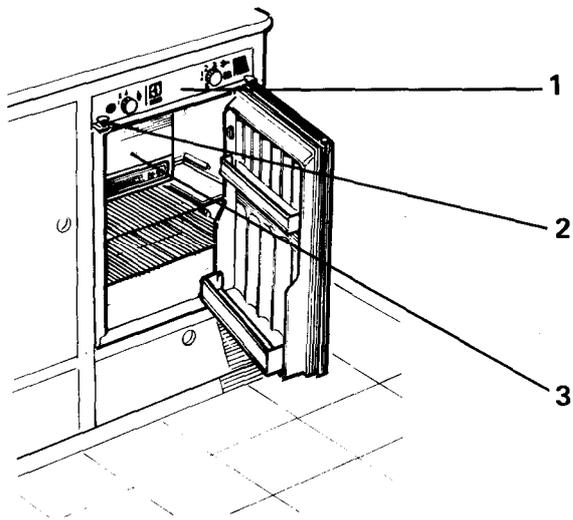


Refrigerator
Réfrigérateur
Koelkast

RM212,F

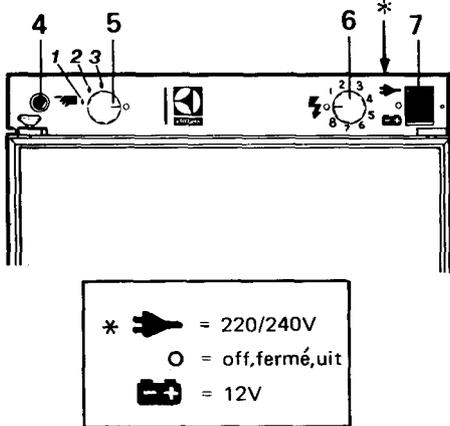
INSTRUCTIONS FOR USE Page 3

MODE D'EMPLOI GEBRUIKSAANWIJZING .. Biad 7



- 1 Control Panel
 2 Travel Catch
 3 Frozen Food Storage Compartment (**)
-
- 1 Tableau de réglage
 2 Arrêt de porte
 3 Compartiment à basse température (**)
-
- 1 Bedieningspaneel
 2 Deurvergrendeling
 3 Diepvries bewaarvak (**)

Fig. 1



4. Button for igniter
 5. Combined gas control and flame failure device
 6. Electric thermostat (220 or 240V)
 7. Voltage selector switch

4. Bouton de l'allumeur
 5. Dispositif de réglage de gaz et de sécurité
 6. Thermostat électrique (220V)
 7. Commutateur

4. Knop voor ontsteker
 5. Gekombineerde gaskraan en vlambeveiliging
 6. Thermostaat (alleen voor 220V)
 7. Voltage keuze-knop

Fig. 2

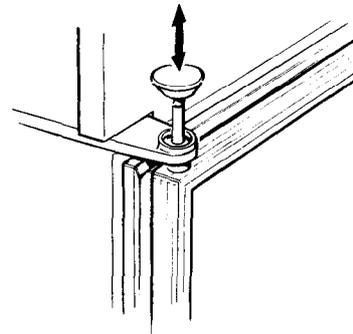
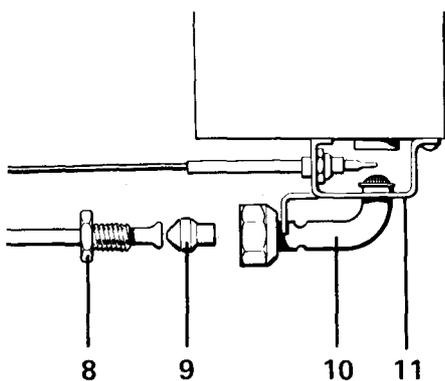


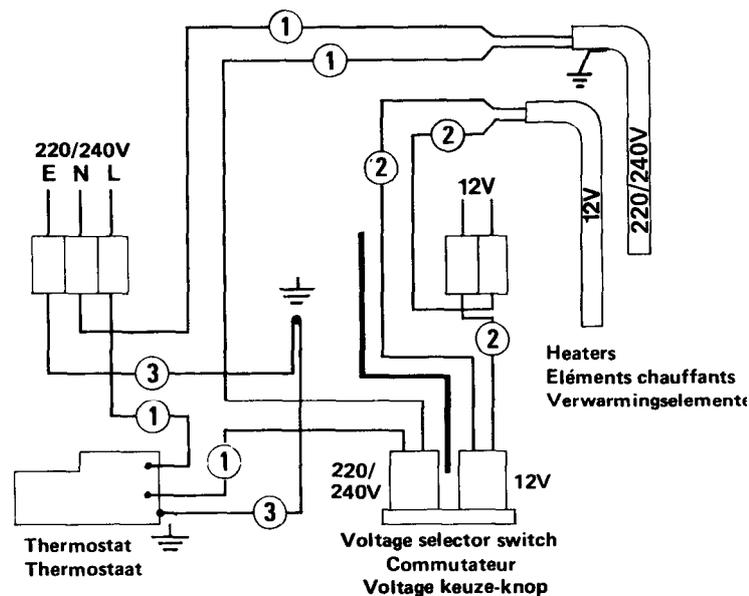
Fig. 3



- | | |
|-------------------|-----------------------|
| 8 Union | 8 Connexion |
| 9 Jet | 9 Injecteur |
| 10 Burner | 10 Brûleur |
| 11 Burner Bracket | 11 Console de Brûleur |

- 8 Koppeling
 9 Inspuiter
 10 Brander
 11 Branderhuis

Fig. 4



- L = Brown, Brun, Bruin
 N = Blue, Bleu, Blauw
 E = Green-and-yellow, Vert-et-jaune, Groen/geel

- 1 = Brown, Brun, Bruin
 2 = Black, Noir, Zwart
 3 = Green-and-yellow, Vert-et-jaune, Groen/geel

Fig. 5

INTRODUCTION

To ensure satisfactory and economical operation, it is essential that the refrigerator is installed as directed in the Electrolux Installation Instructions, and is used in accordance with these instructions. The ventilation openings for air circulation over the cooling unit must not be reduced in size or obstructed in any way otherwise the performance of the cooling unit may be impaired and consumption increased.

When the caravan is on tow, the refrigerator should be operated electrically, i.e. from the 12V battery in the towing vehicle, and not by means of bottled gas.

WARNING

Because of the hazards associated with the use of continuously operating bottled-gas appliances with open-flame burners in difficult-to-ventilate confined spaces, and other considerations, Electrolux do not recommend the installation of their bottled-gas caravan refrigerators on boats, and refrigerators so installed will not be covered by the Company's guarantee.

If, however, a boat installation is planned for the refrigerator, reference should be made to British Standard 5482, Part 3, 1979 and to the Thames Water Authority "Launch Digest" and "Launch Specification". Also, current Guide Lines published by local Water Authorities, or the Ship and Boat Builders' National Federation.

It should be noted that special Marine Refrigerators are available from Electrolux for use on boats.

LEVEL

When the refrigerator is operating, refrigerant trickles through the cooling unit under the influence of gravity. To enable a satisfactory flow to take place, the unit must be level in both directions, otherwise refrigerant can accumulate in pockets and the cooling process impaired.

A continuous rolling and pitching motion as occurs in a caravan on tow will not normally affect operation, but when the caravan is at rest for more than about half an hour it must be levelled, in both directions, so that the ice-tray shelf inside the frozen food storage compartment is level. (This can be checked with a small spirit level placed on the ice-tray shelf). If it is not convenient to level the vehicle and it is to stand out of level for more than half an hour, the refrigerator should be temporarily turned off.

GAS PRESSURE, BURNER, JET, AND GAS CONTROL VALVE

The combined gas control valve and flame failure device (5, fig.2), and jet and burner (9 & 10, fig. 4), must be of the correct type or size for the gas and gas pressure which you use. The gas pressure is determined by the type of regulator fitted to your gas bottle, and this may vary according to the Standard adopted in the country concerned. In the United Kingdom, and most of Europe, the standard pressures used for butane and propane are as shown in section 1 of the table below. In Germany and Austria, the higher pressure shown in section 2 of the table usually applies.

It is essential that a reliable pressure regulator, set to deliver no more than the appropriate pressure shown in the table, is fitted directly to the gas bottle. Needle valve operated gas control taps are NOT suitable for use with this refrigerator and must not be used as a substitute for a pressure regulator.

Before using the refrigerator, check from the label attached to it that the gas equipment is correct for the gas and gas pressure to be used. If it is not, the burner, jet, and combined gas control valve and flame failure device must be changed for the correct size or type in accordance with the table below. For future reference, any changes made should be recorded on or beside the data label.

	Type of Gas	Gas Supply Pressure (Water gauge)	Size of Burner Jet	Type of Burner	Type of Gas Control Valve
1	*Butane Propane	11''(280mm)(28mbar) 14''(370mm)(37mbar)	4	With two aeration holes	Part No. 344002
2	Butane & Propane	20''(500mm)(50mbar) (Usually in Germany and Austria)	2	With one aeration hole	Part No. 344003 †

*e.g. Calor Gas, or Camping Gaz. † Identified by letter D on valve body

STARTING THE REFRIGERATOR (see fig.2)

Before using your refrigerator for the first time, it is advisable to wash the interior and its accessories as described later under 'Cleaning'.

The bottled gas equipment includes a Piezo crystal lighting device which creates a spark over the burner when the button (4) is pushed in fully. No batteries or flints are required to operate this lighter.

Before starting the refrigerator, always check that the alternative method of operation is off as the refrigerator should not be operated by both means at the same time. If the caravan is to be stationary for a period, check that the refrigerator is level.

Bottled Gas Operation - Lighting the burner

1. See that the voltage selector switch (7) is set to '0', i.e. is in its centre position. Ensure that gas is available from the bottle and turn on any taps in the supply to the refrigerator.
2. Turn the gas control knob (5) so that '3' is opposite the indicator mark.
3. Push in fully the gas control knob (5) for about 5 seconds to allow air to clear from the pipe line. (When starting initially, or after changing a gas bottle, it may be necessary to push in the knob appreciably longer to clear all the air. Do not, however, allow too much gas to accumulate around the burner as an over-rich gas/air mixture may be difficult to ignite).
4. Still pressing in the knob (5), push in the button (4) which operates the Piezo igniter, several times in quick succession. (A click should be heard each time the button is pushed in). Continue to press in the gas control knob (5) for a further 15 seconds to allow time for the thermocouple tip (over the burner) to heat up.
5. Release the gas control knob then check that the burner is alight by looking directly through the flame viewer located inside the cabinet at the rear left-hand lower corner. If the burner has not lit, repeat the lighting procedure.

Note:- The refrigerator has a flame failure device which will automatically shut off the gas to the burner if the flame is blown out. While the knob (5) is being pressed in, this device is temporarily inoperative.

Electric operation

The dual voltage electric equipment is for operation from the main 12 volt battery in the car when the caravan is on tow, or from mains voltage electricity when a 220 to 240V a.c. supply, with satisfactory earthing, is available on a site. Before using the refrigerator on electricity make sure that the electricity supply is suitable for the refrigerator.

It is important to understand that 12 volt operation is only intended to be used while the car engine is running and is charging the battery, otherwise the battery may be discharged to a point where it will not restart the engine. (The current drain at 12V is 8 amps minimum). When at rest for more than a short period, the caravan should be levelled and the refrigerator switched over to mains voltage, if available, or the 12V supply switched off and the refrigerator started up on bottled gas.

Before connecting to a mains voltage supply, it is important to make certain that the circuit to, and in, the caravan is properly and effectively earthed.

When operating on mains voltage, the temperature in the refrigerator is thermostatically controlled and can be adjusted by means of the knob (6) of the thermostat. The 12V circuit is not thermostatically controlled and the cooling unit will operate all the time the refrigerator is connected to 12V and switched on. 12V operation is, therefore, only intended to be used for relatively short periods, i.e. when the caravan is on tow. It is not intended for extended periods of use from a continuous 12V supply, otherwise the fresh food compartment may become too cold for the satisfactory storage of fresh foods and drinks.

For connection to the 12V supply, a two-way terminal block is located behind the right-hand end of the control panel (1, fig 1) at the top of the refrigerator.

For connection to a 220-240V electricity supply, the refrigerator is provided with a 3-core mains lead which is intended for connection to a properly earthed plug and socket outlet. In the United Kingdom, the following plug connection instructions must be observed.

IMPORTANT: The wires in the mains lead of this appliance are coloured in accordance with the following code.

GREEN-AND-YELLOW : EARTH,
BLUE : NEUTRAL, BROWN : LIVE

As the colours of the wires may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows :

The wire which is coloured GREEN-AND-YELLOW must be connected to the terminal in the plug which is marked with the letter E or by the earth symbol =L- or coloured green or green-and-yellow.

The wire which is coloured BLUE must be connected to the terminal which is marked with the letter N or coloured black.

The wire which is coloured BROWN must be connected to the terminal which is marked with the letter L or coloured red.

WARNING -THIS APPLIANCE MUST BE EARTHED.

In the United Kingdom, the plug or circuit to the refrigerator must be fitted with a fuse not greater than 5 amps. If a 13 amp. (B.S.1363) fused-plug is used, it should be fitted with a 3 amp fuse. In other countries, the fuse rating will depend on local practice.

During installation, a suitable socket outlet for the mains voltage supply should have been fitted in the caravan, near the refrigerator, in a position readily accessible to the user. In the United Kingdom, all mains voltage wiring in the caravan must be installed in accordance with I.E.E. regulations, including the use of an outlet and coupler to BS 4343/CE E17.

Voltage Selector Switch

The voltage selector switch (7) can be set to three different positions, identified by the following symbols :

☛ = Mains voltage, 220 or 240 V, (top of switch pushed in).
0 = off, (centre position).

☛ = 12V car battery, (bottom of switch pushed in).

To start the refrigerator on electricity, see that the gas control knob (5) is at '0' (off), set the voltage selector switch (7) to the voltage required, then connect the refrigerator to the appropriate voltage supply.

If on mains voltage (220-240), turn the thermostat knob (6) to setting No. 3 or 4.

TEMPERATURE REGULATION

After starting up the refrigerator, it will take about an hour before there are signs of cooling. When operating on mains voltage electricity, the refrigerator is thermostatically controlled and the thermostat knob (6) should be set to No. 3 or 4. This will maintain a suitable temperature in the refrigerator and frozen food storage compartment for general use but, in hot weather, or if more cooling is required, the knob should be turned to a higher number. If less cooling is required, the knob should be turned to a lower number. (This does not apply to 12 volt operation which is not thermostatically controlled).

For operation on gas, the refrigerator should be started off with the gas control (5) set at 'T'. This will provide suitable temperatures in the refrigerator in warm weather, but if the fresh food compartment becomes too cold, especially in cooler weather, turn the gas control knob to '2' or '1'. Remember to return it to a higher setting when necessary, - if the weather becomes warm again for instance.

FROZEN FOOD STORAGE COMPARTMENT

The frozen food storage compartment has a net volume of 3.7 litres (0.13 cubic feet) and has a two-star classification @ . This means that, provided the electric thermostat or gas control is set as described under "Temperature Regulation", the frozen food storage compartment will be maintained at a temperature of -12°C (10°F), or below. Under these conditions, most types of frozen food can be stored in the compartment for up to one month.

When storing frozen food, do not set the gas control at too low a setting. Reduce it only if foodstuffs in the fresh food compartment become too cold.

The permissible length of storage time cannot be precisely stated as this varies very much with the nature of the packaged quick-frozen food stored - vegetables, fish, meat, fruit and dairy products. It is therefore important to take note of the food manufacturer's estimate of the permissible storage times of his products. This estimate, which should be marked on each frozen food package, takes into account inevitable variations during every-day operation which may lead to changes in taste and colour.

If frozen food is allowed to thaw, i.e. the packs become wet and limp, no attempt should be made to store or re-freeze - it should be consumed within 24 hours.

The frozen food storage compartment is for storing quick frozen foods, ice-cream and making ice. It is not intended for the quick freezing of foodstuffs.

Care should be taken when handling and consuming water, ices (e.g. iced lollies) taken directly from the frozen food storage compartment because of the possibility of cold burn (frost bite) when such ices are at very low temperatures.

Never put bottles or cans of carbonated (gassy) drinks in the frozen food storage compartment as they may burst if the gas is forced out by freezing.

STORING FOOD IN THE REFRIGERATOR

To prevent drying out and the transfer of flavours from one food to another, always store foods in covered containers or plastic bags, or wrap them in waxed paper or aluminium foil.

Tall bottles can be placed in the lower door shelf by moving the upper door shelf to its storage position at the top of the door. The plastic tray can be removed from the upper cabinet shelf to make room for bottles and other tall items in the cabinet.

Do not leave the refrigerator door open longer than necessary.

NEVER PUT HOT FOOD IN THE REFRIGERATOR.

Whenever possible, it is of advantage to pre-cool your refrigerator with its contents by running it on bottled gas or mains electricity for a few hours, or overnight, before starting out from home.

To prevent undue movement of bottles etc. in the refrigerator when "on the move", crumpled pieces of clean paper may be wedged temporarily between the various items.

TRAVEL CATCH

The travel catch (fig.3) is to keep the refrigerator door securely closed when the vehicle is on the move. Remember always to push the catch down so that its lower end fully engages the plastic bush in the top of the door, before moving off.

ICE-MAKING

Fill the ice-tray with water to within 5mm from the top, and place it on the shelf in the top of the frozen food storage compartment. When ice has formed, the tray can be released from the shelf simply by lifting one corner.

Ice will be made more quickly if the gas control or electric thermostat (except on 12V) is turned to its highest setting. Remember to return the knob to its normal setting when ice has formed, other wise food in the cabinet may become too cold.

DEFROSTING

Frost will gradually form on and in the frozen food storage compartment and on the fins at the side of the compartment. It is a mistake to assume that an accumulation of frost gives a colder cabinet therefore the refrigerator should be defrosted regularly - about once a week or ten days, depending on the conditions of use.

To defrost, turn the gas control knob (5) or the voltage selector switch (7) to '0' (off), depending on which operation is being used. Remove the ice-tray, food, etc., wrap frozen foods in several layers of clean newspaper and place the package in a cool place.

To defrost as quickly as possible, a small dish of hot (not boiling) water may be placed on the ice-tray shelf, and a bowl of hot water on a cabinet shelf, changing the hot water as necessary until all frost has melted.

Do not place dishes of hot water on the bottom of the frozen food

storage compartment, and do not attempt to defrost more quickly with an electric fire or other form of heat as this may damage the plastic surfaces.

Defrost water will run via a tube at the back into the drip collector fixed to the rear of the refrigerator, where it will evaporate into the circulating air.

When all frost has melted, wipe dry the frozen food storage compartment and cabinet interior, then re-start the refrigerator, setting the gas control knob or voltage selector switch and thermostat knob to their respective positions.

Replace the fresh and frozen food, but wait until the cabinet has cooled down again before making ice.

Remember that if the temperature of frozen food is allowed to rise unduly during defrosting, its storage life may be shortened.

CLEANING THE REFRIGERATOR

Clean the refrigerator thoroughly at intervals as necessary. Turn off the gas or disconnect from the electricity supply, depending on which is being used, empty the cabinet and defrost as described earlier.

The refrigerator and its accessories may then be cleaned with a soft cloth wrung out in a weak solution of bicarbonate of soda. Finally, wipe over with a cloth wrung out in warm water only and dry with a clean cloth. Do not wash any plastic parts in water that is more than hand hot and do not expose them to dry heat.

NEVER USE STRONG CHEMICALS OR ABRASIVE CLEANING MATERIALS ON ANY PART OF THE REFRIGERATOR.

Replace the accessories and restart the refrigerator.

WHEN NOT IN USE

Whenever your refrigerator is to be out of use for a period, turn off the gas, or disconnect from the electricity supply, as applicable. Empty the cabinet and defrost as described earlier. Clean and thoroughly dry the interior and accessories and *leave the door open*. If this is not done the air inside may go stale giving rise to an unpleasant odour which could be difficult to remove at a later date. Empty and dry the ice-tray.

CONSUMPTION

It is not possible to give precise consumption figures for mains voltage electricity, as these vary depending on individual conditions of use. The figures in the following table may, however, be taken as a guide.

ELECTRICITY (220/240V)	ROOM TEMPERATURE		
	20°C (68°F)	25°C (77°F)	MAX
kWh (units) per 24 hours.	1.7	2.0	2.28

BOTTLED GAS	GAS CONTROL SETTING		
	1	2	3
lb liquid/24 hours	0.42	0.53	0.79
kg per 24 hours	0.19	0.24	0.36

MAINTENANCE

CHECKING FOR GAS LEAKS

Periodically, and after service adjustments to the gas equipment, all connections should be checked for leaks by applying a soap/water solution (with the burner alight) and watching for **bubbles**. **DO NOT USE A FLAME TO CHECK FOR LEAKS.** Screw connections should be tight but not overtight. (To check at the back of the refrigerator it will be necessary to make a temporary connection with flexible tubing).

FLUE BAFFLE

The flue baffle must be in position in the central tube of the boiler, over the burner, suspended on its support wire so that the lower edge of the baffle is 75mm (3 inches) above the bottom of the tube. If the baffle is missing or incorrectly located, the cooling unit will not operate properly on bottled gas.

CLEANING FLUE, BURNER, AND JET' (see fig.4)

The appearance of the burner flame should be checked at least once a year. To do this, turn the gas control knob to '3', when the colour of the flame should be predominantly blue. If this is not the case, the refrigerator should be emptied, disconnected, and removed from the recess, and the flue, burner and jet cleaned as described below. (The outer cover of the flue outlet will have to be removed and the flue extension tube withdrawn from the outside before the refrigerator can be moved). When the refrigerator is out of the recess, proceed as follows.

1. Remove the 'lazy T' flue top, then, from top of central flue tube of boiler, lift out the flue baffle on its support wire.
2. With door travel catch engaged, lay cabinet on left-hand side (i.e. burner near the floor) on sheets of newspaper.
3. Disconnect gas pipe from burner by undoing union (8), then pull out burner jet (9). Clean jet by washing it in White Spirit or alcohol, then blowing through with air. Do not under any circumstances prick out the jet. The orifice in the jet has been carefully designed. It is very delicate and any damage to the orifice could affect safety and performance.

4. Remove screw holding burner bracket (11) to boiler, release bracket tongues from slot in boiler, then carefully move burner bracket assembly to one side, clear of the flue tube.
5. Clean burner and adjacent components of soot etc. without disturbing their relative positions.
6. Clean flue tube of boiler - a special flue brush (part No. 151404) is available as an extra for this purpose.
7. Reassemble equipment, engaging tongues in top of burner bracket (11) in corresponding slot in bottom of boiler before replacing fixing screw. Gas unions must be tight but not overtightened.
8. Operate button (4) of igniter whilst watching to check that spark jumps from electrode to burner head. (See next section).
9. Referring to item 'Checking for Gas Leaks', re-install refrigerator, light burner and leave on test to ensure that it operates properly.

IGNITER SPARK GAP

The distance between the tip of the igniter and the top edge of the burner head gauze should be a minimum of 3mm.

HEATERS FOR ELECTRIC OPERATION

For electric operation, the boiler of the cooling unit is fitted with two separate heaters. The one near the back of the refrigerator casing has black leads and is for use on 12V. The other has brown leads, and an earth connection tag, and is for use on 220 to 240V. The 12V heater is rated at 95 watts, and the mains voltage heater, 100 watts.

SERVICE

Should you require help or service in connection with your refrigerator, please refer to addresses on back pages.