

# DOMETIC

L.P. GAS & ELECTRIC REFRIGERATORS

INSTRUCTIONS FOR USE

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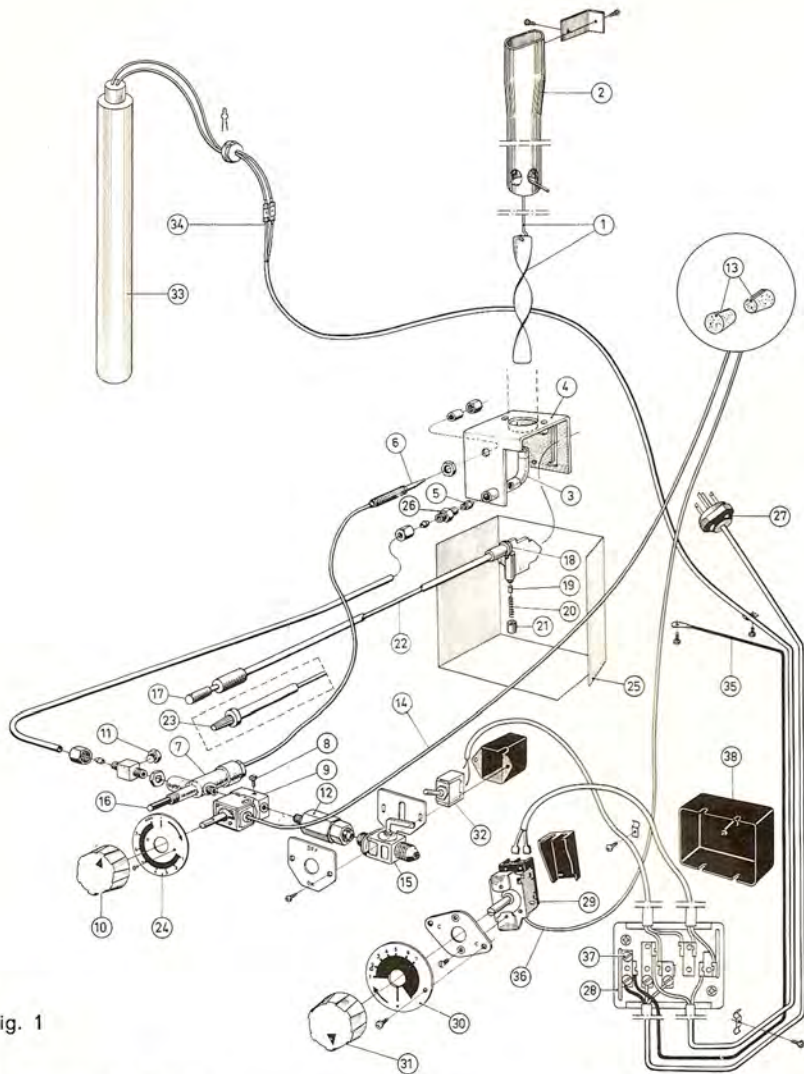


Fig. 1

### Gas equipment parts

1. Flue baffle
2. Flue top
3. Burner tube
4. Burner Bracket
5. Jet
6. Feeler point
7. Flame failure device
8. By-pass screw
9. Gas thermostat
10. Thermostat knob
11. Pressure testing outlet
12. Gas filter
13. Cork plugs for feeler tube inlet

14. Thermostat feeler tube
15. Gas cock
16. Push-button for lighting
17. Turning knob for lighter
18. Lighter wheel
19. Lighter flint-stone
20. Spring for lighter
21. Screw cap for lighter
22. Lighter shaft
23. Alternative turning knob for lighter
24. Thermostat dial
25. Flame blow-out guard
26. Nipple

### Electric equipment parts

27. Wall plug with ground pin
28. Junction box
29. Electric thermostat
30. Thermostat dial
31. Thermostat knob
32. Switch
33. Heater
34. Connector
35. Ground wire
36. Thermostat feeler tube
37. Terminal screws
38. Junction box cover

## INSTALLATION OF REFRIGERATOR IN TRAILER

The refrigerator must be installed on a solid floor and must be level. With the trailer carefully leveled, the refrigerator should level both ways in the freezer compartment. (More about leveling is to be found under the heading "How to start the refrigerator".)

Free air circulation over the fins of the cooling unit is essential. Clearances around the refrigerator should be in accordance with the label attached to the inside of the front access panel.

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

### To change the door opening from left to right or vice versa

unscrew and remove the hinge bolts (1), Fig. 2. Transfer the lower nylon bushing (2) and the washers (3) and (4) (be sure to place them in the correct order) to the opposite end of the door frame. Insert the bolts through the opposite hinges (7) and screw in place. The small hinge pin (8) with its chains is then transferred to the opposite top hinge to be used for securing the door during traveling.

Check that the door closes easily and that the gasket seals well on all sides. If necessary, adjust by resetting the top hinge.

### To change the door panel

unscrew the top hinge bolt (1), Fig. 2. Pull out the bolt and lift off the door. Remove the screws holding the bottom member of the aluminium door frame (5). Pull out the outer door panel (6), replace panel, reassemble and refit the door.

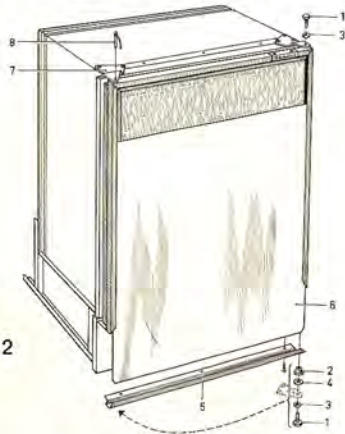


Fig. 2

## HOW TO START THE REFRIGERATOR

### Leveling

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

When the trailer is stationary it must be leveled to be comfortable to live in. If the refrigerator is properly installed, i.e. the freezer shelf parallel to the floor, the refrigerator will then also perform well. To check this a bubble level is supplied with every Dometic refrigerator. The level should be placed on the freezer shelf. Bubble position is most conveniently checked with a small mirror.

When the trailer is on tow, the continuous rolling and pitching movement will not affect the refrigerator as long as the movement passes either side of level, but when the trailer is temporarily parked this sensitivity of the refrigerator should be remembered. So, once more, before you start the refrigerator make sure it is level.

### Gas Operation (Fig. 3.)

1. To start the refrigerator, turn the gas valve lever A to open position (lever parallel to gas stream) and turn the thermostat knob B to setting 4. (On refrigerators for combination electric/gas operation the gas valve cannot be fully opened unless the electric switch E is in the OFF-position).
2. Press the red button C of the automatic flame failure device and after about 15 seconds, turn the lighter rod D clockwise with a rapid movement. This will create a spark which lights the burner.
3. After the burner is lit, keep the button C pressed for an additional 15 seconds.
4. Release the button C and check that the burner is operating. If not, repeat the lighting procedure.

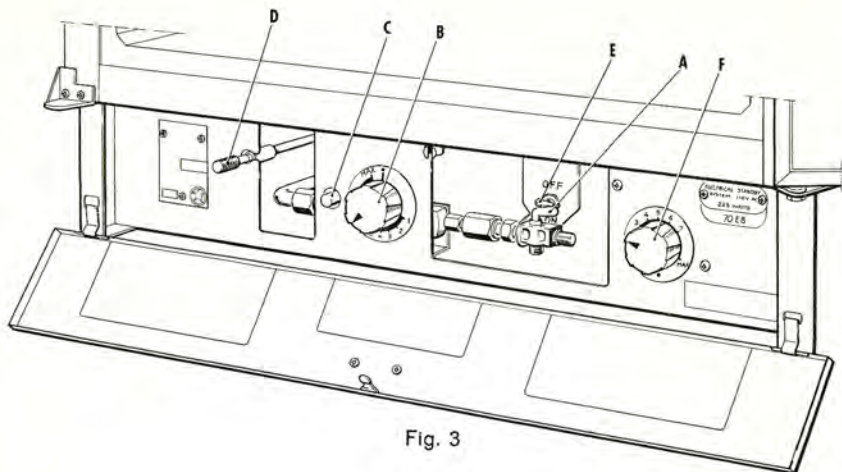


Fig. 3

## Electric Operation

1. Check that the connection cable is plugged to the supply socket.
2. To start the refrigerator, turn the gas valve lever A to the shut-off position and turn the switch E to ON.
3. Turn the electric thermostat knob F to setting 4.

## HOW TO USE THE REFRIGERATOR

### Food storage compartment

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

### Defrosting

To keep cool without undue energy consumption, the refrigerator should be defrosted before an excessive amount of frost has deposited on the radiator cooling fins. To defrost turn the knob of the thermostat to zero, then the frost will melt and the resulting water will be collected in the drip tray. The drip tray should then be emptied and the thermostat reset to its

normal position. The ice trays should be emptied and washed and refilled with fresh water after defrosting.

The above does not apply to refrigerators equipped with the Dometic automatic defrosting device, which makes a quick defrost about once a day without influencing the frozen food storage compartment or frozen foods contained in it. The only thing to see to, is to empty the drip tray 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 at the coldest part of the compartment which is at the bottom of the aluminium liner or, in models with a shelf, on this or just below it. Frozen vegetables, on the other hand, may be stored in any part of the compartment.

The compartment is not designed for the deep or quick freezing of foodstuffs. Meat or fish foods, whether raw or prepared, and provided they are 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 normal temperature 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 inch (5 mm) from the top. To release an ice tray after freezing, pull its handle forwards and upwards. To get the ice cubes from the tray, place it upside down on a plate and allow cold water to run over the tray for a few moments, until the cubes come loose. Cubes not required should be replaced in the tray. Refill the tray with water, dry the outside, and replace it in the frozen storage compartment.

Ice making is accelerated if the thermostat is set to MAX. It is a good idea to do this a few hours before an anticipated need for ice, but be sure to turn back the thermostat to its original setting when the ice is formed, or the foodstuffs in the cabinet may become frozen hard. The ice making time is also reduced if unused cubes are left in the ice trays when they are refilled with water.

### To shut down the cabinet

To shut down the cabinet temporarily, set the thermostat to zero and turn off the gas tap. 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 cabinet, 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 cabinet clean.

## GAS EQUIPMENT

(Fig. 1)

### Flue top and baffle

The flue baffle (1) is suspended from the top (2) and must be in position in the central tube of the cooling unit.

### The burner and the by-pass screw

The burner (3) must be centrally located under the boiler tube.

To change or clean the burner jet (5), first loosen the gas pipe from the burner, then unscrew the nipple (26) from the burner base. The jet is screwed into this nipple.

On delivery the burner is normally fitted with a jet for Propane gas, and when using Butane one must fit another jet size according to the spare parts list. Sizes are stamped on the jet.

The orifice in the jet is very small. It must never be cleaned by means of a pin or similar instrument, as this would enlarge or damage the orifice. Should, for some reason, the jet require cleaning it should be blown through or washed in alcohol.

The by-pass screw is accessible at the top of the thermostat (see illustration).

### The gas thermostat

The refrigerator is equipped with a thermostat (9) which is regulated by turning the knob (10) to different settings in order to obtain the desired controlled cabinet temperatures.

At zero (indicated by a dot)

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. The refrigerator will defrost at this setting.

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 portion 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.

### Flame blow out

If trouble is encountered with the flame blowing out under specially windy conditions, try to avoid the wind blowing against the wall where vent outlets are located. If the trouble persists, set the thermostat on MAX. This later measure can of course only be temporary such as when the caravan is on tow, for after a day or so at this setting the foodstuffs in the cabinet will freeze.

## Periodic maintenance

(Fig. 1)

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

1. Remove the flame blow out guard (25)
2. Disconnect the gas pipe from the nipple (26)
3. Remove the nipple with the jet (5)
4. Clean the jet with alcohol and compressed air ONLY
5. Clean the burner tube (3) and especially the gauze with a brush. Blow with compressed air.
6. Reassemble
7. 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°C or 43°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: that it is clean and reasonably free from soot. Heavy soot formation indicates improper functioning of the burner. Clean baffle and flue. For details on cleaning see under heading "odour from fumes", section d. 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.

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

## How to replace the thermo-element of the Junker flame failure device

(Fig. 4)

1. Unscrew plug A from the valve housing B.
2. Loosen the position nut C and lock nut D.
3. Screw off nut C and release the thermo-element E from holder F. Remove nut D.
4. Bend the new thermo-element to the same shape as the old one. Screw nut D onto the new element.
5. Put the feeler through the hole in holder F, re-fit the distance element G and screw the position nut C home against a shoulder on the feeler itself, making sure the nut D is free during this operation.
6. Tighten the lock nut D against the holder with a spanner, if necessary holding nut C with another spanner. Make sure the feeler is located as in fig. 4.
7. Screw plug A onto the valve housing taking care not to damage the threaded hole in the aluminium cap of the housing. Plug A must be properly tightened to the valve housing to ensure good contact between the thermo-element and the magnetic coil within the housing.

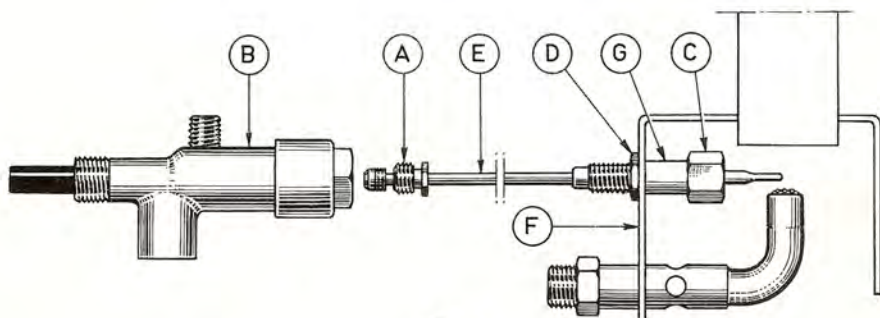


Fig. 4

## The lighter (Fig. 1)

If, after some time of use, the sparks from the lighter weaken, the flintstone will probably have to be replaced. To do this take out the lighter by first loosening the knurled lock nut behind the front plate—if the turning knob is of type (17). A turning knob of type (23) is spring loaded and need only be pressed inwards to allow for disengagement of the lighter from the front plate.

The flint housing, just under the serrated wheel, is covered by a knurled cap, easily unscrewed by hand. Be sure not to lose the small helical spring also contained in the housing. Replace the flintstone and refit the lighter in position, making sure its head enters the slot beside the burner with the serrated wheel upwards. Secure the lighter (17) to the front plate by tightening the lock nut, checking that this does not deform the front plate or jam the lighter knob and shaft. If, after several years of use, the lighter does not function properly even with a new flintstone, the serrated wheel may be worn out and should be replaced.

## ELECTRIC EQUIPMENT (Optional)

### Heater (Fig. 5)

On electrically operated refrigerators heat is supplied by an electric heater (A) mounted on the boiler of the cooling unit inside the insulated cover (B).

To replace the heater, first, of course, check that the wall plug is disconnected, then remove the shutter (C) and enough rock wool insulation around the heater to make possible its extraction. Then bend aside the wire which stops the heater from inadvertently leaving its position, disconnect the electric connection at the boiler cover, and extricate the heater. Make sure the new heater is fully inserted before bending back the lock wire (with caution, or it might snap off). Be careful to put the insulation back in its proper place before refitting the shutter. Note: the edges of the opening in the cover may be sharp.

### Switch (Fig. 1)

The electric control device also comprises an on-off switch (32) which must be in the OFF position before the gas cock (15) can be opened. This prevents the gas burner and the electric heater from functioning at the same time.

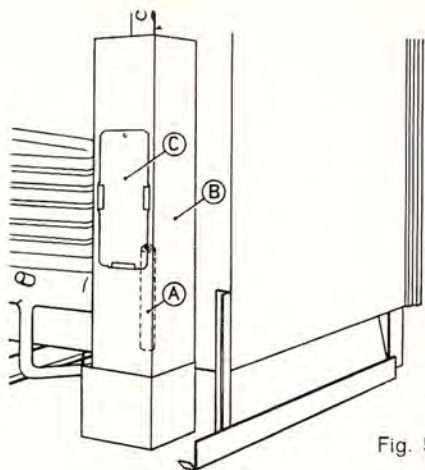


Fig. 5

## Electric thermostat

The temperature in the refrigerator can be regulated by turning the thermostat knob (31) to higher or lower numbers. Although the exact setting is not critical, it will usually be found suitable to 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. No attempts at adjusting the thermostat should be made.

## FAULT TRACING (Fig. 1)

### The refrigerator does not freeze satisfactorily

#### Causes and remedies

- Jet orifice clogged. Disengage gas pipe from burner. Unscrew nipple (26) with jet (5) and blow clear and wash in alcohol. Do not use wire or pin to clean orifice.
- Check the leveling of the refrigerator.
- Flame has gone out. Remedy: 1) Gas in bottle is used up — refill. 2) Feeler point of the flame failure device is not heated enough by flame — check against the fig. 4. 3) Clogged by-pass screw (8) — clean or exchange it.
- Air circulation around cooling unit is restricted. Be sure that refrigerator is properly ventilated.

- e. The evaporator is heavily coated with frost. Defrost by setting thermostat to zero.
- f. Flue baffle (1) 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 changed 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.
- l. Improper operation of the thermostat. Thermostat will have to be exchanged.

## Odour 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. See Service Point List.

# DOMETIC