

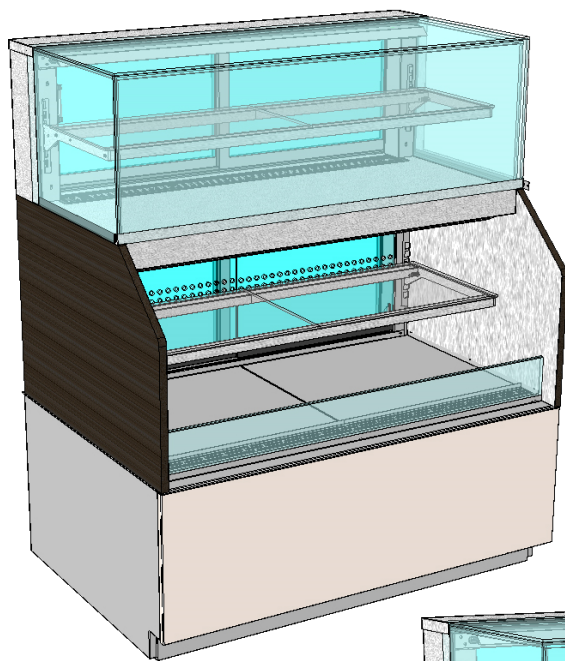
Reveal® USER MANUAL

SCC P/N
20-78347

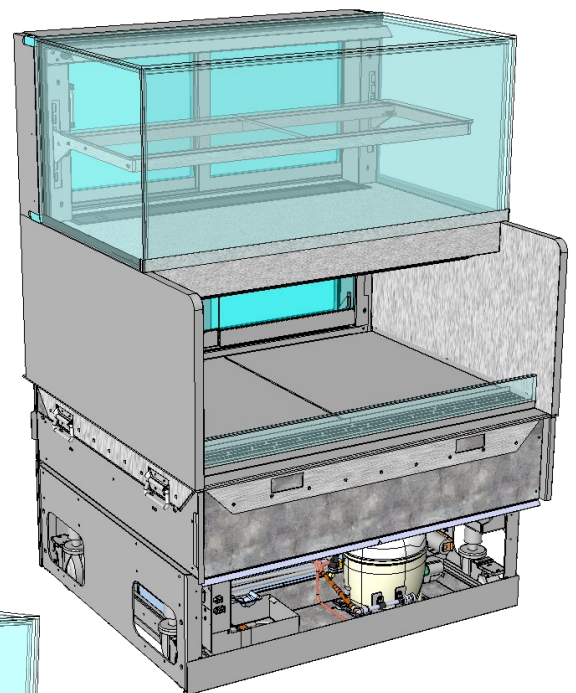
REVEAL® FREE STANDING OVER-UNDER REFRIGERATED COMBO MERCHANDISERS

- > CONVERTIBLE UPPER SECTION MAY BE EITHER AMBIENT OR REFRIGERATED
- > REFRIGERATED LOWER SECTION
- > SELF-CONTAINED OR REMOTE UNITS
- > UPPER SECTION: REAR SLIDING DOORS
- > OPTIONAL RISERS (IN LIEU OF SHELVING)
- > LOWER SECTION: REAR SLIDING DOORS WITH PERFORATED ACRYLIC PLENUMS OR SOLID BACK PANELS
- > **CAUTION! DO NOT PUSH OR PULL ON UPPER GLASS ENCLOSURE!**
- > **ONLY USE HANDLES (AT EACH END OF CASE) TO PUSH OR PULL CASE INTO POSITION!**

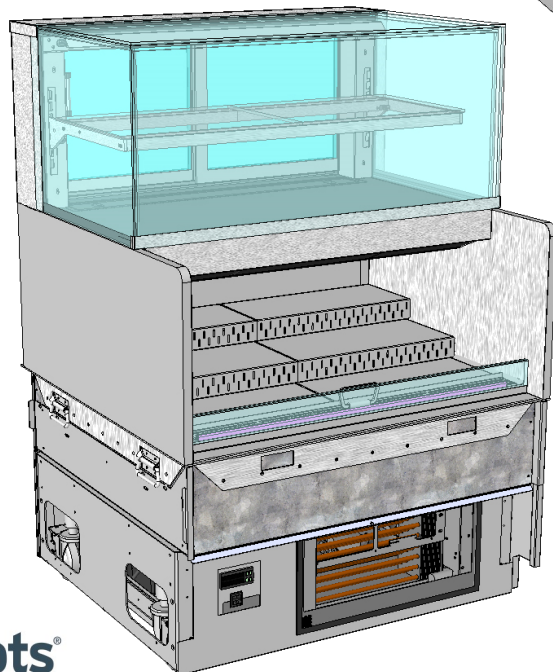
Models Are Shipped WITHOUT Panels and Cladding Attached. See Pages 10 & 11 For Component Attachment Instructions.



← Reveal® Model NR488RRSSV Rear Sliding Doors and Acrylic Perforated Plenums / Cladding Shown Attached



↑ Reveal® Model NR3631RRSSV / Rear Sliding Doors and Acrylic Perforated Plenums / Shown As Shipped From Factory (Without Components) / Rear Slide-Out Access To Condenser Package



← Reveal® Model NR3631RRSSV Self-Service Solid Back Rear Panel Optional Product Steps / Shown As Shipped From Factory (Without Components) / Front Slide-Out Access To Condenser Package

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

TABLE OF CONTENTS	2
REVEAL® REFRIGERATED OVER-UNDER COMBO MODEL APPLICABILITY & DIMENSIONS ..	3
OVERVIEW / DISPLAY TYPE I vs. II / COMPLIANCE / WARNINGS / PRECAUTIONS	4-5
INSTALLATION: TOE-KICK & GRILLE REMOVAL / DISCONNECTING CASE FROM PALLET	6
INSTALLATION, CONT'D: CASTER ADJUSTMENT / LOCK / UNLOCK / CASE REMOVAL FROM PALLET	7
INSTALLATION, CONT'D: SHELVING ASSEMBLY COMPONENTS	8
INSTALLATION, CONT'D: MAIN POWER SWITCH / TOE-KICK & AIR INTAKE GRILLE / PLUG-IN	9
INSTALLATION, CONT'D: SHIPPING BRACE / ATTACHING FRONT PANEL COMPONENTS / HANDLES	10
INSTALLATION, CONT'D: ATTACHING SIDE PANELS, REAR PANEL AND REAR GRILLE	11
INSTALLATION, CONT'D: OPTIONAL ACRYLIC SECURITY COVER	12
CASE DESIGN: FRONT OF CASE (UNITS WITH LOWER REAR DOORS)	13
CASE DESIGN, CONT'D: REAR OF CASE (UNITS WITH LOWER REAR DOORS)	14
CASE DESIGN, CONT'D: CONTROLLER / DC DRIVERS / MAIN POWER SWITCH / CONDENSER COIL FILTER	15
CASE DESIGN, CONT'D: NIGHT CURTAIN ACCESS AND OPERATION	16
CASE DESIGN, CONT'D: UPPER SECTION - AMBIENT VS. REFRIGERATED VIA REAR COVER/BAFFLE POSITION	17
CASE DESIGN, CONT'D: TUB AREA (AFTER DECK PAN REMOVAL)	18
CASE DESIGN, CONT'D: LED LIGHT SWITCH LOCATIONS / LED LIGHTS / THERMOMETERS ..	19
CASE DESIGN, CONT'D: REAR SLIDING DOOR REMOVAL / REAR PERFORATED PLENUM CONTROL	20
CASE DESIGN, CONT'D: CONDENSER PACKAGE (SELF-CONTAINED UNITS ONLY)	21
PRODUCT PLACEMENT / UPPER SECTION & HONEYCOMB AIRFLOW / LOAD LINES	22
CLEANING SCHEDULE (TO BE PERFORMED BY STORE PERSONNEL)	23
PREVENTIVE MAINTENANCE (TO BE PERFORMED BY TRAINED SERVICE PROVIDER)	24-26
TROUBLESHOOTING (TO BE PERFORMED BY STORE PERSONNEL ONLY)	27-28
TROUBLESHOOTING (TO BE PERFORMED BY TRAINED SERVICE PROVIDERS ONLY)	29-32
TROUBLESHOOTING (TO BE PERFORMED BY TRAINED SERVICE PROVIDERS ONLY) - CONDENSING SYSTEM	33
TROUBLESHOOTING (TO BE PERFORMED BY TRAINED SERVICE PROVIDERS ONLY) - EVAPORATOR SYSTEM	34
SERIAL LABEL INFORMATION & LOCATION	35
PROGRAMMABLE CONTROLLER INFORMATION	36
TECHNICAL SERVICE CONTACT INFORMATION / WARRANTY INFORMATION.....	37

REVEAL® REFRIGERATED OVER-UNDER COMBO MODEL APPLICABILITY & DIMENSIONS

Model	Upper Display Height	Overall Height	Case Depth x Length
NR3651RRSSV	16" UDH	50 3/4"OH	33"D* x 35 3/4"L
NR3658RRSSV	16" UDH	57 1/2"OH	33"D* x 35 3/4"L
NR4851RRSSV	16" UDH	50 3/4"OH	33"D* x 47 3/4"L
NR4858RRSSV	16" UDH	57 1/2"OH	33"D* x 47 3/4"L
NR6051RRSSV	16" UDH	50 3/4"OH	33"D* x 59 3/4"L
NR6058RRSSV	16" UDH	57 1/2"OH	33"D* x 59 3/4"L
NR7251RRSSV	16" UDH	50 3/4"OH	33"D* x 71 3/4"L
NR72858RRSSV	16" UDH	57 1/2"OH	33"D* x 71 3/4"L

OVERVIEW

- These Structural Concepts Reveal® cases are designed to merchandise packaged products at 40 °F (4 °C) or less product temperatures.
- Cases should be installed and operated according to this operating manual's instructions to insure 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:

WARNINGS

- Please read the important warnings in this document carefully as they can prevent injury or death.
- See next page for **PRECAUTIONS**.



**ATTENTION
CONTRACTORS**

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



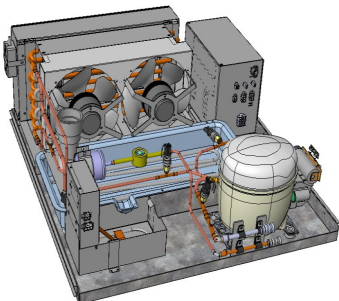
WARNING
Risk of electric shock. Disconnect power before servicing unit.
CAUTION! More than one source of electrical supply is employed with units that have separate circuits.
Disconnect ALL ELECTRICAL SOURCES before servicing.



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: 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.

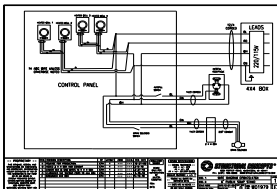
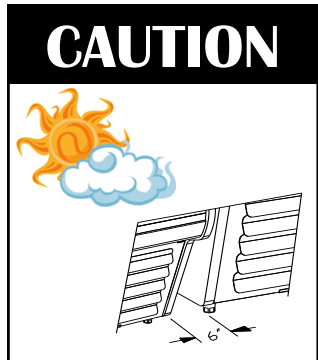
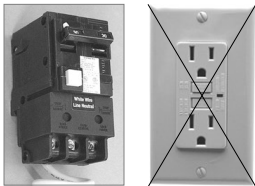


CAUTION! IF YOUR UNIT IS SELF-CONTAINED, YOU MUST CHECK CONDENSATE PAN POSITION & PLUG!
Water on flooring can cause extensive damage!
Before powering up unit, check and confirm that:

- Condensate pan is **DIRECTLY UNDER** condensate drain.
- Condensate pan plug is securely plugged into receptacle.
- Overflow pan has plug connected to its box. Units with optional Clean Sweep® **MUST HAVE** two plugs connected.

PRECAUTIONS

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



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! LAMP REPLACEMENT GUIDELINES
LED lamps reflect specific size, shape and overall design. Any 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! 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! DO NOT RELY ON THERMOMETERS OR THERMOSTATS FOR ACTUAL PRODUCT (FOOD) TEMPERATURES.**
- Thermometers and thermostats reflect air temperatures **ONLY**.
 - For **PRECISE** food temperatures, use calibrated food thermometers **ONLY**.

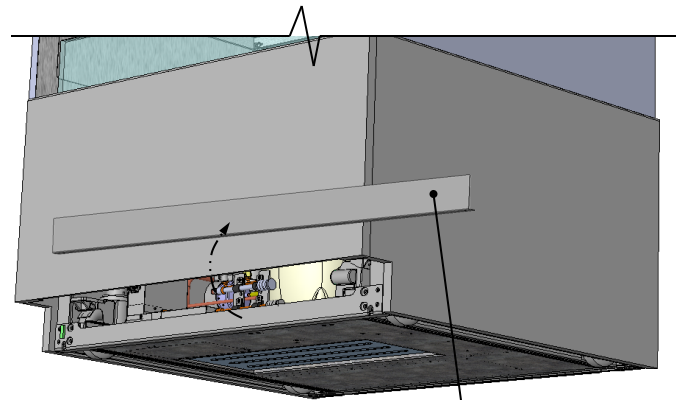
- WIRING DIAGRAM FORMAT & LOCATION**
- Each case has its own wiring diagram folded & in its own packet.
 - Wiring diagram placement may vary; it may be placed near field wiring box, raceway, or other related location.

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

INSTALLATION: TOE-KICK & GRILLE REMOVAL / DISCONNECTING CASE FROM PALLET

1. Remove Front Toe-Kick From Case

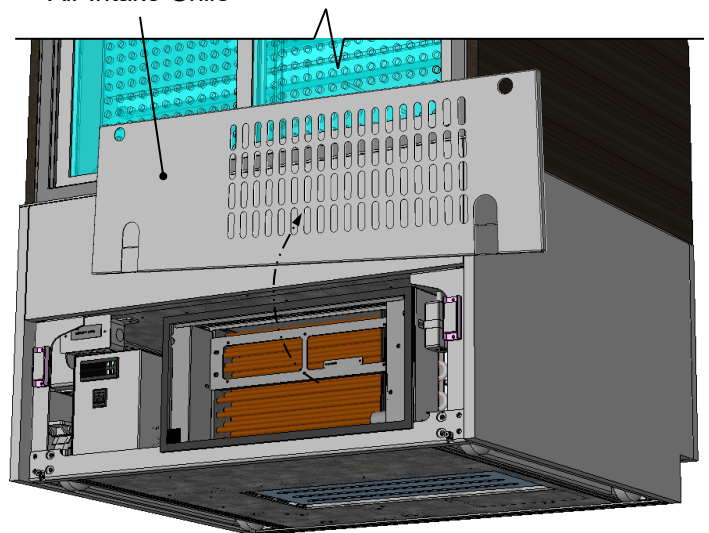
- To prevent damage to case, remove front toe-kick from case before removing from pallet.
- Toe-kick is held in place by magnets only. No screw removal is required.
- Place front toe-kick in secure location while removing case from pallet.



Air Intake Grille
Toe-Kick

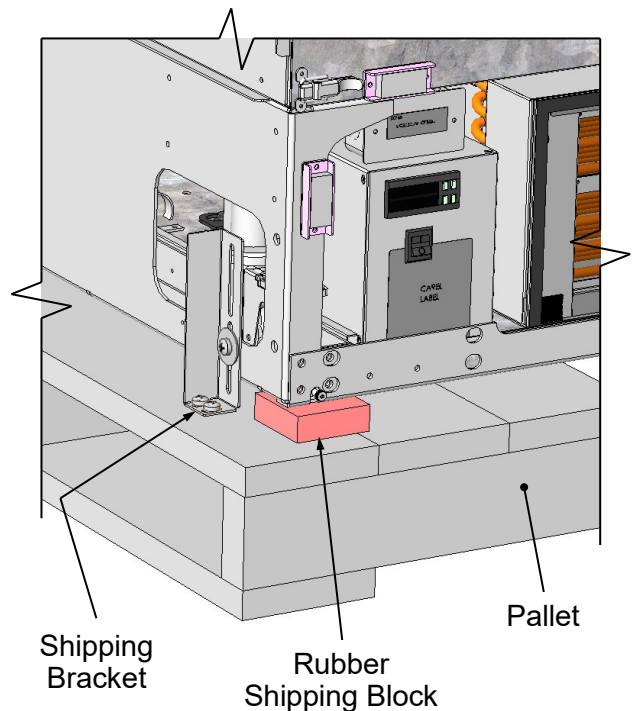
2. Remove Air Intake Grille From Case

- To prevent damage to case, lift air intake grille **UP and OFF** case.
- Air intake grille is held in place by magnets. No screw removal is required.
- Place air intake grille in secure location while removing case from pallet.



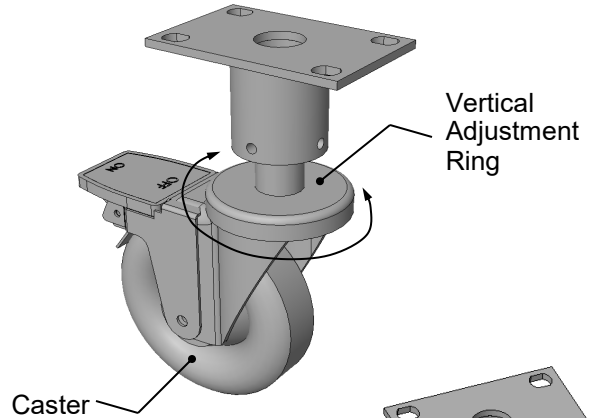
3. Disconnect Case From Pallet

- Use Phillips driver to remove screws from shipping brackets. Remove and discard shipping brackets from pallet.
- Place J-bar/pry bar under base frame. Raise case up from pallet to take weight off casters.
- With case raised, lower casters all the way down against pallet (see next step for detailed instructions on lowering or raising casters).
- Remove rubber shipping blocks.



4. Caster Height: Raising and Lowering

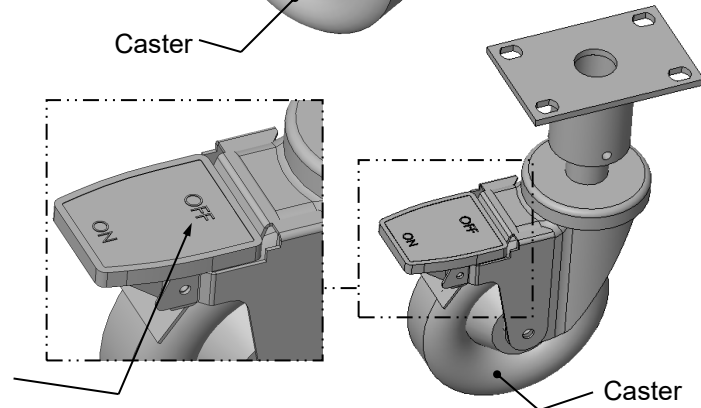
- Raise or lower casters (to adjust case height) by rotating casters' vertical adjustment rings.
 - Rotate vertical adjustment ring clockwise to lower caster (and increase height of case).
 - Rotate vertical adjustment ring counter-clockwise to raise caster (and decrease height of case).



5. Caster Rolling Capability: Unlocking

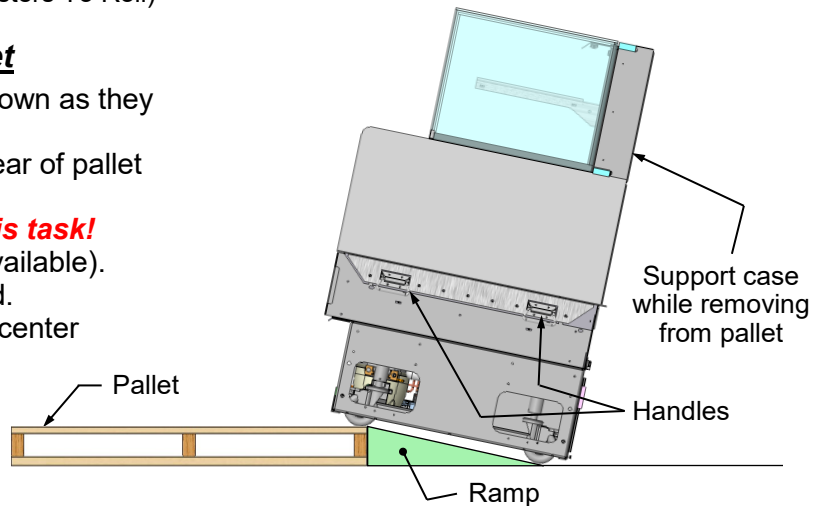
- Important! Case is shipped with caster mechanisms factory set at **ON** (locked) to prevent case from rolling.
- Unlock casters by pressing **OFF** on the caster mechanism.
- See illustration at right.

Press "OFF" Lever To Unlock Caster (And Allow Casters To Roll)



6. Carefully Remove Case From Pallet

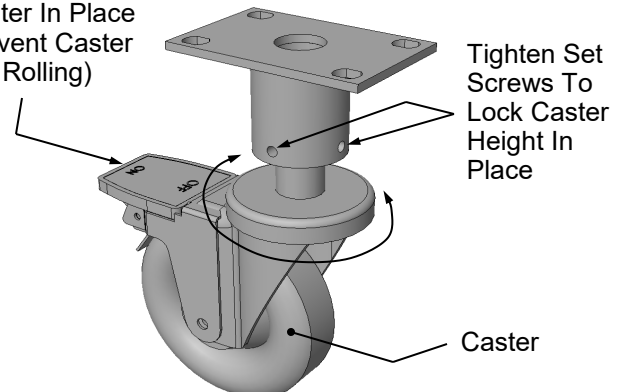
- Check that casters are lowered as far down as they will go (as instructed in step #4).
- Use handles to carefully slide case to rear of pallet (see illustration at right).
- **Caution! 4 people are required for this task!**
- Carefully lower to floor (using ramp if available).
- Slide pallet from under case as required.
- Maintain support of case at all times or center of gravity may cause case to fall.
- See illustration at right.



7. Casters: Locking

- After case is at desired position (and height), use level to check that case is level and plumb.
- Readjust height as needed (as instructed in step #4).
- **Locking Height:** After proper height (and positioning) of case is attained, tighten the two (2) set screws to lock each caster's height in place.
- **Locking Movement:** Then, to prevent casters' rolling capability, lock casters by pressing ON atop the "ON" and "OFF" lever mechanism (shown at right). Case will now be secured at its new location.

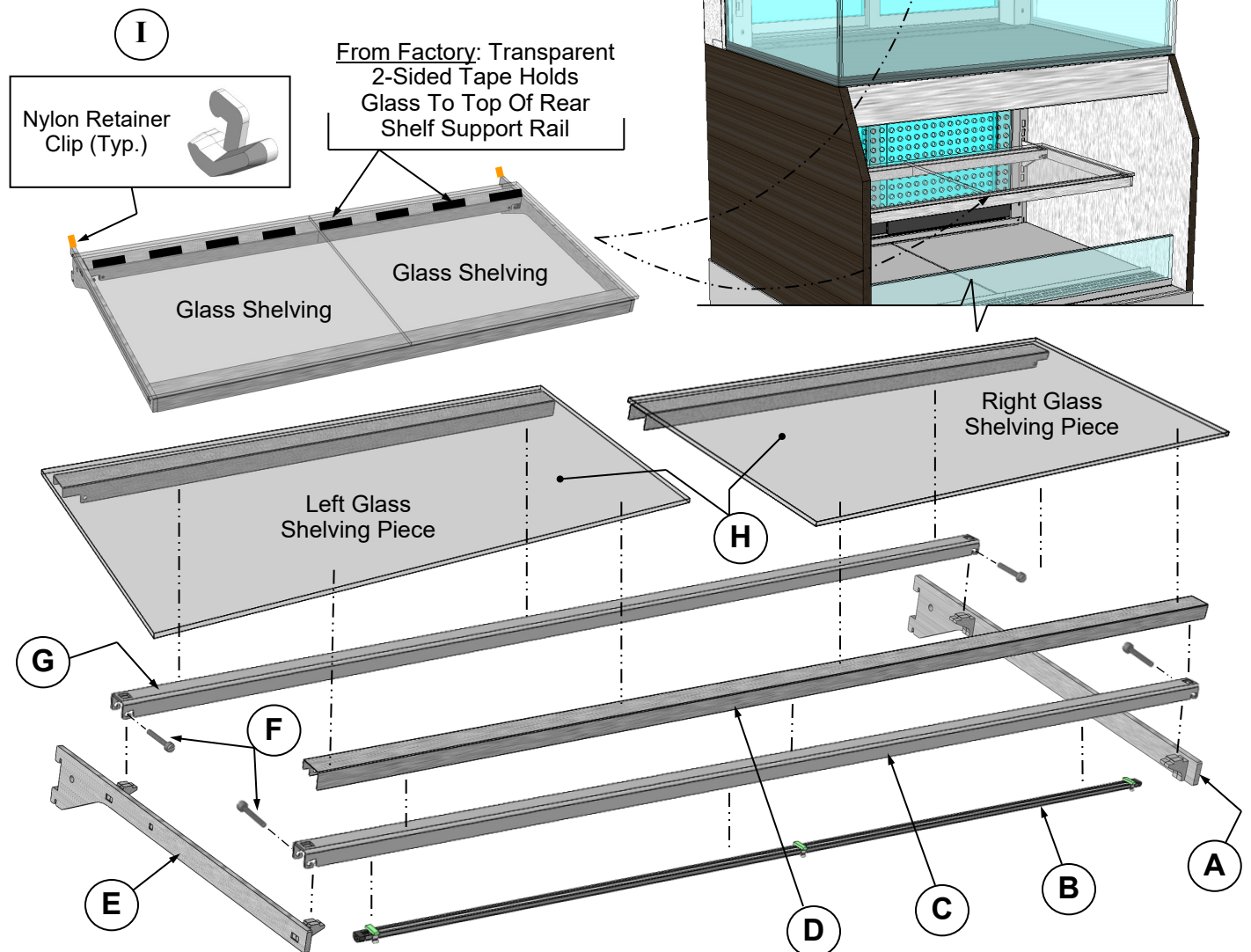
Press "ON" Lever To Lock Caster In Place (And Prevent Caster From Rolling)



8. Shelving Assembly Components

- Check that glass shelving is in proper position before placing product in case
 - Shelves may be adjusted vertically or entirely removed from merchandiser.
 - Metal shelving brackets ARE NOT able to be angled. They are at a fixed 90° position.
 - There are 12 components comprising each shelf assembly:
- A. Right bracket (with hooks to attach to slots in upright)
 - B. LED light with magnets
 - C. Front shelf support rail (LED light attaches to its inner cavity via magnets)
 - D. Cover (rests atop front shelf support rail)
 - E. Left bracket (hooks to attach to slots in upright)
 - F. Nylon thumbscrews (4 per shelf) secures shelving during shipment. Note: Remove

- (using pliers, if necessary) and discard thumbscrews after case is installed so shelves can be disassembled (to clean or service).
- G. Rear shelf support rail
 - H. Left and right glass shelf/cover assemblies (glass is affixed to covers with 2-sided tape from factory). Caution! Glass pieces ARE NOT IDENTICAL! Notches on underside metal covers determine placement in case.
 - I. Nylon retainer clips (2 per shelf) secure brackets during shipment. Note: To adjust or remove shelves, you must remove retainers; pliers may be required to accomplish this task.



9. Plug Case In / Turn Main Power Switch On

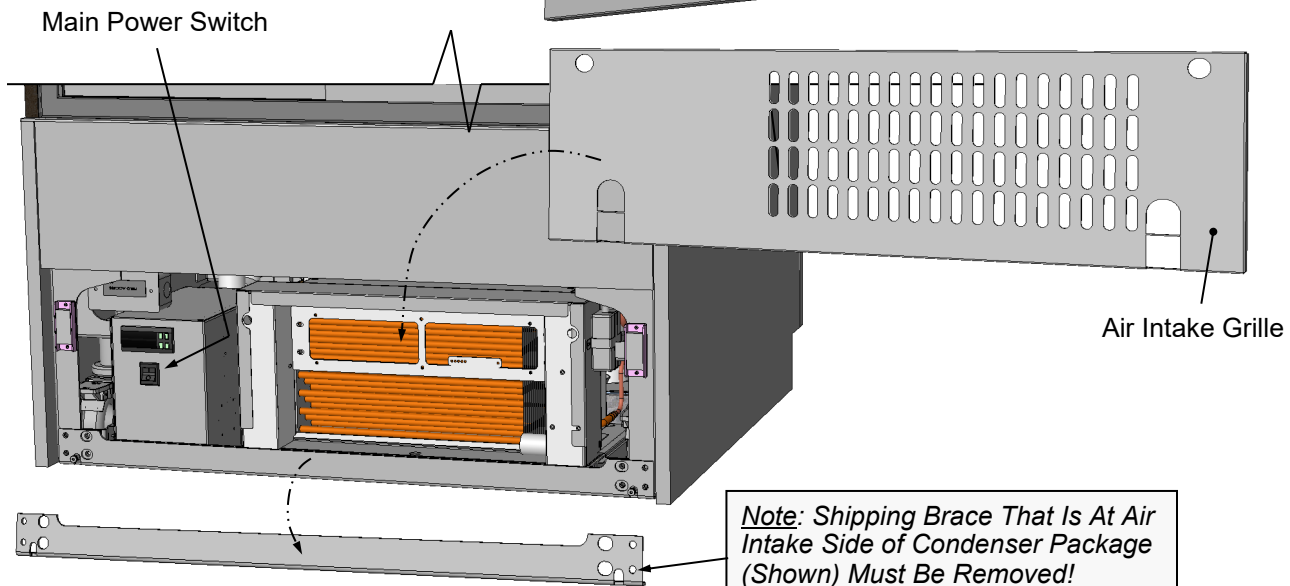
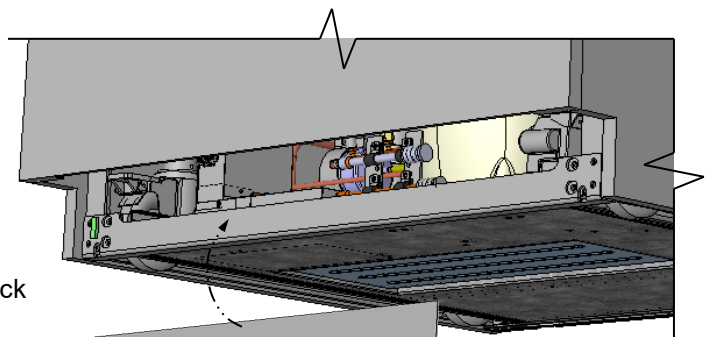
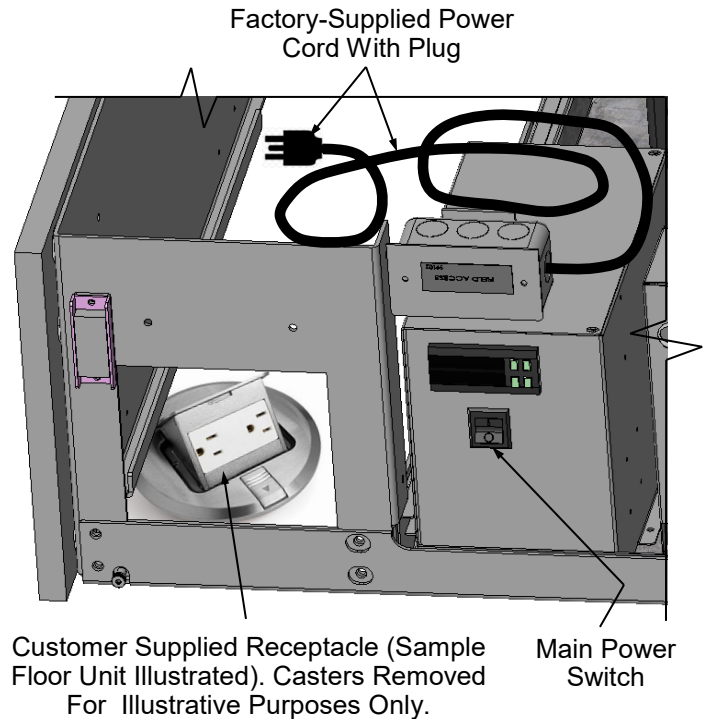
- Power cord with plug is factory-supplied.
- Plug case into customer-supplied electrical outlet.
- **Note 1:** Partially-disassembled view at right is shown with casters removed for illustrative purposes only. View/location of floor receptacle is for illustrative purposes only.
- **Note 2:** Due to space constraints, it may be necessary to pull out condenser package to maneuver power cord plug around components and into receptacle.
- Turn main power switch on.
- Check that case is energized. (Lift deck pans to confirm that evaporator fans are rotating).
- Turn on LED light switch at front-left header.

10. Toe-Kick To Case

- After case has been fully assembled and is in position, return toe-kick to case.
- Toe-kick is held in place by magnets only. No screw replacement is required.

11. Return Air Intake Grille To Case

- After case has been energized and main power switch has been turned on, return air intake grille to case.
- Air intake grille is held in place by magnets. Screw replacement is not required.
- See illustration below.



12. Shipping Brace (Air Intake Side) vs. Air Exhaust Side

- Shipping brace keeps condenser package secure during shipment & while moving case into position.
- After case is in position, remove shipping brace that is just below condenser package by removing (2) screws.
- *Note: Shipping brace that is opposite to air intake side of condenser package (shown below) is NOT to be removed.*

13. Attaching Front Panel Components

- Carefully remove components from packaging.
- *Note:* All front panel components may be attached to case via magnets (WITHOUT screw attachments).
- Attach front toe-kick to case (via lower magnets).
- Slide front panel horizontal support bracket into case's support slot (line up arrows).

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

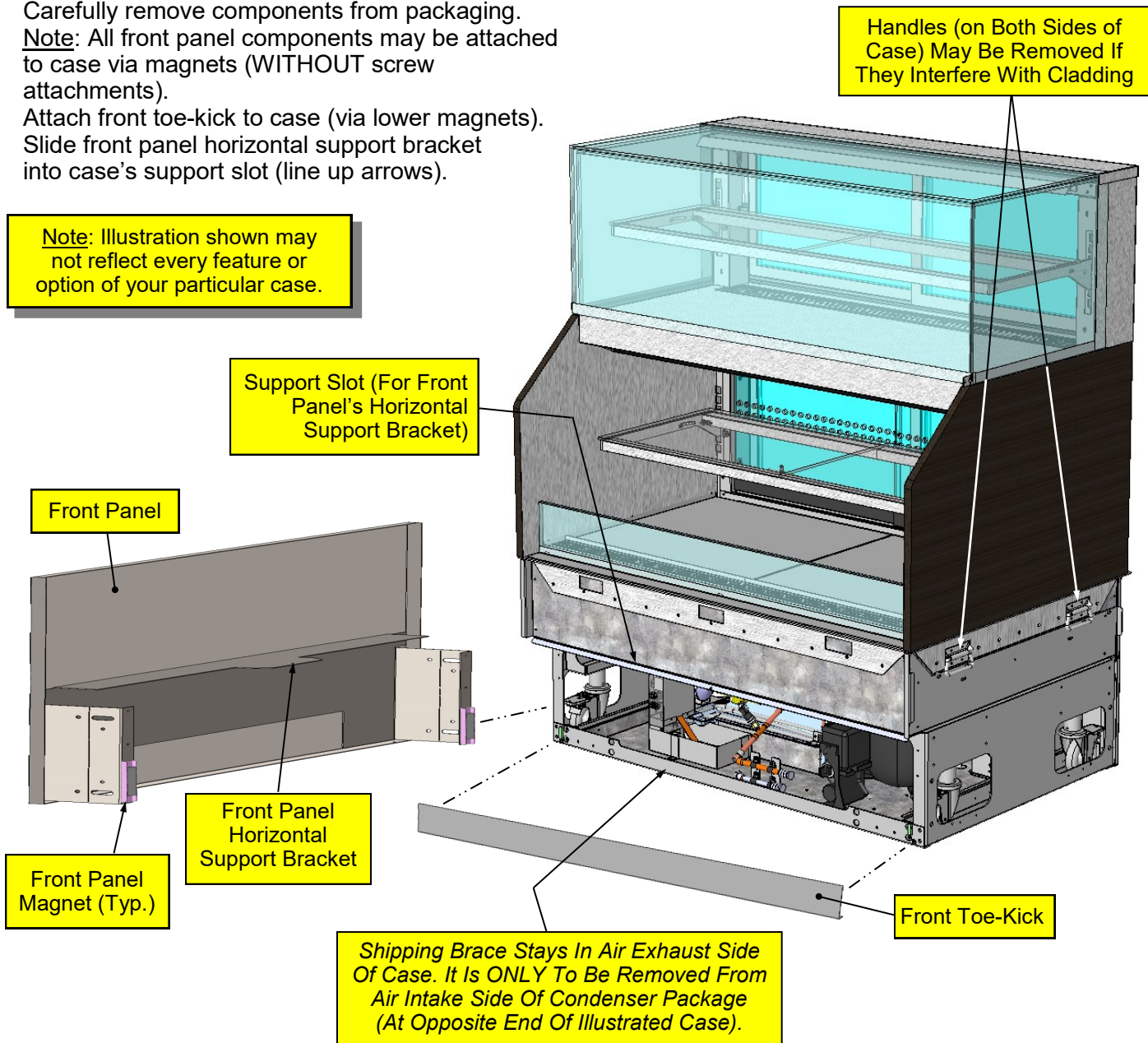
- Then, slide front panel into case until it attaches to case via lower magnets.
- See illustration below.

14. Handles On Sides of Case

- Handles may remain on case after it has been moved into position and cladding is attached.
- However, if handles interfere with the placement of cladding, they may be removed.

>> See Next Page For Instructions on ATTACHING SIDE PANELS, REAR PANEL AND GRILLE.

Handles (on Both Sides of Case) May Be Removed If They Interfere With Cladding



15. Attaching Side Panels

- Attach side panels to case using slot/hook method.
- Use latches at case rear to firmly attach side panels to case.
- See illustrations below.

16. Attaching Rear Upper Panel

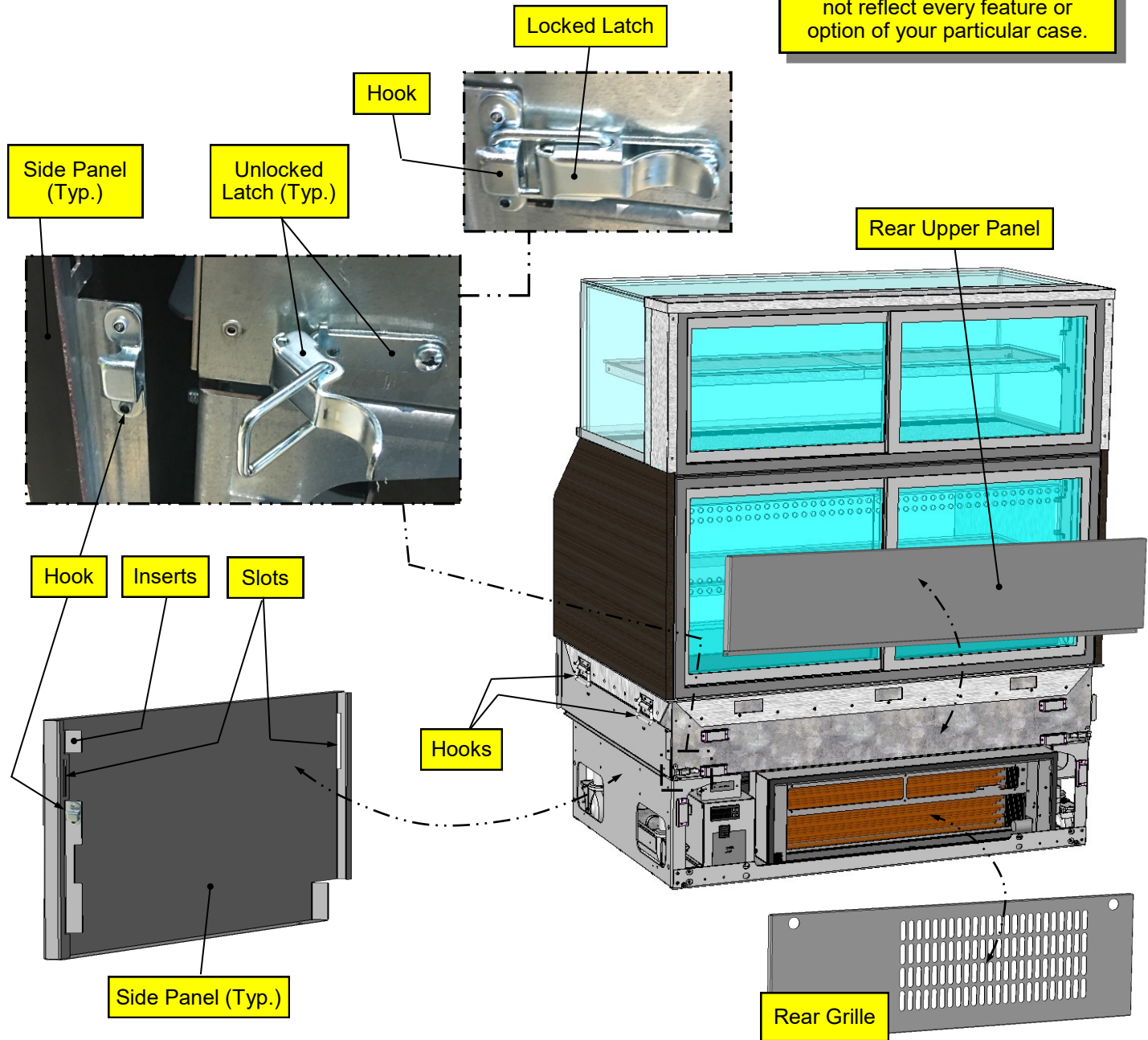
- Place rear upper panel onto care rear.
- Four (4) magnets will hold it firmly in place.
- See illustration below

17. Attaching Rear Grille

- Use finger holes to place rear grille's inner hooks onto case rear's lower shoulder screws.
- Snap onto case's two (2) rear vertical magnets.

>> Note: Components may be removed in reverse order they were shown being attached on this sheet.

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



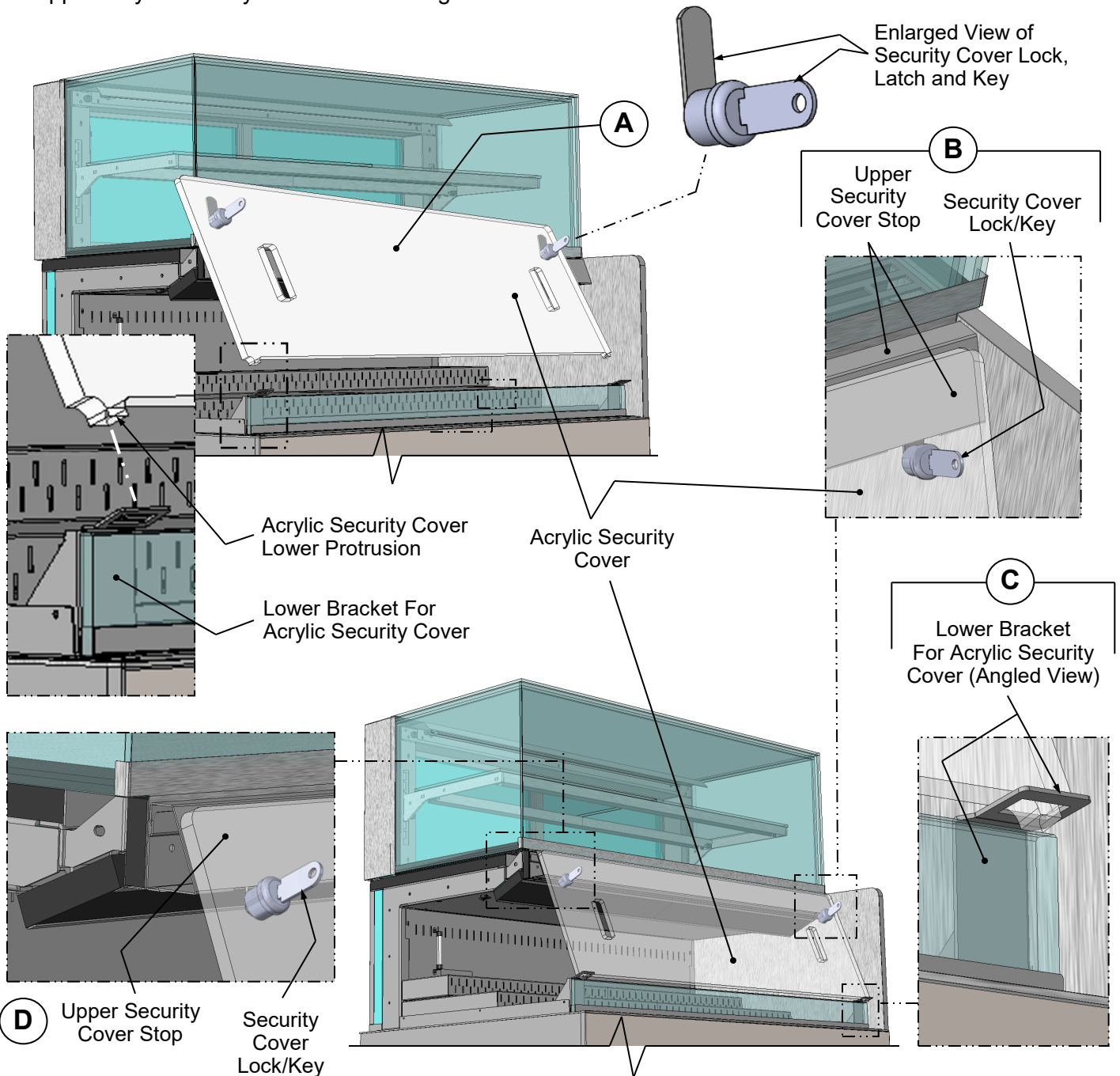
18. Optional Acrylic Security Cover

Note: Illustrations reflects Model NR4835RSS; it may not reflect every feature or option of your case.

- A. View of optional acrylic security cover with holes for grasping (for removing and replacing), enlarged lock/key and lower protrusion.
- B. Acrylic security cover rests against upper security cover stop.
- C. Acrylic security cover's lower protrusions are to rest in lower bracket slots (one in each bracket).
- D. Upper acrylic security cover must rest against

upper security cover stop. Lock at both ends of cover with locking mechanism.

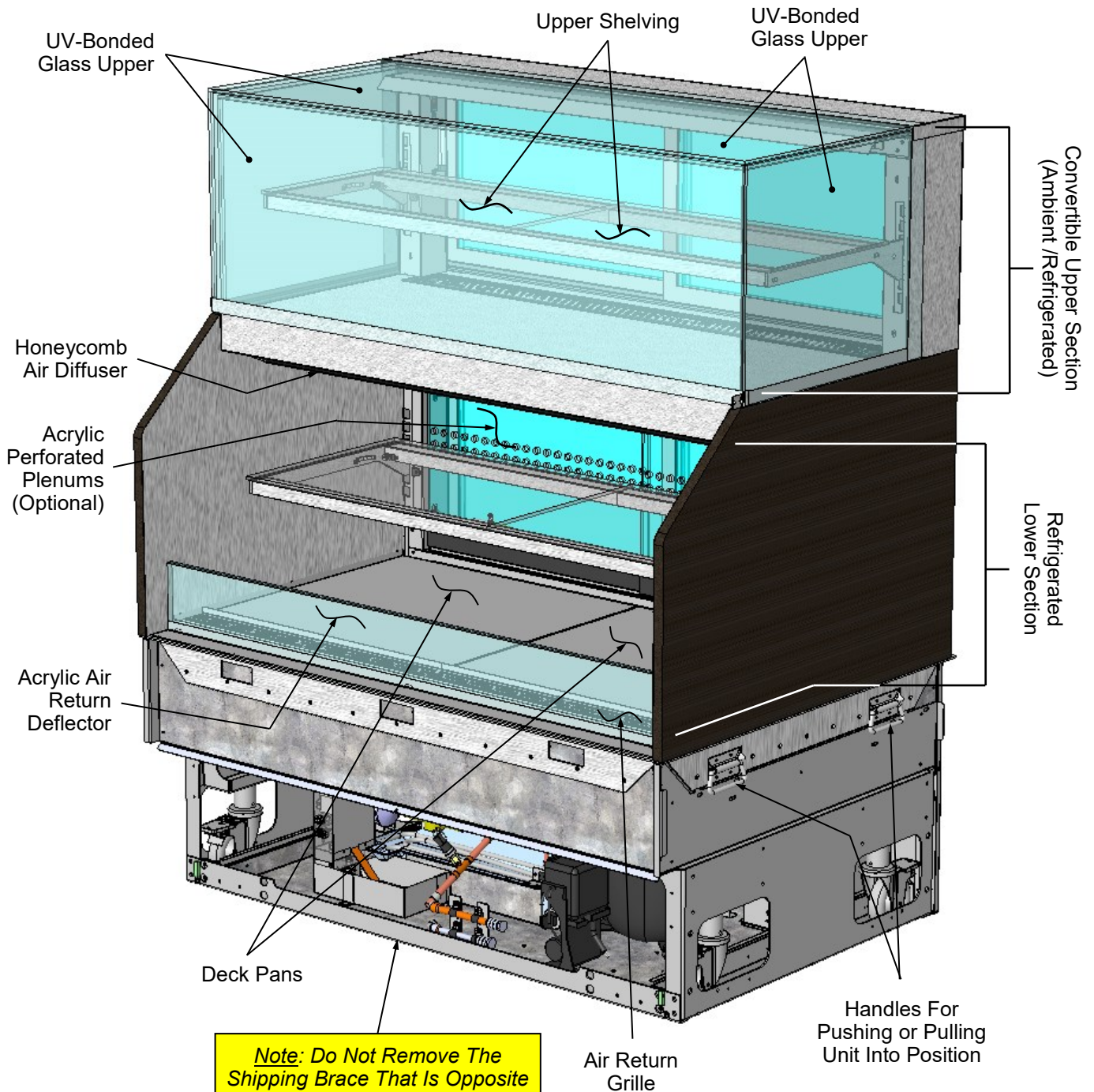
- > Important! After locking in place, store keys in safe yet accessible place.
- > If removing acrylic security cover, store in safe location away from foot traffic as well as work areas that could lead to scratching or marring of surfaces.
- > See **CLEANING SCHEDULE (TO BE PERFORMED BY STORE PERSONNEL)** for cleaning information.



CASE DESIGN: FRONT OF CASE (UNITS WITH LOWER REAR DOORS)

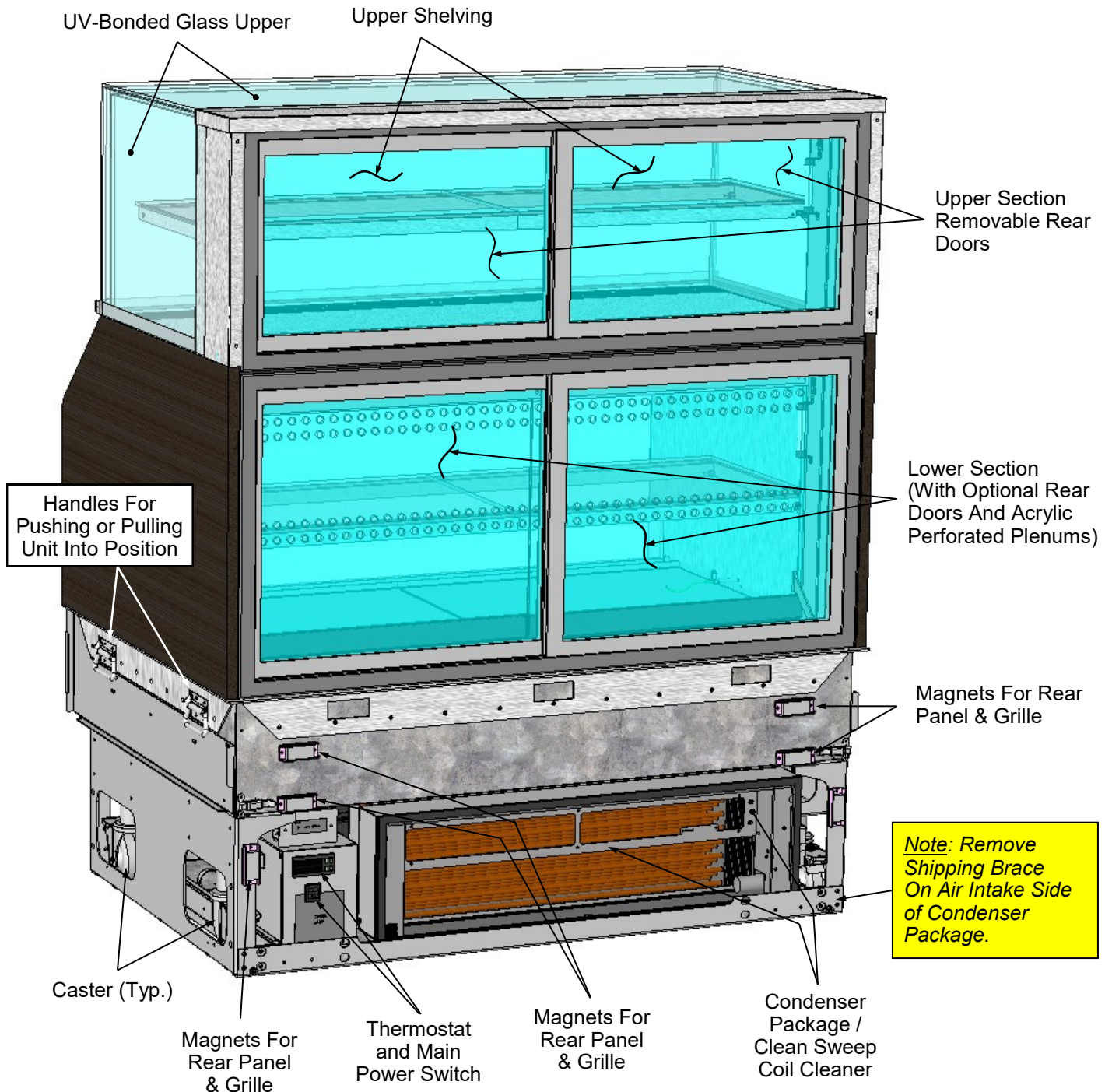
1. Front of Case (Units With Lower Rear Doors)

- Model NR4838RRSSV with lower rear sliding doors is shown below. Models with solid back (in lower section) will not reflect every feature or option shown below.
- Acrylic perforated plenums are shown in lower section. Your unit may have solid back panel.
- Acrylic perforated plenums are controlled by rear door brackets' opening and closing action.
- See illustration below



2. Case Design: Rear of Case (Units With Lower Rear Doors)

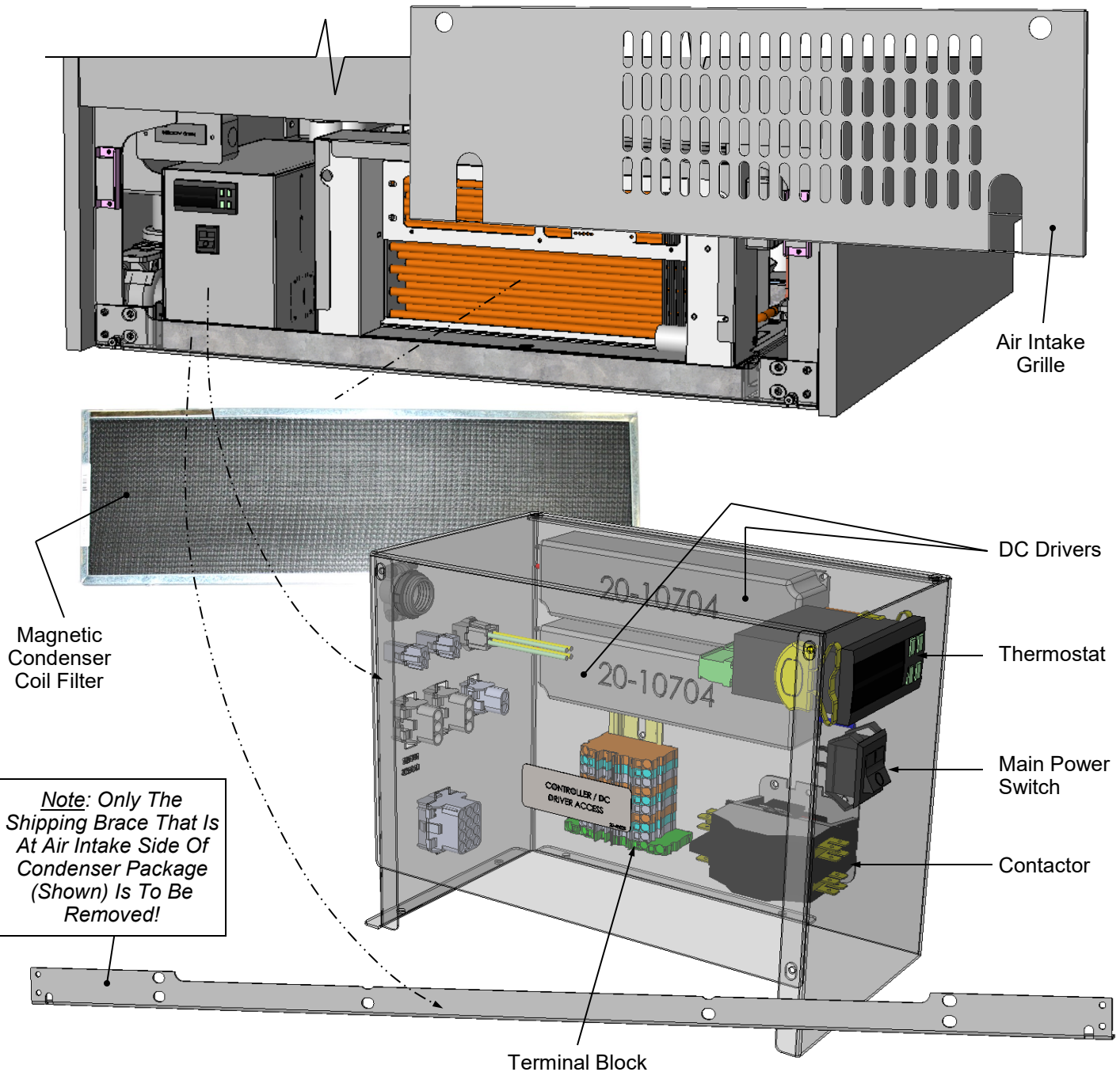
- Model NR4838RRSSV with lower rear sliding doors is shown below.
- Models with solid back (in lower section) will not reflect every feature or option shown below.
- Optional acrylic perforated plenums are shown in lower section. Your unit may have solid back panel.
- Power cord route may differ depending upon customer request.
- Side cladding, air intake grille, etc., has been removed for illustrative purposes only (see below).



3. Controller / DC Driver Access / Components

- Remove air intake grille with slot/hook method; no screw removal is required.
- Magnetic condenser coil filter is directly accessible. See **CLEANING SCHEDULE (TO BE PERFORMED BY STORE PERSONNEL)** for cleaning instructions.
- Remove base support bracket by removing 4 screws.
- Remove 4 screws from the controller/DC driver box

- cover to access electrical components.
- **Note:** Only certified electricians are to access electrical components in case.
- After accessing controller and/or DC drivers, return components to case in reverse order they were removed.

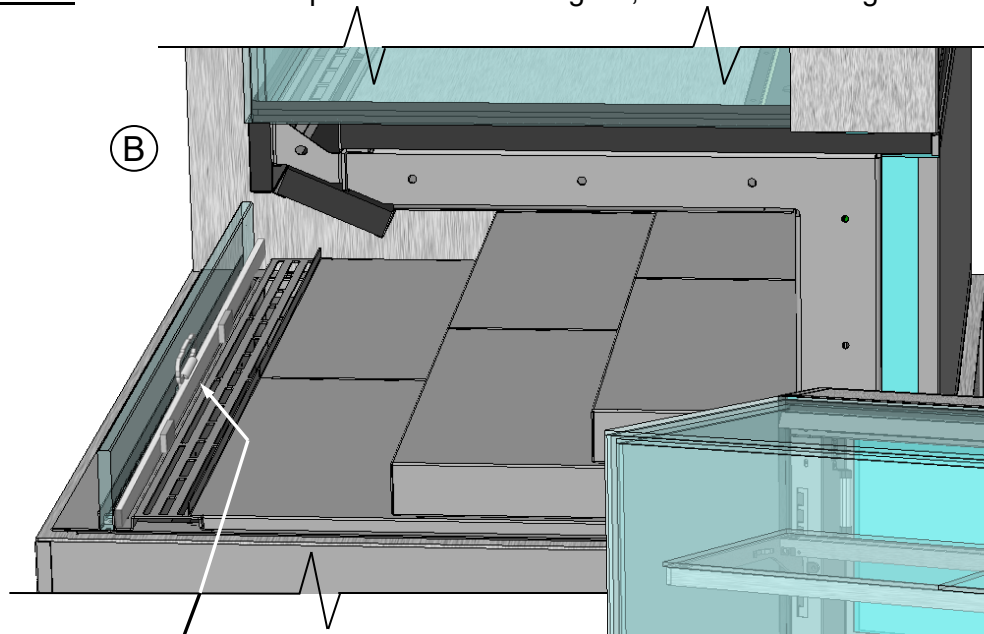
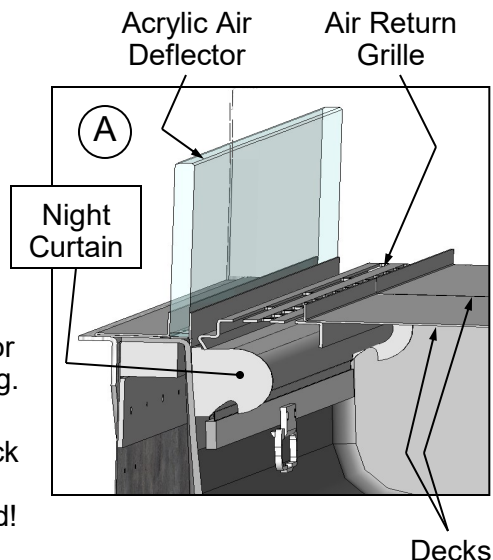


4. Night Curtain: Access and Operation

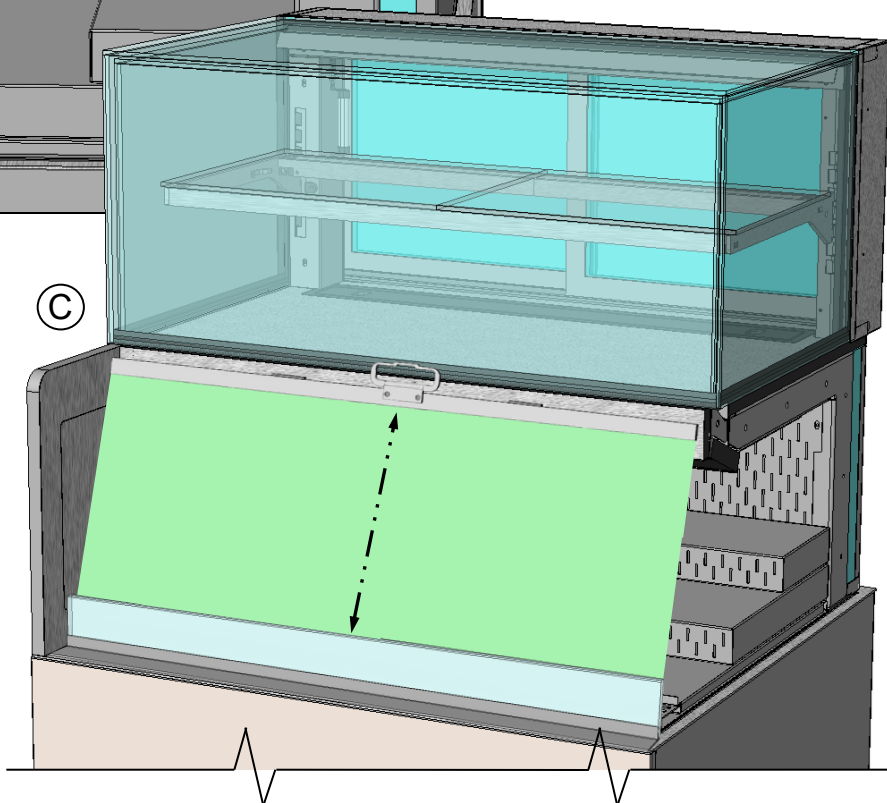
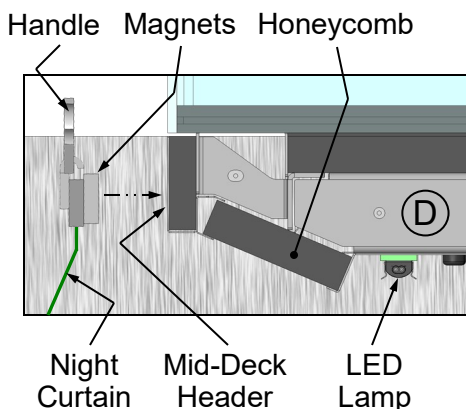
The night curtain saves energy by preventing outside ambient air from entering case. Use night curtain whenever possible.

- A. Night curtain is attached to inside of case at underside of air return grille and decks (at case front).
- B. Night curtain handle (and retaining magnets) is to rest atop air return grille (as shown in illustration). If not, remove decking; remove (2) screws holding return air grille in place. Reach in, grasp handle and pull night curtain upward. Replace grille. Reattach screws.
- C. Firmly grasp handle and slowly extend night curtain (shown green for illustrative purposes). Attach magnets to front of honeycomb housing.
- D. Side view of night curtain attachment to mid-deck header.

>> Caution! To retract curtain, carefully break magnet's hold on mid-deck header; slowly rewind curtain until it rests back on return air grille.
 Caution! If allowed to 'snap back' to return air grille, it could be damaged!



Night Curtain Handle (And Retaining Magnets) Rest Atop Return Air Grille



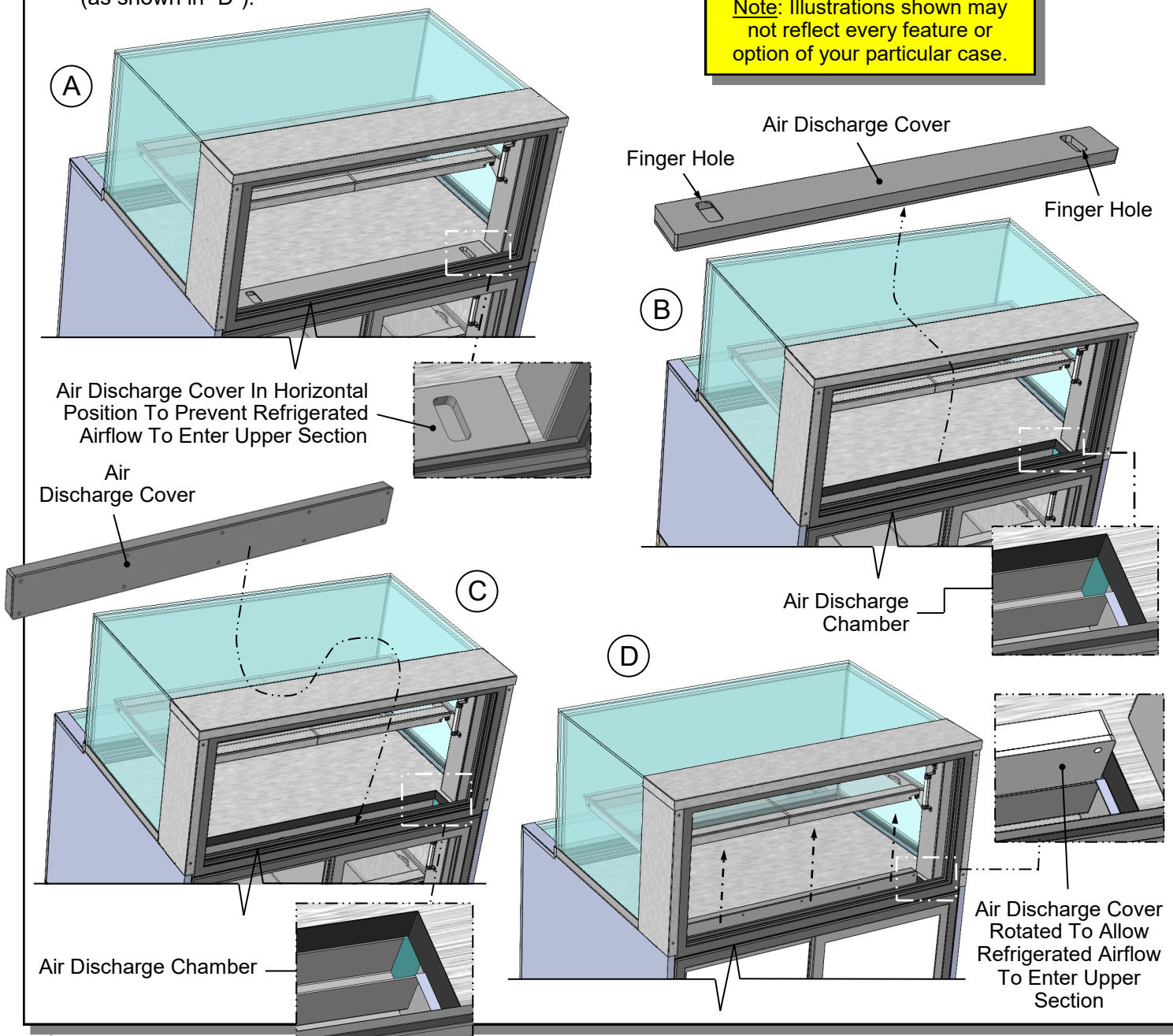
5. Ambient vs. Refrigerated Upper Section

- Illustrations shown with rear sliding doors removed for illustrative purposes. **Doors do not need to be removed to access air discharge cover/baffle.**
- Upper section of case can be either ambient (room temperature) or refrigerated depending upon air discharge cover position.
- Use finger holes to remove horizontal air discharge cover from air discharge chamber.
- For upper section to be ambient, cover must be positioned to BLOCK airflow (as shown in "A").
- For upper section to be refrigerated, cover must be positioned to ALLOW airflow to enter upper section (as shown in "D").

- Upper section in ambient state (cover in horizontal position preventing airflow into upper section).
- Air discharge cover shown removed from case via finger holes (for illustrative purposes only).
- Air discharge cover shown removed from case and rotated vertically (for illustrative purposes only).
- View of upper section in refrigerated state (cover in vertical position ALLOWS refrigerated airflow into upper section).

>> IMPORTANT! The air discharge cover MUST BE placed in the air discharge chamber (in either position) for case to properly function!

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

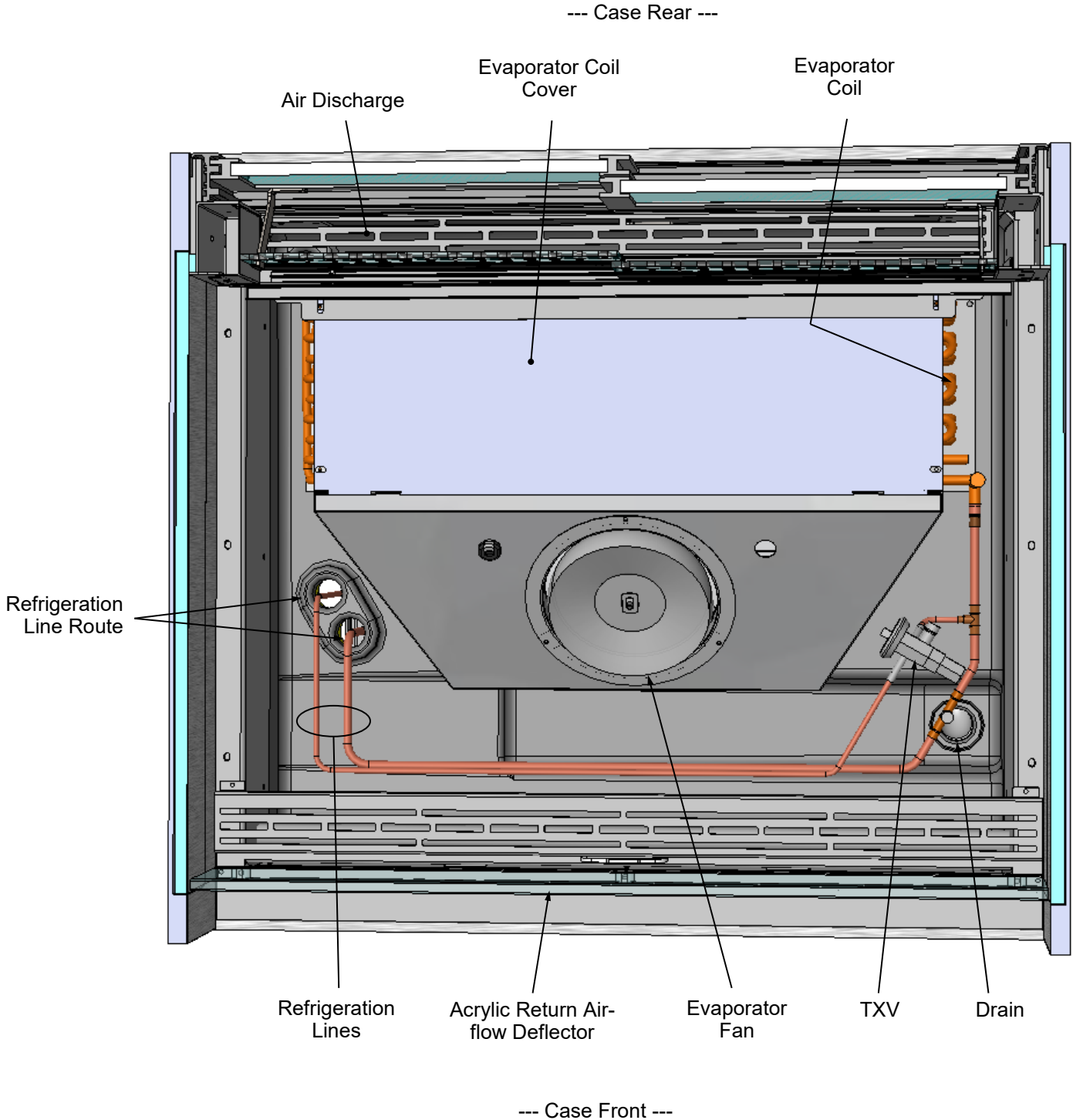


6. Tub Area After Deck Pan Removal

Note: Refrigeration service to be accomplished by refrigeration / electrical contractors only.

Caution! Turn main power off before accessing tub area.

- Illustration below shown after removal of deck pans.
- After cleaning or servicing in tub area, return deck pans to case and return power to case.



7. LED Light Switch Locations

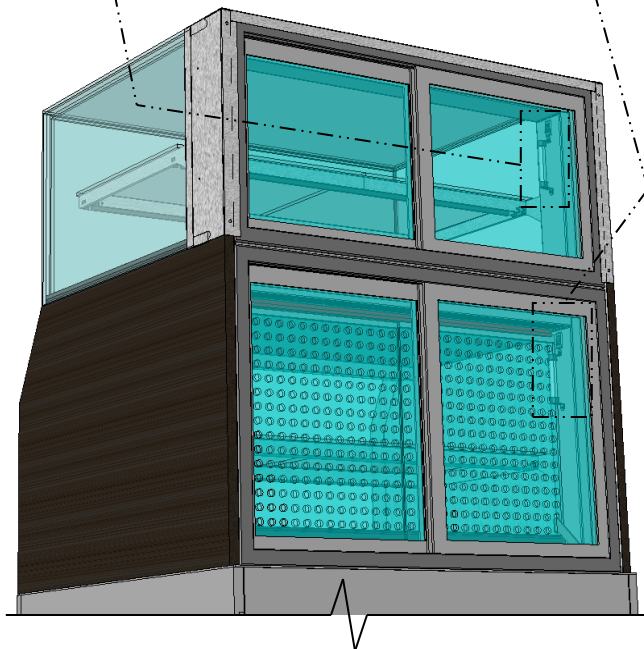
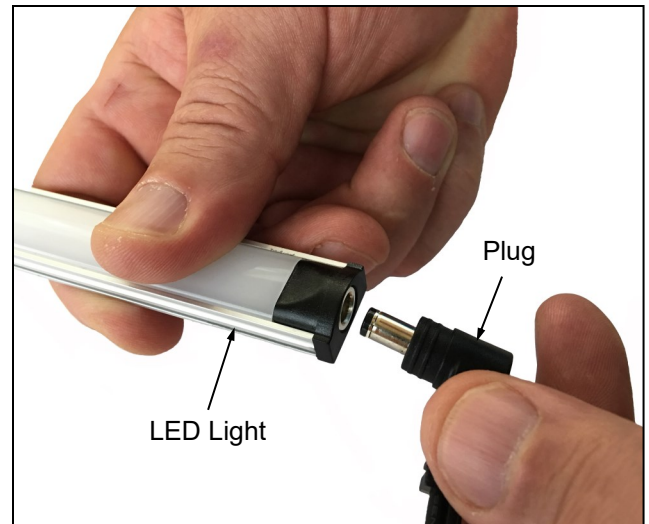
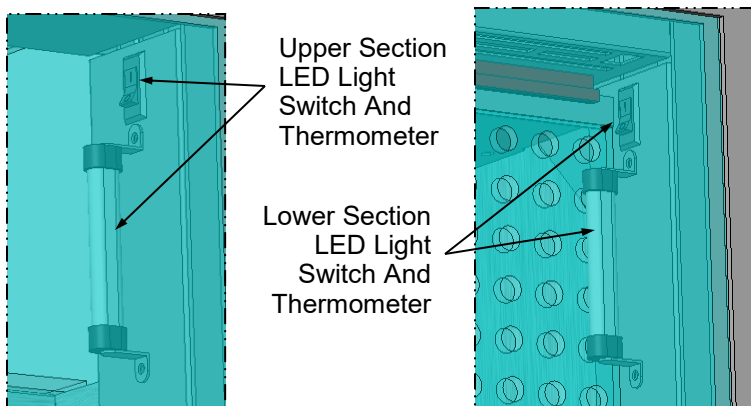
- Separate LED light switches are in upper and lower sections of case (as shown below).
- Cases with lower rear sliding doors have different light switch location than units with solid back rear lower panel (as shown in illustrations below).

8. LED Lights

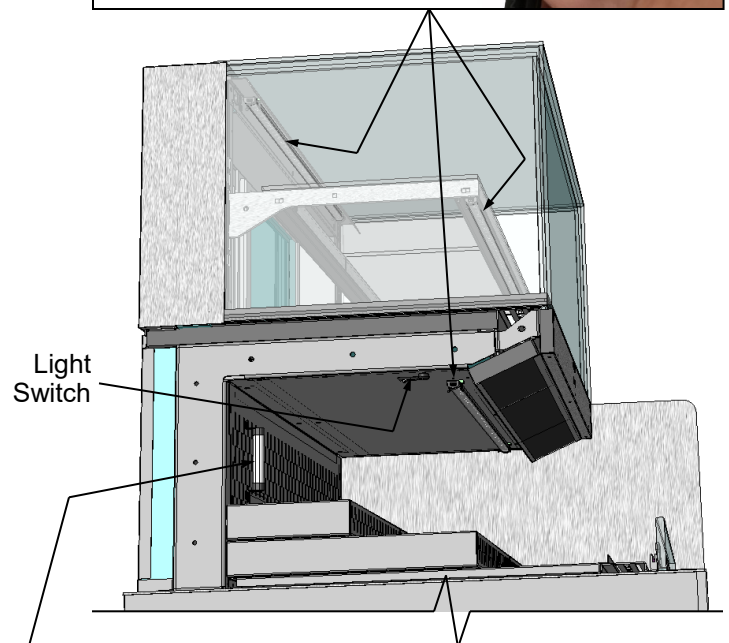
- LED lights are located at both header and shelving of case (as shown below).
- Check that ALL of the light plugs are properly connected to the LED light.
- Plug must be inserted ALL THE WAY into the LED light orifice (with no gap) to work properly.
- See **TROUBLESHOOTING** section in manual if LED lights malfunction.

9. Thermometer Function & Placement

- Separate thermometers are located in both upper and lower sections of case.
- Cases with lower rear sliding doors have different thermometer location than units with solid back rear lower plenums (as shown in illustrations below).
- Thermometer provides temperature of refrigerated section of case.
- Thermometers reflect warmest air temperature in merchandiser. They do not provide actual food temperature.
- Use probe thermometers to determine actual product temperatures.



--- Case With Lower Rear Sliding Doors ---



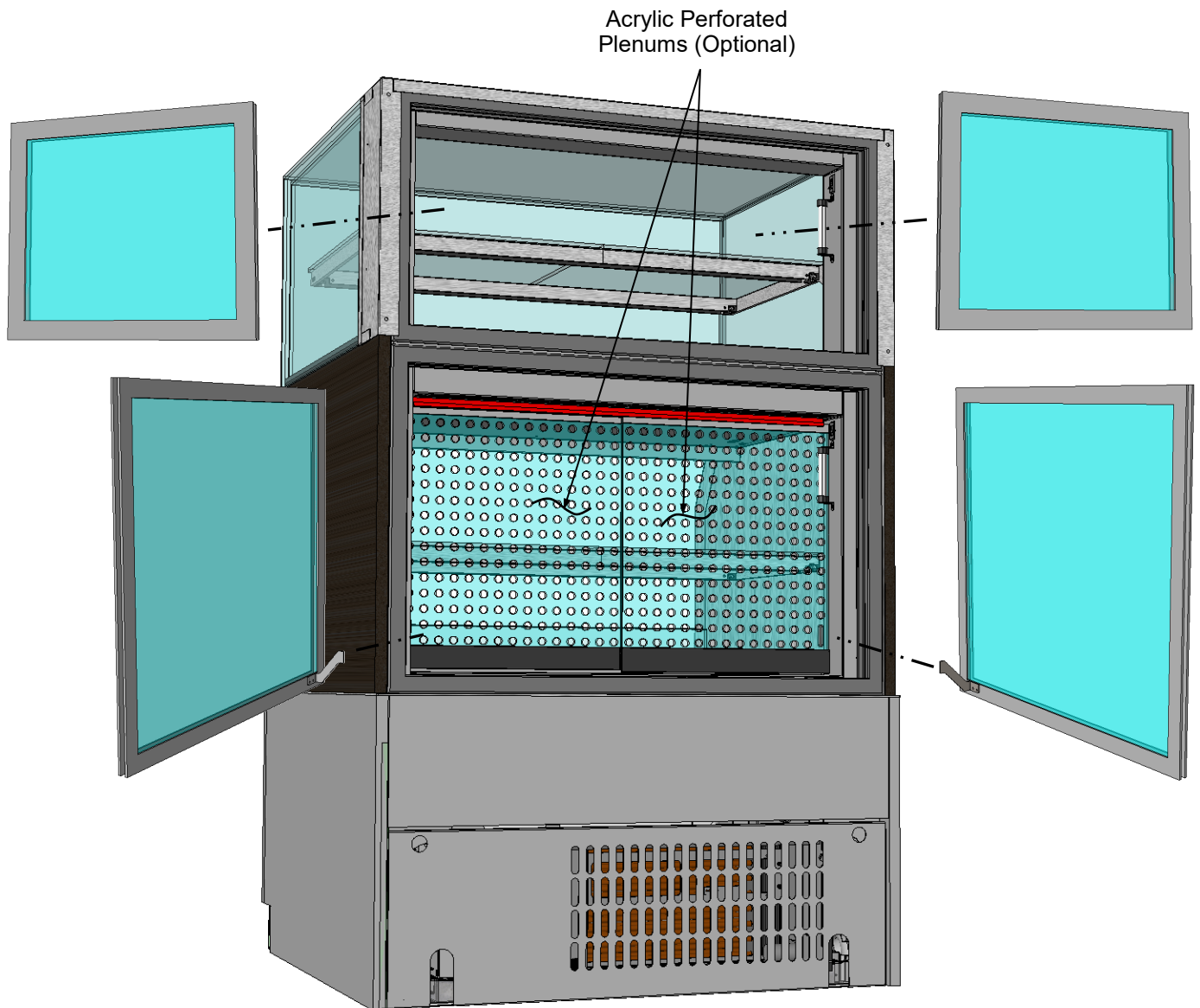
--- Case With Solid Back Rear Lower Plenum ---

10. Rear Sliding Door Removal

- Separate rear sliding doors are in both upper and lower sections of the case.
- To remove rear sliding doors, move doors toward center of the case.
- Individually lift each door up toward the top of the case; pivot the bottom of the door out.
- Return doors to case in reverse order they were removed.

11. Rear Perforated Plenum Control

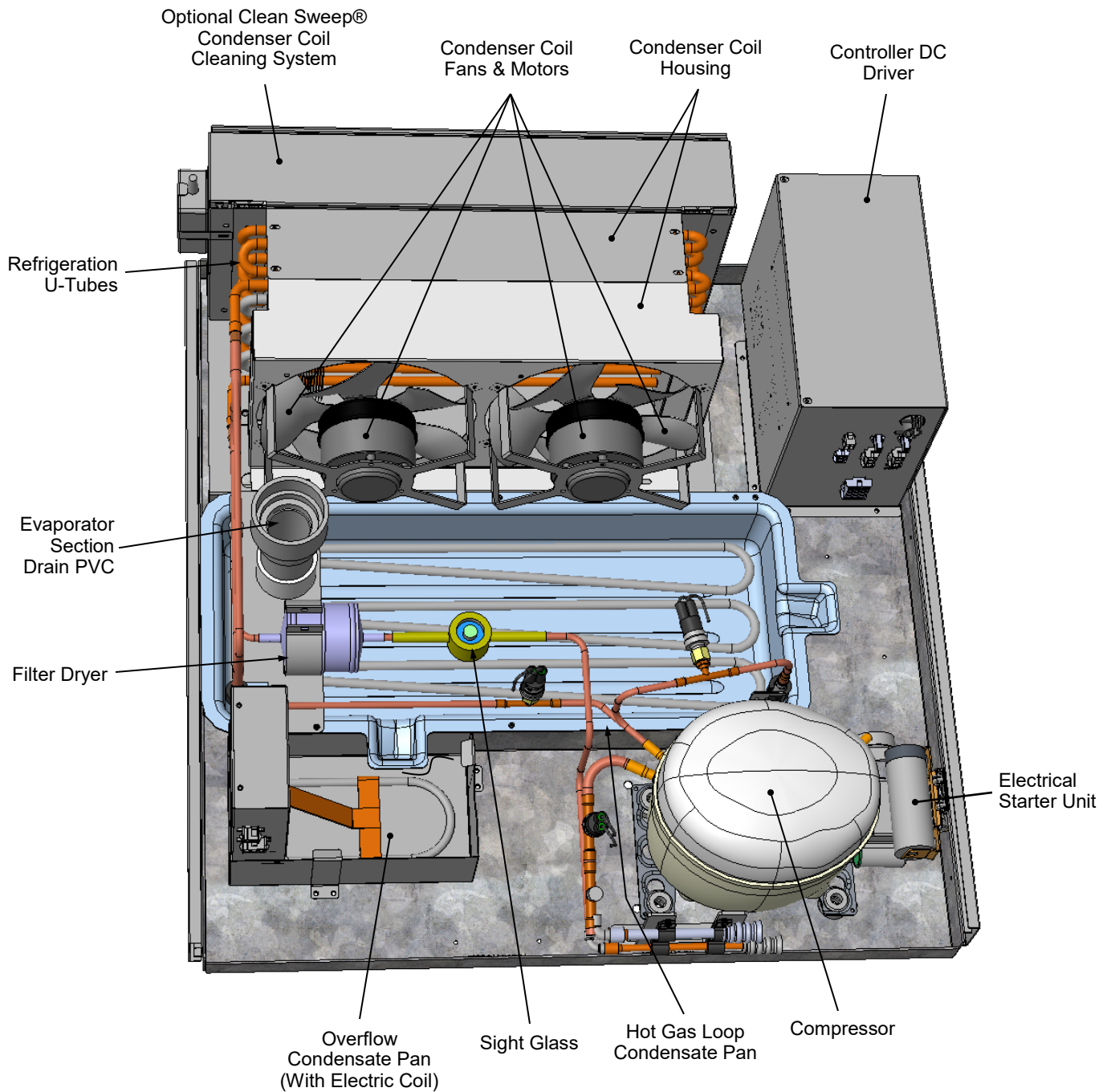
- Optional acrylic perforated plenums are shown. Your unit may have solid back panel.
- Units with acrylic perforated plenums have sliding doors with angled brackets that insert into acrylic perforated plenum slots (as shown below).
- As doors open and close, acrylic perforated plenums follow.



12. Condenser Package (Self-Contained Units)

Assembly/disassembly and servicing to be performed by licensed refrigeration contractor.
Condensate Package Configuration

- Illustration shown is from model NR3658RRSSV. Your unit's component layout may slightly vary.



PRODUCT PLACEMENT / UPPER SECTION & HONEYCOMB AIRFLOW / LOAD LINES

1. Product Placement

- Product can be placed on decking or shelves within display area.
- A wide range of product may be displayed.

2. Convertible Upper Airflow Consideration

- Upper section airflow diffuses at rear with return airflow grille at front.
- Do not block air diffuser grille or return air grille.
- Product must be kept 1" from upper shelves and/or upper glass area to enhance free airflow.

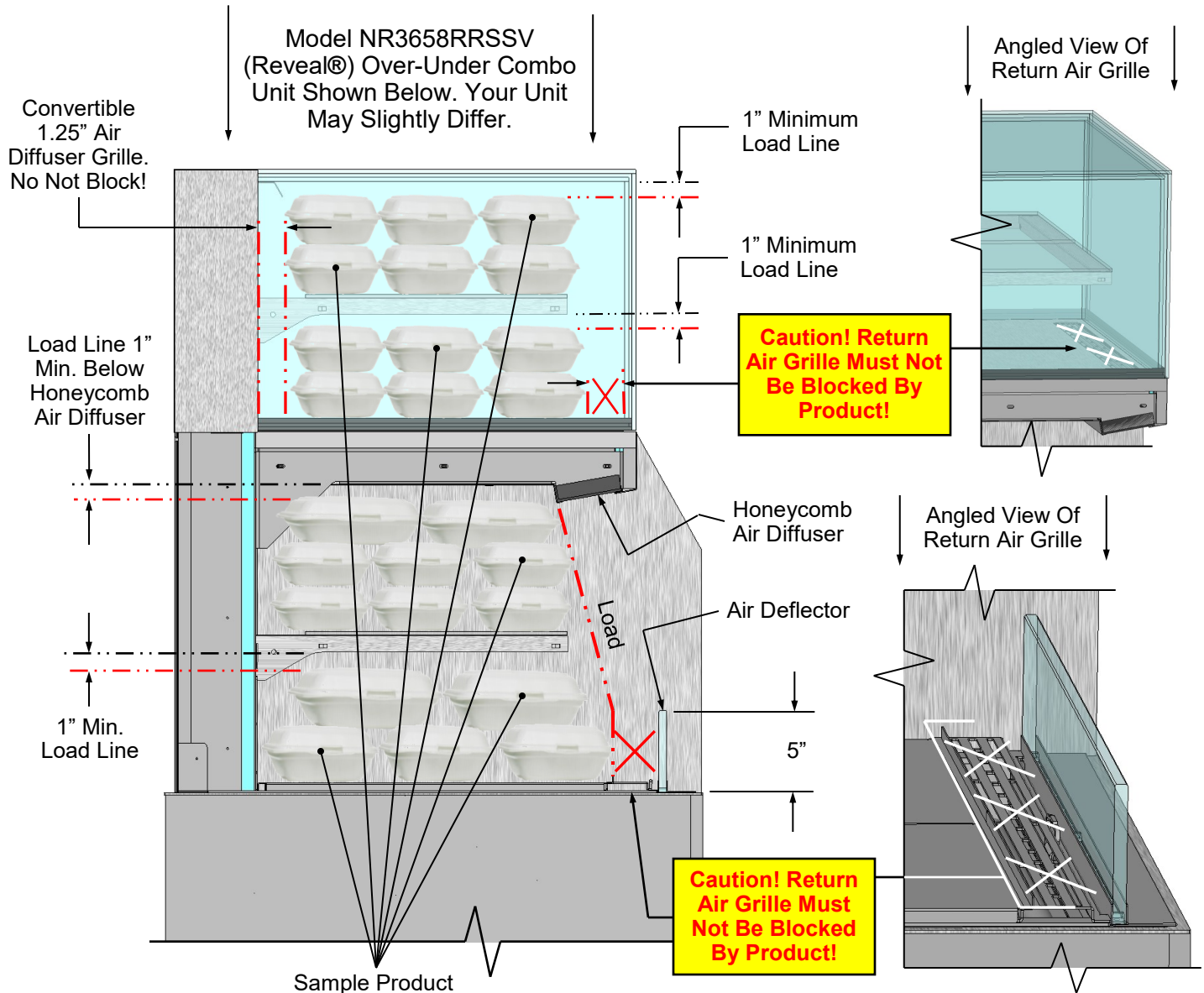
3. Honeycomb Airflow Consideration

- Airflow from honeycomb air diffuser flows over (and around) product to return air grille at case front.

- Caution! Do not impede honeycomb air diffuser's airflow route (to return air grille) with product.
- Caution! You must also keep product OFF return air grille at case front (illustrated below).

4. Load Lines

- Load lines represent the maximum height that product can be placed and/or stacked in case.
- Keep product at or under load lines to assure that refrigerated airflow is properly cycled from honeycomb air diffuser through return air grille.
- Proper product placement will maintain acceptable product temperature (shown below).



CLEANING SCHEDULE (TO BE PERFORMED BY STORE PERSONNEL)

FQ*	CLEANING INSTRUCTIONS
D	Glass Surfaces: Clean glass surfaces and shelves with household or commercial glass cleaner.
D	Rear Sliding Door Exterior Glass: Clean with household or commercial glass cleaner. Clean out rear door track with moist cloth.
D	End Panels, Front Panel, Toe-Kick, etc.: Wipe off with warm water, mild soap solution & non-abrasive cloth.
D	Decks: Wipe off decks with moist cloth dipped in mild soap and water solution.
D	Acrylic: Air Return Deflector / Optional Acrylic Security Cover / Rear Perforated Plenums: <ul style="list-style-type: none"> • Clean: Use soft, clean cloth dipped in solution of warm water and small amount of mild, liquid soap. Apply light pressure while wiping away all smudges and residue. • Rinse: Use pure water in spray bottle to rinse. • Dry: Use soft, clean cloth (rather than abrasive paper towel). • Avoid: Never use window or household cleaners such as Windex®, Formula 409®, or fantastik®. Never use scouring compounds or solvents such as acetone, gasoline, alcohol, 111 trichloroethylene, WD-40® or lacquer thinner. • Polishing: Buff with light coat of automobile paste wax or plastic cleaner/polish. • Scratches: Use high quality buffing compound. Carefully follow instructions.
D	Stainless Steel Surfaces: <ul style="list-style-type: none"> • Wash with a solution of hand dishwashing liquid detergent and water or a solution of baking soda and water. Rinse and polish dry with paper towel or soft cloth. • Never use scouring powders or steel wool as they will scratch stainless steel. • Brighten by polishing with a cloth dipped in vinegar or in ammonia; sprinkle baking soda on sponge and rub gently; rinse. Polish dry with paper towel. • Remove streaks or heat stains from stainless steel by rubbing with club soda.
W	Magnetic Condenser Coil Filter (Self-Contained Units Only): <ul style="list-style-type: none"> • This filter helps prevent dust particles from entering condenser coil. It is accessible at air intake side of case. Clean magnetic condenser coil filter by following either step 1 or 2; then follow step 3: 1. Magnetic condenser coil filter is dishwasher safe; remove from case (no screw removal required) and use a rag or soft-bristled brush to wipe off excess dust particles from filter. Run in normal dishwasher cycle. Remove from dishwasher. Dry with soft cloth or paper towel. Return to case. 2. If dishwasher is used, remove magnetic condenser coil filter from case. Use a rag or soft-bristled brush to wipe off excess dust particles from filter. Submerge in warm, soapy water. Use soft-bristled brush to remove dust, dirt, grease and grime that may collect on filter. Rinse thoroughly. 3. Dry with soft cloth or paper towel (as shown below) or allow to air dry. Replace.
M	Rear Air Discharge Chamber and Rear Air Discharge Cover/Baffle (Upper Section Only): <ul style="list-style-type: none"> • Remove rear air discharge cover/baffle from case. Wipe down baffle with soft cloth dipped in mild soap and water solution OR submerge in warm soapy water and clean with bristled brush. • Use vacuum with soft bristled extension to clean out rear air discharge chamber. Then, wipe down chamber with soft cloth dipped in mild soap and water solution. • Dry both cover/baffle AND rear air discharge chamber with paper towel or clean cloth. Return rear cover/baffle to case in same position it was in before cleaning. See CASE DESIGN, CONT'D: UPPER SECTION - AMBIENT VS. REFRIGERATED VIA BAFFLE POSITION section in manual for illustrations.
Q	Under Case Cleaning: <ul style="list-style-type: none"> > Remote units: Remove lower rear panel (and/or front panel) and clean as directed below. > Self-contained units/moving case: Remove lower grille and opposite side (front or rear panel) panel. Unlock casters and lower casters to floor. See INSTALLATION, CONT'D.: CASTER ADJUSTMENT / LOCK / UNLOCK / CASE REMOVAL FROM PALLET section in manual for instructions. Slide/roll case out of current position. Clean as directed below (in self-contained units/stationary case section). > Self-contained units/stationary case: Remove lower grille (at intake side); slide condenser package out from under case. Optional: remove panel that is opposite lower grille. Clean as directed below. <ul style="list-style-type: none"> • Use vacuum with brush to remove all dust, dirt, food particles or residue from underside of case. • Replace lower grille (and/or panel that is opposite lower grille) when cleaning is complete.

WARNING! TURN OFF CASE BEFORE PERFORMING PREVENTIVE MAINTENANCE!

FREQ.	INSTRUCTIONS
Quarterly	<p>Condensing Coil:</p> <ul style="list-style-type: none"> • Remove air intake grille to access area. Simply lift up and off. • Roll/slide out condenser package. Note: At initial slide-out, it may be necessary to remove two (2) compressor pan shipment screws to slide it out from under case. • Warning! Coil fins are sharp. Handle with care! • Caution! Airborne dust can contaminate food! Use wet rags to cover area where air pressure is blowing. • Use air pressure or industrial strength vacuum; clean dust and dirt that may collect on condenser coil. • Slide/roll condensing package back under case. • Return air intake grille to case.
Quarterly	<p>Condenser Package: <i>Caution! Disconnect power from case before cleaning!</i></p> <ul style="list-style-type: none"> • See CASE DESIGN, CONT'D: CONDENSER PACKAGE (SELF-CONTAINED UNITS ONLY) section in manual for illustrations. • Warning! Condensate pan may be HOT! Disconnect power from case and allow to cool before cleaning evaporator pan! • Remove air intake grille from case (no screw removal is required). • Slide/roll condenser package out from under case. • Use a scrub-brush and a de-scaling solution such as CLR® (to prevent corrosion, lime and rust). Follow instructions as to proper dilution, safety precautions and scrubbing method. • If electric coil overflow evaporator pan is dirty, clean it (and in same manner) while cleaning rest of condenser package. • After thoroughly cleaning condensate 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, condensate overflow pan, etc.). • Slide condenser package back under case. • Return air intake grille to case (no screws required).
Quarterly	<p>Under Case Cleaning: Once refrigeration package is clear of unit, vacuum under case to remove dust and dirt that may collect under case.</p>
Quarterly	<p>Tub Area (Evaporator Coil, Drain, Fans, Brackets, Etc.): <i>Caution! Disconnect power from case before cleaning tub, coil, fan, motor and drain area!</i></p> <ul style="list-style-type: none"> • See CASE DESIGN, CONT'D: TUB AREA (AFTER DECK PAN REMOVAL) section in manual for illustration. • Use vacuum to clean entire area. • After vacuuming, clean area with warm water, clean cloth, and mild soap solution. • Remove any debris that may clog drain. • Wipe down fan blades, motors and brackets with moist cloth.
Quarterly	<p>Honeycomb: Check honeycomb air diffuser to determine if it is dirty. If dirty, remove from case. See next page for cleaning specifics.</p>

NOTE: PREVENTIVE MAINTENANCE IS TO BE PERFORMED BY TRAINED SERVICE PROVIDERS ONLY.

Preventive maintenance should be performed quarterly (unless conditions warrant a more frequent replacement cycle).

Honeycomb Air Diffuser Removal

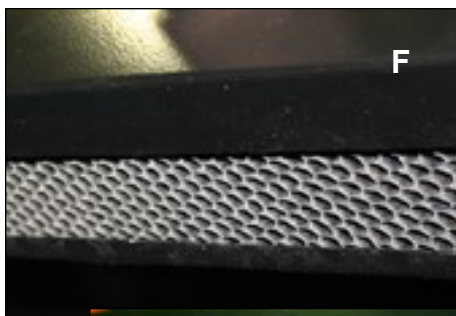
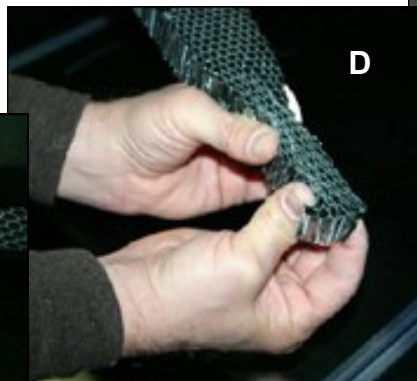
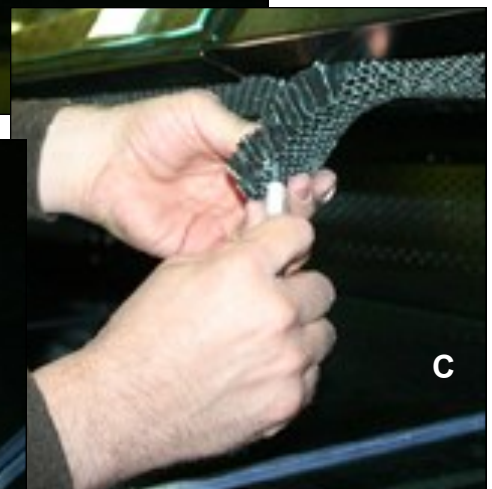
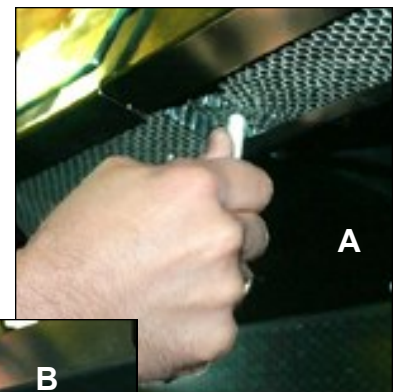
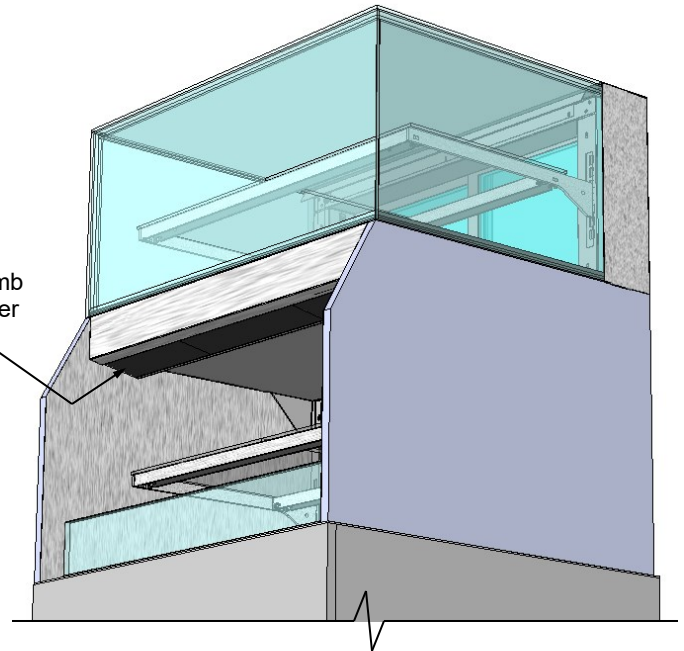
- A. Wedge non-metallic device of suitable strength (such as a ballpoint pen or stylus) between honeycomb and end panel.
- Caution!** Use care not to dislodge the heating wire (that prevents condensation on the honeycomb retainer).
- B. Apply pressure to collapse the honeycomb to allow it to be pulled out of honeycomb retainer.
- C. Pry downward & away from 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'.

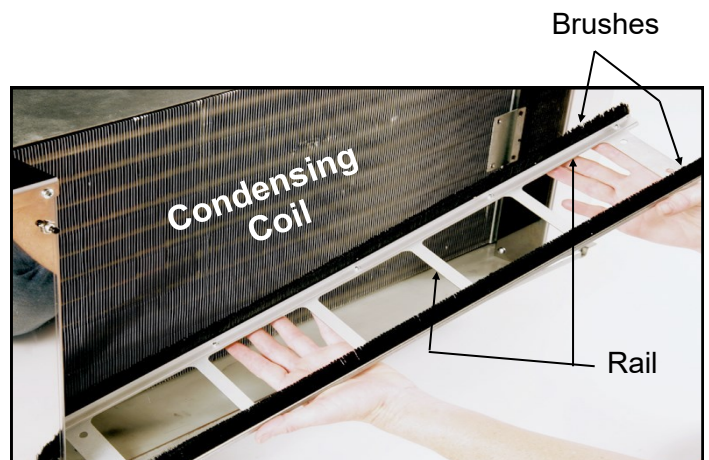
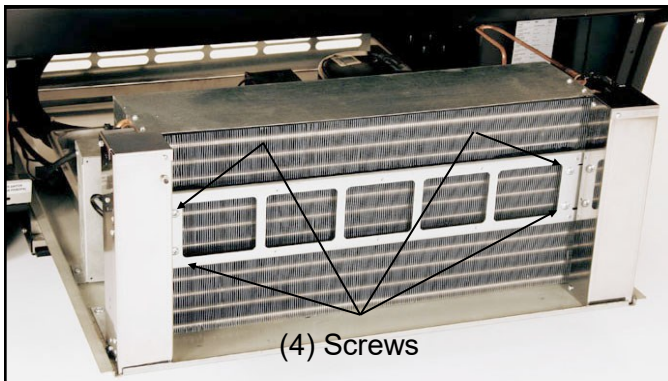
Honeycomb Air Diffuser Installation

- D. Squeeze honeycomb 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.

Honeycomb Air Diffuser



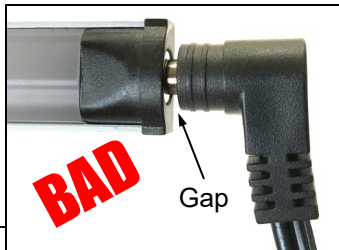
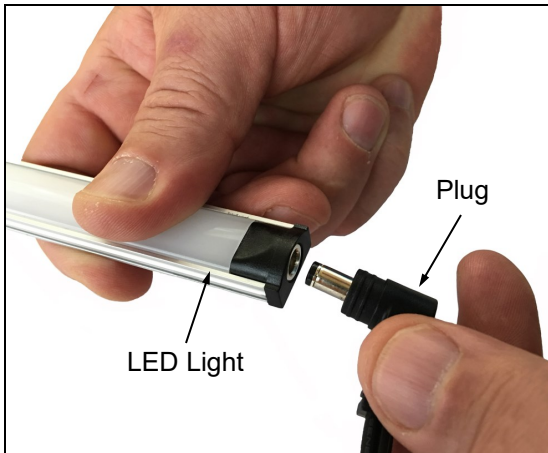
FREQUENCY	INSTRUCTIONS
<p>Quarterly</p>	<p>Optional Clean Sweep™ Condensing Coil Cleaner: <i>Disconnect power from case before servicing the Clean Sweep™ Condenser Coil Cleaner!</i></p> <ul style="list-style-type: none"> • Remove air intake grille (by lifting up and off); no screw removal is required. • Slide/roll out condensing package from underside of case assembly. • Remove the four (4) screws holding the Clean Sweep™ rail intact. • Remove the Clean Sweep™ rail. • Wash rails' 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. • Clean condensing coil: Use air pressure or industrial strength vacuum; clean the dust and dirt that may collect on the condenser coil. • Caution! Coil fins are sharp. Handle with care! • Reattach Clean Sweep™ rail to condensing unit (4 screws). • Slide/roll condensing package back under case. • Replace air intake grille to case (4 screws). • See photos below.



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

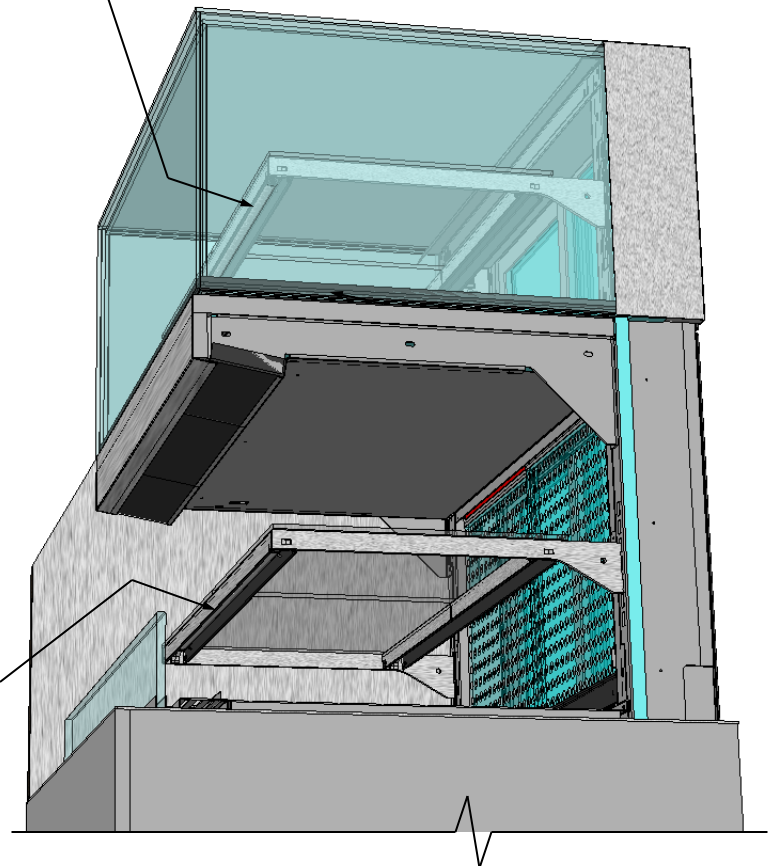
CONDITION	TROUBLESHOOTING
Water Is On The Floor	Call service provider.
Fan Emits Excessive Noise	Call service provider.
Case Lights Are Not Working	Check that light switch is in the <i>on</i> position.
	Check that ALL of the light cords and plugs are properly connected. See next page for step-by-step connection instructions and illustrations.
	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 OVERVIEW / NSF® TYPE / COMPLIANCE / WARNINGS / PRECAUTIONS section in this manual for specifics.
	If case is located near outside doors, temperature fluctuation can hinder unit's ability to maintain temperature.
	<ul style="list-style-type: none"> • 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.

CONDITION	TROUBLESHOOTING
Case Lights Not Working	Check that light switch is in the <i>ON</i> position. <ul style="list-style-type: none"> • See CASE DESIGN, CONT'D: LED LIGHT SWITCH LOCATIONS / LED LIGHTS / THERMOMETERS section in manual for switch location (regardless of case design).
	If case is not hard-wired, check that power cord is properly connected to wall outlet.
	Check that ALL of the light plugs are properly connected to the LED light. <ul style="list-style-type: none"> • Plug must be inserted ALL THE WAY into the LED light orifice (with no gap). • See illustrations below-left.
	Power may not be reaching the case. <ul style="list-style-type: none"> • Contact store management to have trained service provider perform troubleshooting. • Troubleshooting to be performed by trained service providers only is on next page.
	If case light still do not come on, it may need to be replaced. <ul style="list-style-type: none"> • Contact Structural Concepts' Technical Service Department for replacement light (see TECHNICAL SERVICE section of this manual for contact information). • To replace, disconnect plug from existing LED light. Disconnect LED light from its brackets. Replace with new LED light. Insert plug ALL THE WAY into LED light orifice.



LED Light (Lower Section)

LED Light (Upper Section)



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

CONDITION	TROUBLESHOOTING
<p>Water Is On The Floor</p>	<p>Caution! Disruption of power or malfunctioning condensate pan (or electric coil overflow condensate pan) may cause water to overflow pan and seep onto flooring causing damage! Until condensate pan(s) are functioning (or are 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. • When power to case is restored, condensate pan should function properly and water will no longer overflow onto flooring.
	<p>Check that the drain trap is free of debris.</p>
	<p>Check that the drain PVC is correctly positioned over condensate pan.</p>
	<p>Check store conditions. To prevent condensation in NSF/ANSI Type I environments, maximum conditions are to be 55% relative humidity / 75° Fahrenheit. For Type II environments, maximum conditions are to be 55% relative humidity / 80° Fahrenheit.</p>
	<p>Check that electric coil overflow condensate pan is properly plugged in or connected.</p>

CONDITION	TROUBLESHOOTING
Fans Emit Excessive Noise	Check that the case is aligned, level and plumb.
	Check evaporator fans 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.
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	See <i>TROUBLESHOOTING (TO BE PERFORMED BY STORE PERSONNEL)</i> section in manual for most common troubleshooting solutions.
	<p>Check power.</p> <ul style="list-style-type: none"> • If power is not supplied to the case, facility may have faulty power distribution. • If power is supplied to the case but lights are not energized, case's power supply may be faulty.
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.
	Temperature changes during defrost mode but will return to normal. Fourth LED will indicate defrost cycle in progress.
	Check that case is not in sun or near a heat or air-conditioning vent.
	If case is located near outside doors, temperature fluctuation can hinder unit's ability to maintain temperature.
	Check that condenser coil has been cleaned.
	Check that magnetic air filter (attached to rear grille) has been cleaned. See <i>CLEANING SCHEDULE (TO BE PERFORMED BY STORE PERSONNEL)</i> section in operating manual for instructions.
	Check return air grilles for obstructions.
	Check sight glass for flashing and/or low charge.
	Check set point temperature; it may be adjusted too high.

CONDITION	TROUBLESHOOTING
Digital Control Display Is Blank	Check that the MAIN power switch is on.
	Check the circuit breaker box for tripped circuits.
System Is 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.
Condensing Unit Is Not Operating	Check that the power is turned on.
	Determine if temperature controller settings are properly set. <i>See your case's serial label for your model's specified settings. See SERIAL LABEL LOCATION & INFORMATION LISTED / TECH INFO & SERVICE section in manual for label location, etc.</i>

TROUBLESHOOTING (BY TRAINED SERVICE PROVIDERS ONLY) - CONDENSING SYSTEM

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 <i>OVERVIEW / TYPE / COMPLIANCE / WARNINGS / PRECAUTIONS / WIRING / PLUGS</i> 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 (BY TRAINED SERVICE PROVIDERS ONLY) - EVAPORATOR SYSTEM

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 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

Reveal

MODEL NRS3648RXV-SAMPLE
SERIAL NO. 12345X30DZ098765



Intertek



Intertek

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

Super Heat Temp
Defrost


6-8 °F
6 defrosts per day, 45 °F

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

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

SCAN FOR PRODUCT LITERATURE



Sample QR Code

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

35



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



Carel® PJEZ Platform



Carel® ir33 Platform



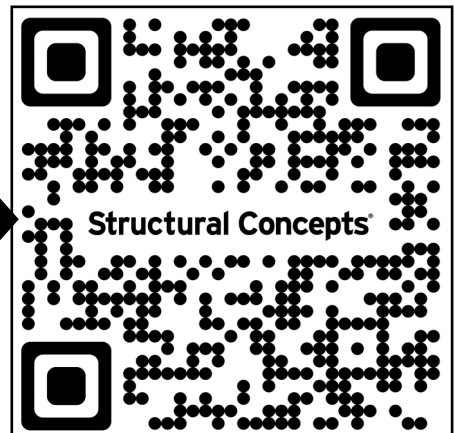
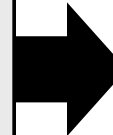
Carel® iJF Platform



Dixell® XM670K-XM679K Platform

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

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



STRUCTURAL CONCEPTS TECHNICAL SERVICE CONTACT INFORMATION & LIMITED WARRANTY

TECH SERVICE/WARRANTY CONTACT INFO:
1 (800) 433-9490 / EXTENSION 1
DAYS/HOURS AVAILABLE:
MONDAY - FRIDAY (CLOSED HOLIDAYS)
8:00 a.m. TO 5:00 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.

