

## INSTRUCTIONS FOR INSTALLATION OF ELECTROLUX REFRIGERATOR MODEL RM212F IN CARAVANS AND PARK HOMES

THESE INSTRUCTIONS ARE IMPORTANT AND SHOULD BE FOLLOWED CLOSELY

### 1. INTRODUCTION

When operating, heat is emitted from parts of the cooling unit at the rear and this has to be carried away by air circulating freely over the back of the refrigerator. To ensure sufficient air circulation for satisfactory operation, it is essential that the clearances called for in this instruction are not reduced in any way otherwise cooling performance will be impaired and consumption increased. Providing the refrigerator is installed in accordance with these instructions, it should operate satisfactorily in ambient temperatures up to 32°C (90°F), with some measure of cooling in temperatures some degrees higher.

It is recommended that the refrigerator is installed by the caravan manufacturer, the supplier, or another qualified person. Owners who are competent to carry out the work themselves can do so, but, for the sake of safety they must take particular care in making the gas connections, checking for leaks, and installing the electrical wiring and fittings. All relevant regulations concerning such installations must be complied with.

Details of the alternative methods of installation are given in item 8 and these should be studied carefully before deciding which method to adopt.

If the refrigerator is to be installed in conjunction with a Cramer cooker/sinktop, their instructions must also be followed.

Many caravans are already provided with a recess, usually in the form of a cupboard which has been specially designed so that it can be adapted, by removal of its door and shelves, to house a refrigerator. Some caravan manufacturers have devised kits of parts to aid installation of refrigerators in their particular caravans.

Available as extras from Electrolux or their Agents, to assist in installing the refrigerator correctly, are the following items:-

- a) An upper, internal ventilator (part No. 2902311-01 for fitting at the top when the refrigerator is installed as illustrated in fig. 4 with internal ventilation of the cooling unit.
- b) A pair of ventilators (part No. 2901913 for a pack of two) for fitting in the wall, or wall and floor, of the caravan when the refrigerator is installed as shown in fig. 5, with wholly external ventilation of the flue and cooling unit.

A flue kit for venting the flue gases to the outside of the caravan is supplied with each refrigerator and must be fitted in all installations.

The gas supply pipe, connectors, etc., are not supplied by Electrolux as the type and sizes of these may vary depending on the particular installation. The appropriate parts should, however, be readily available from the refrigerator supplier or an Agent dealing in gas fittings.

The refrigerator weighs approximately 19 kg (41.8 lb) and the surface on which it is installed must be capable of carrying this weight, plus that of the food, satisfactorily.

**IMPORTANT :** On motorised vehicles, the refrigerator must be installed well away from fuel tanks, fuel filling inlets, pipes leading from inlets to fuel tanks, and fuel tank breathers.

#### 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, of different design, are available from Electrolux for use on boats.*

### 2. GAS PRESSURE – TYPE OF BURNER, JET, AND GAS CONTROL VALVE

The burner and jet (fig. 2), and the combined gas control valve and flame failure device at the top of the cabinet (to which the gas inlet pipe is connected), must all be of the correct type or size for the gas and gas pressure to be used – see table below.

	Type of Gas	Gas Supply Pressure (Water gauge)	Size of Burner Jet	Type of Burner	Type of Gas Control
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, Caravangas,  
or Camping Gaz.

\*\* Identified by letter D  
on valve body.

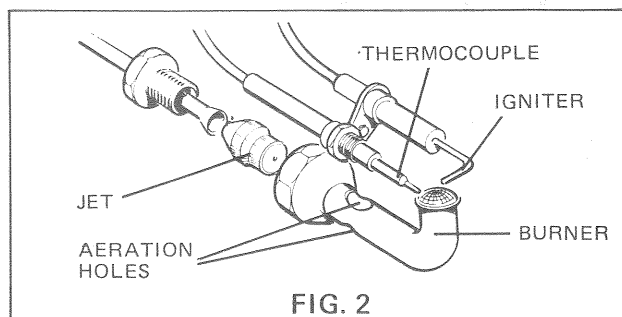


FIG. 2

The gas pressure is determined by the type of regulator fitted to the gas bottle, and this may vary according to the

Standard adopted in the country concerned. In the United Kingdom, and many other parts of Europe, the standard pressures used for butane and propane are as shown in section 1 of the table on page 1. 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 installing the refrigerator, check from the label attached to it that the gas equipment is correct for the gas and gas pressure regulator 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.** For future reference, any changes made should be recorded on or beside the data label.

### 3. FLUE BAFFLE

The flue baffle must be in position in the central tube of the boiler, suspended on its support wire over the burner so that the lower edge of the baffle is 75 mm (3") above the bottom of the central tube. The top end of the baffle support wire is bent into the shape of an "O", and rests horizontally on the top of the boiler central tube. If the flue baffle is missing or incorrectly located, the cooling unit will not operate properly on gas. Any strapping tape used to retain the baffle support wire to the top of the central tube during transit should be removed before installation.

### 4. CHANGING DOOR HINGES TO OPPOSITE SIDE

If preferred, the door hinges can be transferred to the opposite side to reverse the door hang.

- Taking care not to damage bottom of boiler casing, lift refrigerator and carefully lay it on its back.
- Transfer the hinges, travel catch, and front feet to the opposite side.
- Lift refrigerator and stand it upright. Check that door opens and closes properly.
- Check for satisfactory operation of the travel catch.

### 5. CHANGING OUTER DOOR PANEL

If required, the outer door panel can be removed and replaced by one of a different material or colour to match other fittings in the caravan. To do this, lay the refrigerator on its back (taking care not to damage the burner shield), then slide the panel up as far as it will go. Push the lower edge of the door panel inwards, against the insulation, and pull forward and out the plastic retaining strip along the bottom edge. Holding the top and bottom of the panel, bow out its centre until it can be removed from the door frame.

The replacement panel can be of rust-proofed metal, or a plastic laminate. It should be from 0.5mm to 3mm thick, and 464.5mm wide x 522mm high.

Fit the panel to the door and push it up as far as it will go. Re-fit the plastic strip along the bottom edge, then slide the panel down against the plastic strip.

### 6. LEVEL

The downward circulation of refrigerant within the cooling unit is by gravity and the refrigerator has to be reasonably level, when it is stationary, for the cooling unit to operate properly. If the refrigerator is left operating with a sustained list in excess of about 3° in any direction, pockets of liquid refrigerant can collect at various points within the unit impairing or preventing normal circulation of the refrigerant vapour until level conditions return. **It is essential, therefore, that the refrigerator is installed so that the ice-tray shelf inside the frozen food compartment is level in relation to the caravan, in both directions, so that when the caravan is level, the ice-tray shelf is level.**

With the caravan on tow, the usual rolling and pitching, or long hill climbs, will not normally affect the operation of the cooling unit, but when it is stationary a permanent list of more than about 3° in any direction may interfere with its operation. If the list does not exceed 5°, cooling is usually resumed when the refrigerator returns to the upright position, but if it exceeds 5°, the burner should be extinguished or the electricity supply switched off soon after the list begins otherwise the cooling unit may become damaged due to overheating. (Note: 3° corresponds to about 50 mm at the end of a metre-long plumb line, or 1½" at the end of a 30" plumb line).

### 7. DIMENSIONS OF REFRIGERATOR (Fig.3)

The exterior dimensions of the refrigerator are given in the following sketches. When installed, the clearances for air circulation given in item 8 must be allowed for.

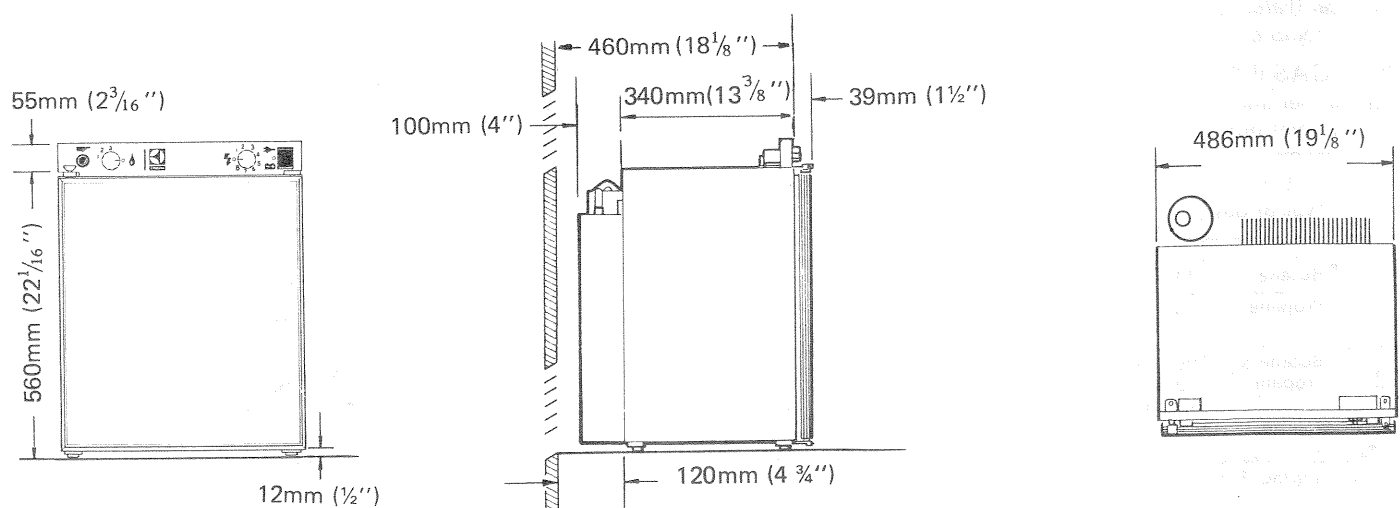


FIG. 3

## 8. BUILDING-IN

There are two basic methods of installation, each requiring a ventilator or ventilators available from Electrolux or their Agents.

The first method (figs. 4 and 6) is where the flue is vented directly to the outside, but ventilation of the cooling unit at the rear is provided by air passing to the unit from below the refrigerator, and emerging into the caravan (slightly warm) through a ventilator fitted at the top front (fig. 4a), or over the top rear (fig. 4b).

The alternative is wholly exterior ventilation (figs. 5 and 12) by means of two ventilators (in addition to the flue-venting kit) fitted at the rear of the refrigerator. The lower ventilator may be positioned in the caravan wall (fig. 5a), or in the floor, under the back of the refrigerator, (fig. 5b). This method of installation is useful where height is limited, and where warmth from the air passing over the cooling unit is not desired inside the caravan.

Whichever installation method is adopted, the surfaces above the flue outlet and under the burner should be of, or covered with, metal or other non-combustible material.

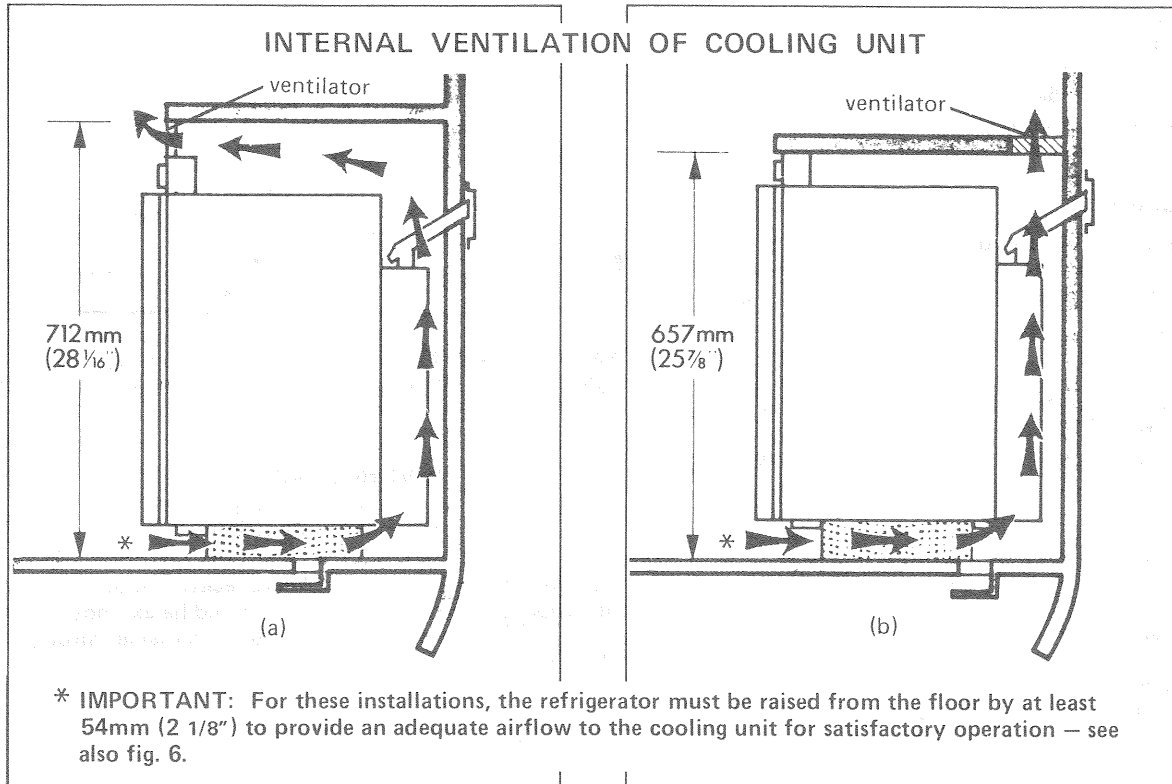


FIG. 4

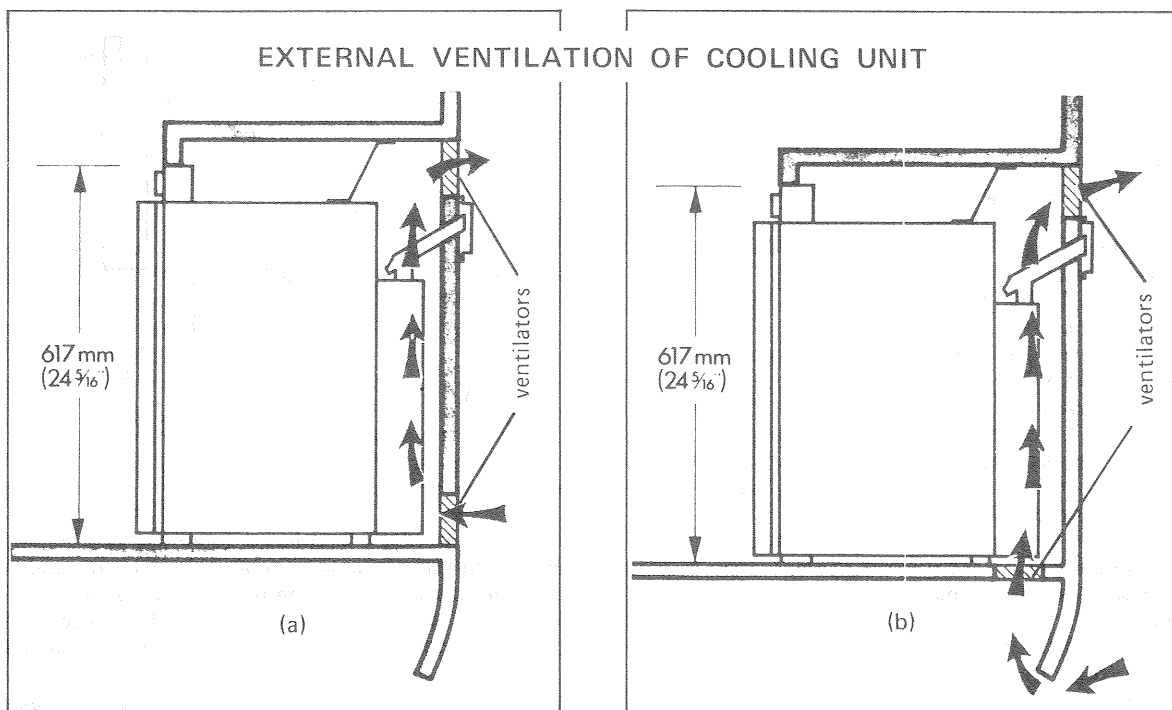


FIG. 5



## METHOD I (With Internal Ventilation of Cooling Unit)

For this method of installation (fig. 6) the following Electrolux ventilator is required:

One 2902311 Upper Ventilator (internal).

The dimensions of the recess are as follows; these are the minimum dimensions required for satisfactory performance of the cooling unit and must not be reduced in any way.

Height of recess – 712 mm (28<sup>1</sup>/<sub>16</sub>" (where ventilator is fitted at top front), or 657 mm (25<sup>7</sup>/<sub>8</sub>" (where ventilator is to be positioned over top rear).

Width of recess – 490 mm (19<sup>1</sup>/<sub>4</sub>"

Depth of recess – 460 mm (18<sup>1</sup>/<sub>8</sub>"

To provide the necessary space underneath for air flow over the cooling unit, the refrigerator should be supported on wooden bearers screwed to the sides of the recess, as illustrated. The bearers should be 254 mm (10") long x 54 mm (2<sup>1</sup>/<sub>8</sub>") high x 20 mm (7/8") approx. wide, and the front edges should be located 62 mm (2<sup>7</sup>/<sub>16</sub>") from the front of the recess.

### Flue Venting Kit

The flue gases must be vented directly to the outside air. Only the Electrolux flue venting kit should be used for this purpose. It consists of the following parts (see fig. 7).

- |                                |  |
|--------------------------------|--|
| A. Flue Top ('lazy T')         | F. Outer Cover   |
| B. Extension Tube for flue top | G. Screw (4 off) 1 <sup>1</sup> / <sub>4</sub> " No. 6 |
| C. Screw (4 off) 3/8" No. 6    | H. Screw, 3/16" No. 6                                  |
| D. Cover Washer (inner)        | I. Heat-resistant rubber flap                          |
| E. Flue Outlet                 |  |

The flue-top (A), which fits directly over the top of the central tube of the boiler, is in the form of a 'lazy T' and incorporates an air-break to minimise the possibility of flame extinction due to draughts.

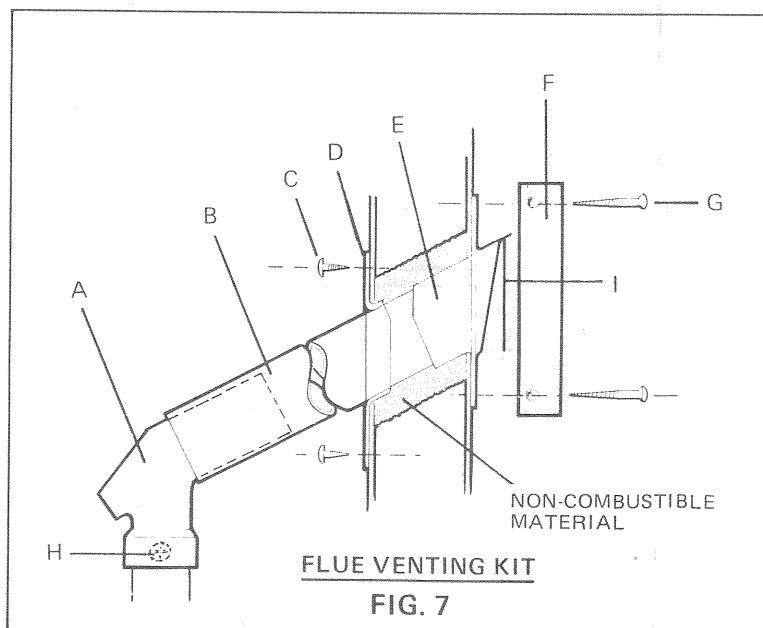
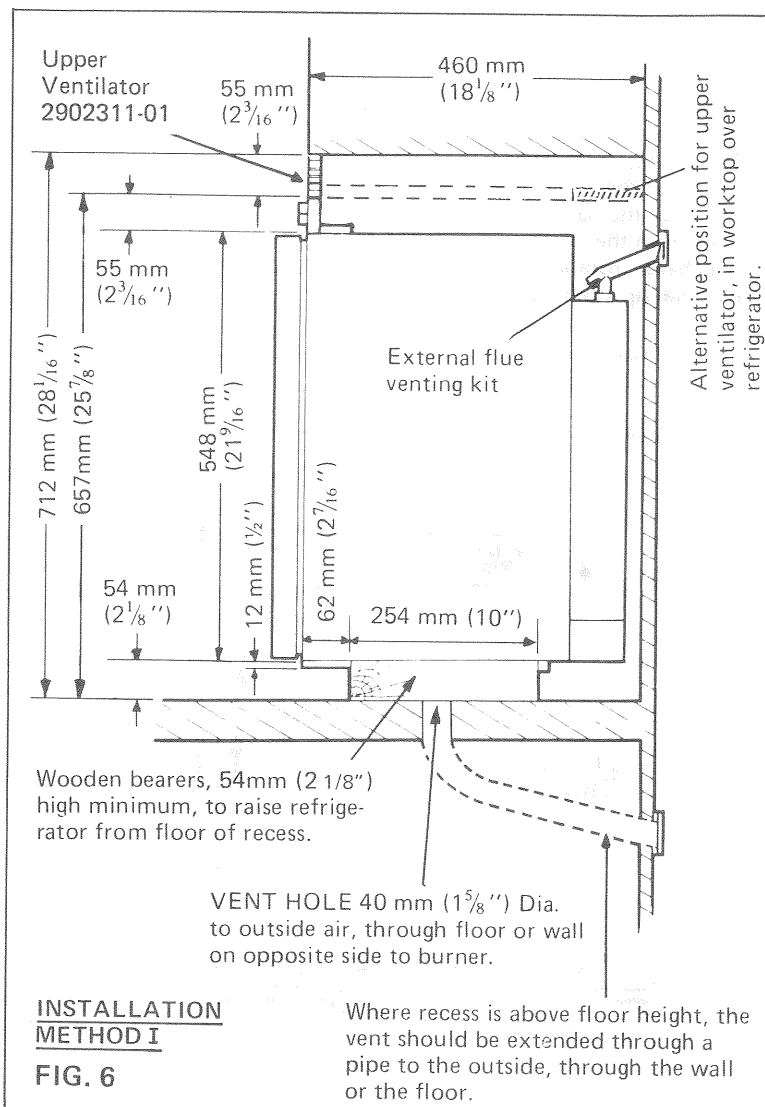
From the flue-top, the extension tube (B) has to pass through the wall of the vehicle to direct the flue gases to the outside. Care must be taken in determining the positions of the centres of the holes in the inner and outer skins of the wall to accept the extension tube. As the amount of space between the back of the refrigerator and the inside wall of the vehicle, as well as the thickness of the wall, may vary for each type of caravan, it is not possible to give actual dimensions therefore each case must be considered carefully before starting to make the opening. Take particular care to ensure the angle is correct so that when in position, the extension tube lines up accurately with the sloping part of the flue-top.

The opening must be large enough to allow the insertion of a layer of non-combustible material around the extension tube as shown in fig. 7, but the opening in the outer skin must not exceed 70 mm (2<sup>3</sup>/<sub>8</sub>") in diameter, otherwise the flange on the flue outlet (E) may not cover it properly.

(NOTE: On caravans for export to Sweden, to comply with their regulations, the opening through the inner skin of the caravan wall must be at least 80 mm (3<sup>1</sup>/<sub>8</sub>") in diameter and the exposed wall cavity faced with aluminium strip; the space between the aluminium strip and the flue extension must then be filled with glass wool or other non-combustible material).

When the hole has been made, the extension tube (B) must be cut to the appropriate length. To determine this length, push the extension tube fully into the flue outlet (E) so that they fit together. With the refrigerator in position, and the flue-top (A) secured in place on top of the central tube of the boiler by means of the screw H, insert the free end of the extension tube (B) through the wall of the vehicle and over the outlet of the flue-top, as far as it will go. Measure the length 'X' (fig. 8) of the tube protruding from the outside. Transfer this measurement to the other end of the tube as shown at 'Y' (fig. 8) and cut at right angles through the tube at this point.

Note 1. If the caravan wall is contoured or is not vertical in the region of the flue outlet, it may be necessary to make a packing piece, from metal or other non-combustible material, of a suitable shape to ensure that, when in position, the plate on the flue outlet is parallel with the back of the refrigerator.



Note 2. It is not advisable to lengthen the flue venting arrangement for more than a short distance as this may result in the flue gases becoming prematurely cooled and water vapour (which is produced during the natural process of combustion), condensing in the flue and running back into the boiler insulation and burner.

Before finally positioning the extension tube, ensure that the portion passing through the shell of the vehicle is surrounded by non-combustible material and that the inner cover washer (D) is in place and is secured by the screws, (C).

Hang the heat-resistant rubber flap (I) from the hook on the outer end of the flue outlet (E), checking that it hangs clear of the flue outlet opening but is free to move readily during adverse conditions of draught. **IMPORTANT: This flap must be fitted to all installations, except on vehicles to be exported to Sweden.**

Fit the outer cover (F) by means of the 4 screws (G) provided, ensuring that the front plate of the flue outlet (E) locates properly in the recess in the outer cover, with the tongue engaging the slot at the bottom. (If the cavity in the caravan wall is too narrow to accept the flanges of the inner cover washer and the flue outlet together (less than 32 mm), the inner cover washer should be fitted with its flange facing away from the wall).

It will be necessary to remove the outer cover and withdraw the extension tube before the refrigerator can be moved out of position at any time.

### Fitting the Upper Ventilator

To fit the upper ventilator in the position shown in fig. 9, screw a block of wood approx. 25 mm (1") square x 50 mm (2") long, to each side of the recess, 16 mm (5/8") from the front edge, as shown. Secure the ventilator to the blocks with a screw through the hole provided at each end. Alternatively, metal angle brackets may be used instead of wooden blocks. A similar method may be used to fit the ventilator in the alternative position over the top rear.

If any other type of ventilator is used, the total area of the openings in it for the passage of air must not be less than 190 cm<sup>2</sup> (30 in<sup>2</sup>).

### Vent Hole Under Refrigerator

A ventilation hole of not less than 13 cm<sup>2</sup> (2 in<sup>2</sup>) effective area (40 mm or 1 5/8" diameter) must be provided in the floor below the refrigerator as shown in fig. 6. The hole should not be directly under or close to the burner where draught could affect the flame, but must lead directly to the outside air through the floor or wall so that, in the event of a gas leak, it would provide an escape outlet for the heavier-than-air gas.

On mobile installations, the vent hole should be shielded against entry of mud etc., by a deflector as shown in fig. 10, fitted underneath with its "closed" end facing the front of the vehicle.

In use, the vent hole should be inspected periodically and cleared of any obstructing matter.

### Gas and Electrical Connections

Reference should be made to sections 9 and 10 for details regarding connection to the gas, 12V and mains electricity supplies.

### Securing in Recess

The refrigerator must be securely fixed in the recess to prevent movement and consequential damage to, or loosening, of gas connections etc. when the caravan is on tow. A method of securing is by means of screws passing through the main side members of the recess, at the front, into the outer casing of the refrigerator, as shown in fig. 12. **Note that the refrigerator must subsequently be readily removable for servicing purposes.**

Before drilling into the refrigerator casing, make certain that the refrigerator is level, in both directions, in relation to the caravan floor. If necessary, adjust the level by placing firm packing pieces under the appropriate feet.

*Caution: When drilling the holes into the refrigerator casing, take great care that the drill does not break through too far and damage the inner plastic lining.*

### METHOD II (Wholly External Ventilation — see Fig. 12)

When this method of installation is adopted, both the flue gases and ventilation air pass to the outside.

Ventilators must be fitted in the wall (or wall and floor) of the caravan as illustrated in fig. 12. The Electrolux wall ventilators (fig. 11) are of durable plastic and are packed in pairs under part number 2901913. **If any other types of ventilator are used the free air space through each must not be less than 240 cm<sup>2</sup> (37 in<sup>2</sup>).**

### Construction of Recess

The recommended recess for this type of installation is as shown in fig. 12, and is complete with regard to top, sides and base, sealed to each other at all junctions. The back edges should follow the contour of the caravan wall and preferably be sealed to the wall by a permanent and effective means. The dimensions for this recess are as follows:

Height — 617 mm (24 5/16")    Width — 490 mm (19 1/4")    Depth — 460 mm (18 1/8") minimum.

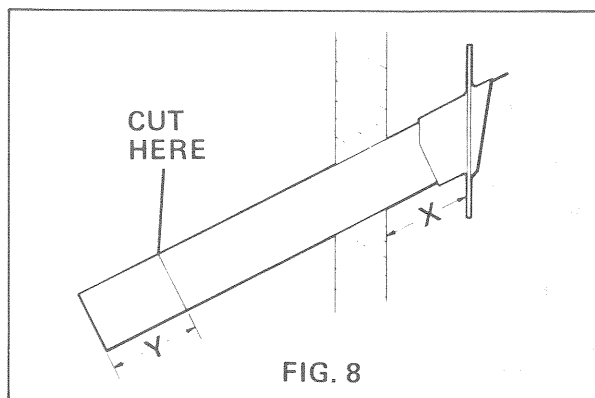


FIG. 8

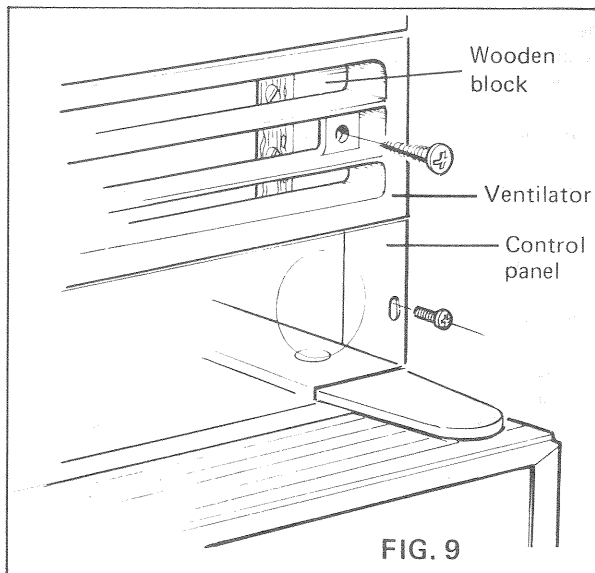


FIG. 9

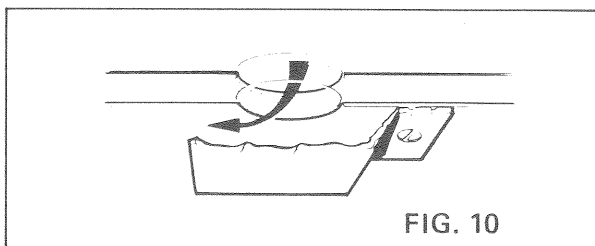


FIG. 10

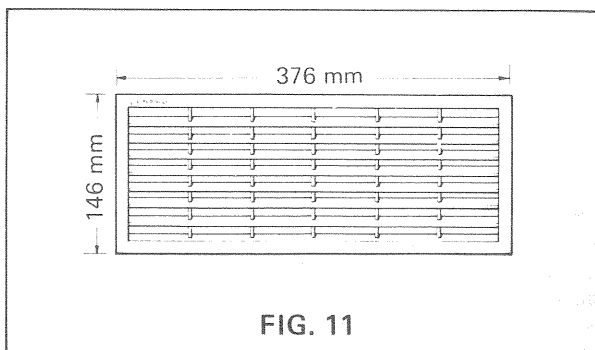


FIG. 11

It is recommended that a metal shield plate, as illustrated in fig. 12, is made to suit the particular installation. It should be fitted between the top of the refrigerator and the underside of the surface above it to prevent dust etc. accumulating in the cavity over the top of the refrigerator, and to assist in directing the rising warm air towards the upper ventilator.

If for some reason, it is not practical to provide a complete recess, and one or both sides are 'open', it is recommended that an abbreviated recess be constructed as illustrated in fig. 13. This is to encourage air circulation over the cooling unit, and also to prevent draughts, dust, etc., entering the ventilators in the wall and blowing into adjacent cupboards and drawers. The recess walls should be made to suit the contour of the caravan wall at the rear, and be sealed to it, whilst the front must extend far enough forward for part of the refrigerator body to enter.

In either case, the lower ventilator should, where possible, be fitted with its lowest **louvre** level with the floor of the recess, and the upper ventilator with its **lower edge** approximately level with the top of the refrigerator casing. This is to encourage good air flow over the various parts of the cooling unit. If the upper ventilator cannot be fitted as high as this, it may be a little lower, but never with its top edge lower than the top of the control fascia panel at the front of the cabinet.

The sizes of the openings required to accept the ventilators are: Height 122 mm ( $4\frac{13}{16}$ " ) x width 353 mm ( $13\frac{7}{8}$ " ). Before determining the position for the upper ventilator, note that the flue venting kit must also be fitted and the horizontal distance between the side of the flue outlet cover and the side of the ventilator should be as large as is practicable.

When cutting the openings for the ventilators, make certain that the strength and rigidity of the caravan wall or floor are in no way impaired. If structural members are interfered with, suitable alternative re-inforcing must be provided. In any case, the edges of openings in the wall must be lined, with wooden battens for instance, to bridge the space between the inner and outer skins.

When fitting the ventilators, use a mastic sealing compound around their edges to prevent rain water running down behind them.

If the lower ventilator is to be in the floor, it should be positioned away from the burner, towards the rear right-hand side to protect the flame from direct draughts.

### Flue Venting Kit

The flue venting kit must be fitted following the instructions given on page 4.

### Vent Hole

When the lower ventilator is in the wall, if the lowest louvre in it is higher than the level of the recess floor, a vent hole must be provided for the escape of gas in the event of a leak, similar to that described earlier – see "Vent Hole Under Refrigerator", on page 5.

### Gas and Electrical Connections

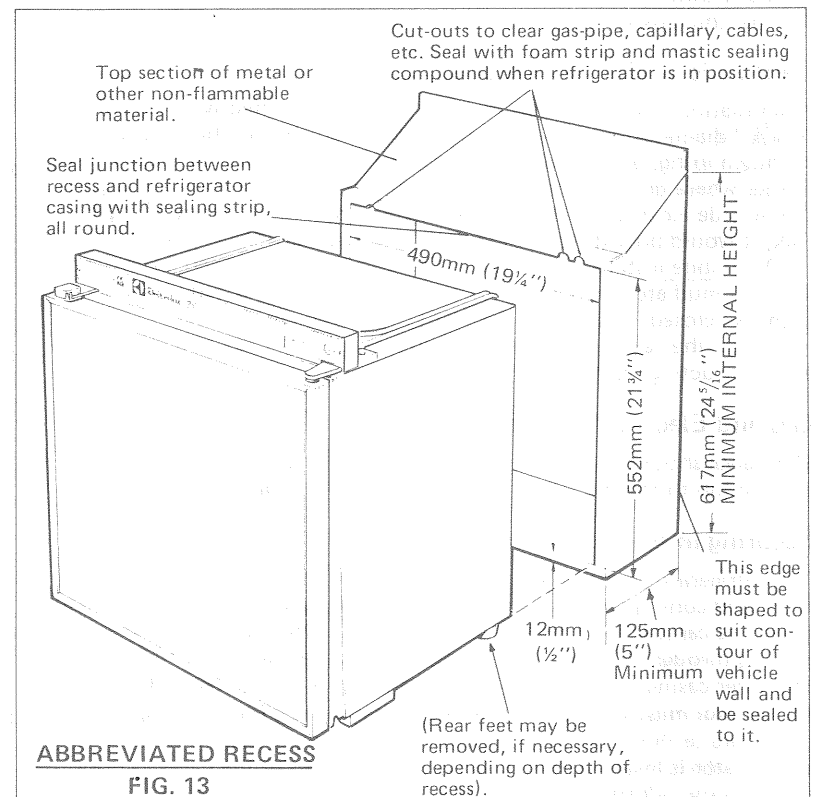
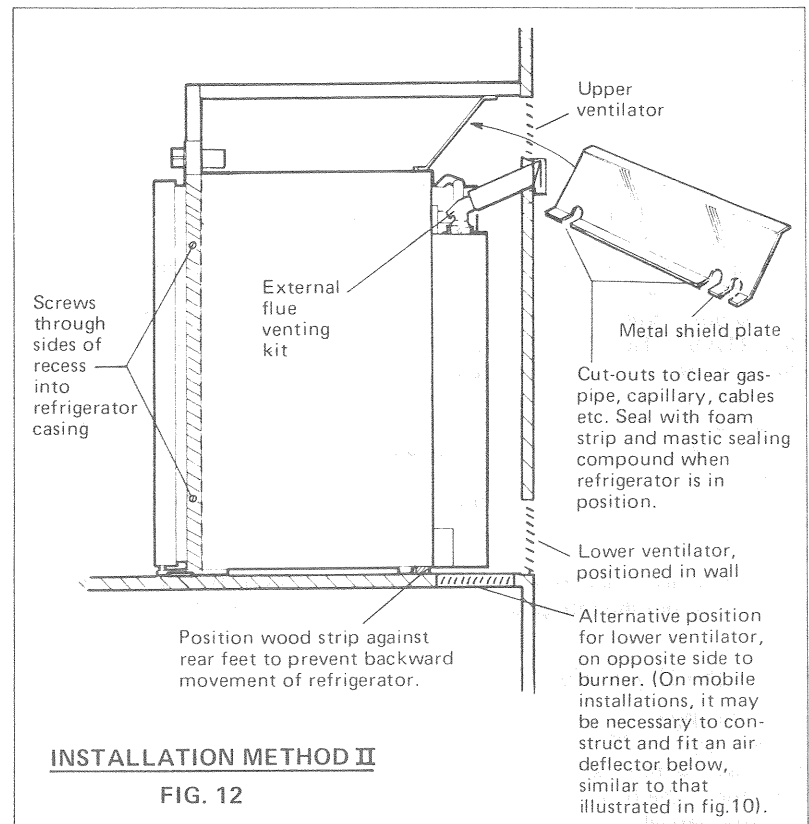
Reference should be made to sections 9 and 10 for details regarding connections to the gas, 12V, and mains electricity supplies.

### Securing in Recess

The refrigerator must be firmly secured in the recess by some means and the method given on page 5 is recommended.

## 9. GAS CONNECTION

The gas installation should only be carried out by a person experienced in gas fitting. It is recommended that the gas pipe feeding the refrigerator is run underneath the caravan and is so arranged that it is possible to turn off the supply to all appliances other than the refrigerator when they are not required. The supply pipe should preferably be of copper; if any other material is used, it must be of





a type approved for use with continuously operating bottled gas appliances, and have threaded connections throughout. Push-on connections must not be used. (We do not recommend the use of "rubber" type flexible tubing for connecting permanently operating appliances of this type in the United Kingdom). All connectors etc. should be of a type specifically designed for the type and diameter of the connection pipe used, and screwed joints should be sealed with a jointing compound approved for use with bottled gas.

The gas supply pipe should be connected to the  $\frac{1}{8}$ " B.S.P. female inlet adaptor (located at the top of the refrigerator, at the left-hand side of the gas control valve) by means of a suitable threaded coupling. The adaptor will accept a  $\frac{1}{8}$ " B.S.P. male thread.

**Note:** In the United Kingdom, 'Wade' Couplings are available from Caravan Dealers and Gas Fitting Suppliers in suitable sizes to connect the refrigerator to any of the usual sizes of metal tubing. For example, Wade Coupling No. 7061 has a union on the inlet to take  $\frac{3}{16}$ " o.d. metal tubing, and has a  $\frac{1}{8}$ " B.S.P. male thread on the outlet which will fit the thread on the refrigerator. However, some dealers may not stock this particular fitting and Wade Coupling No. 1061 can be used as a substitute. A further alternative is Wade Coupling No. 1041 which has union nuts and olives at both ends; by removing and discarding the nut and olive at one end, it can be used in place of the types 7061 and 1061 described above.

When fitting any of these couplings, the thread should be smeared with an approved sealing compound before screwing it into the refrigerator inlet adaptor.

In making the connection to the refrigerator, it is recommended that a union gas cock of an approved type for bottled-gas is incorporated in the supply line in a position which is readily accessible to the user. For eventual servicing purposes, the union should be on the outlet side of the cock and the pipework should be positioned so as not to prevent the refrigerator from being readily withdrawn.

In order to connect the gas supply to the inlet adaptor on the refrigerator, it may be necessary to make an opening in the side of the recess adjacent to the gas control valve at the left-hand side of the control panel. Alternatively, a piece of copper pipe may be connected to the inlet adaptor on the refrigerator before placing the refrigerator in the recess. This pipe should be of suitable length and pre-shaped so that, when the refrigerator is in place, the end of the pipe will be in a convenient and accessible position for connection to the pipe coming from the gas supply.

After the refrigerator has been installed, all accessible connections should be checked for soundness by applying a soap/water solution over them and watching for bubbles with, of course, the gas-bottle and any gas cocks in the line, turned on. **DO NOT USE A FLAME.** Thereafter, all connections should be checked periodically, in the same way, to ensure that they have not loosened in use. (To make all connections on the refrigerator accessible for testing, it would be necessary to withdraw the refrigerator and make temporary connection to the gas supply with flexible tubing).

## 10. ELECTRICAL INSTALLATION

For operation on electricity, the boiler of the cooling unit is fitted with two separate heating elements, one rated at 100W, for use on 220/240V a.c. mains electricity, and the other at 95W, for use from the 12V car battery when the caravan is on tow.

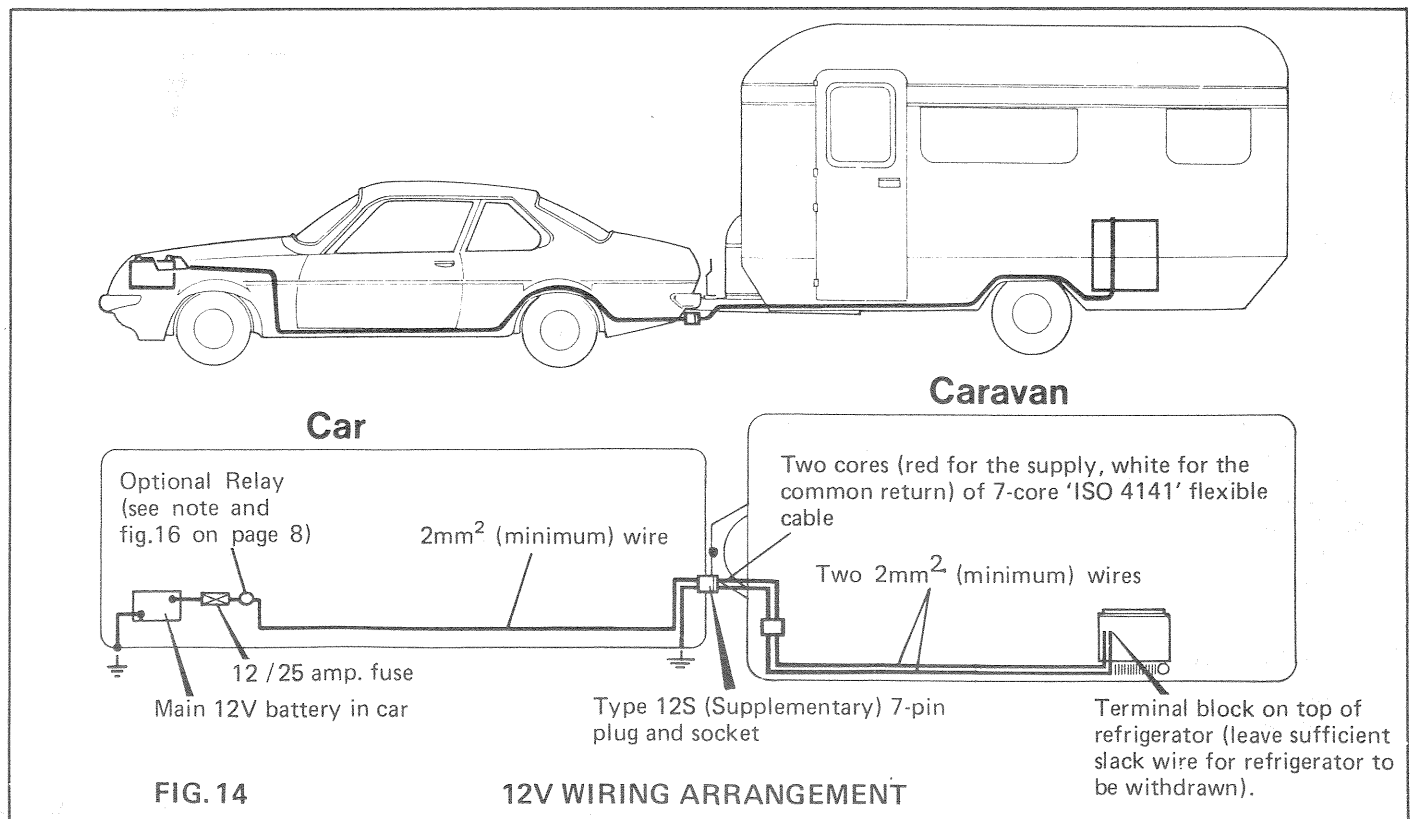
The electrical installation must be carried out in a proper and durable manner, taking into account all relevant regulations or codes of practice. For mains voltage operation, it is important that the circuit to, and in, the caravan, is properly and effectively earthed. **All mains voltage wiring in the caravan must be installed in accordance with the I.E.E. Regulations, including the use of an outlet and coupler to BS4343/CEE17.** When operating on 12 volts, the refrigerator has a relatively high current consumption (8 amps minimum). It is only intended to be used by this method of operation while the engine is running and charging the battery otherwise the battery may become discharged to a point where it will not re-start the engine.

**Note:** To minimise the possibility of a drained battery due to the refrigerator being inadvertently left operating when the engine is at rest, it is strongly recommended that a suitable relay device (e.g. Lucas No. 6RA 33213 or 28RA 33398, or Hella 4RA 003 205 141) is fitted in the car, in circuit with the ignition switch, so that when the engine is switched off the refrigerator is switched off, - see Fig. 16.

This appliance conforms with the requirements of EEC Directive No. 76/889 relating to radio interference.

### a) Wiring for 12V Supply (see figs. 14 and 15, and the Note above).

For connection to the 12V supply, there is a two-way terminal block located on the top of the refrigerator, behind the



right-hand end of the control panel. It is accessible after removing the plastic cover which is held by two screws. Connect the 12V supply wire from the battery to the side of the terminal block that is connected to the voltage selector switch on the refrigerator (see wiring diagram). Connect the 12V "return" wire to the other side of the terminal block.

To prevent undue voltage drop, which would affect the performance of the cooling unit, the wire used for connecting must be at least 2mm<sup>2</sup> in cross-sectional area (e.g. 28/0.30mm), and be as short as possible. The refrigerator should be connected to the terminals of the main battery in the towing vehicle and not to an auxiliary battery in the car or caravan.

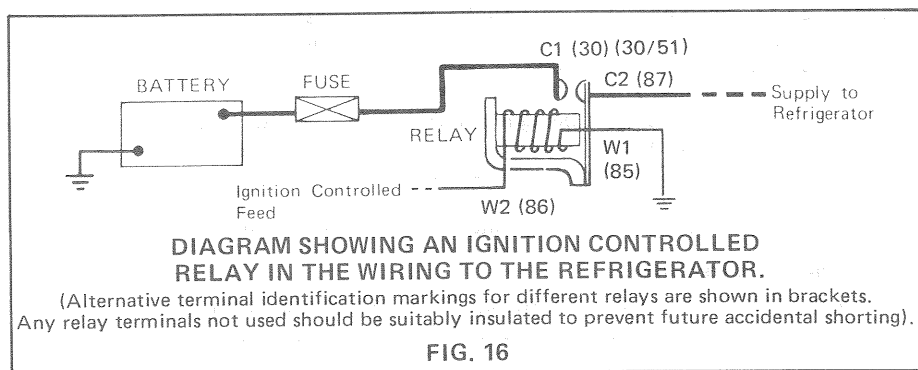
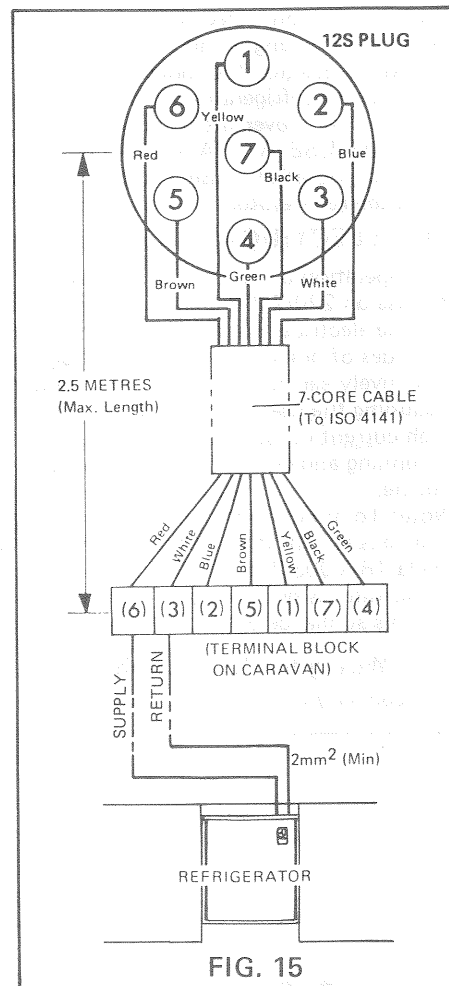
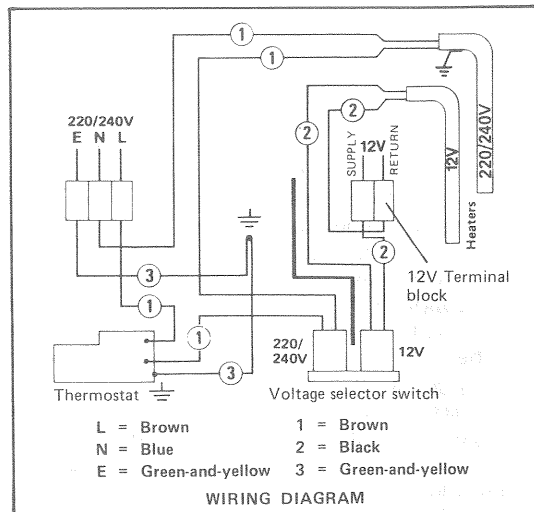
The body of the car can be used for the 'earth' return, provided that the connection to it is well-made, with paint, grease, etc. removed from the area of contact. (Do not use the body of the caravan in place of a wire as this may not be a satisfactory conductor).

### Fuse for 12V Circuit.

A 12 amp, continuous rating, fuse (for example, Lucas fuse, part No. 188216, 12/25 amps) must be incorporated in the supply to the refrigerator, as near to the battery as possible. A good quality fuse holder should be used having adequate size well-made contacts which will carry the current load without undue resistance.

### Connection Between Car and Caravan.

For the flexible connection between the car and caravan, a weather-proof plug and socket must be used and sufficient slack cable allowed for the normal manoeuvring of the car and caravan. This connection may be made using two pins (No.6 for the supply, and No.3 for the return) of a type 12S (Supplementary) 7-pin plug and socket, and the red (supply) and white (return) conductors of a length of 7-core flexible cable manufactured to International Standard ISO 4141. This cable is of heavier construction than earlier types and has six conductors of 1.5mm<sup>2</sup> and one (common return) of 2.5mm<sup>2</sup>. It is permissible to use this type of cable for the flexible link of the refrigerator supply provided the total length of this cable does not exceed 2.5 metres, and that all other wiring for the refrigerator, in the car and caravan, is not less than 2mm<sup>2</sup> in cross-sectional area.



### b) Mains Voltage Connection

For connection to a 220-240V electricity supply, the refrigerator has a 3-core mains lead which is intended for connection to a properly earthed plug and socket outlet. The socket outlet should be fitted in the caravan in a position readily accessible to the user, within reach of the mains lead. In the United Kingdom, the plug and socket outlet should be of the non-reversible type.

**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, in the United Kingdom, 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  $\equiv$  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 upon the voltage and local practice.

### 11. USING THE REFRIGERATOR

Full instructions for lighting the burner, operating on electricity, and making the best use of the refrigerator, are given in the instruction booklet supplied with the refrigerator. These instructions should be read and understood before starting the refrigerator.

*REFRIGERATOR RM212F - A LUX MODEL, MADE IN BRITAIN.*

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