

READ AND SAVE THESE INSTRUCTIONS

Oasis[®] USER MANUAL

SCC P/N
20-14028

MODEL B3924RH REFRIGERATED/HEATED SIDE-BY-SIDE COMBO OEO* WALL CASE



*Online Easy Ordering

Structural Concepts

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OVERVIEW

- This Oasis® self-service combo case merchandises both heated and refrigerated product.
- The refrigerated side of the case is designed to merchandise refrigerated packaged products at 38 °F (3 °C) or less product temperatures.
- The heated side of the case (both shelves and deck) is designed to maintain product at a range of temperatures.
- *Note: Product must be pre-chilled (or pre-heated) PRIOR TO placing in merchandiser. This unit is NOT designed to cool (or heat up) ambient product.*
- Cases should be installed and operated according to this operating manual's instructions to ensure proper performance. Improper use will void warranty.

- For Type 1 Conditions (most cases): ambient conditions are to be at 55% maximum humidity and maximum temperatures of 75 °F (24 °C).
- For Type 2 Conditions: ambient conditions are to be at 60% maximum humidity and maximum temperatures of 80 °F (27 °C).
- If unsure if unit is Type 1 or 2, see tag next to serial label. See **SERIAL LABEL LOCATION & INFORMATION LISTED / TECH INFO & SERVICE** section in this manual for sample serial labels).

TYPE

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

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

- This page 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
 Heated shelves and decking are hot!
 Turn off 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

- 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**.

WIRING DIAGRAM

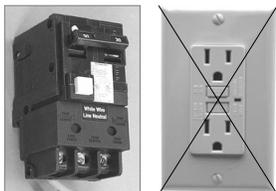
- Each case has its own wiring diagram folded and in its own packet.
- Wiring diagram placement on case varies.

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.

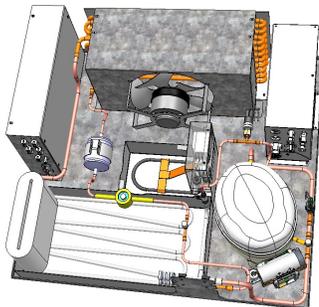


CAUTION! POWER CORD AND PLUG MAINTENANCE
 Risk of electric shock. If cord or plug becomes damaged, replace only with cord and plug of same type.



CAUTION! ADVERSE CONDITIONS / SPACING ISSUES

- Performance issues caused by adverse conditions are **NOT** warranted.
- Unit must be kept at least **15-feet** from exterior doors, overhead HVAC vents or any air curtain disruption to maintain proper temperatures.
- Unit must not be exposed to direct sunlight or any heat source (ovens, fryers, etc.).
- Keep at least **8-inch** clearance above unit for air discharge (self-contained units only).



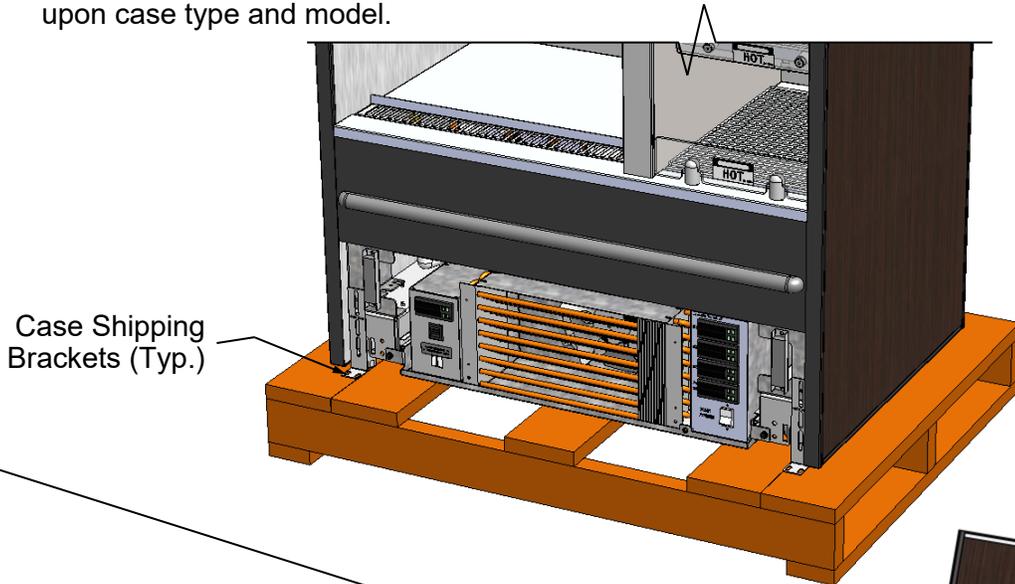
CAUTION! CHECK HOT GAS CONDENSATE PAN POSITION AND PLUG
 Water on flooring can cause extensive damage!
 Before powering up unit, check the following:

- Condensate pan **MUST BE** positioned directly under condensate drain.
- Overflow tray plug **MUST BE** securely plugged into receptacle.
- Overflow pan must have **TWO PLUGS** connected to its box if the unit also has Clean Sweep™ option.

CASE REMOVAL FROM SKID

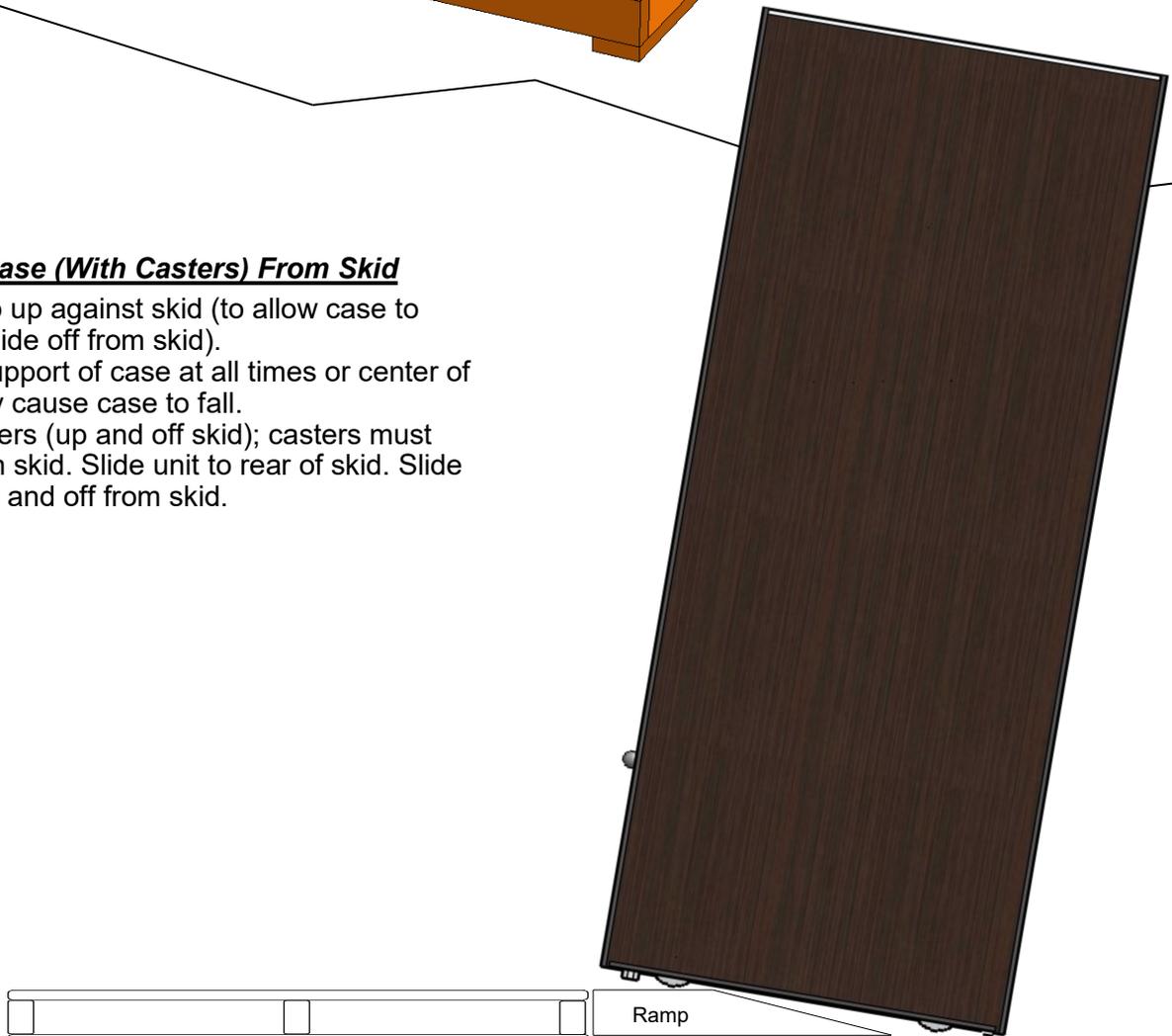
1. Removing Case Shipping Brackets That Are Attached To Skid

- 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 (With Casters) From Skid

- A. Place ramp up against skid (to allow case to smoothly slide off from skid).
- B. Maintain support of case at all times or center of gravity may cause case to fall.
- C. Raise levelers (up and off skid); casters must now rest on skid. Slide unit to rear of skid. Slide down ramp and off from skid.



INSTALLATION: POSITIONING AND ALIGNING CASE / ADJUSTING LEVELERS

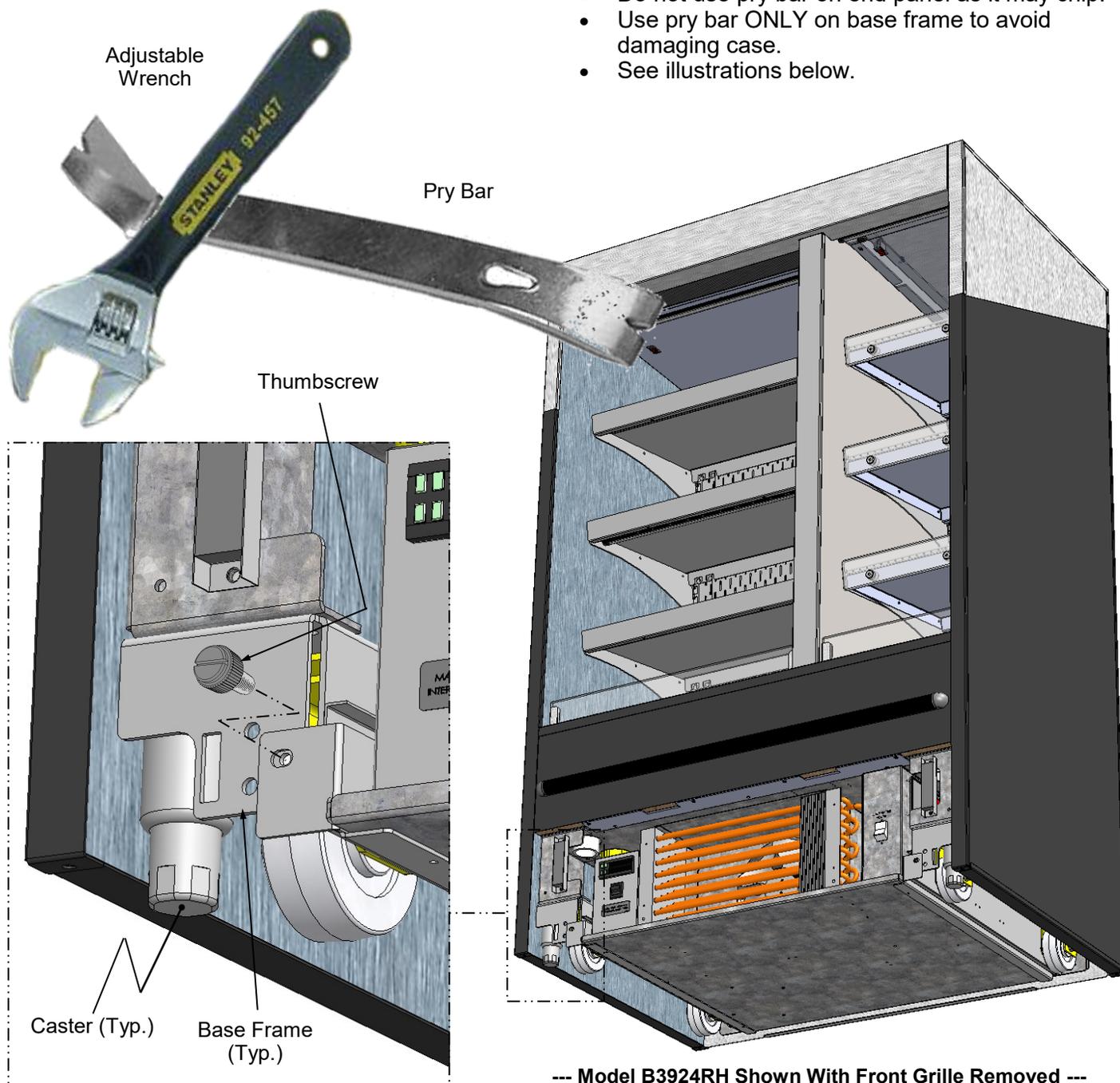
Note: Units shown may not depict an exact representation of your particular unit being installed.

1. Position & Align Case Alongside Other Cases

- As discussed on previous page, using casters, roll case into proper position.
- Before adjusting levelers, make certain that the case is in proper position and, if required, aligned with adjoining cases.
- This may require the repositioning of the case you are installing or the already positioned case.

2. Adjust Levelers

- After case is in position, adjust case so it is level and plumb (see illustration at right).
- You may need to remove front grille and/or rear toe-kick to access levelers.
- Use adjustable wrench (and possibly a pry bar) to adjust leveler.
- 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.



OVERVIEW: REFRIGERATED AND HEATED SECTIONS / THERMOMETERS

Overview

- Model B3924RH is illustrated below.
- Merchandiser is shown partially disassembled for illustrative purposes only.
- Remove front grille to access condenser package.

1. Refrigerated (One End of Case)

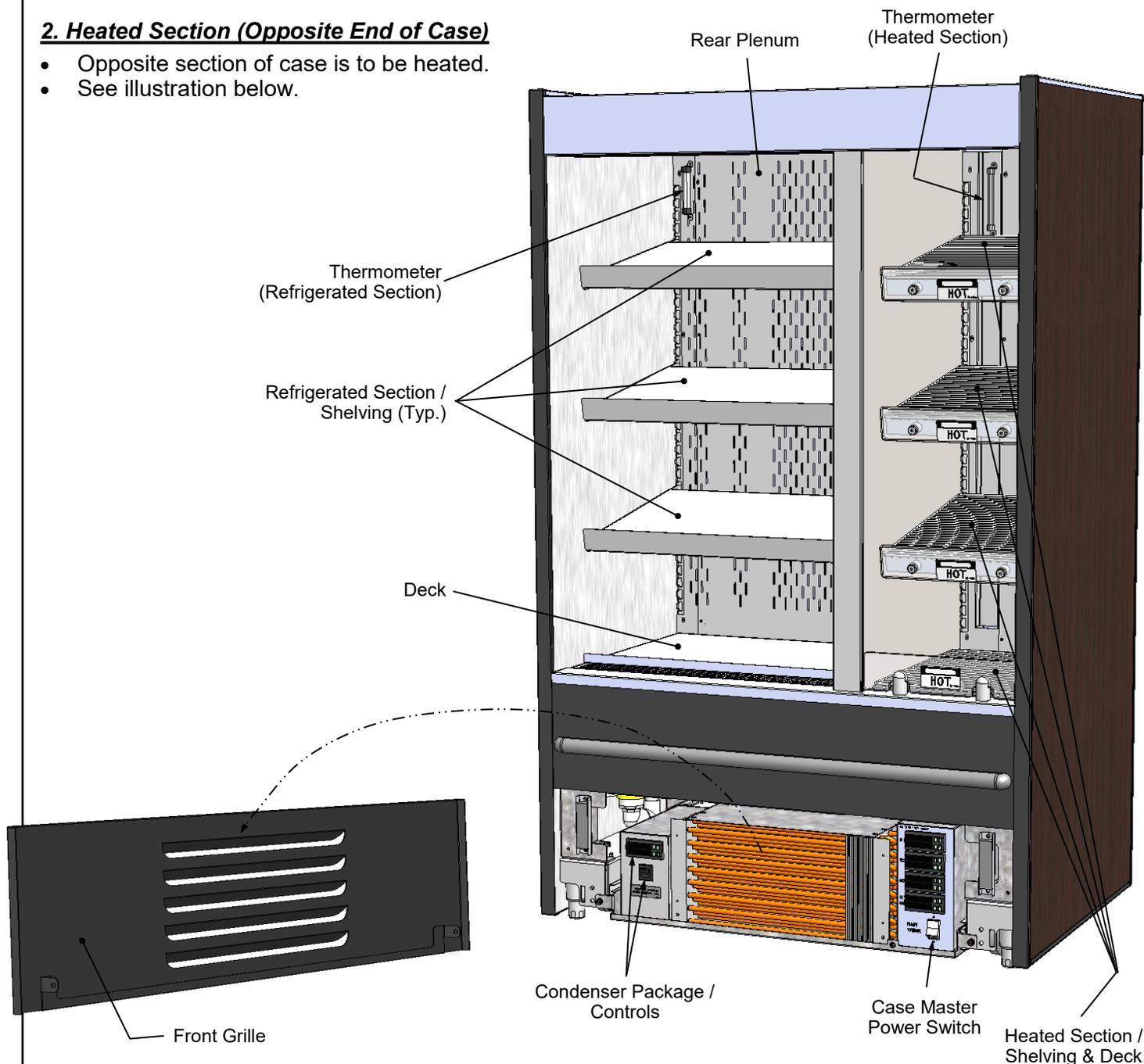
- One section of case is to be refrigerated.
- See illustration below.

2. Heated Section (Opposite End of Case)

- Opposite section of case is to be heated.
- See illustration below.

Important! Thermometers Overview

- **Thermometers reflect warmest air temperature in merchandiser (not actual food temperatures).**
- **You must use probe thermometers to determine actual product temperatures.**



POWER SWITCHES TO ENTIRE CASE & REFRIGERATED SIDE ONLY / LED LIGHT SWITCHES

Overview

- Model B3924RH is illustrated below.
- This model may not reflect every feature or option of your particular case.
- **Four (4) different switches control various aspects of the case; so, please read carefully!**

1. Power Switch To Entire Case

- **The Power Switch To Entire Case** controls BOTH the refrigerated and heated sides of the case (as well as entire case's LED lights).
- It is located at front-right-lower side of case.
- You must remove front grille to access Master Power Switch.
- See illustration below.

2. Power Switch To Heated Side Only

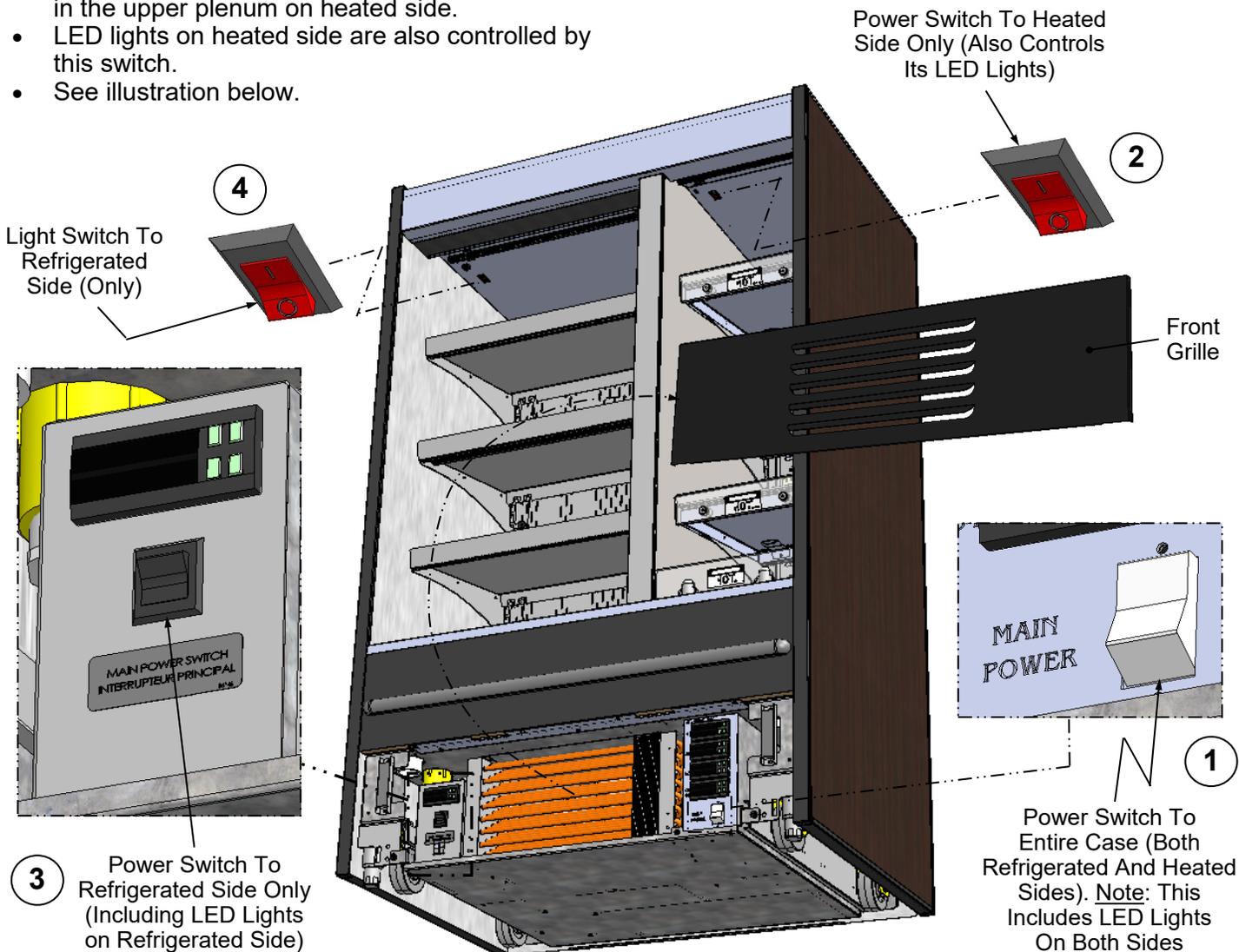
- The **Power Switch To Heated Side Only** is located in the upper plenum on heated side.
- LED lights on heated side are also controlled by this switch.
- See illustration below.

3. Power Switch To Refrigerated Side Only

- The **Power Switch To Refrigerated Side Only** is located in the electrical box on refrigerated side.
- Power to LED lights on refrigerated side are also controlled by this switch.
- See illustration below.

4. Light Switch To Refrigerated Side Only

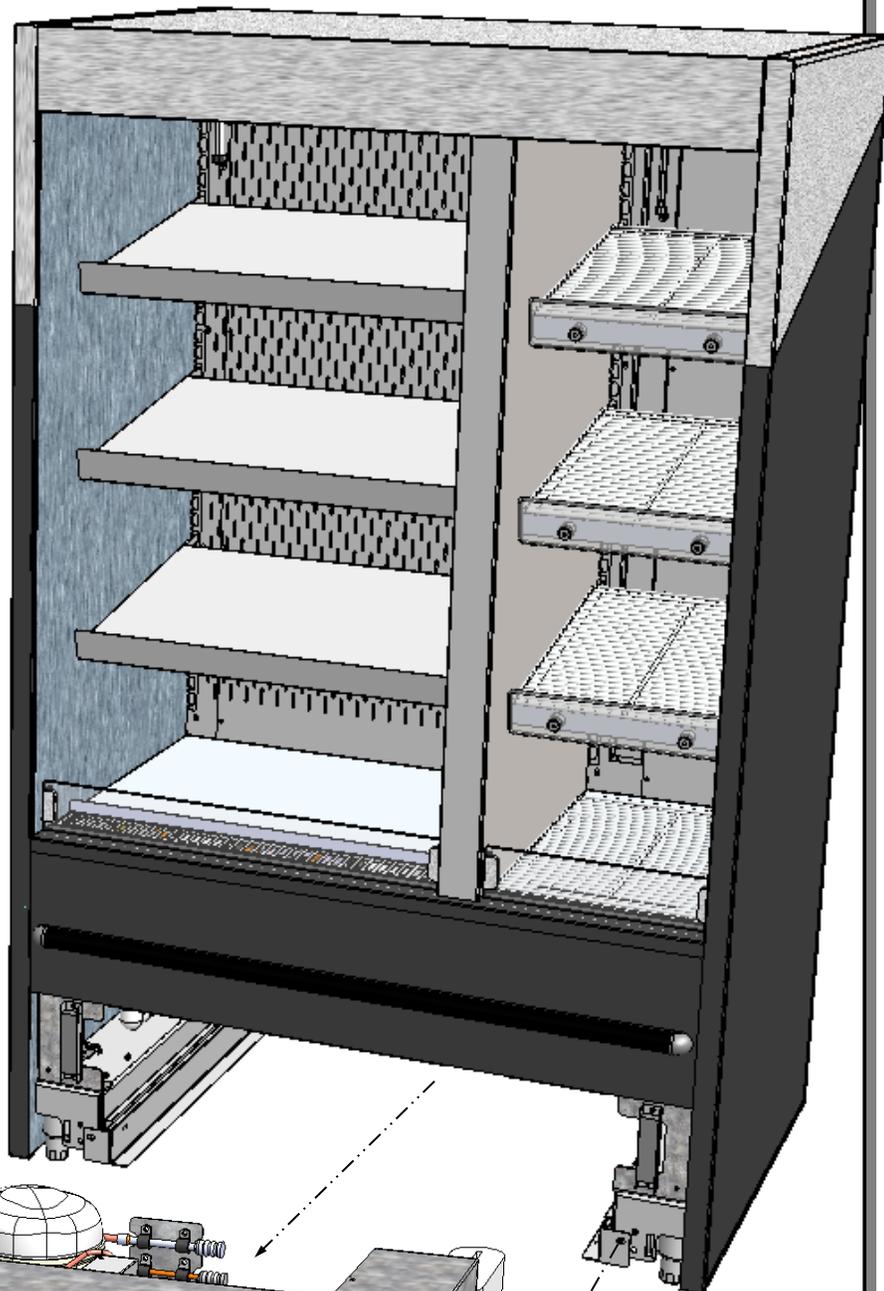
- The **Light Switch To Refrigerated Side Only** is located in the upper plenum on refrigerated side.
- Light switch will turn on all LED lights on refrigerated side only.
- BOTH **Power Switches** MUST BE turned on for this light switch to function.
- See illustration below.



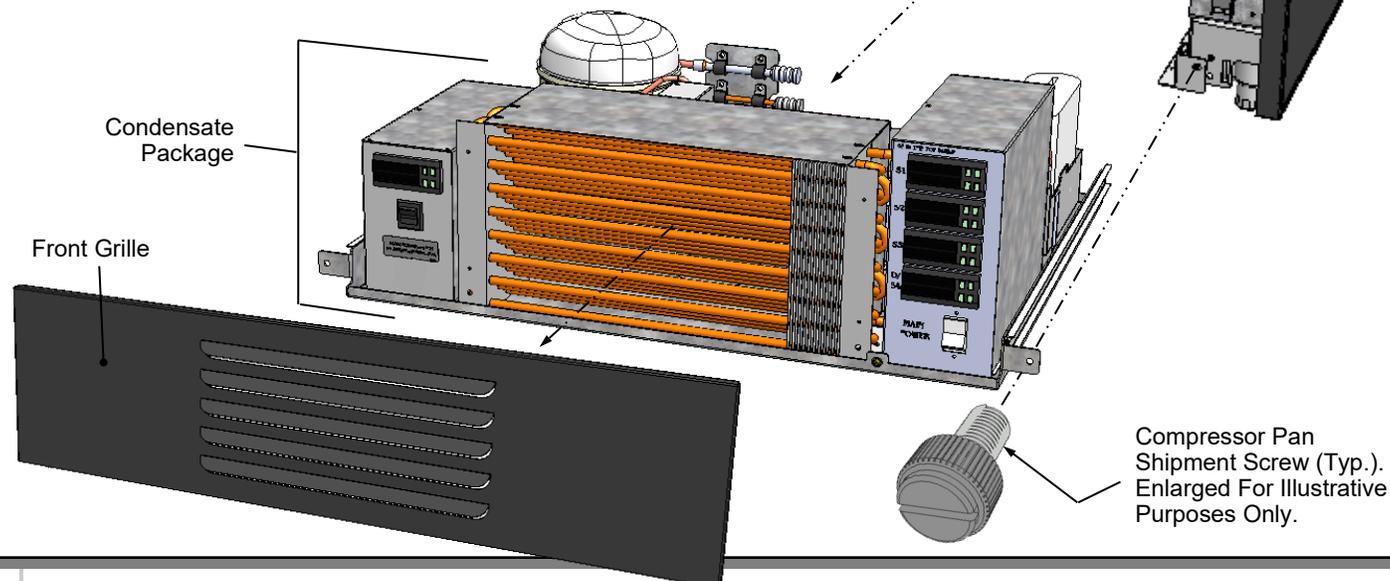
CONDENSATE PACKAGE ACCESS

Condensate Package Access

- **Caution! Only Trained Service Providers Are To Access Condensate Package.**
- Turn off power before accessing and sliding out from under merchandiser.
- Condensate package is accessible at case front.
- At initial slide-out, it may be necessary to remove compressor pan shipment screws (see illustration below for location).
- Remove front grille by simply lifting up and off (no screw removal is required).
- Compressor package pan rests on drawer slides.
- Slide compressor package straight out from underside of the case to prevent damage to unit.
- See **PREVENTIVE MAINTENANCE (TO BE PERFORMED BY TRAINED SERVICE PROVIDER)** section in this operating manual for cleaning specifics on the condenser package



Model B3924RH Shown With Front Grille Removed



LED STYLE LIGHT FIXTURES

LED Style Light Fixtures

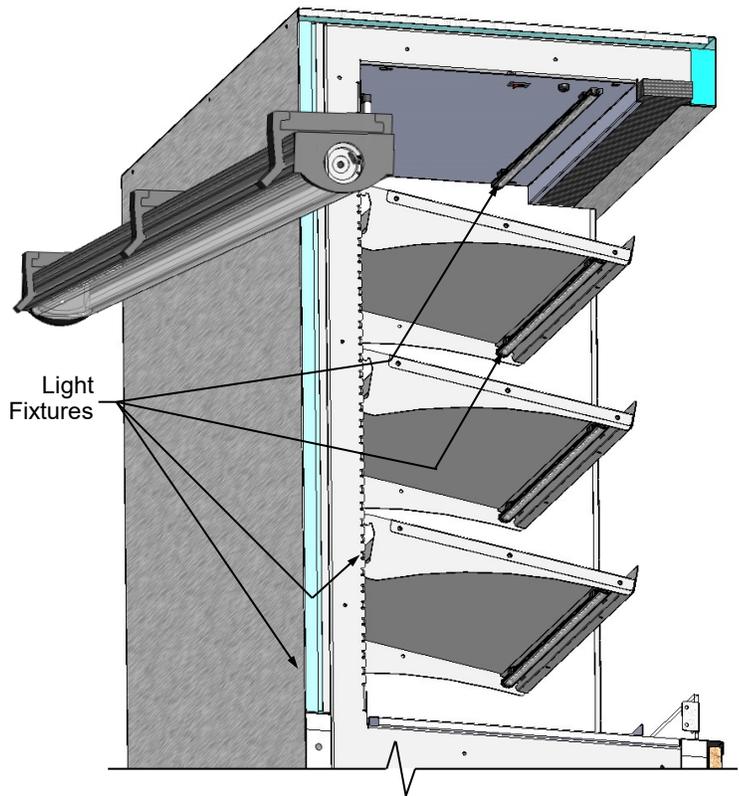
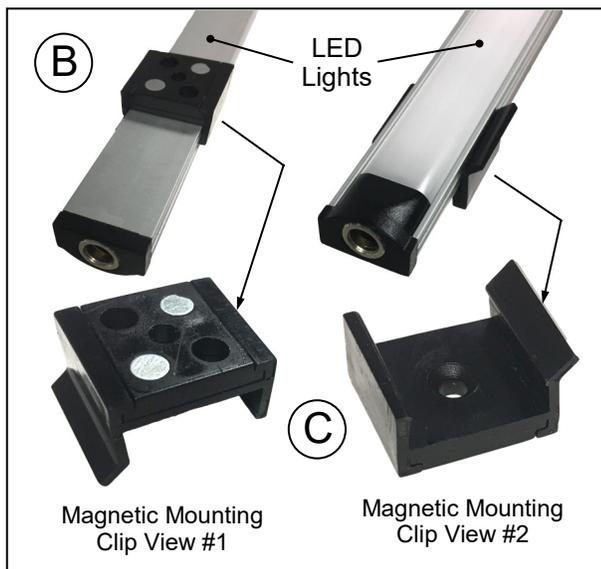
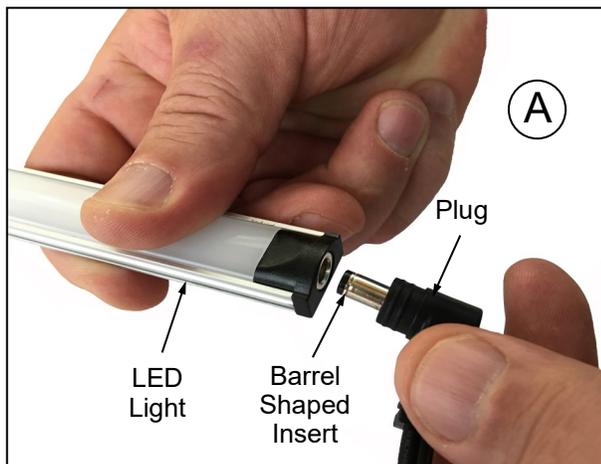
Removal of Faulty LED Lights:

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

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

Replacement of LED lights:

- Attach magnetic mounting clips onto LED light.
 - Adjust magnetic mounting clips so they are equally spaced on LED light.
 - Reattach LED light assembly to its shelf/header.
 - Position properly in shelf/header.
- >> Note: If mounting clips are riveted to shelf (or header), attach by placing LED in base of clip and then snapping into clip at FLANGE SIDE.
- Press plug's barrel-shaped insert all the way into LED light.
 - Important: If plug is not inserted ALL THE WAY IN the LED light's orifice, the light may not energize. See "**BAD**" vs. "**GOOD**" insertion illustrations below-right.
 - Turn LED light switch back on.



--- Model B3924RH Shown Partially Disassembled ---



THERMOSTAT CONTROLLER TO REFRIGERATED SIDE OF CASE

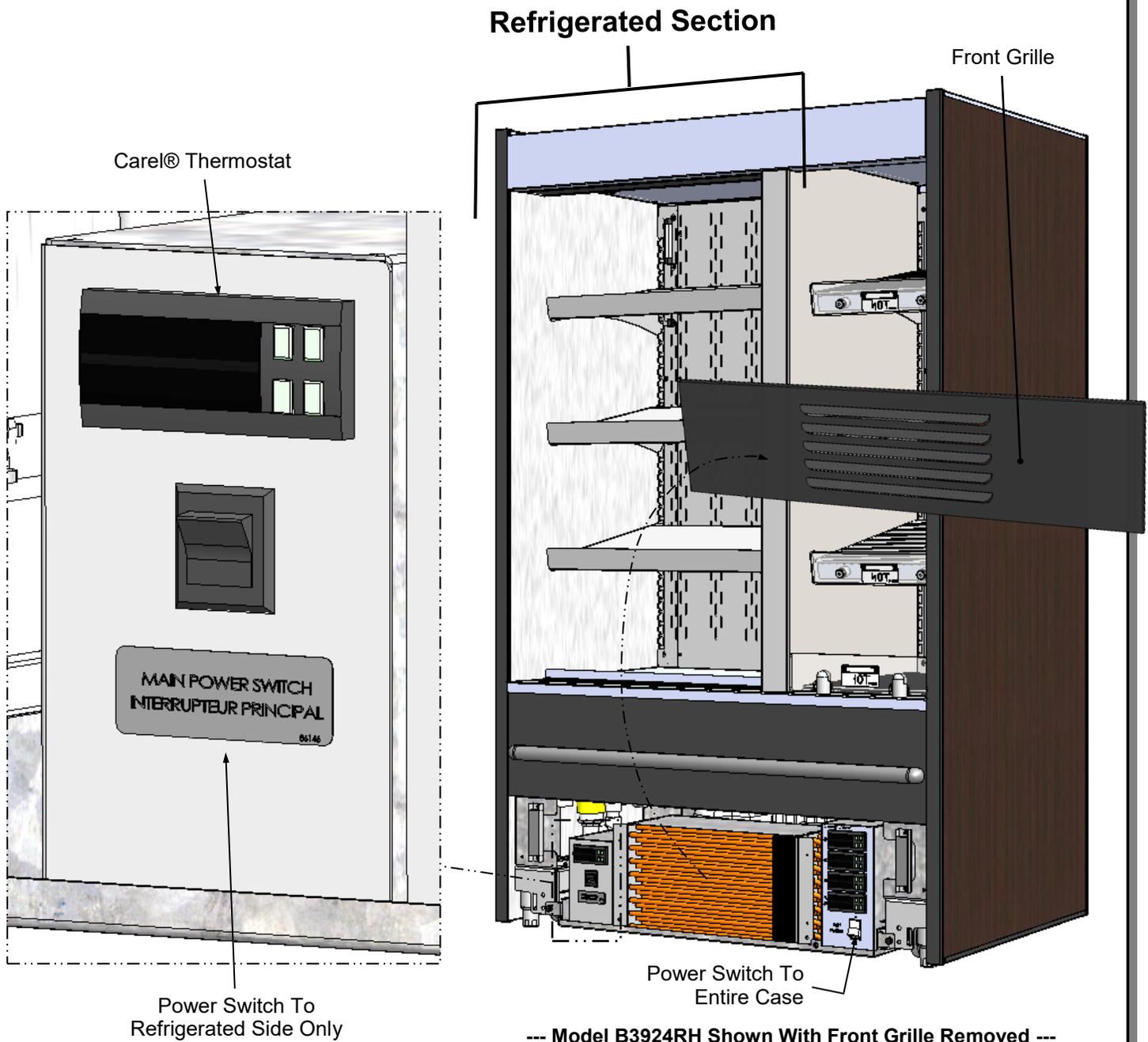
1. Power Switch To Entire Case

- **Power Switch To Entire Case** must be turned ON to energize refrigerated side of case.
- You must remove front grille to access this switch.
- See “Power Switch To Entire Case” at lower right illustration.

- You must remove front grille from case to access this power switch.
- The Carel® thermostat at front-left of case **ONLY** controls refrigerated section to case.
- See **CAREL® CONTROLLER** section of manual for thermostat settings and operation.

2. Power Switch To Refrigerated Side of Case

- Power switch that controls refrigerated side of case is at front-left condenser package.



THERMOSTAT CONTROLLERS TO HEATED SIDE OF CASE

1. Energizing Case

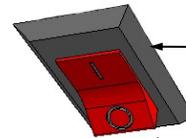
- **Power Switch to Entire Case** (in electrical box) must be turned on to energize case.
- Remove front grille from case to access.
- See below-right illustration for switch location.

2. Power Switch To Heated Side Only

- **Power Switch To Heated Side Only** controls both thermostats and LED lights on heated side.
- See top-right illustration for switch location.

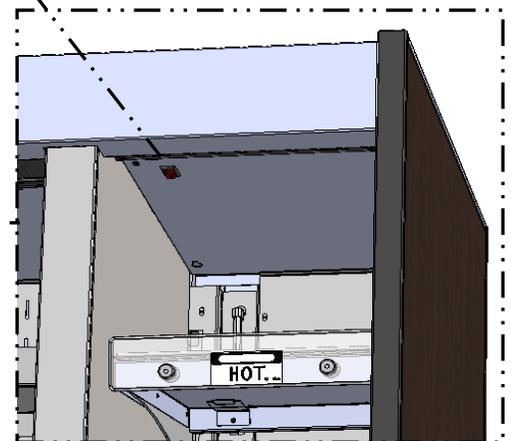
3. Thermostat Controls To Shelving and Deck

- Thermostat controls to heated shelving and deck are at right side of condenser package.
- Note etchings on electrical box: Thermostat "S1" controls top shelf heat. Thermostat "S2," and "S3," controls heat to shelves 2 and 3. Thermostat "D/S4" controls heat to deck/shelf 4.
- See illustration below-right.

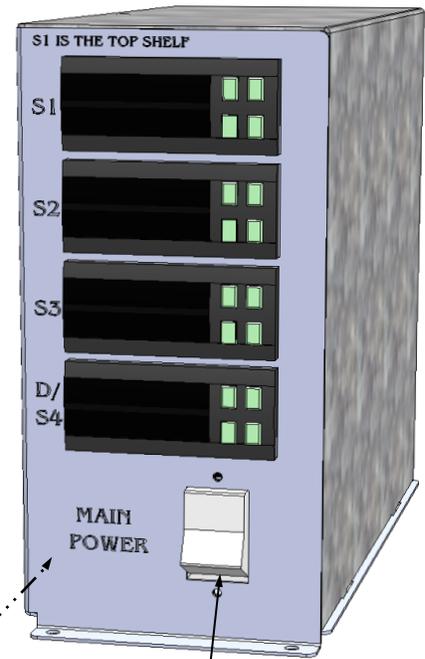
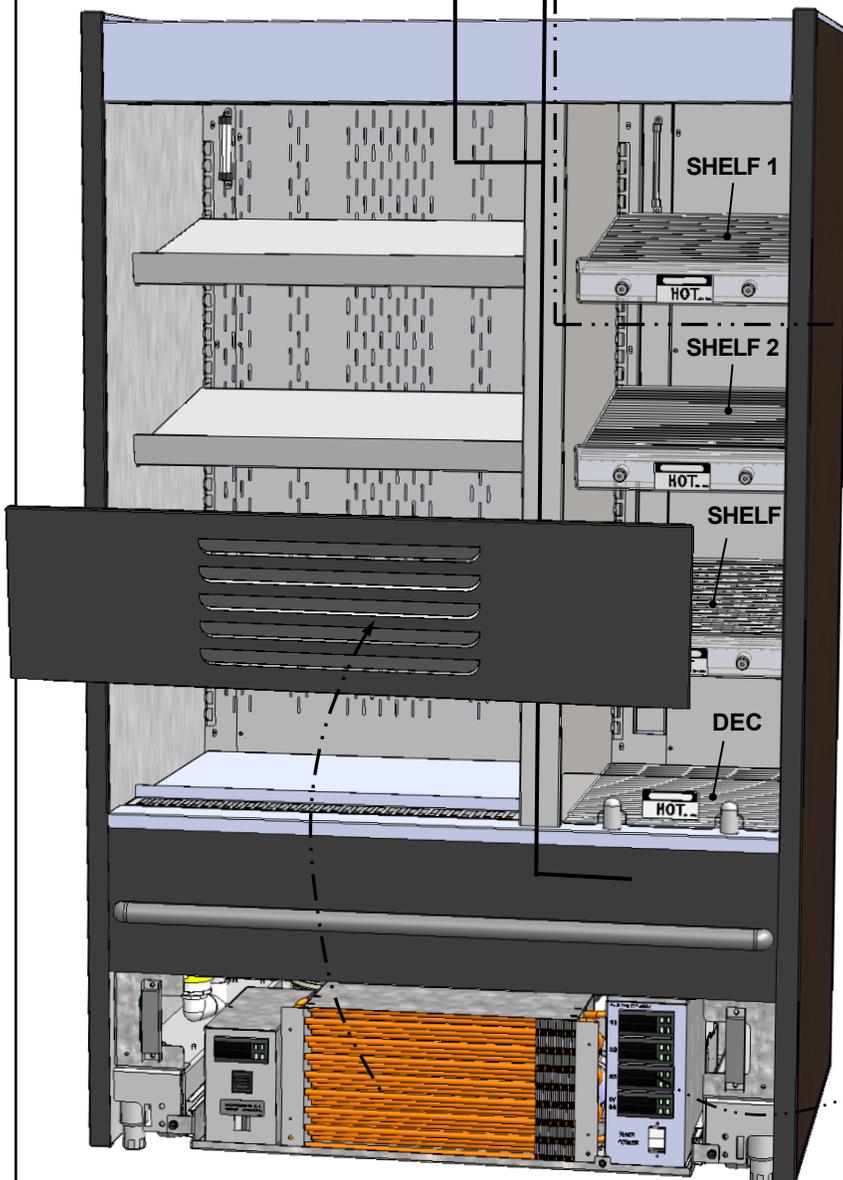


Power Switch To Heated Side Only (Also Controls The Thermostats and LED Lights)

--- Upper Plenum View ---



Heated Section



Power Switch To Entire Case (Both Refrigerated And Heated Sides As Well As LED Lights)

1. Main Power Switch / Light Switch

- See previous two pages for specifics on powering up case (both refrigerated and heated sides).

2. Cooling Case (Refrigerated Side)

- **Note:** Case is designed to **MAINTAIN** product temperatures – NOT cool product! Do not place product that is warm or ambient temperature in case.
- **Before placing product food in case, allow refrigerated side of case 1 hour (60-minutes) for case to achieve its desired temperature.**

3. Heating Up Case (Heated Side)

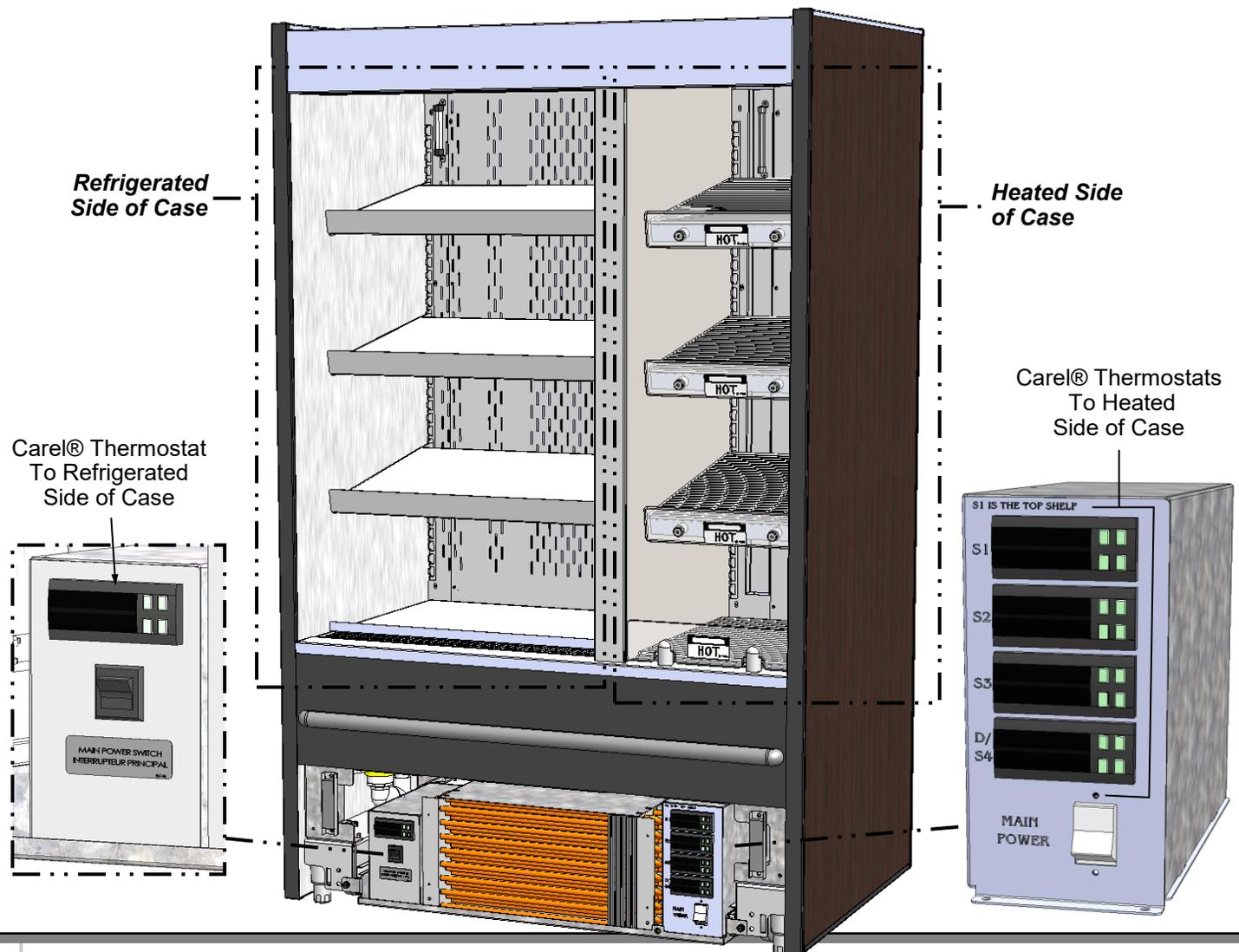
- **Note:** Case is designed to **MAINTAIN** product temperatures – NOT heat up product! Do not place product that is cold or ambient temperature in case.
- **Before placing product in case, allow heated side of case 1 hour (60-minutes) for case to achieve its desired temperature.**

4. Adjusting Thermostat Settings

- Thermostats have been pre-set at factory.
- You should **RARELY** need to adjust thermostats on this case.
- If you **MUST** adjust thermostat settings, see Carel® Controller section in manual for instructions.
- After adjusting thermostat(s) settings, allow **30 MINUTES** at new settings for temperature to affect product.

5. Shutting Down Case

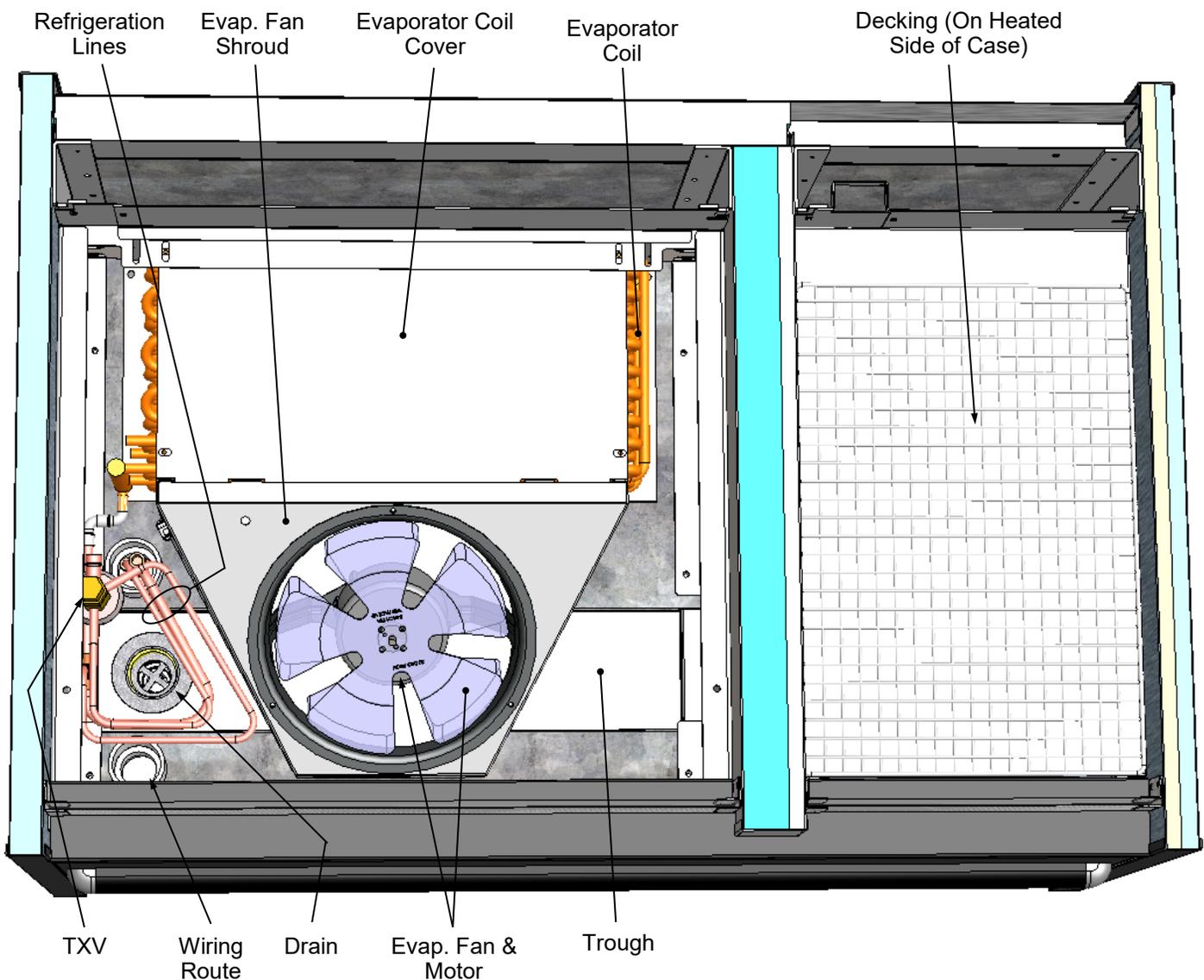
- Remove all product from case.
- Turn main power switch to “OFF” position.
- **Caution! On heated side of case, deck and shelving is hot! Allow case to cool for 45 minutes before cleaning.**
- **Note:** When heated main power is turned back on, you do NOT need to re-enter settings. Temperatures will revert back to case’s **LATEST SETTINGS** before shutdown.



EVAPORATOR COIL / TXV / FAN AND MOTOR / DRAIN / TROUGH / COVER, ETC.

Evaporator Coil / TXV / Fan / Motor / Drain, Etc.

- When appropriate power switches are turned on, refrigeration section will energize (see **MASTER POWER SWITCH / POWER SWITCH** section in this manual for specifics).
- Evaporator coil fan should turn on. Lift decking to check that evaporator coil fan is rotating.
- **Caution! Rotating fan can cause injury. Turn off power before accessing this area!**
- When the case is in 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.
- Components are under decking.
- Decking must be removed for access.
- Note: Partially disassembled view below shown for illustrative purposes only.



--- Model B3924RH Shown Sectioned For Illustrative Purposes Only ---

CLEANING SCHEDULE - TO BE PERFORMED BY STORE PERSONNEL

AREA TO BE CLEANED	FREQ.	INSTRUCTIONS
Sides / Front Grille / Top Board / Front Grille / Rear Plenums	Daily	Wipe down with warm, soapy water and clean cloth. Dry with clean cloth or paper towel.
Metal Shelving (Refrigerated Section)	Daily	Wipe down with warm, soapy water and clean cloth. Dry with clean cloth or paper towel.
Wire Racks (In Heated Side)	Daily To Weekly	<ul style="list-style-type: none"> • Caution! Wire racks on heated side are HOT! Allow case to cool for 45 minutes before cleaning. • Wipe down wire racks. If hardened residue is on racks, carefully remove racks from case. Submerge in hot, soapy water. Use soft-bristled brush to removed hardened residue. Rinse. Dry. Return racks to case.
Heated Shelving and Deck	Daily To Weekly	<ul style="list-style-type: none"> • Caution! Shelving and deck on heated side are HOT! Allow case to cool for 45 minutes before cleaning. • Wipe down with warm, soapy water and clean cloth. Rinse. Dry with clean cloth or paper towel.
Decking	Daily To Weekly	<p>Daily</p> <ul style="list-style-type: none"> • Caution! Deck on heated side are HOT! Allow case to cool for 45 minutes before cleaning. • Wipe down deck with warm, soapy water. Rinse with water-filled spray bottle and sponge or clean cloth. Dry. • For large spills or hardened residue, remove decks and submersed in warm soapy water, and clean with sponge or cloth. • Caution! Do not use Brillo® pad or similar abrasive cleaners as they may mar decking finish. Rinse. Dry. Return decking to case. <p>Weekly</p> <ul style="list-style-type: none"> • Caution! Deck on heated side are HOT! Allow case to cool for 45 minutes before cleaning. • Caution! Due to functioning cooling fan, it is advisable to turn off power to unit at this step. • Remove decks. Clean entire areas at underside of decks. For refrigerated side, coil cover, TXV, sight glass, filter dryer, drain, trough, etc.) with warm water, mild soap solution and soft cloth. Rinse with spray bottle and clean water. Dry thoroughly. • Replace all items in reverse order in which they were removed.
Removable, Magnetized Condenser Coil Filter (Optional)	Weekly	<ul style="list-style-type: none"> • Depending upon environment, it may be necessary to clean filter weekly. • Filter MUST be cleaned at least monthly. • Remove from case. Submerge in warm, soapy water. Use soft-bristled brush to remove dust, grease and grime collected on filter. Rinse thoroughly. Return filter to case. • See previous page in this manual for illustration.
Condenser Coil	Monthly	Remove front grille. Slide condenser package out from underside of case. Vacuum or brush grille condenser coil. Use metal or fiber brush to remove dust and dirt that can collect on condenser coils. Be careful not to damage the fins on the coil.

WARNING! TURN OFF CASE BEFORE PERFORMING PREVENTIVE MAINTENANCE!

FREQ.	INSTRUCTIONS
Quarterly	<p><u>Under Case Cleaning:</u></p> <ul style="list-style-type: none"> Whenever refrigeration package is slid out from underside of case, vacuum (or use broom) under the case to remove all dust, debris and dirt that may collect.
Quarterly	<p><u>Tub Area (Evaporator Coil, Drain, Fans, Etc.):</u></p> <p><i>Caution! Disconnect power from case before cleaning tub, coil, fan, motor & drain area!</i></p> <ul style="list-style-type: none"> 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 (or trough). Wipe down fan blades, motors and brackets with moist cloth.
Quarterly	<p><u>Condenser Coil:</u></p> <ul style="list-style-type: none"> Remove front grille (simply by lifting up and off). Vacuum or brush grille condenser coil. Use metal or fiber brush to remove dust and dirt that can collect on condenser coils. Be careful not to damage the fins on the coil.

1. Quarterly Honeycomb Air Diffuser Removal

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

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

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

C. Carefully pry downward and away from the honeycomb retainer.

Important: Clean honeycomb with warm water and soap solution. Submerge if necessary. Use brush to dislodge stubborn or sticky residue. Dry by using vacuum's blow mode (vs. suction mode).

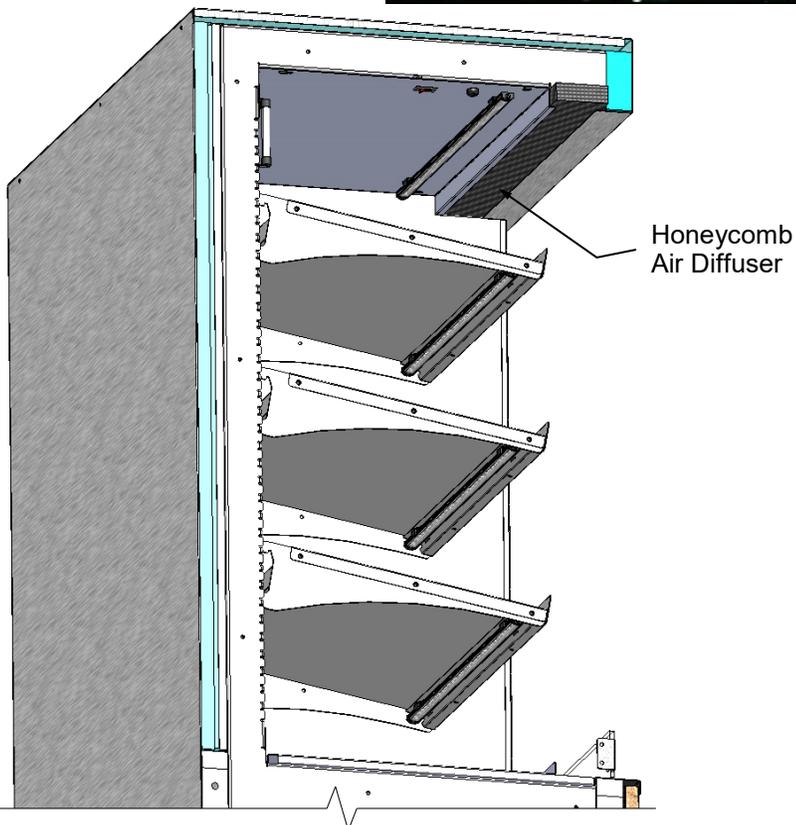
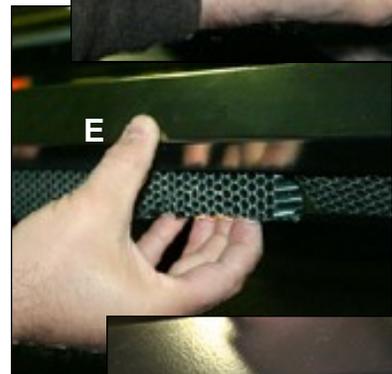
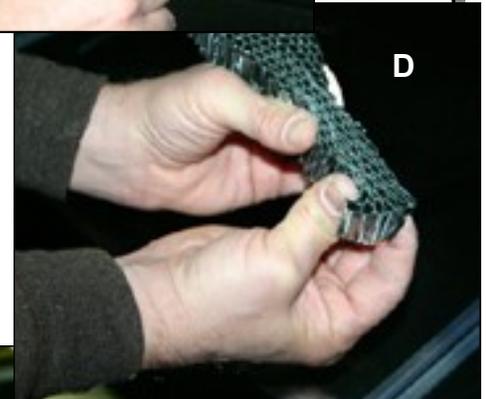
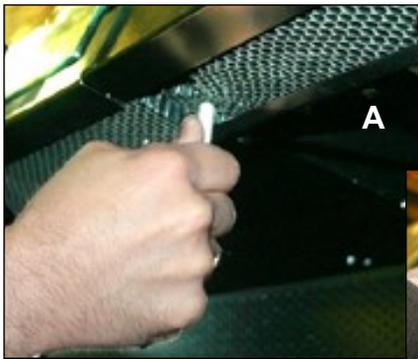
2. Quarterly Honeycomb Air Diffuser Installation

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

E. Carefully slide honeycomb into place.

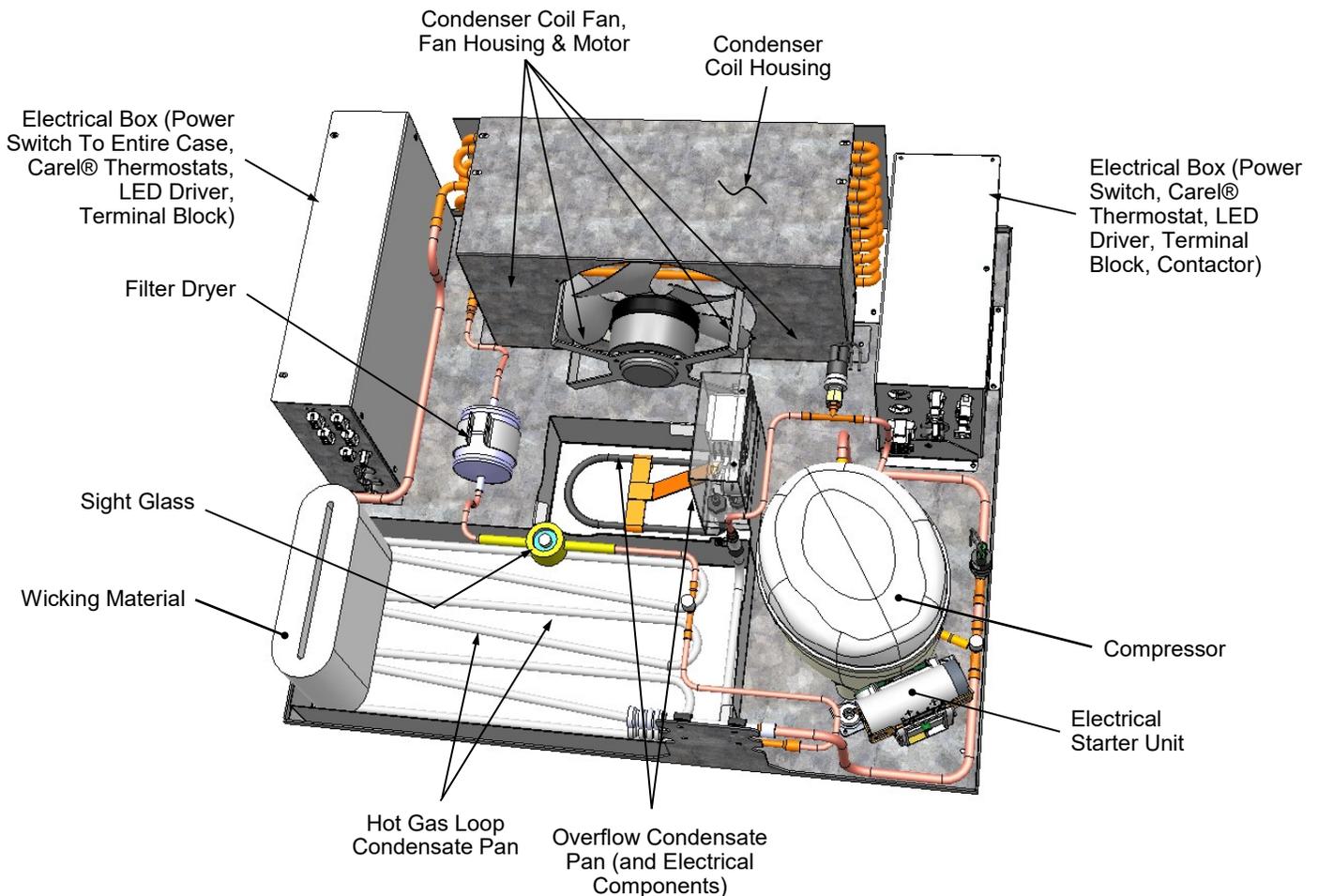
F. Adjust honeycomb so that it fits flat against retainer. It must not be wavy or out of position.

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



--- Model B3924RH Shown Partially Disassembled ---

FREQ.	INSTRUCTIONS
Quarterly	Honeycomb: Check honeycomb air diffuser to determine if it is dirty. See previous page of this manual for cleaning specifics.
Quarterly	<p>Hot Gas Condensate Pan / Overflow Condensate Pan (Electrical Coil):</p> <ul style="list-style-type: none"> • <i>Warning! Condensate Pans Are HOT! Disconnect power from case and allow to cool before cleaning.</i> • Access to condensate pan may be gained by removing front grille and carefully sliding out from under case. It MAY be necessary to remove shipment retention screws prior to sliding out from underside of 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. • 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. • Slide refrigeration assembly back under case (at front). • Replace front grille. • See illustration below for component layout.



TROUBLESHOOTING (TO BE PERFORMED BY STORE PERSONNEL)

CONDITION	TROUBLESHOOTING
Case Is Not Level	See INSTALLATION section in this manual for additional information.
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	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.
	Turn light switch off and check bulb for proper connection. <ul style="list-style-type: none"> • Check that the light cord is plugged in properly. • <u>Note</u>: LED light and plug must be connected in a specific manner or they will not work. • Make certain flat edge of plug connects to flat edge of LED light. • See LED LIGHT REMOVAL/REPLACEMENT, PLUG/CORD POSITIONING, PROPER PLUG INSERTION section in this manual for 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. <ul style="list-style-type: none"> • Product must be pre-chilled before placing in refrigerated section. • Product must be pre-heated before placing on heated shelves.
	For temperatures that are out of range on heated shelves or deck, see THERMOSTAT CONTROLLERS TO HEATED SIDE OF CASE section in this manual.
	Check that the case is not in the sun or near a heat or air-conditioning vent.
	If case is located near front doors, temperature fluctuation can hinder unit's ability to maintain temperature.
	Check air grilles (at front of refrigerated side decking) for obstructions. <ul style="list-style-type: none"> • DO NOT set product on air grilles as this will prevent proper airflow!
	If case still is not holding proper temperature, call service provider.

TROUBLESHOOTING (TO BE PERFORMED BY TRAINED SERVICE PROVIDERS)

CONDITION	TROUBLESHOOTING
Water Is On The Floor	Check that the drain trap is free of debris.
	Check that the drain hose is correctly positioned over floor drain.
	Check store conditions. See OVERVIEW / TYPE / COMPLIANCE / WARNINGS / PRECAUTIONS / WIRING / PLUGS pages in this manual for humidity and temperature ranges to prevent condensation.
Fan Emits Excessive Noise	Check that the case is aligned, level and plumb.
	Check evaporator fans for cleanliness.
	Unplug/power off fan motors. Check to determine whether faulty.
	Check that fan motors are securely mounted in brackets.
	Check that the fan shroud is properly secured.
Fans Are Not Working	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 (certified electricians only).
	Check that fan wiring is connected on terminal blocks (certified electricians only).
System Is Not Operating	Check that the utility power is on.
	Check the circuit breaker box for tripped circuits.

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 labels 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.

→
Sample Serial Label For Refrigerated Cases

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

Reveal MODEL NRS3648RXV-SAMPLE
SERIAL NO. 12345X30DZ098765

Blend

Harmony Addenda *SAMPLE ONLY*

Impulse Grocerant

Oasis Fusion *SAMPLE ONLY*

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

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

Super Heat Temp
Defrost

6-8 °F
6 defrosts per day, 45 °F

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

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

 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.


Sample QR Code

→
Sample Serial Label For Ambient or Heated Cases

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

Blend MODEL NRS3648RXV-SAMPLE
SERIAL NO. 12345X30DZ098765

Harmony Reveal *SAMPLE ONLY*

Grocerant Addenda

Fusion Oasis *SAMPLE ONLY*

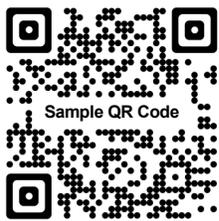
Impulse *SAMPLE ONLY*

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

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

SINGLE PHASE 1.84 AMPS

 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.


Sample QR Code

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Programming The Instrument

To Modify Defrost, Differential and Other Parameters

Prg **Set** 1. Press & hold “Prg” & “SET” keys together for at least five (5) seconds; display will flash “0,” representing password prompt.

▲ **aux** 2. Press ▲ until password “22” is reached.

Set 3. Press “SET” key to confirm password.

▲ **def** **▼** 4. Press ▲ or ▼ to reach a category to be modified.

Set 5. Press “SET” to modify selected parameter.

▲ **def** **▼** 6. Increase or decrease the value using the ▲ or ▼ button respectively.

Set 7. Press the “SET” key to temporarily save the new value and return to the parameter display.

Prg **mute** 8. Press & hold the “Prg” key for 5 full seconds to save changes. This will also mute the audible alarm (buzzer) and deactivate the alarm relay.

Warning! Save Your Parameter Settings!

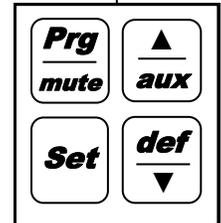
1. To store the new parameter values, PRESS and HOLD the “Prg” key for at least 5 seconds.
2. All modifications made to parameters will be lost if you do NOT press a button within 60 seconds. Should this “timeout” occur, normal operational settings (prior to modifications being made) will resume.
3. If the instrument is switched off before pressing the “Prg” key, all modifications to parameters will be lost.

To Activate Manual Defrost

def **▼** Press and hold “def” key for at least 5 seconds.

To Activate / Deactivate Auxiliary Output

▲ **aux** Press and hold the “aux” key for 1 second.



How To Change Reading From Fahrenheit (°F) To Celsius (°C)

Prg **Set** 1. Press and hold “Prg” and “SET” keys together for at least 5 seconds; display will show “0” (password prompt).

▲ **aux** 2. Press ▲ until password “22” is reached.

Set 3. Confirm by pressing “SET” key.

▲ **def** **▼** 4. Press ▲ or ▼ until reaching the parameter “/ 5.”

Set 5. Press “SET” to modify this selected parameter.

▲ **def** **▼** 6. Press ▲ or ▼ to change value to desired setting: “0” for Celsius (°C) or “1” for Fahrenheit (°F).

Set 7. Press “SET” key to temporarily save the new value and return to the display of the parameter.

Prg **mute** 8. Press & hold “Prg” key for 5 full seconds to save changes. **Note! All values will automatically convert to new scale. No conversion is required.**

To Reset Any Alarms With Manual Reset

Prg **▲** **aux** **mute** Press and hold the “Prg” and “aux” key for at least 1 second.

This data derived from Carel® Controller Material:
ir33 +030220441 - rel. 2.0 - 01.05.2006.
User Manuals\Carel ir33 Platform Programmable Controller For
Refrig Units - Rev C Date: 06/22/2022



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Microprocessor Controller



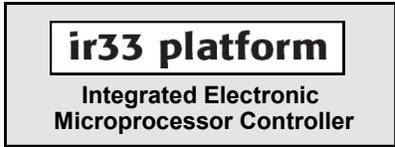
User Interface - Display

ICON	FUNCTION	DESCRIPTION	ON	Normal operation OFF	BLINK	Start up
	COMPRESSOR	ON when the compressor starts. Flashes when the activation of the compressor is delayed by safety times.	Compressor on	Compressor off	awaiting activation	
	FAN	ON when the fan starts. Flashes when the activation of the fan is prevented due to external disabling or procedures in progress.	Fan on	Fan off	awaiting activation	
	DEFROST	ON when the defrost is activated. Flashes when the activation of the defrost is prevented due to external disabling or procedures in progress.	Defrost in progress	Defrost not in progress	awaiting activation	
	AUX	Flashes if the anti-sweat heater function is active, ON when the auxiliary output (1 and/or 2) selected as AUX (or LIGHT in firmware version 3.6) is activated.	AUX auxiliary output active (version 3.6 light auxiliary output active)	AUX auxiliary output not active	Anti-sweat heater function active	
	ALARM	ON following pre-activation of the delayed external digital input alarm. Flashes in the event of alarms during normal operation (e.g. high/low temperature) or in the event of alarms from an immediate or delayed external digital input.	Delayed external alarm (before the time 'A7' elapses)	No alarm present	Alarms in norm. operation (e.g. High/low temperature) or immediate or delayed alarm from external digital input	
	CLOCK	ON if at least one timed defrost has been set. At start-up, comes ON for a few seconds to indicate that the Real Time Clock is fitted.	If at least 1 timed defrost event has been set	No timed defrost event set	Alarm clock	ON if real-time clock present
	LIGHT	Flashes if the anti-sweat heater function is active, ON when the auxiliary output (1 and/or 2) selected as LIGHT is activated (in firmware version 3.6 it does not flash in anti-sweat heater mode and comes on when the dead band output is active).	Light auxiliary output on (version 3.6 dead band auxiliary output active)	Light auxiliary output off	Anti-sweat heater function active (version 3.6 does not flash in anti-sweat heater mode)	
	SERVICE	Flashes in the event of malfunctions, for example E2PROM errors or probe faults.		No malfunction	Malfunction (e.g. E2PROM error or probe fault). Contact service	
	CONTINUOUS CYCLE	ON when the CONTINUOUS CYCLE function is activated. Flashes if the activation of the function is prevented due to external disabling or procedures in progress (E.g.: minimum compressor OFF time).	CONTINUOUS CYCLE operation activated	CONTINUOUS CYCLE function not activated	CONTINUOUS CYCLE operation requested	

Summary Table of Alarm and Signals: Display, Buzzer and Relay

Code	Icon on the display	Alarm relay	Buzzer	Reset	Description
rE	flashing	on	on	automatic	virtual control probe fault
E0	flashing	off	off	automatic	room probe S1 fault
E1	flashing	off	off	automatic	defrost probe S2 fault
E2	flashing	off	off	automatic	probe S3 fault
E3	flashing	off	off	automatic	probe S4 fault
E4	flashing	off	off	automatic	probe S5 fault
	No	off	off	automatic	probe not enabled
LO	flashing	on	on	automatic	low temperature alarm
HI	flashing	on	on	automatic	high temperature alarm
AFr	flashing	on	on	manual	antifreeze alarm
IA	flashing	on	on	automatic	immediate alarm from external contact
dA	flashing	on	on	automatic	delayed alarm from external contact
dEF	on	off	off	automatic	defrost running
Ed1	No	off	off	automatic/manual	defrost on evaporator 1 ended by timeout
Ed2	No	off	off	automatic/manual	defrost on evaporator 2 ended by timeout
Pd	flashing	on	on	automatic/manual	maximum pump down time alarm
LP	flashing	on	on	automatic/manual	low pressure alarm
AtS	flashing	on	on	automatic/manual	autostart in pump down
cht	No	off	off	automatic/manual	high condenser temperature pre-alarm
CHT	flashing	on	on	manual	high condenser temperature alarm
dor	flashing	on	on	automatic	door open too long alarm
EE	flashing	off	off	automatic	E2prom error, unit parameters
EF	flashing	off	off	automatic	E2prom error, operating parameters
ccb	Signal				start continuous cycle request
cce	Signal				end continuous cycle request
dFb	Signal				start defrost call
dFE	Signal				end defrost call
On	Signal				switch ON
off	Signal				switch OFF
rES	Signal				reset alarms w/manual reset / reset HACCP alarms / reset temp. monitoring

This data derived from Carel® Controller Material:
ir33 +030220441 - rel. 2.0 - 01.05.2006.
User Manuals\Carel ir33 Platform Programmable Controller For
Refrig Units - Rev C Date: 06/22/2022



Summary Table of Operating Parameters

CODE	PARAMETER	UOM*	TYPE	MINIMUM	MAXIMUM	DEFAULT
/5	Select Celsius (°C) or Fahrenheit (°F)	flag	C	0	1	For Case Specific Defaults See Serial Label Located Near Electrical Access On Your Case. For Additional Technical Information Call Structural Concepts Technical Service Dept. at 1(800) 433.9490 Ext. 1
/c1	Calibration of probe 1	°C/°F	C	-20	20	
/c2	Calibration of probe 2	°C/°F	C	-20	20	
St	Temperature set point	°C/°F	F	r2	r1	
rd	Control delta	°C/°F	F	20	0.1	
dl	Interval between defrosts	hours	F	0	250	
d4	Defrost activated when instrument is switched on**	-	-	0	1	
dt1	End defrost temperature, evaporator	°C/°F	F	-50	200	
dP1	Maximum defrost duration, evaporator	min	F	1	250	
d6	Display on hold during defrost	-	C	0	2	
dd	Dripping time after defrost	min	F	0	15	
d/1	Display of defrost probe 1	°C/°F	F	-	-	

* Unit Of Measure

** Case will go into defrost ONLY when case is turned off and then back on when probe is reading below 45 °F.

This data derived from Carel® Controller Material: ir33 +030220441 - rel. 2.0 - 01.05.2006. User Manuals\Carel ir33 Platform Programmable Controller For Refriger Units - Rev C Date: 06/22/2022

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Programming The Instrument

To Modify Differential and Other Parameters

Prg **Set** 1. Press & hold “Prg” & “SET” keys together for at least five (5) seconds; display will flash “0,” representing password prompt.

▲ **aux** 2. Press ▲ until password “22” is reached.

Set 3. Press “SET” key to confirm password.

▲ **def** **▼** 4. Press ▲ or ▼ to reach a category to be modified.

Set 5. Press “SET” to modify selected parameter.

▲ **def** **▼** 6. Increase or decrease the value using the ▲ or ▼ button respectively.

Set 7. Press the “SET” key to temporarily save the new value and return to the parameter display.

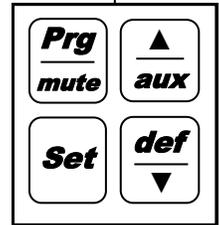
Prg **mute** 8. Press & hold the “Prg” key for 5 full seconds to save changes. This will also mute the audible alarm (buzzer) and deactivate the alarm relay.

Warning! Save Your Parameter Settings!

1. To store the new parameter values, PRESS and HOLD the “Prg” key for at least 5 seconds.
2. All modifications made to parameters will be lost if you do NOT press a button within 60 seconds. Should this “timeout” occur, normal operational settings (prior to modifications being made) will resume.
3. If the instrument is switched off before pressing the “Prg” key, all modifications to parameters will be lost.

To Reset Any Alarms With Manual Reset

Prg **▲** **mute** **aux** Press and hold the “Prg” and “aux” key for at least 1 second.



How To Change Reading From Fahrenheit (°F) To Celsius (°C)

Prg **Set** 1. Press and hold “Prg” and “SET” keys together for at least 5 seconds; display will show “0” (password prompt).

▲ **aux** 2. Press ▲ until password “22” is reached.

Set 3. Confirm by pressing “SET” key.

▲ **def** **▼** 4. Press ▲ or ▼ until reaching the parameter “/ 5.”

Set 5. Press “SET” to modify this selected parameter.

▲ **def** **▼** 6. Press ▲ or ▼ to change value to desired setting: “0” for Celsius (°C) or “1” for Fahrenheit (°F).

Set 7. Press “SET” key to temporarily save the new value and return to the display of the parameter.

Prg **mute** 8. Press & hold “Prg” key for 5 full seconds to save changes. **Note! All values will automatically convert to new scale. No conversion is required.**

This data derived from Carel® Controller Material:
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Unit Document - Revision A Date: 04/07/2022

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Microprocessor Controller



User Interface - Display

ICON	FUNCTION	DESCRIPTION	ON	Normal operation OFF	BLINK	Start up
	COMPRESSOR	ON when the compressor starts. Flashes when the activation of the compressor is delayed by safety times.	Compressor on	Compressor off	awaiting activation	
	FAN	ON when the fan starts. Flashes when the activation of the fan is prevented due to external disabling or procedures in progress.	Fan on	Fan off	awaiting activation	
	DEFROST	ON when the defrost is activated. Flashes when the activation of the defrost is prevented due to external disabling or procedures in progress.	Defrost in progress	Defrost not in progress	awaiting activation	
	AUX	Flashes if the anti-sweat heater function is active, ON when the auxiliary output (1 and/or 2) selected as AUX (or LIGHT in firmware version 3.6) is activated.	AUX auxiliary output active (version 3.6 light auxiliary output active)	AUX auxiliary output not active	Anti-sweat heater function active	
	ALARM	ON following pre-activation of the delayed external digital input alarm. Flashes in the event of alarms during normal operation (e.g. high/low temperature) or in the event of alarms from an immediate or delayed external digital input.	Delayed external alarm (before the time 'A7' elapses)	No alarm present	Alarms in norm. operation (e.g. High/low temperature) or immediate or delayed alarm from external digital input	
	CLOCK	ON if at least one timed defrost has been set. At start-up, comes ON for a few seconds to indicate that the Real Time Clock is fitted.	If at least 1 timed defrost event has been set	No timed defrost event set	Alarm clock	ON if real-time clock present
	LIGHT	Flashes if the anti-sweat heater function is active, ON when the auxiliary output (1 and/or 2) selected as LIGHT is activated (in firmware version 3.6 it does not flash in anti-sweat heater mode and comes on when the dead band output is active).	Light auxiliary output on (version 3.6 dead band auxiliary output active)	Light auxiliary output off	Anti-sweat heater function active (version 3.6 does not flash in anti-sweat heater mode)	
	SERVICE	Flashes in the event of malfunctions, for example E2PROM errors or probe faults.		No malfunction	Malfunction (e.g. E2PROM error or probe fault). Contact service	
	CONTINUOUS CYCLE	ON when the CONTINUOUS CYCLE function is activated. Flashes if the activation of the function is prevented due to external disabling or procedures in progress (E.g.: minimum compressor OFF time).	CONTINUOUS CYCLE operation activated	CONTINUOUS CYCLE function not activated	CONTINUOUS CYCLE operation requested	

Summary Table of Alarm and Signals: Display, Buzzer and Relay

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E1	flashing	off	off	automatic	defrost probe S2 fault
E2	flashing	off	off	automatic	probe S3 fault
E3	flashing	off	off	automatic	probe S4 fault
E4	flashing	off	off	automatic	probe S5 fault
	No	off	off	automatic	probe not enabled
LO	flashing	on	on	automatic	low temperature alarm
HI	flashing	on	on	automatic	high temperature alarm
AFr	flashing	on	on	manual	antifreeze alarm
IA	flashing	on	on	automatic	immediate alarm from external contact
dA	flashing	on	on	automatic	delayed alarm from external contact
dEF	on	off	off	automatic	defrost running
Ed1	No	off	off	automatic/manual	defrost on evaporator 1 ended by timeout
Ed2	No	off	off	automatic/manual	defrost on evaporator 2 ended by timeout
Pd	flashing	on	on	automatic/manual	maximum pump down time alarm
LP	flashing	on	on	automatic/manual	low pressure alarm
AtS	flashing	on	on	automatic/manual	autostart in pump down
cht	No	off	off	automatic/manual	high condenser temperature pre-alarm
CHT	flashing	on	on	manual	high condenser temperature alarm
dor	flashing	on	on	automatic	door open too long alarm
EE	flashing	off	off	automatic	E2prom error, unit parameters
EF	flashing	off	off	automatic	E2prom error, operating parameters
ccb	Signal				start continuous cycle request
ccE	Signal				end continuous cycle request
dFb	Signal				start defrost call
dFE	Signal				end defrost call
On	Signal				switch ON
off	Signal				switch OFF
rES	Signal				reset alarms w/manual reset / reset HACCP alarms / reset temp. monitoring

This data derived from Carel® Controller Material:
ir33 +030220441 - rel. 2.0 - 01.05.2006. Structural Concepts
Heated Unit Document - Revision A Date: 04/07/2022



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Integrated Electronic
Microprocessor Controller



Summary Table of Operating Parameters

CODE	PARAMETER	UOM*	TYPE	MINIMUM	MAXIMUM	DEFAULT
/5	Select Celsius (°C) or Fahrenheit (°F)	flag	C	0	1	For Case Specific Defaults See Serial Label Located Near Electrical Access On Your Case. For Additional Technical Information Call Structural Concepts Technical Service Dept. at 1(800) 433.9490 Ext. 1
/c1	Calibration of probe 1	°C/°F	C	-20	20	
St	Temperature set point	°C/°F	F	r2	r1	
rd	Control delta	°C/°F	F	20	0.1	

* Unit Of Measure

This data derived from Carel® Controller Material:
ir33 +030220441 - rel. 2.0 - 01.05.2006. Structural Concepts
Heated Unit Document - Revision A Date: 04/07/2022

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.)

LIMITED WARRANTY

Overview: All sales by Structural Concepts Corporation (hereafter, "SCC") are subject to the following limited warranty. "Goods" refers to the product or products being sold by SCC.

Warranty Scope: Warranty is for equipment sold in the United States, Canada, Mexico and Puerto Rico. Equipment sold elsewhere may carry modified warranties.

Warranty; Remedies; Limitations: The limit of liability of SCC toward the exchange cost of the original compressor motor (and/or any other components) is one year parts and labor. If any Goods are found to be of faulty material or workmanship within one year of the original F.O.B. (free on board) unit shipment, SCC will, at its option (after inspection by an authorized representative), replace or pay the reasonable cost of replacement of the faulty Goods. If warranty claim is not made within this one year time period, SCC is not bound to warrant Goods. A motor-compressor (and/or any other components) replaced during the warranty shall not exceed manufacturer's current established wholesaler's exchange price. If replacement motor-compressor (and/or other components) is available via storage facility, parts truck, etc., SCC mandates that readily accessible replacement components be used toward repair of Goods; in such instances, SCC will replace such equipment (at its own expense) after confirmation of its use/placement on defective unit. SCC shall not be charged an additional fee, up-charge or expense for such replacement Goods. If SCC is unable to repair or replace the defective Goods, SCC shall issue a credit to the Purchaser for full or partial purchase price, as SCC shall determine. The replacement or payment in the manner described above shall be the sole and exclusive remedy to Purchaser for a breach of this warranty. If any Goods are defective or fail to conform to this warranty, SCC will furnish instructions for their disposition. No Goods shall be returned to SCC without its prior consent.

SCC's liability for any defect in the Goods shall not exceed the purchase price of the Goods. SCC SHALL HAVE NO LIABILITY TO PURCHASER FOR CONSEQUENTIAL DAMAGES OF ANY KIND WHATSOEVER, INCLUDING, BUT NOT LIMITED TO, PERSONAL INJURY, PROPERTY DAMAGE, LOST PROFITS, OR OTHER ECONOMIC INJURY DUE TO ANY DEFECT IN THE GOODS OR ANY BREACH OF SCC. SCC SHALL NOT BE LIABLE TO THE PURCHASER IN TORT FOR ANY NEGLIGENT DESIGN OR MANUFACTURE OF THE GOODS, OR FOR THE OMISSION OF ANY WARNING THEREFROM.

SCC shall have no obligation or liability under this warranty for claims arising from any other party's (including Purchaser's) negligence or misuse of the Goods or environmental conditions. This warranty does not apply to any claim or damage arising from or caused by improper storage, handling, installation, maintenance, or from fire, flood, accidents, structural defects, building settlement or movement, acts of God, or other causes beyond SCC's control.

Except as expressly stated herein, SCC makes no warranty, express, implied, statutory or otherwise as to any parts or goods not manufactured by SCC. SCC shall warrant such parts or Goods only (I) against such defects, (II) for such periods of time, and (III) with such remedies, as are expressly warranted by the manufacturer of such parts of Goods. Notwithstanding the foregoing, any warranty with respect to such parts of Goods and any remedies available as a result of a breach thereof shall be subject to all of the procedures, limitations, and exclusions set forth herein.

THE WARRANTIES HEREIN ARE IN LIEU OF ALL WARRANTIES, EXPRESS, IMPLIED, STATUTORY, OR OTHERWISE. IN PARTICULAR, SCC MAKES NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

No representative, agent or dealer of SCC has authority to modify, expand, or extend this Warranty, to waive any of the limitations or exclusions, or to make any different or additional warranties with respect to Goods.

Period of Limitations: No claim, suit or other proceeding may be brought by Purchaser for any breach of the foregoing warranty or this Agreement by SCC or in any way arising out of this Agreement or relating to the Goods after one year from the date of the breach. In the interpretation of this limitation on action for a breach by SCC, it is expressly agreed that there are no warranties of future performance of the goods that would extend that period of limitation herein contained for bringing an action.

Indemnifications: Purchaser agrees to indemnify, hold harmless, and defend SCC if so requested, from any and all liabilities, as defined herein, suffered, or incurred by SCC as a result of, or in connection with, any act, omission, or use of the Goods by Purchaser, its employees or customers, or any breach of this Agreement by Purchaser. Liabilities shall include all costs, claims, damages, judgments, and expenses (including reasonable attorney fees and costs).

Remedies of SCC: SCC's rights and remedies shall be cumulative and may be exercised from time to time. In a proceeding or action relating to the breach of this Agreement by Purchaser, Purchaser shall reimburse SCC for reasonable costs and attorney's fees incurred by SCC. No waiver by SCC of any breach of Purchaser shall be effective unless in writing nor operate as a waiver of any other breach of the same term thereafter. SCC shall not lose any right because it has not exercised it in the past.

Applicable Law. This Agreement is made in Michigan; it is governed by and interpreted according to Michigan law. Any lawsuit arising out of this Agreement or the Goods may be handled by a federal or state court whose district includes Muskegon County, Michigan, and Purchaser consents that such court shall have personal jurisdiction over Purchaser.

LED Lighting Components Within Lighting System: Supermarket: 5-year LED warranty from date of shipment. Foodservice: 2-year LED warranty from date of shipment. After one year, warranty does not include labor or other costs incurred for diagnosing, repairing, removing, installing, shipping, servicing, or handling of either defective part or replacement parts. Remedy of repair or provision of a replacement part without charge shall be the exclusive remedy for any warranty claim. The replacement LED and/or power supply assumes the unused portion of warranty remaining on unit(s). A 90-day warranty will apply for any LED sold as a service part. Warranty claim must include serial and model number of unit as well as date code on defective LED lighting component(s). Manufacturer may request return of defective part(s) at customer's expense to initiate claim.

Glass Material: Glass (UV-bonded glass, glass sneeze guards, glass enclosures, glass held in place via posts, etc.) is only warranted to FIRST POINT OF DELIVERY.

Miscellaneous: If any provision of this Agreement is found to be invalid or unenforceable under any law, the provision shall be ineffective to that extent and for the duration of the illegality, but the remaining provisions shall be unaffected. Purchaser shall not assign any of its rights nor delegate any of these obligations under this Agreement without prior written consent of SCC. This Agreement shall be binding upon and inure to the benefit of SCC and Purchaser and each of their legal representatives, successors and assignees.

SCC warrants its products to be free of defects in materials and workmanship under normal use and service for a period of one (1) year from the date of delivery.

This warranty is extended only to the original purchaser for use of the Goods. It does not cover normal wear parts such as plastic tongs, tong holders, tong cables, bag holders, or acrylic dividers.

General Conditions: All service labor and/or parts charges are subject to approval by SCC. Contact Customer Service Dept. in writing, by phone, fax or email.

All claims must contain the following information: (1) model & serial code number of equipment; (2) the date and place of installation; (3) the name and address of the agency which performed the installation; (4) the date of the equipment failure; and (5) a complete description of the equipment failure and all circumstances relating to that failure.

Once the claim has been determined to be a true warranty claim by SCC's Customer Service Department, the following procedure will be taken: (1) replacement parts will be sent at no charge from SCC on a freight prepaid basis; (2) reimbursement for service labor will be paid if the following conditions have been met - (a) prior approval of service agency was awarded from the Customer Service Department; and (b) an itemized statement of all labor charges incurred is received by the Customer Service Department. The cost of the service labor reimbursement will be based on straight time rates and reasonable time for the repair of the defect.

If problems occur with any compressor, notify SCC's Customer Service Department immediately. Any attempt to repair or alter the unit without prior consent from the Customer Service Department will render any warranty claim null and void. This warranty and protection plan does not apply to any condensing unit or any part thereof which has been subject to accident, negligence, misuse, or abuse, or which has not been operated in accordance with the manufacturer's recommendations or if the serial number of the unit has been altered, defaced, or removed.

One Year Limit of Liability: During SCC's one-year parts and labor warranty on the original F.O.B. (free on board) unit, SCC is liable for BOTH the equipment and labor costs of repairing or replacing the motor compressor and any other components that were included in the original F.O.B. (free on board) unit.

Five Year Limit of Liability: After the one-year parts and labor warranty on the original F.O.B. (free on board) unit has expired, a PARTS ONLY warranty on the compressor will continue through the fifth year (from the receipt date of the original F.O.B. unit). After the first year of warranty has expired, SCC's warranty covers compressor and/or compressor PARTS ONLY; it does NOT include labor or other costs incurred for diagnosing, repairing, removing, installing, shipping, servicing, or handling of compressor or compressor parts. Furthermore, this warranty will be honored ONLY ONCE during the five year period from the original F.O.B. (free on board) unit shipment date.