



# *Operation Guide*

## *Camper*



**Hobby**  
Weltweit Nummer 1



Dear Motor Home Owners,

We would like to congratulate you on the purchase of your new HOBBY motor home and hope that you will always enjoy traveling with it.

Please read this manual carefully, even if you have been driving a motor home 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 motor home.

We wish you and your companions many enjoyable trips and hope you always have a safe journey.

Your  
HOBBY Motor Home Plant  
Ing. Harald Striewski GmbH

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# 1. Introduction

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

## 1.1 General information

Your HOBBY camper has been built in accordance with the latest technology and recognised safety regulations. Despite all of these safety measures, it is possible that people may be hurt or the camper damaged if the safety instructions in this handbook and the warnings posted on adhesive labels in the camper are not followed. Please use the camper only when it is in perfect technical condition.

Any defects that may endanger human safety or the safety of the camper should be repaired immediately by an expert.

The brakes, electrical and gas equipment should only be checked and repaired by an authorised workshop.

Watch the total, technically admissible weight limit and do not carry more personal and/or special equipment than allowed.

Ensure that you observe the fixed maintenance and inspection dates.

### **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.

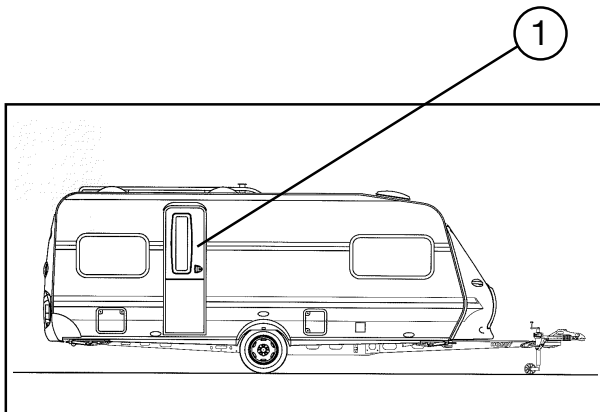


HOBBY grants a 5-year guarantee on the watertightness of the camper in accordance with guarantee conditions. When you accept the vehicle you will receive the guarantee booklet, "Five-Year Guarantee on Watertightness" from your HOBBY dealer.



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

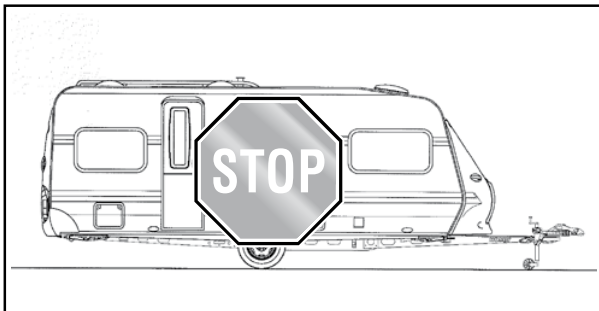
This chapter includes important safety instructions which will protect both people and property in the camper.

- Ensure that there is sufficient ventilation. Built-in forced ventilation (roof bonnets with forced ventilation or mushroom roof ventilators) must never be covered. Keep forced ventilation free of snow and leaves: danger of suffocation!
- Note the height of the entry door.
- Descriptions of built-in devices (refrigerator, heating, cooker, etc.) as well as more in-depth operating instructions must always be observed.
- The measurements, weight and driving performance of the camper may change if accessories or extras requested by the customer are built in. Please check whether such add-ons must be entered in the vehicle's registration certificate.
- Use only tires and rims that have been approved for your camper. Please check vehicle documentation for information on tire and rim sizes.
- The locking brake of the camper must always be activated whenever the carriage is parked.
- To climb on or load the roof: use only ladders that meet safety standards and are secure. Crank the winding stanchions so they are firmly on the ground and/or couple the camper to the base vehicle. Otherwise, the camper can tilt backwards.



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

### 2.2 Before and during the drive



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



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## 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).
- The pull rope must be connected to the base vehicle.
- Tighten the tire bolts after driving the first 50 km.
- Plug the 13-channel plug in the socket of the base vehicle.
- Inspect the vehicle lighting.
- Turn the winding stanchions and the front landing wheel upward and secure them.
- Close gas bottles (heating is forbidden while driving).
- Empty the waste water tank.
- Close gas bottle compartment.
- Adjust outer mirrors on base vehicle.
- Check camper's tire pressure (see tire pressure table).
- Close all windows.
- Close and firmly lock roof bonnet.
- Shut off the light on the outer tent.
- Close and secure entry door.
- If necessary, pull electrical cord out of the exterior socket.
- If necessary, pull television antenna inward as far as possible.
- If necessary, secure the roof load and lash it to prevent slippage.
- If necessary, secure all bicycles and lash them to prevent slippage, ensuring that they do not cover any lighting equipment.
- In winter, the roof must be free of snow and ice before you begin to drive.

## Interior

You must also prepare the interior of the vehicle.

### Preparing the interior:

- Sort all loose objects and store them in their respective compartments.
- Heavy and/or voluminous objects (e.g. TV/ radio) should be stored safely and secured against slipping.
- 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.
- Latch the sliding door.
- Lower table and secure it.



Do not overload the vehicle! Note the permissible gross weight, permissible axle load(s) as well as the permitted height, width and length of the camper.



Post a list with all significant weights and measurements of the carriage in a highly visible place in the base vehicle.

### Do not forget the following:

- Adjust exterior mirrors.
- Check the lights.

## Before you start off

Before you leave, you should be able to answer the following questions with a "yes":

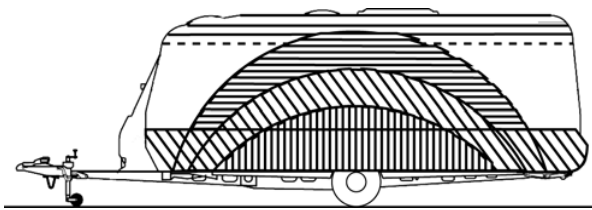
- Do you have a first-aid kit and warning triangle on board?
- Is the lighting on the front, rear and sides in proper condition?

- Are all passengers restrained in the base vehicle with seatbelts?
- Have all passengers exited the camper?



Staying in the camper during the drive is prohibited by law! In the event of an accident, passengers can be hurled out and sustain potentially fatal injuries.

## 2.3 Guidelines for the trip



### 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 place the entire load at the tail end of the camper (danger of slewing).
- 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.
- Lash the roof load securely.
- Store baggage in the interior in cupboards and storage compartments.
- Secure doors and flaps.
- After loading, check total weight and axle load(s) at a public weigh station.

The additional load represents the difference between the gross vehicle weight rating and the mass in running order. This value must include the masses for:

- additional equipment (in addition to that which is pre-installed by the dealer or at the factory),
- personal equipment (i.e., clothing, food, television set, toys, pets, etc.).



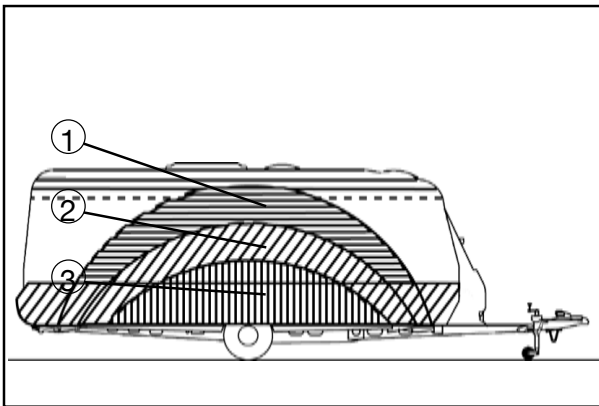
The gross vehicle weight rating indicated in the vehicle documents as well as the permitted drawbar load may not be exceeded. Also note the permissible drawbar load of your base vehicle.



Providing your base vehicle permits this and depending on the size of the camper, you can improve the driving quality by increasing the drawbar load.



The lower a vehicle's centre of gravity is, the better its performance in curves and on the road.



## 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 and the motor of your boat.

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. The caravan should be loaded in such a manner as to take full advantage of the base vehicle's permissible drawbar load. (Do not exceed the camper's maximum support burden of 100 kg.)

## 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. The drawbar load for your combination should be oriented towards the highest possible drawbar load, whereby the lower value must always set the upper limit.

### Rules for the drawbar load:

- Set the correct drawbar load by using, for example, a drawbar load scales, which is held perpendicular to the clutch module. The trailer's drawbar must be in a horizontal position.

- 
- Always check the drawbar load before you start to drive!
  - The specified drawbar load (see handbook or type plate) and the permissible overall mass of the base vehicle and the camper may not be exceeded!

### **How to adjust the correct drawbar load:**

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

## **Roof loads**

The height of the camper may vary on each drive depending on the roof load.

### **Rules for roof load**

- Add the measurements of the roof load to the height of the camper.
- Post a note in a highly visible area of the base vehicle which lists the total vehicle height. Then you will no longer have to calculate the height at bridges and thoroughfares.
- Roof loads have a negative effect on the camper's driving performance and should, therefore, be avoided.



The maximum permissible roof load while driving is 50 kg!

## **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.
- Principally, an overrunning brake system cannot differentiate between a "normal" braking procedure and driving over a pass, which lasts for a longer period of time. This can cause the wheel brakes to heat up strongly so that, if necessary, you must give them sufficient time to cool down.

## 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.



The guide may not position him- or herself between the base vehicle and the camper.

## Driving

Take a test drive before the first long drive to better acquaint yourself with the carriage in driving conditions. Also practice driving in reverse.

### 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 passing trucks or buses (or if another truck or bus passes you), the carriage can be caught up in air suction. Slight counter-steering can eliminate this effect.

## Driving in reverse

Your HOBBY camper has a braking system with automatic reverse. This makes driving in reverse possible without activating the overrunning brake. However, in addition to rolling resistance, the residual brake force must first be overcome.

### Rules for driving in reverse

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



The guide may not position him- or herself between the base vehicle and the camper.

## Driving around curves

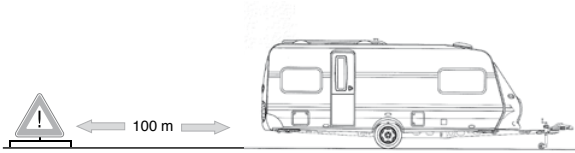
Your carriage is considerably longer than a car.

### 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.

## 2.4 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

The first aid kit (standard equipment) should be within reach at all times and have a fixed place in the base vehicle. Should you remove anything from the first aid kit, remember to replace it immediately. Expiry dates should be checked regularly.

### Warning triangle

The warning triangle should also be within reach at all times and preferably stored together with the first aid kit.

### In an emergency

- Place the warning triangle at least 100 m in front of the scene of danger!

### High-visibility vest (not included)

We recommend that, in accordance with EN 471, you carry and wear a high-visibility vest with white retroreflective stripes whenever you leave the vehicle on open roads or the hard shoulder.

The driver should wear a high-visibility vest if the carriage

- has an accident or breaks down on a section of country road that, due to weather conditions, is not visible, or at dusk or in the dark, or
- has an accident or breaks down and comes to a stop on the hard shoulder of a motorway, and a warning triangle must be set up to protect it.

### Fire extinguisher

(not included)

You should familiarize yourself with the handling of the fire extinguisher early on.

Note the fill date! The fire extinguisher must be inspected every two years.



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## **Fire prevention measures**

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

## **Fighting a fire**

- Evacuate all passengers immediately.
- Close the valves on the gas container.
- Shut off the electrical supply
- Sound alarm and call the fire department.
- Only fight the fire yourself if this is possible without risk.

## 2.5 Maximum speeds

1. Your HOBBY camper is technically equipped for a maximum speed of 100 km/h. Under no circumstances may this speed be exceeded!
2. Note the permissible maximum speeds for trailer carriages in the country in which you are travelling!
3. Road traffic regulations in **Germany** were changed on 22 October 2005. Your camper was already set to a speed of 100 at the factory, and this has been entered in the camper's registration documents. Upon request, the 100 km/h sticker will be issued by the road traffic authority when the camper is initially registered and attached to the back of the vehicle.
4. The following points must be observed, because you are responsible for adhering to them. If they are not met, the maximum speed for the camper is no more than 80 km/h!
  - a) The base vehicle must be equipped with an anti-locking system/anti-lock device and may not exceed an overall mass of 3.5 tons.
  - b) The camper must be equipped with hydraulic vibration dampers (shock absorbers); naturally, your new HOBBY camper is equipped with these.
  - c) The camper's tires may be no more than six years old. They must be marked at least with an L (= 120 km/h) for the appropriate speed category.
  - d) The camper must be equipped with a stabilising unit in accordance with ISO 11555-1 (standard in this HOBBY series since 1997).

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

5. Free interchangeability of base vehicle and camper:

Different campers may be combined with different base vehicles.

You are responsible for ensuring that the preceding regulations are met if you plan to drive at 100 km/h. Should this not be the case, the maximum speed in Germany is 80 km/h!

6. The correct drawbar load gives you more safety:

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

Speed Regulation in Europe (km/h)					
Country	Within city limits	outside city limits	Motorway		
			Cars	Trailer Carriages	
			Belgium	50	90
Bosna-Herzeg.	60	80	120	n/a	
Bulgaria	50	90	130	120 [a]	
Germany	50 [b]	100	130 [c]	80 [d]	
Denmark	50	80	130	80	
Estonia	50	90	110	90	
Finland	50	100	120	80	
France	50	90 [e,f,g]	130 [f,g]	130 [a]	
Greece	50	90 [t]	120	80	
Great Britain	45	96	112	96	
Ireland	50	80 [i]	120	120 [a]	
Italy	50	90	130 [r,s]	80	
Croatia	50	90 [i]	130	80	
Latvia	50	90	110	80	
Lithuania	60	90	110	110 [a]	
Luxemborg	50	90 [k]	130 [j,k]	90 [j]	
Malta	50	80	ñ	ñ	
Macedonia	50 [u]	80 [i]	120	80	

Netherlands	50	80 [i]	120	80
Norway	50	80	90	80 [i]
Austria	50	100	130 [m]	100 [n]
Poland	50/60 [w]	90 [i]	130	80
Portugal	50	90	120 [o]	100
Romania	50	90	120	100 [p]
Sweden	50	90	110	80 [q]
Switzerland	50	80 [i]	120	80
Serbia/Monten.	60	80 [i]	120	80
Slovakia	60	90	130	80
Slovenia	50	90 [i]	130	80
Spain	50	90 [i]	120	90 [v]
The Czech Repub.	50	90	130	80
Türkey	50	90	120	80
Hungary	50	90 [e]	130	80
Cyprus	50	80	100	100

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**Please note:**

- [a] If a German trailer carriage is involved in an accident at a speed of more than 100 km/h, you may expect only limited insurance benefits, because due to their construction campers in Germany are only licensed up to 100 km/h
- [b] In many areas, zones have been set up in which the maximum speed is limited to 30 km/h
- [c] Recommended speed
- [d] Maximum speed of 100 km/h under certain circumstances
- [e] 110 km/h on the motorway
- [f] On wet roads, the speed outside city limits must be reduced by 10 km/h, on expressways by 20 km/h
- [g] Maximum speed for drivers who have held their driver's licence for less than two years: outside city limits 80 km/h, on expressways 100 km/h and on motorways 110 km/h
- [h] Maximum speed of 100 km/h on expressways
- [i] Maximum speed of 100 km/h on expressways
- [j] Maximum speed of 100 km/h on expressways
- [k] Maximum speed for drivers who have held their driver's licence for less than two years: outside city limits 75 km/h, on motorways 90 km/h
- [l] Maximum speed of 60 km/h applies for unbraked trailer with current maximum weight over 300 kg
- [m] on some motorways in Austria, the maximum speed is lower at night
- [n] Maximum speed of 80 km/h if the gross vehicle weight rating for trailer carriages is higher than 3,5 tons
- [o] Drivers who have held their driver's licence for less than one year may only drive 90 km/h
- [p] Maximum speed of 90 km/h if the gross vehicle weight rating for trailer carriages is higher than 3,5 tons
- [q] Maximum speed of 40 km/h applies for unbraked trailer if the gross vehicle weight rating is more than 50% of the unloaded weight of the base vehicle
- [r] 150 km/h is permitted on certain 3-lane motorways (only if appropriate signs have been posted)
- [s] 110 km/h on motorways if roads are wet, 90 km/h on expressways
- [t] 110 km/h are permitted on some stretches of road
- [u] 60 km/h appropriate signs are posted
- [v] Maximum speed of 90 km/h for trailer carriages weighing less than 0,75 tons
- [w] 50 km/h from 5 am - 11 pm, 60 km/h from 11 pm - 5 am

## 2.6 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 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.
- Lay mats under the lifting stanchions when on soft ground.
- Place wheel chocks when parked on a descending slope.

### Redirecting electrical devices

#### Rules for redirecting electrical devices

- Redirect the refrigerator from 12 V to gas or 230 V; otherwise, the battery of the base vehicle could be depleted.

### Water installation

If the vehicle is not heated and there is danger of frost, empty the entire water installation (blow out the water pipes if necessary). Turn off the water pump (unscrew fuse or disconnect). Leave all the faucets and waste valves open. This prevents damage by frost.

Water left standing in the fresh water tank or the pipes quickly becomes undrinkable. Always rinse the pipes thoroughly with several litres of fresh water before using them.



## 3. Undercarriage and vehicle registration

### 3.1 Undercarriage

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 conducted by your HOBBY dealer. If spare parts are needed, only those original parts designated by the manufacturer should be used.



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

### Greasing and oiling

The sliding parts and stationary parts of the undercarriage should be examined and greased regularly. If the camper is used seldom, yearly maintenance is required.

#### Rules for greasing and oiling

- After every 5,000 kilometers driven, but at least once a year, grease the swinging lever bearings on the turning rod spring axle unit.
- Grease stationary parts on the casing of the overrunning unit.
- Grease movable parts such as bolts and toggle positions.
- Grease movable parts of the overrunning unit after every 5,000 kilometers driven.  
**IMPORTANT: The friction elements of the WS 3000 safety hitch may NEVER be oiled or greased.**
- Check from time to time to see that the stationary parts of the thrust rod are not jammed.
- Clean and oil all movable and stationary parts regularly.





The camper's turning rod spring axle unit is equipped with compact wheel bearings. The cylinder hub, compact bearings and axle nuts form a closed unit. The compact bearings are free of maintenance due to their special grease.



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



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



The drawbar loads listed in the vehicle documentation as well as the gross vehicle weight rating may not be exceeded.



## Safety coupling WS 3000

The camper is equipped with an anti-rolling coupling in accordance with ISO 11555-1. This safety coupling stabilises the camper while driving and ensures better driving performance.

Please note the additional operating instructions and the manufacturer's safety instructions.



**WARNING:** The laws of physics cannot be defied with a safety hitch. 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. Please take note of the permitted drawbar load for your base vehicle.

You will find the current value for the drawbar load of the camper on the drawbar load scales.

## Preparation for hitching/unhitching

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



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

## 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).



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

## Inspection of hitch

- The hitch is attached properly/closed if the operation lever is in position (2).



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



Bild 1

### 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. Driving without the stabilization system is possible, however, and under certain street conditions, i.e. in ice and snow, advisable.

### Inspection of the stabilization system

- After hitching and activating the stabilization system, the friction lining can be inspected. The rating plate (type plate) mounted onto the operation lever (Figure 2-1) indicates a triangular field marked with +/- signs, parallel to the slotted hole in the lever which points in the forward-driving direction. The tension ball coupler is adjusted on the front side in such a manner that the cap of a metal pin, visible in the slotted hole (Fig. 2-2) lies under the "+/-" signs on the marked side of the triangle.

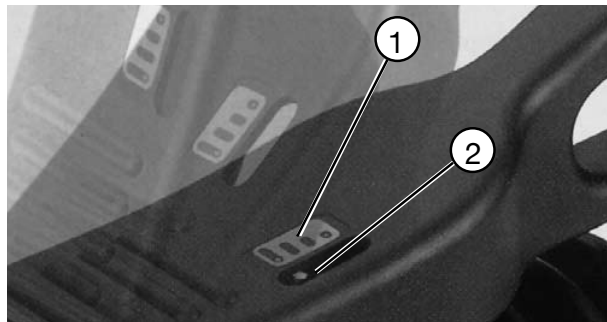


Bild 2

### Shutoff of the stabilization system

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

### Unhitching

- Pull the operation lever slowly upward into the open position (position 1). After releasing the lighting plug and pull cord, the trailer can be unhitched from the base vehicle (e.g. with the help of a drawbar track wheel). We recommend that you park the trailer with the tension ball coupler closed if it will not be used for a significant period of time. To do this, lift the operation lever while pulling the ball socket (movable element with friction lining - Fig. 3.1) forward and slowly close the service lever.

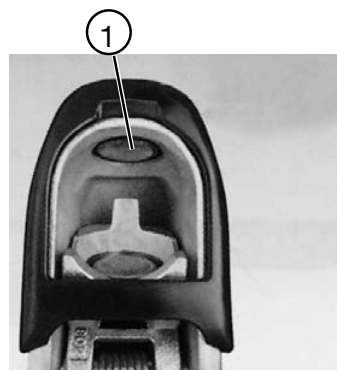
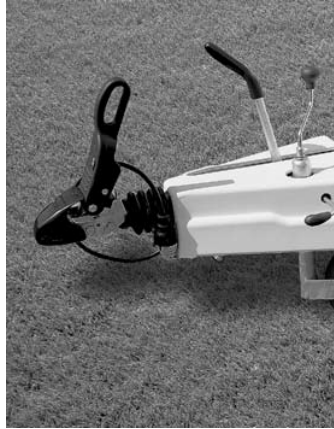


Bild 3

## Maintenance



### Coupling ball on base vehicle

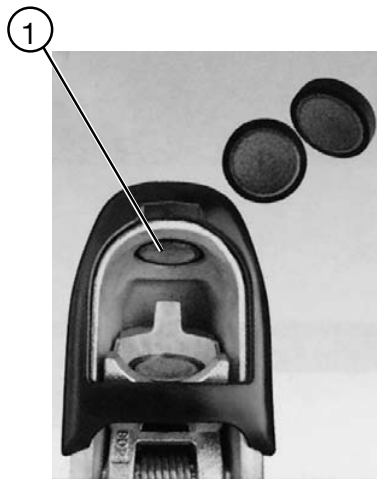
The coupling ball should be dimensionally stable, free of damage, clean and free of grease. When using dacromet-coated (dull silver anti-corrosion coating) as well as lacquered coupling balls, the coating must be removed completely with sandpaper (200-240 grain) so that it does not create deposits on the friction lining. The metal surface of the coupling ball must be bright. A damaged or dirty coupling ball causes increased wear of the friction linings; a greasy one greatly diminishes the stabilization effect. Thinning solvents or spirit are both suitable for cleaning.

### Tension ball coupler

The interior of the tension ball coupler in the area of the friction linings should be kept 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

The front friction lining (1) can be changed in case of excessive wear. Note the detailed assembly instructions in the manufacturer's set of spare parts. The rear friction lining has such a large dimension that it does not have to be replaced.



---

## 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 coupling ball on the base vehicle,
3. a damaged or dirty coupling ball on the base vehicle,
4. dirty friction elements on the tension ball coupler.

### Hints for 1 and 2:

Remove the surface coating of the coupling ball with sandpaper (200-240 grain) and clean with a thinning solvent or spirit.

### for 3:

Polish or clean dirty or damaged coupling balls.

### for 4:

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

## 3.2 Vehicle registration

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

The following documents are required to initiate the registration process:

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

Please remember to apply for a suitable "100 km/h" sticker, should you require one.

## 3.3 General inspection

In accordance with Section 29 of German Road Traffic Licensing Regulations, your camper must be presented every two years for inspection. The Technical Inspection authority, German Association for Motor Vehicle Inspection or another state-recognised expert are all entitled to carry out inspections.

The following documents must be presented at each inspection:

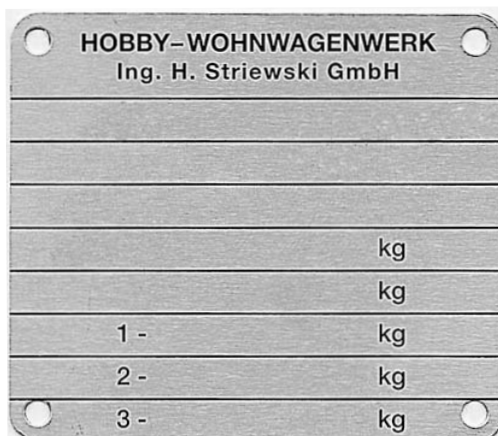
- motor vehicle registration certificate, Part I
- valid certificate of inspection for gas facilities, documenting installation. The initial certificate is located in the service package for the camper.

### Vehicle ID number (FIN)

The 17-digit vehicle ID number, legible from the right, is located either on the front right-hand side of the forked drawbar (models 400 - 650) or on the right-hand side of the front crossmember (models 720/750).

Furthermore, the FIN is etched on the name plate.

Always have the FIN handy in case of inquiries or when visiting your dealer.



### Name plate

Number of general type approval

Vehicle ID number (FIN)

Permissible maximum weight

Permissible axle load, 1st axle

Permissible axle load, 2nd axle

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## 3.4 Definition of mass

### Definition of masses (weights) for campers

The EU regulation 97/27/EG applies for calculating the masses (weights) and for the loading which results from these calculations. The EU 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.

## 3.5 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.

## Drawbars/Longitudinal beams



Bent or damaged drawbars must be replaced immediately. Repairing buckled drawbars is forbidden.



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## 3.6 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.

## 3.7 Locking brake facilities

The components of the brake facilities are covered in the general operation permission documents. 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

- Press the locking brake lever back into the original position.

## 3.8 Overrunning brake facilities

The brake system must be inspected after driving 1,000 km. If the tension ball coupler can be pushed in by hand to more than a third of the usable overrunning path (approx. 30 mm), the brake facilities must be adjusted. These procedures should be repeated every 5,000 km, but at least once a year.



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.



## 4. Wheels, tires

### 4.1 Tires

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

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



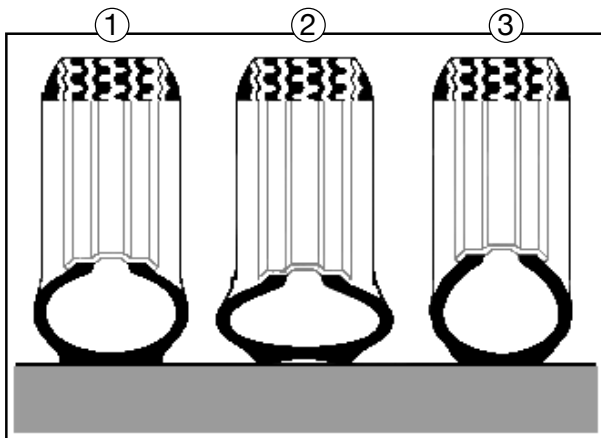
Due to the type of construction, the tires on campers with a tandem axle may wear out more quickly.

### 4.2 Tire pressure

Check the tire pressure on all tires as well as the spare tire approximately every four weeks and before all long trips.

Rules for checking tire pressure:

- Check and fix tire pressure every four weeks (but at least every three months) and before every drive.
- If driving on low tire pressure is unavoidable (i.e., from the campsite to the nearest service station) you should drive at a maximum speed of 20 km/h.
- Raise the pressure of the base vehicle's rear tires by 0.2 bar.
- Tires must be checked when they are cold.
- If tires are checked or the tire pressure corrected when tires are warm, the pressure must be up to 0.3 bar higher than if the tires are cold.



**Rules for tire pressure:**

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



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



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

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



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

## 4.3 Profile depth and age of tires

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



Tires age even when used rarely or not at all.

### Tire manufacturers' recommendation

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

### Age of tires

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

Example:

DOT 4506 refers to week 45 in manufacturing year 2006.

## 4.4 Rims

Use only those rims indicated in the general operating permission documents. If you would like to use other rims, you must consider the following points:

### 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.



The exact specifications can be found in the general operation permission documents.

### Rules for wheel screws:

- Wheel screws should first be tightened after 50 km, then every 500 km.

### Adjusting torque

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



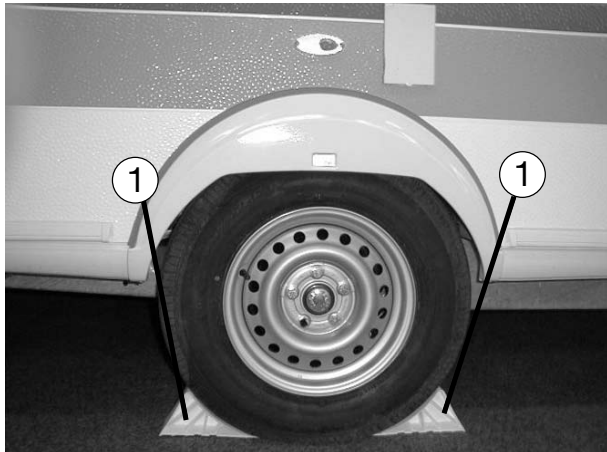
**WARNING:** When changing rims (steel -> aluminium / aluminium -> steel) ensure that you are using the correct wheel screws.

## 4.5 Changing the tire

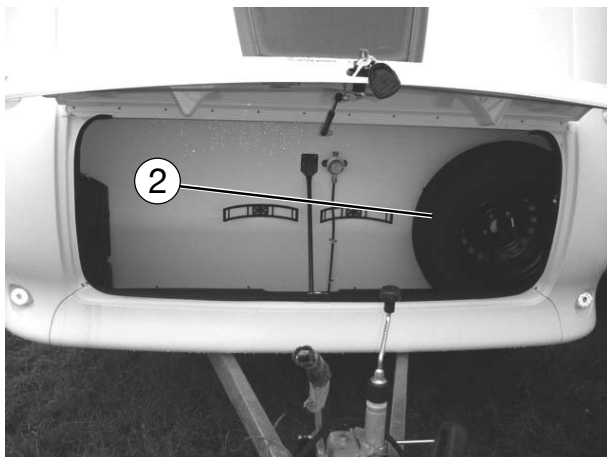


### Preparing to change the tire

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



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



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



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

## Warnings for changing the tire:



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

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

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



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



The rotating stanchions may not be used as a jack!



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



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

## Changing the wheel

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



- Lower the jack and remove it.
- Tighten the wheel fastening screws evenly with the wheel wrench. The nominal value of the attachment torque is 110 nm for steel rims and 120 nm for aluminium rims.
- Release the handbrake and reactivate the stabilization system.

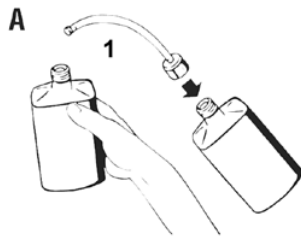


You should have a functional spare tire available at all times. Therefore, have the spare tire replaced without delay.

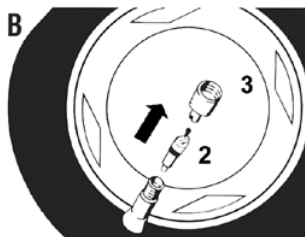


## Tire repair kit

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



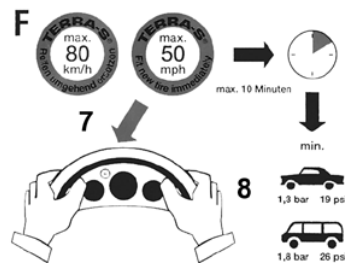
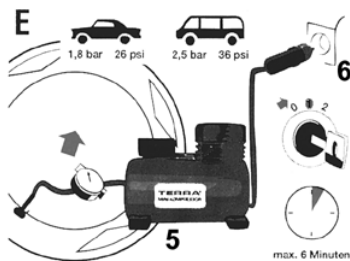
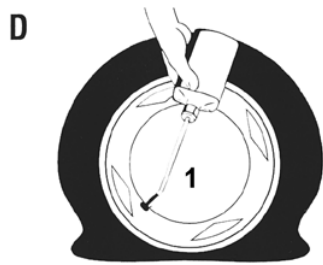
- A** Shake the bottle. Open the fill hose (1) on the bottle (foil seal is thereby punctured).



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



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



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

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

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

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

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



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

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



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



## 5. Exterior structure

### 5.1 Forced ventilation/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 and a forced de-aerating system is located in the ceiling which should not be interfered with. Ventilation and de-aerating of the refrigerator can be closed with the corresponding covers if not operated via gas.



Note the guidelines on the covers, which may only be used during electrical operation in winter.



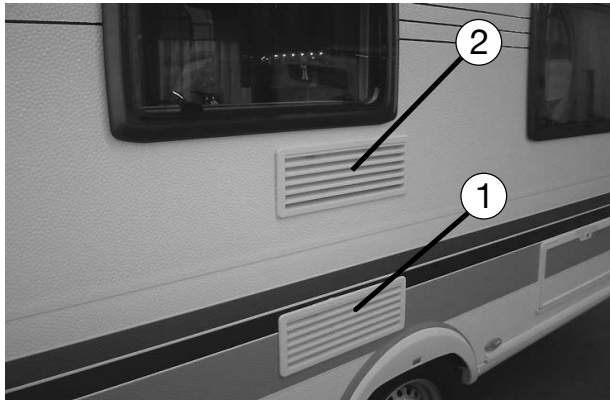
We recommend that you open the roof bonnets whenever you live in the camper.



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



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



## Refrigerator

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



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



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



We recommend that you remove the ventilation bars when outside temperatures are very high. This creates a high air circulation on the refrigerator and increases cooling capacity.



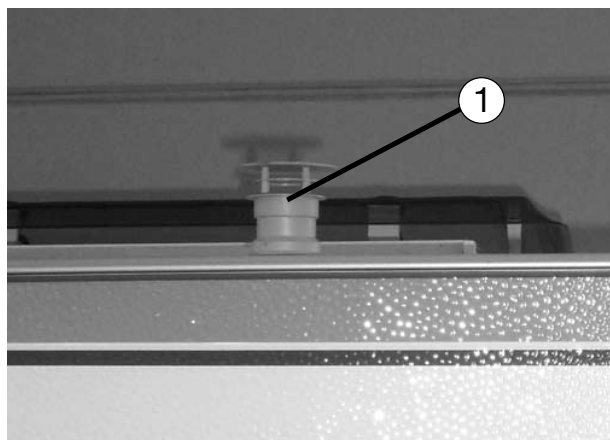
To remove ventilation bars:

- Turn the screw (3) to the left until it locks.
- First pull the ventilation bar carefully to the left.
- Then remove the ventilation bar.

## Heating element

A ventilation flap provides the heating element with fresh air.

The air from the heating element is carried outside by a flue. The flue is located on the roof of the camper (1).



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 Vehicle keys

The following keys are provided with the camper:

- Two keys which fit into the following locks:
  - entry door,
  - service flaps,
  - toilet flap.

### Entry door

#### To open:

- Unlatch the lock with the key.
- Pull the door handle.
- Open the door.

#### To shut:

- Shut the door.
- Turn the key until the latch clicks audibly.
- Turn the key back into the vertical position and pull it out.



To prevent damage to the lock and doorjamb, the inner door handle must be in a perfectly horizontal position and not slanted upward.



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



### Service flap

#### To open:

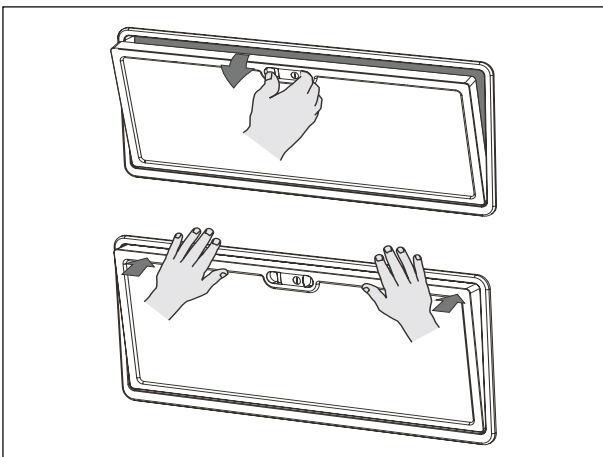
- Hold your hand over the lock and press the flap firmly inward.
- Unlatch the lock with the key.
- Open the flap upward or downward.

#### To shut:

- Close the flap upward.
- Press the flap shut, pushing on the left and right with both hands, to ensure that all fastenings actually lock 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.





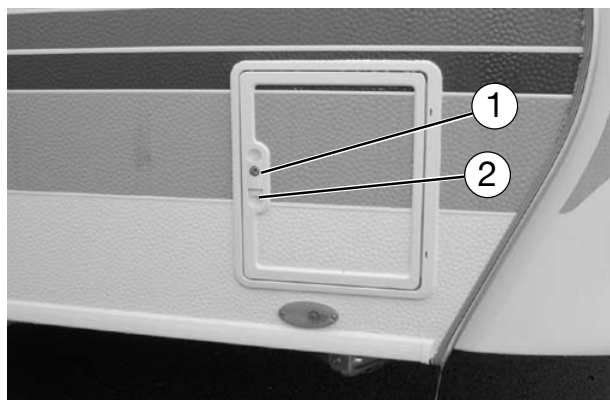
## Gas-bottle container flap

### To open:

- Unlatch the lock (1) with the key.
- Grip handle and open flap.

### To close:

- Turn the flap back until it locks in.
- Latch the lock with the key.



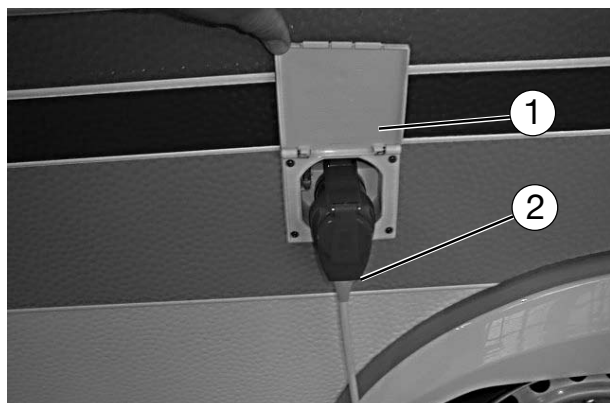
## Toilet flap

### To open:

- Unlatch the lock (1) with the key.
- Press the knob (2) and open flap.

### To close:

- Turn the flap back until it locks in.
- Latch the lock with the key (1).



## Exterior electrical socket

### To open:

- Grip the cover flap at the bottom (1) and lift it up.

### To close:

- Pull the CEE plug (2) out.
- Push the cover flap (1) down until it locks into place.

## 5.3 Exterior mirrors

The base vehicle must be equipped with two mirrors to operate the trailer. The exterior mirrors must ensure that the lanes surrounding the trailer are sufficiently visible.



For safety reasons, the exterior mirrors on the base vehicle must always be properly adjusted before each drive.

### Rules for the purchase of additional mirrors:

- If at all possible, bring the trailer carriage to the place of purchase.
- Have the mirrors trial-fitted on the spot.
- Check that the mirrors are suitable to the dimensions of the vehicle and the sitting position of the driver.
- Additional mirrors should be EC-type tested and thereby correspond to EC regulations.

## 5.4 Roof rail



### Rules for loading the roof rail:

- Only store light baggage on the roof.
- Lash the roof load sufficiently and secure it against slippage or falling.
- Do not load the roof excessively! The heavier the roof load, the worse the overall handling of the vehicle.



The maximum total load for the roof rail is 50 kg!



Note the maximum permissible axle burdens.  
Calculate the measurements of the roof load in relation to the vehicle height.  
Post a note of the total vehicle height in a highly visible place near the driver. Then you no longer have to calculate when approaching bridges and thoroughfares.  
Do not cover the waste gas flue.



## 5.5 Entry door



### To open:

- Turn the latch in the direction of the hinge.



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

### To close:

- Turn the latch away from the hinge



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

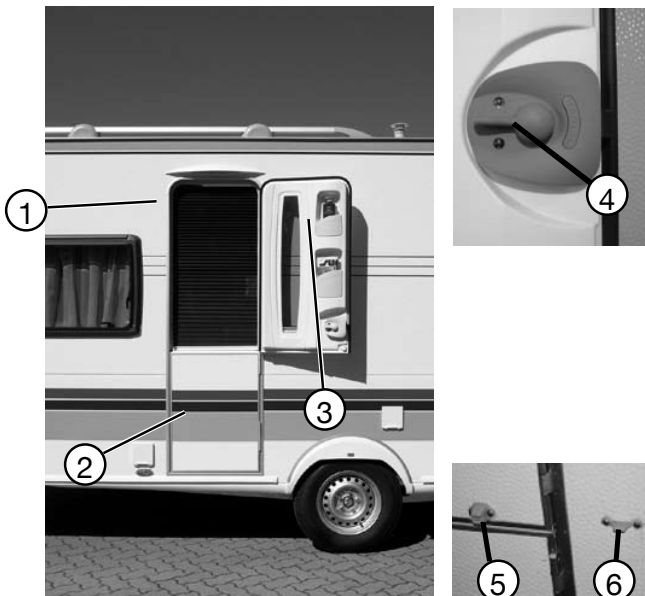


Only drive when the entry door is shut.



### Upper part of door:

The frame (1) and the bottom part (2) of the entry door can be closed even if the door is open. To do this, the upper part (3) of the door must be unlatched from the frame after the door is open.



### Unlatching the upper part of the door:

- Push the latch (4) in the direction of the hinge and press it outward. The door is then unlatched and opens to the outside.
- The latch (4) snaps back to the original position when let go.
- Open the upper part of the door and press it against the vehicle wall. In this process, the door arrest (5) snaps into the opposite piece (6) of the vehicle wall and prevents the upper part of the door from falling shut.
- The door frame and bottom part of the door can now be swung back separately from the upper part of the door and opened slightly.

### Latching the upper part of the door:

- Push the upper part of the door (3) against the door frame (1) until the latch snaps into place.

## 6. Installation of electrical devices

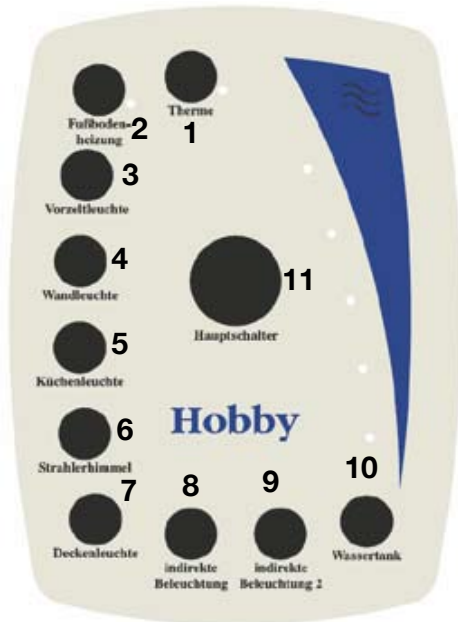
### 6.1 Safety tips

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

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.
- **If the vehicle is equipped with a battery:** Only accumulators with bound electrolytes (gel battery) may be installed.
- Turn off all equipment that uses 12 V before connecting or disconnecting the battery.
- Only authorised specialists may work on the electric system.
- Improper instalment of electrical devices can endanger your life and cause fires.
- Use only a 3 x 2.5 mm<sup>2</sup> cable with a maximum length of 25 m, a CEE plug and connector to connect the camper to an external 230 V mains. Cable drums must be completely unwound, as otherwise there is a great risk that the cable may burn (fire caused by induction, which results in the cable's heating up).
- In Europe, all owners of camping grounds are obliged to provide residual current operated devices for electric cables. However, we recommend that you connect a residual current operated device in series to your cable. This also applies for exterior electric sockets on houses.

## 6.2 Service panel



### Push-button

- 1 Heating system
- 2 Floor heating  
(not standard equipment)
- 3 Light in outer tent
- 4 Wall lamps
- 5 Kitchen lamp
- 6 Diffused reflecting lights
- 7 Ceiling lamp
- 8 Indirect lighting
- 9 Indirect lighting 2
- 10 Water tank
- 11 Main switch

### Function

- On/off switch - red LED shows function.
- On/off switch - red LED shows function.
- On/off switch for light in outer tent.
- On/off switch for lamps.  
Holding the push-button activates the dimmer function. Light increases and decreases.
- On/off switch for lamp.
- On/off switch for lamps.
- On/off switch for lamp.  
Holding the push-button activates the dimmer function. Light increases and decreases.
- On/off switch for indirect lighting (top).
- On/off switch for indirect lighting (bottom).
- Level indicator for water tank.

#### **1 short press of the push-button**

Turns off all consumers connected to this system; saves the selection status (on/off or dimmed). Does not affect heating system and floor heating.  
Press the push-button again to activate the lights to the previously saved status.  
If you hold the **push-button for 5 seconds** when turning it off, all of the consumers connected to this system, including the heating system and the floor heating, are turned off.  
(The memory is reset.)

### General information

The main switch is **only** for the consumers connected to this system! Lamps and other consumers, e.g. the refrigerator, water pump, etc., are **not** controlled and/or switched using this switch.

## Secondary panel 1

### Sleeping area



#### Push-button

**Left**

#### Function

On/off switch for mounted spotlight on left side of bed.  
Holding the push-button activates the dimmer function.  
Light increases and decreases.

**Centre**

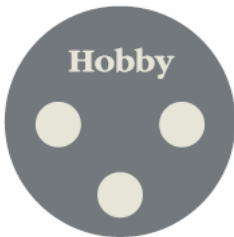
On/off switch for ceiling lamp over suite.  
Holding the push-button activates the dimmer function.  
Light increases and decreases.

**Right**

On/off switch for mounted spotlight on right side of bed.  
Holding the push-button activates the dimmer function.  
Light increases and decreases.

## Secondary panel 2

### Washroom



#### Push-button

**Left**

#### Function

On/off switch for mounted spotlight above Porta Potti portable toilet.

**Centre**

(no function)

**Right**

On/off switch for washroom lamp.

## Remote control

The remote control allows you to operate the service panel according to your needs.

(Not part of standard equipment; available as an extra)

## 6.3 Electrical supply

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

- 230 V mains connection 50 Hz. (1)
- via the base vehicle if it is connected using the 13-pole plug (limited functions)
- via a built-in auxiliary battery (not included). Everything that uses 12 V, such as lighting, water supply, etc., is available.



### Supply via mains connection

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



The 230 V system is protected by a two-pole 13 A overload release (1). (Exceptions to this include special installations such as ultraheat, warm water heating, etc. In this case, an additional two-pole 16 A overload circuit breaker is installed.)

The fuse box is located in the clothes cupboard.

Before connecting the camper to the 230 V mains, turn off the overload circuit breaker by pressing the rocker button down. Now you can set up an electric connection using the cable.



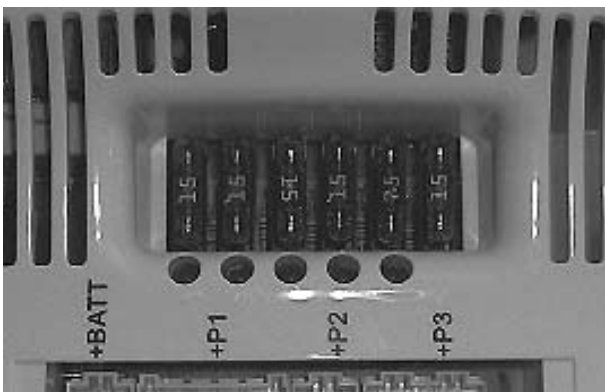
## Rules for the mains connection:

- Use only a 3 x 2.5 mm<sup>2</sup> cable with a maximum length of 25 m, a CEE plug and connector to connect the camper to an external 230 V mains. Cable drums must be completely unwound, as otherwise there is a great risk that the cable may burn (fire caused by induction, which results in the cable's heating up).



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

- After setting up the connection, the overload circuit breaker can be turned on again by pressing the rocker button up. If a residual current operated device (special installations) has been installed in your camper, it must be checked regularly by activating the test button.
- 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 water heaters, etc., you must ensure that this electric power value is not exceeded, taking other electrical equipment into account that is in use, e.g. refrigerator, therme, etc.



## Assignment of fuses 450VA Current supply

For 450VA current supply, the fuses must be inserted as shown in the illustration.

Sequence from left to right:

1. Circuit 1 / 15A
2. Circuit 2 / 15A
3. Circuit 3 / 15A
4. Circuit 4 / 15A
5. Circuit 5 / 7.5A for water supply, oven etc.
6. Circuit 6 / 15A for regulator not via cutoff relay



Fuses that were plugged into the wrong place must be replugged into the correct place

## 6.4 Function of the electrical supply unit

The redirect from battery operation to the mains connection occurs automatically as soon as a mains connection is available.

The electrical supply unit converts the external network voltage for those 12 volt devices present with a converter.

All of the lamps in the camper are run on 12 V direct current. Only the large electrical devices, such as the therme, microwave, air conditioning, etc., are 230 V devices.

**Exception:** in the **Landhaus** model, some of the lamps are run on 230 V.



Your camper also has a combined exterior socket with an antenna connection. Here, for example, a television can be hooked up in the outr tent. The integrated antenna connection can be used as an entry or exit sleeve, according to your preference. You can get more detailed information from your HOBBY dealer.

### Operation via battery

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 is equipped.

The 12 V operation should be switched off 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.

**The base vehicle must always be electrically disconnected from the camper before a low-voltage supply is connected to the camper.**

**This camper series has not been equipped for internal battery supply.**



Please follow the separate instructions for the "self-sufficient package" equipment, which are included with the camper's documents.

If an auxiliary battery is used, it must be replaced by the same type of battery with the same specification as the originally installed auxiliary battery, or as instructed by the manufacturer.

## 6.5 Truma-Vent-Gebläse



Bild 1

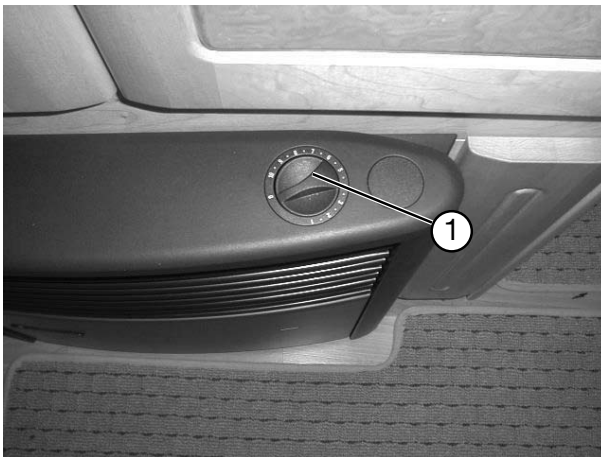


Bild 2



Bild 3

The camper is equipped with an air circulation unit (equipment varies according to each model). This unit distributes the warm air from the heating element throughout the entire interior. The desired level can be adjusted by the turning knob. The turning knob (1) is located on the casing of the heating element (Fig. 1 and 2).

### Operation with 12 volt automatic torque

#### Adjustment by hand:

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

#### To turn off:

- Set switch to position (2).

#### Automatic operation:

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



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



## 6.6 Changing the taillight bulbs



Carefully remove the protective caps with a screwdriver.



Remove the four fastening screws with a crosstip screwdriver.



Now you can remove the taillight from the frame.



Remove the holder by loosening the screw.

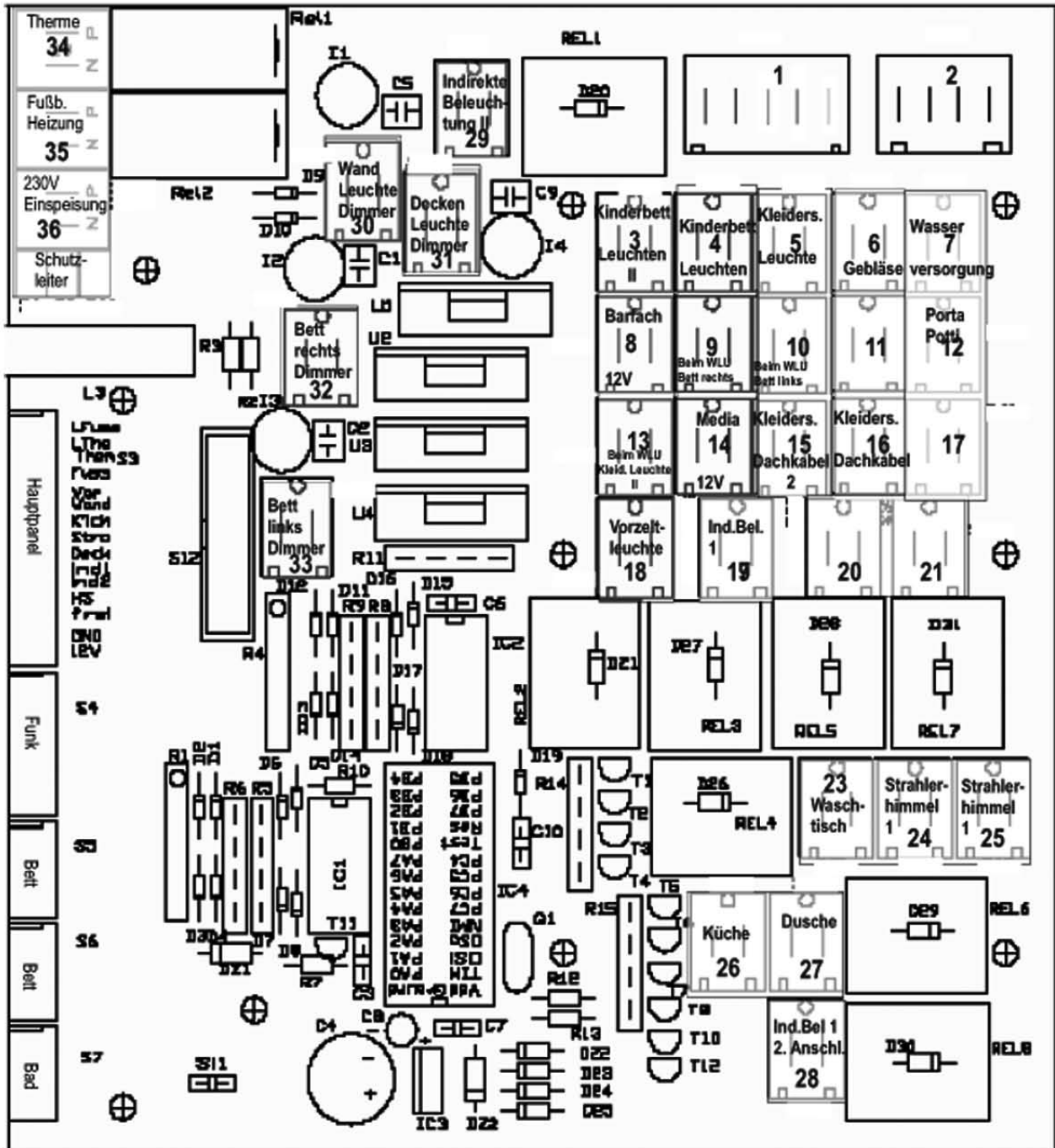


The bulbs are now freely accessible.  
Put the taillight back together by repeating the process in reverse.

## 6.7 Circuit diagram (interior)

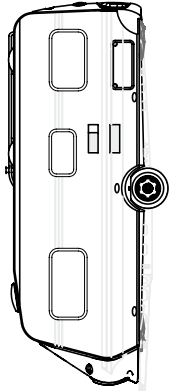
Models: Excellent / Prestige

### Hobby Light Control System 2007

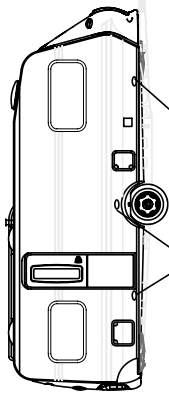


# 6.8 Circuit diagram (exterior)

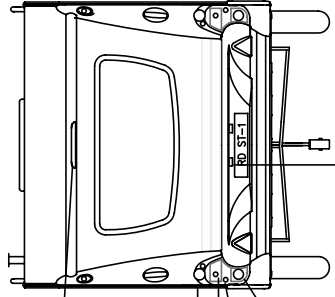
## 12 V Electrical Installation for Vehicle - 2007



Side positioning light 5W

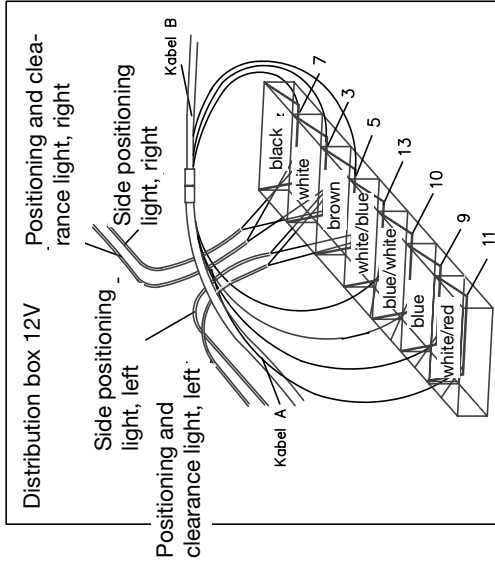


Front running light with reflector 5W

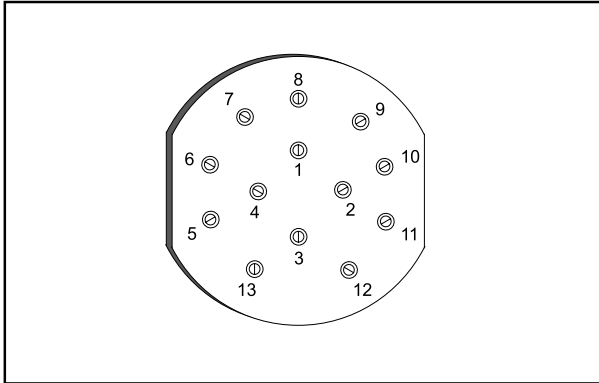


LED brake lights  
Red clearance light 5W  
Route-indicating signal 21W  
brake lights 21W  
Taillight 10W  
Rear fog light 21W

Number plate light 5W



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	Vlt/blå	2.5	Mass for 9



## "Jäger" outlet (13-poled)

View from connection side

Contact	Circuit
1	direction indicator, left
2	fog lamp
3	mass (for circuits 1 through 8)
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

## Contacts of sockets in accordance with DIN 1648-1:97

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## 6.9 Lighting in the camper (switched using the service panel)



Circumferential halogen spotlights above the suite (from "Excellent" model onwards)



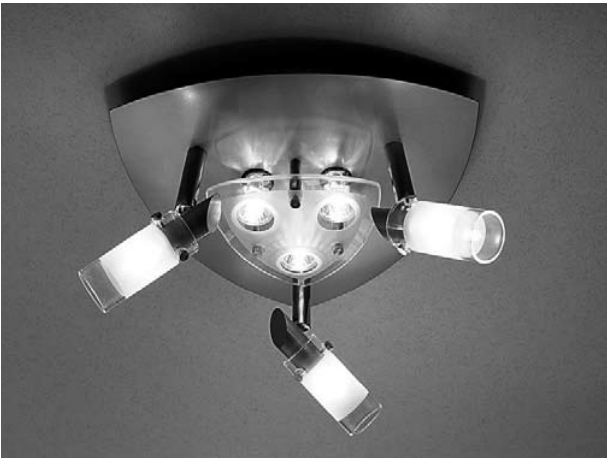
Corner shelf with integrated lamp can be switched on/off separately.



Indirect lighting above stowage cupboards by the suite and kitchen with additional rotating spotlight.



Indirect lighting above the windows by the round sitting area.



Ceiling lamp above suite (can be dimmed).



Lamps in clothes cupboard.

---

## 6.10 Electric floor heating

**(Not part of standard delivery; available as an extra)**

The heating is located in the middle walking strip of the floor; it is 60 cm wide. The length depends on the camper model. This heating is not meant to heat the room; instead, it serves to prevent loss of heat through the floor.

### **To turn on the 24 V floor heating:**

You will find the switch on the service panel.

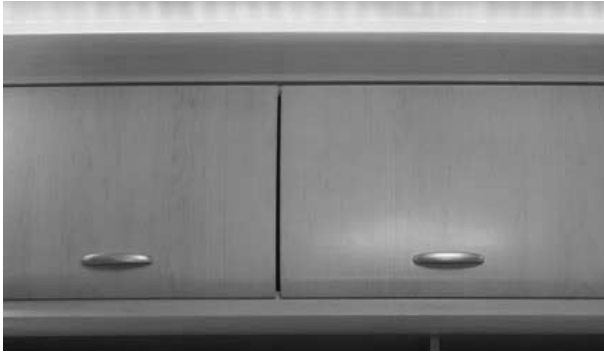
### **Technical data:**

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

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

## 7 Interior structure

### 7.1 Opening and closing doors and flaps



#### Furniture flaps with handle

##### To open:

- Pull the handle until the flap opens.

##### To close:

- Press the flap on the handle until you feel the flap shut.



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



#### Furniture doors

Bathroom door handle



#### Furniture doors with knob

Clothes cupboard



## 7.2 Oval media storage cupboard (rotating TV/bar)



Rotating TV/bar, with connection for 15" flat screen TV and LED lighting.  
Connections are located in the L part of the kitchen.



To swing the oval media storage cupboard out, unlock the integrated snap-in lock (1).

## 7.3 Windows



### Hinged windows

#### To open:

The window can be adjusted to open at varying degrees:

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



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



①

②

#### To shut:

- Lift the window slightly outward so that the hinge disengages.
- Close the window.
- Turn the latches (1) and (2) into the vertical position.



### Separate shades and insect screens

The shades and insect screens are integrated in the window frame. The shade can be adjusted to several positions.

#### To shut the shade:

- Pull the shade into the desired position with the strap and let go. The shade remains in this position.

#### To open the shade:

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



#### **To shut the insect screen:**

- Pull the insect screen (3) completely down with the strap (4) and let go. The screen remains in this position.

#### **To open the insect screen:**

- Pull the insect screen (3) slightly down with the strap (4) and then guide it upward. The screen rolls upward automatically.



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



The shades and insect screens should be left open when the caravan is not in use in order to avoid consequential damage.

## 7.4 Roof bonnets



Panorama thermal roof bonnet



Thermal roof bonnet in bedroom

### 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  $-20^{\circ}\text{C}$ !
- 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!**

### To open the bonnet:

Before opening the bonnet, make sure the area above the bonnet is free of obstacles. The bonnet can be opened to an angle of  $60^{\circ}$ . Push the crank ejector in the direction of the arrow to eject the crank. Turn the crank to its user position. Crank in a clockwise direction to open the bonnet to the desired position. Should there be an obstacle, the crank's overload protection takes effect; in this case, you will hear a slight "grating" noise in the crank. Close the bonnet whenever it rains or there is a storm.

### To close the bonnet:

Turn the crank anticlockwise until the bonnet is closed. Fold the crank and press it into the crank pocket. Should there be an obstacle, the crank's overload protection takes effect; in this case, you will hear a slight "grating" noise in the crank. Give the crank one more turn until it can be pressed back into the crank pocket.



Before driving, make sure the roof bonnet is securely locked.

---

**Shade**

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

**Opening/closing the insect screen**

Use the handle to push the insect screen against the shade until the lock snaps into the handle.

## 7.5 Seat chests and conversion of beds

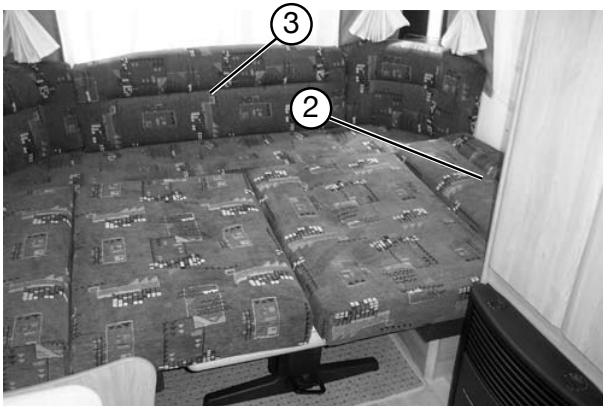
The seat groups can be converted into comfortable beds.



### Elevating table model

#### Conversion:

- Remove the seat and back cushions.
- Pull the latch of the table frame upward and release.
- Pull the latch of the table frame towards the interior of the vehicle and lower the table.
- Replace the seat cushions and pull them to the middle of the table.



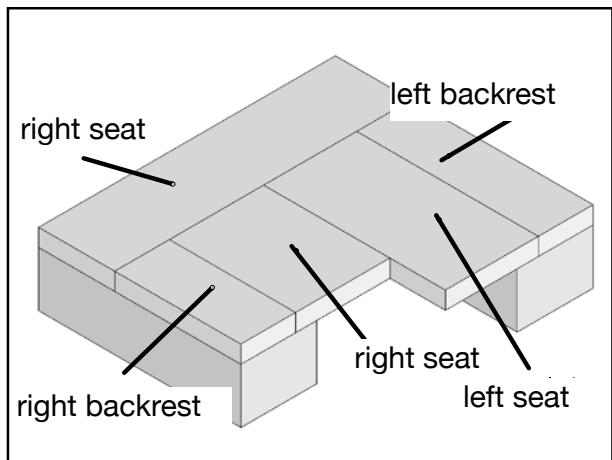
- Fill the empty spaces with the back cushions. To do this, turn the back cushions (2) around and lay them with the wider side against the front or standing wall.
- The back cushion (3) should be placed vertically into the gap to fill the remaining space in vehicles with a width of 2.5 m.



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



Bed expansion for vehicles with rear seat group.



### Setting up the beds

## 7.6 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. Small children should never be left unattended in the caravan.



- Switch children's lamp on/off using the bear's rotatable "nose".  
The lamp can be dimmed and adjusted for use as a nightlight ("blue ears").





## 8. Water

### 8.1 Water supply

#### **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.

#### **Rules for the immersion pump:**

- The immersion pump is only suitable for water.
- The immersion pump tolerates temperatures up to 60° C for a short time.
- Avoid dry runs.
- Protect the pump from freezing.
- Hard blows or hits as well as very dirty water can destroy the pump.
- The pump can transmit at most 8.5 l/min.



## 22 l fresh water tank with service flap

The fresh water tank can be rolled or carried.

### To add water:

- Open the service flap.
- Remove the screw connector and pull the immersion pump from the fresh water tank.
- Pull out the canister.
- Add drinking water to the tank.
- Close the tank with the lid when transporting.

### To remove water:

- Turn the faucets to "cold" or "hot".  
The pump switches on automatically when operated via electricity.

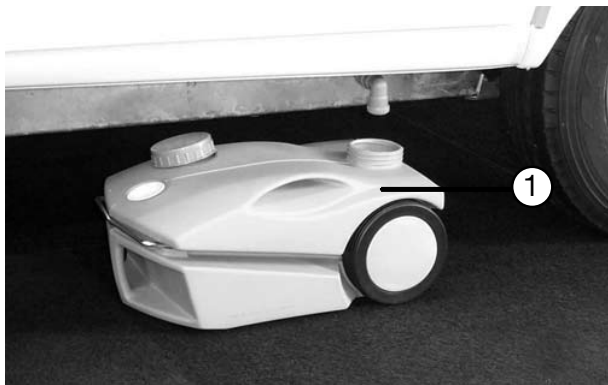
### To empty the tank:

- Open the service flap.
- Pull the immersion pump out of the fresh water tank.
- Pull out and empty the canister.



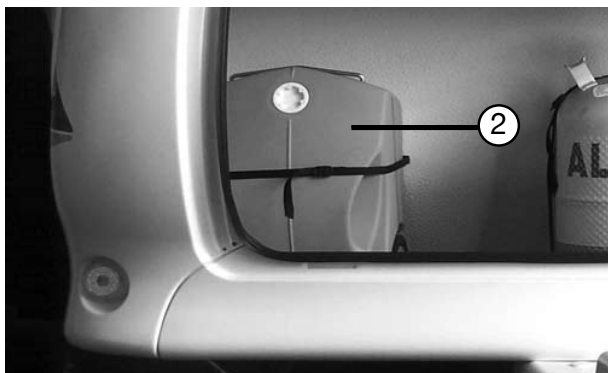
Depending on how the camper is outfitted, it can be delivered with a built-in tank.

Use the measuring cup to fill the 22 l built-in tank.



## Rolling waste water tank

The rolling waste water tank (1) can be pushed under the vehicle when parked; it collects waste water. It has a 22 liter capacity. The waste water tank can be transported with a fold-out transport handle to dispose of the contents at the designated stations.



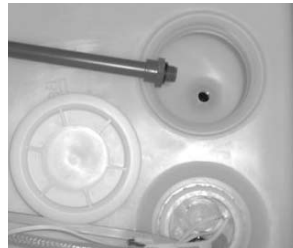
During the trip, the waste water tank can be stored in the gas-bottle container to save space.



## 50 l fixed tank from 540 series onwards

The tank has a volume of 50 liters.

The filler neck on the side wall is used to fill the fresh water tank.



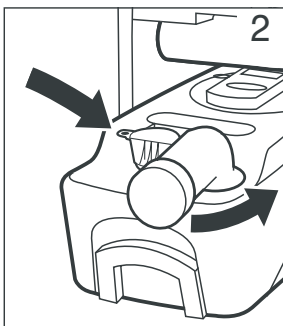
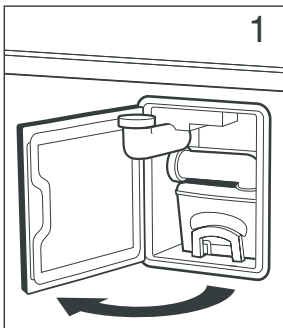
## Emptying the tank and overflow when overfilled

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



Built-in fresh water tank with water level detector (50 l).

## 8.2 Water flushing toilet

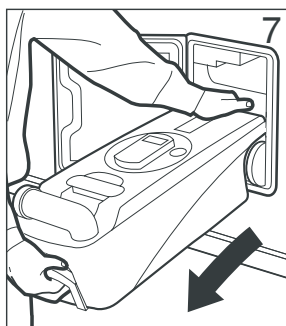
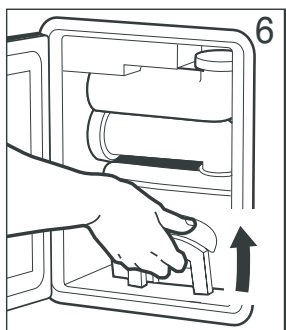
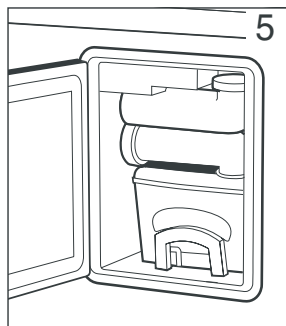
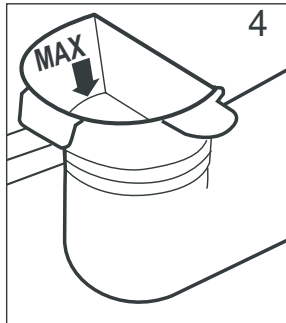
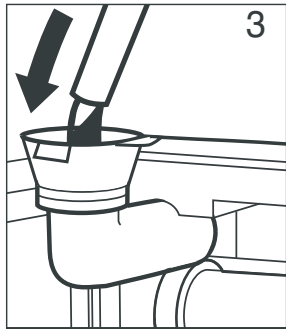


## Toilets with fixed seat and fresh water tank

### To prepare the toilet

1. Open the service flap on the exterior wall of your camper.

2. Swing the fill stanchions of the faeces tank in a 90° arch and remove the water tank extension (located under the handle closest to the drain nozzle).



3. Turn the water funnel outwards, remove the cap and place the extension over the funnel. Pour the required amount of Thetford toilet additive into the water tank. This ensures better flushing and cleansing and keeps the water in the fresh water tank fresh.

4. Fill the water tank with fresh water.



Ensure that the water level is below the water funnel.

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



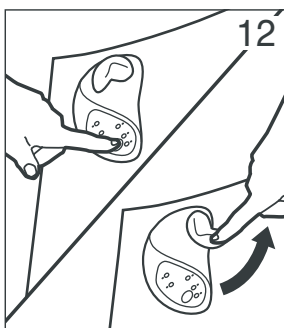
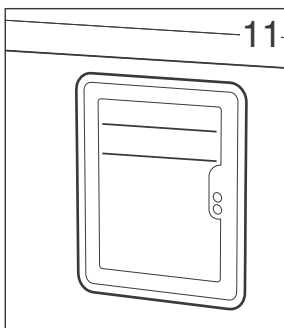
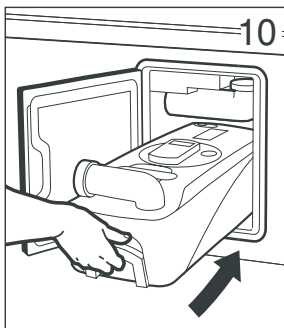
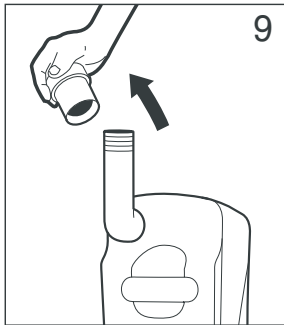
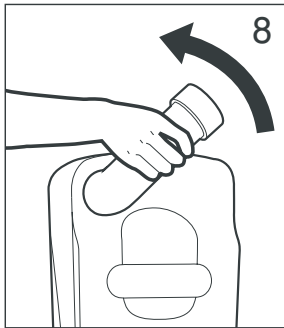
Depending on the amount of space between the door and the faeces tank, you can also use a peg to fasten the extension to the door. Screw the cap back onto the water funnel and press it back inside towards the fresh water tank.



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

6. Remove the faeces tank by pulling the securing clamp upwards.

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



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



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



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

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



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

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

## Operation

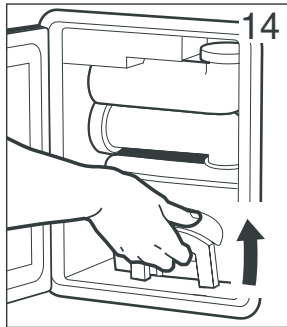
12. Let some water run into the toilet-bowl by pressing briefly on the flush knob or open the valve by turning the lever counterclockwise. Your Thetford toilet is now ready for use.



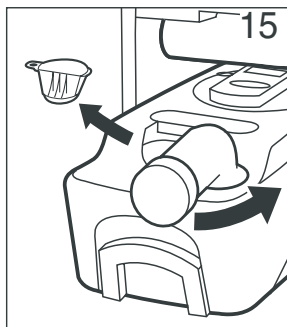
13. After use, open the valve (if it is still closed) by turning the lever counterclockwise. Flush the toilet by pressing the flush knob for several seconds. Close the valve after use.



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



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

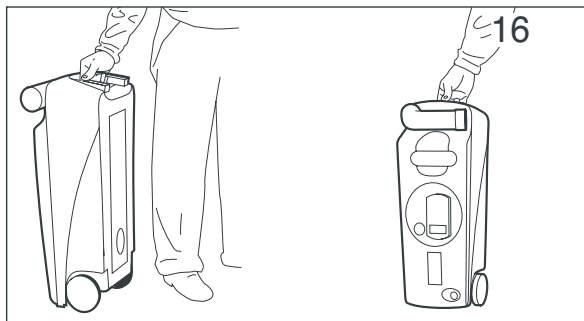


### Emptying the faeces tank:

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



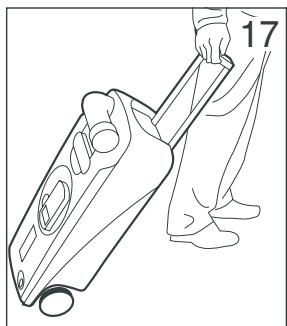
Never let the faeces tank get too full.



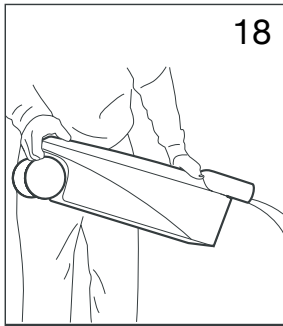
14. Ensure that the valve is closed. Open the service flap on the outside of the camper. Push the securing clamp upwards and remove the faeces tank.

15. Remove the water tank extension first to prevent its being lost when emptying the faeces tank.

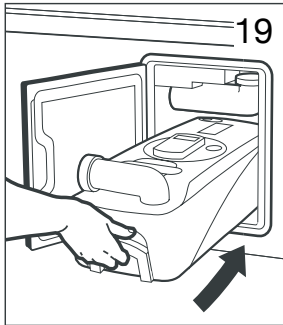
16. Place the faeces tank in a vertical position (tiltable lever on the top, wheels on the bottom). Press the lever down and move it away from the faeces tank so that the tank jumps out of its locked position.




17. Pull the lever up and wheel the faeces tank to a designated and approved disposal site.



18. Push the lever back. Turn the pouring stanchion upwards and remove the cap from the pouring stanchion. Hold the faeces tank in one hand, using its upper handle, and keep the other hand on the rear handle, enabling you to operate the ventilation knob with your thumb when you empty the tank. To empty the tank without splashing, press the ventilation knob carefully while emptying the tank. After emptying, rinse the tank thoroughly with water. Use water to clean the valve as well.



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

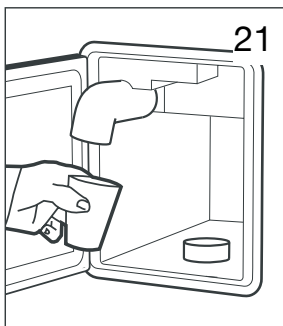
19. If necessary, prepare the toilet once again for use. Replace the water tank extension in its original position on the faeces tank. Push the faeces tank back into the toilet and close the service flap.



## Storage

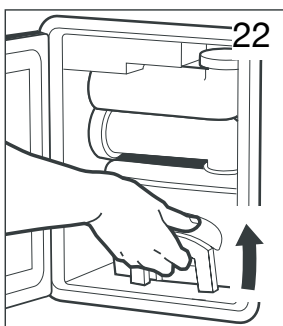
If you do not plan to use your Thetford toilet for a longer period of time, it is important that you follow these instructions first:

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



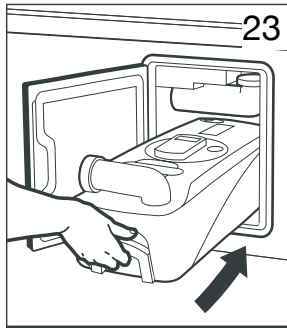
20. Open the valve by turning the lever on the toilet counterclockwise. Now continue pressing on the blue knob until no more water runs into the toilet-bowl. Shut the valve.

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



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





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

## 8.3 Warm water supply via Truma-Therme



### Rules for warm water supply:

- Only use water suitable for drinking.



Note the user's guide before first use!

### To fill the therme:

When using a pre-mixing unit:

- Turn the regulator knob (2) of the pre-mixing valve to the red "hot" symbol until it locks.

When using a mixing faucet:

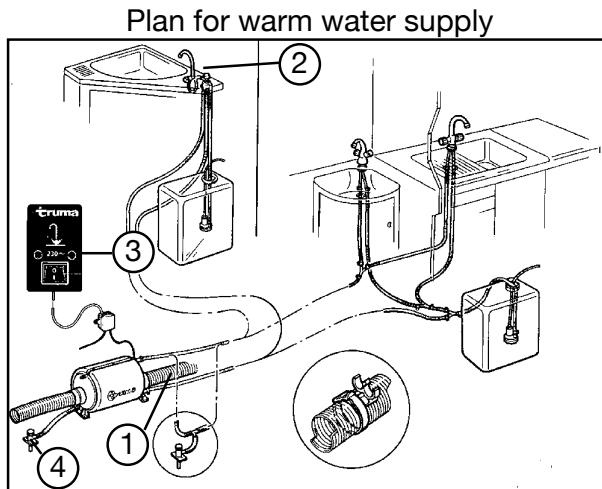
- Open the warm water faucet or set the one-level mixer to "warm".
- Leave the faucets open until the Truma-Therme is filled by blocking the air and hot water flows.

### To remove water:

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

## Emptying the therme:

- Disconnect the electricity supply to the water pump on the main switch or transformer.
- Open all faucets.
- Set all pre-mixing valves to "warm" if necessary.
- Open the runoff valve (4).
- Check to see if water runs out.
- Close the runoff valve (4) after emptying (if necessary, blow the line out).



## Electric operation:

- Set the switch on the control panel (3) to the "on" position. When the light comes on, the unit is operating. Regulate the temperature to 55° C, using the thermostat.
- Power consumption: 300 W.

## Rules for the therme:

- Shut off the device when the camper is not in use.
- Empty the therme at the risk of frost. Frozen water can cause the therme to burst!
- No recoil valve may be built into the cold water faucet (1) between the therme and the immersion pump.
- A depressuriser must be used if the pump is connected to a central water supply, or on stronger pumps. The pressure in the therme may not exceed 1.2 bar. In addition, a safety valve or runoff valve (1) must be used in the cold water tap.
- We recommend that you do not use the water from the therme as drinking water.



Never operate the therme electrically when it is empty.

## WARNING:

The block circuit diagram only reflects the function. Due to the various floor plans, individual modifications are possible.



## 9. Gas

### 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.

#### 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.
- 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.



Connections on gas pressure regulators are screwed on counterclockwise.

- 
- 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.

### **Waste gas**

- The waste gas pipe must be tightly attached to the heating element and the flue. If it shows damage, it should be replaced.
- Waste gases must be able to escape unobstructed, and fresh air must be able to flow in unobstructed. Therefore, no snow barriers or skirts may lie directly against the vehicle. The suction openings under the vehicle floor must be clean and unobstructed at all times.

### **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 1.4 Emergency equipment).



Read the operating instructions from the manufacturer carefully.

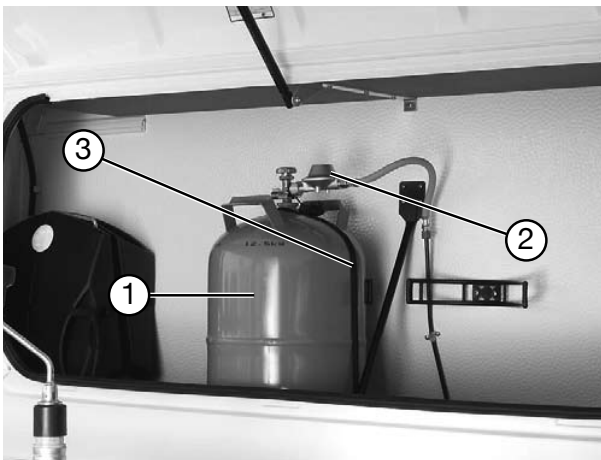


Never use portable cooking or heating devices other than electrical heating devices (note power requirements) but not radiant heaters, because these can cause fire or suffocation.

## 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 bottles of propane gas (1). The gas bottles are connected to the supply line by a safety regulator hose (2). The bottles are fastened by belts (3).



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.

## 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).

## 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.
- No inflammable devices may be in operation when filling the petrol tank of the base vehicle, on ferries and in the garage.



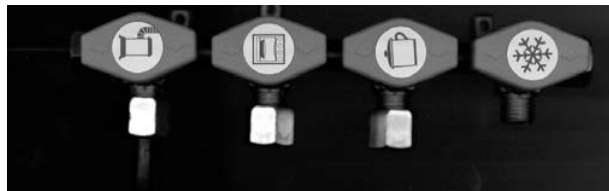
If you suspect a leak in the gas system, you must immediately close all the shutoff spigots in the camper and the gas bottle valves in the bottle compartment.



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.



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



Heating element    Baking oven    Gas range    Refrigerator

## 9.3 Heating element

### Heating element S 5002 and S 3002



Heating while driving is forbidden.



- Above: S 5002 (models 560 to 750)
- Below: S 3002 (models 400 to 540)

#### Place of installation:

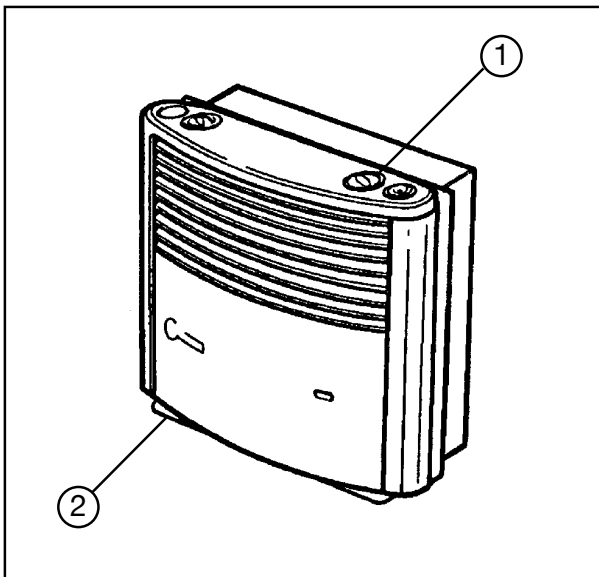
- in the closet or the corner of the flue

#### 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.
- Before the first ignition, ensure that the batteries in the automatic ignitor are working properly.

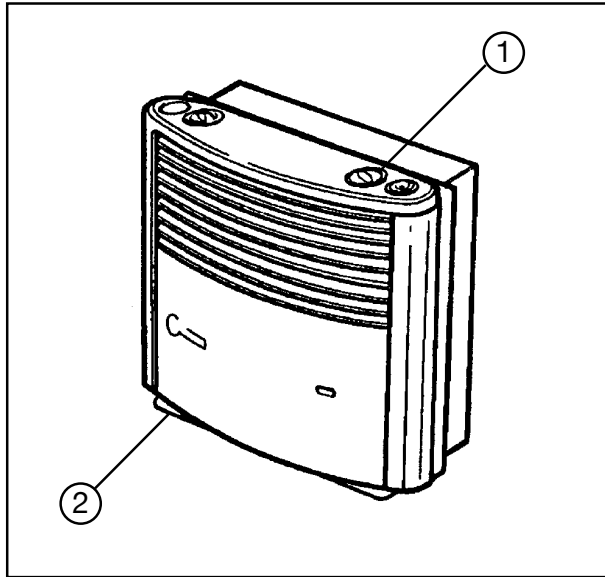
#### Operation:

- Open the bottle valve and the quick-close valve in the gas line.
- Turn the operation handle (1) to the thermostat position 1-10.
- Press the operation handle (1) down until it locks. The ignition is automatic from this position, until the flame burns. The ignition spark is audible. The control light on the automatic ignitor (2) blinks during ignition.
- Hold the operation handle in for up to 10 seconds, so that the ignition fuse kicks in.
- If the gas line is filled with air, it can take up to a minute until the gas is ready to burn. Hold the operation lever (1) in during this period, until the flame burns.



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





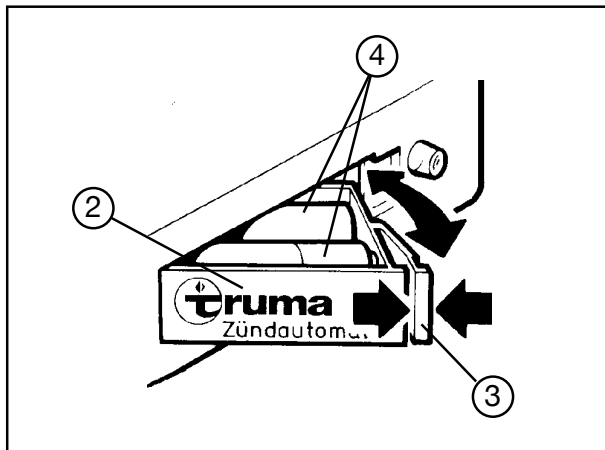
- If the flame extinguishes again, re-ignition takes place during the closing phase of the fusible cut-out of the ignition safety switch (approx. 30 seconds).
- If no flame is ignited, the control light blinks.
- If the control light does not come on at all during the ignition process, the batteries in the automatic ignitor (2) must be replaced.

**To shut off:**

- turn the operation handle (1) to position "0". The automatic ignitor is thereby shut off.
- Apply the flue cap.
- 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:**

- Ensure that the heating element is shut off.
- Unlatch the battery case (2) by pressing the rast lever (3) to the left and swing the case out.
- Insert a new battery of the same type.



**To shut off:**

- Only use a temperature-resistant (up to +70° C) and leakproof mignon battery.
- Push the battery case to the left side of the automatic ignitor.
- Push the rast lever (3) to the right until the latch clicks audibly.



Insert new batteries before the beginning of each heating season.



Also note the separate operating instructions from the manufacturer.

## 9.4 Refrigerator



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



Please follow the separate operating instructions provided by the manufacturer.

### Methods of operation

The refrigerator can be operated in three different ways:

- 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.



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



## 9.5 Gas cooker



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

### Before first use:

- Open the bottle valve and the quick-close valve in the gas line.
- The roof ventilation or the window must be open while operating the gas cooker.
- Operation handles, which must be pressed to ignite gas devices, must automatically spring back into the original position upon release.
- Before using the cooker, the enclosed protective device (3) must be set up or permanently attached to provide effective heat insulation for components and equipment that are at risk from fire.



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!

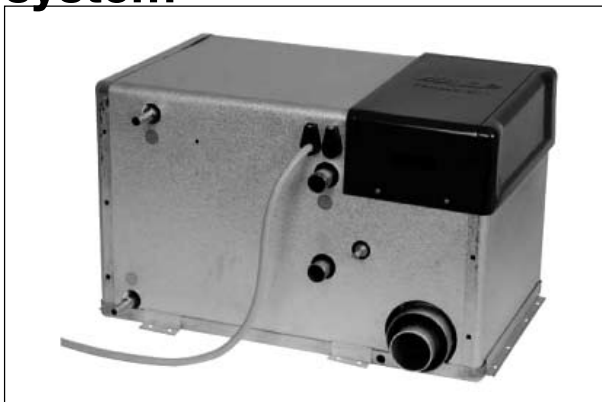


Keep the cover (1) open after cooking for as long as the burners are still giving off heat.



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!

## 9.6 Hot-water heating system

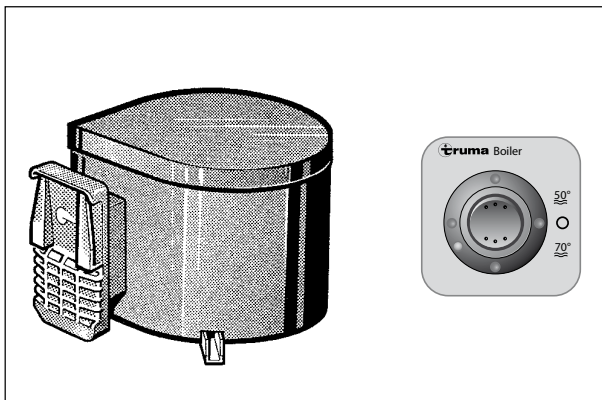


### Ade hot-water heating system



Please follow the separate operating instructions provided by the manufacturer.

## 9.7 Boiler



### Truma boiler



Please follow the separate operating instructions provided by the manufacturer.



## Truma electric boiler



Please follow the separate operating instructions provided by the manufacturer.

## 9.8 Oven



Before initial operation, please note SMEV's operating instructions, which are located among the vehicle's documents.



Use only when the camper is on 230 V operation. The oven has automatic ignition.

## 10. 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]
Garbage system	4.0	HobbyCool 25 air-conditioning system	25.0
Alde hot water heating system	26.0	15" LCD TV	5.0
AL-KO Easy Pull	0.9	LDD TV - universal holder	0.5
AL-KO spare tire holder	7.7	Interior outfitted in leather	5.0
Dockingboy coupling assistance	3.0	Omnistore 6002 awning	27.0
Teleco SF 165 antenna	0.9	Microwave oven	15.0
Self-sufficient package	29.0	Cross strut for roof rail	3.0
Oven	14.1	Ornamental hub cap 2 x 14"	1.0
City water connection	0.5	Ornamental hub cap 4 x 13"	2.0
Roof rail	3.4	Spare wheel carrier	1.0
Drawbar cover	2.4	Digital satellite receiver	3.0
Dometic exhauster hood	3.0	Struts for heavy loads	1.6
Bicycle carrier	6.8	Counterpane	1.5
Ground fault circuit interrupter	0.3	de luxe carpet	7 - 10.5
Flat antenna for satellite system	7.2	Jack with box	5.4
HobbyCool 24 air-conditioning system	25.0	Robstop anti-theft device for drawbar knob	3.0



# 11. Maintenance and upkeep

## 11.1 Maintenance

### Maintenance intervals

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

### Rules for maintenance intervals

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



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

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



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



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

### Greasing and oiling

the sliding parts and stationary parts of the undercarriage should be examined and greased regularly. If the camper is used seldom, yearly maintenance is required.



### Rules for greasing and oiling:

- Have the swinging lever bearings greased after every 2,000 to 3,000 kilometers driven.
- Grease the bearing spaces on the casing of the overrunning system.
- Oil movable parts such as bolts and joints.
- Grease the movable parts of the overrunning system after every 5,000 kilometers driven.
- Check to see that the stationary parts of the shearing rod are not jammed.
- Clean and oil all movable and stationary parts at regular intervals.



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.

## 11.2 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!

## 11.3 Upkeep

### Cleaning the exterior

The vehicle should not be washed more often than necessary.



Only wash the vehicle at specially designed wash sites.



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



Do not use cleaners which contain solvents.

## Rules for cleaning the exterior:

- Rinse the vehicle with a light stream of water.
- Wipe the vehicle down with a soft sponge and typical shampoo solution.  
Rinse the sponge often in the process.
- Afterwards, rinse with a great deal of water.
- Dry the vehicle with a suede cloth.
- Allow the vehicle to stand out in the open after washing to let it dry.



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

## Cleaning with a high-pressure cleaner



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

Note the instructions for the high-pressure cleaner before washing the camper with it. Keep a minimum distance of 700 mm between the camper and the high-pressure nozzle. Note that the water jet comes out of the cleaning nozzle with a great deal of pressure. Incorrect use of the high-pressure cleaner can damage the camper. The temperature of the water must not exceed 60° C. Keep the water jet constantly moving during the entire washing process. The water jet must not be aimed directly at the clearance between the door frame and door leaf or the window frame and window leaf, electrical add-ons, pin-and-socket connectors, gaskets, sealing grill for refrigerator or the roof bonnets. This can damage the vehicle or allow water to seep into the interior.

## Rules for waxing the surfaces:

- Treat the paint surfaces periodically with wax. Note the guidelines for use from the wax manufacturer. We recommend products by such manufacturers as VALMA, Turtle, Flash and System.

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### 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. Any damage to the protective coating should be repaired immediately.

## Windows and doors

### Rules for upkeep:

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



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



Talcum is available in auto specialty stores.

## Cleaning the interior

### Rules for cleaning seat covers, upholstery covers and curtains:

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

### Rules for cleaning the carpet:

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

### Rules for cleaning PVC surfaces:

- 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.

### 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!

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### Rules for cleaning the toilet area:

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



Do not use scouring cleaners in the toilet area either!



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

### Rules for cleaning the enamel sink:

- Only clean the enamel sink with typical household cleaners.

## Accessories

### Rules for upkeep:

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



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



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

## 11.4 Winter operation

### Preparation

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

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

Your dealer will gladly advise you in these matters.

#### Rules for preparation:

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

### Perform all necessary winter-proofing

#### General rules:

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

#### Rules for inner furnishings:

- Empty and clean the refrigerator. Leave the refrigerator door open.
- Leave storage spaces and closets open for ventilation purposes.
- Position cushions and mattresses in such a way that they do not come into contact with condensation.
- If necessary, heat the entire camper to prevent mould build-up from condensation moisture.
- Keep the vehicle interior dry with 3 kg of table salt in a bowl. The salt absorbs the moisture. This salt should be replaced often.
- Disconnect (or ideally, remove) batteries and check the energy level at least once a month, recharging if necessary.
- Completely empty the entire water system.

---

## Winter operation

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

### Rules for ventilation:

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



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

### Frost protection measures

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

### Rules for the waste water tank:

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

## After the end of the winter season

### Rules for upkeep:

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



Only wash the vehicle at specially designated sites.



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

### Rules for the exterior structure:

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

### Rules for containers:

- Empty and clean the fresh water tank with a pump, if necessary with a plunger.
- Empty and clean the waste water tank.
- Empty and clean the WC tank.
- Empty the warm water boiler completely. Turn the switch of the fresh water pump in the on-board control center to "OFF" and open all faucets.
- Ensure that no water can seep into the forced ventilation system in the floor and into the heating element.



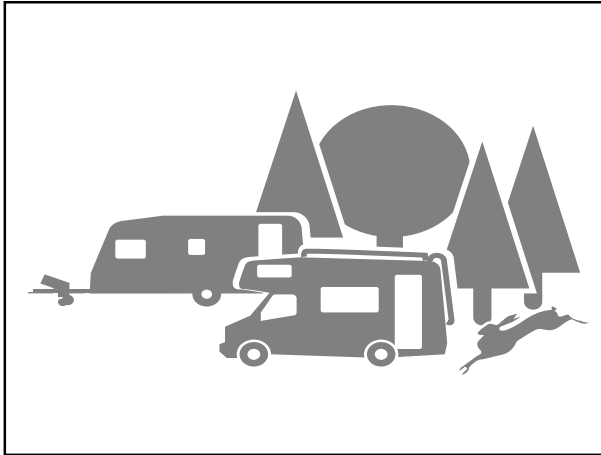
Also note the guidelines and operating instructions from the manufacturers of all built-in devices.





## 12. Waste disposal and environmental protection

### 12.1 The environment and mobile travel



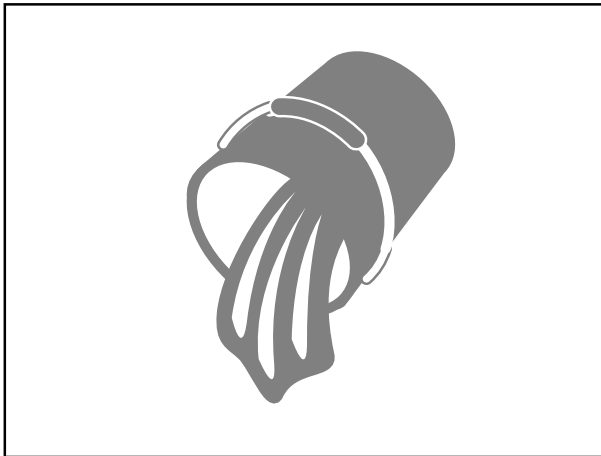
#### Environmentally sound use

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!

## 13. Technical data

### 13.1 Tire pressure values

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

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

### 13.2 Weights in accordance with 97/27/EG, Saison 2007

Type	Weight empty [kg]	Basic equip- ment [kg]	Mass in running order	g.v.w.r. [kg]	Add. load [kg]
<b>400 SB De Luxe Easy</b>	<b>879</b>	<b>59</b>	<b>938</b>	<b>1100</b>	<b>162</b>
<b>400 SF De Luxe Easy</b>	<b>875</b>	<b>59</b>	<b>934</b>	<b>1100</b>	<b>166</b>
<b>400 KB De Luxe Easy</b>	<b>881</b>	<b>59</b>	<b>940</b>	<b>1100</b>	<b>160</b>
<b>400 SB Excellent Easy</b>	<b>890</b>	<b>59</b>	<b>949</b>	<b>1100</b>	<b>151</b>
<b>400 SF Excellent Easy</b>	<b>887</b>	<b>59</b>	<b>946</b>	<b>1100</b>	<b>154</b>
<b>410 SFe Excellent Easy</b>	<b>994</b>	<b>59</b>	<b>1053</b>	<b>1200</b>	<b>147</b>
<b>440 SB De Luxe Easy</b>	<b>993</b>	<b>59</b>	<b>1052</b>	<b>1200</b>	<b>148</b>
<b>440 SF De Luxe Easy</b>	<b>989</b>	<b>59</b>	<b>1048</b>	<b>1200</b>	<b>152</b>
<b>440 SB Excellent Easy</b>	<b>1001</b>	<b>59</b>	<b>1060</b>	<b>1200</b>	<b>140</b>
<b>440 SF Excellent Easy</b>	<b>997</b>	<b>59</b>	<b>1056</b>	<b>1200</b>	<b>144</b>
<b>450 UB De Luxe Easy</b>	<b>970</b>	<b>59</b>	<b>1029</b>	<b>1200</b>	<b>171</b>
<b>450 UF De Luxe Easy</b>	<b>979</b>	<b>59</b>	<b>1038</b>	<b>1200</b>	<b>162</b>
<b>450 UB Excellent Easy</b>	<b>981</b>	<b>59</b>	<b>1040</b>	<b>1200</b>	<b>160</b>
<b>450 UF Excellent Easy</b>	<b>988</b>	<b>59</b>	<b>1047</b>	<b>1200</b>	<b>153</b>
<b>460 UFe De Luxe Easy</b>	<b>1066</b>	<b>59</b>	<b>1125</b>	<b>1300</b>	<b>175</b>
<b>460 UFe Excellent Easy</b>	<b>1077</b>	<b>59</b>	<b>1136</b>	<b>1300</b>	<b>164</b>
<b>495 UL De Luxe Easy</b>	<b>1107</b>	<b>59</b>	<b>1166</b>	<b>1400</b>	<b>234</b>
<b>495 UK De Luxe Easy</b>	<b>1118</b>	<b>59</b>	<b>1177</b>	<b>1400</b>	<b>223</b>

<b>495 UL Excellent Easy</b>	<b>1116</b>	<b>59</b>	<b>1175</b>	<b>1400</b>	<b>225</b>
<b>495 UFe Excellent Easy</b>	<b>1126</b>	<b>59</b>	<b>1185</b>	<b>1400</b>	<b>215</b>
<b>500 KMFe De Luxe Easy</b>	<b>1153</b>	<b>59</b>	<b>1212</b>	<b>1400</b>	<b>188</b>
<b>500 KMFe Excellent Easy</b>	<b>1164</b>	<b>59</b>	<b>1223</b>	<b>1400</b>	<b>177</b>
<b>520 TMF de Luxe Easy</b>	<b>1137</b>	<b>87</b>	<b>1224</b>	<b>1500</b>	<b>276</b>
<b>540 UL De Luxe Easy</b>	<b>1170</b>	<b>87</b>	<b>1257</b>	<b>1500</b>	<b>243</b>
<b>540 UF De Luxe Easy</b>	<b>1174</b>	<b>87</b>	<b>1261</b>	<b>1500</b>	<b>239</b>
<b>540 UK De Luxe Easy</b>	<b>1186</b>	<b>87</b>	<b>1273</b>	<b>1500</b>	<b>227</b>
<b>540 UL Excellent Easy</b>	<b>1179</b>	<b>87</b>	<b>1266</b>	<b>1500</b>	<b>234</b>
<b>540 UF Excellent Easy</b>	<b>1182</b>	<b>87</b>	<b>1269</b>	<b>1500</b>	<b>231</b>
<b>540 UK Excellent Easy</b>	<b>1187</b>	<b>87</b>	<b>1274</b>	<b>1500</b>	<b>226</b>
<b>540 WLU Excellent Easy</b>	<b>1189</b>	<b>87</b>	<b>1276</b>	<b>1500</b>	<b>224</b>
<b>540 UFe Excellent Easy</b>	<b>1201</b>	<b>87</b>	<b>1288</b>	<b>1500</b>	<b>212</b>
<b>540 Uff Excellent</b>	<b>1158</b>	<b>87</b>	<b>1245</b>	<b>1500</b>	<b>255</b>
<b>560 UL Excellent Easy</b>	<b>1293</b>	<b>87</b>	<b>1380</b>	<b>1600</b>	<b>220</b>
<b>560 UF Excellent Easy</b>	<b>1296</b>	<b>87</b>	<b>1383</b>	<b>1600</b>	<b>217</b>
<b>560 UFe Excellent Easy</b>	<b>1303</b>	<b>87</b>	<b>1390</b>	<b>1600</b>	<b>210</b>
<b>560 Uff Excellent Easy</b>	<b>1264</b>	<b>87</b>	<b>1351</b>	<b>1600</b>	<b>249</b>
<b>560 KMFe De Luxe Easy</b>	<b>1320</b>	<b>87</b>	<b>1407</b>	<b>1600</b>	<b>193</b>
<b>560 KMFe Excellent Easy</b>	<b>1332</b>	<b>87</b>	<b>1419</b>	<b>1600</b>	<b>181</b>
<b>560 WLU Excellent Easy</b>	<b>1312</b>	<b>87</b>	<b>1399</b>	<b>1600</b>	<b>201</b>
<b>495 UFe Prestige</b>	<b>1145</b>	<b>59</b>	<b>1204</b>	<b>1500</b>	<b>296</b>
<b>540 UL Prestige</b>	<b>1196</b>	<b>87</b>	<b>1283</b>	<b>1600</b>	<b>317</b>
<b>540 UF Prestige</b>	<b>1197</b>	<b>87</b>	<b>1284</b>	<b>1600</b>	<b>316</b>
<b>540 UL Excelsior</b>	<b>1243</b>	<b>87</b>	<b>1330</b>	<b>1600</b>	<b>270</b>
<b>540 UF Excelsior</b>	<b>1251</b>	<b>87</b>	<b>1338</b>	<b>1600</b>	<b>262</b>
<b>540 WLU Prestige</b>	<b>1199</b>	<b>87</b>	<b>1286</b>	<b>1600</b>	<b>314</b>
<b>540 UFe Excelsior</b>	<b>1264</b>	<b>87</b>	<b>1351</b>	<b>1600</b>	<b>249</b>
<b>540 UFe Prestige</b>	<b>1199</b>	<b>87</b>	<b>1286</b>	<b>1600</b>	<b>314</b>
<b>560 UL Prestige</b>	<b>1265</b>	<b>87</b>	<b>1352</b>	<b>1600</b>	<b>248</b>
<b>560 UF Prestige</b>	<b>1269</b>	<b>87</b>	<b>1356</b>	<b>1600</b>	<b>244</b>
<b>560 UKF Prestige</b>	<b>1289</b>	<b>87</b>	<b>1376</b>	<b>1600</b>	<b>224</b>
<b>560 UFe Prestige</b>	<b>1278</b>	<b>87</b>	<b>1365</b>	<b>1600</b>	<b>235</b>
<b>560 UFe Excelsior</b>	<b>1337</b>	<b>87</b>	<b>1424</b>	<b>1600</b>	<b>176</b>
<b>560 WLU Prestige</b>	<b>1283</b>	<b>87</b>	<b>1370</b>	<b>1600</b>	<b>230</b>
<b>610 UL Prestige</b>	<b>1413</b>	<b>87</b>	<b>1500</b>	<b>1800</b>	<b>300</b>
<b>610 UF Prestige</b>	<b>1419</b>	<b>87</b>	<b>1506</b>	<b>1800</b>	<b>294</b>
<b>610 UL Excelsior</b>	<b>1486</b>	<b>87</b>	<b>1573</b>	<b>1900</b>	<b>327</b>
<b>610 UF Excelsior</b>	<b>1491</b>	<b>87</b>	<b>1578</b>	<b>1900</b>	<b>322</b>

<b>650 KFU Prestige</b>	<b>1527</b>	<b>87</b>	<b>1614</b>	<b>1900</b>	<b>286</b>
<b>650 WFU Prestige</b>	<b>1493</b>	<b>87</b>	<b>1580</b>	<b>1900</b>	<b>320</b>
<b>650 UMFe Prestige</b>	<b>1477</b>	<b>87</b>	<b>1564</b>	<b>1900</b>	<b>336</b>
<b>650 KMFe Prestige</b>	<b>1486</b>	<b>87</b>	<b>1573</b>	<b>1900</b>	<b>327</b>
<b>650 Uff Excelsior</b>	<b>1503</b>	<b>87</b>	<b>1590</b>	<b>1900</b>	<b>310</b>
<b>720 UML Prestige</b>	<b>1704</b>	<b>87</b>	<b>1791</b>	<b>2000</b>	<b>209</b>
<b>720 UMF Prestige</b>	<b>1712</b>	<b>87</b>	<b>1799</b>	<b>2000</b>	<b>201</b>
<b>720 UKFe Prestige</b>	<b>1733</b>	<b>87</b>	<b>1820</b>	<b>2000</b>	<b>180</b>
<b>750 UMF Landhaus</b>	<b>1952</b>	<b>87</b>	<b>2039</b>	<b>2200</b>	<b>161</b>
<b>750 UML Landhaus</b>	<b>1945</b>	<b>87</b>	<b>2032</b>	<b>2200</b>	<b>168</b>

## 13.3 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:

	<b>400 - 500</b>	<b>520 - 750</b>	
a) liquid gas supply			
no. of 11 kg gas bottles:	2	2	kg
weight of an aluminium gas bottle:	5.5	5.5	kg
weight of an 11 kg gas bottle:	11	11	kg
Total:	<b>33</b>	<b>33</b>	<b>kg</b>
b) fluids			
22 l rolling fresh water tank	22	--	kg
50 l fixed fresh water tank	--	50	kg
c) electric supply			
connecting cable for low voltage:	4	4	kg
<b>Total basic equipment:</b>	<b>59</b>	<b>87</b>	<b>kg</b>

## 13.4 Lighting

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

12 V Interior lighting	
Lamp	Lighting
Ceiling lamp, round, grey	1 x 21W
Ceiling lamp, round, grey	1 x 21W
12 V halogen ceiling lamp	3 x 10W
Panorama roof bonnet, upper and lower part	4 x 5W
Closet lamp	LED
Children's bed lamp	1 x 21W
Washroom lamp	3 x 10W
Corner lamp	2 x 10W
Kitchen lamp, silver, 12 V	3 x 21W
Kitchen lamp, silver, 230/12V	1 x 21W
Built-in spotlight 1980/12H/G/chrome	1 x 10W
built-in spotlight with lamp cover	1 x 10W
Built-in spotlight, silver	1 x 5W
Spotlight	1 x 10W
Lamp hanger, silver	1 x 21W
Lamp hanger, alder	1 x 21W
Indirect lighting 3 x B9	3 x 4W
Indirect lighting 5 x B9	5 x 4W
Indirect lighting 6 x B9	6 x 4W
Indirect lighting 7 x B9	7 x 4W
Indirect lighting 7 x B9	7 x 4W
Indirect lighting 10 x B9	10 x 4W
Entry lamp	2x10W
230 V Interior lighting	
Lamp	Lighting
Ceiling lamp	3 x 15W
Ceiling lamp, round, grey	1 x 25W
Ceiling lamp, round, grey	1 x 25W
Ceiling lamp, round, grey (GB)	1 x 40W
Children's bed lamp	1 x 25W
Kitchen lamp, silver	2 x 25W
Kitchen lamp, silver (GB)	2 x 25W
Kitchen lamp, silver 230/12V	2 x 25W
Spotlight 1934 / dull silver	1 x 30W
Lamp hanger, alder	1 x 40W
Lamp hanger, silver	1 x 40W

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