OPERATION GUIDE UK

360 | 420 | 420+ | 450

Version 06/2026

BEACHY FROM THE 2027 SEASON ONWARDS

Hobby
BUILT FOR LIFE

Dear Caravaner,

Congratulations on the purchase of your new Hobby Caravan. The trust you have placed in us is both an incentive and an obligation to continuously implement new ideas, technical innovations and fine touches to design our caravans even better. Our fully fited and highly sophisticated models enable us to offer you the perfect setting for the most enjoyable days of the year.

Please read this manual carefully, even if you have been caravanning for a long time. It will help you to avoid operating errors or causing damage to the vehicle and its equipment. Following the enclosed instructions will increase your driving comfort and maintain the value of your caravan.

If this user manual should be unable to provide the required assistance, a close, pan-European network of dealers is available for further help. Take advantage of your authorised dealer's experience and technical knowledge - we recommend speaking to him in detail before taking your first trip with your HOBBY caravan.

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

Your
Hobby-Caravan Plant
Ing. Harald Striewski GmbH

Table of Contents

1 Introduction
1.1 General information 1
1.2 Key to using in These Operating Instructions 2

2 Safety
2.1 Intended use 4
2.2 General information 4
2.3 Fire protection 4
2.4 Emergency equipment 6
2.5 Before the journey 6
2.5.1 What to observe before your first journey 6
2.5.2 Before each journey 8
2.6 While driving 9
2.7 After each journey 10

3 Chassis
3.1 General information 12
3.2 Vehicle ID number (VIN) 12
3.3 Loading 12
3.3.1 General information 12
3.3.2 Tow hitch load 14
3.3.3 Information on vehicle weights and weight-related data 14
3.4 Stabiliser hitch 16
3.5 Jockey wheel 19
3.6 Handbrake operation 19
3.7 Overrunning equipment and wheel brakes 20
3.8 Electronic Trailer Stabilisation (ETS plus) 21

4 Wheels and tyres
4.1 Wheels 23
4.2 Tyres 23
4.3 Tyre pressure 24
4.4 Profile depth and age of tyres 24
4.5 Rims 25
4.6 Changing a wheel tyre 26
4.7 Tyre repair kit 28

5 Exterior structure
5.1 Forced and fixed ventilation 30
5.2 Opening and closing doors and lockers 30
5.3 Corner Steadies 33
5.4 Roof 33
5.5 Awning rail 34
5.6 Bicycle carrier 34
5.7 Drawbar stowage box 35
5.8 Aftermarket Modifications 35

6 Interior structure
6.1 Opening and closing doors and drawers 36
6.2 Converting the multi-functional wall/lavatory 37
6.3 Tables 39
6.4 Seating and sleeping areas 40
6.5 Rearranging the cushions 43
6.6 Windows 43
6.7 Roof lights 45

7 Installation of electrical devices
7.1 Safety tips 46
7.2 Operation of the installed electrical systems 46

7.3 Remote controls 47
7.4 Electrical supply 48
7.5 Electrical system 52
7.6 Diagram of the electrical distribution board 54
7.7 Subsequently installed devices 55

8 Water
8.1 General information 56
8.2 Water pump 56
8.3 Water flushing toilet 59

9 Built-in devices
9.1 General information 62
9.2 Heating 62
9.2.1 E-Airtronic electric heating 62
9.3 IGLOO cooler 64

10 Accessories 65

11 Maintenance and upkeep
11.1 Maintenance 66
11.2 Hitch head 67
11.3 Brakes 68
11.4 Changing bulbs in the rear lights 69
11.5 Changing the battery and maintenance of the smoke detector 69
11.6 Ventilation 70
11.7 Upkeep 71
11.8 Winterising the caravan 76
11.9 Winter useage 77

12 Waste disposal and environmental protection
12.1 The environment and mobile travel 79

13 Technical data
13.1 Chassis data 81
13.2 Possibilities for increasing loads 81
13.3 Calculating masses 81
13.4 Tyres and Rims 81
13.5 Tyre pressures values 83
13.6 Measurements of Awning Perimeter 83

Index 84

1.1 General information

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

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

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

Your Hobby caravan has been built in accordance with the latest technology and recognised safety regulations. Despite all of these safety measures, it is possible that people may be hurt or the caravan damaged if the safety instructions in this handbook and the warnings posted on adhesive labels in the caravan are not followed.

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

- Only operate the caravan if it is in perfect technical condition.
- Malfunctions that impair the safety of people or the caravan itself must be repaired immediately by a qualified engineer or company..
- The brake system may only be inspected and repaired by an authorised specialist.
- Specified inspection and MOT deadlines must be met.

Before your first journey

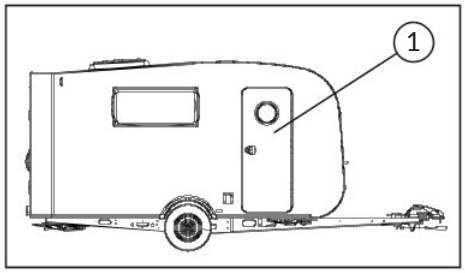
You should certainly familiarize yourself thoroughly with the contents of this handbook; it is much more than a reference book.

Please take any possible provisions regarding the guarantee registration for built-in devices and accessories in the separate manufacturers' operating instructions into account. This ensures your guarantee coverage. Your HOBBY dealer will fill out the warranty registration card for your caravan.

In accordance with guarantee conditions, Hobby gives you a 12-year guarantee through your dealer against leaks in the caravan. When you accept the vehicle you will receive the guarantee booklet, "Five-Year Guarantee on Watertightness" from your Hobby dealer. Maintenance must be carried out regularly and maintenance intervals observed - this is a prerequisite for ensuring warranty. Maintenance must be carried out at regular intervals by an authorised Hobby dealer and documented by him in the Hobby Customer Service History booklet. In addition, all inspections are reported to Hobby by its dealerst.

Annual water ingress checks are annual water ingress check free of charge.
Warning: If no annual water ingress checkis carried out, your right to the 12-year guarantee loses its validity.

1.2 Key to using in These Operating Instructions



Indicating details with the help of position numbers

This operating manual explains the caravan as follows:

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

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

Procedural guidelines
Procedural guidelines are also based on key points and begin with a bullet point. "●".

Guidelines

Guidelines point out important details which ensure the trouble-free operation of the caravan 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 the effects on the environment.

Optional Extras

You have selected a caravan that is equipped to taste.

This user manual describes all of the models and equipment offered within the same season. Therefore, it may include equipment that you have not selected.

Differences and, thus, all of the optional extras are marked with an asterisk "*".

For technical reasons, optional extras cannot always be installed in all models. Should you have any questions, please speak to your Hobby dealer.

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

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

2.1 Intended use

This caravan has been designed as a mobile travel accommodation for private, not commercial use. This is a recreational vehicle that is fit for habitation. It offers accommodation that can be used temporarily or seasonally and which meets the requirements for the construction and use of the vehicle on the road. It is not intended for permanent residence. Furthermore, no more than the number of people for which this caravan has been designed may spend the night in the vehicle. When the caravan is on the road, it may only be used in accordance with road traffic regulations and national vehicle safety standards.

The trailer is only suitable for towing by motor vehicles used for the carriage of passengers (Vehicle Category M^1: saloons, hatchbacks, estate cars, coupés, convertibles). M^1 vehicles which have a special purpose (e.g. mobile homes, ambulances, armoured vehicles) are not suitable for this intended purpose. Motor vehicles for carriage of goods (Vehicle Category N) such as lorries, vans, small lorries, box vans, pick-ups, plus any kind of vehicle with a technically permissible maximum weight of more than 3,500 kg, as well as all types of tractors in Vehicle Categories T and C for agricultural and forestry purposes are also not suitable for towing trailers. The trailer itself may not be used to transport people/ animals and/or goods.

It may not be used to transport people/animals and/or goods. While driving, people/animals may not remain in the caravan. When the caravan is on the road, it may only be used for carrying personal equipment. Transporting unsecured loads and/or packages is forbidden.

Please ensure that the technically permissible maximum weight of the caravan and the permitted axle load(s) per axle are not exceeded. No use of the caravan other than that described here is permitted; any other use is regarded as contrary to the intended use.

2.2 General information

- The caravan may only be driven on public roads by someone with a valid driving licence category for such vehicles.
- The individual manufacturer's operating and instruction manual(s) must be observed when using built-in devices (cooler, heating*, etc.).
- The measurements, weight and driving performance of the caravan may change if accessories or optional extras have been installed. Some accessories that are fitted after purchase of the vehicle must be entered in the registration document.
- Use only tyres and rims that have been approved for your caravan. Information on tyre and rim sizes can be found in the vehicle's registration document or in **Chapter 13.4 Tyres and Rims.**

Label for tyre pressure

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

2.3 Fire protection

Fire prevention measures

- Never leave children and vulnerable persons alone in the vehicle.
- Keep flammable materials away from all heating and cooking appliances*.
- Changes to the electrical system or built-in devices may only be carried out by professional, authorised workshops.

- Keep an ABC dry powder fire extinguisher by the entrance door.
- Ensure that everyone is familiar with the guidelines on the fire extinguisher.
- Place a fire blanket near the gas cooker*.
- Keep all escape routes clear.
- Ensure that everyone is familiar with the fire prevention measures on site.

Fighting a fire

- Evacuate all passengers immediately.
- Disconnect the gas supply when using gas-operated devices.
- Gas containers* which cannot be removed should be cooled with water.
- Shut off the electrical supply.
- Sound the alarm and call the fire service.
- Only fight the fire yourself if this is possible without risk.

Smoke detector

Smoke detector

The caravan has been fitted with a battery-operated smoke detector on the ceiling. Should smoke be detected inside the vehicle, a loud alarm will go off, warning any passengers of a possible fire.
The detector's own electricity supply is powered by a 9V block battery, ensuring that the smoke detector will function independent of the vehicle's electric system, even if the power supply has been switched off.

- To activate the smoke detector, pull the protective foil off the block battery and insert the battery.
- Test the smoke detector regularly to check that it is functioning correctly by pushing on the test button ①.

Please refer also to the device manufacturer's operating manual.

For more information on using and changing the battery, please refer to Chapter **11 Maintenance and Upkeep.**

A smoke detector will not prevent fires or put them out. If it is working properly, it will merely provide you with those possibly decisive seconds to save yourself and notify emergency services.

Please observe the information regarding used batteries in **Chapter 12.1.**

In case of thunderstorms

The danger of a direct lightning strike is very low. Nevertheless, some precautionary measures should be taken during a thunderstorm to further minimize any risk.

- **Close or dismantle the extensions and additions:** Outer tents and further additions should be retracted or dismantled when it is safe to do so.
- **Avoid contact with metallic components and cables:** Avoid direct contact with metallic objects, electric equipment and water pipes.

- **Staying in the trailer:** Due to the different types of materials used, a trailer is **not a Faraday cage**. If you wish to further minimize the risk, we recommend staying in a car or a permanently fixed building.
- **After a suspected lightning strike:** Have the electric system and attached devices checked by a qualified expert. The vehicle may only be operated once again after it has been thoroughly maintained.

2.4 Emergency equipment

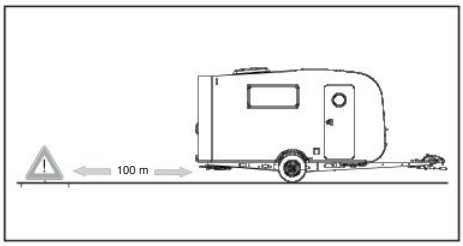
To be prepared in case of an emergency, you should always carry the three emergency devices on board and familiarize yourself with them (not included in the delivery!).

First-aid kit

The first aid kit should always be kept handy. It should have a fixed place in the base vehicle/caravan. If things have been removed from the first aid kit or used they must be replaced as soon as possible.

High visibility jacket/vest

In accordance with individual country regulations, carrying a high-visibility warning vest on board and wearing it in accordance with DIN EN 471:2003+A1:2007 or EN ISO 20471:2013 is mandatory when leaving the vehicle.



Minimum distance between warning triangle and caravan

Warning triangle

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

In an emergency

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

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

2.5 Before the journey

2.5.1 What to observe before your first journey

Vehicle registration (Germany)

Every vehicle which uses public roads is subject to registration. This includes your new caravan. You can register the caravan at your local registration office.
The following documents are required to initiate the registration process:
- Motor Vehicle Registration Certificate Part II and/or Certificate of Conformity (CoC)
- Electronic Insurance Certificate/eIC Number
- personal identification or proof of residence
- possibly, power of attorney to have someone else register the caravan.
- if applicable, direct debit mandate for taxes

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

The transition to digital CoC data will take place at the end of 2026. Please speak to your dealer regarding the process for approval.

General inspection (Germany)

In accordance with Section 29 of German Road Traffic Licensing Regulations, your caravan must undergo a major inspection every two years.

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

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

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

"100" speed sticker

Fit for a Speed of 60 mph (Germany)

1. Your HOBBY caravan is technically equipped for a maximum speed of 60 mph. Under no circumstances may this speed be exceeded!
2. Note the permissible maximum speeds for towing in the country in which you are travelling!
3. Road traffic regulations in **Germany** were changed on 22 October 2005. Your caravan was already set to be towed at 100 KPH at the factory, and this has been entered in the caravan's registration documents. Upon request, the 100 KPH sticker will be issued by the road traffic authority when the caravan is initially registered and attached to the back of the vehicle.
4. The following points must be observed, because you are responsible for adhering to them. If they are not met, the maximum speed for the caravan is 50 mph!
   a) The base vehicle must be equipped with an anti-locking system/anti-lock device and may not exceed an overall mass of 3.5 tons.
   b) The caravan must be equipped with hydraulic vibration dampers (shock absorbers); naturally, your new HOBBY caravan is equipped with these.
   c) The caravan's tyres should be changed after a maximum of six years. They must be marked at least with an L (= 75 mph) for the appropriate speed category.
   d) The caravan must be equipped with a stabilser hitch in accordance with ISO 11555-1. This is a standard feature in all Hobby models.

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

5. Free interchangeability of tow vehicle and caravan:
Different caravans may be combined with different tow vehicles. You are responsible for ensuring that the preceding regulations are met if you plan to drive at 100 km/h.
6. The correct noseweight gives you more safety:
Please refer to chapter 3.3.2 for the recommended noseweight.

- **Tighten the nuts on the wheels after driving the first 50 km with your caravan.**

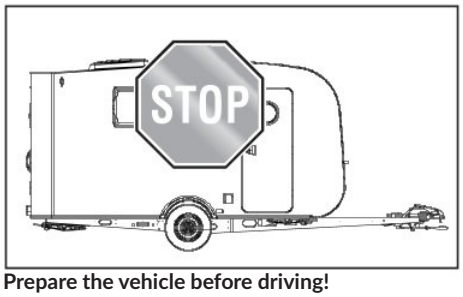
Please familiarise yourself abroad about any national regulations that may apply with regard to registration and general inspection and whether you are permitted to tow your caravan at 100 KPH.

2.5.2 Before each journey

Road safety

- The electric connection between the tow vehicle (your car) and the caravan must function perfectly.
- Before driving, check that the signalling and lighting systems and brakes function correctly.
- If the vehicle has not been used for a longer period of time (approx. 10 months) have the brake system checked by an authorised specialist.
- Set the vehicle's wing mirror.
- The roof must be cleared of snow and ice before driving.
- Regularly check the tyre pressure before driving. False tyre pressure can cause excessive wear, damage to the tyres or even lead to a burst tyre. **(see also Chapter 13.5 Tyre pressure values)**

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



Prepare the vehicle before driving!

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

Interior

Preparing the interior

- Close and firmly lock all of the windows and roof lights.
- Sort all loose objects and store them in their respective compartments.
- Store heavy and/or voluminous objects (e.g. radio, awning, beverage cases) safely before you start your journey, securing them to prevent them from shifting **(see also Chapter 3.3 Loading)**.
- If necessary, switch the cooler to operate in 12V mode.
- Ensure that no liquids, including those in the cooler, can leak out.
- Switch off the gas supply from gas-operated devices*.
- Lock all doors and drawers securely (lock the central locking system for the kitchen drawers).
- Close and lock the rear flap.
- Store the entry step securely inside the vehicle.
- Secure the table and, if possible, lower it.
- Switch off the interior lighting and move height-adjustable lights to their upper position.

Exterior

Check around the caravan and ensure everything is secure for your journey as follows.

Preparation of the vehicle

- The caravan must be hitched up correctly **(see Chapter 3.4 Stabiliser hitch Chapter 3.4).**
- Release the hand brake for the caravan.
- Rotate the corner steadies and front landing wheel upwards and secure them.
- Empty the waste water tank, clean it and stow it securely in the vehicle.
- Switch off the awning light.
- If necessary, disconnect the cable for the 230V mains connection from the external socket.
- Close and lock the entrance door.
- If necessary, secure any bicycles on the bicycle carrier*, lashing them with the fastening straps to prevent them from slipping, and ensure that the rear tail lights are not covered. If the bicycle carrier has not been loaded, fold it in and secure it. **(see Chapter 5.6)**
- If necessary, secure the spare tyre holder.
- If necessary, stow the awning inside the vehicle.

Do not overload the caravan! The permissible axle load, the technically permissible maximum weight as well as the permissible height, width and length of the vehicle must be observed! Ensure that there is sufficient ventilation. Never cover up built-in forced ventilation (skylights with forced ventilation). Ensure that forced ventilation is not covered by snow or leaves as this increases the **danger of suffocation.**

Place a note with all important measurements and weights in a clearly visible place on the dashboard.

2.6 While driving

Driving

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

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

Rules for driving

- Do not underestimate the total length of the car & caravan (rig). Due to the relatively long rear overhang, larger caravan can swing out and, under adverse conditions, the rear end of the caravan can hit the ground.
- Take extra care when driving toward yards and through gates.
- In conditions with strong side winds, slick ice or wet roads, the caravan 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 car & caravan can be accelerated, if necessary, without endangering other drivers or pedestrians.
- If the caravan moves back and forth on a sloping road, brake carefully but rapidly to bring the caravan back into line.
- **Never** increase speed if the caravan becomes pendulous.
- Do not drive down a hill any faster than you would drive up one.
- Long, gently sloping downhill slopes can be dangerous. Calculate your speed from the very beginning so that, if necessary, it is still possible to accelerate without endangering other road users.
- When overtaking or being overtaken by trucks or buses, the caravan can be caught up in air suction. This could cause the caravan to sway or become pendulous.
- Drive with foresight; on longer trips, stop at regular intervals for breaks.

Driving around curves

The combined length of your car & caravan together (rig) is considerably longer than a car.

The following applies for driving in curves

- Do not take curves too quickly or too sharply!
- Take the curve at a somewhat wider radius when turning.
- Note that the caravan can swing out if you turn too quickly.

Brakes

A car and caravan together (rig) 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 the rig is longer than that of an individual vehicle. The load in the caravan also has a significant influence on the braking distance.

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

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

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

Driving in reverse

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

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

Rules for driving in reverse
- The caravan turns in the opposite direction in which you steer.
- Get one someone to guide you when reversing the caravan.

2.7 After each journey

Front grab handle

Rear grab handle

Shunting (moving caravan by hand)

In most cases your caravans will be longer and wider than your car.

Tips for maneuvering your caravan
- There is a significant blind spot when moving the caravan, even when the exterior mirrors are properly adjusted.
- Use a another person when turning into difficult parking spots especially in reverse..

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

Never use the manoeuvring handles to lift the trailer - **danger of serious injury!**

Choosing a parking place

Rules for choosing a parking place

- If at all possible, check the place selected for parking in daylight.
- The parking place should be as horizontal as possible.
- Level the caravan lengthwise using the jockey wheel.
- If on uneven or sloping ground level the the caravan sideways using boards or wheel chocks.

Do not use the corner steadies to compensate for uneven ground.

Securing the vehicle

Rules for securing the vehicle

- Apply the handbrake brake.
- Only extend the corner steadies to the point where the axle still assists in bearing the weight (The crank is located in the wardrobe or drawbar stowage box*).
- If the ground is soft, place supports under the corner steadies.
- Use the wheel chocks to secure the wheels. The chocks are located underneath the vehicle, on the sides, near the wheels.

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

To ensure that the hand brake does not freeze, only pull on it gently when the temperature reaches 0° C or lower.

Switching over electrical devices

Instructions for redirecting electrical devices

- Configure the cooler in accordance with the manufacturer's operating instructions, thereby setting the voltage/battery monitor to "Hi", since the 12V power supply automatically switches off after a short time when the engine (of the car) is not running.

If the camper socket has been attached to the car in a manner conforming to standards (DIN ISO 11446), the car's battery will not be discharged when the ignition has been switched off and you have forgotten to switch the cooler from 12V operation.

Water installation

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

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

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

3.1 General information

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

Technical changes are allowed with the manufacturers permission.

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

Trailers are basically not suitable for towing by lorries, small lorries, buses, etc. **(see 2.1 Intended use)**. If this is done permanently, they will be damaged.

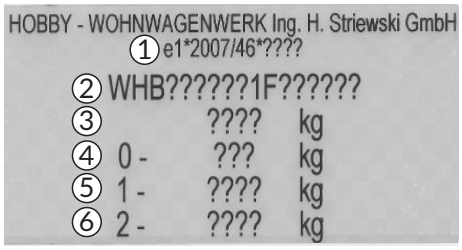
3.2 Vehicle ID number (VIN)

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

Additionally the Vin number is on the sticker in the gas box.

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

Name plate



Hobby name plate

① Permit number
② Vehicle ID number (VIN)
③ Permissible maximum weight
④ Max. nose weight
⑤ Permissible axle load, 1st axle
⑥ Permissible axle load, 2nd axle

Do not remove or change the name plate.

The name plate is located on the side wall to the right of the entrance door.

3.3 Loading

3.3.1 General information

Rules for loading:

- Distribute the additional load evenly between the left and right-hand side of the vehicle. Heavy or bulky items should be stored close to the axles.
- Never load your caravan with the weight towards the rear (danger of swaying back and forth).
- The lower the caravan's centre of gravity, the better its driving performance and response in curves.
- Stow baggage and light objects (clothing) in storage compartments inside the vehicle.
- Heavy objects should be stowed securely to prevent them from moving.

- You may not always be able to follow the recommended stowing arrangement, because storage possibilities are distributed throughout the whole interior of the caravan. If necessary, put heavy objects in the tow vehicle.
- Secure doors and lockers.
- Check the technically permissible maximum weight and the axle load after you have finished loading.

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

If you are not sure whether or not you have overloaded the caravan, you should have it weighed at a public weigh bridge.

Lashing rings

Securing loads

Use lashing rings and suitable retaining straps inside the vehicle (not included in the scope of delivery) to prevent objects from shifting while driving.

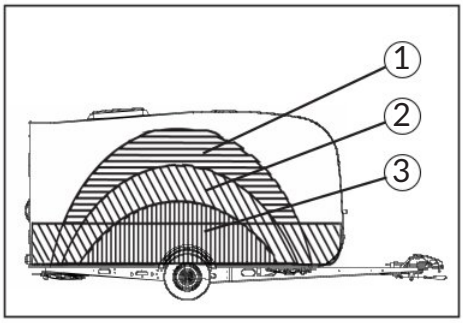
Always check that the lashing rings are firmly locked before you start your drive.

he total maximum luggage weight which can be secured by the four lashing rings must not exceed 55 kg!

The owner/driver of the vehicle is always responsible for ensuring that transported loads have been correctly secured. As far as possible, always use tension belt systems licensed for this purpose.

Never use rubber expanders. Remember that exceptionally strong driving dynamics can occur in dangerous situations or when you are forced to slam on the brakes.

Please note: the heavier the rear load, the worse the driving performance and brake response.



Stowage areas

Stowage areas in the caravan

- Light objects ① such as towels and lightweight laundry.
- Medium-weight objects ② such as clothing, laundry and food.
- Heavy objects ③ such as the awning, boat engine or beverage cases.

3.3.2 Tow hitch load

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

Rules for the nose weight load:

- Set the nose weight correctly! You can, for example, use normal bathroom scales: use a strip of wood (approx. 400mm long) to position them vertically under the hitch head. To do this the A frame of the caravan must be in a horizontal position.
- Always check the nose weight before you start to drive!
- The specified loads (see no. 2. or the Vin sticker) as well as the permissible maximum weight of the car and caravan (the “rig”) must not be exceeded!

How to adjust the correct nose weigh:

1. Determine the maximum nose weigh of your tow vehicle by checking its documentation, the chassisplate or the drawbar plate.
2. **The maximum permissible nose weightfor your HOBBY caravan is 100 kg.**
3. Adjust the nose weight on the caravan to the lower of the two values by loading it carefully. At the same time, try to make full use of this value.
4. The lower of the two specified values for the nose weight, i.e. that of the tow vehicle or the caravan, may not be exceeded.

3.3.3 Information on vehicle weights and weight-related data

The legal requirements for vehicle weights are set out in Commission Implementing Regulation (EU) 2021/535 of 31 March 2021, which is valid throughout the European Union.

1. Maximum technically permissible laden weight of the vehicle
The “technically permissible maximum weight” is the maximum weight specified by the manufacturer which the loaded vehicle may have when driving. Note that exceeding the technically permissible maximum weight when driving can be a safety risk which, in many European countries, entails a fine. We recommend, therefore, that the vehicle should be weighted before every journey to ensure that the technically permissible maximum weight is not exceeded.

2. Mass when ready to drive
Basically, the “mass when ready to drive” is the weight of the standard empty vehicle as specified by the manufacturer. For trailers, the mass when ready to drive includes the mass of the vehicle fitted with standard equipment in accordance with the manufacturer’s specifications plus the liquids, the mass of the superstructure, tow-bar and tyre repair kit.

Note that the information given in the technical data regarding the mass when ready to drive refers to calculated values from the type-approval procedure. These are subject to legally permissible tolerances of up to ± 5 %, which can have a direct impact on the remaining loading capacity of the individual vehicle.

Example:
Mass when ready to drive acc. to technical data: 1,121 kg
Legally permissible tolerance of ± 5 %: ± 56 kg
Legally permissible range of mass when ready to drive: 1,065 to 1,177 kg

Since the occurrence of legally permissible tolerances has a direct impact on the remaining loading capacity of the individual vehicle, these tolerances must already be taken into consideration when configuring the vehicle.

Example:
If legally permissible tolerances in the amount of + 1 % occur in the mass of the vehicle from the example above when it is ready to be driven, the mass when ready to drive increases from 1,121 kg to 1,132.2 kg. This means that the loading capacity of the vehicle is reduced by 11.2 kg.

3. Actual mass of the vehicle and standard equipment/optional extras
The "actual mass of the vehicle" includes the mass when ready to drive plus the optional extras built in at the factory. "Standard equipment" refers to the basic configuration of a vehicle equipped with all of the features which are required by law. This also includes all of the equipment fitted as standard.

"Optional extras" refers to all of the equipment not included in the standard equipment, which is built into the vehicle at the factory under the manufacturer's responsibility and which can be ordered by the customer. On the other hand, other accessories which are fitted by the manufacturer, their partners or the customer themselves after the vehicle has been delivered are not included in the optional extras.

Note that the installation of optional extras always reduces the loading capacity (cf. no. 5.).

4. Maximum number of sleeping spaces
The number of sleeping spaces in trailers is decisive for calculating the so-called minimum loading capacity (cf. no. 5.).

5. Loading capacity and minimum loading capacity
The loading capacity is calculated by subtracting the mass when ready to drive plus the mass of all optional extras from the technically permissible maximum weight.

For all of the vehicles built by HOBBY, Commission Implementing Regulation (EU) 2021/535 stipulates a fixed "minimum loading capacity" for baggage and other objects which are not part of the optional extras fitted at the factory. This is meant to ensure that personal baggage and food (e.g. clothing, toiletries, kitchen equipment, food, camping equipment or toys) may be taken along without exceeding the maximum technically permissible laden weight of the vehicle.

For the trailers built by HOBBY, this minimum loading capacity is calculated using the following formula:
Minimum loading capacity in kg ≥ 10*(n + L)
n = highest number of sleeping spaces and
L = length of the vehicle's superstructure in meters

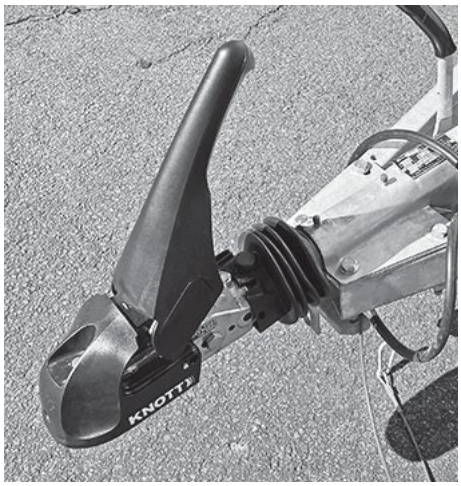
Example:
The minimum loading capacity for a trailer with 3 sleeping spaces and a superstructure which is 5.5 m long is 85 kg (10*[3+5.5]).

6. Maximum mass for optional extras
To ensure that the technically permissible maximum weight of the vehicle, taking the mass when ready to drive and the legally required minimum loading capacity into account, is not exceeded by the installation of optional extras, HOBBY has limited the installation of optional extras and, as manufacturer, specified a “maximum mass for optional extras”.

This is calculated by subtracting the mass when ready to drive as well as the minimum loading capacity from the technically permissible maximum weight.

Since the mass when ready to drive is a calculated value which is subject to the legally permissible tolerances of up to ± 5 %, and the occurrence of these tolerances can mean that the minimum loading capacity is actually undercut, the legally permissible tolerances are also included as a precautionary measure when calculating the maximum mass for optional extras. Furthermore, special features for country-specific/special models which are not part of the standard equipment are also taken into consideration.

3.4 Stabiliser hitch KS 30



Stabiliser hitch

The caravan has been fitted with a stabiliser hitch (class B50-X) with friction pads to reduce fish-tailing. This system conforms to ISO 11555-1. It has been permitted for use up to a maximum speed of 100 km/h.

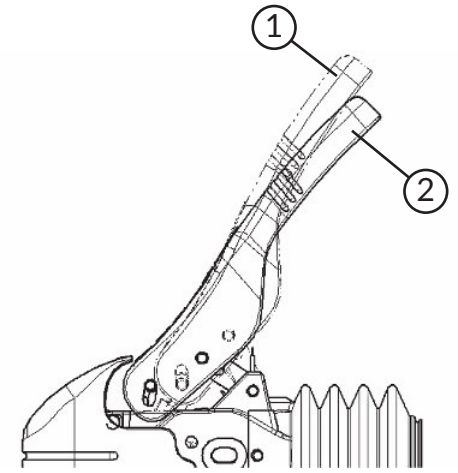
Please note the additional operating instructions and the manufacturer's safety instructions.

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

The stabilising effect on the rig that can be achieved depends to a great extent on the effectiveness of the friction pads in the tow bar and the state of the hitch ball. Therefore, always check the friction pads regularly for wear and tear. There must not be any oil or grease on the friction pads.

The caravan’s driving stability also depends to a great extent on the load, tyre pressure and condition of the tyres.

Before your first trip, please observe the information given in **Chapter 11.2 Maintenance and Upkeep** regarding the ball on the tow bar if it has a Dacromet coating (a dull-silver coating for corrosion protection) or is painted / lacquered.



Opening and closing the stabiliser hitch

Preparation for hitching/unhitching

- To hitch and unhitch, open the stabiliser hitch (lever in position ①).

The stabiliser hitch may only be used with Class A tow balls (ball with a diameter of 50 mm in acc. with ISO 1103) as set out in regulation ECE R55.
WARNING: Ensure that the ball of your tow bar is clean and free of grease.

Hitching

- Connect the break-away cable to the eyelet provided for that purpose (see 3.6 Handbrake, section on Rapid-emergency brake.
- The open stabiliser hitch is set onto the tow ball of the tow vehicle. Push down on the handle to shut the safety hitch automatically (handle in position ②). Normally, the support load is enough to achieve this.
- Insert the 13-pin plug while turning, in accordance with the screw thread.
- Secure the jockey wheel **(see 3.5 Front Landing Wheel)**.

Do not step on the drawbar when the trailer is hitched. The maximum loads for the caravan and/or base vehicle could be exceeded and the combination could buckle.

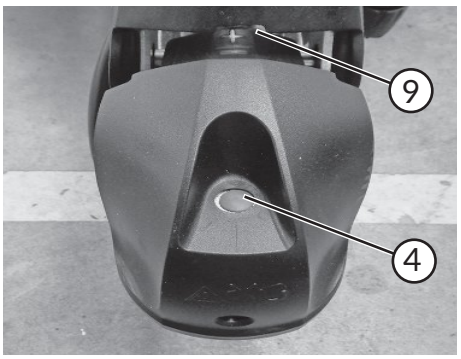
Use only the grab handles provided to manoeuvre the caravan (**see 2.7 After driving**) and never the lever of the KS 30.

Do not use the hitch as a lever to lift the caravan!

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

Do not reach into the open stabiliser hitch! This could trigger the locking mechanism, causing the hand(s) to be crushed.

The stabilising function must always be activated when driving!



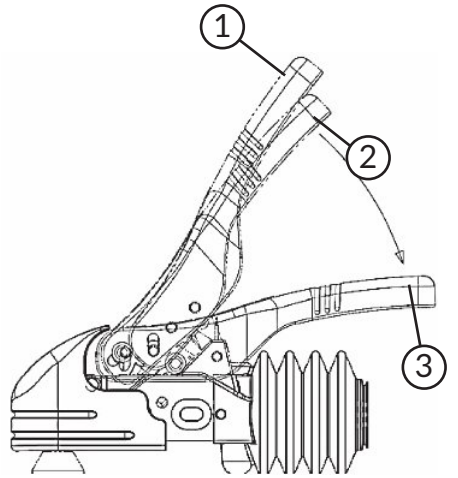
Tow ball location indicator and position of wear indicator

Inspection of hitch

- The stabiliser hitch is closed when the handle is in position ② or ③ and the green pin (ball indicator) in the control display on the upper side of the stabiliser hitch ④ is visible.

If the KS 30 is not properly attached to the tow ball, the caravan can detach from the tow vehicle. After hitching up, the green pin (ball indicator) must be visible! If not, reopen the tow bar and hitch it up correctly.

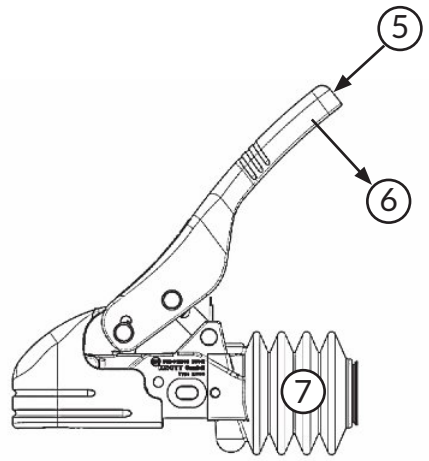
It must not be possible to release the hitch from the tow ball when the jockey wheel is lowered.



Activated stabilising device

Activation of the stabilization system

- To do this, press as far down as possible on the handle in the closed position ②to position ③. After pushing the handle down to position 3, the spring-loaded friction pads mounted on the socket are pushed against the ball of the towing vehicle's trailer hitch. When the hitch is locked on correcty the hitch handle will lay parrallel to the hitch bar.



Easy activation

- Since a certain amount of force is required to activate the stabilising device, we recommend that you first apply force on the handle (as shown in the illustration on the left, position ⑤) and then apply the actual clamping force as shown in position⑥.

Releasing the stabilization system
- Slowly pull the handle upwards past the dead centre position so that it automatically jumps to position ②.

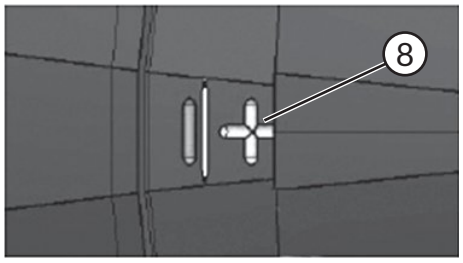
If the stabilising device has been activated, there must be no vehicle parts or attachments on the handle while driving. This means that if the drawbar is pushed in and, at the same time, the KS 30 is turned, this must not result in a collision with the hand brake lever or other attachments.

Never drive when the stabilising device has been deactivated!

Unhitching
- Make sure that overrun gator ⑦ is fully extended. It will not be possible to release the hitch from the tow ball if it is compressed.
- Pull the handbrake on and secure the caravan with wheel chocks if necessary.
- Pull the 13-pin plug and then release the break-away cable.
- Slowly pull back the handle and then upwards into position ② to disengage the friction pads.
- Then pull up the handle as far as possible to position ① so that the coupling is completely open. Lock the handle in this position.
- After the jockey wheel has been wound up, the caravan can be disconnected from the tow vehicle.

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

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



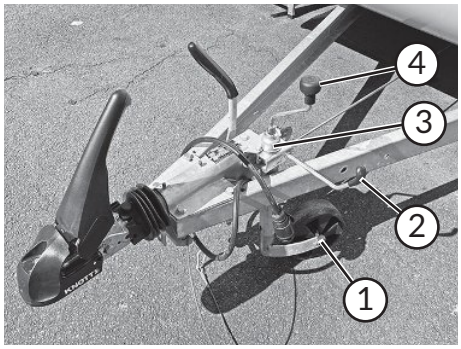
Wear indicator for the friction pads

Maintaining the stabilizing device
After connecting the hitch and locking down the handle, this engages the friction pads. You can see the condition of the friction pads from the wear indicator ⑨:

- If the wear indicator ⑧ is in the green “+” zone, the friction pads are suitable for driving.
- If the indicator is on the dividing line, the friction pads must be replaced **(see Chapter 11.2 Hitch head)**.
- If the indicator is in the red “-” zone, there is no stabilizing function. The friction pads must be replaced without delay. Permission to drive at 100 km/h is immediately cancelled. The caravan may not be driven until the friction pads have been replaced.

If the friction pads are new, optimal shock absorption is reached after a certain period of operation. If the friction pads must be replaced, the state of the tow ball on the tow vehicle must also be checked.

3.5 Jockey wheel



Jockey wheel lifts upwards and locks in place

Rotating it upwards and securing it

- Hitch the caravan to the towvehicle, aligning the jockey wheel ① to the rear end of the caravan.
- Loosen the clamping handle ②.
- Pull the jockey wheel ③ up as far as possible.
- Tighten the clamping handle ②.
- Turn the crank of the front landing wheel ④ counter-clockwise to raise the wheel as far as possible and secure it to prevent it from twisting.

Before driving, always make sure that the jockey wheel is up as far as it will go and it tight to prevent it from coming down when in transit.

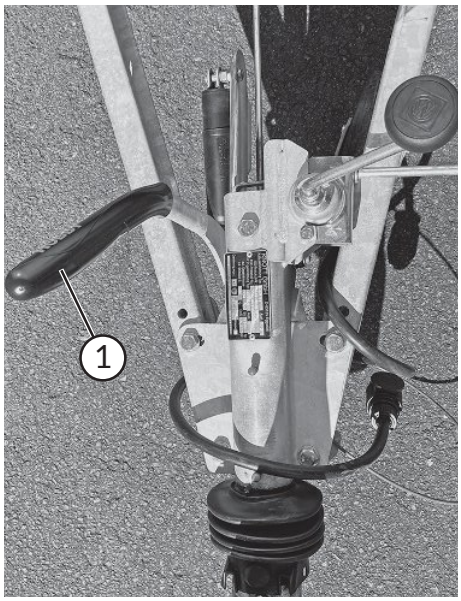
To lower

- Loosen the clamping handle ②.
- Lower the jockey wheel ③ as far as possible until the front landing wheel is approx. 70 mm above the ground.
- Tighten the clamping handle ②.
- Turn the crank of the front landing wheel ④ clockwise to lower the wheel until it touches the ground.
- Unhitch the caravan from the tow vehicle and, if necessary, lower the jockey wheel further.

The maximum mass that the support wheel and its clamping mechanism can support is equal to the maximum permissible drawbar load (100 kg; exception: model 720 = 150 kg).

3.6 Handbrake operation

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



Hand brake facilities

Parking the caravan

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

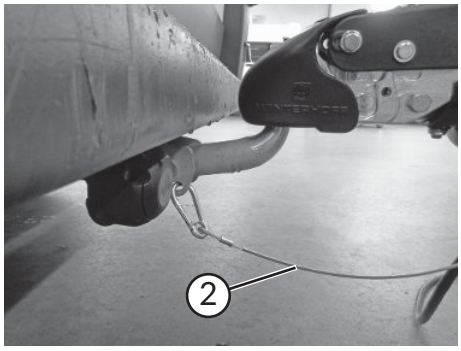
To lock

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

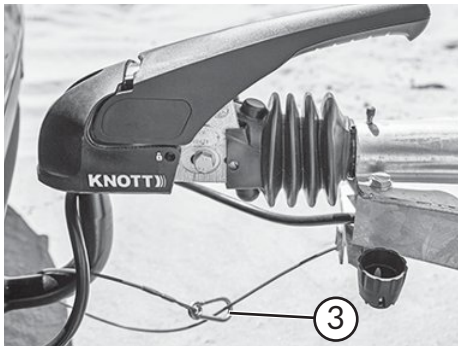
To release

- Push the hand brake forward to the starting position.

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



Fastening the rapid-emergency brake (Breakaway cable) by means of the eyelet on the tow coupling



Fastening the rapid-emergency brake without an eyelet

Rapid-emergency brake

Please observe national regulations on fastening the rapid-emergency brake, as applicable.

The rapid-emergency brake (Breakaway cable) is combined with the hand brake. If the caravan is involuntarily disconnected from the base vehicle, the hand brake will be tightened or moved beyond the dead centre position by by the breakaway cable pulling on the handbrake ②. The hand brake will be employed and the caravan will do an emergency stop. This prevents the caravan from continuing to roll without braking after it has been disconnected.

To fasten the breakaway cable to the base vehicle, clip the carabiner into the eyelet provided (where this is depends on the base vehicle model). If no eyelet has been provided, wrap the breakaway cable once around the tow-bar, forming a loop, and fasten the carabiner directly to the cable (see photo Fig.③.

Should you exchange the carabiner, ensure that you get an equivalent replacement. The standard version of your Hobby caravan is equipped with a carabiner used by fire departments. A so-called spring hook must not be attached directly to the eyelet, because it can only supply the strength required to fully apply the brake if it is the fastener for a loop.

Before driving, the breakaway cable must be fastened to the tow vehicle.

3.7 Overrunning equipment and wheel brakes

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

Checking the overrunning equipment

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

1. If it is possible to push the hitch head more than halfway (approx. 5 mm) in when the hand brake has been activated, the braking system must be adjusted immediately by an experienced technician or workshop.

2. To check the reaction point:
   Activate the hand brake and push the caravan backwards until the hand brake lever is completely tilted. Then push the hitch head into the overrunning equipment. The hitch head should slide back to its fully extended position by itself by means of the gas cushion in the hydraulic damper. Should this procedure take longer than 30 seconds, the overrunning equipment must be checked by an experienced technician or workshop.

Wheel brakes

All Hobby caravan models have an automatic brake adjustment that independently compensates for wear in the brake shoes.

- Regular adjustment of the brakes is not necessary.
- Brake adjustment is automatically deactivated when reversing.

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

Please go to an authorised specialist if, when checking the overrunning brakes, the drawbar can be pushed in more than 45 mm.

Every caravan must undergo an initial inspection by an authorised specialist after the first 500 km **(see also 11.3 Brakes)**.

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

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

3.8 Electronic Trailer Stabilisation (ETS Plus)*

ETS Plus is a safety system that can be retrofitted for HOBBY caravans with a mechanical overrun brake. It automatically recognises if the trailer starts to sway and, if necessary, can stabilise the car and caravan by applying the caravan brakes.

A special MOT inspection is not required for installing ETS Plus.

The ETS Plus system makes use of an LED on the A frame to indicate whether the connection to the car has been carried out correctly. After hitching, the ETS Plus will start an auto-test. After approx. 3 seconds, the LED turns green. The rig is now ready to drive. Please refer also to the manufacturer's separate operating instructions.

- Before your journey, check the light-emitting diode (LED) on the ETS Plus.
- ETS Plus operates within a temperature range of -20°C to +65 °C.
- Never reach into the moving parts of the ETS Plus central unit - **there is a danger that your fingers will be crushed!**
- The steady plus on the 13-pin socket on the car must be safeguarded by means of a fuse with at least 15A but nor more than 20A.
- The increased level of safety provided by ETS Plus should not, however, result in undertaking a safety risk. The vehicle's speed must always be adjusted to take weather, road and traffic conditions into account.
- The limits imposed by the laws of physics cannot be suspended by ETS Plus. Please keep this mind when driving on wet or icy roads.
- Caravans with a high centre of gravity may turn over before they begin to sway.
- No improper modifications may be/have been made to the brake system as this could interfere with the function of the ETS Plus.

If the LED on the ETS Plus is not continuously green, please refer to the following table:

LED display	Meaning	To eliminate
Blinking green (fast) **x_x_x_x**	Brake intervention or auto-test (possible to continue driving)	-
Blinking green (short pulses) **x___x___**	In power-saving mode (possible to continue driving)	After driving for approx. 3 seconds, the system will switch to ready mode.
Blinking green (slow) **xxx__xxx__**	System or brakes too hot (possible to continue driving)	Continue to drive with care. After 120 seconds, the cooling system will switch to ready mode.
Blinking red light **_x_____**	Electric supply fault (e.g. loose contact or voltage too low) (continue to drive prudently)	• Check the (plug-in) cabling. • Unplug the system for 20 minutes, then plug it in again. If this does not help: contact a dealer/authorised specialist.
Blinking red light **_x_x_____**	Mechanical fault (e.g. no brake cable connected/ brakes badly worn out/ system installed incorrectly) (continue to drive prudently)	• Visual inspection of brakes/assembly of ETS Plus/ check that braking system is properly adjusted. • Unplug the system for 20 minutes, then plug it in again. If this does not help: contact a dealer/authorised specialist.
Blinking red light **_x_x_x___**	Error in the central unit (e.g. handbrake is on/ brake rigging preloaded during assembly) (continue to drive prudently)	• If necessary, release the handbrake (overrunning equipment should be fully extended). • If necessary, check that the brake rigging is properly adjusted. • Unplug the system for 20 minutes, then plug it in again. If this does not help: contact a dealer/authorised specialist.
LED does not light up	ETS Plus is inactive (continue to drive prudently)	• Unplug 13-pin trailer cable from tow vehicle. • Visual inspection of plug and contacts. • Check that there is steady plus on the socket. • Plug in 13-pin trailer cable to the tow vehicle. If this does not help: contact a dealer/authorised specialist.

4.1 Wheels

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

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

Tightening torque for wheel nuts and bolts:

Rim	Wheel bolts	Tightening torque
Metal wheel rim	M12 x 1,5 x 24	110 Nm
Light alloy rim	M12 x 1,5 x 28	120 Nm

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

4.2 Tyres

Within the registration certificates part I and II there is a tyre size for each caravan, this doesn't necessarily have to match the tyre size fitted to the caravan ut you can only fit tyres that are approved by the manufacturers, if in doubt please contact your dealer. Other possible tyres are listed in the CoC (Certificate of Conformity).

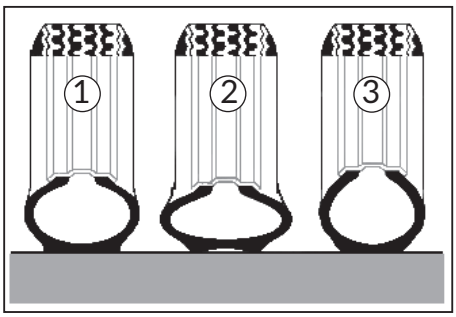
- Check tyres regularly to ensure that the tread is worn down evenly; check tread depth; check for check for damage.
- Always use the same make and model of tyres (summer or winter tyres).
- Drive carefully on new tyres for a distance of approx. 100 km to enable them to develop a full road grip.

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

4.3 Tyre pressure

Tips for checking tyre pressures:

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



Different tyre pressures

Rules for tyre pressure:

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

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

If the tyre pressure is too high, , this leads to higher tread wear and it may cause damage to the suspension.

Information sticker for tyre pressure

Please refer to the table **"Tyre pressure values" in Chapter 13 Technical Data** or the stickers on the hub caps for the correct tyre pressure.

4.4 Profile depth and age of tyres

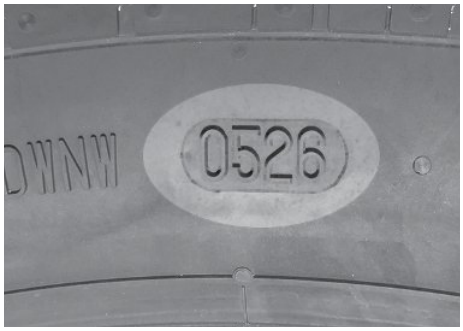
New tyres are needed (at the latest) when the profile depth measures 1.6 mm.

The minimum tread depth only guarantees minimum safety while driving!

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

Tyres age even when used rarely or not at all.

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



DOT number

Age of tyres
You should change your tyres before they reach six years old because the rubber deteriorates over time and also when they don't move for long periods of time. You should not drive at 60 MPH with tyres that are over 6 years old. The four digit DOT code on the side of tyre (if necessary, check the inner wall) shows the date of manufacture. The first two digits refer to the manufacturing week, the last two digits to the manufacturing year.

Example:
DOT 0526 means week 05 in the year of manufacture (here: 2026)

4.5 Rims

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

Rules for the use of other rims:
- Size,
- the pitch Circle Diameter (PCD) and the wheel offset.
- compression depth and
- the load/bearing capacity must be sufficient for the permissible total mass.
- The wheel bolts must be the correct type for the wheel rims fitted.

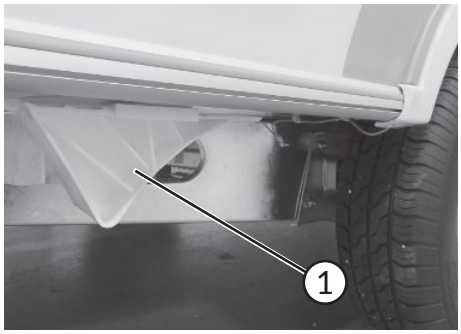
Modifications can only be made with the manufacturer's permission.

Rules for wheel screws

Wheel bolts for all 14" metal wheel rims and all light alloy rims: **cone washer**

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

4.6 Changing a wheel tyre



Chocks

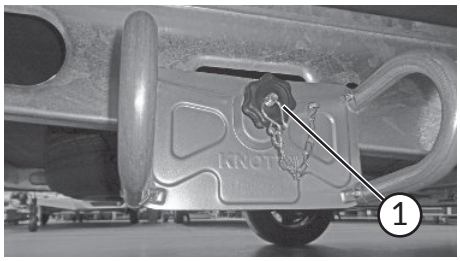
Placing the chocks under the wheel

Preparing to change the tyre

- If possible, only change the tyre when the tow vehicle is coupled to the caravan.
- Park the car and caravan on as firm and even a surface as possible.
- If you have tyre trouble on a public road, turn on your hazard warning signal lights and set up the warning triangle.
- **Tow vehicle:** Pull the hand brake, shift to first gear and align the wheels so that they are straight; when driving an automatic, set the gear to "P".
- **Caravan:** Pull the handbrake, leave the jockey wheel in its driving position, release the hitch handle, to the first position (note: do not open completely).
- Use the wheelchocks ① .

If there is a gasbox* on the caravan, the chocks are located to the right and left of the gasbox.

- If necessary, place chocks ① in front of and behind the wheel that is still in good order so as to secure the caravan.



Threaded lock nut on the spare tyre mount

Spare wheel holder in chassis beam

Spare Tyre*

The spare wheel is located on a holder under the caravan. This is an option and is model specific.

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

Remove the spare tyre

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

If the caravan has alloy rims, note that the correct wheel bolts are used if your spare wheel is a steel rim.

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

Changing the wheel

- Place a firm base, such as a piece of wood, underneath the (shunting) jack* if the vehicle is on soft ground.
- Place a suitable (shunting) jack* or a jack made by KNOTT on the axle near the flange.
- Before jacking up the caravan, loosen the wheel bolts one full revolution, but do not remove them.
- Lift the vehicle until the wheel is 2 or 3 cm off the ground.
- Reset the (shunting) jack* if it slips while the vehicle is being jacked up.
- Remove the wheel bolts and the wheel.
- Place the spare tyre on the wheel hub and align it.
- Reattach the wheel bolts and hand tighten them.
- Lower and remove the (shunting) jack*.
- Tighten the wheel bolts 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 push the hitch handle back down to reengage the friction pads, activating the stabiliser..

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

When raising the trailer on its frame, it is not always possible to position the (shunting) jack* so that it is straight and will not slip. This could cause the trailer to slip or the pillar to twist or tilt. We recommend, therefore, that the trailer is raised using either a shunting jack* placed on the axle (near the flange) or a jack* made by KNOTT.

If the (shunting) jack* is positioned in other places, this may cause damage to the vehicle or even accidents if the vehicle falls off the jack!

The (shunting) jack* is to be used only for changing tyres. It may never be used when working underneath the vehicle! Life-threatening danger!

The corner steadies may not be used as a car jack*!

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

4.7 Tyre repair kit

Tyre repair kit

Parts included in the repair kit

All models are equipped with a tyre repair kit; this is part of the standard equipment.

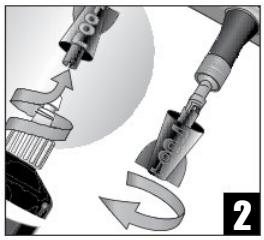
Do not use the tyre repair kit if the tyre was damaged as a result of driving without air. Small punctures (of up to 6 mm), especially in the tyre tread, can be sealed using the tyre repair kit. Do not remove foreign objects (such as screws or nails) from the tyre. The tyre repair kit can be used when the outside temperature ranges from -30°C to +70°C.

Using the tyre repair kit will only help to make the tyre temporarily usable. The tyre should, however, by checked and repaired as quickly as possible by an experienced technician.
Please refer also to the manufacturer's operating instructions.

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

Positioning the tyre

1 Turn the tyre so that the valve is visible on the upper half of the tyre.

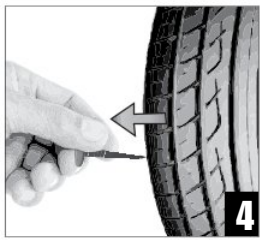


Unscrewing the valve core

2 Unscrew the valve cap and then slowly unscrew the valve core using the enclosed valve wheel wrench. Always hold the valve core firmly when applying the wrench.

Letting air out of the tyre

3 Let all of the air out of the tyre.



Removing a foreign object

4 If possible, remove the foreign object from the tyre.

Pushing the filler hose onto the tyre valve

5 Shake the bottle of tyre sealant. Screw the white attachment on to the bottle, then attach the filler hose and connect it to the valve. Fill in the recommended amount of tyre sealant.

Screwing the valve core tight

6 Pull off the filler hose. Insert the valve core with the aid of the valve wheel wrench and screw it tightly shut

Pumping up the tyre

7 Screw the air hose on to the tyre valve. Connect the power supply cord to the cigarette lighter. Press the ON/OFF button to switch the compressor on. Shut the compressor off as soon as the correct tyre pressure has been reached. Then remove the power supply cord and unscrew the air hose. Screw the valve cap back on.

Never let the compressor run for more than 10 minutes at a time! **Risk of overheating!** Allow the compressor to cool down for 25 minutes before using it again. Resume driving immediately, so that the sealant can be evenly distributed within the tyre. **Maximum speed: 80 km/h. Drive carefully, especially around bends or corners.**

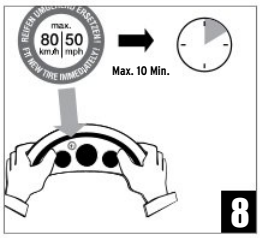
If the tyre is completely flat, it may come off the wheel rim. In this case, air would escape when it is pumped into the tyre. Should this be the case, use a (shunting) jack* to jack up the trailer before pumping air into the tyre.

Danger of accidents! If the required tyre pressure is still unattainable, the tyre is too severely damaged. In this case, the tyre repair kit can no longer provide an effective seal. Therefore, do not drive any further.
Notify a replacement tyre company or call out you're chosen breakdown service.

The compressor gets hot when in use. **Risk of burns and scalding!**

The car's engine must not run when the compressor is being used. The hand brake must be on.

Store the compressor out of the reach of children!



Mounting stickers in the driver's field of vision

8 Stop after having driven for 3 km and check both the sealing and the tyre pressure. Attach the enclosed sticker to the inside of the car's front window. Drive carefully to the next repair shop and have the tyre replaced.

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

5.1 Forced and fixed ventilation

Forced ventilation in the floor

Forced ventilation of the roof bonnet

The following applies for ventilation
Proper ventilation and dehumidifying of the caravan is a prerequisite for ideal living comfort. Vents for draft-free forced ventilation have been integrated in the floor ① of your caravan; for forced dehumidifying , they have been integrated in the roof lights. You must not interfere with their mode of operation.

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

Keep the grilles and coverings clean and dust-free.

We recommend that you open the roof bonnets whenever you stay in the caravan.

Cooking, wet clothing, etc., produces vapor. Every person loses up to 35 g of water per hour. Therefore, depending on the relative humidity, forced ventilation and de-aerating must be carried out by opening the window and the roof bonnets (see also Chapter 11.6 Airing).

5.2 Opening and closing doors

Keys

Two keys which fit the entrance door as well as the lock on the fresh water tank are supplied together with the vehicle.

Entrance door

The entrance door is your escape route in an emergency. Never barricade the door from the inside or the outside!

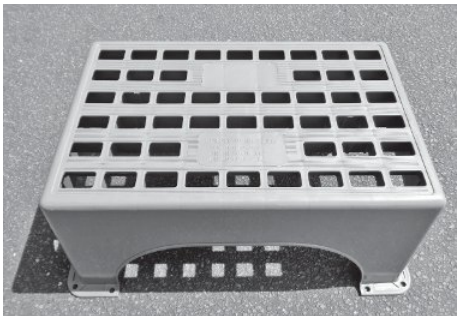
The entrance door must always be kept closed and locked while driving.

Door handle of entrance door

External entrance door

To open
- Gently turn the key to the left (for a door with the hinges on the left and right for a door with the hinges to the right) until you hear the lock open.
- Turn the key to a horizontal position and pull it out.
- Pull on the door handle.
- Open the door.

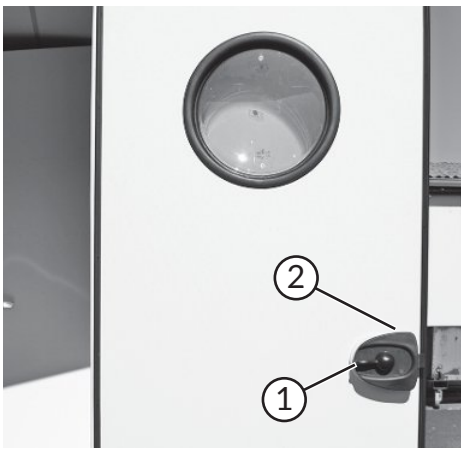
To close
- Close the door.
- Gently turn the key to the right((for a door with the hinges on the left and left for a door with the hinges to the right)
- Turn the key to an upright position and pull it out.


Entry step tread

Entry step

When entering and exiting the vehicle:
- Place the entry step in front of the entrance door to the caravan.
- Ensure that the step is placed on a level surface; this prevents the step from falling over.

Note the varied step heights and, when exiting, ensure you will step onto firm and even ground. The entry step can support a maximum load of 200 kg.



Entrance door

Interior of entrance door

Opening the door
- Press the door handle ① down and push the door out to open it.

Closing the door
- Use the door handle ② to guide the door back into its frame and pull it inwards until it clearly and noticeably locks.

Locked door handle

Locking the door from the inside
- Turn the door handle ① to an angle of about 45° upwards (see illustration).

In this position, the door is locked and can only be opened from the outside with the key for the entrance door.

Partitioned rear flap

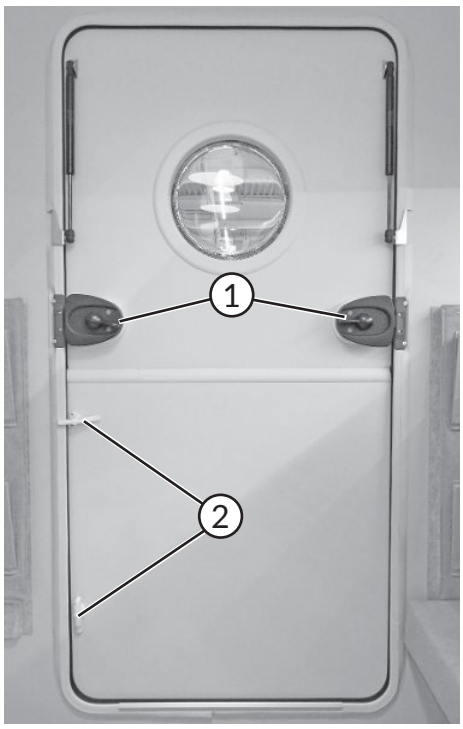
Partitioned outer rear flap

The upper flap and the lower door can only be opened and closed from the inside.

You could be seriously injured! Because of its high position on the vehicle, the rear flap is not meant to be used for entering or leaving the vehicle!

Top flap open

Both flaps open



Partitioned inner rear flap

Partitioned inner rear flap

Opening the upper flap
- Press down on the handles ① and push the flap outwards and upwards to open.

Closing the upper flap
- Guide the flap back into its frame and pull it inwards until it clearly and noticeably locks.

Opening the lower flap
- Turn the twist locks ② to an upright position and swing the flap open to the right.

Closing the lower flap
- Guide the flap back into its frame and turn the twist locks ② to a horizontal position.

Door retainer

Locking devices for doors and flaps

The entrance door and the lower part of the rear flap can be fastened using the locks on the outside wall of the vehicle.

To lock
- Open the door or flap all the way.
- Press the male part that is fastened to the door into the female part on the outside wall of the caravan. Take care to ensure that it clicks firmly into place.

To unlock
- Pull the pieces apart.

Doors and flaps must always be closed before driving.

Cover flap

Cover flap

The access to water or electrical components is covered by these flaps, for example:

Fresh water filler cap

CEE external socket

Opening
- Grasp the cover flap at the bottom of the latch and pull it up.

Closing
- Grasp the latch of the cover flap and close it until it clicks into place.

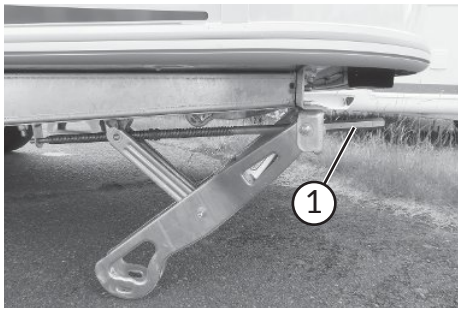
Please refer to the appropriate chapters on water **(Chapter 8)** and electricity **(Chapter 7)** for information on handling the individual components.

When driving, the cover flaps must always be firmly shut.

Never fill any type of liquid (e.g. diesel, oil or cleaning solutions) other than water into the fresh water tank.

5.3 Corner steadies

Turning corner steadies in and out



Supported caravan

The corner steadies are located in the front and rear sections underneath the trailer. The corner steadies have been prepared for the KNOTT levelling system*. It can be purchased from your dealer or specialist shops.

Winding the corner steadies down
- Park the vehicle as horizontally as possible.
- On soft ground, lay a sturdy mat or suitably sized board under the eet of the corner steadies to prevent the caravan from sinking.
- Push the winding handle onto the hexagon head ① and lower the corner stadiess.

The corner steadies must only be used for support, and not for leveling or lifting the caravan.

Winding the corner steadies up
- With the winding handle, turn the corner steadies up to the horizontal position.

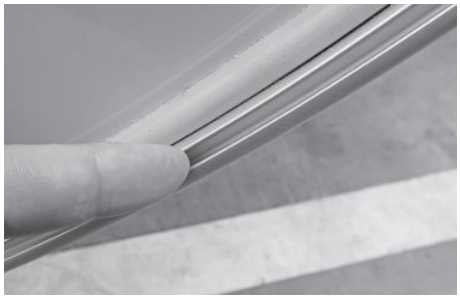
The crank for the corner steadies is located in the wardrobe or drawbar stowage box*.

Always lift the corner steadies all the way up before driving away!

5.4 Roof

Do not step on the roof of the BEACHY!

5.5 Awning rail



Rail for sliding in the awning

The piping of the awning slides into the awning rail on both sides of the caravan, both at the front and rear ends.

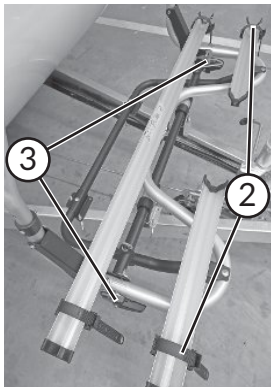
- The awning provides protection from the sun, but not all-weather protection.
- Before driving, the awning must always be fully retracted and secured.

"BEACHY" awning

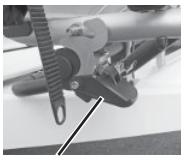
The wheel cover has an integrated keder strip for sliding in the mudguard*.

5.6 Bicycle carrier*

A frame bicycle carrier



Straps and locks



open

closed

Please read the separate operating instructions for the bicycle carrier before using it.

Before driving for the first time, take some time to practice so as to familiarise yourself with driving conditions.

A frame bicycle carrier

In the "BEACHY" series, a bicycle carrier can be mounted on the drawbar.

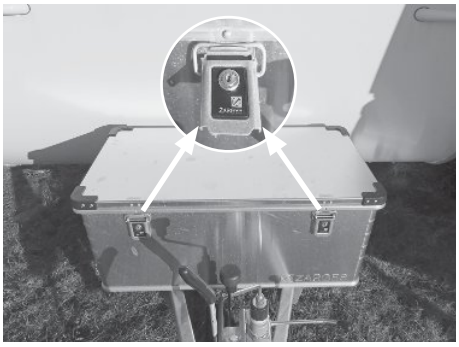
After loading the bicycles, please check the nose weight and, if necessary, regulate it **(see also Chapter 3.3 Loading).**

Please observe the maximum load-carrying capacity of 60 kg for the A frame bicycle carrier, whereby each individual bicycle may not weigh more than 30 kg.

When maneuvering by hand or driving around curves, you should leave a wide angle, because otherwise, depending on the model, the bicycle (carrier) may collide with the tow vehicle.

When driving with bicycles, the front and back wheels of each bicycle must be firmly lashed using the straps ② . The fastenings included in the accessory kit are used for the frame. When driving, close the locks ③. When the vehicle is not being moved, the lever ① can be folded down. To do this, the locks ③ must be opened.

5.7 Drawbar stowage box*


Drawbar stowage box

Please read the manufacturer's separate operating instructions before use.

After loading the drawbar stowage box, always check the drawbar load and, if necessary, regulate it (**see also Chapter 3.3 Loading**).

Please observe that the maximum load-carrying capacity of 60 kg for the drawbar stowage box is not exceeded.

When maneuvering by hand or driving around curves, you should leave a wide angle, because otherwise, depending on the model, the drawbar stowage box may collide with the tow vehicle.

To open
- Unlock both locks and flip them open.
- Lift up the lid.

To close
- Close the lid.
- Flip both locks closed and lock the locks.

5.8 Aftermarket Modifications

Registering accessories in the vehicle's documents

- Have your Hobby dealer fit your aftermarket modifications.
- Take your caravan to a technical support organisation or technical service provider (e.g. MOT).
- The technical support organisation will approve the fittings and draw up a certificate.
  (road traffic authorities)
- Take the certificate and the Motor Vehicle Registration Certificate Part I to the national vehicle registration authority (Driver & Vehicle Licensing Agency). They will enter the change in the registration document.

When subsequently installing additional equipment, please refer to the equipment manufacturer's operating instructions.

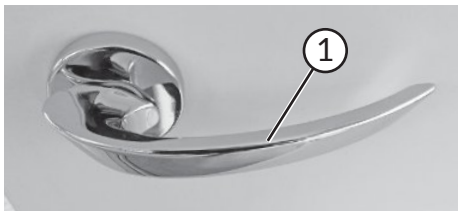
If applicable, please observe national regulations in foreign countries.

Always remember that certain fittings must be entered in the registration document.

Please note that fitting additional equipment reduces the load your Caravan can carry.

Please also observe the information given in **Chapter 10 Accessories**.

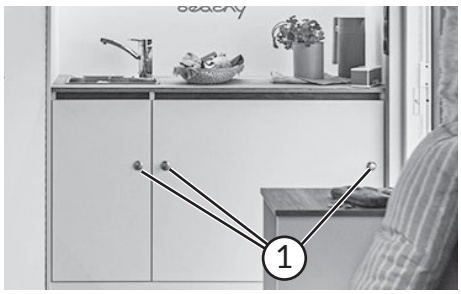
6.1 Opening and closing doors and drawers



Door handle

Walk-in wardrobe/Lavatory*/Porta Potti*

- Push down on the door handle ① to open or shut the door.



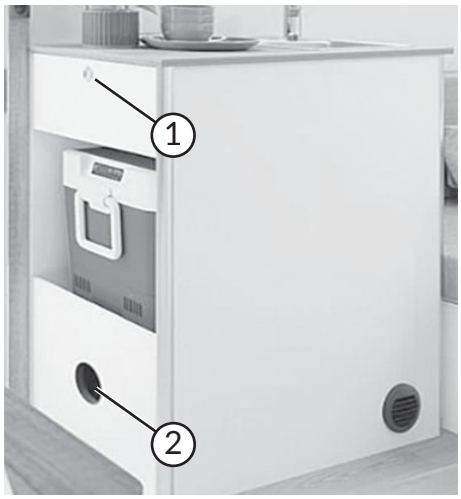
Pushlock in connection with kitchen cabinet and drawer

Drawers/cupboards with a pushlock/pull cord

The cabinet and drawer are each secured by a separate pushlock ① (press-lock knob).

To open

- Press the pushlock ① so that the button pops out.
- Pull on the pushlock ① until the drawer slides out or the cabinet door opens.
- Pull on the pull cord ② to pull the drawer open.



Beachy+ kitchen cupboard with extendable drawer

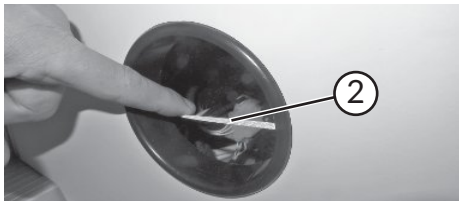
Pull the kitchen drawer open slowly and evenly, using both the right as well as the left pushlock.

To close

- Push the pushlock ① to shut the drawer or the door of the cabinet.
- Press the pushlock ① until the knob snaps in and the drawer/door is securely closed.
- Push the drawer back in and pull on the pull cord ② until it snaps into place.

Close all flaps and drawers before driving. This prevents them from opening accidentally and objects falling out while driving.

Pushlock (left: unlocked/right: locked)



Beachy+ extendable drawer

Hanging storage compartments

Hanging stowage compartments in the living room/kitchen

To open
- Release the rubber bands from the lower hooks. Stow or remove objects.

To close
- Hook the rubber bands on the lower hooks.

You could be seriously injured! Never let rubber bands snap.

Store only light objects in the hanging stowage compartments.

6.2 Converting the multi-functional wall*/lavatory*

Walk-in wardrobe/Lavatory*/Porta Potti*

Porta Potti*, stowed away

Removing the Porta Potti from its storage place*

- Press the lock ① at the front of the base plate.

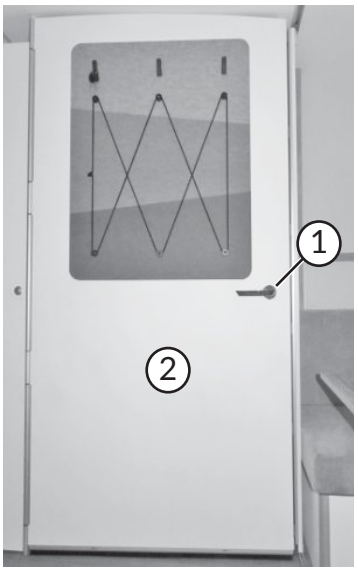
Porta Potti*, set up

- Remove the Porta Potti* and place in on the floor of the wardrobe.

Before driving, the Porta Potti* must be securely fastened to the base plate and stowed away.

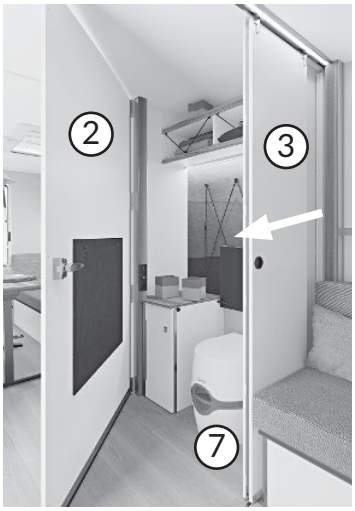
Converting the multi-functional wall*/lavatory*

Beachy+ lavatory*



Beachy+ lavatory*, closed

- Push down on the door handle ① to open or shut the door.
- To convert the space into a lavatory, the door ② must be opened at approx. a 45 degree angle

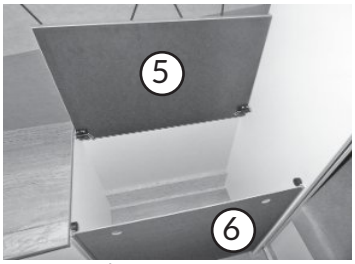


Setting up the lavatory*

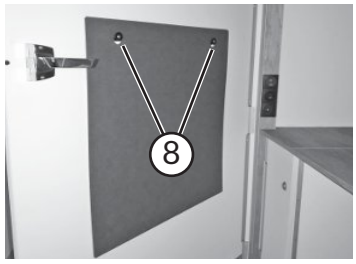
- Pull out the sliding walls ③.

Lavatory*, closed

- Turn the inner wall ④ outwards and connect it to the door ② so that a room is built.



Porta Potti* room



Retaining fixtures for the front panel

- Lift the cover ⑤ up and pull the front panel ⑥ out of the guide rail. Then hang the panel from the inside on the retaining fixtures on the door ⑧ .
- Take out the Porta Potti ⑦ , turn it by 90 degrees and place it on the floor.

⚠ Before driving, dismantle the lavatory and secure it. This prevents it from opening accidentally while driving and objects or the multi-functional wall from sliding out.

6.3 Tables

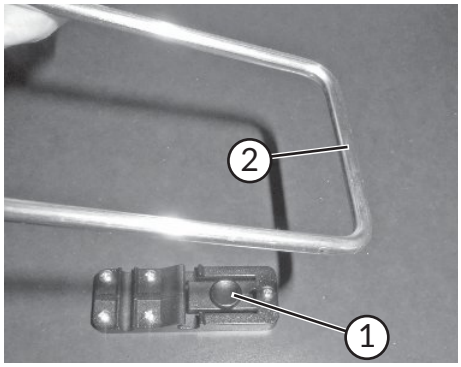
Folding table

Folding table

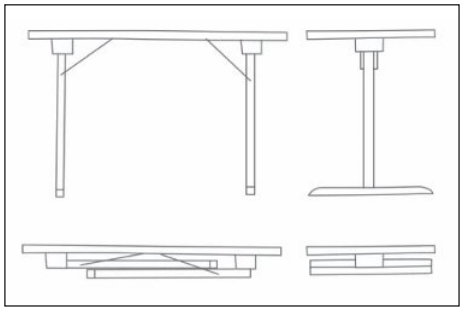
To lower

- Press the lock button ① underneath the table and unhook the holders ② . Fold the feet together towards the middle.

Danger of crushing your fingers! When folding the table, take care not to pinch your hands and fingers.



Lock


Lowering the folding table

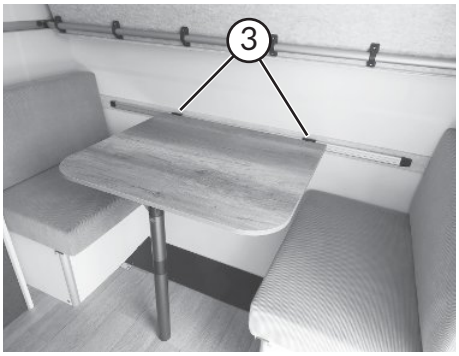
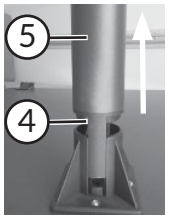


Table in the front seating area – Beachy+

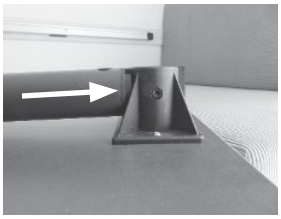
Table in the front seating area
Beachy+

To lower

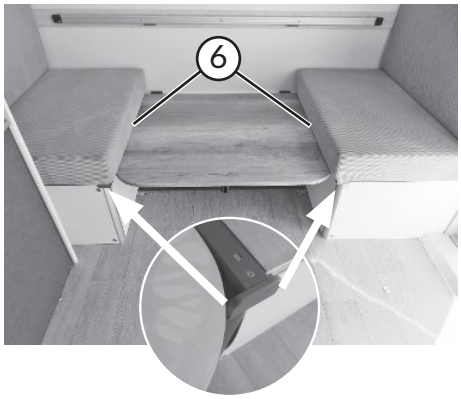
- Raise the table and carefully lift it out of the table holder ③ . Place the table carefully on the seats.



Unlocked table leg


Pushing the table leg into the lock

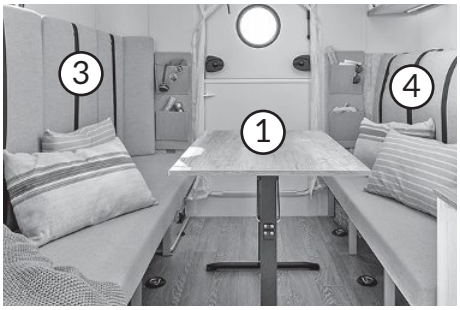
- Pull the table leg ⑤ upwards out of the lock ④ and fold it down. Push the folded down table leg ⑤ into the lock. This secures the table leg.



Positioning for converting the bed

- Place the table on the guide rails ⑥. Ensure that the table lies correctly on the guide rails. The guide rails have end pieces at the front end to prevent severe slipping.

6.4 Seating and sleeping areas



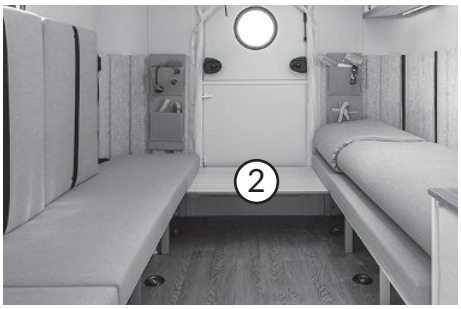
Seating area

Converting the seating area

The seating area can be converted to comfortable beds.

Preparing to convert the bed

- Fold the two folding tables ① together **(see Chapter 6.3 Tables)**.

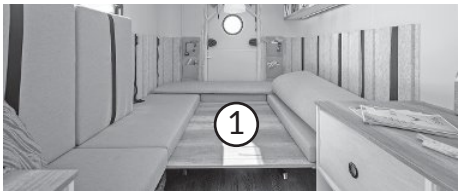


Placing the separate plank

- Place the separate board ② as an extension between the bench seats. Ensure that both sides of the plank lie securely in the notches (see illustration).

When the vehicle is delivered, the separate board is located in the position in which it is required for converting the seating arrangement into a bed.

Notches for the plank



- Place the two folded tables ① as an extension between the bench seats.

- Place the back cushions ③ from the side of the vehicle as a mattress on the extension between the bench seats.

- Place the back cushions ④ from the side of the vehicle on the mattress as a topper.

Maximum load for the bed: **100 kg per person/bed.**

Beachy+Round seating area

Round seating area

- Close and lock the rear door **(see Chapter 5.2)**.
- Place the plank ② between the seating benches and push it until it lies against the rear door. Ensure that both sides of the plank lie securely in the notches **(see illustration)**.
- Place the cushion ⑤ on the plank ② and the backrest cushion ⑥ against the rear door.

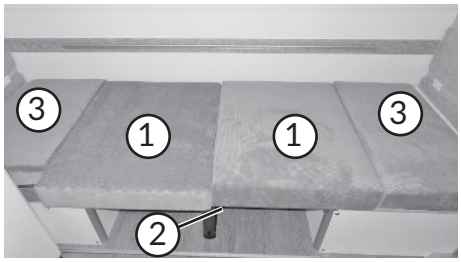
Front seating arrangement with table

Couch

Converting the Beachy+ front seating area

The seating arrangement can be converted into different positions, e.g. as a seating arrangement with a table, as a couch, single bed or bunk beds.

- Move the table **(see Chapter 6.3 Tables)** to the lower position.



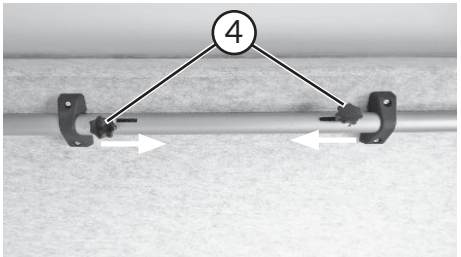
Single bed

Conversion into a single bed

- Place the cushion ① on the table ② and the backrest cushion ③ on the seating area.

Conversion into a couch

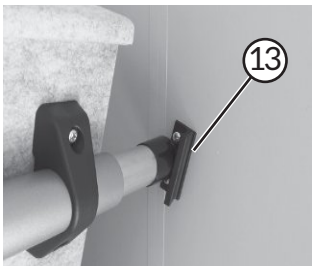
- Conversion into a single bed serves as a bench seat. On the upper bunk bed, push the levers ④ inwards and secure it. Das obere Fold down the upper bunk bed slowly ⑤ **(see illustration)**. The mattress is used as a backrest cushion ⑥ .



Locking levers for the bunk bed

Conversion into bunk beds

- If the upper bunk bed is to be used as a bed, the levers ④ must be pushed inwards and secured. Fold down the upper bunk bed ⑤. Before the bed is placed on the aluminium guide rails ⑦ , the locking levers must be pushed back outwards again.



Wall bracket

Maximum load for the bed: 100 kg per person/bed.

Do not reach into the space between the bed and the side wall while folding the bed up or down - there is a **danger that your fingers will be crushed!**

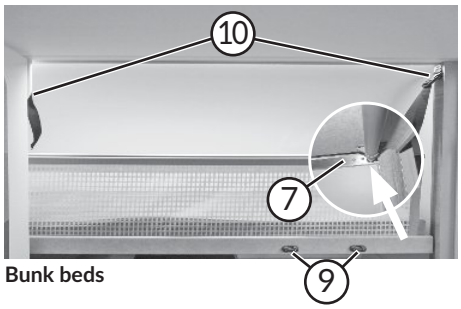
No one must be on or underneath the bunk bed while it is being folded up or down. Keep the space required to lower the bed free of any objects.

The bunk bed is not suitable for unsupervised use by children under the age of 6.

Never leave small children unattended in the trailer when you are gone.

When the vehicle is not in use, lower the bunk bed from the top position and convert it into a bed or remove the mattress from the bunk bed to ensure there is enough air circulation around the bunk bed.

Before driving, fold the bed up and secure it by means of the locking levers ④ behind the wall brackets ⑬.



Bunk beds

Netting to protect from falling out

- When sleeping, always clip the net that protects you from falling out ⑩ into place (located underneath the mattress).

Fig. 1

Fig. 2

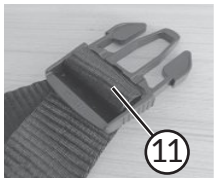


Fig. 3

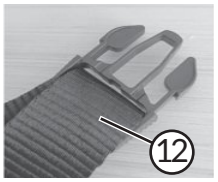


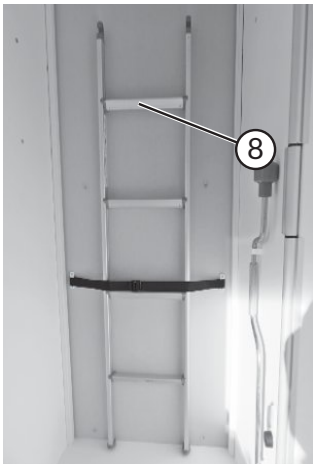
Fig. 4

If there has been no conversion into a lavatory, please observe the following.

- Clip both buckles towards the bed, as can be seen in **Fig. 3**.
- The other ends **(Fig. 4)** of the buckles must point towards the outer walls.

If there has been a conversion into a lavatory*, please observe the following.

- The buckle side ⑪ **(Fig. 3)** must point towards the rear of the vehicle/lavatory **(Fig. 1)**.
- The other side of the buckle ⑫ **(Fig. 4)** must point towards the front of the vehicle/bed.



Bunk bed ladder

Bunk bed ladder

- Hang the ladder ⑧ into the ladder holder ⑨ . The ladder can be found in the wardrobe.

6.5 Rearranging the cushions

When converting the seating area into a bed, do not place the cushions directly on the surface of the table. There is a danger that it could be scratched or mould could build up from condensation. We recommend that you use an absorbent cloth (e.g. terry cloth or cotton).

Ensure that the tabletop, seat chests as well as cushions are well secured so that nothing can fall.

6.6 Windows

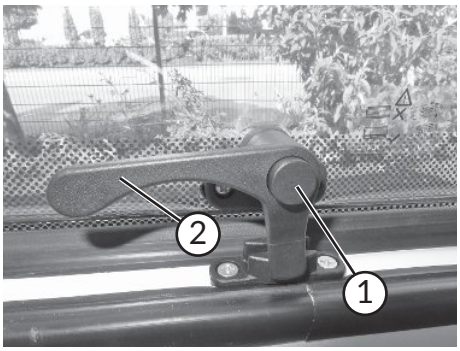
The vehicle's windows can be used as an escape route in an emergency. Therefore, never obstruct the windows from the inside or outside!

In case of strong sunlight, shut the blinds only ¾ or leave the window slightly open. Otherwise, there is a danger of heat build-up.

While driving, leave the sunshade and insect screen open.

Depending on how the window has been constructed, it has one or more latches with locking knobs ①. To open these window catches, press the lock buttons ①. Various window fixings have been fitted in the vehicle.

Before closing the window, check that the curtains **(model-specific)** are not caught in the sealing.



Window latch, closed

Window with ratcheting stays

To open

- Turn all of the window latches ② by 90°.
- Press the window catch outwards until you hear it click. The window will automatically remain in this position. The angle of opening can be increased in predefined steps.

To close

- Lift the window slightly to unhook the stay.
- Close the window.
- Turn all of the window catches ② to the original position so that they clasp behind the latches and pull the pane into the seal.

Window latch, in airing position

Apart from the open and closed positions, the window catches can also be locked in the middle slot of of the latches to allow air in, this is the vent position.

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

Windows must be close fully while driving.

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

Blind/fly screen

Blind/fly screen

To close the black-out blind
- Use the handle to pull the plissé up to the desired position and then let go. The blind remains in this position.

To open the black-out blind
- Use the handle strip to pull up or down lightly on the black-out blind. The blind rolls upward automatically.

To close the fly screen
- Pull the fly screen completely down with the handle and let go. The screen remains in this position.

To open the fly screen
- Pull the fly screen slightly down with the handle and then guide it upward. The screen rolls upward automatically.

Do not let the blind or the fly screen retract on its own, keep hold of it.!

Retightening the tension spring on the shade

Do not leave the blinds closed over a longer period of time. Should a blind lose its tension over a period of time, use a flat screwdriver to retighten the tension spring on the blind. Insert the screwdriver and turn it clockwise one or two revolutions.

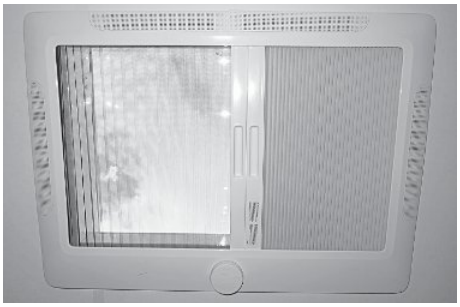
Check the tension and repeat this process until the desired tension has been reached.

Overstretching the blind can permanently damage the retracting spring and impair this function.

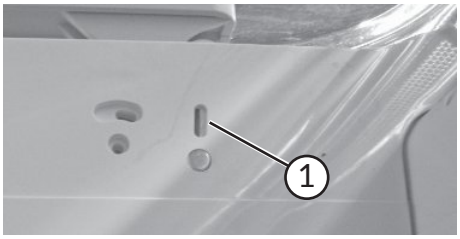
6.7 Roof lights

Safety instructions

- Never open the roof lights if there is a strong wind/ rain / hail, etc. or when the temperature outside is below -20° C!
- Never use force to open the roof lights if they are frozen or covered with snow, because you may break the hinges and the opening mechanism.
- Before opening, remove snow, ice or heavy dirt. Make a note of the required space needed before opening the roof light under a tree, in a garage, etc.
- Close and lock roof lights before driving. Open fly screen and blind (fully open position).
- Close blind only 3/4 of the way if the sun shines in strongly; danger of heat accumulation!
- Leave the blinds completely open if you do not plan on using the caravan for a prolonged period of time.
- The openings for the forced ventilation system must always be left open! Never close or cover forced ventilation systems!


Large roof light

Crank (user position)



Control pin

Large roof light

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

To open

- Reach up to the crank box and fold the crank to the user position by pulling it down. Turn the handle clockwise to open the roof light outer to the desired position. When you have reached the maximum opening angle you will feel the resistance.

To close

- Turn the handle anti-clockwise until the light is closed and you feel the resistance. The control pin ① is visible when the skylight is shut. Then turn the crank only so far until you can fold it into the crank box. To be locked securely, the crank must be folded into the crank box.

The maximum speed is 100 km/h, because noise may be generated or damage caused, depending on the superstructure or place of installation.

Always keep skylights closed when driving!

Flyscreens and blinds (pleated)

Both the flyscreen an blind are fully adjustable by sliding them horizontally from side to side.

7.1 Safety tips

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

Please note

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

Cyber security and software updates:
To protect the security of the electronic systems in your vehicle from unauthorised access, all software updates and access to the system may only be carried out by authorised specialists.

Hobby-Wohnwagenwerk Ing. Harald Striewski GmbH does not assume any warranty or liability for malfunctions, system failures or consequential damages resulting from unauthorised updates, tampering or access by unauthorised third parties.

7.2 Operation of the installed electrical systems

Advice and instructions

Important

- The trailer's electric system should preferably be inspected within a period of less than three years. If the caravan is used frequently, an electrical engineering specialist should inspect the electric system every year and issue a report on the state of the system.
- Only specialists may make possible changes to the electrical system.
- If necessary, disconnect the battery and switch off the 230V mains before carrying out maintenance work.

Batteries*

- Please observe the battery manufacturer's operating instructions.
- The acid in the battery is poisonous and corrosive. Avoid contact with eyes and skin.
- The completely discharged battery must be recharged for at least 24 hours. The battery may be damaged if it has been discharged for more than 8 weeks.
- Avoid complete discharge, as otherwise the performance and lifetime of the battery will be significantly reduced.
- Check the level of the battery fluid regularly (acid batteries); Dual AGM/Lithium-batteries require no maintenance, but **must be continuously recharged.**
- Check that the battery terminals are secure and remove any layers of oxidation.
- If the battery is not used for a longer period of time (four weeks or more) press the pushbutton **(see 7.4 Operating on the battery)**. The standby current used continuously by some electrical devices discharges the battery.
- If the battery has been removed, isolate the positive terminal (to prevent short circuits).

Battery charger*

- The charge controller operates with the use of a sensor or using IU_1U_0 charging technology provided the sensor has not been calibrated or the Ci-Bus system is offline.
- In the case of misuse the guarantee and manufacturer's liability will no longer apply.
- Ensure that the battery charger is sufficiently ventilated.

230V automatic circuit breaker with an earth leakage circuit breaker
The 230V automatic circuit breaker supplies and protects the 230V devices.

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

Fuses

- Only replace a blown fuse after the cause of the error has been fixed by an authorised specialist.
- The new fuse must have the same amperage as the old one.

7.3 Remote controls

3-key control panel

Remote control for kitchen

- Briefly press the key to switch the:

(1) Light in the outer tent
(2) Lighting kitchen + bunk bed (Beachy+)
(3) Ceiling lights

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

It is not possible to switch this light on if the camper has been hooked up to the car by means of the 13-pole plug and the motor is running.

Remote control for sleeping area

Remote control for sleeping area

- Briefly press the key to switch the
  (4) lighting in the seating area
  (5) ceiling lights on and off.

Remote control for walk-in wardrobe/ Lavatory*

Remote control for walk-in wardrobe or lavatory* (model-specific)

- Briefly press the button (6) to switch the LED lighting in the wardrobe or lavatory* on and off.

7.4 Electrical supply

CEE external socket

An electrical supply to the caravan can be obtained from the following connections:

- 230V mains connection 50 Hz
- via the tow vehicle if it is connected using the 13-pole plug (limited functions)
- via a built-in battery*.
  All 12V devices such as lighting, etc., are available.

Supply via mains hook up

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

Connected 230V hook up

To connect to a mains hook up point

- Pull out the 13-pin plug that connects to the tow vehicle.
- Take hold of the bottom of the cover flap of the CEE external socket (1) and pull it up **(see Chapter 5.2 Cover Flaps)**.
- Completely unwind the mains cable.
- Open the cap of the CEE connector plug by pulling it up in a 90° angle.
- Insert the plug (2) until it locks into place.

⚠ Always first unhook the caravan from the car before setting up the 230V mains connection.

To disconnect the electric connection

- Remove the CEE connector plug (2).
- Press the cover flap (1) down until it clicks into place.

⚠ Only plugs and cords that comply with CEE standards must be used.

Automatic circuit breaker with FI ('fast interrupt') switch

Protecting the 230V system

The 230V system is protected by a two-pole 13A automatic circuit breaker ③ . It is located to the side behind the kitchen drawer or in the front seating area (Beachy+).

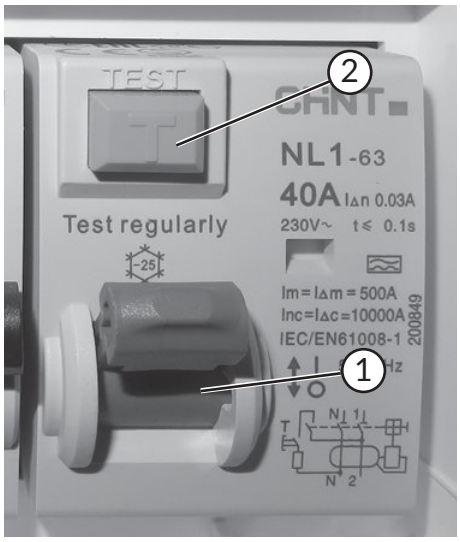
Rules for the mains connection

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

> When you are using a cable drum, this **must** be completely unwound, when the caravan is in use (drawing mains power), as otherwise induction may cause the cable to heat up, which could lead to a fire (provided there is no protection against overheating).

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

Residual current device



FI switch and test button

The standard version of your caravan is equipped with a residual current device that will interrupt the electric circuit in case of a possible residual current. Should there be a power failure, the fault current circuit breaker ('fast interrupt' = FI switch) will trip the entire 230V electric circuit.

> Repairs must not be carried out on the residual current device.
>
> A residual current device does not guarantee any protection against the danger from an electric shock. It does not protect against possible electrical accidents.

> The tripping time for the residual current device (RCD) with a residual current of 30 mA is less than 0.1 seconds.

After connecting up to an electrical supply and switching the power on in the caravan, the function of the residual current device must be checked. After voltage has been applied to the switch ① and it is on (set to I-ON) it must trip when you press the test button ② . The rocker switch ④ jumps down; after it has successfully been checked it must be switched back up to the **"On"** position.

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

> When the FI switch has been switched off (even when testing) the customised settings in all mains-operated devices are lost and the default settings made by the manufacturer will apply again.

If the automatic circuit breaker has gone off (other than if the Test function has been used) you must wait a short while before switching it on again.
- If the automatic circuit breaker remains active, there was only an overload.
- If the automatic circuit breaker goes off abruptly again, there is either a short circuit or an earth fault.

Devices that cause it to trip when in use show that there is a fault; they must be checked and/or repaired by an electrical engineering specialist.

Switching it back on again and again will do no good. The automatic circuit breaker also goes off when the rocker switch is held firmly in place.

13-pole plug

Operation via the tow vehicle

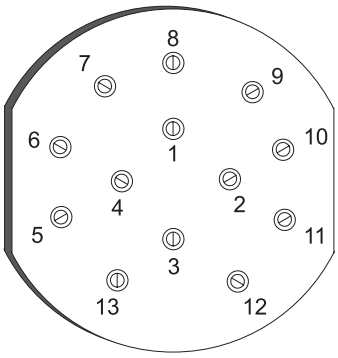
When driving, the battery of the tow vehicle takes over the supply of the 12 V supply if pin 9 of the 13-pin socket system on the tow vehicle is connected.

Switch off 12V operation (when the trailer is hooked to the car) on longer stopovers and breaks to conserve power in the car's battery.

When running on 12 volts, the cooler only functions if the car's engine is running. Contacts 10 and 11 of the 13-pole socket system.

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

Connector pin functions on the 13-pin plug



Connector pins on 13-pin plug in accordance with ISO 11446

PIN	Colour of wire	Wire size	Electrical devices
1	yellow	1,5	Left indicator
2	blue	1,5	rear fog Light
3	white	2,5	Earthing for pins 1 to 8
4	green	1,5	Right indicator
5	brown	1,5	Rear tail light, marker light, licence plate illumination on the right
6	red	1,5	Brake light
7	black	1,5	Rear light, clearance light number plate light on the left
8	pink	1,5	Reversing light
9	orange	2,5	Continuous 12v supply
10	dark grey	2,5	Fridge supply activated by the tow vehicles ignition.
11	white/black	2,5	Earth for fridge
12	light grey	1,5	Not normally used (sometimes used as earth link).
13	white/red	2,5	Earth for pin 9 only

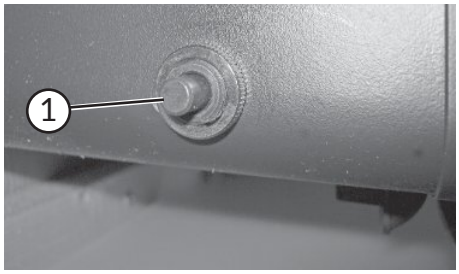
Operation via battery* (self-sufficient package)

- Only accumulator batteries with bound electrolytes (gel or Dual AGM-/Lithium-batteries) may be installed in those positions specified by the manufacturer.
- The installed battery may not be opened.
- When changing batteries, use only batteries of the same make and capacity.
- The temperature of the battery must not exceed 50° C. If the battery is overheated, it cannot be charged.
- Before disconnecting or connecting the battery, disconnect the electric connection to the tow vehicle and switch off the 230V supply, the 12V supply as well as all electrical devices.
- Before replacing fuses you must first turn off the battery charger.
- Before replacing a blown fuse you must first fix whatever caused the fuse to blow.
- Fuses should only be replaced by fuses with the same fuse protection value.

Please observe the information regarding used batteries in **Chapter 12.1.**

Battery

Using and charging the battery
If the caravan is not connected to the 230V mains supply, the battery will supply the electrical system with 12V DC voltage (the 230V sockets are not active in this operating mode).
Since the battery only has a limited capacity, the electrical devices should not be operated for a long periods of time without charging the battery or connecting the caravan to the 230V mains connection. Some electrical devices continuously use standby current from the battery. This flattens the battery. The battery is charged via the battery charger from two possible input sources:
- 230V mains connection
- from the car's alternator when connected to the caravan by means of the 13-pin plug and only if the ignition has been switched on.



Pushbutton

Pushbutton

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

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

Battery container

- Always charge the ancillary battery for at least 10 hours before each journey, directly after each journey and before you take the caravan temporarily out of service:
  - Before each journey, please check that the battery is charged.
  - If necessary, connect it to the mains and press the main switch to start charging the battery.
  - The battery is only charged if it's voltage has dropped to 8V.
  - Use every opportunity during your journey to charge the battery.
- Do not forget to activate the pushbutton on the battery container.
- If the caravan is not in use for a long period of time, the battery should be disconnected after it has been fully charged by pressing the pushbutton on the 12V electrical system.

Battery charger

Battery charger*

The battery charger ① supplies the battery with electric power when there is bus-powered mains operation. It is located to the side behind the kitchen drawer or in the front seating area (Beachy+).

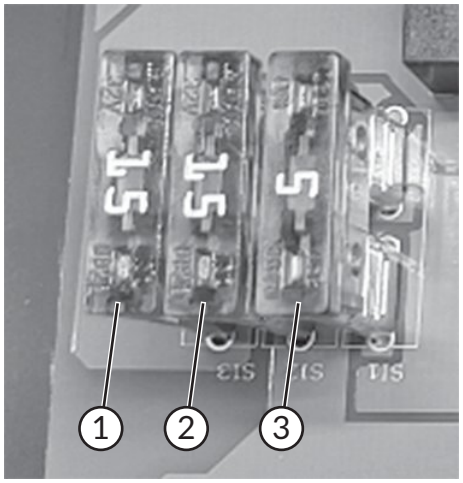
- Airing the battery charger insufficiently will cause a reduction in the charge current.
- The surface of the charger casing may become hot when the device is in operation.
- The battery charger may only be opened by a specialist.

Preparation for the solar system

The cable (2x6 qmm black/white) for preparing for the solar system can be found in the right-hand cable duct next to the entrance door. A loop is located inside at both the top and the bottom of the duct.

7.5 Electrical system

As soon as there is a mains connection, the electrical system will switch from battery operation to mains operation. The electrical supply unit uses a transformer to change the external mains voltage for the 12V electrical devices. All of the lamps in the caravan use 12V. Only large electrical devices such as the E-Airtronic* heating system use 230V.



Assignment of fuses

Assignment of fuses

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

Electric circuit	**①**	**(15A)**	**Input fuse 9 and 13 from the car or battery charger**
Electric circuit	**②**	**(15A)**	**Heating, cooler, USB socket, water pump**
Electric circuit	**③**	**(5A)**	**Lighting in the kitchen, in the seating area, ceiling lights, lighting in the wardrobe, outer tent light**

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

Sockets inside the vehicle

Sockets inside the vehicle

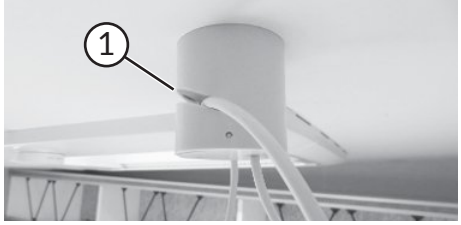
Sockets located inside the vehicle may not be used for devices that are operated outside the vehicle.

USB charging socket

The USB charging socket ① is suitable only for charging USB-compatible devices.

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

Beachy Ceiling light



Beachy cable clamp

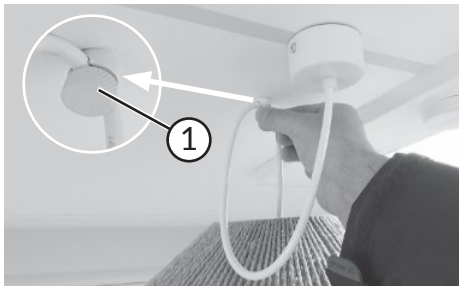
Ceiling lights

Beachy Ceiling lights

Height adjustment

- Pull the cord out of the cable clamp ① .
- When the desired height has been found, the cord must be inserted again into the cable clamp.

Beachy+ ceiling light



Beachy+ cable clamp

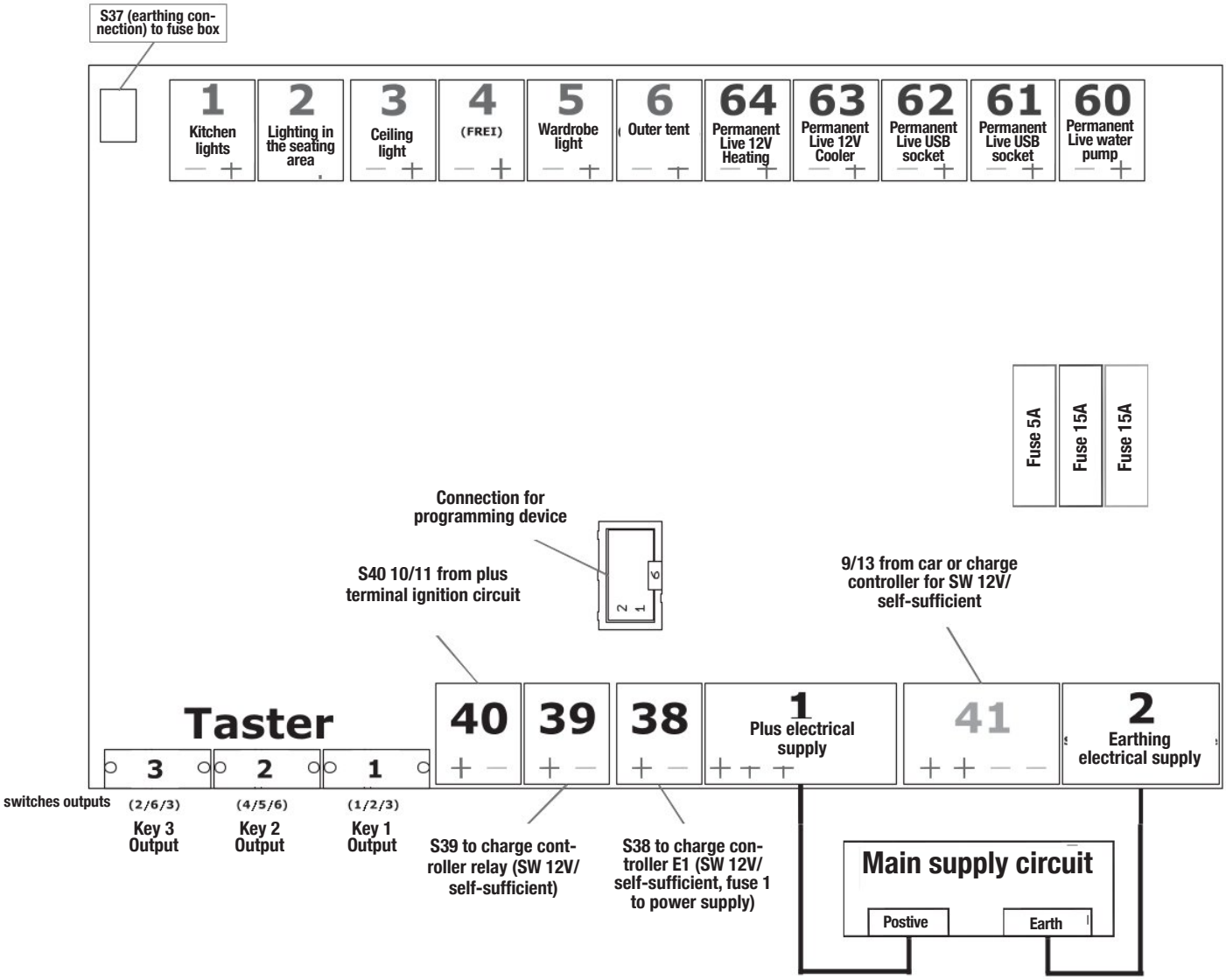
Beachy+ ceiling light

Height adjustment

- To take down the ceiling light, turn the fastener for the cable clamp ① counter-clockwise.
- The loosened ceiling light cable can be pushed as far through as desired in order to find the desired height for the ceiling light.
- Then fasten the cable clamp ① by lightly turning the fastener clockwise.

Before driving, the ceiling light must be installed in the highest position and secured in order to prevent damage should the light swing back and forth while driving.

7.6 Diagram of the electrical distribution board



7.7 Subsequently installed devices

Subsequently installed electronic devices which can be used while driving (e.g. USB sockets, water pumps or similar devices) must satisfy all of the EMV directives. The devices must show approval in accordance with ECE Regulation R10, because otherwise interference to the existing electronic systems caused by a lack of electromagnetic compatibility cannot be excluded.

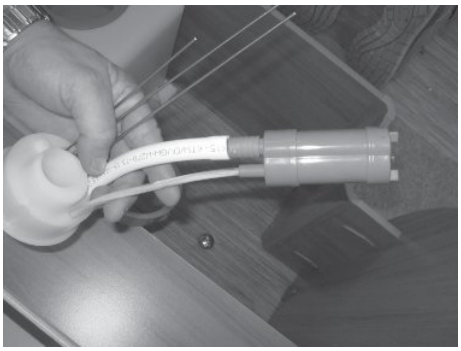
A CE mark is compulsory when retrofitting devices which cannot be used while driving.

8.1 General information

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

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

8.2 Water pump



Submersible pump

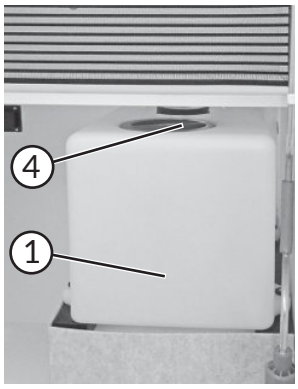
Function of the water pump

A submersible pump supplies fresh water to the kitchen. The pump functions on electricity:
- via a 12 volt automobile battery if the caravan is connected to the tow vehicle,
- via a transformer if the caravan is connected to the 230 volt main.
- In self-sufficient mode* via the installed battery..

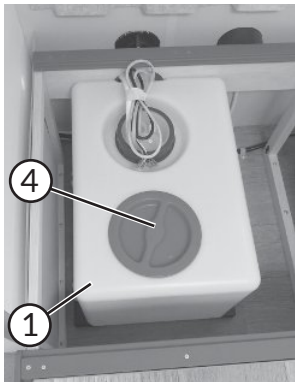
Rules for the submersible pump
- The pump is only suitable for water.
- The pump will operate at temperatures up to 60° C for a short time.
- Avoid dry runs.
- Protect the pump from freezing.
- Hard blows or hits as well as very dirty water can destroy the pump.

The submersible pump requires no maintenance.

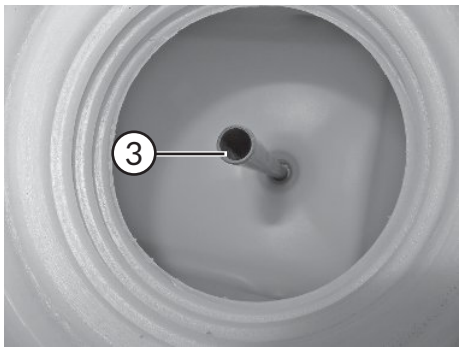
The pump is switched on and off by a micro switch in each tap.



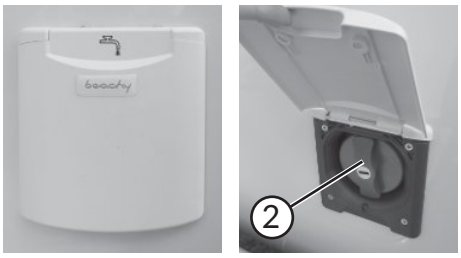
Fresh water tank Beachy



Fresh water tank Beachy+



Overflow pipe on the fresh water tank



Filler cap for the fresh water tank

Fresh water tank

The tank ① holds a volume of 25 l and is located in the walk-in wardrobe (Beachy, bottom right) or in the right-hand rear seating area (Beachy+).
The filler neck ② on the front or right side wall **(model-specific)** is used to fill in fresh water.

The neck for filling up fresh water is marked by a blue cap and a picture of a water tap on the upper edge of the frame. The screw cap is locked and unlocked using the entrance door key.

To open
- Unlock the blue cap the lock with the key.
- Give the blue cap a strong turn anti clockwise and remove it.

To close
- Put the blue cap back on and turn it clockwise to shut it.
- Lock again with the key.

If you put too much water into the tank, the excess will run out through an overflow ③ underneath the caravan.

Water can be emptied from the tank by unscrewing and removing the overflow pipe ③ .
The shelf on the rack (Beachy) or the seat lid (Beachy+) above the fresh water tank can easily be folded up in front in order to reach the red service lid ④.

The water in the tank should be replaced regularly (see **Chap. 11**).

Check the red service lid ④ regularly; it may become loose if the fresh water tank is filled often.

If the vehicle is not being used at times when there is a danger of frost, empty the entire water system including the tank. Leave the water tap open in the middle position.

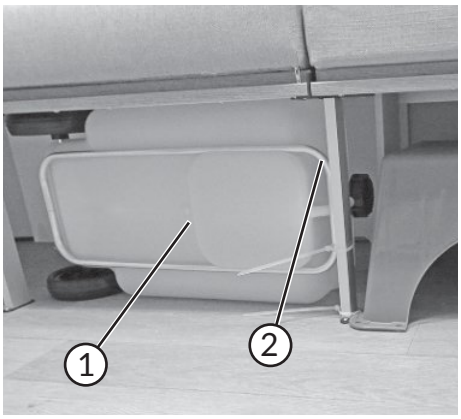
Filling the water system
- Place the trailer in a horizontal position.
- Shut the water tap.
- Unlock the petrol cap ② and turn it counter-clockwise to open it.
- Fill the water tank using the fresh water filler neck.
- Open the water tap and leave it open. The water pump will be switched on. The cold water pipe will be filled with water and must remain open until the water flows out of the tap without any bubbles.
- Shut the water tap.
- Shut the filler neck.

The amount of water in the fresh water tank can be checked by removing the red lid ④ . Look into the tank regularly when filling it. When the maximum level has been reached, the excess water will run off via the overflow pipe ③ underneath the vehicle.

Never introduce anti-freeze or other chemicals into the water system. **This can be poisonous!**
When operating during winter ensure that the fresh water tank is sufficiently heated (insulated).

Emptying the water system

- Switch off the electricity for the water pump.
- Open the water tap to the centre setting.
- Unscrew the cap on the cleaning port of the fresh water tank.
- Unscrew the overflow pipe in the fresh water tank.
- Take out the water pump and hold it up until the water pipes have emptied completely.
- Check whether the tank, faucets and pipes have emptied completely. If necessary, blow out any remaining water in the pipes using compressed air (max. 0.5 bar). Grease the overflow; see Chapter 11 Upkeep.
- Clean the tank and rinse it thoroughly.
- Re-insert the overflow pipe and the water pump in the fresh water tank and close the openings.
- Leave the faucet open.
- Let the water system dry for as long as possible.



Waste water tank

Waste water tank

The rollable waste water tank ① can be pushed under the caravan when the caravan is stationary. Position the waste water tank in such a way that the waste water from the waste water outlet is collected in the waste water tank. It collects the waste water and holds 23,5 litres. The waste water tank can be transported on wheels and has an extendable handle ②, allowing you to pull it to the appropriate waste disposal place for emptying.

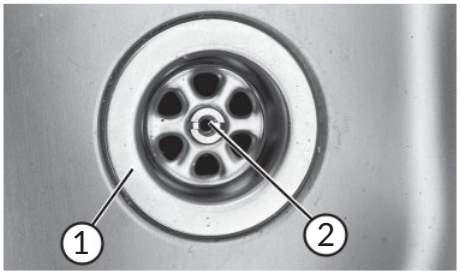
Before driving, empty the waste water tank and then use the supplied bag to stow it in the walk-in wardrobe (Beachy), placing it on the shelf behind the nets used to secure loads, or in the seating area (Beachy+).

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

Only empty your waste water tank at the specially designated disposal points and never in open spaces! As a rule disposal points can be found at motorway service stations; campsites and petrol stations.

Bag for stowing the waste water tank while driving

Sink



Waste fitting

Sink in the kitchen unit

When necessary, the sink waste ① can be removed by unscrewing the screw ② .

When the waste ① is then replaced in the sink and fastened, please observe the maximum tightening torque of the screw.

The maximum tightening torque for the fixing screw for the waste fitting in the sink is 1 Nm. If the screw is tightened any further, this may cause leaking or damage to the waste fitting.

Never pour boiling water into the sink drains. This can lead to deformities and leakages in the waste water system. Always add cold water first.

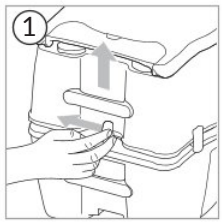
8.3 Water flushing toilet

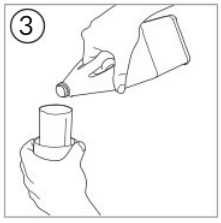
Portable Porta Potti* toilet

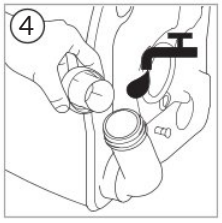
Please refer also to the enclosed manufacturer's operating instructions.

Your portable toilet is made up of two detachable sections: the flush-water tank and the waste-holding tank. to both tanks.

Before using the toilet, it is vital that you add toilet additives (where available) to both tanks.



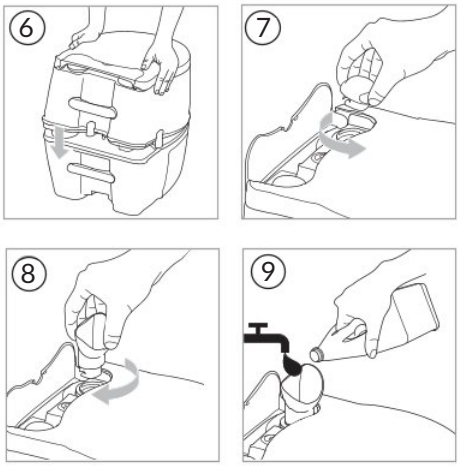




Preparing the toilet waste tank for use

- Separate tanks ①.
- Remove the cap from the pour out spout while it is pointing upwards ② .
- Add the correct dosage of wasteholding tank toilet additive ③ .
- Add the correct dosage of water to ensure that the bottom of the waste-holding tank is covered ④ .
- Shut the water filler funnel tightly ⑤ .

Never add toilet additives directly via the blade as this could damage the lip seal of the waste-holding tank. Only fill the waste-holding tank via the pour out spout.

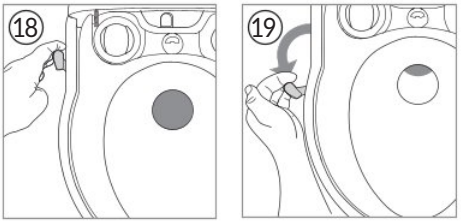


Filling the toilet flush tank

- Recombine tanks (6).
- Remove the water fill cap (7) .
- Place the water fill adaptor (8) .
- Add the correct dosage of flush-water tank toilet additive (where available) and fill the flush-water tank with clean water (9) .

Using the toilet

Schließen Sie die Abdeckung und öffnen und schließen Sie die Verschlussplatte, um aufgestaute Wärme oder Höhendruck abzulassen und um ein Spritzen zu verhindern.



Öffnen der Verschlussplatte

To vent any built-up heat or altitude pressure and prevent for splashing close the cover and once open and close the blade.

- The toilet can be used with the blade open or closed. To open the blade, pull the blade handle (18) / (19).

Make sure you always close the blade completely after use.

Flushing the toilet

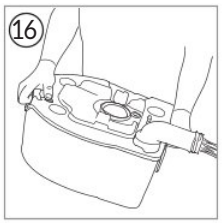
You can achieve the most effective flush by operating the manual pump with three or four short flushes (20).

Do not use ordinary toilet paper, as this may cause clogging.

To ensure toilet paper is always on hand, your toilet includes space for one toilet roll.

To prevent water damage to your caravan:
- the waste tank should be no more than 3/4 full when driving. Otherwise, it may leak through the ventilation system;
- there should be no water in the toilet bowl while driving;
- the flushing water tank should not be too full while driving.Thetford advises travelling with an empty flush-water tank, but at least not filled more than half-ful.

The toilet can withstand a maximum load of 120kg (265 lbs). Make sure you do not overload the toilet.



Emptying the waste tank

You need to empty the waste-holding tank when the level indicator turns red.

- Separate the tanks (1).
- Take the waste-holding tank to an authorised waste disposal point.
- Remove the cap from the pour out spout, while it is pointing upwards (2) .
- Press and hold the vent button with your tumb while the pour out spout is pointing downwards to empty the waste-holding tank without splashing (13).
- Rinse the tank (14) / (15) / (16) .
- Recombine the tanks (6).

Do not allow the waste-holding tank to become too full.

Empty the cassette only in special places for sanitary disposal.

Emptying the flush-water tank

Only empty the flush-water tank completely if you expect not to use your toilet for a long period.

- Remove the water fill cap (7).
- Empty the flush-water tank through the water fill opening (17) .
- Flush the toilet until no more water is being pumped out (20).

Emptying is only allowed at an authorised waste dump.

To vent the flush-water tank the water fill cap contains a small vent hole. Fresh water can come through when lifting or positioning the toilet under an angle.

9.1 General information

In this chapter, you will find information on the devices that have been built into the Hobby caravan. This information refers only to the operation of these devices.

To some extent, the devices described are special accessories.

For further information on the individual built-in devices, please refer to the separate operating instructions that have been included in the blue pack found in the vehicle.

Built-in devices may only be repaired by specialists.

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

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

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

9.2 Heating

9.2.1 E-Airtronic electric heating*

Electric heating

Place of installation
- The heating system is located underneath the kitchen drawer (behind the skirting board / side wall).

Air inflow and outflow Beachy

In the Beachy, the air inflow and outflow opening for the heating system is located on the right and left in the skirting board of the kitchen block (standard fitting). The air is sucked in via the right inflow opening and released via the left outflow opening.

Air inflow and outflow Beachy+

In the Beachy+, the air outflow for the heating system is located on the right in the side wall of the kitchen block (standard fitting). The air inflow is located in the heating section underneath the kitchen block.

Switches in their original position

To operate
Two rotary switches are used to operate the heating system. They are located above the remote controls by the entrance/kitchen block.

To switch on
- Use the rotary switch ① to select the setting (level 0-3). Turn the switch clockwise to the desired level.
- Use the rotary switch ② to set the level of ventilation. Turn the switch ② clockwise until the desired level of ventilation has been reached.

To switch off
- Use the rotary switches ① and ② to bring them back to their original position (see photo) (turn the switches counter-clockwise).

The heating system will only begin to heat/air when the level of ventilation has been turned on. If only the level of heating has been set, the system will not start to heat.

If the level of ventilation is turn on while the level of heating is set to "0", the heating system will switch to ventilation mode (without heating).

If the air outflow for the heating system is blocked or if overheating occurs, the system will automatically turn itself off.

- Only operate the device if it is in perfect technical condition.
- Do not carry out any repairs on or make any changes to the device.
- Only have a defect device repaired by the manufacturer or their service department.

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

While the heating system is operating, the door to the walk-in wardrobe (Beachy) must be kept closed.

Do not block/barricade the air inflow and outflow openings and never insert any objects.

Please refer also to the device manufacturer's operating manual.

9.3 IGLOO cooler

IGLOO cooler

In individual cases, the energy/battery management of some car models cannot produce sufficient electricity and voltage for the 12V supply required for the cooler while driving. To find out more, speak to your car manufacturer.

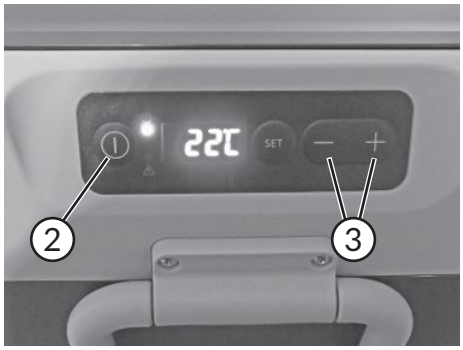
The cooler has been designed to be operated using either DC (12V) or AC (230V) current.

The cooler can cool or freeze goods up to -15° C.

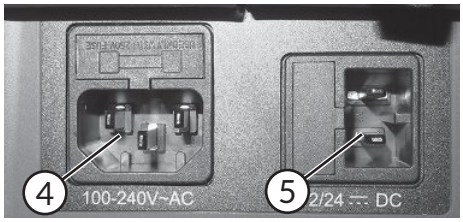
> The simultaneous use of the 12V and 230V cooling systems is not permitted.

The lid of the cooler has a lock. To open it, reach into the opening and lift the handle ① . Push the lid up to open the cooler and down to close it again.

> Please refer to the manufacturer's separate operating instructions before using the refrigerator.
>
> Configure the cooler in accordance with the manufacturer's operating instructions and set the voltage/battery monitor to "Hi".



Control element/Regulating the temperature



Connections

Switching the cooler on and off

230V connectio ④:

- Press the "on/off" key ② to manually switch the cooler on or off.

When the cooler is switched on, the display begins to light up and shows the starting temperature.

- Pull the 230V connector plug out after the cooler has been switched off using the "on/off" key ②.

12V connection ⑤:

- Press the "on/off" key ② to manually switch the cooler on or off.
- Pull the 12V connector plug out after the cooler has been switched off using the "on/off" key ② .

Regulating the temperature

- Use the "Temp +" and "Temp -" keys ③ to increase (+) or lower (-) the temperature in the box.

Accessories

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

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

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

Object	Weight [kg]
Chassis/Security	
KNOTT ETS Plus stabilisation system	5.70
Light alloy rims, black, polished	5.76
Spare tyre with mount, instead of tyre repair kit, mounted underneath the chassis	20.70
Increased load	
Increased load without technical changes	0.00
Superstructure	
Drawbar bicycle carrier 1	10.00
Drawbar stowage box (aluminium transport box, weather and temperature resistant)	7.10
Special application	0,00
Living room	
Organiser box, natural material, foldable, fits storage compartments in bench seat, size L,2 pc. set in beige	4,40
Organiser box, natural material, foldable, fits storage compartments in suspended shelving, size M, 2 pc. set in beige	1.20
Organiser box, natural material, foldable, fits storage compartment in kitchen in beige	1.38
Organiser box, natural material, foldable, fits storage compartments in sideboard, size XS, in brown	3.44
Organiser box, natural material, foldable, fits storage compartments in sideboard, size XS, in beige	1.48
Organiser box, natural material, foldable, fits storage compartments in sideboard (wheel case), size XXS, in brown or beige	0.74
Upholstery combinations	
Seating and sleeping cushions in "Ocean midnight" cord	0,00
Bathroom	
Foldable lavatory partitioning / multi-functional wall	20.50
Portable THETFORD Porta Potti 565P toilet incl. THETFORD base plate	20.50
Water/electricity	
Electric heating	2.86
Pre-wiring for self-sufficient package incl. battery charger with booster and battery container	2.80

11.1 Maintenance

Maintenance intervals

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

Rules for maintenance intervals

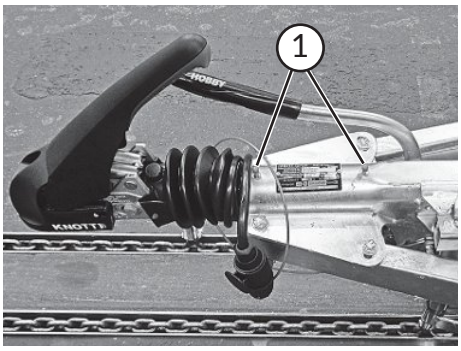
- The 1st annual maintenance check should be carried out by an authorised Hobby dealer no later than 12 months after the initial registration date.
- Have all further maintenance performed once annually at a Hobby dealer.
- Have all maintenance on built-in devices performed in accordance with the corresponding maintenance intervals indicated in the operating instructions.

Hobby's voluntarily granted (12 year) warranty against leaks in the mobile home, as set out in the guarantee conditions, will only take effect if the (chargeable) inspections for leaks were carried out correctly. To this end, the mobile home must be taken to a Hobby dealer 12-18 months after receipt of the vehicle. After the initial inspection for leaks, this inspection must be repeated every 12 months during the warranty period.

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

Greasing and oiling

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



Bearing surfaces on the casing of the overrun coupling

Rules for greasing and oiling

- Movable parts such as pins and hinged parts on the hand brake lever and deflexion lever of the ramp should be oiled lightly.
- Lightly grease the stationary parts on the case of the overrunning equipment ① after every 5,000 kilometres of driving.
- Check from time to time to ensure that the bearing surfaces of the brake rod are not jammed.
- Clean and oil all movable and stationary parts regularly.

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

IMPORTANT: The friction pads of the KS 30 stabiliser hitch must never be lubricated with either oil or grease.

Rubber spring axles require no maintenance.

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

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

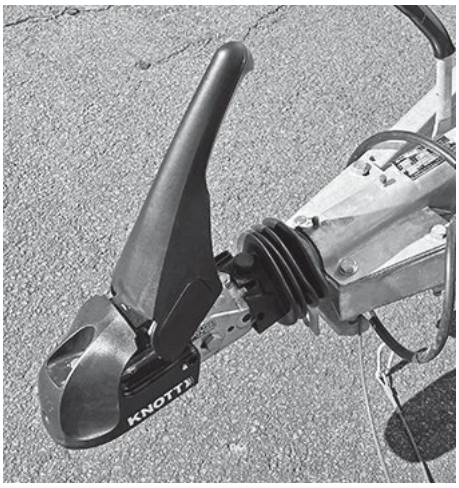
11.2 Hitch head

Tow ball on base vehicle

Ensure that the tow ball meets the required dimensions and is undamaged, clean and free of grease. If using Dacromet-coated (dull-silver coating for corrosion protection) or lacquered tow balls, the coating must be completely removed before your initial journey using sandpaper (grain: 200 240) and then cleaned, e.g. using a nitro thinner or spirit, so that it is not deposited on the surface of the friction pads. The metal surface of the tow ball must be bright. A damaged or dirty tow ball causes increased wear and tear on the friction pads; a greased tow ball greatly reduces the stabilizing effect.

If the friction pads are new, optimal shock absorption is only reached after a certain period of operation.

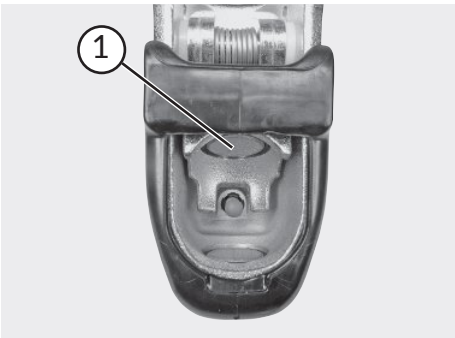
Should the friction pads be worn out or have come into contact with oil or grease, they must be replaced so that the shock absorbers are once again fully effective and hence the caravan is stable.



Stabiliser hitch

Stabiliser hitch

Keep the inside of the tow ball, around the friction pads, clean and grease-free. When the friction pads are dirty, the surface can be cleaned with 200-240 grain sandpaper. Then clean the surface with a cleaning solvent or spirit. All movable bearings and bolts are easy to grease. By regular upkeep and maintenance of your KS 30, you increase its overall life span, function and safety.



Friction pads

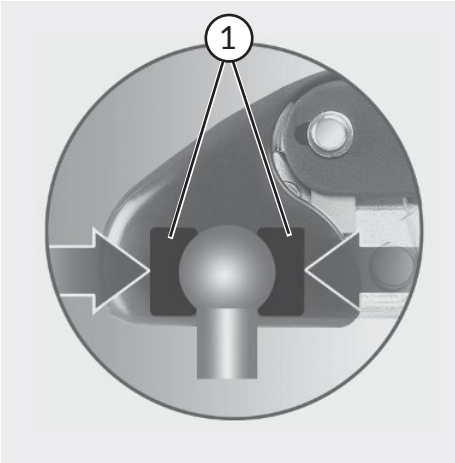


Diagram of friction pads

Changing the friction pads

It is easy to replace the friction pads ① if they are worn out or covered in oil or grease. KNOTT offers the appropriate replacement set for replacing the front and back friction pads.

Please note the detailed instructions for assembly in the manufacturer's spare part kit.

> Use only original KNOTT friction pads.
>
> These have been precisely tailored to meet the requirements of the KS 30 stabiliser hitch.
>
> If other friction pads are used, either the stabilising effect will be negatively influenced or the ball neck could be damaged.

Noises

Noises may occur while towing your caravan; however, they have no influence on the operation and stabilising effect of the stabiliser hitch.

Possible causes of these noises can be:

1. a painted (dacromet coated) ball on the tow vehicle.
2. A galvanized or varnished tow ball on the tow vehicle.
3. A damaged, rusty or dirty tow ball on the tow vehicle.
4. Dirty or worn out friction pads ① in the hitch.
5. the towbar or brake rod in the linings of the overrunning equipment are running dry.

Hints

For 1., 2. 3. and 4.:

- please refer to the sections "Tow ball on towing vehicle" and "Hitch".

for 5:

- Use the lubricating nipple to grease the bushings. Remove the gangway bellows and grease the exposed tow bar.
- Clean the removable tow ball on the locking mechanism and grease it again (see separate operating instructions for the removable tow bar).

11.3 Brakes

Initial inspection

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

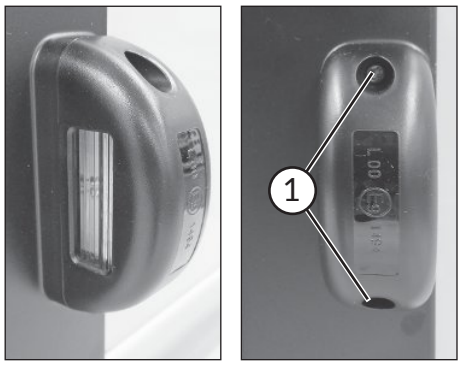
> After exchanging the brake pads, drive the first 100 km carefully, because the full brake force has not yet been reached.

11.4 Changing bulbs in the rear lights

Disconnect the power supply before changing the lamps!

Lamps can be hot!

Ensure that no liquids (e.g. rainwater) flow into the cover.



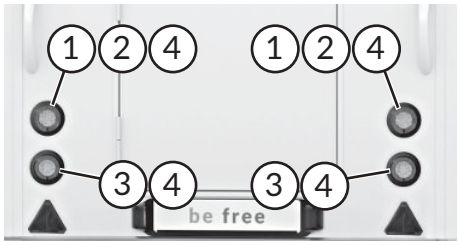
Registration plate light

Changing the licence plate illumination

- To change the registration plate light, first unscrew these screws ①.
- Detach the cables and attach them to the new light.
- Firmly tighten the screws ① to fasten the light securely.

Rear light

The LED components in the rear light cannot be changed separately. In case of defects, the entire rear lamp must be exchanged (only by authorised Hobby dealers).



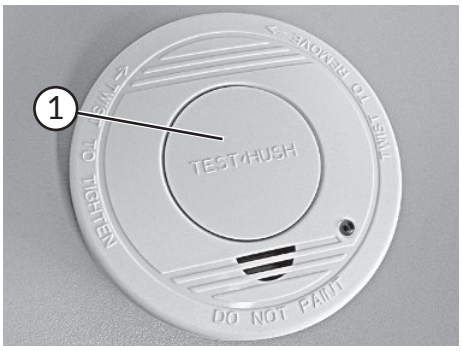
Rear light

① Fog tail lamp
② Back-up light
③ Blinker/Brake light
④ Rear light

11.5 Changing the battery and maintenance of the smoke detector

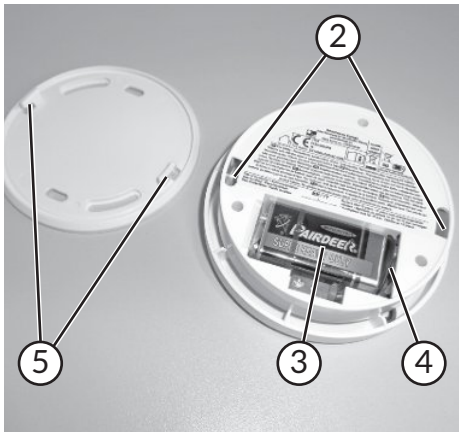
Please observe the operating instructions of the device manufacturer.

Please observe the information regarding used batteries in **Chapter 12.1.**



Smoke detector closed

Maintenance
The smoke detector system does not require any maintenance. From time to time, remove the dust from the cover of the detector and ensure that the air slots are not dirty or blocked up by insects or similar objects. If necessary, the detector should be wiped off with a dry cloth and then hoovered on the outside approx. twice a year.



Smoke detector opened

1 Test button

2 Holes for the lock

3 Block battery, type 9VDC 6F22

4 Pins for battery contact

5 Locking pegs

Changing the battery
To ensure that the block battery continues to function correctly it must be changed regularly, but no later than when the warning signal beeps.

- Carefully turn the cover of the smoke detector anti-clockwise until it can be removed from its mount.
- Take out the used block battery and unpin it from the pins.
- Connect the new block battery to the pins, ensuring that the pins click into place on the poles of the block battery.
- Place the battery in the smoke detector's battery container.
- Place the cover of the smoke detector so that the holes for the lock are over the locking pegs. Carefully turn the cover clockwise until it locks into the mount.

Test

- Press the test button for at least 4 seconds until the alarm goes off. The alarm goes off when the electronic system is working. It will stop as soon as you let go of the test button.

Test the smoke detector every time the battery has been changed.

11.6 Ventilation

Sufficient ventilation and de-aeration of the vehicle interior is essential to maintaining a comfortable climate. You will notice an increased amount of condensation inside the caravan on cooler days or after it has not been used for a prolonged period of time. This condensation may be particularly heavy on single-glazed windows. Damp spots are sometimes even noticeable on furniture surfaces, the inner side of outside walls, and often also in cupboards. Furthermore, such dampness can cause mould to build up, which then rapidly spreads to other surfaces. This situation not only impairs your sense of well-being, but can also lead to damaged components. This condensation is generally caused by the air in the room. One of the properties of air is that it can absorb water. The hotter the air is, the more water it can absorb (relative humidity). If air that is totally saturated with water vapour cools down and reaches its saturation point, it gives off part of the water in the form of condensation. This is also known as a “cold bridge”. However, condensation occurs primarily when there is little airflow due to structural conditions or insufficient airing.

Condensation forms most readily

- in tight spaces,
- from the breath and perspiration of the passengers,
- by having damp clothing, inside the caravan,

While sleeping, a person loses about one litre of water per night through the pores of their skin and breathing. The additional water vapour in the air must be discharged from the recreational vehicle by airing it sufficiently at regular intervals. An air change of 0.5 to 1 ACH (Air change per hour) is required if only for reasons of hygiene to ensure that the level of toxic substances and odorous pollutants in the air in the room remains low.

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

To ensure the ideal air exchange, open the cupboard door when airing and reheating the vehicle. A high level of humidity can cause the edges of the mirrors to corrode. After airing, dry any remaining damp spots with a cloth that has not been sprayed with or dipped in cleaning agents.

Air the caravan as required in an energy-conscious manner. Although this means that some heating energy will be lost, it is in the interests of a healthy room temperature and to prevent any damage from moisture. What is important is to ensure that the loss of heating energy is kept as low as possible. This is best achieved by airing intensively for a brief period at regular intervals. Therefore, you should open the skylights, windows and doors as far as possible for a short time, thus creating a draft. After approx. 10 to 15 minutes the stale, moist air in the room will be replaced by fresh, dry air which, after heating up, can again absorb additional water vapour.

11.7 Upkeep

The following applies for their care:

- clean plastic parts using hot water up to 60°C and mild washing-up liquid.

Only wash the caravan at specially designed wash sites.

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

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

Cleaning products not recommended for use

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

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

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

Cleaning the exterior

The trailer should be thoroughly cleaned at least once a year or if it is soiled. In coastal areas (less than 1500 m away from salt water), the outside of the trailer should be cleaned twice a year.

Rules for cleaning the exterior

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

Thoroughly dry the light sockets, because water collects there easily.

Cleaning with a high-pressure cleaner

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

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

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

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

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

The spray from the high-pressure cleaner must never be pointed directly at the cracks of the doors or windows, acrylic windows, electrical add-on components, plug connectors, seals, ventilation grills or skylights. This may damage the caravan or water could get inside the caravan.

Rules for waxing the surfaces

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

Rules for polishing surfaces

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

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

Rules for treating tar and resin stains

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

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

Rules for damage repair

- Repair all damages without undue delay to prevent further damage caused by corrosion.
  Consult your Hobby dealer.

Chassis

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

Chassis

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

Clean the corner steadies with water and a damp sponge, then dry and grease them, especially the spindle.

Skylights, windows, mirrors and doors

Window surfaces require particularly careful treatment as they scratch very easily, never clean using a brush.

Rules for upkeep

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

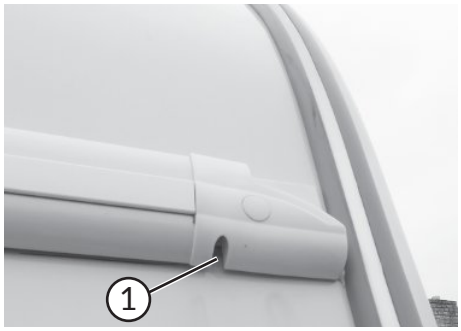
Use plain water to clean the windows. Wipe the mirror dry with a soft cloth. Never use cleaning agents or abrasive and aggressive detergents that contain softeners or solvents! Wipe windows with a damp microfibre or leather cloth, wiping in circles.

Only wipe the mirror carefully with a slightly damp microfibre cloth if there are stubborn stains on it. Never use razor blades to clean window panes or mirrors!

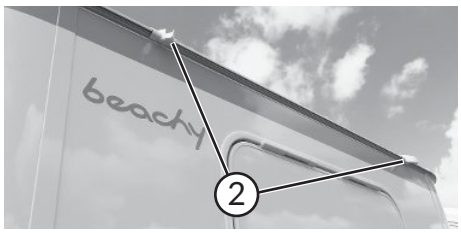
Talcum is available in auto specialty stores.

Roof

To prevent the paint on the roof of the caravan from corroding, the roof plate should be cleaned at least once a year.



Drain at the front



Drains at the rear of the vehicle/on the roof

Drains

The drains ① ② on the external panelling should also be controlled twice a year and, if necessary, any dirt removed by carefully pushing the drains ① free. The drains on the roof/at the rear of the vehicle ② can be wiped off with a damp cloth.

Cleaning the interior

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

Do not use razor blades to clean the mirror or window panes! Wipe mirrors and windows with a damp micro-fibre cloth or leather cloth, wiping in circles. Do not use any cleaning solutions.

Rules for cleaning seat covers, upholstery covers and curtains
- Clean seat covers with a soft brush or vacuum cleaner.
- Mattress covers can only be washed if they have a round zipper. Mattress covers with a zipper that goes around only 1/3 of the cover cannot be washed.
- Have mattresses, cushions and curtains dry-cleaned if they are badly soiled.
- Clean with the foam with a gentle detergent if required.

Cleaning instructions for materials that contain Teflon

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

We recommend the following methods for cleaning

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

This method is particularly suitable for removing:
- wine, milk, lemonade
- blood
- biro, ink
- urine, sweat
- mud
- vomit

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

This method is particularly suitable for removing:
- wax, candles
- pencil

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

Rules for cleaning PVC surfaces

Sand and dust can damage the surface of the PVC flooring if it is walked on regularly. When in use, clean the floor daily with a vacuum cleaner or broom.

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

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

The following applies for the portable toilet*
Thetford recommends cleaning your toilet regularly to prevent limescale and ensure optimal hygiene.

- Clean the inside of the bowl with a soft brush and a special cleaning product.
- Clean the complete toilet with special cleaning products.

Never use household cleaners to clean your portable toilet. These may cause permanent damage to the seals and other toilet components. Also maintain your toilet regularly to prolong the lifespan of your toilet.

- Clean the inside of the waste-holding tank 2 to 3 times a year to remove stubborn limescale.
- Treat the seals with special lubricant to keep the seals soft and pliable.

Never use Vaseline or vegetable oil to lubricate the seals. This may cause leakage to your waste-holding tank.

The valve blade seal is a part of the toilet that is subject to wear. Depending on the extent and manner of servicing, after a certain period the seal will lose quality and must be replaced.

The following applies for the sink

- We recommend using Dometic's special stainless steel cleaner (Article no. 9600000149).

Using chemical substances for cleaning can cause rust deposits to build up.

Please also observe the manufacturer's cleaning instructions.

Overflow pipe of the fresh water tank

The following applies for the fresh water tank

- Rinse it regularly with clean, clear water.
- Pull out the overflow pipe and clean the sealing surface with a gentle cleaning solution.
- Clean the sealing surfaces in the tank and grease them with Vaseline.
- Replace the pipe with a gentle turn to protect the seal.

Cleaning the fresh water tank

- After emptying the water from the fresh water tank, use a cloth to remove the remaining liquid that has collected in the groove.

The following applies for built-in equipment:

- **Heating system***:
  Remove the dust which has collected on the heating in the storage space of the hot-air system at least once a year before the camper season begins. Clean the fan wheel carefully with a brush or small scrubber.
- **Cooler:**
  Keep the ventilation grille clean. The door seal should be rubbed once a year with talcum powder to keep it supple and the expandable fold should be checked for tears.
- Only wipe out the cooler with a damp cloth. Wipe any melted water dry.
- The storage space behind the cooler should be hoovered and cleaned regularly.
- Leave the lid open.

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

11.8 Winterizing the Caravan

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

The following general rules apply

- Only leave your caravan in an enclosed space if it is dry and well-aired. Otherwise, it is better to leave your caravan in the open.
- Cover the stabiliser hitch. Grease the brake linkage and corner steadies.
- Jack up the caravan if possible. Extend the corner steadies to relieve the burden on wheels and axles to some extent. Use axle stands to support the chassis.
- If your vehicle has a battery*, it should be disconnected; ideally, remove it and store it safe from frost. Check it about once a month to see if it is still charged; if not, charge it.
- Leave space between tarpaulins and the caravan so as not to hamper ventilation.

The following applies for the external structure

- Wash the caravan thoroughly **(see 11.7)**.
- Check the vehicle for damages to the paint and other damages. If necessary, repair these damages and carry out any other necessary repairs.
- The exterior should be treated with wax or a special polish for paint lacquer.
- Use a protective agent to protect the metal parts of the chassis against rust.
- Check the chassis for damage and, if necessary, repair it. In case of severe damages, contact your dealer.
- Ensure that water cannot run into the venting on the floor.

The following applies for tanks and containers

- Clean, disinfect, descale and completely empty all water pipes and taps. Leave taps open.
- Clean the fresh water tank and empty it by pulling out the overflow pipe **(see Chapter 8.2 Fresh water)**.
- Clean and empty the waste water tank.
- Clean and empty the toilet flushing tank* and the waste tank*. Clean the toilet valve, apply a lubricant for seals and leave it open.

The following applies for the interior fittings

- Clean the interior of your caravan. Hoover cushions. If possible, store them outside the vehicle in a dry place. Alternatively, place them in such a way inside the caravan that they do not come into contact with condensation.
- Remove organiser boxes* from the vehicle during the winter lay-up to prevent mould.
- Use soapy water to clean linoleum and smooth surfaces.
- Empty and wipe out the cooler. Leave the lid open.
- Leave vents for forced ventilation open. If the caravan is kept in an enclosed space,, you can leave the skylight open.
- Air the caravan thoroughly every four to six weeks when the weather is dry.
- Set up a dehumidifier (such as salt) inside the caravan and dry the granulate or change it regularly.
- If necessary, heat the vehicle (e-heating*) to prevent the build-up of mould from condensation.

11.9 Winter useage

The BEACHY model has not been equipped by the manufacturer for camping in winter, not even if it has been equipped with an E-Airtronic* electric heating system

Nevertheless, should you wish to travel with your Beachy when the outside temperature is colder, please observe the following:

Preparations include

- Check the caravan for damage to the paintwork or from rust and, if necessary, repair it.
- Ensure that water cannot run into the ventilation and de-aerating and heating systems.
- Use a wax-based protective agent to protect the metal parts of the undercarriage against rust.
- Preserve lacquered external surfaces with suitable agents.

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

The following applies for ventilation
Condensation is caused when using the vehicle in low temperatures. Sufficient ventilation is extremely important to ensure that the quality of the air inside the caravan is good and to avoid damage to the caravan caused by condensation

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

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

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

The following applies for heating
- It takes longer to heat the vehicle in the winter.
- Avoid continuous airing during the heating period. Open windows cause a considerably greater loss of heat than brief airing.
- Turn down the heating when airing.
- Do not let the interior cool down completely when you are away or at night; set the heating to low and leave it on.

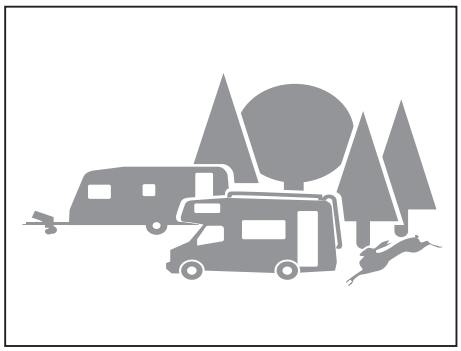
Continue to heat the vehicle while you are sleeping!

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

Saving energy when it is cold outside
It is easy to save energy in the living area. This applies especially for the heating system.

The following applies for saving energy
- Set the vehicle's ventilation system precisely.
- Open the outside door as seldom and as briefly as possible.

12.1 The environment and mobile travel



Environmentally sound use

Naturally, motor home, caravan and van owners and users are especially responsible for the environment.
Therefore, you should always use your caravan in an environmentally sound manner.

Rules for environmentally sound use
- If you plan on spending a long period of time in cities and communities, find out in advance about special campsites for cars with caravans and use them.
- Do not interfere with the quietude and cleanliness of nature.
- Dispose of waste water, faeces and rubbish properly.
- Act in an exemplary manner so that motor home, van and caravan users are not generally regarded as environmental polluters.

Rules for waste water disposal
- Collect waste water on board only in built-in waste water tanks or, in an emergency, in suitable containers!
- Never dispose of waste water in greenery or in drains! Street surface water drains 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 toilet cassette at designated sites, never out in the open! Generally, waste disposal stations can be found at rest facilities, camping grounds or petrol stations.

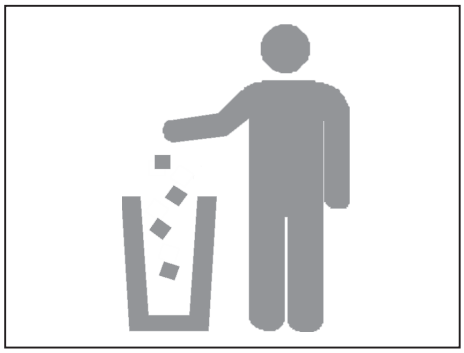
Rules for the disposal of faeces
- Only add approved cleaners to the faeces tank.

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 toilet cassette to become too full. Empty the tank immediately, at the latest when the fill indicator lights up.
- Never dispose of waste water in drains! Street surface water drains 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 rubbish disposal

- Separate rubbish and bring recycleable materials to the appropriate collection sites.
- Empty disposal bins as often as possible in the bins or containers provided for this purpose. This prevents unpleasant odours and rubbish build-up.

Rules for rest areas

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

Protecting the environment is not only in the interest of nature, but also in the interest of all motor home, van and caravan users!

The following applies for used batteries

- Responsibly disposing of and recycling used batteries protects the environment, resources and one's health. Batteries contain valuable materials such as copper, nickel, cobalt, and lithium as well as potentially harmful substances which, if disposed of improperly, can enter the ecosystem.
- Make use of the return system: There are return and collection systems in the EU (e.g. local collection points, retail outlets, recycling centres). Make use of these offers!
- Avoid damage: Ensure that batteries remain undamaged, cover the contacts (e.g. with adhesive tape) to prevent short circuits.
- Dealing with damaged batteries: If a substance should leak or the batteries are damaged, do not continue to use them; dispose of them properly and, if necessary, inform specialist companies.

Environmental and sustainable effects

- Recycling reduces the need for raw materials as well as environmental impacts caused by mining, transport and energy consumption.
- Reusing materials conserves natural resources and reduces greenhouse gas emissions.
- Correct disposal prevents soil, water and air pollution caused by harmful substances.

Key principles:

- Collection instead of disposal: always collect used batteries separately and never dispose of them in the residual waste bin.

13.1 Chassis data

Model	Typ	BEACHY	t.p.o.w.[1] [kg]	Per-mitted axle load	Axle(s)	Wheel brake	Leading equipment	Stabiliser Hitch	Towbar
BEACHY 360	30EG	•	1000	1000	VGB 13 M	20-2425/1	KFL 14 D	KS30	One Piece
BEACHY 420	30EG	•	1000	1000	VGB 13 M	20-2425/1	KFL 14 D	KS30	One Piece
BEACHY 420+	30EG	•	1000	1000	VGB 13 M	20-2425/1	KFL 14 D	KS30	One Piece
BEACHY 450	30EG	•	1000	1000	VGB 13 M	20-2425/1	KFL 14 D	KS30	One Piece

1) Technically permissible maximum weight

13.2 Possibilities for increasing loads

Basic version

Model	Variante	BEACHY	t.p.o.w.[1] [kg]	Axle load [kg]	Axle	Tyres	Brakes	Leading equip-ment	Forked A frame
BEACHY 360	W00G	•	1000	1000	VGB 13 M	195/70 R 14 XL LI 96	20-2425/1	KFL 14 D	One-Piece
BEACHY 420	Y00G	•	1000	1000	VGB 13 M	195/70 R 14 XL LI 96	20-2425/1	KFL 14 D	One-Piece
BEACHY 420+	V00T	•	1000	1000	VGB 13 M	195/70 R 14 XL LI 96	20-2425/1	KFL 14 D	One-Piece
BEACHY 450	Z00G	•	1000	1000	VGB 13 M	195/70 R 14 XL LI 96	20-2425/1	KFL 14 D	One-Piece

13.3 Calculating mass

Model	Variante	BEACHY (G)	BEACHY (T)	t.p.o.w.[1] [kg]	Mass when ready to drive			Max. no. of sleeping spaces	Length of superstruc-ture	Max. mass of optional extras
					Value [kg]	Tolerance -5% [kg]	Tolerance +5% [kg]	[n]	[mm]	[kg]
BEACHY 360	W00G	•		1000	749	712	787	3	3660	146
BEACHY 420	Y00G	•		1000	811	770	852	3	4260	75
BEACHY 420+	V00T		•	1000	824	783	866	4	4260	51
BEACHY 450	Z00G	•		1000	843	801	886	4	4560	28

13.4 Tyres and Rims

Model	Variante	BEACHY	t.p.o.w.[1] [kg]	Axle load [kg]	Standard version: Metal wheel rim	Standard version: Tyre size	Standard version: Air pres-sure (bar)	Metal wheel rims for the standard version: Light alloy rim, size	Metal wheel rims for the standard version: Light alloy rim, marking	Metal wheel rims for the standard version: Light alloy rim, colour	Metal wheel rims for the standard version: Tyre size	Metal wheel rims for the standard version: Air pres-sure (bar)
BEACHY 360	W00G	•	1000	1000	5½ x 14	195/70 R 14 XL LI 96	3,2	6 x 14	TR9-6014	black	195/70 R 14 C LI 101	4,5
BEACHY 420	Y00G	•	1000	1000	5½ x 14	195/70 R 14 XL LI 96	3,2	6 x 14	TR9-6014	black	195/70 R 14 C LI 101	4,5
BEACHY 420+	V00T	•	1000	1000	5½ x 14	195/70 R 14 XL LI 96	3,2	6 x 14	TR9-6014	black	195/70 R 14 C LI 101	4,5
BEACHY 450	Z00G	•	1000	1000	5½ x 14	195/70 R 14 XL LI 96	3,2	6 x 14	TR9-6014	black	195/70 R 14 C LI 101	4,5

Metal wheel rim: tightening torque 10 Nm **Light alloy rim: tightening torque 120 Nm**

Wheel bolts: Retainer for all 13" + 14" metal wheel rims and all light alloy rims (incl. 15") cone washer
Retainer for all 15" metal wheel rims: SPHERICAL WHEEL BOLT

Rims Size	Rims Wheel mounting	Rims Model	Tyre size	Wheel arch	Floor length	Total width	Track	Dis-tance towbar	Length of caravan	Length	Total length
5½ J x 14	5/112, ET 30	Steel	684 x 224	195/70 R 14 XL	3229	2165	1950	3176	3660	3715	5087
5½ J x 14	5/112, ET 30	Steel	684 x 224	195/70 R 14 XL	3829	2165	1950	3429	4260	4315	5687
5½ J x 14	5/112, ET 30	Steel	684 x 224	195/70 R 14 XL	3829	2165	1950	3429	4260	4315	5687
5½ J x 14	5/112, ET 30	Steel	684 x 224	195/70 R 14 XL	4129	2165	1950	3563	4560	4615	5987

Maximum increased load

g.v.w.r. [kg]	Axle load [kg]	Axle New !	Additional rear crossbar	Wheels New !	Brakes New !	Leading equipment	Forked A frame New !	Weight
1200	1200	no	no	no	no	no	no	0,0
1200	1200	no	no	no	no	no	no	0,0
1200	1200	no	no	no	no	no	no	0,0
1200	1200	no	no	no	no	no	no	0,0

Max. increase (for increased load)		Metal wheel rims for increased load			Light alloy rims for increased load				
g.v.w.r. [kg]	Axle load [kg]	Metal wheel rim	Tyre size	Air pres-sure (bar)	Light alloy rim, size	Light alloy rim, marking	Light alloy rim, colour	Tyre size	Air pres-sure (bar)
1200	1200	5½ x 14	195/70 R 14 XL LI 96	3,2	6 x 14	TR9-6014	black	195/70 R 14 C LI 101	4,5
1200	1200	5½ x 14	195/70 R 14 XL LI 96	3,2	6 x 14	TR9-6014	black	195/70 R 14 C LI 101	4,5
1200	1200	5½ x 14	195/70 R 14 XL LI 96	3,2	6 x 14	TR9-6014	black	195/70 R 14 C LI 101	4,5
1200	1200	5½ x 14	195/70 R 14 XL LI 96	3,2	6 x 14	TR9-6014	black	195/70 R 14 C LI 101	4,5

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

Light alloy rims always in connection with brand tires.
As an option, silver light alloy rims are also available in black (SW).

13.5 Tyre pressure values

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

Tyre size	Air pressure in bar
195/70 R 14 XL or reinforced	3,2
195/70 R 14 C	4,5

13.6 Measurements of Awning Perimeter

Model	Perimeter measurements [mm]
BEACHY 360	8360
BEACHY 420	9180
BEACHY 420+	9180
BEACHY 450	9290

The measurement given depends on the optional extras, load and tyre size, and is to be regarded as a guiding value only. To determine the exact perimeter measurement of your awning, we recommend that you measure the caravan.

Index

A
Accessories 65
Additional loads 13
Airing 70
Awning rail 34

B
Bed conversion 40
Bicycle carrier 34
Brakes 68

C
Changing the tyre 26
Chassis upkeep 73
Choosing a parking space 11
Cleaning the exterior 72
Cleaning the interior 74
Cooler 64
Corner steadies 33

D
Doors and flaps 30
Doors
  opening and closing 30
  upkeep 73
Drawbar load 14
Drawers 36
Drawgear 67
Driving 9
Driving in curves 9
Driving in reverse 10
Driving noises 68

E
Electric power supply 48
Electrical system 52
Emergency equipment 6
Entrance door 30
  exterior 30
  interior 31
Entry step 31
Environmental protection 79

F
FI (‚fast interrupt') switch 49
Fighting a fire 5
Fire protection 4
First aid kit 6
Folding table 39
Forced ventilation 30
Fresh water tank 57
Fuses, assignment of 52

G
General inspection 7
Greasing 66

H
Hand brake 19
Hanging storage compartments 37
High-visibility vest 6
Hitching/unhitching 17

I
In case of thunderstorms 5
Information on vehicle weights
  and weight-related data 14

K
Keys 30

L
Lavatory 37
Licence plate illumination
  changing the licence plate lighting 69
Lighting control system 54
Loading 12
Lockers
  opening and closing 30

M
Maintenance 66
Maintenance of the smoke detector 69

O
Oiling 66
Overrunning brake facility 20

P
Pushlock 36

R
Rear flap, partitioned 31
Rear lamps 69
  changing the rear lamps 69
Rearranging the cushions 43
Registration 6
Remote control 47
Rims 25
Roof 33
Roof bonnet 45

S
Seating area 40
Securing the vehicle 11

Shunting 10
Smoke detector 5
Sockets inside the caravan 52
Suitability for a speed of 100 km/h 7

T
Tables 39
Technical data 81
Technically permissible maximum weight 14
Toilet 59
Tyre pressure 24
Tyre profile depth 24
Tyre repair kit 28
Tyres 23
Tyres, age of 24

U
Undercarriage 73
Upkeep 71
Used batteries 80

V
Ventilation and de-aerating 30
VIN (Vehicle Identification Number) 12

W
Walk-in wardrobe 36
Warning triangle 6
Waste water tank 58
Windows 43
  upkeep 73
Winter operation 77

Hobby-Wohnwagenwerk
Ing. Harald Striewski GmbH
Harald-Striewski-Straße 15
24787 Fockbek/Rendsburg
www.hobby-caravan.de

GB

Hobby
BUILT FOR LIFE