

Congratulations

We congratulate you on your new VANSTAR and would like to thank you for choosing this vehicle.

With a VANSTAR you always have the right travelling companion for every trip: Whether for a city trip, a short excursion or your family holidays. The high quality standard and the large variability furthermore enthrall. Many useful details prove to be extremely practical when on the road making your holiday even more relaxed.

Each vehicle is manufactured with great care and the quality is closely checked. This ensures that our products have a long service life.

This instruction manual deals primarily with the aspect of living in your VANSTAR. It will give you all important information and tips so that you can enjoy all technical advantages of your VANSTAR to the full. We have also included a chapter on maintenance - and thus on the conservation of value.

In addition, you will find the documents on the base vehicle and the various built-in appliances.

For maintenance work or whenever you need some help, please always get in touch with your VANSTAR dealer. They know your caravan best of all and will meet all your requests fast and reliably.

We wish you a lot of fun with your VANSTAR, a relaxing holiday and safe driving at all times.

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1.3 Inspection plan

Pos.	Component	Activity	Interval
	Fault current protection switch	Function check with every connection to the 230 V supply	Semi-annually
	Joints, hinges	Lubricate	Annually
	Heater, lighting, storage flap and door closures, seat belts	Function check	Annually
	Pop-up roof	Function check, water ingress test	Annually
	Cushion	Visual check	Annually
	Sealing rubbers and joints	Check for damage	Annually
	Hot-air system	Function check, clean fan wheel if necessary	Annually
	Electrical system	Function check	Annually

We reserve the right to modify the inspection plan.

1.4 Inspection records

Delivery

Date:

Signature and stamp of the VANSTAR dealer:

1. Year

Date:

Signature and stamp of the VANSTAR dealer:

- No defects found
- Found defects:

Should it be determined during an inspection that additional work is necessary, then the carrying out of this work is dependent on the customer commissioning this to be done. Please also adhere to the service intervals stipulated by the manufacturers of the individual equipment. Information is included in the service documents enclosed.

1.5 Inspection certificates for electrical inspection



- ▷ The entire 230 V system must be checked every three years by a qualified electrician in accordance with VDE 0100.

3. Year

Date:

Qualified electrician's signature and stamp:

Entire 230 V system checked:

- No defects found
- Found defects:

6. Year

Date:

Qualified electrician's signature and stamp:

Entire 230 V system checked:

- No defects found
- Found defects:

Please read this instruction manual completely before using the vehicle for the first time!

Always keep this instruction manual in the vehicle. Also inform all other users of the safety regulations.



- ▶ The non-observance of this symbol can lead to personal injury.



- ▷ The non-observance of this symbol can lead to damage being caused to, or inside the vehicle.



- ▷ This symbol indicates recommendations or special aspects.



- ▷ This symbol indicates actions which lead to environmental awareness.

This instruction manual contains sections which describe model-specific equipment or special equipment. These sections are not specially marked. It may be that your vehicle has not been fitted with this special equipment. In some cases, the actual equipment of your vehicle may therefore be different from that shown in some illustrations and descriptions.

However, your vehicle may be fitted with other special equipment not described in this instruction manual.

Special equipment is described when an explanation is required.

Adhere to the instruction manuals which are separately enclosed.



- ▷ The details "right", "left", "front" and "rear" always refer to the vehicle in direction of travel.
- ▷ All dimensions and weight details are "approximate".

Should the vehicle be subjected to damage due to a failure to follow the instructions in this instruction manual, then the warranty claim is deemed invalid.

Our vehicles are subjected to continuous development. Please understand that we reserve the right to alter the form, equipment and technology. Therefore, no claims can be made against the manufacturer as a result of the contents of this instruction manual. The equipment which was known and included at the time of going to press is described.

The reprinting, translation and copying, including extracts is not permitted without prior written authorisation from the manufacturer.

2.1 General

The vehicle is constructed in accordance with the latest technology and the recognised safety regulations. Nevertheless, personal injury may result and the vehicle may be damaged if the safety instructions in this instruction manual are not followed.

Depending on the configuration, the first-aid kit and hazard warning triangle are not included as standard. Equip the vehicle with a first-aid kit and hazard warning triangle before using it for the first time.

Only use the vehicle in a technically impeccable condition. Follow the instructions in the instruction manual.

Malfunctions which impair the safety of persons or the vehicle should be immediately remedied by qualified personnel. To avoid further damages, observe the duty to avert, minimise or mitigate loss for the user during faults.

Have the vehicle's braking inspected and repaired by an authorised specialist workshop only.

Alterations to the body are only to be carried out with the authorisation of the manufacturer.

The vehicle is designed for the exclusive transport of persons. Luggage and accessories may only be transported up to the maximum permissible gross weight.

Observe the test and inspection periods stipulated by the manufacturer.

2.2 Environmental tips



- ▷ Do not impair the tranquillity and spruceness of nature.
- ▷ Remember that: All kinds of waste water and household waste are not to be disposed of in drains or in the open countryside.
- ▷ Only empty the waste water canister at disposal stations, at camping sites or caravan sites, that are especially provided for this purpose. When stopping in towns and communities, observe the instructions at caravan sites or ask where there are disposal stations.
- ▷ Collect waste water on board only in the waste water canister or, if need be, in other vessels suitable to this purpose.
- ▷ Empty waste water canister as often as possible, even when the waste water canister is not completely full (hygiene).
If possible, flush out waste water canister and, if necessary, drainage pipe with fresh water every time it is emptied.
- ▷ Separate household waste according to glass, tin cans, plastic and wet waste also when on a journey. Enquire at the town or community authority about disposal points. Household waste is not to be disposed of in waste paper baskets which are situated at car parks.
- ▷ Empty waste bins as often as possible into the cans or containers that are provided for this purpose. This helps to avoid unpleasant smells and an accumulation of rubbish on board.
- ▷ When parked, do not allow the engine to run more than necessary. When running idle, a cold engine releases more contaminants than usual. The running temperature of the engine is achieved more quickly whilst the vehicle is in motion.
- ▷ When staying in towns and communities for longer periods, search for parking areas which are especially designated for motorhomes. Enquire at the town or community authority about parking spaces.
- ▷ Always leave the parking places in a clean condition.

3.1 Fire prevention

3.1.1 Avoidance of fire risks



- ▶ Never leave children in the vehicle unattended.
- ▶ Keep flammable materials clear of heating and cooking appliances.
- ▶ Lights can get very hot. When the light is switched on, a safety distance of 30 cm to combustible material has to be maintained. Fire hazard!
- ▶ Never use portable heating or cooking appliances.
- ▶ Only authorised qualified personnel may modify the electrical system, the gas system or the appliances.
- ▶ The gas cooker's flames must always be covered with saucepans or pans. Never use the gas cooker without saucepans or pans.

3.1.2 Fire-fighting



- ▶ Always carry a dry powder fire extinguisher in the vehicle. The fire extinguisher must be approved, tested and close at hand.
- ▶ Have the fire extinguisher tested at regular intervals by authorised qualified personnel. Observe the date of testing.
- ▶ The fire extinguisher is not included in the scope of delivery ¹⁾.
- ▶ Always keep a fire blanket at hand near the cooker.

¹⁾ In some countries the fire extinguisher is part of the scope of delivery.

3.1.3 In case of fire



- ▶ Evacuate all passengers.
- ▶ Cut off the electrical power supply and disconnect from the mains.
- ▶ Close regulator tap on the gas bottle.
- ▶ Sound the alarm and call the fire brigade.
- ▶ Fight the fire if this is possible without risk.



- ▷ Keep escape routes clear.
- ▷ Observe the fire extinguisher instructions for use.

3.2 General



- ▶ The oxygen in the vehicle interior is used up by breathing and the use of gas operated appliances. That is why the oxygen needs to be replaced on a constant basis. To this purpose ventilation grills have to be installed in the vehicle. When the pop-up roof is opened, the forced ventilation is ensured. Never cover or block forced ventilations from inside or outside with objects as e.g. a winter mat. Keep forced ventilations clear of snow and leaves. There is a danger of suffocation due to increased CO₂ levels.
- ▶ Observe the headroom of the doors.
- ▶ Electric cables are laid in the floor. Never drill holes or screw screws into the floor. There is danger of an electric shock or short circuit due to damage to a line or cable.



- ▷ The respective instruction manuals and operating manuals are authoritative for the appliances (heater, cooker, icebox etc.) as well as for the basic vehicle (engine, brakes etc.). It is imperative that they be observed.
- ▷ Fitting accessories or special equipment can alter the dimensions, weight and road behaviour of the vehicle. Some of the parts must be entered in the vehicle papers.
- ▷ Only use wheel rims and tyres which are approved for the vehicle. Information concerning the size of the approved wheel rims and tyres is included in the vehicle documents or can be obtained from authorised dealers and service centres.
- ▷ Firmly apply the handbrake when parking the vehicle.



- ▷ When leaving the vehicle, it is imperative that all doors, external flaps and windows are closed.
- ▷ Hazard warning triangle and first-aid kit conforming to DIN13164 are prescribed by law and must be carried on the vehicle.
- ▷ Only move the vehicle on the road if the driver has a driver's license valid for the vehicle class.
- ▷ When selling the vehicle, hand over all instruction manuals for the vehicle and the fitted appliances.

3.3 Road safety



- ▶ Before commencing the journey, carry out a functional check of indicating and lighting equipment, the steering and the brakes.
- ▶ After the vehicle has been standing for a longer period (approx. 10 months) have the braking and gas systems checked by an authorised specialist workshop.
- ▶ Fold in the pop-up roof fully and lock it into place before commencing the journey.
- ▶ Before starting the journey, rotate the seat in the direction of travel and lock in position. The rotating seats must remain locked in the direction of travel during the journey.
- ▶ During the journey, persons are only to sit on the permitted seats. The authorised number of seats is stipulated in the vehicle documents.



- ▶ Before starting the journey fasten your seat belt and keep it fastened during the journey.
- ▶ Always secure children with the child-protection equipment that is mandatory for the respective child's size and weight.
- ▶ Deactivate the passenger airbag if a rear-facing child safety system is used on the passenger seat.
- ▶ Attach child restraint systems only at seats with factory-set three-point safety belts or to ISOFIX attachment systems.
- ▶ Observe the overall height of the vehicle (including roof loads) at underpasses, tunnels, etc.
- ▶ In winter, the roof must be free of snow and ice before commencing the journey.
- ▶ The kitchen unit must not be removed from vehicles with motorhome registration, otherwise the registration would expire in case of mobile operation. For the same reason, a 7-seater is not allowed in case of registration as motorhome.



- ▷ Before commencing the journey, distribute the vehicle payload evenly (see Chapter 4).
- ▷ When loading the vehicle and when taking a rest from driving, in order to load luggage or food, for example, observe the maximum permissible gross weight and axle loads (refer to vehicle documents).
- ▷ Before commencing the journey, ensure that the cupboard doors, all drawers and flaps are secure.
- ▷ Before commencing the journey, close the windows.
- ▷ Before commencing the journey, close all external flaps and lock them.

3.4 Towing



- ▶ Care is to be taken when connecting and detaching a trailer. Risk of accident and injury!
- ▶ No persons are to be between the towing vehicle and the trailer during positioning for connecting and detaching.

3.5 Gas system

3.5.1 General information



- ▶ Close the gas isolator tap and the regulator tap before commencing the journey and when leaving the vehicle.
- ▶ No appliance (e.g. heater) that is operated through the built-in burner may be operational while fuel is being filled up, on ferries or in the garage. Danger of explosion!
- ▶ If an appliance is operated through a burner, do not start the appliance up in closed areas (e.g. garages). Danger of poisoning and suffocation!
- ▶ Have the gas system serviced, repaired or altered by an authorised workshop only.



- ▶ Have the gas system checked by an authorised specialist workshop before starting up and according to the national regulations. This also applies for not registered vehicles. For modifications to the gas system have the gas system immediately checked by an authorised specialist workshop.
- ▶ The gas pressure regulator has to be checked. The gas pressure regulator has to be replaced at least every 10 years. The vehicle owner is responsible for seeing that this is carried out.
- ▶ In case of a defect of the gas system (gas odour, high gas consumption) there is danger of explosion! Close the regulator tap on the gas bottle immediately. Open doors and windows and ventilate well.
- ▶ In case of a defect in the gas system: Do not smoke; do not ignite any open flames, and do not operate electric switches (light switches etc.).
- ▶ Have the defect in the gas system repaired by an authorised specialist workshop.
- ▶ Do not use the gas cooker for heating purposes.
- ▶ If the vehicle or the gas device is not used, close the regulator tap on the gas bottle.
- ▶ Ignition safety valves must close within 1 minute after the gas flame has extinguished. A clicking sound is audible. Check function from time to time.
- ▶ The fitted gas device is designed solely for operation with butane gas. The gas pressure regulator and the fitted gas device are designed for an operating pressure of 30mbar.
- ▶ Regularly inspect the gas tube fitted to the gas bottle connection for tightness. The gas tube must not have any tears and must not be porous. Have the gas tube replaced in an authorised workshop no later than ten years after the manufacturing date. The operator of the gas system must see to it that the parts are replaced.
- ▶ Due to its function and construction, the gas bottle compartment is a space which is open to the exterior. Never cover or block the standard forced ventilation. Otherwise leaking gas cannot be dispersed to the outside.
- ▶ Do not use the gas bottle compartment as storage space as it is not moisture-proof.
- ▶ The regulator tap on the gas bottle must be accessible.
- ▶ Only connect gas-operated devices (e.g. gas grill) which have been designed for a gas pressure of 30 mbar.

3.5.2 Gas bottle



- ▶ Transport the gas bottle only within the designated gas bottle compartment.
- ▶ Place the gas bottle vertically in the gas bottle compartment.
- ▶ Tie down gas bottle so that it is unable to turn or tilt.
- ▶ Close the regulator tap on the gas bottle before the gas pressure regulator or gas tube are removed from the gas bottle.
- ▶ Use your hands only to connect the gas pressure regulator or the gas tube to the gas bottle. Do not use any tools.
- ▶ Only use special gas pressure regulators with safety valves for use in vehicles (included in the scope of delivery status for a new vehicle).
- ▶ Use only gas bottles up to 2.8 kg, including gas bottle valves with safety device (e.g. blue camping gas bottles R907). The gas bottle valve with safety device is not part of the camping gas bottle. The Campstar is optimised for the camping gas bottle. Other gas bottles of the same design have not been tested.
- ▶ Never block the ventilation openings in the floor under the gas bottles.
- ▶ Check whether the gas ventilation system is complete.

3.6 Electrical system



- ▶ Only allow qualified personnel to work on the electrical system.
- ▶ Prior to carrying out work on the electrical system, switch off all devices and lights, disconnect the battery and disconnect the vehicle from the mains.
- ▶ Only use original fuses with the stipulated values.
- ▶ Only replace defective fuses when the cause of the defect is known and has been remedied.
- ▶ Never bridge or repair fuses.

3.7 Water system



- ▶ Water left standing in the water canister or in the water pipes becomes undrinkable after a short period. For this reason, rinse the water pipes and the water canister thoroughly with several litres of fresh water before each use of the vehicle. To do this, open the water tap. After each use of the vehicle completely empty the water canister and the water pipes.



- ▶ If the vehicle is not used for several days or if it is not heated when there is a risk of frost, empty the entire water system. Leave the water tap opened. Frost damage to appliances, frost damage to the vehicle and deposits in water-carrying components can be avoided in this way.

4.1 Payload



- ▶ Excessive payload and the wrong tyre pressure can cause the tyre to burst. You can lose control of the vehicle.
- ▶ Adapt your speed to the payload. The stopping distance is longer when the payload is higher.



- ▷ The maximum permissible gross weight stated in the vehicle documents is not to be exceeded by the payload.
- ▷ Built-in accessories and special equipment reduce the payload.
- ▷ Adhere to the axle load stated in the vehicle documents.

On loading, make sure that the payload's centre of gravity is as low as possible (directly above the floor of the vehicle). Otherwise this may affect the driving characteristics of the vehicle.

4.1.1 Terms



- ▷ In technical and scientific texts the term "mass" has replaced the term "weight". However the term "weight" is still the more common term in general usage. To contribute toward understanding the term "mass" is therefore only used in established phrases in the following passages.

Maximum permissible gross weight in a laden condition

The maximum permissible gross weight in a laden condition is the weight that a vehicle may never exceed.

The maximum permissible overall weight in laden condition consists of the **mass in ready-to-drive condition** and of the **payload**.

The manufacturer has specified the maximum permissible gross weight in a laden condition in Field F.1 of the vehicle documents.

Mass in ready-to-drive condition

The manufacturer specifies the mass in ready-to-drive conditions in Field G of the vehicle documents.

Payload

The payload is made up as follows:

- Conventional load
- Additional equipment
- Personal equipment

Explanations of the individual components of the payload are contained in the following text.

Conventional load

The conventional load is the weight specified by the manufacturer for the passengers.

Conventional load means: 75 kg are calculated for every seat specified by the manufacturer, regardless of how much the passengers actually weigh. The driver's seat is already included as part of the mass in ready-to-drive condition and must **not** be calculated as part of the conventional load.

The manufacturer specifies the number of seats in Field S.1 of the vehicle documents.

Additional equipment Additional equipment includes accessories and special equipment. Examples of additional equipment include:

- Tow coupling
- Roof racks
- Awning
- Bike or motorcycle rack

Information about the weights of the various special equipment devices can be obtained from the manufacturer.

Personal equipment Personal equipment includes all items in the vehicle that are not included in the conventional load and the additional equipment. For example, personal equipment can include the following:

- Foodstuffs
- Crockery
- Television
- Radio
- Clothes
- Bedding
- Toys
- Books
- Toiletries

No matter where kept, personal equipment also includes:

- Animals
- Bikes
- Boats
- Surfboards
- Sports equipment

4.1.2 Calculating the payload



- ▶ Payload calculation at the manufacturer is partly based on all-inclusive weights. For safety reasons, the maximum permissible gross weight in a laden condition must not be exceeded.
- ▶ Only the maximum permissible gross weight and the mass in a ready-to-drive condition, not the actual weight of the vehicle, is stated in the vehicle documents. For your own safety, we recommend that you have your loaded vehicle (with passengers) weighed on a public weighbridge before you set out on your journey.

The payload (see chapter 4.1.1) is the weight difference between

- Maximum permissible gross weight in a laden condition and
- Vehicle mass complete in a ready-to-drive condition.

Example for calculating the payload

	mass in kg to be calculated	Calculation
Maximum permissible gross weight according to vehicle documents, Field F.1	3100	
Vehicle mass in a ready-to-drive condition, including basic equipment according to vehicle documents, Field G	- 2520	
This results in a permissible payload of	580	
Conventional load, e.g. 3persons at 75kg each	- 225	
Additional equipment	- 40	
For the personal equipment this results in	= 315	

The calculation of the payload from the difference between the maximum permissible gross weight in laden condition and the mass specified by the manufacturer in ready-to-drive condition is however only a theoretical value. Only if the vehicle is weighed with full tanks (fuel and water) and complete additional equipment on a public weighbridge, can the actual payload be determined.

4.1.3 Loading the vehicle correctly



- ▶ To ensure safety never exceed the maximum permissible gross weight in a laden condition.
- ▶ Distribute the load evenly between the left-hand and right-hand sides of the vehicle.
- ▶ Distribute the load evenly between both axles. Observe the axle loads specified in the vehicle documents. Additionally observe the permissible load-carrying capacity of the tyres.
- ▶ Securely store all the objects so that they cannot slide or slip.
- ▶ Store heavy objects (awning, canned food, etc.) close to the axles. Low-lying storage compartments whose doors do not open in the direction of travel are particularly suited for storing heavy objects.
- ▶ Store lighter objects (laundry) in the roof storage compartments.

4.1.4 Roof load



- ▷ A roof rack is commercially available as an accessory. Assembly details and the available roof load with respect to the pop-up roof can be found in the instruction manual for the roof rack. We recommend professional installation in a suitable workshop. The manufacturer accepts no liability for any damage if the approved roof load is exceeded.

4.2 Road safety



- ▶ Check the tyre pressure before a journey and at 2-week intervals. Wrong tyre pressure causes excessive wear and can lead to damage or even to tyre burst. You can lose control of the vehicle.

Before commencing the journey, work through the checklist:

	No.	Checks	checked
Base vehicle	1	All vehicle documents are on board	
	2	Tyres in proper condition	
	3	Vehicle lighting, brake and reversing lights function	
	4	Oil level at engine, gear unit and power steering checked	
	5	Coolant and liquid for windshield washer system topped up	
	6	Breaks function	
	7	Brakes react evenly	
	8	When braking, the vehicle remains on track	
Housing body, outside	9	Awning completely retracted	
	10	Roof free of snow and ice (in winter)	
	11	External connections and lines disconnected and stored away	
	12	Pop-up roof folded in, closed, locked and secured	
	13	External flaps and doors closed and locked	
	14	Overall height of the vehicle including roof rack when loaded measured and noted. Keep the height information close at hand in the driver's cabin	
Housing body, inside	15	Table stowed	
	16	Loose parts stored away or fixed in position	
	17	Open storage spaces empty	
	18	All drawers and flaps closed	
	19	Children's seats mounted to seats with three-point safety belts or ISOFIX	
	20	Swivel seat locking mechanism for driver's seat and passenger seat locked in direction of travel	
	21	Seat moved into driving position	
	22	Shades in the driver's cabin removed	
	23	Ventilation grilles stowed	

5.1 Driving with the VANSTAR



- ▶ Always wear a seat belt during the journey at those seats where a seat belt is mounted.
- ▶ Never open the seat belt during the journey.
- ▶ Passengers must remain in the seats provided.
- ▶ The door lock may not be opened.



- ▷ Drive slowly on bad roads.



- ▷ If an accident occurs as a result of these instructions not being observed, the manufacturer will not be responsible for damages caused.
- ▷ The safety measures specified in Chapter 3 have to be observed.

5.2 Driving speed



- ▶ The vehicle is equipped with a powerful engine. Meaning that you have sufficient power reserves in difficult traffic situations. This high power allows a high end speed and requires above-average driving skills.
- ▶ The vehicle provides a huge surface exposed to wind. Particular danger arises when a side wind suddenly occurs.
- ▶ Uneven or one-sided loading changes the road behavior.
- ▶ On unknown roads the road surface conditions may be difficult and unexpected traffic situations may arise. Therefore adapt your driving speed to the respective traffic situation and the ambient situation for your safety.
- ▶ Observe the statutory speed limits that apply in the respective country.

5.3 Seat belts

The vehicle is equipped with automatic three-point safety belts at those seats in the living area for which a seat belt is stipulated by law. ISOFIX attachment systems are mounted on the seats of the back seat. The corresponding national regulations apply for using a seat belt.



- ▶ Before starting the journey fasten your seat belt and keep it fastened during the journey.
- ▶ Do not damage or clamp in the belts. Have damaged seat belts replaced by an authorised specialist workshop.
- ▶ Do not change the belt attachment points, the automatic retractor and the belt locks.
- ▶ Check the screwed connections of the seat belts at intervals in order to ensure that they are firmly seated.
- ▶ Use each seat belt for **one** adult person only.



- ▶ Do not belt up objects together with persons.
- ▶ Seat belts are not sufficient for persons who are less than 150cm tall. In this case use additional retention devices. Observe the test certificates.
- ▶ Factory-set three-point safety belts must be used when attaching child restraint systems.
- ▶ Replace (have replaced) the seat belts that were in use during an accident.
- ▶ Do not tilt the backrest of the seat too far back during the journey. Otherwise the effectiveness of the seat belt is no longer ensured.

5.3.1 Using the seat belt correctly



- ▶ Do not twist the belt. The belt must be positioned smoothly against the body.
- ▶ Before applying the seat belt, adopt the correct sitting position.

5.4 Driver's seat and front passenger's seat



- ▶ Before starting the journey, rotate the seat in the direction of travel and lock in position.
- ▶ Lock the seats in the direction of travel and do not turn them during the journey.



- ▷ The driver's and front passenger's seat are a part of the base vehicle, depending on model and vehicle equipment. In this case the adjustment of the seats is described in the operating instructions of the base vehicle.

5.5 Seating arrangement



- ▶ During the journey, persons are only to sit on the permitted seats. The authorised number of seats is stipulated in the vehicle documents.
- ▶ Wearing of seat belts is compulsory at all seats.
- ▶ Never install the original double seat on the right in the direction of travel, never install the bed couch on the left. Otherwise the seat belts cannot be used at all the seats.

5.6 Operation of heater and cooker



- ▶ No appliance (e.g. heater) that is operated through the built-in burner may be operational while fuel is being filled up, on ferries or in the garage. Danger of explosion!

Refer to the instruction manual for the base vehicle for the position of the fuel filler neck.

6.1 Handbrake



- ▶ The vehicle can move when the parking brake is released, e.g. when it is on chocks.

Firmly apply the handbrake when parking the vehicle.



- ▷ An applied handbrake can prevent the driver's seat from turning. If necessary release the handbrake briefly.

6.2 230 V connection

The vehicle can be connected to a 230 V power supply (see Chapter 8).

7.1 Flap for 230 V connection, square

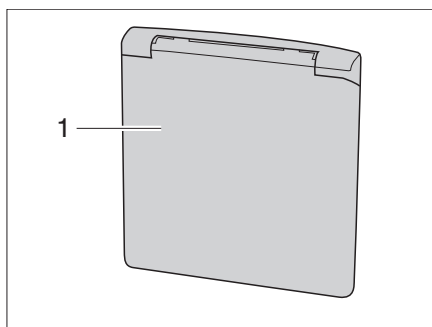


Fig. 1 Flap for 230 V connection

Opening: ■ Grip the external flap (Fig. 1,1) at the bottom and lift it upwards.

Closing: ■ Lower the external flap downward and press it shut.

7.2 Ventilation



The oxygen in the vehicle interior is used up by breathing and the use of gas operated appliances. That is why the oxygen needs to be replaced on a constant basis. Ensure constant ventilation by opening the pop-up roof or opening a window. When the pop-up roof is opened, the forced ventilation is ensured.



▷ Although sufficient ventilation is provided, in certain weather conditions, condensation can form on metal objects (e.g. screwed connections in the floor).

Condensation

Ensure that there is a continuous exchange of air by providing frequent and efficient ventilation. This is the only method for ensuring that condensation is not formed during cool weather. During the colder season, a pleasant living climate is created if heating output, air distribution and ventilation are synchronised. To avoid draft close the air outlet nozzles on the dashboard and set the air distribution of the base vehicle to air circulation. If the vehicle is laid up for a longer period, occasionally ventilate it well, especially in summer as heat accumulation can occur.

7.3 Sliding door



- ▶ Ensure when closing the sliding door that no fingers or other body parts are clamped in.
No-one may be within the closing area of the sliding door when it is being closed.
- ▶ Ensure that children do not use the sliding door without supervision.
- ▶ Deactivate the child lock in the Campstar when the vehicle is occupied (emergency exit).
- ▶ Observe the instruction manual of the vehicle manufacturer for the electrical sliding door (special equipment).

Activating/deactivating the child lock



- ▷ For more information about the built-in child safety lock, see the operating instructions of the chassis manufacturer.

7.4 Rotating the seats



- ▶ Before starting the journey, rotate the seat in the direction of travel and lock in position. The rotating seats must remain locked in the direction of travel during the journey.
- ▶ The vehicle can move when the parking brake is released, e.g. when it is on chocks.



- ▷ For more information about the seat adjustment options, refer to the chassis manufacturer's instruction manual.

7.5 Gooseneck lamp

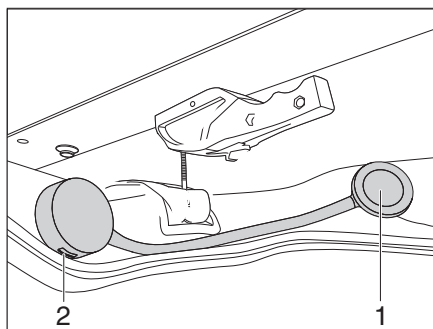


Fig. 2 Gooseneck lamp

A gooseneck lamp (Fig. 2,1) is installed underneath the sleeping area. The base of the gooseneck lamp features a USB port (5 V DC, 1 A) (Fig. 2,2).

Switching the gooseneck lamp on/off

- Tap on the gooseneck lamp's casing.
This switches on the gooseneck lamp.
- Tap again on the gooseneck lamp's casing.
This switches off the gooseneck lamp.



On vehicles without an e-pack, the gooseneck light and the lighting in the pop-up roof are supplied with power from the starter battery.

▷ Ensure regular charging of the starter battery to avoid deep discharge.

On vehicles without the e-pack, the fuse is located on the A-pillar on the passenger side in the foot area.

7.6 Pop-up roof



- ▶ Fold in the pop-up roof before commencing the journey.



The structure of the tent fabric of the pop-up roof has very tiny holes. This is completely normal – the holes close as soon as the tent becomes moist and the fibres swell.

Water column for the cloth bellows according to the manufacturer:

100 mm × 24 h.

▷ Follow the manufacturer's operating and care instructions.

7.6.1 Opening the pop-up roof

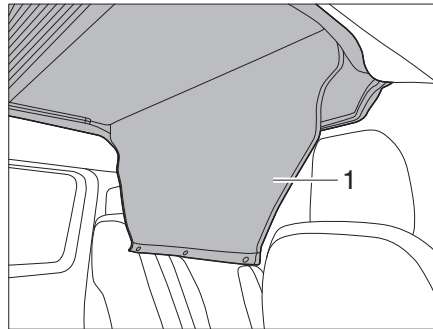


Fig. 3 Rolling up the access cover

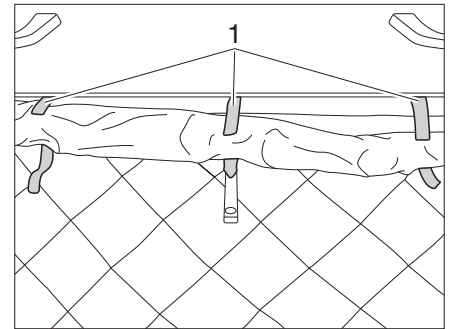


Fig. 4 Opening the Velcro

- Open the entrance cover (Fig. 3,1) and roll it up.
- Open the three Velcros (Fig. 4,1) of the cloth bellows.

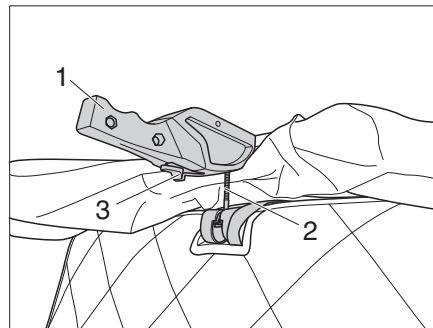


Fig. 5 Releasing the locking mechanisms

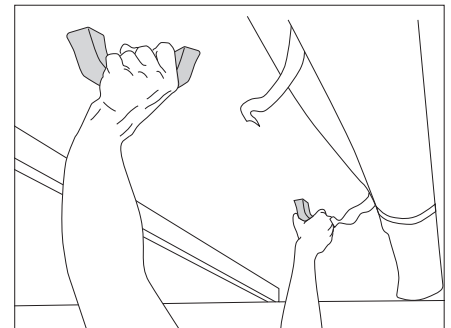


Fig. 6 Pushing up the pop-up roof

- Push forward the locking lever (Fig. 5,3) and at the same time pull down the lock (Fig. 5,1) on the left and right.
- Remove the bolt (Fig. 5,2) from the locking receptacle.
- Hold the grips with both hands and push the pop-up roof upwards (Fig. 6).
- Fold the sleeping area upwards to obtain headroom.

7.6.2 Using the sleeping area



- ▶ The maximum load for the bed in the pop-up roof is 200 kg.
- ▶ Only use the bed in the pop-up roof when the safety guard is in position.
- ▶ When climbing onto the sleeping area do not step onto the armrest of the driver's and front passenger's seats.
- ▶ Ensure in particular with regard to small children less than 6 years of age, that they cannot fall from the sleeping area.

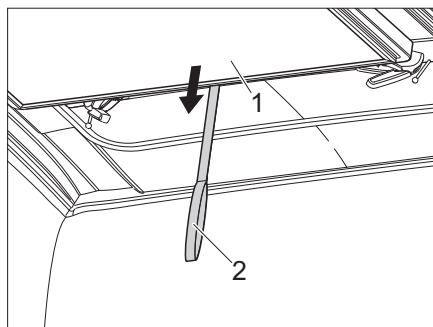


Fig. 7 Pulling the sleeping area downwards

Preparing the sleeping area

- Pull the sleeping area (Fig. 7,1) downwards with the belt (Fig. 7,2).

7.6.3 Fitting the safety guard



- ▷ Do not mount the falling-out protection until the persons are already in the pop-up roof.

To prevent children falling off the bed, the safety guard can be fitted to the pop-up roof.

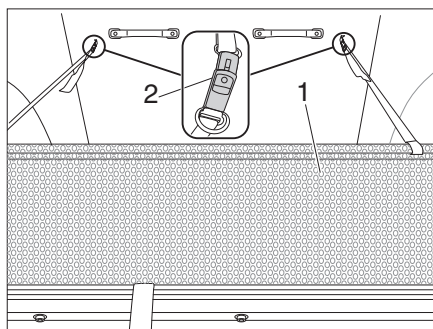


Fig. 8 Falling-out protection

Attaching the falling-out protection:

- Pull the safety guard (Fig. 8,1) out from under the mattress.
- Secure the safety guard to the pop-up roof with the strap buckle (Fig. 8,2).

Removing and storing the falling-out protection:

- Releasing the strap buckle (Fig. 8,2).
- Stow the safety guard (Fig. 8,1) under the mattress.

7.6.4 Panorama function in the pop-up roof



Possible damage to the tent fabric and zip.

- ▷ When closing the zip, pull down the pop-up roof so that the zip is not under tension (Fig. 10).

The raised pop-up roof can be opened with a zip.

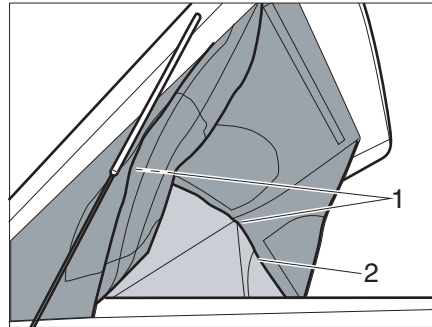


Fig. 9 Panorama function

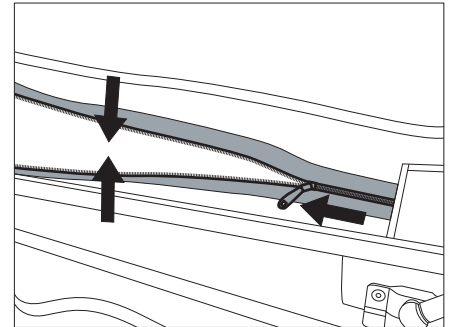


Fig. 10 Relieving the zip

Opening the pop-up roof (panorama function):

- Open the pop-up roof (see chapter 7.6.1).
- Open the zip (Fig. 9,2) all round the pop-up roof.
- Secure the side panels and front panel to the pop-up roof with Velcro (Fig. 9,1).

Closing the pop-up roof:

- Loosen the Velcro fasteners on the side panels and front panel on the top of the pop-up roof.
- Pull the pop-up roof downwards and close the zip.
- Closing the pop-up roof (see chapter 7.6.5).

7.6.5 Closing the pop-up roof



- ▷ Before closing the pop-up roof open at least one door of the vehicle. Material damage may otherwise occur through excess pressure.
- ▷ Before closing the pop-up roof pull the sleeping area (Fig. 7,1) down. **Do not** pull the sleeping area and the pop-up roof down at the same time.
- ▷ When closing the pop-up roof ensure that the cloth bellows are not clamped in.
- ▷ Before starting your journey, check whether the locking levers of the latches (Fig. 13,1) on the left and right are correctly tensioned. If necessary, adjust the lock according to the instructions from the manufacturer.
- ▷ There must be no objects or bedding between the roof shell and the bed unit - risk of damage!
- ▷ The pop-up roof may only be closed with the original mattress.
- ▷ Make sure that the mattress does not protrude to the rear beyond the bed.

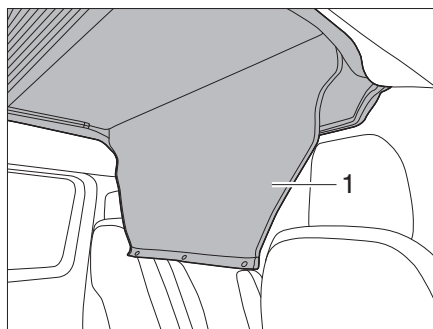


Fig. 11 Unrolling the entrance cover

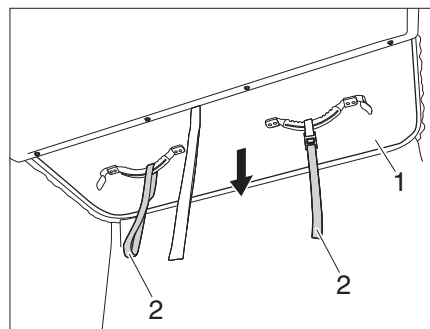


Fig. 12 Pulling the pop-up roof downwards

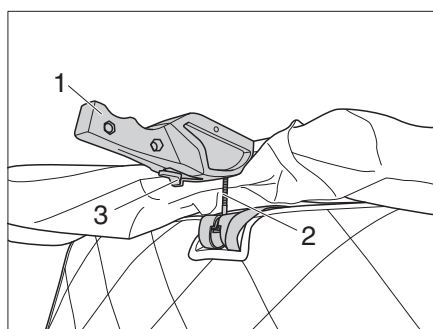


Fig. 13 Tensioning the locking mechanism

- Open a door at the vehicle.
 - Unroll the entrance cover (Fig. 11,1).
 - Pull the sleeping area (Fig. 7,1) downwards with the belt (Fig. 7,2).
 - Pull the pop-up roof (Fig. 12,1) slowly downwards by the pullers (Fig. 12,2) **looking** towards the rear, and observe whether the fabric bellows falls neatly inwards.
 - Slide the bolt (Fig. 13,2) into the locking receptacle.
 - Push up the locks (Fig. 13,1) on the left and right.
 - Check that there is no play in the locking bolt (Fig. 13,2).
 - Roll up the cloth bellows in area of the locking mechanism with care and fasten with the three Velcros (Fig. 4,1).
 - Close the entrance cover (Fig. 11,1) with snap fasteners.
- ▷ If the locking bolts (Fig. 13,2) move excessively and the pop-up roof cannot be properly shut, the latch must be adjusted as described in section 12.3.2.



7.7 Campbox (special equipment)

The Campbox (special equipment) is located at the rear of the vehicle and contains various boxes with pull-outs. The quick-fix system can be used to install and remove individual boxes in the vehicle interior.

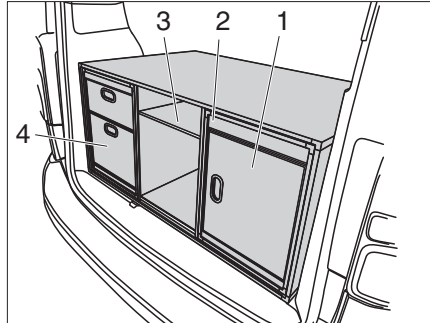


Fig. 14 Campbox

- 1 Flushing module with fresh and used water canister
- 2. USB ports (2x)
- 3. Wind guard for 2-burner cooker
- 4 Removable pull-out with storage space

7.7.1 Removing and installing the flushing module

If necessary, the flushing module may be removed. The water tap (Fig. 15,1) and charging function of the USB outlet can still be used even after removal. The flushing module can also be used outside when the Campbox battery on the back of the flushing module is fully charged.



- ▷ To reduce the weight of the flushing module, remove the two canisters before lifting it out.

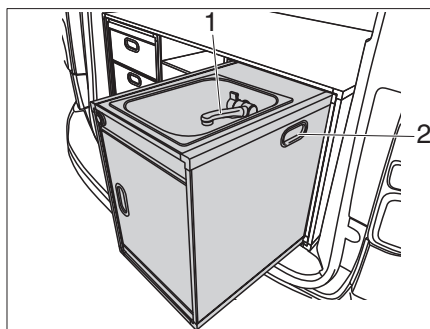


Fig. 15 Flushing module

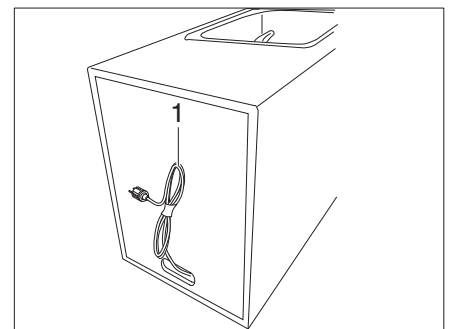


Fig. 16 Mains cable for Campbox battery

Removing the flushing module

- If necessary, remove the power cable (Fig. 16,1) on the back of the flushing module.
- If necessary, remove the water canister from inside the flushing module.
- Pull the flushing module from the Campbox.
- Hold the recessed handles (Fig. 15,2) on the left and right then lift the flushing module from the vehicle.

Installing the flushing module

- Install the flushing module in reverse order.
- Establish an electrical connection.

7.7.2 Kitchen unit power supply

The flushing module can also be used outside when the Campbox battery on the back of the flushing module is fully charged.



- ▷ Make sure the battery is regularly fully charged. Total discharge can damage or destroy the battery. The battery is charged with shore power or during the journey.

Charging the Campbox battery

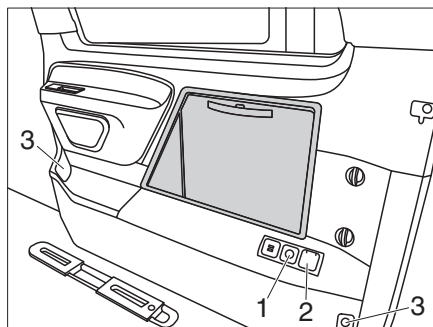


Fig. 17 Outlets in the vehicle

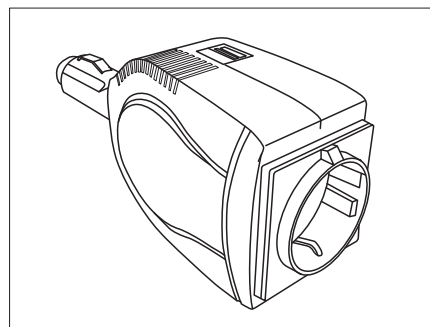


Fig. 18 AC converter

The Campbox battery on the VANSTAR can be charged in a number of ways:

- while driving on one of the original Mercedes 12 V sockets (Fig. 17,3) with inverter (Fig. 18).
- using the 230 V outlet (Fig. 17,2). The vehicle needs to be connected to a 230 V shore power supply.
- using the 12 V outlet (Fig. 17,1) of the optional e-pack with an AC converter (Fig. 18).

7.7.3 Setting up the 2-burner cooker

Remove the pull-out with storage space

- Pull the pull-out with storage space from the Campbox.
- Hold the recessed handles on the left and right then lift the pull-out from the vehicle.

Installing the wind guard

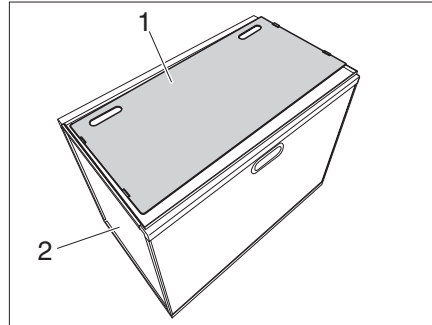


Fig. 19 Position the wind guard

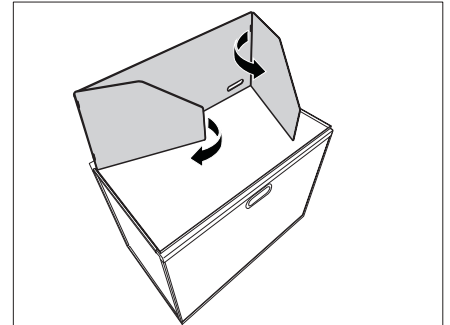


Fig. 20 Assemble the back and side parts

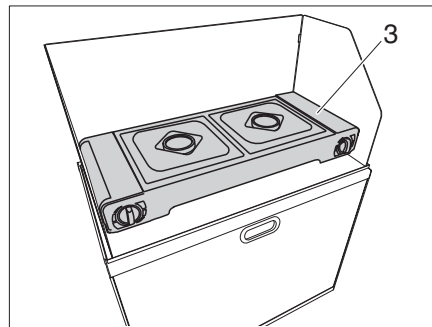


Fig. 21 Setting up the 2-burner cooker

Setting up the 2-burner cooker

- Remove the wind guard (Fig. 19,1) from the Campbox and position on the pull-out with storage space (Fig. 19,2).
- Setup the wind guard as illustrated in Fig. 19 and Fig. 20.
- Remove the 2-burner cooker (Fig. 21,3) from the Campbox and setup in the wind guard.



- ▶ Do not use the 2-burner cooker in the vehicle. Danger of fire and suffocation!
- ▶ Do not use the 2-burner cooker for heating purposes.
- ▶ The 2-burner cooker must only be used with the gas cartridges intended for this purpose.



- ▶ Further information on how to use the 2-burner cooker can be obtained in the manufacturer's instruction manual.

7.7.4 Disassembling/installing the Campbox

If place is required in the back for transport or similar purposes, or the induction hob needs to be used, the Campbox can be removed.

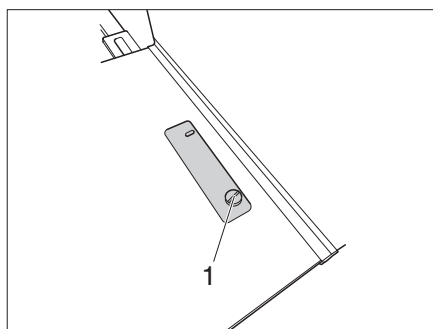


Fig. 22 Campbox fixing screw

Removing the Campbox

- Unscrew the fixing screws (Fig. 22,1) on the left and right of the Campbox.
- Lift the Campbox from the vehicle.

Installing the Campbox



The Campbox must be secured while driving. Depending on the variant of the Mercedes chassis, fixing points (sliding blocks) are installed in the seat rails or in the vehicle floor. The two screws supplied must be used to secure the Campbox while driving.

- ▷ Make sure that the fixing screws (Fig. 22,1) are always sufficiently tightened.

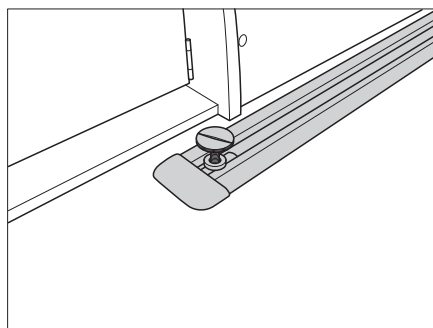


Fig. 23 Variant fixing points in the seat rails

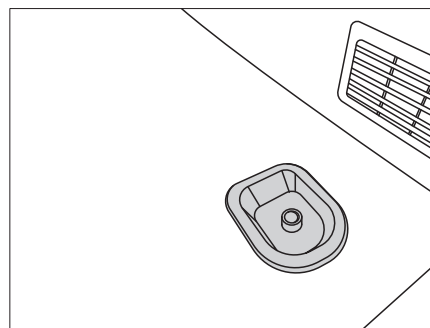


Fig. 24 Variant fixing points in the vehicle floor

- Position the Campbox over the fixing holes and screw in the fixing screws (Fig. 22,1).
- Check that the Campbox is firmly seated.

Adjusting the slot nut in the seat rail

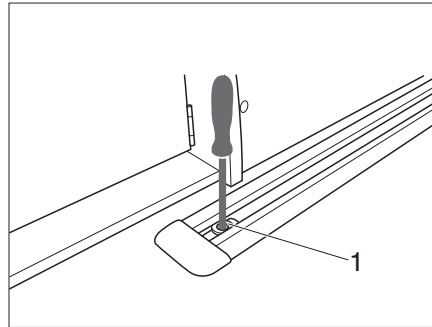


Fig. 25 Slide slot nut

- Removing the Campbox.
- Loosen the screw in the slot nut (Fig. 25,1) with a Torx spanner.
- Slide the slot nut (Fig. 25,1) to the desired position and retighten the screw in the slot nut.

Removing the slot nut

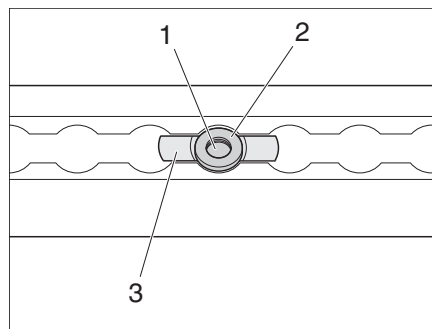


Fig. 26 Removing the slot nut

- Removing the Campbox.
- Loosen the screw (Fig. 26,1) in the slot nut with a Torx spanner.
- Move the slot nut (Fig. 26,3) in the grid until the red centring washer (Fig. 26,2) can be removed.
- Remove the slot nut (Fig. 26,3).

7.7.5 Induction hob

The induction hob in the VANSTAR is located underneath the induction hob access flap (Fig. 27,1) on the right side of the vehicle.

The induction hob can be used if the vehicle is supplied with shore power through the exterior outlet.

Preparing the induction hob

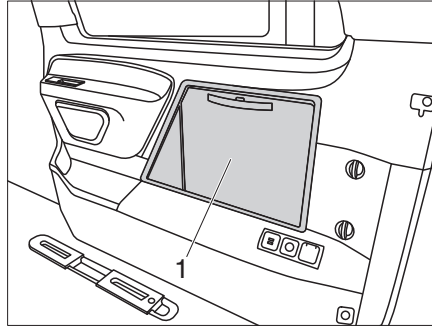


Fig. 27 Access flap

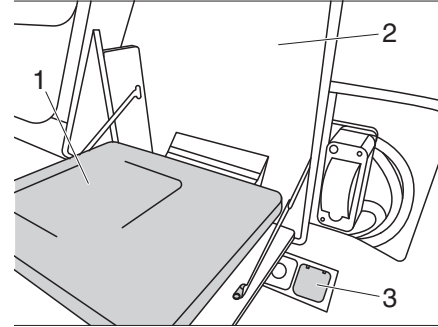


Fig. 28 Induction hob power supply

- Open the induction hob's access flap (Fig. 27,1) and fold downwards (Fig. 28).
- Insert the induction hob's (Fig. 28,1) mains plug into the outlet (Fig. 28,3).
- Setting up the spray guard (Fig. 28,2).

Stowing the induction hob



- Stow the induction hob in reverse order.
- ▷ Further information can be obtained in the manufacturer's instruction manual.

7.8 Setting up the bed couch for Campbox Sleep (optional)

Campbox Sleep can be converted into an additional sleeping place in a few easy steps. The Campbox needs to be installed in the vehicle (see section 7.7.4).

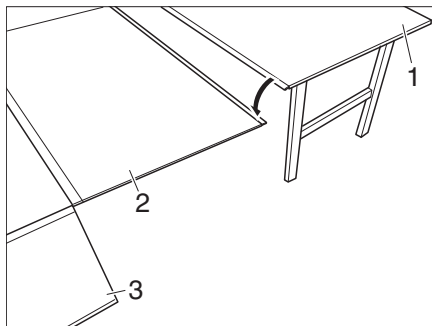


Fig. 29 Attach the table extension

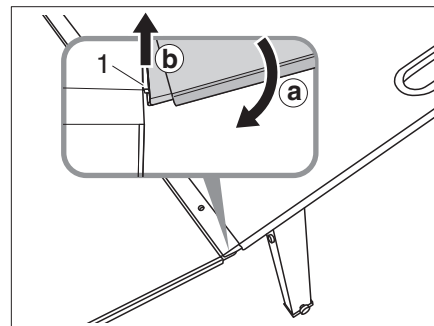


Fig. 30 Attach the table

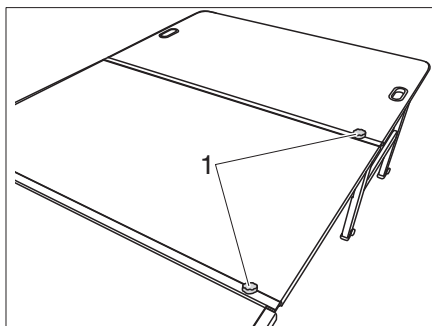


Fig. 31 Fit the safety mechanism

Set up the bed couch

- Position the bed extension (Fig. 29,2) on the rails (Fig. 30,1) of the Campbox and push downwards (Fig. 30,a).
- Lift both rails at the connection points (Fig. 30,b). The rails will snap-lock into one another.
- Snap the table (Fig. 29,1) into the table extension (Fig. 29,2) in the same way (Fig. 30).
- Screw the star screws (Fig. 31,1) into both rail connectors to secure them.

7.9 Setting up the table

The Campbox Sleep sleeping area can also be used as a table.

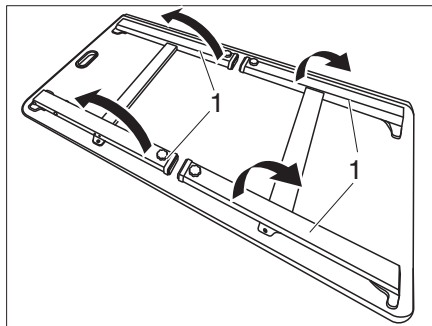


Fig. 32 Underside of the table

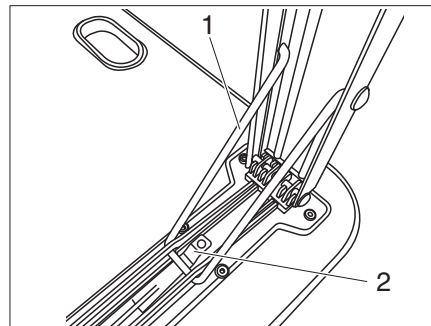


Fig. 33 Lock

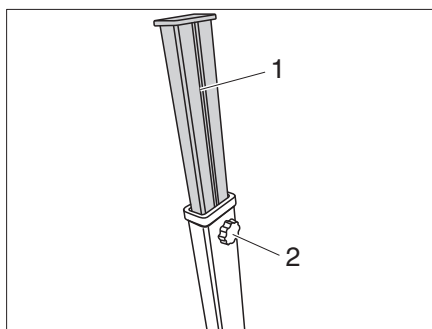


Fig. 34 Adjusting the table feet

Setting up the table

- Lift all table feet (Fig. 32,1), until the bar (Fig. 33,1) locks into the latch.
- Turn the table over and stand it on its feet.

Extending the table feet

- Open the star screw (Fig. 34,2) of the respective table foot and pull out the extension (Fig. 34,1).
- Tighten the star screw (Fig. 34,2) once the desired extension has been reached.

Assembling the table

- Push the extension (Fig. 34,1) on all of the table feet and secure into place with the star screw (Fig. 34,2).
- Press on the catch (Fig. 33,2) and push the table feet downwards (Fig. 32,1).

8.1 General safety instructions



- ▶ Only allow qualified personnel to work on the electrical system.
- ▶ All electronic devices (e.g. mobile telephones, radios, televisions or DVD players) which have been retrofitted to the vehicle and are operated during the journey must have specific features: These are the CE certification, the EMC test (electromagnetic compatibility) and the "E1" inspection.

Only in this way can the functional reliability of the vehicle be ensured. Otherwise the airbag may be triggered or interference to the on-board electronics may result.

The vehicle is a safe place during a storm (Faraday cage). However, to protect the electrical devices, disconnect the 230 V connection and retract the antennae as a precaution.

8.2 12 V power supply



- ▷ To disconnect **all** electrical 12 V appliances from the power supply, disconnect the e-pack battery (special equipment) from the 12 V power supply.

When the vehicle is not connected to the 230 V power supply or the 230 V power supply is switched off, the e-pack battery (special equipment) supplies the vehicle heater and 12 V outlet on the D-pillar with 12VDC.

When the vehicle engine is running, the battery of the e-pack is recharged by the vehicle alternator. The starter battery is not charged via the 230 V connection.

8.2.1 E-pack battery (special equipment)



- ▷ Prior to commencing a journey ensure the battery is fully charged. For this reason charge the battery for at least 20 hours before commencing the journey.
- ▷ During the trip, use every opportunity to charge the battery.
- ▷ Charge the battery for at least 20 hours after the journey.
- ▷ Charge the battery for at least 20 hours before laying up.
- ▷ Longer total discharge damages the battery irreparably.
- ▷ Only use the built-in charging device to charge the battery of the E-pack.
- ▷ Irreparable damage to the battery will result if it is overcharged.
- ▷ For long periods of inactivity (4 weeks or more), either disconnect the battery from the 12 V power supply or recharge it regularly.
- ▷ Do not smoke near the battery.

The battery is protected by a 40 A flat fuse. It is located under the driver's seat next to the battery.

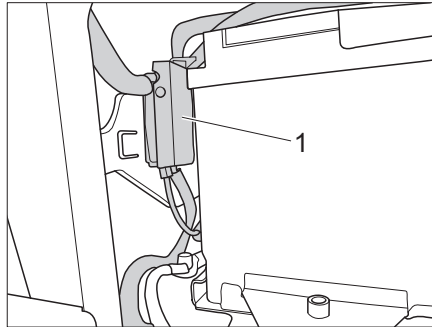


Fig. 35 40 A flat fuse for battery E-package

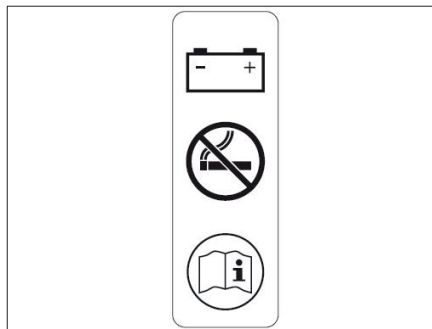


Fig. 36 Do not smoke near the e-pack battery



The battery is maintenance-free. Maintenance-free means:

- ▷ It is not necessary to check the acid level.
- ▷ It is not necessary to lubricate the battery poles.
- ▷ It is not necessary to refill the distilled water.

Even a maintenance-free battery must be charged regularly.

Location

The battery of the e-pack is installed under the driver's seat.

Charging using a 230 V power supply

When the vehicle is connected to the 230 V supply, the e-pack battery is charged via the charging device. The starter battery is charged exclusively via the alternator while driving. If the vehicle is not used for a period of time, the starter battery must be charged regularly. Observe the operating instructions of the chassis manufacturer.

To make use of the maximum output from the charger, switch off all electrical appliances during charging.

Changing



- ▷ When changing the battery of the e-pack, only use a battery of the same type.
- ▷ When changing the battery of the e-pack, only use a battery that corresponds to the minimum capacity of the charging device. Observe the separate instruction manual for the charger. A battery with an insufficient capacity heats up too much during charging. Danger of explosion!
- ▷ Do not connect the battery cables to the wrong poles.



- ▷ If the starter battery or the battery of the e-pack is disconnected, do not operate the ignition. Danger of short circuit!
- ▷ Before disconnecting or connecting the terminals of the e-pack battery, switch off the vehicle engine, the 230 V and 12 V power supplies as well as all the appliances. Danger of short circuit!
- ▷ Do not smoke when replacing the battery.

To change the e-pack battery, proceed as follows:

- Switch off the vehicle engine.
- Disconnect the vehicle from the 220 V power supply.
- There is a danger of short circuit when disconnecting the battery poles. For this reason, first disconnect the negative pole on the battery and then the positive.
- Remove the battery from the vehicle.
- Install the new battery in reverse order.

8.3 Charging unit



- ▷ If possible, always leave the charging unit switched on (except in the case of maintenance work or when removing the e-pack battery).
- ▷ The charging unit heats up during operation. In the case of a total discharge of the battery it is possible that the thermal protection is triggered and that the unit switches off briefly. After the cooling-down phase the charging unit switches on automatically again.

Charging unit

The charging device for the e-pack battery is installed in the vehicle at the rear right behind the Mercedes Genuine cover near the induction cooker. The charging device is always switched on at the factory and does not need to be switched off during operation - except for maintenance work by the dealer.

8.4 Booster

The vehicle is equipped with a booster (Fig. 37,1). It is installed under the driver's seat in the rear and serves to optimise the charging of the body battery while driving. The associated 25 A fuse is installed on the passenger side foot area on the A-pillar (Fig. 38,1).

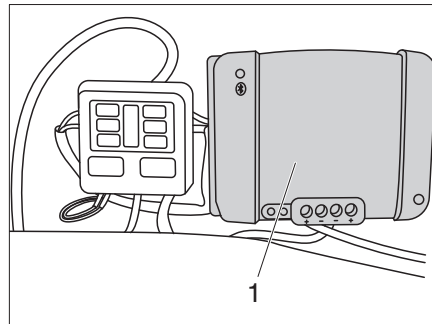


Fig. 37 Booster

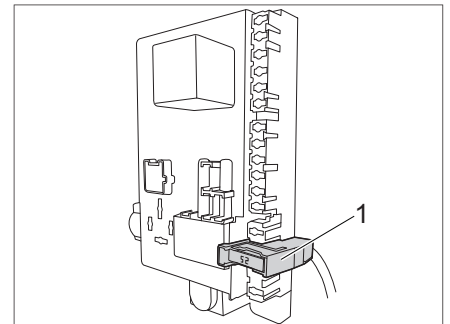


Fig. 38 Booster fuse



- ▷ To prevent unauthorised third-party connections, change the booster's PIN code.
- ▷ To do this, observe the manufacturer's operating instructions.

8.5 230 V supply



- ▶ Only allow qualified personnel to work on the electrical system.

The 230 V vehicle power supply supplies the sockets with protective contact for devices with a maximum of 10 A:

The electrical appliances connected to the 12 V electrical system of the living area are powered by the battery of the e-pack.

Connect the vehicle to an external 230 V power supply system as often as possible. The charging device automatically charges the battery of the e-pack.

8.5.1 230 V connection




- ▶ The external 230 V supply is protected by a residual current circuit breaker (30 mA).
- ▶ Completely unwind the cable on cable drums to prevent overheating.



- ▷ For the connection points on camp sites (camping distributors) highly sensitive fault current protection switches (FI-switches, 30 mA) are obligatory.

The vehicle can be connected to an external 230 V power supply. The cable may have a length of maximum 25 m.

Depending on the model, the flap for the 230 V connection is identified with the symbol .

Connecting the power cable:

- Open the external flap.
- Depending on the model, fold up the cover.
- Insert plug.



- ▷ Depending on the model, unlock the plug before pulling it out.

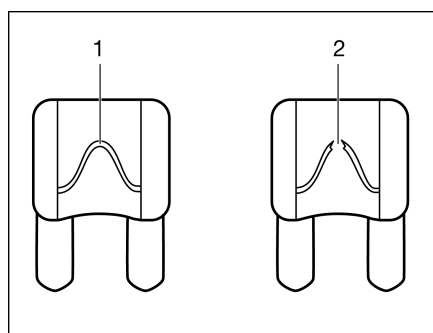
8.6 Fuses



- ▶ Only replace defective fuses when the cause of the defect is known and has been remedied.
- ▶ Only replace defective fuses when the power supply is switched off.
- ▶ Never bridge or repair fuses.

8.6.1 12 V fuses

The appliances connected to the 12 V power supply in the living area are fused individually. The fuses are accessible at different positions in the vehicle.



- 1 Unbroken fuse element
- 2 Broken fuse element

Fig. 39 12 V fuse

An intact 12 V fuse can be detected by the unbroken fuse element (Fig. 39,1). If the fuse element is broken (Fig. 39,2), change the fuse.

Before changing fuses, take the function, value and colour of the relevant fuses from the following specifications. When changing fuses, only use flat fuses with the values shown below.

The 12 V fuses of the VANSTARS are located under the driver's seat at the rear of the booster.

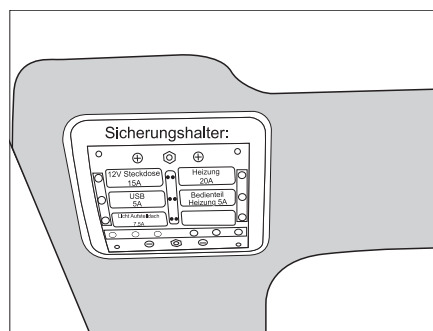


Fig. 40 Fuse holder for 12 V fuses

8.6.2 230 V automatic circuit breaker

The 230 Volt power supply system (external connection) is equipped with an automatic circuit breaker (Fig. 41). This serves in particular as wiring protection. The fuse box is located in the rear to the right of the cooker compartment behind a flap. The automatic circuit breaker is triggered at a short-circuit and at an overload in the supply network.

The residual-current-operated protective device is conducted via the supply line of the outdoor network. In accordance with the EU directive this should exist in every feeder grid. This residual-current-operated protective device should be checked at every new supply point for safety reasons.

If the automatic circuit breaker triggers during operation, the reason has to be determined and to be eliminated by disconnecting the appliance from the power supply system. In case of any doubt, please contact a qualified electrician or the Service of your brand dealer.

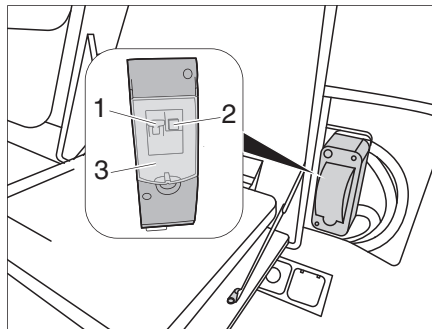


Fig. 41 230 V automatic circuit breaker

- Open the cover flap (Fig. 41,3).

The 230 V connection is protected by a two-pole automatic circuit breaker (Fig. 41,1).



- ▷ The residual current circuit breaker (Fig. 41,2) for 230 volts should be tripped once annually so that the mechanism does not "stick" and the tripping time is not extended.

9.1 General



- ▷ For safety reasons, spare parts for pieces of heating appliances must correspond with manufacturer's instructions and be permitted by the manufacturer as a spare part. These spare parts may only be fitted by the manufacturer or an authorised specialist workshop.



- ▷ Further information can be obtained in the instruction manual for the respective appliance.

The heater and cooker appliances are fitted depending on the model of the vehicle.

10.1 Water supply, general



- ▶ Fill the water canister with fresh water only.
- ▶ Water left standing in the water canister or in the water pipes becomes undrinkable after a short period. For this reason, rinse the water pipes and the water canister thoroughly with several litres of fresh water before each use of the vehicle. To do this, open the water tap. After each use of the vehicle completely empty the water canister and the water pipes.



- ▷ If the vehicle is not used for several days or if it is not heated when there is a risk of frost, empty the entire water system. Leave the water tap in central position open. Frost damage to appliances, frost damage to the vehicle and deposits in water-carrying components can be avoided in this way.
- ▷ The water pump will overheat without water and can get damaged. Never operate water pump when the water canister is empty.
- ▷ Only use the water pump in the water canister with fresh water.

The vehicle is equipped with an installed water canister. An electric water pump pumps the water to the water tap (Fig. 44,1). Opening the water tap automatically switches on the water pump and pumps water to the tap.

The waste water canister collects the waste water.



- ▷ The water supply system conforms to the latest state of technology 03/2009 (Directive 2002/72/EC).

10.2 Water canister

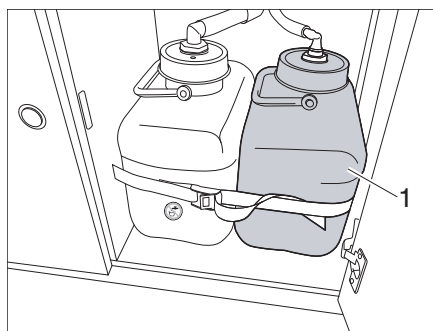


Fig. 42 Water canister

Volume The water canister (Fig. 42,1) has a capacity of approximately 10 l.

10.3 Waste water canister



- ▷ In case of frost add so much anti-freeze (e.g. kitchen salt) to the waste water canister so that the waste water cannot freeze.
- ▷ Never pour boiling water directly into the sink outlet. Boiling water could cause deformation and leaks in the waste water pipe system.



- ▷ Only empty the waste water canister at disposal stations, at camping sites or caravan sites, that are especially provided for this purpose.

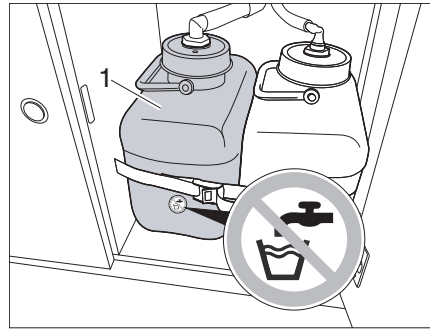


Fig. 43 Waste water canister

The waste water canister (Fig. 43,1) is located in the kitchen unit.

Volume The waste water canister has a capacity of approximately 10 l.

Cleaning Clean the waste water canister several times a year.

10.4 Water system



- ▷ The water pump will overheat without water and can get damaged. Never operate water pump when the water canister is empty.
- ▷ If the vehicle is not used for several days or if it is not heated when there is a risk of frost, empty the entire water system. Leave the water tap opened. Frost damage to the appliances and deposits in water-carrying components can be avoided in this way.
- ▷ After emptying the water system, close the water tap again.

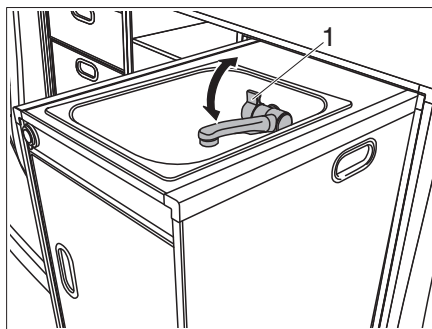


Fig. 44 Sink with water tap

The kitchen unit is equipped with a sink with water tap.

Opening/closing the water tap

- Turn the water tap (Fig. 44,1).
Water is pumped upwards from the water canister (Fig. 42,1). The waste water canister (Fig. 43,1) collects the waste water.
- Turn the water tap (Fig. 44,1) back.
The pump in the water canister stops.

11.1 External care

11.1.1 Washing with a high-pressure cleaner



- ▷ Do not clean the tyres with a high-pressure cleaner. The tyres might be damaged.
- ▷ Do not spray external applications (deco-films) directly with the high-pressure cleaner. The external applications could come off.

Before cleaning the vehicle with a high-pressure cleaner, observe the operating instructions of the high-pressure cleaner.

When cleaning with the nozzle for circular jet between the vehicle and the cleaning nozzle, maintain a minimum distance of approx. 700 mm.

Take into consideration that the jet of water comes out of the cleaning nozzle with pressure. The vehicle may be damaged by incorrect handling of the high-pressure cleaner. The temperature of the water should not be above 60 °C. Keep the jet of water in constant movement during the washing process. Do not direct the water jet at clearances, built-in electrical parts, plugs, seals, ventilation grills or skylights. The vehicle may be damaged or water may enter the interior.

11.1.2 Washing the vehicle



- ▷ Never have the vehicle cleaned in a car wash. Water can penetrate in the forced ventilations. The vehicle could be damaged.
- Wash the vehicle only on a washing site intended for this purpose. Avoid full sunshine. Observe environmental measures.
- Clean external applications and synthetic parts only with plenty of warm water, suitable cleaning agents and soft cloth.
- Wash down the vehicle with plenty of water, a clean sponge or a soft brush. In the case of stubborn dirt add dish washing liquid to the water.
- Treat rubber seals of doors and storage flaps with talc.
- Treat locking cylinder of doors and storage flaps with graphite dust.

11.2 Interior care



- ▷ Treat stains immediately if possible.
- ▷ Synthetic parts in the living area are very delicate and should be treated with care. Do not use solvents, alcohol-containing cleaning agents or scourers containing sand. This procedure will help you to avoid brittleness and formation of cracks.
- ▷ Do not pour any corrosive agents into the drain holes. Never pour boiling water directly into the drain holes. Corrosive agents and boiling water cause damage to drainage pipes and siphon traps.
- ▷ Do not use vinegar based products to clean the water system, or for decalcification of the water system. Vinegar-based products may cause damage to seals or parts of the installation. Use standard decalcifying products for decalcification.
- ▷ Save water. Mop up all remaining water.



- ▷ The service centres of our dealers will be glad to provide information about the use of maintenance products.

- Surface and knobs of furniture, lamps and synthetic parts in the living area should be cleaned with water and a wool cloth. A mild cleanser may be added to the water. If necessary, treat finished surfaces with furniture polish.
- Clean upholstery with dry foam specially manufactured for the use on upholstery or with the foam of a mild detergent. Do not wash upholstery. Protect upholstery from direct sunlight so that it does not lose its colour.
- Never clean the sink or the gas cooker with a scourer. Avoid anything which may cause scratching or grooves.
- Clean gas cooker only with a moist cloth. Prevent any water from penetrating the gas cooker. Water may damage the gas cooker.
- Unrolled seat belts can be cleaned with warm soapsuds. The seat belts must be completely dry before being rolled up.
- Clean water canister with water and dish washing liquid and rinse subsequently with plenty of fresh water.

11.3 Instructions for care of the pop-up roof



- ▷ The instructions for care must be carried out several times, but at least once per year, depending on how often the pop-up roof is used.
- Apply a standard impregnation substance to the cloth bellows before the season begins
- Never close the cloth bellows in a moist or wet state. If you do so nevertheless, it must be dried completely as soon as possible.
- Apply talc or a comparable product to the rubber seals at the roof shell before winter sets in so that the seals do not freeze to the vehicle body during cold weather.
- The roof must be cared for in accordance with the paint care instructions of the vehicle manufacturer. Standard paint care products can be used.
- Observe the care instructions provided by the supplier.

11.4 Winter care



- ▷ If there is any risk of frost, always run heater at a minimum of 15 °C. Set the circulation fan (if existing) to automatic mode. In the case of extreme external temperatures, the furniture flaps and doors should be left slightly open. The inflowing warm air can help prevent the freezing of water pipes, for example, and counteract the formation of condensation in the storage spaces.

11.4.1 Winter operation

During winter operation, condensation develops when the vehicle is occupied under low-temperature conditions. To ensure good interior air quality and avoid vehicle damage from condensation, sufficient ventilation is essential.

- When heating the vehicle, the heater should be at the highest setting. This ensures optimal ventilation.
- In the morning, lift up all cushions, air out storage boxes and dry any damp areas.



- ▷ If condensation has still developed, just wipe it off.

11.5 Lay-up

11.5.1 Temporary lay-up




- ▶ After the vehicle has been standing for a longer period (approx. 10 months) have the braking and gas systems checked by an authorised specialist workshop.
- ▶ Take into consideration that water is undrinkable after only a short time.

Go through the following checklist before lay-up:

Base vehicle

Activities	done
Completely fill fuel tank. This can prevent corrosion to the tank system	
Jack up the vehicle so that the wheels do not bear any load, or move the vehicle every 4weeks. This prevents any pressure points from occurring on tyres and wheel bearings	
Protect the tyres from direct exposure to the sun. Danger of formation of cracks!	
Inflate tyres up to the recommended maximum pressure	
Always provide for sufficient ventilation in the underbody area	
▷ Humidity or lack of oxygen e.g. by covering with plastic film may cause optical irregularities to the underbody.	
Also observe the specifications in the operating instructions of the base vehicle	

	Activities	done
Interior	Place upholstery in an upright position for ventilation, and cover	
Electrical system	Fully charge the e-pack and starter battery  ▷ Charge the battery for at least 20 hours before laying up. Disconnect the e-pack battery from the 12 V power supply	


11.5.2 Winter lay-up

Additional measures are required if laying up the vehicle over winter:

	Activities	done
Base vehicle	Clean body and underbody thoroughly and spray with hot wax or protect with varnish Fill fuel tank with winter diesel Check the frost protection in the cooling water Repaint paint damage	
Body	Keep the forced ventilation open Clean and grease all door and flap hinges Brush oil or glycerine on all locking mechanisms Rub all rubber seals with talc Use graphite dust to treat locking cylinders	
Interior	Position de-humidifiers Remove upholstery from the vehicle and store in a dry place Air the interior every 3 weeks Empty all cabinets and storage compartments, open flaps, doors and drawers Thoroughly clean the interior	
Electrical system	Remove the starter battery and e-pack battery and store in a place protected from frost	
Complete vehicle	Arrange the tarpaulins in such a way that the ventilation openings are not covered, or use porous tarpaulins	

11.5.3 Starting up the vehicle after a temporary lay-up or after lay-up over winter

Go through the following checklist before start-up:

	Activities	done
Base vehicle	Check the tyre pressure on all tyres	
	Check the tyre pressure of the spare wheel	
Body	Check that the doors, windows and pop-up roof are working properly	
	Check the function of all external locks	
Electrical system	Connect to 230 V external power supply	
	Fully charge the e-pack and starter battery	
	 ▷ Charge the battery for at least 20 hours after laying up.	
	Connect the e-pack battery with the 12 V power supply (see section 8.2.1)	
	Check that the electrical system are working, e.g. interior light, socket and all installed electrical appliances	
Water system	Use several litres of fresh water to rinse out water pipes and water canister. To do this, open the water tap	
	Close the water tap	
	Check the water tap for leaks	
Appliances	Check the function of the cooler	
	Check the function of the heater	
	Check the function of the gas cooker	

12.1 Official inspections

An official general inspection (HU) of roadworthiness has to be carried out by a recognised body (such as "TÜV", "DEKRA") at regular intervals in accordance with Section 29 of the German Traffic Licencing Regulations ("Straßenverkehrsulassungsordnung" (StVZO)) on vehicles that are registered in Germany.

The respective local regulations apply in other countries.

12.2 Inspection work

Like any technical appliance, the vehicle must be inspected at regular intervals.

This inspection work must be carried out by qualified personnel.

The service centre in charge will confirm the work performed.

Have chassis inspections confirmed in the chassis manufacturer's customer service booklet.



- ▷ Observe the inspections specified by the manufacturer and have them carried out at the specified intervals. The value of the vehicle is thus preserved.
- ▷ The confirmation of the inspection work carried out also serves as valid proof in the case of damage and claims under the guarantee.

12.3 Maintenance work

12.3.1 General

As with every machine, this vehicle requires maintenance. The extent and frequency of the maintenance work required depend on conditions of operation and use. More difficult operating conditions make it necessary to service the vehicle more often.

Have the basic vehicle and the appliances serviced at the intervals specified in the corresponding instruction manuals.

12.3.2 Maintenance work at the pop-up roof



- ▷ The maintenance instructions care must be carried out several times, but at least once per year, depending on how often the pop-up roof is used.
 - Ventilate the cloth bellows several times a year.
 - For the version with a belt lock check the belts and the clips for function and damage.
 - Observe the care instructions provided by the supplier.
 - Check and if necessary adjust the roof shell and its mechanical parts.

Adjusting the latches

The pop-up roof latches may need to be adjusted after being used several times.

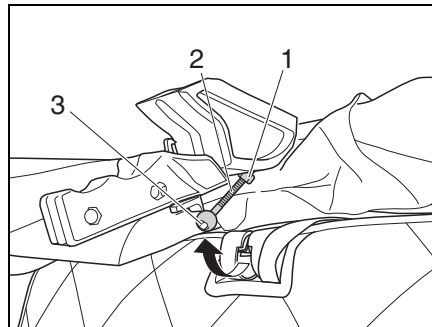


Fig. 45 Pop-up roof latches

- Loosen the lock.
- Swivel the bolt (Fig. 45,2) out of the locking receptacle.
- Loosen the hexagon head screw (Fig. 45,1).
- Tighten the bolt with a hexagon socket spanner at the hexagon receptacle (Fig. 45,3).
- Tighten hexagon head screw (Fig. 45,1) and swivel bolt (Fig. 45,2) into locking receptacle.

12.4 Spare parts



- ▶ Every alteration of the original condition of the vehicle can alter road behaviour and jeopardize road safety.
- ▶ The special equipment and original spare parts recommended by the manufacturer have been specially developed and supplied for your vehicle. Your VANSTAR dealer has these products. Your VANSTAR dealer is informed about admissible technical details and carries out the required work correctly.
- ▶ The use of accessories, parts and fittings not supplied by the manufacturer may cause damage to the vehicle and jeopardize road safety. Even if an expert's report, a general type approval or a design certification exists, there is no guarantee for the proper quality of the product.
- ▶ No liability can be assumed for damage caused by products which have not been released by the manufacturer. This also applies to impermissible alterations to the vehicle.

For safety reasons, spare parts for pieces of equipment must correspond with manufacturer's instructions and be permitted by the manufacturer as a spare part. These spare parts may only be fitted by the manufacturer or an authorised specialist workshop. The VANSTAR dealers are available for any spare parts requirement.

When ordering spare parts, please indicate the serial number and the vehicle type to your VANSTAR dealer.

The vehicle described in this instruction manual is built and equipped to factory standards. Special equipment is offered depending on its purpose or use. When fitting special equipment check if such equipment has to be entered in the vehicle documents. Observe the max. permissible gross weight. Your VANSTAR dealer will be pleased to advise you.

12.5 Vehicle identification plate

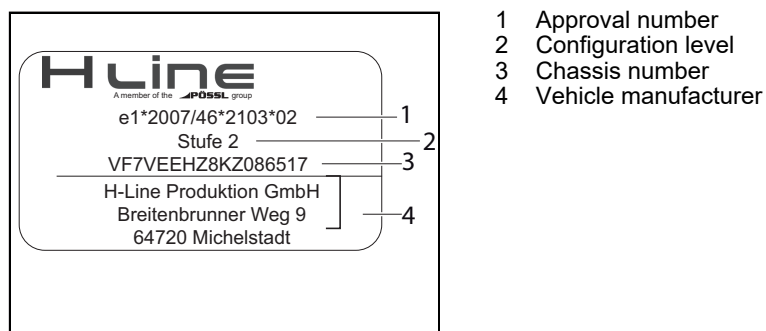


Fig. 46 Vehicle identification plate

The vehicle identification plate (Fig. 46) with the serial number is mounted on the driver's door.

Do not remove the vehicle identification plate. The vehicle identification plate:

- Identifies the vehicle
- Helps with the procurement of spare parts
- Together with the vehicle documents identifies the vehicle owner

12.6 Warning and information stickers

There are warning and information stickers on and inside the vehicle. Warning and information stickers are for the sake of safety and must not be removed.



- ▷ Replacement stickers can be obtained from an authorised dealer or the service centre.

12.7 Changing tyres



- ▷ Note information from the instruction manual of the vehicle manufacturer.

13.1 Electrical system



▷ When the e-pack battery is changed, only use batteries of the same type.



▷ See Chapter 8.2.1 for changing the fuses.

Fault	Cause	Remedy
Interior lighting does not work	LED light strip defective	Replace LED light strip
No 230 V power supply despite connection	230 V automatic circuit breaker has triggered	Switch on 230 V automatic circuit breaker
E-pack battery is not charged when operated in the 230 V mode	Jumbo flat fuse (40 A) in the e-pack battery is defective	Replace the jumbo flat fuse (40A) in the e-pack battery
E-pack battery is not charged during vehicle operation	Charge booster defective	Contact customer service

13.2 Cooker

Fault	Cause	Remedy
Ignition fuse does not operate (flame does not burn after the control knobs are released)	Heat-up time is too short	Keep control knob pressed for approx. 15 to 20 seconds after ignition
	Ignition fuse is defective	Contact customer service
Flame extinguishes when being reduced to its minimum setting	Thermocouple sensor is incorrectly set	Set thermocouple sensor correctly (do not bend). The sensor tip should protrude by 5 mm beyond the burner. The sensor neck should not be more than 3 mm away from the burner ring; if necessary, contact customer service