

eGrocery Program

Medium Temperature



Installation & Operation Manual



**HUSSMANN®**  
eGrocery

## EGP MERCHANDISERS

August 2023  
P/N 3179589\_B  
Spanish P/N 3179590\_B  
MANUAL - IO EGP-FR

# BEFORE YOU BEGIN

## READ THESE INSTRUCTIONS COMPLETELY AND CAREFULLY.

This manual was written in accordance with originally prescribed equipment that is subject to change. Hussmann reserves the right to change or revise specifications and product design in connection with any feature of our products.

### SAFETY INSTRUCTIONS



Personal Protection Equipment (PPE) is required. Wear safety glasses, gloves, protective boots or shoes, long pants, and a long-sleeve shirt when working with this equipment and while handling glass.

### SAFETY INSTRUCTIONS

The safety of our customers and employees is paramount. The precautions and procedures described in this manual are intended as general methods for safe use of this equipment. Please be sure to comply with the precautions described in this manual to protect you and others from possible harm.

Only qualified personnel should install and service this equipment. Observe all precautions on tags, stickers, labels and literature attached to this equipment.

Service is only to be performed by factory-authorized service personnel, so as to minimize the risk of possible ignition due to incorrect parts or improper service. Component parts shall be replaced with like components. Contact your Hussmann representative to arrange servicing.

The definitions below are used to clarify the magnitude and urgency of harm and damage, considering problems arising from misuse. Relative to their potential danger, the definitions are divided into five parts according to ANSI Z535 Series.

### ANSI Z535.5 DEFINITIONS



**DANGER** indicates a hazardous situation which, if not avoided, will result in death or serious injury.



**WARNING** indicates a hazardous situation which, if not avoided, could result in death or serious injury.



**CAUTION** indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.



**NOTICE** is used to address practices not related to personal injury.



**SAFETY INSTRUCTIONS** (or equivalent) signs indicate specific safety-related instructions or procedures.

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# INSTALLATION TOOL LIST

## Unloading refrigerated merchandiser from trailer:

- Lever Bar (also known as a Mule,
- Johnson Bar (J-bar)/
- Moving Dolly(s)/Pallet Jack

## Setting Case Line-Up:

- Level, 4 ft suggested
- Ratchet
- ¼ in. Socket
- 5/16 in. Socket
- ½ in. Socket
- Battery Drill/Screw Gun
- Caulking Gun
- 10 in. Adjustable Crescent Wrench

## WARNING

- » Excessive ambient conditions may cause condensation and therefore sweating of doors. Facility operators should monitor doors and floor conditions to ensure safety of persons.
- » Case ventilation openings must be clear of any obstructions. Do not damage the refrigerant circuit.
- » Always disconnect the electrical power at the main disconnect when servicing or replacing any electrical component. This includes, but is not limited to, such items as fans, heaters, thermostats and lights.
- » Do not use mechanical devices or other means to accelerate the defrosting process.
- » Do not use electrical appliances inside the food storage compartments of the case(s).
- » Do not store items or flammable materials atop the unit. Do not walk on case.
- » Do not use the handle to lift the doors, do not lean doors against case or set doors directly on the floor. Doing this may cause the doors to shatter and personally injury may occur.

# INSTALLATION

## UL LISTING

These merchandisers are manufactured to meet ANSI/ UL 471 standard requirements for safety. Proper installation is required to maintain the listing.

## FEDERAL / STATE REGULATION

These merchandisers at the time they are manufactured, meet all federal and state/ provincial regulations. Proper installation is required to ensure these standards are maintained. Near the serial plate, each case carries a label identifying the environment for which the case was designed for use.

For example:

### **ANSI /NSF-7 Type I**

Display Refrigerator / Freezer intended for 75° F (24° C) / 55% RH Ambient Application

### **ANSI /NSF-7 Type II**

Display Refrigerator / Freezer Intended for 80° F / 55% RH Ambient Application

### **ANSI /NSF-7**

Display Refrigerator Intended for Bulk Produce

## DOCUMENT REVISION HISTORY

REVISION B - Revised cover and images

REVISION A - ORIGINAL ISSUE



This warning does not mean that Hussmann products will cause cancer or reproductive harm, or is in violation of any product-safety standards or requirements. As clarified by the California State government, Proposition 65 can be considered more of a 'right to know' law than a pure product safety law. When used as designed, Hussmann believes that our products are not harmful. We provide the Proposition 65 warning to stay in compliance with California State law. It is your responsibility to provide accurate Proposition 65 warning labels to your customers when necessary. For more information on Proposition 65, please visit the California State government website.

## LOCATION

These merchandisers are designed for displaying products in air conditioned stores where temperature is maintained at or below the ANSI/NSF-7 specified level and relative humidity is maintained at or below 55%.

Placing refrigerated merchandisers in direct sunlight, near hot tables or near other heat sources could impair their efficiency.

Like other display cases, these are sensitive to air disturbances. Air currents passing around cases will seriously impair their operation. Do not allow air conditioning, electric fans, open doors or windows, etc. to create air currents around the cases.

Excessive ambient conditions may cause condensation and therefore sweating of doors. Facility operators should monitor doors and floor conditions to ensure safety of persons.

To prevent sweating on the exterior surfaces of merchandisers, there must be a minimum clearance of 4 inches (102 mm) between the merchandisers and other fixtures or walls. Product should always be maintained at proper temperature. This means that from the time the product is received, through storage, preparation and display, the temperature of the product must be controlled to maximize the life of the product.

## SHIPPING DAMAGE

All equipment should be thoroughly examined for shipping damage before and during unloading. This equipment has been carefully inspected at our factory. Any claim for loss or damage must be made to the carrier. The carrier will provide any necessary inspection reports and/or claim forms.

### Apparent Loss or Damage

If there is an obvious loss or damage, it must be noted on the freight bill or express receipt and signed by the carrier's agent; otherwise, carrier may refuse claim. The carrier will supply necessary forms.

### Concealed Loss or Damage

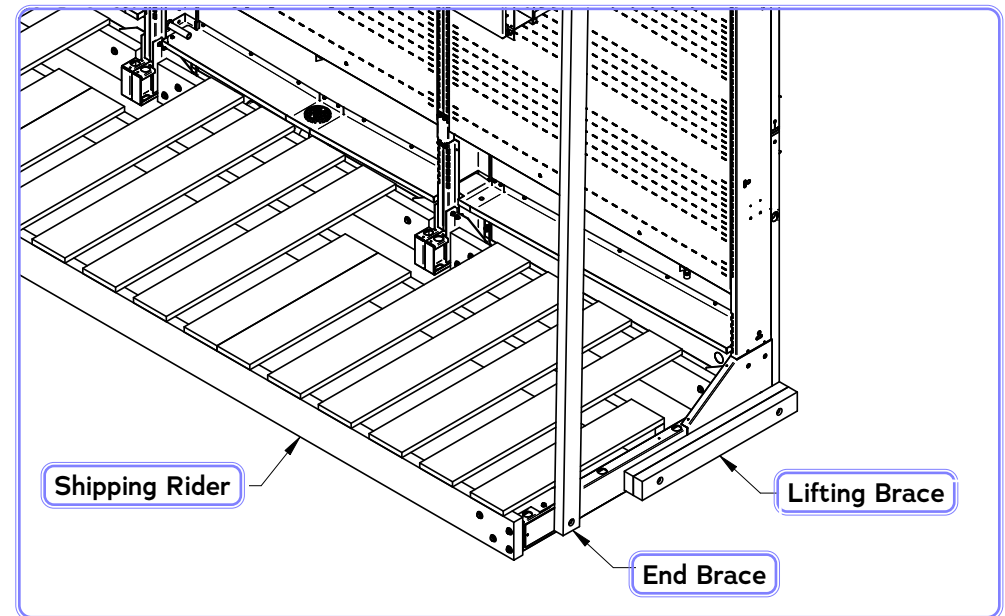
When loss or damage is not apparent until after equipment is uncrated, a claim for concealed damage is made. Upon discovering damage, make request in writing to carrier for inspection within 15 days and retain all packing. The carrier will supply inspection report and required claim forms.

## EXTERIOR LOADING

Do not walk on top of case(s) or damage to the case(s) and serious personal injury could occur. They are not structurally designed to support excessive external loading such as the weight of a person.

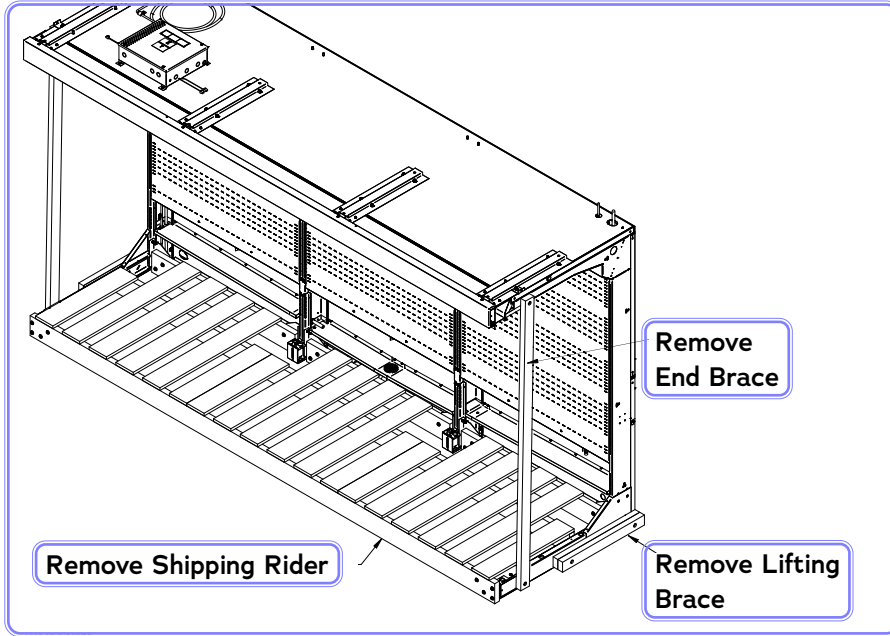
## LIFTING AND MOVING THE CASE

The case can be moved with pallet jacks and/or j-bars. Lifting braces are at each end of the case. Position the jacks or j-bars underneath lifting braces during transit. Be careful not to damage the ends of the case when positioning and moving. The lifting braces should not be removed until after the case is positioned in its final location.

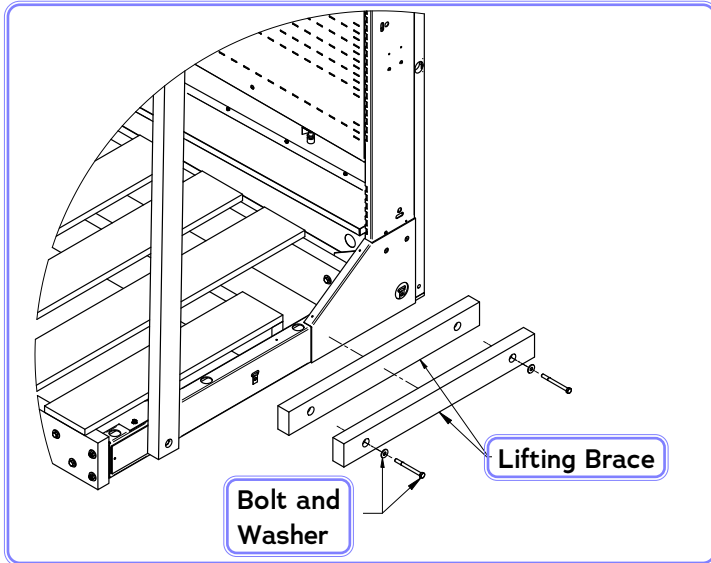


## REMOVE SHIPPING RIDERS AND LIFTING BRACES

Remove bolts from the shipping riders at front and rear locations. The riders are bolted to the case. Remove the riders and end braces.

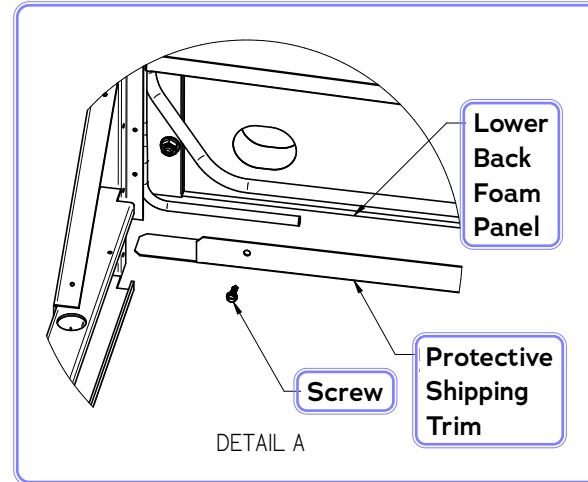
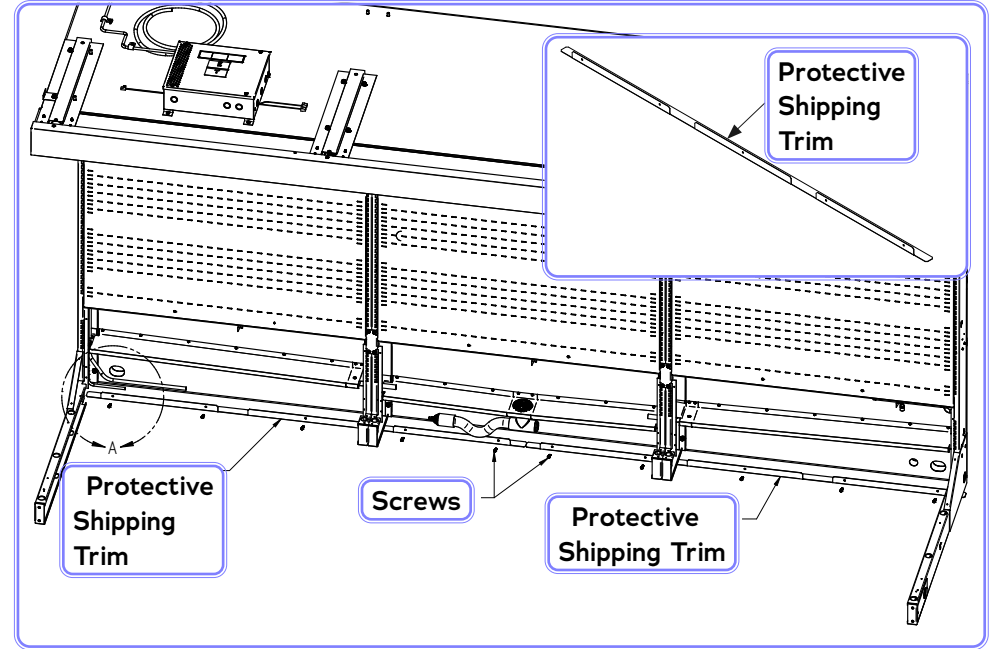


Remove lifting braces.



## REMOVE PROTECTIVE SHIPPING TRIM

The protective shipping trim needs to be removed before the case is installed. Remove the screws (10) and trim as shown below.



## LEVELING

Merchandisers must be installed level to ensure proper operation of the refrigeration system and to ensure proper drainage of defrost water. When leveling merchandisers, use a carpenter's level. Leveling shims or wedges are provided with each merchandiser for use if needed.

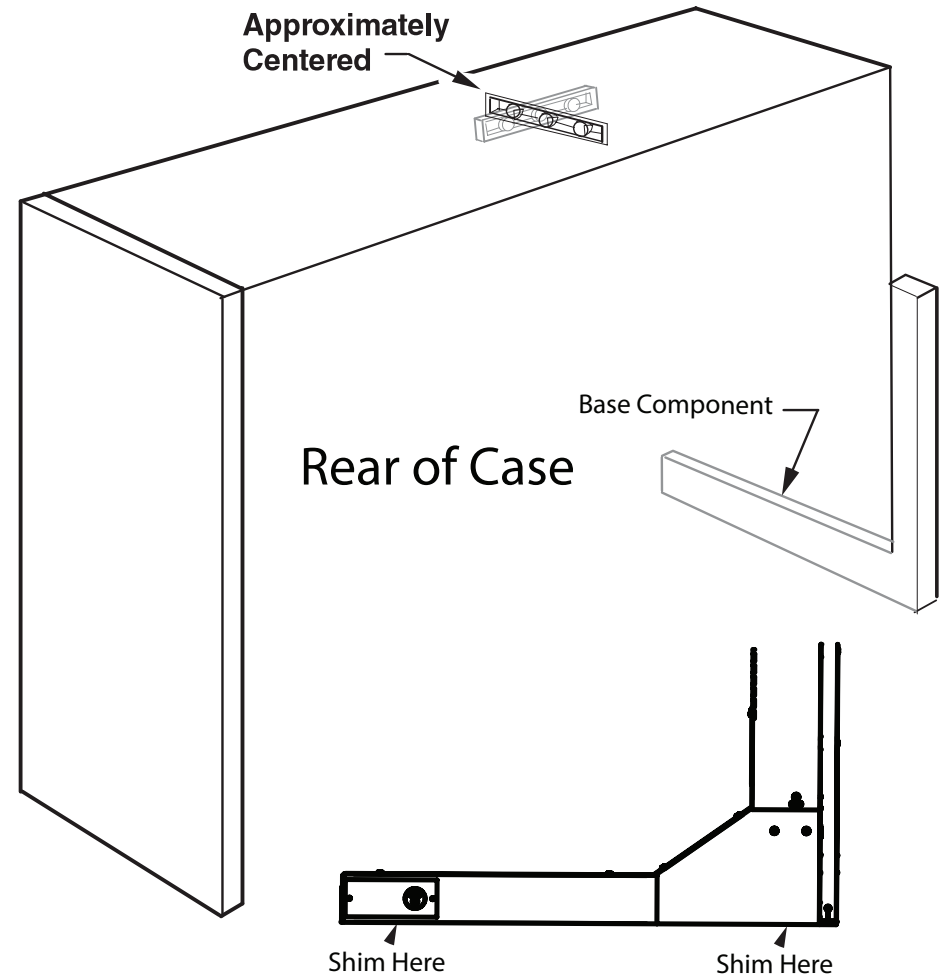
### NOTE:

Begin lineup leveling from the highest point of the store floor.

The front shipping rider can be positioned at the front of the two end base uprights in order to help square and align the base for drilling to floor.

Place shims under the end bases if the floor is not level. Use a 4 ft level to make sure the case is level. Placing shims at other locations will cause uneven distribution of weight leading to piping leaks, as well as sagging or wracked doors.

Supports must be shimmed if not in full contact with the floor.



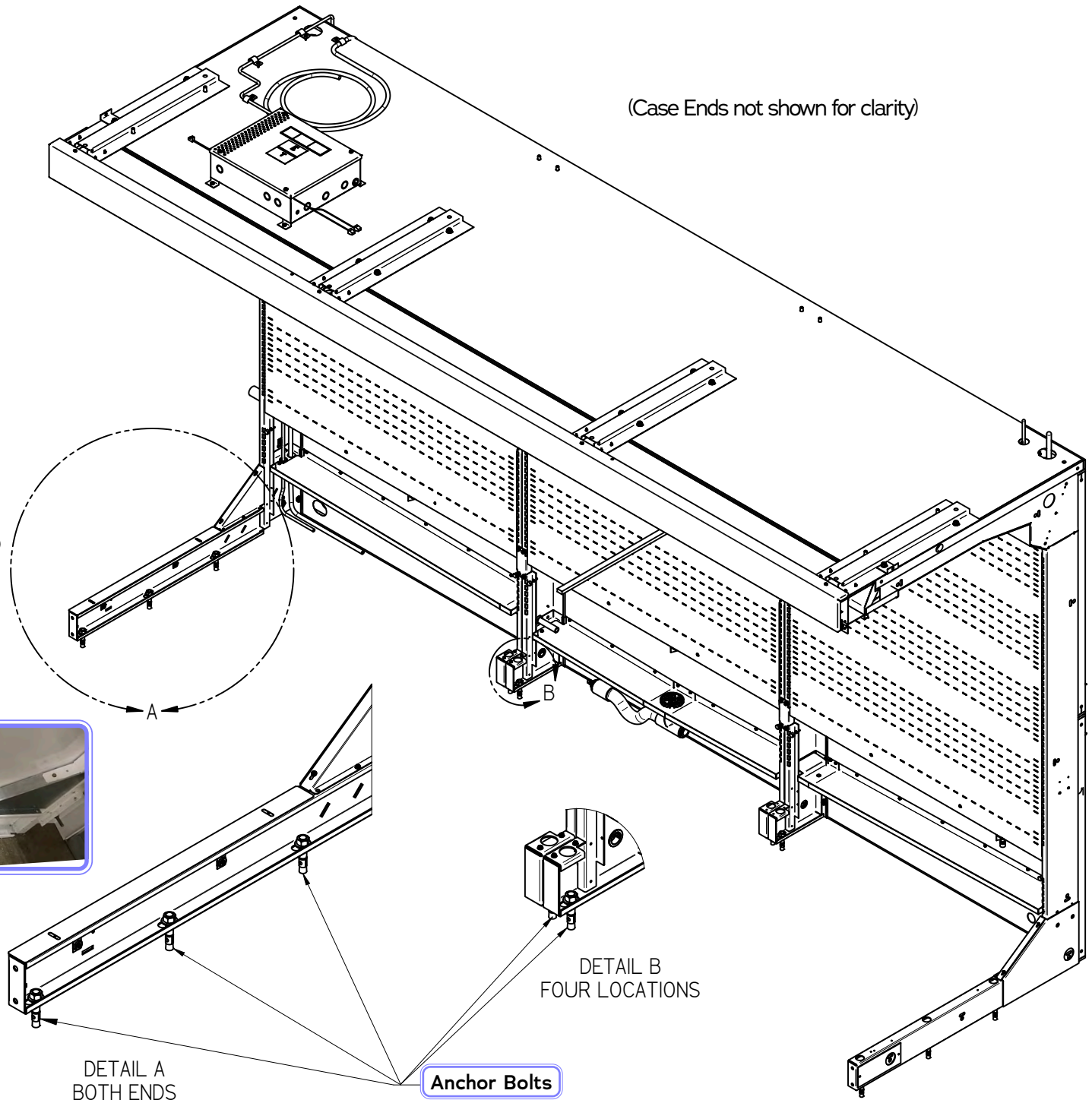


## SECURING CASE TO FLOOR

The case must be secured to the floor using anchors that are fastened to the floor.

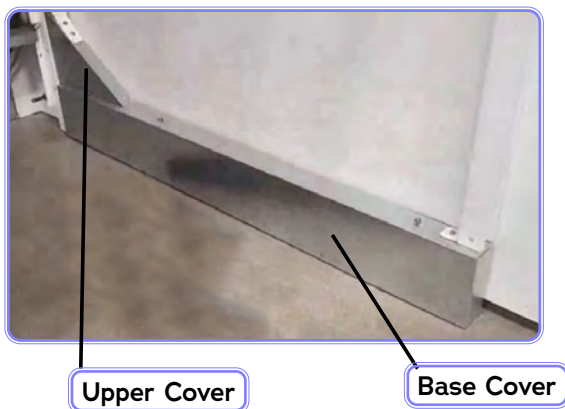
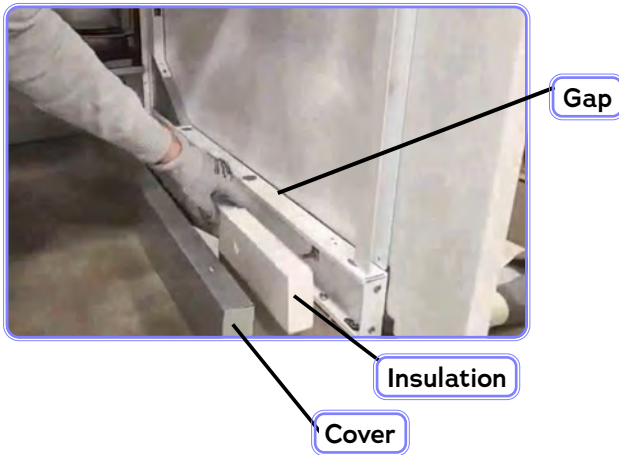
1. Use a square. It is important to make sure the end base uprights are 90° from the back-foam assemblies before installing the 6 anchor bolts in the concrete.
2. Use a hammer drill to drill ½" diameter holes 2¾" inches deep in the concrete. (3 on each end of the case, and 2 at each center location.) Clean out concrete dust from holes.
3. Install the ½" diameter anchor bolts. 3 bolts are installed on each end, 2 bolts are installed on each center frame. Tighten nuts to secure case to the floor.

(Case Ends not shown for clarity)



## BASE UPRIGHT INSULATION & COVER INSTALLATION

1. Install the lefthand insulation.
2. Install the lefthand lower cover using supplied painted screws.
3. Install the lefthand upper cover. Repeat for righthand side of case base upright.
4. Apply silicone sealant to gap.

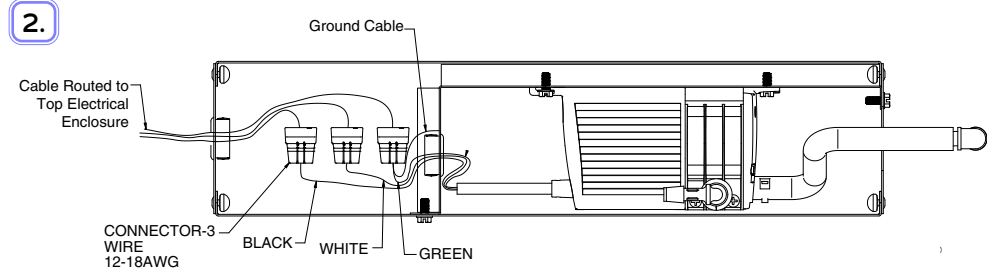
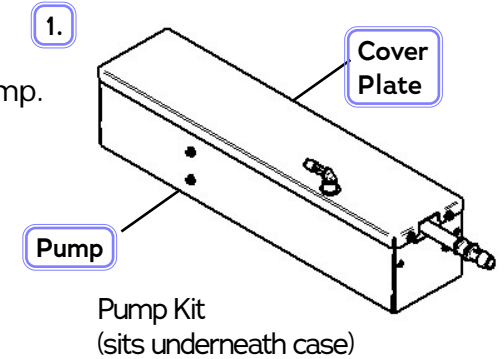


## INSTALLING PUMP & COLLECTION PAN KIT

The bottom drain for defrost water from the evaporator coil of the case is connected to an evacuation pump, which uses plastic drain tubing to pump the water to the condensate pan on top of the case. See next page for part list assembly.

Evaporation pan must be installed level and plugged into electrical receptacle. The tubing should be inspected through its entire length to ensure that it has not been cut, kinked, obstructed, or damaged during shipping and installation.

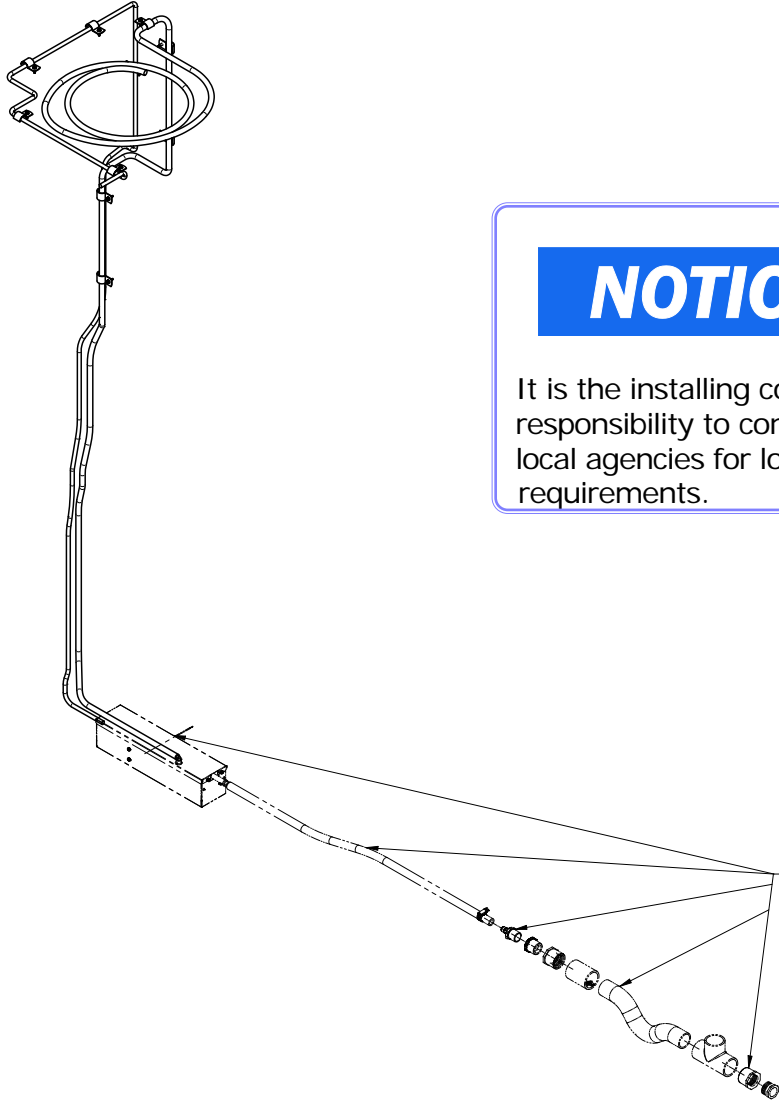
1. Remove cover plates.
2. Connect case wire whip to pump.



## INSTALLING PUMP & COLLECTION PAN KIT (CONTINUED)

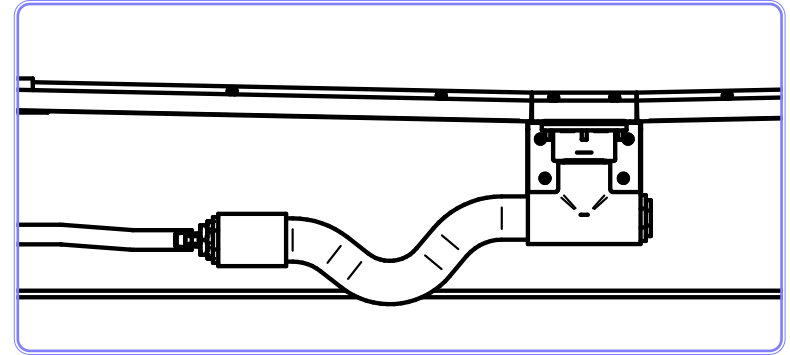
Pump Assembly Exploded View (shown below for reference)

The pump assembly is field installed. The pump wiring harness & water tube are factory installed.

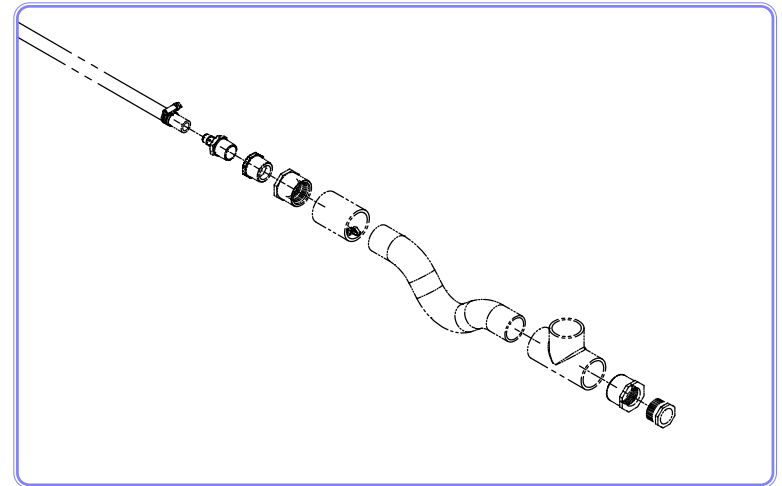


### NOTICE

It is the installing contractor's responsibility to consult local agencies for local code requirements.



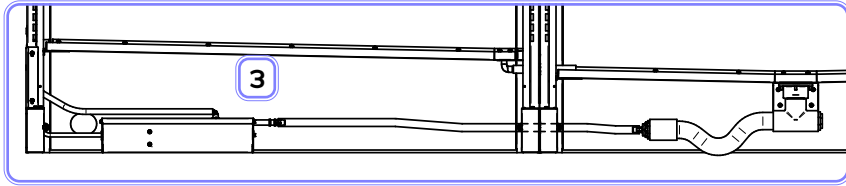
P-trap and Drain Tee



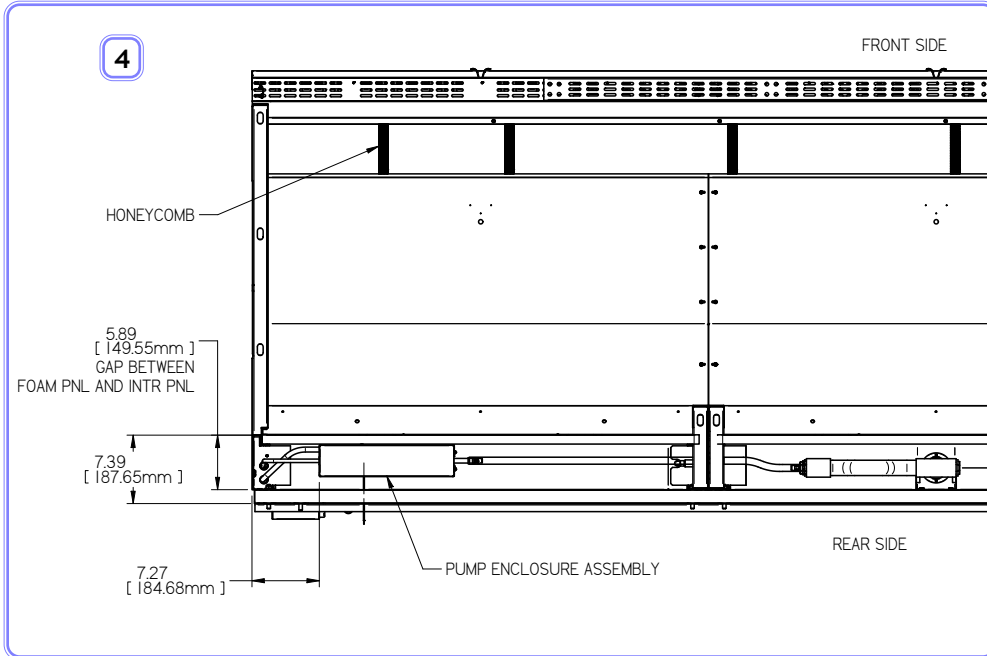
Exploded view of Parts

## INSTALLING PUMP & COLLECTION PAN KIT (CONTINUED)

- Attach hose to tee. Insert opposite end of drain hose to barb of pump assembly



- Place pan underneath interior back panel as shown below.



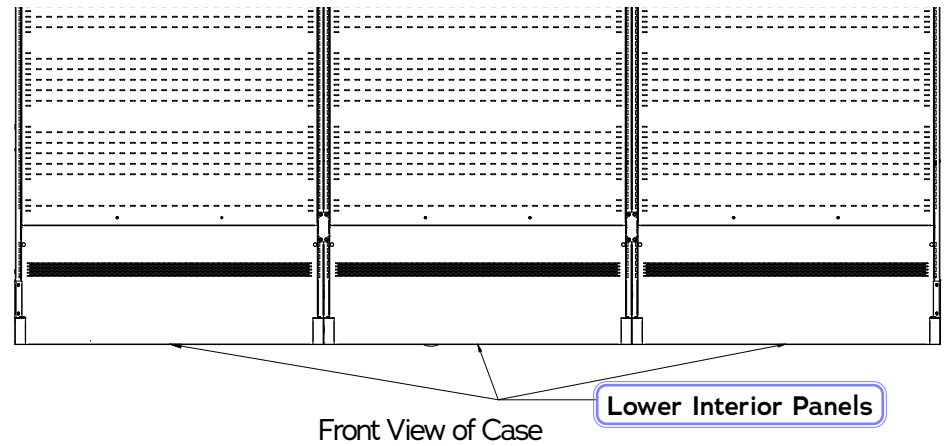
- Connect tubing to condensate pan, which is to be located on top of the case. See Page 2-2 of this manual for location of top-mounted condensate pan.



Condensate Pan (Installed on Top of Case)

## INSTALLING LOWER INTERIOR PANELS

The interior back panels are packed separately with the case. The cutouts in the panel provide access to the valves, the pump and reservoir.

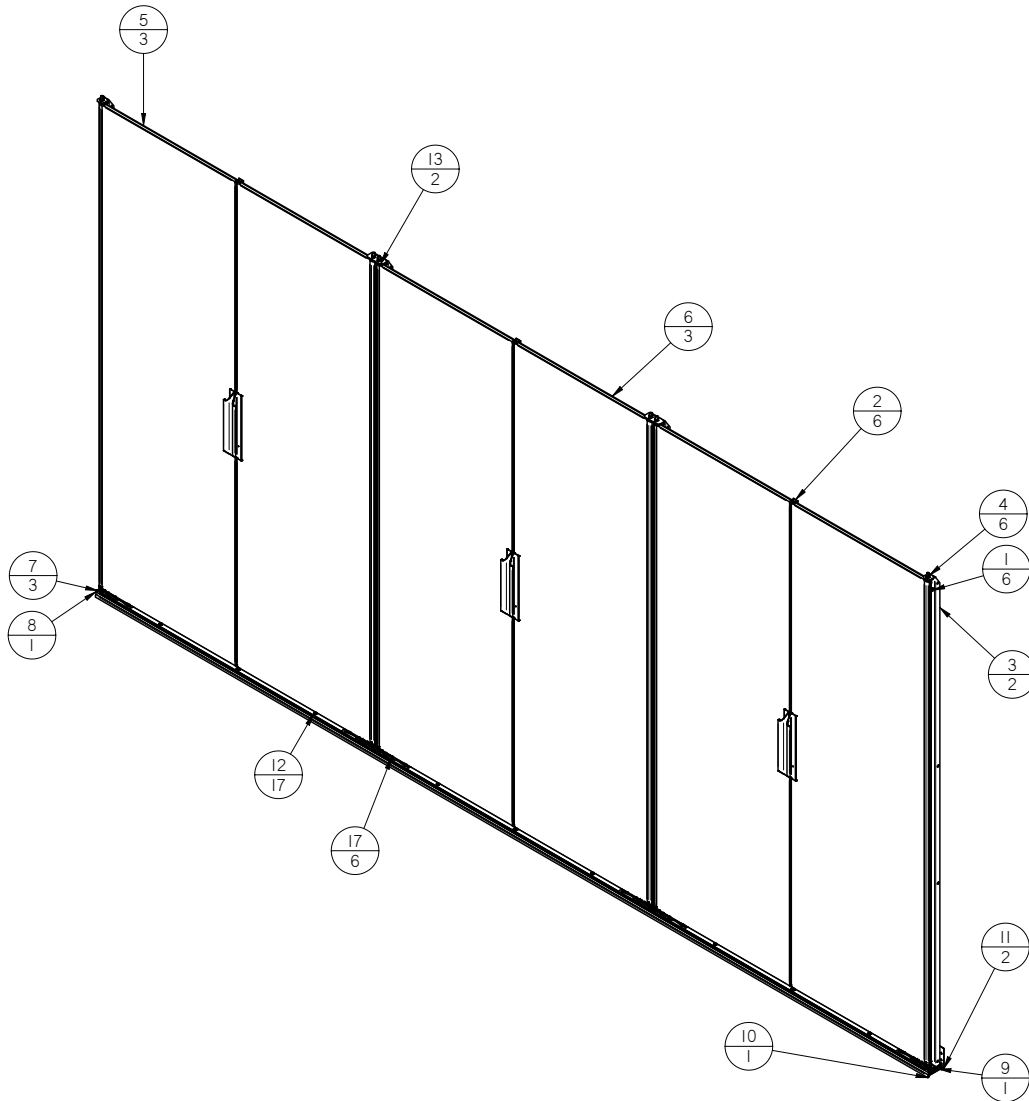


Front View of Case

# 6-DOOR INSTALLATION

## 6-DOOR PARTS LIST

Door Assembly Reference Parts for cases with 6-doors.



## NOTICE

6-door cases use 24" wide doors. 5-door cases have different door installation instructions. See page 1-15 for 5-door case installation.

### PART LIST - ASSEMBLY

ITEM	TITLE	QTY
1	SCREW-HEX WASHER HEAD 10X24X1/2 THREAD CUTTING	6
2	BUMPER-SQUARE	6
3	MULLION	2
4	BUSHING-GRAVITY TOP PIN	6
5	DOOR ASSY-LH GLASS 24X74 WITH SOLID PIN BLACK	3
6	DOOR ASSY-RH GLASS 24X74 WITH SOLID PIN BLACK	3
7	PLATE ASSY-BOTTOM HINGE MODULAR	3
8	RAIL-BOTTOM	1
9	SUPPORT-EXT RAIL	1
10	SUPPORT-BOTTOM RAIL	1
11	BRACKET-BOTTOM SET	2
12	SCREW 8-18 X 1 HEX WASHER HEAD STAINLESS STEEL BLACK #2	17
13	MULLION-CTR BLACK	2
14*	SUPPORT-RAIL	1
15*	WIPER-DOOR FRAME 73.5 BLACK	6
16*	WIPER-DOOR FRAME 46.3 BLACK	1
17	SCREW-.187 SHOULDER 8-32 LOW PROFILE TORX NYLON LOCK PILOT	6
18*	RETAINER-DOOR & WIPER 46.591 BLACK	2
19*	RETAINER-DOOR & WIPER 46.300 BLACK	1
20*	WIPER-DOOR FRAME 46.591 BLACK	2
21*	BUMPER-SQUARE ADHESIVE BACKED BLACK	6

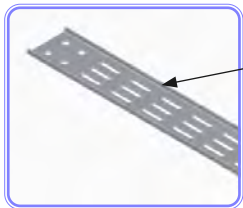
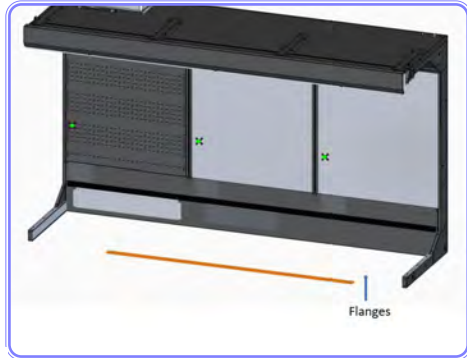
## DOOR INSTALLATION STEPS

Unpack door parts kit, and remove top of crate to access doors.

### NOTE:

Some parts shown may not be included on the case(s) to be installed. The illustrations are only for door installation purposes. Five door cases have separate instructions beginning on page, 1-17.

1. Locate Support Rail, and place it between the uprights of the case with flanges facing up.

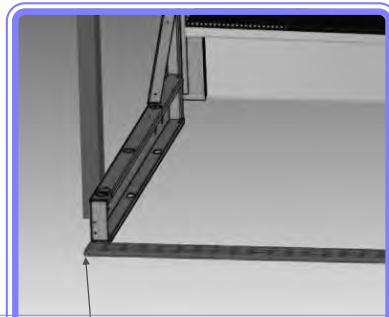


Support Rail

2. Place Bottom Support over Support Rail and center with the bottom uprights on case.

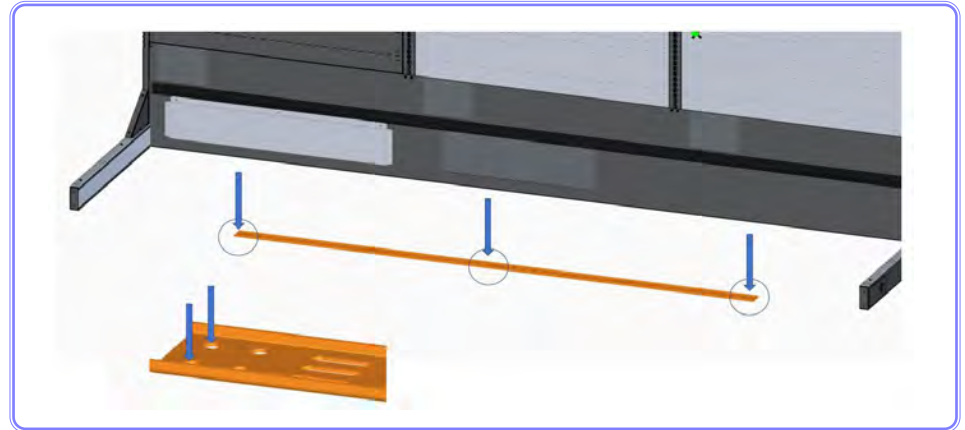


Bottom Support

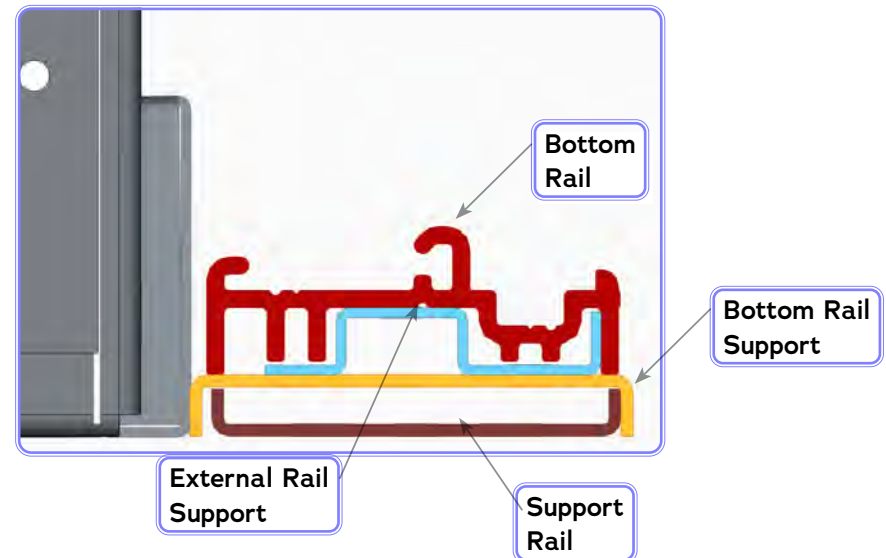


Center the Support Rail between the two bottom uprights. It should align with the end frame.

3. Remove the Bottom Support Rail. The support rail is now in the correct location and can be mounted to the floor in 3 locations with masonry screws in the locations shown by the arrows.



4. Reinstall Bottom Support over Support Rail. Place Exterior Rail Support on top of Bottom Rail Support. Place Bottom Rail over Exterior Rail Support.

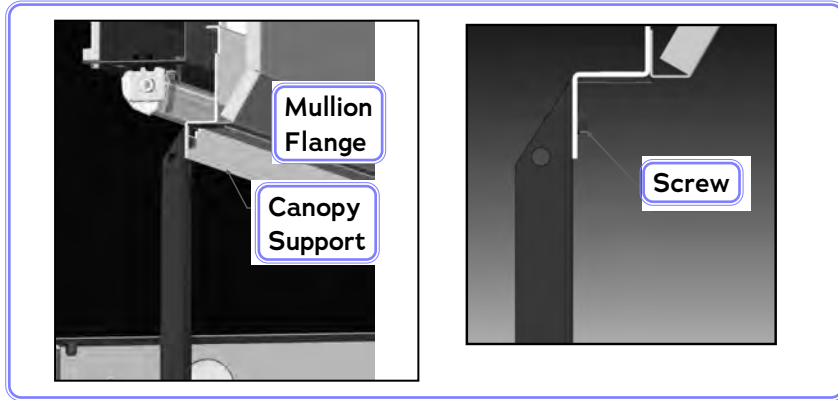


5. Install mullions onto Support Rail. Angle the mullion toward inside of the case and engage the flange in the extrusion (Step 1). Straighten mullion (Step 2).

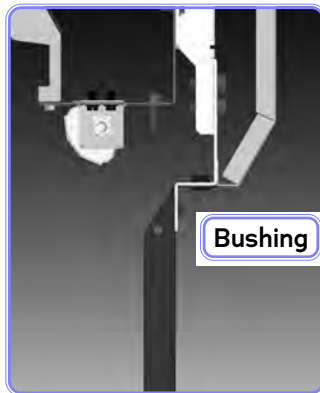
**NOTE:**

End mullions are thinner than center mullions.

6. Slide top flange on mullion through slot in canopy support. Attach with screw. Repeat for all center and end mullions.

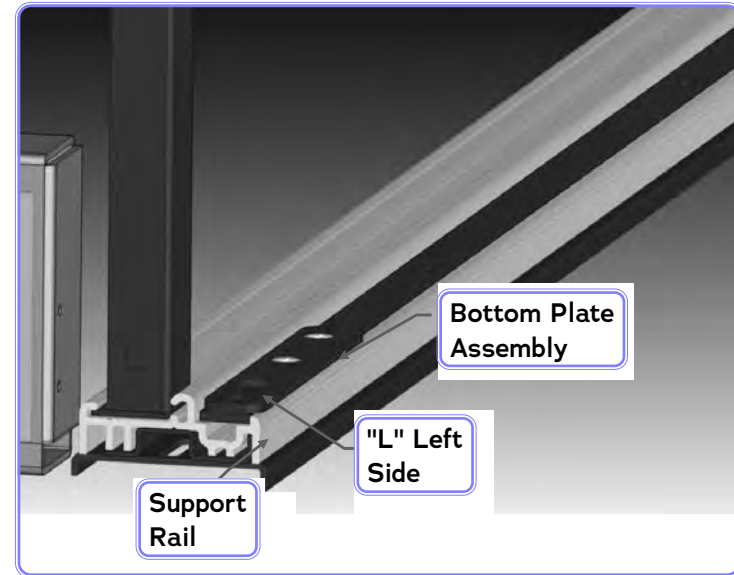


7. Install one bushing into each mullion.

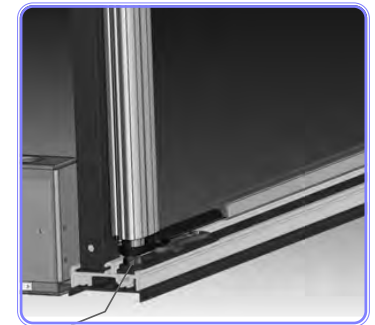
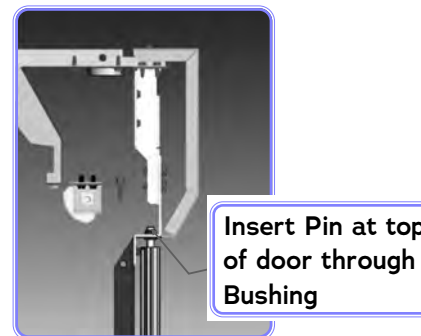


8. Install the bottom plate assembly in the Support Rail. The bottom plate assembly is marked "L" and "R". Frame of reference is standing in front of the case. Repeat for other openings.

Install one screw #8-18 x 1 (black) into center slot of each bottom plate assembly to secure.



9. Repeat the steps in the illustrations below for all doors.



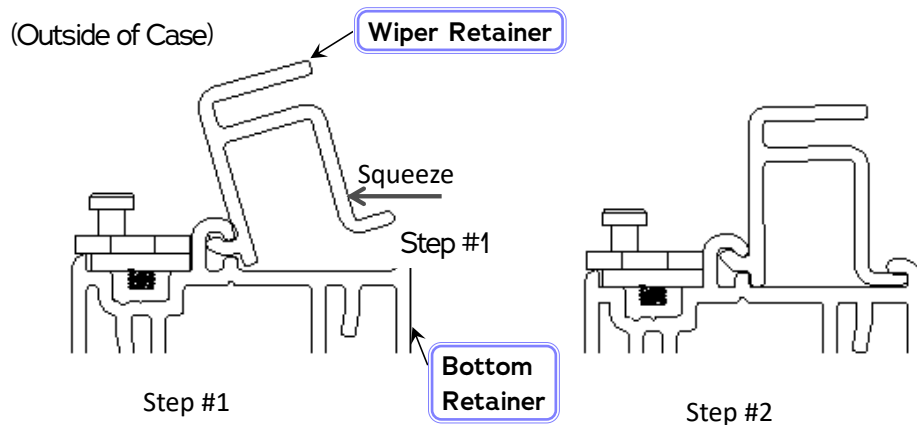
Seat Torsion Rod into plate assembly. Rotate door slightly to verify torsion rod is seated properly.

10. Use ½" open end wrench to add closing tension to the door. Typically 4 to 6 clicks is recommended. Do not exceed 6 clicks. Turn wrench toward the door handle to increase door tension.
- To remove tension from door, lift the door assembly out of the plate assembly. Do not attempt to turn rod away from the door handle.

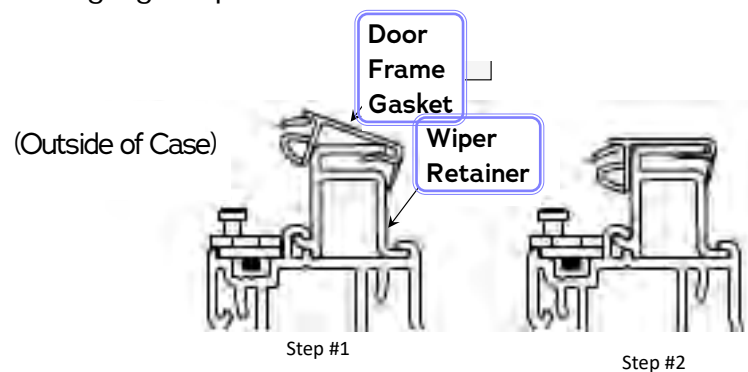


11. Insert wiper retainer at an angle into bottom extrusion as shown in Step #1

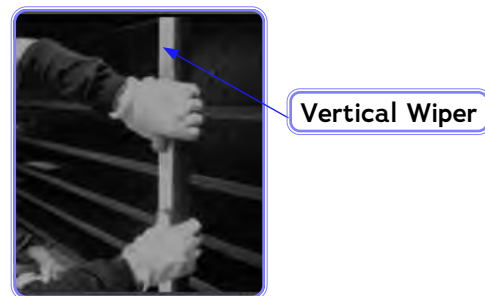
Squeeze the wiper retainer, and insert into bottom extrusion as shown in Step #2.



12. Install door frame gaskets to wiper retainer. Start the wiper by angling the part as shown.

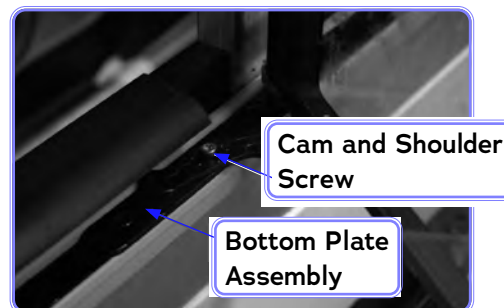


13. Attach vertical wipers to mullions. Start at the bottom, approximately ½" from bottom.



14. Attach cam and shoulder screw.

Insert the shoulder screw through the slot in the cam, and attach the screw to the bottom plate assembly. Use impact driver to seat screw. The torques should be approximately 19"/lbs. Never pry the cam open when installing. Prying the cam will permanently damage the cam.





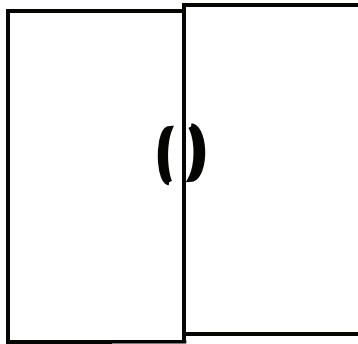
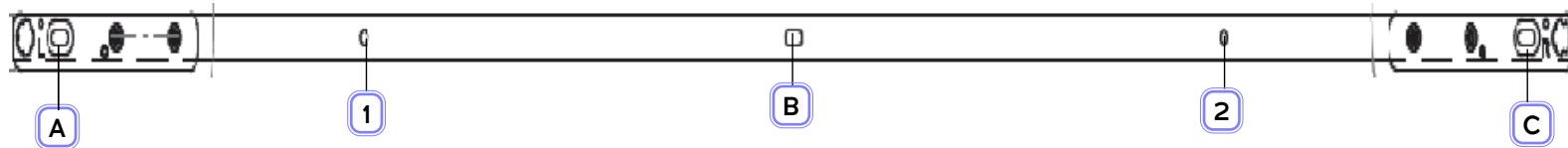
## ADJUSTING DOORS (6-DOOR CASES)

Leveling — Merchandisers must be installed level to ensure proper operation of the refrigeration system, and to ensure proper drainage of defrost water. Glass alignment is also affected with improper leveling of the merchandisers. All steps of setting, joining and case leveling is critical.

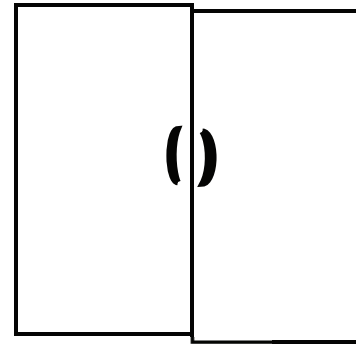
Attention to the glass position is also critical. Do not attempt to make glass adjustments prior to case leveling.

Door Adjustment — Loosen the screws A, B and C as shown below (Do not remove the screws completely). Slide the bottom plate left and right until proper alignment is achieved. Retighten the screws A, B and C. Install fasteners in locations 1 and 2 as shown below.

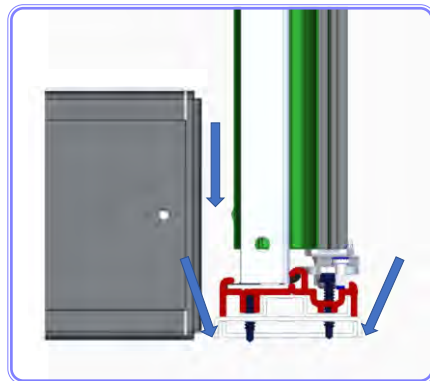
### ECOVISION DOOR ALIGNMENT - MODULAR BOTTOM HINGE PLATE



To Correct Shift the Bottom Plate to the Right



To Correct Shift the Bottom Plate to the Left



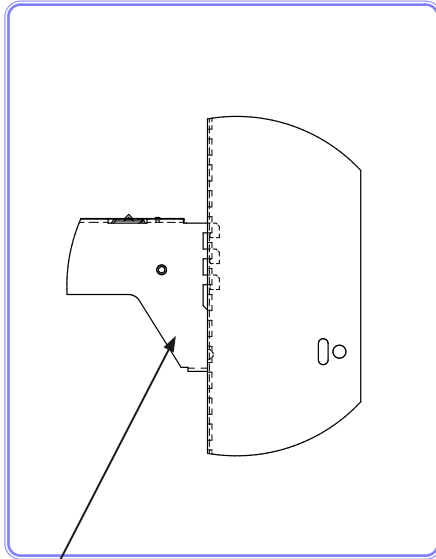
Sealing the Door Frame

Seal the inside and outside of Support where it meets the floor.

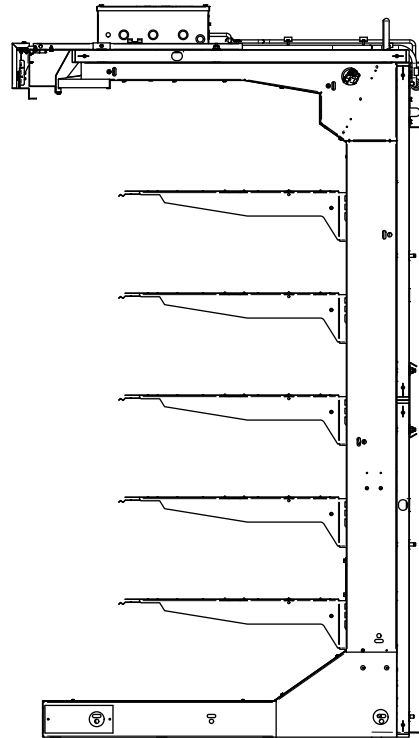
Seal any gaps between the end uprights.

## SHELF AND BASE PAN INSTALLATION

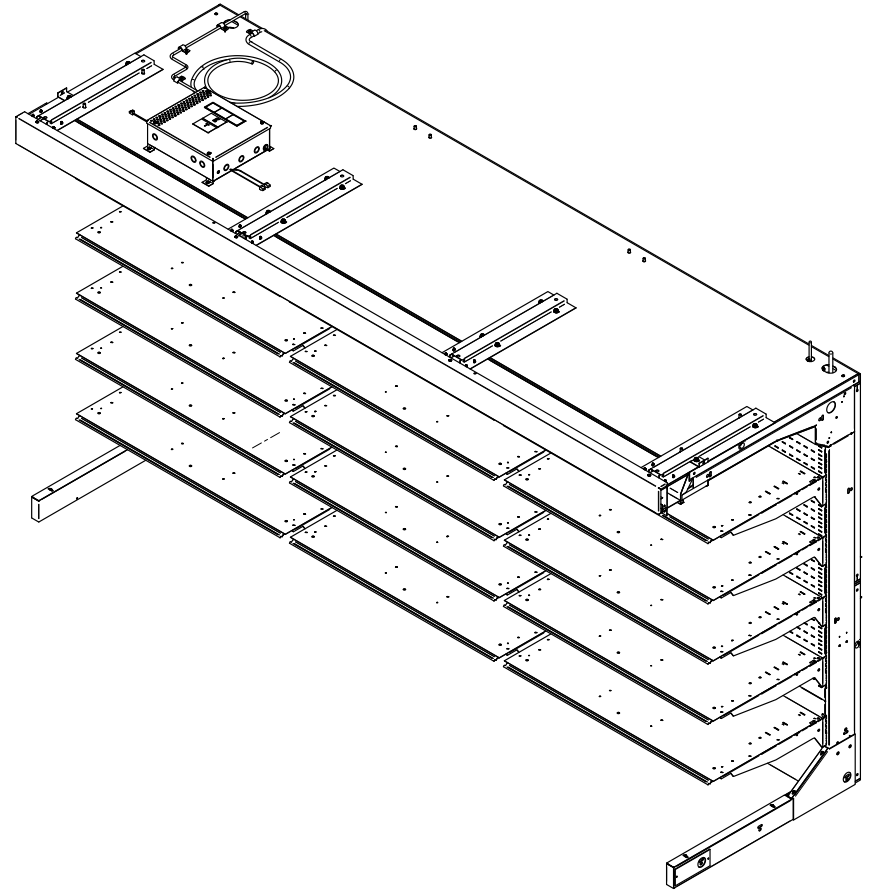
The standard shelf configuration is shown below.



**Install Shelves into Back Standards.  
Then, lift up and slide into Front  
Upright**



STANDARD SHELVES  
( DOORS NOT SHOWN )  
END VIEW

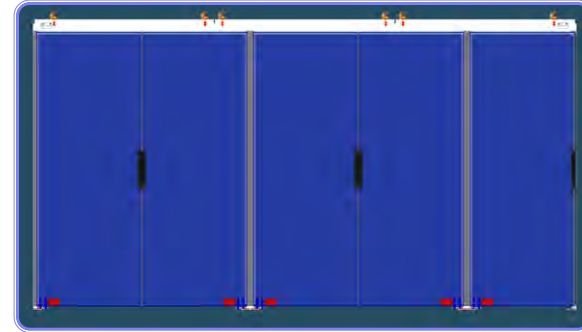


# 5-DOOR INSTALLATION

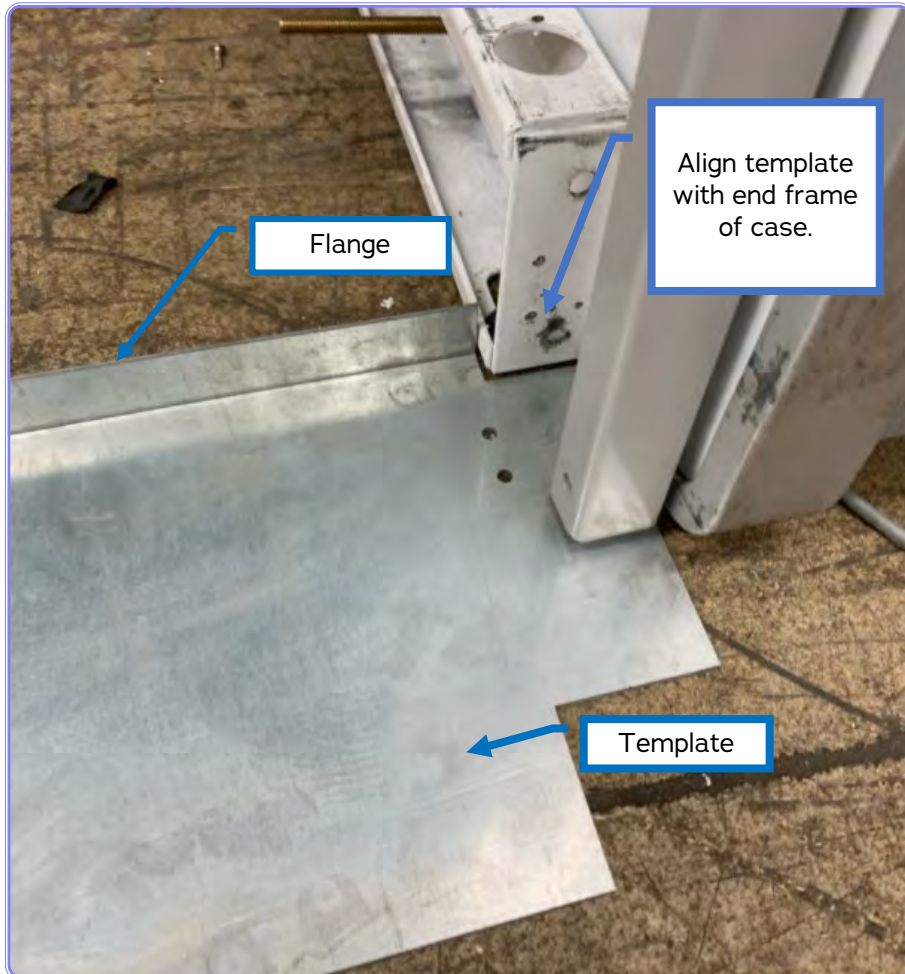
## DOOR INSTALLATION STEPS

Follow this procedure to install doors on a 5-door case:

1. Use template provided to drill holes for door mounting plates.
2. Place template on the floor with the flange toward the inside of the case.
3. Align the corner of the template with the end frames.



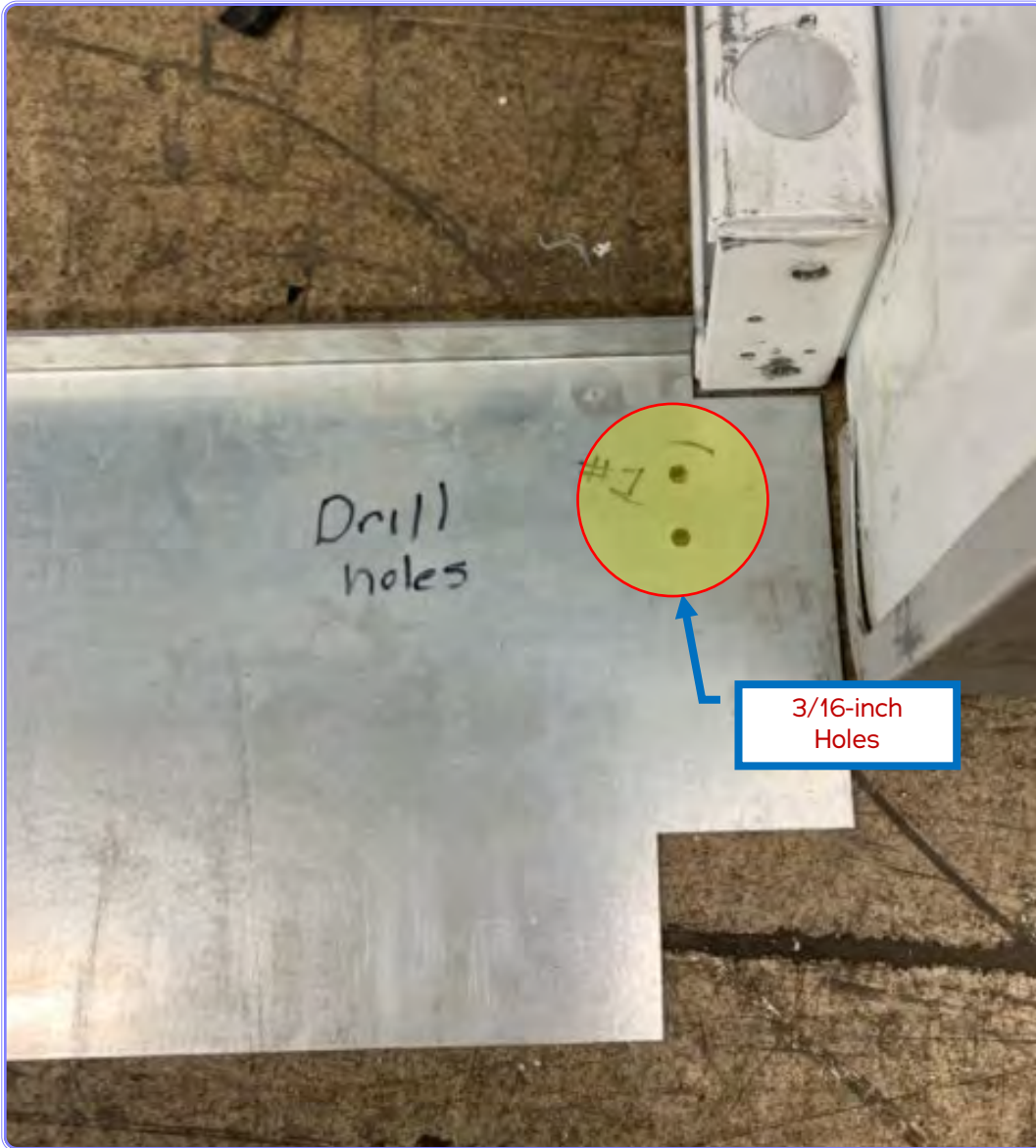
5-door case configuration



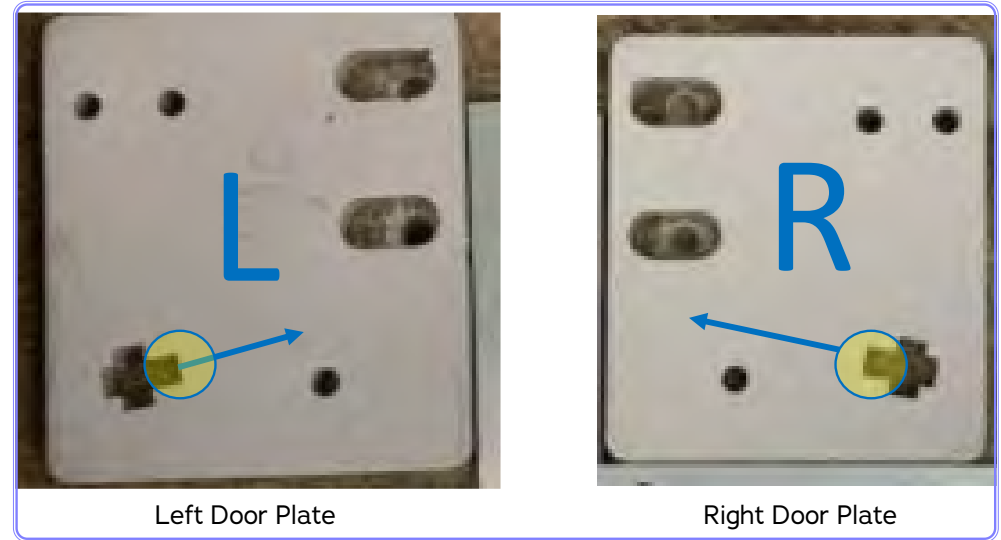
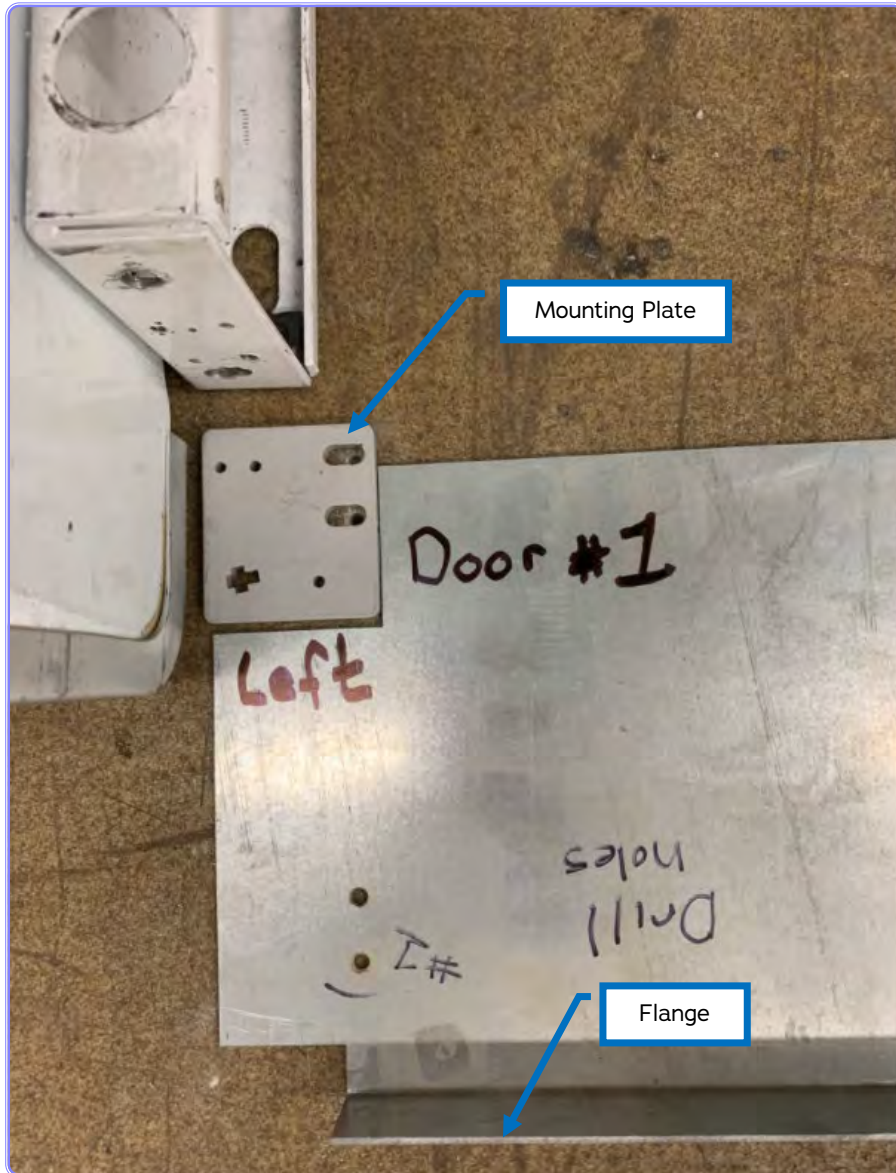
## NOTICE

5-door cases use 30" wide doors. 6-door cases have different door installation instructions. See page 1-9 for 6-door case installation.

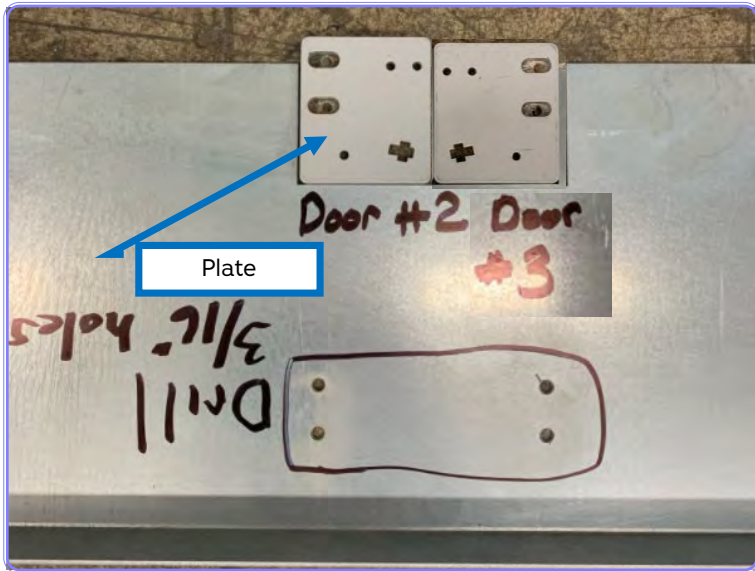
4. Drill 3/16 inch holes into floor identified on the template (10 holes total).



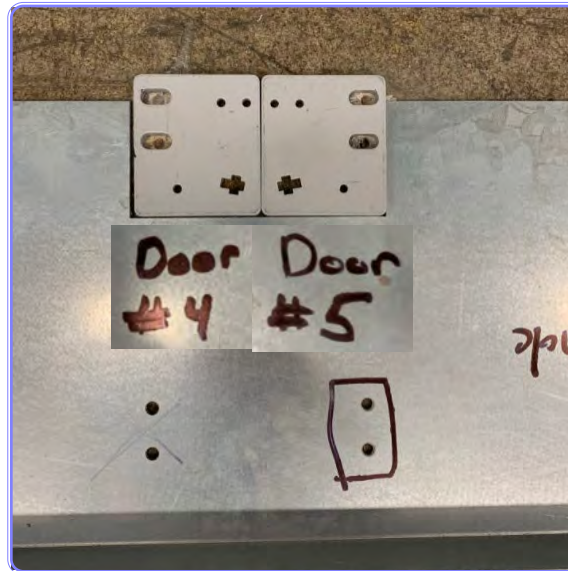
5. Flip the template over so the flange is to the outside of the case and pointing up.
6. Position the mounting plate over the holes, and align the plate with the template, starting at the left side of the case.
7. The templates are for both left and right parts but must be flipped over to accomplish this.



The longer leg of the cross feature (red arrow) always points toward the inside of the case.



Repeat for the 2nd & 3rd door (from the left). Only one plate is required in this position.



Repeat for doors 4 & 5.



No door goes here (end mullion will be installed on top of hinge plate).

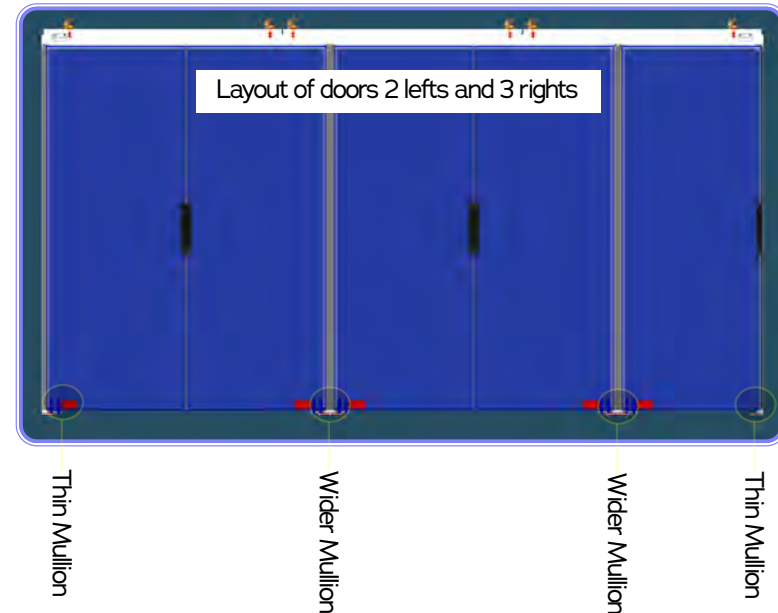


1/4 x 1 1/4 inch screws



Install 1/4 inch Tapcon screws (two screws per plate). Do not tighten until doors are installed and adjusted.

8. Install Mullions: There are four mullions. Three end mullions (1.1 inch wide), and one center mullion (2.7 inches wide). Insert center mullion flange through canopy support.

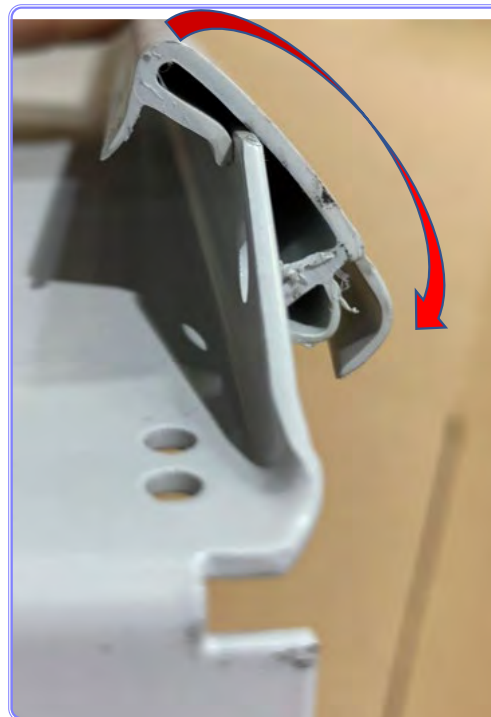


9. Install 3 remaining mullions using #8-18 x 1/2-inch sheet metal screws.
10. Apply 1/2 inch gasket to the two mullions that are against the end panels.
11. Insert bushing into hole in each mullion.



Installed Bushing

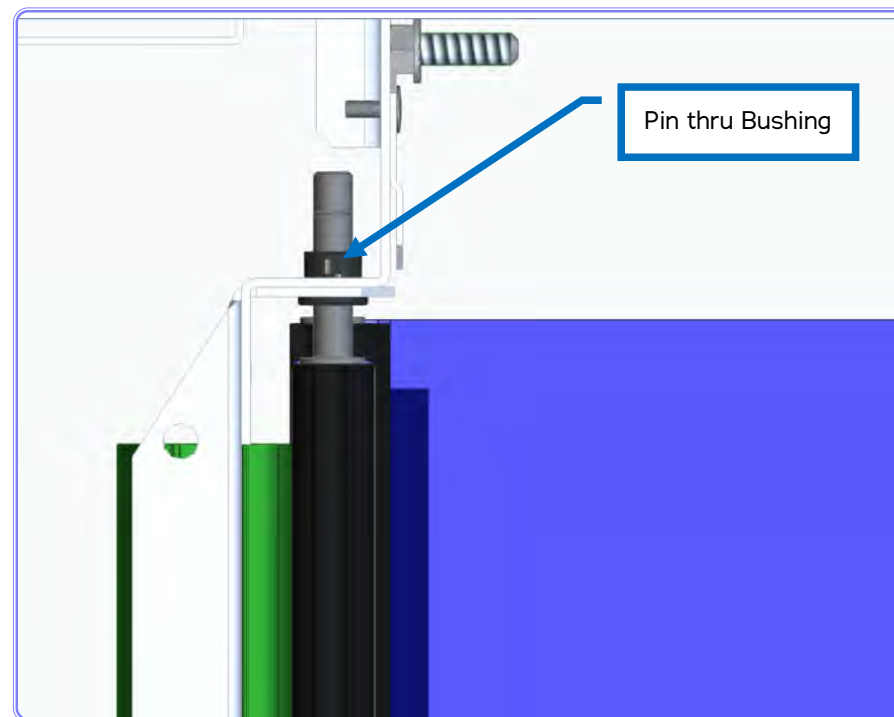
12. Attach Bottom of each mullion using 10-24 x 1/2 Machine screw.  
Do not secure until doors are installed and leveled.
13. Install gasket on each mullion. Start at bottom of the mullion.  
Place curved section onto bend of the mullion.
14. Push gasket until it wraps around mullion.



Installed Gasket



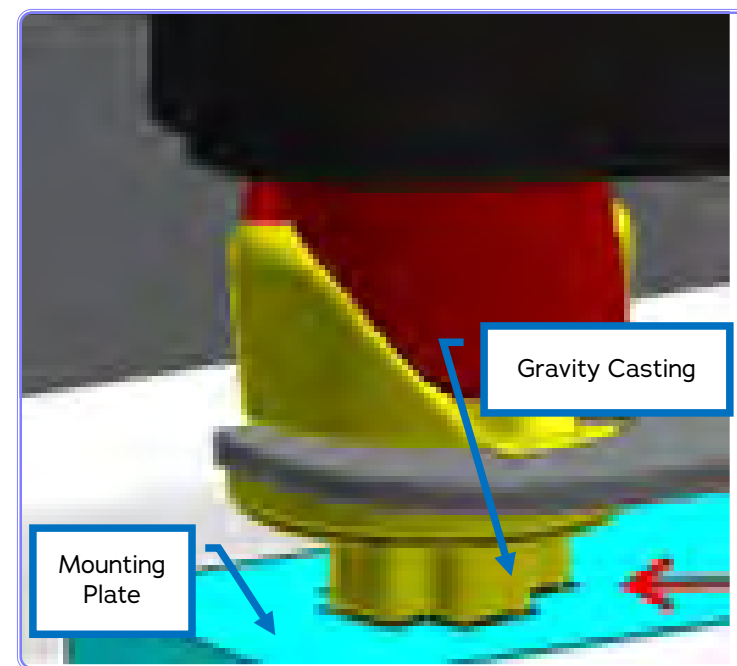
15. Remove doors from Box – Do not use the handle to lift the doors.  
Do not set the doors directly on floor or they may shatter.
16. Insert pin at top of door through bushing in mullion.



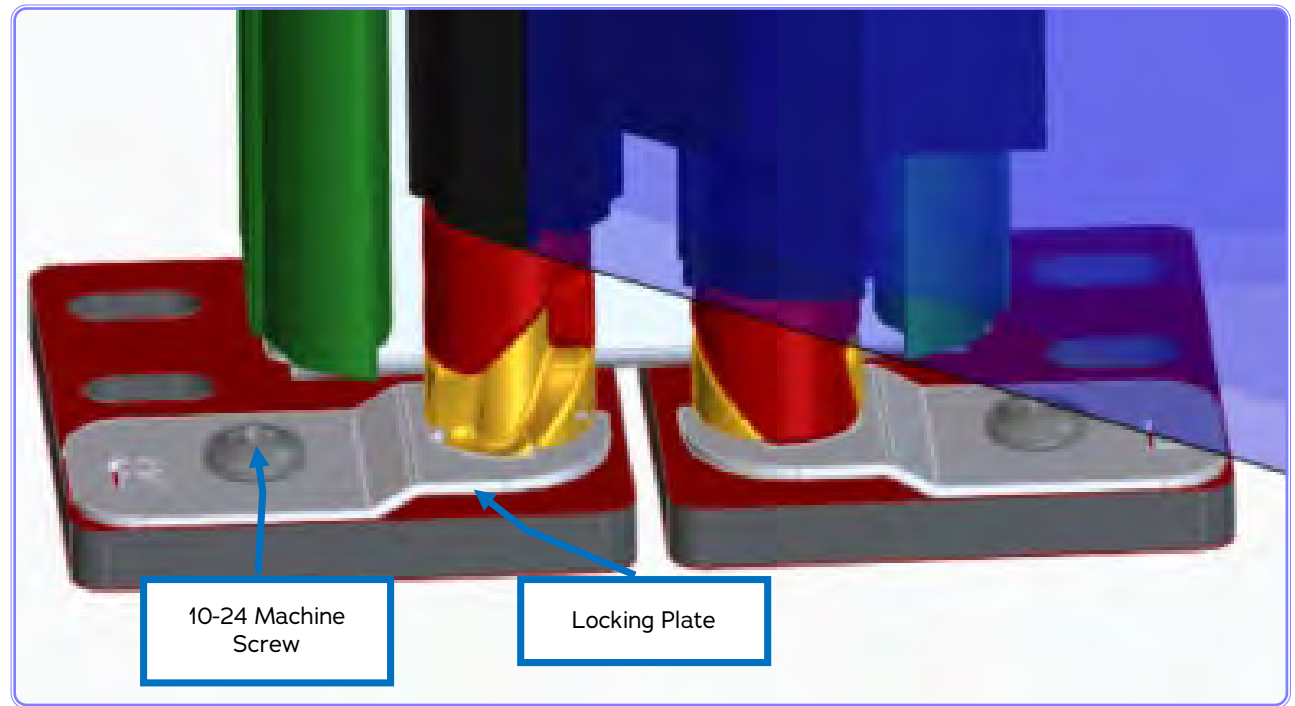
17. Align the gravity hinge (cross feature) with the cross feature in the mounting plate. To get the gravity hinge to seat properly in the mounting plate it may require manual manipulation.

**NOTE:**

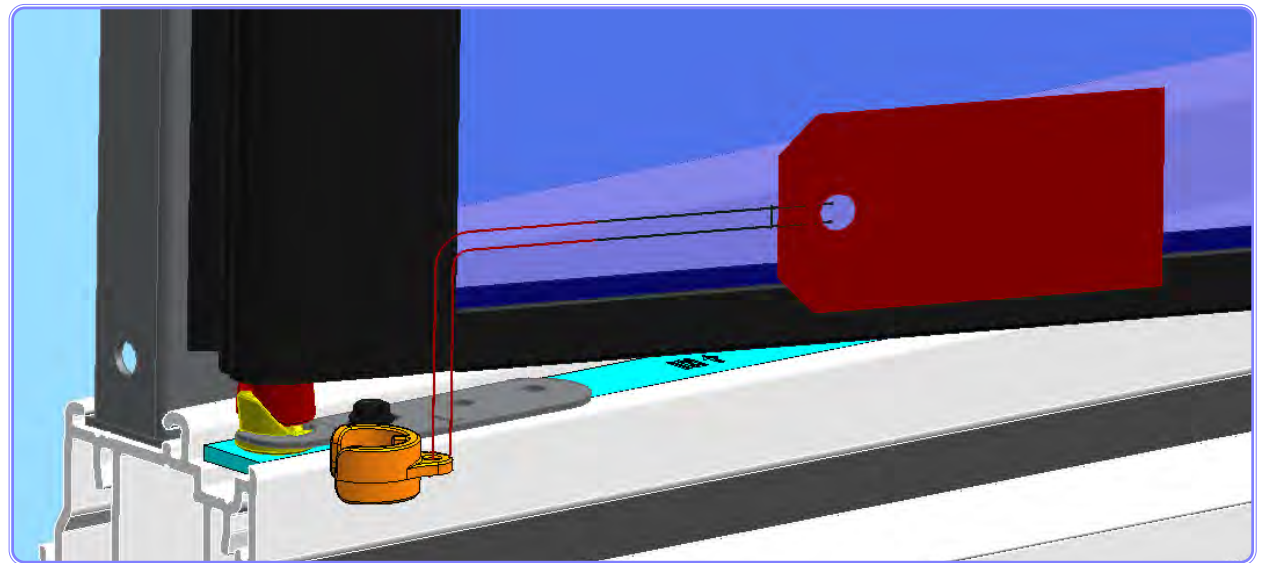
If the casting is not properly seated the door may fall out.



18. Once the door is seated properly, use #10-24 machine screws to fasten the locking plate down. This plate secures the door.

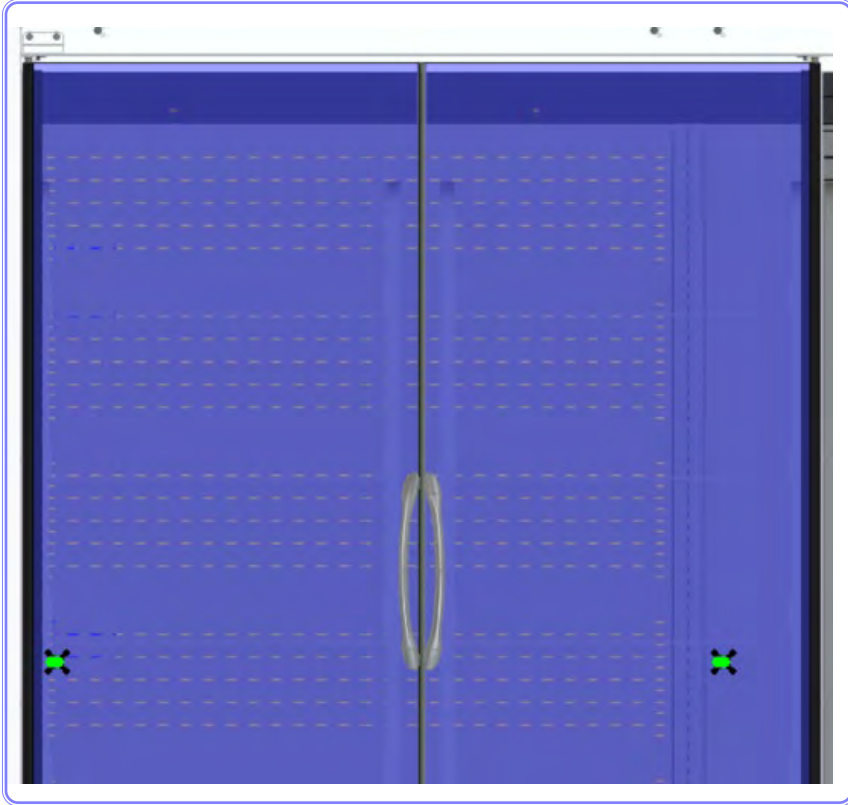


19. Remove the clip by pulling the tag. The door will close.



## ADJUSTING DOORS (5-DOOR CASES)

Tops of doors should be even with each other. Adjust as necessary. Secure the Tapcon mounting screws. Perfectly even doors may not be possible, depending on the levelness of the floor.

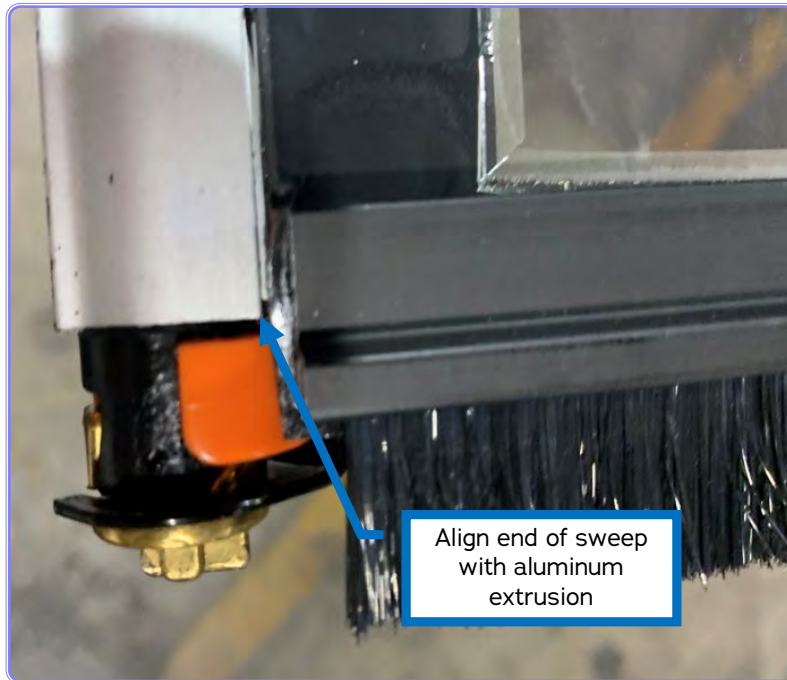
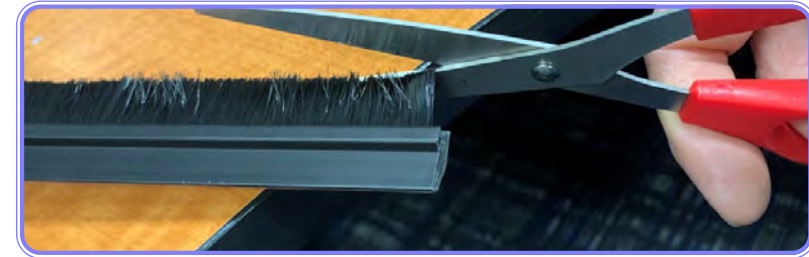


## INSTALLING DOOR SWEEPS

Get door sweeps and remove backing tape. The sweeps are mounted to the inside of the door.

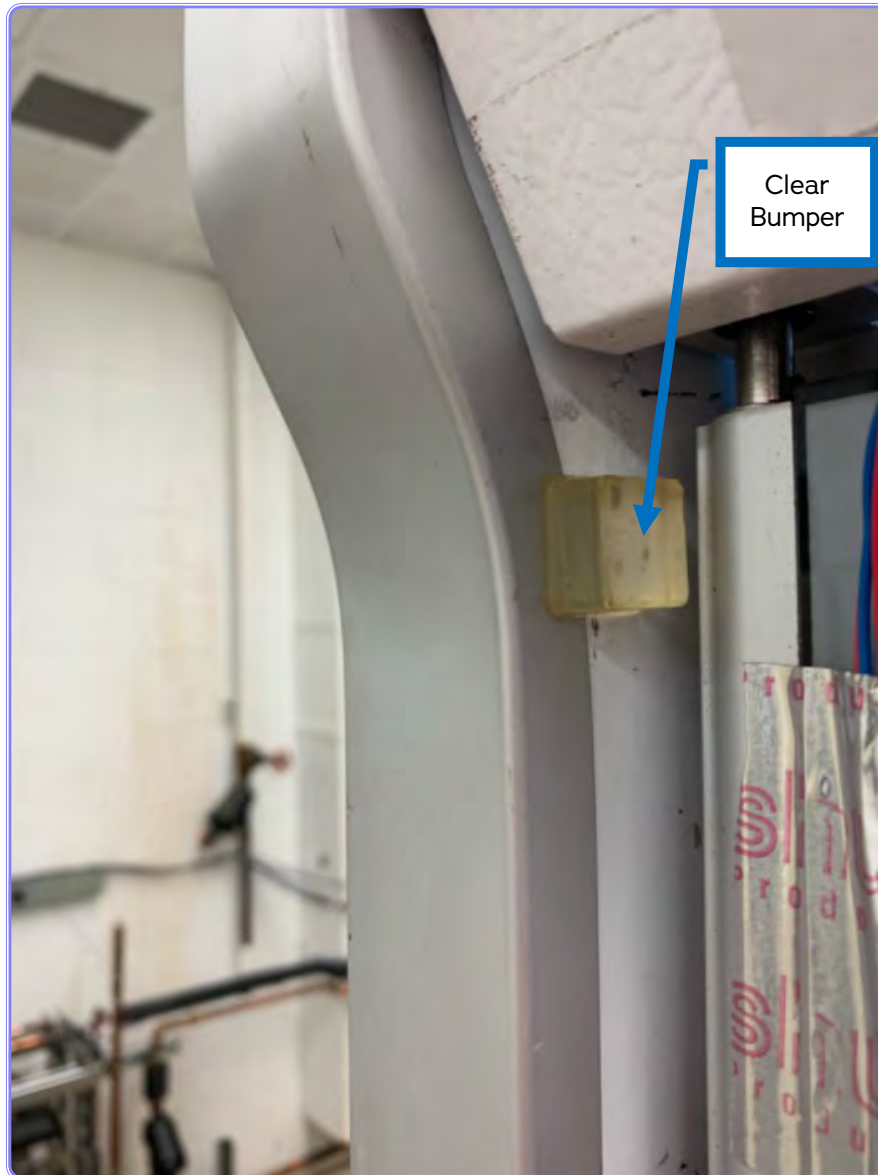
From the inside of the case with the door closed, apply the sweeps to the bottom of the door. The goal is to barely touch the floor. Too much of a gap between the floor and sweep will allow air infiltration into the case and too much contact with the floor will prevent the door from closing.

Cycle the door to make sure it opens and closes properly. Uneven floors may cause the door to hang up. If doors hang up, mark the location on the wiper and trim as little as possible from the bristles to allow the door to function correctly.



## INSTALLING DOOR BUMPER

Place clear bumper on each end panel towards the top of the door.  
This protects the door from contacting the end panel.



# REFRIGERATION / ELECTRICAL

## REFRIGERANT

The correct type of refrigerant will be stamped on each merchandiser's serial plate. The merchandiser refrigeration piping is leak tested, factory sealed and pressurized. See the merchandiser's Technical data sheet for refrigerant settings and defrost requirements.

Bring merchandisers down to the operating temperature listed on the data sheet.

Each four-foot section has its own evaporator coil and pre-set thermostatic expansion valve or (TEV).

Do not remove the cap on the TEVs. This cap is to be removed only for valve disassembly. Removal of this cap during merchandiser maintenance will result in refrigerant loss unless the system is first isolated and the refrigerant recovered.

The TEV has been factory set to provide the recommended performance settings as specified on the merchandiser data sheets.

### **WARNING**

— LOCK OUT / TAG OUT —

- » To avoid serious injury or death from electrical shock, always disconnect the electrical power at the main disconnect when servicing or replacing any electrical component. This includes, but is not limited to, such items as doors, lights, fans, heaters, and thermostats.

### **CAUTION**

- » Removal of the TEV cap will result in refrigerant loss unless the system is first isolated and the refrigerant recovered.

### **WARNING**

- » Refrigeration lines are under pressure and should be depressurized before attempting to make any connections.
- » Refrigerant vapor is hazardous to your health and can cause death.
- » Avoid breathing refrigerant and lubrication vapor or mist. Exposure may irritate eyes, nose and throat. If accidental system discharge occurs, ventilate work area before resuming service.
- » Always wear safety goggles and protective gloves when working with refrigerants. Contact with refrigerant may cause injury. Disconnect hoses with extreme caution! All hoses may contain liquid refrigerant under pressure.
- » Be sure that any room where you are working is thoroughly ventilated, especially if a leak is suspected.
- » Read all safety information regarding the safe handling of refrigerant and refrigerant oil, including the Material Safety Data Sheet. MSDS sheets can be obtained from your refrigerant supplier.

## ELECTRICAL CONNECTIONS

All wiring must be in compliance with NEC and local codes. All electrical connections are to be made in the electrical junction box. Circuits must be sized for all case components. See next page for wiring routes.

## MERCHANDISER ELECTRICAL DATA

Technical data sheets are included with this manual. The data sheets provide merchandiser electrical data, electrical schematics, parts lists and performance data. Refer to merchandiser serial plate or case data sheets for electrical information.

## FIELD WIRING

Field wiring must be sized for component amperes stamped on the serial plate. Actual ampere draw may be less than specified. Field wiring from the refrigeration control panel to the merchandisers is required for defrost termination thermostats and for optional refrigeration thermostats. When multiple merchandisers are on the same defrost circuit, the defrost termination thermostats are wired in series.

## IDENTIFICATION OF WIRING

Leads for all electrical circuits are identified by colored plastic bands. These bands correspond to the color code sticker (shown below) located inside the merchandiser's raceway cover.

**Always check the serial plate for component amperes.**

### WIRING COLOR CODE

Leads for all electrical circuits are identified by a colored plastic band: neutral wire for each circuit has either White insulation or a White plastic sleeve in addition to the color band.

PINK.....	REFRIG. THERMOSTAT LOW TEMP.	ORANGE OR	
LIGHT BLUE.....	REFRIG. THERMOSTAT NORM TEMP.	TAN	LIGHTS
DARK BLUE.....	DEFROST TERM. THERMOSTAT	MAROON	RECEPTACLES
PURPLE.....	CONDENSATE HEATERS	YELLOW	DEFROST HEATERS 120V
BROWN.....	FAN MOTORS	RED	DEFROST HEATERS 208V
GREEN*.....	GROUND	*EITHER COLORED SLEEVE OR COLORED INSULATION	

**ELECTRICIAN NOTE: Use copper conductor wire only.**

**MERCHANDISER MUST BE GROUNDED**

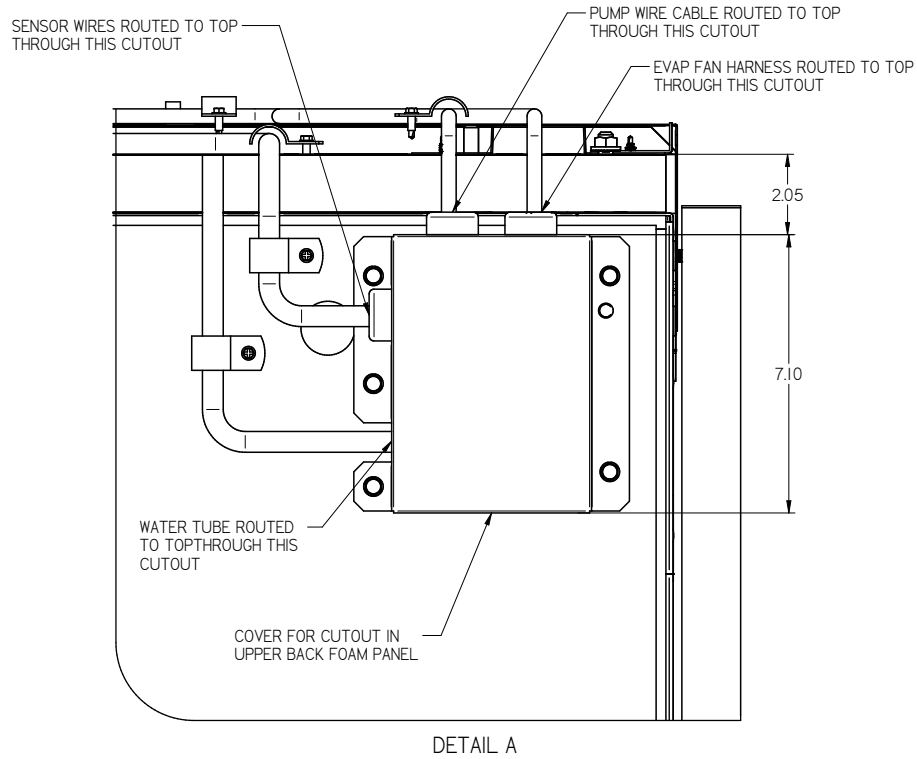
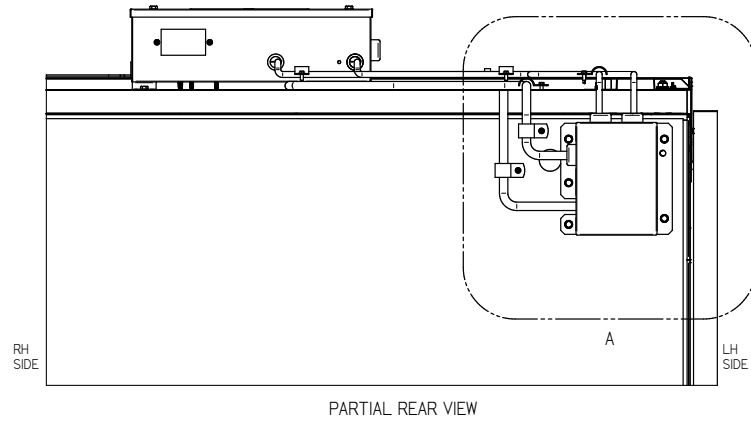
**THESE ARE MARKER COLORS WIRES MAY VARY.**

## WARNING

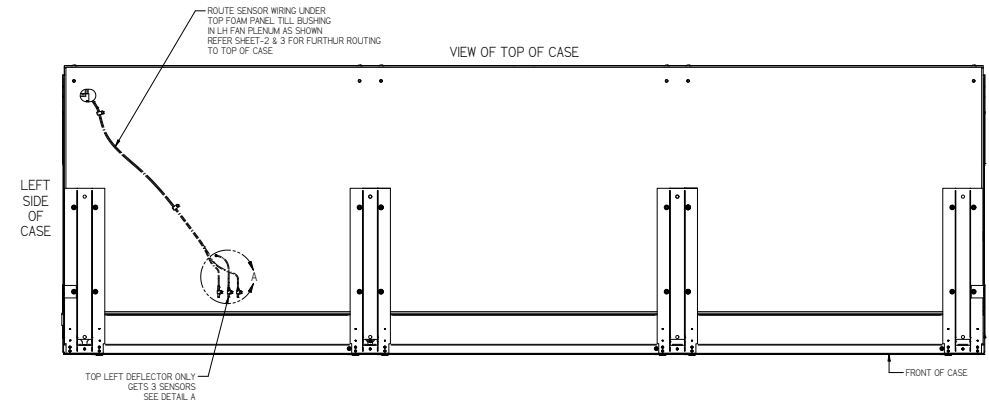
— LOCK OUT / TAG OUT —

- » To avoid serious injury or death from electrical shock, always disconnect the electrical power at the main disconnect when servicing or replacing any electrical component. This includes, but is not limited to, such items as doors, lights, fans, heaters, and thermostats.

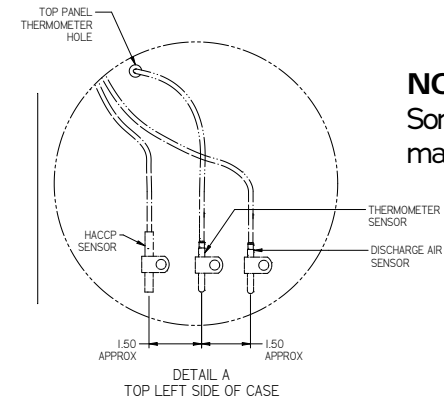
## REAR JUNCTION BOX WIRING ROUTE



## SENSOR WIRING ROUTE



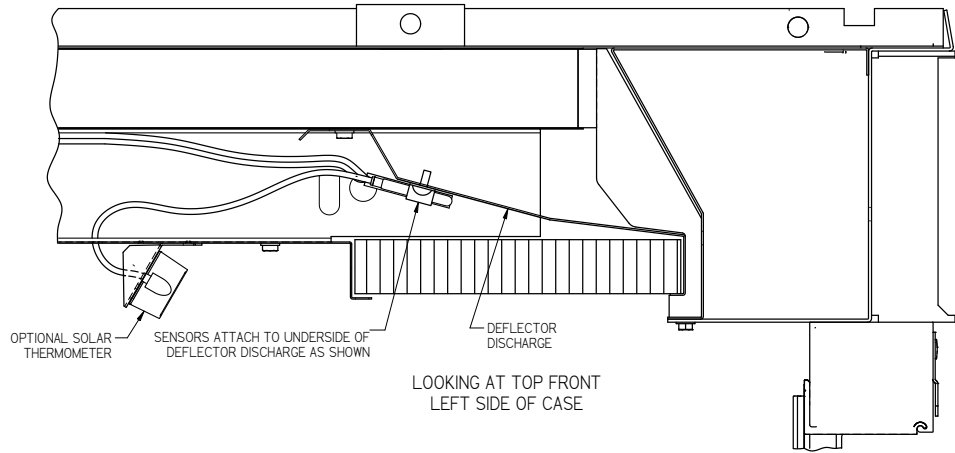
TOP LEFT DEFLECTOR ONLY GETS 3 SENSORS SEE DETAIL A



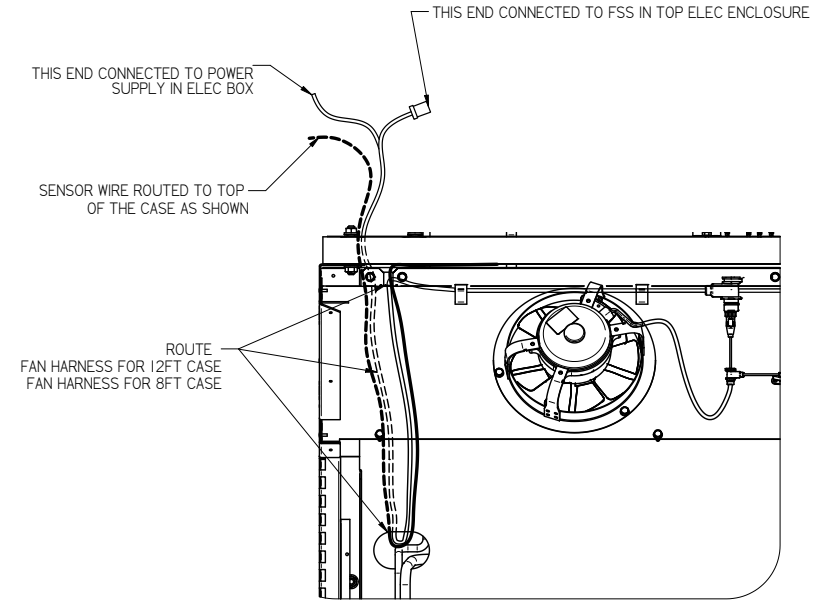
**NOTE:**  
Some applications for this case may only have 1 sensor.



## SENSOR CANOPY LOCATION



## FAN WIRING ROUTE



# START UP / OPERATION

## PRIOR TO START-UP CHECK LIST

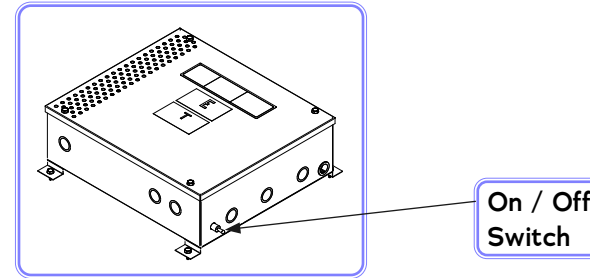
1. Is the case connected to its proper nameplate power supply?
2. Is there power on at the breaker panel and the control box?
3. Are there any leaks condensate water leaks?
4. Are the doors properly leveled and self closing? Check each door at the fully open position and at 1-inch open position.
5. Do evaporator fans rotate freely? Are they plugged in? (Fans are behind interior back panel; manually rotate each fan to confirm free rotation and visually inspect that the electrical connections are secure.

## STARTUP AND OPERATION

See the merchandiser's Technical Data Sheet for refrigerant settings and defrost requirements. Bring merchandisers down to the operating temperatures listed on the data sheet. Once the cases are running, listen for any unusual sounds or events. Examples include: evaporator fan blade interference. The discharge air output at the top inside front of the case (honeycomb area) should be relatively even across the length of the case. VERIFY there are no leaks at connections for the waste condensate water.

## 12 hours after startup checklist

1. Check case temperature.
2. Check water connections around the pump and pan for leaks or accumulation of water.
3. Inspect for any water accumulation due to incorrect or unsealed penetrations where electrical or other lines pass through insulated walls of the case.
4. Check the door operation again to ensure doors open and close properly once the case is down to operating temperature.
5. Check that all inspection plates and covers have been properly replaced.

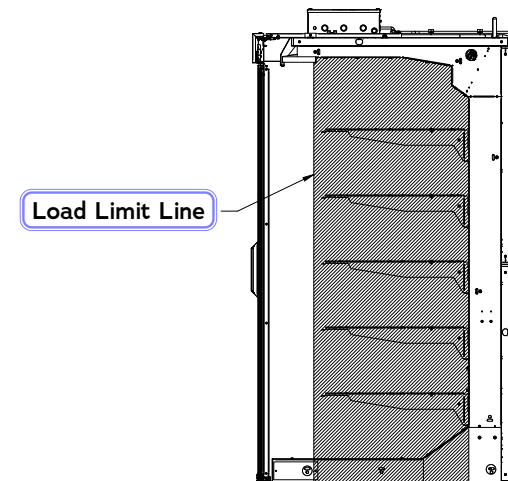


## STOCKING

Products should not be placed in cases until all refrigeration controls have been adjusted and merchandisers are at proper operating temperature. Proper rotation of product during stocking is necessary to prevent product loss. Always bring the oldest product to the front and set the newest to the back.

Air discharge and return flues must remain open and free of obstruction at all times to provide proper refrigeration and air curtain performance. Do not allow product, packages, signs, etc. to block these grilles.

Do not prop doors open while stocking. Keep the doors closed as much as possible to prevent coil frosting and high merchandiser temperatures.



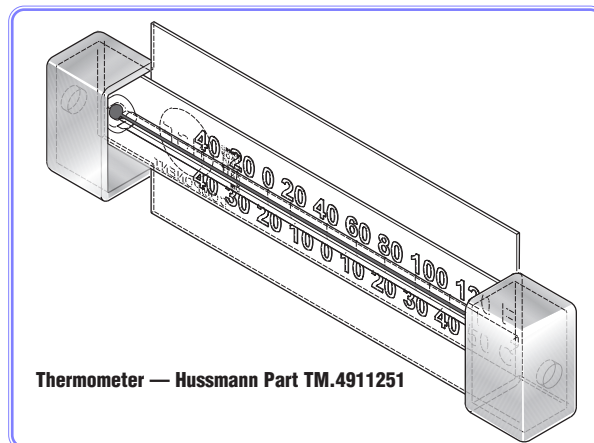
## SAFETY INSTRUCTIONS

- » Merchandiser must operate for 24 hours before loading product!
- » Regularly check merchandiser temperatures. Do not break the cold chain. Keep products in freezer before loading into merchandiser.
- » Medium temperature merchandisers are designed for loading ONLY pre-chilled products. Low temperature merchandisers are designed for loading ONLY frozen products.

## INSTALLING FDA/NSF REQUIRED THERMOMETER

The following pages provide the same information that ships with the thermometer. This requirement does not apply to display refrigerators intended for bulk produce (refer to Page 1-1 for definitions. Please note that the tape cannot be exposed after installation. A digital thermometer may be ordered as an optional kit. Suggested mounting locations for EGP cases is on the interior end panel in a location where the temperature can easily be seen.

This is an NSF-7 & US FDA Food Code Required Thermometer



## Important – Please read!

This thermometer is provided in response to United States  
Food and Drug Administration (US FDA) Food Code [ <http://www.fda.gov/> ]  
and  
National Sanitation Foundation (NSF / ANSI) Standard 7 [ <http://www.nsf.org/> ]

Each installation will be different depending on how the unit is stocked, shopping patterns in the department and ambient conditions of the store. The suggested locations provided herein are possible locations. It is the responsibility of the purchaser / user to determine the location within the food storage area of the unit that best meets the code requirements above.

The thermometer may need to be moved several times to find the warmest location. Mounting options include flexible plastic for price tag molding application, magnet applied to back of flexible plastic for steel end wall, and double stick tape. Tape must not be exposed after installation.

Questions about either code should be addressed to local agencies or other appropriate officials.

**Keep with merchandiser**

**or give to store manager.**

**DO NOT DESTROY.**

# MAINTENANCE

## CARE AND CLEANING

Long life and satisfactory performance of any equipment is dependent upon the care it receives. To ensure long life, proper sanitation and minimum maintenance costs, these merchandisers should be thoroughly cleaned, all debris removed and the interiors washed down, weekly.

### Fan Plenum

The fan plenum is located behind the interior back panels. Remove the back panels to get access to the fans.

### ⚠ CAUTION

» Shut fans OFF during cleaning process.

### Glass Doors

Wipe inside of glass with isopropyl alcohol and a soft cloth. Allow surface to dry before closing door. Use of other cleaners or abrasives may damage the surface, and/or void the warranty. Refer to manual that ships with doors.

### Interior Surfaces

The interior surfaces may be cleaned with most domestic detergents, ammonia based cleaners and sanitizing solutions with no harm to the surface.

### Exterior Surfaces

The exterior surfaces should be cleaned with a mild detergent and warm water to protect and maintain their attractive finish. Never use abrasive cleansers or scouring pads.

### ⚠ CAUTION

» Do not use HOT water on COLD glass surfaces. This can cause the glass to shatter and could result in personal injury. Allow glass fronts, ends and service doors to warm before applying hot water.

### Do Not Use:

- **Abrasive cleansers and scouring pads, as these will mar the finish.**
- **Coarse paper towels on coated glass.**
- **Ammonia-based cleaners on acrylic parts.**
- **Solvent, oil or acidic based cleaners on any interior surfaces.**

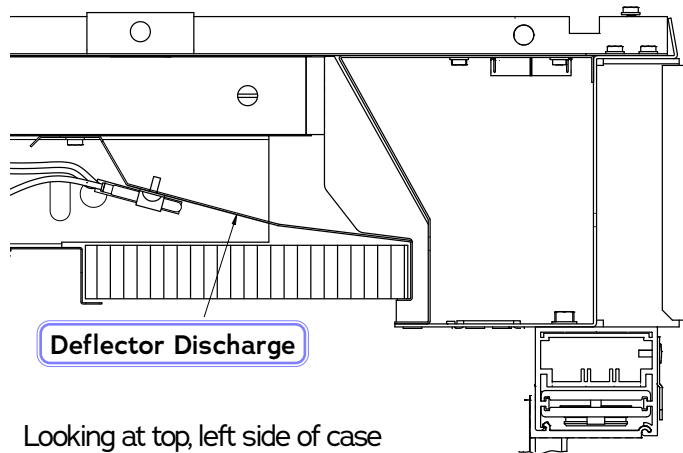
### Do:

1. Remove the product and all loose debris to avoid clogging the waste outlet.
2. Store product in a refrigerated area such as a freezer. Remove only as much product as can be taken to the freezer in a timely manner.
3. First turn off refrigeration, then disconnect electrical power.
4. Thoroughly clean all surfaces with soap and hot water. Do not use steam or high water pressure hoses to wash the interior. These will destroy the merchandisers' sealing causing leaks and poor performance.
5. The fan plenum is located behind the interior back panels. The plenum should be cleaned regularly according to store environment conditions.
6. Take care to minimize direct contact between fan motors and cleaning or rinse water.
7. Rinse with hot water, but do not flood. Never introduce water faster than the waste outlet can remove it.
8. Allow merchandisers to dry before resuming operation.
9. After cleaning is completed, turn on power and refrigerant to the merchandiser.
10. Verify that merchandiser is working properly.

## CLEANING HONEYCOMB ASSEMBLIES

Honeycombs should be cleaned every six months. Dirty honeycombs will cause merchandisers to perform poorly. The honeycombs may be cleaned with a vacuum cleaner. Soap and water may be used if all water is removed from the honeycomb cells before reassembling. Be careful not to damage the honeycombs.

1. Pull the honeycomb assembly out of the interior top panel to remove it.
2. Clean and dry the honeycomb.
3. After cleaning, reassemble in reverse order of removal.



## CLEANING STAINLESS STEEL SURFACES

Use non-abrasive cleaning materials, and always polish with grain of the steel. Use warm water or add a mild detergent to the water and apply with a cloth. Always wipe rails dry after wetting.

Use alkaline chlorinated or non-chlorine containing cleaners such as window cleaners and mild detergents. Do not use cleaners containing salts as this may cause pitting and rusting of the stainless steel finish. Do not use bleach.

Clean frequently to avoid build-up of hard, stubborn stains. A stainless steel cleaning solution may be used periodically to minimize scratching and remove stains. Rinse and wipe dry immediately after cleaning. Never use hydrochloric acid (muriatic acid) on stainless steel.

## CLEANING COILS

Never use sharp objects around coils. Use a soft brush or vacuum brush to clean debris from coils.

- **Do not puncture coils!**
- **Do not bend fins. Contact an authorized service technician if a coil is punctured, cracked, or otherwise damaged.**
- **Do NOT use chlorine or ammonia-based cleaners to clean aluminum coils.**

ICE in or on the coil indicates the refrigeration and defrost cycle is not operating properly. Contact an authorized service technician to determine the cause of icing, and to make adjustments as necessary. To maintain product integrity, move all product to a cooler until the unit has returned to normal operating temperatures.

## **⚠️ WARNING**

Product will be degraded and may spoil if allowed to sit in a non-refrigerated area. Do NOT allow cleaning agent or cloth to contact food product.

## MINIMUM SUGGESTED CLEANING AND MAINTENANCE FREQUENCY

Case Component	Type of Scheduled Maintenance	Maintenance Frequency (Times / Year)*	Average Maintenance Duration (hours)	Total Estimated Maintenance Time / Year (hours)
Evaporator Coil / Case Interior	Cleaning	1	2	2
Honeycomb	Cleaning	1	0.05	0.05
Return Air Grille	Cleaning	12	0.1	1.2
Drip Piping	Cleaning	6	0.1	0.6
Condenser Coil	Cleaning	4	0.1	0.4
Condensate Evaporation Pan	None	4	0.2	0.8
Condensate Evaporation Pan Heater	Cleaning	N/A	N/A	N/A
Condensate Pump	Cleaning	6	0.05	0.03
Electromechanical Thermostats	Replacement	0.2	1	0.2

\*This table is provided for reference only. The suggested maintenance frequency is the minimum required to reduce unexpected equipment failure. Performance and efficiency may be enhanced with more frequent cleaning. Individual cleaning schedules must take into account local environment and usage, as well as all applicable health codes.

# SERVICE

## TROUBLESHOOTING

Problem	Possible Cause	Possible Solution
Case temperature is too warm.	Ambient conditions may be affecting the case operation.	Check case position in store. Is the case located near an open door, window, electric fan or air conditioning vent that may cause air currents? Case must be located minimum 15 ft away from doors or windows. Cases are designed to operate at 55% Relative humidity and a temperature of 75°F.
	Discharge air temp is out of spec.	Check evaporator fan operation. Check electrical connections and input voltage.
		Fans are installed backwards. Check airflow direction.
		Make sure fan blades have correct pitch and are per specification.
		Check to see that fan plenum is installed correctly. It should not have any gaps.
	Case is in defrost.	Check suction pressure and ensure that it meets factory specifications.
		Check defrost settings. See Technical Specifications section.
Product is outside of the load limit area, blocking airflow.	Redistribute product so it does not exceed load limit. There is a sticker on the inside of the case indicating the maximum load limit.	
Coil is freezing over.	Return air is blocked, make sure debris is not blocking the intake section.	
	Coil close-offs are not installed. Inspect coil to make sure these parts are on the case.	
	Clean coil.	
Condensing coil or evaporator coil is clogged or dirty.		
Case temperature is too cold.	The t-stat temp is set too low.	Check settings. See Technical Specifications on the data sheet.
	Ambient conditions may be affecting the case operation.	Check case position in store. Is the case located near an open door, window, electric fan or air conditioning vent that may cause air currents? Case must be located minimum 15 ft away from doors or windows. Cases are designed to operate at 55% Relative humidity and a temperature of 75°F.
Condensation on glass.	Ambient conditions may be affecting the case operation.	Check case position in store. Is the case located near an open door, window, electric fan or air conditioning vent that may cause air currents? Case must be located minimum 15 ft away from doors or windows. Cases are designed to operate at 55% Relative humidity and a temperature of 75°F.
	Inadequate air circulation.	Check if air sweep fans are functioning, check electrical connections.
	Doors are not completely shut.	Close doors correctly.

## TROUBLESHOOTING CONTINUED

Problem	Possible Cause	Possible Solution
Water has pooled under case.	Case drain is clogged.	Clear drain.
	PVC drains under case may have a leak.	Repair as needed.
	Case tub has unsealed opening.	Seal as needed.
	If the case is in a line-up, case to case joint is missing or unsealed.	Install case to case joint and seal as needed.
	Evaporator pan is overflowing (if applicable).	Check electrical connection to evaporator pan. Check float assembly, it should move freely up and down the support stem. Clear any debris.
	Case is not level.	Level the case.
	Drain screen is plugged.	Clean drain screen and remove any debris.
Case is not draining properly.	Drain or P-trap is clogged.	Clear any debris.
Frost or ice on evaporator coil.	Evaporator fans are not functioning.	Check electrical connections.
	Defrost clock is not functioning.	Case should be serviced by a qualified service technician.
	Coil is freezing over.	Return air is blocked, make sure debris is not blocking the intake section. Coil close-offs are not installed. Inspect coil to make sure these parts are on the case.
Lights do not come on.	LED Driver / light socket wiring.	Check electrical connections. See Electrical Section and check wiring diagram.
	LED Driver needs to be replaced.	Case should be serviced by a qualified service technician. See Electrical Section.
	LED fixture socket / connection needs to be replaced.	Case should be serviced by a qualified service technician.
	LED fixture needs to be replaced.	See Maintenance Section.
	Light Switch needs to be replaced.	Case should be serviced by a qualified service technician.

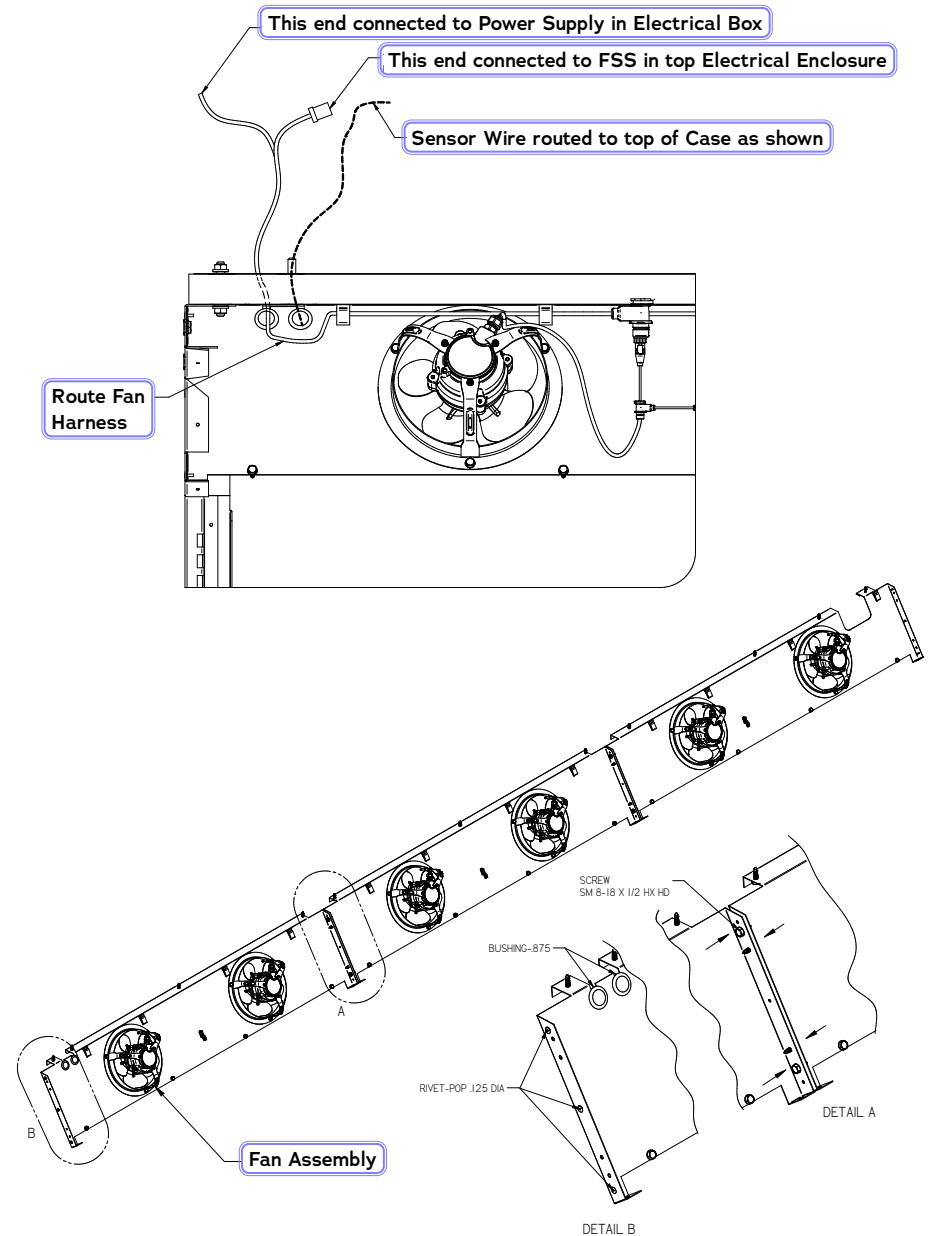


## REPLACING FAN MOTOR ASSEMBLIES

Should it ever be necessary to service or replace the fan motor assembly, be certain that the fan blades are reinstalled correctly.

For access to these fans:

1. Turn OFF power
2. Remove interior top and back panels.
3. Disconnect fan from wiring harness.
4. Remove screws holding fan motor/bracket assembly to plenum and remove assembly.
5. Replace fan motor / bracket assembly and reinstall screws.
6. Reconnect fan to wiring harness.
7. Turn ON power.
8. Verify that motor is working and blade is turning in the correct direction.
9. Replace interior top and back panels. Bring merchandiser to operating temperature before restocking.



## REPLACING ALUMINUM COIL

The aluminum coils used in Hussmann merchandisers may be easily repaired in the field. Materials are available from local refrigeration wholesalers.

Hussmann recommends the following technique:

1. Locate Leak.
2. Remove all pressure.
3. Brush area under heat.
4. Only use a Prestolite torch with number 6 tip.
5. Maintain separate set of stainless steel brushes, and use only on aluminum.
6. Tin surface around area.
7. Brush tinned surface UNDER HEAT, thoroughly filling the open pores around leak.
8. Repair leak. Let aluminum melt solder, NOT the torch.
9. Don't repair for looks. Go for the thickness.
10. Perform a leak check.
11. Wash with water.
12. Cover with a good flexible sealant.

### CAUTION

- » When brazing pipes be sure to use an insulation blanket to prevent damage to the plastic case bottom.

## WARRANTY INFORMATION

# HUSSmann®

To obtain warranty information or other support, contact your Hussmann representative or visit: <https://www.hussmann.com/services/warranty>. Please include the model and serial number of the product.

For questions about your equipment please contact our Technical Support Team 866-785-8499  
For General Support or Service Calls contact our Customer Support Call Center 800-922-1919  
For ordering Aftermarket Warranty Parts 1-855-Huss-Prt (1-855-487-7778) [Hussmann\\_part\\_warranty@hussmann.com](mailto:Hussmann_part_warranty@hussmann.com)