

Dear Customer,

we are pleased that you have chosen a **HYMER** motorhome and would like to thank you for the trust you have shown in our company.

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

Please contact one of our authorised **HYMER** dealers for further information and maintenance or repair work. Their staffs are fully conversant with your vehicle and will be pleased to help in any way they can.

Our list of **HYMER** service centres in Europe is updated regularly. You can obtain a copy of the latest edition from our customer service department or from your **HYMER** dealer.

This instruction manual also includes the warranty certificate for your vehicle. You will be receiving the guarantee stamp shortly. Please paste this stamp in the field provided to confirm the guarantee. To maintain the six year weatherproof warranty against water ingress, your vehicle must be inspected by an authorised **HYMER** dealer or an authorised 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 or every 15,000 km, whichever is sooner.

The chassis manufacturer is responsible for all warranty work on the chassis and engine parts. For this purpose, **HYMER** passes on the first day of registration to the chassis manufacturer (as given by your **HYMER** dealer). Please follow the chassis manufacturer's servicing requirements exactly to maintain the chassis warranty to the full.

HYMER vehicles built on FIAT chassis fall under FIAT Germany's mobility guarantee. Should you have any difficulties with your FIAT chassis please contact:

ADAC-Schutzversicherungs A.G.*
Kennwort "FIAT"
Am Westpark 8
81373 München
Germany

Help line in Germany:

0130 4070 or 089 76764070

Help line for the rest of Europe:

+49 89 76764070

or any authorised FIAT workshop.

For chassis problems on **HYMER** vehicles built on Mercedes Benz chassis please contact:

International help line:*

(00 80 01) 7 77 77 77

or of course any authorised Mercedes Transporter dealer.

We are sure that you will get a lot of enjoyment from your motorhome. Have a good trip!

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.

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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 vehicle 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 **HYMER** 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 **HYMER** dealer will be pleased to advise you.

Conditions for the 6 Year Weatherproof Guarantee*

1. For new vehicles, the **HYMER** 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 **HYMER** 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 **HYMER** 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 **HYMER** 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 **HYMER** 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 **HYMER** dealer. Should the remedy not succeed and the party covered by the guarantee cannot be reasonably expected to accept additional guarantees provided by the **HYMER** dealer, then the party covered by the guarantee can have the leakage remedied by **HYMER AG**, at the expense of the **HYMER** 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 **HYMER** 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 **HYMER** 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 its 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 **HYMER** 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.

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Observe following instructions before first journey of the vehicle:



- ▶ **Re-tighten the wheel nuts/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 batteries before each journey.**
See sections Starter Battery and Living Area Battery.
- ▶ **In case of external temperatures below 0 °C first heat vehicle, then fill water system.**
See section Water Supply/Filling the Water Tank.
- ▶ **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/Skylight/Ventilation.
- ▶ **Before filling the vehicle with fuel switch off gas-operated appliances.**

If there is any risk of frost, observe the following instructions:



- ▶ **If there is any risk of frost, always heat the vehicle.**
See section Winter Operation/Heater.
- ▶ **If the vehicle is not being used when there is risk of frost, empty the entire water system. Leave the water taps on in central position. Leave all drain cocks open. This will avoid frost damage to appliances and to the vehicle.**
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 motorhome. 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 vehicle 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".
- ▷ The metric specifications are binding for physical dimensions.

Should the motorhome 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 motorhomes 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**.

1.1 General

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

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

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

Only have the braking and gas systems inspected and repaired by an authorised specialist workshop.

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

The motorhome is designed for the exclusive transport of persons. Luggage and accessories may only be transported up to the maximum permissible gross weight.

Observe the test or inspection periods stipulated in the 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 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 motorhomes. 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 motorhome
- road safety of the motorhome
- gas system of the motorhome
- electrical fittings of the motorhome
- water system of the motorhome

2.1 Fire Prevention

2.1.1 Avoidance of Fire Risks



- ▶ Never leave children in the motorhome 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 motorhome (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. Never cover or block forced ventilations (skylight and up to three mushroom-shaped vents), e. g. with a winter mat. Keep forced ventilations clear of snow and leaves. There is a danger of suffocation due to increased CO₂ levels.
- ▶ Observe the headroom of the conversion door and the driver's door.



- ▶ As far as the fitted appliances (gas heater, cooker, refrigerator, etc.) and the base vehicle (engine, brakes, etc.) are concerned, the instruction manuals are authoritative. It is imperative that they be observed!
- ▶ Fitting accessories or special equipment can alter the dimensions, weight and road behaviour of the motorhome. Some of the parts must be entered in the vehicle papers.
- ▶ Only use wheel rims and tyres which are approved for the motorhome. Information concerning the size of the approved wheel rims and tyres is included in the vehicle documents.
- ▶ Apply the handbrake when parking the motorhome.
- ▶ When the maximum permissible gross weight exceeds 4 t the wheel chocks must be used when parking on gradients. The wheel chocks are provided as standard for vehicles which have a maximum permissible gross weight exceeding 4 t.



- ▷ When leaving the vehicle, it is imperative that all doors, external flaps and windows are closed.
- ▷ Carry a hazard warning triangle and a first-aid kit and/or flashing hazard warning light when this is required by law.
- ▷ When selling the motorhome, hand over all instruction manuals for the motorhome and the fitted appliances.

2.3 Roadworthiness



- ▶ Before commencing your journey, carry out a functional check of indicating and lighting equipment, the steering and the brakes.
- ▶ 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.
- ▶ Before commencing the journey, secure the hinged pull-down bed to the roof using the securing belt.
- ▶ Before commencing the journey, open and secure the Roman shades situated on the windscreen and on the driver's and front passenger's windows.
- ▶ Before commencing the journey, rotate all swivel seats in the direction of travel and lock in position. During the journey the swivel seats must remain locked in place.
- ▶ During the journey, the seats are only to be occupied by persons (see chapter 4). The authorised number of seats is stipulated in the vehicle documents. Fasten your seat belts before the beginning of the journey and keep them fastened during the journey.
- ▶ Always secure children with the children safety equipment prescribed for the respective height and weight.
- ▶ Models in which the table leg on the dinette table can be folded in: Fold in table leg of dinette table before commencing the journey. Put the dinette table under the mattress of the pull-down bed or of the alcove or attach it to the holder provided for this purpose in the alcove.
- ▶ The base vehicle is a commercial vehicle (small truck). Adjust your driving technique accordingly. When driving through underpasses, tunnels, etc. observe the overall height of the motorhome (refer to the technical data in the vehicle documents).
- ▶ In winter, the roof must be free of snow and ice prior to the commencement of the journey.
- ▶ Check tyre pressure before a journey or every 2 weeks (see chapter 13). Wrong tyre pressure causes excessive wear and can lead to damage or even to tyre burst. You can lose control over the motorhome.



- ▶ Before commencing the journey, distribute the motorhome payload evenly (see chapter 3).
- ▶ When loading the motorhome and when taking a rest from driving, in order to load luggage or food, for example, observe the maximum permissible gross weight and axle loads (refer to vehicle documents).
- ▶ Before commencing the journey, close all gas isolator taps and the regulator tap. Exception: If you plan to use the living area heater during the journey, leave the "Heater" gas isolator tap and the regulator tap open.
- ▶ 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.
- ▶ As far as the round seating unit at the rear is concerned, fix the folding table to the holder on the vehicle floor.
- ▶ Before commencing the journey, close windows and skylights.
- ▶ Close all external flaps and fasten flap locks before each journey.
- ▶ Before commencing the journey, remove the external steady legs and fold up the steady legs which are fitted to the motorhome.



- ▶ Prior to the commencement of every journey and after a short interruption in the journey, ensure that the entrance step is completely retracted.
- ▶ During the initial journey and each time after changing a wheel, re-tighten the wheel nuts 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.
- ▶ Tyres must not be older than 6 years as the material becomes brittle over time (see chapter 13).
- ▶ When using snow chains, the tyres, wheel suspension and steering are subjected to an additional load. When using snow chains, drive slowly and only on streets which are completely covered with snow. Otherwise the motorhome may be damaged. The use of snow chains is subject the legal regulations of the country you are travelling in.

2.4 Towing



- ▶ Care is to be taken when connecting and detaching a trailer.
- ▶ No persons are to be between the motorhome and the trailer during positioning for connecting and detaching.

2.5 Gas Fittings



- ▶ Before commencing the journey, close all gas isolator taps and the regulator tap. Exception: If you plan to use the living area heater during the journey, leave the "Heater" gas isolator tap and the regulator tap open.
- ▶ 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 (starter, light switches a.s.o.). Have the defect repaired by an authorised workshop.
- ▶ Open a skylight 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 motorhome 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.
- ▶ No source of combustion (gas cooker, heater, boiler, etc.) is to be in operation when filling the fuel tank, on ferries or in the garage. 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. Have the gas tube and the gas pressure regulator replaced in an authorised workshop no later than ten years after the manufacturing date. The operator of the gas fittings must see to it that the parts are replaced.
- ▶ Due to its function and construction, the gas bottle compartment is a space which is open to the exterior. 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 the vehicle is not heated when there is risk of frost, empty the entire water system. Leave the water taps on in central position. Leave all drain cocks open. This will avoid frost damage to appliances and to the vehicle.



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

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
- calculating the payload
- correct loading of the motorhome and bike rack
- towing
- retracting and extending entrance step
- storing the dinette table
- central locking system of the bar drawers
- storing the television
- using snow chains

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 nuts 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.

The motorhome is supplied with a set of keys, consisting of keys for the base vehicle and keys for the body. Always deposit a reserve key outside the motorhome. Make a note of the key number. The **HYMER** dealer is able to offer assistance in case of loss. Further information in chapter 12.

3.2 Payload



- ▷ Excessive payload and wrong tyre pressure can cause tyre burst. You can lose control over the motorhome.



- ▷ The maximum permissible gross weight stated in the vehicle documents is not to be exceeded by the payload.
- ▷ Built-in accessories, special equipment, the full water tank and the gas bottles all reduce the payload.
- ▷ Adhere to the axle load stated in the vehicle documents.

In order not to alter the driving quality of the motorhome, ensure that the payload's centre of gravity is as low as possible.



- ▷ For your own safety, **HYMER AG** recommends to have your laden motorhome weighed on a public weighbridge before you set out on your journey.

3.2.1 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 motorhome 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 (permissible gross weight).

(2) Mass in 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
- Driver's weight
- Basic equipment

Unladen weight includes lubricants such as oils and coolants which have been filled, the on-board tool set, the spare wheel and a fuel tank which has been filled up to 90 %.

Regardless of the driver's actual weight, the driver's mass is always calculated at 75 kg.

Basic equipment includes all equipment and fluids required for safe and proper vehicle use. This includes:

- Water system filled up to 100 % (water tank and pipes)
 - Gas bottles filled up to 100 %
 - A full heating system
 - A full toilet flushing system
 - The mass of power 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:

Water tank with 120 l	120 kg
Gas bottles (2 x 11 kg _{gas} + 2 x 14 kg _{bottles})	+ 50 kg
Boiler with 12 l	+ 12 kg
240 V power cable	+ 4 kg
Installation kit for auxiliary battery	+ 20 kg
Total	= 206 kg

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

(3) Payload

The payload is made up as follows:

- Conventional load (3.1)
- Additional equipment (3.2)
- Personal equipment (3.3)

(3.1) Conventional load

Regardless of actual passenger weight, when calculating the conventional load the manufacturer provides for a mass of 75 kg per seat.

The driver's seat is already included as part of the mass in ready-to-drive condition and must **not** be calculated as part of the conventional load.

In the vehicle documents, the manufacturer specifies the number of seats.



- ▷ More passengers may ride in the motor home than specified in the vehicle documents if a seat is available for each person and provided the maximum permissible weight in the laden condition is not exceeded. The fluid containers may be emptied or the gas bottles may be removed to avoid exceeding the maximum permissible gross weight.

(3.2) Additional equipment

Additional equipment includes accessories and special equipment. Examples of additional equipment include:

- Caravan coupling
- Roof rail
- Awning
- Bike or motorcycle rack
- Satellite system
- Microwave oven

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

(3.3) Personal equipment

Personal equipment includes all items in the motorhome 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:

- Animals
- 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) = $10 \times N + 10 \times L$

N = maximum number of people including the driver, as stated by the manufacturer

L = total length of the motorhome in metres

Example for calculating the payload

	Mass in kg to be calculated	Calculation
Maximum permissible gross weight according to vehicle documents	3,500	
Vehicle mass in a ready-to-drive condition, including basic equipment in accordance with vehicle documents	- 3,070	
Payload	430	
Conventional load, e. g.: 3 persons à 75 kg	- 225	
Additional equipment	- 40	
Remaining load for personal equipment	= 165	

3.2.2 Loading the Motorhome Correctly



- ▶ Distribute the payload evenly between the left-hand and right-hand sides of the vehicle.
- ▶ Distribute the payload evenly over both axles, in compliance with the axle loads specified in the vehicle documents. Observe the permissible bearing capacity of the tyres (see chapter 13).
- ▶ In the case of a large payload behind the rear axle (e. g. motorcycle on the rear carrier) or maximum loading of the rear storage space, especially with a long rear extension, observe the leverage effect ($\frac{l_1}{l_2}$). The release of the front axle negatively affects the driving quality, especially for front-driven vehicles.
- ▶ Store heavy objects (tent poles, tin cans, etc.) so that they are unable to slip, e. g.
 - in underfloor storage compartments
 - in deeper 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.
- ▶ Load the bike rack with bicycles only.
- ▶ For safety reasons, weigh the loaded vehicle (with persons) before commencing the journey.

Fiat base vehicles have multileaf rear springs. If the vehicle is unloaded, the suspension is horizontal. When subjected to load, the suspension bends slightly upward. This might create the impression that the vehicle is overloaded. This behaviour is a progressive characteristic, i. e. on low load the suspension is "soft" and becomes progressively "harder" as the load is increased.

The storage options in the motorhome are to a large extent determined by the floor plan. Voluminous storage spaces (particularly rear garages/rear storage spaces) are suited for the storage of heavy vacation paraphernalia (e. g. motorcycle). This may cause the rear axle load to reach its limit prematurely.

The dangers of overloading your motorhome - even at a single axle - should not be underestimated. Of decisive importance for correct loading is not only the actual load weight but also the distance between the load and the axles.

To determine the correct distribution of the load, you will need a scale, a tape measure, a calculator and some time.

The weight of the load on the front axle or the rear axle can be calculated with a simple rule of three: The decisive relation is the distance "A" (in cm) from the front axle to each individual payload weight "G" (in kg). The length of the vehicle "R" (in cm) also enters into the calculation. The front axle distance A times the weight G divided by the distance R yields the load on the rear axle. Then the payload weight is subtracted from the rear axle load which was just calculated. If the result is a positive value, this means that the front axle is relieved of this amount. If the result is a negative value, this means that the front axle is subject to a load of this amount.

Example calculation

Distance to the front axle	A	452 (cm)
Weight in rear garage/rear storage space	G	x 100 (kg)
Length of the vehicle	R	÷ 325 (cm)
Load on the rear axle		139 (kg)
Weight in rear garage/rear storage space		- 100 (kg)
Load relief to the front axle		39 (kg)

Through calculation of the values for all storage spaces, the correct load can be determined.

3.2.3 Rear Garage/Rear Storage Space



- ▷ Observe the permissible axle loads and maximum permissible gross weight when loading the rear garage/the rear storage space.
- ▷ The maximum permitted load of the rear garage/the rear storage space is 350 kg! Do not exceed the permissible rear axle load!
- ▷ If the rear garage/rear storage space is loaded to its maximum capacity, observe the load relief to the front axle resulting from the leverage effect. The driving quality is impaired.
- ▷ Distribute the payload evenly. Excessive spot loads can lead to damages of the floor covering.
- ▷ Use the **HYMER AG** supporting system when two-wheelers are transported in the rear garage.

3.2.4 Underfloor Sliding Drawer



- ▷ The maximum permitted underfloor sliding drawer load is 40 kg.

3.2.5 Roof Load



- ▶ Take care when stepping onto the roof! There is a danger of slipping on the roof when the roof is moist or icy.



- ▷ Access the roof only when a roof rail has been fitted. Only climb onto the roof via the rear ladder.
- ▷ The roof of the vehicle is designed for a maximum localised load of 75 kg/100 cm². On the roof, walk only on the footplate provided for this purpose.
- ▷ Mount roof loads such as surfboards, rubber boats and light canoes on the roof rail of the load rack. The maximum permitted roof load is 200 kg.
- ▷ Secure roof loads. Do not use rubber expanders.
- ▷ Observe the overall height of the motorhome when the roof rack is loaded.

Rear ladder

Fold downwards:

- Insert the key into the locking cylinder (Fig. 1,2) of the rear ladder lock (Fig. 1,1) and turn it a quarter turn until the key is in a vertical position.
- Hold the foldable part of the rear ladder (Fig. 1,4) and swing out the securing bracket (Fig. 1,5).
- Pull out the key and fold the rear ladder downwards.
- Carefully climb onto the ladder.

Fold upwards:

- Fold the rear ladder upwards and hold it firmly.
- Insert the key into the locking cylinder (Fig. 1,2) of the rear ladder lock (Fig. 1,1).
- Swivel the securing bracket (Fig. 1,5) inward around the tube of the fixed part of the rear ladder (Fig. 1,3).
- Turn the key a quarter turn until it is in a horizontal position.
- Check the ladder lock by pulling on the ladder slightly.

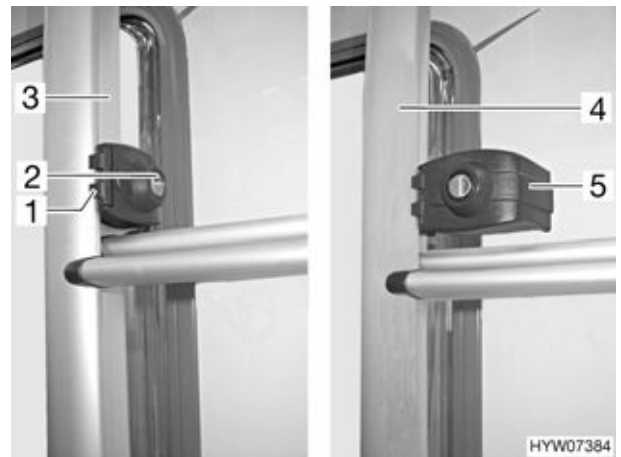


Fig. 1 Rear ladder lock

3.2.6 Bike Rack

Travelling with a loaded bike rack



- ▶ During the journey, check the secure attachment of the bicycles on the bicycle rack after the first 10 km and then at each break in the journey.

The motorhome is fitted as standard with holding cramps for hooking in a bike rack.



- ▷ The bike rack is only to be loaded with bicycles (max. four pcs.).
- ▷ The "Multitalent" bike rack may be loaded with a maximum of four bicycles (max. 50 kg).
- ▷ Driving with a folded out bike rack without bicycles is not permitted.
- ▷ Before every journey, check
 - whether the bike rack without bicycles is properly folded up,
 - whether the bicycles are securely lashed to the rack using the bike rack belts.
- ▷ Do not exceed the maximum permissible gross weight and the axle load by the additional loading of bicycles.

Loading the bike rack with bicycles

When loading the bike rack, observe the centre of gravity. The centre of gravity of the bicycles must be as close as possible to the rear wall of the motorhome. The bike rack should always be loaded from the inside to the outside.

This is how the bike rack is correctly loaded with four bicycles:

- Place the heaviest bicycle directly against the rear wall.
- Place the lightest bicycles in the centre or on the outside of the bike rack.
- Secure the front and rear wheels of a bicycle with the retaining straps on the bike rack.
- And secure each bicycle on the retaining bracket or retaining arm.

If the bike rack is loaded with one bicycle only, position it as closely as possible to the rear wall of the vehicle.

3.3 Towing



- ▶ No persons are to be between the motorhome and the trailer during positioning for connecting and detaching.



- ▶ Trailer with an overrun brake: do not connect or detach trailer 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 axle load of the motorhome. 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 motorhome and the caravan coupling.

3.4 Electrically Operated Entrance Step



- ▶ Before commencing the journey, ensure that the entrance step is completely retracted.
- ▶ Do not stand in the direct range of the entrance step while it is being retracted or extended.
- ▶ Do not step on the entrance step until it has extended completely.



- ▶ Do not grease or lubricate the pivot bearing and joints of the entrance step (see chapter 11).
- ▶ Do not under any circumstances raise or lower persons or loads with the entrance step.

Retracting or extending:

- Press the rocker switch (Fig. 2,1) situated in the entrance area.

When the engine is running and the entrance step is extended, a warning tone is heard. The warning tone ceases as soon as the entrance step is retracted.

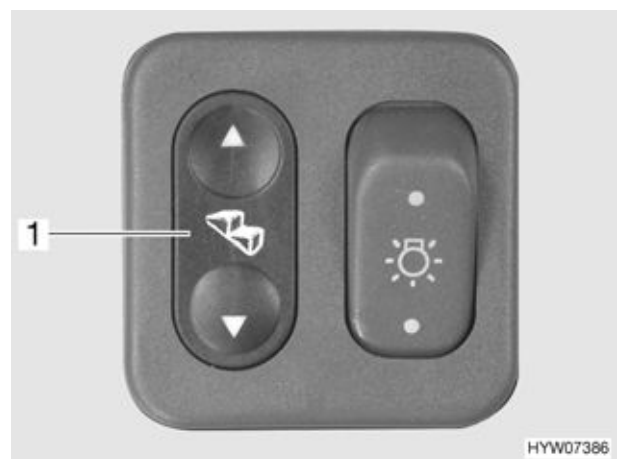


Fig. 2 Rocker switch for entrance step

Models with Fiat base vehicle:

There is a supplementary push button (Fig. 3,1) for retracting the entrance step on the dashboard in the driver's cabin.

Models with Mercedes-Benz base vehicle:

There is an supplementary rocker switch (Fig. 3,2) on the dashboard in the driver's cabin for retracting and extending the entrance step.

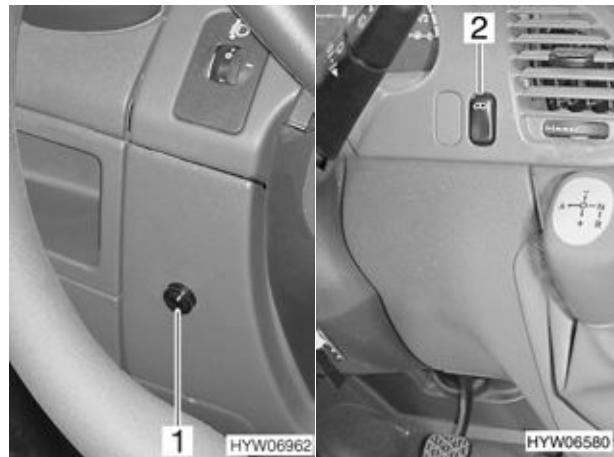


Fig. 3 Push button/rocker switch for entrance step

3.5 Tables

3.5.1 Dinette Table (Variant 1)



- Before commencing the journey put the dinette table into the holder in the alcove provided for this purpose.

The dinette table of the facing seating unit is not fitted into a retainer, but can be moved in a lengthways direction. This results in a risk that full braking or an accident can lead to the dinette table being torn out of its retainer. Persons in the motorhome can be injured.



Fig. 4 Dinette table (variant 1)

Secure the dinette table:

- Insert the dinette table (Fig. 4,3) at a slight angle (Fig. 4,2) into the rail.
- Push the dinette table fully up to the wall and lower it so that the rubber strip (Fig. 4,1) presses against the table-top.

3.5.2 Dinette Table (Variant 2)



- Models in which the table leg on the dinette table can be folded in: Fold in table leg of dinette table before commencing the journey. Put the dinette table under the mattress of the pull-down bed or of the alcove.

The dinette table of the facing seating unit is not fitted into a retainer, but can be moved in a lengthways direction. This results in a risk that full braking or an accident can lead to the dinette table being torn out of its retainer. Persons in the motorhome can be injured.

Models with an alcove:

- Put the dinette table under the mattress in the alcove before commencing the journey.

Models with a pull-down bed:

- Put the dinette table under the mattress of the pull-down bed before commencing the journey.

B 634:

- Before commencing the journey, put the dinette table to the left of the toilet and secure to the holder (Fig. 5,1) provided for this purpose.

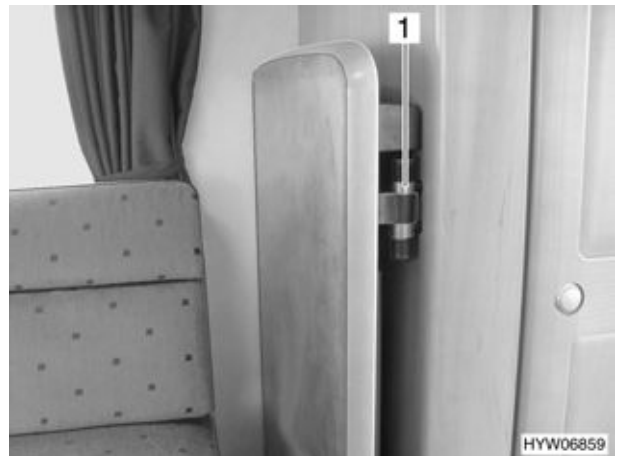


Fig. 5 Dinette table secured (B 634)

3.5.3 Drawer Central Locking System

In some models, the bar drawers are closed using a central locking system.

- Close and lock the drawers before commencing the journey. To do this turn the knob (Fig. 6,1) in an anticlockwise direction.



Fig. 6 Drawer central locking system

3.6 Television

3.6.1 Television on the Support



- Before commencing the journey always remove the television from the support and store it securely.

Storing the TV unit:

- Release the retaining strap (Fig. 7,1 or Fig. 8,1).
- Take TV unit (Fig. 7,2 or Fig. 8,2) from the support (Fig. 7,3 or Fig. 8,3).
- Store TV unit securely.



Fig. 7 Television (variant 1)



Fig. 8 Television (variant 2)

3.6.2 TV Unit in the TV Cabinet



- Always store the TV unit in the TV cabinet when the vehicle is moving.

Storing the TV unit:

- Return TV unit into its initial position (Fig. 9).
- Use handle (Fig. 9,1) to push the extension backwards. The latch (Fig. 9,2) will engage.
- Check whether the retaining strap (Fig. 9,3) is taut.
- Close TV cabinet.



Fig. 9 Television

3.7 Snow Chains

The use of snow chains is subject to the legal regulations of the country you are travelling in. Snow chains are only to be fitted to driving wheels. Check the tension of the snow chains after you have driven a few metres.






- ▷ When using snow chains, the tyres, wheel suspension and steering are subjected to an additional load. When using snow chains, drive slowly and only on streets which are completely covered with snow. Otherwise the motorhome may be damaged.
- ▷ Observe the fitting instructions issued by the manufacturer of the snow chains.

3.8 Roadworthiness

Before commencing the journey, work through the check list:

No.		Checks	Checked
1	Body	External steady legs removed	
2		Fitted steady legs folded in and fixed in place. Observe the warning tone	
3		External connection disconnected	
4		External flaps closed and locked	
5		Awning completely retracted	
6		Rear conversion door closed	
7		Windows and skylights closed and locked	
8		Dinette table stored on the pull-down bed/in the overcab	
9		Pull-down bed (B-Class) fixed to roof with safety belt pulled tight	
10		All drawers and flaps closed	
11		Counter drawers are locked by the central locking system	
12		Refrigerator set to 12 V operation	
13		Refrigerator door secured	
14		Swivel seat locking device for driver's seat, front passenger's seat and bar seat locked	
15		Entrance step retracted (observe warning tone)	
16		Roof free of snow and ice (in winter)	
17		Living area doors and sliding doors secured	
18		Television antenna retracted (if one is built in)	
19		Loose parts stored away or fixed in position	
20		Open storage spaces empty	
21		TV unit secured and stored in the TV cabinet	
22		Television removed from the support and securely stored	
23		Cabin black-out shade is secured	
24		Curtains hooked into the retaining clip	
25		Children's seats mounted to seats with three-point safety belts	

No.		Checks	Checked
26	Base vehicle	Tyres in proper condition	
27		Vehicle lighting, brake lights and reversing lights function	
28		Oil levels for engine, gearbox and power steering controlled	
29		Coolant and fluid for windscreen washers filled up	
30		Brakes function	
31		Brakes react evenly	
32		When braking, the motorhome does not pull to one side	
33	Tyre pressure	 <p>▷ Wrong tyre pressure causes excessive wear and can lead to damage or even to tyre burst. You can lose control over the motorhome.</p> <p>Check the tyre pressure regularly before the beginning of a journey or every 2 weeks (see chapter 13).</p>	
34	Gas fittings	Gas bottles firmly fixed in the gas bottle compartment so that they are unable to turn	
35		Regulator tap on the gas bottle is closed	
36		Gas isolator tap closed  <p>▷ When heating is required during travel the gas isolator tap for the heater and the regulator tap can remain open.</p>	
37	Battery	Check the battery voltage of the starter and living area battery (see chapter 8). If the panel indicates that the battery voltage is too low, the respective battery will need to be re-charged. Observe the notes and instructions in chapter 8.  <p>▷ Commence journey with fully charged starter and living area battery.</p>	

Chapter Overview

This chapter contains instructions on how to drive the motorhome.

The instructions address the following topics:

- driving speed
- brakes
- seat belts
- child restraint system
- seats and headrests
- seating arrangement
- filling the tank
- opening the bonnet
- writing and reading rest
- electrical window winder
- heated windscreen
- Roman shades

4.1 Driving the Motorhome



- ▷ At the beginning of every journey and after short interruptions, ensure that the entrance step is completely retracted.

The driver is responsible for ensuring that the following conditions are met:

- Passengers must remain in their seats.
- Seat belt laws must be observed.
- The doors must remain locked.
- The safety measures stipulated in chapter 2 have to be observed.

Avoid braking with a jerk. Drive slowly on poor roads. Because of the relatively large overhang, larger vehicles might swing out and "touch ground" in unfavourable conditions. Therefore, take extreme care when driving onto ferries, traversing uneven roads and driving in reverse. This prevents damage being caused to the underbody and the parts fitted to it.

The driver and all passengers must always wear their seat belts during the journey. Never open your seat belts when travelling.



- ▷ The base vehicle is a commercial vehicle (small truck). Adjust your driving technique accordingly.

4.2 Driving Speed



- ▶ Your motorhome is equipped with a powerful motor, which will provide you with sufficient reserves in difficult driving situations. This high power enables a high maximum speed and requires above-average driving ability.
- ▶ Observe the following when driving the motorhome:
 - The motorhome provides a large contact surface for wind. A sudden crosswind can be especially dangerous.
 - Uneven, one-sided loading alters road performance.
 - Driving on unknown streets, you may encounter hazardous road conditions and unexpected driving situations.
- ▶ Therefore, in the interest of safety, make sure your driving speed is appropriate to any given driving situation and environment. Adhere to the national legal speed limits.

4.3 Brakes



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



- ▶ Avoid block brakings. A block braking gives the tires "brake plates" of varying strength, which reduce comfort and can render the tires immobile.

Before each journey, check by means of a braking test:

- Do the brakes function?
- Do the brakes react evenly?
- Does the motorhome remain in the lane when braking?

4.4 Seat Belts

Depending on the model, the motorhome is equipped with automatic three-point belts or lap belts in the living area.



- ▶ Fasten your seat belts before the beginning of the journey and keep them fastened during the journey.
- ▶ Do not damage or trap belts. Have damaged seat belts changed by an authorised specialist workshop.
- ▶ Do not alter the belt fixing devices, automatic seat belt winders and the belt clips.
- ▶ Inspect the screwed connections of the seat belts from time to time in order to ensure that they are correctly seated.
- ▶ Only use one seat belt for one adult person.
- ▶ Do not belt in objects together with persons.



- ▶ Seat belts are not sufficient for persons who are less than 150 cm tall. In these cases use additional restraining devices. Observe test certificate.
- ▶ With B-Class models the upper deflection roller of the three-point safety belt is height adjustable. The deflection roller may only be moved by a specialist workshop.

Fastening the seat belt correctly



- ▶ During the journey, do not tilt the backrest too far back, as this may negate the effectiveness of the seat belt.

- Do not twist the belt. The belt must be positioned smoothly against the body.
- Before adjusting the seat belt, adopt the correct sitting position.

The seat belt is adjusted correctly when a fist can be passed between the body and the seat belt.

4.5 Child Restraint System



- ▶ When travelling, secure children under 13 years of age that are smaller than 150 cm, with a suitable and officially approved child restraint system.
- ▶ Only attach the child restraint system to seats that are suitable for this purpose.
- ▶ Fasten the childrens' seat belts before commencing the journey and make sure that their seat belts are kept fastened during the journey.
- ▶ If a front passenger airbag is fitted in the vehicle, do not use a child restraint system (Reboard systems) that faces the back of the front passenger seat. Follow warning notices in the vehicle.

Child restraint systems are divided into five classes:

Class	Body weight	Approximate age
0	up to 10 kg	up to 9 months
0+	up to 13 kg	up to 18 months
I	9 kg to 18 kg	9 months to 4 years
II	15 kg to 25 kg	3 years to 7 ½ years
III	22 kg to 36 kg	6 years to 12 years

The seats that are universally suitable for the respective classes of child restraint systems are shown in the following illustrations.

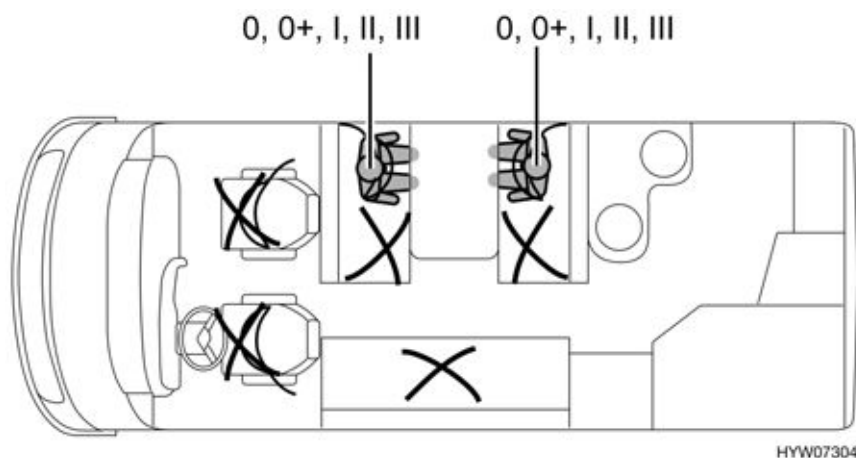


Fig. 10 Suitable seats for child restraint systems (B-Class)

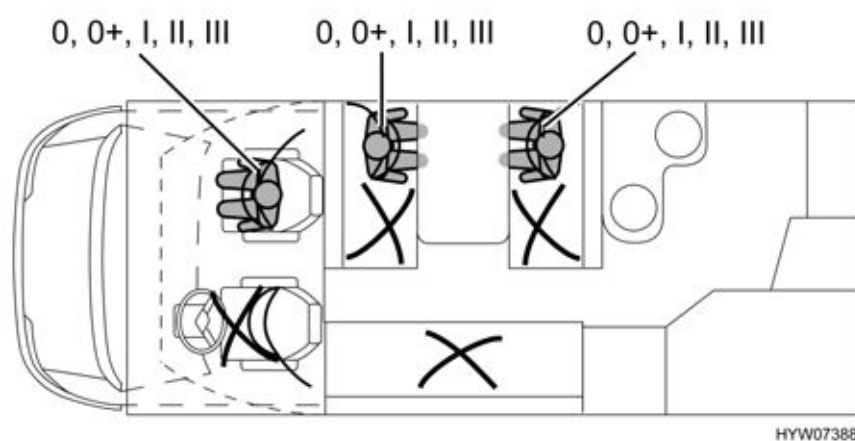


Fig. 11 Suitable seats for child restraint systems (Camp, Tramp)

4.6 Driver's Seat/Front Passenger's Seat



- ▶ Before the start of any journey rotate the driver's seat and the front passenger's seat so they are facing the direction of vehicle travel and lock them in position.
- ▶ The seats must remain fixed in position during the journey and are not to be rotated.



- ▶ To avoid damage to the seatbelt lock, press the lock down before rotating the driver's or front passenger's seat.

4.6.1 Rotating the Driver's Seat/Front Passenger's Seat into Position

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

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



▷ Rotating the seats in the pitched motorhome is described in chapter 6.

4.6.2 Adjusting an Appropriate Seating Position

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

- Pull handle (Fig. 12,1 or Fig. 13,3). The front of the seat is raised.
- Pull handle (Fig. 12,4 or Fig. 13,4). The back of the seat is raised.
- Pull handle (Fig. 12,2 or Fig. 13,1). The seat can be moved forward or backward.
- Turn the handwheel (Fig. 12,3) or pull the handle (Fig. 13,5). The angle of the backrest can be adjusted.

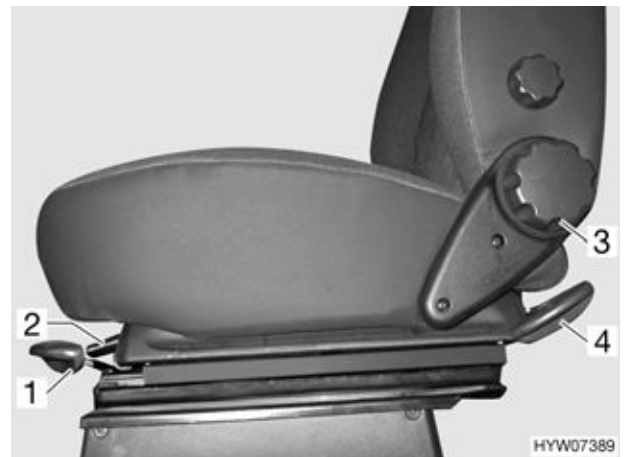


Fig. 12 Driver's seat/front passenger's seat (variant 1)



Fig. 13 Driver's seat/front passenger's seat (variant 2)

4.6.3 Adjusting the Armrest

The height of the armrests is infinitely adjustable.

- Turn the handle (Fig. 13,2) to the left or the right. The armrest can be moved upwards or downwards.

4.7 Headrests

- Before commencing the journey, adjust the headrests so that the back of the head is supported at approximately ear height.

4.8 Seating Arrangement



- ▶ During the journey, persons are only to be in the prescribed seats. The authorised number of seats is stipulated in the vehicle documents.
- ▶ In seats which are fitted with seat belts, you have to observe seat belt laws.

4.9 Filling Up with Diesel



- ▶ **Danger of explosion!**
When filling the fuel tank, on ferries or in the garage, turn off all the appliances in the living area which run on gas.

The fuel filler neck is situated on the exterior of the motorhome, at the front left.

Opening:

- Insert key into locking cylinder (Fig. 14,1) and turn it in an anticlockwise direction.
- Remove cap.

Closing:

- Place the cap on the filler neck.
- Put the key in the locking cylinder (Fig. 14,1) and turn in a clockwise direction.
- Remove the key.
- Check that the cap sits firmly on the filler neck.



Fig. 14 Cap for the fuel filler neck

4.10 Bonnet



- ▶ When the bonnet is open, there is a risk of injury in the engine compartment.
- ▶ Danger of skin burns! An engine can still be hot, even if it has not been running for some time.
- ▶ Do not carry out work in the engine compartment whilst the engine is running.
- ▶ The bonnet must be kept firmly closed and locked. After closing, check whether the lock has engaged. In order to carry this out, pull on the bonnet.

B-Class

Opening:

- Pull the lever situated on the left-hand side of the vehicle underneath the dashboard.
- Place both hands on the top and the bottom edge of the bonnet (Fig. 15,1) do not grip the middle.
- Move the bonnet up.

Closing:

- Move the bonnet down.
- Press down bonnet at the bottom edge in the middle, until the spring-loaded catch engages audibly.
- Pull bonnet upwards with some force and check that it is securely locked.



Fig. 15 Bonnet (B-Class)

4.11 Writing and Reading Rest



- ▶ During the journey the writing and reading rest must be closed.



- ▶ If there is a passenger airbag, the writing and reading rest is locked so it cannot be opened.

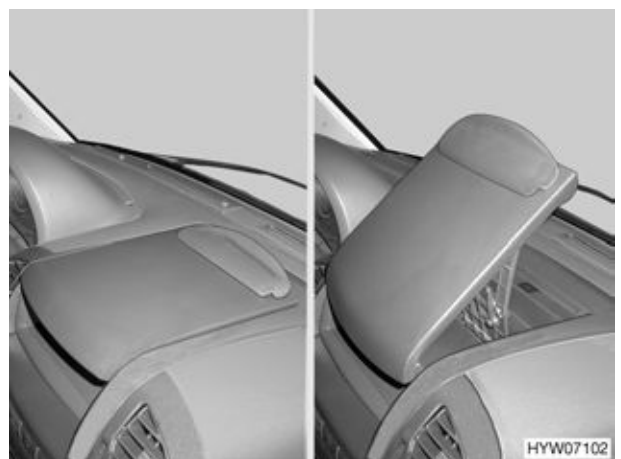


Fig. 16 Writing and reading rest

4.12 Electrical Window Winder



- ▶ Remove hands and other objects from the window before closing.
- ▶ Even if you leave your vehicle just briefly, remove the ignition key from the steering lock. Otherwise children may be able to operate the window winder and injure themselves.

There is an electrical window winder on the driver's side of the motorhome.

Opening and closing:

- Press switch (Fig. 17,1).



Fig. 17 Switch for the electrical window winder in the driver's door

4.13 Heated Windscreen (B-Class)



- ▶ Check from time to time to see if water has penetrated the heated windscreen. Danger of short circuit!



- ▶ The windscreen heater does not generate sufficient heat to de-ice the windscreen.

The windscreen heater is designed to keep the windscreen fog-free or to clear an already fogged windscreen.

Switching on and off:

- Press the rocker switch  on the dashboard.

4.14 Roman Shades for Windscreen, Driver's Window and Front Passenger's Window



- The Roman shades for the windscreen, driver's window and front passenger's window must be open, in a fixed position and secured with the additional lock (Fig. 18,1 and Fig. 19,1).

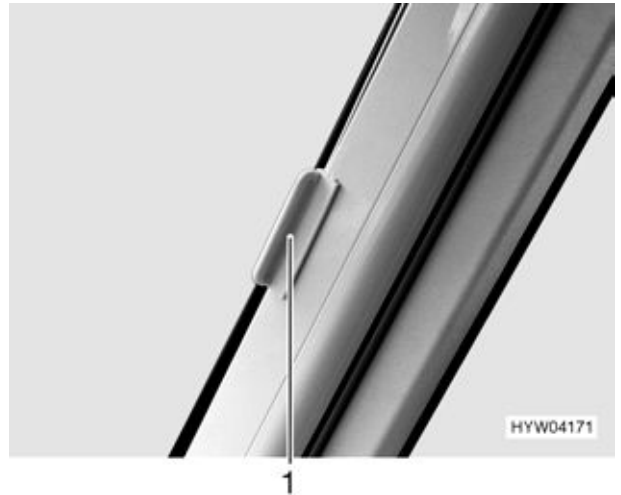


Fig. 18 Additional lock for front Roman shades (B-Class)

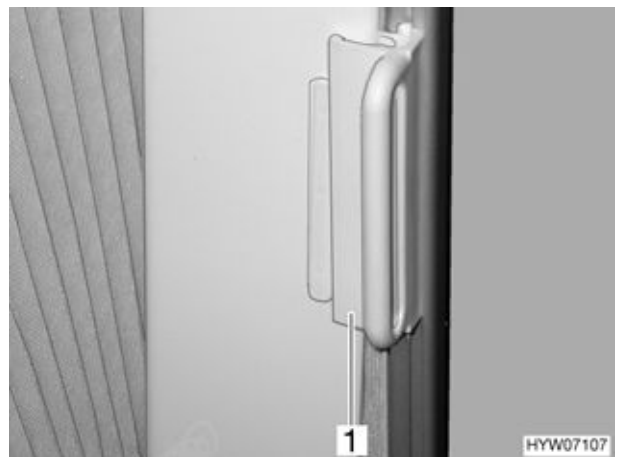


Fig. 19 Lock for Roman shades for the driver/passenger window (Camp, Tramp)

Chapter Overview

This chapter contains instructions on how to pitch the motorhome.

The instructions address the following topics:

- handbrake
- wheel chocks
- entrance step
- 240 V external connection
- operation of the steady legs
- opening and closing the external doors and flaps



- ▷ Pitch the motorhome so that it is as horizontal as possible.

5.1 Handbrake

The handbrake must be applied when the vehicle is parked.

5.2 Wheel Chocks

When the maximum permissible gross weight exceeds 4 t the wheel chocks must be used when parking on gradients. The wheel chocks are provided as standard for vehicles which have a maximum permissible gross weight exceeding 4 t.

5.3 Entrance Step

In order to exit the vehicle, first fully extend the entrance step. Observe the indicator light on the dashboard.

5.4 External Connection

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

5.5 Steady Legs



- ▷ Do not use the fitted steady legs as a vehicle jack. They are only for stabilising the parked motorhome.
- ▷ When pitching, ensure that the steady legs are evenly loaded.
- ▷ Before driving away, wind up the steady legs as far as they can go, fully retract and secure them.



- ▷ When the ground is soft or sinks, place a large plate under the steady legs in order to prevent the vehicle from sinking into the ground.

In order to ensure their correct function, clean and grease the interior tubes of the steady legs regularly.

5.5.1 Mechanical Steady Legs

Extending:

- Place the socket spanner on the hexagon nut (Fig. 20,1) and rotate until the steady leg is in a perpendicular downward position.

The length of the steady leg can be adjusted.

- Remove the splint (Fig. 20,4) out of the support foot extension (Fig. 20,5).
- Extend the support foot extension until it has reached the required length.
- Insert the splint in the support foot extension.
- Rotate the hexagonal nut until the steady leg rests completely on the ground and the motorhome is in a horizontal position.

Retracting:

- Place the socket spanner on the hexagon nut (Fig. 20,1) and rotate until the steady leg is clear of the ground.
- Push in the support foot extension (Fig. 20,5) and insert the splint (Fig. 20,4) in the drilled hole in the support foot extension.
- Rotate the hexagonal nut (Fig. 20,1) with the socket spanner until the steady leg has swung upwards and the guide disc (Fig. 20,3) has completely retracted into the notch (Fig. 20,2).



- ▷ Make sure that all steady legs are completely retracted, all support foot extensions are completely pushed in and secured with the splint (Fig. 20,4) and the guide discs (Fig. 20,3) in all steady legs are retracted into the notch (Fig. 20,2).

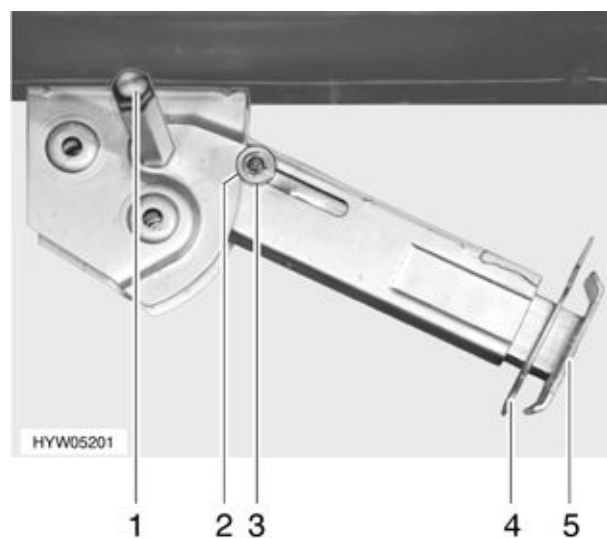


Fig. 20 Steady leg

5.5.2 Electrical Steady Legs




- ▷ The steady legs need sufficient ground clearance to be able to fold out vertically.



- ▷ If the ignition is switched on when the steady legs are folded out, a pulsating warning tone is heard. The warning tone stops after the ignition has been switched off. The push button on the dashboard must be pressed again.

Normal operation

Extending:

- Switch off ignition.
- Activate the controller by pressing the push button (Fig. 21,1) on the dashboard.
A brief humming tone sounds as a control signal to indicate proper functioning of the controller.
- 
 - ▷ If the remote control (Fig. 21,7) is not operated for two minutes after the controller has been activated, the controller automatically switches off.
 - ▷ When a key on the remote control is pressed, the indicator lamp (Fig. 21,2) flashes red.
- Retract the steady legs one by one by pressing the corresponding keys on the remote control, until the steady legs are resting completely on the ground and the motorhome is in a horizontal position.

Key functions:

- Steady leg left up (Fig. 21,3)
- Steady leg left down (Fig. 21,6)
- Steady leg right up (Fig. 21,4)
- Steady leg right down (Fig. 21,5)



Fig. 21 Push button/remote control for electrical steady legs

The length of the steady leg can be adjusted.

- Remove the splint (Fig. 22,4) out of the support foot extension (Fig. 22,5).
- Extend the support foot extension until it has reached the required length.
- Insert the splint in the support foot extension.

Retracting:

- Retract the steady legs one by one by pressing the corresponding keys on the remote control, until a control signal (two brief humming tones) is heard.

Emergency operation

When the electric drive breaks down, the steady legs can be moved with the manual crank.

- Press the securing bracket (Fig. 22,2) inwards.
- Push the motor in the direction indicated (Fig. 22,3) as far as it will go.
- Fold the steady leg out or in like a mechanical steady leg via the hexagonal nut (Fig. 22,1).
- For electrical operation, push the motor against the direction of the arrow as far as it will go.
- Pull out the securing bracket (Fig. 22,2) until it engages.

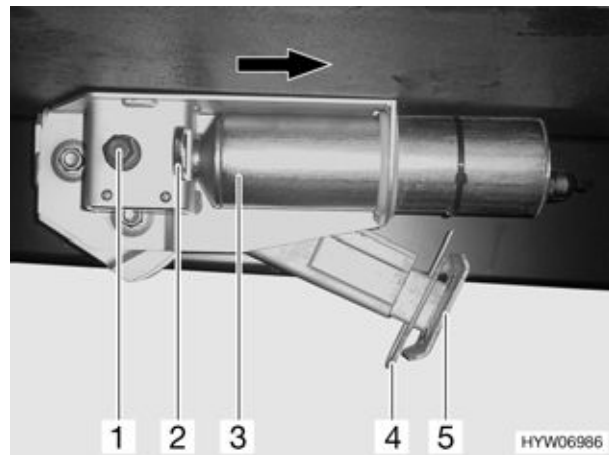


Fig. 22 Electrical steady leg

5.6 Doors

5.6.1 Central Locking



- If the driver or conversion door is open, the safety knob cannot be pressed. The central locking system cannot be activated.
- Before pushing down the safety knob, ensure that the vehicle key is outside the motorhome.

A central locking system is installed in the motorhome. Some of the external flaps can also be locked using the central locking system. The flap locks connected to the central locking system are activated when the entrance or driver's door is opened or closed.

The following are not connected to the central locking system:

- the flap for the gas bottle compartment
- the flaps on the underfloor storage compartments
- the flaps for the tanks and external socket
- the flap for the Thetford cassette

Remote control for central locking system

The remote control:

- : closes and opens all the doors and flaps on the right-hand side of the vehicle,
- : closes and opens all the doors and flaps on the left-hand side of the vehicle,
- : closes all doors and external flaps,
- : without function.



Fig. 23 Remote control for central locking system

5.6.2 Conversion Door and Driver's Door



- ▶ Only drive with the conversion door and driver's door closed.



- ▶ Locking the conversion door and the driver's door can prevent them opening of their own accord, e. g. during an accident.
- ▶ Locked doors also prevent forced entry, e. g. when waiting at a set of traffic lights. However, in an emergency, locked doors makes it more difficult for helpers to enter the vehicle.



- ▶ When leaving the motorhome, always close the doors.
- ▶ Always return the locking cylinder to the initial position.

Conversion and driver's door, outside

Opening:

- Insert the key into locking cylinder (Fig. 24,1) and turn in a clockwise direction until the lock is unlatched.
- Return the key to the central position and remove it.
- Open the door by pulling on the handle (Fig. 24,2).

Closing:

- Insert the key into locking cylinder (Fig. 24,1) and turn in an anticlockwise direction until the lock is engaged.
- Return the key to the central position and remove it.

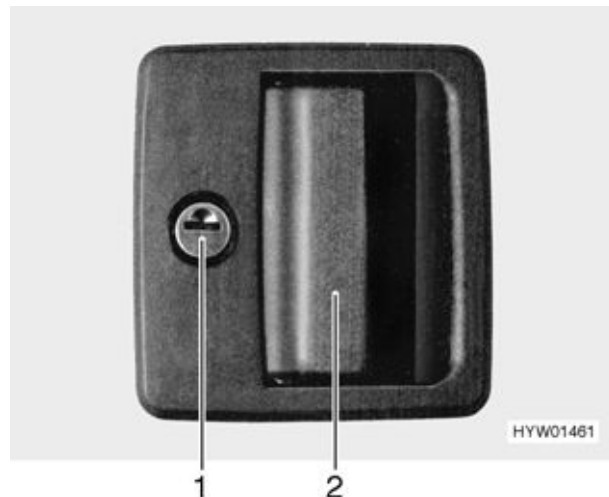


Fig. 24 Door lock of conversion and driver's door, outside

Conversion door, inside

Opening:

- Pull the handle (Fig. 25,1). The lock is unlatched.

Locking:

- Push the safety knob down (Fig. 25,2).



Fig. 25 Door lock of conversion door, inside

Driver's door, inside

Opening:

- Pull on the handle (Fig. 26,2). The lock is unlatched.

Locking:

- Push the safety knob down (Fig. 26,1).



- ▷ In the case of the Camp and Tramp, take note of the instruction manual for the base vehicle.



Fig. 26 Door lock of driver's door, inside

5.6.3 Insect Screen Door

An insect screen door is integrated in the conversion door. The insect screen door can be opened outward. In the process the conversion door stays open.

Extending:

- Fully open conversion door and fix to exterior wall.
- Push rail (Fig. 27,1) in the direction of the arrow.
- Open the insect screen door.
- Push rail (Fig. 28,1) in the direction of the arrow for stabilisation.
- Fully close insect screen door and push latch (Fig. 28,3) in direction of arrow.

Retracting:

- Unlatch insect screen door.
- Push rail (Fig. 28,1) in the opposite direction of the arrow.
- Close insect screen door. The latching (Fig. 28,2) engages.
- Push rail (Fig. 27,1) in the opposite direction of the arrow.



Fig. 27 Insect screen door, closed

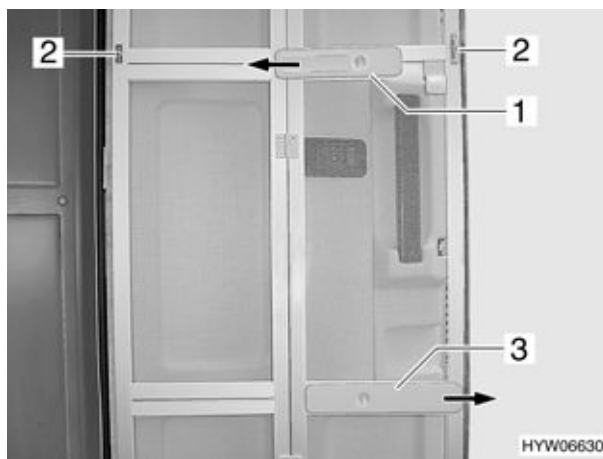


Fig. 28 Insect screen door, opened out

5.7 External Flaps



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



- ▷ When leaving the motorhome, close all external flaps.
- ▷ Always return the locking cylinder to the initial position.

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

5.7.1 Flap Lock (Variant 1)

In the case of models fitted with central locking systems, the flap lock is connected to the central locking system.

Opening:

- Insert key into locking cylinder (Fig. 29,1) and turn a quarter turn in an anticlockwise direction. The flap lock is open.
- Return the key to the central position and remove it.
- Pull on the lock handle (Fig. 29,2). The external flap is open.

Closing:

- Firmly close the external flap.
- Insert key into locking cylinder and turn a quarter turn in a clockwise direction. The flap lock is locked.
- Return the key to the central position and remove it.

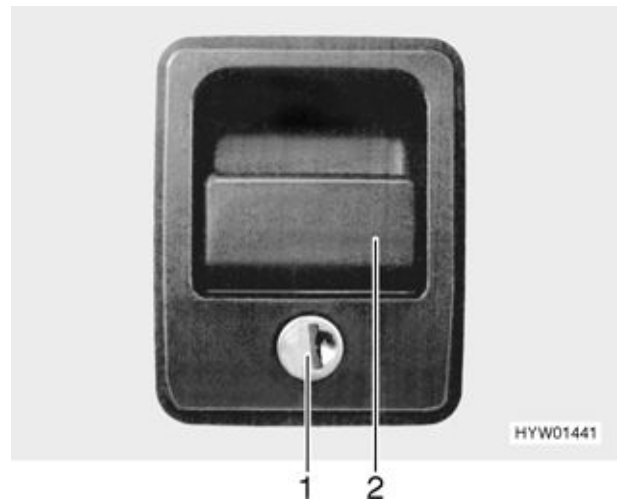


Fig. 29 Flap lock (variant 1)

5.7.2 Flap Lock (Variant 2)

In the case of models fitted with central locking systems, the flap lock is connected to the central locking system.

Opening:

- Insert key into locking cylinder (Fig. 30,1) and turn in a clockwise direction until the flap lock is unlatched.
- Return the key to the central position and remove it.
- Pull on the lock handle (Fig. 30,2). The external flap is open.

Closing:

- Firmly close the external flap.
- Insert key into locking cylinder (Fig. 30,1) and turn it in an anticlockwise direction. The flap lock is locked.
- Return the key to the central position and remove it.

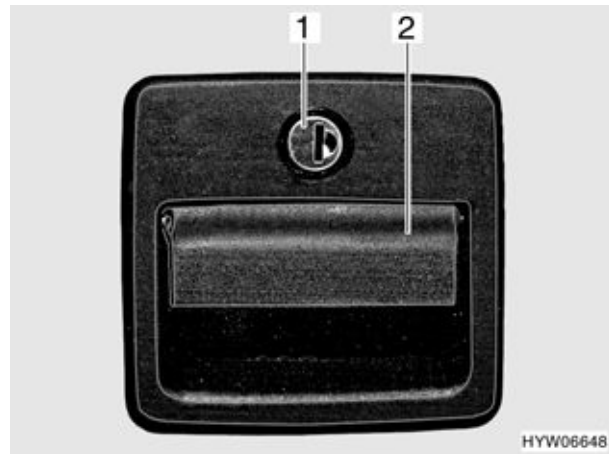


Fig. 30 Flap lock (variant 2)

5.7.3 Flap Lock (Variant 3)



- ▷ During rain, water can penetrate the opened flap lock. Therefore close the lock handle (Fig. 31,2) as shown in Fig. 31.

The flap lock is not connected to the central locking system.

Opening:

- Insert key into locking cylinder (Fig. 31,1) and turn a quarter turn in an anticlockwise direction. The lock handle (Fig. 31,2) 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.

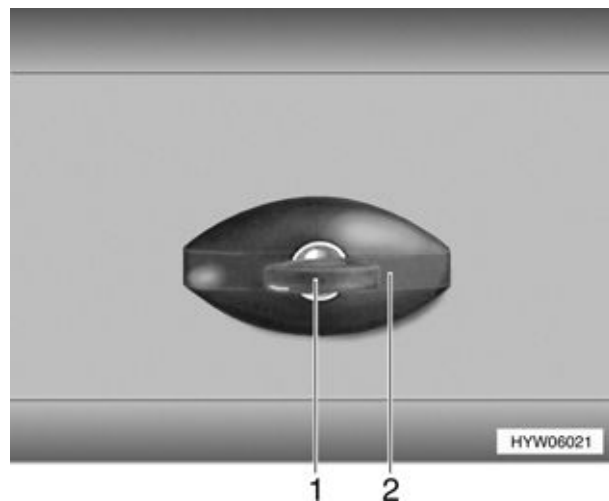


Fig. 31 Flap lock (variant 3), locked

Closing:

- Firmly close the external flap.
- Turn lock handle in a clockwise direction until it is horizontal. The flap lock is bolted but not closed.
- Insert key into locking cylinder.
- 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.

5.7.4 Flap Lock (Variant 4)

The flap lock is not connected to the central locking system.

Opening:

- Insert key into locking cylinder (Fig. 32,1).
- Lift external flap at bottom right (see arrow).
- Turn key one quarter turn in an anticlockwise direction. External flap snaps open.
- Swivel external flap in an upward direction.

Closing:

- Swivel external flap downwards into its initial position.
- Press down external flap and at the same time turn key a quarter turn in a clockwise direction. The flap lock is locked.
- Press down external flap at bottom right (see arrow).
- Return the key to the central position and remove it.



Fig. 32 Flap lock (variant 4)

5.7.5 Flap Lock (Variant 5)

Opening:

- Insert key into locking cylinder (Fig. 33,1).
- Turn key one quarter turn in an anticlockwise direction.
- Swivel external flap in an upward direction.

Closing:

- Swivel external flap downwards into its initial position.
- Press down external flap and at the same time turn key a quarter turn in a clockwise direction. The flap lock is locked.
- Return the key to the central position and remove it.

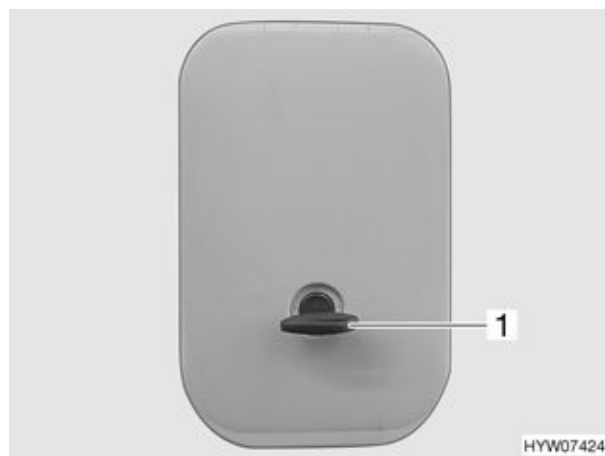


Fig. 33 Flap lock (variant 5)

5.8 Underfloor Sliding Drawer



- ▷ The maximum surface load of the underfloor sliding drawer is 40 kg.

Opening:

- Open the flap lock (Fig. 34,2) as described above.
- Push the retainer (Fig. 34,1) down, keep it pressed and pull out the underfloor sliding drawer.

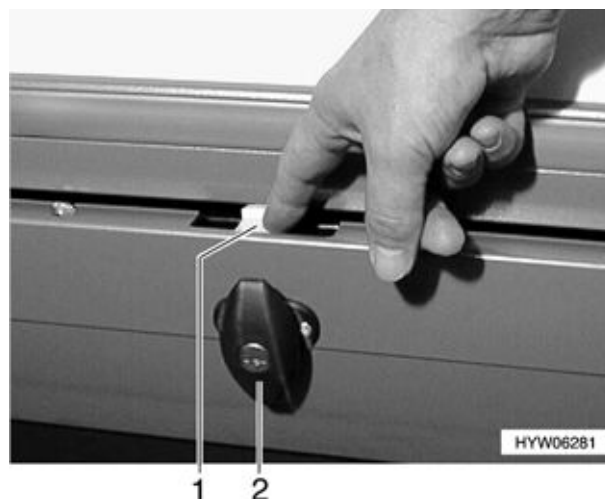


Fig. 34 Retainer on the underfloor sliding drawer

Chapter Overview

This chapter contains instructions about living in the motorhome.

The instructions address the following topics:

- ventilation of the motorhome
- opening and closing the windows
- opening and closing the Roman shades in the driver's cabin
- opening and closing the skylight
- rotating the seats
- adjusting the bar seats
- modifying the table surfaces
- removing tables
- operating the drawer central locking system
- setting up the television
- pulling out the television tray
- use of the beds
- adjusting the spotlights

6.1 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 motorhome is equipped with forced ventilations (skylight and up to three mushroom-shaped vents). 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 increased CO₂ levels.



- ▶ 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. skylight edges, sockets, filling 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. To avoid draft close the air outlet nozzles on the dashboard and set the air distribution of the base vehicle to air circulation. If the motorhome is laid up for a longer period, occasionally ventilate it well, especially in summer as heat accumulation can occur.

6.2 Windows



- ▷ The windows are fitted with a blind or Roman shade 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.
- ▷ During the journey, the windows have to be closed all the time.
- ▷ Depending on the weather, close the windows far enough to prevent moisture from entering.



- ▷ When leaving the motorhome, always close the windows.
- ▷ 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.
- ▷ 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.

6.2.1 Sliding Window

Opening:

- Pull the catch (Fig. 35,1) forwards.
- Press handle (Fig. 35,2) and push forward at the same time.
- Open window half up to the required position.

Closing:

- Close the window as far as it can go.
- Push the catch backwards.

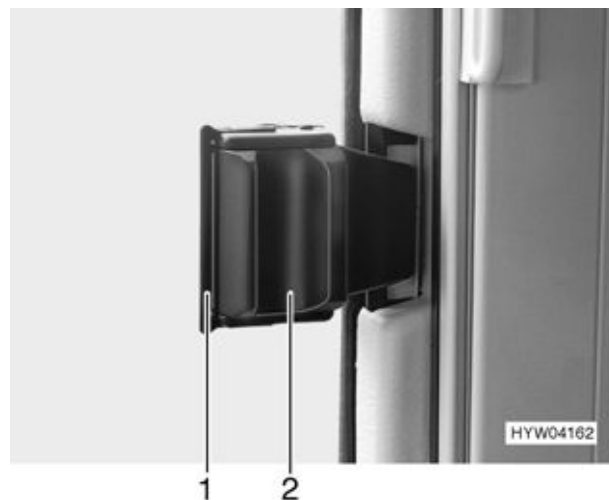


Fig. 35 Sliding window

6.2.2 Hinged Window

Variant 1



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

Opening:

- Set window handle (Fig. 36,3) into a vertical position or turn a quarter turn towards the centre of the window.
- Open the hinged window to the desired latched position. The telescopic rod (Fig. 37,1) automatically locks in place.

The hinged window remains locked in the required position.

Closing:

- Open the hinged window as wide as necessary until the latch releases.
- Close the hinged window.
- Set window handle (Fig. 36,3) into a horizontal position or turn a quarter turn towards the window frame. The locking catch (Fig. 36,2) is located on the inside of the window catch (Fig. 36,1).

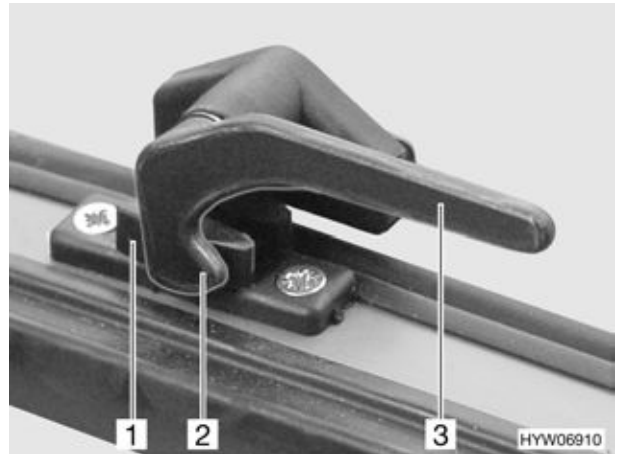


Fig. 36 Hinged window, window handle closed (variant 1)

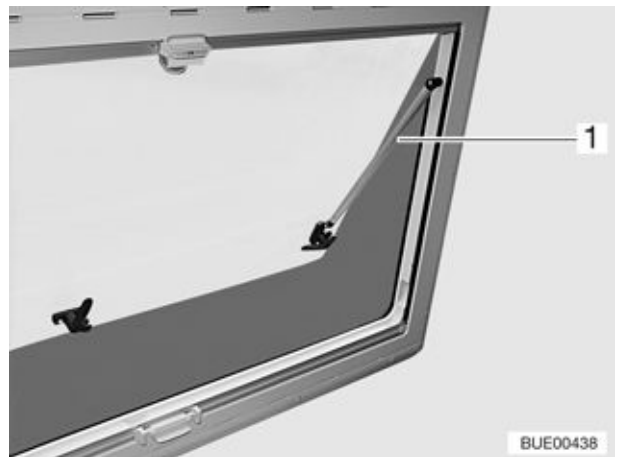


Fig. 37 Hinged window, open (variant 1)

Continuous ventilation:

Using the window handle, the hinged window can be placed in 2 different positions:

- Continuous ventilation (Fig. 38)
or
- firmly closed.

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

- Open window handle (Fig. 38,3) of the hinged window.
- Slightly open the hinged window outwards.
- Return window handle into its original position. The locking catch (Fig. 38,2) has to be moved into the recess of window catch (Fig. 38,1).

The window position "continuous ventilation" must not be kept during the journey.

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

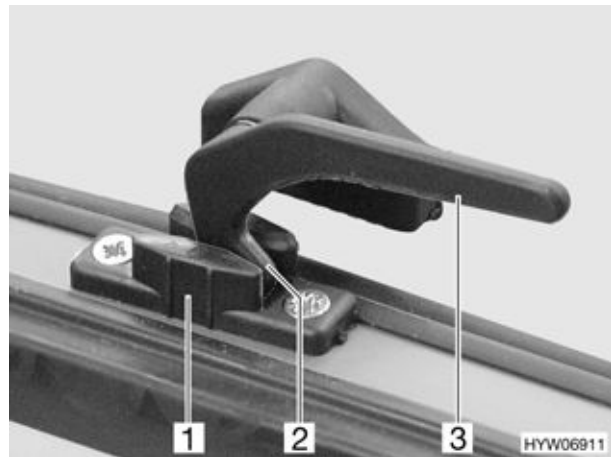


Fig. 38 Hinged window, window handle in the "continuous ventilation" position (variant 1)

Variant 2



- ▷ 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 irrespective there is the danger of the window being torn due to the massive counter-pressure.
- ▷ When opening the hinged windows, ensure that there are no torsional forces. Open and close the hinged windows evenly.
- ▷ When operating the window handle, always press the red safety knob (Fig. 39,1).

Opening:

- Push the safety knob in (Fig. 39,1).
- Place window handle (Fig. 39,2) into a vertical position.
- Open the window until the required locking position is reached; the telescopic rod (Fig. 40) automatically locks in place.

The hinged window remains locked in the required position.

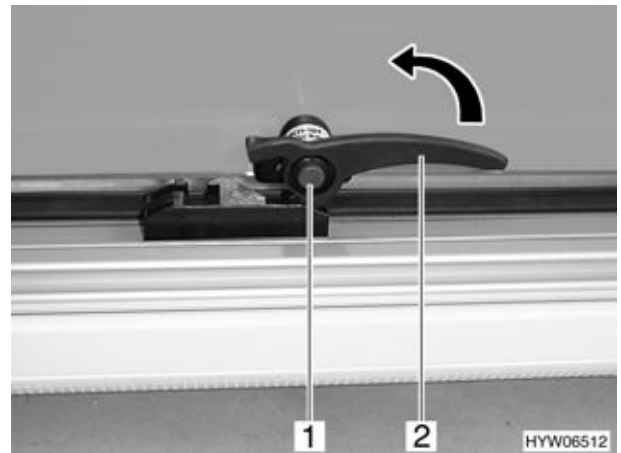


Fig. 39 Hinged window, window handle closed (variant 2)



Fig. 40 Hinged window, telescopic rod (variant 2)

Closing:

- Open the hinged window as wide as necessary until the lock releases.
- Close the hinged window.
- Push the safety knob in (Fig. 41,2).
- Turn window handle (Fig. 41,3) to a horizontal position (in arrow direction).

Continuous ventilation:

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

- Continuous ventilation (Fig. 42)
- or
- firmly closed (Fig. 39).

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

- Open latch on hinged window.
- Slightly open the hinged window outwards.
- Press safety knob and turn window handle to the left. Insert the latch into the left-hand aperture (Fig. 41,1) in the latch block.

The window position "continuous ventilation" must not be kept during the journey.

Ensure that the window handle is secured by means of the safety knob (Fig. 41,2).

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

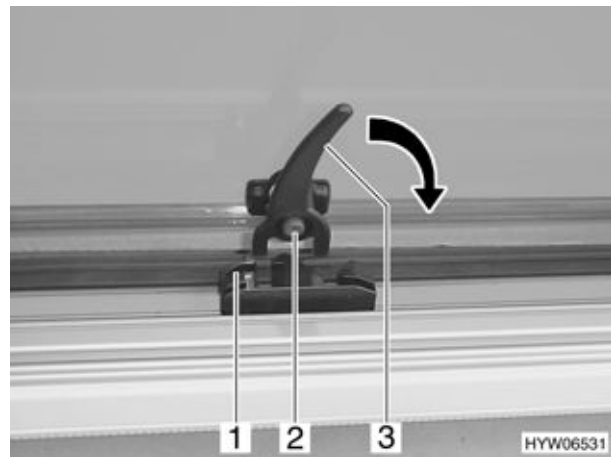


Fig. 41 Hinged window, window handle open (variant 2)



Fig. 42 Hinged window, window handle in the "continuous ventilation" position (variant 2)

Variant 3



- ▷ 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 hinged windows, ensure that there are no torsional forces. Open and close the hinged windows evenly.
- ▷ When operating the window handle, always press the safety knob (Fig. 43,1).

Opening:

- Press the safety knob (Fig. 43,1) down and hold it.
- Set window handle (Fig. 43,2) into a vertical position or turn a quarter turn towards the centre of the window.
- Open the window until the required locking position is reached; the telescopic rod (Fig. 44,1) automatically locks in place.

The hinged window remains locked in the required position.

Closing:

- Open the hinged window as wide as necessary until the latch releases.
- Close the hinged window.
- Press the safety knob (Fig. 43,1) down and hold it.
- Set window handle (Fig. 43,2) into a horizontal position or turn a quarter turn towards the window frame. The locking catch (Fig. 43,3) on the window handle lies entirely on the inner side of the window catch (Fig. 43,4).

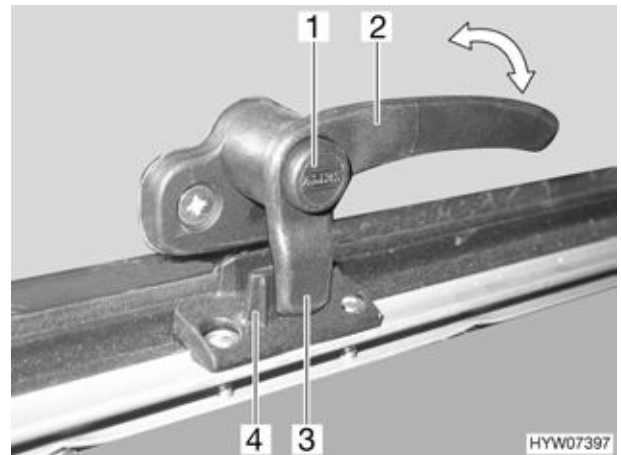


Fig. 43 Hinged window, window handle closed (variant 3)



Fig. 44 Hinged window, telescopic rod (variant 3)

Continuous ventilation:

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

- Continuous ventilation (Fig. 45)
or
- firmly closed.

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

- Press the safety knob (Fig. 45,1) down and hold it.
- Set window handle (Fig. 45,2) into a vertical position or turn a quarter turn towards the centre of the window.
- Lightly open the hinged window outwards.
- Press the safety knob (Fig. 45,1) down and hold it.
- Return window handle into its original position. Move the locking catch (Fig. 45,3) on the window handle into the recess of the window catch (Fig. 45,4).
- Ensure that the safety knob is not pushed in but rather that it secures the window handle.

The window position "continuous ventilation" must not be kept during the journey.

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

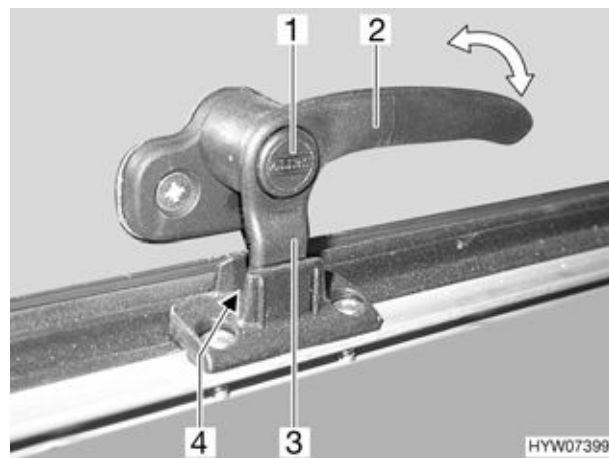


Fig. 45 Hinged window, window handle in the "continuous ventilation" position (variant 3)

6.2.3 Blind or Roman Shade and Insect Screen

The windows in the motorhome are fitted with a blind or Roman shade and an insect screen. The blind or Roman shade and insect screen can be adjusted separately.

Variant 1

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

Blind

Closing:

- Pull blind at the handle (Fig. 46,2) downwards. If the blind is to be completely closed, it is suspended into the locking devices situated on both sides of the window frame (Fig. 46,3).

Opening:

- If the blind is completely closed: press handle (Fig. 46,2) 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.

Insect screen

Closing:

- Pull insect screen at the handle down (Fig. 46,1) and hang it into the locking devices situated on both sides of the window frame (Fig. 46,3).

Opening:

- Press handle (Fig. 46,1) 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).

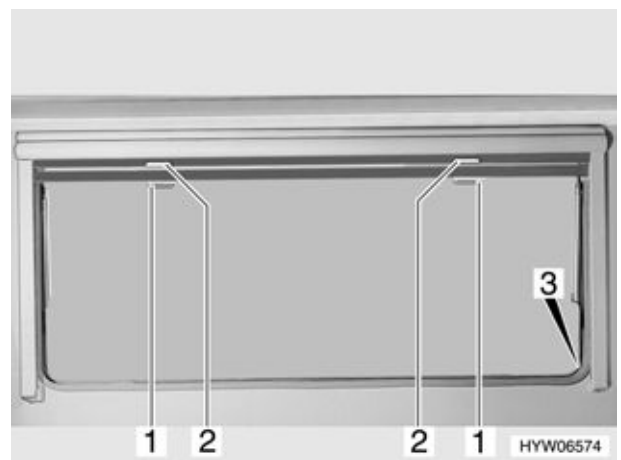


Fig. 46 Hinged window (variant 1)

Variant 2

The insect screen is located in the top blind box, the Roman shade in the bottom blind box.

Roman shade

Closing:

- Grip the Roman shade (Fig. 47,2) using the holding bar, pull it upwards and then release it at the height you require. The Roman shade will stay at this height.

Opening:

- Grip the Roman shade in the middle of the bar and push it down.

Insect screen

Closing:

- Pull the insect screen (Fig. 47,1) downwards using the handle until it pushes against the Roman shade (Fig. 47,2).
- Lock the insect screen in position with the Roman shade.

Opening:

- Press the handle attached to the insect screen (Fig. 47,1).
- Use handle to return the insect screen slowly to its initial position.

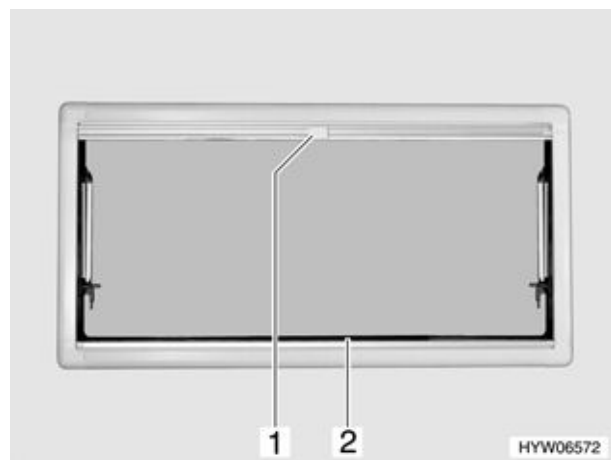


Fig. 47 Hinged window (variant 2)

6.2.4 Roman Shades for Windscreen, Driver's Window and Front Passenger's Window (Camp, Tramp)

Closing:

- Push the rear view mirror upwards and remove it.
- Fold up the side guides (Fig. 48,1) of the Roman shade for the windscreen and secure them to the snap fastener (Fig. 48,2).
- Push the Roman shade for the windscreen up.
- Draw the Roman shades for the driver's and passenger's window and secure it to the magnetic strips (Fig. 49,1 and 2).

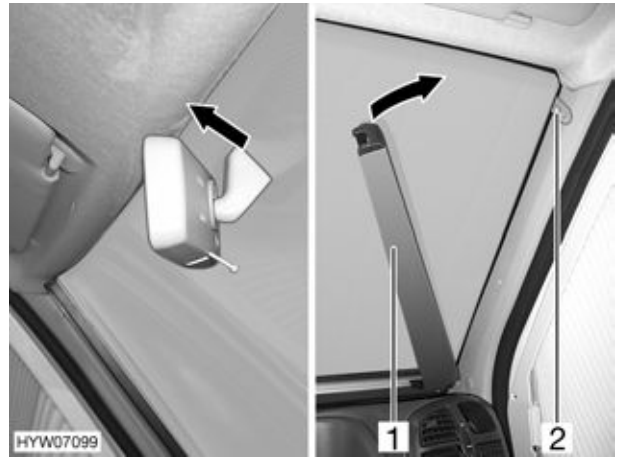


Fig. 48 Roman shade for the windscreen



Fig. 49 Roman shade for the driver's and passenger's window

Opening:

- Open the Roman shades for the driver's and passenger's window and push the guiding handle (Fig. 50,2) onto the cap (Fig. 50,1).
- Push the Roman shade for the windscreen down.
- Fold down the side guides of the Roman shade for the windscreen.
- Attach the rear view mirror from above and push it downwards.

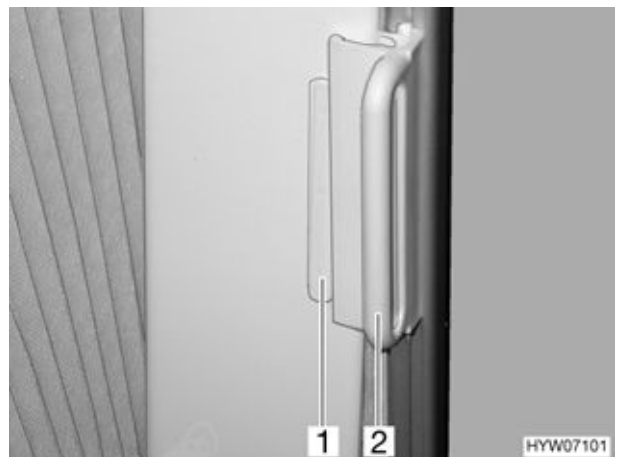


Fig. 50 Roman shade, open

6.3 Skylight



- ▶ 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.



- ▷ The skylights are fitted with a blind or Roman shade 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.
- ▷ Depending on the weather, close the skylights far enough to prevent moisture from entering.
- ▷ During the journey, the skylights have to be closed.



- ▷ When leaving the motorhome, always close the skylights.
- ▷ 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 skylights of the parked vehicle when there is strong sunlight.

6.3.1 Wind-Up Skylight

- Turn the wind-up skylight crank (Fig. 51,2) one direction or the other to raise (open) or lower (close) the wind-up skylight. Any setting is possible.

Roman shade

The Roman shade can be fixed in position at varying lengths. In order to close the Roman shade while keeping the insect screen closed, the two can remain locked together; the insect screen is moved with the Roman shade.

Closing:

- Pull Roman shade (Fig. 51,3) in the direction indicated to the desired position. The Roman shade will stay in that position.

Opening:

- Return the Roman shade to its initial position.

Insect screen

Closing:

- Pull insect screen (Fig. 51,1) in the direction indicated until it touches the Roman shade (Fig. 51,3).
- Lock the insect screen in position with the Roman shade.

Opening:

- Press the handle attached to the insect screen (Fig. 51,1).
- Use handle to return the insect screen slowly to its initial position.



Fig. 51 Wind-up skylight

6.3.2 Hinged Skylight

The hinged skylight may be raised on one side only. Three inclination angles and a ventilation position are available. An extension hook is to be found in the wardrobe.

- In order to open the skylight (Fig. 52,3), rotate the lever anticlockwise one quarter-turn and use lever to press the hinged skylight upwards.

Locking the hinged skylight in ventilation position:

- Grip lever and pull hinged skylight downwards.
- Turn lever (Fig. 52,3) a quarter-turn clockwise.

The latch must slide into the upper aperture.



- ▷ With the hinged skylight in ventilation position, water may ingress into the living area in rainy weather. Therefore close hinged skylight completely.

Roman shade

The Roman shade may be set to any position, either with the hinged skylight open or closed.



- ▷ To avoid heat concentration in full sunshine put hinged skylight in ventilation position and close Roman shade only to 2/3.

Closing:

- Pull Roman shade (Fig. 52,1) in the direction indicated and release in the required position. The Roman shade will stay in that position.

Opening:

- Return Roman shade to its initial position.

Insect screen

Closing:

- Pull insect screen (Fig. 52,2) in the direction indicated until it engages with the latch on the opposite side.

Opening:

- Slightly push up insect screen along the strip. The latch is released.
- Slowly return insect screen into its initial position.

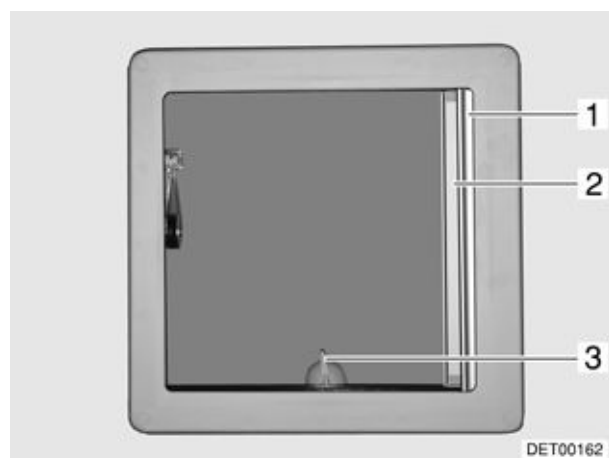


Fig. 52 Hinged skylight

6.3.3 Skylight with Snap Latch

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

Opening:

- Push the spring-loaded latch (Fig. 53,4) towards the inside of the skylight. At the same time press the handle (Fig. 53,1) upwards.

Closing:

- Using both handles, pull down the skylight with force until the two snap latches lock into place.

Blind

When the insect screen is closed and locked to the blind, the blind can still be closed. When the blind is closed, the insect screen is moved along with it.

Closing:

- Push latch (Fig. 53,5) towards external side of skylight.
- Pull blind at the handle (Fig. 53,6) to the opposite handle of the insect screen (Fig. 53,2) and allow to engage.

Opening:

- Clench the handle (Fig. 53,2). The latch is released.
- Use handle (Fig. 53,6) to return blind slowly to its initial position.

Insect screen

Closing:

- Push latch (Fig. 53,3) towards external side of skylight.
- Pull insect screen at the handle (Fig. 53,2) to the opposite handle of the blind (Fig. 53,6) and allow to engage.

Opening:

- Clench the handle (Fig. 53,2). The latch is released.
- Use handle (Fig. 53,2) to slowly return the insect screen.

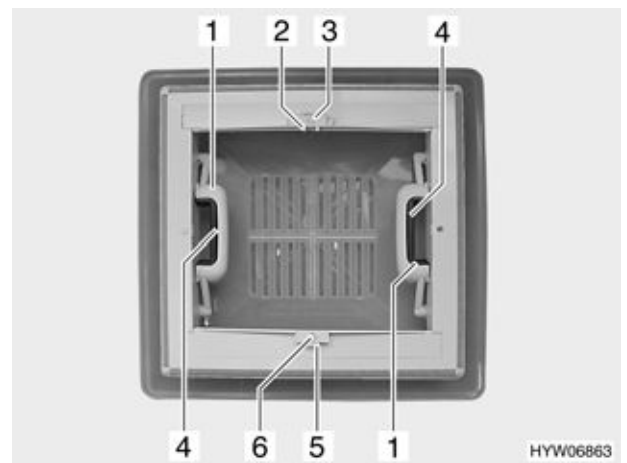


Fig. 53 Skylight with snap latch

6.3.4 Lift-Tilt Skylight



- ▷ Do not stand on the acrylic glass of the lift-tilt skylight.
- ▷ Before commencing the journey, check that the lift-tilt skylight is closed and locked.
- ▷ The lift-tilt skylight is not to be opened or closed during the journey.

The lift-tilt skylight can either be opened using the manual crank or the pivoting mechanism.

Opening with the manual crank:

- Rotate the manual crank (Fig. 54,3) until a resistance can be felt (max. opening angle 70°).

Closing with the manual crank:

- Rotate the manual crank until the lift-tilt skylight is closed. It can be locked after rotating two or three more times.
- Ensure that the skylight is locked by pressing against the acrylic glass.

Opening with the pivoting mechanism:



- ▷ The lift-tilt skylight must be locked (see closing with the manual crank) before the pivoting mechanism is activated.
- ▷ The lift-tilt skylight is only to be operated with both hands on the handles (Fig. 54,2).

The lift-tilt skylight can be placed in various positions with the assistance of the pivoting mechanism.

- Take one handle in each hand and put the lift-tilt skylight into the desired position.

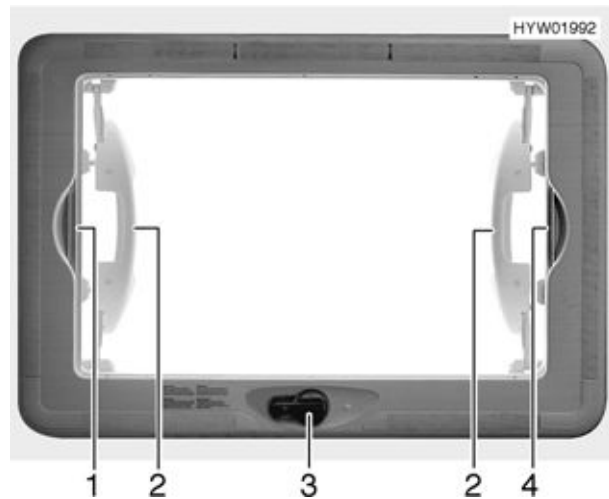


Fig. 54 Lift-tilt skylight

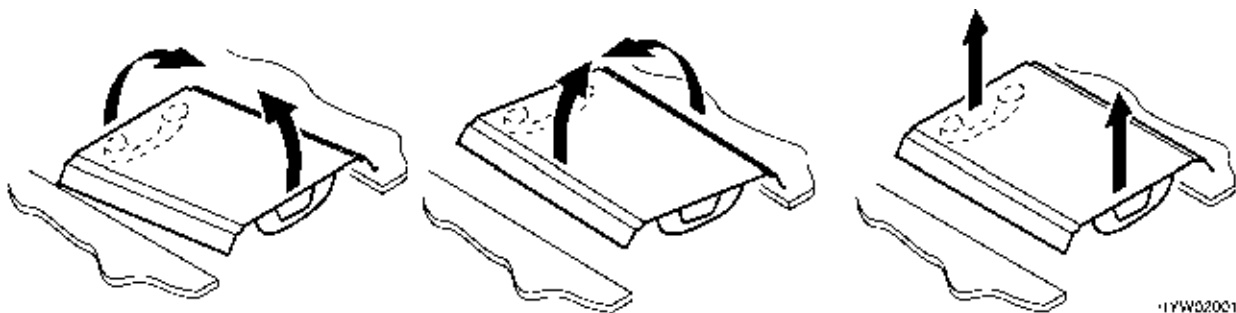


Fig. 55 Positions of the lift-tilt skylight

Roman shade**Closing:**

- Pull Roman shade at the handle (Fig. 54,1) to the opposite handle of the insect screen (Fig. 54,4) and allow to engage.

Opening:

- Unhook handle of the Roman shade (Fig. 54,1).
- Use handle to return the Roman shade slowly to its initial position.

Insect screen**Closing:**

- Pull insect screen at the handle (Fig. 54,4) to the opposite handle of the Roman shade (Fig. 54,1) and allow to engage.

Opening:

- Unhook insect screen at the handle of the Roman shade (Fig. 54,1).
- Use handle (Fig. 54,4) to slowly return the insect screen.

6.4 Seats

6.4.1 Rotating Seats



- ▶ Before commencing the journey, rotate all swivel seats in the direction of travel and lock in position.
- ▶ The seats must remain fixed in position during the journey and are not to be rotated.



- ▶ To avoid damage to the seatbelt lock, press the lock down before rotating the driver's or front passenger's seat.

- Push both armrests at the driver's/front passenger's seat upward. The bar seat can be rotated without the position of the armrest being altered.
- Push the driver's seat/front passenger's seat backwards or into the centre position.
- Pull the lever to turn the seat. The seat is released from the locking device.

Depending on the type of vehicle, the lever for rotating the seats is located at the bottom either in the centre or to the left or right of the seat.

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



- ▶ Setting the position of the seats and armrests is described in chapter 4.

6.4.2 Adjusting the Bar Seat

Bar seat models are equipped with an integrated three-point safety belt.

- Pull the handle (Fig. 56,1). The seat height can be adjusted.
- Pull the handle (Fig. 56,2). The seat can be rotated.
- Pull the handle (Fig. 56,3). The angle of the backrest can be adjusted.



Fig. 56 Bar seat

6.5 Tables

6.5.1 Bar Table

The bar table size can be enlarged by pulling the table out (Fig. 57,1).



Fig. 57 Bar table with table-top pushed in

Pulling the table-top out:

- Pull the table-top (Fig. 57,1) out using the holding bar and pull evenly out and up.
- Push back the table-top.

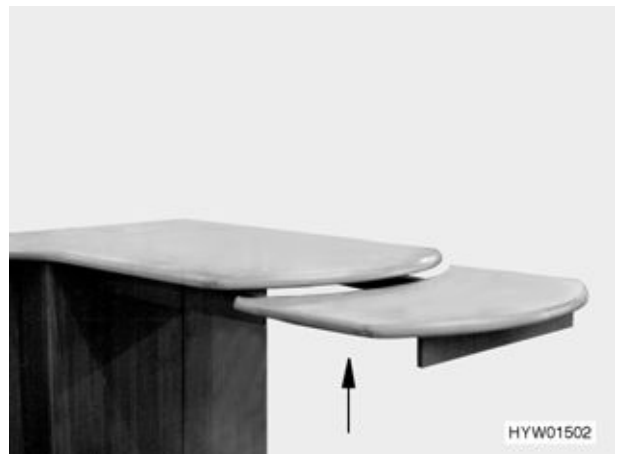


Fig. 58 Bar table with table-top pushed out

Pushing the table-top in:

- Pull the table-top (Fig. 59) as far as possible and push it all the way down and back with even force.



Fig. 59 Bar table with completely extended table-top

6.5.2 Suspension Table with Folding Leg (Variant 1)



- Fold in the table leg of the suspension table before commencing the journey. Remove the suspension table and, depending on the model, put it under the mattress of the pull-down bed or of the alcove or attach it to the holder provided for this purpose in the alcove.

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

Conversion to bed foundation:

- Lift the front of the table-top slightly (Fig. 60,3).
- Press the table leg (Fig. 60,2) in the direction of the arrow, and fold it over 90°.
- Unhook the suspension table from the upper attachment rail (Fig. 60,4).
- Hook the suspension table onto the lower attachment rail (Fig. 60,5) and place it onto the rests (Fig. 60,1).



Fig. 60 Suspension table (variant 1)

6.5.3 Suspension Table with Folding Leg (Variant 2)

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

Conversion to bed foundation:

- Slightly lift the front of the table-top.
- Push the support (Fig. 61,1) in the direction of the arrow, and fold it out.
- Push the table leg (Fig. 61,2) in the direction of the arrow, and fold it in.
- Unhook the suspension table from the upper attachment rail.
- Hook the suspension table onto the lower attachment rail and rest it on the support.

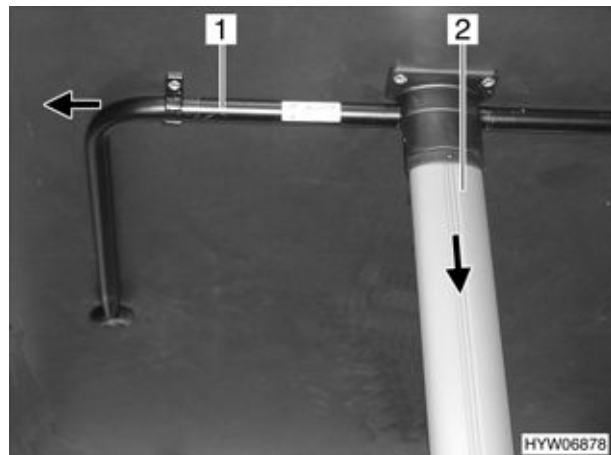


Fig. 61 Suspension table (variant 2)

6.5.4 Table Extension

In some models the suspension table can be increased in size by inserting a table-top extension.

Extending:

- Undo the knurled screws (Fig. 62,2) at the bottom of the table.
- Lift up the front of the table-top slightly and pull it out on the guide rails (Fig. 62,1) as far as it will go.
- Take the table-top extension out of the wardrobe and lay it between the panel wall and the table top.
- Lift the table-top slightly and push it back as far as possible.
- Re-tighten the knurled screws (Fig. 62,2).

Reducing size:

- Undo the knurled screws (Fig. 62,2) at the bottom of the table.
- Slightly lift the front of the table-top and pull out.
- Take out the table-top extension and store it in the wardrobe.
- Lift up the front of the table-top slightly and push it all the way in.
- Re-tighten the knurled screws.

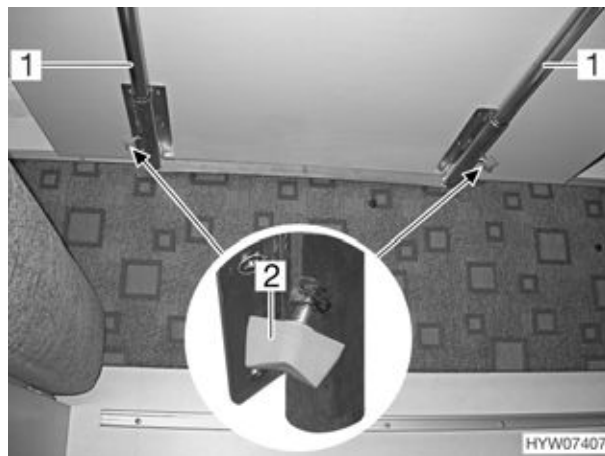


Fig. 62 Extend suspension table

6.5.5 Suspension Table with Folding Leg (Variant 3)

In some models the suspension table size can be enlarged by inserting an extension table element.

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

Extending:

- Undo the safety clips (Fig. 63,2) at the bottom of the table-top.
- Slightly lift the front of the table-top (Fig. 63,1) and pull in the direction indicated as far as it will go.
- Fold out the inserted table-top extension (Fig. 63,3).
- Slide the table-tops together and secure them with the safety clips (Fig. 63,2) on the bottom side of the table-top to prevent them from separating.

Reducing size:

- Undo the safety clips (Fig. 63,2) at the bottom of the table-top.
- Slightly lift the front of the table-top and pull out.
- Fold in the table-top extension.
- Lift up the front of the table-top slightly and push it all the way in.
- Lock the table with the safety clips.

Conversion to bed foundation:

- Slightly lift the front of the table-top.
- Unlock the table leg (Fig. 64,2) at the hinge and fold it in.
- Unhook the suspension table from the upper attachment rail.
- Attach the suspension table onto the lower attachment rail (Fig. 64,1) and rest it onto the table leg hinge (Fig. 64,3).

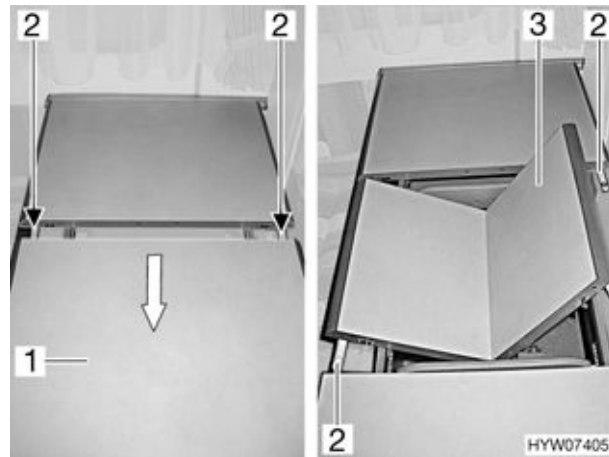


Fig. 63 Extend suspension table

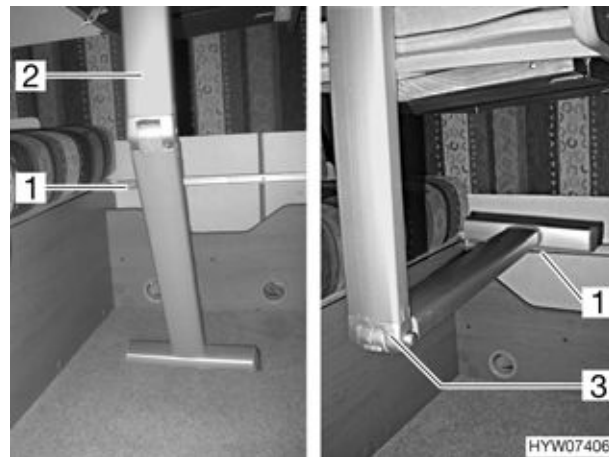


Fig. 64 Suspension table (variant 3)

6.5.6 Fixed Table with Telescopic Table Leg

The fixed table with telescopic table leg is permanently connected to the vehicle floor. The table top can be moved lengthways. The table top can be increased or decreased in size by folding over half of the upper table-top. With the enlarged table-top, the fixed table with the telescopic table leg can be used as a bed foundation.

Extending:

- Pull out the support rails (Fig. 65,2) as far as possible.
- Fold over the upper half of the table-top (Fig. 65,3) and rest it on the support rails.

Moving in a lengthways direction:

- Undo the knurled screw (Fig. 65,4).
- Move the table-top and re-tighten the knurled screw.

Conversion to bed foundation:

- Tread on the knob (Fig. 65,1) with your foot. The lower lock is open.
- Press the table-top in the middle down to the stop limit and hold it down.
- Swivel the catch lever (Fig. 65,5) to the rear. The top lock is open.
- Push the table-top all the way down and hold it down.
- Swing the catch lever (Fig. 65,5) to the front. The table leg is locked.
- Pull out the support rails (Fig. 66,1) as far as possible.
- Take the metal supports (Fig. 66,2) out of the holders in the bench and slide them onto the support rails (Fig. 66).
- Fold over the upper half of the table-top (Fig. 66,3) and rest it on the support rails.

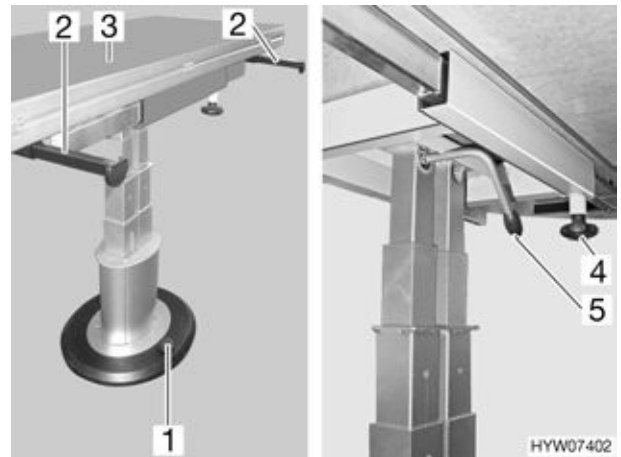


Fig. 65 Fixed table with telescopic table leg

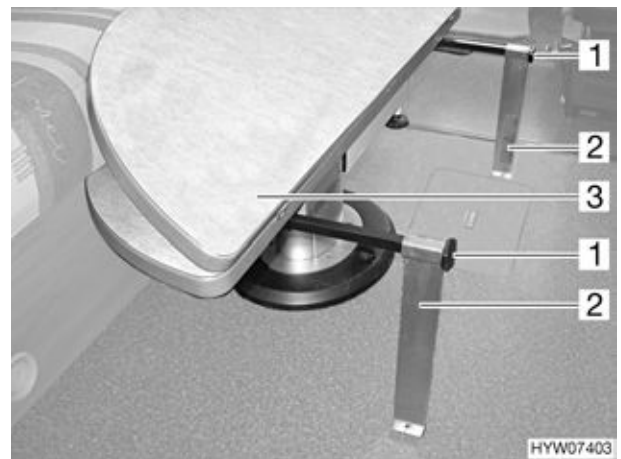


Fig. 66 Conversion to bed

Conversion to table:

- Fold over the right half of the table.
- Pull off the metal supports (Fig. 66,2) and store them in the holders in the bench.
- Slide the support rails (Fig. 66,1) all the way in.
- Swivel the catch lever (Fig. 65,5) to the rear. The top lock is open. The table-top moves upwards to the limit stop.
- Tread on the knob (Fig. 65,1) with your foot. The lower lock is open. The table-top moves completely upwards.
- Swing the catch lever (Fig. 65,5) to the front. The table leg is locked.

6.5.7 Fixed Table with Rigid Table Leg

The table-top of the fixed table of the rigid table leg can be moved both lengthways and crossways. It is not possible to convert it into a bed foundation.

Moving in a lengthways direction:

- Undo the knurled screw (Fig. 67,2).
- Move the table-top (Fig. 67,1) into the desired position.
- Re-tighten the knurled screw.

Moving in a crossways direction:

- Undo the knurled screw (Fig. 67,3).
- Move the table-top (Fig. 67,1) into the desired position.
- Re-tighten the knurled screw.

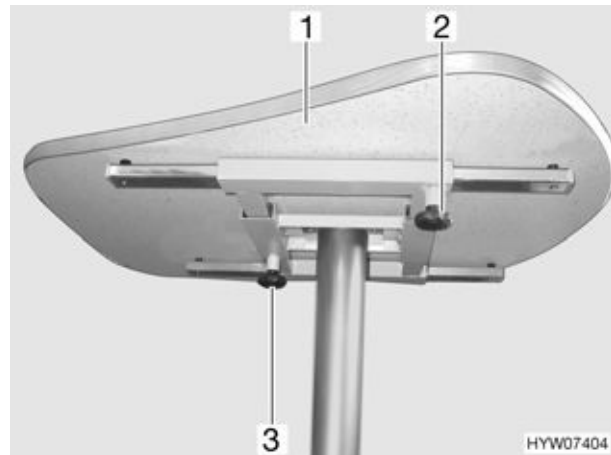


Fig. 67 Fixed table with rigid table leg

6.6 Drawer Central Locking System

In some models, the bar drawers are closed using a central locking system. Whenever the drawers are not being used, lock the drawers with the central locking system. This prevents the drawers from opening themselves or being opened unintentionally. The drawers may open by themselves if the vehicle is on a sloped surface.

Locking:

- Turn the handle (Fig. 68,1) in an anticlockwise direction as far as it will go.
The drawers are locked.

Unlocking:

- Turn the handle (Fig. 68,1) in a clockwise direction as far as it will go.
The drawers are unlocked.



Fig. 68 Drawer central locking system

6.7 Television

Variant 1



- Before commencing the journey always remove the television from the support and store it securely.

Positioning of TV unit:

- Push rods (Fig. 69,2) of the support (Fig. 69,4) into holder (Fig. 69,1).
- Place TV unit onto support and secure it with retaining strap (Fig. 69,3).
- Move support into desired position.

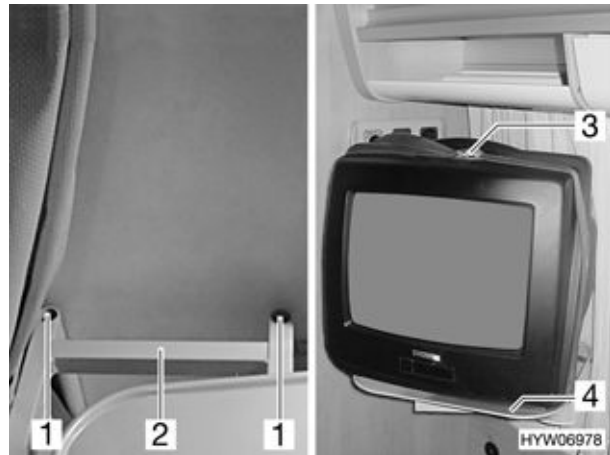


Fig. 69 Television

Variant 2



- Always secure TV unit by means of the retaining strap (Fig. 70,4).
- Before commencing the journey lock the TV set in the TV cabinet.

Pull TV unit forward:

- Press latch (Fig. 70,1) upwards and use handle (Fig. 70,2) to pull extension forward.

Swivel TV unit:

- Pull extension forward until its stop position is reached.
- Swivel support table (Fig. 70,3) into required position.



Fig. 70 TV cabinet

6.8 Beds

6.8.1 Pull-Down Bed



- ▶ The maximum permitted pull-down bed load is 200 kg.
- ▶ The pull-down bed is not to be used for the storage of luggage. When the bed is not being used, only place the bed linen which is required for two people and the dinette table in it.
- ▶ Before commencing the journey secure the pull-down bed to the roof with the securing belt pulled tight.
- ▶ Always use the pull-down bed in conjunction with tightened safety belts and a safety net.
- ▶ Never allow small children to remain in the pull-down bed without supervision.
- ▶ Particularly with regard to small children of less than three years of age, users should ensure that they cannot fall out of the pull-down bed.
- ▶ Use separate children's beds or travel cots suitable for children.
- ▶ Turn off the reading lamps on the underside of the pull-down bed when the bed is pulled down. Fire hazard!

Opening:

- Rotate the driver's and front passenger's seats in the direction of travel, lock in position, push backwards and fold the backrest as far back as possible.
- Close the blind in the driver's cab.
- Undo retaining belt (Fig. 71,3).
- Turn off the reading lamps on the underside of the pull-down bed.
- Pull the bed down with both hands.

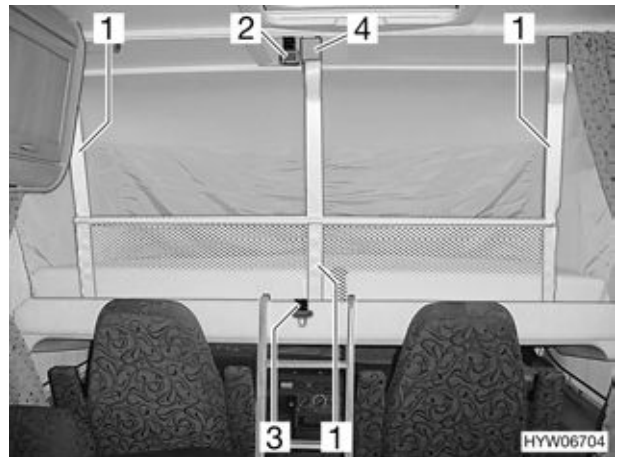


Fig. 71 Pull-down bed complete with applied safety net

Tightening retaining belts:

- Hook retaining belts (Fig. 71,1) into the hooks (Fig. 71,4) on the ceiling.

The retaining belts are located underneath the mattress in the pull-down bed.

Closing:

- Release retaining belts (Fig. 71,1) and place underneath mattress.
- Use both hands to push pull-down bed upwards.
- Secure pull-down bed to the roof (Fig. 71,3) by means of the retaining belt (Fig. 71,2).

Access ladder

- Always use the provided access ladder to climb up to the pull-down bed. Hook the access ladder to the pull-down bed with the two attached hoops in the U-bolt.

6.8.2 Overcab Bed



- ▶ Always use overcab bed with the safety net in position
- ▶ Never allow small children to remain in the overcab 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 overcab bed.
- ▶ Use separate children's beds or travel cots suitable for children.



- ▶ Do not load the overcab bed without mattress. Danger of break of plastic moulded part!

Access ladder

Always use the access ladder (Fig. 72,3) included in order to access the pull-down bed. It is hooked onto the two bars (Fig. 72,4) in the U-bolt of the alcove flap (Fig. 72,5).

Safety net

The safety net (Fig. 72,2) is stored between the mattress and alcove panel (Fig. 72,5). Only use the safety net if persons are already in the alcove. To mount, hang the steel tube (Fig. 72,6) into the holding devices (Fig. 72,1) provided for this purpose on the left and right-hand sides of the alcove interior.

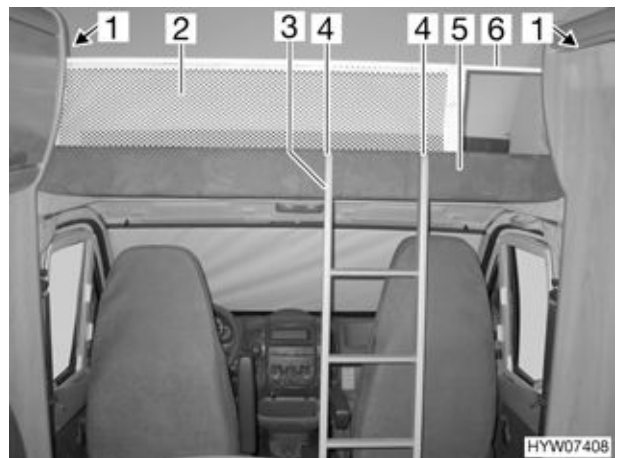


Fig. 72 Alcove with access ladder and tensioned safety net

Depending on the model, the overcab bed can be folded upwards. This simplifies passage from driver's cabin to living area.

Folding upwards:

- Fold the front of the overcab bed upwards. The overcab bed is kept in the upper position by gas-pressure springs (Fig. 73).

Folding downwards:

- Pull overcab bed downwards.
- If necessary, push the mattress behind the panel.



Fig. 73 Overcab, folded upwards

6.8.3 Bunk Bed



- ▶ The maximum permitted bunk bed load is 80 kg.
- ▶ Always use bunk bed with the safety net correctly hooked in.
- ▶ 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 rear area is fitted with a bunk bed. The bunk bed can be used immediately, without conversion.

6.9 Rear Bed Step

The step is mounted on the side of the rear bed.

Opening:

- Put your hand into the recessed grip (Fig. 74,1) and pull towards you.
- Pull guide step (Fig. 74,2) all the way down.

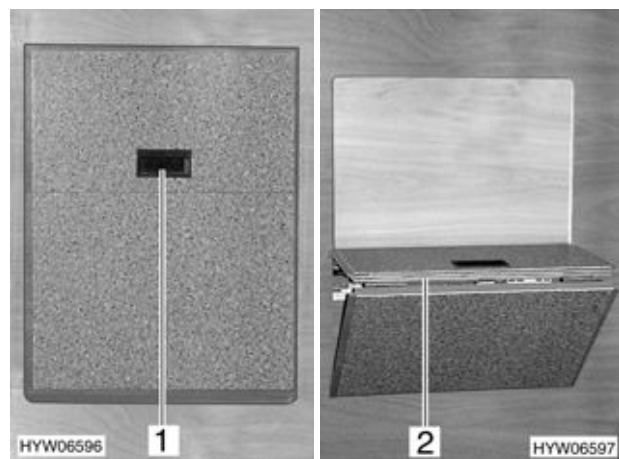


Fig. 74 Rear bed step

6.10 Sleeping Conversion

6.10.1 Central Seating Group (Variant 1)

- Slightly lift the front of the table-top (Fig. 75,3).
- Loosen the locking device fitted to the table leg and fold the table leg against the bottom of the table.
- 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. 75,2).
- Pull out the bedding box extension (Fig. 76,6).
- Lay the table-top (Fig. 76,3) between the two bedding boxes (Fig. 76,5).

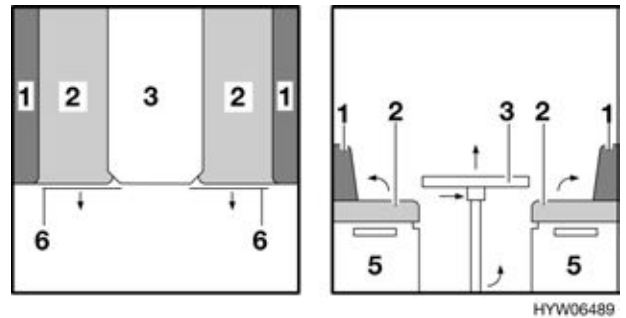


Fig. 75 Prior to conversion

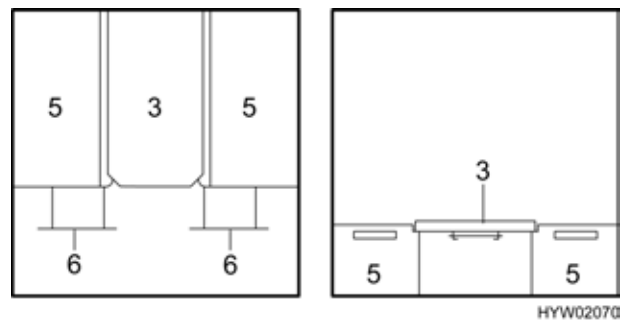


Fig. 76 During conversion

- Place the two seat cushions (Fig. 77,2) in the centre.
- Lay the right back cushion (Fig. 75,1) aside.
- Insert the left back cushion (Fig. 77,1) between the seat cushion and the wall.
- Insert the additional cushion (Fig. 77,7) between the seat cushion and the wall.
- Lay the additional cushion (Fig. 77,4) on the bedding box extension.



- ▷ Depending on the model an enclosed additional cushion must be used instead of the back cushion (Fig. 75,1).

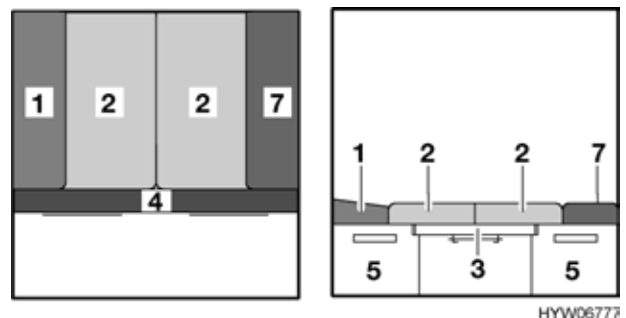


Fig. 77 After conversion

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

6.10.2 Central Seating Group (Variant 2)



▷ Various models do not have a bedding box extension.

- Slightly lift the front of the table-top (Fig. 78,3).
- Loosen the locking device fitted to the table leg and fold the table leg against the bottom of the table.
- Unfold support at the bottom of the table.
- Lift the table-top by approx. 45°, remove it out of the mounting rail and place it into the lower mounting rail.
- Pull out the bedding box extension (Fig. 79,6).

- Place both back cushions (Fig. 80,1) in the middle.
- Lay the additional cushions (Fig. 80,4 and 7) on the bedding box extension.



▷ Depending on the model an enclosed additional cushion must be used instead of the back cushion (Fig. 79,1).

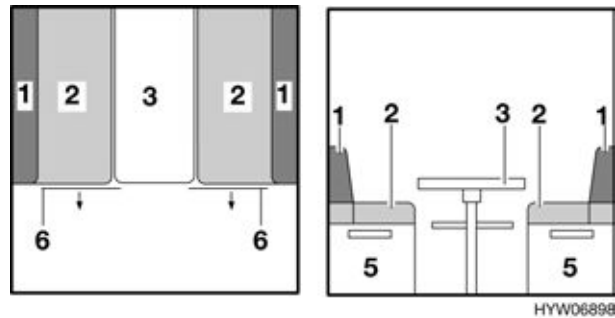


Fig. 78 Prior to conversion

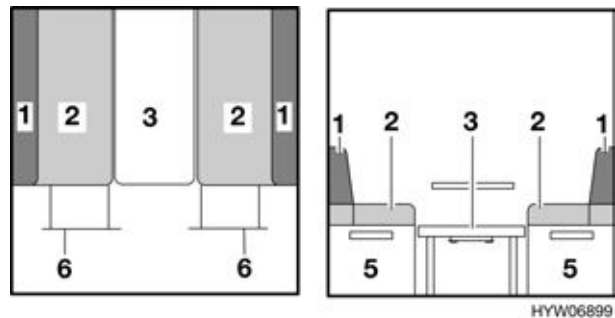


Fig. 79 During conversion

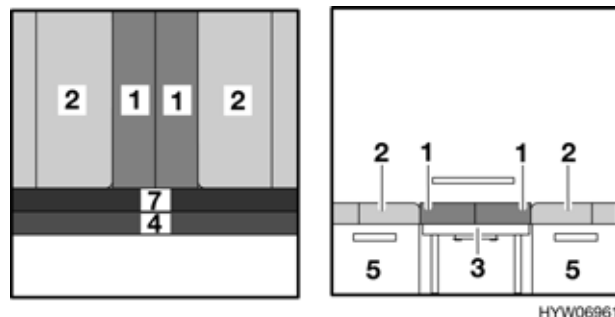


Fig. 80 After conversion

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

6.10.3 Central Seating Group with Divan (Variant 1)



▷ Do not stand on the divan when it is pulled out! The divan may be damaged by this.

- Convert the central seating group for sleeping (see Central Seating Group).

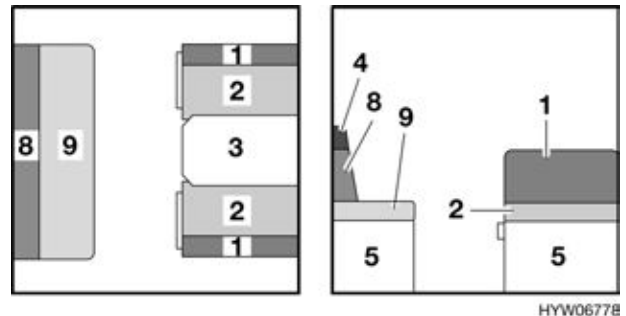


Fig. 81 Prior to conversion

- Pull out as far as possible the bedding box extension (Fig. 82,6) on both bedding boxes of the central seating group.
- Lift the divan slightly (Fig. 82,9) and pull out as far as possible.
- Remove the additional cushion (Fig. 82,4) from the back cushion (Fig. 82,8). The additional cushion is fixed to the back cushion with Velcro and can easily be separated.

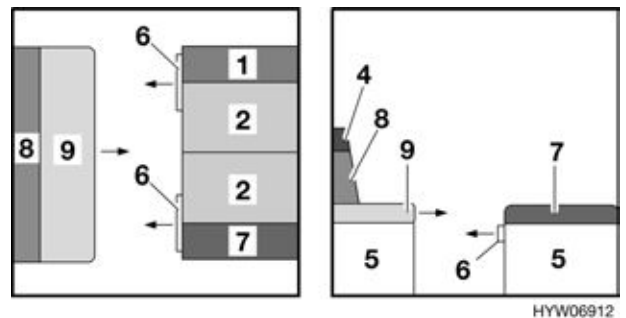


Fig. 82 During conversion

- Insert the additional cushion (Fig. 83,4) between the seat cushion (Fig. 83,9) and the exterior wall.
- Lay the back cushion (Fig. 83,8) on both bedding box extensions.

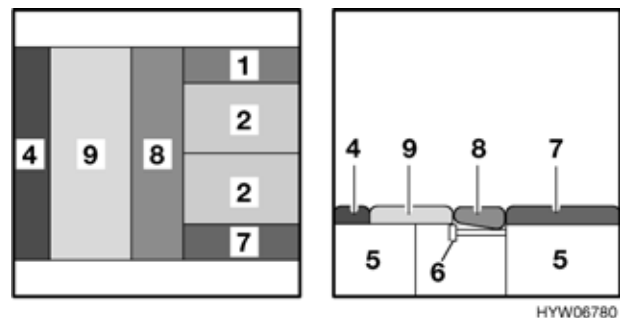


Fig. 83 After conversion

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

6.10.4 Central Seating Group with Divan (Variant 2)



▷ Do not stand on the divan when it is pulled out! The divan may be damaged by this.

- Convert the central seating group for sleeping (see Central Seating Group).

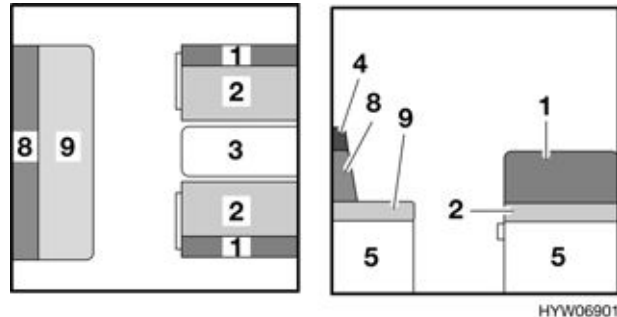


Fig. 84 Prior to conversion

- Pull out as far as possible the bedding box extension (Fig. 85,6) on both bedding boxes of the central seating group.
- Lift the divan slightly (Fig. 85,9) and pull out as far as possible.
- Remove the additional cushion (Fig. 85,4) from the back cushion (Fig. 85,8). The additional cushion is fixed to the back cushion with Velcro and can easily be separated.

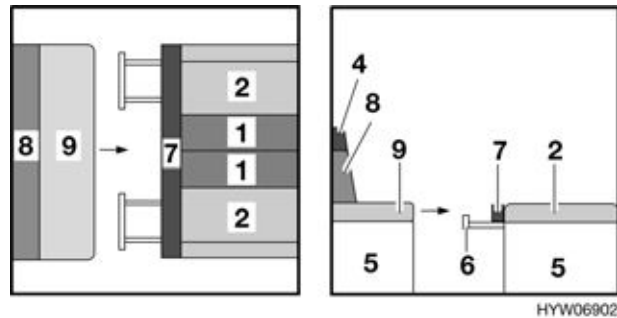


Fig. 85 During conversion

- Insert the additional cushion (Fig. 86,4) between the seat cushion (Fig. 86,9) and the exterior wall.
- Lay the back cushion (Fig. 86,8) and the additional cushion (Fig. 86,7) on both bedding box extensions.

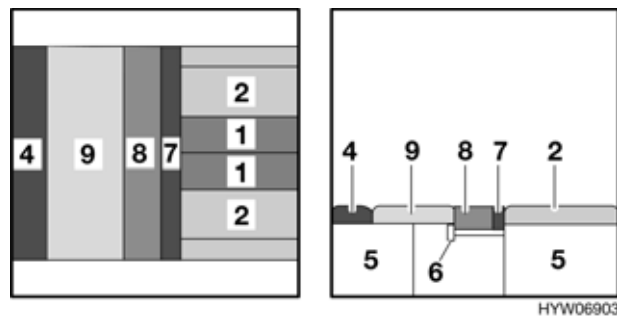


Fig. 86 After conversion

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

6.10.5 Central Bench with Divan



- ▷ Do not stand on the divan when the bedding box extension is pulled out! The divan may be damaged by this.

- Remove the back cushion (Fig. 87,1) and the seat cushion (Fig. 87,2) of the divan and lay them aside.
- Convert the suspension table into a bed foundation (see section 6.5).
- Fold the seat of the divan upwards.

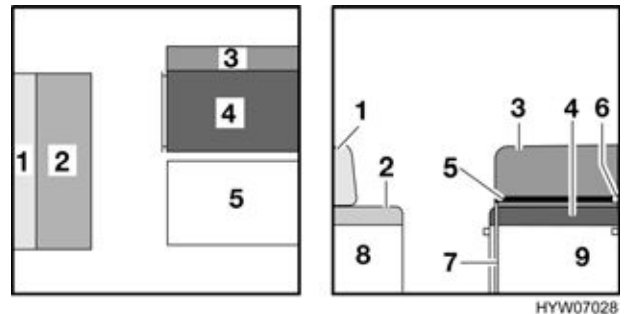


Fig. 87 Prior to conversion

- Take the support (Fig. 88,11) out of the holder in the divan.
- Undo the securing bolt of the bedding box extension in the divan.
- Pull out the bedding box extension (Fig. 88,10) on the divan all the way.
- Tighten the securing bolt of the bedding box extension.
- Fold down the seat of the divan.
- Set the support (Fig. 88,11) on the side on which the bedding box extension does not lie on the central bench under the bedding box extension.
- Lay the seat cushion (Fig. 88,2) back onto the divan.
- Lay the back cushion (Fig. 89,3) of the central bench on the table-top.
- Insert the small additional cushion (Fig. 89,15) between the seat cushion (Fig. 89,4) and the back cushion (Fig. 89,3).
- Lay the big additional cushion (Fig. 89,14) onto the bedding box extension.

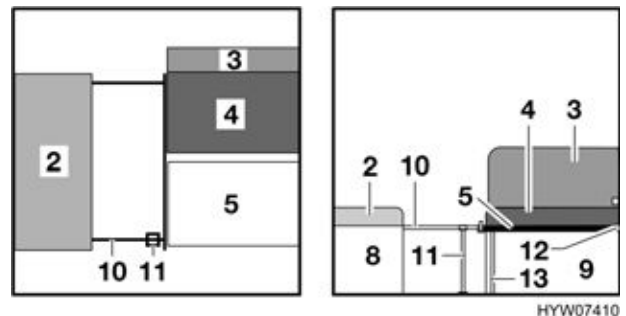


Fig. 88 During conversion

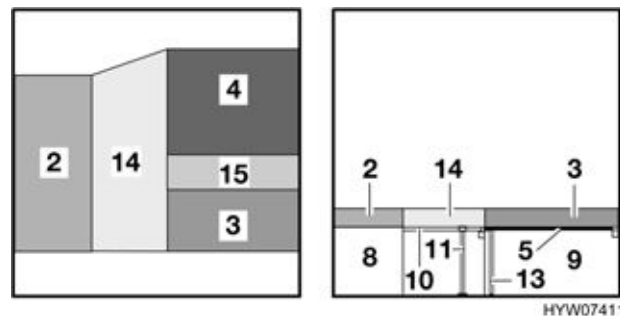


Fig. 89 After conversion

- 1 Back cushion, divan
- 2 Seat cushion, divan
- 3 Back cushion, central bench
- 4 Seat cushion, central bench
- 5 Table-top
- 6 Upper mounting rail
- 7 Table leg
- 8 Bedding box, divan
- 9 Bedding box, central bench
- 10 Bedding box extension
- 11 Support, bedding box extension
- 12 Lower mounting rail
- 13 Support
- 14 Additional cushion, big
- 15 Additional cushion, small

6.10.6 Round Seating Group

- Loosen the fixing screw (Fig. 90,7) at the bottom of the table and lift the table-top (Fig. 90,4).
- Loosen the fixing screw (Fig. 90,8) for the table leg, pull the table leg upwards and out of the holding device.
- Lay all seat and back cushions to one side.

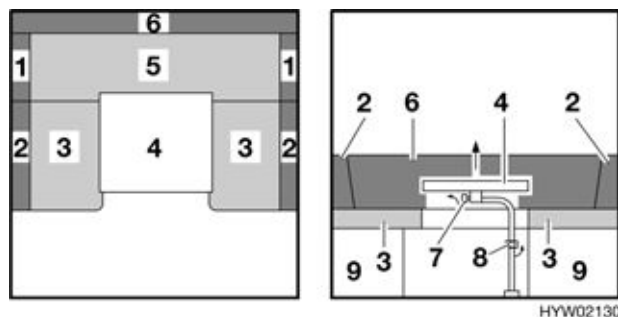


Fig. 90 Prior to conversion

- Remove the bed bar from the wardrobe.
- Lift up the bedding box lids and insert the two bed rods (Fig. 91,10) in a transverse position in the pertinent grooves between both bedding boxes. Close the bedding box lids.
- Place the table-top (Fig. 91,4) on the two bed rods.

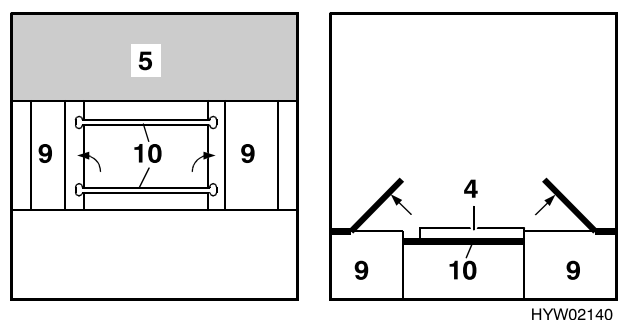


Fig. 91 During conversion

- Place the two seat cushions (Fig. 92,3) in the centre.
- Insert the back cushions (Fig. 92,2) between the seat cushions and the exterior wall.

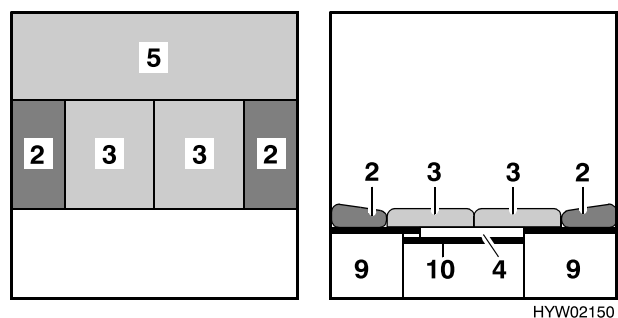


Fig. 92 After conversion

- 1 Back cushion, short
- 2 Back cushion, long
- 3 Seat cushion, short
- 4 Table-top
- 5 Seat cushion, long
- 6 Back cushion or bed widening central seating group
- 7 Fixing screw
- 8 Fixing screw
- 9 Bedding box
- 10 Bed rods

6.10.7 Rear Seating Group B 634



- Do not stand on the slatted frame when it is pulled out! The slatted frame may be damaged by this.

Conversion into two single beds:

- For widening of bed pull out slatted frame (Fig. 94,4) at the left and right bedding box.
- Remove the additional cushion (Fig. 93,5) from the back cushion (Fig. 93,1). The additional cushion is fixed to the back cushion with Velcro and can easily be separated.
- Insert the additional cushion (Fig. 94,5) between the seat cushion (Fig. 94,2) and the exterior wall.

Conversion into one large bed:

- Pull out slatted frame (Fig. 95,4) completely.
- Unfold slatted frame supports (Fig. 95,6).
- Insert the back cushion (Fig. 95,1) and the additional cushion (Fig. 95,5) between the seat cushion (Fig. 95,2) and the exterior wall.

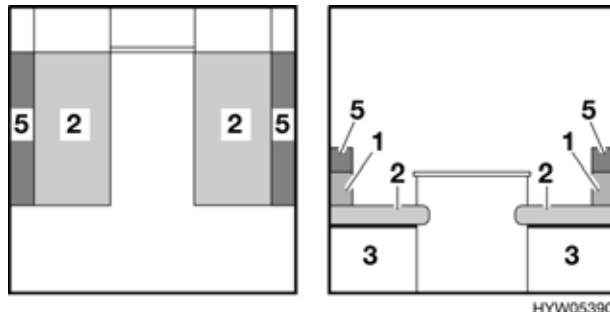


Fig. 93 Prior to conversion

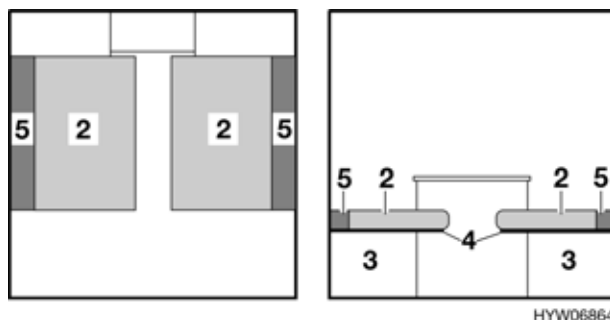


Fig. 94 After conversion into single beds

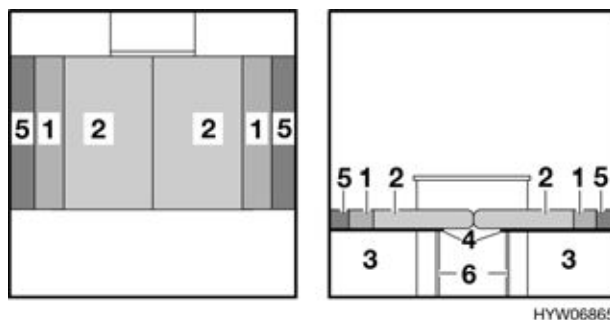


Fig. 95 After conversion into one large bed

- 1 Back cushion
- 2 Seat cushion
- 3 Bedding box
- 4 Bed widening
- 5 Additional cushion
- 6 Support

6.10.8 Bar with Divan



▷ Do not stand on the divan when it is pulled out! The divan may be damaged by this.

- Lift the divan slightly (Fig. 96,1) and pull out as far as possible.
- Remove the additional cushion (Fig. 96,2) from the back cushion. The additional cushion is fixed to the back cushion with Velcro and can easily be separated.
- Lay the additional cushion aside.

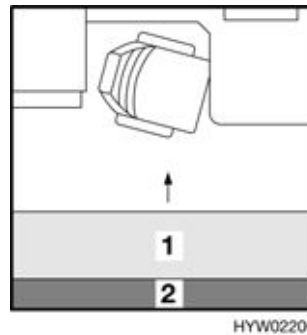


Fig. 96 Prior to conversion

- Insert the back cushion (Fig. 97,3) between the divan cushion and the exterior wall.

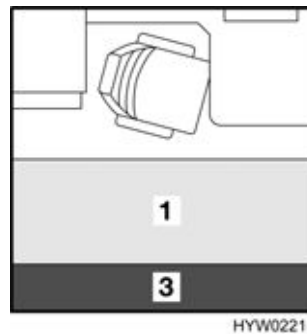


Fig. 97 After conversion

- 1 Divan
- 2 Additional cushion
- 3 Back cushion

6.10.9 Divan with Fixed Table and Telescopic Table Leg

- Convert the fixed table with telescopic table leg (Fig. 98,5) into a bed foundation (see section 6.5).
- Remove the back cushions (Fig. 98,1 and 2) and lay them aside.

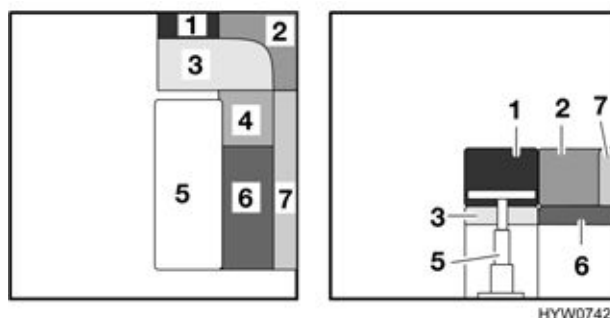


Fig. 98 Prior to conversion

- Remove the back cushion (Fig. 98,7) and lay it onto the table so that both retaining straps (Fig. 99,9) face the outside. The retaining strap (Fig. 99,8) must face the rear.
- Remove the seat cushion of the divan (Fig. 98,6) and lay it aside.
- Attach both retaining straps (Fig. 99,9) with the snap fasteners.
- Lift the seat cushion of the side bench (Fig. 99,3) on the inside and here too attach the retaining strap (Fig. 99,8) with the snap fastener.
- Return the seat cushion of the divan (Fig. 100,6) to its original location.

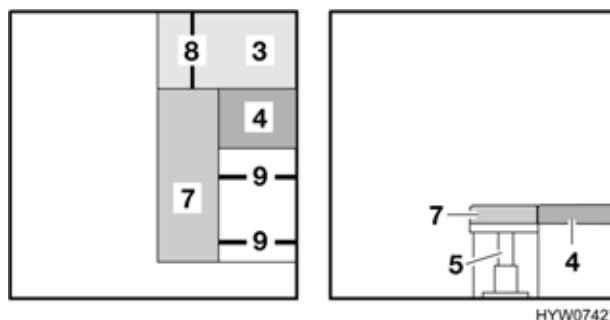


Fig. 99 During conversion

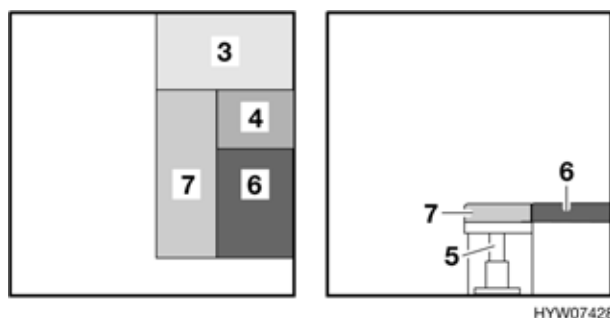


Fig. 100 After conversion

- 1 Back cushion
- 2 Back cushion
- 3 Seat cushion, side bench
- 4 Seat cushion, divan
- 5 Table
- 6 Seat cushion, divan
- 7 Back cushion
- 8 Retaining strap
- 9 Retaining straps

6.11 Spotlight



► Bulbs and light fittings can be extremely hot. Allow to cool before touching.

Turning spotlight:

- Hold housing (Fig. 101,1) and turn.

The housing can be turned in different directions:

- to the left and to the right
- up and down

Shifting spotlight:

- Hold housing (Fig. 101,2).
- Push spotlight along the rail system to desired position.

Removing spotlight:

- Hold housing (Fig. 101,2).
- First remove the holder from the front rod, then from the rear rod.

The spotlight can be moved to any position on the rails.

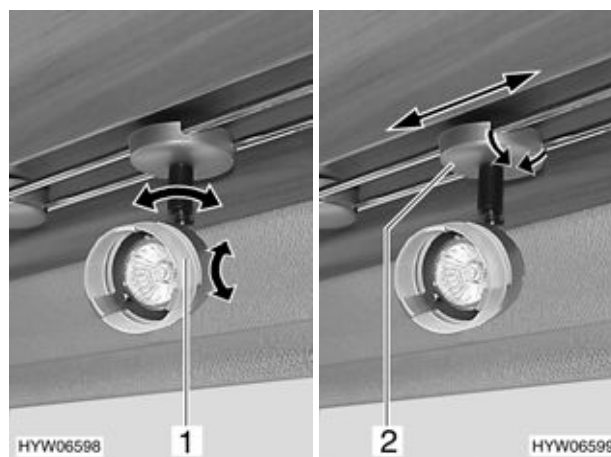


Fig. 101 Spotlight

Chapter Overview

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

The instructions address the following topics:

- safety
- changing the gas bottles
- gas isolator taps
- external gas connection
- Triomatic switching unit

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

7.1 General



- ▶ Before commencing the journey close all gas isolator taps and the regulator tap. Exception: If you plan to use the living area heater during the journey, leave the "Heater" gas isolator tap and the regulator tap open.
- ▶ 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! Close regulator tap on the gas bottle immediately. Open windows and doors. Do not smoke; do not ignite any open flames, and do not operate electric switches (starter, light switches a.s.o.). Have the defect repaired by an authorised workshop.
- ▶ Open a skylight before taking open sources of combustion (gas cooker) into service.
- ▶ Do not use the gas cooker for heating purposes.
- ▶ If the motorhome 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.
- ▶ No source of combustion (gas cooker, gas heater, boiler, etc.) is to be in operation when filling the fuel tank, on ferries or in the garage. Danger of explosion!
- ▶ The installed devices are meant for use with propane or butane gas or 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. Have the gas tube and the gas pressure regulator replaced in an authorised workshop no later than ten years after the manufacturing date. The operator of the gas fittings must see to it that the parts are replaced.
- ▶ Due to its function and construction, the gas bottle compartment is a space which is open to the exterior. 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 barbecue) 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 may 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 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.



- ▶ With some models, the gas bottle compartment is located right next to the conversion door. With these models, only open the gas bottle compartment when the conversion door is closed. Danger from damages.



- ▶ Connections on the gas pressure regulator have left-handed threads.
- ▶ For gas-operated units the gas pressure must be reduced to 30 mbar.
- ▶ Connect gas pressure regulator complete with safety valve directly to bottle valve.

The gas pressure regulator reduces the gas pressure in the gas bottle down to the operating pressure of the gas 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 **HYMER** service centres.
- ▶ For information on the gas supply in Europe see chapter 17.

7.3 Changing Gas Bottles



- ▶ When changing gas bottles, do not smoke or create any open fire.
- ▶ When you have changed the gas bottle, check whether gas escapes at the connection points and unions. Use a leakage search spray to spray the relevant connection point or union (**HYMER** accessories shop).

- Close regulator tap (Fig. 102,3) on the gas bottle (Fig. 102,5). Pay attention to the direction of the arrow.
- Unscrew the gas pressure regulator (Fig. 102,2) with the gas tube (Fig. 102,1) from the gas bottle with a suitable gas spanner.
- Release the fixing belt (Fig. 102,4) and remove the gas bottle.
- Place a filled gas bottle in the gas bottle compartment.
- Fix gas bottle 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).

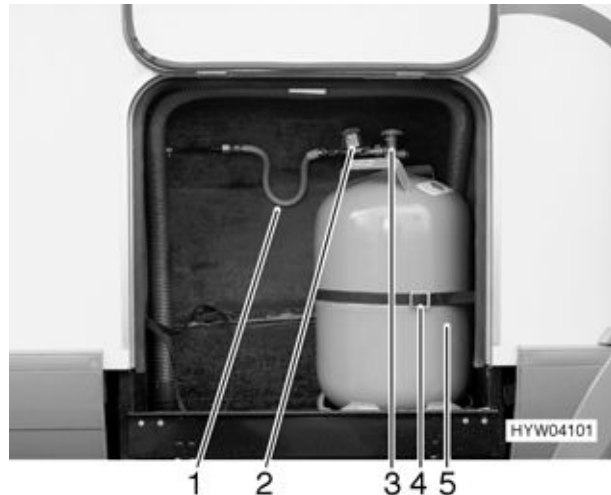


Fig. 102 Gas bottle compartment

7.4 Gas Isolator Taps

A gas isolator tap (Fig. 103) for every gas device is built into the motorhome. 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



Heater/Boiler



Oven

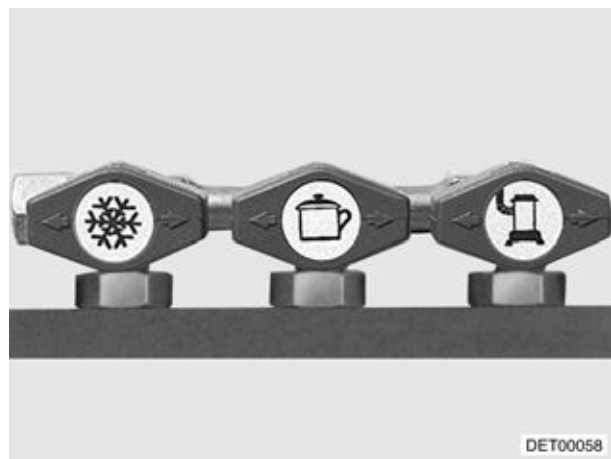


Fig. 103 Gas isolator taps in the off position

7.5 External Gas Connection



- ▶ If the external gas connection is not in use, always close the stopcock (Fig. 104,2).
- ▶ 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. 104,1). 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 of an external gas appliance, make sure that there is nothing near the external gas connection that could cause a spark.
- ▶ Do not use the external gas connection to fill gas bottles. Observe the information stickers on the external gas connection.

The external gas connection (Fig. 104) is located at the front right, next to the gas bottle compartment.

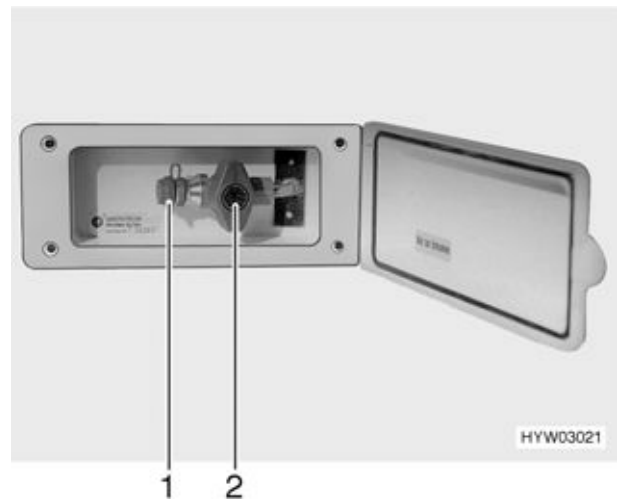


Fig. 104 External gas connection, stopcock closed

7.6 Triomatic Switching Facility



- ▶ The switching facility is only permitted in vehicles where gas bottles are set up outside or in cabinets, which are sealed from the vehicle interior and only accessible from the outside.
- ▶ Do not use the switching facility in closed spaces.

Construction

- Regulator tap (Fig. 105,1) primary bottle
- Gas pressure regulator (Fig. 105,2) primary bottle
- Operating status indicator (Fig. 105,3)
- System regulator (Fig. 105,4)
- Gas pressure regulator (Fig. 105,5) reserve bottle
- Regulator tap (Fig. 105,6) reserve bottle
- Primary bottle (Fig. 105,8)
- Reserve bottle (Fig. 105,7)

The Triomatic switching facility automatically switches gas feed from the primary bottle (Fig. 105,8) to the reserve bottle (Fig. 105,7) as soon as the primary bottle is either empty or no longer ready for operation. The heater may still continue operation.

The Triomatic switching facility consists of two gas pressure regulators (Fig. 105,2 and 5) and a system regulator (Fig. 105,4). The primary bottle gas pressure regulator (Fig. 105,2) is identified by a green identification plate, the reserve bottle gas pressure regulator (Fig. 105,5) is identified by a red plate. The operating status indicator (Fig. 105,3) on the system regulator can check the gas installation for tightness. The gas pressure regulators are fitted with combination connections and permit connection to all gas bottle sizes (3 kg to 33 kg).

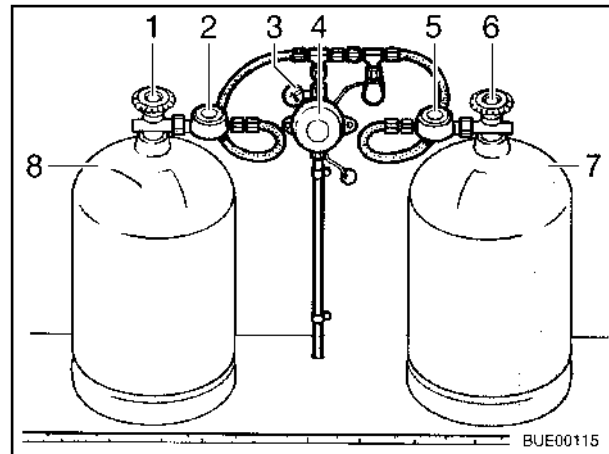


Fig. 105 Triomatic switching facility

Operation

- Open the regulator tap (Fig. 105,6) of the reserve bottle (Fig. 105,7).
- Open the regulator tap (Fig. 105,1) of the primary bottle (Fig. 105,8).

Both gas pressure regulators are now ventilated. The system regulator (Fig. 105,4) supplies the consumers with the respective pressure, regardless of whether the primary or reserve bottle is delivering gas. A green or red field on the operating status indicator (Fig. 105,3) shows which gas bottle is supplying gas.



- ▷ For operation with just one gas bottle, the primary bottle gas pressure regulator (Fig. 105,2) is to be connected.

Changing gas bottles

If the operating status indicator (Fig. 105,3) is in the red range, the primary bottle (Fig. 105,8) must be changed.

- Close the regulator tap (Fig. 105,1) of the primary bottle (Fig. 105,8).
- Unscrew the primary bottle.



- ▷ All consumers can be supplied and further operated using the reserve bottle (Fig. 105,7) (red identification plate).

- Connect the full gas bottle to the primary bottle gas pressure regulator (Fig. 105,2).
- Open the regulator tap (Fig. 105,1) of the primary bottle. The primary bottle automatically supplies more gas.



- ▷ Occasionally use the reserve bottle (Fig. 105,7) as the primary bottle to check if the reserve bottle is sufficiently full.

Remote display

The remote display (Fig. 106) signals the vehicle interior which gas bottle is being used.

The switching facility has two operating modes:

- Winter operation "On and Heating"
- Summer operation "On"

To prevent gas installation faults during winter operation, the gas pressure regulator can be heated. The remote display may also be expanded by using two defrosters (accessories).

Set the operating mode with the rocker switch (Fig. 106,4).

- Winter operation "On and Heating" (Fig. 106,1)
- Off (Fig. 106,2)
- Summer operation "On" (Fig. 106,3)

The indicator lamps show which of the two gas bottles is supplying gas:

- Green indicator lamp: primary bottle (Fig. 105,8)
- Red indicator lamp: reserve bottle (Fig. 105,7)



► Also read the manufacturer's instruction manual.

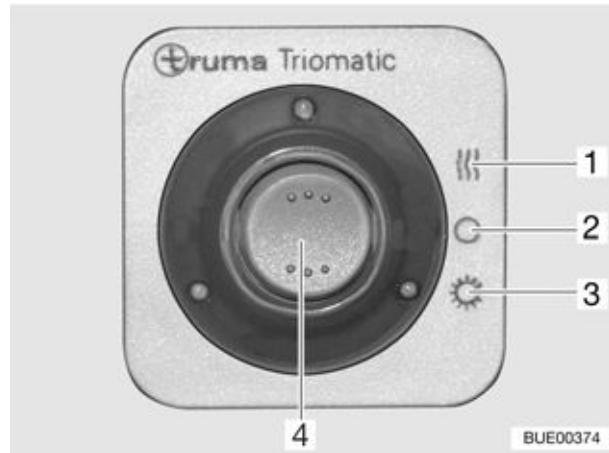


Fig. 106 Remote display

Chapter Overview

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

The instructions address the following topics:

- safety
- explanations of terms relating to the battery
- starter battery
- living area battery
- transformer/rectifier
- power pack
- connection to the 240 V power supply
- panel
- electrical wiring

Operation of the electric appliances of the motorhome is described in chapter 9.

8.1 General



- ▶ Only allow qualified persons to work on the electrical fittings.
- ▶ All electronic devices (e. g. mobile telephones, radios, televisions or DVD players) which have been retrofitted to the vehicle and are operated during the journey must have the following features:
 - CE certification
 - EMC inspected (electromagnetic compatibility)
 - "E1" inspected

Only in this way can the functional reliability of the vehicle be ensured. Otherwise the airbag may be triggered or interference to the on-board electronics may result.

8.2 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.

Open circuit current

Some electrical appliances, such as the clock and the indicator lamps, require continuous electric current. This open 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 off-load 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 12 V Power Supply

8.3.1 Starter Battery

The starter battery is fitted in the engine compartment. It serves for starting the engine and supplies the electrical appliances of the base vehicle as well as optional devices such as the radio, navigation system and the central locking system with voltage.

Discharging the starter battery



- ▷ Total discharge damages the battery.
- ▷ Recharge battery in good time.

A completely charged 90-Ah starter battery will be totally discharged via a closed circuit current (inactive appliances). Inactive appliances are optional devices such as a radio, alarm system, navigation system and a central locking system. Inactive appliances discharge the starter battery when the vehicle engine is switched off.

During periods of low outside temperatures, the starter battery will lose part of its capacity.

Charging the starter battery




- ▷ 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.
- ▷ The starter battery must be **completely** charged before a temporary lay-up of the vehicle.



- ▷ Do not connect the battery cables to the wrong poles.
- ▷ Do not run the motor with a disconnected starter or living area battery. Danger of short circuit!
- ▷ Before disconnecting the pole connections, turn off the motor and the 240 V and 12 V power supplies. There is a danger of short circuit when disconnecting!
- ▷ Observe the instruction manuals for the base vehicle and the charger.

The starter battery can only be fully charged with an external charger. If a 240 V power supply is used, the transformer/rectifier charges the starter battery with a float charge only. Even in mobile operation, the vehicle engine alternator has a limited capability of completely charging the starter battery.

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

- Turn off the vehicle engine.
- Turn off 12 V main switch on the panel (press ). The green indicator lamp or the LCD display will go off.
- On the transformer/rectifier, move the battery cut-off switch to the position "Batterie Aus" (battery off).
- 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 minus pole on the living area battery and then the positive.
- Check that the external charger is turned off.
- Connect the external charger to the starter battery. Pay attention to the polarity: First connect the positive terminal "+" to the positive pole of the starter battery, then connect the negative terminal "-" to the negative pole of the starter battery.
- Turn on the external charger.
- See the instructions for use of the connected charger for information concerning charge period required for the battery.
- See the specifications on the battery for information concerning its strength.
- Disconnect the charger in reverse order.

8.3.2 Living Area Battery



- ▷ The dryfill battery must not be opened.
- ▷ Prior to commencing a journey ensure the living area battery is fully charged. For this reason charge the battery for at least 20 hours before commencing the journey.
- ▷ During the trip, use every opportunity to charge the living area battery.
- ▷ Charge the living area battery for at least 20 hours after the journey.
- ▷ Charge the living area battery for at least 20 hours before every temporary lay-up.
- ▷ Use only the built-in transformer/rectifier to load the living area battery.
- ▷ 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.
- ▷ Before disconnecting or connecting the terminals of the living area battery, switch off the vehicle engine as well as the 240 V and 12 V power supply systems and all appliances.
- ▷ Do not run the engine with the living area battery disconnected. Danger of short circuit!
- ▷ Take note of the battery manufacturers users and maintenance instructions.
- ▷ Devices with a maximum of 10 A can be connected to the sockets of the 12 V power supply.



- ▷ 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.

When the motorhome is not connected to the 240 V power supply, the living area battery supplies the living area with 12 V DC. 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.

Position of the living area battery

Camp Classic:	under the driver's seat
Camp:	under the driver's seat
Camp GT:	under the driver's seat
B-Class (Fiat base vehicle):	underfloor storage compartment on the front left hand side
B Star-Line (Mercedes-Benz base vehicle):	depending on model, behind or next to the front passenger's seat or driver's seat in the floor pan
B-Class:	under the front passenger's seat
Tramp GT:	under the driver's seat

Discharging the living area battery



- ▷ Charge living area battery regularly.
- ▷ Total discharge damages the living area battery. Charge for at least 48 hours after total discharge.

The living area battery is discharged by the off-load current which some electrical appliances continuously require.

A completely charged 80 Ah living area battery will be totally discharged via a closed circuit current:

- after approximately 9 months with the safety/drainage valve switched off
- after approximately 1.5 months with the safety/drainage valve switched on

The self-discharge rate of the battery is dependant on temperature. At 20 to 25 °C the self-discharge rate is approx. 3 % of the capacity per month. The self-discharge rate will increase with rising temperatures: At 35 °C the self-discharge rate is approx. 20 % of the capacity per month.

At low outside temperatures the living area battery will also lose part of its charge capacity.

An older battery no longer has the complete capacity available.

The higher the number of active electrical appliances, the faster the energy of the living area battery is consumed.



- ▷ Further information can be obtained in the instruction manual for the living area battery.

Charging the living area battery

- Only use the transformer/rectifier to charge the living area battery. For this purpose connect the motorhome to a 240 V power supply system as often as possible.



- ▷ Further information can be obtained in the instruction manual for the living area battery.

8.4 Transformer/Rectifier



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

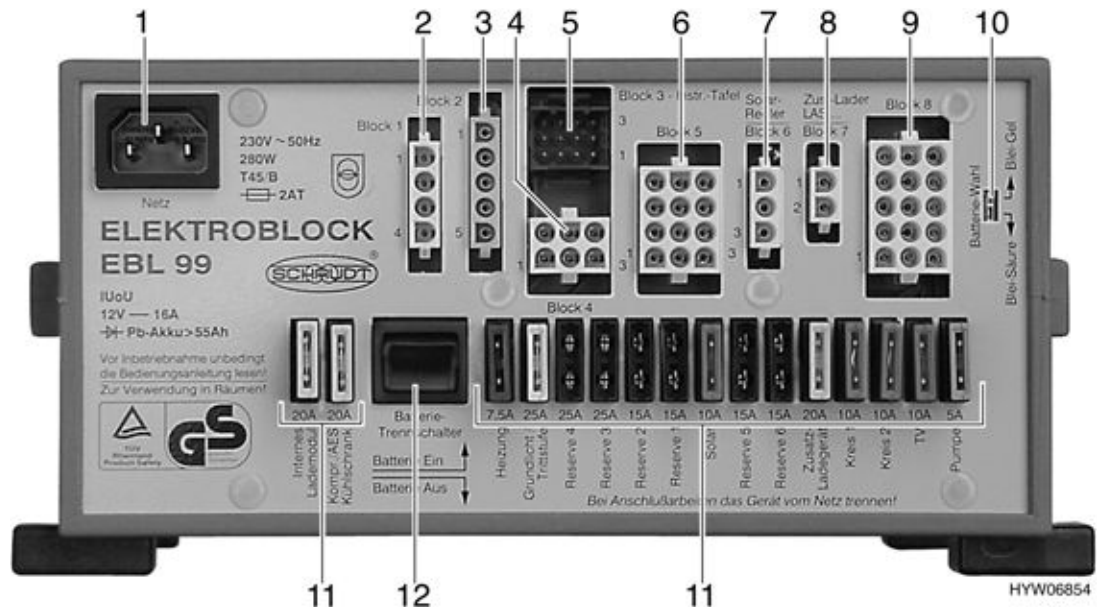


Fig. 107 Transformer/rectifier EBL 99 (variant 1)

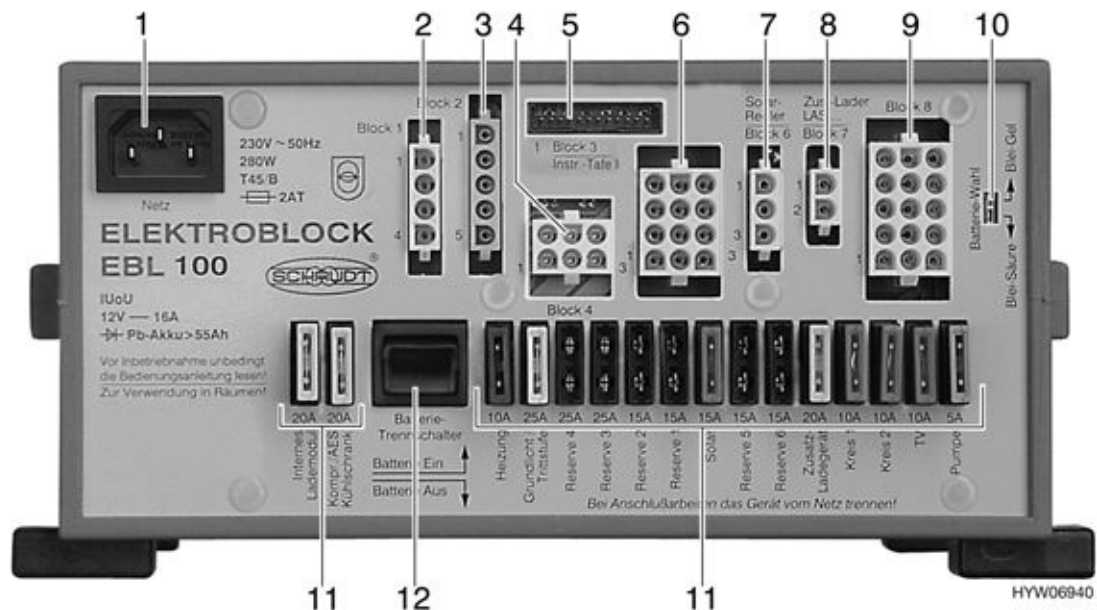


Fig. 108 Transformer/rectifier EBL 100 (variant 2)

- | | | | |
|---|--|----|---|
| 1 | Main supply socket 240 V~ | 7 | Output: block 6 - solar charge regulator (if fitted) |
| 2 | Output: block 1 - refrigerator | 8 | Output: block 7 - auxiliary charging unit |
| 3 | Output: block 2 - alternator D+ | 9 | Output: block 8 - consumer circuit 1, consumer |
| 4 | Output: block 4 - heater, safety/drainage valve, basic
light (lighting in the entrance area), entrance step | 10 | circuit 2, TV, water pump, spare 1, spare 5, spare 6 |
| 5 | Output: block 3 - panel | 11 | Battery selector switch, lead acid/dryfill option |
| 6 | Output: block 5 - solar cell (if fitted), spare 2, spare 3,
spare 4 | 12 | Fuses (see "Fuse rating" table) |
| | | | Battery cut-off switch, "Batterie Ein/Aus" (battery ON/
OFF) |

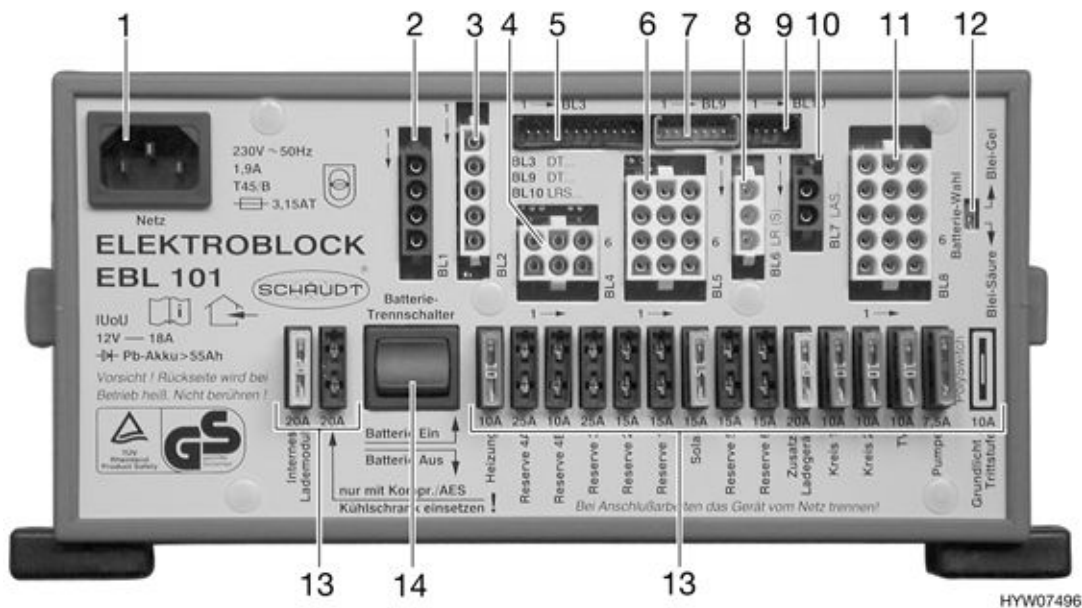


Fig. 109 Transformer/rectifier EBL 101 (variant 3)

- | | |
|---|--|
| 1 Main supply socket 240 V~ | 8 Output: block 6 - solar charge regulator (if fitted) |
| 2 Output: block 1 - refrigerator | 9 Output: block 10 - solar cell (if fitted) |
| 3 Output: block 2 - alternator D+ | 10 Output: block 7 - auxiliary charging unit |
| 4 Output: block 4 - heater, safety/drainage valve, basic light (lighting in the entrance area), entrance step | 11 Output: block 8 - consumer circuit 1, consumer circuit 2, TV, water pump, spare 1, spare 5, spare 6 |
| 5 Output: block 3 - panel | 12 Battery selector switch, lead acid/dryfill option |
| 6 Output: block 5 - spare 2, spare 3, spare 4 | 13 Fuses (see "Fuse rating" table) |
| 7 Output: block 9 - panel | 14 Battery cut-off switch battery On/Off |

Duty of the transformer/rectifier:

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

The transformer/rectifier only works in conjunction with the panel (Fig. 110, Fig. 111, Fig. 117 or Fig. 122).

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

Position of the transformer/rectifier

Camp Classic:	underneath the front passenger's seat in the seat console
Camp:	underneath the front passenger's seat in the seat console
Camp GT:	underneath the front passenger's seat in the seat console
B-Class:	in the cabinet under the window on the front passenger side
B Star-Line:	underneath the driver's seat in the seat console
B-Classic:	in the cabinet under the window on the front passenger side
Tramp GT:	underneath the front passenger's seat in the seat console

Battery cut-off switch

The battery cut-off switch (Fig. 107,12, Fig. 108,12 or Fig. 109,14) disconnects all the living area 12 V appliances, even the safety/drainage valve. This prevents the living area battery from slowly discharging if the motorhome is not used for a longer period of time (e. g. temporary lay-up).

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



- ▷ When the battery cut-off switch is OFF, the safety/drainage valve opens. The water flows out of the boiler.
- ▷ When the battery cut-off switch is turned back on, or once the living area battery terminals have been disconnected and then reconnected, the 12 V main switch must be briefly switched back on. This will reactivate the basic light (lighting in the entrance area), entrance step, heater and spare 4.

- Press the battery cut-off switch up: battery ON.
- Press the battery cut-off switch down: battery OFF.

Battery monitor

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

If the battery voltage falls below 10.5 V, the battery monitor switches off all of the 12 V appliances, excluding the safety/drainage valve.

An AES refrigerator will automatically switch to gas operation.

- Switch off all appliances that are not absolutely essential at the appropriate switch.

If necessary, use the 12 V main switch (Fig. 110,8, Fig. 111,8, Fig. 117,4 or Fig. 122,8) to switch the 12 V supply back on for brief operation. This is only possible, however, when the battery voltage is above 11 V. If the voltage is below this level, the 12 V supply cannot be switched on again until the living area battery has been recharged.



- ▷ You must fully recharge a discharged living area battery as soon as possible.

Charging the battery

If the motorhome is connected to the 240 V power supply, the living area battery is charged by the transformer/rectifier. The transformer/rectifier charges the starter battery with a float charge only.

Battery selector switch



- If the battery selector switch is wrongly set, there is a danger that oxyhydrogen gas could build up and explode.



- Incorrect setting of the battery selector switch damages the living area battery.
- The factory settings of the battery selector switch (Fig. 107,10, Fig. 108,10 or Fig. 109,12) ("dryfill") must not be changed.



- Further information can be obtained from the separate instruction manual "Transformer/rectifier".

8.5 Panel (Variant 1)

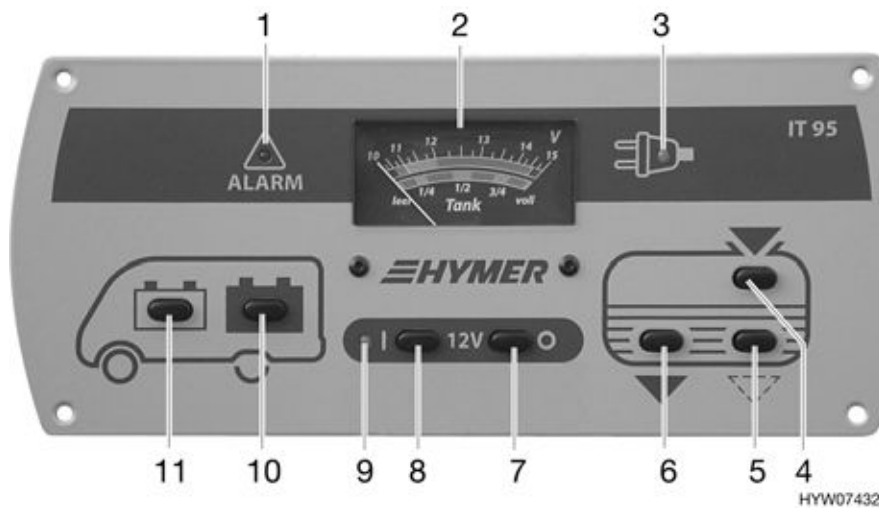




Fig. 110 Panel (variant 1)

- | | |
|--|--|
| 1 ALARM warning light for the living area battery | 7 12 V main switch "OFF" |
| 2 V/tank gauge | 8 12 V main switch "ON" |
| 3 240 V indicator lamp | 9 12 V indicator lamp |
| 4 Switch for reading the filling level in the water tank | 10 Switch for reading the battery voltage of the living area battery |
| 5 Without function | 11 Switch for reading the battery voltage of the starter battery |
| 6 Switch for reading the filling level in the waste water tank | |

8.5.1 V/Tank Gauge for Battery Voltage and Water or Waste Water Levels

Displaying the battery voltage of the starter battery or living area battery:

With the V/tank gauge (Fig. 110,2), note the top scale. The gauge automatically lights up as soon as a switch is pressed.

- Press switch (Fig. 110,11) : the battery voltage of the starter battery is displayed.
- Press switch (Fig. 110,10) : the battery voltage of the living area battery is displayed.

The table below will help you correctly interpret the displayed battery voltage of the living area battery.

Battery voltage (values under operation, not for off-load voltage)	Battery operation vehicle stationary, no 240 V connection	Mobile operation vehicle moving, no 240 V connection	Power operation vehicle stationary, 240 V connection		
11 V or less	- Appliances OFF: Battery flat Total discharge! ⇒ Completely charge battery - Appliances ON: battery overload ⇒ Switch off all the appliances	12 V power supply overload Total discharge! ⇒ Switch off all appliances, completely charge the battery - No charge Faulty alternator control ⇒ Have a specialist workshop repair it		- No charge Transformer/rectifier defective ⇒ Have a specialist workshop repair it	
11.1 V to 13.2 V	Values during operation: Normal range	If the voltage does not get any higher after several hours: 12 V power supply overload ⇒ Switch off all the appliances - Faulty alternator control ⇒ Have a specialist workshop repair it		- Transformer/rectifier defective ⇒ Have a specialist workshop repair it	
	Values for off-load voltage				Charging condition of the battery
	12.3 V 12.5 V > 12.8 V				50 % 75 % 100 %
13.3 V to 13.7 V	Occurs only briefly after charging in mobile or 240 V operation	Battery being charged			
13.8 V to 14.4 V	—	Battery being charged			
More than 14.4 V	—	Battery being overloaded - Faulty alternator control ⇒ Have a specialist workshop repair it			- Transformer/rectifier defective ⇒ Have a specialist workshop repair it



▷ An extended period of total discharge may cause irreparable damage to the living area battery.

Battery alarm for the living area battery:

The red ALARM warning light (Fig. 110,1) flashes as soon as the voltage of the living area battery falls below 11 V (measured under operation) and there is a risk of a total discharge.



- ▷ When the battery alarm comes on, switch off the appliances and completely charge the living area battery, either by mobile operation or by connection to a 240 V power supply.
- ▷ An extended period of total discharge may cause irreparable damage to the living area battery.




- ▷ If the voltage of the living area battery falls below 10.5 V, the battery monitor in the transformer/rectifier switches off all of the 12 V appliances, excluding the safety/drainage valve.

Displaying water or waste water volumes:

With the V/tank gauge (Fig. 110,2), note the bottom scale. The gauge automatically lights up as soon as a switch is pressed.

- Press switch (Fig. 110,4) : the volume of water is displayed.

- Press switch (Fig. 110,6) : the volume of waste water is displayed.



- ▷ Do not keep the tank levels called up for long. Calling up and displaying for a long time can damage the transducers.

8.5.2 12 V Main Switch

The 12 V main switch (Fig. 110,7 and 8) switches the 12 V supply to the living area on and off. Exception: entrance step, lighting in the entrance area, heater and spare 4 remain ready for operation.

- Press switch (Fig. 110,8) "I": the 12 V living area power supply is switched on. The green indicator lamp (Fig. 110,9) illuminates.
- Press switch (Fig. 110,7) "O": the 12 V living area power supply is switched off. The indicator lamp (Fig. 110,9) goes out.



- ▷ To prevent unnecessary discharging of the living area battery, turn off the 12 V main switch whenever you leave the vehicle.
- ▷ Appliances such as the safety/drainage valve, charger, solar regulator and panel consume approx. 20 mA to 65 mA of electricity from the battery capacity, even when the main switch is turned off. Therefore, you should switch the battery cut-off switch on the transformer/rectifier to "Batterie Aus" (battery OFF) when the vehicle is not used for a long period of time.

8.5.3 12 V Indicator Lamp

The 12 V indicator lamp (Fig. 110,9) illuminates whenever the 12 V main switch (Fig. 110,8) is switched on.

8.5.4 240 V Indicator Lamp


The yellow 240 V indicator lamp (Fig. 110,3) illuminates whenever line voltage is available at the transformer/rectifier input.

8.6 Panel (Variant 2)

8.6.1 12 V Main Switch

The 12 V main switch (Fig. 111,8) switches the panel and the 12 V supply to the living area on and off.

Exception: Safety/drainage valve, heater, basic light (lighting in the entrance area), entrance step and spare 4 on the transformer/rectifier are always ready to operate.

- Press key (Fig. 111,8): the 12 V living area power supply is switched on. The LCD display (Fig. 111,7) shows the basic menu and is lit for 20 seconds. Additionally, in the event of an alarm, the relevant alarm display appears.
- Press key (Fig. 111,8): the 12 V living area power supply is switched off. To confirm,  is displayed for 3 seconds. The LCD display disappears afterwards.



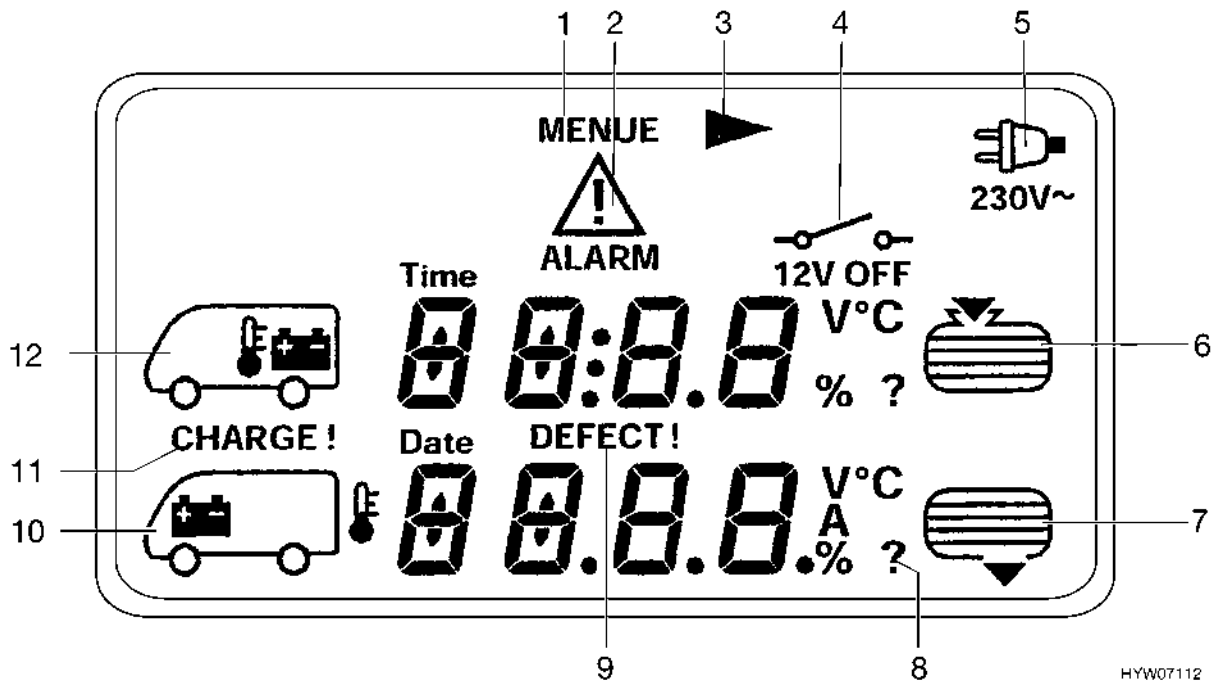
- ▷ To prevent unnecessary discharging of the living area battery, turn off the 12 V main switch whenever you leave the vehicle.
- ▷ Appliances such as the safety/drainage valve, charger, solar regulator and control panel consume approximately 20 mA to 65 mA of electricity from the battery capacity, even when the 12 V main switch is off. Therefore, you should switch the battery cut-off switch on the transformer/rectifier to "Batterie Aus" (battery OFF) when the motorhome is not used for a long period of time.



Fig. 111 Panel (variant 2)

- 1 Key basic-menu
- 2 Key battery-menu
- 3 Key setting-menu
- 4 Key to move flashing menu point upwards or to increase a selected value
- 5 Key to move flashing menu point downwards or to reduce a selected value
- 6 Key to select menu point and to confirm settings
- 7 LCD display
- 8 Key 12 V main switch
- 9 Key tank-menu

8.6.2 LCD Display



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Fig. 112 Symbol diagram on the LCD display

- 1 Service menu and settings menu
- 2 Battery alarm or tank alarm
- 3 Arrow for additional menu pages
- 4 12 V OFF display (3 seconds)
- 5 240 V power supply is connected
- 6 Water tank level
- 7 Waste water tank level
- 8 Display for unclear measurements
- 9 Display for defective level or temperature sensors
- 10 Starter battery/external temperature
- 11 Battery alarm
- 12 Living area battery/internal temperature



- ▷ The arrow ► (Fig. 112,3) in the LCD display indicates that the selected menu consists of several pages.
When the used menu-keys are pressed repeatedly, the next menu-page appears.
- ▷ 20 seconds after the last key has been pressed the basic-menu always appears unlit.

Basic-menu

The basic-menu (Fig. 113) is always shown after switching on with the 12 V main switch (Fig. 111,8). When keys are pressed the LCD display is lit automatically.

- Press key (Fig. 111,1): the basic-menu appears.

The basic-menu contains the following information:

- Net control (Fig. 113,2): symbol appears when motorhome is connected to 240 V supply.
- Date (Fig. 113,3)
- Time (Fig. 113,1)
- External temperature in °C (menu page 2)
- Inside temperature in °C (menu page 2)



- ▷ The temperature menu appears and the "?" flashes if the temperature sensors are defective or if the temperature measured lies outside of the measuring range of -40 °C to +60 °C.

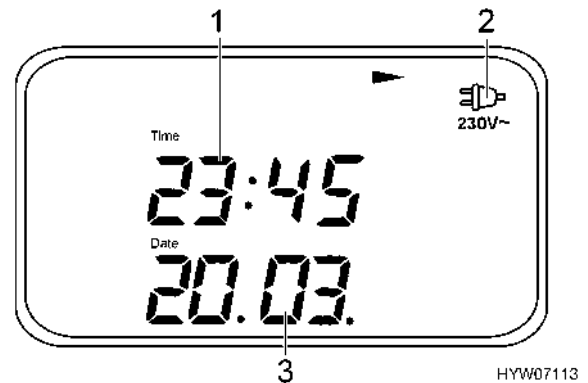


Fig. 113 Basic-menu (page 1)

Battery-menu

When keys are pressed the LCD display is lit automatically.

- Press key (Fig. 111,2): the battery-menu (Fig. 114) appears.

The battery-menu contains the following information:

- Voltage (V), charging current (+A) and discharging current (-A) of the living area battery (Fig. 114,1)
- Voltage (V) of the starter battery (menu page 2)
The shown value is telling only when the battery is in idle condition.

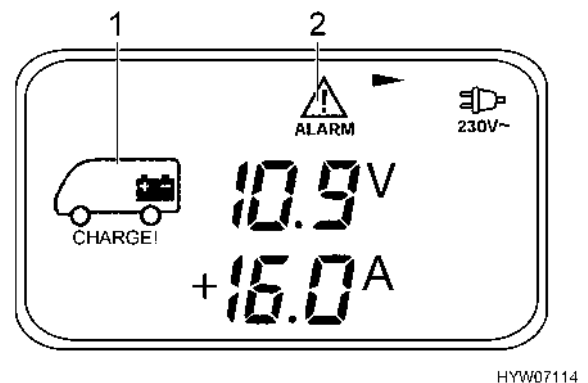


Fig. 114 Battery-menu (living area battery)

The table below will help you correctly interpret the displayed battery voltage of the living area battery.

Battery voltage (values under operation, not for off-load voltage)	Battery operation vehicle stationary, no 240 V connection	Mobile operation vehicle moving, no 240 V connection	Power operation vehicle stationary, 240 V connection												
10.5 V or less	- Appliances OFF: Battery flat Total discharge! ⇒ Completely charge battery - Appliances ON: Battery overload ⇒ Switch off all the appliances	12 V power supply overload Total discharge! ⇒ Switch off all appliances, completely charge the battery - No charge Faulty alternator control ⇒ Have a specialist workshop repair it	- No charge Transformer/rectifier defective ⇒ Have a specialist workshop repair it												
Over 11 V	The 12 V supply can be switched on with the 12 V main switch														
12 V to 13.2 V	Values during operation: Normal range <table><tr><td>Values for off-load voltage</td><td>Charging condition of the battery</td></tr><tr><td>12.0 V</td><td>0 %</td></tr><tr><td>12.2 V</td><td>25 %</td></tr><tr><td>12.3 V</td><td>50 %</td></tr><tr><td>12.5 V</td><td>75 %</td></tr><tr><td>> 12.8 V</td><td>100 %</td></tr></table>	Values for off-load voltage	Charging condition of the battery	12.0 V	0 %	12.2 V	25 %	12.3 V	50 %	12.5 V	75 %	> 12.8 V	100 %	If the voltage does not get any higher after several hours: 12 V power supply overload ⇒ Switch off all the appliances - Faulty alternator control ⇒ Have a specialist workshop repair it	- Transformer/rectifier defective ⇒ Have a specialist workshop repair it
Values for off-load voltage	Charging condition of the battery														
12.0 V	0 %														
12.2 V	25 %														
12.3 V	50 %														
12.5 V	75 %														
> 12.8 V	100 %														
13.2 V to 14.3 V	—	Battery being charged													
Over 14.3 V	—	Battery being overloaded - Faulty alternator control ⇒ Have a specialist workshop repair it		- Transformer/rectifier defective ⇒ Have a specialist workshop repair it											



▷ An extended period of total discharge may cause irreparable damage to the living area battery.

Tank-menu

When keys are pressed the LCD display is lit automatically.

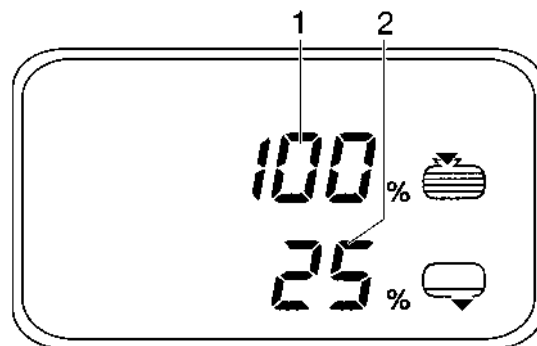
- Press key (Fig. 111,9): the tank-menu (Fig. 115) appears.

The tank-menu contains the following information:

- Filling level of the water tank (Fig. 115,1)
- Filling level of the waste water tank (Fig. 115,2)



- ▷ In the Camp GT model range, the water tank holds 120 l, however the volume has been limited to 70 l (overflow installed) due to reasons of safety. The panel has not been adjusted to this volume. Therefore, the LCD display only shows "50 %" when the water tank is as full as possible.



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Fig. 115 Tank-menu

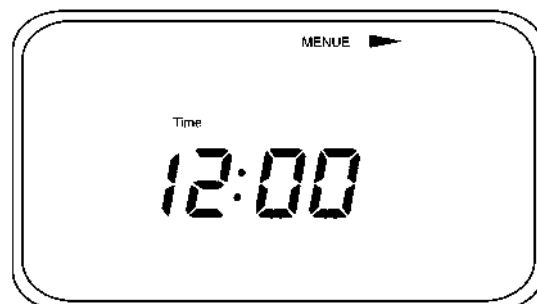
Setting-menu

When keys are pressed the LCD display is lit automatically.

- Press the "MENUE" key (Fig. 111,3) for more than 3 seconds: the setting-menu (Fig. 116) appears.

The setting-menu contains the following information:

- Time
- Date (menu page 2)
- Software version (menu page 3)



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Fig. 116 Setting-menu (page 1)

Set the time:

- Press the "MENUE" key (Fig. 111,3) once.
- Use keys (Fig. 111,4 and 5) to change each flashing number and key (Fig. 111,6) to confirm.

Set date:

- Press the "MENUE" key (Fig. 111,3) twice.
- Use keys (Fig. 111,4 and 5) to change each flashing number and key (Fig. 111,6) to confirm.

Displaying the software version:



- ▷ The software version can be displayed, but not adjusted.

- Press the "MENUE" key (Fig. 111,3) three times. The software version is displayed.

Battery alarm for the living area battery

The battery-menu appears and the symbols (Fig. 114,1 and 2) flash as soon as the voltage of the living area battery falls below 11 V (measured under operation) and there is the threat of a total discharge. Additionally, the voltage indicator flashes.



- ▷ When the battery alarm comes on, switch off the appliances and completely charge the living area battery, either by mobile operation or by connection to a 240 V power supply.
- ▷ An extended period of total discharge may cause irreparable damage to the living area battery.



- ▷ If the voltage of the living room battery falls below 10.5 V, the battery monitor in the transformer/rectifier switches off all of the 12 V appliances, excluding the safety/drainage valve.

Tank alarm

The tank-menu appears and the corresponding symbol flashes when the water tank is empty or the waste water tank is full. Additionally, the alarm symbol and the corresponding percentage indicator flash (Fig. 115,1 or 2).

- Fill water tank or empty waste water tank (see chapter 10).



- ▷ When the tank sensors are defective, the tank menu appears and "?" flashes.

Activating or deactivating the tank alarm:

When keys are pressed the LCD display is lit automatically.

- Press the tank menu key (Fig. 111,9).
- Press the "MENUE" key (Fig. 111,3) for more than 3 seconds. The tank settings menu is displayed.
- Switch on ("ON") or switch off ("OFF") the tank alarm with the keys (Fig. 111,4 and 5) and confirm with the "OK" key (Fig. 111,6).

8.7 Panel (Variant 3)

8.7.1 12 V Main Switch

The 12 V main switch (Fig. 117,4) switches the panel and the 12 V supply to the living area on and off.

Exception: heating, basic light (lighting in the entrance area) entrance step and spare 4 on the transformer/rectifier are always ready to operate.

- Press key (Fig. 117,4): the 12 V living area power supply is switched on. The LCD display (Fig. 117,5) shows the basic-menu and stays lit for 20 seconds.
- Press key (Fig. 117,4): the 12 V living area power supply is switched off. The LCD display fades.



- ▷ To prevent unnecessary discharging of the living area battery, turn off the 12 V main switch whenever you leave the vehicle.
- ▷ Appliances such as the frost protection valve, charger, solar regulator and control panel consume approximately 20 mA to 65 mA of electricity from the battery capacity, even when the 12 V main switch is off. Therefore, you should switch the battery cut-off switch on the transformer/rectifier to "Batterie Aus" (battery OFF) when the motorhome is not used for a long period of time.

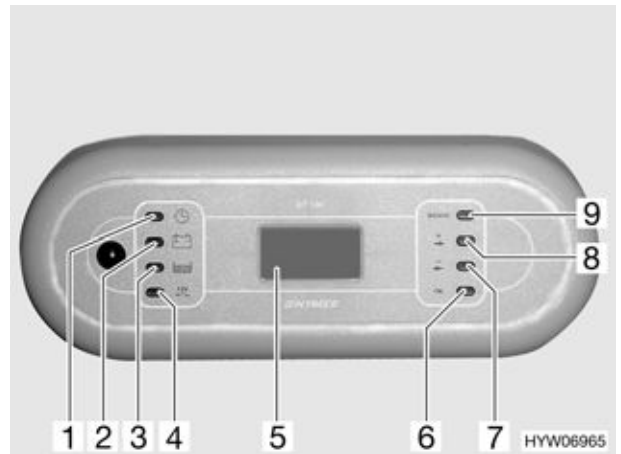


Fig. 117 Panel (variant 3)

- 1 Key basic-menu
- 2 Key battery-menu
- 3 Key tank-menu
- 4 Key 12 V main switch
- 5 LCD display
- 6 Key to select menu point and to confirm settings
- 7 Key to move flashing menu point downwards or to reduce a selected value
- 8 Key to move flashing menu point upwards or to increase a selected value
- 9 Key setting-menu

8.7.2 LCD Display

Basic-menu

The basic-menu (Fig. 118) is always shown after switching on with the 12 V main switch (Fig. 117,4). When keys are pressed the LCD display is lit automatically.

- Press key (Fig. 117,1): the basic-menu appears.

The basic-menu shows the following information:

- Net control (Fig. 118,1): symbol appears when the motorhome is connected to 240 V supply.
- Date (Fig. 118,2)
- Time (Fig. 118,3)
- External temperature (Fig. 118,4) in °C
- Internal temperature (Fig. 118,5) in °C



- ▷ 20 seconds after the last key has been pressed the basic-menu always appears unlit.

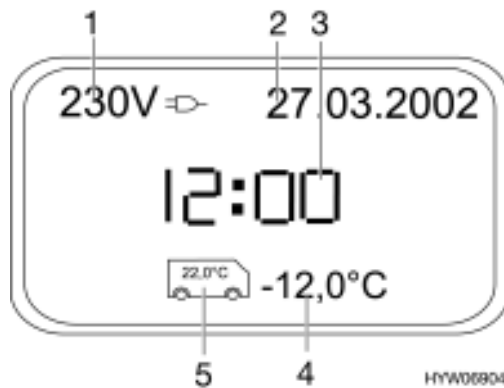


Fig. 118 Basic-menu

Battery-menu

When keys are pressed the LCD display is lit automatically.

- Press key (Fig. 117,2): the battery-menu (Fig. 119) appears.

The battery-menu shows the following information:

- Voltage (V), charging current (+A) and discharging current (-A) of the living area battery (Fig. 119,1)
- Voltage (V) of the starter battery (Fig. 119,2)
The shown value is telling only when the battery is in idle condition.

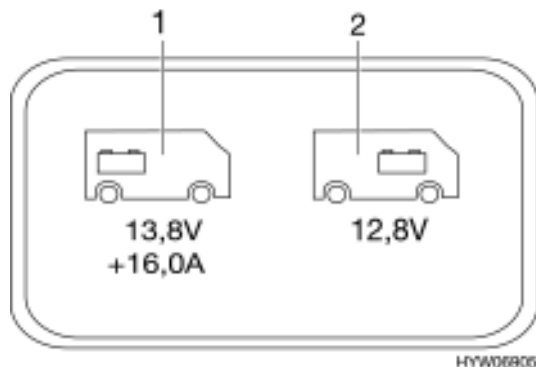


Fig. 119 Battery-menu

The table below will help you correctly interpret the displayed battery voltage of the living area battery.

Battery voltage (values under operation, not for off-load voltage)	Battery operation vehicle stationary, no 240 V connection	Mobile operation vehicle moving, no 240 V connection	Power operation vehicle stationary, 240 V connection		
10.5 V or less	- Appliances OFF: Battery flat Total discharge! ⇒ Completely charge battery - Appliances ON: battery overload ⇒ Switch off all the appliances	12 V power supply overload Total discharge! ⇒ Switch off all appliances, completely charge the battery - No charge Faulty alternator control ⇒ Have a specialist workshop repair it		- No charge Transformer/rectifier defective ⇒ Have a specialist workshop repair it	
12 V to 12.8 V	Values during operation: Normal range	If the voltage does not get any higher after several hours: 12 V power supply overload ⇒ Switch off all the appliances - Faulty alternator control ⇒ Have a specialist workshop repair it		- Transformer/rectifier defective ⇒ Have a specialist workshop repair it	
	Values for off-load voltage				Charging condition of the battery
	12.3 V 12.5 V > 12.8 V				50 % 75 % 100 %
12.8 V to 13.2 V	Occurs only briefly after charging in mobile or 240 V operation	Battery being charged			
13.2 V to 14.3 V	—	Battery being charged			
More than 14.3 V	—	Battery being overloaded - Faulty alternator control ⇒ Have a specialist workshop repair it			- Transformer/rectifier defective ⇒ Have a specialist workshop repair it



▷ An extended period of total discharge may cause irreparable damage to the living area battery.

Tank-menu

When keys are pressed the LCD display is lit automatically.

- Press key (Fig. 117,3): the tank-menu (Fig. 120) appears.

The tank-menu shows the following information:

- Filling level of the water tank (Fig. 120,1)
- Filling level of the waste water tank (Fig. 120,2)

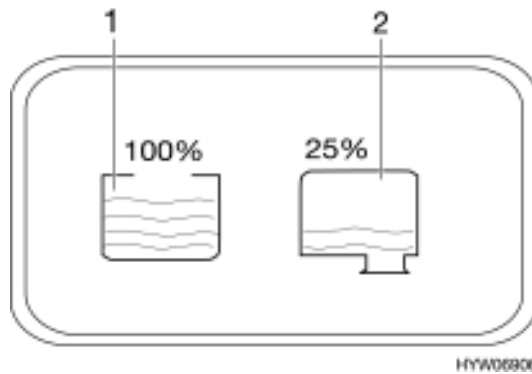


Fig. 120 Tank-menu

Setting-menu

When keys are pressed the LCD display is lit automatically.

- Press key (Fig. 117,9): the setting-menu (Fig. 121) appears.

The setting-menu shows the following information:

- Time (Fig. 121,3)
- Date (Fig. 121,2)
- Alarm (Fig. 121,1):
"ON": the alarm functions are activated
"OFF": the alarm functions are de-activated

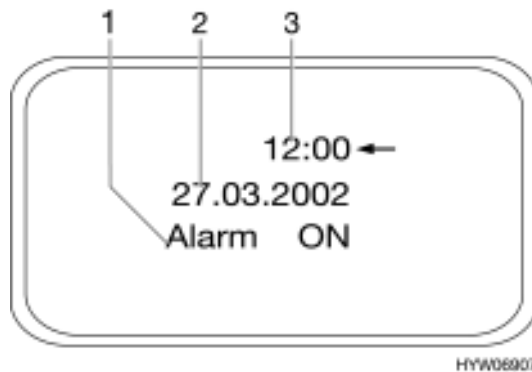


Fig. 121 Setting-menu

Time and date can be set.

Set the time:

- Use keys (Fig. 117,7 and 8) to select time and key (Fig. 117,6) to change.
- Use keys (Fig. 117,7 and 8) to select minutes or hours and wait until the display selected flashes.
- Use keys (Fig. 117,7 and 8) to change each number and key (Fig. 117,6) to confirm. Now another choice for changes can be made.
- Use key (Fig. 117,6) to confirm set time.

Set date:

- Use keys (Fig. 117,7 and 8) to select date and key (Fig. 117,6) to change.
- Use keys (Fig. 117,7 and 8) to select month and year and wait until the display selected flashes.
- Use keys (Fig. 117,7 and 8) to change each number and key (Fig. 117,6) to confirm. Now another choice for changes can be made.
- Use key (Fig. 117,6) to confirm set date.

Battery alarm for the living area battery

The battery-menu appears and the symbol (Fig. 119,1) flashes as soon as the voltage of the living area battery falls below 11 V (measured under operation) and there is the threat of a total discharge.



- ▷ When the battery alarm comes on, switch off the appliances and completely charge the living area battery, either by mobile operation or by connection to a 240 V power supply.
- ▷ An extended period of total discharge may cause irreparable damage to the living area battery.



- ▷ If the voltage of the living area battery falls below 10.5 V, the battery monitor in the transformer/rectifier switches off all of the 12 V appliances, excluding the safety/drainage valve.

Tank alarm

The tank-menu appears and the corresponding symbol (Fig. 120,1 or 2) flashes when the water tank is empty or the waste water tank is full.


- Fill water tank or empty waste water tank (see chapter 10).

8.8 Panel (Variant 4)

8.8.1 12 V Main Switch

The 12 V main switch (Fig. 122,8) switches the panel and the 12 V supply to the living area on and off.

Exception: Safety/drainage valve, heater, basic light (lighting in the entrance area), entrance step, spare 4 on the transformer/rectifier and an AES refrigerator are always ready to operate.

- Press key (Fig. 122,8): the 12 V living area supply is switched on. The LCD display (Fig. 122,7) shows the basic-menu and is lit for 20 seconds. Additionally, in the event of an alarm, the relevant alarm display appears.
- Press key (Fig. 122,8): the 12 V living area supply is switched off. To confirm,  is displayed for 3 seconds. The LCD display disappears afterwards.



- ▷ To prevent unnecessary discharging of the living area battery, turn off the 12 V main switch whenever you leave the vehicle.
- ▷ Appliances such as the safety/drainage valve, charger, solar regulator and panel consume approx. 20 mA to 65 mA of electricity from the battery capacity, even when the 12 V main switch is turned off. Therefore, you should switch the battery cut-off switch on the transformer/rectifier to "Batterie Aus" (battery OFF) when the motorhome is not used for a long period of time.



Fig. 122 Panel (variant 4)

- 1 Key basic-menu
- 2 Key battery-menu
- 3 Key setting-menu
- 4 Key to move flashing menu point upwards or to increase a selected value
- 5 Key to move flashing menu point downwards or to reduce a selected value
- 6 Key to select menu point and to confirm settings
- 7 LCD display
- 8 Key 12 V main switch
- 9 Key tank-menu

8.8.2 LCD display

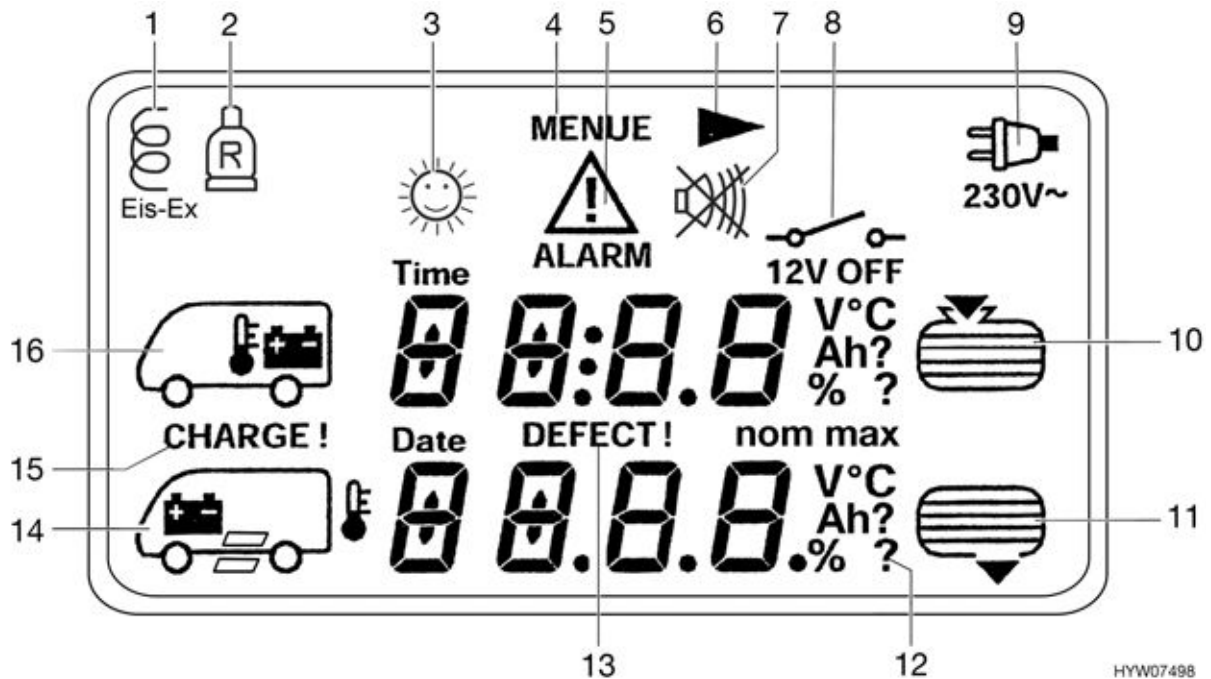


Fig. 123 Symbol diagram on the LCD display

- 1 Defroster switched on (optional)
- 2 Reserve bottle in operation (optional)
- 3 Solar energy (optional)
- 4 Service-menu and setting-menu
- 5 Battery alarm or tank alarm
- 6 Arrow for additional menu pages
- 7 Optical display for buzzer/warning that buzzer is switched off
- 8 12 V OFF display (3 seconds)
- 9 240 V power supply is connected
- 10 Water tank level
- 11 Waste water tank level
- 12 Display for unclear measurements
- 13 Display for defects to battery, tank level sensors or temperature sensors
- 14 Starter battery/external temperature/entrance step
- 15 Command to charge the battery
- 16 Living area battery/internal temperature



- ▷ The arrow ► (Fig. 123,6) in the LCD display indicates that the selected menu consists of several pages.
When the used menu-keys are pressed repeatedly, the next menu-page appears.
- ▷ 20 seconds after the last key has been pressed the basic-menu always appears unlit.

Basic-menu

The basic-menu (Fig. 124) is always shown after switching on with the 12 V main switch (Fig. 122,8). When keys are pressed the LCD display is lit automatically.

■ Press key (Fig. 122,1): the basic-menu appears.

The basic-menu contains the following information:

- Net control (Fig. 124,4): symbol appears when the motorhome is connected to 240 V supply.
- Date (Fig. 124,5)
- Time (Fig. 124,3)
- Entrance step (Fig. 124,6): symbol appears when the entrance step is extended.
- Symbol display for the special equipment (Fig. 124,1 and 2): the gas bottle symbol appears when one of the two gas bottles is empty.
- External temperature in °C (menu page 2)
- Internal temperature in °C (menu page 2)



Fig. 124 Basic-menu (page 1)



- ▷ The temperature menu appears and the "?" flashes if the temperature sensors are defective or if the temperature measured lies outside of the measuring range of -40 °C to +60 °C.

Battery-menu

When keys are pressed the LCD display is lit automatically.

■ Press key (Fig. 122,2): the battery-menu (Fig. 125) appears.

The battery-menu contains the following information:

- Battery capacity (% or Ah) (Fig. 125,2), charging current (+A) (Fig. 125,3) and discharging current (-A) of the living area battery (Fig. 125,1). To change from % display to Ah display: press "OK" key (Fig. 122,6).
- Voltage (V) of the living area battery and the starter battery (menu page 2)
The shown value for the starter battery is telling only when the battery is in idle condition.
- Solar energy of the living area battery (menu page 3)

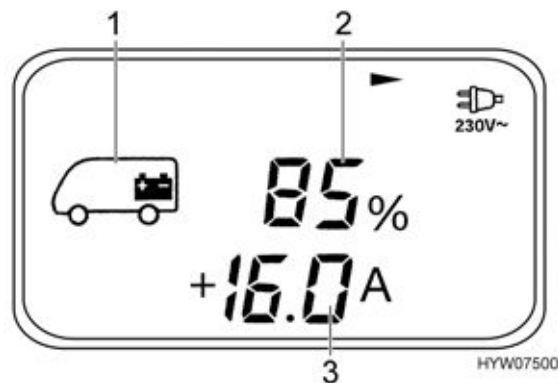


Fig. 125 Battery-menu (living area battery)

The table below will help you correctly interpret the displayed battery voltage of the living area battery.

Battery voltage (values under operation, not for off-load voltage)	Battery operation vehicle stationary, no 240 V connection	Mobile operation vehicle moving, no 240 V connection	Power operation vehicle stationary, 240 V connection													
10.5 V or less	- Appliances OFF: Battery flat Total discharge! ⇒ Completely charge battery - Appliances ON: battery overload ⇒ Switch off all the appliances	12 V power supply overload Total discharge! ⇒ Switch off all appliances, completely charge the battery - No charge Faulty alternator control ⇒ Have a specialist workshop repair it		- No charge Transformer/rectifier defective ⇒ Have a specialist workshop repair it												
Over 11 V	The 12 V supply is switched on with the 12 V main switch															
12 V to 13.2 V	Values during operation: Normal range <table><tr><td>Values for off-load voltage</td><td>Charging condition of the battery</td></tr><tr><td>12.0 V</td><td>0 %</td></tr><tr><td>12.2 V</td><td>25 %</td></tr><tr><td>12.3 V</td><td>50 %</td></tr><tr><td>12.5 V</td><td>75 %</td></tr><tr><td>> 12.8 V</td><td>100 %</td></tr></table>	Values for off-load voltage	Charging condition of the battery	12.0 V	0 %	12.2 V	25 %	12.3 V	50 %	12.5 V	75 %	> 12.8 V	100 %	If the voltage does not get any higher after several hours: 12 V power supply overload ⇒ Switch off all the appliances - Faulty alternator control ⇒ Have a specialist workshop repair it		- Transformer/rectifier defective ⇒ Have a specialist workshop repair it
Values for off-load voltage	Charging condition of the battery															
12.0 V	0 %															
12.2 V	25 %															
12.3 V	50 %															
12.5 V	75 %															
> 12.8 V	100 %															
13.2 V to 14.3 V	—															
More than 14.3 V	—															
		Battery being charged														
		Battery being overloaded														
		- Faulty alternator control ⇒ Have a specialist workshop repair it	- Transformer/rectifier defective ⇒ Have a specialist workshop repair it													



▷ An extended period of total discharge may cause irreparable damage to the living area battery.

Tank-menu

When keys are pressed the LCD display is lit automatically.

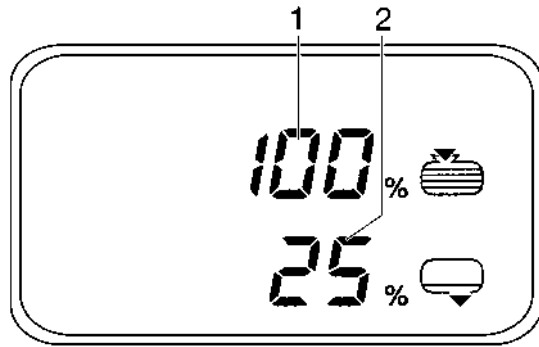
- Press key (Fig. 122,9): the tank-menu (Fig. 126) appears.

The tank-menu contains the following information:

- Filling level of the water tank (Fig. 126,1)
- Filling level of the waste water tank (Fig. 126,2)



- ▷ In the B-Class model range, as well as in the B 630 Star-Line and the B 655 Star-Line models, the water tank holds 120 l, however the volume has been limited to 70 l (overflow installed) due to reasons of safety. The panel has not been adjusted to this volume. Therefore, the LCD display only shows "50 %" when the water tank is as full as possible.



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Fig. 126 Tank-menu

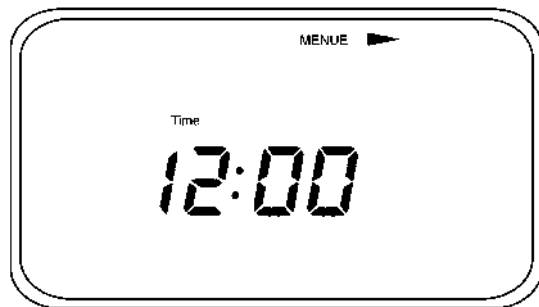
Setting-menu

When keys are pressed the LCD display is lit automatically.

- Press the "MENUE" key (Fig. 122,3) for more than 3 seconds: the setting-menu (Fig. 127) appears.

The setting-menu contains the following information:

- Defroster switched on/off (optional)
- Display of the greatest possible battery capacity (Ah max)
- Display of the battery capacity of the factory-installed battery (Ah nom)
- Time (menu page 2)
- Date (menu page 3)
- Software version and parameter number (menu page 4)



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Fig. 127 Setting-menu (page 2)

Switching defroster on and off:

- Press the "MENUE" key (Fig. 122,3) once.
- Switch on ("ON") or switch off ("OFF") the defroster with the keys (Fig. 122,4 and 5) and confirm with the "OK" key (Fig. 122,6).

Setting the time:



- ▷ If the gas system of the vehicle is equipped with a defroster, the "MENUE" key must be pressed twice to set the time.

- Press the "MENUE" key (Fig. 122,3) once.
- Use keys (Fig. 122,4 and 5) to change each flashing number and "OK" key (Fig. 122,6) to confirm.

Setting the date:



- ▷ If the gas system of the vehicle is equipped with a defroster, the "MENUE" key must be pressed three times to set the date.

- Press the "MENUE" key (Fig. 122,3) twice.
- Use keys (Fig. 122,4 and 5) to change each flashing number and "OK" key (Fig. 122,6) to confirm.

Displaying the software version:



- ▷ The software version and the four-digit parameter number can be displayed, but not adjusted.
- ▷ If the gas system of the vehicle is equipped with a defroster, the "MENUE" key must be pressed four times to display the software version.

- Press the "MENUE" key (Fig. 122,3) three times. The software version and the parameter number are displayed.

Battery alarm for the living area battery

The basic-menu appears and the symbols (Fig. 123,5, 15 and 16) flash as soon as the voltage of the living area battery falls below 12 V (measured under operation) and there is the threat of a total discharge. Additionally, the voltage indicator flashes in the battery menu.



- ▷ When the battery alarm comes on, switch off the appliances and completely charge the living area battery, either by mobile operation or by connection to a 240 V power supply.
- ▷ An extended period of total discharge may cause irreparable damage to the living area battery.



- ▷ If the voltage of the living area battery falls below 10.5 V, the battery monitor in the transformer/rectifier switches off all of the 12 V appliances, excluding the safety/drainage valve.

Battery capacity alarm for the living area battery

The basic-menu appears and the symbol (Fig. 123,16) flashes. The Ah-data and the "CHARGE!" command are also displayed in the battery menu.

Battery defect message for living area battery

The basic-menu appears and the symbol (Fig. 123,16) flashes. The "DEFECT!" display is also displayed in the battery menu.

Tank alarm

The basic-menu appears and the symbols (Fig. 123,5, 10 or 11) flash when the water tank is empty or the waste water tank is full. Additionally, the corresponding percentage indicator (Fig. 126,1 or 2) flashes in the tank menu.

- Fill water tank or empty waste water tank (see chapter 10).



▷ When the tank sensors are defective, the tank menu appears and "?" flashes.

Activating or deactivating the tank alarm:

When keys are pressed the LCD display is lit automatically.

- Press the tank-menu key (Fig. 122,9).
- Press the "MENUE" key (Fig. 122,3) for more than 3 seconds. The tank settings menu is displayed.
- Switch on ("ON") or switch off ("OFF") the tank alarm with the keys (Fig. 122,4 and 5) and confirm with the "OK" key (Fig. 122,6).



▷ Further information can be obtained from the separate instruction manual "Display panel DT 201".

8.9 240 V Power Supply



- ▶ 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.

The 240 V power supply provides electricity for:

- sockets with earth contact for appliances with maximum 16 A
- refrigerator
- transformer/rectifier

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


Connect the motorhome to an external 240 V power supply system as often as possible. The transformer/rectifier automatically charges the living area battery.

8.9.1 240 V Connection



- The external 240 V power supply must be protected by a fuse with a fault current protection switch (FI-switches, 30 mA).

The motorhome can be connected to an external 240 V power supply. The cable may have a length of maximum 25 m.

The flap for the 240 V connection is designated with the symbol .

- Open the flap lock and fold external flap upwards (see chapter 5).
- Tilt cover in an upward direction (Fig. 128).
- Insert connector.



- For the connection points on camp sites (camping distributors) highly sensitive fault current protection switches (FI-switches, 30 mA) are obligatory.

8.9.2 Power Cable for External 240 V Connection



- Completely unwind the cable reels.

Power supply:

- three-core (3 x 2.5 mm²) 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. 128,1) – plug with earth contact (Fig. 128,2).
- Cable reel:
Socket with earth contact (Fig. 128,3) – plug with earth contact (Fig. 128,4).
- Adapter cable:
Socket with earth contact (Fig. 128,5) – CEE 17 plug with earth contact (Fig. 128,6).

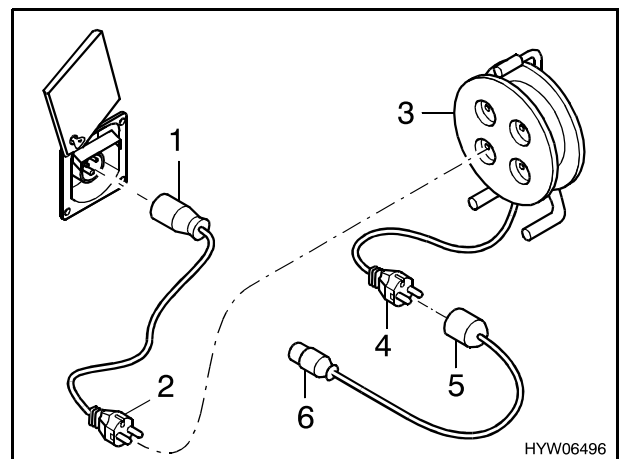


Fig. 128 Connection possibilities for 240 V power supply

8.10 Fuses

8.10.1 Fuses 12 V



- ▶ 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 living area are fused individually. The fuses are accessible at different positions in the vehicle (see tables).

Before changing fuses, take the function, value and colour of the relevant fuses from the following table. When changing fuses, use only flat fuses with the values shown in the table.

Base vehicle fuse rating

FuNo	Base vehicle	Function	Position	Value/ colour
—	All vehicles	Line from the living area battery to the transformer/rectifier	Living area battery	50 A/maxi/ red
—		Battery sensor charger	Living area battery	2 A/grey
—		Line from the starter battery to the transformer/rectifier	Starter battery in the engine compartment	50 A/maxi/ red
—		Line from the starter battery to the refrigerator	Starter battery in the engine compartment	20 A/yellow
—		D+ for alternator	Starter battery in the engine compartment	2 A/grey
F1	Fiat/ Citroen	Electrical window winder	Above fuse box base vehicle driver's side	20 A/yellow
F2		Additional heater	Above fuse box base vehicle driver's side	15 A/blue
F3		External mirror heater	Above fuse box base vehicle driver's side	7.5 A/brown
F4		Lighting of the switches for fog lights and external mirror heater	Above fuse box base vehicle driver's side	2 A/grey
F5		Electrical adjustment of the external mirrors	Above fuse box base vehicle driver's side	2 A/grey
F6		Back-up video system, navigation system	Above fuse box base vehicle driver's side	7.5 A/brown
F7		Fog light	Above fuse box base vehicle driver's side	10 A/red
F36		Main fuse for contact point load relay R1	Fuse box base vehicle driver's side	30 A/green
F46		Electrical steady legs control current	Fuse box base vehicle driver's side	4 A/pink

FuNo	Base vehicle	Function	Position	Value/ colour
F51		Control line for load relay R1	Fuse box base vehicle driver's side	5 A/beige
F62		Back-up fuse	Fuse box base vehicle driver's side	30 A/green
F63		Electrical steady legs control device	Fuse box base vehicle driver's side	4 A/pink
—		Electrical steady legs operating current	Fuse box base vehicle, engine compartment next to ventilator	20 A/yellow
—	Mercedes-Benz	Central locking	Starter battery in the engine compartment	15 A/blue
—		Fog light/fog tail light	Under driver's seat	15 A/blue
—		Electrical window winder, electrically adjustable and heated external mirrors	Under driver's seat	20 A/yellow
—		Refrigerator control via alternator	Starter battery in the engine compartment	3 A/purple
—		Voltage supply refrigerator in 12 V operation	Under driver's seat	30 A/green
8		Navigation system	Fuse box in the base vehicle	20 A/yellow
8		Alarm system	Fuse box in the base vehicle	20 A/yellow
13		Fog light	Fuse box in the base vehicle	10 A/red
17		Back-up video system	Fuse box in the base vehicle	2 A/grey

Fuse rating on the EBL transformer/rectifier 99 (variant 1)

FuNo	Function	Position	Value/colour
—	Internal charger module	Transformer/rectifier	20 A/yellow
—	Compressor/AES refrigerator	Transformer/rectifier	20 A/yellow
—	Heater, additional heater	Transformer/rectifier	7.5 A/brown
—	Basic light/electrically operated entrance step	Transformer/rectifier	25 A/white
—	Spare 4 (satellite antenna, Triomatic, FAN-TASTIC-VENT M 6000 skylight, awning light with motion detector)	Transformer/rectifier	25 A/white
—	Spare 3 (additional plug sockets, additional lighting)	Transformer/rectifier	25 A/white
—	Spare 2 (12 V air-conditioning unit)	Transformer/rectifier	15 A/blue
—	Spare 1 (Omnivent skylight, FAN-TASTIC-VENT M 5000 skylight)	Transformer/rectifier	15 A/blue
—	Solar	Transformer/rectifier	10 A/red
—	Spare 5 (awning motor)	Transformer/rectifier	15 A/blue
—	Spare 6	Transformer/rectifier	15 A/blue
—	Auxiliary charging unit	Transformer/rectifier	20 A/yellow
—	Circuit 1	Transformer/rectifier	10 A/red
—	Circuit 2	Transformer/rectifier	10 A/red
—	TV	Transformer/rectifier	10 A/red
—	Water pump	Transformer/rectifier	5 A/beige

Fuse rating on the EBL transformer/rectifier 100 (variant 2)

FuNo	Function	Position	Value/colour
—	Internal charger module	Transformer/rectifier	20 A/yellow
—	Compressor/AES refrigerator	Transformer/rectifier	20 A/yellow
—	Heater, additional heater	Transformer/rectifier	10 A/red
—	Basic light/electrically operated entrance step	Transformer/rectifier	25 A/white
—	Spare 4 (satellite antenna, Triomatic, FAN-TASTIC-VENT M 6000 skylight, awning light with motion detector)	Transformer/rectifier	25 A/white
—	Spare 3 (additional plug sockets, additional lighting)	Transformer/rectifier	25 A/white
—	Spare 2 (12 V air-conditioning unit)	Transformer/rectifier	15 A/blue
—	Spare 1 (Omnivent skylight, FAN-TASTIC-VENT M 5000 skylight)	Transformer/rectifier	15 A/blue
—	Solar	Transformer/rectifier	15 A/blue
—	Spare 5 (awning motor)	Transformer/rectifier	15 A/blue
—	Spare 6	Transformer/rectifier	15 A/blue
—	Auxiliary charging unit	Transformer/rectifier	20 A/yellow
—	Circuit 1	Transformer/rectifier	10 A/red
—	Circuit 2	Transformer/rectifier	10 A/red
—	TV	Transformer/rectifier	10 A/red
—	Water pump	Transformer/rectifier	5 A/beige

Fuse rating on the transformer/rectifier EBL 101 (variant 3)

FuNo	Function	Position	Value/colour
—	Internal charger module	Transformer/rectifier	20 A/yellow
—	Compressor/AES refrigerator	Transformer/rectifier	20 A/yellow
—	Heater, additional heater	Transformer/rectifier	10 A/red
—	Spare 4 A (satellite antenna, FAN-TASTIC-VENT M 6000 skylight, awning light with motion detector)	Transformer/rectifier	25 A/white
—	Spare 4 B (Triomatic, optional devices gas fittings)	Transformer/rectifier	10 A/red
—	Spare 3 (additional plug sockets, additional lighting)	Transformer/rectifier	25 A/white
—	Spare 2 (12 V air-conditioning unit)	Transformer/rectifier	15 A/blue
—	Spare 1 (Omnivent skylight, FAN-TASTIC-VENT M 5000 skylight)	Transformer/rectifier	15 A/blue
—	Solar	Transformer/rectifier	15 A/blue
—	Spare 5 (awning motor)	Transformer/rectifier	15 A/blue
—	Spare 6	Transformer/rectifier	15 A/blue
—	Auxiliary charging unit	Transformer/rectifier	20 A/yellow
—	Circuit 1	Transformer/rectifier	10 A/red
—	Circuit 2	Transformer/rectifier	10 A/red
—	TV	Transformer/rectifier	10 A/red
—	Water pump	Transformer/rectifier	7.5 A/brown
—	Basic light/electrically operated entrance step	Transformer/rectifier	10 A

Thetford cassette fuse

The fuse is located on the left-hand locker wall of the Thetford cassette (Fig. 129,1). 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.

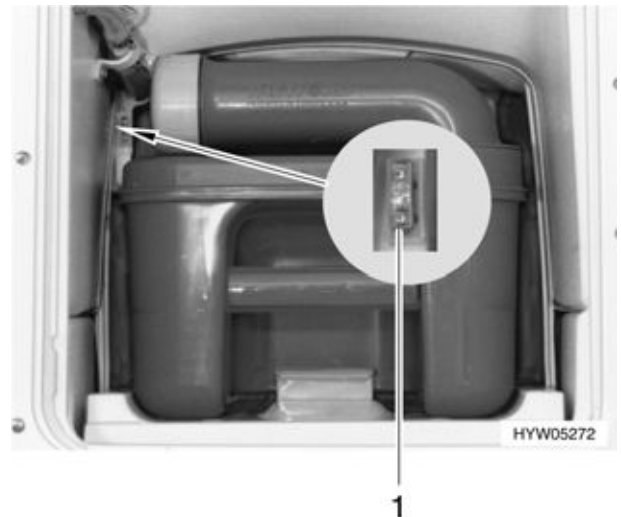


Fig. 129 Thetford cassette fuse

8.10.2 Fuse 240 V

A two-pole safety cut-out (Fig. 130) secures the 240 V power supply. Depending on the model the fuse box is located:

- in the wardrobe
- to the right of the wardrobe
- in the rear bench



Fig. 130 240 V fuse box with safety cut-out

8.11 Circuit Diagrams

8.11.1 240 V Circuit Diagram

Fig. 131 shows a simplified schematic representation of the 240 V circuit.

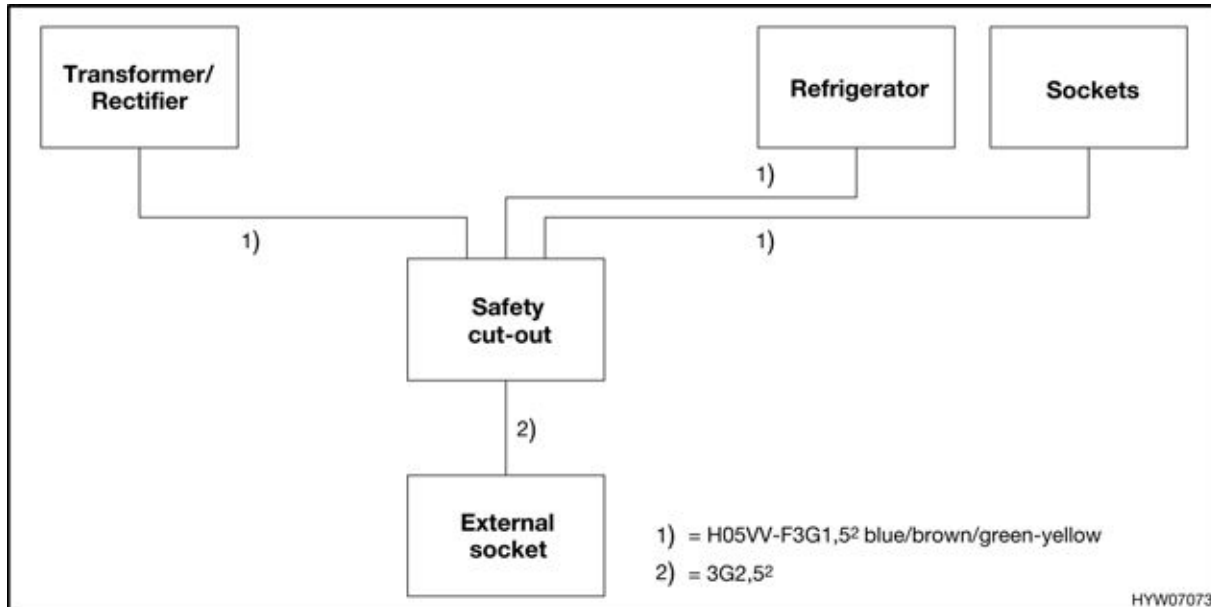


Fig. 131 240 V circuit diagram

8.11.2 12 V Circuit Diagram

The 12 V circuit diagram does not form part of this instruction manual.

Chapter Overview

This chapter contains instructions regarding the appliances of the motorhome.

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
- gas oven with grill
- microwave oven
- extractor hood
- refrigerator

9.1 General



- ▷ The heat exchangers of the Trumatic C hot-air heater and the Trumatic E driver's cabin heater 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 motorhome. 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



Heater/Boiler



Oven

9.2 Heater



- ▶ Never let gas escape unburned due to danger of explosion.
- ▶ When filling the fuel tank, on ferries or in the garage, the heater must be turned off. Danger of explosion!



- ▶ The circulation fan is automatically switched on when the heater is activated, and it stays on. This puts an immense strain on the living area battery, if the motorhome is connected to an external 240 V power supply. Take into consideration that the battery for the living area only has limited reserves of energy.

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

9.2.1 Model Design with Waste Gas Vent on the Right-Hand Side of the Vehicle



- ▶ When the awning is put up and the heater is switched on, exhaust gases from the heater can escape into the awning area. Danger of suffocation! Make sure the area is sufficiently ventilated.

9.2.2 To Heat Properly

Hot air distribution

Several air outlet nozzles (Fig. 132) are built into the motorhome. Pipes conduct the warm air to the air outlet nozzles. Turn the air outlet nozzles in a suitable position so the air can escape as required. To avoid draft close the air outlet nozzles on the dashboard and set the air distribution of the base vehicle to air circulation.

Adjusting the air outlet nozzles

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

When 5 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.

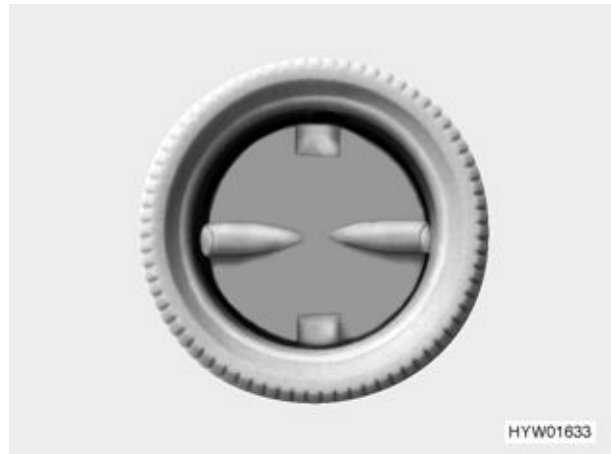


Fig. 132 Air outlet nozzle

Hot air distribution to alcoves (Camp)

The hot air distribution to the alcoves can be opened or closed by the branch block (Fig. 133).

The string clamp is behind the driver's seat. The branch block is installed behind the driver's seat.

Closing:

- Pull out the string (Fig. 133,2) until you feel slight resistance and then secure the string in the clamp (Fig. 133,1).

The flap (Fig. 133,4) is closed.

Opening:

- Release the string (Fig. 133,2) from the clamp (Fig. 133,1) and feed back slowly.

The flap (Fig. 133,4) is opened by the spring (Fig. 133,3).

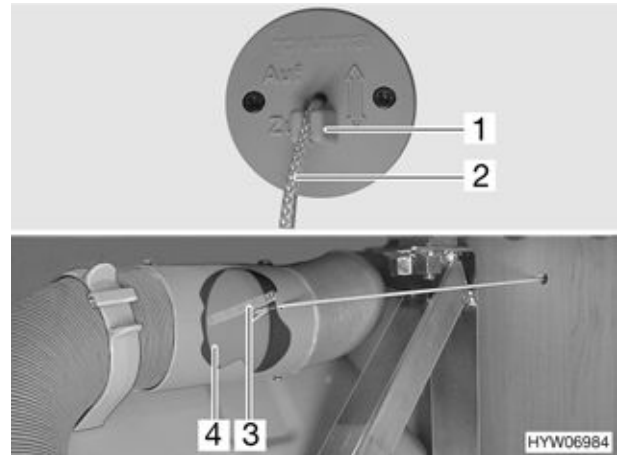


Fig. 133 Branch block

9.2.3 Trumatic C Hot-Air Heater



- ▷ Empty the heating system when there is a danger of frost the heater is not in operation.
- ▷ Do not use the space above and behind the Trumatic C heating as storage compartment.

The heater has two operating modes:

- Winter operation
- Summer operation

Heating is only possible on "Winter" setting. With the "Summer" setting only water in the boiler is heated. Heating is not possible with this setting.

- Set the operating mode using the rotary switch (Fig. 134,3):
 - Summer operation "40 °C" or "60 °C" (Fig. 134,2)
 - Winter operation "Heater without Boiler" (Fig. 134,5)
 - Winter operation "Heater and Boiler" (Fig. 134,6)
 - Off (Fig. 134,4)

The heater cannot be switched off using the 12 V main switch.

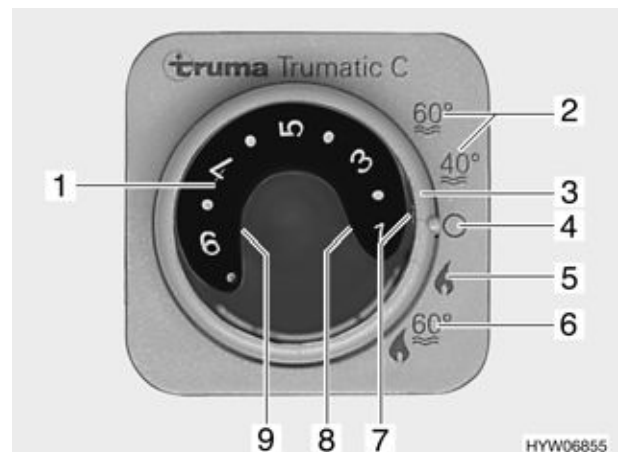


Fig. 134 Operating unit for heater/boiler

- 1 Temperature control knob
- 2 Summer operation water temperature 40 °C or 60 °C
- 3 Rotary switch
- 4 Off
- 5 Winter operation "Heater without Boiler"
- 6 Winter operation "Heater and Boiler"
- 7 Green indicator lamp "Heating operation"
- 8 Red indicator lamp "Fault"
- 9 Yellow indicator lamp "Heating-up phase"

Winter operation

The heater selects the necessary burner setting according to the required room temperature. When the required room temperature is reached, the burner is switched off. In "Heater and Boiler" operating mode (Fig. 134,6) water in the boiler is also heated. In the operating mode "Heater without Boiler" (Fig. 134,5) the heater can be operated with an empty boiler.

Turning on:

- Open the regulator tap on the gas bottle and the gas isolator tap "Heater/boiler".
- Turn temperature control knob (Fig. 134,1) on the operating unit to the required room temperature.
- Set rotary switch (Fig. 134,3) to winter operation "Heater without boiler" or to winter operation "Heater and boiler".

Green indicator lamp (Fig. 134,7) comes on.

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

Turning off:

- Set rotary switch (Fig. 134,3) to "Off" (Fig. 134,4).
- When not in use for an extended period, close the regulator tap on the gas bottle and the gas isolator tap "Heater/boiler".

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

Summer operation



- ▷ Further information can be obtained from the separate "Gas heater" instruction manual.
- ▷ For further information about the use of the boiler, see the section entitled "Boiler".

9.2.4 Trumatic E Driver's Cabin Heater



- Remove cap from waste gas vent before starting to operate the Trumatic E heater.

Heater

Turning on:

- Remove cap from waste gas vent.
- Open the regulator tap on the gas bottle and the gas isolator tap "Heater".
- Turn temperature control knob (Fig. 135,7) to the required heating level.
- Set rotary switch (Fig. 135,6) to the required position:
 - 🔥 high power (Fig. 135,5)
 - 🔥 low power (Fig. 135,4)

Green indicator lamp lights up. During the heating-up period the intensity of illumination of the green indicator lamp is doubled.

Switch on heating with high power when outside temperatures are low.

The red indicator lamp illuminates whenever there is a fault.

Turning off:

- Set rotary switch (Fig. 135,6) to "O" (Fig. 135,3).

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

- When not in use for an extended period, close the regulator tap on the gas bottle and the gas isolator tap "Heater".
- Place cap on waste gas vent.

Circulating fan

Turning on:

- Set rotary switch (Fig. 135,6) to the required position:
 - 🌀 high power (Fig. 135,1)
 - 🌀 low power (Fig. 135,2)



- When the heater is in operation, set the air distribution of the base vehicle on the dashboard to air circulation. This is the fastest way to heat the motorhome.

Turning off:

- Set rotary switch (Fig. 135,6) to "O" (Fig. 135,3).



Fig. 135 Operating unit for Trumatic E

- 1 Circulation fan high power
- 2 Circulation fan low power
- 3 Off
- 4 Heater low power
- 5 Heater high power
- 6 Rotary switch
- 7 Temperature control knob

9.3 Trumatic C Boiler



- ▶ Never let gas escape unburned due to danger of explosion.
- ▶ When filling the fuel tank, on ferries or in the garage, the boiler must be turned off. Danger of explosion!
- ▶ 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! Ensure that there is sufficient ventilation.



- ▷ Never use boiler when empty.
- ▷ If the boiler is not in use it has to be drained when there is danger of freezing (open drain cock, see also chapter 11).
- ▷ The boiler is protected against calcination if it is only used in maximum temperature position when a lot of warm water is required.

The boiler is integrated in the heater system and operates on gas. It is switched on by turning the rotary switch (Fig. 136,2) on the operating unit (Fig. 136).

In winter operation "Heater and boiler" (Fig. 136,3) the water is automatically heated up when the heater is switched on. If the heater switches off after the required room temperature has been reached the boiler will continue to heat up until the set water temperature has been reached.

In summer operation (Fig. 136,1) only the water in the boiler is heated up to either 40 °C or 60 °C. It takes approx. 1 hour to heat the water to 60 °C. The yellow indicator lamp (Fig. 136,4) comes on during the boiler heating-up period.

Winter operation

If the heater is set for winter operation the boiler is already switched on.

Summer operation

Turning on:

- Open the regulator tap on the gas bottle and the gas isolator tap "Heater/boiler".
- Set the rotary switch (Fig. 136,2) on the operating unit (Fig. 136) to "Summer operation" (Fig. 136,1).

The yellow indicator lamp (Fig. 136,4) is illuminated during the heating up period. When the set water temperature is reached, the period of heating up is finished and the yellow indicator lamp fades.

Turning off:

- Set the rotary switch (Fig. 136,2) on the operating unit (Fig. 136) to "OFF".
- Close the regulator tap on the gas bottle and the gas isolator tap "Heater/boiler".

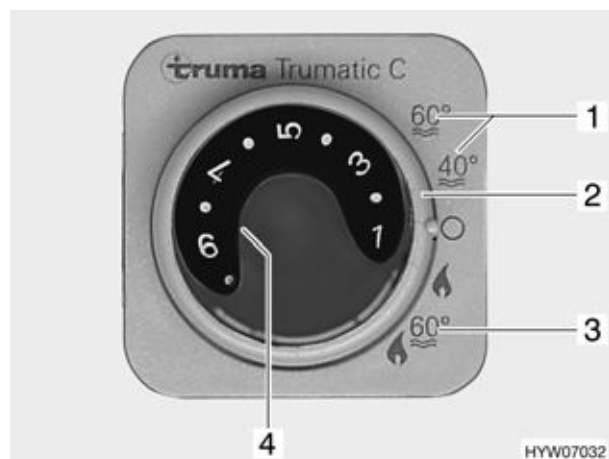


Fig. 136 Operating unit for heater/boiler

Safety/drainage valve boiler

The boiler is equipped with a safety/drainage valve (Fig. 137). The safety/drainage valve prevents water in the boiler from freezing, when there is frost and the heater is not switched on. For position see the chapter 10, "Position of the Drain Cocks".



- ▷ When the safety-/drainage valve is closed a small electrical power flows which puts an extra load on the battery of the living area. Therefore, a daily check of the battery voltage panel is recommended. If the battery voltage drops to below 10.8 V the function of the safety/drainage valve can no longer be guaranteed.
- ▷ When the motorhome is not used for a long period of time, switch off the safety/drainage valve.
- ▷ At temperatures of less than 8 °C the safety/drainage valve opens automatically. Therefore, you must turn on the living area heater and wait until the living area temperature exceeds 8 °C before you fill the boiler.
- ▷ The water pump and the water fittings are not protected against freezing by the safety/drainage valve.



- ▷ The drainage neck of the safety/drainage valve has to be free of dirt (e. g. leaves, ice) at all times.
- ▷ Further information on the living area battery can be obtained from chapter 8.

The voltage supply for the heater/boiler and the safety/drainage valve cannot be interrupted by the 12 V main switch. When there is a fault, the red indicator lamp (Fig. 134,8) on the operating unit for Trumatic C heater/boiler lights up (see chapter 14).

Filling with water:

- Close the safety/drainage valve. Pull the pull switch (Fig. 137,1) up.
- Switch on the 12 V main switch
- 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.

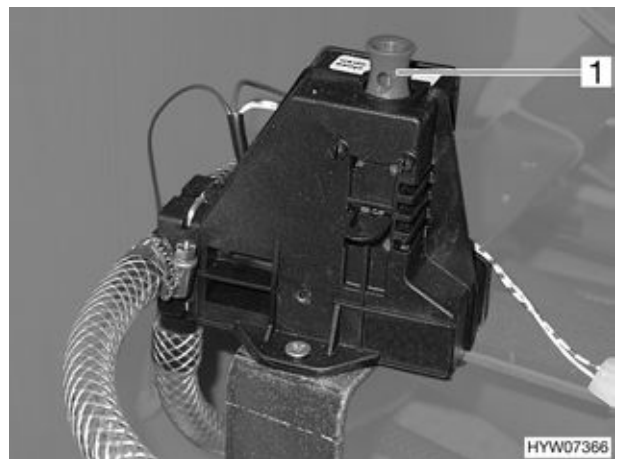


Fig. 137 Safety/drainage valve of the boiler

Emptying:

- Set the rotary switch (Fig. 136,2) on the operating unit (Fig. 136) to "OFF".
- Open the safety/drainage valve (Fig. 137). Push the pull switch (Fig. 137,1) down. The boiler is drained to the outside by the safety/drainage valve.
- Check whether the water has been drained completely from the boiler (approx. 12.5 litres).



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

9.4 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 skylight.
- ▶ Do not use gas cooker and gas oven for heating.

9.4.1 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.
- ▶ 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 apply 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.

The gas cooker is equipped with electronic ignition.

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".
- Press the control knob (Fig. 138,2 or Fig. 139,2), turn to "Max." and hold down until gas flows into the burner.
- Press rocker switch (Fig. 138,1 or Fig. 139,1). Ignition sparks are generated at the burner.
- 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 button and turn to the desired setting.

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".

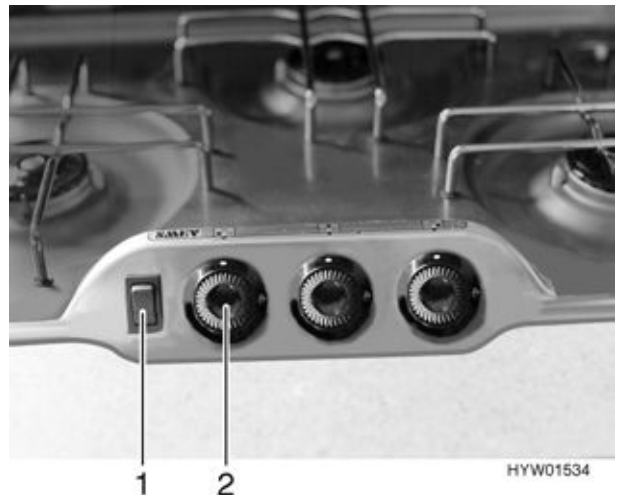


Fig. 138 Operating controls for gas cooker (variant 1)



Fig. 139 Operating controls for gas cooker (variant 2)

9.4.2 Gas Oven





- ▶ Remove cap from waste gas vent before using the gas oven.
- ▶ Always keep ventilation apertures open.
- ▶ There must be no flammable objects near the gas oven when it is being lit.
- ▶ The oven flap must remain open when it is being lit.



- ▶ Before using the gas oven for the first time run it for 30 minutes at maximum temperature without any contents.

The gas oven is equipped with electronic ignition.

Turning on:

- Remove cap from waste gas vent.
- Open the regulator tap on the gas bottle and the gas isolator tap "Oven".
- Open oven flap.
- Set control knob (Fig. 140,4) to baking  or grilling .
- Press control knob down, hold for 5 to 10 seconds. Ignition will take place automatically.
- Release control knob and turn to desired temperature.

Turning off:

- Turn control knob (Fig. 140,4) to position "off".
- Close the regulator tap on the gas bottle and the gas isolator tap "Oven".
- Place cap on waste gas vent.



- ▶ When grilling, pull out heat protection (Fig. 140,1) and leave oven flap half open.
- ▶ The spit motor can be started with the rocker switch (Fig. 140,3) during grilling or baking.
- ▶ Further information can be obtained from the separate instruction manual "Oven".



Fig. 140 Gas oven

- 1 Heat protection
- 2 Rocker switch internal lighting
- 3 Rocker switch spit
- 4 Control knob baking/grilling

9.4.3 Microwave Oven



- ▶ Only qualified personnel may repair the microwave oven. Improper repairs can cause major risks to the user.
- ▶ The protection device against the escape of microwave energy should never be removed.
- ▶ Use the microwave oven only if it has been properly installed.
- ▶ Only use the microwave oven when the door seal is free of damage.
- ▶ Never leave the microwave oven unattended when it is in operation.
- ▶ If there is smoke, keep the microwave oven closed, switch it off and interrupt the power supply.



- ▷ Operate the microwave oven only with the rotary plate and the rotary cross in place.
- ▷ Use only crockery suitable for microwave use.



- ▷ The microwave oven only functions with a correct 240 V connection. In the case of fluctuations of the voltage or of voltage below 230 V, the microwave oven switches itself off completely. Therefore, do not turn on additional 240 V appliances when the microwave oven is in operation. Particularly in southern countries it happens that the line voltage is described as having 230 V but it really does not amount to this value. So it may happen that the microwave oven cannot be operated in these countries.

Turning on:

- Press key to open the door (Fig. 141,4) and place food into the cooking area.
- Close the door. A clicking noise can be heard when it engages.
- Select output on the control knob (Fig. 141,2).
- Select cooking time on the control knob (Fig. 141,3).
- Press the start key (Fig. 141,8).

Turning off:

The end of the cooking process is signalled by a triple signal tone. The appliance will switch off automatically.

- Press key for door opener and remove food-stuffs.



- ▷ Further information can be obtained from the separate instruction manual "Microwave oven".



Fig. 141 Operating controls for microwave oven

- 1 Display time of the day/cooking time, function
- 2 Control knob for output setting
- 3 Control knob for cooking time
- 4 Key for opening the door
- 5 Key for selection of automatic programmes
- 6 Key for deleting incorrect settings or interruption of running functions
- 7 Key for switching off the rotary plate
- 8 Start key/quick-key for automatic programmes
- 9 Key for grill

9.4.4 Extractor Hood

The cooking area is equipped with an extractor hood. The powerful fan blows the cooking steam directly outside. Press the switch (Fig. 142,1) to switch the extraction hood on and off.



Fig. 142 Extractor hood

- 1 Extractor hood switch
- 2 240 V socket
- 3 Switch for cooker lamp

9.5 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.

9.5.1 Removing Refrigerator Ventilation Grill

Variant 1

- Turn screw (Fig. 143,1) one quarter turn using a coin.
- Remove refrigerator ventilation grill.

Variant 2

- Move the locking device (Fig. 144,1) to the middle.
- Remove refrigerator ventilation grill.

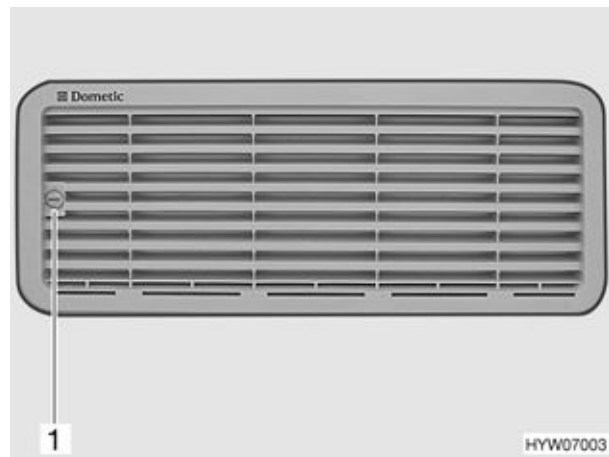


Fig. 143 Refrigerator ventilation grill (variant 1)

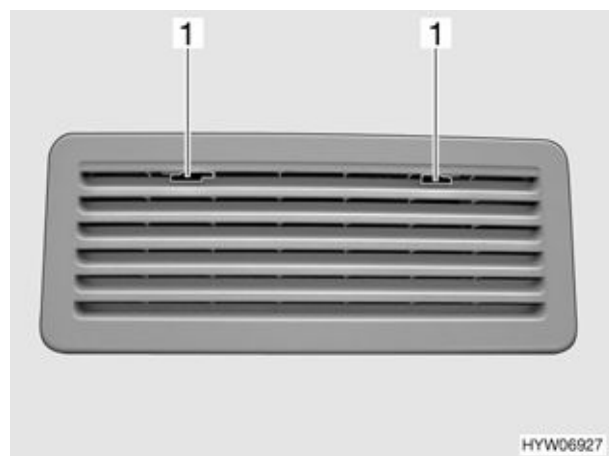


Fig. 144 Refrigerator ventilation grill (variant 2)

9.5.2 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 with the 1 and 2 varieties 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 (variant 1)



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

Turning on:

- Set energy selector switch (Fig. 145,1) to gas .
- Open the regulator tap on the gas bottle and the gas isolator tap "Refrigerator".
- Press the control knob (Fig. 145,2) down and hold it. Gas supply is open. Ignition will take place automatically. Indicator lamp (Fig. 145,3) will flash and a ticking sound can be heard until ignition has been completed successfully.
- Keep control knob (Fig. 145,2) pressed for another 10 to 15 seconds, then release. If the flame fades, then the ignition device will repeat the ignition process.
- Adjust the refrigerating temperature with the control knob.

Turning off:

- Set energy selector switch (Fig. 145,1) to "O". The appliance is switched off.
- Close the gas isolator tap "Refrigerator" and the regulator tap on the gas bottle.

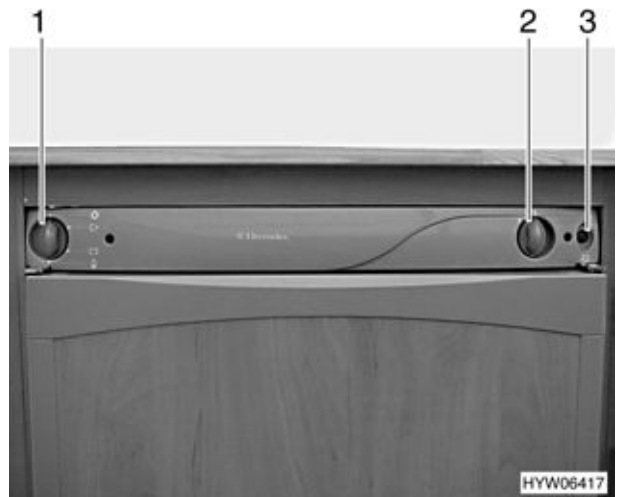


Fig. 145 Operating controls for refrigerator (variant 1)

Electrical operation (variant 1)


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 energy selector switch (Fig. 145,1) to 240 V operation .
- Use control knob (Fig. 145,2) to adjust refrigerating temperature.
- To switch off set energy selector switch to "O". The appliance is switched off.

12 V operation:

- Set energy selector switch (Fig. 145,1) to 12 V operation .
- Use control knob (Fig. 145,2) to adjust refrigerating temperature.
- To switch off set energy selector switch to "O". The appliance is switched off.

The starter battery only supplies the refrigerator with 12 V when the engine is running.

When the engine is not running, the refrigerator is cut off from the power supply in the living area. Therefore a 12 V operation of the refrigerator is only possible while the engine is running. 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".

Gas operation (variant 2)



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

Turning on:

- Set energy selector switch (Fig. 146,2) to gas .
- Open the regulator tap on the gas bottle and the gas isolator tap "Refrigerator".
- Set the control knob (Fig. 146,4) to "Level 5", press and hold in. Gas supply is open. Ignition will take place automatically. A ticking sound can be heard until ignition has been completed successfully.
- Keep the control knob pressed down until the flame indicator (Fig. 146,3) becomes green and then release it. If the flame fades, then the ignition device will repeat the ignition process.
- Use control knob (Fig. 146,4) to adjust refrigerating temperature.

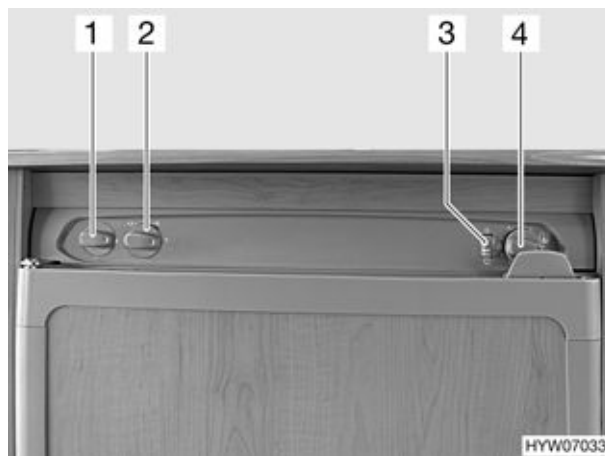


Fig. 146 Operating controls for refrigerator (variant 2)

- 1 Control knob
- 2 Energy selector switch
- 3 Flame indicator
- 4 Control knob

Turning off:

- Set energy selector switch (Fig. 146,2) to "O". The appliance is switched off.
- Close the gas isolator tap "Refrigerator" and the regulator tap on the gas bottle.

Electrical operation (variant 2)

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 energy selector switch (Fig. 146,2) to 240 V operation
- Use control knob (Fig. 146,1) to adjust refrigerating temperature.
- To switch off set energy selector switch to "O". The appliance is switched off.

12 V operation:

- Set energy selector switch (Fig. 146,2) to 12 V operation
- Use control knob (Fig. 146,1) to adjust refrigerating temperature.
- To switch off set energy selector switch to "O". The appliance is switched off.

The starter battery only supplies the refrigerator with 12 V when the engine is running.

When the engine is not running, the refrigerator is cut off from the power supply in the living area. Therefore a 12 V operation of the refrigerator is only possible while the engine is running. During prolonged driving breaks, change over to gas operation.

The thermostat is not activated during 12 V operation. The refrigerator operates continuously.



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

Gas operation (variant 3)



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

Turning on:

- Open the regulator tap on the gas bottle and the gas isolator tap "Refrigerator".
- Set the energy selector switch (Fig. 147,1) to "GAS".
- Set the control knob (Fig. 147,5) to maximum power. Gas supply is open. Ignition will take place automatically. The "GAS" operating indicator (Fig. 147,2) lights up yellow. A ticking sound can be heard until ignition has been completed successfully.
- Adjust the refrigerating temperature with the control knob.

Turning off:

- Set energy selector switch (Fig. 147,1) to "O". The appliance is switched off.
- Close the gas isolator tap "Refrigerator" and the regulator tap on the gas bottle.

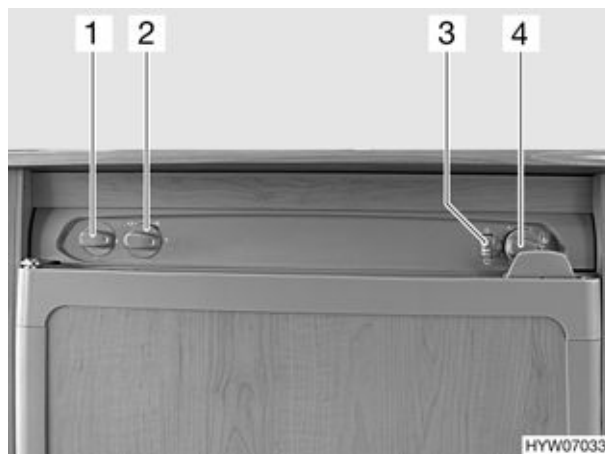


Fig. 147 Operating controls for refrigerator (variant 3)

Electrical operation (variant 3)

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 energy selector switch (Fig. 147,1) to "240 V". The green "240 V" operating indicator (Fig. 147,3) lights up.
- Use control knob (Fig. 147,5) to adjust refrigerating temperature.
- To switch off set energy selector switch to "○". The appliance is switched off.

12 V operation:

- Set energy selector switch (Fig. 147,1) to "12 V". The green "12 V" operating indicator (Fig. 147,4) lights up.
- Use control knob (Fig. 147,5) to adjust refrigerating temperature.
- To switch off set energy selector switch to "○". The appliance is switched off.

The starter battery only supplies the refrigerator with 12 V when the engine is running.

When the engine is not running, the refrigerator is cut off from the power supply in the living area. Therefore a 12 V operation of the refrigerator is only possible while the engine is running. During prolonged driving breaks, change over to gas operation.



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

9.5.3 AES Operating Modes



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



- ▶ If the frame heater is switched on, it will always consume current. Therefore, switch off the frame heater if the vehicle engine is off and the vehicle is not connected to the 240 V power supply.

The refrigerator is equipped with an automatic system to select the type of power (AES). The "AES" automatically selects the optimal energy source and regulates the refrigerator operation. Manual operation to select the type of power is neither required nor possible.

The "AES" selects from the following types of power:

- Solar installation 12 V
- 240 V AC
- 12 V DC
- Gas

Choosing the available energy source highest on the list.

High external temperatures and high humidity can cause drops of water to form on the metal frame of the freezer compartment. This is why the refrigerator is equipped with a frame heater for the freezer compartment. If the temperature and humidity are high, switch on the frame heater by pressing the button (Fig. 148,1). This prevents corrosion. If the frame heater is switched on, the indicator lamp (Fig. 148,2) will be lit.

240 V operation

If the 240 V supply is connected, this power source is selected as the first priority by the AES.

12 V operation

12 V operation is only selected by the AES if the vehicle's engine is running and the alternator supplies sufficient 12 V operating power.

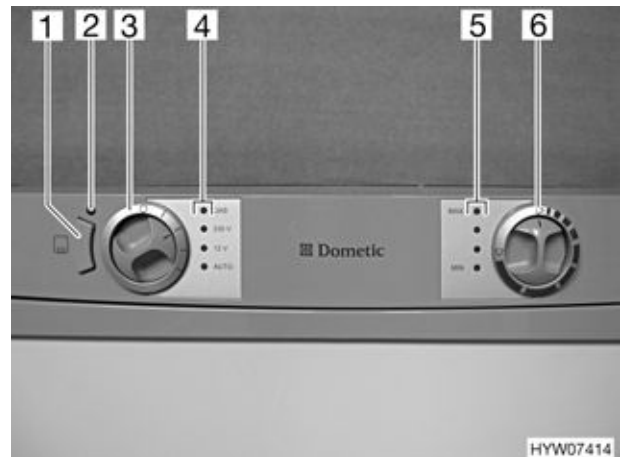


Fig. 148 Operating controls for refrigerator

- 1 Frame heater button
- 2 Indicator lamp
- 3 Energy selector switch
- 4 Indicator lamps
- 5 Indicator lamps
- 6 Control knob for setting the temperature

Gas operation

If the 240 V supply is disconnected and the vehicle's engine is not running the "AES" selects the gas supply. When selecting gas operation the ignition fuse is opened automatically so gas can get into the burner. At the same time the electronic ignition is activated. If the gas flame is extinguished, e. g. by blast of wind, the ignition is activated immediately and re-ignites the gas. When the gas operation is faulty, the "GAS" indicator lamp (Fig. 148,4) flashes red.



- ▷ Open the regulator tap on the gas bottle and the gas isolator tap "Refrigerator".

Change-over between energy sources



- ▷ Open flames are prohibited at petrol stations. If the stop takes longer than 15 minutes, the refrigerator has to be turned off at the energy selector switch (Fig. 148,3).

When changing over between the different power sources there are forced delays built in the "AES". This means, that after a change-over to a new energy source the refrigerator can not be operated immediately. When changing over from 12 V operation to gas operation, a 15-minute delay is built in the AES. This prevents a change-over to gas operation when the vehicle is stopped briefly and the engine is switched off (e. g. stop to fill tank).

Refrigerating temperature control

When turned on the first time the refrigerator automatically selects the middle thermostat position. This position can be adjusted manually by using the control knob (Fig. 148,6). The indicator lamps (Fig. 148,5) show the selected thermostat position. The refrigerating temperature for the three types of energy is set with the control knob. It takes a few hours till the refrigerator reaches its normal operating temperature. When changing over the operation mode the thermostat setting will be maintained. The refrigerating temperature is retained regardless of the type of power being used.

Operation

Turning on:

- Open the regulator tap on the gas bottle and the gas isolator tap "Refrigerator".
- Select the energy type with the energy selector switch (Fig. 148,3). The respective indicator lamp (Fig. 148,4) lights up green.
- Adjust refrigerating temperature with the control knob (Fig. 148,6). The indicator lamps (Fig. 148,5) show the selected thermostat position.

When the gas operation is faulty, the "GAS" indicator lamp (Fig. 148,4) flashes red.

Turning off:

- Turn the energy selector switch (Fig. 148,3) to "O". No indicator lamp (Fig. 148,4) is lit.
- Close the regulator tap on the gas bottle and the gas isolator tap "Refrigerator".



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

9.5.4 Refrigerator Door Locking Mechanism



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

Opening and closing of refrigerator door (variant 1)

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

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

Opening:

- Rotate lock (Fig. 149,1) towards the outside.
- Use handle depression to open refrigerator door.

Closing:

- Fully close the refrigerator door.
- Turn lock towards the centre of the refrigerator.

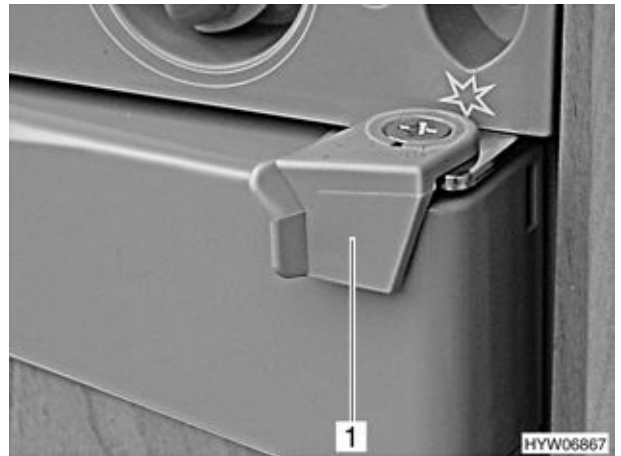


Fig. 149 Refrigerator door lock, closed (variant 1)

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 refrigerator door.
- Allow the lock to engage (Fig. 150,1) with the notch (Fig. 150,2) on the refrigerator door. The refrigerator door will then stay slightly open.



Fig. 150 Refrigerator door in the ventilation position (variant 1)

Opening and closing of refrigerator door (variant 2)

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

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

Opening:

- Open the refrigerator door at the handle (Fig. 151,2). The lock (Fig. 151,1) is released automatically.

Closing:

- Fully close the refrigerator door. Ensure that the lock is engaged.

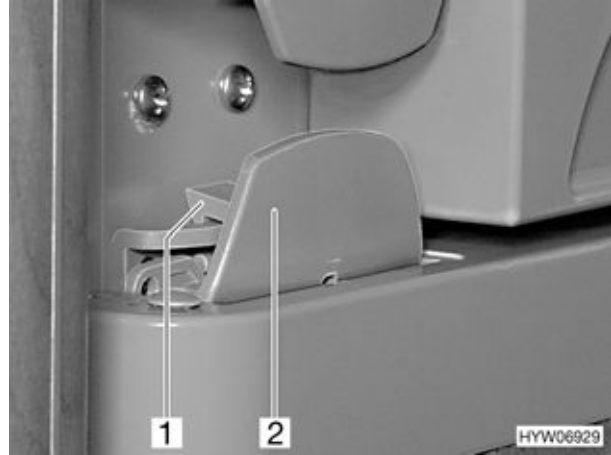


Fig. 151 Refrigerator door lock, closed (variant 2)

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 refrigerator door.
- Open lock (Fig. 152,2) and snap in at the pin (Fig. 152,1). The refrigerator door will then stay slightly open.

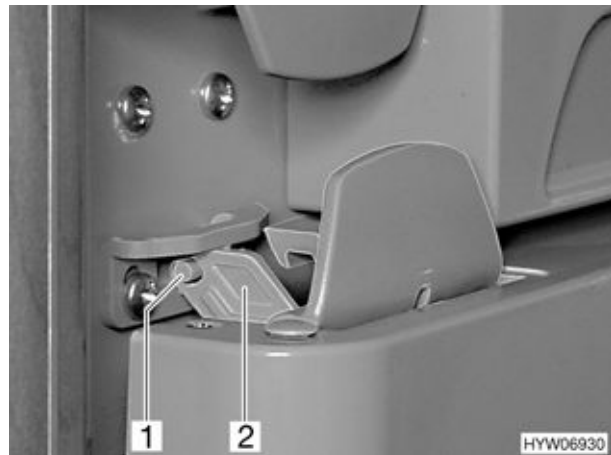


Fig. 152 Refrigerator door in the ventilation position (variant 2)

Opening and closing of refrigerator door (variant 3)

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

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

Opening:

- Push the lock (Fig. 153,1) to the left.
- Use handle depression to open refrigerator door.

Closing:

- Fully close the refrigerator door.
- Push the lock (Fig. 153,2) completely to the right.

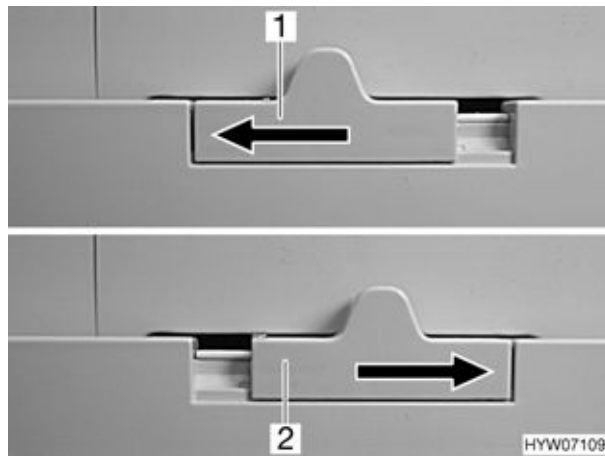


Fig. 153 Refrigerator door lock (variant 3)

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 refrigerator door.
- Fix the refrigerator door using the door latch (Fig. 154,1). The refrigerator door will then stay slightly open (Fig. 154).

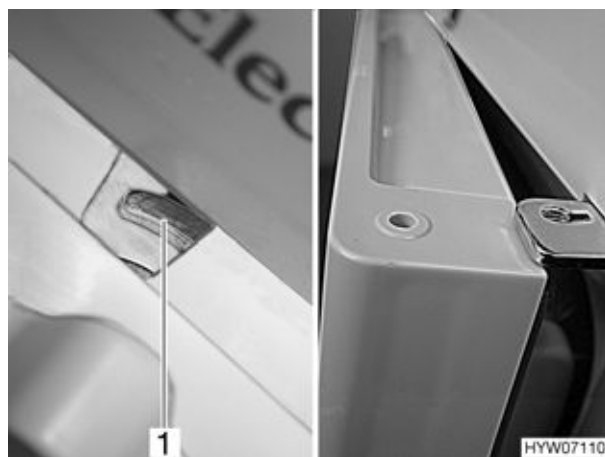


Fig. 154 Refrigerator door in the ventilation position (variant 3)

Chapter Overview

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

The instructions address the following topics:

- water tank
- waste water tank
- toilet compartment
- 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 water tank with fresh water only.
- ▷ If the vehicle is not heated when there is risk of frost, empty the entire water system. Leave the water taps on in central position. Leave all drain cocks open.
- ▷ The water pump will overheat without water and can get damaged. Never operate water pump when the water tank is empty.
- ▷ Clean the water tank thoroughly before use.

The motorhome is equipped with a fitted water tank. An electric water pump pumps the water to the individual water taps. Opening a water tap automatically switches on the water pump and pumps water to the tap. The waste water tank collects the waste water. The water level in the water and waste water tanks can be checked on the panel.



- ▷ Before using the water fittings, the 12 V supply must be turned on. Otherwise the water pump will not work.

When the 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 water tank or in the water pipes becomes undrinkable after a short period. For this reason, rinse the water pipes and the water tank thoroughly with several litres of fresh water before each use of the vehicle. To do this, open all water taps. After each use of the vehicle completely empty the water tank and the water pipes.

10.2 Water Tank

10.2.1 Fresh Water Filler Neck

Variant 1 and variant 2

The fresh water filler neck is on the right or left side of the motorhome, depending on the model.

The flap for the fresh water filler neck is marked by the symbol .

Opening:

- Open flap lock and move external flap (Fig. 155,1 or Fig. 156,1) upwards (see chapter 5).
- Turn the blue cap (Fig. 155,2 or Fig. 156,2) a quarter turn in an anticlockwise direction.
- Remove cap.
- Fill the water tank with fresh water.

Closing:

- Place the cap on the fresh water filler neck.
- Turn cap one quarter turn in a clockwise direction.
- Check that the cap sits firmly on the fresh water filler neck.
- Move external flap downwards and close flap lock (see chapter 5).

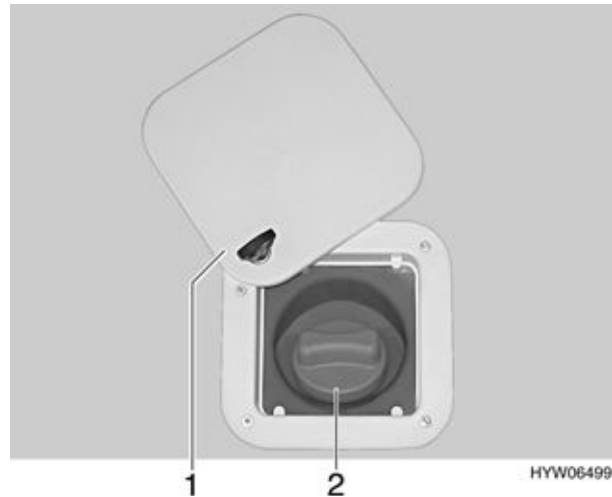


Fig. 155 Cap for the fresh water filler neck (variant 1)



Fig. 156 Cap for the fresh water filler neck (variant 2)

Variant 3

The fresh water filler neck is on the right or left side of the motorhome, depending on the model.

The fresh water filler neck is labelled with the word "Wasser" (water) (Fig. 157,1).

Opening:

- Insert key into locking cylinder (Fig. 157,2) and turn it in an anticlockwise direction.
- Remove cap.
- Fill the water tank with fresh water.

Closing:

- Place the cap on the fresh water filler neck.
- Put the key in the locking cylinder (Fig. 157,2) and turn in a clockwise direction.
- Remove the key.
- Check that the cap sits firmly on the fresh water filler neck.

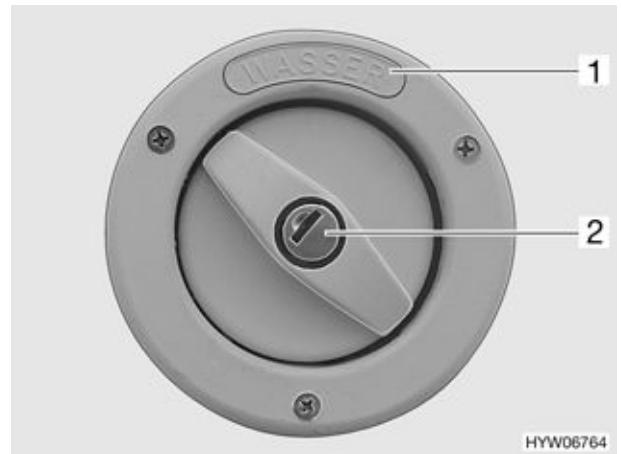


Fig. 157 Cap for the fresh water filler neck (variant 3)

10.2.2 Filling the Water System



▷ Never operate water pump without water.

- Park the motorhome so that it is level.
- Set the 12 V main switch on the panel to "ON".
- Turn on the safety/drainage valve (Fig. 137).
If the temperature is less than 8 °C, you will not be able to turn on the safety/drainage valve. So you must turn on the living area heater and wait until the living area temperature exceeds 8 °C.
- Close the drain cocks: close the valve caps (Fig. 158,1 or Fig. 159,1) by turning them in the clockwise direction. The position where the drain cocks are installed is listed in the "Position of the Drain Cocks" table at the end of this chapter.
- Close all the water taps.

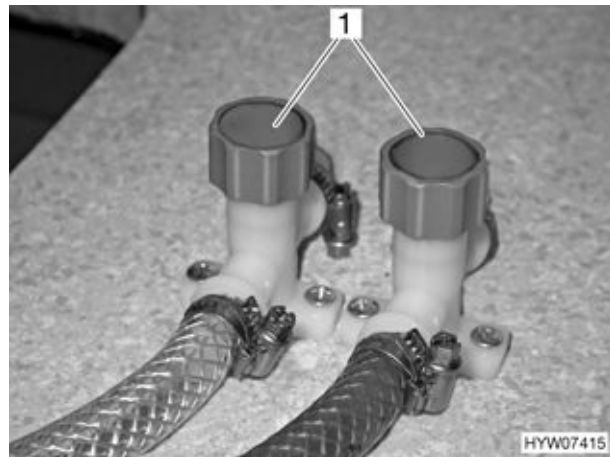


Fig. 158 Drain cocks for models without double floor

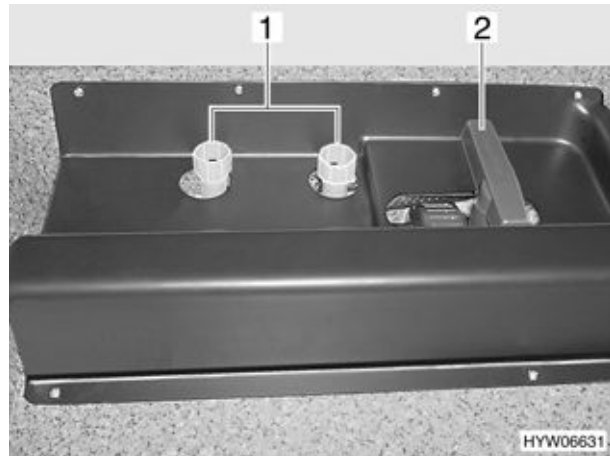


Fig. 159 Drain cocks for models with a double floor bottom

Variant 1 (Fig. 160):

- Open the cap on the water tank.
- Close the drainage opening (Fig. 160,2) in the water tank with the stopper (Fig. 160,1) provided.
- Firmly close the water tank again with the cap.

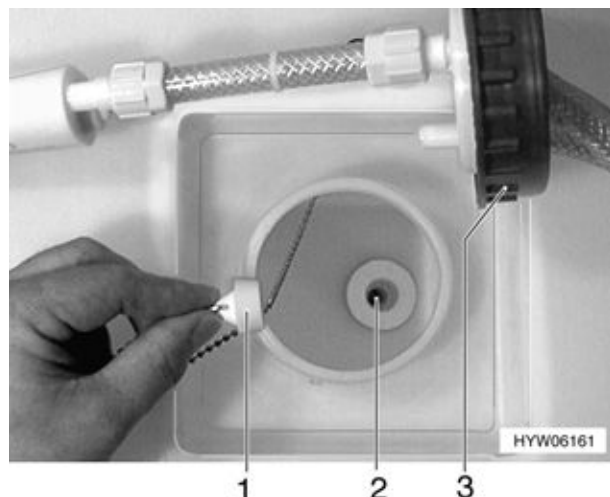


Fig. 160 Water tank, stopper (variant 1)

Variant 2 (Fig. 161):

- Press the top of the panel for access to the water drainage tap (under the bar table) slightly upwards and then release it. Remove the panel.
- Turn water drain cock (Fig. 161,1) in the direction indicated to close.
- Place the panel in opening, press the panel in at the top to close.

For all models:

- Open the fresh water filler neck (Fig. 155 or Fig. 157) on the outside of the motorhome.
- Fill the water tank with fresh water. Use a water hose, a water can with a funnel or similar for filling.
- Set all the water taps to "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 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 water tank is not leaking.



- ▷ The water tank can contain 70 l to 150 l depending on the model.
- ▷ The water level can be checked on the panel (Fig. 110, Fig. 111, Fig. 117 or Fig. 122) when the water tank is filled.
- ▷ In the B-Class and Camp GT model ranges, as well as in the B 630 Star-Line and the B 655 Star-Line models, the water tank holds 120 l, however the volume has been limited to 70 l (overflow installed) due to reasons of safety. The panel has not been adjusted to this volume. Therefore, the LCD display only shows "50 %" when the water tank is as full as possible.

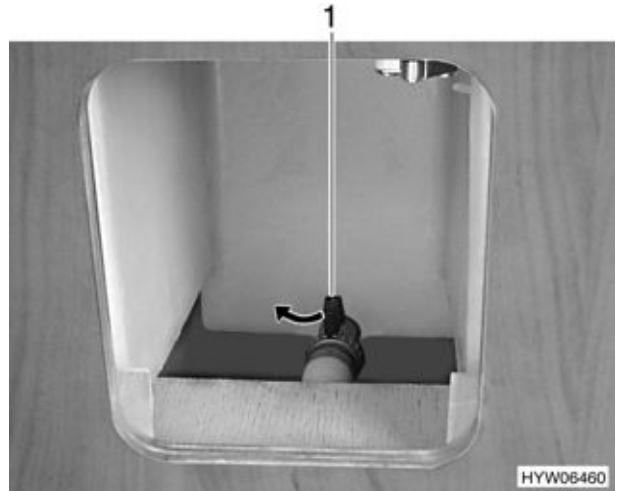


Fig. 161 Water tank, water drain cock, open (variant 2)

10.3 Waste Water Tank

Hot air from the heater heats the waste water tank. This protects the waste water tank from frost.



- ▷ If the heater is out of order, the waste water tank no longer is sufficiently protected against frost. Therefore, if there is a risk of frost, drain the waste water tank and leave the drain cock open.
- ▷ 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.

Depending on the model, the operating lever for waste water disposal is located:

- at the drain pipe (Fig. 162,2) on the left-hand or right-hand vehicle side (Fig. 162,1) for models without double floor
or
- in the rear garage/rear storage space (Fig. 163,2) in the case of model with double floor bottom.

Emptying:

The waste water hosepipe (standard) is in the gas bottle compartment and can be put on the drain pipe (Fig. 162,2) as an extension.

- In order to open the drain cock turn operating lever (Fig. 162,1 or Fig. 163,2) a quarter turn in an anticlockwise direction. The lever is now horizontal.
- Completely empty waste water tank.
- To close the drain cock turn the operating lever a quarter turn in a clockwise direction. The lever is now vertical.

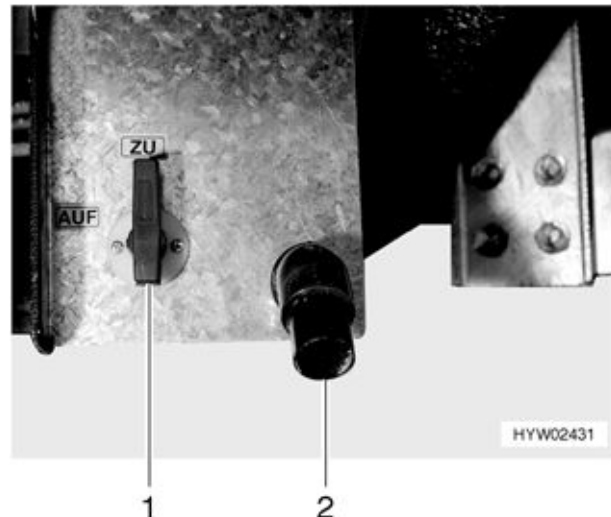


Fig. 162 Operating lever and drain pipe of the waste water tank, closed

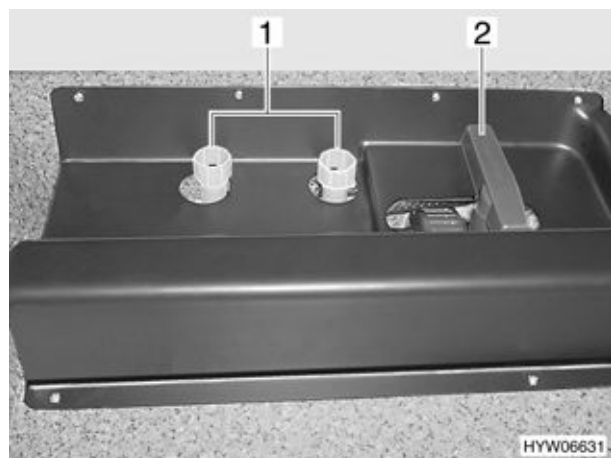


Fig. 163 Operating levers for waste water tank in the rear garage, closed

10.4 Toilet Compartment

- For ventilation purposes during or after a shower, and for drying wet clothing, close the washroom door and open the washroom skylight.
- After using the shower, wipe it dry to prevent moisture from collecting. To dry wet clothes, open a window. This improves the air circulation.



- ▷ Do not load up the shower tray, as this could damage it or cause damage to other items of equipment in the washroom when the vehicle is moving.

10.5 Toilet



- ▷ If there is a danger of frost and the motorhome 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 odor 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 water system of the motorhome. If necessary, the toilet bowl can be moved into the optimal position with variant 1.

10.5.1 Thetford Toilet

Flushing:

- Before flushing open the sliding trap of the Thetford toilet. To do this, turn the slide lever (Fig. 164,1) in an anticlockwise direction.



Fig. 164 Thetford toilet bowl

- For flushing, press the blue flush button (Fig. 165,1).
- After flushing close the sliding trap. To do this turn the slide lever (Fig. 164,1) in a clockwise direction.

The indicator lamp (Fig. 165,2) lights up 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. 164,1) in a clockwise direction: the sliding trap is closed.

10.5.2 Removal of the Thetford Cassette

The flap for the Thetford cassette (Fig. 166) is located on the outside of the motorhome:

- Open the rotary lock (Fig. 166,1) with the key.
- Press both push-button locks (Fig. 166,2) at the same time and open the Thetford cassette flap.
- Release safety catch (Fig. 167,1) and pull out the Thetford cassette (Fig. 167,2).



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

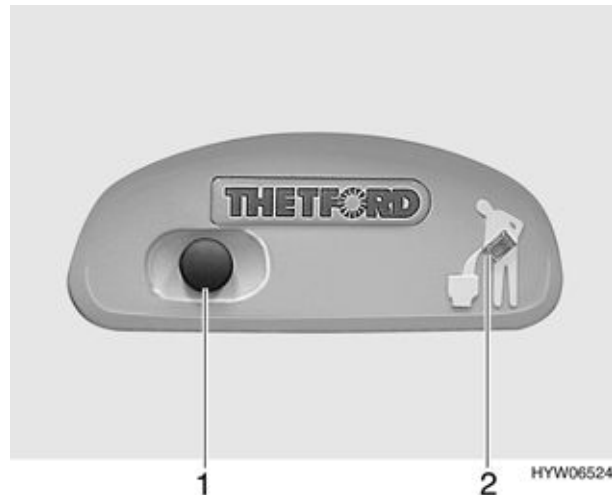


Fig. 165 Flush button/indicator lamp Thetford cassette

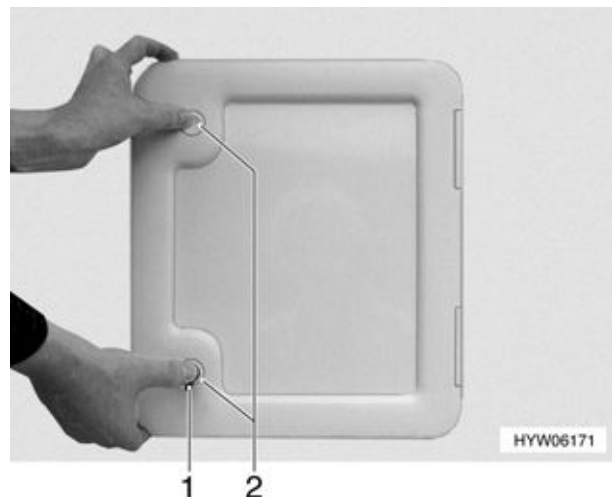


Fig. 166 Opening the Thetford flap

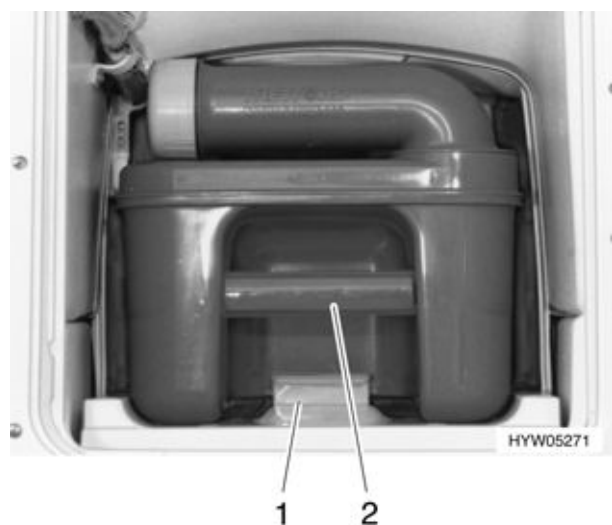


Fig. 167 Removal of the Thetford cassette

10.6 Emptying the Water System



- ▷ If the vehicle is not heated when there is risk of frost, empty the entire water system. Leave the water taps on in central position. Leave all drain cocks open. This will avoid frost damage to appliances and to the vehicle.



- ▷ Take note of the environmental tip in this chapter.

Emptying:

- Open the valve caps (Fig. 158,1 or Fig. 159,1) in an anticlockwise direction.
- Open the safety/drainage valve (Fig. 137).

See the table at the end of this chapter for the place of installation of the drain cocks and the safety/drainage valve.

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

- Pitch the motorhome in a horizontal position.
- Switch off the 12 V power supply at the panel.

Variant 1 (Fig. 160):

- Take the cover off the cleaning opening of the water tank.
- Remove the plug (Fig. 160,1).

Variant 2 (Fig. 161):

- Remove access cover to water drain cock underneath the bar table.
- Open water drain cock (Fig. 161,1).

For all models:

- 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.
- Remove the cap of the water tank. Hold the water pump up until the water pipes are completely empty.
- Check whether the water tank is completely empty.
- Blow out the remaining water in the water pipes (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.
- Leave all drain cocks open.

10.7 Position of the Drain Cocks

Type Hypermobil	Position of the drain cocks	Position of the boiler safety/drainage valve
B 504	Underfloor storage compartment/rear	On the floor under the heater
B 514	Underfloor storage compartment/rear	On the floor under the heater
B 524	Underfloor storage compartment/rear	Under the wardrobe/floor trap in front of the heater/boiler
B 544	Underfloor storage compartment/rear	Under the wardrobe/floor trap in front of the heater/boiler
B-Classic 544	Kitchen unit, next to the toilet	Under the wardrobe/floor trap in front of the heater/boiler
B 564	Underfloor storage compartment/rear	Underfloor storage compartment/rear
B 584	Underfloor storage compartment/rear	Under the wardrobe/floor trap in front of the heater/boiler
B 614	Underfloor storage compartment/rear	On the floor under the heater
B 624	Underfloor storage compartment/rear	On the floor under the heater
B 630 Star-Line	Under the wardrobe/floor trap on the floor	Under the wardrobe/floor trap on the floor
B 634	Wardrobe, under the floor board with flap	Under the wardrobe/floor trap in front of the heater/boiler
B 644	Underfloor storage compartment/rear	Under the wardrobe/floor trap in front of the heater/boiler
B 654	Underfloor storage compartment/rear	Under the wardrobe in front of the heater/boiler
B 655 Star-Line	Under the wardrobe/floor trap on the floor	On the floor under the heater
B-Classic 655	Kitchen unit	Under the wardrobe in front of the heater/boiler
B-Classic 664	Kitchen unit	Under the wardrobe in front of the heater/boiler
B 674	Underfloor storage compartment/rear	On the floor under the heater
B 680 Star-Line	Under the wardrobe/floor trap on the floor	Under the wardrobe/floor trap in front of the heater/boiler
B 700 Star-Line	Under the wardrobe/floor trap on the floor	Under the wardrobe/floor trap in front of the heater/boiler
B 774	Underfloor storage compartment/rear	On the floor under the heater

Type Hymercamp	Position of the drain cocks	Position of the boiler safety/drainage valve
C 494	Bar, under the floor plate with flap	On the floor in front of the heater
C 524	On the floor in front of the heater	On the floor in front of the heater
C 524 Classic	On the floor in front of the heater	On the floor in front of the heater
C 524 GT	Underfloor storage compartment/rear	Under the wardrobe/floor trap in front of the heater/boiler
C 544	On the floor in front of the heater	On the floor in front of the heater
C 544 GT	Underfloor storage compartment/rear	Under the wardrobe/floor trap in front of the heater/boiler
C 614 GT	Underfloor storage compartment/rear	In front of the heater/boiler, on the mounting board
C 644	Storage compartment under refrigerator	Wardrobe, under the floor plate with flap
C 644 Classic	Storage compartment under refrigerator	Wardrobe, under the floor plate with flap
C 684	Wardrobe, on the floor in front of the heater	Wardrobe, on the floor in front of the heater

Type Hymertramp	Position of the drain cocks	Position of the boiler safety/drainage valve
T 574 GT	In the front bench of the facing seating unit on the floor	Under the rear bed on the floor under the heater
T 575 GT	<i>Not known at the time of going to press</i>	<i>Not known at the time of going to press</i>
T 655 GT	Under wardrobe near heater/boiler	In the kitchen unit under the floor trap
T 664 GT	Under wardrobe near heater/boiler	Under wardrobe near heater/boiler

Chapter Overview

This chapter contains instructions regarding the care of the motorhome.

The maintenance instructions address the following topics:

- exterior of the motorhome
- interior
- heated windscreen
- 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 motorhome 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 motorhome with a high-pressure cleaner, observe the operating instructions of the high-pressure cleaner.

During washing, keep the following minimum distance between the motorhome 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 motorhome 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. This could result in damage to the motorhome.

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 motorhome rinse acrylic glass with sufficient 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 **HYMER** accessories shop carries this cleaning agent.

11.1.3 Add-on Parts Made of Glass-Fibre Reinforced Plastic (GRP)



- ▷ Avoid contact between polish and window rubber and piping.
- ▷ The glass-fibre reinforced plastic (GRP) may not become too hot. Therefore when polishing with a polishing machine, keep the machine in constant motion.

GRP add-on parts can turn yellow or become weather-worn due to insufficient care for the vehicle or ageing of the material.

GRP add-on parts should therefore undergo regular follow-up treatment. This way, these parts will not turn yellow and the sealing of the surface remains intact.

- Wash the vehicle and allow to dry as described in section 11.1.2.
- Check if the GRP add-on parts are clean and dry.
- Apply Exclusiv Polish (**HYMER** item no.: 0852070) with a soft cloth to the surface of the GRP add-on part.
- Wait until a light grey film forms.
- Wipe the GRP add-on part with a dry, soft cloth. Move the cloth in circles over the surface of the GRP add-on part.

HYMER AG recommends using a polishing machine for this work.



- ▷ Paint protection (**HYMER** item no.: 0852071) can be used to protect the polish. Please read the instructions printed on the paint protection for details on how to apply it.

11.1.4 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 motorhome rinse acrylic glass with sufficient 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 **HYMER** accessories shop carries this cleaning agent.

11.1.5 Underbody

The underbody of the motorhome 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.

11.1.6 Waste Water Tank

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

- Open the cleaning opening on the waste water tank and the drain cock.
In the case of models with double floor, the cleaning opening is reached through a floor opening in the living area.
In the case of models without double floor, the cleaning opening is located at the bottom or laterally to the waste water tank.
- Rinse thoroughly with fresh water.

11.1.7 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 installation and for decalcifying the water installation. 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 and skylights of the parked vehicle when there is strong sunlight.
- ▷ For information about the use of maintenance products, our representatives and service points 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 lose 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 and skylights with a soft brush or vacuum with the brush attachment of the vacuum cleaner.
- Brush blinds or Roman shades on windows and skylights with a soft brush. Grease or stubborn dirt may be removed with a mild soap at 30 °C (curd soap).
- Unrolled seat belts can be cleaned with warm soapsuds. The seat belt must be completely dry before being rolled up.
- Clean water tank with water and dish washing liquid and rinse subsequently with plenty of fresh water.

11.3 Cleaning the Heated Windscreen



- ▷ Before you clean the inside of the windscreen, switch off the windscreen heater.
- ▷ Do not use sharp-edged or abrasive materials to clean the inside of the windscreens.

- Clean the inside of the heated windscreen with soft material (shammy leather).
- Remove smears or traces of grease with methylated spirit.
- Remove vignettes with benzine.

11.4 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.



- ▷ When there is a frost hazard, always run heater at a minimum of 15 °C. In the case of 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.
- ▷ In the case of frost, cover the windscreen with a winter insulation mat.




11.5 Lay-Up

11.5.1 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 water is undrinkable after only a short time.

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

	Activities	Done
Base vehicle	Completely fill fuel tank. This prevents corrosion damage within the fuel tank system	
	Jack up motorhome so that the wheels do not bear any load, or move motorhome every 4 weeks. This prevents any pressure points from occurring on wheels and wheel bearings	
	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 and starter battery  ▶ Charge at least for 20 hours before laying up	
Water system	Empty the entire water system. Blow out the residual water from the pipes (0.5 bar max.). Leave the water taps on in central position. Leave all drain cocks open. Observe notes in chapter 10	
	Switch off safety/drainage valve by means of the battery cut-off switch on the transformer/rectifier (position: "Batterie Aus" (battery OFF)). Otherwise the battery will become discharged too quickly  ▶ If the safety/drainage valve is switched off, the water system will no longer be protected against frost	


11.5.2 Winter Lay-Up

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

	Activities	Done
Base vehicle	Clean body and underbody thoroughly and spray with hot wax or protect with varnish	
	Fill fuel tank with winter diesel	
	Check antifreeze in the cooling water	
	Rectify damage to the paintwork	
Body	Keep the forced ventilation open	
	Clean and lubricate the mounted steady legs	
	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 motorhome 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 starter and living area batteries 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	
Complete vehicle	Arrange the tarpaulins in such a way that the ventilation openings are not covered, or use porous tarpaulins	

11.5.3 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
Base vehicle	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 built-in steady legs	
	Check that the windows and skylights are working properly	
	Check that all the external locks are working, such as the tank filler neck, the external flaps 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 and starter battery	
	 ▷ Charge at least for 20 hours after laying up	
	Turn on the battery cut-off switch on the transformer/rectifier (see chapter 8)	
	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 water tank. To this end, open all water taps	
	Check the functionality of the operating lever for 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 motorhome.

The instructions address the following topics:

- replacing light bulbs
- adjusting the tension of the springs on the blinds
- AL-KO rear axle
- spare parts

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

12.1 Maintenance Work

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

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 **HYMER** 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 vehicle.

In the chapter "Guarantee" of this instruction manual, the **HYMER** service centre will confirm any work carried out.



- ▷ The inspections described in this instruction manual must be respected and carried out at the stipulated intervals. The value of the motorhome is thus preserved.
- ▷ The entries in the chapter "Guarantee" of this instruction manual are also regarded as proof in case of any damage or guarantee cases.

12.2 Replace Bulbs, External



- ▶ Have the bulbs of the Xenon spotlights changed at a **HYMER** service centre. There is a risk of injury by high voltages!
- ▶ 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. The bulb might burst.



- ▶ Halogen bulbs should not be touched with the fingers. Use a cloth when installing new halogen bulbs.
- ▶ Use only bulbs of the same type and with the correct wattage (see table "Types of Bulbs for External Lights").

12.2.1 Front Lights

Camp, Camp Classic

The lamps for low beam, main beam and parking light (Fig. 168,1) as well as for the direction indicator (Fig. 168,2) are part of the basic vehicle. Replacement of light bulbs is described in the instruction manual of the base vehicle.

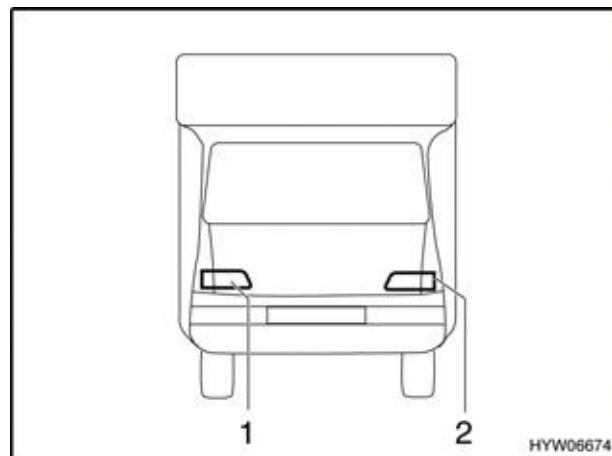


Fig. 168 Front lights (Camp, Camp Classic)

Camp GT, Tramp GT

The lamps for low beam (Fig. 169,2), main beam and parking light (Fig. 169,1) as well as for the direction indicator (Fig. 169,4) are part of the basic vehicle. Replacement of light bulbs is described in the instruction manual of the base vehicle.

Marking lamp (Fig. 169,5)

- Push rubber lip backwards.
- Hold housing from the edge and remove.
- Pull bulb out towards you.

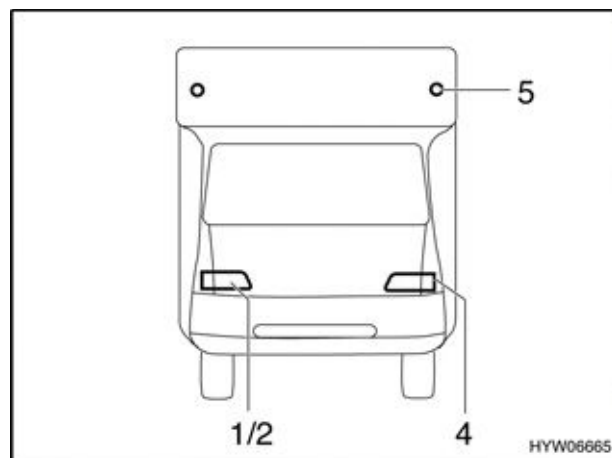


Fig. 169 Front lights (Camp GT, Tramp GT)

B-Class, B Star-Line, B-Classic

Low beam (Fig. 170,1)



▷ Not for Xenon spotlights!

Changing bulbs from the engine compartment:

- Open bonnet (see chapter 4).
- Remove rubber cap (Fig. 171,1) from lamp housing (Fig. 171,2).
- Press the metal clips (Fig. 171,3) together and release them from the holder.
- Remove bulb (Fig. 171,4) with cable from the lamp housing.

Main beam/parking light (Fig. 170,2)



▷ Not for Xenon spotlights!

Changing bulbs from the engine compartment:

- Open bonnet (see chapter 4).
- Remove rubber cap (Fig. 172,1) from lamp housing (Fig. 172,5).

Main beam

- Press the metal clips (Fig. 172,6) together and release them from the holder.
- Remove bulb (Fig. 172,7) with cable from the lamp housing.

Parking light

- Press the metal clamp (Fig. 172,2) on the cable connector (Fig. 172,3) and pull out the cable connector.
- Turn lamp housing (Fig. 172,4) a little in an anticlockwise direction.
- Remove bulb from the lamp housing.

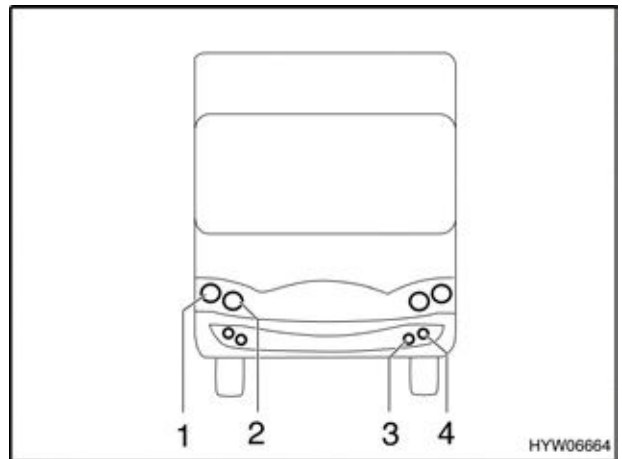


Fig. 170 Front lights (B-Class, B Star-Line, B-Classic)

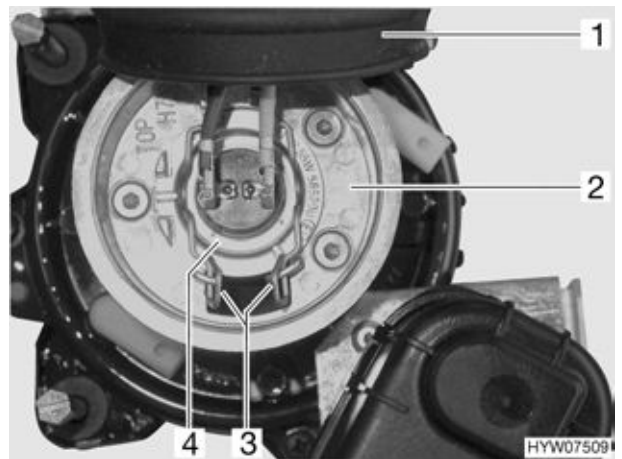


Fig. 171 Low beam

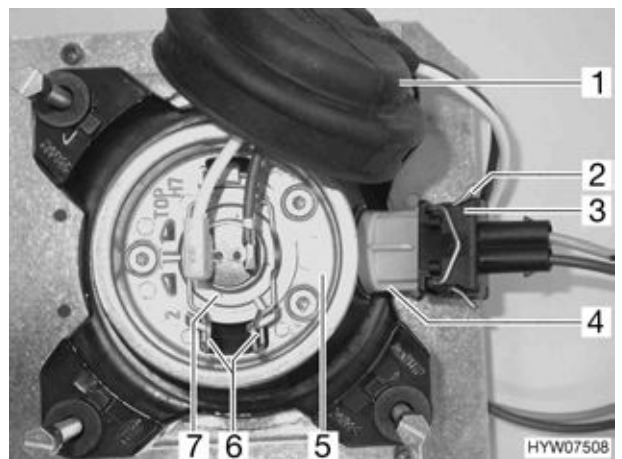


Fig. 172 Main beam/parking light

Fog light (Fig. 170,3)

- Put your hand behind the fog light and remove rubber cap (Fig. 173,3) from lamp housing (Fig. 173,4).
- Remove negative cable (Fig. 173,1) from lamp housing.
- Press securing clips (Fig. 173,2) to remove and move them to the side.
- Remove bulb (Fig. 173,5) with cable from the lamp housing.

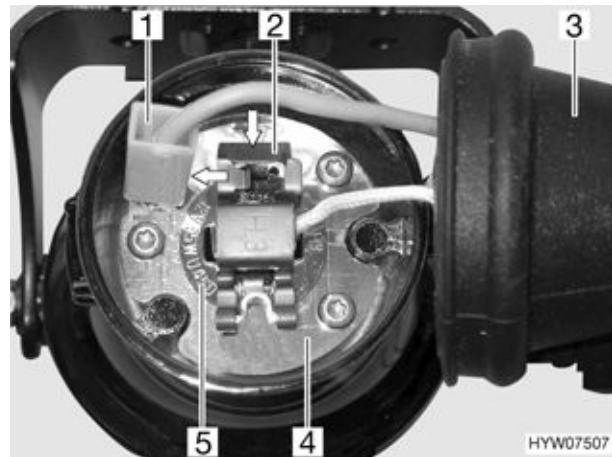


Fig. 173 Fog light

Direction indicator (Fig. 170,4)

- Undo external housing screws.
- Remove lamp housing.
- Remove bulb.

12.2.2 Rear Lights

- Undo housing screws (Fig. 174,1 to 5 or Fig. 175,1 to 5).
- Remove housing.
- Remove bulb.

Only replace third brake light (Fig. 174,6 or Fig. 175,6) completely.

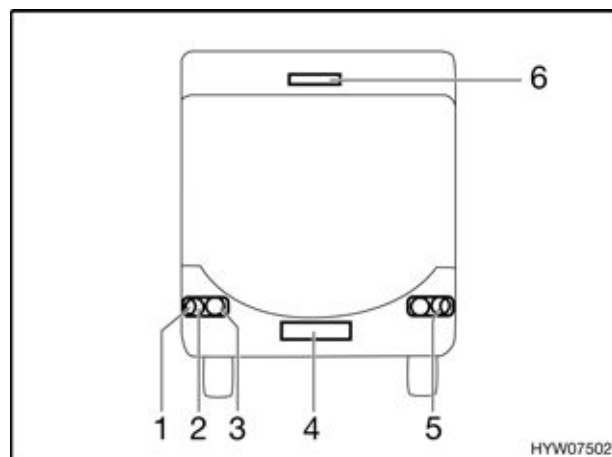


Fig. 174 Rear lights (variant 1)

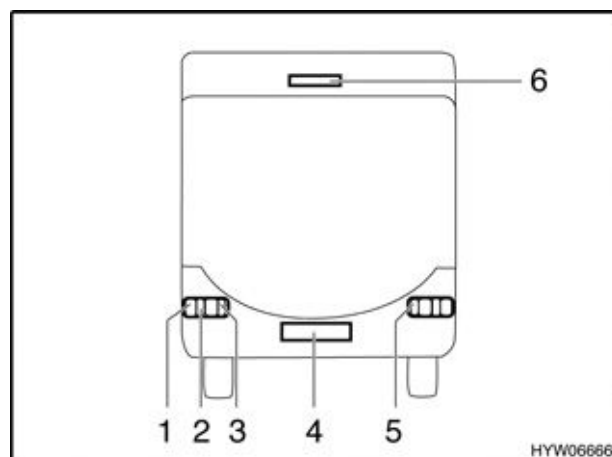


Fig. 175 Rear lights (variant 2)

12.2.3 Side Lights

Camp, Camp Classic

Marking lamp (Fig. 176,1)

- Put your hand behind the marking lamp.
- Turn bulb in a clockwise direction. Lamp holder comes off bayonet socket.
- Pull rubber towards rear.
- Remove bulb.

Direction indicator (Fig. 176,2)

- Push lamp in direction rear.
- Turn lamp and remove it.
- Remove housing.
- Remove bulb.

Contour lamp (Fig. 176,3)

- Undo housing screws.
- Remove housing.
- Remove bulb.

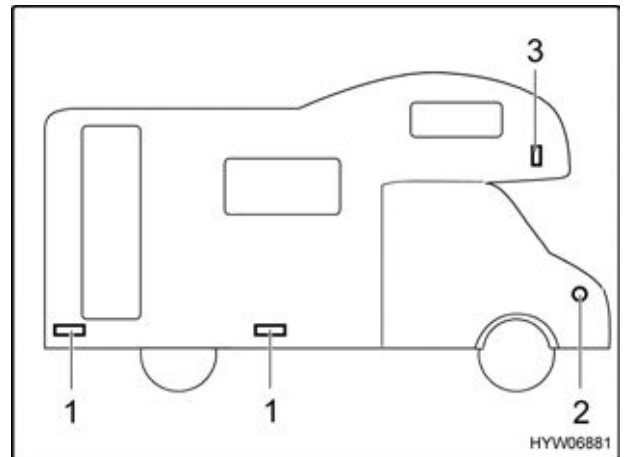


Fig. 176 Side lights (Camp, Camp Classic)

Camp GT, Tramp GT, B-Class, B Star-Line Contour lamp (Fig. 177,1) (not Tramp GT)

- Undo housing screws.
- Remove housing.
- Remove bulb.

Direction indicator (Fig. 177,2)

- Push lamp in direction rear.
- Tilt lamp frontward and remove it.
- Remove base of lamp.
- Remove bulb.

Marking lamp (Fig. 177,3)

- Put your hand behind the marking lamp.
- Turn bulb in a clockwise direction. Lamp holder comes off bayonet socket.
- Pull rubber towards rear.
- Remove bulb.

Awning light (Fig. 177,4)

- Loosen cover of housing.
- Remove housing.
- Remove bulb.

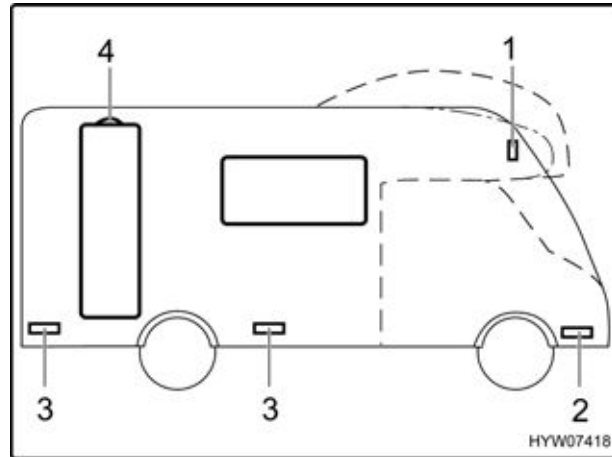


Fig. 177 Side lights (Camp GT, Tramp GT, B-Class, B Star-Line)

B-Classic

Contour lamp (Fig. 178,1)

- Undo housing screws.
- Remove housing.
- Remove bulb.

Direction indicator (Fig. 178,2)

- Push lamp in direction rear.
- Turn lamp and remove it.
- Remove housing.
- Remove bulb.

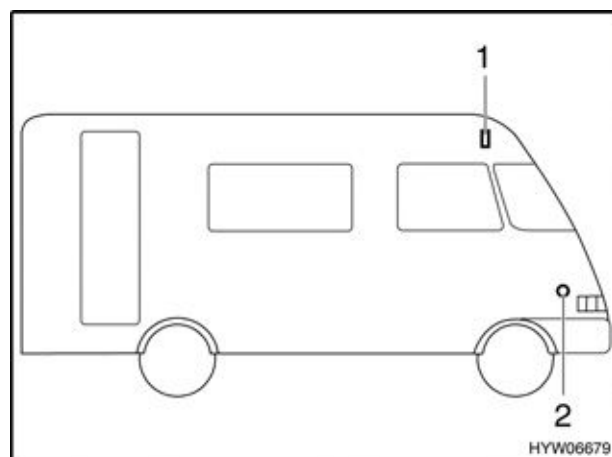


Fig. 178 Side lights (B-Classic)

12.2.4 Types of Bulbs for External Lights

Camp, Camp Classic

	No.	External lights	Type of bulb
Front	1	Main beam	H1 12 V 60/55 W
	1	Low beam	H7 12 V 60/55 W
	1	Parking light	R5W 12 V 5 W
	2	Direction indicator	P21W 12 V 21 W
Rear	1	Brake light/rear light	12VP21-5W
	2	Direction indicator	R21W 12 V 21 W
	3	Fog tail light	P21W 12 V 21 W
	4	Licence plate light	C5W 12 V 5 W
	5	Reversing light	P21W 12 V 21 W
	6	Third brake light	T5 12 V 2.3 W
Side	1	Side marking light	12 V 3 W
	2	Direction indicator	W5W 12 V 5 W
	3	Contour lamp	12 V 5 W

Camp GT, Tramp GT, B-Class, B Star-Line

	No.	External lights	Type of bulb		
			Camp GT Tramp GT	B-Class	B Star-Line
Front	1	Low beam	H7 12 V 60/55 W	H7 12 V 55 W	H7 12 V 55 W
	2	Main beam	H1 12 V 60/55 W	H7 12 V 55 W	H7 12 V 55 W
	2	Parking light	R5W 12 V 5 W	R5W 12 V 5 W	R5W 12 V 5 W
	3	Fog light	—	H3 12 V 55 W	H3 12 V 55 W
	4	Direction indicator	PY21W 12 V 21 W	PY21W 12 V 21 W	PY21W 12 V 21 W
	5	Marking lights	12 V 3 W	—	—
Rear	1	Direction indicator	R21W 12 V 21 W	R21W 12 V 21 W	R21W 12 V 21 W
	2	Fog tail light	P21W 12 V 21 W	P21W 12 V 21 W	P21W 12 V 21 W
	3	Brake light/rear light	12VP21-5W	12VP21-5W	12VP21-5W
	4	Licence plate light	C5W 12 V 5 W	C5W 12 V 5 W	C5W 12 V 5 W
	5	Reversing light	P21W 12 V 21 W	P21W 12 V 21 W	P21W 12 V 21 W
	6	Third brake light	T5 12 V 2.3 W	T5 12 V 2.3 W	T5 12 V 2.3 W
Side	1	Contour lamp	12 V 5 W	12 V 5 W	12 V 5 W
	2	Direction indicator	W5W 12 V 5 W	W5W 12 V 5 W	W5W 12 V 5 W
	3	Marking lamp	12 V 3 W	12 V 3 W	12 V 3 W
	4	Awning light	12 V 5 W	12 V 5 W	12 V 5 W

B-Classic

	No.	External lights	Type of bulb
Front	1	Low beam	H7 12 V 55 W
	2	Main beam	H7 12 V 55 W
	2	Parking light	R5W 12 V 5 W
	3	Fog light	H3 12 V 55 W
	4	Direction indicator	PY21W 12 V 21 W
Rear	1	Brake light/rear light	12VP21-5W
	2	Direction indicator	R21W 12 V 21 W
	3	Fog tail light	P21W 12 V 21 W
	4	Licence plate light	C5W 12 V 5 W
	5	Reversing light	P21W 12 V 21 W
	6	Third brake light	T5 12 V 2.3 W
Side	1	Contour lamp	12 V 5 W
	2	Direction indicator	W5W 12 V 5 W

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. The bulb might 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 glass (Fig. 179,1) in a clockwise direction using two fingers.
- Remove lamp glass.
- Change the halogen bulb.



Fig. 179 Spotlight (variant 1)

12.3.2 Spotlight (Variant 2)

Opening:

- Grip the edge of the spotlight glass (Fig. 180,1) and pull forward.
- Change the halogen bulb.

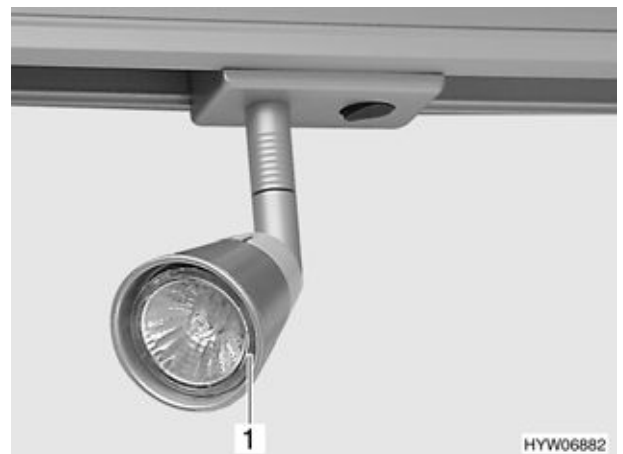


Fig. 180 Spotlight (variant 2)

12.3.3 Spotlight (Variant 3)

Opening:

- Press brackets (Fig. 181,1) inwards.
- Take off the plastic ring.
- Change the halogen bulb.

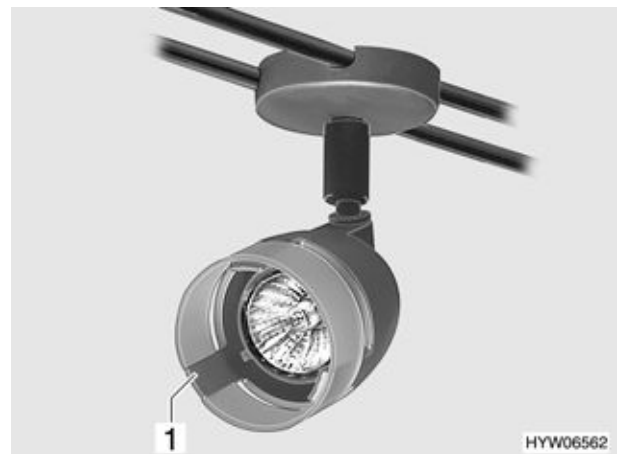


Fig. 181 Spotlight (variant 3)

12.3.4 Spotlight (Variant 4)

Opening:

- Grip the edge of the spotlight glass (Fig. 182,1) and pull forward.
- Change the halogen bulb.



Fig. 182 Spotlight (variant 4)

12.3.5 Spotlight (Variant 5)

Opening:

- Pull the halogen bulb forward out of the socket.



Fig. 183 Spotlight (variant 5)

12.3.6 Living Area Lamp

Opening:

- Remove the screw (Fig. 184,1) and take off the cover (Fig. 184,2).
- Press the glass together gently and remove from the housing.
- Change the fluorescent tube.

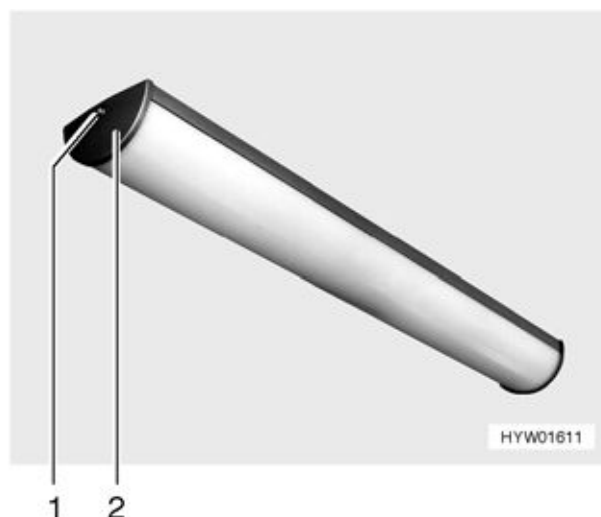


Fig. 184 Living area lamp

12.3.7 Living Area Lamp/Cooker Lamp

Opening:

- Pull at the glass of the lamp (Fig. 185,1). Always start pulling at the very left or right end.
- Change transistor tube.

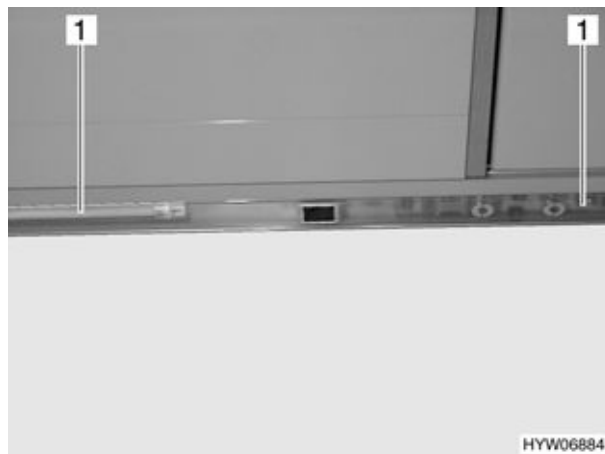


Fig. 185 Living area lamp/cooker lamp

12.3.8 Cooker Lamp

Opening:

- Pull at the glass of the lamp (Fig. 186,1). When pulling out, always start at the far right or far left of the cooker lamp.
- Change the fluorescent tube.



Fig. 186 Cooker lamp

12.3.9 Toilet Light (Variant 1)

Opening:

- Loosen the column base (Fig. 187,1).
- Push metal case (Fig. 187,2) up and remove lamp glass (Fig. 187,3) upwards.
- Change the fluorescent tube.

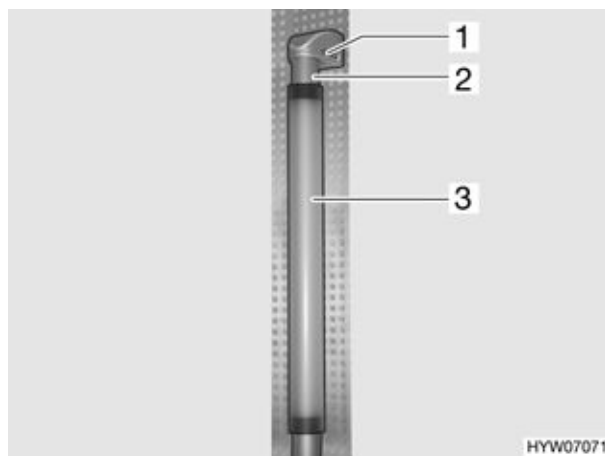


Fig. 187 Toilet light (variant 1)

12.3.10 Toilet Light (Variant 2)

Opening:

- Remove caps (Fig. 188,1).
- Remove screw.
- Remove lamp glass (Fig. 188,2).
- Change the fluorescent tube.

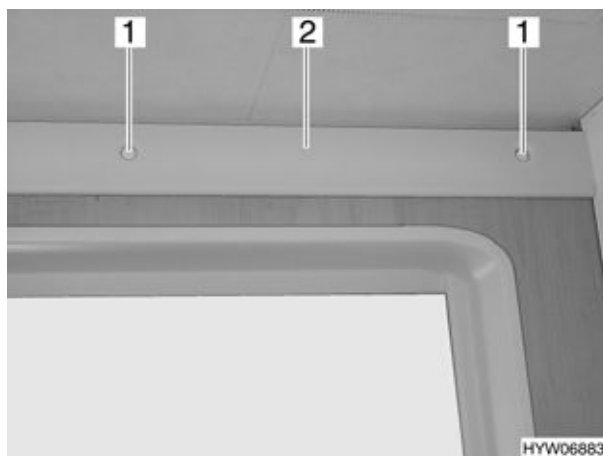


Fig. 188 Toilet light (variant 2)

12.3.11 Halogen Lamp

Opening:

- Turn the panel (Fig. 189,1) slowly until the shade screw underneath engages in the housing catch (Fig. 189,2).
- Remove frame.
- 3 clamps (Fig. 189,3) hold the glass of the halogen lamp in the housing. Push one of the 3 clamps to one side.
- Take out the glass.
- Change the halogen bulb.

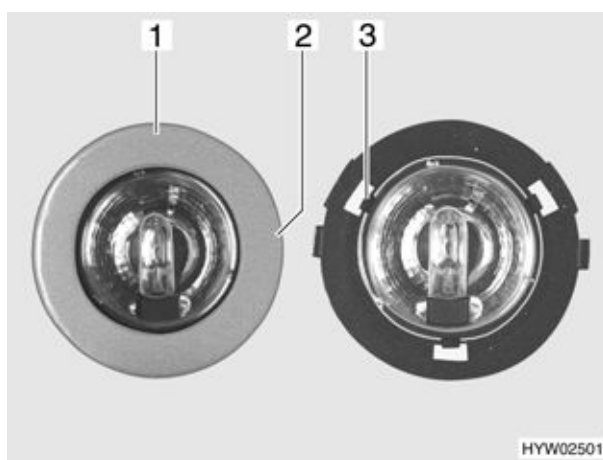


Fig. 189 Halogen lamp

12.3.12 Types of Bulbs for Internal Lights

Internal lighting	Type of bulb
Spotlight, variant 1 to 5 (halogen contact plug)	12 V 10 W
Living area lamp long (transistor tube)	12 V 13 W
Living area lamp short (transistor tube)	12 V 8 W
Living area lamp/cooker lamp (transistor tube)	12 V 13 W
Cooker lamp (transistor tube)	12 V 18 W
Toilet light variant, 1 and 2 (transistor tube)	12 V 18 W
Toilet light, B-Classic 544 (bulb)	12 V 10 W
Halogen lamp (halogen contact plug)	12 V 10 W
Wardrobe light (halogen contact plug)	12 V 5 W
Reading lamp front bed/overcab bed (transistor tube)	12 V 8 W
Front bed/driver's cabin* reading lamp (halogen contact plug)	12 V 5 W

* B-Class only

12.4 Adjusting the Springs of the Insect Screen and the Blind



- ▷ The spring adjustment screw cannot be turned back.

The tensile force of the insect screen spring and the blind can be adjusted if necessary. The adjustment screw (Fig. 190,1) is located on 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.

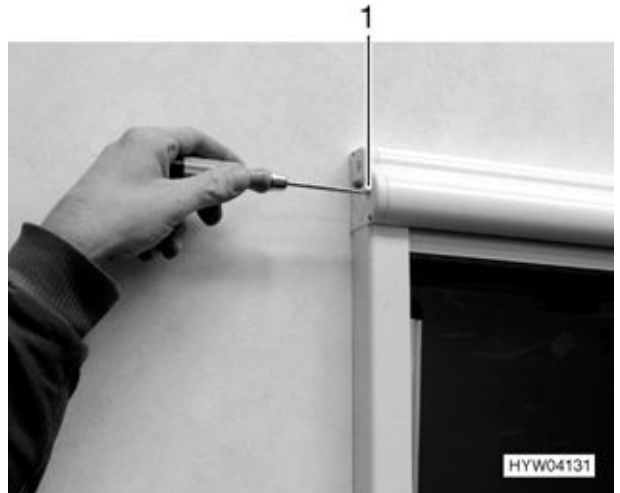


Fig. 190 Adjust spring

12.5 AL-KO Rear Axle

Fiat vehicles with AL-KO rear axle without pneumatic spring:

In addition to the regulations and notes in the operator manual of the basic vehicle as well as in the maintenance manual, the rear axles must be relubricated after 20,000 km, or at least every 12 months.



- ▷ The rear axles must not bear any load while they are being lubricated.
- ▷ Use one of the following types of grease for lubrication:
 - Costrac GL 1501 by the firm Klüber
 - Cardex 3746 SP by the firm CONDA



Fig. 191 AL-KO rear axle

The lubricator nipple (Fig. 191, arrow) is situated on the under side of the axle tube.

12.6 Spare Parts



- ▶ Every alteration of the original condition of the vehicle can jeopardize road safety.
- ▶ The accessories recommended by **HYMER AG** and the original spare parts have been specially developed for your vehicle and supplied by us. Your **HYMER** dealer carries these products. The **HYMER** 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 **HYMER** 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)
- V-belt
- Windscreen blades
- Bulbs
- Water pump

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

12.7 Vehicle Identification Plate

The vehicle identification plate (Fig. 192) with the serial number is mounted on the right hand side at the front just above the skirt.

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.

12.8 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 **HYMER** dealer.

12.9 HYMER Dealers

Contact your **HYMER** dealer whenever replacement parts are needed for the motorhome.

You can find the addresses and telephone numbers of the **HYMER** dealers:

- in the brochure "**HYMER** dealers", which is included separately with the vehicle
- in the Internet at <http://www.hymer.com>

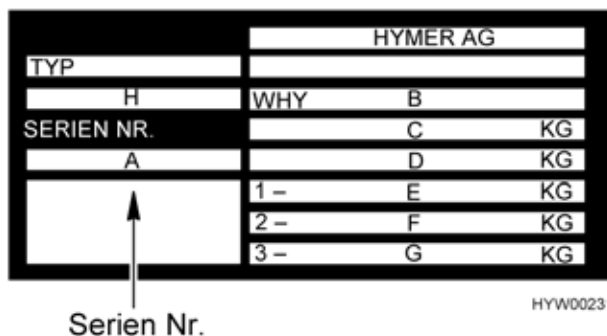


Fig. 192 Vehicle identification plate

- A = Serial number
- B = Manufacturer's code and chassis number
- C = Maximum permissible gross weight of the vehicle
- D = Maximum permissible gross weight of the vehicle with trailer
- E = Permissible axle load front
- F = Permissible axle load rear
- G = Free
- H = Type

12.10 Replacement Keys

To order replacement keys make a note of the following:

Locks for:	To order keys you need:	Obtainable at:	Telephone information:
Fiat base vehicle	Code number or code card, second key or chassis number	Fiat authorised workshops	—
Mercedes-Benz base vehicle	Data card, key number, second key or chassis number	Mercedes-Benz authorised workshop	—
Alarm system	Second key	Laser-Line	+49 2208 94630
		Waeco	+49 2572 879191
HYMER conversion	Serial number, chassis number, second key or key number	HYMER authorised workshop	—

Chapter Overview

This chapter contains instructions about the tyres of the motorhome.

The instructions address the following topics:

- tyre selection
- handling of tyres
- changing a wheel
- spare wheel support

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

13.1 General



- ▶ Incorrect 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
- ▷ Read the instruction manual for the base vehicle.



- ▷ In the case of a puncture on the motorhome, pull over to the side of the road. Place hazard warning triangle well visible from the road. Turn on the warning lights.
- ▷ Tyres on motorhomes with tandem axles may wear faster.

- 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: (1504) week 15, year of manufacture 2004.
- 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 approved wheel rim and tyre sizes are listed in the vehicle documentation for the motorhome; your **HYMER** dealer or the dealer for the base vehicle will be pleased to advise you.
- 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 or wheel bolts are firmly seated. Re-tighten the wheel nuts or wheel bolts of a changed wheel cross-wise after 50 km (30 miles) (Fig. 193). For tightening torque see section Tightening Torque.
- When using new or newly painted rims, re-tighten the wheel nuts or wheel bolts once again after approx. 1000 to 5000 km (600 miles to 3000 miles).
- For lay-ups or long periods of inactivity, keep the tyres and tyre bearings free from pressure points:
 - Jack up the motorhome so that the tyres do not bear any load
or
 - move the motorhome every 4 weeks to change the position of the tyres.

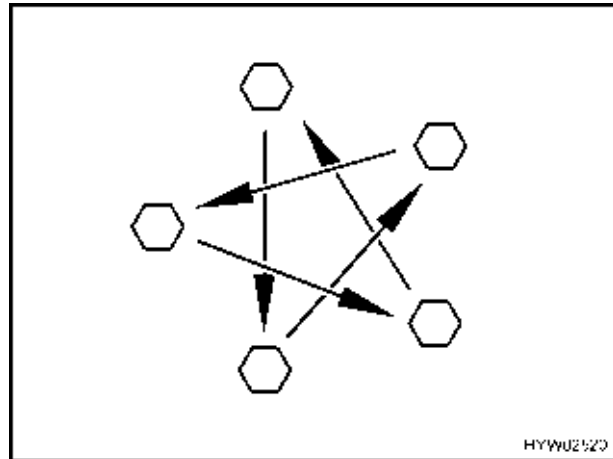


Fig. 193 Tighten the wheel nuts or wheel bolts cross-wise

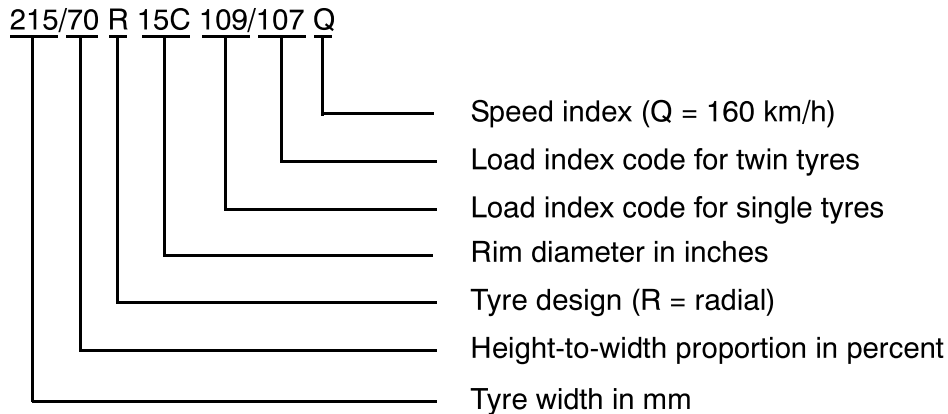
13.2 Tyre Selection

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 standardized 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 axle geometry of a vehicle, such as wheel camber and track, are also important for tyre selection. 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, standardized 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.
- If the tread wear is uneven, have the toe-in and the wheel camber checked. Driving with an incorrectly set toe-in or a one-sided wheel camber leads to a significant increase in wear.
- Avoid block brakings. A block braking gives the tires "brake plates" of varying strength, which reduce comfort and can render the tires 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 motorhome must be on level, firm ground, secure from slipping.
- ▶ Before jacking up the motorhome firmly apply the handbrake.
- ▶ Prevent the vehicle from rolling away with the wheel chocks.
- ▶ Under no circumstances jack the vehicle with the fitted steady legs.
- ▶ When towing a trailer, detach the trailer before jacking up the vehicle.
- ▶ Under no circumstances position the vehicle jack on the bodywork.
- ▶ Do not start the motor while the motorhome is jacked up.
- ▶ Whilst the motorhome 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 nuts or wheel bolts cross-wise (Fig. 193). 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 motorhome by **HYMER AG** can jeopardize road safety.



- ▷ Protect the motorhome according to national regulations, e. g. with a warning triangle.
- ▷ Before changing the wheel, check the wheel and tyre size, the weight-bearing capacity of the tyres and the speed index on the tyres. Only use the wheel rim and tyre sizes stated in the vehicle documents.
- ▷ Further information can be found in the instruction manual of the base vehicle.

13.5.2 Tightening Torque

Base vehicle	Wheel rim	Tightening torque
Fiat	Steel wheel rim 15"	160 Nm
	Steel wheel rim 15"	180 Nm
	Alloy wheel rim 15" and 16"	130 Nm
Mercedes-Benz	Steel wheel rim	190 Nm
	Alloy wheel rim	190 Nm

13.5.3 Changing the Wheel

- Park the vehicle on as even and stable a surface as possible.
- Go into first gear. Switch to "P" position for automatic transmission.
- Apply the handbrake.
- Secure the vehicle: place chocks or other appropriate objects beneath the vehicle.
- Remove the spare wheel from the spare wheel support.
- If the ground is soft, place a stable support such as a wooden board beneath the vehicle jack.
- Position the vehicle jack at the designated mounting points.
- Turn the wheel bolts several times to loosen them, but do not remove them!
- Lift the vehicle until the wheel has been lifted 2 to 3 cm above the ground.
- Remove the wheel bolts and take off the wheel.
- Place the spare wheel on the wheel hub and adjust.
- Tighten the wheel bolts and slightly tighten them cross-wise.
- Crank down the vehicle jack and remove it.
- Using the wheelbrace, tighten the wheel bolts evenly (see the torque table in the section 13.5.2).



- ▷ You should have a useable spare wheel available at all times. For this reason the wheel you have replaced should be repaired immediately.

13.5.4 Changing a Wheel with Alloy Wheel Rims



- ▶ Alloy wheel rims and steel wheel rims require different wheel bolts. When alloy wheel rims are mounted, the spare wheel (steel wheel rim) is accompanied by suitable wheel bolts.

13.6 Spare Wheel Support

Depending on the model, the spare wheel will be located in the rear storage space, in the rear garage or under the floor.

13.6.1 Spare Wheel in Rear Storage Space or Garage (Variant 1)

- Loosen the wing nut (Fig. 194,1) and unscrew it.
- Remove the pad (Fig. 194,2).
- Remove the spare wheel.

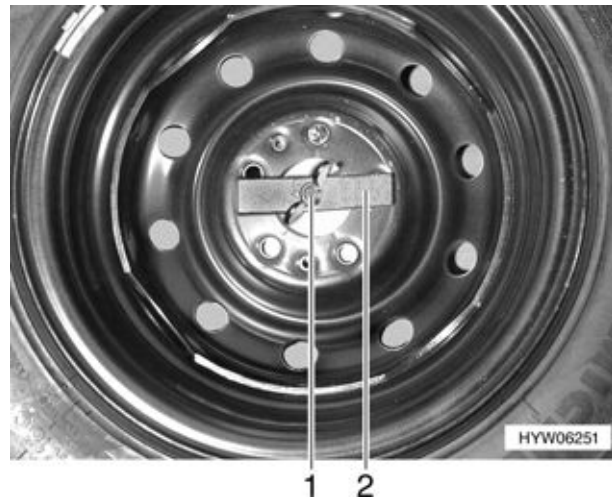


Fig. 194 Spare wheel in the rear storage space (variant 1)

13.6.2 Spare Wheel in Rear Storage Space or Garage (Variant 2)

- Use a wheelbrace to undo both bolts (Fig. 195,1).
- Remove bolts.
- Remove the spare wheel.

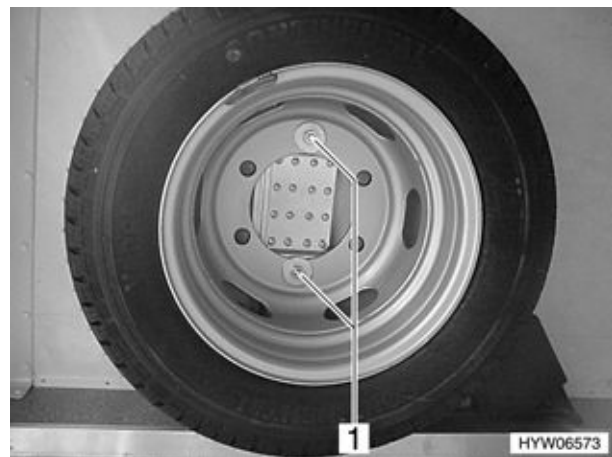


Fig. 195 Spare wheel in the rear storage space (variant 2)

13.6.3 Spare Wheel under the Floor

- Pull out spare wheel with the retaining strap (Fig. 196,1).
- Remove the spare wheel.

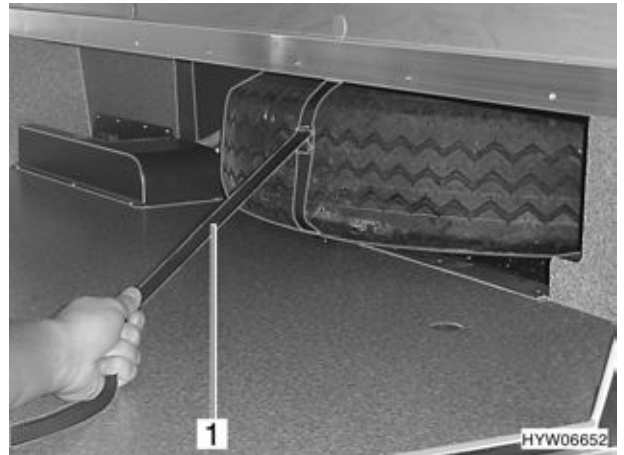


Fig. 196 Spare wheel under the floor

13.6.4 Spare Wheel below the Vehicle



- ▶ Due to its weight and fitted position, the spare wheel can be raised or lowered by a very strong person only (if working alone). Always get a second person to assist.

The spare wheel is stored in a basket near the rear of the vehicle.

- Pull out the splint (Fig. 197,4) from the holder (Fig. 197,2) for the basket (Fig. 197,3).
- Insert the wheelbrace (Fig. 197,5) from the on-board toolset into the holder (Fig. 197,1) on the basket.
- Press the frame of the basket out of the holder.
- Lower the basket with the spare wheel completely.
- Pull the spare wheel out of the basket.

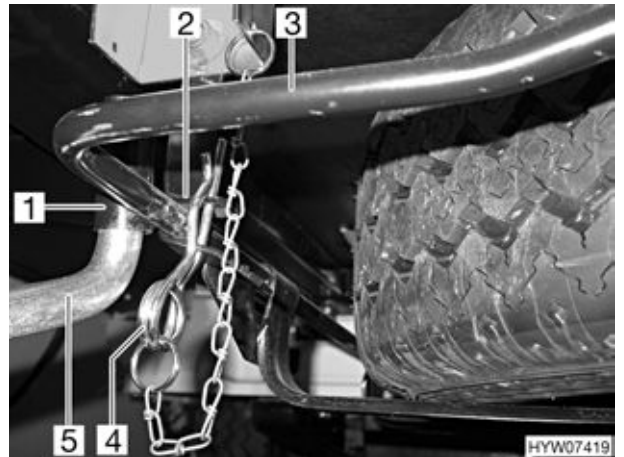


Fig. 197 Spare wheel in the basket



- ▶ After replacing the wheel, check to make sure that the basket in the holder is secured with the splint.

13.6.5 Spare Wheel under the Floor Plate

The spare wheel is fitted below the body between the frame parts of the chassis. It can be lowered or lifted and attached by a winch in the inside of the vehicle.

The opening to permit operation of the winch is covered with a plastic cap (Fig. 198,2).

- If there is a carpet, fold it to one side.
- Use a suitable tool (e.g. a screw driver) to prise off the plastic cap (Fig. 198,2).
- Place the spanner (Fig. 198,3) on the receptacle (Fig. 198,1) of the spare wheel support.
- Turn the spanner until the retaining rope is released along the entire length.
- Pull the spare wheel from below the vehicle.
- Undo the securing splint (Fig. 199,1) and winged nut (Fig. 199,2) of the spare wheel holder.
- Remove the spare wheel.



- ▷ When securing the spare wheel the outside part of the rim has to point upwards. Tighten wing nut and secure it with splint.
- ▷ Turn the spanner until the retaining rope has been totally wound up and is tightly fitted into the receptacle.

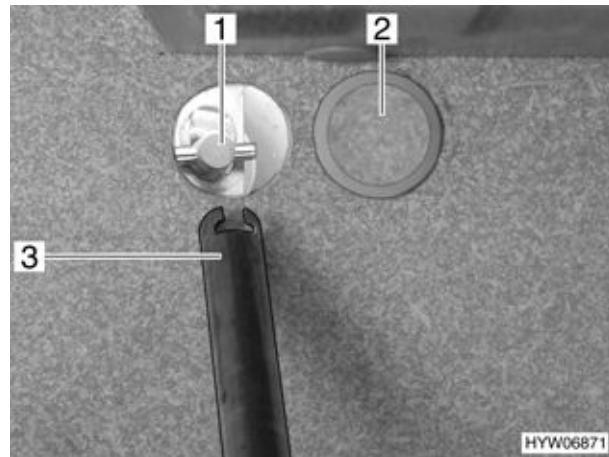


Fig. 198 Opening for winch



Fig. 199 Spare wheel

13.7 Tyre Pressure

The information on pressure levels is valid for cold tyres and loaded vehicles.

Tyre pressures in bar.

13.7.1 Base Vehicle: Fiat/Citroen

Type 11 Tyres	2-axes					
	Tyre manufacturer	Tyre type/ Tyre name	Front (bar)	Rear (bar)	Maximum permissible gross weight (kg)	Maximum permitted rear axle load (kg)
215/70 R 15C 109/107 Q	Michelin	Camping	5.0	5.0	2800/3200	1460/1750
215/70 R 15C 109/107 Q	Michelin/ other makes	—	4.1	4.5	2800/3200	1460/1750

Type 15 Tyres	2-axes					
	Tyre manufacturer	Tyre type/ Tyre name	Front (bar)	Rear (bar)	Maximum permissible gross weight (kg)	Maximum permitted rear axle load (kg)
215/70 R 15C 109/107 Q	Michelin	Camping	5.0	5.0	3400/3500	1900/2000
215/70 R 15C 109/107 Q	Michelin/ other makes	—	4.1	4.5	3400/3500	1900/2000

Type 18 (Maxi) Tyres	2-axes					
	Tyre manufacturer	Tyre type/ Tyre name	Front (bar)	Rear (bar)	Maximum permissible gross weight (kg)	Maximum permitted rear axle load (kg)
215/75 R 16C 113/111 Q	Michelin	Camping	5.5	5.5	3500/3900	2120/2200
215/75 R 16C 113/111 Q	Michelin/ other makes	—	4.5	4.5	3500/3850	2120
215/75 R 16C 113/111 Q	Michelin/ other makes	—	4.5	4.75	3900	2200

Type 18 (Maxi) Tyres	3-axes					
	Tyre manufacturer	Tyre type/ Tyre name	Front (bar)	Rear (bar)	Maximum permissible gross weight (kg)	Maximum permitted rear axle load (kg)
215/75 R 16C 113/111 Q	Michelin	Camping	5.5	3.5	4500	3000
215/75 R 16C 113/111 Q	Michelin/ other makes	—	4.5	3.5	4500	3000
						Sum of both axles

Tyre pressure tolerance: +/- 0.05 bar



- ▷ Over 4.75 bar requires a metal valve.
- ▷ For the maximum permissible axle loads for your vehicle please refer to specific documentation.
- ▷ When a replacement is needed **HYMER AG** recommends "Michelin-Camping" tyres.

13.7.2 Base Vehicle: Mercedes-Benz

Tyres	Front axle	
	Axle loads (kg)	
	1750	1850
195/70-R15C 104/102R	4.5	4.8
225/70-R15C 112/110R	3.5	—

Tyres	Rear axle	
	Axle loads (kg)	
	2240	Twin tyres 3200
195/70-R15C 104/102R	—	4.5
225/70-R15C 112/110R	4.5	—

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

Chapter Overview

This chapter contains instructions about possible faults in the motorhome.

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

The instructions address the following topics:

- braking system
- electrical fittings
- gas fittings
- gas cooker
- gas oven with grill
- microwave oven
- heater
- 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 Braking System




- In the interests of personal safety, have repairs and adjustments to the braking system made only by an authorised specialist workshop.

14.2 Electrical Fittings




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

Fault	Cause	Remedy
Road light system does not work fully	Bulb is defective	Unscrew cover of the relevant light, replace bulb. Note volts and watts specifications
	Fuse on the transformer/rectifier is defective	Replace fuse on the transformer/rectifier
Interior lighting does not work	Bulb is defective	Remove cover, replace bulb. Note volts and watts specifications (see chapter 12)
The electrically operated entrance step cannot be moved in or out	Fuse on the transformer/rectifier is defective	Replace fuse on the transformer/rectifier
The electrically operated steady leg cannot be moved in or out	Controller not switched on	Press push button on the dashboard
	Remote control battery empty	Change the battery (12 V, Type LR V08 or 23A or MN21)
	Fuse is defective	Replace fuse
No 240 V power supply in spite of connection	240 V automatic circuit breaker has triggered	Switch on 240 V automatic circuit breaker
Starter or living area battery is not charged when operated in 240 V mode	Fuse on the transformer/rectifier is defective	Replace fuse on the transformer/rectifier
	Charger in the transformer/rectifier is defective	Contact HYMER customer service
Living area battery is not charged during vehicle operation	Fuse on terminal D+ of the alternator is defective	Replace fuse
	Disconnecter relay in the transformer/rectifier is defective	Contact HYMER customer service
12 V indicator lamp does not light up or there is no LCD display	12 V main switch is switched off	Switch on the 12 V main switch
	Battery cut-off switch on the transformer/rectifier is switched off	Set battery cut-off switch to on
	Starter or living area battery is not charged	Charge the starter or living area battery
	Disconnecter relay in the transformer/rectifier is defective	Contact HYMER customer service

Fault	Cause	Remedy
12 V supply does not work	12 V main switch for the living area battery is switched off	Switch on the 12 V main switch
	Battery cut-off switch on the transformer/rectifier is switched off	Set battery cut-off switch to on
	Living area battery discharged	Charge the living area battery
	Disconnecter relay in the transformer/rectifier is defective	Contact HYMER customer service
12 V supply does not work in 240 V operation	12 V main switch for the living area battery is switched off	Switch on the 12 V main switch
	Battery cut-off switch on the transformer/rectifier is switched off	Set battery cut-off switch to on
	Automatic circuit breaker 240 V has been triggered in the transformer/rectifier	Have HYMER customer services check the electric system
	Charger in the transformer/rectifier is defective	Contact HYMER customer service
Starter battery is discharged in 12 V operation	Disconnecter relay in the transformer/rectifier is defective	Contact HYMER customer service
	Battery cut-off switch on the transformer/rectifier is switched off	Set battery cut-off switch to on
No voltage is supplied by the living area battery	Living area battery discharged	<p>Charge living area battery immediately</p>  <p>▷ An extended period of total discharge may cause irreparable damage to the living area battery</p> <p>Before laying up the motorhome for a longer period, fully charge the living area battery</p> <p>Discharging is caused by inactive appliances (see chapter 8)</p>

14.3 Gas Fittings

Fault	Cause	Remedy
Gas odour, high rate of gas consumption	Leak in gas system	 <ul style="list-style-type: none"> ▷ Immediately close regulator tap on the gas bottle. Open doors and windows and ventilate ▷ Do not smoke; do not ignite any open flames, and do not operate electric switches (starter, light switches a.s.o.) ▷ Have the gas fittings checked by an authorised specialist workshop
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 HYMER customer service

14.4 Cooker

14.4.1 Gas Cooker/Gas Oven

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 HYMER 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 HYMER customer service

14.4.2 Microwave Oven



► Only qualified personnel may repair the microwave oven.

Fault	Cause	Remedy
Microwave appliance does not cut in	Fuse is defective	Replace fuse
	Door of the microwave oven is not properly closed	Remove foreign bodies stuck in the door of the microwave oven and close door properly

14.5 Heater, Boiler, Refrigerator

In the event of a defect occurring on the refrigerator or heater/boiler contact the nearest customer service workshop of the relevant appliance manufacturer. The list of addresses is enclosed with the accompanying appliance documentation. Only authorised personnel may repair the refrigerator or the heater/boiler.

14.5.1 Trumatic C Heater/Boiler

Fault	Cause	Remedy
Red indicator lamp "Fault" is lit	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 HYMER customer service
Red indicator lamp "Fault" flashes	Operating voltage too low	Charge living area battery/Install new living area battery
Red indicator lamp "Fault" is flashing 1 x per second	Operating voltage too low	Charge or renew the living area battery
		Install new living area battery
Red indicator lamp "Fault" is flashing 2 x per second	Operating voltage too high	Contact HYMER customer service
Green indicator lamp behind knob is not lit	Fuse on the transformer/rectifier is defective	Replace fuse on the transformer/rectifier
	Fuse in the electronic control unit has been triggered	Contact HYMER customer service
	Living area battery defective	Charge or renew the living area battery

Fault	Cause	Remedy
Boiler empties, safety/drainage valve has opened	Internal temperature below 8 °C	Heat inside
	Battery cut-off switch on the transformer/rectifier is switched off	Set battery cut-off switch to on
	Operating voltage below 10.8 V	Charge or renew the living area battery
	Fuse is defective	Replace fuse on the transformer/rectifier
Safety/drainage valve does not close when switched on	Battery cut-off switch on the transformer/rectifier is switched off	Set battery cut-off switch to on
	Operating voltage below 10.8 V	Charge the living area battery
	Fuse is defective	Replace fuse on the transformer/rectifier
Red and green indicator lamps are not lit	Fuse is defective	Replace fuse on the transformer/rectifier
Fan wheel runs noisily or not steadily	Fan wheel is soiled	Contact Truma service department

14.5.2 Trumatic E Heater

Fault	Cause	Remedy
Red indicator lamp "Fault" is lit	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
Red indicator lamp "Fault" flashes	A safety element is defective or a fan wheel is dirty	Contact HYMER customer service
	Operating voltage below 10.8 V	Charge or renew the living area battery
	Operating voltage over 12.1 V	Contact HYMER customer service
Red and green indicator lamps are not lit	Fuse is defective	Replace the 5 A fuse on the transformer/rectifier
	Living area battery discharged or defective	Check, recharge or renew the living area battery

14.5.3 Refrigerator


Fault	Cause	Remedy
Refrigerator does not switch on when operating in 240 V mode	No 240 V power supply	Connect 240 power supply
	240 V automatic circuit breaker has triggered	Switch on 240 V automatic circuit breaker
	240 V operating voltage too low	Have an expert check the 240 V power supply system
Refrigerator does not switch on when operating in 12 V mode	Fuse on the transformer/rectifier is defective	Replace fuse on the transformer/rectifier
	Disconnecter relay in the transformer/rectifier is defective	Contact HYMER customer service
	12 V operating voltage too low	Have an expert check the 12 V power supply system
Refrigerator does not cut in when operating in gas mode The "GAS" operating indicator (Fig. 147,2) flashes yellow (variant 3)	Lack of gas	Open regulator tap and gas isolator tap
		Connect a full gas bottle
	Air in the gas pipe	Repeat ignition 3 or 4 times

Fault	Cause	Remedy
In case of AES: Indicator lamps "230 V", "12 V" or "AUTO" (Fig. 148,4) not lit green	Refrigerator is turned off	Switch on the refrigerator with energy selector switch (Fig. 148,3)
	No electrical operating voltage	Connect 240 V power supply
		Let the vehicle engine run
		Switch on or replace the fuse
In case of AES: Refrigerator does not switch to 12 V mode whilst in motion	Operating voltage of alternator is not present/too low	Contact a specialist workshop
In case of AES: The refrigerator does not switch on in gas operation, "GAS" indicator lamp (Fig. 148,4) is not lit yellow	Lack of gas	Open regulator tap and gas isolator tap
		Connect a full gas bottle
In case of AES: "GAS" indicator lamp (Fig. 148,4) flashes yellow, no gas	Air in the gas pipe	Switch off the refrigerator with energy selector switch (Fig. 148,3)
		Open regulator tap on the gas bottle and the gas isolator tap of the refrigerator
		Switch the refrigerator back on with the energy selector switch (Fig. 148,3). After 10 seconds, the AES will at- tempt another ignition
		If the "GAS" indicator lamp (Fig. 148,4) flashes yellow af- ter 30 seconds again, the fail- ure has not been remedied yet
		Repeat this process two to three times for ventilation. If the refrigerator cannot be op- erated, contact HYMER cus- tomer services

14.6 Water Supply

Fault	Cause	Remedy
Leakage water inside the vehicle	A leak has occurred	Identify leak, re-connect water pipes
No water	Water tank is empty	Top up with fresh water
	Drain cock not closed	Close the drain cock
	Fuse of the pump is defective	Replace fuse on the transformer/rectifier
	Pump is defective	Exchange pump (have it exchanged)
	Hose is kinked	Straighten hose or replace
	Transformer/rectifier defective	Contact HYMER customer service
Thetford toilet does not have any flush water	Water tank is empty	Top up with fresh water
	Fuse in Thetford cassette is defective	Replace fuse
Instrument or LCD display for waste water and water indicates a wrong value	Measuring probe in the waste water or water tank is soiled	Clean water/waste water tank
	Measuring probe is defective	Replace measuring probe
Waste water tank cannot be emptied	Drain cock is clogged	Open the cleaning cap on the waste water tank and drain the waste water. Rinse the waste water tank well
Drain on the one-hand lever mixer is clogged	Perlator calcified	Clip off the perlator, de-calcify in vinegar water
Water jets on the shower nozzle clogged	Water jets calcified	De-calcify shower nozzle in vinegar water or rub off soft nozzle burling
Water drains from the shower tray slowly or does not drain at all	The vehicle is not in a horizontal position	Position the vehicle horizontally

14.7 Body

Fault	Cause	Remedy
Wind-up skylight is difficult to operate	Threaded spindle not lubricated	Lubricate threaded spindle
	Threaded spindle defective	Have threaded spindle replaced
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
Bike rack swivel system is difficult to operate	Bike rack swivel system not sufficiently lubricated	Lubricate bike rack swivel system 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 **HYMER** dealers and service centres are available for any spare parts requirement.

15.1 Weight Details for Special Equipment

Weight details for **HYMER** special equipment are listed in the table below. If these objects are either carried in or on the motorhome and are not part of the standard equipment, they must be taken into consideration when calculating the payload.

All weight details are approximate.

Observe the max. permissible gross weight.

Description	kg
Waste water tank, insulated	14
Caravan coupling	26
External shower	1
Heated and electrically adjustable external mirror ¹⁾	2
Car radio and CD	1
Oven	10
Floor carpet moulded part ²⁾	8
Pull down bed ¹⁾	66
Front storage compartment	30
Club seat ²⁾	7
Roof rail with access ladder	17
Front skylight with shade	2
Electrically operated entrance step, 2 steps	18
Bunk bed	15
Driver's door ¹⁾	24
Bike rack for 2 bicycles	6
Bike rack for 4 bicycles	11
Fire extinguisher	3
Cabin floor mat, one-piece ²⁾	3
Remote gas switch	1
Gas socket with stopcock	1
Lift-tilt skylight 960 x 655 mm	25
Rear garage	50

Description	kg
Electric steady legs, 2 pcs. ³⁾	8
Steady legs, 2 pcs.	9
Insulation mat for driver's cabin window	1
12 V air conditioning unit	15
240 V air conditioning unit ¹⁾	35
135 litre refrigerator ¹⁾	13
Awning 300 cm	25
Awning 350 cm	32
Awning 400 cm	40
Microwave oven	10
Rigid motorbike rack	40
Extendable motorcycle rack	32
Lowerable motorcycle rack	54
Multiple load rack B – pair	6
Multiple load rack B high – pair	6.5
Navigation system	3.5
Fog light	2
Panoramic mirror, per pcs. ¹⁾	1
Satellite aerial Mobisat CAP 200	19
Oyster 85 satellite antenna	24.5
Rear mud flaps, 2 pcs.	7
Solar installation, 1 x 54 W, regulated	7.5
Solar installation, 2 x 54 W, regulated	15
Carpet ⁴⁾	8

Description	kg
Thetford spare cassette	5
Table extension (not for L seating group)	2
Triomatic	3
TV swivel console ⁵⁾	1

Description	kg
Ultrasonic alarm system inclusive door switch	1
Underfloor sliding drawer, additional	17
Additional heater, driver's cab ¹⁾	5
Second living area battery	20

- 1 = not Camp, Tramp
 2 = not B-Class
 3 = only for B-Class
 4 = only for Camp, Camp Classic
 5 = only for B-Classic

16.1 Technical Data



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

Further information can be found in the manual of the base vehicle. The technical data are not a component of the instruction manual.

Chapter Overview

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

The tips cover the following topics:

- traffic rules in foreign countries
- road assistance in European countries
- traffic laws in European countries
- gas supply in European countries
- toll regulations in European countries
- safe ways to spend the night during travel
- camping in winter
- energy balance of the living area battery

At the end of the chapter there is a checklist containing the most important equipment for your trip with the motorhome.
















































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.
- ▷ In Italy and Spain, warning vests must be worn when exiting the vehicle outside of towns in the case of vehicle failures or accidents.

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 ★ 166	☎ 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 ★ 110/112***	☎ 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
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	+ 03/112*** ★ 02/112***	☎ LAMB 80 00 00
Lituvania	+ 03/112*** ★ 02/112***	☎ LAS 52 49 74 38
Luxemburg	+ 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

Country	 Emergency Services  Police	 Breakdown Service
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
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: 04/2004

17.3 Speed Limits and Permissible Dimensions



► When travelling abroad, note and do not exceed the varying speed limits.

For your information the speed limits and the permissible dimensions in some of the most visited countries:

Date 04/2004

Country	Max. dimensions in meters		Gross weight	In built-up areas	Outside built-up areas	Motorway
	Width	Length				
Belgium	2.55	12	up to 7.5 t over 7.5 t	50 50	90/120 ¹ 60/90 ¹	120 90
Bulgaria	2.60	11	up to 3.5 t over 3.5 t	50 50	90 70	120 100
Denmark	2.55	12	up to 3.5 t over 3.5 t	50 50	80 70	110 80
Germany	2.55	12	up to 3.5 t over 3.5 t ⁷	50 50	100 80	130 ⁶ 80
Estonia	2.50	12	up to 3.5 t over 3.5 t	50 50	90 70	110 90
Finland	2.60	12		50	80	80
France	2.55	12	up to 3.5 t over 3.5 t	50 50	90 ⁴ /110 ^{1/4} 80 ⁴ /100 ^{1/4}	130 ⁴ 110 ⁴
Greece	2.50	12		50	90/110 ¹	120
Great Britain	2.55	12		48	96/112 ¹	112
Ireland	2.55	12		48	64/96 ¹	112
Iceland	2.55	12		50	90 ⁹	—
Italy	2.50	12	up to 3.5 t over 3.5 t	50 50	90/110 ¹ 80	130 ¹⁵ 100
Federal Republic of Yugoslavia	2.50	12	up to 3.5 t over 3.5 t	60 60	80/100 ¹ 80	100 80
Croatia	2.55	12		50	80/100 ¹	130
Latvia	2.50	12	up to 2.8 t over 2.8 t	50 50	90 90	110 90
Lituvania	2.50	12	up to 3.5 t over 3.5 t	50 50	90 70	110 110
Luxemburg	2.55	12	up to 3.5 t over 3.5 t	50 50	90 75	130 90
Republic of Macedonia	2.50	12		50/60	80	80
Netherlands	2.55 ¹¹	12		50	80/100 ¹	120
Norway	2.55	12,40	up to 3.5 t over 3.5 t	50 50	80/90 ¹ 80	90 80

Country	Max. dimensions in meters		Gross weight	In built-up areas	Outside built-up areas	Motorway
	Width	Length				
Austria	2.55	12	up to 3.5 t over 3.5 t	50 50	100 70	130 ² 80
Poland	2.50	12	up to 3.5 t over 3.5 t	60 60	90 70	130 80
Portugal	2.50	12	up to 3.5 t over 3.5 t	50 50	90/100 ³ 80/90 ³	120 ⁵ 110 ⁵
Romania	2.50	12	up to 3.5 t over 3.5 t	50 50	80 70	100 90
Russia	2.50	12		50	90 ¹⁰	90 ¹⁰
Sweden	2.60	24 ¹²	up to 3.5 t over 3.5 t	50 50	70/90/110 ¹ 80/90 ¹	110 90
Switzerland	2.55	12	up to 3.5 t over 3.5 t ⁸	50 50	80/100 ¹ 80/100 ¹	120 100
Serbia and Montenegro	2.50	12	up to 3.5 t over 3.5 t	60 60	80/100 ¹ 80	100 80
Slovakian Republic	2.50	12	up to 3.5 t 3.5 t to 6.0 t	60 60	90 80	130 80
Slovenia	2.55	12	up to 3.5 t over 3.5 t	50 50	80/100 ¹ 80	100 80
Spain	2.55	12		50	70/80 ¹³ / 90 ¹⁴	90
Czech Republic	2.50	12	up to 3.5 t over 3.5 t	50 50	90 80	130 80
Turkey	2.50	10		50	90	120
Ukraine	2.50	12		60	90 ¹⁰	110 ¹⁰
Hungary	2.50	12	up to 2.5 t over 2.5 t	50 50	90/110 ¹ 70	130 80
Cyprus	2.55	12		50	80	100

1 On expressways

Specifications without guarantee

2 Between 10 p.m. and 5 a.m. the speed limit on all motorways, with the exception of A1 (Salzburg-Vienna) and A2 (Salzburg-Villach): 110 km/h

3 According to traffic signs

4 On wet roads, reduce speed by 10 km/h, on motorways by 20 km/h

5 Drivers who have had their driver's licence for less than one year must not drive faster than 90 km/h. Corresponding stickers (available from ACP offices) must be affixed in a clearly visible position on the rear of the vehicle.

6 Recommended speed: 130 km/h

7 Motorhomes over 7.5 tons max. permissible weight require a tachograph.

8 A heavy goods vehicle supplement must be paid on all roads for all vehicles exceeding 3.5 tons max. permissible weight.

9 On unmade roads (gravel): 80 km/h

10 Drivers who have had their driver's licence for less than two years must not drive faster than 70 km/h.

11 On main roads 2.55 m, on roads marked "B" 2.20 m.

12 Swedish campsites often require the motorhome to have a closed waste water system.

13 On expressways as well as on roads with more than one lane in each direction

14 On roads resembling highways

15 On three-lane motorways: 150 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; on all roads
Iceland	All year; on all roads
Italy	All year; only outside of towns
Latvia	All year; on all roads
Lituvania	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

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17.5 Sleeping in the Motorhome 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		Staying overnight for one night to restore driving ability is permitted. There may be regional and local limitations.
Germany	X		X		
Finland		X	X		Permission from the local authorities or the owner of the land is required.
France	X		X		
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.
Luxemburg		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 Toll Regulations in European Countries

Many European countries have introduced a mandatory toll system. The toll regulations and how they are collected vary greatly from country to country. Nevertheless, ignorance is no excuse. Penalties can be quite severe.

As is the case with traffic regulations, the vehicle driver is required to be familiar with the toll formalities before starting out on a trip. For example, in Austria the vignette does not meet the toll requirements for motorhomes that weigh more than 3.5 t. There, a so-called "Go-Box" must be obtained and charged.

Contact your automobile club or the Internet for further information.

17.8 Tips on Staying Overnight Safely During Travel

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

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 motorhomes 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 motorhome.
- 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 motorhome.

17.9 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.
- Bring snow chains.
- Choose your parking place with care. Observe the ground beneath you. Snow and ice may melt.
- When the motorhome has been positioned, release the handbrake to prevent freezing.
- 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.
- Cover the single-paned driver's cabin window with insulation mats to avoid thermal bridges.
- 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).
- When it is snowing heavily, clear the roof of the motorhome of snow regularly. A few centimeters 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".

17.10 Energy Balance of the Living Area Battery

The living area batteries have a limited power supply. For this reason, the electrical appliances should not be operated without a 240 V power supply for a longer period of time. The following table shows the standard values for power consumption. The indicated operating hours are estimations and will vary depending on individual circumstances.

Balance of energy consumption (example)

Balance of energy					Summer		Winter		
		Output	Current	Hrs/day*	Output/day	Current/day	Hrs/day*	Output/day	Current/day
1	Seating group	20 W	1.7 A	2 hrs	40 W	3.4 Ah	3 hrs	60 W	5.1 Ah
2	Kitchen	18 W	1.5 A	1 hr	18 W	1.5 Ah	2 hrs	36 W	3 Ah
3	Extractor hood	2.8 W	0.23 A	0,5 hr	1.4 W	0.12 Ah	0.5 hr	1.4 W	0.12 Ah
4	Bathroom unit	40 W	3.5 A	1 hr	40 W	3.5 Ah	1 hr	40 W	3.5 Ah
5	Water pump	60 W	5 A	0.5 hr	30 W	2.5 Ah	0.5 hr	30 W	2.5 Ah
6	Heater/Boiler	12 W	1 A	8 hrs	96 W	8 Ah	16 hrs	192 W	16 Ah
7	Television with receiver	40 W	4.2 A	2 hrs	80 W	8.4 Ah	4 hrs	160 W	17 Ah
				total	305.4 W	approx. 27.4 Ah	total	519.4 W	approx. 47.2 Ah
				approx. 1,8 days "power" (independent)			approx. 1 day "power" (independent)		

* Estimated operation time

Solar cells

The independent time period can be extended with use of the solar cells:

Energy gained via solar cells	Summer	Winter
2 solar cells of 50 W produce a gain	approx. 34 Ah/day	approx. 8 - 9 Ah/day
	independent operation reached	in order to prolong independent operation here, another living area battery must be installed

17.11 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 (de-tergent)

✓	Object
	Dishcloths
	Set of knives and forks for grilling
	Coffeepot
	Corkscrew
	Kitchen paper
	Spoons
	Knives
	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
	V-belt
	Glue
	Universal pliers
	Compressor
	Luster terminals
	Loops
	Tube adapter
	Hose clips
	Snow chains (winter)

✓	Object
	Screw driver
	Current-measuring instrument
	Step
	First-aid kit
	Vehicle jack
	Hazard warning triangle
	Warning sign
	Warning vest
	Flashing hazard warning light

Outside

✓	Object
	Stay rope
	Bellows
	Camping chairs

✓	Object
	Camping table
	Luggage racks
	Tent pegs/tightening ropes

✓	Object
	Lock
	String

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