ZHL 15 A
540 KMFe	24 P	•					1500	1500	DB 15 MV/M	20-2425/1	KFL 20 A	WS 3000 H50	ZHL 15 A
540 KMFe	24 S				•		1800	1800	DB 18 MV	25-2025	KFL 20 A	WS 3000 H50	ZHL 15 A
545 KMF	24 R	•					1600	1600	DB 16 MV	20-2425/1	KFL 20 A	WS 3000 H50	ZHL 15 A
560 UL	24 B		•	•			1600	1600	DB 16 MV	20-2425/1	KFL 20 A	WS 3000 H50	ZHL 15 A
560 UL	24 V				•		1800	1800	DB 18 MV	25-2025	KFL 20 A	WS 3000 H50	ZHL 15 A
560 KMFe	24 C	•	•				1600	1600	DB 16 MV	20-2425/1	KFL 20 A	WS 3000 H50	ZHL 15 A
560 Uff	24 D		•				1600	1600	DB 16 MV	20-2425/1	KFL 20 A	WS 3000 H50	ZHL 15 A
560 WLU	24 H			•			1600	1600	DB 16 MV	20-2425/1	KFL 20 A	WS 3000 H50	ZHL 15 A
560 WLU	24 N				•		1800	1800	DB 18 MV	25-2025	KFL 20 A	WS 3000 H50	ZHL 15 A
560 CFe	24 T	•	•				1600	1600	DB 16 MV	20-2425/1	KFL 20 A	WS 3000 H50	ZHL 15 A
560 CFe	24 U				•		1800	1800	DB 18 MV	25-2025	KFL 20 A	WS 3000 H50	ZHL 15 A
610 UL	27 A			•			1900	1000/1000	DB 10 L	20-2425/1	KFL 20 A	WS 3000 H50	ZHL 20 A
610 UL	27 H				•		2000	1100/1100	DB 11 M	20-2425/1	KFL 20 A	WS 3000 H50	ZHL 20 A
650 UMFe	27 B			•			1900	1000/1000	DB 10 L	20-2425/1	KFL 20 A	WS 3000 H50	ZHL 20 A
650 KMFe	27 B	•					1900	1000/1000	DB 10 L	20-2425/1	KFL 20 A	WS 3000 H50	ZHL 20 A
650 KFU	27 C			•			1900	1000/1000	DB 10 L	20-2425/1	KFL 20 A	WS 3000 H50	ZHL 20 A
645 VIP	27 N				•		2000	1100/1100	DB 11 M	20-2425/1	KFL 20 A	WS 3000 H50	ZHL 20 A
650 Uff	27 J				•		2000	1100/1100	DB 11 M	20-2425/1	KFL 20 A	WS 3000 H50	ZHL 20 A
650 UKFe	27 R				•		2000	1100/1100	DB 11 M	20-2425/1	KFL 20 A	WS 3000 H50	ZHL 20 A
650 WFU	27 G			•			1900	1000/1000	DB 10 L	20-2425/1	KFL 20 A	WS 3000 H50	ZHL 20 A
695 VIP	19 N				•		2300	1200/1200	DB 13 M	20-2425/1	KFL 27 A	WS 3000 D50	ZHL 27 C1
720 UML	19 L				•		2300	1200/1200	DB 13 M	20-2425/1	KFL 27 A	WS 3000 D50	ZHL 27 C1
720 UKFe	19 G			•			2200	1200/1200	DB 13 M	20-2425/1	KFL 27 A	WS 3000 D50	ZHL 27 C1
720 KFU	19 M			•			2200	1200/1200	DB 13 M	20-2425/1	KFL 27 A	WS 3000 D50	ZHL 27 C1
770 CFe	19 P					•	2300	1200/1200	DB 13 M	20-2425/1	KFL 27 A	WS 3000 D50	ZHL 27 C1
770 CL	19 S					•	2300	1200/1200	DB 13 M	20-2425/1	KFL 27 A	WS 3000 D50	ZHL 27 C1

Trade name	Size	Rims Wheel mounting	Model	Tyre size	Air [bar]	Floor length	Total width	Track	Distance towbar	Length of caravan	Length	Total length
380 TB	5½ J x 14	5/112, ET 30	Steel	195/70 R 14 XL	3,2	3626	2200	1950	3553	3906	4499	5694
400 SF	5½ J x 14	5/112, ET 30	Steel	195/70 R 14 XL	3,2	3830	2200	1950	3610	4110	4703	5898
400 SFe	5½ J x 14	5/112, ET 30	Steel	195/70 R 14 XL	3,2	3866	2300	2050	3662	4146	4739	5934
420 KB	5½ J x 14	5/112, ET 30	Steel	195/70 R 14 XL	3,2	4133	2300	2050	3787	4413	5006	6201
440 SF	5½ J x 14	5/112, ET 30	Steel	195/70 R 14 XL	3,2	4192	2300	2050	3807	4472	5065	6260
455 UF	5½ J x 14	5/112, ET 30	Steel	185 R 14 C	4,5	4531	2300	2050	3902	4811	5404	6610
460 UFe	5½ J x 14	5/112, ET 30	Steel	185 R 14 C	4,5	4681	2300	2050	4021	4961	5554	6760
460 LU	5½ J x 14	5/112, ET 30	Steel	185 R 14 C	4,5	4531	2300	2050	3983	4811	5404	6610
490 SFf	5½ J x 14	5/112, ET 30	Steel	185 R 14 C	4,5	4925	2300	2050	4241	5205	5798	7004
490 KMF	5½ J x 14	5/112, ET 30	Steel	185 R 14 C	4,5	4925	2300	2050	4195	5205	5798	7004
495 UL	5½ J x 14	5/112, ET 30	Steel	185 R 14 C	4,5	5164	2300	2050	4317	5444	6037	7243
495 UFe	5½ J x 14	5/112, ET 30	Steel	185 R 14 C	4,5	4807	2300	2050	4097	5087	5680	6886
440 SFr	6 J x 15	5/112, ET 30	OJ 15/5	195/70 R 15 C	4,5	4344	2300	2050	3974	4613	5485	6681
460 UFe	6 J x 15	5/112, ET 30	OJ 15/5	195/70 R 15 C	4,5	4812	2300	2050	4125	5081	5953	7149
495 UL	6 J x 15	5/112, ET 30	OJ 15/5	195/70 R 15 C	4,5	5293	2300	2050	4468	5562	6434	7630
495 UL	5½ J x 14	5/112, ET 30	Steel	185 R 14 C	4,5	5164	2300	2050	4311	5444	6037	7237
540 UL	5½ J x 14	5/112, ET 30	Steel	185 R 14 C	4,5	5342	2300	2050	4354	5622	6215	7415
540 UFe	5½ J x 14	5/112, ET 30	Steel	185 R 14 C	4,5	5311	2300	2050	4303	5591	6184	7384
540 UFe	6 J x 14	5/112, ET 30	OJ 14/5	195 R 14 C	4,5	5409	2300	2050	4415	5678	6550	7746
540 WLU	5½ J x 14	5/112, ET 30	Steel	185 R 14 C	4,5	5311	2300	2050	4327	5591	6184	7384
540 KMFe	5½ J x 14	5/112, ET 30	Steel	185 R 14 C	4,5	5482	2300	2050	4411	5762	6355	7555
540 KMFe	6 J x 14	5/112, ET 30	OJ 14/5	195 R 14 C	4,5	5569	2300	2050	4561	5838	6710	7906
545 KMF	5½ J x 14*	5/112, ET 30	Steel	185 R 14 C	4,5	5482	2500	2250	4502	5762	6355	7535
560 UL	5½ J x 14	5/112, ET 30	Steel	185 R 14 C	4,5	5570	2500	2250	4441	5850	6443	7623
560 UL	6 J x 14	5/112, ET 30	OJ 14/5	195 R 14 C	4,5	5696	2500	2250	4599	5965	6843	8016
560 KMFe	5½ J x 14	5/112, ET 30	Steel	185 R 14 C	4,5	5570	2500	2250	4446	5850	6443	7623
560 Uff	5½ J x 14	5/112, ET 30	Steel	185 R 14 C	4,5	5570	2500	2250	4533	5850	6443	7623
560 WLU	5½ J x 14	5/112, ET 30	Steel	185 R 14 C	4,5	5550	2500	2250	4425	5830	6423	7603
560 WLU	6 J x 14	5/112, ET 30	OJ 14/5	195 R 14 C	4,5	5696	2500	2250	4634	5965	6843	8016
560 CFe	5½ J x 14	5/112, ET 30	Steel	185 R 14 C	4,5	5570	2500	2250	4399	5850	6443	7623
560 CFe	6 J x 14	5/112, ET 30	OJ 14/5	195 R 14 C	4,5	5696	2500	2250	4539	5965	6843	8016
610 UL	4½ J x 13	4/100, ET 30	Steel	155/80 R 13 XL	3,3	6047	2500	2250	4375	6327	6920	8100
610 UL	5 J x 13	4/100, ET 30	OJ13/4	165 R 13 C	3,8	6124	2500	2250	4521	6393	7271	8444
650 UMFe	4½ J x 13	4/100, ET 30	Steel	155/80 R 13 XL	3,3	6382	2500	2250	4492	6662	7255	8435
650 KMFe	4½ J x 13	4/100, ET 30	Steel	155/80 R 13 XL	3,3	6382	2500	2250	4492	6662	7255	8435
650 KFU	4½ J x 13	4/100, ET 30	Steel	155/80 R 13 XL	3,3	6432	2500	2250	4557	6712	7305	8485
645 VIP	5 J x 13	4/100, ET 30	OJ13/4	165 R 13 C	3,8	6559	2500	2250	4623	6828	7706	8879
650 Uff	5 J x 13	4/100, ET 30	OJ13/4	165 R 13 C	3,8	6508	2500	2250	4682	6777	7655	8828
650 UKFe	5 J x 13	4/100, ET 30	OJ13/4	165 R 13 C	3,8	6559	2500	2250	4623	6828	7706	8879
650 WFU	4½ J x 13	4/100, ET 30	Steel	155/80 R 13 XL	3,3	6382	2500	2250	4540	6662	7255	8435
695 VIP	5 J x 13	4/100, ET 30	OJ13/4	165 R 13 C	3,8	7159	2500	2250	4911	7428	8303	9496
720 UML	5 J x 13	4/100, ET 30	OJ13/4	165 R 13 C	3,8	7159	2500	2250	4950	7428	8303	9496
720 UKFe	4½ J x 13	4/100, ET 30	Steel	165 R 13 C	3,8	7082	2500	2250	4884	7362	7955	9140
720 KFU	4½ J x 13	4/100, ET 30	Steel	165 R 13 C	3,8	7082	2500	2250	4850	7362	7955	9152
770 CFe	4½ J x 13	4/100, ET 30	Steel	165 R 13 C	3,8	7578	2500	2250	4605	7758	---	9136
770 CL	4½ J x 13	4/100, ET 30	Steel	165 R 13 C	3,8	7578	2500	2250	4605	7758	---	9136

14.5 Possibilities for increasing loads

Basic version

Trade name	Technical name	De Luxe	Excellent	Presige	Premium	Landhaus	g.v.w.r. [kg]	Axle load [kg]	Axle	Tyres	Brakes	Leading equipment	Forked drawbar
380 TB	30 M	•					1100	1100	VGB12-M	195/70 R 14 XL LI 96	20-2425/1	KFL 12 B	One-Piece
400 SF	30 A	•					1200	1200	DB 13 M	195/70 R 14 XL LI 96	20-2425/1	KFL 12 B	One-Piece
400 SFe	30 S	•					1200	1200	DB 13 M	195/70 R 14 XL LI 96	20-2425/1	KFL 12 B	One-Piece
420 KB	30 T	•					1300	1300	DB 13 M	195/70 R 14 XL LI 96	20-2425/1	KFL 12 B	One-Piece
440 SF	30 F	•					1300	1300	DB 13 M	195/70 R 14 XL LI 96	20-2425/1	KFL 12 B	One-Piece
455 UF	30 N		•	•			1350	1350	DB 13 M	185 R 14 C LI 102	20-2425/1	KFL 20 A	One-Piece
460 UFe	30 C	•	•				1350	1350	DB 13 M	185 R 14 C LI 102	20-2425/1	KFL 20 A	One-Piece
460 LU	30 J		•				1350	1350	DB 13 M	185 R 14 C LI 102	20-2425/1	KFL 20 A	One-Piece
490 SFf	30 H		•				1400	1400	DB 15 MV/M	185 R 14 C LI 102	20-2425/1	KFL 20 A	One-Piece
490 KMF	30 U	•					1400	1400	DB 15 MV/M	185 R 14 C LI 102	20-2425/1	KFL 20 A	One-Piece
495 UL	30 D	•	•				1400	1400	DB 15 MV/M	185 R 14 C LI 102	20-2425/1	KFL 20 A	One-Piece
495 UFe	30 E		•				1400	1400	DB 15 MV/M	185 R 14 C LI 102	20-2425/1	KFL 20 A	One-Piece
440 SFr	24 Y				•		1500	1500	DB 15 MV/M	195/70 R 15 C LI 104	20-2425/1	KFL 20 A	ZHL 15 A
					•								
460 UFe	24 X				•		1600	1600	DB 16 MV	195/70 R 15 C LI 104	20-2425/1	KFL 20 A	ZHL 15 A
495 UL	24 Z				•		1700	1700	DB 18 MV	195/70 R 15 C LI 104	25-2025	KFL 20 A	ZHL 15 A
495 UL	24 L			•			1500	1500	DB 15 MV/M	185 R 14 C LI 102	20-2425/1	KFL 20 A	ZHL 15 A
				•									
540 UL	24 M	•					1500	1500	DB 15 MV/M	185 R 14 C LI 102	20-2425/1	KFL 20 A	ZHL 15 A
		•											
540 UFe	24 E		•				1500	1500	DB 15 MV/M	185 R 14 C LI 102	20-2425/1	KFL 20 A	ZHL 15 A
	24 E		•										
540 UFe	24 W				•		1800	1800	DB 18 MV	195 R 14 C LI 106	25-2025	KFL 20 A	ZHL 15 A
540 WLU	24 J		•				1500	1500	DB 15 MV/M	185 R 14 C LI 102	20-2425/1	KFL 20 A	ZHL 15 A
			•										
540 KMFe	24 P	•					1500	1500	DB 15 MV/M	185 R 14 C LI 102	20-2425/1	KFL 20 A	ZHL 15 A
		•											
540 KMFe	24 S				•		1800	1800	DB 18 MV	195 R 14 C LI 106	25-2025	KFL 20 A	ZHL 15 A
545 KMF	24 R	•					1600	1600	DB 16 MV	185 R 14 C LI 102	20-2425/1	KFL 20 A	ZHL 15 A
560 UL	24 B		•	•			1600	1600	DB 16 MV	185 R 14 C LI 102	20-2425/1	KFL 20 A	ZHL 15 A
560 UL	24 V				•		1800	1800	DB 18 MV	195 R 14 C LI 106	25-2025	KFL 20 A	ZHL 15 A
560 KMFe	24 C	•	•				1600	1600	DB 16 MV	185 R 14 C LI 102	20-2425/1	KFL 20 A	ZHL 15 A
560 Uff	24 D		•				1600	1600	DB 16 MV	185 R 14 C LI 102	20-2425/1	KFL 20 A	ZHL 15 A
560 WLU	24 H			•			1600	1600	DB 16 MV	185 R 14 C LI 102	20-2425/1	KFL 20 A	ZHL 15 A
560 WLU	24 N				•		1800	1800	DB 18 MV	195 R 14 C LI 106	25-2025	KFL 20 A	ZHL 15 A
560 CFe	24 T	•	•				1600	1600	DB 16 MV	185 R 14 C LI 102	20-2425/1	KFL 20 A	ZHL 15 A
560 CFe	24 U				•		1800	1800	DB 18 MV	195 R 14 C LI 106	25-2025	KFL 20 A	ZHL 15 A
610 UL	27 A			•			1900	1000/1000	DB 10 L	155/80 R 13 XL LI 84	20-2425/1	KFL 20 A	ZHL 20 A
				•									
610 UL	27 H				•		2000	1100/1100	DB 11 M	165 R 13 C LI 91	20-2425/1	KFL 20 A	ZHL 20 A
650 UMFe	27 B			•			1900	1000/1000	DB 10 L	155/80 R 13 XL LI 84	20-2425/1	KFL 20 A	ZHL 20 A
				•									
650 KMFe	27 B	•					1900	1000/1000	DB 10 L	155/80 R 13 XL LI 84	20-2425/1	KFL 20 A	ZHL 20 A
		•											
650 KFU	27 C			•			1900	1000/1000	DB 10 L	155/80 R 13 XL LI 84	20-2425/1	KFL 20 A	ZHL 20 A
				•									
645 VIP	27 N				•		2000	1100/1100	DB 11 M	165 R 13 C LI 91	20-2425/1	KFL 20 A	ZHL 20 A
650 Uff	27 J				•		2000	1100/1100	DB 11 M	165 R 13 C LI 91	20-2425/1	KFL 20 A	ZHL 20 A
650 UKFe	27 R				•		2000	1100/1100	DB 11 M	165 R 13 C LI 91	20-2425/1	KFL 20 A	ZHL 20 A
650 WFU	27 G			•			1900	1000/1000	DB 10 L	155/80 R 13 XL LI 84	20-2425/1	KFL 20 A	ZHL 20 A
				•									
695 VIP	19 N				•		2300	1200/1200	DB 13 M	165 R 13 C LI 91	20-2425/1	KFL 27 A	ZHL 27 C1
720 UML	19 L				•		2300	1200/1200	DB 13 M	165 R 13 C LI 91	20-2425/1	KFL 27 A	ZHL 27 C1
720 UKFe	19 G			•			2200	1200/1200	DB 13 M	165 R 13 C LI 91	20-2425/1	KFL 27 A	ZHL 27 C1
720 KFU	19 M			•			2200	1200/1200	DB 13 M	165 R 13 C LI 91	20-2425/1	KFL 27 A	ZHL 27 C1
770 CFe	19 P					•	2300	1200/1200	DB 13 M	165 R 13 C LI 91	20-2425/1	KFL 27 A	ZHL 27 C1
770 CL	19 S					•	2300	1200/1200	DB 13 M	165 R 13 C LI 91	20-2425/1	KFL 27 A	ZHL 27 C1

Maximum 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
380 TB	1200	1200	no	no	no	no	no	no	0,0
400 SF	1350	1350	no	no	no	no	no	no	0,0
400 SFe	1350	1350	no	no	no	no	no	no	0,0
420 KB	1350	1350	no	no	no	no	no	no	0,0
440 SF	1350	1350	no	no	no	no	no	no	0,0
455 UF	1500	1500	DB 15 MV/M	yes	no	no	no	no	14,0
460 UFe	1500	1500	DB 15 MV/M	yes	no	no	no	no	14,0
460 LU	1500	1500	DB 15 MV/M	yes	no	no	no	no	14,0
490 SFf	1500	1500	no	no	no	no	no	no	---
490 KMF	1500	1500	no	no	no	no	no	no	---
495 UL	1500	1500	no	no	no	no	no	no	---
495 UFe	1500	1500	no	no	no	no	no	no	---
440 SFr	1600	1600	DB 16 MV	no	no	no	no	no	4,5
	1750	1750	DB 18 MV	no	no	no	no	no	14,6
460 UFe	1750	1750	DB 18 MV	no	no	no	no	no	14,6
495 UL	1750	1750	no	no	no	no	no	no	0,0
495 UL	1600	1600	DB 16 MV	no	no	no	no	no	4,5
	1750	1750	DB 18 MV	34 1462 93 03	195/70 R 15 C LI 104	25-2025	no	no	21,6
540 UL	1600	1600	DB 16 MV	no	no	no	no	no	4,5
	1750	1750	DB 18 MV	34 1462 93 03	195/70 R 15 C LI 104	25-2025	no	no	21,6
540 UFe	1600	1600	DB 16 MV	no	no	no	no	no	4,5
	1750	1750	DB 18 MV	34 1462 93 03	195/70 R 15 C LI 104	25-2025	no	no	21,6
540 UFe	2000	2000	DB 20 MV	no	225/70 R 15 C LI 112	no	no	ZHL 20 A	16,1
540 WLU	1600	1600	DB 16 MV	no	no	no	no	no	4,5
	1750	1750	DB 18 MV	34 1462 93 03	195/70 R 15 C LI 104	25-2025	no	no	21,6
540 KMFe	1600	1600	DB 16 MV	no	no	no	no	no	4,5
	1750	1750	DB 18 MV	34 1462 93 03	195/70 R 15 C LI 104	25-2025	no	no	21,6
540 KMFe	2000	2000	DB 20 MV	no	225/70 R 15 C LI 112	no	no	ZHL 20 A	16,1
545 KMF	1750	1750	DB 18 MV	no	195/70 R 15 C LI 104	25-2025	no	no	15,1
560 UL	1750	1750	DB 18 MV	no	195/70 R 15 C LI 104	25-2025	no	no	15,1
560 UL	2000	2000	DB 20 MV	no	225/70 R 15 C LI 112	no	no	ZHL 20 A	12,5
560 KMFe	1750	1750	DB 18 MV	no	195/70 R 15 C LI 104	25-2025	no	no	15,1
560 UFf	1750	1750	DB 18 MV	no	195/70 R 15 C LI 104	25-2025	no	no	15,1
560 WLU	1750	1750	DB 18 MV	no	195/70 R 15 C LI 104	25-2025	no	no	15,1
560 WLU	2000	2000	DB 20 MV	no	225/70 R 15 C LI 112	no	no	ZHL 20 A	16,1
560 CFfe	1750	1750	DB 18 MV	no	195/70 R 15 C LI 104	25-2025	no	no	15,1
560 CFfe	2000	2000	DB 20 MV	no	225/70 R 15 C LI 112	no	no	ZHL 20 A	16,1
610 UL	2000	1100/1100	DB 11 M	no	165 R 13 C LI 91	no	no	no	16,0
	2200	1200/1200	DB 13 M	no	165 R 13 C LI 91	no	KFL 27 A	no	18,3
610 UL	2200	1200/1200	DB 13 M	no	no	no	KFL 27 A	no	2,3
650 UMFe	2000	1100/1100	DB 11 M	no	165 R 13 C LI 91	no	no	no	16,0
	2200	1200/1200	DB 13 M	no	165 R 13 C LI 91	no	KFL 27 A	no	18,3
650 KMFe	2000	1100/1100	DB 11 M	no	165 R 13 C LI 91	no	no	no	16,0
	2200	1200/1200	DB 13 M	no	165 R 13 C LI 91	no	KFL 27 A	no	18,3
650 KFU	2000	1100/1100	DB 11 M	no	165 R 13 C LI 91	no	no	no	16,0
	2200	1200/1200	DB 13 M	no	165 R 13 C LI 91	no	KFL 27 A	no	18,3
645 VIP	2200	1200/1200	DB 13 M	no	no	no	KFL 27 A	no	2,3
650 UFf	2200	1200/1200	DB 13 M	no	no	no	KFL 27 A	no	2,3
650 UKFe	2200	1200/1200	DB 13 M	no	no	no	KFL 27 A	no	2,3
650 WFU	2000	1100/1100	DB 11 M	no	165 R 13 C LI 91	no	no	no	16,0
	2200	1200/1200	DB 13 M	no	165 R 13 C LI 91	no	KFL 27 A	no	18,3
695 VIP	2500	1300/1300	no	no	165 R 13 C LI 93	no	no	ZHL 27 C	1,8
720 UML	2500	1300/1300	no	no	165 R 13 C LI 93	no	no	ZHL 27 C	1,8
720 UKFe	2500	1300/1300	no	no	165 R 13 C LI 93	no	no	ZHL 27 C	1,8
720 KFU	2500	1300/1300	no	no	165 R 13 C LI 93	no	no	ZHL 27 C	1,8
770 CFfe	2500	1300/1300	no	no	165 R 13 C LI 93	no	no	ZHL 27 C	1,8
770 CL	2500	1300/1300	no	no	165 R 13 C LI 93	no	no	ZHL 27 C	1,8

14.6 Tyres and Rims

Standard version							Metal wheel rims for the standard version			Light alloy rims for the standard version						
Trade name	Technical name	De Luxe	Excellent	Prestige	Premium	Landhaus	g.v.w.r. [kg]	Axle load [kg]	Metal wheel rim	Tyre size	Air pressure (bar)	Light alloy rim, size	Light alloy rim, marking	Light alloy rim, colour	Tyre size	Air pressure (bar)
380 TB	30 M	•					1100	1100	5½ x 14	195/70 R 14 XL LI 96	3,2	6 x 14	OJ14/5	silver	195/70 R 14 C LI 101	4,5
400 SF	30 A	•					1200	1200	5½ x 14	195/70 R 14 XL LI 96	3,2	6 x 14	OJ14/5	silver	195/70 R 14 C LI 101	4,5
400 SFe	30 S	•					1200	1200	5½ x 14	195/70 R 14 XL LI 96	3,2	6 x 14	OJ14/5	silver	195/70 R 14 C LI 101	4,5
420 KB	30 T	•					1300	1300	5½ x 14	195/70 R 14 XL LI 96	3,2	6 x 14	OJ14/5	silver	195/70 R 14 C LI 101	4,5
440 SF	30 F	•					1300	1300	5½ x 14	195/70 R 14 XL LI 96	3,2	6 x 14	OJ14/5	silver	195/70 R 14 C LI 101	4,5
455 UF	30 N		•	•			1350	1350	5½ x 14	185 R 14 C LI 102	4,5	6 x 14	OJ14/5	silver	185 R 14 C LI 102	4,5
460 UFe	30 C	•	•				1350	1350	5½ x 14	185 R 14 C LI 102	4,5	6 x 14	OJ14/5	silver	185 R 14 C LI 102	4,5
460 LU	30 J		•				1350	1350	5½ x 14	185 R 14 C LI 102	4,5	6 x 14	OJ14/5	silver	185 R 14 C LI 102	4,5
490 SFf	30 H		•				1400	1400	5½ x 14	185 R 14 C LI 102	4,5	6 x 14	OJ14/5	silver	185 R 14 C LI 102	4,5
490 KMF	30 U	•					1400	1400	5½ x 14	185 R 14 C LI 102	4,5	6 x 14	OJ14/5	silver	185 R 14 C LI 102	4,5
495 UL	30 D	•	•				1400	1400	5½ x 14	185 R 14 C LI 102	4,5	6 x 14	OJ14/5	silver	185 R 14 C LI 102	4,5
495 UFe	30 E		•				1400	1400	5½ x 14	185 R 14 C LI 102	4,5	6 x 14	OJ14/5	silver	185 R 14 C LI 102	4,5
440 SFr	24 Y				•		1500	1500	Light alloy rims are part of the standard equipment.			6 x 15	OJ 15/5	black	195/70 R 15 C LI 104	4,5
					•											
460 UFe	24 X				•		1600	1600	Light alloy rims are part of the standard equipment.			6 x 15	OJ 15/5	black	195/70 R 15 C LI 104	4,5
495 UL	24 Z				•		1700	1700	Light alloy rims are part of the standard equipment.			6 x 15	OJ 15/5	black	195/70 R 15 C LI 104	4,5
495 UL	24 L			•			1500	1500	5½ x 14	185 R 14 C LI 102	4,5	6 x 14	OJ14/5	silver	185 R 14 C LI 102	4,5
				•												
540 UL	24 M	•					1500	1500	5½ x 14	185 R 14 C LI 102	4,5	6 x 14	OJ14/5	silver	185 R 14 C LI 102	4,5
	24 M	•														
540 UFe	24 E		•				1500	1500	5½ x 14	185 R 14 C LI 102	4,5	6 x 14	OJ14/5	silver	185 R 14 C LI 102	4,5
	24 E		•													
540 UFe	24 W				•		1800	1800	Light alloy rims are part of the standard equipment.			6 x 14	OJ 14/5	black	195 R 14 C LI 106	4,5
540 WLU	24 J		•				1500	1500	5½ x 14	185 R 14 C LI 102	4,5	6 x 14	OJ14/5	silver	185 R 14 C LI 102	4,5
			•													
540 KMFe	24 P	•					1500	1500	5½ x 14	185 R 14 C LI 102	4,5	6 x 14	OJ14/5	silver	185 R 14 C LI 102	4,5
	24 P	•														
540 KMFe	24 S				•		1800	1800	Light alloy rims are part of the standard equipment.			6 x 14	OJ 14/5	black	195 R 14 C LI 106	4,5
545 KMF	24 R	•					1600	1600	5½ x 14	185 R 14 C LI 102	4,5	6 x 14	OJ14/5	silver	185 R 14 C LI 102	4,5
560 UL	24 B		•	•			1600	1600	5½ x 14	185 R 14 C LI 102	4,5	6 x 14	OJ14/5	silver	185 R 14 C LI 102	4,5
560 UL	24 V				•		1800	1800	Light alloy rims are part of the standard equipment.			6 x 14	OJ 14/5	black	195 R 14 C LI 106	4,5
560 KMFe	24 C	•	•				1600	1600	5½ x 14	185 R 14 C LI 102	4,5	6 x 14	OJ14/5	silver	185 R 14 C LI 102	4,5
560 UFf	24 D		•				1600	1600	5½ x 14	185 R 14 C LI 102	4,5	6 x 14	OJ14/5	silver	185 R 14 C LI 102	4,5
560 WLU	24 H			•			1600	1600	5½ x 14	185 R 14 C LI 102	4,5	6 x 14	OJ14/5	silver	185 R 14 C LI 102	4,5
560 WLU	24 N				•		1800	1800	Light alloy rims are part of the standard equipment.			6 x 14	OJ 14/5	black	195 R 14 C LI 106	4,5
560 CFe	24 T	•	•				1600	1600	5½ x 14	185 R 14 C LI 102	4,5	6 x 14	OJ14/5	silver	185 R 14 C LI 102	4,5
560 CFe	24 U				•		1800	1800	Light alloy rims are part of the standard equipment.			6 x 14	OJ 14/5	black	195 R 14 C LI 106	4,5
610 UL	27 A			•			1900	1000/1000	4½ x 13	155/80 R 13 XL LI 84	3,3	5 x 13	TR1 503	silver	165 R 13 C LI 91	3,8
				•												
610 UL	27 H				•		2000	1100/1100	Light alloy rims are part of the standard equipment.			5 x 13	OJ13/4	black	165 R 13 C LI 91	3,8
650 UMFe	27 B			•			1900	1000/1000	4½ x 13	155/80 R 13 XL LI 84	3,3	5 x 13	TR1 503	silver	165 R 13 C LI 91	3,8
				•												
650 KMFe	27 B	•					1900	1000/1000	4½ x 13	155/80 R 13 XL LI 84	3,3	5 x 13	TR1 503	silver	165 R 13 C LI 91	3,8
		•														
650 KFU	27 C			•			1900	1000/1000	4½ x 13	155/80 R 13 XL LI 84	3,3	5 x 13	TR1 503	silver	165 R 13 C LI 91	3,8
				•												
645 VIP	27 N				•		2000	1100/1100	Light alloy rims are part of the standard equipment.			5 x 13	OJ13/4	black	165 R 13 C LI 91	3,8
650 UFf	27 J				•		2000	1100/1100	Light alloy rims are part of the standard equipment.			5 x 13	OJ13/4	black	165 R 13 C LI 91	3,8
650 UKFe	27 R				•		2000	1100/1100	Light alloy rims are part of the standard equipment.			5 x 13	OJ13/4	black	165 R 13 C LI 91	3,8
650 WFU	27 G			•			1900	1000/1000	4½ x 13	155/80 R 13 XL LI 84	3,3	5 x 13	TR1 503	silver	165 R 13 C LI 91	3,8
				•												
695 VIP	19 N				•		2300	1200/1200	Light alloy rims are part of the standard equipment.			5 x 13	OJ13/4	black	165 R 13 C LI 91	3,8
720 UML	19 L				•		2300	1200/1200	Light alloy rims are part of the standard equipment.			5 x 13	OJ13/4	black	165 R 13 C LI 91	3,8
720 UKFe	19 G			•			2200	1200/1200	4½ x 13	165 R 13 C LI 91	3,8	5 x 13	TR1 503	silver	165 R 13 C LI 91	3,8
720 KFU	19 M			•			2200	1200/1200	4½ x 13	165 R 13 C LI 91	3,8	5 x 13	TR1 503	silver	165 R 13 C LI 91	3,8
770 CFe	19 P				•		2300	1200/1200	4½ x 13	165 R 13 C LI 91	3,8	5 x 13	TR1 503	silver	165 R 13 C LI 91	3,8
770 CL	19 S				•		2300	1200/1200	4½ x 13	165 R 13 C LI 91	3,8	5 x 13	TR1 503	silver	165 R 13 C LI 91	3,8

Max. increase (for increased load) Metal wheel rims for increased load Light alloy rims for increased load

Trade name	g.v.w.r. [kg]	Axle load [kg]	Metal wheel rim	Tyre size	Air pressure (bar)	Light alloy rim, size	Light alloy rim, marking	Light alloy rim, colour	Tyre size	Air pressure (bar)
380 TB	1200	1200	5½ x 14	195/70 R 14 XL LI 96	3,2	6 x 14	OJ14/5	silver	195/70 R 14 C LI 101	4,5
400 SF	1350	1350	5½ x 14	195/70 R 14 XL LI 96	3,2	6 x 14	OJ14/5	silver	195/70 R 14 C LI 101	4,5
400 SFe	1350	1350	5½ x 14	195/70 R 14 XL LI 96	3,2	6 x 14	OJ14/5	silver	195/70 R 14 C LI 101	4,5
420 KB	1350	1350	5½ x 14	195/70 R 14 XL LI 96	3,2	6 x 14	OJ14/5	silver	195/70 R 14 C LI 101	4,5
440 SF	1350	1350	5½ x 14	195/70 R 14 XL LI 96	3,2	6 x 14	OJ14/5	silver	195/70 R 14 C LI 101	4,5
455 UF	1500	1500	5½ x 14	185 R 14 C LI 102	4,5	6 x 14	OJ14/5	silver	185 R 14 C LI 102	4,5
460 UFe	1500	1500	5½ x 14	185 R 14 C LI 102	4,5	6 x 14	OJ14/5	silver	185 R 14 C LI 102	4,5
460 LU	1500	1500	5½ x 14	185 R 14 C LI 102	4,5	6 x 14	OJ14/5	silver	185 R 14 C LI 102	4,5
490 SFf	1500	1500	5½ x 14	185 R 14 C LI 102	4,5	6 x 14	OJ14/5	silver	185 R 14 C LI 102	4,5
490 KMF	1500	1500	5½ x 14	185 R 14 C LI 102	4,5	6 x 14	OJ14/5	silver	185 R 14 C LI 102	4,5
495 UL	1500	1500	5½ x 14	185 R 14 C LI 102	4,5	6 x 14	OJ14/5	silver	185 R 14 C LI 102	4,5
495 UFe	1500	1500	5½ x 14	185 R 14 C LI 102	4,5	6 x 14	OJ14/5	silver	185 R 14 C LI 102	4,5
440 SFr	1600	1600	Light alloy rims are part of the standard equipment.			6 x 15	OJ15/5	black	195/70 R 15 C LI 104	4,5
	1750	1750	Light alloy rims are part of the standard equipment.			6 x 15	OJ15/5	black	195/70 R 15 C LI 104	4,5
460 UFe	1750	1750	Light alloy rims are part of the standard equipment.			6 x 15	OJ15/5	black	195/70 R 15 C LI 104	4,5
495 UL	1750	1750	Light alloy rims are part of the standard equipment.			6 x 15	OJ15/5	black	195/70 R 15 C LI 104	4,5
495 UL	1600	1600	5½ x 14	185 R 14 C LI 102	4,5	6 x 14	OJ14/5	silver	185 R 14 C LI 102	4,5
	1750	1750	5½ x 15	195/70 R 15 C LI 104	4,5	6 x 15	OJ15/5	silver	195/70 R 15 C LI 104	4,5
540 UL	1600	1600	5½ x 14	185 R 14 C LI 102	4,5	6 x 14	OJ14/5	silver	185 R 14 C LI 102	4,5
	1750	1750	5½ x 15	195/70 R 15 C LI 104	4,5	6 x 15	OJ15/5	silver	195/70 R 15 C LI 104	4,5
540 UFe	1600	1600	5½ x 14	185 R 14 C LI 102	4,5	6 x 14	OJ14/5	silver	185 R 14 C LI 102	4,5
	1750	1750	5½ x 15	195/70 R 15 C LI 104	4,5	6 x 15	OJ15/5	silver	195/70 R 15 C LI 104	4,5
540 UFe	2000	2000	Light alloy rims are part of the standard equipment.			6 x 15	OJ15/5	black	225/70 R 15 C LI 112	4,5
540 WLU	1600	1600	5½ x 14	185 R 14 C LI 102	4,5	6 x 14	OJ14/5	silver	185 R 14 C LI 102	4,5
	1750	1750	5½ x 15	195/70 R 15 C LI 104	4,5	6 x 15	OJ15/5	silver	195/70 R 15 C LI 104	4,5
540 KMFe	1600	1600	5½ x 14	185 R 14 C LI 102	4,5	6 x 14	OJ14/5	silver	185 R 14 C LI 102	4,5
	1750	1750	5½ x 15	195/70 R 15 C LI 104	4,5	6 x 15	OJ15/5	silver	195/70 R 15 C LI 104	4,5
540 KMFe	2000	2000	Light alloy rims are part of the standard equipment.			6 x 15	OJ15/5	black	225/70 R 15 C LI 112	4,5
545 KMF	1750	1750	5½ x 15	195/70 R 15 C LI 104	4,5	6 x 15	OJ15/5	silver	195/70 R 15 C LI 104	4,5
560 UL	1750	1750	5½ x 15	195/70 R 15 C LI 104	4,5	6 x 15	OJ15/5	silver	195/70 R 15 C LI 104	4,5
560 UL	2000	2000	Light alloy rims are part of the standard equipment.			6 x 15	OJ15/5	black	225/70 R 15 C LI 112	4,5
560 KMFe	1750	1750	5½ x 15	195/70 R 15 C LI 104	4,5	6 x 15	OJ15/5	silver	195/70 R 15 C LI 104	4,5
560 Uf	1750	1750	5½ x 15	195/70 R 15 C LI 104	4,5	6 x 15	OJ15/5	silver	195/70 R 15 C LI 104	4,5
560 WLU	1750	1750	5½ x 15	195/70 R 15 C LI 104	4,5	6 x 15	OJ15/5	silver	195/70 R 15 C LI 104	4,5
560 WLU	2000	2000	Light alloy rims are part of the standard equipment.			6 x 15	OJ15/5	black	225/70 R 15 C LI 112	4,5
560 CFe	1750	1750	5½ x 15	195/70 R 15 C LI 104	4,5	6 x 15	OJ15/5	silver	195/70 R 15 C LI 104	4,5
560 CFe	2000	2000	Light alloy rims are part of the standard equipment.			6 x 15	OJ15/5	black	225/70 R 15 C LI 112	4,5
610 UL	2000	1100/1100	4½ x 13	165 R 13 C LI 91	3,8	5 x 13	TR1 503	silver	165 R 13 C LI 91	3,8
	2200	1200/1200	4½ x 13	165 R 13 C LI 91	3,8	5 x 13	TR1 503	silver	165 R 13 C LI 91	3,8
610 UL	2200	1200/1200	Light alloy rims are part of the standard equipment.			5 x 13	OJ13/4	black	165 R 13 C LI 91	3,8
650 UMFe	2000	1100/1100	4½ x 13	165 R 13 C LI 91	3,8	5 x 13	TR1 503	silver	165 R 13 C LI 91	3,8
	2200	1200/1200	4½ x 13	165 R 13 C LI 91	3,8	5 x 13	TR1 503	silver	165 R 13 C LI 91	3,8
650 KMFe	2000	1100/1100	4½ x 13	165 R 13 C LI 91	3,8	5 x 13	TR1 503	silver	165 R 13 C LI 91	3,8
	2200	1200/1200	4½ x 13	165 R 13 C LI 91	3,8	5 x 13	TR1 503	silver	165 R 13 C LI 91	3,8
650 KFU	2000	1100/1100	4½ x 13	165 R 13 C LI 91	3,8	5 x 13	TR1 503	silver	165 R 13 C LI 91	3,8
	2200	1200/1200	4½ x 13	165 R 13 C LI 91	3,8	5 x 13	TR1 503	silver	165 R 13 C LI 91	3,8
645 VIP	2200	1200/1200	Light alloy rims are part of the standard equipment.			5 x 13	OJ13/4	silver	165 R 13 C LI 91	3,8
650 Uf	2200	1200/1200	Light alloy rims are part of the standard equipment.			5 x 13	OJ13/4	black	165 R 13 C LI 91	3,8
650 UKFe	2200	1200/1200	Light alloy rims are part of the standard equipment.			5 x 13	OJ13/4	silver	165 R 13 C LI 91	3,8
650 WFU	2000	1100/1100	4½ x 13	165 R 13 C LI 91	3,8	5 x 13	TR1 503	silver	165 R 13 C LI 91	3,8
	2200	1200/1200	4½ x 13	165 R 13 C LI 91	3,8	5 x 13	TR1 503	silver	165 R 13 C LI 91	3,8
695 VIP	2500	1300/1300	---	---	---	5 x 13	OJ13/4	black	165 R 13 C LI 93	3,8
720 UML	2500	1300/1300	---	---	---	5 x 13	OJ13/4	black	165 R 13 C LI 93	3,8
720 UKFe	2500	1300/1300	4½ x 13	165 R 13 C LI 93	3,8	5 x 13	TR1 503	silver	165 R 13 C LI 93	3,8
720 KFU	2500	1300/1300	4½ x 13	165 R 13 C LI 93	3,8	5 x 13	TR1 503	silver	165 R 13 C LI 93	3,8
770 CFe	2500	1300/1300	4½ x 13	165 R 13 C LI 93	3,8	5 x 13	TR1 503	silver	165 R 13 C LI 93	3,8
770 CL	2500	1300/1300	4½ x 13	165 R 13 C LI 93	3,8	5 x 13	TR1 503	silver	165 R 13 C LI 93	3,8

If the special accessories 'spare tyre' and 'light alloy rims' are combined, the standard wheel with a metal wheel rim will be included as a spare tyre.

Exception: Premium models are delivered with light alloy spare tyres (special accessory).

Light alloy rims for single axle always in connection with brand tires.

14.7 Beleuchtung

12V Vehicle lighting			
Position	Description	Voltage	Watt
exterior	Left blinker	12	21
exterior	Right blinker	12	21
exterior	Parking light	12	5
exterior	Brake light	12	21
exterior	Rear light	12	10
exterior	Licence plate illumination	12	5
exterior	Clearance lights	12	3
exterior	Running light	12	3
exterior	Side marker light	12	LED or 3 W
exterior	Third brake light	12	LED or 3 W
exterior	Back-up light	12	21
exterior	Fog tail lamp	12	21

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