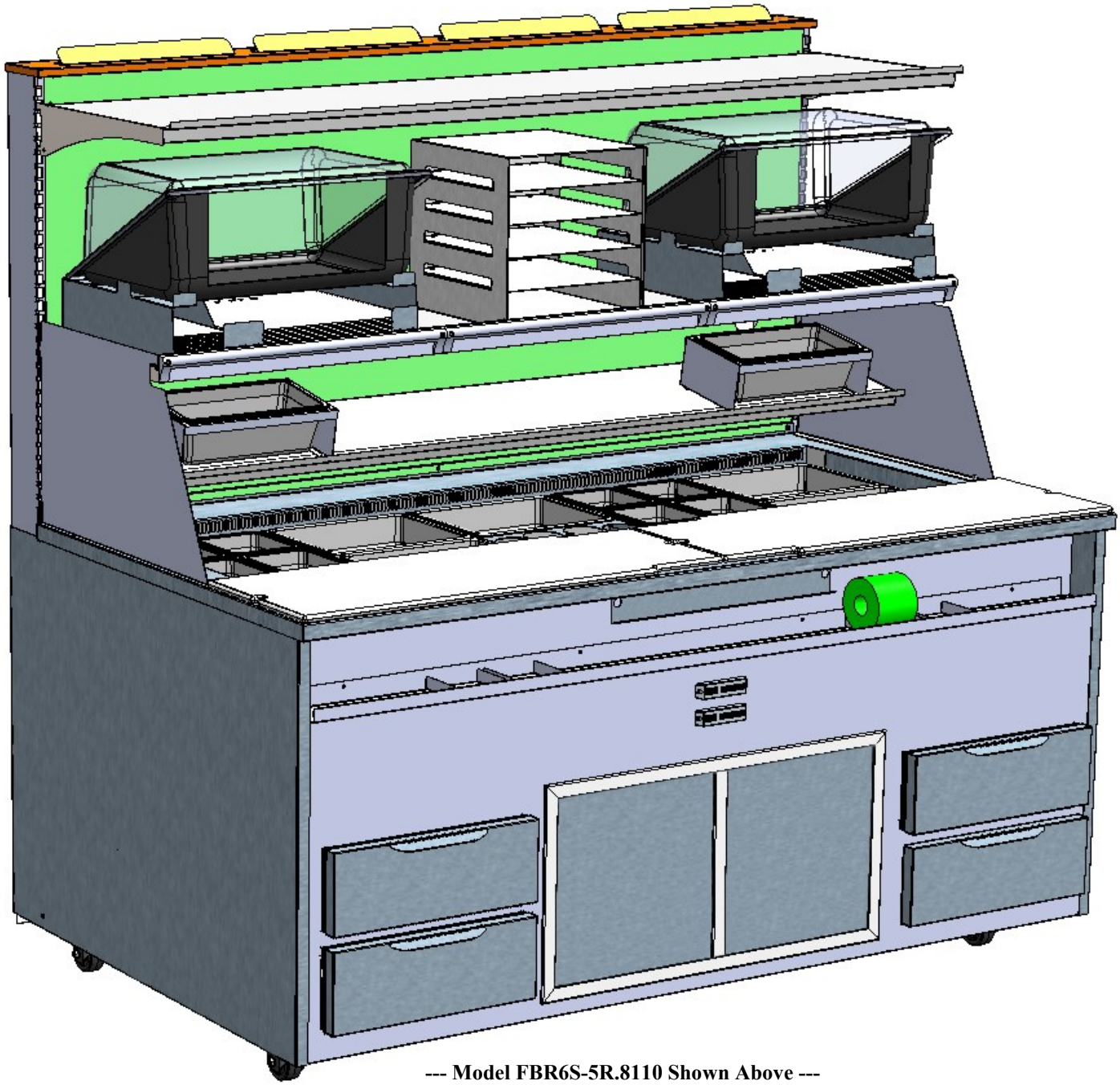
READ AND SAVE THESE INSTRUCTIONS

FUSION USER MANUAL

SCC P/N 21-31395

FUSION REFRIGERATED MODEL FBR6S-5R.8110 SUB PREP WITH FLAT TOP WORK AREA

- **> SELF-CONTAINED R290 SYSTEM WITH FLAMMABLE REFRIGERANT**
- **> MULTIPLE SANALITE WORK SURFACES/CUTTING BOARDS**
- **> REFRIGERATED DRAWERS and CUBBY FOR STORAGE**
- **> CHANNEL FOR LABEL/TISSUE BOX STORAGE**



--- Model FBR6S-5R.8110 Shown Above ---

Structural Concepts®

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

TABLE OF CONTENTS

OVERVIEW

- These cases are designed to merchandise packaged products at 41 °F (5 °C) or less product temperatures.
- Product must be pre-chilled to 41 °F (5 °C) or less product temperatures prior to placing in merchandiser.
- Cases should be installed and operated according to this operating manual's instructions to ensure proper performance. Improper use will void warranty.

NSF/ANSI TYPE II ENVIRONMENTAL CONDITIONS

- This unit is designed for the display of products in ambient indoor store conditions where temperature and humidity are maintained within a specific range.
- This NSF/ANSI Type II display refrigerator is intended to be used where environmental conditions are controlled and maintained so that ambient temperature does not exceed 80 °F (27 °C) and 55% relative humidity.
- Due to atmospheric pressure considerations, it is not recommended that these box door cases operate beyond 6,562 FASL (feet above sea level) / 2,000 MASL (meters above sea level). If your facility exceeds this thresholds, please contact Structural Concepts Corp.

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

Carefully read warnings listed below to prevent electrical shock or injury (including burns) to fingers, hands or other extremities.

>> See next page for continuation.

COMPLIANCE

- **These cases MUST be installed in compliance with all applicable NEC, federal, state and local electrical and plumbing codes.**
- **These cases must ALSO be installed in accordance with the Safety Standard for Refrigeration Systems, ANSI/ASHRAE 15.**
- **ONLY factory authorized service personnel are to service these box cases.**
- **Service shall ONLY be performed on these box cases as recommended by the manufacturer.**

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

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

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

OVERVIEW, CONT'D

WARNINGS, CONT'D

- Carefully read warnings listed below to prevent damage to product, equipment or yourself.

WARNING: 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.

DANGER - RISK OF FIRE OR EXPLOSION

- There is a risk of gas under high pressure, risk of fire explosion, etc.
- Specific storage guidelines, service guidelines, LFL (lower flammability limit), etc.
- Read specifics below.

>> See next page for continuation.

WARNING

- **Do not use means to accelerate the defrosting process or to clean, other than those recommended by the manufacturer.**
- **The case shall be stored in a room without continuously operating ignition sources (for example, open flames, an operating gas appliance or an operating electric heater).**
- **Do not pierce or burn.**
- **Be aware that refrigerants may NOT contain an odor.**
- **You must keep required ventilation openings clear of obstruction.**

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.

DANGER

- **Refrigeration unit contains gas under high pressure. Do not tamper with or puncture the system. Contact qualified service personnel before disposal.**
- **Risk of fire or explosion. Flammable refrigerant is used in this case.**
- **Consult repair manual/owner's guide before servicing this product.**
- **Do not store explosive substances (such as aerosol cans with a flammable propellant) in this case.**
- **Do not use an electrical appliance INSIDE the food storage compartments unless its type is recommended by manufacturer.**
- **To minimize risk of ignition due to incorrect parts or improper service, this case is ONLY to be serviced by factory authorized service personnel.**
- **Flammable refrigerant type specified on case nameplate is on serial label.**
- **Model FBR6S-5R.8110 contains a charge of 150g (5.3 ounces) of R290 refrigerant with a lower flammability limit (LFL) of .038kg/m^3 (.035 oz/ft^3).**

OVERVIEW, CONT'D

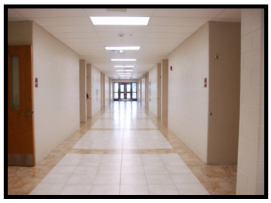
CAUTION

- This sheet also details the area required for operation, areas to avoid placing case, guidelines for children (and others with limited capabilities) while near box door cases.
- This sheet also provides information on refrigeration recovery, recycling and disposal.
- This sheet also provides information on recycling and disposal of refrigerant (including appropriate labeling of equipment thereto).
- Read specifics below.

>> See next page for continuation.

≥7.1m² (23.29ft²)

CAUTION
Minimum room floor area required for operation of these box door cases is ≥7.1m² (23.29ft²).



CAUTION

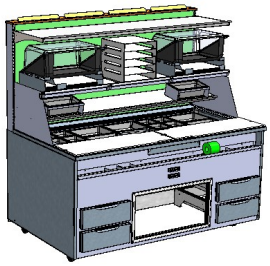
- **These cases are NOT to be installed in lobbies or locations of egress, such as hallways, public corridors.**
- **If case is placed in an enclosure or surrounding structure, keep all of the case's ventilation openings clear of obstructions.**

CAUTION

- **This unit is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the unit by a person responsible for their safety.**
- **Children should be supervised to ensure that they do not 'play with' the unit.**

CAUTION: REFRIGERANT RECOVERY/RECYCLING/DISPOSAL

- **When recycling or discarding case, refrigerants MUST BE handled according to local, state and federal codes, requirements and regulations.**
- **If disposing of a refrigerated case that uses ozone depleting chemicals in its refrigeration system, make sure the refrigerant is removed by a qualified service technician and properly disposed of.**
- **If you intentionally release refrigerant into the atmosphere, you may be subject to fines or other penalties (under regulations mandated by environmental regulators and/or legislative edict).**



CAUTION: REFRIGERANT RECYCLING/DISPOSAL / UNIT LABELING

- **These units contains FLAMMABLE REFRIGERANTS.**
- **Before recycling or disposing of your unit, FLAMMABLE REFRIGERANTS must be recovered/recycled/disposed of.**
- **After FLAMMABLE REFRIGERANT has been removed by a qualified service technician, ensure that there are labels on the equipment stating the equipment HAD contained FLAMMABLE REFRIGERANT.**

OVERVIEW, CONT'D

CAUTION, CONT'D

- This sheet contains cautionary notes and information on shelving load limits, breaker use, thermometers, thermostats, power cord/plug maintenance, checking condensate pan, and wiring diagram format & location.
- Wiring diagram location/placement varies depending upon model.
- Read specifics below.

>> See next page for continuation.

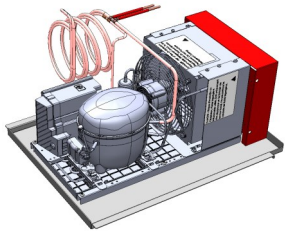
CAUTION! BREAKER USE REQUIREMENT
N.E.C. (National Electric Code) or local code requires dedicated breaker.

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

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

CAUTION! POWER CORD AND PLUG MAINTENANCE

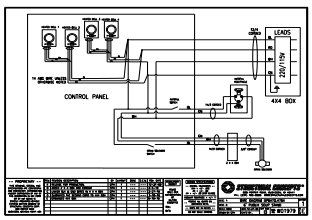
Risk of electric shock. If cord(s) and/or plug(s) becomes damaged, replace only with cord(s) and/or plug(s) of same type.



CAUTION! CHECK CONDENSATE PAN, POSITION & CONNECTIONS!

Water on flooring can cause extensive damage!

- **Before powering up case, check that condensate pan is positioned directly under case's condensate drain.**
- **Also, check that there are NO LOOSE CONNECTIONS, including overflow condensate pan and its power cord plug (if part of the condensate package).**



WIRING DIAGRAM FORMAT & LOCATION

- **Each case has its own wiring diagram folded and in its own packet.**
- **Wiring diagram placement may vary; it may be placed near ballast box, field wiring box, raceway cover, or other related location.**

OVERVIEW, CONT'D

QUALIFICATION OF WORKING PERSONNEL

- When performing maintenance, service and repair on units with ***FLAMMABLE REFRIGERANTS***, there are specific requirements for persons carrying out such tasks.
- Read specifics below.

SERVICING UNITS WITH FLAMMABLE REFRIGERANTS

- Read specifics below.

WORK PROCEDURE / GENERAL WORK AREA

- Read specifics below.

CHECKING REFRIGERANT / FIRE EXTINGUISHER

- Read specifics below.

> See next page for continuation.

QUALIFICATION OF WORKING PERSONNEL

- **Only authorized, approved, competent personnel should provide maintenance, service and repair to cases with FLAMMABLE REFRIGERANTS.**
- **Every working procedure that affects safety means shall ONLY be carried out by competent persons according to UL Annex 101.DVT (the section pertaining to competence of service personnel).**
- **Per Annex 101.DVT, training should include the substance of the following:**
  - **> Information about explosion potential of FLAMMABLE REFRIGERANTS.**
  - **> Information about potential ignition sources (especially the inconspicuous such as lighters, light switches, vacuum cleaners, electric heaters).**
  - **> Information about safety concepts such as leaky refrigerant issues, unventilated vs ventilated enclosures and rooms.**
  - **> Information about refrigerant detectors.**
  - **> Information about the concept of sealed components and sealed enclosures.**
  - **> Information about correct working procedures, including commissioning, maintenance, repair, decommissioning and disposal.**
- **Training must be conducted by national training organizations or manufacturers that are accredited to teach relevant national competency standards that may be set in legislation. Competency to be documented by an achievement certificate.**

SERVICING UNITS WITH FLAMMABLE REFRIGERANTS

- **Prior to beginning work on systems containing FLAMMABLE REFRIGERANTS, safety checks are necessary to ensure that the risk of ignition is minimized.**

WORK PROCEDURE / GENERAL WORK AREA

- **Work shall be under a controlled procedure so as to minimize the risk of a flammable gas or vapor being present while the work is being performed.**
- **All maintenance staff (and others working in the local area) shall be instructed on the nature of work being carried out. Work in confined spaces shall be avoided.**

CHECKING FOR REFRIGERANT / FIRE EXTINGUISHER ACCESS

- **The area shall be checked with appropriate refrigerant detector prior to and during work, to ensure the technician is aware of potentially toxic or flammable atmospheres.**
- **Personnel must ensure that leak detection equipment being used is suitable for use with all applicable refrigerants, i.e., non-sparking, adequately sealed or intrinsically safe.**
- **If any 'hot work' is to be conducted on refrigerant equipment (or any associated parts), appropriate fire extinguishing equipment shall be available on hand. A dry chemical or CO_2 fire extinguisher should be adjacent to the charging area.**

OVERVIEW, CONT'D

NO IGNITION SOURCES
- Read specifics below.

VENTILATED AREA
- Read specifics below.

CHECKS TO REFRIGERATING EQUIPMENT
- Read specifics below.

CHECKS TO ELECTRICAL DEVICES
- Read specifics below.

> See next page for continuation.

NO IGNITION SOURCES

- **No person carrying out work in relation to a REFRIGERATING SYSTEM which involves exposing any pipe work shall use any sources of ignition in such manner that it may lead to the risk of fire or explosion. All possible ignition sources, including cigarette smoking, should be kept sufficiently far away from site of installation, repairing, removing and disposal, during which refrigerant can possibly be released to the surround space.**
- **Prior to work taking place, the area around the equipment shall be surveyed to make sure there are no flammable hazards or ignition risks. "No Smoking" signs shall be displayed.**

VENTILATED AREA

- **Ensure that the area is in the open or that it is adequately ventilated before breaking into the system or conducting any 'hot work.'**
- **A degree of ventilation shall continue during the period that the work is carried out. The ventilation should safely disperse any released refrigerant and preferably expel it externally into the atmosphere.**

CHECKS TO REFRIGERATING EQUIPMENT

Where electrical components are being changed, they shall be fit for the purpose and to the correct specification. The manufacturer's maintenance and service guidelines shall be followed at all times. If in doubt, consult the manufacturer's technical department for assistance. The following checks shall be applied installation using FLAMMABLE REFRIGERANTS:

a) The actual REFRIGERANT CHARGE is in accordance with the room size within which the refrigerant containing parts are installed.
b) The ventilation machinery and outlets are operating adequately and are not obstructed.
c) If an indirect refrigerating circuit is being used, the secondary circuit shall be checked fo the presence of refrigerant.
d) Marking to the equipment continues to be visible and legible. Markings and signs that are illegible shall be corrected.
e) Refrigerating pipe or components are installed where they are unlikely to be exposed to any substance which may corrode refrigerant containing components, unless the components are constructed of materials which are inherently resistant to being corroded or suitably protected against being corroded.

CHECKS TO ELECTRICAL DEVICES

- **Repair and maintenance to electrical components shall include initial safety checks and component inspection procedures. If a fault exists that could compromise safety, then no electrical supply shall be connected to the circuit until it is satisfactorily resolved. If the fault cannot be corrected immediately but is necessary to continue operation, an adequate temporary solution shall be employed.**
- **This shall be reported to the owner of the equipment so all parties are advised.**

OVERVIEW, CONT'D

CHECKS TO ELECTRICAL DEVICES, CONT'D

- Read specifics below.

REPAIRS TO SEALED COMPONENTS

- Read specifics below.

REPAIRS TO INSTRINSICALLY SAFE COMPONENTS

- Read specifics below.

CABLING

- Read specifics below.

> See next page for continuation.

CHECKS TO ELECTRICAL DEVICES, CONT'D

- **Initial safety checks shall include:**
  a) that capacitors are discharged: this shall be done in a safe manner to avoid possibility of sparking;
  b) that no live electrical components are wiring are exposed while charging, recovering or purging the system;
  c) that there is continuity of earth bonding.

REPAIRS TO SEALED COMPONENTS

- **During repairs to sealed components, all electrical supplies shall be disconnected from the equipment being worked upon prior to any removal of sealed covers, etc.**
- **If it necessary to have an electrical supply to equipment during servicing, then a permanently operating form of leak detection shall be located at the most critical point to warn of a potentially hazardous situation.**
- **Particular attention shall be paid to the following to ensure that by working on electrical components, the casing is not altered in a manner that the level of protection is affected. This shall include damage to cables, excessive number of connections, terminals not made to original specification, damage to seals, incorrect fitting of glands, etc. Ensure that the apparatus is mounted securely.**
- **Ensure that seals or sealing materials have NOT degraded to the point of no longer preventing the ingress of flammable atmospheres. Replacement parts shall be per the manufacturer's specifications.**

REPAIRS TO INTRINSICALLY SAFE COMPONENTS

- **Do not apply any permanent inductive or capacitance loads to the circuit without ensuring that this will not exceed the permissible voltage and current permitted for the equipment in use.**
- **Intrinsically safe components are the only types that can be worked on while live in the presence of a flammable atmosphere. The test apparatus shall be at the correct rating.**
- **Replace components ONLY with parts specified by the manufacturer. Other parts can result in the ignition in the atmosphere from a leak.**
- **Note: The use of silicon sealant can inhibit the effectiveness of some types of leak detection equipment intrinsically safe components do not have to be isolated prior to working on them.**

CABLING

- **Check that cabling will NOT be subject to wear corrosion, excessive pressure, vibration, sharp edges, or any other adverse environmental effects.**
- **The check shall also take into account the effects of aging or continual vibration from sources such as compressors or fans.**

OVERVIEW, CONT'D

DETECTION OF FLAMMABLE REFRIGERANTS

- Read specifics below.

REMOVAL AND EVACUATION

- Read specifics below.

> See next page for continuation.

DETECTION OF FLAMMABLE REFRIGERANTS

- **Under no circumstances shall potential sources of ignition be used in the searching for (or detection of) refrigerant leaks. A halide torch (or any other detector using a naked flame SHALL NOT be used.**
- **The following leak detection methods are deemed acceptable for all refrigerant systems.**
- **Electronic leak detectors may be used to detect refrigerant leaks but, in the case of FLAMMABLE REFRIGERANTS, the sensitivity might not be adequate, or might need recalibration. (Detection equipment shall be calibrated in a refrigerant-free area). Ensure that the detector is not a potential source of ignition and is suitable for the refrigerant used.**
- **Leak detection equipment shall be set at a percentage of the LFL of the refrigerant and shall be calibrated to the refrigerant employed, and the appropriate percentage (25% maximum) of gas is confirmed.**
- **Leak detection fluids are also suitable for use with most refrigerants but the use of detergents containing chlorine shall be avoided as the chlorine can react with the refrigerant and corrode the copper pipe-work.**
- **Examples of leak detection fluids are a) bubble method and b) fluorescent method agents.**
- **If a leak is suspected, all naked flames shall be removed/extinguished.**
- **If a leakage of refrigerant is found which requires brazing, all refrigerant shall be recovered from the system or isolated (by means of shut-off valves) in a part of the system remove from the leak. Removal of refrigerant shall be according to UL Annex Clause 101.DVS.9.**

REMOVAL AND EVACUATION

- **When breaking into the refrigerant circuit to make repairs (or for any other purpose) conventional procedures shall be used. However, for flammable refrigerants, best practice MUST be followed, since flammability is a consideration.**
- **The following procedures shall be adhered to: a) safely remove refrigerant following local and national regulations; b) purge the circuit with inert gas; c) evacuate (optional for A2L); d) purge with inert gas (optional for A2L) e) open the circuit by cutting or brazing.**
- **The refrigerant charge shall be recovered into the correct recovery cylinders if venting is not allowed by local and national codes.**

OVERVIEW, CONT'D

REMOVAL AND EVACUATION, CONT'D

- Read specifics below.

CHARGING PROCEDURES

- Read specifics below.

> See next page for continuation.

REMOVAL AND EVACUATION, CONT'D

- **For cases containing flammable refrigerants, the system shall be purged with oxygen-free nitrogen to render the unit safe for flammable refrigerants. This process might need to be repeated several times. Compressed air or oxygen shall not be used for purging refrigerant systems.**
- **For case containing flammable refrigerants, refrigerants purging shall be achieved by breaking the vacuum in the system with oxygen-free nitrogen and continuing to fill until the working pressure is achieved, then venting to atmosphere, and finally pulling down to a vacuum (optional for A2L).**
- **This process shall be repeated until no refrigerant is within the system (optional for A2L). When the final oxygen-free nitrogen charge is used, the system shall be vented down to atmospheric pressure to enable work to take place.**
- **Ensure that the outlet for the vacuum pump is not close to any potential ignition sources and that ventilation is available.**

CHARGING PROCEDURES

In addition to conventional charging procedures, the following requirements shall be followed.

a) Ensure that contamination of different refrigerants does not occur when using charging equipment. Hoses or lines shall be as short as possible to minimize the amount of refrigerant contained in them.

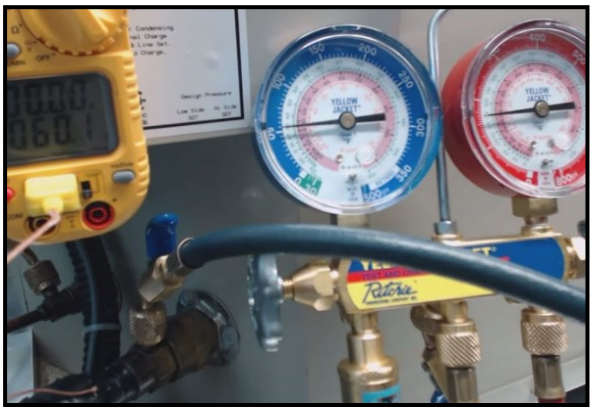
b) Cylinders shall be kept in an appropriate position according to the instructions.

c) Ensure that the REFRIGERATION SYSTEM is searched prior to charging the system with refrigerant.

d) Label the system when charging is complete (if not already.

e) Extreme care shall be taken not to overfill the REFRIGERATING SYSTEM.

- **Prior to recharging the system, it shall be pressure-tested with the appropriate purging gas.**
- **The system shall be leak-tested on completion of charging but prior to commissioning.**
- **A follow-up leak test shall be carried out prior to leaving the site.**

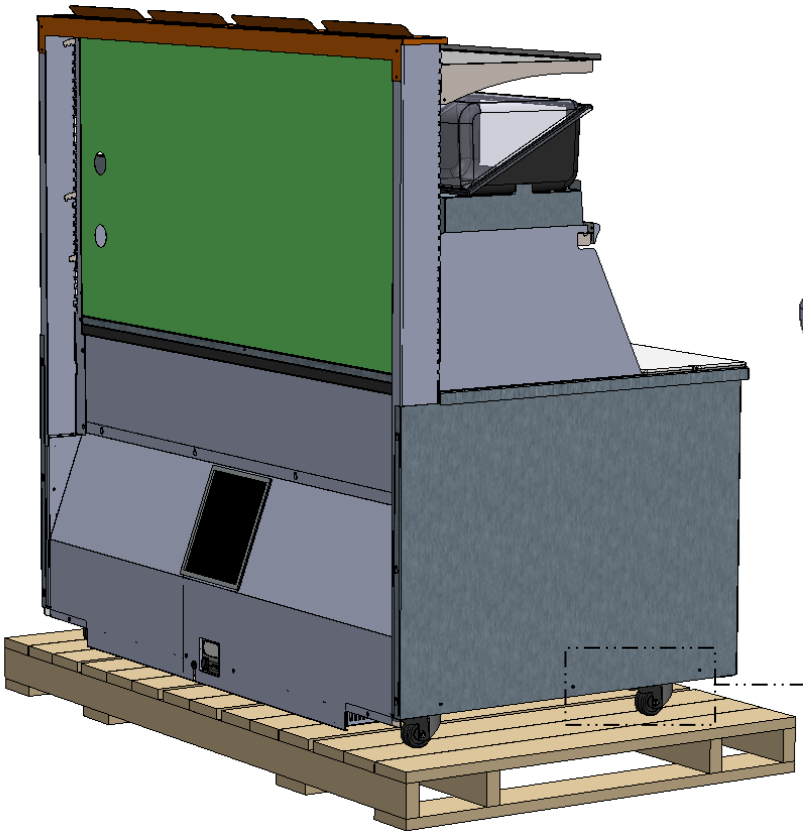


INSTALLATION: REMOVAL OF CASTER BRACKETS FROM SKID

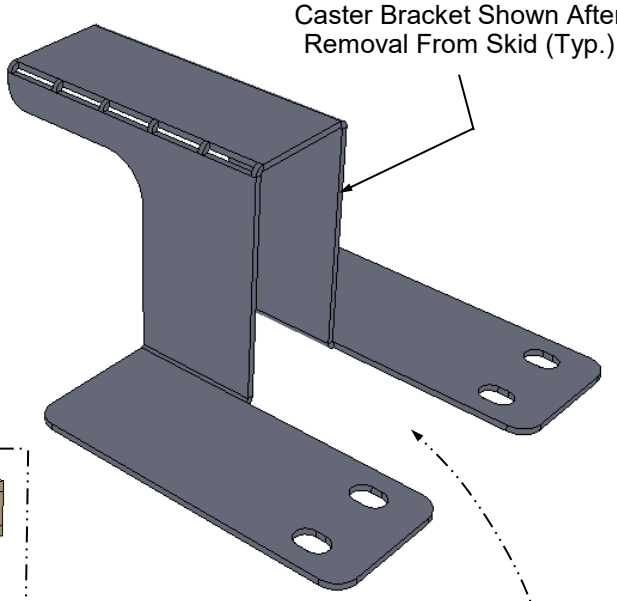
1. Remove Caster Brackets

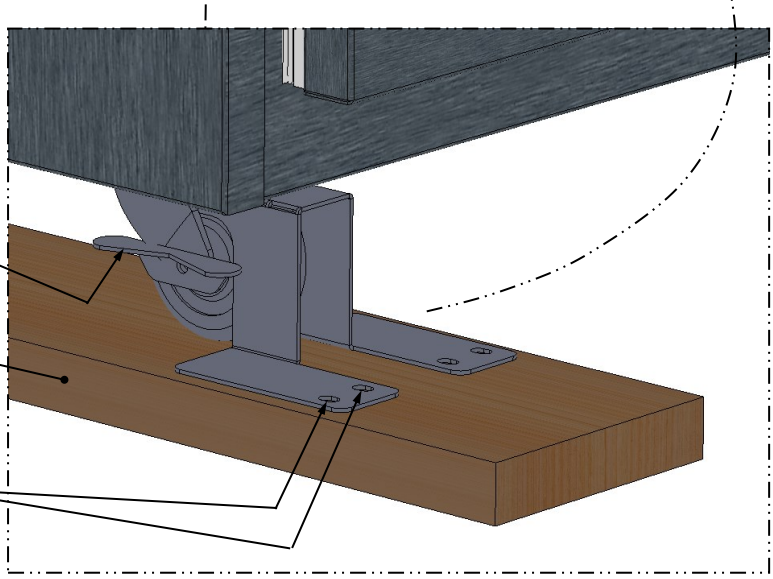
- Caster brackets secure case to skid during shipment
- Remove caster bracket retaining screws.
- Remove caster brackets from skid. Discard/recycle.

Note: Illustration shown reflects model FBR6S-5R.8110. It may not reflect every feature or option of your particular model.



Caster Bracket Shown After Removal From Skid (Typ.)





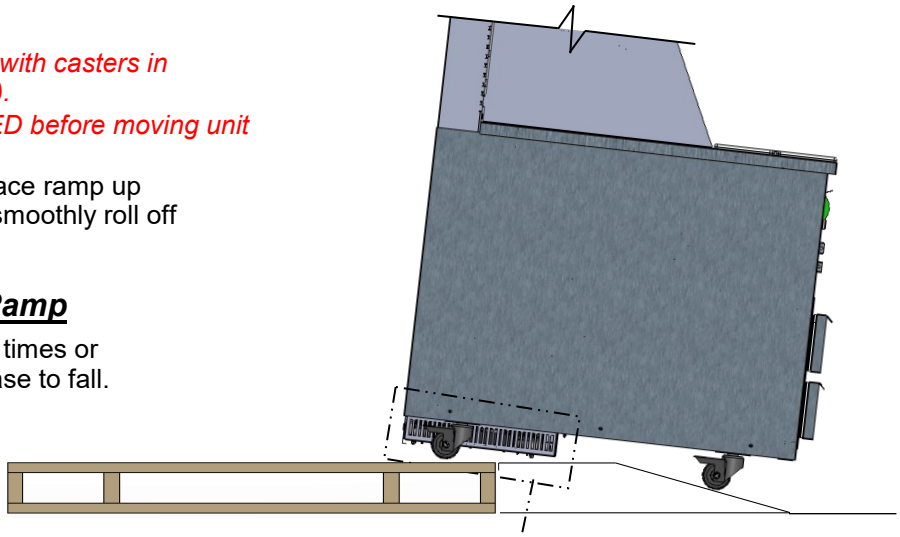
Sample Caster With Lock/Unlock Capability. Note: Your Caster Locking System May Differ.

Small Section of Skid Board (Typ.)

Caster Bracket Retaining Screws (Typ.)

2. Unlocking Casters

- *Important! Cases are shipped with casters in LOCKED position (for stability).*
- *All casters must be UNLOCKED before moving unit off skid and into position.*
- After levelers are unlocked, place ramp up against skid (to allow case to smoothly roll off from skid).



3. Roll Case Off Skid via Ramp

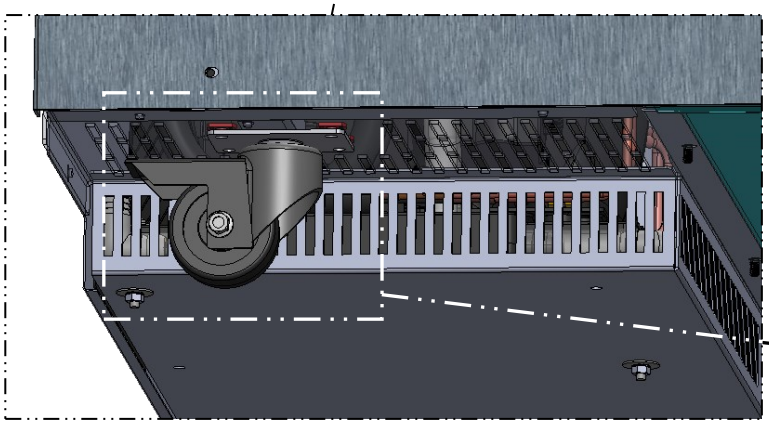
- Maintain support of case at all times or center of gravity may cause case to fall.
- Roll unit to rear of skid.
- Check that ramp is secure and possibly even attached to skid with screws.
- Carefully roll down ramp and off skid.

4. Position & Align Alongside Other Cases

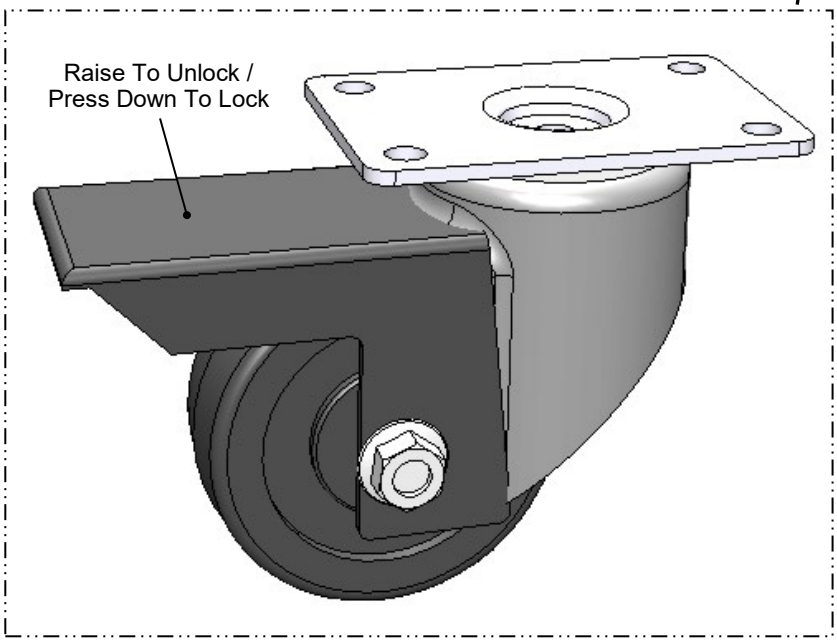
- Before locking casters again, make certain that the case is in proper position and, if required, aligned with adjoining case(s).
- This may require repositioning of the case you are installing or the already positioned cases.

5. Locking Casters

- Press down on caster lock to secure in place.
- Raise caster lock to allow casters to turn freely.
- See illustration at lower-right for sample locking caster.



--- Rotated Underside View of Model FBR6S-5R.8110 ---

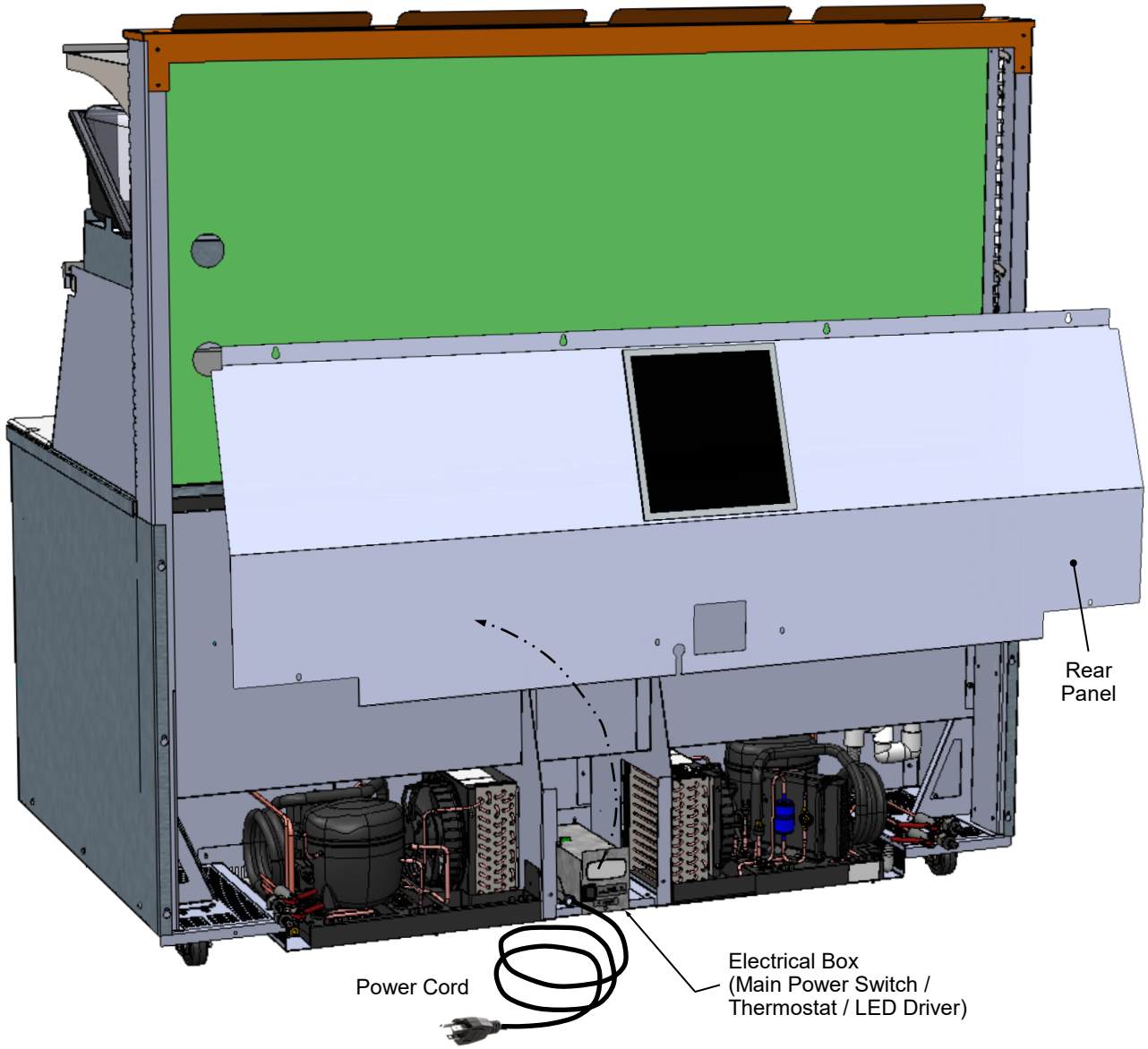


6. Check Condenser Package Connections Before Powering Up Case!

- ***Caution! Connections can come loose during shipment; this can allow water to overflow onto floor, causing damage!***
- When case in is proper location, remove rear panel to check for loose connections.
- Rear panel can be removed by removing screws, grasping panel and pulling outward and off.
- Place away from foot traffic while checking connections.
- See ***TROUBLESHOOTING*** section in operating manual for various troubleshooting issues.
- Return rear panel to case in reverse order it was removed.

7. Reattach Panel / Turn On Power To Case

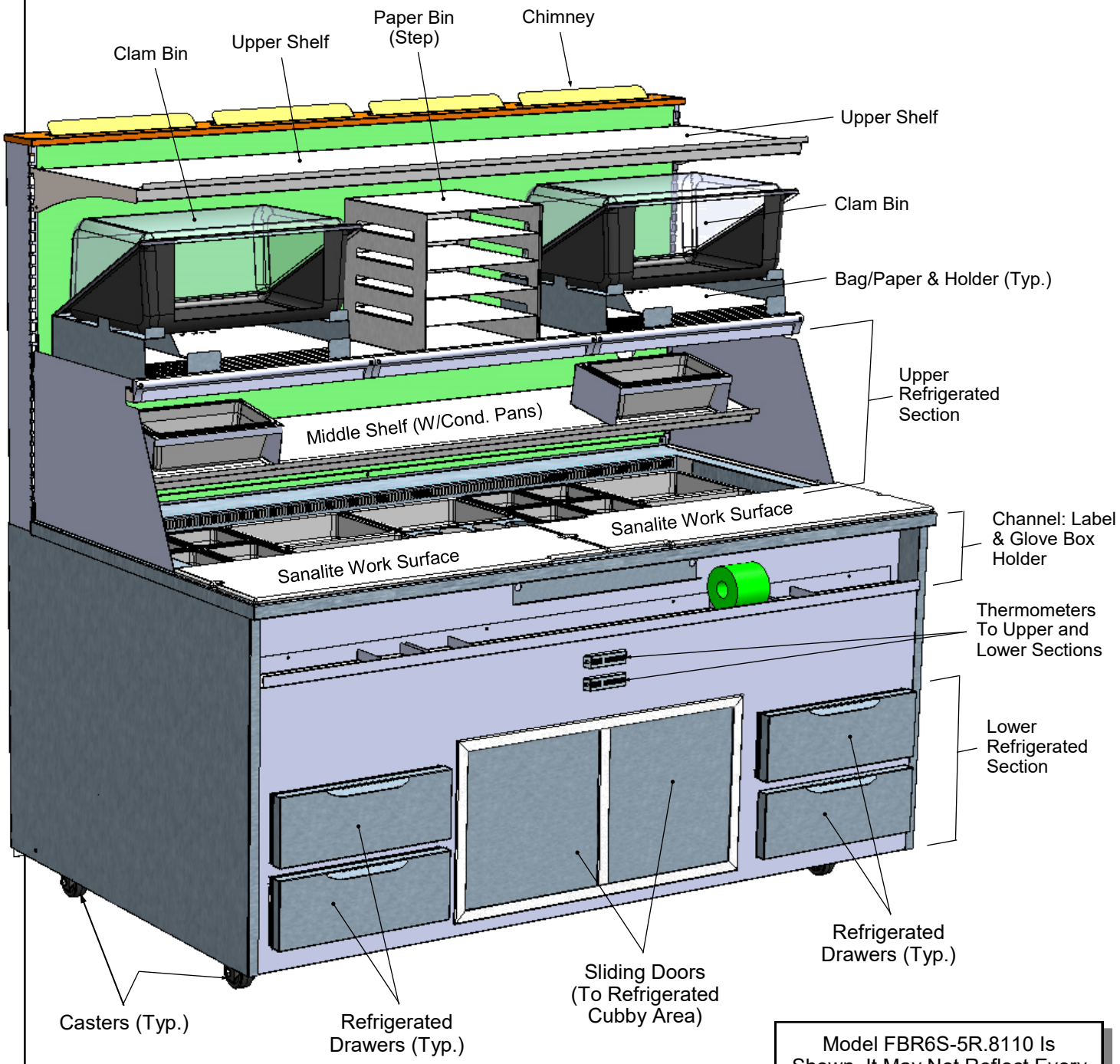
- Return rear panel to case.
- Plug in power cord.
- Turn on main power switch (at rear center).
- Check that programmable controller is energized.
- Check that case is energized and that evaporator fans are rotating.



1. Front View of Case

- Components are called out based on factory specifications.
- Your particular store's layout/design may differ than illustration shown.

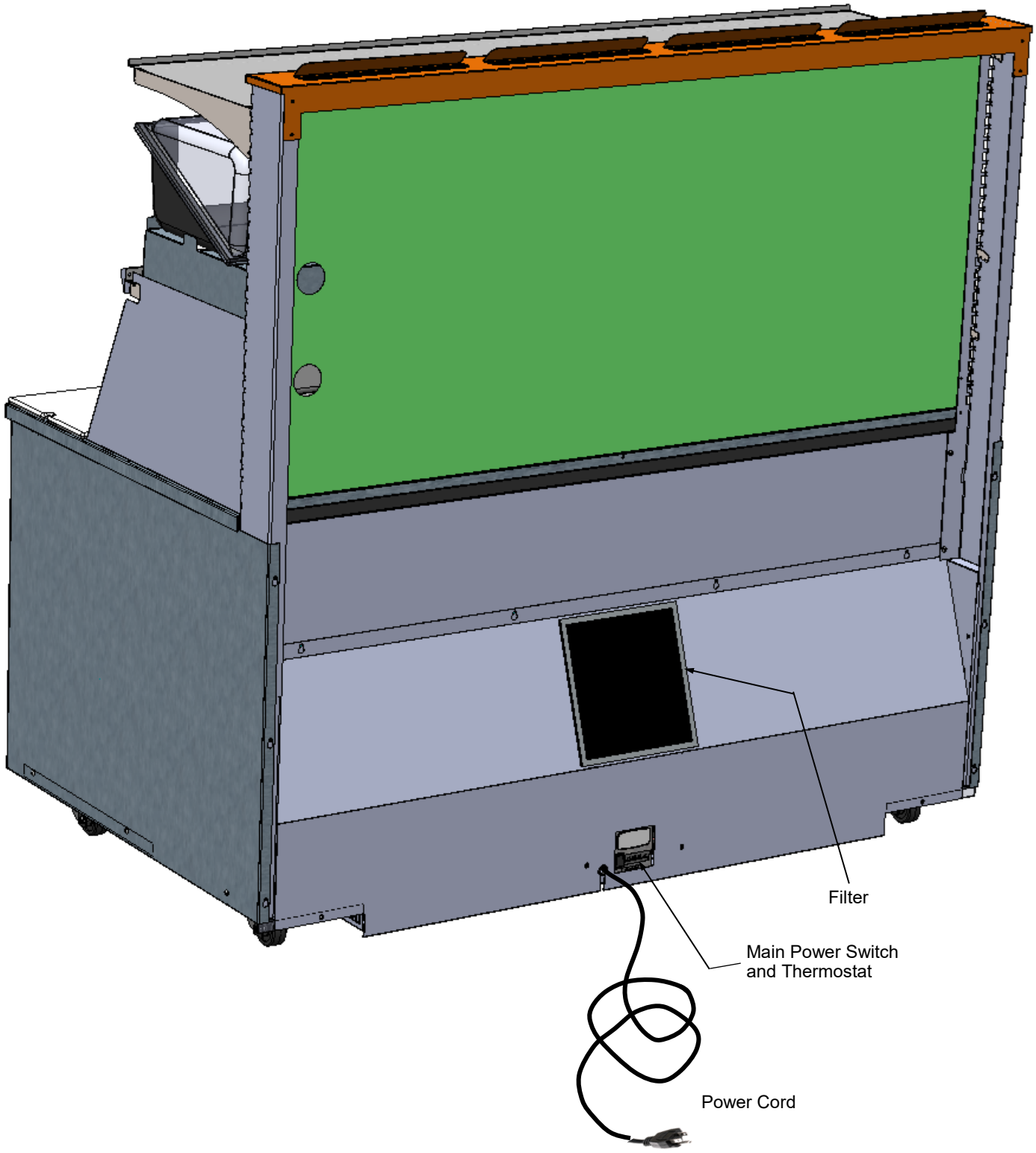
>> *See next page for continuation.*



Model FBR6S-5R.8110 Is Shown. It May Not Reflect Every Feature or Option of Your

2. Rear View of Case

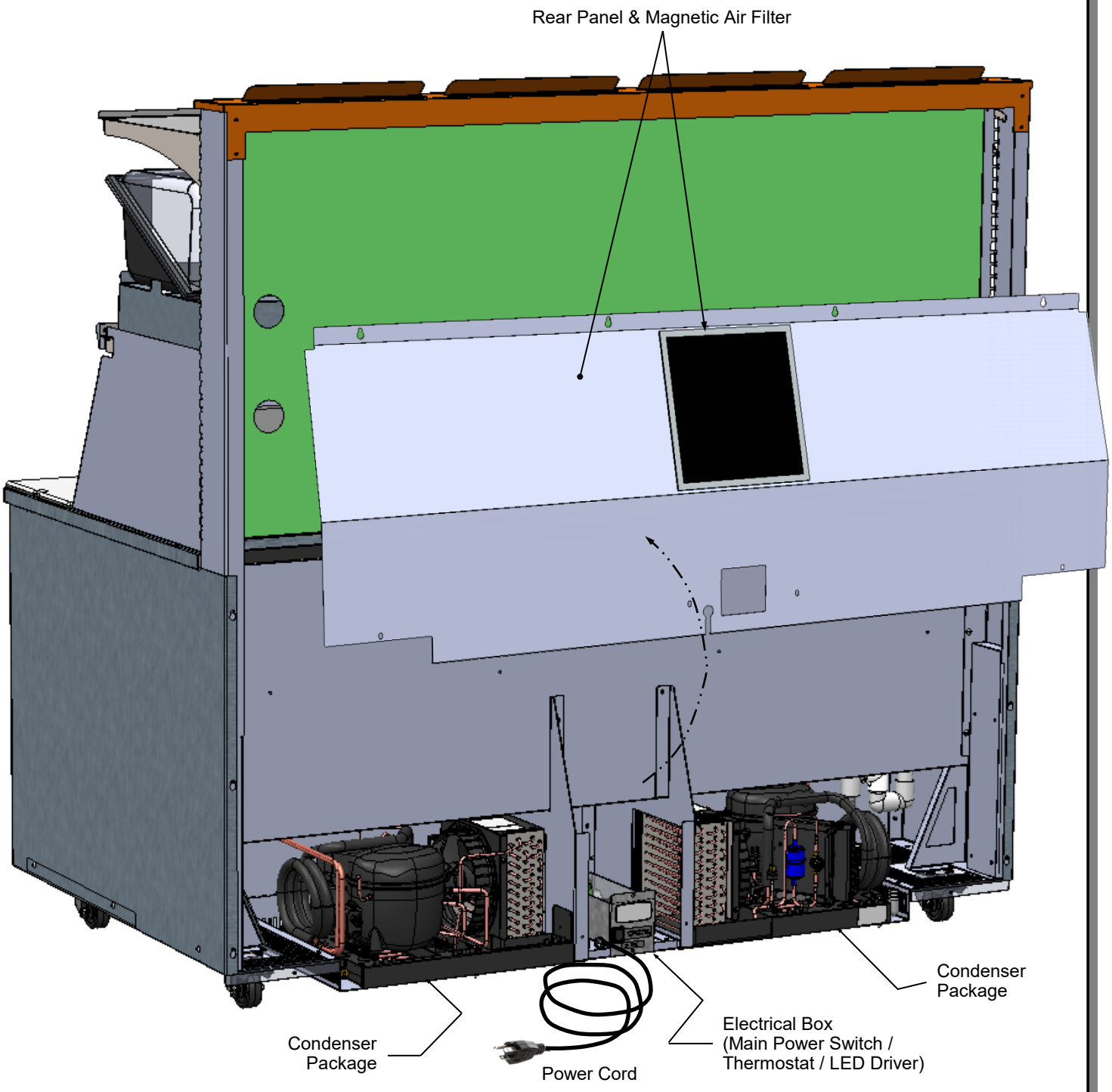
- Main power switch and thermostat is at case rear (rear panel does NOT need to be removed to access thermostat).
- See illustration below.



3. Rear View of Case

- Rear panel is shown removed to show access to condenser package and electrical box.
- Electrical box contains the main power switch, thermostat, LED driver, etc.

>> See next page for continuation.

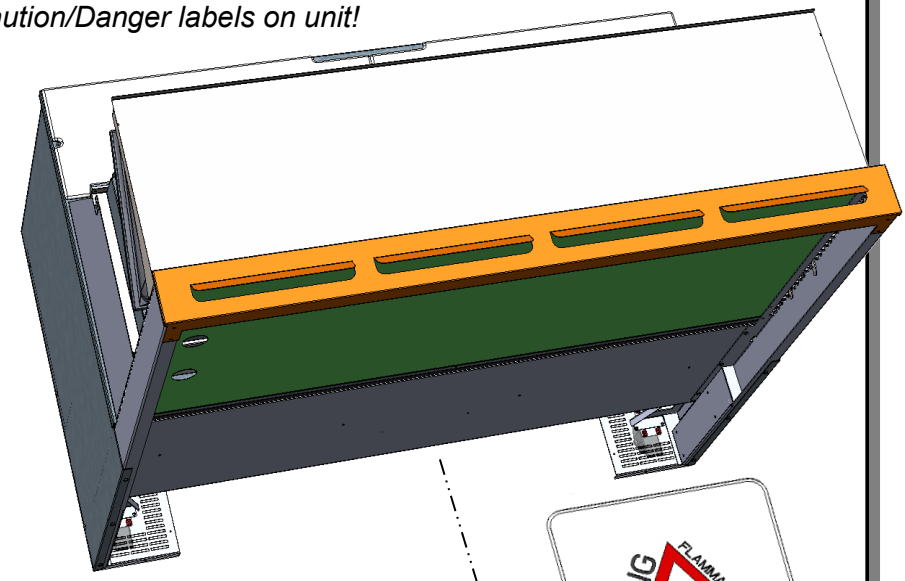


4. Self-Contained Hot Gas Loop Condensate Package

- *Caution: Only trained service providers are to provide maintenance and service to unit.*
- *Warning! Disconnect power before providing maintenance and service to unit.*
- *Important: Carefully read all Warning/Caution/Danger labels on unit!*

>> See next page for continuation.

Model FBR6S-5R.8110 Is Shown. It May Not Reflect Every Feature or Option of Your Particular Case.

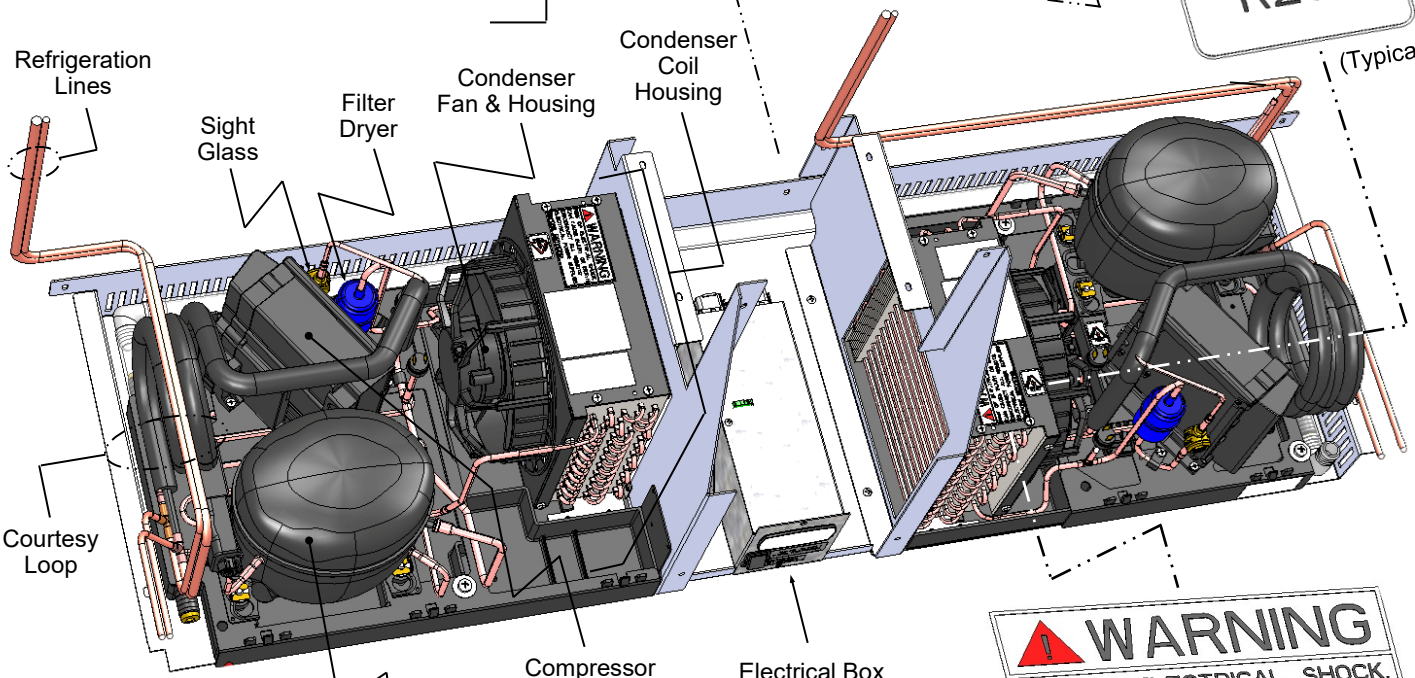


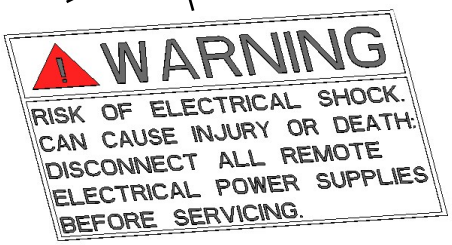
CAUTION - Risk Of Fire Or Explosion. Flammable Refrigerant Used. Consult Repair Manual/Owner's Guide Before Attempting To Install or Service This Product. All Safety Precautions Must be Followed.

DANGER - Risk of Fire Or Explosion. Flammable Refrigerant Used. To Be Repaired Only By Trained Service Personnel. Do Not Puncture Refrigerant Tubing.

Additional Caution / Danger Labels

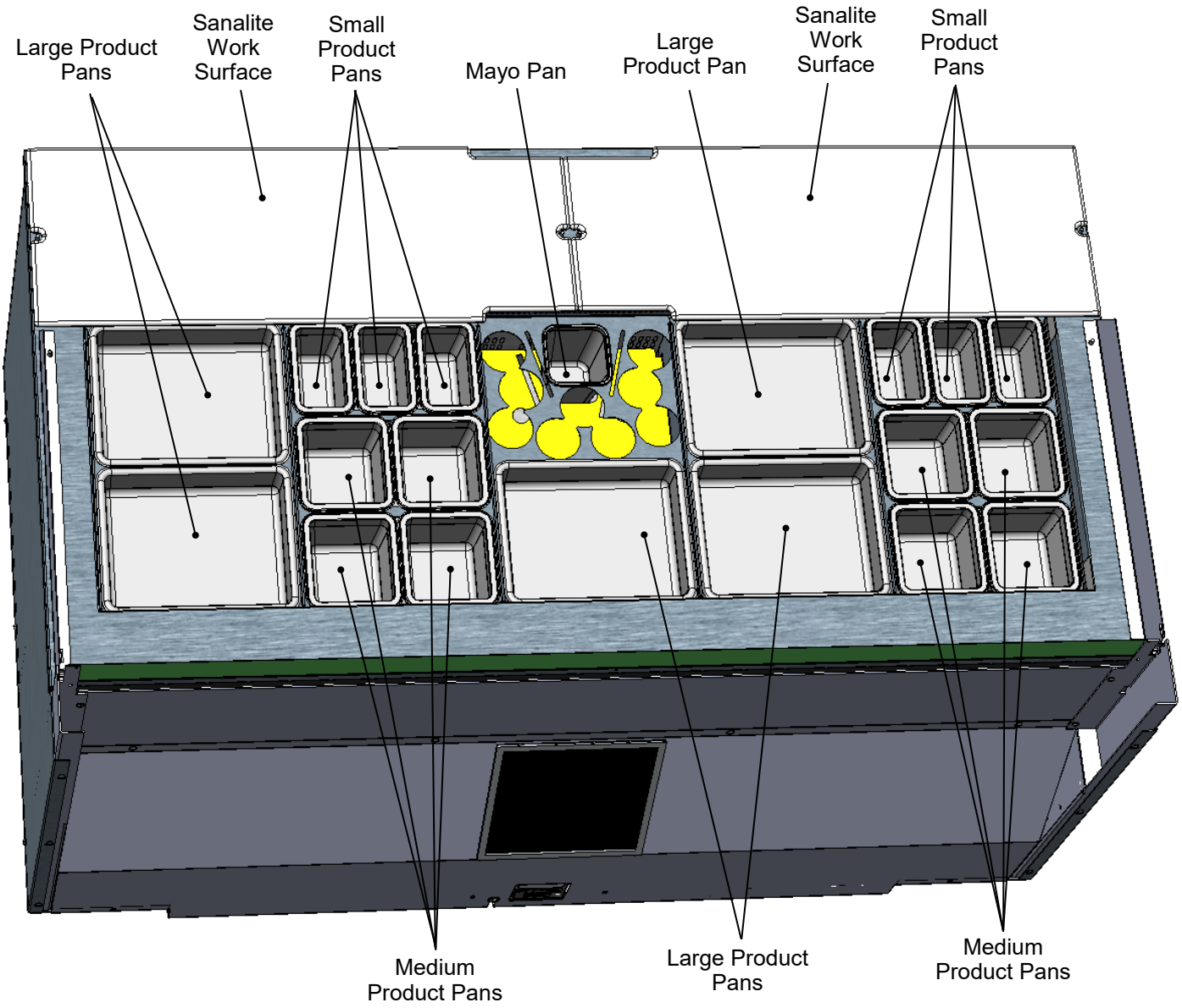
(Typical)





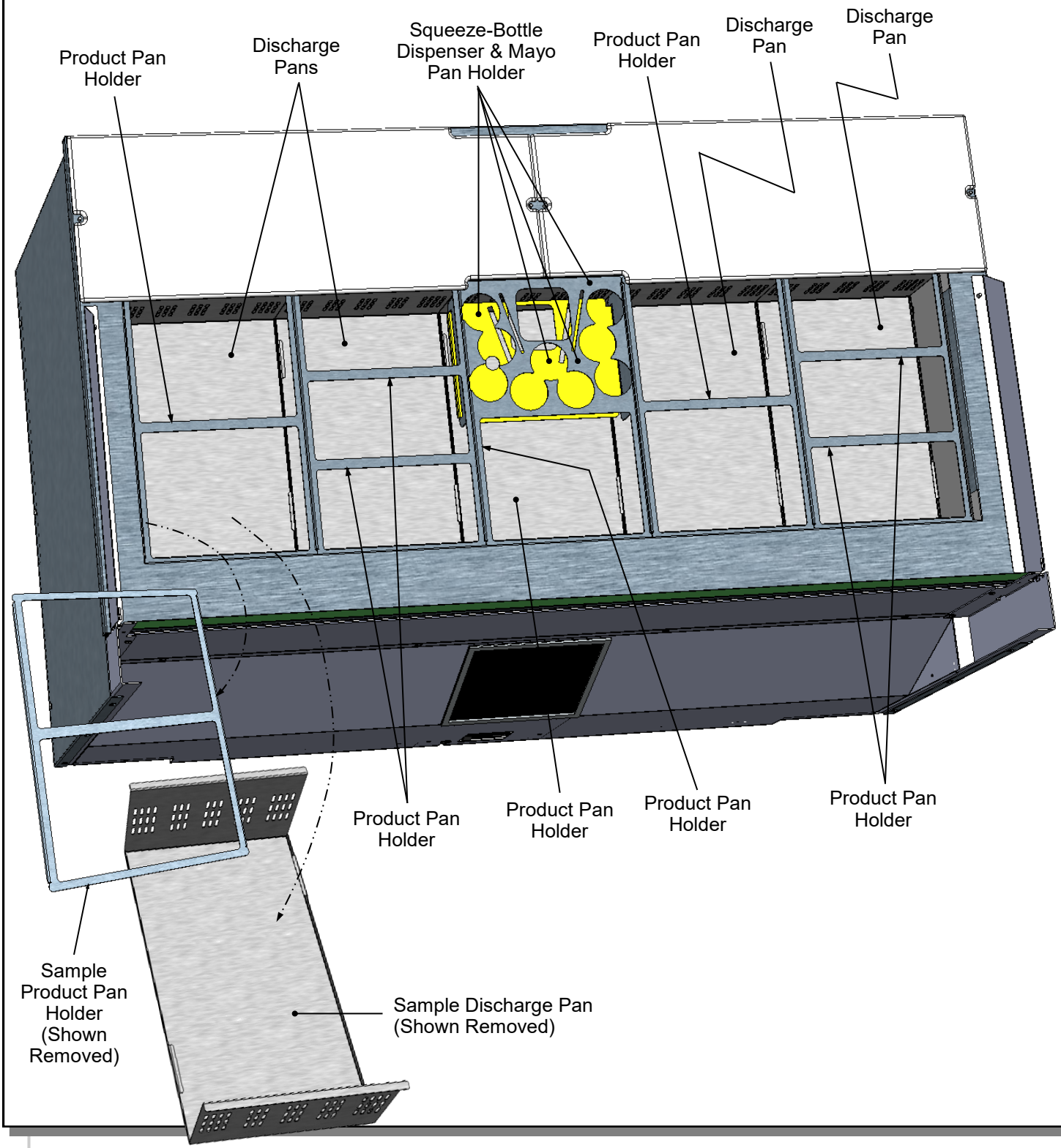
5. Product Pans & Mayo Pan Holder / Sanalite Work Surfaces

- Stainless steel product pans & mayo pan are removable from case (for cleaning and/or replacement).
- Sanalite work surfaces are also removable from case (for cleaning and/or replacement).
- See illustration below.



6. Product Pan Holders & Squeeze Bottle Dispenser Holders

- Stainless steel product pans & squeeze bottle dispenser holders are removable from case (for cleaning and/or replacement).
- See illustration below for both intact and removed components (for illustrative purposes only).



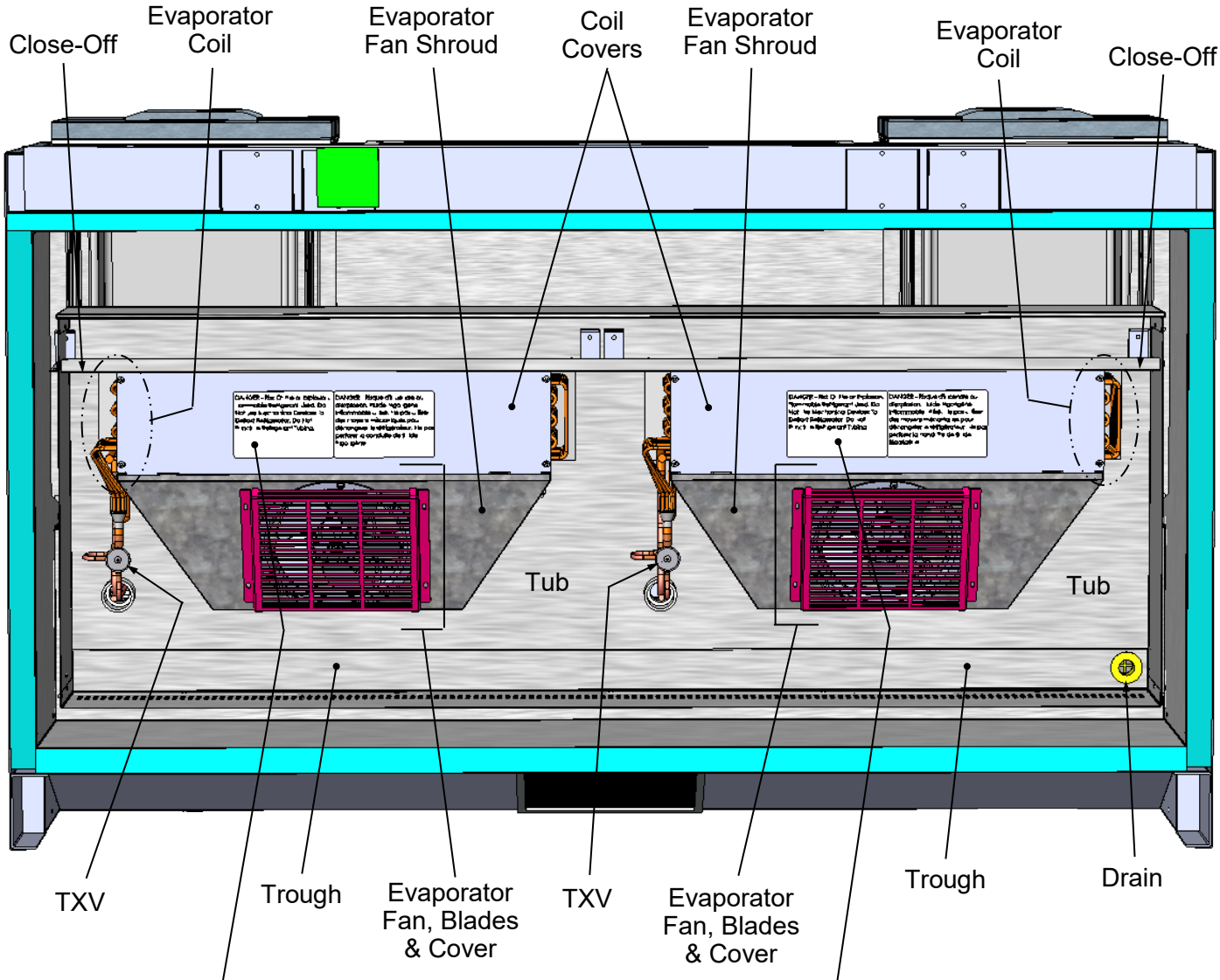
7. Evaporator Coil Fans / Air Discharge

>> Illustration below is shown AFTER all product pan holders and discharge pans have been removed.
>> When case is energized, refrigeration of unit is operational.

- Evaporator coil fan should turn on.
- From inside of the case, check for discharge air from honeycomb discharge duct to confirm that the fan is functioning properly.
- When the case is in a start-up mode or has been idle for a long period of time, the unit will require 75-minutes of run time to pull-down temperature.

8. TXV (Thermostatic Expansion Valve)

- Dual TXV system is utilized on this model.
- See illustration below for TXV locations.

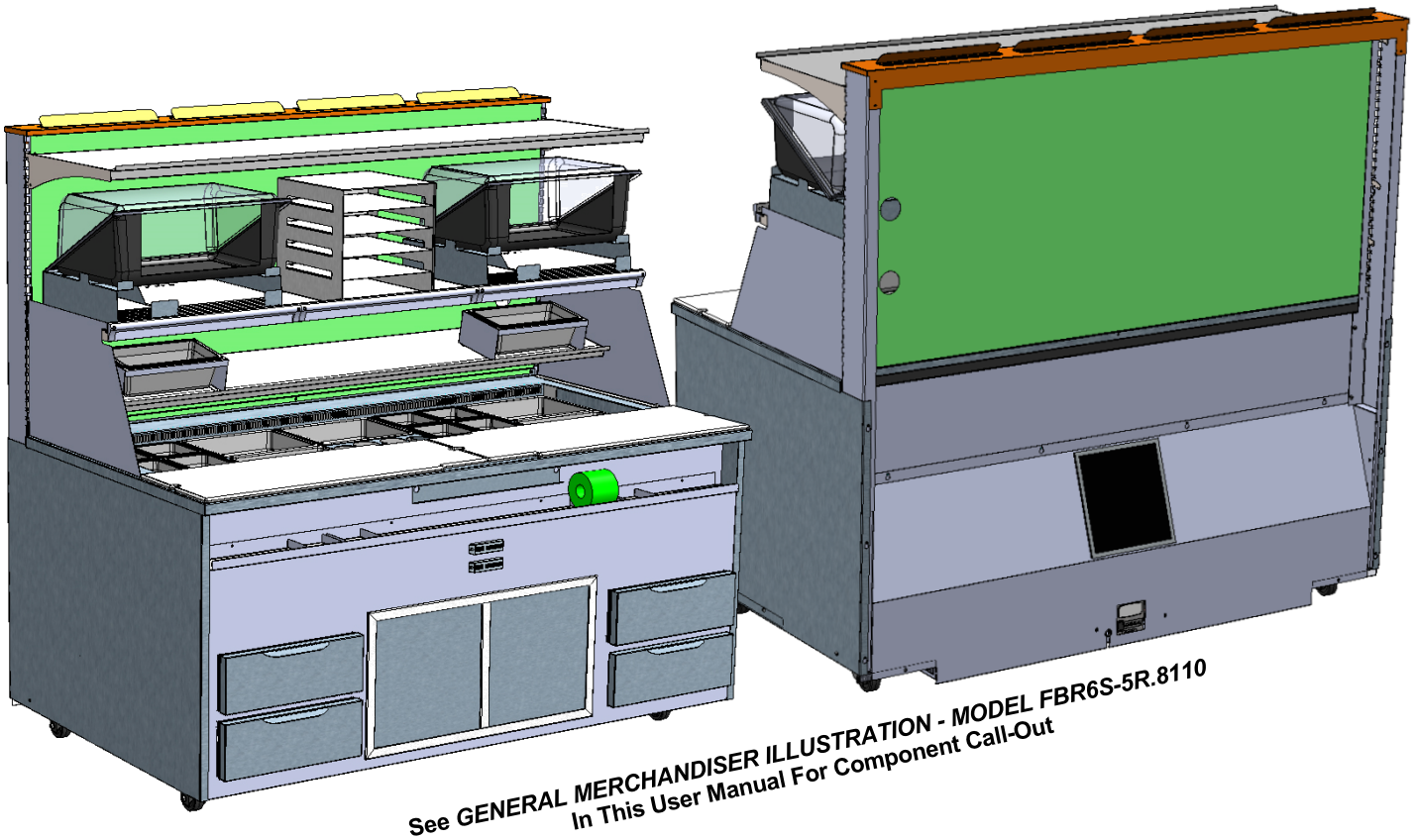


DANGER - Risk Of Fire or Explosion. Flammable Refrigerant Used. Do Not Use Mechanical Devices To Defrost Refrigerator. Do Not Puncture Refrigerant Tubing.

DANGER - Risk Of Fire or Explosion. Flammable Refrigerant Used. Do Not Use Mechanical Devices To Defrost Refrigerator. Do Not Puncture Refrigerant Tubing.

CLEANING SCHEDULE - PERFORMED BY STORE PERSONNEL

FREQ.	INSTRUCTIONS
Daily	**Inner Metal Components (Shelves, Decks, Rear Plenum, Acrylic Bins, Etc.):** • Wipe with cloth dipped in mild-soapy water. Dry with soft cloth.
Daily	**Outer Metal Components (Sliding Doors, Drawers, Rear Channel (For Labels), End Panels, Side Air Deflectors, Rear Chimney, Etc.):** • Wipe with cloth dipped in mild-soapy water. Dry with soft cloth.
Daily	**Sanalite Cutting Boards:** • Wipe with cloth dipped in mild-soapy water. Rinse with spray bottle of pure water. Dry with soft cloth.
Weekly	**Sanalite Cutting Boards, Metal Work Surface, Rear Filter, Refrigerated Drawers and Cubby Area** • Sanalite cutting boards: Remove from case. Submerse Sanalite cutting boards in warm, soapy water and clean with soft-bristled brush. Rinse. Dry with soft cloth. Return to its metal work surface (after it has been cleaned). • Metal work surface (at underside of Sanalite cutting boards), refrigerated drawers and cubby area (accessible via center sliding doors): Wipe with cloth dipped in mild-soapy water. Dry with soft cloth.
Weekly	**Magnetic Air Filter (At Case Rear):** • Remove from case. As magnetic condenser coil filter is dishwasher safe, you may run it in normal dishwasher cycle. Remove from dishwasher. Dry with soft cloth or paper towel. Return to case. • If not using dishwasher, remove magnetic condenser coil filter from case. Use a rag or soft-bristled brush to wipe off excess dust particles from filter. Submerse in warm, soapy water in sink. Use soft-bristled brush to remove dust, dirt, grease and grime that may collect on filter. Rinse thoroughly. • Reattach magnetic air filter to rear of case.



See GENERAL MERCHANDISER ILLUSTRATION - MODEL FBR6S-5R.8110 In This User Manual For Component Call-Out

WARNING! TURN OFF CASE BEFORE PERFORMING PREVENTIVE MAINTENANCE!

QUARTERLY PREVENTIVE MAINTENANCE INSTRUCTIONS

Tub, Coil, Drain, Fan Blades, Motors, Brackets:

Caution! Turn Power Off To Case. Do Not Clean or Perform Service On Unit While Case Is Energized!

1. Remove product pan holders. Place in safe place away from foot traffic.
2. Remove discharge pans. Place in safe place away from foot traffic.
3. Disconnect power cord connectors that energizes fan assemblies.
4. Grasp fan shroud/fan cover assemblies. Lift up and away from case. Place in safe place away from foot traffic.

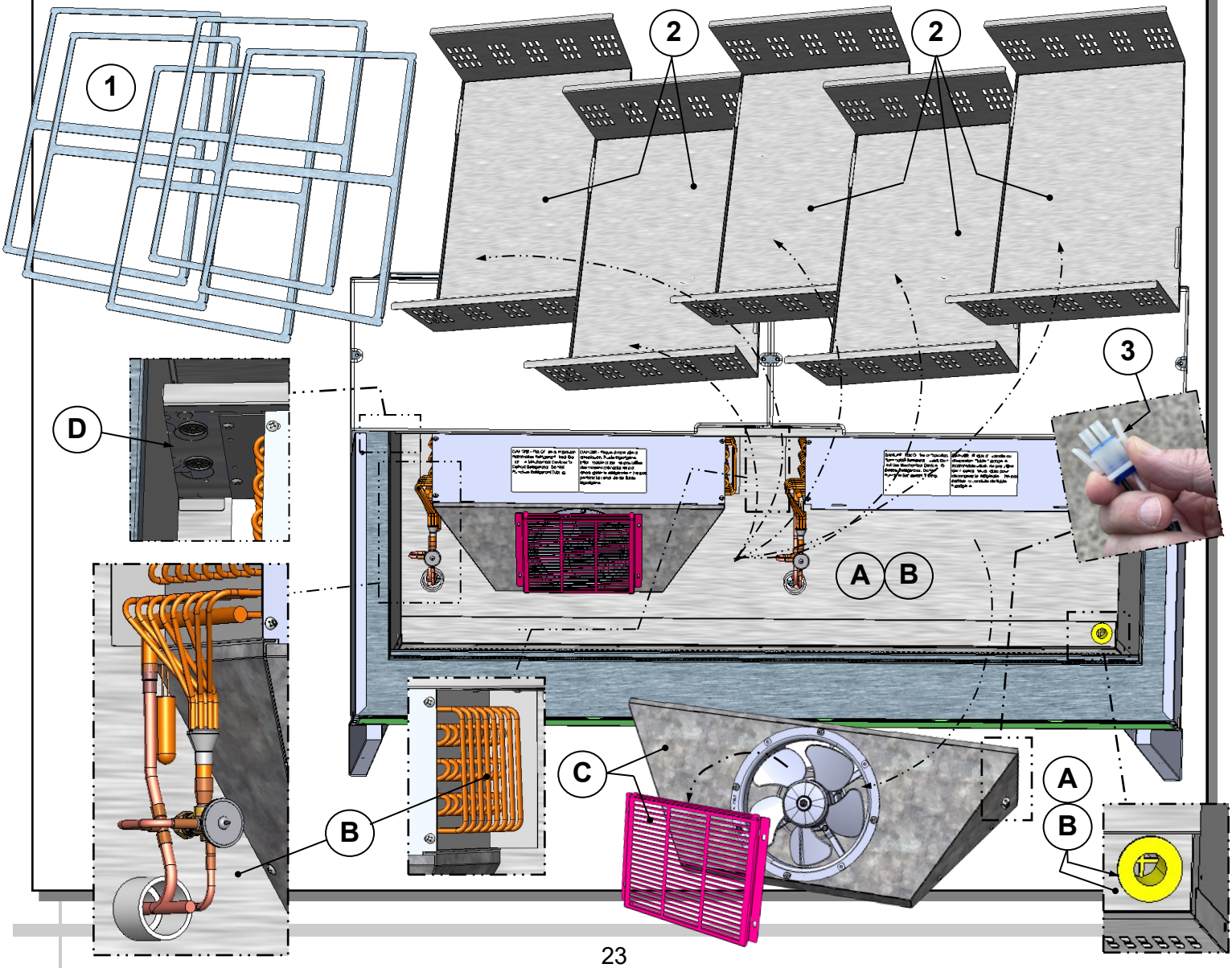
Cleaning Process:

A. Use vacuum to remove excessive residue AND to remove dust in tub, trough and drain.
B. Use clean cloth and/or nylon brush with warm water and mild soap solution to clean tub, drain, trough, TXV, lines, solenoid, coil & coil tubes. See enlarged view of components to be cleaned (lower-right).
C. Use clean cloth with warm water and mild soap solution to clean fan covers, fans, fan blades, shrouds, etc.
D. Use clean cloth with warm water and mild soap solution to clean close-off areas.

>> Dry components with clean rag or paper towel.

Returning Components / Restoring Power To Case:

- Replace/reconnect components in reverse order they were removed or disconnected.
- Turn main power switch back on. Check that evaporator fans are operational.



WARNING! TURN OFF CASE BEFORE PERFORMING PREVENTIVE MAINTENANCE!

QUARTERLY PREVENTIVE MAINTENANCE INSTRUCTIONS, CONT'D

Under Case Cleaning:

- At either case front or rear, vacuum (or broom) under case to remove all dust, debris and dirt that may collect.
- As case is on casters, you may need to unlock them and slightly move case out of position to access desired areas to clean.

Condensate Package:

Caution! You must turn main power switch off before cleaning!

- Remove rear panel. Turn main power switch off and allow components to cool.
- Use a soft-bristled scrub-brush and non-corrosive de-scaling solution (to remove calcium, lime and rust) from condensate pan. Wipe down courtesy loop. Follow de-scaling solution's instructions as to proper dilution and safety precautions.
- After thoroughly cleaning pan with 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 (hot gas loop condensate pan, compressor fan, blades and housing, fans, sight glass (if any), refrigeration lines, courtesy loop, overflow pan (if any), etc.
- Return front panel to case.
- See ***GENERAL MERCHANDISER ILLUSTRATION - MODEL FBR6S-5R.8110 - PAGE 4 of 7*** in this User Manual for condensate package illustration.

TROUBLESHOOTING (TO BE PERFORMED BY TRAINED SERVICE PROVIDER ONLY) - PAGE 1 of 3

CONDITION	TROUBLESHOOTING
Case Not Lining Up	See ***INSTALLATION*** section in this manual for instructions on properly aligning case (alongside other cases) and adjusting levelers.
Water Is On The Floor	***Caution!*** Water on flooring can cause much damage! Until cause is determined (and repaired), follow these procedures: • Use wet-dry vacuum (or mop & bucket) to remove standing water. • Use 'catch pans' for water to drain into. Swap out regularly until case has completely drained.
	Check that the drain trap is free from debris.
	Check that the drain hose/pipe is correctly positioned over condensate pan (or floor drain, for remote units).
	Check store conditions. To prevent condensation in NSF/ANSIType II environments, conditions are to be 55% maximum humidity / 80° Fahrenheit (27° Celsius) maximum temperature.
	Check that condensate pan components have no loose connections.
	Check that overflow condensate pan (if any) has its power cord plug properly plugged into electrical box.
	Check that overflow condensate pan (if any) is not malfunctioning. Its electric rod heater should be heating up when case is energized.
	Caution! Disruption of power can cause water to overflow pan and seep onto flooring causing damage! Check that power to case is constant. Until power is restored, follow these procedures: • Use wet-dry vacuum (or mop & bucket) to remove standing water. • Use 'catch pans' for water to drainage. Swap out regularly until drainage of case is complete (or until power is restored). • When power to case is restored, condensate pan should function properly and water will no longer overflow onto flooring.

CONDITION	TROUBLESHOOTING
Fan Emits Excessive Noise	Check that the case is aligned, level and plumb.
	Check evaporator fan for cleanliness.
	Unplug/power off fan motor. Check motor shaft for bearing wear.
	Check that fan motor is 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.
Fan Is Not Working	Check that the MAIN power switch is on.
	Check that fan connector is securely plugged in at fan shroud.
	Check that fan connector is securely plugged in near close-off.
	Check for foreign material obstructing fan performance.
	Check that fan blade freely rotates within fan shrouds
	Check that power is going to fans
	Check that fan wiring is connected on terminal blocks.
Programmable Controller Display Is Blank	Check that the MAIN power switch is on.
	Check circuit breaker box for tripped circuits.
Programmable Controller Display Is Flashing	*See your case's serial label for your model's specified settings. See **SERIAL LABEL LOCATION & INFORMATION LISTED / TECH INFO & SERVICE*** for label location, etc.
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 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. Please load case with pre-chilled product.
	Check that case is not directly in the sun.
	Check that condenser coil has been cleaned.
	Check air return opening for obstructions.
	Check sight glass for flashing and/or low charge.
	Check set point temperature; it may be adjusted too high.
Condensing Unit Is Not Operating	Check that the power is turned on.
	Check if programmable controller settings are properly set. *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.

TROUBLESHOOTING - R-290 CONDENSING SYSTEM (BY TRAINED SERVICE PROVIDERS ONLY)

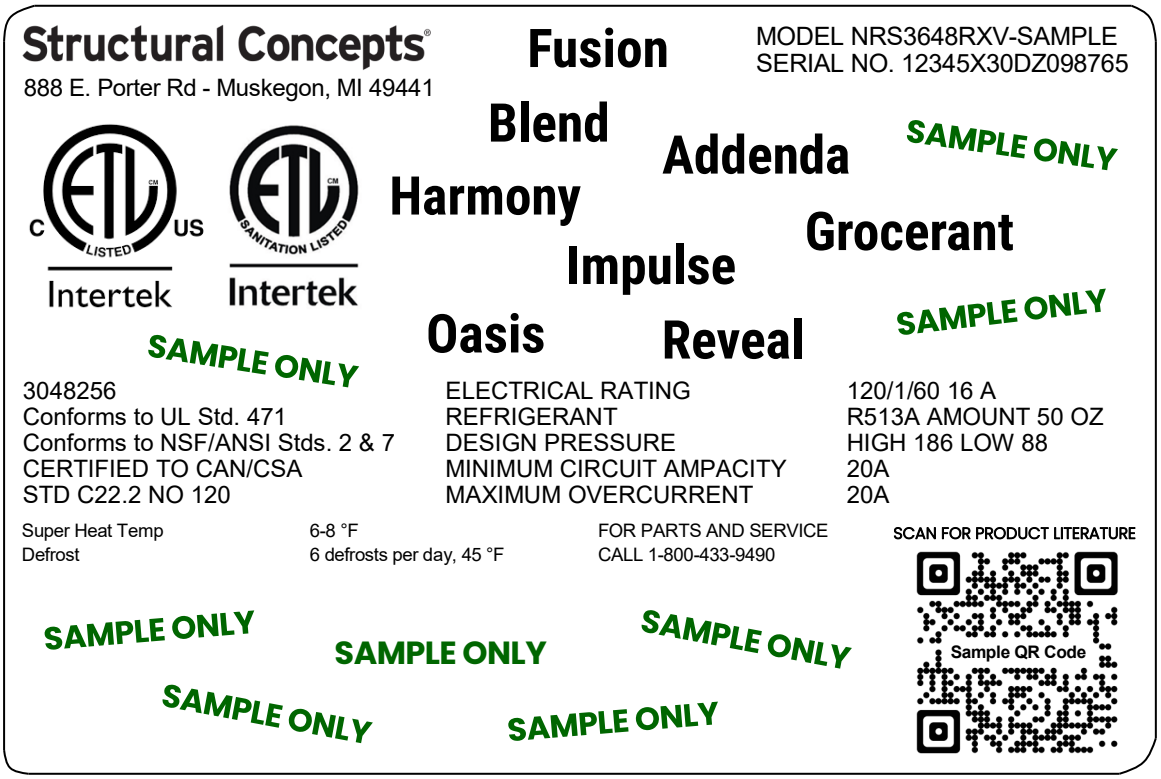
CONDITION	TROUBLESHOOTING
Head Pressure Too High	Check that the condensing coil is not dirty or covered.
	Check that condensing fans are working.
	Perform sub-cooling check and verify that no contaminates are in system.
	Check that liquid line filter dryer is not plugged.
	Check that close-offs are intact (around condensing coil) and that air is not recir-culating.
	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	If sight glass is part of condensing unit, check if it is flashing or showing low charge.

TROUBLESHOOTING - R-290 EVAPORATOR SYSTEM (BY TRAINED SERVICE PROVIDERS ONLY)

CONDITION	TROUBLESHOOTING
Low Suction Pressure	Check if sight glass (if present) 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 line / courtesy loop is not kinked.
	Check that evaporator fan motor is working.
	Check that superheat is between 6 °F to 8 °F (-14 °C to -13 °C).
	Check that there is no air recirculation around evaporator coil.
	Check that evaporator coil is not iced up.
High Suction Pressure	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 15-feet 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 a. Poor thermal contact. b. Warm location.

Serial Label Location & Information Listed / Technical Information & Service

- Serial labels are affixed at a wide range of places (on the header, near thermostat, at case rear, behind panels/toe-kicks, on electrical boxes, etc.).
- Serial labels contain electrical, temperature and refrigeration information, as well as regulatory standards to which the case conforms.
- Sample serial label is shown. A variety of models is displayed on serial label for illustration purposes only. Your case's serial label will reflect only one model.
- For additional technical information and service, see the *TECHNICAL SERVICE* page in this manual for instructions on contacting Structural Concepts' Technical Service Department.



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

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

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®

STRUCTURAL CONCEPTS TECHNICAL SERVICE CONTACT INFORMATION & LIMITED WARRANTY

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

DAYS/HOURS AVAILABLE:
MONDAY - FRIDAY (CLOSED HOLIDAYS)
8:00 AM to 8:00 PM EST

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

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

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

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

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

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