

CONGRATULATIONS!

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

TABLE OF CONTENTS

SAFETY INFORMATION

Safety Precautions _____ 1
Proper Disposal, Connecting Electricity, & Adapter Plugs _____ 2

INSTALLATION

Ownership, Uncrating, & How to Connect to Electricity _____ 3
Wire Gauge Chart _____ 3
Recommended Operating Conditions _____ 4
Locating _____ 5
Leveling _____ 6
Installation of Legs or Castors _____ 7

SETUP

Standard Accessories _____ 8

OPERATION

Startup _____ 11
Mechanical Temperature Controls Sequence of Operation _____ 12
Electronic Temperature Controls Sequence of Operation _____ 17

MAINTENANCE, CARE, CLEANING

Cleaning Condenser Coil _____ 30
Important Warranty Information _____ 31
Stainless Steel Equipment Care and Cleaning _____ 32
General Maintenance _____ 33

WARRANTY

Warranty _____ 34



TAC-14GS-LD



TAC-48SM-LD
***DISCONTINUED**



TAC-72-LD



INSTALLATION MANUAL

TAC: AIR CURTAIN



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 24 hours prior to usage.



SAFETY INFORMATION

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 Owner Manual.

TO LOCATE REFRIGERANT TYPE, SEE SERIAL LABEL INSIDE CABINET. This cabinet may contain fluorinated greenhouse gas covered by the Kyoto Protocol (please refer to cabinet's inner label for type and volume, GWP of 134a= 1,300. R404a= 3,800).

FOR HYDROCARBON REFRIGERATION ONLY (R-290) SEE BELOW:

- **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. To be repaired only by trained service personnel. Do not puncture refrigerant tubing.
- **CAUTION** - 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.
- **CAUTION** - Risk of fire or explosion. Dispose of properly in accordance with federal or local regulations. Flammable refrigerant used.
- **CAUTION** - Risk of fire or explosion due to puncture of refrigerant tubing; follow handling instructions carefully. Flammable refrigerant used.
- **CAUTION** - Keep clear of obstruction all ventilation openings in the appliance enclosure or in the structure for building-in.

SAFETY PRECAUTIONS

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

- This refrigerator must be properly installed and located in accordance with the Installation Instructions before it is used.
- Do not allow children to climb, stand or hang on the shelves in the refrigerator. They could damage the refrigerator and seriously injure themselves.
- Do not touch the cold surfaces in the freezer compartment when hands are damp or wet. Skin may stick to these extremely cold surfaces.
- 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 between the doors and cabinet are necessarily small; be careful closing doors when children are in the area.
- Unplug the refrigerator before cleaning and making repairs.
- Setting temperature controls to the 0 position does not remove power to the light circuit, perimeter heaters, or evaporator fans.

NOTE: We strongly recommend that any servicing be preformed by a qualified technician.

DANGER!**RISK OF CHILD
ENTRAPMENT****PROPER DISPOSAL OF THE REFRIGERATOR**

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 YOU THROW AWAY YOUR OLD
REFRIGERATOR OR FREEZER:**

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

APPLIANCE DISPOSAL

When recycling appliance please make sure that the refrigerants are handled according to local and national codes, requirements and regulations.

REFRIGERANT DISPOSAL

Your old refrigerator may have a cooling system that uses "Ozone Depleting" chemicals. If you are throwing away your old refrigerator, make sure the refrigerant is removed for proper disposal by a qualified service technician. If you intentionally release any refrigerants you can be subject to fines and imprisonment under provisions of the environmental regulations.

USE OF EXTENSION CORDS

NEVER USE AN EXTENSION CORD! TRUE will not warranty any refrigerator that has been connected to an extension cord.

REPLACEMENT PARTS

- Component parts shall be replaced with like components.
- Servicing shall be done by authorized service personnel, to minimize the risk of possible ignition due to incorrect parts or improper service.
- Lamps must be replaced by identical lamps only.
- If the supply cord is damaged, it must be replaced by a special cord or assembly available from the manufacturer or its service agent.

WARNING!**HOW TO CONNECT ELECTRICITY**

DO NOT, UNDER ANY CIRCUMSTANCES, CUT OR REMOVE THE GROUND PRONG FROM THE POWER CORD. FOR PERSONAL SAFETY, THIS APPLIANCE MUST BE PROPERLY GROUNDED.

The power cord from this appliance is equipped with a grounding plug which minimizes the possibility of electric shock hazard.

Have the wall outlet and circuit checked by a qualified 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.

The refrigerator should always be plugged into its own individual electrical circuit, which has a voltage rating that matches the rating plate.

This provides the best performance and also prevents overloading building wiring circuits which could cause a fire hazard from overheated wires.

Never unplug your refrigerator by pulling on the power cord. Always grip plug firmly and pull straight out from the outlet.

Repair or replace immediately all power cords that have become frayed or otherwise damaged. Do not use a cord that shows cracks or abrasion damage along its length or at either end.

When removing the refrigerator away from the wall, be careful not to roll over or damage the power cord.

If supply power cord is damaged it should be replaced with original equipment manufacture parts. To avoid hazard this should be done by a qualified service technician.

USE OF ADAPTER PLUGS

NEVER USE AN ADAPTER PLUG! Because of potential safety hazards under certain conditions, we strongly recommend against the use of an adapter plug.

The incoming power source to the cabinet including any adapters used must have the adequate power available and must be properly grounded. Only adapters listed with UL should be used.

NORTH AMERICA USE ONLY!

NEMA plugs

TRUE uses these types of plugs. If you do not have the right outlet have a certified electrician install the correct power source.

NOTE: International plug configurations vary by voltage and country.



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.

UNCRATING

TOOLS REQUIRED

- Adjustable Wrench
- Phillips Screwdriver
- Level

The following procedure is recommended for uncrating the unit:

- Remove the outer packaging, (cardboard and bubbles or Styrofoam corners and clear plastic). Inspect for concealed damage. Again, immediately file a claim with the freight carrier if there is damage.
- Move your unit as close to the final location as possible before removing the wooden skid.

ELECTRIC INSTALLATION & SAFETY INFORMATION

- If the supply cord is damaged, it must be replaced by a special cord or assembly available from the manufacturer or its service agent.
- Lamps must be replaced by identical lamps only.
- Appliance tested according to the climate classes 5 and 7 temperature and relative humidity.

ELECTRICAL INSTRUCTIONS

- Before your new unit is connected to a power supply, check the incoming voltage with a voltmeter. If anything less than 100% of the rated voltage for operation is noted, correct immediately.
- All units are equipped with a service cord, and must be powered at proper operating voltage at all times. Refer to cabinet data plate for this voltage.

TRUE RECOMMENDS THAT A SOLE USE CIRCUIT BE DEDICATED FOR THE UNIT.

WARNING: Compressor warranties are void if compressor burns out due to low voltage.

WARNING: Power supply cord ground should not be removed!

WARNING: Do not use electrical appliances inside the food storage compartments of the appliances unless they are of the type recommended by the manufacturer.

NOTE: To reference wiring diagram, remove front louvered grill, wiring diagram is positioned on the inside cabinet wall.

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
3	14	14	14	14	14	14	14	14	14	14	14	12
4	14	14	14	14	14	14	14	14	14	12	12	12
5	14	14	14	14	14	14	14	12	12	12	10	10
6	14	14	14	14	14	14	12	12	12	10	10	10
7	14	14	14	14	14	12	12	12	10	10	10	8
8	14	14	14	14	12	12	12	10	10	10	8	8
9	14	14	14	12	12	12	10	10	10	8	8	8
10	14	14	14	12	12	10	10	10	10	8	8	8
12	14	14	12	12	10	10	10	8	8	8	8	6
14	14	14	12	10	10	10	8	8	8	6	6	6
16	14	12	12	10	10	8	8	8	8	6	6	6
18	14	12	10	10	8	8	8	8	8	6	6	5
20	14	12	10	10	8	8	8	6	6	6	5	5
25	12	10	10	8	8	6	6	6	6	5	4	4
30	12	10	8	8	6	6	6	6	5	4	4	3
35	10	10	8	6	6	6	5	5	4	4	3	2
40	10	8	8	6	6	5	5	4	4	3	2	2
45	10	8	6	6	6	5	4	4	3	3	2	1
50	10	8	6	6	5	4	4	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
6	14	14	14	14	14	14	14	14	14	14	14	12
7	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
9	14	14	14	14	14	14	14	14	14	12	12	10
10	14	14	14	14	14	14	14	14	14	12	12	10
12	14	14	14	14	14	14	14	14	14	12	12	10
14	14	14	14	14	14	14	14	14	14	12	12	10
16	14	14	14	14	14	14	14	14	14	12	12	10
18	14	14	14	14	14	14	14	14	14	12	12	10
20	14	14	14	14	14	14	14	14	14	12	12	10
25	14	14	14	14	14	14	14	14	14	12	12	10
30	14	14	14	14	14	14	14	14	14	12	12	10
35	14	14	14	14	14	14	14	14	14	12	12	10
40	14	14	14	14	14	14	14	14	14	12	12	10
50	12	10	10	8	6	6	6	6	6	6	5	4
60	12	10	8	6	6	6	6	6	6	5	4	4
70	10	10	8	6	6	6	5	5	4	4	4	3
80	10	8	8	6	6	5	5	4	4	3	2	2
90	10	8	6	6	5	5	4	4	3	3	1	1
100	10	8	6	6	5	4	4	3	3	2	1	1

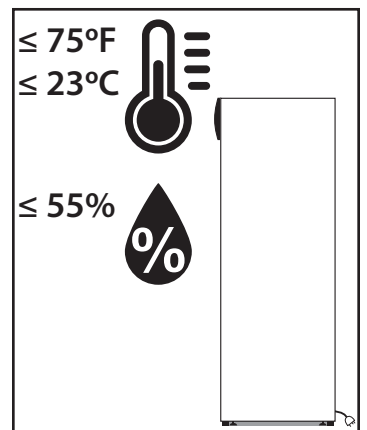
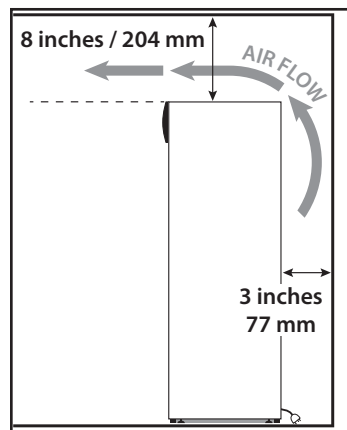
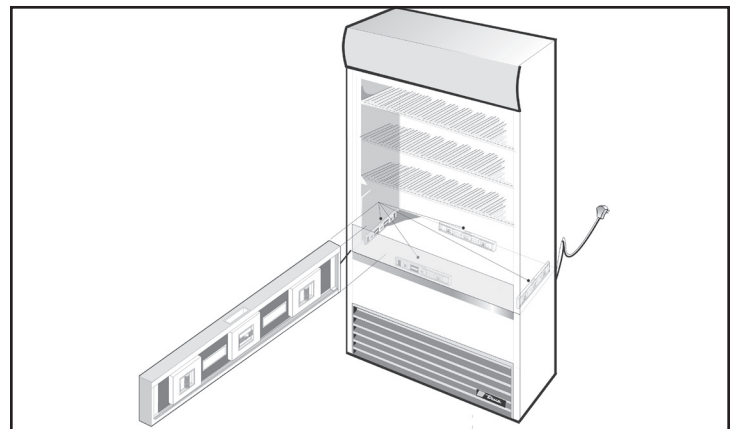
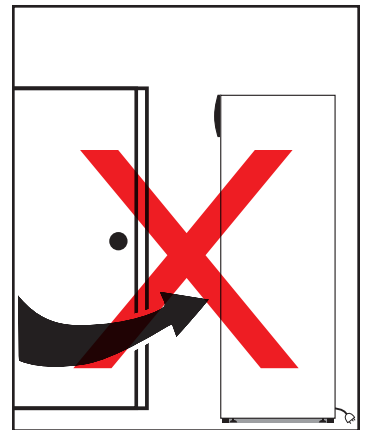
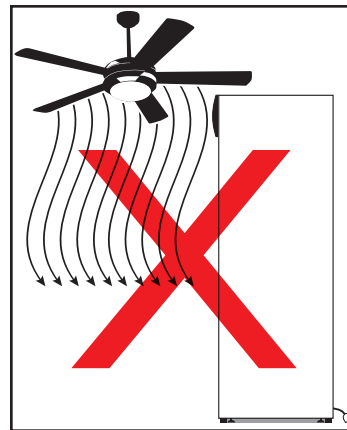
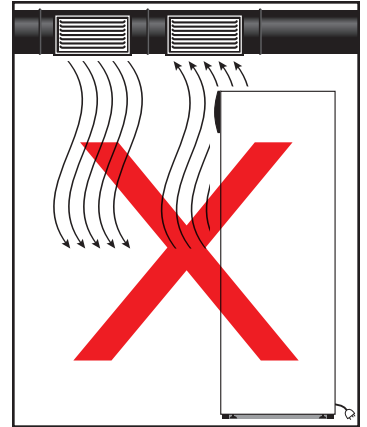
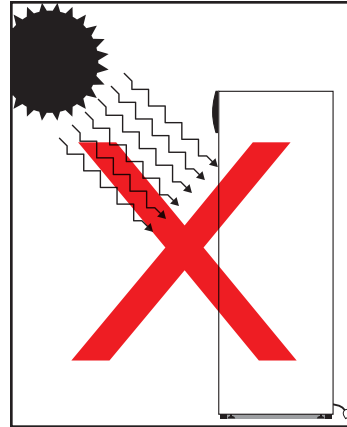
TAC RECOMMENDED OPERATING CONDITIONS

INSTALLATION TIPS

- Do not place into direct sunlight.
- No HVAC supply or return air vents pushing air into or pulling air out of cabinet.
- No ceiling fans.
- No doorways.
- Make sure cabinet is level from back-to-back and side-to-side.

NOTE: Check for correct clearance space in back of cabinet and above. A 3-INCH (77 mm) clearance requirement for the rear of cabinet and 8-INCH (204 mm) clearance above cabinet.

- Maximum ambient condition 75 degrees and 55% Relative Humidity.
- Place cabinet in an area that will not have any air drafts.
- Excessive airflow around cabinet can effect interior cabinet airflow (air-curtain).



LOCATING

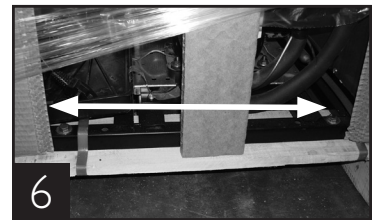
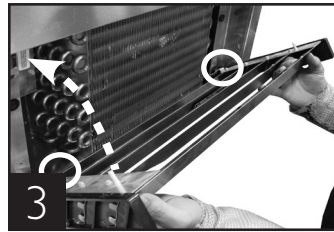
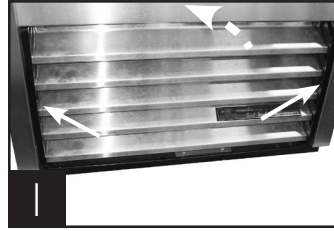
WARNING: BE SURE THERE IS ADEQUATE VENTILATION IN YOUR ROOM. MAXIMUM AMBIENT CONDITION 75 DEGREES AND 55% RELATIVE HUMIDITY. WARRANTY IS VOID IF VENTILATION IS INSUFFICIENT.

CLEARANCES

For proper cabinet operation, clearance guidelines should be followed.

AIR CURTAINS – 4" at the rear and 12" at the top.

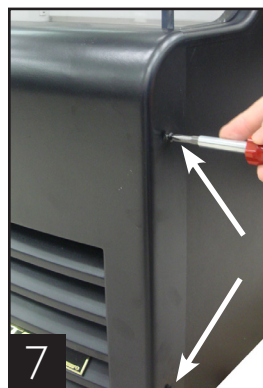
- A. Remove louver from the front of cabinet and backguard (if applicable) from rear of cabinet. Remove louver grill by backing out Phillips screws located on either side of the louver grill. See image 1. Pull the louver grill out from the cabinet front. See image 2. To reinstall grill, place louver grill back into brackets located at the base of the unit. See image 3. Snap top of louver grill into place. Replace screws).
- B. Skid bolts are located in each of 4 corners inside cabinet bottom. See image 4.
- C. Remove skid bolts. See image 5.
- D. Cut straps if applicable. See image 6.
- E. Carefully lift cabinet off of skid.



Images 4-6, removing skid from bottom of cabinet.

TAC-14GS-LD GRILL REMOVAL:

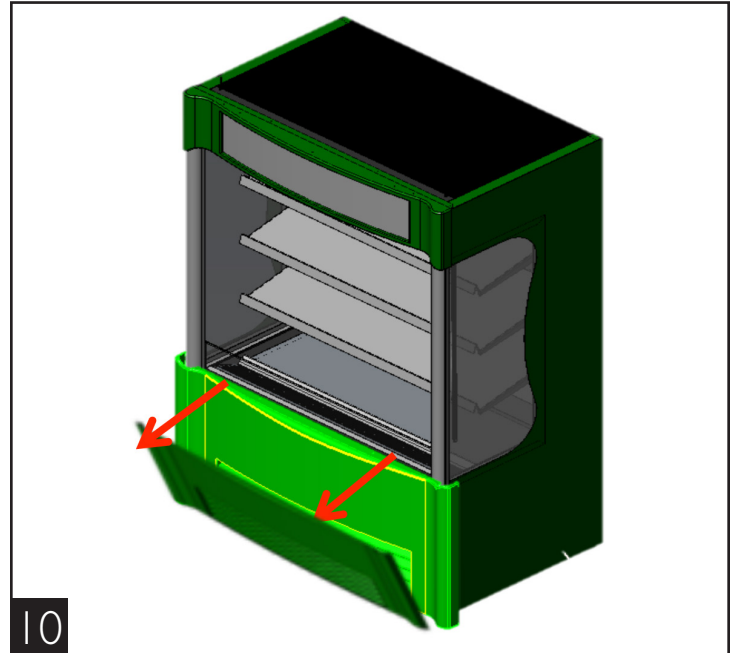
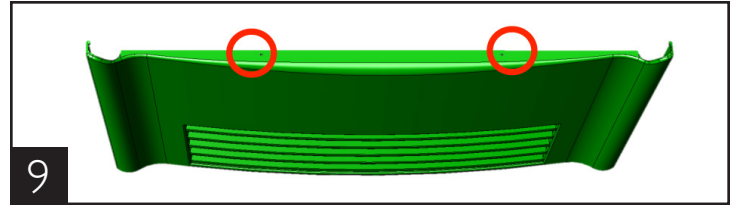
Remove two screws from either side of the front grill. See image 7. Lift grill away front cabinet. See image 8.



TAC-48SM-LD GRILL REMOVAL:

Remove the 2 Phillips screws on the top of the grill. See image 9.

With Phillips screws removed, tilt grill forward from the top to release the grill from the retaining clips on the bottom. See image 10.



LEVELING

A. Set unit in its final location. Be sure there is adequate ventilation in your room. Under extreme heat conditions, (100°F+, 38°C+), you may want to install an exhaust fan.

WARNING: WARRANTY IS VOID IF VENTILATION IS INSUFFICIENT.

- B. Proper leveling of your TRUE cooler is critical to operating success (for non-mobile models). Effective condensate removal and door operation will be effected by leveling.
- C. The cooler should be leveled front to back and side to side with a level.
- D. Ensure that the drain hose or hoses are positioned in the pan.
- E. Free plug and cord from inside the lower rear of the cooler (do not plug in).
- F. The unit should be placed close enough to the electrical supply so that extension cords are never used.

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.

WARNING: CABINET WARRANTIES ARE VOID IF OEM POWER CORD IS TAMPERED WITH. TRUE WILL NOT WARRANTY ANY UNITS THAT ARE CONNECTED TO AN EXTENSION CORD.

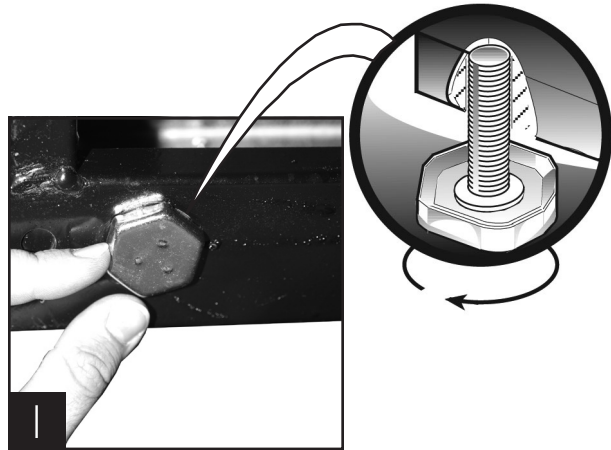
INSTALLATION OF LEGS AND CASTORS

LEG LEVELERS:

If the cabinet is not level use an open-end wrench and turn adjustable tips on legs until cooler is level. (See image 1).

CASTOR INSTALLATION: (KIT CONTENTS)

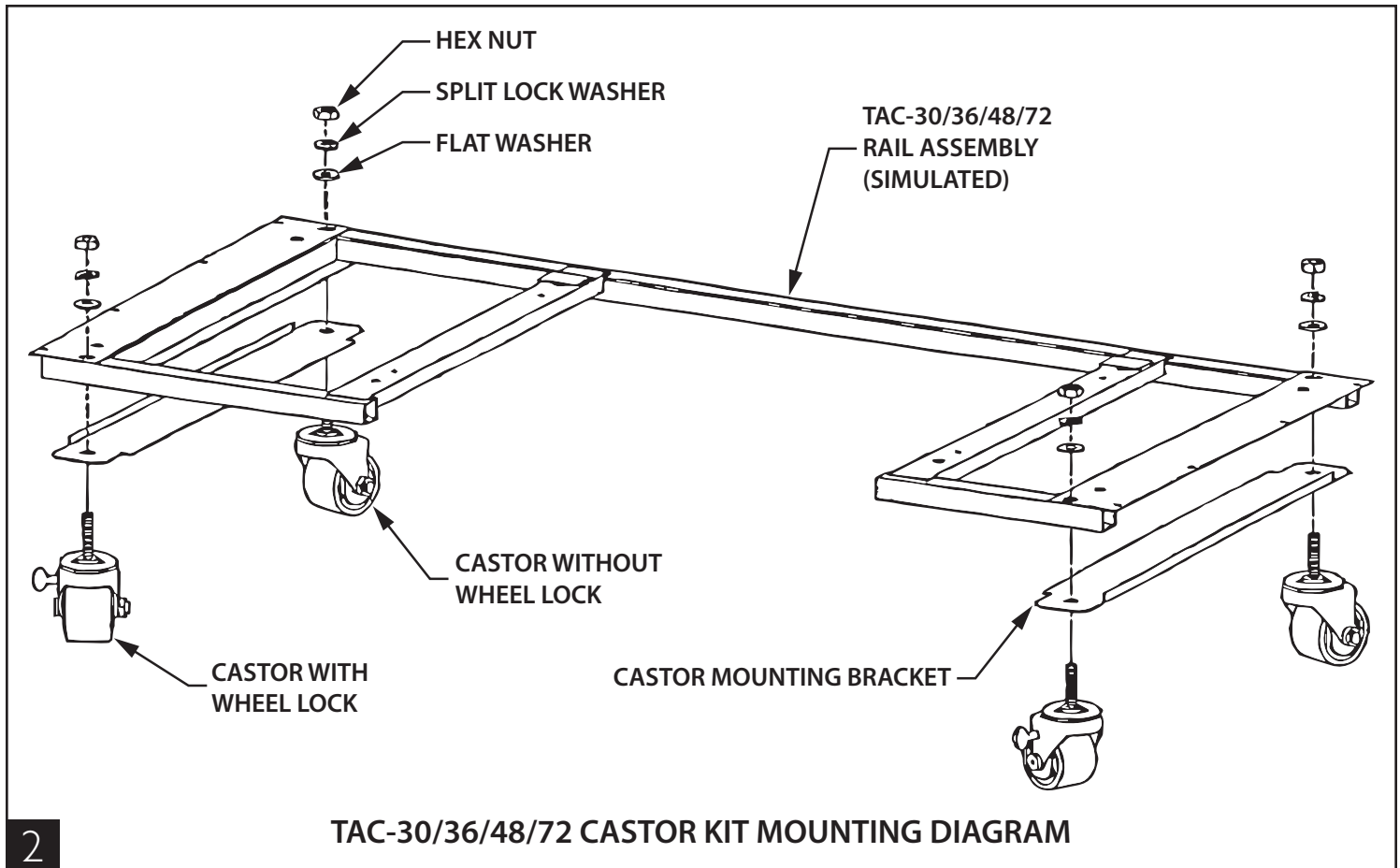
- 2 Castor mounting bracket
- 2 Castor, 2-1/2" diameter wheel with 3/8" - 16 x 1-1/2" threaded stem without brake
- 2 Castor, 2-1/2" diameter wheel with 3/8" - 16 x 1-1/2" threaded stem with brake
- 4 Washer, flat, 3/8" I.D. x 1" O.D.
- 4 Washer, split lock, 3/8" I.D.
- 4 Nut, hex, 3/8" - 16 (See image 2).



Leg levelers in the bottom of the cabinet can be backed out for leveling.

CAUTION

To avoid damage to lower rail assembly, slowly raise unit to upright position after installing castors.



SETUP

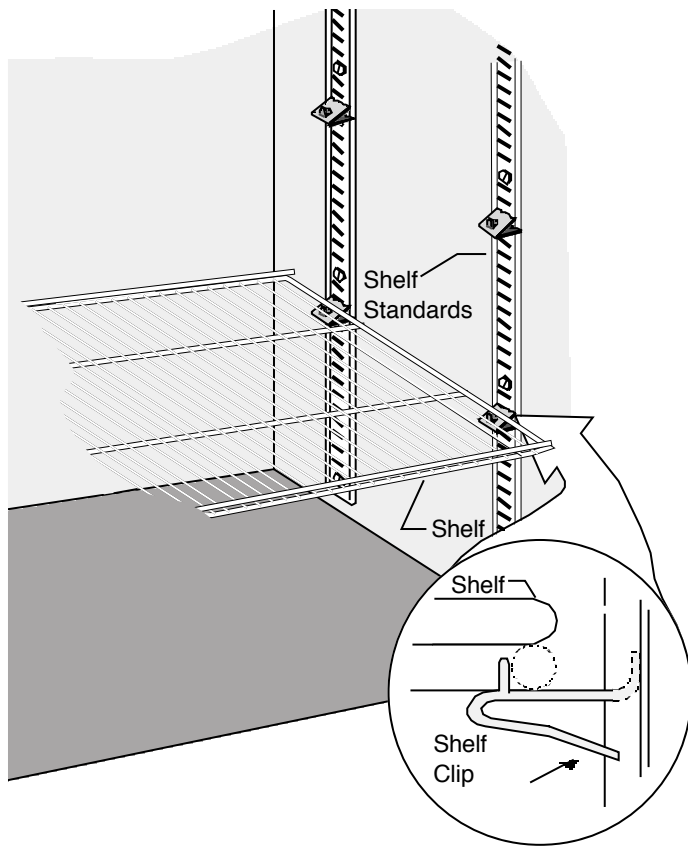
STANDARD ACCESSORIES

SHELVING INSTALLATION / OPERATION

SHELF INSTALLATION:

- A. Hook shelf clips onto shelf standards.
- B. Position all four shelf clips equal in distance from the floor for flat shelves.
- C. Lower front of gravity feed TrueTrac organizers to enable proper feed.
- D. Place shelves on shelf clips making sure all corners are seated properly.

NOTE: Do not load product to where it would over hang the shelf.



CANTILEVER SHELVING INSTALLATION:

A. Install the shelf supports into the shelf standards that are located in the rear corners of the cabinet. See photos 1 & 2.



TAC-72-LD CANTILEVER SHELVING INSTALLATION:

- A. TAC-72-LD cantilever shelves come packaged inside the unit. Leg leveling parts may be taped to the top of the shelf packaging. Remove leg leveling parts. See photo 3.
- B. Remove cantilever shelves from packaging and protective wrap.
- C. Install the shelf supports into the shelf standards that are located in the rear corners and middle of the cabinet. See photo 4.



TAC-48SM-LD SHELVING INSTALLATION:

Note: For ease of installation it is recommended to install the lower shelf first.

INSTALLING SHELF BRACKET INTO SHELF STANDARD

STEP 1

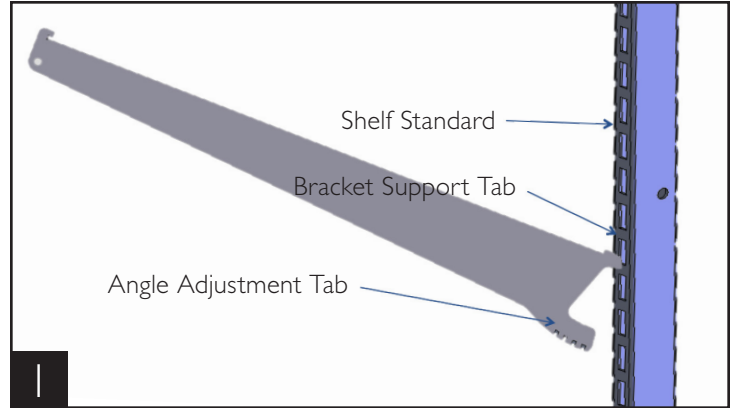
Position the shelf bracket in front of the shelf standard. Raise the front of the bracket up at a 45 degree angle to allow the bracket support tab to slide in and up into the shelf standard. See image 1.

STEP 2

Slide the shelf angle adjustment tab into the shelf standard. Position notch in bracket to support shelf at desired angle.

STEP 3

Repeat for opposite side shelf bracket.



TAC-48SM-LD SHELVING INSTALLATION:

INSTALLING SHELF ONTO SHELF BRACKET

STEP 1

Position shelf on shelf bracket. Shelf horizontal bends on left and right should be to the outside of the bracket

STEP 2

Lift the back of the shelf up and back to clear the shelf support tab of the bracket. See image 2.

STEP 3

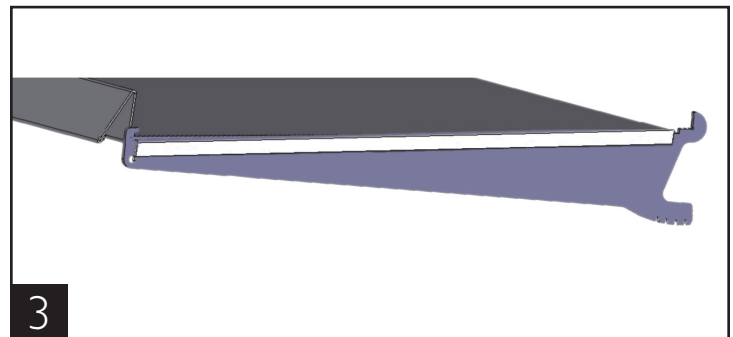
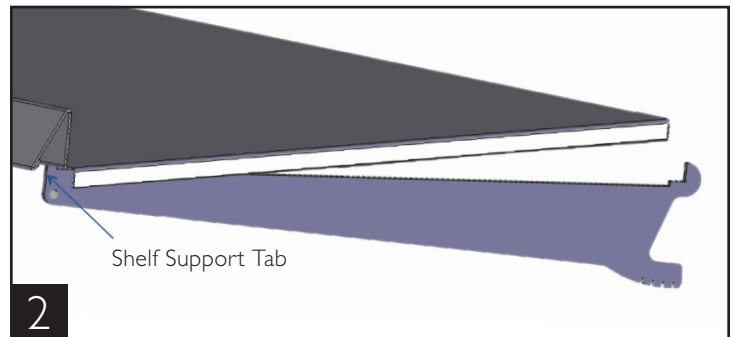
Once cleared, slide shelf forward to allow the front of the shelf to slide under the front shelf support tab. See image 3.

STEP 4

When installed correctly the shelf will be supported between the notches. See image 3.

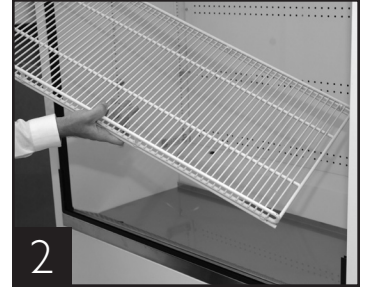
STEP 5

Repeat for additional shelves.

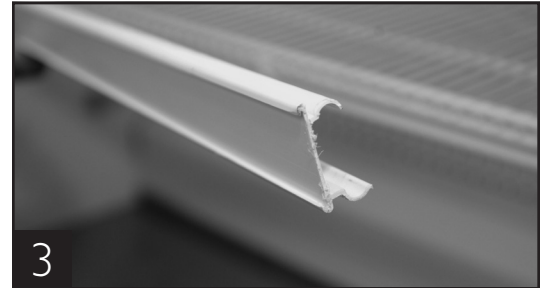
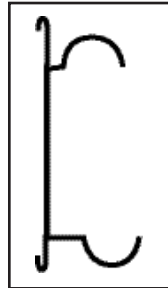


FLAVOR STRIP INSTALLATION

- A. Take the shelf and turn it around. The back of the shelf should be facing out. See images 1-2.
- B. The flavor strip snaps onto the shelf with the larger opening of the strip toward the bottom. See images 3-4.
- C. After flavor strip is installed tags can be put into the flavor strip. See image 5.



Turn shelf around.



Flavor strip end view



Flavor strip install.

OPERATION

STARTUP

A. The compressor is ready to operate. Plug in the cooler.

PLEASE REVIEW THE FOLLOWING CAUTIONS WHEN THE OPTIONAL HEATED PAN IS USED.

CAUTION: This unit has two power supply cords. Unplug both cords before moving or servicing this appliance.

CAUTION: This unit has two power supply cords. Connect each plug to a receptacle that is connected to an individual branch circuit.

CAUTION: This unit has more than one disconnect switch (plug).

B. Temperature controls are factory-set to give refrigerators an appropriate temperature of 35°F (1.6°C). Allow unit to function several hours, completely cooling cabinet before changing the control setting.

Temperature Control Location and Settings.

- Temperature control type will vary upon model and age of cabinet.
- Mechanical control or electronic control without display:
 - Inside cabinet
 - Behind cabinet
 - Behind front or rear access grill
- Electronic control with display:
 - In countertop
 - In top louvered panel
 - In or behind bottom louvered grill

See website for adjustments, sequence of operation, and more information.

C. Excessive tampering with the control could lead to service difficulties. Should it ever become necessary to replace temperature control, be sure it is ordered from your TRUE dealer or recommended service agent.

D. Good air flow in your TRUE unit is critical. Be careful to load product so that it neither presses against the back wall, nor comes within four inches of the evaporator housing. Refrigerated air off the coil must circulate down the back wall.

NOTE: If the unit is disconnected or shut off, wait five minutes before starting again.

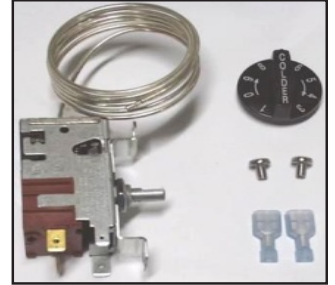
RECOMMENDATION - Before loading product we recommend you run your TRUE unit empty for two to three days. This allows you to be sure electrical wiring and installation are correct and no shipping damage has occurred. Remember, our factory warranty does not cover product loss!

LIGHT SWITCH LOCATION: The light switch is located behind the interior light on the ceiling. Depending on the model the switch will be either on the left or right side of the ceiling.

MECHANICAL TEMPERATURE CONTROLS

COIL SENSING

An evaporator coil sensing temperature control ensures that the evaporator coil will remain clear of frost and ice by not allowing the compressor to restart until the coil temperature is above the freezing temperature. This is considered an **off cycle defrost**.



MECHANICAL TEMPERATURE CONTROL GENERAL SEQUENCE OF OPERATION

MECHANICAL CONTROL REFRIGERATOR GENERAL SEQUENCE OF OPERATION

1. Cabinet is plugged in.
 - a. Interior lights will illuminate on Glass Door Models only. If lights do not come on verify the light switch is in the "ON" position. Solid door cabinets may or may not have lights that may be controlled by the door switch.
2. The compressor and evaporator fans will start if the temperature control is calling for cooling. (If the compressor does not start, verify that the temperature control is not in the "OFF" or "0" position.)
3. The temperature control may cycle the compressor and evaporator fan(s) on and off together.
 - a. The temperature control is sensing the evaporator coil temperature.
 - b. The temperature control should be set on the #4 or #5.
 - c. The warmest setting is #1, the coldest is #9, and #0 is the off position.
 - d. The thermometer is designed to read and display a cabinet temperature not a product temperature. The thermometer may reflect the refrigeration cycle swings of up and down temperatures. The most accurate temperature on a cabinet's operation is to verify the product temperature.
4. There is not a defrost timer as the temperature control will initiate the off-cycle defrost during each refrigeration cycle.
 - a. At this time, the compressor will and the evaporator fan(s) may turn off. Defrost heaters are not installed on refrigerators and therefore will not be energized.
 - b. After the evaporator coil temperature has been reached, as determined by the temperature control, the compressor will restart.
5. There may be a timer located on the condensing unit base. This timer is not used for a defrost event. The timer will change the rotation of the reversing condenser fan motor.

WHEN TO MAKE AN ADJUSTMENT TO A MECHANICAL TEMPERATURE CONTROL

We advise to make a mechanical temperature control adjustment only for a high altitude location.



HOW TO ADJUST A MECHANICAL TEMPERATURE CONTROL

OPERATION INSTRUCTIONS:

REQUIRED TOOLS:

- Jewelers Screw Driver (Small Screw Driver)

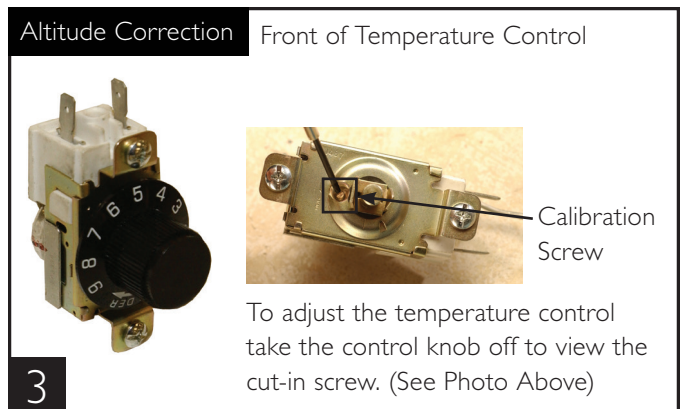
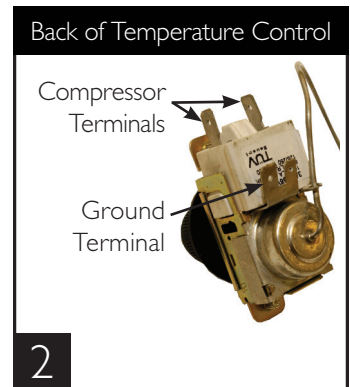
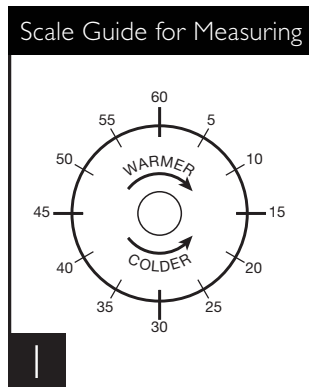
GE CONTROL INSTRUCTIONS:

The scale to the right may be used as a guide for measuring degrees of rotation required for altitude correction. See Figure 1. The arrows indicate direction of screw rotation. Turn calibration screw clockwise to obtain warmer operating temperatures.

NOTE: Each 1/4 turn of the calibration screw is equal to approximately 2 degrees F. Do not make more than 3/4 turn. After making adjustment, measure temperature during three cycles before adjusting again.

NOTE: Only adjust the screw (small flathead) on the face of the control (next to the cam). See Figure 3. Follow the Altitude Correction Table to the right.

ALTITUDE CORRECTION TABLE: CALIBRATION SCREW ADJUSTS BOTH CUT-IN AND CUT-OUT	
Altitude (Feet)	Clockwise Turns
2000	7/60
3000	11/60
4000	15/60
5000	19/60
6000	23/60
7000	27/60
8000	30/60
9000	34/60
10,000	37/60



INSTALLATION INSTRUCTIONS DANFOSS TEMPERATURE CONTROL ADJUSTMENT FOR HIGH ALTITUDE APPLICATIONS:

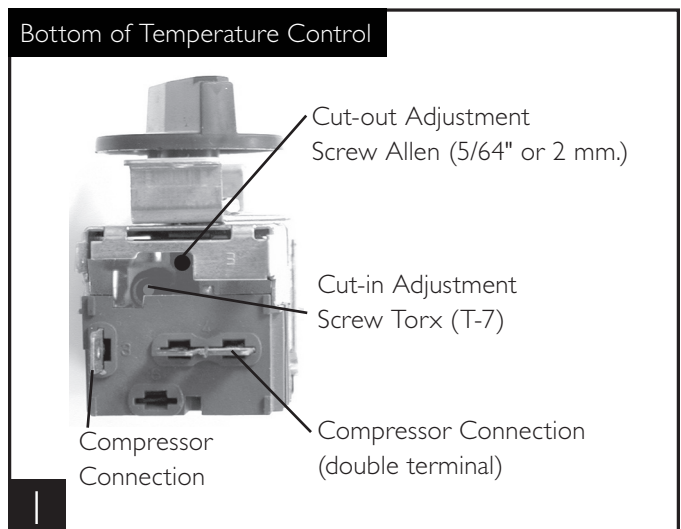
REQUIRED TOOLS:

- Allen Wrench (5/64")
- Torx Screw (T-7)

TERMS:

Cut-out - Temperature sensed by the controller that shuts the compressor off.

Cut-in - Temperature sensed by the controller that turns the compressor on.



INSTRUCTIONS: DANFOSS TEMPERATURE CONTROL ADJUSTMENT FOR HIGH ALTITUDE APPLICATIONS

STEP 1 - Unplug cooler.

STEP 2 - Remove the screws that secure the temperature control to the inset box.

STEP 3 - To make these adjustments it may be necessary to remove the temperature control from the housing.

NOTE: You may have to remove the wires attached to the control. Take note as to which wire is on which spade terminal.

STEP 4 - Pull out gently from cabinet.

NOTE: Mechanical temperature controllers are affected when functioning at high altitude. The cut-in and cut-out temperatures will be colder than when the controller functions closer to sea level.

STEP 5 - For high elevation installations, it may be necessary to “warm-up” the set points. To make the adjustment, insert the appropriate tool in each adjustment screw and turn 1/4 of a revolution clockwise (to the right). This procedure will adjust both the cut-in and cut-out about 2°F warmer.

STEP 6 - Make sure to reconnect the wires to the proper spade terminal when reinstalling.

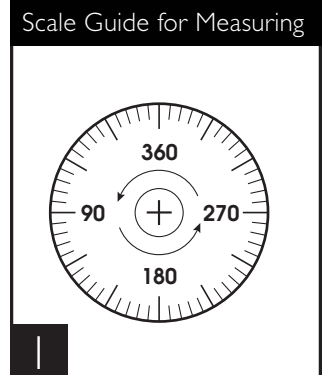
INSTALLATION INSTRUCTIONS TEMPERATURE CONTROL ALTITUDE ADJUSTMENT:

REQUIRED TOOLS:

- Allen Wrench (5/64")
- Torx Screw (T-7)

The scale to the right may be used as a guide for measuring degrees of rotation required for altitude correction. The arrows indicate direction of screw rotation. See Figure 1.

IMPORTANT: Upright models ordered with “High Altitude” temperature controls are pre-calibrated and do not require adjustment.



INSTRUCTIONS: CUTLER HAMMER TEMPERATURE CONTROL ALTITUDE ADJUSTMENT

STEP 1 - Unplug cooler.

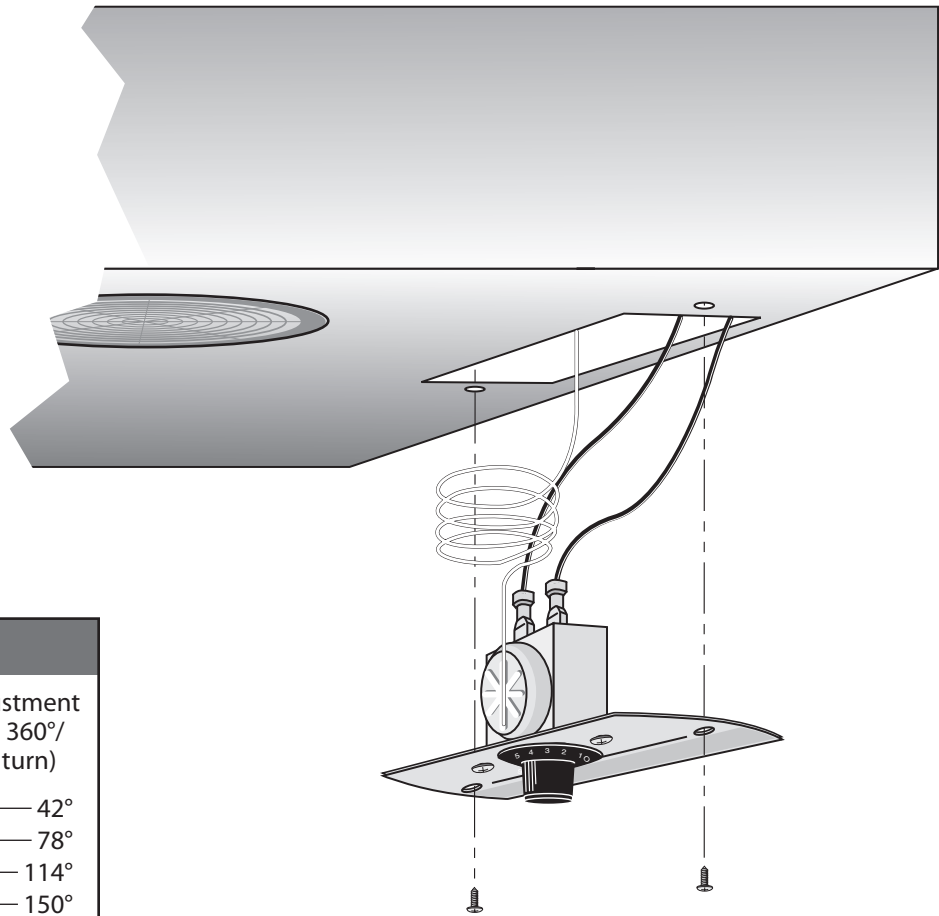
STEP 2 - Turn the temperature control to the “9” position.

STEP 3 - Remove the screws that secure the mounting plate to the evaporator top. See Figure 2.

STEP 4 - Pull control down gently from housing.

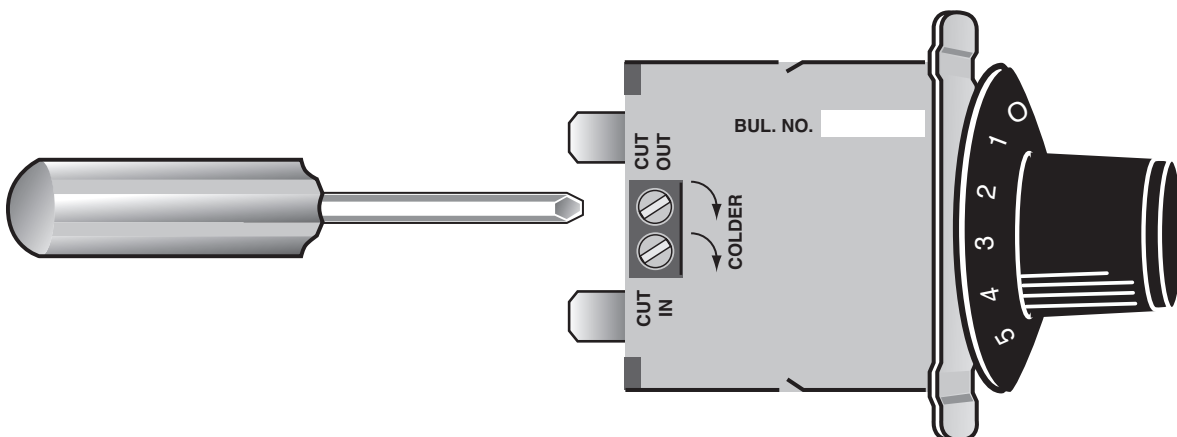
STEP 5 - Turn screws counterclockwise (CCW).

STEP 6 - Reassemble to cooler housing and return the temperature control to the “5” position.



CHART

Height	CCW Adjustment (based on 360°/ complete turn)
2000'	42°
3000'	78°
4000'	114°
5000'	150°
6000'	186°
7000'	222°
8000'	258°
9000'	294°
10,000'	330°



DEFROST TIMER

DEFROST TIME CLOCK OPERATION FOR UNITS WITH MECHANICAL CONTROL

RECOMMENDED DEFROST SETTINGS:

TRUE Manufacturing has factory set your defrost time clock to a recommended time and duration defrost scenario. All refrigeration equipment operating below 30°F will accumulate frost on the evaporator coil and will require routine defrost. Your TRUE equipment has been designed for three defrost periods (6:00 a.m., 2:00 p.m. and 10:00 p.m.). If you decide to deviate from these defrost time settings please follow the procedures for adjustment below.

TOOLS REQUIRED

- Phillips Head Screwdriver
- 1/4" Nut Driver or Socket

SETTING THE TIMER:

UNPLUG UNIT FROM POWER SUPPLY! DO NOT SET THE TIME BY ROTATING THE "OUTER" DIAL.

Turn the minute hand clockwise until the time of day on the outer dial is aligned with the triangle marker on the inner dial (two o'clock position).

ADJUSTING THE DEFROST TIMER:

Your TRUE freezer contains a defrost system that is temperature terminated, however the time clock has been designed with a time termination back-up so that the defrost period will not exceed thirty minutes. While TRUE requires a minimum 3 defrost periods not to exceed 30 minutes the procedure on this page should be followed to customize your specific needs.

NOTICE: If timer is not set for a minimum of 3 defrost per day for 30 minutes each, the coil may develop excessive frost. This may lead to system failure and product loss, which is not covered under warranty.

The following procedure may be followed to customize your needs.

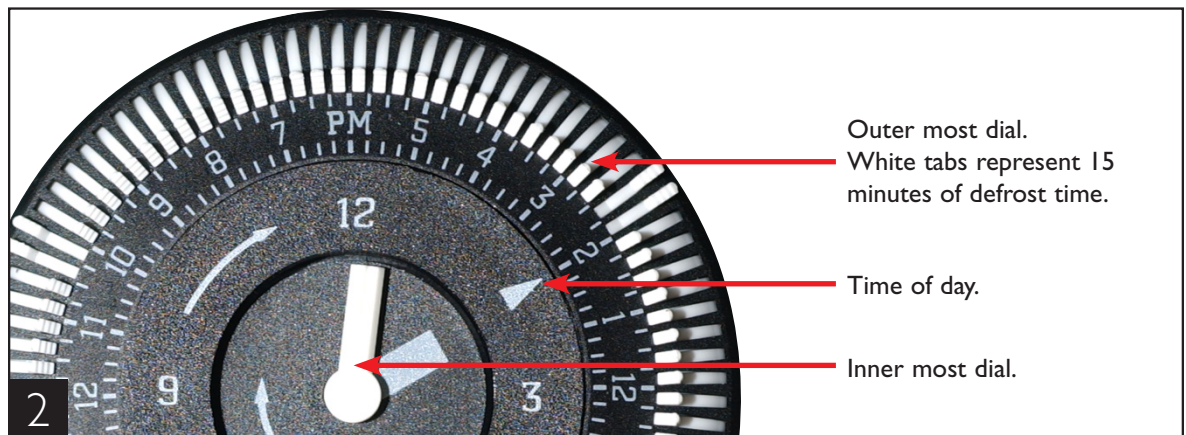
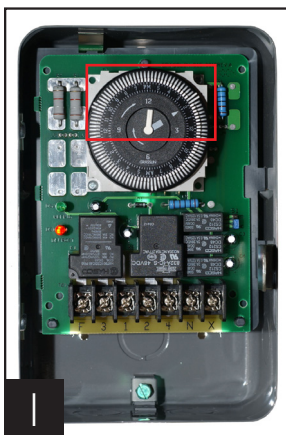
High usage, high temperature, and high humidity may require 4 defrost settings per day.

WARNING: Always follow the manufacturer's recommended settings when programming the amount and duration of the defrost cycles.

STEP 1: The white tabs located on the outmost area of the time clock have been factory set for (6:00 a.m., 2:00 p.m., and 10:00 p.m.). Each tab represents 15 minutes of defrost time. Notice that at each defrost time two white tabs are set for 15 minutes each for a total of 30 minutes of defrost.

STEP 2: In order to program the time to begin the defrost cycle, flip the white tabs out to set the defrost time. To eliminate a defrost time flip the white tabs back toward the center of the Defrost Timer.

STEP 3: TRUE recommends a 30 minute defrost cycle three times per day.



ELECTRONIC TEMPERATURE CONTROLS

DIXELL ELECTRONIC TEMPERATURE CONTROL GENERAL SEQUENCE OF OPERATION

- p1 = supply air (thermostat)
 p2 = coil / copper line (defrost)
 p3 = return air (display)

p3 probe is not installed and / or activated
 in all applications with p3 is not installed
 and / or activated, the display probe is p1.



DIXELL ELECTRONIC CONTROL GENERAL SEQUENCE OF OPERATION

1. Cabinet is plugged in.
 - a. Display will illuminate.
 - b. Interior lights will illuminate on Glass Door Models only. If lights do not come on verify the light switch is in the "ON" position. Solid door cabinets may or may not have lights that may be controlled by the door switch.
 - c. Evaporator motors will come on (refrigerator only).
2. After the Dixell control preprogrammed time delay of 3-5 minutes, the compressor and freezer evaporator fan(s) will start if the control is calling for cooling.
3. The Dixell control will cycle the compressor but may also cycle the evaporator fan(s) on and off determined by the Set-Point and Differential temperatures.
 - a. The Set-Point is the **adjustable** preprogrammed temperature which shuts off the compressor and evaporator fan(s). This is not the programmed cabinet temperature.
 - b. The Differential is the **non adjustable** preprogrammed temperature that is added to the Set-Point temperature that will start the compressor and evaporator fan(s).
 - c. The Dixell control is designed to read and display a cabinet temperature **not a product temperature**. This cabinet temperature may reflect the refrigeration cycle of the Set-Point and it's Differential. The most accurate temperature on a cabinets operation is to verify the product temperature.

Example: If the Set-Point is 33°F/1°C and the Differential is 8°F/4°C

$$\text{(Set-Point) } 33^{\circ}\text{F} + 8 \text{ (Differential)} = 41^{\circ}\text{F}$$

Or

$$\text{(Set-Point) } 1^{\circ}\text{C} + 4 \text{ (Differential)} = 5^{\circ}\text{C}$$

The compressor will cycle off 33°F/1°C and back on at 41°F/5°C

4. The Dixell control may be preprogrammed to initiate defrost at specific intervals that start when the cabinet is plugged in.
 - a. At this time the "DEF" may appear on the display and compressor will turn off until a preprogrammed temperature or duration is reached. During this time, for freezers only, evaporator fan(s) will also turn off and the coil heater and drain tube heaters will also be energized. Some cabinets may also change the rotation of the reversing condenser fan motor.
 - b. After the preprogrammed temperature has been reached or duration for defrost has expired, there may be a short delay for both the compressor and evaporator fans to restart. At this time "DEF" may still appear on the display for a short time.

DIGITAL TEMPERATURE CONTROL COMMANDS:

Use of LED: Each LED function is described in the table below.








Key Combinations:

 +  To lock & unlock the keyboard.

 +  To enter the programming mode.

 +  To exit the programming mode.



LED	MODE	FUNCTION
	ON	The compressor is running
	FLASHING	- Programming phase (flashing with LED  - Anti-short cycle delay enabled
	ON	The fan is running
	FLASHING	Programming phase (flashing with LED )
	ON	The defrost is enabled

HOW TO START A MANUAL DEFROST:

STEP 1 - Push the (DEFROST) key for more than (2) seconds and a manual defrost will start.

STEP 2 - By pushing the (ON/OFF) key, the instrument shows "OFF" for 5 seconds and then the ON/OFF LED switch ON.

ALARM SIGNALS

MESSAGE	CAUSE	OUTPUTS
"P1"	Thermostat probe failure	Alarm output ON; Compressor output according to "CO _n " and "CO _F "
"P2"	Evaporator probe failure	Alarm output ON; Other outputs unchanged
"P3"	Auxiliary probe failure	Alarm output ON; Other outputs unchanged
"HA"	Maximum temperature alarm	Alarm output ON; Other outputs unchanged
"LA"	Minimum temperature alarm	Alarm output ON; Other outputs unchanged
"EE"	Data or memory failure	Alarm output ON; Other outputs unchanged
"dA"	Door switch alarm	Alarm output ON; Other outputs unchanged
"EAL"	External alarm	Alarm output ON; Other outputs unchanged
"BAL"	Serious external alarm	Alarm output ON; Other outputs OFF
"PAL"	Pressure switch alarm	Alarm output ON; Other outputs OFF

NOTE: To silence alarm, press any button on keypad.

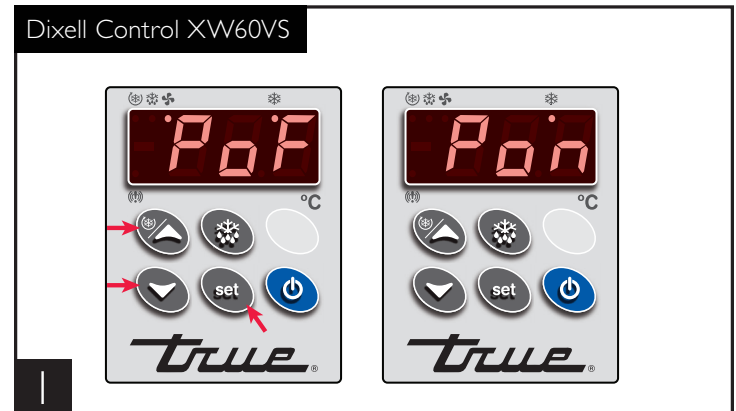
USING THE DIXELL ELECTRONIC CONTROL

HOW TO LOCK / UNLOCK THE KEYS:

STEP 1 - Press the (UP) and (DOWN) keys at the same time for more than (3) seconds.

STEP 2 - The "POF" message will be displayed if the keyboard is locked. At this point, it is only possible to view the set point, MAXIMUM / MINIMUM temperature stored.

STEP 3 - To unlock the keyboard, press the (UP) and (DOWN) keys at the same time for more than (3) seconds. The "Pon" message will be displayed.



THE SET POINT IS WHERE THE COMPRESSOR WILL SHUT OFF.

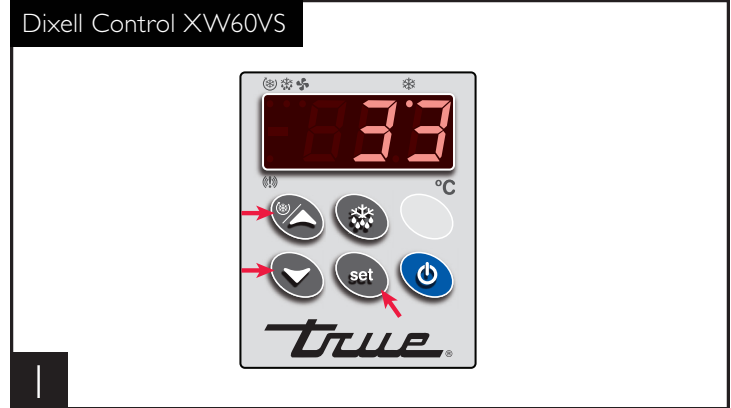
HOW TO SEE AND MODIFY THE SET POINT:

STEP 1 - Model XW60VS push and immediately release the (SET) key. Model XRI60C push and hold the (SET) key: The display will show the (SET) point value.

STEP 2 - The (SET LED) will start blinking.

STEP 3 - To change the (SET) value, push the (UP) or (DOWN) arrows within (10) seconds.

STEP 4 - To memorize the new set point value, push the (SET) key again or wait (10) seconds.



THE LOCAL DISPLAY SHOWS WHICH PROBE IS READING.

HOW TO SEE “LOD” LOCAL DISPLAY:

STEP 1 - Press and hold the (SET) and (DOWN) arrows at the same time for (7-12) seconds.

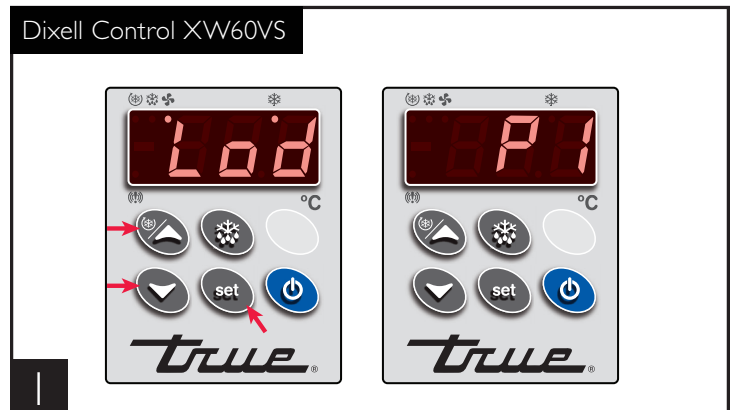
STEP 2 - You should then see (HY).

STEP 3 - Release the keys.

STEP 4 - Press the down arrow until you see the letters (LOD).

STEP 5 - Press the (SET) button. You should see P1, P2, P3. This is the probe used for the display. (All probes may not be used in some applications). To change, press the (UP / DOWN) arrow to set a new number and then push the (SET) button to save these changes.

Wait 10 seconds for control to display temperature.



THE INTERVAL BETWEEN DEFROST TERMINATION IS THE TIME BETWEEN EACH DEFROST CYCLE.

NOTE: This interval is started when the cabinet is plugged in or after initiate of manual defrost.

HOW TO SEE "idF" INTERVAL BETWEEN DEFROST:

STEP 1 - Press and hold the (SET) and (DOWN) arrows at the same time for (7-12) seconds.

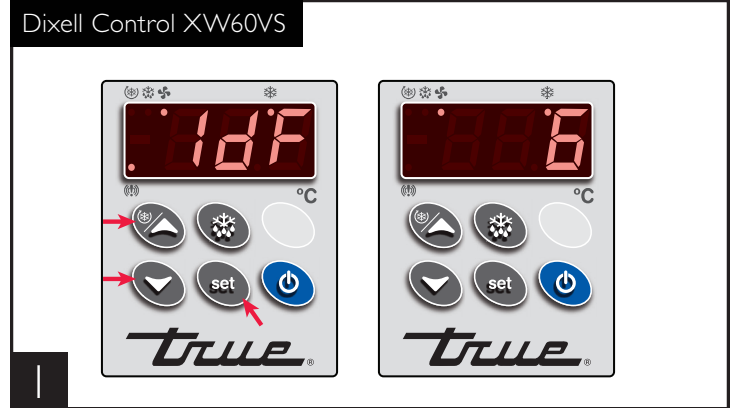
STEP 2 - You should then see (HY).

STEP 3 - Release the keys.

STEP 4 - Press the down arrow until you see the letters "idF".

STEP 5 - Press the (SET) button. You should see the number 6. This is time in hours between each defrost cycle. To change, press the (UP / DOWN) arrow to set a new number and then push the (SET) button to save these changes. Wait 10 seconds for control to display temperature.

NOTE: The interval between defrost termination is the time between each defrost cycle.



THE PROGRAM PARAMETERS CAN BE DOWNLOADED BY THE USE OF A "HOT KEY."

NOTE: These parameters will vary from model to model.

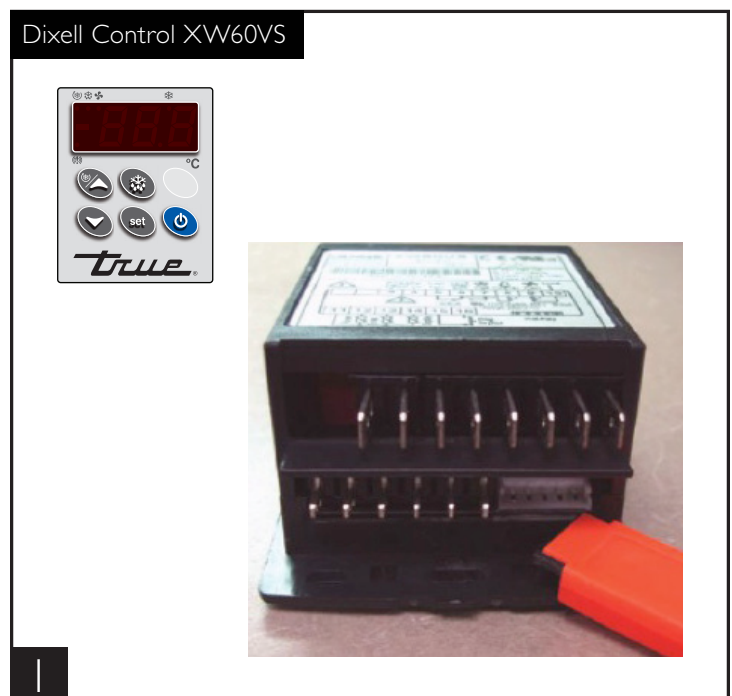
HOW TO DOWNLOAD THE CONTROL PARAMETER:

STEP 1 - Turn controller in the off position or unplug cabinet.

STEP 2 - Insert "Hot Key" into the back of the controller.

STEP 3 - Turn on controller or plug in cabinet.

STEP 4 - "Hot Key" will download automatically once download is complete. Remove "Hot Key".



LAE ELECTRONIC TEMPERATURE CONTROL GENERAL SEQUENCE OF OPERATION

t1 = Thermostat

t2 = Defrost

t3 = Display

t3 probe is not installed and / or activated in all applications

when t3 is not installed and / or activated, the display probe is t1.



LAE ELECTRONIC CONTROL GENERAL SEQUENCE OF OPERATION

1. Cabinet is plugged in.
 - a. Display will illuminate.
 - b. Interior light will illuminate on Glass Door Models only. Solid door cabinet lights are controlled by the door switch.
2. After the LAE control preprogrammed time delay of up to 6 minutes, the compressor and evaporator fan(s) will start if the control is calling for cooling.
 - a. Control or condenser fans may be already pre-programmed from the factory so at the start of every compressor cycle or during a defrost cycle, the condenser fan(s) will reverse for 30 seconds to blow dirt off the condensing coil.
3. The LAE control will cycle the compressor but may also cycle evaporator fan(s) on and off determined by the Set-Point and Differential temperatures.
 - a. The Set-Point is the adjustable preprogrammed temperature which shuts off the compressor and evaporator fan(s). This is not the programmed cabinet temperature.
 - b. The Differential is the non adjustable preprogrammed temperature that is added to the Set-Point temperature that will restart the compressor and evaporator fan(s).
 - c. The LAE control is designed to read and display a cabinet temperature **not a product temperature**. This cabinet temperature may reflect the refrigeration cycle of the Set-Point and its Differential, or it may show an average temperature. The most accurate temperature on a cabinets operation is to verify the product temperature.

Example: If the Set-Point is -9°F/-23°C and the Differential is 10°F/5°C

$$\text{(Set-Point) } -9^{\circ}\text{F} + 10 \text{ (Differential)} = 1^{\circ}\text{F}$$

Or






$$\text{(Set-Point) } -23^{\circ}\text{C} + 5 \text{ (Differential)} = -18^{\circ}\text{C}$$

The compressor and evaporator fan(s) will cycle off -9°F/-23°C and back on at 1°F/-18°C

4. The LAE control may be preprogrammed to initiate defrost by interval or at specific times of day.
 - a. At this time the "dEF" will appear on the display and compressor will turn off until a preprogrammed temperature or duration is reached. During this time for freezers only, evaporator fan(s) will also turn off and the coil heater and drain tube heaters will also be energized. Some cabinets may also change the rotation of the reversing condenser fan motor.
 - b. After the preprogrammed temperature or duration for defrost has been reached there may be a short delay for both the compressor and evaporator fans to restart. At this time "dEF" may still appear on the display for a short time.

HOW TO DIAGNOSE AN LAE ELECTRONIC CONTROL

Indicator lights for Refrigeration/Heating Mode, Fan Operation, Defrost Mode.


LAE Control	LAE Control Icons
<p>The LAE Control panel features a central digital display showing '888'. To the left is a bell icon (Alarm). To the right are four indicator lights: a snowflake (Compressor Running), a fan (Evaporator Fan Running), a snowflake with a downward arrow (Cabinet in Defrost), and a vertical bar with a degree symbol (Activation of 2nd Parameter Set). Below the display are four buttons: 'i' with a double-headed arrow (Info / Set Point Button), a snowflake with a downward arrow (Manual Defrost / Down Button), a triangle with 'M' (Manual Activation Up Button), and 'x' with a power symbol (Stand-By Button). The 'TRUE' logo is on the right side of the panel.</p>	<ul style="list-style-type: none">  Compressor Running  Evaporator Fan Running  Cabinet in Defrost  Activation of 2nd Parameter Set  Alarm

USING THE LAE ELECTRONIC CONTROL




LOCKING AND UNLOCKING THE LAE CONTROLLER:

WHY: Locking of control is necessary to prevent changes to program that may affect cabinet operation.

HOW TO LOCK AND UNLOCK LAE CONTROLLER:

STEP 1 - To change lock setting press and release the Info button . "tl" will appear. See image 1.

STEP 2 - Press the Down button  until "Loc" appears. See image 2.

STEP 3 - While pressing and holding the Info button  press the Up  or Down  button to change the lock settings. If "no" appears, the controller is unlocked. If "yes" appears, the controller is locked. See images 3 and 4.


STEP 4 - Once the lock setting has been set correctly release the info button . Wait 5 seconds for the display to show temperature. See image 5.



Image 3: If "no" appears on screen, the controller is unlocked.



Image 4: If "yes" appears on screen, the controller is locked.



LAE Control



Info / Set Point
Button



Manual Defrost /
Down Button



Manual Activation
Up Button



Stand-By
Button


HOW TO TURN OFF THE LAE ELECTRONIC CONTROL:

May need to unlock control.

WHY: Turning off the control will deactivate all electrical components.

CAUTION: Turning off the control will not shut off power to the cabinet. Cabinet must be unplugged prior to any repair.

HOW TO TURN OFF THE LAE ELECTRONIC CONTROL:

STEP 1 - To turn off control, press and hold the Stand-by button  until "OFF" appears. Release Stand-by button. See Image 2.

STEP 2 - To turn on control, repeat prior steps and a temperature will appear.



TURNING THE GLASS DOOR MODEL LIGHTS ON AND OFF:

May need to unlock control.

WHY: Light may be controlled by LAE Controller or interior light switch.

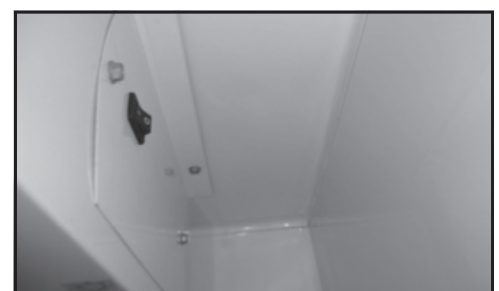
→
ON Position



HOW TO TURN THE GLASS DOOR MODEL LIGHT ON AND OFF:

STEP 1 - To control interior / sign lights by the LAE Controller, press and release the Manual Activation button .

STEP 2 - To control interior / sign lights by the interior door switch, depress the rocker switch to the "ON" position. Light switch is located on inside top right of the ceiling.



(Solid Door model lights are controlled by a door switch)

LAE Control



Info / Set Point
Button



Manual Defrost /
Down Button



Manual Activation
Up Button



Stand-By
Button


CHANGING THE "SET POINT":




May need to unlock control.


WHY: The set point is the temperature at which the compressor will shut off.

NOTE: The "set point" *IS NOT* the cabinet holding temperature.

HOW TO CHANGE THE "SET POINT":

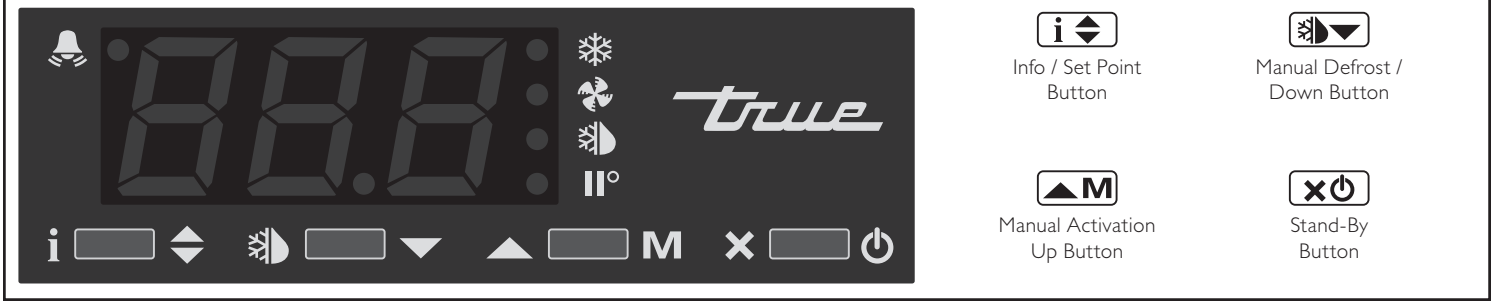
STEP 1 - To see the set point, press and hold the Info button . See image 1.

STEP 2 - While still holding the Info button , press the Up  or Down  button to change the "set point".

STEP 3 - Once the "set point" has been set correctly release the Info button . The display will show temperature. See image 2.



LAE Control



INITIATE A MANUAL DEFROST:

May need to unlock control.

WHY: A one time additional defrost may be necessary to clear accumulated frost / ice from evaporator coil.



HOW TO INITIATE A MANUAL DEFROST:

The method to initiate a manual defrost is determined by the Defrost Mode Parameter "DTM" preprogrammed in the controller.

REGULAR TIME DEFROST (TIM)

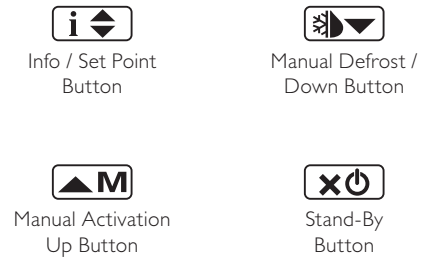
If controller is preprogrammed for "TIM", press and release the Manual Defrost button  until "dEF" appears.

REAL TIME CLOCK (RTC)

If controller is preprogrammed for "RTC" press the and hold the Manual Defrost button  for 5 seconds until "dhI" appears. Release the Manual Defrost button  and then press and hold for an additional 5 seconds until "dEF" appears.

NOTE: Defrost will only terminate once a specific preset temperature or a preset time duration is reached.

LAE Control



CHANGING “DEFROST INTERVALS”:

May need to unlock control.

This can only be changed if defrost mode parameter “DFM” is set for “TIM”.

WHY: The defrost interval is the time duration between defrost cycles. The defrost interval time starts when the cabinet is supplied power or after a manual defrost.

HOW TO CHANGE “DEFROST INTERVALS”:

STEP 1 - To see the set point, press and hold the Info button and the Stand-by button at the same time.

NOTE: Depending on the version of control, one of three parameters will appear: “ScL” image 1a, “SPL” image 1b, “MdL” image 1c.

STEP 2 - Push the Up button until “dFt” appears. See image 2.

STEP 3 - Press and hold the Info button to see the defrost interval time. See image 3.

STEP 4 - While pressing and holding the Info button , press the Up or Down button to change the defrost interval times (higher the number the less frequent the cabinet will defrost).

STEP 5 - Once the defrost interval time has been changed, release the Info button .

STEP 6 - Wait 30 seconds for the display to show temperature. See image 4.



LAE Control



Info / Set Point Button



Manual Defrost / Down Button



Manual Activation Up Button



Stand-By Button



HOW TO CHANGE DISPLAY READOUT FROM FAHRENHEIT TO CELSIUS:

May need to unlock control.

This can NOT be changed with the LAE model AR2-28 version of the control. See page 32 for more information.




WHY: Changing readout will assist with customer application.


HOW TO CHANGE DISPLAY READOUT FROM FAHRENHEIT TO CELSIUS:

STEP 1 - To change the display, press and hold the Info button  and the Stand-by button  at the same time. "Mdl" or "SPL" will appear. See images 1a and 1b.

STEP 2 - Push the Down button  until "SCL" appears. See image 2.

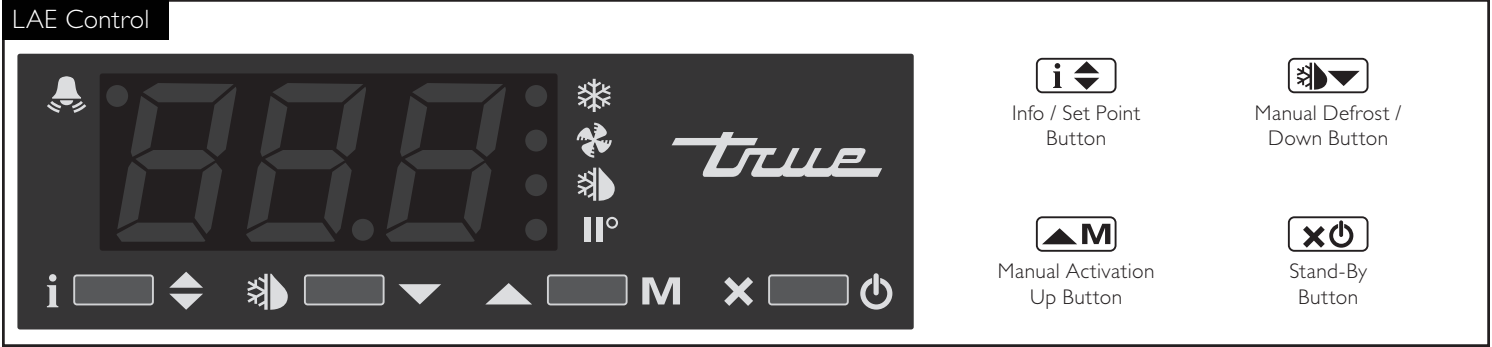
STEP 3 - Press and hold the Info button  to see the "readout scale". See image 3.

STEP 4 - While pressing and holding the Info button , press the up  or down  button to change the "readout scale". See image 4.

STEP 5 - Once the "readout scale" has been changed, release the info button .

STEP 6 - Wait 30 seconds for the display to show temperature. See image 5.





DISPLAYING TEMPERATURE PROBES, T1, T2, T3:

WHY: To display temperature probe readings in different locations of the cabinet.

HOW TO DISPLAY PROBE TEMPERATURES:

STEP 1 - To display T1 temperature, press and release the info button . "t1" will appear. See image 1.

STEP 2 - Press and hold the info button . This is the temperature of the T1 Probe. See image 2.

STEP 3 - By releasing the info button , "t2" will appear. Press and hold the info button to display the temperature of the T2 probe.

STEP 4 - By releasing the info button again, "t3" will appear. Press and hold the info button to display the temperature of the T3 probe. (If probe T3 is not activated, "t3" will not appear of the display.)



DISPLAY CODES

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

LAE CONTROLLER PARAMETER SETTINGS FOR CELSIUS

For LAE control model AR2-28 ONLY, ALL parameters with a formula shown need to be converted for Celsius applications.

EXAMPLE:

If current SPL is set for 20 degrees F the formula is $(X-32) / 1.8$

$(20-32) / 1.8 = -6.7$ Celsius

AR2-28	
SCL	1C
SPL	$(X-32) / 1.8$
SPH	$(X-32) / 1.8$
SP	$(X-32) / 1.8$
C-H	
HYS	$(X) / 1.8$
CRT	
CT1	
CT2	
CSD	
DFM	
DFT	
DH1	
DH2	
DH3	
DH4	
DH5	
DH6	
DLI	$(X-32) / 1.8$
DTO	
DTY	
DPD	
DRN	
DDM	
DDY	
FID	
FDD	$(X-32) / 1.8$
FTO	
FCM	
FDT	$(X) / 1.8$
FDH	$(X) / 1.8$
FT1	
FT2	
FT3	
ATM	
ALA	$(X-32) / 1.8$
AHA	$(X-32) / 1.8$
ALR	$(X) / 1.8$
AHR	$(X) / 1.8$
ATI	
ATD	
ADO	
AHM	
AHT	$(X-32) / 1.8$
ACC	
IISM	
IISL	$(X-32) / 1.8$
IISH	$(X-32) / 1.8$
IISP	$(X-32) / 1.8$
IIHY	$(X) / 1.8$
IIFC	
HDS	
IIDF	
SB	
DS	
DSM	
DI2	
STT	
EDT	
LSM	
OA1	
OA2	
CD	
INP	
OS1	$(X) / 1.8$
T2	
OS2	$(X) / 1.8$
T3	
OS3	$(X) / 1.8$
TLD	
TDS	
AVG	
SIM	
ADR	

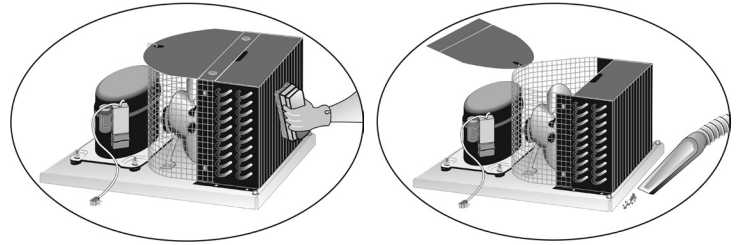
MAINTENANCE, CARE, CLEANING

CLEANING THE CONDENSER COIL

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

TOOLS REQUIRED

- Phillips Screwdriver
- Stiff Bristle Brush
- Adjustable Wrench
- Air Tank or CO2 Tank
- Vacuum Cleaner



STEP 1 - Disconnect power to unit.

STEP 2 - See page below for grill removal instructions

STEP 3 - Clean off accumulated dirt from condensing coil with a stiff bristle brush.

STEP 4 - After brushing condenser coil vacuum dirt from coil, and interior floor.

STEP 5 - Replace grill assembly.

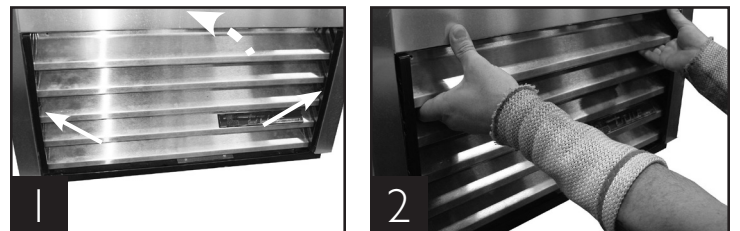
STEP 6 - Connect unit to power and check to see if condensing unit is running.

All TRUE TAC Models are manufactured with Reversing Condenser Fan Motors. This kind of fan motor allows less dust and dirt to accumulate onto the condenser coil. This reduces the required cleaning time of the condenser coil and allows for less expensive operating costs.



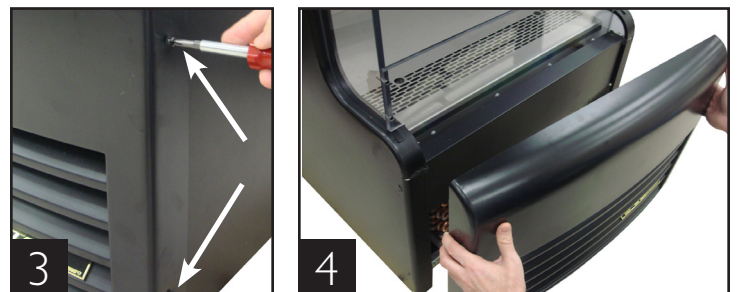
AIR CURTAINS: GRILL REMOVAL

A. Remove louver from the front of cabinet and backguard (if applicable) from rear of cabinet. Remove louver grill by backing out Phillips screws located on either side of the louver grill. See image 1. Pull the louver grill out from the cabinet front. See image 2.



TAC-14GS-LD GRILL REMOVAL:

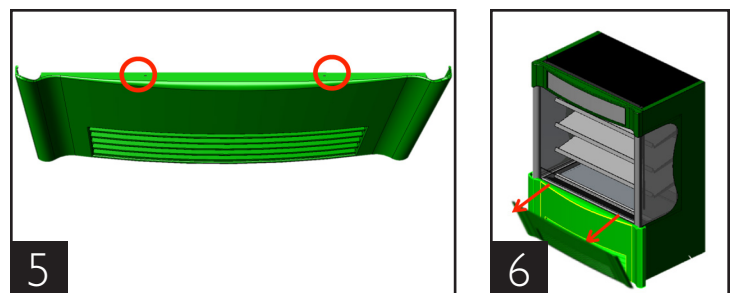
Remove two screws from either side of the front grill. See image 3. Lift grill away front cabinet. See image 4.



TAC-48SM-LD GRILL REMOVAL:

Remove the 2 Phillips screws on the top of the grill. See image 5.

With Phillips screws removed, tilt grill forward from the top to release the grill from the retaining clips on the bottom. See image 6.



IMPORTANT WARRANTY INFORMATION

Condensers accumulate dirt and require cleaning every 30 days. Dirty condensers result in compressor failure, product loss, and lost sales, which are not covered by warranty.

If you keep the Condenser clean you will minimize your service expense and lower your electrical costs. The Condenser requires scheduled cleaning every thirty days or as needed.

Air is pulled through the Condenser continuously, along with dust, lint, grease, etc.

A dirty Condenser can result in NON-WARRANTEED part & Compressor Failures, Product Loss, and Lost Sales.

Proper cleaning involves removing dust from the Condenser. By using a soft brush, or vacuuming the Condenser with a shop vac, or using CO₂, nitrogen, or pressurized air.

If you cannot remove the dirt adequately, please call your refrigeration service company.

On most of the reach-in units the condenser is accessible in the rear of the unit. You must remove the cabinet grill to expose the Condenser.

The Condenser looks like a group of vertical fins. You need to be able to see through the condenser for the unit to function at maximum capacity. Do not place filter material in front of condensing coil. This material blocks air-flow to the coil similar to having a dirty coil.

THE CLEANING OF THE CONDENSER IS NOT COVERED BY THE WARRANTY!

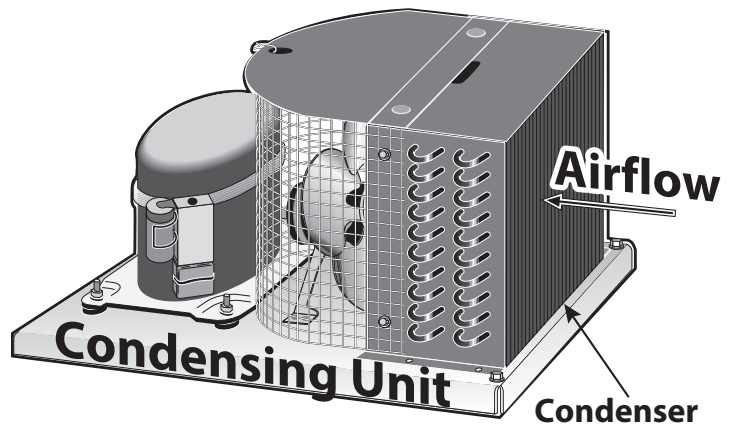
HOW TO CLEAN THE CONDENSER:

1. Disconnect the electrical power to the unit.
2. Remove the louvered grill.
3. Vacuum or brush the dirt, lint, or debris from the finned condenser coil.
4. If you have a significant dirt build up you can blow out the condenser with compressed air.

(CAUTION MUST BE USED TO AVOID EYE INJURY. EYE PROTECTION IS RECOMMENDED.)

5. When finished be sure to replace the louvered grill. The grill protects the condenser.
6. Reconnect the electrical power to the unit.

If you have any questions, please call TRUE Manufacturing at 636-240-2400 or 800-325-6152 and ask for the Service Department. Direct to Service Department 1 (855)372-1368. Service Department Availability Monday-Thursday 7:00 a.m. to 7:00 p.m., Friday 7:00 a.m. to 6:00 p.m. and Saturday 8:00 a.m. to 12:00 p.m. CST.



STAINLESS STEEL EQUIPMENT CARE AND 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 rear its ugly head.

1. Scratches from wire brushes, scrapers, and steel pads are just a few examples of items that can be abrasive to stainless steel's surface.
2. 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.
3. Chlorides are present in table salt, food, and water. Household and industrial cleaners are the worst type of chlorides to use.

RECOMMENDED CLEANERS FOR CERTAIN SITUATIONS / ENVIRONMENTS OF STAINLESS STEEL

- A. Soap, ammonia and detergent medallion applied with a cloth or sponge can be used for routine cleaning.
- B. Arcal 20, Lac-O-Nu Ecoshine applied provides barrier film for fingerprints and smears.
- C. Cameo, Talc, Zud First Impression is applied by rubbing in the direction of the polished lines for stubborn stains and discoloring.
- D. Easy-off and De-Grease It oven aid are excellent for removals on all finishes for grease-fatty acids, blood and burnt-on foods.
- E. Any good commercial detergent can be applied with a sponge or cloth to remove grease and oil.
- F. Benefit, Super Sheen, Sheila Shine are good for restoration / passivation.

NOTE: The use of stainless steel cleaners or other such solvents is not recommended on plastic parts. Warm soap and water will suffice.

8 STEPS THAT CAN HELP PREVENT RUST ON STAINLESS STEEL:

1. **USING 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. Step 2 tells you how to find the polishing marks.
2. **CLEANING ALONG THE POLISH LINES**
Polishing lines or "grain" are visible on some stainless steels. Always scrub parallel to visible lines on some stainless steels. Use a plastic scouring pad or soft cloth when you cannot see the grain.
3. **USE ALKALINE, ALKALINE CHLORINATED OR NON-CHLORIDE CONTAINING 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.
4. **WATER TREATMENT**
To reduce deposits, soften the hard water when possible. Installation of certain filters can remove corrosive and distasteful elements. Salts in a properly maintained water softener can be to your advantage. Contact a treatment specialist if you are not sure of the proper water treatment.
5. **MAINTAINING THE CLEANLINESS OF YOUR FOOD EQUIPMENT**
Use cleaners at the recommended strength (alkaline chlorinated or non-chloride). Avoid build-up of hard stains by cleaning frequently. When boiling water with your stainless steel equipment, the single most likely cause of damage is chlorides in the water. Heating any cleaners containing chlorides will have the same damaging effects.
6. **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.
7. **HYDROCHLORIC ACID (MURIATIC ACID) SHOULD NEVER BE USED ON STAINLESS STEEL**
8. **REGULARLY RESTORE/PASSIVATE STAINLESS STEEL**

GENERAL MAINTENANCE

LIGHT BULB REPLACEMENT

WARNING: Disconnect power to cabinet before replacing light bulbs.

LIGHT BULB REPLACEMENT:

- Hold firmly on the end of the light bulb and pull toward the center of the cabinet. The lampholders are spring activated so the bulb can easily be replaced. (See Image 1).
- When installing a new bulb make sure the prongs at the end of the bulb seat appropriately into the lampholder. (See Image 2).



Interior Lamp



Interior Lampholder

**FOR ADDITIONAL MAINTENANCE INSTRUCTION,
PLEASE VISIT THE MEDIA CENTER AT
WWW.TRUEMFG.COM**



WARRANTY INFORMATION (U.S.A. & CANADA ONLY!)

THIS WARRANTY ONLY APPLIES TO UNITS SHIPPED FROM TRUE'S MANUFACTURING FACILITIES AFTER SEPTEMBER 1, 2015.

THREE-YEAR PARTS & LABOR WARRANTY

TRUE warrants to the original purchaser of every new TRUE refrigerated unit, the cabinet and all parts thereof, to be free from defects in material or workmanship, under normal and proper use and maintenance service as specified by TRUE and upon proper installation and start-up in accordance with the instruction packet supplied with each TRUE unit. TRUE's obligation under this warranty is limited to a period of three (3) years from the date of original installation or 39 months after shipment date from TRUE, whichever occurs first.

Any part covered under this warranty that are determined by TRUE to have been defective within three (3) years of original installation or thirty-nine (39) months after shipment date from manufacturer, whichever occurs first, is limited to the repair or replacement, including labor charges, of defective parts or assemblies. The labor warranty shall include standard straight time labor charges only and reasonable travel time, as determined by TRUE.

Warranty does not cover standard wear parts which include door gaskets, incandescent bulbs or fluorescent bulbs. Warranty also does not cover issues caused by improper installation or lack of basic preventative maintenance which includes regular cleaning of condenser coils.

ADDITIONAL TWO-YEAR COMPRESSOR WARRANTY

In addition to the Three (3) year warranty stated above, TRUE warrants its hermetically and semi-hermetically sealed compressor to be free from defects in both material and workmanship under normal and proper use and maintenance service for a period of two (2) additional years from the date of original installation but not to exceed five (5) years and three (3) months after shipment from the manufacturer.

Compressors determined by TRUE to have been defective within this extended time period will, at TRUE's option, be either repaired or replaced with a compressor or compressor parts of similar design and capacity.

The two (2) year extended compressor warranty applies only to hermetically and semi-hermetically sealed parts of the compressor and does not apply to any other parts or components, including, but not limited to: cabinet, paint finish, temperature control, refrigerant, metering device, driers, motor starting equipment, fan assembly or any other electrical component, etcetera.

404A/134A/HYDROCARBON COMPRESSOR WARRANTY

The two year compressor warranty detailed above will be voided if the following procedure is not carefully adhered to:

1. This system contains R404A, R134A, or R290 refrigerant and polyol ester lubricant. The polyol ester lubricant has rapid moisture absorbing qualities. If long exposure to the ambient conditions occur, the lubricant must be removed and replaced with new. For oil amounts and specifications please call TRUE technical service department (855-372-1368). Failure to comply with recommended lubricant specification will void the compressor warranty.

2. Drier replacement is very important and must be changed when a system is opened for servicing. An OEM exact replacement should be used.

The new drier must also be the same capacity as the drier being replaced.

3. Micron level vacuums must be achieved to insure low moisture levels in the system. 500 microns or lower must be obtained.

WARRANTY CLAIMS

All claims for labor or parts must be made directly through TRUE. All claims should include: model number of the unit, the serial number of the cabinet, proof of purchase, date of installation, and all pertinent information supporting the existence of the alleged defect.

In case of warranty compressor, the compressor model tag must be returned to TRUE along with above listed information.

Any action or breach of these warranty provisions must be commenced within one (1) year after that cause of action has occurred.

WHAT IS NOT COVERED BY THIS WARRANTY

TRUE's sole obligation under this warranty is limited to either repair or replacement of parts, subject to the additional limitations below. This warranty neither assumes nor authorizes any person to assume obligations other than those expressly covered by this warranty.

NO CONSEQUENTIAL DAMAGES. TRUE IS NOT RESPONSIBLE FOR ECONOMIC LOSS; PROFIT LOSS; OR SPECIAL, INDIRECT, OR CONSEQUENTIAL DAMAGES, INCLUDING WITHOUT LIMITATION, LOSSES OR DAMAGES ARISING FROM FOOD OR PRODUCT SPOILAGE CLAIMS WHETHER OR NOT ON ACCOUNT OF REFRIGERATION FAILURE.

WARRANTY IS NOT TRANSFERABLE. This warranty is not assignable and applies only in favor of the original purchaser/user to whom delivered. ANY SUCH ASSIGNMENT OR TRANSFER SHALL VOID THE WARRANTIES HEREIN MADE AND SHALL VOID ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

IMPROPER USAGE. TRUE ASSUMES NO LIABILITY FOR PARTS OR LABOR COVERAGE FOR COMPONENT FAILURE OR OTHER DAMAGES RESULTING FROM IMPROPER USAGE OR INSTALLATION OR FAILURE TO CLEAN AND/OR MAINTAIN PRODUCT AS SET FORTH IN THE WARRANTY PACKET PROVIDED WITH THE UNIT.

RELOCATION OF CABINET FOR REPAIR. True is not responsible for the cost to move a cabinet for any reason from its position of operation on the customer's premises to make a warranty repair.

NON OEM PARTS. Use of non OEM parts without manufacturer's approval will void cabinet warranty.

ALTERATION, NEGLIGENCE, ABUSE, MISUSE, ACCIDENT, DAMAGE DURING TRANSIT OR INSTALLATION, FIRE, FLOOD, ACTS OF GOD. TRUE is not responsible for the repair or replacement of any parts that TRUE determines have been subjected after the date of manufacture to alteration, neglect, abuse, misuse, accident, damage during transit or installation, fire, flood, or act of God.

IMPROPER ELECTRICAL CONNECTIONS. TRUE IS NOT RESPONSIBLE FOR THE REPAIR OR REPLACEMENT OF FAILED OR DAMAGED COMPONENTS RESULTING FROM INCORRECT SUPPLY VOLTAGE, THE USE OF EXTENSION CORDS, LOW VOLTAGE, OR UNSTABLE SUPPLY VOLTAGE.

NO IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE: THERE ARE NO OTHER WARRANTIES, EXPRESSED, IMPLIED OR STATUTORY, EXCEPT THE THREE (3) YEAR PARTS & LABOR WARRANTY AND THE ADDITIONAL TWO (2) YEAR COMPRESSOR WARRANTY AS DESCRIBED ABOVE. THESE WARRANTIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, INCLUDING IMPLIED WARRANTY AND MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF.

OUTSIDE U.S. AND CANADA: This warranty does not apply to, and TRUE is not responsible for, any warranty claims made on products sold or used outside the United States and Canada. This warranty only applies to units shipped from True's manufacturing facilities after September 1, 2015.