JOKER
Maintenance and operation

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1. Journey preparations

Before starting a journey in your brand-new camper we suggest to first check the following list of necessary preparations to make:

**Papers**
- Vehicle Licence
- Identity card or passport
- Vaccination certificate
- Drivers licence
- Green Insurance Policy
- International medical cards
- Necessary papers for you pets
- Road Maps
- Guide Book

**Vehicle preparations**
- General car inspection
- Tool Kit
- Have battery checked
- Check gas reserve
- Refill water tank

**Camping gear**
- Underwear
- Linen
- Garments
- Toiletry
- Foot-gear
- Rainwear
- Pocket-lamp
- Sports-articles
- Waterproof matches
- Radio (possibly)
- Travel readings
2. Camping Equipment

Your vehicle can, according to your order, be equipped with:

- gas installation
- refrigerator
- heater

This manual describes all possible camping variations even though they might not be installed in the individual case.

3. Loading – tire pressure

3.1 Loading

An accurate loading of the vehicle with garments, luggage, food etc. is important in view of a good driving condition.

When stowing away items give preference to the lower storage compartments to place the heaviest loads. Assign the upper storage compartments for lighter objects.

3.2 Loading of the luggage-rack (pop-up roof)

We recommend to use a luggage-bag (Westfalia order No.: 216 004 443 001).

Maximum loading capacity: 50 Kgs. or 110 Lbs. Care for an even load of items.

3.3 Tyre pressure

Your camper and the complete camping gear & equipment represent a certain loading condition. However, when following the VW-Works instructions, driving will a pleasure, with nothing to worry about. Attention should be paid, however, to the special advice given in respect to highway driving, particularly at high speed.

4. To observe before and whilst driving

4.1 Have all the windows and top vent closed to prevent draughts.

Before starting on a journey be sure that your gas, gasoline and water tanks are filled up and the 12 V booster-battery has been loaded.

As soon as the vehicle is in motion, make sure by looking through the rear-view mirror that the rear window is visible. It is important to keep back seats area in view particularly when travelling with children.

Height of the vehicle:
- Pop-up roof 2050 mm (abt. 6.726 Ft.) when shut
- Solid high roof 2700 mm (abt. 8.858 Ft.)

4.2 When entering a gasoline station

Have your gasoline heating and your refrigerator (if turned on gas operation) switched off, when approaching a gasoline station.

4.3 Fuel consumption:

Fuel consumption as per DIN 70 030, part 1, for Joker I and II

<table>
<thead>
<tr>
<th>Engine</th>
<th>Automatic:</th>
<th>1.6</th>
<th>2.0</th>
<th>2.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Driving:</td>
<td>City-driving liter/100 km</td>
<td>15.7</td>
<td>15.8</td>
<td>15.5</td>
</tr>
<tr>
<td>Constant speed</td>
<td>90 km/h liter/100 km</td>
<td>12.2</td>
<td>12.0</td>
<td>13.7</td>
</tr>
</tbody>
</table>

5. Parking

Please have the vehicles heights in mind when on the look-out for a parking or resting place.

Should you wish to raise the pop-up roof at such a resting place first check if there is enough space on top of the vehicle.

Before swivelling the front bucket seats, remember to release the hand-brake. This implies that when parking on a slope, the vehicle should be brought into safe position by either putting into driving or reserve gear or securing with a rock or wedge.

6. Heating

Your vehicle is equipped with an Eberspächer Gasoline-heating, Type B 2 L. This heating operates on fuel from your gasoline tank, though independently from the vehicle motor. Its hot-air exhaust is located in the rear seat bench panel. The heating-blower may also be used for indoor air-circulation. It is important that the heat-pipe, located at the bottom of the seat bench panel, is always kept unobstructed.

When operating the heating, use the thermostat as follows:

1 = Switch
2 = Green Control Lamp
3 = Red Control Lamp (= overheating breakdown)

**Power consumption 15 Watt**

Please observe the following official regulations:
The heat-changer is serviceable for 10 years whereupon it should be exchanged by an original spare of the manufacturer or by an appointed dealing company. The heating device has then to be provided with a label carrying the date of sale of the heat-changer as well as the mention "original spare part".

**Ventilation: (without fresh air supply)**

**Switch on:** Turn and press the tip-switch (1) to the left. The green control lamp (2) lights up and the (single stage) heating-blower starts running.

**Switch off:** Press back to bring tip-switch into initial position. Thereafter the green control lamp (2) goes out.

**Heating:**

**Switch on:** Turn and press the tip-switch (1) to the right. The green control lamp lights up and the starting process begins. The infinitely variable turning knob allows selection of the ambient temperature. After the temperature has been reached — each scaling grade being equivalent to abt. 5° C — the room-thermostat cuts off automatically both the pump and burner. The blower-motor continues running for abt. 2 more minutes whereafter it switches down to a reduced number of revolutions. In case the ambient temperature drops both the pump and burner will switch on again.

**Switch off:** Press back to bring tip-switch (1) into initial position. The blower-motor will - however - continue to run as long as the device will not have cooled off completely. It thereafter cuts off automatically.

Maintenance: Briefly switch on the heating even out of heating periods, i.e. abt. once month. Make sure that when refueling your tank the heater is always switched off. Never switch on the heater in a garage.

Technical data:
- Heating flow on „full“: 2500 Watt ± 10%
- Heating flow on „half“: 1300 Watt ± 10%
- Heating air volume: 80 Kg/h. ± 10% (= 176.36 Pds./h.)
- Rated voltage: 12 Volts
- Operating range: 10-14 Volts
- Max. consumption: 0.32 Lt./h. ± 5% (= 0.070 Gall.)

7. Refrigerator (gas-operation)

The RM 182 A-Electrolux-Kreft refrigerator is equipped with a newly developed absorber-cooling aggregate which guarantees full operation, even when parking on a slope or a grading stretch of 15% inclination. The device is suitable for Propane or Butane-gas only. The pressure suitable to the gas-storage cabinet is mentioned on the type-label. Do not operate at any other pressure. Furthermore, the device is not assigned for connection to city- or natural gas. It can be operated whilst driving, but if so, please observe the particular directions mentioned under para 4.2.

Operation control panel – Explanation of markings
A Turning knob of thermostat. The combined power/gas thermostat is efficient on 220 Volts as well as on gas-operation. The 12 Volts-operation, however, is not controlled thermostatically. Should the turning-knob be fully turned to the left – off the point where you feel a light resistance – the 220 Volts operation will be switched off. This same knob-position corresponds to gas operation in MIN-position (the gas operation gets switched off only when the gas supply connection is turned off).
B Press voltage selection tipswitch.
C Operating-knob of the air-pump as well as to actuate the Piezo-fuse. The knob twists for easier use.
D Flame indicator window.
E Screw cap of fuse
F Push-button to operate the ignition fuse.

Ignition of gas burner:
7.1 Bring the voltage selection switch (B) into position 0 (middle position).
7.2 Open the gas supply (gas-bottle valve and lock-valve for refrigerator).
7.3 Turn the thermostat-knob (A) on MAX. position.

7.4 • Actuate 5-7 times knob (C) as if pumping air.
  • Then press down the ignition fuse (F)-knob and hold down.

Simultaneously operate the piezo-ignition (C)-knob in rapid sequences repeatedly till the flame burns.

As soon as the burner ignites and the flame burns, you will see the flame indicator (D) move from white into green portion. Should the pointer remain in the green portion, hold knob (F) down for another 15 seconds whereafter the thermo-electric ignition fuse will automatically keep the gas-supply opened.

When a new gas-bottle has been connected, or after having refueled the tank there is always air left in the gas-conducts which can only evade through the gas devices. Since the refrigerator only has a small gas through-put we recommend to first set the cooker into operation where most of the air will escape.

7.5 Wait a few minutes and then check if the flame is still burning. Should the flame extinguish unexpectedly, the ignition fuse will immediately take action and will automatically shut the gas supply.

7.6 As soon as a sufficient throughout cooling has been reached you may set the selected temperature by turning the thermostat-knob (A) from max. into the desired position.

7.7 Turn off the gas supply to the device when the refrigerator has to be put out of operation.

7.8 The screw of the condensation water draining pipe has to be released as well to permit flow off of the condensation water. Subsequently re-fasten the screw.

7.9 Should you intend washing your car or drive into a washmobile, first put the plastic-cap (which is part of the vehicle supply) on the exterior, covering of the flue-vent. Should it happen that, nevertheless, water has flowed into the burner space, remove screw (F) of the condensation water draining pipe and let the water flow into a bowl.

To improve the cooling efficiency in case of high outdoor temperature, a 0.6 Watt fan located beneath the refrigerator unit, will switch on automatically as soon as the temperature around the condenser plates will have reached 60° C (140° F). The fan will again switch off, when the temperature will have dropped down to abt. 50° C (122° F).

Remark: The fan is connected to the 12 Volts-circuit so as to also be efficient at 220 Volts and on gas-operation.

At first operation start or when the burner space of the refrigerator is cold the burner-flame may go out after a short while due to still insufficient funnel-action inside the unit. Repeat then the ignition process as described under para 7.4.
7.10 Technical data:

**ELECTROLUX-KREFT**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gas operation</td>
<td>thermostatically adjustable</td>
</tr>
<tr>
<td>Gas connected load</td>
<td>15 g/h (0.176 oz)</td>
</tr>
<tr>
<td>Connector pressure</td>
<td>Cat l, liquid gas: 50 mbar</td>
</tr>
<tr>
<td>Power system</td>
<td>220 V 50 Hz</td>
</tr>
<tr>
<td>12 V</td>
<td>85 Watts thermostatically ajustable</td>
</tr>
<tr>
<td>Capacity</td>
<td>45 litres gross (9.90 Gall.)</td>
</tr>
<tr>
<td>Cooling agent</td>
<td>NH₃ absorber</td>
</tr>
</tbody>
</table>

8. Gas installation (gas bottle – gas tank)

8.1 Description of gas installation

The gas installation has been carried out according to safety directions, and has been controlled by the manufacturer. A corresponding control certificate will be remitted to you along with the vehicle papers. A renewal of the tightness and burning efficiency controls according to § 6.1 of the Technical Rules for „Liquid gas devices and Fire Places“ has to be carried out every 2 years in vehicles and to be inserted in the surrendered vehicle papers. There are about 1000 checking points in the Federal Republic of Germany. Where your next neighbouring checking point is plus more information can be learned from the „Liquid Gas Association“ (Verband für Flüssiggas – VFG) Frankfurt (Phone: 0611-74 60 41) as well as from Westfalia-Werke and all the Westfalia dealers. Your vehicle is equipped with a gas bottle or a gas tank.

All the installed units are ignition-safeguarded, that is, should the flame be extinguished, the safety fuse will automatically turn off the gas supply.

Please bear in mind that it is dangerous and not permitted to have modifications made on the devices and installations.

In case repair work has to be carried out, please request a confirmation of the duly made repair of the units and installations. A gas tightness control has always to be performed when the work is done.

8.2 Shut-off valve

In case of arising danger within the gas system, first turn off the main shut-off valve (yellow knob) in the kitchen cabinet and as soon as this is done, both the remaining other valves, too.

In case none of the gas appliances are to be used shut-off the main valve (C).

8.3 Pressure regulator

The pressure regulator is located near the gas tank behind the lockable lid of the gas tank. Should your vehicle have a gas bottle, this same is to be found in the gas bottle compartment.

The pressure regulator is fitted in the supply installation. This non-adjustable regulator reduces the bottle pressure down to the working pressure of the appliances. These are operated within the vehicle at a working-pressure of 50 mbar.

The pressure regulators are so-placed to let emanating gas escape to the out side in case of an eventual actuation of the safety valve.

**Shut off installations**

A = Shut off valve of cooker  B = Shut off valve of refrigerator  C = Main shut off valve

The picture shows all the shut-off valves in „open“ position.

8.4 Gas Cooker

To utilize the cooker, first open the valve inside the kitchen cabinet. Press in and turn the control knob to the left to ignite the burner. After ignition, hold the grip pressed in for abt. 5-7 seconds. Shortening this space of time may have as a result that the flame extinguishes. Both the burners of the cooker are equipped with an ignition safety fuse.

When operating the gas cooker provide indoor aeration (opening of roof-vent, windows and the like). The open hearths of the cooker must not be used as heaters.

Please observe the directions on the sticker attached to the lid of the kitchen unit.

Cleaning the gas cooker

First remove the gas cooker grating to clean the surface around the burners. While cleaning take care not to bend the protruding thermo-element. A deformed or defective thermo-element no longer permits the use of the burner as the flame will go out again and again despite extended knob pressing. In such cases there is no other solution left as to have the thermo-element replaced by a specialist. The sight of a dim flame after a certain time is a sign of faulty burning. We recommend to clean then the burner covers with an alkaline solution or/and a brush.

Should you have a kitchen-combination cabinet, your cooker will be placed near the sink. Lift the cover (safety fuse is at top right) and you will find a heat shield held inside of the cover.

In case the burners are not to be used, loosen the heat shield and it will become an ideal side-board or drainer for the sink.

Before lifting the cover of the kitchen-combination cabinet, unlock the driver’s seat backrest (set into upright position).

8.5 Gas supply

Gas bottle

The gas bottle is situated in a specially designed plastic container inside the storage compartment next to the clothes cabinet.

Always use 5 Kg (11.02 Pds.) gas bottles acc. to DIN 4661 of Propane or Butane or a mix of both. During winter camping only use pure Propane, as Butane would not convert into gas at temperatures below 0°C (32° F).

Gas bottle exchange

Twist off the cover (having a sticker on top). Take particular care that the joint of the gas pipe conduct and the circular joint of the cover do fit perfectly well.

Do not cover up the floor vent.

Check if the twisting safety devices operative to avoid rattling noises.

The outgoing pipe should not be bent and its radius should not exceed 70 mm (2.75 inches) and is to be tended with utmost care.

Gas tank
The gas tank is placed on the left side of the vehicle underneath the floor and is recognizable at the lid and at the particular colouring (red).

Refueling of the gas tank to be made with Propane gas acc. to DIN 51621 only and by authorized gas service-stations either in your home country or abroad.

A control of the gas tank has to be performed every 10 years. An index of gas service-stations in Europe is also supplied.

The filling indicator is laid out in %. The 85% filling indication corresponds to a filling amount of 10 Kg (22.04 pds.) and should on no account be exceeded. The following scale scheme will give you details as to the capacity compared to the filling indicator. During winter months operation and cross-country driving we recommend to actuate more frequently the shutter of the regulator cover.

Evaluation of gas supply
The indicator unit shows the filling condition of the tank in %. The scheme figured above describes the capacity in kg compared to the %-indication.

Use of gas bottle for gas tank installation owners
Should your gas tank be empty and there is no way to have it refilled you may just as well use a gas bottle to provide the supply of the gas consumer units.

If so proceed as follows:
Shut the main shut-off valve, pipe and regulator of the tank and connect to the bottle in the already known manner. Mind that the bottle is always standing firmly and made safe to not fall down and is protected against sunbeams. In case of bumps against the gas tank while driving or parking have a workshop test of the installation immediately performed.

Furthermore observe that the safety regulator is furnished with a relief valve and that the excess pressure exhausts outside. Take care that there is no open flame within the sputtering section (danger of explosion).

8.6 Gas consumption
Refrigerator: gas consumption 5-15 g./h. (0.17-0.35 oz)
Cooker: burner/buch abt. 110-130 g./h. (3.87-4.57 oz)
9. Power supply

9.1 General description

The installation, as well as the 220 V 50 Hz built-in units are executed acc. to the corresponding directives.

Denomination

A, Disconecting relay of booster battery in the compartment underneath the drivers seat
B, 12 V/45 Ah booster battery in the compartment underneath the drivers seat
C, 16 Amp fuse in the compartment underneath the drivers seat
C1, 10 Amp fuse in the operation board of the refrigerator
C2, 3 Amp fuse in the water pump fuse (fuse acc. to US norms)
D, Switch of refrigerator operation-board
D1, Switch of water-pump in the faucet
E, 12 V heat resistor
F, Fan motor
G, Thermo-switches o. condenser Refrigerator
H, 3 Pol. plug-in connection o. refrigerator
I, 1/1 Plus - 1/2 Minus - 1/3 tripe line
J, 6 Pol. plug-in connection o. indicator-board
K, 2/1 water pump exit
L, 2/2 tank indicator
M, 2/3 Plus - 2/4 Minus
N, 2 Pol. plug-in connection o. water pump
O, Flat joint plug-in connection of water-faucet
P, Flat joint plug-in connection of water tank
Q, 3 Pol. plug-in connection of charging unit (2-equipment)
R, 6/1 charging wire + starter-battery
S, 6/2 charging wire + booster-battery
T, 6/3 charging wire + water pump
V, 3/1 Plus - 3/2 Minus - 3/3 Minus
W, 2 Pol. plug-in connections of heater
X, 7/1 Plus - 7/2 Minus
Y, flat wire o. disconnecxing relay i. compartment underneath the drivers seat
Z, flat wire o. booster battery i. compartment underneath the drivers seat
® ground wire o. heater, charging unit + water tank in the rear r. h. bench
9.2 Exterior plug socket (socket)
The exterior plug socket is on the left exterior side of the vehicle. The socket also contains 2 fuses. These output fuses are accessible from the inside. In type 1 they are placed inside the storage closet and in type 2 behind the backrest of the lateral seat-bench (10 A fine fuse).

9.3 220 Volt-Service refrigerator
Before setting the refrigerator to work please check if the voltage of the house or camping site connection corresponds to the voltage indicated on the power label (shut-off gas supply).

Putting into service
Set the voltage selector switch (B) on 220 volts. Turn the thermostat-knob (A) on maximum power.

As soon as sufficient cooling has been attained, you may set the thermostat-knob (A) to the left i.e. to the desired temperature.

Should you wish to completely turn off the unit, set the voltage selector switch (B) on 0-position.

9.4 12 Volt Installation
To always have your camper ready to start, it is important to periodically check both the starter and booster batteries. The starter battery is placed underneath the passengers seat. Aside from the vehicle-bound consumer-units (lighting, ignition etc.) please bear in mind that the interior light, the 12 Volt-socket of the dash-board, the radio and the car lighting within the drivers seat section are supplied with current originated from the starter battery.
You will find the booster battery underneath the drivers seat. The booster battery supplies power for the following: gasoline-heater, sink water pump, refrigerator vent and indicator-board in the cooker-screen. The 3 r.h. control lamps of the indicator device are showing the loading level of the battery.
- green lamp = more than 12.5 volts
- yellow lamp = less than 12.5 volts
- red lamp = less than 12 volts
The vehicle is equipped with an automatic battery charger set. By connection of the vehicle to 220 Volt current supply the loading level of the starter and booster batteries is been inquired through electronics with the battery set whereupon if need be a loading of the batteries will ensue. As soon as the rated voltage has been reached, the battery charger will automatically switch off. In case of need it will again turn on by itself.

9.5 12 V fuses
The main fuse is located in the battery box underneath the drivers seat.
The refrigerator fuse is placed in the control panel whereas the heater blower fuse is to be found in the heater-controller.

9.6 12 Volt operation of the refrigerator
The electrical switching of the 12 V installation of the refrigerator will permit operation only when the motor is running.

Putting into service
- shut off supply
- set voltage selector switch (B) on 12 Volts
The 12 Volt operation is not regulated thermostatically.
10. Water supply

10.1 The water tank inlet is placed on the left exterior side of the vehicle beneath the window. It has a lock-up cap bearing a water-tank symbol for easy identification.

10.2 Fresh water tank
The fresh water tank is lodged in the storage chest near the kitchen closet.

10.3 12 Volt water pump
The water pump is located r. h. on the bottom of the kitchen closet and operates through the 12 V-booster battery. It starts running when turning the faucet clamp to the left. However, should the tank be empty, the pump will not start.

10.4 Filling level indicator
The filling level shows on the luminous screen of the kitchen-combination. A survey of the water supply is also given by this same indicator.

All the control lamps of the indicator device may be switched off with the center switch (A). By doing so the supply of the 12 Volt water pump will be switched off simultaneously.

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**Water tank capacity**

<table>
<thead>
<tr>
<th>Tank capacity</th>
<th>50 litres (of which 10 spare litres)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indicator level on full</td>
<td>Filling level = Stored capacity at least</td>
</tr>
<tr>
<td>green luminous diode</td>
<td>100 - 80%</td>
</tr>
<tr>
<td>Indicator level on half-full</td>
<td>Filling level = Stored capacity at least</td>
</tr>
<tr>
<td>yellow luminous diode</td>
<td>80 - 30%</td>
</tr>
<tr>
<td>Indicator level reserve</td>
<td>Filling level = Stored capacity at least</td>
</tr>
<tr>
<td>red luminous diode</td>
<td>30 - 6%</td>
</tr>
<tr>
<td>Indicator level on empty, pump off</td>
<td>red luminous diode</td>
</tr>
<tr>
<td>Indicator level on empty, pump off</td>
<td>red luminous diode</td>
</tr>
</tbody>
</table>

3 l (0.660 Gal.) remain in the tank after this same is switched-off.

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**Joker 2 (long seat bench)**

<table>
<thead>
<tr>
<th>Tank capacity:</th>
<th>50 litres (of which 10 spare litres)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indicator level on full</td>
<td>Filling level = Stored capacity at least</td>
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<td>yellow luminous diode</td>
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<td>yellow luminous diode</td>
<td>80 - 30%</td>
</tr>
<tr>
<td>Indicator level reserve</td>
<td>Filling level = Stored capacity at least</td>
</tr>
<tr>
<td>red luminous diode</td>
<td>30 - 6%</td>
</tr>
<tr>
<td>Indicator level on empty, pump off</td>
<td>red luminous diode</td>
</tr>
</tbody>
</table>

3 l (0.660 Gal.) remain in the tank after this same is switched-off.

---

**Caution**

Once in a while cleanse the contacts on the right inner side of the water tank since lime and chlorine may deposit there and because such sediments would influence the conducting power of the indicator device whereupon an exact water filling indication would no longer be granted.
10.5 Kitchen sink
When you have lifted the cover of the kitchen combination
you will see the water faucet placed in the rear right corner of the
sink. The combine-use heat shield of the cooker, which also
serves as a drain to the sink, is left of the cover. By dropping this
same on the cooker, its plate also serves as a drainer.

10.6 Waste waters conduit
The drain conduit is lead in front of the gas tank to the left side of
the vehicle and is stationarily fixed. A waste water tank and its
suitable pipe socket can be fitted — as an extra-equipment — to
the vehicle floor.

10.7 Tank draining
To drain the fresh-water tank open the drain outlet sleeve under­
neath the vehicle floor.

10.8 Water tank attendance
We suggest to always pour into the tank a special admixture for
quick sterilization and permanent freshness of the water. One of
such absolutely harmless sterilization adds is for instance
„Gertisil“.

10.9 Ventilation of the water pump when the tank is filled
up for the 1st time and when draining through the
drain outlet sleeve.
After having filled the water tank (green indicator lamp) it is re­
commended to actuate several times the water faucet lever.
Allow ten seconds break between the lever actuations. These
intervals will permit the air to escape from the water pipe. Do not
stop actuating until the water pump will bring a regular water flow.
By experience this will be necessary 2-6 times.

11. Aeration and ventilation
When using the camper as housing quarters we recommend —
for safety and comfort reasons — to provide a sufficient ventila­
tion. An adequate aeration or ventilation of your camper is the
best pre-condition to a pleasant housing comfort. Your camper
can be aerated either by cranking down the drivers or passen­
gers- seat windows or through the sliding windows. Ventilation
can take place through the mosquito-screen window or the out­
ward opening window.

12. Seats and beds

12.1 Drivers and passengers seats
How to utilize the drivers and passenger seats is to be learned from the vehicle’s operation manual.

12.2 Rear seat bench
The rear seat bench is equipped with Westfalia fittings which permit a very easy conversion of the bench into a bed.

12.3 Lower beds
To set up the beds, first release the safety catch while lifting the seat cushion slightly then pull cushion toward you until the backrest unfolds flat onto support between seat and rear mattress. By doing so the unfolded backrest, cushion and the cushion on the engine-compartment will become a full-size double bed.

Should the rear bench be brought back into upright position lift the cushion till the side hinges snap the backrest into position. Then swing the entire unit toward you and make sure the safety catch on the storage locker is securely engaged.

Caution
Do not use the front table as climbing help for the roof-bed since the mountings of the table-top are not planned for extreme high loads.
13. Pop up roof with luggage rack and double bed

13.1 To raise the pop up roof
- Pull down the lock cover with both hands to release and disengage the lock latch by firmly pressing the latch toward you.
- Push the roof up as high as possible.
- Grasp the crossbar and push up all the way until the strut supports at the front pop-top are securely locked into position.

When raising the pop-up roof open windows or door.

13.2 To close the top
- Flip the front portion of roof bed mattress toward rear.
- Pull the crossbar back and slowly lower the roof up to 20 cm.
- Gather in the canvas evenly to make sure the fabric is not caught in hinges or latch.
- Grasp lock cover with both hands and pull down until lock latch snaps shut securely.
- Assure yourself that no part of the canvas is caught between the lock parts.

Caution
To prevent damage to the top and sides of the pop-up roof, the Camper should never be driven with the top in the elevated position.

13.3 Roof double-bed
Right after the pop-up roof will be raised unfold the front part of the bed. By doing so you will obtain a full-size double bed.
- Pull the mattress toward you about 4” (10 cm) and then fold open.
- Should you wish to close the top, proceed in reverse order i.e. fold the front part of the bed to the rear and pull forth.
Caution
To prevent mildew-forming on the flocking and the canvas of the pop-up roof it should never be closed when wet.

When having the pop-up roof raised be sure that a good aeration is assured by opening the front flap of the canvas. Air circulation must not be hindered by storing bedding etc. on the surface of the rear portion of the roof bed mattress.

Periodically check and lubricate the hinge pins on the strut support of the pop-up roof.

14. Furniture snaps/locks
To open cabinet and storage chest doors, lid covers and utensil drawers, pull the recessed handles.

15. Attendance and cleaning of the equipment
Polish the furniture with the same products you usually purchase for your home furniture. Avoid the use of scouring or caustic agents.

All the surface of the furniture do have a plastic layer. Curtains and upholstery should be cleaned or washed acc. to cleaning directions.

The carpet has to be vacuum-cleaned.
The stainless-steel sink is to be cleaned with a commercial cleaning agent.

Should your vehicle have acrylic-glass double windows please clean these with plenty of water and a mild cleaner (as for dishwashing).

Wipe the panes only with soft cloths or genuine chamoisleather. Do not rub dry!

Slight scratches can be burnished off with brass-polish. A subsequent secondary treatment with silver-polish is recommended.

Exterior application
This application is washmobile-proof and can be cleaned in the same manner as the exterior lacquer. It is recommended, however, to avoid washing in a high pressure jet installation.

16. Winter camping hints
Before setting out on a winter trip, please particularly observe the following:

In the event of snowy weather clear the roof vent from snow as well as the aeration and ventilation orifices.

The formation of condensed water can largely be avoided by simultaneous operation of both the heating and aeration.

When parking on snow covered or icy surfaces, chock all wheels to prevent the Camper from sliding, especially when it thaws. Do not set the parking brake.

If you do not use your Camper at outside temperatures below 32° F (0° C) empty the water tank and drain the water lines to prevent damage caused by freezing water.

Also keep the heater exhaust gas pipe always free from snow.

17. Heating breakdown

<table>
<thead>
<tr>
<th>Nature of breakdown</th>
<th>Remedial measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>The heater has been switched on but no blower noise is to be heard.</td>
<td>Should the light diodes of the operation-screen not flash up, check the motor fuse inside the controller. <strong>Caution!</strong> To replace same use only a 5 x 20 x 1.25 Amp. delay action fine fuse. The use of another fuse could lead to damages inside the controller.</td>
</tr>
<tr>
<td>After the heater has been switched on the blower noise is audible for abt. 3 min. but the heater does not ignite and switches off automatically.</td>
<td>Briefly switch the heater on and off consecutively (not more than twice). If then heater still does not ignite have the unit repaired at a workshop.</td>
</tr>
<tr>
<td>The heater suddenly switches off during operation and the red control lamp (3) of the room-thermostat flashes up.</td>
<td>This breakdown is caused by overheating. Switch off the heater and proceed to removal of the overheating cause (obstruction of the hot-air conduit, f. instance) and switch on anew. Please note that the green control lamp of the thermostat will flash up only 5 sec. after the heater has been switched on and the unit is in operation.</td>
</tr>
</tbody>
</table>

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18. Refrigerator breakdown and remedial measures

Should any malfunction arise, first check the following possible causes – some of which could be remedied by yourself - before bringing the vehicle to a workshop for repairs.

At ambient temperatures of abt. 32° C (102° F) a full cooling efficiency of the refrigerator will no longer be granted.

- Is the vehicle standing on an extreme slope?
- Is the power supply in order? Does the socket still conduct current?
- Is the gas supply functioning well? Is the gas-burner alight?
- Does the unit get enough ventilation? The vent grate and hot air exhaust on top rear of the cabinet must absolutely be exempt from obtruding items. During summer temperatures it is necessary to provide enough indoor aeration.

**Did you set the thermostat knob properly?**

When setting on gas operation did you perhaps release the ignition fuse knob too soon? In the event of new refill of the gas container or exchange of gas bottle it may be necessary to repeat the ignition process at short intervals as while refilling or exchanging bottles air may have entered the gas conduct (see point 7.4 last §).

Check the kinds and/or quantities of the goods you have stored in the refrigerator. These should be stored so as to assure enough air circulation inside the unit. Furthermore control if the refrigerator door closes tightly. In addition to this please remember that a too thick ice layer on the evaporator impairs the cooling efficiency. A periodical thaw off of the unit is therefore indispensable. Always pay attention to having the refrigerator well closed and that foods and liquid items are kept closed. Humidity turns to ice and deposits on the evaporator forming insulation and consequently impairs cooling. Therefore never store warm food in the refrigerator.

Should in spite of all the a. m. controls a perfect operation of the unit not have been obtained, please turn to your next competent service-workshop. A list of the workshop is adjoined to each refrigerator. When calling mention the kind of existant failure as well as the type of your unit and the manufacturing number.