Congratulations

We congratulate you on your new motorhome and would like to thank you for choosing a quality product from PÖSSL.

With a motorhome from PÖSSL you always have the right travelling companion for every trip: Whether for a city trip, a short excursion or your family holidays. The innovative and well-planned layouts offer a wide range of possibilities and the modern interior design, which is common to all models, immediately convey a homely flair. The high quality standard and the large variability furthermore enthrall - lack of space is a thing of the past in our vehicles. Many useful details prove to be extremely practical when on the road making your holiday even more relaxed.

Each PÖSSL 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 motorhome. It will give you all important information and tips so that you can enjoy all technical advantages of your motorhome 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 PÖSSL 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 motorhome, a relaxing holiday and safe driving at all times.

1.1 Vehicle document

Vehicle data
Model:
Car manufacturer/type of engine:
Serial number:
Initial registration:
Purchased from company:
Key number:
Chassis number:
Customer address
Surname, Christian name:
Street, no.:
Postal code, town:
E-mail:
Dealer's stamp and signature

We reserve the right to alter the construction, equipment and the scope of delivery. Special equipment is also listed that is not included in the standard scope of delivery. The descriptions and illustrations in this brochure do not relate to a particular version. For all details, only the respective equipment list is valid.

1.2 Warranty

1. The legal guarantee and product warranty rights apply for the vehicle.
2. It is advisable to present the vehicle for inspection by a PÖSSL dealer at the end of the first year in order to assert any warranty claims that may arise. The presentation should take place 2 months at the latest after the anniversary of the initial registration (or delivery).
   As proof that the inspection has been completed, the inspection has to be confirmed on the corresponding page in this operating manual by a stamp, the date and the signature of the respective PÖSSL dealer.
3. The costs of the inspection are to be paid by the vehicle owner.

1.3 Inspection records

Delivery

Date:

Signature and stamp of the PÖSSL dealer:

1st year

Date:

Signature and stamp of the PÖSSL 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.

1.4 Inspection plan

Pos.	Component	Activity	Interval
1	Joints, hinges	Lubricate	Annually
2	Refrigerator, heater, boiler, cooker, lighting, storage flap and door closures, toilet, seat belts	Function check	Annually
3	Windows, skylights	Function check, water ingress test	Annually
4	Upholstery, curtains, blinds	Visual check	Annually
5	Sealing strips, edges, -rubber	Check for damage	Annually
6	Water supply	Water ingress test	Annually
7	Hot-air system	Function check, clean fan wheel if necessary	Annually
8	Underbody protection, fastening of the underbody attachments	Visual check	Annually
9	Electrical system	Function check	Annually
10	Gas system	Official gas inspection	Every two years
	- Gas filter	Replace gas filter cartridge	Every 2 years
11	Underbody	Visual check, repair underbody protection if necessary	Every two years

We reserve the right to modify the inspection plan.

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.

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. In case of vehicles with a gross weight exceeding 3.5 t a flashing hazard warning light has to be carried additionally on the vehicle.

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 and gas systems 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 tank and toilet cassette or sewage tank at disposal stations at the camping or caravan sites, which 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 tank or, if need be, in other vessels suitable to this purpose.
- ▷ Empty waste water tank as often as possible, even when it is not completely full (hygiene).

  If possible, flush out waste water tank and, if necessary, drainage pipe with fresh water every time it is emptied.
- ▷ Never allow the toilet cassette or sewage tank to become too full. Empty the toilet cassette or sewage tank frequently, at the latest as soon as the level indicator lights up.
- ▷ 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.
- ▷ Use an environmentally-friendly WC chemical agent for the WC which can also be biologically degraded and only use small doses.
- ▷ 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.

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.
- ▶ Always keep a fire blanket at hand near the cooker.

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. For this purpose, forced ventilation options (e.g. skylights with forced ventilation, mushroom-shaped vents or floor vents) are fitted to the vehicle. Never cover or block forced ventilations from the inside or outside with objects such as e.g. a winter mat. Keep forced ventilations clear of snow and leaves. There is a danger of suffocation due to increased CO_2 levels.
- ▶ Observe the headroom of the doors.
- ▶ Gas lines and electrical cables are laid in the floor. Never drill holes or screw screws into the floor. There is danger of a gas explosion or of a power cut or short circuit due to damage to a line or cable.

- ▷ As far as the fitted appliances (heater, cooker, refrigerator, etc.) and the base vehicle (engine, brakes, etc.) are concerned, the instruction manuals are authoritative. 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 DIN 13164 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.
- ▶ If the vehicle has been stationary for a long period (approx. 10 months) have the braking and gas systems checked by an authorised specialist workshop.
- ▶ Before starting the journey and also after short breaks check whether the entrance step has been retracted completely.
- ▶ Fold in the pop-up roof fully and lock it into place before commencing the journey.
- ▶ Before commencing the journey, open and secure the shades on the windscreen and on the driver's and front passenger's windows.

- ▶ 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.
- ▶ Before starting your journey, remove the television from the support and store it securely.
- ▶ During the journey, persons are only to sit on the permitted seats (see Chapter 5). 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.
- ▶ Factory-set three-point safety belts must be used when attaching child restraint systems.
- ▶ The base vehicle is a commercial vehicle (small truck). Adapt your manner of driving correspondingly.
- ▶ 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.

- ▷ 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 all cupboard doors, the toilet door and all drawers and flaps are secure. Engage the refrigerator door securing device. Lock the folding wall of the Vario toilet compartment.
- ▷ Before commencing the journey, close windows and skylights.
- ▷ 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 all gas isolator taps and the regulator tap before commencing the journey and when leaving the vehicle.
- ▶ No appliance (e.g. heating or refrigerator) 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 and the exhaust gas pipes also have 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.
- ▶ Open a skylight or a window before taking open sources of combustion (gas cooker) into service.
- ▶ Do not use the gas cooker or gas oven for heating purposes.
- ▶ If the vehicle or gas devices are not used, close the regulator tap on the gas bottle.
- ▶ If there are several gas devices, each gas device must have its own gas isolator tap. If individual gas devices are not in use, close the respective gas isolator tap.
- ▶ 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 installed gas appliances are designed for use solely with propane or butane gas or a mixture of both. The gas pressure regulator as well as all installed gas devices are set for a gas pressure of 30 mbar.
- ▶ Propane gas is capable of gasification up to -42 °C, whereas butane gas gasifies at 0 °C. Below these temperatures no gas pressure is available. Butane gas is unsuitable for use in winter.
- ▶ 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 by an authorised specialist workshop no later than 10 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.
- Secure the gas bottle compartment in order to prevent unauthorised persons opening it. To do so lock the access.
- 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.
- The exhaust gas pipe must be fitted tightly to the heating system and to the vent and must be sealed. The exhaust gas pipe must not show any evidence of damage.
- Exhaust fumes must be able to escape into the atmosphere unhindered and fresh air must be able to enter unhindered. Therefore keep the waste gas vents and intake openings clean and free (e.g. of snow and ice). No snow walls or aprons may be allowed to lie against the vehicle.

3.5.2 Gas bottles

- Gas bottles are only to be transported within the designated gas bottle compartment.
- Place gas bottles vertically in the gas bottle compartment.
- Tie down gas bottles so that they are unable to turn or tilt.
- If the gas bottles are not connected to the gas tube, always place the protective cap on top.
- 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 bottles. Do not use any tools.
- Only use special gas pressure regulators with a safety valve designed for vehicle use. Other gas pressure regulators are not permitted and cannot meet the demanding requirements.
- Only use 5 kg, 6 kg and 11 kg gas bottles.
  If 1.8 kg or 2.8 kg camping gas bottles (blue) with a fitted check valve are used, a gas regulator with a safety valve must be used.
- Never block the ventilation openings in the floor under the gas bottles.

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 tank or in the water pipes becomes undrinkable after a short period. For this reason, rinse the water pipes and the water tank thoroughly with several litres of fresh water before each use of the vehicle. To do this, open all water taps. After each use of the vehicle completely empty the water tank 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 taps on in central position. Leave the safety/drainage valve (if available) and all drain cocks open. Frost damage to appliances, frost damage to the vehicle and deposits in water-carrying components can be avoided in this way.
- ▷ In vehicles with a fold-down tap in the sink, leave the glass cover open for emptying. The fold-down tap will automatically be folded down when the cover is shut, which prevents the water from completely draining.

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
- Satellite unit

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 Section 4.1.1) is the difference in weight 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	3300	
Vehicle mass in a ready-to-drive condition, including basic equipment according to vehicle documents, Field G	- 2720	
This results in a permissible payload of	**580**	
Conventional load, e.g. 3 persons at 75 kg 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), full gas bottles 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.

4.2 Entrance step

- ▶ Before starting the journey and also after short breaks check whether the entrance step has been retracted completely.
- ▶ Do not stand in the direct range of movement of the entrance step while the entrance step is being extended or retracted.
- ▶ Do not step on the entrance step until it has extended completely. There is a risk of injury!
- ▶ Never raise or lower persons or loads with the entrance step.

▷ Clean dust and dirt regularly from the entrance step, do not grease or oil moving parts.

4.2.1 Electrically operated entrance step

Operating switch

The switch to operate the entrance step is located on the inside of the vehicle in the area of the conversion door.

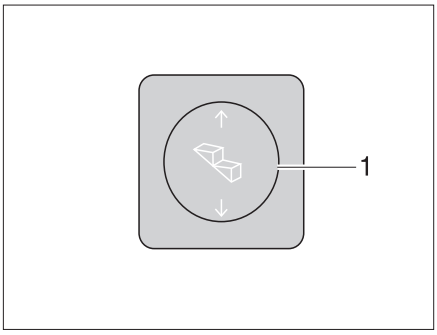


Fig. 1 Operating switch entrance step

Extending:

- ■ Press the rocker switch (Fig. 1,1) down until the entrance step has extended completely.

Retracting:

- ■ Press the rocker switch (Fig. 1,1) up until the entrance step has retracted completely.

4.3 Television

- ▶ Before starting your journey, remove the television from the support and store it securely.

4.4 Sink cover

▶ In case of an accident or emergency braking the sink cover (Fig. 3,1) can injure the vehicle passengers. Before the journey, take the sink cover off the sink and store it securely in the kitchen block or wardrobe.

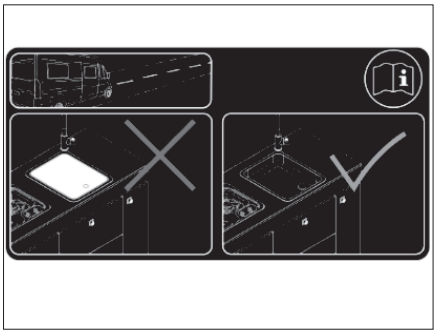


Fig. 2 Sink cover safety label

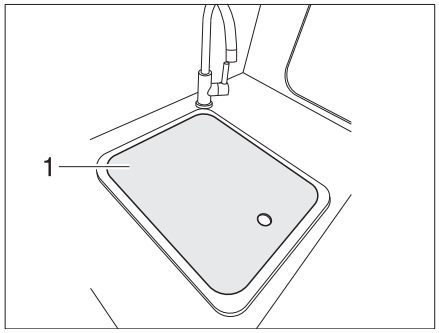


Fig. 3 Sink cover

4.5 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:

Base vehicle

No.	Checks	Checked
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	

	No.	Checks	Checked
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	
	13	Entrance step retracted	
	14	External flaps and doors closed and locked	
	15	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	16	Windows and skylights closed and locked	
	17	Television securely stored	
	18	Television antenna retracted (if one is built in)	
	19	Loose parts stored away or fixed in position	
	20	Open storage spaces empty	
	21	Refrigerator door secured	
	22	Refrigerator set to 12 V operation	
	23	All drawers and flaps closed	
	24	Living area doors secured	
	25	Children's seats mounted to seats with three-point safety belts	
	26	Swivel seat locking device for driver's seat and front passenger's seat locked	
	27	Curtains hooked into the retaining clips	
	28	Shades in the driver's cabin opened and secured	
Gas system	29	Gas bottles firmly fixed in the gas bottle compartment so that they are unable to turn	
	30	Protective cap set on top of the gas bottle	
	31	Regulator tap on the gas bottle and gas isolator taps are closed	
Electrical system	32	Check the battery voltage of the starter battery and the living area battery (see Chapter 9). If the panel indicates that the battery voltage is too low, the respective battery has to be recharged. Observe the instructions in Chapter 9 ▷ Commence the journey with a fully charged starter battery and living area battery.	

5.1 Driving the motorhome

- ▶ The base vehicle is a commercial vehicle (small truck). Adapt your manner of driving correspondingly.
- ▶ Before starting the journey and also after short breaks check whether the entrance step has been retracted completely.
- ▶ 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.
- ▶ Avoid braking suddenly.
- ▶ Only change the destination on the navigation system when the vehicle is at a standstill. Drive to a car park or stop in a safe area when changing the destination.
- ▶ Do not play a DVD on the monitor of the navigation system during the journey.

▷ 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.

▷ The skylights and windows are not designed for high speeds. Excessive speeds can result in noise development that is too high.

5.3 Seat belts

The vehicle is equipped with automatic three-point seat belts at those seats in the living area for which a seat belt is stipulated by law. 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 150 cm 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 safety 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.
- ▶ Sitting on the divans is forbidden during the journey.
- ▶ Wearing of seat belts is compulsory at all seats.

5.6 External doors

- ▶ Only drive with the external doors locked.

- ▷ Locking the doors can prevent them from opening of their own accord, e.g. during an accident.
- ▷ Locked doors also prevent forced entry, e.g. when waiting at a set of traffic lights. However, in an emergency, locked doors make it more difficult for helpers to enter the vehicle.
- ▷ When leaving the vehicle, always lock the doors.
- ▷ The doors are part of the base vehicle. The opening and closing of the doors is described in the instruction manual of the base vehicle.

5.7 Filling up with diesel

- ▶ No appliance (e.g. heating or refrigerator) 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

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 Entrance step

In order to exit the vehicle, first fully extend the entrance step.

6.3 230 V connection

The vehicle can be connected to a 230 V power supply (see Chapter 9).

6.4 Refrigerator

6.4.1 Absorption refrigerator

12 V operation of the refrigerator is only possible when the vehicle engine is running. If the vehicle engine is switched off, set the refrigerator to 230 V operation or gas operation.

6.4.2 Compressor refrigerator

The refrigerator only functions in 12 V operation.

7.1 External flaps

▷ Before commencing the journey, close all external flaps and lock them.

▷ When leaving the vehicle, close all external flaps.

The external flaps fitted to the vehicle are all fitted with identical locking cylinders. Therefore, all locks can be opened with a single key.

7.1.1 Flap for 230 V connection, square

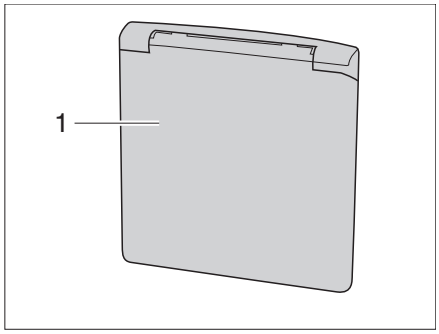


Fig. 4 Flap for 230 V connection

Opening: ■ Grip the external flap (Fig. 4,1) at the bottom and lift it upwards.

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

7.1.2 External flap Thetford cassette

▷ Do not let the external flap fall closed in order to avoid damage.

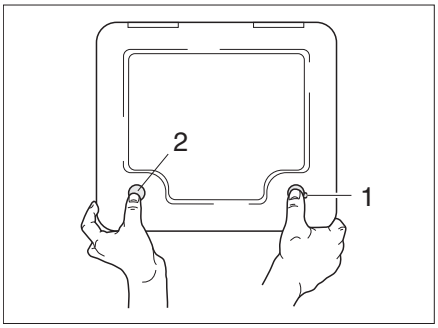


Fig. 5 External flap Thetford cassette

Opening:

- Insert the key into the locking cylinder of the push-button lock (Fig. 5,1) and turn a quarter turn.
- Remove the key.
- Press the push-button lock (Fig. 5,1) and the magnetic push button (Fig. 5,2) simultaneously with your thumbs and open the external flap.

The external flap (Fig. 5) is held by the magnetic push button (Fig. 5,2) against the exterior wall of the motorhome.

Closing:

- Close the external flap and press it shut.
- Insert the key into the locking cylinder (Fig. 5,1) and turn a quarter turn.
- Remove the key.

7.1.3 Cap for the fresh water filler neck

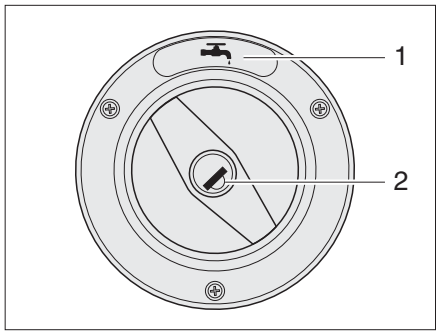


Fig. 6 Cap for the fresh water filler neck (Variant 1)

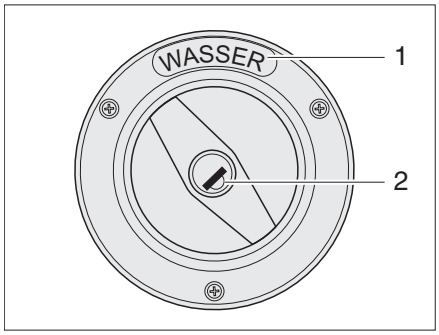


Fig. 7 Cap for the fresh water filler neck (Variant 2)

▷ The fresh water filler neck is identified by the symbol "" (Fig. 6,1) or the word "WASSER" ("WATER") (Fig. 7,1).

Opening:

- Insert the key in the locking cylinder (Fig. 6,2 or Fig. 7,2) and turn it in an anticlockwise direction.
- Remove the cap.

Closing:

- Insert the cap in the fresh water filler neck.
- Turn key clockwise.
- Remove the key.

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. For this purpose, forced ventilation options (e.g. skylights with forced ventilation, mushroom-shaped vents or floor vents) are fitted to the vehicle. Never cover or block forced ventilations from the inside or outside with objects such as e.g. a winter mat. Keep forced ventilations clear of snow and leaves. There is a danger of suffocation due to increased CO_2 levels.

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

▷ Additional cold spots can occur at thermal "bridges" (e.g. mushroom-shaped vents, skylight edges, sockets, filler necks, flaps, etc.).

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 Windows

- ▷ The windows are partially fitted with a blind and a roller insect screen.
- ▷ If the blind is completely closed, exposure to direct sunlight can cause heat to accumulate between the blind and the glass window. The window could be damaged. For that reason, close the blind only 2/3 of the way in direct sunlight.
- ▷ Before commencing the journey, close the windows.
- ▷ Close and lock the hinged windows at the sliding door and behind the sliding door before using the sliding door.
- ▷ Open the blinds at the hinged window at the sliding door before using the sliding door.
- ▷ Depending on the weather, close the windows far enough to prevent moisture from entering.
- ▷ To open and close the hinged windows, open or close all catch levers which are fitted to the hinged window.

- ▷ When leaving the vehicle, always close the windows.
- ▷ In case of strong temperature differences or in extreme weather conditions, light condensation can form on the double-glazed acrylic glass. The glass is designed in such a way that condensation can evaporate when the external temperature increases. There is no danger of the double-glazed acrylic glass being damaged by condensation.
- ▷ Set all the catch levers mounted on the hinged window to the same position in order to avoid tensions in the window.

7.3.1 Hinged window with rotary hinges

- ▷ When opening the hinged windows, ensure that there are no torsional forces. Open and close the hinged windows evenly.

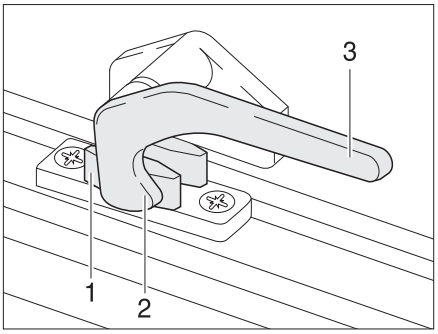


Fig. 8 Catch lever in "closed" position

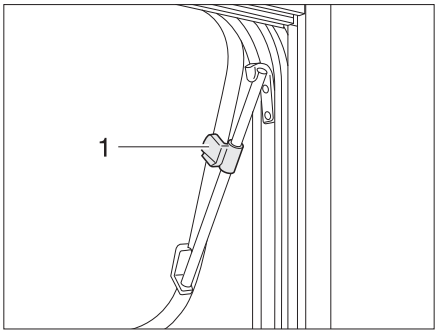


Fig. 9 Hinged window with rotary hinges, open

Opening:

- ■ Turn the catch lever (Fig. 8,3) a quarter turn towards the centre of the window.
- ■ Open the hinged window until the required position has been reached and secure in position using the knurled knob (Fig. 9,1).

The hinged window remains locked in the required position.

Closing:

- Turn the knurled knob (Fig. 9,1) until the latch is released.
- Close the hinged window.
- Turn the catch lever (Fig. 8,3) a quarter turn towards the window frame. The locking catch (Fig. 8,2) is located on the inside of the window catch (Fig. 8,1).

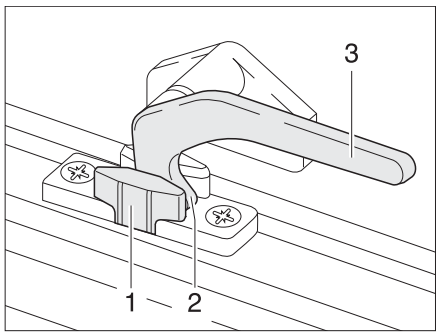


Fig. 10 Catch lever in the "continuous ventilation" position

Continuous ventilation

With the catch lever, the hinged window can be placed in two positions:

- "Continuous ventilation" (Fig. 10)
- "Firmly closed" (Fig. 8)

To place the hinged window into the "continuous ventilation" position:

- Turn the catch lever (Fig. 10,3) a quarter turn towards the centre of the window.
- Lightly open the hinged window outwards.
- Return the catch lever to its initial position. The locking catch (Fig. 10,2) has to be moved into the recess of window catch (Fig. 10,1).

During the journey, the hinged window may not be in the "continuous ventilation" position.

If it rains, the "continuous ventilation" hinged window position could lead to splashing water penetrating the living area. Therefore, close the hinged windows completely.

7.3.2 Hinged window with automatic hinges

▷ Open the window completely in order to unblock the locking device. If the locking device is not unblocked and the window is closed nevertheless, there is the danger of the window being torn due to the massive counter-pressure.

▷ When opening the hinged windows, ensure that there are no torsional forces. Open and close the hinged windows evenly.

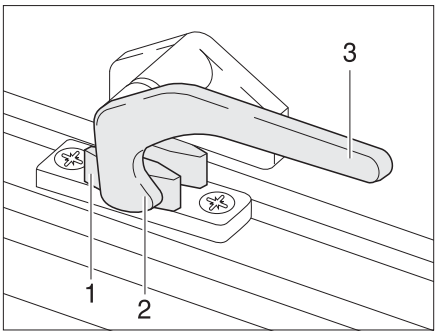


Fig. 11 Catch lever in "closed" position

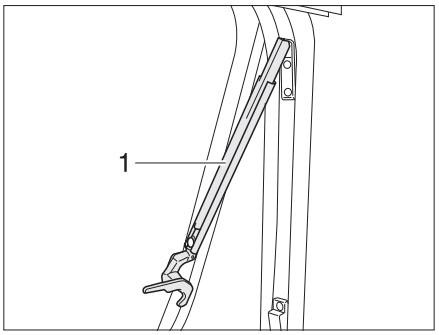


Fig. 12 Hinged window with automatic hinges, open

Opening:

- Turn the catch lever (Fig. 11,3) a quarter turn towards the centre of the window.
- Open the hinged window to the desired latched position. The automatic hinge (Fig. 12,1) locks in place automatically.

The hinged window remains locked in the required position.

Closing:

- Open the hinged window as wide as necessary until the latch releases.
- Close the hinged window.
- Turn the catch lever (Fig. 11,3) a quarter turn towards the window frame. The locking catch (Fig. 11,2) is located on the inside of the window catch (Fig. 11,1).

Continuous ventilation See Section 7.3.1.

7.3.3 Hinged window with damping

▷ When opening the hinged windows, ensure that there are no torsional forces. Open and close the hinged windows evenly.

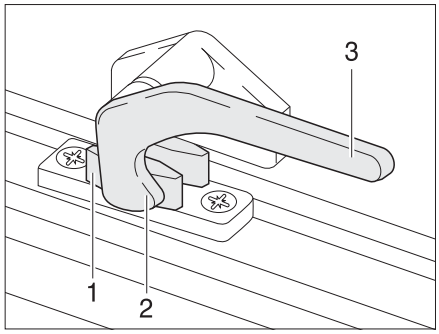


Fig. 13 Catch lever in "closed" position

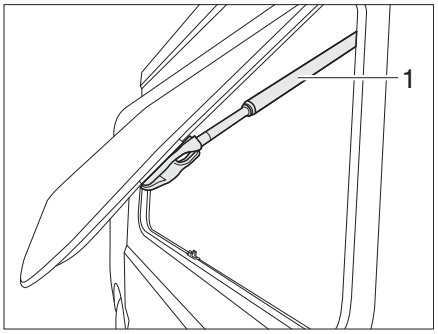


Fig. 14 Hinged window with damping, opened

Opening:
- Turn the catch lever (Fig. 13,3) a quarter turn towards the centre of the window.
- Open the hinged window to the desired position.

The damping (Fig. 14,1) holds the hinged window in the desired position

Closing:
- Press the hinged window into the closed position.
- Turn the catch lever (Fig. 13,3) a quarter turn towards the window frame. The locking catch (Fig. 13,2) is located on the inside of the window catch (Fig. 13,1).

Continuous ventilation See Section 7.3.1.

7.3.4 Sliding window without lock

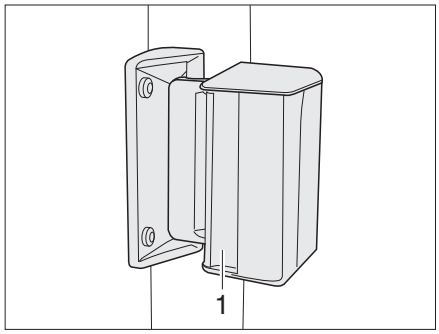


Fig. 15 Sliding window

Opening:
- Press the handle (Fig. 15,1) and push or pull it forwards or backwards at the same time.
- Open window half up to the required position.

Closing:
- Close the window as far as possible and let the handle lock in place.

7.3.5 Blind and roller insect screen

The windows are fitted with a blind and a roller insect screen. The blind and insect screen can be adjusted separately.

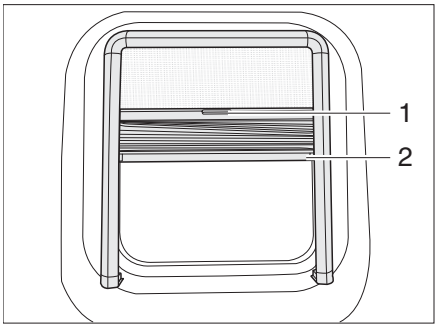


Fig. 16 Hinged window

Blind

Closing:
- Grip into the notch (Fig. 16,2) and pull the blind from the top downwards as far as wished.

Opening:
- Grip into the notch (Fig. 16,2) and push the blind upwards.

Roller insect screen

Closing:
- Use the handle (Fig. 16,1) to pull the roller insect screen downwards.

Opening:
- Use the handle (Fig. 16,1) to push the roller insect screen upwards.

7.3.6 Roman shades for driver's window and front passenger's window

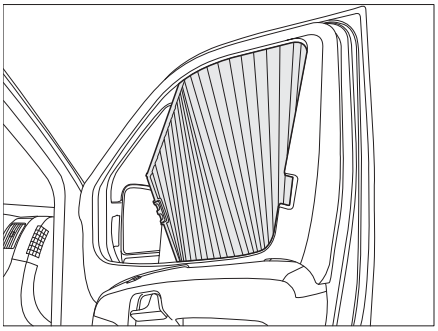


Fig. 17 Roman shades on driver's/ front passenger's windows

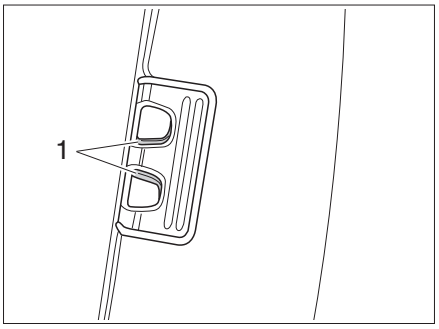


Fig. 18 Roman shade, locking mechanism

Closing:
- Press the locking mechanism (Fig. 18,1) together and lift it slightly.
- Close the Roman shades for the driver's window and the front passenger's window.

Opening:
- Open the Roman shade for the driver's window and the front passenger's window and slide the locking mechanism into the notch.

7.3.7 Roman shade for driver's window and front passenger's window

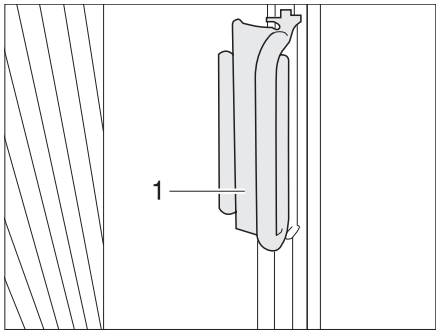


Fig. 19 Handle Roman shade for driver's and front passenger's windows

Closing:

- Grip the Roman shades at both sides of the windscreen at the handle (Fig. 19,1) and pull carefully towards the middle of the windscreen until the magnetic catch keeps the Roman shade closed.

Opening:

- Push the Roman shades carefully at the handle under the cover at the A-columns.
- Push the handle (Fig. 19,1) onto the attachment. The Roman shade is secured.

7.4 Sliding door

- ▶ Always operate the electrical sliding door with care.
- ▶ Ensure when closing the sliding door that no fingers or other body parts are clamped in.

  Ensure that there are no persons (adults and children) in the working range when the sliding door is closed or opened.
- ▶ Ensure that no body parts are within the closing area of the sliding door.
- ▶ If a person becomes stuck in the door, open the sliding door immediately using the handles or engage the emergency unlocking mechanism (section 7.4.2).
- ▶ Ensure that children do not use the sliding door without supervision.
- ▶ Open the sliding door only if the traffic situation allows it.
- ▶ Open and close the sliding door only when the vehicle is stationary.
- ▶ Make sure that the sliding door remains closed while travelling.
- ▶ Make sure that closed sliding door is always be flush with the adjacent bodywork parts in the closed position. Only then is the sliding door closed securely and completely.

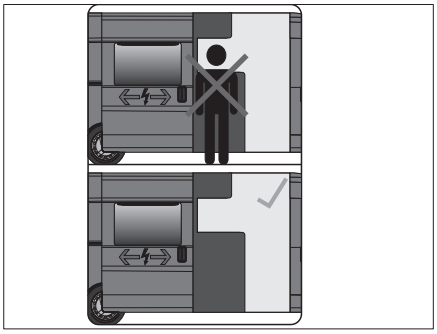


Fig. 20 Sliding door safety label

7.4.1 Sliding door, electric

The sliding door of the motorhome is opened and closed electrically. The door lock can be operated from the outside and inside.

- ▶ Do not use the bottom guide of the sliding door (track roller) as a entrance step.

  This results in a risk of injury and the sliding door mechanism may sustain damage.

Fig. 21 Sliding door guide safety label

Obstacle detection function

The obstacle detection function for the electrical sliding door can reduce the risk of crushing and squeezing injuries when opening and closing the sliding door. When a larger object obstructs or impedes the sliding door during closing or opening, the door is reversed for a few centimetres in the opposite direction and then stopped. In addition warning tones are emitted (see below).

▷ This feature is solely an aid and does not replace caution when closing and opening the electrical sliding door.

Warning tones	Meaning
1 x long	The contract strip was pressed while closing the door
2 x long	Fault on the contact strip
1 × short – 1 × long	Overcurrent
1 x short	Blockage
2 x short	Undervoltage
3 x short	Low temperature
4 x short	Play protection

During the closing process warning tones are emitted during the last 20 - 30 cm.

Safety contact strip

▷ In order to avoid bruising caused by the electric sliding door, the closing edge has a contact strip (Fig. 22,1). When contact is made, the movement of the sliding door is stopped immediately.

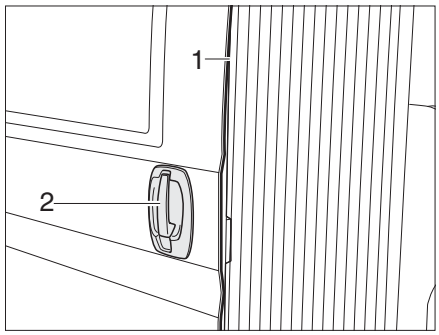


Fig. 22 Sliding door, electric - door handle on outside

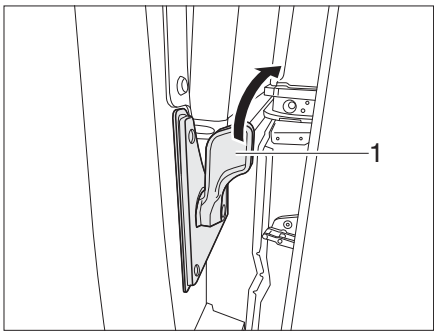


Fig. 23 Sliding door, electric - latch on inside

Sliding door outside

The door lock of the sliding door is connected with the central locking system.

Opening:
- Pull the door handle (Fig. 22,2). The electric sliding door opens completely.

Closing:
- Pull the door handle (Fig. 22,2). The electric sliding door closes and latches into the door lock.

Sliding door inside

Opening:
- Press the latch (Fig. 23,1) to the right. The electric sliding door opens completely.

Closing:
- Press the latch (Fig. 23,1) to the right. The electric sliding door closes and latches into the door lock.

7.4.2 Emergency unlocking mechanism of the electrical sliding door

If the electrical drive of the sliding door does not function for any reason (battery depleted, drive defective, etc.), the sliding door can be disconnected from the electrical drive by using the emergency unlocking mechanism. The sliding door can then be opened and closed without electrical support. The emergency unlocking mechanism is located at the lower rail of the sliding door.

▶ Please note that in emergency unlocking mode the sliding door does not have an end stop that stops the door automatically.

The pillar or the opened windows can be damaged during manual opening of the sliding door.

▷ For the emergency unlocking mechanism, always hook the emergency unlocking lever (Fig. 24,1) directly onto the positioning pin.

Otherwise the vehicle may be damaged by the carrier arm swivelling downwards.

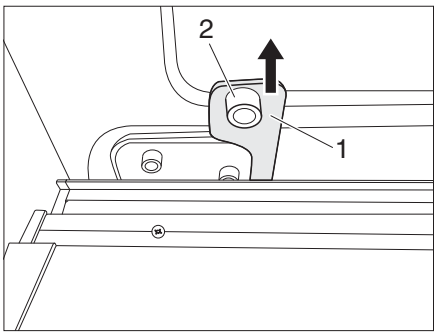


Fig. 24 Emergency unlocking mechanism

- Pull the emergency unlocking mechanism (Fig. 24,1) firmly upwards and hook it directly onto the positioning pin (Fig. 24, 2). The sliding door is now disconnected and can only be opened and closed manually.
- Always push the sliding door open until the mechanical stop is reached. Only in this position is the sliding door kept open through a retainer.
- Pull the sliding door with force out of the retainer to close it.

Connecting the sliding door to the drive

- Use the handle to move the carrier in the guide rail to the open door position.
  The carrier can be found in the protective cover retainer in the guide rail.
- Insert the drive pin of the carrier arm into the hole in the carrier arm.

▷ The emergency unlocking mechanism can only be deactivated again by the Pössl Service.

7.4.3 Power closing aid

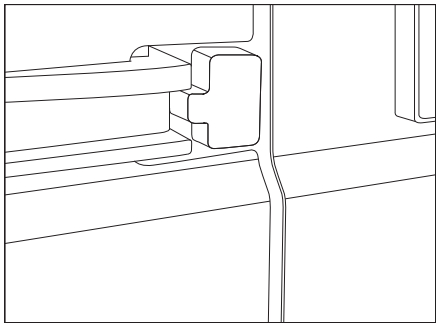


Fig. 25 Power closing aid (external)

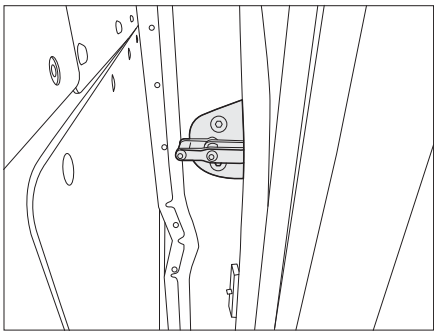


Fig. 26 Power closing aid - closing bar

The vehicle is equipped with an electro-mechanical power closing aid for the sliding door. The sliding door can be closed with only a little effort thanks to the power closing aid.

Closing:

- Slide the sliding door with slow sliding speed and little effort into the end position and press.

From this position the power closing aid automatically moves the sliding door into the closing position.

If the sliding door still projects clearly over the vehicle side, the sliding door was not pressed sufficiently strongly into the end position.

▷ Close the sliding door once more.

Opening:

- Open the sliding door as usual using the inner or outer door handle of the vehicle.

The power closing aid is without function when the sliding door is opened.

▷ The power closing aid can be dismounted if it fails. The standard closing bar is installed in the vehicle instead of the power closing aid. The standard closing bar forms part of the emergency set which is located in the glove compartment of the vehicle.

Particular points

The following particular points have to be observed when using the sliding door.

Particular point	Remedy
Rapid opening and renewed closing of the door	If the door is opened and is to be closed immediately again, a waiting period of 3 seconds has to be observed.
Locking the vehicle with a central locking system	Wait until the locking cycle of the power closing aid is complete and then close the vehicle using the central locking system.
Weak battery	The power closing aid switches off when the battery is weak. However, the door can still be opened and closed manually. When the battery becomes weaker the closing process takes a bit longer.
Disconnect the battery or use the cut-off switch of the living area battery	Disconnect the battery only if the sliding door is closed correctly.
Operation at low temperatures	The power closing aid is switched off for safety reasons at external temperatures of approx. –20 to –25 °C.

7.4.4 Insect screen at the sliding door

▷ Open the insect screen completely before the conversion door is closed.

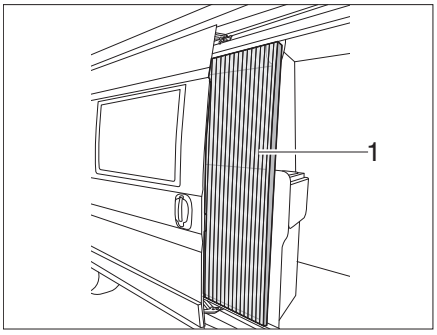


Fig. 27 Insect screen

Closing: ■ Pull out the insect screen completely at the strip (Fig. 27,1).

Opening: ■ Push the insect screen back into the starting position at the strip (Fig. 27,1).

7.5 Skylights

▶ The apertures for forced ventilation must always be kept open. Never cover or block forced ventilations with objects such as e.g. a winter mat. Keep forced ventilations clear of snow and leaves.

▷ The skylights are fitted with a blind or Roman shade and with a roller insect screen or folding insect screen. The Roman shade and folding insect screen are made of thin woven fabric. In order not to damage the Roman shade or the insect screen, grasp the respective handle and carefully return it to the initial position.

▷ If the blind or the Roman shade is completely closed, exposure to direct sunlight can cause heat to accumulate between the blind/the Roman shade and the skylight. The skylight could be damaged. For that reason, close the blind/Roman shade only 2/3 of the way in direct sunlight. Open the skylight slightly or move it to ventilation position.

▷ Depending on the weather, close the skylights far enough to prevent moisture from entering.

▷ Never step on the skylights.

▷ Before commencing the journey, close the skylights.

▷ Before commencing the journey, check that the skylights are closed and locked.

▷ Before commencing the journey, open the Roman shades.

▷ When leaving the vehicle, always close the skylights.

7.5.1 Skylight with snap latch

The skylight can be pushed upwards either from one side or from both sides.

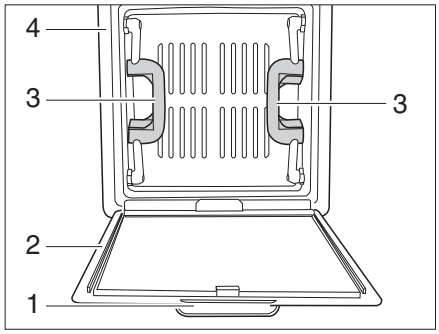


Fig. 28 Skylight with snap latch

Opening:

- Pull down the insect screen (Fig. 28,2) with the handle (Fig. 28,1). The insect screen folds down.
- Push the skylight upwards using both handles (Fig. 28,3).
- Fold the insect screen upward and latch it in at the frame (Fig. 28,4).

Closing:

- Pull down the insect screen (Fig. 28,2) with the handle (Fig. 28,1). The insect screen folds down.
- Pull the skylight downwards with force using both handles (Fig. 28,3).
- Fold the insect screen upward and latch it in at the frame (Fig. 28,4).

7.5.2 Hinged skylight

▷ If it rains, the ventilation skylight position could lead to water entering the living area. Therefore close hinged skylight completely.

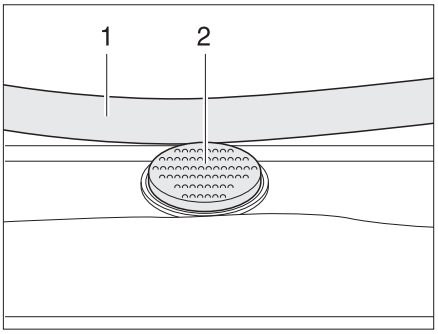


Fig. 29 Securing knob at the hinged skylight

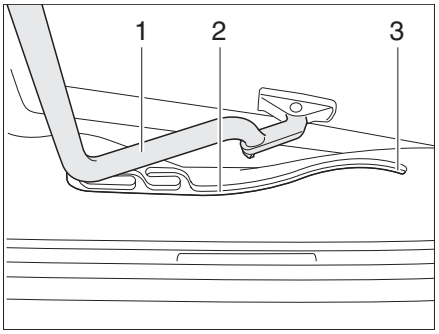


Fig. 30 Hinged skylight, guide

The hinged skylight is opened on one side only.

Opening:

- Press the safety knob (Fig. 29,2) and pull the bar (Fig. 29,1) down with both hands.
- Pull the bar (Fig. 30,1) in the guides (Fig. 30,2) to the rearmost position (Fig. 30,3).

Closing:

- Use both hands to push the bar (Fig. 30,1) slightly upwards.
- Push the bar back in the guides.
- Push the bar upwards with both hands until it is above the safety knob (Fig. 29,2).

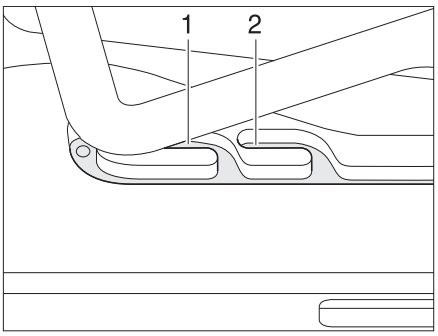


Fig. 31 Hinged skylight in ventilation position

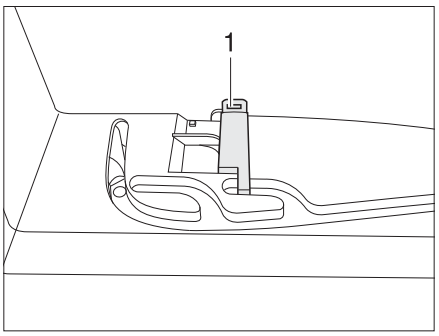


Fig. 32 Locking mechanism in ventilation position

Ventilation position

The hinged skylight can be put in two ventilation positions: Bad weather position (Fig. 31,1) and central position (Fig. 31,2). Depending on the model, the skylight can be locked in the central position with the latch (Fig. 32,1).

- Press the safety knob (Fig. 29,2) and pull the bar (Fig. 29,1) down with both hands.
- Pull the bar in the guides (Fig. 30,2) to the desired position.
- Push the bar slightly upwards and into the selected guide (Fig. 31,1 or 2) and lock if necessary.

Roman shade To close and open the Roman shade:

Closing:
- Pull out Roman shade at the handle and release in the required position. The Roman shade will stay in that position.

Opening:
- Slowly push the Roman shade at the handle to its initial position.

Insect screen To close and open the insect screen:

Closing:
- Pull the insect screen by the handle to the opposite handle of the Roman shade.

Opening:
- Press the rear part of the handle of the insect screen. The latch is released.
- Use handle to return the insect screen slowly to its initial position.

7.5.3 Wind-up skylight

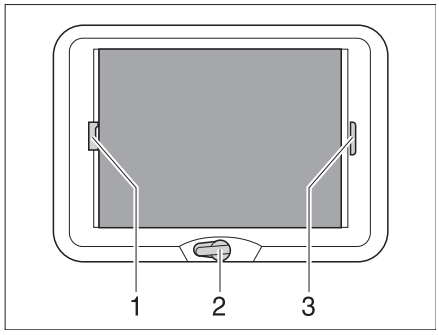


Fig. 33 Wind-up skylight

The wind-up skylight can be opened using the manual crank.

Opening:
- Rotate the hand crank (Fig. 33,2) until a resistance can be felt (max. opening angle 70°).

Closing:
- Rotate the hand crank until the wind-up skylight is closed. The wind-up skylight can be locked after rotating two or three more times.
- Check the locking mechanism. To do so, press your hand against the acrylic glass.

Roman shade The Roman shade can be closed in any position, as desired. If the Roman shade is locked with the insect screen, the insect screen is also moved along on closing the Roman shade.

Closing:
- Pull the handle of the Roman shade (Fig. 33,3) and release in the desired position. The Roman shade will stay in that position.

Opening:
- Slowly push the Roman shade at the handle to its initial position.

Insect screen

If the insect screen is locked with the Roman shade, the Roman shade is also moved along on closing the insect screen.

Closing:

- Pull insect screen at the handle (Fig. 33,1) to the opposite handle of the Roman shade (Fig. 33,3) and allow to engage.

Opening:

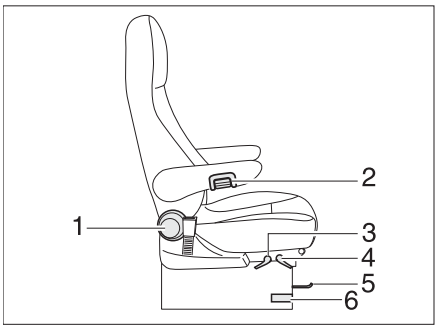
- Press the handle of the insect screen (Fig. 33,1) at the back upwards and detach the insect screen from the Roman shade (Fig. 33,3).
- Slowly push insect screen at the handle to its initial position.

7.6 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.

▷ Move the seats all the way down before turning. Otherwise, the seats cannot be turned.

Depending on the model, the lever for turning the seats is located at the front of the seat or on the left or right side.



1 Wheel for unlocking and adjusting the backrest
2 Armrest adjustment
3 Lever for adjusting the seat height
4 Lever for adjusting the seat inclination
5 Bar for lengthways adjustment
6 Release for turning mechanism

Fig. 34 Driver's seat and front passenger's seat

Rotating seats into driving position

The seats can be rotated in any direction. The seats can only be locked in position in the direction of travel.

- Push both armrests upward.
- Push the driver's seat/front passenger's seat backwards or into the central position.
- Rotate the seat in the direction of travel and lock in position.

Adjusting the armrest

The height of the armrests is infinitely adjustable.

- Turn the knurled wheel (Fig. 34,2) in an anticlockwise direction (when viewed from the front). The latch of the armrest is released by this.
- Move the armrest to the desired position.
- Turn the knurled wheel as far as possible in a clockwise direction.

Adjusting an appropriate seating position

Both the height and the position of the seats can be adjusted. The handles which are required for this purpose are positioned to the front, right or left of the seat.

- Pull the bar (Fig. 34,5). The seat can be moved forward or backward.
- Turn the knurled knob (Fig. 34,1). The backrest will be unlocked and can be adjusted.
- Pull the lever (Fig. 34,4) upwards. The inclination of the seat and backrest can be set.

Adjusting the seat height

Depending on the model, the height of the seat is infinitely adjustable.

- Pull the lever (Fig. 34,3) upwards.
- Take pressure off or apply pressure to seat. The seat moves up or down.
- Release lever when the desired position is reached. The seat is locked.

7.7 Seat bench extension (model-specific)

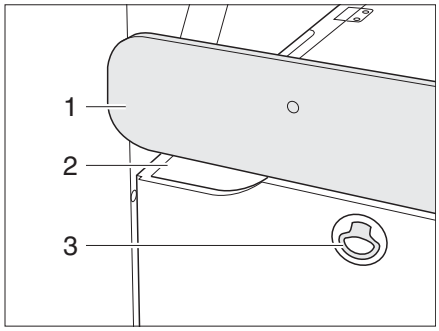


Fig. 35 Bench seat

Bench seat extension

The bench seat can be extended if required.

Increasing the seating area:

▷ Do not pull at the cover (Fig. 35,1).

- Pull out the extension at the handle (Fig. 35,2) under the cover.

Storage space

An additional storage space is located under the bench seat.

Opening the storage space lid:

- Open the storage space lid by pulling the latch (Fig. 35,3).

7.8 Tables

7.8.1 Suspension table with fold-out leg

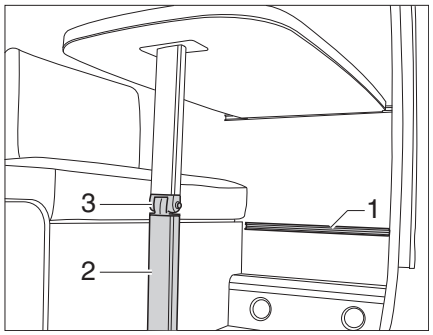


Fig. 36 Suspension table with fold-out leg

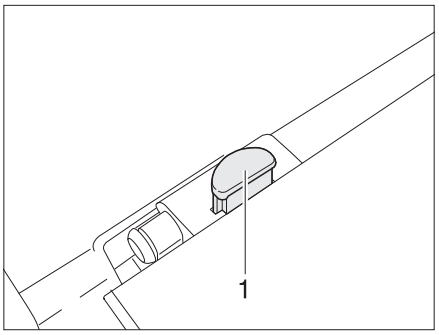


Fig. 37 Table top locking mechanism

The suspension table may also be used as a bed foundation.

Conversion to bed foundation:

- Slightly lift the front of the table-top.
- Unlock the table leg (Fig. 36,2) at the hinge and fold it in.
- Press the release knob (Fig. 37,1) at the locking mechanism of the table-top.
- Detach the suspension table from the upper attachment rail.
- Attach suspension table to the lower attachment rail (Fig. 36,1) and rest it onto the table leg hinge (Fig. 36,3).
- Lock the table-top.

7.8.2 Suspension table with dismountable support leg

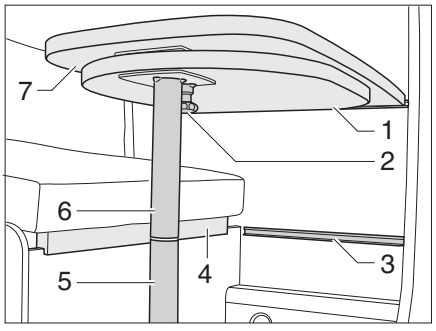


Fig. 38 Suspension table with dismountable support leg

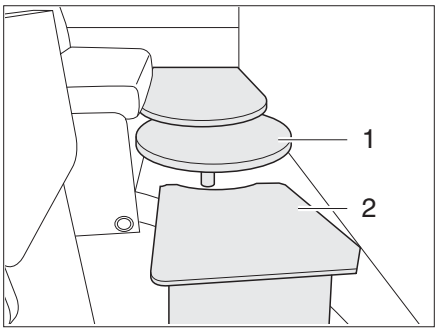


Fig. 39 Bed extension (extra bed)

The table size can be enlarged by swivelling out a table-top extension.

Extending:

- Pull the knob (Fig. 38,2) of the locking mechanism downward and swivel out the table-top extension (Fig. 38,1).

Reducing size:

- Swivel the table-top extension (Fig. 38,1) under the table-top (Fig. 38,7) until the locking mechanism latches audibly.

The dismountable support leg enables the suspension table to be used as a bed foundation.

Conversion to bed foundation (extra bed):

- If necessary, place the multiplex strip (Fig. 38,4) on the bench seat.
- Swivel out the table-top extension (Fig. 38,1).
- Lift the front of the table-top (Fig. 38,7) by approx. 45°.
- Pull out the lower part of the support leg (Fig. 38,5) down and lay aside.
- Remove the table-top from its upper retainer.
- Hook the table-top with the retainers at an angle of 45° into the lower attachment rail (Fig. 38,3) and set it down onto the floor with the upper part of the support leg (Fig. 38,6).
- Lock the table-top.
- Place the bed extension (Fig. 39,2) for the extra bed onto the table-top extension (Fig. 39,1).

Conversion to bed foundation (spare bed):

- Turn the driver's seat and push it all the way forward.
- Swivel out the table-top extension (Fig. 38,1).
- Lift the front of the table-top (Fig. 38,6) by approx. 45°.
- Pull out the lower part of the support leg (Fig. 38,5) down and lay aside.
- Remove the table-top from its upper retainer.
- Hook the table-top with the retainers at an angle of 45° into the lower attachment rail (Fig. 38,3) and set it down onto the floor with the upper part of the support leg (Fig. 38,6).
- Lock the table-top.

7.8.3 Folding table

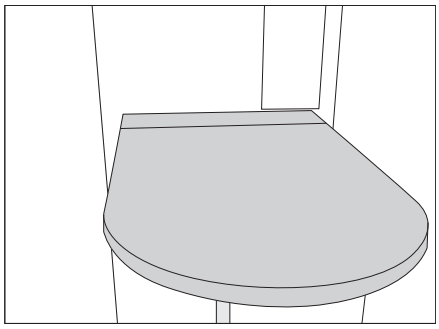


Fig. 40 Folding table, folded out

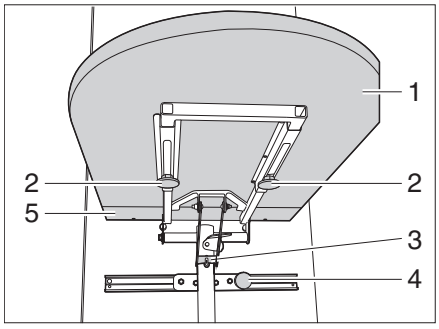


Fig. 41 Folding table, table leg holder

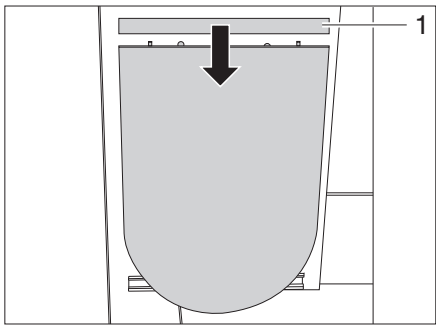


Fig. 42 Folding table, folded in

The folding table can be used as a table or as an additional storage space.

Folding in:

- Loosen two knurled screws (Fig. 41,2) and slide the table-top (Fig. 41,1) forwards.
- Remove the table-top extension (Fig. 41,5) from the table-top.
- Raise the table-top upwards and hang out the support (Fig. 41,3).
- Swivel the table-top (Fig. 41,1) downwards.
- Place the table-top extension (Fig. 42/1) at the top into the wooden dowel.

Moving:

- Loosen the knurled screw (Fig. 41,4) and move the folding table into the desired position.
- Retighten the knurled screw (Fig. 41,4).

7.9 Lamps

- ▶ Lamps and light fittings can develop heat.
- ▶ Let the lamps and light fittings cool down before touching them.
- ▶ When the light is switched on or is still hot, a safety distance of at least 30 cm to combustible material such as net curtains or curtains has to be maintained. Fire hazard!

7.9.1 LED spotlight

▷ Do not move the LED spotlight into the rail, but instead unscrew it as described below, remove it and reinsert it at the desired position.

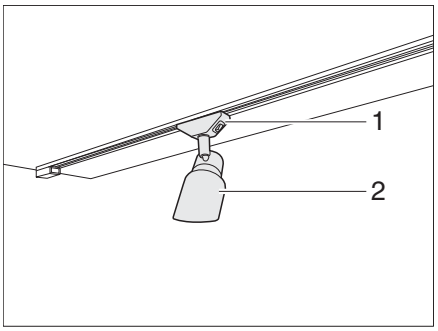


Fig. 43 LED spotlight

Moving the LED spotlight:

- Grasp the holder (Fig. 43,1) and turn it by 45°.
- Remove the LED spotlight (Fig. 43,2) from the rail system.
- Insert the LED spotlight (Fig. 43,2) at the desired position into the rail system and turn by 45°.
- Turn by 45° at the holder (Fig. 43,1).

7.9.2 LED light strips

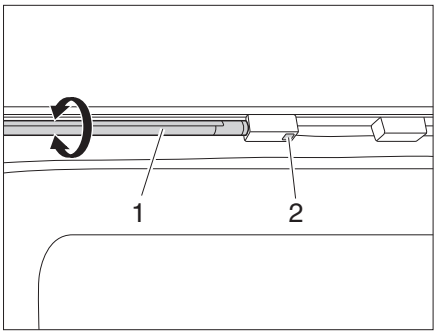


Fig. 44 LED light strips

Switching the LED light strips on/off:

- Switch the LED light strip (Fig. 44,1) on/off at the switch (Fig. 44,2).

Turning light strips:

- Grasp the LED light strip (Fig. 44,1) at the light fixture and turn it.

7.10 Beds

7.10.1 Fixed bed

▶ Do not let the slatted frame fall downwards during closing!

A storage compartment is underneath the bed. Depending on the model, fold the slatted frame from the inside upwards or lift out of the latch or remove the bulkheads in order to place items in the storage compartment or remove them.

Opening:

- Lift the mattress forwards and set it down on the panel.
- Lift and hold the slatted frame.

Closing:

- Move the slatted frame downwards completely.
- If necessary, push the mattress behind the panel.

Dismantling the fixed bed

In order to increase the storage compartment space the bed can also be dismantled completely. The bed can also be stored at certain vehicle types.

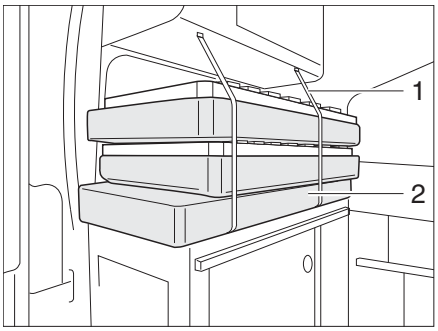


Fig. 45 Dismantling

- Remove the mattress.
- Lay the slatted frame together with the mattress on the cover.
- Stack the cushions, mattresses and slatted frames (Fig. 45,2) onto each other.
- Secure everything using the belt (Fig. 45,1).

Enlarging the fixed bed

It is possible to connect two single beds into a double bed.

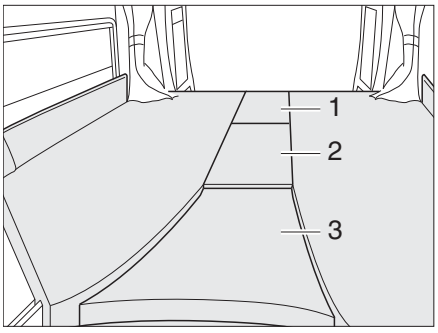


Fig. 46 Double bed rear

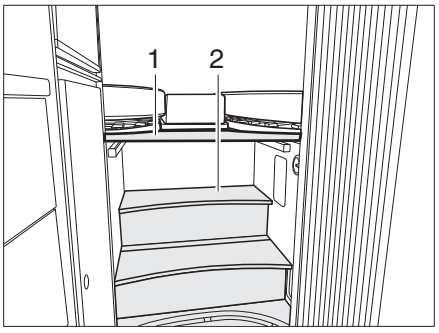


Fig. 47 Double bed stairs

▷ In order to use the stairs do not use the board (Fig. 47,1) above the stairs as well as the additional cushion (Fig. 46,3).

Connecting beds:

- Lay the middle board between the two beds.
- Lay the board (Fig. 47,1) onto the braces above the stairs (Fig. 47,2).
- Insert the additional cushions (Fig. 46,1, 2 and 3).

7.10.2 Bed in the pop-up roof

- ▶ The maximum load for the bed in the pop-up roof amounts to 200 kg.
- ▶ Fold in the pop-up roof before commencing the journey.
- ▶ Only use the bed in the pop-up roof if the safety guards are in position.
- ▶ Never leave small children without supervision.
- ▶ Ensure in particular with regard to small children less than 6 years of age, that they cannot fall out of the bed.
- ▶ Switch off the reading lamps in the pop-up roof when it is folded in. Fire hazard!

▷ Mount the safety guard when the persons are already in the pop-up roof.

Opening the pop-up roof

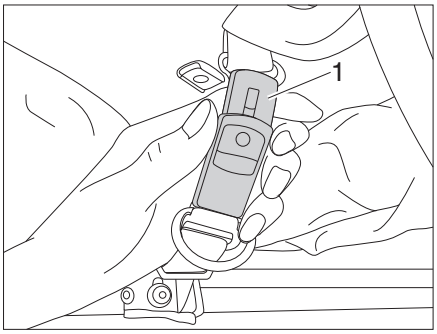


Fig. 48 Open the securing belt

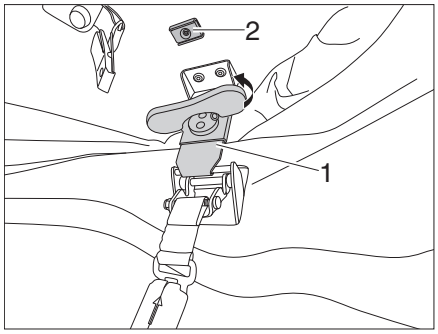


Fig. 49 Releasing the locking mechanisms

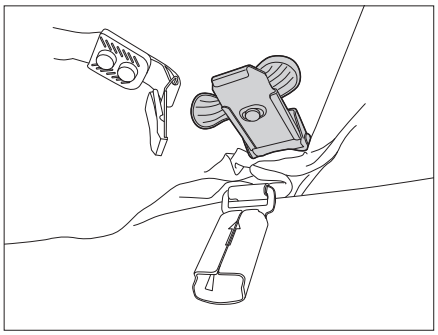


Fig. 50 Fastening the locking mechanism

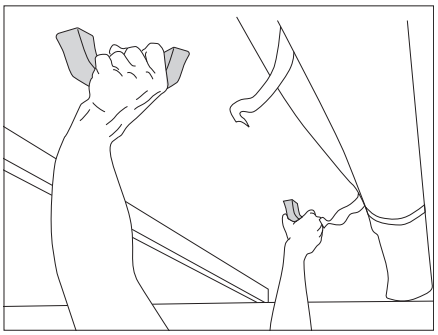


Fig. 51 Pushing up the pop-up roof

- Open the securing belts (Fig. 48,1).
- Set up the twist grips of the left- and right-hand locking mechanism (Fig. 49,1) and turn counter-clockwise until the locking mechanisms are loosened.
- Fold the twist grip further downward and attach the locking mechanism to the magnet (Fig. 49,2) (Fig. 50).
- Hold both the grips with both hands and push the pop-up roof upwards (Fig. 51).

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.
▷ When closing the pop-up roof ensure that the cloth bellows are not clamped in.
▷ Ensure that the locking levers (Fig. 52,1) are attached to the magnet at the top.

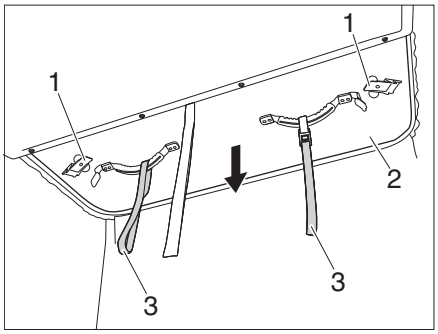


Fig. 52 Pulling the pop-up roof downwards

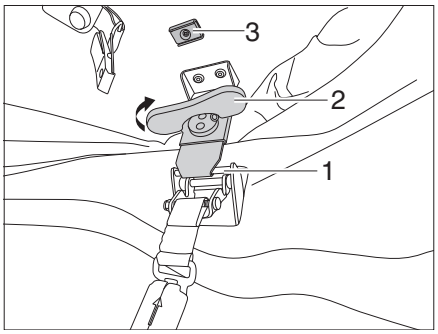


Fig. 53 Tensioning the locking mechanism

- Open a door at the vehicle.
- Check whether the locking mechanism are secured by the magnets (Fig. 53,3).
- Use the pulling devices (Fig. 52,3) to pull the pop-up roof (Fig. 52,2) downwards.
- Remove the locking lever (Fig. 52,1) from the magnet (Fig. 53,3) and insert it into the catch (Fig. 53,1).
- Turn the twist grip (Fig. 53,2) of the locking mechanism clockwise until the locking mechanism is fastened.
- Fold the twist grip (Fig. 53,2) upwards.
- Close the securing belts (Fig. 48,1).

▷ Pay attention to the care instructions for the pop-up roof in section 12.1.6.

7.10.3 Electrical pull-down bed

▶ Never leave small children without supervision.
▶ Ensure in particular with regard to small children less than 6 years of age, that they cannot fall out of the bed.
▶ Ensure that no persons are on or under the pull-down bed when moving the pull-down bed.
▶ After the pull-down bed has reached its position make sure that you remove the key at the operating panel.

▷ Mount the safety guard.

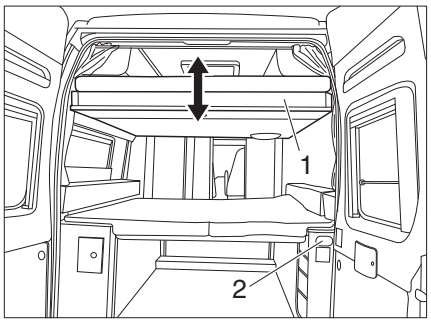


Fig. 54 Electrical pull-down bed

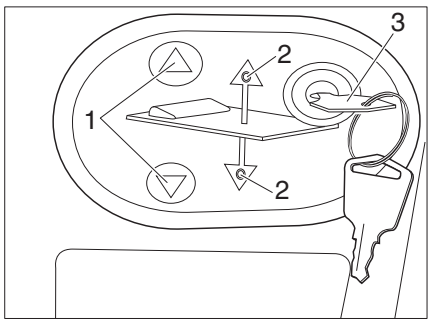


Fig. 55 Operating panel for electrical pull-down bed

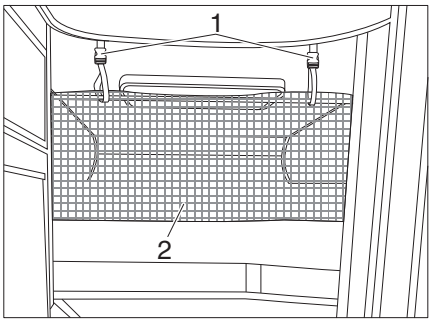


Fig. 56 Safety net

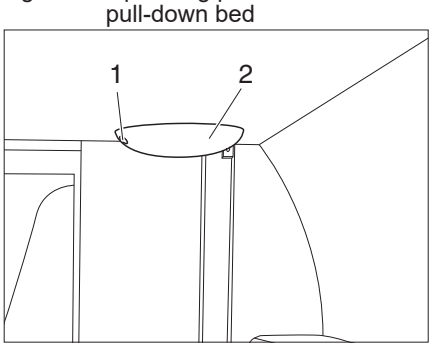


Fig. 57 Emergency operation unit

Lowering or raising the pull-down bed:

- Insert the key (Fig. 55, 3) into the operating panel (Fig. 54, 2).
- Press the ▽ or △ button (Fig. 55, 1) and keep it pressed. The respective LED (Fig. 55, 2) lights up and the pull-down bed (Fig. 54, 1) is lowered or raised.
- When the desired position has been reached, release the ▽ or △ button (Fig. 55, 1). The respective LED (Fig. 55, 2) extinguishes.
- Remove the key (Fig. 55, 3).

Safety net

The safety net (Fig. 56, 2) is stored as standard between the mattress and slatted frame. Do not mount the safety net until the person is already in bed.

Mounting:

- Hook the retaining straps (Fig. 56, 1) into the holders on the ceiling.

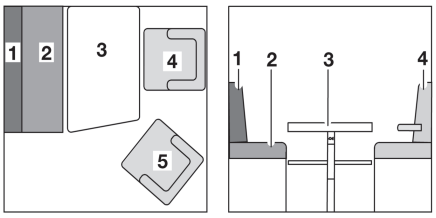
Emergency operation unit

The electrical pull-down bed is equipped with an emergency operation unit (Fig. 57, 2). If the electrical power fails, the pull-down bed can be moved manually with a crank. The crank is located in the bag with the instruction manuals.

- Insert the crank into the opening (Fig. 57, 1) at the emergency operation unit und turn it until the pull-down bed has reached the desired height.

7.11 Converting seating groups for sleeping

7.11.1 Front seating group



1 Back cushion
2 Seat cushion
3 Table
4 Driver's seat
5 Front passenger's seat

Fig. 58 Prior to conversion

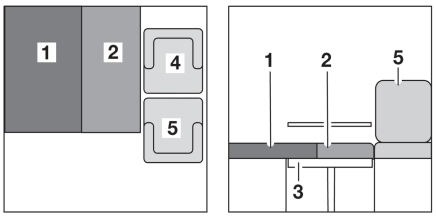
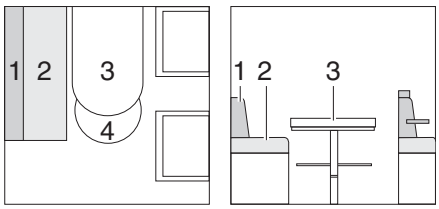


Fig. 59 After conversion

- Turn the driver's seat (Fig. 58,4) so that the backrest faces the driver's door.
- Turn the front passenger's seat (Fig. 58,5) so that the backrest faces the front passenger's door.
- Convert the table (Fig. 58,3) to a bed foundation (see Section 7.8).
- Pull the seat cushion (Fig. 59,2) on the table.
- Place the back cushion (Fig. 59,1) on the bench seat.
- Slide the front passenger's seat (Fig. 59,5) as far as possible to the driver's side.
- Slide the driver's seat (Fig. 59,4) as near as possible to the front passenger's seat.

7.11.2 Front seating group with extension



1 Back cushion
2 Seat cushion
3 Table
4 Table-top extension
5 Bed extension
6 Additional cushion
7 Driver's seat

Fig. 60 Prior to conversion

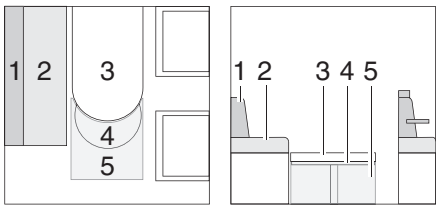


Fig. 61 During conversion (extra bed)

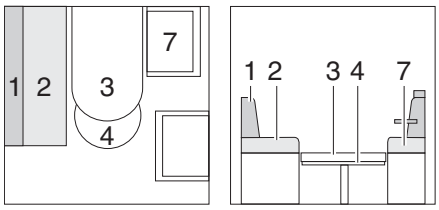


Fig. 62 During conversion (spare bed)

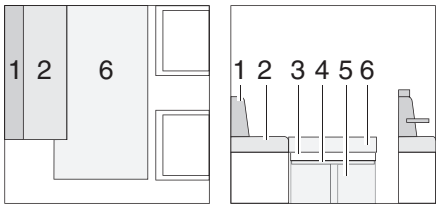


Fig. 63 After conversion (extra bed)

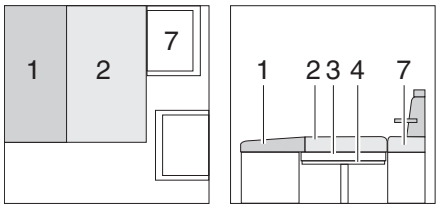


Fig. 64 After conversion (spare bed)

Variant 1 (extra bed):

- Extend the table (Fig. 60,3) and convert it into a bed foundation (see Section 7.8).
- Place the bed extension (Fig. 61,5) for the extra bed onto the table-top extension (Fig. 61,4).
- Place the additional cushion (Fig. 63,6) on the table and the bed extension.

Variant 2 (spare bed):

- Turn the driver's seat by 90° (Fig. 62,7) and push it all the way forward.
- Extend the table (Fig. 62,3) and convert it into a bed foundation (see Section 7.8).
- Reposition the back cushion (Fig. 62,1).
- Place the seat cushion (Fig. 64,2) between the back cushion (Fig. 64,1) and the driver's seat (Fig. 64,7).

7.12 Vehicles with kitchen unit central locking

The kitchen unit is equipped with a central locking system. The doors and drawers of the kitchen unit are automatically locked when the vehicle is started.

The control unit for the kitchen central locking system is located in the tall cupboard next to the kitchen.

8.1 General

- ▶ Close all gas isolator taps and the regulator tap before commencing the journey and when leaving the vehicle.
- ▶ Closing of the isolator and regulator valves is not required at vehicles that are equipped with a crash sensor.
- ▶ No appliance (e.g. heating or refrigerator) 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 and the exhaust gas pipes also have 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.
- ▶ The gas filter cartridge has to be replaced every 2 years.
- ▶ 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.
- ▶ Open a skylight or a window before taking open sources of combustion (gas cooker) into service.
- ▶ Do not use the gas cooker or gas oven for heating purposes.
- ▶ If the vehicle or gas devices are not used, close the regulator tap on the gas bottle.
- ▶ If there are several gas devices, each gas device must have its own gas isolator tap. If individual gas devices are not in use, close the respective gas isolator tap.
- ▶ 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 installed gas appliances are designed for use solely with propane or butane gas or a mixture of both. The gas pressure regulator as well as all installed gas devices are set for a gas pressure of 30 mbar.
- ▶ Propane gas is capable of gasification up to -42 °C, whereas butane gas gasifies at 0 °C. Below these temperatures no gas pressure is available. Butane gas is unsuitable for use in winter.

- ▶ 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 by an authorised specialist workshop no later than 10 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.
- ▶ Secure the gas bottle compartment in order to prevent unauthorised persons opening it. To do so lock the access.
- ▶ 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.
- ▶ The exhaust gas pipe must be fitted tightly to the heating system and to the vent and must be sealed. The exhaust gas pipe must not show any evidence of damage.
- ▶ Exhaust fumes must be able to escape into the atmosphere unhindered and fresh air must be able to enter unhindered. Therefore keep the waste gas vents and intake openings clean and free (e.g. of snow and ice). No snow walls or aprons may be allowed to lie against the vehicle.

8.2 Gas bottles

- ▶ Gas bottles are only to be transported within the designated gas bottle compartment.
- ▶ Place gas bottles vertically in the gas bottle compartment.
- ▶ Tie down gas bottles so that they are unable to turn or tilt.
- ▶ If the gas bottles are not connected to the gas tube, always place the protective cap on top.
- ▶ 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 bottles. Do not use any tools.
- ▶ Only use special gas pressure regulators with a safety valve designed for vehicle use. Other gas pressure regulators are not permitted and cannot meet the demanding requirements.
- ▶ Only use 5 kg, 6 kg and 11 kg gas bottles.
  If 1.8 kg or 2.8 kg camping gas bottles (blue) with a fitted check valve are used, a gas regulator with a safety valve must be used.
- ▶ Never block the ventilation openings in the floor under the gas bottles.
- ▶ Never block the access flap (Fig. 65,1) for the gas bottles. Observe the advice sign.

▷ Screwed connections on the gas pressure regulator have left-handed threads.

▷ For gas-operated units the gas pressure must be reduced to 30 mbar.

▷ Connect gas pressure regulator complete with safety valve directly to bottle valve.

The gas pressure regulator reduces the gas pressure in the gas bottle down to the operating pressure of the gas devices.

▷ For filling and connecting the gas bottles in Europe the accessories shops have corresponding Euro filling sets and Euro bottle sets.

▷ Information is available at the dealers and service centres.

8.3 Changing gas bottles

► When changing gas bottles, do not smoke or create any open fire.

► When you have changed the gas bottle, check whether gas escapes at the connection points and unions. Use a leakage search spray to spray the relevant connection point or union. These agents are available at the accessories shop.

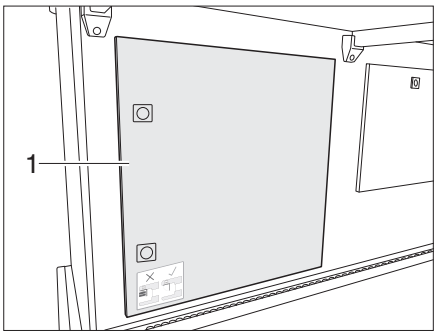


Fig. 65 Access flap for the gas bottles

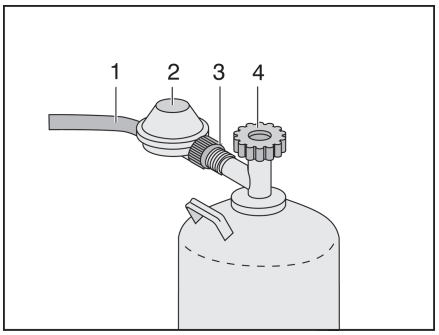


Fig. 66 Gas bottle connection

- Open (Fig. 65,1) flap for the gas bottle compartment.
- Close the regulator tap (Fig. 66,4) on the gas bottle. Pay attention to the direction of the arrow.
- Hold the gas pressure regulator (Fig. 66,2) and open the knurled nut (Fig. 66,3) (left-handed thread).
- Remove the gas pressure regulator and the gas tube (Fig. 66,1) from the gas bottle.
- Release the fixing belts and remove the gas bottle.
- Place a filled gas bottle in the gas bottle compartment.
- Fix gas bottle in place with the fixing belts.
- Position the gas pressure regulator (Fig. 66,2) and the gas tube (Fig. 66,1) on the gas bottle and tighten the knurled nut (Fig. 66,3) by hand (left-handed thread).
- Close flap.

8.4 Connecting the gas bottle to the gas bottle compartment in the kitchen

▶ The gas bottle must only be connected by a qualified expert.

A fully fitted gas hose with an elbow and gas pressure regulator is required to install the gas bottle to the gas bottle compartment.

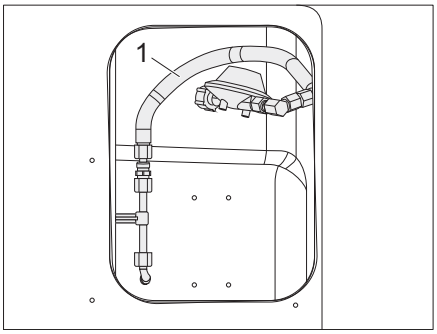


Fig. 67 Connecting the gas hose to the supply

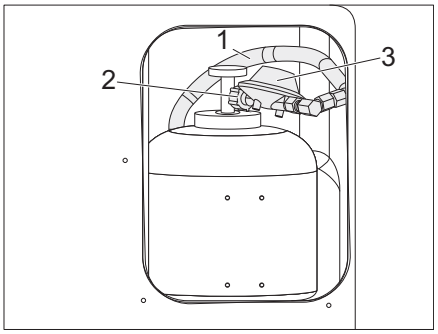
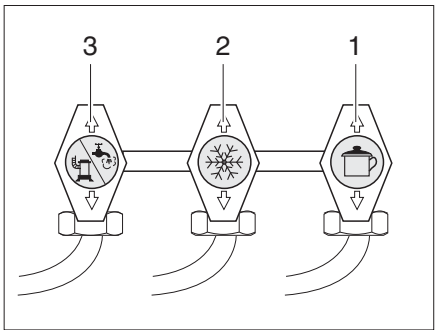


Fig. 68 Connect a gas bottle

- Screw the pre-assembled gas hose (Fig. 67, 1) onto the vehicle's supply line.
- Position the gas pressure regulator (Fig. 68,3) and the gas tube (Fig. 68,1) on the gas bottle and tighten the knurled nut (Fig. 68,2) by hand (left-handed thread).

8.5 Gas isolator taps



1 Cooker
2 Refrigerator (no function at compressor refrigerator)
3 Heater/boiler

Fig. 69 Symbols for the gas isolator taps

A gas isolator tap (Fig. 69) for every gas device is built into the vehicle.

The gas isolator taps are located in the vehicle at different positions, and can also be fitted separately.

8.6 DuoControl CS switching facility

- ▶ Do not use the switching facility in closed spaces.
- ▶ During the journey operate the gas system only with a crash sensor and suitable high-pressure hoses with hose break guard. Danger of explosion.

The DuoControl is an automatic switching facility with a remote display for a two-bottle gas system. The DuoControl switching facility automatically switches gas supply from the primary bottle to the reserve bottle as soon as the primary bottle is either empty or no longer ready for operation. The gas appliances may still continue operation. The DuoControl switching facility is suitable for all commercial gas bottles from 3 kg to 33 kg.

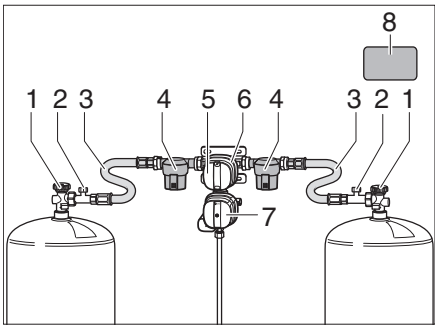


Fig. 70 DuoControl switching facility

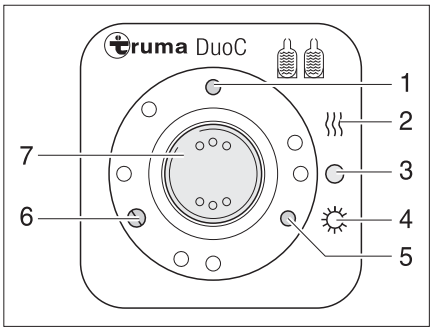


Fig. 71 Operating unit

Construction of the unit

The DuoControl switching facility consists of a switching valve (Fig. 70,6) and the operating unit (Fig. 71). The switching valve is mounted between the high-pressure hoses (Fig. 70, 3). The knob (Fig. 70,5) on the switching valve is used to select which of the gas bottles is to be used as a primary bottle and which is to be used as a reserve bottle.

The switching valve (Fig. 70,6) is equipped with the regulator defroster "EisEx". This prevents damage to the gas system during the winter months.

A gas filter (Fig. 70,4) that protects the gas system against oil and other contamination is located on each side before the switching valve.

Only the electrical functions can be switched at the operating unit (Fig. 71). The regulator taps (Fig. 70,1) on the gas bottles must be opened manually.

The switching valve provides a constant gas pressure, regardless of which gas bottle is being drawn upon. The two indicator lamps on the operating unit show the filling level of the primary bottle. The primary bottle is full when the green indicator lamp (Fig. 71,6) lights up. The primary bottle is empty when the red indicator lamp (Fig. 71,5) lights up. The gas is then supplied via the reserve bottle.

Operating modes

The DuoControl switching facility has two operating modes:

- Winter operation "On and heating"
- Summer operation "On"

▷ When routing the high-pressure hoses ensure that the hoses rise continuously (Fig. 72).

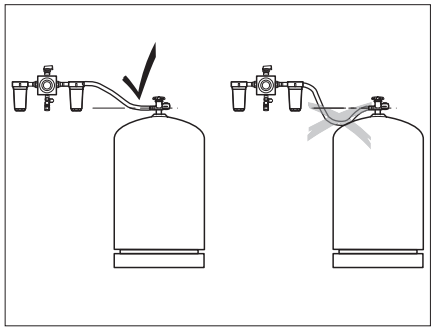


Fig. 72 Routing of the high-pressure hoses

Putting into operation:

- Open the regulator taps (Fig. 70, 1) on the gas bottles.
- Use the knob (Fig. 70,5) on the switching valve (Fig. 70,6) to select the gas bottle which is to be the primary source of gas (primary bottle). Always turn the knob as far as it will go.

Switching off:

- Set the rocker switch (Fig. 71,7) to "O" (Fig. 71,3). The yellow indicator lamp (Fig. 71,1) goes out.
- Close the regulator tap (Fig. 70,1) on the gas bottles.

Remote display

The indicator lamps on the operating unit (Fig. 71,5 and 6) indicate in the vehicle interior whether the primary bottle is ready for operation.

Changing gas bottles

If the green indicator lamp (Fig. 71,6) goes out during operation and the red indicator lamp (Fig. 71,5) lights up, the gas bottle selected as the primary bottle is empty and has to be replaced. The reserve bottle continues supplying the gas appliances with gas.

▶ When changing gas bottles, do not smoke or create any open fire.

▷ Use a country-specific connection for gas bottles.

Changing gas bottles:

▷ Use the enclosed screw aid (Fig. 73,1) to connect and disconnect the high-pressure hoses. It ensures the required tightening torque and prevents damage to the screw connection through using unsuitable tools.

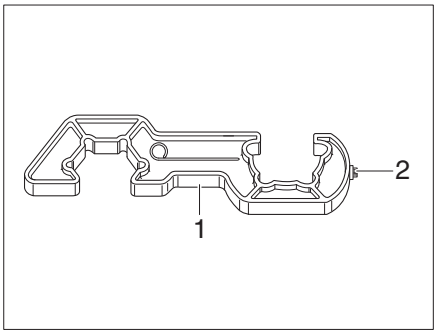


Fig. 73 Screw aid

- Close the regulator tap (Fig. 70, 1) on the empty gas bottle.
- Unscrew the high-pressure hose (Fig. 70,3) from the gas bottle using the screw aid (Fig. 73).
- Connect the full gas bottle to the high-pressure hose (Fig. 70,3).
- Open the regulator tap (Fig. 70, 1) on the gas bottle.
- Set the knob (Fig. 70, 5) on the switching valve (Fig. 70, 6) with half a turn, so that the newly replaced gas bottle will serve as a reserve bottle.
- Press the button (Fig. 70, 2) for the hose break guard at the high-pressure hose to activate it.
- If necessary, press the reset button (Fig. 74, 1) at the crash sensor.

▶ Ensure that gas withdrawal takes place towards the front in the case of DuoControl switching facilities. Otherwise the high-pressure hose can be pinched or damaged in the front flap mechanism.

▶ Observe the safety label (Fig. 70, 8) in the gas bottle compartment.

Crash sensor

The crash sensor protects against unwanted gas discharge. In the event of an accident or a too high angle of the vehicle the gas supply will automatically be interrupted.

▷ Only operate the living area heater during the journey if the vehicle is equipped with a crash sensor and suitable high-pressure hoses with hose break guard.

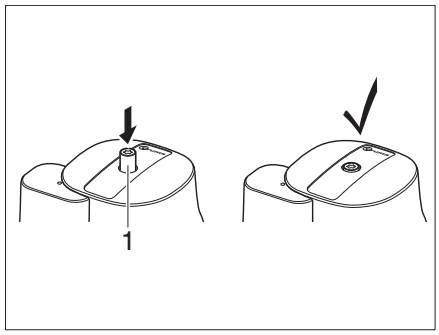


Fig. 74 Crash sensor

If the crash sensor was triggered, it has to be released manually.

Releasing:

■ Use the Torx T20 (Fig. 73,2) at the screw aid to press in the safety release knob (Fig. 74,1), turn it slightly clockwise and hold it for 5 seconds. The crash sensor is ready to operate when the safety release knob (Fig. 74,1) remains in the lowered position.

Gas filter

The gas filters (Fig. 75) filter exhaust residues such as olefins, paraffins and other hydrocarbon compounds out of the gas system. The filter cartridges have to be checked at regular intervals and be replaced at the latest every 2 years.

▷ Observe the instructions for using and installing the gas filter.

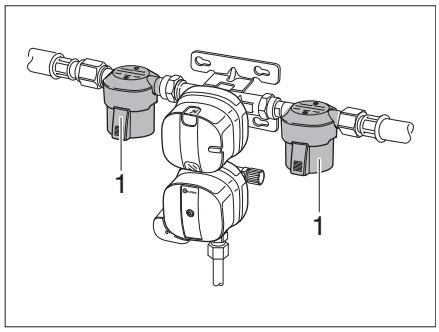


Fig. 75 Gas filter

Hose break guard

The hose break guard protects against gas escaping in case of a defect or the high-pressure hose tearing off.

▷ Use a suitable high-pressure hose with hose break guard and country-specific connection for gas bottles.

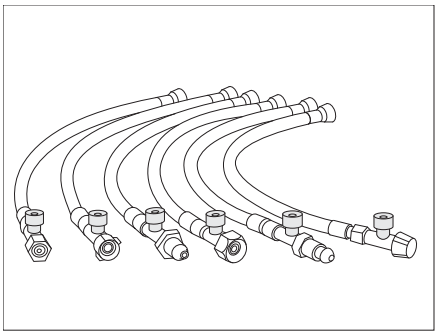


Fig. 76 High-pressure hoses with hose break guard (country-specific variants)

Activating:

- After replacing the gas bottle press the green button (Fig. 70,2) at the high-pressure hose (Fig. 70,3) vigorously.

The hose break guard has been activated.

9.1 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.

9.2 12 V power supply

▷ To disconnect **all** electrical 12 V appliances from the power supply, disconnect the living area battery from the 12 V power supply. Depending on the model, either press the switch on the transformer/rectifier or activate the battery separation on the panel to do so.

When the vehicle is not connected to the 230 V power supply or the 230 V power supply is switched off, the living area battery supplies the living area with 12 VDC. The living area battery has a limited power supply only. For this reason, electrical appliances such as the radio and the lights should not be operated for a long time without using the 230 V power supply.

The 12 V power supply can be cut off with the 12 V main switch on the panel. The heater and the electrical entrance step remain ready for operation.

When the vehicle engine is running, the vehicle alternator recharges the living area battery and the starter battery.

Absorption refrigerator The refrigerator is then only operated with 12 V if the vehicle engine is running. This helps to prevent the living area battery from being run down too quickly.

Compressor refrigerator The refrigerator is only operated with 12 V.

9.2.1 Living area battery

- ▷ Prior to commencing a journey ensure the living area 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 living area battery.
- ▷ Charge the living area 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.
- ▷ Use only the installed transformer/rectifier to charge the living area battery.
- ▷ Irreparable damage to the living area battery will result if it is overcharged.
- ▷ For long periods of inactivity (4 weeks or more), either disconnect the living area battery from the 12 V power supply or recharge it regularly.
- ▷ Do not use the ignition when the starter battery or the living area battery is disconnected. Danger of short circuit!

▷ 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.

The charging condition of the living area battery can be read off on the panel.

Location

Depending on the model, the living area battery is installed under the driver's seat or the front passenger's seat in the seat console.

Charging using a 230 V power supply

If the vehicle is connected to the 230 V power supply, the living area battery and the starter battery are automatically charged by the charger module on the transformer/rectifier. The starter battery is charged with a float charge of 2 A. The charging current is adapted to suit the charging condition of the battery. This ensures that it is not possible to overload the battery.

To make use of the maximum output from the charger module on the transformer/rectifier, switch off all electrical appliances during charging.

Charging using the vehicle engine

When the vehicle engine is running, the vehicle alternator recharges the living area battery and the starter battery. When the vehicle engine is switched off, the batteries are automatically disconnected from one another by a relay in the transformer/rectifier. This prevents the starter battery from being run down by electrical appliances in the living area. The starting capability of the vehicle is thus preserved. The charging condition of the living area battery or the starter battery can be read on the panel.

Changing

▷ When the living area battery is changed, only use batteries of the same type.

▷ When changing the living area battery, use only batteries which meet the minimum capacity of the charger. Observe the separate instruction manual for the charger. Lower-capacity batteries will generate a great deal of heat when they are charged. Danger of explosion!

▷ Do not connect the battery cables to the wrong poles.

▷ Do not use the ignition when the starter battery or the living area battery is disconnected. Danger of short circuit!

▷ Before disconnecting or connecting the terminals of the battery, switch off the vehicle engine, the 230 V and 12 V power supplies as well as all the appliances. Danger of short circuit!

To change the living area battery, proceed as follows:

- Switch off the vehicle engine.
- Switch off the 12 V main switch on the panel. The indicator lamp goes out.
- Switch the battery cut-off switch on the transformer/rectifier to "Batterie Aus" ("battery Off").
- Disconnect the mains plug from the transformer/rectifier.
- Switch off all gas appliances, all gas isolator taps and close the regulator tap on the gas bottle.
- There is a danger of short circuit when disconnecting the battery poles. For this reason, first disconnect the negative pole on the living area battery and then the positive.

- Remove the living area battery from the vehicle.
- Install the new living area battery in the reverse order.

9.3 Transformer/rectifier (EBL 119)

▷ Do not cover the ventilation slots. Danger of overheating!

▷ Depending on the model, not all fuse slots are fitted with fuses.

▷ Further information can be obtained in the manufacturer's instruction manual.

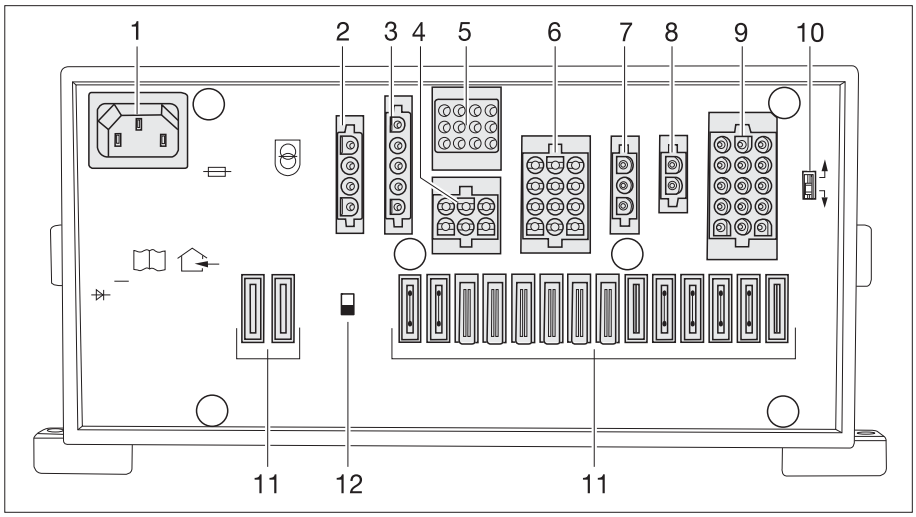


Fig. 77 Transformer/rectifier (EBL 99)

1 Main supply socket 230 V~
2 Output: Block 1 - Refrigerator
3 Input: Block 2 - Control lines, alternator D+
4 Output: Block 4 - Heater, safety/drainage valve, basic light (lighting in the entrance area), entrance step
5 Output: Block 3 - Panel
6 Output: Block 5 - Display of solar cell at on-board control (if fitted), spare 2, spare 3, spare 4
7 Output: Block 6 - Solar charge regulator (if fitted)
8 Output: Block 7 - Auxiliary charging unit
9 Output: Block 8 - Consumer circuit 1, consumer circuit 2, TV, water pump, spare 1, spare 5, spare 6
10 Battery selector switch (lead acid/dryfill/AGM)
11 Fuses
12 Battery cut-off switch (battery On/Off)

Functions The transformer/rectifier has the following functions:

- The transformer/rectifier charges the living area battery. The transformer/rectifier charges the starter battery with a float charge only.
- The transformer/rectifier monitors the voltage in the living area battery.
- The transformer/rectifier distributes the current to the 12 V circuits and secures them. Devices with a maximum of 10 A can be connected to the sockets.
- The transformer/rectifier contains connections for a solar charge regulator, an auxiliary charging unit as well as other control and monitoring functions.
- When the engine is turned off, the transformer/rectifier separates the starter battery electrically from the living area battery. This prevents the 12 V living area appliances from discharging the starter battery.

The transformer/rectifier only works in conjunction with a panel.

When the transformer/rectifier is subject to a heavy load, the fitted charger module reduces the charging current. This protects the charging device against overheating. The transformer/rectifier is subject to a heavy load when e.g. an empty living area battery is charged, additional electrical appliances are turned on and the ambient temperatures are high.

Location Depending on the model, the transformer/rectifier is located in the seat console under the driver's seat or the front passenger's seat.

9.3.1 Battery cut-off switch

▷ The battery cut-off switch disconnects all the appliances that are connected to the transformer/rectifier from the 12 V network.

▷ After the battery cut-off switch has been switched back on: Take basic light (lighting in the entrance area), entrance step, heater and spare 4 back into operation (depending on model). To do so, switch the 12 V main switch briefly back on. This also applies if the living area battery was disconnected and then reconnected.

The battery cut-off switch switches off all the living area 12 V appliances, including the safety/drainage valve. This prevents the living area battery from slowly discharging if the vehicle is not used for a longer period of time (e.g. temporary lay-up).

The batteries can still be charged by the transformer/rectifier even when the battery cut-off switch is switched off.

Switching on/off:

- Press battery cut-off switch upward: Battery On.
- Press battery cut-off switch downward: Battery Off.

9.3.2 Battery selector switch

► If the battery selector switch is set incorrectly, oxyhydrogen gas (exploding gas) can form. Danger of explosion!

▷ Incorrect setting of the battery selector switch damages the living area battery.

▷ Do not change the factory setting of the battery selector switch.

The battery selector switch is used to set the charger module in the transformer/rectifier to the type of living area battery installed in the vehicle ("lead acid", "dryfill" or AGM).

9.3.3 Battery monitoring

▷ **Completely recharge a discharged living area battery as soon as possible.**

The battery monitoring in the transformer/rectifier monitors the voltage in the living area battery.

If the battery voltage falls below 10.5 V, the battery monitor in the transformer/rectifier switches off all of the 12 V appliances.

Measures:

- Switch off all the electrical appliances that are not essential at the corresponding switch.
- If necessary, use the 12 V main switch to switch the 12 V power supply back on briefly. This is only possible, however, if the battery voltage lies above 11 V. If the voltage is below this level, the 12 V power supply cannot be switched on again until the living area battery has been recharged.

9.3.4 Charging the battery

When the vehicle engine is running, the vehicle alternator recharges the living area battery and the starter battery. The main charge is provided to the starter battery. The living area battery cannot be charged completely during the journey. When the vehicle engine is switched off, the batteries are automatically disconnected from one another by a relay in the transformer/rectifier. This prevents the starter battery from being run down by electrical appliances in the living area. The starting capability of the vehicle is thus preserved. The charging condition of the living area battery or the starter battery can be read on the panel.

If the vehicle is connected to the 230 V power supply, the living area battery and the starter battery are automatically charged by the charger module on the transformer/rectifier. The starter battery is only charged with a float charge. The charging current is adapted to suit the charging condition of the battery. This ensures that it is not possible to overload the battery.

To make use of the maximum output from the charger module on the transformer/rectifier, switch off all electrical appliances during charging.

9.4 Panel LT 100

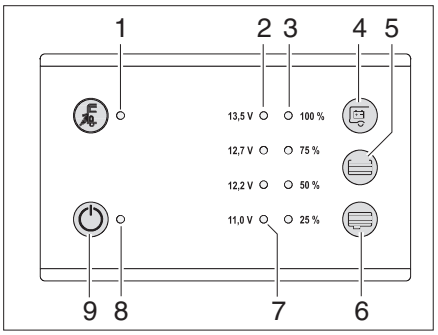


Fig. 78 Panel LT 100

1 230 V indicator lights up at connected power supply (yellow)
2 Indicator LEDs (green-green-yellow-red) display of the battery voltage in four levels with voltage specification and warning against total discharge
3 Display of the tank levels of the water and waste water tank in four levels
4 Reading of battery voltage of the living area battery
5 Reading of water tank level
6 Reading of waste water tank level
7 Warning LED total discharge
8 12 V indicator lamp (green) at switched-on system
9 Main switch 12 V ON/OFF

9.4.1 Level indicator of the water tank

The level of the water tank can be read by using the sensor touchpad (Fig. 78,4).

Reading the level:

- Touch sensor touchpad (Fig. 78,5): The level of the water tank is indicated in four levels by means of the LEDs (Fig. 78,3) (25% to 100%).

9.4.2 Level indicator of the waste water tank

The level of the waste water tank can be read by using the sensor touchpad (Fig. 78,6).

Reading the level:

- Touch the sensor touchpad (Fig. 78,6): The level of the waste water tank is indicated in four levels by means of the LEDs (Fig. 78,3) (25% to 100%).

9.4.3 Read battery voltage

Battery voltage

With the sensor touchpad (Fig. 78,4) the battery voltage of the living area battery can be displayed.

The indicator LEDs (Fig. 78,2) display the battery voltage.

Displays:

- Red warning indicator LED (Fig. 78,7) lights up: Battery voltage above 11.0 V
- Red and yellow LEDs light up: Battery voltage above 12.2 V
- Red, yellow and the lower green LEDs light up: Battery voltage above 12.7 V
- All LEDs light up: Battery voltage above 13.5 V

9.4.4 Battery alarm for the living area battery

The red warning LED (Fig. 78,7) lights up as soon as the voltage of the living area battery falls below 11 V (measured under operation) and there is a risk of a total discharge.

▷ When the battery alarm comes on, switch off the appliances and charge the living area battery, either by driving or by connection to a 230 V power supply.

▷ Total discharge damages the battery.

▷ If the battery voltage falls below 10.5 V, the battery monitor in the transformer/rectifier switches off all of the 12 V appliances.

9.4.5 12 V main switch

The 12 V main switch (Fig. 78,9) switches the panel and the 12 V power supply of the living area on and off.

Exception: Depending on the model. the power closing aid, heater, basic light (lighting in the entrance area), entrance step and Reserve 4 remain ready for operation.

Switching on:

■ Press the upper part of the rocker switch (Fig. 78,9) "On": The 12 V living area power supply is switched on. The indicator lamp (Fig. 78,8) lights up green.

Switching off:

■ Press the lower part of the rocker switch (Fig. 78,9) "Off": The 12 V living area power supply is switched off. The indicator lamp (Fig. 78,8) goes out.

▷ When leaving the vehicle switch off the 12 V main switch. This prevents unnecessary discharging of the living area battery.

▷ Appliances such as the charger, solar charge regulator and panel consume approx. 20 mA to 65 mA of electricity from the battery capacity, even when the 12 V main switch is turned off. Therefore disconnect the living area battery from the 12 V power supply, if the vehicle will not be used for a long period of time.

9.4.6 12 V indicator lamp

The 12 V indicator lamp (Fig. 78,8) illuminates whenever the 12 V main switch (Fig. 78,9) is switched on.

9.4.7 230 V indicator lamp

The yellow 230 V indicator lamp (Fig. 78,1) lights up whenever line voltage is available at the transformer/rectifier input.

9.5 230 V power supply

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

The 230 V power supply provides electricity for:

- Sockets with earth contact for appliances with maximum 10 A
- Refrigerator
- Transformer/rectifier

The electrical appliances connected to the 12 V power supply of the living area are supplied with voltage by the living area battery.

Connect the vehicle to an external 230 V power supply system as often as possible. The charger module in the transformer/rectifier automatically charges the living area battery. In addition to this, the starter battery is charged with a float charge of 2 A.

9.5.1 230 V connection

▶ The external 230 V power supply must be protected by fuse with a fault current protection switch (FI-switches, 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.
- Plug in the plug:

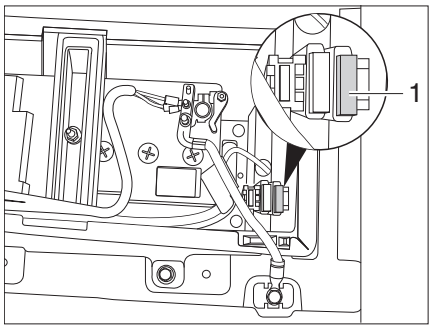
▷ Depending on the model, unlock the plug before pulling it out.

9.6 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.

9.6.1 Main fuse

Location The main fuse (Fig. 79,1) is located in the battery box at the vehicle battery.

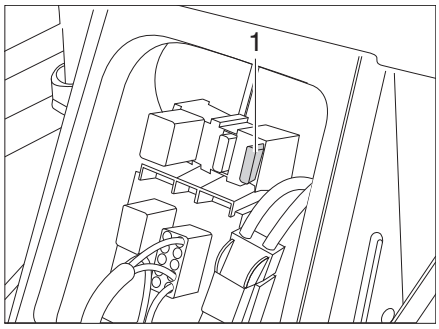


1 Main fuse 50 A/red

Fig. 79 Main fuse

9.6.2 Fuse for ignition plus

Location The fuse for ignition plus has been fitted in the B-pillar (centre pillar) right.

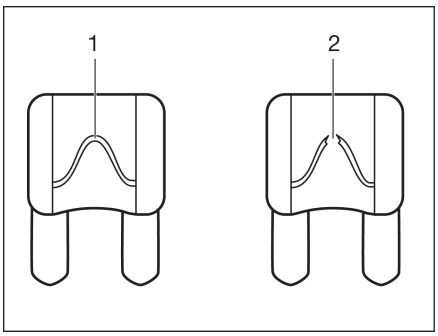


1 Flat fuse 2 A/grey for fuse plus

Fig. 80 Fuse for ignition plus

9.6.3 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

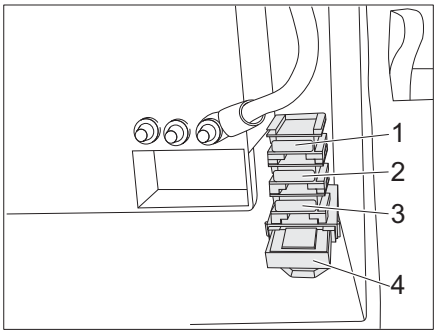
Fig. 81 12 V fuse

An intact 12 V fuse can be detected by the unbroken fuse element (Fig. 81,1). If the fuse element is broken (Fig. 81,2), 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.

Fuses on the starter battery

Depending on the model the fuses are installed near the starter battery under a covering in the floor between the driver and passenger seats or in a seat console.

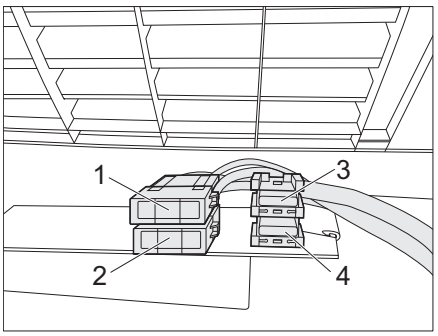


1 15 A/blue control current
2 5 A/brown trickle charge
3 45A 2 A/grey voltage probe booster
4 50 A/red starter battery booster

Fig. 82 Fuses on the starter battery

Fuses on the living area battery

The fuses are located under the front passenger's seat, accessible from the front.

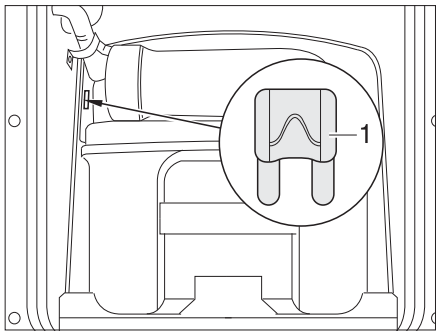


1 20 A/yellow refrigerator
2 40 A/orange load current EBL
3 2 A/grey voltage probe for the living area battery
4 45A 2 A/grey voltage probe booster

Fig. 83 Fuses on the living area battery

Fuse for the Thetford toilet (swivel toilet)

The fuse is located in the locker wall of the Thetford cassette.



1 Flat fuse 3 A/purple

Fig. 84 Fuse for the Thetford toilet

Changing:

- Open the flap for the Thetford cassette on the outside of the vehicle.
- Pull out the Thetford cassette completely.
- Replace the fuse (Fig. 84,1).

Fuse for power closing aid

The power closing aid is supplied with power by the living area battery and the transformer/rectifier, circuit basic light/entrance step. The power closing aid is fused with a 10-A fuse. The fuse is located within the kitchen unit (Fig. 85,1) or in the B column (Fig. 86,1).

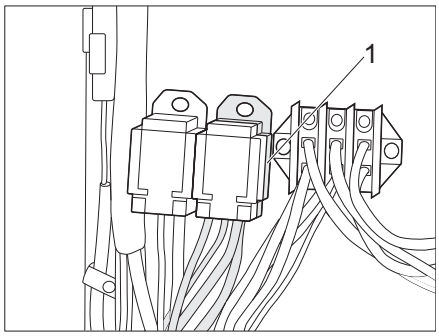


Fig. 85 Fuse for power closing aid in the kitchen unit

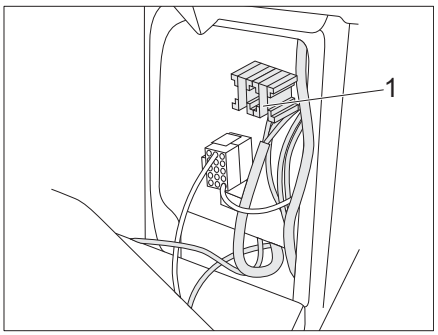


Fig. 86 Fuse for power closing aid in the B column

Fuse for the sliding doors

The fuse for the sliding doors is located in the B column behind a cover. The sliding doors are fused with a 20-A fuse (Fig. 87,1).

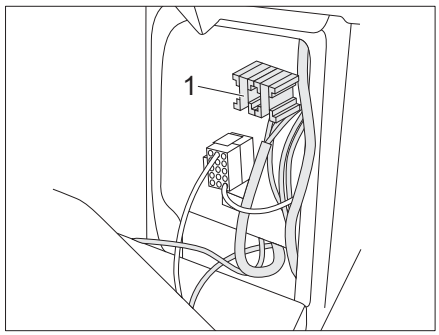


Fig. 87 Fuse for the sliding door

Fuse for indirect lighting

The indirect lighting is fused with a 5-A fuse. This is located in the roof cupboard at the front left.

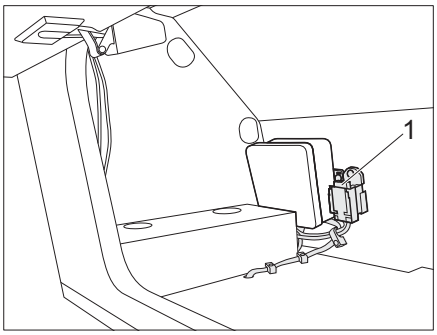


Fig. 88 Fuse for indirect lighting

Fuse for DuoControl/ Panel CP plus switch unit

The DuoControl and/or Panel CP plus switch unit is fused with a 2-A fuse. The fuse (Fig. 90,1) is located under the cover (Fig. 89,1) for the heater either under the seating group or behind under the bed depending on the model.

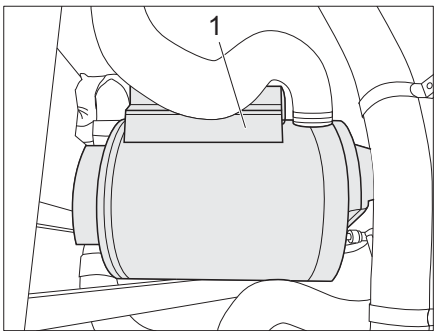


Fig. 89 Heater cover

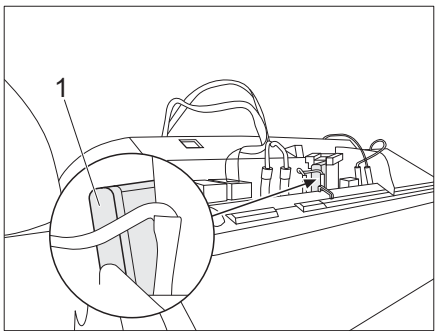


Fig. 90 Fuse for DuoControl/ Panel CP plus switch unit

Fuse for the entrance step and entry ceiling lighting

The fuses (Fig. 91,1) for the entrance step (10 A) and entry ceiling lighting (5 A) are located in the floor cupboard in the kitchen.

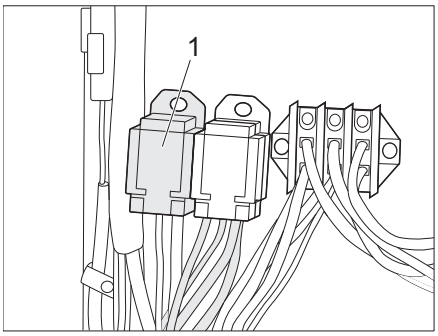


Fig. 91 Fuse for the entrance step and entry ceiling lighting

Fuse for pull-down bed

The fuse (Fig. 92,1) of the pull-down bed is located in the front hanging locker on the right-hand side.

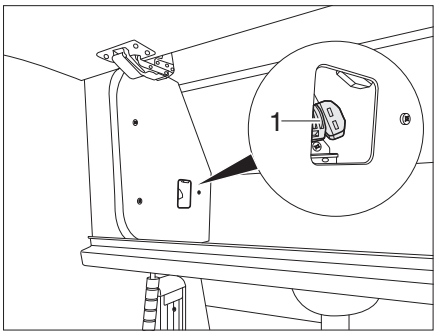


Fig. 92 Fuse for pull-down bed

Fuses at the transformer/rectifier EBL 119

Function		Value/colour
Internal charger module	for charging the battery	20 A yellow
Cooler	Cooler	20 A yellow
Heater		10 A red
Basic light		25 A white
Reserve 4		25 A white
Reserve 3		25 A white
Reserve 2		–
Reserve 1		15 A blue
Solar		15 A blue
Reserve 5		15 A blue
Reserve 6		15 A blue
Auxiliary charging unit		20 A yellow
Circuit 1	LED lighting	10 A red
Circuit 2		10 A red
TV		10 A red
Pump for water	Kitchen/Ignition cooker and water pump	5 A beige

9.6.4 230 V fuse

▷ The 230 V automatic circuit breaker is always mounted near the 230 V connection.

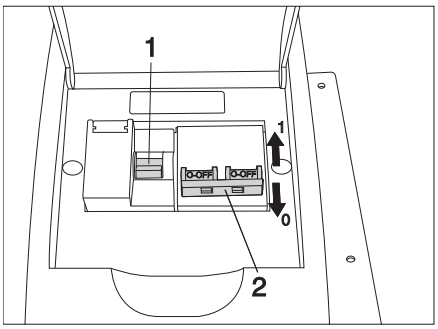


Fig. 93 230 V automatic circuit breaker

The 230 V connection is protected by a two-pole automatic circuit breaker (Fig. 93,2). The FI switch is located next to it.

Location Depending on the model the automatic circuit breaker is located in the bed frame rear left or under the seating group.

10.1 General

▷ The heat exchanger of the Truma hot-air heater has to be replaced after 30 years. Only the manufacturer of the heater or an authorised specialist workshop is allowed to replace the heat exchanger. The operator of the heater must see to it that the parts are replaced.

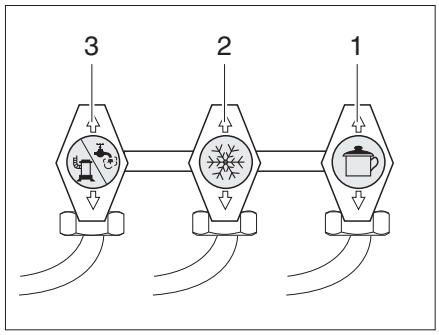
▷ For safety reasons, spare parts for pieces of heating appliances must correspond with manufacturer's instructions and be permitted by the manufacturer as a spare part. These spare parts may only be fitted by the manufacturer or an authorised specialist workshop.

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

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

In this instruction manual a description is given only for the operation of the appliances and their particular features.

To operate gas appliances, first open the regulator tap on the gas bottle and the gas isolator tap corresponding to the appliance.



1 Cooker
2 Refrigerator (no function at compressor refrigerator)
3 Heater/Boiler (without function at diesel heating)

Fig. 94 Symbols for the gas isolator taps

10.2 Heater

▶ Never let gas escape unburned due to danger of explosion.

▶ Never run the heater in gas operation when filling the fuel tank, on ferries or in the garage. Danger of explosion!

▶ Never operate the heater in fuel operation (gas/diesel) in closed rooms (e.g. garages). Danger of poisoning and suffocation!

▷ The circulation fan is automatically switched on when the hot-air heater is activated. During operation it is switched off and back on automatically by a thermostat control unit. This puts an immense strain on the living area battery, if the vehicle is not connected to an external 230 V power supply. Take into consideration that the living area battery only has limited reserves of energy.

Start-up When lighting the heater for the first time a small amount of smoke and odour will occur. Immediately set the operating switch of the heater to its highest position. Open doors and windows and ventilate well. Smoke and odour will disappear by themselves after a while.

10.2.1 To heat properly

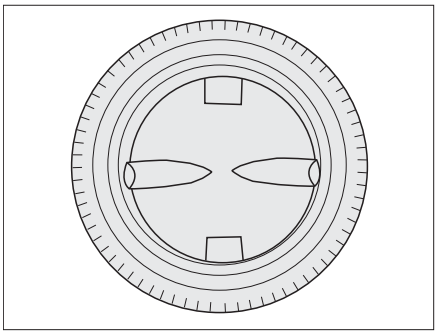


Fig. 95 Air outlet nozzle

Hot air distribution

Several air outlet nozzles (Fig. 95) are built into the vehicle. Pipes conduct the warm air to the air outlet nozzles. Turn the air outlet nozzles in a suitable position so the air can escape as required. To avoid draft close the air outlet nozzles on the dashboard and set the air distribution of the base vehicle to air circulation.

Adjusting the air outlet nozzles

- Fully open: Full hot air stream
- Half or partially open: Reduced hot air stream

When five air outlet nozzles are completely opened, less warm air escapes through each nozzle. However, if only three air outlet nozzles are opened, more warm air flows out of each nozzle.

10.2.2 Truma Combi hot-air heater

▷ Do not use the space above and behind the heater as a storage compartment.

▷ Alternatively the Panel Truma CP plus control unit can also be installed. See Chapter .

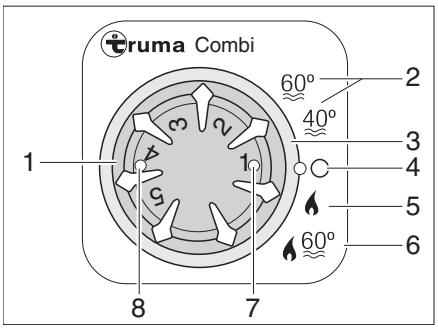


Fig. 96 Operating unit for heater/boiler

1 Temperature control knob
2 Summer operation water temperature 40 °C or 60 °C
3 Rotary switch
4 Off
5 Winter operation "Heater without boiler"
6 Winter operation "Heater and boiler"
7 Indicator lamp green:
Lights up = "Heater operation"
Flashes = "Delayed shut-off for appliance temperature reduction is active"
8 Indicator lamp yellow/red:
Lights up yellow = "Boiler heating-up phase"
Flashes/lights up red = "Fault"

Operating modes

The heater has two operating modes:

- Winter operation
- Summer operation

It is only possible to heat the vehicle in the "Winter" operating mode. With the "Summer" operating mode only water in the boiler is heated. It is not possible to heat the vehicle in this operating mode.

Selecting operating mode:

- Set the operating mode using the rotary switch (Fig. 96,3).

The power supply of the heater cannot be interrupted by means of the 12 V main switch.

Winter operation

The heater selects the required burner setting according to the set heating level. In the "Heater and boiler" operating mode (Fig. 96,6) the water in the boiler is also heated. The heater can be operated with an empty boiler in the "Heater without boiler" operating mode (Fig. 96,5).

Switching on:

- Open the regulator tap on the gas bottle and the gas isolator tap "Heater/boiler".
- Set the temperature control knob (Fig. 96,1) at the operating unit to the desired heating level.
- Set the rotary switch (Fig. 96,3) to winter operation "Heater without boiler" (Fig. 96,5) or to winter operation "Heater and boiler" (Fig. 96,6).

Green indicator lamp (Fig. 96,7) lights up.

The circulation fan automatically switches on when the heater is activated.

Switching off:

- Set the rotary switch (Fig. 96,3) to "O" (Fig. 96,4).
- Close the gas isolator tap "Heater/Boiler" and the main regulator tap on the gas bottle.

After switching off the heater, the circulation fan may still run for a moment to use up the residual heat.

Summer operation

It is not possible to heat the vehicle in the "Summer" operating mode. In this operating mode only the water in the boiler is heated.

▷ Further information can be obtained from the separate instruction manual "Gas heater".

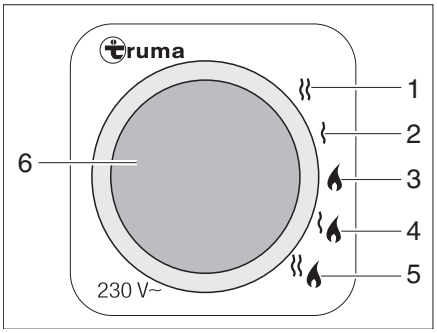
▷ For further information about the use of the boiler see Section "Boiler".

Variant: Heater with gas and 230 V electrical operation

▷ 230 V electrical operation is only possible when the vehicle is connected to the 230 V power supply.

▷ Select the output level for 230 V electrical operation so that it corresponds to the fuse protection of the 230 V connection (900 W for 3.9 A fuse, 1800 W for 7.8 A fuse).

▷ If the heater is set at the operating unit to "Summer" operation and the energy selector switch is set to mixed operation, the heater nevertheless operates only in 230 V operation. The gas burner is not switched on.



1 230 V electrical operation (1800 W)
2 230 V electrical operation (900 W)
3 Gas operation
4 Gas operation and 230 V electrical operation (900 W)
5 Gas operation and 230 V electrical operation (1800 W)
6 Yellow indicator lamp "230 V electrical operation"

Fig. 97 Energy selector switch for heater/boiler

The heater can be operated with different types of energy:

- Gas operation (Fig. 97,3)
- 230 V electrical operation with the output levels 900 W (Fig. 97,2) or 1800 W (Fig. 97,1)
- Gas operation and 230 V electrical operation (mixed operation) with the output levels 900 W (Fig. 97,4) or 1800 W (Fig. 97,5)

The combination gas operation and 230 V electrical operation reduces the heating-up time (only possible when the heater on the operating unit (Fig. 96) is set to winter operation).

When 230 V electrical operation has been selected, the yellow indicator lamp (Fig. 97,6) lights up.

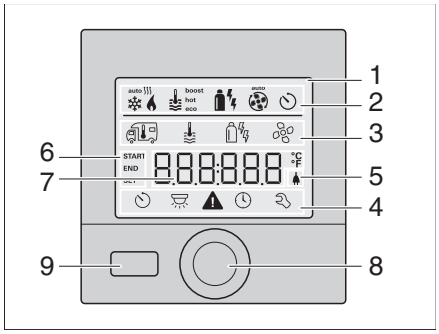
▷ Further information can be obtained from the separate instruction manual "Gas heater".

▷ For further information about the use of the boiler see Section "Boiler".

10.2.3 Panel Truma CP plus

The Truma CP plus operating panel is used to control and monitor the temperature (room/water temperature) and to adjust the air conditioning unit.

▷ Further information is available in the separate manufacturer's instruction manual.



1 Display
2 Status line
3 Menu line (above)
4 Menu line (below)
5 Display line voltage 230 V (mains current)
6 Display timer
7 Settings/values
8 Dial/push button
9 Back button

Fig. 98 Panel Truma CP plus

Button	Function
	Dial/push button
	Turn clockwise ● Pass through the menu from left to right. ● Increase values (+).
	Turn anticlockwise ● Pass through the menu from right to left. ● Decrease values (-).
	Tap ● Apply (store) a selected value. ● Selection of a menu item, change in the setting level.
	Pressing long ● Main switch function ON / OFF.
	Back button ● Jump out of the menu. ● Reject settings (the previous values are retained)

Menu	Description
	Change the room temperature. Adjustable temperature range: ● Heater = 5 - 30 °C (in 1 °C steps). ● Climate system = 16 - 31 °C (in 1 °C steps). ● Automatic climate control = 18 - 25 °C (in 1 °C steps).
	Change the hot water level.
	Select the energy type.

Menu	Description
	Select the fan levels.
	Set the timer.
	Switch the lighting on and off. Brightness selectable in 5 levels.
	Set the time.
	Call up the service menu.

Switching on and off

Switching on:

- Tap the dial/push button (Fig. 98,8).
  Previously selectable values/operating parameters are active again after switching on.

Switching off:

- Press the dial/push button (Fig. 98,8) longer than 4 seconds.
  The message "OFF" is shown in the display.

Setting the room temperature

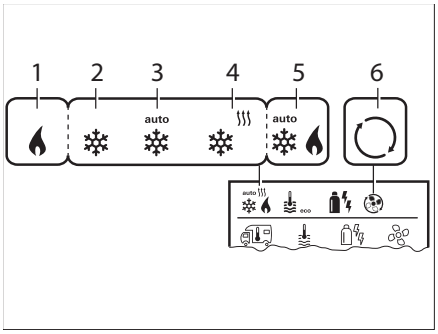


Fig. 99 Room temperature setting options

1 Heater* - Heater ON
2 COOL - Climate system ON
3 AUTO - Climate system set to automatic
4 HOT - Climate system in heating operation
5 AUTO - Automatic climate control* ON
6 VENT - Climate system in air circulation mode

* Symbol flashes until the desired room temperature is reached.

** Only if the automatic climate control was activated.

Changing the room temperature:

- Use the dial/push button (Fig. 98,8) to select the room temperature symbol and change to the setting level by tapping.
- Use the dial/push button to change between the heater, climate system or automatic climate control (depending on the connected devices not all the selection options are available).
- Confirm the selection by pressing the dial/push button (Fig. 98,8).
- Use the dial/push button (Fig. 98,8) to select the desired room temperature.
- Tap the dial/push button (Fig. 98,8) to confirm the value.

Changing the hot water level

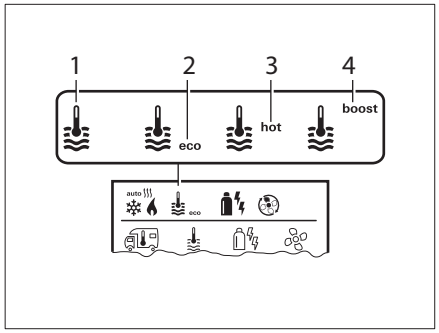


Fig. 100 Hot water setting options

– OFF - Hot water treatment OFF
1 Boiler* - Hot water treatment ON
2 eco** - Hot water temperature 40 °C
3 hot - Hot water temperature 60 °C
4 boost* - Rapid heating up of the boiler contents

* Symbol flashes until the desired water temperature is reached.

** Hot water temperature can only be kept at 40 °C for a limited period at combined room and water heating.

Changing the hot water level:

- Use the dial/push button (Fig. 98,8) to select the hot water level symbol and change to the setting level by tapping.
- Use the dial/push button (Fig. 98,8) to select the desired level.
- Tap the dial/push button (Fig. 98,8) to confirm the value.

Selecting the energy type

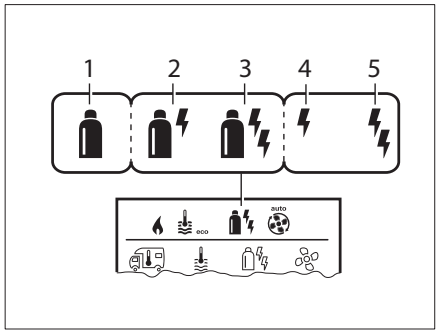


Fig. 101 Energy type setting options

1 Gas/diesel**
2 MIX 1* - Electrical (900 W + gas/ diesel)
3 MIX 2* - Electrical (1800 W + gas/ diesel)
4 EL 1* - Electrical (900 W)
5 EL 2* - Electrical (1800 W)

* Mix and electrical operation only possible at heaters with electrical heating rods.

** The output of the gas/diesel is specified in the heater instruction manual.

Selecting the energy type:

- Use the dial/push button (Fig. 98,8) to select the energy symbol and change to the setting level by tapping.
- Use the dial/push button (Fig. 98,8) to select the desired energy type.
- Tap the dial/push button (Fig. 98,8) to confirm the value.

Special points in mixed operation

Interruption of the 230 V power supply:
If the 230 V power supply is interrupted, the heater switches automatically into gas or diesel operating mode. As soon as the 230 V power supply returns, the heater switches automatically back to mixed operation.

Faults in the combustion process (e.g. lack of fuel):
Observe the instruction manual of the manufacturer.

Special points in electrical operation

If the 230 V power supply is interrupted and the 12 V supply switched on, an error code is shown on the display.

If the 230 V power supply is restored, the heater is started automatically with the previous settings. The error code extinguishes.

Selecting the fan level

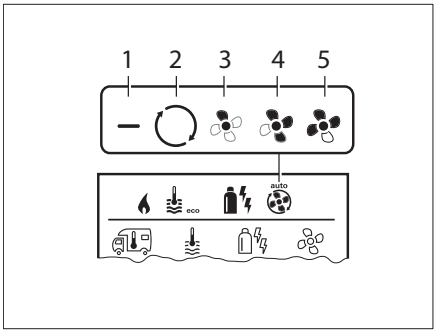


Fig. 102 Setting options fan heater

1 OFF - Fan OFF (no device in operation)
2 VENT - Air circulation (no device in operation and hot water treatment OFF)
3 ECO - Low fan level
4 HIGH* - High fan level
5 BOOST - Rapid room heating (if difference between selected and current room temperature >10 °C)

* Entails high power consumption, high noise level and increased motor wear.

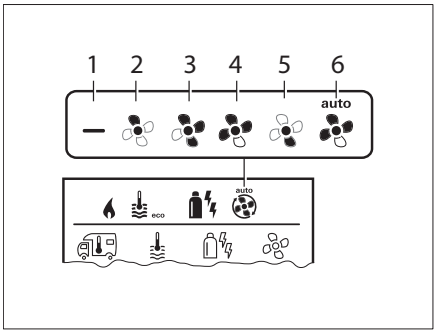


Fig. 103 Setting options fan climate system

1 OFF - Fan OFF (no device in operation)
2 LOW - Low fan level
3 MID - Middle fan level
4 HIGH - Highest fan level
5 NIGHT - Quiet fan operation
6 AUTO* - Automatic selection of the fan level

* Manual selection of the fan level is not possible at automatic climate control.

Selecting the fan level:

- Use the dial/push button (Fig. 98,8) to select the fan level symbol and change to the setting level by tapping.
- Use the dial/push button (Fig. 98,8) to select the desired fan level.
- Tap the dial/push button (Fig. 98,8) to confirm the value.

Setting the timer

▶ Danger of poisoning through exhaust gases in closed spaces (e.g. garage, workshop)!

If the motorhome is parked in closed spaces:

▶ Shut off the fuel supply (gas or diesel) to the heater.
▶ Deactivate the timer of the control unit (OFF).
▶ Switch off the heater at the control unit.

Setting the timer:

- Use the dial/push button (Fig. 98,8) to select the timer symbol and change to the setting level by tapping.
- Use the dial/push button (Fig. 98,8) to set the start time.
- Use the dial/push button (Fig. 98,8) to set the end time.
- Set the room temperature.
- Set the hot water level.
- Select the energy type (only for heater with electrical heating rods).
- Select the fan level (not at AUTO automatic climate control).

Activating the timer:

- Use the dial/push button (Fig. 98,8) to activate the timer (ON).
- Tap the dial/push button (Fig. 98,8) to confirm the value.
  The timer remains active until it is deactivated (OFF).
  If the timer is active, the timer symbol flashes.

Deactivating the timer:

- Use the dial/push button (Fig. 98,8) to deactivate the timer (OFF).
- Tap the dial/push button (Fig. 98,8) to confirm the value.

Switching the lighting on and off

Switching on the lighting:

- Use the dial/push button (Fig. 98,8) to select the lighting symbol and change to the setting level by tapping.
- Use the dial/push button (Fig. 98,8) to switch on the lighting and select one of the brightness levels 1-5.
- Tap the dial/push button (Fig. 98,8) to confirm the value.

Switching off the lighting:

- Use the dial/push button (Fig. 98,8) to select the lighting symbol and change to the setting level by tapping.
- Use the dial/push button (Fig. 98,8) to select the OFF function.
- Tap the dial/push button (Fig. 98,8) to confirm the value.

Setting the time

Setting the time:

- Use the dial/push button (Fig. 98,8) to select the time symbol.
  The hours display flashes.
- Use the dial/push button (Fig. 98,8) to set the hours.
- Tap the dial/push button (Fig. 98,8) to confirm the value.
  The minutes display flashes.
- Use the dial/push button (Fig. 98,8) to set the minutes.
- Tap the dial/push button (Fig. 98,8) to confirm the value.

Service menu

Available functions:

- OFFSET = Calibrate the room temperature sensor of the heater.
- AC SET = Set the offset between cooling and heating.
- ACC = Activate or disable the automatic climate control.
- TEMP = Select the temperature display in °C or °F.
- LIGHT = Change the background lighting in 10 levels.
- 12-24 h = Change the mode of the time display.
- SPR = Set the language.
- INDEX = Display the version number.
- RESET = Reset the control unit to the default settings.

▷ Further information is available in the separate manufacturer's instruction manual.

10.2.4 Heater for waste water tank and waste water pipes (winter comfort package)

▷ Take the battery consumption into account! The heater for the waste water tank and waste water pipes can only be operated for a limited period without an external power supply.

In order to prevent waste water fittings freezing up, the waste water tank and the waste water pipes can be electrically heated separately.

When the heater is turned on, temperature sensors monitor the temperature of the waste water tank and the waste water pipes. If the temperature falls below 5 °C, the heating elements are switched on and the waste water tank and waste water pipes are heated. If the temperature rises above a certain level, the heating elements are switched off again.

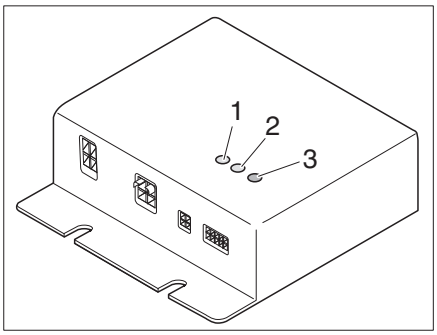


Fig. 104 Control unit

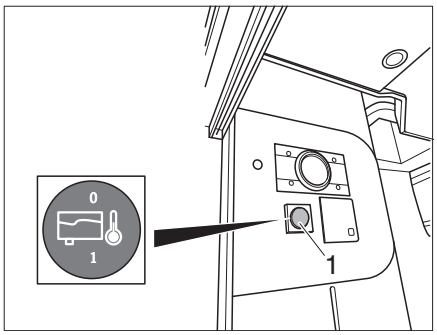


Fig. 105 Reserve switch

The control unit (Fig. 104) is installed in the wardrobe. The control lamps on the control unit have the following meanings:

- The indicator LED (Fig. 104,1) HC1 lights up in green: Heating circuit 1 is operating
- The indicator LED (Fig. 104,2) HC2 lights up in green: Heating circuit 2 is operating
- Fault LED (Fig. 104,3)

To turn it on and off, use the reserve switch (Fig. 105) for the waste water tank heater on the panel.

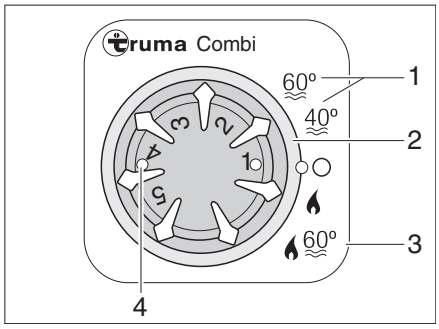
10.3 Boiler

- ▶ Never let gas escape unburned due to danger of explosion.
- ▶ When filling the fuel tank, on ferries or in the garage, never run the boiler in gas operation. Danger of explosion!
- ▶ Never operate the boiler in gas operation in closed rooms (e.g. garages). Danger of poisoning and suffocation!
- ▶ The water in the boiler can be heated up to 60 °C. Risk of scalding!

- ▷ Never use boiler when empty.
- ▷ If the boiler is not being used, empty it if there is any risk of frost.
- ▷ Only operate the boiler with the maximum temperature setting if you require a large quantity of warm water. This protects the boiler against the build-up of limescale.

- ▷ Do not use the water from the boiler as drinking water.

10.3.1 Truma Combi boiler



1 Summer operation water temperature 40 °C or 60 °C
2 Rotary switch
3 Winter operation "Heater and boiler"
4 Indicator lamp yellow/red:
Lights up yellow = "Boiler heating-up phase"
Flashes/lights up red = "Fault"

Fig. 106 Operating unit for heater/boiler

The boiler is integrated in the heater system and operates on gas. The boiler is switched on by turning the rotary switch (Fig. 106,2) on the operating unit (Fig. 106).

In winter operation "Heater and boiler" (Fig. 106,3) the water is automatically heated up when the heater is switched on. If the heater switches off after the required room temperature has been reached, the boiler will continue to heat up until the set water temperature has been reached.

In summer operation (Fig. 106,1) only the water in the boiler is heated up to either 40 °C or 60 °C. The water is heated to 60 °C in approx. 25 minutes. The yellow indicator lamp (Fig. 106,4) illuminates during the boiler heating-up period.

The power supply for the appliance cannot be interrupted by means of the 12 V main switch. When there is a fault, the red indicator lamp (Fig. 106,4) on the operating unit illuminates (see Chapter 14).

Safety/drainage valve

The boiler is equipped with a safety/drainage valve (Fig. 107). The safety/drainage valve prevents water in the boiler from freezing, when there is frost and the heater is not switched on. The safety/drainage valve is installed near the heating.

▷ When the vehicle is not used for a long period of time, open the safety/drainage valve and drain the boiler.

▷ At temperatures below approx. 3 °C the safety/drainage valve opens automatically. Before filling the boiler switch on the heater and wait until the temperature of the safety/drainage valve exceeds 7 °C. Only then can the safety/drainage valve be closed again.

▷ The water pump and the water fittings are not protected against freezing by the safety/drainage valve.

▷ The drainage neck of the safety/drainage valve has to be free of dirt (e.g. leaves, ice) at all times.

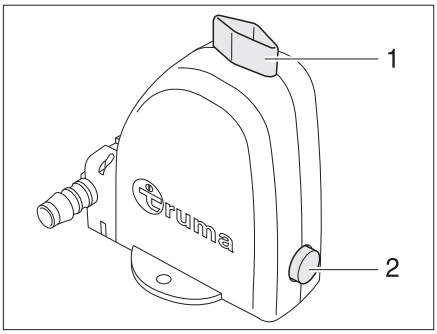


Fig. 107 Safety/drainage valve of the boiler

Winter operation In the "Heater and boiler" switch setting in winter operation, the boiler is already switched on.

Summer operation In summer operation the water can be heated to 40 °C or 60 °C.

Switching on:

- Open the regulator tap on the gas bottle and the gas isolator tap "Heater/Boiler".
- Set the rotary switch (Fig. 106,2) on the operating unit (Fig. 106) to "Summer operation" (Fig. 106,1).

The yellow indicator lamp (Fig. 106,4) lights up during the heating up period. When the set water temperature is reached, the period of heating up is finished and the yellow indicator lamp fades.

Switching off:

- Set the rotary switch (Fig. 106,2) on the operating unit (Fig. 106) to "O".
- Close the gas isolator tap "Heater/Boiler" and the main regulator tap on the gas bottle.

Filling/emptying the boiler The boiler can be supplied with water from the water tank.

Filling the boiler with water:

- Switch on 12 V power supply on the panel.
- Close the safety/drainage valve. To so so turn the knob (Fig. 107,1) crosswise to the safety/drainage valve and press in the push button (Fig. 107,2).
- Set all the water taps to "Hot" and open them. The water pump is turned on. The hot water pipes are filled with water.
- Keep the taps open until the water flowing out of the taps has no bubbles in it. This is the only way to ensure that the boiler is full of water.
- Close all water taps.

Emptying the boiler:

- Set the rotary switch (Fig. 106,2) on the operating unit (Fig. 106) to "O".
- Open the safety/drainage valve. To so so turn the knob (Fig. 107,1) parallel to the safety/drainage valve. The push button (Fig. 107,2) trips. The boiler is drained to the outside by the safety/drainage valve.
- Check whether the water has been drained completely from the boiler (approx. 10 litres).

▷ Further information can be obtained from the separate instruction manual "Boiler".

10.4 Gas cooker

- ▶ Never let gas escape unburned due to danger of explosion.
- ▶ Before using the cooker make sure that there is sufficient ventilation. Open windows or the skylight.
- ▶ Do not use gas cooker or gas oven for heating.
- ▶ Always protect your hands with cooking gloves or potholders when handling hot pots, pans and similar items. There is a risk of injury!
- ▶ During activation and operation of the gas cooker, no flammable or easily combustible objects such as dishcloths, napkins etc. may be near the gas cooker. Fire hazard!
- ▶ The process of ignition must be visible from above and must not be covered by cooking pans placed on the cooker.
- ▶ Depending on the model, the gas cooker lid is held closed by a spring. When closing there is danger of getting injured!

- ▷ Do not use the glass gas cooker lid as a hob.
- ▷ Do not close the gas cooker lid while the gas cooker is in operation.
- ▷ Do not apply pressure on the gas cooker lid when it is closed.
- ▷ Do not place hot cooking pans on the gas cooker lid.
- ▷ Keep the gas cooker lid open after cooking as long as the burner emits heat. The glass plate could otherwise burst.

- ▷ Use only pots and pans whose diameter is suitable for the burner grates of the gas cooker.
- ▷ When the flame fades, the thermocouple automatically cuts the gas supply.
- ▷ Further information can be obtained from the separate instruction manual "Gas cooker".

The vehicle kitchen unit is fitted with a two-burner gas cooker.

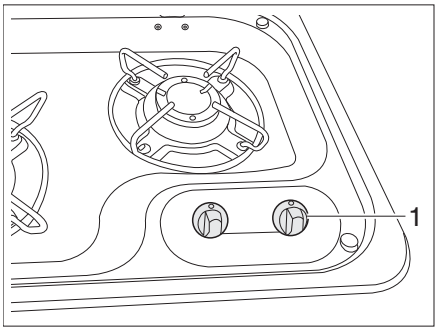


Fig. 108 Operating controls for gas cooker

Switching on:

- Open the regulator tap on the gas bottle and the gas isolator tap "Cooker".
- Open the gas cooker lid.
- Turn the control knob (Fig. 108,1) on the burner you wish to use to the ignition position (large flame).
- Press down the control knob and hold it down.
- Ignite the burner with a gas lighter, a match or with other suitable means of lighting.
- When the flame burns, hold the control knob down for 10 to 15 seconds, until the thermocouple keeps the gas supply automatically open.
- Release the control knob and turn to the desired setting.
- If ignition was not successful, repeat the entire procedure.

Switching off:

- Turn the control knob (Fig. 108,1) to the 0-position. The flame fades.
- Close the gas isolator tap "Cooker" and the regulator tap on the gas bottle.

10.5 Refrigerator

During the journey, only operate the refrigerator via the 12 V power supply. At high ambient temperatures full cooling power is not possible. When external temperatures are high, full cooling power of the cooling unit is only ensured if the refrigerator is ventilated sufficiently. The refrigerator ventilation grill can be removed in order to achieve a better ventilation.

▷ When leaving the vehicle, always fit the refrigerator ventilation grills. Otherwise water could penetrate during rain.

10.5.1 Refrigerator ventilation grill

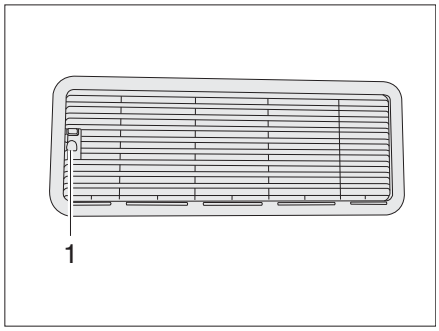


Fig. 109 Refrigerator ventilation grill (Dometic small)

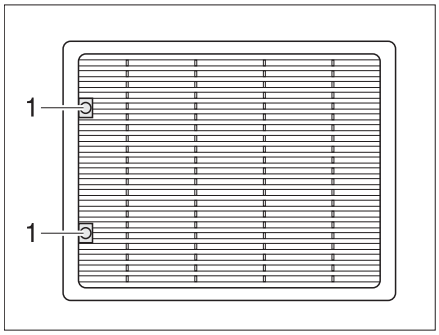


Fig. 110 Refrigerator ventilation grill (Dometic large)

Removal:

- Press the latch (Fig. 109,1 or Fig. 110,1).
- Remove the refrigerator ventilation grill.

10.5.2 Operation (Dometic 5 series)

Operating modes

The refrigerator has 2 operating modes:

- Gas operation
- Electrical operation (230 VAC or 12 VDC)

The operating mode is set with the operating controls on the refrigerator panel. Infinitely variable regulation of the cooling power is only possible with gas operation and when the refrigerator is operated with 230 V. It is not possible with 12 V operation.

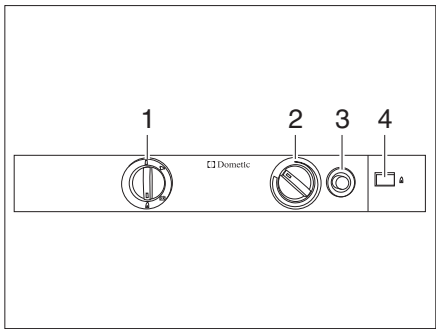
▷ Select only one energy source.

▷ Even when the 12 V supply is switched off, a small electrical current flows which puts an extra load on the living area battery. Always switch the refrigerator off during a temporary lay-up.

Gas operation

▶ Never let gas escape unburned due to danger of explosion.

▶ Gas operation of the refrigerator with liquefied petroleum gas is not permissible.



1 Energy selector switch
2 Control knob for setting the temperature
3 Gas ignition button
4 Flame indicator

Fig. 111 Operating controls for the refrigerator

Switching on:

- Open the regulator tap on the gas bottle and the gas isolator tap "Refrigerator".
- Set the energy selector switch (Fig. 111,1) to "⌂".
- Press the control knob (Fig. 111,2), turn it to highest level and keep it pressed. Wait until gas gets into the burner.
- Press the gas ignition button (Fig. 111,3) and keep it pressed. Ignition is carried out automatically.
- Keep the gas ignition button (Fig. 111,3) pressed until the flame indicator (Fig. 111,4) turns green, then release.
- Keep the control knob (Fig. 111,2) pressed for another 10 to 15 seconds, then release it.
- Use the control knob to adjust the refrigerating temperature.

Switching off:

- Set the energy selector switch to "O". Refrigerator is switched off.
- Close the gas isolator tap "Refrigerator" and the regulator tap on the gas bottle.

Electrical operation

▷ Close the gas isolator tap "Refrigerator" when the refrigerator is operated electrically.

The refrigerator can be operated with the following voltages:

- 230 VAC
- 12 VDC

Switching the 230 V operation on:

- Set the energy selector switch (Fig. 111,1) to "⏦" .
- Use the control knob (Fig. 111,2) to adjust the refrigerating temperature.

Switching the 230 V operation off:

- Set the energy selector switch to "▯". Refrigerator is switched off.

Switching the 12 V operation on:

- Set the energy selector switch (Fig. 111,1) to "+ -".

Switching the 12 V operation off:

- Set the energy selector switch to "O". Refrigerator is switched off.

When operated with 12 V, the refrigerator draws power only from the starter battery. The starter battery only supplies the refrigerator with 12 V when the vehicle engine is running. When the vehicle engine is not running, the refrigerator is cut off from the power supply in the living area. For this reason, change over to gas operation during prolonged driving breaks.

▷ Further information can be obtained in the appliance manufacturer's instruction manual.

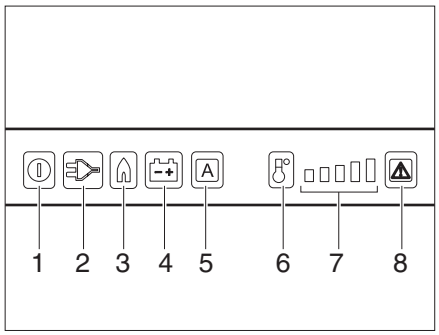
10.5.3 Operation (Dometic 9 series)

Operating modes

The refrigerator has 2 operating modes:

- Gas operation
- Electrical operation (230 VAC or 12 VDC)

The operating mode is set with the operating controls on the refrigerator panel. It is effected automatically or manually. Infinitely variable regulation of the cooling power is only possible with gas operation and when the refrigerator is operated with 230 V. It is not possible with 12 V operation.



1 On/Off button
2 Energy selector button 230 V AC
3 Energy selector button Gas
4 Energy selector button 12 V DC
5 Selector button Automatic
6 Temperature level button
7 Temperature level display
8 LED fault/reset button GAS FAULT

Fig. 112 Operating controls for the refrigerator

Automatic operation

In Automatic mode the electronics automatically switches between the three possible energy sources 230 V, 12 V, liquefied gas.

- Press the On/Off button (Fig. 112,1) for approx. 2 seconds. The refrigerator starts with the energy source mode last selected.
- Press the selector button Automatic (Fig. 112,5).

Manual mode

- ▶ Never let gas escape unburned due to danger of explosion.
- ▶ Gas operation of the refrigerator with liquefied petroleum gas is not permissible.

Gas operation:

- Open the regulator tap on the gas bottle and the gas isolator tap "Refrigerator".
- Press the On/Off button (Fig. 112,1) for approx. 2 seconds. The refrigerator starts with the energy source mode last selected.
- Press the energy selector button Gas (Fig. 112,3).

230 V operation:

- Press the On/Off button (Fig. 112,1) for approx. 2 seconds. The refrigerator starts with the energy source mode last selected.
- Press the energy selector button 230 V AC (Fig. 112,2).

12 V operation:

- Press the On/Off button (Fig. 112,1) for approx. 2 seconds. The refrigerator starts with the energy source mode last selected.
- Press the energy selector button 12 V DC (Fig. 112,4).

Setting the temperature in the refrigerator

- Press the temperature level button (Fig. 112,6). The corresponding LED of the temperature level display (Fig. 112,7) lights up.

The scale begins with the MIN position at the left-hand display LED (small bar = warmest temperature) and reaches to the MAX position at the right-hand display LED (large bar = coldest temperature).

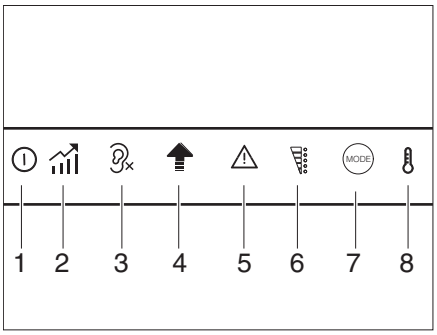
Switching off the refrigerator

- Press the On/Off button (Fig. 112,1) for longer than 2 seconds. The refrigerator switches off.
- In gas operation: Close the gas isolator tap "Refrigerator" and the regulator tap on the gas bottle.

10.5.4 Operation (Dometic 10 series)

Operating modes

The refrigerator is a compressor refrigerator designed for operation with a 12 V DC power supply.



1 On/Off button
2 Mode performance
3 Quiet mode
4 Boost mode
5 Error message
6 Temperature level display
7 Mode button
8 Temperature level button

Fig. 113 Operating controls for the refrigerator

Switching on the refrigerator

- Press the On/Off button (Fig. 113,1) for approx. 2seconds. The refrigerator starts with the last selected settings.
- Press the mode button (Fig. 113,7) repeatedly until the LED displays the desired operating mode.

Setting the temperature in the refrigerator

- Press the temperature level button (Fig. 113,8) repeatedly until the desired temperature (Fig. 113,6) is displayed.

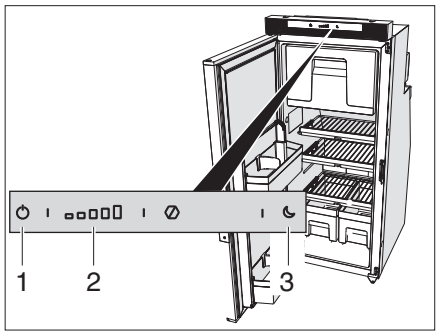
Switching off the refrigerator

- Press the On/Off button (Fig. 113,1) for 4 seconds. The refrigerator switches off.

10.5.5 Operation (Thetford T2090)

Operating modes

The refrigerator is only operated with 12 V DC.



1 On/Off button
2 Refrigerator temperature setting
3 Night mode button

Fig. 114 Operating controls in the refrigerator

Switching on:

- Press the On/Off button (Fig. 114,1) again and keep pressed for a few seconds.

Switching off:

- Press the On/Off button (Fig. 114,1) again and keep pressed for a few seconds.

Setting the cooling level in the refrigerator:

- Press or slide symbols on the refrigerator temperature setting button (Fig. 114,2) to select the desired cooling level. After a few seconds, the control panel will save the settings and change to the locked standby mode.

▷ The temperature in the refrigerator depends on the ambient temperature (location), how often the door is opened and how full it is. If necessary, adjust the cooling level.

▷ Further information can be obtained in the manufacturer's instruction manual.

10.5.6 Refrigerator door locking mechanism

▷ During the journey the refrigerator door must always be closed and be locked in the closed position.

▷ When the refrigerator is switched off, bring the refrigerator door into the ventilation position and lock it in place if possible. This prevents mould from forming.

There are two positions for locking the refrigerator door in place:

- Closed refrigerator door during travel and when the refrigerator is in operation
- Slightly opened refrigerator door as a ventilation position when the refrigerator is switched off

Dometic 5 series

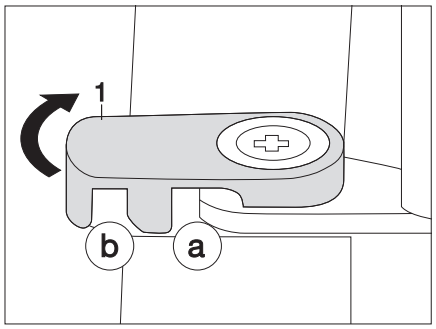


Fig. 115 Locking the refrigerator door

Opening:

- Turn the locking lever (Fig. 1151) to the side.
- Open the refrigerator door by the recessed grip or by the curved handle.

Locking:

- Fully close the refrigerator door.
- Turn the locking lever (Fig. 1151) to the locking position a.
  The refrigerator door is closed and locked.

Locking in the ventilation position:

- Slightly open the freezer compartment and the refrigerator door.
- Turn the locking lever (Fig. 1151) to the locking position b.
  The refrigerator door is locked in the ventilation position.

Dometic 9 series

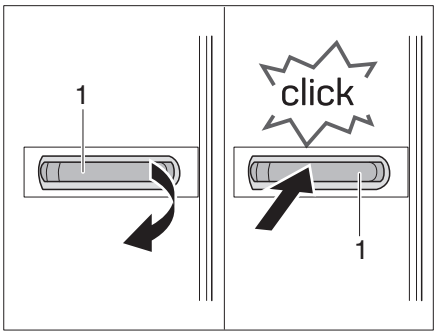


Fig. 116 Opening/closing the refrigerator door

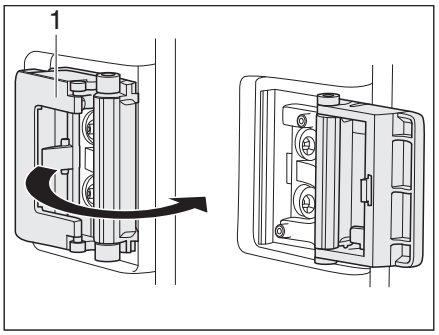


Fig. 117 Locking/releasing the refrigerator door

Opening/closing:

- Pull the door handle (Fig. 116/1).
  The refrigerator door is opened.
- Push the refrigerator door closed at the door handle (Fig. 116/1).
  The refrigerator latches audibly into the locking mechanism. The door is closed correctly for door operation if an audible click can be heard.

Locking in the ventilation position:

- Pull the locking hook (Fig. 117/1) forwards.
  When the refrigerator door is closed it remains slightly open in order to avoid mould formation.

Thetford, locking mechanism on side

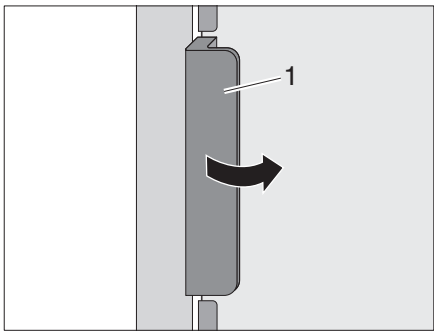


Fig. 118 Opening the refrigerator door

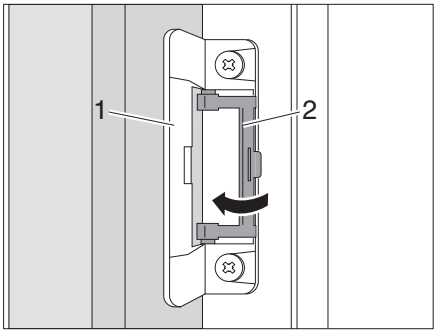


Fig. 119 Locking in the ventilation position

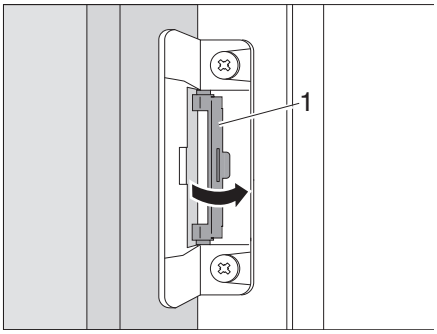


Fig. 120 Turning the locking mechanism back to the initial position

Opening:

- Open the refrigerator door using the handle (Fig. 118,1). The locking mechanism (Fig. 119,1) is released automatically.

Closing:

- Fully close the refrigerator door. Ensure that the locking mechanism latches in.

Locking in the ventilation position:

- Open the refrigerator door.
- Fold open the latching mechanism (Fig. 119,2).
- Close the refrigerator door until a click noise is audible.
- Check whether the refrigerator door is open slightly.

Deactivating the ventilation position:

- Turning the locking mechanism (Fig. 120,1) back to the initial position.
- Check whether the refrigerator door closes.

11.1 Water supply, general

- ▶ Fill the water tank with fresh water only.
- ▶ Water left standing in the water tank or in the water pipes becomes undrinkable after a short period. For this reason, rinse the water pipes and the water tank thoroughly with several litres of fresh water before each use of the vehicle. To do this, open all water taps. After each use of the vehicle completely empty the water tank 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 taps on in central position. Leave the safety/drainage valve (if available) and all drain cocks 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 tank is empty.

The vehicle is equipped with a fitted water tank. An electric water pump pumps the water to the individual water taps. Opening a water tap automatically switches on the water pump and pumps water to the tap.

The waste water tank collects the waste water. The water level in the water and waste water tanks can be checked on the panel.

- ▷ Before using the water fittings, the 12 V power supply on the panel must be switched on. Otherwise the water pump will not work.
- ▷ The water supply system conforms to the latest state of technology 03/2009 (Directive 2002/72/EC).

11.2 Water tank

- ▶ There are 2 caps (Fig. 121, 1) at the water tank.
  Check before the journey whether **both** caps are closed. Observe the warning sign (Fig. 122).

Volume The water tank holds approx. 100 l.

Fresh water filler neck The fresh water filler neck is located on the right-hand side of the vehicle.

The fresh water filler neck is identified by the symbol ( )" or the word "WASSER" ("WATER").

The cap is opened or closed using the key for the external flap locks (see Chapter 7).

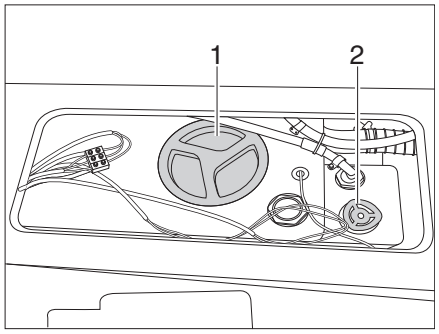


Fig. 121 Water tank

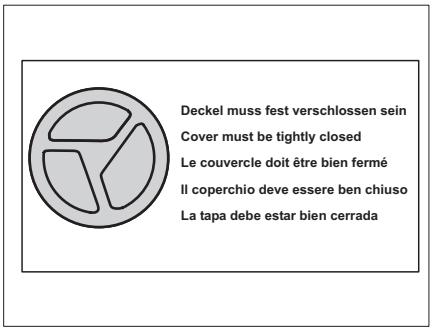


Fig. 122 Warning sign cap

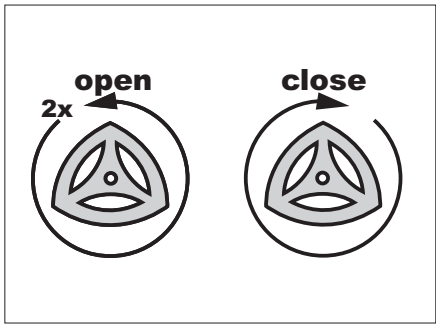


Fig. 123 Water tank fill - drain

Filling with water:

- Turn the adjusting wheel (Fig. 121, 2) as far as possible in a clockwise direction.
  The drainage opening in the water tank is closed.
- Open the fresh water filler neck at the vehicle.
- Fill the water tank with fresh water. Use a water hose, a water canister with a funnel or similar for filling.
- Close the fresh water filler neck.
- Screw the cap (Fig. 121, 1) back onto the water tank.

Draining water:

- Turn the adjusting wheel (Fig. 121, 2) 2 rotations anticlockwise (see also Fig. 123).
  The drainage opening in the water tank is opened and the water is drained.
- Screw the cap (Fig. 121, 1) back onto the water tank.

11.2.1 20 l maximum filling

In order to reach the permissible payload the water tank can be drained down to 20 litres.

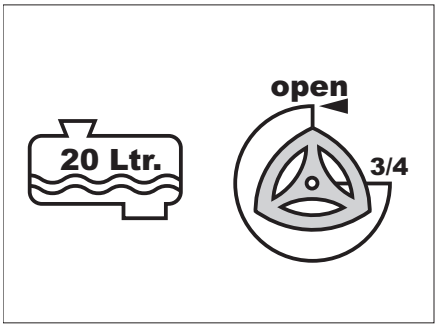


Fig. 124 20 l maximum filling

Drain the water to 20 l:

- Turn the adjusting wheel (Fig. 121, 2) ¾ of a rotation anticlockwise. The fresh water is drained down to 20 litres (see also Fig. 124).

11.2.2 Underfloor water tank

Volume The underfloor water tank holds approx. 100 l.

A cover is located on the bottom side of the water tank.
▷ Check whether the cover is securely on before use.

Filling with water:

- Open the fresh water filler neck at the vehicle.
- Fill the water tank with fresh water. Use a water hose, a water canister with a funnel or similar for filling.
- Close the fresh water filler neck.
- Screw the cap (Fig. 121, 1) back onto the water tank.

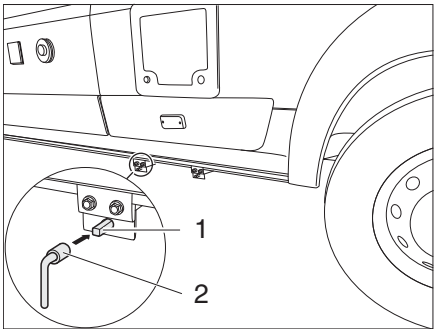


Fig. 125 Operating the fresh water tap

Fig. 126 Fresh water tank symbol

Draining water:

- Place key (Fig. 125,2) onto the square bolt (Fig. 125,1).
- In order to open the fresh water tap, turn the square bolt (Fig. 125,1) a quarter turn anticlockwise.
- Completely empty the underfloor water tank.
- To close the fresh water tap, turn the square bolt back clockwise as far as it will go.

▷ Risk of frost damage! The underfloor water tank is not heated. Empty if there is a risk of frost - see how to empty the water system in section 11.4.

11.3 Waste water tank

▷ In case of frost add so much anti-freeze (such as kitchen salt) to the waste water tank 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 tank at disposal stations, at camping sites or caravan sites, that are especially provided for this purpose.

The waste water tank is located under the vehicle floor.

The drain cock and the cleaning opening are located at the bottom of the waste water tank.

Volume The waste water tank holds approx. 90l.

Cleaning Clean the waste water tank several times per year (see Chapter 12).

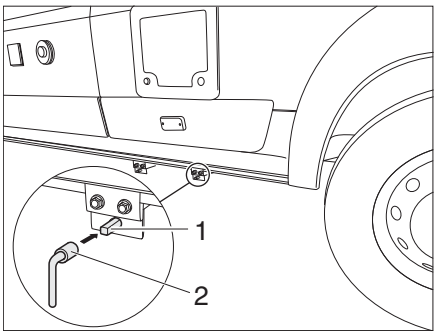


Fig. 127 Operation of the waste water tap

Fig. 128 Waste water tank symbol

The square bolt for opening the waste water tap is directly accessible under the vehicle floor.

Emptying:

- Place key (Fig. 127,2) onto the square bolt (Fig. 127,1).
- In order to open the waste water tap, turn the square bolt (Fig. 127,1) a quarter turn anticlockwise.
- Completely empty waste water tank.
- To close the waste water tap, turn the square bolt back clockwise as far as it will go.

11.4 Water system

▶ When filling the water tank, observe the maximum permissible gross weight of the vehicle.

▷ The water pump will overheat without water and can get damaged. Never operate water pump when the water tank 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 taps on in central position. Leave the safety/drainage valve (if available) and all drain cocks open. Frost damage to appliances, frost damage to the vehicle and deposits in water-carrying components can be avoided in this way.

▷ The water level can be checked on the panel while the water tank is being filled.

Filling:

- Position the vehicle horizontally.
- Close all water taps.
- Switch on 12 V power supply on the panel.
- Close the safety/drainage valve (Truma). To so so turn the knob cross-wise to the safety/drainage valve and press in the push button.
  If the temperature is below approx. 7 °C, the safety/drainage valve cannot be closed. Therefore switch on the living area heater and wait until the living area temperature exceeds approx. 7 °C.
- Fill the water tank with fresh water. Use a water hose, a water canister with a funnel or similar for filling.
- Set all the water taps to "Hot" and open them. The water pump is turned on. The hot water pipes are filled with water.
- Keep the taps open until the water flowing out of the taps has no bubbles in it. This is the only way to ensure that the boiler is full of water.
- Set all water taps to "Cold" and leave them open. This will fill the cold water pipes with water.
- Keep the taps open until the water flowing out of the taps has no bubbles in it.
- Close all water taps.

Emptying:

- Position the vehicle horizontally.
- Switch off the 12 V power supply on the panel.
- Switch off the 230 V power supply on the 230 V fuse box.
- Open all water taps and set to the central position.
- Pull out the shower handset (Fig. 129, 1) and let it drain.
- Switch off boiler.
- Open the safety/drainage valve. To so so turn the knob parallel to the safety/drainage valve. The push button trips.
- Turn the adjusting wheel (Fig. 121, 2) 2 rotations anticlockwise.
- Check the water drainage.
- Empty the waste water tank. Take note of the environmental tips in this chapter.

- Empty Thetford cassette. Take note of the environmental tips in this chapter.
- Rinse the water tank thoroughly.
- Let the water system dry for as long as possible.
- After emptying, leave all water taps on in the central position.
- Leave all drain cocks open.

11.5 Toilet compartment

▷ Do not transport loads in the shower tray. The shower tray or other items of equipment in the toilet compartment can otherwise be damaged.

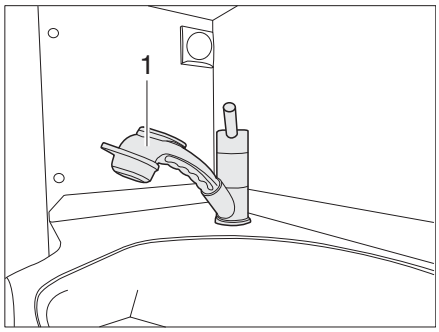


Fig. 129 Shower handset

▷ For ventilation purposes during or after a shower, and for drying wet clothing, close the toilet compartment door and open the toilet compartment window or skylight. This improves the air circulation.

▷ Use the shower handset (Fig. 129,1) to shower. Pull out the shower handset to do so.

▷ Close the shower curtain completely while showering, so that water cannot penetrate between the washroom wall and the shower tray.

▷ After using the shower, wipe it dry to prevent moisture from collecting.

▷ Further information about cleaning the toilet compartment can be found in Section 12.2.

11.6 Vario toilet compartment

Depending on the model, the vehicle is fitted with a Vario toilet compartment. The toilet compartment can be changed in just a few steps so that an enclosed cubicle is available for showering.

11.6.1 Converting into a shower cubicle

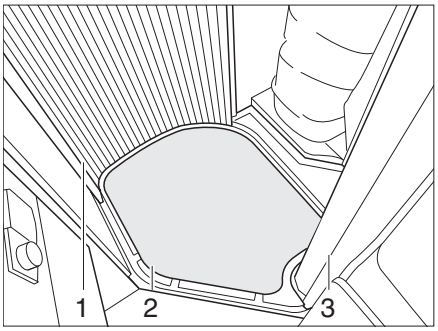


Fig. 130 Cover of the shower tray

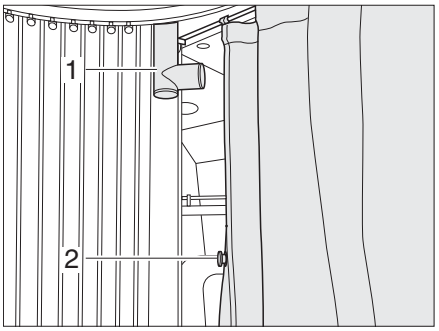


Fig. 131 Fastening the shower curtain

- Remove the cover of the shower tray (Fig. 130,2).
- Completely pull closed the shower curtain (Fig. 130,1 and 3).
- Take out the shower handset and insert it into the holder (Fig. 131,1).
- Close the shower curtain leading to the toilet with the magnet (Fig. 131,2) or the snap fasteners.

11.6.2 Conversion to toilet compartment

Conversion to the toilet compartment is carried out in the reverse order to conversion to a shower cubicle.

▷ To ventilate during or after a shower open the window of the Vario toilet compartment.

▷ Let the shower curtain dry completely before closing.

▷ After using the shower tray, wipe it dry to prevent moisture from collecting.

11.7 Thetford toilet

▷ If there is any risk of frost and the vehicle is not heated, empty the Thetford cassette.

▷ Do not sit on the lid of the toilet. The lid is not designed to bear the weight of a person and could break.

▷ Use a suitable chemical for this toilet. The ventilation will merely remove the odour but not germs and gases. Germs and gases will have a detrimental effect on the sealing rubbers.

▷ Only empty the Thetford cassette at disposal stations, at camping sites or caravan sites, that are especially provided for this purpose.

The flushing of the Thetford toilet is fed directly from the water system of the vehicle. The toilet bowl can be moved into the optimal position.

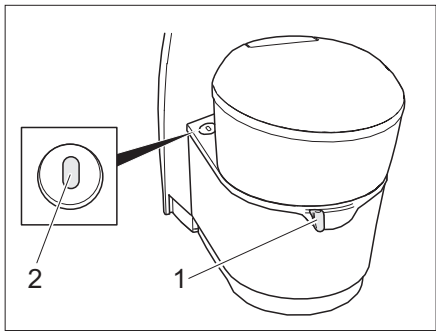


Fig. 132 Thetford toilet bowl, swivelling

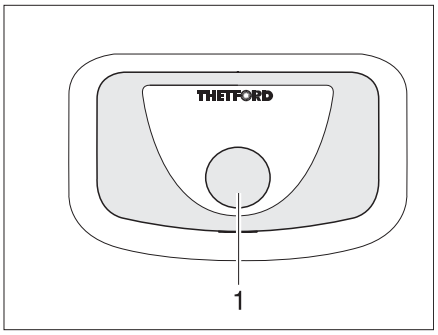


Fig. 133 Thetford toilet flush button

Using:

- Before using open the sliding trap of the Thetford toilet. To do this, push the slide lever (Fig. 132,1) anticlockwise.
- For flushing, press the blue flush button (Fig. 133,1).
- After flushing close the sliding trap. To do this push the slide lever in a clockwise direction.

The display (Fig. 132,2) becomes red when the Thetford cassette has to be emptied.

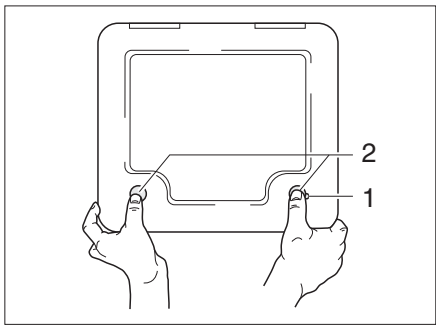


Fig. 134 Flap for Thetford cassette

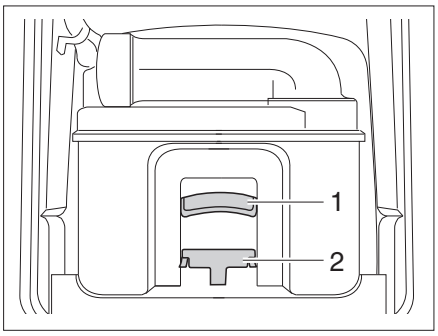


Fig. 135 Thetford cassette

Removing the Thetford cassette:

- Push the slide lever (Fig. 132,1) in a clockwise direction. The sliding trap is closed. To empty, the sliding trap of the Thetford toilet **must** be closed.
- Open the flap for the Thetford cassette on the outside of the vehicle. Insert the key into the locking cylinder of the push-button lock (Fig. 134,1) and turn a quarter turn in a clockwise direction.
- Remove the key.
- Press both push-button locks (Fig. 134,2) simultaneously with your thumb and open the flap for the Thetford cassette.
- Pull the holding bracket (Fig. 135,1) upwards and pull out the Thetford cassette (Fig. 135,2).

Emptying the Thetford cassette:

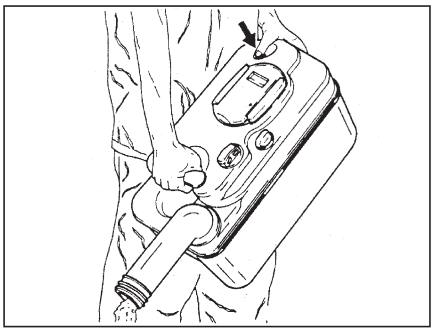


Fig. 136 Emptying the Thetford cassette

- Take the cassette to a disposal point provided to this purpose. Keep the drainage neck pointing upwards in the process.
- If required, turn the drainage neck upwards.
- Remove the cap of the drainage neck.
- Point the cassette with the drainage neck downwards.
- Press the aeration knob with your thumb. The cassette empties.
- Close the drainage neck by putting the cap on.
- If necessary turn the drainage neck back into position.
- Slide the cassette back into its place.
- Ensure that the cassette is secured by the holding bracket (Fig. 135,1).
- Close the flap for the cassette

▷ Further information can be obtained from the separate "Thetford cassette" instruction manual.

12.1 External care

12.1.1 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.

12.1.2 Washing the vehicle

▷ Never have the vehicle cleaned in a car wash. Water can penetrate in the refrigerator grills, the waste gas vents, the ventilations of the extractor hoods or 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.
- Only clean external applications and synthetic parts with plenty of warm water, dish washing liquid 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.
- Add-on parts made of glass-fibre reinforced plastic (GRP) require a regular follow-up treatment with a polisher. This way these parts will not turn yellow and the sealing of the surface remains intact.
- Treat rubber seals of doors and storage flaps with talc.
- Treat locking cylinder of doors and storage flaps with graphite dust.

12.1.3 Windows of acrylic glass

Acrylic glass windows are delicate and require very careful handling.

▷ Never rub acrylic glass windows when dry as dust particles might damage the surface.

▷ Only clean acrylic glass windows with plenty of warm water, dish washing liquid and a soft cloth.

▷ Never use glass cleaning agents with chemical, abrasive or alcohol-containing additives. Premature brittleness of the panes and associated cracks may result from their use.

▷ Avoid contact of cleansing agents used for the body (e.g. tar- or silicone-removing agents) with acrylic glass.

▷ Do not drive into car wash units.

▷ Do not apply stickers to the acrylic glass windows.

▷ After cleaning the vehicle rinse the acrylic glass windows again with sufficient clear water.

▷ Treat rubber seals with glycerine.

▷ Acrylic glass cleanser with antistatic effect is suitable for a follow-up treatment. Small scratches can be treated with acrylic glass polish. These agents are available at the accessories shop.

12.1.4 Waste water tank

Clean the waste water tank after every use of the vehicle as motorhome, at least several times a year.

Cleaning:

- Empty the waste water tank.
- Thoroughly rinse out the waste water tank with fresh water.
- If possible, clean waste water sensors through the cleaning opening by hand.

12.1.5 Entrance step

If the entrance step is lubricated, coarse particles of dirt can settle on the lubricant during the journey and cause damage to the operating mechanism of the entrance step. Therefore, do not lubricate the moving parts of the entrance step.

12.1.6 Pop-up roof

The care and maintenance instructions described in the following must be carried out several times, but at least once per year, depending on how often roof is used:

- In order the ensure the cloth bellows are properly maintained, treat them with a standard impregnation substance before the start of the season.
- The cloth bellows should be ventilated several times throughout the year to ensure no musty smells develop.
- The cloth bellows must never be shut in a moist or wet condition. If you do so nevertheless, it must be dried completely as soon as possible.
- The operating instructions must be followed to close the roof.
- Apply talc or a comparable product to the rubber seals at the roof shell before winter sets in so that the seals does not freeze to the vehicle body during cold weather.
- For the version with roof locking, the locking bolt and all moving parts of the lock must be lubricated to ensure it moves seamlessly.
- For the version with a belt lock check the belts and the hook clips for function and damage.
- The roof must be cared for in accordance with the paint care instructions issued by the respective vehicle manufacturer. Standard paint care products can be used.

12.2 Internal care

- ▷ If possible, treat stains immediately.
- ▷ Acrylic glass windows are delicate and require very careful handling (see Section 12.1.3).
- ▷ Synthetic parts in the toilet and living area are very delicate and should be treated with care. Do not use solvents, alcohol-containing cleansers 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 toilet and 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 toilet and 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 loose its colour.
- ■ Curtains and net curtains should be dry cleaned.
- ■ Clean PVC-floor covering with a mild, soapy cleanser for PVC floors. Do not place carpet on wet PVC-floor covering. The carpet and the PVC-floor covering may stick together.
- ■ 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.
- ■ Brush insect screens on windows and skylights with a soft brush or vacuum with the brush attachment of the vacuum cleaner.
- ■ Brush blinds with a soft brush or vacuum with the brush attachment of the vacuum cleaner. Grease or stubborn dirt may be removed with a mild soap at 30 °C (curd soap).
- ■ Brush Roman shades with a soft brush or vacuum with the brush attachment of the vacuum cleaner. Grease or stubborn dirt may be removed with a mild soap at 30 °C (curd soap).
- ■ Unrolled seat belts can be cleaned with warm soapsuds. The seat belt must be completely dry before being rolled up.
- ■ Clean water tank with water and dish washing liquid and rinse subsequently with plenty of fresh water.

12.3 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.

▷ If there is any risk of frost, cover the outside surface of the windows with winter insulation mats.

12.3.1 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 and roof storage cabinets, curtains and blinds should be opened. 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.

12.4 Lay-up

12.4.1 Temporary lay-up

▶ If the vehicle has been stationary for a long 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.

Before laying up the vehicle, go through the following checklist:

	Activities	Done
Base vehicle	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 4 weeks. 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	
	Clean refrigerator	
	Allow refrigerator and freezer compartment doors to remain slightly open	
Gas system	Close regulator tap on the gas bottle	
	Close all gas isolator taps	
	Always remove gas bottles from the gas bottle compartment, even if they are empty	
Electrical system	Fully charge living area and starter battery ⚠ ▷ Charge the battery for at least 20 hours before laying up.	
	Disconnect the living area battery from the 12 V power supply	
Water system	Empty the entire water system. Blow out the residual water from the water pipes (0.5 bar max.). Leave the water taps on in central position. Leave the safety/drainage valve (if available) and all drain cocks open. Observe the notes in Chapter 11	
	If the transformer/rectifier is switched off using the battery cut-off switch, the safety/drainage valve opens and the water drains. ⚠ ▷ If the safety/drainage valve is switched off, the water system is no longer protected sufficiently against frost.	

12.4.2 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	

	Activities	Done
Electrical system	Remove the starter battery and living area battery and store in a place protected from frost (see Chapter 9)	
Water system	Clean the water system using a cleaning agent from a specialised store	
Complete vehicle	Arrange the tarpaulins in such a way that the ventilation openings are not covered, or use porous tarpaulins	

12.4.3 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	Clean dust and dirt from the entrance step	
	Check that the doors, windows and skylights are working properly	
	Check the function of all external locks	
	Remove the cover from the waste gas vent of the heater (if there is one)	
	Remove the winter cover from the refrigerator grills (if there is one)	
Gas system	Put the gas bottles in the gas bottle compartment, tie down and connect to the gas pressure regulator	
Electrical system	Connect to 230 V external power supply	
	Fully charge living area and starter battery ⚠ ▷ Charge at least for 20 hours after laying up.	
	Connect the living area battery with the 12 V power supply (see Chapter 9)	
	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 tank. To this end, open all water taps	
	Check the functionality of the operating lever for the waste water tank	
	Close safety/drainage valve, drain cocks and water taps	
	Check the safety/drainage valve, water taps, drain cocks and water distributors for leaks	
Appliances	Check the function of the refrigerator	
	Check the function of the heater/boiler	
	Check the function of the gas cooker	

13.1 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 ("Straßenverkehrszulassungsordnung" (StVZO)) on vehicles that are registered in Germany.

The respective local regulations apply in other counties.

An authorised specialist workshop has to inspect the gas system every 2 years. This also applies for not registered vehicles. Modifications to the gas system must be checked immediately by an authorised specialist workshop. The authorised specialists workshop certifies the inspection and the proper state in a gas inspection certificate. The gas inspection sticker is applied on the rear of the vehicle near the licence plate.

13.2 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.

13.3 Maintenance work

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.

13.4 Replacing lamps

- ▶ Bulbs and light fittings can be extremely hot. Therefore, allow lights to cool down before changing bulbs.
- ▶ Before changing bulbs, switch off the power supply at the safety cut-out in the 230 V fuse box.
- ▶ Store bulbs in a safe place inaccessible to children.
- ▶ Do not use any bulb that has been dropped or which shows scratches in its glass. The bulb might burst.
- ▶ 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!

- ▷ New bulbs should not be touched with the fingers. Use a cloth when inserting the new bulb.
- ▷ Only use bulbs of the same type and with the correct wattage.

13.4.1 Surface-mounted halogen light (swiveling)

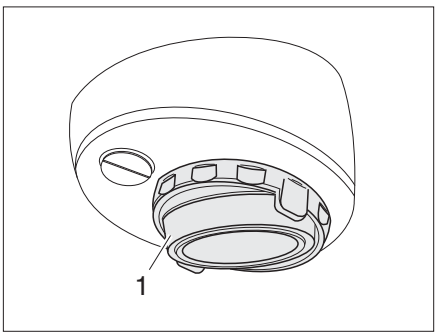


Fig. 137 Surface-mounted halogen light (swiveling)

Changing bulbs:

- ■ Use a suitable tool (e.g. a screwdriver) to lever out and remove the cover (Fig. 137,1).
- ■ Remove halogen bulb.
- ■ Put in a new halogen bulb.
- ■ Reassemble the lamp in the reverse order.

13.4.2 Replacing vehicle lamps at the rear

The cover (Fig. 138,3) has to be removed beforehand to access the rear right-hand vehicle lamps.

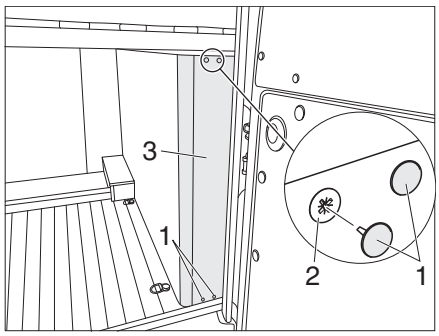


Fig. 138 Cover in the vehicle rear

- Remove the four screw covers (Fig. 138,1).
- Unscrew the four crosshead screws (Fig. 138,2).
- Remove the cover (Fig. 138,3). The vehicle lamps can be accessed now.

13.5 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 PÖSSL have been specially developed and supplied for your vehicle. Your PÖSSL dealer has these products. Your PÖSSL dealer is informed about admissible technical details and carries out the required work correctly.
- ▶ The use of accessories, parts and fittings not approved by PÖSSL may cause damage to the vehicle and jeopardise 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 approved by PÖSSL. 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 PÖSSL dealers are available for any spare parts requirement.

When ordering spare parts, please indicate the serial number and the vehicle type to your PÖSSL 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 PÖSSL dealer will be pleased to advise you.

13.6 Vehicle identification plate

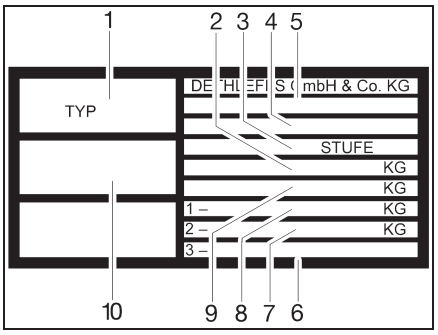


Fig. 139 Vehicle identification plate

1 Type
2 Maximum permissible gross weight of the vehicle with trailer
3 Chassis number
4 Manufacturer of the unit (add-on unit)
5 EC type approval number
6 Permissible rear axle load (for tandem axle)
7 Permissible axle load rear
8 Permissible axle load front
9 Maximum permissible gross weight of the vehicle
10 Serial number

The vehicle identification plate (Fig. 139) with the serial number is mounted in the area of the passenger'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

13.7 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.

14.1 Electrical system

▷ When the living area battery is changed, only use batteries of the same type.

▷ See Chapter 9 for changing the fuses.

Fault	Cause	Remedy
Interior lighting does not work	Bulb is defective	Unscrew cover of the relevant light, replace bulb. Note volts and watts specifications
	Fuse on the transformer/ rectifier is defective	Replace fuse on the transformer/rectifier
The electrically operated entrance step cannot be moved in or out	Fuse on the transformer/ rectifier is defective	Replace fuse on the transformer/rectifier
No 230 V power supply despite connection	230 V automatic circuit breaker has triggered	Switch on 230 V automatic circuit breaker
Starter or living area battery is not charged when operated in 230 V mode	Jumbo flat fuse (40 A) on the starter or living area battery is defective	Replace jumbo flat fuse (40 A) on the starter or living area battery
	Charger module in the transformer/rectifier is defective	Contact customer service
Living area battery is not charged during vehicle operation	Fuse on terminal D+ of the alternator is defective	Replace fuse
	Disconnector relay in the transformer/rectifier is defective	Contact customer service
12 V indicator lamp does not light up	12 V power supply switched off	Switch 12 V power supply on
	Battery cut-off switch on the transformer/rectifier is switched off	Set battery cut-off switch to on
	Starter or living area battery is not charged	Charge the starter or living area battery
	Disconnector relay in the transformer/rectifier is defective	Contact customer service
	Flat fuse (2 A) in the living area battery is defective	Replace flat fuse (2 A) in the living area battery

Fault	Cause	Remedy
12 V power supply does not work in 230 V operation	12 V power supply switched off	Switch 12 V power supply on
	Battery cut-off switch on the transformer/rectifier is switched off	Set battery cut-off switch to on
	Charger module in the transformer/rectifier is defective	Contact customer service
	230 V automatic circuit breaker has triggered	Contact customer service
	Jumbo flat fuse (40 A) on the living area battery is defective	Replace jumbo flat fuse (40 A) on the living area battery
Starter battery is discharged in 12 V operation	Disconnector relay in the transformer/rectifier is defective	Contact customer service
	Battery cut-off switch on the transformer/rectifier is switched off	Set battery cut-off switch to on
No voltage is supplied by the living area battery	Living area battery is discharged	Charge living area battery immediately ▷ Total discharge damages the battery. If the vehicle is to be laid up for a long period, fully charge the living area battery beforehand

14.2 Gas system

- ▶ 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.

Fault	Cause	Remedy
No gas	Gas bottle empty	Changing gas bottles
	Gas isolator tap closed	Open the gas isolator tap
	Regulator tap on the gas bottle is closed	Open regulator tap on the gas bottle
	Outdoor temperature too low (-42 °C for propane gas, 0 °C for butane gas)	Wait for higher external temperatures
	Built-in appliance is defective	Contact customer service

14.3 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

14.4 Heater/Boiler

In the event of a defect contact the nearest customer service workshop of the relevant appliance manufacturer. The list of addresses is enclosed with the accompanying appliance documentation. Only authorised qualified personnel may repair the appliance.

Fault	Cause	Remedy
Heater does not ignite	Temperature sensor at the control unit or remote sensor defective	Remove the connector at the control unit. The heater then functions without the thermostat. Contact the customer service as soon as possible
Red indicator lamp "Fault" illuminates	Air in the gas pipe system	Switch off and on again. After two futile ignition attempts, wait for 10 minutes before trying again
	Lack of gas	Open regulator tap and gas isolator tap
		Connect a full gas bottle
	Defect of a safety element	Contact customer service
Red indicator lamp "Fault" flashes	Operating voltage too low	Charge, have charged or renew the living area battery
Green indicator lamp behind knob is not lit	Fuse on the power supply unit is defective	Replace the fuse on the power supply unit
	Fuse in the electronic control unit has been triggered	Contact customer service
	Living area battery defective	Charge, have charged or renew the living area battery

Fault	Cause	Remedy
Boiler empties, safety/ drainage valve has opened	Temperature at the drainage valve below approx. 3 °C	Switch on the heater. At temperatures below approx. 3 °C the drainage valve opens automatically.
	Battery cut-off switch or main switch on the transformer/rectifier is switched off	Switch battery cut-off switch or main switch on
	Operating voltage under 10.8 V	Charge, have charged or renew the living area battery
	Fuse is defective	Replace fuse on the transformer/rectifier
Safety/drainage valve does not close during switching on	Battery cut-off switch or main switch on the transformer/rectifier is switched off	Switch battery cut-off switch or main switch on
	Operating voltage under 10.8 V	Charge/have living area battery charged
	Fuse is defective	Replace fuse on the transformer/rectifier
	Temperature at the drainage valve below approx. 7 °C	Switch on the heater. When heater is not operating, drainage valve only closes again at temperatures above approx. 7 °C.
Red and green indicator lamps are not lit	Fuse is defective	Replace fuse on the transformer/rectifier
Fan wheel runs loudly or unevenly	Fan wheel soiled	Contact Truma Service

14.5 Refrigerator

In the event of a defect contact the nearest customer service workshop of the relevant appliance manufacturer. The list of addresses is enclosed with the accompanying appliance documentation. Only authorised qualified personnel may repair the appliance.

14.5.1 Dometic refrigerator with AES

Fault	Cause	Remedy
Refrigerator does not switch on when operating in 230 V mode	No 230 V power supply	Connect 230 V power supply
	230 V automatic circuit breaker has triggered	Switch on 230 V automatic circuit breaker
	230 V operating voltage too low	Have the 230 V power supply checked by a specialist workshop

Fault	Cause	Remedy
Refrigerator does not switch on when operating in 12 V mode	Jumbo flat fuse (40 A) on the starter battery is defective	Replace jumbo flat fuse (40 A) on the starter battery
	Flat fuse (2 A) in the starter battery is defective	Replace flat fuse (2 A) in the starter battery
	Disconnector relay in the transformer/rectifier is defective	Contact customer service
	12 V operating voltage too low	Have the 12 V power supply checked by a specialist workshop
Refrigerator does not switch on when operating in gas mode	Lack of gas	Open regulator tap and gas isolator tap
		Connect a full gas bottle
	Air in the gas pipe	Repeat ignition 3 or 4 times
	Cobwebs or burnt residue in the burning chamber	Remove the ventilation grill on the outside of the vehicle and clean the burning chamber

14.5.2 Thetford refrigerator

Fault	Cause	Remedy
The refrigerator does not cool. Compressor does not start up	Battery voltage too low	Check battery and charge
	Start delay with 1 minute (not a fault)	Wait one minute
	Overheating due to high ambient temperature	Leave the refrigerator switch off for one hour, air the vehicle, switch over to day operation
	Vehicle fuse has blown	Check the fuse value, replace by a 15-A fuse
Freezer compartment does not freeze	The interior temperature in the vehicle amounts to less than 16 °C	Increase the temperature in the vehicle and/or select at least Cooling level 4
Refrigerator does not cool. The compressor starts up, but switches off immediately again	Overheating due to high ambient temperature	Leave the refrigerator switch off for one hour, air the vehicle, switch over to day operation
Refrigerator cools too much	The temperature setting is too high	Select a lower temperature setting
High noise level at night	The refrigerator in running in day mode	If the temperature lies below 30 °C, change to night mode
Refrigerator does not cool. The compressor runs uninterruptedly		Contact the Service

Fault	Cause	Remedy
The cooling output of the refrigerator is too low	Overheating due to high ambient temperature	Leave the refrigerator switch off for one hour, air the vehicle, switch over to day operation
	The ventilation openings are blocked completely or partially	Unblock and clean the ventilation openings
	The door is not closed correctly	Close the door and check whether the door seal is OK
	More than 3 mm ice at the evaporator	Defrost the evaporator. Check whether the door seal is OK

14.5.3 10 series Dometic refrigerator

Troubleshooting

Fault	Cause	Remedy
Refrigerator does not work	The fuse in the DC cable or the vehicle fuse is faulty	Replace fuse
	The compressor temperature is too low (<0 °C)	Seal/cover external ventilation grille entirely with insulating material
	The refrigerator will automatically switch off if the voltage is not high enough. (cut-off at 10.4 V)	Charge battery. The refrigerator will automatically restart (input voltage: 11.7 V)

Fault	Cause	Remedy
Refrigerator does not refrigerate sufficiently	The ventilation around the power unit is not adequate	Check whether the ventilation grille is unobstructed
	The vaporiser has frozen over.	Check whether the refrigerator door closes properly. Check whether the seal around the edge of the refrigerator is correctly affixed and not damaged. Thaw refrigerator
	The ambient temperature is too high	Temporarily remote the ventilation grille to allow warm air to escape quicker
	Too much food has been placed in the refrigerator at once	Remove some of the food
	Too much warm food has been placed in the refrigerator at once	Remove the warm food and let it cool before placing it back into the refrigerator
	The refrigerator hasn't been used for an extended period	Check the temperature against after four to five hours

Error and warning notifications

In the event of a fault, the LED error message (Fig. 113,5) will flash in the display according to the fault.

All WARNING (W) category faults will automatically reset once the fault has been fixed.

All ERROR (E) category faults need to be manually reset:

- Press the On/Off button (Fig. 113,1) for 2 seconds.
  A beeping tone is sounded.

The fault has been reset and the refrigerator will restart with the last selected settings.

You can find a list of errors and warnings in the operating instructions issued by the manufacturer.

14.6 Water supply

Fault	Cause	Remedy
Leakage water inside the vehicle	A leak has occurred	Identify leak, re-connect water pipes
No water	Water tank is empty	Top up with fresh water
	Drain cock not closed	Close drain cock
	12 V power supply switched off	Switch 12 V power supply on
	Fuse of the water pump is defective	Replace fuse on the transformer/rectifier
	Water pump defective	Exchange water pump (have it exchanged)
	Water pipe snapped off	Straighten water pipe or replace
	Transformer/rectifier defective	Contact customer service
Toilet has no flush water	Water tank is empty	Top up with fresh water
	Fuse for cassette is defective	Replace fuse
Display for water and waste water indicates a wrong value	Measuring probe in the waste water or water tank is soiled	Clean water/waste water tank
	Measuring probe is defective	Replace measuring probe
Waste water tank cannot be emptied	Drain cock is clogged	Open the cleaning cap on the waste water tank and drain the waste water. Rinse the waste water tank well

14.7 Body

Fault	Cause	Remedy
Hinges/joints in the bathroom unit/toilet compartment are difficult to operate/make a grating noise	Hinges/joints are not sufficiently lubricated	Lubricate hinges/joints with solvent-free and acid-free grease ▷ Spray cans often contain solvents
Storage compartment hinges are difficult to operate/make a grating noise	Storage compartment hinges are not sufficiently lubricated	Lubricate storage compartment hinges with acid-free and resin-free grease

▷ The authorised dealers and service centres are available for any spare parts requirement.