2012 OWNERS HANDBOOK
VAN CONVERSION RANGE

AUTOCRUISE

All Swift Group models have been certified by the National Caravan Council for compliance with stringent European Standards, British Legislation and industry set Codes of Practice specifically relating to health and safety issues. The approval process covers the testing and inspection of critical areas of the product from fire safety, weights and dimensions, to gas, electrics and ventilation. Every Swift Group motorhome carries the "NCC Approved Motor Caravan" badge. The NCC also conduct unannounced inspections at the Swift Group factories to ensure continued compliance. NCC Approval gives you peace of mind that your motorhome is legal and safe.

All camper van / van conversion motorhomes are European Whole Vehicle Type Approved.

This is your assurance that these motorhomes meet all European regulations, and have been constructed and conform to approved standards of safety and manufacturing.

Dear owner

Thank you for deciding to buy one of our new motorhomes. We are sure you will enjoy many happy hours in it and we hope the information and hints in this handbook will heighten your enjoyment.

The handbook has been designed to give you a general guide to the care, use and maintenance of your motorhome.

Whether you are a new or an experienced motorhome user the hints will help to protect your investment.

The information contained will answer most of your queries, but if there are any aspects which are not covered please consult your appointed dealer.

Happy touring!

Important - please quote the base vin (vehicle identification number) in all correspondence with your dealer or Swift Group Limited (Swift), this can be found on the lower corner of the front windscreen or on the Fiat/Peugeot plate positioned on the front cross member within the engine compartment .

All the illustrations and descriptive matter in this handbook are intended to give a general idea of the motorhome. Changing market and supply situations may prevent us from maintaining the exact specification details in this handbook. We therefore reserve the right to alter specifications as materials and conditions demand.

Dealers are not agents of Swift Group Limited and have absolutely no authority to bind Swift Group Limited by any express or implied undertaking or representation.

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PANEL VAN CONVERSION MOTORHOME WARRANTY

All the illustrations and descriptive matter in this handbook are intended to give a general idea of the motorhome. Changing market and supply situations and our policy of continuous product development may prevent us from maintaining the exact specifications detailed in this handbook. We therefore reserve the right to alter specifications as materials and conditions demand.

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Your panel van conversion motorhome has three warranties:

Base Vehicle Warranty – provided by either Fiat or Peugeot

Your vehicle is a panel van conversion motorhome which utilises either a Fiat or Peugeot base vehicle. For a panel van conversion motorhome, Swift takes a panel van as supplied by either Fiat or Peugeot and fits out the interior of the van for habitation. Either Fiat or Peugeot provide a manufacturer's warranty for the base vehicle as supplied to Swift by them. For any issues with the base vehicle warranty please contact your local Fiat/ Peugeot dealer. This Motorhome Warranty does not cover any parts of your motorhome that are covered by the Fiat or Peugeot manufacturer's warranty. Your base vehicle warranty is subject to the terms and conditions contained in the Fiat or Peugeot handbook supplied with the base vehicle and the vehicle must be serviced in accordance with Fiat or Peugeot requirements.

SuperSure Warranty – provided by Swift

For all parts or fittings of your panel van conversion motorhome other than the Fiat/ Peugeot base vehicle, Swift will repair (or at is option, replace) any defective parts or fittings for 3 years from the date of purchase (or hire purchase) subject to conditions, terms and exclusions below.

Panel Van Conversion Body Shell Warranty ("Body Shell Warranty") – provided by Swift

Swift will repair (or at its option, replace) any defects with the panel van conversion to the body shell for 3 years from the date of purchase (or hire purchase), subject to the conditions, terms and exclusions below. This Motorhome Warranty does not cover any parts of your motorhome that are covered by the Fiat or Peugeot manufacturer's warranty.

Conditions for the SuperSure and Body Shell Warranties

1. You must ensure that the habitation part of your motorhome has an Annual Service (see clause 2 below) within 90 days before or 60 days after each anniversary of the original date of purchase. In order to preserve your SuperSure and Body Shell Warranties the third Annual Service must, however, be carried out before the expiry of the 36 month period from the original date of purchase. If you have not performed an Annual Service then Swift will not be obliged to perform any work under the applicable warranty . Original VAT invoices must be retained as proof that Annual Service have been carried out.
2. The Annual Service on the body shell and habitation area must be carried out in accordance with the requirements in this handbook. You will be responsible for any charges made for an Annual Service. If the Annual Service is performed by an authorised Swift Group Service Centre then Swift warrants that the Annual Service has been performed correctly. If the Annual Service is performed by an unauthorised repairer or service centre then if the Annual Service has not been performed in accordance with the requirements in this handbook and/ or work has been performed on your motorhome that is defective or faulty, then Swift will not be obliged to perform any work under this Warranty (insofar as it relates to defective or faulty work or defective Annual Service).

3. All new motorhomes must be registered with Swift within 6 weeks of purchase as new.
4. The benefit of the SuperSure and Body Shell Warranties may be transferred to a new owner if the motorhome is re-sold, provided that the motorhome has been serviced in accordance with the requirements of this handbook, and details of the change of ownership have been supplied to Swift using the change of ownership form set out in this handbook as soon as reasonably practicable after the change.
5. If any repairs are identified as being necessary to the body shell or habitation areas during an Annual Service or otherwise, Swift will only pay for Warranty work performed by an authorised Swift Group Service Centre. The motorhome must be made available to an authorised Swift Group Service Centre within 6 weeks of the date the repair need was identified for the work to be carried out. The cost of transporting, towing or moving the motorhome by any means to or from the place of repair is the responsibility of the owner.
6. The SuperSure and Body Shell Warranties only apply to motorhomes purchased and used primarily within the UK, which means that the motorhome is not used for continuous journeys outside of the UK of longer than 90 days per journey. Please refer to the Fiat or Peugeot handbook for use of the base vehicle outside the UK.

Terms

7. The Body Shell Warranty covers any defect with the joints and seals of the panel van conversion. This includes body leaks, delamination of floors, and water ingress through any permanently sealed seam joints which relate to the conversion of the panel van. This Motorhome Warranty does not cover any parts of your motorhome that are covered by the Fiat or Peugeot manufacturer's warranty.
8. In the first 12 months the SuperSure Warranty will cover any defect other than those specified in the Exclusions below.
9. In the years 2 and 3 the SuperSure Warranty will only cover any defect with the following components:
    - Water system; heater, fresh water tank, water pump, water gauges, taps and shower heads;
    - Heating system and components;
    - Main proprietary items (for example fridge, toilet, cooker);
    - Auxiliary electrics; and/or
    - Windows (excluding window furniture and blinds).

In years 2 and 3, any defect specified in the Exclusions will not be covered.

Exclusions

10. Swift shall not be liable under the SuperSure and Body Shell Warranties for any defect related to or arising from the following:
    - The failure of a component for reasons of fair wear and tear;
    - Damage resulting from freezing, fire, over-heating or accidents (whether caused by the user or a third party);
    - Misuse of any component;
    - Normal deterioration, corrosion, intrusion of foreign or harmful bodies, lack of servicing or negligence of any person other than Swift which causes stoppage of or impairment to the function of any component of the motorhome;
    - Replacement of parts which have reached the end of their effective working life because of age and/or usage;
    - Cleaning or adjustment of any assemblies;
    - Cosmetic finishes to kitchen sinks, cooker tops, vanity units, shower trays; and/or

- Routine maintenance items which are part of the annual service including lubricants, rubber gas hose, the cleaning of the heater and fridge flues, the replacement of gas jets, the resealing and/or replacement of shower room sealant, and the adjustment and lubrication of locks.

11. In addition to the exclusions above, in years 2 and 3 of the SuperSure Warranty Period, Swift Group Limited shall not be liable under this Warranty for any defects related to:
    - Any audio equipment;
    - Any microwave; and/or
    - Any TV.
12. Swift shall also not be liable under the SuperSure, and Body Shell Warranties if the motorhome has been neglected, misused, modified or used for hire or reward or if the identification marks (chassis/VIN numbers) have been removed or defaced. The motorhome will be deemed to have been neglected if it has not been serviced and maintained as stated in this handbook or any repairs being identified as necessary at an Annual Service or by a Swift Group Service Centre have not been carried out in a reasonable time.

You have legal rights under UK law governing the sale of consumer goods. This Warranty does not affect your legal rights.

The name and address of the Warranty provider is:

Swift Group Limited, Dunswell Road, Cottingham, East Yorkshire, HU16 4JX

To make a claim under this Warranty, contact the Swift Group Service Centre which supplied your motorhome. Alternatively, details of your nearest authorised Swift Group Service Centre can be obtained by contacting the Swift Group Customer Care Department on 01482 875740, or enquiring on the website www.swiftgroup.co.uk

ASSISTANCE

What to do if you Require Assistance

Congratulations on purchasing a Swift Group product. We are confident that you will enjoy many happy holidays. However, should you have an enquiry or require assistance with a problem, we hope that this guide will be of assistance to you.

If you have a problem, or enquiry with regards to your new motorhome, please follow these steps:

1. Check the Owners Handbook, paying particular attention to the fault finding advice at the back of the book.
2. Contact your supplying dealer for assistance.

If you need to contact Swift Group Limited, please be aware of the following:

1. When contacting Swift Group, please quote your name, postcode and build number of your motorhome.
2. In most instances, the Customer Care Team will involve your dealer in resolving the issue you are experiencing.
3. If you are contacting the company by email, letter or fax, the Customer Care Team will respond to you within five working days from the date of receiving the correspondence.
4. If you are calling the Customer Care Team, please avoid where possible, Mondays and lunch times.
5. Please be aware that Swift Group Limited cannot send parts direct from the factory. In all cases, without exception, your dealer must place the order for you.

SUPPLIER CONTACTS

A number of Swift Group suppliers manage their own Technical and Warranty related queries. Where a customer has a question relating to a product manufactured by a company listed below, we would advise that the first contact should be directly with them.

Sargent Electrical Services
Unit 39, Tokenspire Business Park, Beverley,
East Yorkshire, HU17 0TB

Phone: 01482 678981
Fax: 01482 678987
E-mail: support@sargentltd.co.uk

Truma UK Ltd.
Park lane, Dove Valley Park,
South Derbyshire, DE65 5BG

Phone: 01283 586020
Fax: 01283 586029

Thetford Ltd.
Unit 19, Oakham Drive,
Parkwood Industrial Estate,
Rutland Road, Sheffield, S3 9QX

Phone: 0114 273 8157
Fax: 0114 275 3094
Email: infogb@thetford.eu

ANNUAL SERVICE / INSPECTION RECORD

In order to comply with the warranty, you must have your motorhome inspected and serviced in accordance with the warranty.

It is important that the owner's handbook is stamped on the appropriate page by the authorised Swift Group Service Centre.

Failure to do this will invalidate the warranty and the transfer of the warranty on the change of ownership.

The inspection should take approximately two hours and will cover the areas dealt with in the annual service check list. Any areas requiring service and/or maintenance will be highlighted by your dealer and we recommend that you authorise any necessary work to be carried out.

Just as the engine/gearbox/roadwheels need regular servicing by your chassis dealer, so there are components in your conversion that need regular maintenance by your motorhome dealer.

These include the gas and electrical systems and the seals in the bodywork. Your dealer will complete the record in this handbook to show that the work has been carried out.

1. Damp and lamination test.
2. Chassis and chassis to body security.
3. Motorhome step.
4. Road lights, wiring and reflectors.
5. Internal lights and 12V DC system.
6. Water heater - gas and 230V AC.
7. Hob, grill and oven.
8. Refrigerator 230V AC, 12V DC and gas.
9. Gas system.
10. Water pump, taps and water system.
11. Mains 230V AC system.
12. Windows and fittings.
13. Roof lights.
14. Furniture hinges/stays etc.
15. Exterior locks and hinges.
16. All internal vents.
17. Seals.
18. Blinds and fly screens.
19. Blown air heating and gas fire systems.

ANNUAL SERVICE/INSPECTION RECORD

MOTORHOME MODEL .....
REGISTRATION NUMBER .....

CHASSIS NUMBER .....
REGISTRATION DATE .....

1st SERVICE DATE: DEALER'S STAMP We certify that an annual service has been carried out in accordance with the handbook.	**2nd SERVICE** DATE: DEALER'S STAMP We certify that an annual service has been carried out in accordance with the handbook.
3rd SERVICE DATE: DEALER'S STAMP We certify that an annual service has been carried out in accordance with the handbook.	**4th SERVICE** DATE: DEALER'S STAMP We certify that an annual service has been carried out in accordance with the handbook.
5th SERVICE DATE: DEALER'S STAMP We certify that an annual service has been carried out in accordance with the handbook.	**6th SERVICE** DATE: DEALER'S STAMP We certify that an annual service has been carried out in accordance with the handbook.

SERVICE INSPECTION

7th SERVICE DATE: DEALER'S STAMP We certify that an annual service has been carried out in accordance with the handbook.	**8th SERVICE** DATE: DEALER'S STAMP We certify that an annual service has been carried out in accordance with the handbook.
9th SERVICE DATE: DEALER'S STAMP We certify that an annual service has been carried out in accordance with the handbook.	**10th SERVICE** DATE: DEALER'S STAMP We certify that an annual service has been carried out in accordance with the handbook.
11th SERVICE DATE: DEALER'S STAMP We certify that an annual service has been carried out in accordance with the handbook.	**12th SERVICE** DATE: DEALER'S STAMP We certify that an annual service has been carried out in accordance with the handbook.
13th SERVICE DATE: DEALER'S STAMP We certify that an annual service has been carried out in accordance with the handbook.	**14th SERVICE** DATE: DEALER'S STAMP We certify that an annual service has been carried out in accordance with the handbook.

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CAMP SITES

Arrivals
Report to reception immediately on arrival.

Vehicle Movement
Keep to roadways unless otherwise directed.

Adhere to speed limits. Note that these are generally 10 mph (remember that the stopping distance on grass is considerably greater than on tarmac). Only a person in possession of a current driving licence may drive on the site.

Park correctly as advised on your pitch. Where possible leave 20 feet of free space around your vehicle.

Use of Site Appliances
Use the electrical mains hook-up in the correct manner and with caution.

Ensure that all fresh water taps/connections are turned off after use. Have care and consideration when using all facilities (toilets and showers etc) and leave clean and tidy. Young children should be supervised.

Waste Disposal
If the vehicle is not fitted with a waste water tank, a suitable receptacle should be placed below all waste water outlet pipes. Do not let these containers overflow.

Dispose of all waste water where instructed. Empty effluent from chemical toilets where instructed. To avoid possible damage to sewage purification works, only approved chemical fluids must be used. Under no circumstances should coal tar, phenol or caustic-based fluids be used.

Disposable napkins and similar bulky items must not be put into chemical closet emptying points but should be wrapped in a polythene bag and placed in the container provided.

Place all litter in containers marked for the purpose.

Noise
Do not make excessive noise. Children should be restrained from making excessive noise.

Flying kites and model aircraft and the use of items like catapults or air-guns, as well as ball games, should not be permitted among, or close to other vehicles.

Musical instruments, record players, radios and televisions should not be used to the inconvenience of other people on the site.

Open and close doors quietly. Power generators must be adequately silenced and used with consideration.

Dogs and other Pets
All dogs and other pets should be kept under control. Unless permission has been granted, no animal should be allowed loose on the site and leads must not exceed 10ft.

No animals should be allowed in the shower/toilet blocks. Do not let dogs foul the site.

Fire Precautions
Adhere to and take note of fire precautions noting the whereabouts of the fire points.

WARNING: PROVIDE ONE DRY POWDER FIRE EXTINGUISHER OF AN APPROVED TYPE OR COMPLYING WITH EN3, OF AT LEAST 1KG CAPACITY, BY THE MAIN EXTERIOR DOOR AND A FIRE BLANKET NEXT TO THE COOKER. FAMILIARISE YOURSELF WITH THE OPERATING INSTRUCTIONS ON YOUR FIRE EXTINGUISHER AND THE LOCAL FIRE PRECAUTION ARRANGEMENTS.

When using a dry powder extinguisher it is suggested that the motorhome be evacuated until the powder has settled, to avoid inhalation.

Unless permission has been granted, barbecues should not be used.

If permission is given, consideration should be given to the annoyance that can be caused to other users of the site.

Open fires are not allowed.

Awnings and Tents
Awnings and tents should only be used when permission has been obtained.

When on grass and staying for more than a few days, the ground sheet and/or side flaps of awnings should be periodically raised in order to avoid damage to the ground.

Departure
Leave the pitch clean and tidy.

On leaving, check out with reception paying the required fees.

Wild Camping
Camping away from licensed sites, without the permission from the land owner or his agents, is not allowed in the United Kingdom.

When permission has been granted, all aspects of this Code should be adhered to.

On no account should:

(a) Litter be disposed of other than in the receptacles provided.

(b) Water be allowed to escape from the vehicle.

(c) Chemical toilets be emptied except into the disposal places agreed with the land owner.

(d) Washing or similar be hung outside the vehicle.

Parking
Motorhomes should only be parked in approved places.

When using the facilities of a motorhome, care and consideration should be given to those around them.

Driving
Before moving off, elevated rooflights and aerials should be lowered and correctly secured, and top hinged windows closed. Likewise all doors and access lockers for gas containers and chemical toilets must be properly secured.

Exterior steps should be properly retracted and secured. When the vehicle is in motion it is compulsory for all front seat passengers and rear seat passengers to wear seat belts, where fitted. When using a motorhome on either the public highway or private roads the Highway Code should be complied with and full consideration given to other road users.

In the event of a motorhome travelling slowly the driver of the motorhome should, where possible, pull over in order to let other traffic pass.

WHEN TRAVELLING, REFUELLING OR ON A FERRY ENSURE THE GAS SYSTEM IS FULLY ISOLATED AT SOURCE.

Handbooks (Chassis & Converter)
Before using a motorhome all aspects of the handbooks, produced by the chassis manufacturer and the converter, must be read and adhered to.

The separate chassis manufacturer handbook refers to your motorhome chassis and base vehicle including care and maintenance.

Environment
Care and consideration should be taken to protect the environment.

Observe the Country and Coastal Codes shown overleaf.

THE COUNTRY CODE

Enjoy the countryside but respect its life and work. More people than ever before are exploring the countryside, interested in farming, plant life, bird watching or just observing the general wildlife. Whatever your interest, there is a lot to learn, but please observe the following code:

1. Guard against all risk of fires. Hay and heathland catch alight easily and once ablaze are very difficult to put out.

REMEMBER: FIRE SPREADS QUICKLY.

2. Fasten all gates.
3. Keep your dog under proper control.
4. Keep to the paths across farm land.
5. Avoid damaging fences, hedges and walls.
6. Leave no litter.
7. Safeguard water supplies.
8. Protect wildlife, wild plants and trees.
9. Go carefully on country roads.
10. Respect the life of the countryside.

THE COASTAL CODE

As our coastlines are increasingly used for recreation and education, the following suggestions are made to enable us to enjoy our inheritance and preserve it for posterity.

DO NOT trample about, or move rocks unnecessarily.

DO NOT frighten seals or seabirds.

DO NOT spill detergents, solvents or fuel from boats as these can kill marine life.

Live molluscs and crustaceans need not be collected as souvenirs - dead shells can usually be found.

Shellfish can take years to grow and fines can be imposed for not observing national regulations.

DO NOT pull up seaweeds unnecessarily.

Make your visit instructive - not destructive.

Look at material - don't remove it. Take notes and photographs, not specimens.

Observe by-laws and be considerate to others.

National Trust property and Country Parks have regulations to protect the wildlife. Follow these and the Country and Coastal Codes.

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BEFORE MOVING OFF & MOTORHOME TERMS

BEFORE MOVING OFF CHECK:

- Gas cylinders and all gas operated appliances have been isolated, including fridge, water heater, oven and space heater.
- Gas cylinders are correctly positioned, secured and turned off unless using en-route heating.
- Loose articles including luton ladder are stowed securely. Do not stow tins, bottles or heavy items in overhead lockers.
- All lockers and cupboard doors are closed and secured.
- Main table is stored or locked in its transit position.
- Fridge is on 12V operation and door lock is set.
- 230V mains input socket flap is securely closed.
- All drain taps are closed.
- Tyre pressures and wheel nuts.
- Rear corner steadies are raised.
- Exterior roof rack ladder is raised and secured.
- All windows/doors/rooflights are closed and secured.
- Exterior step (where fitted) is retracted/ folded in.

Special attention must be taken to ensure all top hinged windows as well as the Luton windows and rooflights are closed when in transit. All units should be fully closed and latched to prevent damage. The motorhome exterior door should also be locked.

MOTORHOME TERMS

Mass in Running Order:
This is the mass of the motorhome as stated by the manufacturer, i.e. ex works weight including the driver with 90% fuel / tools and hook up cable and standard fixtures and fittings, in compliance with European Directive 92/21/EEC (Masses and Dimensions).

Note: Quoted MRO is subject to tolerance, due to weight variation of materials used in Motorhome construction.

Maximum User Payload:
The maximum allowable weight to be put into the motorhome whilst it is being driven. This is made up of 4 sections: Personal effects, conventional load, optional equipment and essential habitation equipment.

The Maximum User Payload is the difference between the Maximum Technically Permissible Laden Mass and the Mass in Running Order.

Personal Effects:
Those items which a user can choose to carry in a motorhome and which are not included as Essential Habitation Equipment or Optional equipment.

Conventional Load:
A mass allowance for each designated passenger seat.

Optional Equipment:
Items made available by the manufacturer over and above the standard specification of the motorhome.

Essential Habitation:
A mass allowance for liquids in systems not accounted for within the MRO.

Maximum Technically Permissible Laden Mass:
The maximum weight for which the motorhome is designed for normal use when being driven on a road, laden. This mass takes into account specific operating conditions including factors such as the strength of materials, loading capacity of tyres etc.

WARNING: UNDER NO CIRCUMSTANCES SHOULD THE MAXIMUM TECHNICALLY PERMISSIBLE LADEN MASS OF THIS MOTORHOME BE EXCEEDED.

Nose weight on towed trailers:
The static mass of the trailer towing device on the rear of the towing vehicle.

Notes:

(i) When measuring the noseweight it is important that the trailer is loaded.

(ii) The trailer is intended to be towed slightly nose heavy. The nose weight can be adjusted by distribution of the load. The nose weight should be approximately 7% of the actual laden weight (but not greater than the hitch capacity) and at the same time suit the motorhome requirements. See 'Advice on Towing' page 22.

LOADING OF VEHICLE

WARNING: loads must not be exceeded. The driver is responsible for arranging the loads so that they comply with the technical weight limits of the specific motorhome model. See specification handbook.

Correct weight distribution is an important factor in ensuring your vehicle is well balanced and easy to drive. It is therefore necessary to load your motorhome carefully making sure all heavy articles are evenly distributed and are preferably placed in the lower lockers or bed boxes.

WARNING: Do not travel with televisions or microwaves in overhead lockers unless the appliance was supplied fitted to your motorhome by the manufacturer.

Although it is essential to ensure that the total weight of your motorhome does not exceed the stipulated Maximum Technically Permissible Laden Mass, (MTPLM), it is important to remember that the front and rear axles also have individual maximum weights which must not be exceeded.

To ensure adequate road holding the load on the front axle, under all conditions, must not be less than 40% or more than 70% of the total weight.

Ensure you distribute the payload equally on each side of the vehicle to avoid an imbalance.

These weights, together with the MTPLM, can be found on the statutory plate affixed to the forward edge affixed to the forward edge of the swing door.

Warning: Turn off all gas appliances while the vehicle is in motion. If a heating system is fitted isolate all appliances except the heater.

Please take care to ensure you have allowed for the masses of all the items you intend to carry in your motorhome e.g. passengers, optional equipment, essential habitational equipment and personal effects such as clothing, food, pets, bicycles, sailboards, sports equipment etc.

LARGE STORAGE AREAS

The large storage areas provided in some motorhome layouts are designed solely for the purpose of carrying personal possessions, these areas must not be used:

- As a habitation area (eg living, sleeping or cooking).
- To carry passengers, animals or livestock.
- For the installation (or use) of any LPG gas operated appliances (unless supplied fitted by the manufacturer).
- For carrying LPG gas bottle cylinders.
- To carry any flammable liquids, unless properly stored, sealed and secured.
- For the operation of an electrical generator.
- In such a way that the load exceeds the MTPLM, and/or minimum and maximum axle loads.

Care must be taken to ensure that exterior doors are closed, locked and that all possessions are properly stored and secured before setting off on any journey.

CAUTION: Motorhomes over 3m have a maximum vehicle height label affixed to the driver's side blind. When planning your route take the vehicle height into consideration.

TYRES

If a wheel or tyre fitted to a wheel is changed any replacement must be of the same type of construction and size.

The law requires that the tyres and pressures must be suitable for the use to which they are being put. The minimum tread depth must be 1.6mm throughout a continuous band comprising the centre three-quarters of the breadth of the tread and around the circumference of the tyre.

Please refer to base vehicle manufacturer's handbook for tyre pressure information. This may also be displayed in the driver's or passenger's door aperture.

DEDICATED TRAVELLING PASSENGER SEATING

Seat belts are fitted to all travelling seats. Travelling seats are designated by the manufacturer and vary according to the layout you have purchased. Each seat is homologated i.e. tested to all relevant safety requirements. NEVER travel in or attempt to install a seatbelt to a non-designated seat.

WARNING: Side facing seats are designed for habitational use only, not when the vehicle is in motion.

SEAT BELTS AND LEGISLATION

Designated driver and passenger seats are fitted with seat belts and MUST be worn.

Children, aged up to 3 years of age, must wear an appropriate child restraint suitable for their age and weight.

Children from 3 years of age and up to 135cm (4'5") in height, or 12 years of age, whichever is reached first must use a restraint suitable for their age.

Children over 135cm (4'5") in height or aged 12 or 13 years must wear a seat belt.

Note: It is the legal responsibility of the driver To ensure children aged up to 14 years old are suitably restrained.

For passengers aged 14 and over, it is their responsibility (not the driver) that a seat belt is worn.

Designated passenger seats within the habitational compartment of your motorhome are identified (fig. 1).

Fig. 1

Seat belts are fitted for your safety and must be worn unless a 'Certificate of Exemption from Compulsory Seat Belt Wearing' is held. This Certificate must be produced if asked for by the Police – seat belt offences can result in a fine.

CHILD SEATS

Choosing/Buying

Go to a reputable retailer such as Halford's, Mothercare, Toys 'R' Us, John Lewis etc. Most reputable retailers will have trained child seat advisers on site and will offer a fitting service. Ask the advisor to fit various seats to the vehicle. Once a correctly fitted seat has been installed, satisfy yourself on it's suitability for your child and the vehicle before buying as it is important to use a correctly fitting seat in your motorhome.

CAUTION: The child seat you use in your car may not be suitable for mounting on a motorhome seat.

Choose the right seat for your child's height and weight.

Ensure it has an official approval mark (usually the United Nations 'E' mark). The current UN standards is Regulation 44.03

Never fit or use a second hand car seat. It could have fit been damaged and may not meet modern standards. The fitting instructions may also be missing.

Positioning/Fitting

Dependant upon the child seat type, the most suitable position for the child seat to be fitted may be the front passenger seat of the cab (NOTE airbag advice below) or the window seat of the forward facing rear seat, the isle seat in the rear is not a recommended position, advice should always be taken from the retailer on the suitability and security of the seat in the

motorhome. Read and follow the child seat manufacturer's instructions for fitting the seat.

All Swift motorhomes are fitted with inertia reel seat belts, however, the child seat must be tight in the adult seat. Push all your weight into the child seat as you tighten the belt.

Keep a copy of the child seat fitting instruction in the motorhome for easy reference.

Any doubts, ask an advisor to show you how to correctly install the seat.

AIRBAG

Never fit a rear facing child restraint in a seat with an active airbag in front of it.

Forward-facing child restraints should be positioned as far back from the airbag as possible. Check the base vehicle handbook.

THREE POINT SEAT BELTS

This section refers to the seat belts located in the habitation area of your motorhome.

Fastening the seat belt:
Insert tongue into buckle; a positive 'click' indicates correct assembly.

Releasing the seat belt:
Press the red release button, the tongue will be ejected from the buckle.

- The belt is designed for use by one person and must not be put around a child seated on a person's lap.
- The belt is suitable for restraining most child seats and boosters.
- The belt should at all times be adjusted and used in accordance with the instructions. No excessive slackness should be present.
- Once installed the diagonal should pass across the centre of the shoulder and the buckle should lie just on or below the hip.
- Avoid twisting the webbing during use. Webbing must not be allowed to chafe against sharp edges.
- Do not make alterations or additions to the belt.
- Belts that have been cut, frayed, damaged or stressed through impact should be replaced. After impact the motorhome anchorage points should also be checked.
- To clean use warm soapy water only.
- Periodic inspection of the installation will ensure reliability of the seat belt.

DRIVING LICENCE

Licences issued to drivers who passed their car driving test before 1st January 1997 include categories B+E and C1+E which gives them entitlement to drive motor vehicles up to 7500kg MTPLM.

Drivers who passed their test on or after this date have category B entitlement only, which restricts the entitlement to motor vehicles with up to 8 passenger seats and an MTPLM of up to 3500kg with trailers up to 750kg MTPLM (4250kg combined) or larger trailers providing the combination of the trailer and towing vehicle does not exceed 3500kg and the MTPLM of the trailer does not exceed the unladen weight of the towing vehicle.

Drivers who passed their test on or after the 1st January 1997 will need to take an additional test(s) to gain the B+E and C1+E entitlement.

VEHICLE CLASSIFICATIONS

Motorhomes up to 3500kg MTPLM are P/LGV (Private Light Goods Vehicles), motorhomes with an MTPLM over 3500kg and up to 7500kg are P/HGV (Private Heavy Goods Vehicles). These are used in defining MOT classifications and vehicle excise duty (road tax) classifications.

ADVICE ON TOWING

The towing capability of each motorhome differs depending on the specific chassis and engine types, (see 'Towing Capabilities Table' in your specification handbook).

This table takes account of the maximum front and rear axle loadings as well as the minimum front axle loading in two conditions, MRO and MTPLM condition.

Towing in these, and any other condition requires sensible loading and distribution of payloads to ensure the requirements of the towing capability table are met.

When towing, the demands on both the vehicle and driver increase. A trailer reduces manoeuvrability, the ability to climb hills, acceleration and braking capacity and makes the vehicle handle and corner differently. It will also increase the fuel consumption of the vehicle.

Always brake in good time. Special care must be taken when descending gradients. Change down before going down a steep hill so the engine can act as a brake. Ensure that the towing vehicle tyre pressures are correct and adjusted for full load conditions and that the trailer tyre pressures are as recommended by the trailer manufacturer. Regularly check the operation of trailer brakes and lights.

For maximum stability, when loading the trailer ensure that the loads are properly secured during transit. Position loads so that most of the weight is placed close to the floor and, where possible, immediately above or close to the axle(s). Where the load can be divided between trailer and tow vehicle, loading more weight into the vehicle will generally improve the stability of the combination. After loading the trailer, check that the nose weight and axle loads are in accordance with the manufacturer's recommendations, also check the rear and front axle loads on the motorhome. When calculating the laden weight of the trailer, remember to include the weight of the trailer PLUS THE LOAD.

NOTE: Towing regulations vary from country to country. It is very important to ensure that national regulations governing towing weights and speed limits are observed (refer to the relevant national motoring organisation for information). The stated maximum permissible towing weights refer to the vehicle's design limitations and NOT to any specific territorial restrictions.

Notes:

i) Do not exceed the motorhome gross vehicle train weight.

ii) Do not exceed the maximum front & rear axle loads on the motorhome.

iii) Ensure the motorhome front axle load is never less than 40% or more than 70% of the total weight.

iv) Motorhomes with an MTPLM up to 3500kg which have European Type approval can only be fitted with a type approved towbar complying to 94/20/EC.

v) The limit for towing an un-braked trailer is 750kg (based on VIN plate not actual weight), this applies to a towed car.

vi) A car dolly with a car with a GVW over 750kg in place is considered as two trailers, these are legal for use for recovery but under the Road Traffic Regulations Act 1984 the combination is limited to 40 mph on motorways and dual carriageways and 20 mph elsewhere. A car dolly is not legal for transportation (there is a very specific difference between recovery and transportation. Recovery is defined as the removal of a broken down vehicle to a place of safety).

vii) The maximum permitted vehicle combination length is 18.75m, however any combination must ensure compliance with the turning circle requirements of Construction and Use regulations 1986 & 97/27/EC.

Panel van spare wheel detail 24
Cruise Control 24

EN ROUTE

PANEL VAN SPARE WHEEL DETAIL

Please refer to the Fiat / Peugeot handbook.

CRUISE CONTROL

The driver of the vehicle should always remain seated and in control of the vehicle when the cruise control has been engaged. Never leave the driving seat for any reason when the vehicle is underway.

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FIRE

Important: Your attention is drawn to the notice affixed inside the wardrobe advising on fire precaution, ventilation and what to do in case of fire.

IN CASE OF FIRE

1. Get everyone out of the motorhome as quickly as possible using whichever exit is the quickest, including windows. Do not stop to collect any personal items.
2. Raise the Alarm. Call the Fire Brigade.
3. Turn off the gas supply valve if it is safe to do so.
4. Turn off the electricity supply at supply point.

MODEL- SI 601 SMOKE ALARM OPERATION

Normal condition

The red LED on the front should flash once every 40 seconds to show the alarm is active.

Low Battery Condition

IMPORTANT: Your smoke alarm requires a battery with a sufficient capacity of power to operate correctly. This must also be correctly installed.

Should your smoke alarm enter a low battery condition, the unit will emit an audible 'chirp' once every 40 seconds. When this occurs you must replace the battery immediately. Your smoke alarm will continue to warn of this low battery condition for at least 7 days, however, failure to change the battery after this time would mean your smoke alarm has insufficient power to alert you in a real fire situation.

BATTERY REPLACEMENT

IMPORTANT: Only the following batteries can be used for replacement. Use of a battery other than those recommended below may have a detrimental effect on the detector's operation. Use of a lithium (long-life) battery could provide power for 10 years under normal operating conditions, meaning there is no need for an annual battery change.

NOTE: The alarm cover can't be installed without a battery fitted.

NOTE: Upon delivery the battery may be fitted with a protective cover. Please ensure this is removed before use.

Carbon-Zinc type:

Eveready Energizer 1222;
Gold Peak 16045 (UL).

Alkaline Type:

Energizer 522; Duracell MN 1604; Duracell 9V

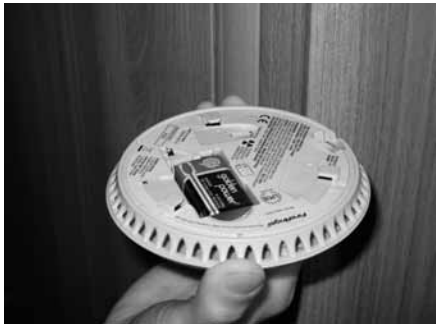
Ultra; Energizer 9V Ultra+; Gold Peak 1604A.

Lithium (long life) type:

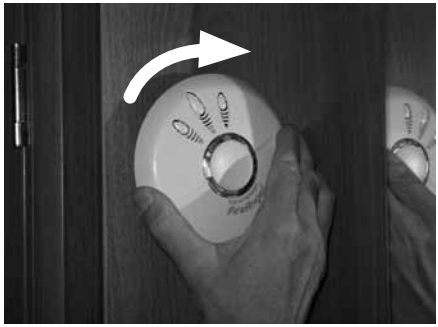
Ultralife U9VL

1. Remove the alarm from its mounting plate by turning anti-clockwise

2. Remove the existing battery and replace with a new battery. From the list on this page, making sure that the positive and negative connections are in the correct position. If unsure see the alarm user manual.



3. Replace the alarm on its mounting plate, lining up the large central vent on the front of the alarm, with the 'X' that is moulded into the plastic on the mounting plate (if unsure see page 13 of the alarm user manual). Ensure the unit is securely fitted.



4. Test your alarm as explained in the next section 'Alarm Test'.

ALARM TEST

1. Press the test button in the centre and release.

2. The unit will emit a loud (85dB at 3 meters) alarm for around 5 seconds and stop automatically.

3. The red LED on your alarm will flash rapidly during the audible signal.

FIRE ALARM

NOTE: The test button accurately tests the alarm's smoke sensing circuit, there is no need to test your alarm with smoke. If your smoke alarm fails to give an audible test signal, please refer immediately to the troubleshooting guide at the end of the user manual.

WARNING: Test your smoke alarm at least once per week

Your smoke alarm has been designed to be as maintenance - free as possible and although the unit requires only battery maintenance for its entire life, there are several things you must do to keep it working properly.

CAUTION: Your smoke alarm is a sealed electrical device and no attempt should be made to open the case. Attempting to open the case will invalidate your Warranty.

CLEANING: As a minimum your smoke alarm should be cleaned once every 3 months using your vacuum cleaner fitted with the soft brush attachment.

WARNING: Your smoke alarm may false alarm when it is being cleaned using a vacuum cleaner.

IMPORTANT: Do not use solvents or cleaners on your smoke alarm, as they may cause damage to the sensor or circuitry. The unit can be wiped with a slightly damp cloth.

Warning: The electronic test button provides a full test of the unit's functionality. DO NOT try to test the alarm with a naked flame, as this may present a potential fire hazard.

WARNING: Never use portable cooking or heating equipment other than electric heaters that are not of the direct radiant type, as it is a fire and asphyxiation hazard.

WARNING: Appliances such as cookers must not be used for heating.

Fire Extinguisher

It is recommended that a dry powder fire extinguisher be carried inside your motorhome at all times.

When using a dry powder extinguisher it is suggested that the motorhome be evacuated until the powder has settled, to avoid inhalation.

A fat pan fire should not have a fire extinguisher aimed at it. It should be smothered with a fire blanket.

WARNING: Provide one dry powder fire extinguisher of an approved type or complying with ISO 7165, of at least 1kg capacity, by the main exterior door and a fire blanket next to the cooker.

Familiarise yourself with the instructions on your fire extinguisher and the local fire precaution arrangements.

Escape paths

It is important that you do not block escape paths to emergency exits with obstructions or hazards.

Children

Do not leave children alone in the motorhome in any event. Keep potentially dangerous items out of reach, as at home e.g. matches, drugs etc.

Ventilation

All motorhomes comply with BS EN 721. The ventilation points on your motorhome are fixed points of ventilation which are required by the European Standards.

All motorhomes have ventilation at high level and low level which have been calculated to suit the individual needs of your motorhome.

High level ventilation is achieved by means of the roof lights and washroom roof ventilators (where applicable). The low level ventilators are positioned in the front or rear bed fascias in van conversions.

Under no circumstances must these vents be blocked or obstructed.

It is advised that fixed ventilation points are checked and cleaned (if necessary) on a regular basis using a small brush and a domestic vacuum cleaner.

Additional night time ventilation is obtained by releasing the window catches and placing them in the second groove. Note the windows are not sealed from rain in this position.

As the ventilation levels are calculated to suit each models requirements there should be no modifications made which may result in reduced ventilation levels.

WARNING: Do not obstruct ventilation.

SECURITY - Motorhome theft:

The theft of a motorhome can occur in the most unlikely circumstances; from a motorway service area or even an owner's driveway. Secure all windows and doors when your motorhome is unoccupied even if only for a short length of time.

VIN (Vehicle identification Number)

Record your motorhome VIN which can be found on the lower edge of the base vehicle front windscreen and the plate located on the front cross member under the bonnet.

Make a note of these numbers in the space provided at the front of this handbook and make a separate note of the numbers to keep safe at home.

Additional security

Consider fitting any device which might deter intrusion by thieves. Customers are advised to identify their motorhome with a method for subsequent identification if other forms of identification have been altered or removed.

Free crime prevention advice about securing your motorhome, protecting your valuables, property marking either at home or whilst on site, can be obtained from the Crime Prevention Officer through your local Police station.

CO ALARM

Fireangel CO-9X Carbon Monoxide Alarm

WARNING: Please read the full user instructions provided.

CARBON MONOXIDE

Known as the silent killer, Carbon Monoxide is an invisible, odourless and tasteless gas.

What are the symptoms of carbon monoxide poisoning?

Early symptoms of carbon monoxide (CO) poisoning can mimic many common ailments and may easily be confused with flu or simple tiredness. Symptoms to look out for include:

- tiredness
- drowsiness
- headaches
- giddiness
- nausea
- vomiting
- pains in the chest
- breathlessness
- stomach pains
- erratic behaviour
- visual problems

Anyone with these symptoms should immediately turn off all appliances and seek medical attention.

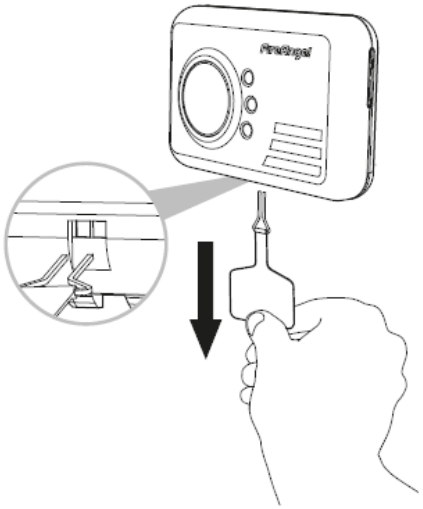
WHAT TO DO DURING AN ALARM

- Keep calm and open the doors and windows to ventilate the motorhome.
- Stop using all fuel burning appliances and ensure, if possible, that they are turned off.
- Evacuate the motorhome leaving the doors and windows open.
- Do not re-enter the motorhome until the alarm has stopped. When exposed to fresh air it can take up to 10 minutes for the sensor to clear and the alarm to stop depending on the level of carbon monoxide detected.
- Get medical help immediately for anyone suffering the effects of carbon monoxide poisoning (headache, nausea), and advise that carbon monoxide poisoning is suspected.
- Do not use the appliance again until it has been checked by an expert. In the case of gas appliances the engineer must be Gas Safe registered.

ACTIVATING THE ALARM

See diagram below

Your detector comes complete with an integrated power pack that will provide power for its entire operational life. To activate the power pack you need to pull the disabling tab (see image). This will in turn pull out the metal disabling clip, which is attached to the end of the tab, from the disabling socket which is situated on the underside of the detector. Retain the disabling tab for future use by taping it to page 20 of the CO-9X user manual.



NORMAL OPERATION OF THE ALARM

When the detector is activated the Power LED will begin to flash green once every minute to indicate that the detector is receiving power from the power pack and is fully operational.

TESTING THE ALARM

Test the sounder, power pack and circuitry by pressing and holding the centre of the Test/Reset button briefly to confirm that the detector is operating properly. The sounder will sound as soon as the button is pressed, and the Alarm LED will illuminate red indicating that the sounder is working and the power pack is providing power to the unit. This test for the sounder, power pack and circuitry should be performed on a weekly basis. This should be continued for the lifetime of the product.

WARNING: Prolonged exposure to the sounder in close proximity to your ears may damage your hearing. Under normal operating conditions, the power pack will last for the lifetime of the product i.e 7 years. The detector will not protect against the risk of carbon monoxide poisoning when the power pack has drained

SENSOR TESTING.

The alarm manufacturer recommends that this is carried out monthly. See of the CO-9X user manual for more details.

CO ALARM OPERATION WHEN CO DETECTED

The higher the concentration of carbon monoxide detected by the detector, the quicker it will respond. When sufficient carbon monoxide is detected a loud audible signal (85 dB at 1m (3 feet)) will be emitted and the Alarm LED will flash red once every second.

The Alarm will sound:

- Between 60 and 90 minutes when exposed to a minimum of 50ppm of CO.
- Between 10 and 40 minutes when exposed to a minimum of 100ppm of CO.
- Within 3 minutes when exposed to a minimum of 300ppm of CO.

FAULT / LOW POWER PACK SIGNAL:

The unit continuously checks the settings of its sensor and circuitry. If any of these settings are found to be incorrect or if the power pack becomes low then the detector will emit a single chirp once per minute and the Fault LED will flash yellow once per minute for up to 30 days.

IMPORTANT: This does NOT mean that the detector has detected carbon monoxide.

MAINTENANCE

Your detector will alert you to potentially hazardous CO concentrations in your motorhome when maintained properly.
To maintain your FireAngel detector in proper working order, and to ensure that the sensor will last for the lifetime of the product, it is recommended that you:

- Test the sounder, power pack and circuitry of your detector at least once per week by pressing the Test/Reset button briefly (see above).
- Perform the Sensor Test once every month (See of the CO-9X user manual for more details).
- Keep the detector free of dust by gently vacuuming the case with a soft brush attachment once per month.

To prevent the possibility of contaminating the sensor in your detector and thus affecting its reliability:

- Never use cleaning solutions on your detector. Simply wipe with a slightly damp cloth.
- Do not paint the detector.
- Do not spray aerosols on or near the detector.
- Do not use any solvent based products near the detector.

SAFETY & SECURITY

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POSITIONING THE MOTORHOME

Note: Check and observe site regulations.

Keep to roadways unless otherwise directed. Adhere to speed limits. Note that these are generally 10mph.

Remember that the stopping distance on grass is considerably greater than on tarmac

Only a person in possession of a current driving licence may drive on the site.

Selecting a pitch
Do not pitch in such a position that your motorhome will obstruct others coming in.

Try to choose an area which is dry, reasonably level and preferably with a hard base.

If you have no alternative but to pitch on a slope try to ensure that you are facing down the slope, for when you leave.

Levelling the motorhome
Levelling must be carried out in both directions for the refrigerator and other equipment to function correctly. Stepped levelling boards or proprietary ramps are ideal for this purpose.

Fig. A

Awnings and Tents
Awnings and tents should only be used when permission has been obtained. When on grass and staying for more than a few days the ground sheet and/or side flaps of awnings should be periodically raised in order to avoid damage to the ground.

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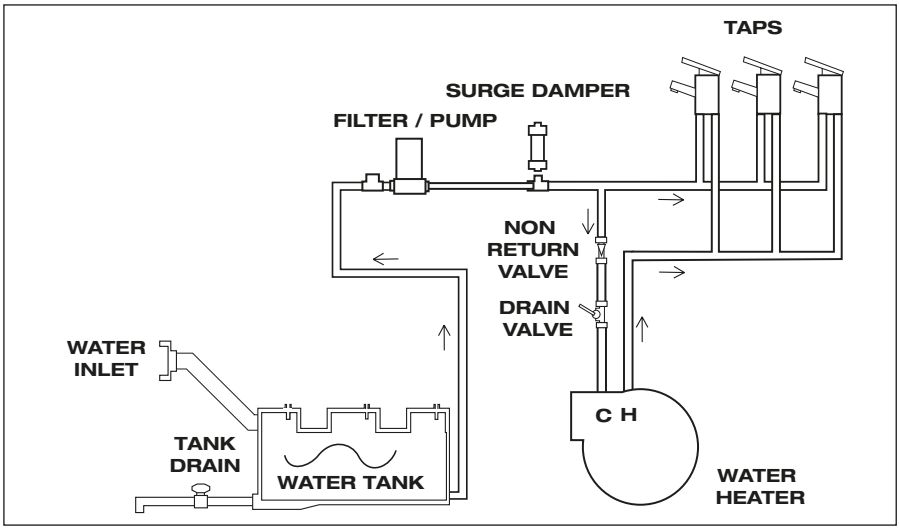
WATER SYSTEM- INTRODUCTION

All Swift Group motorhome water systems have been designed around a pump fitted within the motorhome. This pump draws water from an under floor or internal water tank, to provide water pressure within the water system, whenever it is switched on and water is available.

The schematic below shows the basic configuration of the water system:



When power is supplied to the pump, it will draw water from the water tank, and pump it to the motorhome taps, shower and water heater.

The pump is fitted with its own pressure switch, and the pump will continue to pump water, until the pressure of water on the output of the pump reaches a pre-set level. For this pressure to be achieved, the taps must be closed.

When the taps are opened, water will leave the tap via the spout, and the pressure in the pipes between the pump and the taps will reduce. Because of this reduction in pressure, the pressure switch on the pump will switch back on and the pump will again run to pump more water.

Close to the pump, the water under pressure is split into two paths:

1. Through blue water pipes routed directly to the cold connection of each tap.
2. To the water heater.

Water from the pump enters the bottom of the water heater. Once the water fills the water heater (typically 10 litres), water then leaves the water heater via a connection at the top of that water heater. This water, which is still under pressure, then routes to the hot connection of each tap via the red pipes.

To winterise the system please see separate details later in this handbook.

FRESH WATER SYSTEM

(i) All fittings, including the holding tank, water pipes, taps and connections are of food quality material (to BS6920) and therefore, should not affect the quality of the water used. It is recommended however, that the system is flushed through twice before it is used for the first time, and always cleaned/flushed after it has stood unused for a period of time (eg over the winter period). Care has been taken (using smooth bore pipes etc) to eliminate as many water traps as possible.

(ii) When filling the fresh water system remember to check that the water source is suitable for use as drinking water and, if you are using a hose pipe or water carrier, that it is also made from nontoxic materials (preferably food quality material).

(iii) The fresh water tank may be drained by the drain tap (blue) situated below the floor sill of the van.

(iv) The fresh water system is pressurised by a pump which will continue to operate until it senses a pre-set pressure in the system.

WARNING: If the fresh water tank is completely empty the pump will be unable to pressurise the system and will operate continuously. In this situation it is essential that, in order to avoid damage to the pump, it is switched off using the pump isolator switch on the distribution panel until such time as the water tank has been filled.

Lockable water filler inlet

Fresh Water Tank

Your motorhome is fitted with a water tank filled from the outside via a lockable water filler cap. When filling, use a hose manufactured from non toxic material, to prevent tainting of the water. Remember, if the water heater has been drained it will require 10 litre (0.2 gal) of water to fill it.

WARNING: If the water tank is over-filled, water will escape through the water filler and/or the breather fittings in the top of the water tank. If the tank is very full, further water may escape through tank breathers in transit.

CLEANING WATER SYSTEM

Please ensure all taps are fully turned off when not in use.

We recommend the use of Milton 2 sterilising fluid for cleaning and sterilising the water tank and system.

An explanatory leaflet is available from:

The Milton Food Hygiene Advisory Service,

Whitehall Lane Egham, Surrey, TW20 9NW

CLEANING WATER SYSTEM

Clean the water system at the start and end of the season with sterilising fluid.

Sterilising

When cleaning the water system at the start or the end of the season it is advisable to use a sterilising fluid e.g. Milton 2, Chempro SDP or similar.

Flush the system thoroughly to remove the effective fluid traces.

When water is first introduced, or the water supply in the internal tank, runs out, air will be present in the pipework. It is important that every tap is run to remove any air in the system before, for instance, the shower is used. Air left in pipework local to a tap can act as an accumulator and affect the ratio of hot and cold water flowing from other taps or shower mixers in the system.

System care

Allowing water to freeze in the system may result in damage to the pump and plumbing system.

Non-Toxic antifreeze for potable water may be used with Truma pumps. Follow manufacturers recommendations.

Do not use automotive antifreeze to winterize potable water systems.

These solutions are highly toxic and may cause serious injury or death if ingested.

Sanitising

The water systems, and in particular storage tanks, in motorhomes are susceptible to contamination by bacteria if care is not taken with their use and cleaning. The symptoms caused by bacterial contamination are not purely limited to gastro-intestinal diseases, but may also manifest themselves as ear, nose, throat, eye or skin infections. It is therefore important that you carry out the following procedure prior to using the motorhome each time, even if you boil or filter all water you use for drinking.

Separate Water Containers

1. All water remaining in the container should be disposed of so that the container is empty.
2. The outside of the container should be thoroughly cleansed and washed down to remove any dirt, dust or other contaminant. Water at a suitably hot temperature containing an appropriate detergent is recommended for this purpose.
3. Water should be put in the container, swirled around, then emptied out.
4. The container should then be totally filled with water containing an appropriate sterilant solution and allowed to stand for the recommended contact time (e.g. Milton for 15 minutes).
5. The solution should be emptied from the container.
6. The opening of the container should be cleaned thoroughly with an appropriate prepared wipe impregnated with a sterilant.
7. The container should be inverted whilst stored overnight (if possible).
8. The container must be filled with mains water only and mains water only should be used for the above cleaning procedure.
9. On no account should garden hoses be used to fill water tanks.

For Systems:

1. Drain down the system (open all taps to allow air in, enabling the system to drain quickly).
2. Remove any water filters fitted, and replace with a short length of hose or

empty filter cartridge (this will ensure the filter is not affected by the disinfectant/ sterilant solution).

3. Fill the water system with a disinfectant/ sterilant solution (check that the solution at full strength appears at all taps/showers). Allow to stand for the recommended period of time.
4. Drain the system completely.
5. Thoroughly clean the outside of all taps/ connectors with a cloth soaked in the disinfectant/sterilant.
6. Flush the system through with clean drinking water until no traces of disinfectant/sterilant can be detected at any tap.

Suitable sterilising chemicals are available from your motorhome dealer, accessory shop, chemist or home-brew shops. It is not, however, recommended to use bleach or sodium metabisulphite.

Waste water system

(i) The waste water holding tank is secured underneath the chassis of your motorhome and is gravity fed.

(ii) In order to eliminate unpleasant odours as much as possible, only smooth bore pipes are used.

However, should the waste water tank be overfilled, then the waste water will backfill the drain pipes until it eventually appears in the shower base. In order to prevent this, please take note of part (iii).

(iii) The waste water gauge shows the level of the tank in half increments, it is therefore, recommended that the waste water tank is checked on a daily basis, emptying when required. This is done by opening the valve located just beneath the side skirt on the exterior of the Motorhome.

(iv) The waste tank may be drained by the drain tap (grey) situated below the floor sill of the van.

It should be emptied either directly, or via a waste water container (not supplied) into a designated waste water area.

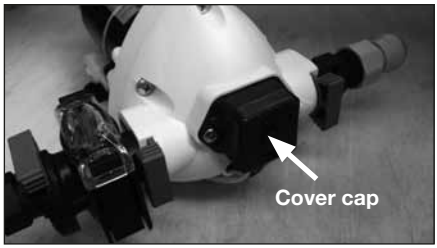
PRESSURE SWITCH

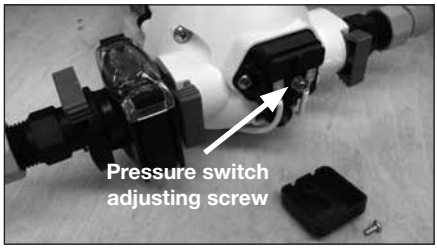
The purpose of a pressure switch is to monitor the pressure on the outlet side of the pump. When a tap is closed, and the pump continues to run, there is an increase of pressure in the system, and when that pressure reaches a pre-set limit, the pressure switch will turn the pump off.

PRESSURE SWITCH ADJUSTMENT

Pressure Switch Adjustment, Truma/Flo-Jet pump. (Normally Grey upper section with White lower section/valve housing)

- All of the Truma/Flo-Jet pumps used by Swift are pre-set at 25psi + / -3psi.
- To further adjust the pressure switch setting, a cover cap must be first be removed from the end of the pump to reveal a pressure adjusting screw, as shown in the photos. A maximum of 1/4 turn clockwise or anti-clockwise, from the factory setting, is advised. Turning the screw clockwise 1/4 turn will increase the pressure switch cut-out pressure, turning the screw anti-clockwise will reduce the pressure setting.
- Please note a second screw mounted below the cover cap is set in position with threadlock, this should not be disturbed.





The pump may have to be removed to gain access to the adjusting screw. Drain the water system before removing the pump.

To remove the pump pull the blue taps at right angles to the pipe work and lift the pump out.

TROUBLE SHOOTING

Pump will not start, when the tap is opened:

- Check fuse(s).
- Check power source(s), and ensure there is sufficient voltage to run the pump.
- Ensure 'pump' LED is illuminated.
- Using a multi-meter, ensure there is power at the pump. If not, refer to your dealer as there maybe damaged cabling or a fault with the fusebox.
- Is the pump hot? If so, allow to cool before retrying.
- Has the vehicle been stored over winter? was it correctly winterised? If no, the pump may have frozen, causing permanent damage.
- The pressure switch may need adjusting. (See pressure switch paragraph in this section for how to do this)

Pump runs, but will not pressurise system (i.e. no or little water being discharged from taps) - Not Pulsing:

- Ensure that there is water in the fresh water tank.
- Check in-line filter is free from debris and correctly fitted.
- Ensure water system has been primed correctly, (see primming the water system page 44), and there are no air-locks present.
- Ensure there are no restrictions in the plumbing.
- Using a multi-meter, ensure there is power at the pump. If not, refer to your dealer as there maybe damaged cabling or a fault with the fusebox.
- Ensure the inlet side of the pump is watertight and not allowing air into the system.
- Using a multimeter check that the voltage is between 10 and 14.5 volts. If not, refer to your dealer.

Pump continues to run (for more than 5 seconds) after taps are closed or pump turns on for no reason:

- Check for leaks on the high pressure side of the pump.
- Ensure water system has been primed correctly, as per the handbook, and there are no air-locks present.
- Ensure the pump is securely mounted.
- Ensure the piping on the high pressure side of the pump is in good condition (not blowing or deforming).
- The pressure switch may need adjusting. (See pressure switch paragraph in this section for how to do this)

Noisy or rough operation

- Check for leaks on the high pressure and low pressure side of the pump.
- Ensure that all pipes (especially those within 150mm of the pump) are not touching any furniture.
- Ensure the pump is securley mounted

Pump rapidly cycles (switches on or off) or water pulses from taps, including temperature pulsing:

- Check for leaks on the high pressure and low pressure side of the pump.
- Ensure there are no restrictions in the plumbing
- The pressure switch may need adjusting. (See pressure switch paragraph in this section for how to do this)

WATER LEVEL SENSOR & CLEANING

Principle

The sensor, fitted to Swift Group motorhomes are pre-fitted to water tanks, and link to the control unit, via a pre-fitted wiring harness.

Two types of level sensor are used:

1. A series of float switches fitted through the side of the tank at different levels which provide a reading at the control unit.
2. A series of stainless steel studs in the side of the tank, the conductivity of the water between the studs providing a reading at the control unit.

The sensors are 'digital', in that while the conductivity (resistance) value can vary, the fusebox will register any conductivity between the reference stud and the other studs, indicating water present.

Normally, even if the studs are dirty, and providing the studs have not been bridged by a foreign object, a circuit will still be delivered back to the control unit and a water level displayed. Similarly the float switches are either open or closed indicating water whether water is present or not.

Stud Sensor cleaning

The first step, in case of fault diagnosis, is to clean the sensor studs. False water level readings at the control unit can be caused by calcium build-up or foreign objects within the tank bridging the studs. (Especially with waste tanks).

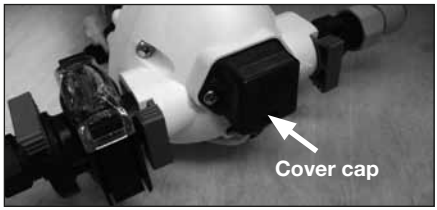
WARNING: Only use food safe plastic mesh scourers, which are suitable for domestic use, for cleaning the sensor studs.

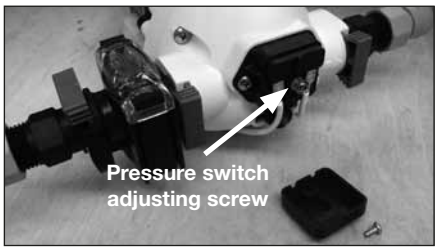
1. Remove the studs from the tank
2. Check the studs for build up of contamination
3. Use clean soapy water
4. Place scourer in water to dampen
5. Apply scourer to the sensor studs with limited pressure
6. Rub sensor studs removing contamination
7. Swill sensor studs with fresh clean water
8. Replace sensor stud into tank, ensure they are sealed.

PRESSURE SWITCH ADJUSTMENT

Pressure Switch Adjustment, Truma/Flo-Jet pump. (Normally Grey upper section with White lower section/valve housing)

- All of the Truma/Flo-Jet pumps used by Swift are pre-set at 25psi + / -3psi.
- To further adjust the pressure switch setting, a cover cap must be first be removed from the end of the pump to reveal a pressure adjusting screw, as shown in the photos. A maximum of 1/4 turn clockwise or anti-clockwise, from the factory setting, is advised. Turning the screw clockwise 1/4 turn will increase the pressure switch cut-out pressure, turning the screw anti-clockwise will reduce the pressure setting.
- Please note a second screw mounted below the cover cap is set in position with threadlock, this should not be disturbed.





The pump may have to be removed to gain access to the adjusting screw. Drain the water system before removing the pump.

To remove the pump pull the blue taps at right angles to the pipe work and lift the pump out.

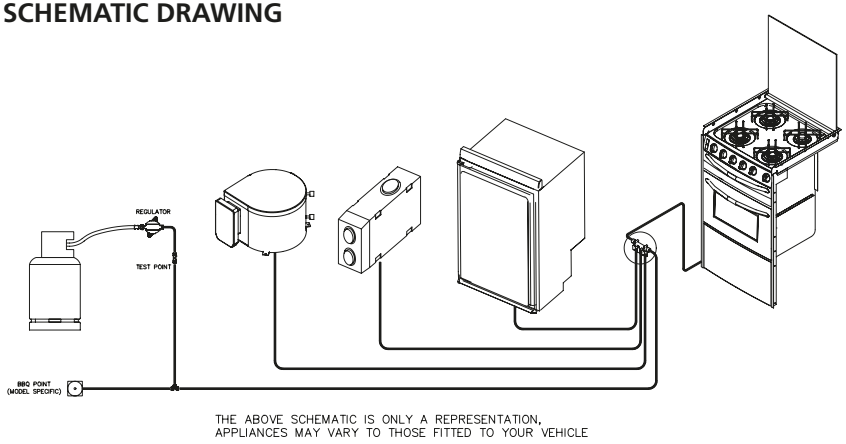
WATER

Fault	Cause	Remedy
Water not flowing from any tap when operated but pump runs	Freshwater tank empty	Check
	Pump wired in reverse	Check wiring, refer to pump manufacturers instructions
	Pipe inlet or outlet pipe disconnected	Check connections
	Pump pipes restricted by kinking	Check pipes run
	Blockage in pump inlet or outlet pipe	Check, starting inside freshwater tank
	Blocked pump filter	Dismantle and clean filter. See pump manufactures instructions.
	Air leak in suction line to pump	Check condition of pipe and pipe joints between the water tank and the pump.
Pump does not run	Pump incorrectly wired	Refer to pump manufacturers instructions
	Pump fuse blown	Check wiring connection and then replace with fuse of correct rating
	Battery disconnected	Check connections
	Pump seized or overheated	Refer to pump manufacturers servicing instructions
	Pressure pump sensing switch may have failed	Refer to pump manufacturers servicing instructions
	Contacts may be faulty	Check contacts in plug and socket are clean and making contact
	Wiring connections may be faulty	Check wiring connections
Water flows from cold tap but not from hot	Blockage in hot pipeline	Disconnect pipes and inspect
	Heater inlet or outlet pipes kinked preventing flow	Check and re-route if necessary.
	Hot tap failed or blocked	Disconnect and inspect
	Heater non-return valve jammed	Seek service attention

WATER

Fault	Cause	Remedy
Water flows from hot tap but has reduced flow from cold	Cold water pipe kinked preventing flow	Check and re-route if necessary
	Blockage in cold pipe line	Disconnect pipes after 1st connector and check up to tap
	Cold tap not connected	Refer to installation instructions
	Cold tap failed or blocked	Disconnect and inspect
Reduced flow from both hot and cold taps	Battery condition low causing pump to run slowly	Check battery state of charge, refer to electrical supply note
	If new taps have been fitted they may be restricting flow	Disconnect and check that they have at least 1/4" (6.3mm) bore
	Pump needs servicing	Refer to pump servicing instructions
	Partially blocked pump filter or in-line filter, if fitted	Dismantle and clean if necessary
	Pump outlet pipe kinked restricting flow	Check and re-route if necessary
	Water leak	Check all water connections
Reduced flow from either tap	Pipe kinking restricting flow	Check and re-route if necessary
	Bore size difference in taps	Use taps of equal bore size
If pump motor runs steadily and will not stop	Battery voltage may be too low (below 10.5 volts)	Check that there is water in the container Adjust switch and/or re-charge battery Check all connections in pipework

TYPICAL GAS SCHEMATIC DRAWING



THE ABOVE SCHEMATIC IS ONLY A REPRESENTATION,
APPLIANCES MAY VARY TO THOSE FITTED TO YOUR VEHICLE

Gas

GENERAL INFORMATION

Gas Bottles
Bottled Liquified Petroleum Gas (LPG) is the most convenient portable source of fuel for your vehicle.

Regularly check flexible gas hose, joints and connections for tightness. Finally make sure that each gas appliance is working efficiently to the recommendations of the appliance manufacturers.

Only use gas bottle cylinders that are located within their dedicated position within the gas bottle housing, never extend hose - hose lengths must not exceed 400mm.

Regulator
Your vehicle is supplied with a wall mounted gas regulator plumbed inside the gas bottle compartment. The regulator and all appliances work at a harmonised 30mb pressure, which work with Butane and Propane gas.

Pressure regulation system in this vehicle has a fixed working pressure of 30 mbar with a flow rate of either 1.2 kg/H or 1.5kg/H and complies with the requirements of EN 12864 annex D.

We do not recommend the use of an inline LPG BBQ with the 1.2kg/H regulator when other LPG appliances are in use.

Standard regulator

Gas Hoses
High-pressure hoses or pigtails as they are called must be used with the new style regulator.

LPG bottle i.e. Propane, Butane, BP and Camping Gaz cylinders all have unique bottle adaptor connections. It is important to check you have the correct hose and adaptor to suit your gas bottles.

Push on hoses are no longer permitted under the latest regulations.

The new high-pressure hoses have threaded connections and must be securely attached to the regulator and to the gas bottle.

Ensure that there is a constant rise in the flexible gas hose between the gas bottle outlet and the regulator elbow.

WARNING: Inspect flexible gas hose(s) regularly for deterioration and renew as necessary with the approved type, in any case no later than 5 years after the date of manufacture marked on the hose.

WARNING: Ensure hoses do not become entangled in door mechanism.

TYPES OF GAS

Butane
Butane is supplied in the UK in green, blue or aluminium bottles.

All these have a male left hand thread EXCEPT for Camping Gaz which has a special female right hand thread and Calor 7kg and 15kg and aluminium bottles which have a special clip-on connection. Continental bottles usually have a male left hand thread similar to but not identical with UK butane.

Butane is suitable for use at temperatures down to 2°C but will not work below that.

Propane
Propane is supplied in red, or partly red bottles which have a female left hand threaded connector. Scandinavian countries use the same connector. Germany and Austria supply propane with a male connection.

Propane will work at temperatures as low as -40°C and is therefore suitable for all winter caravanning.

GAS SAFETY ADVICE

WARNING: If you smell gas or suspect a leak and if it is safe to do so, isolate the gas appliances and turn off the gas bottles at the regulator. Evacuate the vehicle and ventilate. Seek professional advice as to the cause of the leak.

Facts about LPG

LPG is not poisonous.

Bi-products are harmless.

There is danger if all air and oxygen were excluded. (Ventilation holes must be kept clear at all times).

LPG has been given a smell by the manufacturers in order to identify leaks.

Awning Spaces LPG Appliance Exhaust

There is no danger of pollution of an enclosed awning space by the LPG exhaust from a refrigerator venting into it, as awning spaces are generally well ventilated.

Space heaters may produce sufficient exhaust to pollute the awning space, if it is totally enclosed, from a general comfort, smell and hygiene point of view. In the extreme case there could be a build up of carbon dioxide to a dangerous level.

Owners are advised to allow some fresh air circulation in the awning space when such appliances are in use.

PRECAUTIONS

a) Never look for a leak with a match. Always use a soap solution or its equivalent when testing connections. Do not operate any electrical apparatus whatsoever, especially light switches. If the leak is not obvious, the vehicle should be evacuated and qualified personnel consulted.

b) Always turn off the gas cylinder valve or inlet to the vehicle when the appliances are not in use.

c) Never use gas appliances without adequate ventilation.

d) Avoid naked lights when connecting or changing a cylinder.

e) Check the flexible hose frequently.

f) The gas is heavier than air and therefore sinks to the lowest point.

g) Keep bottle gas containers outside (and protected against frost). If they must be kept inside make sure they are well away from heat.

h) Always seek advice when in doubt.

WARNING: Do not use appliances with a different working pressure to 30mbar.

WARNING: Maintain adequate spacing of combustible materials from sources of heat.

WARNING: Do not use independent portable gas appliances inside the vehicle.

WARNING: Always read individual appliance instructions.

Ventilation

WARNING: Safety ventilation shall in no circumstances be obstructed even partially, screens and grills must be kept clean and free from dust

All ventilation complies with BSEN 721 and vents should not be obstructed in any manner as this could lead to insufficient fresh air. In this case the confined atmosphere becomes depleted of oxygen which leads to the formation of the highly poisonous gas 'carbon monoxide'. Carbon monoxide is odourless, colourless and tasteless and will rapidly cause unconsciousness and death with little or no warning prior to collapse. THERE IS NO DANGER WHEN ADEQUATE VENTILATION IS PROVIDED.

Changing gas cylinders

The following procedure should be adopted:

a) Extinguish any fire, flame or source of ignition (including cigarettes, pipes and pilot lights) before changing gas cylinders.

b) Wherever possible change gas cylinders in the open air.

c) Ensure that the gas cylinder valve(s) is/are closed before disconnecting any empty cylinder or before removing the plastic cap or plug on the outlet connection of the replacement cylinder. (Note. left hand thread.)

d) Make firm gas-tight joints. Any leaking vapour will smell. If a leak is suspected after changing gas cylinders and opening valve, test by brushing with soapy water around the joints. Bubbles will form if vapour is leaking. Never use a naked flame.

e) Ensure that the replacement gas cylinder is the correct one for the installation.

f) Gas cylinder valves are of various designs depending on the type of cylinder and the use for which it is intended and it is essential that the correct pressure regulator with the correct pressure setting and capacity for the installation is used in accordance with manufacturer's instructions.

g) In the case of a connection on the pressure regulator which relies upon a sealing washer(s) to maintain a gas-tight joint, it is essential to check that the washer is present, is sound and is correctly positioned prior to making the connection. Where the connection relies on a metal to metal seating or bull nose connection to obtain a gas-tight joint it is essential that the mating surfaces are clean and undamaged. In no case should a damaged valve or connection be used.

h) Where connections are designed to be tightened with a spanner, it is essential that a spanner of the correct size is used and that the union is firmly tightened, hand tightness is not sufficient. When self-sealing valves are incorporated in a gas cylinder, connections should be made in accordance with the manufacturer's instructions and tools should not be used.

Leaks

Action to be taken in the event of a suspected leak:

a) If a gas leak is suspected, close the gas cylinder valve or other valve at the inlet to the vehicle. Do not operate electrical switches. Open all doors and windows to disperse any gas escape.

b) The strong unpleasant smell of LPG will enable the general area of the leak to be detected. Check that gas is not escaping from an unlit appliance. In the case of a leak, close cylinder valve(s) and call a competent installer to rectify the fault.

c) If a leaking gas cylinder cannot be stopped, remove the cylinder to a safe place in the open air in an upright position away from drains and any source of ignition.

Fire

Precautions and actions to be taken:

a) A fire extinguisher of adequate size and preferably of the dry powder type should be available.

b) The initial use of dry powder extinguishers is recommended only if it is likely that the leakage can be stopped by closing the cylinder valve or that the cylinder can be speedily removed.

c) Cool with water all gas cylinders that cannot be removed.

d) As soon as possible remove cylinders adjacent to the fire to a safe place in order to gain access to the seat of the fire.

Connection

Ensure that the gas regulator hose is correctly connected to the gas cylinder in the gas bottle compartment and that the hose connection is tight.

Gas bottles must be fully located, seated at the base of the bottles and restrained by the strap provided in the dedicated compartment position. Straps are positioned to suit 6kg, 7 kg and 13kg bottles.

WARNING: If using cylinders other than those recommended, the user must ensure these are adequately supported, ventilation openings must not be obstructed and the cylinders must not cause damage to other fixtures and fittings located in the compartment.

Open ended gas hoses must always be protected from dirt and insects.

Before turning on the gas supply at the regulator, ensure that all gas operated equipment in the vehicle is turned off.

All gas equipment is supplied through a central Gas Manifold System which has individual isolation taps for each appliance (Fig. A).

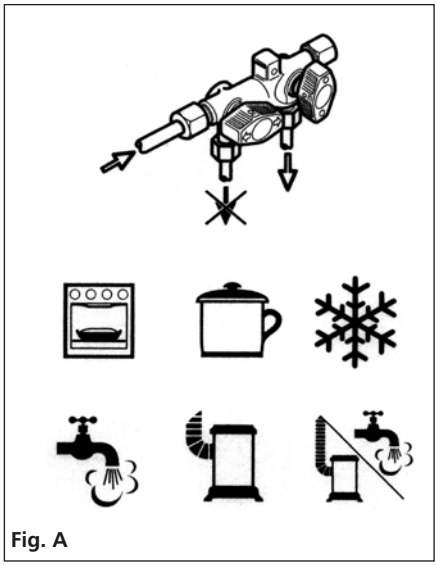


Fig. A

NOTE: If the motorhome is in storage or not being used for a period of time, we recommend turning off the gas supply at the gas bottles.

GAS

Fault	Cause	Remedy
Hob does not light	No gas	Check level of gas in bottle Check gas bottle valve is on Check gas taps are on
	Air in pipe	Purge system Refer to hob manufacturers instructions
Oven does not light	No gas	Check level of gas in bottle Check gas bottle valve is on Check gas taps are on
	Air in pipe	Purge system Refer to oven manufacturers instructions
Space heater	No gas	Check level of gas in bottle Check gas bottle valve is on Check gas taps are on Check exhaust outlet is clear
	Over gassed Air in pipe	Turn off appliance, wait 2 minutes and try again Purge system Refer to space heater or boiler manufacturers instructions
Fridge does not light	No gas	Check level of gas in bottle Check gas bottle valve is on Check gas taps are on
	Air in pipe	Purge system Refer to fridge manufacturers instructions
Water heater does not light	No gas	Check level of gas in bottle Check gas bottle valve is on Check gas taps are on
	Air in pipe	Purge system Refer to water heater manufacturers instructions

THERMAL INSULATION AND HEATING

Your vehicle has been designed to achieve a thermal insulation and heating level for specific climatic conditions when tested according to the procedure in EN1646-1. The classifications are as follows:

GRADE 1
A vehicle with an average thermal transmittance (u) that does not exceed 1.7w/(m^2k).

GRADE 2
A vehicle with an average thermal transmittance (u) that does not exceed 1.7w/(m^2k) and which can achieve an average temperature difference of at least 20k between inside and outside temperatures when the outside temperature is 0°C.

GRADE 3
A vehicle with an average thermal transmittance (u) that does not exceed 1.2w/(m^2k) and which can achieve an average temperature difference of at least 35k between inside and outside temperatures when the outside temperature is -15°C.

THE ELECTRICAL SYSTEM

General Information

It is strongly advised that the mains installation is inspected periodically to ensure safe use. The IET (BS7671) wiring regulations recommend that mains installations in motorhomes are re-inspected every 3 years or annually if the van is used frequently. The National Caravan Council lists the qualifications necessary to perform this inspection, but an NICEIC approved contractor is probably the first choice.

On arrival at the campsite

- Check the suitability of the supply, is it AC or DC, is the voltage and frequency correct.
- Ensure that there is a proper earth (3 pin socket outlet).
- If in doubt consult site staff.
- Make sure that the supply from the site is switched off.
- Make sure that the charger switch on the PSU is switched off.
- Lift the cover on the electricity inlet on the motorhome, and insert the connector on the flexible supply cable.
- At the site supply point, connect the other end of the supply cable to this using the socket provided.
- Switch on the main switch at the site supply point.

CARE POINT: It is good practice to test the RCD (Residual Current Device) in the PSU before switching on. There is a test button on the RCD to test the lever, put the lever in the up position (on) before testing.

CARE POINT: As with the RCD it is good practice to check the Miniture Circuit Breaker (MCB) in the PSU. Switch all to the on position (lever up). If any do not stay up then there is a fault.

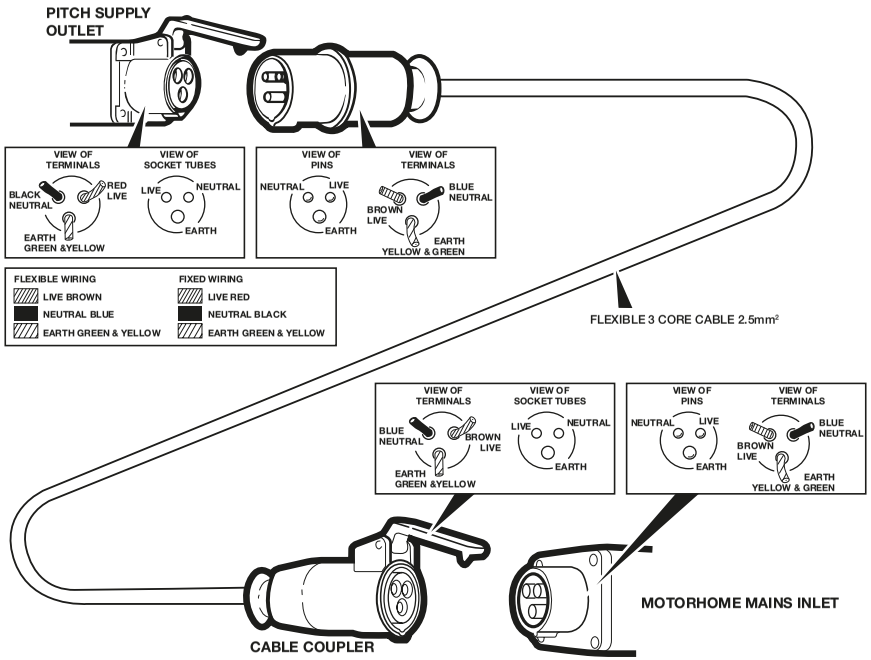
On departure from the campsite

- Switch off supply from the site, disconnect the cable at both ends.
- Switch off RCD.

Note: never use a mains supply lead whilst coiled. Always uncoil the full length before connecting to the supply and remember to protect the cable from traffic.

WARNING: current consumption in the motorhome must not exceed 16 amps or the pitch permitted maximum if this is less than 16 amps.

WIRING OF CONNECTING CABLE AND MOTORHOME MAINS INLET



The legal length of the mains inlet cable is 25 ± 2 metres. When in use it must be fully uncoiled and protected from traffic.

OVERSEAS CONNECTION

- Connection to a mains voltage overseas requires particular attention.
- Overseas supplies can be of reverse polarity.
- Reverse polarity results in equipment not necessarily being isolated when turned off, reverse polarity indicator on the PSU will light in the event of reverse polarity.
- The only sure way to make equipment safe is to unplug it.
- It is useful to have a means of checking polarity when overseas.
- If it can be achieved then connect live to live, and neutral to neutral to achieve full electrical protection.

WARNING: Never allow modifications of electrical or LPG systems and appliances except by qualified persons.

230V MAINS ELECTRICAL EQUIPMENT POWER CONSUMPTION

Please note:
It is possible that the 230V mains electrical equipment may not all operate simultaneously. A typical UK motorhome site mains hook up point provides a maximum output of 10 amps and on some continental sites the available output may be as low as 5 amps.

If your loading exceeds the site supply it may trip the site circuit breaker. Please check the available mains output with your site operator.

Similarly loadings on each circuit breaker within the vehicle should be observed

A label positioned close to the MCB's will identify which appliances within the vehicle are fed from which MCB. Consulting the table (Typical Appliance Consumption Figures) in conjunction with this label, will give an indication of which appliances can, and cannot, (site supply allowing), be operated simultaneously.

TYPICAL APPLIANCE CONSUMPTION FIGURES

Appliances	230V		12V		LP GAS
	Watts	Amperes	Watts	Amperes	Grams/hour
Thetford N80	140 / 200W	0.6Amp / 0.9Amp	Only when driving		14 / 21 g/h
Dometic RM7271 fridge	135w	0.6a	Only when driving		11g/h
Waeco CR80 fridge	25w	0.108a	24w	2a	Not applicable
Truma Ultrastore water heater	850w	3.7a	Not applicable		120g/h
Truma Combi 4 heater/boiler	2000w	8.5a	67w	Max 5.6a	160 - 320g/h
Truma E2400 heater	Not applicable		7 – 13w	0.6 - 1.1a	100 - 200g/h
Spinflo Triplex Hotplate 1	Not applicable		Not applicable		112g/h
Hotplate 2	Not applicable		Not applicable		112g/h
Hotplate 3	Not applicable		Not applicable		180g/h
Grill	Not applicable		Not applicable		115g/h
Oven	Not applicable		Not applicable		112g/h
SMEV hotplate	Not applicable		Not applicable		196 – 320g/h
SMEV oven/ grill	Not applicable		Not applicable		95g/h
Battery charger 25a	500w	Max 3.6a	Not applicable		Not applicable
Water pump	Not applicable		48w	4a	Not applicable

Note: These are approximate figures for guidance only.

Motorhome battery 56
EC400 Power Control System 56

MOTORHOME BATTERY

Motorhome battery

Your motorhome has been fitted with a sealed, Absorbed Glass Matt leisure battery which is specially designed for installing on its side

The battery or batteries should only be positioned in the appropriate compartment, and be properly secured before travelling.

The battery or batteries should only be positioned in the appropriate compartment, and be properly secured before travelling

It is recommended that a good quality leisure battery is always connected when the motorhome electrical system is in use.

Leisure batteries are a deep cycling rechargeable heavy duty 12v battery designed to provide power for lights and other electrical appliances. Replacement batteries should be a proprietary brand leisure battery with a minimum 85amp - 110 amp capacity.

WARNING: When renewing a leisure battery care should be taken ensuring that a fully sealed Absorbed Glass Matt battery, which can be fitted on its side is used. IF UNSURE SEEK ADVICE

Other types of leisure batteries contain a liquid and electrolyte which will leak out if laid on its side. CONTACT WITH THE LIQUID ACID CAN CAUSE SEVERE INJURIES AND DAMAGE TO THE VEHICLE.

Note: Replacement batteries should be checked dimensionally before purchasing, to ensure fitment within the battery compartment, as brands vary in size.

It should be remembered that batteries suitable for the electrical demands of a motorhome differ in design from those for use with a car, and whilst the system may operate with a car battery it is strongly recommended that only a rechargeable leisure type battery, maintained in good condition is used.

WARNING: When connecting the battery, ensure that the correct polarity is observed (black is negative and red/ brown is positive) and that the terminals are securely fastened.

Under normal circumstances it should not be necessary to remove the battery other than for routine inspection of terminals.

Your motorhome has been fitted with an in-line 20 amp fuse between the battery terminal and the power supply unit. Do not use a higher rated fuse as this may cause damage to your motorhome.

WARNING: Switch off all appliances and lamps before connecting or disconnecting the battery.

Smoking is prohibited around the battery compartment.

To preserve the life of your leisure battery and charger please observe the following:

i) Do not leave all 12v lights powered at the same time as this will drain your leisure battery more rapidly.

ii) If all 12v lights must be powered together, ensure the battery is 'in-circuit' and that the battery charger is turned on.

iii) For optimum performance use the transformer/charger unit with a leisure battery attached.

Please note the auxiliary battery or batteries supplied with your motorhome may not be fully charged and should be charged for a minimum of 24 hours before use.

Battery performance may be affected by a number of things such as ambient temperature, age, state of charge etc.

EC400 POWER CONTROL SYSTEM

1 Introduction

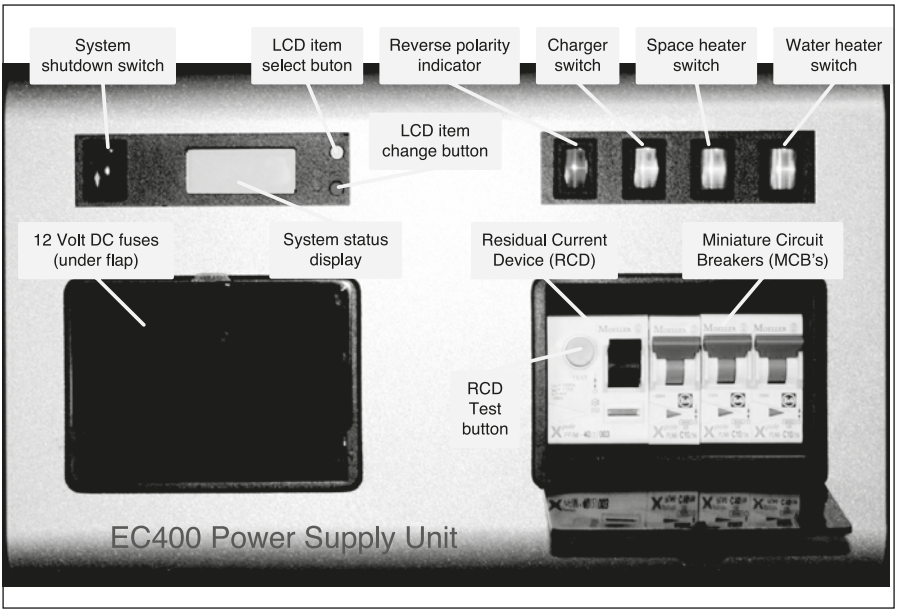
This section of the handbook will guide you through the operation of the electrical system.

Further technical details are contained in section 3 or in the supporting technical manual available from www.sargentltd.co.uk

For the safe operation of all electrical equipment within your Leisure Vehicle it is important that you read and fully understand these instructions. If you are unsure of any point please contact your dealer / distributor for advice before use.

The system has a number of key components that you will need to be familiar with before attempting to use the system, these are:

- The Power Supply Unit (PSU) - a combined mains consumer unit and 12V controller located in the bed box.
- The Control Panel (CP) - a remotely located user control panel used to turn circuits on and off and to display battery and water tank information. This panel uses simple straightforward controls and reliable data communication to the PSU.



2 USING THE SYSTEM

2.1 Power Supply Unit - Component Layout

The PSU is located in the bed box area.

2.2 Activating the System

The EC400 system has a shutdown feature that can be used when the vehicle is in storage. This allows the leisure electronics to be turned off when not required to save battery power. When in the off state the alarm and tracking system supplies are still active, all other supplies are turned off.

Before using the system please ensure the system 'Shutdown switch is in the on position (button in).

2.3 Connecting to the Mains 230V supply and Safety checks

For your safety it is IMPORTANT that you follow these connections instructions each time your Leisure Vehicle is connected to a mains supply. This section assumes that the system is complete and that a Leisure battery has been installed (see 3.4).

A) Ensure suitability of the Mains Supply. Your Leisure Vehicle should only be connected to an approved supply that meets the requirements of BS7671 or relevant harmonised standards. In most cases the site warden will hold information regarding suitability of supply. If using a generator you also need to comply with the requirements / instructions supplied with the generator. Please note that some electronic generators may not be compatible with your leisure system. Further generator operational information is contained elsewhere in this manual.

B) Switch the PSU Power Converter OFF. Locate the green 'Charger' power switch on the PSU and ensure the switch is in the off position (button out) before connection to the mains supply.

C) Connect the Hook-up Lead. Firstly connect the supplied hook-up lead (orange cable with blue connectors) to the Leisure Vehicle and then connect to the mains supply.

D) Check Residual Current Device operation. Locate the RCD within the PSU and ensure the RCD is switched on (lever in up position). Press the 'Test' button and confirm that the RCD turns off (lever in down position). Switch the RCD back to the on position (lever in up position). If the test button failed to operate the RCD see section 3.10.

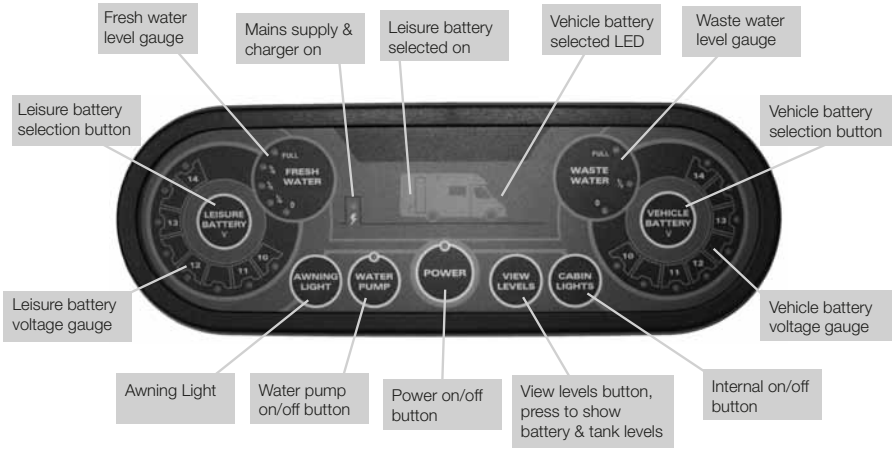
E) Check Miniature Circuit Breakers. Locate the MCB's within the PSU (adjacent to the RCD) and ensure they are all in the on (up) position. If any MCB's fail to 'latch' in the on position see section 3.10.

F) Turn the PSU ON. Locate the black 'Shutdown' button and ensure it is in the on position (press button in). Locate the green 'Charger' switch on the PSU and turn to the on position (press button in). The charger switch will illuminate when turned on.

G) Check correct Polarity. Locate the 'Reverse polarity' indicator on the PSU and ensure that the indicator is NOT illuminated. If the indicator is illuminated see section 3.10.

H) Check operation of equipment. It is now safe to operate the 12v and 230v equipment.

EC462



2.4 Control Panel - Component Layout

2.5 Control Panel Operation

- Power Button. Press the power button to turn the leisure power on. Press the button again to turn the power off. The adjacent LED will illuminate when the power is on, and also the voltage of the selected battery will be displayed on the voltage gauge.
- Pump Button. With the power on, press the pump button to turn the water pump on. Press the button again to turn the pump off. The adjacent LED will illuminate when the pump is on, and also the level of the water tank will be displayed on the water gauge.
- View Levels. To display the battery voltage levels and the water tank levels on the control panel gauges, press the levels button. The display will remain illuminated for 10 seconds.
- Battery Select. By default, the leisure battery is selected as the power source if no mains supply is present, or as the battery to be charged when the mains supply is available. To change the selected battery, press the battery select button. The selected battery is indicated by an LED situated in the centre of the leisure and vehicle battery gauges.
- Lights Button. With the power on, press the lights button to turn the main lighting supply on or off.
- Awning Light Button. With the power on, press the awning light button to turn the awning light on or off.

2.6 Operation while driving

The EC400 system is designed to shutdown parts of the system while the engine is running. This is to meet Electro Magnetic Compatibility (EMC) regulations and to ensure the safe operation of the motorhome.

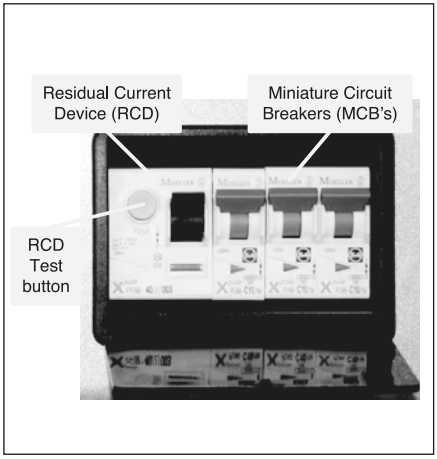
Please ensure the system shutdown switch on the PSU is in the on (button in) position before driving (see 2.2). This will ensure the electronic system is active and will therefore be able to control the charging process, supply the refrigerator and monitor other system circuits.

If / when fitted, designated 12v sockets, en-route reading lights and en-route heating will remain operational while the engine is running.

3 SYSTEM TECHNICAL INFORMATION

The following section provides further technical information relating to the electrical system. You can also access the supporting technical manual from www.sargentltd.co.uk

3.1 Residual Current Device & Miniature Circuit Breakers



The Residual Current Device (RCD) is basically provided to protect the user from lethal electric shock. The RCD will turn off (trip) if the current flowing in the live conductor does not fully return down the neutral conductor, i.e. some current is passing through a person down to earth or through a faulty appliance.

To ensure the RCD is working correctly, the test button should be operated each time the vehicle is connected to the mains supply (see section 2.3)

The Miniature Circuit Breakers (MCB's) operate in a similar way to traditional fuses and are provided to protect the wiring installation from overload or short circuit. If an overload occurs the MCB will switch off the supply. If this occurs you should investigate the cause of the fault before switching the MCB back on.

The following table shows the rating and circuit allocation for the three MCB'sMCB's fail to 'latch' in the on position see section 3.10.

MCB	Rating	Output Wire Colour	Description
1	10 Amps	White	230v Sockets
2	10 Amps	White (Yellow for heater)	Extra 230v Sockets / Space Heater
3	10 Amps	Black (Blue for water heater)	Fridge / Water Heater / 12v Charger

3.2 Battery Charger

The PSU incorporates an intelligent three-stage battery charger / power converter.

During stage 1 the battery voltage is increased gradually while the current is limited to start the charging process and protect the battery. At stage 2 the voltage rises to 14.4V to deliver the bulk charge to the battery. When the battery is charged, the voltage is decreased at stage 3 to 13.6V to deliver a float charge to maintain the battery in the fully charged state. The charger can be left switched on continuously as required.

The battery charger / power converter also provides power to the leisure equipment when the mains supply is connected. This module supplies DC to the leisure equipment up to a maximum of 25 Amps (300 Watts), therefore the available power is distributed between the leisure load and the battery, with the leisure load taking priority as per the following example:

Leisure load	Available power for battery charging
5A	20A
10A	15A
15A	10A
20A	5A

WARNING: Under heavy loads the PSU case may become hot. ALWAYS ensure the ventilation slots have a clear flow of air. Do not place combustible materials against / adjacent to the PSU.

3.3 Smart Charging

The system incorporates a smart charge feature, which monitors both leisure and vehicle batteries and automatically adjusts and directs the charger power (and solar power if a solar panel is installed) to maintain the leisure and vehicle batteries at an optimal level.

3.4 Leisure Battery

A) Type / Selection

For optimum performance and safety it is essential that only a proprietary brand LEISURE battery is used with a typical capacity of 75 to 120 Ah (Ampere / hours). A normal car battery is NOT suitable. This battery should always be connected when the system is in use.

The PSU is configured to work with standard lead acid leisure batteries, and in most cases is also compatible with the latest range of Absorbed Glass Matt (AGM) batteries. Before fitting non-standard batteries please check that the charging profile described in 3.2 is suitable for the type of battery by referring to the battery documentation or battery manufacturer.

ELECTRICAL SYSTEMS

Some vehicle installations can cater for two leisure batteries connected in parallel. In these cases it is recommended that two identical batteries are used.

The battery feed is fitted with an inline fuse between the battery and the electrical harness, and is usually located immediately outside the battery compartment or within 500mm of the battery. The maximum rating of this fuse is 20A per battery.

B) Installation & Removal

Always disconnect the 230v mains supply and turn the PSU green charger switch to the off position (button out) before removing or installing the battery.

When connecting the battery, ensure that the correct polarity is observed (black is negative [-] and red is positive [+]) and that the terminals are securely fastened. Crocodile clips must not be used.

WARNING: Explosive gases may be present at the battery. Take care to prevent flames and sparks in the vicinity of the battery and do not smoke.

C) Operation / Servicing

Under normal circumstances it should not be necessary to remove the battery other than for routine inspection of the terminals and "topping up" of the battery fluid where applicable. Please see instructions supplied with the battery.

Note: Do not over discharge the battery. One of the most common causes of battery failure is when the battery is discharged below the recommended level of approximately 10v. Discharging a battery below this figure can cause permanent damage to one or more of the cells within the battery.

To prevent over discharge, the EC400 system incorporates a battery protect circuit that warns the users and then disconnects the batteries when they fall below set values.

If the power is turned on and the leisure battery level falls below 9V a warning beep will be heard and the leisure battery gauge 10V LED will flash. To cancel the warning, press the levels button.

If the power is turned on and the vehicle battery level falls below 10.9V a warning beep will be heard and the vehicle battery gauge 10V LED will flash. To cancel the warning, press the levels button.

These warnings will not be repeated unless the power switch is turned off and on again. This is to ensure the warning does not become a nuisance.

Battery	Voltage cut off	Action after cut off	Notes
Vehicle	10.9v	Battery selection is changed from Vehicle battery to Leisure battery. If the leisure battery is below 9v then a further warning will occur (see below).	This cut off level is designed to protect the vehicle battery from over discharge. The 10.9v level ensures there is sufficient power in the battery to run the vehicle electronics and start the vehicle. This cut off only applies to power drawn from the battery by the leisure equipment; it will not protect the battery if you leave vehicle circuits switched on, such as the road lights.
Leisure	9v	Power is turned off	This is an emergency cut off level to protect the battery from severe damage. You should not rely on this cut off level during normal operation, but manage your power consumption to a discharge level of 10v. This cut off only applies to power drawn from the battery by the leisure equipment that is controlled by the control panel power switch; it will not protect the battery from discharge by permanently connected equipment.

3.5 12 Volt DC Fuses

WARNING: When replacing fuses always replace a fuse with the correct value. NEVER replace with a higher value / rating as this could damage the wiring harness. If a replacement fuse 'blows' do not keep replacing the fuse as you could damage the wiring harness. Please investigate the fault and contact your dealer.

The following table shows the fuse allocation for the 15 fuses fitted to the PSU. Please note that fuses are dependant on PSU versions, so not all fuses may be present.

Fuse	Rating	Fuse Colour	Description
1	20 Amps	Yellow	Motorhome Fridge (where applicable)
2	15 Amps	Blue	Motorhome Towing (where applicable)
3	7.5 Amps	Brown	Motorhome Marker Lights (where applicable)
4	15 Amps	Blue	Motorhome Fridge D+ (where applicable)
5	10 Amps	Red	Fans
6	10 Amps	Red	12V Sockets
7	10 Amps	Red	Front Internal Lights
8	10 Amps	Red	Water Pumps
9	15 Amps	Blue	Electric Step (where applicable)
10	10 Amps	Red	Motorhome Tank Heaters (where applicable)
11	10 Amps	Red	Auxiliary Supplies (where applicable)
12	5 Amps	Tan	Electronics
13	5 Amps	Tan	Ignitions
14	10 Amps	Red	Rear Internal Lights
15	25 Amps	Clear	Charger (fuse fitted internally to PSU)

The following table shows details of the fuse(s) located at the Leisure battery. See also 3.4A

Fuse	Rating	Fuse Colour	Description
Battery 1	20 Amps	Yellow	Fuse remotely located near battery
Battery 2	20 Amps	Yellow	Fuse remotely located near battery 2 (where fitted)

3.6 Solar Charge Management

The PSU incorporates a built-in solar charge management feature, which will control the input from a separate solar panel and regulator. Depending on the charge state of the batteries, the solar power will be directed to the required battery, and continuously monitored to ensure optimum operation.

3.7 System Status and Configuration display

The PSU also contain a status display unit that can be used to view system information. Press the top yellow 'select' button to change the item being viewed.

3.8 Water Pump Operation

The control panel pump button operates the internal water pump drawing water from the onboard tank.

The water tanks (fresh & waste) incorporate a level warning feature to warn the user when the fresh water level drops below 25% or when the waste water level reaches 100%.

If the water pump power is turned on and the fresh water level drops to below 25% a warning beep will be heard and the fresh gauge empty LED will flash. To cancel the warning, press the levels button.

If the water pump power is turned on and the waste water level rises to full (100%) a warning beep will be heard and the waste gauge full LED will flash. To cancel the warning, press the levels button.

These warnings will not be repeated unless the water pump power switch is turned off and on again. This is to ensure the warning does not become a nuisance.

3.9 Electric Step Operation

On vehicles fitted with an electric step, this is operated by a button near the entry door. Press and release the button to move the step in or out. One press of the button will move the step out, a further press will move the step in again.

If the engine is started the step will move in automatically, after a short warning buzzer. If this operation fails due to an obstacle a buzzer will sound continuously to warn that the step is still out, and therefore requires your attention.

ELECTRICAL SYSTEMS

3.10 Common Fault Table

Fault	Possible Cause	Proposed Fix
No 230 volt output from PSU	Connecting lead between the site and Leisure Vehicle not connected	Check and connect lead as per 2.3C
	RCD switched off	Reset RCD as per 2.3D
	RCD not operating correctly	Check supply polarity; if the RCD continues to fail contact your Dealer as there is probably an equipment or wiring fault.
	MCB switched off	Reset MCB by switching OFF (down position) then back ON (up position), if the MCB continues to fail contact your Dealer as there is probably an equipment or wiring fault.
	No or deficient supply from site	Contact site Warden for assistance
	Other fault	Contact your Dealer
Reverse Polarity light is illuminated on PSU	Mains Supply reversed?	The reverse polarity light is designed to illuminate when the Live and Neutral supply has been reversed / crossed over. If the light illuminates there is a problem with the site supply or the cable connecting the supply to your vehicle. The light is designed to work on UK electrical supplies (where the neutral conductor is connected to earth at the sub station). If you are using your vehicle outside the UK this light may illuminate when no fault exists. In these cases consult the site warden for advise.
	Generator being used	'The Reverse Polarity warning light is on when using my Generator'. This is a normal side effect when using some types of generator. Instead of connecting the neutral conductor to earth, some generators centre tap the earth connection making both neutral and live conductors 110v above earth. This 110v difference causes the neon polarity indicator to illuminate. In most cases it is still safe to use the generator, but please consult the generator handbook for further information.

Fault	Possible Cause	Proposed Fix
Control Panel Problems	Control Panel has no display	Check batteries and fuses, turn PSU isolate switch and charger switch on and ensure mains supply is connected. Check control panel connecting lead at PSU and behind Control Panel Contact your Dealer
	12v Power turns off	Battery protect feature has operated to protect the Vehicle battery and or the Leisure battery. See 3.4C Engine has been started, all equipment has been disconnected to meet EMC requirements. See 2.6
	Control Panel locked / erratic function	Observe control panel handling instructions Control panel software may have crashed. Reboot control panel by turning off the PSU shutdown switch. Wait 30 seconds then turn the switch back on.
No 12 volt output from PSU	No 230v supply	Check all above
	Charger not switched on	Turn charger switch on, switch will illuminate
	Battery not connected and / or charged	Install charged battery as per 3.4
	Power button on control panel not switched to on	Turn power on at control panel
	Battery flat / Battery fuse blown	Recharge battery, check fuses, check charging voltage is present at battery
	Fuse blown	Check all fuses are intact and the correct value fuse is installed as per fuse table
	Equipment switched off / unplugged	Check equipment is switched on and connected to the 12v supply
	PSU overheated / auto shutdown operated	Reduce load on system. Allow PSU to cool down. PSU will automatically restart when cool.
	Other fault	Contact your Dealer
Pump not working	Fuse blown	Replace fuse with correct value as per fuse table.
	Pump turned off	Turn pump on by pressing the pump button at the control panel.
	Setting incorrect	Both the internal and external pump feeds are controlled from the control panel. To alter the setting of the pump switch see section 3.8 Ensure the setting matches your desired requirement.

ELECTRICAL SYSTEMS

3.11 Contact details

Sargent Electrical Services Limited provide a technical help line during office hours. Please contact 01482 678981 if you require technical help. For out of hour support please refer to the tech support section of the Sargent web site www.sargentltd.co.uk

Fresh Water Pump....68
Truma ultra-store water heater....69
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FRESH WATER PUMP

SWITCH SHUT-OFF

Restrictions in a plumbing system may cause the pump to rapid cycle (ON/OFF within 2 seconds) during low flow demands. Cycling should be minimised to prevent pulsating flow, and to achieve maximum pump life. To determine if adjustment is necessary, turn tap on to lower than average flow of water. The pump should cycle, but its 'OFF time' must be 2 seconds or longer. See page 41 on how to adjust the pressure switch.

STERLISING

Fresh water systems require periodic maintenance to deliver a consistent flow of fresh water. Depending on the use and the environment the system is subject to, sterilising is recommended prior to storing and before using the water system after a period of storage.

For information on cleaning the water system, see details in previous section.

WINTERISING

If water is allowed to freeze in the system, serious damage to the plumbing and the pump may occur. Failures of this type will void the warranty. The best guarantee against damage is to completely drain the water system. However, non-toxic antifreeze for fresh water, if available at local caravan centres, may be used.

See Winterisation in Motorhome Care section.

The instructions covering fitted equipment to your vehicle were correct at the time of going to print. Owners handbooks are updated annually and we take great care to try and ensure their accuracy. However, Swift Group Limited cannot accept responsibility for any changes that may be made in specification or operating instructions to the equipment described in this section after the time of going to press.

Every care is taken to ensure that the information provided in this handbook is correct and easy to understand.

Separate manufacturers' leaflets on many of the components are also included in the Owner's Pack provided with this vehicle and we recommend that you compare the instructions in the handbook with the component manufacturers literature, to ensure the information provided is as accurate as possible.

If you are in any doubt as to how to operate the equipment in your vehicle, please contact the component manufacturer's service department on the telephone number shown on their component leaflet. If you remain in any doubt, please contact customer care service department on 01482 875740.

Equipment Specification

For details on type of equipment fitted in your vehicle, please refer to the Sales Brochure or Dealer.

IMPORTANT

To maximise the use and life of all fitted equipment in your vehicle it is essential that any accompanying manufacturers' literature is read fully. All recommended maintenance and preparation procedures should be followed. The information provided in this handbook is only intended as a guide. If in any doubt consult your manufacturer appointed dealer, particularly before attempting to install EXTRA EQUIPMENT.

NOTICE: In the interest of safety, replacement parts for an appliance shall conform to the appliance manufacturer's specifications and should be fitted by them or their authorised agent.

TRUMA ULTRA-STORE WATER HEATER

The water heater features a system that will heat water using liquid petroleum gas or 230V mains electricity. The heater can be simultaneously operated on gas and electricity to give a faster warm-up period. The cassette has a capacity of 10 litres.

Attention: Always fit the cowl cap when the water heater is not being operated! Drain the water heater if there is risk of frost and preferably when you leave the site. Leave all taps open. Frost damage is not covered by the warranty!

Filling the Truma-Ultrastore with water

1. Check that the safety/drain valve in the cold water intake is closed. Lever should be in horizontal position, position (e) Fig. 1.

e = Lever position 'Closed'

f = Lever position 'Drain'

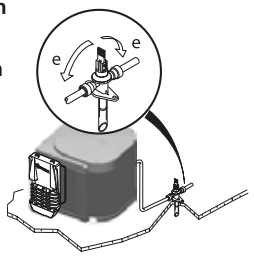


Fig. 1

2. Open hot tap in bathroom or kitchen; set pre-selecting mixing taps or single lever fittings to 'hot'.
3. Switch on power for water pump. Leave the tap open to let air escape while the water heater is filling. The heater is full when water flows freely from the tap.

Note: If only the cold water system is being used, the heater tank will also fill with water. In order to avoid damage through frost, the water heater must be drained as detailed in the following paragraph.

Draining the water heater

WARNING: The water may be hot and cause scalding.

1. Disconnect the water pump and switch off power supply where appropriate.
2. Open all hot and cold water taps.
3. Open safety/drain valve and leave in vertical position, position (f).
4. The water heater will drain directly to the outside. Check that the water contents have been completely drained (10 litres).

GAS OPERATING INSTRUCTIONS

Attention: Do not operate the water heater without water in it!

Remove the cowl cover prior to using the water heater.

Switching On:

1. Remove cowl cover.
2. Open gas cylinder and open quick-acting valve in the gas supply line.
3. Select required water temperature with the inner rotary knob (b) (infinitely variable from approx. 30°C to 70°C).
4. Switch on water heater by turning outer rotary control (a) to the flame symbol. A green indicator light will illuminate.

Fig. 2

5. If there is air in the gas supply line, it may take up to a minute before the gas is available for combustion. If the appliance switches to 'Failure' during this period. switch off the appliance - wait 5 minutes - and switch on again!

Switching Off:

Turn the outer rotary control (a) to 0.

Drain the water heater if there is risk of frost!

If the heater is not to be used for a long period, the cowl cover must be fitted to ensure that the appliance function is not impaired by the ingress of water, dirt or insects. Failure to fit the cowl may invalidate the warranty.

Turn off the gas supply at the cylinder.

ELECTRICAL OPERATING INSTRUCTIONS

Attention: Do not operate the water heater without water in it!

Press the switch on the fused spur to ON. The indicator lamp indicates that the heater is switched on.

Note: Under electrical operation, the water temperature cannot be selected. The temperature is automatically limited to 70°C. For faster heating up period the appliance can be simultaneously operated with gas.

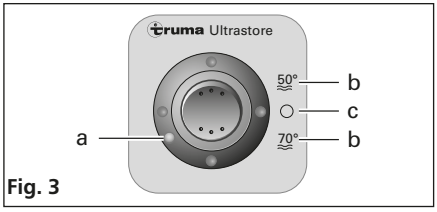


Fig. 3

Maintenance
The water heater should be serviced annually during the routine vehicle service.

Repairs
Repairs should only be carried out by qualified personnel, as otherwise the warranty will be void. Only original Truma parts are to be used.

De-scaling
Introduce wine vinegar into the water system and allow time for it to react with the scale. Flush out thoroughly with fresh water.

Hygiene
The water tank in the water heater Is made of high quality stainless steel. However. to avoid micro-organism colonization of the tank, it should be heated to 70ºC with the electrical heater at regular intervals. Do not drink water from the hot taps.

Fuses
The water heater fuse is on the electronic control unit on the water heater.

Note: Only replace the miniature Fuse on the p.c.b. with a fuse of the same type: 1.25 AT EN 60127-2-3 (slow action).

General safety notes
If the gas system is leaking or if there is a smell of gas:

- Extinguish all naked flames.
- Do not smoke.
- Switch off the appliances.
- Shut off the gas cylinder.
- Open the windows.
- Do not actuate any electrical switches.
- Have the entire system checked by an expert.

1. Repairs may only be carried out by an expert.
2. The following will invalidate the guarantee:
   a) Any alteration to the appliance. including the cowl.
   b) The use of non-original Truma parts/accessories.
   c) Non-observance of the Operating Instructions.
3. The operating pressure for the gas supply is 30 mbar and must correspond to the operating pressure of the appliance (see data plate).

Liquid gas systems must comply with the technical and administrative regulations of the respective country of use (e.g. EN 1949 for vehicles in Europe).

A qualified technician must inspect/test according to EN 1949 every two years and a certificate issued.

The vehicle owner is always responsible for arranging the inspection.

4. Do not operate the water heater when refuelling the vehicle and when in the garage.
5. During the initial operation of a brand new appliance (or after it has not been used for some time), a slight amount of fumes and a certain smell may be noticed for a short while. Remedial action is to immediately run the heater at maximum output and to ensure adequate room ventilation.
6. If the burner makes an unusual noise or if the flame lifts off, it is likely that the regulator is faulty and it is essential to have it checked.

Technical data

Water contents: 10 litres

Water pressure: up to max. 2.8 bar

Type of gas: Liquid gas (propane/butane)

Operating pressure: 30 m/b

Rated thermal output: 1500 W

Gas consumption: 120 g/h

Heating time up to approx. 70°C:
Gas operation: approx. 35 minutes
Electrical operation: approx. 70 minutes
Gas and electrical operation: approx 20 minutes.

Power consumption 12 V
Ignition: 0.17 A
Heating up: 0.08 A
Standby: 0.04 A

Power consumption 230 V
Heating up: (2 A) 450 W
Weight (empty): Approx: 6.7 kg

TRUMATIC E2400

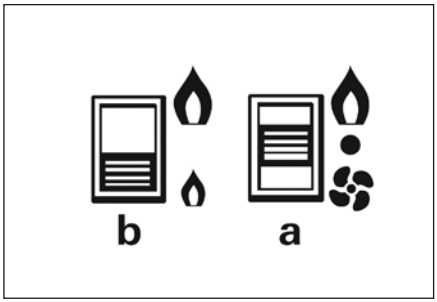
Trumatic E 2400 L.P.G. Heater with electronic control, built-in air distribution and thermostat

Operating instructions

Always observe the operating instructions and 'Important operating notes' prior to starting! The vehicle owner is responsible for the correct operation of the appliance!

The installer or vehicle owner must apply the yellow sticker with the warning information, which is enclosed with the appliance, to a place in the vehicle where it is clearly visible to all users (e.g. on the wardrobe door)! Ask Truma to send you stickers, if necessary.

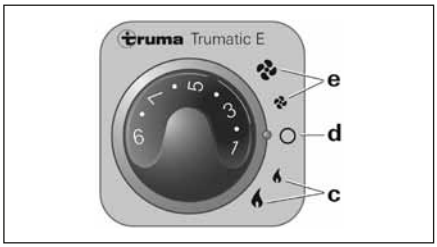
Control panel with sliding switch



a Slide valve
Heating – Off – Ventilation

b Slide valve for high setting (large flame symbol) and low setting (small flame symbol)

Control panel with rotary switch



c 'Heating' rotary switch high setting (large flame symbol) and low setting (small flame symbol)

d 'Off' rotary switch

e 'Ventilation' rotary switch high setting (large symbol) low setting (small symbol)

Switching on the Heating

1. Remove cowl cap.
2. Turn on gas cylinder and open quick-acting valve in the gas supply line.
3. Adjust desired room temperature at rotary knob.
4. Switching the heating on:

Control panel with sliding switch:
Set the switch (a) to Heating and switch (b) to the desired output setting.

Control panel with rotary switch:
Set the rotary switch to the desired output setting (c). If the outside temperature is low, switch to high setting.

The Trumatic E heater has been tested and approved for operation, also when the vehicle is moving. The burner with fan assistance guarantees satisfactory operation, even under extremely windy conditions. It may be necessary to observe respective, country-specific regulations for the operation of liquid gas appliances when the vehicle is moving.

Switching on the Ventilation

Control panel with sliding switch:
Set switch (a) to Ventilation and switch (b) to the desired output setting.

Control panel with rotary switch:
Set the rotary switch to the desired output setting (e).

Switching off

Set the sliding switch (a) or the rotary switch (d) to the centre. If the appliance is switched off after a heating phase, the fan can continue running in order to make use of the residual heat.

If the appliance is not used for a prolonged period of time, close quick-acting valve in the gas supply line and turn off gas cylinder. Green indicator lamp 'Operation' (under rotary control knob).

When the appliance is switched on (heating or ventilation) the green indicator lamp must be illuminated (the fan is running). If the indicator lamp is not illuminated, possibly check the (main) switch. For this purpose observe respective instructions of the vehicle manufacturer.

During the heating operation, while the flame is burning, the green indicator lamp lights up with twice the intensity. This also makes it possible to determine the instantaneous switching point of the room temperature.

Fuses

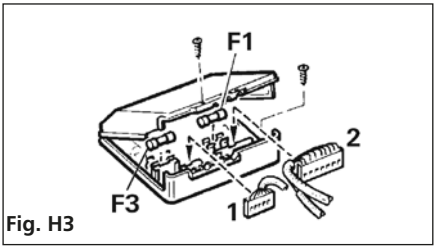


Fig. H3

The device and control panel fuses are on the electronic control unit on the device.

Device fuse (F1):
3.15 AT – slow – (EN 60127-2-3)
Control panel fuse (F3): 1.6 AT – slow –

The fine-wire fuse must only be replaced by a fuse of the same design.

Red indicator lamp 'Failure'

Should a failure occur, the red indicator is illuminated permanently. Possible causes for the failure can be e.g. no gas, insufficient combustion air, heavily soiled rotor, defective fuse etc. Deactivate by switching off and then switching on again.

Opening the window switch and closing it again is the equivalent to switching off/on at the control panel (e.g. performing a fault reset)!

Flash operation indicates that the operating voltage is too low or too high for the appliance (charge battery, if necessary). In Germany, always notify the Truma Service Centre if problems are encountered; in other countries the relevant service partners should be contacted (see Truma Service Booklet or www.truma.com).

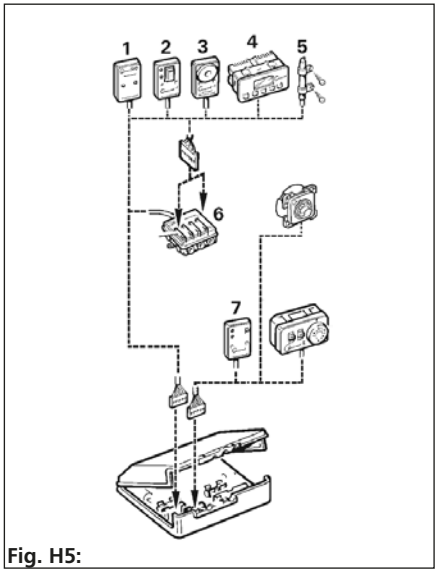


Fig. H5:

Accessories

1. **Control unit VG 2** – for heaters of driver's cabs in tank vehicles, for the transportation of hazardous goods according to ADR (not to be used in combination with a time switch).
2. **Outside switch AS** – for switching the heater on and off from the outside of the vehicle, e.g. for cargo space h eaters (available with 4 m or 10 m connecting cables).
3. **Acoustic signalling device ASM** – gives an acoustic signal in event of a failure.
4. **Time switch ZUE** – for pre-programming 3 switch-on times within 7 days, including 4 m connecting cable (suitable for 12 V and 24 V vehicle electrical system).
5. **Remote sensor FF** – monitors the room temperature independent of the position of the control panel (available with 4 m or 10 m connecting cable).
6. **Multiple connector MSD** – for connecting several accessories (e.g. time switch and remote sensor).

   Extension cable for accessories – items 1 – 6 of 4 m or 10 m (not illustrated).
7. **Direct switch DIS** – for operating the heater at high setting only, without temperature control (available with 4 m or 10 m connecting cable). Replaces control panel.

   Or direct fixed temperature switch DFS – for operating the heater at a fixed temperature (40°C – 70°C depending on the version). Replaces the control panel.

   All electrical accessories are fitted with a connector and can be connected individually.

Important operating notes

1. If the chimney has been placed near or directly beneath an opening window, the device must be equipped with an automatic shut-off device in order to prevent operation with the window open.
2. The integrity and tight fit of the exhaust gas double duct must be checked regularly, particularly at the end of long trips. Also check the mounting of the appliance and the cowl.
3. Following a blow-back (misfire) always have the exhaust gas system checked by an expert!
4. If appliances are assembled on the outside of the vehicle, regularly check the flexible air ducts for damage. A damaged duct could lead to exhaust gas entering the vehicle.
5. Always keep the cowl for conducting exhaust gas and supplying combustion air, free from contamination (slush, leaves etc.).
6. The installed temperature limiter shuts off the gas supply if the appliance becomes too hot. Therefore do not shut the warm air outlets and the opening for the returning circulating air.
7. If the electronic control p.c.b. is defective, return it well packed. If you fail to do so, guarantee claims shall no longer be valid. Only use original p.c.b. as a spare part!
8. Directive 2004/78/EC stipulates that a safety shut-off device is required if motor homes are being heated while driving. The safety shut-off device is also recommended for safety reasons if motorhomes are being heated while driving.

The Truma SecuMotion gas pressure regulator meets this requirement.

If no Truma SecuMotion gas pressure regulator is installed, the gas cylinder must be closed whilst driving and information signs must be attached to the cylinder cabinet and in the vicinity of the control panel.

Always use original Truma parts for maintenance and repair work!

9. For conducting the exhaust gas under the floor, the vehicle floor must be sealed tight. There must also be three open sides beneath the vehicle floor to ensure unhindered escape of the exhaust gas (snow, aprons etc.).

General safety notes

If the gas system is leaking or if there is a smell of gas:

- extinguish all naked flames
- do not smoke
- switch off the appliances
- shut off the gas cylinder
- open windows and door
- do not actuate any electrical switches
- have the entire system checked by an expert!

Repairs may only be carried out by an expert!

A new O-ring must always be installed after dismantling the exhaust duct!

1. Any alteration to the appliance (including exhaust duct and cowl) or the use of spare parts and accessories which are important to the function of the heater and which are not original Truma parts, as well as the non-observance of the installation and operating instructions, will lead to the cancelling of the guarantee and exclusion of liability claims. It also becomes illegal to use the appliance, and in some countries this even makes it illegal to use the vehicle.
2. The operating pressure for the gas supply is 30 mbar and must correspond to the operating pressure of the appliance (see data plate).
3. Liquid gas systems must comply with the technical and administrative regulations of the respective country of use (e.g. EN 1949 for vehicles or EN ISO 10239 for boats in Europe). National directives and regulations (e.g. DVGW worksheet G 607 for vehicles and G 608 for boats in Germany) must be complied with.

For vehicles for commercial use, the relevant accident prevention regulations issued by the professional associations are to be respected (BGV D 34).

The inspection of the gas system is to be repeated every two years by an approved liquid gas specialist (DVFG, TÜV, DEKRA). This is to be confirmed on the corresponding inspection certificate (G 607, G 608, or BGG 935).

The keeper of the vehicle is responsible for arranging the inspection.

Pressure regulating equipment and hoses must be replaced with new ones no more than 10 years after the date of manufacture (every 8 years if used commercially).

This is the responsibility of the operator.

4. Liquid gas equipment must not be used when refuelling, in multi-storey car parks, in garages or on ferries.
5. During the initial operation of a brand new appliance (or after it has not been used for some time), a slight amount of fumes and smell may be noticed for a short while. This can be remedied by running the heater at maximum output and ensuring adequate room ventilation.
6. If the burner makes an un-usual noise or if the flame lifts off, it is likely that the regulator is faulty and it is essential to have it checked.
7. Items sensitive to heat (e.g. spray cans) must not be stored in the installation area, since excess temperatures may under certain circumstances be incurred there.

8. Only pressure control equipment that complies with EN 12864 (in vehicles) and EN ISO 10239 (for boats) with a fixed delivery pressure of 30 mbar must be used for the gas system. The flow rate of the pressure control device must correspond to at least the maximum consumption of all devices installed by the system manufacturer.

For vehicles we recommend the Truma SecuMotion gas pressure regulator and the Truma DuoComfort automatic changeover valve for the two-cylinder system.

At temperatures of around 0°C or less the gas pressure regulator and the changeover valve must be operated using the EisEx de-icing system.

Controller connecting hoses that meet national regulations must always be used in the respective country for which the equipment is destined. These hoses must be checked regularly for brittleness. Winter-proof special hoses must always be used if the equipment is operated during the winter.

If the pressure regulator is exposed to weather conditions – especially on trucks – always make sure to protect the regulator using the Truma protective cover (standard accessory in truck attachment kit).

Technical data

determined in accordance with EN 624 or Truma test conditions

Type of gas:
Liquid gas (propane/butane)

Operating pressure:
30 mbar (see data plate)

Rated thermal output
High setting: 2400 W
Low setting: 1200 W

Gas consumption
High setting: 200 g/h
Low setting: 100 g/h

Air flow rate
High setting: approx. 78 m3/h
Low setting: approx. 49 m3/h

Current input at 12 V
High setting: 1.1 A
Low setting: 0.6 A

Current input at 24 V
High setting: 0.7 A
Low setting: 0.4 A

Standby:
0.01 A

Weight:
approx. 4.7 kg

Declaration of conformity:

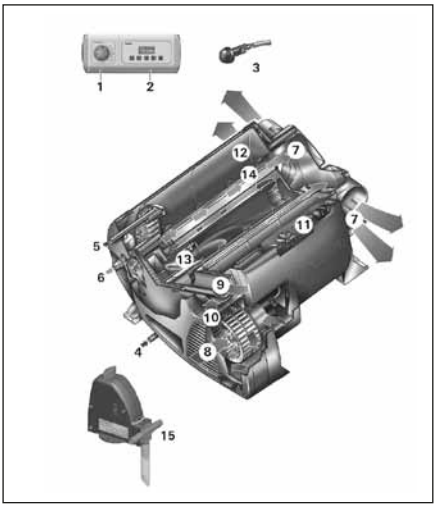
The Trumatic E 2400 has been tested by the DVGW and complies with the gas equipment directive (90/396/EEC) and the other applicable EC directives. The following CE Product Ident. No. is available for EU countries: CE-0085AP0008.

The heater complies with heater directive 2001/56/EC and supplements 2004/78/EC and 2006/119/EC and bears the type approval number: e1 00 0144.

The heater complies with vehicle engine interference suppression directive 72/245/EEC with supplements 2004/104/EC and 2005/83/EC, and bears type approval number: e1 03 2605.

The heater complies with EMC directive 89/336/EEC and low voltage directive 72/23/EEC.

TRUMA COMBI 4 / COMBI 6



1 Control panel
2 Time switch ZUCB (Accessories)
3 Room temperature sensor
4 Cold water connection
5 Hot water connection
6 Gas connection
7 Hot air outlets
8 Circulating air return line
9 Waste gas discharge
10 Combustion air infeed
11 Electronic control unit
12 Water container (10 litres)
13 Burner
14 Heat exchanger
15 FrostControl (safety/drain valve)

Function description

The liquid gas heater 'Truma Combi' is a warm-air heater with integrated hot water boiler (10 litre volume). The burner operates fan-supported, which ensures trouble-free function even when on the move.

In winter operation the heater can be used to heat the room and simultaneously warm water. If only warm water is required, select summer operation.

– In summer operation, the water contents are heated in the smallest burner stage. Once the water temperature is reached, the burner switches off.

– In winter operation, the unit automatically selects the required power setting according to the temperature difference between the temperature set on the control panel and the current room temperature. When the boiler is filled, the water is automatically heated as well. The water temperature depends on the selected operational mode and the heater output.

At a temperature of approximately 3° C at the automatic FrostControl safety/drain valve, the valve will open and drain the boiler.

The unit is not suitable for use as a flow heater.

Safety instructions

If the gas system is leaking or if there is a smell of gas:

– extinguish all open flames
– open windows and door
– close all quick-acting valves and gas cylinders
– do not smoke
– do not activate any electric switches
– ask an expert to inspect the entire system!

Repairs may only be carried out by an expert!

Any modifications to the unit, including accessories, exhaust duct, and cowl, or the use of spare parts and accessories that are important to the operation of the system that are not original Truma parts and failure to follow the installation and operating instructions will cancel the warranty and indemnify Truma from any liability claims. It also becomes illegal to use the appliance, and in some countries this even makes it illegal to use the vehicle.

The gas supply's operating pressure (30 mbar) must be the same as the unit's operating pressure (see type plate).

The vehicle owner is always responsible for arranging the inspection.

Liquid gas equipment may not be used when refueling, in multi-storey car parks, in garages, or on ferries.

During the initial operation of a brand new appliance (or after it has not been used for some time), a slight amount of fumes and smell may be noticed for a short while. It is a good idea to heat the device up several times in summer operation (60° C) and to make sure that the area is well ventilated.

Heat-sensitive objects such as spray cans or flammable liquids may not be stored in the same compartment where the heater is installed because, under certain conditions, this area may be subject to elevated temperatures.

Only pressure regulating equipment that complies with EN 12864 (in vehicles) with fixed output pressure of 30 mbar may be used for the gas system. The flow rate of the pressure control device must correspond to at least the maximum consumption of all devices installed by the system manufacturer.

For vehicles, we recommend Truma's SecuMotion gas pressure regulator; for the two-cylinder gas system we also recommend the Truma DuoComfort changeover valve.

At temperatures below 5° C, the gas pressure regulator or the changeover valve should be used with EisEx regulator heating.

Controller connecting hoses that meet national regulations must always be used in the respective country for which the equipment is destined. These hoses must be checked regularly for brittleness. Winter-proof special hoses must always be used if the equipment is operated during the winter.

Pressure regulating equipment and hoses must be replaced with new ones no more than 10 years after the date of manufacture (every 8 years if used commercially). This is the responsibility of the operator.

Do not use the boiler water as drinking water!

Important operating notes

If the cowl has been placed near or directly beneath an opening window, the device must be equipped with an automatic shut-off device in order to prevent operation with the window open.

The integrity and tight fit of the exhaust gas double duct must be checked regularly, particularly at the end of long trips. Also check the mounting of the appliance and the cowl. Following a blow-back (misfire) always have the exhaust gas system checked by an expert!

Always keep the cowl for the exhaust duct and combustion air intake free of contamination (slush, ice, leaves etc.). The warm air outlets and the openings for circulation air return must be unobstructed so the unit will not overheat. The integrated temperature limiter blocks the gas supply when the unit becomes too hot.

Directive 2004/78/EC stipulates that a safety shut-off device is required if motor homes are being heated while driving.

The Truma SecuMotion gas pressure regulator meets this requirement.

Note: If the Truma SecuMotion gas pressure regulator is not installed, the gas cylinder must be closed while driving and warning signs must be in place in the gas cylinder protection box and near the control panel.

The safety shut-off device is also recommended for safety reasons if motorhomes are being heated while driving.

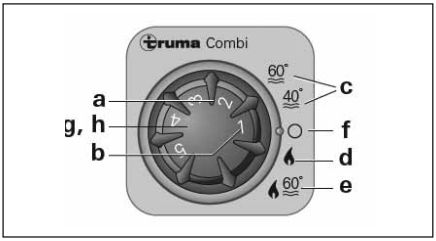
Operating Instructions

Always observe the operating instructions and 'Important operating notes' prior to starting! The vehicle owner is responsible for the correct operation of the appliance.

The installer or vehicle owner must apply the yellow sticker with the warning information, which is enclosed with the appliance, to a place in the vehicle where it is clearly visible to all users (e.g. on the wardrobe door)!
Ask Truma to send you stickers, if necessary.

Before using for the first time, it is essential to flush the entire water supply through with clean warm water. If the heater is not being used, always drain the water contents if there is a risk of frost. There shall be no claims under guarantee for damage caused by frost!

Gas operation (heating and hot water)



a Rotary switch for room temperature (1 – 5)

b green LED lit 'Operation' green LED blinking 'after-running' is active in order to reduce the unit's temperature

c Summer operation (water temperature 40° C or 60° C)

d Winter operation (heating without water temperature monitoring or with drained water system)

e Winter operation (heating with water temperature monitoring)

f Rotary 'Off' switch

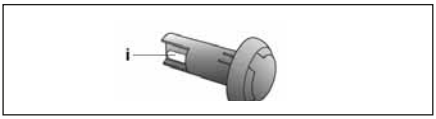
g Yellow LED lit 'Boiler heat-up phase'

h Red LED lit, red LED blinking 'Failure'

The LEDs are visible only when the unit is switched on.

Room thermostat

i Room temperature sensor



To measure the room temperature, an external room temperature sensor (i) is located in the vehicle. The location of the sensor is determined individually by the vehicle manufacturer, depending on the vehicle type; consult the operating instructions for your vehicle for further details.

The thermostat setting on the control panel (1 – 5) must be determined individually depending on the heating requirement and the type of vehicle. For an average room temperature of about 23° C, we recommend a thermostat setting of about 4.

Taking into operation

Heating operation is basically possible without restriction with or without water content.

Check to make sure the cowl is unobstructed. Be sure to remove any covers that may be present.

Turn on gas cylinder and open quick-acting valve in the gas supply line.

Summer operation (boiler operation only)

Move the rotary switch on the control panel to position (c – summer operation) 40° C or 60° C. The green (b) and yellow (g) LEDs light up.

After reaching the set water temperature (40° C or 60° C), the burner will switch off and the yellow LED (g) will be extinguished.

Winter operation

Heating with water temperature monitoring

Set the rotary switch to the operational setting 'e'. Set the rotary switch (a) to the desired thermostat setting (1 – 5). The green LED (b) for operation is lit and simultaneously indicates the position of the selected room temperature. The yellow LED (g) indicates the water's heat-up phase.

The unit automatically selects the required power level according to the temperature difference between the setting on the control panel and the current room temperature. Once the room temperature set on the control panel has been reached, the burner switches back to the lowest stage, and heats the water content to 60° C. The yellow LED (g) will be extinguished after the water temperature is reached.

Heating without water temperature monitoring

Set the rotary switch to the operational setting 'd'. Turn the rotary switch (a) to the desired

thermostat setting (1 – 5). The green LED (b) for operation is lit and simultaneously indicates the position of the selected room temperature. The yellow LED (g – water's heat-up phase) will be lit only when the water temperature is below 5° C!

The unit automatically selects the required power level according to the temperature difference between the setting on the control panel and the current room temperature.

After reaching the room temperature set on the control panel, the burner will switch off. The warm-air fan will continue to run at a low speed as long as the blow-out temperature (on the unit) is higher than 40° C.

If the boiler is filled, the water will automatically be heated at the same time. The water temperature is then dependent on the heating output being given off, and the duration of heating required to reach the desired room temperature.

Heating with drained water system

Set the rotary switch to the operational setting 'd'. Turn the rotary switch (a) to the desired thermostat setting (1 – 5). The green LED (b) for operation is lit and simultaneously indicates the position of the selected room temperature. The yellow LED (g) will be lit only when the temperature of the unit is below 5° C!

The unit automatically selects the required power level according to the temperature difference between the setting on the control panel and the current room temperature. After reaching the room temperature set on the control panel, the burner will switch off.

SWITCHING OFF

Use the rotary switch to switch off heater (position f). The green LED (b) goes off.

If the green LED (b) blinks after switching off, then the unit's after-running is active in order to reduce the unit's temperature. This will end after a few minutes and the green LED (b) will go off.

Always drain water contents if there is a risk of frost!

If the appliance is not to be used for a prolonged period, close the quick-acting valve in the gas supply line and turn off the gas cylinder.

Red LED 'Failure'

The red LED (h) will be lit if there is a failure.

Please consult the Trouble-Shooting list for possible causes.

Reset (failure reset) the unit by switching it off and back on.

If the window switch is opened, the heating unit will stop operating and the red LED (h) will blink. Once the window switch is closed, the heating unit will continue operation and the green LED (b) will be lit continuously.

Filling the water heater

Check if the rotary switch for the drain valve (FrostControl) is set to 'Operation', meaning that it is parallel to the water connection and engaged.

When the temperature at FrostControl is below about 7° C, first switch on the heater to warm the installation compartment and FrostControl. After several minutes, when the temperature at FrostControl is above 7° C, the drain valve can be closed.

Close the drain valve by pushing the push button until it engages. Switch on power for water pump (main switch or pump switch).

Open hot water taps in kitchen and bathroom, (set preselecting mixing taps or single-lever fittings to 'hot'). Leave the fittings open for as long as it takes for the boiler to displace the air and fill up, and the water to flow without interruption.

If just the cold water system is being operated, without using the water heater, the heater tank also fills up with water. To avoid frost damage, the boiler must be drained through the drain valve, even if it was not operated. As an alternative, two shutoff valves, resistant to hot water, can be fitted in front of the cold and hot water connection.

When connecting to a central water supply (rural or city mains), a pressure reduction valve must always be installed to prevent pressures above 2.8 bar from developing in the water heater.

Draining the water heater

Switch off power to water pump (main or pump switch).

Open hot water taps in kitchen and bathroom.

Turn the rotary switch on the drain valve (Frost Control) by 180° until it engages, whereby the push button moves out and the drain valve opens.

The boiler is now drained directly to the outside via the drain valve. Place a bucket beneath the outlet to check whether the water content has completely drained away (10 litres). There shall be no claims under guarantee for damage caused by frost!

Maintenance

Only original Truma parts may be used for maintenance and repair work!

The water container used is made of stainless steel, which is foodstuff-compatible.

Use wine vinegar for descaling the water heater, this being introduced into the appliance via the water supply. Allow the product to react and then thoroughly flush out the appliance with plenty of fresh water. For sterilization purposes we recommend 'Certisil-Argento'; other products (especially those containing chlorine) are unsuitable and may damage the unit.

To avoid microorganisms colonizing the water in the boiler, heat the water to 70° C at regular intervals (at least once per year).

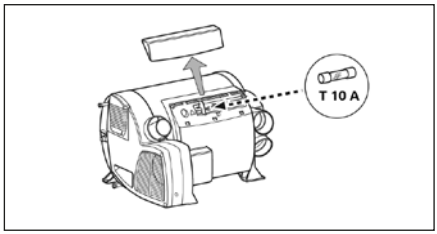
Move the rotary switch on the control panel to position (c – summer operation) 60° C. The green (b) and yellow (g) LEDs light up.

Once the water in the boiler has reached a temperature of 60° C, the burner will switch off and the yellow LED (g) will go out. The unit must stay switched on for at least 30 minutes and no warm water may be removed. The residual heat in the heat exchanger will heat the water up to 70° C.

Fuses

The unit's fuse is located on the electronics under the connection cover. Replace the unit's fuse only with an identical fuse.

Device fuse: 10 A – slow – (T 10 A)



Disposal

The liquid gas heater must be disposed in accordance with the administrative stipulations of the respective country in which it is used. National regulations and laws (in Germany, for example, the Altfahrzeug-Verordnung (old vehicle directive) must be observed.

In other countries, the relevant regulations must be observed.

Technical data

Determined in accordance with EN 624 or Truma test conditions

Type of gas: Liquid gas (propane / butane)

Operating pressure: 30 mbar (see type plate)

Water contents: 10 litres

Heating up time from approx. 15° C to approx. 60° C
Boiler approx. 20 minutes (measured according to EN 15033) Heater + boiler approx. 80 min.

Water pressure: max. 2.8 bar

Rated thermal output (automatic output levels)
Combi 4: 2000 / 4000 W
Combi 6: 2000 / 4000 / 6000 W

Gas consumption
Combi 4: 160 – 320 g/h
Combi 6: 160 – 480 g/h
Readiness-heat power requirement Combi 4 / Combi 6: 5.2 g/h

Air delivery volume (free-blowing without hot-air pipe)
Combi 4: with 3 hot-air outlets max. 249 m3/h with 4 hot-air outlets max. 287 m3/h
Combi 6: with 4 hot-air outlets max. 287 m3/h

Current input at 12 V
Heater + boiler
Combi 4: Short-term max. 5.6 A (average power consumption 1.1 A)
Combi 6: Short-term max. 5.6 A (average power consumption 1.3 A)
Heating up of boiler: 0.4 A
Stand-by: 0.001 A
Heating element FrostControl (optional): maximum 0.4 A

Weight (without water contents): 14.5 kg

Declaration of conformity
The Truma Combi has been tested by the DVGW and complies with the gas equipment directive (90/396/EEC) and the other applicable EC directives. The following CE Product Ident. No. is available for EU countries
Combi 4 / Combi 6: CE-0085-BS0085.

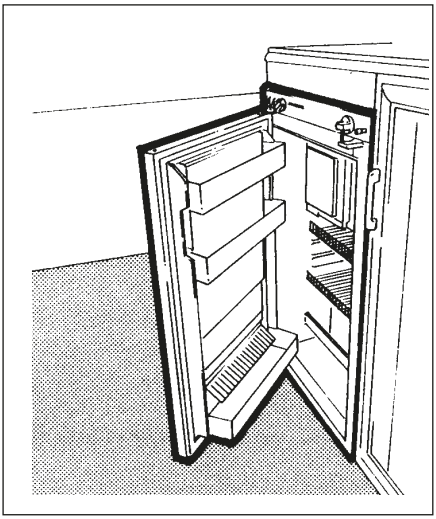
The heater complies with heater directive 2001/56/EC and supplements 2004/78/EC and 2006/119/EC and bears the type approval number Combi 4: e1 00 0193 Combi 6: e1 00 0194.

The heater complies with the interference suppression directive 72/245/EEC for vehicle engines with annexes 2004/104/EC, 2005/83/EC and 2006/28/EC and bears type approval number: e1 03 5020.

The heater complies with EMC directive 89/336/EEC and low voltage directive 73/23/EEC.

For troubleshooting a fault please refer to page 14 of the Truma Combi 4 / Combi 6 Operator Manual.

DOMETIC REFRIGERATORS



Before using your refrigerator for the first time, it is advisable to wash the interior and its accessories.

When using the refrigerator on gas ensure that the gas isolation tap is fully open by turning the knob to the vertical position. The tap can generally be found inside the sink unit or within the wardrobe (model specific). When travelling the fridge can only be Operated in the 12V mode.

Note: Before operating the refrigerator on 12V, it should be pre-cooled, together with its contents, by running it on gas or 230V for a few hours before changing over to 12V for your journey.

The current drain is approximately 7A to 14A (model specific) and power is only available when the ignition circuit is switched on. On site, only the mains electric or gas modes should be used.

The refrigerator can run on either 230V, 12V or LP gas. Changing between these modes of operation is carried out by means of the controls on the control panel.

Caution: Only use one source of energy at a time.

After initial installation, servicing or changing gas cylinders etc., the gas lines may contain some air which should be allowed to escape by briefly turning on the refrigerator or other appliances. This will ensure that the flame lights immediately.

The flame failure device will automatically shut off the gas to the burner if the flame is blown out. On electric ignition versions, the flame failure device will also shut off the gas if the burner does not re-light within about a minute of the flame being blown out.

Before you start to use the appliance, please read the installation and operating instructions carefully.

The refrigerator is designed for installation in leisure vehicles such as caravans or motorcaravans. The appliance has been certified for this application in accordance with EU Gas Directive 90/396/EEC.

Warning and safety notices

Warning: Never use a naked flame to check the appliance for leaks.

- Protect children!
- When disposing of the refrigerator, remove all refrigerator doors and leave the storage rack in the refrigerator. This will prevent accidental locking in or suffocation.
- If you smell gas:
  - close the locking tap of the gas supply and the valve on the cylinder.
  - open the windows and leave the room.
  - do not switch on anything electrical.
  - extinguish naked flames.
- Never open the cooling unit; it is under high pressure.
- Work on the gas, flue system and electrical components must only be carried out by qualified service personnel.

- It is imperative that the operating pressure should correspond to the data given on the model plate of the appliance.
- Compare the operating pressure data given on the model plate with the data on the pressure monitor of the liquid gas cylinder.
- Gas operation of the appliance is not permitted while travelling on ferries.
- Covers ensure electrical safety and must only be removed using a tool.
- The appliance must not be exposed to rain.
- The refrigerator is not suitable for the proper storage of medications.

Coolant

Ammonia is used as a coolant.

This is a natural compound also used in household cleaning agents (1 litre of Salmiak cleaner contains up to 200g of ammonia - about twice as much as is used in the refrigerator). Sodium chromate is used for corrosion protection (1.8% of the solvent).

In the event of leakage (easily identifiable from the unpleasant odour):

- switch off the appliance.
- air the room thoroughly.
- inform the authorised Customer Service department.

Warranty and customer service

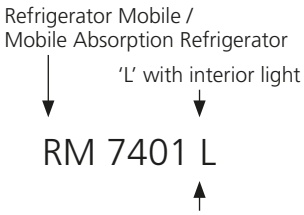
Warranty arrangements are in accordance with EC Directive 44/1999/CE and the normal conditions applicable for the country concerned. For warranty or other servicing, please contact our Dometic Service department. Any damage due to improper use is not covered by the warranty. The warranty does not cover any modifications to the appliance or the use of non-original Dometic parts.

The warranty does not apply if the installation and operating instructions are not adhered to and no liability shall be entertained. Parts can be ordered throughout Europe from our Dometic Service department.

Your Service Centre contact numbers are found in the 'European Service Network' booklet.

When contacting Dometic Service, please state the model, product number and serial number together with the MLC Code, if applicable. You will find this information on the data plate inside the refrigerator.

Description of model



Last digit 1 = manual energy selection
Last digit 5 = automatic and manual energy selection

Cleaning

Before using the refrigerator, it is advisable to clean the appliance both inside and out.

- Use a soft cloth and lukewarm water with a mild detergent.
- Then rinse the appliance with clean water and dry thoroughly.
- Remove dust from the refrigerator unit at yearly intervals using a brush or soft cloth.

Warning: To avoid deterioration of materials:

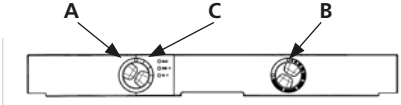
- Do not use soap or hard, abrasive or soda-based cleaning agents.
- Do not allow the door seal to come into contact with oil or grease.

Using the refrigerator

- The cooling unit is silent in operation.
- When the appliance is first put into operation, there may be a mild odour which will disappear after a few hours.
- Ensure the living area is well ventilated.
- The refrigerator will take several hours to reach its operating temperature in the cooling compartment
- The freezer compartment should be cold about one hour after switching on the refrigerator.

Controls

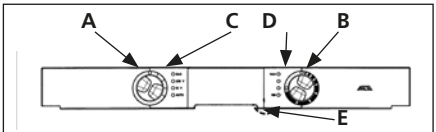
A. Manual energy selection MES (eg RM 7XX1 L)



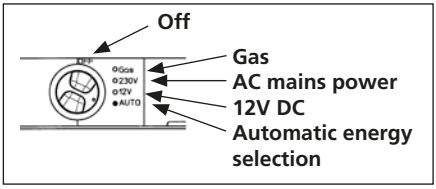
A = energy selection switch
B = gas/electric thermostat AC/DC
C = operating displays (3 LEDs)

B. Automatic and manual energy selection AES (eg RM 7XX5 L)

Note: The refrigerator is equipped to operate on mains power, DC or liquid gas (propane/ butane). The desired power option is selected by means of energy selector switch (A). Energy selector switch (A) has four settings: AC mains power, DC (12V), Gas (liquid gas), OFF.



A = energy selection switch
B = gas/electric thermostat AC/DC
C = operating displays (4 LEDs)
D = temperature setting display
E = dimmer for LED-displays
(only accessible when door opens)

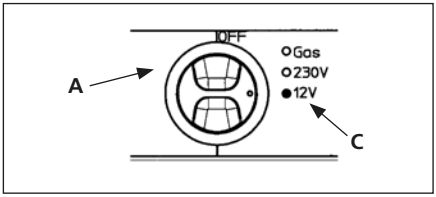


Appliances with automatic energy selection have the additional setting 'AUTO'.

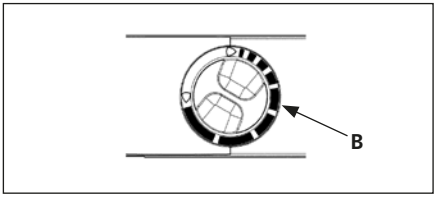
Manual Energy Selection

Electrical operation 12V - operation (DC)

Warning: The refrigerator should only be used while the motor is running, otherwise the on-board-battery would be discharged within a few hours!



1. Set energy selector switch (A) to 12V .
2. Operating display 'C', 12V lights 'green'. Appliance is in function.

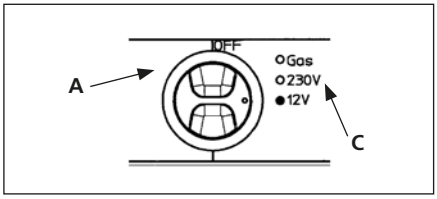


3. Use rotary switch (B) to regulate the temperature in the main refrigerator compartment.

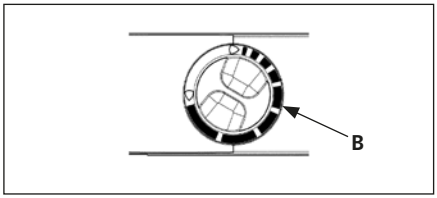
Note: If the operating display fails to light up (it lights up 'red' at AES models) the device is not in operation. (See troubleshooting section).

Mains power

This option should only be selected where the supply voltage of the connection for power supply corresponds to the value specified on the data plate. Any difference in values may result in damage to the appliance.



1. Set energy selector switch (A) to 230V .
2. Operating display 'C', 230V lights 'green'. Appliance is in function.



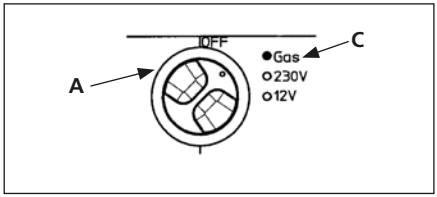
3. Use rotary switch (B) to regulate the temperature in the main refrigerator compartment.

Note: If the operating display fails to light up (it lights up 'red' at AES models) the device is not in operation.

Gas operation

- The refrigerator should only be operated using liquid gas (propane, butane). Do not use town gas or natural gas.
- If the refrigerator is operated during travel using gas, the precautions stipulated by the legislation in the respective country must be taken (in conformity with the European standard EN 732).
- Operating the refrigerator with gas is not permitted during travel in France and Australia.
- As a basic rule, operation using gas is prohibited in petrol stations.

1. Open the valve of the gas cylinder
2. Open the shut-off valve to the gas supply.

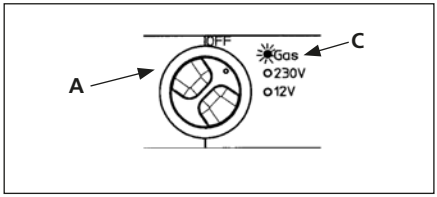


3. Set energy selector switch (A) to gas
4. Set rotary switch (B) to 'MAX' position.

The ignition process is activated automatically, accompanied by a ticking sound approx. 30 sec. Upon successful ignition, the display LED (C) 'Gas' lights yellow. The refrigerator is in function. Use rotary switch (B) to regulate the temperature in the main refrigerator compartment.

Gas faults

In the event of a gas fault (e.g. gas cylinder empty), the operating display (C) flashes yellow.



Remedies:

Set the energy selector switch (A) to position 'OFF'.

1. Is there any gas in the gas bottle?
2. Is the gas bottle valve open?
3. Is the on-board shut-off valve open?

4. Set the main switch (A) to 'on'

The re-ignition starts again.

If after about 30 seconds the operating display (C) starts flashing red again, the gas fault has not been cleared (e.g. air in the gas pipe).

5. Briefly switch the refrigerator off and then on again using main switch (A).

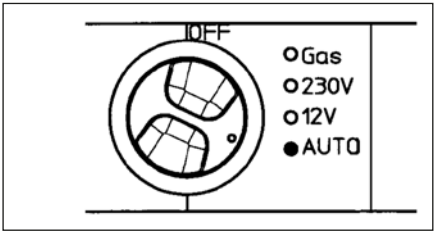
   To remove air from the gas pipes, repeat this procedure 3-4 times.

If these actions do not help, please call an authorised Dometic Service Centre.

Automatic Energy Selection (only with RM 7XX5 L)

'AUTO' operation

RM7XX5 L - models are equipped with an 'AUTO' MATIC function.

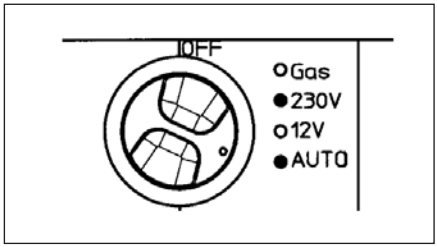


1. Set energy selection switch (A) to position 'AUTO'. The LED 'AUTO' illuminates.

Note: Manual operation is possible at any time.

Explanations
Upon switching on, the electronics automatically select one of the three possible energy types: 230V - 12V – liquid gas. The control electronics automatically ensure that the refrigerator is supplied with the optimum source of energy in each respective case.

Priority
1. Solar (12V DC)
2. 230V AC
3. 12V DC
4. Liquid gas



The selected energy is displayed by the corresponding LED (i.e. 230V).

230V - operation
If sufficient supply voltage is available (more than 200V), this power source is selected as the first option (no solar-system installed).

12V - operation
12V operation should only be selected while the vehicle motor is running or there is sufficient voltage available from the sola system. This can be detected from the D+ connection of the alternator to the electronics, or from the respective signal on the solar charge regulator.

Gas operation
Gas operation is selected in the following circumstances:

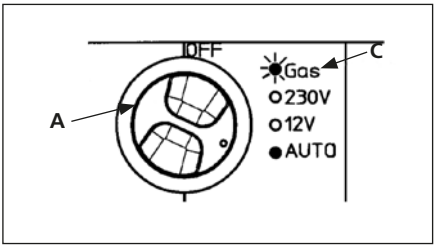
- No supply voltage available.
- The vehicle engine is not running.
- Supply voltage less than 200V

Refuelling Stop
In order to prevent unintended switching to gas operation during refuelling, the electronic system starts gas operation of the refrigerator, after the motor has been turned off for 15 mins. During this time the appliance is in stand-by operation mode and only the 'AUTO' LED lights up.

The use of naked flames is prohibited in petrol station environments. If the refuelling stop lasts longer than 15 mins the refrigerator should be switched off at the main switch (A), or switched over to another energy type.

Gas faults at 'AUTO' mode

If gas faults occur the operating LED 'C' flashes yellow.



Remedies:

Set the energy selector switch (A) to position 'OFF'.

1. Is there any gas in the gas bottle?
2. Is the gas bottle valve open?
3. Is the on-board shut-off valve open?
4. Set the main switch (A) to 'on'.

The ignition starts again.

If after about 30 seconds the operating display (C) starts flashing red again, the gas fault has not been cleared (e.g. air in the gas pipe).

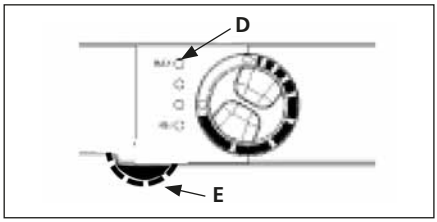
5. Briefly switch the refrigerator off and then on again using main switch (A).

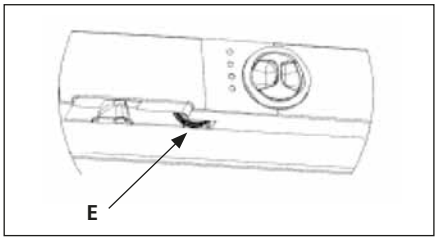
   To remove air from the gas pipes, repeat this procedure 3-4 times.

If these actions do not help, please call an authorised Dometic Service Centre.

Additional functions (RM 7XX5 L - models only)

- Temperature setting display (D) with 4 LED to indicate the selected temperature (MIN - MAX)
- LED - dimmer (E) for adjusting the brightness of the display-LED (only accessible when door opens)



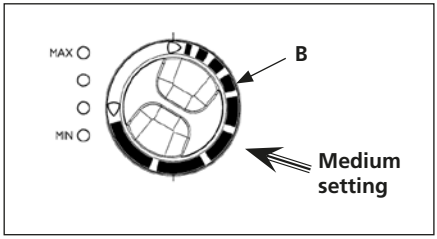


Underneath the fascia is a knurled knob for adjusting the brightness (see item E above).

Temperature setting cooling compartment

As shown, you are able to regulate the temperature of the cooling compartment, if necessary, by turning rotary knob (B).

The cooling unit's performance is influenced by ambient temperatures.



Tip: Please select the medium setting for ambient temperatures between +15°C and +25°C. The unit operates within its optimum performance range.

Storing Food

- Switch the refrigerator on approximately 12 hours before filling it.
- Always store food in sealed containers, aluminium foil or similar.
- Never put hot food into the refrigerator, always let it cool down first.
- Products that could emit volatile, flammable gases must not be stored in the refrigerator.
- Store quickly perishable foods directly next to the cooling fins.

The freezer compartment is suitable for making ice cubes and for short-term storage of frozen food. It is not suitable as a means of freezing foods.

Making ice cubes

Ice cubes are best frozen overnight. At night, the refrigerator has less work to do and the unit has more reserves.

1. Fill the ice cube tray with drinking water. Only use drinking water!
2. Place the ice cube tray in the freezer compartment.


Defrosting

As time goes by, frost builds up on the fins. When the layer of frost is about 3mm thick, the refrigerator should be defrosted.

1. Switch off the refrigerator (see Switching Off section).
2. Remove the ice cube tray and food.
3. Leave the refrigerator door open.
4. After defrosting (freezer compartment and fins free of frost), wipe the cabinet dry with a cloth.
5. Use a cloth to mop up the water from the freezer compartment.
6. Switch the refrigerator back on again.

Warning: The layer of ice must never be removed forcibly, nor may defrosting be accelerated using a heat source.

Note: Water thawing in the main compartment of the refrigerator runs into an appropriate container at the back of the refrigerator. From there, the water evaporates.

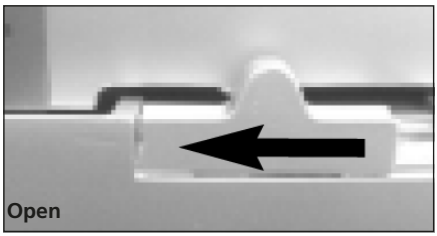
Positioning the storage rack

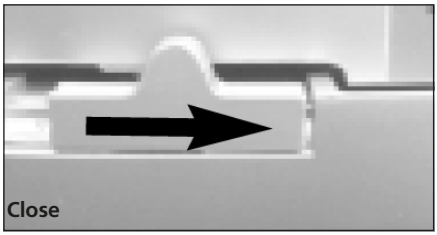
Dismantling:

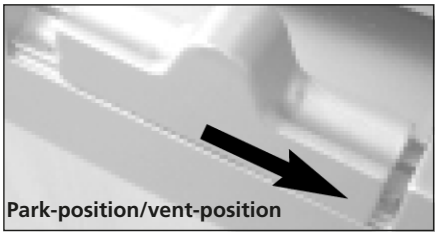
1. Loosen the front and back securing brackets.
2. Move the storage rack to the left and remove it.


To fit the storage rack, the reverse order applies.

Door Locking

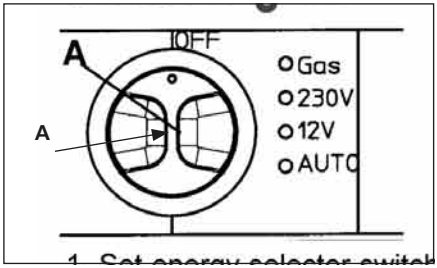


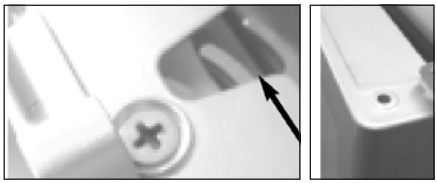




Switching Off

1. Set energy selector switch (A) to position '0' (OFF). The appliance is now fully switched off.
2. Secure the door open by means of the door stop. The door will be slightly ajar. This is to prevent mould from forming inside the appliance.





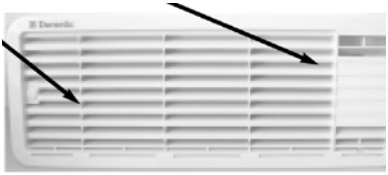
Switching off gas operation

If the refrigerator is to be taken out of service for an extended period of time, the on-board shut-off valve and the cylinder valve must be closed.

Winter Operation

1. Check that the ventilation grills and the extractor have not been blocked by snow, leaves or similar.
2. When the ambient temperature falls below +8°C, the optional winter covers should be fitted. This protects the unit from excessively cold air.

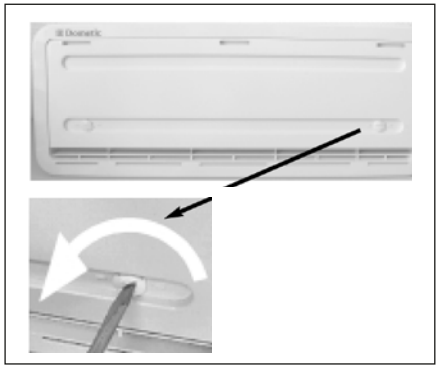
Lower ventilation grille (L200)



Upper ventilation grille with flue vent (L100)

3. Affix the cover and fasten it.

Tip: It is also recommended that the winter covers should be used when the vehicle is taken out of service for an extended period of time.



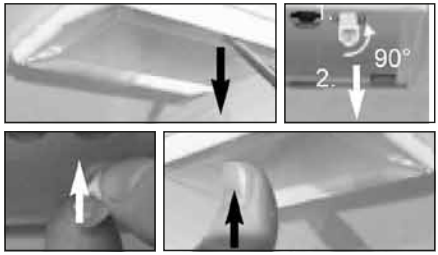
Interior light

Changing the light bulbs

1. Remove cover.
2. Detach defective light bulb.
3. Fit new light bulb
4. Clip the cover back in place.

Note: For 12V DC : 1 light bulb 12V, 2W

Please contact Dometic Service Centres for replacement light bulbs.



TROUBLESHOOTING

Possible cause	Action you can take
Failure : The refrigerator does not work in gas operation mode	
Gas bottle empty.	Change gas bottle.
Is the supply cut-out device open?	Open the cut-out device.
Air in the gas pipe?	Switch device off and on again 3-4 times to remove air from the gas pipe.
Failure : The refrigerator does not work on 12V	
On-board fuse defective.	Fit new fuse.
On-board battery discharged.	Check battery, charge it.
Engine not running.	Start engine.
Failure : The refrigerator does not work on 230V	
On-board fuse defective.	Fit new fuse.
No connection to supply voltage.	Establish power connection.
AES: gas operation despite connection to the supply voltage?	Appliance switches to gas operation due to insufficient supply voltage (automatically switches back to 230 V operation)
Failure : The refrigerator does not cool sufficiently	
Inadequate ventilation to the unit.	Check that the ventilation grilles are not covered.
The thermostat setting is too low.	Turn the thermostat to a higher setting.
There is too much ice on the condenser.	Check that the refrigerator door seals when shut.
Too much warm food put inside.	Let food cool down first.
Appliance running for a short time.	Wait several hours, check again.

Before calling the authorised Service Department, please check whether:

1. The instructions in the section 'Using the refrigerator' have been followed.
2. The refrigerator is not tilted excessively.
3. It is possible to operate the refrigerator with an available power source

Note: The Seven Series refrigerator requires a constant 12 volt supply for the fridge to operate on gas. Disconnecting the leisure battery will switch off the gas operation of the fridge.

MAINTENANCE

- Works on gas components and electrical installation may only be carried out by authorised personnel. We recommend to contact your Dometic Service Centre.
- EN 1949 stipulates that the appliance´s gas equipment and its associated fume system must be inspected after installation and a certificate issued.

  Afterwards a qualified technician must inspect according to EN 1949 every two years and a certificate issued.

It is the user's responsibility to arrange for inspections after purchase.

- It is recommended that the gas burner be inspected and cleaned as necessary at least once a year. We recommend maintenance following an extended shutdown of the vehicle.

PRODUCT LIABILITY

Product liability of Dometic GmbH does not include damages which may arise from faulty operation, improper alterations or intervention in the equipment, adverse effects from the environment such as changes in temperature and air humidity, which may impact the equipment itself or the direct vicinity of the equipment or persons in the area.

ENVIRONMENTAL HINTS

Refrigerators manufactured by Dometic GmbH are CFC-free.

Ammonia (a natural compound of hydrogen and nitrogen) is used in the cooling unit as a coolant. The non-ozone-hazardous cyclopentan is used as a propellant in the manufacture of the PU foam insulation.

DISPOSAL

In order to ensure that the recyclable packaging materials are re-used, these should be sent to the usual local collection system.

The appliance should be transferred to a suitable waste disposal company that will ensure re-use of the recyclable components and proper disposal of the rest.

For eco-friendly draining of the coolant from all absorber refrigeration units, a suitable disposal plant should be used.

ENERGY SAVING TIPS

- At an average ambient temperature of approx. 25°C, it is sufficient to operate the refrigerator at the middle thermostat setting (for both gas and mains voltage).
- Where possible, always store goods that have previously been cooled.
- Do not position the refrigerator in direct sunlight.
- Constant circulation of air must be supplied to the refrigerator unit.
- Defrost regularly.
- Open the door only for a short time when removing goods from the refrigerator.
- Run the refrigerator for about 12 hours before filling it.

THETFORD ABSORBER REFRIGERATORS

Attention: Do not operate the water heater without water in it!

This user's information is for N80 models of Thetford absorption refrigerators. It explains how to use your refrigerator correctly and safely. Read the manual carefully before using the refrigerator for the first time to obtain a quick overview of how to operate and use the refrigerator.

Thetford absorption refrigerators are specially designed to store fresh and frozen food and make ice cubes in caravans and campers. The control panel allows you to select the preferred energy source and cooling level.

Different energy sources allow you to use your refrigerator under different conditions.

Thetford absorption refrigerators belong to category C11: gas appliances that must be installed so that the combustion area is isolated from the living space.

To find out more about how your absorption refrigerator works, visit the website at www.thetford-europe.com.

PRECAUTIONS AND SAFETY INSTRUCTIONS

Alerts

The following alerts are used in this user's manual:

Warning! "Warning" alerts the user to the danger of damage to the product or to the user if the user fails to carry out the described procedures carefully.

Non-observance of the procedures may result in serious injury to the user or damage to the product.

Caution! "Caution" alerts the user to the possibility of damage to the product if the user fails to carry out the described procedures carefully.

Important! "Important" denotes supplementary information for the user and alerts the user to potential problems.

Warnings

- This refrigerator must be installed according to the manufacturer's instructions and in compliance with local and national regulations.
- Read this manual carefully before you start to use your refrigerator.
- Always consult the warnings before you perform any maintenance or gas checks.

Repairs/maintenance

- Never open or damage the cooling system. The cooling system is pressurised and contains substances harmful to health.
- Never attempt to repair gas, extractor or electrical parts yourself. They must be repaired by a qualified service engineer. Contact the Customer Service department of Thetford for a list of qualified parties.
- Always switch off the refrigerator before you perform any kind of maintenance or cleaning.

Use

- Never cover the ventilation grills in the walls of a caravan. Good ventilation is essential for the correct working of the absorber system.
- Water in the ventilation grating can result in damage to the refrigerator. Therefore, we advise that you put the winter cover over the ventilation gratings prior to washing your vehicle.
- Never expose the refrigerator to rain.
- Never operate the refrigerator by gas while driving. If a road accident results in fire, there is a risk of explosion.

What to do if...

- You smell gas:

- close the valve of the gas bottle;

- extinguish any naked flames;

- do not switch on any electrical devices or lighting;
- open the windows and leave the room;
- contact the Customer Service

department of Thetford.

• You suspect a leak in the cooling system:

- switch off the refrigerator;
- extinguish any naked flames;
- provide sufficient ventilation;
- contact the Customer Service

department of Thetford.

ABOUT YOUR REFRIGERATOR

Your refrigerator has a cold space and a freezer compartment. After starting up the refrigerator, allow it to cool for at least eight hours before placing any food in it.

Cold space

The cooling fins are located on the inside of your refrigerator. The absorption system uses the cooling fins to withdraw heat from the refrigerator. Therefore, never place plastic or paper over the cooling fins. Air must be able to circulate freely through the refrigerator so that heat can be extracted.

Important! Do not cover the cooling fins at the back of the refrigerator with plastic or paper. The refrigerator cools optimally when air is allowed to move freely through the refrigerator.

• To limit frosting on the cooling fins:

- always cover liquid foods before placing them in the refrigerator;
- always let hot food cool before placing it in the refrigerator;
- never keep the refrigerator open longer than necessary.

Fitting racks

Inside your refrigerator there are two or three storage racks. You can adjust the racks to a convenient height by means of a simple click system:

• click the plastic bracket to the right short side of the rack;

• turn the bracket into the horizontal position and insert the rack tipped in a sloping position into the refrigerator;

• place the short side without bracket into one of the grooves on the left wall of the refrigerator;

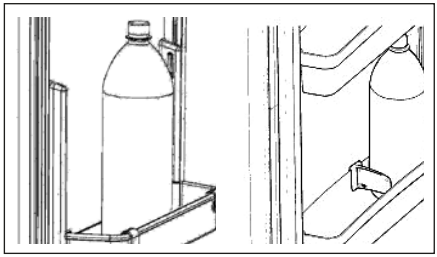
• place the short side with bracket in the corresponding groove on the right wall of the refrigerator;

• turn the bracket downwards to fix it into the groove.

To move a rack, turn the bracket upwards and remove the rack. Place the rack at the required height in the way described above.

Securing products for driving

The fitting racks in your refrigerator have a system for you to secure products while driving. The system consists of a simple click-and-slide plastic strip. To secure products on the rack while driving, push the plastic strip as tightly as you can against the products on the rack. In the storage space on the inside of the refrigerator door, there are two unique Thetford bottle slides (see illustration) The slides prevent bottles from sliding around during driving. Push the slide against the products in the door or place the products between the bottle slide .



Freezer compartment

Important!

- The freezer compartment is unsuitable as a means of freezing food, the freezer will maintain the temperature of already frozen food

- Use only drinking water to make ice cubes.
- Do not place any other products in the freezer compartment when you are making ice cubes.
- Water freezes fastest with the thermostat at the highest setting.

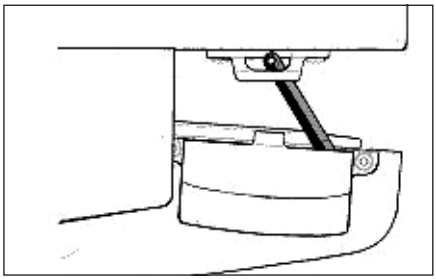
Tip!

- Make ice cubes at night when your refrigerator has more spare capacity.

Door locking mechanism

The refrigerator door has an automatic locking mechanism. The door locks automatically when you press it shut firmly. This automatic locking mechanism also keeps the refrigerator door shut during driving. For some models an additional security device is fitted below the refrigerator. By pushing the locking bar over the pin when the door is closed, you can be sure that the door does not open during your journey.

If you are not going to use the refrigerator for a prolonged period of time, you can use the special storage latch of the door locking mechanism (see illustration) to prevent odours. Rotate the hook through 90 degrees and lock it in place using the strike plate.



MODEL NUMBERS:

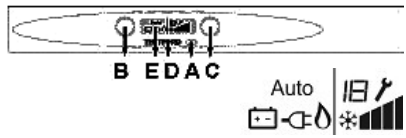
Electrical ignition N80E

- EES (Electric Energy Selection): the 'Electric' version, where the preferred energy source has to be selected manually [no 'Auto' function possible]

SWITCHING ON THE REFRIGERATOR (control panel)

- It is recommended to clean the inside of the refrigerator before you switch it on.
- Let the refrigerator cool for at least eight hours before you place food in it for the first time.

Switching on the refrigerator



A = Main switch (on/off)
B = Mode selection switch
C = cooling level selection switch
D = Function LED
E = LCD display

1. Open the valve of the gas bottle.
2. Open the taps of the gas supply.
3. Press main switch (A). The function LED will turn blue and all symbols on the LCD display will light up.
4. Use the mode selection switch to select the power supply that you want. The LCD display will show the option you have selected.
5. Set the desired refrigerating cooling level by means of the cooling level selection switch (C). The LCD display will show the cooling level setting you have selected.

A. Use the main switch to switch the refrigerator on and off. The function LED will turn blue. The display LCD shows the most recent settings. After 10 seconds the LCD display's backlight will go out. The function LED remains blue.

B. Press the mode selector switch and the LCD display backlight will show the setting for 10 seconds. Pressing the mode selector switch successive times takes you through the menu in the following sequence: Manual DC (12V), manual gas, manual mains voltage (230V).

C. Use the cooling level selector switch to control the temperature of the refrigerator. When you press the cooling level selector switch, the LCD backlight will light up and show the currently set temperature. Every time you press the cooling level selector switch again, you set the refrigerator one position cooler. On reaching the coldest temperature, the system will start again at the warmest temperature setting. Ten seconds after release of the cooling level selector switch, the system will switch off the LCD backlight.

Selecting electrical power manually

Mains voltage (230V):

The LED warns you whenever insufficient voltage is available or if a fault occurs. If this happens, the LED will start flashing once per second and an error code is shown in the LCD display

When sufficient current is available again, or the fault has been resolved, the LED will emit a steady blue light again.

Direct current (12V):

The LED warns you whenever your vehicle's engine is not running, or if a fault occurs, or if insufficient voltage is available. If this happens, the LED will start flashing once per second and an error code is shown in the LCD display.

Once the engine is running, or the fault has been resolved, or sufficient voltage is available again, the LED will again emit a steady blue light.

Powering with gas

Warning! - Flammable material must be kept away from the rear of the refrigerator.

- For selection of gas type, see the information plate inside your refrigerator.
- For the pressure regulator model, see the information plate inside your refrigerator and the table at the back of this booklet.
- The type of gas container and its location must be in compliance with the most recent regulations. Ensure that the unit is installed in a location with good ventilation and make sure that the ventilation openings in the gas container storage location remain open.
- The changing of the gas container must be done outside in the open air and out of reach of any possible sources of ignition.
- It is prohibited to use gas to power the refrigerator while you are driving.
- It is prohibited to use gas to power the refrigerator in the vicinity of petrol stations.

Selecting gas operation manually

If the flame cannot be lit within 30 seconds, the gas supply will stop and gas mode will be switched off. The LED start flashing every second and an error code is shown in the LCD display.

The gas mode can be reset only if the refrigerator is switched off. If you switch the refrigerator on again and the gas mode is still not working, the LED of the manual gas mode will flash to indicate that gas is unavailable and an error code is shown in the LCD display.

Important! It is prohibited to use gas to power the refrigerator while you are driving. If a road accident results in a fire, there is a danger of explosion. It is prohibited to use gas to power the refrigerator in the vicinity of petrol stations. If it takes longer than 15 minutes to refuel your vehicle, you should switch the refrigerator off using the main switch (A).

Switching off the refrigerator

- Push the main switch (A).
- The blue LED will go out.
- The refrigerator is now completely switched off.
- Use the special storage latch on the door locking mechanism to fixate the open door. This prevents unpleasant odours and mould in the refrigerator.

MAINTENANCE

Regular maintenance is necessary to ensure the correct functioning of your refrigerator.

Cleaning

Tip! A good time to clean your refrigerator is straight after you have defrosted it.

- lClean the refrigerator with a soft cloth and mild detergent.
- Dust the refrigerator with a soft, moistened cloth.
- Use a brush or soft cloth to remove once a year any dust from the condenser at the inside of the refrigerator.

Important! - Do not use soap or aggressive detergents that are abrasive or soda-based.

- The removable interior components of the refrigerator are not dishwasher proof.

Defrosting

Frost will gradually build up on the condenser of the refrigerator. You should defrost the refrigerator as soon as the frost layer is about 3 mm thick. Frost reduces the refrigerating capacity and life of your refrigerator.

- Remove the ice cube tray and all food.
- Switch off the refrigerator.
- Leave the refrigerator door open.
- Place dry towels in the refrigerator to absorb the water.
- Place trays containing hot water in the freezer compartment.
- After defrosting (when the freezer compartment and condenser are frost-free), remove the towels and the water trays and use a cloth to dry off the refrigerator.
- Switch the refrigerator on again in the way described in section 4.1 ("Igniting and starting your refrigerator").

Important! - Do not use force or sharp objects to remove frost.

- Do not try to accelerate defrosting by using (for example) a hair dryer.

Door locking mechanism

Frost will form in the refrigerator if the door is not closed properly. To determine whether the door closes properly, close the door with a piece of paper between the door and the refrigerator. Pull at the piece of paper. If you feel resistance, the refrigerator door closes properly. If you feel no resistance, the door does not close properly. Perform this test regularly on all four sides of the refrigerator door.

If you find that the door does not close properly, check whether the door locking mechanism keeps the door properly shut.

Winter operation

If you use the refrigerator when the outdoor temperature is below 8°C, install the Thetford vent winter/storage cover on the ventilation grills. The cover protects your refrigerator from excessively cold air. The winter cover is a refrigerator accessory obtainable from your caravan dealer.

Tip! It is advisable to use the winter/storage cover if you are not going to use the vehicle for a long period of time.

IMPORTANT; DO NOT USE THE WINTER/ STORAGE COVER IN TEMPERATURES GREATER THAN 8°C AS THIS CAN DAMAGE THE COOLING UNIT AT THE REAR OF THE FRIDGE. Remove the covers and re-fit when placing the vehicle back into storage.

Maintenance of gas equipment

A **qualified service engineer** must maintain and inspect gas and electrical equipment. It is advisable to have this maintenance work performed by a customer service centre. Contact the Customer Service department of Thetford for a list of qualified parties.

Important! European laws covering gas appliances and extractors prescribe observance of the following rules (which are the user's responsibility):

- appliances that run on liquid gas must be inspected before being used for the first time and every year thereafter.

- the gas burner must be cleaned at least once a year or more frequently if necessary.
- If a gas hose is used, it must be checked annually. This hose has a limited life and, thus, must be regularly replaced. Check the hose regularly for cracks, splits and ageing. If in doubt, replace the hose. Pay attention to the maximum life of the hose and replace it in time, as advised by the manufacturer or in conformance with local regulations.
- For replacement, a gas hose approved in accordance with the local regulations must be used. Position the hose so that it can rotate, is not kinked, and will allow
- Due to the limited life of the gas hose, it must be installed so that replacement is possible.

Maintenance checklist

This refrigerator will give you many years of trouble-free use if you simply run through the following checklist regularly:

- keep the refrigerator clean (see section 7.1 of the user instruction manual, "Cleaning");
- defrost the refrigerator as often as is necessary (see section 7.2 of the user instruction manual, "Defrosting");
- check the door closing mechanism regularly (see section 7.3 of the user instruction manual, "Door locking mechanism");
- make sure that the ventilation grills are not blocked;
- Regularly clean the ventilation grills.

Vent screen

The vent has a vent screen to prevent bugs from entering the combustion area of the refrigerators. These vents need to be cleaned regularly to insure a good airflow. When the refrigerator performs poor because of external circumstances such as extreme ambient temperatures, the vents can be removed to improve the airflow and improve the cooling performance of the refrigerators.

Storage

If you do not expect to use your refrigerator for a lengthy period, carry out the following actions:

- Remove all food
- Switch off the refrigerator
- Clean the refrigerator as described in Section 7.1 'Cleaning'
- Shut off the gas tap to the refrigerator
- Leave the door of the refrigerator ajar using the special door closure hook (storage position)
- Place the winter protection on the ventilation grill.

Troubleshooting

If your refrigerator does not refrigerate properly or will not start, run through the following checklist. If this fails to solve the problem, please contact the Customer Service Department in your country (see the addresses at the back of this manual).

- Check whether you have followed the instructions in chapters 4, 5 or 6 of the user instruction manual ("Switching on the refrigerator").
- Check whether the refrigerator is on a level surface.
- Check whether the refrigerator can be used with an available energy source.

Possible cause	Action you can take
Problem: refrigerator will not work on gas	
a) Gas bottle is empty.	a) Replace the gas bottle.
b) Valve of the gas bottle or one of the shut-off valves is closed.	b) Open the valve of the gas bottle or shut-off valve(s).
Problem: refrigerator will not work on 12V DC	
a) 12V fuse is defective.	a) Fit a new fuse (Camper —> fuse box of camper. Car —> fuse box of car)
b) Battery is empty.	b) Test the battery and charge it.
Problem: refrigerator will not refrigerate sufficiently	
a) Insufficient ventilation for the refrigerator.	a) Check whether the ventilation gratings are covered.
b) Thermostat set too low	b) Increase the setting of the thermostat
c) Too much ice on the condenser.	c) Check whether the refrigerator door shuts properly and defrost the refrigerator.
d) Too much hot food stored simultaneously.	d) Let the food cool off first.
e) Gas burner is dirty.	e) Have the gas burner cleaned.
f) Door does not shut properly.	f) Check the door closing mechanism.

Control panel diagnostics

Refrigerators with a LCD control panel have a special diagnostics area which displays an error code if there is a fault.

- **Fault 1:** AC heater current is measured to be 75% below nominal current.

  Action: Contact your dealer or a Thetford Service Centre.

- **Fault 2:** DC heater current is measured to be 75% below nominal current.

  Action: Contact your dealer or a Thetford Service Centre.

- **Fault 3:** AC heater is ON when it should be OFF.

  Action: Contact your dealer or a Thetford Service Centre.

- **Fault 4:** DC heater is ON when it should be OFF.

  Action: Contact your dealer or a Thetford Service Centre.

- **Fault 5:** Senses flame when gas should be OFF.

  Action: Contact your dealer or a Thetford Service Centre.

- **Fault 6:** Senses gas output terminal ON when should be OFF.

  Action: Contact your dealer or a Thetford Service Centre.

- **Fault 7:** Senses gas output terminal OFF when should be ON.

  Action: Contact your dealer or a Thetford Service Centre.

- **Fault 8:** AC mains supply is 20% below nominal.

  Action: Your controls are in manual AC mode, but there is no power available. Check if you plugged in the 230V connection, if so the voltage supply on the 230V connection is to low, contact the power supplier.

- **Fault 9:** Gas lockout because flame fails to ignite after 30 seconds.

  Action: Your controls are in manual gas mode, but the flame fails to ignite. Check if your gas cylinder is empty or if one of the shut-off valves is closed. Select another energy source. Reset the fridge 3 or 4 times in gas-mode until flame ignites. Contact your dealer or a Thetford Service Centre if problem isn't resolved.

- **Fault 10:** No "engine running" signal is present and control is in Manual DC mode.

  Action: Your controls are in manual DC mode and the engine of your vehicle is not running. The refrigerator can only cool on 12V when the engine of your vehicle is running. Start the engine or select a different energy mode.

- **Fault 11:** No energy source is available and control is in AUTO mode.

  Action: Your controls are in AUTO mode, but no energy source is available. Start the engine, connect the 230V supply or open the gas supply and reset the refrigerator by turning it of and on again.

- **Fault 12:** Contact your dealer or a Thetford Service Centre.

- **Fault 13:** Thermistor fails; control automatically switches to Backup mode (BOS).

  Action: Check if the connector above the fin on the inside of the cabinet is correctly plugged in. If so contact your dealer or a Thetford Service Centre.

- **Fault 14:** Display Board and Power board lost communication with each other.

  Action: Contact your dealer or a Thetford Service Centre.

GUARANTEE, CUSTOMER SERVICE AND LIABILITY

Guarantee

Thetford B.V offers the end users of Thetford refrigerators a three-year guarantee.

In the case of defects within the guarantee period, Thetford will repair or replace the product. In this instance, the costs of replacement, labour costs for the replacement of defective components and/or the costs of the parts themselves will be paid by Thetford.

1. To make a claim under this guarantee, the user must take the product to a Service Centre recognised by Thetford. The claim will be assessed here.
2. If components are replaced during repair under guarantee, these become the property of Thetford.
3. This guarantee does not prejudice current consumer protection law.
4. This guarantee is not valid in the case of products that are for, or are used for, commercial purposes.
5. No claim under the guarantee will be accepted in the following circumstances:

- the product has been improperly used or the instructions in the manual have not been followed
- the product has not been installed in accordance with the instructions
- alterations have been made to the product
- the product has been repaired by a Service Centre not recognised by Thetford
- the serial number or product code have been changed
- the product has been damaged by circumstances outside the normal use of the product

Liability

Thetford is not liable for loss and/or damage caused directly or indirectly by use of the refrigerator.

ENVIRONMENT

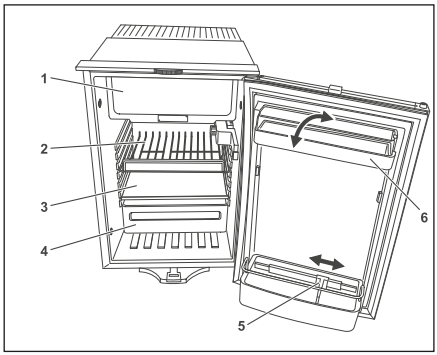
Refrigerators manufactured by Thetford B.V. are PCB-free. Most of the refrigerator is recyclable.

If the refrigerator has reached the end of its service life, contact your local waste processing company to dispose of the refrigerator in an environment-friendly way.

Energy-saving tips

- Install the refrigerator and switch it on about 12 hours before you put anything in it.
- Do not expose the refrigerator to direct sunlight.
- At an ambient temperature of approximately 25°C you can let the refrigerator operate at the middle position of the thermostat (both with gas operation and mains voltage).
- Store foods that have been pre-cooled.
- Open the door only briefly when you take things out of the refrigerator.
- Defrost the refrigerator regularly.
- Use the night power off switch to battery life.

WAECO FRIDGE



Before starting your new refrigerator for the first time, you should clean it inside and outside with a damp cloth for hygienic reasons (please also refer to the see 'Cleaning and care').

8.1 Energy saving tips

- Choose a well ventilated installation location which is protected from direct sunlight.
- Allow hot food to cool down first before you put it in the refrigerator.
- Do not open the refrigerator more often than necessary.
- Do not leave the door open for longer than necessary.
- Defrost your refrigerator as soon as a layer of ice forms.
- Avoid unnecessarily low temperature settings.
- Clean dust and dirt from the condenser at regular intervals.

8.2 Using the refrigerator

The fridge conserves fresh foodstuffs. The freezer compartment conserves frozen foodstuffs and freezes fresh foodstuffs.

Ensure that food or liquids in glass containers are not excessively cooled. Liquids expand when they freeze and can thus destroy the glass containers.

Food may only be stored in its original packaging or in suitable containers. Ensure that the objects placed in the refrigerator are suitable for cooling to the selected temperature.

Switch the refrigerator on by turning the temperature control (fig.51) clockwise.

Note: After switching on, the refrigerator requires approx. 60 s until the compressor starts up.

Setting the temperature
You can set the temperature to any level using the control knob. The built-in thermostat regulates the temperature as follows:

1 least cooling
7 most cooling

The cooling capacity can be influenced by:

- the ambient temperature
- the amount of food to be conserved
- the frequency with which the door is opened.

Conserving foodstuffs

You can conserve foodstuffs in the refrigerator. The time for which the food can be conserved in this way is usually stated on the package.

Do not conserve warm food in the refrigerator.

Do not place glass containers containing liquid in the freezer compartment. Food which can easily absorb tastes and odours and liquids and products with a high alcohol content should be conserved in airtight containers.

The refrigerator is divided in different zones with different temperatures:

- The colder zones are immediately above the drawers for fruit and vegetables, near the back wall.
- Observe the temperature information and best before date on the food packaging.

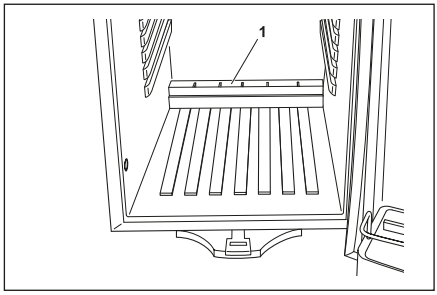
Observe the following when using the refrigerator:

- Never re-freeze products which have started defrosting or have been defrosted, but consume them as soon as possible.
- Wrap food in aluminium foil or cling film and shut in a suitable box with a lid. This ensures that aromas, the shape and the freshness will be better conserved.

Defrosting the refrigerator

The appliance has two options to remove the condensation resulting from operation:

- pass it directly outside: Remove the drip-tray (1). Connect a hose (2) to the outlet connections (3).



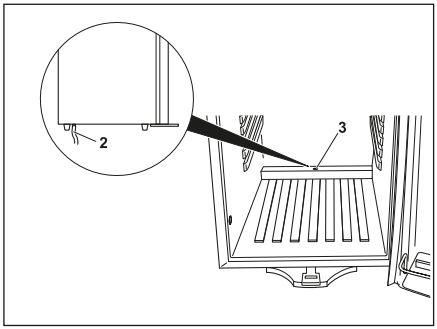
- collect in the drip-tray: Empty the drip-tray (1) as required.

Defrosting the freezer

Never use hard or pointed tools to remove ice or to loosen objects which have frozen in place.

To defrost the refrigerator, proceed as follows:

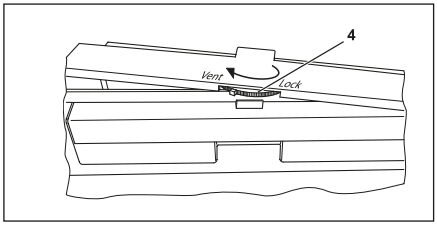
- Take the contents out.
- If necessary, place the contents in another cooling appliance, to keep them cool.
- Set the temperature control knob to '0'.
- Leave the door open.



Switching off and storing the refrigerator

If you do not intend to use the refrigerator for a long time, proceed as follows:

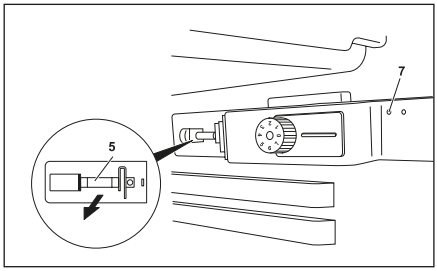
- Set the temperature control knob to level '0'.
- Disconnect the power cable from the battery or pull the AC cable plug out of the rectifier.
- Clean the refrigerator.
- Turn the locking wheel (4) anti-clockwise to the end stop ('Vent').
- Close the door until it latches in.
- The door stays open thus preventing smells from arising.



Replacing the interior light

If the interior light in the refrigerator is faulty, you can change the bulb (12 V, 3 W).

- Remove the cover.
- Pull the light (5) out of the sheet metal straps.

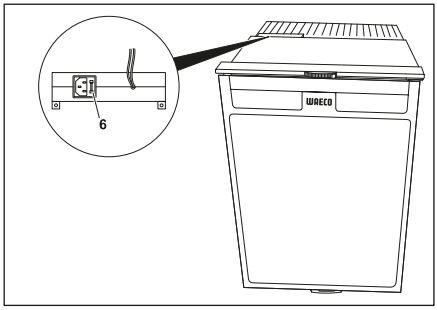


- Slide in the new lamp between the sheet metal straps, until it snaps into place.

Change the fuse (only DC/AC refrigerators).

If the fuse in the rectifier is faulty too, you can replace this too.

- Lever the fuse compartment (6) open with a screwdriver.



- Replace the fuse (250 V/3 A).
- Close the fuse compartment again.

9 Cleaning and care

Do not use abrasive cleaning agents or hard objects during cleaning as these can damage the refrigerator. Never use hard or pointed tools to remove ice or to loosen objects which have frozen in place.

As soon as the refrigerator becomes dirty, clean it with a damp cloth. Make sure that no water drips into the seals. This can damage the electronics. Wipe the refrigerator dry with a cloth after cleaning.

10 Guarantee

Our general guarantee conditions apply. If the product is defective, please return it to the WAECO branch in your country or to your dealer. For repair and guarantee processing, please include the following documents when you send in the appliance:

- A copy of the receipt with purchasing date
- Reason for the claim or a description of the fault

11 Disposal

Place the packaging material in the appropriate recycling waste bins wherever possible.

If you wish to scrap the appliance, ask your local recycling centre or specialist dealer for details about how to do this in accordance with the applicable disposal regulations.

12 Troubleshooting

The significance of the red LED (7)

For operational faults it illuminates several times. The number of pulses depends on the type of fault.

Each flash lasts for one quarter of a second. After the series of impulses a pause follows.

The sequence for the fault is repeated every four seconds.

No. of flashes	Fault	Possible cause
1	Supply voltage	The supply voltage is outside of the set range.
2	Excessive fan current	The fan loads the electronics unit with more than 1 A
3	The motor doesn't start	The rotor is jammed. The pressure difference in the cooling system is too high (> 5 bar).
4	Speed too low	If the cooling system is overloaded, the minimum speed of the motor of 1850 RPM cannot be maintained.
5	Overheating of the electronics unit	If the cooling system is loaded too heavily or the temperature is set too high, the electronics can overheat.

INTERIOR TEMPERATURE TOO LOW IN CONTROL LEVEL '1'

FAULT	POSSIBLE CAUSE	REMEDY
Compressor runs constantly	Faulty thermostat	Change the thermostat
Compressor runs for a long time	Large quantities have been frozen in the freezer compartment	

COMPRESSOR DOES NOT RUN (BATTERY CONNECTION)

U_{KL} = 0 V	There is an interruption in the connection between the battery and the – electronics	Establish a connection
	Main switch faulty (if installed)	Replace the main switch
	Additional supply line fuse has blown (if installed)	Replace the supply line fuse
$U_{KL} \leq U_{EIN}$	Battery voltage is too low	Charge the battery
Start attempt with $U_{KL} \leq U_{OFF}$	Loose cables - Poor contact (corrosion)	Establish a connection
	Battery capacity too low	Replace the battery
	Cable cross section too small	Replace the cable
Start attempt with $U_{KL} \leq U_{ON}$	Ambient temperature too high	
	Insufficient ventilation and/or air supply	Move the refrigerator to another location
	Condenser is dirty	Clean the condenser
Electric circuit between the pins in the compressor interrupted	Defective compressor	Replace the compressor

U_{KL} Voltage between the positive and negative terminals of the electronics

U_{ON} Cut-in voltage of the electronics

U_{OFF} Cut-off voltage of the electronics

COMPRESSOR IS NOT RUNNING (CONNECTED TO AC SUPPLY)

FAULT	POSSIBLE CAUSE	REMEDY
No voltage	Interruption in the supply cable	Establish a connection
	Main switch faulty (if installed)	Replace the main switch
	Additional supply line fuse has blown (if installed)	Replace the supply line fuse
Voltage is present but the compressor doesn't run	Ambient temperature too high	
	Insufficient ventilation and/or air supply	Move the refrigerator to another location
	Condenser is dirty	Clean the condenser
Electric circuit between the pins in the compressor interrupted	Defective compressor	Replace the compressor

POOR COOLING, INTERIOR TEMPERATURE INCREASES

Compressor runs for a long time/continuously	Ambient temperature too high	
	Insufficient ventilation and/or air supply	Move the refrigerator to another location
	Condenser is dirty	Clean the condenser
	Faulty fan	Replace the fan
Compressor runs intermittently	Battery capacity exhausted	Charge the battery

UNUSUAL NOISES

Loud humming	A component of the refrigerant circuit cannot move freely (touching the wall)	Bend the component carefully away from the obstruction
	Foreign body jammed between the cooling unit and the wall	Remove the foreign body
	Fan noise	

SPINFLO OVEN

IMPORTANT: Before using the appliances for the first time, remove all accessories and packing in the grill and oven, including any surface protection film, i.e. plastic coating. Clean all interior surfaces with hot soapy water to remove any residual protective covering of oil and rinse carefully.

Warning: Accessible parts may be hot when the grill is used, young children should be kept away. When cooking always ensure young children are kept away.

Ensure the gas cylinder is turned on. In the event of a gas smell, turn off at the cylinder and contact supplier. The burners on this appliance have fixed aeration and no adjustment is required. Depending on the gas being used, the burners should flame as follows:

Propane: The flames should burn quietly with a blue/green colour with no sign of yellow tips.

Butane: Normally on initial lighting, as small amount of yellow tipping will occur and then slightly increases as the burner heats up.

IMPORTANT: The control tap on this appliance operates both the grill and oven burners. To ensure safe operation it is not possible to operate both burners at the same time.

Using the hob burners

1. Ensure gas cylinder/supply is connected and turned on. In the event of a gas smell turn off at gas cylinder/mains and contact supplier
2. Flame supervision: Each burner is controlled individually and is monitored by a thermocouple probe. In the event of the burner flames being accidentally extinguished, turn off the burner control and do not attempt to re-ignite the burner for at least one minute.
3. To light: Push in the control knob and turn to full rate - see Fig.2. Hold a lighted match or taper to the burner and push the control knob in and hold. It is necessary to hold the knob depressed after the burner has ignited or approximately 10-15 seconds, to allow the thermocouple probe to reach temperature, before releasing the knob. Should the flame go out when the knob is released, the procedure should be repeated holding the knob depressed for slightly longer.
4. For models fitted with spark ignition the procedure is similar except that the burner can be ignited by depressing the ignition button, which is located on the fascia. If the burner has not lit within 15 seconds the control knob should be released and the burner left for at least 1 minute before a further attempt to ignite the burner.
5. For simmering, turn the knob further anti-clockwise to the low rate position.
6. To turn off: Turn the control know until the line on the control knob is aligned with the dot on the control panel. Always make sure the control knob is in the off position when you have finished using the hotplate burners.

Important: The two in line hob burners on this appliance will support pans from 10cm to 20cm. The single hob burner will support pans from 10cm to 22cm.

Warning: Glass lids may shatter when heated. Turn off the hotplate and allow it to cool before closing the glass lid. Remove all spillage from the surface of the glass lid before opening.

Using the hotplate

Ensure the electricity is switched on.

The hotplate control is numbered from 1 to 6. To turn it on, rotate the knob either clockwise or anti-clockwise to the required position. Position 1 is the coolest setting. To turn the hotplate off, rotate the knob until the line or pointer on the knob lines up with the zero on the control panel.

The hotplate is a sealed construction and transfers heat through conduction. For maximum efficiency a correctly sized pan with a flat heavy gauge base should be used. Pan size should be the same or slightly larger (up to 1"/2.5cm oversize).

Before using your hotplate for the first time, we recommend that you prime and then season it.

To prime the Hotplate
Switch on the hotplate for a short period, without a pan, to harden and burn off the coating. Use a medium to high setting for 3 - 5 minutes. A non toxic smoke may occur during this process. Allow it to cool, then season.

To season the Hotplate
First heat the hotplate for 30 seconds on a medium setting, then switch off. Pour a minimal amount of unsalted vegetable oil onto a clean dry cloth or paper towel, and apply a thin coat of oil to the hotplate surface. Wipe off any excess oil, then heat the hotplate on a medium setting for 1 minute. Occasional seasoning will help to maintain the Hotplate's appearance.

Using the grill

Important: The grill must only be used with the door open. The heat deflector below the fascia should be pulled out prior to lighting the grill. Never adjust the heat deflector position without using haNd protection i.e. oven gloves.

1. Ensure gas cylinder/supply is connected and turned on. In the event of a gas smell turn off at gas cylinder/mains and contact supplier.
2. To light: Open door, push in the control knob and turn to full rate - see Fig 2.

   Hold alighted match or taper to the burner and push the control knob in and hold. The burner should ignite and the control knob should be held in for 10-15 seconds before release. If the burner goes out, repeat procedure holding control knob for slightly longer.
3. For models fitted with spark ignition the procedure is similar except that the burner can be ignited by depressing the ignition button, which is located on the fascia. Ignition must be carried out with the door open, and if the burner has not lit within 15 seconds the control knob should be released and the grill left for at least 1 minute before a further attempt to ignite the burner.
4. On first use of the grill, it should be heated for about 20 minutes to eliminate any residual factory lubricants that might impart unpleasant smells to the food being cooked. An non-toxic smoke may occur when using for the first time so open any windows and turn on mechanical ventilators to help remove the smoke.
5. Although the grill does heat up quickly, it is recommended that a few minutes pre-heat be allowed.
6. Flame Failure Device (FFD): The grill burner is fitted with a flame sensing probe, which will automatically cut off the gas supply in the event of the flame going out. In the event of the burner flames accidentally being extinguished, turn off the burner control and do not attempt to re-ignite the burner for at least one minute.
7. It is normal for the flames on this burner to develop yellow tips as it heats up, particularly on Butane.
8. A reversible grill pan trivet enables the correct grilling height to be achieved.

Fast toasting - trivet in high position
Grilling sausages - trivet in high position
Grilling steak/bacon - trivet in high position
Grilling chops, etc. - trivet in low position
Slow grilling - trivet removed

9. To turn off: Turn the control knob until the line on the control knob is aligned with the dot on the control panel. Always make sure the control knob is in the off position when you have finished grilling.

SPINFLO OVEN

Important: The pan supplied with the appliance is multi functional, for use either whilst grilling or when using the oven. The handle design allows removal or insertion whilst the pan is in use.

Using the oven

1. Ensure gas cylinder/supply is connected and turned on. In the event of a gas smell turn off at gas cylinder/mains and contact supplier.
2. To light: Open door, push in the control knob and turn to gas mark 9. Hold a lighted match or taper to the burner and push the control knob in and hold. The burner should ignite and the control knob should be held in for 10-15 seconds before release. If the burner goes out, repeat the process holding control knob for slightly longer.
3. For models fitted with spark ignition the procedure is similar except that the burner can be ignited by depressing the ignition button, which is located on the fascia. Ignition must be carried out with the door open, and if the burner has not lit within 15 seconds the control knob should be released and the oven left for at least one minute before a further attempt to ignite the burner.
4. Place the oven shelf in the required position and close the door. Set control knob to approximately gas mark 5 and heat the oven for about 30 minutes to eliminate any residual factory lubricants that might impart unpleasant smells to the meals being cooked. A non-toxic smoke may occur when using for the first time so open any windows and turn on mechanical ventilators to help remove the smoke.
5. Although the oven does heat up quickly, it is recommended that a 10 minute pre-heat should be allowed. The oven should be up to full temperature in about 15-20 minutes.
6. To turn off: Turn the control knob until the line on the control knob is aligned with the dot on the control panel.
7. Shelf: The shelf has been designed to allow good circulation at the rear of the oven and are also fitted with a raised bar to prevent trays or dishes making contact with the back of the oven. To remove a shelf, pull forward until it stops, raise at front and remove.

Oven temperature control

The temperature in the oven is controlled by a thermostatic gas tap and is variable over the range 130ºC to 240ºC. Approximate temperatures for the settings on the control knob are shown in the table below. The temperatures indicated refer to the centre of the oven and at any particular setting the oven will be hotter at the top and cooler towards the base.

The variation between top and centre, and centre to bottom is approximately equivalent to one gas mark. Good use can be made of the temperature variation in several dishes requiring different temperatures may be cooked at the same time. In this way maximum benefit can be obtained from the gas used to heat the oven. Care should be taken not to overload the oven, adequate spacing being used to allow free circulation for heat.

Cooking guidelines

See user instructions.

Do's and Don'ts

DO read the user instructions carefully before using the appliance for the first time.

DO allow the oven to heat before using for the first time, in order to expel any smells before the introduction of food.

DO clean the appliance regularly.

DO remove spills as soon as they occur.

DO always use oven gloves when removing food shelves and trays from the oven.

DO check that controls are in the off position.

DON'T allow children near the cooker when in use. Turn pan handles away from the front so that they cannot be caught accidentally.

DON'T allow fats or oils to build up in the oven tray or base.

DON'T use abrasive cleaners or powders that will scratch the surfaces of the appliance.

DON'T under any circumstances use the oven as a space heater.

DON'T put heavy objects onto open grill and oven doors.

Leaks

If a smell of gas becomes apparent, the supply should be turned off at the cylinder IMMEDIATELY. Extinguish naked lights including cigarettes and pipes. Do not operate electrical switches. Open all doors and windows to disperse any gas escape. Butane/ Propane gas is heavier than air; any escaping gas will therefore collect at low level. The strong unpleasant smell of gas will enable the general area of the leak to be detected. Check that the gas is not escaping from an unlighted appliance. Never check for leaks with a naked flame, leak investigation should be carried out using a leak detector spray.

SMEV MINI GRILL

USE THE APPLIANCE ONLY IN A WELL VENTILATED SPACE.
The ventilation openings must remain open when the appliances are operating.

IGNITION OF THE APPLIANCE
1. MANUAL IGNITION: OVEN - GRILL

a) Push in control knob, slightly turn to ignition position (fig l) light burner with match or lighter keeping knob pushed in the knob for 5 - 10 sec.

b) Release knob and turn it lo required position.

2 AUTOMATIC IGNITION: OVEN - GRILL

a) For igniting oven or grill, open oven door completely

b) Push In control knob, slightly turn to ignition position keeping it pushed in for 5 - 10sec.

c) Release knob and turn it to designed position.

N.B. Oven and grill burners will not light, if door is not completely open.

POS	1	2	3	4	5	6
TEMP	130	160	180	200	220	240

3) IGNITION OF APPLIANCES WiTH THERMOSTAT

Proceed according to paragraphs 1 and 2, with or without electronic ignition. The ignition position is obtained by turning control knob on a position between 1and 6 for the oven and grill position (see symbol ▼▼▼▼)

For ovens with thermostat the different positions of the knob correspond to the following temperatures in °C of the oven

IMPORTANT If ignition is unsuccessful, repeat operation from beginning; if necessary. have the appliance checked if a gas and/or electricity failure in the appliance. If appliance absolutely does not work, close gas inlet tap and contact retailer. Before using oven for the first lime, let it run at maximum temperature for the duration of 1/2 hour without foodstuffs inside:

"USE GLOVES WHEN HANDUNG HOT ELEMENTS!"

In the event of the burner flames being accidentally extinguished, turn off the burner control and do not attempt re-ignite the burner for at least 1 min.

OPERATION OF THE GRILL

a) Pull out heat protection plate "P" (fig. 5)

b) Light grill burner.

c) Keep oven door half-open (fig. 5).

USE OF THE ROTISSERIE

Insert dripping-pan with the rotisserie installed as indicated in (fig 5a). Push in the appropriate button (fig 4a) in order to set going the rotisserie motor.

Use of the Grill

a) Slide out heat protection plate "P" (fig.' 5)

b) Light grill burner

c) Keep oven door in half-open position (fig. 5)

Use with Oven:

a) Light oven burner

b) Position control knob on desired temperature

c) Close oven door.

SMEV HOTPLATE

USE THE APPLIANCE ONLY IN A WELL VENTILATED SPACE.

The ventilation openings must remain open when the appliances are operating.

POS	1	2	3	4	5	6
TEMP	130	160	180	200	220	240

IGNITION OF THE APPLIANCE

1) MANUAL IGNITION HOTPLATE

a) Push in control knob, slightly turn to ignition position (big flame).
Light burner with match or lighter keeping knob pushed In for 5 – 10 sec.

b) Release knob and turn it to the required position (big or small flame).

2) AUTOMATIC IGNITION: HOTPLATE

a) Push in control knob, slightly turn to ignition position (big flame).
Light the burner by pressing the ignition key and holding down the knob for 5- l0 seconds..

b) Release knob and turn it to required position.

IMPORTANT

If ignition is unsuccessful, repeat operation from beginning; if necessary have the appliance checked if a gas and/or electricity failure in the appliance. If appliance absolutely does not work, close gas inlet tap and contact retailer. Pans of a diameter ranging from l0 to 22 cm may be used.

USE GLOVES WHEN HANDLING HOT ELEMENTS

Never lay Pyrex lids or other items on the burners. Cooking facilities must not be used to heat the environment.

The slots indicated in fig. 5 must be kept open.

CLEANING INSTRUCTIONS

Do not use chemical or abrasive detergents.

THETFORD CASSETTE TOILET

Cassette C-200CS and C200S

The toilet section of the C-200 includes a rotatable bowl, removable seat and cover, a console with a flush handle/flush buttons, a built in flush-watertank and a waste level warning indicator. The valve blade handle is located underneath the bowl.

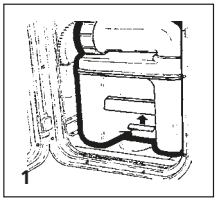
Preparing for Use

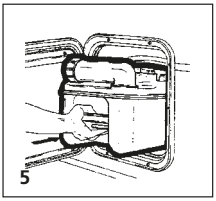
1. Open access door pull retaining clip upwards (fig. 1).
2. Remove holding tank by pulling straight out. When holding tank hits the stop, tilt front end downwards slightly and remove (fig. 2).
3. Position tank vertically and swivel pour out spout upwards (fig. 3).
4. Remove the cap of the pour out spout. Add required quantity of toilet fluid through pour-out spout then add approx. 2 litres of water through the spout to cover holding tank bottom. Replace cap and return pour out spout to its original stored position (fig. 4).

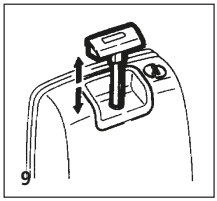
Note: Warmer weather or longer intervals between emptying the waste tank may require additional toilet fluid. Use only Thetford toilet fluid to achieve the best results.

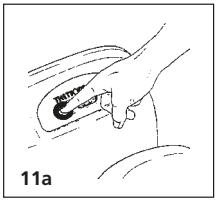
Caution: Never add toilet fluid directly into toilet bowl.

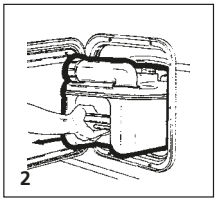
THETFORD CASSETTE TOILET

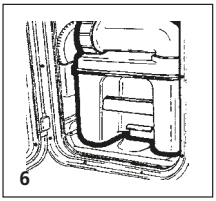


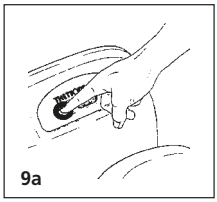


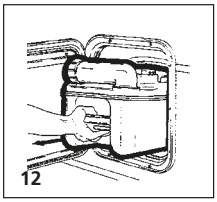


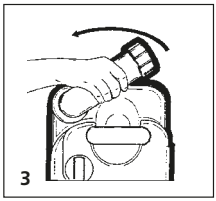


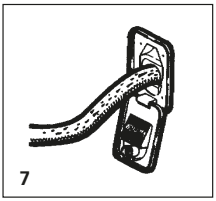


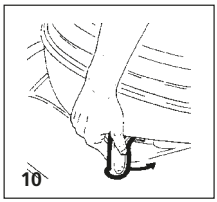


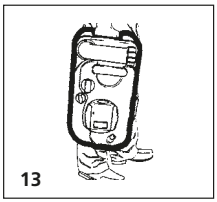


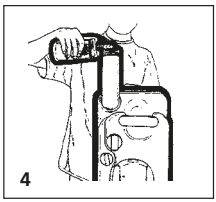


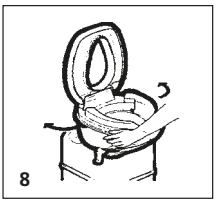


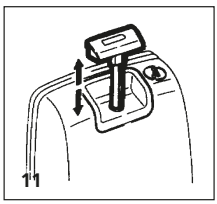


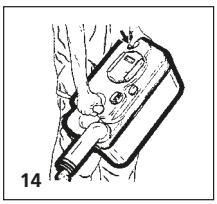












5. Slide the holding tank into position through access door (fig. 5).
6. Make sure the holding tank is secured by the retaining clip. (fig. 6).
7. Open the waterfill door and add 50 ml of Aqua Rinse. Aqua Rinse results in a better flush and improves the hygiene of the toilet. Then fill the watertank with fresh water using a jerrycan or a hose. Tank capacity is 7 litres (fig. 7).

Operation

8. Turn the bowl in the most comfortable position (fig. 8).
9. **C-200 CW only:** Before using the toilet it is recommended to flush some water into the bowl by lifting and pressing down the flush handle (fig. 9).

9a. **C-200 CWE & CS only:** Before using the toilet it is recommended to flush some water into the bowl by pressing and releasing the flush button (fig. 9a).

10. The toilet may be used with the blade open or closed. Pull valve handle towards you to open (fig. 10).

11. **C-200 CW only:** After use, open valve blade (if still closed) and flush, lift the flush handle and press it down (fig. 11). After flushing, close the blade by turning the blade handle.

11a. **C-200 CWE & CS only:** After use, open valve blade (if still closed) and flush, press the flush button (fig. 11a).

After flushing, close the blade by turning the blade handle.

The waste holding tank is located underneath the toilet and is removed for emptying from the outside of the vehicle through an access door. A rotating pour out spout, automatic holding tank vent, air release valve, valve blade, carrying handles and hand grip are incorporated in the waste holding tank. A sliding cover guarantees optimal hygiene.

Emptying the Holding Tank

The holding tank capacity is approx. 17 litres and the tank should be emptied when the waste-level indicator lights up. The waste-level indicator lights up when the holding tank contains more than 15 litres of waste.

CAUTION: Do not allow the holding tank to become overfilled. See trouble shooting section for emergency emptying procedure.

12. Open access door and remove the holding tank. The holding tank can only be removed when the valve blade is closed (fig. 12).
13. Carry the holding tank to a normal household type toilet or other authorised disposal point. Place the holding tank in vertical position and rotate pour out spout upwards (fig. 13).
14. Remove the spout cap. Grasp unit by upper carrying handle nearest to pour out spout. Place other hand on upper rear hand grip so that vent button can be depressed with the thumb while emptying. This ensures a smooth outflow of the tank contents. (fig. 14).

    Note: Only depress the vent button when pour out spout is pointed downwards.

    Rinse the holding tank with clean water. For preparing for use again, see steps 1 to 7.

Cleaning and maintenance

The lipseal and the seal of the automatic vent are made of rubber and therefore these parts need regular maintenance (depending on frequency of use, once or twice a month).

Lipseal: Remove the sliding cover. Open the valve-blade by turning the blade-opener knob anticlockwise. Clean the seal with water. Dry the seal and grease with silicone spray/oil or vegetable oil.

Seal of automatic vent: Turn the automatic vent 60° anticlockwise and remove gently. Clean the seal with water. Dry the seal and grease with silicone spray/oil or vegetable oil.

THETFORD CASSETTE TOILET

To clean the holding tank, empty the tank, and rinse with clean water. Use a mild soap to clean toilet bowl, seat and cover, as well as exterior of toilet unit and holding tank.

NOTE: Do not use strong household detergents or cleaners that contain chlorine, solvents or acid contents.

Wintering/storage

The Thetford Cassette C-200 CW/CWE/CS is easily winterised for storage.

Empty remaining fresh water into the bowl by activating the flush handle up and down (C-200 CW) or by pressing the flush button (C-200 CWE & CS).

Once pump has been cleared and water flow has stopped completely, release into waste tank. Remove waste tank and empty contents in normal way.

To evacuate any remaining water from the fresh water tank. place a container underneath the drainplug and remove drainplug.

When procedure has been completed replace drainplug and waste holding tank (fig. 15). Clean the seals and grease them after drying (see cleaning and maintenance).

Leave the blade of the holding tank open. Do not replace cap on the pour out spout, to ventilate the holding tank. (Also grease the seal of the pour out spout cap.)

Cold weather use

The toilet can be used in cold weather conditions provided that the toilet is in heated surroundings. If this is not the case, you can use a nontoxic antifreeze (propylene glycol) or an antifreeze such as those used in car radiators. Add the antifreeze to the water in the tank. Add the quantity specified in the instructions, paying due regard to the safety instructions.

High altitude and warm weather use

Pressure may build up in the holding tank if the tank is not inserted while driving at high altitudes or in warm weather conditions. The automatic holding tank vent will vent the tank when there is over- or under-pressure. High temperatures may require additional Thetford toilet fluid.

Thetford warranty

1. The Thetford Cassette is warranted for one year from the date of purchase, please fill in and return the warranty card.
2. The warranty covers replacement of defective or flawed parts and the inadequate performance of the toilet.
3. In case of a defect apply to an original dealer or Thetford Service Centre with proof of purchase.
4. Defects, which in our judgement occurred from misuse, negligence or accident, are not covered by the warranty. In addition, the warranty does not apply if the product is installed or handled improperly or if other than the prescribed toilet fluids have been used or if the product has been altered in any way or has been repaired by unqualified persons, or if the serial number and/or date has been altered or removed.
5. Should the original buyer wish to return to us parts believed to be defective, the parts should be sent prepaid. If we find the parts defective and covered by warranty, they will be repaired and returned. If warranty does not apply or has expired, a nominal charge will be made. Any transport costs are for the account of the owner.
6. Before returning product or parts they should be properly cleaned, in order to carry out inspection and repair.
7. No other warranty is given and no personal representative is authorised to make any warranty other than that is contained herein.

THETFORD C250CS AND C250S CASSETTE TOILET

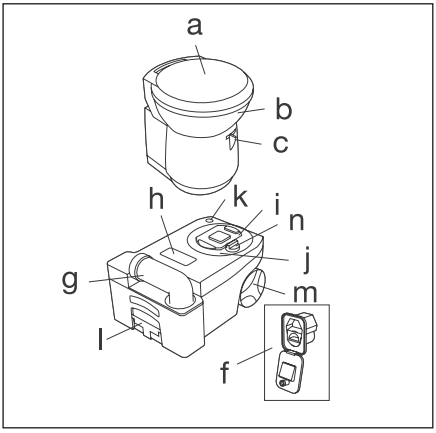
The Thetford Cassette Toilet is a high quality product. The toilet forms an integral part of your caravan or motorhome bathroom, thanks to its functional design which combines modern styling and ease of use. The C-250 Cassette Toilet is manufactured from high quality synthetic materials which makes it a durable, user and maintenance friendly toilet.

The toilet is made up of two parts: a permanently fixed part and a Waste Holding Tank that is accessible from the outside. The removable Waste Holding Tank is located under the toilet bowl and can be removed via a door on the outside of the caravan or motorhome. The Thetford Cassette Toilet is the solution to the sanitary problem in your caravan or motorhome!

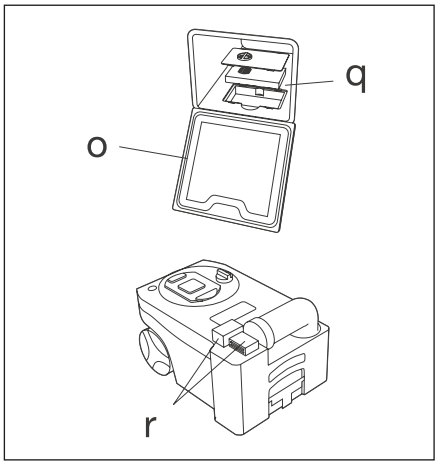
These instructions cover the C-250CWE this has its own flush-water tank.

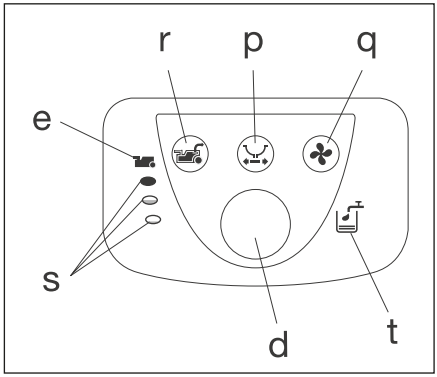
PARTS

a) Removable Seat and Lid
b) Swivelling Toilet Bowl
c) Blade Handle
d) Flush Button
e) Waste Holding Tank Level Indicator
f) Water Filling Door (only if toilet has own flush-water tank)



g) Rotating Emptying Spout
h) Automatic Pressure Release Vent
i) Sliding Cover
j) Removable Mechanism
k) Vent Plunger
l) Pull-Out Handle
m) Wheels
n) Blade Opener
o) Access Door to Waste Holding Tank





Optional Features

p) Electric Blade
q) Automatic Ventilator

r) Waste Pump-Out System

s) Waste Holding Tank Multi-Level Indicator

t) Flush-Water Tank Level Indicator (only if toilet has its own flush-water tank)

Control panel

Preparing for use (standard)

1. Open the access door on the outside of your caravan or motorhome
2. Remove the Waste Holding Tank by pulling the safety catch (which holds the tank in place) upwards.
3. Pull the Waste Holding Tank outward to the stop. Tip it slightly and take the tank fully out.
4. Place the tank upright and turn the rotating emptying spout upwards. The emptying spout ensures that the tank can be easily and hygienically emptied.
5. Remove the cap, with the measuring cup inside, from the emptying spout and pour the correct dosage of Thetford toilet fluid (see product label) into the holding tank. This avoids unpleasant smells and keeps the inside of the tank clean. Next add approximately 2 litres of water - enough to ensure that the bottom of the Waste Holding Tank is covered. For more information on Thetford toilet fluids, see last page of the Thetford user manual. Screw the cap back onto the emptying spout and turn back to its original position.

Note. The Emptying Spout Measuring Cap is supplied in the same packaging as the Thetford user manual.

Warning! Never add toilet fluid directly via the blade or the toilet bowl as this could damage the lip seal of the Waste Holding Tank. Always pour the fluids via the emptying spout.

6. Slide the Waste Holding Tank back into its original position via the access door. Make sure that it is secured with the safety catch. Close the access door and lock it. Your Thetford toilet is now ready to use.

Warning! Never use force if you cannot get the tank back into place easily. This may cause serious damage. If blockage occurs, always check if the blade handle is in the correct (closed) position.

7. For toilets with own Flush-Water Tank: Open the water filling door and fill the flush-water tank with the correct dosage of Aqua Rinse. This Thetford toilet fluid keeps the flush water fresh and improves the flushing. Next, fill up the flush-water tank with clean water (approximately 8 litres) using a jerry can or hose. Your toilet is now ready to use.

Preparing for use with optional features

8. Automatic Ventilator: Open the access door on the outside of your caravan and remove the Waste Holding Tank (as described above).
9. Remove the filter housing cover and if no filter is present, place a new filter into the filter housing. Peel off the sticker lids on the filter. Place back the cover of the filterhousing.

Using the toilet (standard)

10. Turn the bowl to the desired position with the lid closed and using both hands.
11. To activate the control panel, press the flush-button once. The control panel display will stay activated for approximately 5 minutes. Run some water into the bowl by pressing the flush button again briefly.
12. The toilet may be used with the blade open or closed. To open the blade, slide the blade handle under the toilet bowl sideways. After use, open the blade (if still closed) and flush the toilet by pressing the flush button for several seconds (if necessary re-activate the control panel). Close the blade after use.

Important Warning Notice! If your toilet has its own flush-water tank, please make sure that you do not travel with a flush-water tank that is too full. Do not travel with water in the toilet bowl. Failure to adhere to this notice may result in water damage to your caravan or motor home.

Using the toilet with optional features

13. Electric Blade: Push the electric blade button on the control display to electrically open or close the blade. In the case of failure, you can manually open or close the blade by sliding the small handle under the toilet bowl sideways.
14. Automatic Ventilator: The ventilator automatically starts when the control panel is activated (by pressing the flush button) and will automatically shut off after approximately 5 minutes. The Automatic Ventilator Indicator will flash until automatic shut-off occurs. If you want to stop the ventilator, press the Automatic Ventilator button. If you want to re-start the ventilator, press the button again (the LED will start flashing again).
15. Flush Water Tank Level Indicator (only for toilets with own flush-water tank): When the Flush Water Tank Level Indicator lights up, refill the flush-water tank, as only about 1.5 litres of water is left in the tank, which is sufficient for approximately 2 flushes.

Emptying

The Waste Holding Tank has a capacity of 18 litres and requires emptying when the red light (LED) on the toilet control display lights up, when the Waste Holding Tank only has capacity for approximately 2 more litres, which is no more than two to three further uses. Make sure that the blade is closed. Open the access door located outside the vehicle, pull the safety catch upwards and remove the Waste Holding Tank.

16. Place the Waste Holding Tank in an upright position (Pull-Out Handle at the top, Wheels at the bottom). Slide the handle sideways - to the front of the tank - until it snaps out of its locked position.
17. Pull the handle up and wheel the Waste Holding Tank to an authorised waste disposal point.
18. Push the handle back into its locked position. Turn the emptying spout upwards and remove the cap from the spout. Hold the Waste Holding Tank in such a way that during emptying you can operate the vent plunger with your thumb. To empty the tank without splashing, depress the vent plunger while emptying the tank. After emptying, rinse the tank and blade thoroughly with water.

Warning! Do not seriously shake the tank or use high pressure water cleaners. This may cause damage to the tank's interior.

Note. The vent plunger should only be depressed once the emptying spout is pointing downwards. Prepare the toilet for re-use if required. Slide the Waste Holding Tank into the toilet and close the access door.

Emptying with optional features

19. Waste Holding Tank Multi-Level Indicator: The lower lamp indicates that the Waste Holding Tank is almost empty; the middle lamp indicates that it is more than half full; when the upper lamp lights up, the tank needs emptying as it can only take 2 - 3 further uses.

Note. The Waste Holding Tank Level Indicator will flash when the holding tank is not present. In this case the toilet will not flush.

20. Waste Pump-Out System: When activating the control panel this feature automatically lights up. When the Waste Holding Tank Level Indicator illuminates, press the Waste Pump-Out button to pump out the waste from the holding tank Into the vehicle's waste tank. The button will flash while the waste is being pumped and will stop automatically (after approximately 5 minutes) when all waste has been transferred.

    If the vehicle's waste tank is full, the Waste Pump-Out light will flash rapidly and no pump-out will be possible until the central tank is emptied. (Check the level of the vehicle's waste tank on the vehicle's central console). After the Waste Holding Tank has been emptied, there will be approximately 1.5 litres of waste left in the tank. This is normal. Add 2 litres of water and a correct dosage of Thetford toilet fluids to the Waste Holding Tank.

Important! It is vital that the correct amount of toilet fluid is added to ensure the proper breakdown of the waste in the holding tank. Only use the system when the tank is full. Using the system too often on an empty tank can cause damage to the pump, which could cause the system to fail.

Cleaning and maintenance

The toilet should be cleaned and maintained regularly, depending on the amount of use. To clean Thetford toilets, we advise using water and Thetford Bathroom Cleaner.

Note. Never use bleach, vinegar or other powerful household cleaners that contain these substances. These may cause permanent damage to the seals and other toilet components.

Toilet bowl

- Squirt Thetford Bathroom Cleaner into the toilet bowl.
- Flush the toilet bowl with water and wipe down the rest of the toilet with a damp cloth.
- Clean seat and lid The seat and lid can easily be removed: Lift the seat and lid assembly and pull the round pins (inside the assembly) outwards from the pin holes. After cleaning, replace the seat and lid by positioning the round pins in front of the pin holes and push the lid and seat downwards.
- To keep your flush water fresh and to prevent deposits from forming in your toilet bowl, add a correct dosage of Aqua Rinse in your flush water tank, if present, on your toilet.

Tip! For a really shining toilet, dry with a soft dry cloth after cleaning.

Waste holding tank

To keep your Waste Holding Tank fresh and clean, Thetford has developed a number of different toilet fluids. Thetford toilet fluids suppress smells, reduce formation of gas, promote breakdown of toilet waste and increase the life span of a mobile toilet. See page 46 of the Thetford user manual for more information (=matrix). We advise a thorough cleaning of the Waste Holding Tank once each season. Next to using Thetford's Cassette Tank Cleaner, the powerful cleaning agent for the periodical cleaning of the Waste Holding Tank of your toilet, we suggest the following:

- Remove the removable mechanism from the Waste Holding Tank by turning it anti-clockwise and rinse it under a tap.
- Remove the cover plate from the Automatic Pressure Release Vent by prising it up using a small screwdriver. Use one hand to push the Automatic Pressure Release Vent open while holding the float of the Automatic Pressure Release Vent on the inside of the tank with the other hand. Push the float upwards, turn it 180 degrees and remove it from below. Remove the rubber seal underneath the float. Rinse the float and rubber seal under a tap. Replace the Pressure Release Vent using the same method in reverse.

The rubber seals in the toilet (the lip seal, the mechanism seal, the automatic pressure release vent seal and the cap seal) should be regularly cleaned with water and treated with Thetford High Grade Seal Lubricant. This will ensure that the seals remain flexible and in good condition. If the toilet is not to be used for any length of time, it is important to treat the seals with Thetford High Grade Seal Lubricant after cleaning.

Note. Never use Vaseline or any vegetable oil except olive oil. These may cause leakage or malfunction. The lip seal is a part of the toilet that is subject to wear. Depending upon the extent and manner of use, the seals will become less effective and will need replacing periodically.

Cleaning and maintenance for optional Features

- Automatic Ventilation: The filter of the Automatic Ventilation needs to be renewed periodically. After approximately 4 full weeks of use, the filter loses its absorption power.
- Pump-Out Waste System: To ensure optimal functionality of the Pump-Out Waste System, periodical maintenance of the tube and pump is recommended. After emptying the Waste Holding Tank completely, fill it with clean water and empty it again. This will clean the pump and the hose. Do this once every 3 weeks when on holiday. This should ensure proper operation of the system.

Winter operation

You can use your Thetford Cassette Toilet as normal in cold weather as long as the toilet is situated in a heated location. If there is a risk of freezing we advise that the toilet is drained by following the instructions under 'Storage'. For environmental reasons the use of antifreeze, such as that used in car radiators, is not recommended.

Storage

It is important that you follow the instructions below if you do not expect to use your Thetford toilet for a long (winter) period.

- Activate the Control Panel by pressing the flush button. Open the blade and press the flush button until water stops flowing into the bowl. Close the blade. Open the access door on the outside of your caravan or camper and empty the Waste Holding Tank at an authorised waste dump. Follow the instructions for cleaning and maintenance. To allow the Waste Holding Tank to dry, do not place the cap back on the emptying spout of the tank.

21. If the toilet has its own flush-water tank, place a sufficiently large bowl under the drain tube to catch the remaining water from the flush-water tank and remove the drain plug. When no more water exits, put the drain plug on the drain tube, put it back in its original position and close the access door. If the toilet is connected to the vehicle's water tank, please follow your vehicle's instructions for draining the central water system. If your toilet is optionally featured with a Waste Pump-Out System, take out the Waste Holding Tank and completely clean it (see Cleaning and Maintenance). After cleaning, fill it with water, put it back and empty it via the waste pump-out system. Repeat this twice.

Thetford warranty refer to the Thetford user handbook.

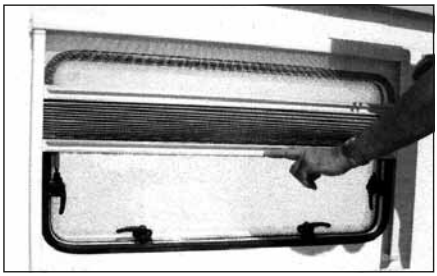
WINDOWS

To open, turn knobs anti-clockwise and open catches. Swivel the window pane open to the desired position and close knobs clockwise to lock in the open position.

To close, reverse the operation.

All opening windows have two catch positions. The first position is for ventilation the second seals the window from ventilation and rain.

OPERATING INSTRUCTIONS FOR BLINDS



Closing: Grab the end bar in the middle and push the blind and flynet together or singly (blind - lower end bar) downwards until the required position is reached.

Opening: Push the end bar of the flynet and / or of the blind upwards.

Care instructions: Clean the blind only with a damp sponge. Clean on a regular basis to avoid dirt particle build up as this can damage the blind material. Use only water or with mild suds or a vacuum cleaner.

In order to avoid material fatigue, do not leave the flynet closed for a long time.

ROOF LIGHTS

When opening the roof lights, care must be taken to release the locking mechanism as the unit is raised.

Roof lights must be fully closed when driving. Roof lights provide essential fixed levels of ventilation.

Mini Heki Rooflight
To open depress button and push bar upwards. The rooflight has two open ventilation positions and a fully open position.

The blind and flynet operate independently of each other and are engaged by connecting to each other and sliding.

Heki care instructions: Clean the blind only with a damp sponge. Clean on a regular basis to avoid dust/ dirt particle build up as this can damage the blind material. Use only water or with mild suds or a vacuum cleaner.

In order to avoid material fatigue, do not leave the flynet closed for a long time.

Midi Heki Roof-light

With operating bar: To open, depress button and push bar to required position. The rooflight has two open ventilation positions and a fully open position.

To close, reverse the operation and then check if locked into position.

With crank: To open, rotate the crank until a resistance is noticeable during the operation.

To close, reverse the operation and then check if locked into position.

SEAT SWIVEL (DRIVER/PASSENGER)

To turn the swivel, slide the BLACK lever rearwards and adjust to the required angle. Before driving off ensure the locking mechanism is fully secure.

BLIND AND FLYSCREEN

The blind and flyscreen operate Independently of each other and are engaged by connecting to each other and sliding.

Safety precautions:

1. Repairs should be carried out only by trained personnel.
2. Inform an approved dealer in case of defects and malfunctions.
3. Before starting off, check the rooflight for damage in the acrylic dome (tension cracks) and the winding mechanism which could arise owing to, for example, branches and other natural causes.
4. Do not step in the acrylic dome.
5. Close the roof light before starting off (check whether it is locked).
6. Do not leave the vehicle with the rooflight open (danger of burglary or from rain).
7. Do not open in strong wind or rain.
8. Before opening, remove snow, ice, dirt, etc. from the acrylic dome.
9. Malfunctions are to be repaired by an approved dealer at once.
10. Do not use caustic detergents (danger of tension cracks in the acrylic dome).
11. Do not operate whilst the vehicle is moving.

Care instructions:

- Please clean the acrylic panes with the Seitz Acrylic Cleaner.
- Stains and light scratches on the acrylic pane can be removed by using the Seitz Acrylic Polish and the Seitz special polishing cloth.
- Use talcum powder (4 times yearly) to care for the rubber seals
- Clean the blinds only with water and mild soap suds
- The guarantee becomes null and void if these instructions are not followed.

FURNITURE DOORS

During normal travelling, vehicle vibration and flexing may cause some of the furniture doors to become out of alignment. For your convenience many hinges are adjustable.

TABLE STORAGE

Tables stored in the table storage compartment must be securely clipped into place whilst in transit.

To avoid damage care must be taken when removing tables from their stored position.

CARE OF LAMINATE TOPS, TABLES, FURNITURE AND DOORS

DO NOT use abrasives, chemically treated cloths or aggressive detergents as these may cause damage.

DO NOT place hot objects on laminated surfaces i.e. tops, tables. Any temperatures 70°C and over will cause permanent damage.

Clean worktop surfaces, furniture and door fascias with a soft, slightly damp cloth, dry off with a soft cloth.

SHOWER

When using the shower, always ensure that the shower door is fully closed thus avoiding water spray on unprotected areas.

OMNISTEP SLIDE-OUT STEP

Operation

Press the "step out" key to bring the step out until it reaches the end of its run or comes up against an obstacle. The step does not come out if the engine is running. Press the "step in" key to take the step back until it reaches the end of its run or comes up against an obstacle. The step goes back in automatically when the engine is running. In this situation the buzzer sounds until the step is fully closed.

Maintenance

Dirt and frost can prevent the step from operating properly. In this case the rails and moving parts should be cleaned or defrosted.

In case of electric break down

If the step does not retract by the motor

- Remove the front plate of the step. (Fig. 1)
- Remove the connection between the footboard and the arms (with screwdriver and wrench S10).
- Slide out the footboard.
- Reinstall the front plate.

Current drawn

- Working current: 5 A
- Blocking current, when fully extended or retracted: 14 A

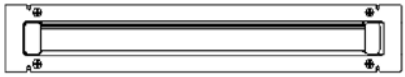


Fig. 1 Front plate

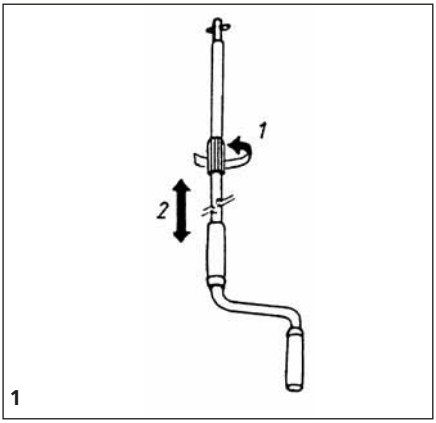
OMNISTOR AWNING

General remarks:

- An awning is a sun and not a rain protection. The awning should be in closed position in case of storm, snowfall or heavy rainfall.
- The awning can not be used without putting out the support arms.
- The fabric may not be rolled up wet for a longer period.
- Clean the awning only by using water or OMNI CLEANER.

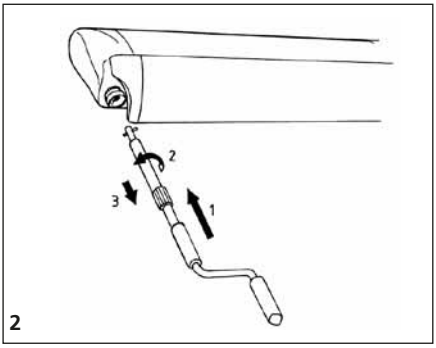
Users instructions:

1. Adjust the crank to the required height.



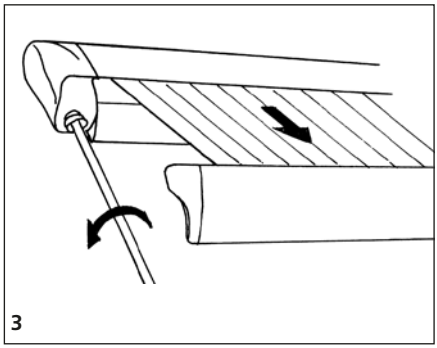
1

2. Introduce the crank arm into the bayonet joint.

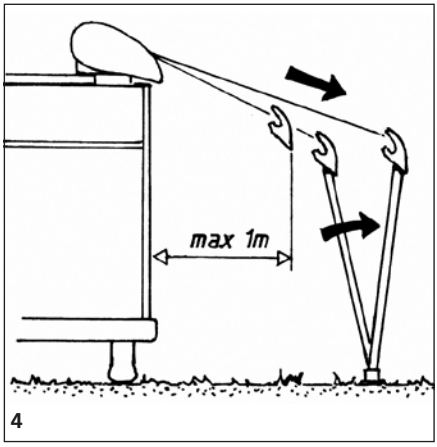


2

3. Unroll the awning while keeping the crank down. The awning will only open after a couple of turnings.

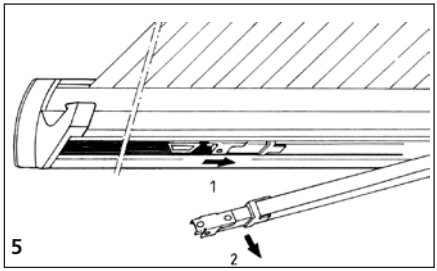

3

4. Unroll till 1 m max. Then put out the support arms before further unrolling



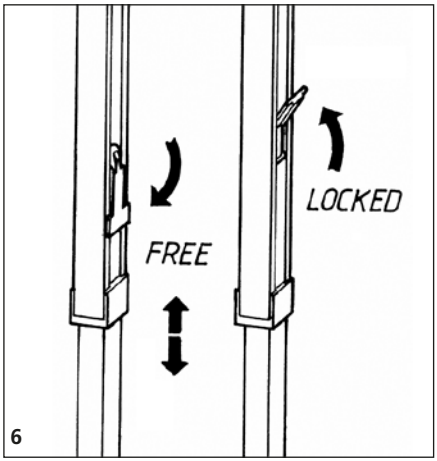
4

5. Slide the support arms out of the front profile.



5

6. Adjust them to the required height. The fabric can be tightened by rolling up a little.



6

Never put out the support arms that high, that the fabric jams between the arms and the box.

7. Fasten the support arms.

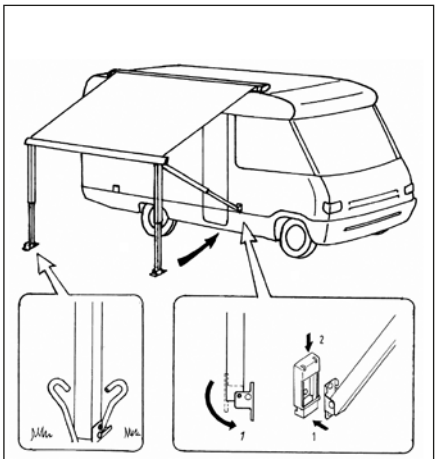
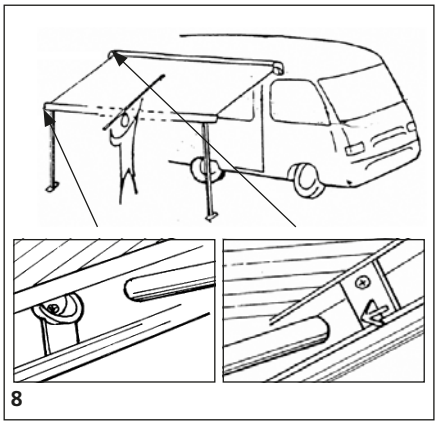
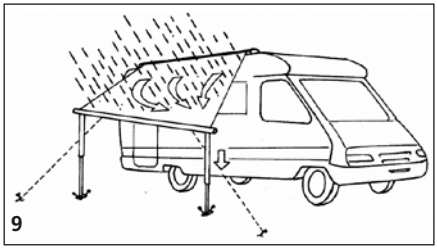


Fig. 7

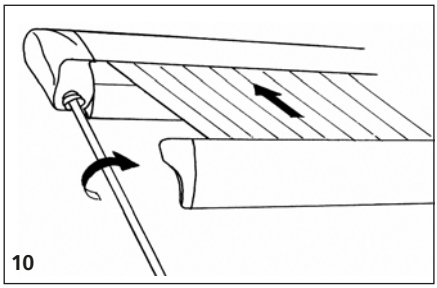
8. Install the tension rafter (for 3.75 m awning).


8

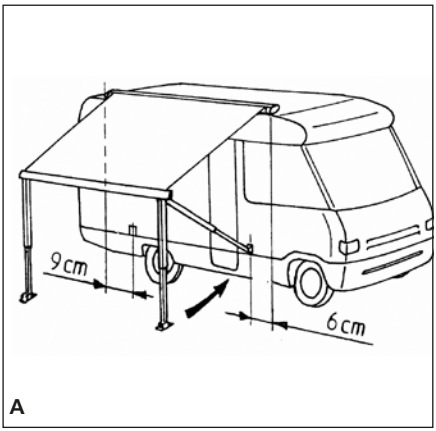
9. When raining, lower one side of the awning in such a way that the water can run down the fabric. Prevent the fabric from flying up by a sudden wind blow by using the hold down kit (optional).


9

10. The front profile locks automatically when rolling up

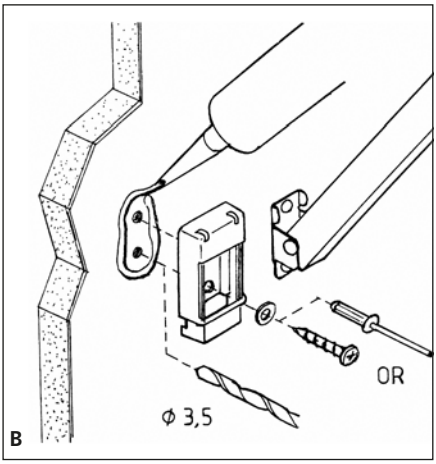

10

A. Determine the position of the bottom mounting bracket on the vehicle wall.

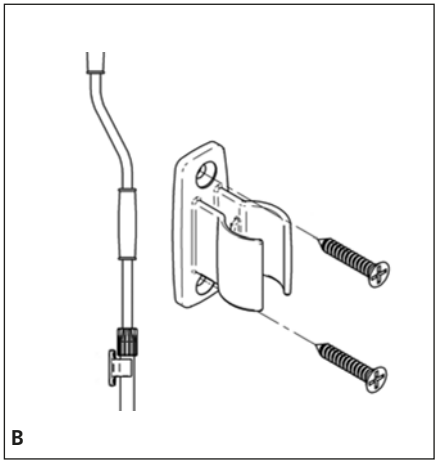


A

B. Install the bracket with the supplied screws or rivets



B



B

STATUS 315 OMNI-DIRECTIONAL TELEVISION & FM RADIO ANTENNA

USAGE GUIDELINES

1. Weak TV Signal

This produces a 'Snowy' picture which can be caused if you are too far away from the TV transmitter, such as in a remote area, positioned in a valley, or if there is a building, hill or other obstruction blocking the signal.

Each TV transmitter has a defined service area where reception will be good. Beyond that boundary is a 'fringe' area where the TV signal will be weaker and the reception quality poorer.

Remedy
Firstly determine whether you are in a poor reception area. Secondly check the points covered in Fault Finding.

2. TV Signal too strong

This can produce severe picture distortion like a zig-zag style pattern. This can be caused when you are too close to a transmitter or picking up strong radio transmissions from another source such as CB radio. Also electrical interference can cause similar effects (see Interference 4).

Remedy
Turn the gain control switch on the Power Pack to 'La'. Secondly check the points covered in Fault Finding.

3. Ghosting

This is when the TV signal is reflected from something in your locality. The 'something' may be a local building or landmark. Your antenna is receiving both the direct signal and the reflected signal from the same transmitter.

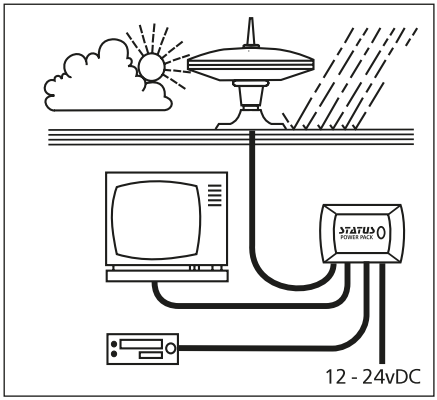
Remedy
Try to move to a better position away from the obstruction. Unfortunately it may not always be possible to isolate Omni-Directional antennas from the cause of the problem.

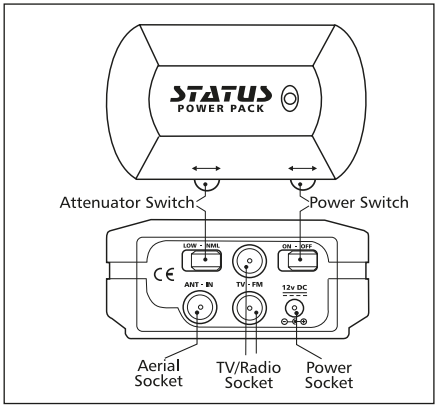
4. Electrical Interference

This type of interference is commonly caused by electrical appliances, such as fans, electric shavers, fluorescent lights.

Other forms of interference can produce a zig-zag pattern similar to that described in Interference 2 which may be caused by inverters, charging units etc.

Remedy
Check the points covered in Fault Finding. In some instances, this type of interference can be overcome by switching off the relevant appliances.





Fault finding

The following are some of the key areas we suggest you check which generally solve the most common problems encountered with the operation of the Status antenna.

Coaxial Plugs
It is critical that all coaxial plugs in the system are fitted correctly. Using the diagram and procedure described, please check each individual plug, ensuring it is wired correctly. Secondly please ensure only quality plugs have been used.

Coaxial Cable
Sharp bends, kinks and hot surfaces can easily damage coaxial cable and should be avoided. An inspection of the cable routing is recommended to ensure all is correct Coaxial cable, if placed in close proximity to electrical cables, transformers or other pieces of electrical equipment, may pick up electrical interference causing picture quality to deteriorate, especially in poor reception areas. Excess cable should be removed and NOT coiled as this may cause picture distortion.

Pinnacle
The pinnacle is essential for the optimum performance of the antenna and therefore should be in place when the antenna is in use.

Gain Switch
Situated below the LED light on the Power Pack, this switch should be set to the normal 'NMl' (switch UP) position for general use. The Low setting may be used when situated close to TV transmitters where strong signals may be affecting the quality of the picture. (see Interference2 below)

Red LED light
Should the red LED on the Power Pack not light, first try unplugging the cable connected to the Antenna Dome from the 'ANT-IN' socket If the LED then illuminates the fault lies with either the coaxial plug or the coaxial cable, please refer to these areas described earlier.

If the LED is still not lit, please contact our office for further assistance.

Short Hook Up Test
This test isolates parts of your system leaving only the TV and the Status antenna linked directly together. Firstly, unplug the coaxial plugs from the 'TV-FM' sockets of the Power Pack which will be connected to a TV outlet socket. With your TV fly lead, connect your TV direct to the Power Pack, plugging into one of the 'TV-FM' sockets.

Ensure the antenna dome is plugged directly into the 'ANT-IN' socket of the Power Pack and switch on. Tune in your TV for the strongest signal. If the picture quality is improved the fault lies with the wiring of the system between the Power Pack and the TV outlet socket

Antenna Dome Coaxial Cable
Check the routing of the coaxial cable from the Antenna Dome to the Power Pack. Check to ensure there are no kinks or trapped cable or if there are loops of surplus cable which could be affecting performance.

When the Antenna Dome was originally fitted and lowered onto the Mounting Foot, cable may have been trapped or kinked under the Mounting Foot To check, remove the Antenna Dome as described to see if this has occurred.

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WINTERISATION/STORAGE

This is probably an opportune moment to arrange for the Motorhome to have its annual service at your appointed dealer.

The following applies whenever your Motorhome is stored particularly during the winter months.

Do not park near trees or larch type fences, due to possible wind damage.

Keep any grass around the floor of the Motorhome short, to maintain air flow and stop any possible damp getting into the Motorhome.

It is advised that the Motorhome is ventilated regularly throughout the winterisation /storage period, opening windows, doors and rooflights when possible.

GENERAL

For care of the vehicle battery please refer to the Fiat handbook in section 'Trouble Shooting'.

All moving parts should be checked for free operation.

Clean all cooking appliances and refrigerator. Lubrication should be carried out at the points illustrated in the general notes on chassis maintenance.

Charge up the on-board battery every 2 months.

Leave the refrigerator door open. Leave furniture doors and lockers open to allow air to circulate fully.

Modifications - DIY work
Owners need to be aware that carrying out DIY modifications to your motorhome may in certain instances, invalidate the warranty cover and could also affect the safety and structure of the vehicle.

WD40 IS NOT RECOMMENDED FOR EXTERNAL OR INTERNAL USE

WD40 attacks paintwork and sealants. If a lubricant is required for Interior hinges, Sliding door tracks, Bottle box hinges, Exterior door hinges, Plastic tracking etc. We recommend "Ambersil 40+" this is readily available from most DIY/Automotive retailers including Halford's

Before carrying out any DIY work within the warranty period, please check with your nearest dealer or contact Supercare customer services on 01482 875740 for advice.

Paintwork
Proper care involves washing the motorhome regularly with a mild detergent rinsing with cold water and leathering off. A good quality, similar coloured car wax may also be applied which will make washing even easier.

Please note: Do not use abrasive-eleaning agents, on the exterior of your motorhome. Stubborn stains may be removed using a soft cloth and mild detergent.

WARNING: Overzealous use of detergents may loosen the decals and/or badges.

Acrylic Windows
The windows in your motorhome are fully double glazed and, with care, will remain sparkling and scratch free.

Keeping Your Acrylic Windows Sparkling
For small scratches, it is possible to use a liquid metal polish or a proprietary acrylic polish of a suitable grade dependant on the severity of the scratches.

Cleaning Windows
Wash down as you would your car. Do not use a sponge on dirty windows. When all the dirt has been removed, dry with a leather or similar type of cloth. The catches and stays do not require lubricating.

Removing Tar
Use a proprietary tar remover on your double glazed windows; (available from most leading car accessory or do-it-yourself shops). Do not use petrol or other chemicals.

Note: The use of a pressure washer on the exterior of your motorhome is not recommended as this may damage the transfers.

CONDENSATION

What is condensation?
Condensation is the change of water from its gaseous form (water vapour) into liquid water. Condensation generally occurs in the atmosphere when warm air rises, cools and looses its capacity to hold water vapour.

As a result, excess water vapour condenses to form droplets.

Why condensation occurs
Condensation occurs when warm moist air meets a cold surface. The risk of condensation therefore depends upon how moist the air is and how cold the surfaces of the vehicle are. Both of these depend to some extent on how the vehicle is used. In a Motorhome with a cold outside wall, if the temperature of the wall falls below the dew point temperature, it is quite normal for condensation to occur predominantly on the external walls.

When condensation occurs
Condensation occurs usually in winter, because the Caravan or Motorhome is cold and because skylights, windows and doors are opened less and therefore the moist air cannot escape.

How condensation occurs
Condensation occurs often for short periods in bathroom and kitchen areas because of the steamy atmosphere, and quite frequently for long periods in unheated areas; it also occurs in cupboards or corners of rooms where ventilation and movement of air is restricted.

What is important
Two things are particularly important:

- To provide ventilation so that moist air can escape.
- To use the heating reasonably.

How can you prevent condensation
Provide ventilation so that moist air can escape.

a) Good ventilation of kitchens when washing, cooking or drying damp clothes is essential. Use the electric element of the space heater will help, when washing, cooking, or drying damp clothes, and particularly when the windows show signs of misting up.

b) If there is no mains electric supply and therefore you cannot use the electrical element of the space heater, open the skylights or windows slightly, but keep the door closed as much as possible.

c) After showering, keep the bathroom window or skylights open, and shut the bathroom door long enough to dry off the room.

d) In all other areas provide some ventilation. Fixed ventilation is provided in accordance with BS EN 721: 1998 this is through skylights and ‘heki roof lights’ in the roofs and from ventilators through the floor under cookers, motorhome step well, doors and in bed boxes it is important not to block these.

Too much ventilation in cold weather is uncomfortable and wastes heat. All that is needed is a very slightly opened window or skylights. Opening a skylight or ‘Heki; rooflights partially or windows

opened to about 1cm opening will usually be sufficient.

Provide reasonable heating

a) Do not use portable paraffin or flueless gas heaters at all.

b) If drying damp clothes or towels, open a window enough to ventilate the area and turn on the electric element of the space heater but do not hang items over the heater.

c) Try to make sure that all areas are at least partially heated. Condensation most often occurs in unheated areas.

d) To prevent condensation, the heat has to keep room surfaces reasonably warm. It can take a long time for a cold Motorhome to warm up, so it is better to have a small amount of heat for a long period than a lot of heat for a short time.

e) Motorhomes are left unoccupied and unheated and can get very cold. Whenever possible, it is best to put the heating on at a low level before setting off on a journey in the winter to pre heat the vehicle.

f) In houses, the rooms above a heated room benefit to some extent from heat rising through the floor. In Motorhomes this does not happen.

Motorhomes use only carefully selected insulation materials but unlike most rooms at home they have all outside walls, so they lose heat through all walls as well as the roof and floor.

Even in a well insulated motorhome with reasonable ventilation it is likely during cold weather if the temperature is less than 10°C that condensation will occur. Ideally the temperature should be kept about 20°C although this is not always possible.

Mould growth
Any sign of mould growth is an indication of the presence of moisture and if caused by condensation gives warning that heating or ventilation, may require improving.

New vehicles
New Motorhomes often take a long time before they are fully 'dried out' because of moisture in the materials used in the manufacture. While this is happening they need extra heat and ventilation. At least during the first winter trips and may require more heat than they will need in subsequent winters journeys. Allowance should be made for this.

WARNING: Do not wash your Motorhome with a high pressure washer as these can permanently damage the seals of your vehicle.

Changing Exterior Bulbs
ALWAYS REPLACE LIKE FOR LIKE

For individual replacement bulb specification, refer to your Specification and base vehicle Handbook.

Generally road lighting bulbs can be easily replaced by unscrewing and removing the lens from the exterior of the caravan or motorhome.

INTERIOR

Follow these guidelines to ensure your investment is receiving the very best attention.

Side Walls, Roof Lining
A simple wipe over with a damp cloth and a very mild detergent is all that is needed.

Soft Furnishings
Should be vacuumed occasionally to remove grit and sand and help to keep its smart appearance and ensure long life. The upholstery can be cleaned with a mild, reputable upholstery cleaner. It is recommended that the curtains and pelmets are specialist cleaned only. The foam used in cushions are manufactured to meet fire regulations. It requires time to return to its normal position after prolonged use.

Clean and dust the upholstery and if possible remove before placing the Motorhome into winter storage. Alternatively, stand the

cushions on their edges to allow circulation of air. This will reduce the possibility of dampness from condensation. Keep curtains or blinds closed, to minimise fading of furniture.

If the blinds and/or flyscreens remain down for a prolonged period of time, re-tensioning of the springs will be necessary before re-use.

Work Surfaces
You should not stand very hot items on any of the work surfaces.

Cupboard Catches
It is advisable to lightly oil all cupboard catches, sliding bolts and hinges from time to time.

Bathroom, Shower Room and Kitchen Equipment
All the Thermoplastic parts in these areas have easy clean surfaces. To ensure long life and prevent damage you must not use any cleaning materials at all and ensure water temperatures do not exceed 70°C, (putting cold water in first is suggested). After every use, it is essential that you rinse with clean water only and wipe with a soft damp cloth.

Failure to follow these simple instructions may result in premature failure or cracking which will not be covered by any guarantees (including extended warranties).

Furniture
A simple wipe over with a damp cloth should be all that is required. Polishing with a proprietary brand of wax polish enhances and maintains furniture in showroom condition.

It must be remembered that because the frames of some doors are made of ash, which is a natural product, they can be affected by temperature and humidity and may bow under certain conditions. As conditions change they should revert to their original positions.

Kitchen Drainer and Cutting Board
You should not stand hot items on to these items. To wash use only warm soapy water, do not use chemicals and bleach.

Changing Interior Bulbs
Remove the lens or lamp shade to access the bulb.

ALWAYS REPLACE LIKE FOR LIKE

For individual replacement bulb specification, refer to your Specification Handbook.

Wheels and Tyres
Do not store in one position with partially deflated tyres. The tyre walls will suffer and do present a real danger of blow outs, especially when travelling at faster speeds than are allowed in the UK.

The wheels should be turned every couple of weeks. If you are removing the wheels, follow the jacking procedure for changing a wheel. Check your tyres regularly for signs of age and deterioration, particularly wear, cracking and blistering. If in doubt consult a reputable tyre fitter.

Water System
Remove chopping board from bowl. All taps should be opened. Single lever mixer taps, including the shower mixer, should have the lever moved to the central position and lifted to the open position for hot and cold.

Drain water heater: Open yellow handle on in line valve normally adjacent to water heater. Valve is open when handle is vertical.

Drain water tanks:
Open the drain valve situated under the offside skirt adjacent tot the fresh water tank.

Waste tank: Open in line valve adjacent to the tank. Valve is open when handle is in line with body of valve.

With valves and switches set as previously described to run taps from the fresh water tank, the pump can be run momentarily to assist purging the water tank and pipes.

Remove shower head. Let the shower hose drain into the shower tray and then return to holder.

The Motorhome may be left in this condition over winter or until ready to use.

It is recommended to leave the drain taps in an open position during storage. Before recomissioning the system, reverse all above actions.

Before recomissioning the system, reverse all above actions.

The Thetford Cassette toilet is easily winterised for storage.

Empty remaining fresh water into the bowl by activating the flush handle up and down or by pressing the flush button (model dependant).

Once pump has been cleared and water flow has stopped completely, release into waste tank. Remove waste tank and empty contents in normal way.

To evacuate any remaining water from the fresh water tank, place a container underneath the drainplug and remove drainplug.

When the procedure has been completed replace drainplug and waste holding tank. Clean the seals and grease them if necessary after drying, with acid free vaseline.

Leave the blade of the holding tank open.

Do not replace cap on the pour out spout, to ventilate the holding tank.

Also follow the notes on fully winterising this pump as published by the pump manufacturer

Recomissioning the Water System
Fill the fresh water tank on the Thetford Cassette porta potti (model specific) using a hose or jerrycan until the water in the funnel reaches the neck. Tank capacity is 15 litres. Aqua Rinse may be added to improve cleaning of bowl and flushing of unit.

Replace cap. Swing back the water fill funnel until it touches the water tank.

Add Aqua Kem (100 ml) into the Cassette (or 120 ml if using Aqua Kem Bio) through the pour out spout. Add small amount of water through the pour out spout and replace the cap. Close the cold taps and ensure all the drain taps are closed.

It is advisable after storage to flush the water system initially with a sterilising agent (such as Milton), and then with water repeating until the system is well flushed through.

Connect the pump.

Fill the system with water until water flows freely from the hot taps. About 2 gallons of water will be required. Close the hot taps.

Appliances
Before starting motor caravanning after storage, check all gas appliances and electrical points.

Note: Preferably not less than once a year, the electrical installation should be inspected and tested by a qualified electrician.

After storage it is advisable to air the Motorhome and clean throughout, especially cooking appliances and the refrigerator.

Replace the bedding if they were removed for storage.

Important: Always follow the manufacturers recommended procedures after use of fitted equipment in the Motorhome, before storing for any length of time.

CARING FOR THE ENVIRONMENT

After many years of service you may decide that your motorhome has become beyond economic repair and should be disposed of. Please ensure that you comply with the end of life vehicle legislation and take it to an authorised treatment facility where it will be properly dealt with to minimise any negative environmental impact. The transaction will be logged at the DVLA, identifying that you are no longer the owner of the vehicle.

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OWNERS CLUB

The Owners Club is a completely independent organisation run for the benefit of the motorhome owners. They have numerous rallies during the year in various parts of the country. Apart from the friendliness and companionship the Club generate it is also actively engaged in charity work for those less fortunate than ourselves. The address of the Secretary of the Owner Club can be obtained from the Swift Group website.

SPARE AND AFTER SALES CUSTOMER CARE

A catalogue of spare parts are available through our Swift Group Dealer Network, from door catches through to spare wheels. Please note, all parts enquiries must be directed through your dealer, as the Swift Group does not operate a direct retail service.

We endeavour to supply parts for vehicles up to 8 years old. If the original part is no longer available your dealer should be able to source a suitable alternative.

Note: Please remember to quote chassis VIN (Vehicle Identification Number) when ordering any items from your dealer. This can be found at the bottom of the front windscreen, on the plate on the front cross member within the engine compartment and on the Swift manufacturers plate situated on the forward edge of the side sliding door.

REPAIR FACILITIES

Should you be unfortunate to encounter damage to your vehicle, we have a number of approved workshops and dealerships with workshop facilities to untertake such repairs. Details of which can be found via our website: www.swiftgroup.co.uk/find-a-dealer

The enjoyment of your motorhome can be greatly enhanced by membership of one or more of the various caravanning, motoring and holiday clubs. Here are some useful addresses:

CARAVAN CLUBS

The Caravan Club,
East Grinstead House,
East Grinstead
West Sussex, RH19 IUA

Tel: 01342 326944
www.caravanclub.co.uk

The Camping and Caravanning Club,
Greenfields House,
Westwood Way,
Coventry,
West Midlands.
CV4 8JX

Tel: 0845 130 7631
or: 024 7647 5448
www.campingandcaravanningclub.co.uk

MOTORING ASSOCIATIONS

Automobile Association (AA)
Fanum House,
Basinstoke,
Hants, RG1 2 EA
Tel: 08705 448866
www.theaa.co.uk
e-mail: customer.services@theaa.com

RAC Motoring Services
8 Surrey Street
Norwich
Norfold
NR1 3 NG
www.rac.co.uk

Green Flag
Tel: 0113 390 4000
www.greenflag.com

RBS Insurance
Churchill Court
Westmoreland Road
Bromley
Kent
BR1 1DP

TRADE ASSOCIATION

NCC
Catherine House,
Victoria Road,
Aldershot,
Hampshire, GU11 1SS
Tel: 01252 318251
www.thencc.org.uk
www.motorhomeinfo.co.uk

The Society of Motor Manufacturers and Traders Limited (SMT)
Forbes House,
Halkin Street,
London SW1X 7DS

Tel: 020 7235 7000
www.smmt.co.uk

Swift Group Limited
Dunswell Road, Cottingham, East Yorkshire,
HU16 4JX

Tel: 01482 875740
email: enquiry@swiftgroup.co.uk
website: www.swiftgroup.co.uk

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USEFUL INFORMATION

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CHANGE OF OWNERSHIP

NOTIFICATION OF CHANGE OF OWNERSHIP

If you sell your motorhome, please notify the change of ownership by completing this page, detaching it and sending it to:

Swift Group Limited
Dunswell Road, Cottingham, East Yorkshire,
HU16 4JX

Tel: 01482 875740

Please note that the benefit of any unexpired warranty cannot be transferred to the new owner until the change of ownership details above have been received.

DETAILS OF MOTORHOME:	Model:	_____
	Chassis No:	_____
	Registration No:	_____
	Serial No:	_____
CURRENT OWNER:	Name:	_____
	Address:	_____
		_____
		_____
		_____
NEW OWNER:	Name:	_____
	Address:	_____
		_____
		_____

AUTOCRUISE

Swift Group Ltd, Dunswell Road, Cottingham, East Yorkshire, HU16 4JX
Tel: 01482 875740 Fax: 01482 840082 Email: enquiry@swiftgroup.co.uk
www.swiftgroup.co.uk

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