

SWITCHING ON THE REFRIGERATOR (control panel)

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

Smart Energy Selection (SES)

When you start up the refrigerator (equipped with Smart Energy Selection (SES)) you should usually select the AUTO mode. The SES system will then automatically select the best of the three available energy sources.

The system will apply the following priority:

- mains voltage (230V)
- direct current (12V)
- liquid gas

If an energy source becomes available that has a higher priority than the source the refrigerator is currently using (e.g. if your vehicle engine is started), the system will stop using the current energy source and switch to the energy source with the higher priority.

If a fault occurs in one or more of the possible energy sources, the system will not generate an error message while an alternative energy source is still available. The SES system switches over automatically.

If none of the energy sources are available, the blue LED flashes every second and an error code is shown in the display.

Automatic models additionally allow you to select the desired energy source manually.

Switching on the refrigerator

Important! The memory of the SES system

saves every change made to the setting. Consequently, the SES system will start up on each subsequent occasion in the last selected setting.

1. Open the valve of the gas bottle.
 2. Open the taps of the gas supply.
 3. Press main switch (A). The function LED will turn blue and all symbols on the LCD display will light up.
 4. Use the mode selection switch to select the "Auto" function or one of the power supplies that you want. The LCD display will show the option you have selected.
 5. Set the desired refrigerating cooling level by means of the cooling level selection switch (C). The LCD display will show the cooling level setting you have selected.
- A. Use the main switch to switch the refrigerator on and off. The function LED will turn blue. The display LCD shows the most recent settings. After 10 seconds the LCD display's backlight will go out. The function LED remains blue.
- B. Press the mode selector switch and the LCD display backlight will show the setting for 10 seconds. Pressing the mode selector switch successive times takes you through the menu in the following sequence: AUTO, manual DC (12V), manual gas, manual mains voltage (230V) and back to AUTO. Select either the AUTO option or one of the other power supplies that you want to use. The LCD display shows the option you have selected. If you select the AUTO option,

the system will choose the most suitable power supply and the AUTO symbol and the symbol of the power supply chosen by the system will both be shown on the LCD display. Ten seconds after release of the mode selector switch, the system will switch off the LCD backlight.

C. Use the cooling level selector switch to control the temperature of the refrigerator. When you press the cooling level selector switch, the LCD backlight will light up and show the currently set temperature. Every time you press the cooling level selector switch again, you set the refrigerator one position cooler. On reaching the coldest temperature, the

system will start again at the warmest temperature setting. Ten seconds after release of the cooling level selector switch, the system will switch off the LCD backlight.

Powering with electricity

Powering with electricity can be selected both by the Auto mode (only Automatic fridges) and manually.

Auto mode

Mains voltage (230V):

This energy source will be selected if the mains voltage is greater than 200V. This power supply requires a continuous current of 12V to operate the electronic control system.

Direct current (12V) :

The SES system will select 12 V powering only if a mains voltage (230V) is unavailable, the vehicle engine is running and a voltage higher than 11V is available.

If a fault occurs during electrical powering (230V or 12V), an error message will not be shown on the display as long as another energy source is available. The system will automatically switch to the available energy source that has the highest priority.

Selecting electrical power manually

Mains voltage (230V):

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

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

Direct current (12V):

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

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

NB: If the refrigerator has been manually set to operate at 12V, it will not automatically switch to another energy source when your vehicle's engine is not running. In this case,

the refrigerator will stop cooling.

Powering with gas

Powering with gas can be selected both by the Auto mode (only Automatic fridges) and manually.

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

- For selection of gas type, see the information plate inside your refrigerator.
- For the pressure regulator model, see the information plate inside your refrigerator.
- The type of gas container and its location must be in compliance with the most recent regulations. Ensure that the unit is installed in a location with good ventilation and make sure that the ventilation openings in the gas container storage location remain open.
- The changing of the gas container must be done outside in the open air and out of reach of any possible sources of ignition.

- It is prohibited to use gas to power the refrigerator while you are driving.
- It is prohibited to use gas to power the refrigerator in the vicinity of petrol stations.

Auto mode

The system will select gas operation if:

- mains voltage (230V) is unavailable;
- the vehicle's engine is not running.

Once mains voltage (230V) is available again or the vehicle's engine is running, the system will switch to the available energy source that has the highest priority if the fridge is in Auto mode.

If the refrigerator switches from 12V DC to gas operation when it is in auto mode, the system will wait for about 15 minutes before igniting the gas. During this time, however, the gas indicator lamp will come on. The delay is built in to avoid it switching to gas operation whenever you stop to refuel your vehicle. You can cancel the delay by immediately switching the refrigerator off and then on again.

If the system selects gas operation, the ignition will be activated automatically. The gas will flow to the burner and be lit by the electric ignition. If the flame goes out, the gas will immediately be lit again.

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

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

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

Switching off the refrigerator

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

MAINTENANCE

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

Cleaning

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

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

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

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

Defrosting

Frost will gradually build up on the condenser of the refrigerator. You should defrost the refrigerator as soon as the frost

layer is about 3 mm thick. Frost reduces the refrigerating capacity and life of your refrigerator.

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

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

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

Door locking mechanism

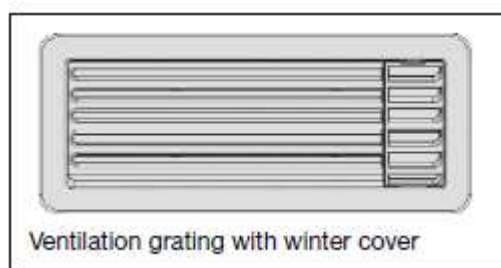
Frost will form in the refrigerator if the door is not closed properly. To determine whether the door closes properly, close the door with a piece of paper between the door and the refrigerator. Pull at the piece of paper. If you feel resistance, the refrigerator door closes properly. If you feel no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

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

Winter operation

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

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



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

Maintenance of gas equipment

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

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

- appliances that run on liquid gas must be inspected before being used for the first time and every year thereafter.
- the gas burner must be cleaned at least once a year or more frequently if necessary.
- If a gas hose is used, it must be checked annually. This hose has a limited life and, thus, must be regularly replaced. Check the hose regularly for cracks, splits and ageing. If in doubt, replace the hose. Pay attention to the maximum life of the hose and replace it in time, as advised by the manufacturer or in conformance with local regulations.
- For replacement, a gas hose approved in accordance with the local regulations must be used. Position the hose so that it can rotate, is not kinked, and will allow no bends to occur.
- Due to the limited life of the gas hose, it must be installed so that replacement is possible.

Maintenance checklist

This refrigerator will give you many years of

trouble-free use if you simply run through the following checklist regularly:

- keep the refrigerator clean (see section "Cleaning");
- defrost the refrigerator as often as is necessary (see section "Defrosting");
- check the door closing mechanism regularly (see section "Door locking mechanism");
- make sure that the ventilation grills are not blocked;
- Regularly clean the ventilation grills.

Vent screen

The vent has a vent screen to prevent bugs from entering the combustion area of the refrigerators. These vents need to be cleaned regularly to insure a good airflow. When the refrigerator performs poor because of external circumstances such as extreme ambient temperatures, the vents can be removed to improve the airflow and improve the cooling performance of the refrigerators.

STORAGE

If you do not expect to use your refrigerator for a lengthy period, carry out the following actions:

- Remove all food
- Switch off the refrigerator
- Clean the refrigerator as described
- Shut off the gas tap to the refrigerator
- Leave the door of the refrigerator ajar using the special door closure hook (storage position)
- Place the winter protection on the ventilation grill.

TROUBLESHOOTING

If your refrigerator does not refrigerate properly or will not start, run through the following checklist. If this fails to solve the problem, please contact the Customer Service Department in your country (see the addresses at the back of this manual).

- Check whether you have followed the instructions ("Switching on the refrigerator").
- Check whether the refrigerator is on a level surface.
- Check whether the refrigerator can be used with an available energy source.

Problem: refrigerator will not work on gas	
Possible cause	Action you can take
a) Gas bottle is empty.	a) Replace the gas bottle.
b) Valve of the gas bottle or one of the shut-off valves is closed.	b) Open the valve of the gas bottle or shut-off valve(s).
Problem: refrigerator will not work on 12V DC	
Possible cause	Action you can take
a) 12V fuse is defective.	a) Fit a new fuse (Camper —> fuse box of camper. Car —> fuse box of car)
b) Battery is empty.	b) Test the battery and charge it.
Problem: refrigerator will not refrigerate sufficiently	
Possible cause	Action you can take
a) Insufficient ventilation for the refrigerator.	a) Check whether the ventilation gratings are covered.
b) Thermostat set too low.	b) Increase the setting of the thermostat
c) Too much ice on the condenser.	c) Check whether the refrigerator door shuts properly and defrost the refrigerator.
d) Too much hot food stored simultaneously.	d) Let the food cool off first.
e) Gas burner is dirty.	e) Have the gas burner cleaned.
f) Door does not shut properly.	f) Check the door closing mechanism.

Control Panel Diagnostics

Refrigerators with a LCD control panel have a special diagnostics area which displays an error code if there is a fault.

- **Fault 1:** AC heater current is measured to be 75% below nominal current.

Action: Contact your dealer or a Thetford Service Centre.

- **Fault 2:** DC heater current is measured to be 75% below nominal current.

Action: Contact your dealer or a Thetford Service Centre.

- **Fault 3:** AC heater is ON when it should be OFF.

Action: Contact your dealer or a Thetford Service Centre.

- **Fault 4:** DC heater is ON when it should be OFF.

Action: Contact your dealer or a Thetford Service Centre.

- **Fault 5:** Senses flame when gas should be OFF.

Action: Contact your dealer or a Thetford Service Centre.

- **Fault 6:** Senses gas output terminal ON when should be OFF.

Action: Contact your dealer or a Thetford

Service Centre.

- **Fault 7:** Senses gas output terminal OFF when should be ON.

Action: Contact your dealer or a Thetford Service Centre.

- **Fault 8:** AC mains supply is 20% below nominal.

Action: Your controls are in manual AC mode, but there is no power available.

Check if you plugged in the 230V connection, if so the voltage supply on the 230V connection is too low, contact the power supplier.

- **Fault 9:** Gas lockout because flame fails to ignite after 30 seconds.

Action: Your controls are in manual gas mode, but the flame fails to ignite. Check if your gas cylinder is empty or if one of the shut-off valves is closed. Select another energy source. Reset the fridge 3 or 4 times in gas-mode until flame ignites. Contact your dealer or a Thetford Service Centre if problem isn't resolved.

- **Fault 10:** No "engine running" signal is present and control is in Manual DC mode.

Action: Your controls are in manual DC mode and the engine of your vehicle is not running. The refrigerator can only cool on 12V when the engine of your vehicle is running. Start the engine or select a different energy mode.

- **Fault 11:** No energy source is available and control is in AUTO mode.

Action: Your controls are in AUTO mode, but no energy source is available. Start the engine, connect the 230V supply or open the gas supply and reset the refrigerator by turning it off and on again.

- **Fault 12:** Contact your dealer or a Thetford Service Centre.

- **Fault 13:** Thermistor fails; control automatically switches to Backup mode (BOS).

Action: Check if the connector above the fin on the inside of the cabinet is correctly plugged in. If so contact your dealer or a Thetford Service Centre.

- **Fault 14:** Display Board and Power board lost communication with each other.

Action: Contact your dealer or a Thetford Service Centre.