Dear Customer,

Thank you for choosing a ***ERIBA*** caravan.

This instruction manual is intended to help you get to know and use your new caravan. **It is essential that you read and comply with the safety instructions in chapter 2.**

Don't hesitate to contact our ***ERIBA*** service centres if you have any questions. Their staff are fully conversant with your vehicle and will be pleased to help in any way they can. Our list of ***ERIBA*** service centres in Europe is updated regularly. You can obtain a copy of the latest edition from our customer service department or from your ***ERIBA*** dealer.

This instruction manual also includes the warranty certificate for your caravan. You will be receiving the guarantee stamp shortly. Please paste this stamp in the field provided to confirm the ***ERIBA*** guarantee. To maintain the six year ***ERIBA*** weatherproof guarantee against water ingress, your vehicle must be inspected for a fee by an authorised ***ERIBA*** dealer or an authorised ***ERIBA*** workshop once a year. A small fee will be charged for this inspection and a confirmation stamp stuck into this manual. We also recommend a general inspection of the conversion at yearly intervals.

For emergencies on the road outside working hours, ***HYMER AG*** offers a mobility guarantee with its own help line. Stipulations will be sent to you separately shortly. This service is free of charge for new vehicles in their first year. The address* is:

DTC-Touring Versicherung AG*
Am Westpark 8
D-81373 München

Help line in Germany:	0180 2 496373
From phones with an alphanumeric keypad:	0180 2 HYMER E
International help line:	+49 180 2 496373 +49 89 76764242

Wishing you many happy holidays in your ***ERIBA***.

You will also find ***HYMER AG*** on the Internet at: http://www.hymer.com.

Yours,
HYMER AG

* These details are accurate at the time of going to press.

0731070
Model year 04
Edition 03/11-1 englisch

Customer Address

Surname, Christian Name:

Street, No.:

Postal Code, Town:

Country:

Vehicle Data

Model:

Version No.:

Serial Number:

Chassis Number:

Initial Registration:

Dealer Data

Dealer Number:

Date of Hand-Over:

Notification of delivery

To be completed on the date the vehicles is handed-over by the selling dealer, a copy being returned to ***HYMER AG***.

Confirmation:

I have today received the Service Coupon Book for the annual servicing intervals and the water ingress test for the stated model.

Date:

Signature and Stamp of the Selling Dealer

Customer's Signature

Customer Address

Surname, Christian Name:

Street, No.:

Postal Code, Town:

Country:

Vehicle Data

Model:

Version No.:

Serial Number:

Chassis Number:

Initial Registration:

Dealer Data

Dealer Number:

Date of Hand-Over:

Please paste the guarantee stamp in here.

Note:
You will receive your guarantee stamp immediately after *HYMER AG* has received the Notification of Delivery from your trade partner.
Please ensure that the guarantee stamp is pasted in.

Guarantee certificate

(Please paste the guarantee stamp into the field provided.)

Water Ingress Test *

During the water ingress test, your ***ERIBA*** dealer or an authorised workshop, using a hygrometer, checks the entire body of your vehicle for water impermeability. The test is carried out on all connections, windows, skylights, external flaps and doors.

Important:
The six-year weatherproof guarantee is only valid when the testing intervals are upheld. The water ingress test must be carried out on an annual basis. The water ingress test may be carried out max. six months before or six months after the date on which the test is due. For additional information concerning the 6 year guarantee against leaks, please refer to the following text. Also your ***ERIBA*** dealer will be pleased to advise you.

Conditions for the 6 Year Weatherproof Guarantee *

1. For new vehicles, the ***ERIBA*** dealer guarantees that for a period of six years - for motorhomes, up to a maximum of 100.000 km - that, with normal use, no water will penetrate the bodies manufactured by ***HYMER AG***.
2. The prerequisite for this guarantee is that the purchaser provides evidence that
   - water penetrates the ***ERIBA*** body at the connections, bored holes and joints in the floor, wheel housing, side wall, front wall, rear wall and roof, including alcoves by normal use.
     For example it is not deemed as being normal use when water which has a pressure exceeding 1 bar makes contact with the vehicle.
   - the aforementioned areas are in their original condition or if work has been carried out, then this has been carried out either by ***HYMER AG*** or an authorised workshop. It is of no importance if the purchaser proves that the work or alterations did not cause the leaks.
   - the defect does not result from misuse or negligence or intentional actions taken by the purchaser.
   - the defect is not a result of environmental pollution which exceeds that which is normal and permissible.
   - the vehicle has been presented to the ***ERIBA*** dealer or an authorised workshop for inspection purposes in exchange for a fee. The annual period commences as defined under point 5 of this agreement. If the inspection work is carried out six months after expiry of the period at the latest, then the right to claim under the guarantee remains in force. The inspection interval is not lengthened.
   - a leakage or a dampness which indicates leakage has called to the attention of the ***ERIBA*** dealer within 14 days of its discovery.
   - the costs for the guarantee work do not exceed the value of the vehicle at that time.
   - ***HYMER AG*** or an authorised workshop was commissioned to remedy defects discovered during the inspection without delay.
   - the ***HYMER AG*** care instructions were adhered to.

   The inspections are to be proven by means of the guarantee stamps pasted into this booklet by the ***ERIBA*** dealer or the authorised workshop, with the date and serial number, together with the stamp and signature from the workshop.

***** not valid for all vehicle types and all countries

3. Any leak covered by the guarantee, will be remedied by the authorised ***ERIBA*** dealer. Should the remedy not succeed and the party covered by the guarantee cannot be reasonably expected to accept additional guarantees provided by the ***ERIBA*** dealer, then the party covered by the guarantee can have the leakage remedied by ***HYMER AG***, at the expense of the ***ERIBA*** dealer.

   No further claims apply.

4. Claims made by the purchaser especially with respect to any warranty and guarantee claims made against the dealer or claims resulting from product liability are not affected by this guarantee.

   A change of ownership has no effect on the guarantee obligations.

   Damage claims which could result from this guarantee agreement and the carrying out thereof and which could be made against a ***ERIBA*** dealer by the party covered by the guarantee are excluded, except for cases where they are based on intent or gross negligence on the part of the ***ERIBA*** dealer or the breach of a cardinal duty.

5. The guarantee period commences with the delivery of the vehicle to the purchaser, on the date of the initial registration at the latest. It terminates prematurely when the vehicle is written off or it's capability of use ceases to exist for other reasons.

   Work carried out on the vehicle which does not fall under this guarantee agreement do not extend the guarantee period.

6. The claims with respect to the remedying of a leakage falls under the statute of limitations 6 months after discovery of the leakage or dampness indicating this leakage, upon expiry of the guarantee period at the latest.

Inspection

After each service, the "Inspection Checklist" provides you with supplementary and detailed information concerning the work which has been specifically carried out on your vehicle. You receive the Inspection Checklist when you collect your vehicle from your ***ERIBA*** dealer. Should it be determined during a vehicle check that additional work is necessary, then the carrying out of this work is dependent on the customer commissioning this to be done. Please also adhere to the service intervals stipulated by the manufacturers of the individual equipment. Information is included in the service documents enclosed.

Important:
The carrying out of the planned inspections is a prerequisite for any guarantee claims.

Service Proof for a Motorhome or Caravan

Inspection 1

12 months after taking delivery or 7,500 km, depending on which comes first.

Date:

Mileage Reading:

Dealer's Signature and Stamp:

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

Water Ingress Test 1

Water Ingress Test:

Paste in the customer service stamp for the 12 month check here (subject to payment).

12 Months

Your next water ingress test is due on:

earliest:

latest:

Service Proof for a Motorhome or Caravan

Inspection 2

Every 12 months or after 15,000 km - depending on which comes first.

Date:

Mileage Reading:

Dealer's Signature and Stamp:

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

Water Ingress Test 2

Water Ingress Test:

Paste in the customer service stamp for the 12 month check here (subject to payment).

24 Months

Your next water ingress test is due on:

earliest:

latest:

Service Proof for a Motorhome or Caravan

Inspection 3

Every 12 months or after 25,000 km - depending on which comes first.

Date:

Mileage Reading:

Dealer's Signature and Stamp:

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

Water Ingress Test 3

Water Ingress Test:

Paste in the customer service stamp for the 12 month check here (subject to payment).

36 Months

Your next water ingress test is due on:

earliest:

latest:

Service Proof for a Motorhome or Caravan

Inspection 4

Every 12 months or after 35,000 km - depending on which comes first.

Date:

Mileage Reading:

Dealer's Signature and Stamp:

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

Water Ingress Test 4

Water Ingress Test:

Paste in the customer service stamp for the 12 month check here (subject to payment).

48 Months

Your next water ingress test is due on:

earliest:

latest:

Service Proof for a Motorhome or Caravan

Inspection 5

Every 12 months or after 45,000 km - depending on which comes first.

Date:

Mileage Reading:

Dealer's Signature and Stamp:

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

Water Ingress Test 5

Water Ingress Test:

Paste in the customer service stamp for the 12 month check here (subject to payment).

60 Months

Your next water ingress test is due on:

earliest:

latest:

Service Proof for a Motorhome or Caravan

Inspection 6

Every 12 months or after 55,000 km - depending on which comes first.

Date:

Mileage Reading:

Dealer's Signature and Stamp:

Inspection 7

Every 12 months or after 65,000 km - depending on which comes first.

Date:

Mileage Reading:

Dealer's Signature and Stamp:

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

Service Proof for a Motorhome or Caravan

Inspection 8

Every 12 months or after 75,000 km - depending on which comes first.

Date:

Mileage Reading:

Dealer's Signature and Stamp:

Inspection 9

Every 12 months or after 85,000 km - depending on which comes first.

Date:

Mileage Reading:

Dealer's Signature and Stamp:

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

Service Proof for a Motorhome or Caravan

Inspection 10

Every 12 months or after 95,000 km - depending on which comes first.

Date:

Mileage Reading:

Dealer's Signature and Stamp:

Inspection 11

Every 12 months or after 105,000 km - depending on which comes first.

Date:

Mileage Reading:

Dealer's Signature and Stamp:

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

Observe following instructions before first journey of the vehicle:

- **Re-tighten wheel bolts after 50 km (30 miles).**
- **Read the instruction manual to avoid personal and material damage.**

Observe following instructions before each journey of the vehicle:

- **Check the tyre pressures.**
  See section Tyre Pressure.
- **Load the vehicle correctly. Observe the maximum permissible gross weight.**
  See section Payload.
- **Fully charge battery before each journey.**
  See section Living Area Battery.
- **In case of external temperatures below 0 °C first heat vehicle, then fill water system.**
  See section Water Supply/Filling the Fresh Water System.
- **Gas bottles should only be transported within the designated gas bottle compartment and should be checked to be secure and in the off position prior to travelling.**
- **Keep forced ventilations clear.**
  See section Windows/Ventilation.
- **Before filling the towing vehicle with fuel switch off gas-operated appliances.**

Observe following instructions in winter operation:

- **When camping in winter or in high altitude areas, always heat the vehicle if there is any risk of frost.**
  See section Winter Operation/Heater.
- **When the vehicle is not used empty the entire water system and leave the water taps on in central position. This will avoid frost damage to the water system.**
  See section Emptying of Water System.

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

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

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

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

▷ This symbol indicates recommendations or special aspects.

▷ This symbol indicates actions which lead to environmental awareness.

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

Special equipment is described when an explanation is required.

Adhere to the instruction manuals which are separately enclosed.

▷ The details "right", "left", "front" and "rear" always refer to the vehicle in direction of travel.

▷ All dimensions and weight details are "approximate".

Should the caravan be subjected to damage due to a failure to follow the instructions in this instruction manual, then the guarantee claim against ***HYMER AG*** is deemed invalid.

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

The reprinting, translation and copying, including extracts is not permitted without prior written authorisation from ***HYMER AG***.

▷ The caravan comes without a jack. We suggest you buy a usual commercial scissor-type jack before first use of your caravan, in order to have it ready in the case of mishap or emergency. Your ***ERIBA*** dealer will be pleased to advise you.

1.1 General

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

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

Malfunctions which impair the safety of persons or the caravan should be immediately remedied by qualified personnel.

Have the caravan's braking and gas systems inspected and repaired by an authorised specialist workshop only.

Alterations to the body are only to be carried out with the authorisation of ***HYMER AG***.

Luggage and accessories may only be transported up to the maximum permissible gross weight.

Observe the test or inspection periods stipulated in this instruction manual.

1.2 Environmental Tips

- ▷ Remember that: all kinds of waste water and household waste are not to be disposed of in drains or in the open countryside.
- ▷ Only empty the waste water tank and Thetford cassette at disposal stations, at camping sites or in disposal points which are especially provided for this purpose. When stopping in towns and communities observe the instructions at caravan sites or ask where there are disposal points.
- ▷ Drain waste water tank as often as possible, even when it is not completely full (hygiene).

  If possible, flush out waste water tank and drainage pipe with fresh water every time it is emptied.
- ▷ Never allow the Thetford cassette to become too full. Empty the Thetford cassette frequently, at the latest as soon as the filling level display lights up.
- ▷ Separate household waste according to glass, tin cans, plastic and wet waste also when on a journey. Enquire at the town or community authority about disposal points. Household waste is not to be disposed of in waste paper baskets which are situated at car parks.
- ▷ Empty waste bins as often as possible into the cans or containers provided for this purpose. This helps to avoid unpleasant smells and an accumulation of rubbish on board.
- ▷ When parked, do not allow the engine of the towing vehicle to run more than necessary. When running idle, a cold engine releases more contaminants than usual. The running temperature of the engine is achieved more quickly whilst the vehicle is in motion.
- ▷ Use an environmentally-friendly WC chemical agent for the WC which can also be biologically degraded and only use small doses.
- ▷ When staying in towns and communities for longer periods, search for parking areas which are especially for caravans and towing vehicles. Enquire at the town or community authority about parking spaces.

Chapter Overview

This chapter contains important safety instructions. The safety instructions are for the protection of persons and property.

The instructions address the following topics:

- fire prevention and what to do in case of fire
- general care of the caravan
- road safety of the caravan
- gas fittings of the caravan
- electrical fittings of the caravan
- water system of the caravan

2.1 Fire Prevention

2.1.1 Avoidance of Fire Risks

- ▶ Never leave children in the caravan unattended.
- ▶ Keep flammable materials clear of heating and cooking appliances.
- ▶ Lights can get very hot. Always maintain a safety distance of 30 cm.
- ▶ Never use portable heating or cooking appliances.
- ▶ Alterations to electrical fittings, gas fittings or to built-in appliances are only to be carried out by qualified personnel.

2.1.2 Fire-Fighting

- ▶ Always carry a dry powder fire extinguisher in the caravan (with at least 1 kg capacity). It must be approved, tested and close at hand.
- ▶ Have the fire extinguisher tested at regular intervals by qualified personnel. Observe the date of testing.

2.1.3 In Case of Fire

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

- ▷ Acquaint yourself with the position and operation of the emergency exits.
- ▷ Keep escape routes clear.
- ▷ Observe the fire extinguisher instructions for use.

2.2 General

- ▶ Ensure that there is sufficient ventilation. When staying in the caravan, open the lifting roof. There is a danger of suffocation due to increased CO_2 levels.
- ▶ Observe the headroom of the conversion door.

- ▷ As far as the appliances (gas heater, cooker, refrigerator, etc.) are concerned, the instruction manuals are authoritative. It is imperative that they be observed!
- ▷ Fitting accessories or special equipment can alter the dimensions, weight and road behaviour of the caravan. Some of the parts must be entered in the vehicle papers.
- ▷ Only use wheel rims and tyres which are approved for the caravan. Information concerning the size of the approved wheel rims and tyres is included in the vehicle documents.
- ▷ Apply the handbrake when parking the caravan.

- ▷ When leaving the caravan, close the conversion door, all external flaps and windows.
- ▷ When selling the caravan, hand over all instruction manuals for the caravan and the fitted appliances.

2.3 Roadworthiness

- ▶ Before commencing the journey, check the brakes and the indicating and lighting equipment.
- ▶ After the vehicle has been standing for a longer period (approx. 10 months) have the braking and gas systems checked by an authorised specialist workshop.
- ▶ During the journey, no persons are to travel inside the caravan.
- ▶ In winter, the roof must be free of snow and ice prior to the commencement of the journey.
- ▶ Before commencing the journey, empty the waste water tank.

- ▷ Before commencing the journey, distribute the caravan payload evenly (see chapter 3).
- ▷ When loading the caravan and when taking a rest from driving, in order to load luggage or food, for example, observe the maximum permissible gross weight and caravan load of the towing vehicle (refer to vehicle documents).
- ▷ Ensure that the maximum permitted nose weight is not exceeded and that the minimum nose weight does not fall below the minimum. Load the caravan accordingly.
- ▷ While driving with your caravan, the towing vehicle must be equipped with two exterior rear view mirrors.
- ▷ Before commencing the journey, close the regulator tap on the gas bottle and all other gas isolator taps.
- ▷ Before commencing the journey, ensure that all cupboard doors, the toilet door and all drawers and flaps are secure. Engage the refrigerator door securing device.
- ▷ Close all external flaps and fasten flap locks before each journey.
- ▷ Before commencing the journey, close windows and lifting roof.
- ▷ Before commencing the journey, ensure that the four corner steadies and the jockey wheel are cranked as high as possible.
- ▷ At the beginning of every journey and after short interruptions, ensure that the entrance step is completely retracted.
- ▷ During the initial journey and each time after changing a wheel, re-tighten the wheel bolts after 50 km (30 miles). Subsequently inspect them at regular intervals in order to ensure that they are firmly seated. See chapter 13 for tightening torque.
- ▷ Check the tyre pressure before a journey and at two-week intervals (see chapter 13). Wrong tyre pressure causes excessive wear and can lead to damage or even to tyre burst. You can lose the control over the caravan.
- ▷ Tyres must not be older than 6 years as the material becomes brittle over time (see chapter 13).

2.4 Towing

- Care is to be taken when connecting and detaching the caravan.
- No persons are to be between the towing vehicle and the caravan during positioning for connecting and detaching.

2.5 Gas Fittings

- Before commencing the journey, close all gas isolator taps and the regulator tap.
- Have the gas fittings repaired or altered by an authorised workshop only.
- Have the gas fittings checked by an authorised specialist workshop according to the national regulations before commissioning. This also applies for not registered vehicles. For modifications to the gas fittings have the gas fittings immediately checked by an authorised specialist workshop.
- In case of a defect of the gas fittings (gas odour, high gas consumption) there is an explosion hazard! Close regulator tap on the gas bottle immediately. Open doors and windows and ventilate. Do not smoke; do not ignite any open flames, and do not operate electric switches (light switches a.s.o.). Have the defect repaired by an authorised workshop.
- Open the lifting roof before taking open sources of combustion (gas cooker) into service.
- Do not use the gas cooker for heating purposes.
- The exhaust pipe must be fitted tightly to the heating system and to the chimney and must be sealed. The exhaust gas pipe must not show any evidence of damage.
- Waste air must be able to leave and fresh air must be able to enter unhindered. For this reason, no snow walls or aprons must be allowed to lie against the vehicle. Keep the intake openings under the floor of the vehicle open and clean.
- If the caravan or gas equipment are not used, close the regulator tap on the gas bottle.
- If there are several gas devices, each gas device must have its own gas isolator tap. If individual devices are not in use, close the respective gas isolator tap.
- Thermocouple must close within 1 minute after the gas flame has extinguished. A clicking sound is audible. Check function from time to time.
- When refuelling the towing vehicle, on ferries and in the garage, no source of combustion (gas cooker, heating, boiler, etc.) is to be in operation. Danger of explosion!
- The designated gas bottle compartment will accommodate two gas cylinders, i. e. Calor Gas Butane/Propane or Camping Gaz. All gas cylinders **must** be fitted with the appropriate regulator.
- Secure gas cylinders in a vertical position. At **no** time should gas cylinders be transported horizontally.

- Propane gas is capable of gasification up to -42 °C, whereas butane gas gasifies at 0 °C. Below these temperatures no gas pressure is available. Butane gas is unsuitable for use in winter.
- Inspect the gas tube fitted to the gas bottle connection for tightness. The gas tube should have no tears and should not be porous. It is recommended that the gas tube be replaced every 12 months, or earlier if necessary.
- Due to its function and construction, the gas bottle compartment is a space which is open to the exterior. In order to enable leaking gas to immediately be dispersed outside, the standard forced ventilation is never to be blocked or covered.
- Do not use the gas bottle compartment as storage space.
- The regulator tap on the gas bottle must be accessible.
- Lock the gas bottle compartment in order to prevent unauthorised persons opening it.
- Gas bottles are only to be transported within the designated gas bottle compartment.

2.6 Electrical Fittings

- Work on the electrical fittings should only be carried out by qualified persons.
- Prior to carrying out work on the electrical fittings, switch off all devices and lights, disconnect the battery and disconnect the 240 V power cable from the mains.
- Only use original fuses with the values specified in the instruction manual.
- Only replace defective fuses when the cause of the defect is known and has been remedied.
- Never bridge or repair fuses.

2.7 Water System

▷ If there is any risk of frost and the caravan is not heated, empty the water system (pipes, tank, etc.) as otherwise there is a danger or permanent damage due to icing.

▷ Unused water in the fresh water canister or in the fresh water tank becomes unpalatable after a relatively short period. For this reason, rinse the water taps and the fresh water canister or the fresh water tank thoroughly with several litres of fresh water each time before you use the caravan. To do this, open all water taps.

Chapter Overview

This chapter contains important instructions which should be noted before beginning commencing your journey or carrying out any tasks before the journey.

The instructions address the following topics:

- first journey
- connecting and detaching to the vehicle
- caravan coupling
- calculating the payload
- correct loading of the caravan
- retracting and extending the entrance step

At the end of the chapter there is a checklist which once again summarises the most important points.

3.1 First Journey

▷ During the initial journey, re-tighten the wheel bolts after 50 km (30 miles). Subsequently inspect them at regular intervals in order to ensure that they are firmly seated. See chapter 13 for tightening torque.

▷ Check whether the road light system of the towing vehicle corresponds to that of the caravan (see chapter 8), and whether a nominal voltage of 12 V is provided by the towing vehicle.

The caravan is supplied with a set of keys. Always deposit a reserve key outside the caravan. Make a note of the key number. The ***ERIBA*** dealer is able to offer assistance in case of loss. Further information in chapter 12.

3.2 Connecting

▶ There is a risk of accidents and injury when connecting a caravan. Therefore, exercise care when connecting the caravan to the towing vehicle.

▶ No persons are to be between the towing vehicle and the caravan during positioning for connecting.

▷ Caravan with an overrun brake: Do not connect or detach caravan with the overrun brake on.

▷ Caravan coupling with detachable ball neck: If the ball neck is installed incorrectly, there is danger of the trailer breaking away. Observe the instruction manual issued by the caravan coupling manufacturer.

▷ Observe the permissible nose weight and rear axles load of the towing vehicle. Nose weight and rear axle load must not be exceeded. The values of the nose weight and rear axle load are included in the documents of the towing vehicle and the caravan.

▷ In order to connect the caravan place the supporting jockey wheel on the ground.

▷ Do not use the stabilising lever as a maneuvering aid.

- ▷ Ensure that the interior of the coupling is not soiled and that the movable parts of the coupling (not the ball retainer) are lubricated.
- ▷ AKS stabiliser: The tow ball is not to be lubricated when using the stabiliser. The friction pads are pressed against the coupling ball and thereby generate an anti-rolling moment. This anti-rolling effect is only guaranteed when the towing vehicle coupling head is free of lubricant and other residues. When lubricating the stabiliser ensure that no lubricant is on the friction pads.

- Connect the caravan (see section 3.3). The coupling jaw and the ball must interlock and are not to be loosely superposed. The coupling jaw must completely surround the ball.
- Connect the breakaway brake cable with a loop to a suitable anchorage point on the vehicle, **do not** attach to the towball.
- Raise the jockey wheel as far upwards as possible. Adjust the running role in parallel to the direction of travel and to the draw box.
- Insert the thirteen-pin plug into the socket of the towing vehicle. Ensure that the two hooks of the safety cover engage with the plug. The hooks prevent the plug from becoming loose during the journey.
- Put the connection cable in a loose loop across the drawbar. Make sure that it does not touch the ground.
- Make sure that the caravan coupling is securely mounted on the coupling ball and that the green safety indicator is visible.
- Check whether corner steadies and jockey wheel are raised.
- Check the caravan lighting system whilst the towing vehicle is connected.

- ▷ Check whether the thirteen-pin caravan plug fits into the towing vehicle socket. Should the designs differ, ask your ***ERIBA*** dealer for adaptation possibilities.
- ▷ Further information about the AKS stabiliser can be obtained in the separate instruction manual from AL-KO.

3.3 Caravan Couplings

▷ Before connecting, ensure that the ball head of the coupling device is free of dirt and grease.

3.3.1 AL-KO AK 160

The coupling mechanism has an "Open position". As long as the caravan coupling is not placed on top of the implement coupling, the coupling handle remains open.

- Place the open caravan coupling (Fig. 1) on the towing vehicle caravan ball. The caravan coupling now locks automatically and audibly in place.
- In addition, push the coupling handle (Fig. 1,1) down with your hand (not with your foot). Closing and securing is carried out automatically.
- Conduct a visual inspection: the green point on the safety indicator (Fig. 1,2) must be visible.

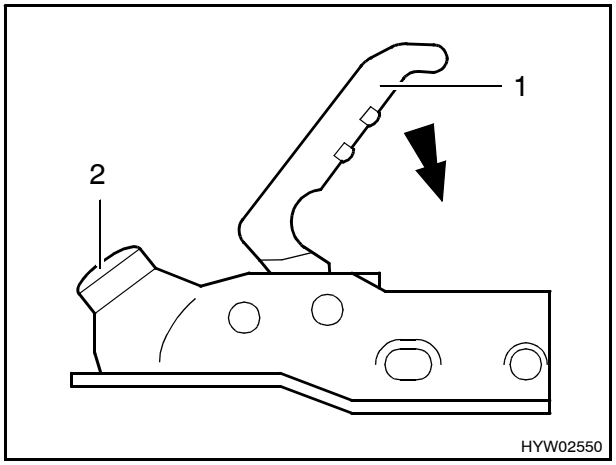


Fig. 1 AL-KO AK 160 caravan coupling

3.3.2 AL-KO AKS 1300

- Pull up the stabilising lever (Fig. 2,1) as far as possible.
- Turn the handwheel (Fig. 2,2) in an anti-clockwise direction as far as possible in the open position.
- Pull the coupling handle (Fig. 2,3) upwards.
- Place the opened stabiliser on the caravan ball. The coupling handle must audibly lock back into its previous position.
- In addition, push the coupling handle downwards with your hand. Closing and securing is carried out automatically.

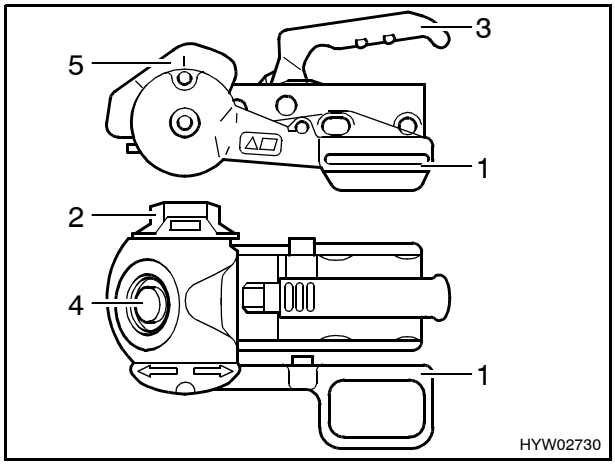


Fig. 2 AL-KO AKS 1300 stabiliser

- Conduct a visual inspection: the green point on the safety indicator (Fig. 2,4) must be visible.
- Turn handwheel in a clockwise direction until it can be felt and heard that the torque limiting mechanism grates.
- Push the stabilising lever down until the marking on the stabilising lever is aligned with that on the stabilising housing (Fig. 2,5).

3.4 Detaching

- ▶ There is a risk of accidents and injury when connecting a caravan. Therefore, exercise care when detaching the caravan from the towing vehicle.
- ▶ Observe the additional safety instructions with respect to connecting included in this instruction manual.

- Apply the caravan handbrake.
- Place the wheel chocks behind both of the wheels.
- Remove the plug from the towing vehicle socket and insert it in the retainer which is to be found on the drawbar.
- Remove the brakeaway cable from the towing vehicle.
- Lower the jockey wheel until it is firmly positioned on the ground. Now loosen the coupling.
- Using the jockey wheel, lift the drawbar until the towing vehicle can be driven away without risk.

3.5 Payload

- ▷ The maximum permissible gross weight stated in the vehicle documents is not to be exceeded by the payload.
- ▷ Excessive payload and wrong tyre pressure can cause tyre burst. You can lose the control over the caravan.
- ▷ Built-in accessories and special equipment reduce the payload.
- ▷ Adhere to the axle load stated in the vehicle documents.

Load the caravan so that the drawbar coupling head is not pushed downwards due to the permissible nose weight. Heavy objects should be close to the axles and a weight centre should be in the centre of the vehicle.

When loading the caravan observe:
- the permissible maximum caravan load
- the permissible maximum nose weight (e. g. 50 kg)
- the minimum nose weight in accordance with national regulations

3.5.1 Calculating the Payload

- ▶ Payload calculation is based on part on all-inclusive weights. For safety reasons, the maximum permissible gross weight in a laden condition must not be exceeded.
  For your own safety, ***HYMER AG*** recommends to have your completely laden vehicle weighed on a public weighbridge before you set out on your journey.

The payload (3) is the difference in weight between
- maximum permissible gross weight (1) in a laden condition
  and
- vehicle mass complete (2) in a ready-to-drive condition.

(1) Maximum permissible gross weight in a laden condition
The maximum permissible gross weight in a laden condition is based on design-related vehicle features and the bearing capacity of the tyres.

In the vehicle documents, the manufacturer specifies the maximum permissible gross weight in a laden condition.

(2) Mass in a ready-to-drive condition

The mass in ready-to-drive condition is made up as follows:
- Unladen weight (mass of the empty vehicle) with factory-installed standard equipment
- Basic equipment

Basic equipment includes all equipment and fluids required for safe and proper vehicle use. This includes:
- Fresh water system filled up to 90 % (fresh water canister or fresh water tank and pipes)
- Gas bottles filled up to 90 %
- A full heating system
- A full toilet flushing system
- The mass of connecting cables for 240 V power supply
- The installation kit for an auxiliary battery if an auxiliary battery can be used
  The waste water and sewage tanks are empty.

Example for calculating the basic equipment:

Fresh water tank with 40 l	40 kg
Gas bottles (2 x 11 kg $_{gas}$ + 2 x 14 kg $_{bottles}$)	+ 50 kg
Boiler with 10 l	+ 10 kg
240 V power cable	+ 4 kg
Installation kit for auxiliary battery	+ 6 kg
Total	= 110 kg

In the vehicle documents, the manufacturer specifies the mass in ready-to-drive conditions.

(3) Payload

The payload is made up as follows:
- Additional equipment (3.1)
- Personal equipment (3.2)

(3.1) Additional equipment

Additional equipment includes accessories and special equipment. Examples of additional equipment include:
- Stabiliser
- Awning
- Satellite system
- Hot water supply

Chapter 15 lists the weights of the various items of special equipment; they may also be obtained from the manufacturer.

(3.2) Personal equipment

Personal equipment includes all items in the caravan which do not appear in the list above. These include:

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

No matter where kept, personal equipment also includes:

- Bikes
- Boats
- Surfboards
- Sports equipment

For personal equipment is concerned, start with a weight which can be calculated using this formula:

Minimum weight M (kg) = 10 x N + 10 x L + 30
N = maximum number of beds, as stated by the manufacturer
L = the total length of the caravan in metres, not including the drawbar

Example for calculating the payload

	Mass in kg to be calculated	**Calculation**
Maximum permissible gross weight according to vehicle documents	1350	
Mass in a ready-to-drive condition, including basic equipment	- 1100	
Payload	250	
Additional equipment	- 40	
Remaining load for personal equipment	= 210	

▷ The maximum permissible gross weight stated in the specifications may not be exceeded under any circumstances when the caravan is loaded.

3.5.2 Loading the Caravan Correctly

- Evenly distribute the payload on the left-hand and right-hand side of the caravan.
- Store heavy objects (awning, tin cans, etc.) close to the axles so that they cannot slip, e. g.
  - in low-lying storage compartments, the doors of which do not open in the direction of travel
  - on the floor
- Store lighter objects (laundry) in the roof storage compartments.
- For safety reasons, weigh the loaded caravan before commencing the journey.

The payload arrangement recommended cannot be adhered to consequently as the storage facilities are to be found throughout the complete caravan. Ensure that heavy items are close to the axles and the lower area, i.e. directly above the vehicle floor. Store heavy objects (awning , tin cans, etc.), if possible, in the towing vehicle.

Incorrectly loaded:

- Never concentrate the caravan load at the rear!

Two weight centres which are apart lead to inclination to skid.

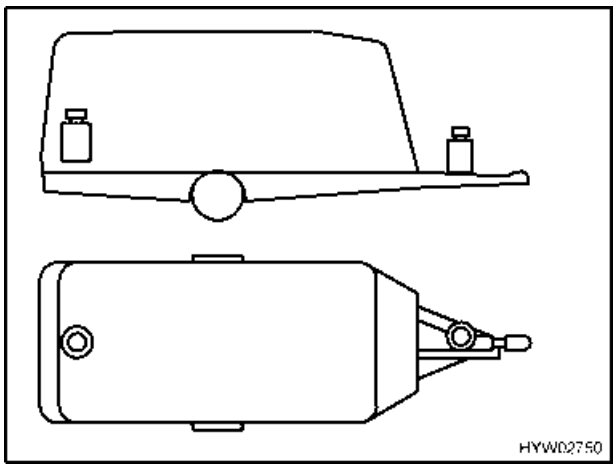


Fig. 3 Incorrect weight distribution

Correctly loaded:

Do not store heavy objects such as awnings, tin cans, etc. in the caravan but rather in the towing vehicle. Store all loads close to the axle.

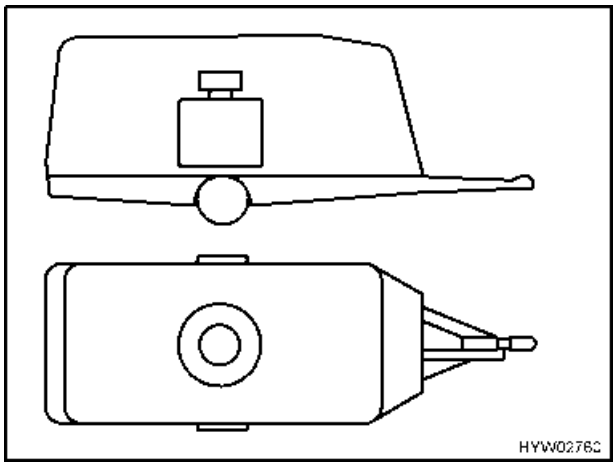


Fig. 4 Correct weight distribution

3.5.3 Caravan Load, Nose Weight and Axle Load

▷ The information on the towing vehicle documents is important for the selection of the car and caravan.

The caravan load (Fig. 5,1) stipulated in the towing vehicle documents provides information as to the maximum weight which the towing vehicle is permitted to tow. The caravan load refers to the actual weight of the caravan and not to the maximum permissible gross weight of the caravan. An example: The towing vehicle can tow 1,200 kg. If the caravan weighs 900 kg, then one can load it with an additional 300 kg. A caravan with a higher permissible gross weight, however, must not be loaded with weight exceeding 1,200 kg.

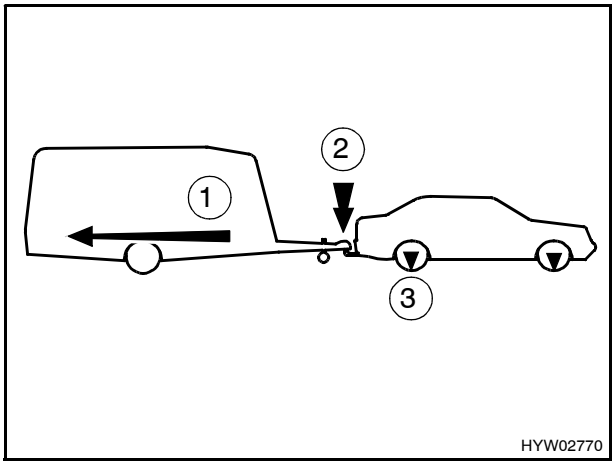


Fig. 5 Caravan load, nose weight and axle load

1 Caravan load
2 Nose weight
3 Axle load

The nose weight (Fig. 5,2) provides information pertaining to which force the caravan drawbar can apply to the caravan coupling of the towing vehicle. Information is to be found in caravan coupling descriptions and the vehicle documents. Therefore, a caravan coupling with a permissible nose weight of 50 kg is not to support a loaded caravan which has a nose weight of 75 kg. Additionally, for the permissible gross weight the nose weight must be taken into consideration. If necessary the payload in the towing vehicle must be reduced by the amount of the nose weight.

The axle load (Fig. 5,3) is also stipulated in the vehicle documents of the towing vehicle. It provides information concerning the highest permissible load for the front and rear axles and is not to be exceeded by a caravan. The load must also be uniformly distributed within the caravan. The above illustration shows where which forces act on the car and caravan.

3.6 Entrance Step

▶ Before commencing the journey, check whether the entrance step is completely pushed in.

▷ Do not grease or lubricate the pivot bearing and joints of the entrance step (see chapter 11).

Pushing in or pulling out

Pulling out:

- Hold of the bottom of the entrance step (Fig. 6,1) pull out and fold down.

Pushing in:

- Hold of bottom of the entrance step, lift the front and push it backwards.

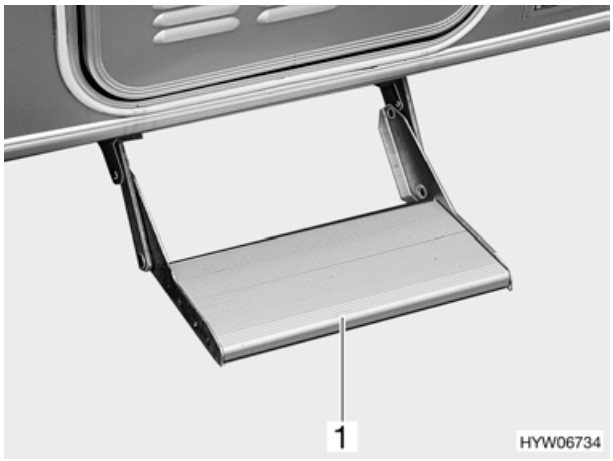


Fig. 6 Entrance step

3.7 Roadworthiness

Before commencing the journey, work through the check list:

No.		Checks	Checked
1	**Body**	Corner steadies and jockey wheel raised	
2		External connection disconnected	
3		External flaps closed and locked	
4		Roof free of snow and ice (in winter)	
5		Conversion door closed and locked	
6		Windows and lifting roof closed and locked	
7		Sliding door, WC door and table secured	
8		All drawers and flaps closed	
9		Refrigerator door secured	
10		Dinette table secured	
11		Road lighting system working	
12		Loose parts stored away or fixed in position	
13		Open storage spaces empty	
14	**Towing vehicle with caravan**	Two external mirrors fitted to towing vehicle	
15		Road lighting system working	
16		Overrun brake functions correctly	
17		Brakes react evenly	
18		When braking, the towing vehicle and caravan remain in the lane	
19	**Tyre pressure**	 ▷ Wrong tyre pressure causes excessive wear and can lead to damage or even to tyre burst. You can lose the control over the caravan. Check the tyre pressure of caravan and towing vehicle regularly before beginning a journey or at intervals of two weeks (for tyre pressure of towing vehicle refer to instruction manual of towing vehicle).	
20	**Gas fittings**	Gas bottles firmly fixed in the gas bottle compartment so that they are unable to turn	
21		Regulator tap on the gas bottle is closed	
22	**Battery**	Check the battery voltage of the living area battery (refer to chapter 8).  ▷ Commence journey with fully charged living area battery (Power Pack SE).	

Chapter Overview

This chapter contains instructions on how to drive the caravan.

The instructions address the following topics:

- driving speed
- brakes

4.1 Driving with the Caravan

- ▶ During the journey, no persons are to travel inside the caravan.
- ▶ The caravans are designed by ***HYMER AG*** for a technically permissible maximum speed of 100 km/h (60 mph). Therefore never drive faster than 100 km/h (60 mph).
- ▶ Please always observe the speed limits in the individual countries (see chapter 17).

The main differences between driving with a caravan and driving without a caravan are the increased vehicle width and length, a decreased acceleration and an increased vehicle stopping distance. Therefore, adapt your driving technique to the altered road behaviour resulting from driving with a caravan.

4.2 Brakes

- ▶ Have defects on the braking system immediately remedied by an authorised specialist workshop.

Before each journey, check by means of a braking test:
- Does the overrun brake function?
- Do the brakes react evenly?
- Do the towing vehicle and the caravan remain in the lane when braking?

Chapter Overview

This chapter contains instructions on how to pitch the caravan.

The instructions address the following topics:

- handbrake
- wheel chocks
- driving in reverse
- operation of the corner steadies
- opening and closing the external doors and flaps
- 240 V external connection

▷ Pitch the caravan so that it is as horizontal as possible.

5.1 Handbrake

- Apply the handbrake (Fig. 7,1) when parking the caravan. It locks automatically in place.
- In order to release it, press the securing button (Fig. 7,2) and lower the handbrake.

▷ Prior to releasing the handbrake, lift the handbrake slightly. This enables the securing button which is subjected to spring pressure to be pushed in more lightly.

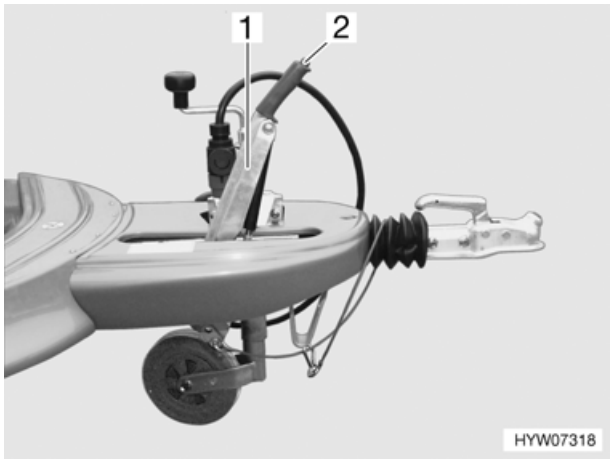


Fig. 7 Handbrake

5.2 Wheel Chocks

Use the two wheel chocks even when the upward or downward gradients are of a minimum. The wheel chocks are situated on the underside in the front of the caravan.

- Press the retaining clip (Fig. 8,3) upwards.
- Pull the wheel chock (Fig. 8,4) forwards until the recesses of the wheel chock (Fig. 8,1) are aligned with the hooks at the holder (Fig. 8,2).
- Remove the wheel chock downwards out of the holder.

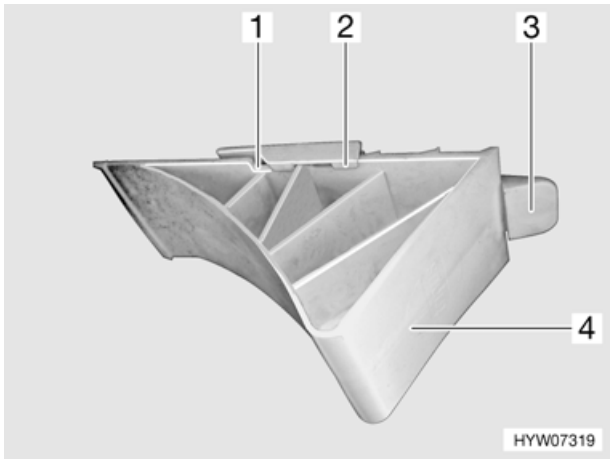


Fig. 8 Wheel chock

5.3 Driving in Reverse

As far as all models with an automatic reverse driving mechanism are concerned, the caravan can be reversed without difficulty. In addition to the rolling resistance, residual braking power must be taken into account.

5.4 Corner Steadies

▷ Do not use the corner steadies, fitted to the caravan as standard, as a vehicle jack. The corner steadies are only for stabilising the pitched caravan. The caravan wheels are not to be raised above the ground.

▷ When the ground is soft, place a pad or block under the corner steadies in order to prevent the caravan from sinking into the ground.

In order to stabilise the pitched caravan use the corner steadies fitted as standard.

- With the assistance of the jockey wheel position the pitched caravan in a horizontal position. For control purposes use a small spirit level.

Fold out the corner steadies after the caravan is in an absolutely horizontal position.

- Place the crank handle provided as standard on the hexagonal nut (Fig. 9,1) of the corner steady (Fig. 9,2) and rotate. The corner steady folds out.

Fig. 9 Corner steady in a folded out position

5.5 Conversion Door

▶ Only drive with a locked conversion door.

▷ When leaving the caravan, close the conversion door.
▷ Always return the locking cylinder to its initial position.

5.5.1 Conversion Door, Outside

Opening when the conversion door is locked:

- Insert the key into locking cylinder and turn in a clockwise direction (Fig. 10,1) until the lock is unlatched.
- Return the key to the central position (Fig. 10,2) and remove it.

Opening when the door is not locked:

- Turn the door knob in a clockwise direction (Fig. 10,3) until the lock of the door is unlatched.

Closing:

- Insert the key into locking cylinder and turn a quarter turn in an anticlockwise direction (Fig. 11,1).
- Return the key to the central position (Fig. 11,2) and remove it.

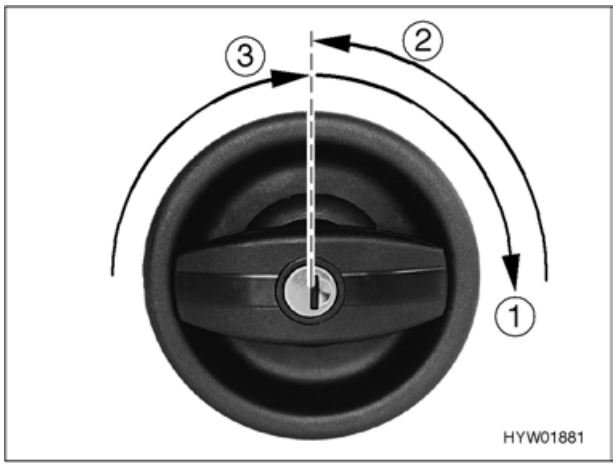


Fig. 10 Door lock of conversion door, outside, opening

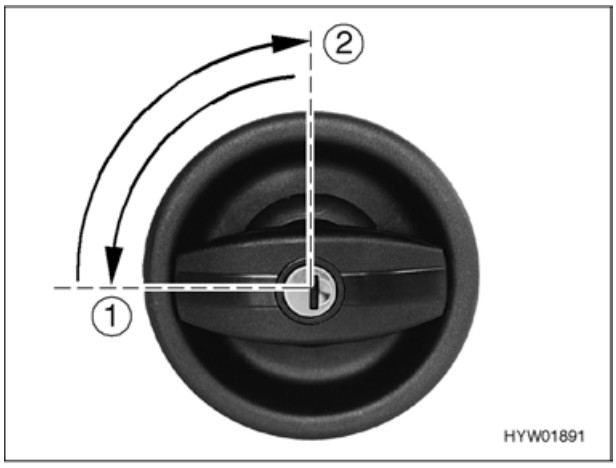


Fig. 11 Door lock of conversion door, outside, closing

5.5.2 Conversion Door, Inside

Opening:

- Turn the knob in an anticlockwise direction (Fig. 12,1).

Locking:

- Turn the door knob approx. 45° in a clockwise direction and leave in this position (Fig. 12,2 and Fig. 13).

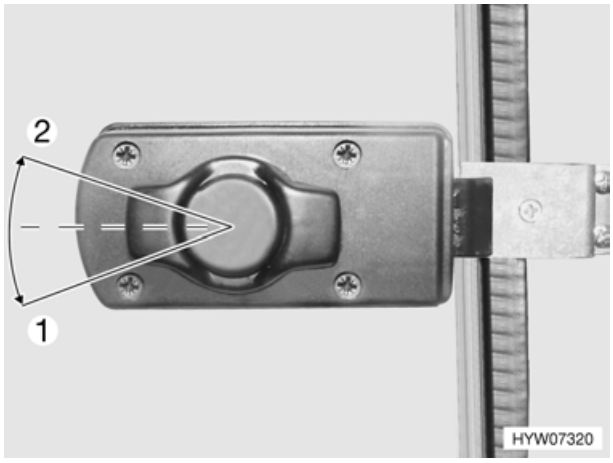


Fig. 12 Door lock of conversion door, inside, open

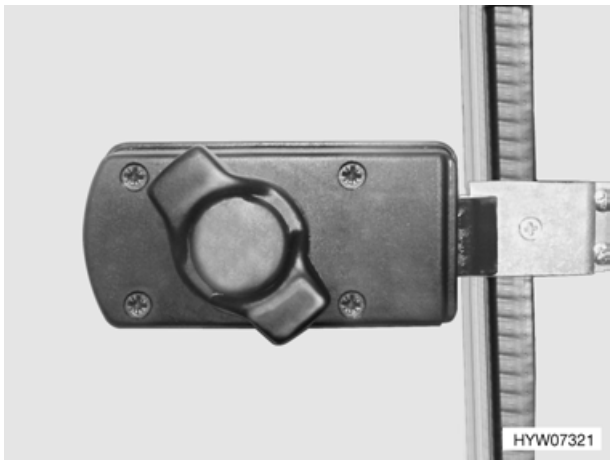


Fig. 13 Door lock of conversion door, inside, closed

5.5.3 Insect Screen on the Conversion Door

The insect screen of the conversion door is located in the upper blind box (Fig. 14,2).

Closing:

- Pull the insect screen down by the bar (Fig. 14,3) until the magnets (Fig. 14,1) adhere to the metal bar on the floor.

Opening:

- Pull the bar (Fig. 14,3) slightly upward until the magnets are released, then slowly guide the insect screen back into the blind box.

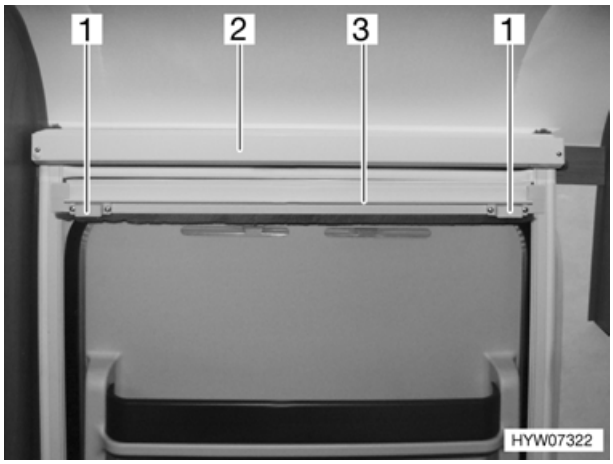


Fig. 14 Insect screen, conversion door

5.6 External Flaps

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

▷ When leaving the caravan, close all external flaps.

▷ Always return the locking cylinder to the initial position.

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

5.6.1 Flap Lock for External Flaps (Variant 1)

▷ During rain, water can penetrate the opened flap lock. Therefore close the lock handle (Fig. 15,2) as shown in Fig. 15.

Opening:

- Insert key into locking cylinder (Fig. 15,1) and turn a quarter turn in an anticlockwise direction. The lock handle (Fig. 15,2) snaps out.
- Turn lock handle one quarter turn in an anticlockwise direction. The flap lock is open.
- Return the key to the central position and remove it.
- To open the external flap, open all the flap locks fitted to that particular external flap.

Closing:

- Firmly close the external flap.
- Turn lock handle (Fig. 15,2) in a clockwise direction, until it is horizontal. The flap lock is bolted but not closed.
- Insert key into locking cylinder (Fig. 15,1).
- Press down lock handle with key inserted and turn key a quarter turn in a clockwise direction. The lock handle will stay bolted.
- Return the key to the central position and remove it.
- To close the external flap, close all the flap locks fitted to that particular external flap.

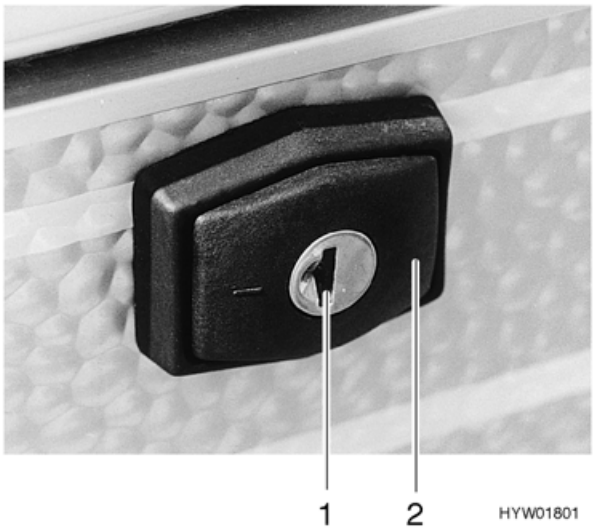


Fig. 15 Flap lock, locked (variant 1)

5.6.2 Flap Lock for External Flaps (Variant 2)

▷ During rain, water can penetrate the opened flap lock. Therefore close the lock handle (Fig. 16,2) as shown in Fig. 16.

Opening:

- Insert key into locking cylinder (Fig. 16,1) and turn a quarter turn in an anticlockwise direction. The lock handle (Fig. 16,2) snaps out.
- Turn lock handle one quarter turn in an anticlockwise direction. The flap lock is open.
- Return the key to the central position and remove it.
- To open the external flap, open all the flap locks fitted to that particular external flap.

Closing:

- Firmly close the external flap.
- Turn lock handle (Fig. 16,2) in a clockwise direction, until it is horizontal. The flap lock is bolted but not closed.
- Insert key into locking cylinder (Fig. 16,1).
- Press down lock handle with key inserted and turn key a quarter turn in a clockwise direction. The lock handle will stay bolted.
- Return the key to the central position and remove it.

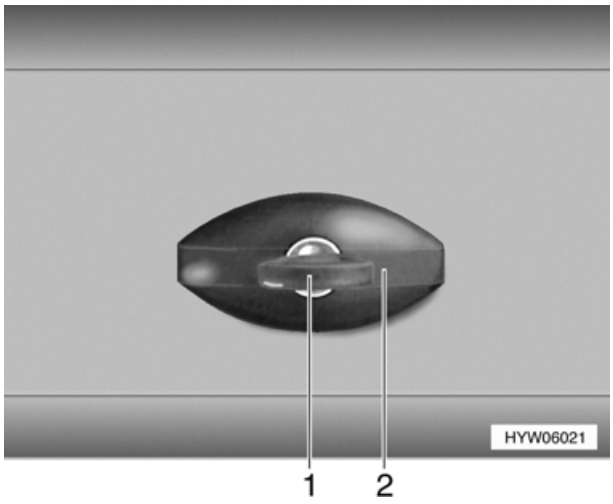


Fig. 16 Flap lock (variant 2)

5.6.3 Flap Lock for External Flaps (Variant 3)

Opening:

- Insert key into locking cylinder (Fig. 17,1) of the push-button lock and turn a quarter turn in an anticlockwise direction.
- Press both push-button locks simultaneously with your thumbs and open the external flap.

Closing:

- Close the external flap and press it shut.
- Insert key into locking cylinder (Fig. 17,1) and turn a quarter turn in a clockwise direction.
- Return the key to the central position and remove it.

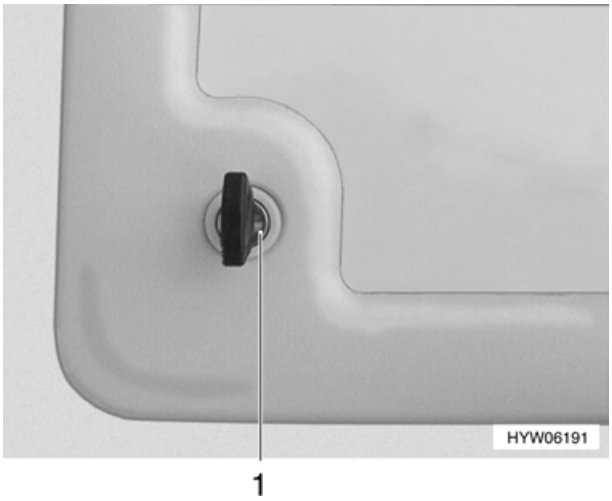


Fig. 17 Flap lock (variant 3)

5.7 External Connection

The caravan can be connected to a 240 V power supply (see chapter 8).

Chapter Overview

This chapter contains instructions about living in the caravan.

The instructions address the following topics:

- heating the caravan
- ventilation of the caravan
- opening and closing the hinged windows
- opening and closing the lifting roof
- modifying the table surfaces
- removing tables
- extending the seating group (Troll)
- use of the beds

6.1 Heating

▶ During heater operation, the exhaust gas pipe in the wardrobe will get hot. Therefore do not keep any heat-sensitive garments right next to the exhaust gas pipe (see also chapter 9).

6.2 Ventilation

▶ The oxygen in the vehicle interior is used up by breathing or the use of the gas cooker etc. and must therefore be continuously replaced. For this reason the caravan features forced ventilations. Never cover or block forced ventilations with objects as e. g. a winter mat. Keep forced ventilations clear of snow and leaves. There is a danger of suffocation due to an increased CO_2 level.

▶ The lifting roof is fitted with ventilation zips which can be opened for additional ventilation

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

▷ In extreme weather conditions, condensation can form on the double-glazed acrylic glass. The glass is so designed that condensation can evaporate when the outside temperature is increased. There is no danger of the double-glazed acrylic glass being damaged by condensation.

▷ Additional cold spots can occur at thermal "bridges" (e. g. lifting roofs, sockets, filler necks, flaps, etc.).

Ensure that there is a continuous exchange of air by providing frequent and efficient ventilation. This is the only method for ensuring that condensation is not formed during cool weather. During the colder season, a comfortable living climate is created by a balance of heating performance, air distribution and ventilation. If the caravan is laid up for a longer period, occasionally ventilate it well, especially in summer as heat accumulation can occur.

6.3 Windows

- ▷ The windows are fitted with a blind and an insect screen. After the latch has been released, the blind and insect screen automatically spring back to the initial position by tensile force. In order not to damage the tension mechanics, hold onto the blind or insect screen and allow it to slowly return to the initial position.
- ▷ Before commencing the journey, always close the windows.
- ▷ Depending on the weather, close the windows far enough to prevent moisture from entering.

- ▷ When leaving the caravan, always close the windows.
- ▷ The upholstery will fade over time, if it is exposed to sunlight. If the temperature within the vehicle rises rapidly as well, the colour will change at an accelerated rate.
  Therefore, ***HYMER AG*** recommends that you close the shades on the windows of the parked vehicle when there is strong sunlight.

6.3.1 Hinged Window

- ▷ Windows with engaging struts must be opened completely in order to release the lock. If the locking device is not released and the window is closed nevertheless, there is the danger of the window being torn due to the massive counter-pressure.
- ▷ When opening the windows, ensure that there are no torsional forces. Open and close windows evenly.

- ▷ In extreme weather conditions, condensation may form on the inside of the double-glazed acrylic glass as the material absorbs moisture. The condensation disappears with rising temperatures.

Opening hinged window with clamp fitting:

- Place window handle (Fig. 18,3) into a vertical position.
- Open the hinged window until the required position has been reached and use knurled knob (Fig. 19,1) to secure in position.

Closing hinged window with clamp fitting:

- Turn knurled knob (Fig. 19,1) until the latch is released.
- Close the hinged window.
- Place the window handle (Fig. 18,3) into a horizontal position. The locking catch (Fig. 18,2) is located on the inside of the window catch (Fig. 18,1).

Opening hinged window with automatic locking mechanism:

- Undo safety screw at the hinges of the side and rear windows (depending on model).
- Swing out safety screw out of the retaining clip.
- Open the window until the required locking position is reached; the telescopic rod (Fig. 20) automatically locks in place.

The hinged window remains locked in the required position.

Closing hinged window with automatic locking mechanism:

- Open the hinged window as wide as necessary until the lock releases.
- Close the hinged window.
- Place the window handle (Fig. 18,3) into a horizontal position. The locking catch (Fig. 18,2) is located on the inside of the window catch (Fig. 18,1).
- Hook safety screw at the telescopic rods into retaining clips of the side windows and the rear window and tighten it.

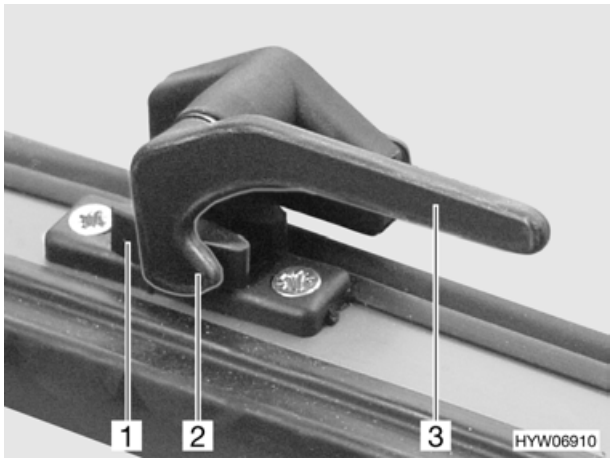


Fig. 18 Hinged window, window handle closed

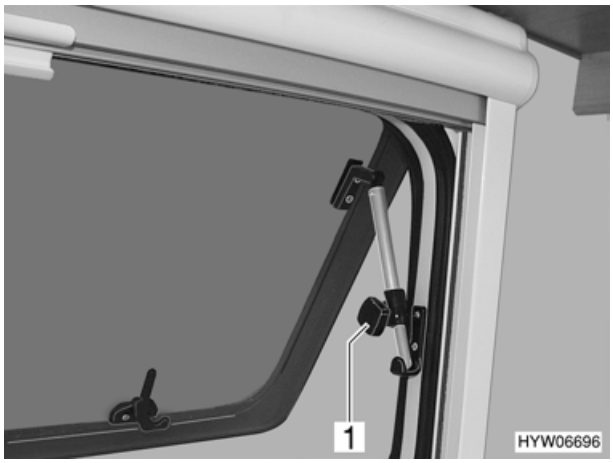


Fig. 19 Hinged window, clamp fitting

Fig. 20 Hinged window, automatic locking mechanism

Continuous ventilation:

Using the window handles, the hinged window can be placed in two different positions:

- Continuous ventilation (Fig. 21)
  or
- firmly closed (Fig. 18).

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

- Open window handle (Fig. 21,3) of the hinged window.
- Lightly open the hinged window outwards.
- Return window handle into its original position. The locking catch (Fig. 21,2) has to be moved into the recess of window catch (Fig. 21,1).

During rain, the window position "continuous ventilation" could lead to splash water penetrating into the living area. Therefore, close the hinged windows completely.

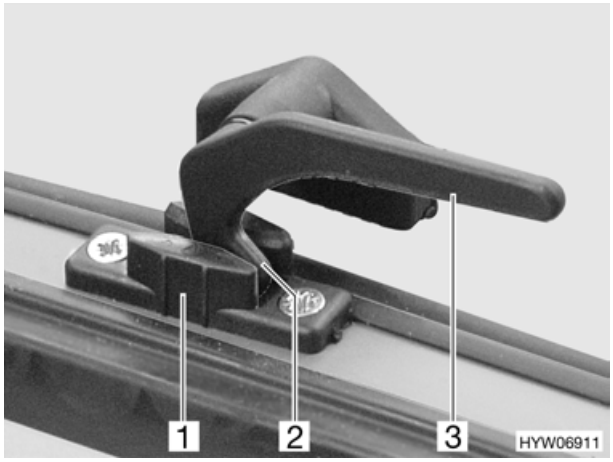


Fig. 21 Hinged window in the "continuous ventilation" position

6.3.2 Blind and Insect Screen

The windows in the caravan are fitted with a blind and an insect screen. The blind and insect screen can be adjusted separately.

Blind and insect screen are located in the top blind box.

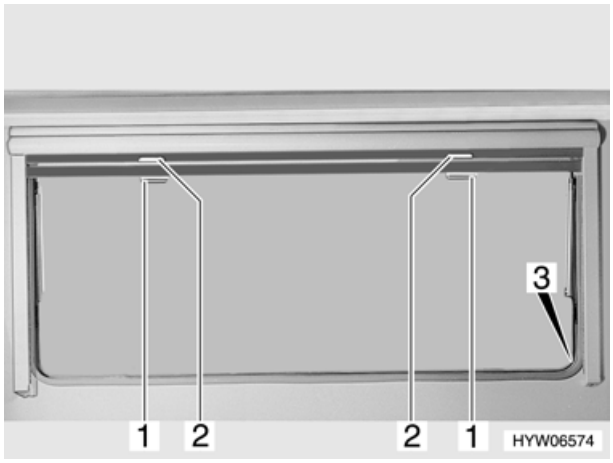


Fig. 22 Hinged window

Blind

Closing:

- Pull blind at the handle (Fig. 22,2) downwards. If the blind is to be completely closed, it is suspended into the locking devices (Fig. 22,3) situated on both sides of the window frame.

Opening:

- If the blind is completely closed: press handle (Fig. 22,2) downwards and at the same time tilt it slightly forwards. The blind can be taken out of the locking devices situated on both sides of the window frame.
- If the blind is in an intermediate position: pull the handle slightly downwards until the locking device releases.
- Use handle to return blind slowly to its initial position.

▷ If necessary, the tensile force of the spring for the blind can be re-adjusted (see chapter 12).

Insect screen

Closing:

- Pull insect screen at the handle (Fig. 22,1) down and hang it into the locking devices (Fig. 22,3) situated on both sides of the window frame.

Opening:

- Press handle (Fig. 22,1) downwards and at the same time tilt it slightly forwards. The insect screen can be taken out of the locking devices situated on both sides of the window frame.
- Use handle to return the insect screen slowly to its initial position.

▷ If necessary, the tensile force of the spring for the insect screen can be re-adjusted (see chapter 12).

6.4 Lifting Roof

- ▶ The apertures for forced ventilation must always be kept open. Never cover or block forced ventilations with objects as e. g. a winter mat. Keep forced ventilations clear of snow and leaves.
- ▶ When staying in the caravan, the lifting roof must be opened.

- ▷ Before closing the lifting roof, always close the ventilation zips.
- ▷ Ensure that the canvas is not trapped between the lifting roof and the vehicle roof.
- ▷ Before commencing the journey, always close the lifting roof.

Opening:

- Remove all spring clamps (Fig. 23,1) downwards out of the holder.
- Press the lifting roof up (Fig. 23,2) using the handles.

Closing:

- Pull the lifting roof down by the handles.
- Pull all spring clamps down and lock into place.

▷ The ventilation zips in the canvas of the lifting roof can be opened for additional ventilation.

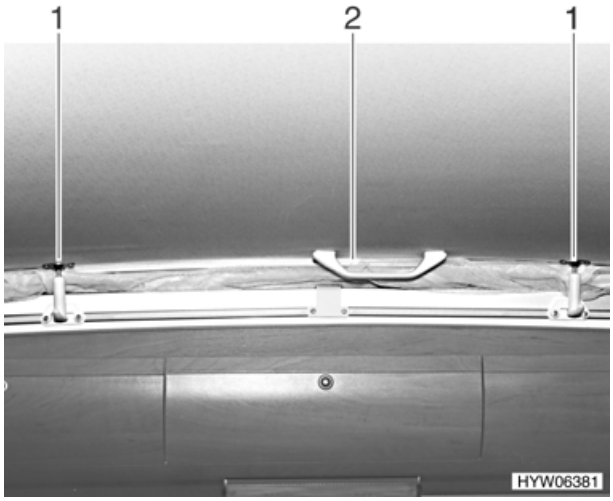


Fig. 23 Lifting roof, closed

6.5 Tables

6.5.1 Fixed Table Round Seating Group

The top of the fixed table of the round seating group can be moved both lengthways and crossways. In addition, the top can be rotated.

Rotating table-top:

- Undo the knurled screw (Fig. 24,1).
- Rotate the table-top (Fig. 24,2) into the desired position.
- Retighten the knurled screw.

Moving table-top lengthways or crossways:

- Undo the knurled screw (Fig. 24,1).
- Undo the knurled screws (Fig. 24,3).
- Rotate the table-top (Fig. 24,2) and push in the rails into the desired position.
- Retighten all knurled screws.

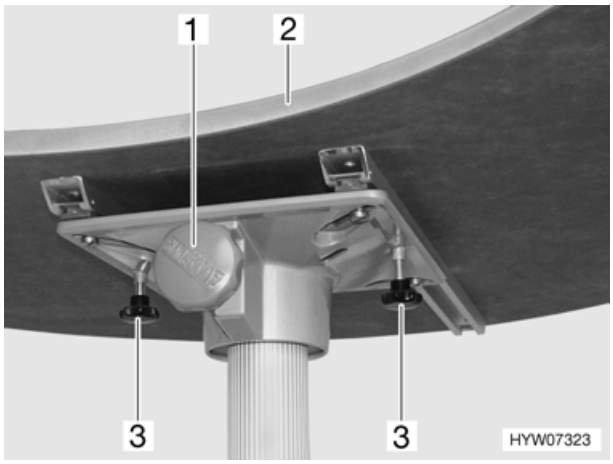


Fig. 24 Fixed table for the round seating group

6.5.2 Folding Table Single Bed Seating Group Troll (Variant 1)

▷ Before commencing the journey, always retract the folding table and secure it in the holder provided for this purpose.

Putting up folding table:

- Undo the snap fasteners of the securing straps (Fig. 25,2).
- Open retaining belt (Fig. 25,1).
- Carefully remove the folding table (Fig. 25,3) from the holder.
- Place the folding table with the legs upwards onto the seat cushions.
- Fold the legs (Fig. 26,5) one after the other outwards against the resistance of the springs (Fig. 26,4) until the retaining clips (Fig. 26,1) engage in the hooks (Fig. 26,2) of the guides (Fig. 26,3).
- Turn round the folding table and place it between the single beds.

Removing folding table:

- Turn the folding table round and place it with the legs upwards onto the seat cushions.
- Press the retaining clips (Fig. 26,1) on both legs one after the other from the hook (Fig. 26,2) of the guide (Fig. 26,3) and fully retract the leg (Fig. 26,5).

  The retaining clip is kept in the closed position by the spring (Fig. 26,4).
- Push the folding table with the legs backwards in the holder between seating group and cabinet (Fig. 25).
- Secure the folding table (Fig. 25,3) with the retaining belt (Fig. 25,1) and the securing straps (Fig. 25,2).

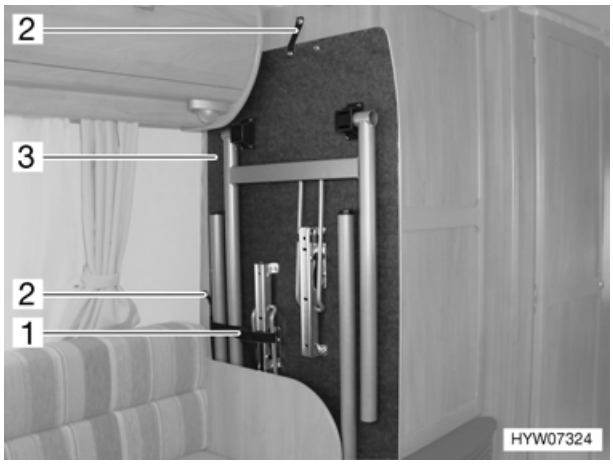


Fig. 25 Folding table in the holder

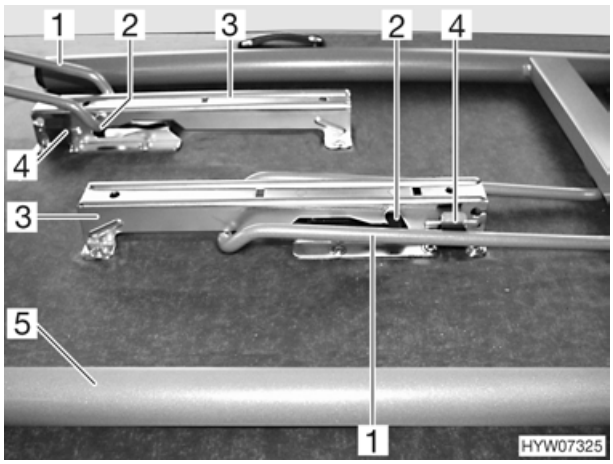


Fig. 26 Folding table, folding mechanism

6.5.3 Folding Table Single Bed Seating Group Troll (Variant 2)

The variant 2 of the folding table can be also used as a table extension of the variant 1.

- Pull the complete cover plate of the bedside locker (Fig. 27,2) forwards.
- Fold the upper part of the cover plate (Fig. 27,1) backwards (Fig. 27).

Fig. 27 Folding table, bedside locker

6.6 Extending the Troll Single Bed Seating Group

- Place folding table to the side.
- Lift the bedside locker at the front by approx. 45°, remove it out of the mounting rail and place to the side.
- Insert the additional cushion (Fig. 28,1).
- Place the folding table again to its original location.

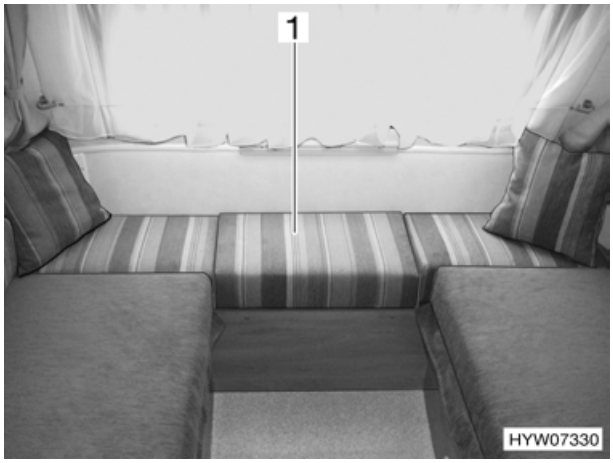


Fig. 28 Seating group after extending

6.7 Beds

6.7.1 Bunk Bed

- Maximum loading of the bunk bed 50 kg.
- Never allow small children to remain in the bunk bed without supervision.
- But in particular with regard to small children less than three years of age, users should ensure that they cannot fall out of the bunk bed.
- Use separate children's beds or travel cots suitable for children.

Depending on the model, the caravan is fitted with a bunk bed. The bunk bed can be used immediately, without additional conversion.

The lower bed can be folded up. The space under the bed can be used for storage.

6.7.2 Hanging Bed

- Maximum loading of the hanging bed 50 kg.
- Never allow small children to remain in the hanging bed without supervision.
- But in particular with regard to small children less than three years of age, users should ensure that they cannot fall out of the hanging bed.
- Use separate children's beds or travel cots suitable for children.

Depending on the model, the caravan is fitted with a hanging bed.

- Hang the hanging bed (Fig. 29,5) with the rods (Fig. 29,3) into the holders (Fig. 29,4).
- Hang the hooks of the tightening straps (Fig. 29,1) into the eyes (Fig. 29,2).

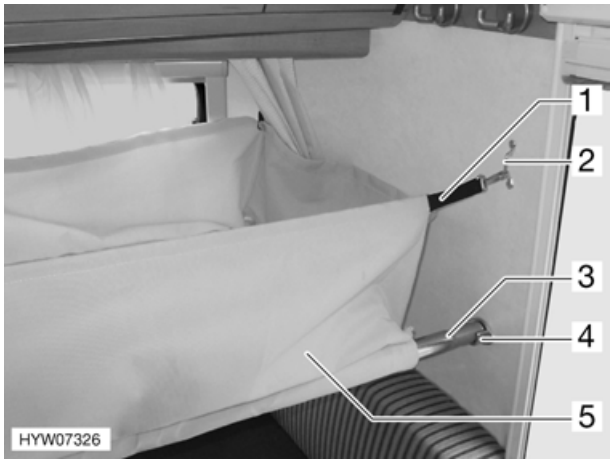


Fig. 29 Hanging bed

6.7.3 Fixed Bed (Variant 1)

A storage compartment is underneath the bed. Lift up the slatted frame to place items in the storage compartment or to empty it.

Opening:

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

  The gas-pressure springs (Fig. 30,1) hold the slatted frame open.

Closing:

- Press the slatted frame downwards against the resistance of the gas-pressure spring.
- If necessary, push the mattress behind the panel.

Fig. 30 Fixed bed (variant 1)

6.7.4 Fixed Bed (Variant 2)

▶ Do not let the slatted frame fall down when closing the bed.

A storage compartment is underneath the bed. Lift up the slatted frame to place items in the storage compartment or to empty it from the inside.

Opening:

- Lift the mattress forwards and set it down on the panel.
- Lift the slatted frame to the desired height and allow both hinges (Fig. 31,1) to engage in the same position.

Closing:

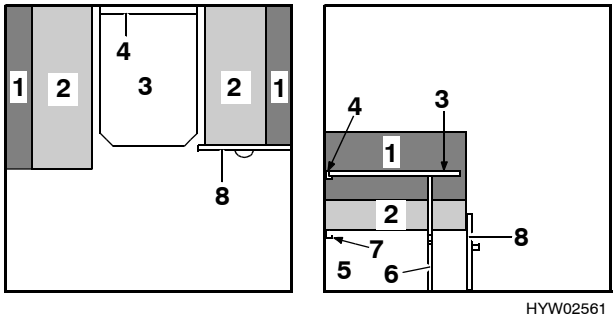
- Lift the slatted frame as far as possible. The hinges release (Fig. 31,1) in a downwards direction.
- Guide slatted frame all the way down.
- If necessary, push the mattress behind the panel.

Fig. 31 Fixed bed (variant 2)

6.8 Sleeping Conversion

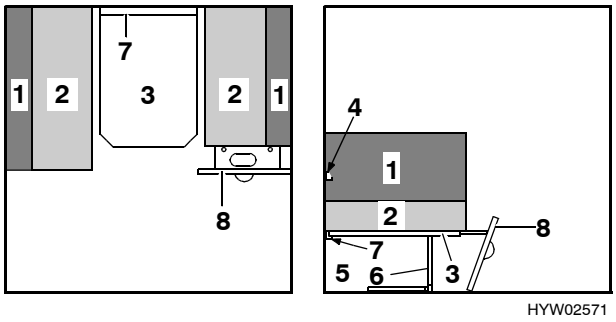
6.8.1 Front Seating Group

- Place the seat cushions (Fig. 32,2) in an upright position.
- Slightly lift the front of the table-top (Fig. 32,3).
- Release the locking device fitted to the table leg and fold the lower half of the table leg backwards by 90°.
- Lift the table-top (Fig. 32,3) by approx. 45°, remove it out of the upper mounting rail (Fig. 32,4) and hold it at an angle of 45°.
- Insert the table-top (Fig. 33,3) in the lower mounting rail (Fig. 33,7) and place it on the floor with the folded table leg (Fig. 33,6).
- Fold out flap of the bed extension (Fig. 33,8).



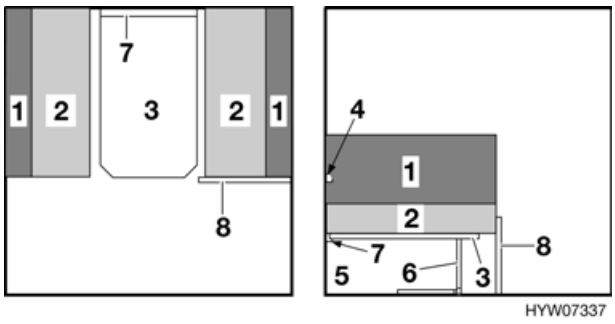
HYW02561

Fig. 32 Prior to conversion



HYW02571

Fig. 33 During conversion (not for Troll 530)



HYW07337

Fig. 34 During conversion (Troll 530)

1 Back cushion
2 Seat cushion
3 Table-top
4 Upper mounting rail
5 Bedding bed
6 Table leg
7 Lower mounting rail
8 Flap bed extension
9 Additional cushion

- Place the back cushions (Fig. 35,1) between the two seat cushions (Fig. 35,2).
- Depending on the model, place the additional cushion (Fig. 35,9) on top.

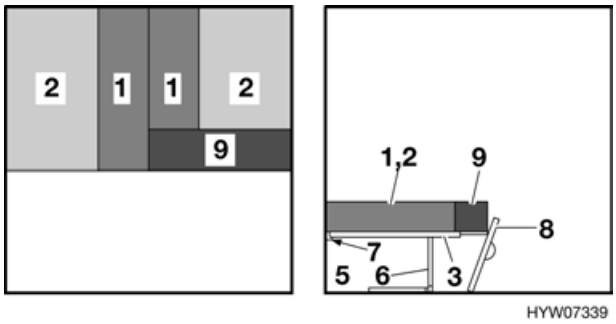


Fig. 35 After conversion (not for Troll 530)

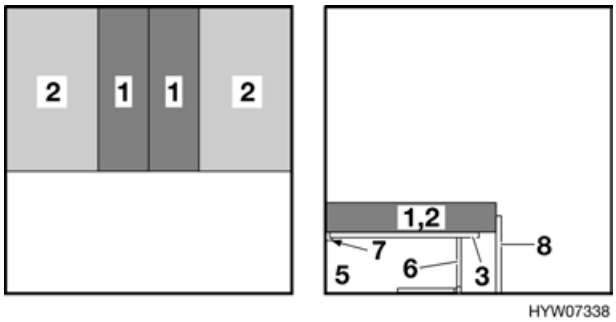


Fig. 36 After conversion (Troll 530)

1 Back cushion
2 Seat cushion
3 Table-top
4 Upper mounting rail
5 Bedding box
6 Table leg
7 Lower mounting rail
8 Flap bed extension
9 Additional cushion

6.8.2 Side Seating Group Troll 552 GT/Front Seating Group Troll 550/555 GT

- Slightly lift the front of the table-top (Fig. 37,3).
- Release the locking device fitted to the table leg and fold the lower half of the table leg backwards by 90°.
- Lift the table-top by approx. 45°, remove it out of the mounting rail and place to the side.
- Lay the two seat cushions in position (Fig. 37,2 and 4).
- Place table-top into the lower holders.
- Pull out the bedding box extension (Fig. 38,6).

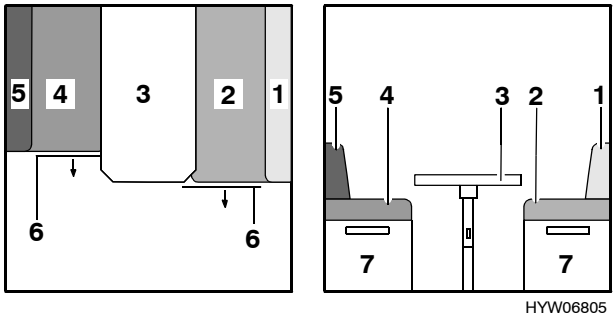


Fig. 37 Prior to conversion

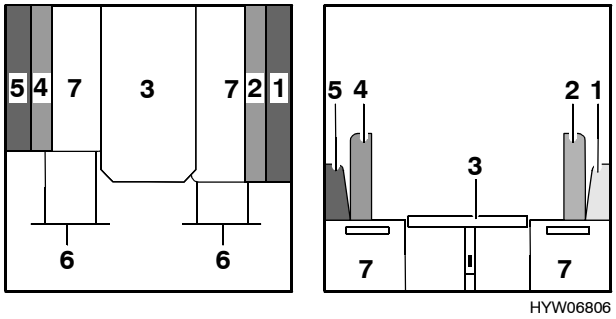


Fig. 38 During conversion

- Place both seat cushions (Fig. 39,2 and 4) in the centre.
- Insert the back cushions (Fig. 39,1 and 5) between the seat cushions and the wall.
- Lay the additional cushions (Fig. 39,8 and 9) on the bedding box extension.

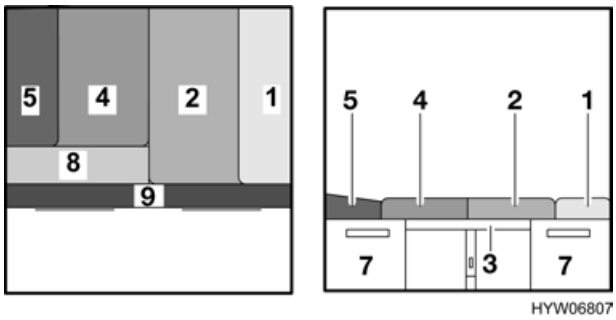


Fig. 39 After conversion

1 Back cushion
2 Seat cushion
3 Table-top
4 Seat cushion
5 Back cushion
6 Bedding box extension
7 Bedding box
8 Additional cushion, short
9 Additional cushion, long

6.8.3 Seating Group with two Single Beds

- Slightly lift the front of the table-top (Fig. 40,3).
- Press the top of the table leg together and fold it against the bottom of the table.
- Lift the table-top (Fig. 40,3) by approx. 45°, remove it out of the mounting rail (Fig. 40,4) and place to the side. The table is not required for the sleeping conversion.
- Pull out slatted frame (Fig. 41,7).
- Remove the back cushion (Fig. 41,1) and lay it aside.
- Remove the back cushion (Fig. 41,5) from the back cushion (Fig. 41,6).
- Lightly lift up the two seat cushions (Fig. 41,2) and pull them on the slatted frame (Fig. 41,7).

- Insert the back cushions (Fig. 42,5 and 6) between the seat cushions (Fig. 42,2) and the exterior wall.

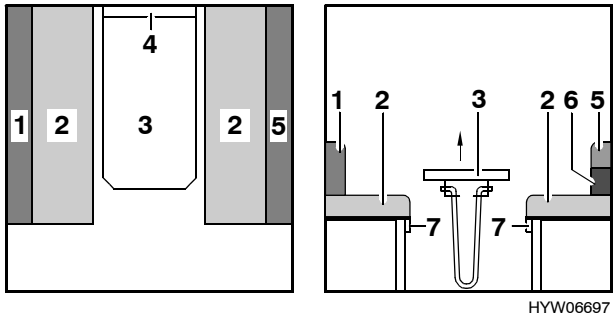


Fig. 40 Prior to conversion

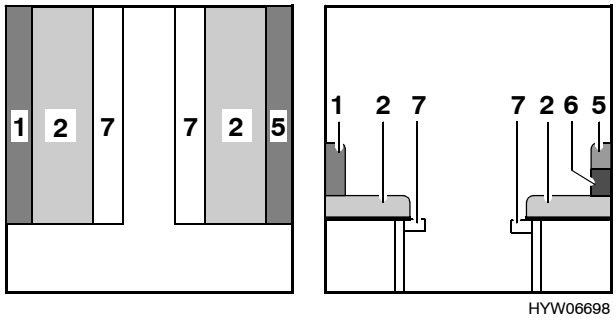


Fig. 41 During conversion

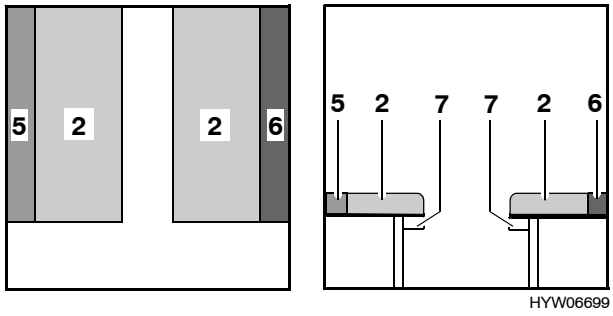


Fig. 42 After conversion

1 Back cushion
2 Seat cushion
3 Table-top
4 Mounting rail
5 Back cushion
6 Back cushion
7 Slatted frame

6.8.4 Seating Group with Bed 1400 x 1900

- Slightly lift the front of the table-top (Fig. 43,3).
- Press the top of the table leg (Fig. 43,6) together and fold it against the bottom of the table.
- Lift the table-top by approx. 45°, remove it out of the mounting rail (Fig. 43,4) and place to the side. The table is not required for the sleeping conversion.
- Release bed leg (Fig. 44,7) and turn it a quarter turn.
- Ensure that the bed leg is correctly placed on the bedding box (Fig. 44,5) opposite.
- Lightly lift up the two seat cushions (Fig. 44,2) and pull them to the middle.

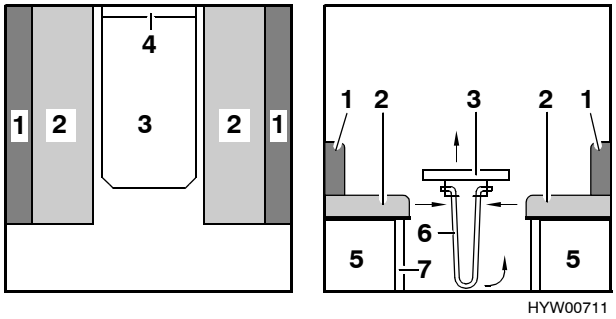


Fig. 43 Prior to conversion

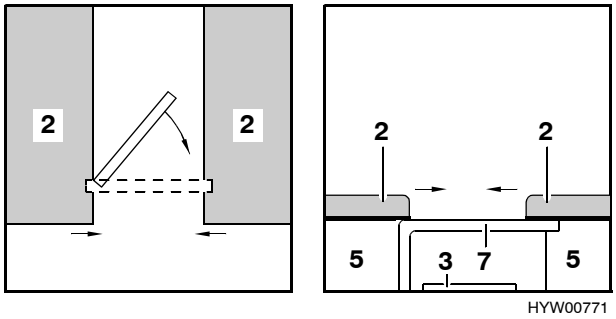


Fig. 44 During conversion

- Insert the back cushions (Fig. 45,1) between the seat cushions (Fig. 45,2) and the exterior wall.
- Push the table-top (Fig. 45,3) under the bed.

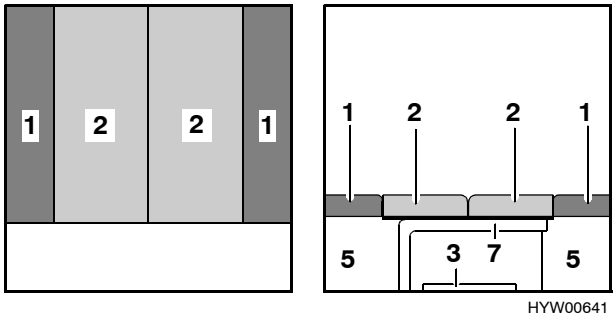


Fig. 45 After conversion

1 Back cushion
2 Seat cushion
3 Table-top
4 Mounting rail
5 Bedding box
6 Table leg
7 Bed leg

6.8.5 Seating Group Puck 120

- Slightly lift the front of the table-top (Fig. 46,3).
- Remove table leg (Fig. 46,6).
- Lift the table-top by approx. 45°, remove it out of the mounting rail (Fig. 46,4) and lay it aside. The table is not required for the sleeping conversion.

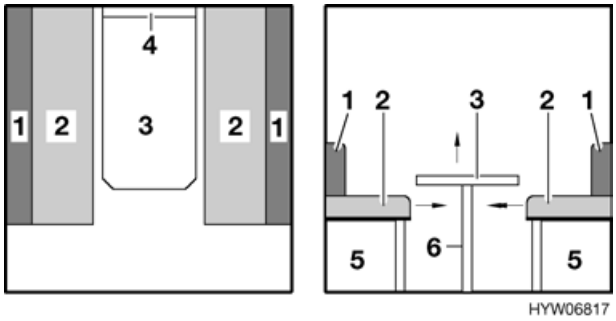


Fig. 46 Prior to conversion

- Remove the bed rods (Fig. 47,7) from the bedding box (Fig. 47,5).
- Lift up both seat cushions (Fig. 47,2) and place the two bed rods (Fig. 47,7) in a transverse position in the pertinent grooves between both bedding boxes.
- Pull the seat cushions into the centre.

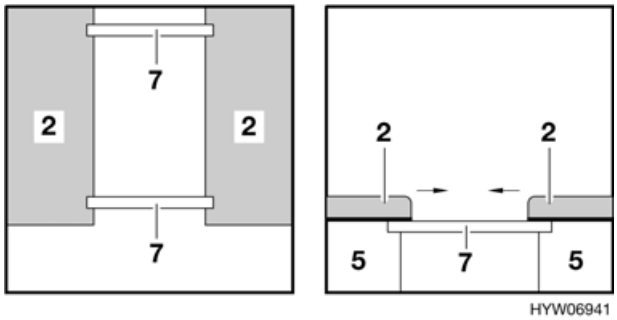


Fig. 47 During conversion

- Insert the back cushions (Fig. 48,1) between the seat cushions (Fig. 48,2) and the exterior wall.

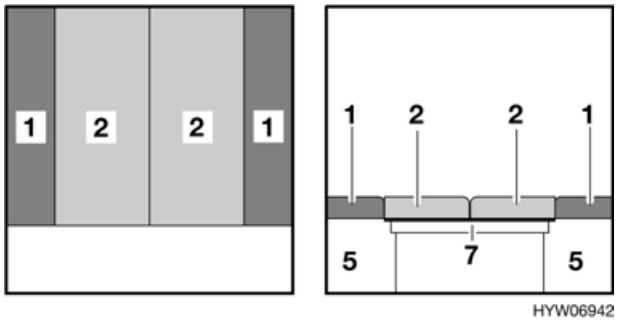


Fig. 48 After conversion

1 Back cushion
2 Seat cushion
3 Table-top
4 Mounting rail
5 Bedding box
6 Table leg
7 Bed rod

6.8.6 Seating Group Puck L 225 GT

- Slightly lift the front of the table-top (Fig. 49,3).
- Press the top of the table leg (Fig. 49,6) together and fold it against the bottom of the table.
- Lift the table-top by approx. 45°, remove it out of the mounting rail (Fig. 49,4) and lay it aside. The table is not required for the sleeping conversion.
- Remove the bed rods (Fig. 50,7) from the bedding box (Fig. 50,5).
- Lift up both seat cushions (Fig. 50,2) and place the two bed rods (Fig. 50,7) in a transverse position in the pertinent grooves between both bedding boxes.
- Pull the seat cushions into the centre.

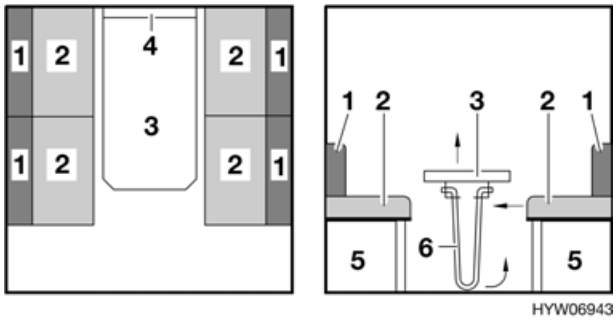


Fig. 49 Prior to conversion

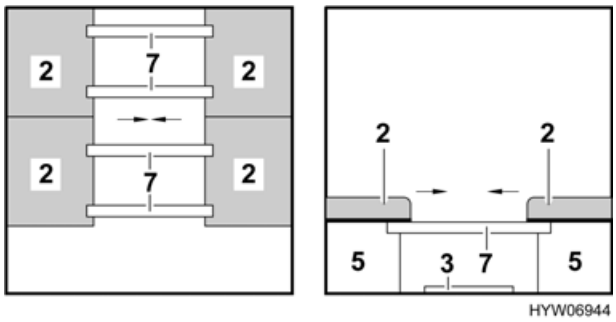


Fig. 50 During conversion

- Insert the back cushions (Fig. 51,1) between the seat cushions (Fig. 51,2) and the exterior wall.

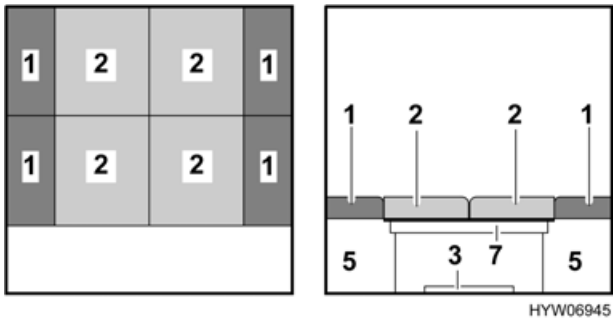


Fig. 51 After conversion

1 Back cushion
2 Seat cushion
3 Table-top
4 Mounting rail
5 Bedding box
6 Table leg
7 Bed rod

6.8.7 Use of Bed Extension (Depending on Model)

- Release bedding box front wall (Fig. 52,4) from the locking device.

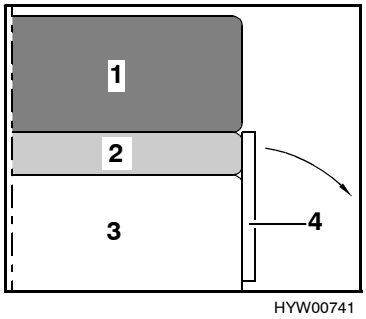


Fig. 52 Prior to conversion

- Tilt bedding box front wall in the direction of the floor.
- Lift bedding box extension (Fig. 53,5).

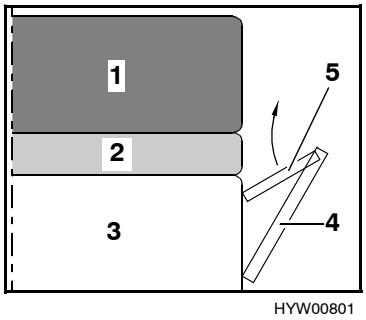


Fig. 53 During conversion

- Allow the bedding box extension (Fig. 54,5) to engage and, if necessary, lift the seat cushion.
- Use the additional cushion for sleeping conversion.

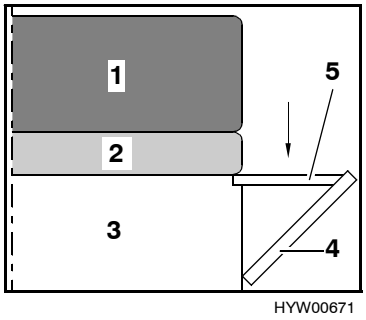


Fig. 54 After conversion

1 Back cushion
2 Seat cushion
3 Bedding box
4 Bedding box front wall
5 Bedding box extension

Chapter Overview

This chapter contains instructions regarding the gas fittings of the caravan.

The instructions address the following topics:

- safety
- changing the gas bottles
- gas isolator taps
- external gas connection

The operation of the gas operation appliances of the caravan is described in chapter 9.

7.1 General

- ▶ Before commencing the journey, close all gas isolator taps and the regulator tap.
- ▶ Have the gas fittings checked by an authorised specialist workshop according to the national regulations before commissioning. This also applies for not registered vehicles. For modifications to the gas fittings have the gas fittings immediately checked by an authorised specialist workshop.
- ▶ Have the gas fittings repaired or altered by an authorised workshop only.
- ▶ In case of a defect of the gas fittings (gas odour, high gas consumption) there is an explosion hazard! Immediately close regulator tap on the gas bottle. Open windows and doors. Do not smoke; do not ignite any open flames, and do not operate electric switches (light switches a.s.o.). Have the defect repaired by an authorised workshop.
- ▶ Open the lifting roof before taking open sources of combustion (gas cooker) into service.
- ▶ Do not use the gas cooker for heating purposes.
- ▶ If the caravan or gas equipment are not used, close the regulator tap on the gas bottle.
- ▶ If there are several gas devices, each gas device must have its own gas isolator tap. If individual gas devices are not in use, close the respective gas isolator tap.
- ▶ Thermocouple must close within 1 minute after the gas flame has extinguished. A clicking sound is audible. Check function from time to time.
- ▶ When refuelling the towing vehicle, no source of combustion (gas cooker, gas heater, boiler, etc.) is to be in operation.
- ▶ The installed devices are meant for use with propane or butane gas or a mixture of both. The gas pressure regulator as well as all installed gas devices are set for a gas pressure of 30 mbar.
- ▶ Propane gas is capable of gasification up to -42 °C, whereas butane gas gasifies at 0 °C. Below these temperatures no gas pressure is available. Butane gas is unsuitable for use in winter.
- ▶ Inspect the gas tube fitted to the gas bottle connection for tightness. The gas tube should have no tears and should not be porous. It is recommended that the gas tube be replaced every 12 months, or earlier if necessary.

- Due to its function and construction, the gas bottle compartment is a space which is open to the exterior. In order to enable leaking gas to immediately be dispersed outside, the standard forced ventilation is never to be blocked or covered.
- Do not use the gas bottle compartment for storage.
- Lock the gas bottle compartment in order to prevent unauthorised persons opening it.
- The regulator tap on the gas bottle must be accessible.
- Only connect gas-operated devices (e. g. gas grill) which have been designed for a gas pressure of 30 mbar.
- The exhaust pipe must be fitted tightly to the heating system and to the chimney and must be sealed. The exhaust gas pipe must not show any evidence of damage.
- Waste air must be able to leave and fresh air must be able to enter unhindered. For this reason, no snow walls or aprons must be allowed to lie against the vehicle. Keep the intake openings under the floor of the vehicle open and clean.

7.2 Gas Bottles

- Gas bottles are only to be transported within the designated gas bottle compartment.
- Secure gas cylinders in a vertical position. At **no** time should gas cylinders be transported horizontally.
- Close the regulator tap on the gas bottle before the gas pressure regulator or gas tube are removed from the gas bottle.
- The gas pressure regulator must only be secured with a suitable gas spanner (Do **not** overtighten).
- The designated gas bottle compartment will accommodate two gas cylinders, i. e. Calor Gas Butane/Propane or Camping Gaz. All gas cylinders **must** be fitted with the appropriate regulator.
- Use the shortest possible hose lengths (150 cm max.) for external gas bottles.
- Check the gas tube regularly for wear and tear. It is recommended that the gas tube be replaced every 12 months, or earlier if necessary.

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

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

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

If 2 gas bottles are used at the same time:

■ Connect a gas pressure regulator fitted with an automatic switchover device.

▷ Information available at the ***ERIBA*** service centre.

▷ For filling and connection of the gas bottles in Europe the ***ERIBA*** accessories shops have corresponding Euro filling sets and Euro bottle sets.

▷ For information on the gas supply in Europe see chapter 17.

7.3 Changing Gas Bottles

▶ When you have changed the gas bottle, check whether gas escapes at the connection points and unions. Use a leakage search spray to spray the relevant connection point or union (***ERIBA*** accessories shop).

- Close regulator tap (Fig. 55,1) on the gas bottle (Fig. 55,4). Pay attention to the direction of the arrow.
- Unscrew the gas pressure regulator (Fig. 55,3) with the gas tube (Fig. 55,5) from the gas bottle with a suitable gas spanner.
- Release the fixing belt (Fig. 55,2) and remove the gas bottle.
- Place a filled gas bottle in the gas bottle compartment.
- Fix in place with the fixing belt.
- Screw the gas pressure regulator with gas tube on the gas bottle and secure with a suitable gas spanner (**Do not** overtighten).

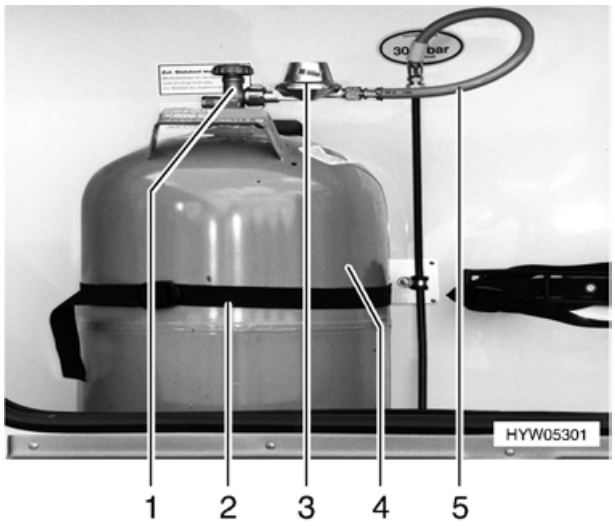


Fig. 55 Gas bottle compartment

7.4 Gas Isolator Taps

A gas isolator tap (Fig. 56) for every gas device is built into the caravan. The gas isolator taps can be found under the cooker. Each of the symbols on the gas isolator taps refers to a gas device:

 Refrigerator

 Cooker

 Boiler

 Heater

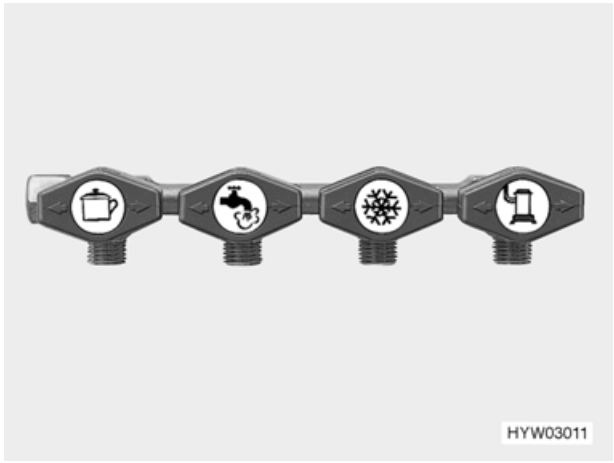


Fig. 56 Gas isolator taps in the off position

7.5 External Gas Connection

- If the external gas connection is not in use, always close the stopcock (Fig. 57,2).
- Only gas appliances with a suitable adapter should be connected to the external gas connection.
- Connect only external gas appliances which are designed for an operation pressure of 30 mbar.
- Once you have made the connection and opened the stopcock, make sure that no gas is escaping at the connection point (Fig. 57,1). If there is a leak in the external gas connection, gas will escape into the open air. Immediately close the stopcock and the regulator tap on the gas bottle. Have the external gas connection checked by an authorised specialist workshop.
- When connecting an external gas appliance, make sure that there is nothing near the external gas connection that could cause a spark.

The external gas connection (Fig. 57) is located at the front right, next to the gas bottle compartment.

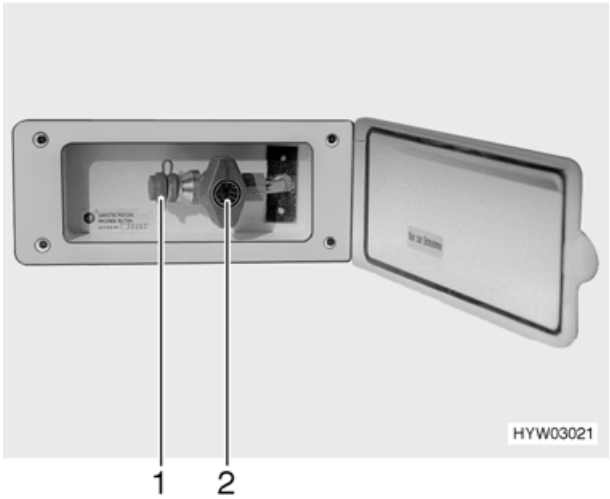


Fig. 57 External gas connection, stopcock closed

Chapter Overview

This chapter contains instructions regarding the electrical fittings of the caravan.

The instructions address the following topics:

- safety
- 240 V power supply
- connection to the 240 V supply
- 12 V power supply
- power pack
- explanations of terms relating to the battery
- living area battery
- panel
- sockets
- towing vehicle connection
- electrical wiring

Operation of the electric appliances of the caravan is described in chapter 10.

8.1 General

- ▶ Only allow qualified persons to work on the electrical fittings.
- ▶ Only replace defective fuses when the cause of the defect is known and has been remedied.

8.2 240 V Power Supply

The 240 V connection is protected by a two-pole automatic circuit breaker (Fig. 58,1 or Fig. 59,1).

The power pack is integrated in the circuit breaker.

The 240 V power supply provides electricity for:
- sockets with earth contact
- refrigerator
- 12 V living area power supply

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

When the external 240 V power supply is connected, the living area battery (Power Pack SE) is automatically charged by the built-in power pack.

Connect the caravan to an external 240 V power supply system as often as possible. The power pack automatically charges the living area battery.

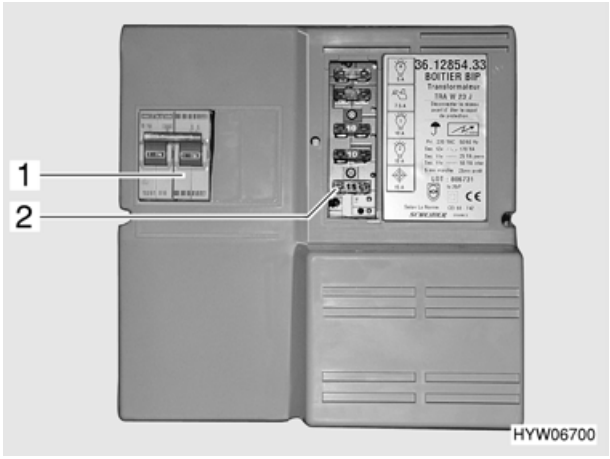


Fig. 58 240 V automatic circuit breaker with power pack

1 Two-pole circuit breaker
2 See table "Fuse Rating"

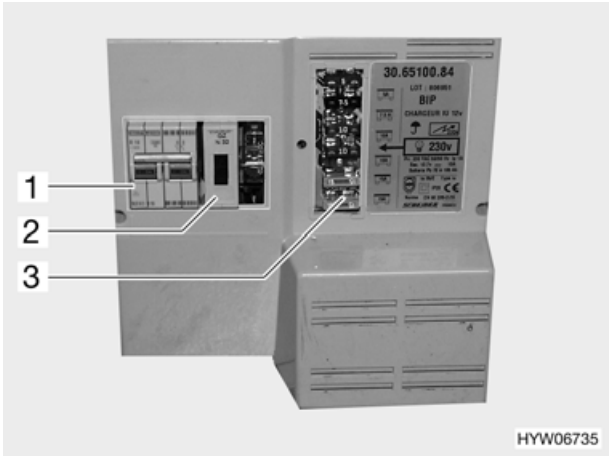


Fig. 59 240 V automatic circuit breaker with power pack (Power Pack SE)

1 Two-pole circuit breaker
2 One-pole circuit breaker for charger
3 See table "Fuse Rating"

8.2.1 240 V Connection

▶ Completely unwind the cable on cable drums to prevent overheating.

Power cable:
- three-core (3 x 2,5 mm^2) flexible rubber sheathed cable
- maximum 25 m in length
- 1 plug with earth contact
- 1 socket with earth contact

In order to be prepared for all connection possibilities, ***HYMER AG*** recommends the following combinations:

- Adapter cable:
  CEE 17 socket with earth contact (Fig. 60,1) – plug with earth contact (Fig. 60,2).
- Cable reel:
  Socket with earth contact (Fig. 60,3) – plug with earth contact (Fig. 60,4).
- Adapter cable:
  Socket with earth contact (Fig. 60,5) – CEE 17 plug with earth contact (Fig. 60,6).

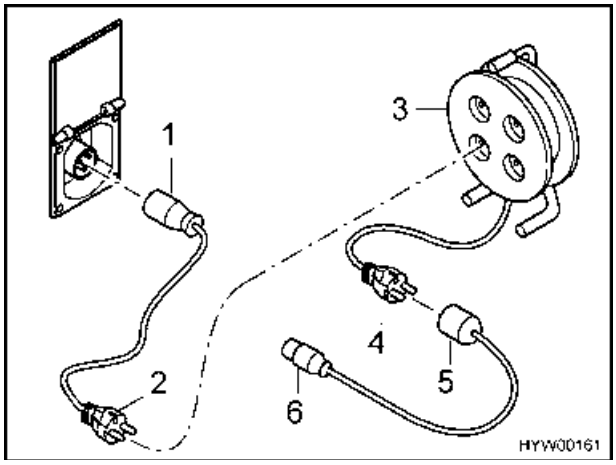


Fig. 60 Connection options for 240 V power connection

8.3 12 V Power Supply

When the caravan is not connected to the 240 V power supply, 12 V supply is performed either by the battery of the connected towing vehicle or by the living area battery (Power Pack SE). If the caravan is electrically connected to the towing vehicle, the living area battery is charged by the vehicle generator when the vehicle's engine is running.

The living area battery has a limited power supply only. For this reason, the electrical appliances should not be operated for a long time without using the 240 V power supply or supplied by the living area battery with voltage when the vehicle's engine is switched off.

In order to prevent fast discharge of the living area battery, the refrigerator is operated on 12 V supply only when the engine is running and when there is an electrical connection between the towing vehicle and caravan.

8.3.1 Power Pack

- If you use the battery of the towing vehicle to provide power for the caravan, bear in mind that the battery capacity is restricted. If you place too great a burden on the battery, this may lead to starting difficulties.
- Always disconnect the electrical connection between the towing vehicle and the caravan before the caravan is connected to a 240 V supply or if the living area battery is being charged by an external device.

The power pack (Fig. 58 or Fig. 59) is installed in the front under the table on the left or in a bedding box.

Without a connection to the 240 V supply, the requisite power supply is provided by the battery of the towing vehicle, as long as contact 9 "constant positive", is connected to the towing vehicle socket (see connection diagram at the end of this chapter). The 12 V living area lamps, the cassette toilet and the water pump can be used.

When the 240 V supply is connected, the power pack switches the power supply in the living area automatically from the towing vehicle battery to mains operation. A connected battery (Power Pack SE) is recharged.

▷ The towing vehicle battery is not charged by the power pack.

The thermal cut-out in the power pack switches all 12 V consumers in the caravan off, if the power pack overheats. The power pack can overheat, if the ventilation apertures are covered by clothing or if many 12 V consumers are operated for a long time.

When the thermal cut-out has triggered, the power pack automatically switches back on after cooling down.

8.3.2 Terms

Off-load voltage

The off-load voltage is the voltage of the battery in idle condition, i. e. no current is consumed and the battery is not being charged.

Closed circuit current

Some electrical appliances, such as the clock and the indicator lamps, require continuous electric current, for this reason they are referred to as inactive appliances. The closed circuit current flows even if the 12 V main switch has been switched off.

Total discharge

▷ Total discharge damages the battery.

Total discharge of the battery is imminent, if a battery is completely discharged by an active appliance and by closed circuit current.

Capacity

Capacity refers to the amount of electricity which can be stored in a battery.

The capacity of a battery is given in ampere hours (Ah). If a battery possesses a capacity of 80 Ah, then the battery can dispense a current of 1 A for 80 hours or a current of 2 A for 40 hours.

External influences such as temperature may alter the storage capacity of the battery.

8.3.3 Living Area Battery (Power Pack SE)

- ▷ Take note of the battery manufacturers users and maintenance instructions.
- ▷ Prior to commencing a journey ensure the living area battery is fully charged. For this reason charge the battery for at least 20 hours before commencing the journey.
- ▷ During the trip, use every opportunity to charge the living area battery.
- ▷ After the trip, charge the living area battery for at least 20 hours, as normally, the living area battery is never fully charged even during lengthy mobile use.
- ▷ Use the provided power pack to charge the living area battery. Use a regulated charger for external charging.
- ▷ When the living area battery is changed, only use batteries of the same type. A dryfill battery must only ever be replaced by a dryfill battery.
- ▷ The living area battery charges more quickly when the ambient temperatures are high (above 30 °C). The self-discharge rate at +20 °C is 2 % per month, at +40 °C it is 15 to 20 % per month.
- ▷ A satisfactory measurement of the charging condition can only be made after 4 hours of battery charging. Immediately after charging, the battery voltage is higher, after approx. 4 hours, it sinks to the so-called off-load voltage. The off-load voltage displays the charging condition.

Off-load voltage (measured at the poles)		Charging condition
Greater than	12.80 V	100 %
Approx.	12.55 V	75 %
Approx.	12.32 V	50 %
Approx.	12.18 V	25 %
Less than	12.00 V	0 %

- ▷ For long periods of inactivity (4 weeks or more), either disconnect the living area battery or recharge it regularly.
- ▷ The dryfill battery is maintenance-free. Maintenance-free means:
  - It is not necessary to check the acid level.
  - It is not necessary to lubricate the battery poles.
  - It is not necessary to refill the distilled water.

  Even a maintenance-free dryfill battery must be charged regularly.

8.4 Check Living Area Battery

At low outside temperatures the living area battery can lose part of its capacity. The standard values for the power consumption are included in the following "Balance of energy consumption" table. The indicated operating hours are estimates and will vary depending on individual circumstances.

8.5 Energy Reserve of the Living Area Battery

The capacity of a battery is limited as to time. The higher the number of electrical appliances, the faster the energy of the living area battery is consumed. A battery which has been installed for years has no longer the complete capacity available.

To protect the living area battery, no more than 80 % of the battery's capacity should be drawn. Therefore, a regular check of the charging condition of the living area battery is recommended.

Balance of energy consumption (example)

Balance of energy		Output	Current	Summer			Winter		
				Hrs/ day*	Output/ day	Current/ day	Hrs/ day*	Output/ day	Current/ day
1	Seating group	20 W	1.7 A	1	20 W	1.7 Ah	2	40 W	3.4 Ah
2	Kitchen	18 W	1.5 A	1	18 W	1.5 Ah	2	36 W	3 Ah
3	Bathroom unit	30 W	2.5 A	1	30 W	2.5 Ah	1	30 W	2.5 Ah
4	Water pump	18 W	1.5 A	0.5	9 W	0.8 Ah	0.5	9 W	0,8 Ah
5	Front lights	20 W	1.7 A	0.5	10 W	0.8 Ah	1	20 W	1.7 Ah
6	Trumatic S 3002 heater	12 W	1 A				16	192 W	16 Ah
7	Television with receiver	40 W	4.2 A	2	80 W	8.4 Ah	4	160 W	17 Ah
8	Awning light	10 W	0.8 A	1	10 W	0.8 Ah	1	10 W	0.8 Ah
				Total	177 W	Approx. 16.5 Ah	Total	497 W	Approx. 45.2 Ah
				Approx. 2.4 days "power" (independent)			Approx. 0.9 days "power" (independent)		

*) Estimated operating hours

8.6 Charging the Living Area Battery (Power Pack SE)

- The acid in the battery is poisonous and corrosive. Any contact with the skin or the eyes is to be avoided.
- In the case of charging with an external charger there is danger of explosion. Only charge the battery in a well ventilated area and away from naked flames or possible sources of sparks.
- Always remove the living area battery from the caravan when charging it using an external charger.

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

▷ Before disconnecting or connecting the terminals of the living area battery, switch off the vehicle engine of the towing vehicle as well as the 240 V and 12 V power supply systems and all appliances.

▷ Do not run the vehicle engine when the living area battery is disconnected, if there is an electrical connection between the caravan and the towing vehicle. Danger of short circuit!

8.6.1 Charging Using a 240 V Power Supply

When the 240 V power supply is connected, the living area battery is charged via the power pack which is fitted in the caravan. The charging current is adapted to suit the charging condition of the battery. This ensures that it is not possible to overload the battery.

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

8.6.2 Charging Using the Vehicle Engine of the Towing Vehicle

When the vehicle engine is running, the vehicle generator charges the living area battery. An electrical connection between the towing vehicle and the caravan is prerequisite for this. If the vehicle engine is switched off, the electrical connection is automatically disconnected by a relay. This prevents the vehicle battery from being run down by electrical appliances in the living area.

8.6.3 Charging with an External Charger

When charging the living area battery with an external charger, proceed as follows:

- Turn off all gas appliances, all gas isolator taps and close the regulator tap on the gas bottle.
- There is a danger of short circuit when disconnecting the battery poles. For this reason, first disconnect the negative pole on the living area battery and then the positive.
- Remove the living area battery from the caravan.
- In the case of dryfill batteries, check whether the external charger is approved for use with dryfill batteries.
- Check that the external charger is turned off.
- Connect the external charger to the living area battery. Pay attention to the polarity:
  First connect the positive terminal "+" to the positive pole of the battery, then connect the negative terminal "–" to the negative pole of the battery.

- Turn on the external charger.
- See the instructions for use of the connected charger for information concerning charge period required for the battery.
- Disconnect the external charger in reverse order.

8.7 Living Area Battery in the Winter

If the caravan has not been operated for some time or the 240 V power supply has not been connected for some time, the living area battery will quickly lose its capacity at low outside temperatures. If the caravan is laid up for a long time in winter, remove living area battery and store in a frost-protected room so that it will not freeze and will be destroyed.

8.8 Fuses

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

The appliances connected to the 12 V supply in the caravan are fused individually. The fuses are accessible on the power pack (Fig. 58 or Fig. 59). Function, value/colour of the relevant fuses are given in the following table. When changing fuses, only use fuses with the specified values.

8.8.1 Fuse Rating on the Power Pack

No.	Function	Colour	Current
1	Awning light 12 V	Light brown	5 A
2	Water pump bar and toilet, fan heating	Brown	7.5 A
3	Light 12 V bar, front seating group, toilet; socket 12 V bar	Red	10 A
4	Light 12 V rear seating group; sockets 12 V cabinet, bar, rear seating group	Red	10 A
5	Refrigerator 12 V	Blue	15 A
6	Battery main fuse (Power Pack SE)	Blue	15 A

8.8.2 Thetford Cassette Fuse

The fuse (Fig. 61,1) is located on the left-hand locker wall of the Thetford cassette.
Type of fuse: flat fuse 3 A/purple.
To change the fuse, open the Thetford cassette flap on the outside and pull out the Thetford cassette completely.

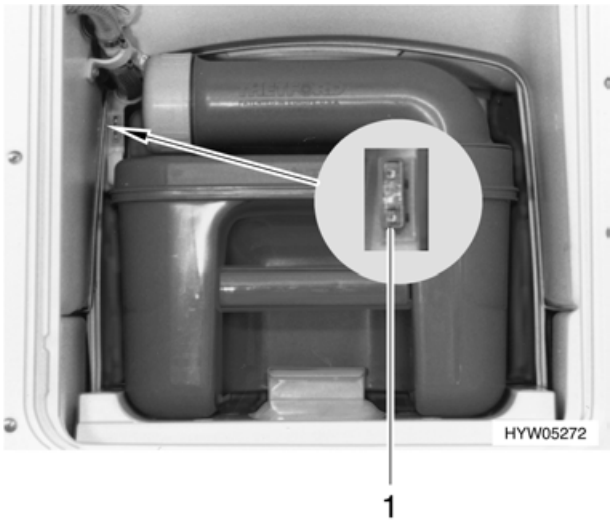


Fig. 61 Thetford cassette fuse

8.8.3 Fuse 240 V

A two-pole safety cut-out (Fig. 62,1 and Fig. 63,1) in the power pack secures the 240 V power supply.

The power pack is installed in the front under the table on the left or in a bedding box.

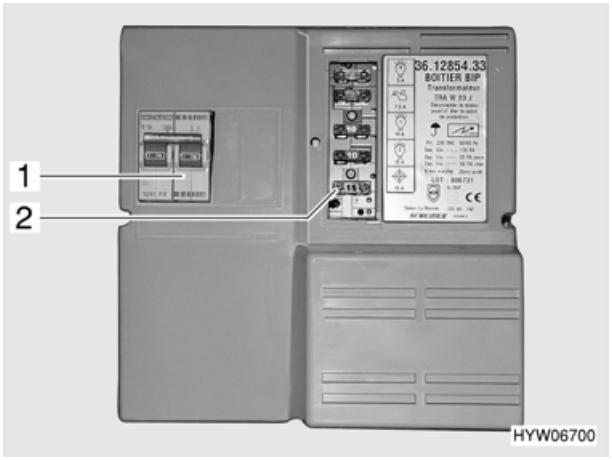


Fig. 62 240 V automatic circuit breaker

1 Two-pole circuit breaker
2 See table "Fuse Rating"

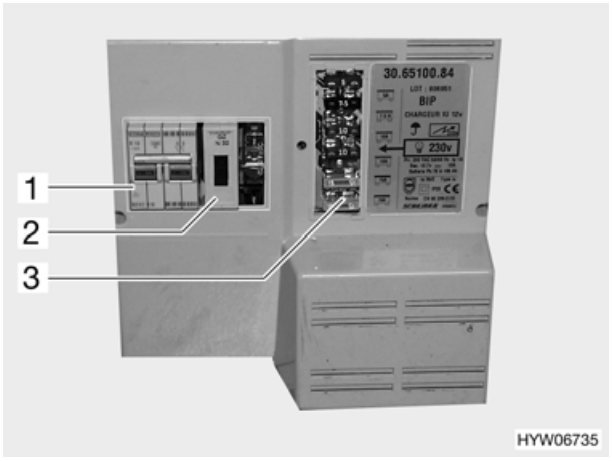


Fig. 63 240 V automatic circuit breaker (Power Pack SE)

1 Two-pole circuit breaker
2 One-pole circuit breaker for charger
3 See table "Fuse Rating"

8.9 Sockets

8.9.1 Antenna Connection

For connection of an antenna, an antenna cable is laid in the caravan.

The cable ends are hidden under the covers in the front of the caravan:
- In the roof storage compartment (Fig. 64,1)
- In the storage compartment on the floor (Fig. 64,2)

The position is marked by signs.

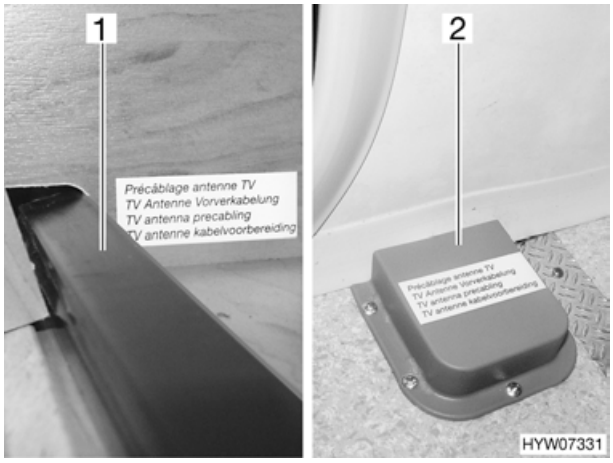


Fig. 64 Antenna connection, pre-assembled

8.9.2 External Socket

The external socket is equipped with the following connections:

- 240 V socket (Fig. 65,1)
- 12 V socket (Fig. 65,3)
- TV socket (Fig. 65,4)
- SAT socket (Fig. 65,2)

The 240 V socket and the 12 V sockets can be used to power electrical devices in the awning.

TV socket and SAT socket offer two possibilities for TV operation:

- Television in the vehicle, connection to an external antenna
- Television in the awning, connection to external antenna

Fig. 65 External socket

8.10 Thirteen-Pin Plug Connection Diagram

▷ Note the colours of the connecting cables which are fitted to the thirteen-pin plug of the towing vehicle. This makes any new connection which may be necessary easier. To connect the thirteen-pin plug with a seven-pin socket, use a commercially available adaptor.

Plug side of the socket
"Jaeger" system

Plug side of the socket
"Multikon" system

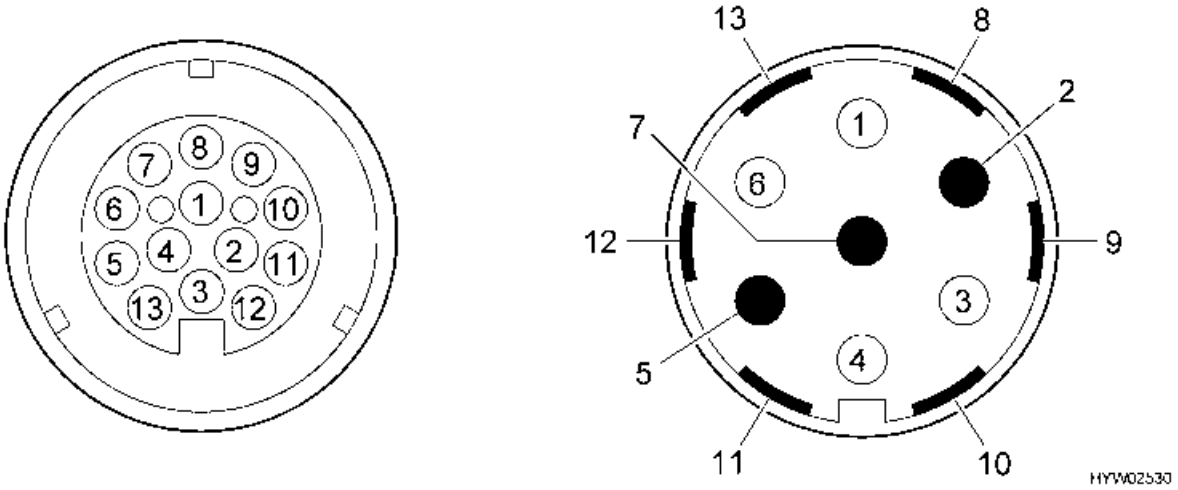


Fig. 66 Contact diagram of the thirteen-pin plug

Connection diagram

Contact number	DIN specification	Function	Cable colour	Cross section of the wire
1	L	Left direction indicator	Yellow	1.5 mm^2
2	54 G	Fog tail light	Blue	1.5 mm^2
3*	31	Earth (contacts 1, 2, 4 - 8)	White	2.5 mm^2
4	R	Right direction indicator	Green	1.5 mm^2
5	58 R	Right tail light, marker light, licence plate light	Brown	1.5 mm^2
6	54	Brake lights	Red	1.5 mm^2
7	58 L	Left tail light, marker lamp, licence plate light	Black	1.5 mm^2
8		Reverse lamp and/or reverse equipment for overrun brake	Pink	1.5 mm^2
9		Power supply (constant positive)	Orange	2.5 mm^2
10		Power supply; controlled by the refrigerator ignition switch	Grey	2.5 mm^2
11*		Earth (contact 10)	White black	2.5 mm^2
12		Not assigned	-	-
13*		Earth (contact 9)	White red	2.5 mm^2

*) These earth cables may not be connected to electrical conductors on the trailer side.

8.11 Towing Vehicle Installation (Power Pack SE)

- ▷ The towing vehicle must be retrofitted with the corresponding cable cross sections and a relay (Fig. 67,1) for power the supply (controlled using the ignition) (see Fig. 67).
- ▷ If the cable cross sections stipulated below are not adhered to, then it is possible that a correct charging of the living area battery during the journey is not possible.

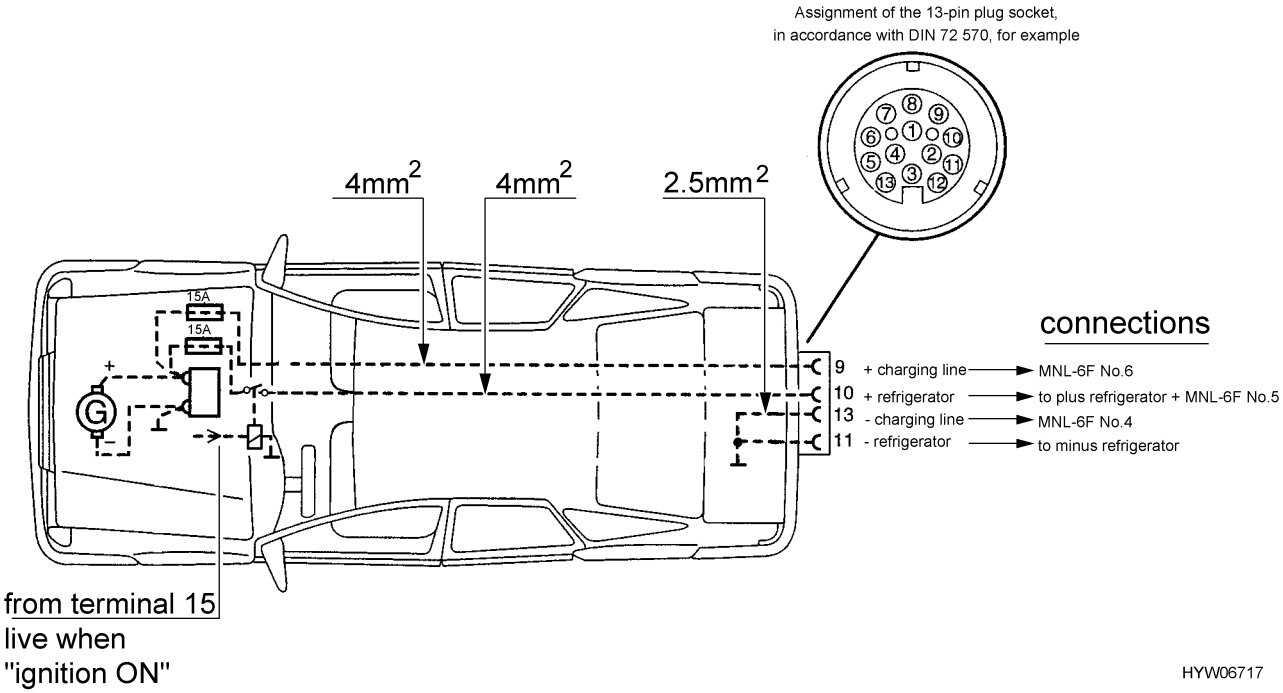


Fig. 67 Towing vehicle installation diagram (Power Pack SE)

8.12 Circuit Diagrams

See chapter 18 for circuit diagrams.

Chapter Overview

This chapter contains instructions regarding the appliances of the caravan.

The instructions refer exclusively to the operation of the appliances.

Further information about the appliances can be found in the instruction manuals for the appliances, included separately with the vehicle.

The instructions address the following topics:

- heater
- boiler
- gas cooker
- refrigerator

9.1 General

▷ The heat exchangers of the gas heater Trumatic E have to be replaced after 30 years. The replacement may only be carried out by the manufacturer of the gas heater or by an authorised workshop. The user of the gas heater is responsible for the replacement.

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

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

The heater, boiler, cooker and refrigerator are fitted depending on the model of the caravan. In this instruction manual a description is given only for the operation of the appliances and their particular features.

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

Symbols for the gas isolator taps:

 Refrigerator

 Cooker

 Boiler

 Heater

9.2 Hot-Air Heater

- In winter, check that the waste gas vent on the vehicle roof is free of snow and ice before using the heater.
- Never let gas escape unburned due to danger of explosion.
- When refuelling the towing vehicle, on ferries and in the garage, the heater must be turned off. Danger of explosion!
- From heat setting 3 to 4 on switch on circulating fan. There is danger of overheating!
- Do not damage the exhaust gas pipe.
- The waste gas vent may neither be closed nor blocked.
- When camping in winter, the Truma waste gas vent extension should be used to prevent snow from choking the waste gas vent.
- Do not use the space behind the heater as a storage compartment.

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

9.2.1 To Heat Properly

Hot air distribution

Several air outlet nozzles (Fig. 68) are built into the caravan. Pipes conduct the warm air to the air outlet nozzles. Turn the air outlet nozzles in a suitable position so the air can escape as required.

Adjusting the air outlet nozzles

- Fully open: full hot air stream
- Half or partially open: reduced hot air stream

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

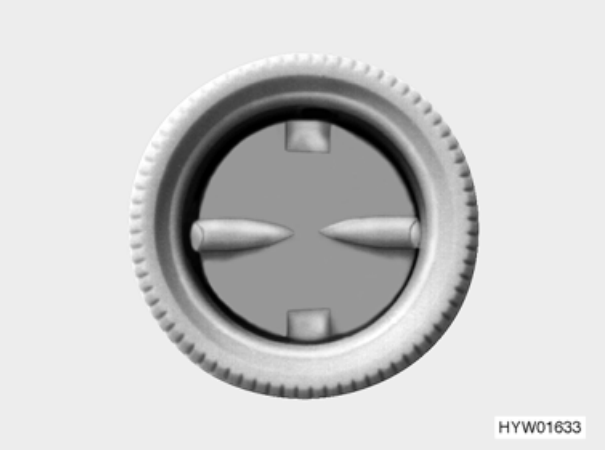


Fig. 68 Air outlet nozzle

9.2.2 Heater (Variant 1)

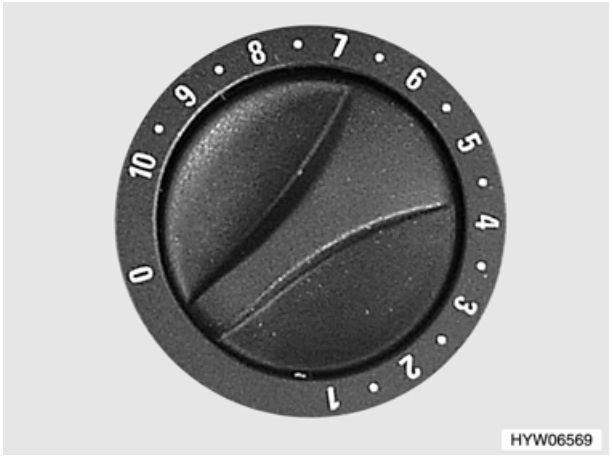


Fig. 69 Heater control knob

Turning on:

- Open the regulator tap on the gas bottle and the gas isolator tap "Heater".
- Turn control knob (Fig. 69) on the heater to the required position and press it firmly.

  The automatic ignition produces ignition sparks. A clicking noise can be heard.
- Keep the control knob pressed until there is a flame. Press down for another 10 seconds to activate thermocouple.

▷ In case of problems wait for two minutes before trying again.

Turning off:

- Turn the control knob (Fig. 69) on the heater to "0". The automatic ignition is switched off simultaneously.
- If the heating is not to be used for an extended period, close the main regulator tap on the gas bottle and the "Heater" gas isolator tap.

▷ The automatic ignition sparks until the gas ignites. If there is no gas, it will continue to spark until the battery feeding it is empty. When the heating is not required, set the control knob to "0" to avoid the battery running flat.

▷ If the clicking noise cannot be heard at all or only in intervals of several seconds during ignition: change the battery.

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

9.2.3 Heater (Variant 2)

The control knob (Fig. 70,1) has the following positions:

- Off: O
- Large flame: ●
- Lighting position: 

Fig. 70 Heater (variant 2)

Turning on:

- Open the regulator tap on the gas bottle and the gas isolator tap "Heater".
- Turn control knob (Fig. 70,1) on the heater to the lighting position and press it firmly.

  The automatic ignition produces ignition sparks. A clicking noise can be heard.
- Keep the control knob pressed until there is a flame. Press down for another 10 seconds to activate thermocouple.

▷ In case of problems wait for two minutes before trying again.

- Leave the heating in the lighting position for approx. one minute.
- Set heat output at the control knob between lighting position and large flame.

Turning off:

- Turn the control knob (Fig. 70,1) on the heater to "0". The automatic ignition is switched off simultaneously.
- If the heating is not to be used for an extended period, close the main regulator tap on the gas bottle and the "Heater" gas isolator tap.

▷ The automatic ignition sparks until the gas ignites. If there is no gas, it will continue to spark until the battery feeding it is empty. When the heating is not required, set the control knob to "0" to avoid the battery running flat.

▷ If the clicking noise cannot be heard at all or only in intervals of several seconds during ignition: change the battery.

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

9.2.4 Circulation Fan

The circulation fan together with the gas heater ensures a better distribution of hot air in the caravan.

- Turn the knob (Fig. 71,2 or Fig. 72,1) to the required position of the circulating fan.

Manual control (e. g. ventilation)

● Circulation fan off (switch has no function during heater operation)

A Automatic operation (heating)

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

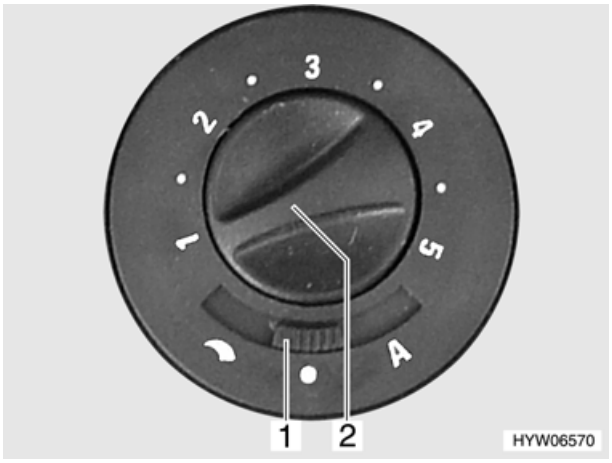


Fig. 71 Operating switch for circulation fan (variant 1)

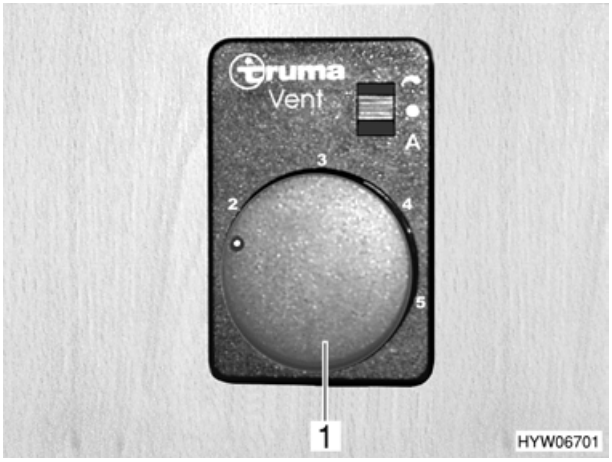


Fig. 72 Operating switch for circulation fan (variant 2)

9.3 Ultraheat Additional Electric Heater

▷ The additional electric heater only functions when the vehicle is connected to a 240 V power supply.

The Ultraheat additional electric heater is built-in to the hot-air heater. Therefore there are three heating options:

- Only the gas heater
- Gas heater and electric heater
- Only the electric heater

The vehicle heats up faster if the additional electric heater is used.

The additional electric heater has three output levels:

- 500 W
- 1000 W
- 2000 W

Turning on:

- Connect the vehicle to a 240 V power supply (see section 8.2.1).
- Set rotary switch (Fig. 73,1) to the desired output level.
- Turn temperature control knob (Fig. 73,3) to the desired output level.

▷ If the heater is operated by electricity and gas simultaneously, the additional electric heater switches off to prevent possible overheating by the stronger gas burner.

Fig. 73 Ultraheat operating unit

Turning off:

- Set rotary switch (Fig. 73,1) to "○" (Fig. 73,2).

9.4 Boiler

- ▶ Never let gas escape unburned due to danger of explosion.
- ▶ When refuelling the towing vehicle, on ferries and in the garage, the boiler must be turned off. Danger of explosion!

9.4.1 Truma Hot Water Source

Depending on the model, the caravan is fitted with a hot water source.

- ▷ Switch off the hot water source when the caravan is not in use.
- ▷ Never use hot water source without water inside it.
- ▷ Before the hot water source is switched on with a 240 V power supply, check if it is filled with water.
- ▷ When the hot water source is not in operation, empty the hot water source.
- ▷ Protect the hot water source against calcination by only operating it at the maximum temperature setting when large quantities of hot water are needed.

The hot water source can either be operated using the 240 V power supply (electrical mode of operation), with the hot air of the heater system or both types of energy. The hot water source heats approx. 5 l water to a temperature of approx. 55 °C.

The electrical mode of operation is switched on with the switch (Fig. 74,1). The indicator lamp on the switch must illuminate. During hot air operation, the water is heated up by the heater and the circulating air.

Fig. 74 Switch for hot water source

Filling with fresh water:

- Connect the external 240 V power supply to the caravan and switch on the 240 V automatic circuit breaker.
- Set switch (Fig. 74) to off. Indicator lamp (Fig. 74,1) does not light up.
- Turn the drain cocks on the cap (Fig. 75,1) in a clockwise direction.
- Set all the water taps to "Hot" and open them. Water pump pumps water into the hot water source.
- Leave water taps on until water flows out free of bubbles. Hot water source is filled with water.
- Close the water tap again.

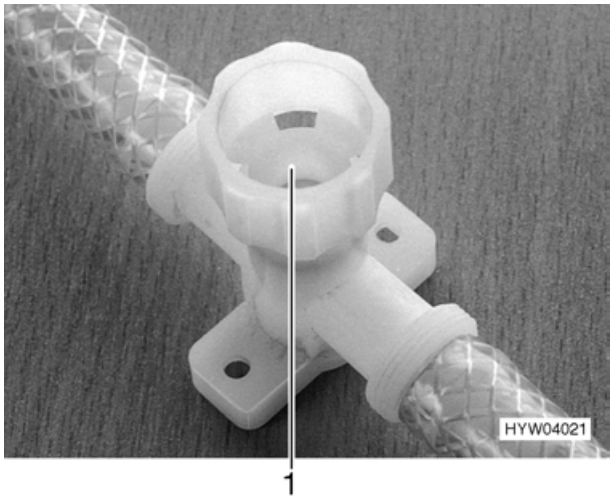


Fig. 75 Drain cock

Electrical operation:

- Connect the external 240 V power supply to the caravan and switch on the 240 V automatic circuit breaker.
- Set switch (Fig. 74) to on. Indicator lamp (Fig. 74,1) on the switch is illuminated.

The water in the hot water source is heated up to 55 °C.

Emptying:

- Switch off the 240 V power supply on the 240 V automatic circuit breaker.
- Remove the cap of the fresh water tank.
- Open all water taps and set to the central position.
- Hang the shower handset up in the shower position.
- Hold the water pump up until the fresh water pipes are completely empty.
- Open drain cocks of the hot water source.
- Check whether the hot water source is completely empty.

9.4.2 Truma Boiler

Depending on the model, the caravan is fitted with a boiler.

- ▶ Never let gas escape unburned due to danger of explosion.
- ▶ Remove cap from waste gas vent before using the boiler.
- ▶ Models with waste gas vent on the right-hand side of the vehicle: If the awning is put up and the boiler switched on, exhaust from the boiler may build up in the awning. Danger of suffocation! Make sure the area is sufficiently ventilated.
- ▶ When refuelling the towing vehicle, on ferries and in the garage, the boiler must be turned off. Danger of explosion!

- ▷ Switch off the boiler when the caravan is not in use.
- ▷ Never use boiler when empty.
- ▷ Before the boiler is switched on with a 240 V power supply, check if it is filled with water.
- ▷ When the boiler is not in operation, empty the boiler.
- ▷ The boiler is protected against calcination if it is only used in maximum temperature position when a lot of warm water is required.

- ▷ The electric operation of the boiler is only possible if the vehicle is connected to the 240 V power supply.

The boiler has three operating modes:

- Gas operation
- Electrical operation (240 V AC)
- Combined operation

The operating mode is set with the operating controls.

The regulation of the water temperature in the boiler is only possible with gas operation.

Filling with fresh water:

- Close the boiler drain cock (Fig. 76,1).
- Open all water taps and set to "Warm" position. Water pump is pumping water into the boiler.
- Leave all water taps on until water is free of bubbles. Boiler is filled with water.
- Close the water taps.

Gas operation:

- Remove cap from waste gas vent.
- Open the regulator tap on the gas bottle and the gas isolator tap "Boiler".
- Switch on boiler by turning the rotary switch (Fig. 77,3) to "🔥" (Fig. 77,5). The green "Operation" indicator lamp illuminates the knob (Fig. 77,1). The red indicator lamp (Fig. 77,2) illuminates when there is a fault (see chapter 14).
- Adjust the knob (Fig. 77,1) to the required water temperature.

Turning off:

- Set rotary switch (Fig. 77,3) to "○" (Fig. 77,4).
- Close the gas isolator tap "Boiler" and the regulator tap on the gas bottle.
- Place cap on waste gas vent.

The red indicator lamp (Fig. 77,2) illuminates when there is a fault (see chapter 14).

Electrical operation:

- Connect the vehicle to the 240 V power supply and switch on the 240 V automatic circuit breaker.
- Set switch (Fig. 78,1) to on. Indicator lamp on the switch is illuminated.

The water in the boiler is heated up to approx. 65 °C.

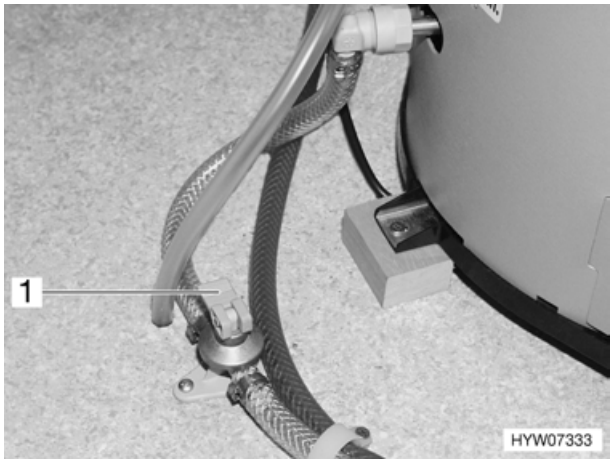


Fig. 76 Drain cock boiler

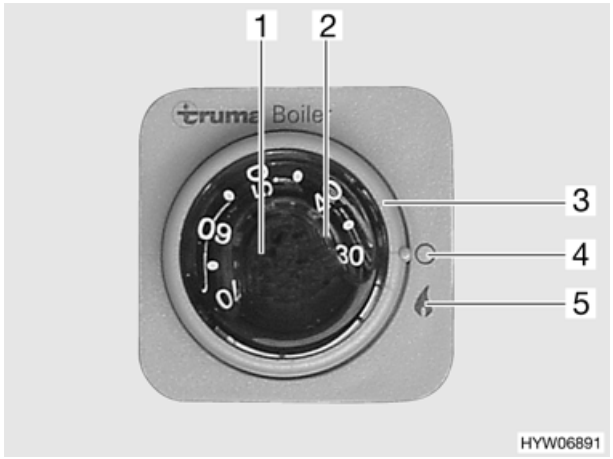


Fig. 77 Operating switch for Truma boiler (gas operation)

Fig. 78 Operating switch for Truma boiler (electrical operation)

Combined operation:

To heat the water in the boiler more quickly, switch on gas and electrical operation at the same time.

Emptying:

- Switch off boiler. Turn knob (Fig. 77,1) anticlockwise until it can go no further.
- Open boiler drain cock (Fig. 76,1). In order to do this, set the rocking lever on the boiler drain cock in a vertical position.
- Check if water has drained completely from the boiler (approx. 10 litres).

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

9.5 Cooker

- ▶ Never let gas escape unburned due to danger of explosion.
- ▶ Before using the cooker make sure that there is sufficient ventilation. Open hinged window or ventilations of the lifting roof.
- ▶ Do not use the gas cooker for heating.

9.5.1 Gas Cooker

- ▶ During activation and operation of the gas cooker, no flammable objects must be near the gas cooker.
- ▶ The process of ignition must be visible from above and not be covered by cooking pans placed on the cooker.
- ▶ Always put up the flame protection when using the gas cooker.
- ▶ Depending on the model, the gas cooker lid is held closed by a spring. When closing there is danger of getting injured.

▷ Do not use the glass gas cooker lid as a hob.

▷ Do not close the gas cooker lid while the gas cooker is in operation.

▷ Do not apply pressure on the gas cooker lid when it is closed.

▷ Do not place hot cooking pans on the gas cooker lid.

▷ Depending on the model, the gas cooker is fitted with two or three sources of combustion.

Turning on:

- Open the gas cooker lid.
- Fold out and fix flame protection.
- Open the regulator tap on the gas bottle and the gas isolator tap "Cooker".
- Turn the control knob (Fig. 79,1) on the burner you wish to use to the ignition position (large flame).
- Press the control knob and hold it down until gas flows to the burner.
- Light burner with a match or other suitable means of lighting.
- Once the flame is burning, the control knob must be held down in for 10 to 15 seconds, until the thermocouple automatically keeps the gas supply open.
- Release the control knob and turn to the desired position.

Turning off:

- Turn the control knob to the 0-position. The flame fades.
- Close the regulator tap on the gas bottle and the gas isolator tap "Cooker".

▷ When the flame fades, the thermocouple automatically cuts the gas supply.

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

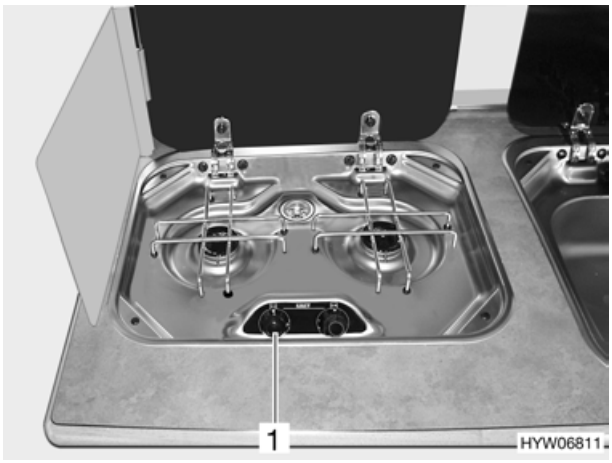


Fig. 79 Operating controls for gas cooker

9.6 Refrigerator

While driving, only operate the refrigerator via the 12 V power supply. At temperatures above +40 °C full cooling power is not possible. When outside temperatures are high, full cooling power of the cooling unit is only guaranteed by sufficient ventilation. In order to achieve a better ventilation the refrigerator ventilation grill can be removed.

9.6.1 Removing Refrigerator Ventilation Grill

- Turn screw (Fig. 80,1) one quarter turn using a coin.
- Remove refrigerator ventilation grill.

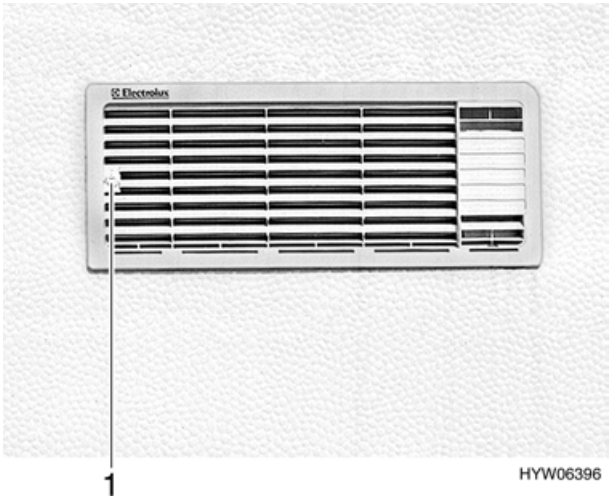


Fig. 80 Refrigerator ventilation grill

9.6.2 Operating Modes

The refrigerator has 2 operating modes:
- Gas operation
- Electric operation (240 V AC or 12 V DC)

The operating mode is set on the refrigerator panel. Infinitely variable regulation of the cooling power is only possible with gas operation and when the refrigerator is operated with 240 V. It is not possible with 12 V operation.

▷ Select only one energy source.

Gas operation

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

Turning on:

- Set 240 V switch (Fig. 81,2) to "0".
- Set 12 V switch + - (Fig. 81,1) to "0".
- Open the regulator tap on the gas bottle and the gas isolator tap "Refrigerator".
- Set the control knob (Fig. 81,4) to "Large flame“, press and hold in. Wait until gas gets into the burner.
- Press the gas ignition button (Fig. 81,5) twice quickly.
- Hold the control knob down for approx. 15 seconds after ignition until the thermocouple keeps the gas supply automatically open.

The bluish flame can be observed in a viewing glass inside the refrigerator at the bottom left.

- If the flame does not burn, repeat ignition.

After the refrigerator has been in operation in "Max." position for 24 hours the gas supply can be reduced if the cooling power is sufficient.

Turning off:

- Set control knob to ● "OFF".
- Close the gas isolator tap "Refrigerator" and the regulator tap on the gas bottle.

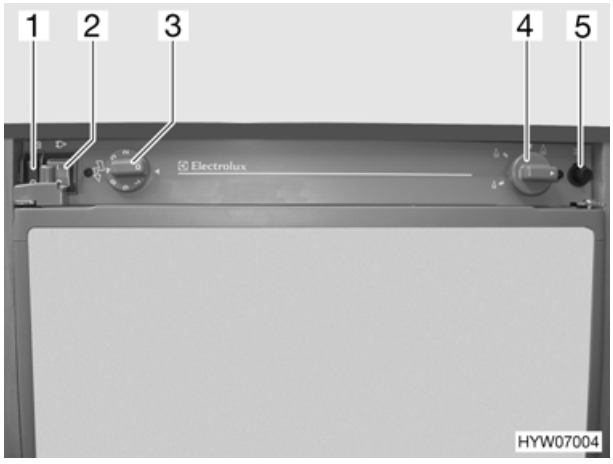


Fig. 81 Operating controls for refrigerator

Electrical operation

The refrigerator can be operated with the following voltages:
- 240 V AC
- 12 V DC

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

240 V operation:

- Set 12 V switch  (Fig. 81,1) to "0".
- Set 240 V switch  (Fig. 81,2) to "I".
- Set thermostat (Fig. 81,3) to required refrigerating temperature between "1" and "7".
- To deactivate, turn the thermostat control knob to "0". Refrigerator is turned off.

12 V operation:

- Set 240 V switch  to "0".
- Set 12 V switch  to "I".

When operated with 12 V, the refrigerator is power-supplied by the starting battery of the towing vehicle (via the thirteen-pin connector). During prolonged driving breaks, change over to gas operation.

The thermostat is not activated during 12 V operation.

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

9.6.3 Refrigerator Door Locking Mechanism

▷ During the journey, the refrigerator door must always remain closed and locked.

Opening and closing the refrigerator door

There are 2 positions for locking the refrigerator door in place:
- closed refrigerator door during travel and when the refrigerator is in operation
- slightly opened refrigerator door as a ventilation position when the refrigerator is switched off

Opening:

- Push the green retainer lock (Fig. 82,4) to the side to release the locking device. The bolt (Fig. 82,3) will trip.
- Open the refrigerator door by the recessed grip or by the curved handle.

Closing:

- Fully close the refrigerator door.
- Press bolt (Fig. 82,3) down, so that it engages in the outer latched position (Fig. 82,2).

Locking the refrigerator door in the ventilation position:

▷ To prevent mould forming, lock the refrigerator door in the ventilation position when the refrigerator is switched off.

- Slightly open the freezer compartment and the refrigerator.
- Press bolt (Fig. 82,3) down so that it engages in the inner latched position (Fig. 82,1). The refrigerator door will then stay slightly open.

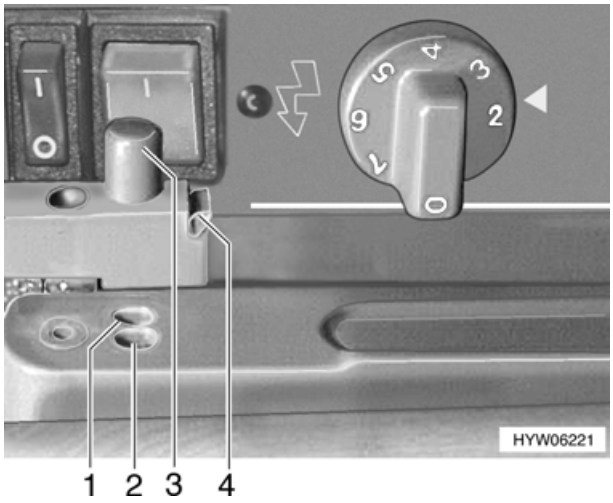


Fig. 82 Lock on refrigerator door

Chapter Overview

This chapter contains instructions regarding the sanitary fittings of the caravan.

The instructions address the following topics:

- sink
- fresh water canister or fresh water tank
- waste water tank
- toilet
- complete water system

The positions of the drain cocks are indicated in a table found at the end of this chapter.

10.1 Water Supply, General

- ▷ Fill the fresh water canister or the fresh water tank only with fresh water.
- ▷ If there is any risk of frost, empty the water system completely.
- ▷ The water pump will overheat without fresh water and can get damaged. Never operate water pump when the fresh water canister or the fresh water tank is empty.
- ▷ Clean the fresh water tank or the fresh water canister thoroughly before use.

The caravan is equipped with a fresh water canister or a built-in fresh water tank. An electric water pump pumps the fresh water to the individual water taps. Opening a water tap automatically switches on the water pump and pumps fresh water to the tap. A canister or the waste water tank collects the waste water.

- ▷ Before using the water fittings, the 240 V electricity supply must be connected and the 240 V automatic circuit breaker must be switched on. Otherwise the water pump will not work. This is not required when the caravan is fitted with the Power Pack SE.

When the fresh water canister or the fresh water tank is re-filled, an air bubble may form at the bottom of the pump which will prevent water from being drawn in. Shake the water pump up and down energetically in the water.

Water left standing in the fresh water canister, in the fresh water tank or in the water pipes becomes undrinkable after a short period. Rinse the water pipes and the fresh water canister or the fresh water tank thoroughly with several litres of water before each use of the caravan. To do this, open all water taps. After each use of the caravan, empty completely the fresh water canister or the fresh water tank and the water pipes.

10.2 Sink

▷ Always tilt the water tap downwards before closing the cover.

- Open the sink cover and lock it in the required position.
- Then swing the water tap upwards.

10.3 Fresh Water Tank

The fresh water tank is built into the seating group.

10.3.1 Fresh Water Filler Neck

The filler neck for filling the fresh water tank is on the right or left side of the caravan depending on the model.

▷ The fresh water filler neck is labelled with the word "WASSER" (water) (Fig. 83,1).

Opening:

- Insert key into locking cylinder (Fig. 83,2) and turn it in an anticlockwise direction.
- Remove cap.

Closing:

- Place the cap on the fresh water filler neck.
- Put the key in the locking cylinder (Fig. 83,2) and turn in a clockwise direction.
- Return the key to the central position and remove it.

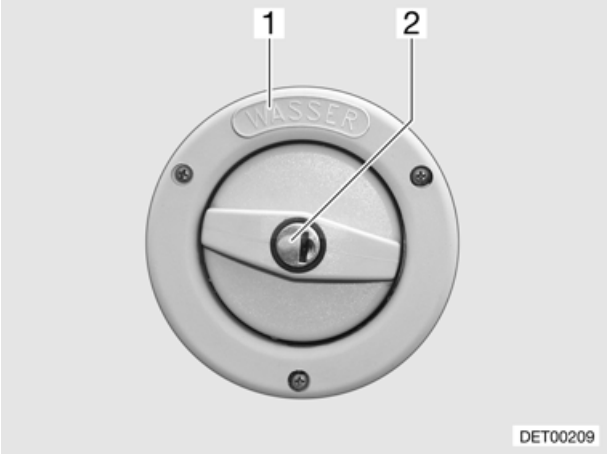


Fig. 83 Cap for the fresh water filler neck

10.3.2 Fill the Fresh Water Tank

- Remove the cap (Fig. 83,2) from the fresh water filler neck (see section 10.3.1).
- Fill the fresh water tank.
- Close cap at the fresh water filler neck.

10.4 Filling the Fresh Water System

▷ Never operate water pump when the fresh water canister or the fresh water tank is empty.

With fresh water canister:

- Loosen retaining straps at the fresh water canister.
- Unscrew the cap of the fresh water canister.
- Remove water pump and water hose from the fresh water canister.
- Top up with fresh water.
- Place water pump in the fresh water canister and close the cap tightly.
- Secure fresh water canister with retaining strap.
- Set all the water taps to central position "Hot" and open them. This will turn on the water pump.
- Keep the taps open until the water flowing out of the taps has no bubbles in it. This is the only way to ensure that the boiler is also full of water.
- Set all water taps to "Cold" and leave them open. This will fill the cold water pipes with fresh water.
- Keep the taps open until the water flowing out of the taps has no bubbles in it.
- Close all the water taps.

Fresh water tank:

- Position the caravan horizontally.
- Connect the 240 V power supply and switch on the 240 V fuse box (Fig. 58 or Fig. 59). As far as the Power Pack SE with living area battery is concerned, a 240 V supply is not necessary.
- Close drain cocks for the boiler or hot water source.
- Open the cap on the fresh water tank.
- Close the drainage opening in the fresh water tank with the stopper (Fig. 84,1) provided.
- Firmly close the fresh water tank again with the cap.

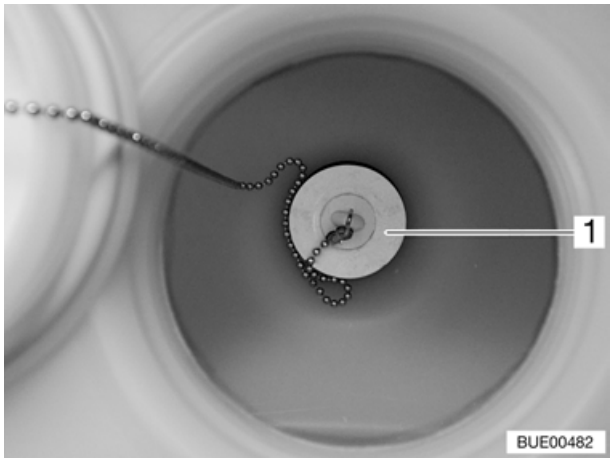


Fig. 84 Fresh water tank, stopper

- Open the fresh water filler neck.
- Top up with fresh water. Use a water hose, a water canister with a funnel, or similar for filling.
- Set all the water taps to central position "Hot" and open them. This will turn on the water pump.
- Keep the taps open until the water flowing out of the taps has no bubbles in it. This is the only way to ensure that the boiler or the hot water source is also full of water.
- Set all water taps to "Cold" and leave them open. This will fill the cold water pipes with fresh water.
- Keep the taps open until the water flowing out of the taps has no bubbles in it.
- Close all the water taps.
- Close the fresh water filler neck.
- Check that the cap on the fresh water tank is not leaking.

10.5 Waste Water Tank

▶ Before commencing the journey, empty the waste water tank.

▷ If there is any risk of frost, empty the waste water tank.

▷ Never pour boiling water directly into the sink outlet. Boiling water could cause deformation and leaks in the waste water pipe system.

▷ Only empty the waste water tank at disposal stations, camping sites or at specially established disposal points.

The waste water tank is fixed.

Emptying:

- Turn the cap (Fig. 85,1) of the drain cock anticlockwise.
- Completely empty waste water tank.
- Turn the cap (Fig. 85,1) in a clockwise direction.

The drain cock is closed.

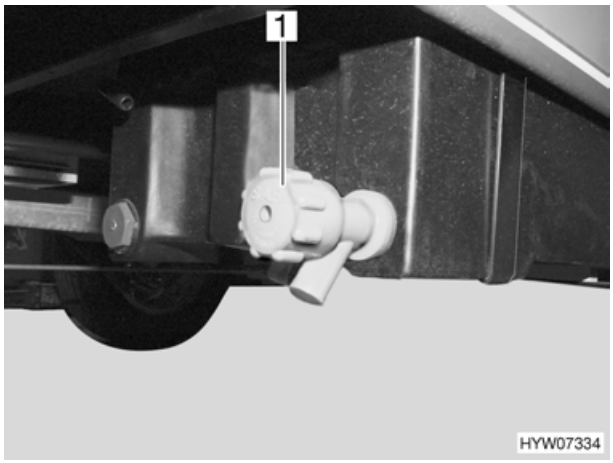


Fig. 85 Drain cock for waste water tank

10.6 Thetford Toilet

- ▷ If there is any risk of frost and the caravan is not heated, empty the Thetford cassette.
- ▷ Do not sit on the lid of the Thetford toilet. The lid is not designed to bear the weight of a person and could break.
- ▷ Use a suitable chemical for this toilet. The ventilation will merely remove the odour but not germs and gases. Germs and gases will have a detrimental effect on the sealing rubbers.

- ▷ Only empty the Thetford cassette at disposal stations, camping sites or at specially established disposal points.

The flushing of the Thetford toilet is fed directly from the fresh water system of the caravan. If necessary and possible, the toilet bowl can be turned into the required position.

10.6.1 Thetford Toilet (Variant 1)

Flushing:

- Before flushing open the sliding trap of the Thetford toilet. To do this, turn the slide lever (Fig. 86,1) in an anticlockwise direction.
- For flushing, press the blue flush button (Fig. 87,1).
- After flushing close the sliding trap. To do this turn the slide lever (Fig. 86,1) in a clockwise direction.

The indicator lamp (Fig. 87,2) illuminates whenever the Thetford cassette must be emptied.

Emptying:

To empty, the sliding trap in the Thetford toilet **must** be closed.

- Turn the slide lever (Fig. 86,1) in a clockwise direction: the sliding trap is closed.

Fig. 86 Thetford toilet bowl (variant 1)

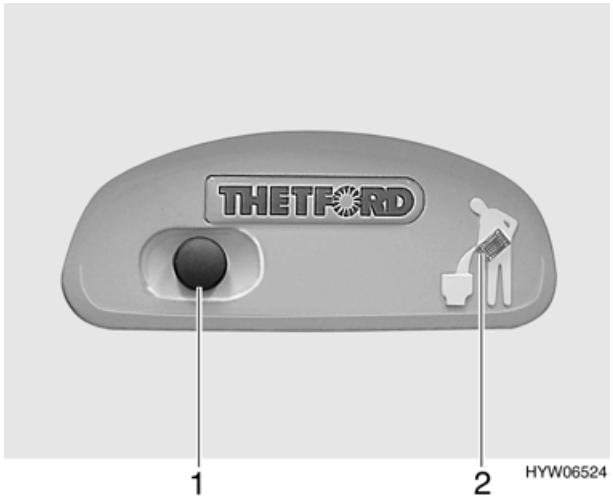


Fig. 87 Thetford cassette, flush button/indicator lamp (variant 1)

10.6.2 Thetford Toilet (Variant 2)

Flushing:

- Press flush button (Fig. 88,1) and at the same time rotate in an anticlockwise direction.
- After flushing, turn flush button in a clockwise direction, the sliding trap is closed.

Emptying:

To empty, the sliding trap in the Thetford toilet **must** be closed.

- Turn the flush button (Fig. 88,1) in a clockwise direction. The sliding trap is closed.

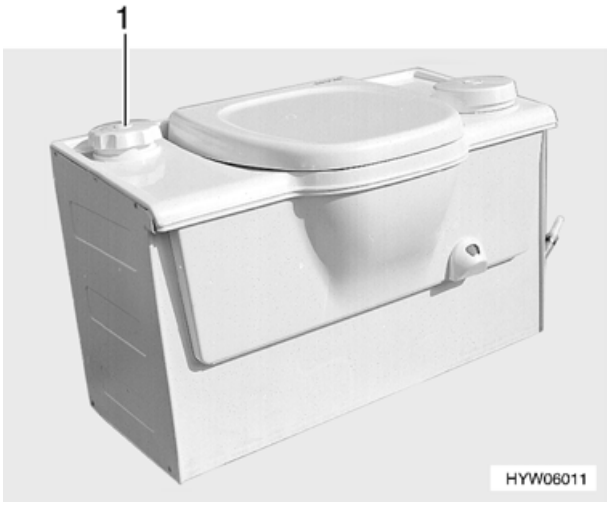


Fig. 88 Thetford toilet, flush button (variant 2)

10.6.3 Removal of the Thetford Cassette

The flap for the Thetford cassette (Fig. 89) is located on the outside of the caravan:

- Open the push-button lock (Fig. 89,1) with the key.
- Press both push-button locks (Fig. 89,2) at the same time and open the Thetford cassette flap.

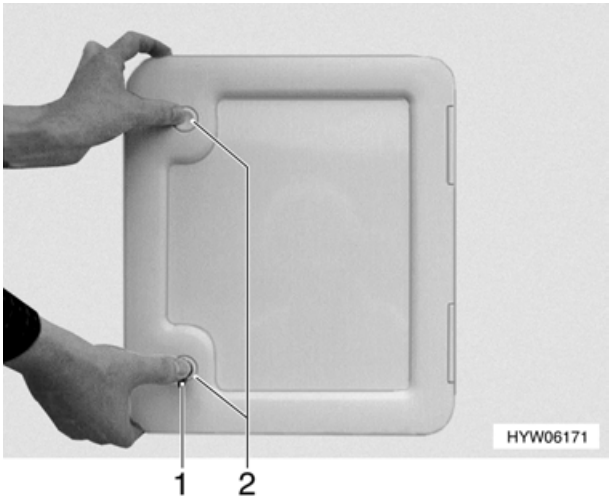


Fig. 89 Opening the Thetford flap

- Release safety catch (Fig. 90,1) and pull out the Thetford cassette (Fig. 90,2).

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

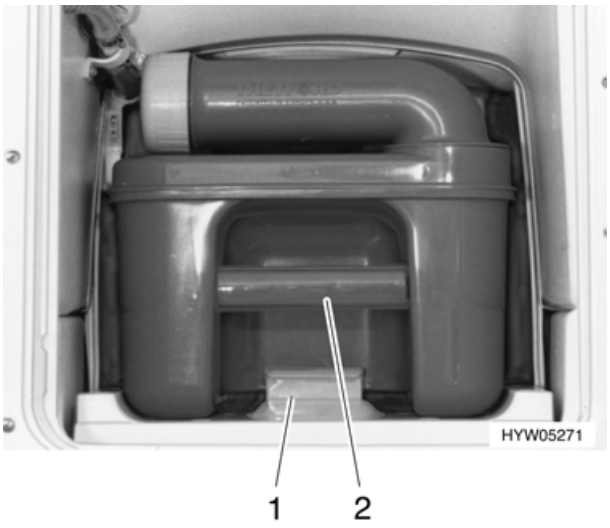


Fig. 90 Removal of the Thetford cassette

10.7 Emptying the Water System

▷ If the caravan is not heated and there is any risk of frost, empty the whole water system to avoid damage to built-in appliances and the caravan.

▷ Take note of the environmental tip in this chapter.

With fresh water canister:

- Switch off the 240 V power supply on the 240 V automatic circuit breaker.
- Loosen retaining straps at the fresh water canister.
- Unscrew the cap of the fresh water canister.
- Remove water pump and water hose from the fresh water canister.
- Empty fresh water canister.
- Set water tap in kitchen and shower compartment (toilet compartment) in an exact central position (hot - cold), and open.
- Hold the water pump up until the fresh water pipes are completely empty.
- Blow out the remaining water in the water hoses (max. 0.5 bar).
- Empty Thetford cassette. Take note of the environmental tip in this chapter.
- After emptying, leave all taps open in the central position.

Fresh water tank:

To empty and ventilate the fresh water system, proceed as follows. To prevent frost damage:

- Position the caravan in a horizontal position.
- Switch off the 240 V power supply on the 240 V automatic circuit breaker.
- Open all drain cocks.
- Remove the cap of the fresh water tank.
- Remove water pump and water hose from the fresh water canister.
- Take out the stopper of the fresh water tank.
- Set water tap in kitchen and shower compartment (toilet compartment) in an exact central position (hot - cold), and open.
- Hang the shower handset up in the shower position.
- Hold the water pump up until the fresh water pipes are completely empty.
- Check whether the fresh water tank is completely empty.
- Blow out the remaining water in the water hoses (max. 0.5 bar).
- Empty the waste water tank. Take note of the environmental tip in this chapter.
- Empty Thetford cassette. Take note of the environmental tip in this chapter.
- After emptying, leave all taps open in the central position.

Chapter Overview

This chapter contains instructions regarding the care of the caravan.

The maintenance instructions address the following topics:

- exterior of the caravan
- interior
- winter operation

At the end of the chapter there is a checklist of measures you must carry out if you are not going to use the caravan for an extended period of time.

The checklist address the following topics:

- temporary lay-up
- winter lay-up
- start-up after a lay-up

11.1 External Care

11.1.1 Washing with a High-Pressure Cleaner

▷ Do not clean the tyres with a high-pressure cleaner. The tyres might be damaged.

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

During washing, respect the following minimum distance between the caravan and the high-pressure jet:
- with nozzle for circular jet approx. 700 mm
- when using a 25° fan nozzle and dirt cutter, approx. 300 mm

Take into consideration that the jet of water comes out of the cleaning nozzle with pressure. The caravan may be damaged by incorrect handling of the high-pressure cleaner. The temperature of the water should not be above 60 °C. Keep the jet of water in constant movement during the washing process. Do not keep the water jet directed at clearances, built-in electrical parts, plugs, seals or the refrigerator ventilation grill. Otherwise the caravan could be damaged.

11.1.2 Windows of Acrylic Glass

Acrylic glass windows are delicate and require very careful handling.

- ▷ Never rub when dry as dust particles might damage the surface!
- ▷ Only clean with plenty of warm water, dish washing liquid and soft cloth.
- ▷ Never use glass cleaning agents with chemical, abrasive or alcohol-containing additives. Premature brittleness of the panes and associated cracks may result from their use.
- ▷ Avoid contact of cleansing agents used for the body (e. g. tar- or silicone-removing agents) with acrylic glass.
- ▷ Do not clean vehicle in car wash.
- ▷ Do not attach stickers.
- ▷ Having cleaned the caravan rinse acrylic glass with plenty of clear water.
- ▷ Treat rubber seals with glycerine.

- ▷ Seitz acrylic glass cleanser with antistatic effect is suitable for a follow-up treatment. Small scratches can be treated with Seitz acrylic glass polish. The ***ERIBA*** accessories shop carries this cleaning agent.

11.1.3 Washing the Caravan

- Wash the caravan only on a washing site intended for this purpose. Avoid full sunshine. Observe environmental measures!
- Only clean external applications and synthetic parts with plenty of warm water, dish washing liquid and soft cloth.
- Wash caravan with as much water as possible also using a clean sponge or a soft brush. In the case of stubborn dirt add dish washing liquid to the water.
- The DR. KEDDO caravan cleaner may also be used to clean painted exteriors.
- Parts made of glass-fibre reinforced plastic (GRP) require a regular follow-up treatment with polisher BF 150 from the firm BÜFA (Büsing und Fasch GmbH, Rastede). This way these parts will not turn yellow and the sealing of the surface remains intact.
- Treat rubber seals of doors and storage flaps with talc.
- Treat locking cylinder of doors and storage flaps with graphite dust.

11.1.4 Underbody

The underbody of the caravan is partly coated with an age-resistant underbody protection. Should the underbody protection be damaged, repair immediately. Do not treat areas coated with underbody protection with spray oil.

11.1.5 Waste Water Tank

Clean the waste water tank after every use of the caravan.

- Open the cleaning opening on the waste water tank and the drain cock.
- Rinse thoroughly with fresh water.

11.1.6 Entrance Step

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

11.2 Caring for the Interior

- ▷ Acrylic glass windows are delicate and require very careful handling (see section "Windows of Acrylic Glass")!
- ▷ Synthetic parts in the toilet and living area are very delicate and should be treated with care. Do not use solvents, alcohol-containing cleansers or scourers containing sand! This procedure will help you to avoid brittleness and formation of cracks.
- ▷ Do not pour any corrosive agents into the drain holes. Never pour boiling water directly into the drain holes. Corrosive agents and boiling water cause damage to drainage pipes and siphon traps.
- ▷ Do not use vinegar based products for cleaning the Thetford toilet and the water system and for decalcifying the water system. Vinegar-based products may cause damage to seals or parts of the installation. Use standard decalcifying products for decalcification.

- ▷ The upholstery will fade over time, if it is exposed to sunlight. If the temperature within the vehicle rises rapidly as well, the colour will change at an accelerated rate. Therefore, ***HYMER AG*** recommends that you close the shades on the windows of the parked vehicle when there is strong sunlight.
- ▷ For information about the use of maintenance products, our representatives and service centres will be glad to advise.

- Surface and knobs of furniture, lamps and synthetic parts in the toilet and living area should be cleaned with water and a wool cloth. A mild cleanser may be added to the water.
- Clean upholstery with dry foam specially manufactured for the use on upholstery or with the foam of a mild detergent. Do not wash upholstery! Protect upholstery from direct sunlight so that it does not loose its colour.
- Curtains and net curtains should be dry cleaned.
- Vacuum clean the carpet, if necessary clean with carpet shampoo.
- Clean PVC-floor covering with special cleansing agents. Do not place carpet on wet PVC-floor covering. The carpet and the PVC-floor covering may stick together.
- Never clean the sink or the gas cooker with a scourer. Avoid anything which may cause scratching or grooves.
- Clean gas cooker only with a moist cloth. Prevent any water from penetrating the cooker. Water may damage the gas cooker.

- Brush insect screens on windows with a soft brush or vacuum with the brush attachment of the vacuum cleaner.
- Brush blinds on windows with a soft brush. Grease or stubborn dirt may be removed with a mild soap at 30 °C (curd soap).
- Clean fresh water canister or fresh water tank with water and dish washing liquid and rinse subsequently with plenty of clear water.

11.3 Winter Care

De-icing salt damages the underbody and the parts open to water spray. ***HYMER AG*** recommends to wash the vehicle more frequently during wintertime. Mechanical and surface treated parts and the underside are under particular strain, and should therefore be cleaned thoroughly.

- ▷ If there is any risk of frost, always operate the heater with approximately 15 °C and put the circulation fan in automatic mode. In the case extreme outside temperatures, the furniture flaps and doors should be left slightly open. The inflowing warm air can help prevent the freezing of water pipes, for example, and counteract the formation of condensation in the storage spaces.
- ▷ Keep the waste gas vent free from snow and apply a vent extension of at least 10 cm (4 inches) in length.
- ▷ If there is any risk of frost, cover the outside surface of the windows with a winter insulation cover.

11.4 Lay-Up

11.4.1 Temporary Lay-Up

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

Before laying up the vehicle, go through the following check list:

	Activities	Done
Chassis	Lubricate the moving parts of the caravan coupling ▷ Do not lubricate the AKS stabiliser!	
	Jack up caravan with suitable support so that the wheels do not bear any load, or move caravan every four weeks. This prevents any pressure points from occurring on wheels and wheel bearings ▷ Never use the fitted corner steadies as a car jack but only external support	
	Always provide for sufficient ventilation in the underbody area ▷ Humidity or lack of oxygen e. g. by covering with plastic film may cause optical irregularities to the underbody	
Interior	Place upholstery in an upright position for ventilation, and cover	
	Clean refrigerator	
	Allow refrigerator and freezer compartment doors to remain slightly open	
Gas fittings	Close regulator tap on the gas bottle	
	Close all gas isolator taps	
	Always remove gas bottles from the gas bottle compartment, even if they are empty	
Electrical fittings	Fully charge living area battery ▷ Charge at least for 20 hours before laying up	
	Spray the contacts on the thirteen-pin connector with contact spray	
Water system	Empty the entire water system. Blow out the residual water from the lines (0.5 bar max.). Observe notes in chapter 10	

11.4.2 Winter Lay-Up

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

	Activities	Done
Chassis	Clean body and underbody thoroughly and spray with hot wax or protect with varnish	
Body	Keep the forced ventilation open	
	Clean and lubricate corner steadies	
	Clean and grease all door and flap hinges	
	Brush oil or glycerine on all locking mechanisms	
	Rub all rubber seals with talc	
	Use graphite dust to treat locking cylinders	
Interior	Position de-humidifiers	
	Remove upholstery from the caravan and store in a dry place	
	Air the interior every 3 weeks	
	Empty all cabinets and storage compartments, open flaps, doors and drawers	
	Thoroughly clean the interior	
Electrical fittings	Remove living area battery and store in a place protected from frost (see chapter 8)	
Water system	Clean the water system using a cleaning agent from a specialised store	
Awning	Clean the awning area and store in a dry place	
Complete vehicle	Arrange the tarpaulins in such a way that the ventilation openings are not covered, or use porous tarpaulins	

11.4.3 Starting Up the Vehicle after a Temporary Lay-Up or after Lay-Up over Winter

Go through the following check list before start-up:

	Activities	Done
Chassis	Check the tyre pressure on all tyres	
	Check the tyre pressure of the spare wheel	
Body	Clean the pivot bearing of the entrance step	
	Check the functioning of the fitted corner steadies	
	Check that hinged windows and the lifting roof are working properly	
	Check that all the external locks are working, such as the external flaps, the fresh water filler neck and the conversion door	
	Remove the cover from the waste gas vent of the heater (if there is one)	
	Remove the winter cover from the refrigerator grills (if there is one)	
Gas fittings	Put the gas bottles in the gas bottle compartment, tie down and connect to the pressure reducer	
Electrical fittings	Connect to 240 V external power	
	Fully charge living area battery ▷ Charge at least for 20 hours after laying up	
	Check that the electrical fittings are working, e. g. interior light, socket and all installed electrical appliances	
Water system	Use several litres of fresh water to rinse out water pipes and fresh water canister or fresh water tank. To this end, open all water taps	
	Check the function of the drain cock at the waste water tank	
	Close all drain cocks and water taps	
	Check the water taps, drain cocks and water distributors for leaks	
Appliances	Check the function of the refrigerator	
	Check the function of the heater/boiler	
	Check the function of the gas cooker	

Chapter Overview

This chapter contains instructions regarding the maintenance of the caravan.

The instructions address the following topics:

- stabiliser
- replacing light bulbs
- adjusting the tension of the spring on the insect screen
- spare parts

At the end of the chapter you will find the ***ERIBA*** (***HYMER***) service numbers and important instructions on how to obtain replacement parts.

12.1 Maintenance Work

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

Inspection and maintenance work may only be carried out by trained personnel.

Special technical knowledge, which cannot be taught within the framework of this instruction manual, is required for these tasks. Personnel possessing this technical knowledge are available for assistance at all ***ERIBA*** service centres. Their experience and regular technical instruction by the factory as well as equipment and tools guarantee expert and up-to-date maintenance of the caravan.

In the inspection record of this instruction manual, the ***ERIBA*** service centre will confirm any work carried out.

- ▷ Note the inspections listed in the inspection record and have them carried out at the specified intervals. The value of the caravan is thus preserved.
- ▷ The inspection record also serves as valid proof in the case of damage and claims under the guarantee.

12.2 AKS 1300 Stabiliser

Clean the stabiliser and the coupling head regularly. Use either thinners or white spirit. When lubricating the stabiliser ensure that no lubricant is on the friction pads.

Checking the stabilising device (on the side of the friction pads):

Prerequisite:
Connection to AKS 1300, ball diameter 50 mm

- Turn the hand wheel (Fig. 91,1), until it can be heard and felt that the torque limiting mechanism grates. Turn in a in a clockwise direction.
- Check distance a:
  - Distance a > 0 (Fig. 91):
    Wear within the permissible range.
  - Distance a = 0 (Fig. 92):
    Check and, if necessary, replace the friction pads.

▷ Resetting the friction pads is not required.

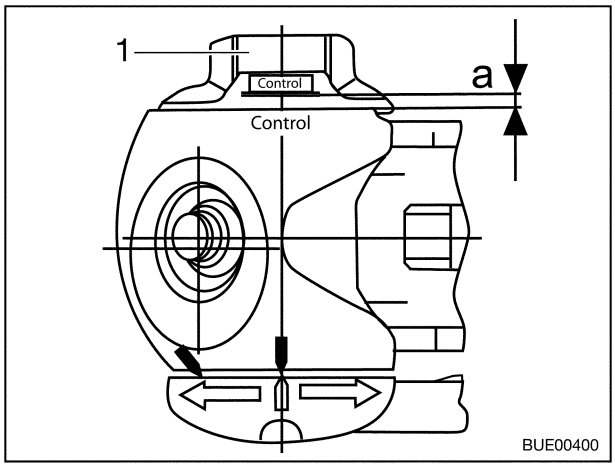


Fig. 91 Friction control

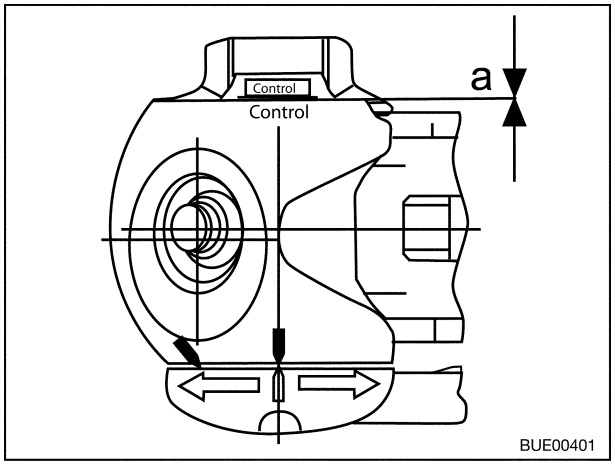


Fig. 92 Friction control

12.3 Replacing Bulbs and Fluorescent Tubes, Internal

- ▶ Bulbs and light fittings can be extremely hot. Therefore, allow lights to cool down before changing bulbs.
- ▶ Store bulbs in a safe place inaccessible to children.
- ▶ Do not use any bulb that has been dropped or which shows scratches in its glass. It may burst.
- ▶ Lights can get very hot. Always maintain a safety distance of 30 cm. Fire hazard!

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

12.3.1 Spotlight (Variant 1)

Opening:

- Turn the the glass (Fig. 93,1) in a clockwise direction.
- Remove the glass.
- Change the halogen bulb.

Fig. 93 Spotlight (variant 1)

12.3.2 Spotlight (Variant 2)

Opening:

- Grip the edge of the spotlight glass (Fig. 94,1) and pull forward.
- Change the halogen bulb.

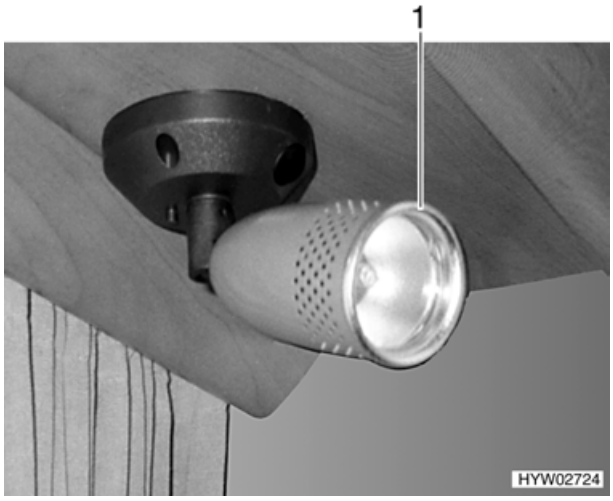


Fig. 94 Spotlight (variant 2)

12.3.3 Living Area Lamp

Opening:

- Press side panels (Fig. 95,1) slightly towards the outside.
- Press the glass together gently and remove from the housing.
- Change the faulty halogen bulb.
- Press side panels slightly towards the outside.
- Allow the lamp glass to engage first in the front, then in the back.

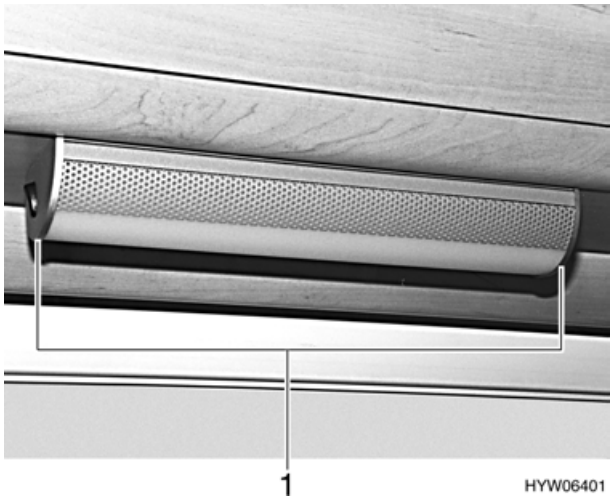


Fig. 95 Living area lamp

12.3.4 Halogen Lamp

Opening:

- Turn the panel (Fig. 96,1) slowly until the shade screw underneath engages in the housing catch (Fig. 96,2).
- Remove the frame.
- Three clamps (Fig. 96,3) hold the glass of the halogen lamp in the housing. Push one of the three clamps to one side.
- Remove the glass.
- Change the halogen bulb.

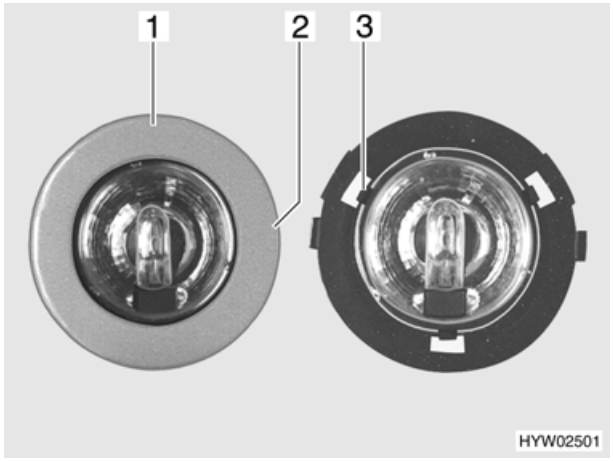


Fig. 96 Halogen lamp

12.3.5 Toilet Light

Opening:

- Press the lamp glass (Fig. 97,1) at both hooks together and pull it out.
- Change the halogen bulb.
- Insert and press down lamp glass with the hooks into the recesses.

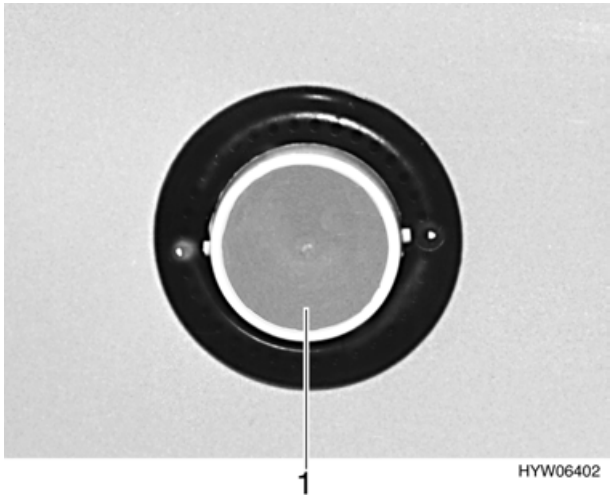


Fig. 97 Toilet light

12.3.6 Awning Light

Opening:

- Press the housing gently together (Fig. 98) and pull it out towards you.
- Change the halogen bulb.
- Hook at the upper edge of the housing must engage with the recess of the holder.
- Pres down housing.

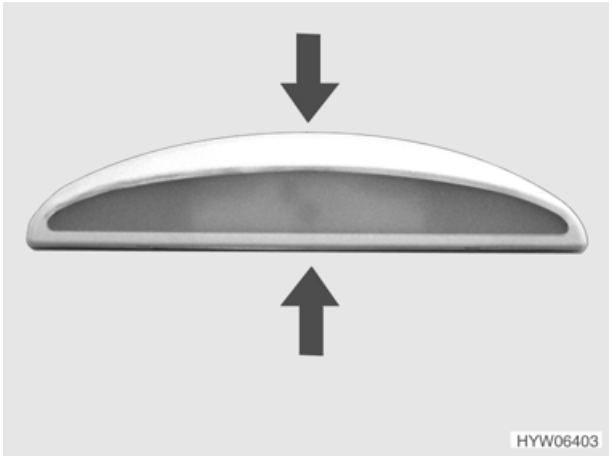


Fig. 98 Awning light

12.4 Adjusting the Springs of the Blind and the Insect Screen

▷ The spring adjustment screw cannot be turned back.

The tensile force of the spring for the blind or the insect screen can be adjusted if necessary. Two adjustment screws for the blind (Fig. 99,1) and the insect screen (Fig. 99,2) are at the left side of the window frame.

- With a flat head screwdriver, turn the adjustment screw in a clockwise direction to the engagement position.
- Check the tensile force of the spring.
- If necessary, turn the adjustment screw in a clockwise direction to the following engagement position.

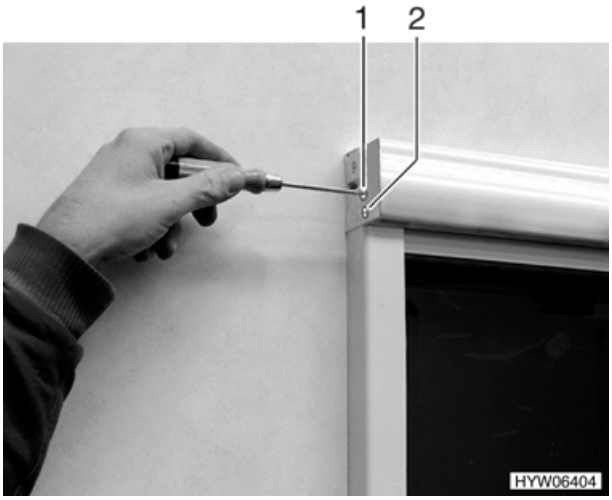


Fig. 99 Re-tensioning the spring tension

12.5 Spare Parts

- Every alteration of the original condition of the caravan can jeopardize road safety.
- The accessories recommended by ***HYMER AG*** and the original spare parts have been specially developed for your caravan and supplied by us. Your ***ERIBA*** dealer carries these products. The ***ERIBA*** dealer is informed about admissible technical details and carries out the required work correctly. The use of accessories, parts and fittings not supplied by ***HYMER AG*** may cause damage to the vehicle and jeopardize road safety. Even if an expert's report, a general type approval or a design certification exists, there is no guarantee for the proper quality of the product. No responsibility can be taken for damage caused by products not provided by ***HYMER AG*** or by non permissible alterations.

For safety reasons, spare parts for pieces of equipment must correspond with manufacturer's instructions and be permitted by the manufacturer as a spare part. These spare parts may only be fitted by the manufacturer or an authorised workshop. Our ***ERIBA*** dealers and service centres are available for any spare parts requirement. However, spare parts cannot be shipped ex factory.

Here are some suggestions of important spare parts:
- Fuses (ratings see chapter 8)
- Bulbs
- Water pump

When ordering spare parts please indicate the serial number and the caravan type to the ***ERIBA*** dealer. The caravan described in this instruction manual is built and equipped according to work standards. Special equipment is offered depending on its purpose or use. When fitting special equipment check if such equipment has to be entered in the vehicle documents. Observe the maximum permissible gross weight of the caravan. Your ***ERIBA*** dealer will be pleased to advise you.

12.6 Vehicle Identification Plate

The vehicle identification plate (Fig. 100) with the serial number is mounted near the conversion door.

Do not remove the vehicle identification plate. The vehicle identification plate:
- identifies the vehicle
- helps with the procurement of spare parts
- together with the vehicle documents identifies the vehicle owner

▷ Always include the **serial number** with all inquiries for the customer service office.

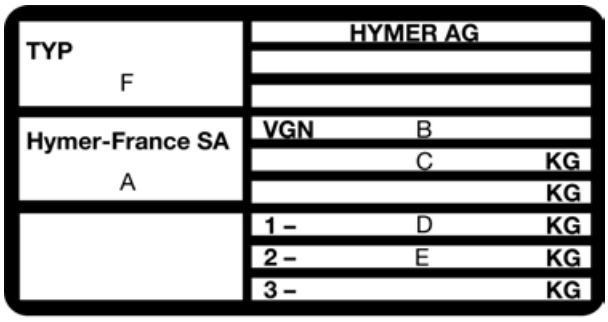


Fig. 100 Vehicle identification plate

A = Serial number
B = Chassis number
C = Maximum permissible gross weight of the caravan
D = Permissible axle load
E = Free
F = Permission number

12.7 Warning and Information Stickers

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

▷ Replacement stickers can be obtained from a ***ERIBA*** dealer.

12.8 Service Telephone Numbers

12.8.1 *ERIBA* (*HYMER*) Service Numbers

The ***ERIBA*** (***HYMER***) service numbers are:
- +49 180 2 496373
- +49 89 76764242

12.8.2 *ERIBA* Dealers

Contact your ***ERIBA*** dealer whenever replacement parts are needed for the caravan.

You can find the addresses and telephone numbers of the ***ERIBA*** dealers:
- in the brochure "***ERIBA*** dealers", which is included separately with the vehicle
- in the Internet at http://www.hymer.com

12.9 Replacement Keys

To order replacement keys make a note of the following:

Locks for:	To order keys you need:	Obtainable at:	Telephone information:
ERIBA conversion	Serial number, chassis number, second key or key number	***ERIBA*** dealers	–

Chapter Overview

This chapter contains instructions regarding the tyres of the caravan.

The instructions address the following topics:

- tyre selection
- handling of tyres
- changing a wheel

At the end of the chapter there is a table you can use to find the correct tyre pressure for your caravan.

13.1 General

▷ Wrong tyre pressure causes excessive wear and can lead to damage or even to tyre burst. This is why the tyre pressure should be checked regularly.

▷ Only check the tyre pressure on cold tyres.

▷ In the case of a puncture, pull over to the side of the road. Make vehicle and caravan safe with a hazard warning triangle. Turn on the warning lights.

- Check the tyres regularly (every 2 weeks) for equal tread wear, tread depth and external damage.
- Tyres must not be older than 6 years as the material will become brittle over time. The four-digit DOT number on the tyre flank indicates the date of manufacture. The first two digits designate the week, the last two digits the year of manufacture.
  Example: (1503) week 15, year of manufacture 2003.
- Replace tyres at the latest, when the minimum depth of tread stipulated by law is reached.
- Always use tyres of the same model, same brand and same style (summer and winter tyres).
- Only use tyres approved for the wheel rim type fitted. The permitted rim and tyre sizes are quoted in the caravan certificate. Your ***ERIBA*** dealer is always willing to advise.
- Run-in new tyres for approx. 100 km (60 miles) at low speed since only then do they reach full strength.

- Check regularly that the wheel nuts are firmly seated. Re-tighten the wheel bolts of a changed wheel cross-wise (Fig. 101) after 50 km (30 miles). For tightening torque see section Tightening Torque.
- When using new or newly painted rims, re-tighten the wheel bolts once again after approx. 1,000 to 5,000 km (600 miles to 1,000 miles).
- For lay-ups or long periods of inactivity, keep the tyres and tyre bearings free from pressure points:
  - Jack up the caravan so that the tyres do not bear any load
    or
  - move the caravan every 4 weeks to change the position of the tyres.

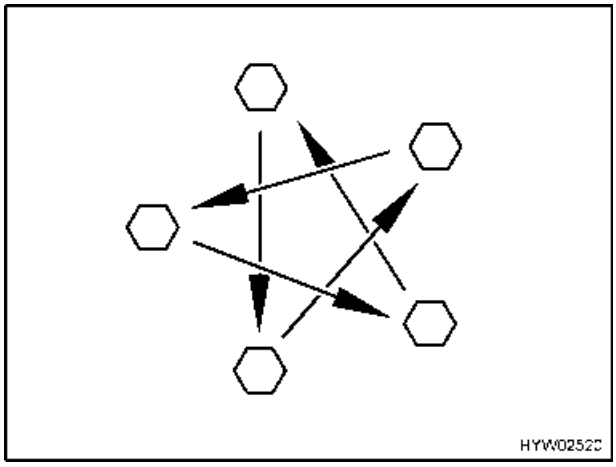


Fig. 101 Tighten the wheel bolts cross-wise

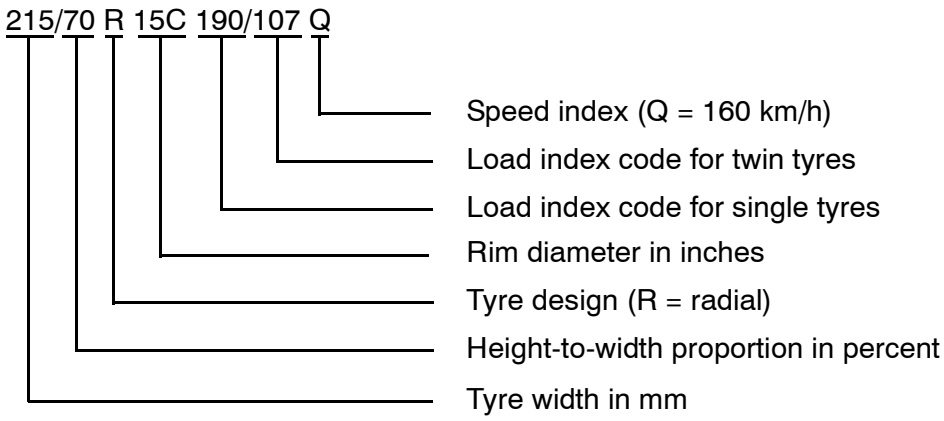
13.2 Tyre Selection

The tyre sizes permissible for a vehicle are indicated in the vehicle documents. Each tyre must fit the vehicle on which it will be driven. This applies to the external dimensions (diameter, width), which are indicated with the standardised size designations. In addition, the tyres must meet the requirements of the vehicle with regard to weight and speed.

Weight refers to the maximum permissible axle load which can be distributed on two tyres. The maximum load-carrying capacity of a tyre is indicated by its load index (= LI, load index code).

The maximum permissible speed for a tyre (with full load capacity) is indicated by the speed index (= SI). Together, load index and speed index form the operating code of a tyre. This is an official component of the complete, standardised dimensions description which appears on every tyre. The information on the tyres must correspond to the specifications which appear in the vehicle papers.

13.3 Tyre Specifications



13.4 Handling of Tyres

- Drive over kerbs at an obtuse angle.
  Otherwise the flanks of the tyres may get pinched. Driving over a kerb at a sharp angle can damage the tyre and result in it getting ruptured.
- Drive over high manhole covers at a slow speed.
  Otherwise the tyres may get pinched. Driving over a high manhole cover at high speed can damage the tyre and result in it getting ruptured.
- Check the shock absorbers regularly. Driving with poor shock absorbers significantly increases wear.
- Avoid block brakings. A block braking gives the tyres "brake plates" of varying strength, which reduce comfort and can render the tyres immobile.
- Do not clean the tyres with a high-pressure cleaner. The tyres can suffer serious damage within just a few seconds and rupture as a result.

13.5 Changing a Wheel

13.5.1 General Instructions

The spare wheel is in the living area with Puck L 225 GT and it is under the rear with all other models. Use a commercial scissor-type jack to change the wheel.

- ▶ The caravan must be on level, firm ground, secure from slipping.
- ▶ Before jacking up the caravan, firmly apply the handbrake.
- ▶ Prevent the caravan from rolling away by blocking the opposite wheel with the wheel chocks.
- ▶ Under no circumstances jack the caravan with the fitted corner steadies.
- ▶ Position the vehicle jack underneath the axle rather than on the bodywork.
- ▶ Whilst the caravan is in a jacked up position, persons should not lie down under it.

- ▷ Do not damage the thread of the thread bolts when changing the wheel.
- ▷ Tighten the wheel bolts cross-wise (Fig. 101). For tightening torque see section Tightening Torque.
- ▷ When changing wheels (e. g. light metal wheel rims or wheels with winter tyres), use the correct wheel bolts of the correct length and shape. The firm seating of the wheels and the function of the braking system depend on this.
- ▷ Wheel rims and tyres not permitted for use with the caravan by ***HYMER AG*** can jeopardize road safety.

- ▷ Protect the caravan according to national regulations, e. g. with a warning triangle.
- ▷ Before changing the wheel, check the wheel rim and tyre size, the max. tyre load and the speed index on the tyres. Only use the wheel rim and tyre sizes stated in the vehicle documents.

13.5.2 Changing a Wheel with Alloy Wheel Rims

- The resting surfaces of the wheels on the break drums must be clean and free of burrs.
- Only use fastening parts provided for to loosen the wheels lightly and ensure that they rest correctly and move freely, subsequently tighten the wheel nuts cross-wise with a suitable wrench.
- Many axles do not have a centring aid, flange or bolts. It must be ensured that the wheel nuts are equally centered above the bolt circle (no jamming).

To release and fix the secured alloy wheel rim use the suitable spanner for removal of the wheel hub cap and the anti-theft locking nut.

Releasing secure alloy wheel rim:

- Remove wheel hub cap from the alloy wheel rim.
- Place the anti-theft locking nut on the anti-theft locking screw and unscrew and remove with a commercial hexagon spanner.
- Unscrew and remove the remaining wheel screws with the hexagon spanner.

Fixing and securing alloy wheel rim:

- Place alloy wheel rim on the brake drum. Make sure that the bored holes are exactly above the threaded bores of the brake drum.
- Wind in wheel screws with a commercial hexagon spanner into the threaded bores of the brake drum.
- Place anti-theft locking nut on the anti-theft locking screw and wind in with a hexagon spanner into the threaded bores of the brake drum.
- Tighten the wheel screws and the anti-theft locking screw cross-wise.
- Remove anti-theft locking nut from the anti-theft locking screw.
- Press wheel hub cap onto the alloy wheel rim.

13.5.3 Tightening Torque

Wheel rim	Tightening torque
Steel wheel rim	100 Nm (74 ft/lbs)
Alloy wheel rim	120 Nm (89 ft/lbs)

13.6 Tyre Pressure

- Wrong tyre pressure causes excessive wear and can lead to damage or even to tyre burst.

The information on pressure levels is valid for cold tyres.

Tyres	Tyre pressures (bar)	Tyre pressure (psi)
135 R13	2.4	35
155 R13	2.4	35
165 R13	2.4	35
185/70 R13	2.4	35
195/70 R14	2.4	35

Please always observe the speed limits in the individual countries (see chapter 17).

The caravans are constantly brought up to the latest technical standards. It is possible that new tyre sizes are not yet included in this table. If this is the case, any ***ERIBA*** dealer will be happy to provide the newest values.

Chapter Overview

This chapter contains instructions about possible faults in the caravan.

The faults are listed with their possible causes and corresponding remedies.

The instructions address the following topics:

- chassis
- braking system
- electrical fittings
- gas fittings
- gas cooker
- hot water source
- boiler
- refrigerator
- water supply
- body

The specified faults can be remedied with relative ease and without a great deal of specialised knowledge. In the event that the remedies detailed in this instruction manual should not be successful, an authorised workshop must find and eliminate the cause of the fault.

14.1 Chassis

Fault	Cause	Remedy
Coupling does not lock in place after being placed on top	Ball larger than Ø 50 mm	Remove dirt Contact ***ERIBA*** customer service
	The coupling interiors are soiled and no longer work automatically	Clean well and lubricate (not stabiliser)
Caravan cannot be detached	Ball worn	Position the caravan and car in the same direction and detach. Immediately replace the worn ball

14.2 Braking System

- ▶ In the interests of personal safety, have repairs and adjustments to the braking system made by an authorised specialist workshop only.
- ▶ Follow maintenance or manufacturer specifications.

14.3 Electrical Fittings

▷ A dryfill battery may only be replaced by a dryfill battery.

Fault	Cause	Remedy
Road light system does no longer work correctly	Bulb is defective	Remove cover, replace bulb. Note volts and watts specifications
	Contacts on the plug and/or in the socket have oxidised and/or are contaminated	Clean contacts and spray with contact spray
	Short circuit caused by water in the plug and/or socket	Open plug and/or socket, dry out, and spray with contact spray
	Cable interruption on the plug	Open plug, re-connect if necessary (see connection diagram)
Road light system does not match the towing vehicle light system	Contact connections within the plug have been reversed	Check contact allocation and wiring on the plug/connector of the caravan
Interior lighting does no longer work correctly	Bulb is defective	Remove cover, replace bulb. Note volts and watts specifications
	Fuse on the power pack is defective	Replace fuse
12 V interior lighting does not work	240 V automatic circuit breaker switched off	Switch on 240 V automatic circuit breaker
	Thermal cut-out in the power pack has triggered.	Wait until the thermal cut-out switches back on
	Fuse on the power pack is defective	Replace fuse
	Power pack is defective	Contact ***ERIBA*** customer service
240 V interior lighting does not work	240 V automatic circuit breaker switched off	Switch on 240 V automatic circuit breaker
	Thermal cut-out in the power pack has triggered	Wait until the thermal cut-out switches back on
No 240 V power supply, in spite of 240 V connection	240 V automatic circuit breaker switched off	Switch on 240 V automatic circuit breaker

Fault	Cause	Remedy
No voltage from the living area battery (Power Pack SE)	Living area battery discharged	Charge living area battery immediately  ▷ An extended period of total discharge may cause irreparable damage to the living area battery Before laying up the caravan for a longer period, fully charge the living area battery Discharging is caused by inactive appliances (see chapter 8)

14.4 Gas Fittings

Fault	Cause	Remedy
Gas odour, high rate of gas consumption	Leak in gas system	 ▷ Close regulator tap on the gas bottle immediately. Open doors and windows and ventilate ▷ Do not smoke; do not ignite any open flames, and do not operate electric switches (light switches a.s.o.) ▷ Have the gas system checked by a specialist
No gas	Gas isolator tap closed	Open the gas isolator tap
	Regulator tap on the gas bottle is closed	Open regulator tap on the gas bottle
	External temperature is too low (-42 °C for propane gas, 0 °C for butane gas)	Wait for higher external temperatures
	Built-in appliance is defective	Contact ***ERIBA*** customer service

14.5 Cooker

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

14.6 Hot Water Source, Boiler, Refrigerator

In the event of a defect occurring on the refrigerator, hot water source or boiler contact the nearest customer service workshop of the relevant appliance manufacturer. The list of addresses is enclosed with the accompanying appliance documentation. Repairs to the refrigerator or heater or boiler may only be carried out by qualified personnel.

14.6.1 Truma Hot Water Source

Fault	Cause	Remedy
The hot water source is connected to power supply but does not heat	Operating switch is switched off	Switch on the operating switch, the indicator lamp on the switch must light up
	Operating switch defective	Contact ***ERIBA*** customer service
	240 V automatic circuit breaker switched off	Switch on 240 V automatic circuit breaker
	240 V power supply disconnected	Connect 240 V power supply
	Heating coil of the hot water source is defective	Contact ***ERIBA*** customer service

14.6.2 Truma Boiler

Gas operation

Fault	Cause	Remedy
Red indicator lamp "Fault" illuminates	Air in the gas pipe system	Switch off and on again. After two futile ignition attempts, wait for 10 minutes before trying again
	Lack of gas	Open regulator tap and gas isolator tap
		Connect a full gas bottle
	Defect of a safety element	Contact ***ERIBA*** customer service
Green indicator lamp behind knob is not lit	Fuse is defective	Replace fuse
	Fuse in the electronic control unit has been triggered	Contact ***ERIBA*** customer service
	Living area battery defective	Charge or renew the living area battery
Red and green indicator lamps are not lit	Fuse is defective	Replace fuse on the transformer/rectifier

Electrical operation

Fault	Cause	Remedy
Boiler is connected to power supply but is not heated	Operating switch is switched off	Switch on the operating switch, the indicator lamp on the switch must light up
	Operating switch defective	Contact ***ERIBA*** customer service
	240 V automatic circuit breaker switched off	Switch on 240 V automatic circuit breaker
	240 V power supply disconnected	Connect 240 V power supply
	Overtemperature fuse has triggered	Switch off boiler and switch on after approx. 5 minutes
	Heating coil of the boiler is defective	Contact ***ERIBA*** customer service

14.6.3 Refrigerator

Fault	Cause	Remedy
Refrigerator does not switch on when operating in 240 V mode	240 V automatic circuit breaker switched off	Switch on 240 V automatic circuit breaker
	Fuse on the power pack is defective	Replace fuse
Refrigerator does not switch on when operating in 12 V mode	Contacts on the plug and/or in the socket have oxidised and/or are contaminated	Clean contacts and spray with contact spray
	Short circuit caused by water in the plug and/or socket	Open plug and/or socket, dry out, and spray with contact spray
	Cable interruption on the plug and/or socket	Open plug, re-connect if necessary (see chapter 8)

14.7 Water Supply

Fault	Cause	Remedy
Leakage water inside the vehicle	A leak has occurred	Identify leak, re-connect supply tubes
No fresh water	Fresh water canister or fresh water tank is empty	Fill with fresh water
	Drain cock not closed	Close the drain cock
	Pump is defective	Exchange pump (have it exchanged)
	Fuse on the power pack is defective	Replace fuse
	Hose is kinked	Straighten hose or replace
	Power pack is defective	Contact ***ERIBA*** customer service
Thetford toilet does not have any flush water	Fresh water canister or fresh water tank is empty	Fill with fresh water
	Fuse in Thetford cassette is defective	Replace fuse
Waste water tank cannot be emptied	Drain cock is clogged	Open the cleaning cap on the waste water tank and drain the waste water. Rinse the waste water tank well

14.8 Body

Fault	Cause	Remedy
Lifting roof is difficult to operate	Spring or lifting scissors are defective	Insert new spring or lifting scissors
Flap hinges/door hinges are difficult to operate	Flap/door hinges are not sufficiently lubricated	Lubricate flap hinges/door hinges with acid-free and resin-free grease
Front bonnet swivel system is difficult to operate	Front bonnet swivel system is not (sufficiently) lubricated	Lubricate front bonnet swivel system with acid-free and resin-free grease
Hinges/joints in the bathroom unit/toilet compartment are difficult to operate/make a grating noise	Hinges/joints are not sufficiently lubricated	Lubricate hinges/joints with solvent-free and acid-free grease  ▷ Spray cans often contain solvents
Storage compartment hinges are difficult to operate/make a grating noise	Storage compartment hinges are not sufficiently lubricated	Lubricate storage compartment hinges with acid-free and resin-free grease

▷ Our ***ERIBA*** dealers and service centres are available for any spare parts requirement.

15.1 Weight Details for Special Equipment

Weight details for ***ERIBA*** special equipment are listed in the table below. If these objects are either in or on the caravan and are not part of the standard equipment, they have to be taken into consideration when determining the payload.

All weight details are approximate.

Observe the max. permissible gross weight.

Description	kg
Waste water tank	6
Airmix	2
External flap, storage compartment	1
Power Pack SE	15
Shower curtain	2
Duomatic L	2
Ultraheat additional electric heater	3
Bunk bed	10
Interior sprung mattress for single beds	10
Fresh water tank	6
Remote gas switch	0.5

Description	kg
Gas socket with stopcock	1
Hanging bed	8
Heating with automatic ignition	10
Insect screen, conversion door	5
Stabiliser	5
Floor carpet cut-to-size	4
Touring Plus Package	7
Truma hot water source	12
Awning socket	1
Hot water boiler, 10 litres	15

16.1 Technical Data

The information on dimensions and weight is valid for caravans with standard equipment.

- ▷ Only the details provided in the actual vehicle documentation of the caravan shall be binding with regard to the technical data.
- ▷ The measurements as well as the net weight of the caravan may change when mounting accessories or special equipment. Differences due to manufacturing tolerances (+/- 5 %) are possible and admissable.

Type Caravan	Length (cm)	Width (cm)	Height (cm)	Maximum permissible gross weight (kg)	Tyre size
Puck 120	409	165	198	650	135 R13
Puck 120 GT	409	165	198	650	155 R13
Puck 120 Fifty's	409	165	198	650	155 R13
Puck L 225 GT	460	180	205	750	155 R13
Familia 310 GT	460	200	220	850/900[1)]	155 R13 165 R13[1)]
Familia 320 GT	460	200	220	900	165 R13
Triton 410 GT	511	200	220	1000/1200[1)]	185/70 R13 195/70 R14[1)]
Triton 418 GT	511	200	220	1000/1200[1)]	185/70 R13 195/70 R14[1)]
Triton 420 GT	511	200	220	1000/1200[1)]	185/70 R13 195/70 R14[1)]
Triton 430 GT	511	200	220	1000/1200[1)]	185/70 R13 195/70 R14[1)]
Triton 430 Fifty's	511	200	220	1000/1200[1)]	185/70 R13 195/70 R14[1)]
Troll 510 GT	568	200	220	1200	195/70 R14
Troll 530 GT	568	200	220	1200	195/70 R14
Troll 540 GT	568	200	220	1200	195/70 R14
Troll 550 GT	568	210	220	1200	195/70 R14
Troll 552 GT	568	210	220	1200	195/70 R14
Troll 555 GT	568	210	220	1200	195/70 R14

[1)] Special equipment

Chapter Overview

This chapter contains helpful tips on how to travel with the caravan.

The tips cover the following topics:

- road assistance in European countries
- traffic laws in European countries
- gas supply in European countries
- safe ways to spend the night during travel
- camping in winter

At the end of the chapter there is a check list containing the most important equipment for your trip with the caravan.

17.1 Traffic Rules in Foreign Countries

▷ The vehicle driver is required to inform himself as to the traffic rules of the countries in which he plans to travel before beginning the trip.

17.2 Help on Europe's Roads

Country	✚ **Emergency Services** ★ **Police**	☎ **Breakdown Service**
Belgium	✚ 100 ★ 101	☎ TCB Brussels 0 70 34 47 77
Bulgaria	✚ 150 ★ 160	☎ UAB (02) 9 80 33 08
Denmark	✚ 112 free of charge ★ 112 free of charge	☎ Falck 79 42 42 42
Germany	✚ 112 ★ 110	☎ ADAC 22 22 22***
Estonia	✚ 112 ★ 110	☎ EESTI (+372) 6 96 91 88/18 88***
Finland	✚ 112 ★ 112	☎ Helsinki (09) 77 47 64 00 Friday 6 pm to Sunday 10 pm: 02 00 80 80
France	✚ 15 ★ 17	☎ AIT Assistance 08 00 08 92 22
Greece	✚ 166*/151** ★ 100	☎ ELPA 104
Great Britain	✚ 999/112*** ★ 999/112***	☎ AA (08 00) 0 28 90 18
Ireland	✚ 999/112*** ★ 999/112***	☎ AA Dublin 18 66 77 88

Country	✚ Emergency Services ★ Police	☎ Breakdown Service
Iceland	✚ 112 ★ 112	☎ F.I.B 5 11 21 12
Italy	✚ 118 ★ 112	☎ ACI 8 00 11 68 00
Croatia	✚ 94 ★ 92	☎ HAK 987/ 0 19 87***
Latvia	✚ 112 ★ 110	☎ LAMB 80 00 00
Lithuania	✚ 112 ★ 110	☎ LAS 52 49 74 38
Luxembourg	✚ 112 ★ 113	☎ ACL 4 50 04 51
Macedonia	✚ 94 ★ 92	☎ AMSM (02) 9 87
Netherlands	✚ 112 ★ 112	☎ ANWB 08 00 08 88
Norway	✚ 113 ★ 112	☎ NAF 81 00 05 05
Austria	✚ 144/112*** ★ 133	☎ ÖAMTC 120
Poland	✚ 999 ★ 997	☎ PZM 96 37
Portugal	✚ 112 ★ 112	☎ ACP Lissab. (21) 9 42 91 03 ACP Porto (22) 8 34 00 01
Romania	✚ 961 ★ 955	☎ ACR 92 71
Russia	✚ 03 ★ 02	
Sweden	✚ 112 ★ 112	☎ M 0 20 91 29 12
Switzerland	✚ 144 ★ 117/112***	☎ TCS 140/03 50 53 11***
Serbia and Montenegro	✚ 94 ★ 99	☎ AMS SCG 9 87/ 01 19 87***
Slovakian Republic	✚ 155 ★ 158	☎ ASA 1 81 24
Slovenia	✚ 112 ★ 113	☎ AMZS 19 87
Spain	✚ 061 ★ 112	☎ RACE (91) 5 93 33 33
Czech Republic	✚ 155 ★ 158	☎ UAMK CR 12 30
Turkey	✚ 112 ★ 155/112***	☎ ADAC Istanbul (02 12) 2 88 71 90

Country	✚ Emergency Services ★ Police	☎ Breakdown Service
Ukraine	✚ 03 ★ 02	☎ 112 UA (3 22) 27 01 12
Hungary	✚ 104 ★ 107	☎ MAK 188/(06-1) 3 45 17 44***
Cyprus	✚ 199/112*** ★ 199/112***	☎ AA 22 31 31 31

* = Number only applies to major cities
** = Outside major cities
*** = In the mobile communication network

Specifications without guarantee

Date: 04/2003

17.3 Speed Limits

- When travelling abroad, note and do not exceed the varying speed limits.
- The caravans are designed by ***HYMER AG*** for a technically permissible maximum speed of 100 km/h (60 mph). Never drive faster.

For your information a list is provided below detailing the speed limits in some of the most visited countries:

Date 09/2001

Country	In built-up areas (km/h)	Outside built-up areas (km/h)	Motorway (km/h)
Belgium	50	90/120[1]	120[10]
Bulgaria	50	90	120
Denmark	50	70	80
Germany	50	80	80/100[9/12]
Estonia	50	70	90
Finland	50	80	80
France	50	90[2]/110[1/3]	130[8/10]
Greece	50	80	80
Great Britain	48	80/96[1]	96[9]
Ireland	48	80	80

Country	In built-up areas (km/h)	Outside built-up areas (km/h)	Motorway (km/h)
Iceland	50	80	–
Italy	50	70	80
Croatia	50	80	80
Latvia	50	80	80
Lithuania	60	70	110[10]
Luxembourg	50	75	90
Macedonia	50/60	80	80
Netherlands	50	80	80
Norway	50	60[4]/80	60[4]/80
Austria	50	100[5]	100[5]
Poland	60	80	80
Portugal	50	70/80[11]	100
Romania	50	90	100
Russia	50	90[13]	90[13]
Sweden	50	80[6]	80[6]
Switzerland	50	80	80[10]
Serbia and Montenegro	60	80	80
Slovakian Republic	60	80	80
Slovenia	50	80	80
Spain	50	70/80[1]	80
Czech Republic	50	80	80

Country	In built-up areas (km/h)	Outside built-up areas (km/h)	Motorway (km/h)
Turkey	50	70	80
Ukraine	50	90[13]	90[13]
Hungary	50	70	80
Cyprus	50	80	100

Specifications without guarantee

1 On expressways, on roads with more than one lane in each direction and on roads resembling highways
2 In wet conditions 80 km/h
3 In wet conditions 100 km/h
4 Trailers with no brakes and a current gross weight exceeding 300 kg
5 With trailer of more than 750 kg (max. permissible gross weight 3.5 t) outside built-up areas 80 km/h, on motorways 100 km/h. For towing vehicle and trailer of max. permissible gross weight of over 3.5 t outside built-up areas 60 km/h, on motorways 70 km/h.
6 Trailer with no brakes whose maximum permissible gross weight is two times the unladen weight of the towing vehicle: 40 km/h.
7 80 km/h for trailers up to 1,000 kg max. permissible gross weight
8 In wet conditions 110 km/h
9 Towing vehicle/trailer combinations must not use the far left-hand lane (far right-hand lane in GB) on three-lane motorways.
10 In the event of accidents involving speeds in excess of 100 km/h insurance payments may be reduced as caravans are only type approved for speeds up to 100 km/h.
11 According to the traffic signs
12 Only with the approval of the road traffic authority for the relevant towing vehicle/trailer combination. Confirmation by TÜV/DEKRA and also the official certificate issued by the road traffic authority must be carried at all times.
13 Drivers who have had their driver's licence for less than two years must not drive faster than 70 km/h.

Source: ADAC

17.4 Driving with Low Beam in European Countries

The following is a list of the European countries in which driving with low beam is required even during the day.

Country	Conditions
Denmark	All year; on all roads
Estonia	All year; on all roads
Finland	All year; only outside of towns
Iceland	All year; on all roads
Italy	All year; only on highways and expressways
Latvia	All year; on all roads
Lithuania	From November 1 to March 1; on all roads
Norway	All year; on all roads
Poland	From October 1 to March 1; on all roads
Sweden	All year; on all roads
Switzerland	All year; on all roads
Slovenia	All year; on all roads
Czech Republic	From October 27 to the last Sunday in March; on all roads
Hungary	All year; only outside of towns

Specifications without guarantee

17.5 Sleeping in the Caravan Away from Camping Areas

Country	Sleeping on roads and fields		Sleeping on privately owned lands		Comments
	yes	no	yes	no	
Belgium		X	X		On highway rest areas max. 24 hours permitted.
Bulgaria		X		X	
Denmark	X		X		
Germany	X		X		Staying overnight for one night to restore driving ability is permitted. There may be regional and local limitations.
Finland		X	X		
France	X		X		Permission from the local authorities or the owner of the land is required.
Greece		X		X	Staying overnight for one night on designated areas on the national route Patras-Athen-Thessaloniki is permitted.

Country	Sleeping on roads and fields		Sleeping on privately owned lands		Comments
	yes	no	yes	no	
Great Britain		X	X		
Ireland		X	X		
Italy	X		X		Observe the local regulations. Parking and staying overnight on free areas is prohibited.
Croatia		X	X		Permission from the local authorities must be obtained in order to stay overnight on privately owned land.
Luxembourg		X	X		
Netherlands		X	X		
Norway	X		X		Officially prohibited on rest areas and cultivated grounds. Travelling on dirt roads is prohibited.
Austria	X		X		Staying overnight once to restore driving ability is permitted, but not in nature reserves. Observe regional and local restrictions.
Poland		X	X		
Portugal		X		X	Staying overnight on highway rest areas is tolerated.
Romania		X		X	
Russia		X		X	
Sweden	X		X		Not on agriculture areas or in the vicinity of houses. Driving on open fields is prohibited.
Switzerland		X	X		One overnight stay at highway rest areas and in some cantons is tolerated.
Slovakian Republic	X		X		
Slovenia		X		X	
Spain	X		X		Some regional prohibitions apply, especially on beaches.
Turkey	X		X		
Ukraine		X		X	
Hungary		X	X		Staying overnight on privately owned land is permitted only with police certification.

Specifications without guarantee

17.6 Gas Supply in European Countries

▷ In Europe, there are several different connection systems for gas bottles. It is not always possible to fill or exchange your gas bottles in a foreign country. Get information about the connection system in the country you are travelling to before embarking on your journey, e. g. at a motoring club or in the trade press.

General tips:

- Only go on vacation with completely filled gas bottles.
- Use all of the gas bottles' capacity.
- Take along adapter sets (available in camping supply stores) for filling gas bottles in foreign countries and for connecting the gas regulator to foreign gas bottles.
- During the cold time of the year observe filling with propane gas component (butane does not gas under 0 °C).
- Use blue bottles from the firm Campingaz (distributed world-wide). Only use gas bottles with safety valves.
- When bottles from other countries are used, check the gas bottle compartments to see if the gas bottles fit into them. Gas bottles from other countries do not always display the same size as your own gas bottles.

17.7 Tips on Staying Overnight Safely During Travel

Prudent behaviour is the most important protective measure for insuring a safe night in the caravan.

The risk of thievery is reduced to a minimum when the following basic rules are observed:

- During high season do not spend the night at highway rest stops or parking areas located along typical vacation routes.
- Several caravans on one site at the same time do not necessarily decrease the chances of thievery occurring. Consult your own feelings about the parking site.
- Even if it is just for one night, go to a camping site.
- If you are parked in an open area, place dry twigs around the caravan.
- Only take with you those valuables which are absolutely necessary for the journey. If possible store your valuables in a small vault.
- Always lock up the caravan.

17.8 Tips for Winter Campers

The following tips will help make your winter camping experience as agreeable as possible.

- Reserve your parking place in good time. Good winter camping sites are often booked up early.
- Do not start your trip without winter tyres.
- Choose your parking place with care. Observe the ground beneath you. Snow and ice may melt.
- Place boards of a sufficient size under the jockey wheel and the corner steadies to prevent then from sinking when the snow thaws.
- When the caravan has been positioned, release the handbrake to prevent freezing.
- Protect the handbrake lever and the accumulator against frost with protective covers.
- Protect the gas bottle compartment against freezing with a protective cover.
- Do not leave waste water in the tank but drain it into a bucket.
- No snow walls should be allowed to cover the built-in forced ventilation.
- Keep the built-in forced ventilation free from snow and ice.
- Make sure the air circulation is good. Good air circulation prevents moisture from collecting and makes it easier to heat the living room.

- Only operate the gas system using propane.
- Follow the instructions in the chapter "Gas Supply in European Countries".
- Use a two-bottle system with automatic controller for the gas system, so that the supply does not run out during the night.
- Do not use the space behind the heater as a storage compartment.
- Never operate catalytic ovens or infra-red gas radiators in the interior of the vehicle, since they consume oxygen for burning.
- Lay the 240 V power cable in such a way that the cable cannot be frozen or be damaged (e. g. during snow removal).
- Use a winter awning.
- When it is snowing heavily, clear the roof of the caravan of snow regularly. A few centimetres of powdery snow serves as insulation, but wet snow quickly becomes a heavy burden.
- Before embarking on the return journey, remove all the snow from the roof to avoid impeding vehicles behind you with a "snow flag".

17.9 Travel Check Lists

The following check lists will help that nothing important is left at home although not everything on the check lists might be necessary.

Kitchen area

✔	Object
	Wiping cloth
	Mug
	Turnspit
	Can opener
	Egg-cup
	Ice cube tray
	Lighter
	Bottle opener
	Air-tight storage boxes
	Breakfast plate
	Forks
	Cleansing agent (detergent)

✔	Object
	Dishcloths
	Set of knifes and forks for grilling
	Coffeepot
	Corkscrew
	Kitchen paper
	Spoons
	Knifes
	Garbage bags
	Frying pans
	Stirring spoons
	Salad servers
	Chopping board

✔	Object
	Bowls
	Brush to wash the dishes
	Cloth to wash the dishes
	Matches
	Cups
	Plates
	Thermos jug
	Pots
	Glasses

Bathroom/sanitary items

✔	Object
	Towels
	Sanitary items

✔	Object
	Toilet brush
	Toilet paper

✔	Object
	Toothbrush glass

Living area

✔	Object
	Dustbin
	List of addresses
	Registration confirmation(s)
	Road atlas
	Bath towels
	Bath shoes
	Batteries
	Bed sheets
	Bed linen
	Laundry bag
	Books
	Camping guide
	Spare bulbs
	Vehicle documents
	Water bottle
	Binoculars
	Fire extinguisher
	Driving licence

✔	Object
	Gas bottle
	Green insurance card
	Insect lamp
	Insect repellent
	Deck of cards
	Broom
	Candles
	Dust pan
	Coat-hangers
	Clothes brush
	Pillow
	Credit card
	Map
	Medicine
	Music cassettes
	Neck-supporting pillow
	Sewing kit
	Identity card
	Radio

✔	Object
	Rain clothes
	First aid kit
	Travel guides/parking guide
	Passport
	Rucksack
	Sleeping bags
	Pencils and paper
	Shoes
	Shoe polish
	Vacuum cleaner
	Flash light
	Pocket knife
	Table cloth
	Visa
	Clothes pins
	Clothesline

Vehicle/tools

✔	Object
	Waste water container
	Adapter socket
	CEE adapter
	Wire
	Spare wheel
	Spare lamps
	Spare fuses
	Replacement water pump
	Hammer
	Flat wrench
	Gas filling adapter
	Gas tube

✔	Object
	Fabric tape
	Watering can for fresh water
	Cable reel
	Glue
	Universal pliers
	Compressor
	Luster terminals
	Loops
	Tube adapter
	Hose clips
	Snow chains (winter)
	Screw driver

✔	Object
	Current-measuring instrument
	Step
	Wheel chock
	First-aid kit
	Vehicle jack
	Hazard warning triangle
	Warning sign
	Warning vest
	Flashing hazard warning light

Outside

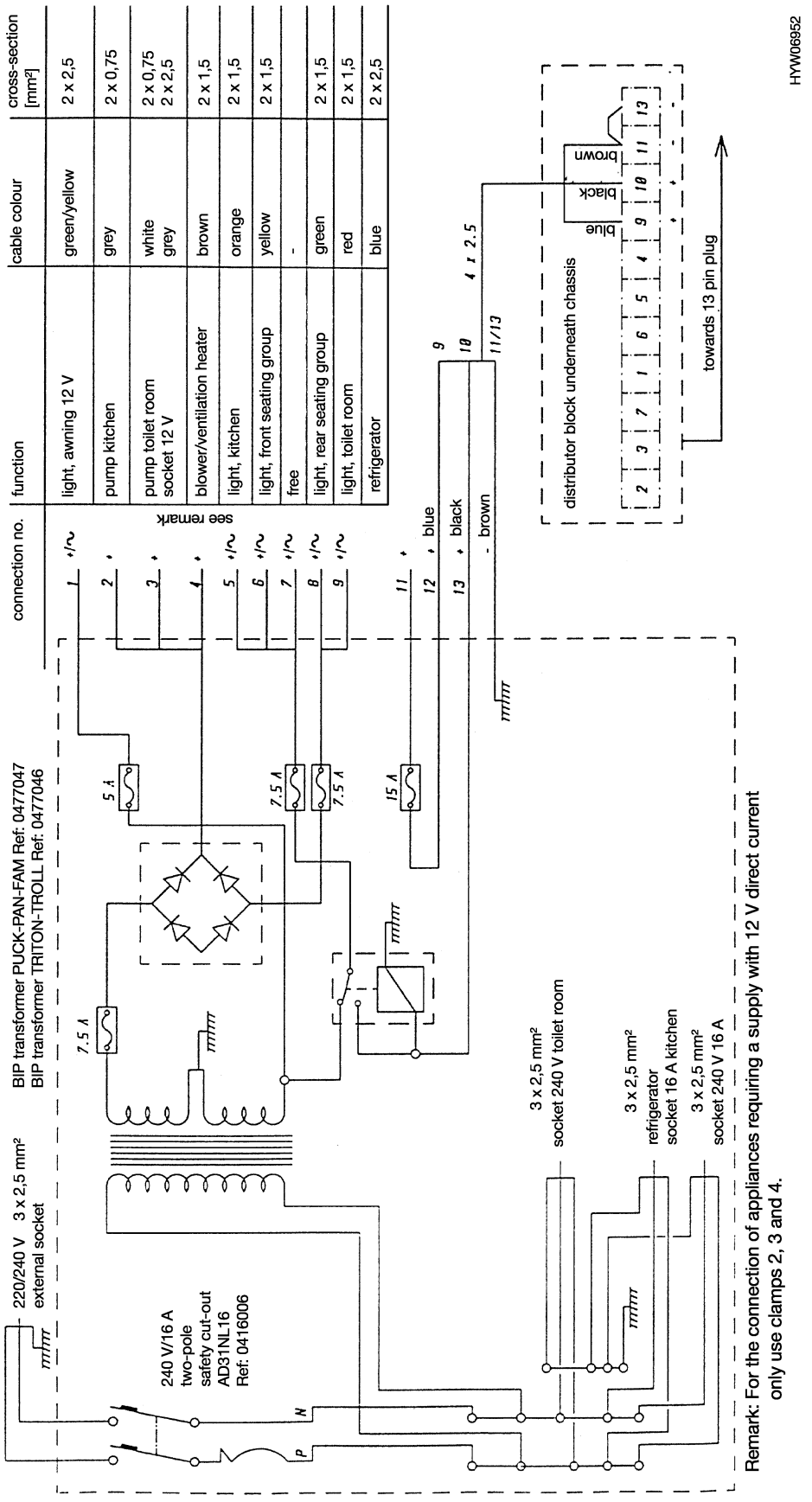
✔	Object
	Stay rope
	Bellows
	Camping chairs
	Camping table

✔	Object
	Luggage racks
	Tent pegs/tightening ropes
	Lock

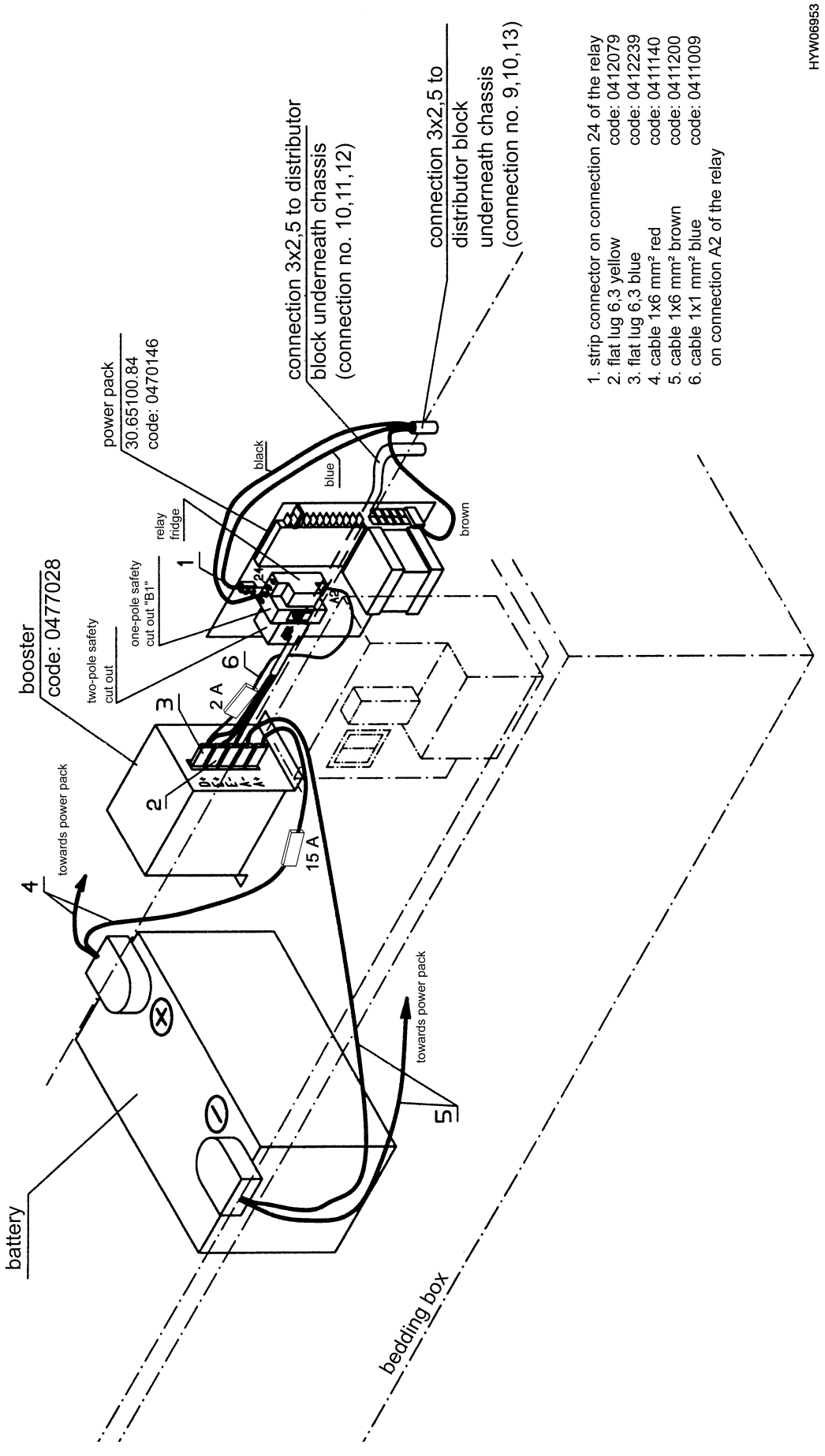
✔	Object
	String

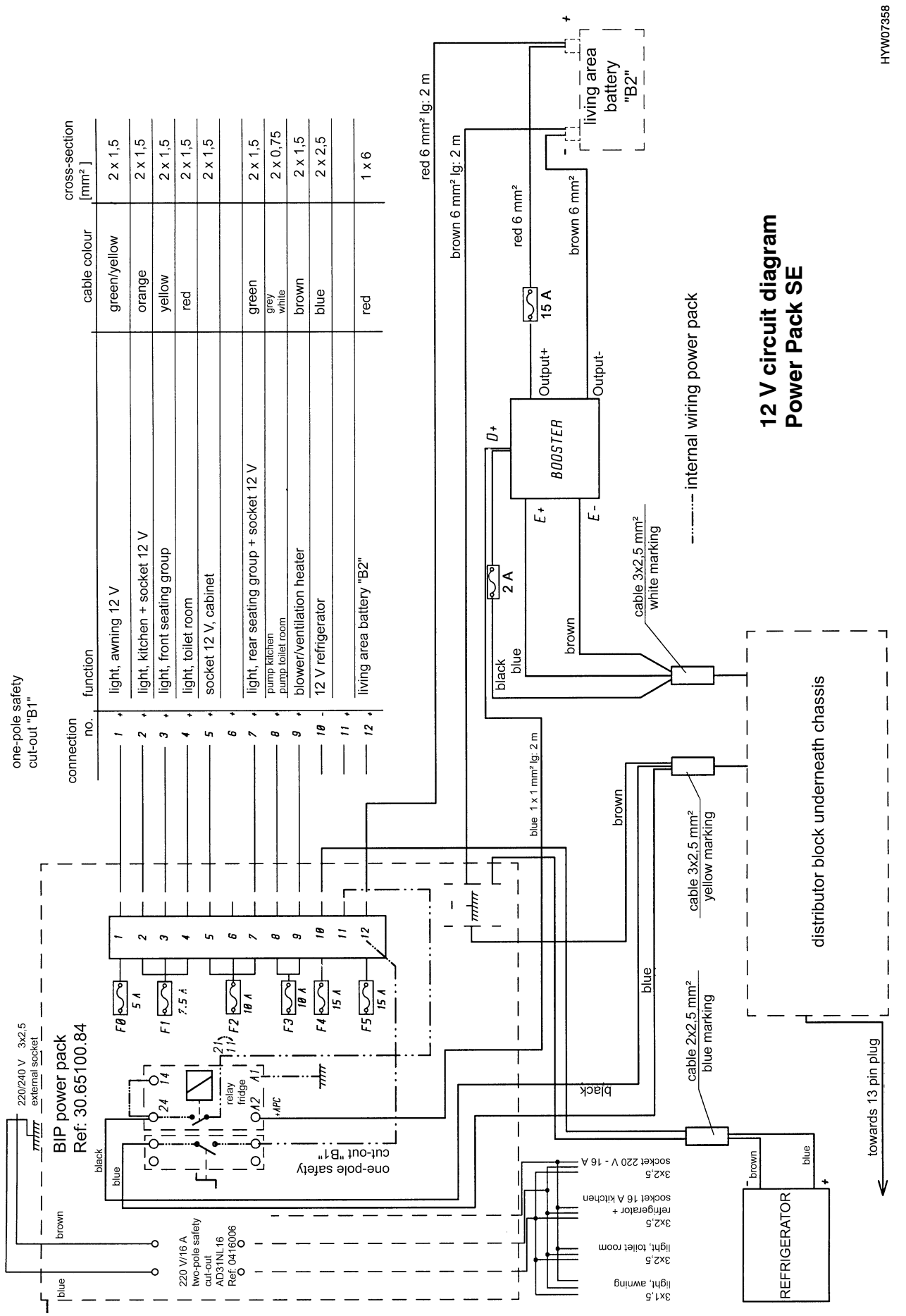
18.1 Circuit Diagrams

12 V circuit diagram



Power Pack SE principle




12 V circuit diagram
Power Pack SE
HYW07358
connection no.
function
cable colour
cross-section [mm²]
1 + light, awning 12 V green/yellow 2 x 1,5
2 + light, kitchen + socket 12 V orange 2 x 1,5
3 + light, front seating group yellow 2 x 1,5
4 + light, toilet room red 2 x 1,5
5 + socket 12 V, cabinet 2 x 1,5
6 + light, rear seating group + socket 12 V green 2 x 1,5
7 + pump kitchen grey 2 x 0,75
8 + pump toilet room white
9 + blower/ventilation heater brown 2 x 1,5
10 - 12 V refrigerator blue 2 x 2,5
11 +
12 + living area battery "B2" red 1 x 6
one-pole safety cut-out "B1"
BIP power pack
Ref: 30.65100.84
220/240 V 3x2,5 external socket
220 V/16 A two-pole safety cut-out AD31NL16 Ref: 0416006
F0 5 A
F1 7,5 A
F2 10 A
F3 10 A
F4 15 A
F5 15 A
relay fridge
one-pole safety cut-out "B1"
BOOSTER
D+
E+
E-
Output+
Output-
15 A
2 A
red 6 mm² lg: 2 m
brown 6 mm² lg: 2 m
red 6 mm²
brown 6 mm²
living area battery "B2"
internal wiring power pack
cable 3x2,5 mm² white marking
cable 3x2,5 mm² yellow marking
cable 2x2,5 mm² blue marking
blue 1 x 1 mm² lg: 2 m
distributor block underneath chassis
towards 13 pin plug
REFRIGERATOR
3x1,5 light, awning
3x2,5 light, toilet room
3x2,5 refrigerator + socket 16 A kitchen
3x2,5 socket 220 V - 16 A

A

B

C

D

E

F

G

H

R

S

T

U

V

W