



Dometic

**INSTALLATION AND
OPERATING INSTRUCTIONS**

REFRIGERATOR FOR LP-GAS AND ELECTRIC OPERATION

RM2300

RM2400

RM2500

RM2600

RM2800

FOR YOUR SAFETY

If you smell gas:

- 1. Open windows.**
- 2. Don't touch electrical switches.**
- 3. Extinguish any open flame.**
- 4. Immediately call your gas supplier.**

FOR YOUR SAFETY

Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

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Dometic

quality leisure line products

SERVICE OFFICE

DOMETIC SALES CORP.
509 South Poplar
LaGrange, IN 46761

REFRIGERATORS WITH
PIEZO IGNITER
RM2300/2400

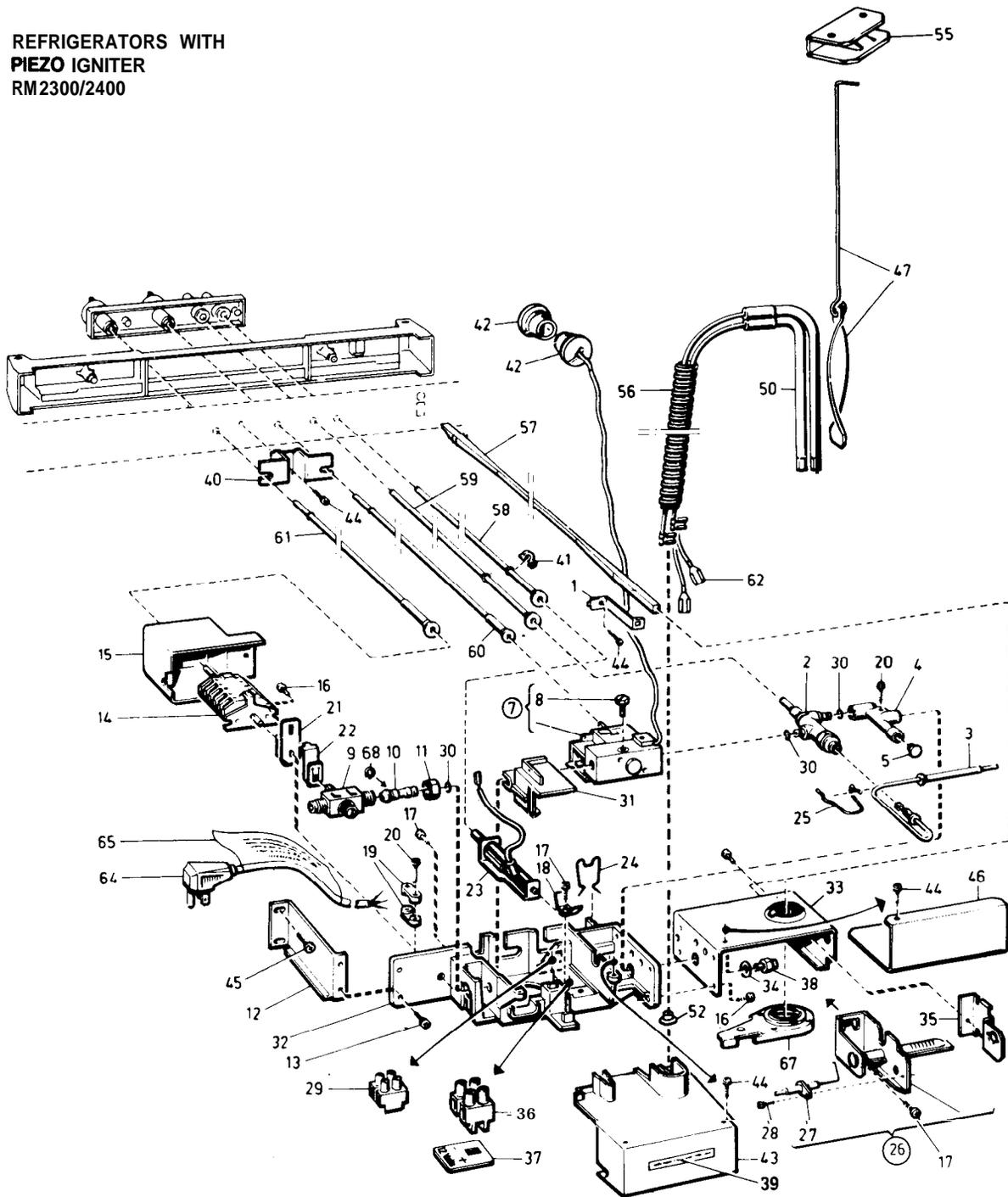
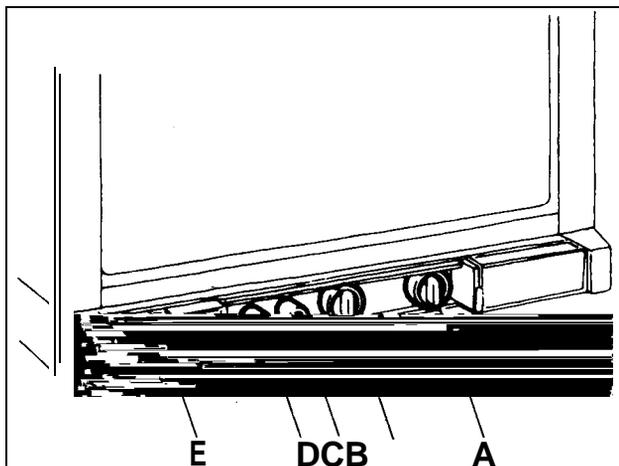


Fig.1



Item Description
No.

- 1 Retainer
- 2 Thermo electric safety valve
- 3 Thermo couple element
- 4 Coupling
- 7 Thermostat
- 9 Cut-off valve
- 10 Nipple
- 11 Nut
- 14 Switch
- 23 Lighter
- 26 Burner
- 27 Electrode
- 28 Terminal
- 30 Sealing ring
- 31 Snap catch
- 33 Burner housing

- 35 Burner retainer
- 36 Terminal 12/120V
- 38 Burner jet
- 42 Plug
- 43 Cover
- 46 Cover
- 47 Flue baffle
- 50 Heater
- 52 Bushing
- 53 Retaining ring

REFRIGERATORS WITH
AUTOMATIC IGNITION
RM2500

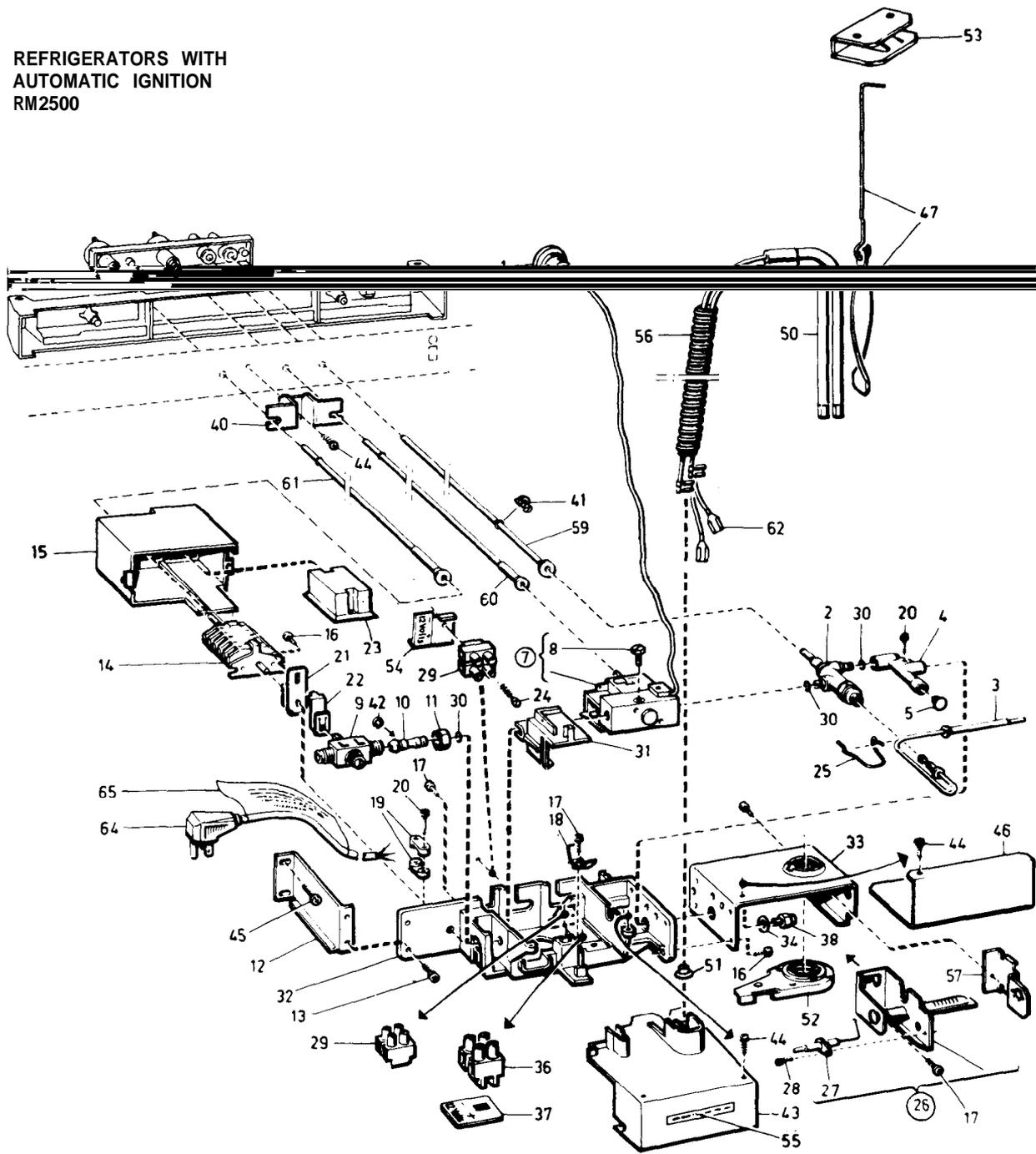
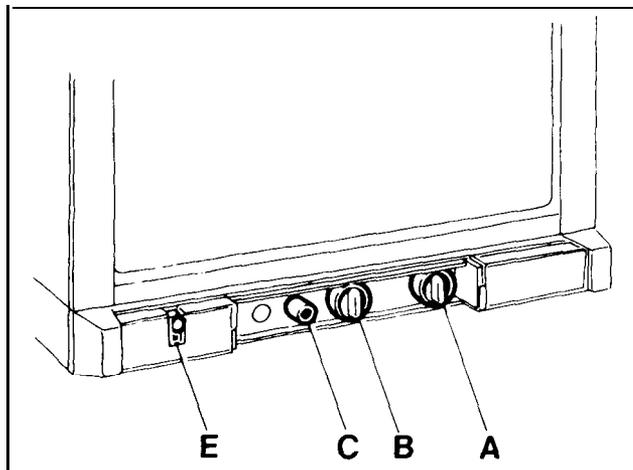


Fig.2



Item No.	Description	
1	Plug	36
2	Thermo electric safety valve	36
3	Thermo couple element	43
4	Coupling	46
7	Thermostat	47
9	Cut-off valve	50
10	Nipple	51
11	Nut	52
14	Switch	53
23	Reigniter	55
26	Burner	57
27	Electrode	59
29	Terminal block	60
30	Sealing ring	61
31	Snap catch	62
33	Burner housing	64
36	Terminal block	
36	Burner jet	
43	Cover	
46	Cover	
47	Flue baffle	
50	Heater	
51	Bushing	
52	Clamping plate	
53	Flue top	
55	Label for 12V	
57	Burner retainer	
59	Push rod	
60	Shaft, thermostat	
61	Shaft, switch	
62	Lead for 12/120V	
64	Flexible cord	

REFRIQUERATORS WITH
AUTOMATIC IQNITION
RM2600
RM2800

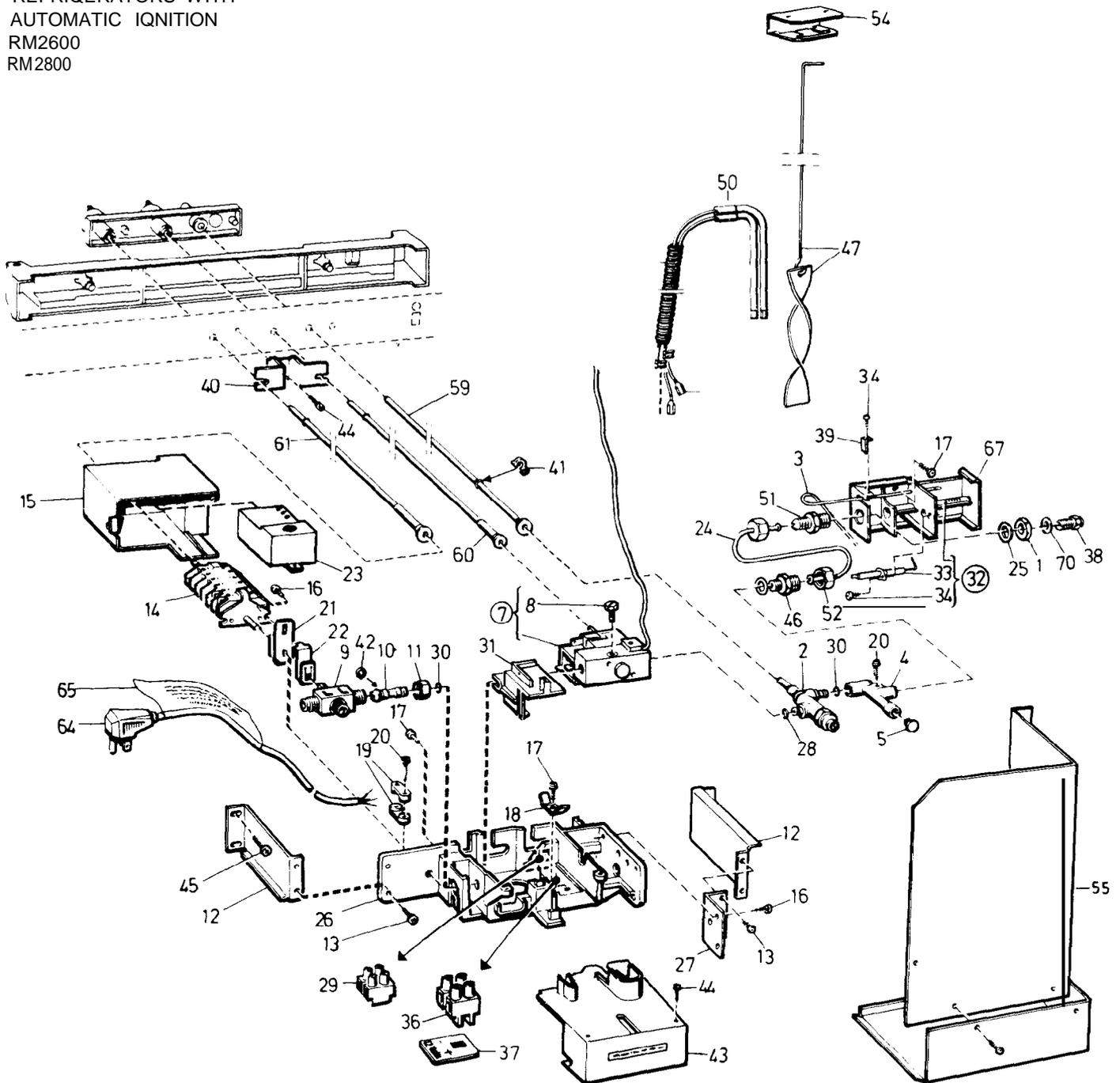
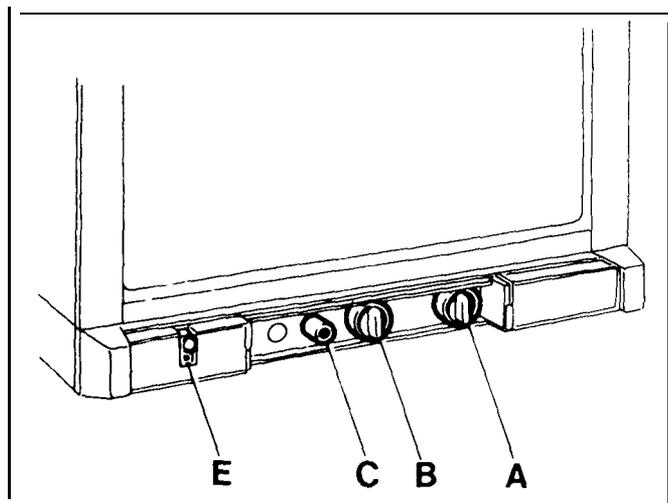


Fig.3



Item No.	Description	Item No.	Description
2	Thermo electric safety valve	43	Cover
3	Thermo couple element	46	Nipple
4	Coupling	47	Flue baffle
7	Thermostat	50	Heater
9	Cut-off valve	51	Nipple
10	Nipple	54	Flue cap
11	Nut	55	Protection plate
14	Switch	59	Push rod
23	Reigniter	60	Shaft, thermostat
24	Gas tube	61	Shaft, switch
29	Terminal block	64	Flexible cord
31	Snap catch	67	Burner housing
32	Burner		
33	Electrode		
36	Terminal block		
36	Burner jet		

INSTALLATION

GENERAL INSTRUCTIONS

This appliance is designed for storage of foods and storage of frozen foods and making ice.

The refrigerators outlined hereon have been design certified under ANS 221.19 -- 1983. Refrigerators by the American Gas Association for installation in a mobile home or recreational vehicle and are approved by the Canadian Gas Association. The certifications are, however, contingent on the installation being made in accordance with the following instructions as applicable.

The installation must in the USA conform with:

1. National Fuel Gas Code ANSI Z223.1-1 984
2. Manufactured Home Construction and Safety Standard, Title 24 CFR, Pan 32-80,
3. Recreational Vehicles ANSI/NFPA No. 501 C-1977

The unit must be electrically grounded in accordance with the National Electric Code ANSI/NFPA No. 70-1984 when installed if an external alternating current electrical source is utilized.

4. Any applicable local code



The installation must in Canada conform with:

1. Current CGA B 149 Gas Installation Codes
2. Current CSA Standard Z 240.4 GAS - EQUIPPED RECREATIONAL VEHICLES AND MOBIL HOUSING
3. Any applicable local code

The unit must be electrically grounded in accordance with the current CANADIAN ELECTRICAL CODE C 22 Parts 1 and 2.

Ventilation

The installation shall be made in such a manner as to separate the combustion system from the living space of the mobile home or recreational vehicle. Openings for air supply or for venting of combustion products shall have a minimum dimension of not less than 1/4 inch.

Proper installation requires one lower fresh air intake and one upper exhaust vent. The ventilation kits shown in this instruction booklet have been certified for use with the refrigerator models listed in the tables. **Certified vent system kits, see separate list.** The ventilation kits must be installed and used without modification. An opening towards the outside at floor level in the refrigerator compartment must be provided for ventilation of heavier-than-air fuel gases. The lower vent of the recommended kits is provided with proper size openings. The flow of combustion and ventilating air must not be obstructed.

For ready serviceability of the burner and control manifold parts of the refrigerator the lower side vent is fitted with a liftout panel which provides an adequate access opening.

GAS CONNECTION

Hook-up to the gas supply line is accomplished at the manual gas valve, which is furnished with a 3/8" SAE (UNF 5/8- 18) male flare connection. All completed connections should be checked for leaks with soapy water.

The gas supply system must incorporate a pressure regulator to maintain a supply pressure of not more than 11 inches water column.

When testing the gas supply system at test pressures in excess of 1/2 psig the refrigerator and its individual shutoff valve must be disconnected from the gas supply piping system.

When testing the gas supply system at pressures less or equal 1/2 psig the appliance must be isolated from the gas supply piping system by closing its individual manual shutoff valve.

In case detailed instructions on the installation and connection to the gas supply are required, contact your dealer or distributor.

ELECTRICAL CONNECTION

120VoltsAC

The refrigerator is equipped with a three prong (grounded) plug for protection against shock hazards and should be plugged directly into a properly grounded three prong receptacle. Do not cut or remove the grounding prong from this plug. The cord should be routed to avoid coming in contact with the burner cover flue cover or other hot components.

Refrigerator models requiring 12 V DC supply

On units provided with interior light or automatic reigniter or both there is one additional terminal block marked "12 V". On "Three Power" units with interior light or automatic reigniter or both there are two additional blocks.

The refrigerator must be connected to the battery circuit with two wires of adequate capacity to avoid voltage drop. The wire gage should be chosen with consideration to the wire length in accordance with table below. The 12 V circuit must be fused. Maximum circuit fuse size: 15 Amps. for the models RM2300 and RM2400, 20 Amps. for RM2500, 30 Amps. for RM2600 and 40 Amps. for RM2800.

Do not use the body or chassis of the vehicle as a substitute for either of the two conductors. No other electrical equipment or lighting should be connected to the refrigerator circuit. The refrigerator will draw from 10 to 23 Amps at 12 Volt depending on model.

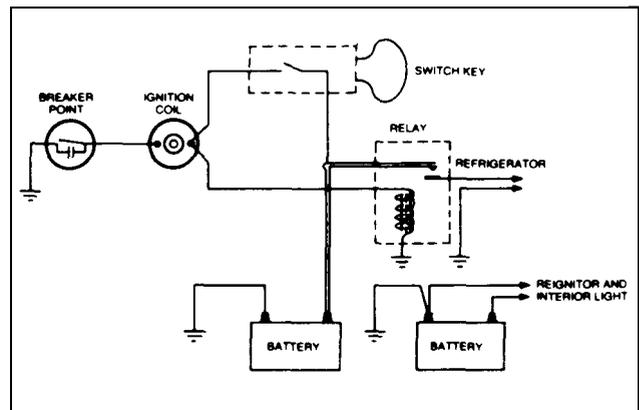
The interior light and the reigniter must be connected to a separate battery circuit and will draw about 1 Amp.

Maximum two conductor wire length in feet and meter.

AWG	RM2300 125W	RM2400 135W	RM2500 175W	RM2600 250W	RM2800 275W	Interior light only 10W
14 ft.	10	9	7	5	4	17
12 ft.	17	15	12	8	7	35
10 ft.	27	25	19	13	12	55
8 ft.	43	40	31	22	19	85
6 ft.	69	64	49	34	31	135
4 ft.	110	102	79	55	50	220

CAUTION

Do not Operate the refrigerator on 12 Volt when the vehicle is parked. YOU will run out of battery in a rather short time. If possible the installation of a 12 Volt operated refrigerator should be completed with a relay mounted either in the car or in the recreational vehicle (see below). This relay will automatically cut out the refrigerator when the car engine is stopped.



SPECIAL HINTS

Note. Do not install the appliance directly on carpeting. Carpeting must be protected by a metal or wood panel beneath the appliance which extends at least full width and depth of the appliance.

The refrigerator must be installed in a substantial enclosure and must be level. A spirit level is supplied with each refrigerator and by placing it in the freezer compartment one can level the refrigerator both ways front to back and side to side. When installing the refrigerator in the enclosure care should be taken to ensure a complete sealing between the front frame of the refrigerator and the top, sides and bottom of the enclosure. For this purpose a length of sealing strip is applied to rear surfaces of the front frame. A sealing strip should also be applied to the foremost floor of the enclosure as shown in fig 8. The sealing strip should provide a complete isolation of the appliance combustion system from the vehicle interior.

Be careful not to damage the sealing strip applied to the floor of the enclosure when the refrigerator is put in place.

In the front frame and in the base at the rear of the refrigerator there are holes for screws for fixing the refrigerator in the enclosure. See fig. 9.

Any space between counter or storage area and the top of the refrigerator greater than 1 1/2" should be blocked. The heat produced at the rear of the refrigerator will otherwise become trapped in this space making the top of the refrigerator hot and reducing the efficiency of the refrigerator.

TO REMOVE AND REPAIR THE REFRIGERATOR

Before working on the refrigerator, make sure that 120 V A.C. and optional 12 V DC. Leads are disconnected. Close the gas valve. Unscrew the hexagon nut (#11 Fig. 2) and move the Valve on the gas line out of the bracket. Check that the valve slips out of the clip connection with the switch shaft.

Loosen the screws fixing the refrigerator to the enclosure and remove the refrigerator.

When replacing the refrigerator make sure that the sealing strips are properly positioned. After reassembly the gas connection should be checked for leaks.

TEST OF THE GAS SAFETY SHUTOFF

The gas safety shutoff device must be tested after the refrigerator is placed in operation.

Refrigerator with piezo igniter. (Figure 1)

1. Start the refrigerator according to the instruction for gas operation with piezo igniter.
2. Check that the gas flame is lit. This can be observed through the reflector (E).
3. Close the gas valve by turning the knob (A) back to position "OFF".
4. Wait 1 minute.
5. Remove cover plate, see (46) in fig 1. Open the gas valve by turning the knob (A) to position "GAS" without pushing the button (C) and (D). Test that no gas comes through the jet, (item 38.) Use soap water solution. Be careful not to damage the jet.
6. After test, rinse the jet with water. Once more be careful no to damage the jet. Assemble the cover plate. Start the refrigerator by following the instruction for gas operation with piezo igniter. Normal gas operation should now return. Operate for at least 5 minutes.

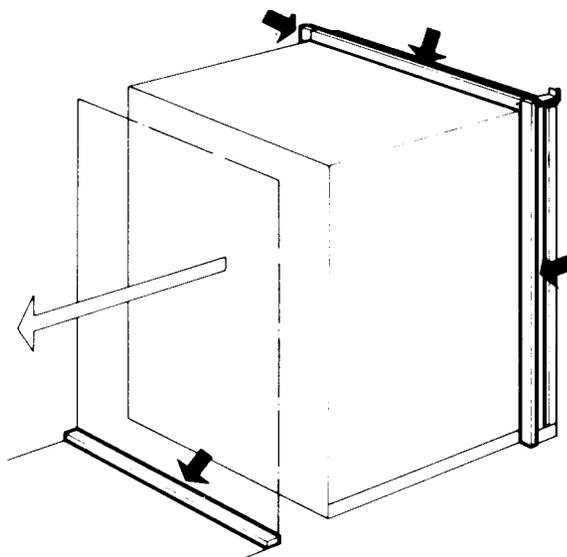


Fig.8

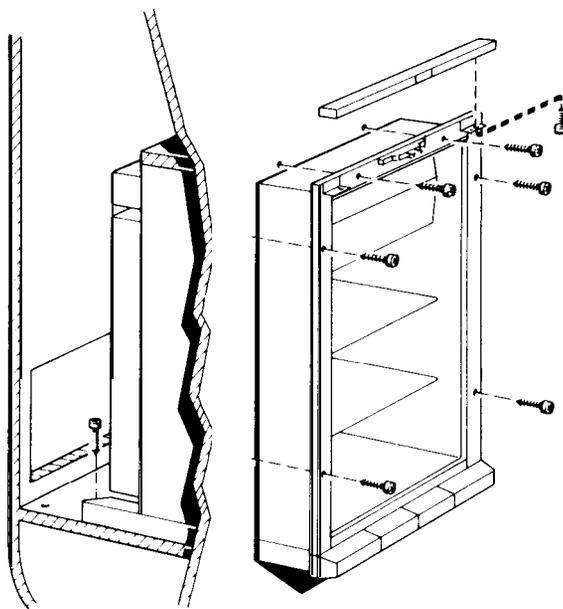


Fig.9

Refrigerator with automatic reigniter. (Fig 2 & 3)

1. Start the refrigerator according to the instruction for gas operation with automatic reigniter.
2. Check that the gas flame is lit. The lamp (E) is out.
3. Close the gas valve by turning the knob (A) back to position "OFF".
4. Wait 1 minute, disconnect 12 V D.C.
5. Remove cover plate, see (46) fig. 2 for RM2500 and (55) fig. 3 for RM2600/2800. Open the gas valve by turning knob (A) to position "GAS" without pushing the button (C). The igniter will not spark. Test that no gas comes through the jet, (item 38). Use soapy water. Be careful not to damage the jet.
6. After the test rinse the jet with water. Once more be careful not to damage the jet. Assemble the cover plate. Connect the 12 V D.C. again. Start the refrigerator by following the instruction for gas operation with automatic reigniter. Normal gas operation should now return. Operate for at least 5 minutes.

CERTIFIED INSTALLATION

Certified installations require one roof vent and one lower side vent or as optional one upper vent and one lower side vent.

The two alternatives are provided for by using the different kits listed in the Appendix.

For further information contact your dealer or distributor.

METHODS OF INSTALLATION

The methods of installation are shown in figures 10 a and 10 b. It is essential that all maximum or minimum dimensions are strictly maintained as the performance of the refrigerator is dependent on an adequate flow of air over the rear of the refrigerator.

VENTILATION -HEIGHTS

Refrigerator model	Minimum ventilation heights in inches and mm	
	Installation with upper and lower side vent	Installation with roof vent and lower side vent
RM2300 in.	37	31
RM2400 in.		34
RM2500 in.		42
RM2600 in.		56
RM2800 in.		62

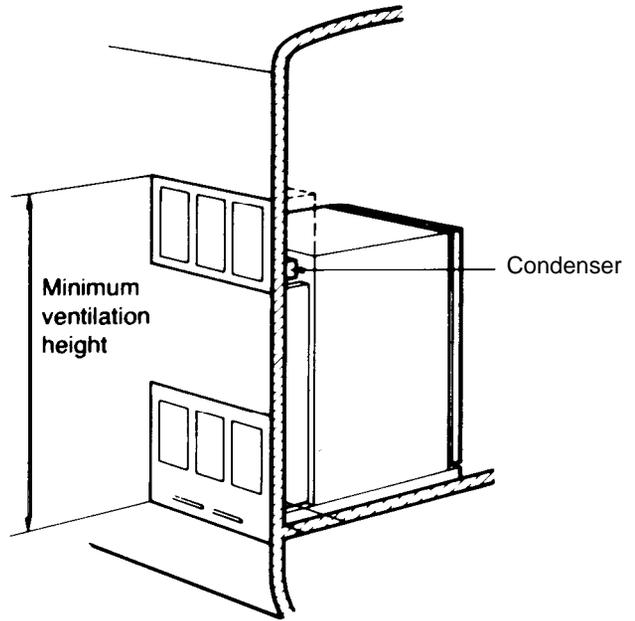


Fig. 10 a

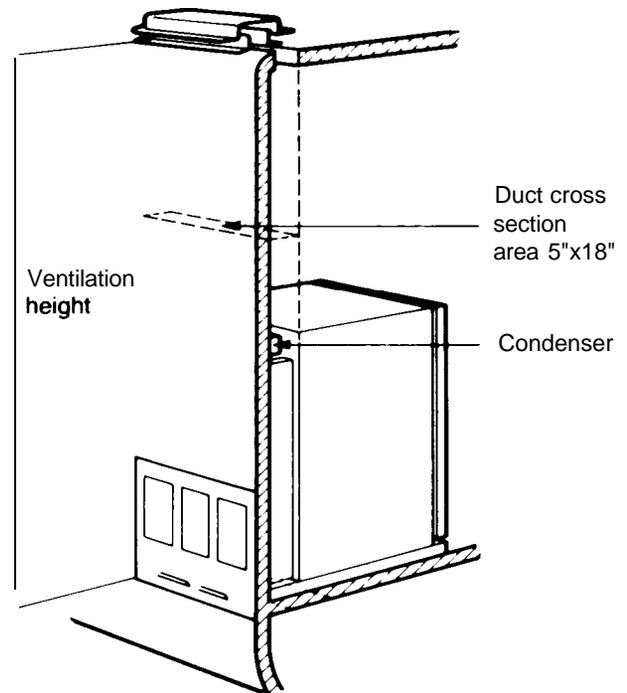


Fig. 10 b

CLEARANCES

Minimum clearances in inches to combustible materials are

- G: Top 0
- K: Side 0
- L: Bottom 0
- M: Rear 1
- N: See example below

Clearance M between the rearmost part of the refrigerator and the wall behind the refrigerator

Clearance N on top of the condenser is related to the minimum ventilation height

See Fig 11 and examples below

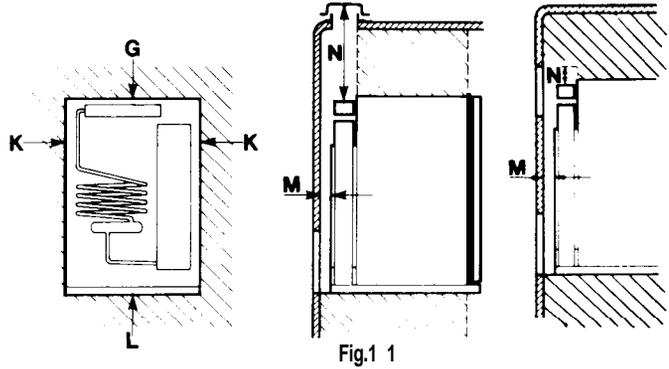


Fig.1 1

Refrigerator model	Overall product dimensions			Installation product dimensions			Recess dimensions			Distance between top of condenser and top of refrigerator e
	Height A	Width B	Depth C	Height h	Width w	Depth d	Height H	Width W	Depth D	
RM 2300 inch	30 3/8	21 11/16	22 1/16	29 9/16	20 1/4	20 3/8	29 3/4	20 1/2	21 3/8	1 1/4
RM2400 inch	32 15/16	23	24 11/16	32 1/8	21 9/16	22 15/16	32 5/16	21 13/16	23 15/16	1 1/4
RM2500 inch	40 13/16	23	24 11/16	40	21 9/16	22 15/16	40 3/16	21 13/16	23 15/16	1 1/4
RM2600 inch	52	23	24 11/16	51 3/16	21 9/16	22 15/16	51 3/8	21 13/16	23 15/16	1 1/8
RM2800 inch	57 15/16	24 15/16	24 11/16	57 1/8	23 7/16	22 15/16	57 1/2	23 13/16	23 15/16	1 1/8

This method of installation and these clearances will give you adequate space for servicing and proper installation.

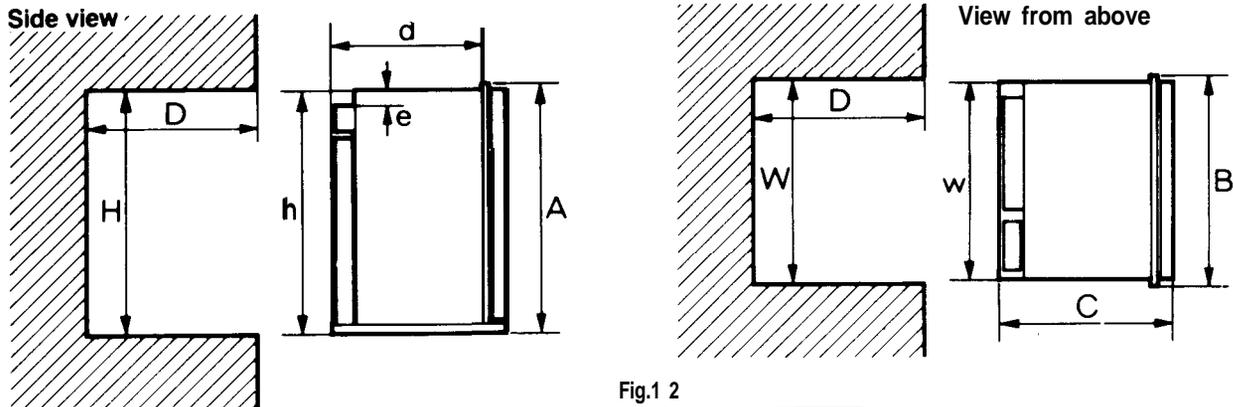


Fig.1 2

EXAMPLES

The clearance N for the RM 2300 model is derived at in the following way.

Installation with upper and lower side vents

N= Minimum ventilation height 37 minus installation height 29 9/16 plus distance between condenser top and refrigerator top 1 1/4

in: $N=37-29 \frac{9}{16}+1 \frac{1}{4}=8 \frac{11}{16}$ inches

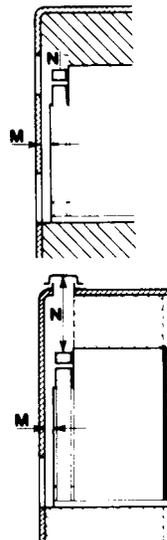
mm: $N=940-751+32=221$ mm

Installation with roof vent and lower side vent

N=Minimum ventilation height 31 minus installation height 29 9/16 plus distance between condenser top and refrigerator top 1 1/4 plus distance between roof surface and roof vent cap 5 1/4

in: $N=31-29 \frac{9}{16}+1 \frac{1}{4}+5 \frac{1}{4}=7 \frac{15}{16}$ inches

mm: $N=787-751+32+134=202$ mm



INSTRUCTIONS FOR USE

HOW TO START THE REFRIGERATOR Leveling

In the boiler, ammonia vapor is distilled from an ammonia-water mixture and carried to the finned condenser, where it liquifies. The liquid flows to the evaporator, where it creates cold by evaporating into a circulating flow of hydrogen gas. If the evaporator coil is not level the liquid readily accumulates, forming pockets which can impair the gas circulation or even block it, in which case, of course, the cooling will stop.

When the recreational vehicle is stationary it must be leveled to be comfortable to live in. If the refrigerator is properly installed, the freezer shelf parallel to the floor, the refrigerator will then also perform properly. A bubble level should be placed on the freezer shelf. When the vehicle is in tow, the continuous rolling and pitching movement will not affect the refrigerator as long as the movement passes either side of level, but when the trailer is temporarily parked this sensitivity of the refrigerator should be remembered. **So once more, before you start the refrigerator make sure the recreational vehicle is leveled to be comfortable to live in.**

Gas Operation with piezo igniter (Fig. 1)

1. To start the refrigerator turn the knob (A) to position "GAS".
2. Turn the thermostat knob (B) a quarter of a turn from position "OFF".
3. Push the button (C) to stop and push the button (D) of the piezo igniter. The pushing has to be repeated until the gas is lit at the burner. This can be observed through the reflector(E).
4. After the gas is lit keep the button (C) pushed for 10 seconds. Release the button and check through the reflector that the burner flame stays burning. If not, repeat the lighting procedure. To shut off the refrigerator turn the knob (A) to off position.

Gas Operation with automatic reigniter (Fig. 2 & 3)

1. To start the refrigerator turn the knob (A) to position "GAS". Lamp (E) comes on.
2. Turn the gas thermostat knob (B) a quarter of a turn from position "OFF".
3. Press the button (C) to stop and keep it depressed. When lamp (E) goes out, wait 15 sec. and release button (C). If the lamp comes on again, repeat the procedure. If flame blows out, reignition will take place automatically. To shut off the refrigerator turn the knob (A) to off position.

NOTE: After a replacement of the LP Gas bottles or a long period with refrigerator off, the gas line is likely to be filled with air. In such a case the lighting procedure has to be repeated until the air is pushed out of the line and the gas has reached the burner.

Electric Operation (Fig. 1,2,3)

1. Check that the 120 Volt plug is correctly connected to the main supply. When the refrigerator is equipped for 12 Volt D.C. operation the low voltage connection is made at the terminals marked at the rear of the refrigerator.
 2. Turn the knob (A) to desired position for electric operation.
 3. Turn the thermostat knob (B) a quarter of a turn from position "OFF".
- To shut off the refrigerator turn the knob (A) to off-position.

HOW TO USE THE REFRIGERATOR Food Storage Compartment

The food storage compartment is completely closed and unventilated, which is necessary to maintain the required low temperature for food storage. Consequently foods having a strong odor or those liable to absorb odors should be covered. Vegetables, salads, etc. should be covered to retain their crispness. The coldest positions in the refrigerator are underneath the cooling evaporator and at the bottom of the refrigerator, and the least cold positions are on the upper door shelves. This should be considered when different types of food are placed in the refrigerator.

Defrosting

Shut off the refrigerator.
Empty the refrigerator, leaving the drip tray under the finned evaporator and the cabinet and freezer doors open. If desired, defrosting may be speeded up by filling the ice tray with hot water and placing it in the freezer.
When the frost on the finned evaporator section has melted water will be collected in the drip tray. The drip tray should be emptied at regular intervals.
When all frost is melted, empty the drip tray and dry the interior of the refrigerator with a clean cloth.
Replace the drip tray and ice tray, replace all food stuffs and set the thermostat knob to its normal position.

Frozen Food Storage Compartment

The ice trays should be placed in direct contact with the freezer shelf for fastest ice making. Quick frozen soft fruits and ice cream should be placed in the coldest part of the compartment which is at the bottom of the aluminium liner or, in models with a shelf, on this or just below it. Frozen vegetables, on the other hand, may be stored in any part of the compartment.

The compartment is not designed for the deep or quick freezing of foodstuffs. Meat or fish foods, whether raw or prepared, and provided they are pre-cooled in the refrigerator, can however, also be stored in the frozen food storage compartment. They can then be stored about three times as long as in the fresh food storage compartment. To prevent drying out, keep food in covered dishes, in plastic bags or wrapped in aluminum foil.

Ice Making

Ice cubes can be made in the ice trays which should be filled with water to within 1/4" from the top. To release the ice cubes seize the tray with both hands and twist the tray. Cubes not required should be replaced in the tray. Refill the tray with water and replace the tray on the freezer shelf.

Ice making is accelerated if the thermostat knob is turned to setting "MAX". It is a good idea to do this a few hours before an anticipated need for ice but be sure to turn the knob back to normal setting when the ice is formed or the foodstuffs in the cabinet may become frozen hard.

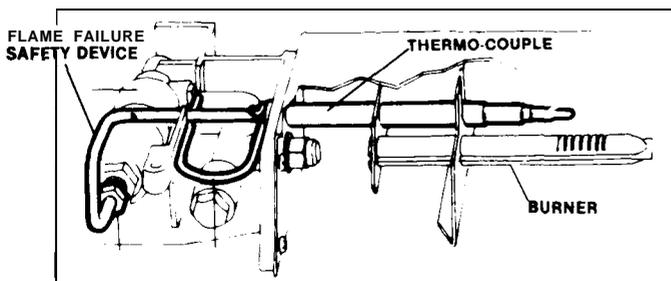
To Shut Off the Refrigerator

To shut off the refrigerator turn the knob (A) to off position. If the cabinet is not in operation over a period of weeks, it should be emptied and cleaned and the door left ajar. Some models are provided with interior light, which comes on when the door is opened. To avoid discharging the battery, the light should be shut off. Use tape to close the switch or remove the lamp. The ice trays should also be dried and kept outside the cabinet.

Cleaning

To clean the interior lining of the refrigerator use lukewarm weak soda solution. The evaporator, ice trays and shelves must, however, be cleaned with warm water only. Never use strong chemicals or abrasives to clean these parts or the protective surface will be spoiled. It is important always to keep the refrigerator clean.

Do not store explosive substances in the refrigerator such as cigarette lighter fluid, gasoline, ether or the ..



GAS EQUIPMENT Flue Top and Baffle

The flue baffle is suspended from the top and must be in position in the central tube of the cooling unit.

The Flame Failure Safety Device

The tip of the thermo-couple must reach in over two slots of the burner. To replace the thermocouple proceed as follows:

1. Remove the cover
2. Unscrew plug and pull thermocouple straight out.
3. Remove spring.
4. Pull out thermocouple sideways from burner housing.
5. Bend the new thermocouple to the same shape as the old one.
6. Reassemble in reverse order. Check that the tip has been correctly refitted in relation to burner.
7. Mount plug, taking care not to damage the threaded hole in the aluminum cap of the housing. The plug must be properly tightened to the valve housing to ensure good contact between the thermocouple and the magnetic coil within the housing.

The Thermostat

The refrigerator is equipped with a thermostat which is regulated by turning the knob to different settings in order to obtain the desired controlled cabinet temperature.

At OFF Under normal operating conditions the thermostat valve remains closed and the burner is running continuously at the by-pass rate, just enough to keep the burner lit.

At MAX The thermostat valve remains open and the burner is running continuously at full gas rate. Lowest cabinet and freezer temperatures are obtained at this setting.

Between these two extremes of the dial various controlled temperatures can be obtained, by turning the thermostat knob to a suitable position. The closer to MAX the lower the temperature. As soon as the required cold temperature inside the cabinet is reached, the thermostat cuts the burner main flame leaving the by-pass flame to keep the safety valve open.

The Igniter

The refrigerator is fitted either with a piezo igniter (see fig. 1) or an automatic reigniter (fig. 2 and 3) which does not normally need any maintenance. If the igniter does not work properly contact an authorized service center.

ELECTRIC EQUIPMENT Cartridge heater

The refrigerator is equipped also for electric operation. Many models are equipped for both 120 Volts A C and 12 Volts D C operation.

The heat necessary for the operation of an absorption type cooling unit is supplied by an electric heater mounted in a pocket of the boiler system.

To replace the heater, first of course check that the wall plug is disconnected. If the refrigerator is equipped for 12 Volts D.C. operation, make sure that the 12 V leads are disconnected. Then proceed as follows:

1. Remove the cover of the main control structure by loosening the two screws
2. Disconnect the heater leads
3. Pull off the metal hose

INSTRUCTIONS FOR MOUNTING THE DOOR PANEL

The refrigerator is normally delivered without door panel(s). Before starting the mounting work check that the panel dimensions are in compliance with those given in the table and read the instructions through. When mounting the panel, proceed as follows.

- A. Remove the door decoration list (2) with its two screws (1). The upper corners of the upper panel (2door models) and the lower corners of the lower panel has to be cut according to the sketch.
- B. Insert one of the vertical edges of the panel into the groove of the door frame (3).
- C. Bend the panel gently so that the free side of the panel can be slipped into the corresponding groove of the door frame (4).
- D. Push the panel downwards so that the lower horizontal edge of the panel is fitted into the bottom groove (5).
- E. Between the upper edge of the panel and the door frame there is now a gap which should be covered by the decoration strip.
- F. Put the strip across the door so that the gap is covered and push it upwards (6). The tabs on the inside of the strip should fit in behind the flange of the door frame. Secure the decoration strip by means of the two screws (1).

Panel dimensions

Thickness max. 4 mm 5/32 inches

REFRIG. MODELS	HEIGHT	WIDTH
	+ 1- 1/32 inch	+1- 1/32 inch
RM2366	25 1/2	21 1/16
RM2400	28 1/16	22 13/32
RM2500	35 15/16	22 13/32
RM2600		

