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1 Foreword

You want to get to know new horizons? Count on us to help you!

Congratulations on your new **ADRIA Van**.

We have designed and built your vehicle so that travelling with your "home away from home" will be very enjoyable.

1.1 Before your first journey

- Take your time and read this instruction manual on one of the comfortable seats of your vehicle.
 - This instruction manual also contains surprising innovations for experienced users because the **ADRIA** design team does not tolerate technical standstill.
- Pay special attention to the "Safety" Chapter (Chapter 2).
 - Your own health and that of your passengers can depend on your familiarisation with the safety regulations and your adequate reaction to critical situations.
- Please also pay attention to the separate instruction manuals for special equipment and appliances as well as accessories.
- If your **ADRIA** vehicle has special accessories (light-metal rims, air suspension, etc.), please observe the enclosed special approvals and the associated regulations.

1.2 Notes on this instruction manual

- Please understand that we reserve the right to alter the technical system, the form and the equipment. Our vehicles are being continuously developed. Therefore, no claims can be made against **ADRIA** on the basis of the contents of this instruction manual. The equipment which was known and included at the time of going to press is described in this manual. This instruction manual is valid only insofar as the vehicle corresponds to the state of the equipment described therein.
- The models may have different equipment (standard equipment, special equipment and accessories). The standard equipment is described in this instruction manual. You will also find descriptions of the special equipment and accessories in this instruction manual insofar as explanations are required. Please also pay attention to the enclosed separate instruction manuals of the special equipment or accessory manufacturers.
- Reproduction, copying and translation, including extracts, are not permitted without the explicit approval of **ADRIA**. Misprints and errors excepted.
- **ADRIA** will not be held responsible for damage to the vehicle resulting from the nonobservance of the instruction manual.

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1.3 Maintenance and repair

- Please contact your local **ADRIA** dealer for all service and repair work as well as special questions.
 - The employees of your authorised workshop will be pleased to provide advice and assistance.
 - Only original parts ensure the quality and operational readiness of your vehicle.
 - If service work is neglected or performed incorrectly, we will be unable to meet our warranty obligations according to our warranty conditions.
- Please fill in the following data of your vehicle:
 - These are of special significance when you have questions concerning ordering original parts.
- Check the nameplates for the data of your vehicle.

Vehicle data	
Model:	
Year of construction:	
Vehicle identification number:	-----
Bodywork number:	-----
Bodywork key number:	-----

We wish you unlimited enjoyment in your leisure time with your new **ADRIA** van.

Executive Board

2 Safety

2.1 Safety instructions

This Section contains safety instructions that must be followed when operating the vehicle.



Important!

We point out explicitly that we will not assume any liability for damage and malfunctions resulting from the nonobservance of this instruction manual.

2.1.1 Explanation of symbols



Danger!

Type of danger

- ▲ Avoidance

This type of safety warning warns of an **imminently pending danger** that could jeopardise the life and health of persons. Nonobservance of these safety instructions can cause severe damage to health up to life-threatening or fatal injuries.



Warning!

Type of danger

- ▲ Avoidance

This type of safety warning warns of a **possible danger for persons**. This type of warning must be exactly followed to prevent hazards to persons or severe material damage.



Caution!

Type of danger

- ▲ Avoidance

This type of safety warning warns of **possible material damage**. This type of warning must be exactly followed to prevent material damage.



Important!

Important

Notes of this kind provide additional information with respect to **technical requirements**. This type of information facilitates the handling of the vehicle for the user.

2.2 General safety instructions

- Safely store all objects before starting to drive. Securely close all flaps, doors, windows and hatches. Keep liquids in leak-proof containers.
- When staying in the vehicle, always keep the forced ventilation and the mushroom ventilator open and never covered, as there is a risk of suffocation by increased carbon monoxide.
- Always keep the instruction manuals for the vehicle and all installed appliances (e.g. cooker, refrigerator, toilet) and additional equipment (e.g. bike racks) in the vehicle and observe them.
- Never leave children in the vehicle unattended.
- Pay attention to the vehicle height while driving.
- When leaving the vehicle, securely close all windows, doors and roof hoods.
- Pay attention to the clearance height of the entrance door.

2.3 Safety instructions for driving on public roads

- The vehicle must be registered.
- The driver of the vehicle must have the required driving license.
- The installation of accessories changes the dimensions, the total weight as well as the road behaviour of the vehicle. Some of this equipment is subject to entry in the vehicle documents.
- When loading the vehicle, pay attention to the gross weight rating and the gross axle weight rating (see motor vehicle registration certificate, part I).
- Distribute the additional load evenly within the vehicle (Chapter 5.1).
- Check the tyre pressure and tighten the wheel nuts before starting to drive. Check the firm seating of the wheel nuts after 50 kph and then in regular intervals.
- Check the function of the brakes and the signal and lighting system.
- Empty the waste water tank.
- Close all doors, cupboard doors, drawers and flaps as well as all windows and roof hoods. Latch the refrigerator door securing device.
- Stow away the sink board (special equipment), the loft bed ladder (special equipment), the table and/or other loose pieces of equipment safe and secure.
- Retract or fold down antennas (special accessory).
- Switch off the awning light (special equipment).
- Retract the entrance step (special equipment).
- Close and lock all outer doors and flaps.
- In winter, clear the roof from snow and ice before starting the journey.
- Persons as well as pets must be seated on seats equipped with suitable restraining devices while travelling in the vehicle.
- Vehicles from 3.5 t to 7.5 t are designed for a maximum speed of 100 kph. This maximum speed must not be exceeded, not even when a higher speed is allowed in the country being visited.
- When parking the vehicle, apply the parking brake up to the maximum possible end position.
- Place wheel chocks (special accessory) under the wheels when parking the vehicle on inclines or slopes.
- Have the vehicle brake system checked and repaired by an authorised workshop only.
- When the vehicle is transported by rail or on a lorry, it must be loaded in the driving direction.

2.3.1 Driving the van

- Drive according to your abilities taking the larger dimensions and the higher weight of the vehicle into consideration. You need time for familiarisation.
- Always take corners in a large radius and slowly. The cornering behaviour as compared with a passenger car changes because of the length of the vehicle and its weight.
- At driveways and crossings, the vehicle acceleration is significantly lower than that of a passenger car.
- Due to the higher weight, the vehicle braking distance is much longer than that of a passenger car.
- Pay attention to the greater height of the vehicle at gateways and trees on the side of the road.
- When driving in reverse, always have a second person assist you.
- Due to the vehicle height, the vehicle is more sensitive to crosswind.

2.4 Official technical inspections

2.4.1 General inspection



Important!

Please observe the regulations for the applicable country of registration.

2.4.2 Checking the gas system

The liquid gas system was inspected at the factory by a technical expert. The gas system must be inspected again every two years and after making any modifications and repairs. Always have a gas leak test performed on this occasion. The vehicle operator is responsible for initiating the inspection. Upon delivery of the vehicle, the operator must be informed in writing of his/her duty to have the gas system inspected. The correct condition of the gas system is confirmed with a gas inspection certificate and possibly, depending on national regulations, an associated gas inspection sticker.

2.4.3 Emergency equipment to be carried in the vehicle

The following emergency equipment (special accessories) must be carried in the vehicles at all times:

- First aid kit
- Warning triangle
- A warning light must also be carried in vehicles above 3.5 t.
- A warning vest for each passenger should be carried in all vehicles.

The regulations of the respective country must be observed. Contact the automobile association of the respective country for information.

2.5 Safety instructions for the gas system



Danger!

Poisoning by gas

- ▲ If it smells of gas or you suspect that gas is escaping, perform the following:
 - Clear the danger area!
 - Close the shut-off valve on the gas cylinder!
 - Avoid ignition sources and open flames and do not smoke!
 - Ventilate the rooms!
 - Inform the camping site manager, and the fire brigade when necessary!



Danger!

Risk of explosion

- ▲ Gas appliances are not to be operated during refuelling and on ferries or in garages!
 - Close all quick-action stop valves and the shut-off valve on the gas cylinder.



Danger!

Risk of suffocation

- ▲ Never cover the forced ventilation in the roof hoods and in the floor area nor the mushroom ventilators in order to ensure continuous exchange of air in the vehicle.
Caution: Snowfall in winter!



Warning!

Injuries or material damage

- ▲ Subsequently installed, gas-operated additional appliances must be designed for an operating pressure of 30 mbar.
- ▲ The liquid gas system was inspected at the factory by a technical expert.
 - The gas system must be inspected again every two years and after making any modifications and repairs (Chapter 2.4.2).
 - Installations and modifications to the gas system may be performed only by an authorised workshop.
- ▲ The gas system may be put into service again only after inspection by a technical expert!

2.5.1 Gas stove



Danger!

Risk of suffocation

- ▲ In regular operation of the gas stove there exists acute danger to life due to lack of oxygen and the possibly generated odourless and toxic carbon monoxide (CO)!
- ▲ Always ensure good ventilation when the gas stove is in operation. Always keep a window, a roof hood or the doors open.
- ▲ Never use the gas stove for heating.



Danger!

Risk of poisoning

- ▲ If a flame of the gas stove extinguishes, unburned gas flows out for a short time until the flame failure device reacts and, together with the oxygen, generates an explosive mixture inside the vehicle!
- ▲ Watch the flames while using the cooker!
- ▲ When finished, shut the respective quick-action stop valve.

2.5.2 Gas cylinder compartment

Check each time before using the gas:

- ➔ Store the gas cylinders exclusively in the gas cylinder compartment. They must stand upright and fastened so that they are unable to turn or tilt.
- ➔ The gas cylinder compartment must be sealed against the interior of the vehicle and must have a vent hole in or directly above the floor plate. This vent hole must have a minimum cross-section of 100 cm² and must not be covered.
- ➔ Use only pressure regulators with safety valves! Other regulators are not allowed!
- ➔ Carefully connect the regulator on the gas cylinder by hand. The screw connections on the gas regulator have left-hand threads. Do not use tools such as wrenches or pliers.
Exception: The high-pressure hoses of the Truma SecuMotion/MonoControl CS (special equipment) should be tightened with the enclosed plastic wrench.
- ➔ For temperatures below 5°C, a de-icing system for regulators (e.g. accessory Eis-Ex) must be used.
- ➔ Do not operate or store any current-storage devices (e.g. batteries) or devices that could be the source of ignition in the gas cylinder compartment.
- ➔ Electric lines routed through the gas cylinder compartment have to be insulated and must not be connected with terminals; have the work performed by an authorised workshop.
- ➔ Do not use the gas cylinder compartment as storage space.
- ➔ Secure the gas cylinder compartment against unauthorized access.

2.5.3 Gas appliances in general

Pay attention to the following when operating the gas system:

- The regulators and the exhaust gas routing must be inspected every two years! The inspection must be confirmed on the inspection certificate according to the DVGW [German Technical and Scientific Association on Gas and Water] worksheet G 607. The operator has to initiate the inspection.
- The exhaust gas pipe must be fitted tightly to both the gas heater as well as the cowl and must be sealed. It may not show any evidence of damage.
- The exhaust gas routing of the gas heater must be installed ascending over its complete length and fitted tightly with clamps. If required, install exhaust gas pipe supports.
- Before placing the gas heater into service, always clear dirt and snow from the cowl and the combustion air inlets. This prevents increased, unacceptable carbon monoxide content in the exhaust gas.
- Radiant heaters and appliances drawing combustion air from the interior of the vehicle are not to be used for heating the vehicle!
- When gas appliances are switched on that require the control knob to be pressed for lighting (e.g. gas stove), it must spring back automatically immediately after release.
- If no gas is being consumed during the journey, the shut-off valve on the gas cylinders **must** be closed.
- Close the respective quick-action stop valve when gas-operated appliances are not used.
- Close the shut-off valve on the gas cylinder when the vehicle will not be used for a longer period.
- Operate the gas system only with propane gas, butane gas or a mixture of both. Propane gas is capable of gasification down to -32 °C, whereas butane gas gasifies only to approx. 0 °C.
- Gas appliances are not to be operated during refuelling, in a garage or on a ferry.
- Observe the relevant regulations in foreign countries!

2.6 Safety instructions for the electrical system

Pay attention to the following when operating the electrical system:

- Installations and modifications of the electrical system may only be performed by qualified personnel.
- Prior to carrying out work on the electrical system, switch off all appliances and lights, disconnect the battery and disconnect the 230 V power cable from the mains.
- Replace defective fuses only when the cause of the defect is known and has been remedied. Use only original fuses with the values specified in the instruction manual from the respective manufacturer.
- Do not bridge or repair fuses.

2.6.1 Safety instructions for emergency power generator (special accessory)

Observe the following when operating emergency power generators:

- Voltage variations during operation with an emergency power generator must be avoided to prevent damage to the electrical system and the electrical appliances.

For more information, see the separate instructions from the manufacturer.



Important!

We recommend the installation of a voltage monitor by your dealer.

2.7 Fire prevention

2.7.1 General fire prevention



Danger!

Fire risk

- ▲ Only authorised and qualified personnel may perform service work and modifications to the gas system and the electrical system.
- ▲ Never leave children in the vehicle unattended.
- ▲ Do not use portable heating or cooking appliances.
- ▲ Keep flammable materials clear of cooking and heating appliances.
- ▲ Acquaint yourself with the position and operation of the emergency exits in the vehicle.
- ▲ Always keep escape routes clear.
- ▲ Empty ashtrays into the waste bin only when the ashes are cold.
- ▲ When the lighting elements are switched on, maintain a safety distance of at least 30 cm from combustible objects.



Important!

Always have a dry powder fire extinguisher (special accessory) filled with 1 kg minimum in your vehicle.

- The fire extinguisher must be close at hand.
- Read the instruction manual carefully and keep it close at hand.
- Have the fire extinguisher checked at regular intervals by qualified personnel; observe the test seal.

2.7.2 What to do in the case of fire

Correct behaviour:

- Evacuate all passengers.
- Close the shut-off valve on the gas cylinder.
- Switch off the electrical power supply; disconnect the vehicle from the mains.
- Call the fire brigade, sound the alarm.
- Fight the fire, if possible.

2.8 Safety instructions for the roof



Warning!

Risk of injury and of damage to the vehicle roof

- ▲ Do not walk on the van roof.
- ▲ Clear snow and ice from the roof and from the roof hoods.
 - ➔ Use a ladder which is placed against the roof edge for this purpose.

2.9 Safety instructions for rear carrier systems (special accessories)



Warning!

Risk of injury and damage to the vehicle

- ▲ Pay attention to the statutory regulations for the installation of a rear carrier.
- ▲ When the rear lighting of the vehicle is covered, a second set of lights must be installed.
- ▲ Do not exceed the permissible carrying weight of the rear carrier.
- ▲ The load must not project by more than 40 cm on the sides. Do not allow sharp or pointed objects to project.
- ▲ The load must be stored safely and specially secured against falling down.
- ▲ When the rear carrier is used, the load distribution of the vehicle as well as its drive and brake behaviour change.



Important!

Have the installation of a rear carrier performed by an authorised workshop only. Ask your **ADRIA** dealer for advice.

2.10 Environmental tips

For the protection of our environment, always pay attention to the following:

- ➔ Always turn off the engine when the vehicle stands still. The operating temperature is reached most quickly while driving.
- ➔ **Never** dispose of any kind of waste water and waste in the open countryside.
- ➔ Empty the waste water tank and the toilet only at special waste disposal stations. These waste disposal stations are available at camping sites. Request information from local authorities.
- ➔ Use environmentally-friendly chemical additives for the toilet.
- ➔ Separate household waste and dispose of this waste in special waste disposal stations.
- ➔ When staying in towns and communities for longer periods, always stay at special car parks for motorhomes. Obtain information about car parks and camping sites in time before starting the journey.
- ➔ Always collect waste oil, lubricants and cleaning agent in suitable containers and dispose of them properly.

3 Description & equipment

3.1 About this instruction manual

In the diagrams for explanation of the equipment, "black arrows" always stand for switching off or closing an equipment part and "white arrows" for switching on or opening.

3.2 Bodywork

The vans are designed as follows:

- Outer skin: Sheet steel
- Insulation: X-Trem / Styrofoam
- Inner wall: Plywood

To improve road safety, a 3rd brake light is installed in the upper rear area.

3.3 Gas cylinder compartment

The lockable gas cylinder compartment is sealed against the vehicle interior (Chapter 11.2).

3.4 Interior furnishings

All pieces of furniture are made from high-quality materials and securely attached. Sufficient storage space is available in the living area and in the kitchen unit.

All flaps, cabinet doors and drawers are equipped with secure locks and fittings that prevent unintentional opening.

The furniture surfaces can be easily cleaned with commercially available cleaning agents (Chapter 19.2).

Depending on the model, the vehicle has firmly installed beds and/or seating groups that can be easily converted for sleeping. (Chapter 9).

3.5 Kitchen

The kitchen unit consists of a cooking stove, sink and a refrigerator/freezer.

Adequate storage space is provided.

3.6 Bathroom unit

Depending on the model, the vehicle has a bathroom unit with toilet (Chapter 16) and a sink and shower unit. Always close the curtain when taking a shower.

3.7 Heater

The vehicle is equipped with a heater with hot-air blower (Chapter 13).

3.8 Water and waste water

The vehicle is equipped with a water tank and a waste water tank (Chapter 12).

4 Placing into service

4.1 Registering the vehicle

Before the first journey, the vehicle must be registered according to national regulations and a license plate fitted. Vehicles may be operated in road traffic only when insurance cover exists. An EC approval exists for the vehicle.

4.2 Placing the vehicle into service for the first time



Warning!

Make sure to follow the safety instructions

- ▲ Carefully read and follow the safety instructions (Chapter 2.1) before placing the vehicle into service.
- ▲ Insurance coverage and warranty claims to the manufacturer become void when the safety instructions are not observed and followed.



Warning!

Accident hazard

- ▲ After the first 50 km, retighten the wheel nuts and then regularly check the seating of the wheel nuts.
- ▲ Check the tyre pressure before each journey.

Pay attention to the following when placing the vehicle into service:

- Familiarise yourself with your vehicle before the first journey.
- Get used to the driving characteristics and dimensions of your vehicle during a short weekend trip.
- Drive slowly and carefully in the beginning.

5 Before the journey

5.1 Loading the vehicle



Warning!

Risk of injury and severe damage to the vehicle

- ▲ When a tyre bursts, the vehicle can get out of control.
- ▲ Do not exceed the vehicle gross weight rating.
- ▲ Check the tyre pressure (Chapter 22.1) at regular intervals. Tyres can burst when the tyre pressure is too low.



Warning!

Danger of overloading

- ▲ The gross weight rating entered in the vehicle documents must not be exceeded. Tyres can also burst when the vehicle is overloaded.
- ▲ A warranty claim to the manufacturer and the insurance coverage become void.

Pay attention to the following when loading the vehicle:

- Unladen weight = mass in ready-to-drive condition according to EN 1646-2 (Chapter 22.2).
- Additional equipment installed in the factory and options increase the unladen weight and reduce the additional load.
- Determine the maximum additional load according to part 1 of the registration certificate and the list in the "Technical data" Chapter (as from Chapter 22.2).
- The additional load covers all other persons and the luggage.
- On vehicles with standard equipment, the outside of the roof and the rear area are not to be loaded.
 - Never exceed a height of 4 m and a width of 2.55 m with additional attachments.
 - Attach and secure the roof and rear loads so that they do not slip, are unaffected by the wind and are streamlined. Do not use rubber expanders!
- In order not to endanger other road users, objects must not project beyond the vehicle silhouette on the side or rear.
 - Do not overload the vehicle. For weight information and Tables, see Chapter 22.2 onwards and the registration certificate, part I.
- Pay attention to the correct axle load distribution. Roadability and tyre wear are directly affected by the axle load. Pay attention to the maximum axle loads (see registration certificate part I).
- Load the vehicle evenly on the right and left. The driving characteristics deteriorate when loading is uneven.
- Store heavy objects (e.g. tinned food, cutlery, dishes) in low-lying storage compartments and secure them against slipping.
- Stack light objects, e.g. clothes, in higher storage compartments or in the compartments below the seats.
- Always keep liquids in leak-proof containers in low-lying storage compartments.
- Load the bike rack (special accessory) with only 2 bikes at the most (50 kg maximum).



Important!

Weigh the completely loaded vehicle on public scales before starting your journey.

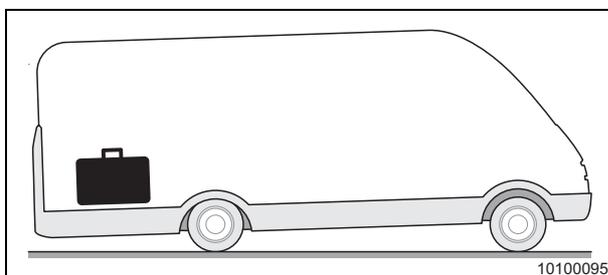


Fig. 1 Vehicle loaded incorrectly

VEHICLE LOADED **INCORRECTLY!**

- Steerability and braking effect are reduced.

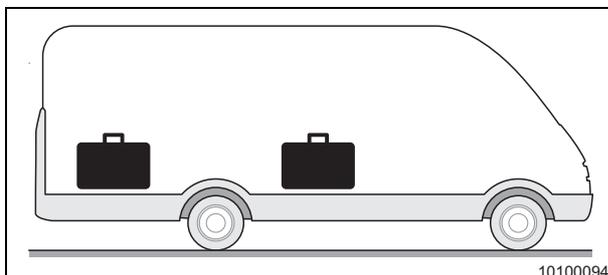


Fig. 2 Vehicle loaded correctly

VEHICLE LOADED **CORRECTLY!**

- Store objects between the axles, if possible.
- Store heavy objects at lower positions.
- Store light objects at upper positions.



Important!

Pay attention to the following when installing rear carriers:

- Attachment and securing of the load as specified
- Allowable load-carrying capacity of the vehicle and axle(s)
- Change of axle load distribution
- Change of driving and braking behaviour of the vehicle
- Change of overall length

5.2 Spare keys

The following information is required for ordering a spare key:

Key for	Required information	To be obtained from
Basic vehicle	<ul style="list-style-type: none"> • Vehicle identification number: • Registration certificate part II • Code card, if applicable 	Service department of basic vehicle manufacturer
Bodywork (doors and flaps)	<ul style="list-style-type: none"> • Registration certificate part II • Key number 	Adria Service department

Tab. 1 Spare keys

5.3 General check before starting to drive



Warning!

Hazards and damage due to unsecured load

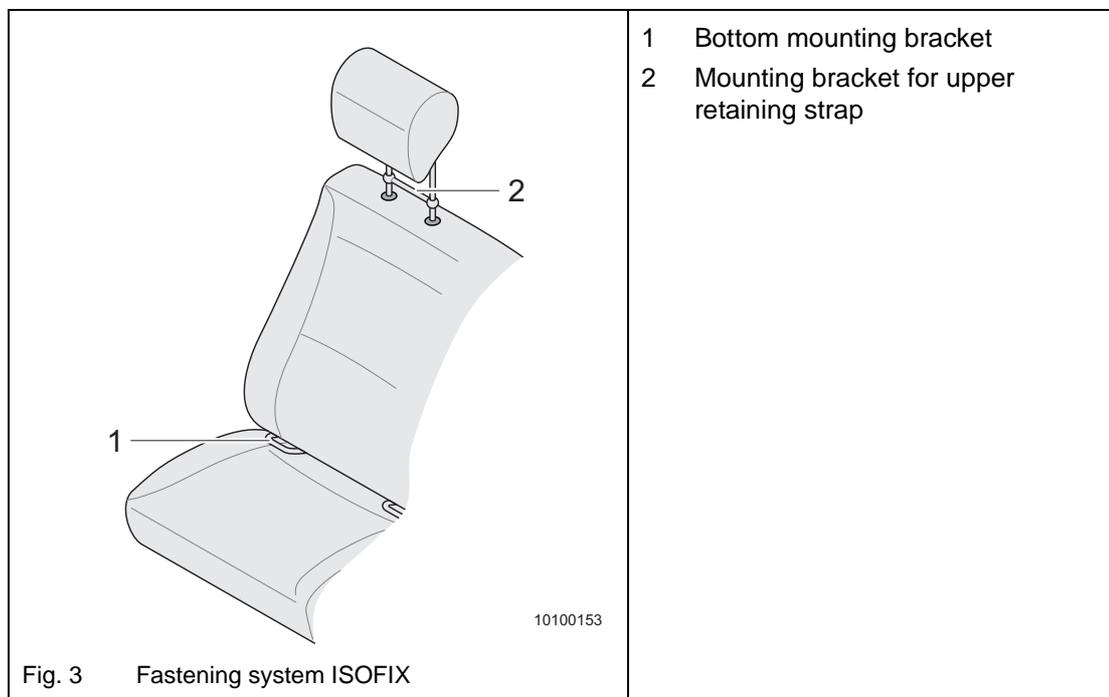
- ▲ After having driven for a few kilometres, check the additional load is stowed in slip-free manner in the vehicle.

Go through the checklists (Chapter 23) before starting to drive.

5.4 Fastening system ISOFIX for child car seats

Some models have the ISOFIX fastening system for child car seats.

Please select the suitable child car seat for your child according to the Table (Tab. 2).



Fastening the child car seat:

- ➔ Latch the connectors of the child car seat in the mounting bracket (Fig. 3/1).
- ➔ Fasten the upper retaining strap on the mounting bracket of the headrest (Fig. 3/2).

	For children from ...		
	Weight	Age (approx.)	Height (approx.)
Weight groups			
Group 0	> 0 to 10 kg	From birth to 1 year	to 75 cm
Group I	> 9 to 18 kg	1 to 4.5 years	75 to 100 cm
Group II	15 to 25 kg	3,5 to 7 years	to 125 cm
Group III	25 to 36 kg	7 to 12 years	to 150 cm
Variable seats			
Group 0+	> 0 to 13 kg	From birth to 2 years	to 90 cm
Group 0/I	> 0 to 18 kg	From birth to 5 years	to 100 cm
Group I/II	> 9 to 25 kg	1 to 7 years	72 to 125 cm
Group I/II/III	> 9 to 36 kg	1 to 12 years	75 to 150 cm
Group II/III	> 15 to 36 kg	3.5 to 12 years	95 to 150 cm

Height, age and weight:

The weight group only specifies the weight. Age and height are reference values. Children grow at different speeds and also have different weights at the same age. The important thing is that the child car seat fits your child.

Tab. 2 ISOFIX reference value table

5.5 Tyres



Warning!

Risk of injury and severe damage to the vehicle

- ▲ When a tyre bursts, the vehicle can get out of control.
 - ➔ Check the tyre pressure (see Tab. 25 in Chapter 22.1) at regular intervals.
 - ➔ Check the tyres for damage at regular intervals
 - ➔ Comply with minimum tread depth. Observe the regulations of the respective country.
- Regularly check the tyre pressure on cold tyres and correct the tyre pressure as required. Do not forget the spare wheel (special equipment).
 - The tyres overheat if the tyre pressure is too low which can cause the tyres to burst at high speed.
- Regularly check the tyres for even wear and damage (e.g. penetrated foreign objects, punctures, cuts, tears and bumps in the tyre sidewalls). Always have the damage repaired by a specialist.
- Regularly check the tread depth.
 - If the tread depth is too small, the risk of aquaplaning rises.
 - Comply with the minimum tread depth. Observe the regulations of the respective country. We recommend to change the tyre as from a tread depth of 4 mm.

- Always use tyres of the same construction, same brand and same type (summer and winter tyres). Do not forget the spare wheel (see Tab. 25 in Chapter 22.1).
- Regularly check the wheel nuts or bolts for firm seating.
- When the vehicle is put out of service for a longer period, prevent "flat spots" on the tyres.
 - Relieve the load on the tyres by jacking up the vehicle.
 - Move the vehicle every 4 weeks so that the position of the wheels is changed and the load on the tyres is always at different positions.
 - Increase the tyre pressure by 0.3 bar as compared with the stipulated tyre pressure.
- Drive over kerbs slowly and, if possible, at an obtuse angle. Avoid driving over steep and sharp-edged kerbs.
 - Hard or acute-angled impacts against kerbs or sharp-edged objects, for example stones, can damage the tyres.
- Drive over high manhole covers at a slow speed.
- Hidden tyre damage is not eliminated by correcting the tyre pressure.
- Do not use used tyres.
 - Tyres age even when they are not driven or driven only a little.
 - It is recommended to change the tyres of the vehicle, including the spare wheel, when they are 6 years old or earlier when the minimum tread depth is reached.

5.6 Electrical lighting

Before starting to drive, check the function of all interior and exterior lighting equipment on the vehicle and replace defective lighting elements.

Make yourself familiar with the replacement of lighting elements before starting to drive (Chapter 21.2).

6 During the journey



Danger!

Risk of injury due to sliding passenger seat (on some models)

- ▲ Move the rear seat bench into its basic position and lock it in place.



Caution!

Risk of injury and damage to the vehicle

- ▲ During positioning manoeuvres, when driving through passageways, bridges, tunnels and with overhanging branches, observe the dimensions of the vehicle.
- ▲ Dimensions of the vehicle, see vehicle documents.
- ▲ Equipment and attachments change the weight and the dimensions.



Important!

- Persons as well as pets must be seated on seats equipped with suitable restraining devices while travelling in the vehicle.
- While the motorhome is in motion, nobody may remain in the alcove, the beds and the bathroom unit.

Pay attention to the following during the journey:

- When starting to drive and still at slow speed, brake shortly to check the function of the brake system and the braking behaviour (exact tracking etc.).
- Adjust your driving technique to the vehicle size, drive with consideration and foresight.
- Drive slowly on poor roads.
- Drive downhill at the same speed as uphill.
- Switch to the next gear early enough.
- Avoid braking abruptly.
- Prevent jerky steering as this could cause the vehicle to swerve.
- When driving over bridges, you have to anticipate crosswind. Because of the vehicle size and height, the vehicle is more sensitive to crosswind than a passenger car.
- The vehicle can get into a turbulence when overtaking truck-trailer combinations. Light counter-steering compensates this effect.
- Do not underestimate the length of the vehicle.
- When turning into a road and when driving around bends, take the larger curve radius of the vehicle into consideration.
- The braking distance of the vehicle is considerably longer than that of a passenger car. Please increase the safety distance accordingly.
- When driving in reverse, always have a second person assist you because the rear view mirrors can distort the distances differently.
- At petrol stations or in garages, switch off all "open flames" operated with gas (also refrigerator or heater).

7 After the journey

7.1 Requirements for the parking area

The parking area should be firm and level.

7.2 Pitching the vehicle

A second person is helpful for the following tasks.

Aligning the vehicle:

- Align the vehicle horizontally in the driving direction by manoeuvring.
- Align the vehicle horizontally crosswise to the driving direction.
 - If sufficient room is available, move the vehicle until you have found a horizontal position.
 - If this is not possible, use drive-on chocks (special accessory) underneath the respective wheels,
- Tighten the parking brake to the stop and engage the first gear.
- Secure the vehicle with the wheel chocks (special accessory) against rolling away.

7.2.1 Electrical connection

If 230 V supply is available at your parking area, the electrical appliances can be connected to this voltage supply (Chapter 10.1.1).

Observe the fuse protection of the voltage supply.

Some vehicles have their own living area battery (special equipment). On such vehicles, electrical appliances can also be used without the 230 V connection. The 12 V supply only functions when the 12 V voltage is switched on via the control panel. (Chapter 8.7).

8 Living

8.1 Sliding door



Important!

The door locks of the sliding doors are connected to the central locking on all vans.



Warning!

Risk of injury

- ▲ Always make sure not to injure any persons or animals, or damage any objects when opening and closing the door.
- ▲ Always use just the grip to open and close the door.
- ▲ Always open and latch the sliding door completely, especially when the vehicle is parked on a slope.
- ▲ Always keep the sliding door closed and locked during the journey or when moving the vehicle.

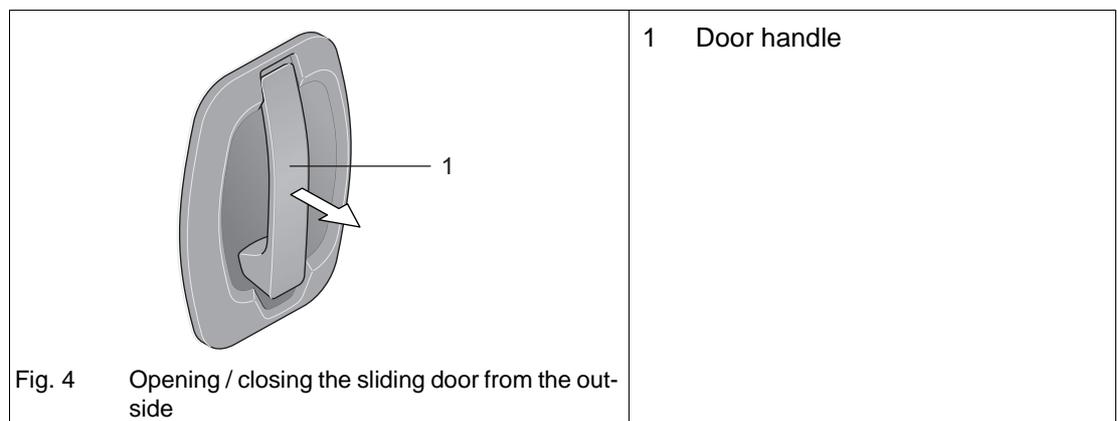


Caution!

Damage

- ▲ Before using the sliding door, always make sure the window in the sliding door and the window behind the sliding door (special accessory) are closed and locked.
- ▲ Open the flyscreen door (special equipment) fully before closing the sliding door.

8.1.1 Opening / closing the sliding door from the outside



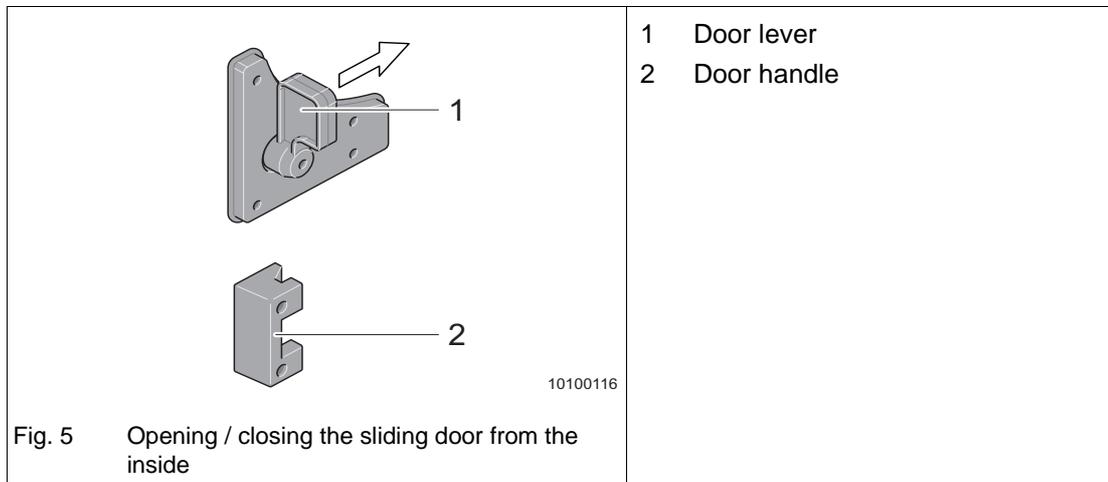
Opening the sliding door:

- ➔ Unlock the lock with the remote control.
- ➔ Pull the door handle (Fig. 4/1) to open the door.
- ➔ Slide the door to the rear to the locking position.

Closing the sliding door:

- ➔ Pull the door handle (Fig. 4/1) and press in the locking position.
- ➔ Slide the door to the front until it is completely closed.

8.1.2 Opening / closing the sliding door from the inside



Opening the sliding door:

- ➔ Pull the door lever (Fig. 5/1) to the rear and open the door up to the locking position.

Closing the sliding door:

- ➔ Use the door handle (Fig. 5/2) to slide the door until it latches in on its own.

8.1.3 Sliding door stop function (special equipment)

Some models have an optional sliding door with stop function. The door locks into place in half-open position.

- ➔ Pull the door handle (Fig. 4/1) or the door lever (Fig. 5/1) again to unlock the stop function.

8.1.4 Flyscreen door (special equipment)

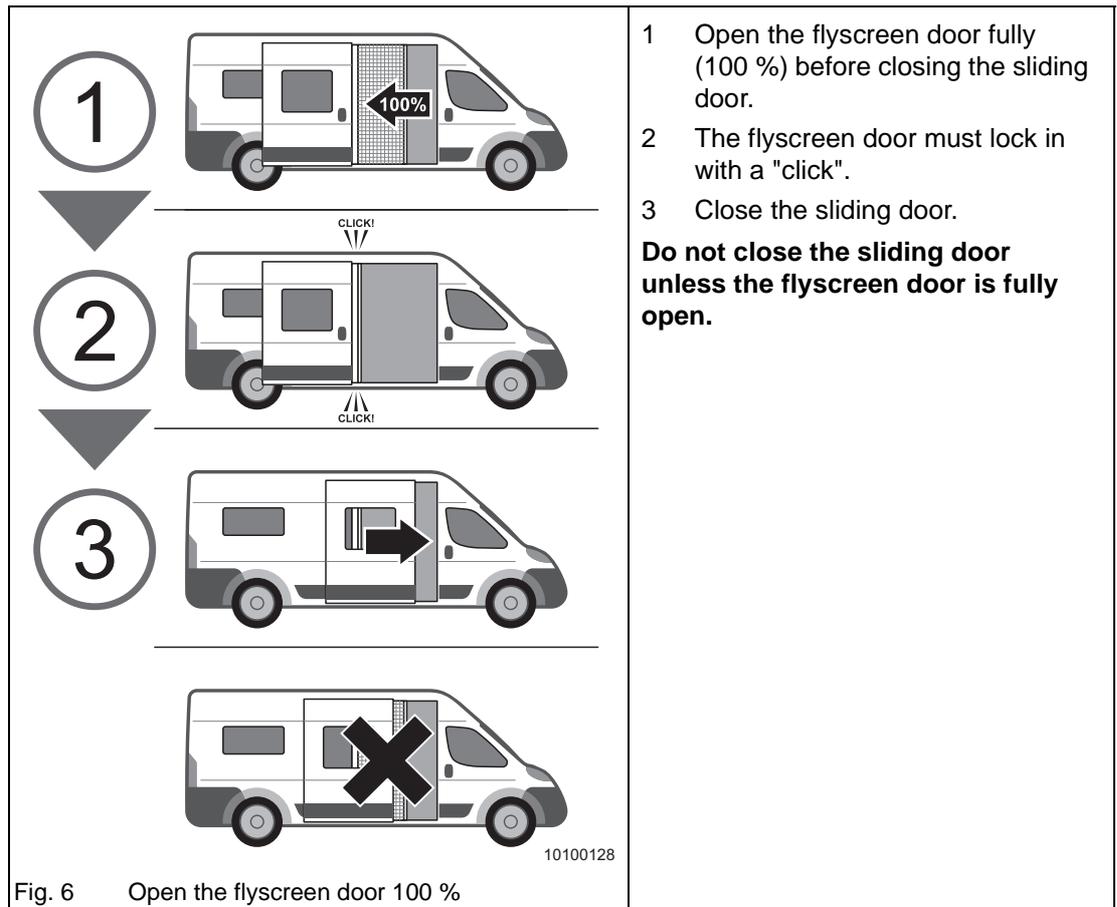
Some models have an optional flyscreen door.



Caution!

Damage

- ▲ Open the flyscreen door (special equipment) fully before closing the sliding door.



- 1 Open the flyscreen door fully (100 %) before closing the sliding door.
- 2 The flyscreen door must lock in with a "click".
- 3 Close the sliding door.

Do not close the sliding door unless the flyscreen door is fully open.

Opening the flyscreen door:

- ➔ Grip the flyscreen door in the middle of the vertical profile.
- ➔ Carefully slide the door open to prevent the door canting in the guide profiles.

Closing the flyscreen profile:

- ➔ Grip the flyscreen door in the middle of the vertical profile.
- ➔ Carefully slide the door closed to prevent the door canting in the guide profiles.
- ➔ Push the door shut until the brush seal is flush with the vehicle frame.

8.2 Ventilating the vehicle



Danger!

Poisoning by gas and carbon monoxide

- ▲ Always keep the forced ventilation (in the roof hoods and in the floor panel) and the mushroom ventilators open, do not cover them.



Caution!

Possibility of mould formation

- ▲ At night, condensation water could collect under the cushions. To dry the cushions (foamed material), place the cushions in an upright position and ventilate the vehicle thoroughly.

- Correct ventilation of the vehicle is the best prerequisite for agreeable living comfort.
- Each person gives off up to 35 g water per hour by breathing. Therefore, the living area must be ventilated using the windows and roof hoods depending on the relative humidity.
- Additional water evaporates as a result of cooking or wet clothes.
- Extreme weather conditions could cause the forming of condensed water inside the acrylic glass double window. With rising temperatures, the condensation water evaporates again and the window is cleared.

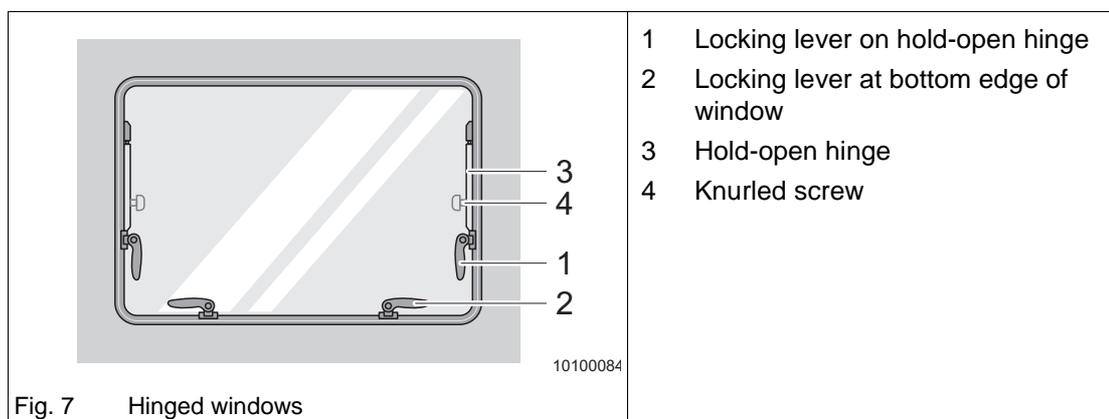
See Chapter 17 "Winter camping" for further details.

8.3 Hinged windows

8.3.1 General

The hinged windows of the vehicle have either automatic locking (the hinged window automatically locks into place in the desired position after opening) or can be continuously adjusted with a knurled screw.

The number of catch bars at the bottom edge of the window varies depending on the window width.



Opening the window:

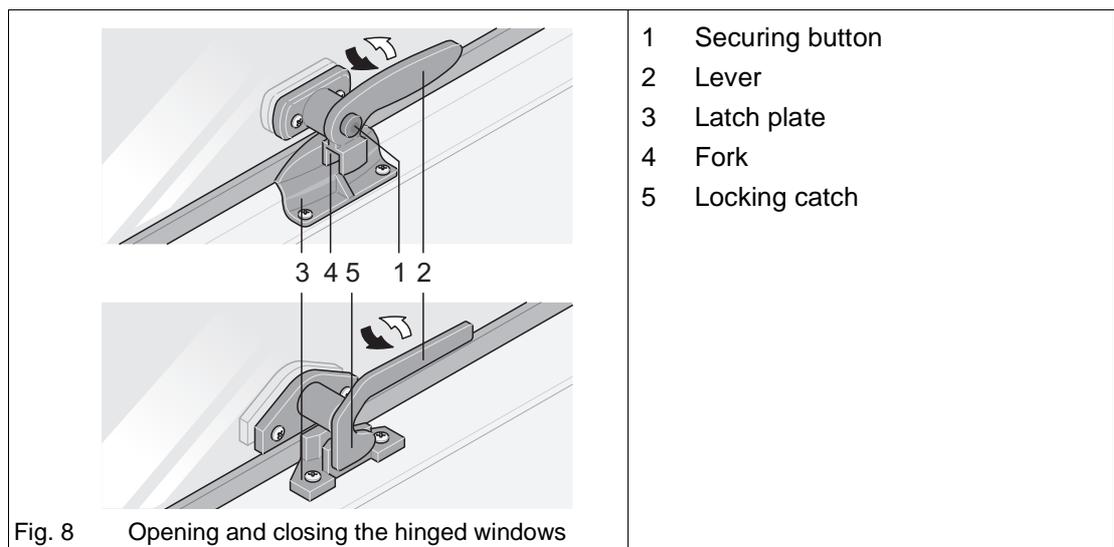
- ➔ Open the two locking levers (Fig. 7/1) on the hold-open hinges (Fig. 7/3) first.
- ➔ Then open the locking levers (Fig. 7/2) on the bottom edge of the window.
- ➔ Push the window to the outside until it has the desired opening width.
- ➔ Window with knurled screw: Tighten the knurled screw(s) (Fig. 7/4) clockwise when the hold-open hinge has reached the desired opening position.

Closing the window:

- ➔ Window with knurled screw: Hold the window pane with one hand and loosen the knurled screw(s) (Fig. 7/4) anticlockwise until the window can be slightly moved.
- ➔ Window with automatic hold-open hinges: Open the window until the lock is released.
- ➔ First close the locking levers on the bottom edge of the window.
- ➔ Afterwards, close the locking levers on the hold-open hinges.

8.3.2 Opening/closing the windows

To open and close the hinged windows, open or close all locking levers on the respective hinged window.



Opening the window:

- ➔ If the locking lever has a securing button (Fig. 8/1), press and hold down the securing button.
- ➔ Turn the lever (Fig. 8/2) to the middle of the window.
- ➔ Open all window locks.
- ➔ Open the window.

Closing the window:

- ➔ Close the window.
- ➔ If the locking lever has a securing button (Fig. 8/1), press and hold down the securing button.
- ➔ Turn the lever (Fig. 8/2) to the window frame.
- ➔ The fork (Fig. 8/4) of the lever (Fig. 8/2) closes completely on the inside of the latch plate (Fig. 8/3).

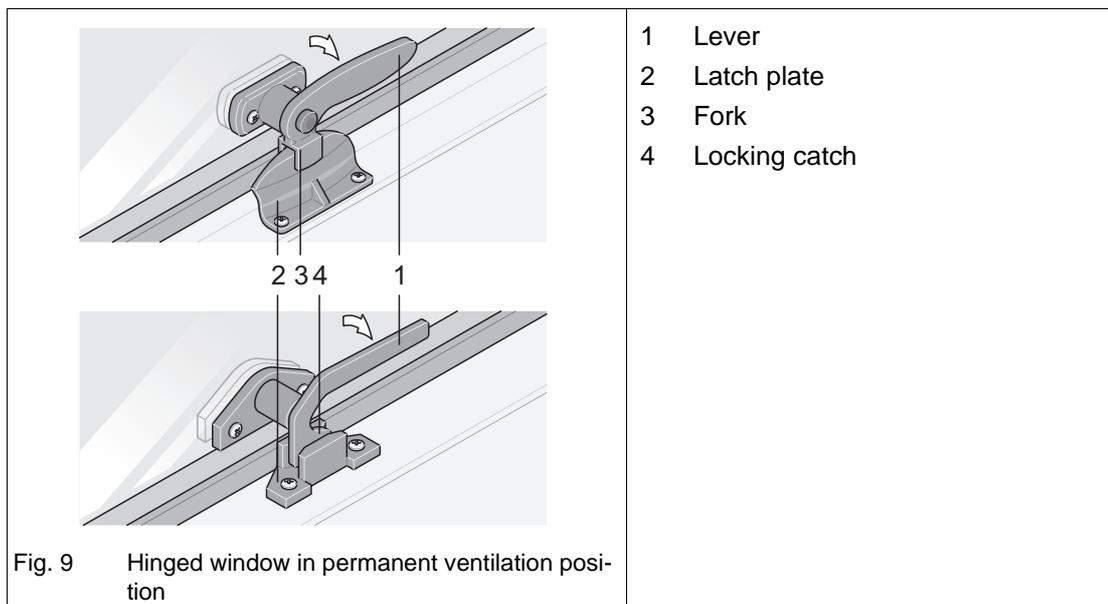
8.3.3 Permanent ventilation



Caution!

Cracks in the window

- ▲ For permanent ventilation, close only the levers (Fig. 7/2) at the bottom edge of the window in the "permanent ventilation" position, otherwise the window pane is bent. This could result in the formation of cracks in the acrylic glass window.
- ▲ Ensure all bottom catch bars are closed in the same position, otherwise, the window could be distorted.



Setting the window to the "permanent ventilation" position

- ➔ Open the locking levers as described in Chapter 8.3.2.
- ➔ Pull the window back until it is almost closed.
- ➔ With a locking lever (Fig. 9/1) **with** securing button, make sure the latch plate (Fig. 9/2) fits properly in the fork (Fig. 9/3) when closing the lever (Fig. 9/1).
- ➔ With a locking lever (Fig. 9/1) **without** securing button, make sure the locking catch (Fig. 9/4) fits properly in the recess of the locking plate (Fig. 9/2) when closing the lever (Fig. 9/1).

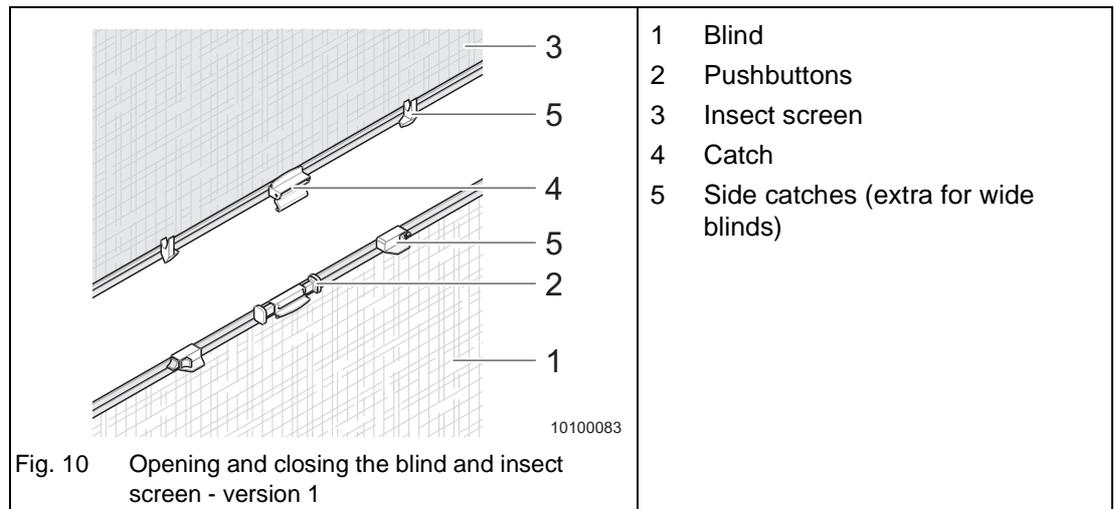
8.4 Window blinds and insect screens



Caution!

Damage to insect screen

- ▲ When you unlock the blind/insect screen, hold on to the insect screen (Fig. 10/3), otherwise it will snap up with spring tension. Snapping up could damage the screen spring and the insect screen.
- ▲ Only close the blind to a maximum of 75 % during direct sunlight. Air must be able to circulate.



The blind (Fig. 10/1) is located in the bottom part of the window frame.

The insect screen (Fig. 10/3) is installed in the top part of the window frame.

Opening and closing the blind:

- ➔ Press the two pushbuttons (Fig. 10/2) together.
- ➔ Slide the blind to the desired position.

Releasing the two pushbuttons automatically clamps the blind in place.

The blind (Fig. 10/1) has a restricting device so that it can be latched into place at different latching positions.

Opening and closing the insect screen:

- ➔ Pull the insect screen (Fig. 10/3) down until the catch (Fig. 10/4) latches into place in the blind (Fig. 10/1).

The insect screen (Fig. 10/3) can be operated only in combination with the blind (Fig. 10/1).

Separating the insect screen from the blind:

- ➔ Press on the upper catch (Fig. 10/4) of both blinds.
- ➔ Also release the side catches (Fig. 10/5) to separate the insect screen from the blind for wider blinds.

8.5 View protectors in the vehicle front



Caution!

Damage to view protector

- ▲ The fabric of the view protector is sensitive to pressure and can thus be easily damaged.

To prevent people from looking into the interior of the vehicle, a view protector is fitted to each the windows of the driver's cab: The view protector closes off:

- Windscreen
- Side windows

8.5.1 Pleated windscreen view protector (special equipment)

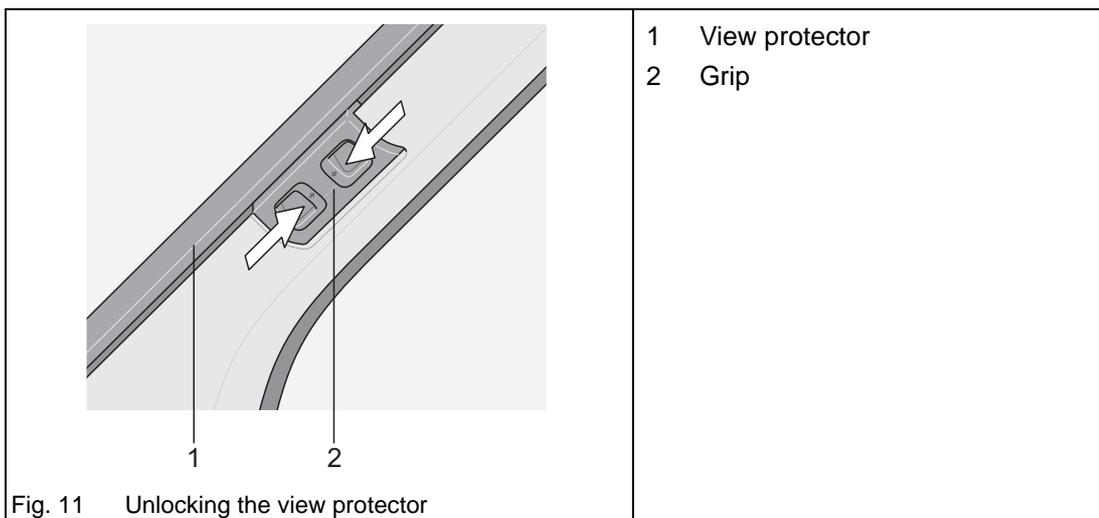


Danger!

Accident hazard

- ▲ If one or both windscreen halves are not locked, it is possible that the windscreen can become covered during certain driving manoeuvres.

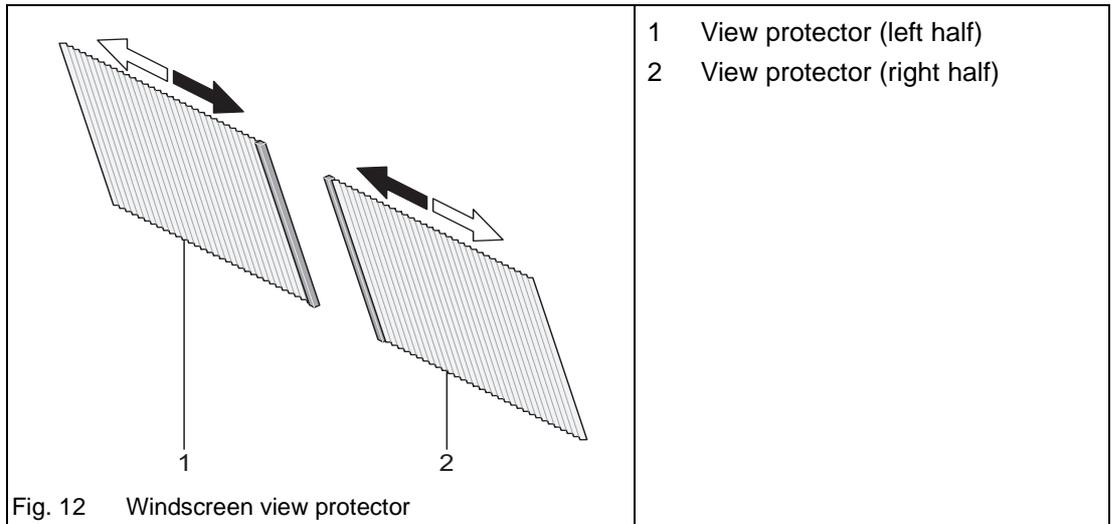
→ Lock the view protectors before starting the journey.



The view protector (Fig. 11/1) is located on the left and right of the windscreen.

Closing the view protector:

- Fold up both sunvisors.
- Unlock the view protector (Fig. 11/1) by pressing together both catch bars on the grip (Fig. 11/2) on both sides of the windscreen.

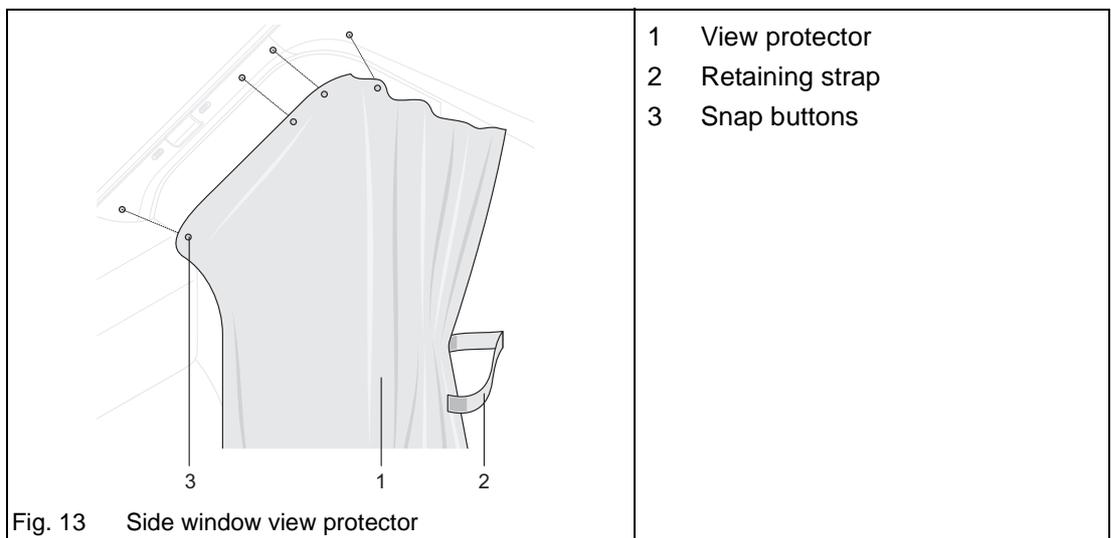


- ➔ Bring the interior rearview mirror into a position parallel to the windscreen.
- ➔ Hold each view protector (Fig. 12/1, 2) by the grip (Fig. 11/2).
- ➔ Slide both halves of the view protector (Fig. 12/1, 2) to the middle of the windscreen.

Opening the view protector:

- ➔ Hold each half of the view protector (Fig. 12/1, 2) by the grip (Fig. 11/2) and slide it back into the respective A column.
- ➔ Check that both halves of the open view protector can be locked again using the grip (Fig. 11/2).

8.5.2 Side window view protector



The view protectors (Fig. 13/1) are located at the rear edge of the respective side windows.

Closing the view protector:

- ➔ Loosen the Velcro fastener of the retaining strap (Fig. 13/2).
- ➔ Pull the view protector (Fig. 13/1) to the front and close the snap buttons (Fig. 13/3).

Close the view protector in reverse sequence.

8.5.3 Pleated side window view protectors (special equipment)

8.5.3.1 Version 1

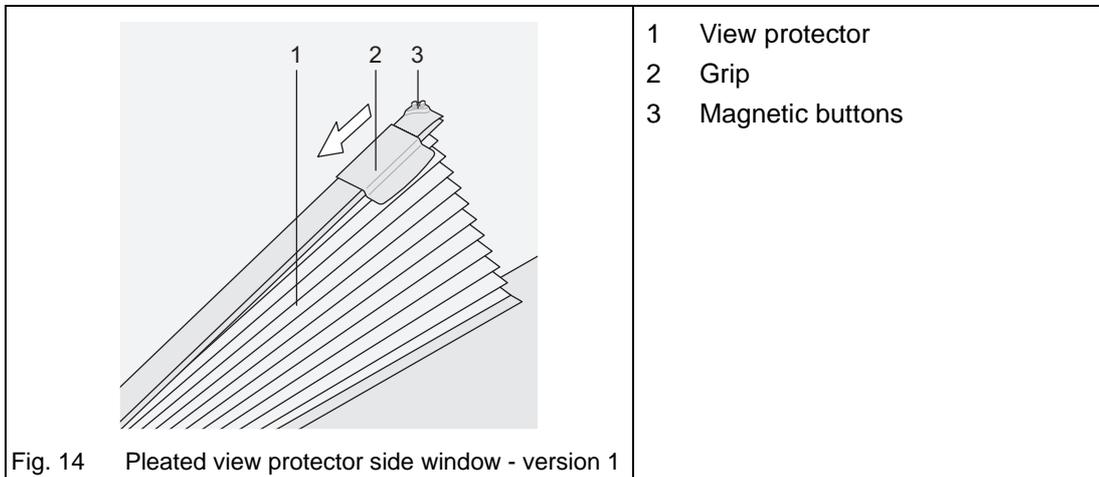


Fig. 14 Pleated view protector side window - version 1

The pleated view protectors (Fig. 14/1) are integrated in the right and left door frames in the driver's cab.

Closing the pleated view protector:

- ➔ Slide the grip (Fig. 14/2) in the direction of the arrow. This unlocks the pleated view protector.
- ➔ Unfold the view protector (Fig. 14/1) and attach it to the window frame using the magnetic buttons (Fig. 14/3).

Close the view protector in reverse sequence.

8.5.3.2 Version 2

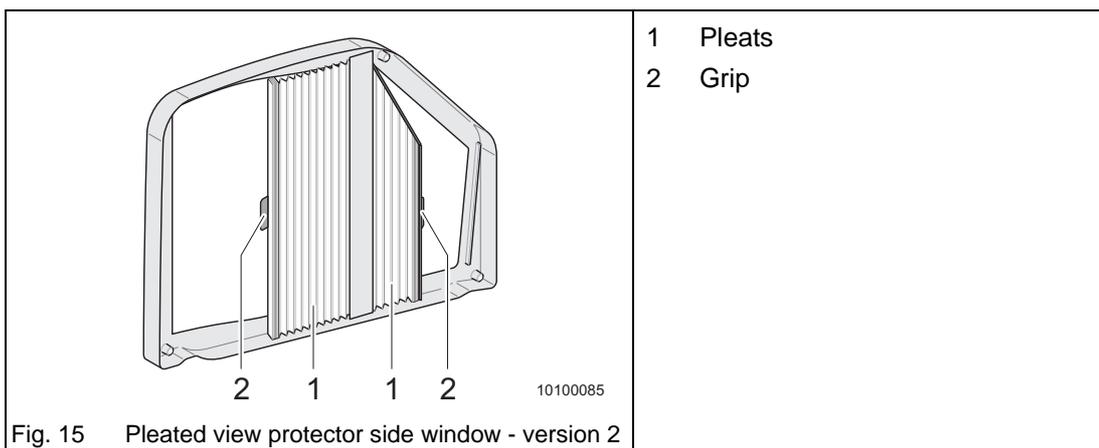


Fig. 15 Pleated view protector side window - version 2

The pleated view protectors (Fig. 15/1) are integrated in the right and left door frames in the driver's cab.

Closing the pleated view protector:

- ➔ Pull the pleats firmly on both sides on the grip (Fig. 15/2).
- ➔ Slide the grip (Fig. 15/2) in arrow direction and lock it in on the opposite side.

Close the view protector in reverse sequence.

8.6 Roof openings

8.6.1 General

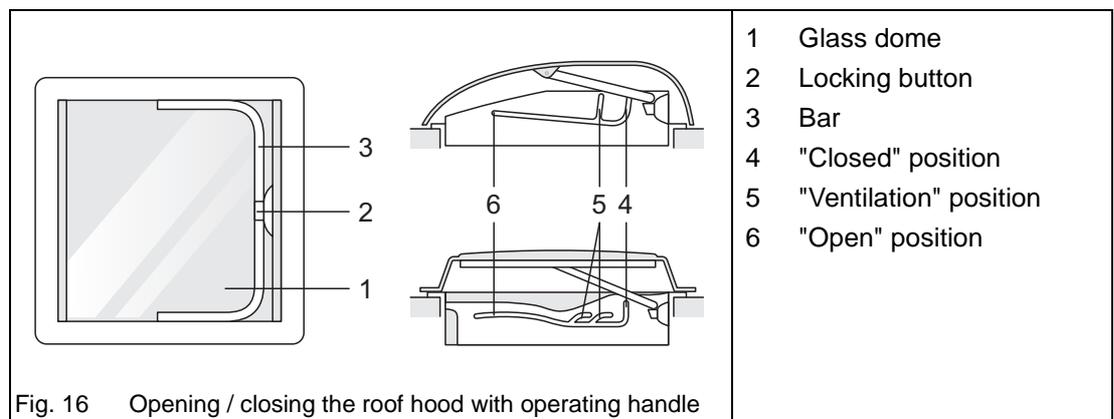


Important!

- Before starting the journey, check the roof openings for damage to the glass dome.
- Open the blind and insect screen before starting the journey.
- Close the roof openings before starting the journey.
- **ADRIA** recommends a **maximum** speed of **130 kph**.
- Do not open the roof openings by strong wind/storm, rain, hail, snowfall or outdoor temperatures under -10 °C.
- Make sure the opening area above the roof hood is free.
- Before opening the roof openings, remove snow, ice and other foreign material.
- Close the roof openings when leaving the vehicle. Danger of burglary or from rain water and wind.
- Consult an authorised workshop when faults or malfunctions occur.

8.6.2 Roof hood with operating bar

The roof hood with operating bar can be opened by tilting to one side.



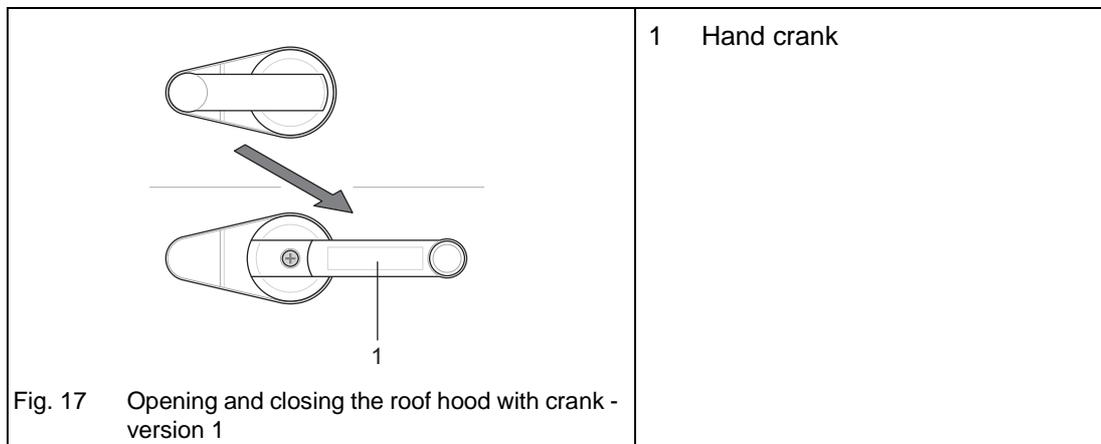
Opening the roof hood:

- ➔ To open the glass dome (Fig. 16/1), press the locking button (Fig. 16/2) and pull the bar (Fig. 16/3) downwards.
- ➔ Push the bar (Fig. 16/3) into the desired position. Possible positions are "Ventilation" (Fig. 16/5) or "Open" (Fig. 16/6).

Closing the roof hood:

- ➔ Push the bar (Fig. 16/3) in the direction of the locking button (Fig. 16/2) to close the roof hood.
- ➔ Press the locking button (Fig. 16/2) and push the bar (Fig. 16/3) into the "Closed" position.

8.6.3 Roof hood with crank operation (special equipment)



Opening the roof hood:

Some models are equipped with additional locking levers (Fig. 8).

- ➔ Swivel the hand crank (Fig. 17/1) out.
- ➔ Turn the hand crank only until a resistance can be felt.
The roof hood is now in the maximum open position.
Any desired interim position is possible.

Closing the roof hood:

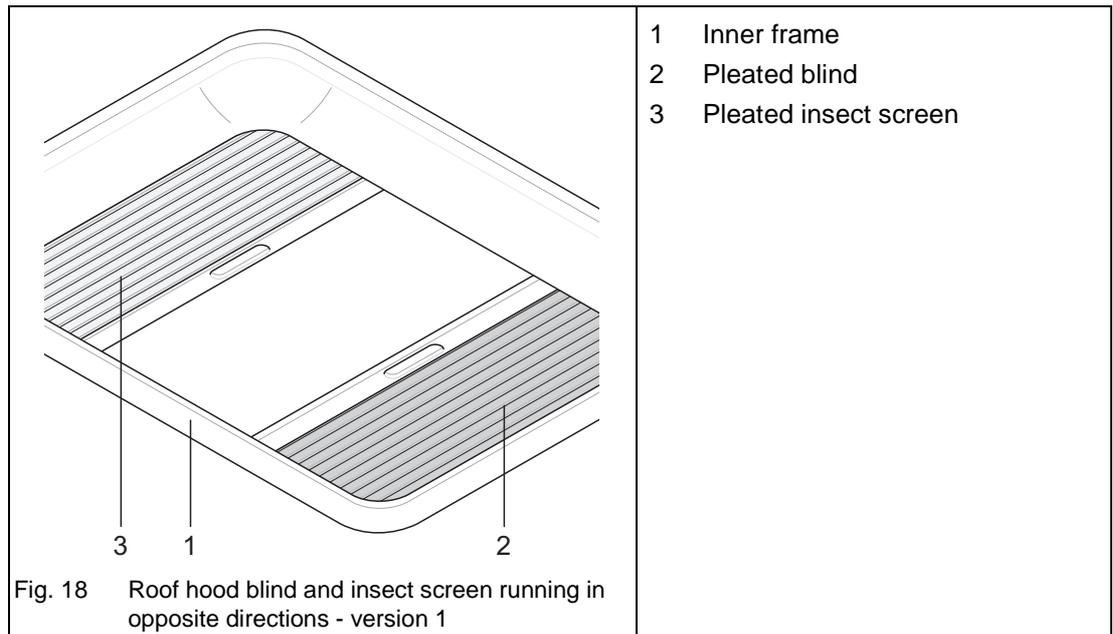
- ➔ Turn the hand crank (Fig. 17/1) only until a resistance can be felt.
- ➔ Check the locking by attempting to lift the glass dome.
Before you fold in the hand crank again, a light initial tension must be present on the crank.
 - If required, loosen the attachment screw, take the crank out of the gearing and reposition the crank. Then place the crank onto the gearing again and screw tight.
- ➔ Close the locking lever as required (Fig. 8).

8.6.4 Roof hood blind and insect screens running in opposite directions



Important!

- Both pleated blinds are continuously adjustable and can be operated together or separate from each other.
- Only close the pleated blind to a maximum of 75% during direct sunlight. Air must be able to circulate.



The pleated blind (Fig. 18/2) and the pleated insect screen (Fig. 18/3) are fitted in the inner frame (Fig. 18/1) of the roof hood.

Opening/closing the pleated blind or pleated insect screen:

- ➔ Reach into the recess of the end bar of the pleated blind (Fig. 18/2) or pleated insect screen (Fig. 18/3).
- ➔ Slide it to the desired position.

8.6.5 Care of roof hoods

For information on the care of the roof hoods, please see the "Care" Chapter (Chapter 19.1.1).

8.7 Control panel

Different control panels are installed in the vehicle depending on the model:

Battery voltage and, depending on the model, water tank and fuel tank levels can be queried via the control panels.

The control panels are located inside the vehicle.

8.7.1 LT 50 control panel

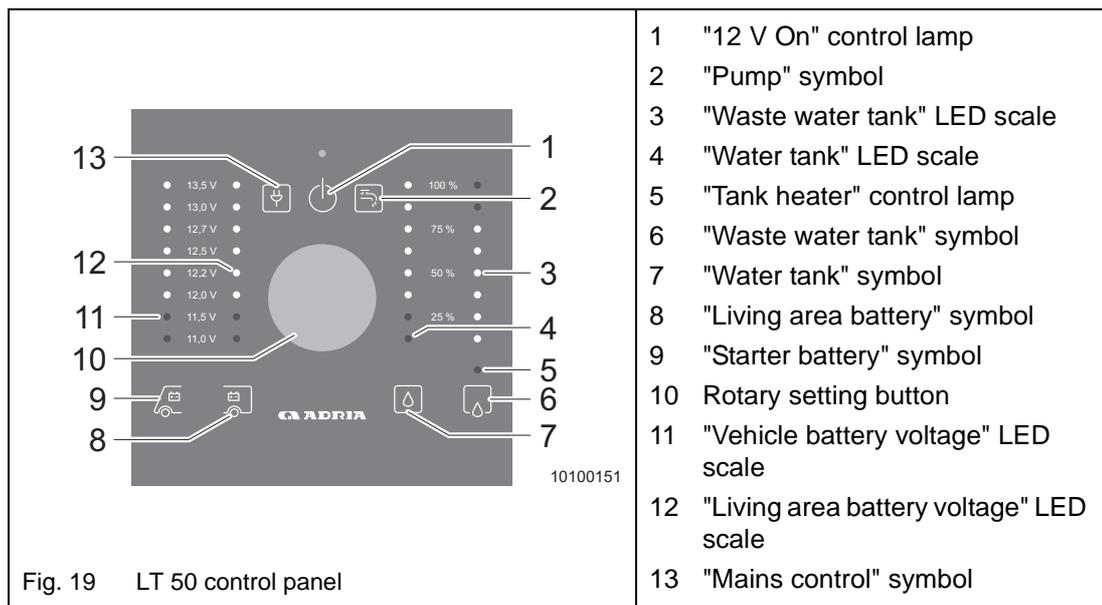


Fig. 19 LT 50 control panel

"Mains control" indicator:

- ➔ Connect the connector for mains operation to the 230 V mains supply.
 - The "Mains control" symbol (Fig. 19/13) lights and the batteries are charged.
 - The "Mains control" symbol lights only when the 12 V supply voltage is switched on.

"12 V On" rotary setting button:

- ➔ Briefly press the rotary setting button (Fig. 19/10) to switch the supply voltage for the 12 V appliances on or off.
 - The "12 V On" control lamp (Fig. 19/1) lights when the 12 V appliances are switched on.
- ➔ Switch off the 12 V appliances when you leave the vehicle for a longer period of time.



Important!

Note that the power supply continues to the entrance step and the awning light, for example, even with the main switch switched off.

Checking the battery voltage:

The 12 V supply voltage must be switched on to display the battery voltage.

- ➔ Turn the rotary setting button (Fig. 19/10) until the desired battery symbol (Fig. 19/8) or (Fig. 19/9) lights.

The scale legend "Volt" (left) lights and the battery voltage of the selected battery is shown on the LED scale concerned (Fig. 19/11) or (Fig. 19/12).

i Important!

The indicator goes off after approx. 20 s when no button is pressed in this time.

Checking the tank fill levels:

The 12 V supply voltage must be switched on to display the tank fill levels.

- ➔ Turn the rotary setting button (Fig. 19/10) until the desired tank symbol (Fig. 19/6) or (Fig. 19/7) lights.
The scale legend "%" (right) lights or blinks and the fill level of the selected tank is shown on the LED scale concerned (Fig. 19/3) or (Fig. 19/4).

i Important!

The indicator goes off after approx. 20 s when no button is pressed in this time.

The water tank is empty or the waste water tank full when the symbol of the selected tank blinks while the fill level is indicated.

When the LEDs of the LED scale concerned blink, there is a sensor error on the respective tank.

Switching the different 12 V appliances on and off

The voltage supply to the pumps and the tank heater can be individually switched on or off. The 12 V supply voltage must be switched on in order to switch the different 12 V appliances on and off.

Switching the pump on and off:

- ➔ Turn the rotary setting button (Fig. 19/10) until the water tank fill level is shown on the LED scale (Fig. 19/4).
The pump is on when the "Pump" symbol (Fig. 19/2) lights.
- ➔ Press the rotary setting button (Fig. 19/10) to change the switched state.
The "Pump" symbol (Fig. 19/2) lights or goes off. The 12 V supply of the pump is switched on or off.

i Important!

When the 12 V supply voltage is switched off, the "Pump" power supply is also switched off.

Switching the tank heater on and off:

- ➔ Turn the rotary setting button (Fig. 19/10) until the waste water tank fill level is shown on the LED scale (Fig. 19/3).
The tank heater is on when the red LED (Fig. 19/5) above the "Waste water tank" symbol (Fig. 19/6) lights.
- ➔ Press the rotary setting button (Fig. 19/10) to change the switched state.
The red LED (Fig. 19/5) lights or switches off. The 12 V supply of the tank heater is switched on or off.

i Important!

The switching state of the "Tank heater" is maintained when you switch the 12 V supply voltage off. The red LED goes off when the 12 V supply voltage is switched off, but the tank heater remains switched on.

For more information, see the separate instructions from the manufacturer.

8.8 Electrical entrance step (special equipment)

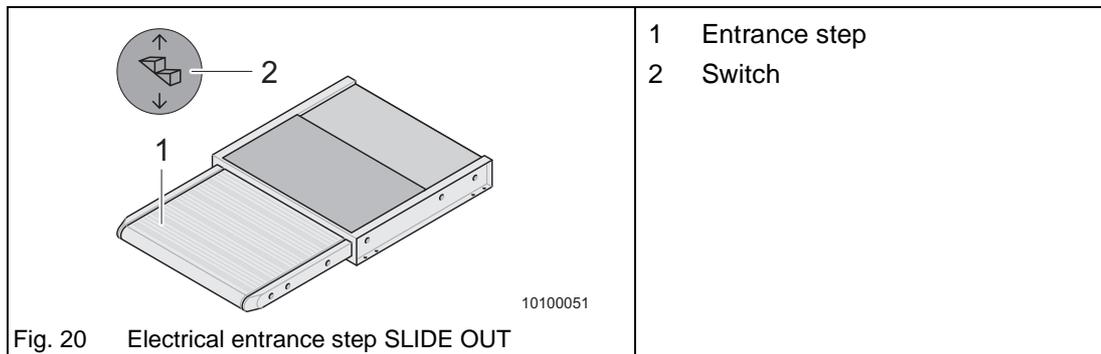
Some vehicles are equipped with an electrical entrance step.



Warning!

Accident hazard

- ▲ Maximum load of entrance step: 200 kg.
- ▲ Only use the step when it is fully extended.
- ▲ Before starting the journey, ensure the entrance step is completely retracted.
- ▲ Extend and retract the entrance step only in an unloaded condition.
- ▲ Keep persons and pets away from the entrance step during extension or retraction.
- ▲ Only adults may operate the entrance step.
- ▲ Never leave the vehicle without extended entrance step.
- ▲ Never jump on the step.
- ▲ Only one person may be on the step at a time.
- ▲ Before extending or retracting the entrance step, check the available space.
- ▲ Ensure the extended step does not represent an obstacle or hazard for third persons.
- ▲ In adverse weather conditions, clean the step from snow or ice.
- ▲ Clean the entrance step thoroughly at regular intervals to ensure its perfect function.



Retracting or extending the electrical entrance step:

The switch (Fig. 20/2) for retraction or extension of the entrance step is located in the entrance area near the outer door.

- ➔ Tip the switch (Fig. 20/2) briefly in the lower area until the entrance step is extended (Fig. 20/1).
- ➔ Tip the switch (Fig. 20/2) briefly in the upper area until the entrance step is retracted (Fig. 20/1).

8.9 Seating group / table

The driver's and passenger's seats can be rotated, and the seating group can therefore be extended.

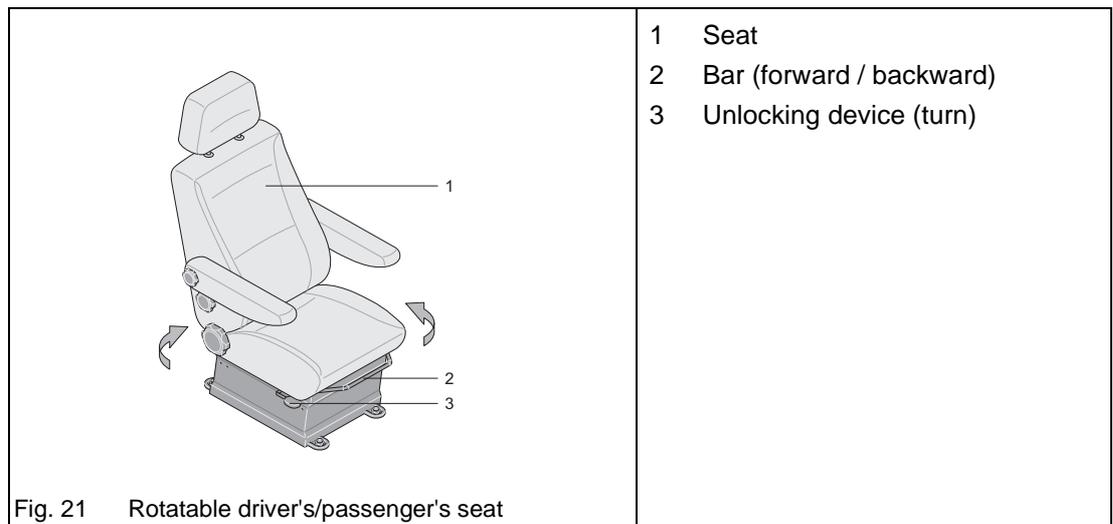
8.9.1 Rotatable driver's / passenger's seat (special equipment)



Danger!

Accident hazard when the driver's seat rotates while driving

- ▲ The driver's seat must be locked before you start to drive.



- ➔ Actuate the unlocking device (Fig. 21/3) on the seat (Fig. 21/1).
- ➔ Adjust the inclination of the backrest and the seat position in longitudinal direction so that the seat does not collide with the side wall, the cab door or the steering wheel.
 - If necessary, briefly release the parking brake and pull the parking brake again after adjustment when the vehicle is not secured from rolling away by other means.
- ➔ Now you can rotate the seat (Fig. 21/1) to the desired position.
- ➔ Before starting the journey, rotate the seat back to its initial position.
- ➔ Check the lock (Fig. 21/2) is engaged.

8.9.2 Seat bench



Danger!

Risk of injury

- ▲ While travelling, passengers must use the seat belts on the seat benches and face the driving direction.
- ▲ Move the sliding passenger seat into its basic position before starting the journey.



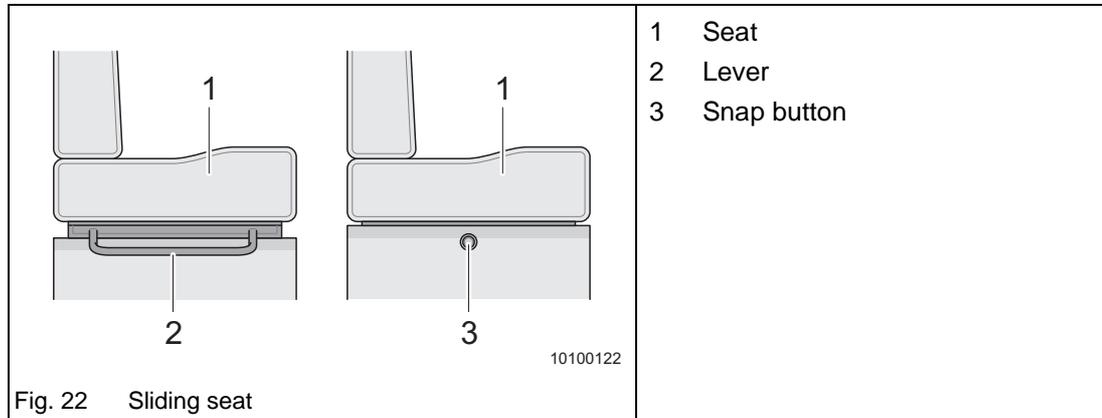
Important!

The cushions must always be secured (also when parked) with all attachment devices.

The substructures of the seat benches are made from massive steel pipes and contain the attachment points of the seat belts.

The cushions of the seat benches are attached to the substructure with snap buttons, snap-on fasteners and/or Velcro fasteners.

Some models have passenger seats that slide to the side (option).



Sliding the individual seat out:

- Sit down on the seat.
- Pull side lever (Fig. 22/2) upward and push seat (Fig. 22/1) to the side.
- Lower the lever, check seat locking by gently jogging the seat.

Sliding the individual seat into its basic position:

- Sit down on the seat.
- Pull the side lever upward and push the seat into its basic position.
- Lower the lever, check seat locking gently jogging the seat.

Sliding the sliding seat out:

- Unlock the base plate with snap button (Fig. 22/3) on the side.
- Push seat (Fig. 22/1) with the base plate to the side.

Sliding the sliding seat into its basic position:

- Unlock the base plate with snap button (Fig. 22/3) on the side.
- Push the seat into its basic position.
- Lock the base plate with the snap button.

8.9.3 Water tank underneath the seat bench

The water tank is underneath the seat bench on some models (Chapter 12.1.1).

Servicing the water tank:

- Remove the cushions.
- Fold up the seat cushions to reach the service opening of the water tank.

8.9.4 Tables



Warning!

Risk of burning and scalding

- ▲ Ensure the table is locked securely before serving food and hot drinks on the table.
- ▲ Remove all food and drinks from the table before you start converting.
- ▲ If the table top moves, cups or glasses could tip over or plates could fall off the table.



Warning!

Risk of injuries in the case of an accident

- ▲ Before starting a journey with the table hung in position, first fold the table foot up and stow the table away safely (e.g. in the rear garage).

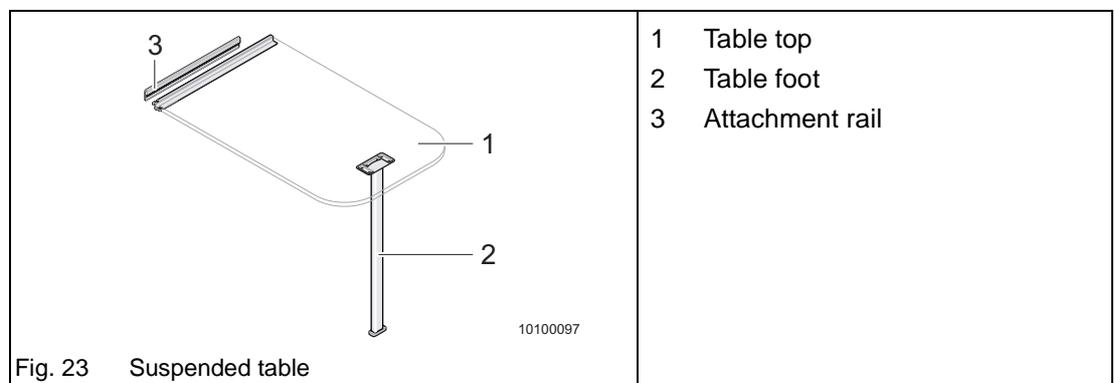
Different optional table variants are used, depending on the model.

8.9.4.1 Suspended table



Important!

- On some models, the table can be used as part of a bed.
- On some models, the table can be used, when the sliding door is open, outside on the kitchen unit as awning table
- On some models, the table can be used as an extra table top.
 - ➔ To turn the extra table top, pull the latch on the underside of the table down.



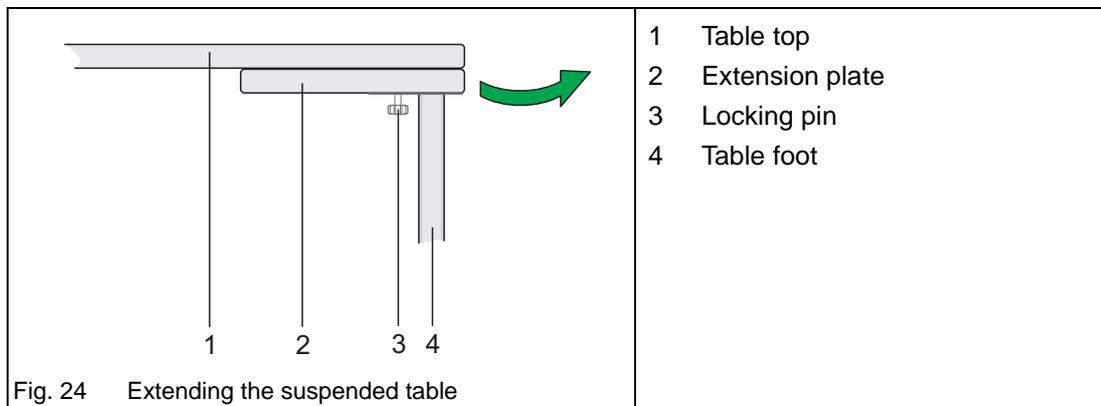
Adjusting the table top:

- ➔ Lift the table top (Fig. 23/1) slightly at the front.
- ➔ Slide the table into the attachment rail (Fig. 23/3).
- ➔ Lower carefully so that the catches slide in and interlock.

Removing the table top:

- ➔ Lift the table top at the front and remove it upwards out of the attachment rail.

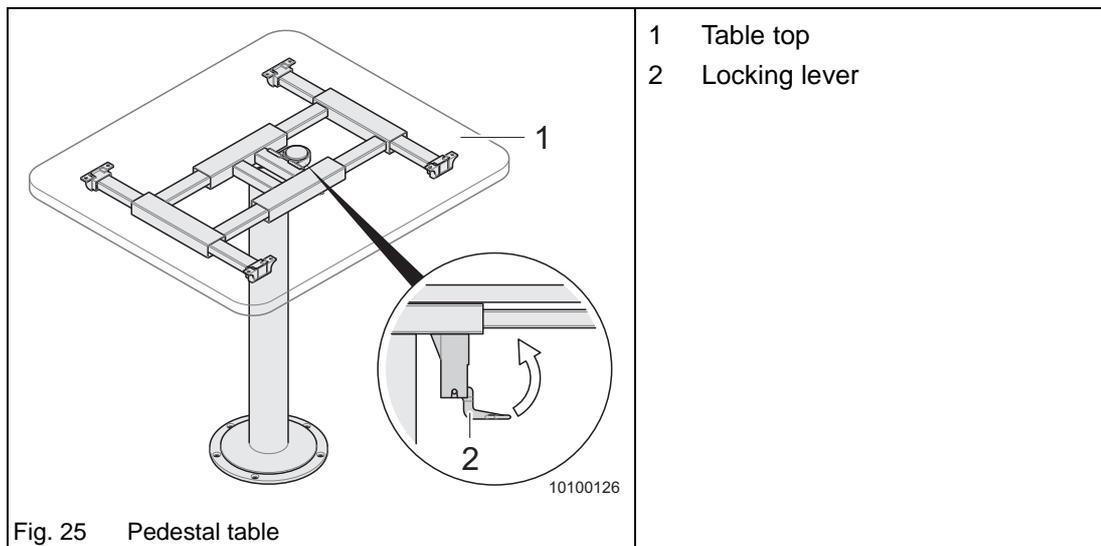
8.9.4.2 Suspended table with swivelling table top extension



Extending the suspended table:

- ➔ Pull the locking pin (Fig. 24/3) on the underside of the table (Fig. 24/1).
 - ➔ Swivel the extension plate (Fig. 24/2) in arrow direction until the latch engages.
- Stow away in reverse sequence.

8.9.4.3 Pedestal table



Moving the table top:

- ➔ Push locking lever (Fig. 25/2) on the underside of table top (Fig. 25/1) upward (unlock).
- ➔ Move the table top to the desired position.
- ➔ Push locking lever (Fig. 25/2) downward (lock).

8.10 Furniture locks



Caution!

Damage to the handles

- ▲ Do not pull too hard on a handle when the respective door, flap or drawer cannot be opened.
- ▲ First unlock the drawers before opening them.
- ▲ To close the bathroom door, always hold the door handle pressed fully down.

Depending on the production series, there can be different locking systems.

The drawings serve only to show the operating principle. Differences in form are possible.

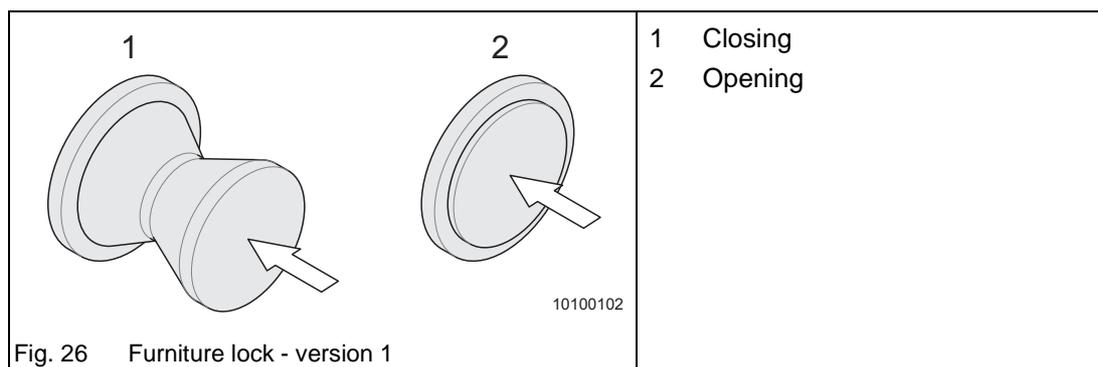
8.10.1 Furniture locks - version 1



Caution!

Risk of damage through cupboard or drawer contents flying around!

- ▲ Carefully lock the cabinets and drawers before starting each journey.



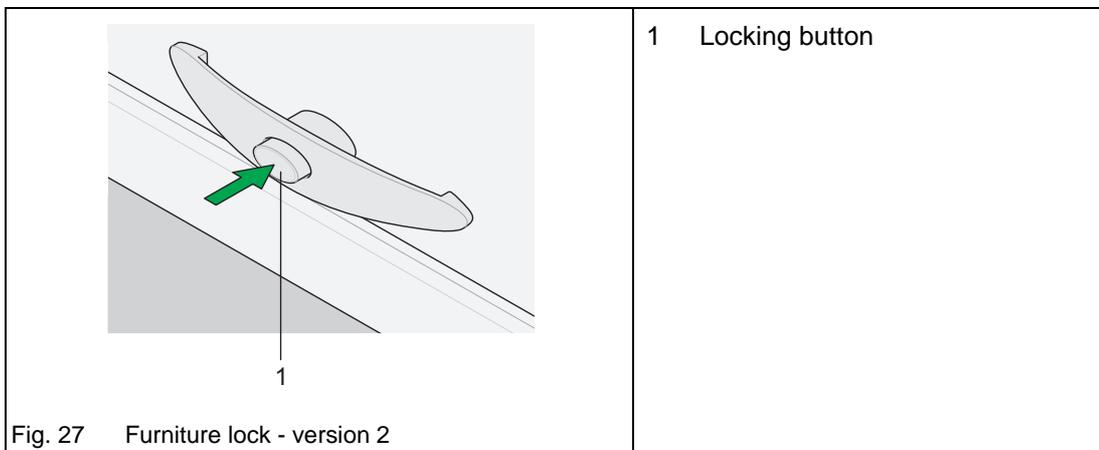
Opening:

- ➔ Press the locking button (Fig. 26/1), the button springs out. The lock is unlocked.
- ➔ Open the cabinet door, flap or drawer.

Closing:

- ➔ Close the cabinet door, cabinet flap or drawer.
- ➔ Push in the locking button until it latches into place (Fig. 26/2). The lock is locked.

8.10.2 Furniture locks - version 2



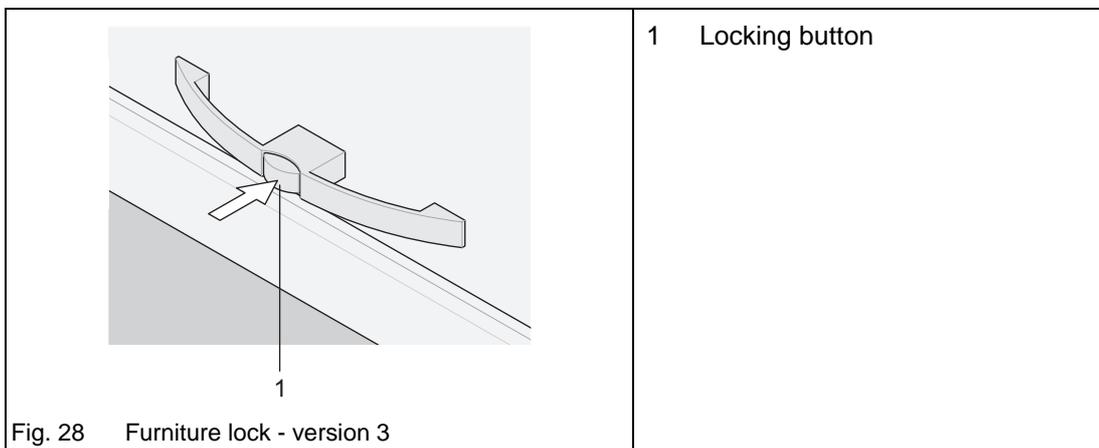
Opening:

- ➔ Press the locking button (Fig. 27/1), the button springs out. The lock is unlocked.
- ➔ Open the cabinet door, flap or drawer.

Closing:

- ➔ Close the cabinet door, cabinet flap or drawer.
- ➔ Push the locking button (Fig. 27/1) in until it latches into place. The lock is locked.

8.10.3 Furniture locks - version 3



Opening:

- ➔ Press the locking button (Fig. 28/1). The lock is unlocked.
- ➔ Open the cabinet door, flap or drawer.

Closing:

- ➔ Close the cabinet door, cabinet flap or drawer.
- ➔ Release the handle. The lock is locked.

8.11 TV equipment (special equipment)



Caution!

Damage to the vehicle

- ▲ Before starting the journey, you always have to lower and lock the antenna.
- ▲ Retract, lay it flat and secure the satellite dish before starting the journey.
- ▲ Lock the antenna mast into place to prevent twisting of the satellite dish.



Caution!

Damage to the cables

- ▲ Make sure the cables always have enough room to move.



Caution!

Damage to the appliance

- ▲ Check all locking grips are engaged before each journey.
- ▲ Check that all locking screws and locking brackets are screwed tight before each journey.

The vehicle has been prepared for the installation of TV equipment:

- Antenna cables and sockets have already been installed.
- ➔ Check freedom of movement before the installation of an automatic antenna.



Important!

- For more information concerning the installation of TV equipment, contact your **ADRIA** dealer.
- For more information, see the separate manufacturer's operating instructions.

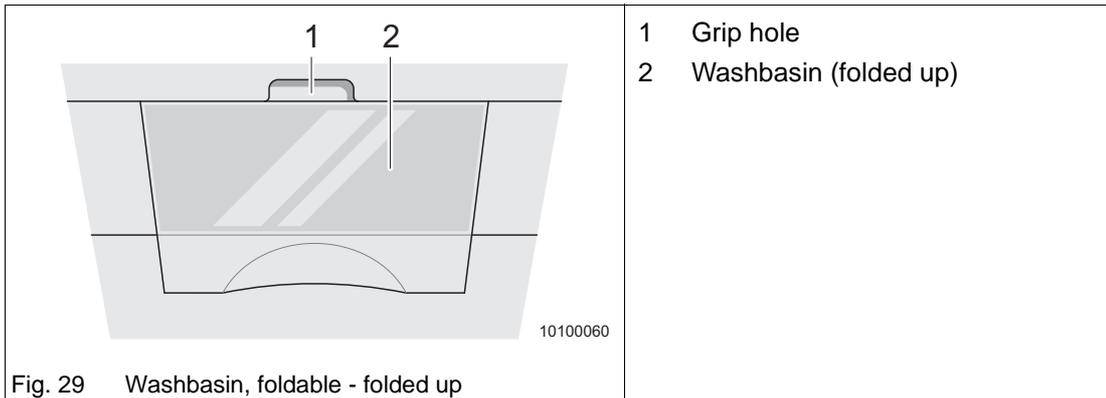
8.12 Washbasin, foldable



Caution!

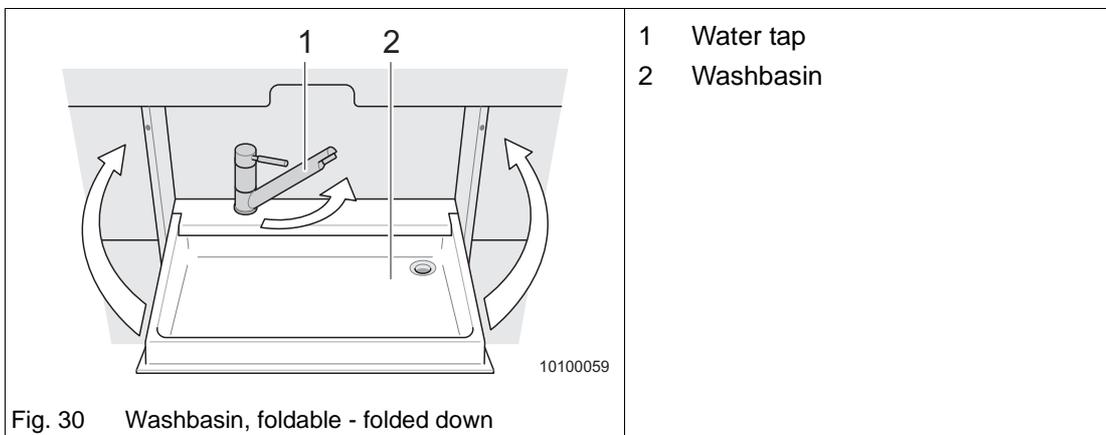
Damage to mirror and washbasin

- ▲ Always lower the washbasin slowly.



Folding the washbasin down:

- ➔ Grip inside the grip hole on the mirror (Fig. 29/1) and carefully pull the washbasin (Fig. 29/2) with mirror.
- ➔ Fold the washbasin (Fig. 29/2) with mirror down.

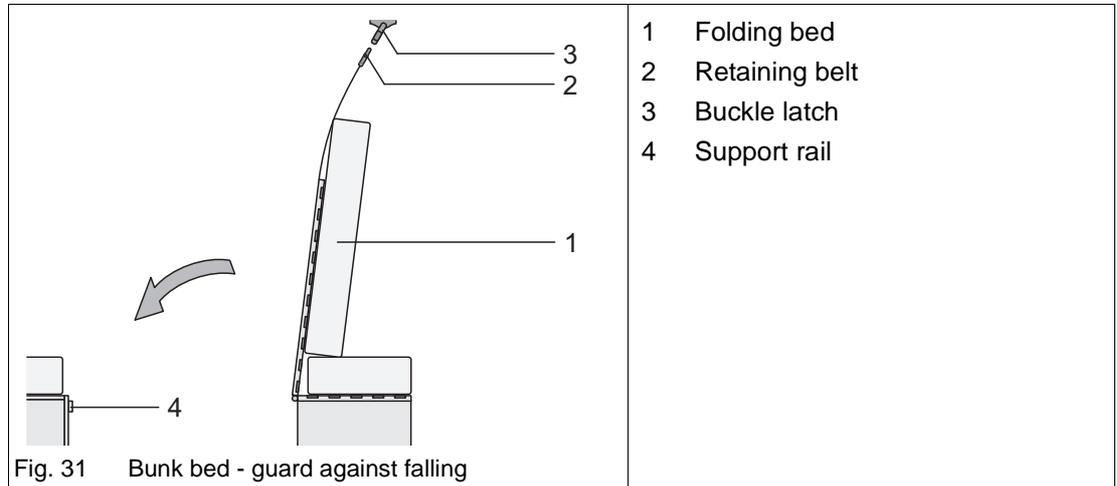


Folding the washbasin up:

- ➔ Turn the water tap (Fig. 30/1) to the rear until it almost touches the rear panel.
- ➔ Fold the washbasin (Fig. 30/2) with mirror upwards and push it into the catch.

9 Sleeping arrangements

9.1 Folding bed at the rear of the vehicle



Lowering the folding bed:

- ➔ Open the retaining belt (Fig. 31/2,3).
- ➔ Lower the folding bed (Fig. 31/1) onto the support rail (Fig. 31/4).

Securing the folding bed:

- ➔ Lift the folding bed and secure it with the retaining belt (Fig. 31/2,3).

9.2 Lifting bed at the rear



Danger!

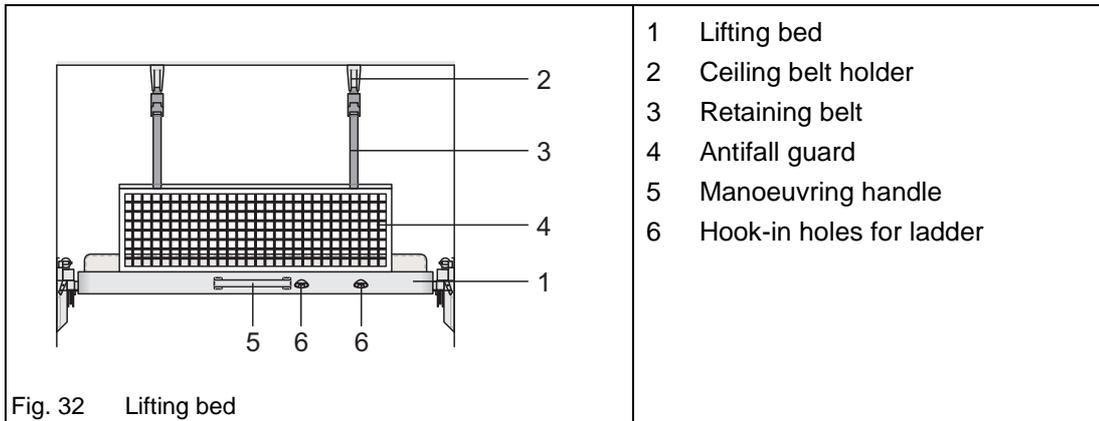
Accident hazard

- ▲ Push lifting bed upward and lock it before starting the journey.
- ▲ Do not use the lifting bed for storage of luggage during the journey.
- ▲ Place only the required bed linen on the lifting bed during the journey.
- ▲ Never allow small children to remain in the lifting bed without supervision.
- ▲ For children under 6 years of age, ensure they cannot fall out of the lifting bed.
- ▲ Use separate children's beds or travel cots suitable for small children.
- ▲ Always use the lifting bed with hung-in safety net.
- ▲ See the labels on the lifting bed for the maximum load.



Important!

The lowering area of the lifting bed must be free from obstacles.



Lowering the lifting bed:

- Unfasten the retaining belt from the ceiling.
- Using both hands, push the lifting bed (Fig. 32/1) down with the manoeuvring handle (Fig. 32/5) to the stop.
- Hang the ladder into the hook-in holes (Fig. 32/6) on the lifting bed.
- Fasten the antifall guard (Fig. 32/4) on the bed using the retaining belts (Fig. 32/3) and the ceiling belt holder (Fig. 32/2) on the ceiling.

Raising the lifting bed:

The lifting bed is raised in reverse sequence.

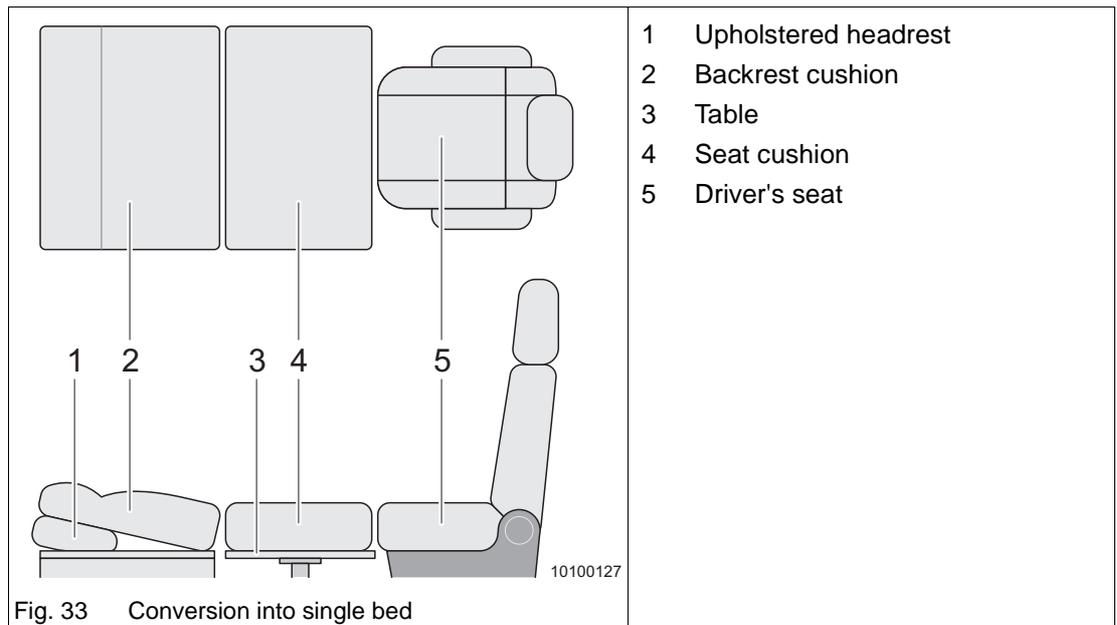
- Unfasten the antifall guard (Fig. 32/4) from the ceiling.
- Place the bed linen flat on the bed.
- Unhang the ladder and stow away.
- Move the lifting bed upward using the manoeuvring handle (Fig. 32/5), raise the rear part of the bed and push the lifting bed upward to the stop.
- Secure the lifting bed to the ceiling with the retaining belt.

9.3 Converting the seating group into a single bed in driving direction



Important!

The extra table top must not be swivelled out on models with such an extra table top.



Turning the driver's seat:

- ➔ Rotate the driver's seat (Fig. 33/5) 180° against the driving direction (Chapter 8.9.1).
- ➔ Tip the driver's seat to the front so that a horizontal seat is created.

Lowering the table:

- ➔ Unhinge table (Fig. 33/3) (Chapter 8.9.4).
- ➔ Pull the bottom part of the table foot off downward and stow away.
- ➔ Hinge the table (Fig. 33/3) into the bottom attachment rail (special equipment) and position.

Making the mattress:

- ➔ Place the cushions (Fig. 33/4) on the table.
- ➔ Fold the upholstered headrest (Fig. 33/1) on the backrest cushion (Fig. 33/2) to the rear.
- ➔ Place the backrest cushion (Fig. 33/2) with the thicker side on the seat bench in the direction of the driver's seat.
- ➔ Push the driver's seat (Fig. 33/5) to the rear against the cushions.

Reconverting the mattress:

- ➔ Reconvert the seating group in reverse sequence.

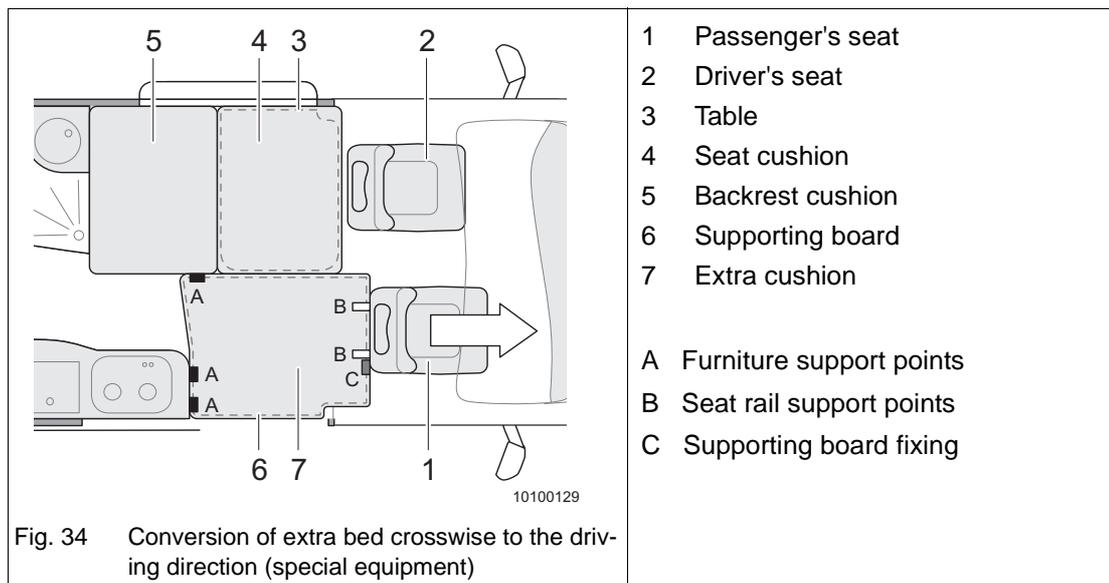
9.4 Installing the extra bed crosswise to the driving direction (special equipment)



Danger!

Risk of injury

- ▲ During the journey, the extra bed may not be installed.
 - ➔ Safely stow away the supporting board and the extra cushion before starting the journey.



Moving the assenger's seat forward:

- ➔ Push the passenger's seat (Fig. 34/1) fully forward.

Lowering the table:

- ➔ Unhinge table (Fig. 34/3) (Chapter 8.9.4).
- ➔ Pull the bottom part of the table foot off downward and stow away.
- ➔ Hinge the table (Fig. 34/3) into the bottom attachment rail (special equipment) and position.

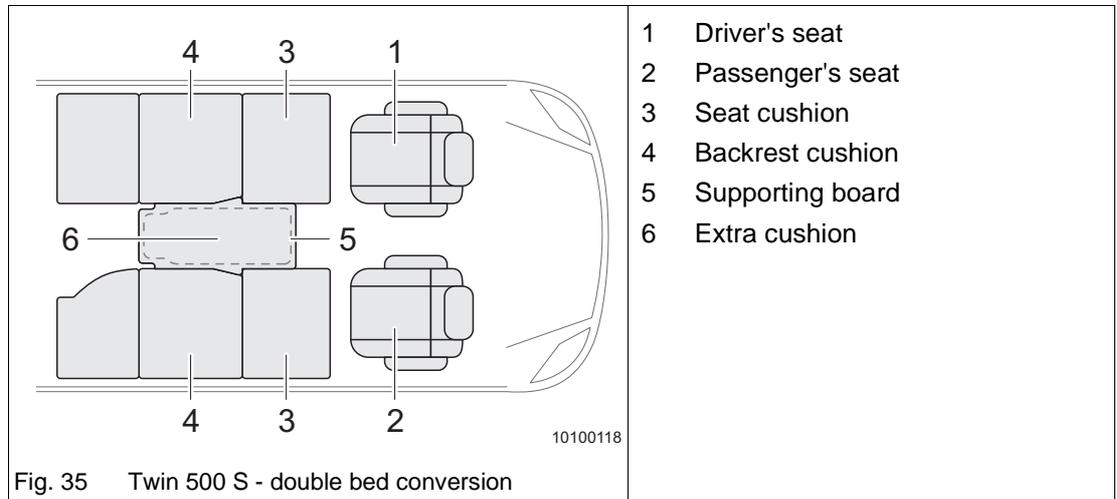
Making the mattress:

- ➔ Place the cushion (Fig. 34/4) behind the driver's seat on the table.
- ➔ Place the backrest cushion (Fig. 34/5) on the seat bench.
- ➔ Push the driver's seat (Fig. 34/2) to the rear against the cushions to prevent the cushions shifting .
- ➔ Place the supporting board (Fig. 34/6) exactly behind the passenger's seat on the furniture support points (Fig. 34/A) and on the seat rails (Fig. 34/B).
- ➔ Make sure that the fixing on the supporting board (Fig. 34/C) correctly rests against the seat rail to prevent the supporting board slipping (Fig. 34/6).
- ➔ Place the extra cushion (Fig. 34/7) on the supporting board (Fig. 34/6).

Reconverting the mattress:

- ➔ Reconvert the seating group in reverse sequence.

9.5 Converting the rear seats into single beds



Rotating driver's seat and passenger's seat:

- ➔ Rotate the driver's seat (Fig. 35/1) and the passenger's seat (Fig. 35/2) 180° against the driving direction (Chapter 8.9.1).
- ➔ Tip the seats to the front so that a horizontal seat is created.

Lowering the table:

- ➔ Unhinge the table (Chapter 8.9.4).
- ➔ Pull the bottom part of the table foot off downward and stow away.
- ➔ Lay the table with the table top face down on the floor.

Making the mattress:

- ➔ Fold the cushion (Fig. 35/3) to the front.
- ➔ Actuate the locking lever at the bottom of the seats and fold the backrest cushion (Fig. 35/4) to the front.
- ➔ Push the driver's seat (Fig. 35/1) and the passenger's seat (Fig. 35/2) to the rear against the cushions.

Connecting the beds (special equipment):

- ➔ Take the supporting board (Fig. 35/5) out of the cabinet and fold open the side panels by the hinges.
- ➔ Place the supporting board (Fig. 35/5) between the seats (Fig. 35/4) (narrow side to the rear, side panels downward).
- ➔ Take the extra cushion (Fig. 35/6) out of the cabinet and position it exactly between the backrest cushions (4).

Reconverting the mattress:

- ➔ Reconvert the seating group in reverse sequence.

10 Power supply



Caution!

Short-circuit, corrosion and cable break

- ▲ For your own safety, have the electrical system checked at least once a year by an authorised workshop.

10.1 230 V power supply

The vehicle can be connected to an external power supply with 230 V which must be protected with a 30 mA ground-fault circuit breaker (fault current).

10.1.1 Making the electrical connection between the vehicle and the power source



Caution!

Danger of overheating of the cable on the cable reel

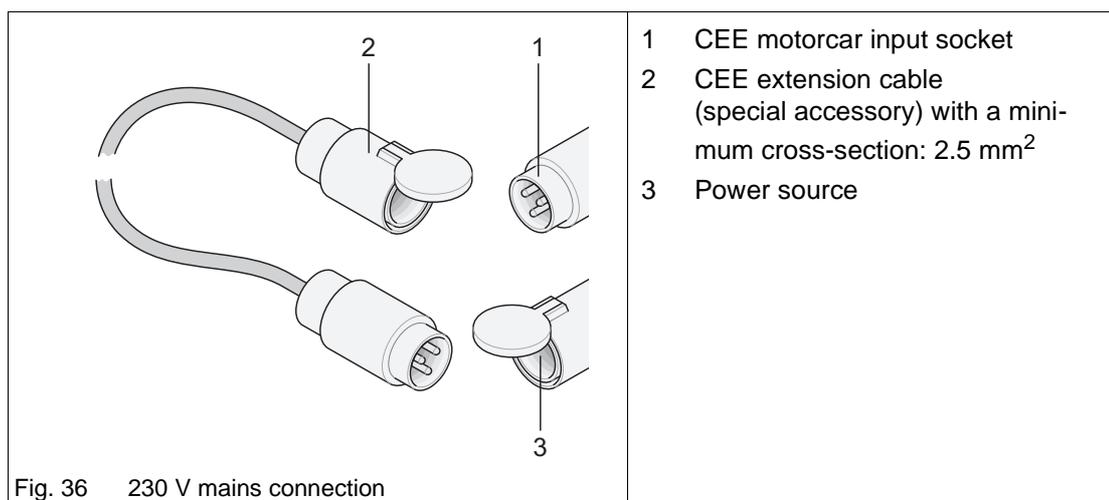
- ▲ Always unroll the cable completely from the cable reel. This prevents overheating of the cable.
- ▲ Use a cable reel with integrated overheat protection.



Important!

- Connectors and sockets do not fit in every country.
- It is possible that an adapter set is required for the country being visited.

The connection of the vehicle to the external 230 V power supply must be made with a rubber sheathed cable "H0 RN-F 3G 2.5 mm²" or an equivalent cable with connectors according to "IEC 309". The overall length of the electric cable should not exceed 25 m!



Connecting:

- ➔ When making the connection, always begin on the vehicle and make the connection to the power source last.

Disconnect in reverse sequence.

10.2 Fuse protection of the 230 V electric circuit in the vehicle

The external 230 V power supply of the vehicle is protected with a 13 A circuit breaker. In addition to the circuit breakers, a ground-fault circuit breaker (special equipment) is installed in some vehicles.

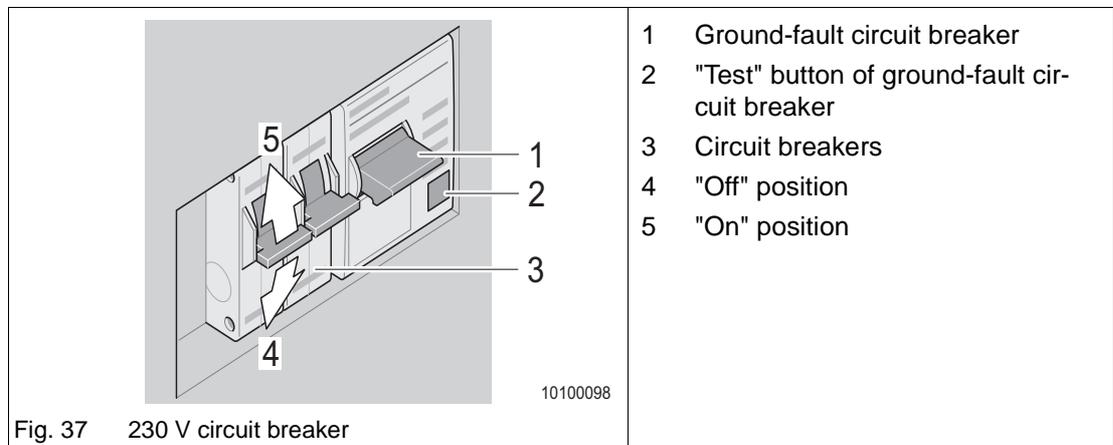
The ground-fault circuit breaker protects persons against electric shock if the insulation of electrical appliances is defective.



Important!

Check the ground-fault circuit breaker for fault-free operation monthly or, after a longer period of standstill of the vehicle, before starting each journey.

The fuse box with circuit breakers and ground-fault circuit breaker is normally installed in the wardrobe or a seat chest.



Checking the ground-fault circuit breaker:

- ➔ Press the "Test" button (Fig. 37/2) of the ground-fault circuit breaker with the 230 V power supply connected.
The ground-fault circuit breaker (Fig. 37/1) triggers, the switch handle springs to the "Off" position.
- ➔ Switch the handle of the ground-fault circuit breaker back to the "On" position after the successful test.

Switching on the circuit breaker:

- ➔ To switch on the circuit breaker (Fig. 37/3), push the switch handle upward.

When the circuit breaker has triggered, wait for a short time before switching on again.

- If the circuit breaker remains on, only an overload occurred.
- If the circuit breaker immediately triggers again, this is due to a short-circuit or earth fault. Consult an authorised workshop and have the fault repaired.



Important!

It makes no sense to switch the breaker on several times. The circuit breaker triggers even when you hold the switch handle.

10.3 Power supply - external generator (special accessory)



Caution!

Damage to vehicle electronics

- ▲ Voltage variations or voltage peaks must not occur.
- ▲ Make the connection from the generator to the vehicle only when the generator is in operation and the output voltage is constant.
- ▲ Switch the generator off only after the connection between the vehicle and the generator has been disconnected.

For more information, see the separate instructions from the manufacturer.

10.4 12 V power supply

10.4.1 Transformer/rectifier (power supply unit 230 V/12 V)

The transformer/rectifier is the central power distribution unit of your vehicle. The transformer/rectifier serves for charging the living area battery and for the power supply of the 12 V appliances. When the living area battery is fully loaded, the transformer/rectifier automatically charges the starter battery of the basic vehicle.



Warning!

Risk of burns

- ▲ Do not touch the rear of the transformer/rectifier during operation. The rear of the transformer/rectifier becomes hot during operation.



Caution!

Damage to power supply unit

- ▲ Replace defective fuses only when the cause of the defect is known and has been remedied.
- ▲ Never bridge or repair fuses.
- ▲ Use only original fuses with the values specified in the separate instructions from the manufacturer.
- ▲ Replace defective fuses only when the transformer/rectifier has been de-energised.
- ▲ Do not lay any cables underneath the power supply unit due to the heat generation.

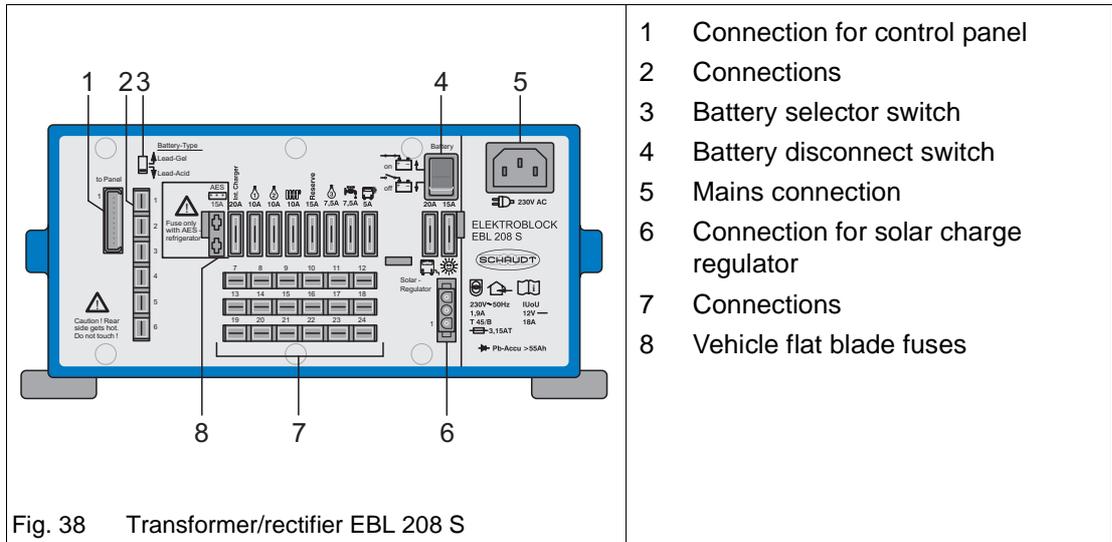


Fig. 38 Transformer/rectifier EBL 208 S

- 1 Connection for control panel
- 2 Connections
- 3 Battery selector switch
- 4 Battery disconnect switch
- 5 Mains connection
- 6 Connection for solar charge regulator
- 7 Connections
- 8 Vehicle flat blade fuses

Before placing into service:

- ➔ Check the battery selector switch (Fig. 38/3) is in the correct position.
- ➔ Make sure the living area battery is connected.

Placing into service:

- ➔ The system is switched on with the 12 V main switch on the control panel (see Chapter 8.7).

Vehicle flat blade fuses

- Insert the fuse for the AES refrigerator only when an AES refrigerator (special accessory) is connected. Otherwise, the living area battery can be completely discharged. Damage to the battery cannot be excluded.
- The flat blade fuses (Fig. 38/8) protect the different electric circuits. If required, remove the blue cover with the designation "FUSE" (optional) and check or replace all fuses.

Battery disconnect switch

The battery disconnect switch (Fig. 38/4) disconnects the following connections from the living area battery:

- All 12 V appliances except the AES refrigerator and the entrance step
- The control panel

This prevents the slow discharge of the living area battery by quiescent current while the vehicle is placed out of service.

The batteries can still be charged by the transformer/rectifier, the generator or the solar charge regulator (special accessory) (Fig. 38/6) when the battery disconnect switch (Fig. 38/4) is switched off.

Battery selector switch:

- Setting the battery selector switch (Fig. 38/3) to the wrong position can damage the living area battery.
- ➔ Disconnect the transformer/rectifier from the mains before setting the battery selector switch (Fig. 38/3) to a different position.

The option of switching over with the battery selector switch ensures optimum charging of the two battery types (lead-gel or lead-acid).

- Selection of lead-gel battery: Set the battery selector switch to "Lead-Gel".
- Selection of lead-acid battery: Set the battery selector switch to "Lead-Acid".

→ Use a thin object for the changeover (e.g. ball-point pen refill).

For more information, see the separate instructions from the manufacturer.

10.4.2 Starter battery



Caution!

Discharging of starter battery

- ▲ The capacity of the starter battery is limited.
- ▲ The starting capability is affected if the power supply is provided for an extended period of time via the constant plus of the vehicle.

If the vehicle is connected to an external 230 V power source (Chapter 10.1.1), an automatic changeover from 12 V to 230 V / 12 V (power supply unit) occurs (Chapter 10.4.1).

10.4.3 Living area battery (special equipment)



Danger!

Deflagration

- ▲ The use of acid batteries as living area batteries in the vehicle is not allowed. Detonating gas can be created during the load process and lead to a gas explosion. The installation area is not equipped for accommodation of a lead-acid battery.

Gel or AGM batteries are used as living area battery.

The electronic energy centre is equipped with a 70 A disconnect relay. This integrated protection disconnects the living area battery from the starter battery when the engine is switched off so that the function of the starter battery is maintained.

The living area battery can be charged in two ways:

- With the vehicle generator, i.e. while the engine is running.
All major appliances such as refrigerator, heater, water pump, etc. must be switched off. The battery should then be "fully" charged at the 230 V mains.
- By connection to the 230 V mains.
This charges the battery automatically. All major appliances must be switched off.

Regularly check the battery voltage with the control panel (Chapter 8.7):

- If the voltage is 12 V or higher or in the green area, everything is okay.
- If the voltage is less than 12 V or in the red area, switch off all appliances immediately and charge the battery. The minimum charging time should be 24 hours or better 48 hours. Overcharging is automatically prevented by the battery charger.
- If the "Battery alarm" warning light blinks, the battery must be charged immediately for a minimum of 48 hours with the built-in automatic battery charger or a separate charger. For this purpose, the vehicle must be connected to the 230 V power supply. If the battery voltage has dropped below 3 V, the engine must be started for approx. 10 seconds so that the battery charger is switched on. Then charge the battery for a minimum of 48 hours.



Important!

- Before and after each use of the vehicle, the battery should be charged with the battery charger, if possible, for more than 24 hours.
- If you are on the way for a longer journey, the battery should be "fully" charged at least once a month via the 230 V mains.
- If the vehicle is not used for a longer period of time, all appliances must be switched off (pay attention to hidden appliances, for example satellite system, tank heating, boiler safety valve, etc.). The easiest way to do this is to disconnect the plus pole directly on the battery. Charge the battery once a month with the built-in battery charger or a minimum of 24 hours.
- The warranty for the auxiliary battery is valid only when it is serviced properly.

10.4.4 Control panel

For more information on the control panels, see Chapter 8.7.

10.5 Fuses



Warning!

Risk of burns

- ▲ Replace defective fuses only when the power supply unit has been de-energised.



Caution!

Damage to the electrical system

- ▲ Replace defective fuses only when the cause of the defect is known and has been remedied.
- ▲ Never bridge or repair fuses.
- ▲ Use only original fuses with the same rating.

Fuses protect the electrical system and the electrical appliances from damage by overloading and short circuits. If the amperage is too high, a fuse automatically interrupts the electric circuit.

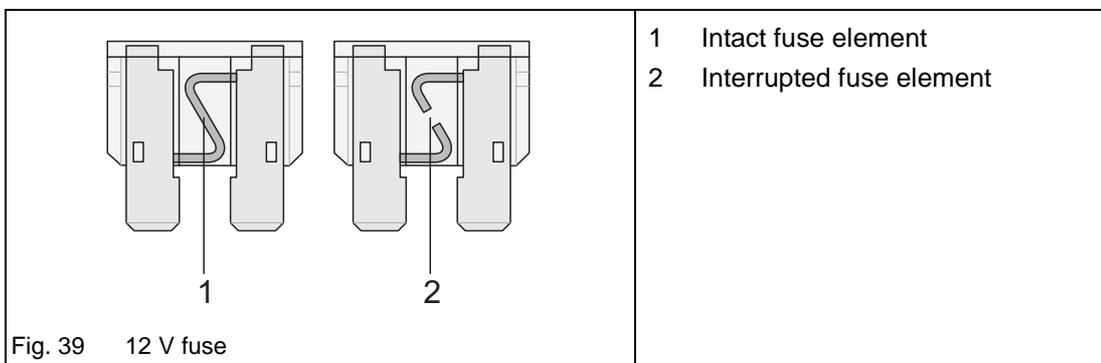
The electric fuses are accessible at different installation locations in the vehicle.

The appliances that are connected to the 12 V supply in the living area are protected by their own fuses.

Before changing fuses, see the following table for function, value and colour of the respective fuses:

Amperage	Colour	Function	Installation location
2 A	Grey	Fuse of living area battery	Next to the living area battery
3 A	Violet	Fuses of Thetford toilet	In the housing frame of the Thetford cassette
20 A	Yellow	Fuse of refrigerator	Next to or in the transformer/rectifier
50 A	Red	Fuse of 12 V power supply unit	Next to the living area battery

Tab. 3 Fuses



Changing the fuses:

→ A fuse must be changed when the fuse element is interrupted (Fig. 39/2).

10.6 Electrical diagram

See the following electrical diagrams for the layout of the electrical components and wiring. These diagrams are required for possible repairs and maintenance.



Caution!

Damage to the electrical system

- ▲ Have maintenance and repair work performed by an authorised workshop.
- ▲ Improper maintenance and repair work voids your warranty claims.

11 Gas system

11.1 General information about the gas system

Familiarise yourself with the safety instructions for handling gas.

For general safety instructions concerning the topic of "gas", see the "Safety instructions for the gas system" (Chapter 2.5).



Danger!

Poisoning by gas

- ▲ If it smells of gas or you suspect that gas is escaping, perform the following:
 - Clear the danger area!
 - Close the shut-off valve on the gas cylinder!
 - Avoid ignition sources and open flames and do not smoke!
 - Ventilate the rooms!
 - Inform the camping site manager, and the fire brigade when necessary!



Danger!

Risk of explosion

- ▲ Gas appliances are not to be operated during refuelling and on ferries or in garages!
 - Close the quick-action stop valves
 - Close the gas cylinder valves



Warning!

Danger to life

- ▲ Have repairs or modifications of the gas system performed by an authorised workshop only!
- ▲ Never modify the gas system or appliances yourself!
- ▲ Never use a lighter or other open source of light at the junctions of the gas pipes to look for leaks!
- ▲ The user may make only the connection between the pressure regulator and the gas cylinder! Any other work has to be performed by an authorised workshop!



Important!

- The complete gas system in the vehicle is designed for an operating pressure of 30 mbar which is kept constant by the built-in pressure regulator.
- The gas system must be inspected again every two years and after making any modifications and repairs. Always have a gas leak test performed on this occasion. The vehicle owner is responsible for initiating the inspection. Upon delivery of the vehicle, the operator must be informed in writing of his/her duty to have the gas system inspected. The correct condition of the gas system is confirmed with a gas inspection certificate and possibly, depending on national regulations, an associated gas inspection sticker.
- The gas regulator and the gas hose must be replaced every ten years.
- The complete gas system has been designed according to the valid technical regulations for liquid gas equipment and burners in camping vehicles. This was examined and certified by an expert.
- All installed gas-operated appliances have safety devices. When the flame goes out, the automatic flame failure device interrupts the gas supply. In spite of this safety device, the respective quick-action stop valve must be closed if the appliance is not in operation.
- In order to ensure continuous exchange of air in the vehicle, do not cover the forced ventilation in the roof hoods and in the entrance nor the mushroom ventilators.
- When there is snowfall in winter, keep the forced ventilation free from ice and snow! (Chapter 17.3).

11.2 Gas cylinder compartment



Caution!

Gas cylinder compartment

- ▲ Always keep the forced ventilation in the floor free!
- ▲ Always keep gas cylinders upright and lashed.
- ▲ Do not use the gas cylinder compartment as storage space. Danger of fire!

Depending on the model, the lockable gas cylinder compartment is accessible from the inside or the outside. The gas cylinder compartment is sealed from the interior in both cases.

The gas cylinder compartment is intended for storing the gas cylinders. Do not cover the forced ventilation.

Secure the gas cylinder compartment against unauthorized access.

11.3 Gas types

The gas-operated appliances are operated with liquid gas (propane, butane or a mixture of both).

The dealers offer mainly 5 kg or 11 kg gas cylinders for purchase or hiring.

Handling gas cylinders

- ➔ Store gas cylinders exclusively in the gas cylinder compartment.
- ➔ Lock the gas cylinder compartment securely against unauthorized access!

11.3.1 Propane gas

Propane is a colourless and odourless gas. Propane is capable of gasification down to -42 °C.

Propane is suitable for winter camping.

Propane is highly flammable, heavier than air and, in high concentrations, has a narcotising to suffocating effect.

11.3.2 Butane gas

Butane occurs in two different versions (isomers): Isobutane and n-butane.

Isobutane and n-butane are liquid gases that are generated when crude oil is distilled.

Isobutane gasifies at -12 °C, n-butane at -0.5 °C. This means, butane is unsuitable for use in winter. Between the seasons, a mixture of butane and propane gas can also be used.

11.3.3 Information on liquid gas

Liquid gas characteristics:

- Liquid gas has no colour.
- It smells of garlic.
- It is heavier than air and collects on the ground after escaping.
- It is combustible and can burn rapidly when it escapes uncontrolled or explode when sparks occur.
- In enclosed areas, it displaces the breathing air; risk of suffocation!

11.4 Reference values for gas consumption

The gas consumption depends on how intensively the connected appliances are used.

Appliance	Reference value	Unit
Gas heater	170 - 490	g/h
Cooker	100 - 400	g/h
Refrigerator	10 - 25	g/h

Tab. 4 Reference values for gas consumption

11.5 Handling gas cylinders



Danger!

Risk of suffocation!

- ▲ Close the flap of the gas cylinder compartment tight.
- ▲ Regularly check the seal!



Caution!

Danger when handling gas cylinders

- ▲ Read the safety instructions on the gas cylinder!
- ▲ Operate gas cylinders only with the pressure regulator connected!
- ▲ Do not smoke in the vicinity of the gas cylinders! Any kind of open flame must be avoided! This is valid in particular when replacing gas cylinders.
- ▲ Never lubricate threads and seals on the pressure regulator with grease. Risk of explosion by chemical reactions!
- ▲ The vents in the floor of the gas cylinder compartment always have to be kept uncovered.
- ▲ Use only gas cylinders provided for the camping sector!
- ▲ Never use special cylinders from other areas of application!
- ▲ Gas cylinders that are not connected must always be secured with a screw and protective cap.
- ▲ Always keep the screw and protective caps for connected gas cylinders available.
- ▲ Pay attention to the inspection date on the gas cylinder!
- ▲ Fill gas cylinders only by weight. This applies also for foreign countries!
- ▲ Never use city gas or natural gas!
- ▲ Never fill gas cylinders at propellant gas stations. Risk of explosion!
- ▲ If the vehicle is parked for a longer period of time, the gas cylinders may remain in the vehicle only when it is parked outdoors!
- ▲ The gas cylinder compartment is designed for one or two 11 kg gas cylinders depending on the model.

The screw connections on the gas cylinders have left-hand threads.

The gas cylinders are not part of the delivery items of the vehicle and have to be bought and connected by the operator.

Take utmost care when handling gas cylinders.

Grey gas cylinders with red marking (protective cap and bottom ring) are purchased cylinders and can be replaced or filled.

11.6 Gas pressure regulator SecuMotion/MonoControl CS (special equipment)



Danger!

Risk of explosion!

- ▲ Rapid burning of gas.
- ▲ When changing gas cylinders, there is always some gas left in an "empty" gas cylinder.
- ▲ Smoking and open light or fire are forbidden when handling gas cylinders!



Caution!

Pressure regulators and flexible lines

- ▲ Pressure regulators and flexible lines must be replaced 10 years after manufacturing at the latest.
- ▲ The operator is responsible for the replacement.



Caution!

Risk of explosion caused by a leak after changing the gas cylinders

- ▲ Perform a leak test on the connections of the high-pressure hose after changing the gas cylinders.
- ▲ Use a leak detector spray according to DIN EN 14291.



Important!

With the SecuMotion/MonoControl CS gas pressure regulator, the operation of a type-tested liquid gas heater is allowed during the journey in Europe (EU Directive 2001/56/EC).

As an option, a Truma DuoComfort switch-over valve (special accessory) can be connected to the gas pressure regulator for the twin-cylinder system.

Use commercially available gas cylinders with 3 kg, 5 kg, 11 kg or 33 kg.

Always stand gas cylinders upright and secure them against falling over.

Do not kink or bend the high-pressure hose (Fig. 41/3) sharply!

11.6.1 Placing the SecuMotion/MonoControl CS into service



Important!

If not used for a longer period and with the gas cylinders closed, the SecuMotion/MonoControl CS can be switched off.

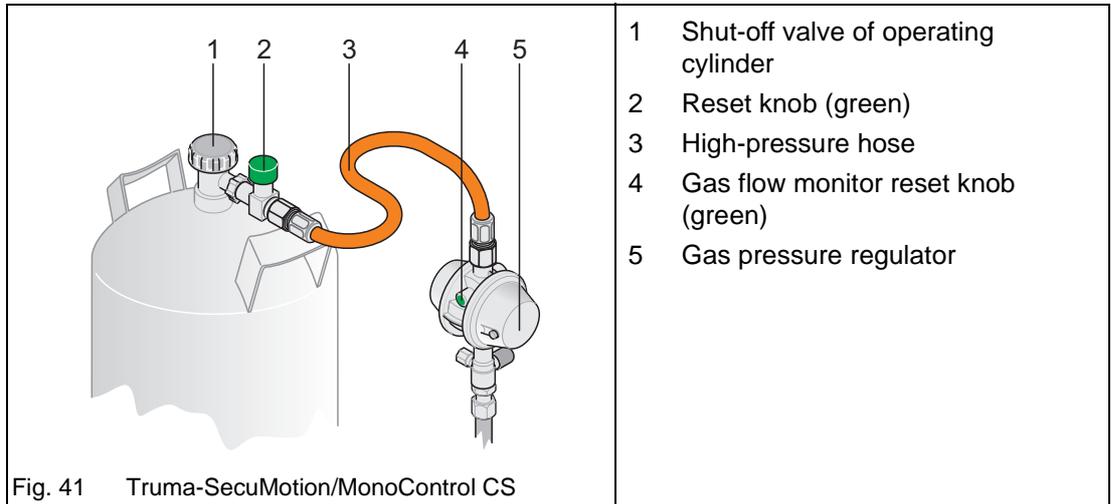


Fig. 41 Truma-SecuMotion/MonoControl CS

Placing the SecuMotion/MonoControl CS into service:

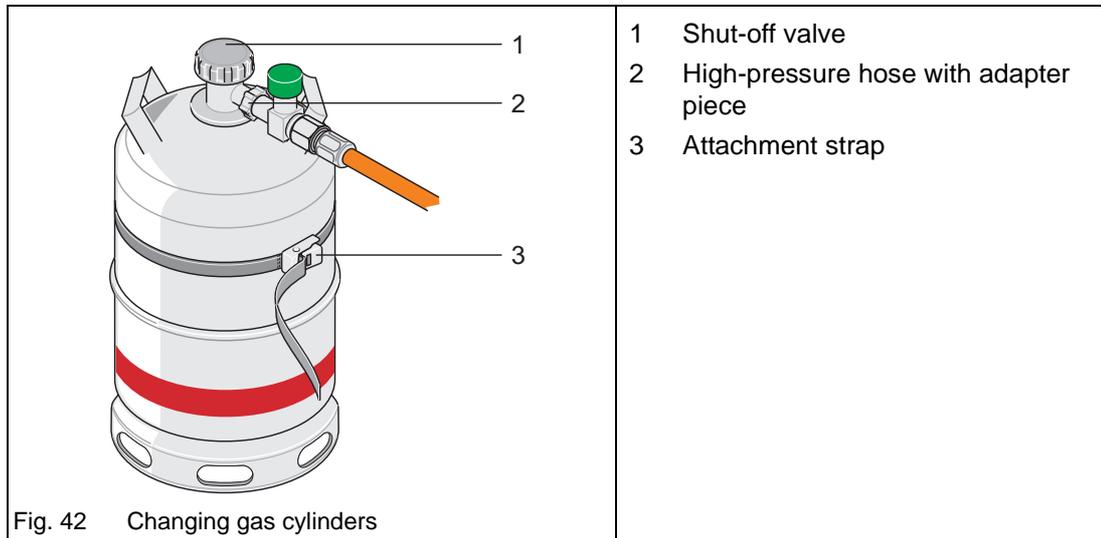
- ➔ Open the shut-off valve (Fig. 41/1) of the full gas cylinder.
- ➔ Press the reset knob (green button) (Fig. 41/2) on the high-pressure hose (Fig. 41/3) firmly and hold it depressed briefly.
- ➔ Hold the gas flow monitor reset knob (green button) (Fig. 41/4) on the gas pressure regulator (Fig. 41/5) depressed for approx. 5 seconds.
- ➔ If required, repeat the process.

The gas appliances can now be placed into service.

11.6.2 SecuMotion/MonoControl CS - changing gas cylinders

Use the screwing tool provided for screwing the high-pressure hose on and off.

The screwing tool ensures the required tightening torque and prevents damage to the screw connection caused by wrong tools.



Changing gas cylinders:

- Close the shut-off valve (Fig. 42/1) of the empty gas cylinder.
- Unscrew the high-pressure hose with adapter piece (Fig. 42/2) from the gas cylinder or remove the plug-on adapter, if required.
- Replace the empty gas cylinder in the gas cylinder compartment by a full gas cylinder.
- Secure the gas cylinders against falling over with an attachment strap (Fig. 42/3).
- Screw the high-pressure hose with adapter piece (Fig. 42/2) to the full gas cylinder or insert the plug-on adapter.
- Open the shut-off valve of the full gas cylinder.
- Press the hose rupture protection and green gas flow monitor (Chapter 11.6.1).

11.6.3 SecuMotion/MonoControl CS - changing the high-pressure hose



Important!

Also replace the seal after every change of the high-pressure hose.

If damage is visible on the high-pressure hose, it must be replaced.

Use the screwing tool provided for screwing the high-pressure hose on and off.

The screwing tool ensures the required tightening torque and prevents damage to the screw connection caused by wrong tools.

Changing the high-pressure hose:

- ➔ Close the shut-off valve (Fig. 42/1) of the gas cylinder.
- ➔ Unscrew the high-pressure hose from the adapter piece of the gas cylinder (Fig. 42/2) and from the regulator inlet or remove the plug-on adapters, if required.
- ➔ Screw a new high-pressure hose to the adapter piece of the gas cylinder (Fig. 42/2) and the regulator inlet, attach the plug-on adapter.
- ➔ Open the valve of the gas cylinder.
- ➔ Press the hose rupture protection and green gas flow monitor (Chapter 11.6.1).
- ➔ Close the flap.

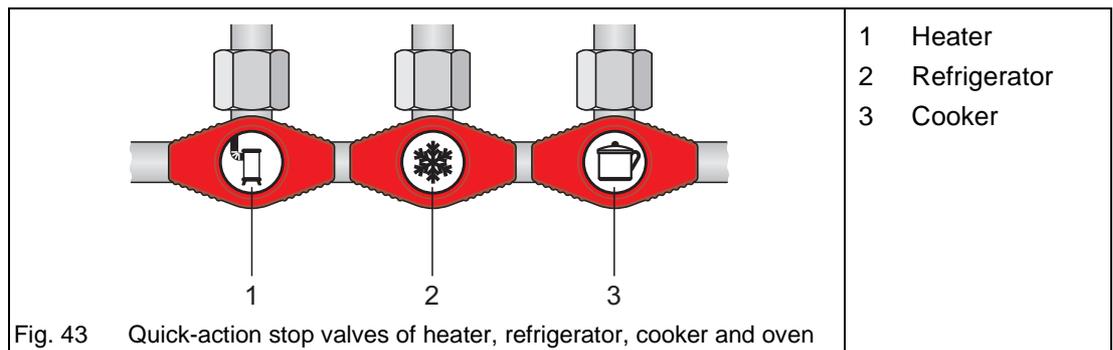
11.7 Quick-action stop valves



Important!

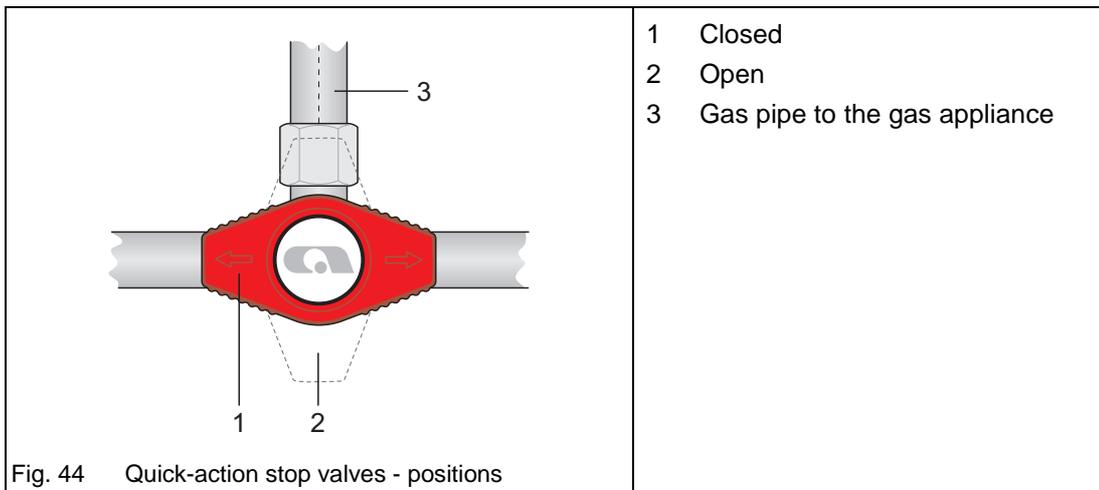
If the gas appliance is not used, the respective quick-action stop valve must be closed.

The gas distribution to the individual gas appliances is performed via the gas quick-action stop valves.



Each gas appliance has its own quick-action stop valve. These are marked with suitable symbols to prevent mistakes:

- Heater (Fig. 43/1)
- Refrigerator (Fig. 43/2)
- Cooker (Fig. 43/3)



Using the gas appliances:

- ➔ Open the respective quick-action stop valve to put the desired gas appliance into service.
- Quick-action stop valve closed (Fig. 44/1): The arrows on the quick-action stop valve are positioned on the gas appliance crosswise to the direction of the gas pipe (Fig. 44/3).
 - Quick-action stop valve open (Fig. 44/2): The arrows on the quick-action stop valve are positioned in the direction of the gas pipe to the gas appliance (Fig. 44/3).

12 Water and waste water

12.1 Water supply



Warning!

Health hazard

- ▲ Formation of bacteria and algae in the water tank.
 - Change the water at regular intervals including the boiler contents (e.g. twice a week).
 - After the end of every journey or after 4 weeks at the latest, the water tank must be drained, cleaned thoroughly and left open (venting).
 - Thoroughly clean the hoses after the end of each journey.
 - Use disinfectant for the water tank.



Caution!

Damage to the water pump

- ▲ Pumps can run hot without water and can be damaged.
- ▲ Never run pumps when the water tank is empty!



Caution!

Damage to the environment

- ▲ Never drain tanks (water and waste water) in the open countryside!
- ▲ Empty tanks only at petrol stations, resting places, disposal stations or camping sites at the provided places.



Caution!

Damage due to frost

- ▲ When there is a risk of frost, drain the water system of the vehicle.

A water tank is fitted in the vehicle as standard. When a water tap is opened, the installed water pump is switched on when the pump on the control panel is switched on.

Using the water tank:

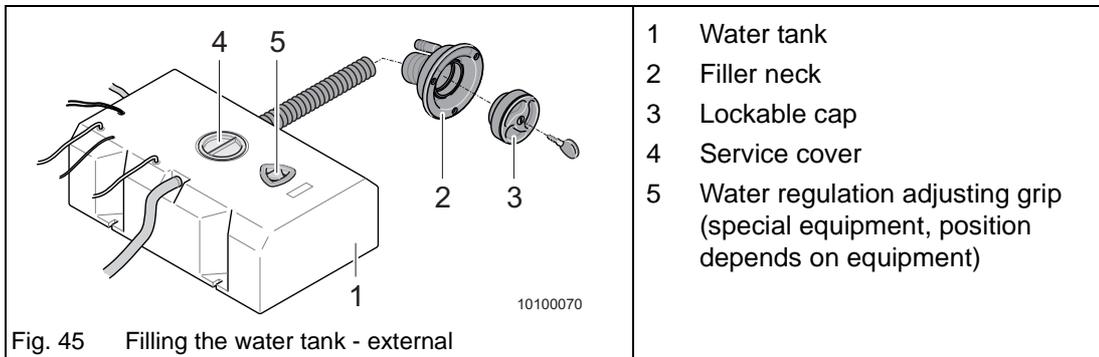
- Thoroughly clean the water tank before starting each journey.
- If possible, fill the water tank only just before staying overnight or at the destination of the journey.
- Avoid additional weight.
- Fill the water tank with drinking water only.

When the vehicle is placed out of service for an extended period of time or is not heated when there is a risk of frost, empty, clean and dry the entire water system (Chapter 12.3). Leave the water taps and drain cocks as well as all drain valves open.

We recommend to check the pipes every 6 months for leaks and to tighten the clamps as well as the connectors.

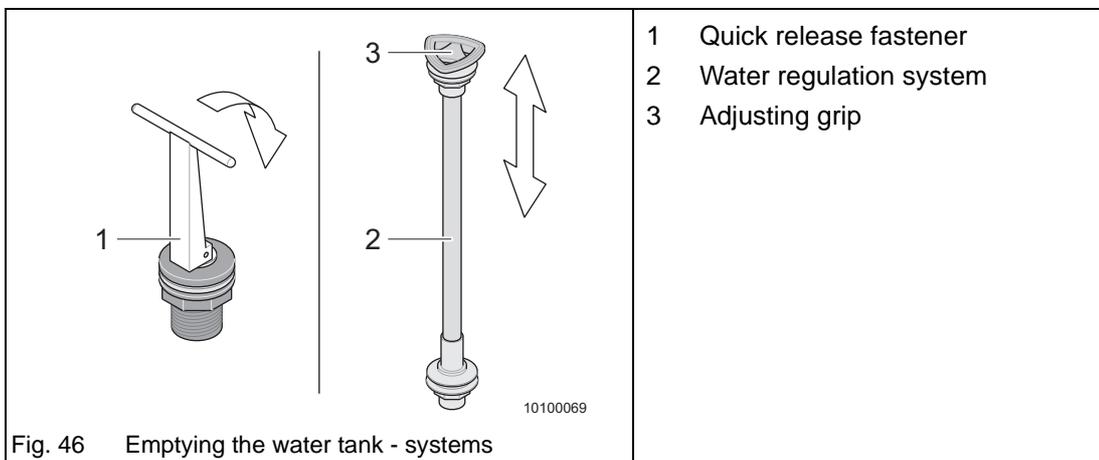
The water supply system corresponds to the state of technology (Directive 2002/72/EC).

12.1.1 Water tank



Filling the water tank (external):

- ➔ Switch the water pump off on the control panel (Chapter 8.7).
- ➔ Close the drain on the tank bottom.
 - Some models are fitted with a water regulation system (special equipment) (Fig. 46/2). An adjusting grip (Fig. 46/3) (Fig. 45/5) is positioned on the top side of the tank to regulate and drain the water.
 - Turn the grip clockwise to close the system and have all the water available for use.
- ➔ Unlock and open the lockable cap (Fig. 45/3) on the filler neck (Fig. 45/2).
- ➔ Fill water with a water canister, a watering can or a hose into the water tank.
- ➔ Replace, close and lock the cap.



Draining/cleaning the water tank:

- ➔ Switch the water pump off on the control panel (Chapter 8.7).
- ➔ Open the drain plug on the tank bottom. To do this, depending on the system:
 - Either open the service cover (Fig. 45/4), fold the grip on the plug in the tank (Fig. 46/1) down and pull the plug out,
 - or turn the adjusting grip of the regulation system (Fig. 46/3) or (Fig. 45/5) anticlockwise to the stop.
- ➔ Drain the water tank completely.
- ➔ Clean the inside of the tank.
- ➔ Close the plug in the tank bottom, and the service cover when necessary.

12.1.2 Faucet

Drawing of hot and cold water is performed with a single-lever faucet.

Depending on the installation position, the water temperature is controlled either by raising and lowering or swivelling the lever.

The switch on the faucet only works when the water supply is switched on on the control panel.

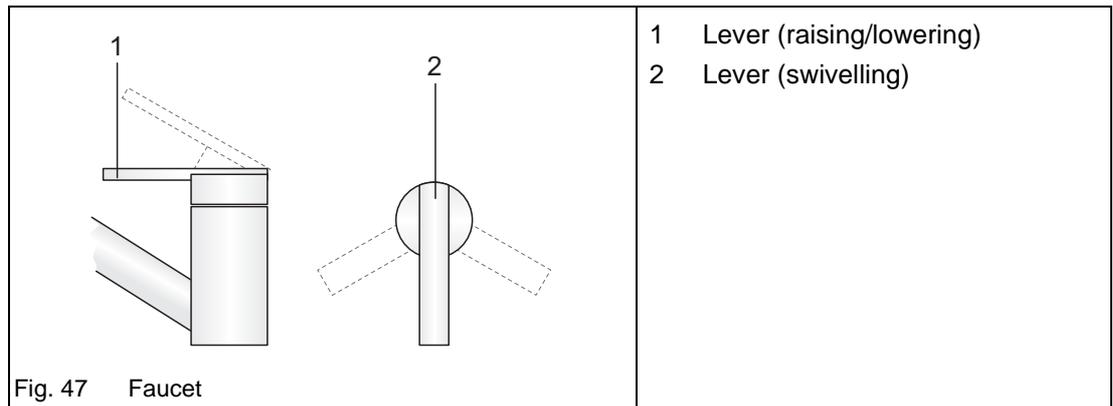


Fig. 47 Faucet

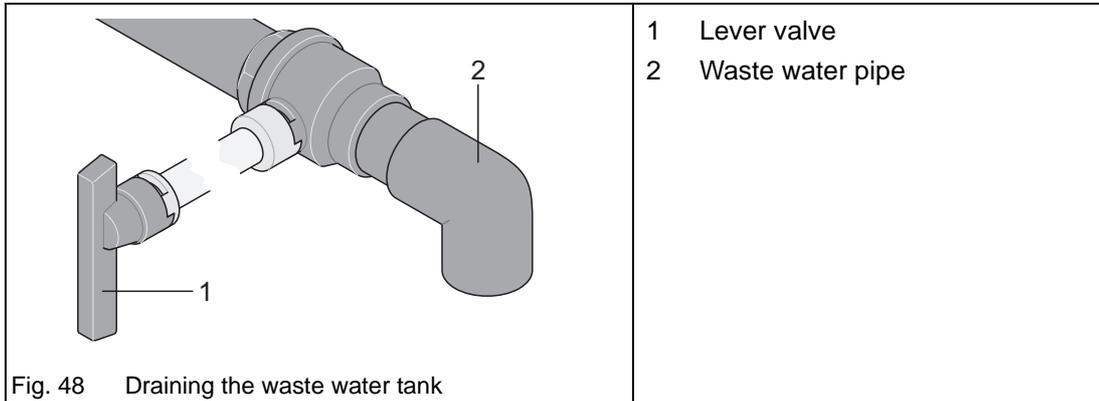
Operating the faucet:

- Move the lever (Fig. 47/1) upward to turn on the water pump.
Water is running.
- Adjust the desired temperature by swivelling the lever (Fig. 47/1).
- Lever in the "red" direction: The water becomes warmer.
- Lever in the "blue" direction: The water becomes cooler (minimum ambient temperature of the water tank).
- Push the lever (Fig. 47/1) fully downward to stop the water.

12.2 Waste water

The accruing waste water from the sink in the kitchen and the shower and the washbasin in the bathroom is collected centrally in the waste water tank.

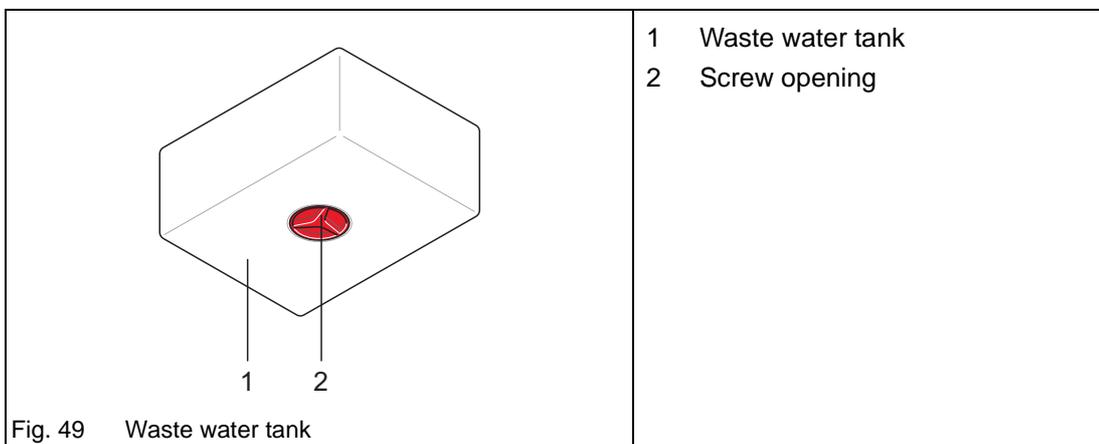
The drain pipe and the handle for the drain valve are located on the underside of the vehicle.



Emptying the waste water tank:

- ➔ Position the vehicle over the drain position so that the waste water from the waste water pipe (Fig. 48/2) can flow into a gully.
- ➔ Turn the lever (Fig. 48/1) to open the drain valve.
- ➔ When the tank is empty, close the drain valve again.

12.2.1 Waste water tank



The waste water tank is also located on the underside of the vehicle. For thorough cleaning, the waste water tank of most models has a screw opening that is accessible from below. Stubborn soiling can thus be eliminated.

12.2.2 Waste water tank heater (special equipment)

On some models, the waste water tank has an electrical heater.



Caution!

Damage to the tank heater

- ▲ Operating the tank when it is empty can damage the heater.
 - ➔ Deactivate the tank heater when the tank has been drained.
- ➔ Switch on the 12 V supply.
- ➔ Switch the tank heater on on the control panel.

If the tank heater is activated, it is automatically switched on when the temperature is below +5 °C.

12.3 Emptying the water system



Caution!

Damage due to frost

- ▲ Prevent frost damage to the water system.
- ▲ If the vehicle is not heated when there is a risk of frost (winter), damage to the components of the water or waste water system can occur due to the formation of ice. Drain all water-conducting components.

When the vehicle is placed out of service for an extended period of time or is not heated when there is a risk of frost, empty, clean and dry the entire water system. Leave the water taps and drain cocks as well as all drain valves open.

Draining the water supply:

- ➔ Switch the water pump and boiler off.
- ➔ Open all water taps to the centre position.
- ➔ Empty the water tank (Chapter 12.1.1).
- ➔ Open the boiler safety valve (Chapter 13.1.9).
- ➔ The tank must be rinsed, cleaned and allowed to dry.
- ➔ On vehicles with pressure pump, switch the pump on for a short time to remove residual water.
- ➔ Leave all water taps open in the centre position until the vehicle is placed into service again. The water pump may be switched on only when water has been filled.

Emptying the waste water system:

- ➔ Allow the waste water to flow into the waste water tank.
- ➔ Drain the waste water tank at the intended waste water disposal station.
- ➔ Drain the WC cassette.

13 Heater & hot water



Danger!

Risk of fire

- ▲ The person using the heating must have the heat exchanger of the Truma heating replaced at the latest after 30 years. Only the heating manufacturer or an authorized workshop can exchange the heat exchanger.
- ▲ Heating spare parts must always be approved as spare parts by the manufacturer.



Danger!

Risk of explosion

- ▲ Never let unignited gas flow out.
- ▲ Switch the heater off before filling the fuel tank, when on ferries and in garages.



Danger!

Risk of poisoning

- ▲ Before placing the gas heater into service in winter operation, check the cowl on the vehicle roof is free from snow and ice.
- ▲ Check the exhaust gas pipe for damage before switching the heating on. Do not use the heater with a damaged exhaust gas pipe.
- ▲ Do not close off or cover the exhaust cowl.
- ▲ Use cowl extensions during winter camping, snow must not cover the exhaust cowl.
- ▲ Do not use the space behind the heating for storage.



Danger!

Risk of poisoning and suffocation from the exhaust cowl on the right vehicle side

- ▲ When the awning is in place and the heater operates in gas mode, the heater exhaust gases can collect under the awning. There exists the risk of poisoning and suffocation due to lack of oxygen and the possibly generated odourless and toxic carbon monoxide (CO).
- ▲ Ensure adequate ventilation!



Important!

- The heater can be run with gas during the journey when the gas supply is fitted with a SecuMotion/MonoControl CS gas pressure regulator (special equipment) (Chapter 11.6).
 - Before starting the journey, obtain information concerning special provisions of the country to be visited (EN 732).
- Observe the safety instructions for the gas system (Chapter 2.5 and Chapter 11.5).

Depending on the model, either a Truma Combi or Truma Combi E gas heater is fitted in your vehicle. The heater system is used to heat the living area and for providing hot water.

13.1 Combi heaters

13.1.1 Gas heater Truma Combi and Truma Combi E (special equipment)

Important!

- The function of Truma Combi and Truma Combi E is almost identical.
 - ➔ For the operation of Truma Combi E, the power must first be set with the power selector switch.
- When new heaters are placed into service for the first time, there is a light generation of smoke. This is normal.
 - ➔ In this case, allow the heater to run at maximum capacity, switch on the circulation fan and open the air vents to ventilate the motorhome thoroughly during this period.

Important!

For more information, see the separate instructions from the manufacturer.

The Truma Combi and Truma Combi E liquid gas heaters are warm-air heaters with integrated hot-water boiler. The burner operates fan-supported which ensures trouble-free function even during the journey.

The Truma Combi E has additional heating rods for electrical operation. Three power selection options are therefore available for the operation of this appliance:

- Gas only for independent operation.
- Electricity only (230 V) for stationary operation at a camping site.
- Gas and electricity simultaneously (possible only in winter mode).

13.1.2 Placing into service

Important!

Heating is always possible in all operating modes (gas, electric and mixed operation) with and without water.

Check the following each time before placing the heater into service:

For gas operation:

- ➔ Is the exhaust cowl free?
Otherwise remove the cover from the exhaust cowl.
- ➔ Is the shut-off valve of the gas cylinder open?
- ➔ Is the "Heater" quick-action stop valve on the distributor block open?

For electrical operation (Truma Combi E):

- ➔ Is the circuit protection for the 230 V power supply at the camping site adequate? (900W - 3.9A / 1800W - 7.8A)
- ➔ Has the connecting cable been fully unwound from the cable reel?
- ➔ Is the 230 V circuit breaker in the vehicle switched on?

13.1.3 Control panels

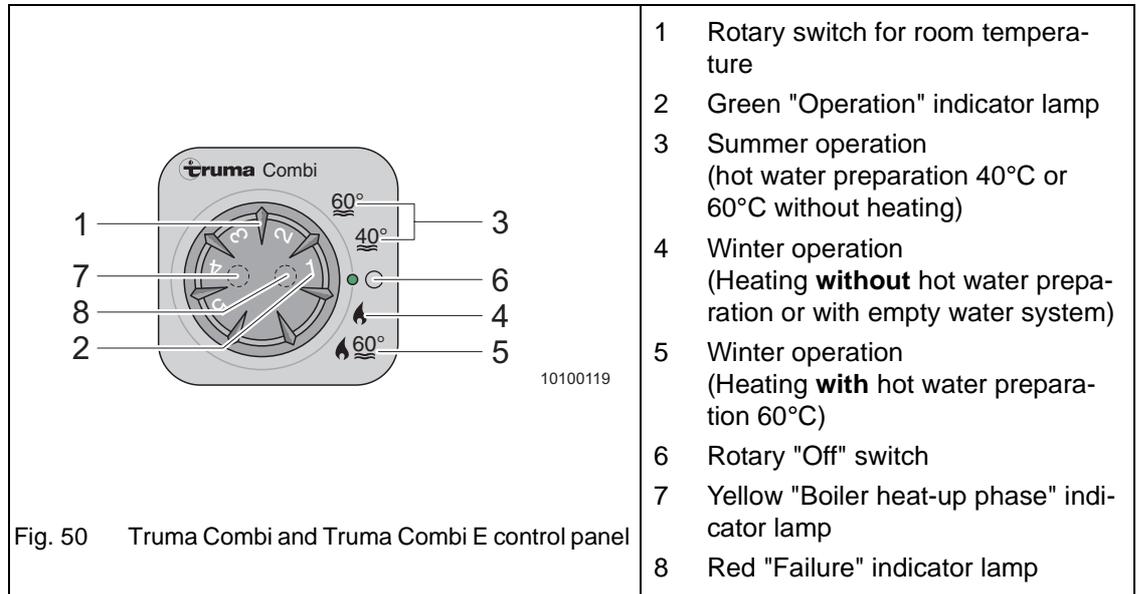


Fig. 50 Truma Combi and Truma Combi E control panel

The vehicle is equipped in series with the control panel Truma Combi or Truma Combi E.

Adjust the room temperature with the rotary switch "Room temperature" (Fig. 50/1). Coloured LEDs for operating mode indicators ((Fig. 50/2) and (Fig. 50/7)) and failure (Fig. 50/8) are located in the rotary switch "Room temperature".

By turning the outer ring, you can select the different operating modes in summer operation and in winter operation.

- ➔ Turn the swivel ring until the green dot on the swivel ring points to the desired operating mode.

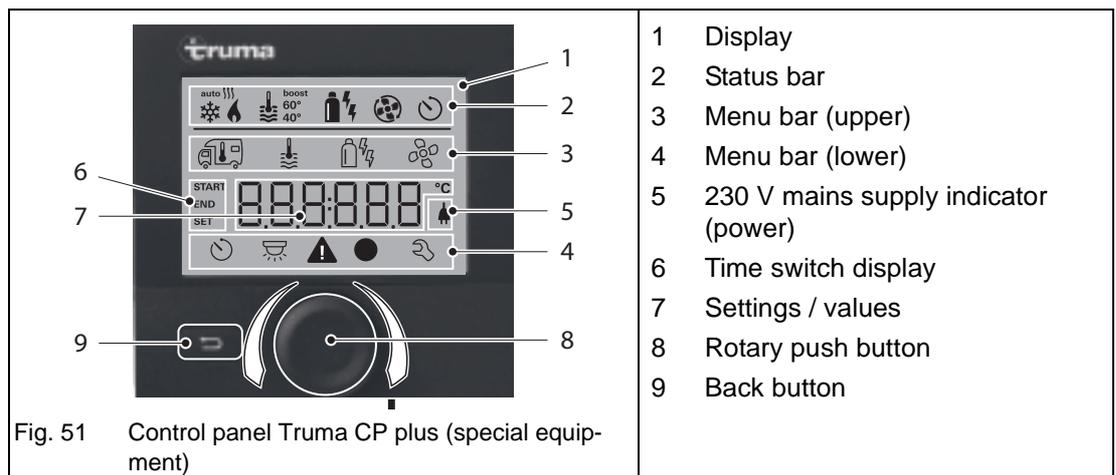


Fig. 51 Control panel Truma CP plus (special equipment)

Some vehicles are optionally equipped with control panel Truma CP plus.

The rotary push button (Fig. 51/8) serves to select the menus or to change the values to be set.

- ➔ Rotate the rotary push button to the right or left to select a menu item or to change the values.
- ➔ Press the rotary push button to activate the menu item or to accept the set value.
- ➔ Press the rotary push button for more than 3 seconds to switch the control panel on or off.

Use the Back button (Fig. 51/9) to return to the previous menu or the previous display.

The settings in the menus are performed analog to the settings described for Truma Combi and Truma Combi E further above. For more information, see the separate instructions from the manufacturer.

13.1.4 Summer mode



Important!

Mixed operation (gas and electricity) is not possible in summer mode. With this setting, the unit automatically selects electrical operation with the preselected electrical power of 900 W or 1800 W.

Preparing hot water:

Boiler must be filled with water (Chapter 13.1.10).

- ➔ Set to gas or electric operation on the control panel (Fig. 50).
- ➔ Set the rotary switch to summer mode (Fig. 50/3) 40°C or 60°C.
- ➔ When the equipment is switched on, the green and the yellow indicator lamps (Fig. 50/7) go on.
- ➔ When the set water temperature (40°C / 60°C) is reached, the water heater is switched off and the yellow indicator lamp (Fig. 50/7) goes off.

13.1.5 Winter operation

13.1.5.1 Heating with hot water preparation:



Important!

The water can be heated to up to 60°C depending on the heating power that is required to achieve the room temperature.

Boiler must be filled with water (Chapter 13.1.10).

- ➔ Set the desired operating mode on the control panel (Fig. 50).
- ➔ Set the rotary switch to "60°C heating" (Fig. 50/5).
- ➔ Turn the rotary knob (Fig. 50/1) on the control panel to the desired thermostat setting (1-9) for room temperature.
- ➔ The green "On" indicator lamp (Fig. 50/2) and the yellow water heating indicator lamp (Fig. 50/7) on the control panel go on.
- ➔ The unit gradually reduces the power until the selected room temperature is reached. If the room temperature has been reached but the water still has to be heated, the circulation fan switches off and the water continues to be heated to a temperature of 60°C at the lowest power setting.
- ➔ The yellow indicator lamp (Fig. 50/7) is on during heating and goes off when the water temperature is reached (60°C).

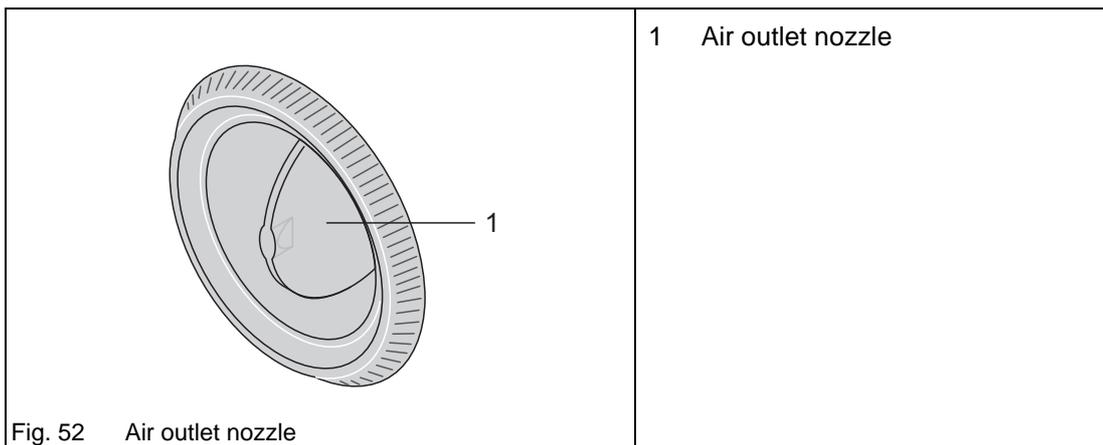
13.1.5.2 Heating without hot water preparation:



Important!

- When the boiler is filled, the water is automatically heated.
 - The water temperature is dependent on the specified heater performance and the duration of the heating for reaching the room temperature.
- ➔ Set the desired operating mode on the control panel (Fig. 50).
 - ➔ Set the rotary switch to "winter mode" (heating without hot water preparation) (Fig. 50/4).
 - ➔ Turn the rotary knob (Fig. 50/1) to the desired thermostat setting (1 to 5).
 - ➔ After the heater is switched on, the green "On" indicator lamp (Fig. 50/2) on the control switch goes on.
 - ➔ When the selected room temperature has been reached, the heater switches off, independent of the water temperature. If there is water in the boiler, it will also be heated in this mode of heating.

13.1.6 Heating properly



Several air outlet nozzles (Fig. 52/1) are built into the vehicle. Pipes and flexible hoses conduct the warm air to the nozzles.

Distributing the warm air:

- ➔ Close the air outlet nozzles on the instrument panel of the basic vehicle to prevent draughts.
- ➔ Set the air distribution of the basic vehicle to air circulation.
- ➔ Adjust the air outlet nozzles (Fig. 52/1) so that the warm air escapes at the desired positions only.

Adjusting the air outlet nozzles:

- ➔ Fully open the air outlet nozzle (Fig. 52/1) to conduct the full warm air flow to the desired position.

The more the air outlet nozzle is closed (Fig. 52/1), the less warm air flows out.

The more air outlet nozzles are open, the less warm air flows out at the individual nozzles.

13.1.7 Switching the heater off

- Set the rotary switch to "Off" (Fig. 50/6).
- The fan can continue to run after switching off in order to utilise the residual heat. The green indicator lamp flashes.
- Close the "heater" quick-action stop valve 11.7 (Fig. 43/1) when the heater is not used for an extended period of time.
- Close the gas cylinder shut-off valve 11.6 when no other gas appliance is in operation.

13.1.8 Malfunctions

i Important!

If a fault shut-off occurs during mixed operation when using Truma Combi E (e.g. because of an empty gas cylinder), the heater continues to run in electrical operation.

When the heater malfunctions, the red indicator lamp (Fig. 50/8) is on.

See the Chapter 21.6 "Truma Combi faults" for possible causes.

- The fault is reset by switching the heater off and on with the control switch.

i Important!

If the 230 V power supply is interrupted for short periods during operation (approx. 1 second), the heating will resume as normal.

13.1.9 FrostControl (safety / drain valve)

The safety / drain valve is near the heater.

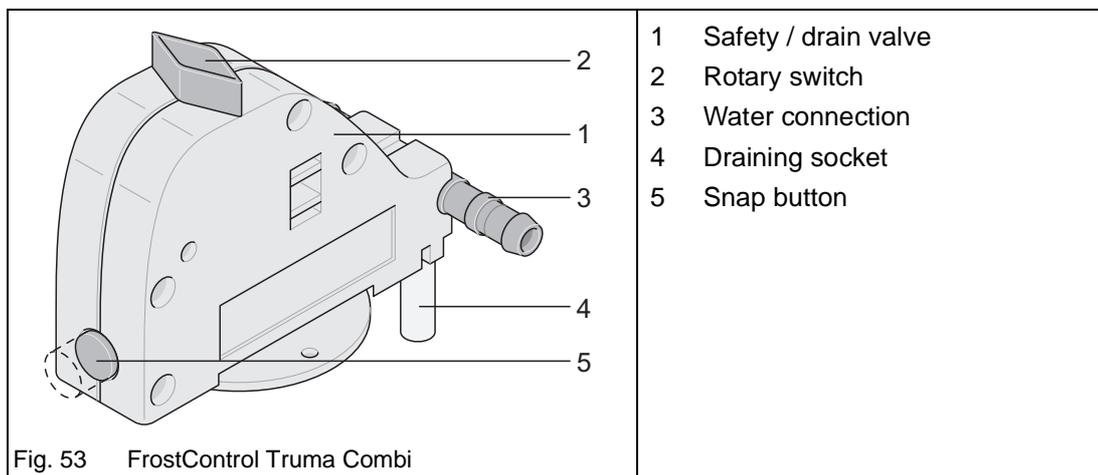


Fig. 53 FrostControl Truma Combi

"FrostControl" (Fig. 53/1) is a currentless safety/drain valve. When there is a danger of frost, it automatically drains the contents of the boiler through a draining socket (Fig. 53/4). If excessive pressure is present in the system, pressure will be automatically intermittently equalised through the pressure relief valve.

Closing the drain valve:

- ➔ Check if the rotary switch (Fig. 53/2) is set to "Operation" (parallel to the water connection (Fig. 53/3)) and is engaged.

It can be manually closed with the snap button (Fig. 53/5) (pressed) and then the boiler filled only when the temperature at the drain valve is above approx. 7°C.

- ➔ Set the heater to summer or winter mode (Chapter 13.1.4 or 13.1.5) and set the rotary switch (Fig. 53/2) of the valve (Fig. 53/1) to "Operation". The rotary switch must engage.
- ➔ Press the snap button (Fig. 53/5) into the valve until it engages ("closed" position).
- ➔ Always keep the drainage pipe (Fig. 53/4) of the safety / drain valve free from contamination (slush, ice, leaves, etc.).

Automatic opening of the drain valve:

When the temperature at the drain valve is below approx. 3 °C, the drain valve will open automatically, the snap button (Fig. 53/5) springs out and the supply of water of the motorhome drains out through the drainage pipe (Fig. 53/4).

Manual opening of the drain valve:

- ➔ Turn the rotary switch (Fig. 53/2) 90° until it engages.
The snap button (Fig. 53/5) springs out and the water drains out through the draining socket (Fig. 53/4).

13.1.10 Filling the water heater



Caution!

Damage to heater

- ▲ A pressure reduction valve must be used when connecting to a central public water supply. This prevents pressures above 2.8 bar in the water heater.



Important!

- If the temperature at the drain valve is below approx. 7 °C, you first have to switch on the heater to heat the installation area and the FrostControl. After a few minutes and when the temperature is above 7 °C, the drain valve can be closed.
- If just the cold water system is being operated without using the water heater, it is still filled with water. To avoid damage by frost, the water must be drained by operating the safety / drain valve - even when the water heater has not been used.

- ➔ Check the rotary switch of the "FrostControl" is set to "Operation" (parallel to the water connection).
- ➔ Close the drain valve by pushing in the snap button.
- ➔ Switch on the power for the water pump (main and/or pump switch).
- ➔ Open the hot water taps in the kitchen and the bathroom.
 - Set the temperature selector or single-lever faucets to "hot".
 - Leave faucets open until the air has been forced out of the water heater and water flows out of the faucets.

13.1.11 Draining the water heater

- ➔ Interrupt the power supply for the water pump.
- ➔ Open the hot water taps in the kitchen and the bathroom.
- ➔ Place a bucket underneath the outlet.
- ➔ Turn the rotary switch of the drain valve 90° until it engages (Fig. 53/2).
The water heater is now drained to the outside.
- ➔ Check the complete volume has been drained.

13.2 Electrical floor temperature control system (special equipment)

Depending on the model and special equipment, your vehicle has been fitted with a floor temperature control system. It serves to heat the floor surfaces in your vehicle slightly.

Electric heating foils are used in connection with a Truma warm air heater.



Danger!

Risk of electric shock or short-circuit

- ▲ Do not drill any holes or screw in any screws in the floor when the vehicle is fitted with an electrical floor temperature control system.

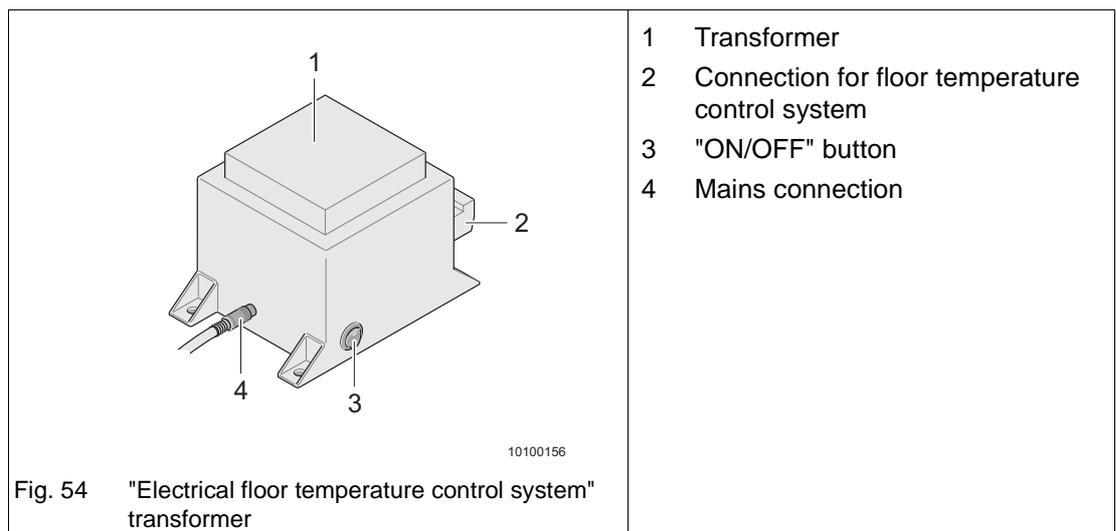


Danger!

Risk of overheating

- ▲ Do not cover the transformer.

You can only use the floor temperature control system when the vehicle is connected to a 230 V supply. For your safety, a transformer reduces the mains voltage to a low voltage which is then fed to the heating foils.



The transformer (Fig. 54/3) for the electrical floor temperature control system is fitted in either a bed box or in the garage depending on the model.

Using the electrical floor temperature control system:

- Check the circuit protection for the 230 V power supply at the camping site is adequate. (350 W - 1.5 A)
- Check the connection cable is wound off fully from the cable reel.
- Check the 230 V circuit breaker in the vehicle is switched on.
- Check the mains plug (Fig. 54/2) of the floor temperature control system is correctly plugged in.
- Check the mains plug (Fig. 54/4) of the transformer is connected to a 230 V socket.
- Press the "ON/OFF" button (Fig. 54/3) to switch the floor temperature control system on or off.

14 Cooking



Danger!

Risk of poisoning due to carbon monoxide (CO) and lack of oxygen

- ▲ Always open a window or roof hood when the gas stove is switched on.
- ▲ Never cover the forced ventilation in the roof hoods and in the entrance as well as the mushroom ventilators.



Danger!

Risk of explosion

- ▲ Never allow the gas to flow out unburned because of the risk of explosion!
- ▲ If a flame of the gas stove extinguishes, unburned gas flows out until the flame failure device is activated and together with the oxygen generates an explosive mixture inside the vehicle!
- ▲ Watch the flames while using the cooker!
- ▲ When finished, shut the respective quick-action stop valve (Chapter 11.7).

14.1 Gas stove

The gas stove is operated with liquid gas.



Caution!

Defective cooking area

- ▲ The burner does not operate properly. The flame goes out again and again despite the control knob being depressed for an extended period of time.
- ▲ The thermal element is bent or defective. Have defective thermal elements replaced by an authorised workshop. We recommend yearly inspection by a specialist.



Important!

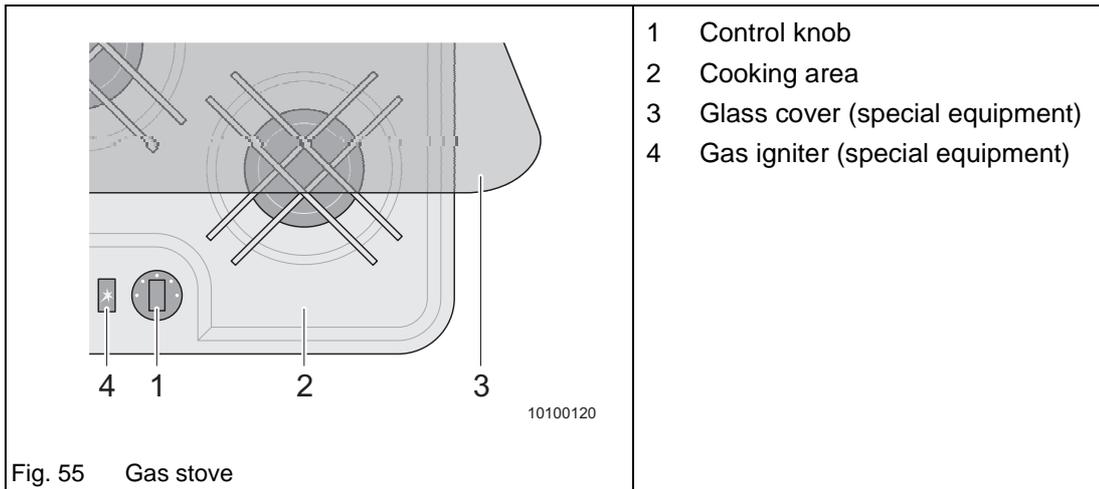
- Always make sure the respective control knob is set to "Off" when you are finished using the cooking stove, the grill or the oven.
- On models with electric ignition, proceed in the same manner as described, however, the flame is ignited by pressing the button for electric ignition on the control panel.

Observe the following when operating the gas stove:

- ➔ Always open a window or a roof hood (Chapter 8.2).
This supplies the vehicle with sufficient oxygen and leads away cooking vapours.
- ➔ Do not keep combustible objects, e.g. tablecloths, napkins, etc. near the gas stove. Risk of fire!
- ➔ Carefully observe the ignition process. The view must not be obstructed.
- ➔ Place the pots on the middle of the cooking positions.
- ➔ Use only pots with flat bottoms that are not larger than the respective gas burner grate.
- ➔ Do not allow the flames to extend beyond the pot edge.
- ➔ Always use cooking gloves or pot holders when handling hot pots, pans and similar items. Risk of injury!
- ➔ Never use the gas stove for heating.

Observe the following for the glass cover (special equipment):

- Do not apply pressure on the glass gas stove cover when closed.
- Do not close the glass cover while burners are still in operation or emit heat.
- Do not place hot cooking pans on the glass cover.
- In the case of frost, keep the kitchen window closed and provide ventilation in a different way. Otherwise, the temperature difference on the glass cover could cause damage.



Switching the gas stove on:

- Clean the gas stove before placing it into service (Chapter 19.2.5).
- Lift the glass cover (Fig. 55/3, special equipment) of the cooking area (Fig. 55/2) up and, when necessary, fit the aluminium protective covers (special equipment).
- Open the gas cylinder shut-off valve (Fig. 42/1) and the quick-action stop valve (Fig. 44/3) on the distributor block.
- Turn the control knob (Fig. 55/1) of the desired cooking position (Fig. 55/2) to "large flame", press it and keep it depressed.
Gas flows out.
- Ignite the gas flowing out with a suitable device and keep the control knob (Fig. 55/1) depressed for approx. 10 seconds until the flame safety device keeps the gas supply open.
 - Piezo gas igniter (Fig. 55/4): Each time it is pressed, a spark is created to ignite the gas.
 - Electric gas igniter (Fig. 55/4): When the button is pressed, several ignition sparks are created until you release the gas igniter.
- If the flame goes out, repeat the process.
- Regulate the gas supply by turning the control knob to the "large flame" or "small flame" symbol.

Switching the gas stove off:

- Turn the control knob (Fig. 55/1) clockwise to the "0" position.
The flame goes out and the flame safety device automatically shuts off the gas supply.
- Close the quick-action stop valve (Fig. 44/3).

For more information, see the separate instructions from the manufacturer.

15 Refrigerator & freezer compartment

Depending on the vehicle equipment, one of the refrigerators described below is installed in your vehicle.

The refrigerator and the freezer compartment form a mechanical unit.

To ensure optimum function, the appliance should stand level, if possible. However, it is also suitable for inclined positions to a certain degree.

Clean the refrigerator before placing it into service (Chapter 19.2.5).

When the appliance is first put into service, there may be a mild odour which will disappear after a few hours.

Ensure the living area is well ventilated (Chapter 8.2).

The refrigerator takes a few hours to reach its operating temperature whereas the freezer compartment should be cold about one hour after switching the refrigerator on.

For more information, see the separate instructions from the manufacturer.

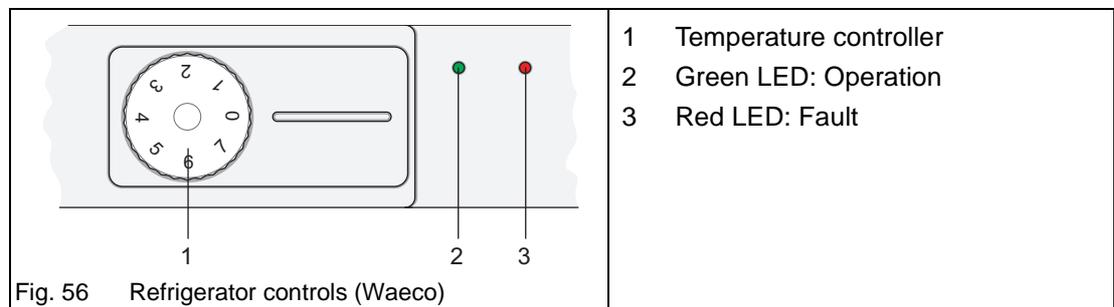


Important!

- Some Figures and descriptions show special equipment which may not be installed in your vehicle.
- Observe with an absorber refrigerator: The higher the ambient temperature, the more warmth the refrigerator must dissipate. This is done via the refrigerator grille on the rear side of the refrigerator in the outer skin of the vehicle.
 - Depending on the model, air circulation can be adversely affected when the sliding door is open.
 - For higher temperatures, a circulation fan (special accessory) can be fitted to improve refrigerator efficiency.
 - It can be useful to remove the refrigerator grille in dry weather (without rain).
Caution: Always keep the refrigerator grille fitted during rain!

15.1 Controls

15.1.1 Waeco CoolMatic



For more information, see the separate instructions from the manufacturer.

15.1.2 Dometic 4 series

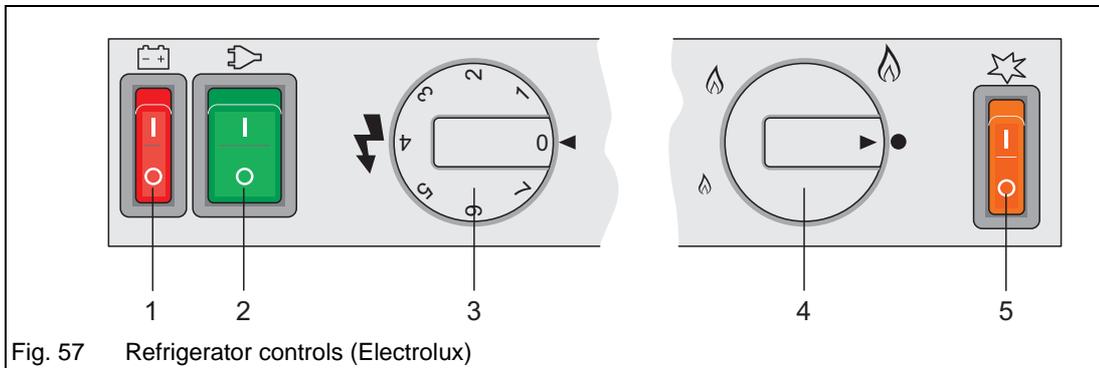


Fig. 57 Refrigerator controls (Electrolux)

- 1 12 V rocker switch
- 2 230 V rocker switch
- 3 Temperature selection switch 230 V mode
- 4 Temperature selection switch gas mode
- 5 Ignition switch

For more information, see the separate instructions from the manufacturer.

15.1.3 Dometic 8 series with manual mode selection and automatic ignition MES

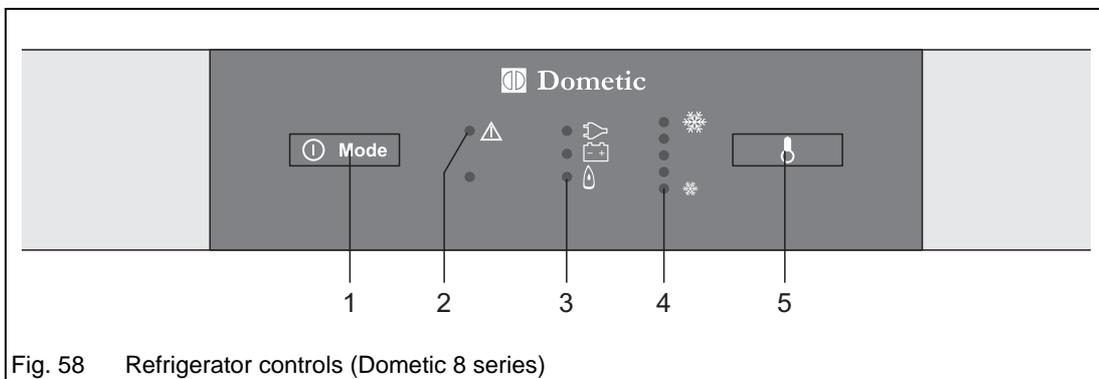


Fig. 58 Refrigerator controls (Dometic 8 series)

- 1 On/Off / energy selector button
- 2 "Malfunction" LED indicator
- 3 "Mode" LED indicator
- 4 "Temperature range" LED indicator
- 5 Temperature setting switch

15.1.4 Dometic 8 series with manual mode selection and battery ignition

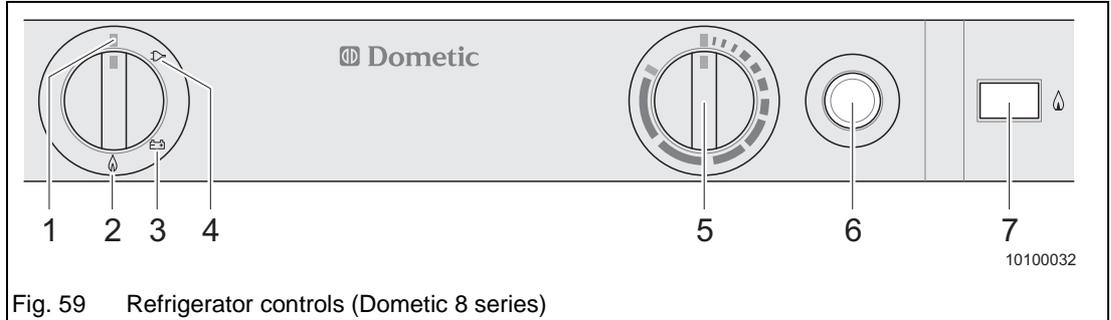


Fig. 59 Refrigerator controls (Dometic 8 series)

- 1 Power selector switch "Off"
- 2 Power selector switch "Gas mode"
- 3 Power selector switch "12 V"
- 4 Power selector switch "230 V"
- 5 Temperature controller
- 6 Battery ignition (gas mode)
- 7 Flame display (gas mode)

15.1.5 Thetford series N 3000

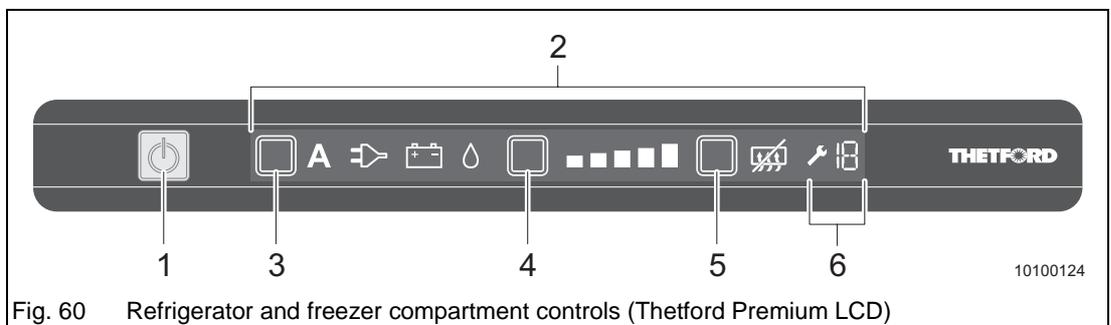


Fig. 60 Refrigerator and freezer compartment controls (Thetford Premium LCD)

To switch to the individual functions, press the selector switch  once or several times. The selected mode is shown on the right, next to the selector switch.

- 1 Main switch
- 2 Touchscreen
- 3 "Source" symbol
- 4 "Cooling level" button
- 5 "Anti-condensation" button
- 6 Error code display

For more information, see the separate instructions from the manufacturer.

15.2 Placing into service

15.2.1 12 V mode

The 12 V mode should be selected only while the engine is running.



Important!

A low voltage monitor is fitted on compressor refrigerators running with 12 V. The low voltage monitor automatically switches the refrigerator off when the battery voltage drops below 11 V.

15.2.2 230 V mode

Select the 230 V mode only when an external 230 V supply is connected.

Before starting the journey, obtain information on the voltage in the country to be visited.

15.2.3 Gas operation (only for absorber refrigerators)



Danger!

Risk of explosion at petrol stations!

- ▲ Open flames are prohibited at petrol stations!
 - Switch the refrigerator off using the power selector switch!



Caution!

Using gas

- ▲ Only use liquid gas to run the refrigerator (Chapter 11.3).
- ▲ At altitudes of more than 1000 m above sea level, physical factors may cause problems with the ignition of the gas. This is not a malfunction!

Using the refrigerator with gas:

- Open the gas cylinder shut-off valve (Fig. 42/1) and the quick-action stop valve (Fig. 44/3) on the distributor block.
- Select mode "Gas" using the power selector switch.
- Then place the refrigerator into operation according to the information in the separate manufacturer's instruction manual.

For more information, see the separate instructions from the manufacturer.

15.2.4 Winter operation



Important!

Attach the winter covers also when the vehicle is taken out of service for an extended period of time or cleaned on the outside.

Check in winter operation:

- Check regularly that the ventilation grilles have not been blocked by snow, ice, leaves or similar.

When the outside temperature drops below +8 °C, the winter covers (special accessory) should be fitted to the ventilation grilles.

This protects the refrigerator unit from excessively cold air.

For more information, see the separate instructions from the manufacturer.

15.3 Storing food

15.3.1 General information

- Switch the refrigerator on approx. 12 hours before storing food.
- Always store pre-cooled food only. When buying and transporting food, make sure the food is well pre-cooled. Use insulated bags for transport.
- Always open the refrigerator door just briefly.
- Always store the food separately and well packed (closed containers, aluminium foil, etc.).
- Never put hot food into the refrigerator. Always let it cool first.
- Store sensitive food directly near the fins.
- Bear in mind that the temperature inside a closed vehicle can rise significantly as a result of sun irradiation. This can affect the performance of the refrigerator.
- Pay attention to the unhindered air circulation of the refrigerator unit.

15.3.2 Freezer compartment

- Do not store carbonated drinks in the freezer compartment.
- The freezer compartment is suitable for making ice cubes and for short-term storage of frozen food.
- The freezer compartment is not suitable for freezing food!

15.4 Putting out of service



Important!

If the refrigerator is switched off for a longer period of time, the door should remain open somewhat. For this purpose, the lock has a special latching position.

For more information, see the separate instructions from the manufacturer.

16 Toilet



Caution!

Damage to the environment

- ▲ Use an environment-friendly and biodegradable chemical toilet additive for the toilet.
 - The ventilation will remove merely the odour but not germs and gases. Germs and gases can have a detrimental effect on the rubber seals.



Caution!

Material breakage

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



Important!

- Never add toilet fluid through the valve blade or the toilet bowl.
- Do not leave water in the bowl when the toilet is not used. This does not prevent unpleasant odours but could cause flooding.
- Use quick dissolving toilet tissue in order not to affect the mechanical components of the cassette.
- Empty the cassette and water tank when the vehicle is not heated and there is a risk of frost.

Whenever using the toilet:

- ➔ Every time you place the Thetford Cassette into service, perform all preparations according to the separate manufacturer's instruction manual.
- ➔ Before using the Thetford toilet for the first time, fill the water tank with fresh water (Chapter 12.1.1).
- ➔ Cover the bottom of the cassette with water and fill in environment-friendly and biodegradable toilet chemicals. Observe the manufacturer's instructions for the dosage. For environmental reasons, the toilet can also be used without chemical additives, however, this requires more frequent emptying of the cassette (Chapter 16.3).

16.1 Thetford Cassette C-200 S and C-260 S



Caution!

Damage to the water pump during winter operation

- ▲ In winter operation, the toilet may be flushed only after the toilet compartment has been well heated, otherwise the water pump of the flush system could be damaged.
- ▲ Do not use antifreeze.

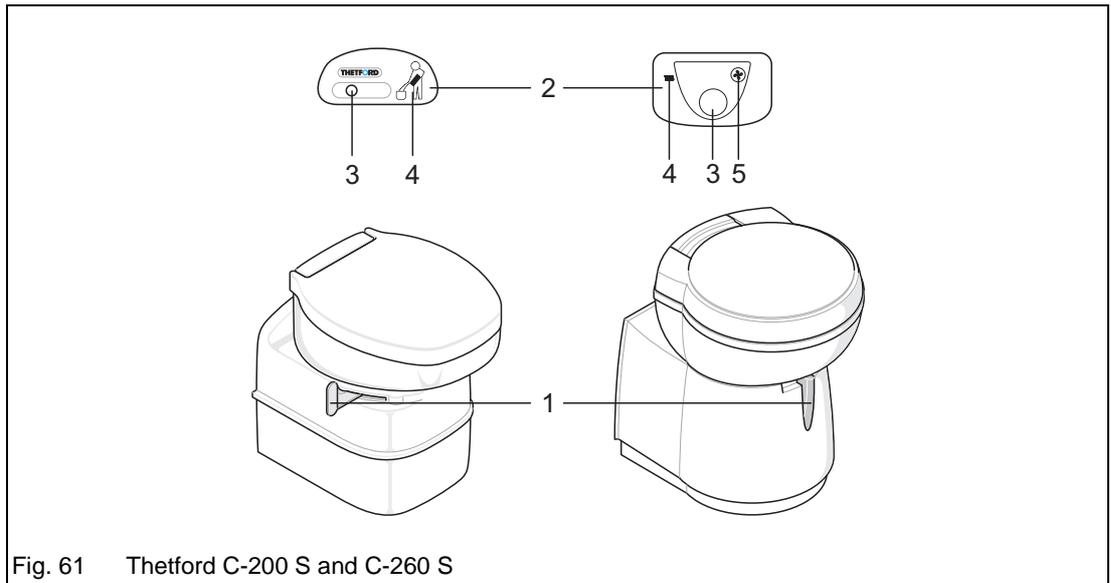


Fig. 61 Thetford C-200 S and C-260 S

- 1 Lever for opening the valve blade
- 2 Operator panel
- 3 Flush button
- 4 Waste level indicator
- 5 Automatic ventilator (special equipment)

Before use:

- ➔ Turn the toilet bowl to the desired position using both hands.
- ➔ To activate the control panel, press the flush button (Fig. 61/3) once.
- ➔ Use the lever (Fig. 61/1) to open the valve blade or allow some water to run into the bowl. Press the flush button again to run water into the bowl.

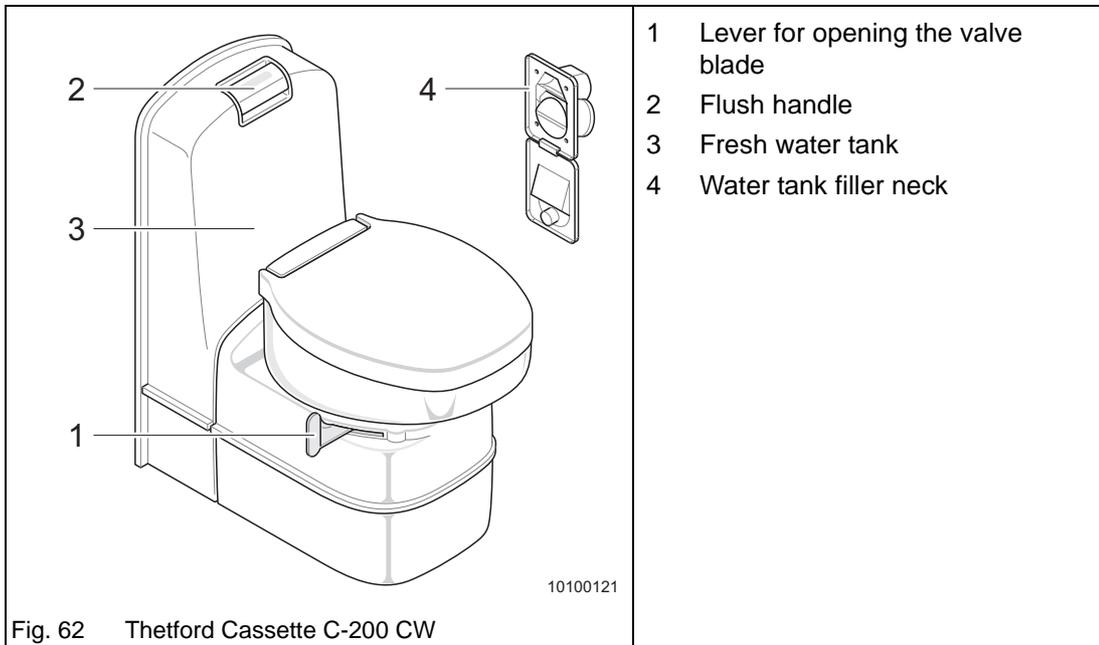
After use:

- ➔ Push the lever (Fig. 61/1) to the side if the valve blade is still closed.
- ➔ Flush the toilet (Fig. 61/3) by pressing the flush button for several seconds (if necessary, reactivate the control panel (Fig. 61/2)).
- ➔ Close the valve blade with the lever (Fig. 61/1) after flushing.

For more information, see the separate instructions from the manufacturer.

16.2 Thetford Cassette C-200 CW/CWE (pump toilet)

The Thetford Cassette C-200 CW/CWE has a separate water tank. The filler neck of the water tank is at the outside of the vehicle or at the rear of the water tank.



Filling the water tank:

- Open the filler neck (Fig. 62/4) with a key.
- Fill in flushing water with a suitable container (e.g. watering can).
- Close the filler neck (Fig. 62/4) with a key.

Before use:

- Turn the toilet bowl to the desired position using both hands.
- Use the lever (Fig. 62/1) to open the valve blade or allows some water to run into the bowl. For that purpose, pull the flush handle (Fig. 62/3) up and push it down slowly.

After use:

- Push the lever (Fig. 62/1) to the side if the valve blade is still closed.
- To flush, pull the flush handle (Fig. 62/3) up and push it down slowly.
- Close the valve blade with the lever (Fig. 62/1) after flushing.

For more information, see the separate instructions from the manufacturer.

16.3 Cassette



Caution!

Danger for the environment

- ▲ Use an environment-friendly and biodegradable chemical toilet additive for the toilet.
- ▲ The cassette may be emptied only at camping sites with suitable waste water treatment plants or special waste disposal stations (e.g. at parking sites for camping vehicles).

16.3.1 Thetford Cassette C-200 S

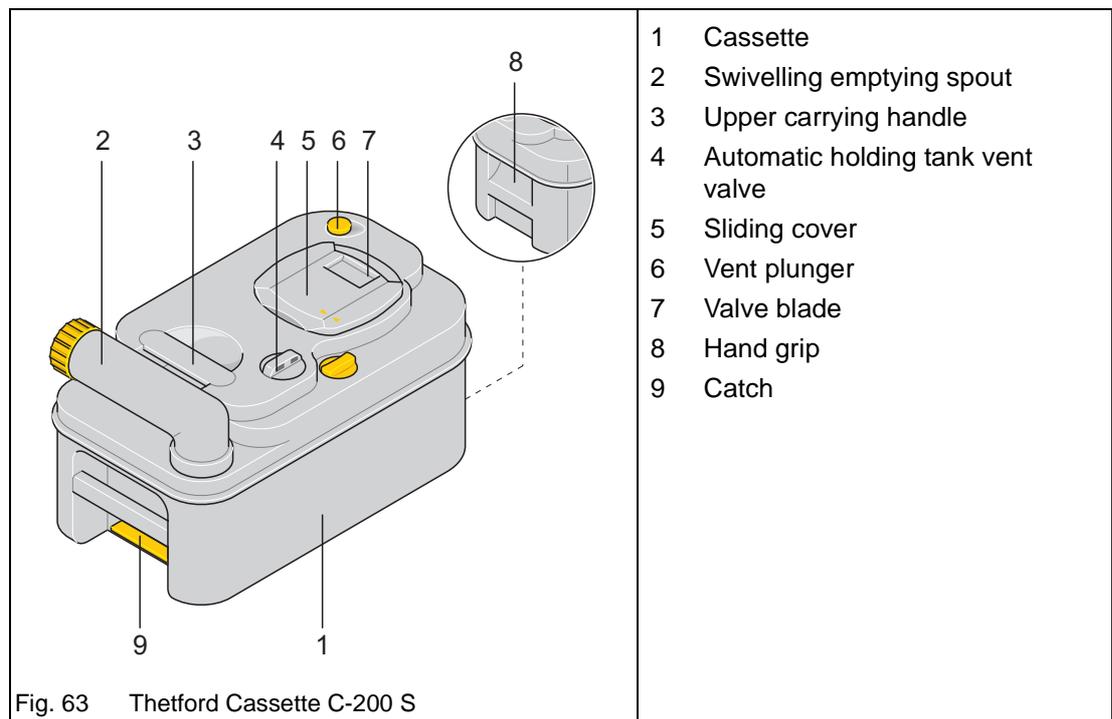
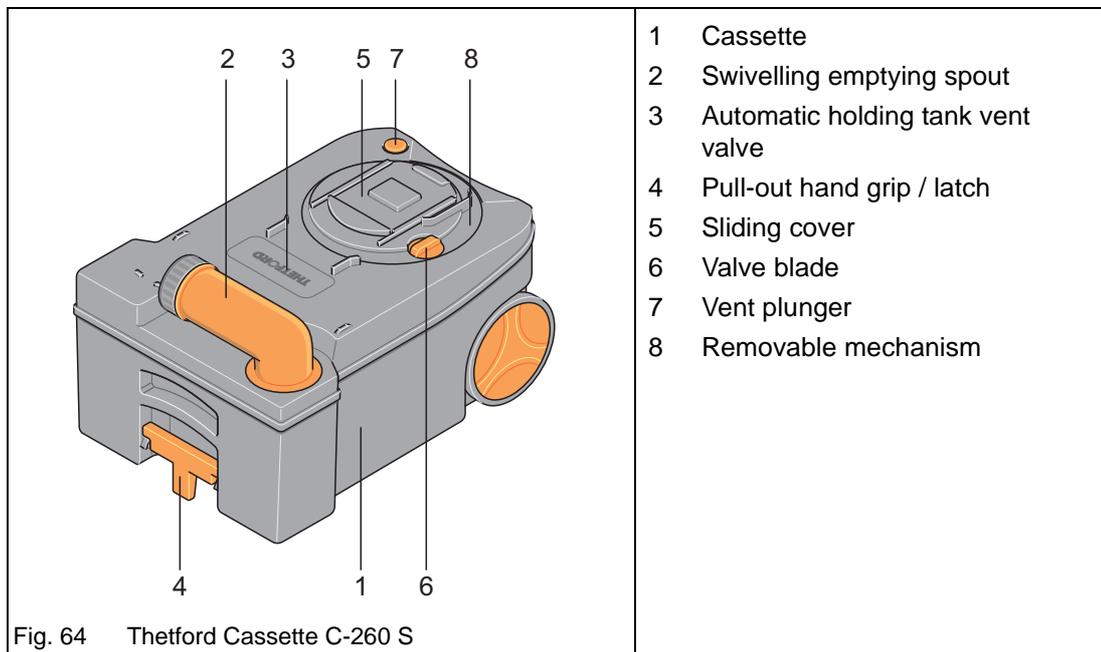


Fig. 63 Thetford Cassette C-200 S

The cassette (Fig. 63/1) has a capacity of approx. 17 l and should be emptied when the level indicator (Fig. 61/4) lights. Do not allow the cassette to become overfilled.

16.3.2 Thetford Cassette C-260 S



The cassette (Fig. 64/1) has a capacity of 18 l and should be emptied when the level indicator (Fig. 61/4) lights. Do not allow the cassette to become overfilled.

16.3.3 Emptying the cassette

Removing the cassette:

- Close the valve blade (Fig. 61/1) in the toilet compartment.
- Open the outer access door.
- Unlock the cassette using the latch (Fig. 63/9) or (Fig. 64/4) and take the cassette out.
- When the cassette is pulled out, the valve blade ((Fig. 63/7) or (Fig. 64/6) is closed hygienically by the sliding cover ((Fig. 63/5) or (Fig. 64/5).

Emptying the cassette at disposal stations:

- Place the cassette upright. The emptying spout ((Fig. 63/2) or (Fig. 64/2) must point upwards.
- Turn the emptying spout ((Fig. 63/2 or (Fig. 64/2) upwards.
- Unscrew the cap from the emptying spout.
- C-200S: Lift the cassette with one hand on the upper carrying handle (Fig. 63/3); with the other hand on the hand grip (Fig. 63/8).
- On C-260 S: Pull the hand grip (Fig. 64/4) upward and take the cassette to the intended waste disposal station.
- Turn the cassette so that it is emptied.
- Press the vent plunger ((Fig. 63/6) or (Fig. 64/7) with the thumb of the other hand. Press the vent plunger only when the emptying spout is pointed downwards. Pressing the vent plunger empties the tank without splashing.
- Thoroughly rinse the cassette with water.
- Also clean the valve blade with water.

- Then pour toilet fluid into the cassette.
The cap of the emptying spout has a measuring cup on the inside.
This decomposes the faeces quickly, prevents unpleasant smells in the cassette and keeps the inside of the tank clean.
- Fit the tank back in again.
- Close the access door.

For more information, see the separate instructions from the manufacturer.

16.4 Placing the toilet out of service



Important!

Empty the cassette and water tank when the vehicle is not heated and there is a risk of frost.

Placing the toilet out of service:

- Place a sufficiently large container underneath the drain of the water tank.
- Open the drain plug, completely drain the water tank and allow to dry (Chapter 12.1.1).
- Empty the cassette (Chapter 16.3).
- Leave the emptying spout open to allow the tank to dry.
- Clean the toilet (Chapter 19.2).
- Clean all seals and treat with care products for seals.

For more information, see the separate instructions from the manufacturer.

17 Winter camping

17.1 Travelling in winter

Winter camping is becoming more and more popular. Your **ADRIA** vehicle is suitable, to the greatest possible extent, for use in winter and if you pay attention to the following information, your winter holiday in your own vehicle will become proper winter fun.



Important!

Before starting the journey, mount suitable winter tyres and have snow chains on board. Snow chains are prohibited on aluminium rims.

When camping in winter:

- Obtain exact information about road conditions and weather.
- Avoid roads with strong uphill/downhill gradients.
- Select the camping site carefully and in time, plan your arrival during the day.
- Carefully check the tyres, tread depth and tyre pressure (Tab. 25).
- Fill the windscreen washer unit with frostproof cleaner, take reserve frostproof cleaner for the journey with you.
- Before starting the journey, clear snow and ice from the roof, all windows, mirrors and lights as well as the wheel wells.
- Do not warm up the engine while parked, smoothly drive off immediately after you start the engine.
- Use only propane gas (Chapter 11.3) with a two-cylinder system for winter camping.
- Allow for sufficient gas supplies.

Pitching the vehicle:

- Clear the snow from the parking area before pitching the vehicle.
- Do not park the vehicle underneath trees. Falling branches or pieces of ice can damage the roof and roof hoods.
- Check the underground regularly to prevent sinking in when thawing sets in.
- After pitching, secure the vehicle with wheel chocks against rolling away. Release the parking brake to prevent freezing.
- After travelling on salt-covered roads, the complete vehicle including the chassis has to be thoroughly washed with water.
- To prevent white rust formation of the galvanised parts, ensure adequate air circulation underneath the vehicle. Water must be capable of flowing off.
- Lay the 230 V power cable so as to prevent it freezing to the ground or being damaged when snow is cleared.

17.2 Winter operation



Danger!

Risk of suffocation

- ▲ Do not use any catalytic stoves or infrared radiators in the vehicle. The oxygen in the living area is then used.



Caution!

Risk of damage through freezing

- ▲ Do not store any fluids in the unheated vehicle when there is a risk of frost.
- ▲ If the vehicle is left with the heating switched off for a longer period of time at low temperatures, the water pipes and tanks could freeze and thus be damaged.
- ▲ Empty the waste water system when there is a risk of frost.
- ▲ When there is a risk of frost and the vehicle is not heated, the water system must be carefully cleaned, thoroughly rinsed, completely emptied and thoroughly dried.
- ▲ When there is a risk of frost, water taps have to be left open in the unheated vehicle even when the water supply is drained. Drain the faucets that have a "warm" and a "cold" position in both positions and leave them open in one of the positions (Chapter 12.3).

The vehicle is insulated and suitable for use in winter when operated properly. The water supply is located inside the vehicle.

The snow and ice load can amount to several hundred kilograms and so reduce the additional load of your vehicle.

In winter, temperature differences and wet objects (e.g. ski clothes) in the vehicle increase condensation.

Warm air absorbs much more humidity than cold air. When the warm air in the vehicle cools down, water condenses in cold places (windows, window frames and storage compartments). This can be remedied by adequate heating with the air circulation switched on.

We recommend thermo-mats for the outside of the driver's cab. These keep the windows free from snow, ice and steam.

When camping in winter:

- ➔ Vent openings may not be covered by snow or snow drifts. Clear the snow also from underneath the vehicle so that the heater receives enough fresh air.
- ➔ Regularly clean snow and ice from the roof and sunblind (special accessory) or awning (special accessory) (Chapter 2.8).
- ➔ Always keep the heater exhaust clear. Attach cowl extensions (special accessory) as necessary.
- ➔ Provide for good ventilation (air circulation) and heating. Always keep the forced ventilation open.
- ➔ Use the awning as a wind guard and storage area for wet objects, e.g. skiing equipment.
- ➔ Always open all cabinet doors, flaps and storage compartments when heating the vehicle to prevent condensation.
- ➔ Wipe off any condensation.
- ➔ Air and dry the cushions daily.

- ➔ Open windows and roof hoods when cooking.
- ➔ If possible, do not use electrical appliances with high current consumption. The current capacity at camping sites is limited.
- ➔ Make sure the drain pipe of the waste water does not freeze up (Chapter 12.3).

17.3 Checklist for winter camping

Checklist for winter camping	✓
Winter tyres (tread depth at least 4 mm)	
Talc, Vaseline for rubber seal	
New wipers (also as reserve)	
Antifreeze in wiper fluid (also as reserve)	
Snow shovel, broom with long handle	
Telescopic ladder	
Door lock de-icer	
Hand brush	
Defroster spray, plastic ice-scraper	
Anti-mist cloth for windscreen	
Warning vest	
Umbrella	
Torch, headtorch	
Wheel chocks, working mat (insulating mat), work gloves	
Folding spade	
Start aid (traction aid), sandsack, grid	
Snow chains (not for light-metal rims), tyre socks, etc.	
Spare bulbs	
Battery jumper cable	
Winter cover for refrigerator grille	
Thermo-mats/hood for driver's cab	
Awning	
Winter bed linen	
Watering can	
Antifreeze for the waste water tank (e.g. table salt)	
Heating tape (to thaw frozen lines)	
Bucket or tank on wheels for waste water	

Tab. 5 Checklist for winter camping

18 Placing out of service



Important!

When the instructions for maintenance and care, and the checklist for placing out of service are observed, the vehicle can be parked outdoors all year round.

18.1 Checklist for temporary placing out of service:

	Activity	✓
Bodywork	Keep the forced ventilation and all mushroom ventilators open.	
	Carefully wash the vehicle and apply a paint protection product (wax).	
	Repair paintwork damage. Your ADRIA dealer will be pleased to advise you with respect to suitable products.	
	Move the vehicle every four weeks in order to avoid "flat spots" and damage to the wheel bearings. Secure the vehicle with wheel chocks from rolling away.	
	Regularly check the tyre pressure.	
	Disengage the parking brake.	
	Protect the tyres from direct exposure to the sun.	
	Thoroughly air the vehicle every 4 weeks. If the vehicle is to be parked in an enclosed area, at least two windows must remain open.	
	Provide for good ventilation in the underbody area.	
	Cover the exhaust cowl, if possible.	
Electrical system	If the vehicle is covered with a tarpaulin, make sure air can still circulate above the roof. The tarpaulin must not rest directly on the roof to prevent it from sticking to the roof. Light wooden slats allow for air circulation on the roof.	
	Fully charge the starter and living area batteries for at least 24 h.	
Gas system	Disconnect the battery terminals on the living area battery.	
	Close the gas shut-off valve of the gas cylinder.	
	Close all quick-action stop valves for all appliances.	
	Always remove all gas cylinders from the gas cylinder compartment and store them safely.	
	Close the open end of the gas hose so that no dirt or insects can enter.	

	Activity	✓
Water system	Empty the entire water system completely, clean carefully and allow to dry.	
	Leave all water taps, all drain cocks as well as all drain valves open. Drain the faucets that have a "warm" and a "cold" position in both positions and leave them open in one of the positions.	
	Bacteria and algae can form in the water tank, therefore, after the end of the journey, the water tank must always be drained, thoroughly cleaned (Chapter 12.3) and allowed to dry. We recommend using a disinfectant for the water tank. Ask your ADRIA dealer for advice.	
Appliances	Empty and clean the refrigerator; leave the refrigerator door and the freezer compartment, if applicable, open.	
	For information concerning placing appliances temporarily out of service, see the separate appliance instruction manuals.	
Living area	Leave all cabinet doors, access doors, storage compartments, seat chests and bed boxes open.	
	Clean the living area and storage compartments.	
	Stand all the cushions up for ventilation or store them in the house.	
	Make sure the forced ventilation is open and not covered.	

Tab. 6 Checklist for temporary placing the vehicle out of service

18.2 Placing out of service over the winter

The following measures are required in addition to those already mentioned for the temporary placing out of service over the winter.

	Activity	✓
Bodywork	Clear snow from the roof when it snows.	
	Thoroughly heat and ventilate the vehicle every four weeks.	
	Lubricate all hinges and locks.	
	Apply talc or Vaseline to all rubber seals.	
	Use graphite dust to treat locking cylinders.	
	Install the winter cover for the refrigerator grille (special accessory).	
Electrical system	Fully charge the starter and living area batteries for at least 24 h. Remove the living area battery and store it protected against frost. Charge the starter battery and removed living area battery every month.	
Appliances	For information concerning placing appliances out of service over the winter, see the separate appliance instruction manuals.	
Living area	Make sure the forced ventilation is open and not covered.	
	Keep all cushions dry in the house.	
	Position dehumidifiers and check them regularly.	

Tab. 7 Checklist for placing out of service over the winter

18.3 Returning to service after the placing out of service

Perform the following activities for placing into service again:

	Activity	✓
Bodywork	Remove tarpaulin and possibly wooden slats.	
	If the vehicle has been stationary for a long period (approx. 10 months), have the brake system checked by an authorised workshop.	
	Check the tyre pressure, also of the spare wheel (special equipment).	
	Remove cover from the exhaust cowl, if present.	
	Remove the winter cover for the refrigerator grille (special accessory).	
	Check the function of all doors, windows, flaps and hatches.	
	Check the function of all external locks (e.g. entrance door, filler neck, flaps, etc.).	
Electrical system	Connect the starter and living area batteries. Fully charge the starter and living area batteries for at least 24 h.	
Gas system	Lash the gas cylinders in the gas cylinder compartment and connect gas cylinders.	
	If the vehicle has been stationary for a long period (approx. 10 months), have the gas system checked by an authorised workshop.	
Electrical system	Check the function of the electrical system (e.g. lighting, sockets) and of all appliances (e.g. refrigerator).	
Water system	Thoroughly rinse the complete water system with plenty of fresh water; leave the taps open.	
	Close all water taps and drain valves.	
	Check for leakage and function of all water taps and drain valves.	
Appliances	For information concerning returning appliances to service, see the separate appliance instruction manuals.	
	Check the function of all appliances (e.g. refrigerator, cooker, heater, etc.).	
Living area	Replace all cushions.	
	Remove dehumidifiers.	

Tab. 8 Checklist for returning to service

19 Cleaning & care

19.1 Cleaning and care - exterior

We recommend the following steps for the care of the vehicle:



Warning!

Risk of injury and of damage to the vehicle roof

- ▲ Do not walk on the van roof.
- ▲ Clear snow and ice from the roof and from the roof hoods.
 - Use a ladder which is placed against the roof edge for this purpose.



Important!

- Never drive the vehicle through a wash facility. The acrylic glass windows will be scratched by the rotating cleaning brushes.
 - When cleaning the vehicle with a high-pressure cleaner, maintain a distance of approx. 70 cm from the nozzle to the vehicle surface.
 - Never point the water jet directly towards doors, windows, flaps and vent openings. Splashing water can penetrate the vehicle through the circumferential air gap between the glass dome and the frame (forced ventilation).
 - Do not spray directly on deco foils as they could become detached.
 - Never point the water jet directly towards electric accessories and plug connections.
 - Do not use glass cleaners, abrasives, solvents, cleaning agent containing methylated spirit or alcohol. This would result in cracks or embrittlement of the acrylic material.
 - Avoid everything that could cause scratching or scoring.
 - Avoid torsional forces when opening and closing the windows.
- Wash the vehicle with plenty of cold to lukewarm water and cleaning agent. Then dry thoroughly.
 - You can purchase suitable cleaning agents and additives from your **ADRIA** dealer.
 - Bird droppings, tree gum, berries, road salt, sea salt, etc. must always be removed immediately.
 - Clean windows only with plenty of lukewarm water and mild soap solution.
 - Treat rubber seals on doors, windows and flaps with talc or Vaseline.
 - Check the condition of the undersealant once a year. If the undersealant is defective, contact your **ADRIA** dealer.
 - The chassis is galvanised. Seal areas where rust is setting in (e.g. caused by stone-chipping or other effects) by the application of cold zinc.
 - After driving in winter on salt-covered roads, thoroughly clean the galvanised surfaces and aluminium components and rinse with clear water.
 - To prevent the formation of white rust (only a visual defect) on the galvanised parts, ensure adequate air circulation underneath the vehicle. Water must be capable of flowing off.
 - When staying near the sea, regularly wash the vehicle with clear fresh water.

- The painted outer surface of the vehicle can be preserved with a commercially available wax. Pay attention to the manufacturer's instructions.
- Treat polyester parts every year with a two-component wax. Pay attention to the manufacturer's instructions.
- Observe the environmental protection measures in cleaning and care of the vehicle.

19.1.1 Cleaning the acrylic windows (side windows, roof hoods)



Important!

- Never drive the vehicle through a wash facility. The acrylic glass windows will be scratched by the rotating cleaning brushes.
- When cleaning the vehicle with a high-pressure cleaner, maintain a distance of approx. 70 cm from the nozzle to the vehicle surface.
- Never point the water jet directly towards doors, windows, flaps and vent openings. Splashing water can penetrate the vehicle through the circumferential air gap between the glass dome and the frame (forced ventilation).
- Do not use glass cleaners, abrasives, solvents, cleaning agent containing methylated spirit or alcohol. This would result in cracks or embrittlement of the acrylic material.
- Avoid everything that could cause scratching or scoring.
- Avoid torsional forces when opening and closing the windows.



Important!

Condensation water can form between the double windows of the acrylic glass window. The condensation water disappears by itself, however, this takes some time.

Acrylic glass windows are very delicate and require very careful handling. Non-compliance with the cleaning instructions voids the manufacturer's warranty.

- Clean the windows with only warm water and a soft, clean sponge or cloth.
- If the windows are very dirty, use a solution with water and mild soap solution to keep the windows clear and free from electrostatic charging.
- For stubborn soiling, we recommend a special cleaning agent for acrylic glass which is available from your **ADRIA** dealer.
- Do not use scouring agents. They would scratch the plastic surfaces.
- After cleaning the vehicle, rinse all acrylic glass windows with clean water.
- Treat rubber seals with talc.
- Regularly lubricate all moving parts, hinges and flaps with acid-free grease (e.g. Ballistol).
- Do not allow water to penetrate the mechanical parts.
- The insect screens and blinds can be cleaned with a soft brush. If the insect screens and blinds are very dirty, use water and mild soap solution to wash them. Then allow the screens and the blinds to dry well.

19.1.2 Cleaning plastic parts

- ➔ Clean plastic parts only with warm water, mild household cleanser and a soft, clean sponge or cloth. The aqueous solution should contain 2 % cleaning agent at the most.
- ➔ Do not use scouring agents. They would scratch the plastic surfaces.
- ➔ Very greasy or oily spots can be washed with ethyl, isopropyl or isobutyl alcohol. Organic solvents (e.g. acetone, methanol or ethanol) could damage the material.
- ➔ An example of possible damage to moulded plastic parts are stress cracks caused by different media. Other chemicals can have a swelling and softening effect on the plastic material. Therefore, plastic parts should be subjected to contact with the solvents referred to above only for a short period (2 minutes max.) at room temperature.
- ➔ Avoid mechanical loads (e.g. clamping, twisting) of the plastic parts during cleaning in order to prevent distortion.

19.2 Cleaning and care - interior



Important!

Exposure to sunlight can cause the plastic parts to yellow. This is not a quality defect.



Important!

- Use only commercially available, mild cleaning agent to clean the vehicle. Ask your **ADRIA** dealer for advice.
- Do not use caustic or abrasive cleaning agent.
- Avoid everything that could cause scratching or scoring.

19.2.1 Cleaning plastic parts



Warning!

Risk of injuries through caustic substances

- ▲ Do not get acids into the eyes or on mucous membranes! Avoid skin contact!
 - ▲ To remove calcification, use only highly diluted, commercially available acids (e.g. acetic acid).
- ➔ Clean plastic parts only with warm water, mild household cleanser and a soft, clean sponge or cloth. The aqueous solution should contain 2 % cleaning agent at the most.
 - ➔ Do not use scouring agents. They would scratch the plastic surfaces.
 - ➔ Very greasy or oily spots can be washed with ethyl, isopropyl or isobutyl alcohol. Organic solvents (e.g. acetone, methanol or ethanol) could damage the material.
 - ➔ An example of possible damage to moulded plastic parts are stress cracks caused by different media. Other chemicals can have a swelling and softening effect on the plastic material. Therefore, plastic parts should be subjected to contact with the solvents referred to above only for a short period (2 minutes max.) at room temperature.
 - ➔ Avoid mechanical loads (e.g. clamping, twisting) of the plastic parts during cleaning in order to prevent distortion.
 - ➔ To prevent calcification, the water used must be softened. When calcification of the surface occurred, it can be removed with a diluted acid solution (e.g. acetic acid).

19.2.2 Care of furniture

- Clean the furniture with a soft cloth and a commercially available furniture polish, do not use intensive cleansers.
- Wash the work surfaces with water by adding a mild detergent or household cleanser.
- Clean textile storage spaces and textile cabinets with cleansing foam.

19.2.3 Care of cushions, curtains, net curtains

- Small spots in the cushions can be removed with commercially available cleaning foam for use on cushions or the foam of mild detergent.
- Do not wash cushions.
- Protect upholstery from direct sunlight so that it does not fade.
- Have large spots or soiling removed by the dry cleaners.
- Have curtains and net curtains cleaned by the dry cleaners only.
- Brush insect screens and Roman shades with a soft brush or vacuum with the brush attachment of the vacuum cleaner.
- Grease spots on Roman shades can be removed with mild, warm laundry soap.

19.2.4 Care of PVC floor coverings and carpets (special equipment)



Caution!

Risk of damage

- ▲ Do not place the carpet on the wet PVC floor covering, the carpet and PVC floor covering may stick together and could tear the PVC floor covering off when the carpet is removed again.
- ▲ It is also possible that mould will form between the PVC floor covering and the carpet.
- Wash the PVC floor covering with a commercially available cleanser and allow to dry well. Do not use wax.
- Do not use scouring agents or aggressive cleansers.
- Vacuum clean the carpet.
- Clean spots with carpet foam.

19.2.5 Cleaning the kitchen

19.2.5.1 Cleaning work surfaces and sink

- Wash the work surfaces with water to which a mild detergent or household cleanser has been added and dry the surfaces.
- Clean the stainless steel sink with a commercially available cleanser.

19.2.5.2 Cleaning the gas stove



Caution!

Damage to gas stove

- ▲ Prevent water or cleaning agent from penetrating the gas outlet openings. Water may damage the gas stove.
- ▲ Do not use scouring agents. These scratch the surfaces.
- Allow the gas stove to cool before cleaning.
- Clean the gas stove only with a moist cloth.
- Clean the glass cover (special equipment) of the cooker with a glass cleaning agent.

19.2.5.3 Cleaning the oven



Caution!

Damage to seals and surfaces

- ▲ Do not allow the door seal to come into contact with oil or grease.
- ▲ Do not use scouring agents. These scratch the surfaces.
- Clean the inside and outside of the appliance before you place it into service and then at regular intervals.
- Use only soft cloths. Clean the appliance only with mild household cleaners.
- Then rinse the appliance with fresh water and dry thoroughly.

19.2.5.4 Cleaning the refrigerator



Caution!

Damage to seals and surfaces

- ▲ Do not use soap, abrasive or soda-based cleaning agent.
- ▲ Do not allow the door seal to come into contact with oil or grease.
- ▲ Do not use scouring agents. These scratch the surfaces.
- Clean the inside and outside of the appliance before you place it into service and then at regular intervals.
- Use only soft cloths. Clean the appliance only with mild household cleaners.
- Then rinse the appliance with fresh water and dry thoroughly.
- Remove dust from the refrigerator unit at yearly intervals using a brush or soft cloth. The refrigerator unit is accessible through the upper refrigerator grille.

19.2.6 Cleaning the bathroom



Caution!

Damage to surfaces

- ▲ Do not clean the bathroom and the toilet with solvents or cleaning agent containing alcohol. Do not use scouring agents.
 - These could cause cracks or embrittlement of the plastic material.
 - ▲ Do not pour caustic substances or boiling water into the drains.
 - These damage both the drain pipes and the siphon traps.
 - ▲ Do not allow the door seal to come into contact with oil or grease.
 - ▲ Do not use scouring agents. These scratch the surfaces.
 - ▲ Do not use vinegar essence for decalcifying the toilet and the water system. Use only commercially available mild decalcifying products that do not affect the plastic material.
 - Ask your **ADRIA** dealer for advice.
-
- ➔ Clean the bathroom and the toilet only with warm water, a soft cloth or sponge and mild, standard cleaning agent.
 - ➔ Clean the toilet compartment only with a moist cloth and mild cleaning agent.
 - ➔ The seals of the cassette, the vents and the lid as well as the valve blades of the toilet must be cleaned regularly with a mild cleaning agent for plastic materials.

19.2.7 Cleaning the water tank, waste water tank and toilet water tank

- ➔ Always clean the water tanks and water pipes every time before filling them with commercially available cleaning agent and rinse them with plenty of water.
- ➔ Before you put the vehicle out of service, the water tanks must be carefully cleaned, thoroughly rinsed, completely emptied and thoroughly dried (Chapter 12.3).

20 Inspection & maintenance

20.1 Inspection work



Important!

A leisure vehicle must be officially inspected at regular intervals just like other vehicles.



Important!

Use only original spare parts from the respective manufacturer.

- Inspection and maintenance work must be performed at regular intervals.
- Since special technical knowledge is required for the performance of the maintenance and inspection work, it has to be performed by authorised workshops.
- Regular maintenance guarantees value retention of the vehicle.

20.2 Checking and replenishing operating fluids

Operating fluids include:

- Engine oil
- Brake fluid
- Coolant
- Wiper water
- Power steering oil
- Air-conditioning system cooling medium (special equipment)

Please see the manufacturer's original operating instructions for checking operating fluids.

20.3 Brakes



Warning!

Risk of injury and severe damage to the vehicle

- ▲ Check brake system at regular intervals.
- ▲ All repairs and adjustments of the brake system have to be performed in an authorised workshop only!

The wear of the brake lining depends on the driving technique.

- Consult an authorised workshop immediately if the braking behaviour is not normal (pulling to one side or reduction in braking pressure).
- Drive with consideration and foresight.
- Avoid braking abruptly.
- Have the brake system inspected regularly.

20.4 Chassis

In addition to the maintenance work specified by the basic vehicle manufacturer, the following maintenance work has to be performed:

Maintenance activity	Interval
Van general inspection	According to regulations in the country of registration
Have the brake system checked in an authorised workshop	Every year
Have the undersealant checked	Every year
Check the tightening torque of wheel nuts	Monthly
Check the charged condition of the starter battery	Monthly
Check tread depth and tyre pressure	Before starting to drive
Check the exterior lighting	Before starting to drive

Tab. 9 Chassis maintenance and inspection plan

For the frequency of the maintenance work, see the separate manufacturer's instruction manual. On vehicles that are not driven much, the maintenance work must be performed every year and in time before the start of the journey.

20.5 Bodywork

Maintenance activity	Interval
Delivery check	Before delivery
Replace the gas regulator and gas hose	Every 10 years
Official gas inspection	Every 2 years
Leakage test	According to warranty conditions
Bodywork inspection	Every year
Have the electrical system checked	Every year
Have the gas system checked	Every year
Check screw connections of fixing clamps of roof hoods	Every year
Rub talc on seals on doors, windows and roof hoods	Every year
Clean the moving parts of the entrance step (special equipment) and lubricate with grease	Half-yearly
Check water pipes and fittings for leaks and correct attachment	Half-yearly
Check charged condition of living area battery	Monthly

Tab. 10 Bodywork maintenance and inspection plan

21 Troubleshooting

Please pay attention to the following information for finding and correcting faults.

If you cannot remedy the faults yourself, contact the Customer Service of your competent **ADRIA** dealer or the respective appliance manufacturer (heater = Truma, toilet = Thetford, etc.).



Warning!

Risk of injury and severe damage to the vehicle

- ▲ All repairs on the vehicle and on the brake system have to be performed in an authorised workshop only!

21.1 Changing wheels

21.1.1 Securing the vehicle

- ➔ If possible, remove the vehicle from the flowing traffic.
- ➔ Wear a warning vest (different regulations from country to country).
- ➔ Secure the vehicle with a warning triangle and possibly a warning light.
- ➔ Apply the parking brake and engage the first gear or reverse gear.
- ➔ Secure the vehicle with wheel chocks from rolling away.

21.1.2 Vehicles with tyre mobility system (special equipment)



Warning!

Health hazard

- ▲ The spray can contains ethylene glycol and **should not be used by asthmatics**.
 - ➔ Do not breathe in the vapours during repair.
- ▲ Avoid contact with your eyes, skin and clothes.
 - ➔ Immediately rinse off with plenty of water.
 - ➔ Immediately consult a doctor if an allergic reaction occurs.



Important!

- With the tyre mobility system, tyres can be repaired whose treads were pierced by foreign objects with a diameter of **4 mm max**.
- The tyre mobility system is approved only for filling the tyres of a vehicle that was equipped by the factory with this tyre mobility system.
- Repair with the tyre mobility system is only a temporary measure! Repaired tyres may be used only for a short period!

The tyre mobility system can be found in the front part of the vehicle.

The scope of delivery includes:

- Spray can with sealing fluid
- Folded sheet with instructions
- Compressor with manometer and connecting pieces
- Adapter for pumping up various elements

Before repair:

Do not pull out any foreign objects (screws or nails) that have penetrated the tyre.

- ➔ Before repair, carefully check the tyre sidewall.
Do not use the tyre mobility system when the tyre has already been damaged by driving with the flat tyre.
- ➔ Also check the rim.
When the rim is damaged (deformation of the bead of the rim that causes loss of air), repair is not possible.

After repair:

- ➔ Stop after driving for approx. 10 minutes and check the tyre pressure.
- ➔ Consult a tyre repairman as soon as possible.
- ➔ Inform the tyre repairman that the tyre has been repaired with the tyre mobility system.
- ➔ Give the instruction sheet to the persons who have to repair the tyre that was treated with the tyre mobility system.

For more information concerning the tyre mobility system, see the separate manufacturer's instruction manual.

21.1.3 Vehicles with spare wheel (special equipment)

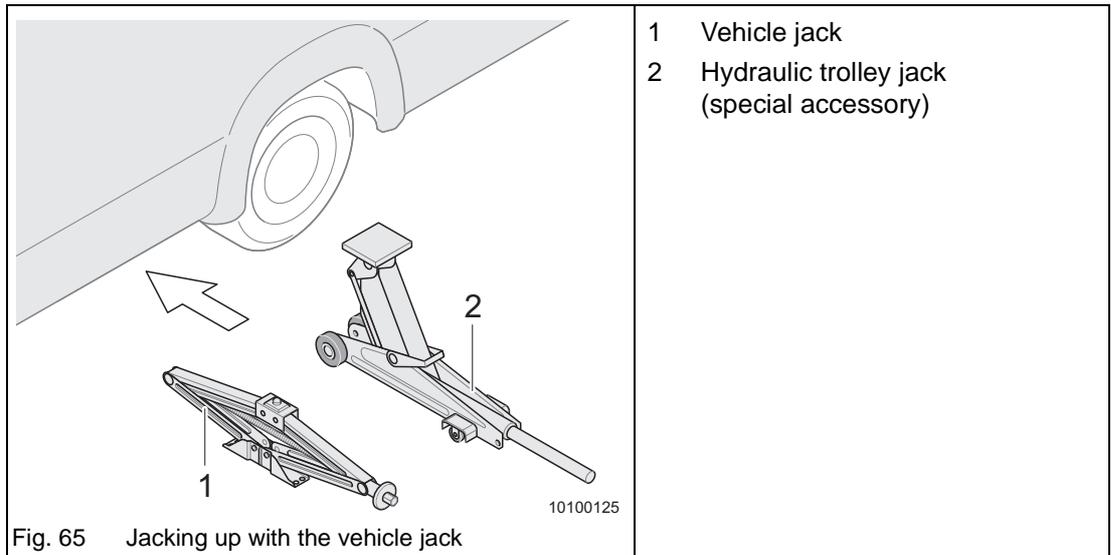
21.1.3.1 Vehicle jack

**Danger!****Severe injuries by crushing**

- ▲ Use only a vehicle jack with adequate lifting capacity. Determine the lifting capacity necessary in the technical data of your vehicle based on the gross weight rating.
- ▲ Never position the vehicle jack on the bodywork.
 - ➔ Position the vehicle jack only at the intended positions.
- ▲ The vehicle jack serves only for wheel change. Never use it for working underneath the vehicle.
- ▲ Jack up the vehicle only on level and firm ground.
- ▲ Do not lie underneath the jacked up vehicle.
- ▲ Do not use the corner steadies for lifting the vehicle.

For changing the wheels, we recommend using the included vehicle jack or a hydraulic trolley jack which is available as an accessory.

For more information concerning the vehicle jack, see the separate manufacturer's instruction manual.



The vehicle jack and the onboard tool set are under a seat in the driver's cab or in the garage.

- ➔ Position the vehicle jack (Fig. 65/1) or the hydraulic trolley jack (special accessory) (Fig. 65/2) only at the lifting points provided underneath the car body.

For more information concerning the vehicle jack, see the separate manufacturer's operating instructions.

21.1.3.2 Spare wheel storage location

The spare wheel is underneath the vehicle floor in the rear area.

- ➔ Secure the vehicle (Chapter 21.1.1).
- ➔ Observe the further information in the separate instructions from the basic vehicle manufacturer.
- ➔ Take the spare wheel out of the support.
- ➔ Change the defective wheel.
- ➔ Stow the damaged wheel properly after a wheel change.

21.1.3.3 Changing the wheel



Warning!

Risk of injury when the vehicle rolls away

- ▲ Perform the wheel change only when the vehicle has been secured.



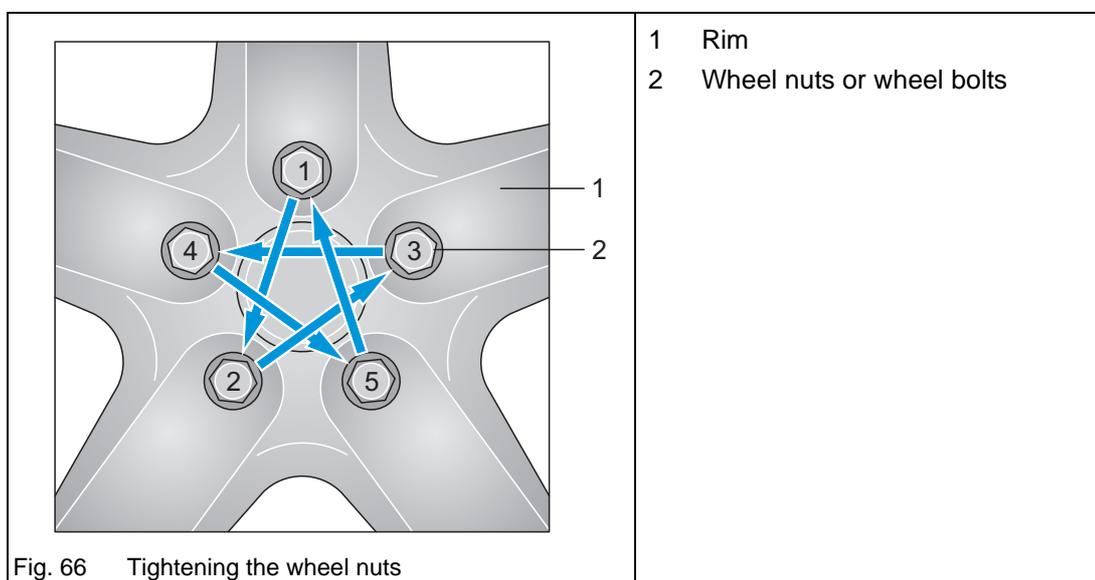
Caution!

Unsafe wheel attachment

- ▲ Always use the correct wheel bolts.
- ▲ For light-metal rims, different wheel bolts (diameter, length) can be used than for steel rims.
 - ➔ Ensure the bolts are not interchanged.

- Secure the vehicle (Chapter 21.1.1).
- Shut off the engine and apply the parking brake.
- Engage the first gear or reverse gear.
- Place the wheel chocks before and behind the opposite wheel. This secures the vehicle from rolling away.
- Get the spare wheel and the tools.
- Remove the protective caps from the wheel nuts or the wheel cover.
- Unscrew the wheel nuts or wheel bolts by half a revolution with the wheel spanner.
- Position the vehicle jack and jack up the vehicle until the defective wheel is off the ground (Chapter 21.1.3.1).
- Screw out the wheel nuts or wheel bolts and place them onto a clean surface. Make sure the threads are clean.
- Change the wheel.
- Clean the threads, turn in the wheel nuts or bolts and tighten by hand.
- Stow the defective wheel in the spare wheel support.
- Lower the vehicle and remove the vehicle jack.
- Tighten the wheel nuts crosswise (Chapter 21.1.4).
- Stow the tools and the safety equipment.
- Check the tyre pressure at the next opportunity.
- After driving approx. 50 km, check the seating of the wheel nuts or bolts and tighten.

21.1.4 Tightening the wheel nuts



- Tighten the wheel nuts or wheel bolts (Fig. 66/2) in the sequence 1 - 2 - 3 - 4 - 5.
- Check the firm seating of all wheel nuts or wheel bolts again.
- Use a torque wrench for light-metal rims without steel bushings.
- See the separate operating instructions from the chassis manufacturer for tightening torques for rims.
- After driving approx. 50 km, check the seating of the wheel nuts or wheel bolts.

21.2 Replacing lighting elements

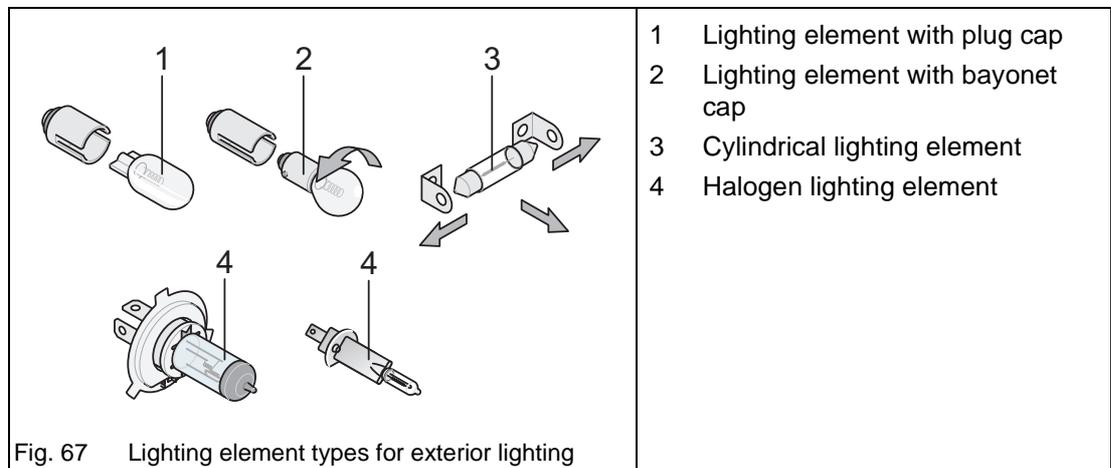


Caution!

Damage to lighting elements

- ▲ Never touch lighting elements with your bare fingers. Always use a clean and lint-free cloth.
- ➔ Before starting to drive, check the function of all interior and exterior lighting equipment on the vehicle and replace defective lighting elements.
- ➔ Have a clean mat available for changing the lighting elements. This ensures that you will not lose any small parts.

21.2.1 Exterior lighting



- ➔ Replace the various lighting elements as follows:

	Lighting element type	Replacing
1	Lighting elements with plug cap	<ul style="list-style-type: none"> • Removing: Pull the lighting element out. • Fitting: Push the lighting element in the socket with light pressure.
2	Lighting elements with bayonet cap	<ul style="list-style-type: none"> • Removing: Push the lighting element down and turn it anticlockwise. • Fitting: Insert the lighting element in the socket and turn it clockwise.
3	Cylindrical lighting element	<ul style="list-style-type: none"> • Removing / fitting: Bend the contacts of the lighting element carefully outwards.
4	Halogen lighting element	<ul style="list-style-type: none"> • Removing: Loosen the fitting spring. • Fitting: Hang the fitting spring back in.

Tab. 11 Replacing lighting element types - exterior

21.2.1.1 Replacing lighting elements - front

Vehicle with driver's cab of basic vehicle:

Lighting - front	Lighting elements
Low beam bulb	H7 - 55 W
High beam bulb	H1 - 55 W
Parking light, front	W5W
Turn indicator, front	P21W

Tab. 12 Front lighting elements

For more information, see the separate instructions from the basic vehicle manufacturer.

21.2.1.2 Replacing lighting elements - sides

Lighting - sides	Lighting elements
Turn indicator, side	W16WF or LED
Awning light	G4 10W or LED

Tab. 13 Side lighting elements

21.2.1.3 Replacing lighting elements - rear

Lighting - sides	Lighting elements
Turn indicator, rear	P21W
Brake light	P21W
Additional brake light (3rd brake light)	LED
Reversing light	P21W
License-plate light	C5W

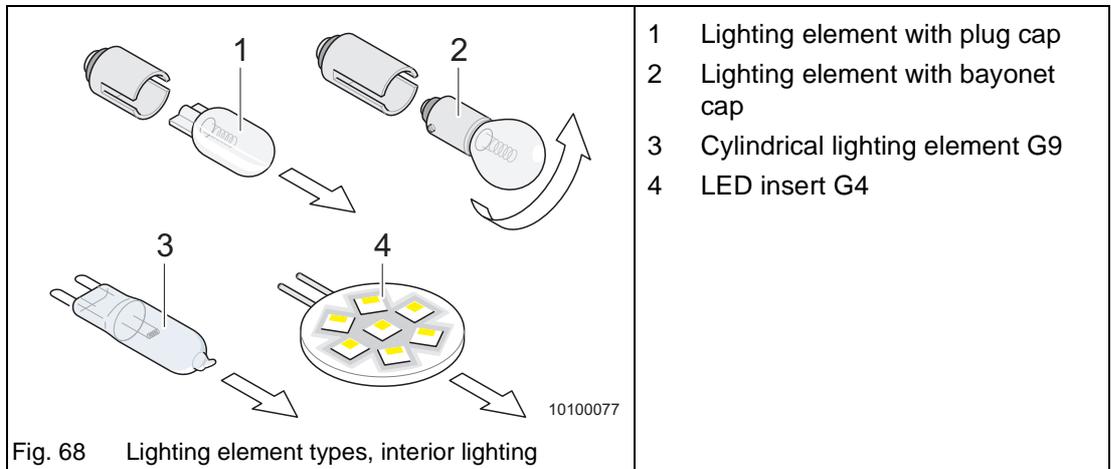
Tab. 14 Rear lighting elements

Replacing lighting elements:

- ➔ Replacing rear lighting elements, observe the instruction manual of the basic vehicle manufacturer.
- ➔ Remove the shelving for the relevant lighting on the inside of the D column (rear).
- ➔ Loosen both fixing nuts of the lighting with a wrench (opening 17).
- ➔ First unscrew and remove the bottom nut by hand and then the top nut.
- ➔ Replace the defective lighting element as described in the instruction manual of the basic vehicle manufacturer.

Refit the lighting in reverse sequence.

21.2.2 Interior lighting



➔ Replace the various lighting elements as follows:

	Lighting element type	Replacing
1	Lighting elements with plug cap	<ul style="list-style-type: none"> Removing: Pull the lighting element out. Fitting: Push the lighting element in the socket with light pressure.
2	Lighting elements with bayonet cap	<ul style="list-style-type: none"> Removing: Push the lighting element down and turn it anticlockwise. Fitting: Insert the lighting element in the socket and turn it clockwise.
3	Cylindrical lighting element with G9 cap	<ul style="list-style-type: none"> Removing: Pull the lighting element out. Fitting: Push the lighting element in the socket with light pressure.
4	LED insert with G9 plug connection	<ul style="list-style-type: none"> Removing: Pull the LED insert out of the plug connection. Fitting: Push the LED insert into the plug connection with light pressure.

Tab. 15 Replacing lighting element types - interior

Lighting - interior	Lighting elements
Ceiling light, living area	LED-12 V-G4 1.0 W
Ceiling light, sleeping area	LED-12 V-G4 1.0 W
Lighting, roof hood	Halogen 12 V-G4 10 W
Reading lamp, living area	LED-12 V-G4 0.5 W
Reading lamp, sleeping area	LED-12 V-G4 1.0 W
Kitchen light	LED-12 V-G4 0.5 W
Lighting, bathroom unit	LED-12 V-G4 0.5 W
Lighting, wardrobe	C10W 12 V 10 W
Lighting, storage space	Halogen 12 V-G4 10 W

Tab. 16 Interior lighting elements

21.3 Gas stove faults

Fault	Possible cause	Remedy
No gas	See Chapter 21.4 "No gas".	
Flame extinguishes in the "small flame" position	Flame failure device is not adjusted correctly.	<ul style="list-style-type: none"> • Adjustment exclusively by authorised workshop.
Flame failure device does not react	Flame failure device is defective.	<ul style="list-style-type: none"> • Consult an authorised workshop.
Flame appearance on appliance not normal	Gas pressure regulator defective.	<ul style="list-style-type: none"> • Consult an authorised workshop.

Tab. 17 Gas stove faults

21.4 Gas system faults

Fault	Possible cause	Measure													
Gas smell, high gas consumption	Gas system leaks.	<ul style="list-style-type: none"> • Immediately put the gas system out of service. • Close the gas cylinder shut-off valves. • Avoid any type of ignition spark and open light. • Ventilate the vehicle well (Chapter 2.5). • Repair by authorised workshop. 													
	No gas	<table border="1"> <tbody> <tr> <td>Gas cylinder is empty.</td> <td> <ul style="list-style-type: none"> • Exchange gas cylinder (Chapter 11.5 and 11.6). </td> </tr> <tr> <td>Gas cylinder shut-off valve closed.</td> <td> <ul style="list-style-type: none"> • Open gas cylinder shut-off valve (Chapter 11.6.1). </td> </tr> <tr> <td>The SecuMotion/MonoControl CS (special equipment) has switched off after the gas system has not been used for a longer period of time and with the gas cylinders shut off.</td> <td> <ul style="list-style-type: none"> • Place the SecuMotion/MonoControl CS (special equipment) into service (Chapter 11.6.1). </td> </tr> <tr> <td>Gas pressure regulator frozen.</td> <td> <ul style="list-style-type: none"> • Use a regulator de-icing system (e.g. Eis-Ex as accessory). </td> </tr> <tr> <td>Quick-action stop valve closed</td> <td> <ul style="list-style-type: none"> • Open quick-action stop valve (Chapter 11.7). </td> </tr> <tr> <td>Appliance is defective.</td> <td> <ul style="list-style-type: none"> • Repair by authorised workshop. </td> </tr> <tr> <td>Outside temperature too low.</td> <td> <ul style="list-style-type: none"> • Use propane gas for winter camping (Chapter 11.3). </td> </tr> </tbody> </table>	Gas cylinder is empty.	<ul style="list-style-type: none"> • Exchange gas cylinder (Chapter 11.5 and 11.6). 	Gas cylinder shut-off valve closed.	<ul style="list-style-type: none"> • Open gas cylinder shut-off valve (Chapter 11.6.1). 	The SecuMotion/MonoControl CS (special equipment) has switched off after the gas system has not been used for a longer period of time and with the gas cylinders shut off.	<ul style="list-style-type: none"> • Place the SecuMotion/MonoControl CS (special equipment) into service (Chapter 11.6.1). 	Gas pressure regulator frozen.	<ul style="list-style-type: none"> • Use a regulator de-icing system (e.g. Eis-Ex as accessory). 	Quick-action stop valve closed	<ul style="list-style-type: none"> • Open quick-action stop valve (Chapter 11.7). 	Appliance is defective.	<ul style="list-style-type: none"> • Repair by authorised workshop. 	Outside temperature too low.
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Appliance is defective.	<ul style="list-style-type: none"> • Repair by authorised workshop. 														
Outside temperature too low.	<ul style="list-style-type: none"> • Use propane gas for winter camping (Chapter 11.3). 														
Flame appearance on appliance not normal	Gas pressure regulator defective.	<ul style="list-style-type: none"> • Consult an authorised workshop. 													

Tab. 18 Gas system faults

21.5 Refrigerator/freezer compartment faults

Fault	Possible cause	Remedy
No gas operation	See Chapter 21.4 "No gas".	
	Energy selector switch on refrigerator in false position.	<ul style="list-style-type: none"> Switch power selector switch on refrigerator to "Gas mode" or "Automatic mode" (Chapter 15.1.2).
	Air in gas pipe.	<ul style="list-style-type: none"> Switch the appliance off and start again. Repeat three to four times.
No 230 V operation	Energy selector switch on refrigerator in false position.	<ul style="list-style-type: none"> Switch power selector switch on refrigerator to "230 V mode" (Chapter 15.1.2).
	Vehicle not connected to mains supply.	<ul style="list-style-type: none"> Connect vehicle to the mains.
	Onboard fuse defective.	<ul style="list-style-type: none"> Insert a new fuse.
No 12 V operation	Energy selector switch on refrigerator in false position.	<ul style="list-style-type: none"> Switch power selector switch on refrigerator to "12 V mode" (Chapter 15.1.2).
	Onboard fuse defective.	<ul style="list-style-type: none"> Insert a new fuse.
	Battery is discharged.	<ul style="list-style-type: none"> Check and charge the battery.
	Ignition is not switched on.	<ul style="list-style-type: none"> Start the engine.
Cooling function is not sufficient	Door not closed properly.	<ul style="list-style-type: none"> Close the door. Have the door adjusted.
	Ventilation of the cooling unit is not sufficient.	<ul style="list-style-type: none"> Check the refrigerator grilles are not covered.
	Thermostat setting too low.	<ul style="list-style-type: none"> Increase thermostat setting.
	Too much ice on vaporiser.	<ul style="list-style-type: none"> Check the refrigerator door closes properly.
	Too much warm food placed in the refrigerator at the same time.	<ul style="list-style-type: none"> Allow food to cool first.
	Appliance not yet long enough in operation.	<ul style="list-style-type: none"> Check the cooling effect after some hours.

Tab. 19 Refrigerator/freezer compartment faults

21.6 Truma Combi heater faults



Important!

Consult an authorised workshop if the listed measures are not successful.

Fault	Possible cause	Remedy
LEDs do not light.	No supply voltage.	<ul style="list-style-type: none"> • Check battery voltage (12 V). • Check all electric connectors and fuses.
Green LED lights but heater does not operate.	The temperature setting on the control panel is lower than the room temperature.	<ul style="list-style-type: none"> • Set the temperature on the control panel higher.
Green LED lights and red LED blinks.	Battery voltage is too low.	<ul style="list-style-type: none"> • Charge the battery.
The red LED goes on approx. 30 seconds after the heater is switched on.	See Chapter 21.4 "No gas".	
After operating for a longer period of time, the heater switches to failure.	Warm air outlet openings blocked.	<ul style="list-style-type: none"> • Check and free individual single warm air outlet openings.
	Gas pressure regulator frozen.	<ul style="list-style-type: none"> • Use a regulator de-icing system (e.g. Eis-Ex as accessory).
Green and red LEDs blink after heater is switched off.	Appliance was switched off during failure. After-running is active in order to reduce the temperature.	<ul style="list-style-type: none"> • After-running will switch off after a few minutes. The system can only be reset after this time elapses by switching the system off and on again.
The drain valve (FrostControl) does not close.	Temperature on drain valve is below +3 °C.	<ul style="list-style-type: none"> • Switch the heater on. If the heater is not in operation, the drain valve can only be closed when the ambient temperature is above +3 °C.
	Drain valve rotary switch not set to "Operation".	<ul style="list-style-type: none"> • Turn the drain valve rotary switch (Fig. 53/2) to "Operation". Now press the snap button (Fig. 53/5) on the drain valve until it engages.

Tab. 20 Power supply faults

21.7 Power supply faults

Fault	Possible cause	Remedy
Ground-fault circuit breaker triggered	Fault in 230 V cables of vehicle.	<ul style="list-style-type: none"> Contact Customer Service.
	Fault in an electrical appliance.	<ul style="list-style-type: none"> Disconnect all electrical consumers until the ground-fault circuit breaker no longer triggers. Have defective appliances repaired by a qualified electrician.
Living area battery is not charged in 230 V operation	No mains voltage.	<ul style="list-style-type: none"> Switch on the circuit breaker in the vehicle. Switch the ground-fault circuit breaker in the vehicle on. Have the mains voltage checked.
	Transformer/rectifier defective.	<ul style="list-style-type: none"> Contact Customer Service.
Living area battery is overcharged in 230 V operation	Transformer/rectifier defective.	<ul style="list-style-type: none"> Contact Customer Service.
Living area battery is not charged in drive operation	Too many connected appliances.	<ul style="list-style-type: none"> Switch off the appliances, if possible.
Living area battery is overcharged in drive operation	Generator is defective.	<ul style="list-style-type: none"> Have the generator checked.
	Regulator defective.	<ul style="list-style-type: none"> Have the regulator checked.
Starter battery is not charged in 230 V operation	No mains voltage.	<ul style="list-style-type: none"> Switch on the circuit breaker in the vehicle. Switch the ground-fault circuit breaker of the 230 V supply on. Have the mains voltage checked.
	Transformer/rectifier defective.	<ul style="list-style-type: none"> Contact Customer Service.

Fault	Possible cause	Remedy
Refrigerator does not operate in drive operation	No voltage applied to refrigerator.	<ul style="list-style-type: none"> • Have the fuse and cables checked.
	Transformer/rectifier defective.	<ul style="list-style-type: none"> • Contact Customer Service.
	Refrigerator defective.	<ul style="list-style-type: none"> • Have the refrigerator checked.
12 V supply in the living area does not function	The 12 V main switch for the living area battery is switched off.	<ul style="list-style-type: none"> • Switch 12 V main switch for living area battery on (Chapter 8.7).
	Fuse or cables defective.	<ul style="list-style-type: none"> • Have the fuse and cables checked. • Switch the ground-fault circuit breaker of the 230 V supply on.
	Transformer/rectifier defective.	<ul style="list-style-type: none"> • Contact Customer Service.
	System put out of service.	<ul style="list-style-type: none"> • Put the system into service.

Tab. 21 Power supply faults

21.8 Control panel faults

Fault	Possible cause	Remedy
12 V supply does not function	12 V main switch switched off.	<ul style="list-style-type: none"> Switch 12 V main switch for living area battery on (Chapter 8.7).
	Fuse defective.	<ul style="list-style-type: none"> Contact Customer Service.
12 V control indicator (green) is not lit	12 V supply switched off.	<ul style="list-style-type: none"> Switch on the 12 V supply.
System cannot be switched on	Living area battery is not charged or insufficiently charged.	<ul style="list-style-type: none"> Charge the living area battery.
	Fuse defective.	<ul style="list-style-type: none"> Contact Customer Service.
No voltage is supplied by the living area battery	The living area battery is discharged.	<ul style="list-style-type: none"> Charge living area battery immediately! <p>Complete discharging damages the living area battery!</p>
	Discharge is performed by inactive appliances, e.g. the frost protection valve of the combined heater.	<ul style="list-style-type: none"> Charge living area battery for longer stationary periods.
The "mains control" symbol is not shown although the 230 V mains supply is connected	The mains connection has no voltage.	<ul style="list-style-type: none"> Check the mains connection (e.g. camping site).
	Circuit breaker before the transformer/rectifier has triggered or is switched off.	<ul style="list-style-type: none"> Reset or switch on the circuit breaker.

Tab. 22 Control panel faults

21.9 Water supply faults

Fault	Possible cause	Remedy
No water	Water tank is empty.	<ul style="list-style-type: none"> Top up the water tank (Chapter 12.1.1).
	Fuse of water pump defective.	<ul style="list-style-type: none"> Replace the defective fuse.
	Water pump defective.	<ul style="list-style-type: none"> Have the water pump replaced in an authorised workshop.
Water leak in vehicle	Leak in the water system.	<ul style="list-style-type: none"> Identify and repair leak.

Tab. 23 Water supply faults

21.10 Toilet faults

Fault	Possible cause	Remedy
Toilet does not have flushing water	Water tank is empty.	<ul style="list-style-type: none"> • Fill the water tank.
The pump runs, the toilet bowl is not emptied	Clogging in toilet bowl.	<ul style="list-style-type: none"> • Fill the toilet bowl with water. Allow clogging to soak for approx. 2 minutes and then flush several times in quick succession.
Toilet does not function	Fuse defective.	<ul style="list-style-type: none"> • Replace the fuse.

Tab. 24 Toilet faults

22 Technical Data



Important!

- For the technical data, the statements in the registration certificate part I are binding.
- Modifications of the original equipment of the vehicle ex factory can affect road safety and driving behaviour.
- Accessories not approved by **ADRIA** for installation, attachment or conversion can cause damage to the vehicle and affect driving behaviour.
- **ADRIA** assumes no liability for damage caused by unapproved accessories or by unallowed modifications on the vehicle.
- The dimension and weight information is within possible tolerances $\pm 5\%$.

22.1 Tyres / tyre pressure



Warning!

Risk of injury and severe damage to the vehicle

- ▲ Different tyre pressures may be necessary when using winter tyres. See the instruction manual for the basic vehicle for detailed information.

Basic vehicle	Tyre size	Tyre pressure, front [bar]	Tyre pressure, rear [bar]
Fiat Ducato	215/70 R 15	4,1	4,5
	215/70 R 15 C	5,0	5,5
	225/75 R 16	4,5	5,0
	225/75 R 16 C	5,5	5,5

Tab. 25 Tyres / tyre pressure

For the tyre size, please see the vehicle documents or look at the tyres of your vehicle.

The specifications are applicable for cold tyres under load. The pressure should be approx. 0.3 bar higher for warm tyres.

The tyre pressures specified are approximate values. Refer to the separate operating instructions of the basic vehicle for exact specifications.

22.2 Additional load / weight



Caution!

Danger of overloading

- ▲ The driving behaviour of an overloaded vehicle changes drastically. It can get out of control during the journey.
- ▲ When the vehicle is overloaded, the insurance coverage and the warranty claim to the manufacturer become void.
 - Do not exceed the gross weight rating entered in the vehicle documents.



Important!

- Load the vehicle properly (Chapter 5.1).
- Weigh the vehicle before starting the journey (e.g. on public vehicle scales).

22.2.1 Determining the additional load

The additional load is calculated according to the following formula:

- $\text{Gross weight rating} - (\text{minus}) \text{ unladen weight} / \text{basic equipment} = \text{weight of additional load}$

In the EU, the EU Directive 97/27/EC is valid for the additional loading of vehicles; these rules are essentially equivalent to standard DIN EN1645-2.

22.2.1.1 Gross weight rating

See the registration certificate, part I or part II, for the gross weight rating.

22.2.1.2 Empty weight/basic equipment

The empty weight is made up as follows:

- Weight of the empty, ready-to-drive vehicle including basic equipment ex factory.
- This includes:
 - The weight of the empty vehicle including spare wheel/tyre mobility system and tools
 - Driver's weight (75 kg)
 - Fuel tank filled up to 90 %
 - 100 % full gas cylinders (11 kg gas + 5 kg cylinder weight = 16 kg)
 - 100 % full water tank (e.g. 25 liter = 25 kg)
 - 100 % full water system
 - 100 % full boiler (e.g. 11 liter = 11 kg)
 - CEE connecting cable (4 kg)

22.2.1.3 Additional load

The additional load consists of:

Additional equipment

All objects offered in addition to the standard equipment.

An extract of the weight of additional equipment can be found in Chapter 22.2.2, e.g.:

- Adria special equipment
- Special equipment from the manufacturer of the basic vehicle
- Special accessories from the dealer

Personal equipment

- Pets on board
- Shoes and clothes
- Toiletry and sanitary articles
- Kitchen accessories and foodstuff
- Leisure time and sports articles, toys
- Audio, TV and video equipment and accessories
- etc.

22.2.2 Weight of additional equipment and accessories

The following list includes additional equipment packages and accessories. The values are valid when not already included in the standard equipment of the vehicle. All weight information is "approximate information".

	Additional equipment / accessories	Weight (approx.)	✓
Basic vehicle	Fiat 130 Multijet/150 Multijet instead of 115 Multijet	25 kg	
	Fiat 180 Multijet instead of 115 Multijet	75 kg	
	Fiat Maxi Chassis	40 kg	
Packages	COMFORT	25 kg	
	COMFORT PLUS	29 kg	
	SOUND	20 kg	
	SOUND + VIDEO	40 kg	
	SOUND + VIDEO PLUS	55 kg	
	kit DE LUXE	15 kg	
Equipment	Waste water tank heated	1 kg	
	Passenger airbag	3 kg	
	Alarm system	2 kg	
	Trailer system with electric connection	28 kg	
	Instrument panel refinement	1 kg	
	ASR / ESP	4 kg	
	Automated transmission (Fiat/Renault)	approx. 17 kg	
	Rear view mirrors, electrically adjustable and heatable	2 kg	
	CD radio	1-5 kg	
	Roof railing	4 kg	
	Auxiliary diesel heating	4 kg	
	Bike holder	10-20 kg	
	Fire extinguisher	2 kg	
	Folding blind on driver's cab side windows	1 kg	
	Combi 4E heater (instead of Combi 4)	2 kg	
	Air-conditioning system, driver's cab	18-20 kg	
Light-metal rims (20")	10 kg		
Reinforced generator	1 kg		

	Additional equipment / accessories	Weight (approx.)	✓
	Awning	20-30 kg	
	Metallic paint finish	2 kg	
	Metallic paint finish, front bumpers	2 kg	
	MP3-CD-Radio with MFL and Bluetooth	5 kg	
	Navigation system	2-5 kg	
	Fog lamp	4 kg	
	Upholstery, partly leather	5 kg	
	Radio pre-installation, driver's cab	2 kg	
	Reversing camera	2 kg	
	Seat base cover, driver's cab	1 kg	
	Stop & Start automatic	1 kg	
	Daytime lights	2 kg	
	Cruise control	1 kg	
	Carpet, driver's cab + dinette	4 kg	
	TFT TV-holder	3-5 kg	
	TV + SAT equipment	15-40 kg	
	120 liter diesel tank (instead of 50 liter)	25 kg	
	Total weight of built-in additional equipment		

Tab. 26 Weight of additional equipment and accessories

23 Checklists



Important!

These lists also include special equipment, special accessories and personal equipment not included in the standard vehicle equipment.

23.1 Checklist, general

Van checklist	✓
Van general inspection and gas inspection carried out (Chapter 2.4.1)	
Gas inspection carried out (Chapter 2.4.2)	
Maintenance and inspection work carried out (Chapter 20)	
Use-by date for gas regulator and gas hose checked	
Batteries charged	
Oil level, coolant level and windscreen wiper water level checked	
Wheel bolts, wheel nuts tightened correctly	
Tyre pressure checked (Chapter 22.1), tread depth checked	
Spare wheel tyre pressure or use-by date of tyre mobility system checked	
Lighting checked	
Nationality plate attached (when required in destination country)	
Emergency equipment available (warning triangle and first-aid kit, possibly flashing hazard warning light and warning vests), use-by date for first aid kit checked	
Fire extinguisher present and tested	
Tools: Gloves, reserve fuel canister (if allowed in the country being visited), jumper cable, tow rope/bar, vehicle jack, wheel chocks, wheel nut spanner, screwdriver, open-ended spanner, hammer, pliers, circuit tester, terminal clamps, fabric tape, folding spade, engine oil, tension belts	
Spare parts available: Fuses, spare lights, hose clamps, hose, spare immersion pump, wire	
Snow chains, traction aid available	
Bubble level, drive-on chocks available	
CEE cable reel, extension cable, adapter cable available	
Earth contact-multiple socket available	
Water tank cleaned, disinfected and drain valve closed	
Water tank filled	
Water hose, canister, watering can available	
Water disinfectant available	
Waste water tank emptied and drain valve closed	

Van checklist	✓
Cassette emptied and with fresh disinfectant	
Additive for cassette available	
Gas cylinders, filled	
Gas cylinders secured safely in gas cylinder compartment (Chapter 11.2), screw caps and protective covers available for all cylinders	
Quick-action stop valves for cooker, oven etc. closed (Chapter 11.7)	
Gas adapter (filler set, cylinder set), SecuMotion/MonoControl CS high-pressure hoses available	
Cranks and support plates for corner steadies available	
Sunblind crank available	
Extra cushion for bed conversion available	
All ladders safely stowed	
Antenna retracted and secured	
All liquids stored in leak-proof containers	
All objects in open storage areas stowed securely	
Refrigerator, freezer compartment and oven doors latched securely	
Sink board safely stowed	
Cabinets and drawers latched securely	
Bathroom door latched securely	
All beds and bed extensions latched securely	
All tables safely stowed	
All windows and roof hoods closed securely	
Awning light switched off	
Awning retracted and latched securely	
230 V connecting cable removed from external socket	
Corner steadies retracted	
Drive-on chocks, wheel chocks removed	
Snow and ice cleared from roof	
Roof loads attached securely, roof boxes locked securely	
Rear carrier loaded securely, warning sign attached securely	
Additional loads stored securely and prevented from shifting	
Vehicle loaded properly (Chapter 5.1)	
Permissible gross weight and gross axle weight rating of the vehicle not exceeded (see registration documents)	

Van checklist	✓
Entrance step retracted	
All outer doors and outer flaps securely latched and locked	
Child car seats attached securely	
Headlamp height adjustment adapted	
Rearview mirrors correctly adjusted	
Cab seats set to the right position and locked into position	
Rear passenger seats set to the right position and locked into position	
Driver's cab blinds fully open and locked	

Tab. 28 General van checklist

23.2 Driver and passengers checklist

Driver and passengers checklist	✓
Identity cards, passport, visa (check validity!)	
Health insurance card, EU health insurance card, health insurance documents for abroad	
Travel health insurance documents	
Vaccination cards (vaccinations up to date?), allergy passes, emergency passes	
Required travel documents for all animals	
Driving licence, international driving licence	
Vehicle documents, green insurance card	
General inspection certificate, emissions test certificate, official gas inspection certificate	
Parking disc	
Instruction manual	
Directory of authorised workshops for basic vehicle	
Spare vehicle key	
Spare glasses	
Window cloth	
Automobile club card, breakdown insurance package for coverage abroad	
Accident set with European accident report	
Apartment or house key	
Cash, foreign currencies	
Travel cheques	
EC card, credit card	
Toll stickers, toll tickets, ferry tickets, petrol coupons	
Road atlas, road maps	
Navigation equipment, navigation CD or DVD	
Travel guides, camping and parking guide	
Camping site booking confirmation	
Phrase books, dictionaries	
Travel provisions	
Address book	
Mobile phone with charger (12 V/230 V)	

Tab. 29 Driver and passengers checklist

23.3 Living and sleeping area checklist

Equipment	✓	Equipment	✓
Copies of: Identity cards, passports, visa		Copies of: Vaccination cards, allergy passes, emergency passes	
Copies of: Driving licence, international driving licence		Copies of: Vehicle documents, green insurance card	
Telephone number of local bank (if the EC card gets stolen)		Telephone number of credit card company (if the credit card gets stolen)	
Clothes, shoes		Pyjamas	
Rainwear, winter clothes (hat, scarf, gloves, boots...)		Swimwear, bathrobe and slippers, diving goggles, flippers	
Sports clothes, jogging gear		Ski clothes	
Umbrella		Shoe polish	
Pillows, blankets		(Fitted) sheets, bed linens	
Coat hangers		Clothes brush, lint roller	
Camping table, camping chairs		Tent, awning	
Table cloths, place mats, napkins, bibs		Insect repellent candles / insect repellent lights, fly swatter	
Iron, sewing kit, scissors		Pocket knife, multitool	
Pocket light, candles		Rope, cord	
Barbecue, charcoal, charcoal lighters		Batteries	
Pencils and paper		Alarm clock	
Books, CDs, DVDs		Radio	
Sunglasses, sunhat, suncap		Audio equipment, photo equipment, video equipment	
Rucksack		Games, painting accessories, cuddly toys	
Binoculars		Dog collar, dog lead	
Bicycles, tricycles, scooters		Bicycle locks with keys, repair kit	
Air mattress, pump/compressor		Leisure equipment	
Impregnating agent			

Tab. 30 Living area checklist

23.4 Kitchen checklist

Equipment	✓	Equipment	✓
Food		Bottle stopper	
Baby food		Glasses, mugs, cups	
Carving knife, kitchen knife, bread knife		Plates (large/small), soup plates, soup bowls	
Chopping board		Bowls (large/small)	
Gas lighters, matches		Bread basket	
Scissors, can opener		Cutlery, ladles, salad servers	
Pots, pans		Airtight storage boxes	
Pot coasters		Aluminium foil, cling film, freezer bags	
Pot holders		Coolbag	
Measuring cup		Kitchen towels	
Baking paper		Basin/box for dirty crockery	
Cooking spoons, spatula, egg whisk		Coffee machine, filter paper, kettle	
Spices		Dishwashing brush, sponge, cloth	
Pasta strainer, salad strainer		Tea towels	
Dishwashing detergent		Cleaner	
Tea pot, coffee pot, thermos flask		Tin opener, bottle opener, corkscrew	
Bottle warmer		Broom, dustpan and brush, vacuum cleaner	
Egg boiler, egg cups		Dust bin, rubbish bag	
Toaster		Grill utensils	
Floor cloth, bucket		Dog bowl	

Tab. 31 Kitchen equipment checklist

23.5 Bathroom / sanitary equipment checklist

Equipment	✓	Equipment	✓
Toilet bag		Glasses, glasses cleaners	
Toothbrush, toothpaste, beakers		Contact lenses, cleaner, clear water	
Shaver, razor blades / shaving brush / shaving foam		Body lotion, face creme, hand creme	
Soap		Toilet brush	
Shower gel, shampoo		Wet wipes	
Flannels		Nappies, changing mat	
Towels, bathing towels, shower towels		Tampons, sanitary towels	
Toilet paper (rapid dissolving)		Contraceptives	
Comb, brush, hair bands, hair slides		Detergent, clotheslines, clothes pegs	
Hair dryer, curling tongs		Tissues	
Mousse, hair spray		Disinfectant	
Deodorant, fragrance		Sun protection products, aftersun cream	
Cosmetic products, lip balm		Insect repellent lotion, insect repellent spray	
Cotton swabs, cotton pads		First-aid kit and medicines with instruction leaflets	
Nail scissors, nail file		Laundry bag	
Tweezers		Earplugs	

Tab. 32 Bathroom / sanitary equipment checklist



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