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MANUTENZIONE

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1 INTRODUCTION

1.1 PURPOSE OF THE MANUAL

This manual contains instructions for the use and maintenance of TRIGANO vehicles.

1.2 MANUFACTURER IDENTIFICATION

The manufacturer of each of the vehicle models and variants referred to in this manual is:

TRIGANO SPA

Loc. Cusona

53037 San Gimignano (SI) - IT

Tel. +39 0577 6501

info@trigano.it

1.3 HOW TO READ THE MANUAL

The manual is divided into chapters and paragraphs. Each paragraph is a sub-level of the relevant chapter. References to titles or paragraphs are marked with the abbreviation 'Chap.' or 'Par.', followed by the relative number. Example: "Chap. 2" or "Par. 2.1".

The figures in this manual are numbered in a progressive manner, based on the relevant chapter - for example, Figure 1.3 is the third figure in the first chapter. The references to the figures are marked with the abbreviation 'Fig.' followed by the relative number. Example: 'Fig. 1.3'. The components indicated in the figures are marked with letters or numbers,

as appropriate. For example, a reference to component C in Figure 2 of Chapter 3 is indicated as follows: "see C - Fig. 3.2" or simply "(C - Fig. 3.2)".

In addition to the instructions for use and maintenance, this manual contains safety-related indications, to which special attention must be paid. This information is marked with the following symbols:

DANGER

Failure to comply with the indication entails a situation of imminent risk which, if not avoided, will cause instant death or serious or permanent damage or injury.

WARNING

Failure to comply with the indication entails a situation of potential risk which, if not avoided, could cause death or serious harm to health.

CAUTION

Failure to comply with the indication entails a situation of potential risk which, if not avoided, could cause minor damage to the vehicle.

ATTENTION

An indication that refers to a behaviour that must be adopted when taking actions that do not entail risks of physical injury.

 **ENVIRONMENT**

Indication relating to environmental protection.

NOTE

Provides information in addition to the indications contained within the previous safety messages.

1.4 VEHICLE IDENTIFICATION

The vehicle is identified by two alphanumeric codes, for the chassis and the body respectively, positioned as follows:

- **Chassis identification code**

For the position of the chassis code, please refer to the chassis manufacturer's Owner Handbook, as supplied with the vehicle.

NOTE

The chassis code is also indicated on the vehicle registration certificate.

- **Body identification code**

The body identification code can be found on the identification plate, fastened to the inside of the cabin of the vehicle. The following data are shown on the vehicle identification plate:

- A. Type-approval code
- B. Model identification code
- C. Progressive vehicle manufacturing code
- D. Maximum weight permitted with vehicle at full load
- E. Maximum weight permitted with vehicle at full load with trailer
- F. Maximum weight permitted on front axle
- G. Maximum weight permitted on rear axle
- H. Vehicle manufacturer
- I. Chassis identification code

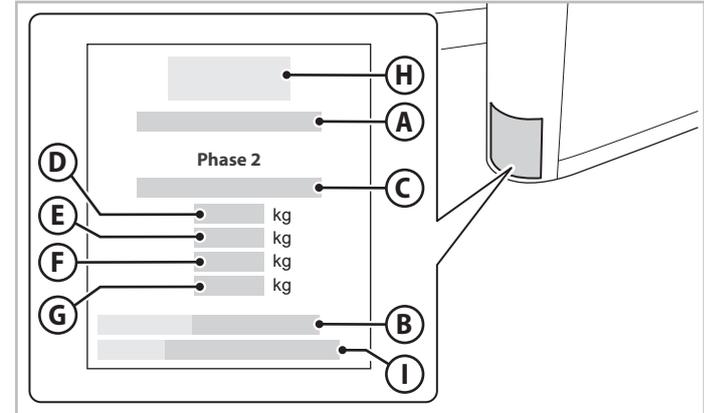


Fig. 1.1 - Body identification plate

1.5 EQUIPMENT

Each vehicle comes with the following equipment:

- Two complete sets of keys (ignition and compartment opening).
- On board documentation including, in addition to this manual:
 - Owner Handbook and chassis manufacturer's Warranty Booklet
 - SEA/TRIGANO warranty booklet
 - Manual with the original instructions for the control panel
 - Instruction Manuals and Warranties of any installed devices.

1.6 GENERAL INSTRUCTIONS

WARNING

Failure to respect the safety instructions contained in this handbook and in all the documentation provided with the vehicle may cause injury or damage to persons or items inside the vehicle or to the vehicle itself.

- Only use the vehicle under perfect technical conditions and follow the instructions in this booklet very closely.
- Ensure that any repairs to faults on components or equipment that could adversely affect the safety of the user and the vehicle are carried out immediately by authorized personnel of the respective manufacturers.
- Ensure that the vehicle is periodically checked according to the service schedule exclusively at a workshop authorized by the manufacturer, as indicated in the warranty booklet.

- Ensure that any changes made to the body are carried out exclusively by a manufacturer-approved dealer or authorized workshop, which will be directly responsible for the work carried out.
- Respect the inspection deadlines displayed in the vehicle and infiltration Warranty Booklets.

CAUTION

Air or hydraulic suspension should not be installed if there is a tow hook and vice versa. If both components are present it may damage the structure of the vehicle.

NOTE

Damage resulting from the installation of accessories not provided for by the manufacturer is not covered by the warranty.

**ENVIRONMENT**

- **Never dispose of grey water or domestic waste in the open air or in road drains. The grey water tank and the cassette toilet must only be emptied at the designated disposal areas found at campsites or other designated disposal points. Comply with the regulations of the locations where you are staying and find out about available disposal points.**
- **Do not dispose of domestic waste in litter bins in parking areas. Separate rubbish into glass, cans, plastic containers and organic waste, including when travelling. Find out where the disposal points are in the locations where you are staying.**
- **Use minimal quantities of environmentally-friendly, biodegradable chemical substances for the toilet. If chemical substances not suitable for the toilet are used, emptying must be carried out more frequently.**
- **When parked, do not leave the engine running. The engine gives off more toxic substances whilst idling.**

ATTENTION

Printing, translating or copy this Owner Handbook either in whole or in part is forbidden without the prior written authorization of the manufacturer.

1.7 WARRANTY

Failure to follow the instructions in this booklet and in the Owner Handbook could cause damage to the vehicle which will invalidate the terms and conditions of the Manufacturer's warranty.

In addition, the incorrect use, tampering or modification of the vehicle's original equipment shall effectively forfeit the right to warranty.

Work carried out to repair damage caused by frost are not covered under warranty.

The manufacturer of the vehicle and the manufacturer of the chassis are constantly seeking to perfect their models and therefore reserve the right to make technical and cosmetic changes to the equipment supplied at any time. This Owner Handbook lists the equipment fitted in the vehicles at the time of going to press; as such, the contents of this booklet shall not constitute any right to compensation from the manufacturer.

NOTE

- **For appliances installed on the vehicle, the warranty provided by the respective manufacturers shall apply.**
- **For more information on the warranty that covers the vehicle and its components, please refer to chapter 8 of this manual, as well as to the warranty booklet for the chassis and the equipment installed on the vehicle.**

2 SAFETY

Read all the safety regulations set out in this chapter carefully.

2.1 GENERAL

For safe use of the vehicle, the following safety regulations must be strictly adhered to:

- Never use portable cookers or stoves inside the vehicle, as they present a fire and poisoning risk.
- Permanent openings are required to ensure the constant exchange of air inside the vehicle: the double cover of the extractor vent in the roof and the ventilation grilles located in the lower part of the vehicle.



DANGER

The increase in the percentage of carbon dioxide increases the risk of suffocation. For this reason, it is strictly forbidden to close or block permanent ventilation openings in any way.

- Ensure that you are familiar with the location and operation of the vehicle exits (doors and windows).
- Leave evacuation routes free.



WARNING

For all information related to fire safety, please refer to paragraph "2.3 Fire prevention".

- For information regarding correct use of each vehicle component

(engine, braking system, etc.) and any equipment installed on board, always refer to the relevant technical documentation provided by the respective manufacturers.

- The weight and behaviour of the vehicle while travelling can be affected (at times significantly) by the installation of accessories not included in the initial configuration of the vehicle. Check the compatibility of the installed accessories to ensure the stability of the vehicle.
- Use the raised beds for sleeping only. Install the fall protection net when these beds are being used by children, particularly those younger than 6 years of age.
- When the tow hook is mounted, the maximum permissible speed is reduced.

ATTENTION

If using the tow hook, please refer to the Highway Code of the country in which the vehicle is being driven.

- Ensure that the dimensions of the rims and tyres that are type-approved for the vehicle are adhered to, as shown on the vehicle registration certificate.
- When stopping, even on flat ground, always apply the handbrake and engage first gear.



WARNING

Loss of stability. When stopping on uneven ground or when replacing one of the wheels, secure the vehicle with appropriate stop wedges, which must be inserted under the wheels.

- Modifications and repairs to the electrical or gas appliances or systems must only be carried out by personnel authorized by the manufacturer. Any unauthorized modification shall lead to the forfeit of the warranty.

2.2 TRAVELING

Before using the vehicle:

- Check that the steering, brakes, and lighting and signalling devices are working properly. In addition, check the correct locking of the cab seat swivel plates, where present.

When driving, for safe use of the vehicle, follow the instructions below:

- Take note of the number of seats indicated on the vehicle registration certificate. The vehicle is not approved for the carrying more people than the number provided.
- Ensure that passengers remain seated with their seat belts fastened while travelling.

NOTE

In any case, the rules regarding the use of seat belts in the country you are travelling in apply.

- When using child seats, only those with three-point attachment seat belts should be used.

WARNING

Rear-facing seats are not suitable for child restraint systems.

- When passing through subways, tunnels, porticoes, covered car parks, etc., please observe the vehicle's maximum ground clearance.

NOTE

The vehicle's maximum ground clearance is indicated on the registration certificate.

WARNING

- **Loss of stability. Moderate your speed in case of strong winds or when exiting tunnels, on viaducts and when overtaking lorries and buses.**
 - **The driver is responsible for respecting the maximum loads, as provided for on the vehicle registration certificate and in the Highway Code.**
- When loading the vehicle, to avoid loss of stability or dangerous situations while travelling:
 - Check the mass of all the objects that are loaded onboard.
 - Distribute the load evenly.
 - The vehicle load must not exceed the maximum load values indicated on the vehicle registration certificate.
 - During the winter season, before using the vehicle, clear any snow or ice from the roof.

NOTE

The weight stated on the vehicle registration certificate is subject to a variation of 5%.

- After a long period of storage, it is necessary to have the braking system, gas distribution system and electrical system checked by a manufacturer-authorized workshop.

2.3 FIRE PREVENTION

While portable and fixed fire prevention devices that are maintained in correct working order are usually sufficient if properly indicated and correctly, promptly and rapidly used to extinguish fires, the best method of averting the danger of fires on board the vehicle is prevention.

As such, the driver must therefore inform passengers of the rules to be followed for this purpose:

- Do not obstruct the vehicle exits and ensure all evacuation routes are left free.
- Never leave children or animals alone inside the vehicle.
- Never use portable cookers or stoves inside the vehicle.
- Keep flammable materials away from heat sources (e.g. ceiling lights) and open flames (e.g. stoves and cookers).
- Do not carry easily flammable fuels (e.g. petrol, kerosene, diesel) inside the vehicle.
- Ensure that the tanks of any other means of transport loaded onto the vehicle are empty.
- Keep the keys to the gas bottle compartment in an easily accessible place.

In any case, the manufacturer recommends equipping the vehicle with the following devices:

- Powder fire extinguisher approved in accordance with ISO 7165 (not supplied by the manufacturer), with a minimum capacity of 1 kg, to be kept near the main door of the vehicle.

**WARNING**

The fire extinguisher must be checked periodically by authorized, qualified personnel. Always respect the inspection deadlines.

- Fire blanket (not provided by the manufacturer), to be kept close to the kitchen.

**WARNING**

Danger of fire. Consult the fire extinguisher instructions and vehicle fire precautions, and practice putting out fires using firefighting equipment.

In the event of a fire on board the vehicle, it is important to remain calm and follow the procedure below:

1. Evacuate the passengers, moving them away from the vehicle.
2. Close the main valve of the gas cylinders and remove them if possible.
3. Raise the alarm and call the Fire Brigade.
4. Disconnect the external socket from the 220 V mains power supply and disconnect the auxiliary battery using the battery disconnect switch.

5. Try to ensure that any other vehicles parked nearby move away.

WARNING

- **Only attempt to extinguish the fire with the fire extinguisher in the case of small fires, and provided this does not entail any risk. Ensure that you always have an escape route.**
- **Never underestimate the danger of smoke, even in modest quantities: smoke restricts visibility, causes suffocation and can contain highly toxic substances.**

2.4 GAS SYSTEM

WARNING

Danger of explosion:

- **If not equipped with a safety valve, the gas system must be completely closed while the vehicle is travelling.**
- **When refuelling, all gas appliances (cookers, Combi heaters, Alde boilers and the gas supply to the refrigerator) must be turned off.**

NOTE

All gas appliances have a safety tap. The gas distribution taps are usually located in the kitchen units.

To avoid dangerous situations relating to the operation of the gas system, follow the instructions below:

- At least once a year, ensure that the pipes and fittings are checked for perfect tightness by a dealer or workshop that has been authorized by the manufacturer.
- Regularly check that the gas cylinder connection hose is not damaged in any way. In any case, the hose must be replaced by the expiry date indicated on the hose itself. The hose must be replaced with a model that complies with the current safety regulations on gas devices.
- If a system defect occurs (e.g. smell of gas, abnormal consumption), immediately close the main valve of the gas cylinder and ventilate the space well by opening doors, windows and skylights. Do not light matches or lighters and do not smoke. Do not operate any electrical switches (e.g. service appliances, lights, starter motor). Ensure the fault is checked and repaired exclusively by personnel authorized by the manufacturer.
- Check that there is sufficient ventilation inside the vehicle by opening a window or skylight before turning on the gas burners.
- Do not use the gas burners to heat the space.
- Close the main valve on the gas cylinder when the vehicle or gas appliances are not in use.
- When not using an individual gas appliance, close the corresponding tap.
- Check the function of the safety devices designed to protect against gas leaks on a regular basis. The safety device must close automatically within a minute of the flame of the corresponding gas appliance being turned off. A click will be heard to indicate closure.

ATTENTION

Only use propane gas cylinders during the winter to ensure correct operation of the Combi heater, the Alde boiler and the other gas appliances.

NOTE

Propane gas remains in a gaseous state even at temperatures of -32°C , whereas butane gas only remains in gaseous state to 0°C . Below these temperatures, the gases will no longer be pressurized.

 **WARNING**

Danger of explosion:

- Check that the gas bottles are firmly secured to the brackets in the dedicated compartment, in an upright position and so that they cannot move.
- Do not store or transport gas bottles in other compartments of the vehicle.

NOTE

For safety reasons, the cylinder holder compartment is insulated from the cabin and is only accessible from the outside. The compartment communicates with the outside by means of vents which are designed to disperse any accumulated humidity.

 **WARNING**

Danger of explosion. Ensure that the ventilation system of the gas cylinder compartment is not obstructed, as this could prevent the dispersion of any leaked gas into the external environment.

- Do not use the gas compartment as a storage locker or luggage rack.
- The main valve for the gas bottles must be easily accessible at all times.
- Always close the gas bottle compartment in order to prevent access by external parties.
- Before travelling and at least once a week, check that the carbon monoxide detector and the smoke detector (see par. 6.7.5), if supplied, are working correctly.

2.5 ELECTRICAL SYSTEM

- Before carrying out work on the electrical system:
 - turn off all appliances and lights;
 - disconnect any external 220V mains connection;
 - disconnect the auxiliary battery using the battery disconnect switch provided.

 **CAUTION**

Danger of short circuit. If the battery is removed or disconnected, detach the negative pole first and then the positive pole. When the battery is reconnected, reverse the order, connecting the positive pole first and then the negative pole.

! WARNING

- Only use leak-proof (maintenance-free) batteries as auxiliary batteries. If using a non-AGM lead-acid battery, the hose provided must be connected in order to channel the vapours generated during charging to the exterior.
- If a lithium battery is used as an auxiliary battery, carefully follow the instructions regarding lithium batteries, as set out in par. 6.8.4.

! CAUTION

Check that the battery charger is set correctly for the type of battery being used.

- When replacing a broken fuse, switch off the appliance concerned and use a new fuse of the same type as the original one with the correct rating (same colour as the faulty fuse) for the replacement.

! WARNING

Danger of fire. Never replace a failed fuse with metal wires, other salvaged material, or fuses with a rating higher than that stipulated.

2.6 WATER SYSTEM**! WARNING**

Danger of biological contamination:

- Even if drinking water is used, the water present in the white water tank and in the pipes can quickly grow bacteria that is harmful to the body, rendering it undrinkable. Before using the vehicle, flush out the tank and the pipes thoroughly with plenty of drinking water or a specific product. Open all the taps to carry out this operation.
 - Never use the water contained in the white water tank as drinking water.
- To prevent the vehicle's water system from freezing during the winter period or in low temperature conditions, fully drain the system by opening and leaving open all the mixers, the drain tap on the white water tank, the valve on the Combi tank and the shutter on the grey water tank.

3 BEFORE STARTING YOUR JOURNEY

WARNING

Before each trip, the following checks must be carried out in order to ensure the safety of the occupants and the efficiency of the vehicle. For checks relating to the chassis, follow the manufacturer instructions in the relevant Use and Maintenance Manual.

3.1 ENGINE CHECKS

Carry out all the fluid level checks as required by the chassis manufacturer and listed in the relevant Use and Maintenance Manual.

3.2 TYRE CHECK

When cold, check the pressures, the wear and the general condition of the tyres, following the instructions of the chassis manufacturer as listed in the relevant Use and Maintenance Manual.

WARNING

Loss of stability. Before each journey and in any case at regular intervals, check that the tyre pressures correspond with the values provided in the chassis manufacturer Use and Maintenance Manual. In particular, if the vehicle is fully loaded, this check must be carried out ensuring that the pressures correspond with the “fully loaded” reference values.

3.3 BRAKES CHECK

Check the brake fluid level, following the instructions provided in the chassis manufacturer’s Use and Maintenance Manual. As soon as you begin travelling, check that the brakes are working efficiently and in a uniform manner.

WARNING

Check the brakes in an area where there is no risk to other road users, and without passengers on board.

3.4 LIGHTS CHECK

Check that all lights are working correctly:

- Dipped beam and high beam
- Front and rear direction indicators
- Front and rear side lights and overcab side marker LED lights
- Brake lights
- Reversing lights

3.5 BATTERY CHECK

Check that the engine and auxiliary batteries are charged. If the control panel indicates insufficient voltage, charge the batteries fully before setting off.

3.6 DEVICE CHECK

After a period of brief storage, check that the main utilities are functioning correctly, such as: refrigerator, heating, electrical and water systems.

3.7 EXTERIOR CHECKS

Before setting off, carry out all the exterior checks listed below every time, even when only travelling short distances.

- Television aerial retracted (if fitted).
- Awning fully retracted (if fitted).
- External 220V power connection cable disconnected.
- External parking feet raised (if fitted).
- External doors closed and locked.
- Roof free from ice and snow.



ENVIRONMENT

Make sure that all items used when stopped (e.g. tables, seats, waste bin etc.) are correctly stored back inside the vehicle.

3.8 INTERIOR CHECKS

Before setting off, carry out all the interior checks listed below every time, even when only travelling short distances.

- Gas bottle valves closed and correctly secured in the gas bottle compartment.
- Close the red gas distribution control unit taps usually located inside the kitchen units.
- Correct operation of the carbon monoxide detector and smoke detector, if present (see par. 6.7.5).
- Extractable door step (if present) must be completely retracted and locked.

- Entrance door closed and locked.
- Interior doors and sliding doors closed and locked.
- Windows closed and locked with locking levers secured.
- Roof skylights closed, including while travelling.
- Moving bed fastened and secured with the straps (if present).
- Cabinet doors and drawers closed.
- Refrigerator door closed and secured.
- Storage compartments without doors emptied.
- Objects must be stowed or secured, particularly the chopping board in the kitchen and any other object which could be dangerous while travelling.
- Dining tables securely attached to the appropriate supports.
- Front and side blackout curtains in the cab rolled back and fixed to the fasteners provided.
- Pivoting seats must be turned in direction of travel and locked on their plates (if present).
- Electric rear view mirrors positioned according to driver requirements.

3.9 THE FIRST JOURNEY

The vehicle comes with two sets of keys (for the ignition, doors, flaps and fillers). Always keep a spare key somewhere safe (not in the vehicle).



WARNING

Loss of stability. On first journey using the vehicle, after the first 100 km of travel, check the tightness of the wheel bolts. Following this, this bolt tightness check must be carried out approximately every 5,000 km.

! WARNING

Loss of stability. To prevent anomalous tyre wear, it is advisable to have the front wheel toe-in of the vehicle measured in running conditions (at the owner's own expense). The manufacturer will not be liable in case of problems or damage deriving from failure to carry out the necessary checks.

3.10 PAYLOAD

Before setting off, check that:

- The payload does not exceed the technically permissible total weight, as indicated on the vehicle registration certificate.
- The load is distributed in accordance with the maximum load permissible on the axles.

The payload is listed in the vehicle's technical data sheet and consists of the difference between the technically permissible total weight of the vehicle and the kerb weight (see par. 3.10.1).

! WARNING

Loss of stability. An excessive load and insufficient tyre inflation pressures can lead the tyres to burst and the driver subsequently losing control of the vehicle.

NOTE

- The kerb weight, and consequently the payload and/or the number of seats available when travelling may vary depending on the accessories installed.
- The driver is responsible for respecting the maximum loads as set out in the type-approval documents, as well as for respecting the Highway Code.
- The weights listed in the vehicle's technical data sheet refer to those set out in European Regulation 2018/858.

3.10.1 KERB WEIGHT

The kerb weight is indicated in the vehicle's technical data sheet and includes:

- the weight of the BASE vehicle when empty,
- the driver,
- 100% of the fuel,
- the white water,
- a gas cylinder for domestic use.

3.11 HOW TO LOAD THE VEHICLE CORRECTLY

- Distribute the load evenly on the left and right sides.
- Secure any heavy objects properly so they cannot slide, stowing them in the compartments under the floor and in the side underbody compartments which cannot open in the direction of travel; alternatively, place them directly on the floor.
- Stow lighter objects in the wall units.

- If the vehicle has a bicycle rack, it should only be used for transporting bicycles.
- Weigh the laden vehicle complete with passengers for a safety check.

3.12 LOADING THE ROOF

WARNING

Danger of falls. The roof is very slippery when wet or icy.

- The maximum permitted load on the roof is 75 kg, and this should be distributed evenly over its entire surface.
- Secure the loads properly without using bungee cords.
- When walking on the roof, stay away from the hatches.

3.13 REAR LOCKER - REAR GARAGE

- When loading the garage or rear locker, respect the expected axial loads and the type-approved weight.

WARNING

Do not exceed the maximum load of 300 kg on the garage locker.

- The locker can withstand a distributed weight of 300 kg, in line with the values on the vehicle registration certificate with regard to axle ratio and load capacity.

WARNING

Loss of stability:

- **Distribute the payload evenly. Excessive, concentrated loads could damage the floor covering.**
- **The load in the rear locker reduces the total payload of the vehicle. Take care not to exceed the maximum load values permitted for the vehicle.**

3.14 TRAILERS

WARNING

Ensure that no other people or children are in the vicinity of the vehicle and trailer when coupling and uncoupling the trailer.

- Only type-approved tow bars may be fitted. The maximum permissible speed when towing a trailer must be reduced: please refer to the Highway Code of the country in which you are driving for details.
- If the vehicle is equipped with a tow hook, it is advisable to remove the tow hook ball when not towing trailers.
- Check the vehicle and tow hook documentation for the permissible rear axle weight and drawbar load. These values must not be exceeded.

3.15 ADJUSTMENTS

WARNING

All adjustments must be made when the vehicle is stationary.

3.15.1 ELECTRIC EXTERIOR REAR VIEW MIRRORS

Adjustments to the electric mirrors can only be carried out with the ignition key in the **MAR** position. To adjust the mirrors, position the knob (**A** - Fig.3.1) in one of the two positions:

1. left mirror
2. right mirror

After positioning the knob, move in the direction of the arrow to adjust the selected mirror.

Once the adjustment of the mirrors is complete, move the knob (**A** - Fig.3.1) into the neutral position (**3** - Fig.3.1).



Fig.3.1 - Adjusting the mirrors

3.15.2 INTEGRATED MOTORHOME SLIDING WINDOW (PASSENGER SIDE)

NOTE

For information on other versions, please see the Owner Handbook provided by the chassis manufacturer.

To open the window:

1. Press down on the hook on the rear handle (**A** - Fig.3.2), detaching it from the locking latch, in order to unlock the window.
2. Pull on the handle (**A** - Fig.3.2), bringing the window forwards to the desired position.

To close the window:

1. Pull the handle (**A** - Fig.3.2), bringing the window back to the closed position, until the handle is fully engaged with the locking latch.

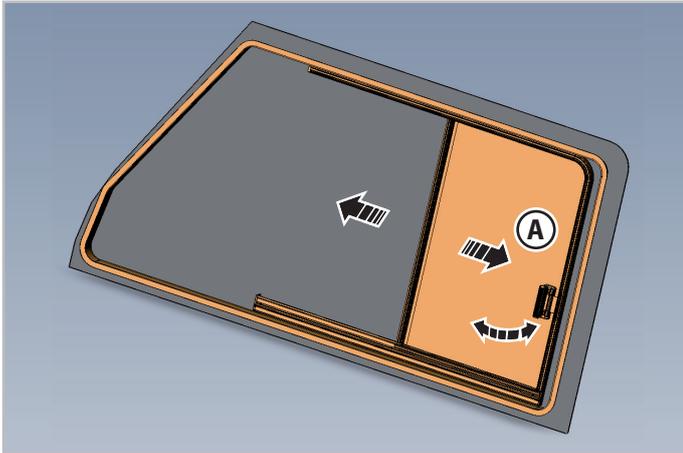


Fig.3.2 - Integrated motorhome sliding window, passenger side

3.15.3 SWIVELLING SEATS (MOTORHOME)

WARNING

Before setting off, always check that both of the seat swivel plates (if present) are facing the direction of travel and are secured.

NOTE

For information on other versions, please see the Owner Handbook provided by the chassis manufacturer.

Seat swivelling

The control (A - Fig.3.3) for swivelling the seat is positioned on the outer side of the seat.

Move the seat as far forwards as it will go before swivelling. Then, lift the control (A - Fig.3.3) for swivelling the seat and release it when the required position is reached.

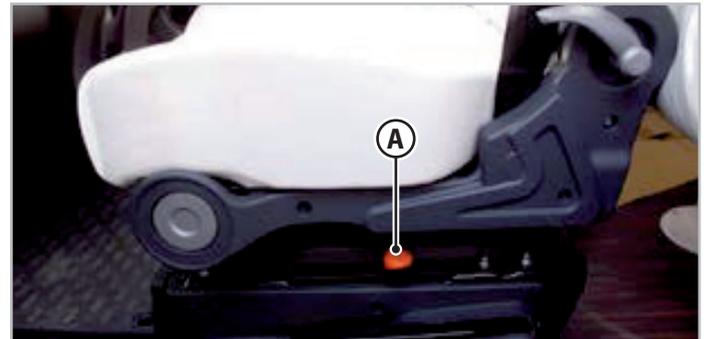


Fig.3.3 - Seat swivelling

3.15.4 FRONT SEATS (MOTORHOME)

NOTE

For information on other versions, please see the Owner Handbook provided by the chassis manufacturer.

The front seats have 4 different adjustment settings:

- seat backrest angle (mechanical adjustment);
- cushion angle (mechanical adjustment);
- armrest position adjustment;
- seat slide adjustment.

Backrest inclination

The control (**A** - Fig.3.4) for adjusting the backrest inclination is positioned on both sides of the seat, in the lower area of the backrest.

To adjust, while seated in the seat, turn the knob (**A** - Fig.3.4) and move the backrest to the desired position, then release the knob.



Fig.3.4 - Backrest adjustment control

Cushion angle

The control (**B** - Fig.3.5) for adjusting the cushion angle is located on the inner side of the seat cushion.

To adjust the position, turn the knob (**B** - Fig.3.5) either clockwise or anticlockwise.

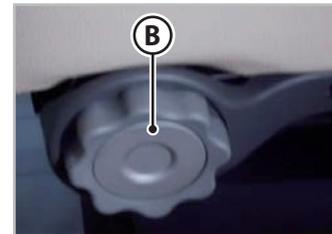


Fig.3.5 - Cushion adjustment control

Armrest position

Turn the knob (**C** - Fig.3.6) until the desired position is reached.

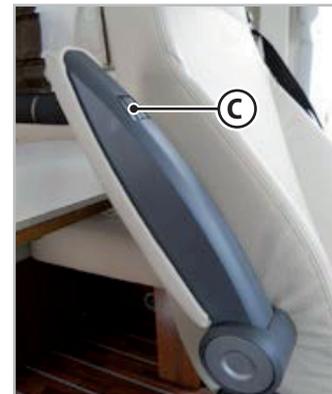


Fig.3.6 - Armrest adjustment knob

Seat slide

The lever (D - Fig.3.7) for adjusting the longitudinal position of the seat is located under the seat cushion.

Lift the lever (D - Fig.3.7) to move the seat and release it when the required position is reached.

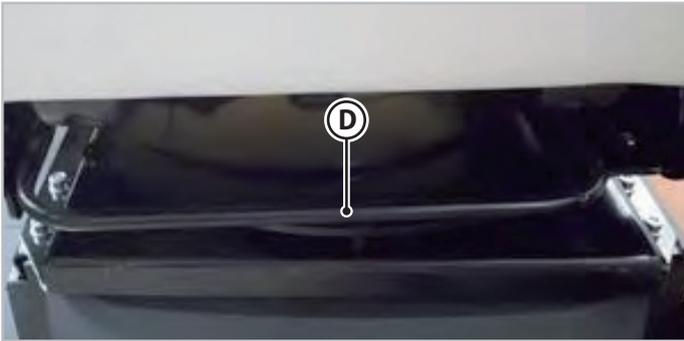


Fig.3.7 - Seat slide lever

3.16 SEAT BELTS

Depending on the model, the vehicle is fitted with three-point automatic seat belts or two-point lap straps. As far as fastening seat belts is concerned, refer to the legal requirements of the individual countries.

Always follow the instructions below for using seat belts.

- Do not damage, twist or tie the seat belts. Replace damaged seat belts.
- Do not make any modifications to the seat belt fastenings, buckles or winders.

- Seat belts must be used for adults only.
- For children, check whether the child seats can be adjusted to fit the vehicle seats. When fitting, follow the instructions from the child seat manufacturer very carefully. Only fit child seats only on seats with three-point seat belts.
- Seats facing backwards are not suitable for installing child restraint systems.
- Do not strap objects in together with people.
- Seat belts are not effective for people under 150 cm tall. When necessary, use the additional safety devices provided for by the Highway Code.

3.16.1 HOW TO USE THE SEAT BELTS CORRECTLY

WARNING

Carefully read the instructions and the warnings in par. "3.16 Seat belts" of the chassis manufacturer's Owner Handbook before using the vehicle's seat belts.

- The seat backrest should not be too far reclined, as this significantly reduces the effectiveness of the seat belts.
- Do not roll the seat belt; this should be flat and extended, resting against your chest or abdomen.
- Sit in the correct position before adjusting the seat belt.
- The seat belt is positioned correctly when it is close to your body: if there is a gap of between 5 and 6 cm between the wearer's body and the belt, it is not correctly adjusted.

- To fasten the seat belt, insert the tab (**A** - Fig.3.8) into the buckle (**B** - Fig.3.8).
- To release the seat belt, press the button (**C** - Fig.3.8).



Fig.3.8 - Seat belt

3.17 ISOFIX ATTACHMENTS (OPTIONAL)

The vehicle has been approved in accordance with the most recent ISOFIX regulation. If the vehicle is equipped with ISOFIX fasteners, the position of these will be indicated by the relevant labels.

When fitting child seats, please take the following into consideration:

- It is possible to fit the vehicle with child seats that use the two ISOFIX at the base of the seat and the three-point seat belt for attachment. There is no anchor positioned in the back of the seat (the top-tether).
- Before purchasing or assembling the child seat with ISOFIX anchoring system, check that the dinette table can be lowered and that it does not interfere with the child seat.

4 WHILE TRAVELLING

4.1 DRIVING THE VEHICLE

- The driver is always responsible for checking that:
 - Passengers remain seated in the type-approval seats and wear seat belts in both forward and backward facing seats.

NOTE

The total number of type-approval seats is indicated on the vehicle registration certificate and each seat is identified with a label.

- Child seats are placed in seats fitted with three-point seat belts only. Seats facing backwards are not suitable for installing child restraint systems.
- The doors and windows remain locked when the vehicle is travelling.
- All the safety measures listed in this manual are observed.
- The extractable door step (where fitted on the vehicle) is fully retracted and locked in position before setting off, even after short stops.
- Do not open the skylights while travelling.
- Always ensure that the cab doors and entrance door are closed while driving.



WARNING

Danger of falls. While travelling:

- **It is expressly prohibited to move about inside the vehicle, or use the equipment, beds or toilets while travelling.**
 - **Never open the cab doors or the main entrance door while driving for any reason, as the air could force them open suddenly.**
- The equipment and facilities present in the vehicle are designed to be used only when the vehicle is stationary. The use of such equipment and facilities while travelling contravenes the Highway Code and presents risks. The manufacturer does not accept responsibility for accidents occurring while travelling.
 - The vehicle chassis is that of a commercial vehicle: accordingly, an appropriate driving style must be adopted. A number of considerations must be kept in mind with regard to the weight and size differences compared with a motorcar. In particular:
 - Drive carefully and avoid sudden braking.
 - Leave longer braking times than when driving a car.
 - When turning a corner, pay attention to the size of the vehicle, and particularly to the rear.
 - Allow enough time when overtaking.
 - Take particular care when parking and reversing.

! WARNING

Loss of stability. The vehicle's large side area makes it particularly sensitive to gusts of wind from the side. Drive at a sensible speed in high winds and take special care when coming out of tunnels, driving over viaducts and when overtaking articulated lorries and coaches.

◦ Be especially careful when driving in underpasses and sections with height restrictions.

! CAUTION

Danger of damage to the vehicle. Drive slowly on uneven road surfaces. To prevent damage to the underbody or to parts fitted on the lower section of the vehicle, remember that the rear protrusion, which is particularly large on the bigger models, may make manoeuvring tricky, with the risk of the vehicle getting stuck. Pay particular attention on slopes and when driving on access ramps to garages, ferries and dips built to slow down traffic, as well as when driving on very uneven terrain and during reversing manoeuvres.

4.2 ELECTRIC EXTERIOR REAR VIEW MIRRORS**ATTENTION**

If the mirror makes it difficult to pass through narrow spaces, fold it from position 1 to position 2 (Fig.4.1). For information regarding the adjustment of the electric exterior rear view mirrors, please see par. 3.15.1.

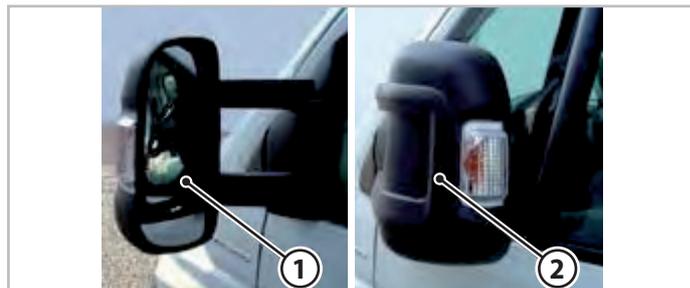


Fig.4.1 - Closing the rear view mirror

4.3 BRAKES**! WARNING**

Any faults or operating problems should be repaired immediately by specialist, authorized personnel as approved by the chassis manufacturer.

5 WHEN PARKED

5.1 GENERAL INSTRUCTIONS

- Find out where the designated parking areas for motorhomes are located, or where it is possible to park for longer periods in populated areas.
- Only use awnings, tables, seats and drying racks where permitted (campsites, specially designated parking areas, etc.).
- Do not stop in front of public buildings or at tourist sites, so as not to inconvenience other people.



ENVIRONMENT

Do not leave waste in parking areas. Respect the public peace, people in neighbouring spaces and the environment in general.



WARNING

Danger of damage to the vehicle and of damage to property and people. Whilst the vehicle is stopped, always apply the handbrake and engage first gear. Engage reverse gear when temporarily parked on a slope.

- Do not block the vents or air inlets in any way. Even during the winter period, good interior ventilation must be ensured.
- Open the skylights or windows slightly when the heating is on.

- At least once a day, open the doors of the internal furniture and move cushions away from the walls to prevent the formation of condensation.
- Always keep the exhaust gas flue and combustion air outlet clean.



CAUTION

Danger of damage to the vehicle. To create shade inside the vehicle when the skylights are closed on sunny days, do not close the shades completely. Instead, leave the fly screens open by a third and the shades by the remaining two thirds. This will prevent the heat from becoming trapped between the skylight and the shades, causing damage to the skylight and frame.

5.2 WHEEL CHOCKS

It is advisable to have special chocks for the vehicle to be used to improve safety when parked on an incline. These chocks can also be used when the vehicle is in brief storage (if it is parked in the open) to keep the front wheels raised and allow rain water and snow to drain off from the roof more quickly.

5.3 CABIN ENTRY DOORS

- Activate the safety lock on the cab doors and the main entrance door to prevent them from opening accidentally while travelling or in the event of an accident.
- Locking the doors provides protection against intrusion from the outside, for example when stopped at the traffic lights. However, in emergencies, it makes access more difficult for rescuers.

- When the doors and the flaps are closed, always make sure that they are properly shut, checking that the locks are in the second position and not the first position.

5.3.1 OPENING/CLOSING THE ENTRANCE DOOR FROM THE OUTSIDE

To open the entrance door from the outside (Fig.5.1):

1. Insert the key in the lock **A** and turn it clockwise until the lock is released.
2. Return the key to the central position **O** and remove it.
3. Open the door by pulling the handle **B**.

To close the entrance door from the outside:

1. Close the entrance door using the handle **B**.
2. Insert the key into the lock **A** and turn it anticlockwise until the lock is closed.
3. Return the key to the central position **O** and remove it.

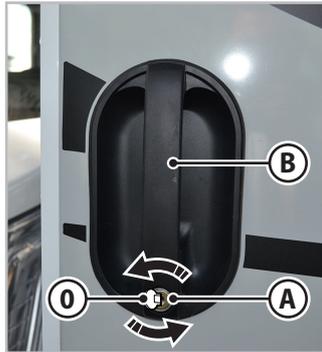


Fig.5.1 - Opening/closing the entrance door from the outside

5.3.2 OPENING/CLOSING THE ENTRANCE DOOR FROM THE INSIDE

To open the door from the inside (Fig.5.2):

1. Pull the lever **A** to release the lock.

NOTE

When you pull lever A, the door opens, even if closed from the outside.

To close the door from the inside:

1. Close the door by grasping handle **B**.
2. Press on the lever **A** to engage the safety lock.



Fig.5.2 - Opening/closing the entrance door from the inside

5.4 GARAGE LOCKER

WARNING

- Use the garage locker in accordance with the vehicle type-approval data relating to the total maximum permitted load for the actual vehicle and the maximum permitted load for the garage locker.
- Check that you have locked the garage locker by securing all the locks (A - Fig.5.3) before starting to travel. Simply closing the flap by applying pressure will not ensure it is secured.

The garage locker is equipped with two locks (A - Fig.5.3).

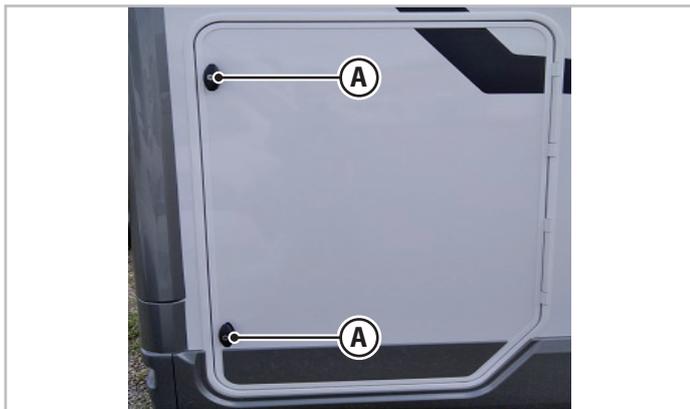


Fig.5.3 - Garage locker locks

To open the garage locker (Fig.5.4):

1. Insert the key into the lock **A** and turn it clockwise by 1/4 of a turn to release the lock; Repeat the operation for all the locks **A** present.
2. Return the key to the vertical position **O** and remove it.
3. Pull both handles **B** at the same time to open the door.

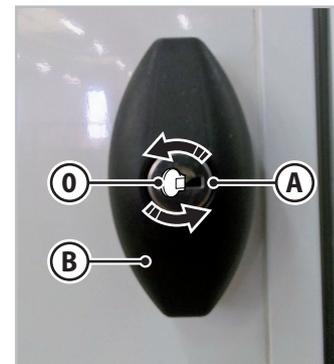


Fig.5.4 - Opening/closing the garage locker

To close the garage locker (Fig.5.4):

1. Before closing the door, check that the lock is not locked.
2. Release the clip (where fitted) and close the door.
3. After closing the door, insert the key into the lock **A** and turn it anti-clockwise by 1/4 of a turn to lock the lock; Repeat the operation for all the locks **A** present.
4. Return the key to the vertical position **O** and remove it.

Some models have a garage locker equipped with a stop piston (**C** - Fig.5.5) which keeps the door secured in the fully open position. To close the door, simply exert a slight force to release the piston. Meanwhile, other models are equipped with a spring (**D** - Fig.5.5) or a plastic clamp (**E** - Fig.5.5).

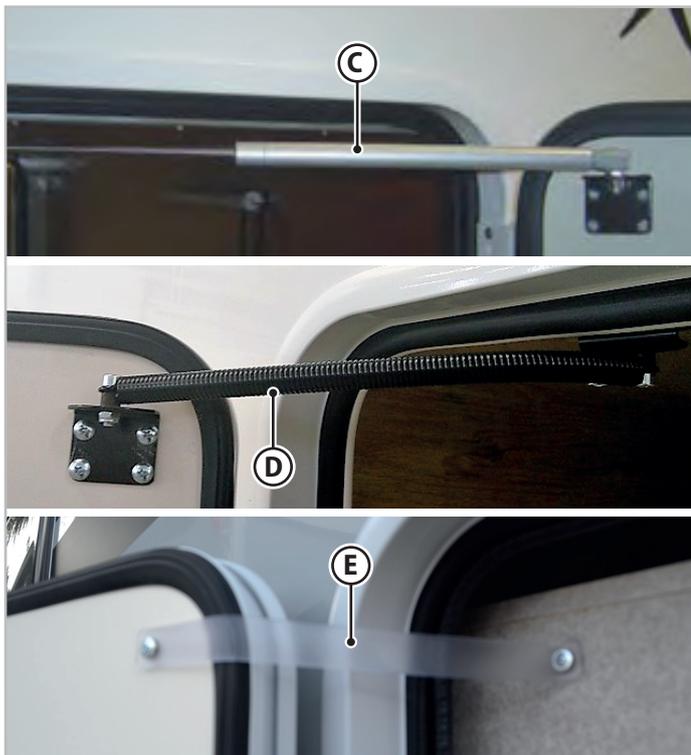


Fig.5.5 - Garage locker types

5.5 REFUELLING

WARNING

Danger of explosion:

- When refuelling, transporting the vehicle by ferry and when the vehicle is in a garage or closed, unventilated space, all gas appliances in the cabin must be switched off.
- The flash point of diesel fuel decreases with the addition of petrol or petroleum. The risk of explosion is therefore greater when handling this mixture of fuels.

The fuel filler flap is located on the outside of the vehicle, usually at the front on the left hand side.

5.5.1 FUEL FLAP (MOTORHOME)

NOTE

For information on other versions, please see the Owner Handbook provided by the chassis manufacturer.

To open the fuel flap (Fig.5.6):

1. Insert the key into the lock **A** and turn it anticlockwise until the lock is released.
2. Return the key to the central position **O** and remove it.
3. Open the fuel flap by pulling on the handle **B**.



Fig.5.6 - Fuel flap

To close the fuel flap (Fig.5.6):

1. Close the fuel flap using the handle **B**.
2. Insert the key into the lock **A** and turn it clockwise until the lock is locked.
3. Return the key to the central position **O** and remove it.

5.5.2 FUEL CAP (MOTORHOME)

NOTE

For information on other versions, please see the Owner Handbook provided by the chassis manufacturer.

To open the fuel cap (Fig.5.7):

1. Insert the key into the lock **A** and turn it anticlockwise until the lock is released.
2. Turn the fuel cap anticlockwise until it opens. Following this, it will be possible to refuel.

To close the fuel cap (Fig.5.7):

1. Turn the fuel cap clockwise until it is fully closed.
2. Insert the key in the lock **A** and turn it clockwise until the lock is closed.
3. Return the key to the central position **O** and remove it.

Fuel additive

To open the AD-BLUE additive cap (**B** - Fig.5.7), turn the cap anticlockwise and remove it. Proceed with the refuelling. Perform the same operation in reverse in order to close it.

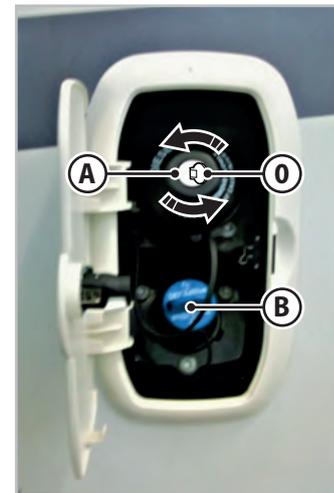


Fig.5.7 - Fuel cap

5.6 INTEGRATED MOTORHOME BONNET

NOTE

For information on other versions, please see the Owner Handbook provided by the chassis manufacturer.

Opening the integrated motorhome bonnet

Only open the integrated motorhome bonnet when the vehicle is stationary.

WARNING

- **Danger of dragging.** Pay attention to scarves, ties and other loose-fitting garments, to ensure that they do not come into contact with moving parts, even by accident; If they accidentally come into contact with moving parts, they may get caught up and dragged with serious risks for those wearing them.
- **Danger of burns.** Before carrying out any type of operation inside the engine compartment, wait for the engine to cool down.

To open the integrated motorhome bonnet, proceed as described below:

1. Pull the lever **A** (Fig.5.7 and Fig.5.8, varies depending on vehicle type) on the left of the steering column in the direction of the arrow.

2. Lift the integrated motorhome bonnet from the front by lifting the lever **B** (Fig.5.9).

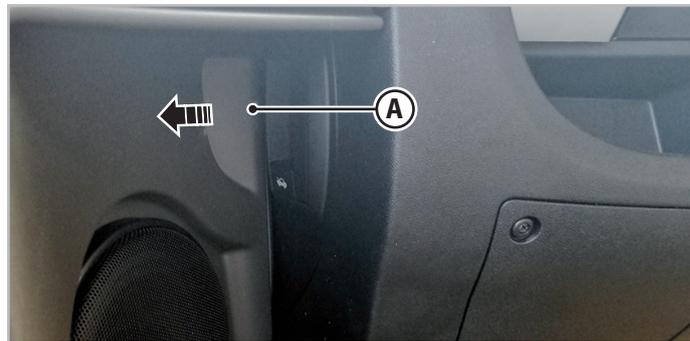


Fig.5.8 - Bonnet opening lever - Type A



Fig.5.9 - Bonnet opening lever - Type B

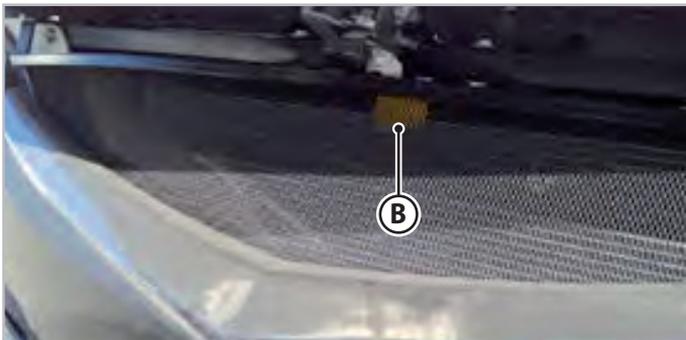


Fig.5.10 - Bonnet raise lever



WARNING

For safety reasons, the bonnet must always be fully closed while travelling. Accordingly, always check that the bonnet is closed and locked properly before setting off. If it is found during travel that the bonnet lock is not fully engaged, stop immediately and close the bonnet in the correct manner.

Closing the integrated motorhome bonnet

To close the integrated motorhome bonnet, proceed as described below:

1. Lower the bonnet to around 20 centimetres from the engine compartment.
2. Drop the bonnet and check (by trying to lift it) that it is fully closed and not just hooked in the safety position.

If the bonnet is not fully closed, do not apply pressure; instead, lift up again and repeat the manoeuvre.

6 LIVING IN THE VEHICLE

6.1 VENTILATION

DANGER

Danger of suffocation. The amount of oxygen present inside the vehicle reduces in proportion to the number of occupants and to the use of the heater and the stove. Oxygen is replaced by carbon dioxide, a toxic and sometimes lethal gas. It is therefore necessary that:

- the air inside the vehicle is continuously refreshed during the course of the day;
- the permanent air vents (A - Fig.6.1) are not obstructed or covered.

- Ventilate the cabin often by opening doors, windows and skylights. During cold periods, regular air circulation in proportion to the amount of heating being used is necessary, to maintain an optimal environment inside the vehicle. In hot weather, especially with extremely high temperatures, it enables the hot air that tends to remain inside the cabin to be dispersed.

- In accordance with the relevant safety regulations, the vehicle is equipped with fixed openings (A - Fig.6.1) which cannot be obstructed, for a constant air intake required to prevent the formation of condensation and to ensure that there is always an exchange of air in the cabin.

- To maintain proper ventilation of the cabin and cab:

- Never cover the forced ventilation fans built into the body.
- Do not cover skylights with forced ventilation or ceiling mushroom vents (e.g. with thermal insulation in winter).
- Do not close/block ventilation outlets with any other type of cover.
- Ensure heating vents are kept open at all times.



Fig.6.1 - Permanent ventilation openings

NOTE

While travelling, the air flows are especially noticeable to the passengers seated in the rear dinette compartment. This is due to the ventilation openings that legally cannot be obstructed and not on account of any manufacturing defects or assembly deficiencies.

6.1.1 CONDENSATION

CAUTION

Prolonged exposure to condensation may damage the vehicle and its components.

NOTE

The damage caused by condensation due to incorrect ventilation of the vehicle is not covered by warranty.

- To counteract the formation of condensation:
 - Ventilate the vehicle regularly using the windows and skylights.
 - Maintain an optimal temperature inside the vehicle, especially during the winter period.
 - Warm up the vehicle regularly while keeping the air recirculation system switched on. During the boiler heating mode phase, open all cabinet doors, hinged hatches and storage drawers.
 - Ventilate the vehicle during use and after use for a few hours, particularly if being stored in a closed environment.
 - Position absorbent materials between the windscreen and the dashboard when parked, especially during winter.
 - Use condensation traps when spending long periods of time in the vehicle.
 - During the winter period, use an external thermal blind on the windscreen and windows or an integrated blind.

- Open a window or skylight after each use of the shower, in order to allow water vapour to escape.
- Regularly air the pads, cushions and mattresses by raising them and placing them in an upright position, to enable any accumulated condensation to dry.
- Remove the protective film after using the pads, cushions and mattresses.

CAUTION

If the pads, cushions or mattresses are covered with protective film, the accumulated condensation could lead to the formation of mould.

NOTE

With low winter temperatures, condensation may form inside the double glazed windows; this is perfectly normal. The condensation will disappear as the outside temperature increases.

6.2 AUTOMATICALLY LOCKING WINDOWS

Opening

1. Press the safety button (**B** - Fig.6.2) on the locking levers (**A** - Fig.6.2).
2. Release all the locking levers (**A** - Fig.6.2), placing them in the vertical position.
3. Open the window by pushing it from the centre until it reaches the desired position (Fig.6.3); the window will automatically remain locked.

Closing

CAUTION

Always support the window when closing; do not just let it fall.

1. Push the middle of the window a few millimetres forwards to release the mechanism and allow free movement.
2. Pull the window from the middle until it closes fully.
3. Attach all the locking levers (**A** - Fig.6.2), placing them in the closed position.
4. Check that the safety button (**B** - Fig.6.2) has been released.

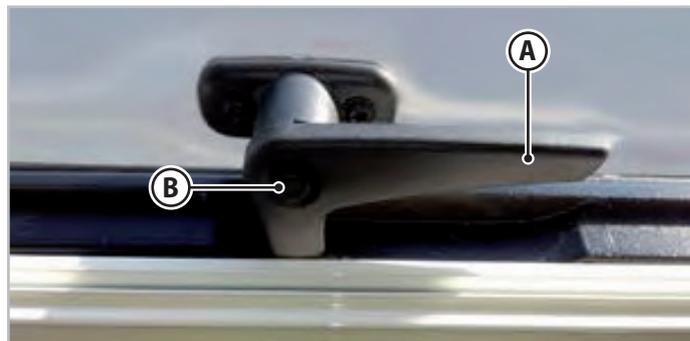


Fig.6.2 - Window locking lever

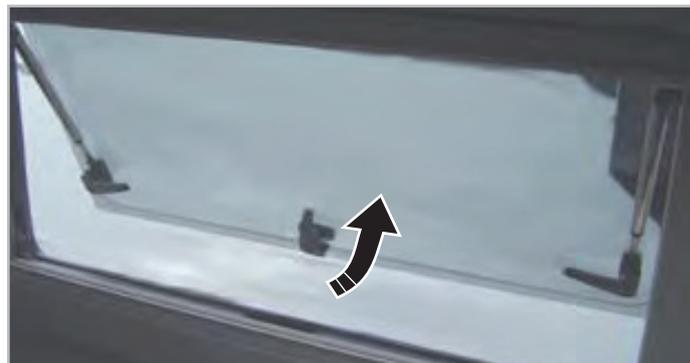


Fig.6.3 - Opening the windows

Fly screens and shades

The windows are fitted with fly screens and shades. The fly screens and shades may be used separately.

CAUTION

Always support the fly screens and the shades until they are fully wound back in, to prevent sudden retraction which could damage the mechanism.

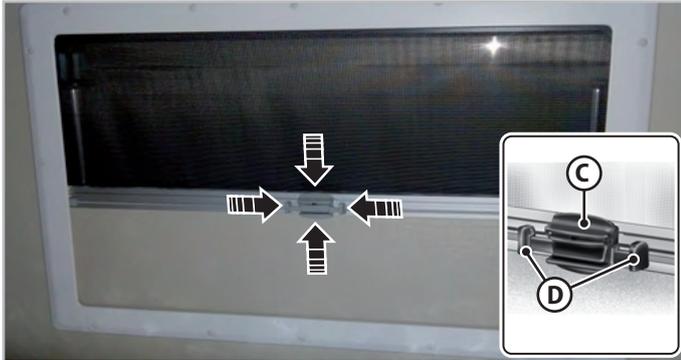


Fig.6.4 - Fly screens and window shades

To open or close the fly screens, grasp the handle (C - Fig.6.4) and lower it until the hooks are inserted into the stops on the shade.

To open or close the shades, press and hold the buttons (D - Fig.6.4)

and raise or lower the shades using the handle (C - Fig.6.4). Once the desired position has been reached, release the buttons and check that the shade is locked in one of the pre-fixed positions.

6.3 SKYLIGHTS

- Before starting to travel, check that the skylights are shut and locked.
- Do not open the skylights while travelling.

CAUTION

- While travelling, the skylights should remain closed with the shades and fly screens (if fitted) open/released. The shades and the fly screens should remain open/released even during brief storage.

6.3.1 SKYLIGHT WITH HANDWHEEL

On some models, this type of skylight comes in two versions, one with a simple ventilation function and the other with a ventilation and extraction system. Both skylights are fitted with fly screens.

Turn the handwheel (A - Fig.6.5) in either direction to raise (open) or lower (close) the skylight. The opening of the skylight can be adjusted to any intermediate position.

To use the ventilation and extraction function, open the skylight with the handwheel (A - Fig.6.5) and select the ventilation function with air in (IN) or out (OUT), using the key (B - Fig.6.5).

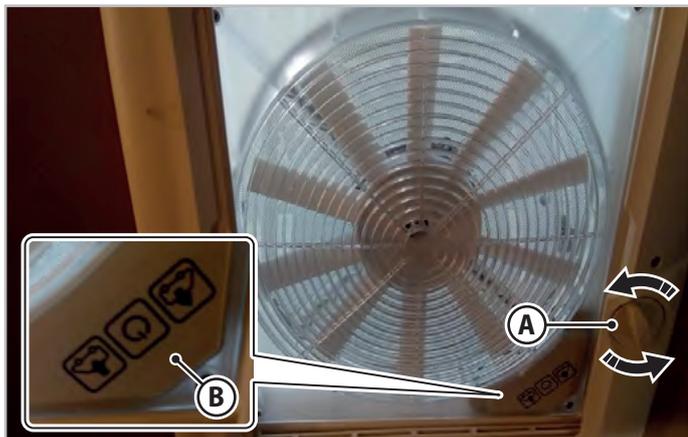


Fig.6.5 - Skylight with handwheel

6.3.2 TILTING SKYLIGHT

Depending on the model, one of two versions of the tilting skylights may be found on the vehicle (type A or type B).

Tilting skylight - Type A (Fig.6.6)

Opening

1. Press the safety button **A** and pull the bracket **B** downwards using both hands.
2. Pull the bracket **B** into the guides **C** and back into the rearmost position.

Closing

1. Push the bracket **B** slightly upwards using both hands.
2. Push the bracket back into the guides again.
3. Push the bracket up using both hands until it is above the safety button **A**.

Air circulation position

The tilting skylight can be placed in two different positions for air circulation.

1. Press the safety button **A** and pull the bracket **B** downwards using both hands.
2. Pull the bracket **B** into the guides **C** until the desired position is reached.
3. Lightly press the bracket **B** upwards and push it into the selected guide **D** or **E**.

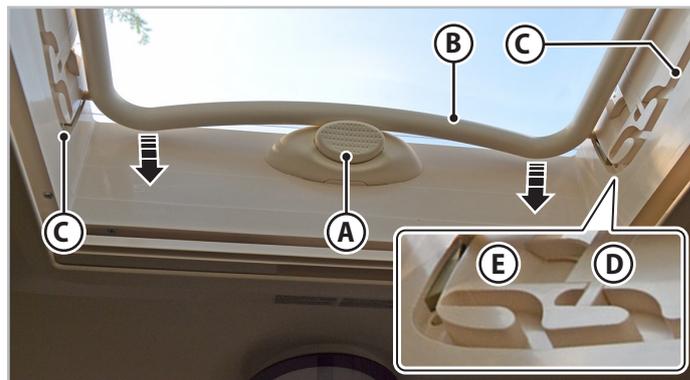


Fig.6.6 - Tilting skylight - Type A

Tilting skylight - Type B (Fig.6.7)

Air circulation position

The tilting skylight can be placed in various air circulation positions.

- Lift the safety handle (**F** - Fig.6.7) and turn it anticlockwise to raise the skylight to the desired position.
- To lower the skylight, rotate the handle clockwise until it is fully closed.

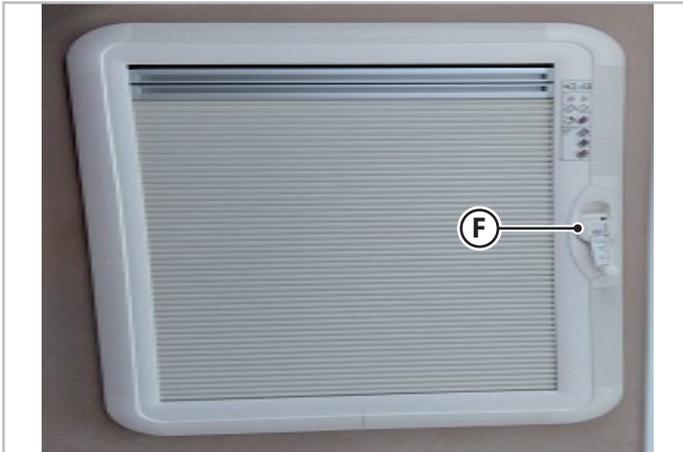


Fig.6.7 - Tilting skylight - Type B

Fly screens and shades

The tilting skylight is equipped with fly screens and shades. The fly screens and shades may be used separately.

To open and close the fly screens, pull the handle (**G** - Fig.6.8) into the required position and then release. The fly screens will remain in this position.

To open and close the shades, pull the handle (**H** - Fig.6.8) to the desired position and then release. The shades will remain in this position.

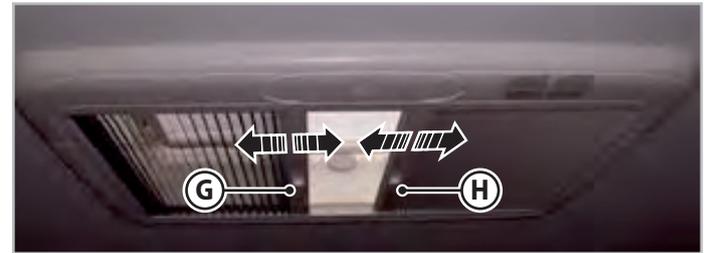


Fig.6.8 - Tilting skylight with fly screens and window shades

6.3.3 PANORAMIC SKYLIGHT WITH MANUAL LOCKING ARMS

Opening

1. Turn the levers (**A** - Fig.6.9) to the vertical position.
2. Open the skylight by pushing it downwards to the required position.
3. Lock the skylight by tightening the knobs (**B** - Fig.6.9) on the telescopic arms.

Closing

1. Loosen the knobs (**B** - Fig.6.9) on the telescopic arms.
2. Support the skylight as you move it into the closed position.
3. Lock all the levers (**A** - Fig.6.9).

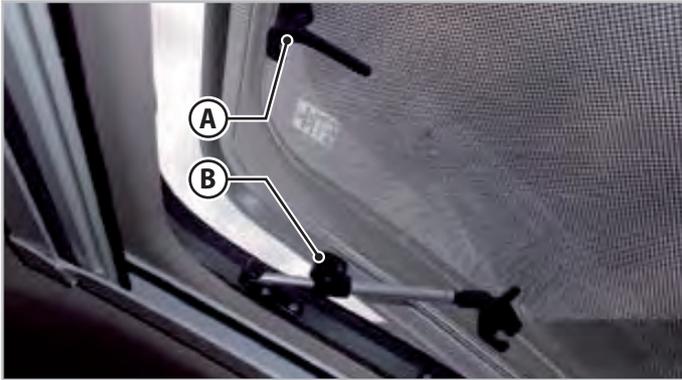


Fig.6.9 - Panoramic skylight

Fly screens and shades

The panoramic skylight is fitted with fly screens and shades. The fly screens and shades may be used separately.

To open and close the fly screens, grasp the middle part of the edge (**C** - Fig.6.10) and pull it to the required position, then release. The fly screens will remain in this position.

To open and close the shades, grasp the middle part of the edge

(**D** - Fig.6.10) and pull it to the required position, then release. The shades will remain in this position.

CAUTION

Always guide the fly screens and shades when retracting.

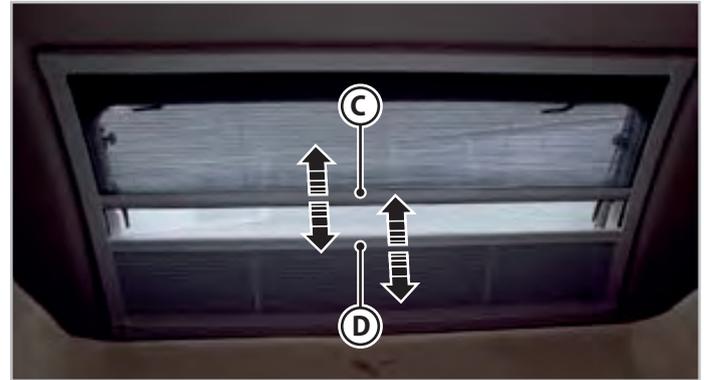


Fig.6.10 - Tilting skylight with fly screens and window shades

6.4 FOLDABLE SHADES

6.4.1 SIDE WINDOWS (MOTORHOME)

NOTE

For information on other versions, please see the Owner Handbook provided by the chassis manufacturer.

Closing

Using the grip, push the folding shades (Fig.6.11) until fully closed and fasten in the seat provided for this purpose.

Opening

Open the folding shades (Fig.6.11) using the grip, pulling it until it is fully open and fix in space with the magnet on the grip.



Fig.6.11 - Folding shades for side windows

6.4.2 WINDSCREEN (MOTORHOME)

NOTE

For information on other versions, please see the Owner Handbook provided by the chassis manufacturer.

! WARNING

Before starting to travel, check that the central shade is fully lowered and the side shades are fully closed.

Closing and opening

Pull the shades (Fig.6.12) from the central area upwards for total cover. Pull the curtain all the way down to open and for use while travelling.



Fig.6.12 - Folding shades for windscreen

Example positions**CLOSED POSITION****PRIVACY POSITION****OPEN POSITION**

Fig.6.13 - Positions of the windscreen shades

6.5 PULL-DOWN BEDS

WARNING

- Only use the pull-down beds for sleeping.
- Before lowering the pull-down beds, check that there are no people, animals or objects in the area occupied by the bed.
- Before closing the pull-down beds, check that there are no people, animals or objects on the bed.
- Do not use pull-down beds to store items that could fall while traveling.
- Do not use the pull-down beds without the protective net.
- The use of the pull-down beds by children under 6 years is forbidden without adult supervision.
- The static load capacity when the bed is lowered is 250 kg for the double bed and 125 kg for the single bed. The liftable load is max. 60 kg. The weight limits must be respected at all times.

6.5.1 FRONT PULL-DOWN BED OVER DINETTE

CAUTION

Before lowering the pull-down bed over dinette, check that the table below it is positioned outside the area of movement of the bed, in order to prevent the wall unit from hitting the table.

Opening

Before performing the operation, check that:

- The front cab seat backrest and both reclined.
- There are no people, animals or objects which could interfere with the movement of the bed.

To lower the pull-down bed over dinette:

1. Release the safety device (**A** - Fig.6.14).
2. Press the corresponding movement handle (**B** - Fig.6.14) and bring the bed down to the end of its stroke.

Closing

Before performing the operation, check that:

- There are no people, animals or objects which could interfere with the movement of the bed.

To close the pull-down bed over dinette:

1. Press the corresponding movement handle (**B** - Fig.6.14) and bring the bed down to the end of its stroke.
2. Secure the bed in place again using the safety device (**A** - Fig.6.14).

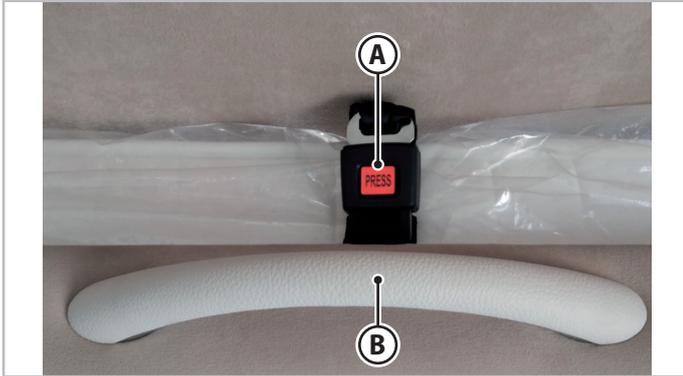


Fig.6.14 - Front pull-down bed over dinette

6.5.2 PULL-DOWN BED OVER DINETTE COMPARTMENT (MOTORHOME)

NOTE

For information on other versions, please see the Owner Handbook provided by the chassis manufacturer.

Before lowering the bed, check that:

- There are no people or animals under the area that the bed will occupy.
- There are no objects underneath which could prevent correct use of the bed.

Before lifting the bed, check that:

- There are no people or pets on the bed.
- There are no objects that could prevent complete closure or interfere with the proper functioning of the bed.

The bed can be controlled using the specific controls (A - Fig.6.15) positioned directly on the bed or via the control button (B - Fig.6.15) in the vehicle. Press the upper arrow to raise the bed and the lower arrow to lower it (Fig.6.15).

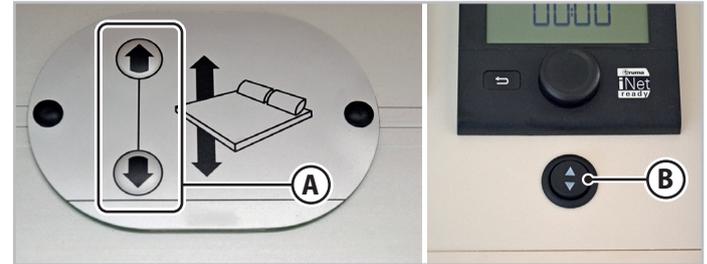


Fig.6.15 - Command for pull-down bed over dinette compartment

⚠ CAUTION

The bed must not be kept in the fully raised position during long stops: leave a 10 cm gap between the roof and the bed mattress.

Manual release

Proceed as follows if the bed needs to be reset or used manually during power failures where there is no electricity for operating the pull-down bed lifting/lowering system.

Depending on the version of the bed fitted on the vehicle, proceed as follows:

Type A

1. Open the left wall cabinet to reach the electric motor for the bed.
2. Insert the Allen wrench (**D** - Fig.6.16) into the screw (**C** - Fig.6.16) in order to manually move the bed; this is located on the front of the motor.
3. To raise the bed, turn the key anticlockwise, and to lower it, turn the key clockwise.

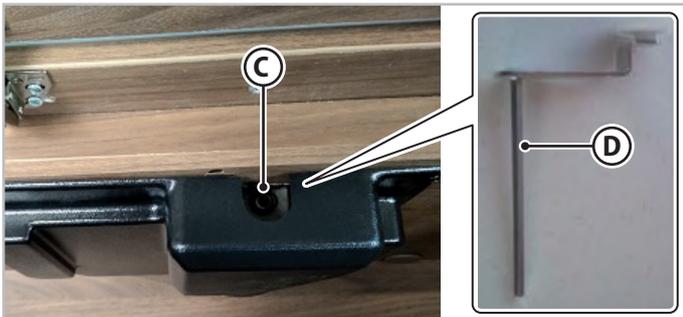


Fig.6.16 - Releasing a Type A electric bed

Type B

1. Open the left wall cabinet to reach the electric motor for the bed.
2. On the underside of the motor (**E** - Fig.6.17), insert the Allen wrench (**F** - Fig.6.17) into the specific seat in order to manually move the bed.
3. To raise the bed, turn the key anticlockwise, while to lower it, turn the key clockwise.

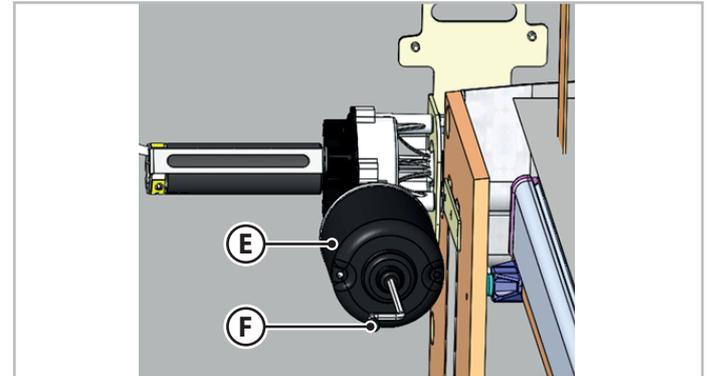


Fig.6.17 - Releasing a Type B electric bed

6.5.3 SAFETY NET

WARNING

Do not use the pull-down beds without the protective net.

- All vehicle beds positioned at a height greater than 1 metre from the floor have a protective net installed.
- As is the case with all devices dedicated to safety, the protective net must be used and applied in accordance with the regulations currently in force.
- Secure the protective net (**A** - Fig.6.18) using the hooks (**B** - Fig.6.18 and Fig.6.19) the rings designed for this purpose (**C** - Fig.6.19).

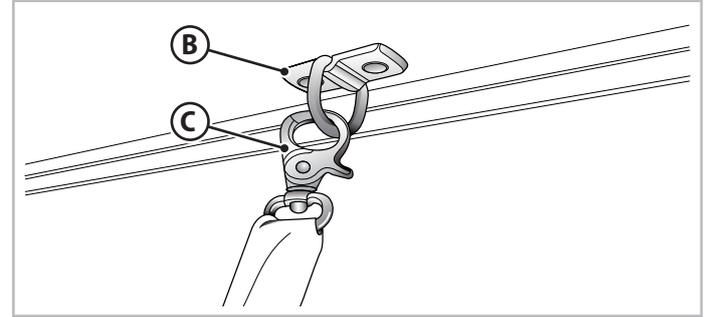


Fig.6.19 - Protective net hook

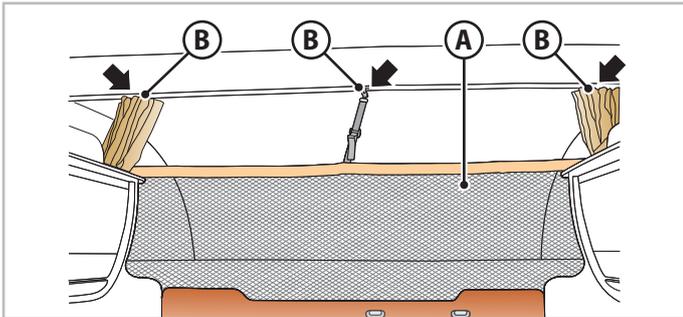


Fig.6.18 - Protective net for pull-down bed over dinette

6.6 CONVERTING THE DINETTE COMPARTMENT

NOTE

For the various possible configurations to convert the dinette compartment into a sleeping area, please see paragraph 9.1 of this manual.

6.6.1 FOLD-OUT FLAP

Some vehicles are equipped with a fold-out flap that enables a cushion to be positioned on the side of the dinette compartment. Lower the flap to move it into the sofa position (**A** - Fig.6.20) and lift it to move it into the travel position (**B** - Fig.6.20).



Fig.6.20 - Dinette flap

6.6.2 TABLE

Depending on the vehicle model, the cabin is equipped with tables that can be lowered and manoeuvred to improve comfort on board and to transform the dinette compartment from day configuration to night configuration.

Table with telescopic leg (optional)

To lower the table:

1. Use your foot to press the button (**A** - Fig.6.21) at the base of the table.
2. At the same time, press the table downwards to lower it completely.

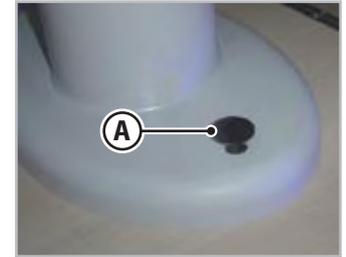


Fig.6.21 - Telescopic leg

Table movement function (depending on model)

The handle (**B** - Fig.6.22) enables the table top to be moved to any position:

1. Press and hold the handle **B** with the palm of your hand facing upwards.
2. Position the table as required.
3. Release the handle **B**.



Fig.6.22 - Table movement function

Fold-out table (depending on model)

1. Release the latches positioned under the table and rotate the table top by 90°.



2. Open the table top, resting against the structure below.



Table with folding leg (depending on model)

1. Press the button **C** on the table leg joint.
2. Fold back the table leg.



Fig.6.23 - Table with folding leg

6.7 GAS SYSTEM

6.7.1 INSTRUCTIONS FOR USE

WARNING

While travelling in the vehicle, the entire gas system must be fully turned off by law. Before starting to travel, it is essential to close the valve on the cylinder as well as all the red gas distribution control unit taps in the cabin.

- Ensure that the seal of the pipes and the connectors is checked regularly. Visit a dealer or workshop authorized by the manufacturer in order to carry out this operation.
- The manufacturer is not responsible in any way in cases where the original gas system is used incorrectly, tampered with, if modifications are made, or if the system has not been checked regularly. Replace the rubber hose of the regulator in accordance with the date printed on the hose itself.
- The gas system is supplied by one or more portable gas cylinders, connected to a pressure reducer.
- The system distributes the gas by means of a control unit to the following appliances: hob cookers and oven (where present), Combi heater, Alde boiler and refrigerator.

6.7.2 GAS DISTRIBUTION CONTROL UNIT

The control unit distributes gas to all the system devices.

WARNING

Before using the gas equipment described in this paragraph for the first time, carefully read the instruction booklets provided by the respective manufacturers.

Before operating an appliance, it is necessary to open the main gas valve located on the cylinder and the corresponding valve of the gas distribution control unit. Depending on the models, the gas distribution control unit is located under the sink or under the cabinet.

The individual taps (Fig.6.24) are marked with a symbol that identifies the appliance to which it is connected.

- A. Stove tap
- B. Refrigerator tap
- C. Combi tap
- D. Oven tap

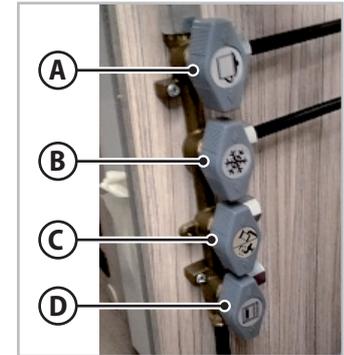


Fig.6.24 - Gas distribution taps

Operation: the taps are closed (**B** - Fig.6.25) when the knob is perpendicular to the outlet pipe, and are open (**A** - Fig.6.25) when the knob is in the same position as the outlet pipe.

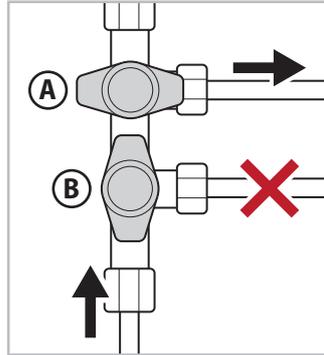


Fig.6.25 - Opening and closing the taps

6.7.3 GAS CYLINDERS



Fig.6.26 - Gas cylinder compartment

The removable cylinders are housed in a dedicated, ventilated compartment (Fig.6.26), only accessible from the outside of the vehicle, which is fully isolated from the cabin.

WARNING

- Always check that the ventilation grilles for the cylinder holder compartment are completely clear.
- No items apart from the actual cylinders should be stored in the cylinder holder compartment.

- Secure the cylinders vertically in the compartment using the dedicated straps, so that they cannot rotate.
- Close the main valve before removing the pressure adjustment device or the hose from the cylinder.
- Tighten the pressure regulator ring nut manually on the cylinders; only use the spanner for the final tightening.

ATTENTION

The pressure regulator ring nut has a left-spiral thread and should therefore be turned anticlockwise to tighten it.

- The gas coming from the removable cylinder that has a closing valve reaches the appliances passing through a pressure reduction unit and a distribution control unit with several taps, one for each appliance, located inside the kitchen units or in a cupboard.

- Each consumer has a thermocouple safety valve which stops the gas from escaping if the flame accidentally goes out.
- When leaving the vehicle parked, it is advisable to turn off all gas-powered appliances carefully. In addition, always close the valve on the cylinders and the control unit taps inside the cabin.

Replacing the gas cylinder

1. Close the main valve on the cylinder, turning the knob clockwise.

NOTE

The direction of rotation of the knob for closing the valve is on the knob.

2. Undo the gas regulator ring nut (left-spiral thread) by turning in a clockwise direction using the special spanner, and detach it from the cylinder valve.
3. Unclip the cylinder attachment strap and remove the cylinder from the compartment.
4. Place the full cylinder in the compartment and secure it using the fastening straps.
5. Replace the pressure regulator seal with a new one.

CAUTION

The seal for the cylinder pressure regulator should be replaced with a new one every time the pressure regulator ring nut is loosened or undone completely.

NOTE

Many cylinders have a new seal fitted in the cylinder filler cover which must be torn away.

6. Fit the pressure regulator on the main cylinder valve, turning the gas regulator ring nut (left-spiral thread) in an anticlockwise direction.

6.7.4 VERTIKAL CS DUO CONTROL - HORIZONTAL (OPTIONAL)

NOTE

For information on the use and operation of the gas pressure safety regulator with automatic switching, please see the documentation provided by the manufacturer of the regulator.

6.7.5 CARBON MONOXIDE AND SMOKE DETECTOR (DEPENDING ON MODEL)

Some vehicles are equipped with devices for the detection of carbon monoxide (**A** - Fig.6.27) and smoke (**B** - Fig.6.27). These devices are placed on the wall or roof of the vehicle near the entrance door.



Fig.6.27 - Carbon monoxide and smoke detectors

NOTE

For more information on the use and operation of the smoke detector and the carbon monoxide detector, please see the documentation provided by the manufacturer of these devices.



WARNING

Before travelling and at least once a week, check that the carbon monoxide detector (A - Fig.6.27) and the smoke detector (B - Fig.6.27) are working correctly, as described in the instruction booklet provided by the manufacturer of these devices.

Carbon monoxide detector

The carbon monoxide detector (**A** - Fig.6.27) sounds an alarm if the amount of gas exceeds the permitted limit. When the batteries are connected to the device, a green light blinks every minute to indicate that it is working correctly.

Press the TEST button to check the correct operation of the alarm; a test beep should be emitted.

Smoke detector

The smoke detector (**B** - Fig.6.27) sounds an alarm if the amount of smoke exceeds the permitted limit. When the batteries are connected to the device, an LED light blinks every 30 seconds to indicate that it is working correctly.

Press the TEST button for around 3 seconds to verify the correct operation of the alarm, which should emit a test beep.

6.8 ELECTRICAL SYSTEM

All of the electrical functions inside the vehicle body are controlled by the control panel (see par. 6.11.4). The electrical utilities are supplied by the auxiliary battery (see par. 6.8.4).

6.8.1 INSTRUCTIONS FOR USE

WARNING

Danger of electrocution:

- Repairs to the the electrical system should only be carried out by specialist personnel and at any rate, at a dealer or workshop authorized by the manufacturer.
- Before carrying out any work on the electrical system, turn off all appliances and lights, detach any connection to the 220 V mains power and disconnect the auxiliary battery using the dedicated battery disconnect switch.

CAUTION

If a broken fuse is being replaced, use the switch to turn off the affected appliance with the switch and use a new fuse of the original type with the correct flow rate value (same colour as the faulty fuse) to replace it. Before replacing the fuse, identify the source of the fault

6.8.2 220 V POWER SUPPLY

WARNING

Danger of electrocution. The external 220 V power supply must be protected by a 30 mA differential circuit breaker. The differential switch varies depending on the vehicle model.

During stops, the vehicle may be connected to an external 220 V power supply. The connection point must not be more than 20 metres away from the vehicle.

The vehicle's 220 V (**A** - Fig.6.28) power supply panel is protected by a two-pole magnetic thermal-differential switch (**B** - Fig.6.28). The power supply socket has a third earth pole as required by law.

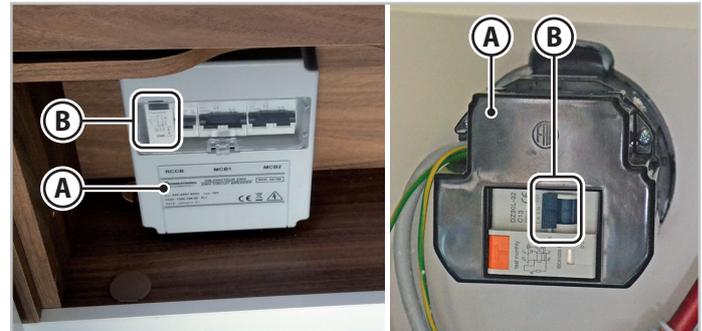


Fig.6.28 - Power supply panel

Connection to the 220 V mains power supply enables the following to receive power:

- The 220 V current sockets
- The refrigerator (at 220 V)
- The automatic charger for the auxiliary battery and the engine battery via the battery charger fitted in the vehicle (electric control unit). The charging current is adapted to the battery charge level. It is therefore impossible to overload it.

Connecting to the 220 V power supply

To connect to the 220 V power supply:

1. Lower the levers (**B** - Fig.6.28) of the differential switch.
2. Lift the cover (**C** - Fig.6.29) of the socket (**D** - Fig.6.29) located on the side of the vehicle.
3. Connect an external cable of an appropriate size and approved type to the socket (**D** - Fig.6.29).
4. Connect the external cable to the 220 V power supply.
5. Lift the levers (**B** - Fig.6.28) of the differential switch.

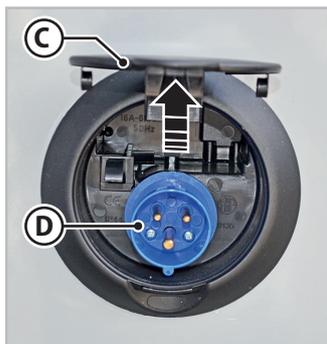


Fig.6.29 - 220 V power supply socket

CAUTION

- **If the differential switch clicks when the levers are raised, do not force it - instead, check the connection.**
- **The external connection cable to the 220 V power grid must comply with the characteristics set out in the local regulations of the country in which the connection or charging operation is taking place.**

6.8.3 12 V POWER SUPPLY

The vehicle is equipped with 12 V power, supplied by the auxiliary battery. The 12 V power supply powers the service utilities, namely the interior lighting and all the systems and accessories in the living area of the vehicle.

While travelling, both vehicle batteries (engine and auxiliary) are recharged by the alternator that also powers the refrigerator at 12 V.

To prevent the auxiliary battery from running down rapidly, the refrigerator only receives a 12 V power supply when the engine is running.

NOTE

- **The compressor refrigerator is only powered at 12 V.**
- **When the compressor refrigerator is present, the vehicle is set up for the installation of two batteries, in order to allow the refrigerator to receive power even when the vehicle is off.**

ATTENTION

When the engine is switched off and the vehicle is not connected to the 220 V external power supply, do not power the electrical utilities with the 12 V battery for a prolonged period, because the auxiliary battery energy reserves only last for a limited time.

NOTE

The battery charge level can be viewed on the control panel.

ATTENTION

Take care to ensure that the key is inserted correctly, lining up the two teeth match the seats on the switch.

The switch is located inside the right-hand dinette seat or inside the passenger's floor hatch, and has two positions:

- **OFF:** Battery disconnected
- **ON:** Battery connected

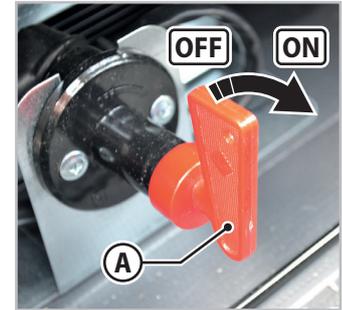


Fig.6.30 - Battery disconnect switch

6.8.3.1 **Battery disconnect switch**

Depending on the vehicle model, the function of a battery disconnect switch can be performed:

- Through a battery disconnect switch
- Manually disconnecting the battery
- Automatically disconnecting the battery from the control panel

Battery disconnect switch (where present)

The 12 V electrical circuit of the auxiliary battery can be equipped with a switch that allows you to interrupt the power supply by inserting and turning the key designed for this purpose (**A** - Fig.6.30).

Manual disconnection

! WARNING

Danger of electrocution. Before disconnecting the auxiliary battery manually, check that the vehicle is turned off.

Where no battery disconnect switch is present, the battery can be manually disconnected from the poles (first the negative pole, then the positive one).

Automatic disconnection

It is also possible to disconnect the battery automatically through the control panel, depending on the vehicle's equipment.

Type A panel (Fig.6.42, page 74)

1. Press and hold the power button for 10 seconds.
2. After a few seconds, a number of beeps will sound, ending with a longer beep.
3. At the end of the beep, the battery disconnect function is activated.

Panel Type B (Fig.6.43, page 74)

Press the 'Off' button to activate the battery disconnect function.

NOTE

- **Once the battery disconnect function is activated, the utilities will still be powered for a further 180 seconds.**
- **For more information on the operation of the control panel, please see the instruction booklet provided by the manufacturer of the device.**

6.8.4 BATTERIES

The vehicle is equipped with two batteries, which are automatically recharged by the alternator while travelling:

- **Engine battery:** powers the electrical parts of the original chassis (engine, vehicle exterior lights, etc.).
- **Auxiliary battery:** powers the service utilities, namely the interior lighting and all the systems and accessories in the living area of the ve-

hicle. This is housed in the driver's cab or inside the right-hand dinette seat.

General instructions

ATTENTION

- **Before setting off on a journey, it is advisable to check that the engine battery and the auxiliary battery are charged.**
- **If the vehicle is parked for long periods during the trip, when possible, connect to the 220 V mains power supply to restore the auxiliary battery charge level.**

ATTENTION

- **If one or both batteries are run down, it is advisable to recharge them completely before setting off. Charge the battery 48 hours before a trip and 48 hours after.**
- **If the battery is completely flat, recharge it for at least 10 hours.**



CAUTION

- **If the vehicle is not used for a long period, it is advisable to recharge the battery completely every four months.**
- **If a battery is left discharged for more than six months, it will be irreparably damaged and will permanently lose its capacity to be recharged.**

- If the ambient temperature is high (more than 30 °C), the auxiliary battery (like the vehicle battery) will discharge more quickly. At a temperature of 20 °C, the battery loses around 2% of its charge per month, whilst at 40 °C, this figure can reach 15-20%.
- If the ambient temperature is very cold, the auxiliary battery, like the vehicle battery, suffers a loss of capacity and may require more frequent recharging operations.

Auxiliary battery

WARNING

- Only use leak-proof (maintenance-free) batteries as auxiliary batteries. If using a non-AGM lead-acid battery, the hose provided must be connected in order to channel the vapours generated during charging to the exterior.
- The installation of the auxiliary battery must be carried out in accordance with the instructions provided by the relevant manufacturer, exclusively by specialist personnel.

CAUTION

- Depending on the equipment, the vehicle may be designed to be fitted with either one or two auxiliary batteries. If two auxiliary batteries are installed, use batteries of the same type.
- Check that the battery charger is set correctly for the type of battery being used.

ATTENTION

The fluid level does not need to be checked on 'maintenance-free' batteries.

If the vehicle is not going to be used for a long time, disconnect the auxiliary battery via the battery disconnect switch.

If a **lithium battery** is used as an auxiliary battery:

WARNING



Danger of explosion. Lithium batteries contain very hazardous materials that can cause explosions under particular temperature conditions.



Danger of corrosive materials. Lithium batteries contain highly corrosive materials and therefore must be handled with care, using appropriate PPE and only by specialist personnel.



Danger of burns. Lithium batteries can reach high temperatures and therefore must be handled with care, using appropriate PPE and only by specialist personnel.

**WARNING**

Maintenance of lithium batteries must only be carried out by specialist personnel authorized by the battery manufacturer.



Keep lithium batteries out of the reach of children.

**ENVIRONMENT**

Lithium batteries contain materials that are harmful to humans and the environment. Dispose of lithium batteries properly and at specialist facilities.

Type A panel battery setting (Fig.6.42, page 74)

1. Press the battery button  to display the battery charge level (for more information please refer to the next paragraph, 'Charge Level').
2. Press and hold the battery button  for 5 seconds. A flashing 'LI' symbol will appear, indicating the default setting for the battery type (lithium battery).
3. Press the battery button again  to change the battery type. Once the desired type of battery has been selected, wait until the symbol stops blinking.

NOTE

The battery types that can be selected are as followed: LI (lithium battery), AGM (AGM battery), Gel (gel battery) and Pb (lead acid battery).

Battery setting Panel Type B (Fig.6.43, page 74)

1. Press the 'Batteries' button in the settings menu.
2. Press the 'Edit' button (pencil icon) on one of the two auxiliary batteries.
3. Press the "-" and "+" keys to select the battery type.
4. Press the 'Apply' button to confirm the selection.

NOTE

If two auxiliary batteries are fitted on the vehicle, the selected battery type was automatically applied to both.

Level of charge

The correct reading of the battery charge level can only be taken 4 hours after charging is complete.

To check the charge level, proceed as follows:

1. Disconnect the external power cable from the 220 V mains power supply.
2. Turn off all the lights and electrical appliances.

Type A panel (Fig.6.42, page 74)

3. Press the battery button . By pressing the battery button, you can scroll through the information regarding battery charging. To understand which battery the information displayed refers to, see the relevant icon:



Starter battery



Auxiliary battery 1



Auxiliary battery 1 and 2



Auxiliary battery 2

Panel Type B (Fig.6.43, page 74)

3. Access the battery menu. The battery charge data can be viewed from the battery menu.

ATTENTION

- **The voltage shown on the display must not be less than 12.5 V.**
- **If the battery is run down, it will take about 12 hours of recharging to reach 12.5 V.**

Charging the batteries

The engine battery and the auxiliary battery can be recharged, not only while the vehicle is travelling, but also when parked, by connecting the vehicle to the 220 V power grid.

ATTENTION

It is advisable to recharge the batteries using the vehicle battery charger, connecting the external power supply lead to the 220 V mains power.

NOTE

For more information on battery charging, refer to the owner handbook for the chassis and the instructions provided by the auxiliary battery manufacturer.

Looking after the batteries in winter

Batteries lose their capacity much quicker at low temperatures. If the vehicle is not used for long periods, it is advisable to connect the supply lead to the 220 V mains regularly.

6.8.5 ADVICE AND CHECKS ON THE ELECTRICAL SYSTEM

220 V distribution panel

WARNING

Danger of electrocution. Before carrying out any work on the distribution panel, set the differential switch (B - Fig.6.28) to '0' (OFF) and disconnect the plug from the 220 V mains power supply.

- To turn off power to the entire 220 V system, set the differential switch (B - Fig.6.28) to '0' (OFF).
- Only connect and disconnect the external 220 V power supply when the differential switch is in the '0' position (OFF).
- When carrying out work on the differential switch, before plugging the current back in, it is essential to identify the cause of the fault and repair this, through a workshop authorized by the manufacturer.

Battery charger

WARNING

Keep the battery charger compartment dry and ventilated.

- Check that the battery is charging correctly via the control panel.
- The battery charger should only remain connected to the external 220 V power grid for the time necessary to recharge the batteries.
- The battery charger only works and supplies a current when it is connected to the battery.

Tank sensors

CAUTION

Risk of damage to tank sensors. To prevent sediment and deposits, do not leave water in the tanks for long periods, especially in the grey water collection tank.

6.9 WATER SYSTEM

WARNING

Any maintenance or repair operations on the water system must be carried out at a dealer or workshop authorized by the manufacturer.

CAUTION

Danger of freezing. During the winter period, in case of prolonged periods of non-use, the vehicle's water system and related tanks must be emptied.

The vehicle's water system is composed of the following components:

- **White water tank (par. 6.9.1):** large capacity tank housed inside the vehicle.
- **Grey water tank (par. 6.9.2):** tank for collecting sink and shower water, located under the floor.
- **Cassette toilet (par. 6.9.3):** tank with external access connected to the toilet.

The level of white and grey water can be checked via the control panel:

- For the **Type A panel** (Fig.6.42, page 74), press the tank button .
- For the **Type B panel** (Fig.6.43, page 74), in the 'Resources' menu.

6.9.1 WHITE WATER TANK

WARNING

Danger of biological contamination:

- Do not use water from the white water tank for drinking, preparing food or brushing teeth. The drinking water in the tank may no longer be hygienic after a few days.
- Replace the water in the tank often. Before replacing the water, clean the inside of the tank with a specific disinfectant liquid designed for this process.
- Before using the vehicle, thoroughly rinse the tank and pipes using plenty of drinking water (see par. 7.3).

Refilling the white water tank

To refill the white water tank, proceed as follows:

1. Lift the flap (**A** - Fig.6.31) to access the water filler cap on the side of the vehicle.
2. Insert the key into the lock (**B** - Fig.6.31).
3. Turn the key anticlockwise and remove it.
4. Turn the cap (**C** - Fig.6.31) anticlockwise and remove it.
5. Fill the tank using the appropriate hose.

CAUTION

Clean the water pipe before inserting it into the filler cap, and take care to ensure no foreign bodies or dirt get into the tank.

6. To close the filler cap, repeat the steps in reverse.

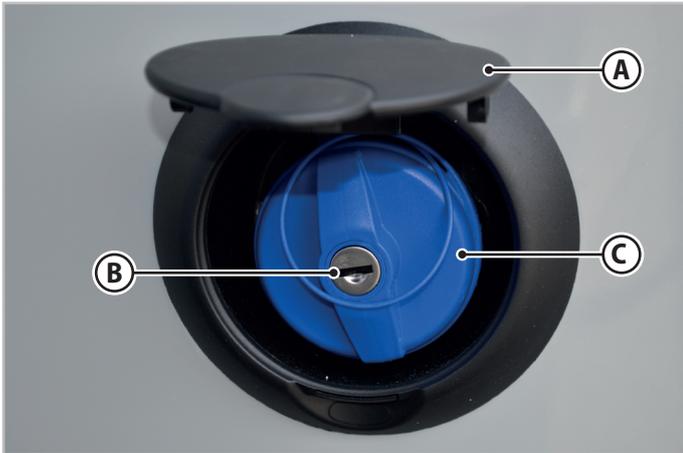


Fig.6.31 - Refilling the white water tank

CAUTION

The weight of the water contained in the tank helps to determine the overall weight of the vehicle, and must comply with the overall type-approved weight. As a result, when determining the payload, the water in the tank must be taken into consideration.

Use of the white water tank

The water is supplied automatically when the taps are turned on by an electric pressure switch pump, which must be activated beforehand via the control panel.

CAUTION

To avoid damage to the water pump, do not operate it when the white water tank is empty.

ATTENTION

If water is not coming out of the taps but there is water in the tank and the pump is working, the tap filters or the water pump filter could be blocked. Clean the tap filters first, and then, if necessary, clean the pump filter (see par. 7.5).

Emptying the tank

Some models are equipped with a drain valve (**D** - Fig.6.32) positioned above the white water tank.

The drain valve has two positions: By turning the wheel clockwise, either total or partial (20 litres in running order) emptying is possible.

To close the drain valve, turn the wheel fully anticlockwise.

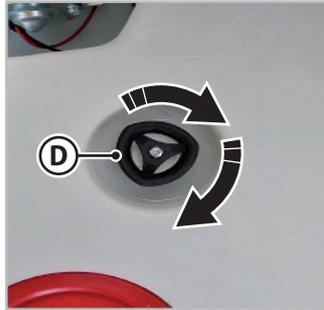


Fig.6.32 - White water drain valve

Other models are equipped with two caps for emptying the white water tank (Fig.6.33):

- E.** Remove the cap to partially empty the tank (20 litres in running order).
- F.** Remove the cap to fully empty the tank.

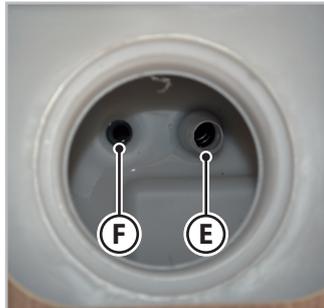


Fig.6.33 - White water drain valve

External hot and cold water outlet

The external shower outlet is located inside the garage locker, and is supplied with water from the white water tank.

To connect the supplied shower hose to the outlet:

1. Lift the flap (**E** - Fig.6.34).
2. Insert the hose supplied into the attachment (**F** - Fig.6.34).

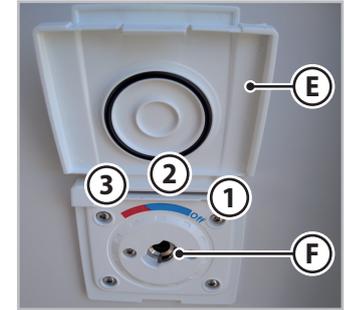


Fig.6.34 - Shower connection outlet

Once the shower hose has been connected to the outlet, move the hose attachment to one of three positions as required:

1. **Shower closed (OFF):** no water comes out when the shower lever is pressed.
2. **Cold water:** when the shower lever is pressed, cold water comes out.
3. **Hot water:** when the shower lever is pressed, hot water comes out.

To disconnect the shower hose, repeat the steps in reverse.

6.9.2 GREY WATER TANK

The grey water (waste water from the kitchen sink, the toilet and the shower) is collected in a tank located on the underbody of the vehicle. A light on the control panel indicates when the tank needs to be emptied. The warning light comes on when 100 % of the total tank capacity is reached.

CAUTION

Risk of freezing of pipes and grey water tank. In winter and in low temperature conditions, use a specific antifreeze liquid, at the percentage indicated on the product packaging. Pour the antifreeze liquid into the tank from the drain of one of the sinks.

Emptying the grey water tank

To drain the tank, pull the handle (**A** - Fig.6.35) of the drainage valve, located under the vehicle floor or inside the garage locker. When the tank is empty, close the valve by pushing the handle right back into its housing.

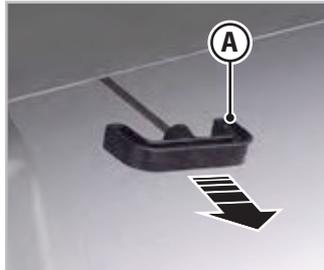


Fig.6.35 - Grey water drain valve

ENVIRONMENT

Only drain the grey water tank at specially designated emptying points (Camper Service) or at campsite disposal points.

Grey water tank heater

The heater consists of an electric resistor fitted inside the tank to prevent the grey water from freezing. The probe is controlled by a switch (**B** - Fig.6.36) located at the entrance of the vehicle. The switch is equipped with an LED light and marked with the relevant identification symbol.

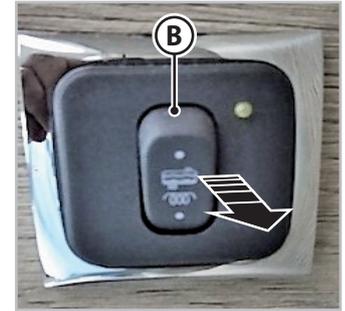


Fig.6.36 - Heater switch

6.9.3 CASSETTE TOILET

ATTENTION

Before using the removable cassette toilet for the first time, carefully read the instruction booklet provided by the manufacturer.

The vehicle is equipped with a toilet with a removable tank (or cassette tank). The toilet flush is supplied with water from the white water tank. Depending on the vehicle model, the toilet fitted may vary.

The cassette toilet is located outside the vehicle, next to the toilet.

The upper part of the toilet (A - Fig.6.37) can be rotated right or left for optimal use of the space.

Flushing the toilet

To flush the toilet:

1. Move the lever (B - Fig.6.37) to position (C - Fig.6.37) to open the flush hatch.
2. Press and hold the flush button (E - Fig.6.37) for as long as needed.
3. Move the lever to position (D - Fig.6.37) to close the flush hatch.

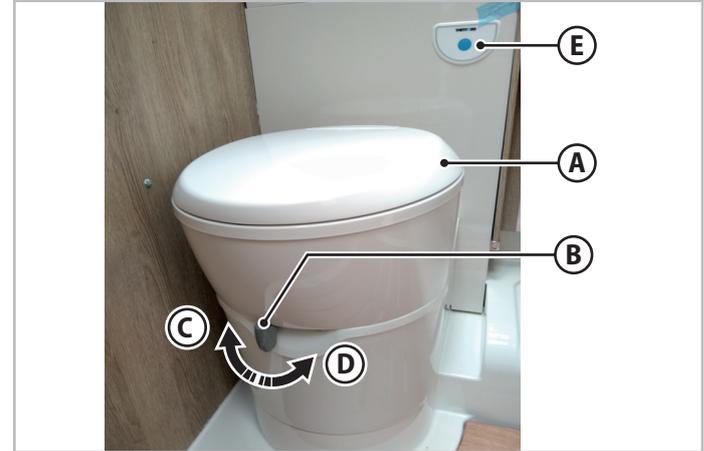


Fig.6.37 - Flushing the toilet

Emptying the cassette toilet

CAUTION

- The cassette toilet has a capacity of around 18 litres and must be emptied as soon as the red indicator light on the toilet control panel lights up.
- After each emptying of the cassette toilet, top up the disinfectant product as indicated in the instruction booklet for the toilet and the product itself.

Depending on the vehicle model, the hatch to access the tank may be on the right or left side or on the rear wall.

To empty the cassette toilet, proceed as follows:

1. Check that the toilet drain hatch is closed: the lever (**B** - Fig.6.37) must be in position (**D** - Fig.6.37).
2. Using the key, open the lock (**F** - Fig.6.38), and then remove the key.
3. Press buttons **G** and **F** (Fig.6.38) and open the door.
4. Press slightly upwards on the handle (**H** - Fig.6.38) and remove the tank.
5. Remove the cap (**I** - Fig.6.38) and press the vent button to empty the tank.



ENVIRONMENT

Only empty the cassette toilet at the specially designated disposal points (Camper Service) or at campsite emptying points. For hygiene reasons, the cassettes cannot be emptied into the normal campsite toilets.



CAUTION

Danger of freezing. In low temperatures and where there is no heating, empty the cassette toilet completely.

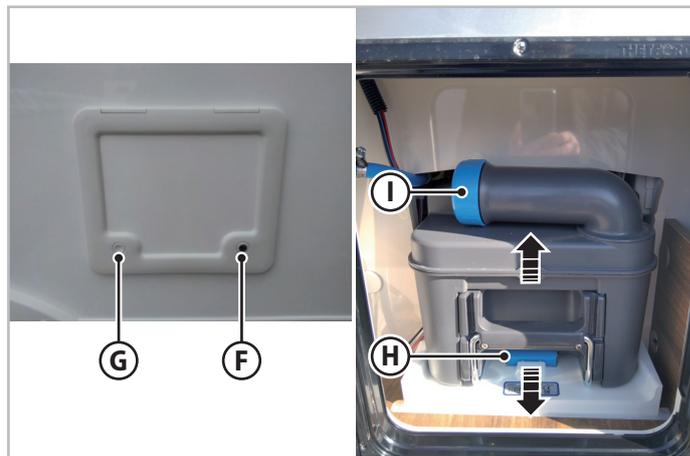


Fig.6.38 - Emptying the cassette toilet

6.10 BOILER HEATING SYSTEM

Depending on the model, the boiler heating mode inside the vehicle is provided either by a Combi heater (see par. 6.10.3) or an Alde boiler heating system (see par. 6.10.4).

6.10.1 IMPORTANT WARNINGS

WARNING

Danger of carbon monoxide poisoning. Once a year, get the discharge elements of all the gas utilities checked at a workshop authorized by the manufacturer. In particular, check the discharge of the Combi heater and the Alde boiler: these must be working efficiently and be free of obstructions and breakages. Take the utmost care to avoid crushing, holes, tears or detachments of the heater discharge pipes in order to avoid the release of carbon monoxide.

CAUTION

The heat exchanger for gas heaters and boilers must be replaced ten years after it is first used; this replacement must be carried out exclusively by the heater or boiler manufacturer or by a workshop authorized by the manufacturer. The owner of the vehicle is responsible for having the replacement carried out.

NOTE

- For more information on the Combi heater, please see the dedicated paragraphs of this manual and the instruction booklet provided by the heater manufacturer.
- For more information on the Alde system, please see the dedicated paragraphs of this manual and the instruction booklet provided by the system manufacturer.

6.10.2 VENT ADJUSTMENT

The hot air distribution system is composed of pipes and outlet vents positioned in the living area.

To direct the air flow to the desired areas, rotate the nozzle while holding the ring nut (**A** - Fig.6.39).

On some models the vents can be opened and closed as well as directed. Turn the tab (**B** - Fig.6.39) to direct and adjust the air flow.

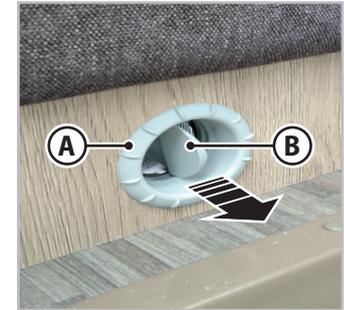


Fig.6.39 - Air vents

ATTENTION

When all the vents are open, the flow of hot air coming out from each of the vents will be restricted. For a stronger air flow from one or more of the vents, close all the others.

6.10.3 COMBI HEATER (DEPENDING ON MODEL)

The vehicle can be equipped with a heater with integrated water tank (Combi heater), powered by gas, diesel or electricity. This compact system combines a high-performance hot air heater and a very efficient water tank.

The Combi heater enables the water to be heated, and also provides hot air for heating the vehicle.

Before turning on the Combi gas heater, open the corresponding tap (C - Fig.6.24) on the gas distribution control unit.

! WARNING

- **Carefully read the instructions provided by the manufacturer of the device before using the Combi heater for the first time.**
- **If the Combi heater is not used for an extended period, close the gas tap and the quick-closing valves.**

! WARNING

- **Danger of carbon monoxide poisoning. The chimney is an essential air intake for the Combi heater and also expels combustion fumes. Always keep the exhaust gas flue and combustion air outlet clean.**

! CAUTION

- **Danger of freezing. In low temperatures or long stationary periods, empty the Combi heater tank.**
- **When opening the door to access the rear locker, take care not to block it near the exhaust gas flue. If the Combi is running, the exhaust fumes may damage the locker door.**

NOTE

During normal use of the Combi heater, brown marks may form over time.

Operation

The Combi heater automatically selects the heating level required by the ambient conditions. The thermostat turns the heater off once the selected ambient temperature is reached. The boiler heating mode will automatically turn on again when the temperature inside the vehicle drops. During boiler heating mode, the water in the tank (approximately 12 litres) is automatically brought to the maximum temperature.

In summer mode, only the water is heated. The water may be brought to a temperature of 40 °C or 60 °C.

WARNING

If the system has not turned on after two attempts, wait for 10-15 minutes before repeating the same operation so that any hazardous gas fumes can dissipate.

ATTENTION

- Once the Combi heater has been turned on, wait approximately 15-30 minutes for the hot water to be produced.
- The ambient temperature and the water temperature can be set either independently of each other or at the same time.

Control panel

The vehicle is equipped with a control panel for using the Combi heater; this varies depending on the vehicle's equipment.

NOTE

For more information on the control panel, please see the instruction booklet provided by the manufacturer of the device.

6.10.3.1 Safety valve

The Combi heater has a safety discharge valve (Fig.6.40) in order to prevent the water inside the integrated tank from freezing. The valve opens automatically below 4 °C and empties the water through a pipe. The safety discharge valve can operate without electricity. In freezing temperatures, the water contained in the tank is automatically discharged via the discharge tube.

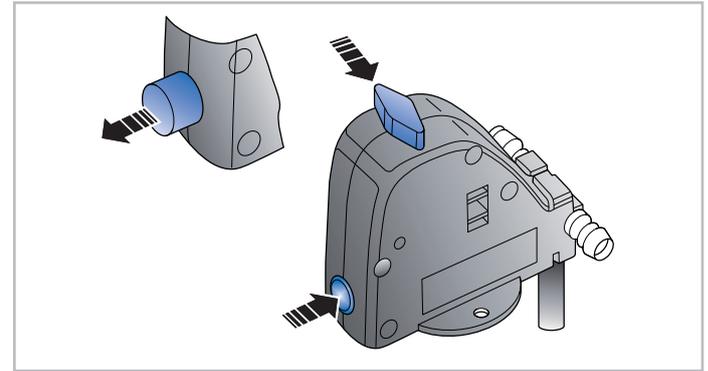


Fig.6.40 - Combi safety valve

6.10.4 ALDE BOILER HEATING SYSTEM (DEPENDING ON MODEL)

The vehicle can be equipped with an Alde boiler heating system. In this type of system, the hot air for heating the cabin is generated by a gas boiler through a heat transfer fluid.

The hot water is supplied from a tank integrated into the system's boiler.

! WARNING

Before using the Alde boiler heating system for the first time, carefully read these instructions and the instruction booklet provided by the system manufacturer.

Checking the system before use

Check the level of glycol mixture (Fig.6.41) in the expansion tank. When the system is cold, the level should be around 1 cm above the minimum level indicator. In new vehicles, air bubbles may occur, which disappear when the system begins to be used. In this case, the liquid level may drop in the expansion tank.

! CAUTION

Do not start the boiler without the glycol mixture. Do not mix different types of glycol, as this may cause the mixture to coagulate.



Fig.6.41 - Glycol mixture level

! WARNING

Danger of carbon monoxide poisoning. The chimney is an essential air intake for the boiler, and also expels combustion fumes:

- Ensure that the chimney is always free of snow, ice and other impurities.
- Make sure that no other objects prevent or block the smoke from coming out or stop air from entering the chimney.
- Check that the chimney is not discharging into an enclosed space, such as an awning.

- Check that the vents are not blocked. Blocked valves reduce the effectiveness of the boiler heating system and worsen the air quality inside the vehicle.
- Check that there are no objects preventing air from circulating inside the cabin.
- Check that there are no cushions and blankets blocking or preventing air circulation behind the backs of the sofas.
- If the vehicle is fitted with carpet, check that the carpet is not covering air vents and convectors.
- Do not block the air circulation channels in the vehicle.

ATTENTION

To benefit fully from the principle of heat circulation through water, it is important that air can pass freely under the beds and behind the backrests and cabinets.

Turning on the system for the first time

WARNING

- Danger of biological contamination. The hot water in the boiler is not drinkable and should not be used for food preparation.
- Danger of burns. The water contained in the boiler can reach high temperatures.

CAUTION

In low temperatures, empty the boiler tank to avoid damaging it. The warranty does not cover frost damage.

When the Alde boiler heating system is first turned on, or after a long period of non-use:

1. Carry out the appropriate checks on the boiler heating system (see par. "Checking the system before use").
2. Turn on the boiler, following the instructions below.

NOTE

The boiler can be used even if there is no water in the tank.

3. Set the clock.
4. Set the desired mode (LPG and/or electric) and the desired indoor temperature.

NOTE

- The LPG boiler and the electric resistor can operate at the same time.
- For more information on using the Alde boiler heating system, please see the instruction booklet provided by the system manufacturer.

6.10.5 ELECTRIC UNDERFLOOR HEATING (OPTIONAL)

The underfloor heating, if present, can be turned on and off:

- from the switch located in the left dinette compartment or on the entrance side of the right dinette compartment;
- directly from the control panel.

The system is connected to the 220 V line and is protected by a circuit breaker.

The floor heating is automatic according to the perceived temperatures. The self-adjusting heating wires consist of a polymer core which is powered at 220 V according to the ambient temperature, and generates a temperature increase by electrically exchanging carbon particles. The main advantages are:

- Automatic heat adjustment.
- No danger of overheating during use.

The system may also work by means of inverter (when travelling) precisely because of its low consumption.

6.11 VEHICLE EQUIPMENT

ATTENTION

For more information on the use and operation of the equipment or accessories installed on the vehicle, please see the instruction booklets provided by the respective manufacturers, supplied with the vehicle documentation.

6.11.1 STOVE TOP

The stove top on the vehicle may vary both in shape and position, depending on the vehicle model.

WARNING

- Carefully read the instructions provided by the manufacturer of the device before using the stove top for the first time.
- Danger of carbon monoxide poisoning. Before using the stove top, ensure adequate ventilation of the cabin interior by opening windows and skylights. Never use the cooker as a heater.

WARNING

- Danger of fire. Do not bring flammable or easily flammable objects near the gas cooker when it is on.
- Never tamper with the gas connections on the stove top.
- If carrying out repairs to the stove top which require the disconnection of the gas system, always perform a seal test on the system before the appliance is put into operation again.

Before turning on the stove top, open the corresponding tap (A - Fig.6.24) on the gas distribution control unit.

WARNING

For the characteristics of the pots and pans to be used with the various rings on the stove top, refer to the dimensions of the pots indicated in the instruction booklet provided by the stove top manufacturer.

6.11.2 OVEN

Depending on the configuration of the vehicle, the oven may be located on top of the refrigerator or under the kitchen.

 **WARNING**

- Read the instructions provided by the manufacturer of the appliance before using the oven for the first time.
- Danger of carbon monoxide poisoning. Before using the oven, ensure adequate ventilation of the cabin interior by opening windows and skylights. Never use the oven as a heater.
- Danger of fire. When the oven is turned on, do not insert flammable or highly flammable objects inside it.
- If carrying out repairs to the oven which require the disconnection of the gas system, always perform a seal test on the system before the appliance is put into operation again.

Before turning on the oven, open the corresponding tap (**D** - Fig.6.24) on the gas distribution control unit.

6.11.3 REFRIGERATOR

The refrigerator on the vehicle may vary depending on the vehicle model; it may be a compressor refrigerator or a refrigerator with a trivalent supply (gas, 220 V, 12 V).

 **WARNING**

- Read the instructions provided by the manufacturer of the appliance before using the refrigerator for the first time.
- Before using the refrigerator, clean the inside carefully.
- Do not store carbonated liquids in the freezer.
- If the refrigerator needs to be used for a long period with interior vehicle temperatures of below 10°C, a constant temperature cannot be guaranteed inside the freezer. The temperature may rise and the food could defrost.
- The performance of the refrigerator may change depending on environmental conditions. For efficient, safe use of the refrigerator, please refer the relevant manufacturer's user manual.
- If carrying out repairs to the refrigerator which require the disconnection of the gas system, always perform a seal test on the system before the appliance is put into operation again.

To use the gas refrigerator, open the corresponding tap (**C** - Fig.6.24) on the gas distribution control unit.

6.11.4 CONTROL PANEL

The vehicle is equipped with a control panel for managing the utilities installed in the vehicle. The control panel may vary depending on the vehicle model or equipment:

Type A control panel



Fig.6.42 - Type A control panel

Type B control panel



Fig.6.43 - Type B control panel

CAUTION

Carefully read the instructions provided by the manufacturer of the device before using the control panel for the first time.

NOTE

For more information on the control panel, please see the instruction booklet provided by the manufacturer of the device.

6.11.5 SOLAR PANEL (DEPENDING ON MODEL)

The vehicle can be equipped with a charge controller to monitor and optimize the use of energy coming from the solar panel.

NOTE

For more information on the charge controller, please see the instruction booklet provided by the device manufacturer.

7 MAINTENANCE

Correct maintenance of the vehicle is the best guarantee for being able to use it safely and to keep it in good condition.

ATTENTION

- Refer to the chassis manufacturer's Scheduled Maintenance Programme as set out in the Owner Handbook for the maintenance of the engine and the chassis.
- For maintenance and repairs of equipment fitted on the vehicle (e.g. refrigerator, heater, boiler, stove top, oven, etc.), please see the relevant use and maintenance manuals as provided by the respective manufacturers.

7.1 GENUINE SPARE PARTS

The genuine spare parts and accessories for the vehicle are designed and tested to integrate perfectly with the motorhome.

The specialist personnel from the dealers and workshops authorized by the manufacturer are familiar with the technical specifications of the spare parts and accessories for the vehicle, and they possess the necessary skills to carry out repairs and replacement operations. They can also provide advice regarding any accessories, as well as supplying genuine spare parts.

- Do not use components and accessories that are not approved by the manufacturer.

 **WARNING**

The use of components or accessories that are not approved by the manufacturer can adversely affect the safety and good operation of the vehicle.

- To install components and accessories on the vehicle, contact a dealer or workshop authorized by the manufacturer.

 **WARNING**

Any modifications made by unauthorized persons can affect the operation and safety of the vehicle and invalidate the warranty.

- Contact the dealers or workshops authorized by the manufacturer for the assembly of special accessories that may require adjustment. When fitting special accessories, the permitted dimensions and type-approved weight limits for of vehicle must be respected.

ATTENTION

It is advisable to keep the following spare parts onboard: fuses of different ratings, LEDs, pressure switch pump for the white water tank, tool kit.

7.2 EXTERNAL CLEANING

The materials used on the outside of the vehicle are chosen for their exceptional resistance to aggression from atmospheric agents. In any case, to keep the vehicle in the best condition, follow the instructions below:

 **CAUTION**

- **Do not use pressure washers or high temperature washers to wash the vehicle.**
- **Close the windows and hatches of the vehicle tightly during washing and be take care not to direct the jet of water at the vents or the refrigerator grille.**

- Wash the external parts of the vehicle on a regular basis and especially after stays in seaside locations with high air salinity.
- During the winter season, carefully clean the underbody and the mechanical parts of the vehicle which are subject to wear from below. The antifreeze salt scattered on roads damages the underside of the vehicle.

7.2.1 EXTERNAL SURFACES

- Wash the external surfaces of the vehicle with plenty of water and a neutral detergent, then dry with an appropriate cloth.
- If the surface of the vehicle appears dull, the area involved should be treated with non-abrasive bodywork polish.
- Wash and polish the fiberglass parts of the vehicle like a normal car body, using standard products available on the market (abrasive paste, polish, etc.).

 **CAUTION**

To prevent damage to the shiny surfaces of the vehicle:

- Do not use corrosive or abrasive products for cleaning.
- Do not use stiff brushes, hard cloths, or other abrasive media.
- Do not wash the vehicle after it has been in the sun for a long time, to prevent dulling the shine of the paintwork.
- Remove tar stains, bird droppings, insects, rust and other substances that could damage the paintwork as soon as possible.
- Regularly clean and remove any materials deposited on the roof.

7.2.2 ACRYLIC GLASS

- Wash acrylic glass surfaces using water and a mild soap, then dry with a sponge, a soft cloth or a special cloth.
- If necessary, use specific detergents for acrylic surfaces.

 **CAUTION**

- Do not use corrosive or abrasive products for cleaning.
- Do not rub acrylic glass surfaces when they are dry, as dust particles could scratch them.

7.2.3 HINGES

Lubricate the hinges of the doors and outer flaps regularly with acid-free products to keep them in good working order.

7.3 INTERNAL CLEANING

Periodically clean the materials and equipment inside the vehicle to keep them in good condition and to maintain them in working order.

NOTE

For specific instructions on cleaning the appliances installed on the vehicle, please see the instruction booklets provided by the respective manufacturers.

For cleaning the various components, follow the instructions below:

7.3.1 CUSHION COVERS, CURTAINS AND FABRICS IN GENERAL

Dry clean cushion covers, curtains and fabrics in general to avoid shrinkage and discoloration.

7.3.2 FURNITURE

 **CAUTION**

Do not use corrosive or abrasive products for cleaning.

Clean the surfaces of the furniture with a soft, slightly damp cloth.

7.3.3 WASH BASINS AND STOVES

 **CAUTION**

- To clean the stove top, follow the instructions below and in the booklet provided by the appliance manufacturer.
- So as not to damage the gas cooker, ensure that no water enters the openings on the cooker.
- Do not use corrosive or abrasive products for cleaning.

- Use water and a cream detergent without abrasive particles for cleaning.
- Clean the gas cookers with a damp sponge.

7.3.4 WINDOWS

 **CAUTION**

Do not use corrosive or abrasive products for cleaning.

Only use a mild soap and water solution for cleaning.

7.3.5 BATHROOM AND THERMOFORMED

ELEMENTS

 **CAUTION**

Do not use corrosive or abrasive products for cleaning.

Only use a mild soap and water solution for cleaning.

7.3.6 FLOOR

 **CAUTION**

- Do not use corrosive or abrasive products for cleaning.
- Do not use stiff brushes, hard cloths, or other abrasive media.

Use a mild soap solution and lukewarm water for cleaning. Rub the solution gently with a non-abrasive sponge and rinse with lukewarm or cold water.

7.4 GAS SYSTEM

- At least once a year, ensure that the system pipes and fittings are checked for perfect tightness by a dealer or workshop that has been authorized by the manufacturer.
- Regularly check that the gas cylinder connection hose is not damaged in any way. In any case, the hose must be replaced by the expiry date indicated on the hose itself. The hose must be replaced with a model that complies with the current safety regulations on gas devices.
- If a system defect occurs (e.g. smell of gas, abnormal consumption), immediately close the main valve of the gas cylinder and ventilate the space well by opening doors, windows and skylights. Do not light matches or lighters and do not smoke. Do not operate any electrical switches (e.g. service appliances, lights, starter motor). Ensure the fault is checked and repaired exclusively by personnel authorized by the manufacturer.
- Check the function of the safety devices designed to protect against gas leaks on a regular basis. The safety device must close automatically within a minute of the flame of the corresponding gas appliance being turned off. A click will be heard to indicate closure.
- Before travelling and at least once a week, check that the carbon monoxide detector and the smoke detector (if supplied) are working correctly (see par. 6.7.5).

7.4.1 CARBON MONOXIDE AND SMOKE DETECTOR

CAUTION

Do not use detergents or solvents to clean the carbon monoxide detector and the smoke detector.

NOTE

For more information on the maintenance of the smoke detector and the carbon monoxide detector, please see the documentation provided by the manufacturer of these devices.

7.5 WATER SYSTEM

- Clean the white water tank and system at least once a month (see par. 7.5.1).
- Regularly clean the tap filters of the various appliances with specific products to prevent limescale formation.
- Clean the drains and the grey water tank regularly (see par. 7.5.2). Empty the grey water tank (see par. 6.9.2) when the corresponding light on the control panel comes on.
- Empty (see par. 6.9.3) and clean (see par. 7.5.3) the cassette toilet after using the vehicle and when the red light on the toilet control panel comes on.
- Clean the external filter of the water pump regularly (see par. 7.5.4), particularly when the water flow rate from the taps is reduced despite:
 - cleaning the tap filters;
 - ensuring there is water in the white water tank;
 - checking that the pump is working.
- Check the tightness of the pipe clamps for the various devices (pump, taps, wash basin drains, etc.), especially the hot water pipes.

7.5.1 CLEANING THE WHITE WATER TANK

 **WARNING**

When cleaning the white water tank and system, do not use harmful products which could pollute the water contained in the tank and the system as a whole.

ATTENTION

- **When cleaning, use disinfectant liquids commonly found in pharmacies and follow the manufacturer's dosage and instructions.**
- **The white water tank has an inner filler cap for cleaning, located in the top part of the tank.**

Thoroughly clean the tank and corresponding ducts at least once a month. To clean the white water tank and water pipes:

1. Empty the white water tank completely by opening all the taps and letting the water flow out until it is completely emptied.
2. Open the inner cap inside the white water tank and clean the inside with a damp cloth.
3. Pour the disinfectant solution into the white water tank.
4. Fill the white water tank using the external filler cap (see par. 6.9.1).
5. Bring the white water system up to pressure by operating the pump from the control panel and let the product work inside it, in accordance with the times provided by the manufacturer.
6. Wash out the white water system by opening the taps of the various system appliances until it is empty.
7. Refill the white water tank and rinse the system out by opening all the taps until the white water tank is completely empty.

7.5.2 CLEANING THE GREY WATER TANK

ATTENTION

When cleaning the tank, use specific products for treating drains and follow the manufacturer's dosage and instructions.

CAUTION

Do not use corrosive products to clean drains and the grey water tank. The use of corrosive products could damage the components of the drainage system.

Regularly clean the grey water drains and the tank as follows:

1. Pour the cleaning product into the drains connected to the grey water tank (kitchen sinks, toilet and shower).
2. Rinse the product in accordance with the timings and methods indicated by the manufacturer.
3. Empty the grey water tank (see par. 6.9.2).

7.5.3 CLEANING THE CASSETTE TOILET

ATTENTION

When cleaning, use specific products for treating cassette toilets and follow the manufacturer's dosage and instructions.

Empty and clean the cassette toilet after using the vehicle and when the red light on the toilet control panel comes on.

To clean, proceed as follows:

1. Remove and empty the cassette toilet (see par. 6.9.3).
2. Insert the cleaning product into the tank.
3. Fill the tank with water.
4. Leave the product to act in accordance with the timings and methods indicated by the manufacturer.
5. Empty the tank and reinsert it into its seat on the side of the vehicle.

CAUTION

After each emptying of the cassette toilet, top up the disinfectant product as indicated in the instruction booklet for the toilet and the product itself.

7.5.4 CLEANING THE WATER PUMP EXTERNAL FILTER

Clean the external filter of the water pump regularly, particularly when the water flow rate from the taps is reduced despite:

- cleaning the tap filters;
- ensuring there is water in the white water tank;
- checking that the pump is working.

To clean the external filter of the pump, proceed as follows:

1. Turn off the water pump switch from the control panel.
2. Empty the white water tank (see par. 6.9.1) and all pipes in the hydraulic system.
3. Access the water pump (**A** - Fig.7.1) by removing the cushions from the dinette sofa and removing the drinking water tank compartment lid.
4. Unscrew the plastic connection (**C** - Fig.7.1) between the filter and the drain tube.

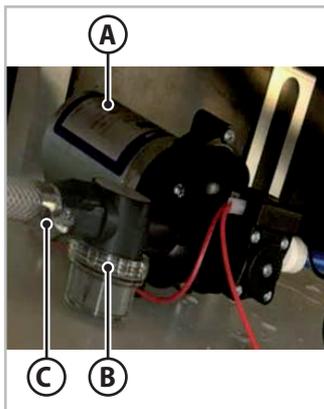


Fig.7.1 - External water pump filter

5. Undo the transparent cover (**B** - Fig.7.1) on the filter and extract the filter body.

6. Clean the filter with water and a small brush.
7. Refit the filter.

CAUTION

The filter on the pumps with an internal (pressure switch) filter should be cleaned by a dealer or workshop authorized by the manufacturer.

7.6 WHEELS AND TYRES

CAUTION

Read all the information and warnings regarding tyres in the chassis manufacturer Owner Handbook very carefully.

- Check the tyres regularly for wear, check the tread depth and check for any damage to the sidewalls.
- Make sure the depth of the tread meets the minimum required standards as set out in the Highway Code.
- To replace the tyres:
 - Always use tyres of the same type, make and version (summer or winter) as those fitted on the vehicle.
 - Only use the tyres permitted for the type of wheels fitted on the vehicle. The permitted dimensions are shown on the vehicle registration certificate.
- With new tyres, drive at a sensible speed for the first 100 km to allow

them to run in.

- During periods of prolonged storage, it is good practice to place the vehicle on special stands to reduce the weight on the tyres, or alternatively, to move the vehicle once a month so as to modify the part of the wheel resting on the ground. These precautions prevent tyre deformation and reduce pressure points on the wheel bearings.

7.6.1 TYRE INFLATION PRESSURE

- The inflation pressure of the tyres should be measured with the tyres cold.
- Check the tyre pressures regularly.



WARNING

Loss of stability. If the tyre inflation pressure is too high or too low, this can adversely affect safe driving, result in irregular wear and cause a puncture.

NOTE

To check the tyre pressure values recommended for the vehicle, please see the chassis manufacturer Owner Handbook, using the figure given for fully laden conditions.

7.6.2 CHANGING A WHEEL

- To repair or replace a wheel:
 1. If necessary, signal vehicle emergency conditions using the warning methods provided for by the Highway Code.
 2. Engage the handbrake and put the vehicle in first gear.
 3. Position the chocks so that they prevent the vehicle from moving.
 4. Lift the vehicle at the points indicated by the chassis manufacturer with the appropriate lifting equipment.
 5. Proceed with repairing or replacing the wheel.



WARNING

Danger of crushing:

- **Never attempt to lift the vehicle by holding the body.**
- **Never lie down under a raised vehicle.**
- **Do not start the engine while the vehicle is raised.**

- Replacing the rims with others of a different type not designed for the vehicle can adversely affect safety when driving.

ATTENTION

Models that do not have a spare wheel come with an inflation compressor with a 12 V power supply and current socket to be inserted into the cigarette lighter, plus a repair kit for punctures. The packaging contains the instructions for using the kit and the compressor.

**WARNING**

Repairs carried out using the kit are temporary and are only designed to get the vehicle to the nearest tyre repairer to have a permanent repair carried out. If the tyre has a puncture and has been repaired using the kit supplied, drive slowly and very carefully: do not exceed the top speed of 80 km/h for any reason.

7.7 ELECTRICAL SYSTEM**7.7.1 FUSES**

- Ensure that when replacing a blown fuse, the device to which it is connected is turned off. Replace with an original fuse with the same value and colour.
- If, after replacing a blown fuse, the new one also burns out, visit a car electrician or a trusted dealer to replace the fuse and identify the nature of the fault.
- The main fuses of the vehicle can be found in the fusebox, protected by a plastic cover, which may be located on the front of the dinette compartment on the driver's side or the passenger's side, depending on the model. Other fuses are located near the individual appliances (e.g. the cassette toilet).

ATTENTION

If one of the utilities is not working, after checking the condition of the fuses in the control unit, read the manufacturer's instructions for the device that is not working in order to check the presence and location of the relevant protective fuse.

NOTE

For more information regarding the fuse holder, please refer to the documentation provided by the relevant manufacturer.

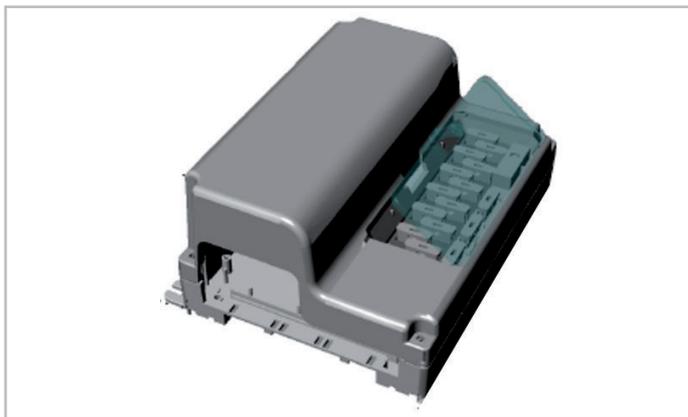


Fig.7.2 - C/Poliswitch fuse holder

External lights replacement

WARNING

On Sem-integrated and Attic camper models, before replacing the external front lights on the vehicle, read the general instructions and warnings about replacing bulbs very carefully, especially halogen bulbs; this information can be found in the chassis manufacturer's owner handbook.

7.7.2 REAR LIGHT CLUSTER

CAUTION

In the event of a malfunction of the external rear lights, contact a workshop or dealer authorized by the manufacturer.

7.7.3 OVERCAB SIDE MARKER LED LIGHTS

To replace the bulb in the overcab side marker LED lights, proceed as described below:

1. Switch off the exterior lights and remove the ignition key.
2. Remove the white-red cover (A - Fig.7.3) by removing the mounting screws (B - Fig.7.3).
3. Remove the damaged bulb.
4. Fit the new bulb.
5. Reassemble the white-red cover (A - Fig.7.3) using the mounting screws (B - Fig.7.3) previously removed.

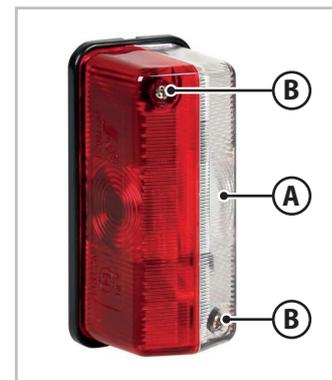


Fig.7.3 - Overcab side marker LED lights

7.7.4 AUXILIARY BATTERY

Suitable maintenance prolongs the life of the battery and makes sure that it is always in a position to supply the energy required.

Follow the maintenance instructions and the warnings from the manufacturer of the auxiliary battery carefully.

CAUTION

- After installing the battery, check the correct setting of the battery charger and/or the control panel to avoid problems with the electrical system.
- Depending on the equipment, the vehicle may be designed to be fitted with either one or two auxiliary batteries. If two auxiliary batteries are installed, use batteries of the same type.

WARNING

- Danger of electrocution and corrosive materials:**
- For maintenance operations not described in this manual or for the replacement of the auxiliary battery, contact a dealer or workshop authorized by the manufacturer.
 - To access the battery for maintenance operations or to replace it, contact a dealer or a workshop authorized by the manufacturer.

WARNING

Danger of electrocution and corrosive materials:

- If the auxiliary battery needs to be removed from its housing for replacement, contact a dealer or workshop authorized by the manufacturer.
- Do not try and open the cover on sealed batteries.

Routine maintenance (to be carried out once a month)

- Check the tightness of the battery connection terminals.
- Check the battery charge status from the control panel.
- When necessary, restore the battery charge by connecting the lead to the 220 V mains power: the battery charger is activated automatically.

Supplementary maintenance (to be carried out twice a year)

- Clean and grease the battery terminals with a special product or with petroleum jelly to protect them from oxidation and corrosion.
- Check the tightness of the connection terminals.
- Sealed and/or gel batteries do not require maintenance. The level of the electrolyte does therefore not have to be checked or distilled water added. However, the battery terminals do need to be cleaned and greased with a special product or with petroleum jelly, to protect them from oxidation and corrosion. The tightness must also be checked. The operations of checking and recharging the battery are the same as

those for traditional batteries.

- It is advisable to recharge the battery on a regular basis, even if the vehicle is not used for a long time.

7.8 BRIEF STORAGE



If you plan on storing your vehicle for a brief or long period, as well as following the instructions given below, read the warnings and instructions for storing the vehicle in the chassis manufacturer's owner handbook.

7.8.1 BRIEF STORAGE

If the vehicle is expected to be stored for a brief period, observe the following instructions:

- Remove perishable foods.
- Clean the inside of the refrigerator and leave the door ajar so that air can circulate.
- Wash the vehicle thoroughly, both inside and out.
- If possible, park the vehicle on flat ground, in a covered area which is dry and well ventilated.
- Position the stop chocks.
- Recharge the batteries fully, leaving the vehicle connected to the 220 V mains power for around 12 hours.
- Disconnect the auxiliary battery.
- Immediately after use, before storage, ventilate the vehicle.

- Leave the air intakes that must not be obstructed clear.
- Check that all the gas taps for the appliances on board are shut, along with the main cylinder valve.
- Drain the hydraulic system completely and clean it. Drain both the tanks and the boiler and check that the pipes are empty.
- Lift the windscreen wiper blades away from the glass.
- Check the tyre pressure.
- Before using the vehicle again, wash out the fresh water tank and the hot and cold water supply pipes carefully, rinse thoroughly and then check the tyre inflation pressure again.

7.8.2 PROLONGED STORAGE

If the vehicle is expected to be stored for a long period, observe the following instructions:

- Remove perishable foods.
- Clean the inside of the refrigerator and leave the door ajar so that air can circulate.
- Wash the vehicle thoroughly, both inside and out.
- Cover the cushions with a cloth made from a breathable fabric to protect them from the sun.
- Fill the fuel tank completely to prevent the formation of condensation which can produce corrosion and cause serious damage to the fuel system.
- If possible, park the vehicle on flat ground, in a covered area which is dry and well ventilated.
- Engage first gear and check that the handbrake is not applied.
- Position the stop chocks.

- Recharge the batteries fully, leaving the vehicle connected to the 220 V mains power for around 12 hours.
- Disconnect the auxiliary battery.
- Disconnect the negative terminal from the engine battery pole and check the charge every three months.
- Recharge the batteries when necessary.
- If the batteries are not disconnected, check the charge level once a month and keep it at the maximum level.
- Leave the air intakes that must not be obstructed clear.
- Check that all the gas taps for the appliances on board are shut, along with the main cylinder valve.
- Remove the gas cylinders even if they are completely empty and place them in a covered, well-ventilated area.
- Drain the hydraulic system completely and clean it. Drain both the tanks and the boiler and check that the pipes are empty.
- Sprinkle talc on the windscreen wiper blades and lift them away from the glass.
- Inflate the tyres to a pressure of 0.5 bar higher than the recommended figure and check regularly.
- Before using the vehicle again, wash out the white water tank and the hot and cold water supply pipes carefully and rinse thoroughly, then restore the tyre inflation pressure to the recommended value.
- Before setting off after a long period of storage, ensure the braking system and the gas system are carefully checked at a workshop authorized by the manufacturer.

7.8.3 WINTERIZATION

If the vehicle is expected to be in storage during the cold seasons, observe the following instructions:

- Clean the body, the underbody and the floor thoroughly.
- Drain the hydraulic system completely.
- Disconnect and remove the batteries and store them somewhere that is protected against frost.
- Disconnect the gas cylinders and remove them, even if they are completely empty.
- Remove the cushions and store them in a dry place.
- Leave the air intakes that must not be obstructed clear.
- Clean the inside of the refrigerator and leave the door ajar so that air can circulate.
- Place dehumidifiers inside the vehicle and air the interior every three to four weeks.
- Clean and grease the hinges on the doors and all the outer flaps.
- Spray lubricant oil into the locks and the interior closure mechanisms.
- Apply a small amount of talc to the rubber seals.
- Disconnect the auxiliary battery.
- Take care in the case of heavy snow falls. In such cases, remove the snow from the roof of the vehicle.

7.9 STANDARD FEATURES FOR INSTALLING ACCESSORIES

NOTE

For the cleaning and specific maintenance operations to be carried out on the accessories installed on the vehicle, please see the instruction booklets provided by the respective manufacturers.

The vehicle is equipped with channelling for the assembly of:

Bicycle rack attachments

Attachment points for a bicycle rack are present on the back wall of the vehicle.

TV socket

An area is provided in vehicle for installing a television. The TV cable connection is located near this area.

LCD TV bracket

Some vehicles are provided with an LCD TV bracket (optional) and aerial socket (standard). The type and installation of the LCD TV bracket varies according to the vehicle model.

Awning

An awning can be installed on the door side of the vehicle.

8 WARRANTY

ATTENTION

- Light visible through some points of the cell structure depends on the construction specifications of the body and the physical properties of the fibreglass and is not in any way an indication of a construction defect or a fault in the waterproofing of the joints, thermal insulation or the structural soundness of the vehicle.
- On some models, the construction technology does not include the bonding of the fibreglass panel covering the roof of the vehicle and therefore, in certain climatic conditions, the fibreglass could be subject to slight thermal expansion which could manifest itself in the form of undulation. This does not, under any circumstances, indicate a construction defect or deficiency in the waterproofing or thermal insulation or the structural soundness of the vehicle.

8.1 STIPULATED WARRANTY

The warranty booklet is delivered with the vehicle.

The vehicle must be serviced once a year at the sales dealer, a dealer or workshop authorized by the manufacturer, to ensure that it is maintained in safe, efficient conditions under the terms of the warranty.

8.2 AFTERSALES SERVICE AND WARRANTY

The warranty services are provided by dealers and workshops authorized by the manufacturer; the updated list of these is always available on the "www.trigano.it" website.

When a repair needs to be carried out under warranty, please display the Warranty Certificate provided along with the vehicle, filled in and stamped by the sales dealer, along with the receipts for any operations carried out previously.

Components such as the chassis and its components, the refrigerator, the Combi heater, the Alde boiler, the oven, the control unit, the sanitary fittings and auxiliary battery are covered under the original manufacturer's warranty. The respective warranties are supplied together with the vehicle; please check that these are present.

It should also be remembered that the warranty cannot be enforced and should therefore be considered as having expired in the case of defects stemming from scheduled maintenance that has not been carried out or in case of obvious negligence regarding regular maintenance or by tampering with the original product.

In case of uncertainty concerning the application of the warranty, the dealer will charge the customer for the repair; reimbursement will only be considered once the case has been examined by the manufacturer.

8.3 WARRANTY CONDITIONS

- The dealer authorized by the manufacturer has no obligation under the warranty to repair defects that are a result of normal wear and tear or misuse, usage that differs from intended use, insufficient maintenance, overloading and excessive speed.

- Any modifications made to the vehicle, such as repairs or tampering, even partial, carried out by someone other than the manufacturer's workshops, dealers or authorized workshops, without prior, written agreement from the manufacturer, will automatically lead to the warranty being forfeited.

ATTENTION

- **The warranty is also forfeited if spare parts other than those stipulated by the manufacturer are fitted on the vehicle.**
- **The warranty ceases to be effective in case of a change of ownership if the new owner does not notify the authorized dealer within 10 days, in order for the new ownership to be registered on the manufacturer's portal.**
- **The warranty does not cover parts and accessories not made by the manufacturer, such as: chassis, indicator lights, refrigerators, heaters, ovens, boilers, ovens, hot water heaters, wash basins, stove tops and tyres. The manufacturer assigns the rights to the warranty (legal and/or stipulated) to the buyer for these products, with regard to the manufacturers of these products.**

- The warranty conditions illustrated above are absolute and irrevocable; the buyer is bound to accept them when purchasing the vehicle.

8.4 WARRANTY AGAINST INFILTRATIONS

NOTE

For the conditions of the stipulated warranty against infiltrations, please refer to the booklet accompanying the vehicle.

ATTENTION

- **Ensure that the vehicle is inspected in accordance with the body inspection procedures as defined by the manufacturer. The time allowances and methods for these checks are described in the warranty booklet.**
- **The customer is responsible for the cost of the inspection, and this should be documented both by filling in the respective inspection coupons enclosed with the warranty and through the relevant fiscal documentation (receipts, invoices etc.), the original copies of which are enclosed.**

ATTENTION

If the vehicle is sold and there is a change of ownership, registering the new ownership on the manufacturer portal will allow the new owner to take over the warranty from the previous customer, providing that the conditions set out in this booklet are strictly followed and the implementation of the routine maintenance can be verified through the fiscal documentation.

This warranty ceases to be effective in the following cases:

- In case of infiltrations resulting from damage caused to the vehicle in accidental circumstances such as an accident, accessories which have not been properly fitted, negligence, treatment of the body with unsuitable materials or any other factor not directly attributable to the manufacturer.
- In case of any confirmed damage not notified within 30 days of the date of occurrence to a dealer or workshop authorized by the manufacturer, or if non-genuine spare parts or unsuitable materials were used.
- If the (current or previous) customer has failed to adhere to the regular inspection frequency and consequently did not repair damage which led to or may have led to infiltrations.
- The warranty ceases to be valid in case of change of ownership where the new owner fails to notify the manufacturer.

In the case of manufacturing defects concerning the body waterproofing during the period covered by the warranty, the manufacturer is responsible for:

- the labour costs for any repairs;
- materials and components used for the repairs.

The customer, meanwhile, is responsible for the following:

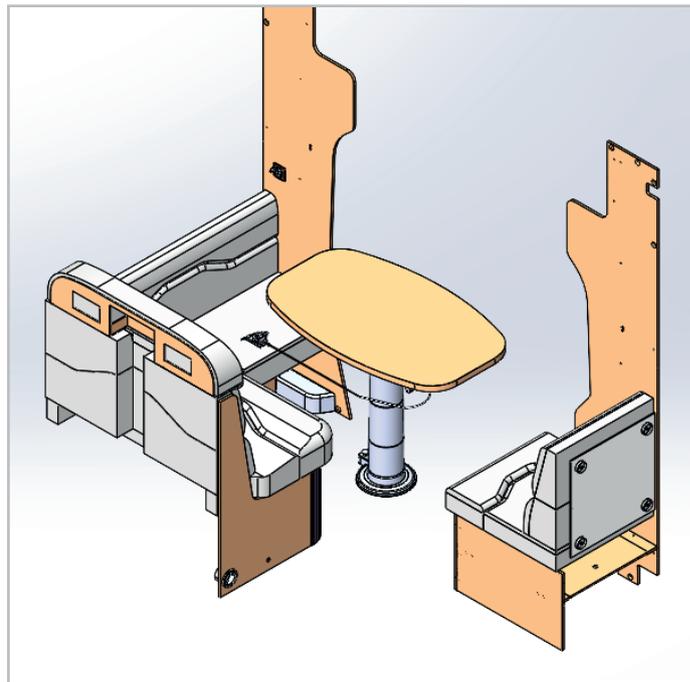
- costs for implementing the inspection coupons;
- transport costs for moving the vehicle to a dealer or workshop authorized by the manufacturer, selected in order to carry out the inspection and any necessary repairs;
- cost of repairs in the case of an accident or incorrect use of the vehicle;

- any type of damage or expense connected to the inability to use the vehicle whilst the repairs are being carried out.

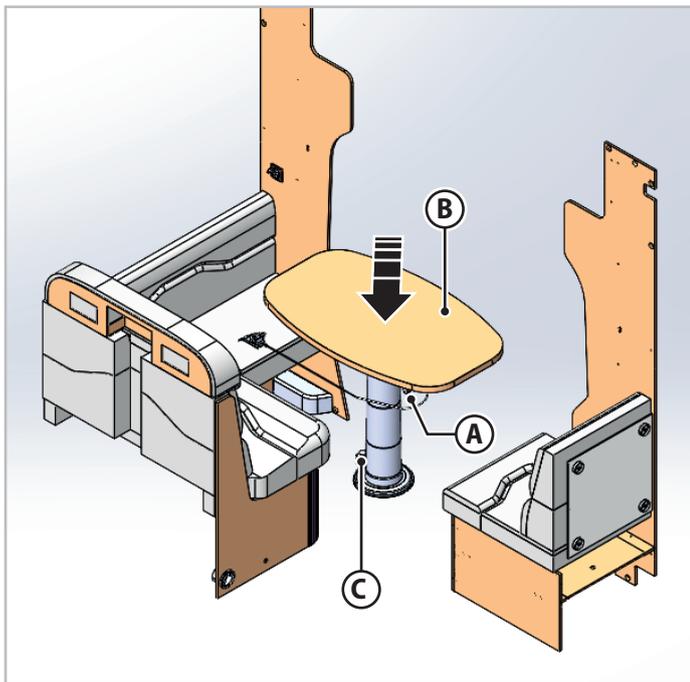
9 APPENDIX

9.1 COMPOSITION OF THE FRONT DINETTE COMPARTMENT BED

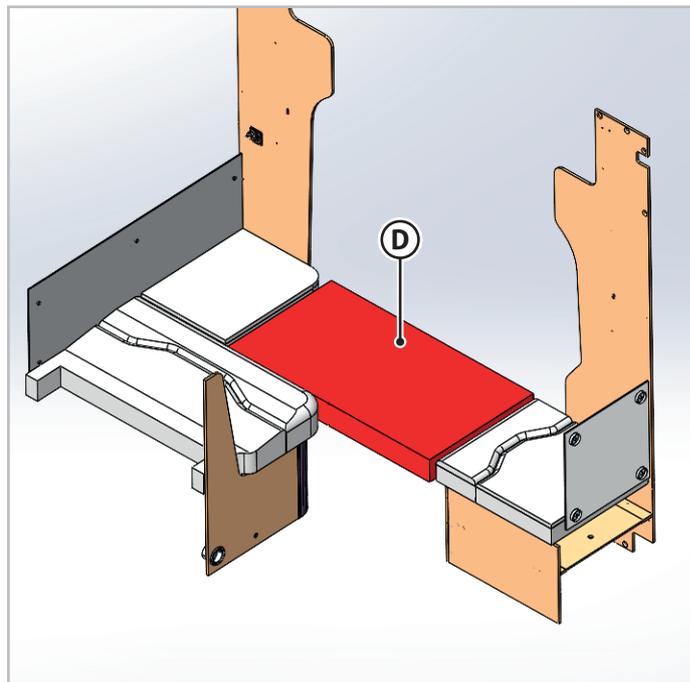
Type A



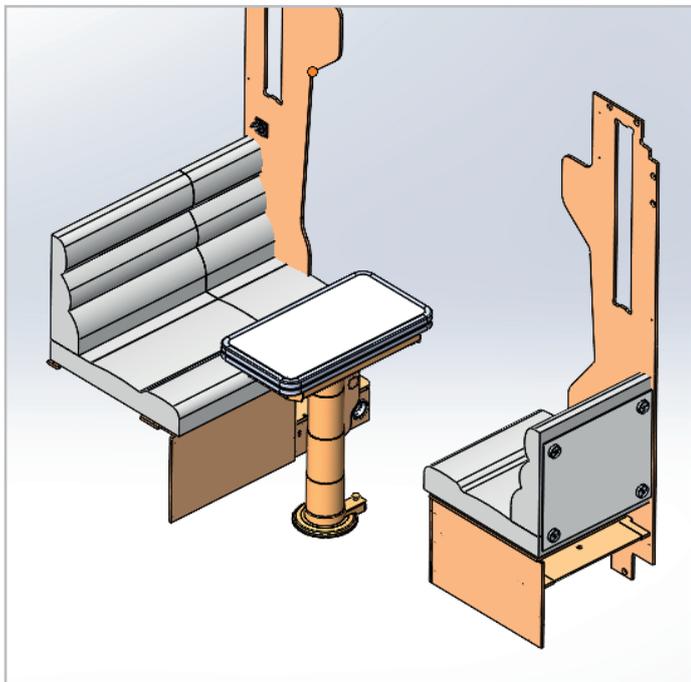
1. Day configuration



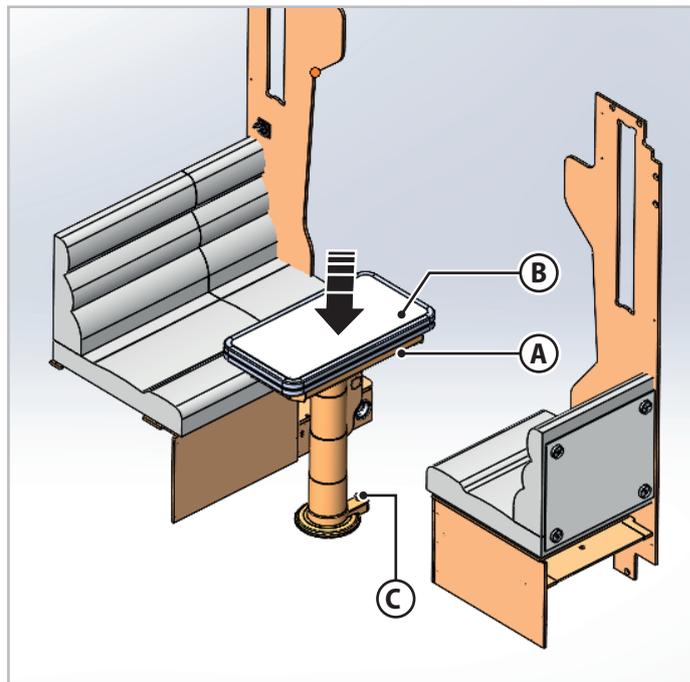
2. Use the lever **A** to bring the table top **B** to the central position between the sofa and the armchair. Press the button **C** and lower the table top **B**.



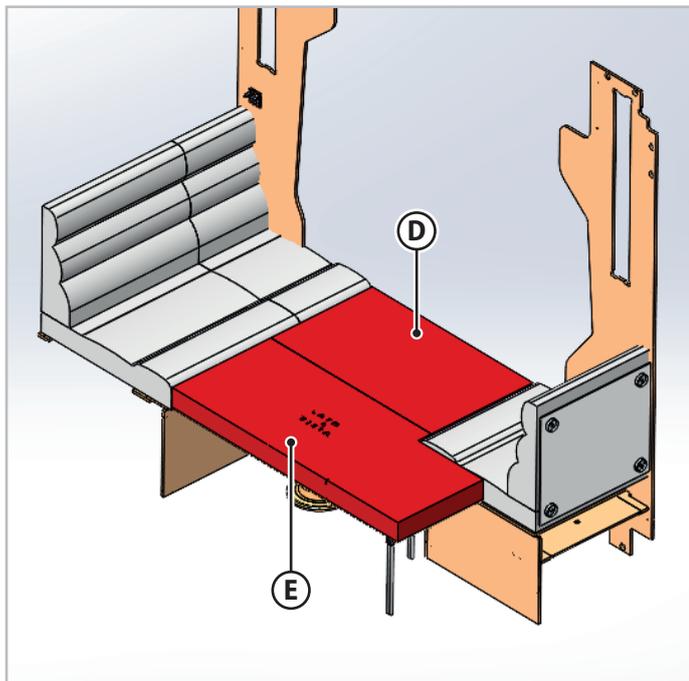
3. Position the additional cushion **D**.

Type B

1. Day configuration

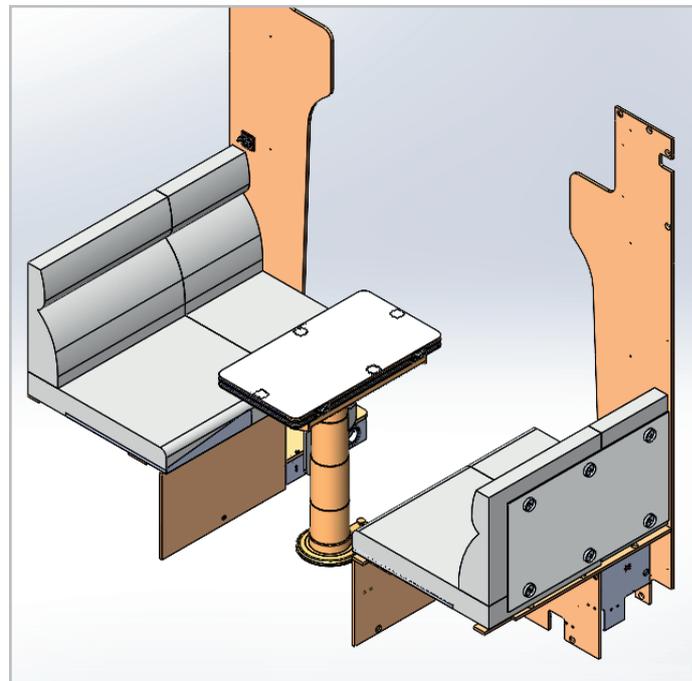


2. Insert the support extensions to create the bed. The extensions are equipped with support legs.
3. Use the lever **A** to bring the table top **B** to the central position. Press the button **C** and lower the table top **B**.
4. Release the latches positioned under the table and rotate the table top by 90°.
5. Open the table top **B**, resting it against the structure below.

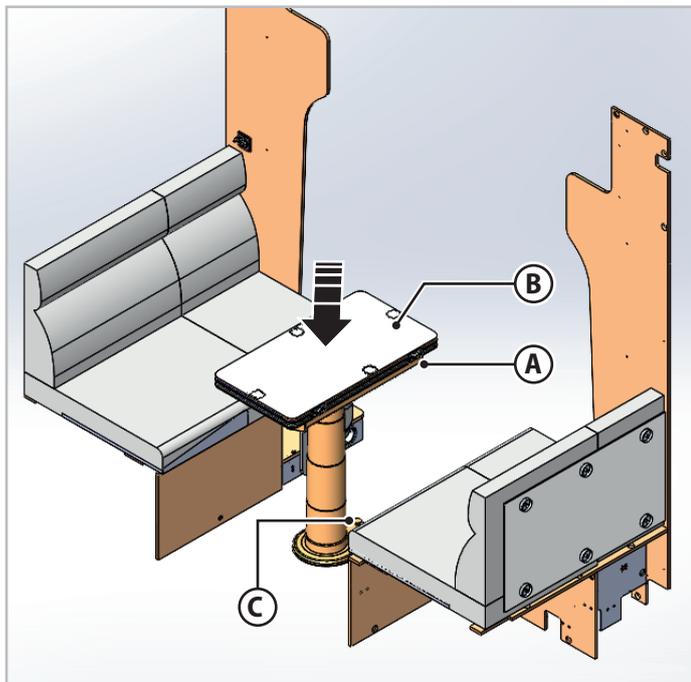


6. Position the additional cushions **D** and **E**.

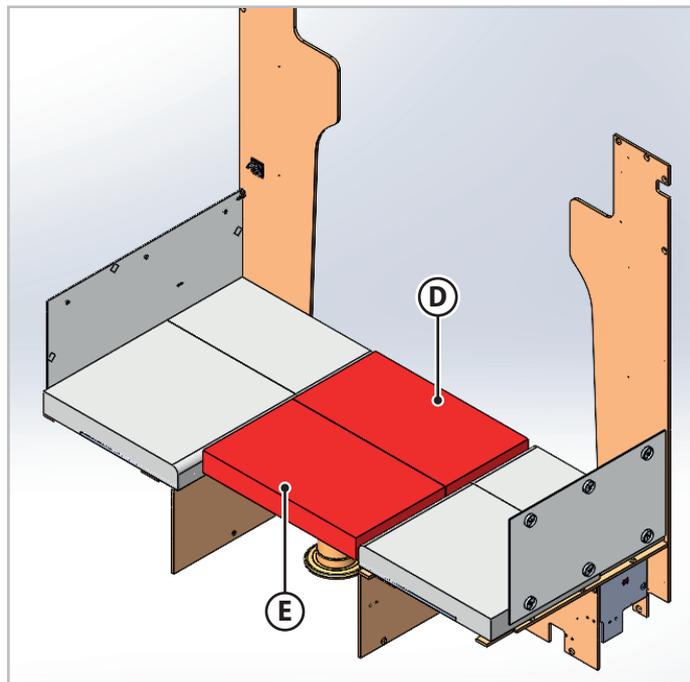
Type C



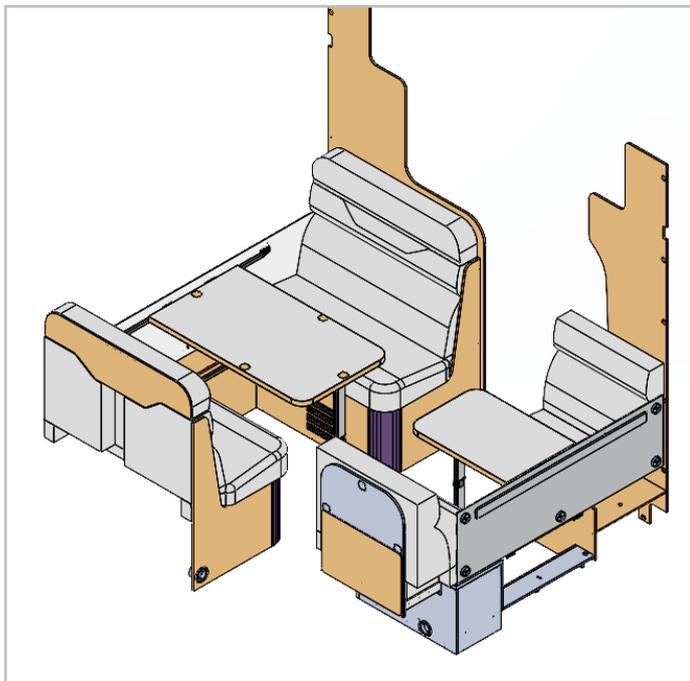
1. Day configuration



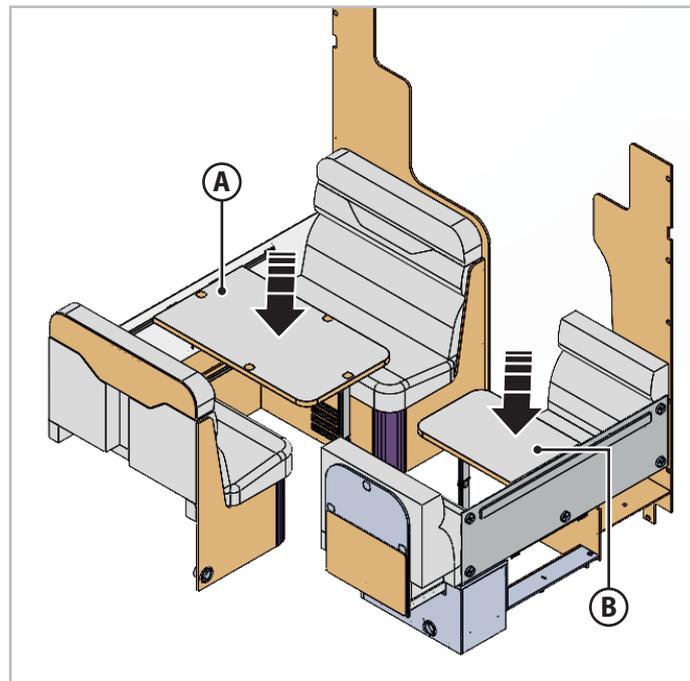
2. Use the lever **A** to bring the table top **B** to the central position. Press the button **C** and lower the table top **B**.
3. Release the latches positioned under the table and rotate the table top by 90°.
4. Open the table top **B**, resting it against the structure below.



5. Position the additional cushions **D** and **E**.

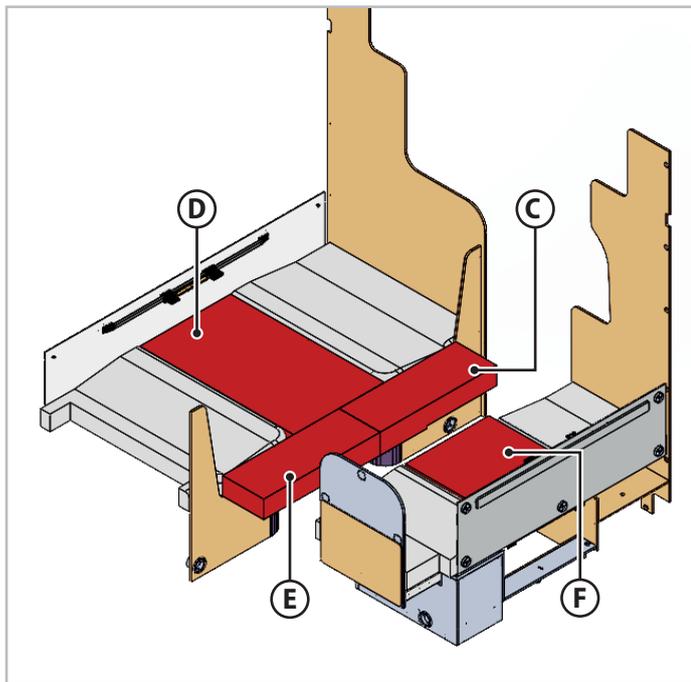
Type D

1. Day configuration



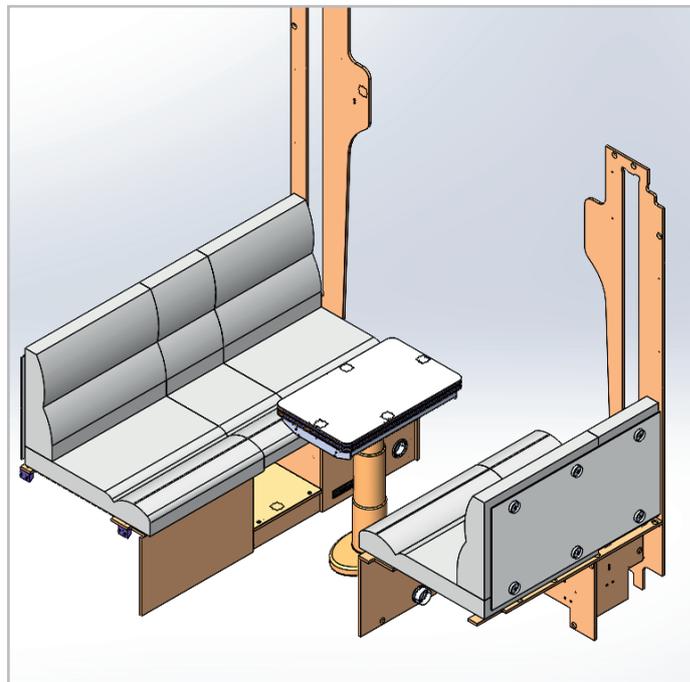
Repeat the steps on both tables (**A** and **B**):

2. Raise the back part of the table.
3. Release the wall fasteners under the table.
4. Detach the table from the wall guide.
5. Using the button on the leg, bend the leg itself and rest the table between the two seats.

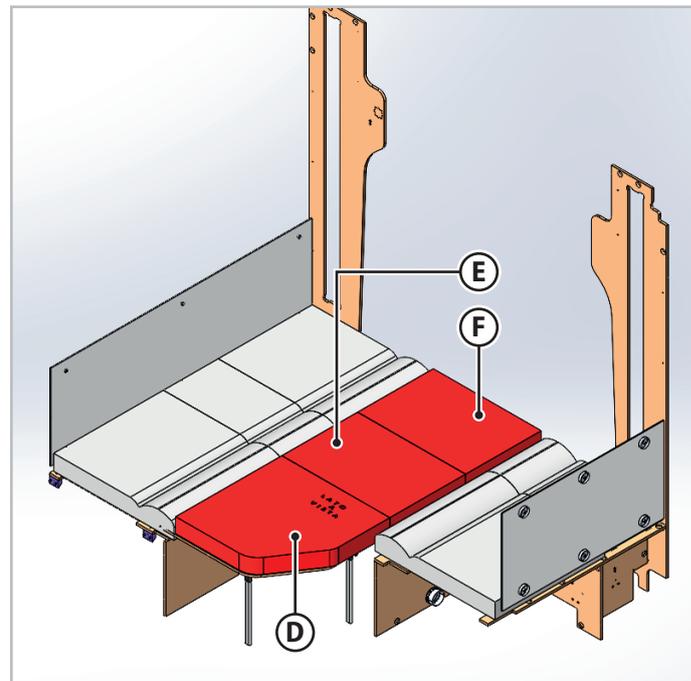
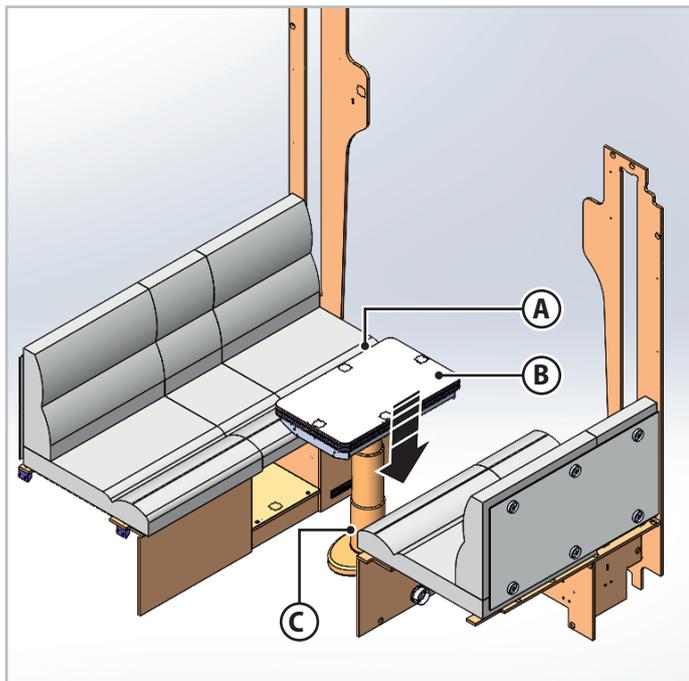


6. Position the additional cushions **C, D, E** and **F**.

Type E

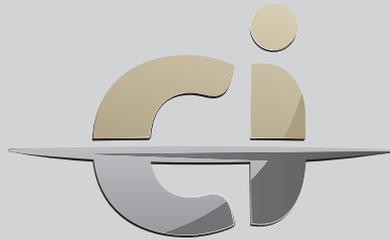


1. Day configuration



2. Insert the support extensions to create the bed. The extensions are equipped with support legs.
3. Use the lever **A** to bring the table top **B** to the central position. Press the button **C** and lower the table top **B**.
4. Release the latches positioned under the table and rotate the table top by 90°.
5. Open the table top **B**, resting it against the structure below.

6. Position the additional cushions **D**, **E** and **F**.



TRIGANO

TRIGANO SPA

 Loc. Cusona
53037 San Gimignano (SI) - IT

 +39 0577 6501

 info@trigano.it



www.caravansinternational.it/en