

# FUSION USER MANUAL

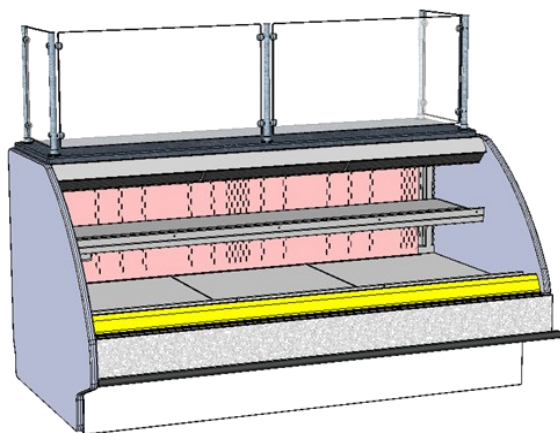
SCC P/N  
20-32516

**FUSION AMBIENT CAKE DECORATING STATION: MODEL GHSSCD336LB.5744A**

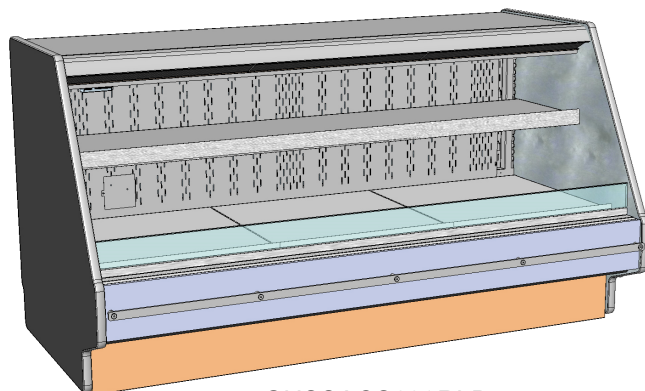
**FUSION REFRIGERATED SELF-SERVICE BAKERY DISPLAY CASES: MODELS GHSSCD436RLB.5872 / GHSSCD636RLB / GHSSCD636RLB.5872A / GHSSACS639RLB**

**FUSION REFRIGERATED SELF-SERVICE LOWER OPEN PROFILE CHEESE DISPLAY CASE: MODEL GHSSEH636RLB**

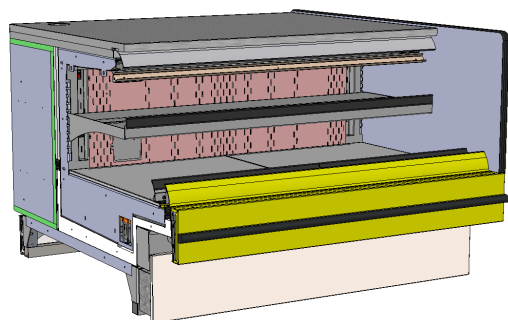
**FUSION REFRIGERATED SELF-SERVICE HIGH VOLUME BAKERY DISPLAY CASE: MODEL GHSSACS839RLB / STAINLESS STEEL WORK SURFACE / UV-GLUED GLASS SNEEZE GUARD / END PANEL CONFIGURATION VARIES**



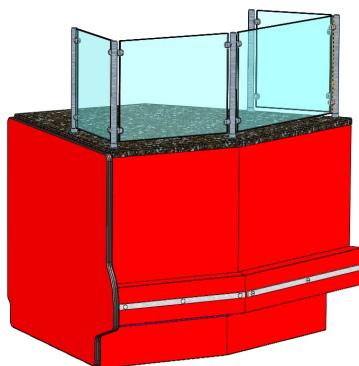
GHSSEH636RLB



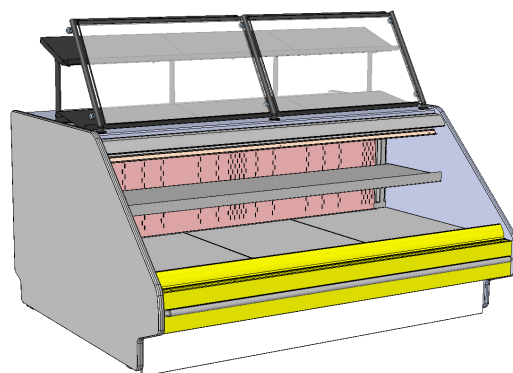
GHSSACS639RLB



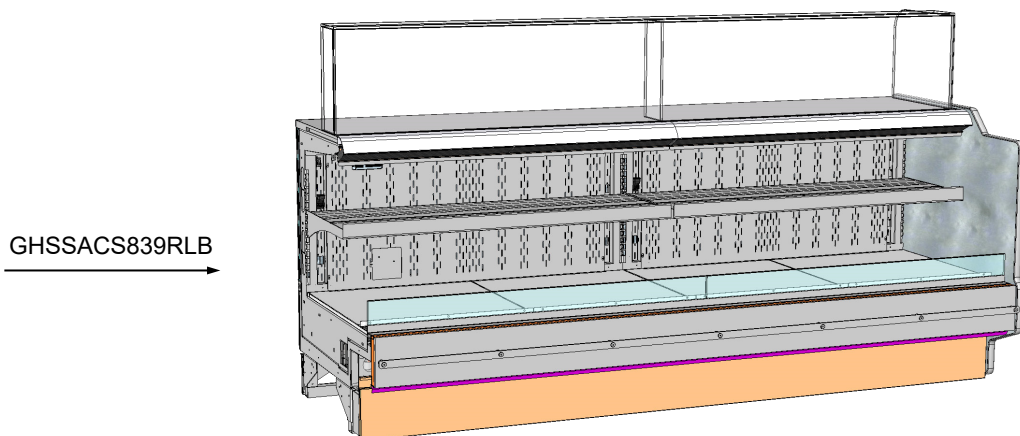
GHSSCD436RLB.5872  
(Similar to GHSSCD636RLB.5872A)



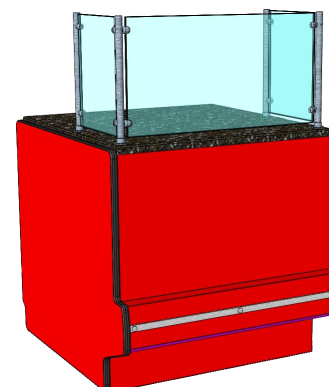
GHSSCD236LB.5744



GHSSCD636RLB



GHSSACS839RLB



GHSSCD336LB.5744A

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**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.

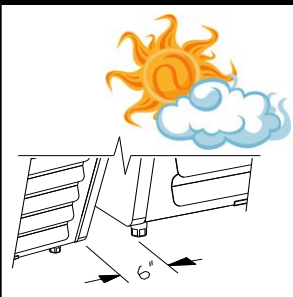
## REFRIGERANT DISCLOSURE STATEMENT

- 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

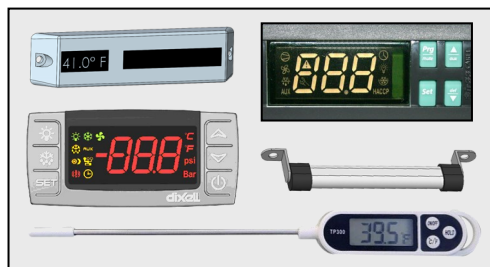


## CAUTION! ADVERSE CONDITIONS / SPACING ISSUES

- 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.

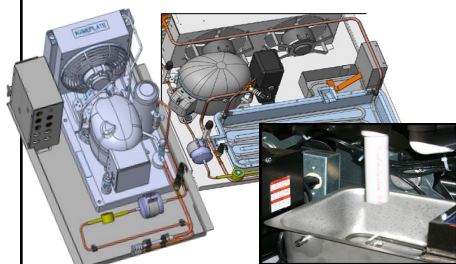


**CAUTION! POWER CORD AND PLUG MAINTENANCE**  
Risk of electric shock. If cord or plug becomes damaged, replace only with cord and plug of same type.



## 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

- These Structural Concepts cases should be installed and operated according to these instructions to ensure proper performance. Improper use will void warranty.
- This unit is designed to display of products in ambient store conditions with a max. temperature of 80 °F (27 °C) .

## COMPLIANCE

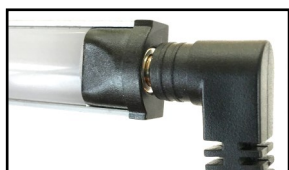
- Performance issues when in violation of applicable NEC, federal, state or local electrical codes are not covered by warranty. See below.

## PRECAUTIONS

- Following are important precautions to prevent damage to unit or merchandise. Read carefully!

## 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.



## WARNING

ELECTRICAL  
HAZARD



## COMPLIANCE

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

## CAUTION! LAMP REPLACEMENT GUIDELINES

If LED lamps are used, they must be size, shape and overall design. Any replacements must meet factory specifications.

## WARNING

Risk of electric shock.

*Disconnect ALL ELECTRICAL SOURCES before servicing.*

## CAUTION! GFCI BREAKER USE 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! POWER CORD AND PLUG MAINTENANCE

Risk of electric shock. If cord or plug becomes damaged, replace only with cord and plug of same type.

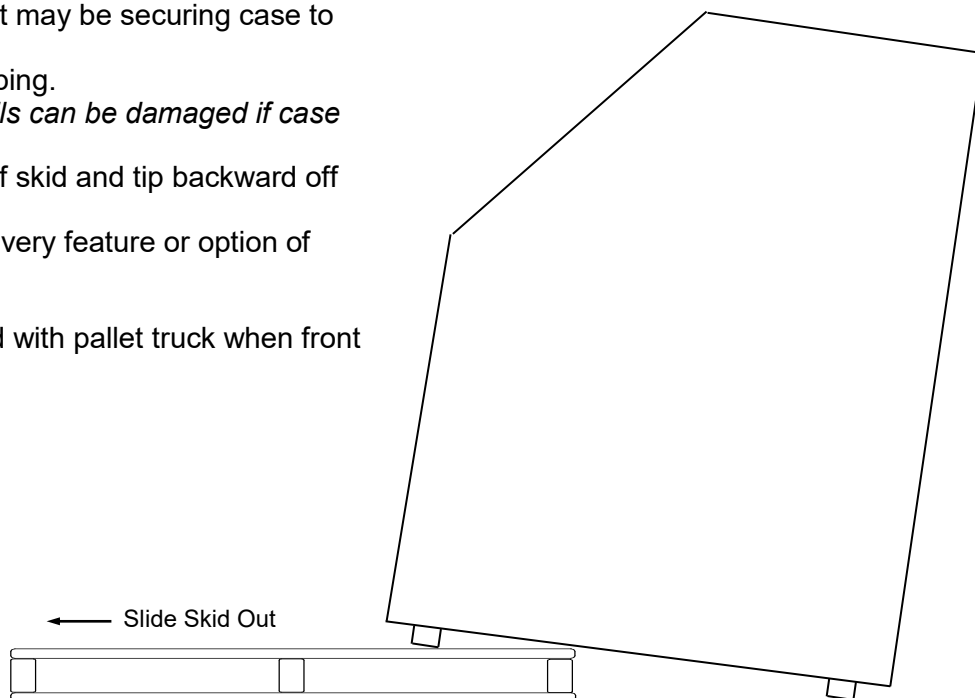
**WARNING:** This product can expose you to chemicals, including Urethane (Ethyl Carbamate), which are known to the state of California to cause cancer and birth defects or other reproductive harm. For more information go to [P65Warnings.ca.gov](http://P65Warnings.ca.gov).

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

### **1. Remove From Skid (With Frame Support Rails)**

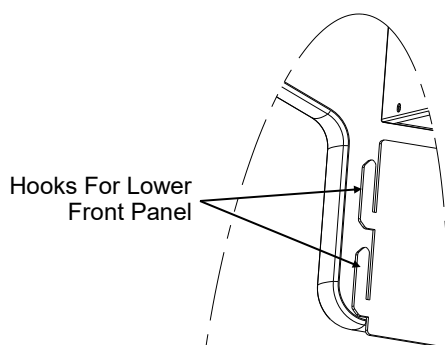
- Remove shipping brace that may be securing case to skid.
- Support case to prevent tipping.
- *Caution! Frame support rails can be damaged if case hits floor with heavy force!*
- Carefully slide unit to rear of skid and tip backward off skid.
- Illustration may not reflect every feature or option of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

Note: Case can be repositioned with pallet truck when front



### **2. Removing Vertical Lower Front Panels**

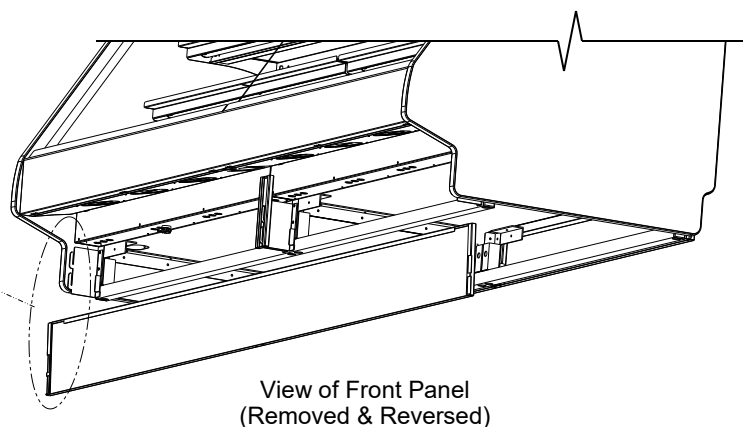
Note: No screw removal required: Simply lift lower front panel up (off hooks) and out (away from case).



Note  
Lower Front Panel  
Removed & Reversed  
For Illustrative  
Purposes Only

Slots For Lower  
Front Panel

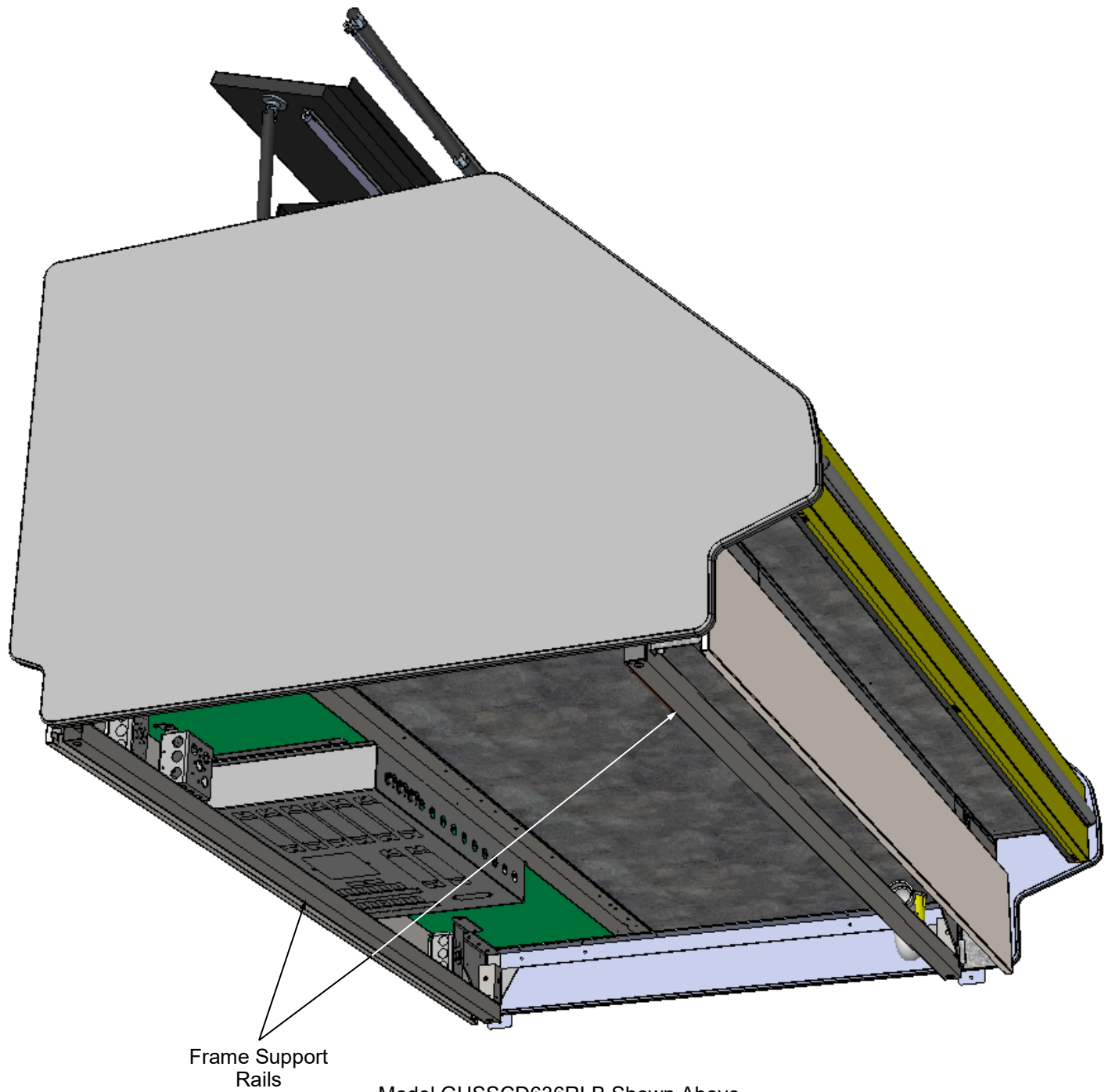
Note: Illustration below may not reflect every  
feature or option of this particular case.  
However lower front panel removal  
illustration will apply.





### **3. Cases With Frame Support Rails: Shim**

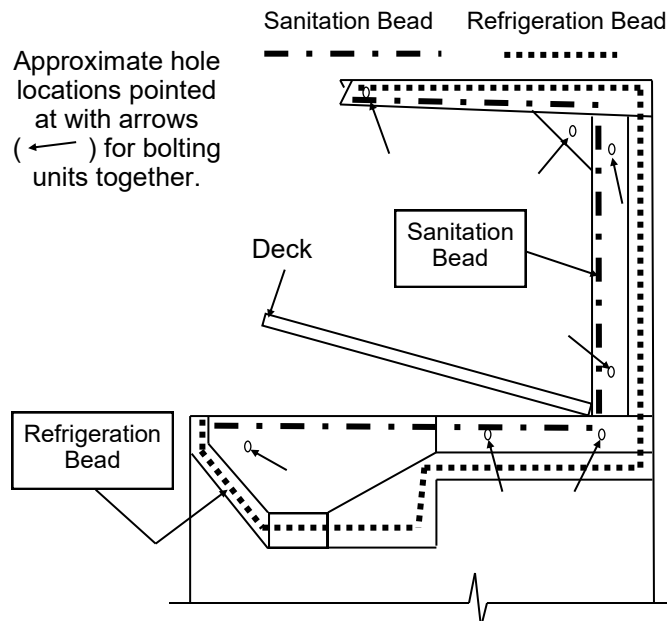
- Illustration below shows case with frame support rails.
- Shims will be provided with all cases that have frame support rails.
- Use shims to level case.
- **Note:** *After case is in position, it must be sealed to floor to prevent entry or leakage of liquid or moisture.*



### 4. **Bolting and Caulking Units Together**

Follow these steps to assure a secure, level lineup.

- A. Begin all lineups leveling from highest point of floor.
- B. After the 'first' case is level, apply industrial grade butyl caulk on non-visible areas (at case end). Use industrial grade silicone sealant on visible areas (at case end).
- C. **Form Two (2) Caulk/Sealant Lines:** (Sanitation and Refrigeration). See illustration at mid-right for outline of caulk/sealant lines.
- D. Line up 'second' case bolt-hole to bolt-hole to 'first' case.
- E. Using SCC-supplied bolts (found in hole locations OR in installation packet), insert bolts in bolt hole locations (shown at top-right). You may need to remove decking to access lower bolt holes.
- F. Caution! Front of cases **MUST** be flush with each other! After leveling, all cases to be same height.
- G. Using SCC-supplied nuts & bolts, **lightly tighten** each of the 5 to 8 bolts in a cross-wise pattern. Work your way around the pattern, tightening more firmly at each pass. **Do not** firmly tighten one bolt and then start on the next!
- H. After the cases are bolted together, level the 'second' case. Repeat this process for each case to be adjoined.
- I. After all lined-up cases are level, seal all seams with industrial grade silicone sealant.
  - See general illustration at top-right.

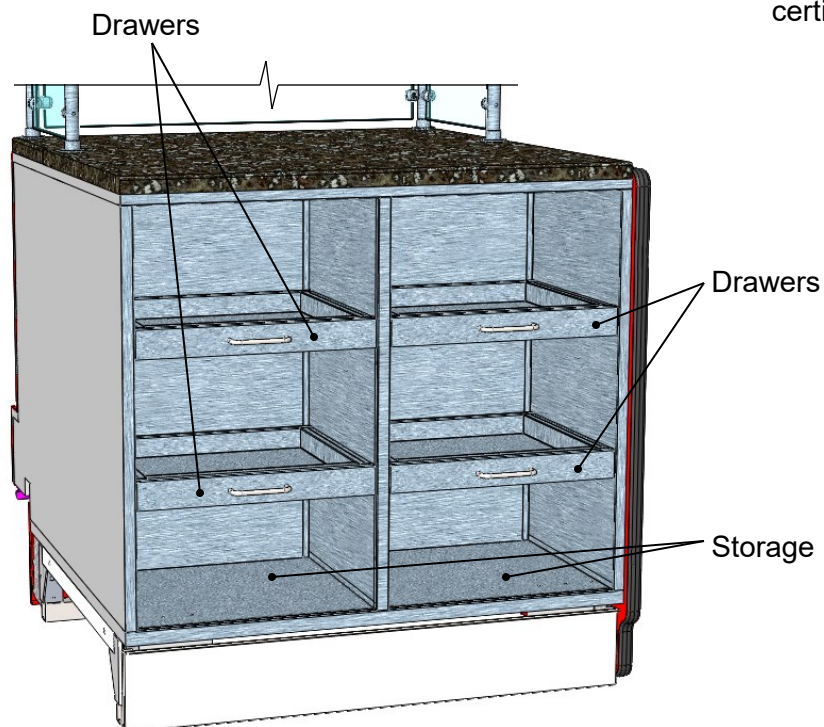




**Ambient Model GHSSCD336LB.5744A Is Shown In Below Illustration**

**5. Ambient Drawers / Ambient Storage Areas**

- Entire case (including rear section) is ambient.
- Drawers and storage areas are provided.
- See illustration below.



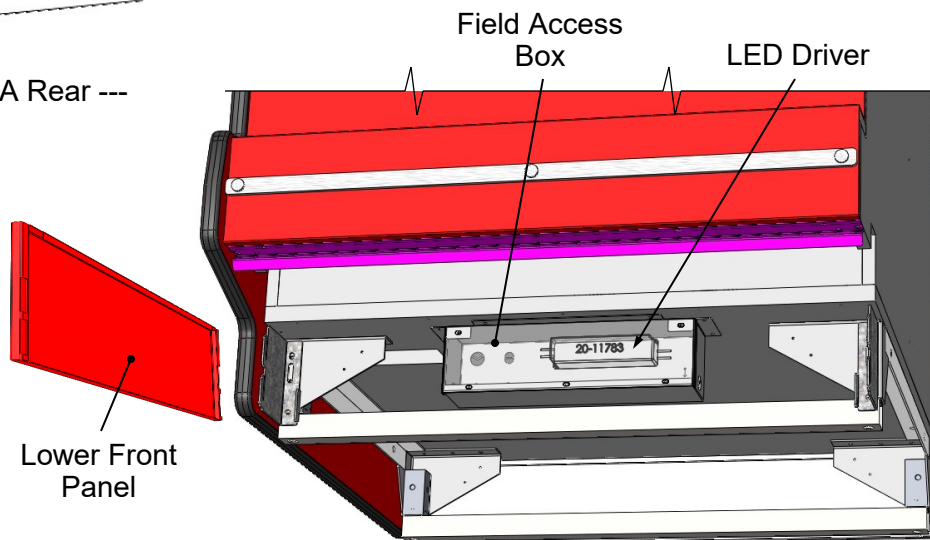
--- Model GHSSCD336LB.5744A Rear ---

**6. Electrical Connections**

**Field Access Box / LED Driver**

> Note: Lower front panel must be lifted up and off. See **INSTALLATION: REMOVAL FROM SKID, REMOVING VERTICAL LOWER FRONT PANELS** section in this manual for more in-depth illustrations on hook/slot panel removal design.

- Stub-up connections are at rear of lower front panel.
- To access, remove lower front panel (no screw removal required).
- Note: Wiring process must be performed by certified electrician only.



--- Model GHSSCD336LB.5744A Front ---

**Model GHSSCD436RLB.5872 Shown Below  
(GHSSCD636RLB.5872A Has Similar Layout)**

**7. Ambient Drawers / Ambient Storage Areas**

- Entire rear section is ambient.
- Drawers and storage areas are provided.
- See illustration below.

**8. Electrical Connections**

**LED Drivers, Circuit Board, Transformer, Terminal Strips, Programmable Controller, Etc.**

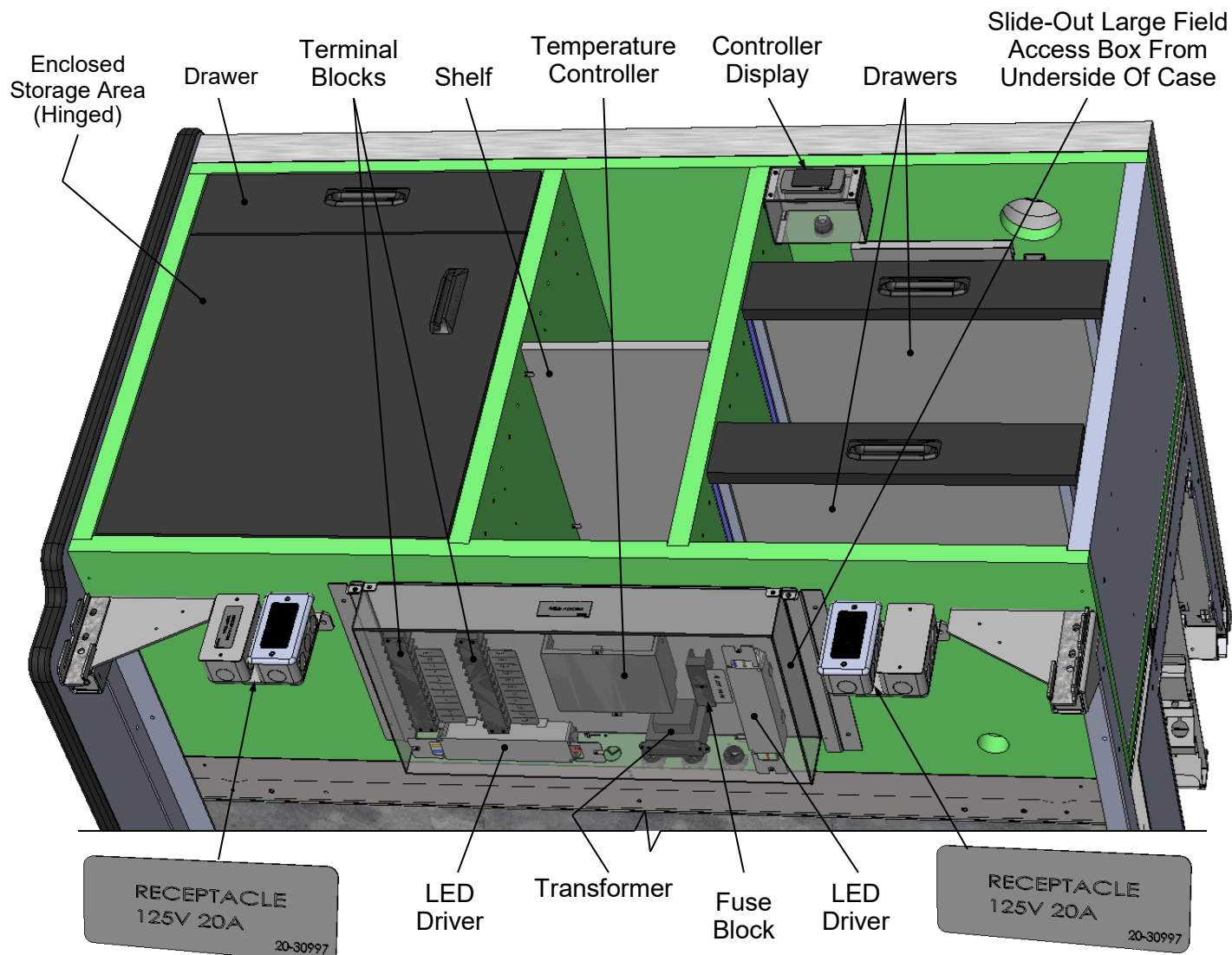
> Note: Rear toe-kick may be lifted up and off.  
See **INSTALLATION: REMOVAL FROM SKID, REMOVING VERTICAL LOWER FRONT PANELS** section in this manual for instructions.

- Stub-up connections are at rear of pull-out ballast box.

- To access, remove rear toe-kick (no screw removal required).
- Carefully and slowly slide out electrical box.
- Remove ballast box / LED driver box cover.
- Note: Wiring process must be performed by certified electrician only.

**9. Programmable Controller**

- Programmable controller is in the pull-out electrical box.
- It is designed for multiplexed cabinets with stepper driver inside.
- Controller display is at case rear.
- See your particular programmable controller's user manual for operating instructions.



**Model GHSSCD636RLB Shown Below**

**10. Ambient Drawers / Ambient Storage Areas**

- Entire rear section is ambient.
- Drawers and storage areas are provided.
- See illustration below.

**11. Electrical Connections**

**LED Drivers, Circuit Board, Transformer, Terminal Strips, Programmable Controller, Etc.**

> Note: Rear toe-kick may be lifted up and off. See **INSTALLATION: REMOVAL FROM SKID, REMOVING VERTICAL LOWER FRONT PANELS** section in this manual for instructions.

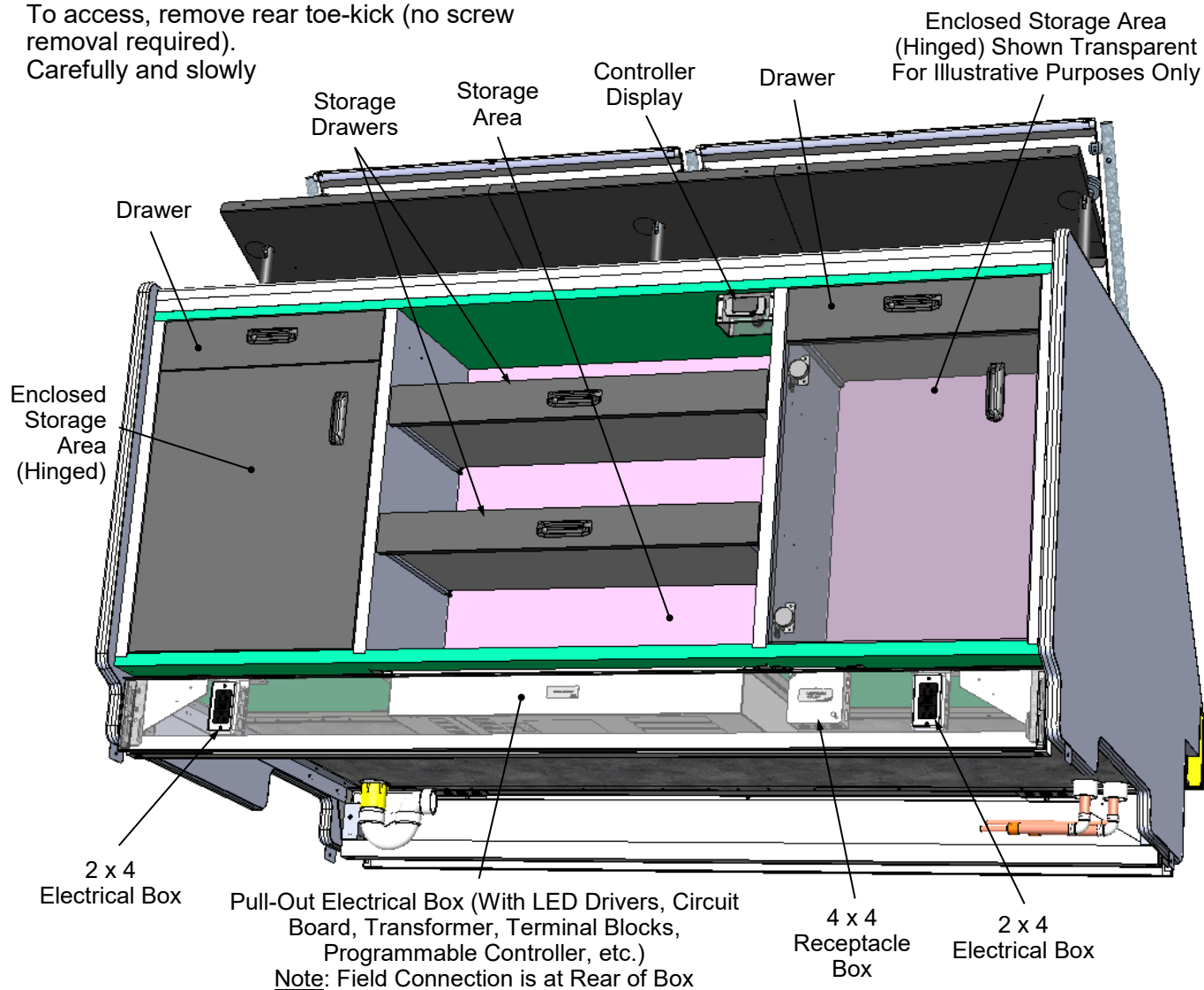
- Stub-up connections are at rear of pull-out ballast box.
- To access, remove rear toe-kick (no screw removal required).
- Carefully and slowly

slide out electrical box.

- Remove ballast box / LED driver box cover.
- Note: Wiring process must be performed by certified electrician only.

**12. Programmable Controller**

- Programmable controller is in the pull-out electrical box.
- It is designed for multiplexed cabinets with stepper driver inside.
- Controller display is at case rear.
- See your particular programmable controller's user manual for operating instructions.



--- Model GHSSCD636RLB Shown Above ---



**Note:** Model GHSSCD636RLB Shown Below  
(Models GHSSCD436RLB.5872 and  
GHSSCD636RLB.5872A Have Similar Layout)

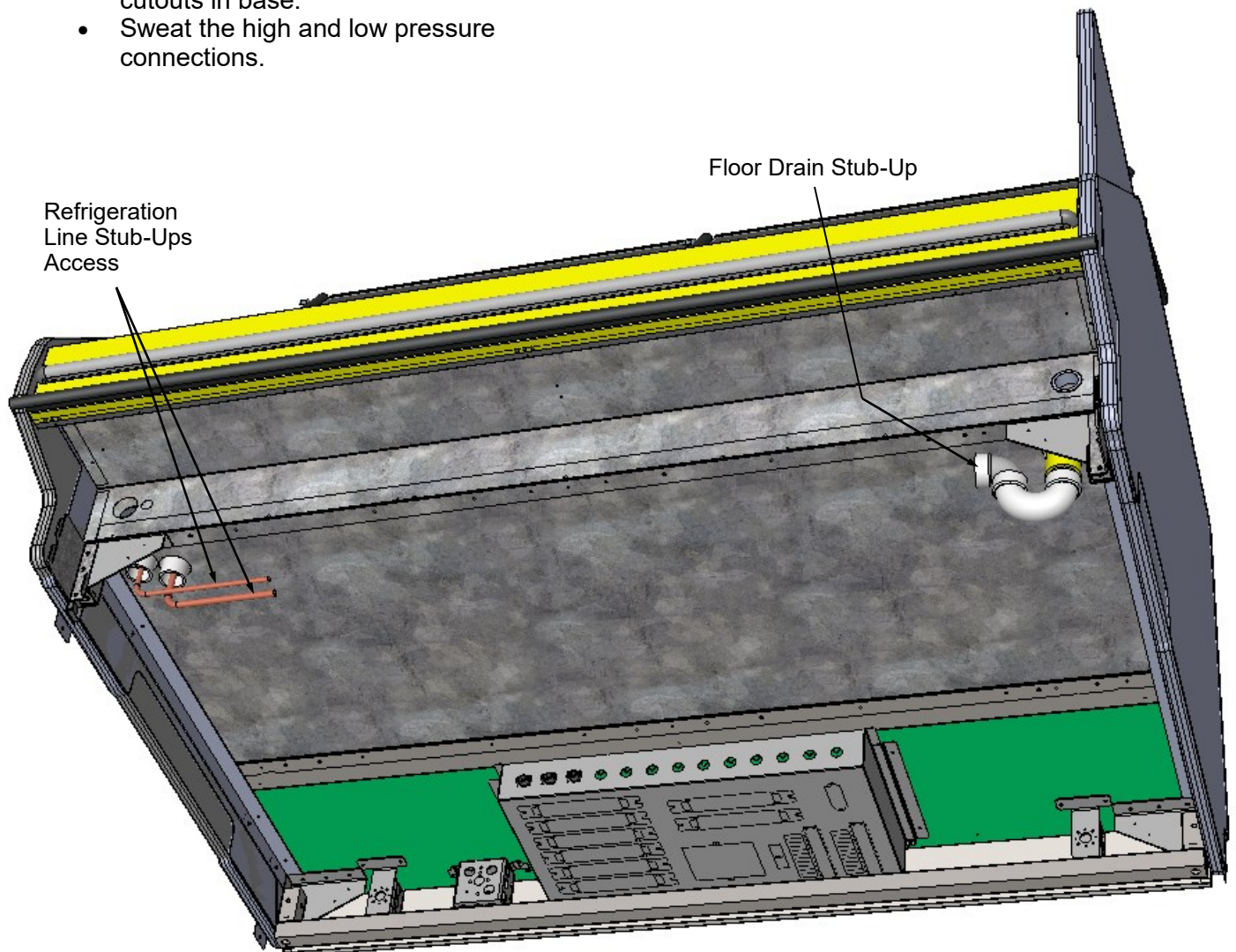
### **13. Refrigeration Line Stub-Up Connections**

- Remove front panel.
- Refrigerant stub-up access opening is at the front on the left hand side of the base (see illustration at top-right).
- Stub-up connections are accessed from inside the case.
  - Remove interior decks.
  - Remove fan shroud assembly.
- Line connections are in the tub front, on the left hand side
- Remove foam material from the entry hole provided in the tub drain trough.
- Route refrigerant lines through access hole.
  - 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.
- Illustration at top-right may not reflect every feature or option of your particular case.

### **14. Refrigeration Drain Connection**

- 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 the case on the right hand side.
- Connect tub drain to floor drain. Maintain 1/4"-fall per foot to provide proper drainage.
- Illustration at top-right may not reflect every feature or option of your particular case.



## Display Case Start-Up

### 1. Case Operation

- Case will power-up when properly field wired.
- Lift deck to check that coil fans are running.
- See **MAINTENANCE: BRACKET RETAINERS / SHELF ASS'Y / DRAIN / TXV / FANS / VALVES** section in this manual for view of coil fans after deck pans have been raised/removed.
- Coil fans should be on and rotating.

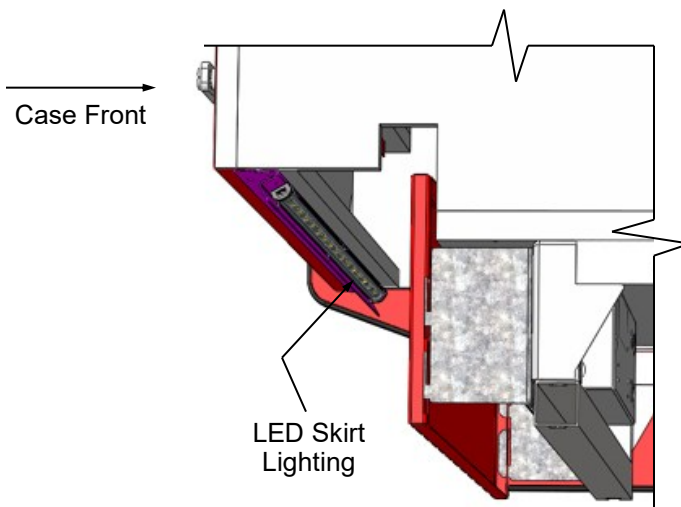
### 2. Case Lights

- When no light switch is provided, LED lights will power-up when properly field wired.
- See illustration below-left for light switch.
- Top-right illustration shows LED light location for Model GHSSCD336RLB.5744.
- Below-right illustration shows LED light locations for Model GHSSCD636RLB.
- Your particular model's LED light location may differ.

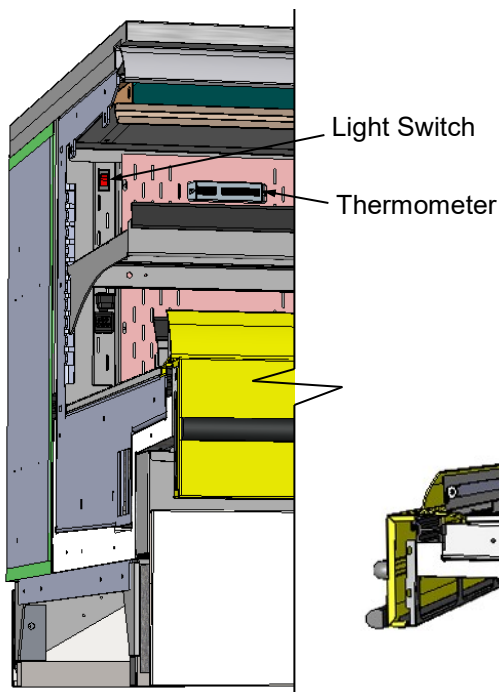
### 3. Thermometer

- Thermometer is located at rear plenum on refrigerated merchandisers.

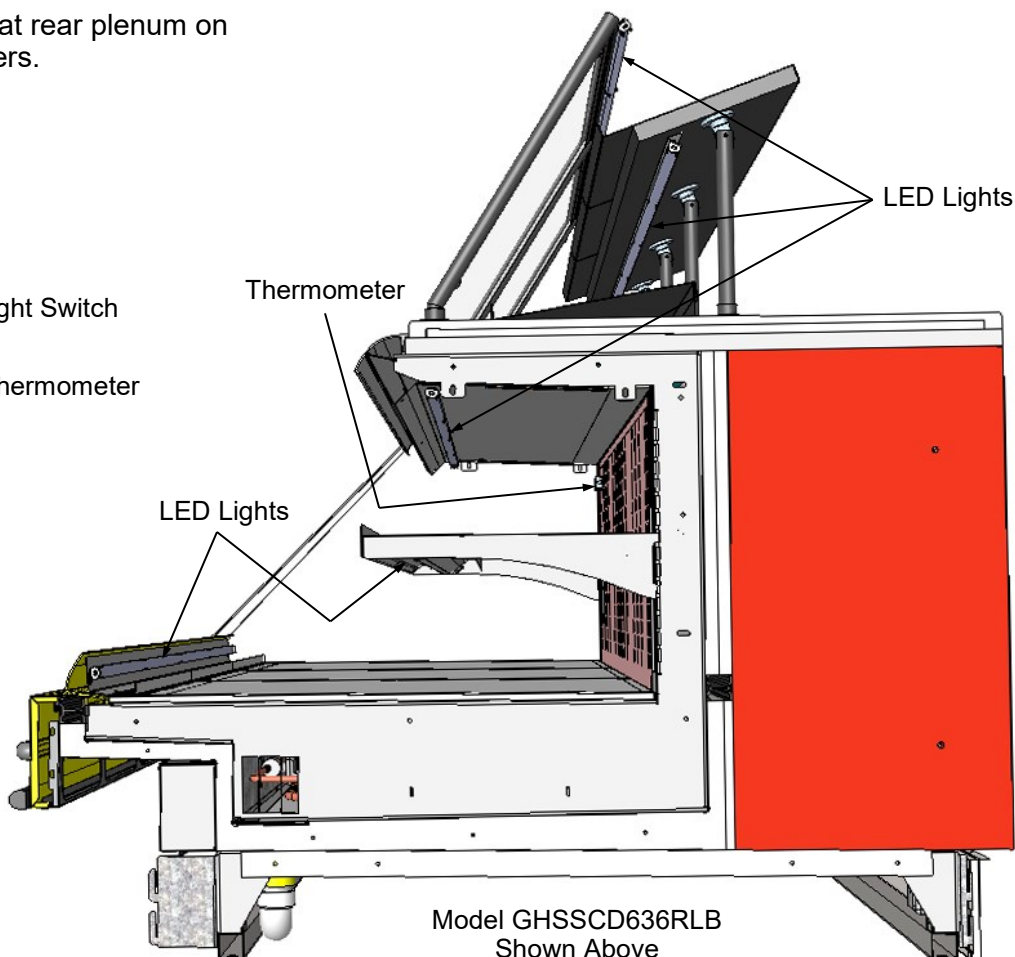
- Thermometers reflect internal air temperature only (not actual food temperature).
- Use probe thermometers to determine actual product temperatures.



Model GHSSCD336RLB.5744 Shown Above



GHSSCD436RLB.5782  
Shown Above



Model GHSSCD636RLB  
Shown Above

## Maintenance

### 1. Case and Lights

- Lights will power-up when properly field wired.

### 2. 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.

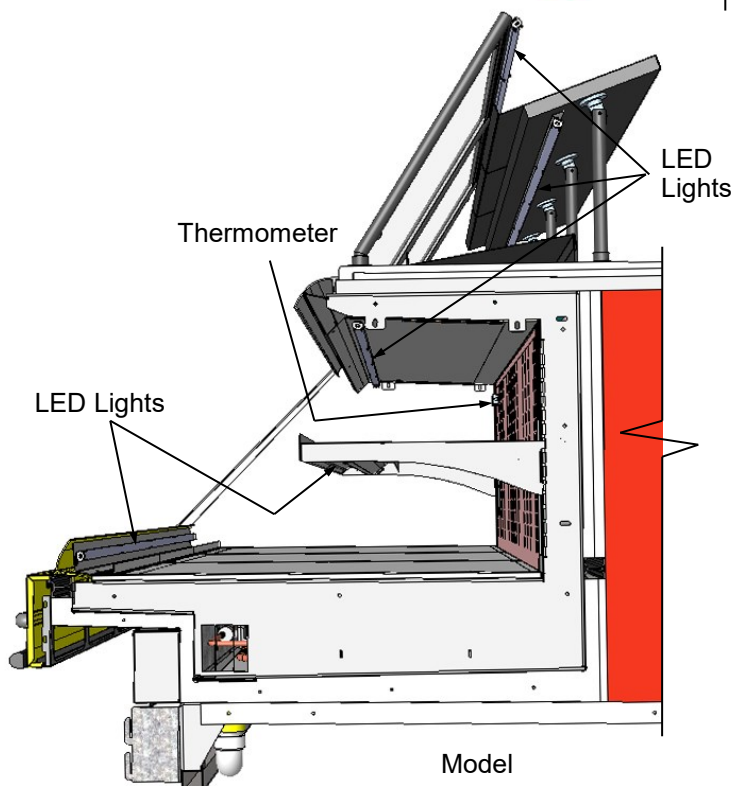
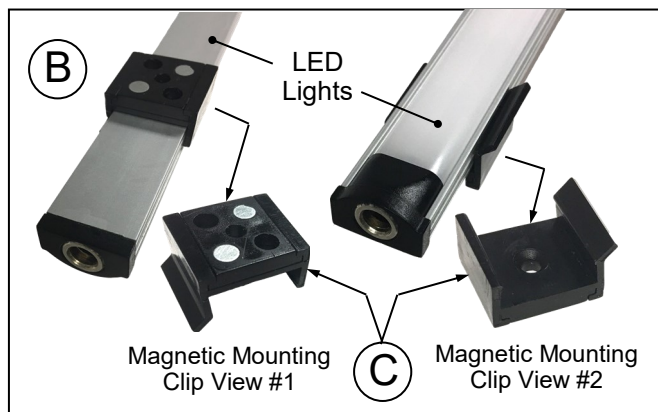
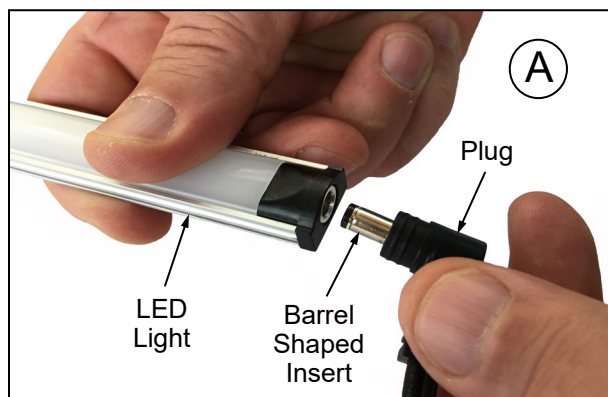
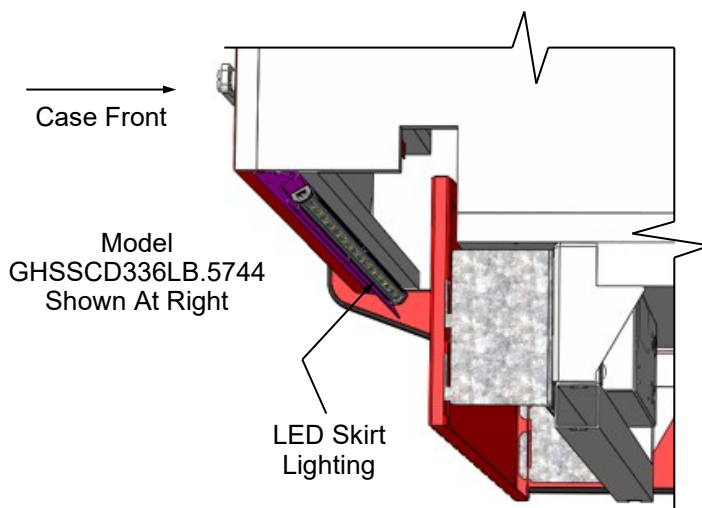
#### Replacement of LED lights:

- 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.
- Turn LED light switch back on.





### Maintenance, Continued

#### 3. Bracket Retainer Removal

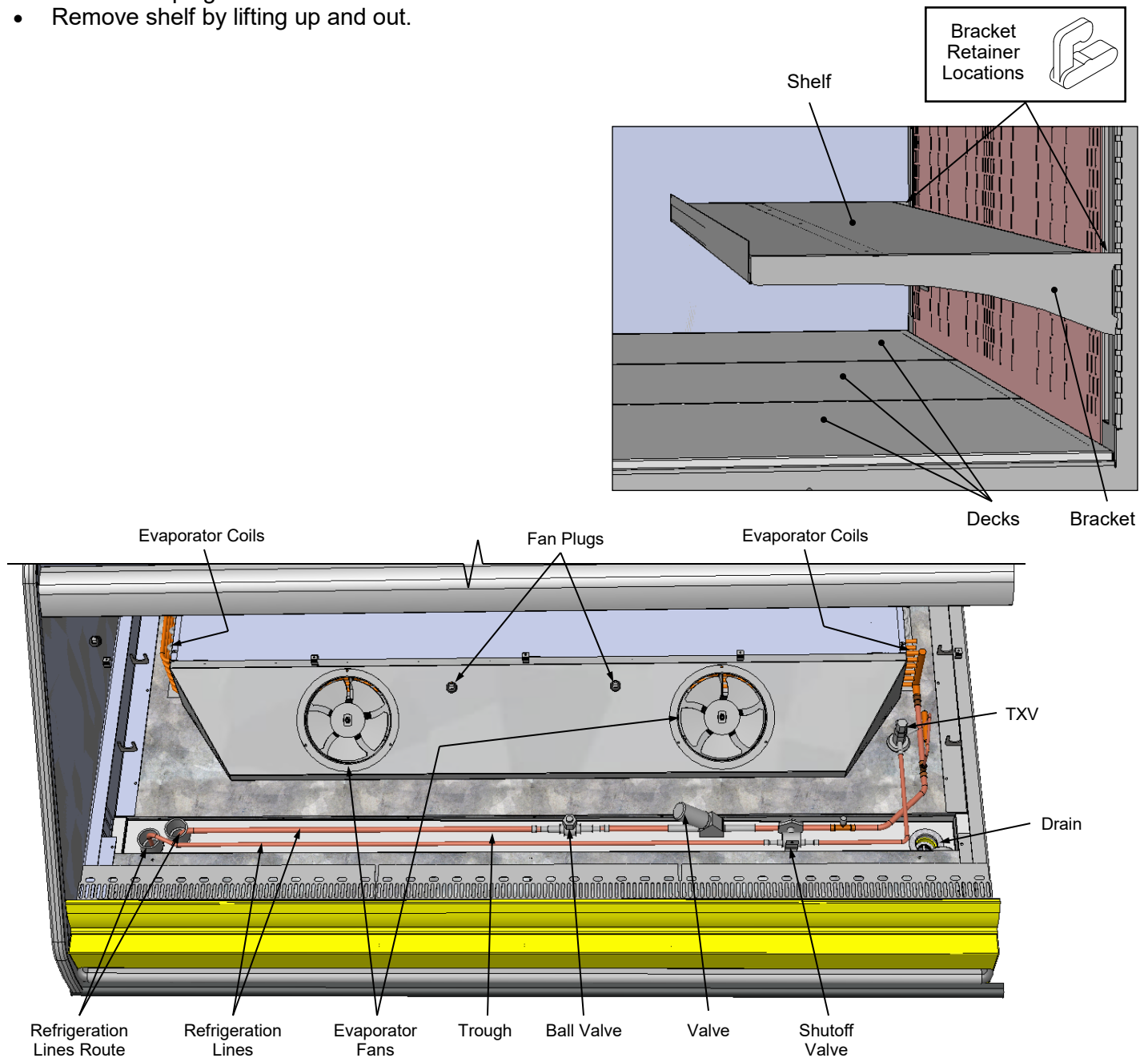
- To remove brackets, it may be necessary to remove the nylon shipping bracket retainers.
- Pliers will be required to accomplish this task.
- See illustration at top-right for location of bracket retainers.

#### 4. Shelf Assembly Removal

- For lighted shelving, unplug the LED light connection plug.
- Remove shelf by lifting up and out.

#### 5. Drain / Trough / TXV / Evaporator Fans & Coils / Refrigeration Lines / Valves, Etc.

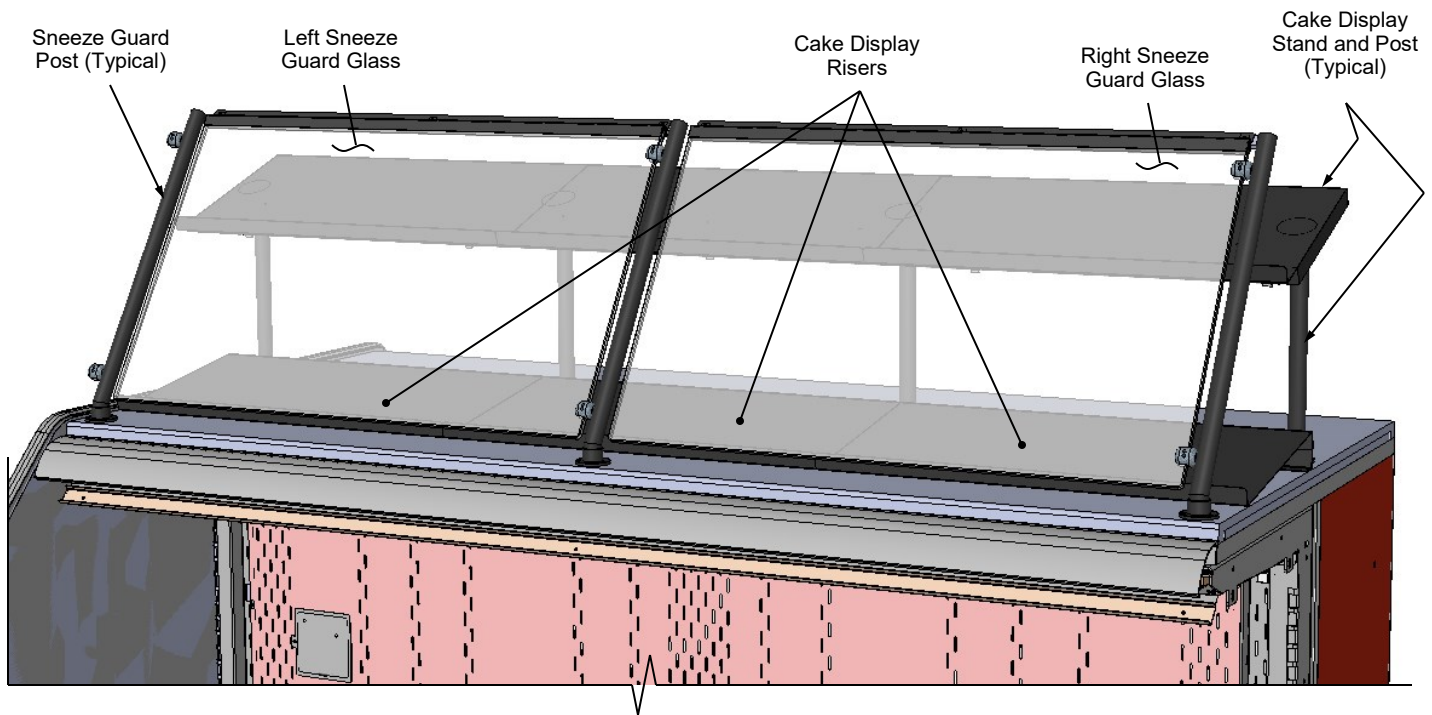
- See illustration below for general layout.
- Deck pans have been removed for illustrative purposes only.
- **Caution! Only authorized personnel are to access this area.**



**Maintenance, Continued**

**6. Lighted Upper Cake Display Layout**

- Lighted upper cake display allows cakes to be prominently displayed to customers.
- See illustration below for general layout.
- See cleaning schedule for cleaning instructions.



--- Model GHSSCD636RLB Shown Above ---

## GENERAL CLEANING (TO BE PERFORMED BY STORE PERSONNEL)

AREA TO CLEAN	FREQ.	INSTRUCTIONS
Case Exterior	Daily	<b>Acrylic:</b> Clean any acrylic surfaces (including air deflectors and with a mild soap and water solution and a soft cloth. <b>Caution! Never use ammonia-based cleaners on acrylic. Incorrect cleaning agents or abrasive cleaning cloths cause surface to 'cloud' over time.</b>
	Daily	<b>Glass / Mirrors:</b> Clean side glass, glass shelves, glass sneeze guard (upper cake display area) and mirrors with a household or commercial glass cleaner.
	Daily	<b>Shelves/Decking:</b> Non-glass shelves and decking can be cleaned with a warm soap and water solution and soft cloth. Rinse with spray bottle with clean water. Dry with clean cloth or paper towel.
	Daily	<b>Lighted Upper Cake Display Stand (Model GHSSCD636RLB) :</b> Clean with a warm soap and water solution and soft cloth. Rinse with spray bottle with clean water. Dry with clean cloth or paper towel.
	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.
	Daily	<b>Granite, Marble &amp; Stone Surfaces (Model GHSSCD336LB.5744A):</b> See next page.
	Weekly	<b>Wood, Laminate, Rear Drawers and Painted Surfaces:</b> Clean with mild soap and water solution and a soft cloth.
Case Interior	Daily	<b>Shelves/Deck:</b> Shelves/Deck can be cleaned with a warm soap and water solution. For stubborn stains/residue, decks can be removed and cleaned with soap and water solution or submersed in hot, soapy water solution. Rinse thoroughly. Dry. Return to case.
	Weekly	<b>Shelving Brackets / Air Return Grilles / Decking</b> <ul style="list-style-type: none"> <li>Wipe off shelving brackets, air return grilles and decking with moist cloth.</li> <li>Shelving brackets can be removed for more thorough cleaning.</li> <li>Air return grilles can be removed for more thorough cleaning.</li> <li>Decking is NOT to be removed by store personnel.</li> </ul>

## ENGINEERED (SYNTHETIC) QUARTZ CARE AND MAINTENANCE

Engineered Quartz Overview	<p><b>Engineered (Synthetic) Quartz Overview:</b></p> <ul style="list-style-type: none"> <li>Engineered (synthetic) quartz is a 'man-made' product. It is sometimes called "engineered stone." It is made from crushed quartz particles bonded with polyester, styrene, resin, pigments and tert-butyl peroxybenzoate.</li> <li>It is non-porous, mold and mildew-resistant, and impervious to odor-causing bacteria.</li> <li>Slabs are specifically sized. Engineered quartz contains a maximum of 94% mineral quartz (though percentages vary). Engineered quartz is extremely resistant to damaging chemicals.</li> <li>There are many engineered (synthetic) quartz brands. These include Caesarstone, Cambria, Compac, Corian, Daltile ONE, Granite HanStone, Transformations, Kowalski, LG Hausys, LG Viatera, Lunastone, Marble.com, MSI Q, Okite, Pental, Polarstone, Pompeii, Samsung, Sensa, Silestone, Stone Italiana, Vadara, Vena &amp; Vicostone.</li> </ul>
Routine Care	<p><b>For Daily, Routine Care and Cleaning:</b></p> <p>Engineered (synthetic) quartz require very little maintenance. Simply wipe the surface with neutral pH balanced household detergent and warm water solution with soft sponge or microfiber cloth to maintain its shine.</p> <ul style="list-style-type: none"> <li>To prevent fading, keep from harsh, direct sunlight for long periods of time.</li> <li>General cleaners: use neutral pH balanced household detergent and warm water (4 cups of water/1 teaspoon of detergent). Or isopropyl alcohol (aka rubbing alcohol). Or use any general, all-purpose cleaner, glass cleaner or Pine Sol. Or use Clorox Wet Wipes (as they contain no bleach or are soft). After cleaning, thoroughly rinse with water and dry with clean cloth to prevent water spots from forming.</li> <li>Specifically designed cleaners for manufactured quartz: Black Diamond Stoneworks Granite Counter Cleaner, Caldrea Countertop Spray, Clark's Natural Stone Spray Cleaner, Granite Gold, Simple Green, Park &amp; Bailey Granite &amp; Stone Cleaner, Seventh Generation Granite &amp; Stone Cleaner, Stone Care Quartz Clean &amp; Shine, Stone Pro Quartz Countertop Cleaner, Weiman Quartz Countertop Cleaner and Polish.</li> </ul>
Difficult Spills	<p><b>For Difficult Spills, Stains and Spots:</b></p> <ul style="list-style-type: none"> <li>Thoroughly clean with warm water and neutral pH detergent (mixture detailed above) before pursuing next steps.</li> <li>Clean up high staining liquids such as coffee, tea, fruit juice, lemon juice, vinegar, wine and tomato juice right away. Use warm water and neutral pH detergent to do so. After cleaning, thoroughly rinse with water and dry.</li> <li>For residues that harden as they dry (food, gum, nail polish, and paint), place wet cloth or paper towel over residue for 10 minutes (to soften its properties); then gently scrape off residue by using a plastic putty knife or plastic scraper; avoid metal blades or scrapers if possible; then clean using warm water and soap. If you must use metal razor blade or scraper, remove gray marks with soap and water. Thoroughly rinse with water and dry to prevent water spots.</li> <li>Difficult spots may need to be treated with solutions/chemicals BEYOND warm water and neutral pH detergents: A. Water/white vinegar mixture: 2 cups of water with 1 tablespoon of white vinegar in spray bottle; spray surface; allow solution to sit for 2 minutes; wipe off with soft cloth or sponge. B. Soft Scrub Liquid Gel: Apply gel to cloth or sponge (not directly to quartz surface); wipe the area in a circular motion; repeat until spot is removed. C. Goo Gone adhesive remover (for sticky residue). Thoroughly rinse the surface with water and wipe dry to prevent water spots.</li> <li>Water stain removal: 1 part vinegar + 3 parts baking soda in warm water. Dip cloth in mixture and thoroughly soak stain. Leave for 5-10 minutes; then scrub area with soft brush. Rinse with water and dry with clean cloth.</li> </ul>
Extreme Heat Protection	<p><b>Extreme Heat Protection:</b></p> <ul style="list-style-type: none"> <li>Engineered quartz is extremely resistant to heat, and can withstand moderately high temperatures for brief periods of time without being damaged.</li> <li>Engineered quartz CAN BE damaged by sudden and extreme temperature changes; thus, use a trivet or a hot pad to protect its surface from hot pans, hot dishes or small appliances that may reach high temperatures.</li> </ul>
Chemicals To Avoid	<p><b>Chemicals To Avoid:</b></p> <ul style="list-style-type: none"> <li>Nail polish remover (acetone), oil soaps, and furniture cleaners or paint strippers that contain trichloroethane or methylene chloride.</li> <li>Chemicals with an alkaline level of pH &gt;10 (oven cleaners, chloring bleach, lacquer thinner, ammonia, tub and tile cleaner, borax, etc.)</li> <li>Chlorinated solvents (trichloroethylene or methylene chloride)</li> <li>Concentrated acids (hydrocyanic acid, hydrofluoric acid, hydrochloric acid, sulfuric acid, nitric acid or CLR)</li> </ul> <p>Caution must be used for the following products on engineered quartz surfaces:</p> <ul style="list-style-type: none"> <li>Avoid using products containing oils or powders as may leave a residue.</li> <li>Avoid abrasive scrubs/cleaners (such as Ajax, Comet, Scotch-Brite or oven cleaner) as it dull or discolor the finish.</li> </ul> <p>Common stains like coffee, food, makeup, permanent markers, etc.:</p> <ul style="list-style-type: none"> <li>Apply the appropriate cleaner with a paper towel and wipe. If necessary, soak with paper towels from 3-10 minutes.</li> <li>Scrub the area with a non-abrasive cloth or sponge. Rinse and dry thoroughly.</li> </ul>
Preventing Scratches	<p><b>Scratch Deterrence:</b> Engineered quartz surfaces are scratch RESISTANT. However, they CAN be scratched or marred by certain utensils or cleaning materials.</p> <ul style="list-style-type: none"> <li>Use a cutting board to avoid damaging the quartz surface and knives.</li> <li>Never use abrasive scouring pads, steel wool soap pads, Brillo® pads or "Magic Erasers."</li> </ul>

## TROUBLESHOOTING (TO BE PERFORMED BY STORE PERSONNEL)

CONDITION	TROUBLESHOOTING
Case Not Lining Up	See <b>INSTALLATION: REMOVAL FROM SKID, REMOVING VERTICAL LOWER FRONT PANELS</b> section in manual for instructions on properly aligning case (alongside other cases) and shimming rails.
Water Is On The Floor	Call service provider.
Fan Emits Excessive Noise	Call service provider.
Case Lights Are Not Working	Check that Light switch is in the <i>on</i> position.
	Check that ALL of the light cords and plugs are properly connected. See <b>START-UP: LIGHTS / OPERATION / LED REMOVAL &amp; REPLACEMENT / CORDS &amp; PLUG / THERMOMETER</b> section in this manual.
	If case lights still do not come on, call service provider.
Case is Not Holding Proper Temperature	If a large amount of warm product was added to the case, it will take time for the temperature to adjust. Product must be pre-chilled before placing in case.
	Check that the case is not in the sun or near a heat or air-conditioning vent. See <b>OVERVIEW / TECHNICAL INFORMATION / WARNINGS</b> section in this manual for specifics.
	If case is located near outside doors, temperature fluctuation can hinder unit's ability to maintain temperature.
	Check air return grilles (area at front of decking) for obstructions. DO NOT set product on air grilles as this will prevent proper airflow!
	If case still is not holding proper temperature, call service provider.

**GENERAL CLEANING (TO BE PERFORMED BY TRAINED SERVICE PROVIDERS ONLY)**

AREA TO CLEAN	FREQUENCY	INSTRUCTIONS
Case Interior	Monthly	<b><u>Evaporator Fan Shroud Area (Under Decking):</u></b> <i>Caution! Due to rotating fans in area, turn off case and disconnect plug from wall outlet before beginning fan shroud (and surrounding tub area) cleaning!</i> 1) Turn off power. 2) Remove decks from case. 3) Clean fan shroud area (and surrounding tub area) with moist cloth.
	Quarterly	<b><u>Tub &amp; Drain:</u></b> <i>Caution! Due to rotating fans in area, turn off case and disconnect plug from wall outlet before beginning tub &amp; drain cleaning!</i> Vacuum tub under decks. Clean with soap and water solution. Wipe dry with clean cloth. Keep drain free of debris to prevent clogging.



CONDITION	TROUBLESHOOTING
<b>Case Not Lining Up</b>	See <b>INSTALLATION</b> section in manual for instructions on properly aligning case (alongside other cases) and adjusting levelers.
<b>Water Is On The Floor</b>	<p><b>Caution!</b> Water on flooring can cause much damage! Until cause is determined (and repaired), following these procedures:</p> <ul style="list-style-type: none"> <li>• Use wet-dry vacuum (or mop &amp; bucket) to remove standing water.</li> <li>• Use 'catch pans' for water to drain into. Swap out regularly until case has completely drained.</li> </ul>
	Check that the drain trap is free of debris.
	Check that the drain hose is correctly positioned over floor drain.
	<p>Check store conditions.</p> <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>	Check that the case is aligned, level and plumb.
	Check evaporator fan for cleanliness.
	Unplug/power off fan motors. Check motor shaft for bearing wear.
	Check that fan motors are securely mounted in brackets.
	Verify that fan blades are securely mounted to fan motor.
	Check that nothing is preventing blade rotation.
	Check that the fan shroud is properly secured.
<b>Fans Are Not Working</b>	Check that fans are plugged in at the fan shroud.
	Check for foreign material obstructing fan performance.
	Check that fan blades freely rotate within fan shrouds
	Check that power is going to fans
	Check that fan wiring is connected on terminal blocks.
<b>System Not Operating</b>	Check that the utility power is on.
	Check the circuit breaker box for tripped circuits.

CONDITION	TROUBLESHOOTING
<b>Case Lights Are Not Working</b>	Check that <b>ALL</b> of the light cords and plugs are properly connected. See <b>START-UP: LIGHTS / OPERATION / LED REMOVAL &amp; REPLACEMENT / CORDS &amp; PLUG / THERMOMETER</b> section in this manual.
	Service Technicians Only: Check voltage at LED drivers. If voltage is entering but not exiting, LED driver may be faulty.
<b>Case Is 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.
	Check that case is not in sun or near a heat or air-conditioning vent. See <b>OVERVIEW / TYPE 1 vs. 2 / COMPLIANCE / WARNINGS / PRECAUTIONS / WIRING / PLUGS - PG 2 of 2</b> in manual for adverse conditions/spacing issue parameters.
	If case is located near outside doors, temperature fluctuation can hinder unit's ability to maintain temperature. See <b>OVERVIEW / TYPE 1 vs. 2 / COMPLIANCE / WARNINGS / PRECAUTIONS / WIRING / PLUGS - PG 2 of 2</b> section in manual for adverse conditions/spacing issue parameters.
	Check air return grilles for obstructions.

## 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 recirculate.
	Check that store ambient temperature isn't above maximum allowed. See <b>OVERVIEW / TYPE / COMPLIANCE / WARNINGS / PRECAUTIONS / WIRING / PLUGS</b> section in this manual.
<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>

**PREVENTIVE MAINTENANCE (TO BE PERFORMED BY TRAINED SERVICE PROVIDER)**

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

PREVENTIVE MAINTENANCE	FREQ.	INSTRUCTIONS
Case Exterior	Quarterly	<b><u>Under Case Cleaning:</u></b> Once refrigeration package is clear of unit, vacuum under case to remove dust and dirt that may collect under case.
	Quarterly	<b><u>Honeycomb:</u></b> Check honeycomb air diffuser to determine whether it is dirty. If dirty, remove from case and clean. See <b><i>MAINTENANCE FUNDAMENTALS - HONEYCOMB AIR DIFFUSERS (SERVICE TECHNICIANS ONLY)</i></b> section of this manual (next page) for cleaning specifics.
Case Interior	Quarterly	<b><u>Tub Area (Evaporator Coil, Drain, Fans, Brackets):</u></b> <b><i>Caution! Disconnect power from the case before cleaning tub, coil, fan, motor and drain area!</i></b> <ul style="list-style-type: none"> <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> <li>• Wipe down fan blades, motors and brackets with moist cloth.</li> </ul>

## **Honeycomb Air Diffuser Removal**

See **PREVENTIVE MAINTENANCE (TO BE PERFORMED BY TRAINED SERVICE PROVIDER)** section in this manual for cleaning frequency.

A. Wedge a non-metallic device of suitable strength (such as a ballpoint pen) between the honeycomb and the end panel.

**Caution!** Use care not to dislodge the heating wire (that prevents condensation on the lamp assembly).

B. Apply pressure to collapse the honeycomb to allow it to be pulled out of honeycomb retainer.

C. Carefully pry downward and away from the honeycomb retainer. Clean honeycomb with warm water and soap solution. Submerge if necessary.

Use brush to dislodge stubborn or sticky residue. Dry by using vacuum's blow mode (vs. suction mode).

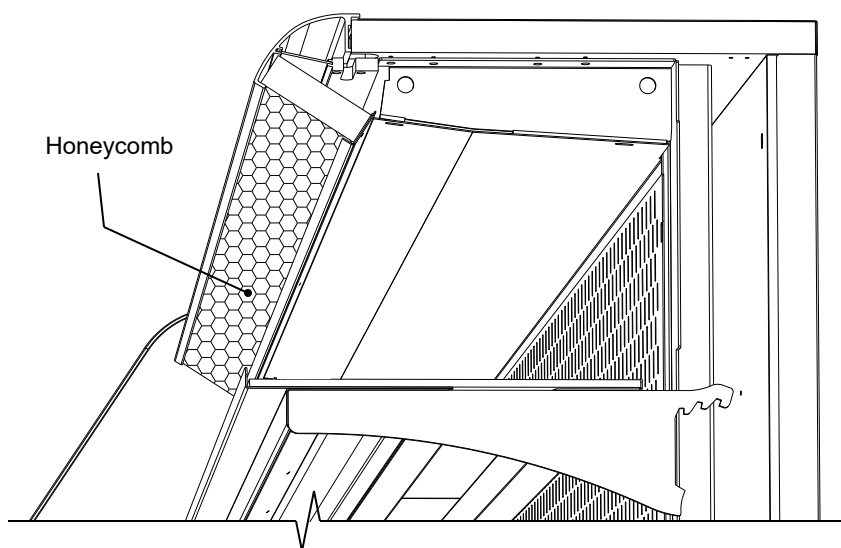
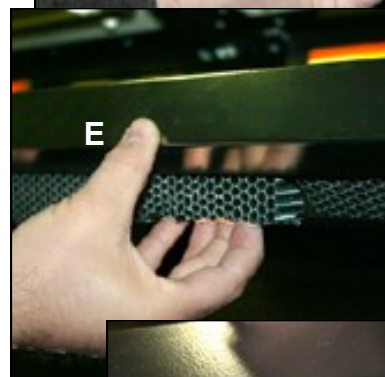
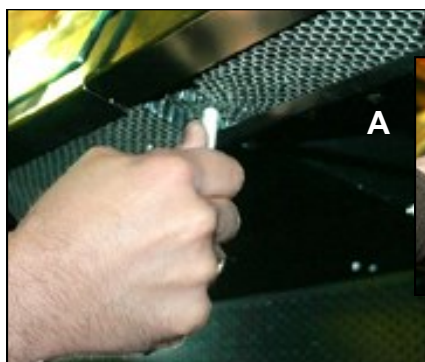
## **Honeycomb Air Diffuser Installation**

D. Squeeze honeycomb to allow it to fit into the honeycomb retainer.

E. Carefully slide honeycomb into place.

F. Adjust honeycomb so that it fits flat against retainer. It must not be wavy or out of position.

**Note:** For honeycomb air diffusers in other locations, these same general instructions apply.



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





**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

**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

**Fusion**  
**Blend**  
**Harmony**  
**Addenda**  
**Impulse**  
**Grocerant**  
**Oasis**  
**Reveal**

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

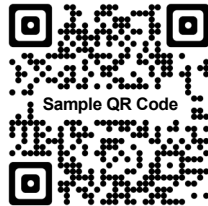
120/1/60 16 A  
R513A AMOUNT 50 OZ  
HIGH 186 LOW 88  
20A  
20A

MODEL NRS3648RXV-SAMPLE  
SERIAL NO. 12345X30DZ098765

**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 ONLY**

**SAMPLE ONLY**

**SAMPLE ONLY**

TYPE II DISPLAY REFRIGERATOR: THIS EQUIPMENT IS INTENDED FOR USE IN AN AREA WHERE THE ENVIRONMENTAL CONDITIONS ARE CONTROLLED AND MAINTAINED SUCH THAT THE AMBIENT TEMPERATURE DOES NOT EXCEED 80 °F (27 °C).


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

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

- Serial labels are affixed at a wide range of places (on the header, at case rear, behind panels or toe-kicks, on electrical boxes, etc.).
- Serial labels contain electrical 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

**Harmony**

**Oasis**

**Blend**

**Impulse**

**Reveal**

**Addenda**

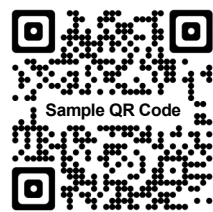
**Grocerant**

3048256  
Conforms to UL Std. 65  
CERTIFIED TO CAN/CSA  
STD C22.2 NO 120

120 VOLTS      60HZ  
FOR PARTS OR SERVICE CALL  
STRUCTURAL CONCEPTS  
AT 1-800-433-9489

SINGLE PHASE 1.84 AMPS

SCAN FOR PRODUCT LITERATURE



Sample QR Code

--- Sample Serial Label For Ambient/Heated Cases ---

## 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.

