



Dometic

INSTALLATION AND OPERATING INSTRUCTIONS

REFRIGERATOR FOR LP-GAS AND ELECTRIC OPERATION

RA1302

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.

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FOR YOUR SAFETY

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



Dometic

quality leisure line products

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REFRIGERATORS WITH
PIEZO IGNITER

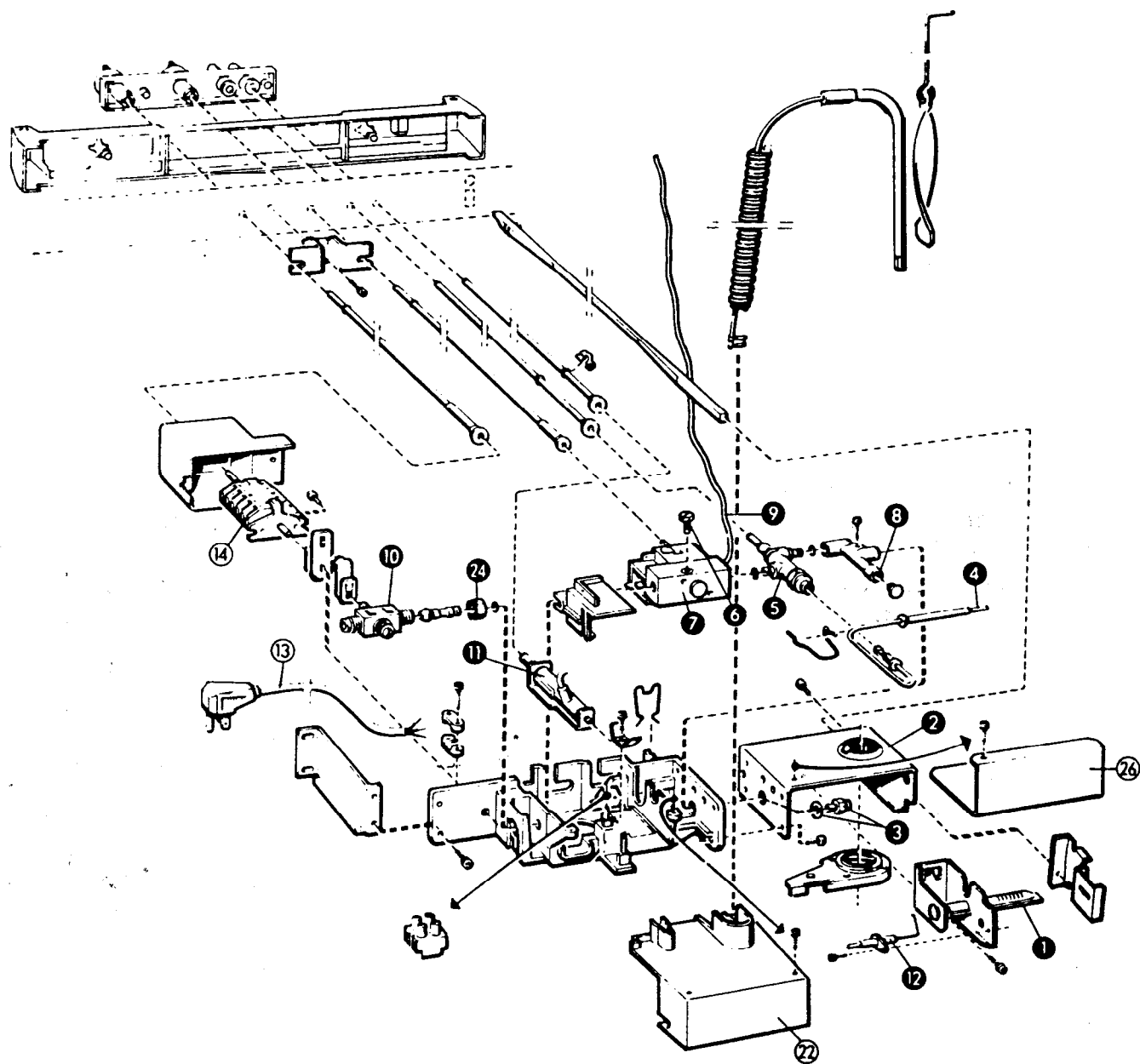


Fig. 1

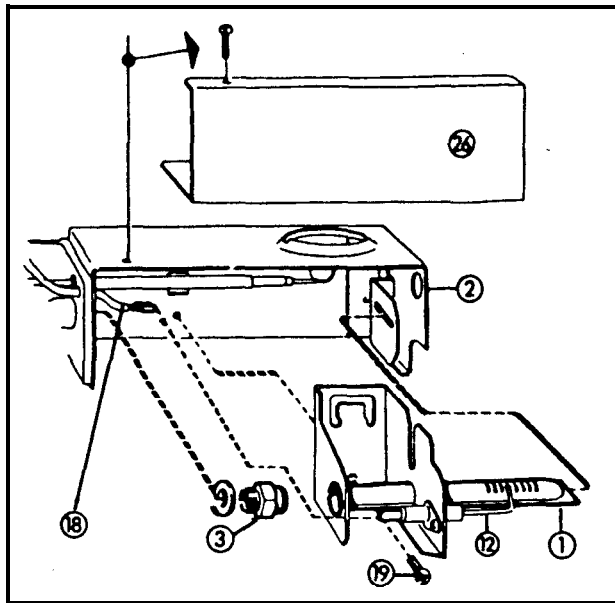


Fig. 2

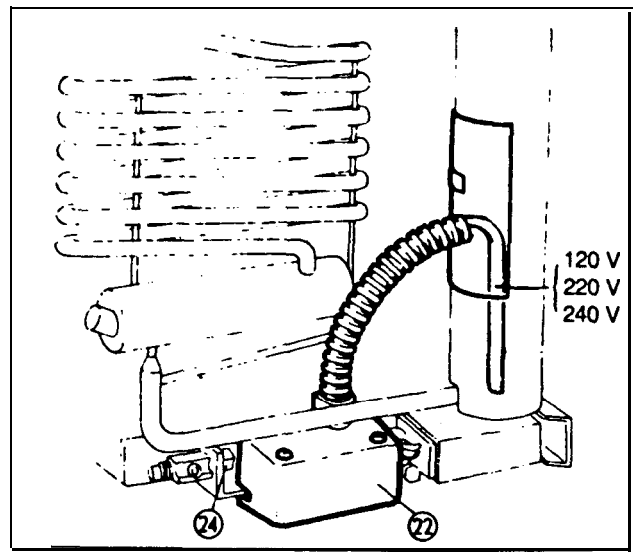


Fig. 5

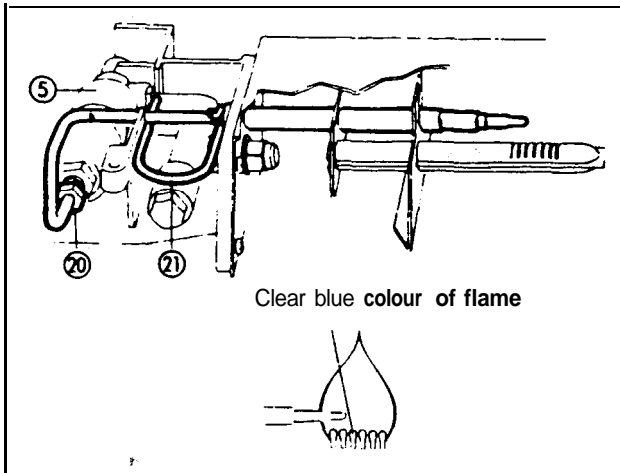


Fig. 3

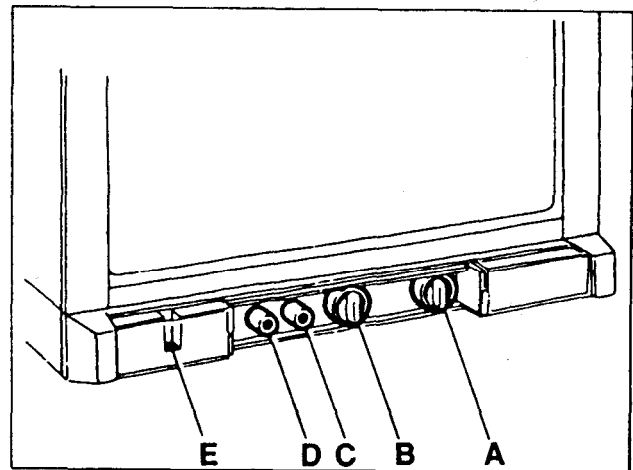


Fig. 4

Gas equipment parts

1. Burner tube
2. Burner housing
3. Burner jet
4. Feeler point (thermocouple)
5. Flame failure safety device
6. Bypass screw
7. Gas/Electrical thermostat
6. Pressure test gage connection
9. Capillary tube for thermostat
10. Shut-off valve
11. Piezo igniter (lighter)
12. Electrode
19. Burner fixing screw
24. Hexagon nut
26. Cover plate

Electric equipment parts

13. Flexible cord
14. Switch
18. Lighter cable
22. Cover

INSTALLATION

GENERAL INSTRUCTIONS

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

The refrigerators outlined have been design certified under ANS /Z21.19a-1984. Refrigerators, by the American Gas Association, and are also 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 2223.1-1984.
 2. Any applicable local code.
- 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.

The installation must **in Canada conform with:**

1. Current CGA B 149 Gas Installation Codes.
2. Any applicable local code.

The unit must be electrically grounded in accordance with the current **CANADIAN ELECTRICAL CODE C22** Parts 1 and 2.



Free-standing models for floor installation only

Ensure that there is a free space of at least 4 in. (10 cm) above the refrigerator and see that the ventilation opening on top of the cabinet is not covered in any way.

Do not place the refrigerator in a space where air circulation is restricted.

A clearance of at least 25 mm should be left between the rear and sides of the refrigerator and the surrounding walls.

This free-standing refrigerator requires accessibility to the back for servicing the gas equipment. If allowed by the Local Authorities, the accessibility can be obtained by using a certified Flexible Metal Connector of Gas Hose Assembly which would allow the refrigerator to be withdrawn without disrupting the gas supply. However, if the Local Authorities require a rigid gas supply connector the refrigerator should be located with sufficient space at the back for servicing or, if located against a wall, a removable panel of a minimum size of 16x20" should be provided in the wall to allow access to the back of the refrigerator.

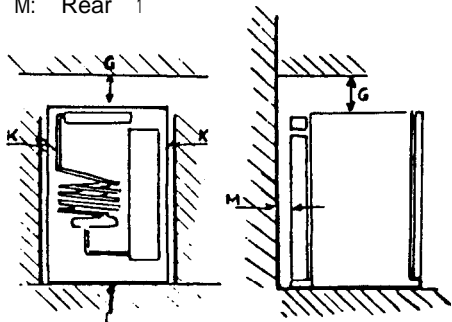
Feet

Some of the freestanding models come with 4 plastic feet. These feet should be mounted on the underside to ensure free air circulation around the cooling unit.

CLEARANCES

Minimum clearances in inches to combustible materials are:

- G: Top 4
K: Side 1
L: Bottom 0
M: Rear 1
- Clearance M between the rearmost part of the refrigerator and the wall behind the refrigerator.



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 3/8" 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 gage.

When testing the gas supply system at test pressures in excess of 1/2 psi 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

120 Volts AC

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.

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 level. A spirit level is supplied with each refrigerator.

TO REMOVE AND REPLACE THE REFRIGERATOR

Before working on the refrigerator make sure that 120 V A. C. leads are disconnected. Shut the gas valve. Unscrew the hexagon nut 24 and move the valve on the gas line out off the bracket. Check that the valve slips out of the clip connection with the switch shaft. After reassembly the gas connection should be checked for leaks with soapy water.

TEST OF THE GAS SAFETY SHUTOFF

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

Do as follow:

1. Start the refrigerator according to the instruction for gas operation with piezo igniter (fig. 4).
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 (26) in fig. 2. 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 3 in fig. 1 or 2. Use soapy water. Be careful not to damage the jet.
6. After test rinse the jet with water. Once more be careful not to damage the jet. Assemble the cover plate. Start the refrigerator by following the instruction for gas operation.

Normal gas operation should now return. Operate for at least 5 minutes.

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 tiuifies. 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.

If the refrigerator is properly installed, e e the freezer shelf parallel to the floor, the refrigerator will then also perform well.

Gas Operation (Fig. 4)

1. To start the refrigerator turn the knob A to position "GAS".
2. Turn the thermostat knob B to setting 4.
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.

NOTE: As soon as the necessary cold temperature in inside the cabinet has been reached, adjust the thermostat knob to required setting.

Electric Operation (Fig 4)

1. Check that the attachment plug is correctly connected to the main supply.
 2. Turn the knob A to desired position for electric operation.
 3. Turn the thermostat knob B to setting 4.
- 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, whiih is necessary to maintain the required low temperature for food storage. Consequently foods having a strong odor or liable to absorb odors should be covered. Vegetables, salads etc should be covered to retain their crispness. The coldest positiins 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 diierent types of food are placed in the refrigerator.

Defrosting

When the frozen food storage compartment is covered with frost the refrigerator must be shut down temporarily till the frost is melted.

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 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 to MAX for a few hours. Then reset the thermostat knob to its normal position.

Before the refrigerator is restarted the compartment should be dried, the ice trays washed and refilled with fresh water:

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.

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 on the shelf 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 precooled 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 aluminium foil.

Ice Making

Ice cubes can be made in the ice trays which should be filled with water to within 1/4" (5 mm) from the top. To release the ice cubes seize the tray with both hands and twist the tray. Cubes not required should preferably 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. 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 gas, petrol, ether or the like.

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 (Fig. 3)

The feeler of the thermo couple shall reach in over two slots of the burner. To replace the thermo couple proceed as follows:

1. Remove the plastic cover 22 (Fig. 5).
2. Unscrew plug 20 and pull thermocouple straight out (Fig. 3).
3. Remove spring 21 (Fig. 3).
4. Pull out thermocouple sideways from burner housing.
5. Bend the new thermo-couple to the same shape as the old one.
6. Reassemble in reverse order. Check that feeler has been correctly refitted in relation to burner. See Fig. 3.
7. Mount plug 20, taking care not to damage the threaded hole in the aluminium 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

me 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 is a numbered proportion of the dial over which various controlled temperatures can be obtained, the higher the number, 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 with a piezo igniter (see fig. 4) which does not normally need any maintenance. If the igniter does not work properly contact an authorized service point.

ELECTRIC EQUIPMENT

Cartridge heater

This refrigerator is equipped also for electric operation, 120 Volts A C.

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

To replace the heater first of course check that the wall plug is disconnected. Then proceed as follow:

1. Remove the plastic cover (22) of the main control structure by loosening the two screws.
2. Disconnect the heater leads.
3. Pull off the metal hose.

4. With a pair of pliers unfold the lug holding the lid of the boiler casing and open the lid.
5. Remove some insulation wool so that the heater is accessible.
6. Turn and lift the heater out of its pocket.
7. Fit the new heater into the pocket and pull on the hose around the leads.
6. Connect the leads and put on the plastic cover.
9. Reset the insulation and close the lid of the boiler casing.

The Switch

The electric control also comprises an on-off switch operated by the selector knob at the front panel. The switch has a "on"-position for 120 Volts A.C.

The Thermostat

The electric thermostat is combined with the gas thermostat and is thus operated by the knob B at the front panel. The temperature in the refrigerator can be regulated by turning the thermostat knob to higher or lower numbers. Although the exact setting is not critical choose a setting at which the frost which gradually forms on the cooling evaporator is just maintained in dry condition.

It will be necessary to set the thermostat knob one or two numbers higher when the ambient temperature becomes higher or the load unusually heavy.

If less cooling is required a lower setting should be chosen.

PERIODIC MAINTENANCE

NOTE. Before working on the refrigerator make sure that 120 V A.C. leads are disconnected. Shutoff gas valve.

The Burner and the Burner Jet (Fig. 2)

The colour of the flame shall be clear blue over the slots of the burner (Fig. 3).

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

1. Loosen screw and remove cover plate for burner housing.
2. Disconnect lighter cable from the electrode.
3. Loosen burner fixing screw 19 and withdraw burner.
4. Clean burner tube with a brush. Blow with compressed air.
5. Screw off jet and clean with alcohol. Blow with compressed air. Never use a needle or similar.
6. Reassemble.
7. Be careful that the end of the burner fits into the slot on the bracket.

The slots of the burner must be centrally located under the boiler tube.

The Electrode

For a proper ignition function it is necessary to keep the electrode insulation dry and free from dirt. The gap between burner tube and electrode shall be max. $\frac{3}{16}$ " (5 mm) and min. $\frac{1}{8}$ " (3 mm).

WARNING

If the refrigerator is used intermittently it should be checked at least once a year.

It is important to keep the appliance area clear and free from combustible materials, gasoline and other flammable vapors and liquids. The flow of combustion and ventilating air must not be obstructed. Check the flue baffle that it is clean and reasonably free from soot. Heavy soot formation indicates improper

functioning of the burner. Clean baffle and flue. Further, 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, **not with an open flame.**

NOTE. Any service of the gas controls, with exception for the above mentioned replacement, maintenance and cleaning operations must be performed by an authorized service center only.

FAULT TRACING

The refrigerator does not freeze satisfactorily

Causes and remedies

- a) Jet orifice clogged. Unscrew jet and blow clear or wash in alcohol. Do not use wire or pin to clean orifice.
- b) Check the leveling of the refrigerator.
- c) Flame has gone out. Remedy: 1) Gas in bottle is used up - refill. 2) Feeler point of the flame failure safety device is not heated enough by flame - check against fig. 2 or 3. 3) Clogged by-pass screw - clean or exchange it.
- d) Air circulation around cooling unit is restricted. Be sure that refrigerator is properly ventilated.
- e) The evaporator is heavily coated with frost. Defrost.
- f) Flue baffle not inserted into the central tube of the cooling unit.
- g) The thermostat is incorrectly used. See paragraph on thermostat. In hot weather the setting should be one or two numbers "colder" than usual.
- h) Gauze in burner head clogged. Clean.
- i) Burner damaged. Replace.
- j) Burner may be dislocated. Relocate.
- k) Wrong gas pressure at the burner. Have pressure checked at burner and at gas bottle. Pressure at burner must not fall below 11 "W.G. when thermostat is set on MAX.

ODOR FROM FUMES

Causes and remedies

- a. The flame touches side of the boiler due to dislocation of the burner. Relocate. Burner dislocation may also cause smoke and discoloring of walls and ceiling.
- b. Burner damaged. Replace.
- c. The flame touches flue baffle. Remedy: 1) Burner damaged. Replace. 2) Flue baffle too low. Correct the position of the baffle.
- d. The flue tube is dirty. Clean flue as follows. Cover burner and jet. Remove flue top and baffle. Clean flue with special flue brush. Clean baffle before putting back in place.

All the above instructions are to be followed closely. The refrigerator is quality-guaranteed. However, we are not responsible for any failures caused by improper adjustments and unfavorable installation conditions. Contact service point or distributor service dept. for assistance.

Replacement Parts Suppliers: See cover.



INSTALLATION INSTRUCTIONS (Addendum) WHERE REQUIRED BY LOCAL AUTHORITIES

REFRIGERATOR FOR LP-GAS AND ELECTRIC OPERATION

MODEL RA 1302

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.

INSTALLATION

GENERAL INSTRUCTIONS

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

The refrigerators outlined have been design certified under ANS 221 .19a-1984 Refrigerators, by the American Gas Association, and are also approved by the Canadian Gas Association.

The certifications are, however, contingent on the installation being made in accordance with the following instructions as applicable.

USA installations must conform with:

1. National Fuel Gas Code ANSI Z223.1-1984.
2. Any applicable local code.

The unit must be electrically grounded in accordance with the National Electric Code ANSI/NFPA No. 70-1964 when installed if an external alternating current electrical source is utilized.

Canadian installations must conform with:

1. Current CGA B 149 Gas Installation Codes.
2. Any applicable local code.

The unit must be electrically grounded in accordance with the current **CANADIAN ELECTRICAL CODE C22** Parts 1 and 2.



CERTIFIED INSTALLATION

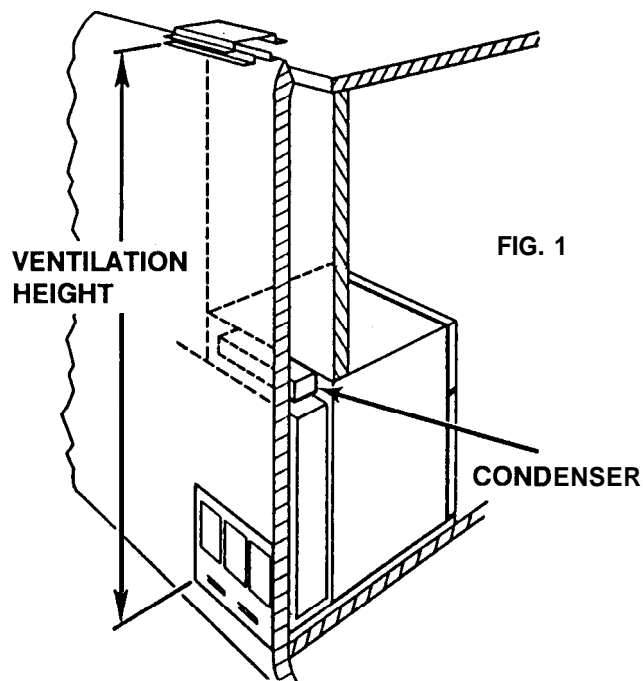
Certified installations require one roof vent and one lower side vent and shall be made in such a manner as to separate the combustion system from the living space of the mobile home, recreational vehicle or any other dwelling.

Refer to FIG. 1.

INSTALLATION WITH ROOF VENT AND LOWER SIDE VENT	MIN. HEIGHTS INCHES MM
RA 1302	62 1575

METHOD OF INSTALLATION

The method of installation is shown below in FIG. 1. 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.



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 casing of the refrigerator and the top, sides and bottom of the enclosure.

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 gauge.

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 than or equal to 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 120 Volts AC

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.

TO REMOVE AND REPLACE THE REFRIGERATOR

Before working on the refrigerator make sure that 120 V AC leads are disconnected. Shut the gas valve. Unscrew the hexagon nut 24 and move the valve on the gas line out off the bracket. Check that the valve slips out of the clip connection with the switch shaft. After reassembly the gas connection should be checked for leaks with soapy water.

TEST OF THE GAS SAFETY SHUTOFF

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

Do as follows:

1. Start the refrigerator according to the instruction for gas operation with piezo igniter (FIG. 4, Form 820 4540-00).
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 (26) in FIG. 2. 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 3 in FIG. 1 or 2. Use soapy water. Be careful not to damage the jet.
6. After test rinse the jet with water. Once more be careful not to damage the jet. Assemble the cover plate. Start the refrigerator by following the instruction for gas operation.

Normal gas operation should now return. Operate for at least 5 minutes,

FOR INSTRUCTION ON CARE AND USE, REFER TO FORM NO. 820 4540-00; PAGES 5, 6 & 7.