

Refrigerator

RM-100 REFRIGERATOR

Door Assembly	13-2
Cabinet Assembly	13-3
Cooling Unit	13-4
Removal and Replacement	13-5
Theory of Operation	13-6
The Absorption Type Cooling Unit	13-7
The Automatic Defrosting Device	13-8

COMPONENT CHECKING, REPAIRING AND MAINTENANCE

Cooling Unit Operation Analysis	13-9
Gas Thermostat and Burner	13-9
Flue System	13-10
Thermoelectric Safety Device	13-10
Piezo Lighter	13-11
Electric Heater Replacement	13-12
Absorption Unit Replacement RM-100	13-12
Door Removal RM-100	13-13
Door Gasket and Pan Replacement	13-13
Gas/Electric Control	13-14

TROUBLE SHOOTING - ELECTRIC OPERATION..... 13-14

TROUBLE SHOOTING - GAS OPERATION..... 13-15

Door (RM-100)

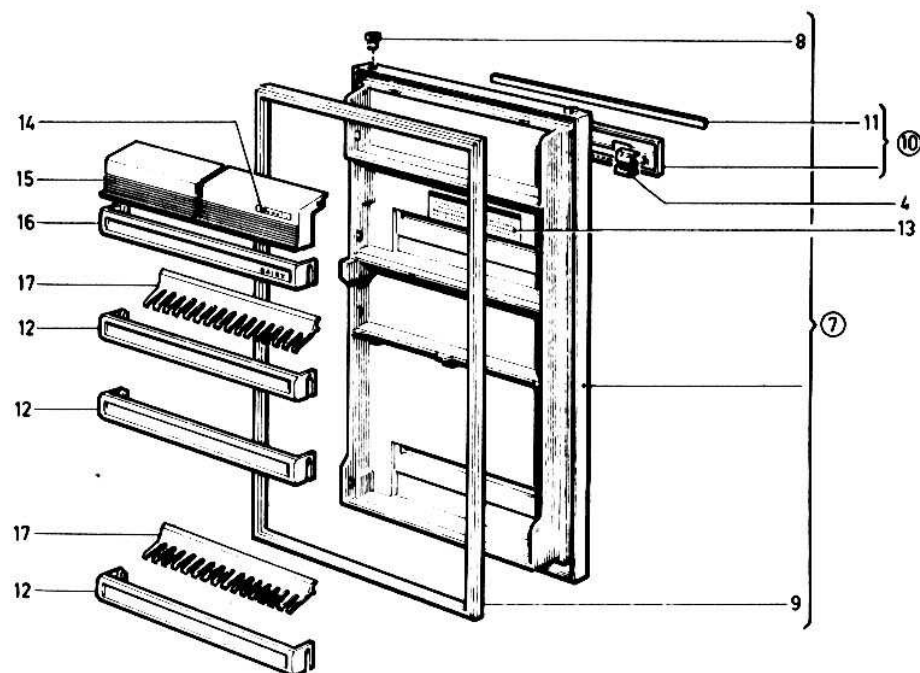
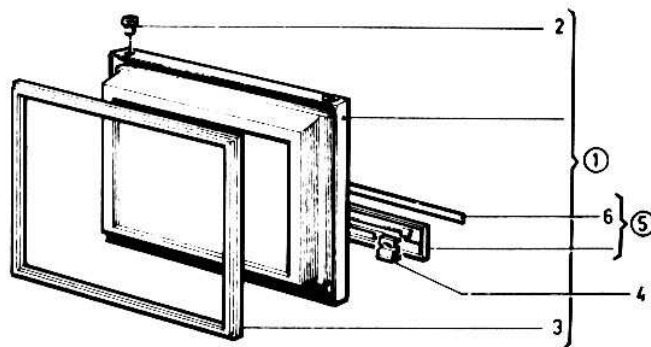


Fig. 1

Door (RM-100)

Item No.	Part No.	Description
1	200 26 20-02/5	Door, upper, compl.
2	200 26 19-00/1	. Bushing
3	200 26 26-00/6	. Door gasket
4	200 27 07-00/4	Holder for decoration
5	200 26 90-02/8	Decoration, compl.
6	200 26 91-02/6	. Decoration strip
7	200 26 10-02/6	Door, lower, compl.
8	200 26 19-00/1	. Bushing
9	200 26 26-01/4	. Door gasket
10	200 26 78-02/3	Decoration, compl.
11	200 26 76-02/7	. Name plate "Gas Electric - Automatic Defrost - Royal Dometic"
12	200 17 32-05/2	Door compartment
13	200 23 56-00/0	Warning label
14	200 26 72-00/0	Name plate "Dometic"
15	200 50 07-06/3	Shutter, brown
16	200 17 32-06/0	Door compartment
17	200 27 94-00/2	Bottle holder

Cabinet (RM-100)

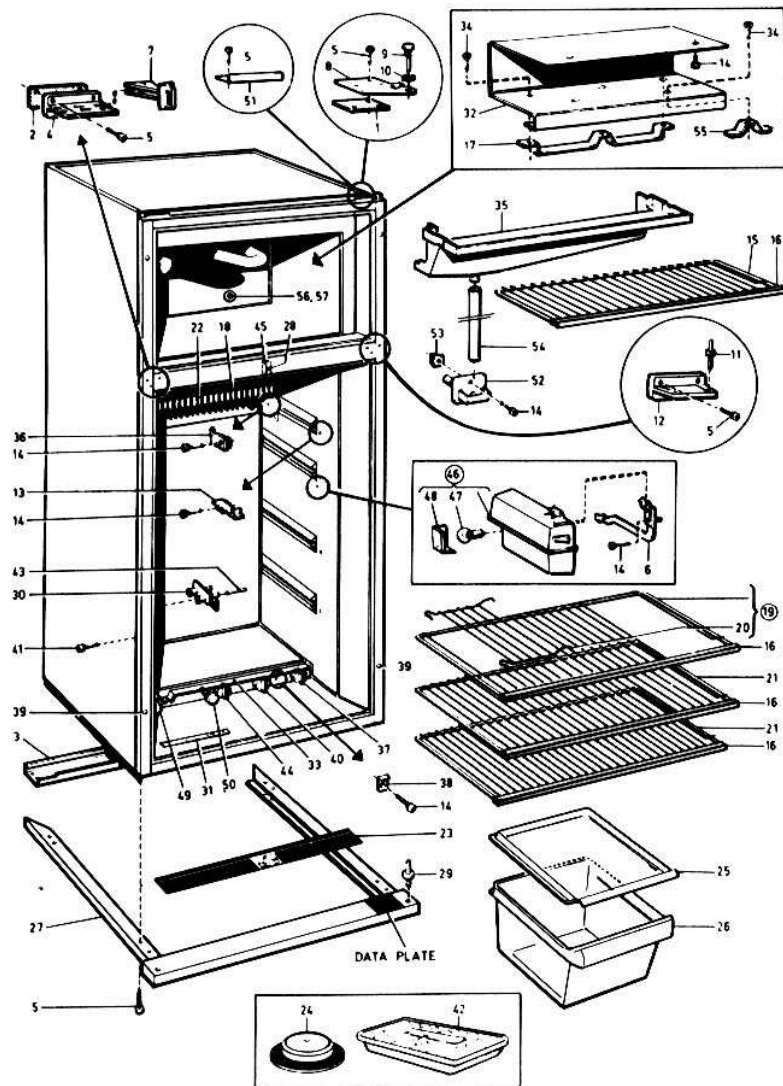


Fig. 2

Cabinet (RM-100)

Item No.	Part No.	Description
1	200 22 66-01 9	Spacer
2	200 27 61-00 1	Washer
3	200 26 25-02 4	Protection plate
4	200 27 60-00 3	Holder
5	724 13 28-01 7	Screw, RX 5 x 14, Z.P.L.
6	200 27 49-00 6	Holder
7	200 27 59-00 5	Travel latch
8	200 25 36-00 7	Hinge plate
9	200 05 44-00 3	Hinge pin, upper
10	735 21 60-01 9	Lock washer, 7.4, Z.P.L.
11	200 23 26-00 3	Hinge pin, middle
12	200 25 35-00 9	Hinge, middle
13	200 26 35-00 7	Shelf stop
14	729 52 81-65 8	Screw, LKXS B6x12, stainless
15	200 26 52-06 9	Shelf, depth 170 mm
16	200 26 40-00 7	Decoration strip
17	200 26 41-00 5	Holder
18	729 54 18-40 9	Screw, RXS B10x30, stainless
19	200 26 51-12 9	Shelf with flap, depth 312 mm
20	200 16 59-06 5	Flap
21	200 26 52-05 1	Shelf, depth 312 mm
22	200 26 37-00 3	Flange
23	200 70 08-03 6	Instruction plate
24	200 28 75-00 9	Spirit level
25	200 27 27-00 2	Cover for crisper
26	200 27 26-00 4	Crisper, yellow
27	200 25 33-09 5	Cabinet base, beige
28	729 53 44-40 7	Screw, RXS B8x10, Stainless
29	200 23 67-00 7	Hinge pin
30	200 26 24-00 1	Shelf retainer
31	200 22 35-00 6	Warning label (KEEP THIS SPACE FREE)
32	200 26 42-00 3	Shelf
33	200 26 64-00 7	Control panel, brown
34	724 33 27-13 2	Screw, FXS 5x16, brass, Z.P.L.
35	200 26 36-00 5	Drip protection, white
36	200 05 47-00 6	Snap spring
37	200 27 25-03 0	Thermostat knob, electric
38	733 78 13-06 2	Lock nut SNJ 1915
39	200 23 52-01 7	Plug
40	200 27 25-04 8	Gas valve knob
41	729 52 79-01 7	Screw, RXS B6x10, Z.P.L.
42	200 23 37-00 0	Ice tray
43	200 12 81-00 1	Pin
44	200 27 25-02 2	Thermostat knob, gas
45	200 27 98-00 3	Clamp
46	200 27 51-01 0	Light fitting, compl.
47	14 03 15-00 3	Lamp C6V
48	200 27 48-00 8	Lamp protection
49	200 27 24-00 9	Knob
50	200 27 22-00 3	Pull knob
51	200 27 99-00 1	Cover
52	200 22 60-00 4	Drain pipe
53	200 16 74-00 7	Snap nut
54	200 26 04-00 3	Hose
55	200 27 28-00 0	Holder
56	729 54 12-40 2	Screw, RXS B10x16, stainless
57	734 48 90-40 0	Washer, 5.4, stainless

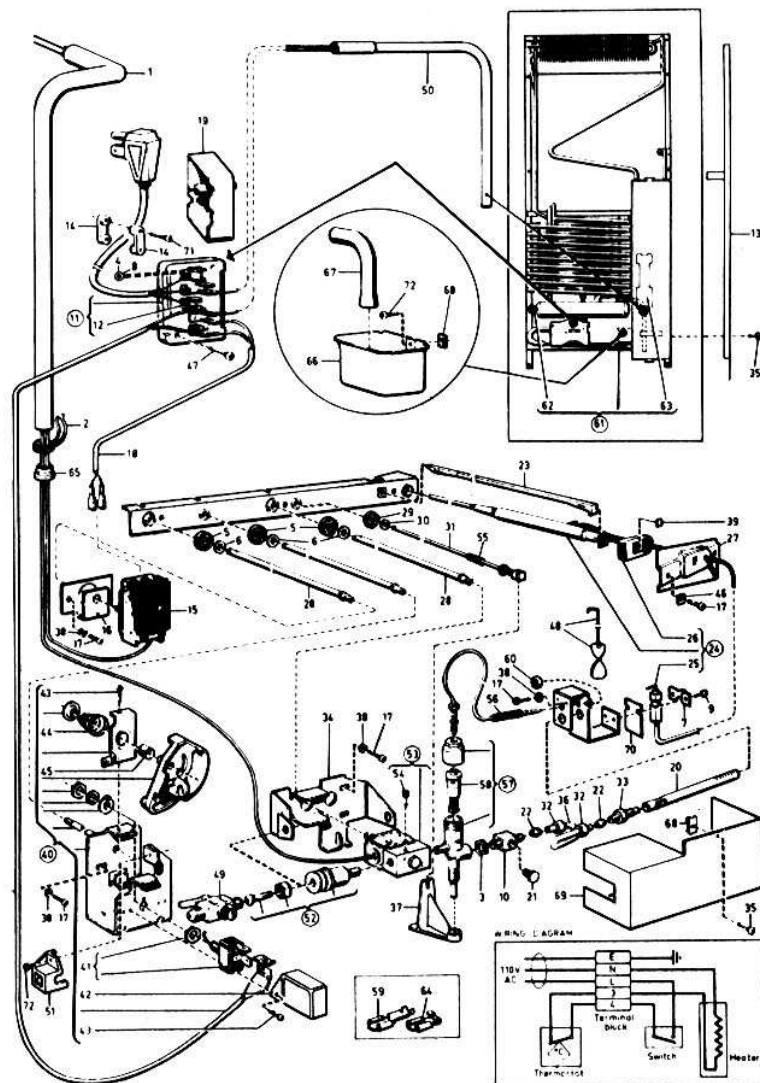


Fig. 3

Electric/Gas Equipment Cooling Unit (RM-100)

Item		
No.	Part No.	Description
1	200 26 00-00/1	Tube
2	200 26 01-00/9	Tube holder
3	17 33 66-00/6	Lock nut
4	724 13 28-01/7	Screw, RX 5x14, Z.PL.
5	200 22 24-01/8	Sealing ring
6	734 49 74-01/4	Washer, 5.5, Z.PL.
7	200 24 38-00/6	Clamp
8	735 11 46-01/9	Spring washer, FBB 5.1, Z.PL.
9	729 52 75-01/5	Screw, LKXS B6x6, Z.PL.
10	200 24 70-00/9	Connection piece
11	58 15 57-70/9	Terminal block
12	723 22 50-03/0	Screw, KCS 3.5x5, NI.PL.
13	200 24 72-02/1	Flue
14	56 10 14-01/0	Saddle clip
15	289 00 32-02/8	Electric thermostat Ranco A50-283
16	289 00 34-00/8	Thermostat bracket
17	724 12 89-01/1	Screw, RX 4x10, Z.PL.
18	17 31 93-02/0	Cable, compl., for thermostat
19	58 15 65-72/8	Cover with screw
20	200 26 44-00/9	Burner
21	16 93 80-00/3	Plug screw 1/8-27PTF-SLP, short
22	17 32 13-00/0	Olive
23	200 22 22-03/8	Light conductor
24	200 26 09-02/8	Lighter Piezo, compl.
25	200 24 36-00/2	Electrode
26	200 23 04-00/0	Packing
27	200 23 05-00/7	Holder
28	200 23 00-03/2	Shaft
29	200 22 24-00/0	Sealing ring
30	734 49 08-01/2	Washer 6.0, Z.PL.
31	200 22 26-03/9	Pull Rod
32	17 32 15-00/5	Union nut
33	200 26 60-21/1	Burner jet No. 58 (propane)
34	200 24 69-00/1	Bracket
35	729 52 87-01/0	Screw, RXS B6x25, Z.PL.
36	200 26 49-00/8	Gas inlet pipe
37	200 22 27-00/3	Valve rocker
38	735 11 36-01/0	Spring washer, FBB 4.1, Z.PL.
39	200 22 20-00/8	Sight glass
40	200 26 70-04/6	Switch control, compl.
41	17 21 68-00/7	Switch
42	17 31 01-00/7	Protection cover
43	729 52 79-01/7	Screw, RXS B6x10, Z.PL.
44	200 26 65-00/4	Spring
45	735 68 19-11/5	Compression ring, SCB 1828
46	200 23 51-00/1	Washer
47	729 52 83-01/9	Screw, RXS B6x16, Z.PL.

No.	Part No.	Description
48	17 21 74-01/3	Flue baffle
49	17 28 07-00/0	Cut-off valve
50	380 03 90-09/2	Heater 110V, 275W
51	200 27 66-00/0	Turning protection
52	17 28 10-00/4	Gas filter with nipple and nut
53	289 00 31-05/3	Gas thermostat Ranco V35, compl.
54	17 28 19-02/1	By-pass screw S17
55	200 23 81-00/8	Spring
56	16 93 71-00/2	Thermo-couple element CT101033
57	17 07 55-00/3	Safety valve STG 1/6 S4
58	200 09 99-00/9	Safety valve magnet
59	760 38 57-00/9	Tab connector, straight
60	16 93 86-00/0	Nut M8x1
61	928 61 09-00/5	Cooling unit 610A without heater
62	17 32 28-00/8	Filling cap
63	17 34 30-00/0	Cover
64	760 48 55-00/2	Tab connector, angle
65	200 27 68-00/6	Plug
66	200 26 02-00/7	Evaporation bowl
67	200 26 03-00/5	Drain trap
68	733 78 10-41/6	Lock nut SNU 1219/17/40
69	200 27 30-00/6	Burner protection
70	200 24 42-00/8	Insulation
71	729 52 85-01/4	Screw, RXS B6x19, Z.PL.
72	729 52 79-01/7	Screw, RXS B6x10, Z.PL.

Removal and Replacement of RM 100 Refrigerator

1. Remove screws that secure credenza to refrigerator panel. These are located by opening credenza door and removing the screws anchoring frame work, shelves and credenza top to the panel.
2. Remove wires from air conditioner thermostat. (Be sure to note color code of wires for reinstallation.)
3. Located on face of panel are Phillips head screws and pop rivets securing panel to refrigerator. Remove these.
4. Now, very carefully, slide panel from wall extrusion and remove completely from trailer. (When sliding panel out, be careful not to scratch it on the credenza trim.)
5. Open pantry door next to refrigerator. Located on panel next to refrigerator, will be a row of Phillips screws anchoring panel to refrigerator. Remove these screws.
6. On top of shelf above refrigerator, remove screws attaching shelf to refrigerator.
7. Remove pop rivets which secure metal strap from refrigerator to wall. This is located at top rear corner where panel was removed. (Step 4)
8. Shut off gas supply. Work through refrigerator burner inspection door to disconnect gas line from gas shut-off valve.
9. Remove electric plug from electric outlet.
10. Refrigerator should now be ready for removal.
11. Lay a piece of plywood ¼" thick by 3 ft. square on the floor at the face of the refrigerator. Tip back slightly and pull forward on refrigerator until refrigerator starts onto plywood. As soon as it is started, continue to pull refrigerator from wall until it clears opening. (Be very careful when removing refrigerator not to damage furniture.)
12. Reinstall by reversing above steps. Check all gas connections for leaks with soapy water, or leak detector.

It is best to place a piece of cardboard or plywood on floor to prevent damage to the carpet when removing.

Theory of Operation (All Models)

The refrigerator is designed to keep perishable foodstuffs in a wholesome condition for a sufficiently long period to meet household requirements. To do this, a temperature of between 35°F (2°C) and 50°F (10°C) has been found most suitable, and the refrigerator must be capable of maintaining this temperature under the most severe conditions likely to be met.

The cabinet is an insulated container, fitted with shelves, and provision is made for the storage of frozen foods and the freezing of water into ice-cubes of convenient size for household use. In order to maintain the cabinet at the relatively low temperatures necessary for the storage of food and the making of ice, heat has to be extracted from the foodstuffs, the air admitted to the cabinet every time the door of the refrigerator is opened, the small amount of heat that enters through the insulated walls of the cabinet and from the water in the ice trays. The sum of these items constitutes the load on the cooling unit.

The Frozen Storage Compartment is inside the cabinet and attached to the evaporator (that portion of the unit where the cooling effect is produced), consequently it is maintained at a low temperature.

Inside the cabinet the air around the evaporator is cooled, becomes heavier and moves downwards. As it passes over the foodstuffs it extracts heat, becomes lighter and rises, thus creating an air circulation within the cabinet. (See fig. 4).

A thermostat or temperature regulator, which automatically controls the cabinet temperatures, is fitted to all except kerosene operated models.

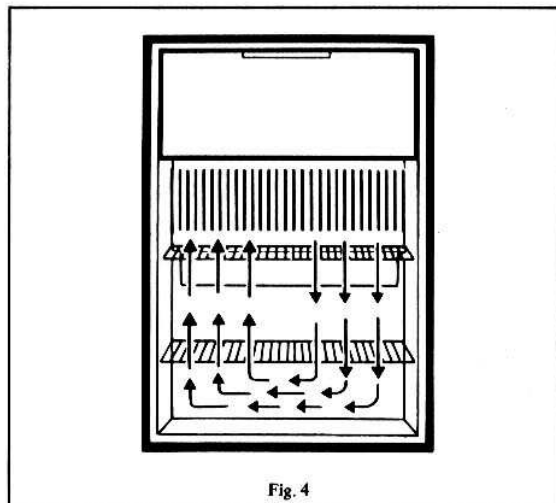


Fig. 4

Absorption Type Cooling Unit

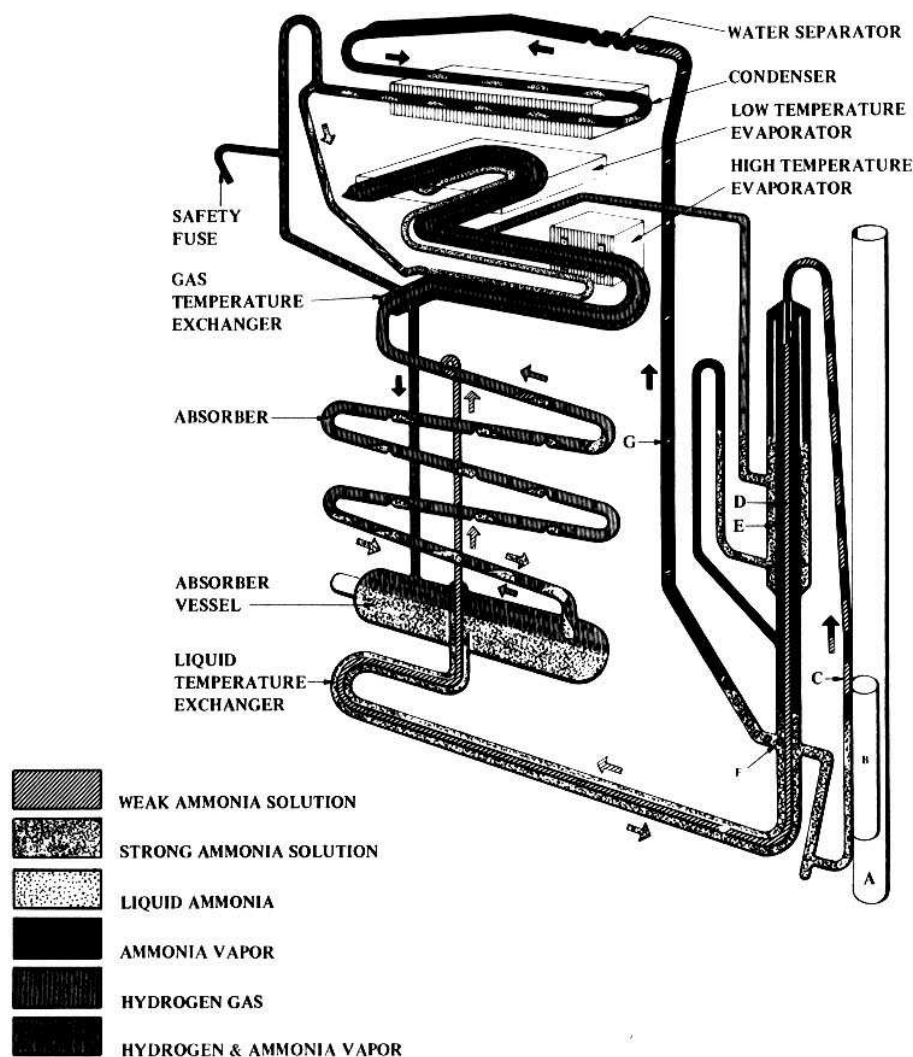


Fig. 5

Absorption Type Cooling Unit

The continuous absorption type of cooling unit is operated by the application of a limited amount of heat furnished by L.P.G. or electricity. No moving parts are employed.

The unit, (see fig. 5) consists of four main parts — the boiler, condenser, evaporator and absorber. Further, this unit is provided with an automatic defrosting device (see fig. 6).

The unit (in fig. 5) can be run on either electricity or L.P.G. When the unit operates on L.P.G. the heat is supplied by a burner which is fitted underneath the central tube (A) and when the unit operates on electricity the heat is supplied by a heating element inserted in the pocket (B).

The unit charge consists of a quantity of ammonia, water and hydrogen at a sufficient pressure to condense ammonia at the room temperature for which the unit is designed.

When heat is supplied to the boiler system, bubbles of ammonia gas are produced which rise and carry with them quantities of weak ammonia solution through the siphon pump (C). This weak solution passes into the tube (D), while the ammonia vapor passes into the outer tube (E) and on to the point (F) where it is enriched by bubbling through the liquid before rising into the vapor pipe (G) and on to the water separator. Here any water vapor is condensed and runs back into the boiler system leaving the dry ammonia vapor to pass to the condenser.

Air circulating over the fins of the condenser removes heat from the ammonia vapor to cause it to condense to liquid ammonia in which state it flows into the low temperature evaporator. The ammonia passes from the low temperature evaporator into the high temperature evaporator.

Both the low and the high temperature evaporators are supplied with hydrogen. The hydrogen passes across the surface of the ammonia and lowers the ammonia vapor pressure sufficiently to allow the liquid ammonia to evaporate. The evaporation of the ammonia extracts heat from the evaporator which in turn extracts heat from the food storage space, as described above, thereby lowering the temperature inside the refrigerator.

The mixture of ammonia and hydrogen vapor passes from the evaporators to the absorber.

Entering the upper portion of the absorber is a continuous trickle of weak ammonia solution fed by gravity from the tube (D). This weak solution, flowing down through the absorber, comes into contact with the mixed ammonia and hydrogen gasses which readily absorb the ammonia from the mixture, leaving the hydrogen free to rise through the absorber coil and to return to the evaporator.

The strong ammonia solution produced in the absorber flows down to the absorber vessel and then to the boiler system; thus completing the full cycle of operation.

The liquid circulation of the unit is purely gravitational. It is therefore essential that the unit stands level.

Heat is generated in the absorber by the process of absorption. This heat must be dissipated into the surrounding air. Heat must also be dissipated from the condenser in order to cool the ammonia vapor sufficiently for it to liquefy. Free air circulation is therefore necessary over the absorber and condenser.

The whole unit operates by the heat applied to the boiler system and it is of paramount importance that this heat is kept within the necessary limits and is properly applied.

Automatic Defrosting Device

The absorption unit shown in Fig. 5 incorporates a unique, fully automatic defrosting device for the general food storage compartment, which eliminates the necessity for manual defrosting at frequent intervals normally associated with most conventional refrigerators. Furthermore, the time interval of each defrosting cycle, and the frequency, have been so arranged that during defrosting there is no noticeable effect upon the temperature of the foods stored in the refrigerator, and frozen food storage conditions can be maintained at all times in the frozen storage compartment.

How Automatic Defrosting Works

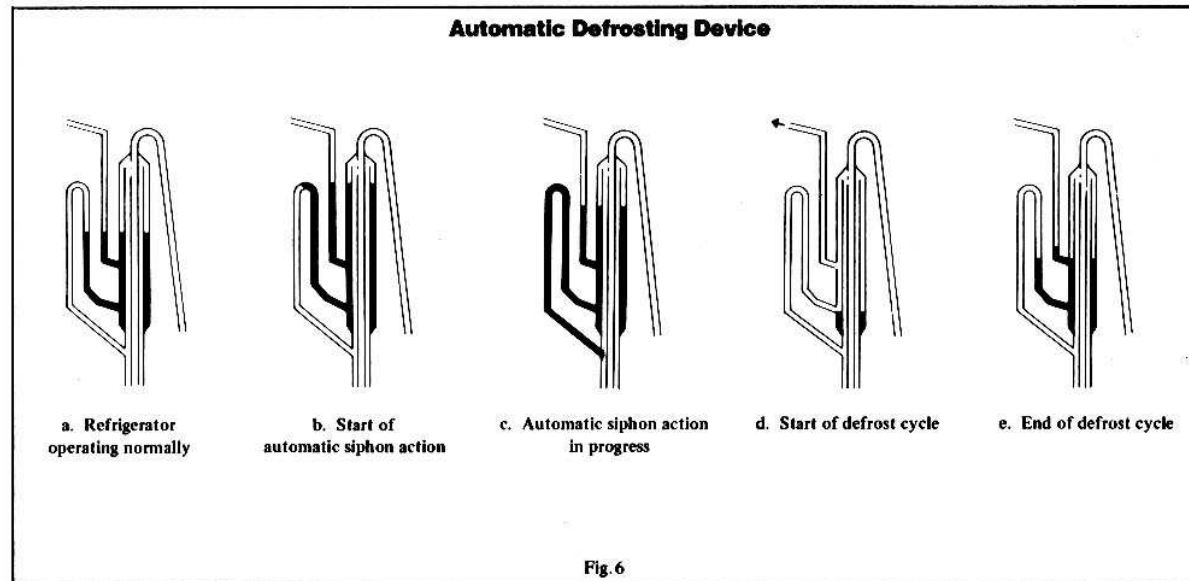
The defrosting action is brought about by diverting hot gas from the boiler to the high temperature evaporator at periodic intervals, and this hot gas melts the ice on the fins of the evaporator coil. The resulting defrost water runs off into the drip tray.

The operation of the defrost cycle is completely automatic and the frequency with which it takes place is determined by an automatic siphon arrangement (see fig. 6) in the boiler system, which periodically empties an associated siphon chamber, allowing hot gas to pass through the chamber and thence along a by-pass pipe to that section of the evaporator which cools the general food storage compartment.

During the normal refrigeration process, see a. in fig. 6, the by-pass pipe outlet from the siphon chamber is closed by condensed liquid, and over a period of 15-25 hours solution continues to condense in the chamber and the liquid level rises slowly until it reaches the siphoning height (see b.).

The automatic siphon then empties the siphon chamber (see c.) and thereby uncovers the outlet to the by-pass pipe. This allows the hot gas from the boiler to by-pass the condenser, passing, instead, through the siphon chamber direct to the cabinet cooling coil of the evaporator (see d.).

The defrost period lasts about half an hour, after which time the solution condensing in the siphon tube once again closes the outlet to the by-pass



pipe, and defrosting ceases (see e.). The refrigerator unit then continues to operate normally for another 15-25 hours, and the defrosting cycle is repeated.

Refrigerator Component Checking. Repairing & Maintenance

Operation Analysis for Cooling Unit

It is obviously important that all external factors affecting the unit should be checked properly before a unit is condemned as faulty and that emphasis has been placed upon the necessity for correct installation, upright refrigerator, correct heat input, baffle position, etc. Check the size and wattage of the electric heater to make sure that the heater element is inserted to its full length in its pocket or receptacle. If the electric heater is only partly inserted, the heat distribution will be incorrect, causing an excessive vaporizing of the ammonia within the boiler when operating on electricity. The same symptom can show up with too much or too little heat input either on electric or on gas operation, or if the refrigerator has been operating in an off-level position or with inadequate ventilation.

There are many things to consider before determining that the unit is faulty.

1. Leveling of the refrigerator.
2. When the trailer is stationary, it must be leveled to be comfortable to live in. When the refrigerator is properly installed, the ice-tray compartment shelf is parallel with the floor. To check this, a bubble level is supplied with the refrigerator. The level should be placed on the ice-tray compartment shelf and the position of the bubble observed. Adjust the position of the trailer so that the bubble is in the center ring of the level.
3. When the trailer is in tow, the continuous rolling and pitching movement will not affect the refrigerator as long as the movement passes either side of level. When the trailer is temporarily parked, the sensitivity of the refrigerator should be remembered.
4. Correct position of baffle in boiler tube.
5. No burnt-out heating element.
6. Heating element in correct position.
7. Correct size and wattage of heating element.
8. Supply voltage corresponds to voltage stamped on heating element.
9. No fluctuation in voltage supply.
10. No loose electric connections.

11. Thermostat intact.

12. No unit leaks.

If an excessive vaporizing of the ammonia within the boiler occurs due to the reasons above, the liquid mixture in the boiler becomes very weak and the pump will cease to operate. This means that the circulation of liquid stops, with the result that the evaporator inside the cabinet ceases to produce cooling.

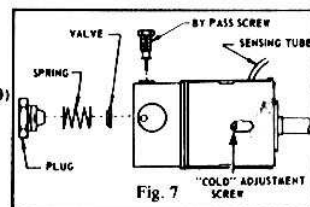
Such a blockage of the unit in the liquid circuit is usually made evident by signs of overheating on the vapor pipe leading from the boiler to the condenser. The paint on this pipe will become blistered and the metal discolored.

To remedy this fault, it is recommended that you remove the unit or refrigerator completely to allow sufficient time to cool down the unit. Turn the unit or refrigerator upside down several times, so that the liquid in the absorber vessel can be mixed with the liquid in the boiler. This procedure will restore the liquid balance to the unit.

Gas Thermostat V-35

1. The gas thermostat V-35 consists of three main parts:

Bellows system
Mechanism
Valve housing (See Fig. 10)



2. Cleaning valve or valve seat in the V-35 thermostat

Dirt on the thermostat gas valve or seat prevents the thermostat valve from completely closing. Consequently, it lets through some gas when in closed position. This condition may prevent reducing the flame to the required minimum. It will cause too low cabinet temperature. This can be controlled by turning the thermostat dial to "O". If the flame does not go down to the low flame (by-pass flame) it will be necessary to clean the thermostat valve and valve seat.

NOTE: The thermostat will not close to by-pass, on setting "O", unless the thermostat bulb is cooled down to at least 5 degrees C (40 degrees F).

Proceed as follows:

- a. Remove the plug, spring and valve and clean the valve and the valve seat.
- b. Also check the size of by-pass screw in accordance with table below.

NOTE: The adjusting screw on the thermostat is preset at the factory and should never be readjusted.

Model	By-pass screw	Part No.
RM-100	S17	17 28 19-02/1

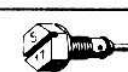


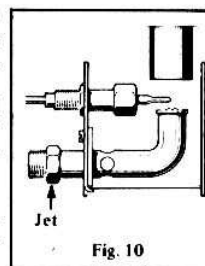
Fig. 9

The Gas Burner (See Fig. 10.)

1. The burner has the jet horizontally located and the burner mixing tube is formed as a bend with vertical outlet.

The primary air inlets are pre-set and therefore not adjustable. The burner and the burner holder are made in one piece.

The burner is provided with the thermoelectric failure safety device and the thermocouple tip is pre-set.



2. Removal and Replacement

- a. Shut off gas supply.
- b. Remove thermocouple from thermal electric safety device. (See page 13-10 for removal instructions.)

c. Disconnect gas line at burner housing.

d. Remove Phillips head screw securing housing.

e. Rotate burner housing down and out.

f. To install, reverse above procedure being sure that no dirt gets into gas line or thermoelectric connection. Check all gas connections for leaks with soapy water or leak detector.

3. Periodic Maintenance

Once or twice a year, depending on use, it is recommended to clean and adjust the burner assembly. Proceed as follows:

a. Disconnect the gas pipe from the burner assembly.

b. Remove the burner housing. (See 2 above.)

c. Remove the jet.

d. Clean the jet with alcohol and compressed air ONLY.

e. Clean the burner tube and gauze with a brush. Blow with compressed air.

f. Reassemble.

g. Check the burner with full flame (turn thermostat to MAX and with by-pass flame). If the refrigerator has been working for a few hours and the thermostat bulb is colder than about 6 degrees C or 43 degrees F, the transition from full flame to by-pass can be observed if one turns the thermostat knob slowly from MAX to zero.

At the same time, check the flue baffle to see that it is clean and reasonably free from soot. Heavy soot formation indicates improper functioning of the burner. Clean baffle and flue. Also, clean cooling unit and floor under refrigerator.

The entire gas installation should be checked for leaks at intervals. Test all pipe connections with soapy water or leak detector, not an open flame.

The refrigerator gas equipment must not be subjected to internal pressure exceeding 22 inches pressure of water column.

4. Burner jet sizes and part number.

Model	Butane	Part No.	Propane	Part No.
RM100	58	200 26 60-21/1	58	200 26 60-21/1



Fig. 11

The Flue System

1. The flue system consists of the following parts:

a. Central tube (built-in as part of the boiler system and cannot be removed).

b. Flue

c. Flue baffle with support wire

The purpose of the flue system is to provide a draft which will pull the burner flame into the central tube and supply sufficient primary and secondary air to the flame.

The right flue draft will not be obtained until after the burner has heated the flue system to the proper temperature.

The flue baffle, which is inserted in the central tube, distributes the heat produced by the burner to the boiler system.

It is important that the correct size of baffle is used and that it is correctly located in the central tube in order to obtain the best cooling performance. The size and the distance between the lower end of the baffle and the lower end of the central tube for different refrigerator models are shown in table c. and Fig. 12.

2. Flue obstructions

On gas refrigerators, the flue will require cleaning occasionally. To do this, it will be necessary to gain access to the back of the cabinet. When cleaning the flue proceed as follows:

Unscrew the outer burner shield of the burner housing, release the flue and lift out the baffle on its support wire from the top of the boiler tube.

From the top, clean the flue with a suitable flue brush. Also clean the baffle before putting back in place.

An obstruction in the flue will reduce or stop flue draft. Flue obstructions will cause odors outside refrigerator, slow freezing and higher cabinet temperatures. Flue stoppages may also cause the flame to burn outside the central tube.

3. Baffle sizes, height, and part numbers.

Model	Baffle Width x Length		Baffle Height		Part No. Baffle with support wire
	mm	inches	mm	inches	
RM100	20 x 150	¾ x 6	75	3	17 21 74-01/3

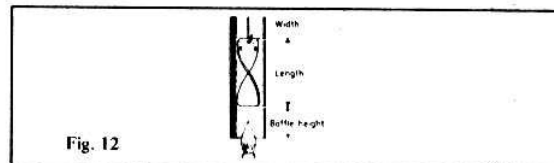


Fig. 12

Thermoelectric Safety Device

1. Firmly pulling rod to engage safety device will allow gas to flow to the burner.

2. Light burner, holding safety device open for at least one minute.

3. Release rod engaging safety device. Burner should continue to operate. If not, check the following:

a. Thermoelectric tip may not be close enough to flame to heat properly. Move closer.

b. Thermoelectric copper lead may be loose from electromagnet. Finger tighten, then turn an additional 1/4 turn with wrench.

c. Safety valve magnet may be faulty. Replace as follows:

4. If the safety valve magnet is defective, it cannot be repaired but must be replaced. When the safety valve magnet needs replacement, proceed as follows: (See Fig. 13.)

a. Unscrew the connection plug (A) on the thermocouple from the housing nut (B).

b. Unscrew the housing nut (B) and remove the defective safety valve magnet (C) from the housing (D).

c. Fit a new magnet valve and ensure that it is properly inserted in the housing (D).

d. Fit the housing nut (B) and the connection plug (A) and check that a good contact between the contact plug (E) on the thermocouple and the contact (F) on the safety valve magnet is obtained.

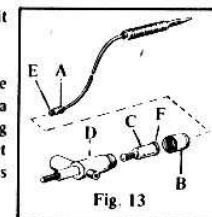
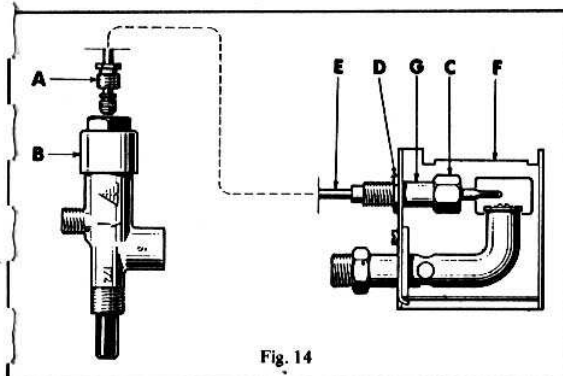


Fig. 13

5. Thermocouple may be defective, replace as follows: (See Fig. 14)

- Unscrew plug (A) from the valve housing (B).
- Loosen the position nut (C) and lock nut (D).
- Screw off nut (C), remove spacer (G) and nut (D). Release the thermocouple feeler (E) from burner housing (F).
- Bend the new thermocouple to the same shape as the old one. Screw nut (D) into the new element.
- Put the feeler through the hole in the burner housing (F), refit the spacer (G) and screw the position nut (C) tight against the shoulder on the feeler. Make sure the nut (D) is free during this operation.
- Tighten the lock nut (D) against the burner housing with a small spanner, if necessary, holding nut (C) with another spanner. Make sure the feeler is located as in Fig. 14.
- Screw plug A onto the valve housing B, taking care not to damage the threaded hole in the aluminum cap of the housing. Plug A must be properly tightened to the valve housing to insure contact between the thermocouple and the magnetic coil within the housing.



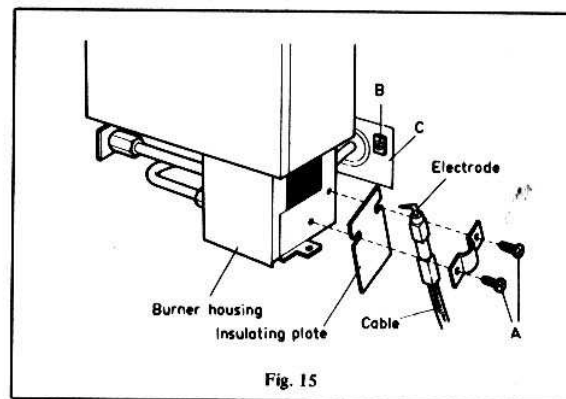
Piezo Lighter RM 100 (FIG. 15)

The Piezo lighter does not normally need any maintenance. If for any reason the electrode or the lighter must be replaced, proceed as follows:

Replacement of electrode only.

- Unscrew burner outer shield.
- Loosen fastening screw "A" (Fig. 15) holding the electrode against side of burner housing.
- Loosen the electrode from its cable by unscrewing the electrode anti-clockwise.
- Fit a new electrode.

CAUTION: When fastening the electrode on the burner housing make sure that the insulation plate is properly fitted between the burner housing and the electrode (See Fig. 15).



Replacement of Piezo lighter complete

- Release the Piezo lighter knob "E" inside the cabinet by means of pulling the knob outwards.
- Loosen outer burner shield and burner housing.
- Loosen the fastening screw "A" (Fig. 15) holding the electrode against side of burner housing.
- Loosen the two screws "B" on holder "C". Now the lighter complete can be pulled out at the rear of the cabinet.
- To fit new lighter, reverse above procedure.

Replacement of Electric Heater RM 100

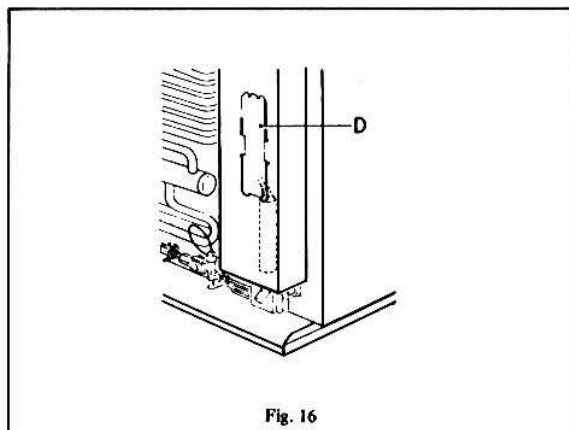


Fig. 16

1. To replace the heater, first check that the wall plug is disconnected, then remove the plate D, (Fig. 16).
2. Remove the fiberglass insulation around the heater so that the heater is accessible for removal. Then bend aside the wire clip keeping the heater in proper position, disconnect the heater leads from the cord and remove the heater.
3. Make sure the new heater is fully inserted before bending back the wire clip (with caution, or it might snap off). Reset the electric connections. Be careful to put the fiberglass insulation back in its proper place and in such a way that the heater leads will not be in direct contact with hot boiler tubes.
4. It is essential that the replacement heater be of the proper rating in order to provide the correct heat input for the particular model.

When replacing heater always make sure that the heater is properly inserted in its pocket. (See Fig. 17)

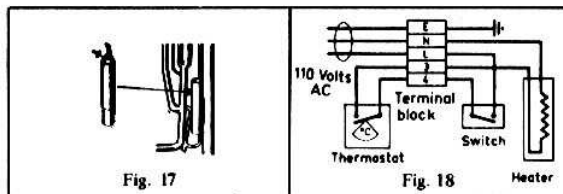


Fig. 17

Fig. 18

Amperage Requirements

Model	Voltage	Ampere
RM 100	110	2.5

Heater Part Numbers

Model	Cooling Unit Type No.	Heater Type	Voltage	Watts	Part No.
RM100	601A	-	110	275	3800390-09/2

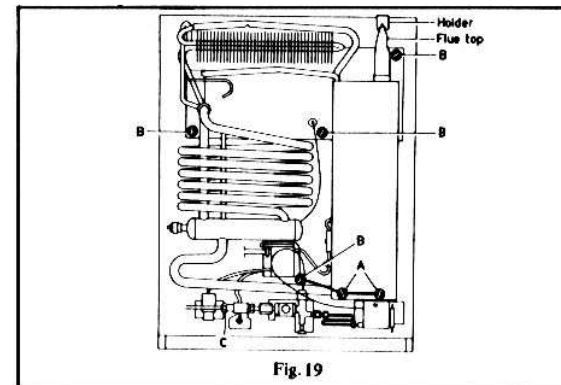
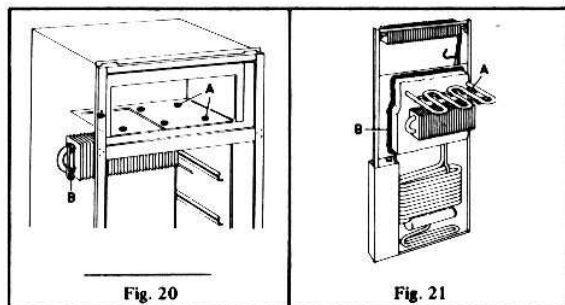


Fig. 19

Replacement of Absorption Unit on RM-100

When replacing the absorption unit it will be necessary to remove the refrigerator from its recess. (See page 13-5)

1. Remove the 6 screws (A) at the bottom of the freezer compartment (Fig. 20).
 2. Remove the thermostat capillary tubes by loosening the two screws (B) on the evaporator fins (Fig. 20).
- CAUTION:** The locations of the thermostat capillary tubes should be noted at this time for relocation later on. The tubes must be replaced in the right position, otherwise improper performance may result.
3. Remove the two sealing plugs for capillary tubes, one on the back and one inside the cabinet, and straighten the tubes out.
 4. Remove the capillary tubes by going to the back of the refrigerator and gently pulling the tubes straight out.



5. Remove the connection block cover on the side of the boiler case and disconnect the two electrical wires where they join the heater leads in the connection block (new electric heater is normally installed in new absorption units at factory).
6. Remove the ground screws (A) (Fig. 19) on the lower part of the boiler case.
7. Remove the flue and the flue baffle.
8. Remove the screws (B) holding the absorption unit onto the back of the refrigerator (Fig. 19).
9. Release the Piezo electrode from burner housing.
10. Remove the fastening screw (Fig. 21) on the burner housing and remove the burner housing from the boiler case.
11. Carefully slide absorption unit straight out of the cabinet.

CAUTION: Be careful not to damage the inner liner. The locations of the fastening strips (A) (Fig. 21) on the evaporator should be noted at this time as they have to be fitted on the new unit.

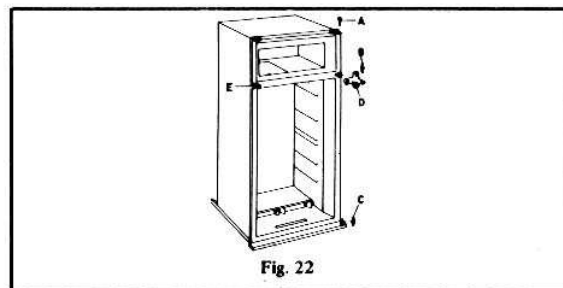
12. To replace absorption unit, reverse above procedure.

CAUTION: Be sure to apply sealing Permagum (B) (Fig. 21) on the unit mounting plate. Be sure to fit the fastening brackets (A) on the evaporator coils in the right positions, otherwise it will be difficult to refit the 6 fastening screws inside the freezer.

Door Removal

1. Unscrew and remove the upper hinge bolt (A) on the freezer door, incline the door outwards and lift off the door (Fig. 22).
2. Remove the middle hinge bolt (B) and lift off the cabinet door.

CAUTION: Upon reinstallation, check that the door closes easily and that the door gaskets seal well on all sides.

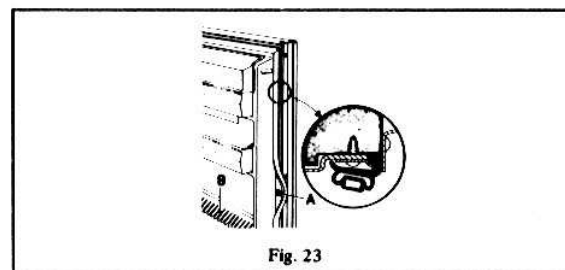


Replacement of Door Gasket and Door Pan

1. Remove shutter for butter compartment.
2. Remove the door compartments.
3. Unscrew the upper hinge bolt, incline the door outwards and lift off the door.
4. Lay door on flat surface with door pan facing up.

CAUTION: Be sure to protect door panel from scratches and dents.

5. The screws holding the door pan in place are hidden by the door gasket. Pull the door gasket to one side and remove all screws (A) (Fig. 23) from the door plate.
6. Remove the metal reinforcing strips and door gasket.



7. If door pan has to be replaced, lift door pan away from door plate.

To replace door gasket and door pan, reverse above procedure.

CAUTION:

1. Do not fasten the screws too tightly, as it could cause cracks in new door pan.
2. The screws should be evenly or equally tightened all around the door.
3. Check that the door closes easily and that the door gasket seals well on all sides.

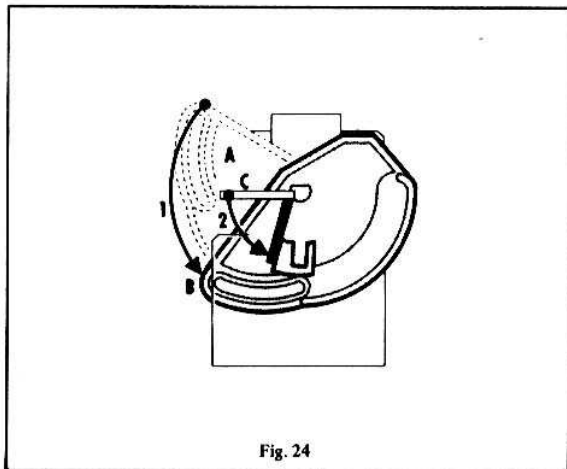


Fig. 24

Gas/Electric Control

When connecting the gas line to the gas cock on the gas/electric equipment at the rear of the refrigerator, use a back-up wrench to prevent undue rotation of the gas cock.

It is of utmost importance for correct function of the gas/electric control that the gas cock lever is correctly engaged in the slot "E" (Fig. 27) on the plastic driving disc "A" of the gas/electric control mechanism.

If for any reason the gas cock lever has come off position in the driving plastic disc, check alignment. Proceed as follows:

1. Turn downwards the driving plastic disc "A" to stop "B" (Fig. 24).
2. Turn downwards the lever "C" of the gas cock as far as possible (Fig. 24).

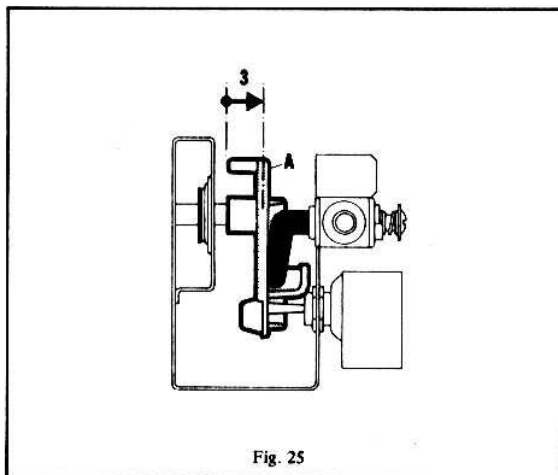


Fig. 25

3. Pull the driving disc "A" outwards (Fig. 25).
4. Turn the lever "C" of the gas cock into vertical position "D" (Fig. 26).

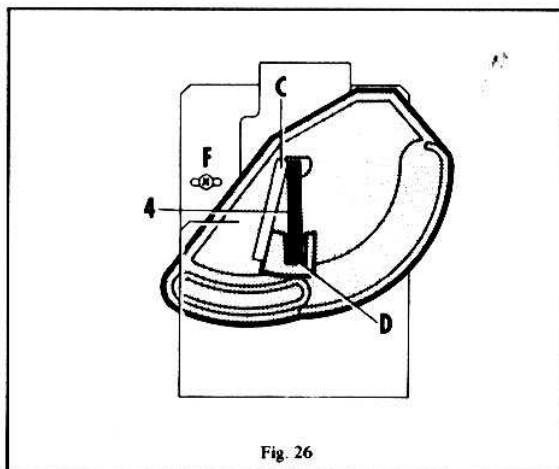


Fig. 26

5. Release the driving disc which is then pulled inwards by spring action, whereby the lever of the gas cock snaps into its slot "E" on the driving disc "A" (Fig. 27).

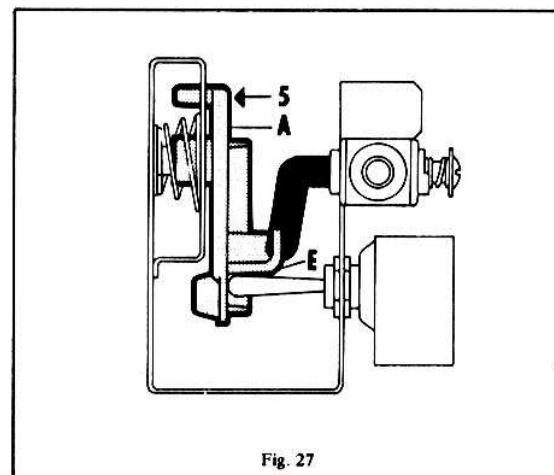


Fig. 27

Note: If the gas cock lever sluggishly snaps into its position in the driving disc "A", adjust the two fastening screws "F" of the mechanism.

Trouble Shooting – Electric Operation

1. The refrigerator does not cool satisfactorily.

Probable Cause	Remedy
a. Thermostat at wrong setting.	Turn the thermostat dial to a higher number.
b. Vent restricted.	Remove any restriction.
c. Refrigerator not level.	The refrigerator must be level in both directions to operate properly. (See p. 13-9)
d. Air leakage into cabinet.	Check fit of door gasket, and that the sealing plug is in the hole for the thermostat capillary in the rear wall of cabinet. (See p. 13-13)
e. Evaporator heavily coated with frost.	If the cooling unit is not equipped with the automatic defrosting device, defrost at more frequent intervals.

f. Heater faulty, wrong voltage or type.	Fit a new heater of appropriate voltage. (See p. 13-12)
g. Intermittent electricity supply.	Look for loose connections or other reason for interruption, and correct.
h. Drop in supply voltage.	The supply voltage should be maintained at the full rate.
i. Thermostat at "O".	Turn thermostat dial to No. 3 or 4.
j. Break in electrical circuit.	Check fuses, switches, wiring, etc. and repair the fault.
k. Heater faulty (open circuit).	Fit a new heater.
l. Thermostat faulty.	Have a new thermostat fitted.
m. Failed refrigerating unit.	(See p. 13-9)

2. The refrigerator is too cold.

Probable Cause	Remedy
a. Thermostat at wrong setting.	Turn the thermostat dial to a lower number.
b. End of thermostat capillary tube incorrectly located.	Re-insert the capillary end of thermostat fully in the sleeve under the ice-tray compartment.
c. Thermostat faulty.	Have new thermostat fitted.
d. Heater wrongly connected to terminal block.	(See p. 13-12)

d. Thermocouple not heated enough by flame.	(See p. 13-10)
e. Clogged by-pass screw.	Clean by-pass screw with alcohol and by blowing air through it. If necessary, replace by-pass screw.
f. Burner jet or burner gauze clogged.	Clean burner jet with alcohol and by blowing air through it. If necessary, replace burner jet. Clean the head with a brush.
g. Flue baffle not inserted into central tube of the cooling unit.	(See p. 13-10)
h. Baffle too low in flue.	(See p. 13-10)
i. Wrong gas pressure at the burner.	Have pressure checked. Pressure must not fall below 11" water columns when thermostat is set on maximum.
j. Burner assembly may be adrift.	Refit burner.
k. Thermostat at wrong setting.	Turn the thermostat dial to a higher number. If necessary, replace thermostat.

l. Failed refrigerating unit. (See p. 13-9)

2. The refrigerator is too cold.

Probable Cause	Remedy
a. Thermostat at wrong setting.	Turn the thermostat dial to a lower number.
b. End of thermostat capillary tube incorrectly located.	Re-insert end of capillary tube in the clamp on the fresh food compartment evaporator.
c. Incorrect size of by-pass screw.	Replace by-pass screw to correct size. (See p. 13-9)
d. Dirt in valve of the thermostat.	Clean the valve and valve seat in the thermostat. (See p. 13-9)

Trouble Shooting—Gas Operation

1. The refrigerator does not cool satisfactorily.

Probable Cause	Remedy
a. Vent restricted.	Remove any restriction.
b. Refrigerator not level.	(See p. 13-9)
c. Gas in tank used up.	Fill tank with L.P.G.