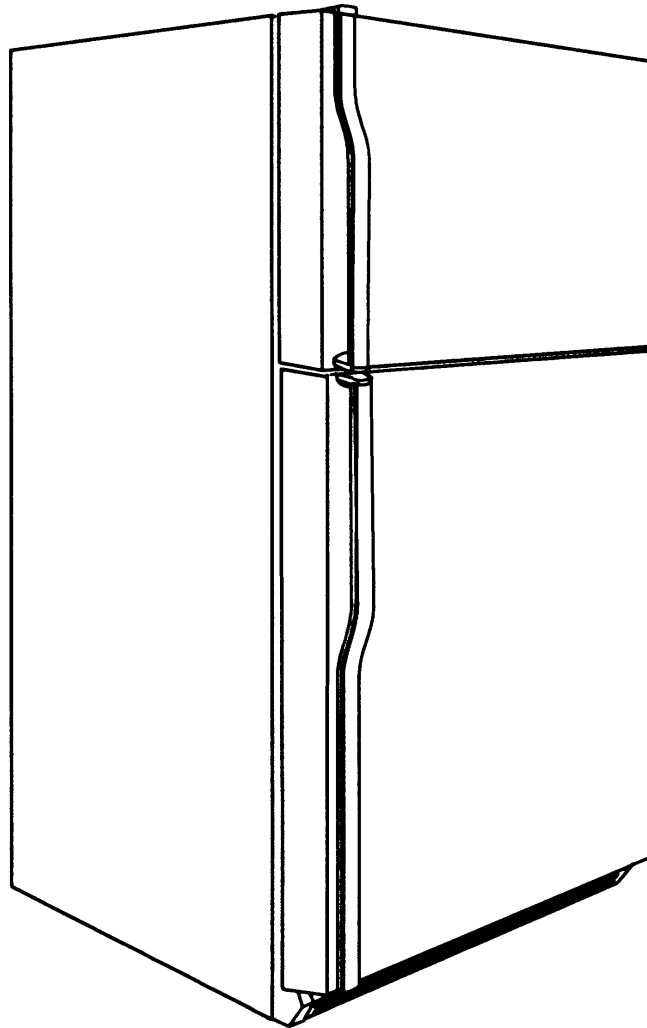


**KitchenAid**

**TECHNICAL EDUCATION**



**G-MODEL  
25 cu. ft. TOP-MOUNT  
REFRIGERATOR/FREEZER**

**JOB AID 4322312**

# INTRODUCTION

This Job Aid, *1998 "G" Model, 25 cu. ft. TOP-MOUNT REFRIGERATOR/FREEZERS*, (Part No. 4322312) provides specific information for the installation, service and repair of 1998 "G" Model 25 cu. ft. Top Mount Refrigerator/Freezers.

*1998 "G" Model, 25 cu. ft. TOP-MOUNT REFRIGERATOR/FREEZERS* has been compiled to provide the most recent information on design, features, troubleshooting, service and repair procedures. Whirlpool-required sweep charge procedures are to be strictly adhered to when repairing the sealed system. For a complete explanation of those procedures, refer to the Job Aid, *SWEEP CHARGE PROCEDURES FOR THE 90's*, (Part No. 4321717) and its companion video (Part No. 4321718.)

## GOALS AND OBJECTIVES

The goal of this Job Aid is to provide detailed information that will enable the service technician to properly diagnose malfunctions and repair 1998 "G" Model 25 cu. ft. Top-Mount Refrigerator/Freezers.

The objectives of the Job Aid are:

The service technician will -

- Understand proper safety precautions.
- Follow proper refrigerant recovery procedures.
- Successfully troubleshoot and diagnose malfunctions.
- Successfully perform necessary repairs.
- Successfully return the refrigerator/freezer to proper operational status.

## TO THE INSTRUCTOR/INDEPENDENT STUDENT

At the end of certain sections of this Job Aid you will find a "Confirmation of Learning Exercise." A pencil will be necessary to complete these exercises. Certain exercises may require that service procedures be performed if an appropriate appliance is available.

**KitchenAid** Inc.

For the way it's made.™

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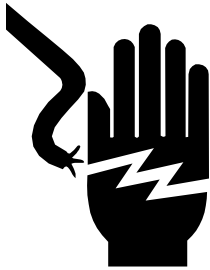
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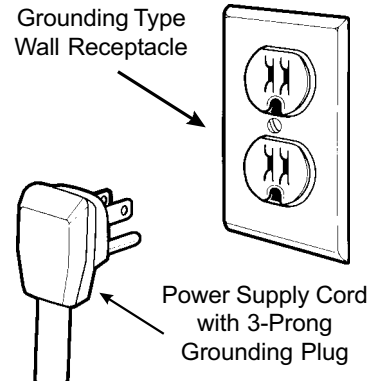
# SAFETY

## ! WARNING



### To avoid the risk of electrical shock, property damage, personal injury or death:

- The power cord must be plugged into a 3-prong, grounding-type wall receptacle, grounded in accordance with the National Electrical Code, ANSI/NFPA 70 - latest edition and local codes and ordinances.
- It is the personal responsibility of the consumer to have a proper 3-prong wall receptacle installed by a qualified electrician.
- DO NOT, UNDER ANY CIRCUMSTANCES, REMOVE THE POWER CORD GROUNDING PRONG.
- A separate adequately fused and grounded circuit should be available for this appliance.
- Do not remove any grounding wires from individual components while servicing, unless the component is to be removed and replaced. It is *extremely* important to replace all grounding wires when components are replaced.



## ! WARNING



### ELECTRIC SHOCK HAZARD

Disconnect the electrical power before servicing any components .  
Failure to do so can result in death or electrical shock.

## ! WARNING



### PERSONAL INJURY HAZARD

This unit has several sharp edges in areas where you will be working to remove components for service. Wear protective gloves where sharp edges are present.

# R134a REFRIGERANT

## Service Information

This product uses R134a refrigerant. This refrigerant requires synthetic Ester oil in the compressor. This cooling system does not tolerate contamination from any of the following:

- Other Refrigerants
- Moisture
- Petroleum-based Lubricants
- Silicone Lubricants
- Cleaning Compounds
- Rust Inhibitors
- Leak Detection Dyes
- Any Other Type of Additive

As a result the following precautions should be observed:

- Use equipment dedicated to R134a sealed system service only.
- Do not leave a replacement compressor open to the atmosphere for more than 10 minutes.
- Always replace the filter-drier when performing any repairs on the sealed system.
- **USE ONLY R134a REFRIGERANT FOR BACKFLUSHING AND SWEEP PROCEDURES.**
- If the rubber plugs on the service replacement compressor appear to have been tampered with or removed, **DO NOT USE THE COMPRESSOR.** Get another one.
- The filter-drier **MUST** be cut from the sealed system. Never unbrazed the filter-drier from system tubing. Applying heat will drive moisture back into the sealed system.

| HEALTH AND SAFETY HANDLING       | R134a   |
|----------------------------------|---|
| Allowable Overall Exposure Limit | 1,000 ppm   |
| Vapor Exposure to Skin           | No effect   |
| Liquid Exposure to Skin          | Can cause frostbite   |
| Vapor Exposure to Eyes           | Very slight irritation  |
| Liquid Exposure to Eyes          | Can cause frostbite   |
| Above Minimum Exposure Limit     | Can cause asphyxiation, tachycardia and cardiac arrhythmias.  |
| Safety and Handling              | Wear appropriate skin and eye protection. Use adequate ventilation.   |
| Spill Management                 | Remove or Extinguish Ignition or Combustible Sources. Evacuate or Ventilate Area.   |
| Fire and Explosion Hazards       | May decompose if contact is made with flames and heating elements. Container may explode if heated due to pressure rise. combustion products are toxic. |
| Storage Conditions               | The procedures / rules for R12 also apply to R134a.   |
| Disposal Procedure               | Reclaim   |

**SEE SWEEP CHARGE PROCEDURES FOR THE 90's,  
Part No. 4321717 FOR COMPLETE INSTRUCTIONS ON  
SERVICING THE SEALED SYSTEM.**



# ANSWER SHEET

## CONFIRMATION OF LEARNING

### EXERCISES

#### Section One

True or False Statements:

1. F
2. F
3. T
4. T
5. T

#### Section Two

True or False Statements:

1. T
2. F
3. F
4. T
5. T

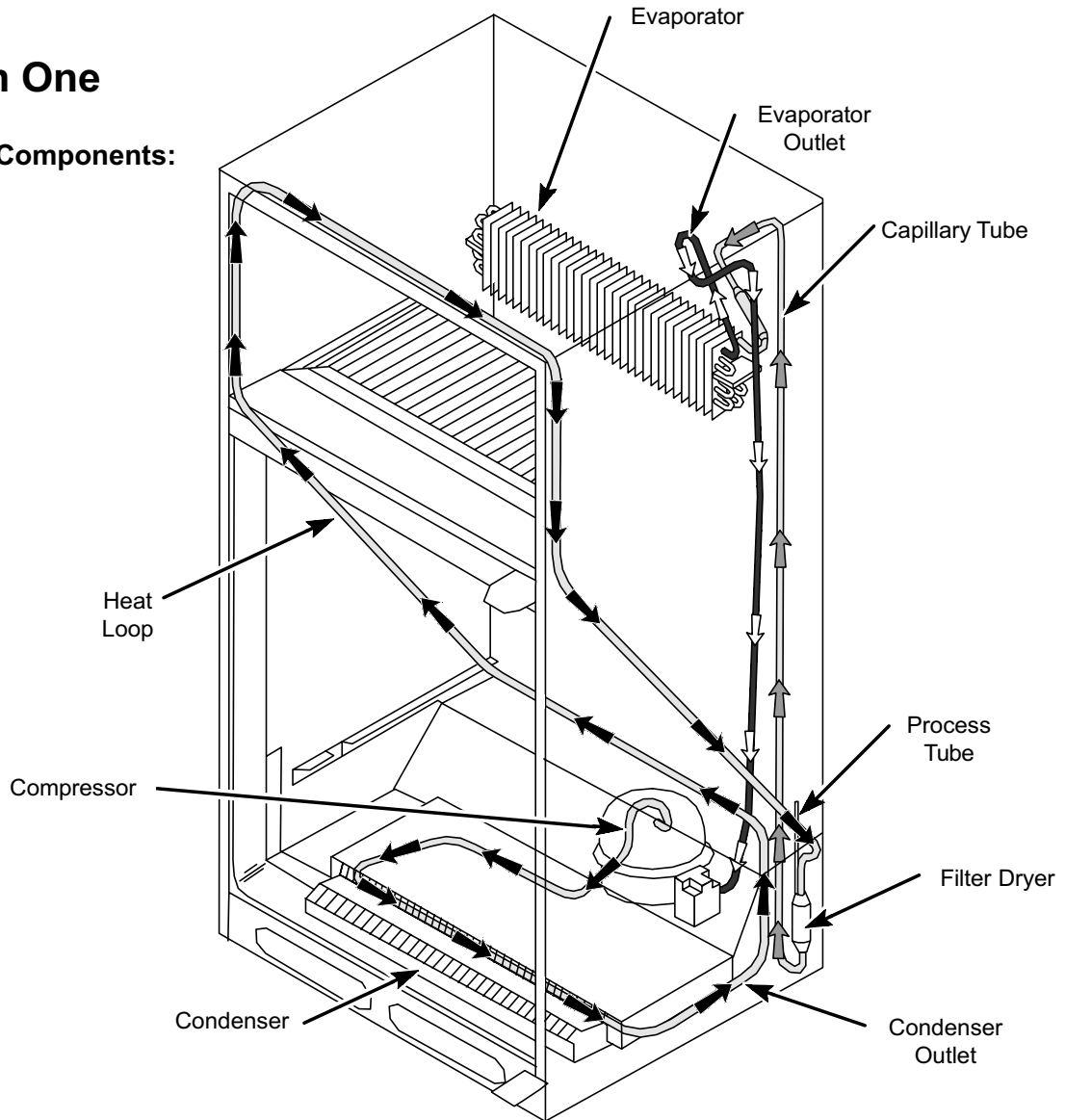
#### Section Three

True or False Statements:

1. F
2. T
3. T
4. F
5. F

#### Section One

Label the Components:









# SECTION TWO

## THEORY OF OPERATION

### TEMPERATURE CONTROL

Freezer temperature is regulated by an air-sensing thermostat inside the control box located at the top front of the refrigerator compartment. This thermostat actuates the compressor to circulate refrigerant through the sealed system to remove heat from the freezer and refrigerator sections. The thermostat should be set to maintain 0° - 5°F freezer food temperature.

Refrigerator temperature is regulated by an automatic air damper control. The air damper control is a thermostat that manually actuates the air damper door. This control governs the amount of refrigerated air entering the refrigerator compartment. The control should be set to maintain 38°F to 40°F fresh food temperature.

### Refrigerant Flow

Refrigerant is pumped from the compressor and passes through the condenser, the heat loop around the freezer compartment opening, the filter drier, capillary tube, evaporator and the suction line back to the compressor.

The heat loop is made of a continuous piece of copper tubing with no brazed joints.

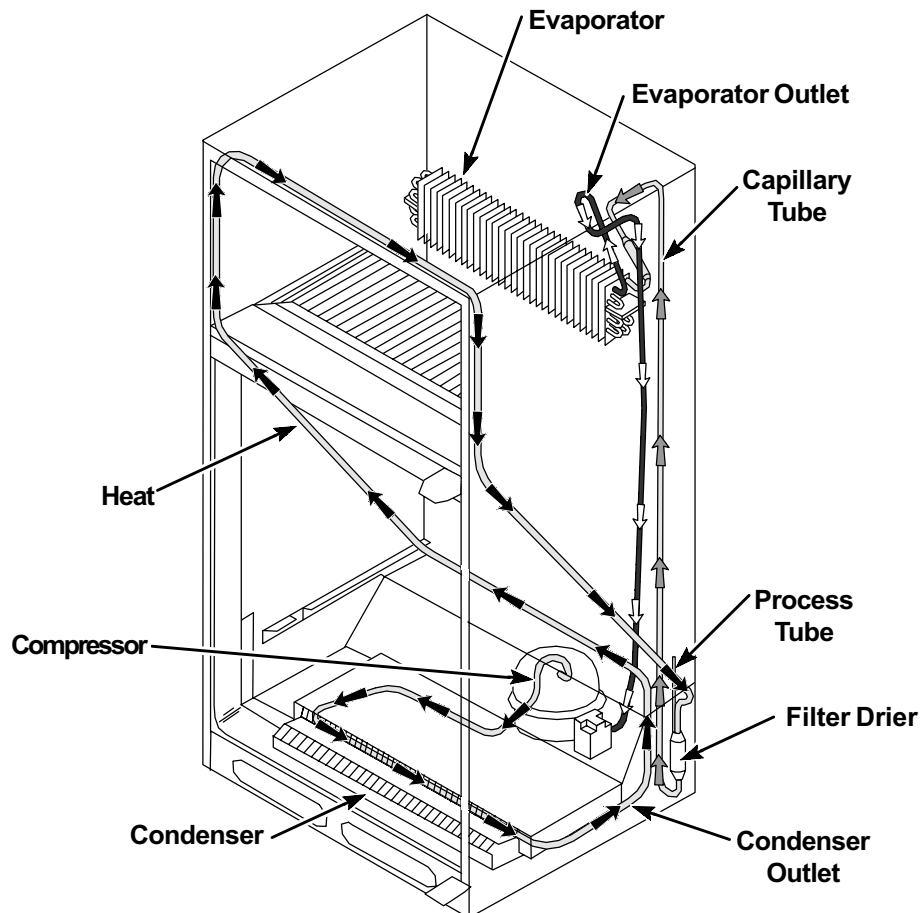


Fig. 2

## Air Flow

Air inside the freezer section is cooled when it is drawn across the evaporator and circulated through the freezer compartment.

Cold freezer air is also drawn into the refrigerator compartment and circulated to remove heat.

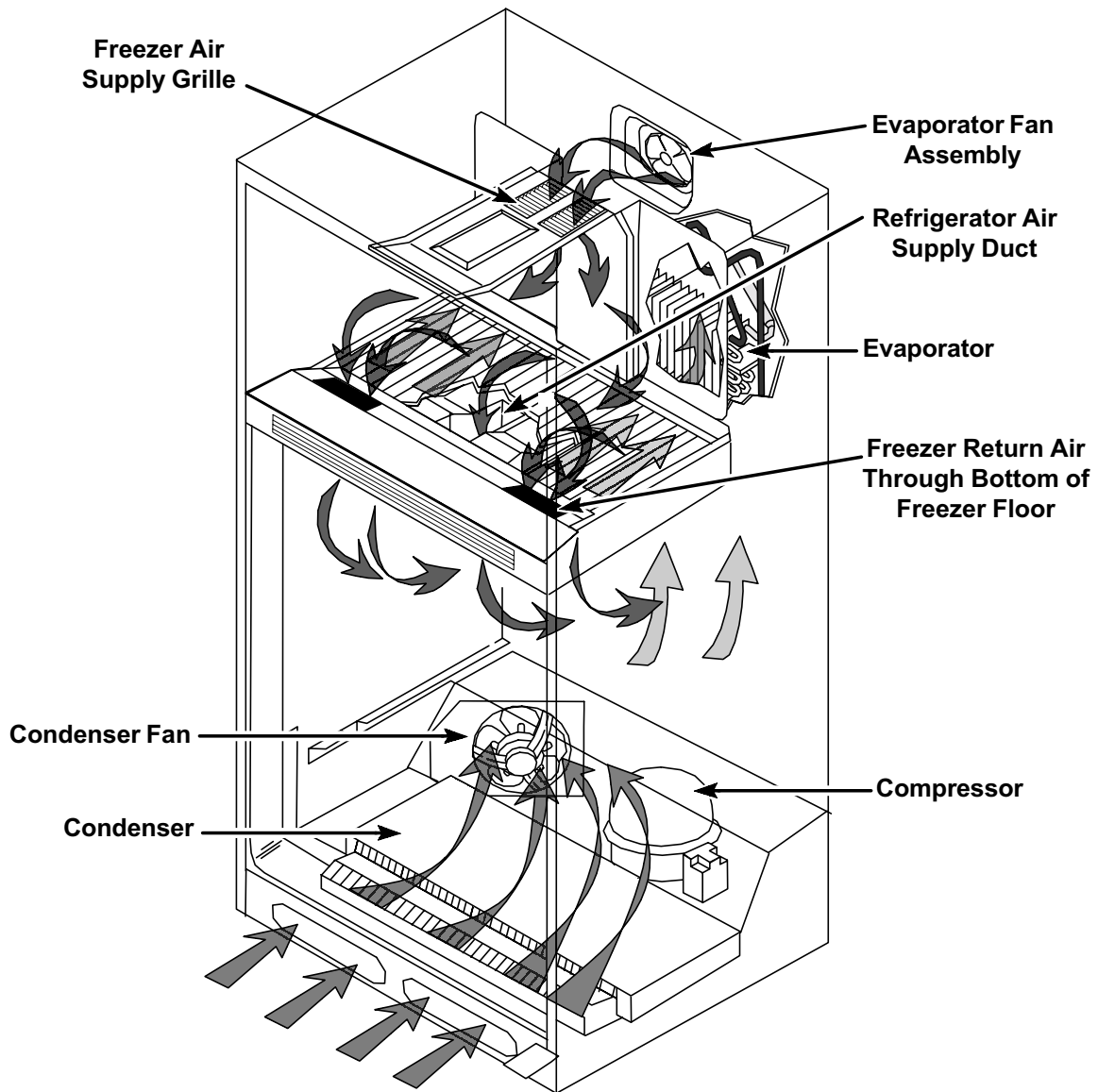


Fig. 3

# Defrost System

Automatic defrost after every eight hours of compressor run time is accomplished by utilizing a defrost timer thermostat in the control box, a defrost bi-metal thermostat attached to the outlet of the evaporator and a radiant electric heater suspended beneath the evaporator. (Fig. 4)

The bi-metal thermostat is attached to the outlet side of the evaporator coil tubing (Fig. 7) and opens at 48°F to terminate the defrost heating. About 33 minutes from the start of the defrost cycle, the timer restores operation to the compressor circuit. (Fig. 5) The bi-metal thermostat contacts close at 13°F, enabling the defrost heater to operate during the next defrost cycle.

The defrost heater is suspended on the right side and across the bottom of the evaporator. The defrost heater also provides warming to the defrost drain area to keep it clear during the defrost cycle. (Fig. 6)

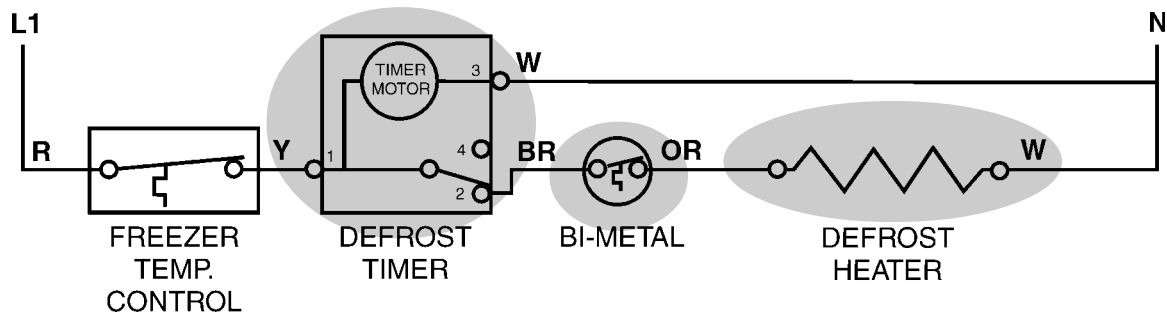


Fig.4

Defrost Timer

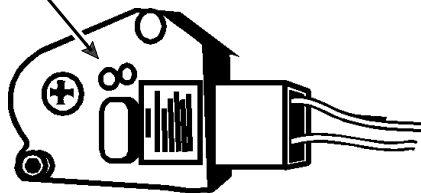


Fig.5

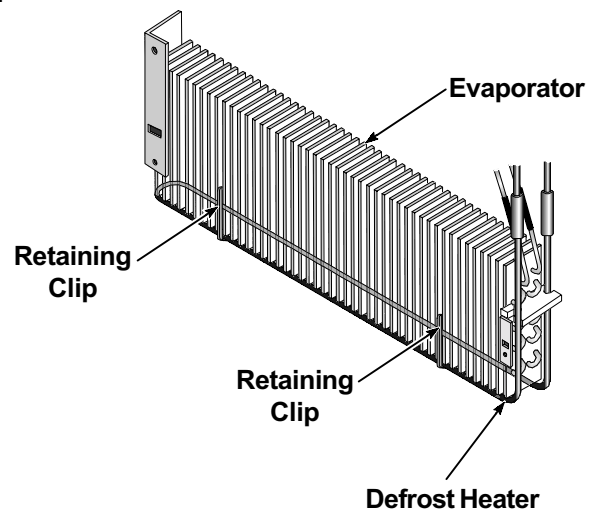


Fig.6

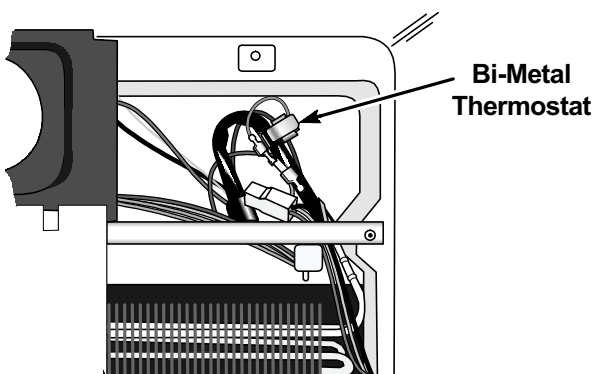


Fig.7

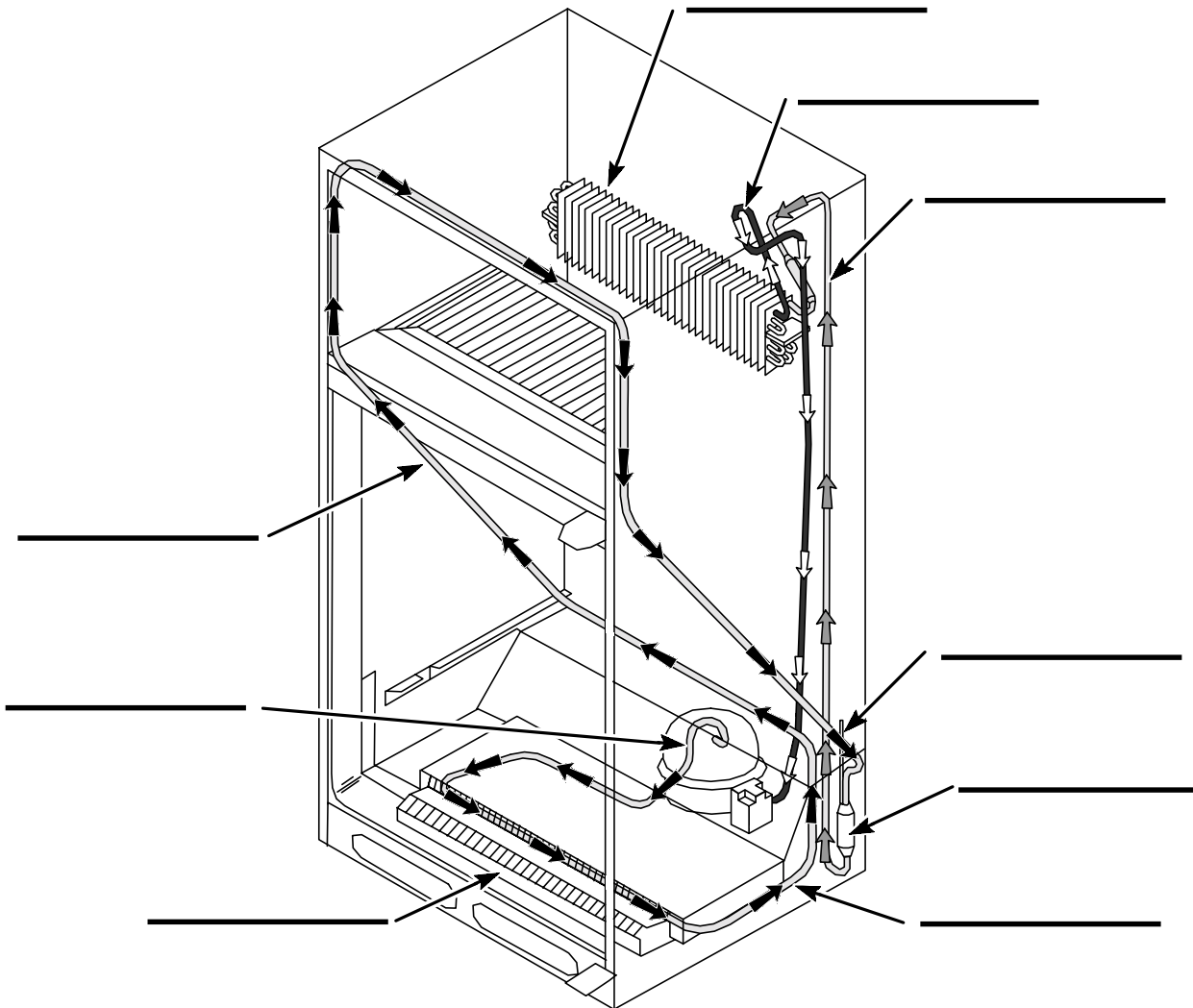
# SECTION TWO

## CONFIRMATION OF LEARNING EXERCISES

In the blank to the left of the statement, place a **T** if the statement is **TRUE** or an **F** if the statement is **FALSE**.

- \_\_\_ 1. This refrigerator/freezer is provided with a refrigerant heat loop that is foamed in place around the freezer compartment door.
- \_\_\_ 2. Air flow from the freezer compartment to the refrigerator compartment is regulated through a motorized air damper door.
- \_\_\_ 3. The defrost timer is located inside the freezer compartment control box.
- \_\_\_ 4. The defrost cycle is designed to occur after eight hours of compressor run-time.
- \_\_\_ 5. The defrost bi-metal thermostat is designed to open at 48°F and close at 13°F.

Label all of the components in the illustration below.



## SECTION THREE

### COMPONENT ACCESS

Accessing the components in the 25 cu. ft. Top-Mount Refrigerator/Freezer is generally quite similar to other typical Whirlpool units.

### Accessing the Component Compartment

Components located in the component compartment are assembled on a slide-out tray at the bottom of the unit. The compressor, filter-drier, condenser, condenser fan and water supply valve are located in this area. To gain access to these components the compartment, heat exchanger and condenser fan covers must be removed and the tray slid out.

1. Remove the six (6) hex-head screws securing the condenser fan cover to the cabinet. (Fig. 8-A)
2. Remove the six (6) screws securing the two sections of the heat exchanger cover to the back of the unit. (Fig. 8-B)
3. Remove the five (5) screws securing the component compartment cover to the cabinet. (Fig. 8-C)
4. Remove the two (2) screws securing the water supply valve to the base rail. (Fig. 8) **NOTE:** If a water supply valve is mounted on the bracket, it is not necessary to disconnect the copper supply tubing or the plastic supply tubing.

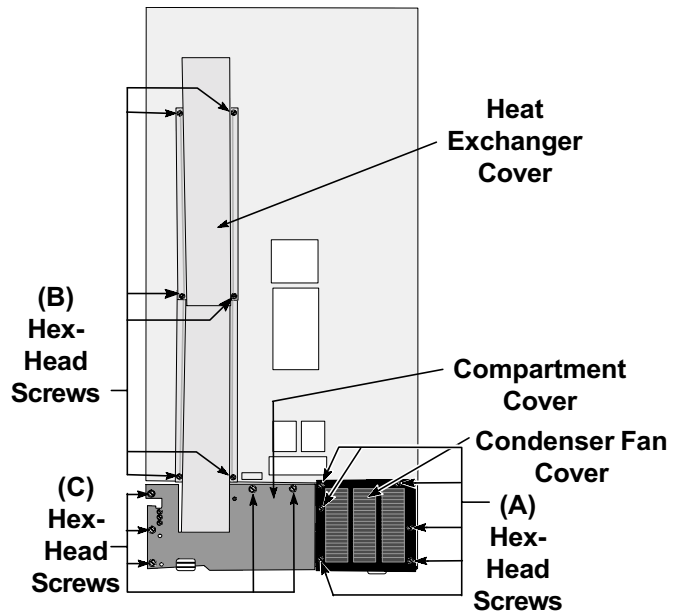


Fig. 8

5. Push the filter-drier out of its retaining bracket and gently move it out of the way. **NOTE:** Take care not to kink any of the tubing connected to the filter-drier.
6. Remove the two (2) compressor mounting bolts securing the slide-out tray to the lower rear cabinet rail. (Fig. 9)
7. Carefully slide the tray out from the unit. (Fig. 9) **NOTE:** The tray can only slide out a few inches without kinking the tubing. To slide the tray completely out, the sealed system must be purged and the tubing disconnected.

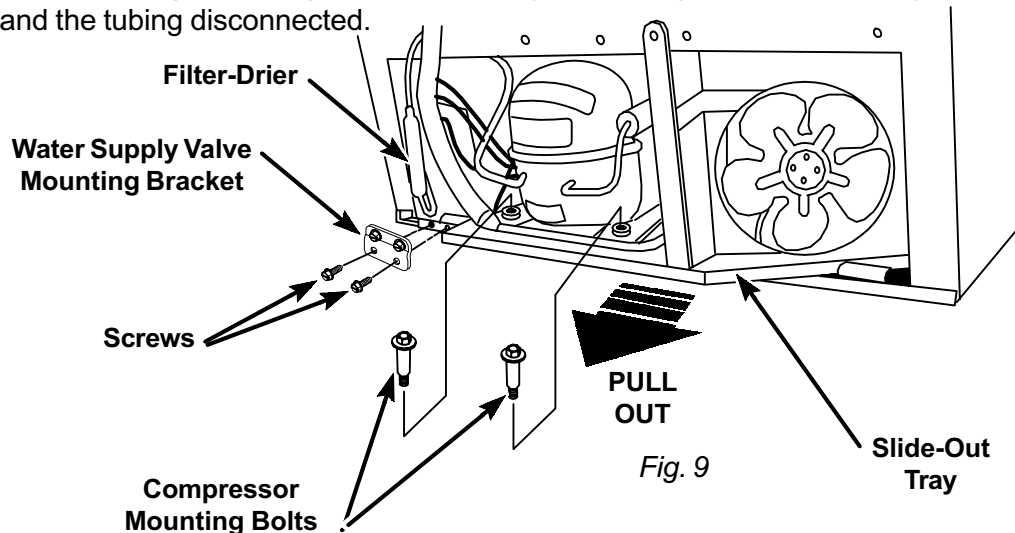


Fig. 9

## Accessing the Heat Exchanger and Wiring Harness

The heat exchanger and wiring harness are located under the metal cover on the back of the cabinet. Remove the six (6) screws securing the cover to the back of the cabinet. (Fig. 10 & 11)

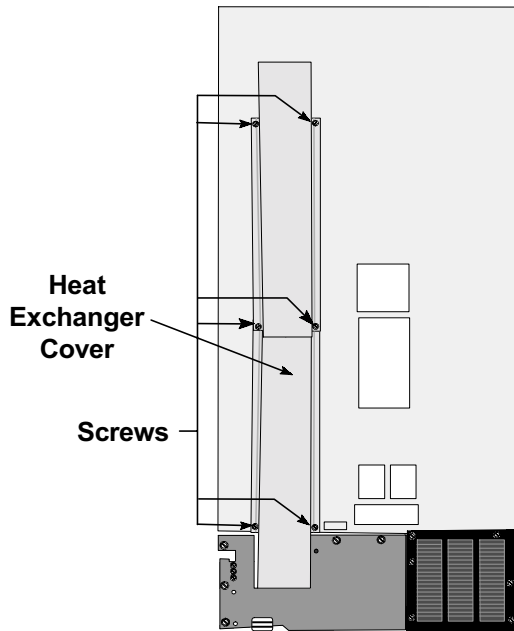


Fig. 10

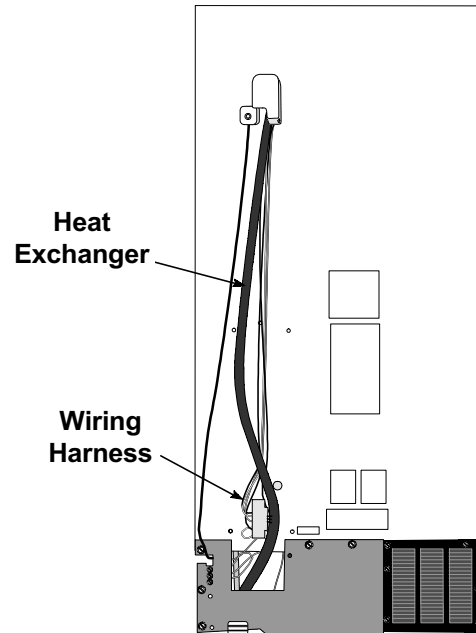


Fig. 11

## Accessing Component in the Freezer Section

The evaporator, automatic ice maker, and other associated components are all accessible inside the freezer section.

### Removing the Automatic Ice Maker

**NOTE:** If Ice-Maker needs replacing, use FSP Replacement Ice Maker.

1. Remove the hex-head screw securing the bottom bracket to the freezer liner.
2. Loosen the two (2) screws in the slotted brackets at the top of the automatic ice maker three or four turns. (These screws must be removed if the evaporator cover is to be removed.) (Fig. 12)
3. Slide the automatic ice maker up and off the screws.
4. Disconnect the automatic ice maker wiring harness connector and remove the automatic ice maker from the unit.
5. Remove the extension from the water inlet tube.

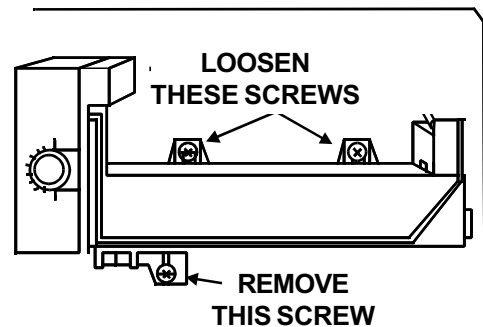


Fig. 12

### Servicing the Evaporator and Other Related Components

The evaporator, evaporator fan, defrost bi-metal and defrost heater are located behind the evaporator cover.

1. Remove freezer shelf and two (2) screws securing each shelf bracket to the back wall of the freezer compartment. (Fig. 13)

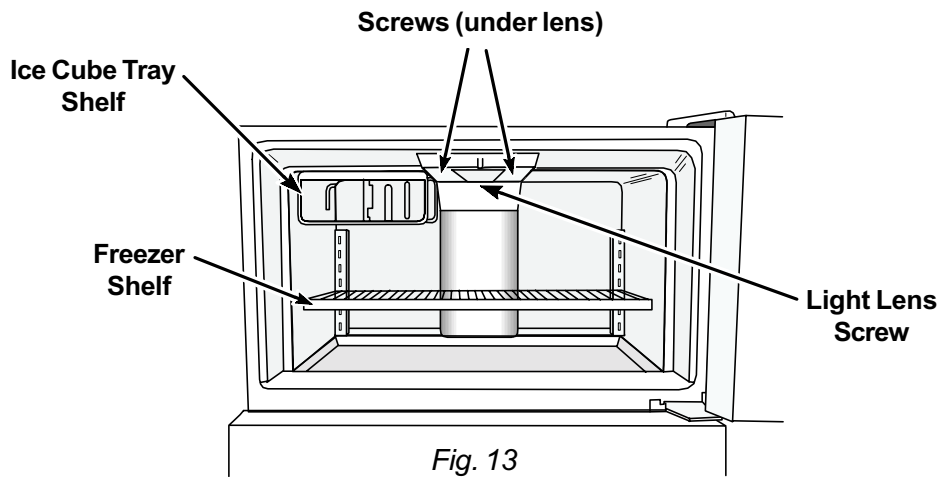


Fig. 13

2. Remove the automatic ice maker (if present) or slide the ice cube tray shelf forward to release it from the (3) stand-off screws securing it to the freezer compartment ceiling.
3. Remove screw securing the rear of the light lens.
4. Remove the two (2) screws securing the freezer ceiling air duct to the top of the freezer compartment.
5. Pull the air duct down from the freezer compartment ceiling. Take care not to break the five (5) clips securing the front of the air duct to the ceiling. (Fig. 14)

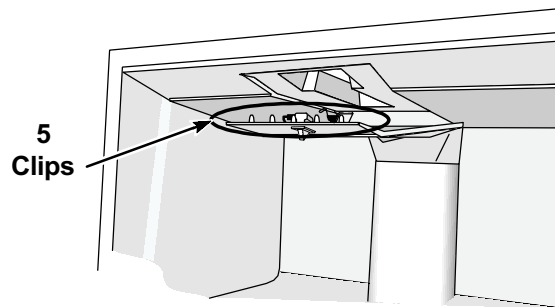


Fig. 14

6. Disconnect the electrical wire to the light switch and light socket and remove the air duct. the wiring harness will remain attached to a piece of insulating material, which can be moved out of the way when removing the evaporator cover. (Fig. 15)

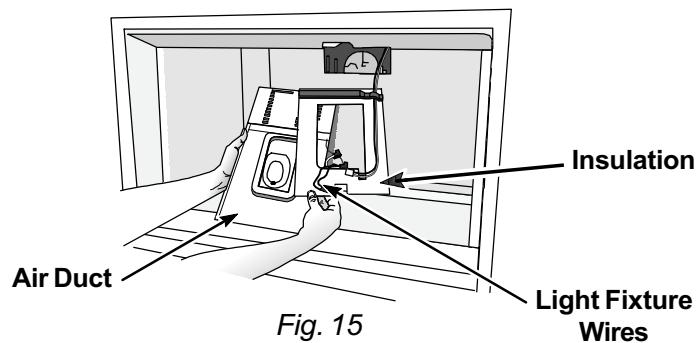


Fig. 15

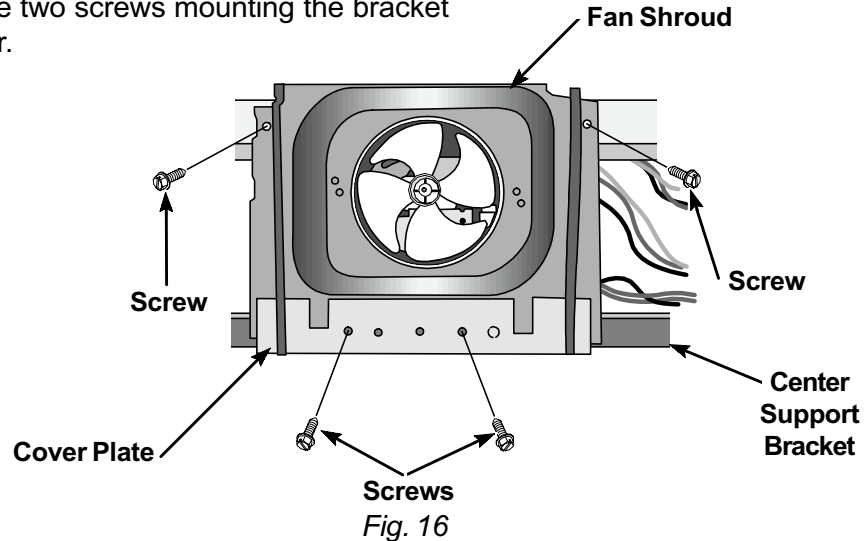
7. Remove the remaining screws securing the evaporator cover to the back wall of the freezer compartment.



## Removing the Evaporator Fan Motor

The evaporator fan motor is mounted on a bracket that is attached to a shroud mounted to the back wall of the freezer section. (Fig. 16)

1. Remove freezer back panels.
2. Remove the two screws mounting the sheet metal cover plate to the bottom of the fan shroud.
3. Remove the two screws mounting the top of the fan shroud to the cabinet.
4. Lay the fan motor and the shroud over and remove wiring.
5. Remove the two screws mounting the bracket to the motor.

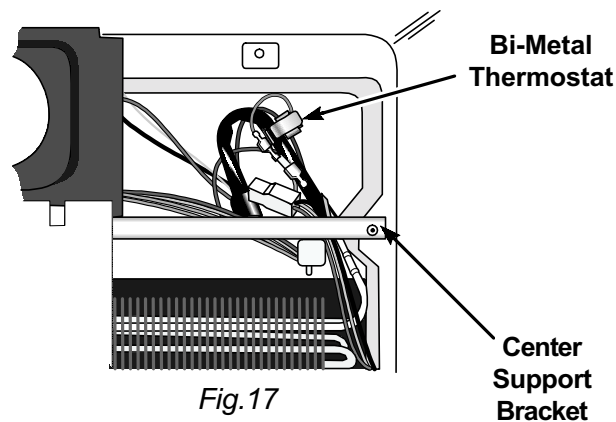


## Servicing the Evaporator, Defrost Bi-metal and Defrost Heater

The evaporator, defrost bi-metal and defrost heater are serviceable parts on these units.

### Removing the Defrost Bi-metal

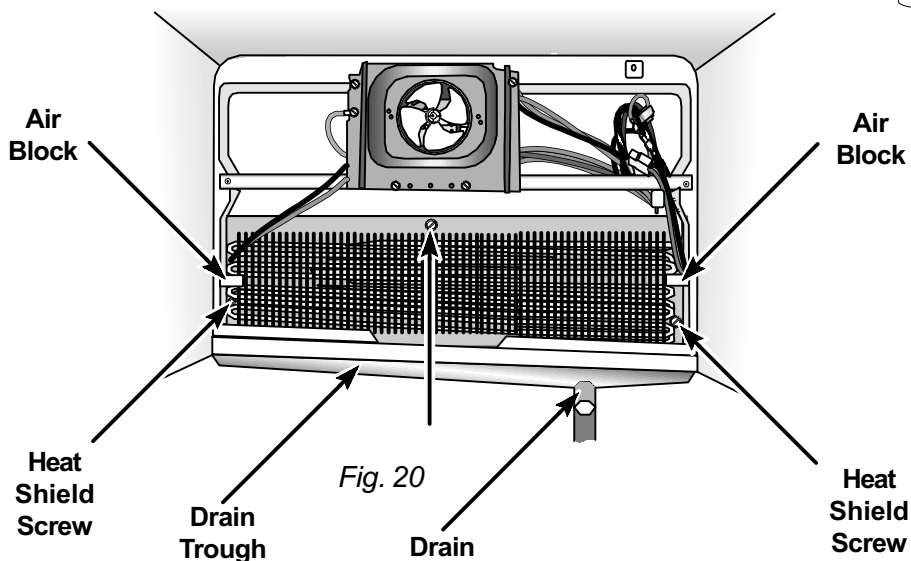
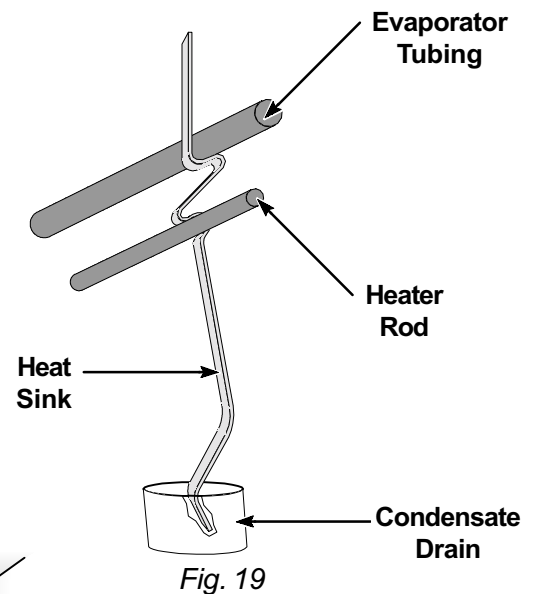
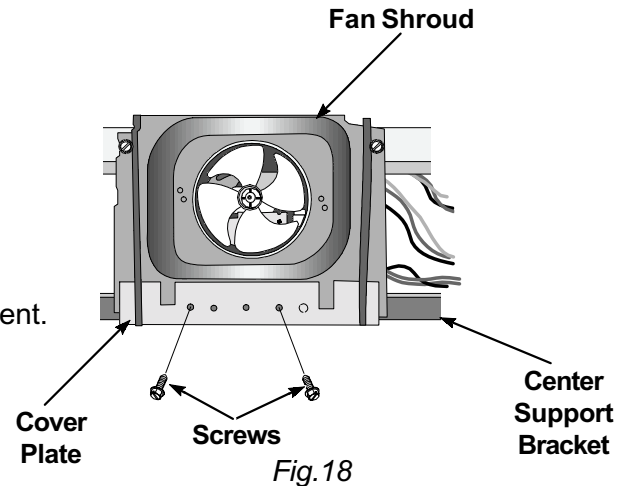
1. Remove the freezer back panel.
2. Unclip the thermostat from evaporator coil outlet tube and remove thermostat. (Fig. 17)
3. Cut either the red and blue leads or the blue and gray leads depending on which thermostat to be removed.
4. When installing a replacement defrost bi-metal, use wire nuts to reconnect the pigtail wires of the defrost bi-metal to the bare wire harness leads.



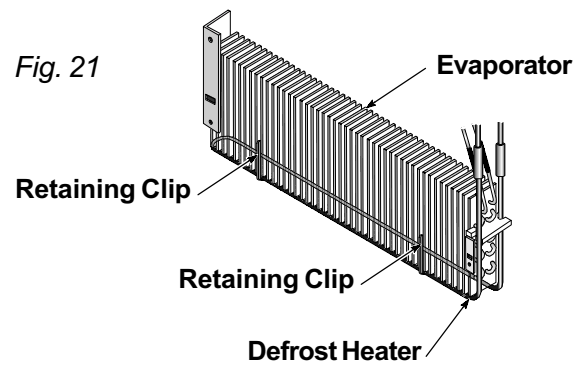
## Removing the Defrost Heater Element

**NOTE:** Using this procedure will require the use of a ¼" magnetic nut driver when removing and installing the three (3) screws securing the evaporator heat shield. A dropped screw will fall into the condensate drain trough and possibly be lost into the condensate drain.

1. Remove the freezer back panel.
2. Remove the two (2) screws securing the cover plate to the bottom of the fan shroud. (Fig. 18)
3. Remove the center support bracket.
4. Remove the drain tube heat sink. (Fig. 19)
5. Disconnect the wire leads to the heater element.
6. Carefully remove the styrofoam air blocks from each side of the evaporator. (Fig. 20)
7. Carefully remove the three screws securing the heat shield to the back wall. (Fig. 20)
8. Carefully lift the evaporator and heat shield assembly up over the rear lip of the freezer floor and pull it away from the back wall. The evaporator can now be detached from the heat shield hangers and clips.



- remove the two (2) clips securing the heater to the evaporator bottom and slide the heater down until it disengages from the evaporator. (Fig. 21)

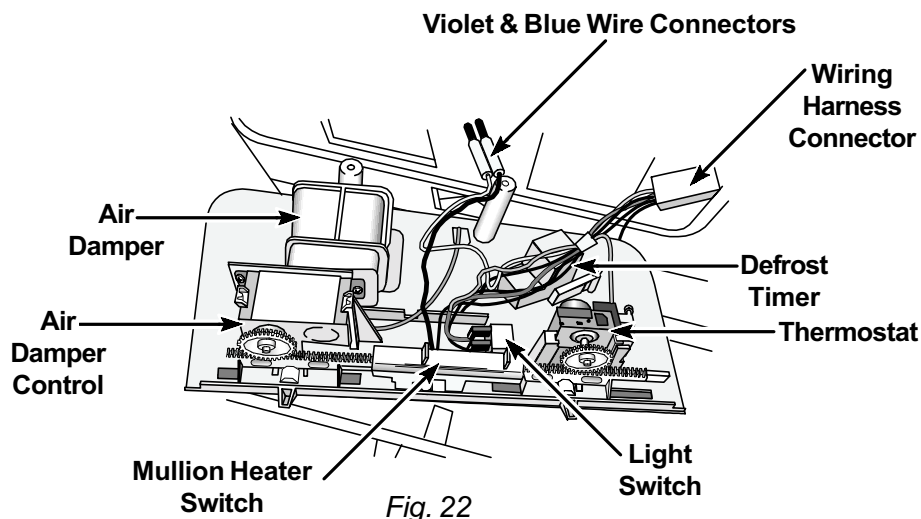


## Accessing Components in the Refrigerator Section

### Accessing the Control Box

The control box is located at the front of the refrigerator section and is secured to the refrigerator compartment ceiling. The control box contains:

- The cold air damper control
  - The defrost timer
  - Freezer temperature control thermostat
  - The switch for the refrigerator compartment lights
  - Mullion moisture control switch
- Remove the two (2) Phillips-head screws securing the front of the control box to the ceiling of the refrigerator section.
  - Remove the two (2) Phillips-head screws hidden inside the standoffs at the back of the control box.
  - Move the temperature controls toward the center of the control box to prevent the control racks from interfering with the removal of the control box.
  - Lower the control box down. Carefully pull the freezer temperature-sensing tube from the hole in the divider between the freezer and refrigerator compartments.
  - Unplug the six-pin wiring harness connector block and the violet and blue wire connectors.



The control box can now be removed from the refrigerator compartment. (Fig. 22)

## Removing the Damper Control

1. Remove the control box from the unit.
2. Unclip the damper control from the two mounting posts and slide it up and off the posts.

**NOTE:** Before installing a service replacement damper, rotate the control shaft full counterclockwise. Install the rack slide in the far right position to synchronize the damper setting properly.

## Removing the Freezer Temperature Control

1. Remove the control box from the unit. (*Fig. 22 - page 12*)
2. Unclip the freezer temperature control from the mounting post and lift it off.
3. Remove the gasket material and electrical wiring tape securing the temperature -sensing tube to the control box and unclip the tubing from the stud.

**NOTE:** Before installing a service replacement freezer temperature control, rotate the control shaft fully counterclockwise. Install the rack slide to the far right position to synchronize the thermostat setting properly.

When reassembly the control box, make sure the temperature-sensing tube is clipped in place and taped to the control box stud. Slide the insulating cap over the tube and onto the post to seal the hole in the divider between the freezer and refrigerator compartments.

## Removing the Defrost Timer

1. Remove the control box from the unit. (*Fig. 22 - page 12*)
2. Unclip the timer from the mounting post.
3. Unplug the the wiring harness connector from the timer terminals.

## Removing the Light Switch

1. Remove the control box from the unit. (*Fig. 22 - page 12*)
2. Snap the switch out of its mounting hole in the control box.
3. Unplug the wire connectors from the switch terminals.

## Removing the Exterior Cabinet Moisture Switch

1. Remove the control box from the unit. (*Fig. 22 - page 12*)
2. Remove the plastic insulation from the switch.
3. Unclip the switch from between the mounting posts.
4. Unplug the wires from the switch terminals.

## Accessing The Mullion Heater

1. Remove the doors and center hinge.
2. Remove the Phillips-head screw in the ceiling of the refrigerator compartment that secures the center mullion cover to the cabinet.
3. Press in on one side of the mullion cover and slide it until the opposite side clears the cabinet flange.
4. Remove the mullion cover.
5. Unplug the wire connectors from the mullion heater terminals and remove the mullion heater.

## SECTION THREE CONFIRMATION OF LEARNING EXERCISES

In the blank to the left of the statement, place a **T** if the statement is **TRUE** or an **F** if the statement is **FALSE**.

- \_\_\_ 1. The thermostat to control temperature in the freezer section is located in the refrigerator compartment.
- \_\_\_ 2. The heat exchanger and main wiring harness is accessible behind a panel attached to the back of the cabinet.
- \_\_\_ 3. The defrost timer is located in a box behind the toe grille at the bottom of the unit.
- \_\_\_ 4. The automatic damper control that regulates air flow into the refrigerator compartment must be disconnected from the wiring harness when it is to be replaced.
- \_\_\_ 5. The defrost bi-metal thermostat is attached to the back wall of the freezer compartment.

If a 1998 Model "G" 25 cu. ft. Top-Mount Refrigerator/Freezer is available, perform the following service procedures:

- A. Perform all the steps necessary to pull the component compartment slide-out tray out a few inches to access the compressor and condenser fan.
- B. Perform all steps necessary to remove the defrost heater element from the evaporator.
- C. Perform all steps necessary to remove the temperature control thermostat from the control box.
- D. Perform all steps necessary to remove the damper door assembly and damper control thermostat.

# SECTION FOUR

## TROUBLESHOOTING AND DIAGNOSTICS

### TROUBLESHOOTING GUIDE

| PROBLEM   | POSSIBLE CAUSE  |
|---|---|
| 1. Operating Sound Level                          | A. See owners manual for explanation of normal operating sound  |
| 2. Freezer Warm - Compressor Off                  | A. Temperature Control defective or setting too warm<br>B. Defrost control stalled in defrost mode (defective)<br>C. Compressor defective<br>D. Overload and/or relay defective   |
| 3. Too Cold in Refrigerator                       | A. Refrigerator damper control knob set too cold<br>B. Refrigerator damper control not closing<br>C. Freezer temperature control knob set too cold<br>D. Restricted condenser air<br>E. Refrigerant shortage or restriction<br>F. Overcharge  |
| 4. Freezer Warm - Compressor Cuts Off on Overload | A. Heavy usage and/or high ambient<br>B. Restricted condenser air<br>C. Compressor machine compartment back cover is missing<br>D. Cabinet elevated off floor<br>E. Condenser fan motor inoperative<br>F. Condenser fan blade loose or missing<br>G. Improper voltage<br>H. Relay or overload faulty<br>I. Compressor motor winding open<br>J. Non-condensables in system<br>K. Overcharge  |
| 5. Freezer Too Warm - Compressor Operating        | A. Control knob set too warm<br>B. Control out of calibration<br>C. Restricted condenser air<br>D. Inoperative condenser fan motor<br>E. Door left open<br>F. Heavy usage<br>G. Freezer fan motor inoperative<br>H. Defrost thermostat open<br>I. Defrost heater open<br>J. Freezer or condenser fan blade loose or off<br>K. Evaporator heavily frosted<br>L. Defrost control stuck in compressor run mode<br>M. Drain plugged<br>N. Loss of refrigerant or restriction<br>O. Inefficient compressor |
| 6. Too Warm in Refrigerator                       | A. Refrigerator setting too warm<br>B. Damper doesn't open<br>C. Freezer control set too warm<br>D. Supply air duct blocked<br>E. Return air duct blocked<br>F. Heavy usage or high ambient temperature   |
| 7. Freezer Too Cold                               | A. Freezer temperature control knob set too cold<br>B. Freezer temperature control out of calibration   |
| 8. Long Off Cycle - Too Warm at Start             | A. Low ambient temperature<br>B. Freezer temperature control knob set too warm<br>C. Freezer temperature control out of calibration   |

| PROBLEM  | POSSIBLE CAUSE   |
|--|--|
| 9. Short off Cycle                             | <ul style="list-style-type: none"> <li>A. High ambient and/or heavy usage</li> <li>B. Freezer control knob set too cold</li> <li>C. Freezer control out of calibration</li> <li>D. Light on constantly</li> <li>E. Poor door seal</li> </ul>   |
| 10. Long or Continuous Operation               | <ul style="list-style-type: none"> <li>A. Heavy usage and/or high ambient</li> <li>B. Inadequate condenser air flow</li> <li>C. Freezer temperature set too cold</li> <li>D. Freezer temperature control out of calibration</li> <li>E. Freezer temperature control relay frozen closed</li> <li>F. Loss of refrigerant or restriction</li> </ul>  |
| 11. Short Run Cycle                            | <ul style="list-style-type: none"> <li>A. Low ambient and/or light usage</li> <li>B. Freezer temperature control setting too warm or control out of calibration</li> </ul>   |
| 12. Condensation on Cabinet Exterior           | <ul style="list-style-type: none"> <li>A. High humidity installation (design accepts bead of water on exterior of cabinet after 4 hours with a 0° to 5°F. (-18° to -17°C.) freezer food temperature and 38° to 40°F. (3°C to 4°C) refrigerator food temperature in 84% R.H. conditions (See example of typical sweat pattern under above conditions on <i>page 19.</i>)</li> <li>B. Freezer control set too cold</li> <li>C. Freezer control out of calibration</li> <li>D. Poor door gasket seal</li> <li>E. Insulation void</li> </ul>   |
| 13. No Ice/Low Ice Production                  | <ul style="list-style-type: none"> <li>A. Freezer not cold enough</li> <li>B. Broken locking tab on vertical cam</li> <li>C. Module shut-off switch and contacts shorted and Burned</li> <li>D. Motor stalled or stripped</li> <li>E. Check ejector position</li> <li>F. Bail shut-off arm in vacation mode - no ice</li> <li>G. Bail shut-off arm binds when raised or lowered</li> <li>H. Little/no alumilastic on thermometer</li> <li>I. Housing to mold screws not seated</li> <li>J. Heater not staked in mold</li> <li>K. Wrong heater temperature</li> <li>L. Broken S/O lever (miscalibrated shut-off switch)</li> </ul>  |
| 14. Over Production of Ice                     | <ul style="list-style-type: none"> <li>A. Bail shut-off arm not in actuator</li> <li>B. Misformed bail shut-off arm</li> <li>C. Shut-off lever broken or bypassing vertical cam</li> <li>D. Broken module actuator</li> </ul>  |
| 15. Hollow Ice Cubes                           | <ul style="list-style-type: none"> <li>A. Water fill volume too low</li> <li>B. Improper freezer airflow</li> <li>C. Thermostat out of calibration</li> </ul>  |
| 16. Flooding or Ice Slabs in Bucket or Freezer | <ul style="list-style-type: none"> <li>A. Thermostat out of calibration</li> <li>B. Jammed cube stalled in water-fill cycle</li> <li>C. Leaky water valve</li> <li>D. Fill volume of water excessive</li> <li>E. Motor stalled in water-fill cycle (12:00 ejector position)</li> <li>F. Contaminated module</li> <li>G. Refrigerator or ice maker not level</li> <li>H. Excessive water pressure</li> <li>I. Module shut-off switch and contacts shorted and burned</li> <li>J. Broken locking tab on vertical cam (stalled in water-fill)</li> <li>K. Fill-tube not properly located in fill cup</li> <li>L. Fill cup water opening flashed over/plugged</li> <li>M. Cubes fell over back of ice maker, melting into freezer</li> </ul> |

# DIAGNOSTIC INFORMATION

## ! WARNING



### ELECTRIC SHOCK HAZARD

Disconnect the electrical power before servicing any components.  
Failure to do so can result in death or electrical shock.

### PERFORMANCE DATE \*(NORMAL OPERATING CONDITIONS)

| AMB  | WATTS | SYSTEM PRESSURE<br>(PSIG) |             |
|------|-------|---------------------------|-------------|
|      |       | HIGH<br>SIDE              | LOW<br>SIDE |
| 70°  | 190   | 90                        | 1           |
| 90°  | 205   | 135                       | 2           |
| 110° | 210   | 185                       | 2           |

\*Normal operating conditions are viewed when air and temperature controls are at mid-setting, freezer section temperature is between 0°- 5°F and unit is cycling.

**NOTE:** Watt and pressure readings will vary and are influenced by existing condition of the appliance, such as iced-up evaporator, condition of the condenser, defrost cycle, pull-down time and customer use.

## SERVICE INFORMATION

1. Do not interchange the compressor suction and process stubs.
2. Refrigerant charge must be applied to high side only.
3. Ice maker and water valve not original equipment on all models.
4. **CAUTION:** Ice maker cycle **MUST** be initiated electrically. Do not try to manually start cycle.
5. Service defrost bi-metal (55°F) open.
6. Defrost timer may contain a capacitor in series with motor. Do not continuity test when checking for failed timer motor. Instead, energize timer and listen for gear movement.
7. Part number can be found on component.

### GENERAL COMPONENT INFORMATION BE SURE AND USE CORRECT REPLACEMENT PARTS

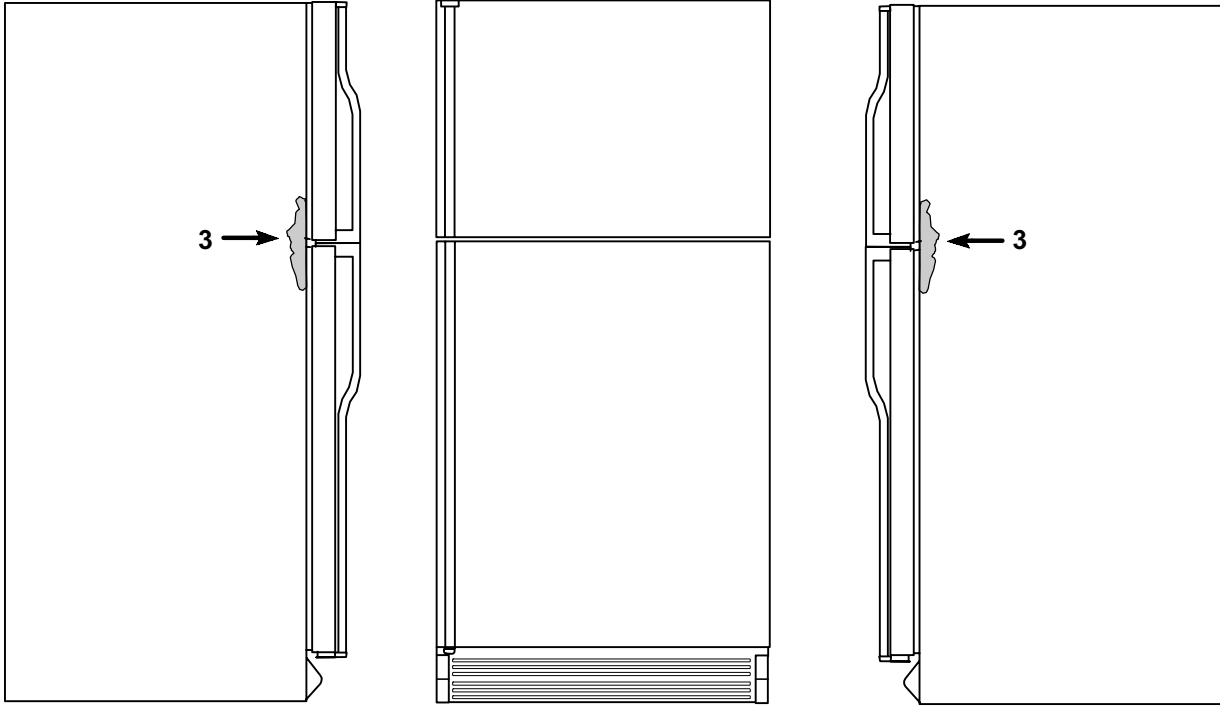
| 120VAC<br>COMPONENT | WATTAGE<br>@120VAC | OHMS<br>RESISTANCE | TECUMSEH<br>TP1380Y |
|---------------------|--------------------|--------------------|---------------------|
| COMPRESSOR          | --                 | --                 | 12049702            |
| RUN WINDING         | --                 | 2.6                | --                  |
| START WINDING       | --                 | 4.35               | --                  |
| PTC RELAY           | --                 | --                 | 10097202            |
| OVERLOAD            | --                 | --                 | 10377015            |
| RUN CAPACITOR       | --                 | --                 | C8931604            |
| THERMOSTAT          | --                 | --                 | RO161075            |
| DEFROST TIMER MOTOR | .7                 | 13000              | 10428601            |
| DEFROST HEATER      | 505                | 30                 | 10991107            |
| BI-METAL            | --                 | --                 | 10449501            |
| EVAPORATOR FAN      | 11                 | --                 | 10654206            |
| CONDENSER FAN       | 10                 | --                 | 10884501            |
| MULLION HEATER      | 12.1               | 1650               | 10543603            |



**-- NOTES --**

# SECTION FIVE TECH TIPS

## TYPICAL EXTERNAL SWEAT PATTERNS



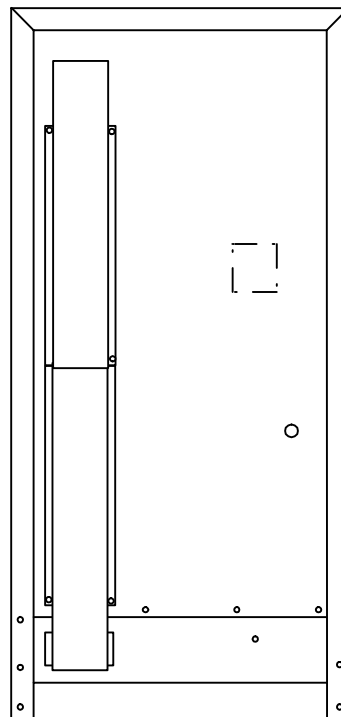
**LEFT SIDE**

**FRONT**

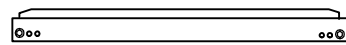
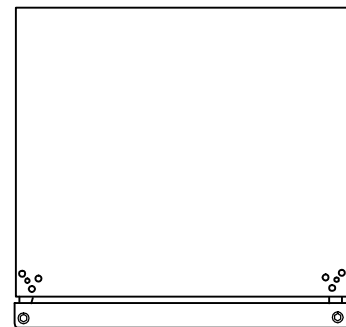
**RIGHT SIDE**

**CLASSIFICATIONS OF  
CONDENSATION**

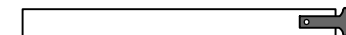
- 1 = Haze or fog
- 2 = Beading
- 3 = Beads or small drops
- 4 = Drops running together



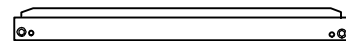
**BACK**



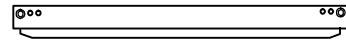
**BOTTOM FRZ. DOOR**



**CENTER MULLION**



**TOP REF. DOOR**

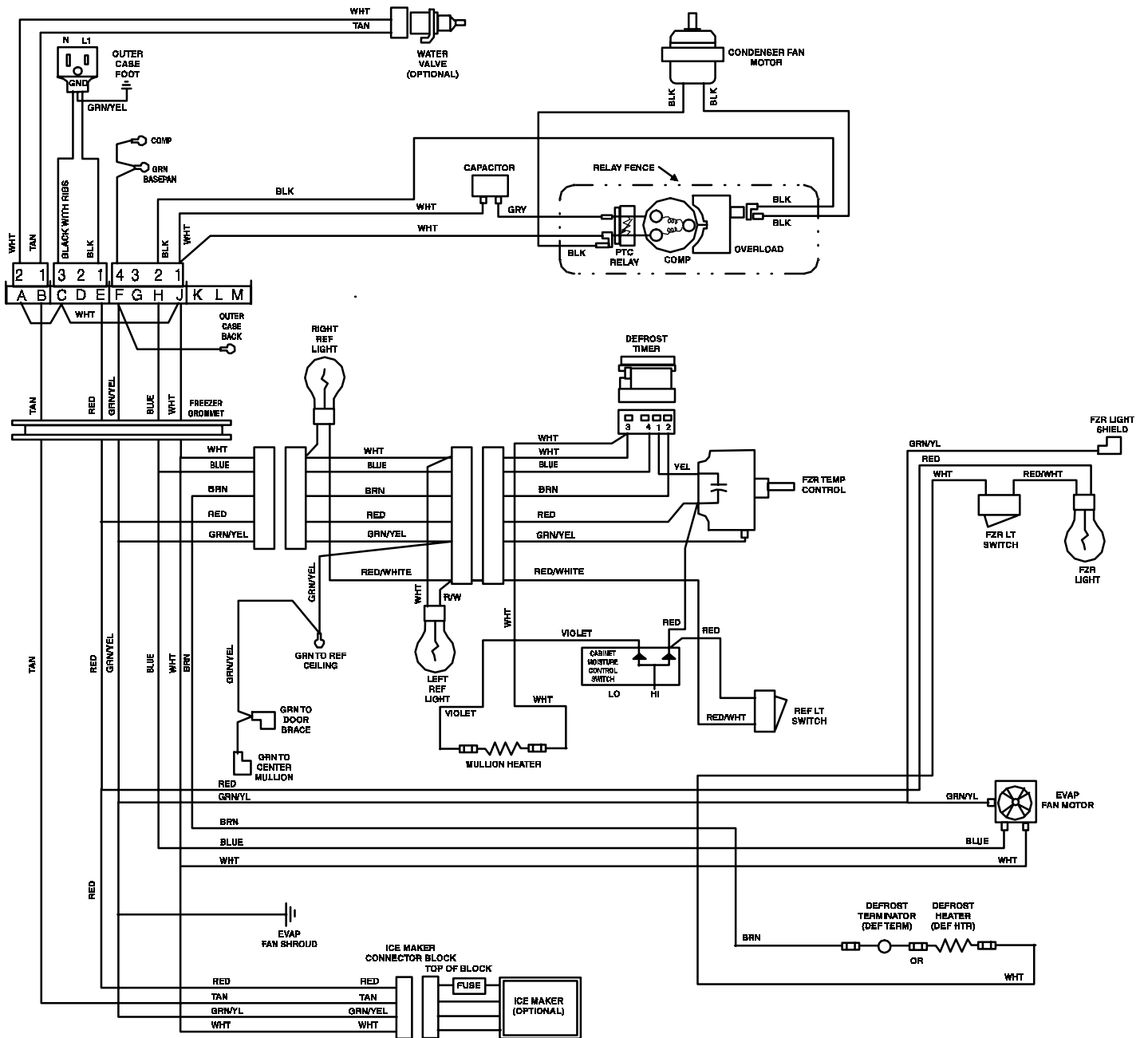


**BOTTOM REF. DOOR**

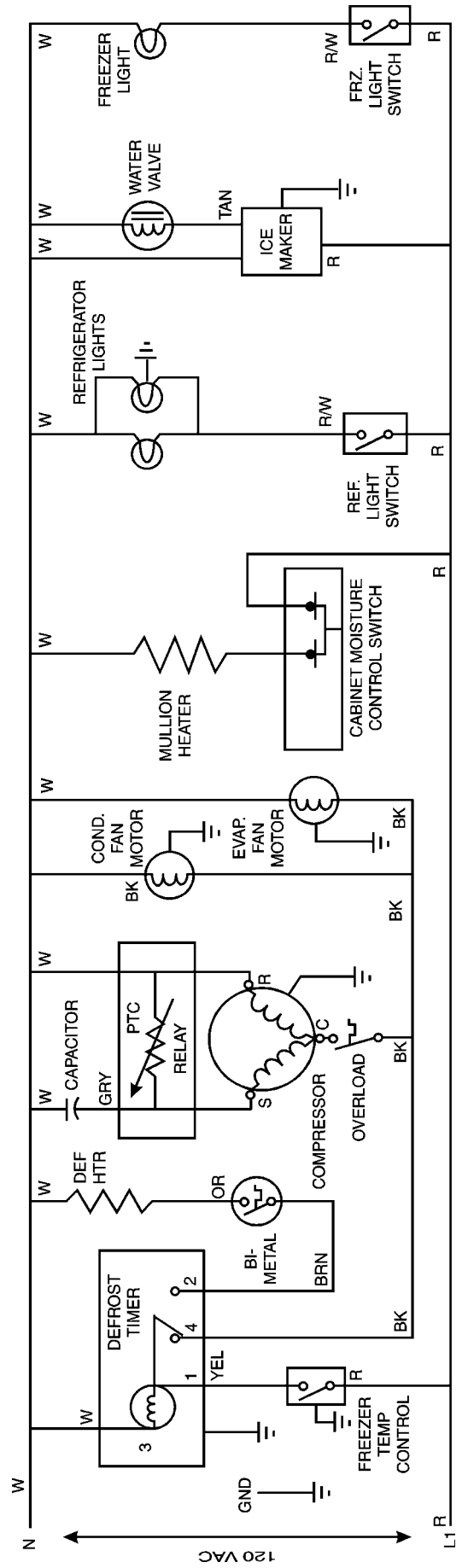


**LOWER MULLION**

# WIRING HARNESS SCHEMATIC

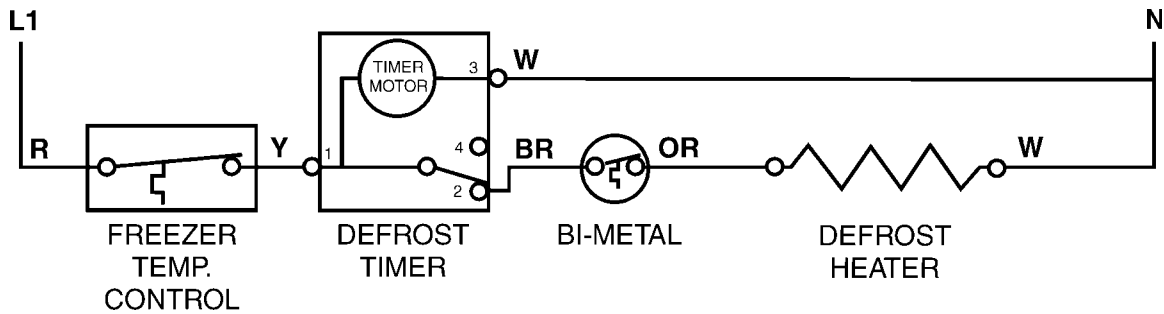


# WIRING DIAGRAM

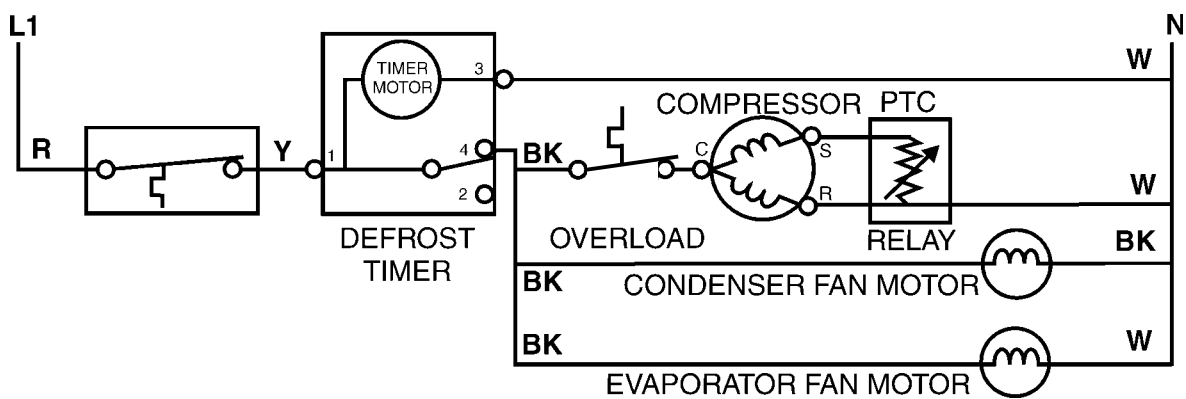


# STRIP CIRCUITS

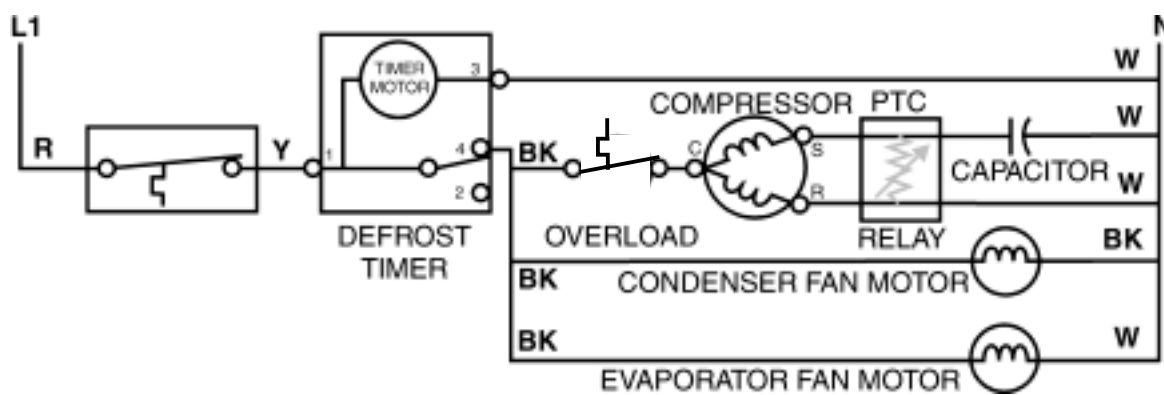
## 1. Defrost Circuit - Defrost Heater Energized



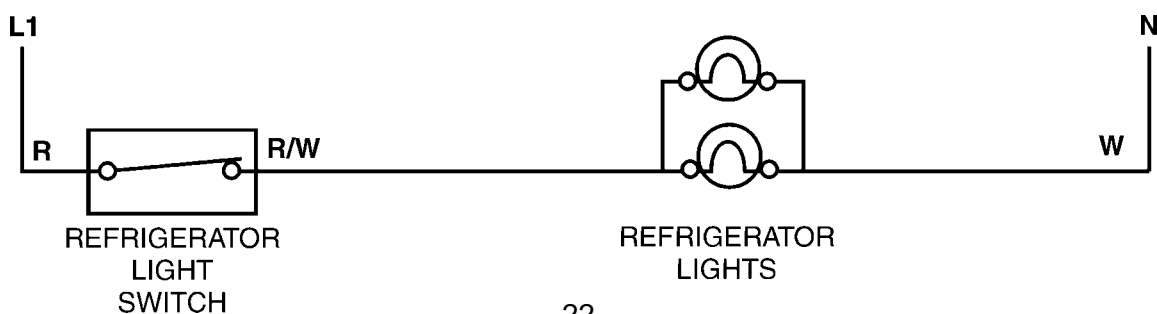
## 2. Cooling Circuit - Freezer thermostat calling for cooling (at instant of compressor start)



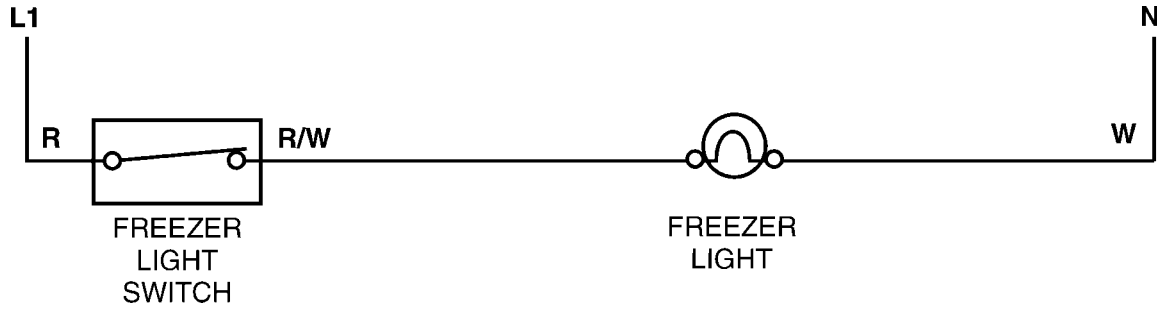
## 3. Cooling Circuit - Freezer thermostat calling for cooling (running)



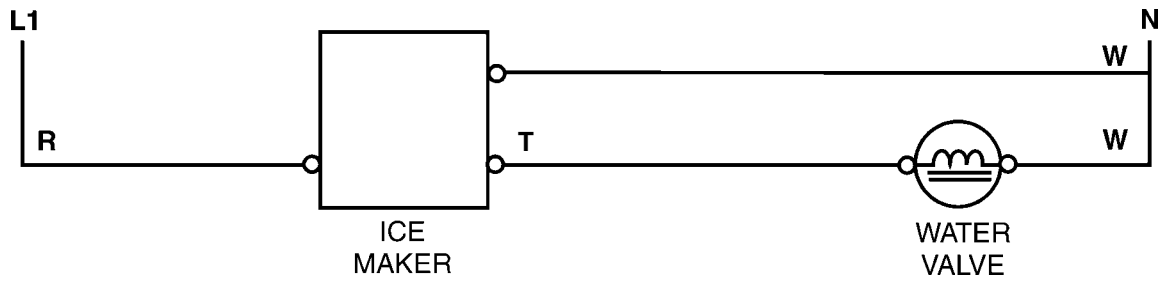
## 4. Refrigerator Lights Circuit - Refrigerator door open



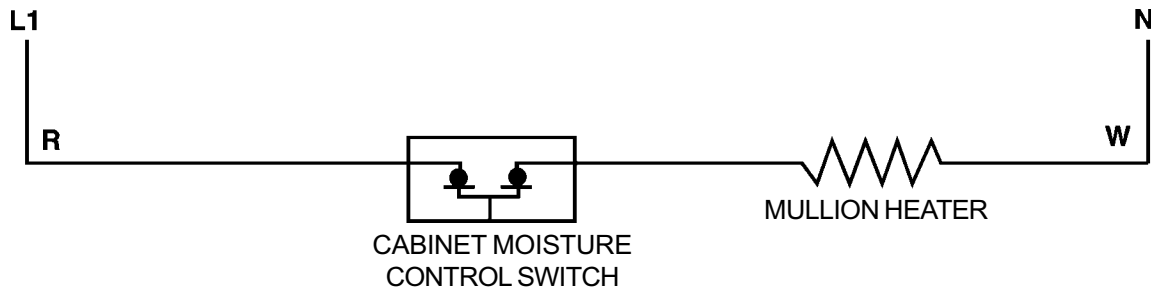
5. Freezer Light Circuit - Freezer Door Open



6. Automatic Ice Maker/Water Supply Valve Circuit



6. Mullion Heater Circuit



## SERIAL AND MODEL NUMBER DESIGNATORS

The serial number for all Whirlpool and KitchenAid brand Refrigerator/Freezers contain the following designations:

|                                 |    |   |    |       |
|---------------------------------|----|---|----|-------|
| <b>Manufacturer Site/Source</b> | EC | H | 39 | 40174 |
| <b>Calendar Year H=1998</b>     |    |   |    |       |
| <b>Calendar Week</b>            |    |   |    |       |
| <b>Sequential Serial Number</b> |    |   |    |       |

The model number for the KitchenAid brand 25 cu. ft. Top Mount Refrigerator/Freezers contains the following designations:

|   |          |           |          |           |          |          |           |           |
|---|----------|-----------|----------|-----------|----------|----------|-----------|-----------|
| <b>Model Number</b>   | <b>K</b> | <b>TR</b> | <b>S</b> | <b>25</b> | <b>K</b> | <b>G</b> | <b>WH</b> | <b>00</b> |
| <b>Marketing Channel (if present)</b>   |          |           |          |           |          |          |           |           |
| KitchenAid Brand = K  |          |           |          |           |          |          |           |           |
| <b>Product Identification</b><br>TR = Top-Mount Freestanding<br>Reversible Door Swing |          |           |          |           |          |          |           |           |
| <b>Merchandise Scheme/Series</b><br>S = Superba                                       |          |           |          |           |          |          |           |           |
| <b>Capacity</b>   |          |           |          |           |          |          |           |           |
| <b>Features - Accepts Ice Maker Kit</b>   |          |           |          |           |          |          |           |           |
| <b>Year of Introduction</b><br>G= 1998  |          |           |          |           |          |          |           |           |
| <b>Color</b><br>WH = White<br>AL = Almond<br>BL = Black                               |          |           |          |           |          |          |           |           |
| <b>Engineering Changes (Numeric)</b>  |          |           |          |           |          |          |           |           |

# WARRANTY

## KitchenAid Refrigerators

| LENGTH OF WARRANTY:   | KITCHENAID WILL PAY FOR:  | KITCHENAID WILL NOT PAY FOR:   |
|---|---|--|
| <b>ONE YEAR FULL WARRANTY</b><br>FROM DATE OF PURCHASE  | Replacement parts and repair labor costs to correct defects in materials or workmanship. Service must be provided by an authorized KitchenAid servicing outlet.   | <b>A.</b> Service calls to: <ol style="list-style-type: none"> <li>1. Correct the installation of the refrigerator.</li> <li>2. Instruct you how to use the refrigerator.</li> <li>3. Replace house fuses or correct house wiring.</li> <li>4. Replace house plumbing.</li> </ol> <b>B.</b> Repairs when refrigerator is used in other than normal home use.<br><b>C.</b> Damage resulting from accident, alteration, misuse, abuse, fire, flood, acts of God, improper installation, or installation not in accordance with local electrical codes or plumbing codes.<br><b>D.</b> Any food lose due to product failure.<br><b>E.</b> Any labor costs during the limited warranty.<br><b>F.</b> Replacement parts or repair labor costs for units operated outside the United States or Canada.<br><b>G.</b> Pickup and delivery. This product is designed to be repaired in the home.<br><b>H.</b> Repairs to parts or systems caused by unauthorized modifications made to the appliance.<br><b>I.</b> In Canada, travel or transportation expenses for customers who reside in remote areas. |
| <b>SECOND THROUGH FIFTH YEAR FULL WARRANTY</b><br>FROM DATE OF PURCHASE                       | Replacement or repair of the refrigerator/freezer cavity liner, (including labor costs.) If the part cracks due to defects in materials or workmanship. Service must be provided by an authorized KitchenAid servicing outlet.<br><br>Replacement parts and repair labor costs to correct defects in the sealed refrigeration system.<br><br>These parts are:<br>1. Compressor; 2. Evaporator<br>3. Condenser; 4. Drier<br>5. Connecting Tubing<br><br>Servicing must be provided by an authorized KitchenAid servicing outlet. |  |
| <b>SIXTH THROUGH TENTH YEAR LIMITED WARRANTY</b><br>FROM DATE OF PURCHASE                     | Replacement parts and repair labor costs to correct defects in the sealed refrigeration system.<br><br>These parts are:<br>1. Compressor; 2. Evaporator<br>3. Condenser; 4. Drier<br>5. Connecting Tubing   |  |
| <b>LIMITED LIFETIME WARRANTY</b><br>SECOND YEAR THROUGH LIFE OF PRODUCT FROM DATE OF PURCHASE | Replacement of all SLIDE 'N' LOCK Door Bins and SLIDE 'N' LOCK Can Racks due to defective materials or workmanship.   |  |

**KITCHENAID AND KITCHENAID CANADA DO NOT ASSUME ANY RESPONSIBILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.** Some states or provinces do not allow the exclusion or limitation of incidental or consequential damages, so this exclusion or limitation may not apply to you.

**This warranty gives you specific legal rights, and you may also have other rights which may vary from state to state or province to province.**

**Outside the United State and Canada, a different warranty may apply. For details please contact your authorized KitchenAid dealer.**

If you need service, first see the "Troubleshooting Guide" section of this book. After checking the "Troubleshooting Guide," additional help can be found by checking the "Requesting Assistance or Service" section or by calling our Consumer Assistance Center, **1-800-442-1230** (toll free), from anywhere in the U.S.A. For service in Canada, see the "Requesting Assistance or Service" section.



**-- NOTES --**

**KitchenAid**

For the way it's made.™

