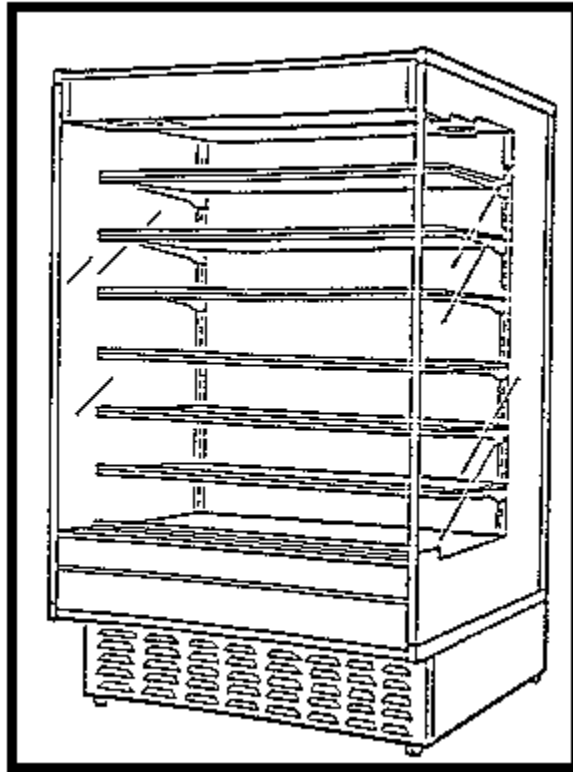




# Installation Instructions

## *MODEL RD-2*

### REFRIGERATED SHOWCASE



LITERATURE NUMBER 1042572

REV. B



The RD-2 refrigerated display showcase unit has been safety and performance-test approved by various safety regulatory testing agencies. In the course of new installations or periodic inspections, reference to agency approvals may be required. Following are the regulatory agency file numbers:

**SAFETY AND PERFORMANCE LISTING**



Underwriters Laboratories, Inc.  
1655 Scott Blvd  
Santa Clara, CA 95050  
(408) 985-2400

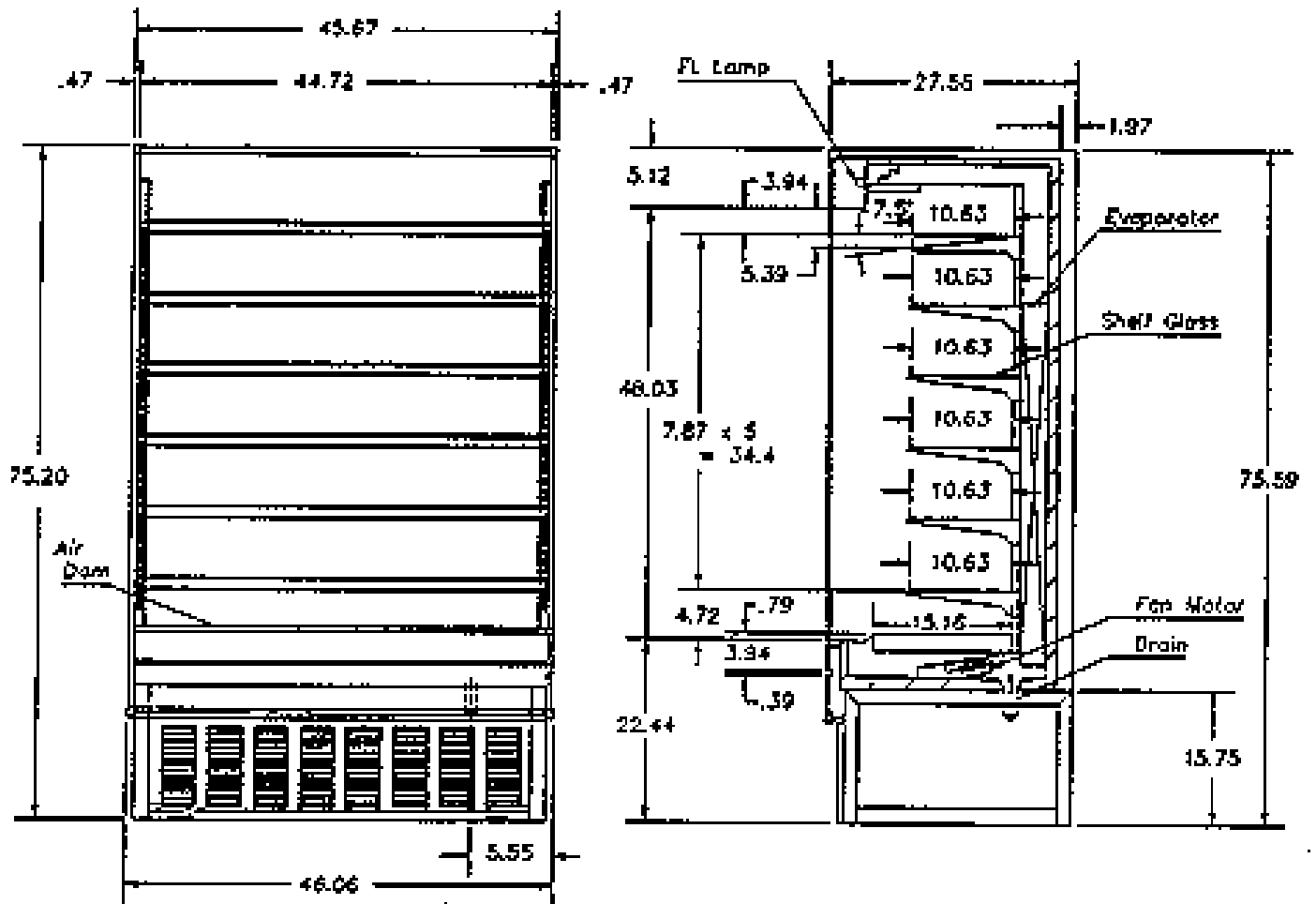
File Number: SA6934



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## MAIN COMPONENTS AND DIMENSIONS



DIMENSION UNIT: INCH

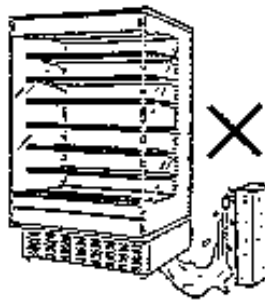
## INITIAL SET-UP

The Model RD-2 Refrigerated Showcase, when properly installed and maintained, is designed to provide years of trouble-free operation. This Operation Manual contains information necessary for proper installation, maintenance and cleaning of the unit.

It is the responsibility of the installer to ensure the unit is installed and working properly. The following instructions provide step-by-step set-up, plumbing, condensate drain connections, wiring, start-up, performance and maintenance guidelines.

### CABINET SET-UP

Step 1: Choose a location for your new refrigerated display case. Avoid placing the cabinet near equipment that releases heat. Avoid direct sunlight. To protect all electrical parts, do not place the cabinet where it will be subjected to rain, splashed liquid, or excessive humidity. In addition, do not allow frost to form on the evaporator.



Step 2: Check the air flow around the cabinet, since strong air flow may displace the cooled air in the display case. Place the cabinet where the air-flow speed is less than 60 ft/min. Also avoid areas subject to strong winds or cigarette smoke (see figures 1-9).

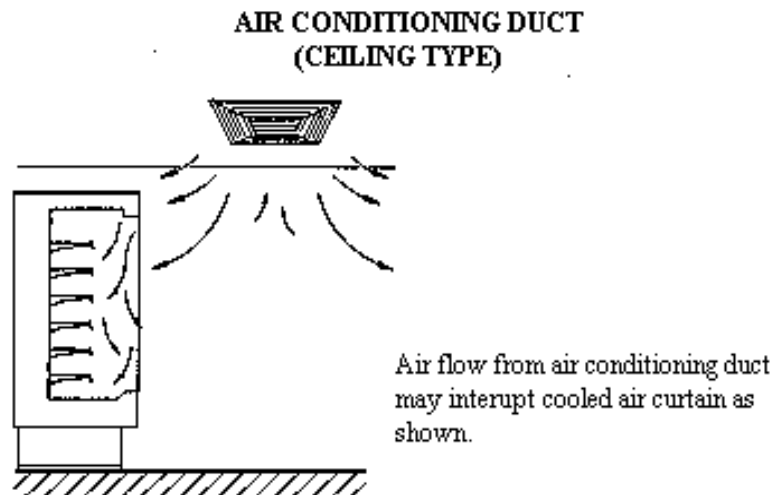
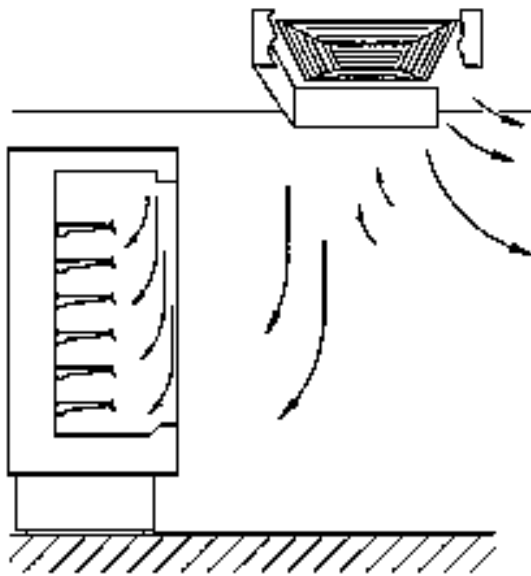
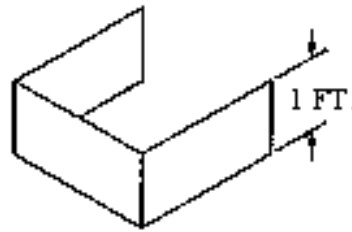


FIGURE 1

**AIR CONDITIONING DUCT (CON'D)  
(CEILING TYPE)**



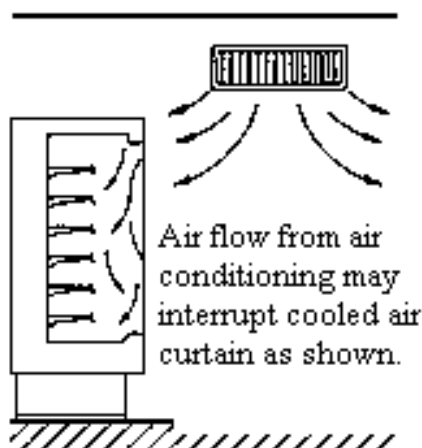
**FIGURE 3**



**AIR DAM (REF.)  
FIGURE 2**

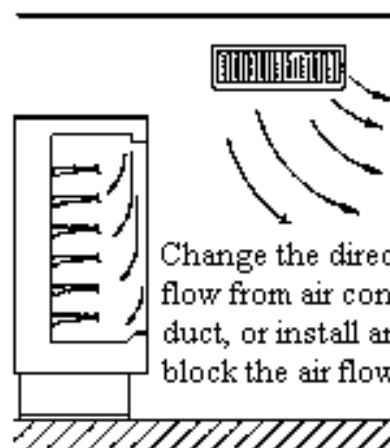
Install the air dam to block the direction of air flow from air conditioning duct as shown.

**AIR CONDITIONING DUCT  
(WALL TYPE)**



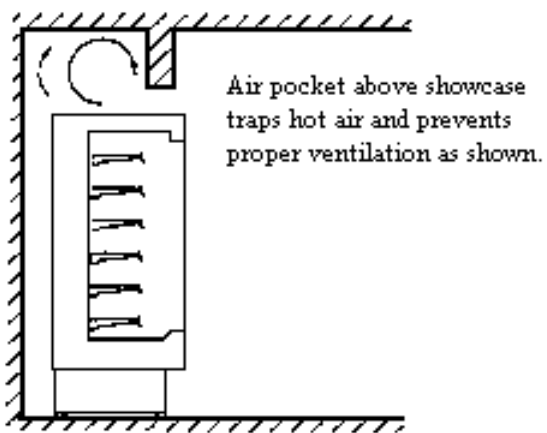
**FIGURE 4**

Air flow from air conditioning may interrupt cooled air curtain as shown.

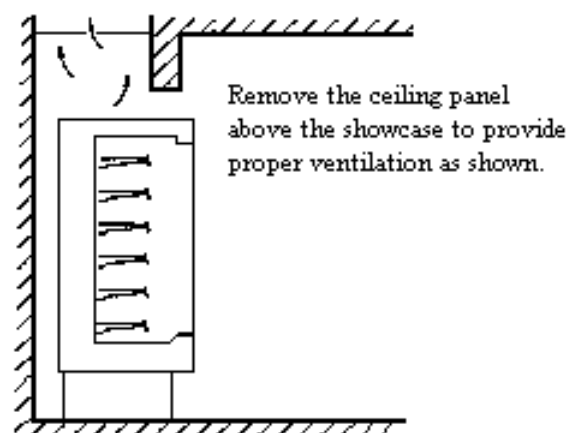


**FIGURE 5**

Change the direction of air flow from air conditioning to duct, or install an air dam to block the air flow as shown.

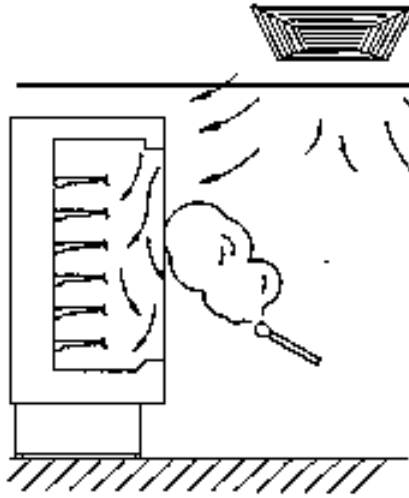


**FIGURE 6**



**FIGURE 7**

**TO CHECK AIR CURTAIN**



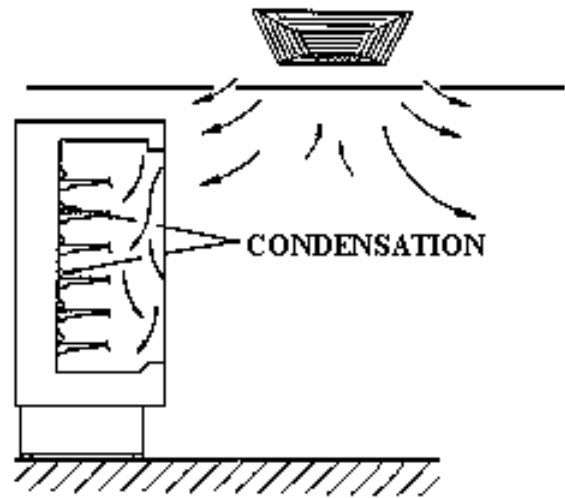
**FIGURE 8**

Hold smoke stick 1 foot from front opening of showcase as shown. (Figure 8)

If smoke travels upward than the air curtain is present.

If smoke travels into the showcase the air curtain is not functioning correctly.

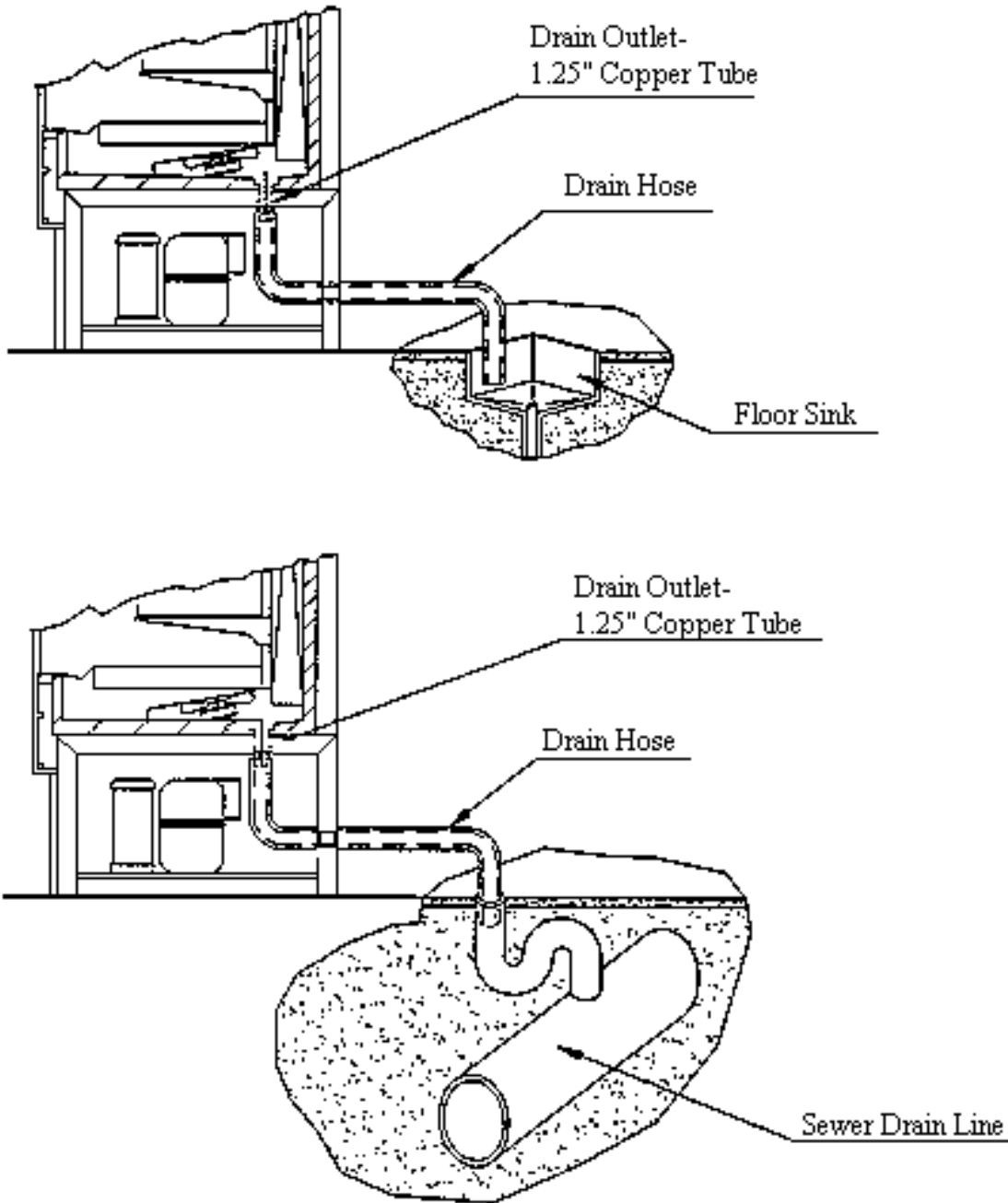
Another indication of a non-functional air curtain is the presence of condensation on the inside back surface of the showcase unit as shown.



**FIGURE 9**

## CONDENSATE DRAIN CONNECTION

Install the appropriate condensate drain line between the 1 ¼" copper tube outlet to either a floor sink, a sewer drain line or other, as picture below



## CABINET ELECTRICAL WIRING

Step 1: Remove the lower-rear and left-side compressor access panel.

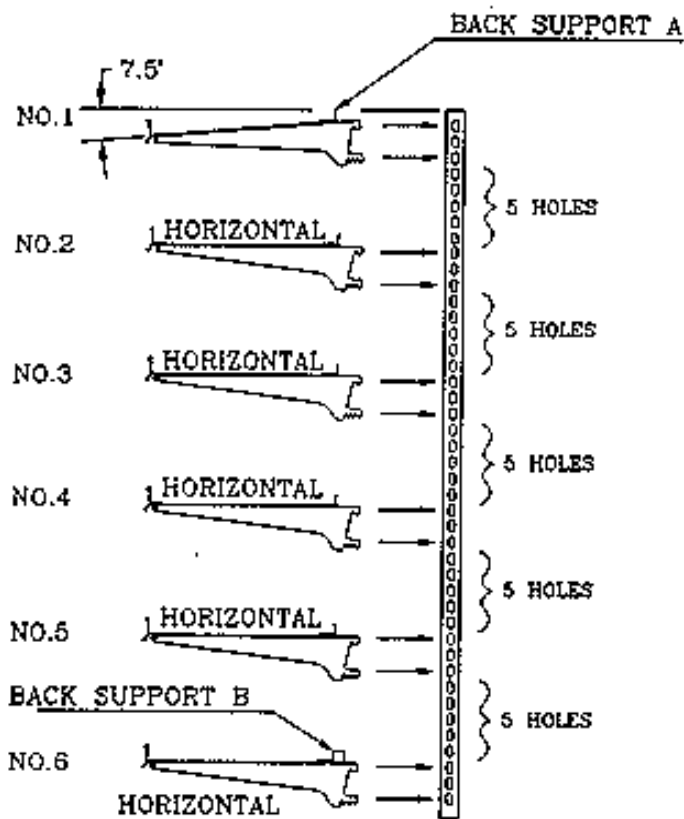
Step 2: Remove the left-side junction-box panel and locate the electrical wiring diagram on the inside of the panel.

Step 3: Install permanently connected field wiring to the 230V/ 60Hz/ 1 Phase (4-wire) compressor circuit.

The pigtail wires are provided. See the circuit amperage ratings located on the unit nameplate.

## SHELF & ACCESSORY INSTALLATION

Step 1: Ensure that the shelves are setup as pictured below.



Put back support "A" on NO.1 - NO.5 shelves  
Put back support "B" on NO.6 shelf.

Step 2: A price card slides into the shelf sash as shown.





## **START-UP & OPERATING INFORMATION**

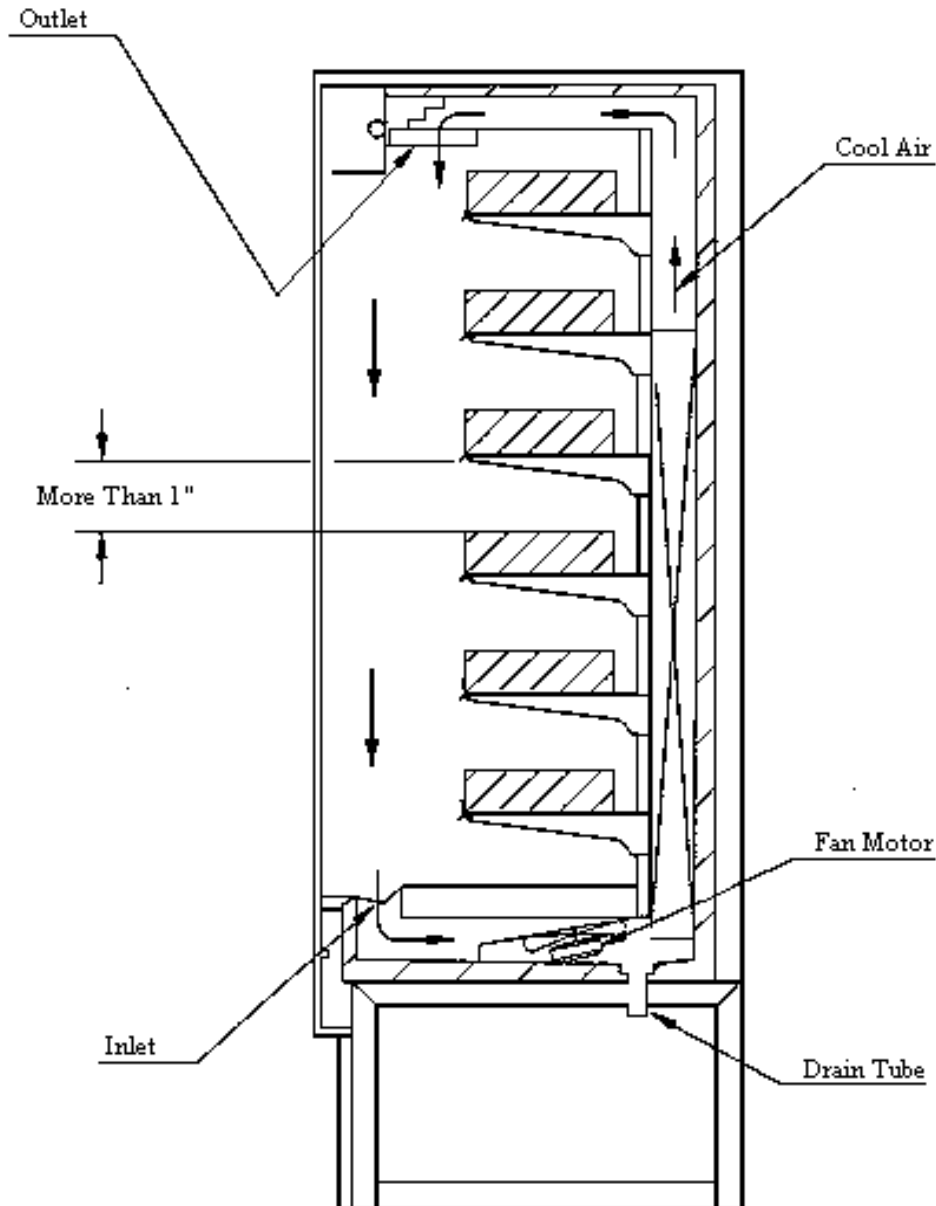
### **START-UP INFORMATION AND PERFORMANCE EVALUATION**

- Step 1: Open the front panel and flip the toggle switch to the “ON” position. Both the condensing unit, and the evaporator fans should operate, and the fluorescent lighting should turn on.
- Step 2: While the condensing unit and evaporator fans are running, verify that there is a flow of cold air from the honeycomb, at the top of the cabinet.
- Step 3: Using the thermometer in the lower-right corner, monitor the cabinet temperature, and verify that the unit cools to 40°F within 20-30 minutes.
- Step 4: Continue to monitor temperature performance through the complete run cycle, until the system enters the defrost cycle. The defrost cycle (condensing unit shutdown) is programmed to run for 10 ~ 30 minutes every two hours.
- Step 5: Verify that all unit access-cover panels have been replaced, and the cabinet is ready to be loaded by store personnel.

### **OPERATING GUIDELINES**

1. For best results, pre-cool all product before stocking the display case.
2. Stock products only after the cabinet is cooled.
3. When loading the cabinet, do not place merchandise outside of the shaded area.
4. Allow at least 1” between the upper surface of the displayed product and the shelf directly above it.
5. Do not overload product. Improper loading of merchandise may result in refrigeration inefficiency.
6. Do not remove the glass side panels during operation.
7. Do not stock the shelves with all bottles or cans. Hard or heavy merchandises should not be loaded on the glass shelves.

## COOLING MECHANISM



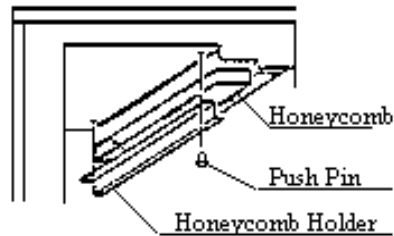
A cooling unit is located under the display case. Cool air is circulated through the display case by 3 interior fans.

Evaporator fan motor = 6W each.

## GENERAL MAINTENANCE

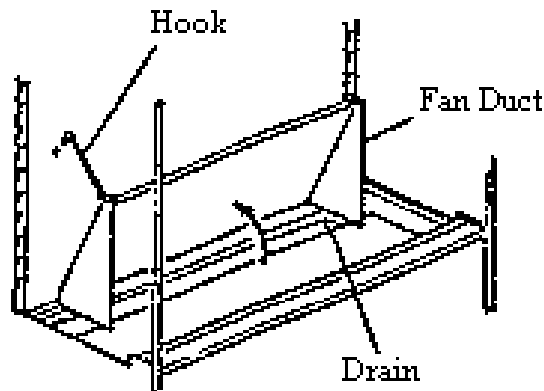
## CLEANING THE HONEYCOMB

In order to maintain peak operating performance, remove the honeycomb (as shown below) and rinse it with clean water to remove dust. Under normal conditions, inspect and clean every 30 days.



## CLEANING THE BOTTOM OF THE INNER BOX & DRAIN

Lift the fan duct, as shown below, and clean the bottom of the inner box with a mild detergent and a soft, damp cloth. Check the drain hole for proper water flow and remove any blockage. Rinse with clean water.

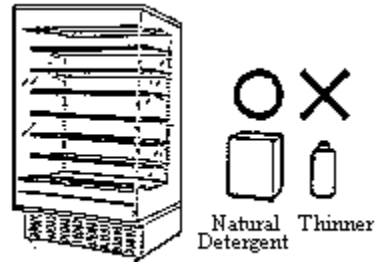


## CLEANING THE CONDENSING FILTER

Remove the lower front panel and clean the filter with a mild detergent. Rinse with clean water. Under normal conditions, you should inspect and clean the filter weekly.

## CLEANING THE CABINET

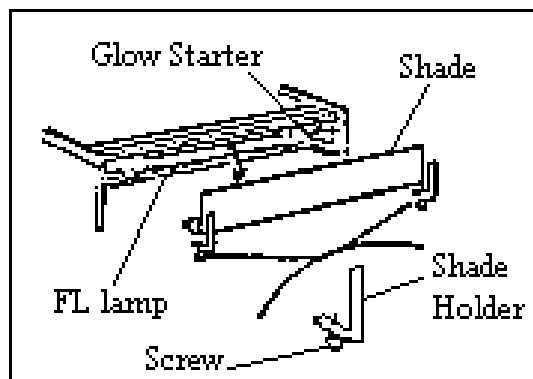
To clean the cabinet and shelves, use a mild detergent and a soft, damp cloth. Rinse with clean water. Do not use paint thinner, laundry detergent, or harsh chemicals.



## LIGHTING

Replace inoperable fluorescent lights as shown below.

Fluorescent Light	Glow Starter
120V 25 Watt	FS-25





## **PRECAUTIONS**

**CAUTION:** Do not operate the unit with the access panels removed.

### **STORING THE CABINET**

Step 1: Disconnect the unit from its power source.

Step 1: Wipe the interior of the cabinet with a damp cloth.

Step 1: Polish the interior of the cabinet with a dry cloth.

Step 1: Store the unit in a clean, dry place. Do not choose a location where the unit will be exposed to direct sunlight, high temperature, or high humidity.

## **TROUBLE SHOOTING**

Before calling your serviceman, please make these simple checks:

### **If the unit is not operating:**

1. Is the cabinet plugged in?
2. Is there a main-power failure?
3. Is there a blown fuse?
4. Has the refrigeration unit cycled off, because it is at the designated operating temperature?  
*Note: The evaporator fan motors run continuously and do not cycle with the refrigeration unit.*

### **If the fluorescent light is off:**

1. Is the fluorescent-light tube properly connected to the socket?
2. Does the fluorescent light need to be changed?

### **If the cabinet temperature is too warm:**

1. Is the thermostat set correctly?
2. Is the cabinet located in direct sunlight?
3. Is the cabinet located in a strong air-flow path?
4. Is the distance between the upper surface of the displayed merchandise and the shelf directly above it at least 1"?
5. Is the air temperature around the cabinet above 75°F?

**REFER TO THE ENVIRONMENTAL CONSIDERATIONS, ON PAGES 5 THROUGH 7, THAT WILL AFFECT COOLING PERFORMANCE.**