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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 five-year guarantee on the watertightness of the camper in accordance with the guarantee conditions. On the first day of use of the vehicle, you will receive the guarantee booklet, "Five-Year Guarantee on Watertightness" from your HOBBY dealer.



WARNING: If no leak inspection is performed, your right to the 5-year guarantee loses its validity.

Markings in these operation instructions

The handbook explains the camper as follows:

Texts and illustrations

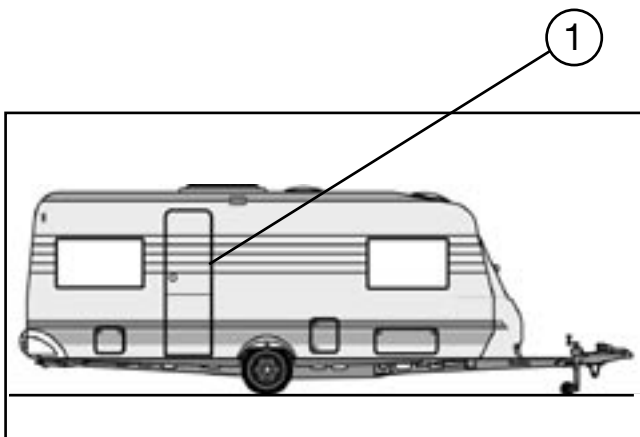
The texts which accompany illustrations are found directly to the right of the illustrations. Details in illustrations (here: entry door) are marked with position numbers (1).

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.

1 Safety

1.1 Before the first drive

Registration

Every vehicle which uses public roads is subject to registration. This includes your new camper.

You can register the camper at your local registration office.

The following documents are required to initiate the registration process

- motor vehicle registration certificate, Part II and, if applicable, confirmation of data
- insurance card
- personal identification or residence certificate

Inspection

Your camper must be presented every two years for inspection, in accordance with Section 29 of the Road Traffic Licensing Regulations. The Technical Inspection Authority, German Association for Motor Vehicle Inspection or another state-recognized expert are entitled to carry out inspections.

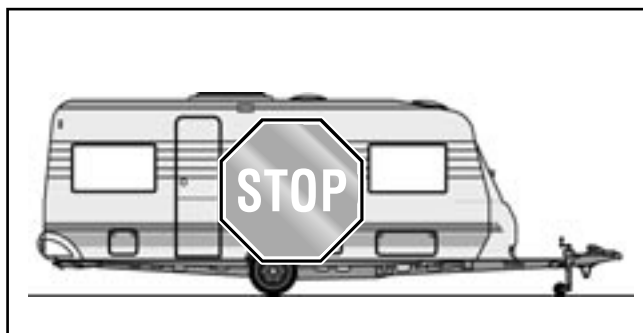
The following documents must be presented at every inspection

- motor vehicle registration certificate, Part I
- valid certificate of inspection for the gas facilities documenting the installation. You will receive the initial certificate with the motor vehicle registration certificate, Part II



In the event of additional questions or problems, your HOBBY dealer will be glad to help at any time!

1.2 Before and during the drive



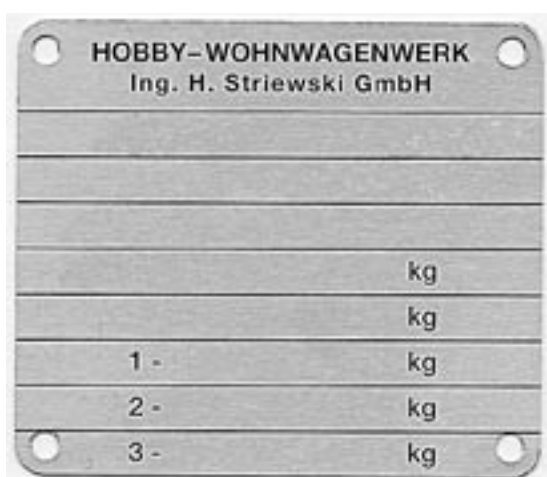
As the owner and driver, you are responsible for the condition of your vehicle. Therefore, you must note the following points:

Exterior

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

Preparation of the vehicle

- The vehicle must be hitched properly (see guidelines for the safety hitch WS3000).
- The pull rope must be connected to 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.)
- Close gas bottle compartment.
- Adjust the outer mirrors on the base vehicle.
- Check the camper's tire pressure (see tire pressure table).
- Close all windows.
- Shut off the light on the outer tent.
- Close and secure the entry door.
- Close all spigots and shut-off valves on gas-powered appliances.
- If necessary, pull the electrical cord out of the exterior socket.
- If necessary, pull the 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.



Name plate

Number of general type approval

Vehicle ID number

Permissible maximum weight

Permissible axle load, 1st axle

Permissible axle load, 2nd axle



WS 3000 safety hitch

The camper is equipped with an anti-sling hitch. This safety hitch secures the camper during the drive and ensures better handling. Please note the additional operation guide and safety tips from the manufacturer.



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).



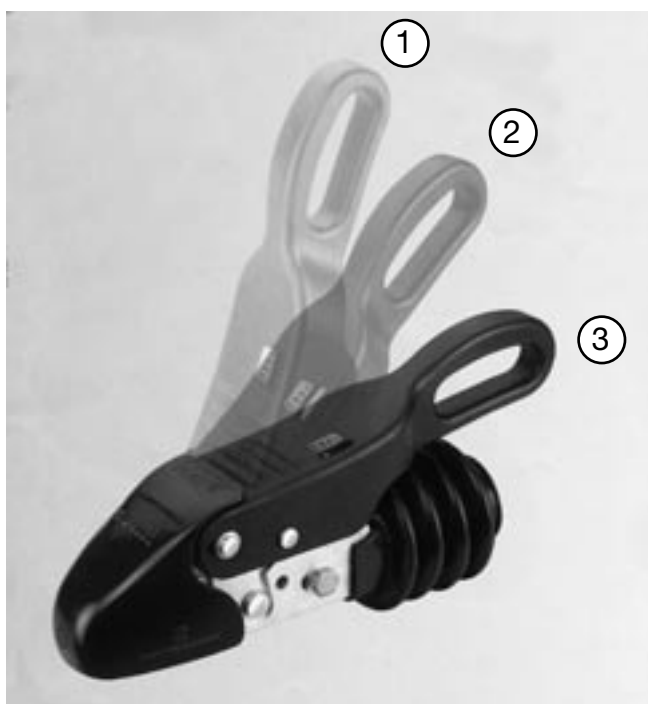
WARNING: Ensure that the metal of your ball coupler is bright and free of grease.

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 vehicle.



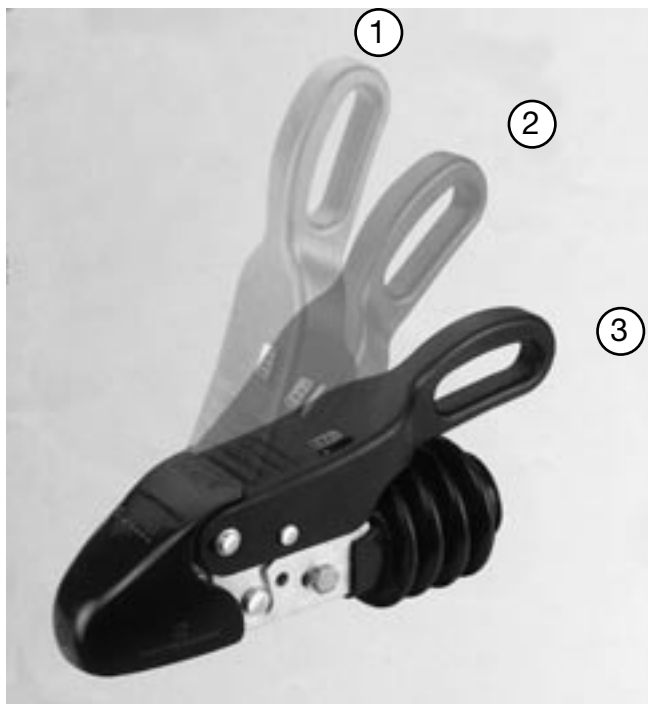


Bild 1

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.

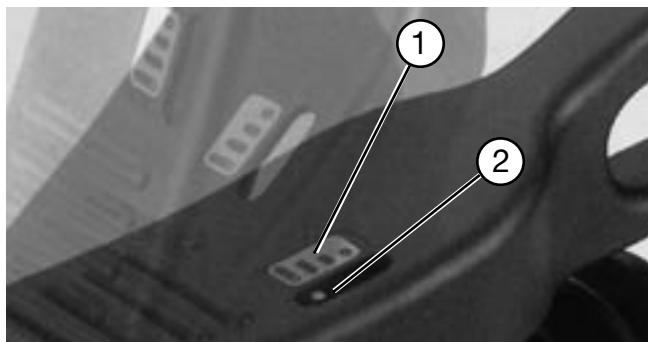


Bild 2

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.

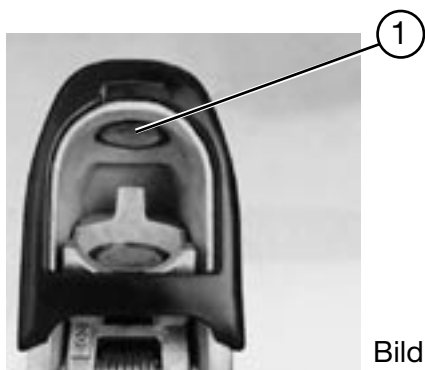


Bild 3

Maintenance



Coupling ball on base vehicle

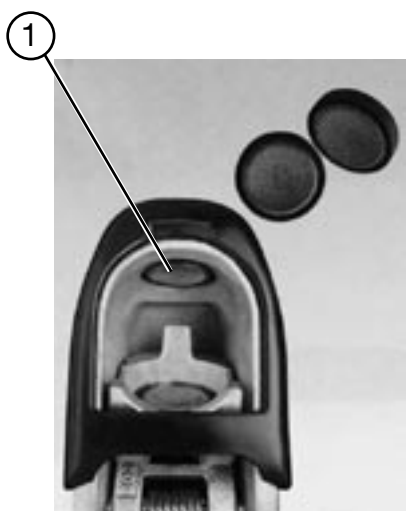
The coupling ball should be dimensionally stable, free of damage, clean and free of grease. When using dacromet-coated (dull silver anti-corrosion coating) as well as lacquered coupling balls, the coating must be removed completely with sandpaper (200-240 grain) so that it does not create deposits on 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.

Interior

You must also prepare the interior of the vehicle.

Preparing the interior:

- Sort all loose objects and store them in their respective compartments.
- Heavier objects should be stored as close to the floor as possible.
- Redirect the refrigerator to 12-volt operation, if necessary.
- Shut off all interior lighting.
- Ensure that all fluids are kept in tightly closed containers to prevent leaks, also in the refrigerator.
- Fasten gas bottles in their holders.
- Close the main valve on the gas container as well as the quick-close valves in all gas-powered appliances.
- Close all doors (including the refrigerator door), drawers and flaps tightly.
- Latch the sliding door.
- Clamp the table's safety device.
- Dismantle hanging lamps.



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.

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.

1.3 Guidelines for the trip

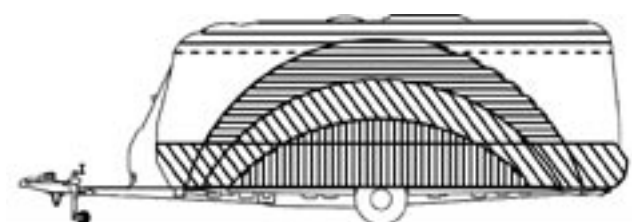
Loading

Rules for loading

- Spread the load evenly. Heavy or bulky objects belong in the lower storage compartments.
- 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.

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.



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.

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 running brake.

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.

1.4 Emergency equipment



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.

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 (not included)

The first aid kit is located in the base vehicle and should be within reach at all times.

Warning triangle

The warning triangle is located in the base vehicle and should be within reach at all times.

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.

Fire prevention measures

- Never leave children unattended in the vehicle
- Ensure that all passengers are familiar with the location and use of the emergency exits.
- Keep all escape routes clear.
- Keep flammable materials away from all heating and cooking appliances.
- Place a fire extinguisher at the main entry door.
- Place a fire cover near the gas cooker.
- Ensure that everyone is familiar with the guidelines on the fire extinguisher.
- Ensure that everyone is familiar with the fire prevention measures on site.

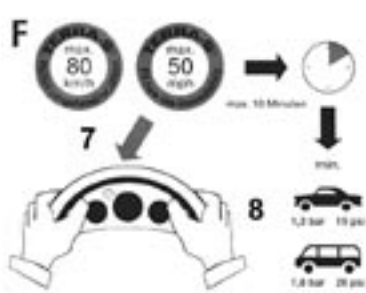
Fighting a fire

- Evacuate all passengers.
- 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.

Tire repair kit

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





- A** Shake the bottle. Open the fill hose (1) on the bottle (foil seal is thereby punctured).
- B** Unscrew the valve cap from the tire valve. Remove the valve insert (2) with the valve-core remover (3). Do not lay the valve insert (2) down in sand or dirt.
- C** Pull the stopper (4) from the fill hose (1). Push the fill hose onto the tire valve.
- D** Hold the bottle down with the filling tube and then press them together. Press the entire bottle contents into the tire. Pull the fill hose off (1) and screw the valve insert (2) tightly into the tire valve with the valve-core remover (3).
- E** Open the air hose (5) on the tire valve. Insert the plug (6) into the cigar lighter socket. Then pump the tires (Fig. 7). do not operate the electric air pump longer than 8 minutes! Danger of overheating! If sufficient air pressure is unattainable, drive 10 meters (either forward or in reverse) so that the sealant can be evenly distributed within the tire. Repeat the pumping process. Resume driving immediately, so that the sealant can be evenly distributed within the tire.
Maximum speed: 80 km/h. Drive carefully, especially in curves.
Check tire pressure after driving 10 minutes. If the tire pressure has fallen under this minimum value (8), you may not drive any further.
If the minimum value is still indicated (8), correct the tire pressure according to the tire pressure table in the gas bottle container. Drive carefully to the nearest mechanic and have the tire replaced.



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

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



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

1.5 Maximum speeds

This camper is technically equipped for a speed of 100 km/h. This means that a maximum speed of 100 km/h is permitted with a suitable base vehicle and special permission.

Never drive faster than 100 km/h, even if the permitted maximum speed is higher in various countries.

The maximum speed in Germany is 80 km/h.

It is possible under certain circumstances in accordance with the ninth exception regulation in the German Road Traffic Law to drive on motorways and other public roads with camper carriages at 100 km/h.

You can get more detailed information from your HOBBY dealer or at the Technical/German Motor Vehicle Association inspection site, as well as at the General German Automobile Club, as well as the German DCC.

Geschwindigkeitsvorschriften in Europa (km/h)					
Land		innerorts	ausserorts	Autobahn	
				Pkw	Kombinationen
	Belgien	50	90	120	120 [a]
	Bosnien-Herzeg.	60	80	120	n/a
	Bulgarien	50	90	130	120 [a]
	Deutschland	50 [b]	100	130 [c]	80 [d]
	Dänemark	50	80	130	80
	Estland	50	90	110	90
	Finnland	50	100	120	80
	Frankreich	50	90 [e,f,g]	130 [f,g]	130 [a]
	Griechenland	50	90 [t]	120	80
	Großbritannien	45	96	112	96
	Irland	50	80 [i]	120	120 [a]
	Italien	50	90	130 [r,s]	80

	Kroatien	50	90 [i]	130	80
	Lettland	50	90	110	80
	Litauen	60	90	110	110 [a]
	Luxemburg	50	90 [k]	130 [j,k]	90 [j]
	Malta	50	80	ñ	ñ
	Mazedonien	50 [u]	80 [i]	120	80
	Niederlande	50	80 [i]	120	80
	Norwegen	50	80	90	80 [l]
	Österreich	50	100	130 [m]	100 [n]
	Polen	50/60 [w]	90 [i]	130	80
	Portugal	50	90	120 [o]	100
	Rumänien	50	90	120	100 [p]
	Schweden	50	90	110	80 [q]
	Schweiz	50	80 [i]	120	80
	Serbien/Monten.	60	80 [i]	120	80
	Slowakei	60	90	130	80
	Slowenien	50	90 [i]	130	80
	Spanien	50	90 [i]	120	90 [v]
	Tschechien	50	90	130	80
	Türkei	50	90	120	80

	Serbien/Monten.	60	80 [i]	120	80
	Slowakei	60	90	130	80
	Slowenien	50	90 [i]	130	80
	Spanien	50	90 [i]	120	90 [v]
	Tschechien	50	90	130	80
	Türkei	50	90	120	80
	Ungarn	50	90 [e]	130	80
	Zypern	50	80	100	100

Stand 06/2005

Bitte beachten Sie:

- [a] Bei Unfällen mit deutschen Gespannen bei Geschwindigkeiten über 100 km/h muss immer mit Einschränkungen bei der Versicherungsleistung gerechnet werden, da Wohnwagen in Deutschland bauartbedingt nur bis 100 km/h zugelassen sind
- [b] In vielen Gebieten sind Tempo 30-Zonen eingerichtet
- [c] Empfohlene Richtgeschwindigkeit
- [d] Unter bestimmten Voraussetzungen Tempo 100
- [e] Auf Schnellstrassen 110 km/h
- [f] Bei Nässe muss die Geschwindigkeit ausserorts um 10 km/h, auf Autobahnen um 20 km/h verringert werden
- [g] Bei Führerscheinbesitz unter zwei Jahren ausserorts höchstens 80 km/h, Schnellstrassen 100 km/h und Autobahnen 110 km/h
- [i] Auf Schnellstrassen gilt Tempo 100
- [k] Bei Führerscheinbesitz unter einem Jahr ausserorts Tempo 75, auf Autobahnen 90 km/h
- [l] Bei ungebremstem Anhänger mit aktuellem Gesamtgewicht über 300 kg gilt Tempo 60
- [m] In Österreich gilt nachts auf einigen Autobahnen ein niedrigeres Tempolimit
- [n] Für Kombinationen über 3,5 Tonnen zul. Gesamtgewicht gilt ein Limit von 80 km/h
- [o] Wer den Führerschein erst weniger als ein Jahr hat, darf nur 90 km/h fahren
- [p] Für Kombinationen über 3,5 Tonnen zul. Gesamtgewicht gilt Tempo 90
- [q] Bei ungebremstem Anhänger, dessen zul. GG die Hälfte des Leergewichts des Zugfahrzeugs übersteigt, nur 40 km/h
- [r] Auf einzelnen dreispurigen Autobahnen (nur bei entsprechender Beschilderung) sind 150 km/h erlaubt
- [s] Bei Nässe gilt ein Tempolimit auf Autobahnen von 110 km/h, auf Schnellstrassen von Tempo 90
- [t] Streckenweise sind 110 km/h erlaubt
- [u] Nach Ausschilderung auch 60 km/h
- [v] Für Kombinationen mit Anhänger unter 0,75 Tonnen gilt Tempo 90
- [w] 50 km/h von 5-23 Uhr, 60 km/h von 23-5 Uhr

1.6 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.

2 Undercarriage

2.1 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.

2.2 Loading

Definition of masses (weights) for caravans

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 12.3 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.

When the 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.)

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.

Rules for loading

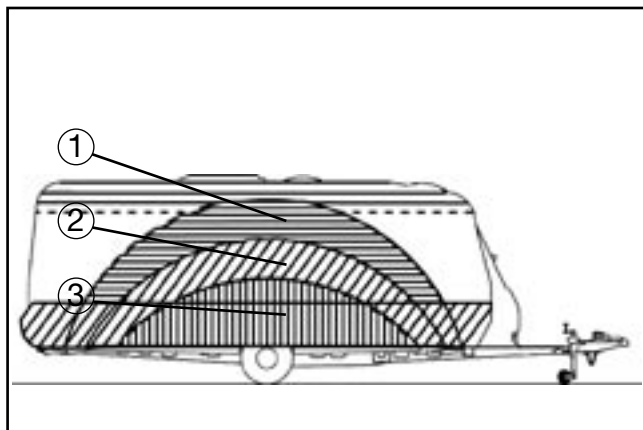
- Spread the load evenly.
- Store heavy objects near the axle.
- Never focus the load to the rear (danger of skidding!)



If conditions for the base vehicle are right, an increase in the drawbar load can improve the overall handling of the camper.



The lower the center of gravity in a vehicle, the better the handling (also when driving around curves).



Loading areas in the camper

- Lightweight objects (1) such as hand towels and lightweight clothing.
- Moderately heavy objects (2) such as normal clothing, laundry and food.
- Heavy objects (3) such as the outer tent and boat motor.

2.3 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 (1) 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 (1) inward to the horizontal position.

2.4 Entry step tread



When entering and exiting the vehicle:

- Ensure that the step tread (1) 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 Wheels, tires, brakes

3.1 Tires

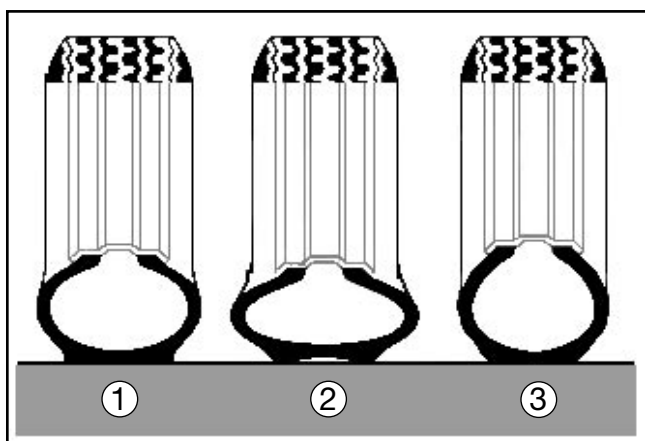
Only use those tires designated in the registration documents. Other tire sizes may only be used with the permission of the manufacturer.

3.2 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.

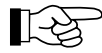


Correct tire pressure can be found in the table on wheels/tire pressure in the chapter entitled "Technical Information" or in the table in the gas container.

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

3.3 Profile depth

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.

3.4 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.

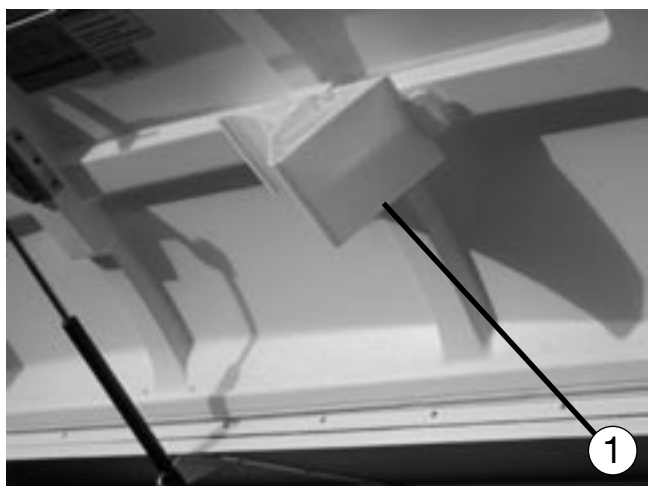
Adjusting torque

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



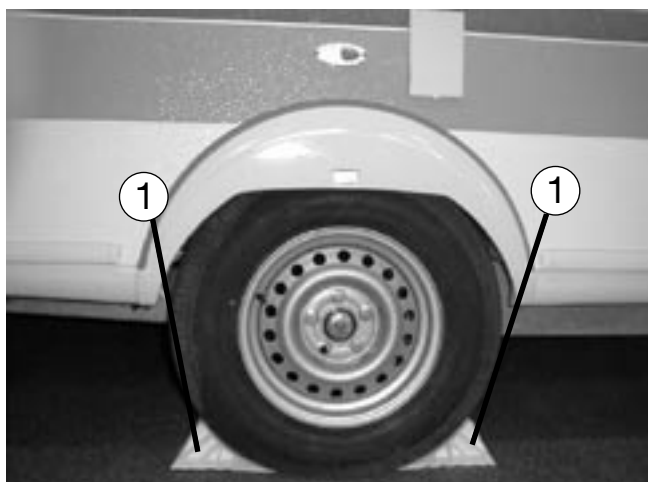
WARNING: When changing rims (steel -> aluminium / aluminium -> steel) ensure that you are using the correct wheel screws.

3.5 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.

3.6 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.

3.7 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.

4 Exterior structure

4.1 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.



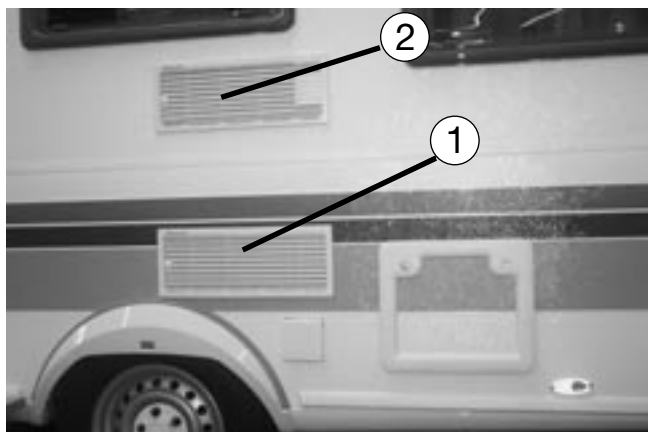
Note the guidelines on the covers; these may only be used during electrical operation in winter. We recommend that you open the roof bonnets whenever you live in the caravan.



Cooking, wet clothing, etc., produces vapor. Every person loses up to 35 g of water in one hour. Therefore, one must ventilate and de-aerate through the windows and roof bonnets according to the relative humidity (see also "Winter operation"). We recommend that you open the roof bonnets whenever you live in the caravan.



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.



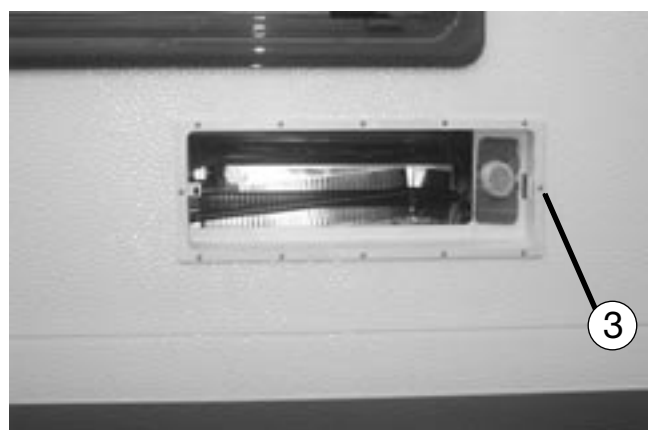
there is a danger of suffocation if ventilation openings are blocked! Therefore, do not block ventilation openings.



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.



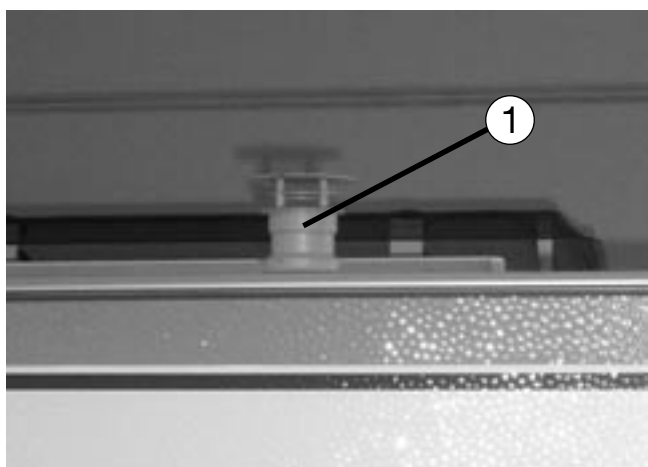
To remove ventilation bars:

- 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.

4.2 Vehicle keys

The following keys are provided with the camper:

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

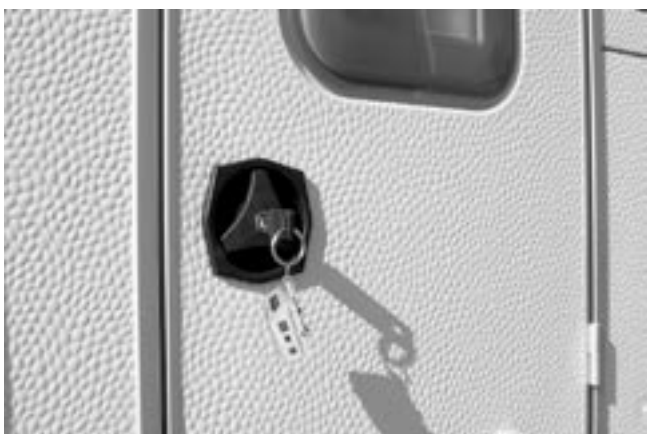
Entry door

To open:

- Unlatch the lock with the key.
- Turn 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 close:

- Close the flap upward or downward.
- Latch the lock with the key.





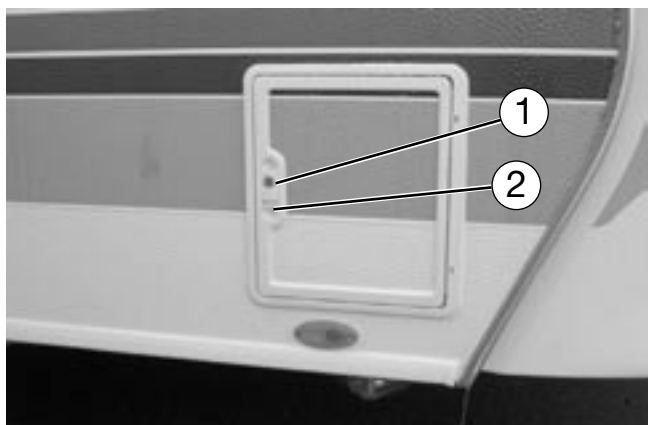
Gas-bottle container flap

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.

4.3 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.

4.4 Rear ladder and roof rail



Rules for climbing the rear ladder:

- Climb the ladder carefully.
- Hold the ladder with both hands while climbing.
- Do not walk free-handed on the roof.



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.

5 Installation of electrical devices

5.1 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 mm² 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.

5.2 Service center



Functions

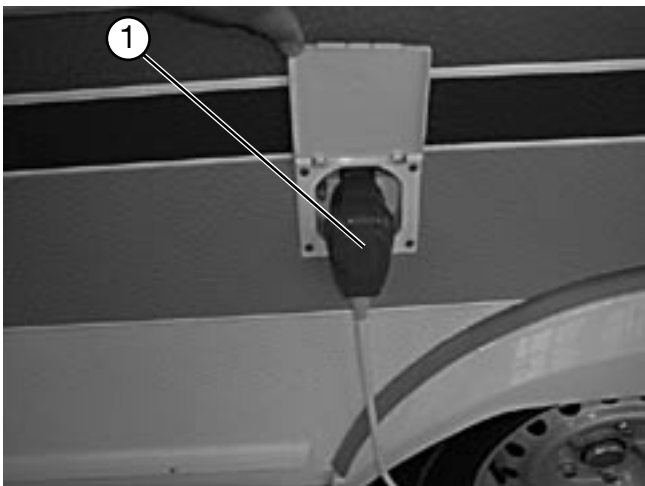
The service center is equipped with the following functions:

1. 12 V/DC lighting (halogen bulbs with a max. of 10 watts in the service center)
2. Shock-proof sockets 230 V/AC for electrical devices up to a max. of 1000 watts
3. Switch for 12 V lighting for roof bonnet
4. Switch with pilot light for 230 V warm water therme
5. Four-stage electronic indicator for fresh water tank
6. Test switch for fresh water tank indicator.

Operation of the individual functions

The switch is used to activate the fresh water tank indicator. The 3 press switches are used to operate the 12 V/DC kitchen lighting, roof bonnet lighting and the warm water therme.

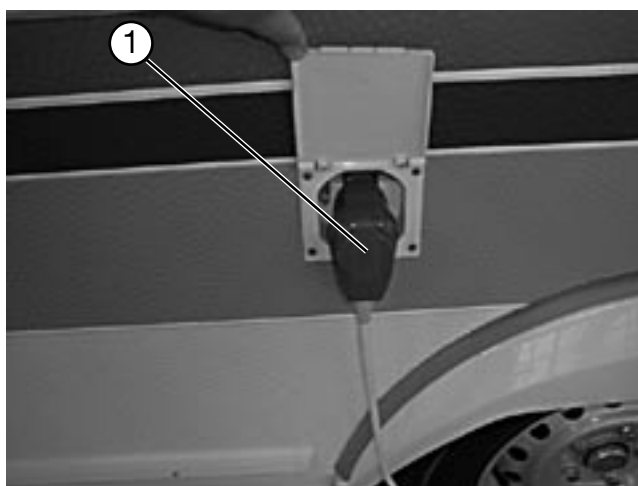
5.3 Electrical supply



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



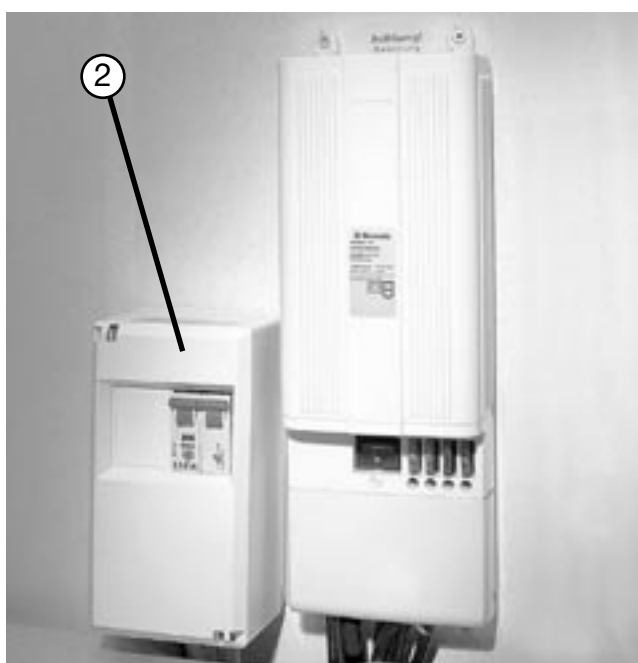
The camper receives its electric power supply via the 230 V CEE feeder plug (1) on the side wall of the vehicle.

The 230 V system is protected by a two-pole 13 A overload release (2). (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 mm² 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.

5.4 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.

5.5 Truma-Vent blower



Fig. 1

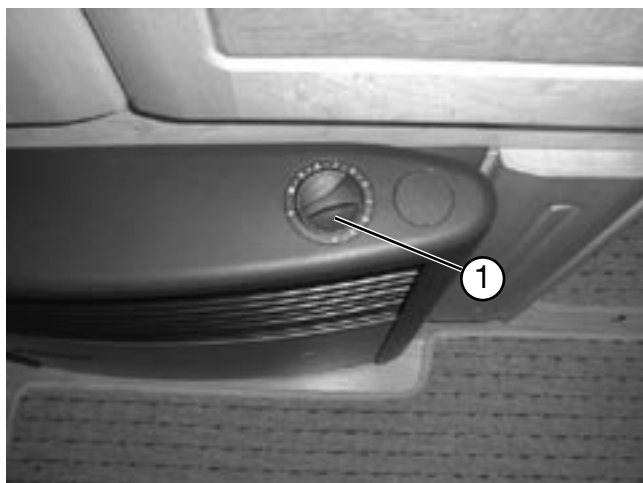


Fig. 2

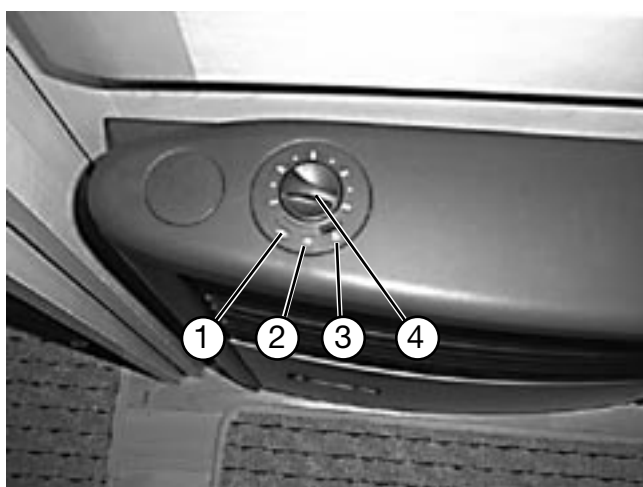


Fig. 3

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 automatically.



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.

5.6 Microwave



Please note that the microwave can not be operated while the door is open, since the closing mechanism in the door has a function switch which automatically interrupts the heating process when the door is open.



Leaving the door open when the microwave is turned on can result in bodily harm from the influence of the microwaves.

Never interfere with the door mechanism. Do not place objects between the front of the microwave and the door; otherwise, residue from food or cleaners can build up.

Read the separate operating instructions from the manufacturer before the first use. These instructions are found with the vehicle documents.

Oven



Please read SMEV's operating instructions before the first use. These are found with the vehicle documents.

5.7 Changing halogen bulbs



The glass bulbs for the halogen lamps may not be touched with your bare hands; this could lead to a limitation of the illumination power and overall life span. Instead, use clean paper or only touch the metal base.

Halogen spotlights

Halogen bulb 12 V/5 W

Changing bulbs:

- Turn off the light and, if necessary, allow it to cool.
- Carefully unfasten the inner ring with a screwdriver.



- Carefully remove the inner ring together with the glass pane.



- Now you can remove the bulb from the socket.



Only halogen pin bases with a maximum of 5 W may be used.



- Insert the new bulb in the socket and replace the inner ring with the two clips in the designated groove. You can now press the inner ring together with the glass pane in the casing.

5.8 Changing taillight bulbs



Carefully remove the protective caps with a screwdriver.



Loosen the four fastening screws with a screwdriver.



Now you can remove the taillight from the frame.

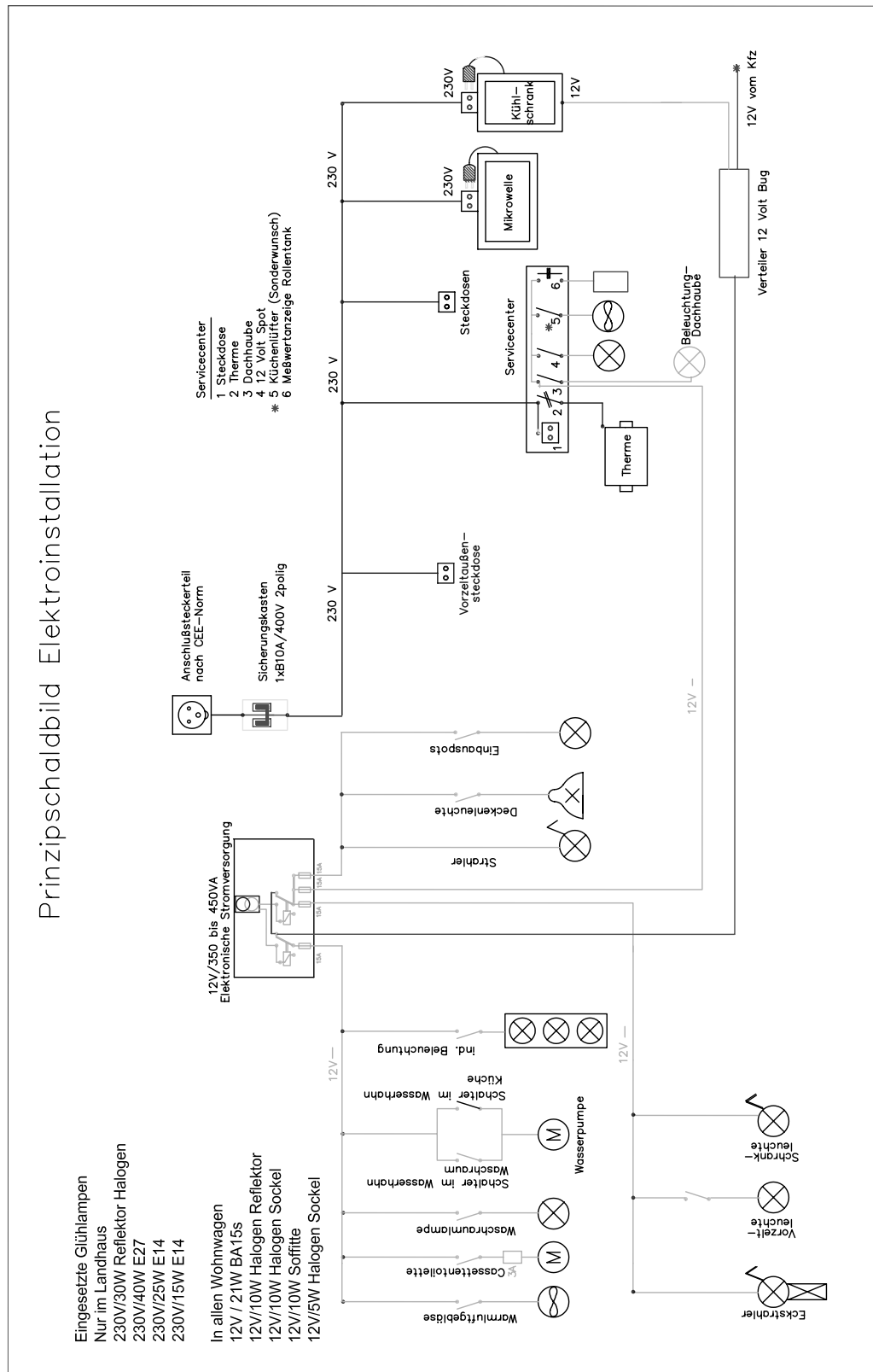


Remove the holder by loosening the screw.

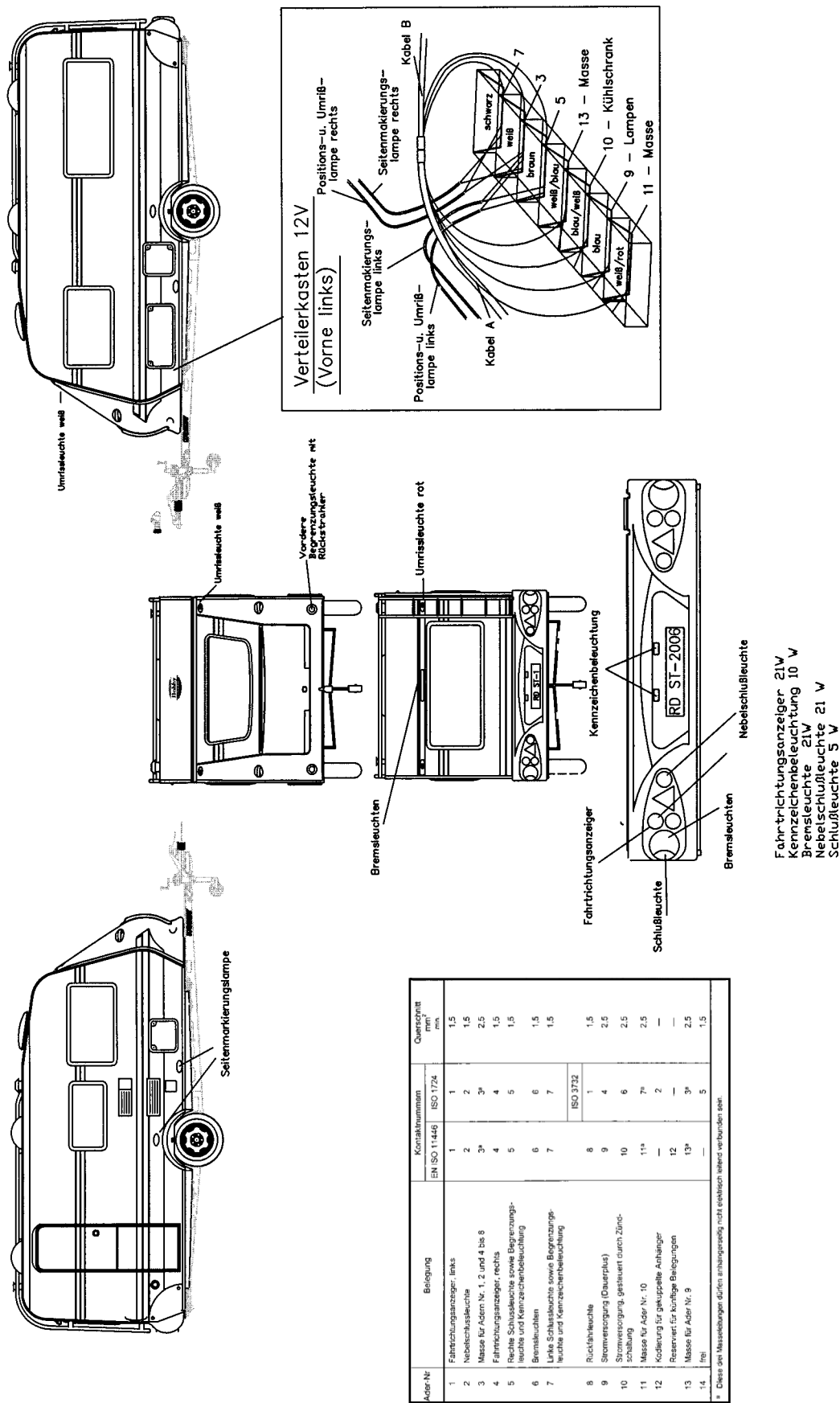
The bulbs are now freely accessible. To insert new bulbs, repeat the process in reverse.

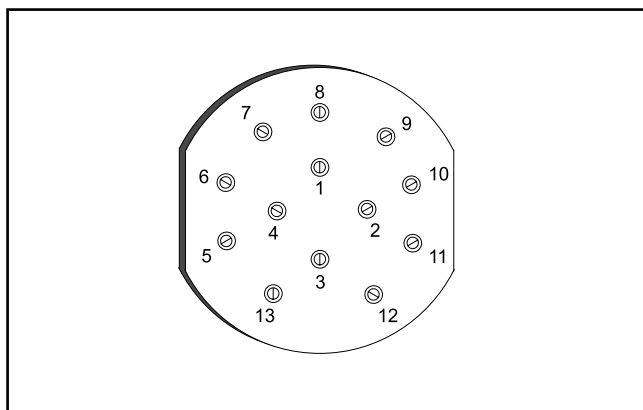
5.9 Circuit diagram (interior)

for the models Excellent /
Exclusive / Prestige



5.10 Circuit diagram (exterior)





"Jäger" outlet (13-poled)

View from connection side

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

Kontakt	Stromkreis
1	Fahrtrichtungsanzeiger, links
2	Nebelschlußleuchte
3	Masse (für Stromkreis 1 bis 8)
4	Fahrtrichtungsanzeiger, rechts
5	Rechte Schlußleuchte, Umrißleuchte, Begrenzungsleuchte und Kennzeichenbeleuchtung
6	Bremsleuchten
7	Linke Schlußleuchte, Umrißleuchte, Begrenzungsleuchte und Kennzeichenbeleuchtung
9	Stromversorgung (Dauerplus)
10	Stromversorgung, Zündschalter gesteuert
11	Masse für Stromkreis 10
12	Masse für Anhängererkennung
13	Masse für Stromkreis 9

6 Interior structure

6.1 Opening and closing doors and flaps

Entry door

To open:

- Turn the latch (1) 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!

Upper part of door:

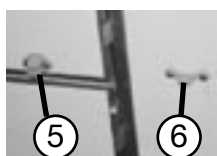
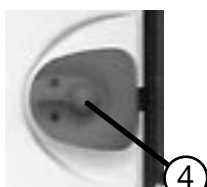
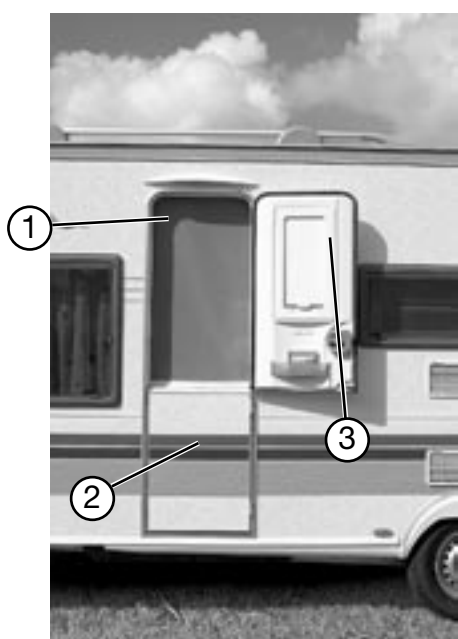
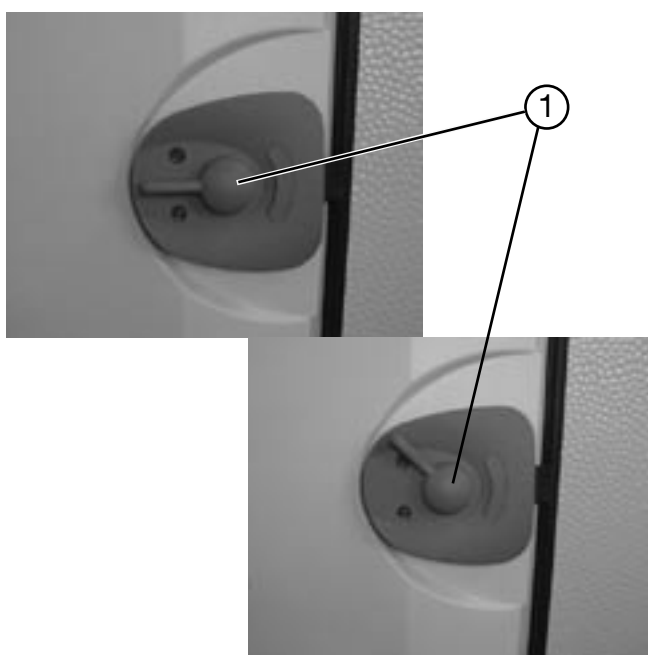
The frame (1) and the bottom part (2) of the entry door can be closed even if the door is open. To do this, the upper part (3) of the door must be unlatched from the frame after the door is open.

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.





Furniture doors with inner push-button

To open:

- Press the inner part of the push-button (1).
- Hold the push-button and open the furniture flap.

To close:

- Press the flap shut until it snaps into place. The flap is properly closed when it has snapped into place.



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



To open:

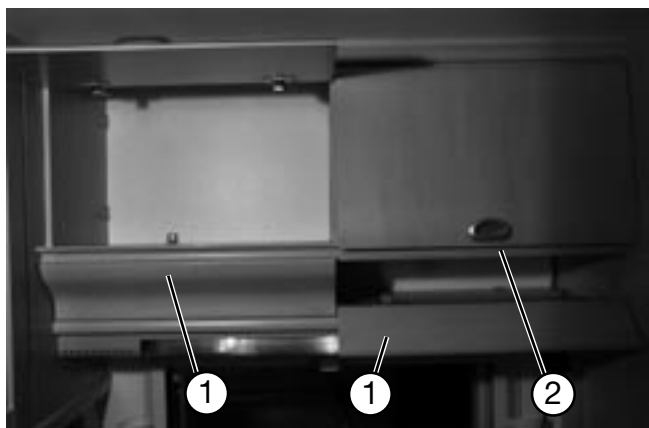
- Pull the handle (1) until the flap opens.

To close:

- Press the flap (2) on the handle (1) 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 flaps without handle

To open:

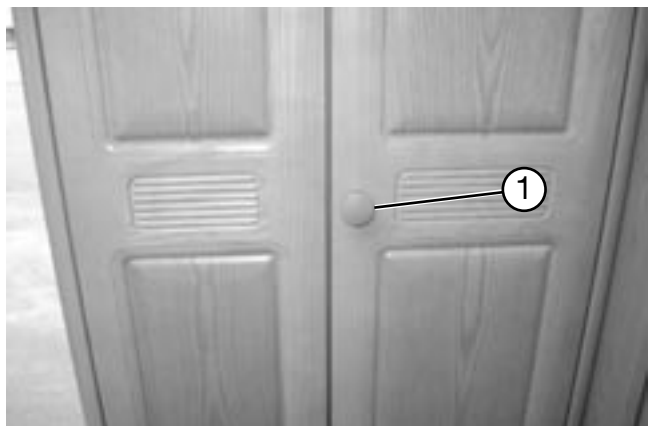
- Press the flap (1) inward. The lock (2) becomes unlatched by pressing, and the flap opens.

To close:

- Press the flap (1) inward until you hear the lock snap shut.



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



Furniture doors with turning knob

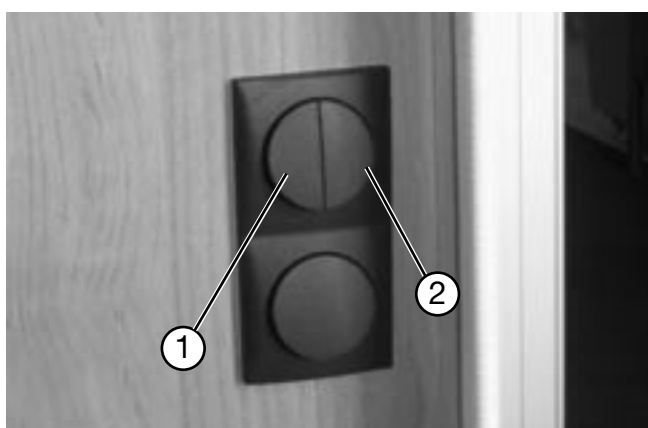
To open:

- Turn the knob (1) in the direction of the hinge.

To close:

- Leave the knob in the open position and close the door.
- Turn the knob away from the hinge.

6.2 Light switches



Entry area

The light switches for the lighting on the ceiling (1) (only 230 volt alternating current) and the outer tent lamp (2) and the indirect lighting are located in the entry area.

Electric floor heating

The heating system is located in below the central walking area of the floor and has a width of 60 cm. The length depends on the model. This heating is not meant to heat the room, but to prevent loss of heat via the floor.

Turning on the 24 V floor heating:

Depending on the model, the switch is located either in the entry area or in the kitchen area.

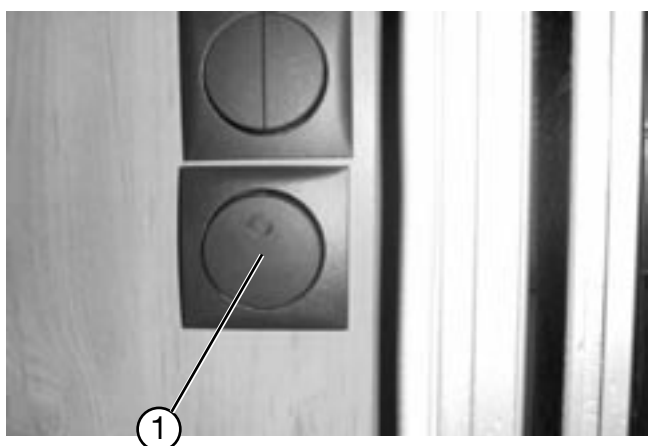
Technical data:

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

Power consumption lies between 150 W and 320 W, depending on the length of the camper.

A 24 V floor heating has been installed in the **Landhaus** model.

The power consumption is somewhat higher for these heating systems.



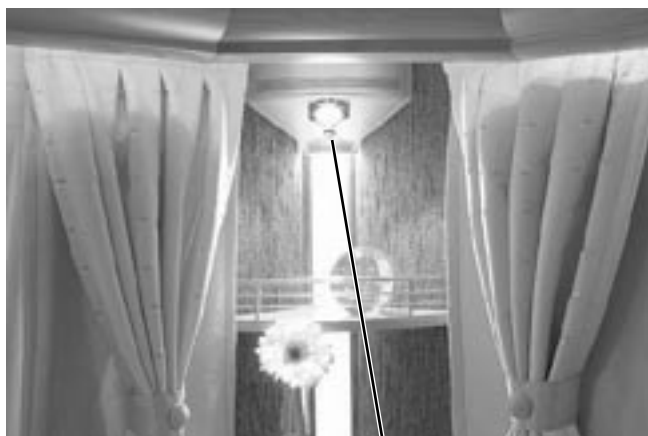


Interior

The switch for the washroom lighting (1) is located on the ceiling in the rear washroom. If the washroom is located in the middle of the vehicle, that switch can be found under the mirror next to the socket.



The light switch for the kitchen lighting is located in the service center.



The light switch (2) for some lamps is located directly on the lamp.

6.3 Windows



1

2

Hinged windows

To open:

The window can be adjusted to open at varying degrees:

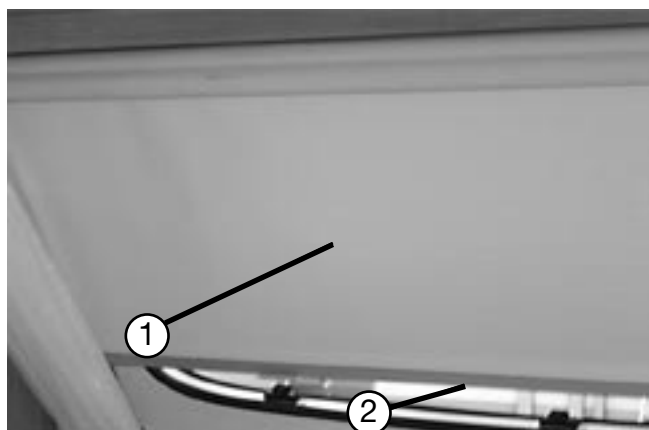
- Turn the latch into the vertical position.
- Press the window outward until you hear a click. The window automatically remains in this position.



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

To shut:

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



1

2

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 (1) into the desired position with the strap (2) and let go. The shade remains in this position.

To open the shade:

- Pull the shade (1) down slightly with the strap (2) 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.

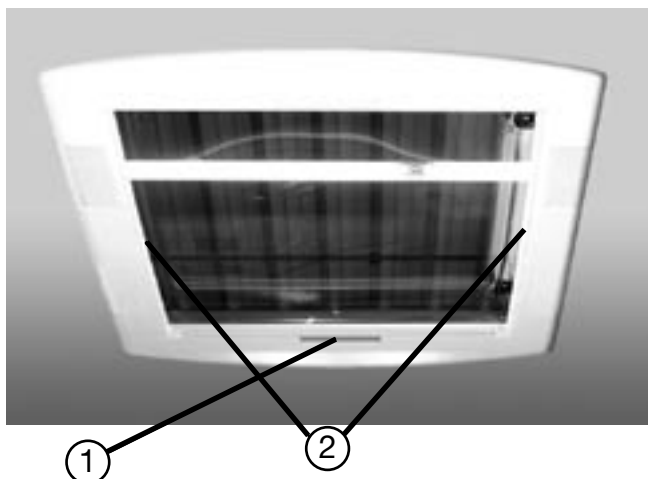


Do not let the shade or the insect screen fly upward!



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

6.4 Roof bonnets



Roof bonnet with combination shade

The roof bonnet can be hinged on one side and also pushed open. The shade/insect screen is integrated.

To open:

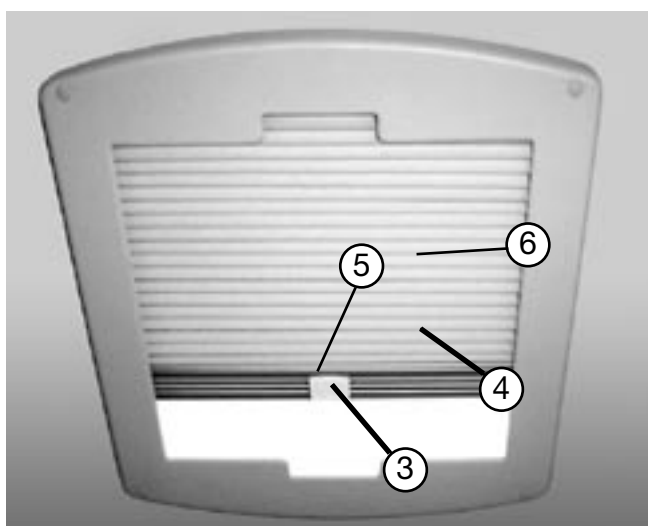
- Open the latch (1) of one side of the frame and open the roof bonnet simultaneously by pressing upward. When open, the bonnet can be pushed back with holders (2).

To shut:

- Close the roof bonnet and push it down until the latches snap into place.

To combine the shade/insect screen:

- Pull the connection strap (3) on the insect screen (4) to the opposite one-hand operation (5) of the shade.
- Snap the connection lash (3) onto the latch of the one-hand operation (5) of the shade (6).



To adjust the shade:

- Bring the one-hand operation of the shade into the desired position by pushing.

To open the insect screen:

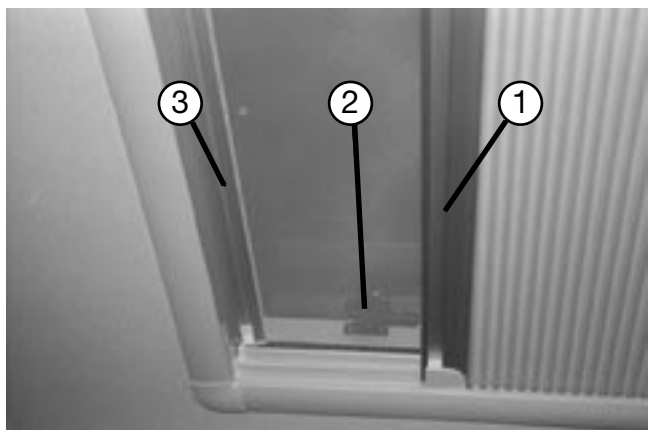
- Snap the connection lash (3) on the insect screen (4) out and disconnect it.



The roof bonnet must always remain closed during the drive!



The forced ventilation/de-aeration system in the roof bonnet frame must always remain open!



Thermal roof windows

To open:

Several degrees can be adjusted:

- Turn the latch (2) on both sides of the roof window inward.
- Press the window outward until you hear a click. The window automatically remains in this position.
- The window can be pushed into the desired position.

To shut:

- Push the window shut until it locks.
- Pull the window down until it is shut.
- Turn the latch (2) on both sides of the roof window outward.

To shut the insect screen:

- Pull the insect screens on the closing rod (3) to the opposite frame.

To open the insect screen:

- Pull the insect screens on the closing rod (3) back into the original position.

To shut the shade:

- Pull the shade on the closing rod (1) into the desired position.

To open the shade:

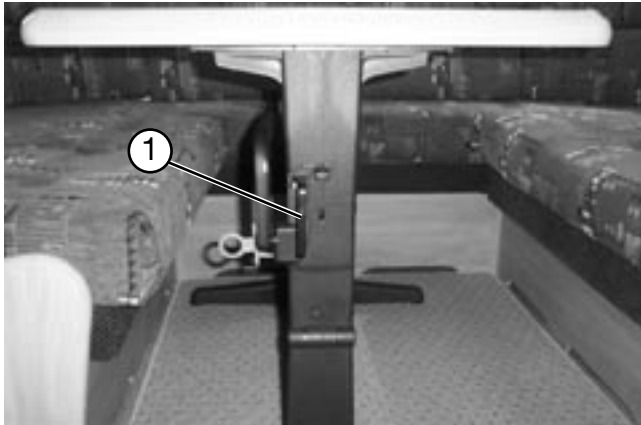
- Pull the shade on the closing rod (1) back into the original position.



The roof bonnet must always remain closed during the drive!

6.5 Seat chests and conversion of beds

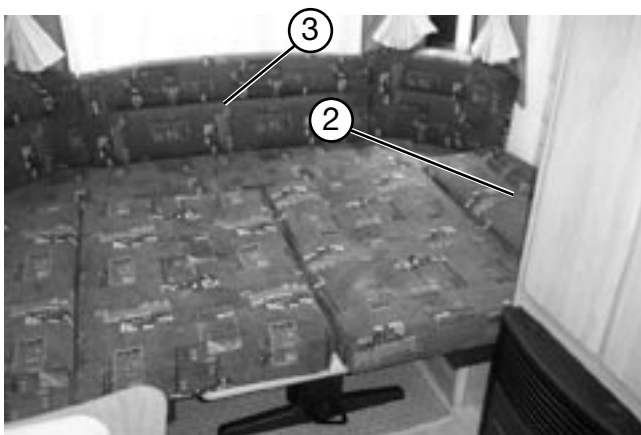
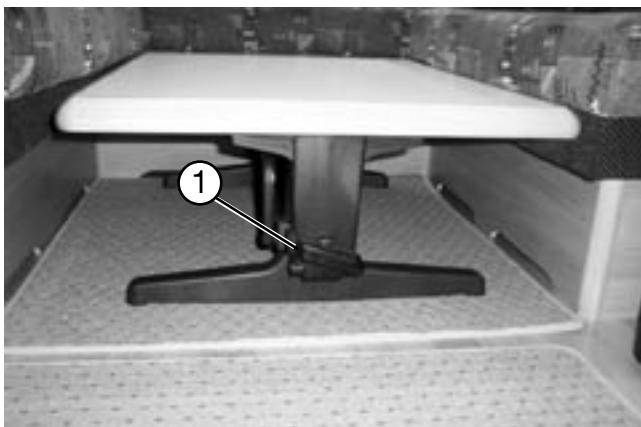
The seat groups can be converted into comfortable beds.



Elevating table model

Conversion:

- Remove the seat and back cushions.
- Pull the latch (1) of the table frame upward and release.
- Pull the latch (1) 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.

6.6 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.

7 Water

7.1 Water supply

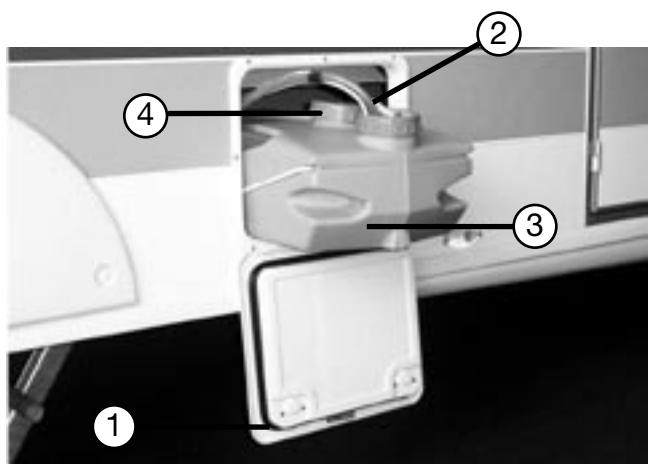
Function of the water supply

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 (1).
- Remove the screw connector and pull the immersion pump (2) from the fresh water tank.
- Pull out the canister (3).
- Add drinking water to the tank.
- Close the tank with the lid (4) when transporting.

To remove water:

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

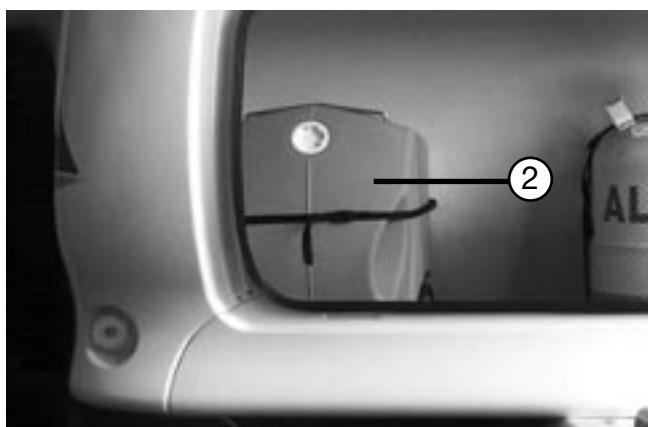
To empty the tank:

- Open the service flap (1).
- Pull the immersion pump out of the fresh water tank.
- Pull out and empty the canister.



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

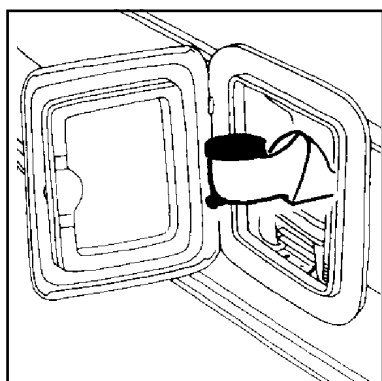
(Exception 560 Uff: The warm water is in the bottle compartment here.)



Emptying the tank and overflow when overfilled

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

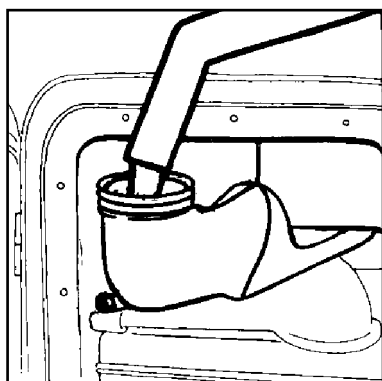
7.2 Water flushing toilet



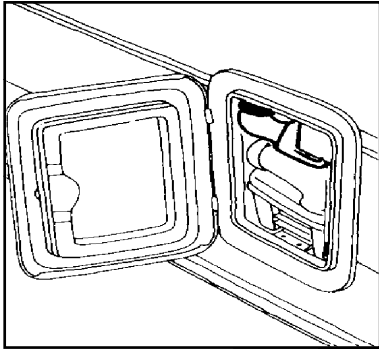
Toilet with fixed seat and fresh water tank

To prepare the toilet:

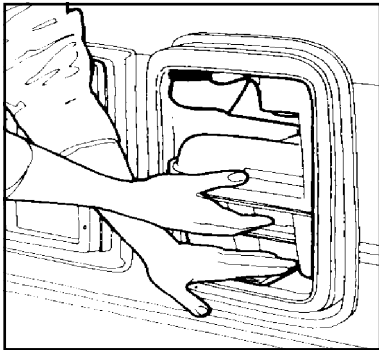
- Open service flap.
- Swing the fill stanchions outward.



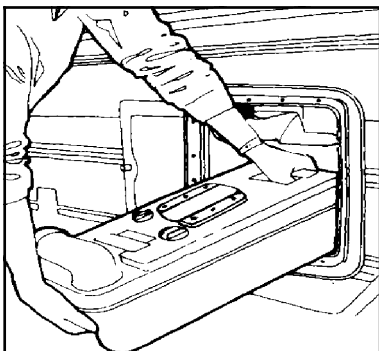
- Remove the screw cap.
- Fill with water until the water reaches the upper rim; this indicates approximately 15 l.



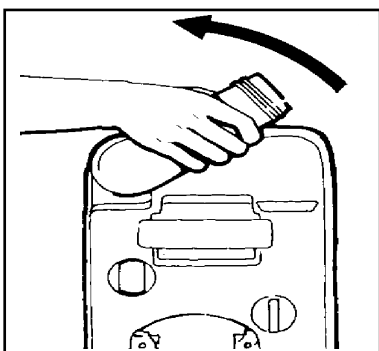
- Close the screw cap.
- Swing the pouring stanchions inward.



- Pull the holder clamp down to remove the faeces tank.



- Pull the faeces tank outward until it clicks.
- Tilt the faeces tank lightly and then pull it out completely.



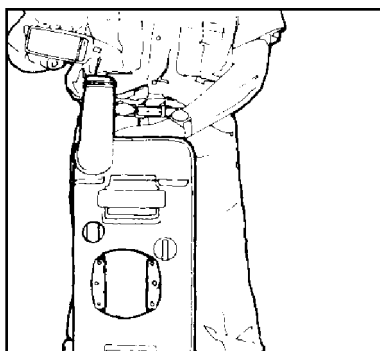
- Set the faeces tank upright.
- Turn the pouring stanchions upward.



You can avoid the use of ordinary toilet-bowl cleaners by installing an active-charcoal filter system!



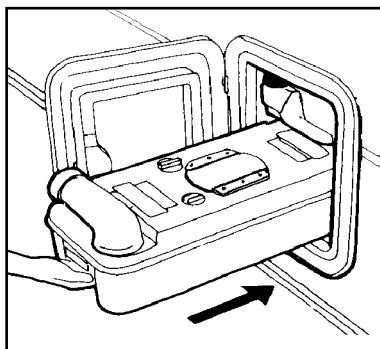
Apply toilet-bowl cleaners very sparingly. Excess application does not guarantee the prevention of odour buildup!



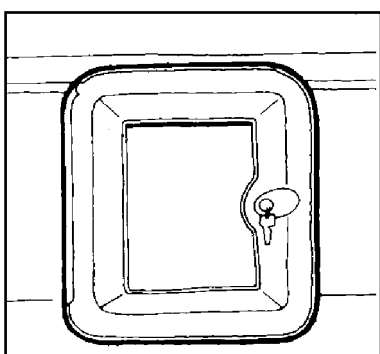
- Fill the faeces tank with the indicated amount of cleaning fluid.
- Afterwards, add enough water to fully cover the bottom of the faeces tank.
- Turn the pouring stanchions back to their original position.



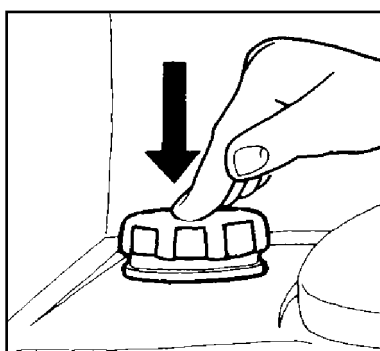
Never apply toilet-bowl cleaner directly to the toilet bowl.



- Push the faeces tank back into its place - so far until the holder clamps lock and hold the tank in place.

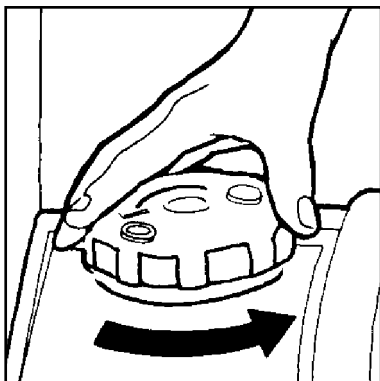


- Close the service flap.

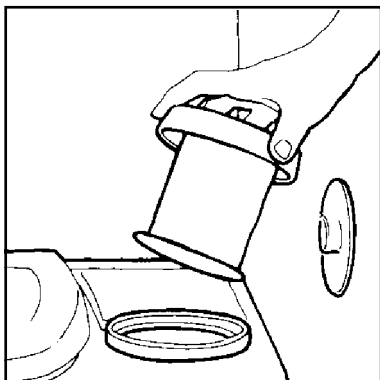


To use:

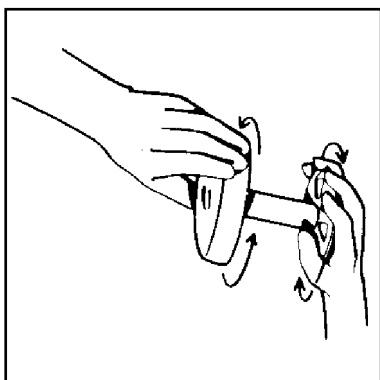
- Fill the toilet bowl with water by pressing the flush knob. Flushing continues as long as the flush knob is pressed.
- Then use the toilet normally.



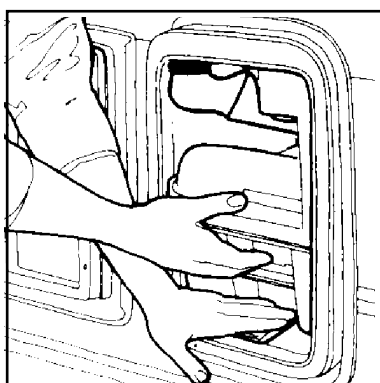
- Flush the toilet bowl with water by pressing the flush knob and simultaneously turning it counterclockwise. The turning movement opens the valve. The toilet bowl is then flushed thoroughly.
- Turn the flush knob clockwise to close the valve.



- Store toilet paper in the designated compartment so that it remains clean and dry.



- The toilet paper can also be placed in a wall holder.

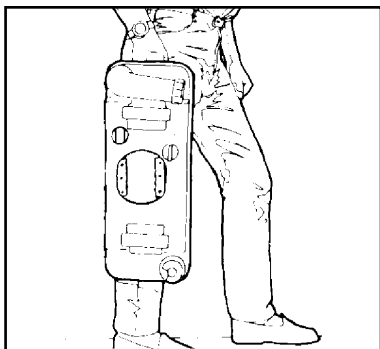


Emptying the toilet case:

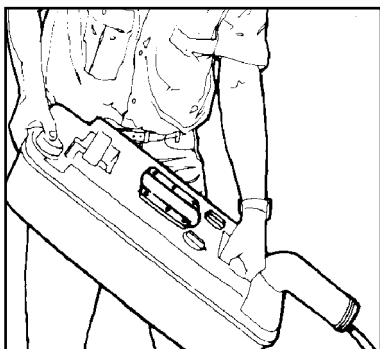
- Open the service flap and pull the holder down to empty the faeces tank.
- Pull the faeces tank out, holding it straight, until it is released.
- Tilt the faeces tank slightly and then pull it out completely.



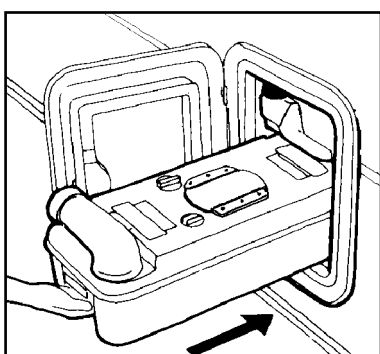
Only empty the faeces tank at designated sites, never out in the open!



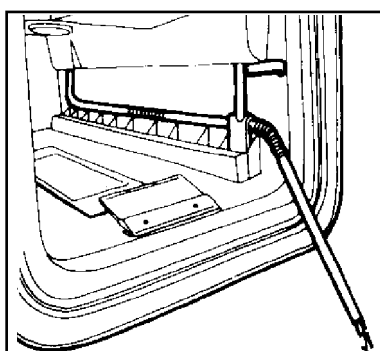
- Bring the faeces tank to a designated disposal site; position the pouring stanchions upward in the process.



- Remove the pouring stanchion cap.
- Position the faeces tank so that the pouring stanchions face downward.
- Press the ventilation knob with your thumb; the tank then empties.

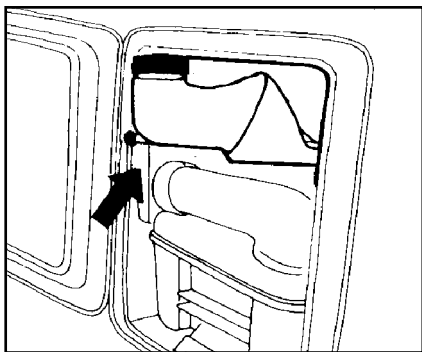


- Push the faeces tank back into place until it returns to the locked position.
- Close the service flap.



To empty the fresh water tank:

- Remove the drain hose/fill indicators in the fresh water tank from their holders.
- Let the water run out through the open service flap.



- Empty the fill stanchions for the fresh water tank by pulling out the stopper on the front.
- Swing the fill stanchions upward.

Rules for the environmentally sound use of the toilet:

- Only use approved and non-polluting cleaners!
- Only empty the toilet at designated stations!
- Never route waste water to a gully! Most sewers bypass the sewage treatment plant and flow directly into a river.

7.3 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.

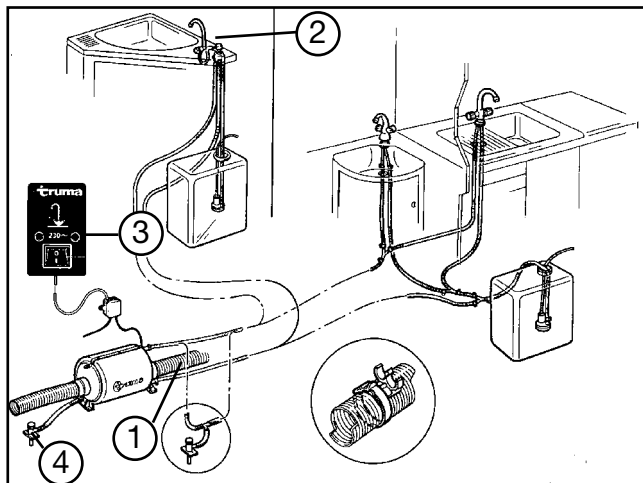
When using a mixing faucet:

- 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.
- Activate the pump.
- Shut off the pump after removing water.

Plan for warm water supply



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.

8 Gas

8.1 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.

-
- 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).

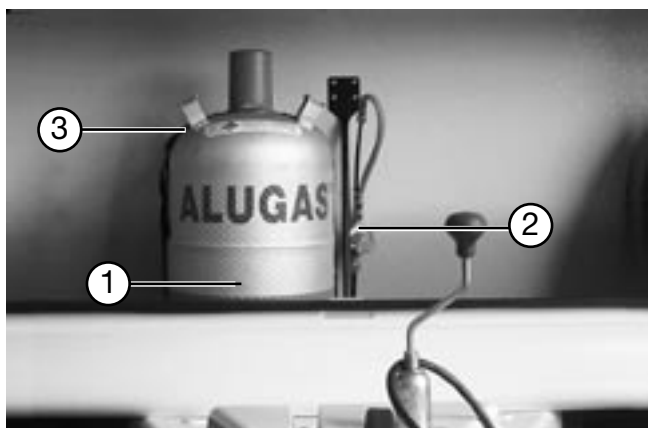


Read the operating instructions from the manufacturer carefully.

8.2 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).

Rules for the gas-bottle container:

- Before every trip, check that gas bottles are securely fastened. Place them in an upright position.
- Re-lash all loose belts.
- Using a leak indicator, inspect the regulator connection for leaks every time you change a bottle.
- The bottle container is not suitable for transporting accessories (e.g. outer tent).
- The ventilation of the bottle container (gap between the bottom of the bottle container and the front wall) must not be closed.



With baking oven (by special request)
Standard in Excelsior from 540 onwards

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



Heating
element

Baking
oven

Gas
range

Refrigerator

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 the gas shutoff spigots

- These are located in the kitchen in the cupboard next to the refrigerator, or in the closet.

Rules for shutoff spigots and valves:

- Close all spigots on gas-powered devices during the drive.



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.

8.3 Heating element

Heating element S 5002 and S 3002

- Above: S 5002 (models 540 - 750)
- Below: S 3002 (models 400 - 495)

Place of installation:

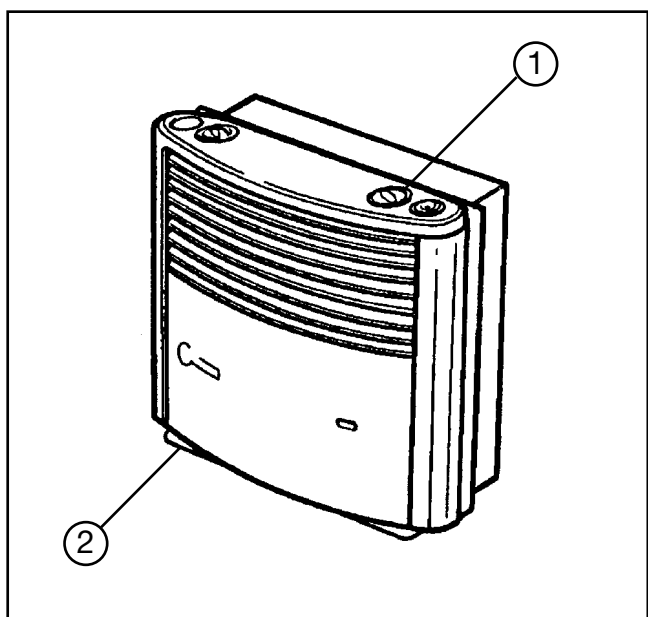
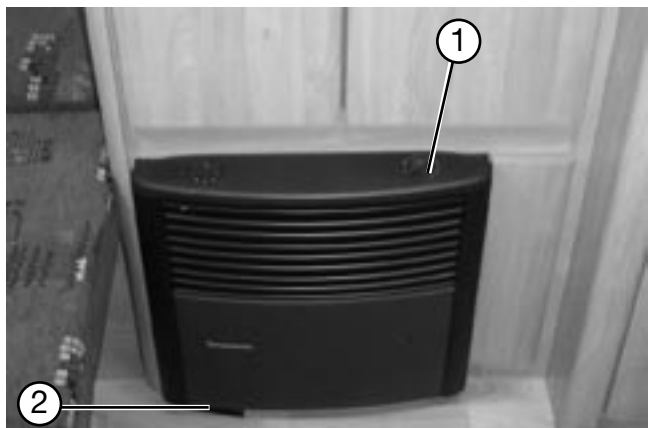
- in the closet or the corner of the flue

Before first use:

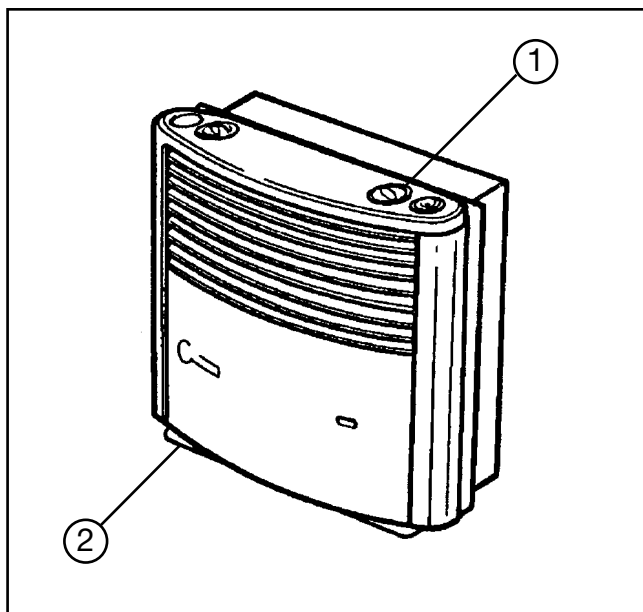
- Before the first ignition, ensure that the batteries in the automatic ignitor (2) are working properly.

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.



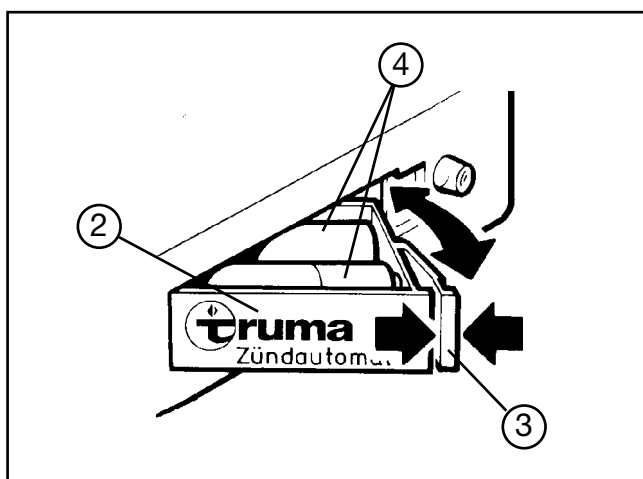
- If the flame extinguishes again, re-ignition takes place during the closing phase of the fusible cut-out of the ignition safety switch (approx. 30 seconds).
- If no flame is ignited, the control light blinks.
- If the control light does not come on at all during the ignition process, the batteries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

8.4 Refrigerator

The refrigerators used in the camper are from the manufacturers Electrolux and Thetford. Note the separate user's guide from the manufacturers of these devices.

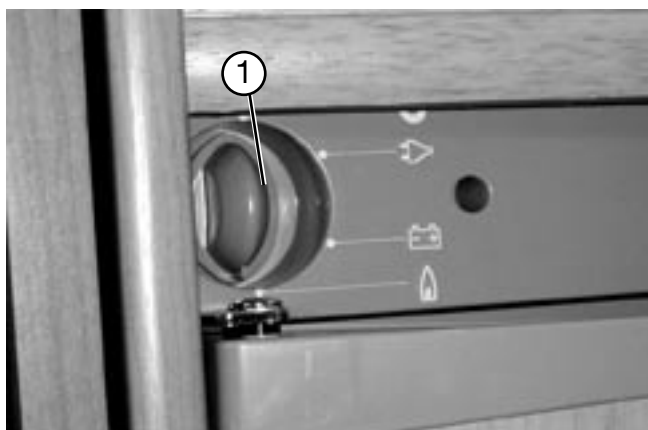
Methods of operation

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.

12 V operation

The 12 V operation should only be used during the drive when the motor of the base vehicle is running. Shut off 12 V operation during breaks and long stopovers to conserve power in the battery of the base vehicle.



Do not operate the refrigerator on gas during the drive! Danger of explosion!

Operation:

- Shut off gas operation, if necessary.
- Set the switch (1) to position 1. If voltage is present, the switch will light up in red.

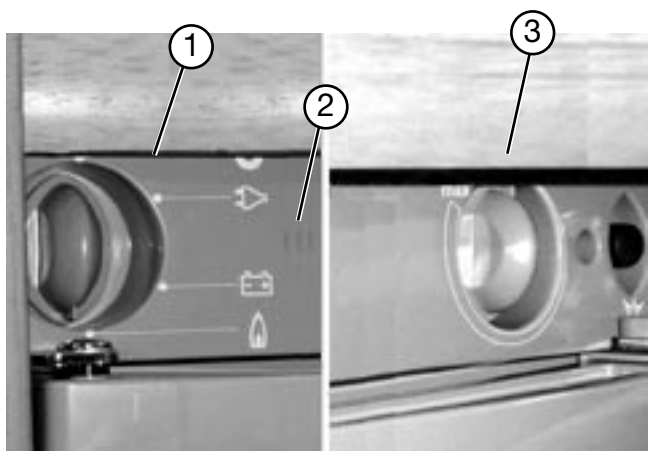
230 V operation

Before first use:

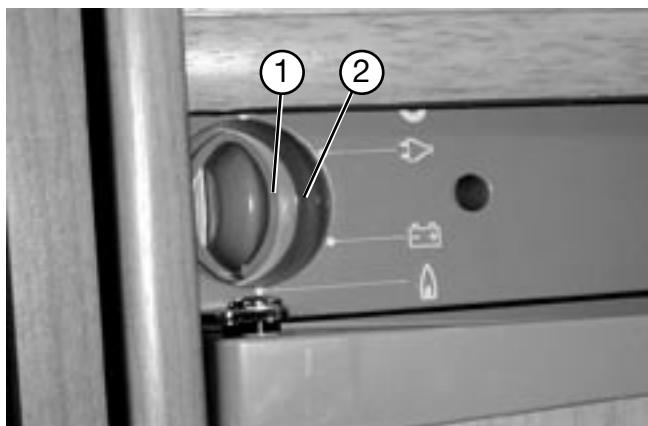
- Check to see if the voltage of the connection in the camper or at the campsite corresponds to that indicated on the type sign.
- Shut off gas operation, if necessary.
- Shut off 12 V operation, if necessary. To do this, set the switch (1) to position 0.

Operation:

- Set the turning knob on the thermostat (3) to the highest level.
- Set the switch (2) to position 1. If voltage is present, the switch will light up in green.

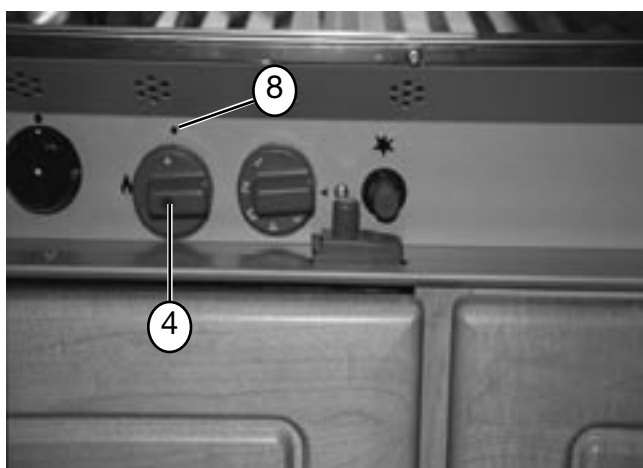


Gas operation



Before first use:

- check to see that the data on gas pressure corresponds to that on the type sign.
- If necessary, shut off 12 V operation by setting the switch to position 0.
- If necessary, shut off 230 V operation by setting the switch to 0.
- Open the valve on the bottle and quick-close valve on the gas line.



To shut off gas operation

- Turn the knob (4) to the "off" position (8).

Further information is found in the operation instructions from the refrigerator manufacturer.

Refrigerator operation

To avoid ice build-up on the cooling element as far as possible: Cover liquid foods and beverages. Let warm foods and beverages cool before you place them into the refrigerator. Keep the refrigerator open only when necessary.

To use surfaces:

There are two or three shelves in your refrigerator. you can adjust the shelves to the desired height with a simple clamp.

Press the synthetic holder on the short right side of the shelf.

- Turn the holder horizontally and slide the shelf into the refrigerator at an angle.
- Set the short side without the holder into one of the designated slots on the left refrigerator wall.
- Set the short side with the holder into the designated slot on the right refrigerator wall.
- Turn the holder down so that it clamps in the slot.

To reposition the shelf, turn the holder upward and remove the shelf. Set the shelf to the desired height as indicated above.



The freezer is not suitable for the initial freezing of foods.
Only use drinking water for making ice cubes.
Do not place other products in the freezer while making ice cubes.

8.5 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 Accessories

Note the detailed operation instructions, installation instructions and circuit diagrams from the manufacturers when using accessories.

10 Maintenance and upkeep

10.1 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!

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.

10.2 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!

10.3 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.

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.

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.

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 furniture surfaces:

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



Do not use scouring solvents or intensive cleaners since these can scratch the surface!

Rules for cleaning the toilet area:

- Clean with neutral liquid soap and a non-scouring cloth.



Also do not use scouring cleaners in the toilet area!

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!

10.4 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.

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.



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).



Only wash the vehicle at specially designated sites.



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

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.

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.

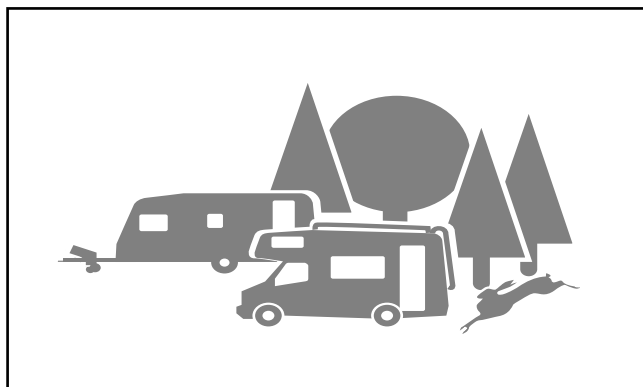


also note the guidelines and operating instructions from the manufacturers of all built-in devices.

11 Waste disposal and environmental protection

11.1 Mobile travel and the environment

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.

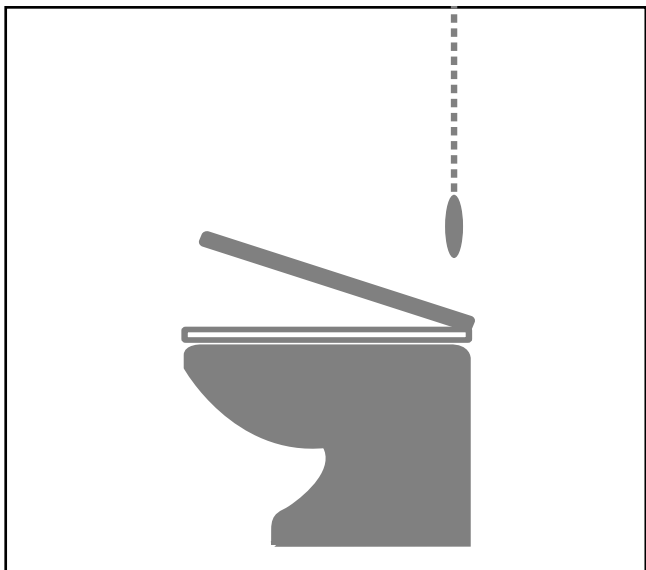


Rules for waste water disposal:

- 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.



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

12 Technical data

12.1 Tire pressure values

Tire size	Air pressure in bar
155 R 13 C	4.5
185 R 14 8PR	4.5
195/70 R15C	4.5
175/70 R13	3.0
195/70 R14	3.0

12.2 Weights in accordance with EN 1645-2

Type	Weight empty [kg]	Basic equipment 1) [kg]	Mass in running order 2) [kg]	g.v.w.r. [kg]	Add. load 3) [kg]
400 SB De Luxe Easy	898	79	977	1100	123
400 SF De Luxe Easy	901	79	980	1100	120
400 KB De Luxe Easy	904	79	983	1100	117
400 SB Excellent Erle Easy	903	79	982	1100	118
400 SF Excellent Erle Easy	916	79	995	1100	105
410 SFe Excellent Easy	987	79	1066	1200	134
440 SB De Luxe Easy	992	79	1071	1200	129
440 SF De Luxe Easy	994	79	1073	1200	127
450 UB De Luxe Easy	975	79	1054	1200	146
450 UF De Luxe Easy	984	79	1063	1200	137
450 UB Excellent Erle Easy	985	79	1064	1200	136
450 UF Excellent Erle Easy	987	79	1066	1200	134
460 UFe De Luxe Easy	1044	79	1123	1300	177
460 UFe Excellent Erle Easy	1050	79	1129	1300	171
495 UL De Luxe Easy	1105	79	1184	1400	216
495 UK De Luxe Easy	1118	79	1197	1400	203
495 UL Excellent Erle Easy	1119	79	1198	1400	202
495 UK Excellent Erle Easy	1125	79	1204	1400	196
495 UFe Excellent Easy	1094	79	1173	1350	177
500 KMFe De Luxe Easy	1130	79	1209	1400	191
500 KMFe Excellent Erle Easy	1142	79	1221	1400	179
500 UFf Excellent Erle Easy	1138	79	1217	1400	183
520 TMF Excelsior Birne	1149	107	1256	1500	244

540 UL De Luxe Easy	1166	107	1273	1500	227
540 UF De Luxe Easy	1167	107	1274	1500	226
540 UK De Luxe Easy	1169	107	1276	1500	224
540 UL Excellent Erle Easy	1172	107	1279	1500	221
540 UF Excellent Erle Easy	1174	107	1281	1500	219
540 UK Excellent Erle Easy	1179	107	1286	1500	214
540 UFe Excellent Erle Easy	1204	107	1311	1500	189
560 UL Excellent Erle Easy	1292	107	1399	1600	201
560 UF Excellent Erle Easy	1299	107	1406	1600	194
560 KMFe De Luxe Easy	1318	107	1425	1600	175
560 KMFe Excellent Erle Easy	1329	107	1436	1600	164
560 UFe Excellent Erle Easy	1292	107	1399	1600	201
495 UFe Prestige Esche	1170	79	1249	1500	251
540 UL Prestige Esche	1227	107	1334	1550	216
540 UF Prestige Esche	1235	107	1342	1550	208
540 UL Exclusive Wurzelahorn	1239	107	1346	1550	204
540 UF Exclusive Wurzelahorn	1249	107	1356	1550	194
540 UL Excelsior Mollebusch	1230	107	1337	1550	213
540 UF Excelsior Mollebusch	1241	107	1348	1550	202
540 UFe Excelsior Mollebusch	1271	107	1378	1550	172
540 UFe Exclusive Wurzelahorn	1285	107	1392	1550	158
540 WLU Exclusive Wurzelahorn	1258	107	1365	1550	185
540 WLU Prestige Esche	1253	107	1360	1550	190
560 UL Prestige Esche	1345	107	1452	1600	148
560 UF Prestige Esche	1349	107	1456	1600	144
560 UKF Prestige Esche	1361	107	1468	1600	132
560 UL Exclusive Wurzelahorn	1352	107	1459	1600	141
560 UF Exclusive Wurzelahorn	1354	107	1461	1600	139
560 Uff Exclusive Wurzelahorn	1321	107	1428	1600	172
560 KMFe Exclusive Wurzelahorn	1392	107	1499	1600	101
560 KMFe Prestige Esche	1387	107	1494	1600	106
560 UFe Prestige Esche	1351	107	1458	1600	142
560 UFe Exclusive Wurzelahorn	1365	107	1472	1600	128
560 UFe Excelsior Mollebusch	1340	107	1447	1600	153
560 WLU Prestige Esche	1373	107	1480	1600	120
560 WLU Exclusive Wurzelahorn	1387	107	1494	1600	106
610 UL Prestige Esche	1470	107	1577	1750	173
610 UF Prestige Esche	1481	107	1588	1750	162
610 UL Excelsior Mollebusch	1534	107	1641	1900	259
610 UF Excelsior Mollebusch	1542	107	1649	1900	251
635 SMF Prestige Esche	1541	107	1648	1900	252
650 KFU Prestige Esche	1607	107	1714	1900	186
650 Uff Excelsior Mollebusch	1555	107	1662	1900	238
650 UMFe Prestige Esche	1524	107	1631	1900	269
650 KMFe Prestige Esche	1532	107	1639	1900	261

650 KMFe Exclusive Wurzelahorn	1535	107	1642	1900	258
650 WFU Prestige Esche	1552	107	1659	1900	241
700 SMF Exclusive Wurzelahorn	1715	107	1822	2000	178
720 UML Prestige Esche	1762	107	1869	2000	131
720 UMF Prestige Esche	1770	107	1877	2000	123
720 UKFe Exclusive Wurzelahorn	1792	107	1899	2000	101
750 UMF Prestige Esche	1975	107	2082	2200	118
750 UML Prestige Esche	1967	107	2074	2200	126

¹⁾ Basic equipment includes all accessories and fluids necessary for the safe and proper use of the vehicle.

This includes the masses of:

- the liquid gas bottles, 100 % full
- the fresh water tank, 100 % full
- the warm water heater, 100 % full
- the toilet tank, 100 % full
- and a connection line for low voltage (cable reel)

²⁾ The mass in running order equals the mass of the empty vehicle plus basic equipment.

³⁾ The additional load in accordance with EN 1645-2 equals the difference of the "gross vehicle weight rating" and the "mass in running order". This value must take into account the masses for additional equipment and personal equipment.

12.3 Basic equipment

a) Liquid gas supply

	400 - 500	500 - 760	
Number 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 (100%):	11	11	kg
Total:	33	33	kg

b) Fluids

22 l Rolling fresh water tank (100%):	22	--	kg
50 l Fixed fresh water tank (100%):	--	50	kg
15 l Toilet flushing tank (100%):	15	15	kg
5 l Truma-Therme (100%):	5	5	kg
Total:	42	70	kg

c) Electric supply

Connecting cable for low voltage:	4	4	kg
Total basic equipment:	79	107	kg

12.4 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	1 x 5W
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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