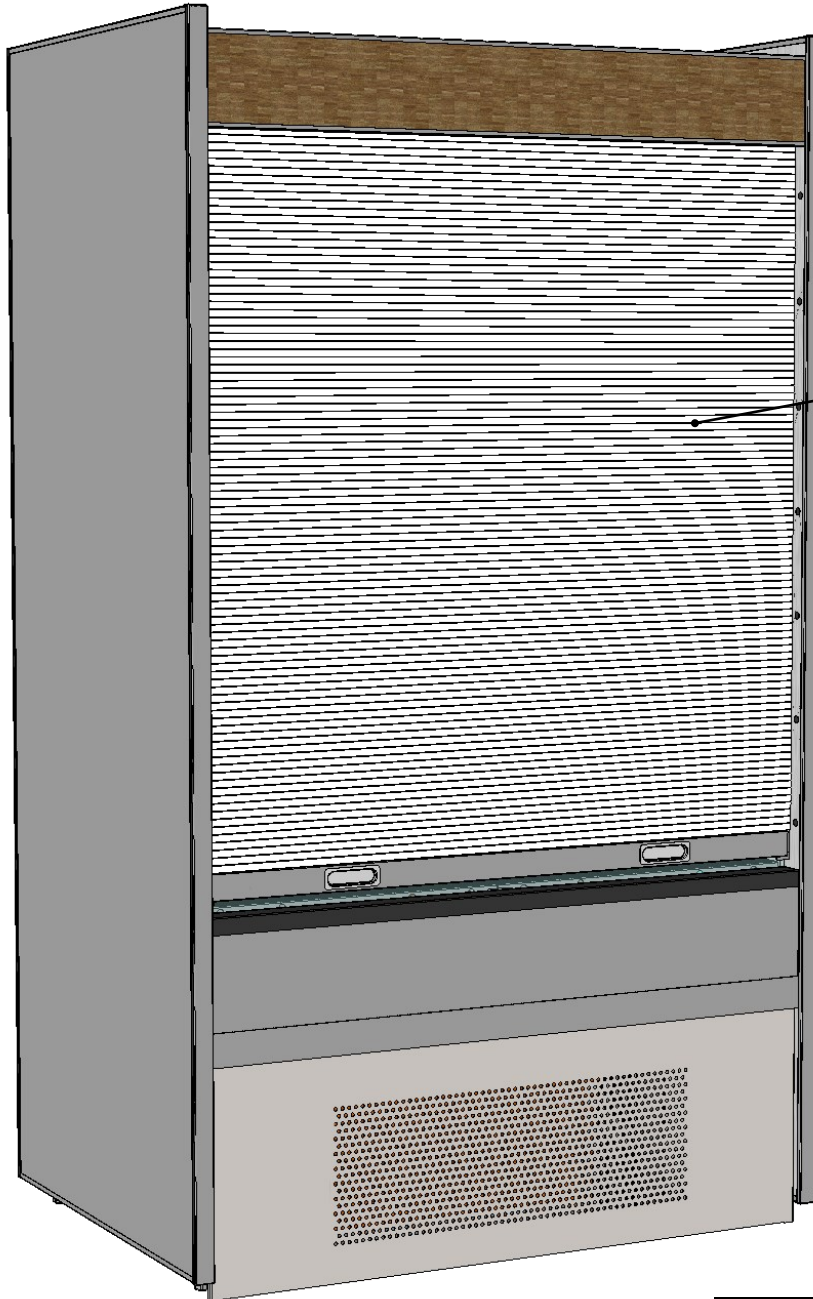


Oasis[®] USER MANUAL

SCC P/N
20-90271

MICROMARKET REFRIGERATED, SELF-SERVICE, IN-AISLE “BOX CASE”

- > MODELS INCLUDE THE FOLLOWING: BV3632, BV4732, BV5932, and BV7132
- > SELF-CONTAINED & REMOTE UNITS > MODELS AKA “WALL UNITS”
- > ELECTRONICALLY CONTROLLED ROLLING DOOR WITH BATTERY BACKUP



For Electronically
Controlled Door
Information, See
Pages 7 & 8 In
This User Manual.

Model BV4732 Shown Above

This Manual Reflects Oasis Model BV4732.
However, It May Also Be Applicable To
Models Not Illustrated Herein.

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

| | |
|--|-------|
| OVERVIEW / TYPE / COMPLIANCE / WARNINGS / PRECAUTIONS / WIRING / PLUGS | 3-4 |
| INSTALLATION: CASE REMOVAL (VIA LEVELERS & CASTERS) | 5 |
| INSTALLATION, CONT'D: POSITIONING & ALIGNING CASE / ADJUSTING LEVELERS | 6 |
| INSTALLATION, CONT'D: BATTERY BACKUP SYSTEM GUIDE / PRE-CHARGING BATTERY | 7 |
| INSTALLATION, CONT'D: ELECTRONICALLY CONTROLLED DOOR / AUTO-CLOSE / RAISING DOOR | 8 |
| INSTALLATION, CONT'D: OVERFLOW CONDENSATE PAN / PLUG IN UNIT / MAIN POWER SWITCH | 9 |
| ELECTRONICALLY CONTROLLED ROLLING DOOR | 10 |
| EVAPORATOR COIL FAN DISCHARGE / TXV (THERMOSTATIC EXPANSION VALVE) | 11 |
| HONEYCOMB AIR DIFFUSER / LED LIGHT FIXTURES / LED LIGHT REMOVAL & REPLACEMENT | 12 |
| WALL SPACING / REAR VENTING / CASTER LOCKING OPERATION | 13 |
| SELF-CONTAINED HOT GAS LOOP CONDENSATE PACKAGE LAYOUTS | 14-16 |
| LOAD LEVEL GUIDE / TEMPERATURE GUIDE (MODEL B42 SHOWN / APPLICABLE TO ALL OTHER MODELS IN MANUAL) | 17 |
| CLEANING SCHEDULE (TO BE PERFORMED BY STORE PERSONNEL) | 18 |
| QUARTERLY PREVENTIVE MAINTENANCE (TO BE PERFORMED BY TRAINED SERVICE PROVIDERS ONLY) | 19-22 |
| ANNUAL PREVENTIVE MAINTENANCE (TO BE PERFORMED BY TRAINED SERVICE PROVIDERS ONLY) | 23 |
| TROUBLESHOOTING - GENERAL (TO BE PERFORMED BY TRAINED SERVICE PROVIDERS ONLY) | 24-26 |
| TROUBLESHOOTING - CONDENSING SYSTEM (BY TRAINED SERVICE PROVIDERS ONLY) | 27 |
| TROUBLESHOOTING - EVAPORATOR SYSTEM (BY TRAINED SERVICE PROVIDERS ONLY) | 28 |
| SERIAL LABEL LOCATION & INFORMATION LISTED / TECH INFO & SERVICE | 29 |
| PROGRAMMABLE CONTROLLER INFORMATION | 30 |
| TECHNICAL SERVICE CONTACT INFORMATION / WARRANTY INFORMATION | 31 |

OVERVIEW

- These Structural Concepts Oasis® merchandisers are designed to merchandise packaged products at 41 °F (5 °C) or less product temperatures.
- Product must be pre-chilled to 41 °F (5 °C) or less product temperatures prior to placing 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 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 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 sheet contains important warnings to prevent injury or death. Please read carefully!



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



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
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
Condensate Pan is Hot!
Disconnect and allow to cool before cleaning or removing from case.



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.

PRECAUTIONS

- This sheet contains important precautions to prevent damage to unit or merchandise.
- Please read carefully!
- See previous page for specifics on **OVERVIEW**, **TYPE**, **COMPLIANCE** and **WARNINGS**.

WIRING DIAGRAM

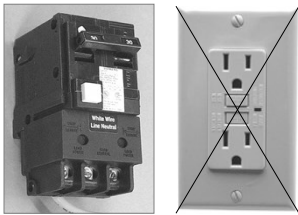
- Each case has its own wiring diagram folded and in its own packet.

- Wiring diagram placement may vary; 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



CAUTION! LAMP REPLACEMENT GUIDELINES

All lamps reflect specific size, shape, breakage resistance and overall design. Replacements must meet factory specifications.

CAUTION! GFCI BREAKER USE REQUIREMENT

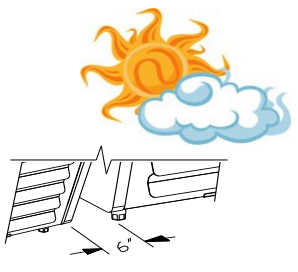
If N.E.C. (National Electric Code) or your local code requires GFCI (Ground Fault Circuit Interrupter) protection, you **MUST** use a GFCI breaker in lieu of a GFCI receptacle.



CAUTION! POWER CORD AND PLUG MAINTENANCE

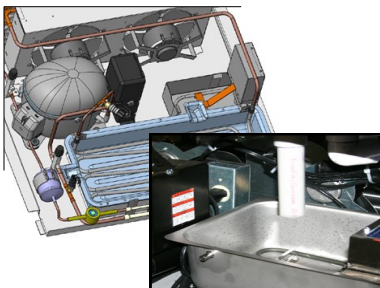
Risk of electric shock. If cord or plug becomes damaged, replace only with cord and plug of same type.

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 and 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! CHECK CONDENSATE PAN, ITS POSITION & PLUG!

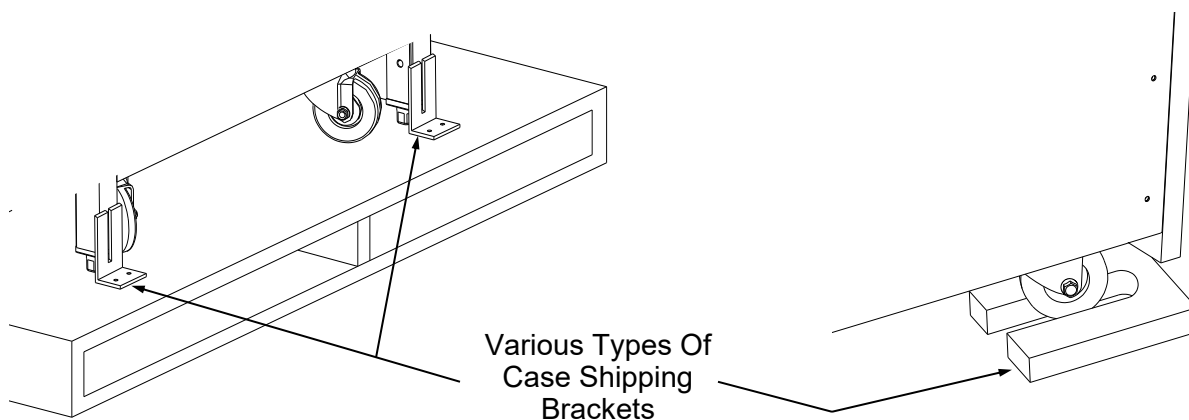
Water on flooring can cause extensive damage!

- 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.

INSTALLATION: CASE REMOVAL (VIA LEVELERS & CASTERS)

1. Removing Case Shipping Brackets That Are Attached To Skid

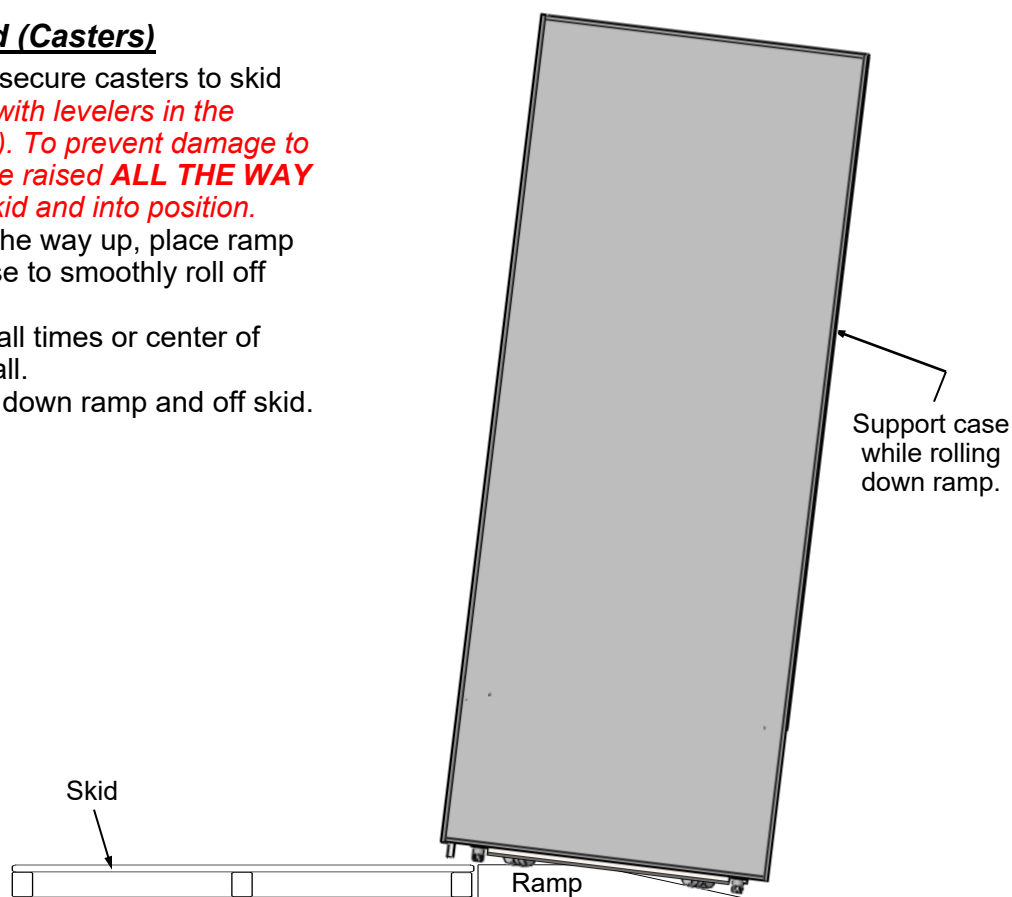
- Remove screws holding Case Shipping Brackets to skid.
- Remove Case Shipping Brackets from Skid.
- See illustrations below. Note: Shipping Brackets will vary in size, shape, material and location depending upon case type and model.



2. Remove Case From Skid (Casters)

Remove shipping brackets that secure casters to skid

- *Important! Case is shipped with levelers in the **DOWN** position (for stability). To prevent damage to the case, all levelers must be raised **ALL THE WAY UP** before moving unit off skid and into position.*
- After levelers are raised all the way up, place ramp up against skid (to allow case to smoothly roll off from skid).
- Maintain support of case at all times or center of gravity may cause case to fall.
- Roll unit to rear of skid. Roll down ramp and off skid.

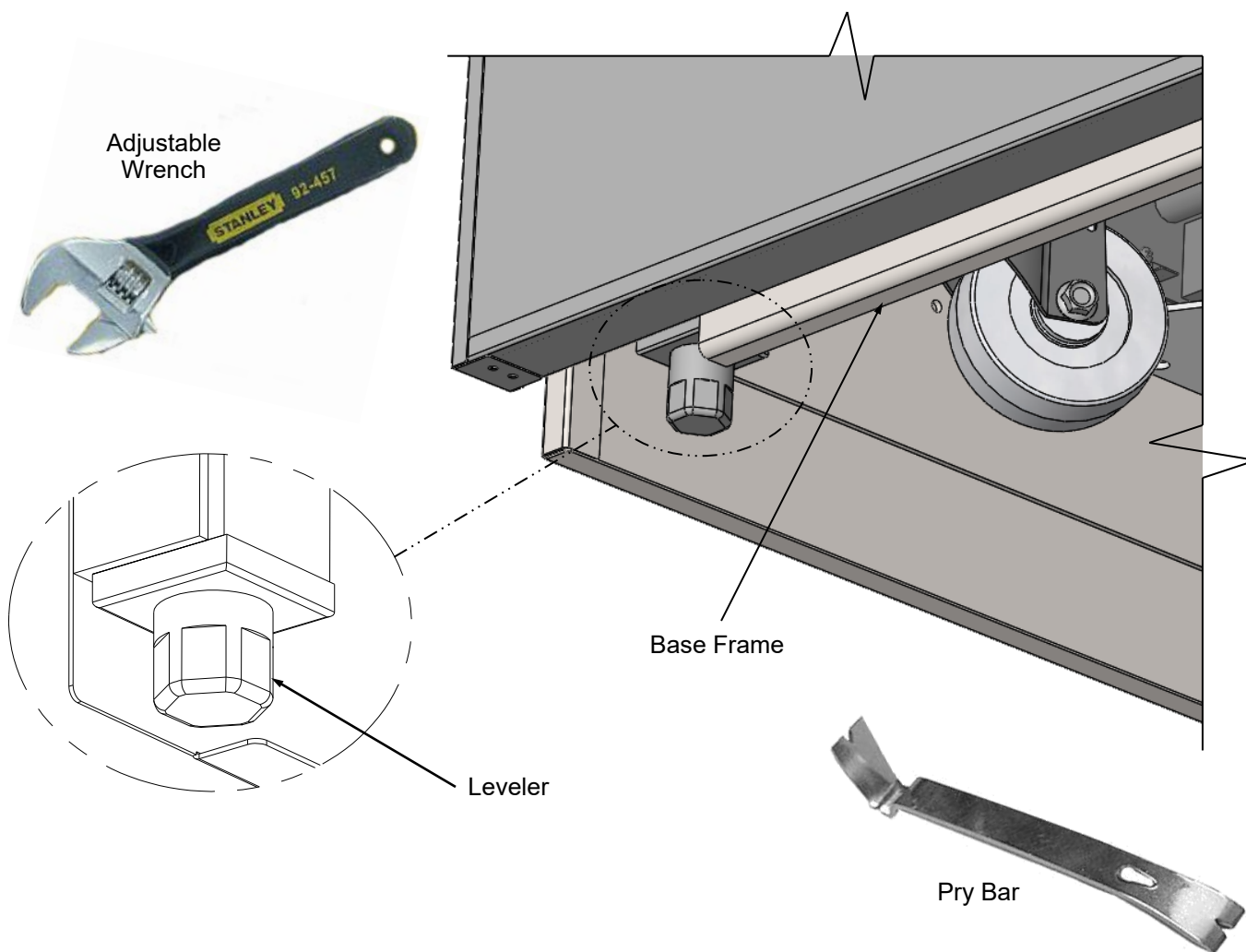


3. Position & Align Alongside Other Cases

- Before adjusting levelers, make certain that the case is in proper position.
- This may require the repositioning of the case you are installing or the already positioned case(s).

4. Adjusting Levelers

- **Important! After case is in proper position, levelers must then be **LOWERED** to floor.**
- Adjust levelers so the case is level and plumb.
- You may need to remove front and/or rear toe-kick to access levelers.
- Use adjustable wrench to adjust leveler.
- Depending upon case weight it may be necessary to use a pry bar to accomplish this task.
- Do not use pry bar on toe-kick as it may buckle.
- Do not use pry bar on end panel as it may chip.
- Use pry bar **ONLY** on base frame to avoid damaging case.
- See illustrations below.



5. Connect Battery To Battery Backup System


Important Notes:

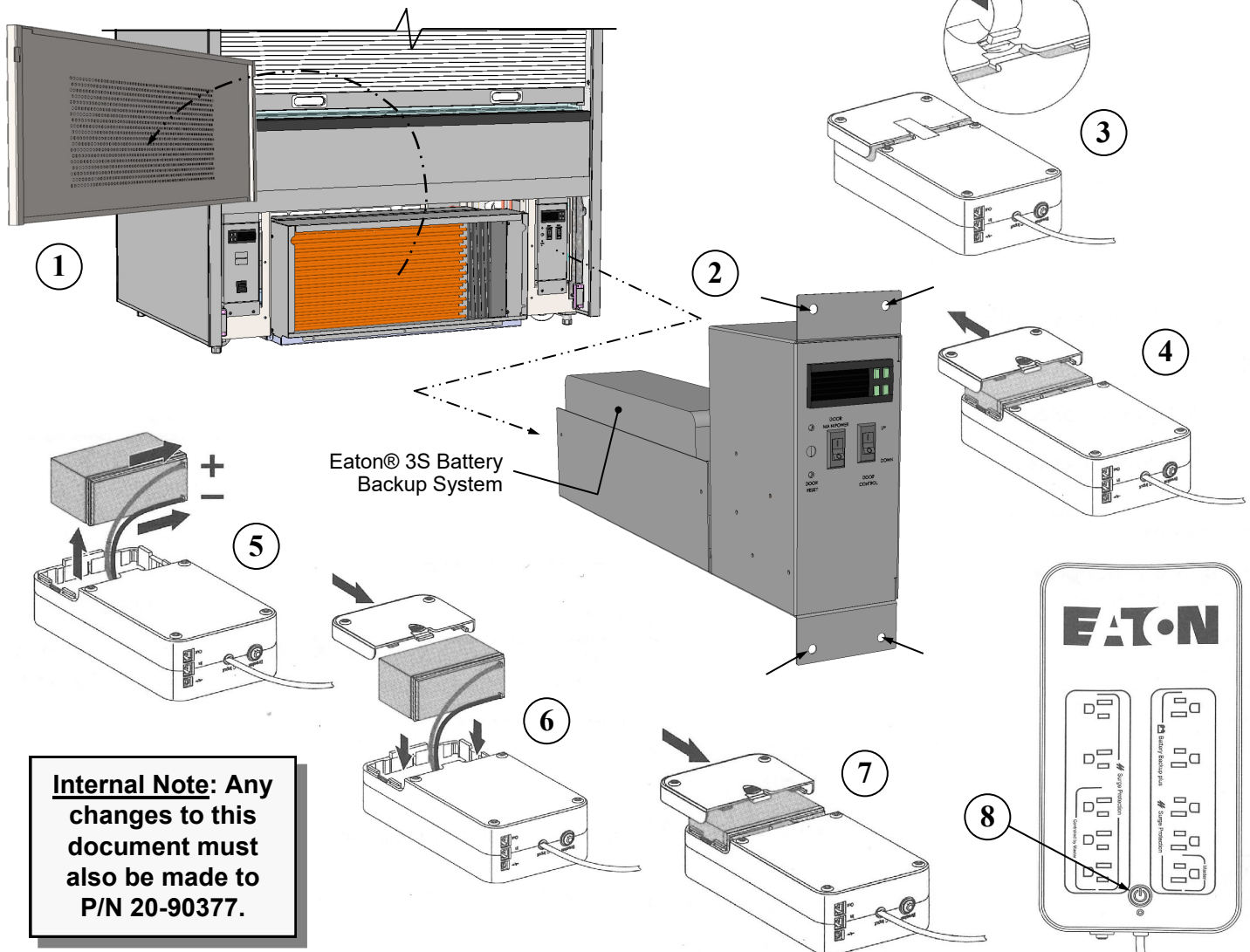
A. Battery is shipped DISCONNECTED to system. You MUST connect battery to the battery backup system at installation!

B. Battery must be connected & charged for 24 hours before operating the electronically controlled door!

- **Internal Note:** Any changes to this document must also be made to P/N 20-90377.

Carefully follow these instructions:

1. Remove front grille from case to access the battery backup system.
 2. Remove (4) screws () and slide door controller box out from case to access Eaton 3S Unit.
 3. Peel off tape with rubber spacer (at its underside).
 4. Slide battery cover off the Eaton 3S unit.
 5. Pull out battery and connect the battery wires firmly to battery terminals; red to positive (+) and black to negative (-).
 6. Insert battery back into the unit's compartment.
 7. Slide the battery cover on the unit until release tab locks into place.
 8. Press the power button on the unit.
- >> Return unit to door controller box compartment.
>> Slide controller box back into case; replace the (4) screws.
>> Return front grille to case.
>> Allow the battery to charge for 24 hours before using electronically controlled door.



6. Front Grille Removal

- Front grille must be removed to access main power switch, thermostat and door controls.
- Simply lift up and off hooks and magnets; no screw removal is required.
- See illustration below.

7. Electronically Controlled Rolling Door and Thermostat

- Door CANNOT be raised or lowered by hand.
- Use door control switch to raise and lower door.
- Door limits and parameters are programmed into the door control thermostat (at factory).

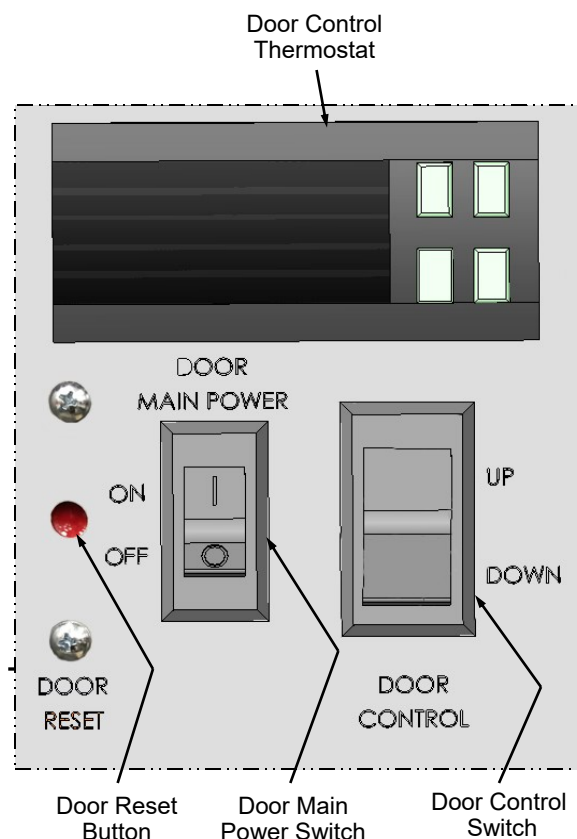
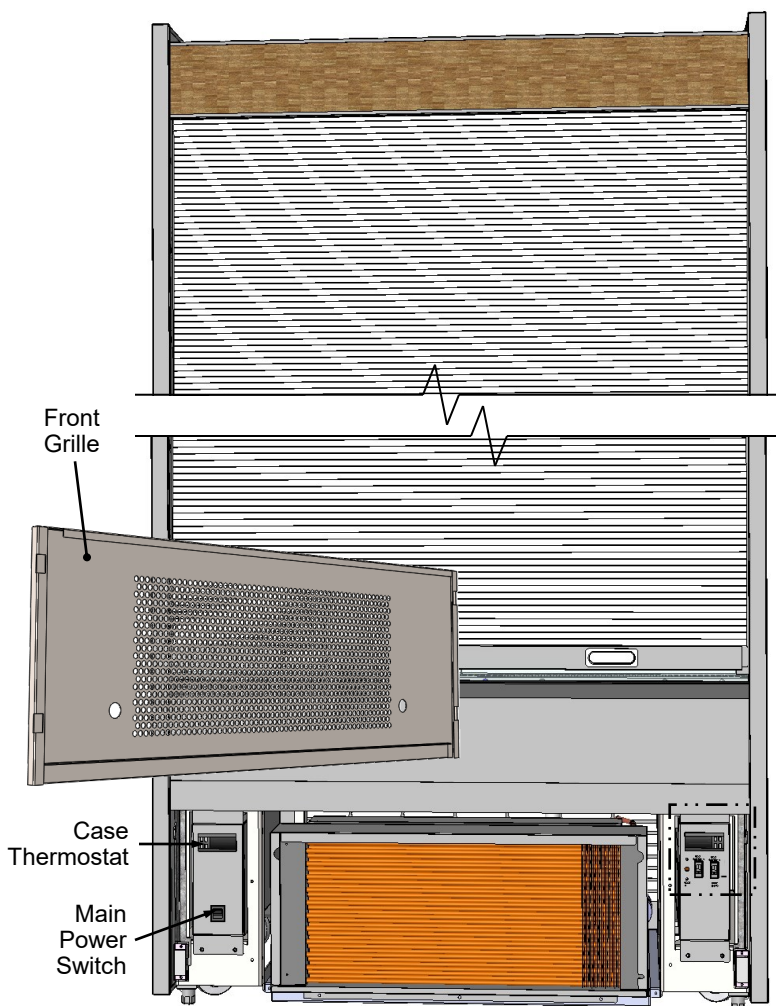
8. Door's 'Automatic Close' Function

- Door will automatically close if case temperature exceeds 41 °F for 30 minutes.
- This door closure may be due to case malfunction, a power outage, or even if power to case is inadvertently turned off).

- If door closure is due to a malfunction of the case, remove all hazardous/perishable foods and have service performed by authorized technician.
- To raise the door, turn the DOOR MAIN POWER switch "OFF" and then back "ON."
- Then, use a rigid instrument (pen, pencil, etc.) to press the red DOOR RESET button (which resets the thermostat alarm). Then, raise the door again by using DOOR CONTROL switch.

9. Raising Door For Cleaning or Service

- Many cleaning and service tasks can be performed prior to door closing (within a 30-minute window).
- Door will remain raised until temperature exceeds 41 °F for 30 minutes; then it will automatically close.
- If door closes automatically during cleaning or service, switch DOOR MAIN POWER to "OFF" and then back "ON" (which resets the thermostat alarm).
- Then, use a rigid instrument (pen, pencil, etc.) to press the red DOOR RESET button.
- Then, raise the door again by using the DOOR CONTROL switch.



10. Sliding Condenser Package Out From Underside Of Case

- At shipment, removal of compressor pan shipment screws (at front of case) may be necessary to access condenser package.
- See illustration below-right.
- Condenser package base rests on plastic glides.
- Slide condenser package out from under case.

11. Overflow Condensate Pan Check

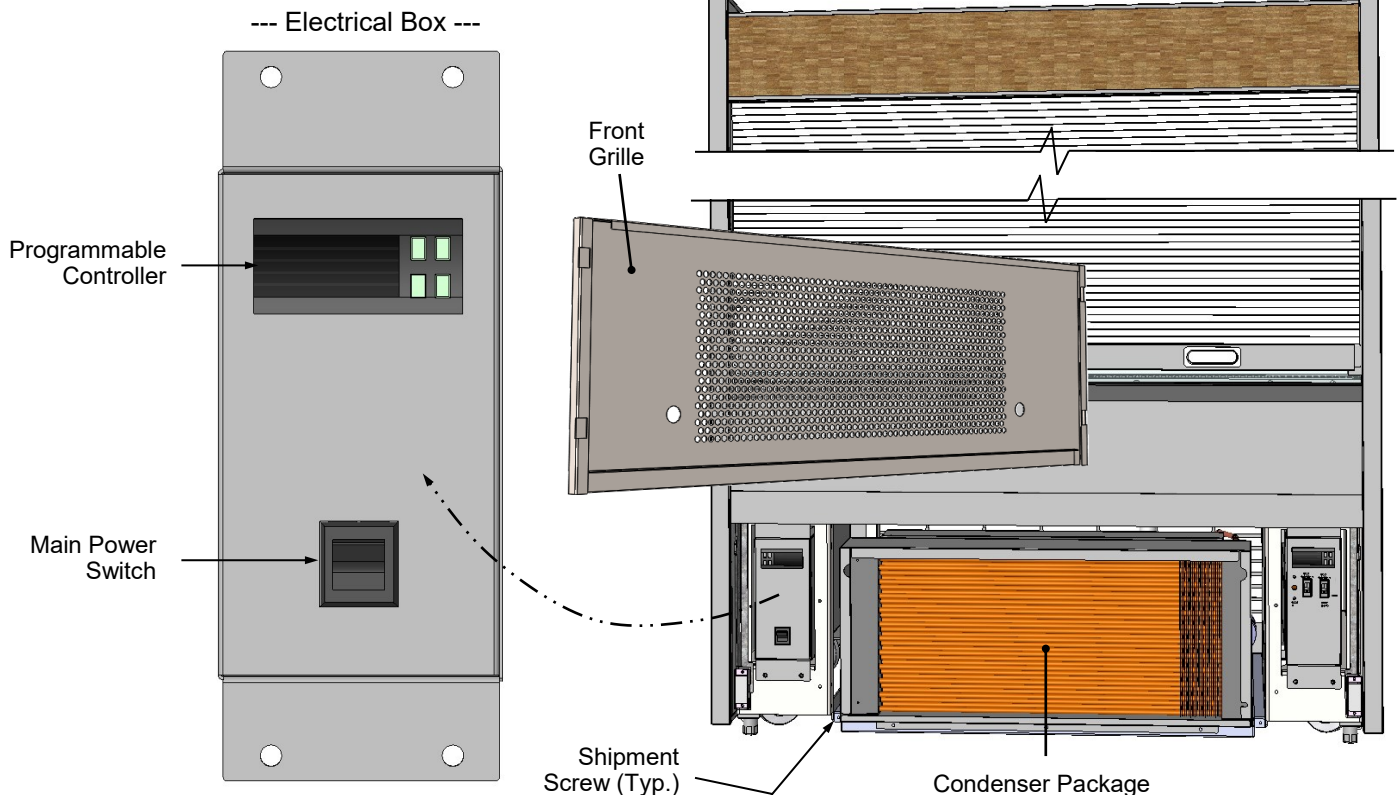
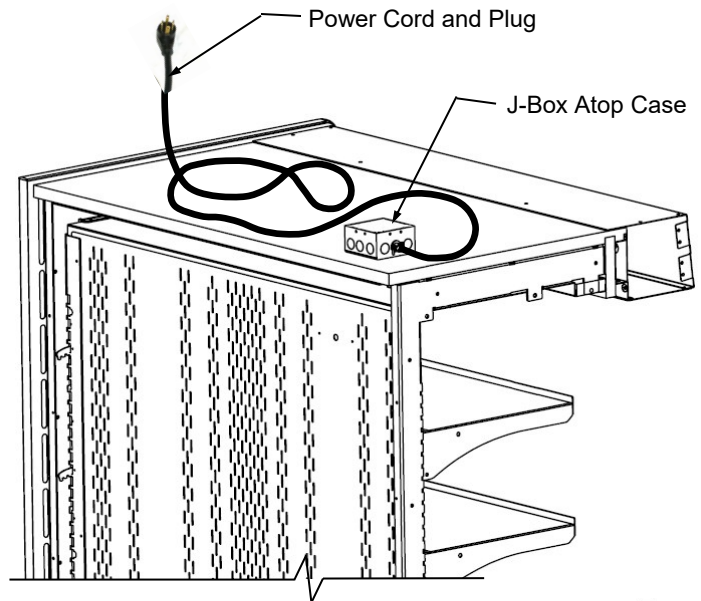
- **Caution! If case runs without proper connection, water will overflow pan and drain onto floor causing damage!**
- **Overflow condensate pan can unplug from its electrical outlet during shipment!**
- Before turning case on, check that power cord from overflow condensate pan is plugged in.
- See **TROUBLESHOOTING** section in operating manual for additional information.

12. Merchandiser Power Cord Route & Plug-In

- Note: Depending upon floor layout and power source location, cord may be routed through rear of case below OR through 4x4 J-box atop.
- See illustration at top-right for view of case with power cord routed atop case (through 4x4 box).

13. Turning On Power To Case

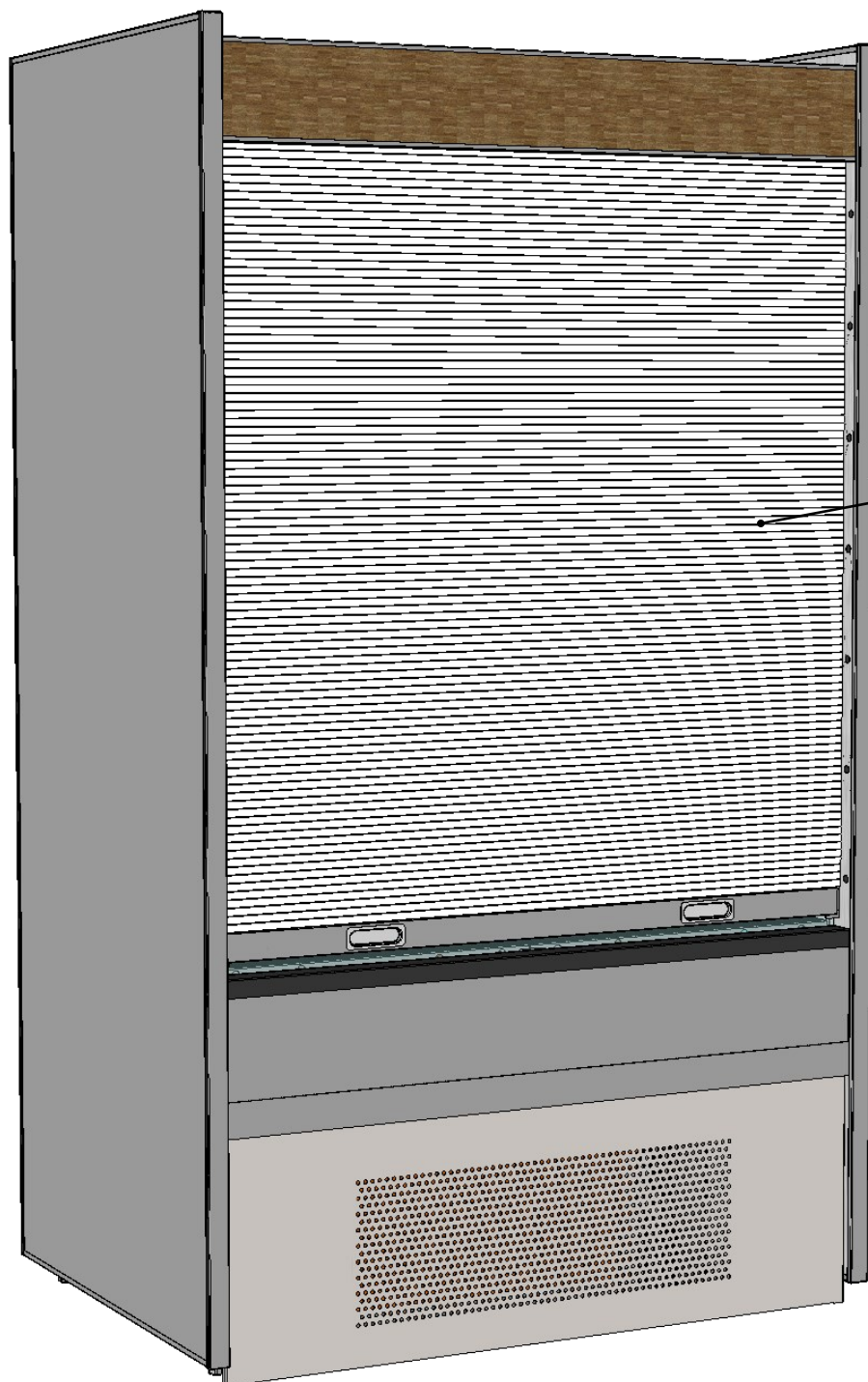
- Plug in power cord.
- Main power switch may be accessed by removing front grille.
- Main power switch is located on electrical box below controller. See illustration at lower-left.



ELECTRONICALLY CONTROLLED ROLLING DOOR

Electronically Controlled Rolling Door

- Electronically controlled rolling door is NOT able to be raised or lowered by hand.
- Handles are from factory stock and are NOT able to be used for raising or lowering door.
- Door is ONLY able to be raised or lowered by electronic controls.
- See ***INSTALLATION, CONT'D: ELECTRONICALLY CONTROLLED DOOR / AUTO-CLOSE / RAISING DOOR*** section in User Manual for specifics.



Electronically
Controlled Door

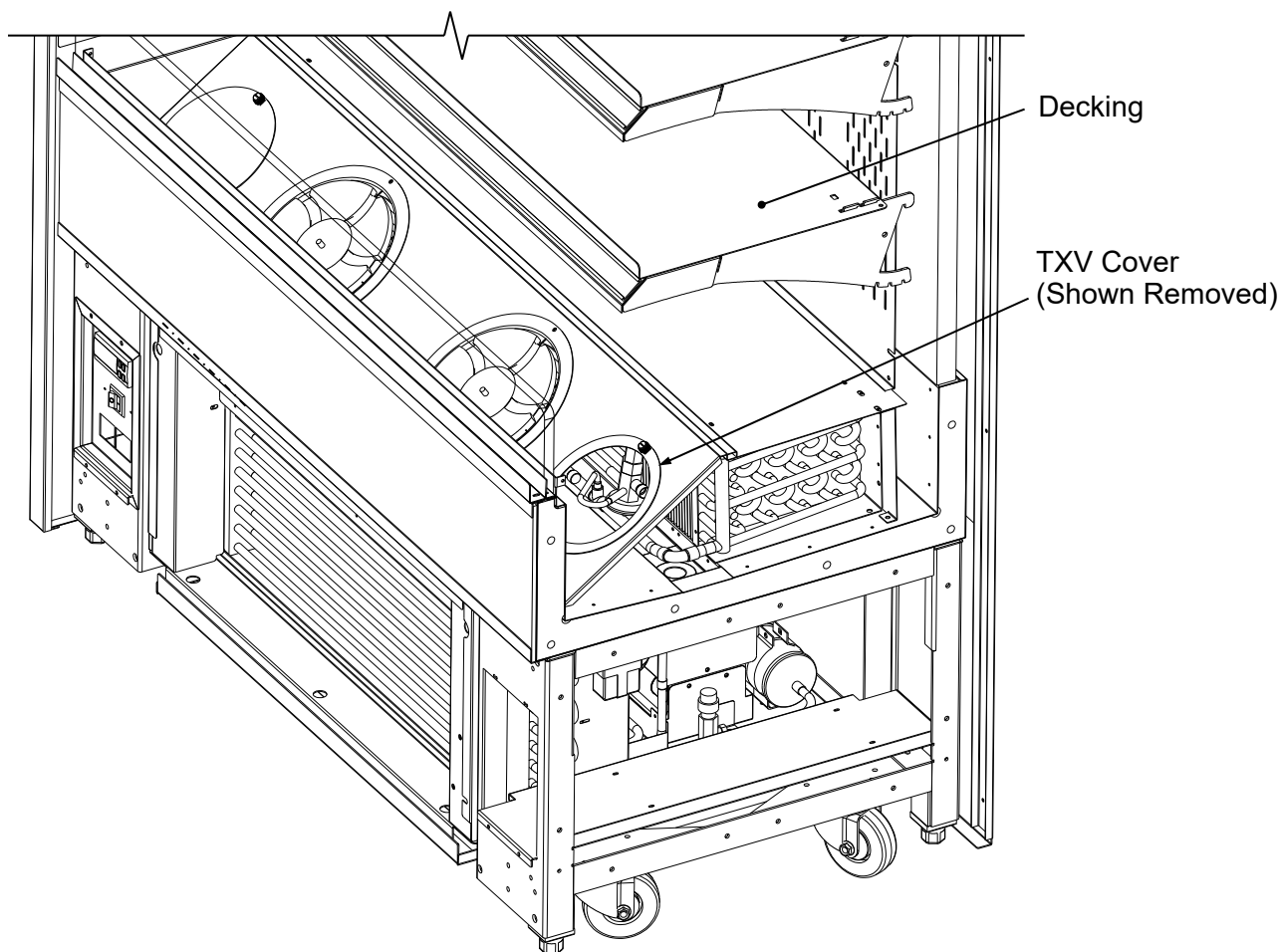
Note: Illustration Shown
May Not Exactly Reflect
Every Feature or Option of
Your Particular Case.

1. Evaporator Coil Fan Discharge

- When main power switch is turned on, refrigeration assembly will energize (see **FRONT GRILLE REMOVAL / CONDENSER PACKAGE / OVERFLOW PAN / MAIN POWER SWITCH** section for startup specifics).
- Evaporator coil fans should turn on. From inside of the case, check for discharge air from front baffle to confirm that the fans are functioning properly.
- When the case is in a start up mode or has been idle for a long period of time, the unit will require 75 minutes of run time to pull-down temperature.
- See below illustration.

2. TXV (Thermostatic Expansion Valve)

- TXV is under TXV access panel.
- Decking must be removed for access.
- TXV cover must also be removed for access (remove two thumb screws).
- See illustration below.
- Note: Standard cases have TXV at customer-left. For cases with EnergyWise, TXV is at customer-right.



Case shown with End Panel, Decking, and TXV Cover removed.

Note: Illustration Above Has Customer Right TXV. Cases Without EnergyWise Refrigeration Package Will Have TXV Accessibility at Customer-Left.

1. Honeycomb Air Diffuser

- Honeycomb is located in discharge air duct.
- See illustration below.
- **Note:** Depending upon model chosen, illustrations shown below may not exactly reflect every design feature or option as yours.

2. LED Light Fixtures

- **Warning! Disconnect power before providing maintenance and service to unit.**
- When replacing LED lights, you must replace with similar lights.
- Light switch is located at customer-left of case under header, behind honeycomb.
- Turning on light switch will turn on ALL lights in entire case.
- LED lights are located at both header and shelving of case (as illustrated at right).

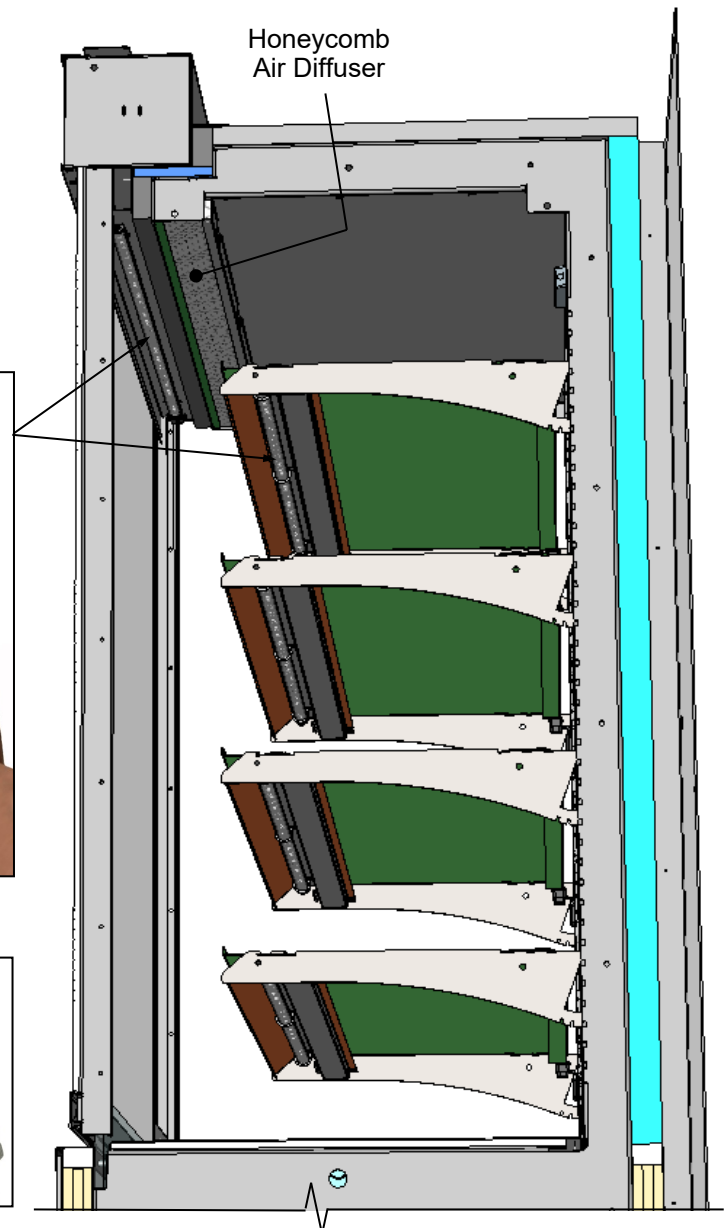
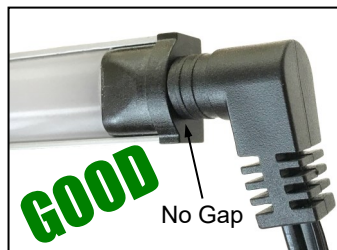
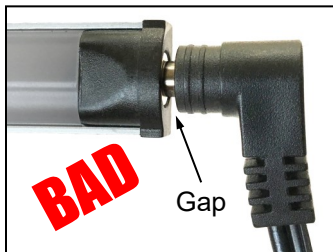
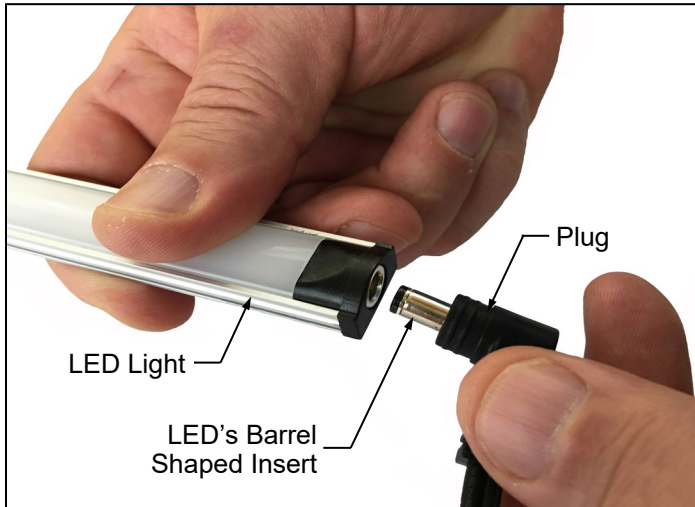
3. LED Light Removal / Replacement

Removal of lamp:

- LED lights rarely require change-out.
- Contact Structural Concepts' Technical Service Department for replacement parts (see the Technical Service section of operating manual).

Replacement of lamp:

- To replace LED Light Fixture, disconnect existing light from its brackets.
- **Note:** LED Light and Plug must be connected in a specific manner or they will not work.
- Make certain that oval form of plug connects to oval form of LED end cap.
- Check that ALL of the light plugs are properly connected to the LED lights.
- Plugs must be inserted ALL THE WAY into the LED light orifices (with no gap) to work properly.
- See illustrations below for BAD vs GOOD connection practices.



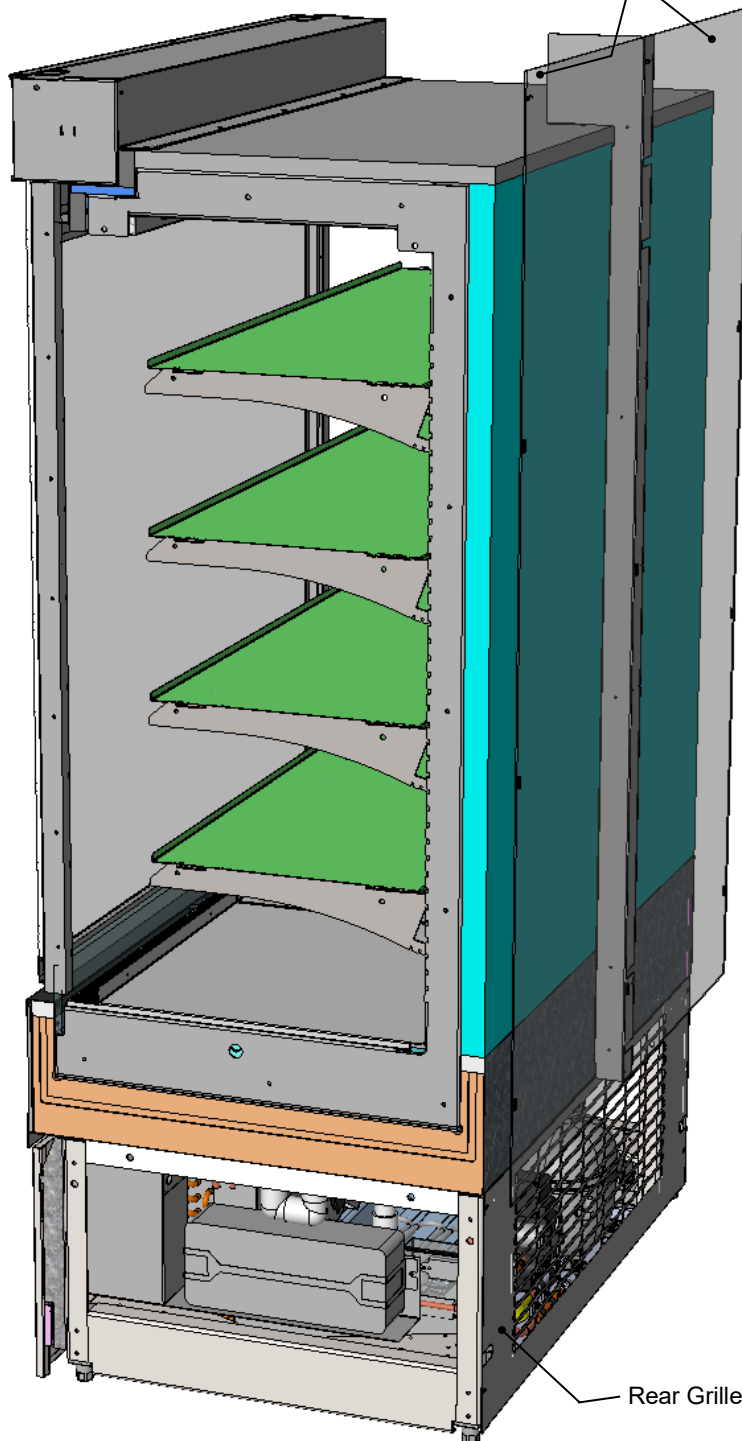
1. Wall Spacing / Rear Venting (May Not Be Applicable To Your Model)

- Caution: Venting is an integral part of case temperature management. Do not remove rear panel!
- Rear grille may be removed (by removing 4 screws) for service or maintenance of condenser unit.
- Return rear grille to case rear when completed.

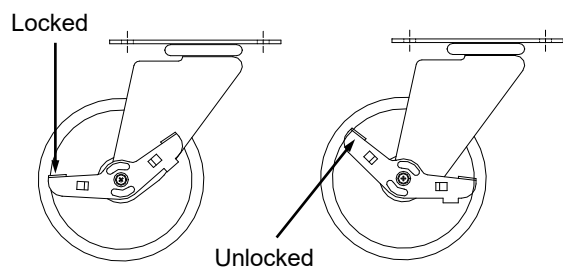
2. Caster Locking Operation

- Depending upon your case design, casters may be locked and unlocked.
- To lock casters push down on lever, to unlock pull up the lever all the way.
- See illustration below-left.

Rear Panel (Shown Transparent For Illustrative Purposes Only)



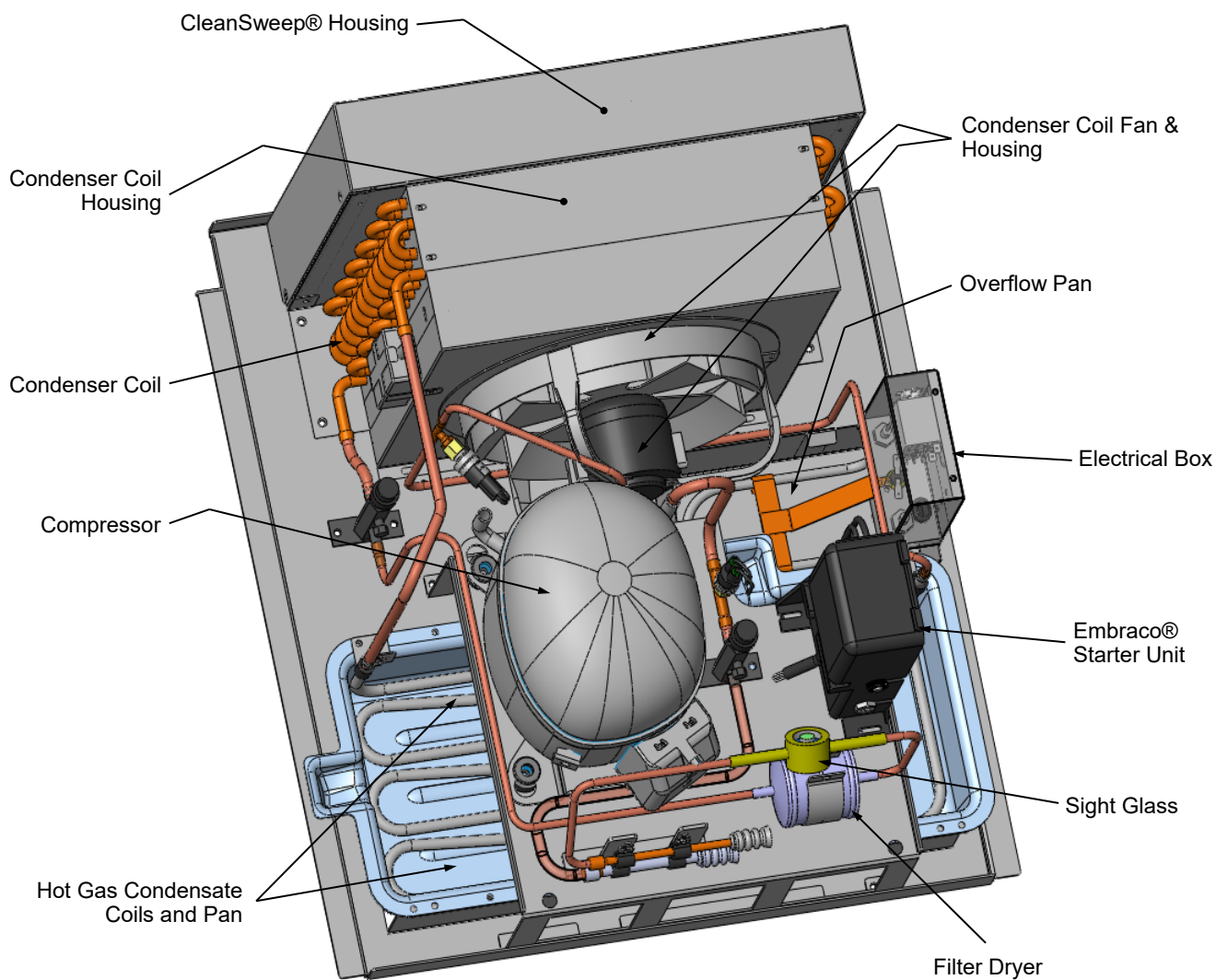
--- Sample Caster Design ---



Model BV4732 Shown Above
(Partially Disassembled For Illustrative Purposes Only)

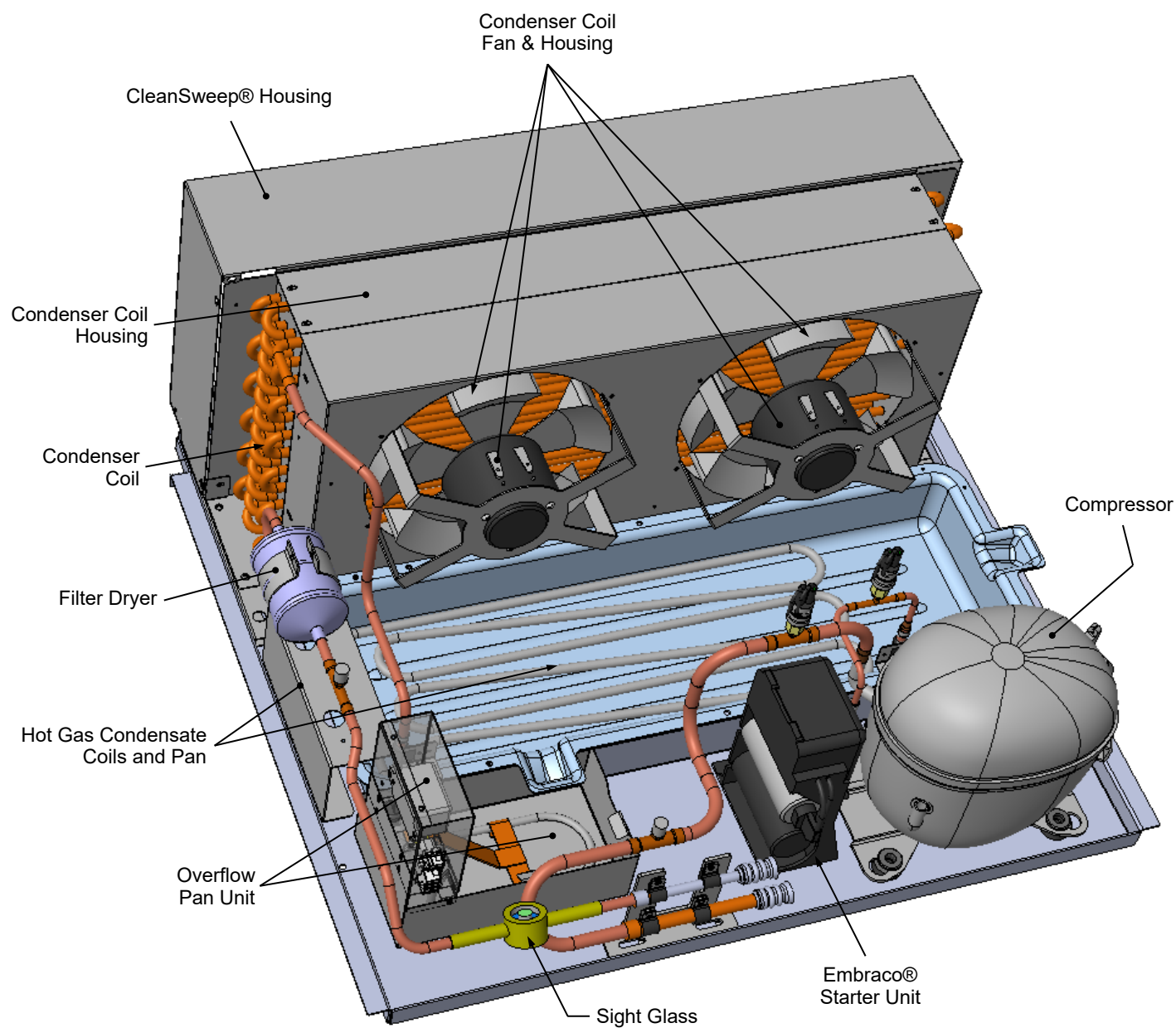
1. Self-Contained Hot Gas Loop Condensate Package

- **Caution:** Only trained service providers are to provide maintenance and service to unit.
- **Warning!** Disconnect power before providing maintenance and service to unit.
- **Note:** Illustration shown may not reflect your particular condensate package layout.



2. Self-Contained Hot Gas Loop Condensate Package

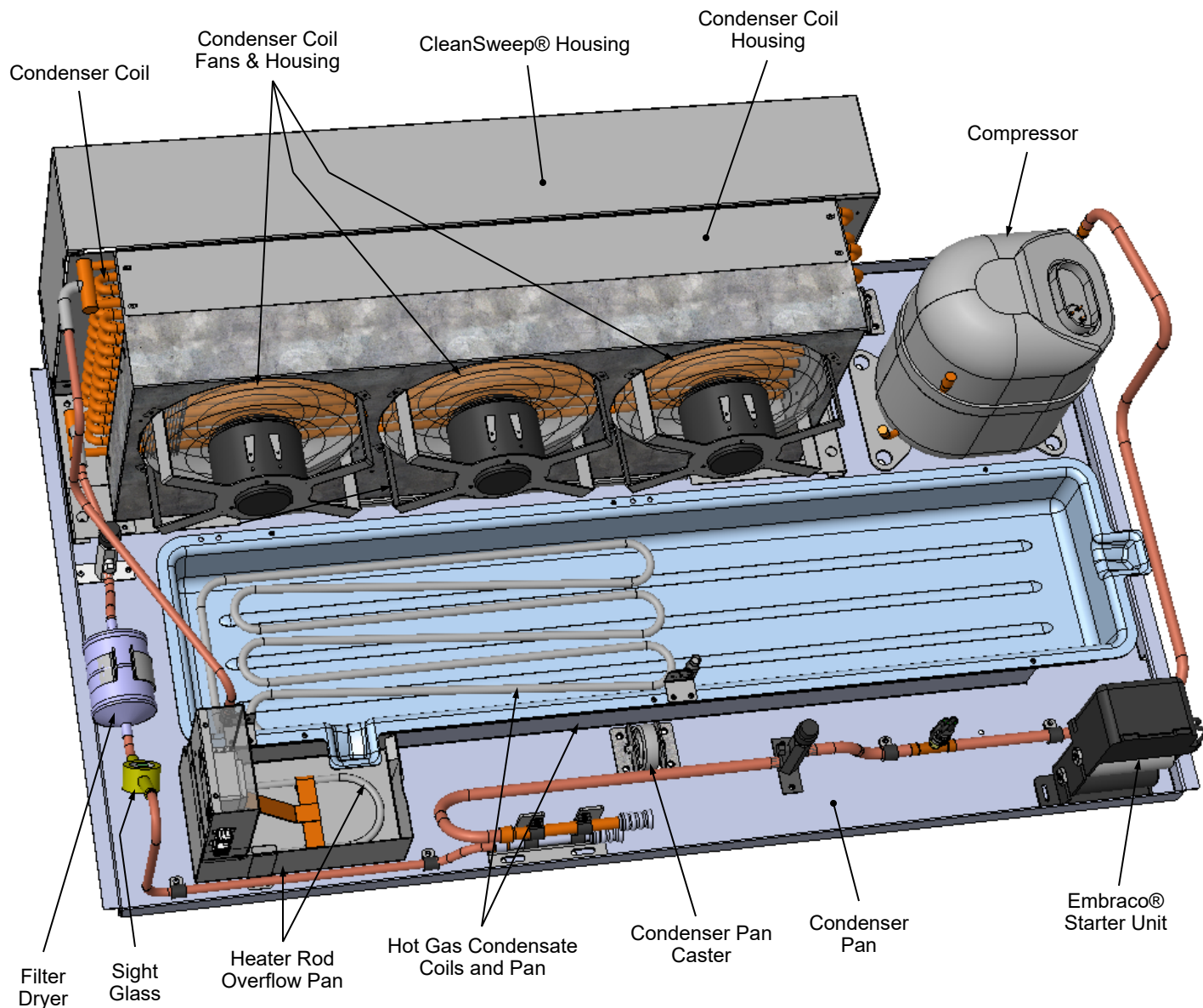
- **Caution:** Only trained service providers are to provide maintenance and service to unit.
- **Warning!** Disconnect power before providing maintenance and service to unit.



--- Model BV4732 Condenser Package Shown Above ---

3. Self-Contained Hot Gas Loop Condensate Package

- **Caution:** Only trained service providers are to provide maintenance and service to unit.
- **Warning!** Disconnect power before providing maintenance and service to unit.
- **Note:** Illustration shown may not reflect your particular condensate package layout.



--- Model B6632SC.6241 Condenser Package Component Layout ---

LOAD LEVEL GUIDE / TEMPERATURE GUIDE (MODEL B42 SHOWN / APPLICABLE TO OTHERS)

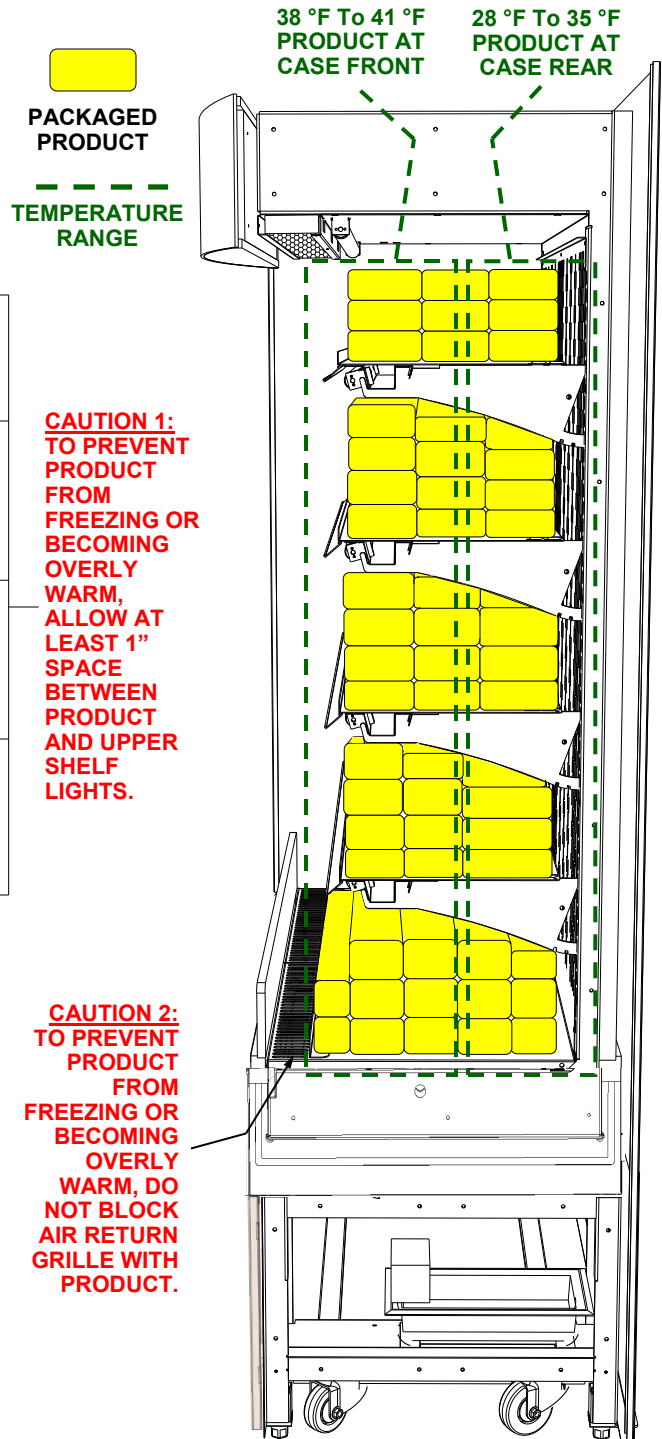
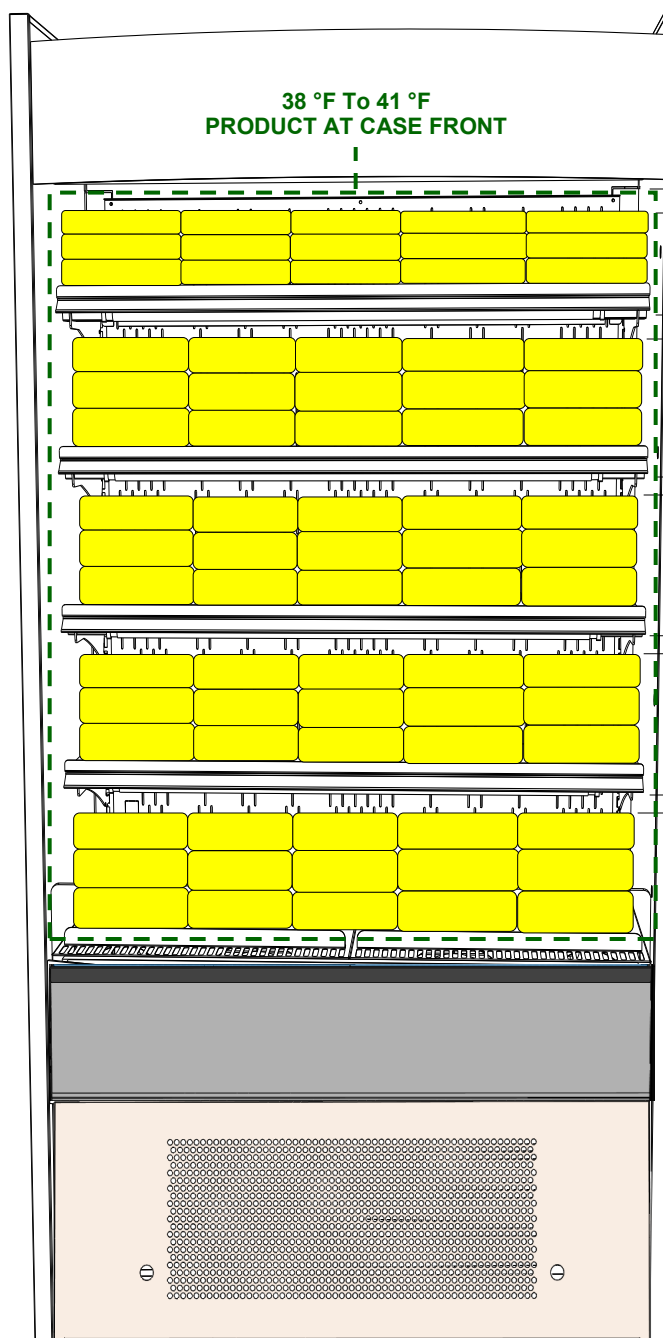
LOAD LEVEL & TEMPERATURE GUIDE

CAUTION 1: TO PREVENT PRODUCT FROM FREEZING OR BECOMING OVERLY WARM, ALLOW AT LEAST 1" SPACE BETWEEN PRODUCT AND UPPER SHELF LIGHTS.

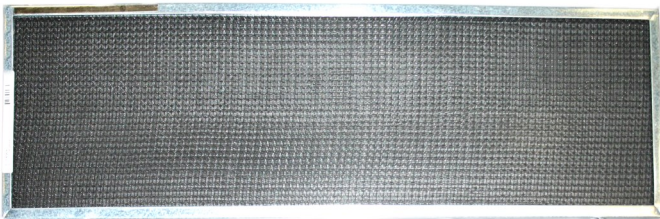
CAUTION 2: TO PREVENT PRODUCT FROM FREEZING OR BECOMING OVERLY WARM, DO NOT BLOCK AIR RETURN GRILLE WITH PRODUCT.

- IMPROPER PRODUCT PLACEMENT PREVENTS PROPER AIRFLOW CAUSING PRODUCT TO FREEZE OR BECOME OVERLY WARM.
- FOLLOW THESE PRODUCT PLACEMENT GUIDELINES TO MAINTAIN DESIRED PRODUCT TEMPERATURES.

NOTE: SEE VIEW AT RIGHT FOR PRODUCT TEMPERATURE RANGE AT FRONT vs. REAR OF CASE



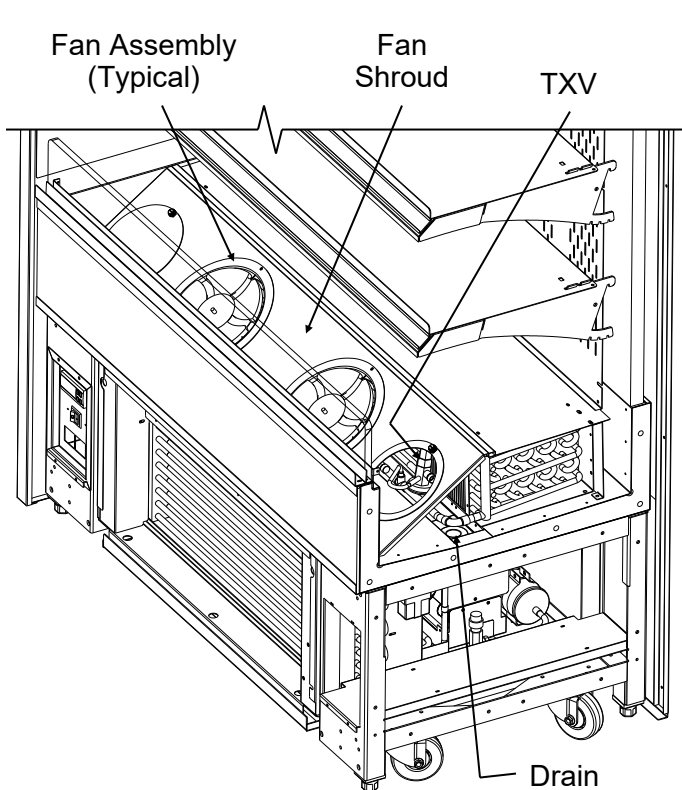
CLEANING SCHEDULE - TO BE PERFORMED BY STORE PERSONNEL

| FREQ. | INSTRUCTIONS |
|---------|--|
| Daily | <u>Acrylic Air Deflectors:</u> Clean with a warm water and mild soap solution and soft cloth. Never use ammonia-based cleaners (nor household or commercial window cleaner) on acrylic. |
| Daily | <u>Shelves & Decks:</u> Wipe off with moist cloth. |
| Daily | <u>Glass/Mirror Surfaces:</u> <ul style="list-style-type: none"> • Clean with household or commercial glass cleaner. Dry with soft cloth or paper towel. |
| Weekly | <u>Tub & Drain:</u> Vacuum tub under decks. Clean with soap and water solution. Wipe dry with clean cloth. Keep drain free of debris to prevent clogging. |
| Weekly | <u>Magnetic Condenser Coil Filter Option (Self-Contained Units Only):</u> <ul style="list-style-type: none"> • This optional filter helps prevent dust particles from entering condenser coil. • It is accessible by removing front panel from case. • Clean magnetic condenser coil filter by following either of these steps: <ol style="list-style-type: none"> 1. As magnetic condenser coil filter is dishwasher safe, remove from case (no screw removal); use a rag or soft-bristled brush to wipe off excess dust particles from filter. Run in normal dishwasher cycle. Remove from dishwasher. Dry with soft cloth or paper towel. Return to case. 2. If not using dishwasher, remove magnetic condenser coil filter from case. Use 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. 3. Dry with soft cloth or paper towel. Replace.  |
| Weekly | <u>Rear Perforated Plenum (Either Stainless Steel or Acrylic):</u> <ul style="list-style-type: none"> • Clean with a warm water and mild soap solution and soft cloth. |
| Monthly | <u>Air Return Grille and Fan Shroud Area:</u> See Illustration below. 1) Turn off power. 2) Remove decks from case. 3) Clean with moist cloth. |

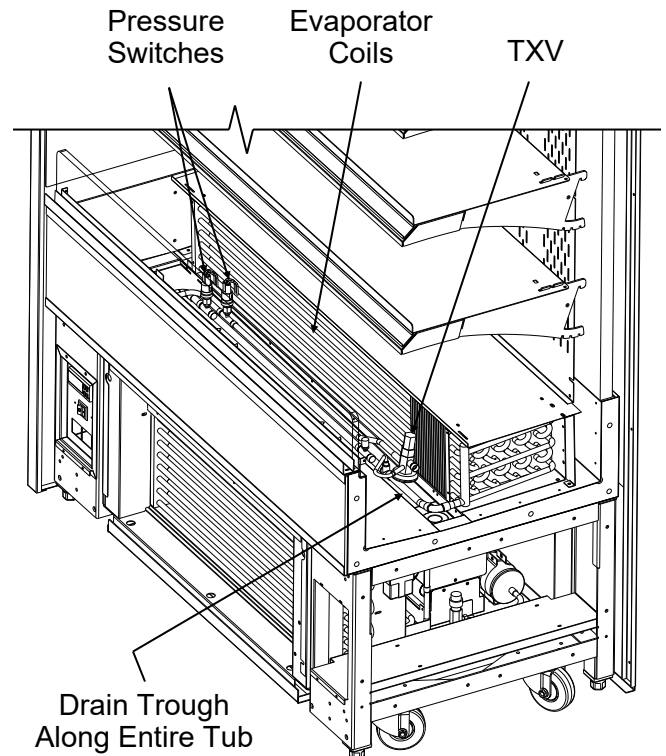
QUARTERLY PREVENTIVE MAINTENANCE (PERFORMED BY TRAINED SERVICE PROVIDERS)

WARNING! TURN OFF CASE BEFORE PERFORMING PREVENTIVE MAINTENANCE!

| PREVENTIVE MAINTENANCE | INSTRUCTIONS |
|------------------------|---|
| Case Interior | <p><u>Tub, Coil, Drain, Fan Blades, Motors, Brackets:</u></p> <p><i>Disconnect power from case before cleaning the tub, coil, fan, motor and drain area!</i></p> <ul style="list-style-type: none"> • Remove decking, sub-deck (if any) and fan shroud. • Use vacuum to clean condenser coils. • Clean tub, coil and drain with warm water, clean cloth, brush and mild soap solution. • Remove any debris that may clog drain. • Wipe down fan blades, motors and brackets with moist cloth. • Replace decking, sub-deck (if any) and fan shroud. |



Case shown with End Panel, Deck, and TXV Cover removed.



Case shown with End Panel, Decks, Fan Shroud and TXV Cover removed.

Above Illustrations (With TXV at Customer-Right) is ONLY on Cases With EnergyWise Refrigeration Package (With Hot Gas Loop Condensate System)

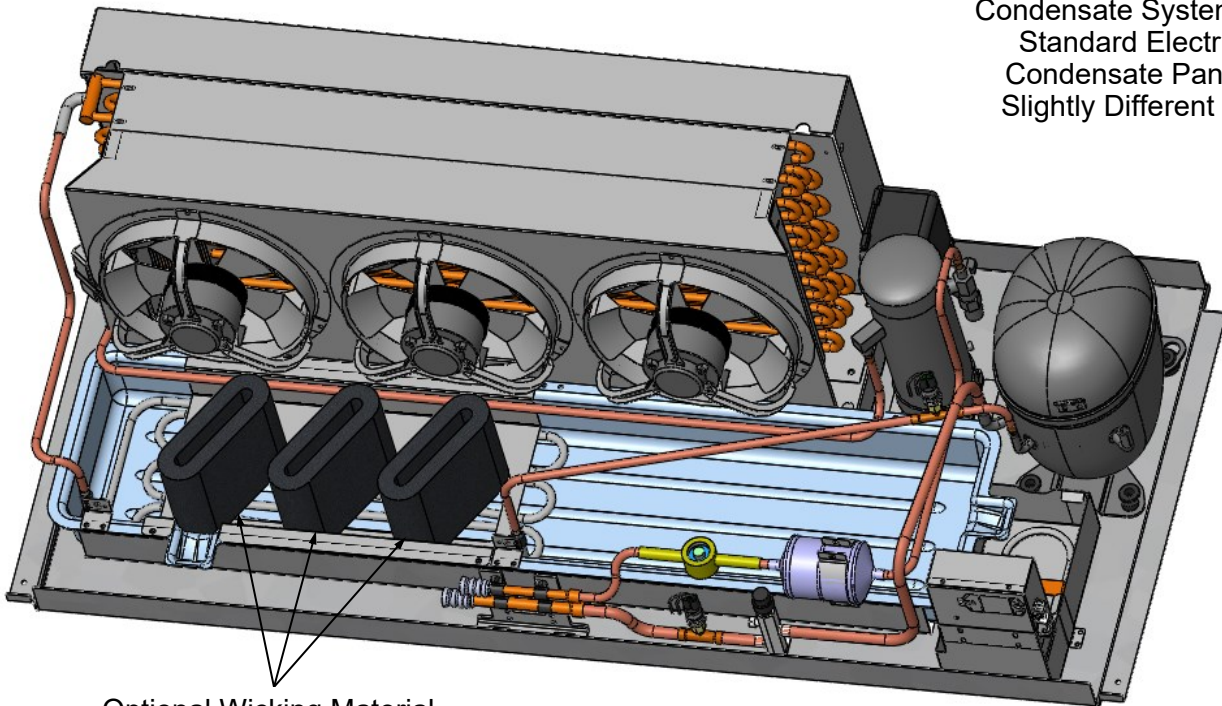
QUARTERLY PREVENTIVE MAINTENANCE (PERFORMED BY TRAINED SVC PROVIDERS), CONT'D**WARNING! TURN OFF CASE BEFORE PERFORMING PREVENTIVE MAINTENANCE!**

| PREVENTIVE MAINTENANCE | INSTRUCTIONS |
|------------------------|---|
| Case Interior | <u>Under Case Cleaning:</u> Whenever refrigeration assembly is removed from underside of case, vacuum (or broom) under case to remove all dust, debris and dirt that may collect. |
| Case Interior | <u>Condenser Coil Fins / Refrigeration Assembly Without Evaporator Pan:</u> <i>Warning! Disconnect power from case before beginning process!</i> A. Remove front grille (by removing thumbscrews). B. Slide out refrigeration assembly. C. Use vacuum (in suction mode) and brush to dislodge and remove dust both in and on coil fins. D. Place damp rags around condensing fan motor brackets to collect airborne dust. E. Switch vacuum to blow mode to blow air through condenser coils and into damp rags on fans. Blow entire surface of condensing coil to assure that all entrenched dust is removed. Caution! Coil fins are sharp! F. While refrigeration assembly is out from under case, use a moist cloth to wipe off dust & debris that collects on various parts (fans, sight glass, overflow pan, etc.). G. Slide refrigeration assembly back under case. H. Replace front grille to case (reattach with thumbscrews). <i>See illustrations below.</i> |

WARNING! TURN OFF CASE BEFORE PERFORMING PREVENTIVE MAINTENANCE!

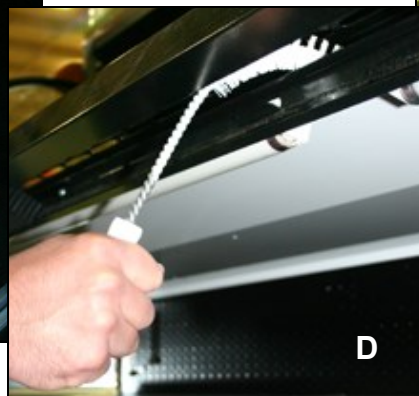
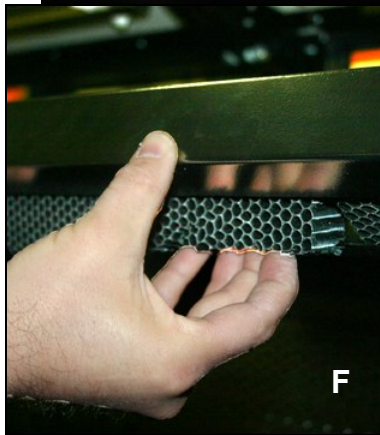
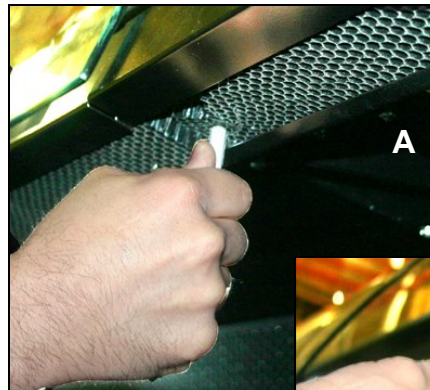
| PREVENTIVE MAINTENANCE | INSTRUCTIONS |
|-----------------------------|--|
| <p>Case Interior</p> | <p><u>Refrigeration Assembly With Condensate Pan:</u></p> <p><i>Caution! You must turn main power switch off before cleaning!</i></p> <ul style="list-style-type: none"> • Remove front grille. Turn main power switch off. • Slide refrigeration package out from under case. • Remove wicking material (if any). • Use a scrub-brush and a non-corrosive de-scaling solution (to remove calcium, lime and rust) from condensate pan. Clean hot gas loop (for EnergyWise units) or electric coil (for standard units). Follow instructions as to proper dilution, safety precautions and scrubbing method. • 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. • Use moist cloth to wipe off dust & debris that collects on various parts (fans, sight glass, overflow pan, etc.). • Return wicking material to mounting brackets. If wicking material is tattered, torn or disintegrating, replace with new. If wicking material is not available, contact Structural Concepts. See toll-free number at last page of operating manual. • Slide condenser package back under case. • Return front grille to case. |

Note: Hot Gas Loop
Condensate System Shown.
Standard Electric Coil
Condensate Pans Have
Slightly Different Layout.



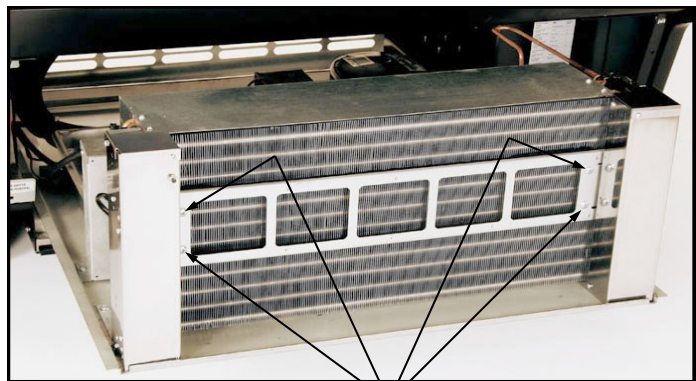
Optional Wicking Material
(Shown For Illustrative Purposes Only)

| PREVENTIVE MAINTENANCE | INSTRUCTIONS |
|------------------------|--|
| Case Interior | <p><u>Honeycomb Air Diffuser:</u></p> <p>A. Wedge a non-metallic device of suitable strength (such as a ballpoint pen) between honeycomb and its housing. <u>Caution!</u> Use care not to dislodge the heating wire (that prevents condensation on the honeycomb retainer).</p> <p>B. Apply pressure to collapse honeycomb to pull it out of honeycomb retainer.</p> <p>C. Carefully pry downward and away from the honeycomb retainer.</p> <p>D. Use brush to reach in and, with outward sweeping motion, pull any crumbs or residue out of honeycomb area.</p> <p>> 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.</p> <p>E. After honeycomb has been thoroughly cleaned and dried, squeeze honeycomb to allow it to fit into the honeycomb retainer.</p> <p>F. Carefully slide honeycomb into place.</p> <p>G. Adjust honeycomb so it fits <u>flat</u> against retainer (not be wavy or out of position).</p> |



ANNUAL PREVENTIVE MAINTENANCE (PERFORMED BY TRAINED SERVICE PROVIDERS ONLY)

| PREVENTIVE MAINTENANCE | INSTRUCTIONS |
|------------------------|--|
| Case Interior | <p><u>Optional Clean Sweep® Condensing Coil Cleaner:</u></p> <p><i>Important! Disconnect power from case before cleaning the Clean Sweep® Condenser Coil Cleaner!</i></p> <ul style="list-style-type: none"> • Remove front grille (by removing 4 screws). • Slide/roll out condensing unit assembly. • Remove the four (4) screws holding Clean Sweep® rails intact. • Remove the Clean Sweep® rail. • Wash rail and brushes in hot water and mild soap solution. • If brushes are worn, they must be replaced. Call Technical Service Department to replace. Toll-Free number is listed at end of manual. • <i>Caution! Coil fins are sharp. Handle with care!</i> • Reattach Clean Sweep® rail to condensing unit (4 screws). • Slide/roll condensing unit assembly back under case. • Replace front grille to case in same manner it was removed. • See photos below. |



(4) Screws



Rail

Brushes

--- Above photos are taken after front grille has been removed from case ---

| CONDITION | TROUBLESHOOTING |
|------------------------------|--|
| Case Not Lining Up | See Installation section in this manual for instructions on properly aligning case (alongside other cases) and adjusting levelers. |
| Water Is On The Floor | <p>Caution! Water on flooring can cause much damage! Until cause is determined (and repaired), follow these procedures:</p> <ul style="list-style-type: none"> • Use wet-dry vacuum (or mop & bucket) to remove standing water. • Use 'catch pans' for water to drain into. Swap out regularly until case has completely drained. • Note: See <i>Drain, Hose and Bracket Placement Illustrations</i> sheet in this manual for views of different condensate systems used in display cases. |
| | Check that the drain trap is free of debris. |
| | Check that the drain hose is correctly positioned over condensate pan (or floor drain, for remote units). |
| | <p>Check store conditions.</p> <ul style="list-style-type: none"> • To prevent condensation in NSF/ANSI Type I environments, maximum conditions are to be 55% relative humidity / 75° Fahrenheit. • For NSF/ANSI Type II environments, maximum conditions are to be 55% relative humidity / 80° Fahrenheit. • 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. |
| | Check condensate pan float for proper operation (electric condensate trays). |
| | Check that condensate pan is properly plugged in or connected. |
| | <p>Caution! Condensate pan may be malfunctioning. If so, water will overflow pan and seep onto flooring causing damage! Until condensate pan is functioning (or is replaced), follow these procedures:</p> <ul style="list-style-type: none"> • Use wet vacuum (or mop & bucket) to remove standing water. • Use 'catch pans' for water to drain into. Swap out regularly until case has completely drained. |
| | <p>Caution! Disruption of power can cause water to overflow pan and seep onto flooring causing damage! Check that power to case is constant. Until power is restored, follow these procedures:</p> <ul style="list-style-type: none"> • Use wet-dry vacuum (or mop & bucket) to remove standing water. • Use 'catch pans' for water to drainage. Swap out regularly until drainage of case is complete (or until power is restored). • When power to case is restored, condensate pan should function properly and water will no longer overflow onto flooring. |
| | <p>Caution! Wicking material (if any) on your particular hot gas loop condensate tray may be dirty or worn and need replacement.</p> <ul style="list-style-type: none"> • Slide condensate package out from under unit. • After refrigeration system has been carefully slid out, replace wicking material with new. If wicking material is not available, contact Structural Concepts. See toll-free number at last page of this operating manual. • Note: See QUARTERLY PREVENTIVE MAINTENANCE (PERFORMED BY TRAINED SVC PROVIDERS ONLY), CONT. section in manual for wicking material illustration. |

| CONDITION | TROUBLESHOOTING |
|---|--|
| Fan Emits Excessive Noise | 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. |
| Fans Are Not Working | Check that the MAIN power switch is on. |
| | 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. |
| Digital Control Display Is Blank | Check that the MAIN power switch is on. |
| | Check the circuit breaker box for tripped circuits. |
| System Not Operating | Check that the utility power is on. |
| | Check that the MAIN power switch is on. |
| | Check the circuit breaker box for tripped circuits. |

| CONDITION | TROUBLESHOOTING |
|---|--|
| 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 HONEYCOMB AIR DIFFUSER / LED LIGHT FIXTURES / LED LIGHT REMOVAL & REPLACEMENT section in User Manual for illustrations. |
| | Service Technicians Only: Check voltage at LED drivers. If voltage is entering but not exiting, LED driver may be faulty. |
| Control Display Is Flashing | See <i>your case's serial label for your model's specified settings</i> . See SERIAL LABEL LOCATION & INFORMATION LISTED / TECH INFO & SERVICE for label location, etc. |
| Case Is Not Holding Temperature | 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. |
| | CAUTION! DO NOT RELY ON THERMOMETERS OR THERMOSTATS FOR PRODUCT (FOOD) TEMPERATURES. <ul style="list-style-type: none"> • Thermometers & thermostats reflect air temperatures ONLY. • For ACTUAL product (food) temperatures, use calibrated food probe thermometers ONLY. • For accurate readings, DO NOT use infrared food thermometers. |
| | 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. See OVERVIEW / TYPE / COMPLIANCE / WARNINGS / PRECAUTIONS / WIRING / PLUGS section in manual for adverse conditions/spacing issue parameters. |
| | If case is located near front doors, temperature fluctuation can hinder unit's ability to maintain temperature. See OVERVIEW / TYPE / COMPLIANCE / WARNINGS / PRECAUTIONS / WIRING / PLUGS section in manual for adverse conditions/spacing issue parameters. |
| | Check that condenser coil air filter (attached to rear grille) has been cleaned. See CLEANING SCHEDULE (TO BE PERFORMED BY STORE PERSONNEL) section in operating manual for instructions. |
| | Check that condenser coil has been cleaned. |
| | Check air return grilles for obstructions. |
| | Check sight glass for flashing and/or low charge. |
| | Check Set Point Temperature; it may be adjusted too high. |
| Condensing Unit Is Not Operating | Check that the power is turned on. |
| | Determine if temperature controller settings are properly set. See <i>your case's serial label for your model's specified settings</i> . See SERIAL LABEL LOCATION & INFORMATION LISTED / TECH INFO & SERVICE section in manual for label location, etc. |

TROUBLESHOOTING - CONDENSING SYSTEM (BY TRAINED SERVICE PROVIDERS ONLY)

| CONDITION | TROUBLESHOOTING |
|------------------------|--|
| Head Pressure Too High | 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. See OVERVIEW / TYPE / COMPLIANCE / WARNINGS / PRECAUTIONS / WIRING / PLUGS section in this manual. |
| Head Pressure Too Low | 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 |
|------------------------------|--|
| Low Suction Pressure | 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. |
| High Suction Pressure | 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"> a. Poor thermal contact. b. Warm location. |


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 is shown. A variety of models is displayed on serial label for illustration purposes only. Your case's serial label will reflect only one model.
- 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
Blend
Addenda
Harmony
Grocerant
Impulse
Oasis
Reveal

MODEL NRS3648RXV-SAMPLE
SERIAL NO. 12345X30DZ098765


 Intertek


 Intertek

SAMPLE ONLY

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

6-8 °F
6 defrosts per day, 45 °F

SAMPLE ONLY

ELECTRICAL RATING
REFRIGERANT
DESIGN PRESSURE
MINIMUM CIRCUIT AMPACITY
MAXIMUM OVERCURRENT

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

SAMPLE ONLY


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

SAMPLE ONLY

SAMPLE ONLY

SAMPLE ONLY

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



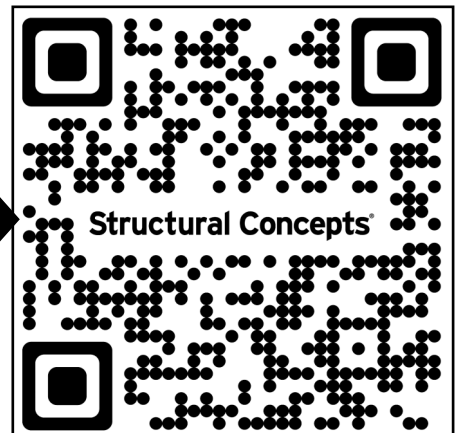
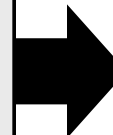
Carel® iJF Platform



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 AM to 8:00 PM 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.

