# EQUIPMENT DETAILS

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**Note:** 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 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.

A WARNING: 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. **Note:** 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 Combination Boiler**

The Truma Combination Boiler has been designed to run on gas or electric power and the optimum performance is obtained when used in **dual fuel mode, that is running on gas and electric at the same time.** 

Running in dual fuel mode has the following benefits:

- Fastest possible heat up time, the 2KW gas burner combines with a 1.8KW electric element to provide 3.8KW of energy to heat your hot water and warm your caravan.
- The intelligent heat management system automatically senses when the water and room are nearing the required temperature and then automatically turns off your gas burner and operates solely electric power, conserving your gas.
- As hot water is used or the room cools the Truma combination heater will continue to operate on electric only until a point where the demands necessitate that additional gas power is required. An example for such a demand could be for instance if the exterior door was left open and the room temperature dropped by 10 degrees in the space of a few minutes, in this case the intelligent heat management system would decide that the best way to get the room back to the required temperature would be to use both gas and electric at the same time.

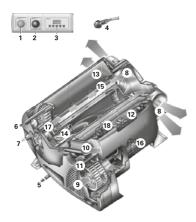
Operating the Truma Combination system on electric or gas only will result in longer heat up times for hot water and the room temperature n comparison to operating on dual fuel.

Operating on electric only may not in all cases maintain a comfortable room temperature especially in colder conditions.

# TRUMA COMBI 4E

The intelligent heat management system in operation in dual fuel mode allows the Truma Combination boiler to prioritize the electric power source over your gas, which all conserve your gas supply.

# Truma Combi 4E



- 1 Control panel
- 2 Power selector switch
- 3 Optional timer
- 4 Room temperature sensor
- 5 Cold water connection
- 6 Hot water connection
- 7 Gas connection
- 8 Hot air outlets
- 9 Recirculated air intake
- 10 Waste gas discharge
- 11 Combustion air infeed
- 12 Electronic control unit
- 13 Water container (10 litres)
- 14 Burner
- 15 Heat exchanger
- 16 Power electronics

17 Heating elements 230 V

18 Overheating switch 230 V

### 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

# TRUMA COMBI 4E

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.

A WARNING: Care should be taken to ensure adequate ventilation of the flue at all times. It is inadvisable to inhale exhaust fumes.

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.

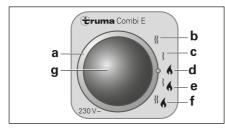
# **Standard Operating Instructions**

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) Power selector switch

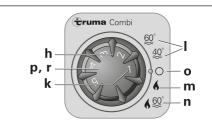


- a = Power selection rotary switch
- b = Electric operation 230 V, 1800 W
- c = Electric operation 230 V, 900 W
- d = Gas operation
- e = Mixed operation\* (900 W gas and electrical operation)
- f = Mixed operation\* (1800 W gas and electrical operation)
- g = Yellow LED on = "Electrical operation"
- \* Winter mode only!

In summer mode the unit automatically selects electric operation at the preselected electrical power of 900 W or 1800 W.

Switching on the electric heating elements as well does not increase the maximum heating power.

### **Control panel**



- h = Rotary switch for room temperature (1 5)
- k = green LED lit "Operation" green LED blinking "after-running" is active in order to reduce the unit's temperature
- I = Summer operation (water temperature 40 °C or 60 °C)
- m = Winter operation (heating without water temperature monitoring or with drained water system)
- n = Winter operation (heating with water temperature monitoring)
- o = Rotary "Off" switch
- p = yellow LED lit "Boiler heat-up phase"
- r = red LED lit, red LED blinking "Failure"

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

**Note:** The control panel, situated above the entrance door must be switched on for the combi boiler to operate. See page 69

# Room thermostat

To measure the room temperature, the room temperature sensor is fitted to the furniture. The exact location is determined by the layout of the vehicle.

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.

# TRUMA COMBI 4E

### Taking into operation

Heating is possible without restrictions with gas, electrical and mixed operation, with or without water.

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

For operating on gas turn on gas cylinder and open the shut off valve at the manifold.

For operating on electric operate the water heater switch on the power supply unit. See page 67.

### Summer operation (boiler operation only)

Select gas or electrical operation using the power selector switch. Illumination of the yellow LED (g) on the power selector switch indicates that the unit is operating with 230 V.

Mixed operation (gas and electrical) is not possible in summer mode. With this setting the unit automatically selects electrical operation with a preselected power setting of 900 W or 1800 W.

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

When the selected water temperature is reached (40 °C or 60 °C) the heater shuts off and the yellow LED (p) goes off.

### Winter operation

# Heating with water temperature monitoring

Select gas, electrical or mixed operation using the power switch. Illumination of the yellow LED (g) on the power selector switch indicates that the unit is operating with 230 V. Move rotary switch on control panel to operating position (n). Set the rotary switch (h) to the desired thermostat setting (1 - 5). The green LED (k) for operation is lit and simultaneously indicates the position of the selected room temperature. The yellow LED (p) indicates the water's heat-up phase.

The device automatically selects the required power setting in accordance with the temperature difference between the temperature selected on the control panel

and the current room temperature. When the room temperature selected on the control panel is reached, the heater switches back to the smallest setting and heats the water to 60 °C. Once the water temperature is reached, the heater switches off and the yellow LED (p) goes out. The warm air fan can continue to run in order to cool the unit (after-run).

# Heating without water temperature monitoring

Select gas, electrical or mixed operation using the power switch. Illumination of the yellow LED (g) on the power selector switch indicates that the unit is operating with 230 V. Move rotary switch on control panel to operating position (m). Turn the rotary switch (h) to the desired thermostat setting (1 - 5). The green LED (k) for operation is lit and simultaneously indicates the position of the selected room temperature. The yellow LED (p - water's heat-up phase) will be lit only when the water temperature is below 5°C! The device automatically selects the required power setting in accordance with the temperature difference between the temperature selected on the control panel and the current room temperature. Once the room temperature selected on the control panel has been reached, the heater switches off. The warm air fan continues to run at slow speed until the outgoing air temperature (on the unit) has fallen to 40°C or less. 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 Select gas or electrical operation using the power selector switch. Illumination of the yellow LED (g) on the power selector switch indicates that the unit is operating with 230 V. Move rotary switch on control panel to operating position (m). Turn the rotary switch (h) to the desired thermostat setting (1 – 5). The green LED (k) for operation is lit and simultaneously indicates the position of the selected room temperature. The yellow LED (p) will be lit only when the temperature of the unit is below 5°C! Depending on the operating mode, the unit will automatically select 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 selected on the control panel has been reached, the heater switches off. The warm air fan continues to run at slow speed until the outgoing air temperature (on the unit) has fallen to 40°C or less.

### Switching off

Switch off heater at control panel using rotary switch (position o). The green LED (k) goes off.

If the green LED (k) 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 (k) 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 gas shut off valve at the manifold.

#### Gas operation fault

If a fault occurs during gas operation the red LED (r) on the control panel illuminates.

Please consult the Trouble-Shooting list for possible causes.

A reset (fault reset) is carried out by switching off, waiting until all LED's on the control panel have stopped flashing, and then switching the heater on again.

#### **Electrical operation fault**

If a fault occurs during electrical operation the yellow indicator lamp (g) on the power selector switch goes off.

Possible causes can be found in the troubleshooting list.

If the 230 V power supply is interrupted for just a brief period of approximately 1 second during operation, the heater will subsequently resume as normal.

#### Filling the water heater

Switch on power for water pump (main 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 the boiler was not operated.

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.

In order to check the water that is flowing out, place an appropriate container (capacity 10 litres) beneath the drain valve.

Open the drain valve which is situated next to the boiler by lifting the yellow handle into the vertical position.

Check whether all of the water in the boiler (10 itres) has been drained into the container via the drain valve.

# 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! Materials in the device which come into contact with water are suitable for use with drinking water (see manufacturer's declaration: www.truma.com / downloads / manufacturer's declaration).

Bio-film, deposits and limescale must be removed using chemicals to protect the unit from infestation by microorganisms.

# TRUMA COMBI 4E

Only chloride-free products must be used in order to prevent damage to the unit.

The effectiveness of the use of chemicals to combat microorganisms in the unit can be increased by heating the water in the boiler to 70 °C at regular intervals.

Move power selector switch to gas operation (d) to do this.

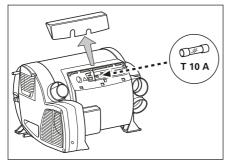
Move the rotary switch on the control panel to position (I – summer operation) 60 °C. The green (k) and yellow (p) LEDs light up.Once the water in the boiler has reached a temperature of 60 °C, the burner will switch off and the yellow LED (p) will go out. The unit must stay switched on for at least 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 12 V

The fuse is in the electronics beneath the connection cover.

Replace the unit's fuse only with an identical fuse.

Device fuse: 10 A - slow - (T 10 A)



### Fuses 230 V

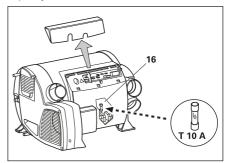
The fuse and the power supply lines must only be replaced by an expert!

The unit must be disconnected from the mains

(all poles) before opening the electronic housing lid.

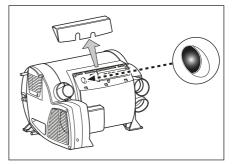
The fuse is in the power electronics (16) beneath the electronic housing lid.

This fine fuse must always be replaced with a fuse of the same type: 10 A, slow, interrupting capacity "H".



#### Overheating protection 230 V

The 230 V heating facility has a mechanical overheating switch. If the 12 V power supply is interrupted during operation or during the after-run period, for example, the temperatures within the unit could activate the overheating protection.



To reset the overheating protection, allow heater to cool, remove connection cover and press red reset button.

# **Technical data**

Determined in accordance with EN 624 or Truma test conditions

Device category:  ${\rm I_{3\ b/p}}$  in accordance with EN 437

Type of gas: Liquid gas (propane/butane)

Operating pressure: 30mbar (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

Pump pressure: max 2.8 bar

System pressure: Max 4.5 bar

Rated thermal ouput (automatic output levels)

Gas operation Combi 4 E: 2000 / 4000 W

Electrical operation Combi 4 E 900W / 1800 W

Mixed operation (gas and electrical)

Combi 4 E: max 3800 W

#### Gas consumption

Combi 4: 160-320 g/h

Readiness-heat power requirement Combi 4 E

Gas operation 5.2g/h

# Air delivery volume (gree-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

# Current input at 12 V

#### Heater + boiler

Combi 4 E: Short term max 5.6A (average power consumption 1.1A) Heating up of boiler: 0.4 A Stand by: 0.001 A Heating element FrostControl (optional): maximum 0.4 A

### Current input of 230V

3.9 A (900 W) or 7.8 A (1800 W)

### Weight (not containing water):

Heater unit: 15.1kg Heater unit with peripheral devices: 15.6kg

# Troubleshooting

For troubleshooting a fault please refer to page 9 of the Truma Combi 4E Operator Manual.

### Truma Heating System and Air Flow

The Swift Group undertakes considerable testing of our products in cold chambers to ensure they are usable in cold temperatures. During this testing, the air flow on the blown air outlets is defined and set by us. In some cases, customers may wish to alter this setup to achieve a different heating pattern (i.e. more hot air to the rear of the vehicle or vice-versa) and this can be achieved by placing restrictors in the blown air system.

Customers should seek the advice of Truma or their Dealer on how to do this.

# **Dometic absorption refrigerator**

#### Guide to these operating instructions

Before you start using the refrigerator, please read the operating instructions carefully.

These instructions provide you with the necessary guidance for the proper use of your refrigerator. Observe in particular the safety instructions. Observation of the instructions and handling recommendations is important for dealing with the refrigerator safely and for protecting you from injury and the refrigerator from damage. You must understand what you have read before you carry out a task.

Keep these instructions in a safe place close to the refrigerator so they may be referred to at any time.

### **Copyright protection**

The information, texts and illustrations in these instructions are copyright protected and are subject to industrial property rights.

No part of these instructions may be reproduced, copied or utilised in any other way without written authorisation by Dometic GmbH, Siegen.

### Warranty

Warranty arrangements are in accordance with EC Directive 44/1999/CE and the normal conditions applicable for the country concerned.

For warranty or other maintenance, please contact our customer services 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.

# Limitation of liability

All information and guidance in these operating instructions were prepared after taking into consideration the applicable standards and regulations as well as the current state of the art. Dometic reserves the right to make changes at any time which are deemed to be in the interest of improving the product and safety.

Dometic will assume no liability for damage in the case of :

- Non-observation of the operating instructions
- Application not in accordance with the regulations or provisions
- Use of non-original spare parts
- Modifications and interferences to the appliance
- Effect of environmental influences, such as temperature fluctuations
  - humidity

### **Customer services**

Dometic offers a pan-European customer service network. Find your authorised customer service centre by calling the phone number indicated in the EuroService Network book. EuroService Network - which accompanies every refrigerator. You can also obtain the address information of the nearest customer service from www.dometic.com. When contacting Dometic Customer Services, please state the model, product number and serial number together with the MLC code, if applicable. You will find this information on the rating plate inside the refrigerator. We recommend that you note this data in the field provided on the front page of this operation manual.

### Spare parts

Parts can be ordered throughout Europe from our customer services. Always give the model and product number when you contact the customer service! You will find this information on the rating plate inside the refrigerator. **Note:** Refrigerators manufactured by Dometic GmbH are free of CFC/HCFC and HFC. Ammonia (a natural compound of hydrogen and nitrogen) is used in the cooling unit as a coolant. Non-ozonehazardous cyclopentane is used as a propellant for manufacturing PU foam insulation.

In order to ensure that the recyclable packaging materials are re-used, they should be sent to the customary 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 25°C, it is sufficient to operate the refrigerator at middle thermostat setting.
- Where possible, always store precooled products.
- Do not expose the refrigerator to direct sunlight.
- Ensure that air circulation of the cooling unit is not obstructed.
- Defrosting at regular intervals saves energy (see "Defrosting"). Open the refrigerator door only for a short period of time when removing products.
- Run the refrigerator for about 12 hours before filling it.

# Safety instructions

#### Application according to regulations

This refrigerator is designed for installation in recreation vehicles such as caravans or motorhomes. The appliance has been type approval tested for this application in accordance with the EC Gas Directive.

The refrigerator is to be used solely for storing foodstuffs.

A **WARNING:** The refrigerator is not suitable for the proper storage of medication. Please observe in addition the instructions in the medication package inserts.

#### User's responsibility

Anyone operating the refrigerator must be familiar with the safe handling and understand the advice in these operating instructions. Children may only operate the appliance, if they have been made aware of how to operate the refrigerator safely and the dangers attending incorrect operation.

# Protection of children when disposing of the equipment

A WARNING: When disposing of the refrigerator, detach all refrigerator doors and leave the storage racks in the refrigerator. In this way inadvertent entrapment and suffocation is prevented.

# Working upon and checking the refrigerator

 WARNING: Work on gas equipment, exhaust system and electrical facilities must be carried out by authorised personnel only. Substantial damage to property and / or injury to persons can arise through unprofessional procedures.

A WARNING: Never use an unshielded flame to check gas bearing parts and pipes for leakage! There is a danger of fire or explosion. **WARNING:** Never open the absorber cooling unit! It is under high pressure. There is a danger of injury.

### Information on 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% by weight of the solvent).

In the event of leakage (easily identifiable from the strong odour), proceed as follows:

- Switch off the appliance.
- Air the room thoroughly.
- Inform authorised customer services.

**Note:** For your safety it was ascertained in an expert's report that no impairment of health exists when the coolant is discharged.

# Operating the refrigerator with gas

It is imperative that the operating pressure corresponds to the data specified on the rating plate of the appliance. Compare the operating pressure of the rating plate with the data specified on the pressure reducing valve of the liquid gas cylinder.

 $\triangle$  **WARNING:** Operating the appliance with gas is not permitted

- At petrol stations
- On ferry boats
- While transporting the caravan / motorhome by a transporter or breakdown vehicle.

There is danger of fire! Leave the equipment switched off.

# Safety instructions when storing foodstuffs

# Instructions for storing food in a refrigerator:

No refrigerator of any kind can improve the quality of the food; refrigerators can only maintain the food's quality for a short duration as from the time of storing it.

Please observe the following particular conditions for storing food in a refrigerator that is built into a vehicle:

- A change in the climatic conditions such as temperature fluctuations
- High temperatures inside the vehicle when it is closed and parked in direct sunlight (temperatures are possible up to 50°C)
- Use of the refrigerator during travel with the power supply of 12V DC
- A refrigerator built in behind a window and exposed to direct sunlight
- Storing the products too soon, i.e. shortly after starting up the appliance for use

Under these particular conditions the refrigerator cannot guarantee reaching the temperature needed for perishables.

Perishables include all products with a stipulated use-by date and a minimum storage temperature of +4°C or less, especially for meat, poultry, fish, sausages, pre-packed foods.

- Pack raw and cooked foods separately (e.g. in containers, aluminium foil, etc.).
- Only remove the outside packaging of single packs if all the necessary information, e.g. the use-by date, can also be read on the single packs.
- Do not leave cooled goods outside the refrigerator for too long.
- Place the foods with the next use-by date at the front, accordingly.
- Pack away any left-over food and eat at the first opportunity.

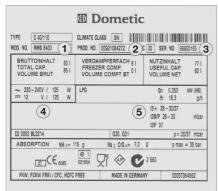
- Wash your hands before and after handling any food.
- Regularly clean the inside of the refrigerator.

Please observe the instructions and information regarding the use-by date on the outside packaging of the food.

Please observe section "Cleaning" of this instruction.

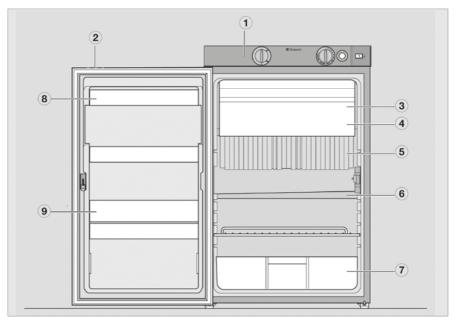
# **Refrigerator rating plate**

The rating plate is to be found on the inside of the refrigerator. It contains all important details of the refrigerator. You can read off from this the model identification, the product number and the serial number. You will need these details whenever you contact the customer service centre or when ordering spare parts.



- 1. Model Number
- 2. Product Number
- 3. Serial Number
- 4. Electrical rating details
- 5. Gas pressure

# **Description of refrigerator**



- 1. Operating controls
- 2. Door locking button
- 3. Freezer compartment (removable)
- 4. Insertable grid shelf (available as option, to be used when freezer compartment is removed)
- 5. Post-evaporator for cooling compartment
- 6. Condensation water drain channel
- 7. Vegetable bin
- 8. Upper door shelf with flap, egg shelf available as option may be inserted
- 9. Lower door shelf with bottle holders

# **Refrigerator operation**

The refrigerator is equipped to operate on three power modes:

- Mains voltage (230V AC)
- Direct-current voltage (12V DC)
- Gas (liquid gas propane/butane)

Select the desired power mode by the energy selector switch (battery igniter type models) or the MODE button (MES, AES). Appliances with automatic energy selection (AES) are additionally provided with "automatic mode" function. The AES system automatically selects the best energy source for each particular situation.

### Cleaning

Before starting up the refrigerator, it is recommended that you clean it inside and repeat this at regular intervals.

Use a soft cloth and lukewarm water with a mild detergent. Then wipe out the appliance with clean water and dry thoroughly.



To avoid material alterations, 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.

### Maintenance

 In compliance with the applicable regulations, please note that the gas unit and the connected ventilation ducts must be checked by authorised technical personnel after first use and after every other year for compliance with the European Standard EN 1949. A test certificate has to be issued. It is the user's responsibility to arrange this test.

- The gas burner must be inspected and cleaned as necessary at least once a year.
   When using liquefied petroleum gas (tank or refill cylinders) the maintenance interval is reduced to half-yearly or quarterly. Keep the evidence of maintenance work carried out on your refrigerator.
- Work on gas and electrical equipment shall be carried out by qualified personnel only.

It is recommended that this is carried out by an authorised customer services department.

We recommend maintenance following an extended shutdown of the vehicle.

**Note:** We recommend maintenance following an extended shutdown of the vehicle. Please contact Dometic Customer Services.

The cooling unit's performance is influenced by ambient temperatures. Please select the medium setting for ambient temperatures between +15°C and +25°C (refer to Setting of cooling compartment temperature). The unit operates within its optimum performance range.

Dometic refrigerators work according to the absorption principle. For physical reasons, an absorption system responds slowly to changes made by the thermostat controller, by loss of cooling energy through opening the door or during storing food. The devices meet the cooling performance requirements of the Climatic Class SN acc. to EN/ISO 7371 in the temperature range of +10°C to +32°C ambient temperature.

For temperatures below +10°C, winter covers should be installed. For ambient temperatures exceeding +32°C for a longer period of time, it is recommended installing Dometic additional fan (item no. 241 2985 -00 ).

# DOMETIC ABSORPTION REFRIGERATOR

# Manual energy selection / automatic ignition (RM 8xx1) MES



- 1. Power ON/OFF switch
- 2. Energy selector button 230V ~
- 3. Energy selector button GAS
- 4. Energy selector button 12V =
- 6. Temperature level selection
- 7. Temperature level display
- 8. Indicator LED failure / Reset button GAS FAILURE

### Switching ON/OFF

- Switch ON by pressing button (1), 2s
- Switch OFF by pressing button (1), > 2s

### 230V AC operation

- Select "Mains voltage" by pressing button (2)
- Set temperature step by pressing button (6)

### 12V DC operation (vehicle's battery)

- Select "Battery voltage" by pressing button (4)
- Set temperature step by pressing button (6)

### Gas operation

- Select "Gas" by pressing button (3)
- Set temperature step by pressing button (6)

#### **Electrical operation**

To start the refrigerator, press button (1) for 2 seconds.

The refrigerator starts with the last selected type of energy.



12V operation :	
Press button (4) :	

#### Gas operation



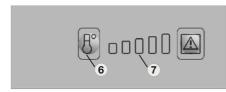
#### Gas operation :

Press button (3) :

The ignition process is activated automatically by means of an automatic igniter.

**Note:** The flame extinguishes after reaching the preset cooling compartment temperature and ignites again if the cooling compartment temperature increases again. If the flame is not lit after the first ignition attempt, the automatic igniter repeats the ignition twice (duration 30 s) at time intervals of 2 minutes. If the flame is not lit afterwards, a fault is indicated.

# Setting of cooling compartment temperature



Select the desired cooling compartment temperature by pressing button (6) .

The LED display (7) of the selected temperature setting is illuminated.

The scale starts with **MIN position** at the left LED position (small bar = highest temperature) and climbs up to **MAX position** at the right LED position (large bar = lowest temperature).

**Note:** The temperature levels do not relate to absolute temperature values.

### Additional features (MES / AES)

- The brightness of the display reduces after a few seconds if no other buttons are pressed. The indicator lights again if a button is pressed. Press the button again to activate the required function.
- Failures are indicated by flashing of the failure indicator LED.
- Should the door be kept open for too long (more than 2 minutes), an acoustic signal is initiated (pulsing whistle tone).
- Should the electronic control detect any failure, an acoustic signal will sound (pulsing whistle tone). At the same time the display starts flashing (for trouble-shooting, please refer to page 108).

# Gas operation with internal batteries (optional)

An optional battery compartment in the electronics case for internal (self-contained) power supply of the electronics is available for the model variants RM 8xx1 and RM 8xx5 (appliances with electronics).



Battery compartment

Load the battery compartment with batteries  $(8 \times AA 1.5 \text{ V})$  before operating the refrigerator.

All operating modes can be selected while the on-board 12 V DC power supply is active. The internal voltage is disconnected.

If the on-board 12 V DC power supply is not present or there is an interruption of the mains power supply during operation, the electronics automatically switch to the internal (battery) power supply.

The refrigerator can now only be operated in the gas mode.

All LED indicators except the GAS LED are not lit during operation with internal batteries. The GAS LED flashes every 15 seconds. If a button is pressed, the temperature level LEDs (7) also light.

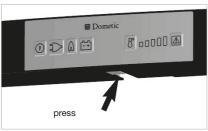
If the battery voltage is too low, an acoustic signal (whistle tone) sounds every 15 seconds.

Then replace the batteries in the battery compartment.

### Inserting / changing the batteries

• Switch off the refrigerator, as described in section 4.17 Shutting of the refrigerator.

# DOMETIC ABSORPTION REFRIGERATOR



Opening battery compartment



**Note:** Batteries (8 x AA 1.5V) are not included!

# A WARNING:

- Observe the correct polarity !
- Do not connect non-rechargeable batteries to a charger.
- Remove rechargeable batteries from the battery compartment before charging.
- Avoid short circuits on the contacts in the battery compartment!
- Remove discharged batteries.
- Remove the batteries from the battery compartment if the refrigerator will not be used for a long time.
- Do not mix different types of batteries.

# **Door locking**

A **WARNING:** As a basic rule, shut and lock the refrigerator before you start your journey!

# Mechanical door lock

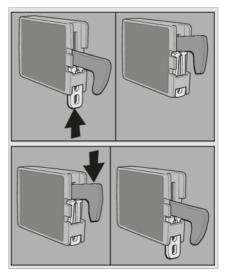




Open the door by pressing the locking button and pull open. Shut the door again by pushing it to close. The snapping into the lock can be heard. While the vehicle is parked, the locking hook may be fixed to facilitate opening of the door.

# Fastening and releasing the door lock hook when parking the vehicle

If the vehicle is parked for a longer period of time, the locking hook may be clamped by means of a lockbar. The door may now be opened by just pulling it without need of pressing the locking button.



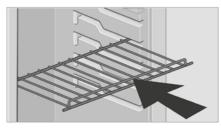
# Lighting

If the door is open for more than 2 minutes, the sensor-controlled interior lighting is automatically cut off (except for models with battery igniter).

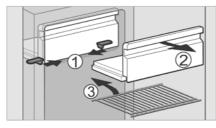
**Note:** Please contact the authorised Dometic Service if a failure occurs.

# Positioning the storage racks

The storage racks may be pulled out by smoothly lifting them and may be positioned as desired.



# Removable freezer compartment (where applicable)



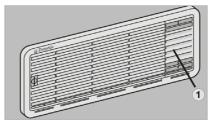
To enlarge the cooling compartment, just remove the freezer compartment.

- 1. Unlock the freezer compartment on both sides.
- 2. Pull the freezer compartment out.

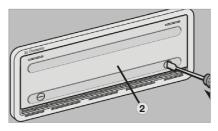
Store the freezer compartment safely in order to prevent damage.

Once the freezer compartment is removed, an additional storage rack (3.) may be installed. The storage rack is a piece of extra equipment and may be obtained by Dometic.

# Winter operation



In winter, check that the ventilation grilles and the exhaust duct system (1) have not been blocked by snow, leaves, etc.



When the outside temperature falls below +10°C, the winter covers should be fitted. This protects the unit from excessively cold air which could have adverse effects on the performance of the unit.

Covers may be supplied as part of the specification of your motorhome or alternatively are available through most Swift Group dealers

**Note:** You should also attach the winter covers if the vehicle is taken out of service for a longer period of time or while it is being cleaned from the outside.

# Storing food and making ice cubes

# Storing products in the cooling compartment

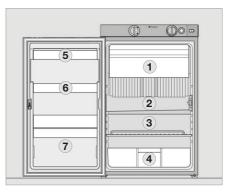
- Switch the refrigerator on approx. 12 hours before filling it.
- Always store pre-cooled foods in the refrigerator. Make sure that the food is well cooled when it is bought and also when transporting it. Use insulated cooling bags.
- Open the refrigerator door only for a short period of time when removing products.
- Products must be packed best of all in closed containers, wrapped in aluminium foil or similar - and stored separately from each other, in order to prevent drying out or odours.
- Allow foods that have been warmed up to cool down before storing.
- Avoid storing products in the refrigerator that could emit volatile flammable gases.
- Do not overfill the storage grids and compartments to prevent obstructing the internal air circulation.
- Maintain a clearance of approx. 5 10 mm between chilled products and postevaporator ("cooling fins").
- Do not expose the refrigerator to direct sunlight. Please bear in mind that the temperature inside a closed vehicle increases sharply if exposed to sunlight and that this can reduce the efficiency of the refrigerator.
- Ensure that air circulation of the cooling unit is not obstructed. Keep the ventilation grilles free from obstructions.

# Storing products in the cooling compartment

- Do not keep carbonated drinks in the freezer.
- 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.

When ambient temperatures are lower than +10°C and the refrigerator is exposed to these temperatures for extended periods of time, an even regulation of freezer temperature cannot be guaranteed for system related reasons. This can cause the temperature in the freezer to rise and the stored goods to melt.

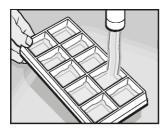
# **Refrigerator compartments**



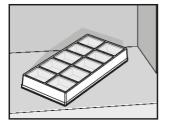
- 1. Freezer compartment : already frozen food (deep-frozen food)
- 2. Middle compartment: Dairy products, convenience food
- 3. Bottom compartment: Meat, fish, food for defrosting
- 4. Vegetable compartment: Salads, vegetables, fruit
- 5. Top door shelf: Eggs, butter
- 6. Middle door shelf: Cans, dressings, ketchup, jam
- 7. Bottom door shelf (drinks compartment): Drinks in bottles or bags

### Making ice cubes

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



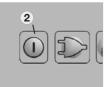
1. Fill the ice cube tray with drinking water.

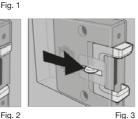


2. Place the ice cube tray in the freezer compartment.

# A WARNING: Only use drinking water!

# Shutting off the refrigerator





- Fig. 3
- Switch off MES and AES models by pressing button (2). Keep button (2) pressed for 3 seconds. The display disappears and the appliance is fully switched off (Fig. 1).

- Release the locking mechanism of the door lock by pushing it and shift it to the front. If the door is shut in this position, a small gap is nevertheless kept open to prevent formation of mildew (Fig. 2+3).
- If the refrigerator is to be taken out of service for an extended period of time, close the onboard shut-off valve and the cylinder valve.

# Defrosting

As time goes by, frost builds up on the fins inside the refrigerator. A layer of frost thicker on one side may occur and does not represent a malfunction. When this layer of frost is about 0.118 inches (3 mm) thick, the refrigerator should be defrosted.

- Switch off the refrigerator, as described above - Shutting of the refrigerator.
- Remove all food and the ice cube tray.
- · Leave the refrigerator door open to allow air to enter and to prevent formation of mildew.
- After defrosting (freezer compartment and fins free of frost), wipe both cooling compartments dry with a cloth.

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.

A WARNING: The layer of ice must never be removed forcibly nor may defrosting be accelerated using a heat source!

# Troubleshooting

# Failure: The refrigerator does not cool sufficiently.

Possible cause	Action you can take
Inadequate ventilation to the unit	Check that the ventilation grilles are not covered
Thermostat setting is too low	Set thermostat to a higher level
The condenser is heavily frosted	Check that the refrigerator door closes properly
Too much warm food has been stores inside within a short period of time	Allow warm food to cool down before storage
The appliance has been running for only a short period of time	Check whether the cooling compartment works after approx 4-5 hours
Ambient temperatures too high	Regularly remove ventilation grilles.

# Failure: The refrigerator does not cool in gas operation mode.

Possible cause	Action you can take
Gas cylinder empty	Change gas cylinder
Is the upstream shut-off device open?	Open shut-off device
Air in the gas pipe?	Switch off the appliance and start again. Repeat this procedure 3-4 times, if necessary.

# Failure: The refrigerator does not cool in 12 V operation.

Possible cause	Action you can take
On-board fuse defective	Fit new fuse
On-board battery displaced	Check battery, charge it
Engine not running	Start engine
Heating element defective (please refer to failure indication)	Please inform the Dometic Customer Ser- vices.

# Failure: The refrigerator does not cool in 230 V operation.

Possible cause	Action you can take
On-board fuse defective	Fit new fuse
Vehicle not connected to mains supply volt- age	Make a connection to a mains power supply
AES: Gas operation despite connection to the mains supply voltage?	Appliance switches to gas operation due to insufficient mains supply voltage (automatically switches back to 230 V operation)
Heating element defective (please refer to failure indication	Please inform Dometic Customer Services

# Information on failure display and trouble-shooting

- Refrigerators with an electronics system (MES, AES) indicate the occurence of a malfunction by the LED or display flashing.
- If a malfunction occurs, the indicator LED "Failure" (8) flashes simultaneously. In the case of AES models an acoustic alarm sounds.

Before notifying the authorised Service Centre, please check whether:

- the instructions in section "Operating the refrigerator" have been observed.
- the refrigerator stands level.
- it is possible to operate the refrigerator with any available power source.

# Status indicators



- 1. Button ON / OFF
- 2. Energy selector switch 230 V AC
- 3. Energy selector switch GAS
- 4. Energy selector switch 12V DC
- 6. temperature level button
- 7. temperature level display
- 8. fault LED / GAS FAULT reset button

# Operation with on-board 12 v power supply

Indicator	Fault	Remedy
(2) and (8) flashing and acous- tic signal 20s	<b>230 V mode:</b> "230V" not avail- able or voltage too low	Check mains power connection, mains voltage, fuse
(4) and (8) flashing and acous- tic signal 20s	<b>12 V mode:</b> "12V" not available or voltage too low	Check 12V connection, on-board battery, fuse
(3) and (8) flashing and acous- tic signal 20s	<b>Gas mode:</b> Flame not ignited	Check gas supply (gas bottle, gas valve) Press the <b>(8)</b> button after clearing the fault
Acoustic signal, 15s at two minute intervals	Interior lighting is switched on	Close door, check door contact
(2) and (7) flashing and acous- tic signal 20s	<b>230 V mode:</b> 230V heating ele- ment defective	Arrange replacement of 230V heating element, contact Customer Service
(4) and (7) flashing and acous- tic signal 20s	<b>12 V mode:</b> 12V heating ele- ment defective	Arrange replacement of 12V heating element, contact Customer Service
(7) flashing and acous- tic signal 20s	Temperature sensor without contact or defective	Contact Customer Service
(3) and (7) flashing and acous- tic signal 20s	Burner defective or cooling unit defective	Check burner, burner nozzles, if necessary contact Customer Service and arrange replacement

# THETFORD OVEN

# Thetford oven

A WARNING: 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.

A **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.

A **WARNING:** 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

- 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
- 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.
- 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.

**WARNING:** 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.

A 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.

A **WARNING:** The use of the electric hotplate and gas hobs will generate heat. We recommend, to avoid excess build-up of heat around the cooker area, the window is left opened when cooking to allow for additional ventilation.

# THETFORD OVEN

### 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

A WARNING: 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.

 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.

- 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.
- 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

 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.

A WARNING: 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

- 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.
- 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.
- 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 130°C to 240°C. 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, light burner with match or lighter and keep knob pushed 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.

**Note:** Oven and grill burners will not light, if door is not completely open.

# 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 1 and 6 for the oven and grill position (see symbol  $\checkmark \checkmark \checkmark \checkmark$ )



For ovens with thermostat the different positions of the knob correspond to the following temperatures in °C of the oven

POS	1	2	3	4	5	6
TEMP	130	160	180	200	220	240

A WARNING: 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 20 mins without foodstuffs inside:

 $\triangle$  **WARNING:** Use gloves when handling 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
- b. Light grill burner.
- c. Keep oven door half-open
- d. Do not use for more then 20 minutes.

# 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.
- b. Light grill burner
- c. Keep oven door in half-open position.

### Use with Oven:

- a. Light oven burner
- b. Position control knob on desired temperature
- c. Close oven door.

# SMEV hotplates

# Use the appliance only in a well ventilated space.

### To use

- Ensure gas cyclinder is connected and turned on and the shut off valve at the manifold is open. In the event of a gas smell turn off at gas cylinder and contact supplier.
- Flame supervision: Each burner is controlled individually and is monitored by a thermocouple probe. In the event of the burner flames being accidently extinguished, turn off the burner control and do not attempt to re-ignite the burner for at least one minute.

The ventilation openings must remain open when the appliances are operating.

# SMEV HOTPLATES

### 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- 10 seconds.
- b. Release knob and turn it to required position.

A WARNING: 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 I0 to 22 cm may be used.

During grill operation, do not obstruct the hole in the centre of the burners where heat and smoke can come out. The heat coming out of this hole may be used to heat up or cook food by placing a saucepan or frying pan over it.

 $\triangle$  **WARNING:** 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.1 must be kept open.

### Visual flame control

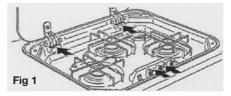
- a. The flame is right, when its internal tongue is blue and its outline well defined.
- b.If the flames have yellow tips and little pressure , consult your dealer.

# 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. LPG gas is heavier than air; any escaping gas will therefore collect at a low level. The strong unpleasant smell of gas will enable the general 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.

# **Cleaning instructions**

Do not use chemical or abrasive detergents.



# MICROWAVE OVEN

### Microwave oven general user instructions

Always refer to the microwave operating instructions supplied with the vehicle

# Precautions to avoid possible exposure to excessive microwave energy

- a. Do not attempt to operate this oven with the door open since open door operation can result in harmful exposure to microwave energy. It is important not to defeat or tamper with the safety interlocks.
- b. Do not place any objects between the oven front face of the door or allow soil or cleaner residue to accumulate on sealing surfaces.

# A WARNING:

c. if the door or door seals are damaged, the oven must not be operated until it has been repaired by a competent person.

# A WARNING:

d. it is hazardous for anyone other than a competent person to carry out a service or repair operation.

# A WARNING:

e. liquids or other foods must not be heated in sealed containers since they are liable to explode.

# A WARNING:

f. only allow children to use the oven without supervision when adequate instruction has been given so that the child is able to use the oven in a safe way and understands the hazards of improper use.

# A WARNING:

g. when the appliance is operated in the combination mode, children should only use the oven under adult supervision due to the temperature generated. (if provided)

# Important safety guidance

A WARNING: To prevent fire, burns, electric shock and other warnings. Listed below are, as with all appliances, certain rules to follow and safeguards to assure high performance from this oven:

#### Important instructions

- Do not use the oven for any reason other than food preparation, such as for drying clothes, paper, or any other non food items or for sterilizing purposes.
- 2. Do not use the oven when empty, this could damage the oven.
- Do not use the oven cavity for any type of storage, such as papers, cookbook, cookware etc.
- 4 Do not operate the oven without the glass tray in place. Be sure it is sitting properly on the rotating base.
- Make sure you remove caps or lids prior to cooking when you cook food sealed in bottles.
- Do not put foreign material between the oven surface and door. It could result in excessive leakage of microwave energy.
- Do not use recycled paper products for cooking. They may contain impurities which could cause sparks and/or fires when used during cooking.
- 8. Do not pop popcorn unless popped in a microwave approved popcorn popper or unless it's commercially packaged and recommended especially for microwave ovens. Microwave popped corn produces a lower yield than conventional popping; there will be a number of unpopped kernels. Do not use oil unless specified by the manufacturer.
- Do not cook any food surrounded by a membrane, such as egg yolks, potatoes, chicken livers, etc., without first piercing them several times with a fork.

# MICROWAVE OVEN

- 10. Do not pop popcorn longer than the manufacturer's directions. (Popping time is generally below 3 minutes). Longer cooking does not yield more popped corn it can cause scorching and fire. Also, the cooking tray can become too hot to handle or may break.
- If smoke is observed, switch off or unplug the appliance and keep the door closed in order to stifle any flames.
- 12. When heating food in plastic or paper containers, keep an eye on the oven due to the possibility of ignition.
- 13. The contents of feeding bottles and baby food jars shall be stirred or shaken and the temperature checked before consumption, in order to avoid burns.
- 14. Always test the temperature of food or drink which has been heated in a microwave oven before you give it to somebody, especially to children or elderly people. This is important because things which have been heated in a microwave oven carry on getting hotter even though the microwave oven cooking has stopped.
- 15. Eggs in their shell and whole hard-boiled eggs should not be heated in microwave ovens since they may explode, even after microwave heating has ended.
- 16. Keep the waveguide cover clean at all times. Wipe the oven interior with a soft damp cloth after each use. If you leave grease or fat anywhere in the cavity it may overheat, smoke or even catch fire when next using the oven.
- 17. Never heat oil or fat for deep frying as you cannot control the temperature and doing so may lead to overheating and fire.
- 18. Liquids, such as water, coffee, or tea are able to be overheated beyond the boiling point without appearing lo be boiling due to surface tension of the liquid. Visible bubbling or boiling when the container is removed from the microwave oven is not always present. This could result in very hot liquid suddenly boiling over when a spoon or other utensil is inserted into the liquid.

# To reduce the risk of injury to persons:

- a. Do not overheat the liquid.
- b. Stir the liquid both before and halfway through heating it.
- c. Do not use straight-sided containers with narrow necks.
- d. After heating, allow the container to stand in the microwave oven for a short time before removing the container
- e. Use extreme care when inserting a spoon or other utensil into the container.

# Care of the microwave

- 1. Turn the oven off before cleaning
- Keep the inside of the oven clean. When food spatters or spilled liquids adhere to oven walls, wipe with a damp cloth. Mild detergent may be used if the oven gets very dirty. The use of harsh detergent or abrasives is not recommended.
- The outside oven surface should be cleaned with soap and water, rinsed and dried with a soft cloth. To prevent damage to the operating parts inside the oven, water should not be allowed to seep into the ventilation openings.
- If the central panel becomes wet, clean with a soft dry cloth. Do not use harsh detergents or abrasives on Control Panel.
- 5. If steam accumulates inside or around the outside of the oven door, wipe with a soft cloth. This may occur when the microwave oven is operated under high humidity conditions and in no way indicates malfunction of the unit.
- It is occasionally necessary to remove the glass tray for cleaning. Wash the tray in warm sudsy water or in a dishwasher.
- 7. The roller guide and oven cavity floor should be cleaned regular/y to avoid excessive noise. Simply wipe the bottom surface of the oven with mild detergent water or window cleaner and dry. The roller guide may be washed in mild sudsy water.
- 8. The oven should be cleaned regularly and any food deposits removed;

# THETFORD CASSETTE TOILET

 Failure to maintain the oven in a clean condition could lead to deterioration of the surface that could adversely affect the life of the appliance and possibly result in a hazardous situation.

# Thetford cassette toilet

# Cassette C-200CS and C200S

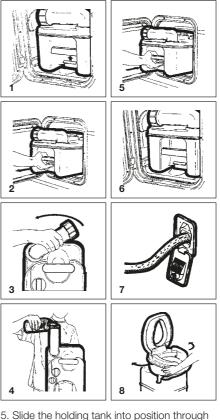
The toilet section of the C-200 includes a rotatable bowl, removable seat and cover, a console with a flush handle/flush buttons, a built in flush-watertank and a waste level warning indicator. The valve blade handle is located underneath the bowl.

### **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 pourout 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.

 $\bigtriangleup$  **WARNING:** Never add toilet fluid directly into toilet bowl.



- 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).
- 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).

# THETFORD CASSETTE TOILET



# Operation

- 8. Turn the bowl in the most comfortable position (fig. 8).
- 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).
- The toilet may be used with the blade open or closed. Pull valve handle towards you to open (fig. 10).

- 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 wastelevel indicator lights up when the holding tank contains more than 15 litres of waste.

**WARNING:** 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).
- 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.

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.
- The warranty covers replacement of defective or flawed parts and the inadequate performance of the toilet.
- 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.

- Before returning product or parts they should be properly cleaned, in order to carry out inspection and repair.
- No other warranty is given and no personal representative is authorised to make any warranty other than that is contained herein.

# Thetford C260 and C260S cassette toilet

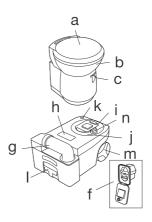
The Thetford Cassette Toilet is a high quality product. The toilet forms an integral part of your caravan or motorhome bathroom, thanks to its functional design which combines modern styling and ease of use. The C-250 Cassette Toilet is manufactured from high quality synthetic materials which makes it 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!

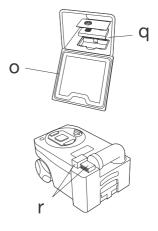
These instructions cover the C-250CWE this has its own flush-water tank.

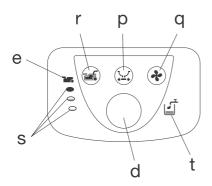
# Parts

- 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
- I. 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
- 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.
- 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.

A 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 flushwater 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

- Automatic Ventilator: Open the access door on the outside of your caravan and remove the Waste Holding Tank (as described above).
- 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.

A WARNING: 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 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.

A **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.

A WARNING: 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 anticlockwise 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.
- 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 / BLINDS

### Windows

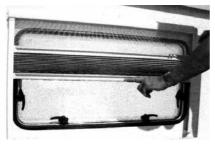


To open, turn knobs anti-clockwise and open catches. Swivel the window pane open to the desired position and close knobs clockwise to lock in the open position.

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.

#### To adjust the tension of the Horrex blind:

Trim panels or window surround will need to be removed before the blind can be re-tensioned.



In each corner piece there is an cord tensioner (see photo). By unscrewing the hexagon screw, the cord can move through the cord tensioner. When you pull the cord, the tension will get higher, when you let it move back the tension will get less.

#### **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.

### MINI HEKI ROOFLIGHT

In order to avoid material fatigue, do not leave the flynet closed for a long time.

### Midi Heki Rooflight



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.

### **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.
- 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

### SEAT SWIVEL / BUNK BED SAFETY / OMNISTEP

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.

### 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.

### Bunk bed safety

Where the sleeping surface is over one metre above floor level the following notices apply.

 $\triangle$  **WARNING:** Always ensure safety boards are located before entering the bunk.

A **WARNING:** Use upper bunks for sleeping only, with the provided protection against fall out in position.

A WARNING: Care shall be taken against the risk of fall out when the upper bunks are being used by children, specially under 6 years of age, these bunks are not suitable for use by infants without supervision

### **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

### **Omnistor Awning**

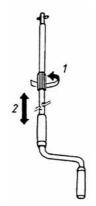
### General remarks:

- 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.

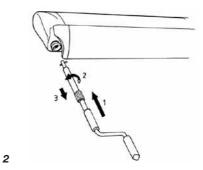
### Users instructions:

1

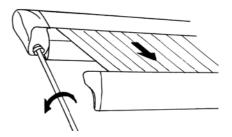
1. Adjust the crank to the required height.



2. Introduce the crank arm into the bayonet joint.

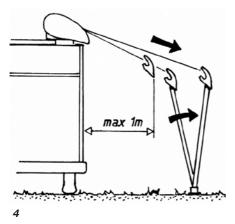


3. Unroll the awning while keeping the crank down. The awning will only open after a couple of turnings.

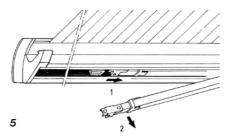


3

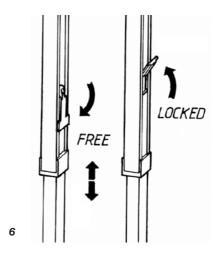
4. Unroll till 1 m max. Then put out the support arms before further unrolling



5. Slide the support arms out of the front profile.



6. Adjust them to the required height. The fabric can be tightened by rolling up a little.



**Note:** Never put out the support arms that high, that the fabric jams between the arms and the box.

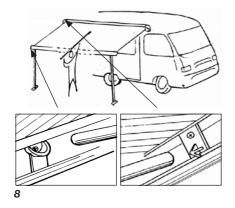
7. Fasten the support arms.



Fig. 7

### OMNISTOR AWNING

8. Install the tension rafter (for 3.75 m awning).

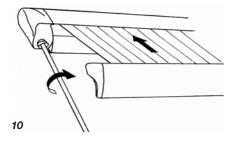


9. When raining, lower one side of the awning in such a way that the water can run down the fabric. Prevent the fabric from flying up by a sudden wind blow by using the hold down kit (optional).



10.

The front profile locks automatically when rolling up



### STATUS 570 ANTENNA

### Status 570 Digital antenna system

#### Travelling

### Do not travel:

- with the antenna raised
- with the antenna set for vertical signals

To reduce the possibility of damage when travelling, point the antenna backwards.

The RED SPOT on the bottom of the mast indicates the front of the Antenna.

#### Operating the system

Firstly determine the approximate location of the nearest transmitter and whether the signals are horizontally or vertically polarised. For assistance ask your site operator or check other antennas in the vicinity.

1. Loosen the Mast Locking Collar and raise the antenna. Rotate the mast to direct the TV transmitter.

The RED SPOT on the bottom of the mast indicates the front of the antenna.

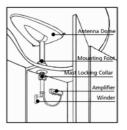
 Should you need to receive vertically polarised signals rotate the winder, anticlockwise to cant the antenna through 90°. The red / green indicator in the lower part of the aerial mast indicates whether the aerial is horizontal or vertical.

DO NOT use undue force on the winder.

- 3. Switch ON the amplifier and the LED will illuminate.
- 4. Check the gain control is set to maximum. For maximum rotate clockwise.
- 5. Tune your television into the strongest signal. You may need to adjust the direction of the mast to achieve the best picture quality.
- 6. Secure by tightening the mast locking collar.

#### Removing the antenna

- 1. Unplug the antenna lead from the amplifier.
- Loosen the mast locking collar and lift off whilst feeding out the mast, coaxial cable and plug.
- 3. Push the blanking cap supplied into place.



**WARNING:** The blanking cap is temporary seal and is not recommended for long term use.

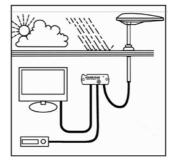
### Technical:

#### Antenna dome

Height raised: 330mm Height lowered: 150mm No Antenna dome: 50mm

Mast: 365 mm Amplifier: 115 x 45 x 29mm

Frequency Range: UHF 470-862 MHz Antenna Forward Gain: 7db Amplifier Gain - Max: 18db Gain Adjustment - Min: 15db Noise Figure: 2.8db Output Impedence: 75ohms Output: 98 dbuV Power Supply: 12-24 VDC Power Consumption: 55ma



### STATUS 570 ANTENNA



### **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 Connections**

It is critical that all connections in the system are fitted correctly. Using the diagrams and procedures described over the page, please check all connectors ensuring they are 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. 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. An inspection of the routing of the cable is highly recommended to ensure all is correct.

### **Gain Control**

In normal use the button should be rotated clockwise for maximum. In strong signal areas the amplification may need to be reduced. To reduce amplification rotate the button anti-clockwise until picture quality improves. The button rotates through 270 degrees from MAX to MIN.

### LED light

Should the LED on the amplifier not light, firstly check there is power to the unit. Secondly check the polarity is correct. Otherwise contact your dealer for further assistance.

### Short Hook up - Test 1

This test isolates the wiring from the amplifier through to your TV/Radio points.

Unplug the coaxial plugs from the 'TV' sockets of the amplifier and using your TV fly lead with convertor 1 supplied. Connect your TV to the amplifier.

Please ensure the antenna dome is plugged directly into the 'ANT-IN' socket of the amplifier and switch on. Tune in your TV for the strongest signal.

If the picture quality improves the fault lies with the wiring of the system between the amplifier and the TV outlet socket.

### Short Hook up - Test 2

This text isolates the amplifier by connecting your TV direct to the antenna.

Unplug the antenna from the amplifier and connect convertor 2 supplied to the plug on the cable end. Using your TV Fly lead connect the antenna directly to your TV. Tune in your for the strongest signal.

If the picture quality improves, the fault lies the Vision Plus Amplifier.

### Antenna Dome Coaxial Cable

Check the routing of the coaxial cable from the antenna dome to the amplifier. Check to ensure there are no kinks or trapped cable or if there are loops of surplus cable which could be affecting performance.

Signal	Symptom	Action
Very poor	No picture or sound, TV freez- ing, severe pixila- tion, break up and picture drop out	Check the amplifier gain is set to maximum (rotate clockwise). Check antenna alignment which must be directed at the transmitter. Ensure the antennas polarity is correct, whether horizontal or vertical. Bypass the amplifier by following 'Short Hook-Up Test 1'
Poor	Moderate pixilation and sound distor- tion	
Medium	Minor pixilation, will not receive all channels	
Good	Stable picture, good sound qual- ity, will receive all channels	N/A
Strong	Moderate pixila- tion, picture break up and drop out	Reduce the amplifier gain (rotate anti-clock- wise). Rotate antenna AWAY from the transmit- ter.
Very Strong	No picture or sound, TV freez- ing, severe pixila- tion, break up and picture drop out	Rotate antenna AWAY from the transmitter. Switch 'OFF' the amplifier and turn the gain control to maximum (rotate clockwise).

After performing any of the 'Actions' above you must re-tune your TV.

### CARE OF FURNITURE

# 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.

### **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 stowage / store in transit

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.

### SHOWER / TV INLET / COLOUR REFERENCE

### Shower

When using the shower, always ensure that the shower door is fully closed thus avoiding water spray on unprotected areas.

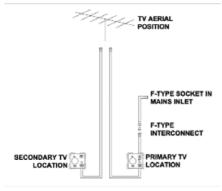
### **Trigger shower heads**

- Squeeze trigger to release water. Release trigger to top. Twist trigger up to gain permanent water flow, lower to stop.
- Care should be taken as water may become hot temporarily when switched on until it mixes and regulates.
- Small children should be supervised at all times when using the shower.
- We recommend unfastening the trigger shower head before travelling and storing safely to prevent it becoming detached whilst travelling.

### **TV** inlet

Depending on specification, the motorhome may be fitted with an external co-ax connection in place of, or in addition to, connections for a roof mounted TV aerial. The external co-ax connection point will be within the mains inlet enclosure.

## Co-ax connection point within the mains inlet enclosure



A short co-ax lead featuring a screw on co-ax connection will be present behind the Blue mains inlet connector. A co-ax cable will be fitted and connected within the motorhome, from the back of this connection, to the primary TV position within the motorhome. At the same time, further co-ax cable or cables will be fitted which route from a likely TV aerial position (i.e. within the wardrobe) to each of the TV positions within the motorhomes.

The primary TV position will feature a socket marked 12v, TV, and SAT. The co-ax from the external connection point will route to the socket output marked SAT, whilst the co-ax from the wardrobe or similar will route to the socket output marked TV. At any secondary TV positions, if present, the co-ax from the wardrobe will route to the socket output marked TV.

An external TV aerial or site TV feed can be connected to the external connection point; signals from that connection will then be available at the primary TV position within the motorhome. As the connections are of the screw-on type, it is also possible to use this co-ax to route from an externally mounted satellite dish, to a satellite receiver.

### Colour reference

The colour code for touch ups or resprays for all white Fiat cabs and Swift coach built habitational body components is Fiat White 249. For Fiat cabs other than white, contact your Fiat dealer or obtain a colour match.

Please be aware that colours can fade over time, and therefore, if the vehicle is more than a few years old, it is suggested a colour match be obtained.

### **Sliding Door Flyscreen**

### Operation

The sliding door flyscreen runs on tracks mounted to the floor and the Control panel and moves from left to right. It is tensioned with cords that are fixed at floor level near to the passenger seat.

When the vehicle sliding door is open pull the blind from the central part of the vertical handle avoiding twisting to close the blind.

Ensure flynet is open before closing the vehicle sliding door.

### Care

Clean only with a damp sponge ensuring dirt build that would affect the running tracks is removed. Use only clean water with mild suds or a vacuum cleaner. In order to avoid material fatigue, do not leave the flyscreen closed for a long period. Take care with high winds when the flynet is closed.

