



TRUE MANUFACTURING CO., INC.

INSTALLATION MANUAL
TSCI SERIES



Congratulations!

You have just purchased the finest commercial refrigerator available. You can expect many years of trouble-free operation.

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TSCI-600R-G-PH~TSL01 RX1 WHT



INSTALLATION MANUAL

TSCI SERIES
Original Instructions

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826258-B

How to Maintain Your True Refrigerator to Receive the Most Efficient and Successful Operation

You have selected one of the finest commercial refrigeration units made. It is manufactured under strict quality controls with only the best quality materials available. Your TRUE cooler, when properly maintained, will give you many years of trouble-free service.

WARNING – Use this appliance for its intended purpose as described in this Installation Manual.

Refrigerant Safety & Warning Information

See the serial label inside the cabinet for the units refrigeration type. For Hydrocarbon Refrigeration (R290 only), see below:



DANGER – Risk of fire or explosion. Flammable refrigerant used. **DO NOT** use mechanical devices to defrost refrigerator. **DO NOT** puncture refrigerant tubing; follow handling instructions carefully. To be repaired only by trained service personnel.



DANGER – Risk of fire or explosion (flammable refrigerant used), consult repair manual/owner's guide before attempting to service this product. All safety precautions must be followed. Dispose of properly in accordance with local and federal regulations. Follow all safety precautions.

CAUTION – Keep all ventilation openings clear of obstruction in the appliance enclosure or in the structure housing the appliance.

Basic Safety & Warning Precautions

- Take care during operation, maintenance or repairs to avoid cuts or pinching from any part/component of the cabinet.
- Units may pose a tipping hazard while uncrating, during installation, or when moving the unit.
- Ensure the unit is properly installed and located in accordance with the Installation Instructions before use.
- This appliance is not to be used, cleaned or maintained 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.
- **DO NOT** allow children to play with the appliance or climb, stand, or hang on the unit's shelves to prevent damage to the refrigerator and personal injury.
- **DO NOT** touch the cold surfaces in the freezer compartment when hands are damp or wet. Skin may stick to these extremely cold surfaces.
- Unplug the refrigerator before cleaning and making repairs.
- Setting temperature controls to the 0 position or powering off an electronic control may not remove power from all components (e.g., light circuits, perimeter heaters, and evaporator fans).
- **DO NOT** store or use gasoline, or other flammable vapors and liquids, in the vicinity of this or any other appliance.
- **DO NOT** store explosive substances such as aerosol cans with a flammable propellant in this appliance.
- Keep fingers out of the "pinch point" areas; clearances between the doors and cabinet are necessarily small; be careful closing doors when children are in the area.
- **DO NOT** use electrical appliances inside the food storage compartments of the units unless the appliances are of the type recommended by the manufacturer.

NOTE: All servicing must be performed by a qualified technician.

Cabinet Disposal Warning

DANGER!
RISK OF CHILD
ENTRAPMENT



Proper Disposal of the Cabinet

Child entrapment and suffocation are not problems of the past. Junked or abandoned refrigerators are still dangerous, even if they will sit for "just a few days." If you are getting rid of your old refrigerator, please follow the instructions below to help prevent accidents.

Before throwing away your old refrigerator or freezer:

- Take off the doors.
- Leave the shelves in place so that children may not easily climb inside.



DANGER – Risk of fire or explosion. Flammable insulation and/or refrigerant used. Dispose of all in accordance with local and federal regulations. Follow all safety precautions.

Installation

Prior to Installation

Ownership

To ensure that your unit works properly from the first day, it must be installed properly. We highly recommend a trained refrigeration mechanic and electrician install your TRUE equipment. The cost of a professional installation is money well spent.

Before you start to install your TRUE unit, carefully inspect it for freight damage. If damage is discovered, immediately file a claim with the delivery freight carrier.

TRUE is not responsible for damage incurred during shipment.

Cabinet Specification

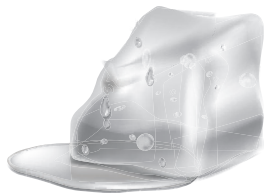
This appliance is rated for open food storage.

Cabinet Location

- Appliance is not suitable for an area where a pressure washer or hose may be used.
- Ensure the location will provide adequate clearances and sufficient airflow for the cabinet.
- Ensure the power supply for the cabinet matches the cabinet specification sheet or cabinet data plate and is within the rated voltage (+/-5%). Also, that the amp rating of the circuit is correct and that it is properly grounded.
- The cabinet should always be plugged into its own individual dedicated electrical circuit. The use of adapter plugs and extension cords is prohibited.

Notice to Customer

Loss or spoilage of products in your refrigerator/freezer is **not covered by warranty**. In addition to following recommended installation procedures, you must run the refrigerator/freezer for 24 hours prior to usage to verify its proper operation.



CLEARANCES			
	TOP	SIDES	BACK
TSCI Refrigerator	1" (25.4 mm)	0" (0 mm)	1" (25.4 mm)
TSCI Freezer	12" Open (304.8 mm)	0" (0 mm)	3" (76.2 mm)

WARNING – Warranty is void if ventilation is insufficient.

Wire Gauge Chart

115 Volts	Distance In Feet To Center of Load												
	AMPS	20	30	40	50	60	70	80	90	100	120	140	160
2	14	14	14	14	14	14	14	14	14	14	14	14	14
3	14	14	14	14	14	14	14	14	14	14	14	14	12
4	14	14	14	14	14	14	14	14	14	14	12	12	12
5	14	14	14	14	14	14	14	14	12	12	12	10	10
6	14	14	14	14	14	14	14	12	12	12	10	10	10
7	14	14	14	14	14	14	12	12	12	10	10	10	8
8	14	14	14	14	14	12	12	12	10	10	10	8	8
9	14	14	14	12	12	12	10	10	10	10	8	8	8
10	14	14	14	12	12	10	10	10	10	10	8	8	8
12	14	14	12	12	10	10	10	8	8	8	8	8	6
14	14	14	12	10	10	10	8	8	8	8	6	6	6
16	14	12	12	10	10	8	8	8	8	8	6	6	6
18	14	12	10	10	8	8	8	8	8	8	8	8	5
20	14	12	10	10	8	8	8	6	6	6	6	5	5
25	12	10	10	8	8	6	6	6	6	6	5	4	4
30	12	10	8	8	6	6	6	6	5	4	4	4	3
35	10	10	8	6	6	6	5	5	4	4	4	3	2
40	10	8	8	6	6	5	5	4	4	4	3	2	2
45	10	8	6	6	6	5	4	4	3	3	3	2	1
50	10	8	6	6	5	4	4	3	3	3	2	1	1

230 Volts	Distance In Feet To Center of Load												
	AMPS	20	30	40	50	60	70	80	90	100	120	140	160
5	14	14	14	14	14	14	14	14	14	14	14	14	14
6	14	14	14	14	14	14	14	14	14	14	14	14	12
7	14	14	14	14	14	14	14	14	14	14	14	14	12
8	14	14	14	14	14	14	14	14	14	14	12	12	12
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14	14	14	14	14	14	14	12	12	12	10	10	10	8
16	14	14	14	14	14	12	12	12	10	10	10	8	8
18	14	14	14	14	12	12	12	10	10	10	8	8	8
20	14	14	14	12	10	10	10	10	10	10	8	8	8
25	14	14	12	12	10	10	10	10	10	8	8	6	6
30	14	12	12	10	10	10	8	8	8	8	6	6	6
35	14	12	10	10	10	8	8	8	8	8	6	6	5
40	14	12	10	10	8	8	8	6	6	6	6	5	5
50	12	10	10	8	6	6	6	6	6	6	5	4	4
60	12	10	8	6	6	6	6	6	6	5	4	4	3
70	10	10	8	6	6	6	5	5	4	4	4	2	2
80	10	8	8	6	6	5	5	4	4	4	3	2	2
90	10	8	6	6	5	5	4	4	3	3	3	1	1
100	10	8	6	6	5	4	4	3	3	3	2	1	1

Installation (cont.)

Uncrating

Tools Required

- Adjustable wrench
- Phillips screwdriver
- Level

The following procedure is recommended for uncrating the unit:

1. Remove the outer packaging (cardboard and bubble or Styrofoam corner and clear plastic). See fig. 1. Inspect for concealed damage. **Again, immediately file a claim with the freight carrier if there is damage.**
NOTE: DO NOT remove the shipping bracket (glass swing doors; fig. 2) or the shipping blocks (glass slide doors; fig. 3) until the unit is installed in its final location. **Do not discard;** use the bracket/blocks when next moving the cabinet.
2. With an adjustable wrench, remove all shipping bolts securing the wood skid to the bottom of the cabinet. See fig. 4.
NOTE: Move the unit as close as possible to the final location before removing the wooden skid. Some models may require removing the front and/or rear grill/cover to access the shipping bolts.
3. If leveling legs or castors **will not be used**, remove the cabinet from the wood skid and set the skid aside.
NOTE: DO NOT lift the cabinet by the countertops, doors, drawers, or grills.

If leveling legs or castors **will be used**, rotate the cabinet on the skid (see fig. 3) and see the installation instructions on page 6.

NOTE: Remember to leave cabinet upright for 24 hours before plugging into a power source. Keys for cabinet with door locks are located in the warranty packet.



WARNING – Units may pose a tipping hazard while uncrating, during installation, or when moving the unit.

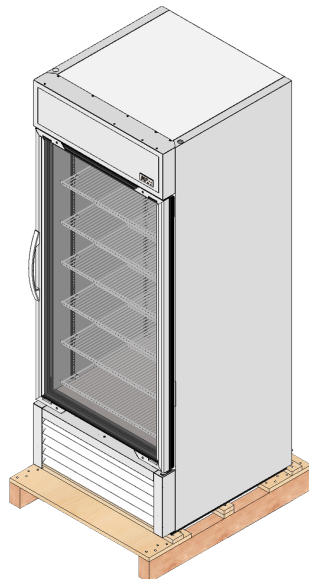


Fig. 1. Remove the exterior packaging.

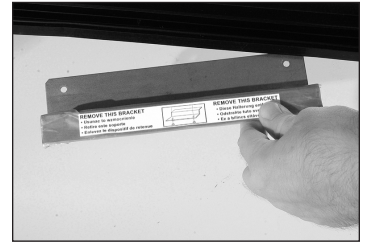
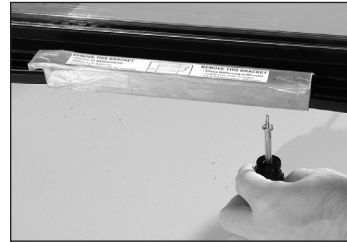


Fig. 2. Remove the glass swing door shipping bracket, if so equipped. Do not discard.



Fig. 3. Glass slide door shipping block locations. Remove if so equipped and do not discard.

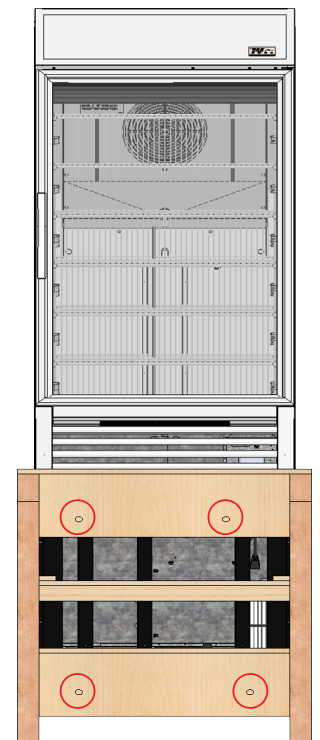


Fig. 4. Shipping bolt locations.

Installation (cont.)

Cabinet Location

1. Ensure that the drain hose or hoses are positioned in the pan.
2. Free the plug and cord from inside the lower rear of the cooler (**DO NOT** plug in).
3. Place the unit close enough to the electrical supply so that the extension cords are never used.

Installing Leveling Legs

Leveling legs are provided to assist with leveling the cabinet.

With access to the bottom of the cabinet, thread the leveling legs into the holes used to secure the cabinet to the skid. See figs. 1 and 2.

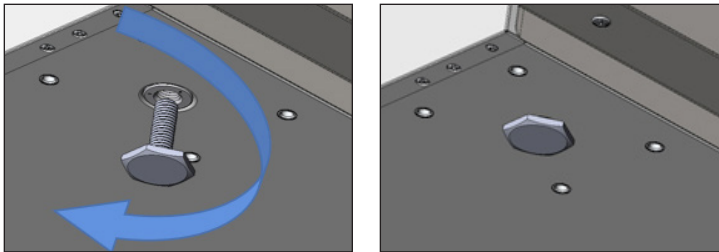


Fig. 1. Turn the leveling legs clockwise to lower the unit.

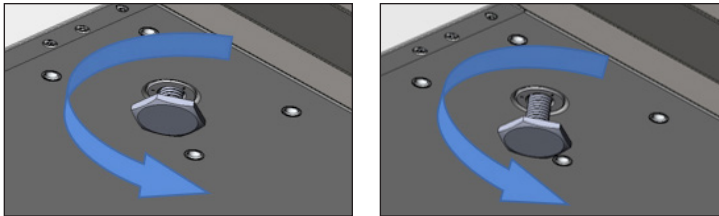


Fig. 2. Turn the leveling legs counterclockwise to raise the unit.

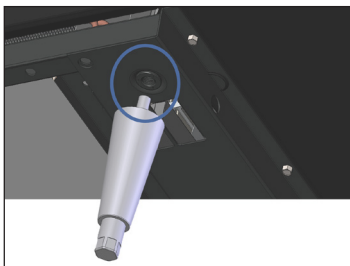


Fig. 3. Locate the threaded hole in the rail.

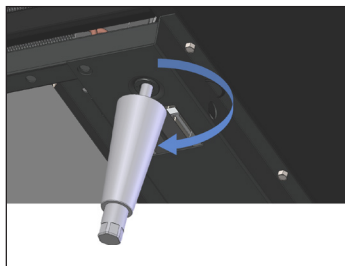


Fig. 4. Screw in the leveling legs.

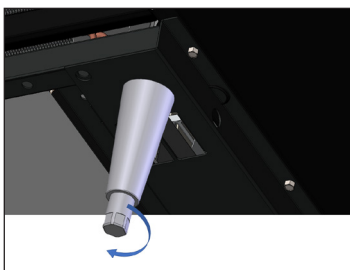
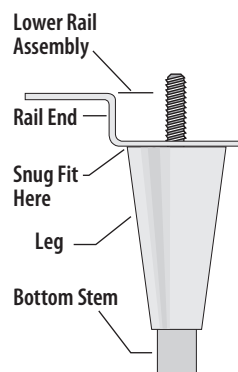


Fig. 5. Turn the bottom stem to level the cabinet.



Installing 6" Leveling Legs or Castors

Adjustable legs will provide 6" (152 mm) of clearance under the cabinet. Castors provide cabinet mobility.

NOTE: If the cabinet has a center leveling screw, castor, or leg, make sure it is adjusted properly so it makes full contact with the floor after the cabinet has been leveled.

Required Tools

Adjustable Wrench

6" Leveling Legs

1. Access the bottom of the cabinet and thread the leveling legs into the rail. See figs. 3 and 4.
2. Verify that the cabinet is level.
3. If the cabinet is not level, gently lift and support the low end of the cabinet. With an adjustable wrench, screw the bottom stem of the leveling leg in or out to level and support the cabinet. See fig. 5.

Castors

1. Loosen the castor bolt enough to slide the provided castor shims between the castor bearing and the bottom rail of the cabinet. See fig. 6.
2. Install the desired number of shims. If more than one shim is used, turn the slots at a 90° angle to each other, so the slots do not align. See figs. 7 and 8.
3. Tighten and secure the shims and castors with the optional castor wrench. Lower the cabinet and verify that it is level. If the cabinet is not level, repeat the process until the cabinet is level and supported.

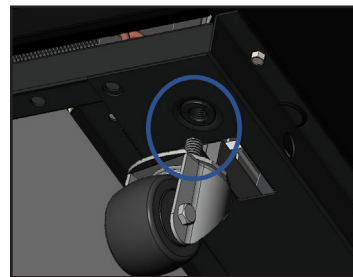


Fig. 6. Loosen castor bolt.

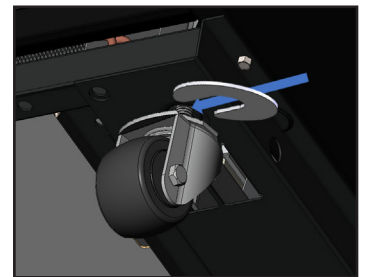
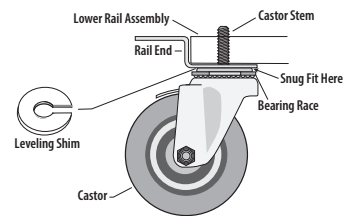


Fig. 7. Install shim(s).



Fig. 8. Position multiple shims at 90° angles.



Installation (cont.)

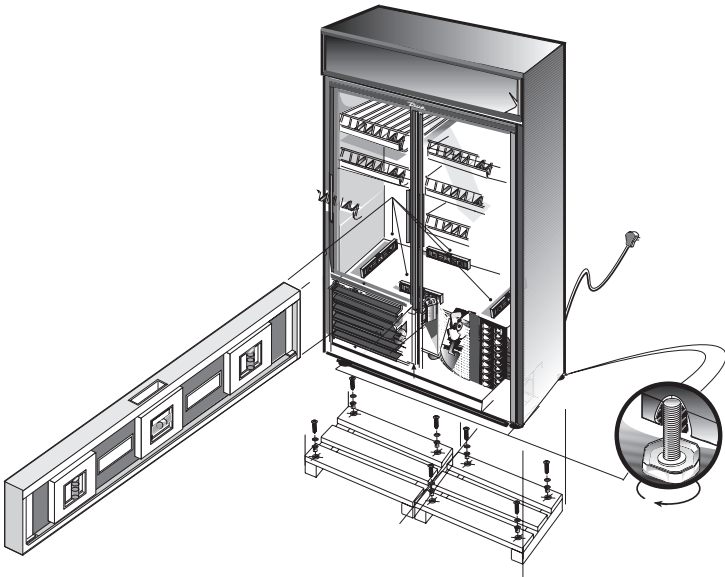
Leveling

Proper leveling of your TRUE cooler is critical to operating success (for non-mobile models). Leveling impacts effective condensate removal and door operation.

Level the unit front-to-back and side-to-side.

1. Position the level on the inside floor of the unit near the doors (the level should be parallel to cabinet front). Level the cabinet.
2. Position the level at the inside rear of cabinet (again, the level should be placed parallel to cabinet back). Level the cabinet.
3. Perform procedures similar to steps 1 and 2 by placing the level on inside floor (left and right side, parallel to the depth of the cooler). Level the cabinet.

NOTE: If the cabinet has a center leveling screw, castor, or leg, make sure it is adjusted properly so it makes full contact with the floor after the cabinet has been leveled.



Sealing the Cabinet to the Floor

Asphalt floors are susceptible to chemical attack. A layer of tape may be placed on the floor prior to applying the sealant to protect the floor.

1. Position the cabinet, allowing 3" (73 mm) between the wall and the rear of the cabinet to ensure proper ventilation.
2. Level the cabinet. The cabinet should be level side-to-side and front-to-back. To check that the cabinet is level, place a carpenter's level on the interior cabinet floor in four places:
 - a. Position the level on the inside floor of the cabinet, near the doors (the level should be placed parallel to the cabinet front). Level the cabinet.
 - b. Position the level at the inside rear of the cabinet (the level should be placed parallel to the cabinet back). Level the cabinet.
 - c. Perform procedures similar to a. and b. by placing the level on the left and right inside floor (level should be parallel to the cabinet sides). Level the cabinet.
3. Draw an outline of the cooler base on the floor.
4. Raise and block the front side of the cabinet.
5. Apply a bead of NSF-approved sealant (see list below) to the floor, 1/2" (13 mm) inside the front part of the outline drawn in step 4. The bead of sealant must be heavy enough to seal the entire cabinet surface when the cabinet is lowered on top of the sealant.
6. Raise and block the rear of the cabinet.
7. Apply sealant to the floor on the other three sides, as outlined in step 5.
8. Examine the the cabinet to ensure that it is sealed to the floor around the entire perimeter.

NSF-Approved Sealants

- 3M #ECU800 Caulk
- 3M #ECU2185 Caulk
- 3M #ECU1055 Bead
- 3M #ECU1202 Bead
- Armstrong Cork – Rubber Caulk
- Products Research Co. #5000 Rubber Caulk
- G.E. Silicone Sealer
- Dow Corning Silicone Sealer

Installation (cont.)



Electrical Installation & Safety

Use of Adapter Plugs

NEVER USE AN ADAPTER PLUG! An adapter plug alters the original OEM plug configuration when connecting it to a power source.

TRUE will not warranty any refrigerator/freezer that has been connected to an adapter plug.

Use of Extension Cords

NEVER USE AN EXTENSION CORD! An extension cord is determined to be any component that adds length to the original OEM power cord when connecting it to a power source.

TRUE will not warranty any refrigerator/freezer that has been connected to an extension cord.

NEMA Plug Configurations

60 HZ USE ONLY!

TRUE uses these types of NEMA plugs shown. If you **DO NOT** have the proper outlet, have a licensed electrician verify and install the correct power source.



International (IEC) Plugs Only

International cabinets may be supplied with a power cord that will require installation. Install this cord before connecting the unit to a power source.

NOTE: International plug configurations will vary by country and voltage

Installation

Fully seat the power cord into the cabinet receptacle until it locks in position. See fig. 1.

Removal

Depress the red button. See fig. 2.

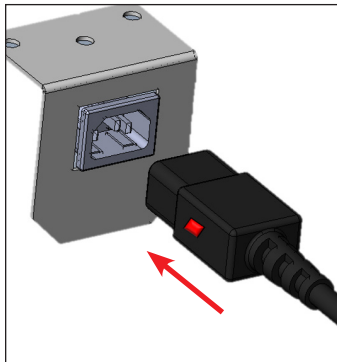


Fig. 1. Fully insert the power cord into the receptacle.

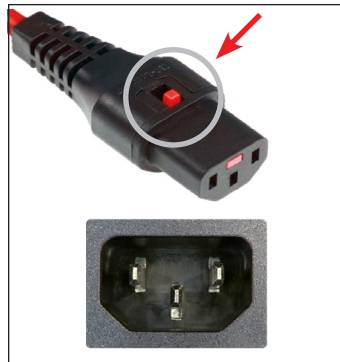


Fig. 2. Push the red button to remove the plug.

How to Connect Electricity

- The power cord from this appliance is equipped with a grounding plug which minimizes the possibility of electric shock hazard.
- The wall outlet and circuit should be checked by a licensed electrician to make sure the outlet is properly grounded.
- If the outlet is a standard 2-prong outlet, it is your personal responsibility and obligation to have it replaced with the properly grounded wall outlet.
- **DO NOT**, under any circumstances, cut or remove the ground prong from the power cord. For personal safety, this appliance must be properly grounded.
- Before your new unit is connected to a power supply, check the incoming voltage with a voltmeter. If the recorded voltage is less than the rated voltage for operation (+/-5%) and amp rating, correct immediately. Refer to cabinet data plate for this voltage requirement.
- The refrigerator/freezer should always be plugged into a dedicated electrical circuit. This provides the best performance and prevents building wiring circuits from being overloaded, which could cause a fire hazard from overheated wires.
- Never unplug your refrigerator/freezer by pulling on the power cord. Always grip plug firmly and pull straight out from the outlet.
- When moving the refrigerator/freezer, for any reason, be careful not to roll over or damage the power cord.
- Repair or replace immediately all power cords that have become frayed or otherwise damaged. **DO NOT** use a power cord that shows cracks or abrasion damage along its length or at either end.
- If the supply power cord is damaged, it should be replaced with original equipment manufacturer (OEM) components. To avoid hazard this should be done by a licensed service provider.

Cabinet Wiring Diagram

The cabinet's wiring diagram is in the exterior servicing compartment space of the cabinet.

A copy of the wiring diagram may also be obtained at www.TRUEmfg.com/support/serial-number-lookup

Cabinet Setup

Standard Accessories

Shelf Installation

1. Hook the shelf clips into the shelf standards. See fig. 1.
2. Push up on the bottom of the clip. See fig. 2.
NOTE: You may need to squeeze or twist the bottom of the shelf clip for proper installation. Position all four shelf clips equal in distance from the floor for flat shelves.
3. Ensure the shelf clip is not loose or able to wiggle out of the shelf standard. See figs. 3 and 4.
4. Place the shelves on the shelf clips with the cross support bars facing down.
NOTE: Be sure all shelf corners are properly seated.

Installation Tips

- Install **all** the shelf clips before installing any shelves.
- Start at the bottom shelf and work your way up.
- Always lay the back of each shelf down on the rear clips before the front.

WARNING – DO NOT use pliers or any crimping tools when installing shelf clips. Altering shelf clips in any way can lead to shelving instability.



Fig. 1. Installing top tab of shelf clip.



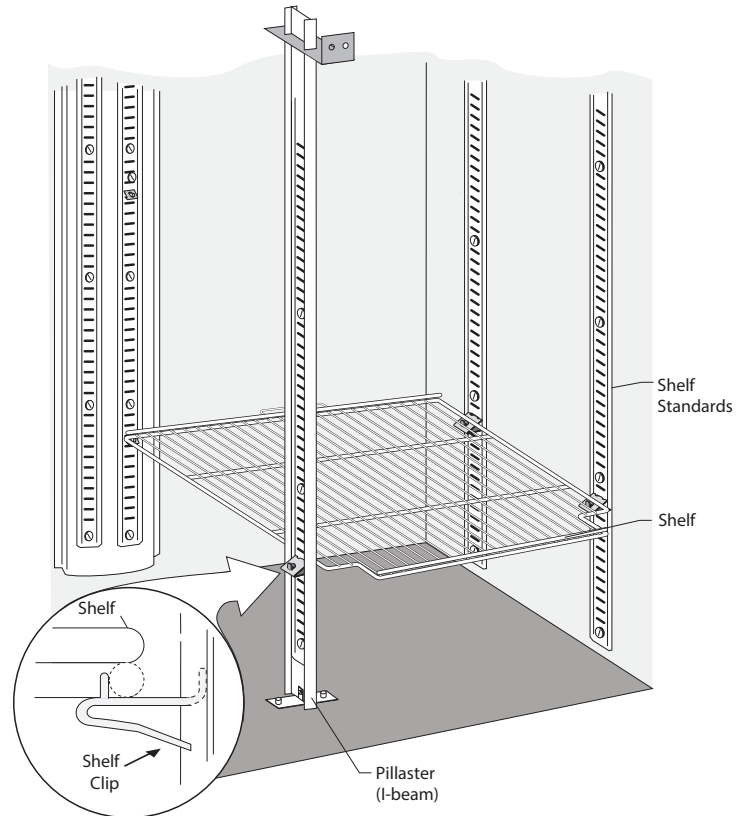
Fig. 2. The bottom tab of the shelf clip will fit tightly



Fig. 3. You may need to squeeze or twist the bottom of the shelf clip to install.



Fig. 4. Installed shelf clip..



Cabinet Setup

Optional Scientific Accessories

Access Port (factory install only)

Access hole in cooler with cover to run lines, cords or move beakers, etc. May be placed anywhere at customers' discretion; except in middle of back wall. If no preference, standard is to place 29" from interior floor in middle of side wall. See fig. 1.

Chromatography Mast (factory or field install)

300 series stainless steel pole runs vertical inside cooler to clamp beakers or other equipment to: See fig. 2.

- One-Door: In center of cooler (requires half shelves).
- Two and Three-Door: In between shelves/sections.

Half Shelves (one-door models only) (field install only)

Adjustable, heavy duty, PVC coated wire shelves. Includes shelf clips. See fig. 3.

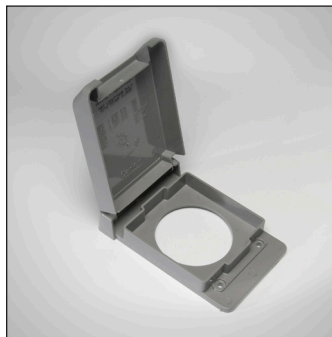


Fig. 1. Access Port.

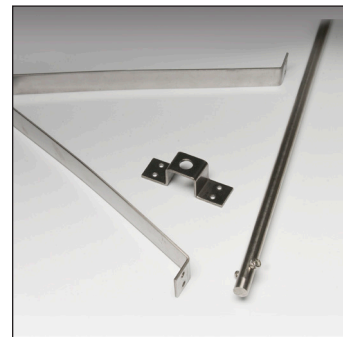


Fig. 2. Chromatography Mast & bracket.



Fig. 3. Half Shelf

Cabinet Operation



Startup


- The compressor is ready to operate when the unit is purchased. All you need to do is plug in the cooler.
- Excessive tampering with the control could lead to service difficulties. If replacing the temperature control is ever needed, be sure to order the replacement from your TRUE dealer or recommended service agent.
- Good air flow inside your TRUE unit is critical. Take care to prevent product from pressing against the sides or back wall and coming within 4" (101.6 mm) of the evaporator housing. Refrigerated air off the evaporator coil must circulate throughout the cabinet for even product temperatures.

NOTE: If the unit is disconnected or shut off, wait 5 minutes before restarting.

RECOMMENDATION – Before loading product, run your TRUE unit empty for 24 hours to verify proper operation. Remember, our factory warranty **DOES NOT** cover product loss!

Temperature Control & Light Switch Location

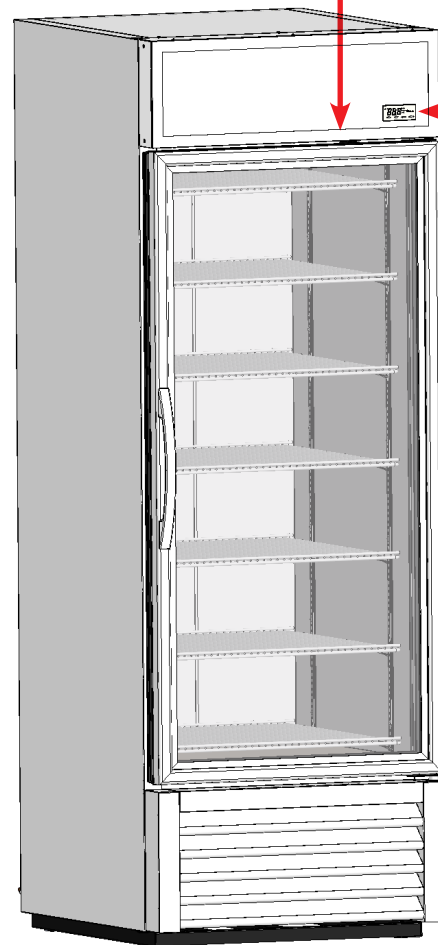
The light symbol  shows the approximate location of the light switch. 

The electronic temperature control can act as a light switch. To control the light, press the up arrow  **M**.



Light Switch on Glass Door Models

Inside the front ceiling.



Electronic Temperature Control
On the front of the rain shield.

FOR MORE INFORMATION

For more information regarding a cabinets general sequence of operation, including basic temperature control adjustments, please visit our website:

www.truemfg.com/support/resource-library

Cabinet Operation (cont.)

Sequence of Operation

When the cabinet is plugged in...

1. The lights turn on.
 - a. The display illuminates.
 - b. The interior light will illuminate on Glass Door Models only. Solid Door cabinet lights are controlled by the door switch.
2. The evaporator fan starts.
3. After the pre-programmed temperature control 3 min delay, the compressor will start if the control calls for cooling.
 - a. The control or condenser fans are pre-programmed from the factory so at the start of every compressor cycle, the condenser fan(s) will reverse for 30 sec to blow dirt off the condensing coil.
4. The temperature control cycles the compressor on and off as determined by the set-point and differential temperatures.
 - a. The temperature control is designed to read and display a cabinet temperature. The most accurate temperature on a cabinets operation is to verify the product temperature.
 - b. The set-point is the **adjustable** pre-programmed temperature designed to match the average cabinet temperature.
 - c. The differential temperatures are the **non-adjustable** pre-programmed temperatures used to determine when the compressor shuts off and turns on.
 - i. The high differential is added to the set-point and determines when the compressor turns on (cut-in temperature).
 - ii. The low differential is subtracted from the set-point and determines when the compressor turns off (cut-out temperature).

Set Point (SP) = 39°F (4°C)

High Differential (hY0) = 2°F (1°C)

Low Differential (hY1) = 2°F (1°C)

SP + hY0 = Cut-In 39°F (4°C) + 2°F (1°C) = 41°F (5°C)

SP - hY1 = Cut-out 39°F (4°C) - 2°F (1°C) = 37°F (3°C)

5. The temperature control may be pre-programmed to initiate defrost by interval or evaporator temperature.
 - a. The compressor will turn off until a pre-programmed temperature or duration is reached.
6. This control is pre-programmed where an audible alarm will activate when the cabinet temperature is above 46°F (8°C) for 5 consecutive minutes. **hi** will appear on the display, indicating a high temperature alarm is active.










NOTE: These values may vary by model. See "Adjust Temperature Alarm Ranges" to adjust the temperature alarms for your application.

 - a. To silence the audible alarm, press any button on the display.
 - b. The display will continue to show **hi** until the cabinet temperature drops below 46°F. **This alarm will likely activate during an initial pulldown (plug-in).**

Electronic Temperature Control

L A E CONTROL LEGEND



-  Compressor Running
-  Evaporator Fan Running
-  Cabinet in Defrost
-  Activation of 2nd Parameter Set
-  Alarm
-  Info/Set Point
-  Manual Activation/Up Arrow
-  Manual Defrost/Down Arrow
-  Stand-By/Cancel










DISPLAY CODES

Display	Definition	Display	Definition
<i>dEF</i>	Defrost in progress	<i>hi</i>	Room high temperature alarm
<i>oFF</i>	Controller in stand-by	<i>Lo</i>	Room low temperature alarm
<i>do</i>	Door open alarm	<i>E1</i>	Probe T1 failure
<i>t1</i>	Instant Probe 1 temperature	<i>E2</i>	Probe T2 failure
<i>t2</i>	Instant Probe 2 temperature	<i>E3</i>	Probe T3 failure
<i>t3</i>	Instant Probe 3 temperature	<i>th1</i>	Maximum probe 1 temperature recorded
<i>n in</i>	Minutes of the Real Time Clock	<i>tLo</i>	Minimum probe 1 temperature recorded
<i>hr5</i>	Hours of the Real Time Clock	<i>Loc</i>	Keypad state lock

Electronic Temperature Control (cont.)

L A E CONTROL LEGEND




-  Compressor Running
-  Evaporator Fan Running
-  Cabinet in Defrost
-  Activation of 2nd Parameter Set
-  Alarm
-  Info/Set Point
-  Manual Defrost/Down Arrow
-  Manual Activation/Up Arrow
-  Stand-By/Cancel

Lock/Unlock the Control

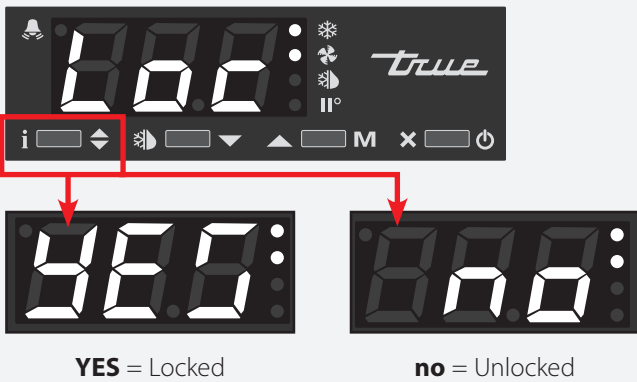
1. Press info  to show **t1**.



2. Press the down arrow  to show **Loc.**



3. Press and hold info to show the current lock status.
DO NOT RELEASE THE BUTTON!



YES = Locked

no = Unlocked

4. Press the arrows to change the lock setting.



5. Release all buttons and wait for the control to display the cabinet temperature.

Turn Off/On the Control

Turning off the control will deactivate all electronic components connected to the control. The lights will remain powered.

CAUTION – Turning off the control will not shut off power to the cabinet. Be sure to remove power to the cabinet prior to servicing.

Turn Off

Press and hold cancel  until the display shows **OFF**.



Turn On










Press and hold cancel until the display shows **on**.



Electronic Temperature Control (cont.)

L A E CONTROL LEGEND





-  Compressor Running
-  Evaporator Fan Running
-  Cabinet in Defrost
-  Activation of 2nd Parameter Set
-  Alarm
-  Info/Set Point
-  Manual Defrost/Down Arrow
-  Manual Activation/Up Arrow
-  Stand-By/Cancel

Change the Set Point

Changing the set point adjusts the cabinet temperature to keep optimal product temperature.

1. Press and hold info  until the display shows the current set point. **DO NOT RELEASE THE BUTTON!**



2. While holding info, press the up  or down  arrows to adjust the setting.



3. Release all buttons and wait for the control to display the current cabinet temperature.

Initiate Manual Defrost

A manual defrost clears accumulated frost and ice from the evaporator coil. The defrost will only terminate when a specific preset temperature or duration has been met.










Press Manual Defrost  until the display shows **deF**.



Electronic Temperature Control (cont.)

L A E CONTROL LEGEND



-  Compressor Running
-  Evaporator Fan Running
-  Cabinet in Defrost
-  Activation of 2nd Parameter Set
-  Alarm
-  Info/Set Point
-  Manual Defrost/Down Arrow
-  Manual Activation/Up Arrow
-  Stand-By/Cancel

Change Defrost Intervals

The defrost interval is the duration between defrost cycles,

NOTE: The defrost interval **can only be changed** if the defrost mode parameter **dFm** is set for **tim** or **Fro**.

1. Press and hold both info  and cancel  until the display shows **MdL**.




2. Press the up arrow  until the display shows **dFt**.



3. Press and hold info until the display shows the current defrost interval time. **DO NOT RELEASE THE BUTTON!**



4. While holding info, the up or down  arrows to adjust the setting.



5. Release all buttons and wait for the control to display the current cabinet temperature.

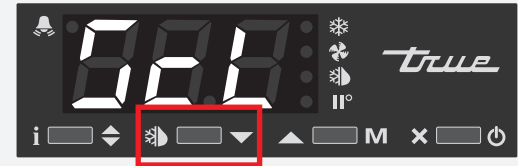
Change Display Readout

The display can show the temperature in either Fahrenheit or Celsius.

1. Press and hold both info  and cancel  until the display shows **MdL**.




2. Press the down arrow  until the display shows **ScL**.



3. Press and hold info until the display shows the current system of measure. **DO NOT RELEASE THE BUTTON!**
 - °F: Fahrenheit (no decimal)
 - 1°C: Celsius (0.1 precision)
 - 2°C: Celsius (no decimal)



4. While holding info, press the up  or down arrow to change the system of measure.



5. Release all buttons and wait for the control to display the current cabinet temperature.

Electronic Temperature Control (cont.)

L A E CONTROL LEGEND



- Compressor Running
- Evaporator Fan Running
- Cabinet in Defrost
- Activation of 2nd Parameter Set
- Alarm
- Info/Set Point
- Manual Defrost/Down Arrow
- Manual Activation/Up Arrow
- Stand-By/Cancel

Display Probe Temperatures

The display shows the temperature probe readings in different locations of the cabinet.

1. Press info to show **t1**.



2. Press and hold info to show the current **t1** probe temperature.



3. Release info to show **t2**.



4. Press and hold info to show the current **t2** probe temperature.



5. Release info to show **t3**.



6. Press and hold info to show the current **t3** probe temperature.

NOTE: If the T3 probe is not activated, **t3** will not appear.



7. Release all buttons and wait for the control to display the current cabinet temperature.

Electronic Temperature Control (cont.)

Alarms

Please note the alarm values shown may vary by model. Please see "Adjust Temperature Alarm Ranges" to adjust the temperature alarms for your application.

Temperature Alarms

Please Be Advised

- **The high temperature alarm typically triggers during the unit's initial startup.** Silence the alarm as described below; the display will continue flashing **hi** until the alarm condition has been resolved as described below.
- If an alarm has been **silenced but the reason for the alarm persists**, the control will **sound a 20 sec alert every 60 min** until the alarm condition has been resolved as described below.

High Temperature Alarm



An audio/visual alarm that warns when the internal cabinet temperature rises above accepted parameters.

Why It Occurs

If the internal cabinet temperature reads $\geq 46^{\circ}\text{F}$ (8°C) for ≥ 5 min, the control emits a series of beeps and the display flashes **hi**.

Silencing the Alarm

Press **ANY** button to silence the alarm. The display will continue to flash **hi** until the internal cabinet temperature reads $< 46^{\circ}\text{F}$ (8°C).

Low Temperature Alarm



An audio/visual alarm that warns when the internal cabinet temperature drops below accepted parameters.

Why It Occurs

If the internal cabinet temperature reads $\leq 36^{\circ}\text{F}$ (2°C) for ≥ 5 min, the control emits a series of beeps and the display flashes **Lo**.

Silencing the Alarm

Press **ANY** button to silence the alarm. The display will continue to flash **Lo** until the internal cabinet temperature reads $> 36^{\circ}\text{F}$ (2°C).

Door Open Alarm



An audio/visual alarm that warns when the door remains open longer than accepted parameters.

Why It Occurs

If the door remains open for ≥ 60 sec, the control emits a series of beeps and the display flashes **do**.

Silencing the Alarm

Shut the door to stop the alarm. Alternately, press **ANY** button to silence the alarm; the display will continue to flash **do** until the door closes.

Electronic Temperature Control (cont.)

L A E CONTROL LEGEND



	Compressor Running		Info/Set Point		Manual Activation/Up Arrow
	Evaporator Fan Running		Manual Defrost/Down Arrow		Stand-By/Cancel
	Cabinet in Defrost				
	Activation of 2nd Parameter Set				
	Alarm				

Adjust Temperature Alarm Ranges

The temperature alarm ranges are adjustable for different customer applications. Please note the values shown are Fahrenheit.

NOTE: The control will lock after a short period of inactivity. Unlock the display and press the up arrow to scroll to the required parameter. If the control skips past the necessary parameter, press the down arrow to scroll back.

Step 1: Change Alarm Mode (AtM)

1. Press and hold both info and cancel until the display shows **MdL**.



2. While the display shows **MdL**, press info until the display shows **AtM**.



3. While the display shows **AtM** press and hold info to show the current setting. **DO NOT RELEASE THE BUTTON!**



4. While holding info , press the down arrow until the display shows **AbS** (alarm is an absolute number).



5. Release all buttons to show **ALA**. Proceed to step 2.

Step 2: Change Low Alarm Setting (ALA)

1. While the display shows **ALA**, press and hold info to show the current setting.

DO NOT RELEASE THE BUTTON!



2. While holding info, press the up or down arrows to change the current setting.

RECOMMENDED: Be sure the low alarm setting is at least **1° colder** than the Cut-Out temperature to prevent a false alarm.



3. Release all buttons to show **AhA**. Proceed to step 3.

Electronic Temperature Control (cont.)

L A E CONTROL LEGEND



	Compressor Running		
	Evaporator Fan Running		
	Cabinet in Defrost		
	Activation of 2 nd Parameter Set		
	Alarm		

Step 3: Change High Alarm Setting (AhA)

1. While the display shows **AhA**, press and hold info to show the current setting.

DO NOT RELEASE THE BUTTON!



2. While holding info, press the up or down arrows to change the current setting.

RECOMMENDED: Be sure the high alarm setting is at least 1° warmer than the Cut-In temperature to prevent a false alarm.



3. Release all buttons. Proceed to step 4.

Step 4: Change Alarm Delay (Atd)

1. Press info until the display shows **Atd**.



2. While the display shows **Atd**, press and hold info to show the current setting. **DO NOT RELEASE THE BUTTON!**



3. While holding info, press the up or down arrows to change the current setting.

NOTE: Alarm delay is measured in minutes.

RECOMMENDED: Be sure the time delay is at least 5 min to prevent a false alarm.



4. Release all buttons and wait for the control to display the current cabinet temperature.

Electronic Temperature Control (cont.)

L A E CONTROL LEGEND

	Compressor Running		Info/Set Point		Manual Activation/Up Arrow
	Evaporator Fan Running		Manual Defrost/Down Arrow		Stand-By/Cancel
	Cabinet in Defrost				
	Activation of 2nd Parameter Set				
	Alarm				

High (thi) & Low (tLo) Temperature Log

The High/Low Temperature Log allows user to see maximum and minimum temperatures recorded since the log was last reset.

RECOMMENDED: The control typically records the **thi** during the initial startup. Reset the **thi** log after 24 hours of operation.

Viewing the Log

1. Tap info until the display shows either **thi** or **tLo**.

2. Press and hold info until the display shows the logged maximum or minimum temperature.

Reset the Log

1. Tap info until the display shows either **thi** or **tLo**.

2. Press and hold info until the display shows the logged temperature. **DO NOT RELEASE THE BUTTON!**
3. Tap cancel to set the log to the current internal cabinet temperature.

Maintenance, Care & Cleaning

CAUTION - Take care during operation, maintenance or repairs to avoid cuts or pinching from any cabinet part/component.

Cleaning the Condenser Coil

When using electrical appliances, basic safety precautions should be followed, including the following:



WARNING – **DO NOT** clean appliance with a pressure washer or hose.



CAUTION – Fins are sharp. Caution must be used to avoid eye injury. Eye protection is recommended.

Tools Required

- 1/4" nut driver
- 3/8" nut driver
- Stiff bristle brush
- Tank of compressed air
- Vacuum cleaner
- Flashlight
- Eye protection

1. Disconnect power to unit.
2. Remove the front louvered grill from the cabinet. See fig. 1-3.
3. Carefully clean off accumulated dirt from the front fins of the condensing coil with a stiff bristle brush. See fig. 3.
4. With dirt removed from the surface of the coil, use a flashlight to verify that you can see through the coil and observe the condenser fan blade spinning. See fig. 4.

If the view is clear, reinstall louvered grill, connect unit to power and verify operation.

If the view is still blocked with dirt, proceed to step 6.

5. Remove the condenser base bolts. See fig. 6.
6. Remove the condenser coil brackets.
7. Carefully slide the condensing unit out (tubing connections are flexible). Gently blow compressed air or CO₂ through the coil until it is clean.
8. Carefully vacuum any dirt around and behind the condensing unit area.
9. Replace the coil brackets. Then carefully slide the compressor assembly back into position and replace the bolts.
10. Reinstall the louvered grill, connect power to the unit, and verify operation.

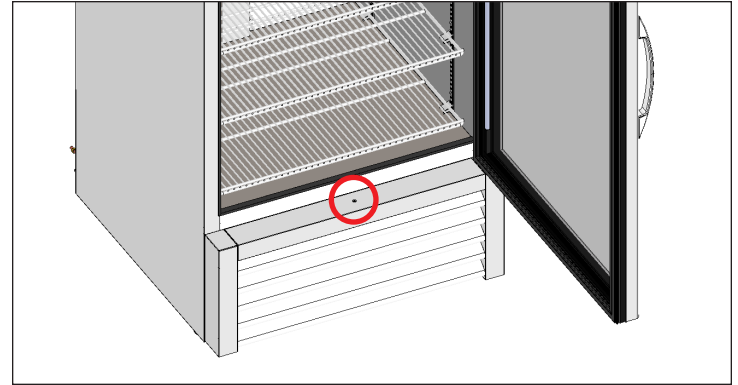


Fig. 1. Swing door louver grill screw location.



Fig. 2. Slide door louver grill screw locations.

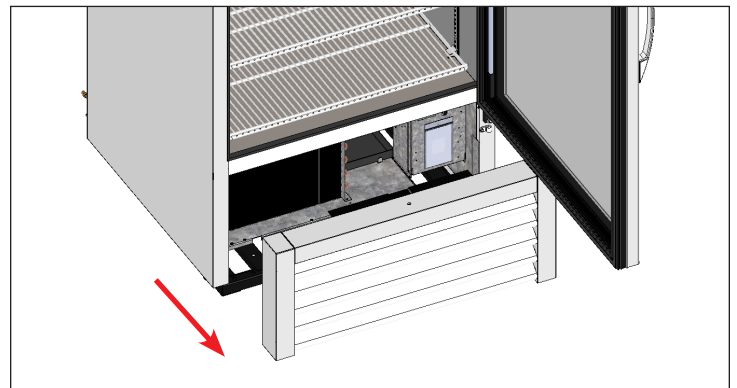


Fig. 3. Carefully remove the grill.

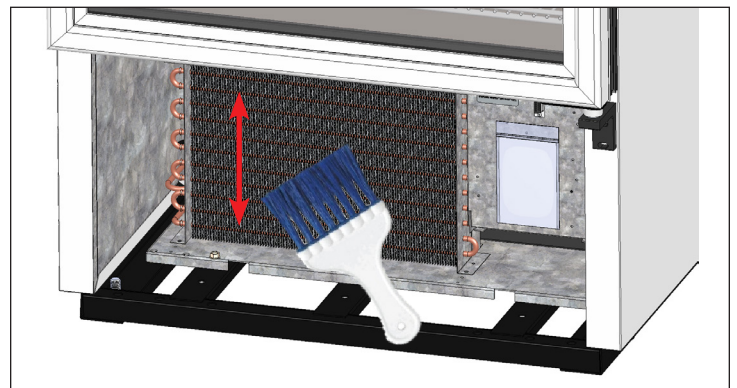


Fig. 4. Never brush across the coil fins.

Maintenance, Care & Cleaning (cont.)

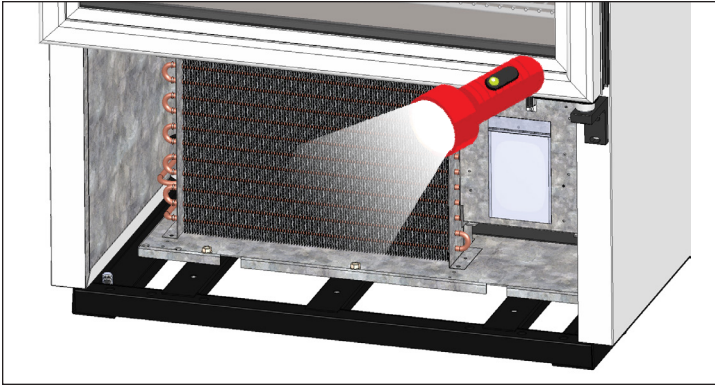


Fig. 5. Verify all blockages have been removed.

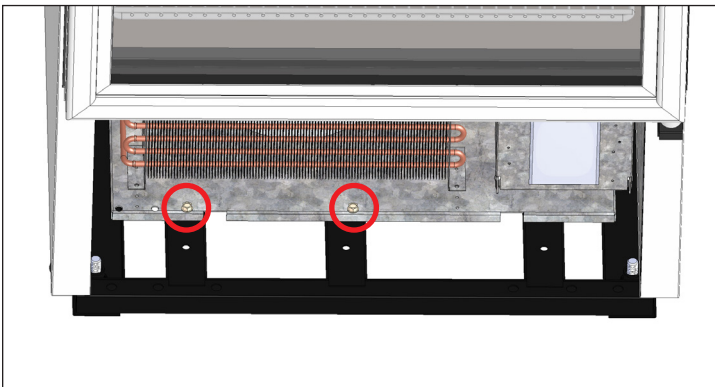


Fig. 6. Remove condenser base bolts.

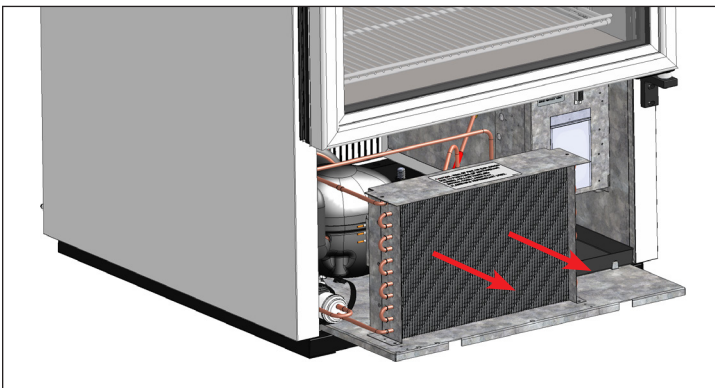


Fig. 7. Carefully slide the condensing unit out.

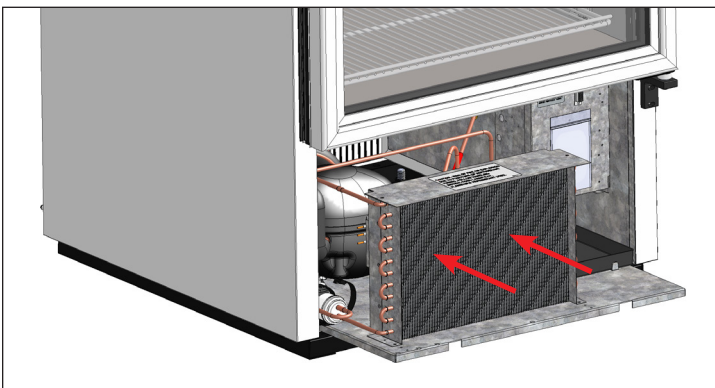


Fig. 8. Carefully slide the condensing unit back into position and replace the bolts.

Important Warranty Information

THE CLEANING OF THE CONDENSER IS NOT COVERED BY WARRANTY!

If you have any questions, please contact your local TRUE Manufacturing Service Department. See the front cover for locations and contact information.

- Condenser coils accumulate dirt and require cleaning every 30 days or as needed.
- A dirty condenser coil can result in non-warranted repairs and/or cabinet failure.
- Proper cleaning involves removing dust from the condenser by using a soft brush, vacuuming the condenser with a shop vac, or using CO₂, nitrogen or pressurized air.
- Do not place any filter material in front of the condensing coil.
- On most units, the condenser is accessible by removing the cabinet's outer grill cover.
- If you cannot remove the dirt adequately, please contact your licensed refrigeration service provider.

Maintenance, Care & Cleaning (cont.)

Stainless Steel Care & Cleaning

CAUTION – **DO NOT** use any steel wool, abrasive or chlorine-based products to clean stainless steel surfaces.

Stainless Steel Opponents

There are three basic things which can break down your stainless steel's passivity layer and allow corrosion to form.

- Scratches from wire brushes, scrapers, steel pads, and other items that can be abrasive to stainless steel's surface.
- Deposits left on your stainless steel can leave spots. You may have hard or soft water depending on what part of the country you live in. Hard water can leave spots. Hard water that is heated can leave deposits if left to sit too long. These deposits can cause the passive layer to break down and rust your stainless steel. All deposits left from food prep or service should be removed as soon as possible.
- Chlorides which are present in table salt, food and water, as well as in household and industrial cleaners. These are the worst type of chlorides to use on stainless steel.

Stainless Steel Cleaning and Restoration

DO NOT use stainless steel cleaners or similar solvents to clean plastic or powder-coated parts. Instead, use warm soapy water.

- For routine cleaning and removal of grease and oil, apply white vinegar, ammonia, or any good commercial detergent* with a soft cloth or sponge.
 - Stainless steel polish (e.g., Zep® Stainless Steel Polish, Weiman® Stainless Steel Cleaner & Polish, Nyco® Stainless Steel Cleaner & Polish, or Ecolab® Ecoshine®) and olive oil can act as a barrier against fingerprints and smears.
 - Degreasers* (e.g., Easy-Off® Specialty Kitchen Degreaser or Simple Green® Industrial Cleaner & Degreaser) are excellent for removal of grease, fatty acids, blood and burnt-on foods on all surfaces.
- *DO NOT** use detergents or degreasers with chlorides or phosphates.
- For restoration/passivation or removing stubborn stains and discoloration, Brillo® Cameo®, Zud® Cleanser, Ecolab® Specifix™ First Impression® Metal Polish, Sheila Shine, or talc can be applied by rubbing in the direction of the polish lines.

NOTE: The use of proprietary names is intended for example only and does not constitute or imply an endorsement. Omission of proprietary cleansers from this list does not imply inadequacy.

8 Tips to Help Prevent Rust on Stainless Steel

Maintain the Cleanliness of Your Equipment

Avoid build-up of hard stains by cleaning frequently. Use cleaners at the recommended strength (alkaline chlorinated or non-chloride).

Use the Correct Cleaning Tools

Use non-abrasive tools when cleaning your stainless steel products. The stainless steel's passive layer will not be harmed by soft cloths and plastic scouring pads.

Clean Along Polishing Lines

Polishing lines ("grain") are visible on some stainless steels. Always scrub parallel to polishing lines when visible. Use a plastic scouring pad or soft cloth when you cannot see the grain.

Use Alkaline, Alkaline-Chlorinated or Non-Chloride Cleaners

While many traditional cleaners are loaded with chlorides, the industry is providing an ever increasing choice of non-chloride cleaners. If you are not sure of your cleaner's chloride content, contact your cleaner supplier. If they tell you that your present cleaner contains chlorides, ask if they have an alternative. Avoid cleaners containing quaternary salts, as they can attack stainless steel, causing pitting and rusting.

Rinse

When using chlorinated cleaners, you must rinse and wipe dry immediately. It is better to wipe standing cleaning agents and water as soon as possible. Allow the stainless steel equipment to air dry. Oxygen helps maintain the passivity film on stainless steel.

Never Use Hydrochloric Acid (Muriatic Acid) on Stainless Steel

Even diluted, hydrochloric acid can cause corrosion, pitting and stress corrosion cracking of stainless steel.

Water Treatment

To reduce deposits, soften hard water when possible. Installation of certain filters can remove corrosive and distasteful elements. Salts in a properly maintained water softener can also be to your advantage. Contact a treatment specialist if you are not sure of the proper water treatment.

Regularly Restore & Passivate Stainless Steel

Stainless steel gets its stainless properties from the protective chromium oxides on its surface. If these oxides are removed by scouring, or by reaction with harmful chemicals, then the iron in the steel is exposed and can begin to oxidize, or rust. Passivation is a chemical process that removes free iron and other contaminants from the surface of stainless steel, allowing the protective chromium oxides to re-form.

Cabinet Adjustments, Servicing, & Component Replacement

NOTE: Any cabinet adjustments are to be made **AFTER** the cabinet has been verified level and properly supported.

Servicing & Replacing Components

- Replace component parts with OEM (original equipment manufacturer) components.
- Have a licensed service provider service your unit to minimize the risk of possible ignition due to incorrect parts or improper service and to ensure the operator's health and safety.
- Unplug the refrigerator/freezer before cleaning or making any repairs. Setting temperature controls to the 0 position or powering off an electronic control may not remove power from all components (e.g., light circuits, perimeter heaters, and evaporator fans).

Slide Door Operation – Door Removal

DO NOT use the side latch before removing the slide door. The tension on the door cord is needed to execute these operation instructions. Doors cannot be removed unless they are positioned as stated in these instructions.

1. Position the doors as described below:

Two-Door Units

Slide the front door so it is centered on the cabinet. See figs. 1 and 2.

Three-Door Units

Center the middle door on the left edge of the right door. See fig. 3.

2. After centering, lift the door and tilt the top of the door back until the rollers are out of the top channel. Then, swing the bottom of the door out of the bottom channel. See fig. 4.

Two-Door units skip to step 5

3. Slide the right door to the left and align the left edge with the beginning of the TRUE Logo at the top of the door frame (see fig. 5). Then lift the door out of the track as described in step 2 (see fig. 4).
4. Slide the left door to the right and align the right edge with the end of the TRUE Logo at the top of the door frame (see fig. 6). Then lift door out of track same way as fig. 4.
5. Remove the door cord from the roller bracket. See figs. 7 and 8.

NOTE: The door cord will either be nylon cord or metal cable. The black plastic tab holding the door cord slides out the back.
6. Let the door cord slowly retract back into the door side channel.
7. When reinstalling the door, be sure the door cord grommet attaches to roller slot closest to the pulley. See fig. 9

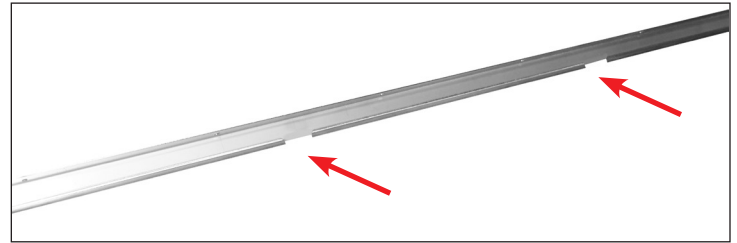


Fig. 1. Door channel openings (two-door units ONLY).



Fig. 2. Two-Door Units: Position the front door at the center of the cabinet.



Fig. 3. Three-Door Units: Center the middle door on the left edge of the right door.

Cabinet Adjustments, Servicing & Component Replacement (cont.)



Fig. 4. Carefully remove the door.

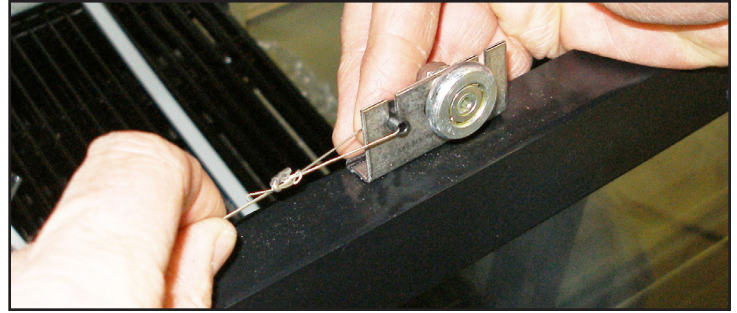


Fig. 7. Remove the door cord from the roller bracket.

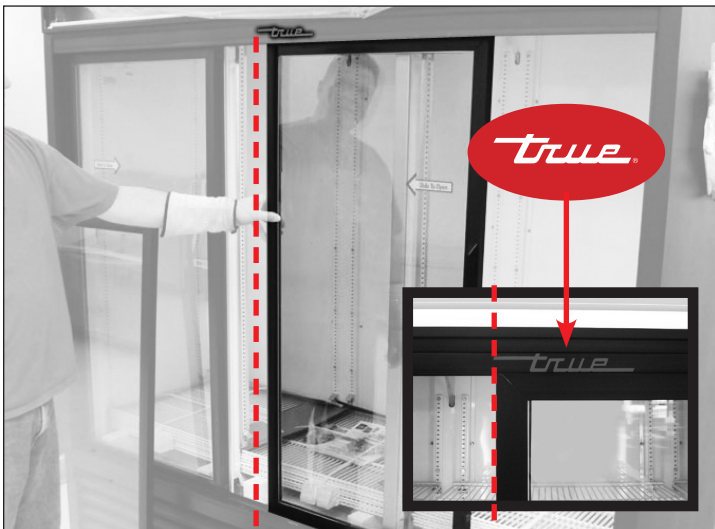


Fig. 5. Align the left edge of the right door with the left edge of the True logo.



Fig. 8. Slide the the black tab holding the door cord out the back

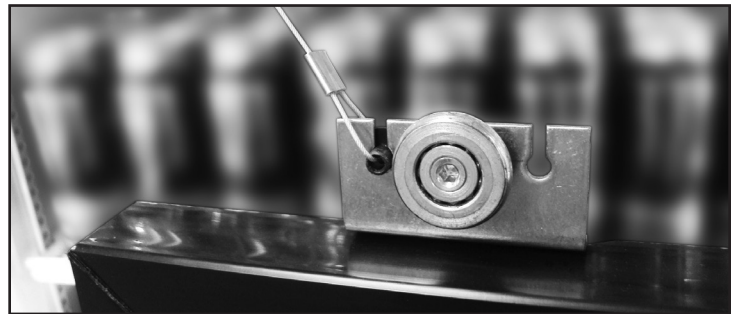


Fig. 9. Be sure the door cord is in the roller slot closest to the pulley.



Fig. 6. Align the right edge of the left door with the right edge of the TRUE logo.

Cabinet Adjustments, Servicing & Component Replacement (cont.)

Slide Door Operation – Door Adjustment

Only adjust the cabinet after it has been installed in its final location and correctly leveled.

1. Completely close the slide doors and check for openings. If there are any gaps/openings between the closed doors and cabinet, the doors will need to be adjusted.
2. With a 7/16" wrench or adjustable wrench and 1/8" Allen wrench, loosen the roller and move it along the slotted hole. After the adjustment has been made tighten the roller into place. See fig. 1.

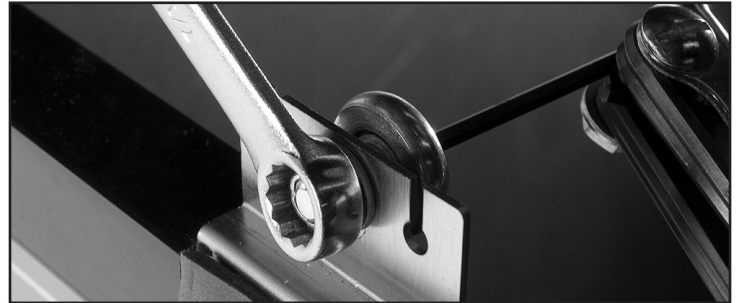


Fig. 1. Adjust the roller.

Slide Door Operation – Hold-Open Feature

The hold-open feature keeps the door in the open position.

1. Slide the door open.
2. Latch the door in the open position from the back side of door (notch in track). See figs. 1 and 2.

NOTE: Figs. 1 and 2 show the rear view of the door and track.



Fig. 1. Door latch is in the open position (engaged with notch).



Fig. 2. Door latch is in the closed position (disengaged from notch).

FOR MORE INFORMATION

For additional maintenance instruction, please visit the media center at

www.truemfg.com

Warranty Information (USA & Canada Only)

Warranty Information

To view and download the
Warranty Information for USA & Canada,
please scan the QR code below.





www.truemfg.com