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FEDERAL INDUSTRIES

INSTLLATION & OPERATIONS INSTRUCTIONS
REFRIGERATED SSRSP
SANDWICH PREP CASE MODELS

KEEP THIS MANUAL FOR FUTURE REFERENCE

Engineering and technical data are subject to change without notice.

FEDERAL INDUSTRIES
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CONTENTS

INTRODUCTION

Thank you for purchasing a Federal Industries display case. This manual contains important instructions for installing and servicing the Refrigerated Self-Service Merchandisers. A repair parts list and wiring diagram are also included in the manual. Read all of these documents carefully before installing or servicing your case.

NOTICE

Read this manual before installing your case. Keep this manual and refer to it before doing any service on the equipment. Failure to do so could result in personal injury or damage to the case.

NOTICE

Installation and service of the electrical components in the case must be performed by a licensed electrician.

The portions of this manual covering components contain technical instructions intended only for persons qualified to perform electrical work.

DANGER

Improper or faulty hookup of electrical components in the case can result in severe injury or death.

All electrical wiring hookups must be done in accordance with all applicable local, regional, or national standards.

SERIAL NUMBER

Record the model and serial numbers of the case for easy reference. Always refer to both model and serial numbers in your correspondence regarding the case.

Case Model_____ Serial Number_____
Condensing Unit Model_____ Serial Number_____

This manual cannot cover every installation, use, or service situation. If you need additional information, call or write us:

WARRANTY/TECHNICAL SERVICE DEPARTMENT
Federal Industries
P.O. Box 290
Belleville, WI 53508
Toll Free (800) 356-4206 / WI Phone (608) 424-3331

WARNING LABELS & SAFETY INSTRUCTIONS

This is the safety-alert symbol. When you see this symbol on your case or in the manual, be alert to the potential for personal injury or damage to your equipment.

Be sure you understand all safety messages and always follow recommended precautions and safe operating procedures.

NOTICE TO EMPLOYERS

You must make sure that everyone who installs, uses, or services your case is thoroughly familiar with all safety information and procedures.

Important safety information is presented in this section and throughout the manual. The Following signal words are used in the warning and safety messages:

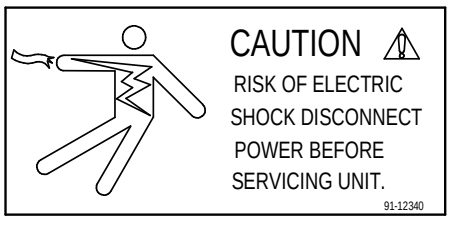
DANGER: Severe injury or death **will** occur if you ignore the message.

WARNING: Severe injury or death **can** occur if you ignore the message.

CAUTION: Minor injury or damage to your case **can** occur if you ignore the message.

NOTICE: This is important installation, operation, or service information. If you ignore the message, you may damage your case.

The warning and safety labels shown throughout this manual are placed on your Federal Industries case at the factory. Follow all warning label instructions. If any warning or safety labels become lost or damaged, call our customer service department at 1(800) 356-4206 for replacements.



This label is located on the back of the display case.

CAUTION
HAZARDOUS MOVING PARTS
DO NOT OPERATE UNIT WITH
DISPLAY PANS REMOVED.

This label is located below the display pan.

PRE-INSTALLATION PROCEDURES

Inspection for Shipping Damage

You are responsible for filing all freight claims with the delivering truck line. Inspect all cartons and crates for damage as soon as they arrive. If damage is noted to shipping crates, cartons, or if a shortage is found, note this on the bill of lading (all copies) prior to signing.

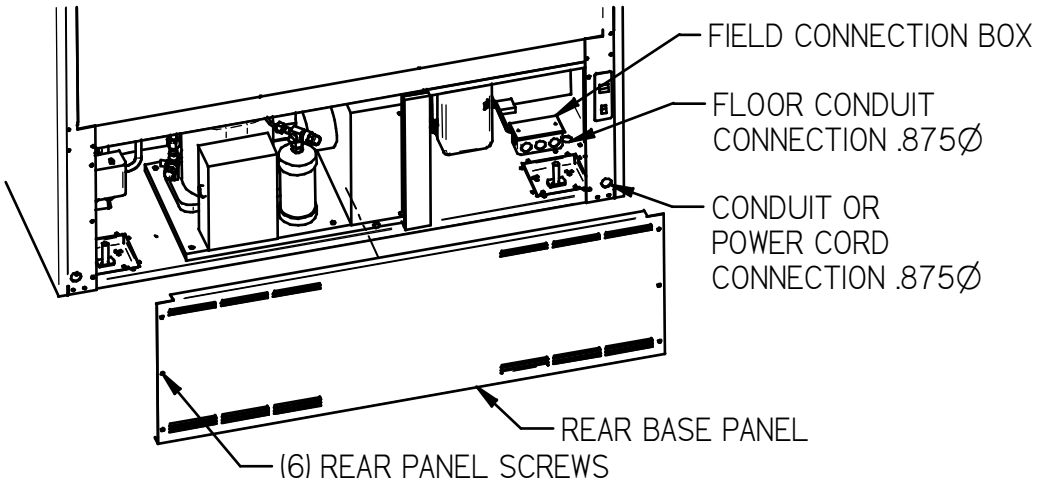
If damage is discovered when the case is uncrated, immediately call the delivering truck line and follow up the call with a written report indicating concealed damage to your shipment. Ask for an immediate inspection of your concealed damage item. Crating material must be retained to show the inspector from the truck line.

GENERAL ELECTRICAL & GROUNDING

DANGER: Improper or faulty hookup of electrical components in the display case can result in severe injury or death.

Permanent Connected (OPTION)

-Only a licensed electrician must perform all case electrical connections.
-All electrical wiring hookups must be done in accordance with all applicable local, regional, or national electrical standards.
-A separate circuit for each display case is required to prevent other appliances on the same circuit from overloading the circuit and causing malfunction.
-The electrical service must be grounded upon installation.
-See the electrical data plate located at the rear of the case for proper circuit size and wire ampacity.
-The electrical connection box is accessible from the rear of the case with rear grill removed.



Cord Connected (OPTION)

-A factory installed optional power cord is properly sized to the amperage requirements of the case. See the electrical data plate located on the rear exterior of the case for the proper circuit size for each case.
- The cord is factory installed protruding from the rear corner of the case.
-A separate circuit for each display case is required to prevent other appliances on the same circuit from overloading the circuit and causing malfunction.

INSTALLATION INSTRUCTIONS

Locating Display Case

The case should be located where it is not subjected to the direct rays of the sun, heating ducts, grills, radiator, or ceiling fans, nor should it be located near open doors or main door entrances. Also, avoid locations where there are excessive air movement or air disturbances.

The case requires a minimum of 12" clearance at the rear of the unit for air discharge. Do not locate case with back tight against the wall.

No clearance is needed on sides of the unit.

Removing Case From Shipping Skid and General Installation

CAUTION: Do not push or pull against the top end glass, or door frames and do not pull on end panels when removing the case from the skid or moving the case. Case damage or glass breakage will result.

1. Remove crate top and sides and note missing or damaged items as explained in the pre-installation procedures outlined above.
2. Move the case as near as possible to the final location and before removing it from the shipping skid.
3. Remove the (4) brackets that secure the case to the shipping skid.
4. Prepare cabinet according to instructions in this section that pertain to your model.
5. Lift the case off of skid and into required position. Only lift the case from under the rear lip and front bottom trim channel above the base. Note: Do not push or pull on front bottom trim channel.
6. The case must be level for proper drainage of defrost condensate to the condensate evaporator. Using the wrench provided level and square the case as needed by adjusting the leg leveler in each corner of base. The 6'cases also have a set of leg levelers in the center. These must be adjusted so the base is flat.
7. The leveled case must be sealed to the floor using a NSF Listed Sealant.

Cleaning

For initial setup, clean the case as outlined in the "Weekly Cleaning" section of this manual.

REFRIGERATION

Self Contained Models Use pressure gauges to set pressure control.

		SSRSP5052	SSRSP5952	SSRSP7752
Refrigeration R404 Charge		32 OZ	34 OZ	36 OZ
Low Pressure Switch Cut In		82 psi	82 psi	82 psi
Low Pressure Switch Cut Out		48 psi	45 psi	51 psi
High Pressure Switch Cut Out				
TXV Setting (turns from full open) (Turn screw counter clockwise to stop for full open position)		1.5	1.5	1.5

The self-contained models are shipped from the factory with a completely operational 404A refrigeration system and require no modifications or adjustments upon installation. Case must be installed as per the installation section of this manual to provide proper condensing air cooling.

Self Contained Refrigeration Operation

The unit temperature is controlled by the low pressure side of a dual high/low pressure switch. The compressor will run until either the minimum run timer times out (approx 10 min) or the suction pressure reaches the set cut out point at which time the compressor turns off. The compressor will remain off until the suction pressure rises and reaches the set cut in point of the pressure switch at which time the compressor turns on.

Note: The condenser fan runs continuously.

This unit also has a defrost timer that will shut the compressor off a set number of times per day to insure a full defrost occurs. The compressor will remain off until the either the off time is reached or until the temperature sensor on the coil reaches a set temperature which ever happens first.

Remote Models Use pressure gauges to set pressure control.

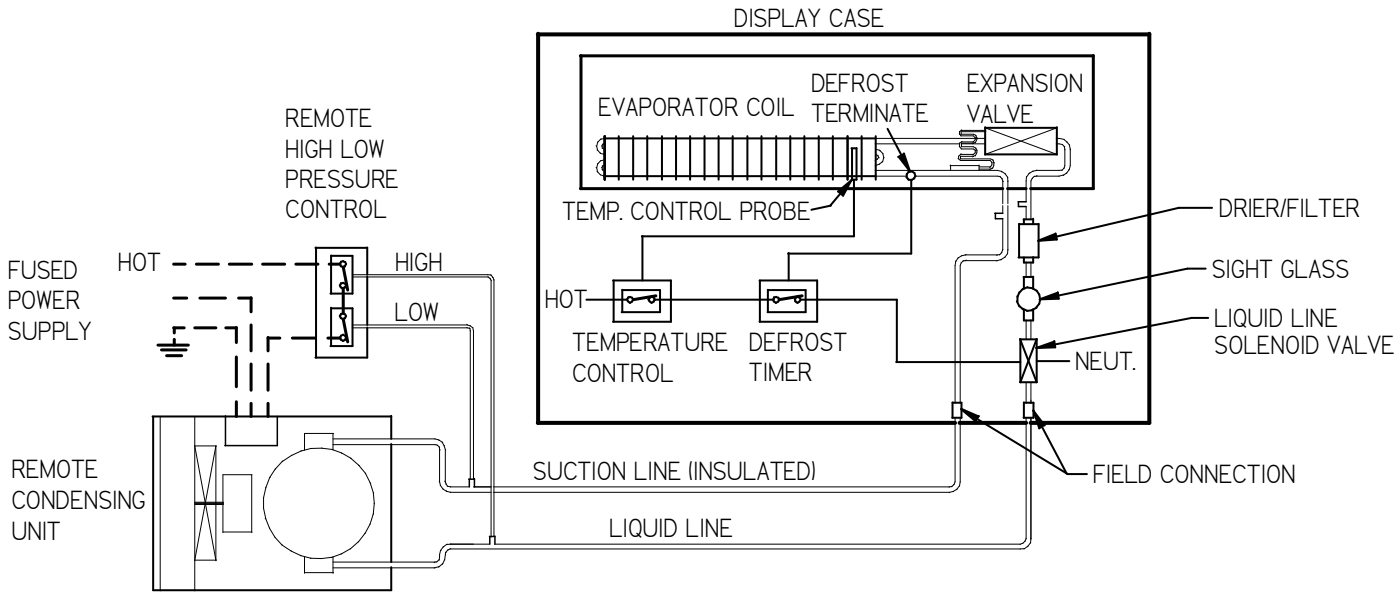
		SSRSP5052	SSRSP5952	SSRSP7752
Refrigeration R404 Charge	CHARGED IN FIELD			
Remote Low Press. Switch Cut In	50			
Remote Low Press. Switch Cut Out	30			
Remote High Press. Switch Cut Out	400 psi			
TXV Setting (turns from full open) (Turn screw counter clockwise to stop for full open position)		1.5	1.5	1.5

Remote Models

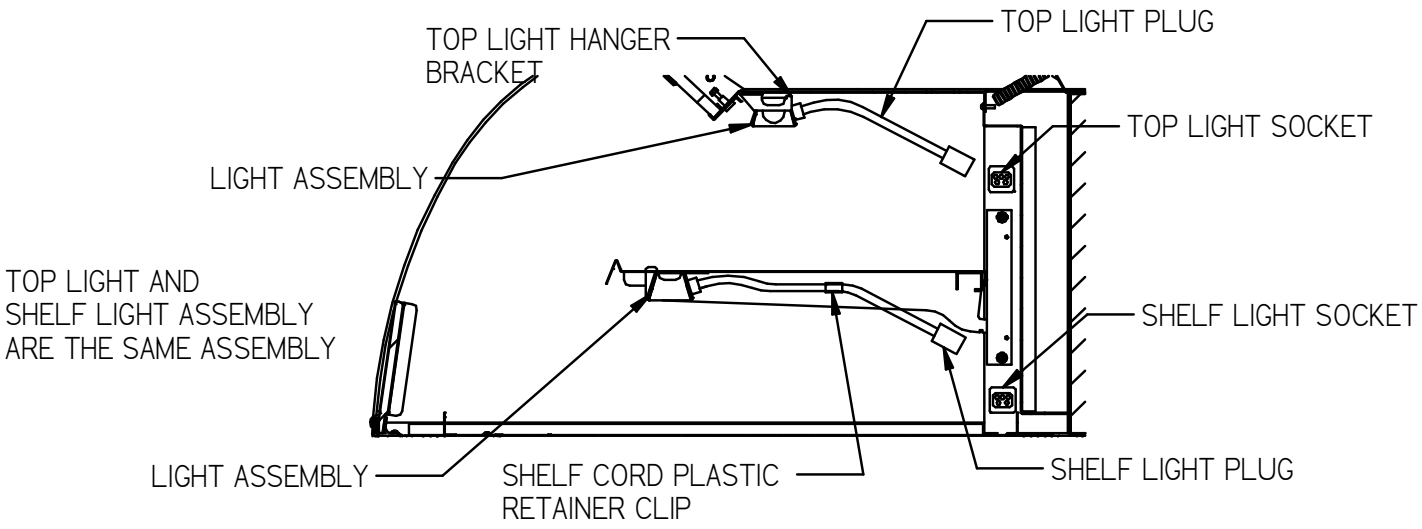
The remote models are designed to use 404A refrigerant and shipped from the factory with the evaporator coil, expansion valve, sight glass and refrigerant solenoid valve. A thermostat senses evaporator temperature and opens and closes the refrigerant solenoid valve. The solenoid valve closes and shuts off the refrigeration flow to the unit and initiates a pump down cycle. This will allow the remote low pressure switch to open and shut off remote compressor. The temperature control may require some adjustment by installer for proper operation of unit. This unit also has a defrost timer that will shut the refrigeration solenoid off a set number of times per day (set at factory for 3 times per day) to insure a full defrost occurs. The solenoid will remain off until the either the off time is reached or until the temperature sensor on the coil reaches a set temperature which ever happens first

The condensing unit is optionally supplied from the factory for remote location installation. The condensing unit supplied from the factory will require a high low pressure switch that must be mounted and wired by the installer. The high low pressure switch must be wired in series with the compressor power supply as shown in diagram below. A drier/filter must also be installed by installer.

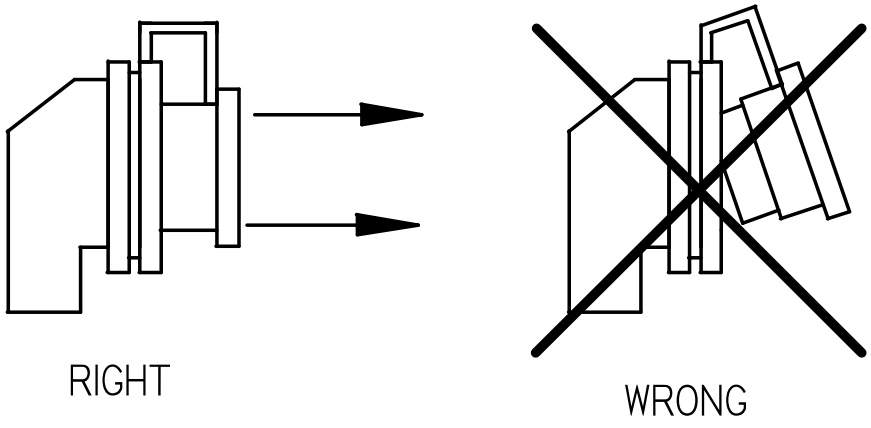
1. Mount condensing unit indoors as close to the remote display case as practical. The refrigeration line should be as short as possible and must not exceed 30 feet.
2. All refrigeration and/or electrical materials between the condensing unit and display case are to be supplied by installing contractor.
3. Route properly sized and designed refrigeration lines from the condensing unit to the cabinet. Horizontal suction lines should be pitched downward towards the condensing unit at least ½" per 10' run to aid the oil drainage. A "P" trap must be installed in the suction line at the foot of every riser to insure oil return. Dry nitrogen must be used to flow through tubing while brazing refrigeration lines.
4. Suction line must be insulated the entire length with Armaflex (or equivalent). Do not run liquid line inside insulation with suction line.
5. The remote high/low-pressure control must be mounted, wired and set pressures by the installer.
6. Leak check condensing unit, cabinet, and all connecting tubing. Cabinet and condensing unit tubing should be checked to insure no leaks occurred during shipping or from rough handling.
   Make certain all refrigeration valves are opened and evacuate system to 500 microns. Charge the system with refrigerant type specified on the data plates.



TOP LIGHT INSTALLATION



1. Turn the light switch to the off position.
2. Hang one end of light assembly housing on to top light hanger bracket located near ceiling in lower case section at each end of case. Hook the other end of light assembly housing on to the top light hanger bracket on the opposite end.
3. Remove the cap from the top light female sockets.
   IMPORTANT: Grip each side of cap firmly and wiggle and pull cap straight out of socket. Do not roll cap during removal. Incorrect removal of cap may cause damage to electrical connection.



4. If the socket is not being used for a shelf light, the cap must be plugged into socket for entire light system to operate.
5. Plug in top light by aligning the male pins on the top light plug with the female top light socket and push together. **IMPORTANT:** Do not roll plug during insertion.

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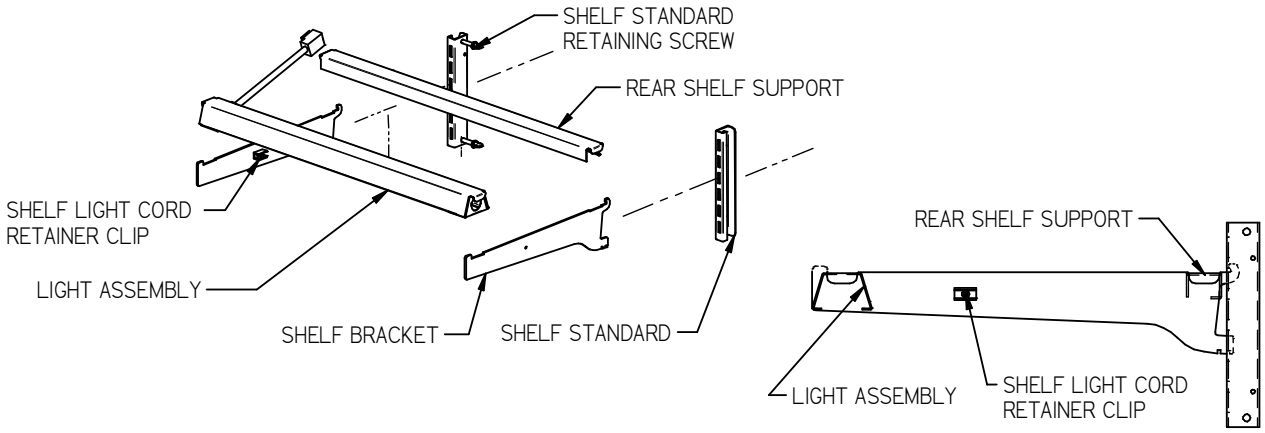
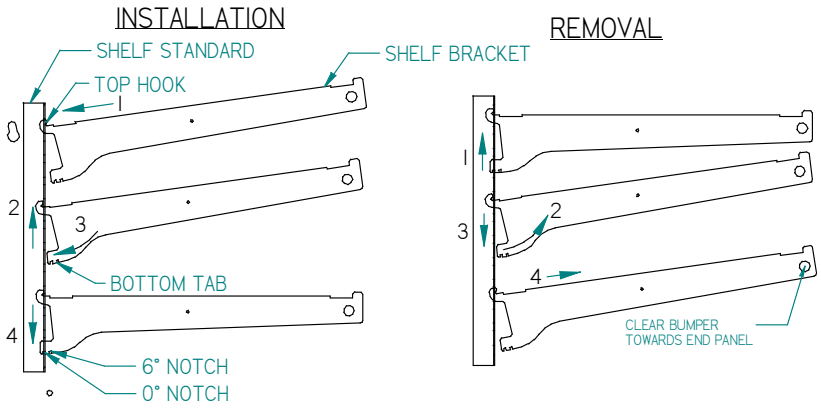
SHELVING INSTALLATION & REMOVAL

Shelf Bracket & Supports Installation



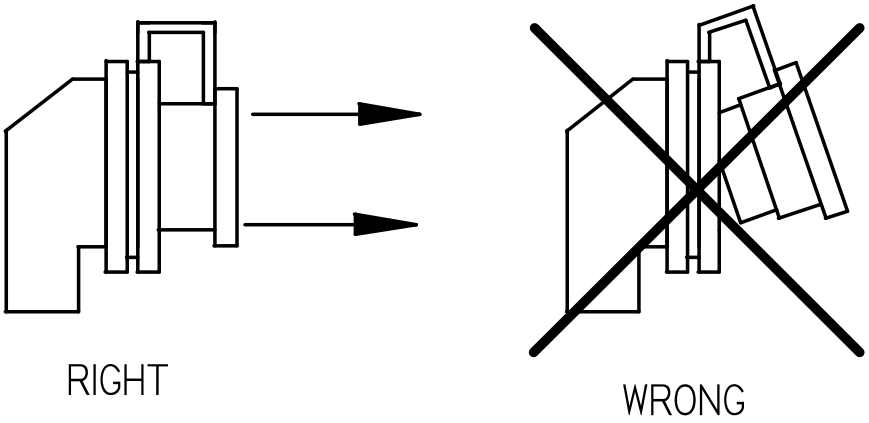
1. Turn the light switch to the off position.
2. Follow the instruction in the illustration below and insert (1) of the (2) shelf brackets in the desired shelf standard slot on one side of the case. Place the additional shelf bracket in the same shelf standard slot on the opposite end of case. The bracket with a shelf light cord retainer clip must be on the side with the shelf light receptacle.



I. Place shelf bracket top hook into desired shelf standard slot.
2. Lift shelf bracket top hook to allow shelf bracket bottom tab to clear shelf standard slot.
3. Swing shelf bracketbottom tab into shelf standard slot.
4. Place the desired shelf bracket notch of 0, 6, or 12 degrees onto bottom of shelf standard slot.

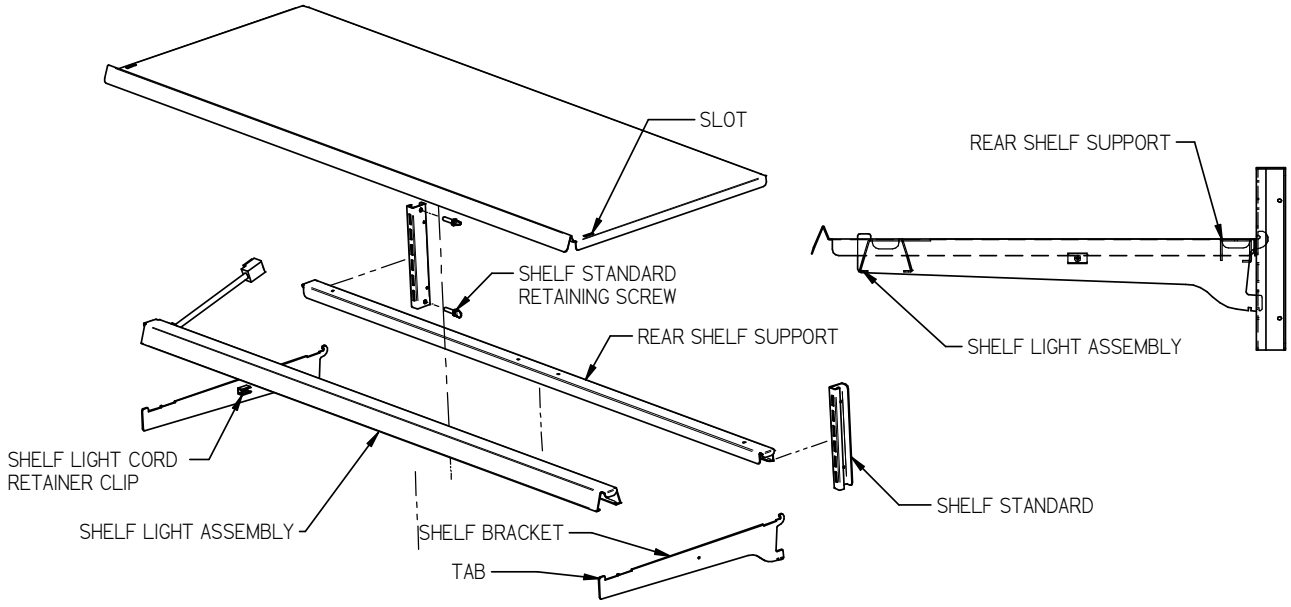
I. Lift shelf bracket up to allow shelf bracket notch to clear the bottom of shelf standard slot.
2. Swing shelf bracket bottom tab out of shelf standard slot.
3. Drop shelf bracket down to allow shelf bracket top hook to clear top of shelf standard slot.
4. remove shelf bracket top from shelf standard slot.

3. Hang one end of shelf light housing on the front notch of a shelf bracket and then the other end of shelf light housing on the notch of the shelf bracket on the opposite end.
   NOTE: On models without shelf lights, use a shelf support instead of a shelf light housing.
4. Push shelf light cords into plastic shelf cord retainer clip located on inside of shelf bracket.
5. Remove the cap from the appropriate female light sockets.
   IMPORTANT: Grip each side of cap firmly and wiggle and pull cap straight out of socket. Do not roll cap during removal. Incorrect removal of cap may cause damage to electrical connection.



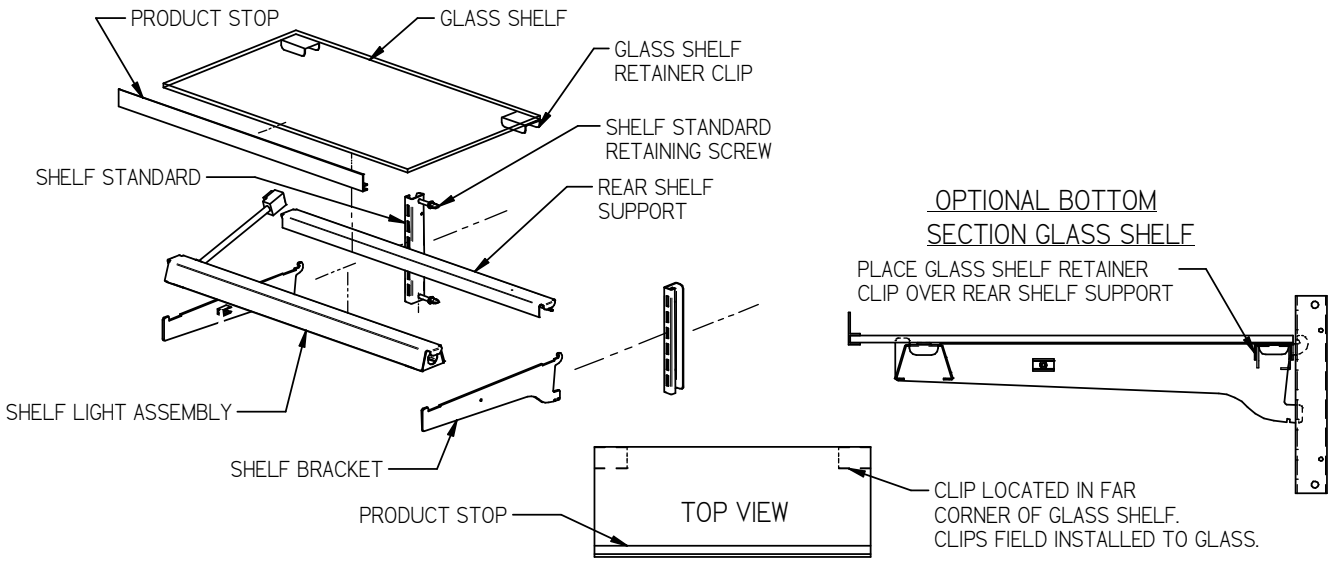
6. If the socket is not being used for a shelf light, the cap must be plugged into socket for entire light system to operate.
7. Plug in shelf light by aligning the male pins on the appropriate shelf light cord plugs with the female light sockets and push together. **IMPORTANT:** Do not roll plug during insertion.
8. Hang one end of the shelf support on to the rear notch of one shelf bracket and then on the rear notch of the shelf bracket on the opposite side.
9. Place supplied shelving onto shelf supports as outlined in the appropriate "Shelf Installation" section of this manual.
10. Removal of shelving is performed by following steps in reverse order.
11. The shelf standards are removable from case by removing the (2) shelf standard retaining screws holding them to the inside wall of case.

Solid Shelf Installation



1. Install shelf brackets & shelf supports as described in Shelf Bracket & Supports Installation Section of this manual.
2. Place the front of metal shelf onto front shelf light. (On front shelf support for models without shelf lights). The tab on end of shelf bracket must go through slot in front of shelf.
3. Place the back of shelf over the back of the rear shelf support.

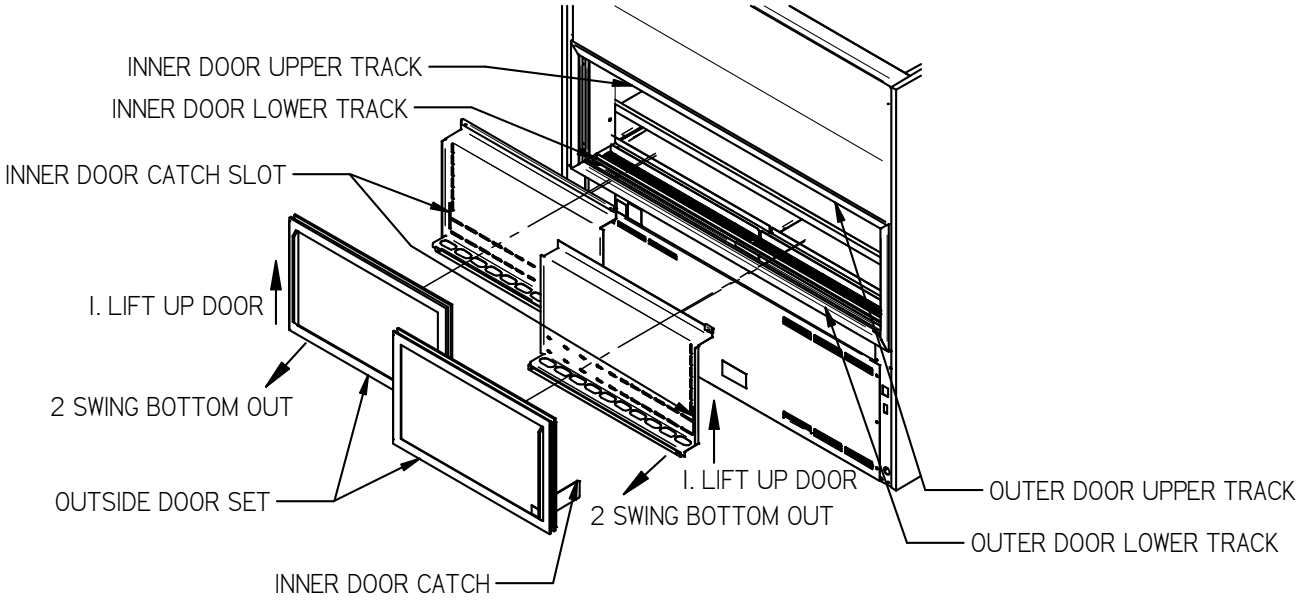
Glass Shelf Installation (OPTIONAL)



1. For first time installation attach (2) glass shelf retainer clips to each glass shelf in location shown in illustration. Clean area of glass where glass shelf holder is to be located with rubbing alcohol and let air dry before installing shelf glass holder. Remove backing from tape located on flat side of glass shelf holder. Position the glass shelf holders in the (2) far corners of glass. Repeat for each glass shelf.
2. For first time installation attach (1) product stop to each glass shelf as shown in detail above. Align the product stop edge with the edge of the glass and push the "U" portion of the product stop on to glass lip across the entire front of glass.
3. Attach a clear bumper on both sides of the light housing top surface for the front of the glass to set on. This step may have already been performed at the factory for you.
4. Place front of glass shelf onto clear bumpers on front shelf light. (On front shelf support for models without shelf lights.)

REAR DOORS (OPTION)

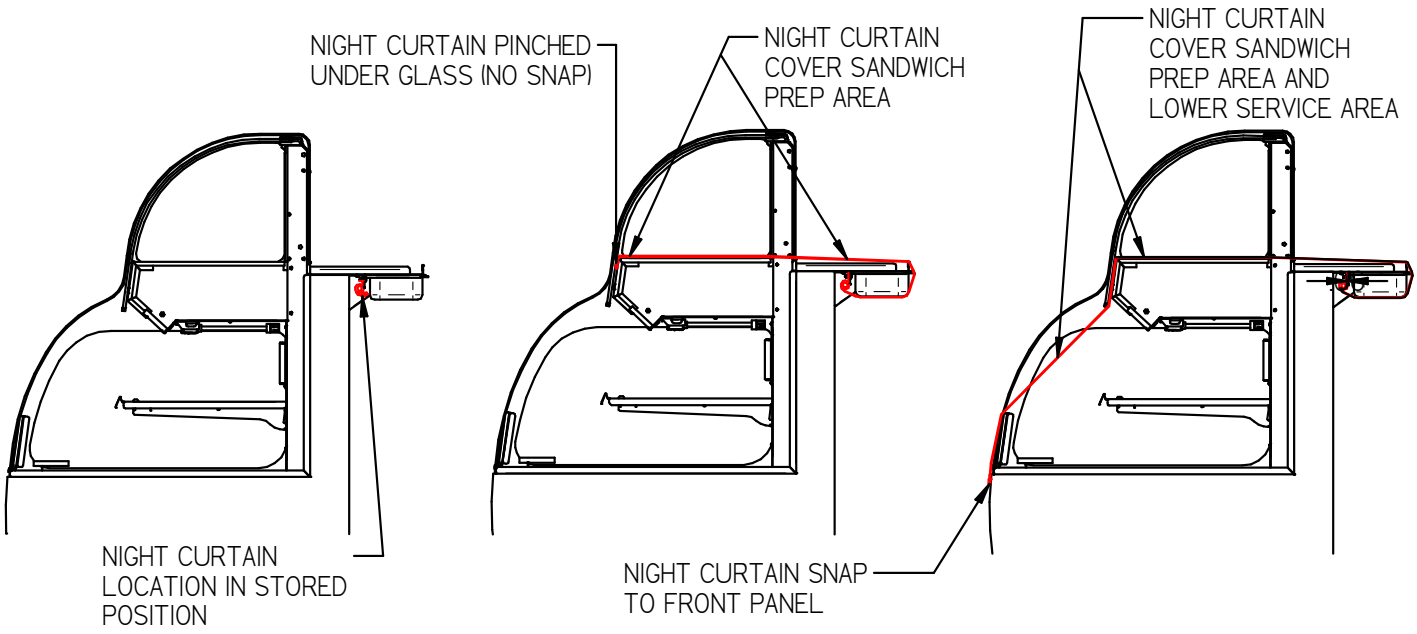
BOTTOM SECTION REAR DOORS (OPTIONAL)



1. Start with the outer outside door and lift the door upward until the bottom edge of door clears the lower track and then swing the bottom of the door outward and down out of upper track.
2. Remove the outer inside door using the same procedure.
3. The inner door set can then be removed using the same procedure starting with the inner outside door followed by the inner inside door.
4. Reverse this procedure for door reinstallation starting with the inner inside door followed by the inner outside door. Check that the doors slide freely.
5. Replace the outside inner door and the outside outer door. Be sure to slide the inner door catch into the inner door catch slot for each door.

   Note: None of the doors are not interchangeable and they must be replaced in the same location that they where removed from.

NIGHT CURTAIN OPERATION



The night curtain rolls up and is stored under the Sandwich wrap board as shown in first view. The curtain can be used to cover only the upper sandwich prep area when not in use (as shown in second view). The curtain can be used to cover the sandwich prep area and the lower service area (as shown in third view)

OPENING:

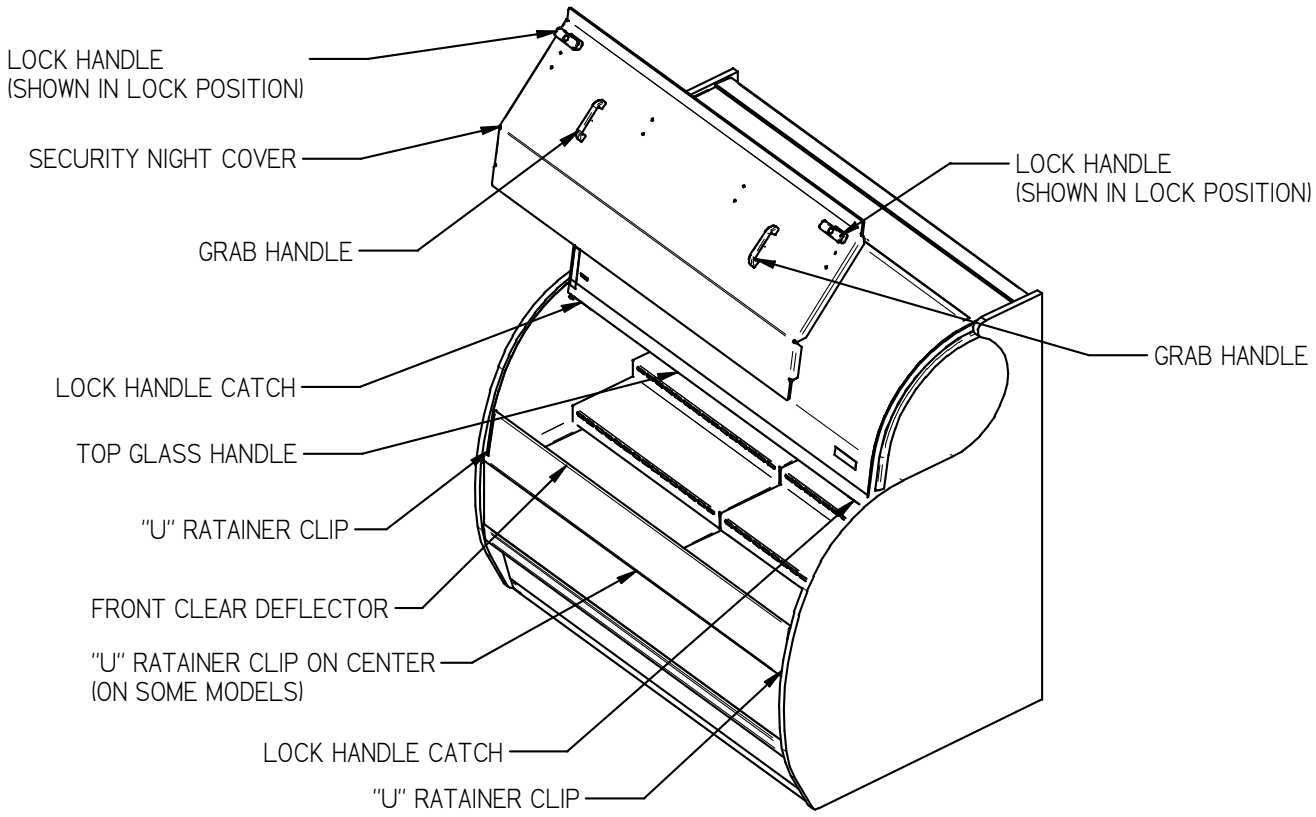
1. Standing in back of case grab night curtain strap and pull the rolled night curtain down and around sandwich prep area. Hook the edge of night curtain over the front edge of sandwich prep area under the front glass.
2. Stand in front of case, lift glass and pull the night curtain out in front of case. Attach the snap located under the night curtain strap on to the snap located on the front lower panel

CLOSING:

1. From front of case grab the night curtain strap and detach the snap located in the front lower panel.
3. While holding the night curtain strap hook the front of night curtain over the front edge of sandwich prep area
2. From the back of the case unhook the night curtain from front edge of sandwich prep area and allow the night curtain to roll up around back of case and back under Sandwich prep board.

Note: The 59”’ and 77” models have (2) night curtains.

SECURITY NIGHT COVER (OPTION)



REMOVAL:

1. Unlock the lock handles and turn handles vertical to disengage from lock handle catches.
2. Grab the front grab handles and lift the cover straight up out of the case opening.

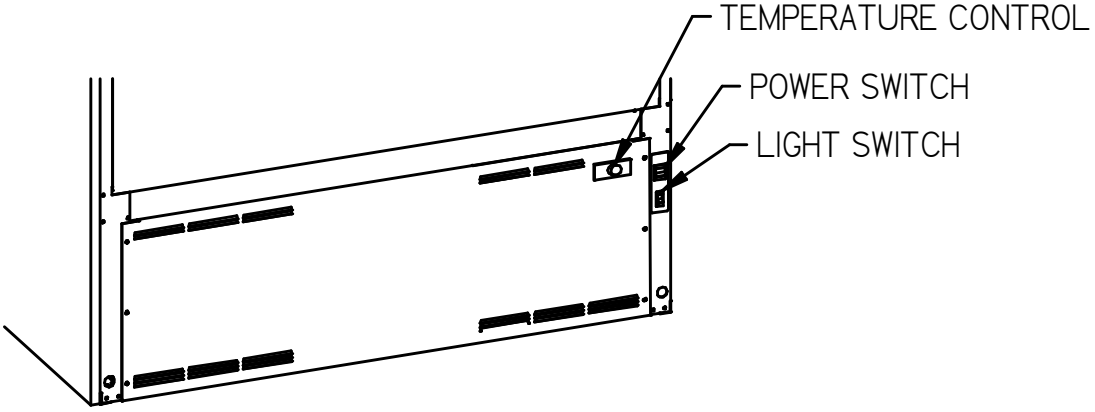
INSTALATION:

1. Turn the lock handle so the latch handle is vertical to the top of the case.
2. Holding the grab handles place the bottom flange of the security night cover inside the “U” retainer clips located on each side of case opening behind the front clear deflector. There also may be a “U” retainer clip in the center of the case that must also engage the security night cover flange.
3. Set the top flange of the security cover down against the top glass handle.
4. Turn the lock handles so they engage the lock handle catches and use the key to lock them in place.

IMPORTANT: Cleaning the Acrylic plastic security night cover require special care to prevent hazing of material. Lightly dust (not wipe) the surface with clean soft cloth. Then the surface can be wiped carefully with a soft, wet cloth or chamois. The cloth or chamois must be kept free of grit by frequently rinsing in clean water. Grease and oil can be removed with kerosene. Do not use window cleaners or kitchen scouring compounds. DO NOT use solvents such as Acetone, Benzene, Carbon Tetrachloride, and Lacquer Thinners. A spray wax such as Pledge or Maguire’s polish can be applied and wiped with a clean soft cloth. The wax tends to fill in and hide small scratches

OPERATING INSTRUCTIONS

NOTICE: This refrigerated display case is designed to operate in a maximum environment of 80 DEG. F and 55% relative humidity. Exceeding these limits will cause poor case performance and sweating of glass panels.



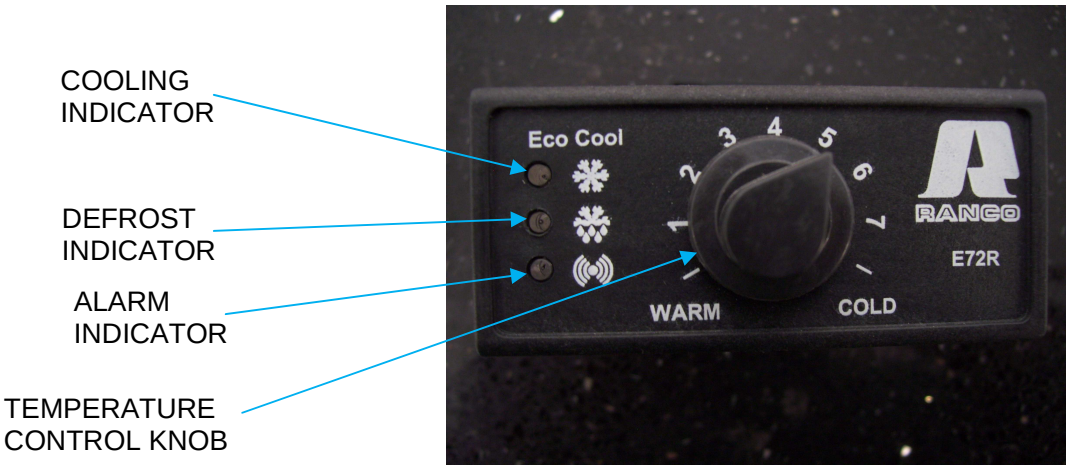
Power Switch
The unit has a power switch that turns off power to the entire unit, including the condensate evaporator and the lights. This switch is located behind a lift up panel on the unit base.

Light Switch
The unit has a light switch that turns on and off the interior lights of unit. This switch is located below the lift up panel on the unit base.

Temperature Control
This controls the temperature of the display interior of case.

Temperature Control Functions

Electronic Control



Temperature Control Knob

This controls the temperature of the display interior of case.

-OFF: Turning the control counterclockwise to the "WARM" setting is an Off position, this position turns the refrigeration off and all indicator lights will also be off at this setting.

-ON; The control will be on from the warmest setting at "1" and the coldest setting at "COLD".

Cooling light

This light will be on when control requires refrigeration to be on. The compressor / condensing unit should be running to cool the case.

Defrost light

This light will be on when control when refrigeration is defrosting allowing ice to melt off of evaporator coil. The number of times and length of defrost will vary depending on case environment.

Alarm light

This light indicates that there is a problem with case or electronic control and service should be called.

Initial Start-Up

After all the checks outlined in the installation section of this manual have been made, the case is ready to be put into service. Turn on the Power at the breaker box and flip the Power Switch and Light Switch on unit to the on position.

At start up from a warm unit, it is recommended that the temperature control is set at a warm setting, such as 1 on the dial. After the unit has gone through several cycles, turn the control to a mid range setting, then to a colder setting if necessary to maintain desired product temperature

NOTICE: This refrigerated display case is designed to operate in a maximum environment of 75 DEG. F and 55% relative humidity. Exceeding these limits will cause poor case performance and excessive sweating.

Placing Product into Lower Section of Case

- Do not exceed 75 pounds of weight per shelf. Heavy product should be distributed evenly across the entire shelving area.

- Determine desired shelving location and angle before placing product in case. Product must be removed to readjust shelf location and angle.

- Do not overhang the front or rear of shelves with product. Improper clearance in front and rear of shelf will block the refrigerated airflow and will cause product loss.

-Do not block the slots along the front and rear air discharge slots. Covering these slots will block the refrigerated airflow and could cause product loss.

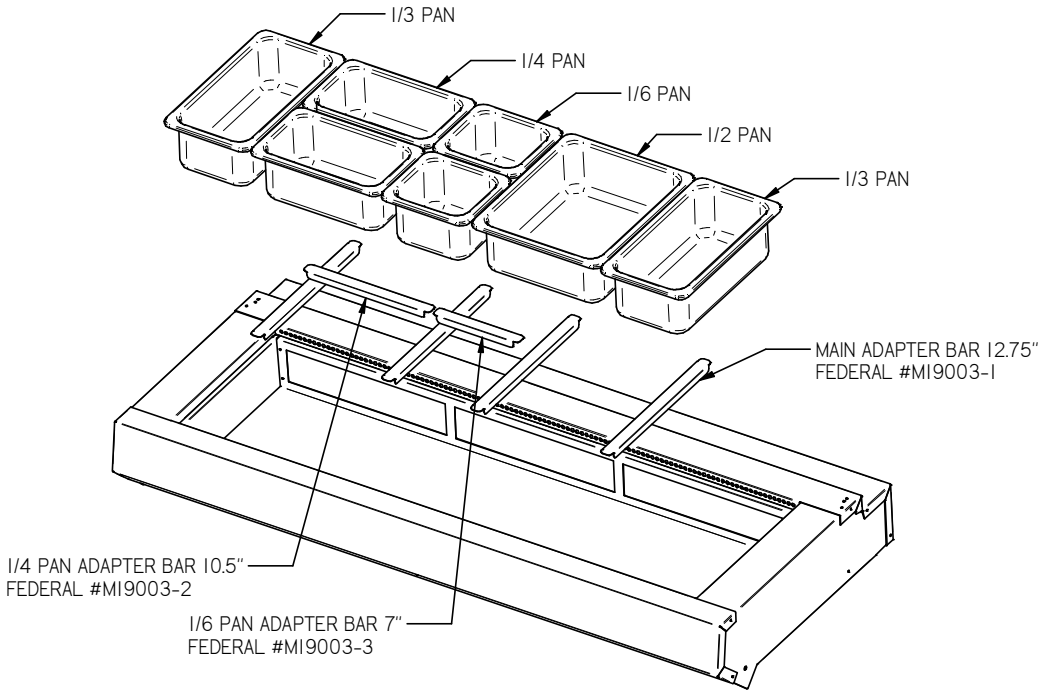
-The display deck is removable for cleaning and can become dislodged in shipment. To ensure proper airflow and performance of the case, make sure that the display deck is pushed completely down into evaporation tub.

-Allow refrigerated models to run for at least two hours before placing pre-chilled product into unit.

NOTICE: CASE MUST BE STOCKED WITH PRE-CHILLED PRODUCT ONLY.

NOTICE: This refrigerated display case is designed to operate in a maximum environment of 75 DEG. F and 55% relative humidity. Exceeding these limits will cause poor case performance and sweating of glass panels.

Placing Product into Upper Food Pan Section of Case



- Determine Food pan arrangement and size requirements.

- Install food pans and place adapter bars provided between all pans. (There cannot be air gaps between pans). See drawing above for typical arrangement.

- Above drawing shows a typical food pan arrangement. Any arrangement of Full, 1/2, 1/4, 1/3 or 1/6 size pans can be used provided sufficient adapters are used.

SSRSM5052 = (4) HALF PANS, SSRSM5952 = (5) HALF PANS, SSRSM7752 = (7) HALF PANS,

- A set of divider bars are supplied with each case. If additional adapters are required call to order required adapters.

- Do not run case without all food pans and all adapters installed.

NOTICE: CASE MUST BE STOCKED WITH PRE-CHILLED PRODUCT ONLY.

NOTICE: This refrigerated display case is designed to operate in a maximum environment of 75 DEG. F and 55% relative humidity. Exceeding these limits will cause poor case performance and sweating of glass panels.

NOTICE: DO NOT RUN CASE WITHOUT ALL FOOD PANS INSTALLED. LOWER SECTION OF CASE AND OTHER FOOD PANS WILL NOT HOLD PROPER TEMPERATURE IF ALL PANS ARE NOT INSTALLED.

MAINTENANCE

Shelf Light Bulb Replacement

1. All shelf light fixtures use a spring-loaded socket at one end. To remove the bulb push the bulb towards the spring-loaded socket until the opposite ends drops out of the socket.
2. The bulb is inside a clear shatter proof tube with a black plastic cap on each end. Be careful not to allow bulb to slide out of shatter proof tube.
3. Reinstall new bulb in to the existing shatter proof tube and reuse black plastic end caps. Reinstall bulb assembly in the same manner as described in the Bulb Removal Procedure. Be sure bulb is secure in bulb receptacles

Note: Be sure to use a direct equivalent to the original bulb.

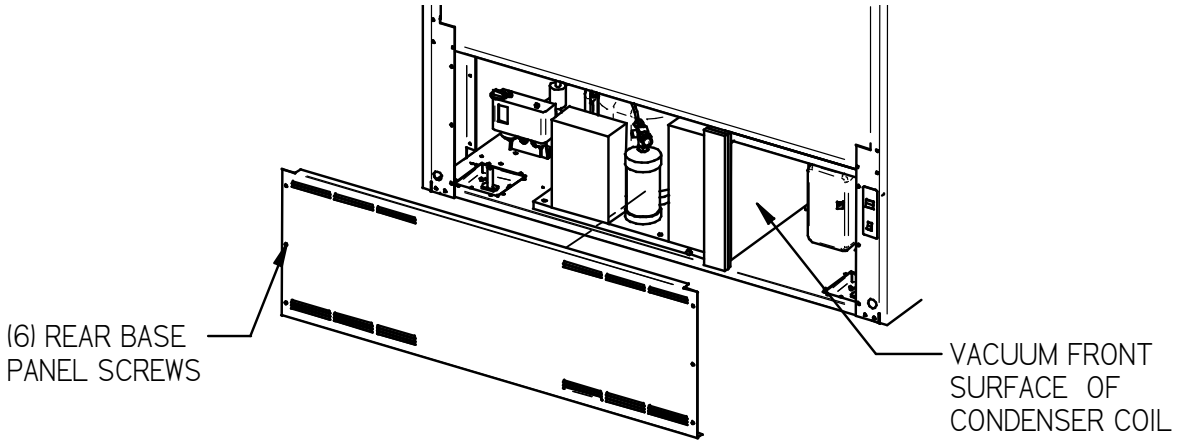
PERIODIC MAINTENANCE

NOTICE: **Condenser coil must be cleaned a minimum of twice per month to insure proper refrigeration performance and prevent compressor failure. Failure to clean condenser coil will void condenser warranty.**

Cleaning Condenser Coil (All Self Contained Refrigerated Units)

It is very important that the Condenser coil is cleaned twice per month to insure proper refrigeration performance and to prevent compressor failure. Failure to clean condenser coil will void condenser warranty.

1. Disconnect power to the unit.
2. Remove the back base panel located on the back bottom of unit by removing the (6) front panel retaining screws.
3. Carefully vacuum the front surface of condenser coil. Take care not to bend coil fins with vacuum cleaner nozzle.
4. Reinstall back panel and retaining screws.



CLEANING INSTRUCTIONS

Daily Cleaning

The case should be cleaned thoroughly, as described in the weekly cleaning section, before it is used for the first time.

NOTICE:	**Avoid splashing or soaking any electrical components with water to prevent electrical damage to the case.**
NOTICE:	**Shut off lights and power switches and remove all product from case. Allow sufficient time for the unit to reach room temperature before proceeding with cleaning.**
NOTICE:	**Remove all product from case before proceeding with cleaning procedure.**
NOTICE:	**Acrylic front air deflector requires special washing procedures to prevent hazing and yellowing of material.**
NOTICE:	**This case is not designed to be cleaned by flushing.**

Note: For major spills or foreign material buildup use complete weekly cleaning instructions.

Note: Detergents are not recommended and do not use abrasive cleaners or pads to prevent scratching of surfaces.

1. Clean all foreign materials from the door opening if supplied.
2. Wipe complete interior of both the upper & lower areas of case using a damp cloth.
3. To allow easier access to clean upper section interior tilt the upper front glass open. Tilt the front glass up by standing in front of the case and grabbing the handle at the bottom of the glass and lifting the bottom of the glass upward. The glass can then be cleaned with common window cleaners. Close the glass by pulling the front handle of glass down to the closed position.
4. The remaining exterior surface should be wiped down using any ammoniated cleaners or soapy warm water.
5. IMPORTANT: Cleaning the clear acrylic plastic front air deflector require special care to prevent hazing and yellowing of material. Lightly dust (not wipe) surface with clean soft cloth. Then the surface can be wiped carefully with a soft, wet cloth or chamois. The cloth or chamois must be kept free of grit by frequently rinsing in clean water. Grease and oil can be removed with kerosene. Do not use window cleaners or kitchen scouring compounds. DO NOT use solvents such as Acetone, Benzene, Carbon Tetrachloride, and Lacquer Thinners. A spray wax such as Pledge or Maguire's polish can be applied and wiped with a clean soft cloth. The wax tends to fill in and hide small scratches.

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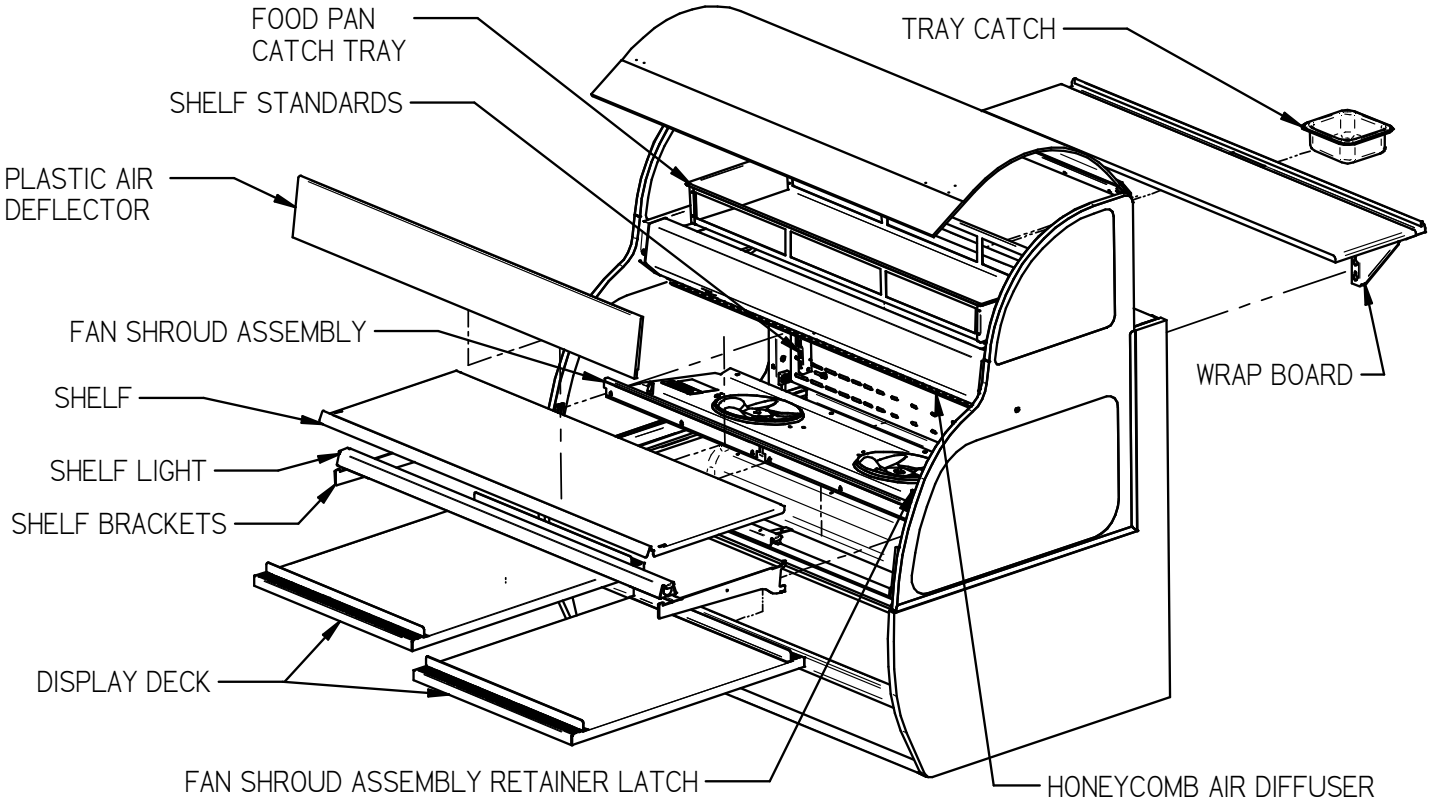
Weekly Cleaning

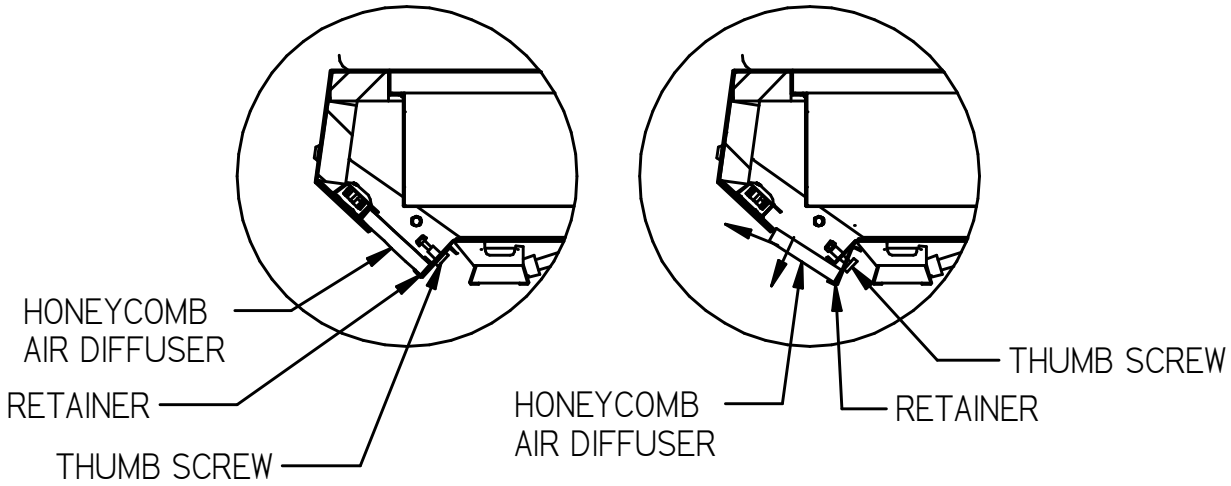
This procedure is recommended on a weekly basis. It may need to be performed more often if necessary to maintain a clean, sanitary case. The case should be cleaned to this procedure before using the first time.

NOTICE:	**Avoid splashing or soaking any electrical components with water to prevent electrical damage to the case.**
NOTICE:	**Shut off lights and power switches and remove all product from case. Allow sufficient time for the unit to reach room temperature before proceeding with cleaning.**
NOTICE:	**Remove all product and food pans from case before proceeding with cleaning procedure.**
NOTICE:	**Acrylic front air deflector requires special washing procedures to prevent hazing and yellowing of material. Read weekly cleaning procedure carefully.**
NOTICE:	**This case is not designed to be cleaned by flushing.**

Weekly Interior Cleaning



1. To allow access to clean upper section interior tilt the upper front glass open. Tilt the front glass up by standing in front of the case and grabbing the handle at the bottom of the glass and lifting the bottom of the glass upward. The glass can then be cleaned with common window cleaners.
2. Remove food pan catch tray by lifting it out of top of case. Clean all foreign material from around and under the food pan catch tray. Clean food pan catch tray using warm soapy water and a brush.
3. If supplied with lower rear door option remove both inner & outer rear doors as described in the "Door Removal" section of this manual.
4. Clean all foreign material from inner and outer rear door tracks and clean both sides of the doors using warm soapy water and a brush. Apply a light film of lubricant such as PAM to door tracks to make the doors operate smoother.
5. Remove interior shelving from unit as described in the "Shelving Installation and Removal" section of this manual. Remove both shelf standards from interior of case by removing the (2) thumbscrew from top and bottom of each standard.
6. Clean all shelves, shelf supports, shelf light housings, shelf brackets, shelf standards using warm soapy water and a brush. Rinse thoroughly and allow to dry.
7. Lift the display deck(s) up and out of evaporator tub.
8. Remove the fan shroud assembly by lifting (2) black tabs up on fan shroud assembly retainer latch at each end of the front of the fan shroud and removing the thumb screws from along the rear lip of the fan shroud. Lift the fan shroud assembly and reach in and unplug the evaporator fan motor cord(s). Lift fan shroud assembly out of tub.
9. Clean the display deck(s) using warm soapy water and a brush. Rinse thoroughly and allow to dry. Wipe off fan shroud assembly (do not rinse or submerge fan motors).
10. Clean the entire interior of the case using warm soapy water. Flush foreign material from drain area. Wipe off all soapy water with a damp cloth and allow to dry. (DO NOT use solvents such as Acetone, Benzene, Carbon Tetrachloride, and Lacquer Thinners)
11. Remove the honeycomb air diffuser(s) from upper air duct track. Loosen thumb screws on Retainer located behind diffuser. Retainer will drop down allowing diffuser to be pulled out of case.



12. Clean honey comb air diffuser with warm soapy water and a brush. Rinse thoroughly and allow to dry.
13. Remove the clear plastic front air deflector by lifting it up and out of case.
    IMPORTANT: Cleaning the Acrylic plastic front air deflector require special care to prevent hazing and yellowing of material. Lightly dust (not wipe) surface with clean soft cloth. Then the surface can be wiped carefully with a soft, wet cloth or chamois. The cloth or chamois must be

kept free of grit by frequently rinsing in clean water. Grease and oil can be removed with kerosene. Do not use window cleaners or kitchen scouring compounds. DO NOT use solvents such as Acetone, Benzene, Carbon Tetrachloride, and Lacquer Thinners. A spray wax such as Pledge or Maguire's polish can be applied and wiped with a clean soft cloth. The wax tends to fill in and hide small scratches.

14. Slide the tray catch out from under wrap board and wash warm with soapy water.
15. Remove the wrap board assembly by lifting assembly up out of key slots on support brackets. Clean the Wrap board using warm soapy water and a brush. Rinse thoroughly and allow to dry.
16. Reassemble all components in reverse order.

NOTE: Depending on the amount of usage and spillage of foreign material, some fasteners may have to be removed and parts disassembled to allow proper cleaning of the unit.

Weekly Exterior Cleaning

1. Clean the front and end glass using any common window cleaner.
2. The exterior surfaces should be wiped down using any ammoniated cleansers or warm soapy water.

SERVICE INFORMATION

CAUTION
RISK OF ELECTRIC SHOCK

DISCONNECT POWER
BEFORE SERVICING UNIT

Before any service work is performed on the case, make sure all power is disconnected to the case.

Service problems or request for repair parts from authorized service agencies, trained service personnel, or owners should be referred to:

CUSTOMER SERVICE DEPARTMENT
Federal Industries
P.O. Box 290
Belleville, WI 53508
Toll Free: (800) 356-4206 / WI Phone (608) 424-3331
Fax: (608) 424-3234

Special Service Situations

There are rare occasions when the refrigerant charge must be evacuated from a case in order to perform service work. In those situations, Federal Industries recommends that the refrigerant charge be evacuated into a recovery system to prevent the possibility of hydrofluorocarbons (HFC's) from being released into the atmosphere.

If moisture or liquid is observed around or under a Federal Industries case, an immediate investigation should be made by qualified personnel to determine the source of the moisture or liquid. The investigation made should determine if the case is malfunctioning or if there is a simple housekeeping problem.

NOTICE: **Moisture or liquid around or under a case is a potential slip/fall hazard for persons walking by or working in the general area of the case. Any case malfunction or housekeeping problem that creates a slip/fall hazard around or under a case should be corrected immediately.**

Pre-Service Checklist

You may avoid the cost and inconvenience of an unnecessary service call by first reviewing this checklist of frequently encountered situations that can cause unsatisfactory case performance.

CAUTION: Before servicing case turn off power at the main breaker of fuse box.

Case Does Not Operate

-Check for disconnected power supply.
-Check for tripped breaker or blown fuse.

Lights Do Not Operate

-Check that light switch is on.
-Be sure light is properly seated in the sockets.
-Check that shelf light cord(s) are tight in the sockets.
-Plug unused light sockets with socket cap provided with socket.

Case Temperature Too Warm

-Check that the cold air inlet and outlet slots are not blocked.
- Be sure that the rear doors (if supplied) are closed and tightly sealed.
-Check for a blocked or dirty condenser coil fins.
-Check cold airflow. Lack of adequate cold airflow could be a defective evaporator fan or blocked evaporator coil. Check that paper or foreign material is not blocking evaporator. If the evaporator coil is blocked due to excessive frost, turn the power switch "off" position for approximately one hour to defrost.
-Is the case installed properly to allow adequate air flow to and from condenser?
-Check that there is no air movement around case causing disruption to air curtain. Such as ceiling fans, heating/AC air ducts, exterior doors, ect
-Are all food pans and adapter bars installed preventing air loss from top of case?

SALE & DISPOSAL

Owner Responsibility

If you sell or give away your Federal Industries case you must make sure that all safety labels and the Installation-Service Manual are included with it. If you need replacement labels or manuals, Federal Industries will provide them free of charge. Contact the customer service department at Federal Industries at (800) 356-4206.

The customer service department at Federal Industries should be contacted at the time of sale or disposal of your case so records may be kept of its new location.

If you sell or give away your Federal Industries case and you evacuate the refrigerant charge before shipment. Federal Industries recommends that the charge be evacuated into a recovery system to prevent the possibility of HFC's from being released into the atmosphere.

REFRIGERATION & ELECTRICAL DATA

	SELF CONTAINED				REMOTE	
MODEL	404A REFRIG.	VOLTAGE	AMPERAGE	OPTIONAL CORD STYLE	VOLTAGE	AMPERAGE
SSRSP5052	32 OZ	230/60/1	10	15AMP NEMA 6-15	120/60/1	10
SSRSP5952	34 OZ	230/60/1	13	20AMP NEMA 6-20	120/60/1	13
SSRSP7752	36 OZ	230/60/1	13	20AMP NEMA 6-20	120/60/1	14

Electronic Control Operation

This unit is equipped with an Invensys – Ranco temperature control. The control parameters are set at the factory and cannot be manually changed in the field. Control parameter changes can only be made by downloading a new set of parameters via a program chip supplied by Federal Industries. The pre set control parameters are listed on the chart in the Settings Chart below.

Operation

The control uses two sensors, one located in the air stream and one located on the evaporator coil. The sensor located in the air stream is referred to as the temperature control sensor. The sensor located on the evaporator coil is referred to as the coil sensor.

The temperature control sensor is located inside the center tower at the top. The sensor location is critical for proper operation on the unit. Do not move or relocate this sensor.

The coil sensor is strapped to the evaporator coil. This sensor location is critical for proper operation of the unit. Do not move or relocate this sensor.

The temperature control is set to cut in at 38 degrees F. The Temp control cuts out at 16 degrees F at the coldest setting' COLD' and 28 degrees F at the warmest setting, '1' on the control dial.

The temp control turns off the refrigeration system when the control is turned all the way counterclockwise.

Defrost Cycle

The Ranco control is programmed to initiate defrost via two different methods. There are 3 programmed defrost cycles in the case which will initiate a defrost cycle every 8 hours. The unit does not have a time clock so the defrost cycles cannot be set for any specific time of day.

The unit also has an 'On demand' defrost feature that will initiate a defrost when the temperature differential between the evaporator temperature and the air temperature is more than 12 degrees for 5 minutes after 30 minutes into the refrigeration cycle. Once initiated the defrost cycle will terminate when evaporator coil sensor reaches 43 degrees F.

Control Factory Settings

The control parameters are set at the factory and cannot be manually changed in the field. Control parameter changes can only be made by downloading a new set of parameters via a program chip supplied by Federal Industries

E3380 11/10/11

TAB	REF	PARAMETER DESCRIPTION	FACTORY DEFAULT	LPRSS
CONFIGURATION	1	Controller Operation Temperature Units	Fahrenheit	
	4	Defrost Termination Method	Evaporator Sensor	
SET-POINTS	8	Cut-In Warm	14ºF	40ºF
	9	Cut-Out Warm	-4ºF	**34ºF**
	10	Cut-In Cold	-2ºF	40ºF
	11	Cut-Out Cold		**24ºF**
	13	Comp Minimum On Time	1 min	**10min 0 sec**
DISPLAY	15	Defrost Display Lock (display indication during defrost)	Lock Display at Temp. reading prior to defrost.	Show current temp

DEFROST	38	Defrost Termination Temperature	41ºF	43ºF
	39	Time to First Defrost (hh:mm)	6 hr	8 hr
	40	Time to subsequent Defrost	6 hr	8 hr
	41	Defrost Max Duration	1 hr	30 min

Control Display

The control display is located in the unit base. It is programmed to display the current temperature from the control sensor located inside the center tower at the top.

Refrigeration Operation

Self Contained Models

The self-contained models are shipped from the factory with a completely operational 404A refrigeration system and require no modifications or adjustments upon installation. Case must be installed as per the installation section of this manual to provide proper condensing air cooling.

The unit temperature is controlled by the Electronic control outlined in the control section of this manual. Note: The condenser fan runs continuously.

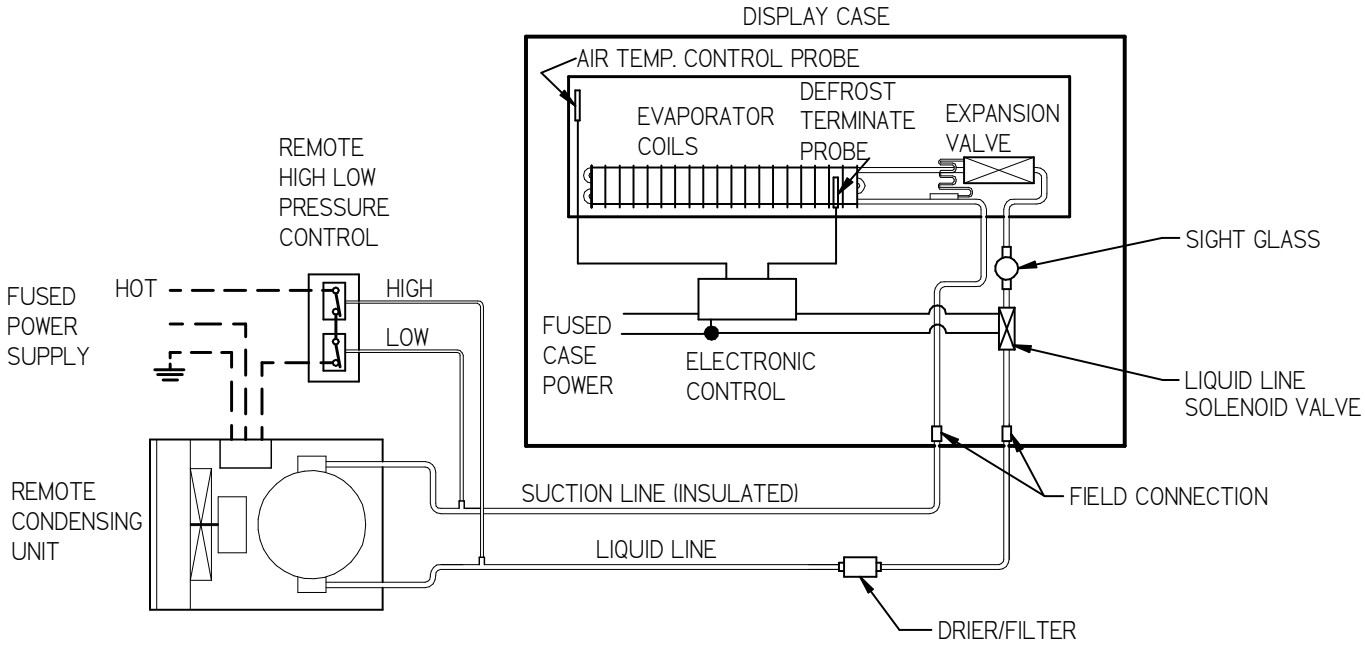
Remote Models Use pressure gauges to set pressure control.

Refrigeration R404 Charge	CHARGED IN FIELD
Remote Low Press. Switch Cut In	50 psi
Remote Low Press. Switch Cut Out	15 psi
Adjustable Head Master	200 psi
Remote High Press. Switch Cut Out	400 psi

The remote models are designed to use 404A refrigerant and shipped from the factory with the evaporator coil, expansion valve, sight glass, and refrigerant solenoid valve. Filter Drier must be installed in field. Electronic control runs identical to the Self Contained models except the electronic control opens and closes a refrigeration solenoid valve located on the suction line instead of turning on and off a compressor. The solenoid valve closes and shuts off the refrigeration flow to the unit and initiates a pump down cycle. This will allow the remote low pressure switch to open and shut off remote compressor.

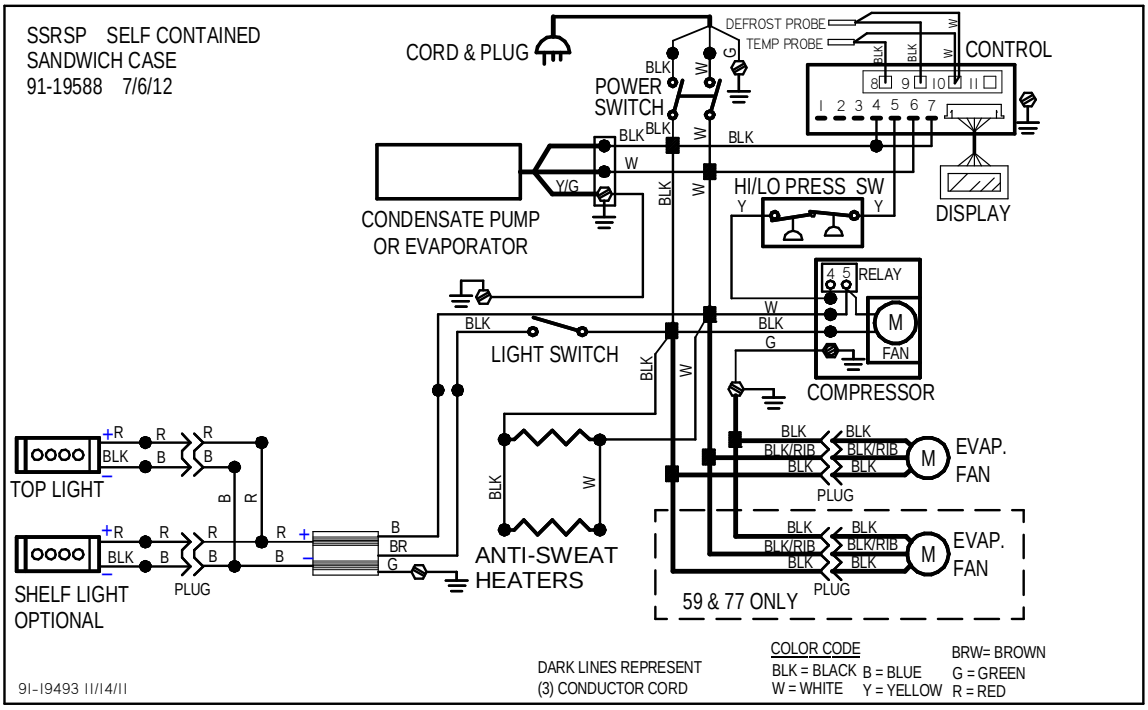
The condensing unit and pressure controls are optionally supplied from the factory for remote location installation. The condensing unit must be mounted and wired by the installer. The high low pressure switch must be wired in series with the compressor power supply as shown in diagram below.

7. Mount condensing unit indoors as close to the remote display case as practical. The refrigeration line should be as short as possible and must not exceed 30 feet.
8. All refrigeration and/or electrical materials between the condensing unit and display case are to be supplied by installing contractor.
9. Route properly sized and designed refrigeration lines from the condensing unit to the cabinet. Horizontal suction lines should be pitched downward towards the condensing unit at least ½" per 10' run to aid the oil drainage. A "P" trap must be installed in the suction line at the foot of every riser to insure oil return. Dry nitrogen must be used to flow through tubing while brazing refrigeration lines.
10. Suction line must be insulated the entire length with Armaflex (or equivalent). Do not run liquid line inside insulation with suction line.
11. The remote high/low-pressure control must be mounted, wired and set pressures by the installer.
12. Leak check condensing unit, cabinet, and all connecting tubing. Cabinet and condensing unit tubing should be checked to insure no leaks occurred during shipping or from rough handling.
    Make certain all refrigeration valves are opened and evacuate system to 500 microns. Charge the system with refrigerant type specified on the data plates.

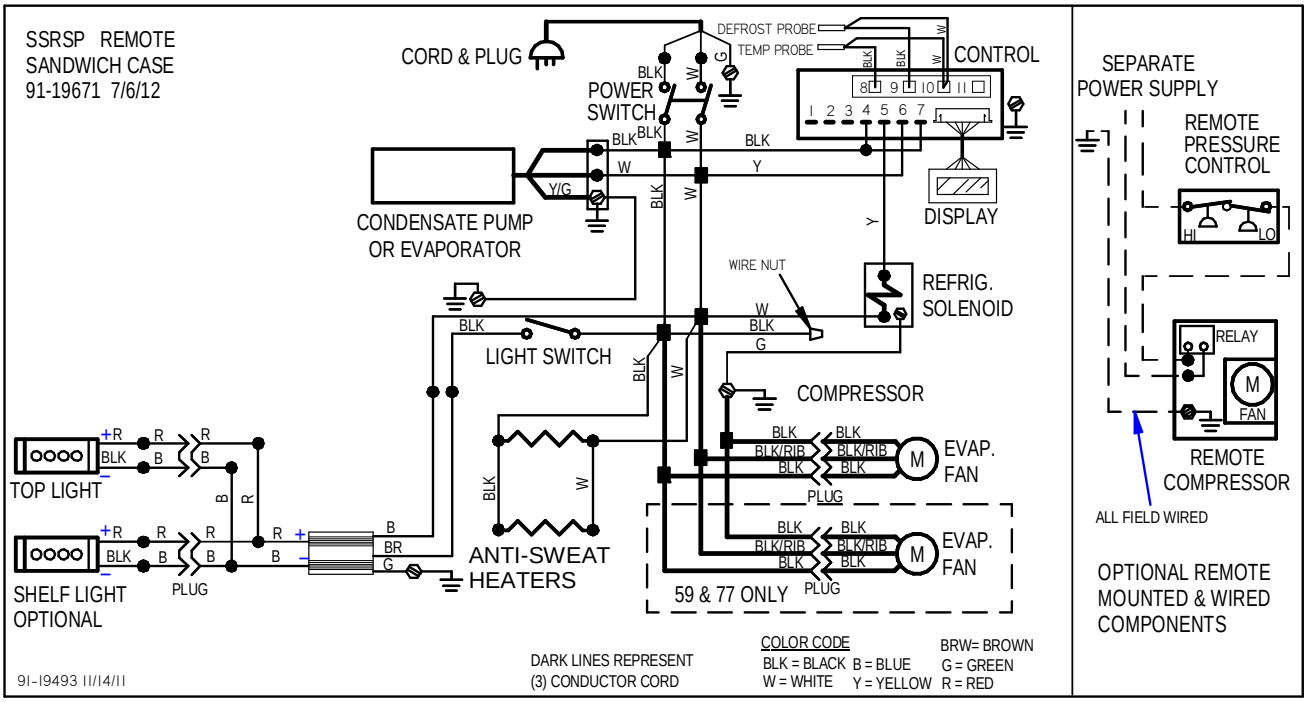


MAIN WIRING DIAGRAMS

SELF CONTAINED SSRSP5052 SSRSP5952, SSRSP7752



REMOTE SSRSP5052, SSRSP5952, SSRSP7752



REPLACEMENT PARTS

REFRIGERATION	SSRSP5052	SSRSP5952	SSRSP7752
Compressor (SC)	30-18052	30-18645	30-18645
Condensing Unit (SC)	30-17887	30-18215	30-18215
Evaporator Coil	33-13357	33-13358	33-13359
TXV	32-19419		32-19416
Filter Drier	32-12626		
Site Glass	32-54010		
Evaporator Fan Motor (SC 240V)	41-19070		
Evaporator Fan Motor (remote 120V)	41-17981		
Evaporator Fan Blade	72-17355		
Latch Evaporator Housing to Coil	66-13640		
Pressure Control (SC)	32-51009		
Temperature Control	32-19445		
Temperature Probe	32-19094		
Control Display	32-19446		
Digital Display Ribbon Cable	32-19093		
Solenoid Remote Refrigeration (Remote)	32-30141		
Condensate Pan Ass'y (SC)	SA4471-3		
Condensate Pan Heater (SC)	40-19392		
Condensate Pump (remote)	47-18980		
Condensate Drain Tube	SA4490-2	SA4490-2 & SA4683	
Condensate Drain Tube (remote)	SA4490-3		
Thermometer	32-13662		
ELECTRICAL	**SSRSP5052**	**SSRSP5952**	**SSRSP7752**
Light Switch	41-11066		
Power Switch	41-18186		
Light Power Supply	39-19039		
LED Light Assembly	SA5307-2	SA5307-3	SA5307-4
LED Light strip	42-19038	42-19038-5	42-19038-3
Shelf light Cord	43-16861-1		
Anti Sweat Heater (SC)	43-18491-2	43-18491-3	43-18491-4
Anti Sweat Heater (remote)	43-18491-5	43-18491-6	43-18491-7
Power Cord (Optional)	43-17839		
Wiring Diagram (SC)	91-19588		
Wiring Diagram (remote)	91-19671		
PANELS & GLASS	**SSRSP5052**	**SSRSP5952**	**SSRSP7752**
Front Glass	50-19570-2	50-19570-3	50-19570-4

Front Glass Clamp	81-18196-2	81-18196-3	81-18196-4
Gas Cylinder	81-19639	81-19639	81-11047
Glass End Clear	50-19584		
Glass End Reflective Left(Optional)	50-19584-1L		
Glass End Reflective Right(Optional)	50-19584-1R		
End Panel Ass'y Left (Black)	68-19585-L		
End Panel Ass'y Right (Black)	68-19585-R		
End Panel Ass'y Left (Color needed)	68-19585-1L		
End Panel Ass'y Right (Color needed)	68-19585-1R		
End Panel Ass'y Left (Stainless)	SA5326-L		
End Panel Ass'y Right (Stainless)	SA5326-R		
SHELVING	**SSRSP5052**	**SSRSP5952**	**SSRSP7752**
Glass Shelf (Optional)	52-11214	52-11217	52-12034
Glass Shelf Retainer(Optional)	SA4091		
Glass Shelf (Optional)	M17950-2	M17950-3	M17950-4
Shelf Bracket	67-16038-1A		
Shelf Standard	M16522		
Step Riser BLlack (Btm Section Optional)	SA4486-2	SA4486-3	SA4486-4
DOORS (Bottom Optional)	**SSRSP5052**	**SSRSP5952**	**SSRSP7752**
Rear Door Bottom Track (Btm) (Opt)	57-18519-2	57-18519-3	57-18519-4
Rear Door Jamb(Btm Section)(Optional)	57-18199-2		
Rear Door Inner Solid(Btm Section)(Opt)	53-18211-2	53-18211-3	53-18211-4
Rear Door Outer Solid(Btm Section)(Opt)	53-18212-2	53-18212-3	53-18212-4
CatchDoor Inner Inside(Btm Section)(Opt)	M15356-2		
Catch Outer Inside(Btm Section)(Opt)	M15356-1		
Rear Door Inner Inside(Btm Section)(Opt)	SA4465-2	SA4465-3	SA4465-4
Rear Door Outer Inside(Btm Section)(Opt)	SA4464-2	SA4464-3	SA4464-4
MISCELLANEOUS	**SSRSP5052**	**SSRSP5952**	**SSRSP7752**
Deflector Front Clear (Btm Section)	15-18198-2	15-18198-3	15-18198-4
Security Night Cover Panel (Optional)	M17218-2	M17218-3	M17218-4
Security Night Cover Latch (Optional)	66-11727		
Pan Adapter 1/2 or 1/3 Pan	M19003-1		
Pan Adapter 1/4 Pan	M19003-2		
Pan Adapter 1/6 Pan	M19003-3		
Night Curtain	65-19645	65-19458	65-19646