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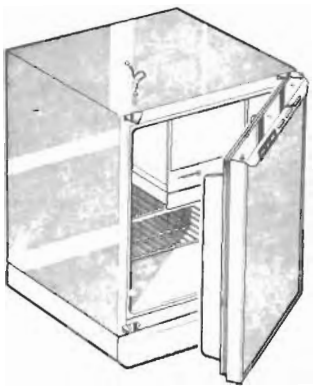
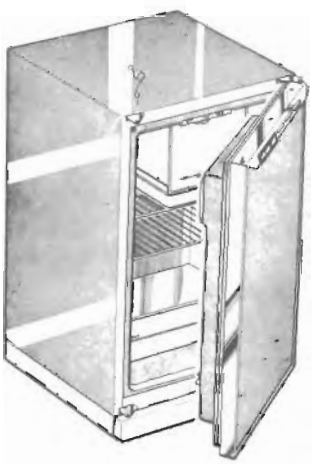
7306



LEADING PARTICULARS

	DUAL	GAS	ELECTRIC
COLOUR	Grey	Grey	Grey
HEIGHT	$27\frac{5}{8}$"	$27\frac{5}{8}$"	$25\frac{7}{16}$"
WIDTH	21"	21"	21"
DEPTH (incl. handle)	$22\frac{3}{8}$"	$22\frac{3}{8}$"	$22\frac{3}{8}$"
WEIGHT	80 lbs. (nett)	80 lbs.(nett)	68 lbs.(nett)

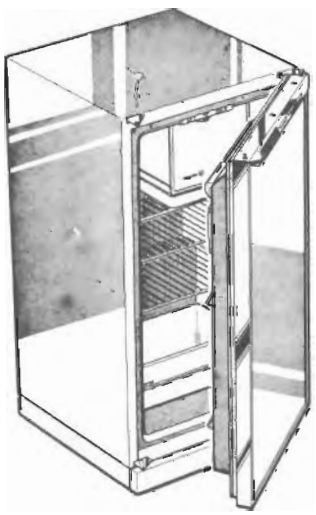
7403



LEADING PARTICULARS

	DUAL	GAS
COLOUR	Grey	Grey
HEIGHT	$36\frac{3}{8}$"	$36\frac{3}{8}$"
WIDTH	22"	22"
DEPTH (incl. handle)	$24\frac{1}{8}$"	$24\frac{1}{8}$"
WEIGHT	111 lbs. (nett)	111 lbs. (nett)

7404



LEADING PARTICULARS

	DUAL	GAS
COLOUR	Grey	Grey
HEIGHT	$41\frac{15}{16}$"	$41\frac{15}{16}$"
WIDTH	22	22
DEPTH (incl. handle)	$24\frac{1}{8}$"	$24\frac{1}{8}$"
WEIGHT	115 lbs.(nett)	115 lbs. (nett)

Installation instructions

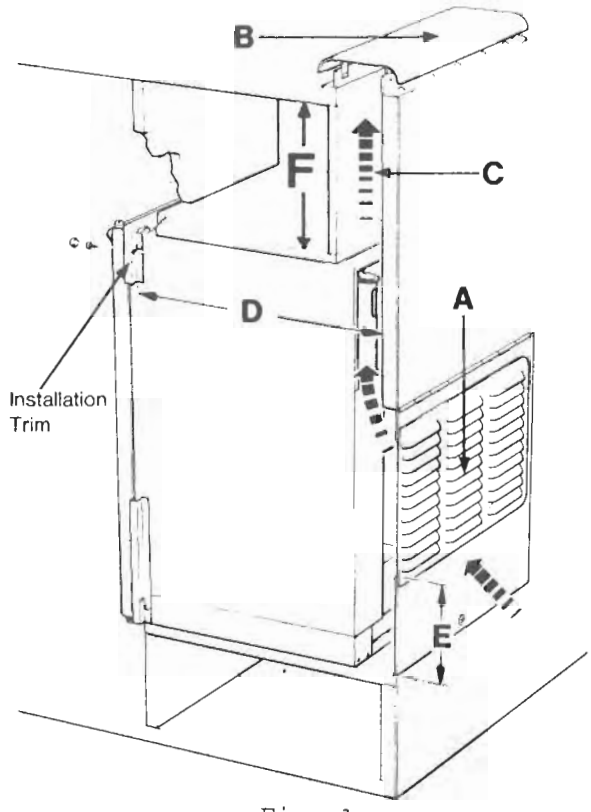


Fig. 1

A. Ventilator in access door must give 40 square inches minimum ventilation. Minimum louvre dimension to be 1/4".

B. Roof vent should have 80 square inches opening.

C. Duct must conform with dimensions detailed in paragraph 3 (d).

D. Dimension D must conform with instructions detailed in paragraph 2 (d).

E. Dimension E must be 9".

F. Dimension F must be no less than 8".

1. GENERAL

a. In order for the refrigerator to perform correctly and safely, it must be installed in accordance with the approved instructions given below. Installation will normally be carried out by the manufacturer or your dealer and their advice must be followed.

b. All gas connections should be made by an experienced person in compliance with the Local, State or National regulations in force.

c. The refrigerator must stand level side to side and front to rear within 1°.

d. A gas ON-OFF valve must be inserted in a convenient place in the gas supply line between the gas bottle and the refrigerator.

e. An electric supply socket connection must be available.

2. RECESS MOUNTED REFRIGERATORS BUILT-IN INSTALLATION

a. The method of installation is shown in Fig. 1.

b. The gas supply, electric supply lead and battery supply leads must be so positioned that they will not be damaged when the refrigerator is slid into or out of the recess.

c. It is essential that all maximum and 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.

d. The top, bottom and sides of the recess must completely enclose the refrigerator and a close fit must be obtained between the cabinet mounting frame and the surrounding structure so that no products of combustion can enter the living space of the coach.

Recess Dimensions:	Model	Height	Width	Depth*
	7306	28"	21 1/4"	21"
	7403	37 1/8"	22 1/4"	23"
	7404	42 1/2"	22 1/4"	23"

* See Item D

e. The structure on which the recess is made must be sufficiently strong to take the weight of a refrigerator when filled. This is approximately 125 lbs. for model 7306, 170 lbs. for model 7403, and 190 lbs. for model 7404.

f. The refrigerator must be screwed securely to the floor to prevent movement when travelling, using the bottom rear bracket.

3. VENTILATION FOR THE REFRIGERATOR

a. Good ventilation is absolutely essential for the correct functioning of this refrigerator.

b. The incoming air must enter a vented panel which also provides access to the working parts of the refrigerator. This panel should give 40 sq. ins. minimum ventilation. It should be fitted as shown in Fig. 1, Item A. Minimum louvre dimension to be 1/4".

c. The outgoing air is discharged through a roof vent which must have an opening of 80 sq. ins. It should be fitted as shown in Fig. 1, Item B.

d. A duct must be formed above the refrigerator leading from the top of the refrigerator to the roof vent. This can be formed very simply behind the cupboard built in above the refrigerator.

Please note that it is necessary to provide four sides to the duct and that it must measure at least:

	7306	7403 and 7404
Width	21"	22"
Front to Rear	4"	4½"
Height	8"	8"

Recommended types of vent panels and roof vents are available from Frigiking. Prices on application.

EVEN IF NO CUPBOARD IS FITTED ABOVE THE REFRIGERATOR, A DUCT MUST BE FORMED AS SHOWN IN FIG. 1, ITEM C. IT IS IMPORTANT THAT THE ROOF VENT BE LOCATED DIRECTLY ABOVE THE DUCT AND THE COOLING UNIT OF THE REFRIGERATOR. DO NOT OFFSET THE ROOF VENT TO ONE SIDE.

4. GAS OPERATION

a. Check that the suspension wire, gas baffle and flue are assembled so that the bottom of the baffle is 2 ½" to 3" above the bottom of the flared funnel.

b. The gas assembly comprises a gas tap, gas filter, thermostat, safety valve, igniter and burner. The inlet tube is fitted with a connector and nut to suit 3/8" O/D tubing with a flared end.

c. Fit two (2) Alkaline type "D" cells in the battery box as shown in Fig. 2.

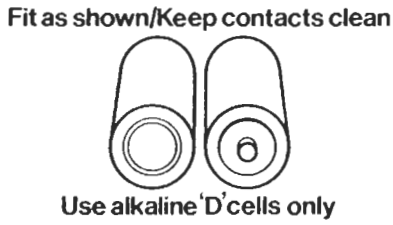


Fig. 2

5. ELECTRIC OPERATION (110V)

a. Check that the electricity supply corresponds with the supply voltage range marked on the data plate on the control panel.

6. INSTALLING THE REFRIGERATOR IN THE RECESS

a. Connect the refrigerator to the gas supply temporarily with a flexible tube and check all gas joints for leaks by using a soap solution.

b. Install the refrigerator by sliding it in through the recess opening until the mounting frame is flush against the surrounding woodwork.

c. The mounting frame is completely removable for difficult installations. The mounting frame is pre-drilled to enable it to be screwed to the surrounding woodwork if required.

d. Attach the gas supply to the inlet connector of the refrigerator and check this joint for leaks with soap solution.

e. Check the gas pressure at the test point. Pull off Pressure Test point sealing cap to obtain access. Pressure should be 10" to 12" water gauge.

f. Pressure drop from the inlet connection to the pressure test point is 0.1" water gauge (0.25 grams per sq. cm.).

7. FURNACE AND HEATERS

Install the refrigerator well away from direct heat. Do not let hot air play on the front of the refrigerator.

CONTROLS (L.P. GAS)

The L.P. gas controls located behind the bottom door are the gas on-off valve, the gas thermostat and the gas igniter buttons. The gas on-off valve has a control knob, colored blue, and has only two positions, as its description suggests. In the "off" position, the notch in this knob is positioned in such a way that the electric slide switch interlocks with it to prevent the operation of the refrigerator on both types of fuel at one time. The thermostat control knob, colored red, is marked Dl2345C. The thermostat will control the interior temperature when set in any position between 1 and 5; the higher the number, the colder the interior. The letter "C" indicates the coldest position when the thermostat is not controlling and the refrigerator is operating continuously. This setting is required for starting and the quickest ice making. The letter "D" indicates the defrost setting. There is no "off" position on the thermostat; the gas can only be turned off at the gas on-off valve.

CONTROLS (Electric)

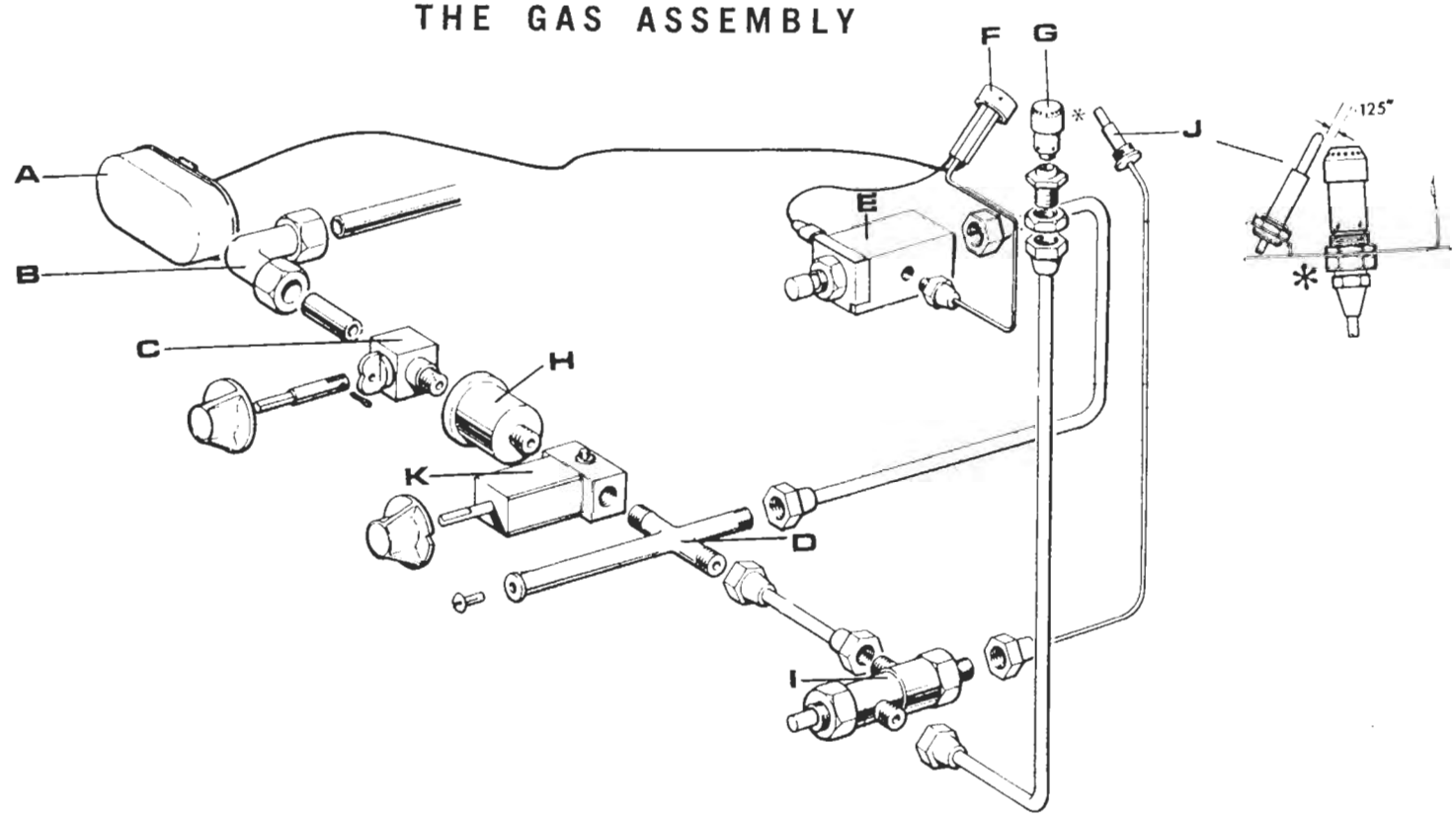
The electric controls are the on-off switch located behind the bottom door and the thermostat, the control knob for which, on the Model 7306DO, is located on the rear wall of the cabinet interior; and on the Models 7403 and 7404DO is located in the top front of the cabinet interior. The electric thermostat knob is marked 012345C. The thermostat will control the interior temperature when set in any position between 1 and 5; the higher the number, the colder the interior. The letter "C" indicates the coldest or continuous running position. This setting should be used for starting or fastest ice making. The letter "O" indicates the "off" position.

STARTING

Before attempting to light the burner, make certain that all gas lines to the refrigerator are purged of all air remaining in them. Once certain that gas is reaching both the main burner and the ignition burner, the lighting procedure may be started.

First, slide the electric switch to the "off" position, turn the blue gas knob to "Gas On", set the red thermostat knob to position "C", then depress both the red and the black buttons marked "IGNITION" situated to the right of the control panel. As soon as the main burner ignites, release the black button. Provided all air has been purged from the gas lines, ignition should take place within a few seconds. Continue to hold down the red button for approximately 30 seconds after ignition of the main burner. The flame can be seen through the burner inspection windows, located in the bottom rear of the 7306DO cabinet interior, and reflected in a mirror which can be seen through an inspection port situated in the base of the Models 7403DO and 7404DO. After approximately 30 seconds the burner flame will have developed enough heat at the thermocouple tip to energize the coil which causes a magnet to hold the safety valve in the open position. The red button may then be released. If the thermocouple does not react in 30 seconds and the flame is extinguished when the red button is released, repeat the procedure for ignition holding the red button down for slightly longer the second time. By the same process, should the flame be extinguished by other causes, the thermocouple tip would cool to a point at which the magnet would automatically close the valve, thus preventing the escape of any unburned gas.

THE GAS ASSEMBLY



Introduction

The L. P. gas flowing through a connecting tube from the bottle(s) to the gas tap is filtered before entering the thermostat. It then passes into the cross-piece where it is directed to the ignitor and to the burner via the safety valve. The gas flow to the burner is governed by the thermostat which is sensitive to the cabinet temperature:

The function of the parts comprising the gas assembly is described here together with possible defects. Where replacement is necessary, reference is made to the appropriate section for dismantling and re-assembly. Where trouble cannot be quickly diagnosed, each part should be checked in sequence until the fault is located.

A—Battery Box: This consists of a metal compartment for two "D" type flashlight batteries and a plastic cover fitted with contacts and a spade terminal to which one of the ignitor leads is attached.

It is not recommended that batteries be left in place if the refrigerator is not in use for extended periods. Corrosion from leaking batteries could affect the terminals which would then require cleaning.

B—Gas Connection Fitting: A ⅜" compression or flared connector is provided on the inlet tube for connection to ⅜" O.D. copper tubing.

C—Gas Tap: This is an ON/OFF tap connected by means of a shaft to the gas control knob on the front panel. Except for a gas leak at the connection, this part is unlikely to be troublesome. Replacement procedure is described on page 18 under "Gas Thermostat".

D—Crosspiece: This part is connected to the thermostat and provides a test point connection and supply connections to the safety and button valves.

The refrigerator should be operated on a gas pressure of 10"-12" W.G. which should be checked at the pressure test point by removing the slotted screw and attaching the tube of a manometer or test gauge. The method is described on page 18 under "Gas Thermostat". After checking the pressure, replace the screw and test for leaks.

E—Button Valve: This is a brass valve which, in its normal position, blocks the flow of gas to the ignitor. It also has a spade terminal for an electrical contact to which is connected one of the wires from the ignitor. The function of this valve is to ignite the burner. Pushing the black button opens the valve allowing gas to flow to the ignitor and, at the same time, the battery circuit is closed causing the ignitor coil to glow and ignite the gas. Releasing the black button will close the valve and the gas line to the ignitor.

Replacement procedure is described on page 19.

F—Ignitor: This part is used for main burner ignition and consists of a gas supply tube connected to the button valve and two electrical leads; one lead connected to the button valve and the other to the battery box cover. The ignitor also contains a small glow coil which ignites the gas when the button valve is activated.

Failure is most likely to be due to faulty or loose electrical connections or the glow coil could be damaged or broken.

Replacement procedure is described on page 19.

G—Burner: The burner consists of three parts: the burner adaptor, the injector and the burner head. The injector is a brass fitting precisely drilled to give the correct gas input and is the only part likely to develop a fault due mainly to blockage. If blockage occurs the injector should be cleaned by blowing it out with air pressure. If this fails, the injector should be replaced. Never use a wire or drill to clear the orifice.

There are four air intake holes at the bottom and ten ports at the top of the burner head. These could become partially blocked in time but they can be easily cleaned by soaking the part in gasoline or paint thinners.

In the event that burner replacement is necessary, the procedure is described on page 19.

H—Gas Filter: This part filters the gas to prevent foreign matter from entering the thermostat. Since there are no moving parts, failure could only be due to blockage over an extended period of time.

Replacement procedure is described on page 18 under "Gas Thermostat".

I—Safety Valve: This is a brass valve which, in its normal position, blocks the flow of gas to the main burner and acts as a safety device should the burner be extinguished. Pushing the red button overcomes the safety device and allows gas to reach the burner where it is ignited. In approximately twenty seconds, the heat from the burner flame will have energized the thermocouple sufficiently to hold open the safety valve and it will continue to do so as long as the burner is lighted.

Replacement procedure is described on page 19.

J—Thermocouple: This part is fitted adjacent to the burner and is connected to the safety valve. When energized by heat from the burner, it holds the safety open by magnetism. Should the burner be extinguished, the thermocouple will immediately cool and release the safety valve.

When replacing the thermocouple, ensure that the gap between thermocouple and burner is ⅛". (See illustration).

Replacement procedure is described on page 19.

K—Gas Thermostat: The thermostat consists of a capillary tube and bellows operating a gate valve in the main gas line. The capillary tube and bellows are charged with a calculated volume of gas to provide an accurate range of thermal settings and then sealed by the manufacturer.

The function of the thermostat is to control the cabinet and evaporator temperatures over a predetermined range by means of the thermally operated bellows which control the flow of gas to the burner. The higher the setting number the lower the cabinet temperature.

When the control knob is set at position "C", the valve is locked open and the maximum amount of gas flows to the burner. As the knob is rotated clockwise through the lower numbers, the bellows are compressed by the spring and plate motivated by the thread on the control spindle and the flow of gas through the valve is restricted.

At position "D", the bellows are fully compressed, the gate valve is closed and the gas flow is shut off. At this stage, a restricted amount of gas flows through the hollow by-pass screw, around the gate valve, to the main burner. This flow of gas is sufficient to keep the burner lighted on a pilot flame.

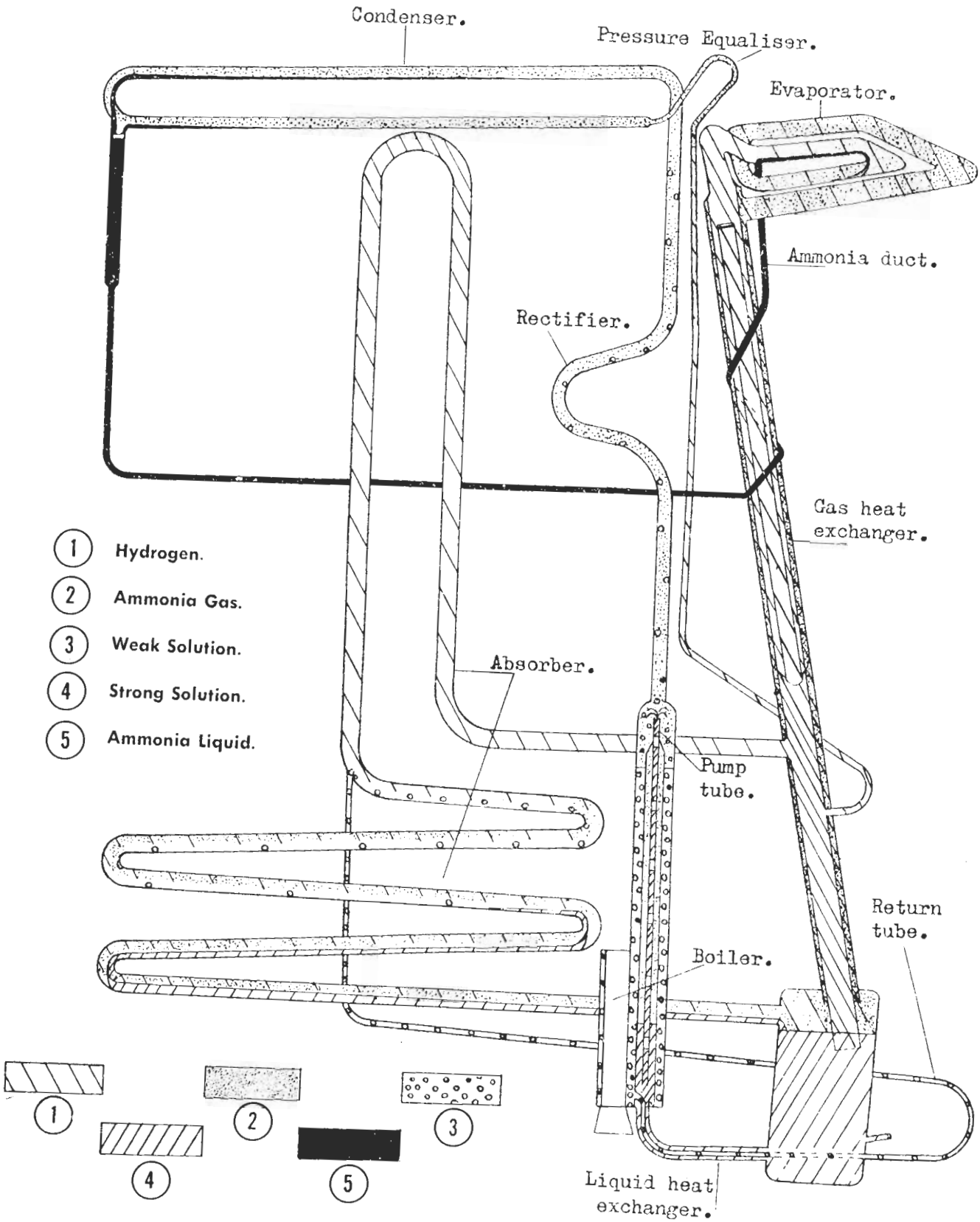
At all intermediate settings, the thermostat operates automatically. The gate valve closes to the by-pass rate of flow when the cabinet interior cools to the desired temperature and re-opens when the cabinet temperature rises.

The most likely defect is a leak occurring either in the capillary tube or bellows causing the bellows to collapse thus closing the gate valve. A fault of this type would give a low pressure reading at the test point.

If the by-pass screw becomes blocked, the gas flow to the burner will be cut off when the gate valve automatically closes extinguishing the burner. The by-pass screw should be removed and cleaned by air pressure. Do not use a wire or drill for this purpose. When replacing the by-pass screw, ensure that the rubber sealing washer nits tightly to prevent a leak.

Replacement procedure is described on page 18.

WORKING DIAGRAM OF A TYPICAL COOLING UNIT



COOLING UNIT SYSTEM

The Refrigerator is operated by a sealed absorption Cooling Unit charged with aqua-ammonia solution and hydrogen under pressure. It can be repaired only by the manufacturer and no attempt should be made to repair this Unit.

(a) The heat source is a Gas Burner situated below the Boiler allowing the heat to flow up through the compartment.

(b) The heat generated in the Boiler causes ammonia vapor and water to be expelled from the solution and rise into the Rectifier.

(c) The water vapor is condensed in the Rectifier and runs back into the Boiler. The ammonia vapor passes through into the Condenser Tubes where it is liquified by air cooling. The liquified ammonia is gravity fed through the ammonia duct to the top of the Evaporator.

Precooled hydrogen is introduced into the Evaporator by way of the Gas Heat Exchanger.

In the Evaporator, the partial pressure of the ammonia is considerably reduced due to the partial pressure of the hydrogen (Dalton's Law of Partial Pressure) resulting in evaporation of the ammonia and consequent absorption of heat through the walls of the evaporator. A cover is fitted to the evaporator to allow the maximum possible absorption to take place.

The heavy mixture of hydrogen and ammonia vapor passes down through the Gas Heat Exchanger into the top of the Reservoir, where it meets a weak solution of ammonia flowing down through the Absorber tubes. Due to the ammonia's affinity to water, practically all the ammonia vapor is absorbed by the weak solution flowing down through the absorber into the Reservoir and the relatively pure hydrogen rises through the Absorber and re-enters the Gas Heat Exchanger to complete the cycle.

The strong ammonia liquid from the Absorber passes down through the Reservoir to the bottom of the Boiler by way of the liquid Heat Exchanger where it is preheated and then passes into a small bore tube, the Pump Tube. The heat supplied to the Boiler causes bubbles of ammonia gas to be formed resulting in drops of liquid being forced out of the top of the tube into the outer Boiler compartment (Thermal Lift Pump).

Ammonia is again driven off into the Condenser and the weak solution remaining sinks to the bottom of the Boiler into the Liquid Heat Exchanger where it is cooled and then passes up through the Return Tube into the Absorber which is arranged at a lower level than the pump to allow gravity feed to take place.

FAULT DIAGNOSIS

SEQUENCE TESTING

It is recommended that, where a defect is not obvious, testing should proceed in a defined sequence so as to eliminate those parts which are functioning correctly and thus arrive at the faulty part. The following procedure should prove helpful in doing this.

(1) Turn the gas control to OFF.

(2) Remove the test point screw and attach a piece of rubber tube from the propane guage or manometer.

(3) Turn the gas control to ON. Set the thermostat control to "C".

(4) Test pressure should read between 10" - 12" W.G. If the pressure is low, check the supply bottle and regulator. If satisfied that the pressure from the supply bottle is correct, then the filter may be blocked. This is unlikely in a new refrigerator, but may occur after one or two years use.

(5) If the pressure is correct, try to light the burner. If the pressure immediately drops to 0" W.G., then the thermostat is defective. The small flow of gas through the by-pass screw in a defective thermostat will build up a pressure of 10" - 12" W.G. but if the push button is operated it will immediately reduce the pressure to 0" W.G.

(6) If the pressure is correct but the igniter fails to light:-

a) Check batteries.
b) Check battery contacts and spade terminals at battery box and button valve.
c) Check that igniter coil is intact and that it glows when the black button is depressed.

(7) If the igniter is functioning properly but the burner still fails to light:-

a) Check burner injector for blockage.
b) Check safety valve.

VARYING CONDITIONS

SMALL BURNER FLAME

The flow of gas to the burner is controlled by the thermostat which either delivers a full flow when open (full flame) or a restricted flow through the by-pass when the thermostat valve is closed (low flame). Since the total input to the burner on high flame is less than 600 B.Th.U. the term 'full flame' is relative but the experienced service man will have no difficulty in distinguishing between the two levels.

On lighting and testing the burner, the control should be set at 'C', thus ensuring a full flame. If the burner is not reaching a full flame, and tests show that the thermostat pressure is normal, then turn off the gas and remove the burner to inspect the injector for damage or blockage. Do not attempt to clear it with a piece of wire but use an air hose or a pump. If necessary replace the injector.

FAULT DIAGNOSIS (Continued)

BURNER FLAME GOES OUT

If the complaint is that the burner flame goes out when the control is set at any number between 1 and 5, during automatic operation, shut off the gas, remove the by-pass screw from the thermostat and examine it for blockage. Do not attempt to clear it with a piece of wire or a drill, but use an air hose or a pump.

When the cabinet interior cools down to the desired temperature, the thermostatic gas valve will close and gas will then flow through the by-pass screw to the burner (low flame). Therefore, if the by-pass screw is blocked, the gas flow will be cut off thus extinguishing the flame.

NOTE: Flame blow-out caused by drafts should also be considered, particularly if tests indicate that all parts are functioning correctly.

CHECKING CALIBRATION OF THERMOSTAT

Where a complaint is made that the refrigerator either cools too much or does not cool enough, and the gas pressure is normal, a check of the thermostat calibration should be carried out as follows:-

(1) Turn off the gas.

(2) Attach a piece of rubber tubing from the propane guage to the test point.

(3) Set the control knob to position 'C'.

(4) Turn on the gas.

(5) Loosen the capillary clip on the side of the evaporator compartment and remove the thermostat capillary tube, allowing it to hang free.

(6) Light the burner.

(7) Prepare a mixture of ice and water and immerse the end of the capillary tube 3" into the mixture.

If the correct pressure (10"-12" W.G.) is obtained on position 'C', rotate the control knob to position 'D'. The thermostat should close to give a pressure reading of 2½" in between positions '2' and '1' on the control knob and remain at this reading on defrost 'D'. If the thermostat closes before reaching position '2' on the control knob, it should be replaced as the calibration is wrong.

VENTILATION

Many complaints regarding poor operation of the refrigerator can be traced to improper ventilation. In trailer installations, most manufacturers adhere to instructions and provide both a lower vented grille of adequate size and a roof vent. In some cases, however, when two side vents are used, the top vent is installed too low, below the level of the condenser fins on the unit, and this can only result in hot air being trapped behind the refrigerator with the consequent loss of efficiency.

It has also been noted that some owners will close off all or part of the lower vent either because of draft in the trailer or flame blow-out. This can only result in loss of efficiency, particularly in summer, as the cooling unit requires an adequate flow of air to maintain peak performance. The recommendations in the installation instructions are based on this requirement and any alterations affecting performance should be brought to the owners attention.

VENTILATION (Continued)

Refusal to heed such a warning will only cause dissatisfaction with performance and can lead to costly repairs due to improper diagnosis of the cause of the trouble by inexperienced service personnel.

The method of ventilation to ensure that it conforms to requirements should be one of the first things checked.

EFFECT OF EVAPORATOR BEING OFF-LEVEL

When the evaporator is noticably off-level it will allow more than the normal volume of ammonia to be stored in the coils thereby reducing the concentration of liquid in the reservoir (See "Checking Rectifier Temperature"). In extreme cases the evaporator can become completely flooded with ammonia and the hydrogen will stop circulating, which will result in a complete stoppage of refrigeration.

The only way to clear the evaporator of excessive ammonia is to tip it backwards to enable the liquid to flow back to the reservoir and the boiler. The refrigerator should then be levelled and a check made on the levelling of the evaporator. It should then be re-started; the first signs of refrigeration should be noticable after half an hour.

CHECKING RECTIFIER TEMPERATURES

The rectifier should normally be warm whilst the refrigerator is running but excessive heat is a sympton of several faults (see diagnosis chart). A simple check for excessive temperature is to apply a few drops of water to the bottom bend of the rectifier and, if it sizzles, the rectifier is too hot.

BURNER

If the burner does not light, then follow the procedure on the next page.

IF BURNER DOES NOT LIGHT

1. Press black button. Apply flame to igniter head.

   a) Lights with good flame. Go to 3.
   b) Does not light or poor flame. Go to 2.

2. Keep red and black buttons depressed to bleed air. Re-apply flame.

   a) Lights with good flame. Go to 3.
   b) As before. Clear blockage in pipe, valve or orifice behind head. Repeat 1.

3. Extinguish igniter. Press black button.

   a) Coil glows but gas does not light. Adjust position of coil in head or replace head. Repeat 3.
   b) Coil does not glow. Go to 4.
   c) Igniter works correctly. Go to 5.

4. Insert new batteries. Check continuity, base to battery box cover terminal, with red button depressed.

   a) Continuity is satisfactory. Repeat 3.
   b) No continuity. Correct fault by adjustment or replacement of terminals, wires, igniter head or button valve. Repeat 3.

5. Press red and black buttons together. Release black button after 15 seconds.

   a) Burner does not light. Clear burner injector and check position of igniter head (see drawing). Repeat 5.
   b) Burner lights. Go to 6.

6. Release red button after at least 30 seconds.

   a) Burner stays lighted with full flame. Go to 9.
   b) Burner stays lighted with small flame. Clear burner injector. Repeat 5.
   c) Burner goes out. Go to 7.

7. Check position of thermocouple (see drawing) and tightness of thermocouple/valve joint.

   a) Position and tightness satisfactory. Go to 8.
   b) Position or tightness incorrect. Re-set. Repeat 5.

8. Replace safety valve or thermocouple and repeat 5.

9. Turn thermostat to position 'D'.

   a) Burner flame reduces. Go to 10.
   b) Burner flame does not reduce. Replace by-pass screw. Repeat 9.
   c) Burner flame goes out. Clean out by-pass screw or replace it. Repeat 9.

10. Check gas pressure at test point.

    a) Pressure 1.5" - 2.5" Water. All satisfactory.
    b) Pressure outside limits. Change by-pass screw or burner injector. Repeat 5.

A diagnosis chart of various probable causes under certain conditions is listed below, but it is recommended that where doubt exists a full check be made in sequence listed earlier to avoid mistakes.

DIAGNOSIS CHART

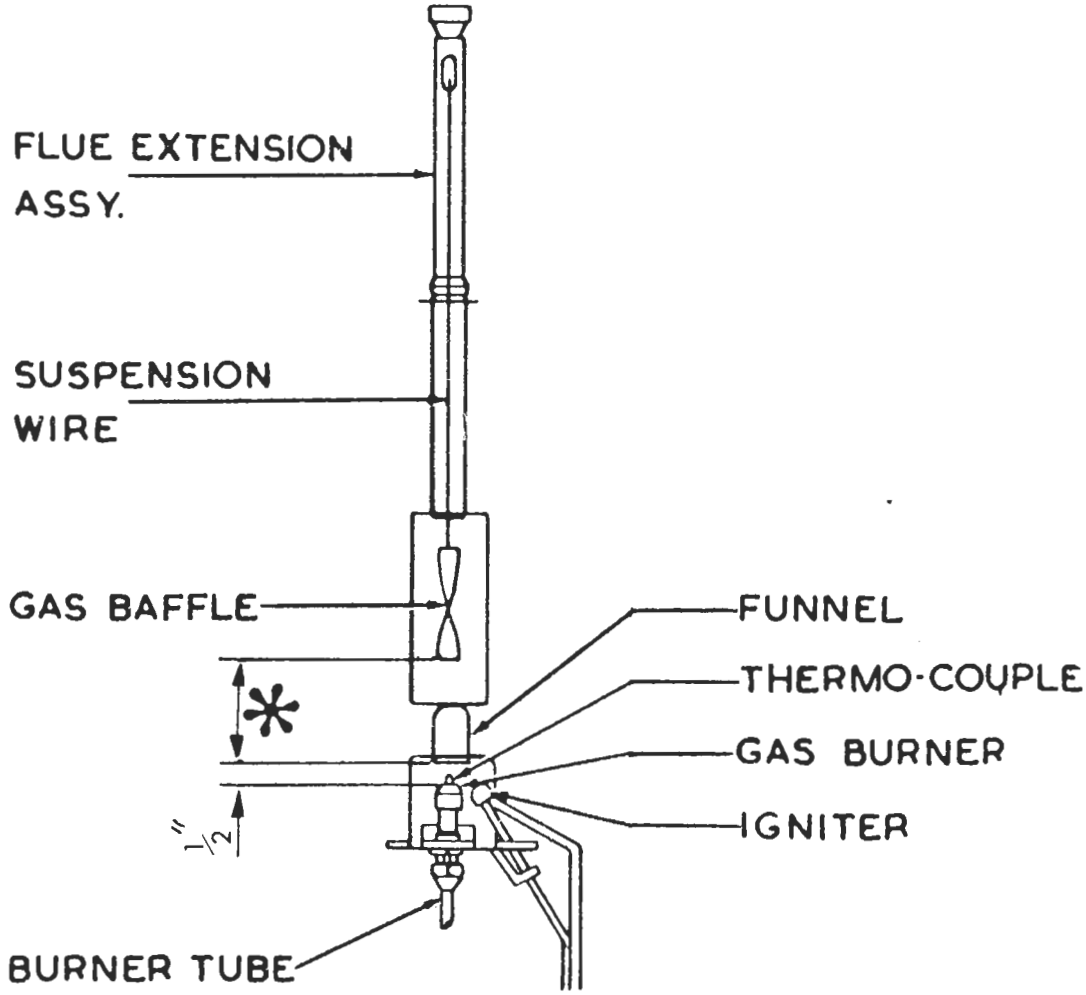
FAULT	PROBABLE CAUSES	REMEDIES
Burner fails to ignite.	1. Gas not turned on	Check all valves and any cock in the installation and supply bottle.
	2. No gas to the refrigerator at the Pressure Test Point or the Crosspiece.	Check the supply bottle and gas regulator to establish that there is an adequate supply of gas.
	3. Blocked Filter Injector	Replace.
	4. Faulty Ignitor	Check Batteries, Battery contacts, Button Valve contact and Ignitor coil.
	5. Blocked Burner	Remove Burner and examine. See "Small Burner Flame" on page 9.
	6. Faulty Safety Valve	Replace.
Burner ignites but goes out when Safety Valve Button is released.	1. Thermocouple incorrectly positioned.	Reposition. See insert gas train illustration Section 'C'.
	2. Bad Thermocouple to Safety Valve connections	Remake connections.
	3. Insulation fault in Solenoid coil.	Replace Safety Valve
	4. Faulty Thermocouple.	Replace.
Burner ignites but goes out when gas control is not at "D".	1. Blocked By-pass Screw.	See "Burner Flame Goes Out" page 10.
Insufficient cooling.	1. Maximum gas pressure too low.	Check pressure at Test Point and Supply Bottle.
	2. Door not closing.	Adjust door with shims under hinges as required.
	3. Faulty Door Gasket.	Examine and repair or replace as necessary.
	4. Poor ventilation	Check venting. See diagram and also page 10.

DIAGNOSIS CHART

FAULT	PROBABLE CAUSES	REMEDIES
Insufficient cooling (cont'd)	5. Partially blocked Burner Injector.	See "Small Burner Flame" see page 9.
	6, Burner in wrong position.	Check position with illustration.
	7. Partially blocked Filter.	Uncouple connection and remove gas cock from the filter body. Replace if necessary.
	8. Faulty Thermostat.	See "Checking Calibration of Thermostat" page 10.
Insufficient cooling combined with excessive rectifier temperature.	1. Refrigerator not level.	Adjust as necessary, see page 11.
	2. Evaporator coils flooded with ammonia.	Tilt the refrigerator backwards. Return it to the original position. Check coils are level and correct if necessary.
	3. System Leaking.	A leaking system usually smells of ammonia and shows signs of a yellow deposit at the leak. It must be replaced.
	4. Internal stoppage of system.	A system which does not give correct operation, all other parts being correct should be replaced.
Excessive cooling.	1. Maximum gas pressure too high.	Check pressure at the Test Point and if it is above 12" water gauge adjust the regulator on the container.
	2. Thermostat Capillary Tube incorrectly positioned.	Slacken the two screws securing the Capillary Clip and position the Thermostat Capillary tube under the Clip in the groove. The end of the Capillary should just be visible below the bottom of the clip. Tighten the screws.
	3. Burner connection loose.	Check for leak with soap solution and if found to be leaking, tighten and re-set.
	4. Damaged Burner	Examine and replace if necessary.
	5. Faulty Thermostat.	See "Checking Calibration of the Thermostat" page 10.

DIAGNOSIS CHART

FAULT	PROBABLE CAUSES	REMEDIES
Cabinet temperature rises instead of falls	1. System Faulty	Replace system
Refrigerator with normal interior temperature fails to make ice.	1. Ice Trays, or ice compartment greasy or dirty.	Wash Ice Trays in soapy water, defrost the refrigerator and wipe any grease or dirt from the ice making compartment.
	2. Buckled or damaged Ice Trays.	Replace with new Trays.



***Dimension equals :**

7306	7403	7404
$2\frac{5}{8}$"	$2\frac{3}{4}$"	$2\frac{3}{4}$"

DIAGNOSIS CHART

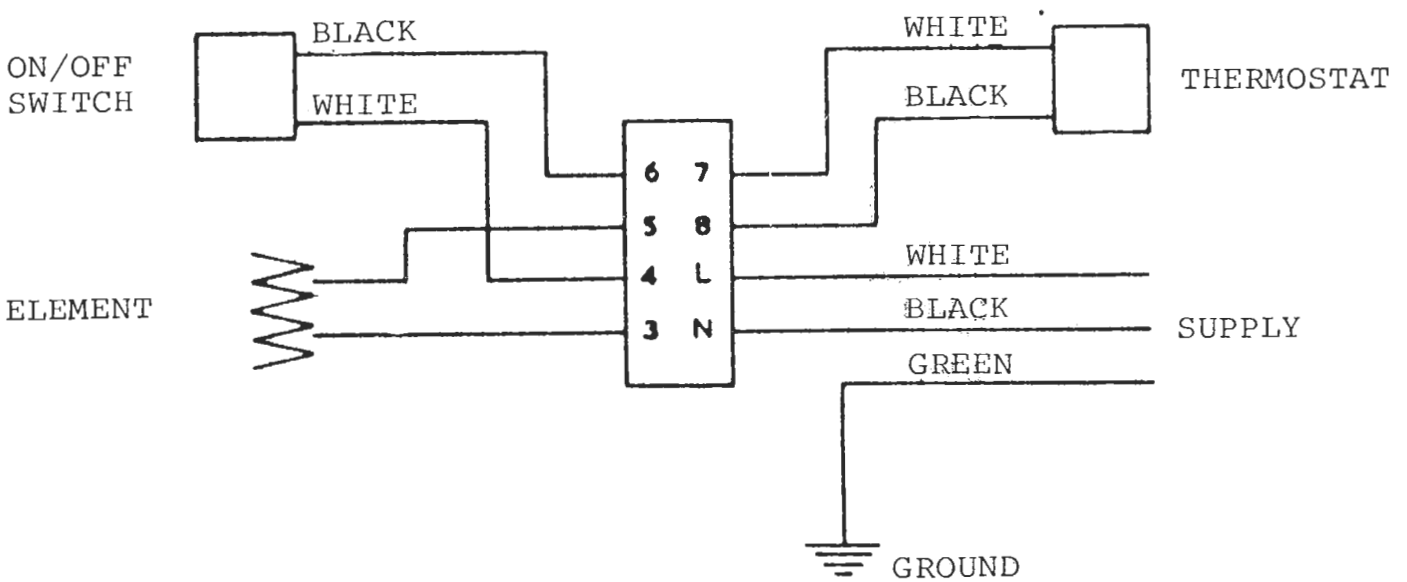
FAULT	PROBABLE CAUSES	REMEDIES
Insufficient cooling.	1. Door not closing correctly.	Check door seal.
	2. Refrigerator not level.	Adjust as necessary as in levelling instructions.
	3. Faulty Thermostat	Replace thermostat
	4. Faulty System	Replace system.
Excessive cooling.	1. Thermostat capillary tube incorrectly positioned.	Slacken the two screws securing the capillary clip and position the thermostat capillary tube under the clip in the groove. The end of the capillary should just be visible below the bottom of the clip. Tighten the screw.
	2. Faulty Thermostat	Replace thermostat.
Cabinet temperature rises instead of falls.	1. Faulty system	Replace system.
Refrigerator fails to operate.	1. No electricity	Check supply with test lamp.
	2. Faulty lead to the refrigerator	Check with a test lamp at the terminal block.
	3. Faulty thermostat	Disconnect the thermostat leads from the terminal block, check that the thermostat is switched on and test for continuity. If open circuit replace thermostat.
(Rectifier cold)		
	4. Faulty element	Disconnect the element leads from the terminal block and test for continuity. If open circuit, replace the element.
	5. Change over switch faulty	Disconnect the switch and test for continuity.
(Rectifier hot)	6. Refrigerator not level	Adjust as necessary as in levelling instructions.
	7. Internal blockage of the system.	Replace the system.

DIAGNOSIS CHART

FAULT	PROBABLE CAUSE	REMEDIES
(Rectifier hot)	8. System leaking.	A leaking system usually smells of ammonia and shows signs of a yellow deposit at the leak. It must be replaced.
Refrigerator with normal interior temperature fails to make ice.	1. Ice trays or ice compartment greasy or dirty.	Wash ice trays in soapy water. Defrost the refrigerator and wipe any grease or dirt from the ice making compartment.
	2. Buckled or damaged ice trays.	Replace with new trays.

7306 DUAL

WIRING DIAGRAM



DISMANTLE AND RE-ASSEMBLY PROCEDURE

A. DOOR ASSEMBLY

1. Door Seal

(a) Remove the top knurled hinge pin and lift the door clear of the bottom hinges.
(b) Lay the door on a flat surface ensuring that suitable padding is used to protect the paint-work.
(c) Peel back the door seal and remove the door panel and seal retaining screws.
(d) Ease the seal off the door panel.
(e) Replace in the reverse order ensuring that the lower lip of the seal is correctly positioned under the door panel.

2. Door Handle and Front Panel

(a) Remove the door as in 1 (a).
(b) Remove the three screws located along the top of the door.
(c) Carefully prise out the top hinge bushes.
(d) Ease out the centre securing rivet from the front panel.
(e) Open the side trims away from the door sufficiently to enable the front panel to slide out.
(f) Replace in reverse order ensuring that care is taken when replacing the front panel so as not to scratch the paint.

NOTE: If the panel is a tight fit into the bottom trim, it may be necessary to remove the bottom two hinge bushes and completely remove the trim.

3. Door Motif

(a) Insert a small screw driver blade between the handle and the motif and lever off.

4. Butter Door (7306)

(a) Remove the plastic button located in the door interior on the left hand side of the butter door hinge pin.
(b) Slide the hinge pin approximately ½" to the left.
(c) Pull the right hand side of the butter door clear of the interior and ease the door hinge pin and spring away to the right.
(d) Replace in reverse order.

5. Butter and Cheese Doors (7403 & 7404)

(a) Lift the doors and pull in a forward downward movement until clear.
(b) Replace by inserting the top edge of the doors into the top slide and push door into bottom slide.

6. Dairy Door Slides

(a) Carry out instructions 1 (a) to (c).
(b) Remove panel and release screws retaining the slides.
(c) Replace in reverse order.

B. CABINET ASSEMBLY

1. Evaporator Door

(a) Open the evaporator door and remove the two screws holding the door hinge.

NOTE: When re-assembling the door and hinge, the spring must first be fitted into the hole on the bottom bracket of the door, and the other end of the spring fitted into the slot in the top bracket. The hinge bracket can then be fitted over the spring.

2. Thermostat (7306 Electric)

(a) Slacken the two screws securing the capillary clip to the evaporator cover and release the capillary tube.
(b) Pull off the thermostat control knob.
(c) At the rear of the refrigerator, remove the two screws holding the thermostat bracket to the back plate.
(d) Remove the thermostat plastic cover and screw and disconnect the two "Faston" connectors.
(e) Ease the thermostat capillary tube through the interior liner and cabinet rear.
(f) Replace in reverse order.

3. Thermostat (7403 & 7404 Electric)

(a) Follow instructions 2 (a and b)
(b) Secure a piece of string to the capillary phial in order that refitting is made easier.
(c) Release the four screws, two securing the mounting plate and two securing the thermostat.
(d) Ease the thermostat capillary through the interior liner.
(e) Replace in reverse order.

4. Thermostat (Gas - All Models)

PLEASE NOTE: BEFORE COMMENCING TO DISMANTLE ANY GAS FITTING, TURN OFF THE GAS AT THE SOURCE OF SUPPLY.

(a) Open the refrigerator door. Defrost the ice-making compartment and remove all the contents from the cabinet.
(b) Loosen the two screws securing the capillary clip and ease the capillary tube clear.
(c) Disconnect the gas supply pipe to enable the refrigerator to be lifted clear and placed on its back. (Door face upwards)
(d) Disconnect the inlet connector from the gas cock.
(e) Remove the split pin securing the control rod to the gas cock and lift the control rod clear.
(f) Unscrew the gas cock and filter body from the thermostat.
(g) Unscrew the connecting nuts on the cross-piece.
(h) Remove the two screws securing the thermostat to the support bracket. Pull off the thermostat knob and ease the thermostat and crosspiece clear. The crosspiece can now be unscrewed from the thermostat body.
(i) Withdraw the capillary tube from the cabinet, releasing the grommets on the backplate and under the cabinet.
(j) Replace in reverse order.

NOTE: When removing the thermostat knob, care must be taken to pull it off evenly. Do not prise it off with a screwdriver as this will only result in a broken knob.

5. Heating Element

(a) Remove the screws and two piece protective screen from the boiler.
(b) Remove the two screws holding the terminal block to the unit.
(c) Tilt the terminal block and disconnect the element leads.
(d) Remove the insulation as necessary and pass both element leads through the rubber grommet.

(e) Remove the flue fixing screw and lift off the flue and baffle.
(f) Remove the boiler extension screw and lift the boiler extension clear.
(g) Remove the two element clamping screws, slide the element up the boiler, and off the system tube.
(h) Replace in reverse order ensuring that all the insulation is re-used.

6. Gas Burner

(a) At the rear of the refrigerator, remove the four screws securing the bottom baffle plate.
(b) Disconnect the burner tube adaptor nut from the burner adaptor, then unscrew the locknut from the adaptor.
(c) Remove the two screws securing the burner bracket which can then be lowered for easy removal of the burner.
(d) To expose the injector (jet), unscrew the burner from the burner adaptor.
(e) Replace in reverse order.

7. Thermo-couple Assembly

(a) Disconnect the thermocouple from the safety valve.
(b) Release the burner bracket as in 6 (a) and (c), and remove the locknut retaining the thermocouple to the burner bracket.
(c) Replace in the reverse order.

8. Ignitor Assembly

(a) Disconnect the push on leads from the battery cover and button valve.
(b) Unscrew the connector nut securing the ignitor tube to the button valve.
(c) At the rear of the refrigerator, release the burner bracket as in 6 (a) and (c).
(d) Remove the clamp screw underneath the burner bracket, and lift the ignitor assembly clear.
(e) Replace in reverse order.

9. Safety and Button Valves

(a) Unscrew all the tube connectors from both the safety valve and the button valve.
(b) Remove the two screws holding the mounting bracket and withdraw it complete with both valves.
(c) Remove the locknut to detach the valves from the bracket.
(d) Replace in reverse order.

10. Interior Liner

(a) Follow instructions B 10 (a to d) for Models 7403 & 7404.
(b) Remove door as A 1 (a).
(c) On the front face of the liner tap through the centre pins of the rivets and remove the liner as follows:-
    1. Spring the bottom of the liner out and down towards the right hand side.
    2. Spring out the left hand side.
    3. Spring out the top of the liner.
    4. Move the liner to the left and finally release the right hand side.

NOTE: The bottom edge and 2½" up each side is sealed with MS6870 Sealing Compound.

(d) Replace in reverse order taking care not to damage the liner.

(e) Model 7306 - It is not possible to replace the cabinet interior of the Model 7306 because of the construction of the cabinet and the molded expanded polyurethane insulation. Because of this insulation, however, it is most unlikely that the cabinet interior of the Model 7306 will require to be replaced. The insulation and cabinet interior form one rigid unit which is extremely strong and is, therefore, unlikely to be broken or damaged when subjected to normal usage. Should a cabinet interior be found to be damaged, contact Morphy-Richards, Inc. or our nearest warehouse for further information.

11. Cooling Unit

(a) Disconnect the refrigerator from the electric/gas supply and remove any food and also the ice trays. Place the drip tray below the evaporator and defrost the ice making compartment.
(b) After defrosting, remove the drip tray and shelves and dry out the cabinet and evaporator with a cloth.
(c) Remove the electric thermostat as in B2 or B3.
(d) Remove the evaporator cover polythene retaining bolt(s) and ease the cover forward off the evaporator tube.
(e) Remove the evaporator sealing plate.
(f) Remove the heating element as in B5.
(g) Remove the plug lead, thermostat lead and terminal block.
(h) Remove the two screws securing the burner bracket.
(i) Remove the three screws securing the system to the cabinet and the fifteen smaller screws securing the back plate to the cabinet. The unit, complete with the back plate, can now be removed from the cabinet.
(j) Replace in the reverse order ensuring that all the insulation is correctly replaced.