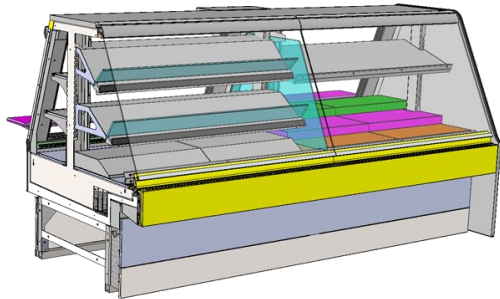


# FUSION USER MANUAL

**SCC P/N  
5-9410**

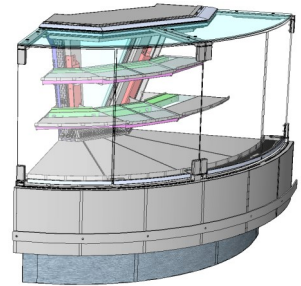
**FUSION SERVICE REFRIGERATED MID-VOLUME DELI MERCHANDISERS > FLAT ANGLED FRONT GLASS  
> CURVED FRONT GLASS > VERTICAL FRONT GLASS > REAR LIFT FRONT GLASS > REMOTE & SELF-CONT.  
> FULL AND OPEN END PANELS > REFRIGERATED-TO-DRY SWITCH AT CASE REAR (OPTIONAL)**



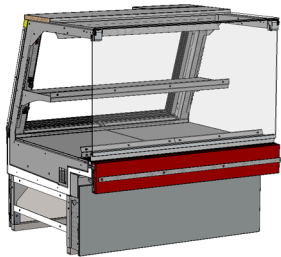
Model GMDSES8R / End Panel Removed /  
Optional Case-To-Case Glass / Front &  
Rear Shelves / Variety of Product Steps



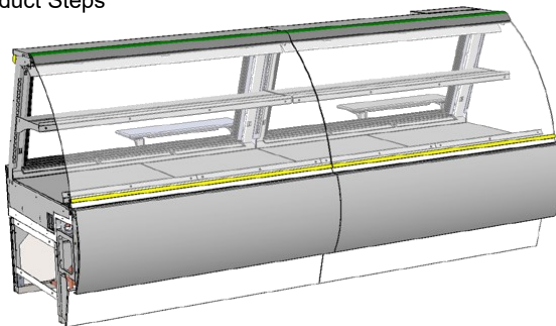
Model GMDS6R  
With Rear Sliding Doors



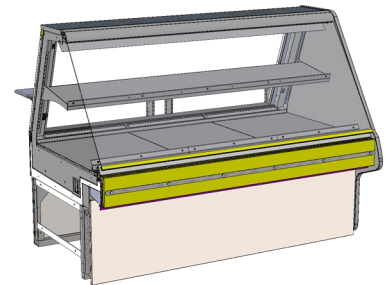
Model GMDSVX9R.6694  
Radius Corner / Curved Front /  
4 Swinging Front Doors



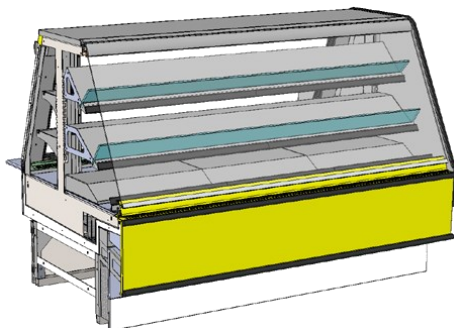
GMDSV4R / Front Vertical Glass  
(Top-Hinge) / Rear Sliding Doors /  
Optional Scale Stand



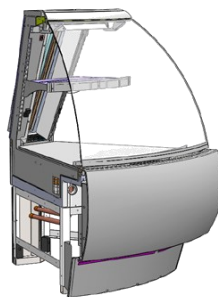
Model GMDS10R.5773F / Open Rear Section /  
Curved Front Panel / Flip-Up Ledges / Scale Stand



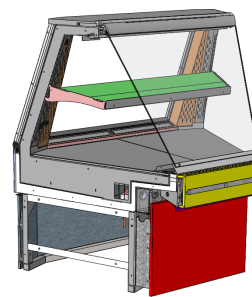
GMDS6R.5773D No Rear Sliding  
Doors / Rear Flip-Up Ledge



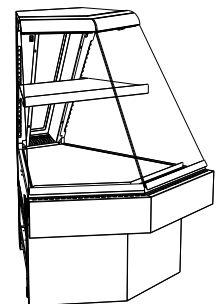
Model GMDSES6R / End Panel  
Removed / Front & Rear Shelves /  
Variety of Product Steps



Model GMDSX4R.5773J /  
Rear Hinged Door /  
Curved Front Panel

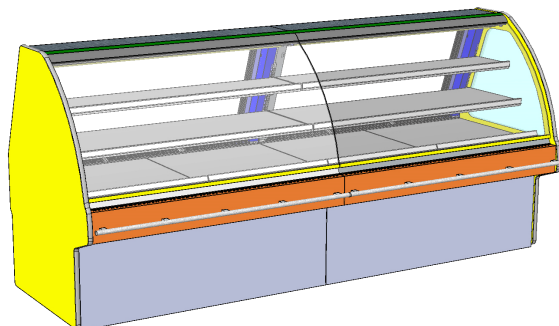


GMDSNA4R.5773M  
45° Inside Wedge



Model GMDSX4R

**Note: See Next Page For  
Various Models That This  
User Manual Is Applicable.**



GMDS10R.7673 / Curved Front  
Glass / Rear Sliding Doors /  
Optional Rear Ledge /  
Rear Storage Bins

**Structural Concepts®**

DELIVERING FRESH. ALWAYS.™

Structural Concepts Corp. · 888 E. Porter Rd · Muskegon, MI 49441 Phone: 231.798.8888 Fax: 231.798.4960 · www.structuralconcepts.com

## TABLE OF CONTENTS / LIST OF MODELS INCLUDED IN MANUAL

|                                                                                                                                   |       |
|-----------------------------------------------------------------------------------------------------------------------------------|-------|
| TABLE OF CONTENTS / LIST OF MODELS ENCOMPASSED IN MANUAL .....                                                                    | 2     |
| OVERVIEW / UNIT TYPE / COMPLIANCE / WARNINGS / PRECAUTIONS / WIRING .....                                                         | 3-5   |
| INSTALLATION: REMOVAL FROM SKID, REMOVING LOWER FRONT PANELS .....                                                                | 6     |
| INSTALLATION, CONT'D: BOLTING AND CAULKING UNITS TOGETHER .....                                                                   | 7     |
| INSTALLATION, CONT'D: POSITIONING & ALIGNING CASE / FRAME SUPPORT RAIL SHIMMING ..                                                | 8     |
| INSTALLATION, CONT'D: FRONT GLASS ALIGNMENT & ADJUSTMENT (VIA RAIL SYSTEM) .....                                                  | 9     |
| INSTALLATION, CONT'D: PROBE LEADS BOX / FIELD WIRING BOX / BALLAST (OR OPTIONAL<br>LED DRIVER) / ANTI-CONDENSATE AXIAL FANS ..... | 10    |
| INSTALLATION, CONT'D: REFRIGERATION LINES / STUB-UPS / DRAINS .....                                                               | 11    |
| INSTALLATION, CONT'D: SCALE STAND WITH OUTLETS & CAT5 / FLIP-UP LEDGE .....                                                       | 12    |
| START-UP AND OPERATION .....                                                                                                      | 13    |
| MAINTENANCE FUNDAMENTALS: LED LIGHT FIXTURES / REMOVAL & REPLACEMENT .....                                                        | 14    |
| MAINTENANCE FUNDAMENTALS, CONT'D: SHELF ASSEMBLIES .....                                                                          | 15    |
| MAINTENANCE FUNDAMENTALS, CONT'D: SHELF ASSEMBLIES / STEPS .....                                                                  | 16-17 |
| MAINTENANCE FUNDAMENTALS, CONT'D: DRAIN, TXV VALVE ACCESS .....                                                                   | 18    |
| MAINTENANCE FUNDAMENTALS, CONT'D: REAR SLIDING DOORS .....                                                                        | 19    |
| MAINTENANCE FUNDAMENTALS, CONT'D: REAR LIFT FRONT GLASS .....                                                                     | 20    |
| MAINTENANCE FUNDAMENTALS, CONT'D: REFRIGERATED TO DRY SWITCH (OPTIONAL) .....                                                     | 21    |
| MAINTENANCE FUNDAMENTALS, CONT'D: CUTTING BOARD / REAR LEDGE REMOVAL .....                                                        | 22    |
| MAINTENANCE FUNDAMENTALS, CONT'D: REFRIGERATION PACKAGE LAYOUT .....                                                              | 23    |
| MAINTENANCE FUNDAMENTALS, CONT'D: REMOTE UNIT FIELD ACCESS BOX / MISTING<br>SYSTEMS .....                                         | 24    |
| CLEANING SCHEDULE - INTERIOR: TO BE PERFORMED BY STORE PERSONNEL .....                                                            | 25    |
| CLEANING SCHEDULE - EXTERIOR: TO BE PERFORMED BY STORE PERSONNEL .....                                                            | 26    |
| CLEANING SCHEDULE - STAINLESS STEEL: TO BE PERFORMED BY STORE PERSONNEL .....                                                     | 27    |
| PREVENTIVE MAINTENANCE - TO BE PERFORMED BY TRAINED SERVICE PROVIDERS ONLY ....                                                   | 28    |
| TROUBLESHOOTING - TO BE PERFORMED BY STORE PERSONNEL (UNLESS NOTED<br>OTHERWISE) .....                                            | 29-30 |
| TROUBLESHOOTING - CONDENSING SYSTEM (TO BE PERFORMED BY TRAINED SERVICE<br>PROVIDERS ONLY) .....                                  | 31    |
| TROUBLESHOOTING - EVAPORATOR SYSTEM (TO BE PERFORMED BY TRAINED SERVICE<br>PROVIDERS ONLY) .....                                  | 32    |
| SERIAL LABEL INFORMATION & LOCATION .....                                                                                         | 33    |
| PROGRAMMABLE CONTROLLER INFORMATION .....                                                                                         | 34    |
| TECHNICAL SERVICE CONTACT INFORMATION / WARRANTY INFORMATION .....                                                                | 35    |

### THIS OPERATING MANUAL INCLUDES (BUT IS NOT LIMITED TO) THE FOLLOWING MODELS:

**GMBS552R GMBS652R GMDS2R.5773 GMDSNA4R.5773M GMDS4R GMDS4R.5068 GMDS4R.5773B  
 GMDS5R GMDS5R.5773C GMDS6R GMDS6R.5241 GMDS6R.5773D GMDS8R GMDS8R.5182  
 GMDS8R.5243A GMDS8R.6803D GMDSES6 GMDSES8R GMDSES12R GMDS10R GMDS10R.5243  
 GMDS10R.5773F GMDS10R.7673 GMDS12R GMDS12R.5241A GMDSV3D.6694 GMDSV3R.6694  
 GMDSV4R.6749B GMDSVC3R GMDSVC6R GMDSVC6R.6694 GMDSVC8R GMDSVC8R.6694  
 GMDSVCX9R.6694 GMDSVX4R GMDSX4R GMDSX4R.5773J GMDSVX4R.7215 GMDSX9R  
 GMDSVX9R GMDSVX9R.6694 and GMDSVX9R.7215.**

## OVERVIEW

- These Structural Concepts cases are designed to merchandise packaged products at 41 °F (5 °C) or less product temperatures (unless custom cases with wire rack shelving).
- Product must be pre-chilled to 41 °F (5 °C) or less before being placed in merchandiser.
- Cases should be installed and operated according to this operating manual's instructions to ensure proper performance. Improper use will void warranty.

## NSF/ANSI TYPE I vs. II ENVIRONMENTAL CONDITIONS

This unit is designed for the display of products in ambient environmental conditions where temperatures and relative humidity are maintained within a specific range.

- NSF/ANSI Type I Conditions: Product is displayed in store conditions with maximum ambient temperature of 75 °F (24 °C) and maximum relative humidity of 55%.

- NSF/ANSI Type II Conditions: Product is displayed in store conditions with maximum ambient temperature of 80 °F (27 °C) and maximum relative humidity of 55%.
- If you are unsure if your unit is classified as NSF/ANSI Type I or Type II, see tag next to serial label on your case.

## COMPLIANCE

- Performance issues when in violation of applicable NEC, federal, state and local electrical and plumbing codes are not covered by warranty.
- See below compliance guideline.

## WARNINGS

- This page contains important warnings to prevent injury or death. Please read carefully!

## PRECAUTIONS and WIRING DIAGRAMS

- See next page for **PRECAUTIONS** and **WIRING DIAGRAM** information.



### COMPLIANCE

This equipment **MUST** be installed in compliance with all applicable NEC, federal, state and local electrical and plumbing codes.

### WARNING

ELECTRICAL  
HAZARD



### WARNING

Risk of electric shock. Disconnect power before servicing unit.  
**CAUTION!** More than one source of electrical supply is employed with units that have separate circuits.  
*Disconnect ALL ELECTRICAL SOURCES before servicing.*

### WARNING

KEEP  
HANDS  
CLEAR



### WARNING

Hazardous moving parts. Do not operate unit with covers removed.  
Fan blades may be exposed when deck panel is removed.  
Disconnect power before removing deck panel.



### WARNING

This product can expose you to chemicals, including Urethane (Ethyl Carbamate), which are known to the state of California to cause cancer and birth defects or other reproductive harm. For more information go to [P65Warnings.ca.gov](http://P65Warnings.ca.gov).

### WARNING

HOT  
SURFACE



### WARNING

Condensate pan and overflow condensate pans are **HOT!**  
Disconnect and allow to cool before cleaning or removing from case.

## PRECAUTIONS

- Following are important precautions to prevent damage to unit or merchandise. Read carefully!
- See previous page for specifics on **OVERVIEW**, **CONDITION TYPE**, **COMPLIANCE** and **WARNINGS**.

## WIRING DIAGRAM

- Each case has its own wiring diagram folded and in its own packet. It may be placed near ballast box, field wiring box, raceway cover, or other related location.

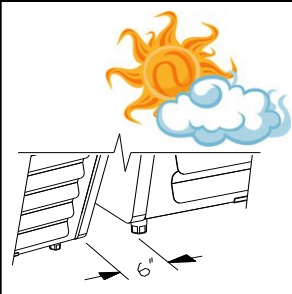
## REFRIGERANT DISCLOSURE STATEMENT

- This equipment is prohibited from use in California with any refrigerants on the "List of Prohibited Substances" for that specific end-use, in accordance with California Code of Regulations, title 17, section 95374.
- This disclosure statement has been reviewed and approved by Structural Concepts and Structural Concepts attests, under penalty of perjury, that these statements are true and accurate.



**CAUTION! GFCI BREAKER REQUIREMENT**  
If N.E.C. (National Electric Code) or your local code requires GFCI (Ground Fault Circuit Interrupter) protection, you **MUST** use a GFCI breaker in lieu of a GFCI receptacle.

## CAUTION



## CAUTION! ADVERSE CONDITIONS / SPACING ISSUES

- Performance issues caused by adverse conditions are **NOT** warranted.
- To prevent damage to end panels due to condensation, apply industrial grade silicone sealant and tightly join to opposite end panels. When not adjoining cases, keep end panels at least 6" away from walls/structures. Rear panels must also be kept at least 6" from walls and structures.
- Case must not be exposed to direct sunlight or any heat source.
- To maintain proper case temperature, keep case at least 15-feet from exterior doors, overhead HVAC vents or any air curtain disruption.
- Self-contained case clearance: 6" min. air intake / 6" min. air discharge.

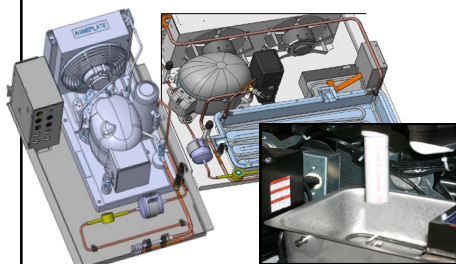


**CAUTION! POWER CORD AND PLUG MAINTENANCE**  
Risk of electric shock. If cord or plug becomes damaged, replace only with cord and plug of same type.



## CAUTION! DO NOT RELY ON THERMOMETERS OR THERMOSTATS FOR PRODUCT (FOOD) TEMPERATURES.

- Thermometers & thermostats reflect air temperatures **ONLY**.
- For **ACTUAL** product (food) temperatures, use a calibrated food probe thermometers **ONLY**.
- For accurate readings, **DO NOT** use infrared food thermometers.



## CAUTION! CHECK CONDENSATE PAN, ITS POSITION & PLUG!

Water on flooring can cause extensive damage!

- Before powering up case, check that condensate pan is positioned directly under case's condensate drain.
- Before powering up case, check that condensate pan's electrical plug is **SECURELY** connected to condensate system's receptacle.
- If wicking material is used in condensate pan, check that it is secure.

## **OVERVIEW - CONTINUED**

### **WEIGHT LOADS ON GLASS / PREVENTING SAGGING**

- Caution! To prevent sagging, do not exceed 5 LB (2.3 KG) weight load per top glass section between stainless steel posts (or supports).



#### **CAUTION! TOP GLASS WEIGHT LOAD LIMIT**

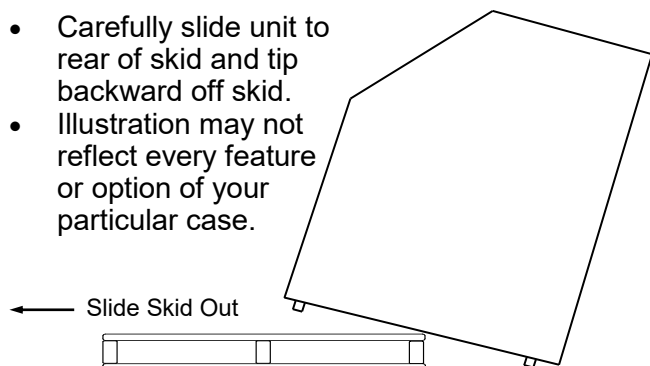
- To prevent sagging or breakage, do not exceed 5 LBS (2.3 KG) weight load per top glass section (between posts and/or supports).
- To prevent scratching or marring, do not place ANY items on glass.



## INSTALLATION: REMOVAL FROM SKID, REMOVING LOWER FRONT PANELS

### 1. Remove Case From Skid

- Remove shipping brace that may be securing case to skid.
- Support case to prevent tipping.
- **Caution! Rails can be damaged if case hits floor with heavy force!**
- Carefully slide unit to rear of skid and tip backward off skid.
- Illustration may not reflect every feature or option of your particular case.



Case can be repositioned with pallet truck when front lower panel is removed. Blocking may be necessary to obtain adequate height.

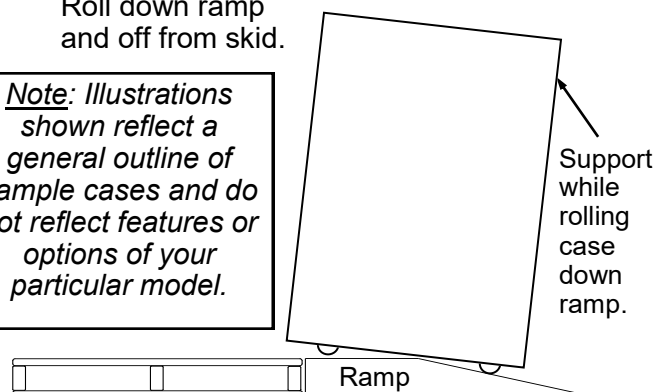
### 2. Remove Case From Skid (Casters)

Remove shipping brackets that may be securing casters to skid

- Place ramp up against skid (to allow case to smoothly slide off from skid).
- Maintain support of case at all times or center of gravity may cause case to fall.
- Unlock Casters. Roll unit to rear of skid.

Roll down ramp and off from skid.

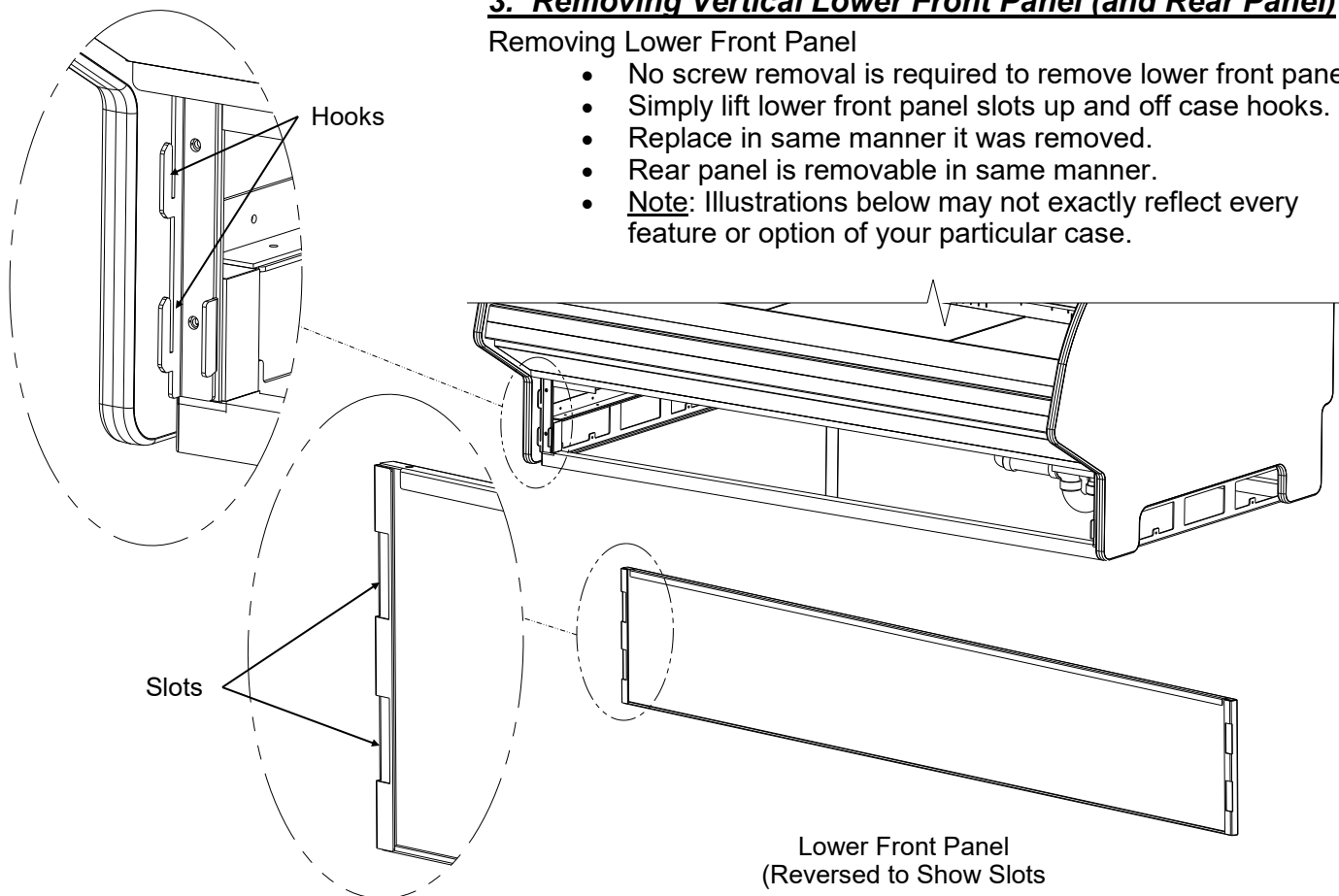
**Note:** Illustrations shown reflect a general outline of sample cases and do not reflect features or options of your particular model.



### 3. Removing Vertical Lower Front Panel (and Rear Panel)

Removing Lower Front Panel

- No screw removal is required to remove lower front panel.
- Simply lift lower front panel slots up and off case hooks.
- Replace in same manner it was removed.
- Rear panel is removable in same manner.
- **Note:** Illustrations below may not exactly reflect every feature or option of your particular case.



## 4. Case Adjoinment Instructions

- >> Warranty is void if improper sealant/urethane is used.
- >> Lay generous beads of sealant/urethane as specified.

### A. Prior To Adjoinment - Apply Industrial Grade Urethane Adhesive at Center of Uprights

- Lay a generous bead of industrial grade urethane adhesive at center of uprights (in non-visible areas).
- This urethane adhesive prevents refrigerated air from escaping between cases (causing condensation and reducing refrigeration efficiency) as well as preventing ants or other insects from entering case.
- See industrial grade urethane adhesive illustration below-left.

### B. Adjoining Cases - Using Bolts and Nuts

- Use appropriately sized nuts and bolts for each hole.
- #1 - Hole is accessible through rear sliding door (if you are able to avoid gas cylinder, attach bolt); otherwise start at #2 in bolt/nut attachment process.

- #2 - Holes are accessible through rear sliding door.  
 #3 - Holes are accessible at underside of decking.  
 Decking must be removed to attach bolts/nuts.  
 #4 - Holes are accessible at base frame (through front of case after front toe-kick has been removed).
- Tighten nuts securely (but do not over-tighten).
  - See illustration below.

### C. After Adjoinment - Apply Food Grade Silicone Sealant To Inner And Outer Seams

- After all nuts/bolts are securely attached to case, apply a generous bead of food grade silicone sealant at both inner and outer seams.
- When properly applied, this food grade silicone sealant will prevent water from seeping between cases (into the case or to the floor) as well as crumbs or other residue from entering between case seams.
- See silicone sealant illustration below-left.

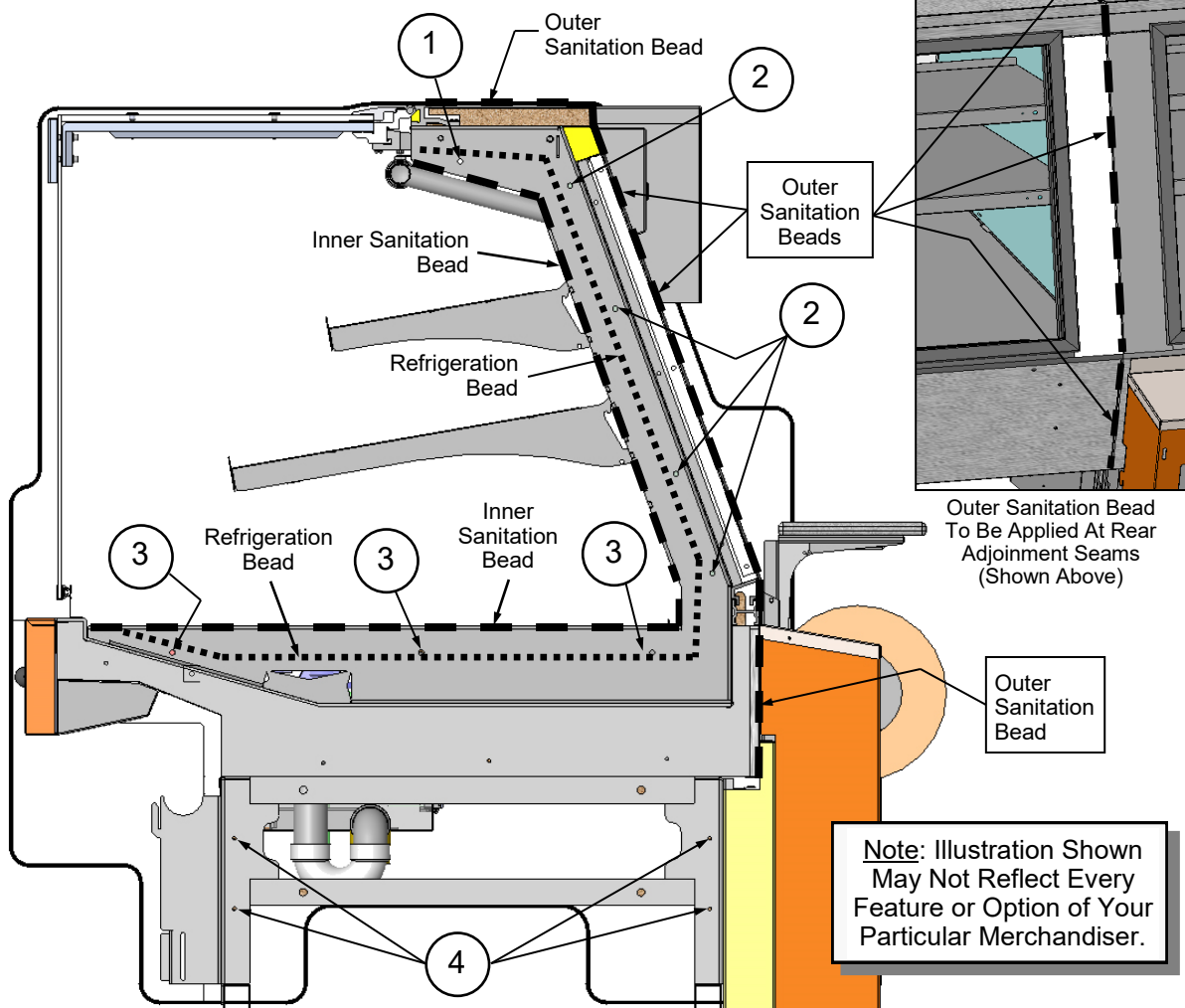
>> You must reattach toe-kick and decking after case adjoinment process is complete.



Industrial Grade Urethane Adhesive (For Refrigeration Bead Applications)



Silver, Black or Clear Silicone Sealant Conforming To NSF/ANSI 51 Specs (For Sanitation)



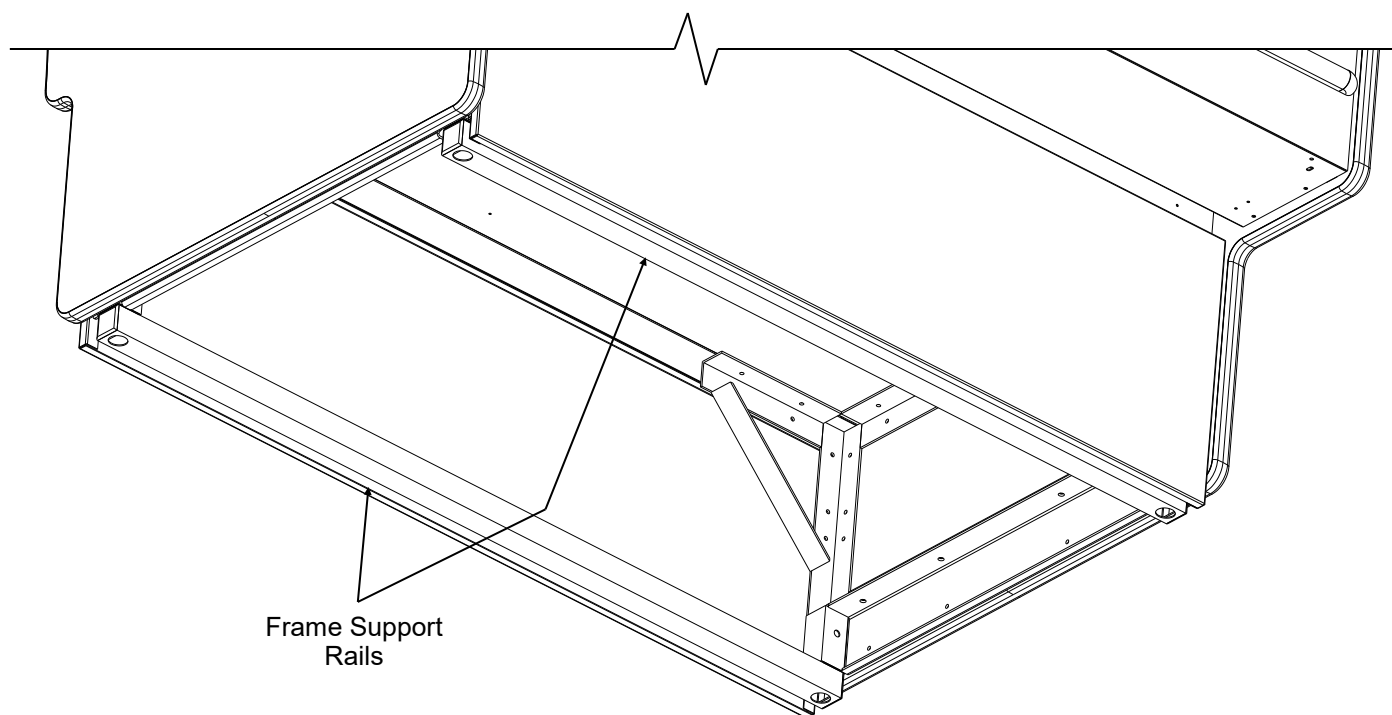
### **5. Position & Align Case Alongside Other Cases**

- Before adjusting levelers (or shimming frame support rails), make certain that the case is in proper position and, if required, aligned with adjoining case.
- This may require the repositioning of the case you are installing or the already positioned case.
- Though case below shows both end panels, case adjoinments routinely consist of end panel removal for case-to-case placement.

### **6. Frame Support Rails Must Be Shimmed**

- Illustration below shows case with frame support rails.
- Shims will be provided with all cases that have frame support rails.
- Use shims to level case.
- ***Note: After case is in position, it must be sealed to floor to prevent entry or leakage of liquid or moisture.***

**Note:** Illustration shown may not exactly reflect every feature or option of your particular unit.

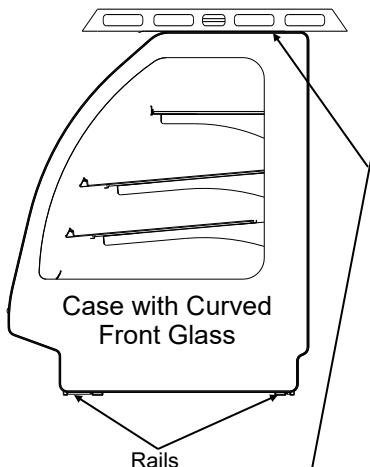




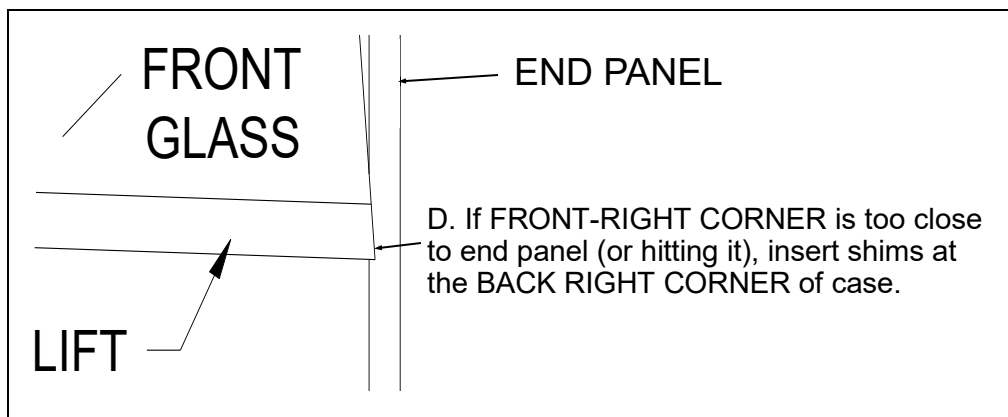
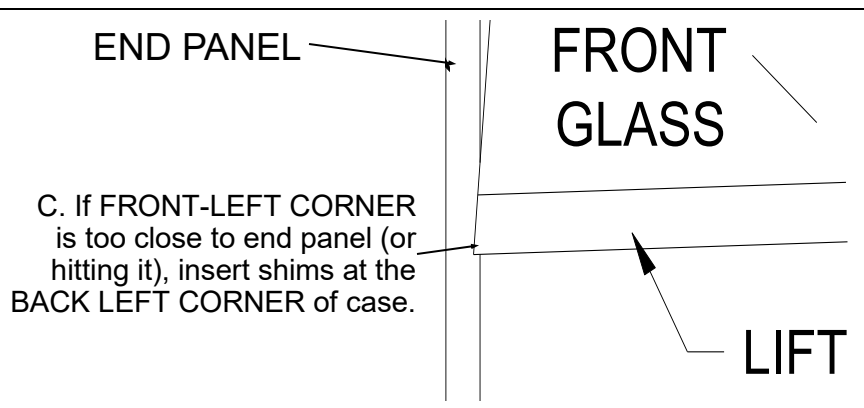
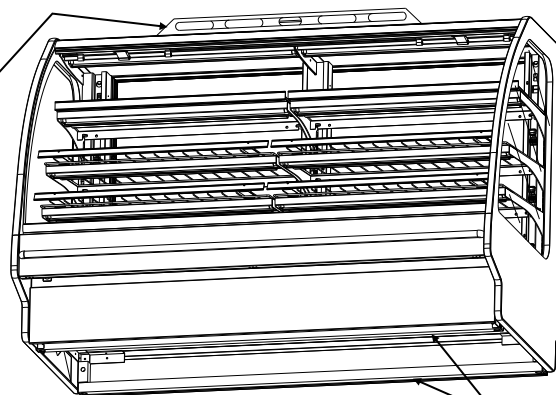
## 7. Front Glass Alignment & Adjustment via Rail System (For Curved and Flat Front Glass)

- Proper alignment of the front glass is important to create and maintain a seal inside the case.
- Improper alignment can cause air leaks compromising the environment inside the case and create condensation.
- Follow the five steps listed below to assure proper front glass alignment.
- Illustrations shown may not exactly reflect every feature or option of your particular case.

**A. Side-to-Side Leveling:** Place a level on top of display case (parallel to front glass). Raise or lower either side of case by inserting shims under the rails to level the case (following steps 3 and 4 below).



- B. Front-to-Back Leveling:**
- Place a level on top of case, perpendicular to the front glass.
  - Raise or lower either side of case by shimming under the rails (following steps 3 & 4 below).
  - Double-check the side-to-side level.

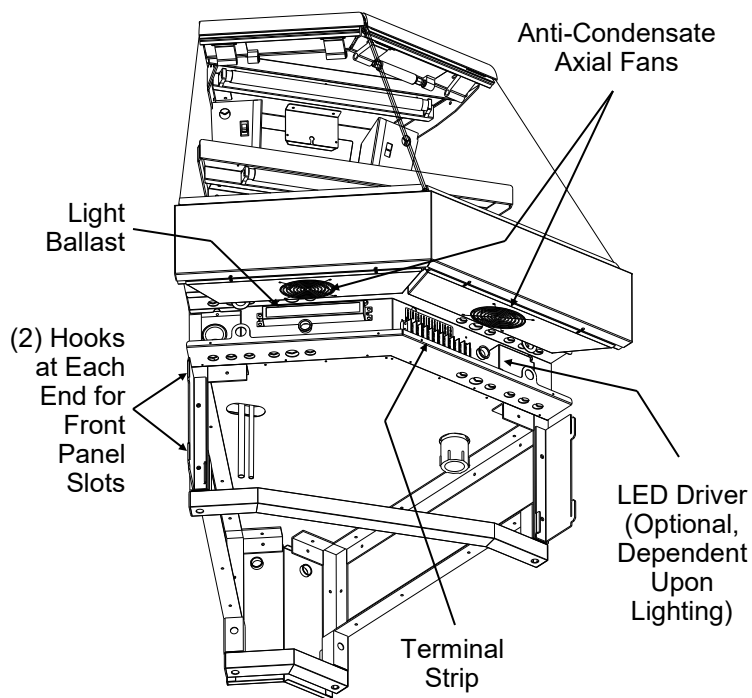


### E. Verification:

- After inserting shims, open and shut the front glass.
- Verify (again) that the front glass is properly aligned at both left-hand and right-hand side of the case.
- If not, repeat the shimming procedure until the front glass is properly aligned along both sides of the case.

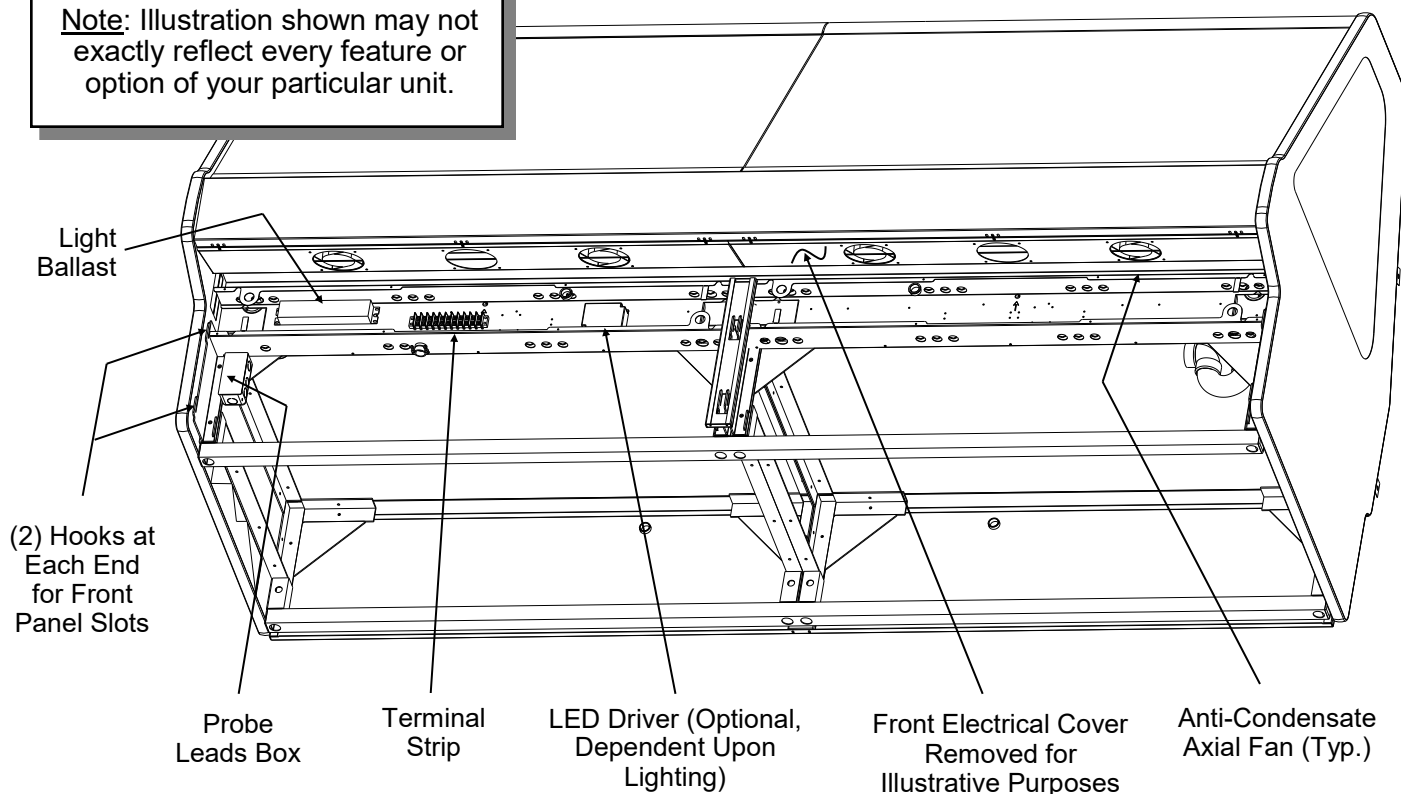
**8. Probe Leads Box / Field Wiring Box / Ballast (or Optional LED Driver) / Terminal Strip / Anti-Condensate Axial Fans**

- Probe leads are in probe leads box (on certain models). It is located at customer front-left of case (behind front panel).
- Field wiring box is also located at front left of case (behind front panel)
- Ballast (or optional LED driver) and terminal strip is also located behind front electrical cover (shown removed for illustrative purposes).
- Screws hold front electrical cover in place. Unscrew and drop electrical cover down and out.
- Anti-condensate axial fans (for front glass) may be accessed (at underside of front panel) by simply removing four screws, and dropping fans down.
- ***Caution! Only certified electricians are to access electrical components!***



--- View of GMDSX4R With Front Panel and Electrical Cover Removed ---

**Note:** Illustration shown may not exactly reflect every feature or option of your particular unit.



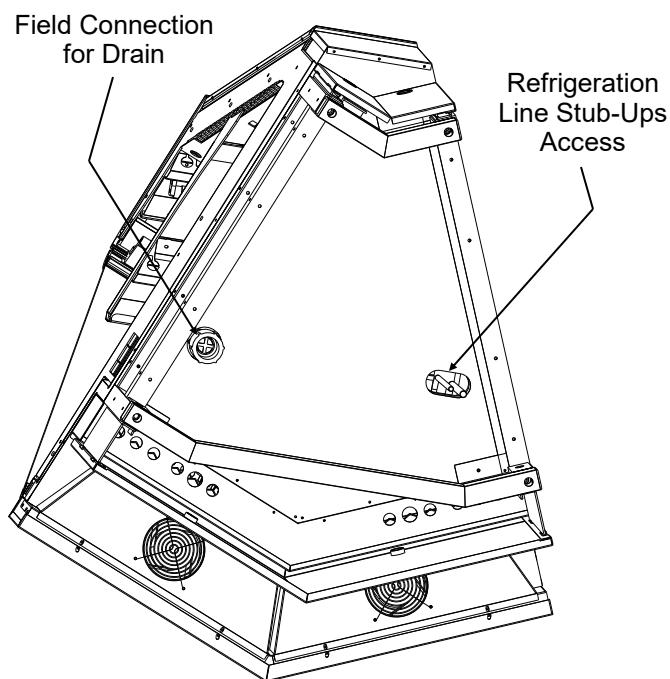
--- View of GMDS8R With Front Panel and Electrical Cover Removed ---

## **9. Refrigeration Line Stub-Up Connections**

- Refrigerant stub-up access is at underside of case.
- Stub-up connections are accessed by removing rear panel (no screws required).
- Run case-to-case connections through cutouts in base.
- Sweat the high and low pressure connections.
- Fill access hole with suitable filler to insure watertight integrity of tub.
- Note: Illustration below may not reflect every feature or option of your particular case.

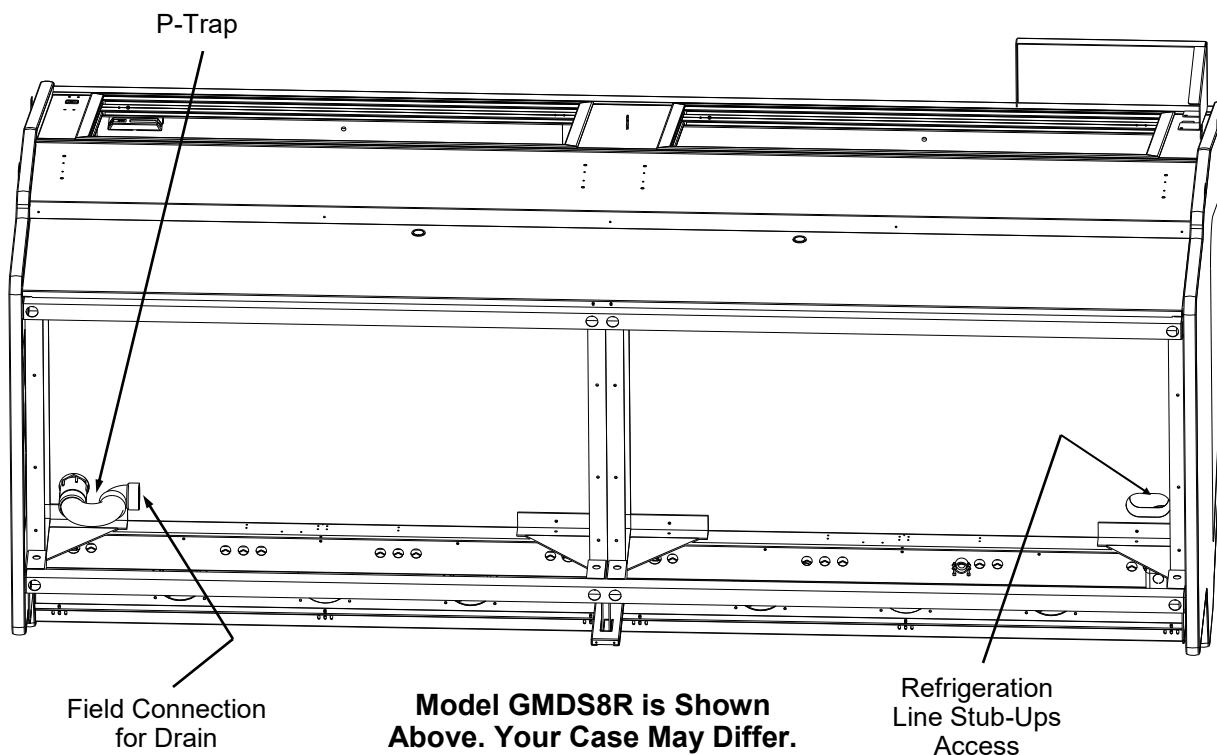
## **10. Drains**

- Cases have drains at left and right hand sides.
- Longer cases may have drain at case center.
- Drain field connection location as shown.
- See next page for illustration of TXV Valve, Drains, Refrigeration Line Stub-Ups Access, etc.
- Depending upon drain access needs, either front or rear panel may be removed to gain access to drain stub-up.
- 1.5" male PVC stub-up connection is under case.
- Drain stub-up may be at case center in extended length cases.
- Connect tub drain to floor drain. Maintain 1/4"-fall per foot to provide proper drainage.



**Model GMDX4R is Shown Above.**

Note: Illustrations shown may not exactly reflect every feature or option of your particular unit.



**Model GMDX8R is Shown Above. Your Case May Differ.**

## **11. Scale Stand / Ethernet CAT5 / Receptacle**

- Optional scale stand location and illustration is shown below.
- Route the scale stand cord through into receptacle (shown below).
- Plug scale stand cord into receptacle as shown in illustration below.
- Depending upon options chosen, CAT5 (Category 5) network cable outlet may also be available at scale stand base (as shown below).

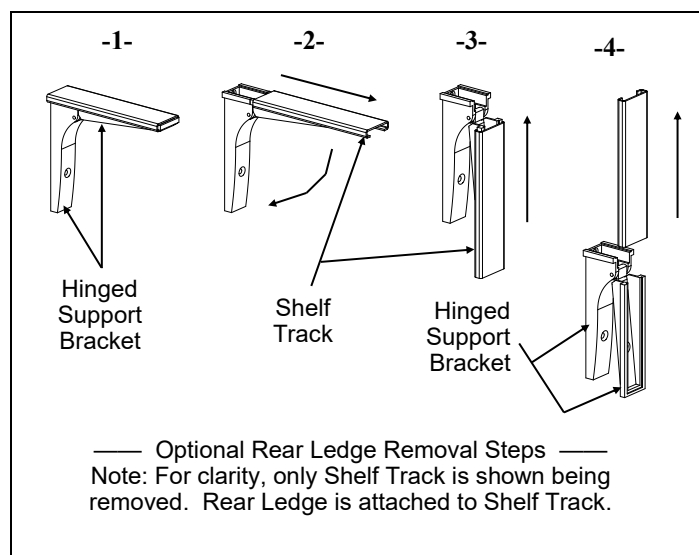
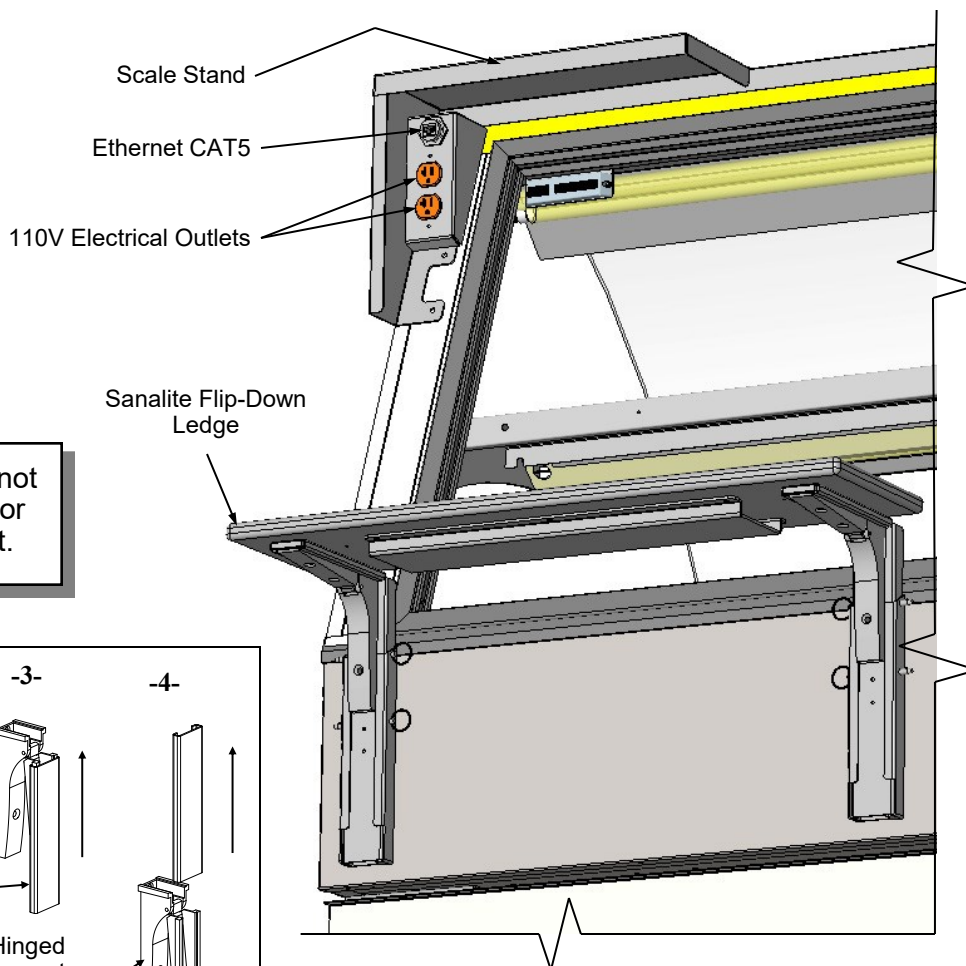
## **12. Rear Ledge**

Rear Ledge is connected to Shelf Track. See below for Rear Ledge removal steps.

Rear ledge step-by-step removal method is as follows:

1. Hinged Support Bracket is shown in its standard upright position.
- 2 & 3. While upright, Rear Ledge must be slid away from case and then rotated downward to vertical position.
- 3 & 4. From the shelf's lowered position, lift from bottom edge upward to disengage shelf track (and attached Rear Ledge) from bracket.

Note: Illustrations shown may not exactly reflect every feature or option of your particular case.

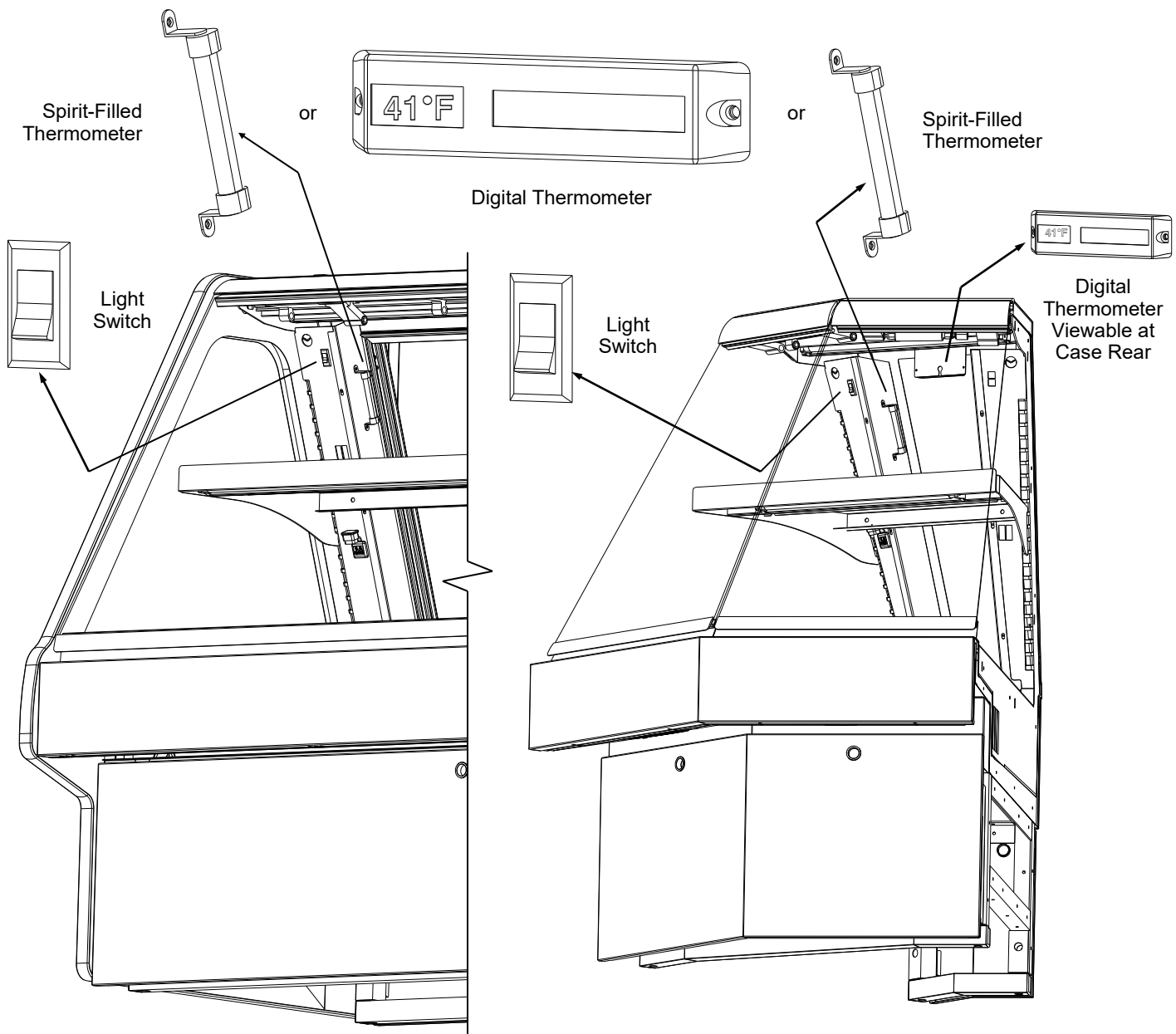


Model GMDS10R.5773F Shown Above.  
Your Model May Vary

## START-UP AND OPERATION

### **Merchandise Start-Up**

- Unit will energize when properly field wired.
- Evaporator coil fans will automatically turn on. From the front of the case, lift glass and remove the decking; check to see that the coil fans are all functioning properly.
- Lights switch is accessible at case front-left, near upright. See illustration below.
- Turn light switch on. All lights should come on at the same time. First time lighting may require a short warm up-period for the bulbs.
- Slightly dim or a flickering of new bulbs is normal.
- If lights do not turn on, check all raceway plugs. The lighting is wired in series so **all lights must be plugged in or receptacles capped** in order for the case to light.
- Refrigeration section has been tested to maintain temperature at or below 5 °Celsius / 41 °Fahrenheit.
- Note: Thermometers provided with equipment reflect internal air temperature only (not actual food temperature). Use probe thermometers to determine actual product temperatures.



## 1. LED Style Light Fixtures

### Removal of Faulty LED Lights:

- Contact Structural Concepts' Technical Service Department for replacement LED lights.
- Turn off LED light switch.
- To remove faulty LED light, follow these steps:
  - A. Disconnect plug from LED light.
  - B. Using both hands, grasp LED light assembly (with its magnetic mounting clips). Pull downward and off its shelf (or header).
  - C. Remove magnetic mounting clips from LED light by pressing against flange part of clip with thumb.

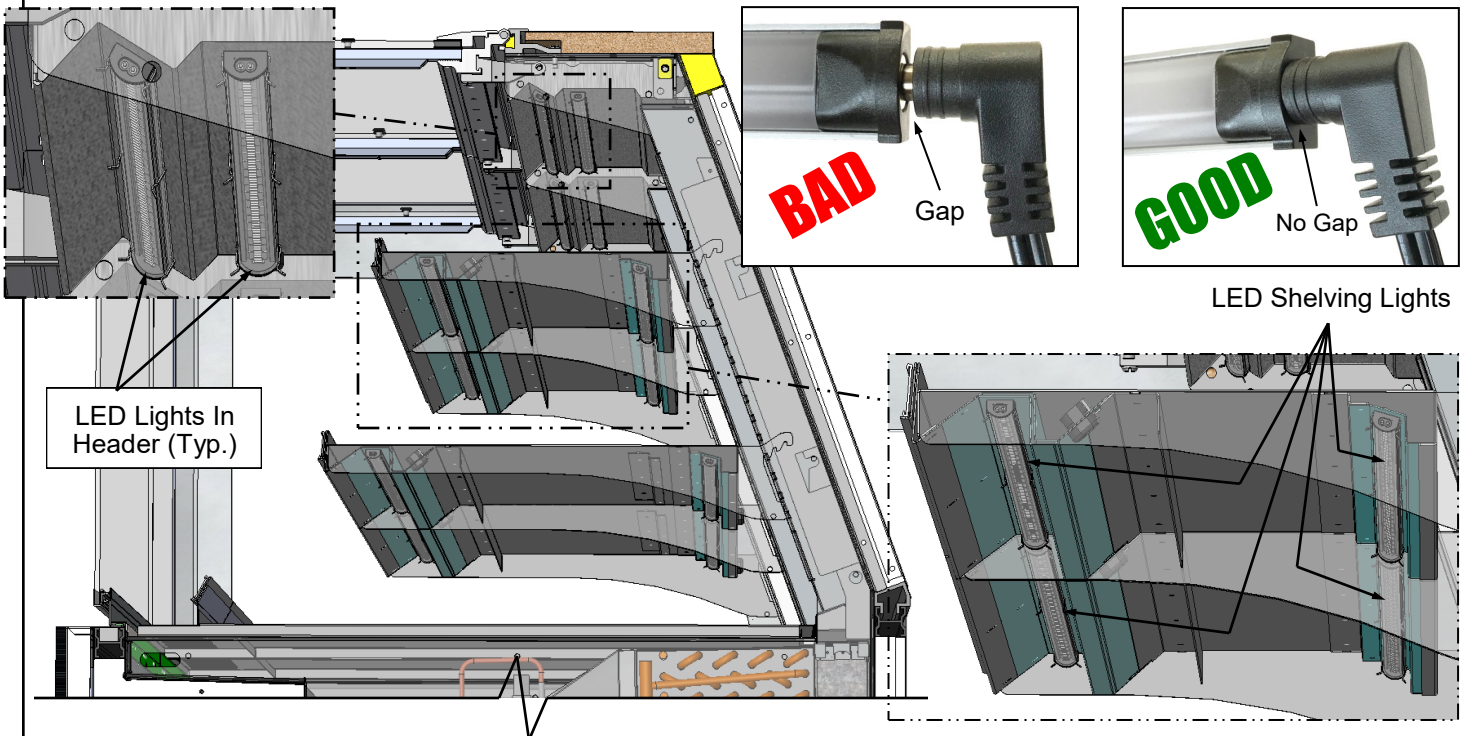
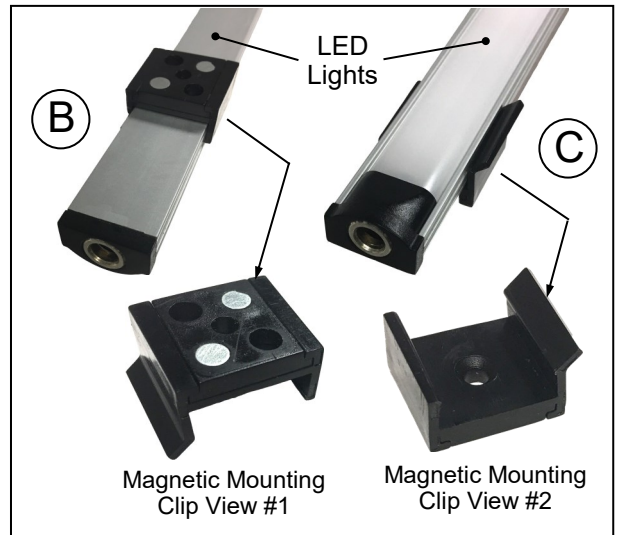
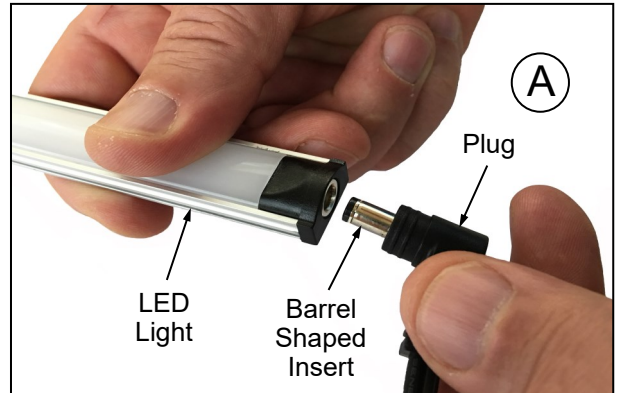
>> **Note:** Mounting clips MAY be riveted to shelf or header. In such instances, simply remove LED light from mounting clips by pressing against flange part of clips with thumb.

### Replacement of LED lights:

- Attach magnetic mounting clips onto LED light.
- Adjust magnetic mounting clips so they are equally spaced on LED light.
- Reattach LED light assembly to its shelf/header.
- Position properly in shelf/header.

>> **Note:** If mounting clips are riveted to shelf (or header), attach by placing LED in base of clip and then snapping into clip at FLANGE SIDE.

- Press plug's barrel-shaped insert deep into LED light.
- **Important:** If plug is not inserted ALL THE WAY IN the LED light's orifice, the light may not energize. See "BAD" vs. "GOOD" insertion illustrations below-right.
- Turn LED light switch back on.



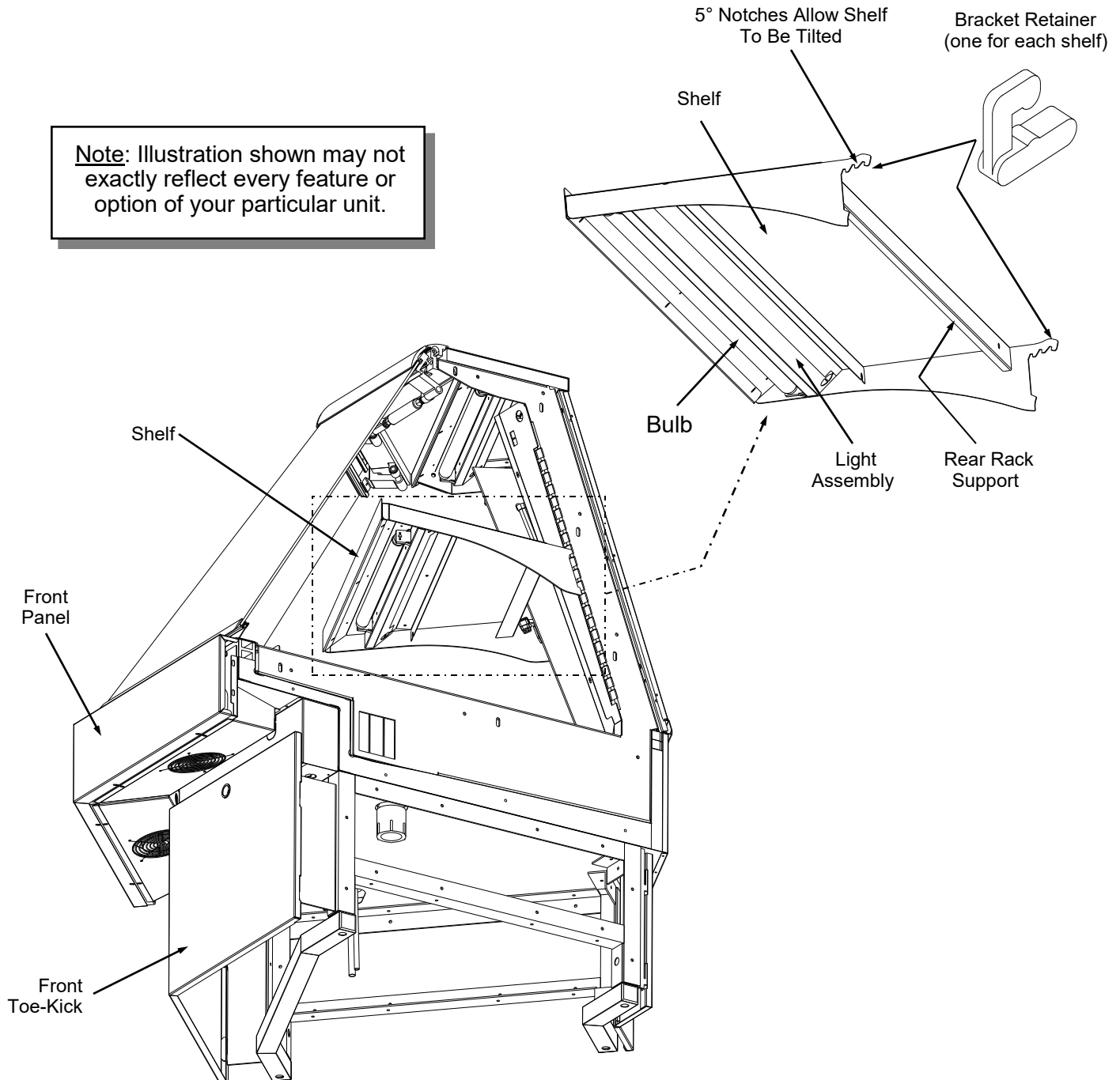


## 2. Shelf Assembly (Standard Style)

- Shelves may be removed from uprights for cleaning or service.
- For lighted shelving, unplug the light cord and detach from the rear shelf support prior to removing from case.
- Remove brackets. **Note: It may be necessary to remove the bracket retainer.** Pliers will be required to accomplish this task; pull bracket retainers out of upright toward front of case.

- **Note:** Depending upon model and options chosen, shelf assembly may be tilted forward at 5° increments (see illustration below right).
- See next page for additional shelf assembly styles (and step styles) on various models.

**Note:** Illustration shown may not exactly reflect every feature or option of your particular unit.

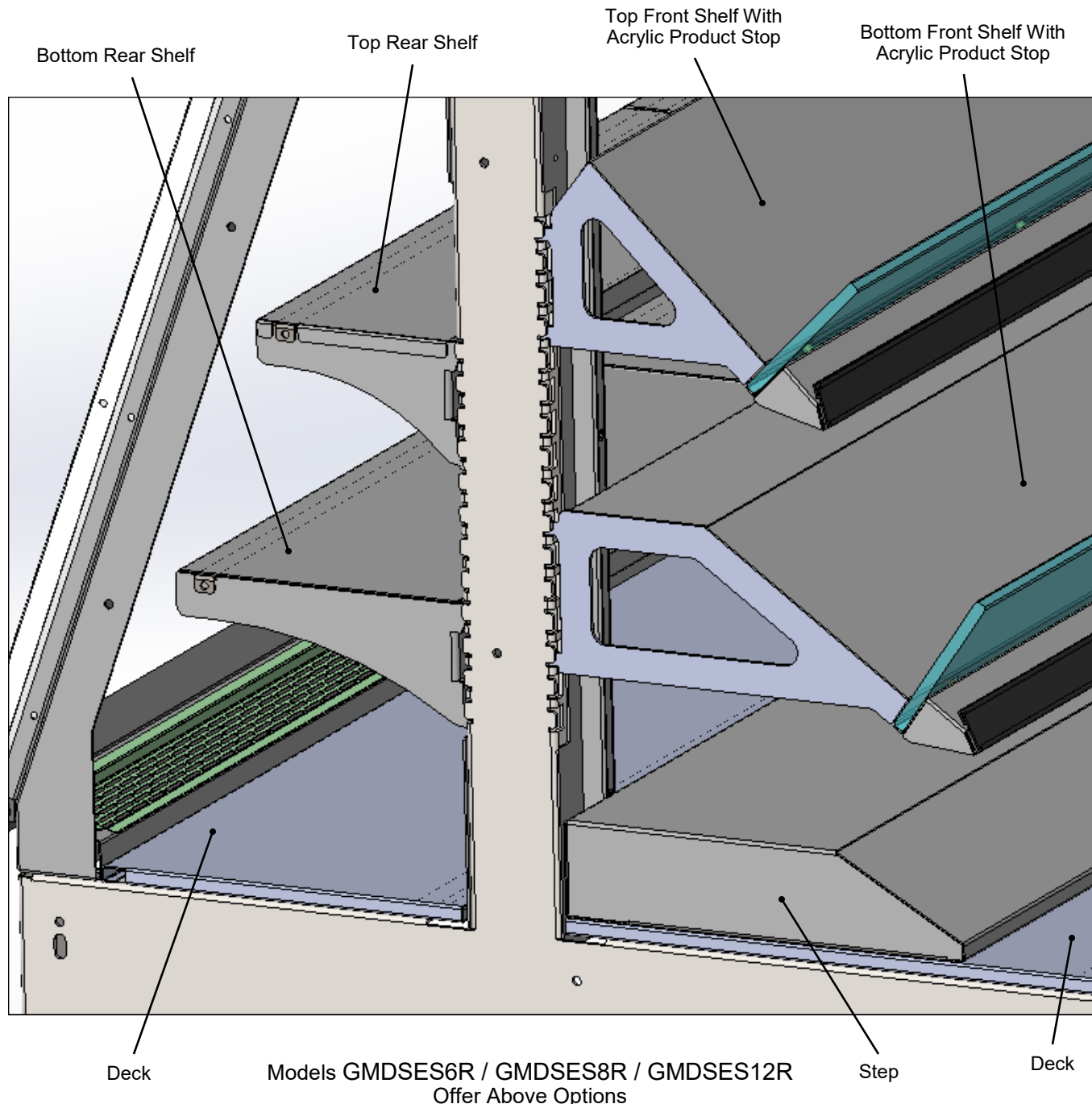


### 3. Shelf Assembly (Optional Styles)

- Shelves may be removed from uprights for cleaning or service.
- For lighted shelving, unplug the light cord and detach from the rear shelf support prior to removing from case.

### 4. Steps

- Steps can vary in size and style.
- Models GMDSES6R / GMDSES8R / GMDSES12R offer optional steps as shown below. Your unit's style may vary.
- See next page for additional shelf assembly and step styles.



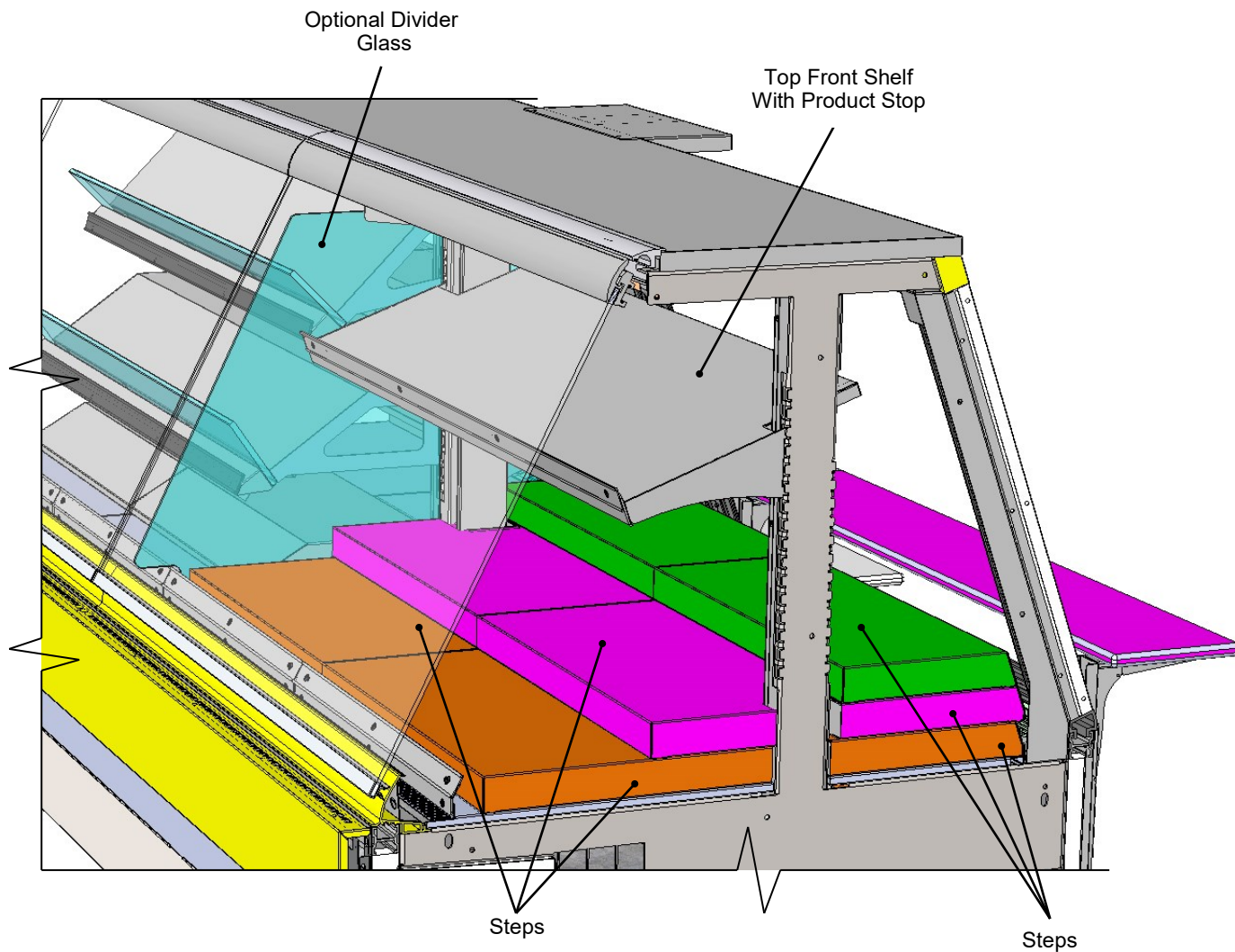
### **5. Shelf Assembly (Optional Styles)**

- Shelves may be removed from uprights for cleaning or service.
- For lighted shelving, unplug the light cord and detach from the rear shelf support prior to removing from case.
- Models GMDSES6R / GMDSES8R / GMDSES12R offer shelf assembly designs shown below. Your unit's style may vary.

### **6. Steps**

- Steps vary in size and style.
- Models GMDSES6R / GMDSES8R / GMDSES12R offer optional steps as shown below. Your unit's style may vary.
- See previous page for additional shelf assembly and step styles.

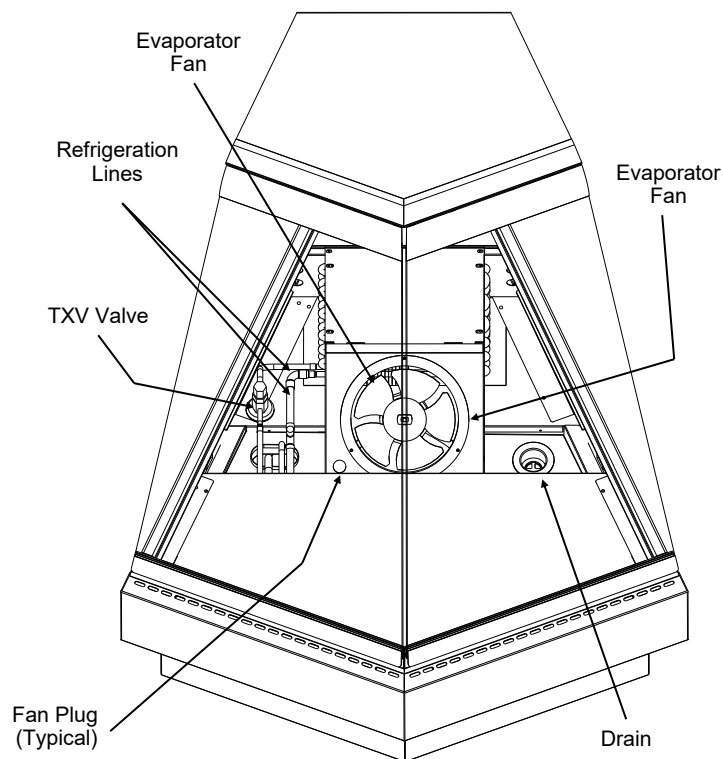
Note: Illustration shown may not exactly reflect every feature or option of your particular unit.



Models GMDSES6R / GMDSES8R / GMDSES12R  
Offer Above Options

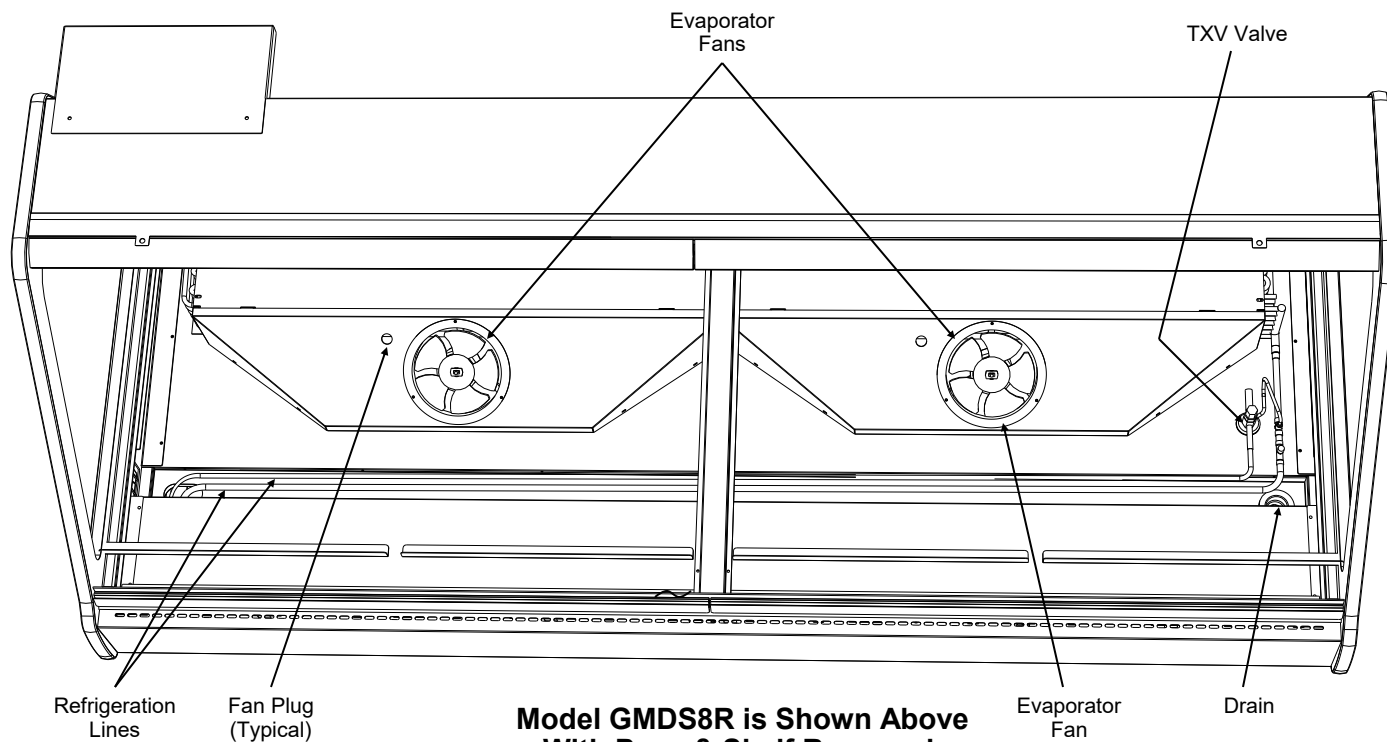
## 7. Drain and Expansion Valve Access

- The drain and expansion valve are both accessible from the front of the case.
- Unplug the fans (one plug per side) and remove the fastener from the access panel in the front right (or left) corner of the unit.
- The drain and the expansion valve (TXV) is directly below the access panel.



**Model GMDSX4R is Shown Above  
With Pan & Shelf Removed**

**Note:** Illustration shown may not exactly reflect every feature or option of your particular unit.



**Model GMDS8R is Shown Above  
With Pans & Shelf Removed.  
Your Case May Differ**

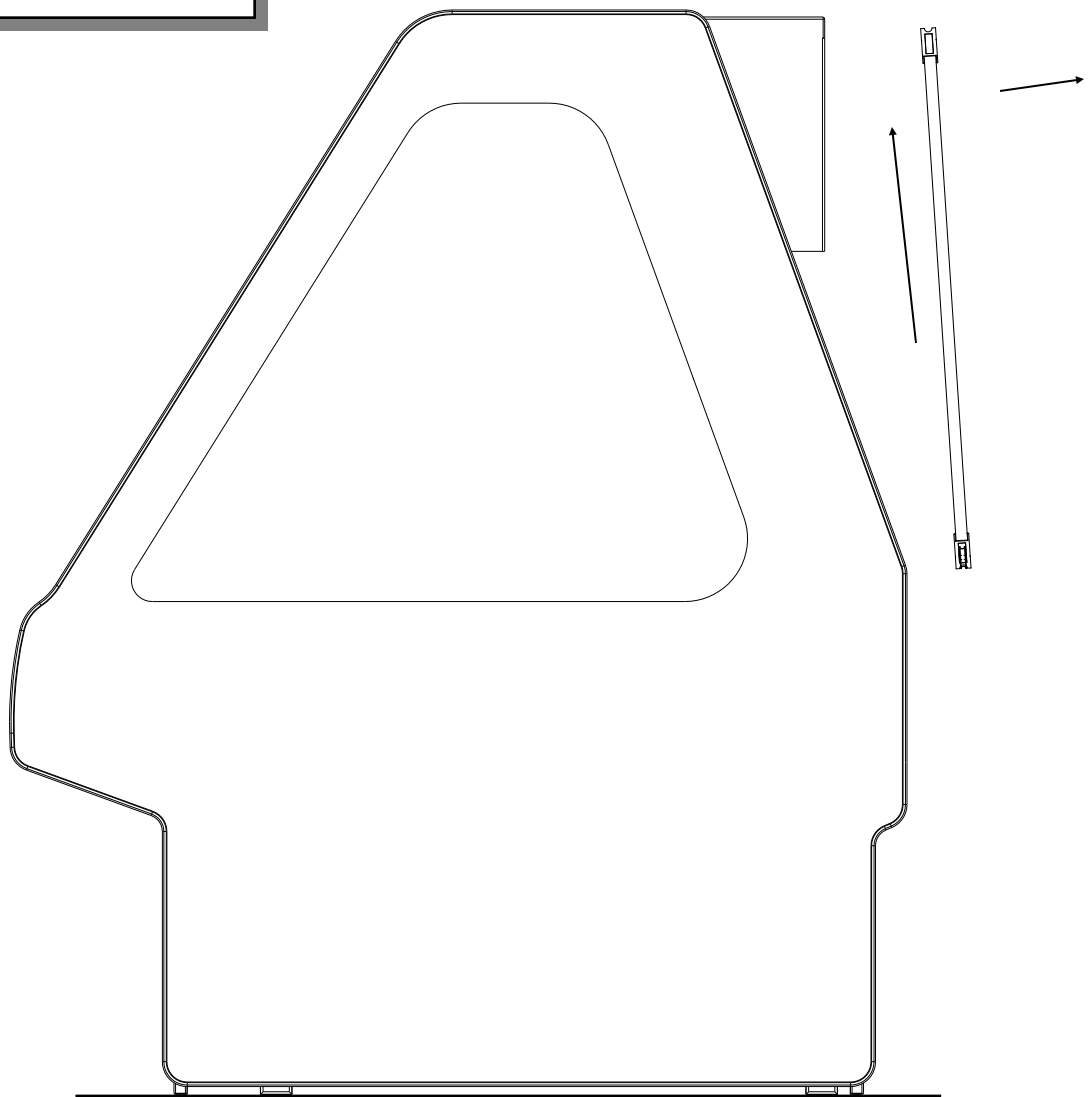
### 8. Rear Sliding Doors

Note: Doors are not interchangeable. There is an inner and outer door. The outer must be removed first and replaced last.

- The outer door is the right hand door (from the service side or rear of case).
- It is identified by a stop located at the lower right hand corner to the inside of the case.

Note: Illustration shown may not exactly reflect every feature or option of your particular unit.

- Move doors toward the center of the case.
- Individually lift each door up toward the top of the case; pivot the bottom of the door out.
- Carefully set rear sliding doors down to prevent them from falling.
- Replace rear sliding doors in reverse order they were removed.
- **Caution! If rear sliding doors become loose, sloppy or DO NOT stay in their door tracks, they could fall out causing damage or injury! Bottom door guides may need to be replaced.**  
>> See **PREVENTIVE MAINTENANCE - TO BE PERFORMED BY TRAINED SERVICE PROVIDERS ONLY** section in manual for specifics.



--- Case With Single Set of Rear Sliding Doors ---

Lift Handle

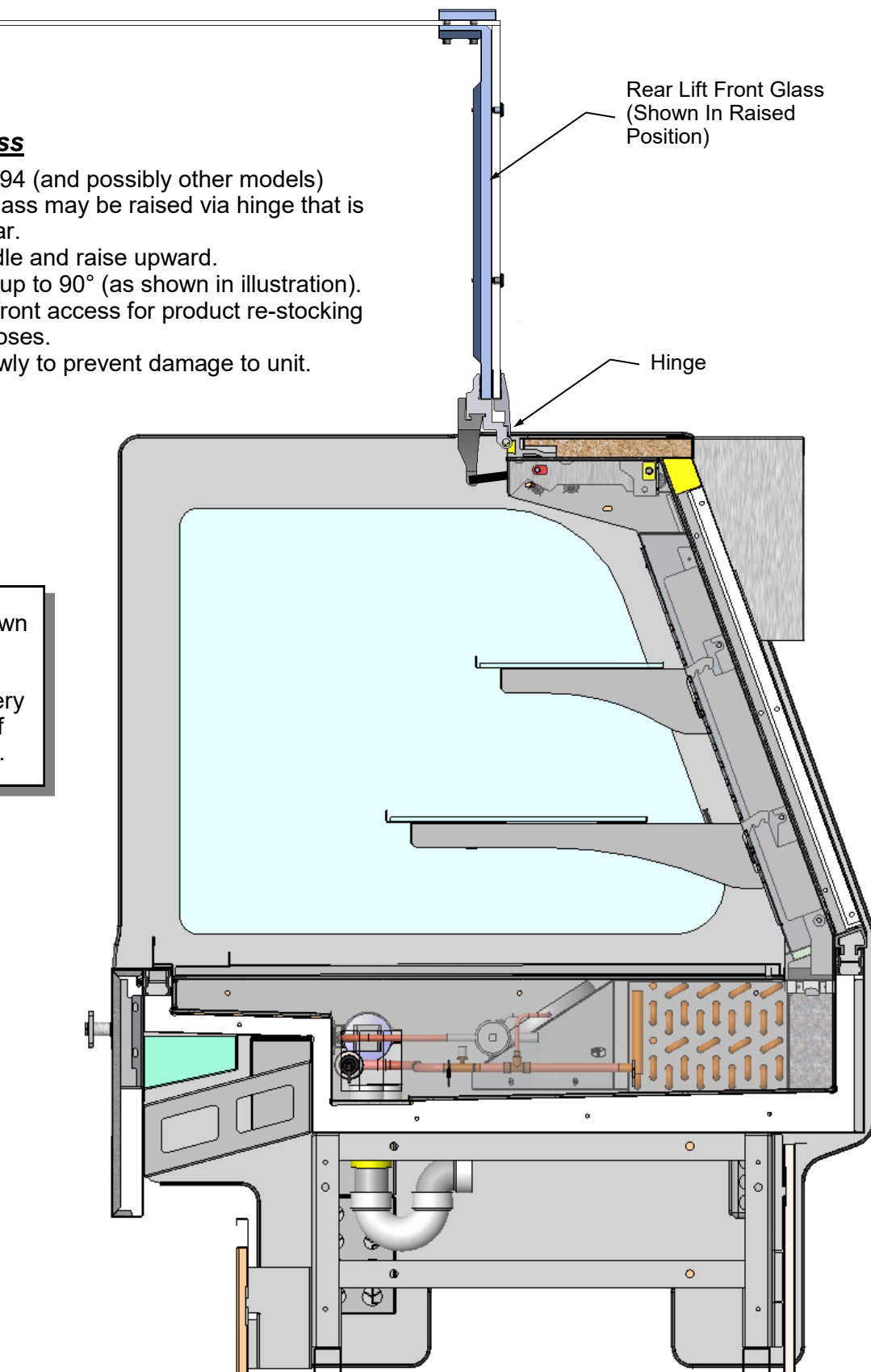
Rear Lift Front Glass  
(Shown In Raised  
Position)

### **9. Rear Lift Front Glass**

- Model GMDSV3R.6694 (and possibly other models) has UV-glued front glass may be raised via hinge that is located near case rear.
- Simply grasp lift handle and raise upward.
- Front glass will raise up to 90° (as shown in illustration).
- Raised glass allows front access for product re-stocking and/or cleaning purposes.
- Lower front glass slowly to prevent damage to unit.

Note: Illustration shown reflects Model GMDSV3R.6694. It may not reflect every feature or option of your particular unit.

Hinge





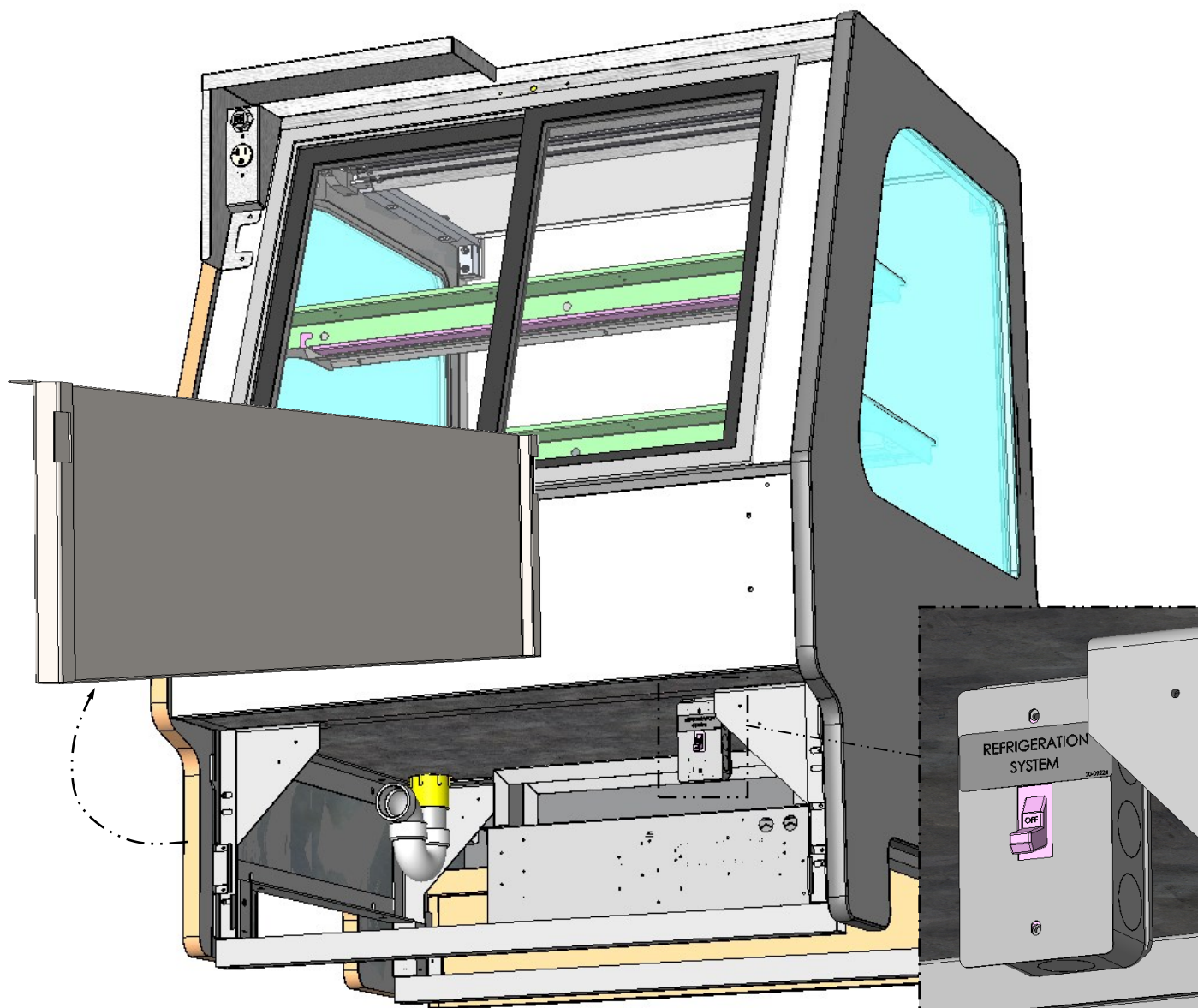
**10. Refrigerated to Dry Switch (Optional)**

Model GMDSV3R.6694 (and possibly other models) may be able to switch from refrigerated to dry (non-refrigerated), if this option is chosen

- To access switch, simply lift rear toe-kick up and off case (as shown below).

- Only authorized store personnel are to access switch.
- After unit has been set to desired state (either refrigerated or dry) via rear switch, return rear toe-kick to case.

**Note:** Illustration shown reflects Model GMDSV3R.6694. It may not reflect every feature or option of your particular unit.

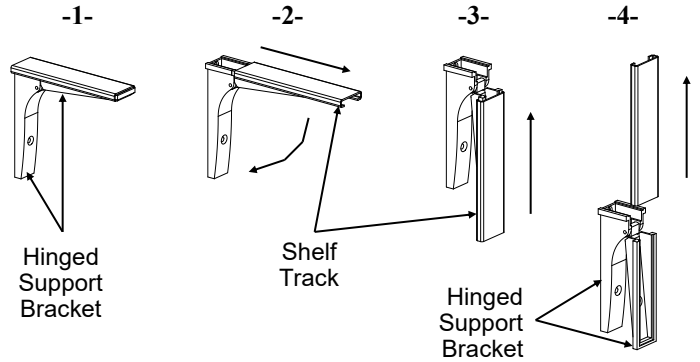


Case With Single Set of Rear Sliding Doors

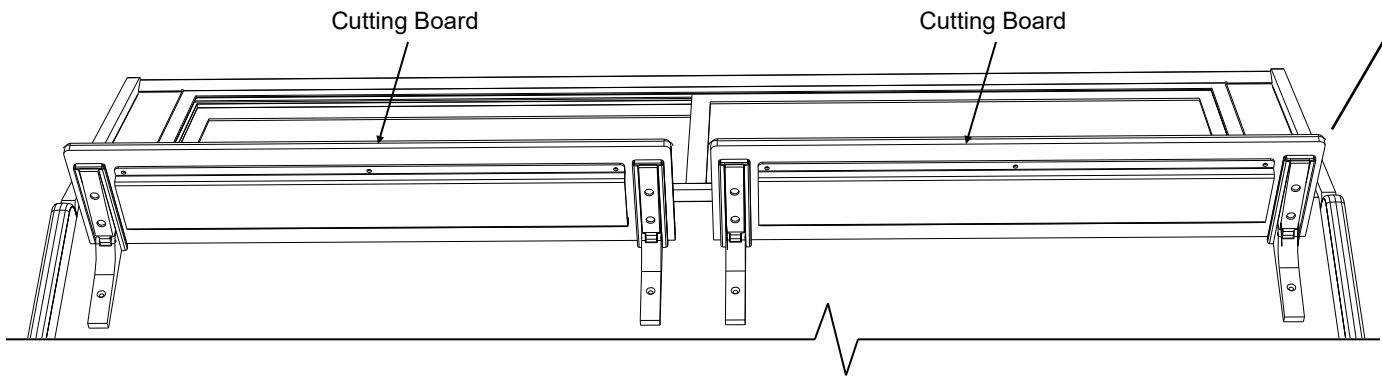
### 11. Cutting Board / Rear Ledge Removal Steps

The illustrations at right and below reflect step-by-step removal method.

1. Hinged Support Bracket is shown in its standard upright position.
- 2 & 3. While upright, Rear Ledge must be slid away from case and then rotated downward to vertical position.
- 3 & 4. From the shelf's lowered position, lift from bottom edge upward to disengage shelf track (and attached Rear Ledge) from bracket.



————— Rear Ledge Removal Steps —————  
 Note: For clarity, only Shelf Track is shown being removed. Rear Ledge is attached to Shelf Track.

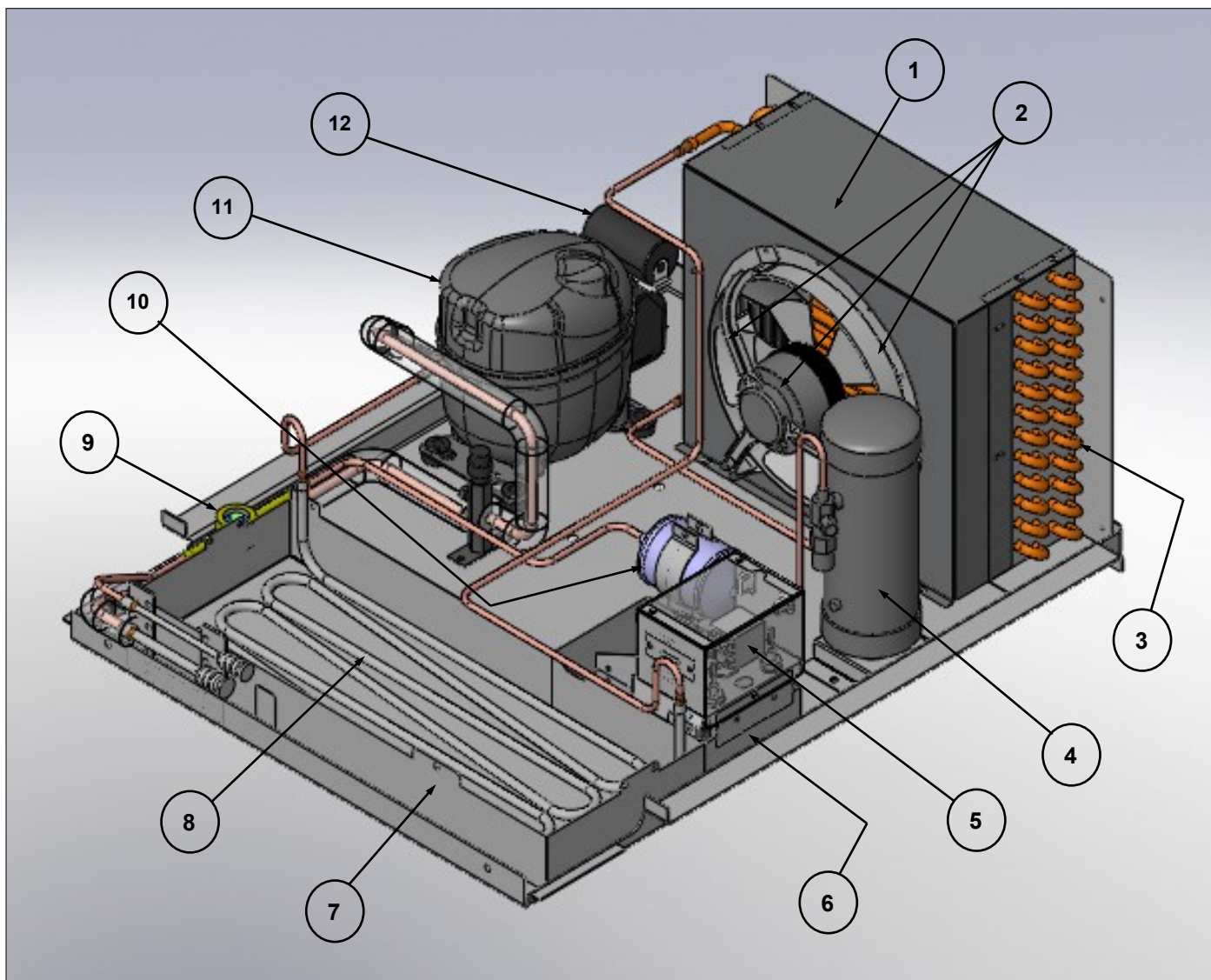


**Note:** Illustration shown may not exactly reflect every feature or option of your particular unit.

### 12. General EnergyWise Refrigeration Package Configuration

- Note: Your particular compressor may have slightly different refrigeration package layout.

|   |                                                                                                                                |    |                                           |
|---|--------------------------------------------------------------------------------------------------------------------------------|----|-------------------------------------------|
| 1 | Fan Shroud / Condenser Coil Cover: (Optional: May Have Shroud Attached to House Clean Sweep™ Automatic Condenser Coil Cleaner) | 7  | Hot Gas Condensate Evaporator Pan         |
| 2 | Fan Motor & Bracket                                                                                                            | 8  | Hot Gas Loop                              |
| 3 | Condenser Coil Tubing                                                                                                          | 9  | Sight Glass                               |
| 4 | Receiver                                                                                                                       | 10 | Filter / Drier                            |
| 5 | Electrical Box (To Overflow Condensate Pan)                                                                                    | 11 | Hot Gas Loop Compressor                   |
| 6 | Overflow, Hot Gas Condensate Evaporator Pan                                                                                    | 12 | Start Components, Hot Gas Loop Compressor |



### 13. Electrical Connections

Field Access Boxes, Electrical Outlets, LED Drivers, Circuit Board, Transformer, Terminal Strips, Programmable Controller, Etc.

> **Note:** Rear panel is shown transparent.

- Access to field access box is at case rear with rear panel removed (no screw removal required).
- **Note:** Wiring process must be performed by certified electrician only.
- When case is properly field-wired, it will energize (no main power switch required).

### 14. Programmable Controller

- Programmable controller is in the pull-out electrical box (accessible at case rear).
- Programmable controller display is also at case rear (as shown at upper-right below).

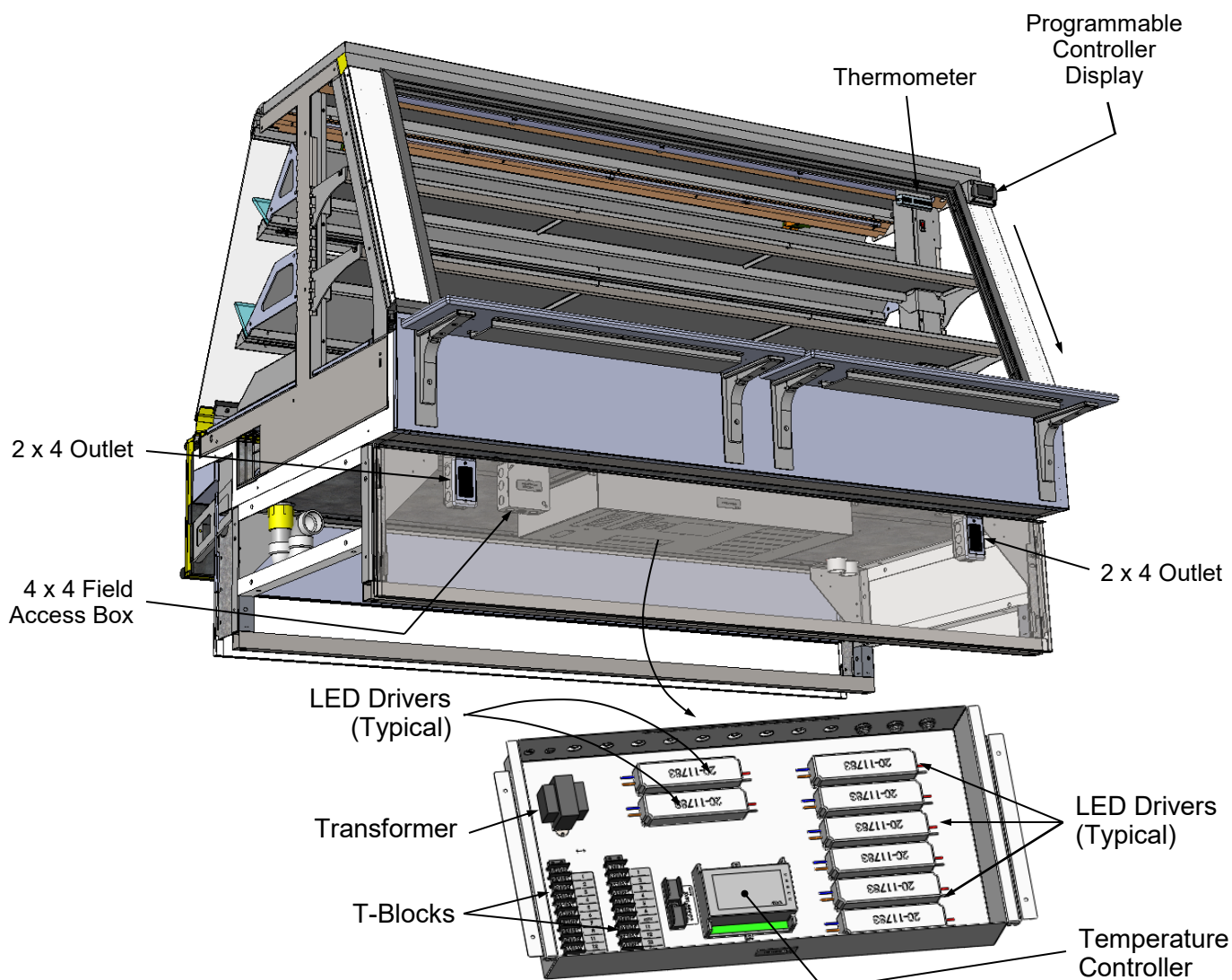
- See **Programmable Controller Information** section in this user manual for additional information.

### 15. Model Illustration Compatibility

- Model shown below is GMDSE6R.
- Models GMDSE8R & GMDSE12R have similar remote layouts.
- Your model may slightly differ.

### 16. Misting Systems

- Certain units have misting systems.
- To prevent ice buildup, misting systems **MUST BE** placed in extended manual defrost on a weekly basis.
- See next page's **Interior Weekly Extended Manual Defrost** section for additional information.



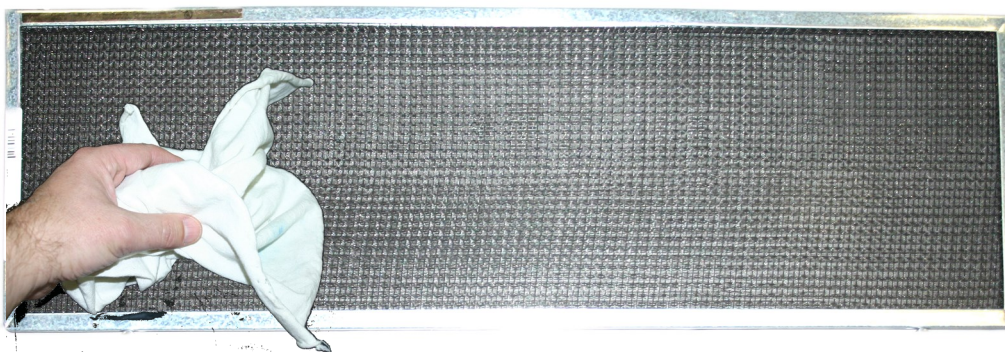
# CLEANING SCHEDULE - INTERIOR: TO BE PERFORMED BY STORE PERSONNEL

| AREA     | FREQ.   | INSTRUCTIONS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|----------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Interior | Daily   | <b>Decks:</b> Wipe off decks with moist cloth dipped in mild soap and water solution.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|          | Weekly  | <b>Extended Manual Defrost (For Units With Misting System Only):</b> <ul style="list-style-type: none"> <li>Units with misting system can have ice buildup occur (causing case to operate outside acceptable temperatures). Models include GMDSV8R.7063B and GMDSV12R.7063D. However, misting systems may also be on other models.</li> <li>To prevent ice buildup, case must be placed in extended manual defrost until all ice that may have built up in evaporator coils has thawed. This procedure may take several hours.</li> <li>If uncertain of proper extended manual defrost procedure, see your controller's instruction guide OR contact your facility's maintenance/service manager.</li> </ul> |
|          | Monthly | <b>Tub and Drain (Trained Service Providers Only):</b> <ul style="list-style-type: none"> <li><b>Caution! Turn off power to unit before proceeding.</b></li> <li>Area at underside of decking must be kept free of debris which could clog tub and drain. To access drain area, remove the deck and fan shroud.</li> <li>Use spray bottle and brush to dislodge residue. Use wet-vac on tub, trough and drain to remove residue.</li> <li><b>Caution! Avoid splattering water over the case and surrounding areas!</b></li> </ul>                                                                                                                                                                            |
|          | Monthly | <b>Condensing Coil:</b> <ul style="list-style-type: none"> <li>Remove grille (by lifting up and off).</li> <li>Use air pressure or industrial strength vacuum; clean dust and dirt that may collect on the condenser coil.</li> <li><b>Caution! Coil fins are sharp. Handle with care!</b></li> <li>Replace rear grille. No screw attachment is necessary.</li> </ul>                                                                                                                                                                                                                                                                                                                                        |



# CLEANING SCHEDULE - EXTERIOR: TO BE PERFORMED BY STORE PERSONNEL

| AREA     | FREQ.   | INSTRUCTIONS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|----------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Exterior | Daily   | <b>All Glass / Mirrors:</b> Clean side glass, front glass and mirrors with household or commercial glass cleaner. Clean out door track with moist cloth.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|          | Daily   | <b>Rear Sliding Door Exterior Glass:</b> Clean with household or commercial glass cleaner.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|          | Daily   | <b>End Panels, Front Panel, Toe-Kick, etc.:</b> Wipe off all surfaces with warm water and mild soap solution and non-abrasive cloth.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|          | Weekly  | <b>Wood, Laminate and Painted Surfaces:</b> Clean with mild soap and water solution and a soft cloth .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|          | Weekly  | <p><b>Magnetic Condenser Coil Filter (Self-Contained Units Only):</b></p> <ul style="list-style-type: none"> <li>This filter helps prevent dust particles from entering condenser coil.</li> <li>It is usually accessible at case rear.</li> <li>Clean magnetic condenser coil filter by following either step 1 or 2; then follow step 3: <ol style="list-style-type: none"> <li>To clean by hand, (without using dishwasher), remove magnetic condenser coil filter from case. Use a rag or soft-bristled brush to wipe off excess dust particles from filter. Submerge in warm, soapy water. Use soft-bristled brush to remove dust, dirt, grease and grime that may collect on filter. Rinse thoroughly. Skip to step #3.</li> <li>As magnetic condenser coil filter is dishwasher safe, remove from case (no screw removal required) and use a rag or soft-bristled brush to wipe off excess dust particles from filter. Run in normal dishwasher cycle. Remove from dishwasher. Go to next step.</li> <li>Dry with soft cloth or paper towel (as shown below) or allow to air dry. Replace.</li> </ol> </li> </ul> |
|          | Monthly | <b>Under Case Cleaning:</b> Remove front toe-kick (or rear panel). Vacuum under case to remove all dust and dirt. Replace front toe-kick (or rear grille) when complete.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |





## CLEANING SCHEDULE -STAINLESS STEEL: TO BE PERFORMED BY STORE PERSONNEL

### General Stainless Steel Surface Cleaning (To Be Performed As Often As Needed):

- Certain grades of stainless steel, and some are more prone to corrosion than others.
- Stainless steel can become exposed to a wide variety of contaminants, which if left untreated can cause stains and rust.
- Stainless steel requires a specific cleaning procedure to maintain its sheen and remain rust-free.
- Wash with a solution of liquid dishwashing detergent and hot water.
- Rinse with pure hot water from spray bottle. Wipe with clean sponge. This will remove soap residue that can lodge in stainless steel's microscopic grooves, causing rust.
- Dry with clean, soft cloth or paper towel.
- **Caution!** *To prevent rust, you MUST rinse with pure hot water from a spray bottle while wiping with clean sponge after EACH cleaning.*
- **Caution!** *Never clean with scouring powder or steel wool as they can mar, scratch and/or erode the surface of stainless steel. When the surface properties of stainless steel have been compromised, rust can form.*

### Brightening:

- **Method 1:** Brighten by polishing with a soft cloth or sponge with a solution of one part vinegar to 2 parts water in a spray bottle.
- **Method 2:** Sprinkle baking soda on sponge and rub gently with soft cloth or sponge.
- **Caution!** *To prevent rust, you MUST rinse with pure hot water from a spray bottle while wiping with clean sponge after EACH cleaning.*
- Dry with clean, soft cloth or paper towel.

### Removing Streaks or Stains:

- **Method 1:** Place two teaspoons of rubbing alcohol on a microfiber cloth or pad. Rub the cloth along the grain of the appliance until the entire area has been wiped. The rubbing alcohol will air dry itself.
- **Method 2:** Dip soft cloth or sponge in club soda and rub gently over area of concern.
- **Caution!** *To prevent rust, you MUST rinse with pure hot water from a spray bottle while wiping with clean sponge after EACH cleaning.*
- Dry with clean, soft cloth or paper towel.

### Polishing:

- Place a dab of olive oil onto clean soft cloth. Spread over area until a light sheen is observed. Use pressure to "work the oil" into the small grooves in the surface. Apply firm, steady pressure using small circular motions.
  - > **Dry buff:** Remove excess oil with clean cloth or paper towel using small circular motions.
  - > **Wet buff:** Use an ounce or white vinegar with clean cloth or paper towel using small circular motions.
  - > Continue wiping until oily finish has been removed.
- **Caution!** *To prevent rust, you MUST rinse with pure hot water from a spray bottle while wiping with clean sponge after EACH cleaning.*
- Dry with clean, soft cloth or paper towel.

### Removing Rust:

- If rust has begun to form, there are a variety of products that can treat it.
- Among these are CLR® (calcium, lime and rust remover) and Chemetall Oakite 33 (rust, oxides and scale remover).
- **Caution!** *To prevent food contamination, personal injury or further corrosion, carefully follow the recommended cleaning precautions and instructions.*

**PREVENTIVE MAINTENANCE - TO BE PERFORMED BY TRAINED SERVICE PROVIDERS ONLY**

**WARNING! TURN OFF CASE BEFORE PERFORMING PREVENTIVE MAINTENANCE!**

| PREVENTIVE MAINTENANCE | FREQ.     | INSTRUCTIONS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|------------------------|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Case Exterior          | Quarterly | <p><b><u>Condensing Coil:</u></b></p> <ul style="list-style-type: none"> <li>Remove rear grille to access area. Simply lift up and off.</li> <li>Roll/slide out condenser package. <b>Note:</b> At initial slide-out, it may be necessary to remove two (2) compressor pan shipment screws to slide it out from under case.</li> <li><b>Warning! Coil fins are sharp. Handle with care!</b></li> <li><b>Caution! Airborne dust can contaminate food!</b> Use wet rags to cover area where air pressure is blowing.</li> <li>Use air pressure or industrial strength vacuum; clean dust and dirt that may collect on condenser coil.</li> <li>Slide/roll condensing package back under case.</li> <li>Return rear grille to case.</li> </ul>                                                                                                                                                                                                                                                                                                                                   |
|                        | Quarterly | <p><b><u>Under Case Cleaning:</u></b></p> <p>Once refrigeration package is clear of unit, vacuum under case to remove all dust and dirt that collects under case.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                        | Quarterly | <p><b><u>Rear Sliding Doors:</u></b></p> <ul style="list-style-type: none"> <li>Rear sliding doors can become loose, sloppy or dislodge from their door tracks. Doors could eventually FALL OUT of the door frames and into (or out of) the case causing damage or injury.</li> <li>Bottom door guides may have become worn and need to be replaced.</li> <li>Contact Structural Concepts' Technical Service for guidance and/or replacement parts information. See last page of manual for contact info.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Case Interior          | Quarterly | <p><b><u>Tub, Coil, Drain, Evaporator Fans, Brackets:</u></b></p> <ul style="list-style-type: none"> <li>Remove decking.</li> <li>Use vacuum to clean entire area.</li> <li>After vacuuming, clean area with warm water, clean cloth, and mild soap solution.</li> <li>Remove any debris that may clog drain.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                        | Quarterly | <p><b><u>Honeycomb:</u></b> Check honeycomb air diffuser to determine whether it is dirty. If dirty, remove from case. Clean with mild detergent. Rinse with high-pressure sprayer. Dry. Return to case.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                        | Quarterly | <p><b><u>Refrigeration Package/Compressor Area (Self-Contained Units Only):</u></b></p> <p><b>Caution! Be certain to disconnect power from case before cleaning refrigeration package!</b></p> <ul style="list-style-type: none"> <li><b>Warning! Overflow condensate pan is HOT! Disconnect power from case and allow to cool before cleaning evaporator pan!</b></li> <li>Slide/roll compressor package out from under case.</li> <li>Use a scrub-brush and a de-scaling solution such as CLR® (to prevent corrosion, lime and rust). Follow instructions as to proper dilution, safety precautions and scrubbing method.</li> <li>After thoroughly cleaning pan with scrub-brush and solution, rinse thoroughly with clean water (in spray bottle) and wipe dry with sponge or paper towel.</li> <li>Use moist cloth to wipe off dust &amp; debris that collects on various parts (fans, sight glass, overflow pan, etc.).</li> <li>Slide refrigeration assembly back under case.</li> <li>Replace front panel and lower grille via hooks (no screws required).</li> </ul> |

# TROUBLESHOOTING - TO BE PERFORMED BY STORE PERSONNEL (UNLESS NOTED OTHERWISE)

| CONDITION                                 | TROUBLESHOOTING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Ice Is Forming on Evaporator Coils</b> | Perform extended manual defrost weekly. See <b><i>CLEANING SCHEDULE - TO BE PERFORMED BY STORE PERSONNEL</i></b> section in manual for additional info.                                                                                                                                                                                                                                                                                                                                          |
| <b>Product Is Drying Out</b>              | <u>Trained Service Providers Only</u> : Check the relative humidity in the store.                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Water Is On Floor</b>                  | <u>Trained Service Providers Only</u> : Check that the drain trap is free of debris.                                                                                                                                                                                                                                                                                                                                                                                                             |
|                                           | Check that the drain hose is correctly positioned over hot gas condensate pan.                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                                           | <u>Trained Service Providers Only</u> : Check store conditions. <ul style="list-style-type: none"> <li>To prevent condensation in NSF/ANSI Type I environments, maximum conditions are to be 55% relative humidity / 75° Fahrenheit.</li> <li>For NSF/ANSI Type II environments, maximum conditions are to be 55% relative humidity / 80° Fahrenheit.</li> <li>If you are unsure if your unit is classified as NSF/ANSI Type I or Type II, see tag next to serial label on your case.</li> </ul> |
| <b>Fan Emits Excessive Noise</b>          | <u>Trained Service Providers Only</u> : Check that the case is aligned, level and plumb.                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                           | <u>Trained Service Providers Only</u> : Check evaporator fan for cleanliness.                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                           | <u>Trained Service Providers Only</u> : Unplug/power off fan motors. Check motor shaft for bearing wear.                                                                                                                                                                                                                                                                                                                                                                                         |
|                                           | <u>Trained Service Providers Only</u> : Check that fan motors are securely mounted in brackets.                                                                                                                                                                                                                                                                                                                                                                                                  |
|                                           | <u>Trained Service Providers Only</u> : Verify that fan blades are securely mounted to fan motor.                                                                                                                                                                                                                                                                                                                                                                                                |
|                                           | <u>Trained Service Providers Only</u> : Check that nothing is preventing blade rotation.                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                           | <u>Trained Service Providers Only</u> : Check that the fan shroud is properly secured.                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Fans Not Working</b>                   | Check that the MAIN power switch is on.                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                                           | <u>Trained Service Providers Only</u> : Check that fans are plugged in at the fan shroud.                                                                                                                                                                                                                                                                                                                                                                                                        |
|                                           | <u>Trained Service Providers Only</u> : Check for foreign material obstructing fan performance.                                                                                                                                                                                                                                                                                                                                                                                                  |
|                                           | <u>Trained Service Providers Only</u> : Check that fan blades freely rotate within fan shrouds.                                                                                                                                                                                                                                                                                                                                                                                                  |
|                                           | <u>Trained Service Providers Only</u> : Check that power is going to fans.                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                                           | <u>Trained Service Providers Only</u> : Check that fan wiring is connected on terminal blocks                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Digital Control Display Is Blank</b>   | Check that the MAIN power switch is on.                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                                           | <u>Trained Service Providers Only</u> : Check the circuit breaker box for tripped circuits.                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>System Not Operating</b>               | <u>Trained Service Providers Only</u> : Check that the utility power is on.                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                                           | Check that the MAIN power switch is on.                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                                           | <u>Trained Service Providers Only</u> : Check the circuit breaker box for tripped circuits.                                                                                                                                                                                                                                                                                                                                                                                                      |

## TROUBLESHOOTING - TO BE PERFORMED BY STORE PERSONNEL (UNLESS NOTED OTHERWISE)

| CONDITION                               | TROUBLESHOOTING                                                                                                                                                                                                                                                        |
|-----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Case Lights Not Working</b>          | Check that light switch has been flipped on.                                                                                                                                                                                                                           |
|                                         | Check bulbs for proper installation and connection.                                                                                                                                                                                                                    |
|                                         | Check for burned out bulbs.                                                                                                                                                                                                                                            |
|                                         | Clean dirt and dust from the bulbs to prevent flickering.                                                                                                                                                                                                              |
| <b>Not Holding Temperature</b>          | If a large amount of warm product was added to the case, it will take time for the temperature to adjust. Unit needs product to be pre-chilled.                                                                                                                        |
|                                         | Temperature changes during defrost mode but will return to normal. Fourth LED will indicate defrost cycle in progress.                                                                                                                                                 |
|                                         | Check that case is not in sun or near a heat or air-conditioning vent.                                                                                                                                                                                                 |
|                                         | If case is located near outside doors, temperature fluctuation can hinder unit's ability to maintain temperature.                                                                                                                                                      |
|                                         | Check that condenser coil has been cleaned.                                                                                                                                                                                                                            |
|                                         | Check air return grilles for obstructions.                                                                                                                                                                                                                             |
|                                         | <u>Trained Service Providers Only</u> : Check sight glass for flashing and/or low charge.                                                                                                                                                                              |
|                                         | <u>Trained Service Providers Only</u> : Check set point temperature; it may be adjusted too high.                                                                                                                                                                      |
| <b>Condensing Unit Is Not Operating</b> | Check that the power is turned on.                                                                                                                                                                                                                                     |
|                                         | Determine if temperature controller settings are properly set. <i>See your case's serial label for your model's specified settings. See <b>SERIAL LABEL LOCATION &amp; INFORMATION LISTED / TECH INFO &amp; SERVICE</b> section in manual for label location, etc.</i> |

## TROUBLESHOOTING - CONDENSING SYSTEM (BY TRAINED SERVICE PROVIDERS ONLY)

| CONDITION                     | TROUBLESHOOTING                                                                                                                                                                                                                    |
|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Head Pressure Too High</b> | Check that the condensing coil is not dirty or covered.                                                                                                                                                                            |
|                               | Check that condensing fans are working.                                                                                                                                                                                            |
|                               | Check that refrigerant is not overcharged.                                                                                                                                                                                         |
|                               | Perform sub-cooling check and verify that no contaminants are in system.                                                                                                                                                           |
|                               | Check that liquid line filter dryer is not plugged.                                                                                                                                                                                |
|                               | Check that close-offs are intact (around condensing coil) and that air is not recirculating.                                                                                                                                       |
|                               | Check that store ambient temperature isn't above maximum allowed.<br><ul style="list-style-type: none"> <li>• See <b>OVERVIEW / TYPE / COMPLIANCE / WARNINGS / PRECAUTIONS / WIRING / PLUGS</b> section in this manual.</li> </ul> |
| <b>Head Pressure Too Low</b>  | Check if sight glass is flashing or showing low charge.                                                                                                                                                                            |
|                               | Check that suction pressure isn't too low.                                                                                                                                                                                         |
|                               | Check that compressor reed valves aren't bad. Look for high suction/low head pressure. Perform pump-down.                                                                                                                          |

## TROUBLESHOOTING - EVAPORATOR SYSTEM (BY TRAINED SERVICE PROVIDERS ONLY)

| CONDITION                    | TROUBLESHOOTING                                                                                                                            |
|------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Low Suction Pressure</b>  | Check if sight glass is flashing or showing low charge.                                                                                    |
|                              | Check that expansion valve (TXV) isn't restricted. Check element charge.                                                                   |
|                              | Check that liquid line or filter isn't restricted. Check that refrigeration lines and/or hoses are not kinked on either high or low sides. |
|                              | Check that evaporator fan motors are working.                                                                                              |
|                              | Check that superheat is between 6 °F to 8 °F.                                                                                              |
|                              | Check that there is no air recirculation around evaporator coil.                                                                           |
|                              | Check that evaporator coil is not iced up.                                                                                                 |
| <b>High Suction Pressure</b> | Check for refrigerant overcharge.                                                                                                          |
|                              | Check that compressor reed valves aren't bad. Look for high suction/low head pressure. Perform pump-down.                                  |
|                              | Check that the "cooling load" isn't high. Product must be pre-chilled before placing in refrigerated section of case.                      |
|                              | Check that case is at least <u>15-feet</u> from exterior doors, overhead HVAC vents or any air curtain disruption.                         |
|                              | Check that unit is not exposed to direct sunlight via windows or any other heat source (ovens, fryers, etc.).                              |
|                              | Check that superheat adjustment isn't low.                                                                                                 |
|                              | Check TXV bulb installation <ul style="list-style-type: none"> <li>a. Poor thermal contact.</li> <li>b. Warm location.</li> </ul>          |



**Serial Label Location & Information Listed / Technical Information & Service**

- Serial labels are affixed at a wide range of places (on the header, near thermostat, at case rear, behind panels/toe-kicks, on electrical boxes, etc.).
- Serial labels contain electrical, temperature and refrigeration information, as well as regulatory standards to which the case conforms.

- Sample serial label shown below.
- For additional technical information and service, see the *TECHNICAL SERVICE* page in this manual for instructions on contacting Structural Concepts' Technical Service Department.

**Structural Concepts®**  
888 E. Porter Rd - Muskegon, MI 49441

# Fusion

MODEL NRS3648RXV-SAMPLE  
SERIAL NO. 12345X30DZ098765



Intertek



Intertek

**3048256**  
Conforms to UL Std. 471  
Conforms to NSF/ANSI Stds. 2 & 7  
CERTIFIED TO CAN/CSA  
STD C22.2 NO 120

Super Heat Temp  
Defrost

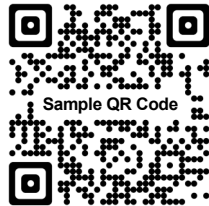
**ELECTRICAL RATING**  
**REFRIGERANT**  
**DESIGN PRESSURE**  
**MINIMUM CIRCUIT AMPACITY**  
**MAXIMUM OVERCURRENT**

6-8 °F  
6 defrosts per day, 45 °F

**120/1/60 16 A**  
**R513A AMOUNT 50 OZ**  
**HIGH 186 LOW 88**  
**20A**  
**20A**

FOR PARTS AND SERVICE  
CALL 1-800-433-9490

SCAN FOR PRODUCT LITERATURE



Sample QR Code

--- Sample Serial Label For Refrigerated Cases ---



**Determine Which Programmable Controller Is On Your Case (Controllers That Are Commonly Used By Structural Concepts Are Shown Below). Your Particular Programmable Controller May Differ.**



**Carel® PJEZ Platform**



**Carel® ir33 Platform**



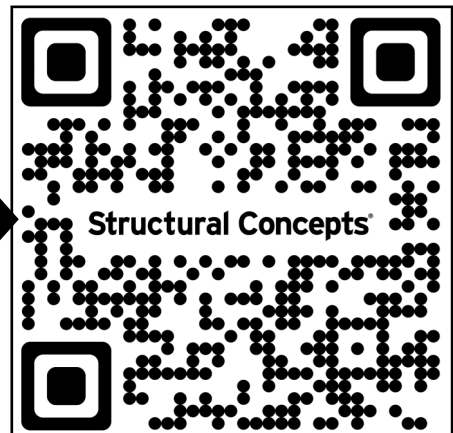
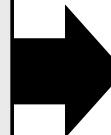
**Carel® iJF Platform**



**Dixell® XM670K-XM679K Platform**

**To Access Information About The Programmable Controller That Is Used On Your Case, Follow These Instructions:**

- > If Viewing This Document on Smart Phone, Tablet or Computer, Select/Click On The QR Code at Right.
- > If Viewing This Document In Print (Hard Copy), Scan The QR Code at Right With Your Smart Phone or Tablet.



## STRUCTURAL CONCEPTS TECHNICAL SERVICE CONTACT INFORMATION & LIMITED WARRANTY

**TECH SERVICE/WARRANTY CONTACT INFO:**  
1 (800) 433-9490 / EXTENSION 1

**DAYS/HOURS AVAILABLE:**  
MONDAY - FRIDAY (CLOSED HOLIDAYS)  
8:00 A.M. to 8:00 P.M. EST

**YOU MUST HAVE THE FOLLOWING INFO AVAILABLE  
BEFORE CONTACTING STRUCTURAL CONCEPTS:**

SERIAL NO. / MODEL NO. / STORE NO. / STORE  
ADDRESS / DETAILS (PHOTOS, LEAK LOCATIONS,  
DAMAGE, STORE'S AMBIENT CONDITIONS, ETC.)

**To Access The Limited Warranty To Your  
Case, Follow These Instructions:**

> If Viewing This Document on Smart Phone,  
Tablet or Computer, Select/Click On The QR  
Code at Right.

> If Viewing This Document In Print (Hard  
Copy), Scan The QR Code at Right With Your  
Smart Phone or Tablet.

