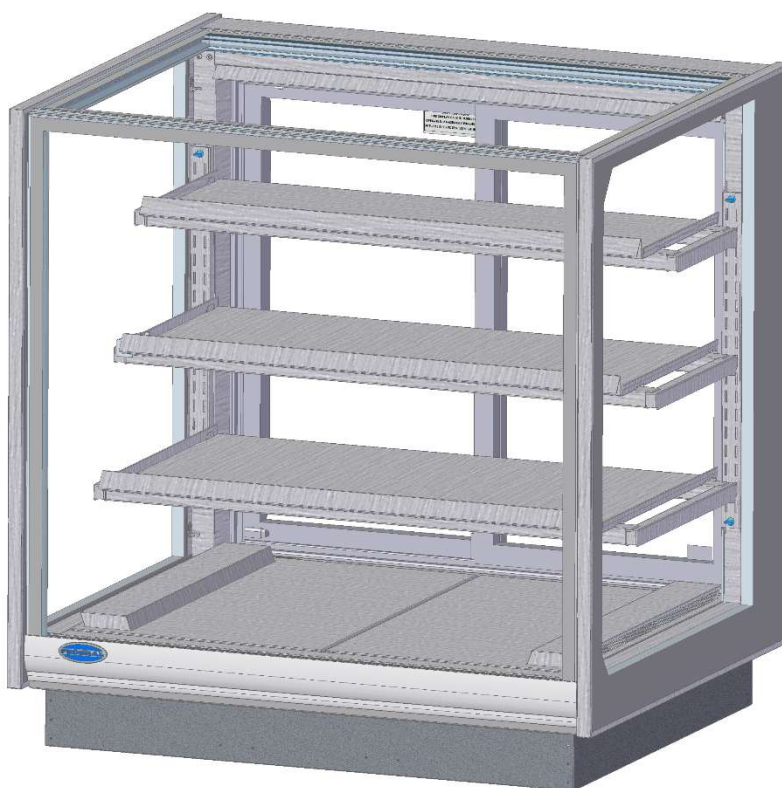




*The Signature of Quality®*

## INSTALLATION & OPERATIONS INSTRUCTIONS

*ITH: Heated Models*



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## (1) Introduction

---

Thank you for purchasing a Federal Industries display case. This manual contains important instructions for installing and servicing your new display case. 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.

|                                                                                    |                                                                                                                                                                                                                                                                                                 |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   | <b>NOTICE</b><br><b>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.</b>                                                                       |
|   | <b>NOTICE</b><br><b>Installation and service of the electrical components in the case must be performed by a licensed electrician.</b><br><b>The portions of this manual covering components contain technical instructions intended only for persons qualified to perform electrical work.</b> |
|  | <b>DANGER</b><br><b>Improper or faulty hookup of electrical components in the case can result in severe injury or death.</b><br><b>All electrical wiring hookups must be done in accordance with all applicable local, regional, or national standards.</b>                                     |

### 1.1 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 with Federal regarding the case.

Case 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**

**Parts Town**

**1200 Greenbriar Dr.**

**Addison, IL 60101**

**Toll Free: (833) 238-8168**

**Email: [techservice@partstown.com](mailto:techservice@partstown.com)**



## (2) 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.



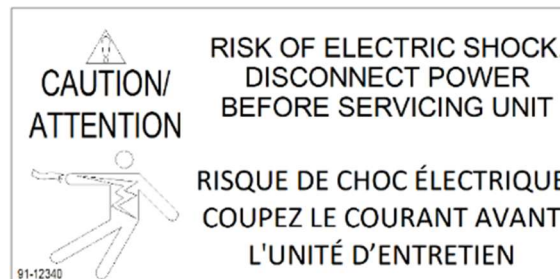
### NOTICE TO EMPLOYERS:

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 <b><u>will</u></b> occur if you ignore the message.                                              |
| WARNING: | Severe injury or death <b><u>can</u></b> occur if you ignore the message.                                               |
| CAUTION: | Minor injury or damage to your case <b><u>can</u></b> 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 (800) 356-4206 for replacements.



**CAUTION: HOT**

Located at front of unit and on shelves

---

### **(3) PRIOR TO UNPACKING EQUIPMENT!**

---

***Inspect 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 damaged item. Crating material must be retained to show the inspector from the truck line.

---

## (4) GENERAL ELECTRICAL & GROUNDING

---



### **WARNING:**

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

#### **4.1 CORD CONNECTED**

For models that are supplied with a power cord, the cord is properly sized to the amperage requirements of the case. See the rating plate for specific unit requirements.



### **CAUTION**

**Risk of Electric Shock.** If the cord or plug becomes damaged, replace only with a cord and plug of the same type.

---

## (5) INSTALLATION INSTRUCTIONS

---

### 5.1 LOCATING THE DISPLAY CASE

The case must 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.

There are no special clearance requirements for this unit.

### 5.2 REMOVING CASE FROM SHIPPING SKID

**Be sure to leave shelf packaging material intact for this step.**

**First remove the base front and rear panels**

Two or more people should be involved in moving the unit from the pallet onto the ground.

Remove the (4) 1/4" screws that secure the case to the skid. These screws are located in the front and rear corners of the base rails inside of the front and rear base access panels/grills.

Once all the bolts are removed, slide the unit off the back of the shipping pallet, and tilt it so the rear corner touches the ground. Then have someone move pallet out from under the case and gently tilt the case forward until it touches the floor.

#### 5.2.1 Removing Packaging Material

Remove bubble wrap and packing material for all shelves and panel, brackets, etc. If it is necessary to remove tape residue from plastic materials, use cleaning compounds recommended in the cleaning section of this manual.

#### 5.2.2 Lifting and Moving the Case



**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.**

### 5.3 SINGLE CASE INSTALLATION (STAND ALONE UNITS)

NOTE: If necessary, use a wood or plastic shim under each leg leveler to avoid scratching the tile floor.

#### 5.3.1 Sealing Unit to The Floor

After the unit is positioned and the leg levelers are turned out, the unit needs to be sealed to the floor for NSF approved installation. This is not required for models with casters or legs.

#### **5.4 PRIOR TO INITIAL USE**

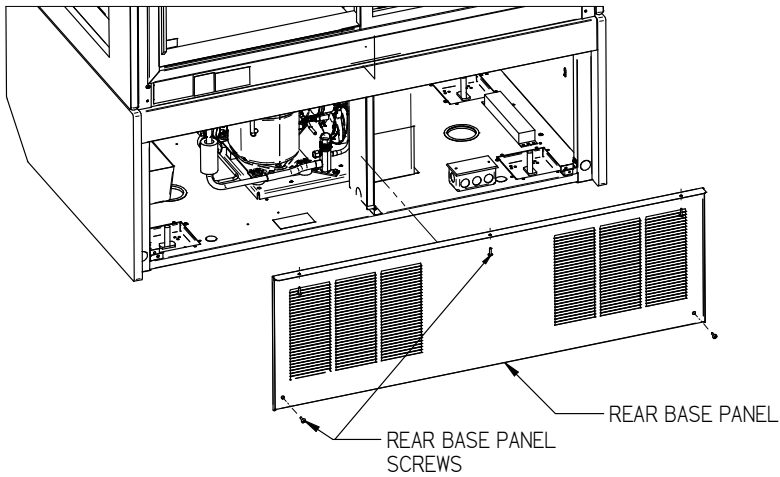
Unit must be cleaned as indicated in the “WEEKLY CLEANING” section of this manual before initial use.

---

## (6) COMPARTMENT PANEL REMOVAL

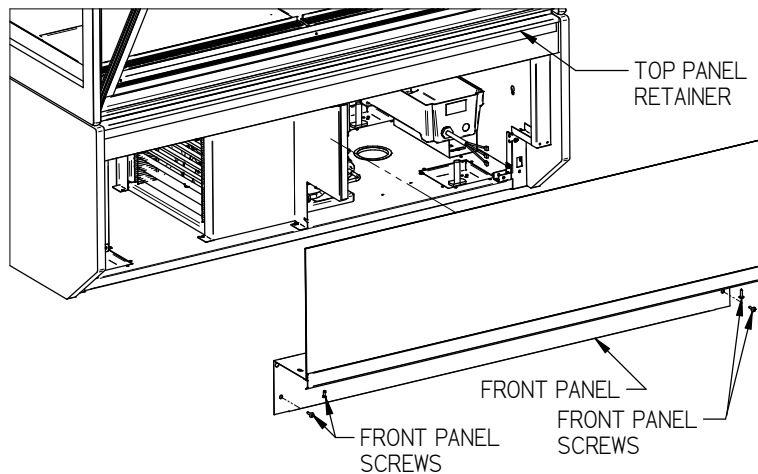
---

### Floor Base Models Back Panel



1. Remove screws located in each lower corner of panel.
2. Remove screws located on top of panel under the base cross member.
3. Pull top of panel outward until lip on bottom of panel clears bottom of base and remove from case.

### Front Panel



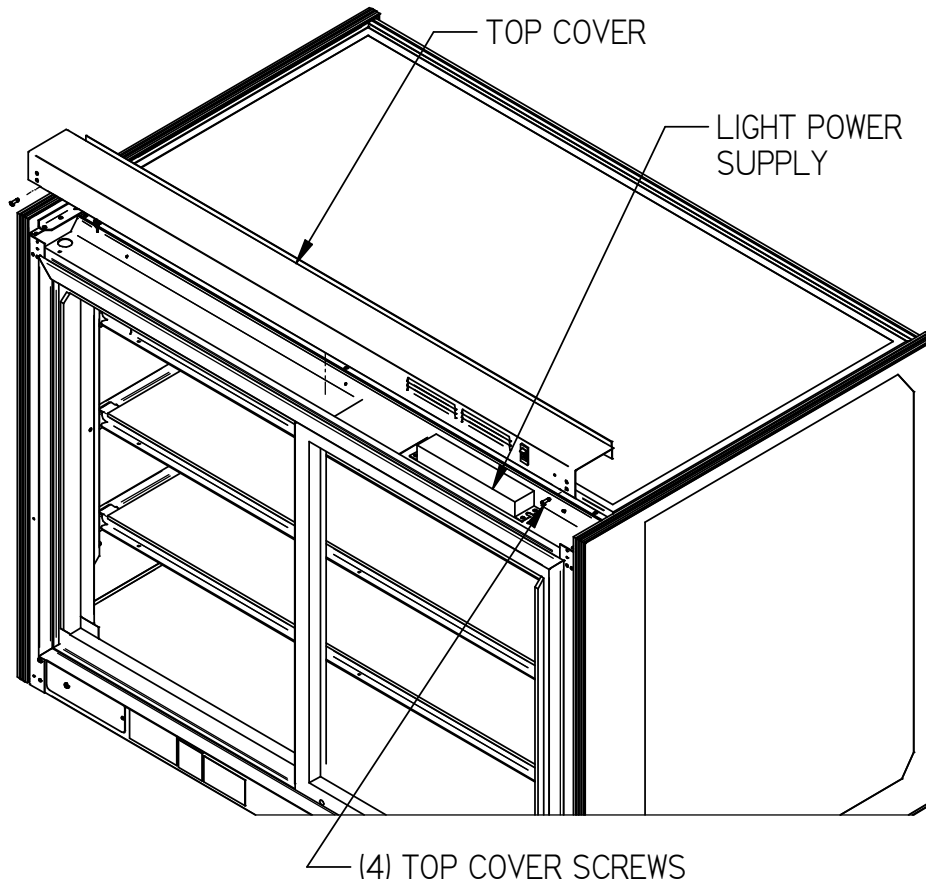
1. Disconnect power to Display Case.
2. Remove (2) front panel phillip head screws from each lower corner of front panel (1) is located on front of panel and the other under the recess behind trim strip. Do not remove the screws holding trip strip to front panel.
3. Slide the front panel down until it slides out of the top panel retainer lip at the top of the panel.
4. Install panel in reverse order.

## TOP COVER



**DANGER:** Electric shock hazard. Do not operate unit with panels removed.

Light Power Supply is located on top of case under the top cover.

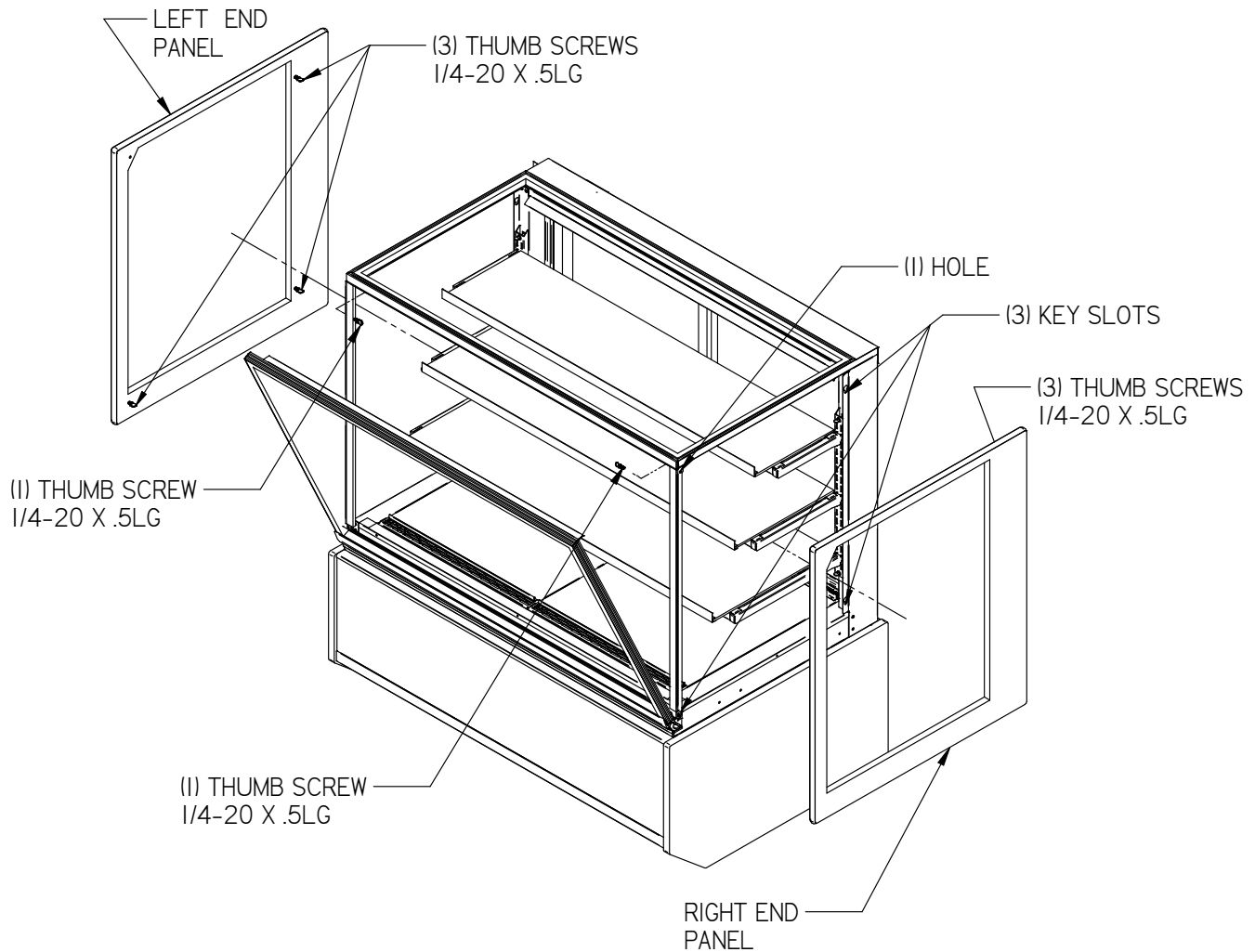


1. Disconnect power to Display Case.
2. Remove the (4) 8-32 top cover screws from top cover.
3. Slide the cover back from under the top glass trim.  
Note: there is a ground wire connected from case to the Top Cover. To prevent electrical shock **Do NOT remove this wire.**

---

## (7) END PANEL INSTALLATION

---



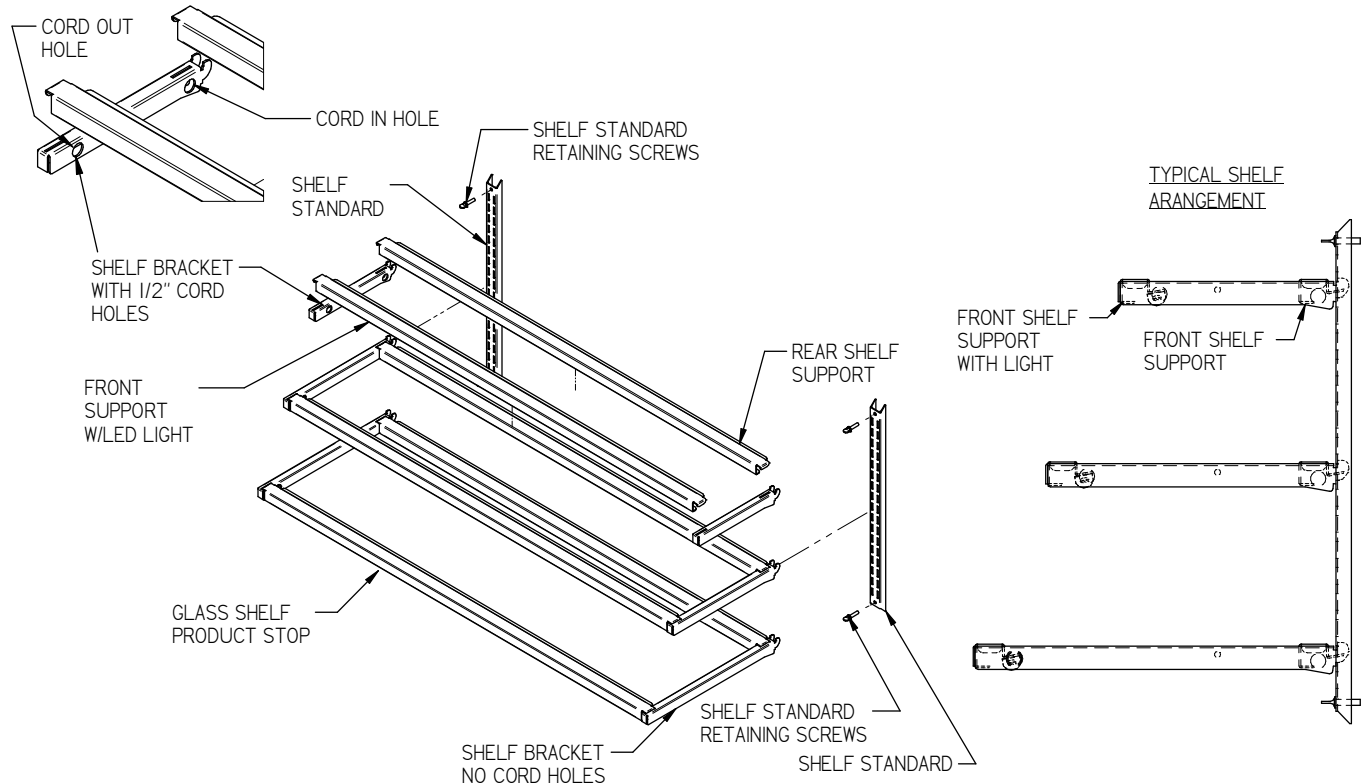
End Glass is shipped installed on Floor model units.

1. On each side of case there are (3) keyhole mounting slots for easier installation of glass. There is (1) mounting hole in the front top corner of case to prevent glass from accidentally popping off of end of case.
2. Screw (3) thumb screw about half way into end panel in location of the keyholes in case as shown.
3. Align end panel thumb screws with keyholes and hook end panel on to case. Do not tighten thumb screws.
4. Align the mounting hole in top front corner of case with top front hole in end panel and attach with  $\frac{1}{4}$ -20 x .5LG thumb screw
5. Tighten all (4) thumb screws by hand.
6. Remove end panels in reverse order.

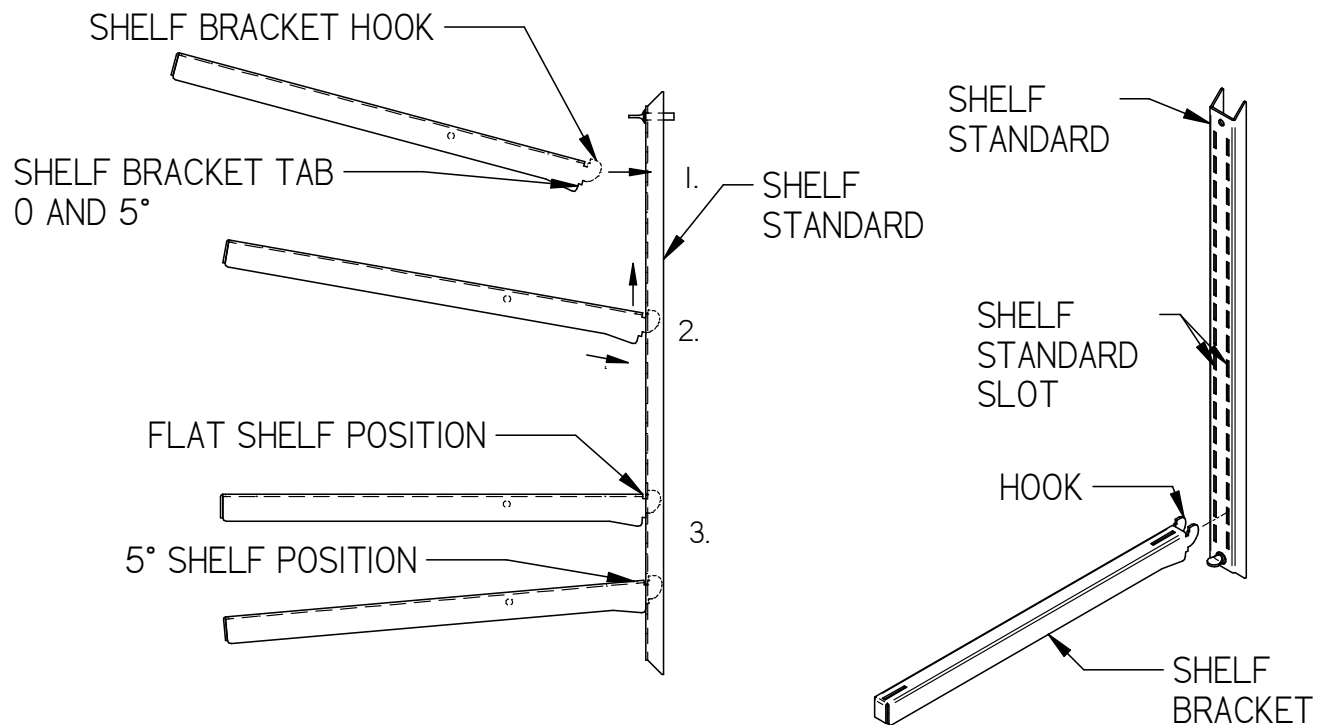
## (8) SHELVING INSTALLATION AND REMOVAL

### 8.1 SHELF BRACKETS AND SUPPORTS

NOTE: Different shelf sizes and quantities are optional from factory so shelf bracket quantity and size may vary, but procedure is the same.



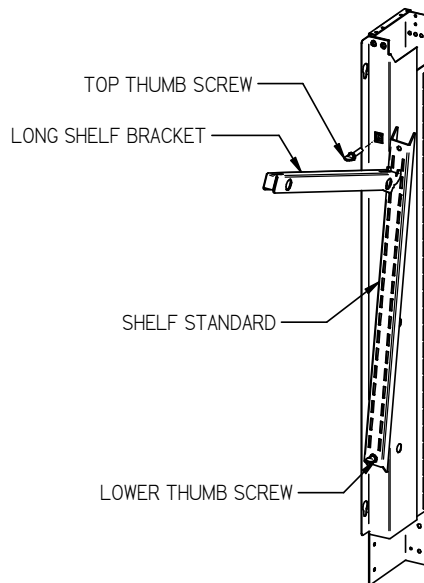
1. Turn the light switch to the off position. Remove rear doors as described in the “Rear Door Removal” section of this manual to allow access to interior of case.
2. Follow the instruction in the illustration below. Starting with the longest brackets for bottom shelf insert (1) of the (2) shelf brackets in the desired shelf standard slot on one side of the case. Place the long second shelf bracket in the same shelf standard slot on the opposite end of case. Important; The bracket with the  $\frac{1}{2}$  hole must be on the light cord side of case.
3. Repeat procedure for middle shelf brackets and the shortest top brackets. NOTE: Different shelf sizes and quantities are optional from factory so shelf bracket quantity and size may vary, but procedure is the same.
  1. Tilt shelf bracket upward and install shelf bracket hook into desired slot.
  2. Lift shelf bracket hook up behind back of shelf standard and rotate the shelf bracket downward until desired shelf bracket tab rests on front of shelf standard.
  3. Bracket can be either flat 0 degrees 5 degree downward tilt as shown.



4. Once all shelf brackets are installed in desired position run each shelf light cord into  $\frac{1}{2}$  hole in back of shelf bracket and out the  $\frac{1}{2}$ " hole in the front of shelf bracket. The shelf light cord length can be adjusted by pulling out cord from cord grommet or pushing cord back into cord grommet.
5. Install front shelf supports with LED lights on to shelf brackets. All shelf supports with the lights are the same. The LED light must be facing towards back of case. Hook shelf support end flanges into front notch of shelf brackets on each side of case.
6. Install rear shelf supports with no lights on to shelf brackets. All shelf supports with no lights are the same. The flange on shelf support should be facing towards back of case. Hook shelf support end flanges into rear notch of shelf brackets on each side of case
7. Push shelf light cords into end of LED light. NOTE: Do not plug cord in backwards. There are (2) humps on end of cord that must align with humps in end of LED light. Plugging in the cord upside down will Damage LED light strip.
8. Manage desired cord lengths by pulling out cord from cord grommet or pushing cord back into cord grommet.

NOTE: Cords always remain in case they are not removable.

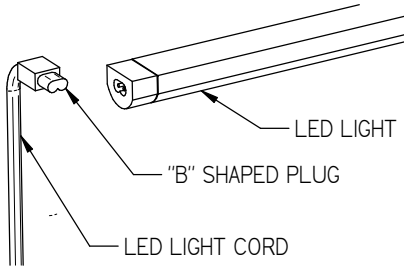
## Special Length Shelf Installation



If the top shelf has long brackets and needs to be placed in top shelf standard notch position the shelf bracket may hit top panel or divider panel when trying to install it. If top slot is required install bracket as follows:

1. Remove the shelving from cases.
2. Loosen bottom thumb screw (do not remove)
3. Remove top thumb screw
4. Rotate the shelf standard towards center of case until the shelf bracket can be slipped into slots of standard.
5. Once shelf bracket is in place, rotate the shelf standard back to vertical position and reinstall top thumb screw and tighten.
6. Tighten lower thumb screw and install shelving as described in shelving installation.

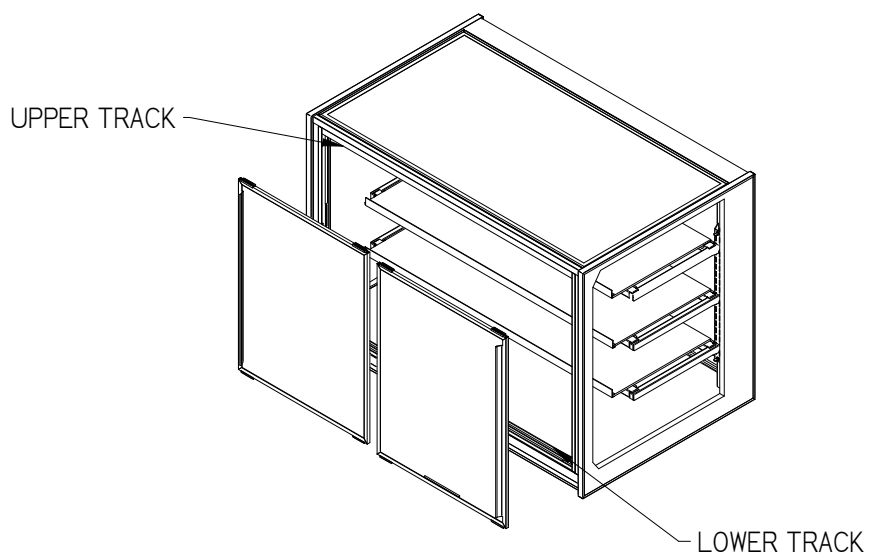
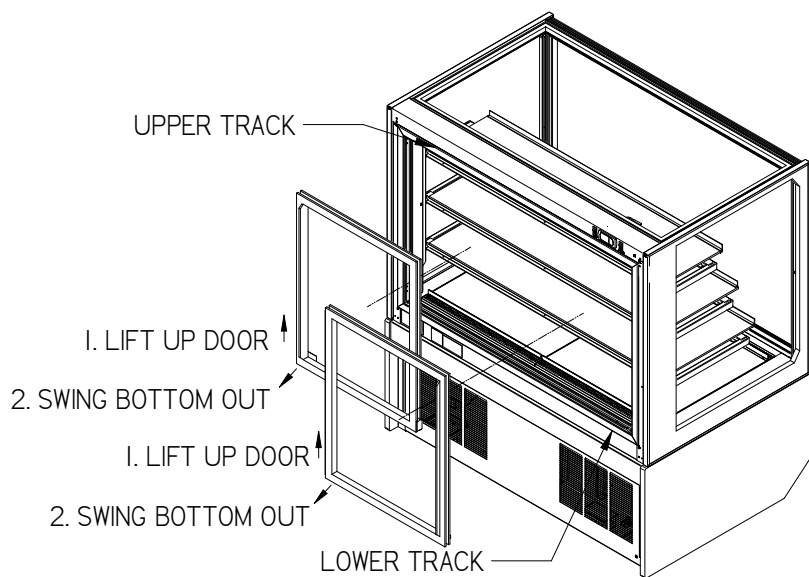
## **LED Light Plug Connection**



**NOTICE:** The plug must be inserted in correct orientation into LED light. LED light will not light if Connecting plug into LED light upside down. It may also cause LED light failure.

Look at the end of the plug and the receptacle of LED light. On one side of the LED plug there are two bumps and the other side there is a flat. (Similar to the letter B shape). The LED light has the same configuration. The shapes must align correctly when inserting LED plug into the LED light.

## (9) FRONT AND REAR DOORS REMOVAL



1. Start with the outer 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.

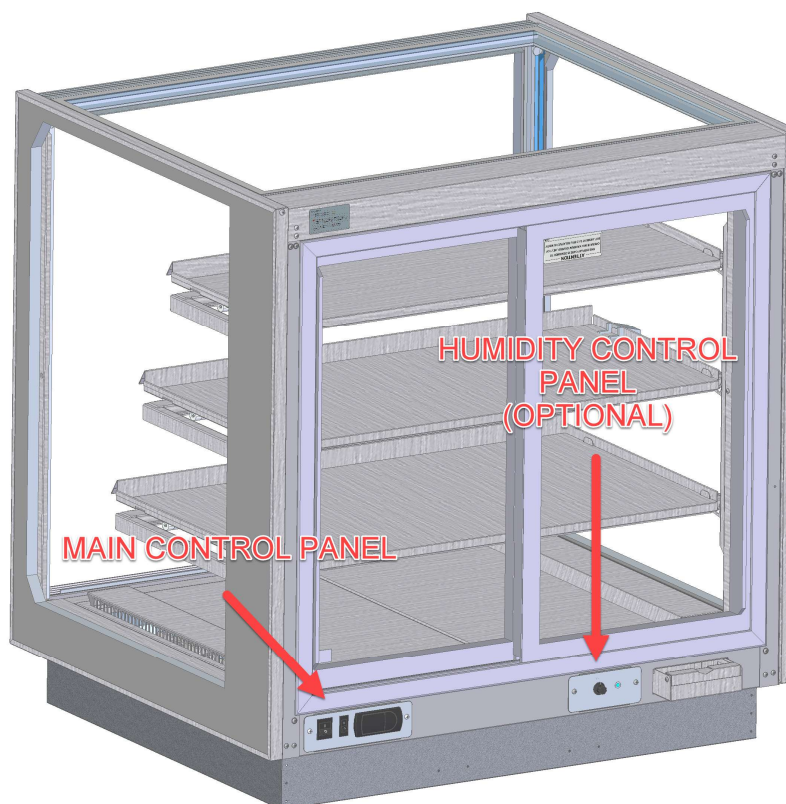
2. After the outer door is removed repeat the procedure for the inner door.
3. Reverse this procedure for door reinstallation. Rear doors are not interchangeable.

## (10) CONTROL OPERATION

### ▲NOTICE▲

Load items at the intended holding temperature or greater. At time of loading, items stocked in unit **MUST** be pre-heated to at least this temperature.

The controls are found on the back of the unit just below the rear door track.



| <u>CONTROL</u>      | <u>PURPOSE</u>                                                                   |
|---------------------|----------------------------------------------------------------------------------|
| POWER ON/OFF        | POWER ENTIRE UNIT OFF OR ON; TURNS OFF ALL LIGHTS, HEATERS, AND CONTROLS         |
| LIGHTS ON/OFF       | TURN ALL LIGHTS ON OR OFF                                                        |
| AIR TEMPERATURE     | ADJUST INTERNAL CASE TEMPERATURE, POWER ON/OFF AIR HEATING SYSTEM.               |
| HUMIDITY (OPTIONAL) | ADJUST INTERNAL HUMIDITY LEVEL OF CASE. LIGHT ON INDICATES THAT WATER PAN IS DRY |

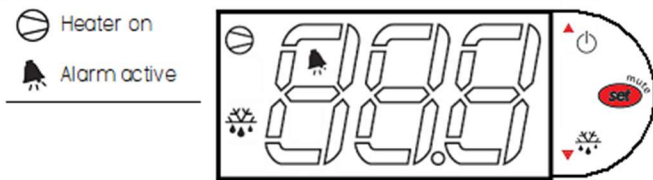
### 10.1 Air Temperature Control

Use the following procedure to adjust the control setpoints.

## ADJUSTMENT

- ▲  Power & set point up adjust
-  Set point adjust mode
- ▼  Set point down adjust
- Power
  - ▲  Hold 3 seconds to start system if off
  - ▲  Hold 3 seconds to shut down system if on
- Temp Adjust
  -  Hold for 3 seconds to enter set point adjust mode
  - ▲  Adjusts system to warmer setting while in set point mode  
use higher settings for warmer temps - eg. "6" instead of "5"
  - ▼  Adjusts system to colder setting while in set point mode  
use lower settings for lower temps - eg. "4" instead of "5"

## DISPLAY



### Display Reads

In normal operation the Display reads control setting  
 "OFF" - System is off  
 "1" thru "9" - Currently selected set point (system is on)  
 "E" followed by any character - Error code see Federal owner's manual  
 Some controls display green characters, some display red,  
 the control is operating normally in either case

If control emits beeping noise press and release  to mute  
 Read error code and check Federal owner's manual to determine  
 if service is required

Error code E0=Temperature probe disconnected or failed.

The temperature controllers each reference one temperature probe that is mounted in the deck or shelf depending on the control. Do not locate the probe to a different position.

Temperatures are digitally controlled via factory settings 1-9. Setting "1" provides the coolest surface temperatures while setting "9" will provide the warmest. See table below for the temperature of each setting.

| Temperature Control Setting | Temperature [°F] |
|-----------------------------|------------------|
| 1                           | 120              |
| 2                           | 125              |
| 3                           | 130              |
| 4                           | 135              |
| 5                           | 140              |
| 6                           | 145              |
| 7                           | 150              |
| 8                           | 155              |
| 9                           | 160              |

## 10.2 Humidity Control And Pan Operation (When Equipped)

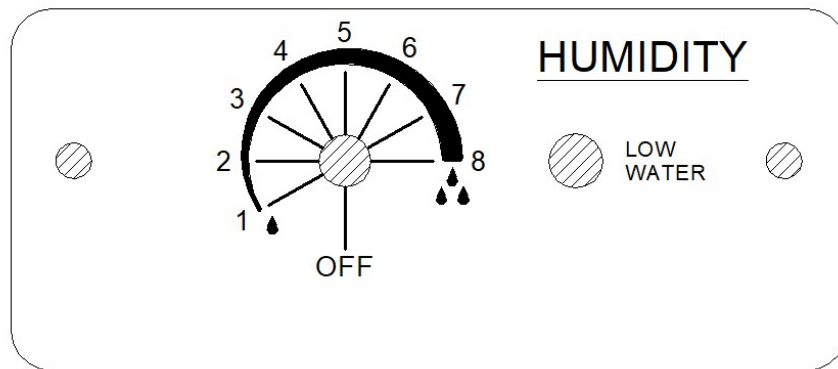
Rotate the knob clockwise to a higher setting to increase internal cabinet humidity and counterclockwise to reduce the humidity level.

Different air temperatures will result in different relative humidity values for the same number setting of the control.

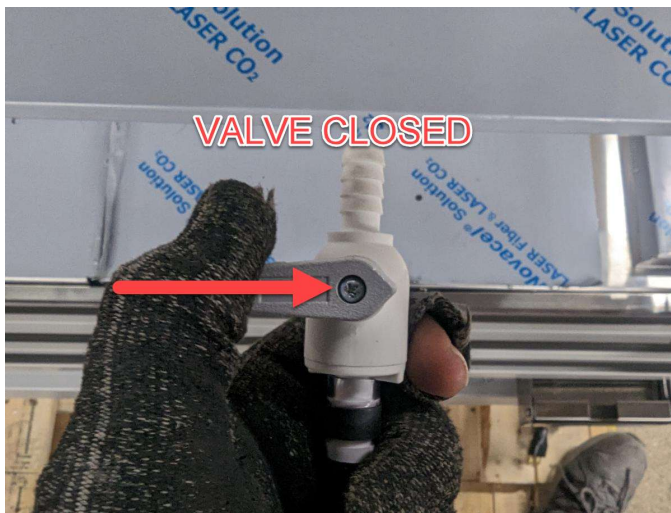
Turning the control to “OFF” does not prevent the addition of humidity. This setting turns off the water pan heater that is required to increase humidity levels past what the standard air heating element does.

To eliminate all humidity generation, simply do not add water to the pan.

See also the cleaning section of this manual for details on how to remove hard water residue.



To start using the humidity pan first check that the drain valve is in the closed position. The valve is located on the end of the drain hose underneath the display cabinet. If equipped with a rear panel, this panel must be removed to access the hose and valve.



Pull out the sliding cover and add water until the pan is visibly full. The amount of time the water will last in the pan depends on the air temperature and humidity level settings chosen. At max air and humidity settings, the water should last roughly 4hrs prior to needing refilled. When the pan needs to be refilled the blue indicator light on the humidity control panel will light up. Water may be added prior to this, but it is not necessary.

### 10.3 Typical Humidity Conditions

The following table represents approximate humidity levels that the humidity package can generate at various control settings.

| Temperature Control Setting | Temperature [°F] | Temperature [°C] | Relative Humidity at max highest setting |
|-----------------------------|------------------|------------------|------------------------------------------|
| 1                           | 120              | 48.9             | 70%                                      |
| 5                           | 150              | 65.6             | 40%                                      |
| 9                           | 160              | 71.1             | 20%                                      |

## (11) FOOD PACKAGING RECOMMENDATIONS

This merchandiser is designed to be used with pre-packaged product only. All food items placed in the merchandiser must be packaged. No foods should be placed in the merchandiser without packaging.

### ▲NOTICE▲

**Load items at the intended holding temperature or greater. At time of loading, items stocked in unit MUST be pre-heated to at least this temperature.**

Not all packaging is compatible with this merchandiser. Any packaging material with a rating of less than 200°F should not be used.

Typically, polypropylene (recycle code 5) works well, but check with the manufacturer first to get an accurate assessment of the application.

|  <b><u>DO NOT USE</u></b> the following packaging materials: |                            |
|-----------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| Recycle Code                                                                                                                                  | Material Name              |
|                                                             | Polyethylene terephthalate |
|                                                            | High-density polyethylene  |
|                                                            | Polyvinyl chloride         |
|                                                            | Low-density polyethylene   |

Materials listed in the table above will not survive the high temperature conditions of this merchandiser.

---

## **(12) INITIAL STARTUP**

---

### **12.1 STARTUP**

After all the checks outlined in the installation section of this manual have been made, the case is ready to be put into service. Ensure supply power (breaker) is on and flip the Power Switch and Light Switch on unit to the on position. Also ensure that the control is powered on as described above.

At start up with a unit that is still cold, it is recommended that the temperature control is set to a mid-setting, such as 5. After an hour of running, adjust the control to a warmer or a colder setting if necessary to maintain desired product temperature. Allow heated models to run for at an hour before placing pre-chilled product into display area.

#### **12.1.1 Startup with the humidity package**

If the unit has the optional humidity package, ensure that the fill indicator light is off. If the indicator is on, fill the pan with water. Then turn the humidity control to the desired setting if known. If unknown, turn the control to the highest setting. After at least an hour, adjust the control to the desired level of humidity.

For the humidity package, internal water condensation on the glass is normal when initially starting up the unit. If the unit has been running for more than an hour and condensation occurs then the humidity control should be adjusted to a lower setting until the condensation goes away. The exact setting required will vary with environmental conditions and the temperature setting of the case.

### **12.2 PLACING PRODUCT INTO CASE**

After completing shelving installation as outlined in “Shelving Installation and Removal” section of this manual you may begin placing product into the display case.

- Do not exceed 100 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 sides of the shelves (or deck) with product. Product may overhang rear of shelf, but allow a minimum of 1-1/2” between product and rear door. Improper clearance at the sides of the shelf will block the airflow and could cause product loss.
- Do not block the slots along the sides of the display pan. Covering these slots will block the airflow and will cause product loss.
- The display pan is removable for cleaning and can become dislodged in shipment. To ensure proper airflow and performance of the case, make sure that the display pan is properly seated with air management slots facing the end glass. Check that the pan is installed properly before placing product the display pans.
- CASE SHOULD BE STOCKED WITH PRE-HEATED PRODUCT ONLY.

---

## (13) CLEANING INSTRUCTIONS

---

### 13.1 DAILY CLEANING

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

|                                                                                    |                                                                                                                                                                     |
|------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   | <b>NOTICE:</b><br>Avoid splashing or soaking any electrical components with water to prevent electrical damage to the case.                                         |
|   | <b>NOTICE:</b><br>Shut off power switch and remove all product from case. Allow enough time for the unit to reach room temperature before proceeding with cleaning. |
|   | <b>NOTICE:</b><br>Remove all product from case before proceeding with cleaning procedure.                                                                           |
|  | <b>NOTICE:</b><br>This case is not designed to be cleaned by flushing.                                                                                              |

**Note: For major spills or foreign material buildup perform the 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.
1. Wipe complete interior of both the upper & lower areas of case using a damp cloth.
2. The remaining exterior surface should be wiped down using any ammoniated cleaners or soapy warm water.

### 13.2 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.

|                                                                                     |                                                                                                                             |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
|  | <b>NOTICE:</b><br>Avoid splashing or soaking any electrical components with water to prevent electrical damage to the case. |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|

|                                                                                   |                                                                                                                                                                       |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <b>NOTICE:</b><br>Shut off power switches and remove all product from case. Allow enough time for the unit to reach room temperature before proceeding with cleaning. |
|  | <b>NOTICE:</b><br>Remove all product from case before proceeding with cleaning procedure.                                                                             |
|  | <b>NOTICE:</b><br>This case is not designed to be cleaned by flushing.                                                                                                |

1. Side, and rear door glass can be cleaned with common window cleaners.
2. Remove interior shelving and display deck from unit as described in the “Shelving Installation and Removal” section of this manual.
3. Clean all shelves, shelf supports, shelf light deflectors, shelf brackets, shelf standards using warm soapy water and a brush. Rinse thoroughly and allow to dry.
4. Remove the display deck and clean using warm soapy water and a brush. Rinse thoroughly and allow to dry.
5. Clean the entire interior of the case using warm soapy water. 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)
6. Reassemble all components in reverse order.
7. The exterior surfaces should be wiped down using any ammoniated cleansers or warm soapy water.

### **13.3 CLEANING THE OPTIONAL HUMIDITY PAN**

The humidity pan will need to be cleaned on a regular basis. The frequency of the cleaning required is directly related to the hardness of water being added to the pan. See table below.

| <b>Water Hardness</b> | <b>Cleaning Interval Recommendation</b> |
|-----------------------|-----------------------------------------|
| 0 gpg                 | Typically not required                  |
| 1-9 gpg               | Once per month                          |
| 10-20 gpg             | Twice per month                         |
| 20+ gpg               | Weekly                                  |

gpg = grains per gallon

To clean the humidity pan:

1. Locate the drain hose protruding from underneath the case. The rear panel will need to be removed if included.
2. Using a 2.5gal bucket or other container, open the drain valve and let the water drain completely into the bucket.

3. Close the drain valve to prevent any further flow.
4. Add a 50% white vinegar (5% acidity) 50% water solution to the pan until it is full.
5. Turn the humidity up to the highest setting.
6. Allow the unit to run for 30mins to dissolve the scale buildup in the pan.
7. Drain the solution into a bucket and discard using the same method described for remaining water above.
8. For extreme scale buildup this procedure may need to be repeated, or full strength vinegar may be required.

Other lime scale removal products may be used for this process, but anything used should be food safe.

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## (14) SERVICE

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### Service Information

#### **WARNING**

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.**

**To find a service company in your area, please visit our website at  
<https://federalind.com/support-service/service-rep-locator>. There you can also find self-  
service tools to help you get the answers you need faster!**

**For warranty service requests and all technical support, including compressors and other  
service parts please contact:**

- Phone: (833) 238-8168
- Email: [techservice@partstown.com](mailto:techservice@partstown.com)



**Federal Industries has partnered with Parts Town for ALL Non-Warranty Part Identification,  
Pricing, Lead Times, Orders & Freight Quotes. Please contact Parts Town directly if you  
need parts:**

- Website: [Partstown.com](https://Partstown.com)
- Email: [CustomerService@Partstown.com](mailto:CustomerService@Partstown.com)
- Phone: 833-809-8188

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## **(15) SALE & DISPOSAL**

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### **15.1 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.

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## **(16) TROUBLESHOOTING**

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### **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.

#### ***Case Does Not Operate***

Check for disconnected power supply.

Check for tripped breaker on blown fuse.

Check that the thermostat display is on and is not displaying an error.

#### ***Lights Do Not Operate***

Check that light switch is on.

Check for tripped breaker or blown fuse.

Check that light cords are plugged in correctly to sockets. Check connector on LED light, and connector on

#### ***Temperature is too low***

Increase control setpoint

Check supply voltage to case is above 208V

Look for HVAC discharge vents, fans, and other possible air disruptions.

#### ***Temperature is too high***

Turn down control setpoint

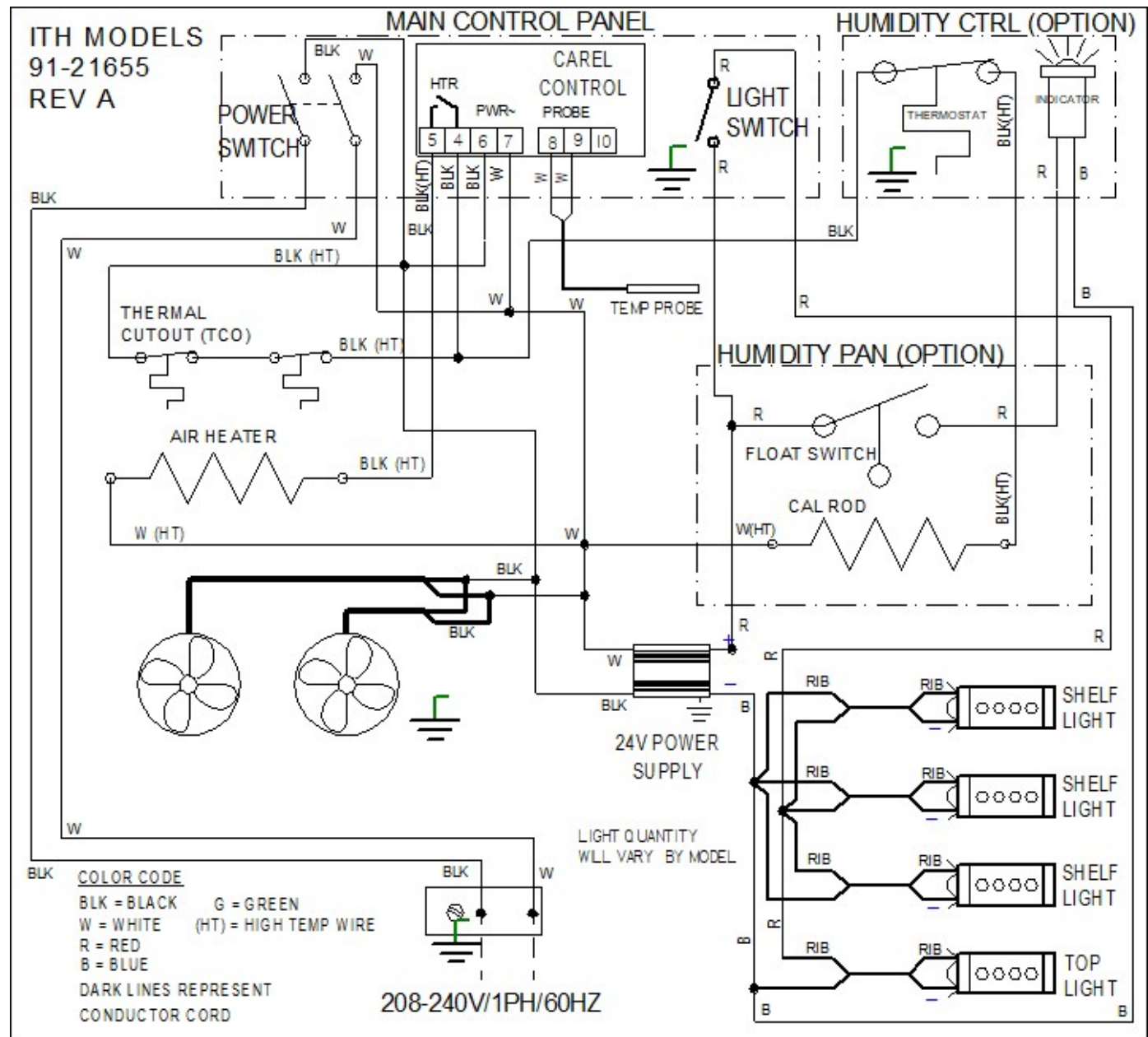
Check the control for errors and contact service

#### ***Control Error***

Turn the main power switch to off to power down the unit

Wait 10s, and power the unit back on

## Wiring Diagrams



## (17) SERVICE PARTS

### ELECTICAL COMPONENTS

| MODELS | LIGHT SWITCH | POWER SWITCH | LIGHT POWER SUPPLY | LIGHT 24V LED STRIP | SHELF LIGHT CORD | MAIN WIRING DIAGRAM | MAIN WIRE HARNESS |
|--------|--------------|--------------|--------------------|---------------------|------------------|---------------------|-------------------|
| ITH36  | 4I-11066     | 4I-18186     | 39-20555           | 42-20870-29C35      | 43-20475         | 9I-21655            | 43-2164I          |
| ITH48  | 4I-11066     | 4I-18186     | 39-20555           | 42-20870-40C35      | 43-20475         | 9I-21655            | 43-2164I          |
| ITH60  | 4I-11066     | 4I-18186     | 39-20555           | 42-20870-51C35      | 43-20475         | 9I-21655            | 43-2164I          |

### AIR HEATING COMPONENTS

| MODELS | AIR HEATER | FAN      | FAN CORD | ELECTRONIC CONTROL | TEMPERATURE PROBE | THERMAL OVERLOAD PROTECTOR |
|--------|------------|----------|----------|--------------------|-------------------|----------------------------|
| ALL    | 40-21532   | 4I-21617 | 43-1117I | 32-19865-20        | 32-21046          | 4I-17129                   |

### HUMIDITY PACKAGE COMPONENTS

| MODELS | CONTROL ASSEMBLY | PAN ASSEMBLY |
|--------|------------------|--------------|
| ALL    | SA6I24-2         | SA6I22       |

### HUMIDITY PACKAGE CONTROL COMPONENTS

| MODELS | CONTROL  | INDICATOR LIGHT | DECAL    |
|--------|----------|-----------------|----------|
| ALL    | 4I-21646 | 42-21629        | 9I-21649 |

### HUMIDITY PAN COMPONENTS

| MODELS | PAN    | PAN LID | HEATER     | DRAIN TUBE | DRAIN VALVE | HOSE CLAMPS | FLOAT SWITCH | THERMOSTAT PROBE BRACKET | ENCLOSURE GASKET |
|--------|--------|---------|------------|------------|-------------|-------------|--------------|--------------------------|------------------|
| ALL    | SA6I2I | M2I860  | 40-21598-3 | 15-21606   | 84-21608    | 8I-21609    | 4I-2162I     | M2I832                   | 16-12426         |

### GLASS COMPONENTS

| MODELS  | FRONT GLASS / PLASTIC ON SS | TOP GLASS  | END GLASS CLEAR L.H. SS TRIM W/SCREWS | END GLASS CLEAR R.H. SS TRIM W/SCREWS | END GLASS REFL. L.H. SS TRIM W/SCREWS | END GLASS REFL. R.H. SS TRIM W/SCREWS | FRONT GLASS MAGNET SIDE |
|---------|-----------------------------|------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|-------------------------|
| ITH3626 | 5I-20598-4                  | 5I-20599-4 | SA6I38-IL                             | SA6I38-IR                             | SA6I38-3L                             | SA6I38-3R                             | 64-20476-5              |
| ITH4826 | 5I-20598-5                  | 5I-20599-4 | SA6I38-IL                             | SA6I38-IR                             | SA6I38-3L                             | SA6I38-3R                             | 64-20476-5              |
| ITH6026 | 5I-20598-6                  | 5I-20599-4 | SA6I38-IL                             | SA6I38-IR                             | SA6I38-3L                             | SA6I38-3R                             | 64-20476-5              |
| ITH3634 | 5I-20598-1                  | 5I-20599-1 | SA6I38-L                              | SA6I38-R                              | SA6I38-2L                             | SA6I38-2R                             | 64-20476-4              |
| ITH4834 | 5I-20598-2                  | 5I-20599-2 | SA6I38-L                              | SA6I38-R                              | SA6I38-2L                             | SA6I38-2R                             | 64-20476-4              |
| ITH6034 | 5I-20598-3                  | 5I-20599-3 | SA6I38-L                              | SA6I38-R                              | SA6I38-2L                             | SA6I38-2R                             | 64-20476-4              |

## REAR DOORS

| MODELS  | DOOR LEFT CLEAR | DOOR RIGHT CLEAR | DOOR LEFT REFLECTIVE | DOOR RIGHT REFLECTIVE |
|---------|-----------------|------------------|----------------------|-----------------------|
| ITH3626 | 53-20467-4      | 53-20468-4       | 53-20467-4A          | 53-20468-4A           |
| ITH4826 | 53-20467-5      | 53-20468-5       | 53-20467-5A          | 53-20468-5A           |
| ITH6026 | 53-20467-6      | 53-20468-6       | 53-20467-6A          | 53-20468-6A           |
| ITH3634 | 53-20467-1      | 53-20468-1       | 53-20467-1A          | 53-20468-1A           |
| ITH4834 | 53-20467-2      | 53-20468-2       | 53-20467-2A          | 53-20468-2A           |
| ITH6034 | 53-20467-3      | 53-20468-3       | 53-20467-3A          | 53-20468-3A           |

## SHELF & DECK COMPONENTS (BEFORE 5/1/25)

| MODELS | S/S SHELF - 11"<br>(NOT STANDARD FOR 26IN<br>MODELS) | S/S SHELF - 14" | S/S SHELF - 17" | SHELF BRACKET<br>FOR 11" SHELF | SHELF<br>BRACKET<br>FOR 14"<br>SHELF | SHELF<br>BRACKET<br>FOR 17" SHELF | DISCHARGE<br>DISPLAY DECK<br>(LEFT) | INTAKE DISPLAY<br>DECK (RIGHT -<br>TEMP CONTROL<br>SIDE) | SHELF<br>STANDARD |
|--------|------------------------------------------------------|-----------------|-----------------|--------------------------------|--------------------------------------|-----------------------------------|-------------------------------------|----------------------------------------------------------|-------------------|
| ITH36  | M21813-1                                             | M21813-2        | M21813-3        | 67-20621-1L                    | 67-20621-2L                          | 67-20621-3L                       | SA6126-1                            | SA6120-1                                                 | M20442            |
| ITH48  | M21813-4                                             | M21813-5        | M21813-6        | 67-20621-1L                    | 67-20621-2L                          | 67-20621-3L                       | SA6126-2                            | SA6120-2                                                 | M20442            |
| ITH60  | M21813-7                                             | M21813-8        | M21813-9        | 67-20621-1L                    | 67-20621-2L                          | 67-20621-3L                       | SA6126-3                            | SA6120-3                                                 | M20442            |

## SHELF & DECK COMPONENTS (AFTER 5/1/25)

| MODELS | S/S SHELF - 11"<br>(NOT STANDARD FOR 26IN<br>MODELS) | S/S SHELF - 14" | S/S SHELF - 17" | SHELF BRACKET<br>FOR 11" SHELF | SHELF<br>BRACKET<br>FOR 14"<br>SHELF | SHELF<br>BRACKET<br>FOR 17" SHELF | DISCHARGE<br>DISPLAY DECK<br>(LEFT) | INTAKE DISPLAY<br>DECK (RIGHT -<br>TEMP CONTROL<br>SIDE) | SHELF<br>STANDARD |
|--------|------------------------------------------------------|-----------------|-----------------|--------------------------------|--------------------------------------|-----------------------------------|-------------------------------------|----------------------------------------------------------|-------------------|
| ITH36  | M21813-1                                             | M21813-2        | M21813-3        | 67-21865-1L                    | 67-21865-2L                          | 67-21865-3L                       | SA6126-1                            | SA6120-1                                                 | M22240            |
| ITH48  | M21813-4                                             | M21813-5        | M21813-6        | 67-21865-1L                    | 67-21865-2L                          | 67-21865-3L                       | SA6126-2                            | SA6120-2                                                 | M22240            |
| ITH60  | M21813-7                                             | M21813-8        | M21813-9        | 67-21865-1L                    | 67-21865-2L                          | 67-21865-3L                       | SA6126-3                            | SA6120-3                                                 | M22240            |

