



## **Traulsen UHT Series Customer Maintenance Manual**

UNDERCOUNTER REFRIGERATORS

**SPECIFICATION SHEET**  
**QUICK START GUIDE**  
**OWNERS MANUAL**  
**INSTALLATION INSTRUCTIONS**  
**OPERATING INSTRUCTIONS**  
**MAINTENANCE INSTRUCTIONS**  
**SERVICE MANUAL**  
**WIRING DIAGRAMS**  
**TROUBLESHOOTING INSTRUCTIONS**  
**TECHNICAL BULLETINS**  
**REPLACEMENT PARTS**  
**HOBART SERVICE PARTS STORE**



Project \_\_\_\_\_  
 AIA # \_\_\_\_\_ SIS # \_\_\_\_\_  
 Item # \_\_\_\_\_ Quantity \_\_\_\_\_ C.S.I. Section 114000



# UHT SERIES

## Compact Undercounter Refrigerator

### Models/Self-Contained

### UHT27



Some models are ENERGY STAR® listed. Please refer to [www.energystar.gov](http://www.energystar.gov) to view the most up-to-date product listing and performance data.



This unit is listed to the applicable UL, CSA and NSF Standards by an approved NRTL. Consult the factory or unit's data plate for approval information.

## AVAILABLE CONFIGURATIONS

27", 32", 48", 60", 72" Wide Models

Model	Door Style	Hinging
UHT27-L	One Solid Door	Left
UHT27-R	One Solid Door	Right

## STANDARD PRODUCT FEATURES

- Stainless Steel Exterior Top, Sides & Doors
- Anodized Aluminum Interior
- Front Breathing Self-Contained Refrigeration System
- Environmentally Friendly, Non-Flammable R-450A Refrigerant
- Self-Closing Stainless Steel Doors with Stay Open Feature at 105 degrees
- Anodized Aluminum Interior Door Liner
- Interior Mounted Thermometer
- Two (2) Powder Coated Shelves Per Door, Mounted on Pilasters
- Automatic Non-Electric Condensate Evaporator
- Magnetic Snap-In EZ-Clean Door Gasket(s)
- 8' (2.4 m) NEMA Cord & Plug Attached
- Set of Four (4) 4" Casters
- 3-Year Parts & Labor Warranty
- 2-Years Additional Compressor Parts Warranty

## ACCESSORIES & OPTIONS (\*field installed)

- CK20 (four 6" (15.2 cm) high casters for 27" models)
- CK24 (four 3-1/2" (8.9 cm) high casters for 27" models)
- CK26 (four 2-3/4" (6.9 cm) high casters for 27" models)
- CK28 (four 2-1/2" (6.4 cm) high casters for 27" models)
- CUACC-LEGSET4 (four 6" (15.24 cm) high legs for 27" models)
- Shelf CPW1 (additional shelf for 27" models)
- CU27TOP-BSW0 (22 ga. stainless steel top with 4" (10.2 cm) backsplash 27")
- Optional accessory kits shipped separately for field installation

## Factory Installed Options

Stainless Steel Finished Back \* Other Door Hinging

DEALERS CHOICE COMPACT UNDERCOUNTERS

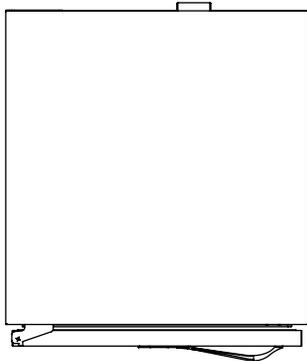
CONTINUED PRODUCT DEVELOPMENT MAY NECESSITATE SPECIFICATION CHANGES WITHOUT NOTICE.

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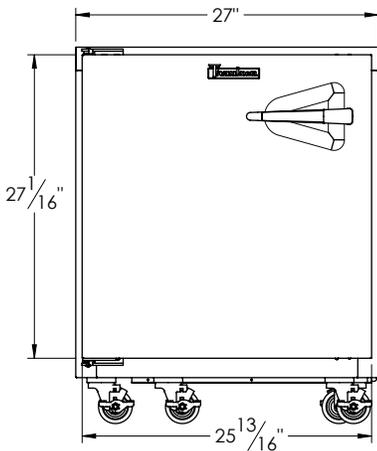
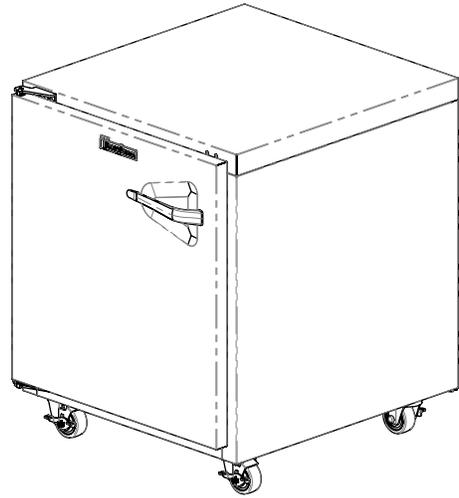


**MODELS:**

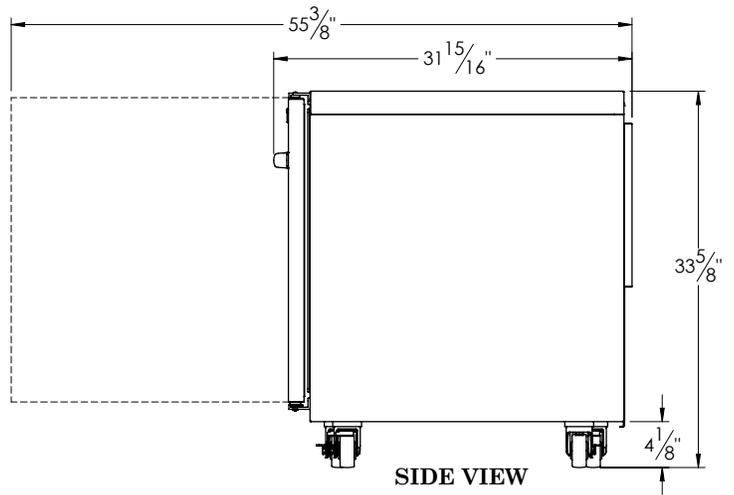
UHT27-L  
UHT27-R



**TOP VIEW**



**ELEVATION**



**SIDE VIEW**



Project \_\_\_\_\_  
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# UHT SERIES

## Compact Undercounter Refrigerator

### Models/Self-Contained

Door Models: UHT27-L, UHT27-R

MODELS	UHT27__
<b>CABINET DIMENSIONAL DATA</b>	
Storage cu. ft. (l)	7.35 (208)
Width cabinet in. (cm)	27" (69)
Width - door in. (cm)	25 7/8" (65.7)
Depth - door open 90° in.	55 3/8" (140.7)
Clear door opening in. (cm)	22 3/4" (57.8)
# of doors	1
# of shelves	2
Total shelf Area sq. ft. (m)	4.88 (.45)
<b>ELECTRICAL DATA &amp; REFRIGERATION DATA</b> 115/60/1 NEMA 5-15P	
Full Load Amps	7.5
MDEC <sup>1</sup> (KWH)	1.64
Refrigerant	R-450A
Refrigerant Amount oz. (gr)	7 (198)
BTU <sup>2</sup> /HR   H.P.	1435 (1/4)
<b>SHIPPING DATA</b>	
Width Crated in. (cm)	45" (114)
Volume Crated cu. ft. (l)	55 (1557)
Weight lbs. (kg) - Crated	240 (109)

## EQUIPMENT SPECIFICATIONS

### CONSTRUCTION, HARDWARE, INSULATION

Cabinet exterior front, one piece sides, and doors are constructed of 22 gauge stainless steel. Cabinet interior and door liners are constructed of anodized aluminum. The exterior cabinet back and bottom are constructed of galvanized steel.

Door self-closes at less than 90 degrees and also includes a stay open feature at 105 degrees. Gasket profile and Santoprene<sup>®</sup> material simplify cleaning and increase overall gasket life. Both the cabinet and door(s) are insulated with an average of 2" (5 cm) thick high density, non-CFC, foamed in place polyurethane.

### REFRIGERATION SYSTEM

A balanced, rear mounted, front breathing, self-contained refrigeration system using environmentally friendly, non-flammable R-450A refrigerant is provided. It features a capillary tube, air cooled 1435 BTU, 1/4 hp, hermetic compressor, a forced air evaporator coil and a non-electric condensate evaporator. An 8' (2.4m) NEMA cord and plug is provided. Standard operating temperature for refrigerator models is 34° to 38°F (1.1° to 3.3°C).

### INTERIOR

Standard interior arrangements include two (2) powder coated wire shelves per door, mounted on pilasters. These are adjustable in 1/2" (1.27 cm) increments, allowing for a minimum of 1-1/2" (3.81 cm) spacing between shelves.

### WARRANTY

Both a three year parts and labor warranty and a five year compressor parts warranty (self-contained models) are provided standard.

### NOTES:

- MDEC = Maximum Daily Energy Consumption
  - Compressor BTU based on a 90°F (32°C) degree ambient and 20°(-6°C) degree evaporator.
- When ordering please specify: voltage, hinging and optional accessories.

CONTINUED PRODUCT DEVELOPMENT MAY NECESSITATE SPECIFICATION CHANGES WITHOUT NOTICE.

Approved by \_\_\_\_\_ Date \_\_\_\_\_ Approved by \_\_\_\_\_ Date \_\_\_\_\_



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# UHT SERIES

## Compact Undercounter Refrigerator

### Models/Self-Contained

### UHT32



Some models are ENERGY STAR® listed. Please refer to [www.energystar.gov](http://www.energystar.gov) to view the most up-to-date product listing and performance data.



This unit is listed to the applicable UL, CSA and NSF Standards by an approved NRTL. Consult the factory or unit's data plate for approval information.

## AVAILABLE CONFIGURATIONS

27", 32", 48", 60", 72" Wide Models

Model	Door Style	Hinging
UHT32-L	One Solid Door	Left
UHT32-R	One Solid Door	Right

## STANDARD PRODUCT FEATURES

- Stainless Steel Exterior Top, Sides & Doors
- Anodized Aluminum Interior
- Front Breathing Self-Contained Refrigeration System
- Environmentally Friendly, Non-Flammable R-450A Refrigerant
- Self-Closing Stainless Steel Doors with Stay Open Feature at 105 degrees
- Anodized Aluminum Interior Door Liner
- Interior Mounted Thermometer
- Two (2) Powder Coated Shelves Per Door, Mounted on Pilasters
- Automatic Non-Electric Condensate Evaporator
- Magnetic Snap-In EZ-Clean Door Gasket(s)
- 8' (2.4 m) NEMA Cord & Plug Attached
- Set of Four (4) 4" Casters
- 3-Year Parts & Labor Warranty
- 2-Years Additional Compressor Parts Warranty

## ACCESSORIES & OPTIONS (\*field installed)

- CK20 (four 6" (15.2cm) high casters for 27" & 32" models)
- CK24 (four 3-1/2" (8.9 cm) high casters for 27" & 32" models)
- CK26 (four 2-3/4" (6.9 cm) high casters for 27" & 32" models)
- CK28 (four 2-1/2" (6.4 cm) high casters for 27" & 32" models)
- CUACC-LEGSET4 (four 6" (15.24 cm) legs for 27" & 32" models)
- Shelf CPW2 (additional shelf for 32" models)
- CU32TOP-BSW0 (22 ga. stainless steel top with 4" (10.2 cm) backsplash 32")
- Optional accessory kits shipped separately for field installation

## Factory Installed Options

Stainless Steel Finished Back \* Other Door Hinging

DEALERS CHOICE COMPACT UNDERCOUNTERS

CONTINUED PRODUCT DEVELOPMENT MAY NECESSITATE SPECIFICATION CHANGES WITHOUT NOTICE.

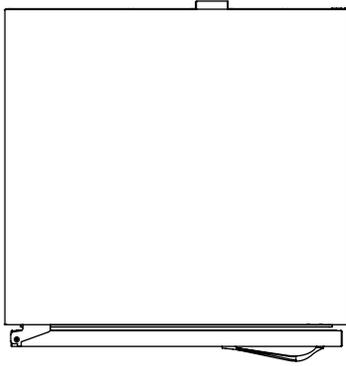
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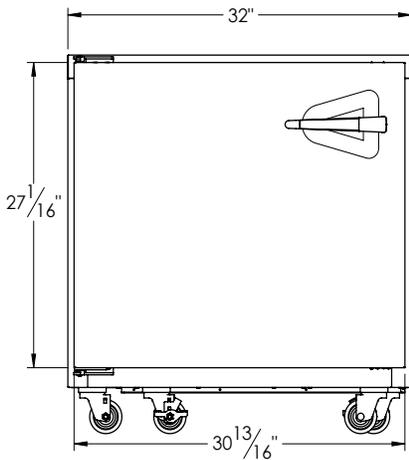
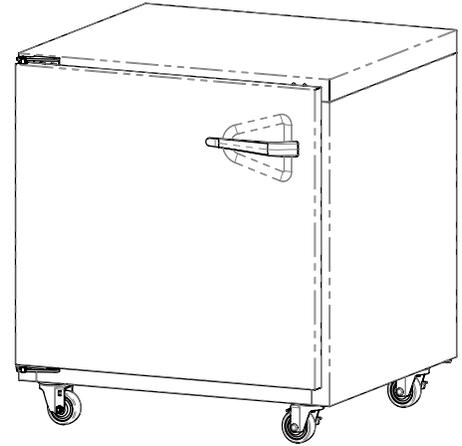
**MODELS:**

UHT32-L  
UHT32-R

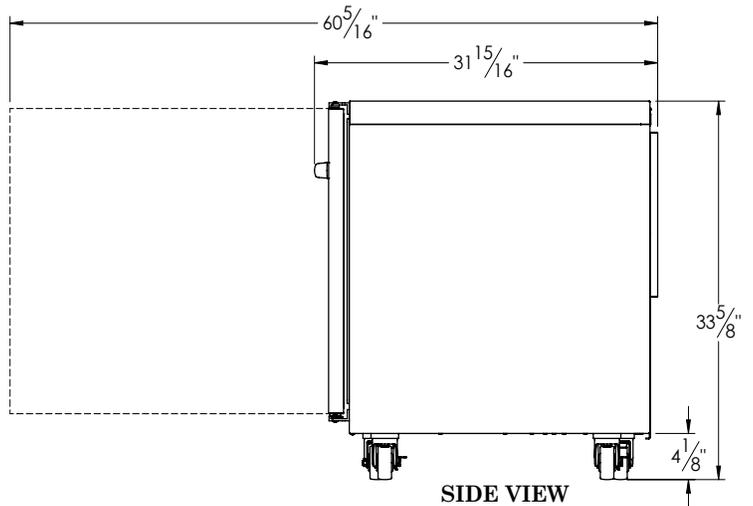
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**TOP VIEW**



**ELEVATION**



**SIDE VIEW**



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# UHT SERIES

## Compact Undercounter Refrigerator

### Models/Self-Contained

Door Models: UHT32-L, UHT32-R

MODELS	UHT32__
<b>CABINET DIMENSIONAL DATA</b>	
Storage cu. ft. (l)	8.61 [244]
Width cabinet in. (cm)	27" [69]
Width - door in. (cm)	25 7/8" [65.7]
Depth - door open 90° in.	55 3/8" [140.7]
Clear door opening in. (cm)	22 3/4" [57.8]
# of doors	1
# of shelves	2
Total shelf Area sq. ft. (m)	6.1 [56]
<b>ELECTRICAL DATA &amp; REFRIGERATION DATA</b> 115/60/1 NEMA 5-15P	
Full Load Amps	7.5
MDEC <sup>1</sup> (KWH)	1.78
Refrigerant	R-450A
Refrigerant Amount oz. (gr)	8.5 [241]
BTU <sup>2</sup> /HR   H.P.	1435 [1/4]
<b>SHIPPING DATA</b>	
Width Crated in. (cm)	45" [114]
Volume Crated cu. ft. (l)	45 [1274]
Weight lbs. (kg) - Crated	255 [116]

NOTES:  
 1. MDEC = Maximum Daily Energy Consumption  
 2. Compressor BTU based on a 90° F (32° C) degree ambient and 20° (-6° C) degree evaporator.  
 - When ordering please specify: voltage, hinging and optional accessories.

## EQUIPMENT SPECIFICATIONS

### CONSTRUCTION, HARDWARE, INSULATION

Cabinet exterior front, one piece sides, and doors are constructed of 22 gauge stainless steel. Cabinet interior and door liners are constructed of anodized aluminum. The exterior cabinet back and bottom are constructed of galvanized steel.

Door self-closes at less than 90 degrees and also includes a stay open feature at 105 degrees. Gasket profile and Santoprene® material simplify cleaning and increase overall gasket life. Both the cabinet and door(s) are insulated with an average of 2" (5 cm) thick high density, non-CFC, foamed in place polyurethane.

### REFRIGERATION SYSTEM

A balanced, rear mounted, front breathing, self-contained refrigeration system using environmentally friendly, non-flammable R-450A refrigerant is provided. It features a capillary tube, air cooled 1435 BTU. 1/4 hp, hermetic compressor, a forced air evaporator coil and a non-electric condensate evaporator. An 8' (2.4m) NEMA cord and plug is provided. Standard operating temperature for refrigerator models is 34° to 38°F (1.1° to 3.3° C).

### INTERIOR

Standard interior arrangements include two (2) powder coated wire shelves per door, mounted on pilasters. These are adjustable in 1/2" (1.27 cm) increments, allowing for a minimum of 1-1/2" (3.81 cm) spacing between shelves.

### WARRANTY

Both a three year parts and labor warranty and a five year compressor parts warranty (self-contained models) are provided standard.

DEALERS CHOICE COMPACT UNDERCOUNTERS

CONTINUED PRODUCT DEVELOPMENT MAY NECESSITATE SPECIFICATION CHANGES WITHOUT NOTICE.

Approved by \_\_\_\_\_ Date \_\_\_\_\_ Approved by \_\_\_\_\_ Date \_\_\_\_\_



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# UHT SERIES

## Compact Undercounter Refrigerator

### Models/Self-Contained

### UHT48



## STANDARD PRODUCT FEATURES

- Stainless Steel Exterior Top, Sides & Doors
- Anodized Aluminum Interior
- Front Breathing Self-Contained Refrigeration System
- Environmentally Friendly, Non-Flammable R-450A Refrigerant
- Self-Closing Stainless Steel Doors with Stay Open Feature at 105 degrees
- Anodized Aluminum Interior Door Liner
- Interior Mounted Thermometer
- Two (2) Powder Coated Shelves Per Door, Mounted on Pilasters
- Automatic Non-Electric Condensate Evaporator
- Magnetic Snap-In EZ-Clean Door Gasket(s)
- 8' (2.4 m) NEMA Cord & Plug Attached
- Set of Four (4) 4" Casters
- 3-Year Parts & Labor Warranty
- 2-Years Additional Compressor Parts Warranty

## ACCESSORIES & OPTIONS (\*field installed)

- CK20 (four 6" (15.2 cm) high casters for 48" models)
- CK24 (four 3-1/2"(8.9 cm) high casters for 48" models)
- CK26 (four 2-3/4" (6.9 cm) high casters for 48" models)
- CUACC-LEGSET4 (four 6" (15.24 cm) high legs for 48" models)
- SHELF48 UPPER (upper shelf for 48" models)
- SHELF48 LOWER (lower shelf for 48" models)
- CU48TOP-BSW0 (22 ga. stainless steel top with 4" (10.2 cm) backsplash 48")
- Optional accessory kits shipped separately for field installation

## Factory Installed Options

Stainless Steel Finished Back \* Other Door Hinging

DEALERS CHOICE COMPACT UNDERCOUNTERS



This unit is listed to the applicable UL, CSA and NSF Standards by an approved NRTL. Consult the factory or unit's data plate for approval information.

## AVAILABLE CONFIGURATIONS

27", 32", 48", 60", 72" Wide Models

Model	Door Style	Hinging
UHT48-LR	Two Solid Doors	Left/Right
UHT48-LL	Two Solid Doors	Left/Left
UHT48-RR	Two Solid Doors	Right/Right

CONTINUED PRODUCT DEVELOPMENT MAY NECESSITATE SPECIFICATION CHANGES WITHOUT NOTICE.

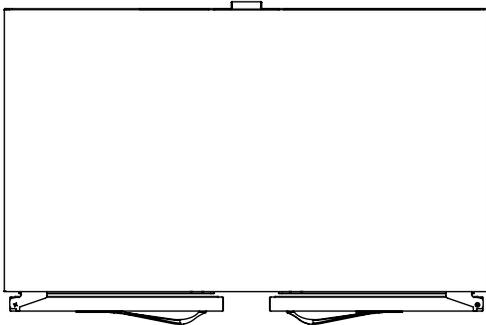
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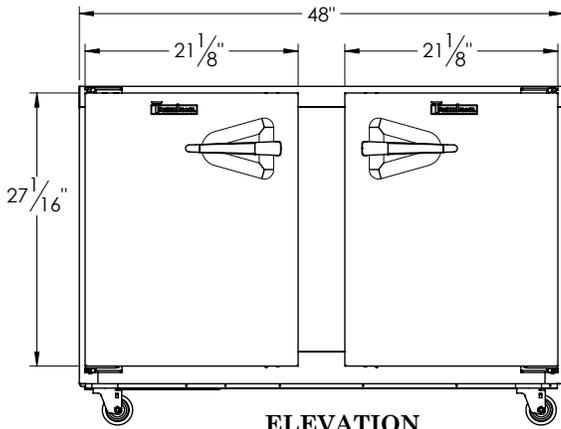
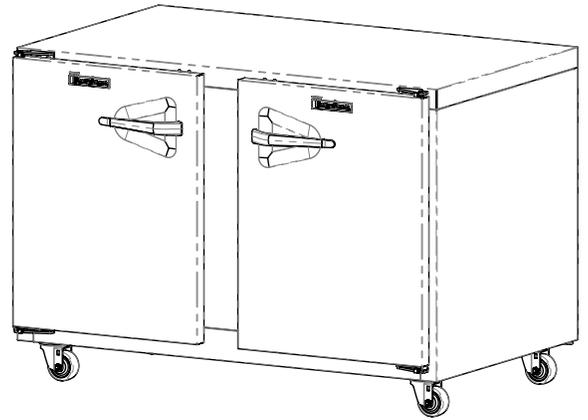
**MODELS:**

UHT 48-LR, -LL, -RR

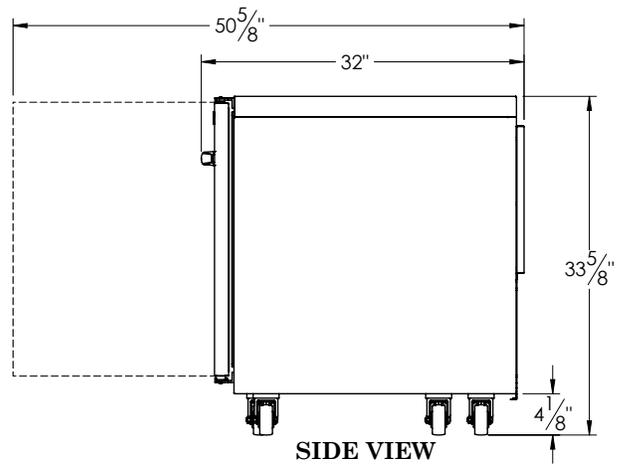
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**TOP VIEW**



**ELEVATION**



**SIDE VIEW**



Project \_\_\_\_\_  
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 Item # \_\_\_\_\_ Quantity \_\_\_\_\_ C.S.I. Section 114000



# UHT SERIES

## Compact Undercounter Refrigerator

### Models/Self-Contained

Door Models: UHT48-LR, -LL, -RR

MODELS	UHT48__
<b>CABINET DIMENSIONAL DATA</b>	
Storage cu. ft. (l)	13.56 (383)
Width cabinet in. (cm)	48" (112)
Width - door in. (cm)	21 1/8" (53.7)
Depth - door open 90° in.	50 3/8" (128.6)
Clear door opening in. (cm)	18" (18)
# of doors	2
# of shelves	4
Total shelf Area sq. ft. (m)	10.3 (.96)
<b>ELECTRICAL DATA &amp; REFRIGERATION DATA</b> 115/60/1 NEMA 5-15P	
Full Load Amps	7.5
MDEC <sup>1</sup> (KWH)	1.2
Refrigerant	R-450A
Refrigerant Amount oz. (gr)	12.5 (354)
BTU <sup>2</sup> /HR   H.P.	1435 (1/4)
<b>SHIPPING DATA</b>	
Width Crated in. (cm)	69" (175)
Volume Crated cu. ft. (l)	69 (1954)
Weight lbs. (kg) - Crated	355 (161)

## EQUIPMENT SPECIFICATIONS

### CONSTRUCTION, HARDWARE, INSULATION

Cabinet exterior front, one piece sides, and doors are constructed of 22 gauge stainless steel. Cabinet interior and door liners are constructed of anodized aluminum. The exterior cabinet back and bottom are constructed of galvanized steel.

Door self-closes at less than 90 degrees and also includes a stay open feature at 105 degrees. Gasket profile and Santoprene® material simplify cleaning and increase overall gasket life. Both the cabinet and door(s) are insulated with an average of 2" (5 cm) thick high density, non-CFC, foamed in place polyurethane.

### REFRIGERATION SYSTEM

A balanced, rear mounted, front breathing, self-contained refrigeration system using environmentally friendly, non-flammable R-450A refrigerant is provided. It features a capillary tube, air cooled 1435 BTU, 1/4 hp, hermetic compressor, a forced air evaporator coil and a non-electric condensate evaporator. An 8' (2.4m) NEMA cord and plug is provided. Standard operating temperature for refrigerator models is 34° to 38°F (1.1° to 3.3°C).

### INTERIOR

Standard interior arrangements include two (2) powder coated wire shelves per door, mounted on pilasters. These are adjustable in 1/2" (1.27 cm) increments, allowing for a minimum of 1-1/2" (3.81 cm) spacing between shelves.

### WARRANTY

Both a three year parts and labor warranty and a five year compressor parts warranty (self-contained models) are provided standard.

DEALERS CHOICE COMPACT UNDERCOUNTERS

#### NOTES:

- MDEC = Maximum Daily Energy Consumption
  - Compressor BTU based on a 90° F (32° C) degree ambient and 20° [-6° C] degree evaporator.
- When ordering please specify: voltage, hinging and optional accessories.

CONTINUED PRODUCT DEVELOPMENT MAY NECESSITATE SPECIFICATION CHANGES WITHOUT NOTICE.

Approved by \_\_\_\_\_ Date \_\_\_\_\_ Approved by \_\_\_\_\_ Date \_\_\_\_\_



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# UHT SERIES

## Compact Undercounter Refrigerator

### Models/Self-Contained

### UHT60



## STANDARD PRODUCT FEATURES

- Stainless Steel Exterior Top, Sides & Doors
- Anodized Aluminum Interior
- Front Breathing Self-Contained Refrigeration System
- Environmentally Friendly, Non-Flammable R-450A Refrigerant
- Self-Closing Stainless Steel Doors with Stay Open Feature at 105 degrees
- Anodized Aluminum Interior Door Liner
- Interior Mounted Thermometer
- Two (2) Powder Coated Shelves Per Door, Mounted on Pilasters
- Automatic Non-Electric Condensate Evaporator
- Magnetic Snap-In EZ-Clean Door Gasket(s)
- 8' (2.4 m) NEMA Cord & Plug Attached
- Set of Six (6) 4" Casters
- 3-Year Parts & Labor Warranty
- 2-Years Additional Compressor Parts Warranty

## ACCESSORIES & OPTIONS (\*field installed)

- CK21 (six 6" (15.2 cm) high casters for 60" models)
- CK25 (six 3-1/2" (8.9 cm) high casters for 60" models)
- CK27 (six 2-3/4" (6.9 cm) high casters for 60" models)
- CUACC-LEGSET6 (six 6" (15.24 cm) high legs for 60" models)
- SHELF60 UPPER (upper shelf for 60" models)
- SHELF60 LOWER (lower shelf for 60" models)
- CU60TOP-BSW0 (22 ga. stainless steel top with 4" (10.2 cm) backsplash 60")
- Optional accessory kits shipped separately for field installation

## Factory Installed Options

Stainless Steel Finished Back \* Other Door Hinging

DEALERS CHOICE COMPACT UNDERCOUNTERS



This unit is listed to the applicable UL, CSA and NSF Standards by an approved NRTL. Consult the factory or unit's data plate for approval information.

## AVAILABLE CONFIGURATIONS

27", 32", 48", 60", 72" Wide Models

Model	Door Style	Hinging
UHT60-LR	Two Solid Doors	Left/Right
UHT60-LL	Two Solid Doors	Left/Left
UHT60-RR	Two Solid Doors	Right/Right

CONTINUED PRODUCT DEVELOPMENT MAY NECESSITATE SPECIFICATION CHANGES WITHOUT NOTICE.

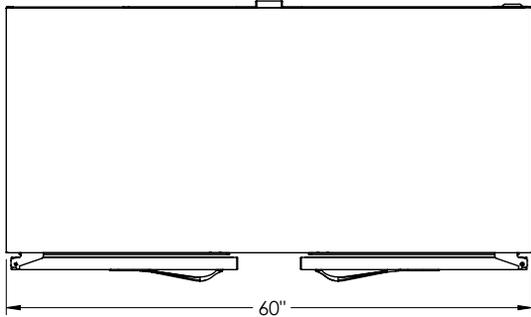
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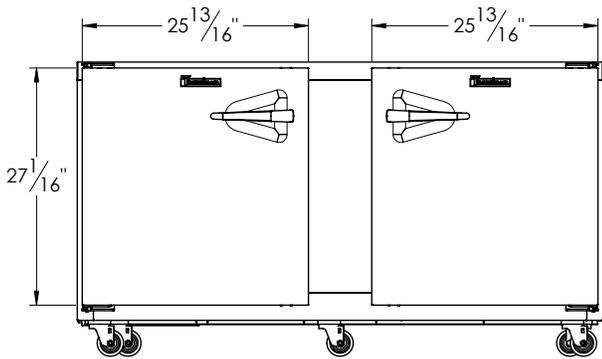
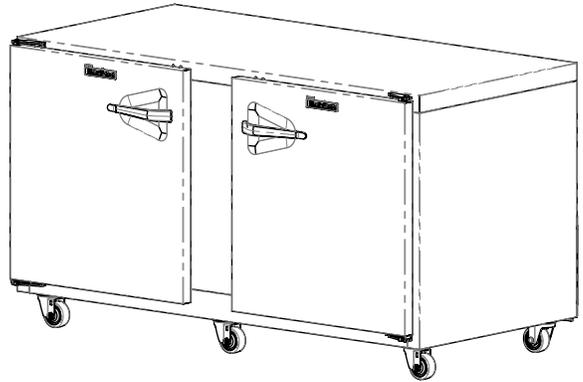
**MODELS:**

UHT 60-LR, -LL, -RR

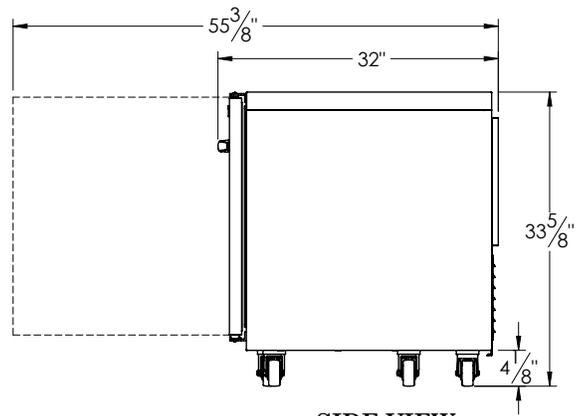
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**TOP VIEW**



**ELEVATION**



**SIDE VIEW**



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# UHT SERIES

## Compact Undercounter Refrigerator

### Models/Self-Contained

Door Models: UHT60-LR, -LL, -RR

### EQUIPMENT SPECIFICATIONS

MODELS	UHT60__
<b>CABINET DIMENSIONAL DATA</b>	
Storage cu. ft. (l)	17.42 (494)
Width cabinet in. (cm)	60" (152)
Width - door in. (cm)	25 7/8" (65.7)
Depth - door open 90° in.	55 3/8" (140.7)
Clear door opening in. (cm)	22 3/4" (57.8)
# of doors	2
# of shelves	4
Total shelf Area sq. ft. (m)	13.2 (1.23)
<b>ELECTRICAL DATA &amp; REFRIGERATION DATA</b> 115/60/1 NEMA 5-15P	
Full Load Amps	7.5
MDEC <sup>1</sup> (KWH)	2.01
Refrigerant	R-450A
Refrigerant Amount oz. (gr)	12.5 (354)
BTU <sup>2</sup> /HR   H.P.	1435 (1/4)
<b>SHIPPING DATA</b>	
Width Crated in. (cm)	69" (175)
Volume Crated cu. Ft. (l)	69 (1954)
Weight lbs. (kg) - Crated	548 (249)

#### CONSTRUCTION, HARDWARE, INSULATION

Cabinet exterior front, one piece sides, and doors are constructed of 22 gauge stainless steel. Cabinet interior and door liners are constructed of anodized aluminum. The exterior cabinet back and bottom are constructed of galvanized steel.

Door self-closes at less than 90 degrees and also includes a stay open feature at 105 degrees. Gasket profile and Santoprene® material simplify cleaning and increase overall gasket life. Both the cabinet and door(s) are insulated with an average of 2" (5 cm) thick high density, non-CFC, foamed in place polyurethane.

#### REFRIGERATION SYSTEM

A balanced, rear mounted, front breathing, self-contained refrigeration system using environmentally friendly, non-flammable R-450A refrigerant is provided. It features a capillary tube, air cooled 1435 BTU. 1/4 hp, hermetic compressor, a forced air evaporator coil and a non-electric condensate evaporator. An 8' (2.4m) NEMA cord and plug is provided. Standard operating temperature for refrigerator models is 34° to 38°F (1.1° to 3.3°C).

#### INTERIOR

Standard interior arrangements include two (2) powder coated wire shelves per door, mounted on pilasters. These are adjustable in 1/2" (1.27 cm) increments, allowing for a minimum of 1-1/2" (3.81 cm) spacing between shelves.

#### WARRANTY

Both a three year parts and labor warranty and a five year compressor parts warranty (self-contained models) are provided standard.

#### NOTES:

- MDEC = Maximum Daily Energy Consumption
  - Compressor BTU based on a 90° F (32° C) degree ambient and 20° [-6° C] degree evaporator.
- When ordering please specify: voltage, hinging and optional accessories.

CONTINUED PRODUCT DEVELOPMENT MAY NECESSITATE SPECIFICATION CHANGES WITHOUT NOTICE.

Approved by \_\_\_\_\_ Date \_\_\_\_\_ Approved by \_\_\_\_\_ Date \_\_\_\_\_



Quality Refrigeration

# Quick Start Guide

Instructions for the installation, use and care of:

**UHT / ULT Series  
Compact Undercounters  
&  
UPT / UST Series  
Compact Prep Tables**

## 1. RECEIPT & SUPPORT INSTALLATION

You should carefully inspect your Traulsen unit for damage during delivery. If damage is detected, you should save all the crating materials and make note on the carrier's Bill Of Lading describing this. A freight claim should be filed within 5 days.

Confirm that the correct power supply is available to the cabinet per the manufactures requirements as listed on the cabinet data tag before cabinet installation. The area in which your cabinet is to be installed should be chosen carefully to insure the best performance. The installation surface should be level and provide good area circulation.

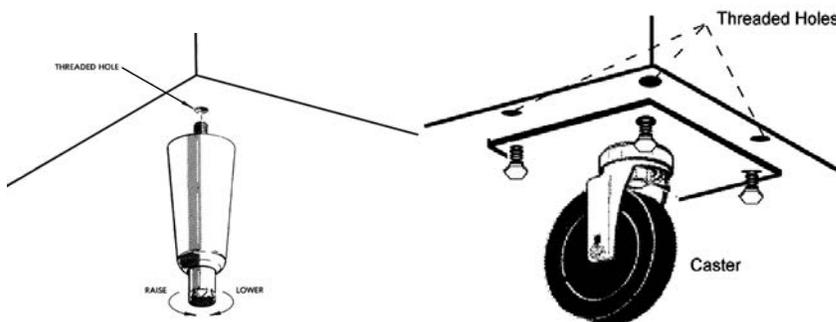
**⚠ WARNING**

Some models may use R-290 (Propane) as a refrigerant. If flammable refrigerant is present, follow instructions as labeled on the unit. Proper care must be taken to avoid any damage to refrigeration system including refrigerant tubing, condenser and evaporator coils during handling, moving, installation and cleaning as it may cause risk of fire or explosion. If damaged, unit must be moved to well ventilated area away from any sources of ignition.

Further service and repair must be performed by qualified refrigeration technicians familiar with applicable safety standards for flammable refrigerants. Technicians must use appropriate personal protective equipment and follow applicable safety precautions to avoid risk of fire or explosion.

Most units are supplied with a cord and plug, which can simply be plugged into a dedicated appropriately sized outlet. For those requiring hard-wiring directly to the power supply, this should be done by a qualified electrician onl .

After uncrating the unit, select a level location for final placement. Install the legs or casters as shown belo .



**Compacts Supports ("Stem" type legs & casters)**

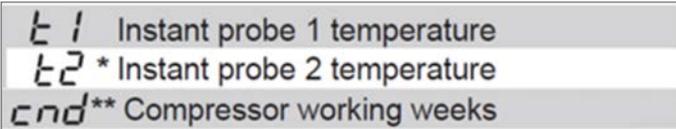
## 2. CONTROL BASICS

Your new Traulsen unit is equipped with a digital control, which precisely regulates operation. It is supplied from the factory completely ready for use.



### 2. a - INFORMATION MENU

The information available in this menu is:



\* displayed only if enabled (see Configuration Parameters) \*\* displayed only if ACC > 0

#### Access to menu and information displayed:

- Press and immediately release button **i**.
- With button **▼** or **▲** select the data to be displayed.
- Press button **i** to display value.
- To exit from the menu, press button **x** or wait for 10 seconds.

#### Initiate Stand-By:

Keeping the button **⏻** pressed for 3 seconds allows the controller to be put on a standby or output control to be resumed (with **SB=YES** only).

#### Locking the Keypad:

The keypad lock avoids undesired, potentially dangerous operations, which might be attempted when the controller is operating in a public place. In the INFO menu, set parameter **LOC** = YES to inhibit all functions of the buttons. To resume normal operation of keypad, adjust setting so that **LOC** = NO.

### 2. b - ADJUSTING CABINET SETPOINT

#### Setpoint display and modification

- Press button **i** for atleast a half second to display the setpoint value.
- While keeping the **i** button pressed, use button **▼** or **▲** to set the desired value (adjustment is within the minimum **SPL** and the maximum **SPH** limit).
- When button **i** is released, the new value is stored.

## 2. CONTROL BASICS (continued)

### 2. c - INITIATING A DEFROST

#### **Automatic defrost:**

Defrost starts automatically as soon as the time set with parameter **DFT** has elapsed.

- Timed defrost: With **DFM** = TIM defrosts take place at regular intervals when the timer reaches the value of **DFT**. For example, with **DFM** = TIM and **DFT** = 36, a defrost will take place every 6 hours.
- Optimized defrost: With **DFM** = FRO the timer is only increased when the conditions occur for frost to form on the evaporator, until the time set with parameter **DFT** is matched. If the evaporator works at 0°F, defrost frequency depends on the thermal load and climatic conditions. With setpoints much lower than 0°F, defrost frequency mainly depends on the refrigerator operating time.
- Defrost time count backup: At the power-up, if **DFB** = YES, the defrost timer resumes the time count from where it was left off before the power interruption. Vice versa, with **DFB** = NO, the time count re-starts from 0. In stand-by, the accumulated time count is frozen.

#### **Manual or remote defrost start:**

It's possible to manually start a defrost, by pressing button  for 2 seconds.

**Defrost type.** Once defrost has started, Compressor and Defrost outputs are controlled according to parameter **DTY**. If **FID** = YES, the evaporator fans are active during defrost.

**Defrost termination.** The actual defrost duration is influenced by a series of parameters.

- Time termination: **T2** = NO and **T3** different from 2EU: the evaporator temperature is not monitored and defrost will last as long as time **DTO**.
- Temperature monitoring of one evaporator: **T2** = YES and **T3** different from 2EU. In this case, if the sensor **T2** measures the temperature **DLI** before the time **DTO** elapses, defrost will be terminated in advance.

#### **Resuming thermostatic cycle:**

When defrost is over, if **DRN** is greater than 0, all outputs will remain off for **DRN** minutes, in order for the ice to melt completely and the resulting water to drain. Moreover, if probe **T2** is active (**T2** = YES), the fans will re-start when the evaporator gets to a temperature lower than **FDD**; Vice versa, if probe **T2** is not active (**T2** = NO) or after defrost has come to an end, such condition does not occur by end of the time **FTO**, after **FTO** minutes have elapsed the fans will be switched on anyway.

Caution: if **DFM** = NON or **C-H** = HEA all defrost functions are inhibited; if **DFT** = 0, automatic defrost functions are excluded.

### 2. d - CONFIGURATION PARAMETERS

#### **Parameter Configuration**

- To get access to the parameter configuration menu, press button  and  for 5 seconds.
- With button  or  select the parameter to be modified
- Press button  to display the value.
- By keeping button  pressed, use button  or  to set the desired value.
- When button  is released, the newly programmed value is stored and the following parameter is displayed.
- To exit from the setup, press button  or wait for 30 seconds.

## 2. CONTROL BASICS (continued)

### 2. e - OPERATION DISPLAY INDICATORS

During normal operation, the display shows either the temperature measured or one of the following indications:

<i>dEF</i>	Defrost in progress
<i>oFF</i>	Controller in stand-by
<i>cL</i>	Condenser clean warning
<i>do</i>	Door open alarm
<i>E1</i>	Probe T1 failure
<i>E2</i>	Probe T2 failure
<i>E3</i>	Probe T3 failure

### 2. f - TECHNICAL DATA

Power supply

TRL-002....W 100-240Vac ±10%, 50/60Hz, 3W

Relay output max loads (240Vac)

	TRL-002..S/T..-	TRL-002..Q/R..-
Compressor	16A resistive 12 FLA 48 RLA	12A resistive 12 FLA 48 RLA
Evap. Fan	16A resistive 4 FLA 12 RLA	8A resistive 4 FLA 12 RLA
Defrost	16A resistive 4 FLA 12 RLA	16A resistive 4 FLA 12 RLA
Auxiliary loads 1	7A resistive	7A resistive
Auxiliary loads 2	7A resistive	7A resistive

#### Input

NTC 10KΩ@25°C LAE Part No. SN4...

#### Measurement Range

<0.5 within the measurement range

#### Operating Conditions

-10... +50°C; 15%...80% r.H.

#### CE (Approvals and Reference Norms)

EN60730-1; EN60730-2-9; EN55022 (Class B); EN50082-1

## 2. CONTROL BASICS (continued)

### 2. g - COMPONENTS AND WIRING DIAGRAM



#### Indications:

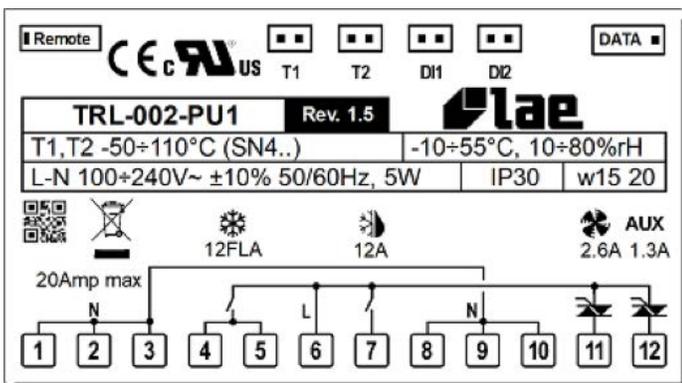
-  Thermostat output
-  Fan output
-  Defrost output
-  Activation of 2<sup>nd</sup> parameter set
-  Alarm

 Manual activation / Increase button

 Exit / Stand-by button



#### Control Wiring Diagram:



### 3. GENERAL CARE

**⚠ WARNING**

**Disconnect electrical power supply before cleaning any parts of the unit.** All Traulsen equipment should be cleaned only with warm water, mild soap and a soft cloth. Apply with a dampened cloth and wipe in the direction of the metal grain.

Avoid the use of strong detergents and gritty, abrasive cleaners as they may tend to mar and scratch the surface. Do not use cleansers containing chlorine as this may promote metal corrosion.

Care should also be taken to avoid splashing the unit with water containing chlorinated cleansers when mopping the floor around the unit.

For stubborn odor spills, use baking soda and water (mixed to a 1 TBSP baking soda to 1 pint water ratio).

### 4. ADJUSTING THE SHELVES

**⚠ WARNING**

**Disconnect electrical power supply before cleaning any parts of the unit.** This is the single most important thing you can do to promote long, efficient equipment life. For upright cabinets, remove the two bottom screws securing the louver panel, then pivot this upwards allowing full access to the front facing condenser.

Vacuum or brush any dirt, lint or dust from the finned condenser coil, around the compressor and other cooling system parts as indicated. If significant dirt is clogging the condenser fins, use compressed air to blow this clear. When finished reverse the louver removal process as instructed above.

## 6. CLEANING THE CONDENSER

### **⚠ WARNING**

**Disconnect electrical power supply before cleaning any parts of the unit.**

This is the single most important thing you can do to promote long, efficient equipment life

To clean the condenser, remove rear bottom perforated access panel.



Vacuum or brush any dirt, lint or dust from the finned condenser coil, around the compressor and other cooling system parts as indicated.

If significant dirt is clogging the condenser fins, use compressed air to blow this cle .



## 7. TROUBLESHOOTING

### **⚠ WARNING**

Some models may use R-290 (Propane) as a refrigerant. Service and repair must be performed by qualified refrigeration technicians familiar with applicable safety standards for flammable refrigerants. Technicians must use appropriate personal protective equipment and follow applicable safety precautions to avoid risk of fire or explosion. Service and repair must be performed in well ventilated and unconfined area, away from any ignition sources. All system components must be replaced with like components. Factory recommends to use exact make and models to assure the consistent performance and to minimize the risk of possible ignition due to incorrect parts. In case of uncertainty or parts unavailability, contact Traulsen technical assistance at 800-825-8220.

PROBLEM	POSSIBLE SOLUTION
Condensing unit fails to start.	a. Check if cord & plug has been disconnected.
Condensing unit operates for prolonged periods or continuously.	a. Are door(s) or drawer(s) closing properly? b. Dirty condenser or filter. Clean properly. c. Microprocessor control setting is too high, readjust.
Food Compartment is too warm.	a. Check if a large quantity of very cold or frozen food has recently been added. Allow adequate time for the cabinet to recover its normal operating temperature. b. Adjust the control to warmer setting, readjust.
Food Compartment is too cold.	a. Check if a large quantity of very cold or frozen food has recently been added. Allow adequate time for the cabinet to recover its normal operating temperature. b. Adjust the microprocessor control to warmer setting, readjust.
Condensation on exterior surface.	a. Check door(s) or drawer(s) alignment & gaskets for proper seal. b. Condensation on the exterior surface of the unit is perfectly normal during periods of high humidity. c. Check perimeter heat setting and increase setting if <100.

## 8. SERVICE & WARRANTY INFORMATION

### 8. a - SERVICE SUPPORT

To speak to service support for Traulsen units please contact our Fort Worth, TX facility by phone at 800-825-8220 or by fax to 817-740-6748 (parts) or 817-740-6757 (service).

Note: When calling for service support, please make sure you have model and serial number of unit available.

<b>Traulsen</b>		4401 Blue Mound Rd. Ft. Worth, TX 76106 800-825-8220	
MODEL:	RDT232WUF-FHS		Model Number
MODELE:	T2336AA14		Serial Number
S/N:	T2336AA14		
<small>SCAN FOR SERVICE INFO</small>			
<b>REFRIGERANT / REFRIGERANTE / RÉFRIGÉRANT</b>			
SY51 (REFM):	R-134a		
Hi Press. (PRESH):			
Lo Press. (PRESL):	2		
SY52 (REFAT):	R-404a		
Hi Press. (PRESH):	50		
Lo Press. (PRESL):	2		
<b>Input Power (ELIN) - FOR INDOOR USE ONLY</b>			
115:			
(Symbol 1) (Alt. Safety / Other 1)	(Symbol 2) (Alt. San / Other 2)	(Symbol 3) (Alt. En. / Other 3)	(Symbol 4) (WEEE)
(Symbol 5) (Safety)	(Symbol 6) (Sanitation)	(Symbol 7) (Energy)	(Symbol 8) (Customer QR Code / Other 4)
Device/Part Number: PartNum		(UL/NSF Notes)	
<b>COMPONENTS / COMPOSANTS / COMPONENTES</b>			
COMP AMPS:		EVAP FAN AMPS:	
COND FAN AMPS:		LIGHT WATTS:	
DEF HTR AMPS:		CTRL AMPS:	
DOOR HTR AMPS:		MIN AMPS:	
MAX AMPS:			
<small>370-60297-00 REV. A 11/20/14</small>			

Please visit our website at [www.traulsen.com](http://www.traulsen.com) for additional service, literature and parts information. From our home page click on the SERVICE tab, and select one of the following:

SERVICE FINDER

OWNER'S MANUALS

PARTS PRICING

SERVICE & PARTS MANUALS

WARRANTY REGISTRATION

### 8. b - WARRANTY REGISTRATION:

The warranties for your new Traulsen unit may be registered with us by contacting our Fort Worth, TX facility directly by phone at 800-825-8220.

**HOURS OF OPERATION:**

**Monday thru Friday 7:30 AM - 4:30 PM CST**



Quality Refrigeration

**Traulsen**

**4401 Blue Mound Road Fort Worth, TX 76106**

**Phone (800) 825-8220**

**Service Fax (817) 740 6757**

**[www.traulsen.com](http://www.traulsen.com)**



Quality Refrigeration

# OWNER'S MANUAL

**Instructions for the installation, operation  
and maintenance of Traulsen:**

Door and Drawer Models

Compact Undercounter Refrigerators and Freezers: 27", 32", 48" and 60"

Compact Prep Tables UPT and UST Series: 27", 32", 48" and 60"



This Traulsen unit is built to our highest quality standards. We build our refrigerators this way as a matter of pride. This philosophy has made Traulsen the leader in commercial refrigeration since 1938. We thank you for your choice and confidence in Traulsen equipment and we know you will receive many years of utility from this equipment.

All Traulsen units are placed on a permanent record file with the service department. In the event of any future questions you may have, please refer to the model and serial number found on the name tag affixed to the unit. Should you need service, call us on our toll free number, 800-825-8220 between 7:30 am - 4:30 pm CST, Monday thru Friday. You may also log onto [www.traulsen.com](http://www.traulsen.com) for further information. It is our pleasure to help and assist you in every possible way.

<p><b>INSTALLER</b></p> <p>COMPLETE THE FOLLOWING INFORMATION PRIOR TO UNIT INSTALLATION</p>	
INITIAL START DATE: _____	SERIAL NO. _____
MODEL TYPE: _____	
COMPANY/INDIVIDUAL NAME: _____	
INSTALLER: _____	

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## I. THE SERIAL TAG

The serial tag is a permanently affixed label on which is recorded vital electrical and refrigeration data about your Traulsen product, as well as the model and serial number. This tag is located in the right interior compartment on all standard models.

### I. a - READING THE SERIAL TAG:

- Serial = The permanent ID# of your Traulsen unit
- Model = The model # of your Traulsen unit
- Volts = Voltage
- Hz = Cycle
- PH = Phase
- Total Current = Maximum amp draw
- Minimum Circuit = Minimum circuit ampacity
- Lights = Light wattage
- Heaters = Heater amperage (Hot Food units only)
- Refrigerant = Refrigerant type used and refrigerant charge
- Design Pressure = High & low side operating pressures
- Agency Labels = Designates agency listings

 FORT WORTH, TX.				
SERIAL	MODEL			
VOLTS	Hz		PH	
TOTAL CURRENT	AMPS			
MINIMUM CIRCUIT	AMPS			
MAXIMUM OVERCURRENT PROTECTION			AMPS	
LIGHTS	WATTS			
HEATERS	AMPS			
REFRIGERANT		TYPE		OZ
DESIGN PRESSURE	HIGH		LOW	
REFRIGERANT		TYPE		OZ
DESIGN PRESSURE	HIGH		LOW	
370-60294-00 REV (A)				
 		COMMERCIAL REFRIGERATION		

## II. RECEIPT INSPECTION

All Traulsen products are factory tested for performance and are free from defects when shipped. The utmost care has been taken in crating this product to protect against damage in transit.

You should carefully inspect your unit for damage during delivery. If damage is detected, you should save all the crating materials and make note on the carrier's Bill Of Lading describing the damage. A freight claim should be filed immediately. If damage is subsequently noted during or immediately after installation, contact our customer care team to file a freight claim. There is a fifteen (15) day limit to file freight damage with the carrier. Under no condition may a damaged unit be returned to Traulsen without first obtaining written permission (return authorization). You may contact Hobart/Traulsen customer care at 800-333-7447 to request a return or file a claim.

## III. INSTALLATION

### III. a - LOCATION:

Select a proper location for your unit, away from extreme heat or cold. Allow enough clearance between the unit and the side wall in order to make use of the stay open feature at 120° (self-closing feature operates up to 90°). The door(s) must be able to open a minimum of 90° in order to make use of the maximum clear door width.

**NOTE: Do not install the cabinet without legs, casters or front ventilated utility base.**

### III. b - PACKAGING:

All Traulsen units are shipped from the factory bolted to a sturdy wooden pallet and packaged in a durable cardboard container. The carton is attached to the wooden skid with the use of large staples. These should first be removed to avoid scratching the unit when lifting off the crate.

To remove the wooden pallet, first if at all possible, we suggest that the cabinet remain bolted to the pallet during all transportation to the point of final installation. The bolts can then be removed with a 5/8" socket wrench by tipping or otherwise raising the unit to allow access to them. Avoid laying the unit on its front, side or back for removal of the pallet.

**NOTE: Traulsen does not recommend laying the unit down on its front, side or back. However, if you must please be certain to allow the unit to remain in an upright position afterwards for 24 hours before plugging it in so that the compressor oils and refrigerant may settle.**

### III. c - INSTALLING/ADJUSTING LEGS OR CASTERS:

6" High legs are supplied standard for all Traulsen compact undercounter and prep table units. These are shipped from the factory inside a cardboard box which is secured inside the cabinet. Casters in lieu of legs are supplied as an optional accessory for all compact undercounter and prep table models.

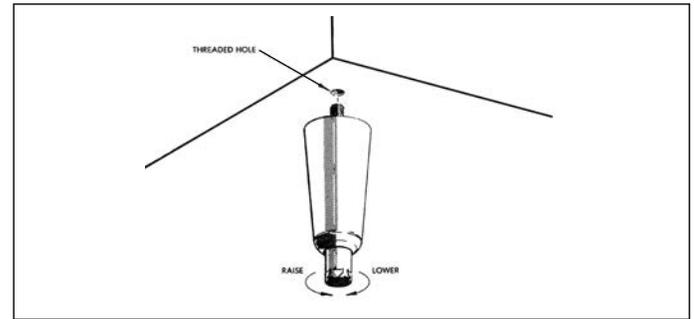
## III. INSTALLATION (CONTINUED)

### III. c - INSTALLING/ADJUSTING LEGS OR CASTERS: (continued)

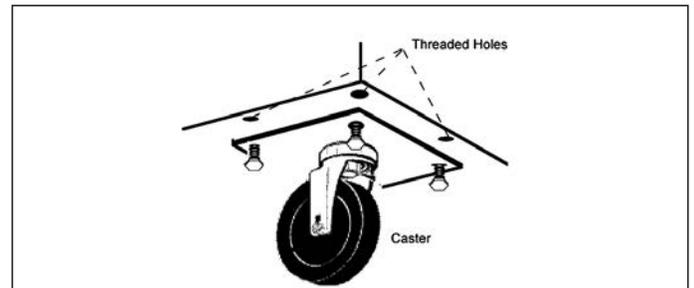
The casters are "stem" type, and do not require the use of any bolts. When ordered casters are shipped in a separate box.

**WARNING: THE CABINET MUST BE BLOCKED AND STABLE BEFORE INSTALLING LEGS OR CASTERS.**

Raise up and block the cabinet a minimum of 7" from the floor and thread the legs into the threaded holes on the bottom of the cabinet's.



Thread optional casters into the threaded holes on the bottom of the cabinet in the same way. Casters with brakes should be installed at the front.



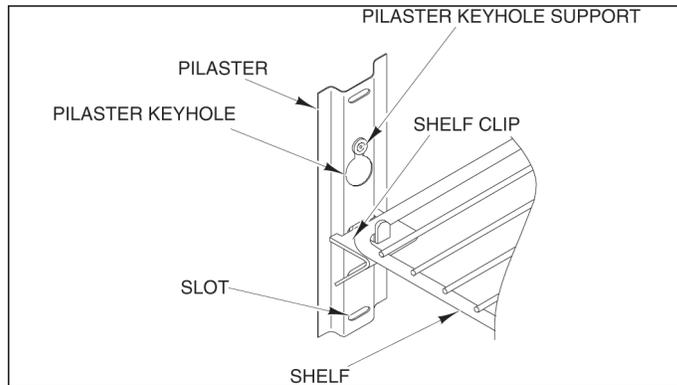
Level the cabinet using a level or pan of water in the bottom of the cabinet. On units with legs, turn the adjustable feet in or out to level the cabinet side-to-side and front-to-back. Units with casters should be placed on level floors.

**NOTE: Traulsen units are not designed to be moved while on legs. If the unit requires moving, a pallet jack or forklift should be used to prevent damage.**

### III. INSTALLATION (continued)

#### III. d - SHELF CLIPS FOR DOOR MODELS:

Shelves and shelf clips are shipped with the unit. For each shelf, insert four (4) shelf clips into the pilaster slots at the same height. The shelf clips have a small projection on top which holds the shelf position and prevents it from slipping forwards. After installing shelf clips on pilasters, place shelves on clips.



#### III. e - CORD & PLUG:

All UHT, ULT, UPT & UST models are supplied with a cord and plug attached. It is shipped coiled at the bottom of the cabinet, secured by a nylon strip. For your safety and protection, all units supplied with a cord and plug include a special three-prong grounding plug on the service cord. Select only a dedicated electrical outlet with grounding plug for power source.

**NOTE: Do not under any circumstances, cut or remove the round grounding prong from the plug, or use an extension cord.**

#### III. f - POWER SUPPLY:

The supply voltage should be checked prior to connection to be certain that proper voltage for the cabinet wiring is available (refer to the serial tag to determine correct unit voltage, see page 1). Make connections in accordance with local electrical codes. Use qualified electricians.

Use of a separate, dedicated circuit is required. Size wiring to handle indicated load and provide necessary over current protector in circuit (see amperage requirements on the unit's serial tag).

#### III. g - CLEARANCE:

It is important for the proper operation and longevity of your Traulsen unit that it have adequate provisions underneath for air supply to the compressor. There are no clearance requirements for the sides, rear or top.

**NOTE: Do not install the cabinet without legs, casters or a front ventilated utility base.**

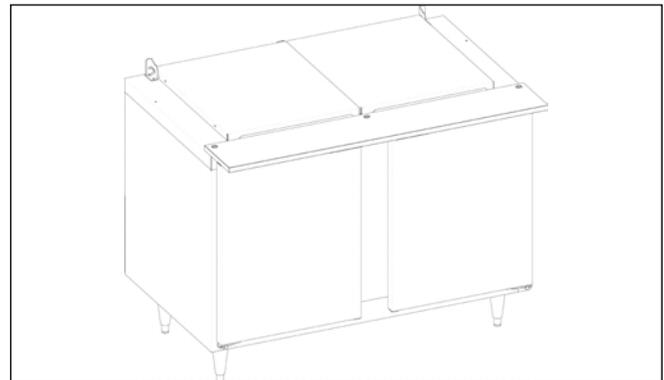
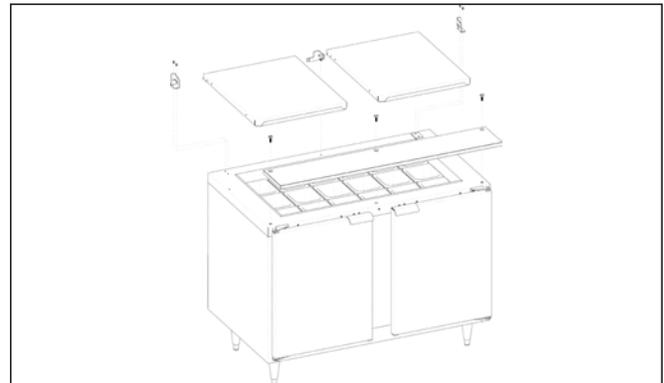
### III. INSTALLATION (continued)

#### III. h - CUTTING BOARD ASSEMBLY-UPT/UST:

On sandwich prep tables, the cutting board may require assembly at the site.

Place cutting board on cabinet, properly align & install three screws to secure in place. The cutting board is field reversible, reverse process to reverse cutting board.

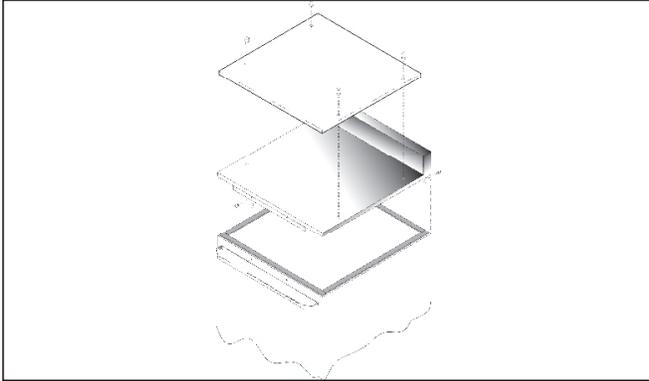
**Note: The lid(s)/cover(s) are installed at the factory. No assembly required.**



### III. INSTALLATION (continued)

#### III. i - INSTALLING THE STAINLESS STEEL TOP-UHT:

All 27", 32, 48, and 60" wide compact undercounter models can be supplied with an optional stainless steel top. This must be installed on-site, to do so please follow the directions below.



1. Peel Off backing and install foam tape (provided) around entire perimeter of the top of the unit.
2. A flange is assembled underneath at the front of the counter top. This flange has two screw holes. Screw the two 1/4-20x5/8" screws (provided through the holes in this front flange into the threaded holes in the front of the top edge of the unit.
3. Using the five 10-16x1/2" screws provided, screw the bottom of the rear cover plate to the upper rear of the cabinet.
4. If the optional polyethylene cutting board top is provided, there are four threaded pins which screw into the four threaded holes in the work top. The four holes in the polyethylene cutting board top fit around the heads of the four pins.

### IV. OPERATION

#### IV. a - PRESTART CHECKS:

The compressor must float freely before connecting to electrical power. The compressor motor is provided with rubber vibration isolator mounts (no springs). No bolts need to be loosened. Check all exposed refrigeration lines to make sure they are not dented or kinked. Check for tubing shifts due to shipping that would cause operating noise, wear, or leaks. Check that condenser fan rotates freely.

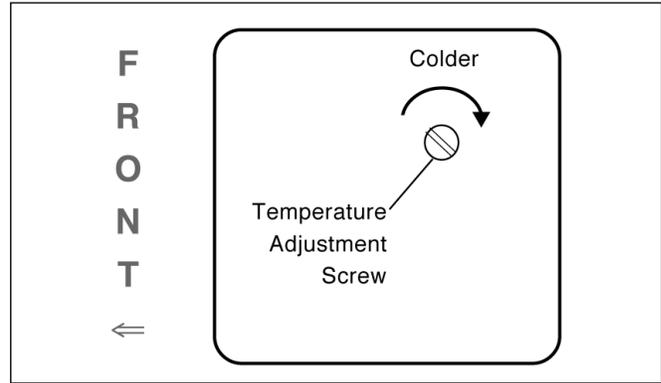
The refrigeration system should be checked for proper operation before product is stored in the cabinet.

### IV. OPERATION (continued)

#### IV. b - TEMPERATURE CONTROL:

The temperature is set at the factory but local conditions may necessitate slight adjustment.

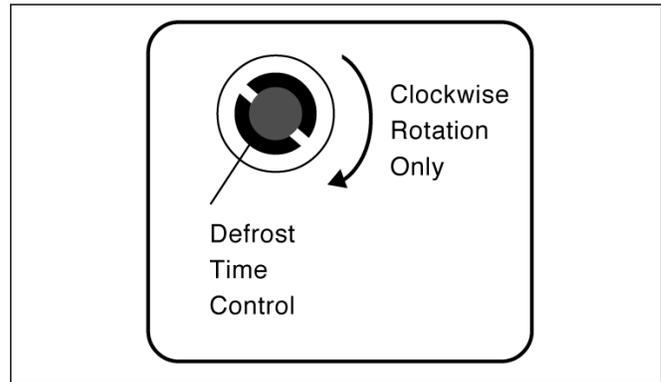
The temperature control shown in below is located on the front side of the evaporator housing. To adjust, turn the adjustment screw with a screwdriver a small amount at a time; turning clockwise lowers the temperature. An "OFF" position is fully counterclockwise and interrupts power to the compressor and condenser fan only, not the entire refrigerator.



ULT32 freezer model is equipped with a knob that has a number ranging from 0 to 9. Turning the knob clockwise lowers the temperature, turning the knob counterclockwise raises the temperature. 0 is the "OFF" position. The temperature range of adjustments is -5 to 5 F degrees.

#### IV. c - DEFROST CONTROL:

Frozen food storage cabinets are equipped with a defrost timer that provides a 20 minute defrost cycle every 6 hours (four defrost cycles per day).



## IV. OPERATION (continued)

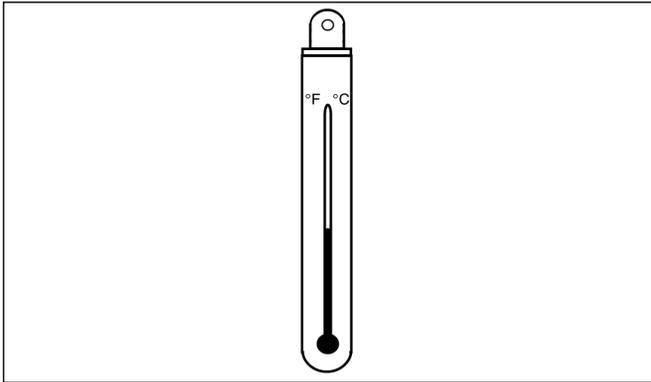
### IV. c - DEFROST CONTROL: (continued)

This control can be adjusted to set when the next defrost cycle will start. To adjust the defrost time control, use a coin on the outside slot in the rim of the timer and turn clockwise until the compressor turns off. Continue turning coin clockwise until the compressor restarts. The next defrost cycle will start in about 5 hours 40 minutes. On all models ULT27, ULT48 and ULT60, the defrost time control is located on the front side of the evaporator housing, behind the temperature control adjustment screw. On earlier models ULT48 and ULT60, the defrost time control was accessed through a small round opening on the outside rear of the unit.

ULT32 freezer model requires no adjustment. The defrost occurs every 4 hours. It is time initiated and temperature terminated with a time safety backup.

### IV. d - REFRIGERATING PRODUCT:

A thermometer is provided inside all UHT, ULT, UPT & UST models. Allow the cabinet to reach normal operating temperature before loading.



UHT, ULT, UPT & UST Series will satisfactorily refrigerate an assorted load of food items. Allow space between articles to permit free air circulation. Do not overload at any one time with warm food products and expect immediate results. A certain amount of time is required to remove heat from items before operating temperatures can be attained. The system is designed for storage of refrigerated or frozen product.

Opening the door or drawer will increase the temperature in the cabinet and will require a certain amount of time to recover. Also after peak service periods or after warm product is loaded the refrigerator will require a certain amount of time for the temperature to return to the normal operating range.

### IV. e - PANS & DIVIDER BARS-TOP RAIL:

Sandwich Prep models are provided with 1/6 size plastic pans and metal divider bars. When 18 one sixth size pans are ordered, four standard and one wide pan divider/supports are provided to achieve appropriate pan separation. When 24 one-sixth size pans are ordered, six standard and one wide pan divider bars are provided to achieve appropriate pan separation. All other arrangements use all standard width pan divider bars.

## IV. OPERATION (continued)

### IV. f - DIVIDER BARS-DRAWERS:

Drawer models are provided with metal divider bars standard. All 27" wide models are supplied with 2 bars, 32" wide models are supplied with 2 narrow bars and 1 wide bar and 60" wide models are supplied with 2 bars and 1 hook divider bar, per drawer.

## V. CARE AND MAINTENANCE

### V. a - CLEANING THE EXTERIOR:

Exterior stainless steel should be cleaned with warm water, mild soap and a soft cloth. Apply with a dampened cloth and wipe in the direction of the metal grain.

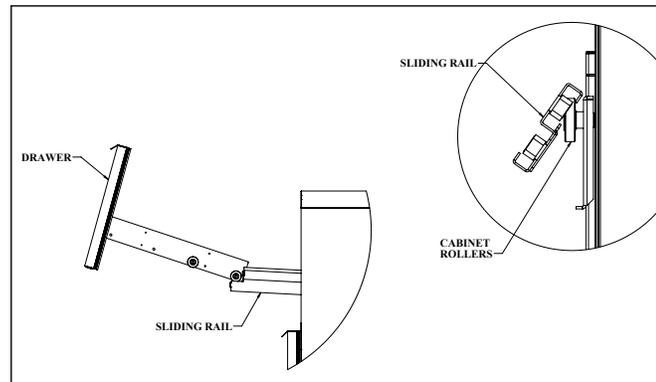
Avoid the use of strong detergents and gritty, abrasive cleaners as they may tend to mar and scratch the surface. Do NOT use cleaners containing chlorine, this may promote corrosion of the stainless steel.

### V. b - CLEANING THE INTERIOR:

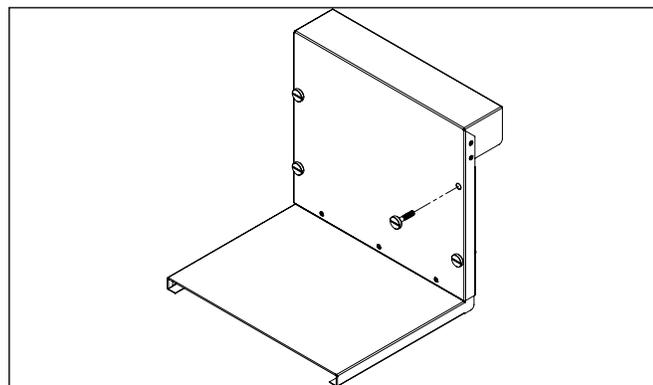
For cleaning the interior, the use of baking soda as described in section V. a is recommended. Use on breaker strips as well as door and drawer gaskets.

All door models interior fittings are removable without tools to facilitate cleaning.

Depending on the level of cleaning, drawer models interior fittings may require a tool to facilitate cleaning. The drawer frame may be removed without tools by simply pulling out and upward. For deeper cleaning the back panel shown in the bubble drawing will require a Phillips screwdriver to be removed.



For additional deeper cleaning you may also remove the air duct by removing the thumb screws and rotating them in counter clockwise motion.



## V. CARE AND MAINTENANCE (continued)

### V. c - CLEANING THE CONDENSER COIL:

Check the condenser coil periodically. The operating environment will affect the required frequency of cleaning. Air must be able to freely circulate through the condenser. This surface must be kept free of dirt and grease for proper system operation. Remove the lower rear panel on the rear of the equipment cabinet. Carefully clean dirt and lint from the condenser coil using a vacuum cleaner or soft brush; do not use a wire brush. Replace the lower rear panel. Reconnect electrical power supply.

### V. d - CONDENSATE REMOVAL SYSTEM CARE:

The evaporator coil, condensate loop and condensate pan, when needed, can all be flushed with fresh water by a qualified service technician. This should be part of any routine maintenance program and can prolong the life of the equipment.

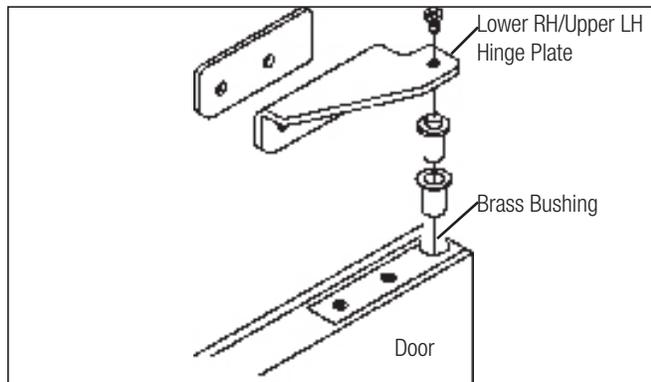
Condensate removal is provided by evaporation at the lower rear portion of the equipment cabinet and does not need a drain. Periodic cleaning of the condensate removal box, remove the lower panel at the rear of the equipment cabinet. Clean the condensate removal box by wiping it out with a clean damp cloth, using care with the condensate loop inside. Replace the lower rear panel. Reconnect electrical power supply.

**WARNING: DISCONNECT ELECTRICAL POWER SUPPLY BEFORE CLEANING ANY PARTS OF THE UNIT.**

## VI. MISC. OPERATIONS

### VI. a - REHINGING THE DOOR:

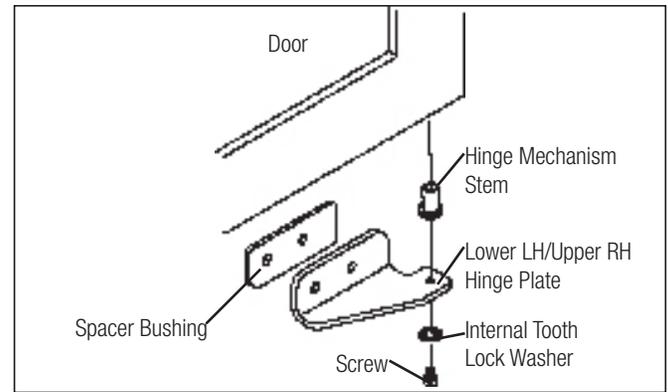
The door(s) on all UHT, ULT, UPT & UST models can be easily rehung in the field. To begin, open the door to its maximum position. Support the non-hinged end of the door so minimum movement occurs when the bolts from the lower hinge plate are removed. Remove the lower hinge plate and then the door from the top hinge bracket. The hinge plate pin and plastic bushing will remain in the top hinge plate.



Lay the door down on a padded flat surface while being careful not to allow the lower hinge plate and mechanism stem to slide out the bottom of the door.

**NOTE:** The lower hinge plate is under spring tension. Grasp the lower hinge plate while keeping a firm grip on the plate, carefully slide it out the bottom of the door just far enough to allow the plate to rotate a full 360°. Unwind the tension of the spring by carefully allowing the hinge plate to rotate a full 360° several times.

## VI. MISC. OPERATIONS (continued)



Slide the hinge plate and hinge mechanism stem out the bottom of the door.

### VI. b - PREPARING FOR EXTENDED SHUT DOWN:

**NOTE:** Remove the brass bushing from the bottom of the door only if spring replacement is necessary. Both the spring and bushing will need to be new parts.

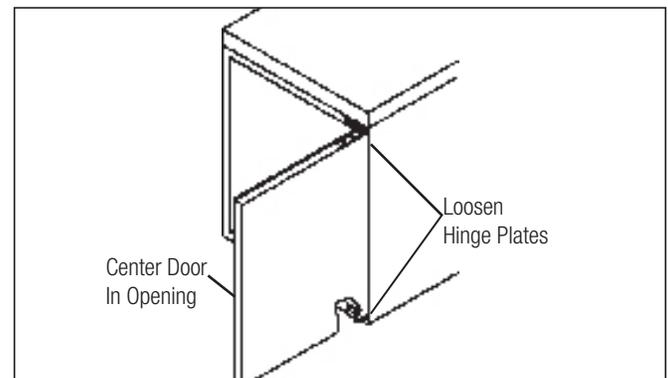
**NOTE:** When installing, make sure the lower hinge plate and hinge mechanism stem are rotated no more than six (6) full turns while applying tension to the spring.

To reinstall the door, position the lower hinge plate into the position of being open 90° to the cabinet. Place the top hinge plate pin in the hole in the top of the door and support the other end of the door for minimal movement. Start the bolts in the lower hinge plate and tighten the bolts enough to hold the door in place. Remove the block from under the end of the door. Adjust the door.

If the refrigerator is not to be used for an extended period of time, disconnect the electrical power supply and open the doors. As soon as the cabinet has warmed up to room temperature, wipe out the interior. Leave the doors open and check again to make sure that no moisture has collected on any parts. To restart refrigerator, follow instructions under PRESTART CHECKS and OPERATION.

### VI. c - ADJUSTING THE DOOR:

Occasionally the door(s) may require alignment adjustment. To do so, first open the door and loosen the hinge plate screws enough to move the hinges if desired, but the door is held in place. Center the door in the opening. Next level the top hinge plate and tighten the screws. Finally, level the lower hinge plate and tighten the screws.



## VI. MISC. OPERATIONS (continued)

### VI. d - DOOR & DRAWER GASKET(S) REPLACEMENT:

Remove the old gasket by pulling it out from the gasket retainer. Next, install the four corners of the new gasket by pushing straight in on the gasket until it is hooked behind the gasket retainer. Be careful not to stretch the gasket as it will not return to its original length. Starting at the center of one edge, push the gasket straight in until it is hooked behind the gasket retainer. Proceeding from this point out to the corners, continue pushing the gasket straight into the gasket retainer. Proceed doing the same to each of the remaining edges until the gasket is completely installed.

## VII. TROUBLE SHOOTING GUIDE

PROBLEM	POSSIBLE SOLUTION
1. Condensing unit fails to start.	a. Check if cord & plug has been disconnected. b. Check thermostat temperature setting.
2. Condensing unit operates for prolonged periods or continuously.	a. Are doors or drawers closed properly? b. Dirty condenser or filter. Clean properly. c. Evaporator coils iced. Needs to defrost.
3. Food Compartment is too warm.	a. Check door(s) or drawers and gasket(s) for proper seal. b. Check if a large quantity of warm food was recently added or the door or drawer was kept open for a long period of time. Allow adequate time for the cabinet to recover its normal operating temperature. c. Thermostat setting to high. Readjust per instructions. d. Check that condensing coil is clean.
4. Food Compartment is too cold.	a. Check if a large quantity of very cold or frozen food has recently been added. Allow adequate time for the cabinet to recover its normal operating temperature. b. Adjust the thermostat to a warmer setting.
5. Condensation on exterior surface.	a. Check door(s) or drawer(s) alignment and gaskets for proper seal. b. Condensation on the exterior surface of the unit is perfectly normal during periods of high humidity.
6. Compressor hums & does not start.	a. Call for service.

## VIII. SERVICE ASSISTANCE

### VIII. a - SERVICE INFORMATION:

Before calling for service, please check the following:

Is the electrical cord plugged in?

Is the fuse OK or circuit breaker on?

Clean condenser coil

Is the power switch on?

If after checking the above items and the unit is still not operating properly, please contact an authorized Traulsen service agent. You may obtain the name of a service agent from the Service Directory page of our web site: [www.traulsen.com](http://www.traulsen.com). Please note, you will be required to register for a login name and pass code to access our directory. If service is not satisfactory, please contact our in-house service department at:

**Traulsen**  
**4401 Blue Mound Road**  
**Fort Worth, TX 76106**  
**(800) 825-8220**

Traulsen reserves the right to change specifications or discontinue models without notice.

### VIII. b - SERVICE SUPPORT INFORMATION:

To purchase replacement parts or to speak to service support for Traulsen and most Hobart refrigeration units please contact our Ft. Worth facility by phone at 800-825-8220 or fax to 817-740-6748 (parts) or 817-740-6757 (service).

**Note: When calling for spare parts or service support, please make sure you have model and serial number of unit available.**

To source service support locally follow instructions below for nearest authorized service agent. Please note, you will be required to register for a login name and pass code to access our directory.

1. Log onto [www.traulsen.com](http://www.traulsen.com)
2. Select Contact Us/Dealer Directory (top right of screen)
3. Click on Service Directory tab
4. Select state by using the drop down box
5. Select Go

### VIII. c - WARRANTY REGISTRATION:

The warranties for your new Traulsen unit may be registered with us by contacting our Ft. Worth facility directly by phone at 800-825-8220 or you may register on-line. Please note, you will be required to register for a login name and pass code to access our on line registration.

1. Log onto [www.traulsen.com](http://www.traulsen.com)
2. Select Contact Us/Dealer Directory (top right of screen)
3. Select Warranty Registration (lower right of screen)
4. Fill out information requested
5. Select Submit to complete unit warranty registration

## IX. WARRANTIES



### STANDARD DOMESTIC WARRANTY

TRAULSEN warrants new equipment to the original purchaser, when installed within the United States against defective material and workmanship for three (3) years from the date of original installation. Under this warranty, TRAULSEN will repair or replace, at its option, including service and labor, all parts found to be defective and subject to this warranty. Warranty term begins upon the date of Installation, the date of End User Invoice or the date of Dealer Invoice, whichever is proven to occur latest, not to exceed 18 months from Dealer Invoice date (the "Warranty Period"). Warranty excludes components that are removable without tools.

The compressor part is warranted for an additional two (2) years. During this period TRAULSEN will supply replacement compressor(s) if deemed defective, however all installation, recharging and repair costs will remain the responsibility of the owner.

This warranty does not apply to damage resulting from fire, water, burglary, accident, abuse, misuse, transit, acts of God, terrorism, attempted repairs, improper installation by unauthorized persons, and does not apply to food loss.

For Traulsen units purchased with a remote feature, standard warranty will apply only to those components contained within the unit to the point of connection of the refrigeration lines leading to the remote condenser.

"Defective Part Return" – All claimed defective replacement part(s) must be returned to TRAULSEN for inspection within 30 days from the date of the repair. Failure to return all claimed defective part(s) to TRAULSEN will invalidate the warranty claim, this warranty statement, and forfeit payment for those repairs affected.

### INTERNATIONAL COMMERCIAL WARRANTY

TRAULSEN warrants to the original purchaser the Refrigeration Equipment shall be manufactured free from defects in material and workmanship under normal use and service for a period of one (1) year from date of shipment. Under this warranty, TRAULSEN will reimburse the purchaser for the replacement of any part of said equipment (excluding dryers & refrigerant gas) which then proves to be defective. This warranty does not apply to damage resulting from fire, water, burglary, accident, abuse, misuse, transit, acts of God, terrorism, attempted repairs, improper installation by unauthorized persons, and will not apply to food loss.

TRAULSEN'S standard warranty does not apply to Export Sales. Rather, for a period of one (1) year from date of original installation not to exceed Fifteen (15) months from date of shipment from factory, TRAULSEN: will, at Traulsen's sole discretion, replace or repair, F.O.B. factory, any defective parts normally subject to warranty and will not cover the cost of packing, freight or labor, such costs being the sole responsibility of the dealer.

**THERE ARE NO ORAL, STATUTORY OR IMPLIED WARRANTIES APPLICABLE TO TRAULSEN, INCLUDING BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. TRAULSEN SHALL HAVE NO OBLIGATION OR LIABILITY FOR CONSEQUENTIAL OR SPECIAL DAMAGES, INCLUDING, BUT NOT LIMITED TO, INDIRECT, PUNITIVE DAMAGES, LOSS OF USE, LOSS OF PRODUCT, DOWN TIME OR LOST PROFITS, GROWING OUT OF OR WITH RESPECT TO THE EQUIPMENT OR ITS SALE, OPERATION OR USE, AND TRAULSEN NEITHER ASSUMES NOR AUTHORIZES ANYONE ELSE TO ASSUME FOR IT ANY OBLIGATION OR LIABILITY IN CONNECTION WITH THE EQUIPMENT OR ITS SALE, OPERATION OR USE OTHER THAN AS STATED HEREIN.**

**THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES EITHER EXPRESSED OR IMPLIED AND CONSTITUTES TRAULSEN'S FULL OBLIGATION AND LIABILITY. WARRANTIES NOT AVAILABLE ON REMOTE MODELS.**

## X. SERVICE PARTS LIST

Note: Part numbers listed are for standard products as currently manufactured. For products manufactured as other than standard, please contact the factory.

ITEM	DESCRIPTION	PART NUMBER
<b>CASTERS</b>	6" CASTER - 60" MODELS	CASTER 5SET6
	6" CASTER - 27", 32" & 48" MODELS	CASTER 5SET4
	4" CASTER - 60" MODELS	CASTER 60SET3
	4" CASTER - 27", 32" & 48" MODELS	CASTER SET4IN
	3 1/2" CASTER - 60" MODELS	CASTER SET4
	3 1/2" CASTER - 27" , 32" & 48" MODELS	CASTER SET3IN
	2 1/2" CASTER - 27" MODELS	CASTER SET2IN
<b>HINGE</b>	REPLACEMENT HINGE	SER-60248-00
	REPLACEMENT HINGE CARTRIDGE	SER-60249-00
<b>SHELVES</b>	SHELF - 27" MODELS	SHELF CPW1
	SHELF - 32" MODELS	SHELF CPW2
	SHELF - 48" MODELS (UPPER)	SHELF48 UPPER
	SHELF - 48" MODELS (LOWER)	SHELF48 LOWER
	SHELF - 60" MODELS (UPPER)	SHELF60 UPPER
	SHELF - 60" MODELS (LOWER)	SHELF60 LOWER
<b>SHELF CLIP</b>	SHELF CLIP - ALL MODELS	SER-60269-00
<b>THERMOMETER</b>	THERMOMETER - ALL MODELS	SER-60268-00
<b>TOP, BACKSPLASH</b>	BACKSPLASH TOP - 27" MODELS	CU27TOP BSWO
	BACKSPLASH TOP - 32" MODELS	CU32TOP BSWO
	BACKSPLASH TOP - 48" MODELS	CU48TOP BSWO
	BACKSPLASH TOP - 60" MODELS	CU60TOP BSWO

## X. SERVICE PARTS LIST (continued)

Note: Part numbers listed are for standard products as currently manufactured. For products manufactured as other than standard, please contact the factory.

ITEM	DESCRIPTION	PART NUMBER
<b>DRAWER 27 COMPACT</b>	DRAWER ASSEMBLY	550-10234-00
	DRAWER TOP	550-10214-00
	DRAWER BOTTOM	550-10233-00
	DRAWER FACE ASSEMBLY TOP	550-10216-00
	DRAWER FACE ASSEMBLY BOTTOM	550-10216-01
	DRAWER FRAME ASSEMBLY TOP/BOTTOM	550-10135-01
	DRAWER SUPPORT LEFT	550-10231-00
	DRAWER SUPPORT RIGHT	550-10232-00
	DRAWER SLIDING RAIL LEFT	550-10230-00
	DRAWER SLIDING RAIL RIGHT	550-10230-01
	DRAWER CROSSRAIL	550-10215-00
	DRAWER GASKET TOP	341-60099-02
	DRAWER GASKET BOTTOM	341-60099-03
	DRAWER ROLLER	344-41808-01
	DIVIDER	701-60774-00
<b>DRAWER 32 COMPACT</b>	DRAWER ASSEMBLY	550-10236-00
	DRAWER TOP	550-10222-00
	DRAWER BOTTOM	550-10235-00
	DRAWER FACE ASSEMBLY TOP	550-10224-00
	DRAWER FACE ASSEMBLY BOTTOM	550-10224-01
	DRAWER FRAME ASSEMBLY TOP/BOTTOM	550-10209-01
	DRAWER SUPPORT LEFT	550-10231-00
	DRAWER SUPPORT RIGHT	550-10232-00
	DRAWER SLIDING RAIL LEFT	550-10230-00
	DRAWER SLIDING RAIL RIGHT	550-10230-01
	DRAWER CROSSRAIL	550-10223-00
	DRAWER GASKET TOP	341-60099-04
	DRAWER GASKET BOTTOM	341-60099-05
	DRAWER ROLLER	344-41808-01
	DIVIDER NARROW	701-61258-03
	DIVIDER WIDE	701-61258-04
<b>DRAWER 60 COMPACT</b>	DRAWER ASSEMBLY FIRST OPENING	550-10239-00
	DRAWER ASSEMBLY SECOND OPENING	550-10239-01
	DRAWER TOP	550-10214-02
	DRAWER BOTTOM	550-10233-00
	DRAWER FACE ASSEMBLY TOP	550-10216-00
	DRAWER FACE ASSEMBLY BOTTOM	550-10216-01
	DRAWER FRAME ASSEMBLY TOP	550-10135-03
	DRAWER FRAME ASSEMBLY BOTTOM	550-10135-01
	DRAWER SUPPORT LEFT FIRST OPENING	550-10231-00
	DRAWER SUPPORT RIGHT FIRST OPENING	550-10237-00
	DRAWER SUPPORT LEFT SECOND OPENING	550-10238-00
	DRAWER SUPPORT RIGHT SECOND OPENING	550-10232-00
	DRAWER SLIDING RAIL LEFT	550-10230-00
	DRAWER SLIDING RAIL RIGHT	550-10230-01
	DRAWER CROSSRAIL	550-10215-00
	DRAWER GASKET TOP	341-60099-02
	DRAWER GASKET BOTTOM	341-60099-03
	DRAWER ROLLER	344-41808-01
	DIVIDER WITH HOOKS	601-61110-00
	DIVIDER	701-60774-00

## NOTES:

**HOURS OF OPERATION:**  
Monday thru Friday 7:30 am - 4:30 pm CST



**Quality Refrigeration**

**Traulsen**  
4401 Blue Moud Road Fort Worth, TX 76106  
Phone (800) 825-8220 Fax (817) 740-6757  
Website: [www.traulsen.com](http://www.traulsen.com)



## Traulsen Refrigeration

# SERVICE MANUAL #01

### Instructions For The Troubleshooting And Repair Of Traulsen Compact Undercounter Refrigerator, Freezer & Prep Table Models

27", 48" & 60" Compact Undercounter Refrigerator Models  
27", 48" & 60" Compact Undercounter Freezer Models  
27", 48" & 60" Compact Prep Table Models



#### -NOTICE-

This Manual is prepared for the use of trained Authorized Traulsen Service Agents and should not be used by those not properly qualified, nor should the equipment for which it is prepared be adjusted or repaired by anyone except properly qualified personnel. This manual is not intended to be all encompassing, but is written to supplement the formal training, on-the-job experience and other product knowledge acquired by Authorized Traulsen Service Agents. Reproduction or other use of this Manual, without the express written consent of Traulsen & Co., Inc. is prohibited.

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<b>MODEL</b>		<b>SN NO.</b>		<b>MD</b>	
<b>ML</b>		<b>MAX. OPERATING AMBIENT</b>			
<b>VOLTS</b>		<b>HZ</b>	<b>PH</b>	<b>TOTAL AMPS</b>	
<b>MAXIMUM FUSE SIZE OR HACR TYPE CIRCUIT BREAKER</b>			<b>AMPS</b>	<b>MINIMUM CIRCUIT CAPACITY</b>	
			<b>AMPS</b>	<b>AMPS</b>	
<b>REFRIGERANT TYPE</b>	<b>OUNCES MAXIMUM</b>	<b>DESIGN PRESSURE PSIG</b>		<b>H.S</b>	<b>L.S</b>
<b>LIGHT AMPS</b>	<b>EVAPORATOR FAN MOTORS</b>	<b>QTY.</b>	<b>FULL LOAD AMPS EACH</b>		
<b>ANTICONDENSATE HEATER AMPS</b>		<b>DEFROST HEATER AMPS</b>			
<b>COMPRESSOR</b>	<b>RATED LOAD AMPS</b>	<b>LRA</b>	<b>AMPS</b>		
<b>CONDENSER FAN MOTORS</b>	<b>QTY</b>	<b>FULL LOAD AMPS EACH</b>			
<b>COMMERCIAL REFRIGERATOR AND/OR FREEZER</b>					
					
286L PLATE NO. 432680-5		FORT WORTH, TX. MADE IN U.S.A.		DATA NO. 432679-	

## I. THE SERIAL TAG

The serial tag is a permanently affixed sticker on which is recorded vital electrical and refrigeration data about your Traulsen product, as well as the model and serial number. This tag is located on the left side of the interior compartment of all compact undercounter refrigerator, freezer and prep table models.

### READING THE SERIAL TAG

- Serial = The permanent ID# of your Traulsen
- Model = The model # of your Traulsen
- Volts = Voltage
- Hz = Cycle
- PH = Phase
- Total Current = Maximum amp draw
- Minimum Circuit = Minimum circuit required
- Lights = Light wattage
- Heaters = Heater amperage
- Refrigerant = Refrigerant type used
- Design Pressure = High & low side operating pressures and refrigerant charge
- Agency Labels = Designates agency listings

## II. GENERAL INFORMATION

### II. a - INTRODUCTION:

This manual applies to the following Traulsen models:

UHT27, UHT48 & UHT60 Compact Undercounter Refrigerator Models

ULT27, ULT48 & ULT60 Compact Undercounter Freezer Models

UPT276, UPT279, UPT488, UPT4812, UPT4818, UPT6012, UPT6018 & UPT6024 Compact Prep Table Refrigerator Models

All of the information, illustrations and specifications contained in this manual are based on the latest product information available at the time of printing.

### II. b - MODEL DESIGNATIONS:

The three letter model prefix indicates the type:

UHT = Compact Undercounter Refrigerator

ULT = Compact Undercounter Freezer

UPT = Compact Prep Table

The next two numbers indicate the product width:

27 = 27" Wide Refrigerator, Freezer or Prep Table

48 = 48" Wide Refrigerator, Freezer or Prep Table

60 = 60" Wide Refrigerator, Freezer or Prep Table

The last one or two number indicates the pan capacity (prep tables only):

6 = Six (6) Sixth Size Pan Capacity

8 = Eight (8) Sixth Size Pan Capacity

9 = Nine (9) Sixth Size Pan Capacity

12 = Twelve (12) Sixth Size Pan Capacity

18 = Eighteen (18) Sixth Size Pan Capacity

24 = Twenty Four (24) Sixth Size Pan Capacity

### II. c - WIRING DIAGRAM:

Refer to the wiring diagrams on pages 21 and 22 for any service work performed on the unit. Should you require another copy, please contact Traulsen Service at (800) 825-8220, and provide the model and serial number of the unit involved.

### II. d - INSTALLATION:

Generally compact undercounter refrigeration products are installed by the dealer or others contracted by the dealer or owner. Detailed installation instructions are included with each unit.

### II. e - CLEANING:

Detailed cleaning instructions are included with each unit, however special care **MUST** be given to the condenser coil. The condenser coil must be cleaned at a minimum of every six months. This can be done with a vacuum cleaner using a brush attachment, or a stiff brush or wisk broom. For more information please refer to section "V. a & b" of the Compact Undercounter Owner's Manual.

### II. f - TOOL REQUIREMENTS:

For most jobs a standard set of hand tools, a VOM with AC current tester, along with a temperature tester or thermometer are adequate. However in some cases the following additional tools may be required as well:

- Refrigeration Reclaiming Equipment
- Acetylene Torch
- Nitrogen Bottle With Gauges
- Nitrogen Regulator
- Refrigeration Gauge Manifold
- Refrigerant Scale
- Valve Core Removal Kit

### III. SPECIFICATIONS

Model No.	HP	Refrigerant Type	Refrigerant Charge	Cond. Unit Amp Draw (LRA)	Voltage	Amps
UHT27	1/6	R-134a	8 oz.	4.0	120/60/1	3.4
UHT48	1/4	R-134a	12oz.	6.1	120/60/1	6.7
UHT60	1/4	R-134a	12oz.	6.1	120/60/1	6.7
ULT27	1/3	R-134a	9 oz.	7.2	120/60/1	6.7
ULT48	1/3	R-404A	14 oz.	8.9	120/60/1	10.0
ULT60	1/2	R-404A	14 oz.	10.8	120/60/1	12.0
UPT276	1/5	R-134a	9 oz.	4.5	120/60/1	4.3
UPT279	1/5	R-134a	9 oz.	4.5	120/60/1	4.3
UPT488	1/4	R-134a	12 oz.	6.1	120/60/1	7.0
UPT4812	1/4	R-134a	12 oz.	6.1	120/60/1	7.0
UPT4818	1/4	R-134a	12 oz.	6.1	120/60/1	7.0
UPT6012	1/4	R-134a	12 oz.	6.1	120/60/1	7.0
UPT6018	1/4	R-134a	12 oz.	6.1	120/60/1	7.0
UPT6024	1/4	R-134a	12 oz.	6.1	120/60/1	7.0

### IV. OPERATING DATA

Refrigerator Model: UHT27			Freezer Model: ULT27		
Refrigerant	R-134a	R-134a	Refrigerant	R-134a	R-134a
Ambient Temperature	70° F	100° F	Ambient Temperature	70° F	100° F
Suction Pressure			Suction Pressure		
Start of Cycle	43 lb.	43 lb.	Start of Cycle	11 lb.	11 lb.
End of Cycle	15 lb.	15 lb.	End of Cycle	0 lb.	1 lb.
Discharge Pressure			Discharge Pressure		
Start of Cycle	68 lb.	71 lb.	Start of Cycle	84 lb.	120 lb.
End of Cycle	87 lb.	145 lb.	End of Cycle	116 lb.	164 lb.

## IV. OPERATING DATA

<b>Refrigerator Model: UHT48</b>			<b>Freezer Model: ULT48</b>		
Refrigerant	R-134a	R-134a	Refrigerant	R-404A	R-404A
Ambient Temperature	70° F	100° F	Ambient Temperature	70° F	100° F
Suction Pressure			Suction Pressure		
Start of Cycle	37 psig	36 psig	Start of Cycle	37 psig	41 psig
End of Cycle	12 psig	15 psig	End of Cycle	14 psig	20 psig
Discharge Pressure			Discharge Pressure		
Start of Cycle	58 psig	130 psig	Start of Cycle	164 psig	250 psig
End of Cycle	102 psig	171 psig	End of Cycle	210 psig	310 psig

<b>Refrigerator Model: UHT60</b>			<b>Freezer Model: ULT60</b>		
Refrigerant	R-134a	R-134a	Refrigerant	R-404A	R-404A
Ambient Temperature	70° F	100° F	Ambient Temperature	70° F	100° F
Suction Pressure			Suction Pressure		
Start of Cycle	37 psig	38 psig	Start of Cycle	39 psig	40 psig
End of Cycle	11 psig	21 psig	End of Cycle	11 psig	17 psig
Discharge Pressure			Discharge Pressure		
Start of Cycle	57 psig	109 psig	Start of Cycle	96 psig	126 psig
End of Cycle	99 psig	168 psig	End of Cycle	214 psig	308 psig

<b>Prep Models: UPT276 &amp; UPT279</b>			<b>Prep Models: UPT488, UPT4812 &amp; UPT4818</b>		
Refrigerant	R-134a	R-134a	Refrigerant	R-134a	R-134a
Ambient Temperature	70° F	100° F	Ambient Temperature	70° F	100° F
Suction Pressure			Suction Pressure		
Start of Cycle	41 lb.	43 lb.	Start of Cycle	30 psig	32 psig
End of Cycle	21 lb.	20 lb.	End of Cycle	12 psig	21 psig
Discharge Pressure			Discharge Pressure		
Start of Cycle	61 lb.	90 lb.	Start of Cycle	89 psig	148 psig
End of Cycle	118 lb.	174 lb.	End of Cycle	105 psig	171 psig

<b>Prep Models: UPT6012, UPT6018 &amp; UPT6024</b>		
Refrigerant	R-134a	R-134a
Ambient Temperature	70° F	100° F
Suction Pressure		
Start of Cycle	29 psig	34 psig
End of Cycle	12 psig	20 psig
Discharge Pressure		
Start of Cycle	81 psig	128 psig
End of Cycle	99 psig	169 psig

## V. REMOVAL & REPLACEMENT OF PARTS

**WARNING: UNPLUG UNIT BEFORE SERVICING**

### 27" Models

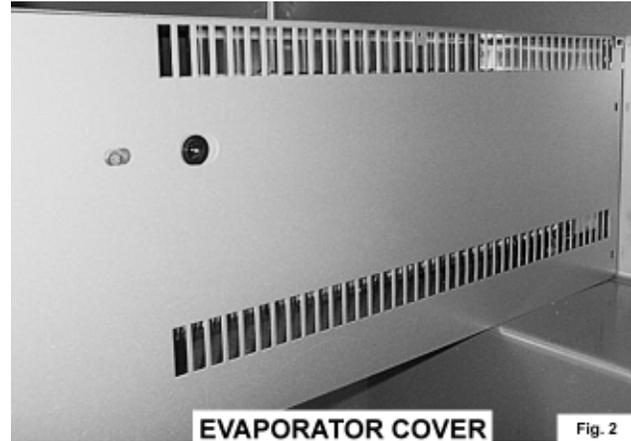
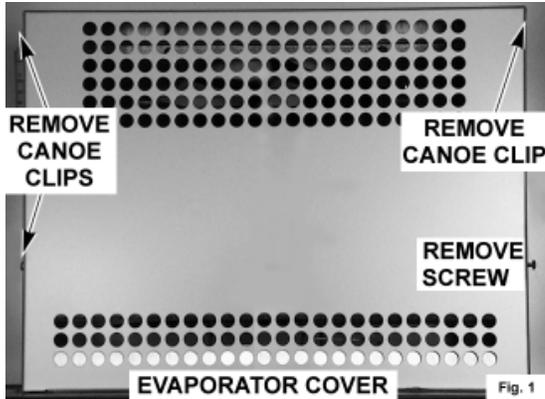
### 48" & 60" Models

#### V. a - EVAPORATOR COVERS:

Begin by removing the shelves from inside the cabinet. In addition on prep tables it will also be necessary to remove the pans and duct work. Next, remove the screw and lock washer and the canoe clips from the cover (see figure 1).

Begin by removing the shelves from inside the cabinet. In addition on prep tables it will also be necessary to remove the pans and duct work. Next, remove the screws from the evaporator cover (see figure 2).

**NOTE:** Lock washer must be installed.



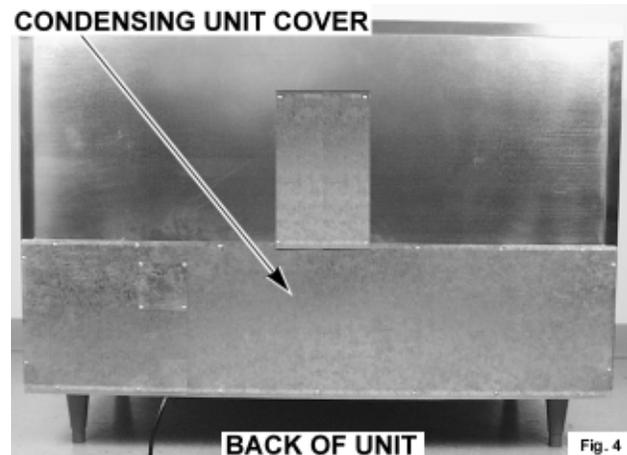
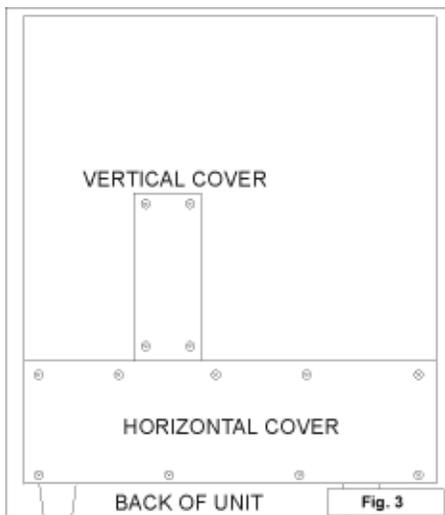
Reverse the procedure to install.

Reverse the procedure to install.

#### V. b - CONDENSING UNIT COVER:

Begin by accessing the back of the unit. Next remove the screws that secure the covers (see figure 3).

Begin by accessing the back of the unit. Next remove the screws that secure the cover (see figure 4).



Reverse the procedure to install.

Reverse the procedure to install.

## V. REMOVAL & REPLACEMENT OF PARTS (cont'd)

**WARNING: UNPLUG UNIT BEFORE SERVICING**

### 27" Models

### 48" & 60" Models

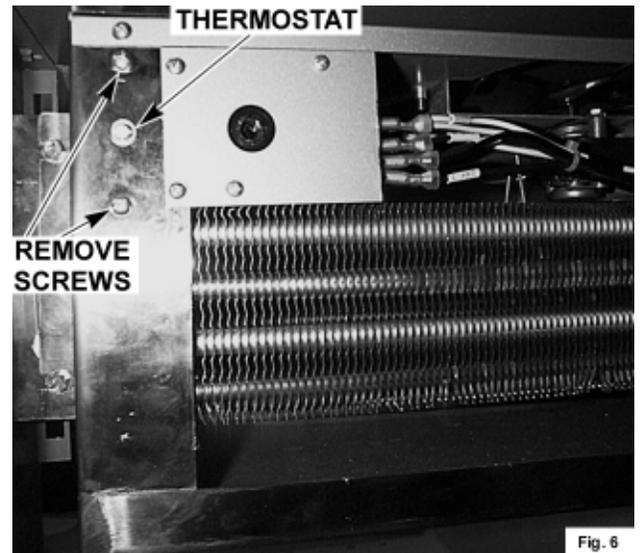
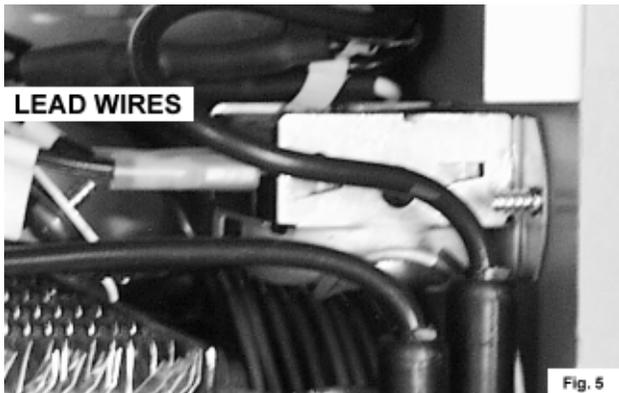
#### V. c - THERMOSTAT:

**NOTE:** The thermostat bulb for the refrigerator is embedded in the coil, top center location.

**NOTE:** The thermostat bulb for the refrigerator is above the evaporator coil, front area location, access from the left side of the evaporator coil, behind the door mullion.

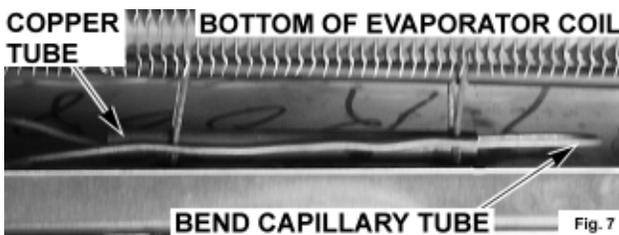
Begin by removing the evaporator cover as outlined in section "V a." Next, remove the screws that secure the thermostat and then disconnect the lead wires from the thermostat (see figure 5).

Begin by removing the evaporator cover as outlined in section "V a." Next, remove the screws that secure the thermostat and then remove the lead wire from the thermostat (see figure 6).



Remove the thermostat bulb from its location (see figure 7).

Remove the thermostat bulb from the mounting clips on the evaporator coil (see figure 8).



Reverse the procedure to install.

Reverse the procedure to install.

## V. REMOVAL & REPLACEMENT OF PARTS (cont'd)

### WARNING: UNPLUG UNIT BEFORE SERVICING

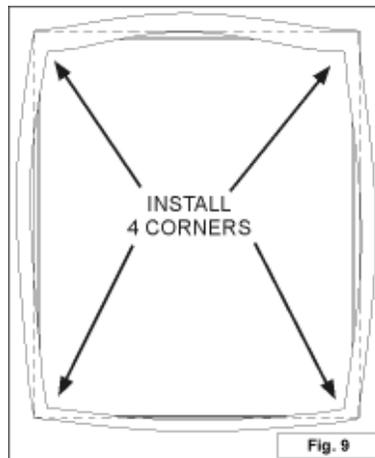
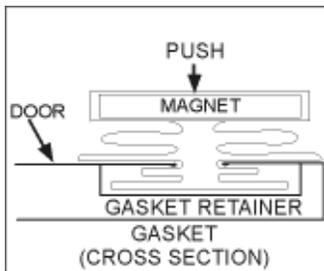


Fig. 9

#### V. d - DOOR GASKET:

Begin by removing the old gasket by pulling it out from the gasket retainer.

Begin installing the new gasket by installing the four corners first, pushing straight into the gasket until it is hooked behind the gasket retainer (see figure 9).

Next, starting at the center of one edge, push the door gasket straight in until it is hooked behind the gasket retainer (see figure 10).

Proceeding from this point out to the corners, continue to push the gasket straight into the gasket retainer.

Continue to the remaining edges and repeat the preceding operations until installation is completed.

Plug in the unit and put back into operation.

**CAUTION: Do Not Pull** on the gasket material. This will stretch it and, at room temperature, the material will NOT return to its original length.

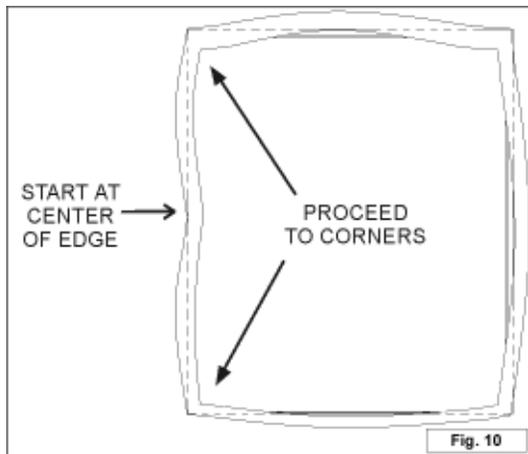


Fig. 10

#### V. e - DOOR:

Begin by removing the old door. Open it to the maximum position, placing support under the non-hinged end of the door so minimum movement occurs when bolts from the lower hinge are removed (see figure 11).

Remove the bolts from the lower hinge plate and proceed to remove the door from the top hinge bracket. The hinge plate pin and plastic bushing will remain in the top hinge plate.

To install, position the lower hinge plate into the position of being open 90 degrees to the cabinet. Place the top hinge plate pin in the hole in the top of the door and support the other end of the door for minimal movement.

Start the bolts in the lower hinge plate and tighten the bolts enough to hold the door in place. Remove the support from under the end of the door.

Adjust the door as outlined in "section VI. h."

#### V. f - DOOR HINGE MECHANISM:

Begin by removing the door as outlined above. Lay the door flat on a padded surface to prevent damage. Remove the screw that holds the lower hinge plate to the hinge mechanism stem.

**NOTE:** When installing, make sure the hinge mechanism stem is in a position where there is tension on the stem when turned in either direction.

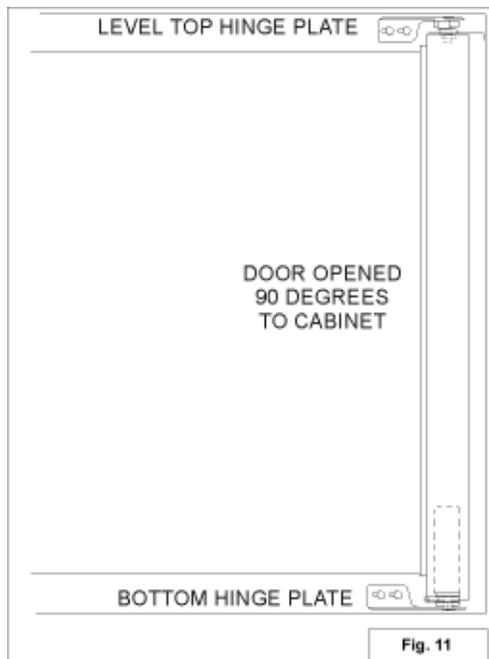


Fig. 11

## V. REMOVAL & REPLACEMENT OF PARTS (cont'd)

**WARNING: UNPLUG UNIT BEFORE SERVICING**

### V. f - DOOR HINGE MECHANISM (cont'd):

Remove the door spring and two plastic bushings (see figure 12).

Remove the screws from the hinge mechanism and remove it from the door (see figure 13).

Insert the replacement hinge mechanism into the door. Use the hinge plate to turn hinge mechanism past the point of being spring loaded. This will allow the stem to be inserted into the square hole in the hinge plate.

**A. For LH Hinge, Turn Clockwise.**

**B. For RH Hinge, Turn Counter-Clockwise.**

Install the plastic bushing, the spring and the second plastic bushing on the hinge mechanism stem. Attach the hinge plate to the hinge mechanism.

**NOTE: The lock washer is critical and must be installed.**

Install the door as outlined in section "V. e."

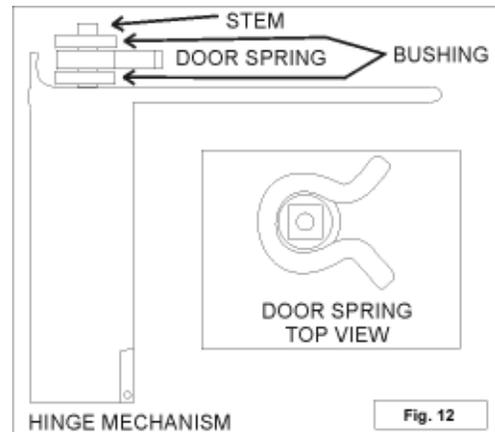


Fig. 12

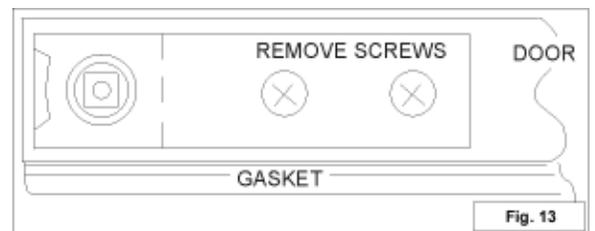
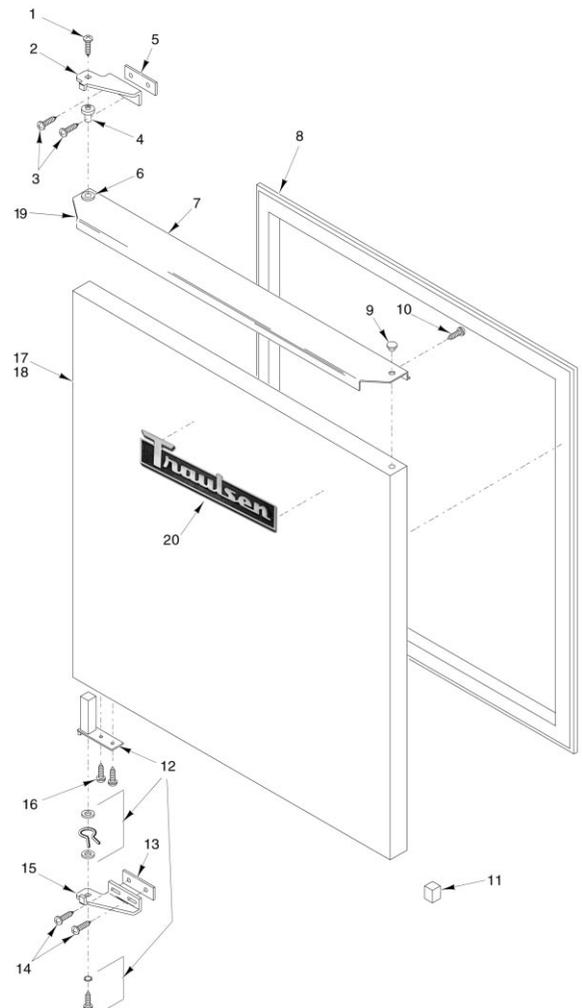


Fig. 13

#### ILLUS.

#### NO. NAME OF PART

1	Mach. Screw 10-32 x 3/8 Truss Hd
2	Hinge Plate (Lower RH, Upper LH)
3	Self-Tapping Screw 1/4-20 x 5/8 Hex Washer Hd., Type TT
4	Pin-Upper Hinge Pivot
5	Hinge Spacer
6	Bushing - Door Stop (Short)
7	Door Handle (Does Not Include Tape)
8	Door Gasket
9	Plug Button
10	Self-Tapping Screw 8-18 x 3/8 Phil Pan Hd., Type B
11	Square Plug
12	Hinge-Power Cartridge Assy. (Incls. Spring, Washers & Retaining Screw)
13	Spacer-Hinge
14	Self-Tapping Screw 1/4-20 x 5/8 Hex Washer Hd., Type TT
15	Plate-Hinge (Lower LH, Upper RH)
16	Self-Tapping Screw 10-24 x 1/2 Phil Truss Hd., Type D
17	Door Assembly. (Right Hand)
18	Door Assembly. (Left Hand)
19	Tape For Door Handle
20	Traulsen Nameplate with adhesive



## V. REMOVAL & REPLACEMENT OF PARTS (cont'd)

**WARNING: UNPLUG UNIT BEFORE SERVICING**

### 27" Models

### 48" & 60" Models

#### V. g - DEFROST TIMER:

Begin by removing the evaporator cover as outlined in section "V a." Next, remove the screws that secure the defrost timer to the evaporator housing. Disconnect the lead wires from the defrost timer (see figure 14).

Begin by removing the evaporator cover as outlined in section "V a." Next, remove the screws that secure the defrost timer to its mounting bracket. Disconnect the lead wires from the defrost timer (see figure 15).

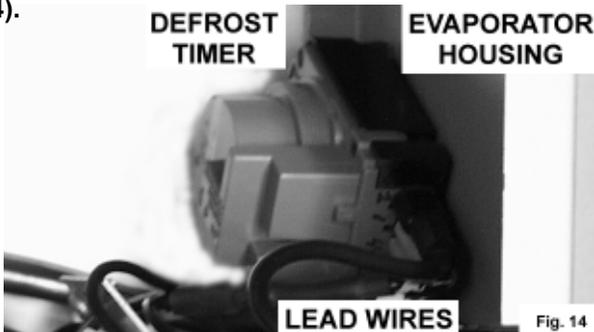


Fig. 14

Reverse the procedure to install. Adjust the defrost timer as outlined in "DEFROST TIMER SETTINGS" in the "Service Procedures & Adjustments" section.

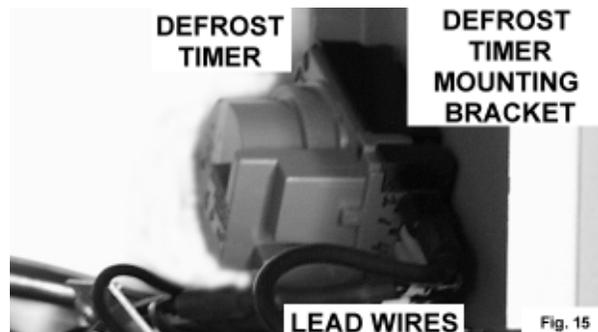


Fig. 15

Reverse the procedure to install. Adjust the defrost timer as outlined in "DEFROST TIMER SETTINGS" in the "Service Procedures & Adjustments" section.

#### V. h - HEATERS:

Begin by removing the evaporator and condensing unit covers as outlined in section "V a & b." Next, disconnect the lead wires to the defrost heater. There is a ground wire attached from the heater shield to the side panel of the evaporator housing (see figure 16).

**Defrost Heater - Freezer Models Only:** Begin by removing the evaporator cover as outlined in section "V a." Next, disconnect the lead wires to the defrost heater and drain pan heater. There is a ground wire attached from the heater shield to the side panel of the evaporator housing (see figure 17).

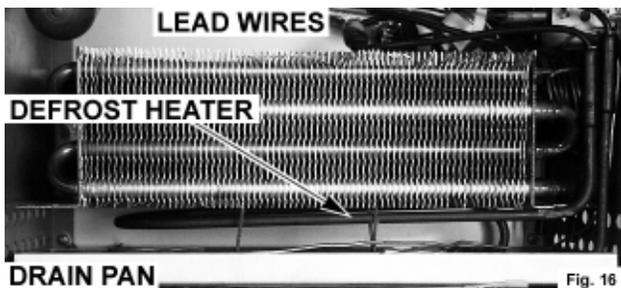


Fig. 16

Disconnect the drain tube from the drain pan at the back of the unit and pull the drain pan and heater from the unit.

Reverse the procedure to install.

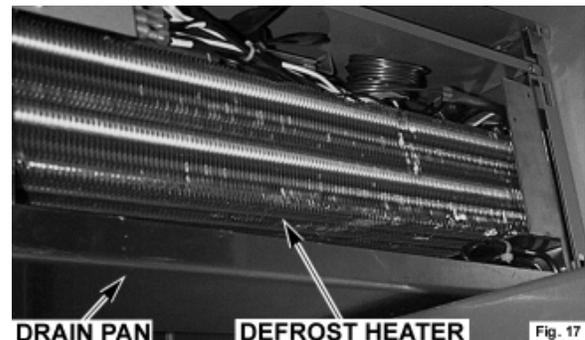


Fig. 17

Disconnect the drain tube from the drain pan at the back of the unit and remove evaporator defrost heater (see figure 18).

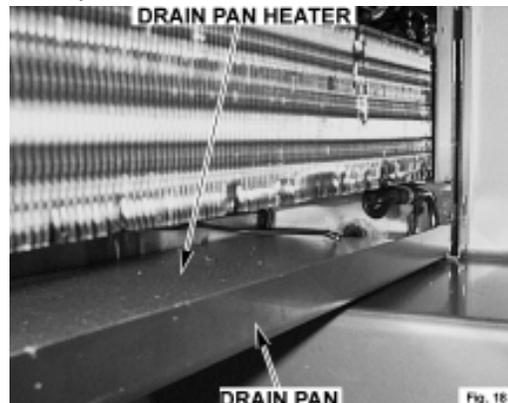


Fig. 18

Reverse the procedure to install.

## V. REMOVAL & REPLACEMENT OF PARTS (cont'd)

**WARNING: UNPLUG UNIT BEFORE SERVICING**

### V. i - DOOR FRAME HEATER:

Begin by opening the door past 90 degrees. Next remove the door frame heater covers from the door frame by gently prying out on the inside edge of the cover.

**NOTE:** Do not bend the covers. They will be difficult to install.

Pull the door frame heater wire loose from the door frame channel (see figure 19).

Disconnect the supply lead wires from each end of the heater, and the (green) ground lead wire from one end.

Connect lead wires to replacement heater and insert the new heater into the door frame channel.

**NOTE:** Do not kink heater wire at the corners of the frame.

**NOTE:** Check position of the heater cover in the top corners of the door frame.

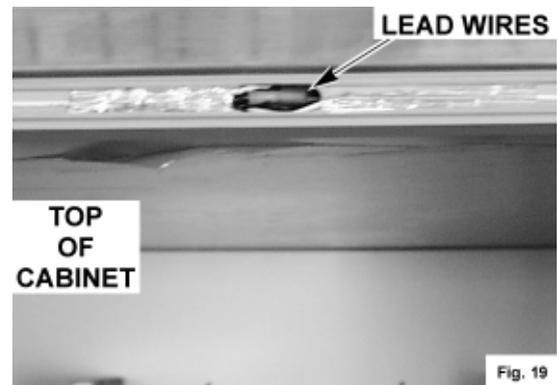
Install the horizontal heater covers first, then the vertical ones, using the following method.

a) Hook the inside edge of the heater cover over the lip of the door frame.

b) Use your fingers to push the outside edge over the outside lip of the heater channel in the door frame.

c) Repeat for each side.

Finish by checking for proper operation of both the door and door frame heater.



## V. REMOVAL & REPLACEMENT OF PARTS (cont'd)

**WARNING: UNPLUG UNIT BEFORE SERVICING**

### 27" Models

### 48" & 60" Models

#### V. j - CONDENSING UNIT COMPONENTS:

**NOTE:** Condensing components may vary on some systems, but the following procedures are general guidelines for replacement of condensing unit components. Don't damage any connected refrigeration or electrical lines and wires.

Begin by removing the condensing unit cover as outlined in section "V b." Next, remove the screws from the condensing unit mounting plate and slide the condensing unit from the unit for easier access (see figure 20).



Reverse the procedure to install.

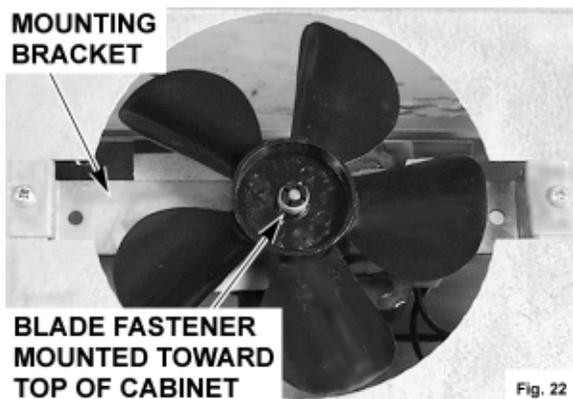
Begin by removing the condensing unit cover as outlined in section "V b." Next, remove the screws from the condensing unit mounting plate and slide the condensing unit from the unit for easier access (see figure 21).



Reverse the procedure to install.

#### V. k- EVAPORATOR FAN MOTOR:

Begin by removing the evaporator cover as outlined in section "V a." Next, pull the blade from the motor shaft (see figure 22).

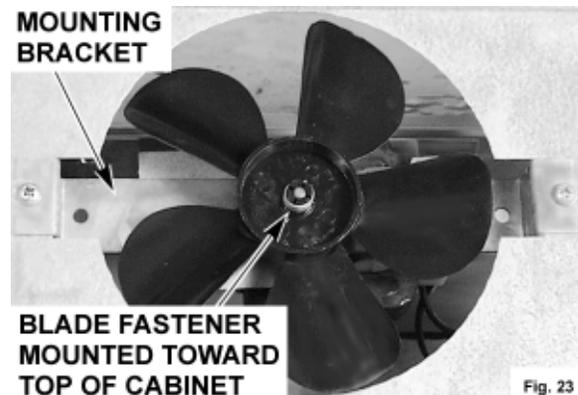


**NOTE:** To replace the fan blade only, reverse the procedure to install.

Next, remove the bolts that secure the evaporator fan motor mounting bracket. Then disconnect the lead wires to the motor and remove the motor from the mounting bracket.

Reverse the procedure to install.

Begin by removing the evaporator cover as outlined in section "V a." Next, remove the screws securing the fan shroud from the evaporator coil. Disconnect the lead wires to the motor and slide out the evaporator fan shroud. Pull the blade from the motor shaft (see figure 23).



**NOTE:** To replace the fan blade only, reverse the procedure to install.

Next, remove the bolts that secure the evaporator fan motor mounting bracket. Remove the motor from the mounting bracket.

Reverse the procedure to install.

## V. REMOVAL & REPLACEMENT OF PARTS (cont'd)

**WARNING: UNPLUG UNIT BEFORE SERVICING**

### 27" Models

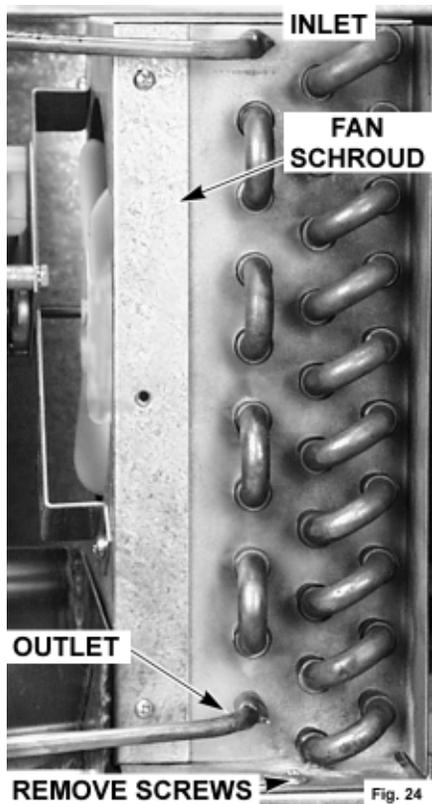
### 48" & 60" Models

#### V. I - CONDENSER COIL:

**WARNING:** THIS PROCEDURE REQUIRES THE USE OF REFRIGERANTS. BE CERTAIN THE WORK AREA IS WELL VENTILATED. SAFETY GOGGLES AND GLOVES SHALL BE WORN SINCE REFRIGERANTS MAY CAUSE BURNS TO THE SKIN.

Begin by recovering refrigerant from the system.  
NOTE: The use of reclaiming equipment is mandatory.

Next remove the condenser fan and shroud assembly from the coil. Disconnect inlet and outlet lines at the soldered connections nearest the condenser coil (see figure 24).



Remove the coil. Reverse the procedure to install coil, then proceed to the next step.

NOTE: It is recommended that the filter/drier be changed when this part is replaced.

Evacuate system. To finish, charge the system and put unit back into operation.

**WARNING:** THIS PROCEDURE REQUIRES THE USE OF REFRIGERANTS. BE CERTAIN THE WORK AREA IS WELL VENTILATED. SAFETY GOGGLES AND GLOVES SHALL BE WORN SINCE REFRIGERANTS MAY CAUSE BURNS TO THE SKIN.

Begin by recovering refrigerant from the system.  
NOTE: The use of reclaiming equipment is mandatory.

Next remove the condenser fan and shroud assembly from the coil. Disconnect inlet and outlet lines at the soldered connections nearest the condenser coil (see figure 25).



Remove the coil. Reverse the procedure to install coil, then proceed to the next step.

NOTE: It is recommended that the filter/drier be changed when this part is replaced.

Evacuate system. To finish, charge the system and put unit back into operation.

## V. REMOVAL & REPLACEMENT OF PARTS (cont'd)

**WARNING: UNPLUG UNIT BEFORE SERVICING**

### 27" Models

### 48" & 60" Models

#### V. m - COMPRESSOR:

**WARNING:** THIS PROCEDURE REQUIRES THE USE OF REFRIGERANTS. BE CERTAIN THE WORK AREA IS WELL VENTILATED. SAFETY GOGGLES AND GLOVES SHALL BE WORN SINCE REFRIGERANTS MAY CAUSE BURNS TO THE SKIN.

Begin by recovering refrigerant from the system. NOTE: The use of reclaiming equipment is mandatory.

Next disconnect the lead wires to the compressor junction box. Disconnect the suction and discharge lines from the compressor (see figure 26).



Remove the compressor. Install new compressor and connect wire leads and conduit at compressor junction box.

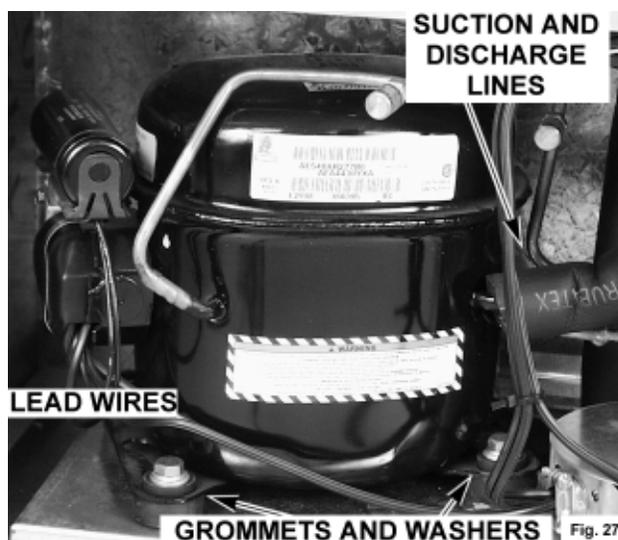
Remove the filter/drier and install a new filter/drier.

Evacuate system. To finish, charge the system and put unit back into operation.

**WARNING:** THIS PROCEDURE REQUIRES THE USE OF REFRIGERANTS. BE CERTAIN THE WORK AREA IS WELL VENTILATED. SAFETY GOGGLES AND GLOVES SHALL BE WORN SINCE REFRIGERANTS MAY CAUSE BURNS TO THE SKIN.

Begin by recovering refrigerant from the system. NOTE: The use of reclaiming equipment is mandatory.

Next disconnect the lead wires to the compressor junction box. Disconnect the suction and discharge lines from the compressor (see figure 27).



NOTE: Note the position of the compressors vibration reduction grommets and washers, for reassembly with new compressor.

Remove the compressor. Install new compressor and connect wire leads and conduit at compressor junction box.

Remove the filter/drier and install a new filter/drier.

Evacuate system. To finish, charge the system and put unit back into operation.

## V. REMOVAL & REPLACEMENT OF PARTS (cont'd)

**WARNING: UNPLUG UNIT BEFORE SERVICING**

**27" Models**

**48" & 60" Models**

### V. n- CONDENSER FAN ASSEMBLY:

Begin by removing the screws that secure the fan mounting bracket and remove it from the condensing unit shroud (see figure 28).



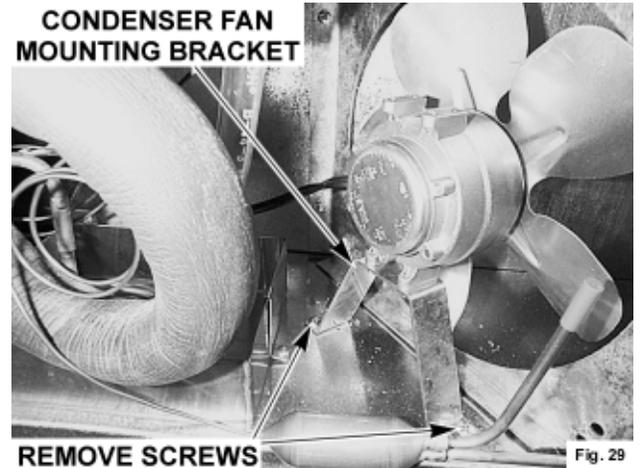
Pull the blade from the motor shaft.

**NOTE:** To replace the fan blade only, reverse the procedure to install.

Next, disconnect the lead wires from the motor and remove the fan motor from the mounting bracket.

Reverse the procedure to install.

Begin by disconnecting the lead wires from the motor (see figure 29).



Next, remove the screws that secure the fan mounting bracket. Pull the blade from the motor shaft then remove the fan motor from the mounting bracket.

Reverse the procedure to install.

## V. REMOVAL & REPLACEMENT OF PARTS (cont'd)

**WARNING: UNPLUG UNIT BEFORE SERVICING**

### 27" Models

### 48" & 60" Models

#### V. o- EVAPORATOR COIL:

**WARNING: THIS PROCEDURE REQUIRES THE USE OF REFRIGERANTS. BE CERTAIN THE WORK AREA IS WELL VENTILATED. SAFETY GOGGLES AND GLOVES SHALL BE WORN SINCE REFRIGERANTS MAY CAUSE BURNS TO THE SKIN.**

Begin by removing the evaporator and condensing unit covers as outlined in sections "V. a & b".

Next, recover the refrigerant from the system.

**NOTE:** The use of reclaiming equipment is mandatory.

Remove the evaporator fan assembly and shroud. Move the thermostat bulb out of the way (on freezer models only, it will also be necessary to remove the high limit thermostat and clips that support the defrost heater and locate the thermostat bulb).

Remove the screws from the mounting brackets that secure the coil (see figure 30).



Disconnect the refrigeration lines to the evaporator coil at the back of the unit. Pull the coil from the cabinet.

**NOTE:** You may have to remove the defrost heater with the evaporator coil.

Reverse the procedure to install.

Evacuate system. To finish, charge the system and put unit back into operation.

**NOTE:** It is recommended that the filter/drier be changed when this part is replaced.

**WARNING: THIS PROCEDURE REQUIRES THE USE OF REFRIGERANTS. BE CERTAIN THE WORK AREA IS WELL VENTILATED. SAFETY GOGGLES AND GLOVES SHALL BE WORN SINCE REFRIGERANTS MAY CAUSE BURNS TO THE SKIN.**

Begin by removing the evaporator and condensing unit covers as outlined in sections "V. a & b". Also remove the evaporator fan shroud as outlined in section "V. k".

Next, recover the refrigerant from the system.

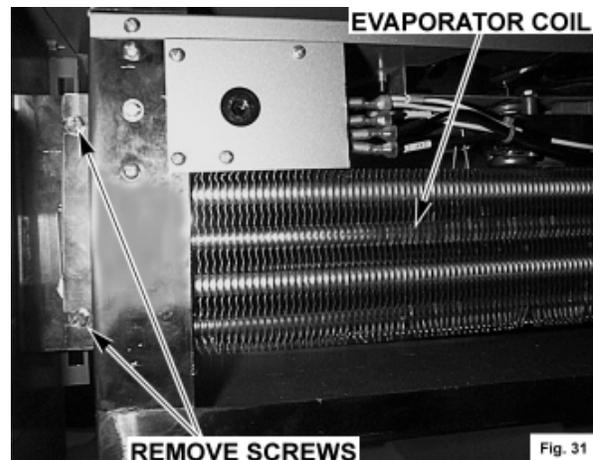
**NOTE:** The use of reclaiming equipment is mandatory.

Remove the thermostat as outlined in section "V. c" (on freezer models only, it will also be necessary to remove the high limit thermostat and screws that support the defrost heater ).

Disconnect the wiring harness from condensing unit to the evaporator.

Disconnect the refrigeration lines and wiring harness to the evaporator coil at the back of the unit.

Remove the screws from the mounting brackets that secure the coil (see figure 31). Pull the coil from the cabinet.



**NOTE:** You may have to remove the defrost heater with the evaporator coil.

Reverse the procedure to install. Evacuate system.

**NOTE:** it is recommended that the filter/drier be changed when this part is replaced.

To finish, charge the system and put unit back into operation.

## VI. SERVICE PROCEDURES & ADJUSTMENTS

**WARNING: CERTAIN PROCEDURES IN THIS SECTION REQUIRE ELECTRICAL TEST OR MEASUREMENTS WHILE POWER IS APPLIED TO THE MACHINE. EXERCISE EXTREME CAUTION AT ALL TIMES. IF TEST POINTS ARE NOT EASILY ACCESSIBLE, DISCONNECT POWER, ATTACH TEST EQUIPMENT AND REAPPLY POWER TO TEST.**

### VI. a - SYSTEM ACCESS:

All external indicators should be checked as part of system diagnosis before determining the refrigerant pressures. Improper access may expose the refrigerant to contaminants and non-condensables which will result in system failure.

### VI. b - BOLT-ON PIERCING VALVES:

**CAUTION:** Bolt-on piercing valves are used as a temporary diagnostic tool. They must be removed from the system before the system is put back into operation.

- 1) Place one piercing valve on the compressor process tube and one on the liquid line drier process tube. Follow the installation instructions provided by the manufacturer of the piercing valve.
- 2) Upon completion of diagnosis, pinch off the process tube just below the piercing valve.
- 3) Remove the valve and sweat the opening shut.
- 4) Install permanent access fittings in the suction and liquid lines as part of system repair.
- 5) When complete, follow the guidelines as outlined under "LEAK CHECK" and "EVACUATING SYSTEM."

### VI. c - SWEAT-ON PIERCING VALVES:

**NOTE:** Sweat-on piercing valves are used for system diagnostics, but may be left on after service is complete. They may be installed while the system is fully charged.

- 1) Place one piercing valve on the compressor process tube and one on the liquid line drier process tube. Follow the installation instructions provided by the manufacturer of the piercing valve.
- 2) When complete, follow the guidelines as outlined under "LEAK CHECK" and "EVACUATING SYSTEM."

### VI. d - REFRIGERANT LEAK CHECK:

**DISCONNECT THE ELECTRICAL POWER TO THE MACHINE AT THE MAIN CIRCUIT BOX. PLACE A TAG ON THE CIRCUIT BOX INDICATING THE CIRCUIT IS BEING SERVICED.**

**THIS PROCEDURE REQUIRES THE USE OF REFRIGERANTS. BE CERTAIN THE WORK AREA IS WELL VENTILATED. SAFETY GOGGLES AND GLOVES SHALL BE WORN SINCE REFRIGERANTS MAY CAUSE BURNS TO THE SKIN.**

**NOTE:** The use of R-22 in small quantities is recommended as a trace gas for leak detection.

### VI. d - REFRIGERANT LEAK CHECK (cont'd):

- 1) Access the refrigeration system (note: see section "VI. a - SYSTEM ACCESS").
- 2) Attach gauge manifold set to the system, low side to process tube on the compressor and the high side to the process tube on the drier.
- 3) Connect refrigerant bottle to the center of gauge manifold and open the valve on the bottle. Bleed charging hose at the manifold gauge to remove air from the system.
- 4) Open valve on low side of gauge manifold and charge system with one ounce of R-22.
- 5) Close low side of the gauge manifold and the valve on the refrigerant bottle.
- 6) Disconnect refrigerant bottle and connect nitrogen bottle.

**NOTE:** The use of a nitrogen regulator is required.

- 7) Set output valve on nitrogen valve to 120 psi.
- 8) Open nitrogen bottle valve and low side gauge manifold valve. Allow pressure to equalize.
- 9) Shut off both valves and disconnect nitrogen bottle.
- 10) Use a leak detector or a thick soapy solution and check for leaks at all tubing connections.

**A -** If leaks are found, repair leaks and repeat process.

**B -** If no leaks are found, evacuate system as outlined in section "VI. e - EVACUATING SYSTEM".

- 11) Charge the system and check for proper operation.

### VI. e - EVACUATING SYSTEM:

**Introduction -** Refrigeration reclaiming equipment is required. Our goal in system evacuation is to remove all the non-condensables possible. No evacuation method will remove 100% of the moisture and air from within the refrigeration circuit. Because of this, guidelines and methods must be developed and adhered to ensuring only harmless amounts of contaminants remain in the system.

#### GUIDELINES

**WARNING - DO NOT PRESSURIZE SYSTEM ABOVE 150 PSIG. PRIOR TO EVACUATION OR DURING LEAK TEST PROCEDURES.**

- Use only a two stage vacuum pump (2 CFM or greater) and electronic micron.
- Evacuate from high and low sides of the system.
- No chemical additive or alcohols are to be used to "dry up" a system.

## VI. SERVICE PROCEDURES & ADJUSTMENTS (cont'd)

**WARNING: CERTAIN PROCEDURES IN THIS SECTION REQUIRE ELECTRICAL TEST OR MEASUREMENTS WHILE POWER IS APPLIED TO THE MACHINE. EXERCISE EXTREME CAUTION AT ALL TIMES. IF TEST POINTS ARE NOT EASILY ACCESSIBLE, DISCONNECT POWER, ATTACH TEST EQUIPMENT AND REAPPLY POWER TO TEST.**

### VI. e - EVACUATING SYSTEM/GUIDELINES (cont'd):

- Blow down of system with DRY NITROGEN prior to evacuation is acceptable and many times desirable. See "System Clean-Up."
- Evacuate to 200 microns.

#### PROCEDURE

**WARNING: DISCONNECT THE ELECTRICAL POWER TO THE MACHINE AT THE MAIN CIRCUIT BOX. PLACE A TAG ON THE CIRCUIT BOX INDICATING THE CIRCUIT IS BEING SERVICED.**

**WARNING: THIS PROCEDURE REQUIRES THE USE OF REFRIGERANTS. BE CERTAIN THE WORK AREA IS WELL VENTILATED. SAFETY GOGGLES AND GLOVES SHALL BE WORN SINCE REFRIGERANTS MAY CAUSE BURNS TO THE SKIN.**

- 1) Access the refrigeration system as outlined under "SYSTEM ACCESS."
- 2) Connect low (blue) side of gauge manifold to schrader valve on compressor process line and high (red) side of gauge manifold to schrader valve on filter/drier process line.
- 3) Connect center line of gauge manifold to vacuum pump.
- 4) Turn vacuum pump on and open both sides of gauge manifold.
- 5) Pull a vacuum to 200 microns.
- 6) Break the vacuum with 3 psig of dry nitrogen.
- 7) Repeat steps 5 and 6.
- 8) Pull vacuum to 200 microns.
- 9) Charge system and check for proper operation.

### VI. f - CHARGING SYSTEM:

**WARNING: DISCONNECT THE ELECTRICAL POWER TO THE MACHINE AT THE MAIN CIRCUIT BOX. PLACE A TAG ON THE CIRCUIT BOX INDICATING THE CIRCUIT IS BEING SERVICED.**

**WARNING: THIS PROCEDURE REQUIRES THE USE OF REFRIGERANTS. BE CERTAIN THE WORK AREA IS WELL VENTILATED. SAFETY GOGGLES AND GLOVES SHALL BE WORN SINCE REFRIGERANTS MAY CAUSE BURNS TO THE SKIN.**

- 1) Access the refrigeration system.
- 2) Attach gauge manifold set to the system, low side to process tube on the compressor and the high side to the process tube on the drier.

**NOTE: See "SYSTEM ACCESS."**

### VI. f - CHARGING SYSTEM (cont'd):

- 3) Be sure system is properly leak checked and evacuated before charging as outlined under "LEAK CHECK" and "EVACUATING SYSTEM."
- 4) Make certain both valves are closed on the gauge manifold. Open the valve on the bottle. Bleed charging hose at the manifold gauge to remove the air.

**NOTE: Initially charge system through high side to prevent liquid refrigerant from reaching compressor.**

- 5) Open the high side gauge valve (red). Allow refrigerant to flow into the system until the nameplate charge is reached or until the high side will not accept any more refrigerant. At this point, shut the gauge and bottle valves.
- 6) Reconnect power to the unit and check for proper operation and high pressure leaks.
- 7) Add the remaining amount of refrigeration charge through the low side with the compressor running.
- 8) Check for proper operation and leaks.
- 9) Disconnect power to the unit and replace any covers removed.

### VI. g - SYSTEM CLEAN UP/INTRODUCTION:

When a compressor burn-out or moisture infiltration is encountered, the service person must make the determination as to the degree of system contamination. Normally a compressor burn-out will fit into one of three categories:

- **CONTAINED** - compressor oil not acidic, no oil discoloration.
- **CONTAMINATED COMPRESSOR** - oil acidic, discoloration of oil, contamination limited to compressor.
- **MASSIVE CONTAMINATION** - contaminated oil and/or refrigerant pumped through system.

#### CONTAINED

- 1) Replacement of liquid line drier.
- 2) Install suction filter drier for clean up and then remove it when service is complete. Usually within 48 hours.
- 3) Replacement of compressor.
- 4) Evacuation (to 200 microns).
- 5) Charge by weight.

#### CONTAMINATED COMPRESSOR

The "contaminated compressor" requires the same procedure as the "contained" burn-out. Plus, the system must be flushed with nitrogen after the compressor and drier has been removed.

## VI. SERVICE PROCEDURES & ADJUSTMENTS (cont'd)

**WARNING: CERTAIN PROCEDURES IN THIS SECTION REQUIRE ELECTRICAL TEST OR MEASUREMENTS WHILE POWER IS APPLIED TO THE MACHINE. EXERCISE EXTREME CAUTION AT ALL TIMES. IF TEST POINTS ARE NOT EASILY ACCESSIBLE, DISCONNECT POWER, ATTACH TEST EQUIPMENT AND REAPPLY POWER TO TEST.**

### VI. g - SYSTEM CLEAN UP/INTRODUCTION (cont'd):

#### MASSIVE CONTAMINATION

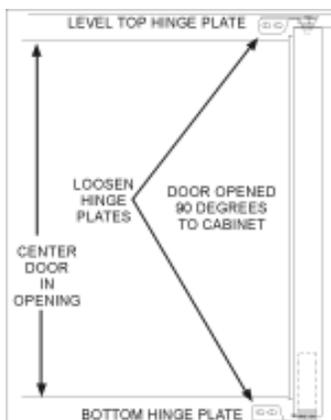
The replacement compressor **MUST NOT** be installed until after system clean-up procedures have been completed.

- 1) Remove the burned-out compressor as outlined under "COMPRESSOR" in "Section V. m".
- 2) Remove the capillary tube and drier.
- 3) Purge nitrogen through the high and low sides of system until moisture and contaminated oil has been removed from the remaining components of the system.
- 4) Reassemble refrigeration system and add an CW052 style liquid drier and a suction line drier.
- 5) Purge nitrogen through the high and low sides of system for 5 minutes.
- 6) Evacuate refrigeration as outlined under "EVACUATING SYSTEM" for 30 minutes. Repeat nitrogen purge and evacuation two more times.
- 7) Charge system as outlined under "CHARGING SYSTEM". Allow for the increased liquid capacity of the liquid line drier.
- 8) Reconnect power and check for proper operation.
- 9) Disconnect power and install any panels removed.
- 10) Return between 24 and 48 hours to recover gas, replace liquid line drier with a CW032 style drier. Remove the suction drier, but do not replace.
- 11) Evacuate and charge system as outlined under "EVACUATING SYSTEM" and "CHARGING SYSTEM".

### VI. h - DOOR ADJUSTMENT:

**WARNING: UNPLUG UNIT BEFORE SERVICING.**

- 1) Open the door and loosen the hinge plate screws enough to move the hinges if desired, but the door is still held in place.
- 2) Center the door in the opening.
- 3) Level the top hinge plate and tighten the screws.
- 4) Level the lower hinge plate and tighten the screws.



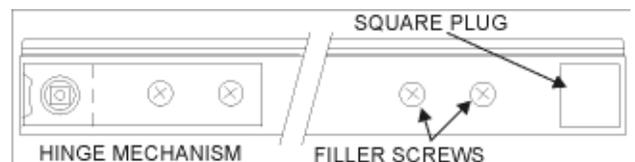
### VI. i - REHINGING DOOR:

**WARNING: UNPLUG UNIT BEFORE SERVICING.**

- 1) Remove the door as outlined in "Section V. e."
- 2) Remove the hinge plate pin and plastic bushing from the top hinge plate.
- 3) Remove the top hinge plate from the cabinet and set aside for use as the lower hinge plate.
- 4) Remove the plug button from the top of the door.
- 5) Lay the door face down on a padded flat surface.
- 6) Remove the screw that secures the bottom hinge plate to the hinge mechanism and set aside for use as the top hinge plate.
- 7) Remove the hinge mechanism, filler screws and square plug from the bottom of the door.



- 8) Remove enough foam from the new location of the hinge mechanism to allow for insertion of the hinge mechanism without compressing the foam.
- 9) Install the hinge mechanism into the bottom of the door where the square plug was removed and install the plug and filler screws in the remaining locations.



- 10) Use the hinge plate to turn the hinge mechanism past the point of being spring loaded. This will allow the stem to be inserted into the square hole in the hinge plate. For LH hinge, turn clockwise or for RH hinge, turn counterclockwise.
- 11) Install the plastic bushing, the spring and the second plastic bushing on the hinge mechanism stem. Attach the hinge plate to the hinge mechanism. **NOTE: The lockwasher is critical and must be installed.**
- 12) Remove the plastic buttons (turn counterclockwise, do not pull) from the hinge plate mounting positions on the opposite side of the cabinet.
- 13) Install the top hinge plate to the cabinet.
- 14) Install the plug button and hinge plate pin in the top of the door.
- 15) Install the door as outlined under "DOOR" in "REMOVAL AND REPLACEMENT OF PARTS."
- 16) Adjust the door as outlined under "DOOR ADJUSTMENT."

## VI. SERVICE PROCEDURES & ADJUSTMENTS (cont'd)

**WARNING: CERTAIN PROCEDURES IN THIS SECTION REQUIRE ELECTRICAL TEST OR MEASUREMENTS WHILE POWER IS APPLIED TO THE MACHINE. EXERCISE EXTREME CAUTION AT ALL TIMES. IF TEST POINTS ARE NOT EASILY ACCESSIBLE, DISCONNECT POWER, ATTACH TEST EQUIPMENT AND REAPPLY POWER TO TEST.**

### VI. i - REHINGING DOOR (cont'd):

- 13) Install the top hinge plate to the cabinet.
- 14) Install the plug button and hinge plate pin in the top of the door.
- 15) Install the door as outlined in "Section V. e".
- 16) Adjust the door as outlined under "DOOR ADJUSTMENT".

### VI. j - DEFROST TIMER SETTING:

**WARNING: UNPLUG UNIT BEFORE SERVICING**

The timer is preset with four, 23 to 25 minute defrost cycles per day. You can only set when the defrost cycle will start.

- 1) Use a screwdriver to turn cam clockwise until you hear the contacts close. This position is when the defrost cycle begins.

**NOTE:** The screwdriver slot is designed to be turned clockwise only.

- 2) Continue to turn the cam until you hear the contacts open. The defrost cycle has ended and it will be six hours until the next occurrence.
- 3) You can continue turning the cam and position it approximately within the six hour period.

### VI. k - DOOR PERIMETER HEATER TEST:

**WARNING: UNPLUG UNIT BEFORE SERVICING**

- 1) Access the heater wire around the door frame.
- 2) Plug the unit in and verify 120 volt supply to the heater.
- 3) The reading should be .25 amp.

### VI. l - DEFROST HEATER TEST:

**WARNING: UNPLUG UNIT BEFORE SERVICING**

- 1) Access the heater lead wire to the defrost heater.
- 2) Plug the unit in, turn the defrost timer to start a defrost cycle.
- 3) Verify 120 volt supply to the heater.
- 4) The reading should be 3.7 amp (27" models) or 2.8 amp (48" & 60" models).
- 5) If you want to perform a continuity check:
  - a. Unplug the unit.
  - b. Disconnect the lead wires to the heater.
  - c. Use an ohmmeter to check for 32.4 ohms (27" models) or 41 ohms (48" & 60" models).

### VI. m - DRAIN PAN HEATER TEST (n/a on 27" models):

**WARNING: UNPLUG UNIT BEFORE SERVICING**

- 1) Access the heater lead wire to the drain pan heater.
- 2) Plug the unit in, turn the defrost timer to start a defrost cycle.
- 3) Verify 120 volt supply to the heater.
- 4) The reading should be 1.04 amp.
- 5) If you want to perform a continuity check:
  - a. Unplug the unit.
  - b. Disconnect the lead wires to the heater.
  - c. Use an ohmmeter to check for 110.0 ohms.

## VII. ELECTRICAL OPERATION

### VII. a- COMPONENT FUNCTION:

Compressor:	Pumps refrigerant through refrigeration lines and components.
Condenser Fan:	Draws air across condenser coil to aid in removing heat from the refrigerant and moves air across compressor to aid in cooling the compressor.
Start Capacitor:	Wired in series with the start windings to help start compressor motor.
Thermal Overload:	Removes power from the compressor if the internal temperature of the compressor becomes too high (auto reset).
Relay:	Senses current of run winding of compressor motor. Normally open contacts close when the run winding draws a high amperage at start and brings the start capacitor and start windings into the circuit. As the motor reaches operating speed (less amperage through run winding), the normally open contacts open and removes the start capacitor and start windings from the circuit.
Evaporator Fan:	Draws air from the cabinet and moves the air through the evaporator coil.
Defrost Heater:	Defrosts evaporator coil and prevents water droplets from evaporator coil from freezing before they can drain into the condensate pan. Operates only during defrost cycle.
High Limit Thermostat:	Monitors temperature at the evaporator. Opens circuit to defrost heater if coil temperature reaches 40°F (± 5°). Closes at 20°F (± 5°).
Defrost Time Clock:	Controls defrost cycles on freezers. Four, 23 to 25 minute defrost per day. Start time can be set, but number of defrosts is permanent.
Door Perimeter Heater:	Prevents condensate from forming on door frame.
Thermostat:	Monitors cabinet air temperature. Opens when cabinet temperature reaches set temperature.
Drain Pan Heater:	48" and 60" models only. Defrosts drain pan to prevent water droplets from evaporator coil from freezing before they can drain out. Operates only during defrost cycle.
Hi-Limit Press. Control:	48" and 60" models only. Monitors compressor's head pressure. Removes power from compressor and condenser fan motor, if head pressure becomes too high (manual reset for high pressure trip).

## VII. ELECTRICAL OPERATION (cont'd)

### VII. b - SEQUENCE OF OPERATION:

#### REFRIGERATION

##### 1 - Conditions:

- a. Unit connected to correct voltage.
- b. Condensing unit controlled by thermostat.
- c. Thermostat set to desired temperature.
- d. Evaporator fan powered.
- e. Cabinet temperature below set point.
- f. High limit thermostat closed (freezer).
- g. Power to thermostat contacts through defrost timer 1/4 (freezer).
- h. Door perimeter heater energized (freezer).
- i. Defrost timer motor energized (freezer).

##### 2- Temperature Rises Above Set Temperature:

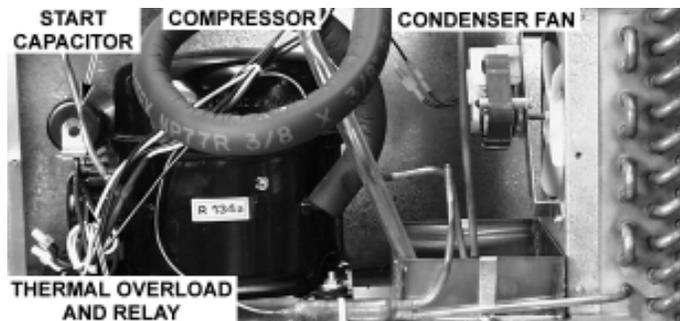
- a. Thermostat contact close, powering compressor.

##### 3- Set Temperature Is Met:

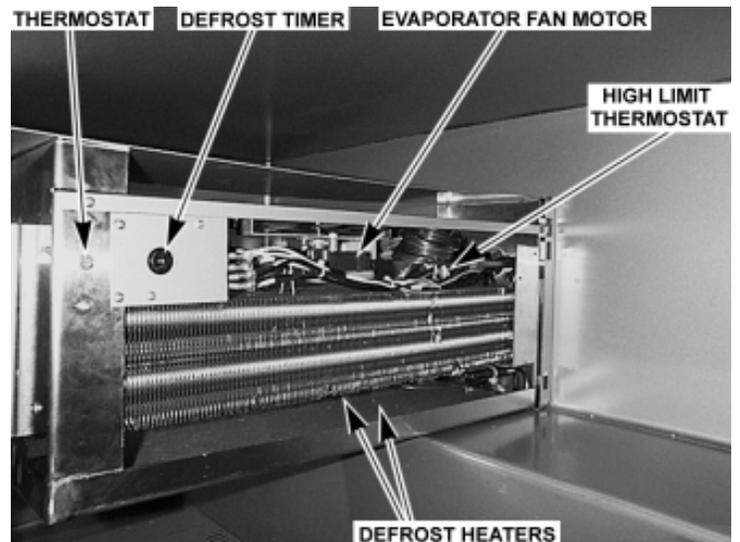
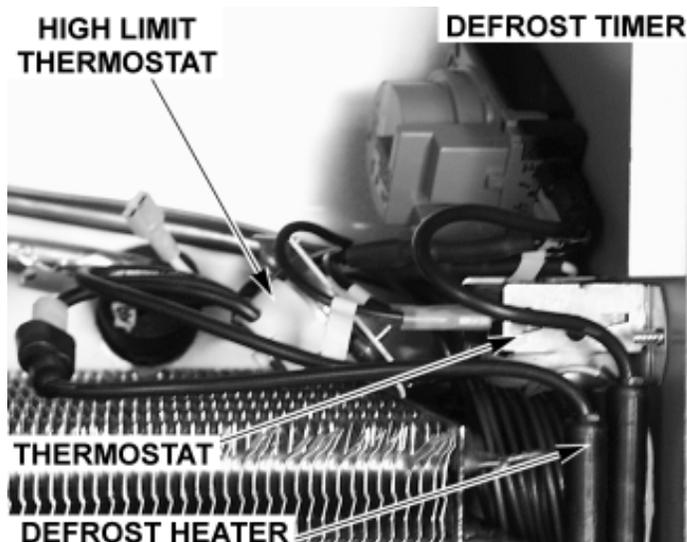
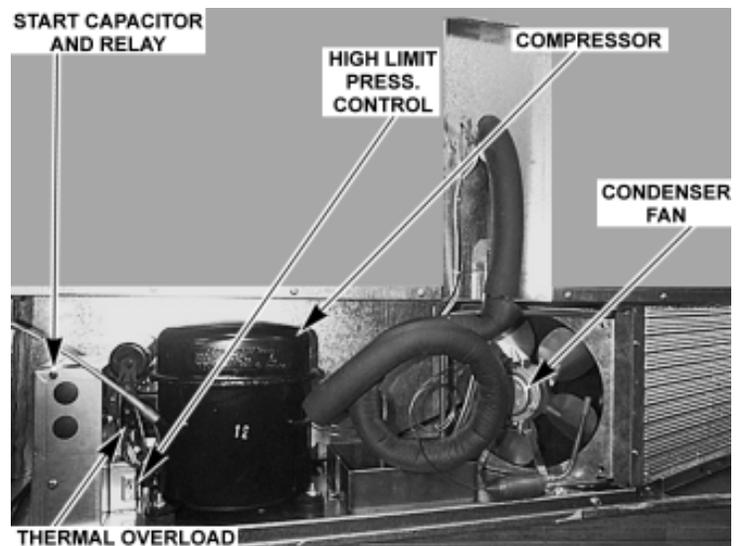
- a. Unit returns to conditions in step 1.

### VII. c - COMPONENT LOCATION:

#### 27" Models



#### 48" & 60" Models



### VII. b - SEQUENCE OF OPERATION (cont'd):

#### DEFROST MODE (freezer)

##### 1 - Unit Operating In Refrigeration Mode.

##### 2 - Defrost Initiated By Defrost Timer.

- a. Defrost timer contacts 1/4 open.
  - 1) Power removed from evaporator fan.
  - 2) Power removed from thermostat contacts.
- b. Defrost timer contacts 1/2 close.
  - 1) Power to defrost heater.

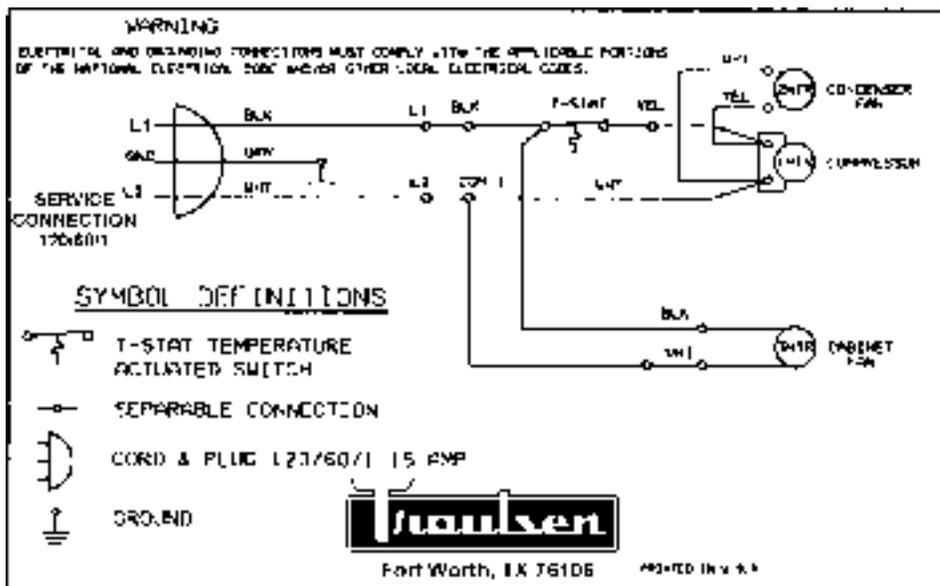
##### 3 - Defrost Time Expires.

- a. Defrost timer contacts 1/2 open.
  - 1) Power removed from defrost heater.
- b. Defrost timer contacts 1/4 close.
  - 1) Power to evaporator fan.
  - 2) Power to thermostat.

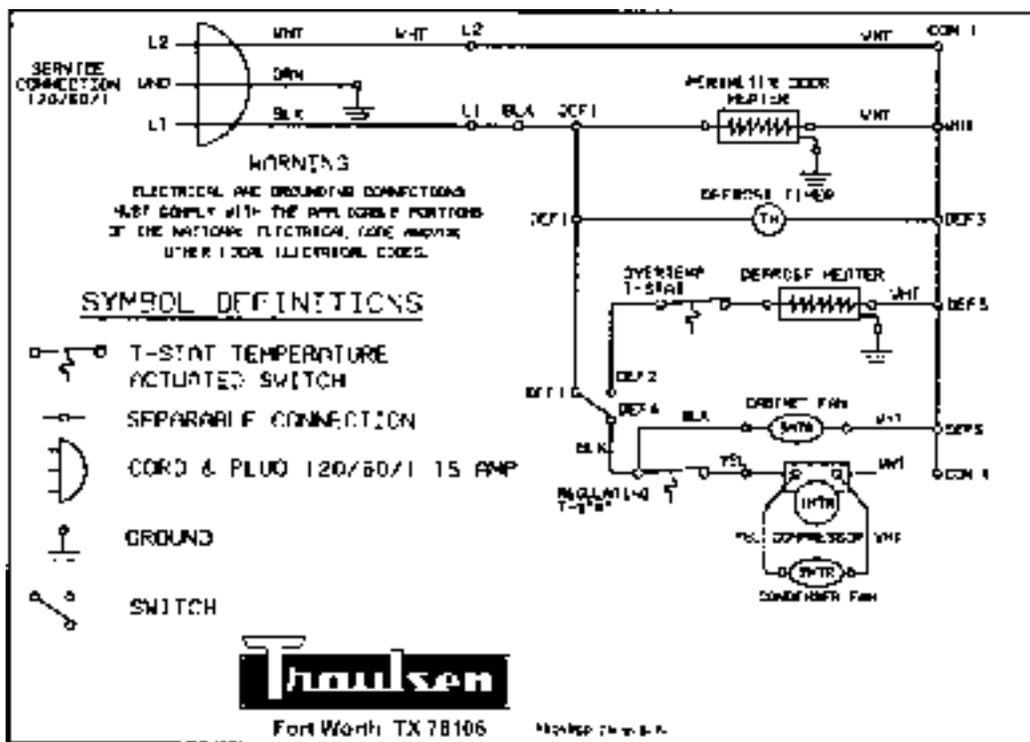
##### 4 - Unit Returns To Normal Operation Until The Next Defrost Cycle.

## VIII. WIRING DIAGRAMS - 27" MODELS

Electrical Diagram - Refrigerator Cabinet With Digital Thermometer Option  
Models: UHT27, UPT276 & UPT276, 120VAC/60HZ/1PH



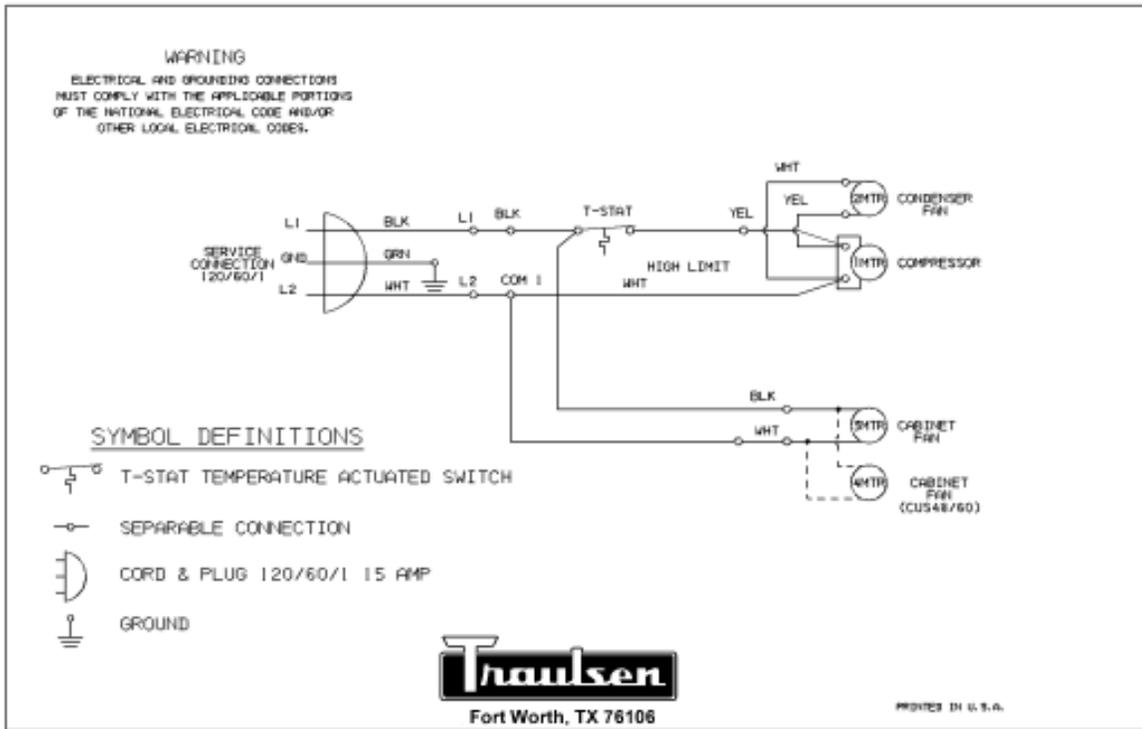
Electrical Diagram - Freezer Cabinet With Digital Thermometer Option  
Model: ULT27, 120VAC/60HZ/1PH



# VIII. WIRING DIAGRAMS - 48" & 60" MODELS

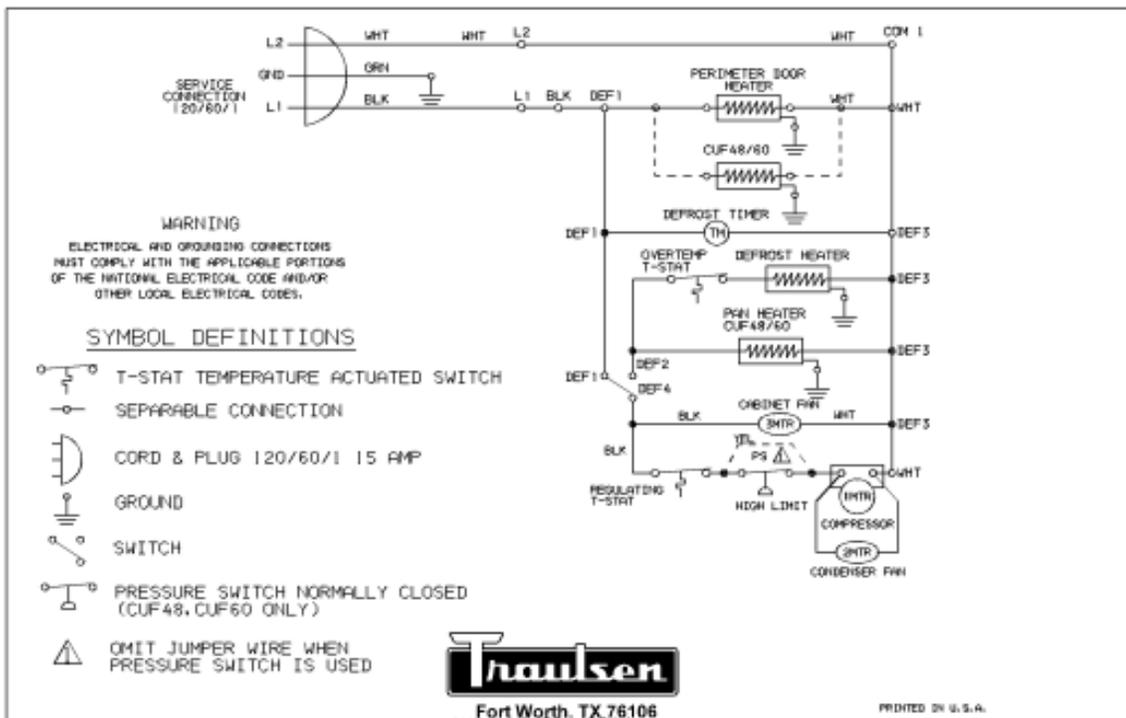
## Electrical Diagram - Refrigerator Cabinets

Models: UHT48, UHT60, UPT488, UPT4812, UPT4818, UPT6012, UPT6018 & UPT6024, 120VAC/60HZ/1PH



## Electrical Diagram - Freezer Cabinets

Model: ULT48 & ULT60, 120VAC/60HZ/1PH



## VI. TROUBLESHOOTING

**WARNING:** CERTAIN PROCEDURES IN THIS SECTION REQUIRE ELECTRICAL AND REFRIGERATION SYSTEM TEST OR MEASUREMENTS WHILE POWER IS APPLIED TO THE MACHINE. EXERCISE EXTREME CAUTION AT ALL TIMES. IF TEST POINTS ARE NOT EASILY ACCESSIBLE, DISCONNECT POWER, ATTACH TEST EQUIPMENT AND REAPPLY POWER TO TEST.

Compressor will not run, no current draw.	<ol style="list-style-type: none"> <li>1. Compressor circuit breaker open.</li> <li>2. Cabinet temperature satisfied.</li> <li>3. Wired wrong or faulty connection.</li> <li>4. Start component malfunction.</li> <li>5. Compressor motor windings open.</li> <li>6. Thermostat malfunction.</li> <li>7. High pressure control tripped.</li> </ol>
Compressor will not run, current draw and trips overload.	<ol style="list-style-type: none"> <li>1. Low voltage.</li> <li>2. Start component malfunction.</li> <li>3. Compressor windings shorted.</li> <li>4. Locked rotor.</li> <li>5. Excessive head pressure.</li> </ol>
Defrost time too long.	<ol style="list-style-type: none"> <li>1. Defrost timer malfunction.</li> </ol>
Compressor short cycles on overload.	<ol style="list-style-type: none"> <li>1. Low voltage.</li> <li>2. Improper air flow over condenser.</li> <li>3. Low refrigerant charge.</li> <li>4. Compressor electrical component malfunction.</li> <li>5. High head pressure.</li> </ol>
Compressor short cycles on thermostat.	<ol style="list-style-type: none"> <li>1. Improper air flow over evaporator coil.</li> <li>2. Low ambient conditions.</li> <li>3. Thermostat bulb improperly located.</li> <li>4. Thermostat malfunction.</li> </ol>
Continuous unit operation.	<ol style="list-style-type: none"> <li>1. Loss of refrigerant.</li> <li>2. Excessive door openings.</li> <li>3. Thermostat malfunction.</li> <li>4. Compressor inoperative.</li> </ol>
Compressor run time lengthy.	<ol style="list-style-type: none"> <li>1. Partial loss of refrigerant.</li> <li>2. High ambient conditions.</li> <li>3. Improper air flow over condenser coil.</li> <li>4. Excessive product load.</li> <li>5. Excessive door openings.</li> <li>6. Door gasket inoperative.</li> <li>7. Contaminates in refrigeration system.</li> <li>8. Compressor malfunction.</li> </ol>
Low suction pressure.	<ol style="list-style-type: none"> <li>1. Restriction in drier.</li> <li>2. Loss of refrigerant.</li> <li>3. Poor air flow.</li> </ol>
High head pressure.	<ol style="list-style-type: none"> <li>1. Improper air flow across condenser.</li> <li>2. Extreme ambient conditions.</li> <li>3. Overcharge of refrigerant.</li> <li>4. Air in system.</li> </ol>
Will not defrost.	<ol style="list-style-type: none"> <li>1. Defrost heater malfunction.</li> <li>2. High limit thermostat open.</li> <li>3. Defrost timer inoperative.</li> <li>4. Wired wrong or faulty connection.</li> </ol>
Coil icing.	<ol style="list-style-type: none"> <li>1. Gasket leaking.</li> <li>2. Drain tube plugged.</li> <li>3. Non-frozen product in freezer.</li> </ol>



Quality Refrigeration

**Traulsen**  
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 Website: www.traulsen.com

**HOURS OF OPERATION:**  
 Monday thru Friday 7:30 am - 4:30 pm CST



Quality Refrigeration

# INTELA-TRAUL® MASTER SERVICE MANUAL



---

***For All Full Size Undercounter, G-Series and  
R&A Series Refrigerator, Freezer, Dual-Temp  
and Hot Food Unit Controllers***

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## **Traulsen**

4401 Blue Mound Road - Fort Worth, Texas 76106

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Fax-Service (817) 740-6757

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# I. GENERAL INFORMATION

## I. a - HOW TO USE THIS MANUAL:

Traulsen provides this manual as an aid to the service technician in installation, operation, and maintenance of INTELA-TRAUL® Controllers. When used properly, this service manual can help the service technician maintain, troubleshoot and diagnose most of the problems and malfunctions that may occur with the Controllers.

This manual covers the four different types of Controllers (**Full Size Undercounter, G-Series, R&A Series Refrigerator & Freezer, and R&A Series Hot Food**). These vary slightly from one another, all exceptions are noted, and where appropriate separate sections are provided.

While we believe that most aspects of the controllers are covered in this manual, should you encounter a condition not addressed, or require a wiring diagram please contact:

**Traulsen**  
**4401 Blue Mound Road Fort Worth, TX 76106**  
**Attn: Service Department**  
**Phone: (800) 825-8220 or (817) 625-9671**  
**Fax: (817) 740-6757**

All service communication must include:

- Model Number & Serial Number Of Unit
- A detailed explanation of the problem

## I. b - ABOUT INTELA-TRAUL:

The Traulsen INTELA-TRAUL and G-Series microprocessor controls are microprocessor based systems which replace several electromechanical components typically built into refrigeration products, such as: time clocks, thermometers, defrost limit switches and temperature controls, all combined into one solid state modular unit.

These microprocessor controls both monitor a cabinet air sensor and a coil sensor. The INTELA-TRAUL on the R & A Series also includes a discharge line sensor and a relative humidity sensor (H1 versions only). In conjunction with the programmed parameters of the control, and the information received, it cycles the refrigeration system ON and OFF at set temperatures, initiates and/or terminates defrost cycles, and initiates one of several alarm features if a problem is sensed (R & A Series only). R & A Series controls also allow the operator to cycle the door perimeter heaters ON/OFF as needed.

## I. c - OPERATING THE CONTROLLER:

When operating the controller it is important to note that you only have approximately 20-30 seconds between button pushes. If you take longer than 30 seconds, the controller will revert back to displaying the cabinet temperature. If you enter the wrong security code, the controller will revert back to displaying the cabinet temperature. You can exit the parameters at any time by waiting 20-30 seconds for the control to return to normal operation.

## II. BASIC SERVICE PROCEDURES

### II. a - ADJUSTING THE TEMPERATURE:

The Display  
Will Read

- Step 1: Press . Display will read "CUS." 
- Step 2: Press . Display will read "000" with the left digit flashing. 
- Step 3: Press . Display will read "000" with the center digit flashing. 
- Step 4: Press  until the center digit changes to an "A". 
- Step 5: Press . Display will read "0A0" with the right digit flashing. 
- Step 6: Press  until the right digit changes to a "1". 
- Step 7: Press . Display will read "SPH". 
- Step 8: Press  again.
- Step 9: Press  or  to adjust temperature to desired setting.

(NOTE: SPH should be set at 38 to 40°F for refrigerators and 0°F for freezers)

- Step 10: When display reads the desired temperature press . 
- Step 11: Press  until display reads "SPL". 
- Step 12: Press .
- Step 13: Press  or  to adjust temperature to desired setting. 

(NOTE: SPL should be set at 34°F for refrigerators and -4°F for freezers)

- Step 14: Press .
- Step 15: Press  to exit (R & A Series only). On G-Series models the controller will automatically revert back to normal temperature display operation after a delay of approximately 20-30 seconds.

## II. BASIC SERVICE PROCEDURES

### II. b - STARTING A MANUAL DEFROST CYCLE (R & A Series):

The Display  
Will Read

- Step 1: Press . Display will read "CUS."
- Step 2: Press . Display will read "000" with the left digit flashing.
- Step 3: Press . Display will read "000" with the center digit flashing.
- Step 4: Press  until the center digit changes to an "A".
- Step 5: Press . Display will read "0A0" with the right digit flashing.
- Step 6: Press  until the right digit changes to a "1".
- Step 7: Press . Display will read "SPH".
- Step 8: Press  until the control reads "Sd," Start Manual Defrost.
- Step 9: Press . Display will read "n" (NO).
- Step 10: Press  or . Display will read "4" (YES).
- Step 11: Press . Controller will display "SPH" for 30 seconds and then "DEF" will appear.

CUS

000

000

0A0

0A0

0A1

SPH

Sd

n

4

SPH

**NOTE:** The controller will automatically revert back to normal operation after a delay of approximately 20-30 seconds.



#### NOTE:

Traulsen R & A Series refrigerator models also include an off-cycle defrost feature, which occurs once an hour. This is indicated by the control display, is time or temperature terminated, and generally is of 3 - 10 minutes in duration.

DEFROST ICON

## II. BASIC SERVICE PROCEDURES

### II. c - STARTING A MANUAL DEFROST CYCLE (G-Series):

The Display  
Will Read

- |  |   |
|--|---|
| Step 1: Press  . Display will read "CUS."   |  |
| Step 2: Press  . Display will read "000" with the left digit flashing.  |  |
| Step 3: Press  . Display will read "000" with the center digit flashing.  |  |
| Step 4: Press  until the center digit changes to an "A".  |  |
| Step 5: Press  . Display will read "0A0" with the right digit flashing.   |  |
| Step 6: Press  until the right digit changes to an "1".   |  |
| Step 7: Press  . Display will read "SPH".   |  |
| Step 8: Press  until the control reads "Sd," Start Manual Defrost.  |  |
| Step 9: Press  . Display will read "n" (NO).  |  |
| Step 10: Press  or  . Display will read "4" (YES).   |  |
| Step 11: Press  . Display will then read "SPH," Start Manual Defrost.   |  |
| Step 14: Press  or  to scroll to the next parameter, otherwise the controller will automatically revert back to normal operation after a delay of approximately 20-30 seconds. |   |



#### NOTE:

Traulsen G-Series refrigerator models also include an off-cycle defrost feature, which occurs once an hour. This is indicated by the control display, is time terminated, and is generally of 3 - 10 minutes in duration.

The defrost cycle on Traulsen G-Series freezer models can be either time or temperature terminated.

DEFROST ICON

### III. TROUBLESHOOTING

#### III. a - CHECKING FOR DEFECTIVE SENSORS:

The Display  
Will Read

Step 1: Press . Display will read "CUS."



Step 2: Press . Display will read "000" with the left digit flashing.



Step 3: Press . Display will read "000" with the center digit flashing.



Step 4: Press  until the center digit changes to an "A".



Step 5: Press . Display will read "0A0" with the right digit flashing.



Step 6: Press  until the right digit changes to an "1".



Step 7: Press .

Step 8: Press  until display reads "EL". Press .



If the display now reads "-40," check for loose connection on the EVAPORATOR sensor. If the display has a very high reading such as "266," replace the evaporator sensor.

NOTE: Erroneous readings may be the result of a faulty sensing circuit (open or shorted) in the Controller.

Step 9: Press  until the display reads "DL<sup>1</sup>". Press .



In the event that the display now reads "-40," check for a loose connection on the DISCHARGE LINE sensor. If the display has a reading of "220" or higher, check for lack of adequate air-flow through the condenser, a bad condenser motor, or any other condition around the unit which could cause a high temperature, such as a steam table or a crossdraft. Otherwise, proceed with replacing the DISCHARGE LINE sensor.

NOTE: Erroneous readings may be the result of a faulty sensing circuit (open or shorted) in the Controller.

Step 10: Press  until the display reads "AA<sup>2</sup>". Press .



Display should read the approximate ambient air temperature behind the louver panel. If the display reads "111" check for a loose connection on the RH/AMBIENT AIR sensor. If the display reads "32.0" check the sensor for a short circuit.

NOTE: If display reads -40 or 266 the cabinet sensor is defective and requires replacement.

NOTE: Ambient Air Sensor not included on MIT version controllers.

NOTE: Erroneous readings may be the result of a faulty sensing circuit (open or shorted) in the Controller (on H1 control version only).

1= DL is not included on G-Series controllers.

2= AA is not available with MIT version controllers.

### **III. TROUBLESHOOTING**

#### **III. b - CHECKING FOR FAILED RELAYS:**

##### **Checking For A Failed Internal Controller Relay:**

1. Gain access to Controller compressor relay (see REMOVAL INSTRUCTIONS within this service manual for the specific type of controller your are servicing).
2. Locate the connector with the black/blue/purple wires and unplug it. Refer to the schematic on the side of the controller, or refer to the appropriate wiring diagram (to obtain this please contact the factory, referencing the serial number of the unit involved).
3. Using a volt/ohm meter (VOM) with the power OFF, check the resistance across the black to blue wires of the Controller connector. If completed circuit is indicated (with no power to the Controller), the contacts are stuck closed and the Controller should be replaced (on MIT versions either the relay box or one of the other relays within the unit need to be replaced).

##### **Checking For A Failed External "Slave" Relay or Solid State Relay (SSR), p/n 337-60360-01 (MIT II Only):**

1. Gain access to the controller compressor relay (see REMOVAL INSTRUCTIONS within this service manual for the specific type of controller your are servicing).
2. Locate the external "slave" relay and unplug the harness connectors.
3. Using a volt/ohm meter (VOM), check the resistance from the "COM" terminal to the "NO" terminal. If a completed circuit is indicated, the contacts are stuck closed and the slave relay should be replaced.
4. For the SSR, remove the black and blue wires from terminals 3 & 4. Using a volt/ohm meter, and with the power OFF, measure the resistance across the terminals. A completed circuit indicates that the circuit is closed and that the relay should be replaced. A reading of 25 m $\Omega$  to 35 m $\Omega$  is considered normal for an open circuit in the SSR.

##### **Checking For A Failed Door/Light Relay (R & A Series models only):**

1. Gain access to Controller door relay (see REMOVAL INSTRUCTIONS within this service manual for the specific type of controller your are servicing).
2. Remove the wire from the door relay coil.
3. Using a volt/ohm meter (VOM), check across the relay contacts. If an open across the contacts is not indicated, replace the door relay.

**NOTE:** Equipment manufactured with the MIT II controller version do not include a Door/Light relay).

4. Physically check the switch for evidence of water. If switch has water in it, proceed with replacing the switch.

### III. TROUBLESHOOTING

#### III. c - CHECKING FOR OTHER FAILED COMPONENTS:

##### Checking For A Failed Door Switch:

1. Remove the door(s) from the unit involved.
2. Locate the door switch, which is located behind the top door hinge(s).
3. Remove the switch from the cabinet.
4. Using a volt/ohm meter (VOM), check across the switch contacts. "COM" to "NO" should read open. If not, replace the switch.
5. Reinstall the switch and hinge onto the cabinet.

NOTE: If the unit has more than one door, check ALL door switches in the same manner as described in steps 1 thru 5 above.

##### Checking For A Failed Controller Transformer (H1 & MIT I control versions only):

1. Check incoming voltage. Voltage at the unit must be within the ranges shown in the table below.

VOLTAGE		
MIN	MAX	STANDARD
104 VAC	126 VAC	115/60/1
187 VAC	253 VAC	208-230/60/1
10.2 Volts (MIT 12.4)	13.8 Volts (MIT 14.7)	Transformer Output Voltage

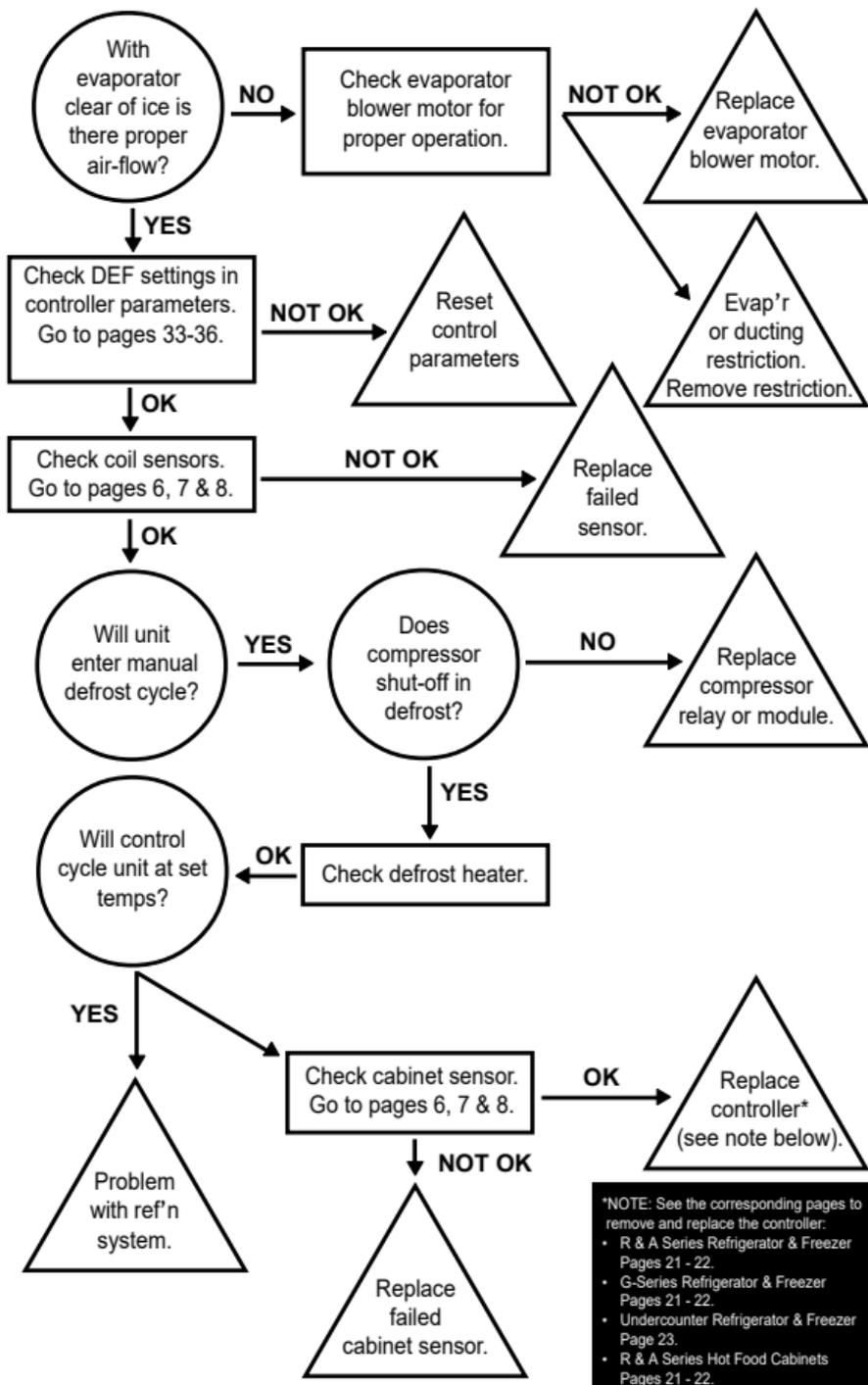
2. If the controller display does not come back on, use a volt/ohm meter (VOM) and check the output voltage of the controller transformer.
3. If the output voltage from the transformer is not within the range shown in the table above, replace the transformer. If the transformer tests OK, replace the controller instead.
4. For equipment manufactured with the MIT II controller version the transformer is mounted inside the relay module. Check between 17 and 8 on 18 pin connector on relay module for 12V DC.

##### Checking Cabinet, Coil or Discharge Line Sensors:

1. Gain access to CABINET, COIL or DISCHARGE LINE sensor and disconnect it.
2. Place tip of sensor probe in a mixture of icewater for several minutes. Allow enough time for sensor probe to acclimate to the icewater.
3. At 32°F, probe resistance should be 32.7K Ohms, +/- 10%. If resistance is not within this range, replace the sensor.

### III. TROUBLESHOOTING

#### III. d - CHECKING FOR ICED EVAPORATOR COIL:



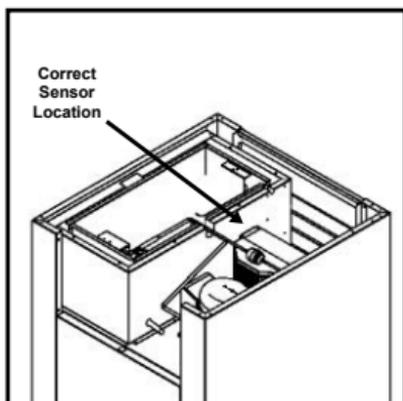
### III. TROUBLESHOOTING

#### III. e - PROPER SENSOR PLACEMENT:

##### Coil Sensor:

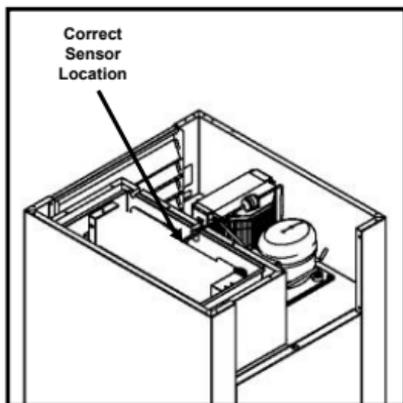
The coil sensor should be inserted into the return air side of the evaporator coil. On freezer models only this sensor should be centered approximately 2" (two inches) from the top (horizontally through coil - centered in coil).

On refrigerator models this sensor should be mounted on top of the coil.



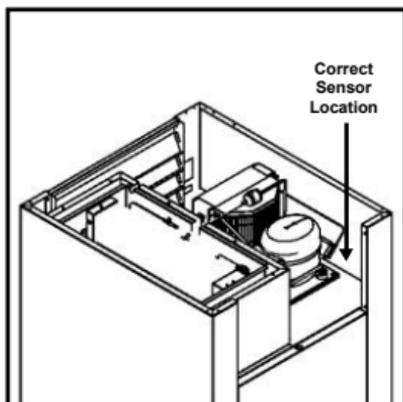
##### Cabinet Air Sensor:

The cabinet air sensor should be mounted inside the evaporator housing (hump) on the return air side of the evaporator coil.



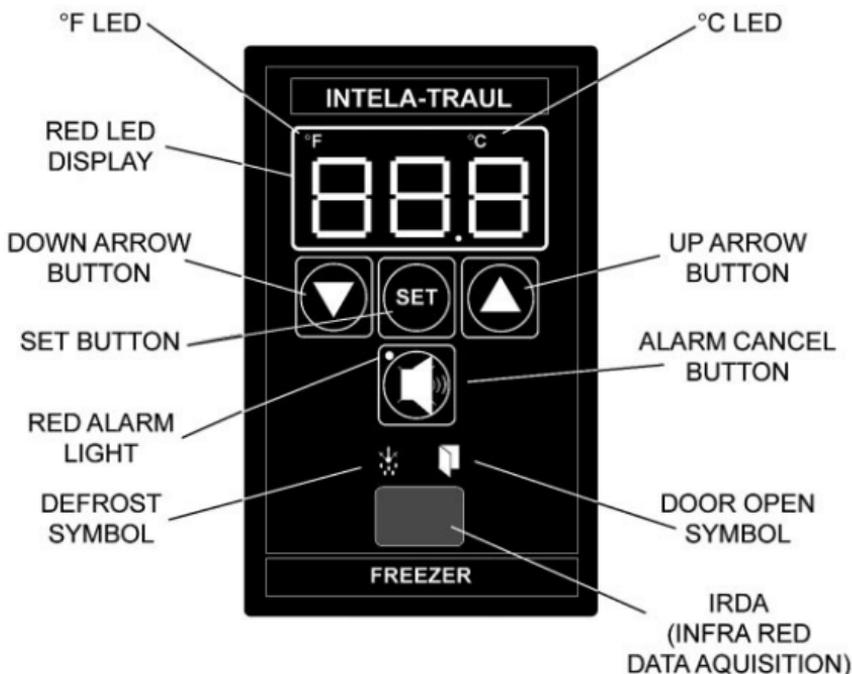
##### Discharge Sensor (R & A Series Only):

The discharge air sensor should be mounted on the hot gas side of the compressor. Placement should be as close to the compressor as possible and must be placed prior to the beginning of the hot gas loop. Please note that discharge sensors must be insulated.



## IV. CONTROL ARCHITECTURE

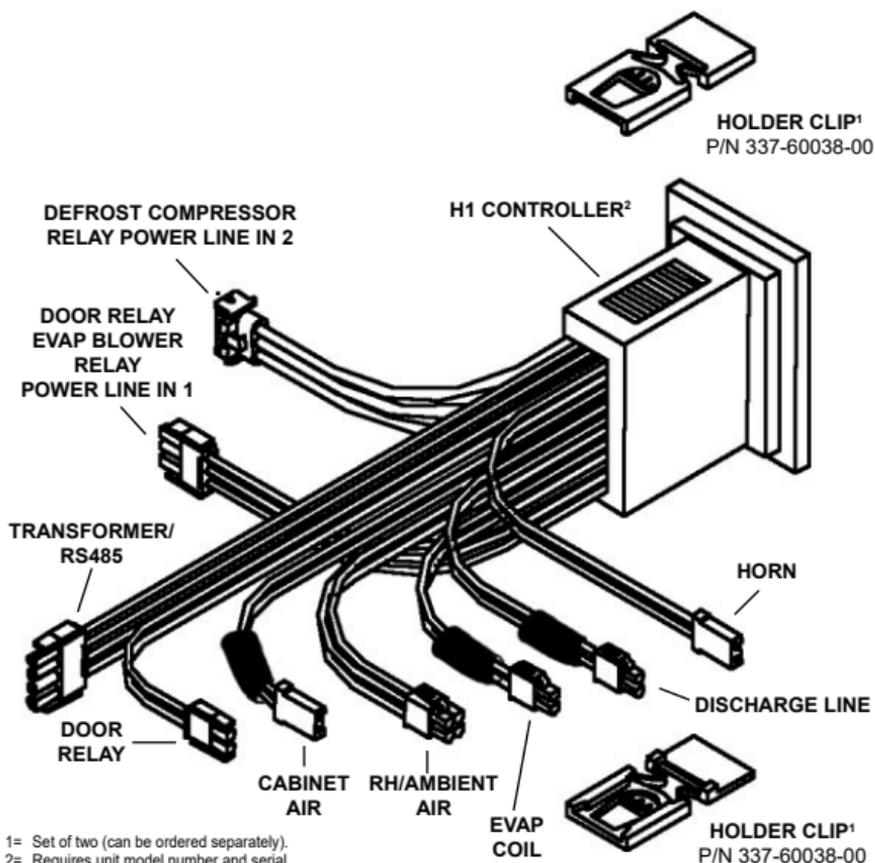
### IV. a - R & A SERIES REFRIGERATOR & FREEZER VERTICAL CONTROLLER:



**NOTES:** IRDA not included on equipment manufactured with the MIT II control version.

See parts assembly on pages 12-13.

# IV. CONTROL ARCHITECTURE



**COIL SENSOR<sup>3</sup>**  
P/N 337-60071-02



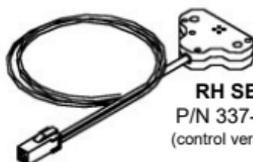
**DISCHARGE SENSOR<sup>3</sup>**  
P/N 337-60072-00



**CABINET SENSOR<sup>3</sup>**  
P/N 337-60069-02



**HORN<sup>3</sup>**  
P/N 337-60070-00

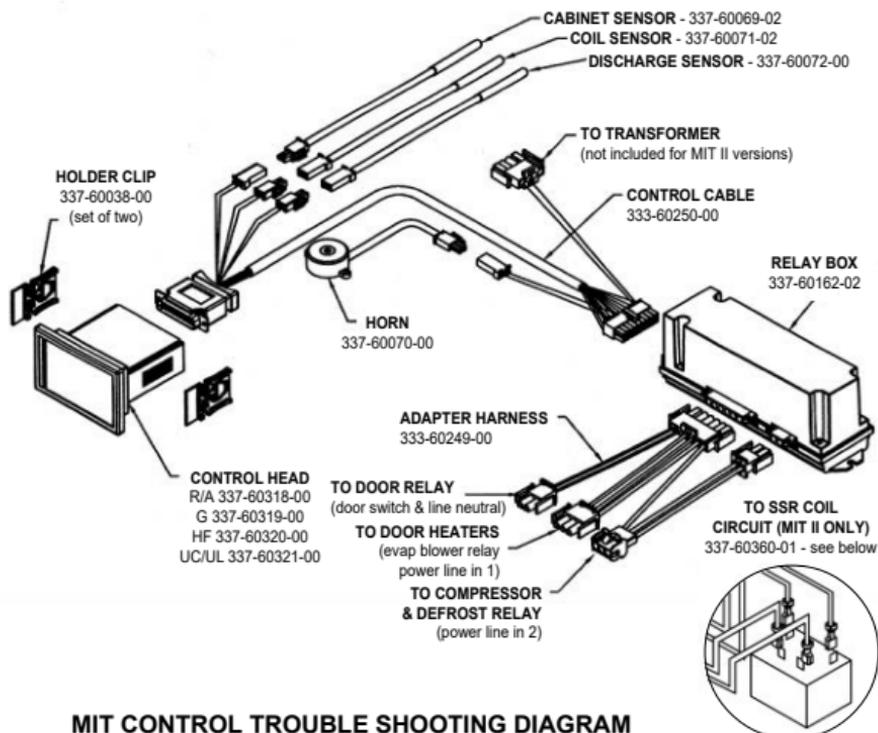


**RH SENSOR<sup>3</sup>**  
P/N 337-60080-00  
(control versions H only)

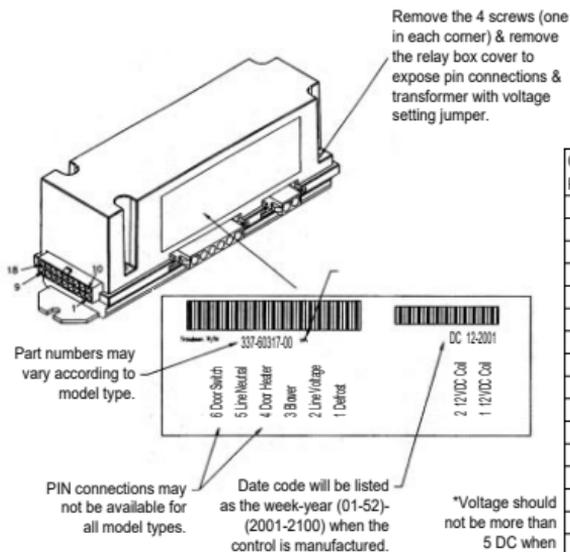
<sup>3</sup>= Component can be ordered separately.

# IV. CONTROL ARCHITECTURE

## IV. b - R & A SERIES REFRIGERATOR & FREEZER VERTICAL CONTROLLER: Parts assembly for H1 thru MIT control versions only



### MIT CONTROL TROUBLE SHOOTING DIAGRAM



#### NOTE

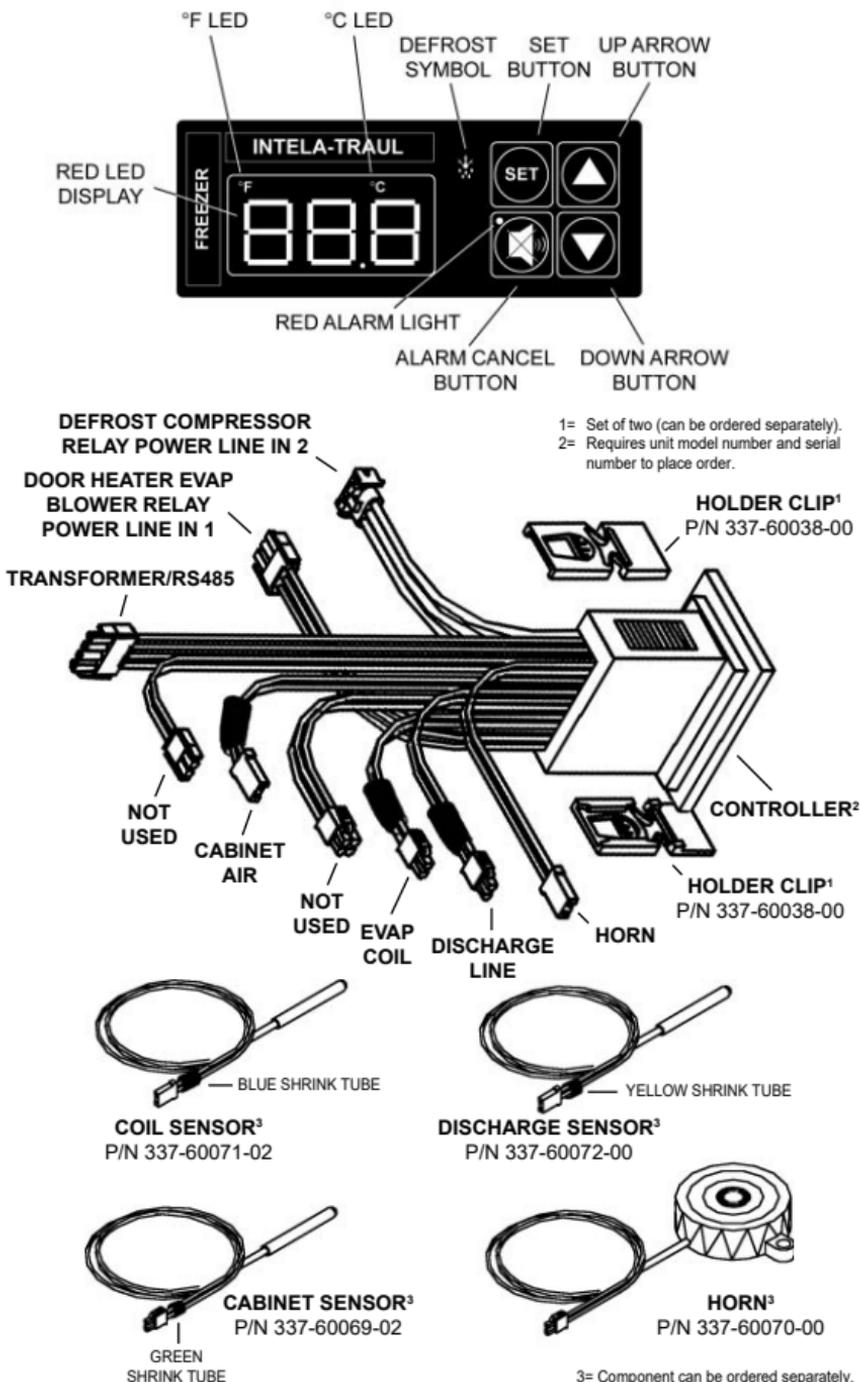
All pins in this connection should not read more than 20 VAC



Connector Pin No.	Color	Signal
1	Gray	Blower*
2	Orange	Door Heater*
3	Green	Alarm From Controller
4		
5		
6	Brown	
7	White/Purple	-RS485
8	Black	Ground
9	Yellow/Red	12 VAC
10	Blue	Compressor*
11	Purple	Defrost*
12	Yellow	Door Open Signal
13	Red	Power to Horn
14	Orange	
15	White	
16	Pink	+RS485
17	Red	12 VDC to Controller
18		

# IV. CONTROL ARCHITECTURE

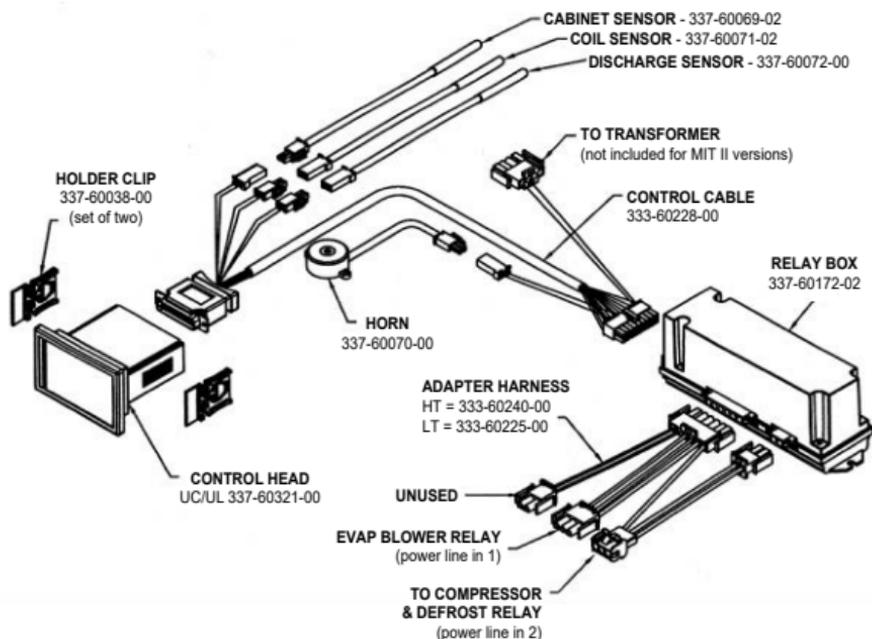
## IV. c - UC & UL (UNDERCOUNTER) HORIZONTAL CONTROLLER:



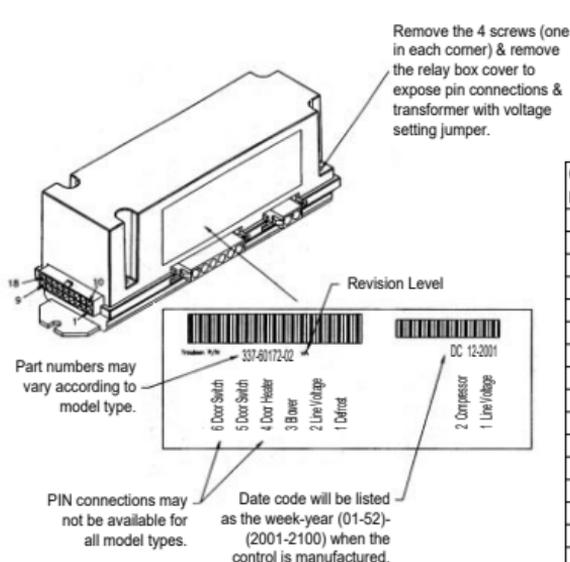
# IV. CONTROL ARCHITECTURE

## IV. c - UC & UL (UNDERCOUNTER) HORIZONTAL CONTROLLER:

### Parts assembly for MIT control version only



## MIT CONTROL TROUBLE SHOOTING DIAGRAM



### NOTE

All pins in this connection should not read more than 20 VAC

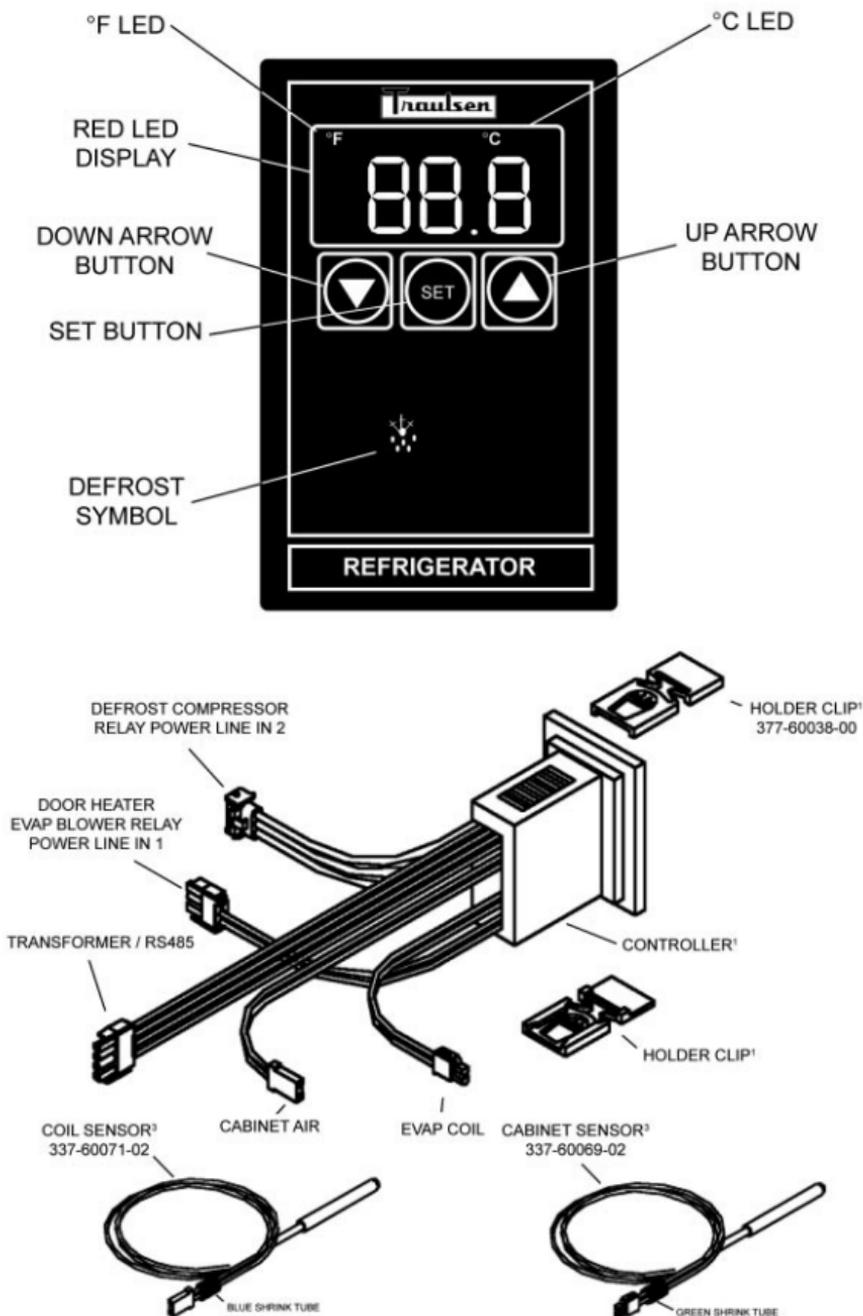


Connector Pin No.	Color	Signal
1	Gray	Blower*
2	Orange	Door Heater*
3	Green	Alarm From Controller
4	Black	Return From Horn
5		
6		
7	White/Purple	-RS485
8	Black	Ground
9	White	12 VAC
10	Blue	Compressor*
11	Purple	Defrost*
12	Yellow	Door Open Signal
13	Red	Power to Horn
14		
15		
16	Pink	+RS485
17	Red	12 VDC to Controller
18	Black	12 VAC

\*Voltage should not be more than 5 DC when measured to ground (pin 8).

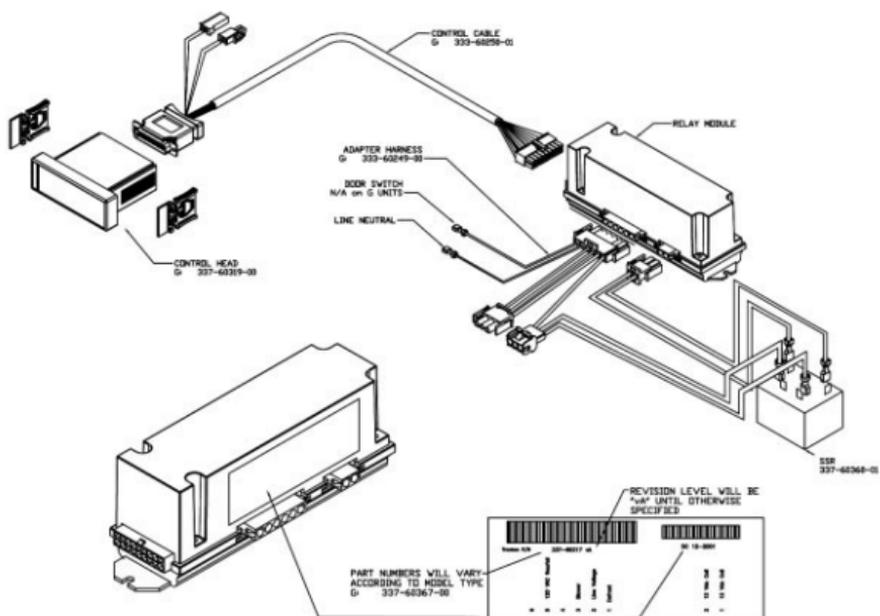
# IV. CONTROL ARCHITECTURE

## IV. d - G-SERIES REFRIGERATOR & FREEZER VERTICAL CONTROLLER:



# IV. CONTROL ARCHITECTURE

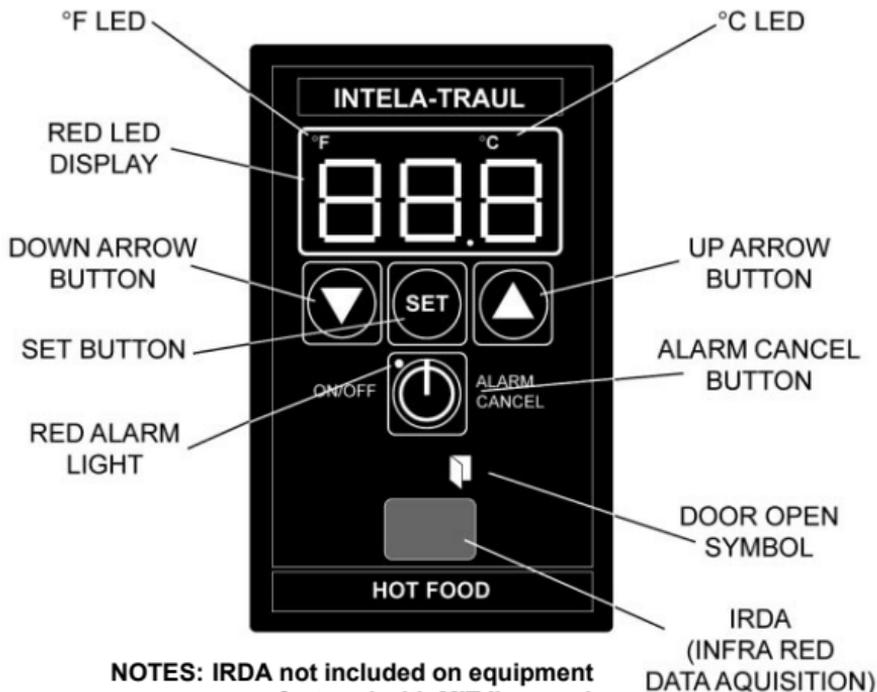
## IV. d - G-SERIES REFRIGERATOR & FREEZER VERTICAL CONTROLLER:



CONNECTOR PIN NUMBER	COLOR	SIGNAL
1		
2	GRAY	BURGER
3		
4		
5		
6		
7		
8	BLACK	GROUND
9	YELLOW/RED	POWER LINE FAILURE
10	BLUE	COMPRESSOR
11	PURPLE	DEFROST
12		
13	ORANGE	3 VDC FROM CONTROLLER
14		
15		
16	RED	12 VDC TO CONTROLLER

## IV. CONTROL ARCHITECTURE

### IV. e - R-SERIES HEATED CABINET VERTICAL CONTROLLER:



**NOTES:** IRDA not included on equipment manufactured with MIT II control version.

See parts assembly on pages 17-18.

#### **HOT FOOD CABINET START-UP (pre-MIT version):**

When power is first applied to the unit, you must set the temperature by pressing the "SET" and "UP ARROW" buttons at the same time using equal pressure with both thumbs, until the temperature appears on the display. Next, use the "UP" button to reach the desired temperature (maximum 180°), then press and release the "SET" button to lock it in.

After this is done you can turn the control ON and OFF by pressing and releasing the "ALARM CANCEL" button.

Be aware to watch for the display constantly reading "OFF". This is an indication of a possible faulty cabinet sensor. To remedy, replace the sensor and reset the operating temperature.

#### **HOT FOOD CABINET START-UP (MIT version):**

The MIT control offers an additional means of turning the cabinet heaters ON and OFF. After the operating temperature has been set, the operator can continuously turn the unit OFF and then back ON again to the same operating temperature by pressing the "ON/OFF" button on the face of the control.

Please note that this feature will not function if the control is in an alarm state with the alarm LED illuminated.

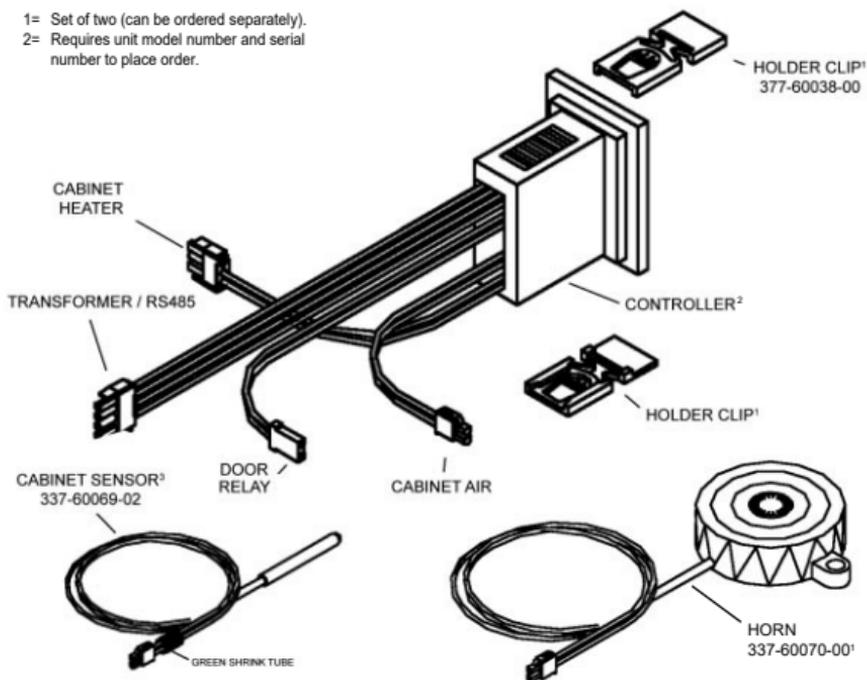
## IV. CONTROL ARCHITECTURE

### IV. e - R-SERIES HEATED CABINET VERTICAL CONTROLLER:

#### Parts assembly for H1 control versions only

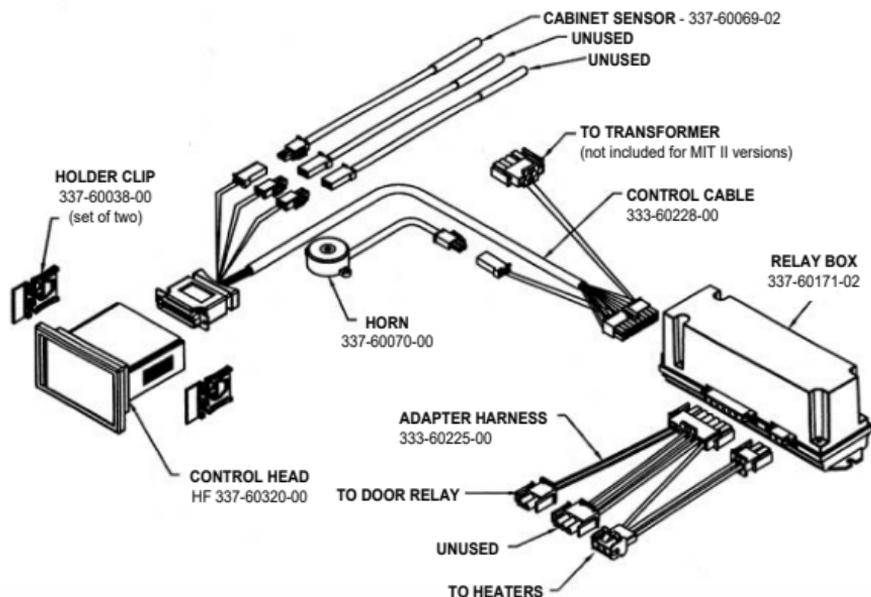
1= Set of two (can be ordered separately).

2= Requires unit model number and serial number to place order.

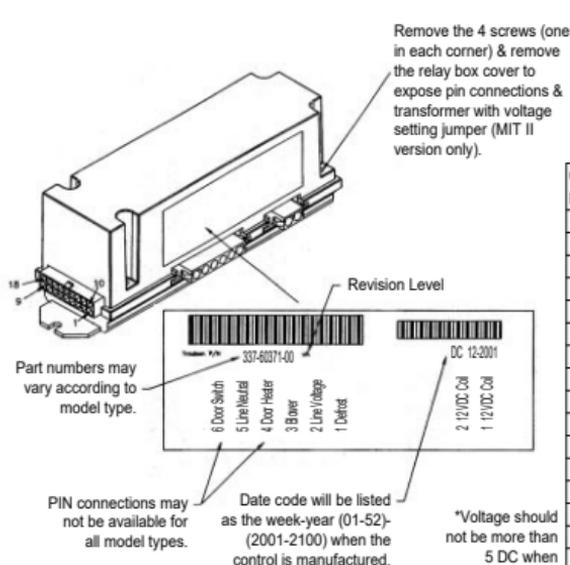


# IV. CONTROL ARCHITECTURE

## IV. e - R-SERIES HEATED CABINET VERTICAL CONTROLLER: Parts assembly for MIT control versions only



### MIT CONTROL TROUBLE SHOOTING DIAGRAM



#### NOTE

All pins in this connection should not read more than 20 VAC



Connector Pin No.	Color	Signal
1	Gray	Blower*
2	Orange	Door Heater*
3	Green	Alarm From Controller
4	Black	Return To Horn
5		
6		
7	White/Purple	-RS485
8	Black	Ground
9	White	12 VAC
10	Blue	Compressor*
11	Purple	Defrost*
12	Yellow	Door Open Signal
13	Red	Power to Horn
14		
15		
16	Pink	+RS485
17	Red	12 VDC to Controller
18	Black	12VAC

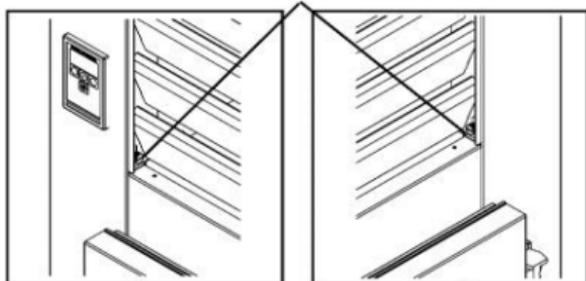
\*Voltage should not be more than 5 DC when measured to ground (pin 8).

## V. REMOVAL/INSTALLATION

### V. a - ALL VERTICAL CONTROLLERS:

To remove INTELA-TRAUL® (p/n's 337-60090-00, 337-60091-00 and 337-60092-00) and G-Series (p/n's 337-60093-00, 337-60094-00 and 337-60095-00) Vertical Controller from the unit in which it is installed, proceed as follows (If unable to access the unit from the rear perform steps 1 through 3, otherwise, proceed to step 4):

#### (2) SLOT HEAD THUMBSCREWS

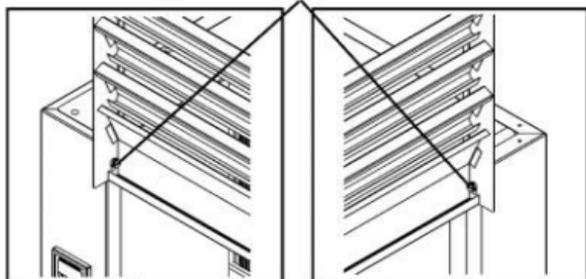


LOUVER  
ASSEMBLY

TYPICAL UNIT

1. At front of unit, remove two (2) slot head thumb screws from bottom corners of louver assembly. Set thumbscrews aside.

#### (2) SLOT HEAD THUMBSCREWS



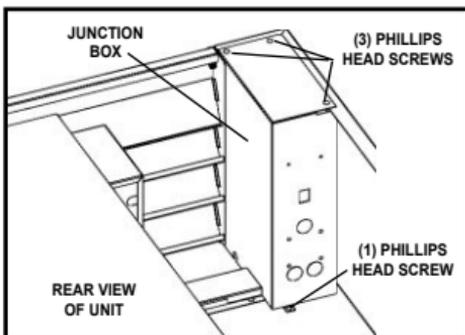
LOUVER  
ASSEMBLY  
(IN RAISED  
POSITION)

2. Swing louver assembly up and away from front of unit until it stops.
3. Remove two (2) Slot head thumbscrews from top of louver assembly. Set thumbscrews and louver assembly aside.

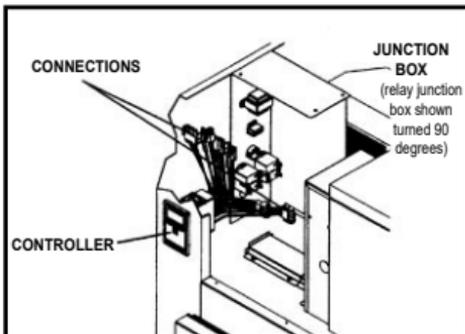
## V. REMOVAL/INSTALLATION

**WARNING: DISCONNECT ALL POWER BEFORE PROCEEDING**

- At the top of the junction box, remove three (3) Phillips head screws. Set screws aside.
- Locate one (1) Phillips head screw at bottom of junction box, and remove. Set screw aside.



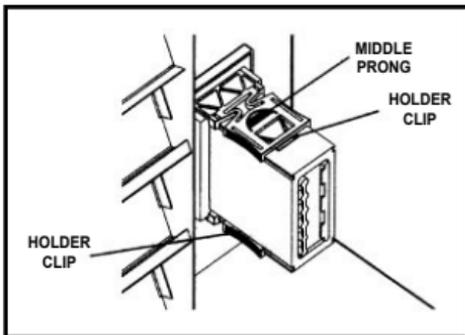
- Carefully slide junction box away from front of unit until all wiring and connections to the controller are exposed.
- Locate all nine (9) Controller connections (five for G-Series), then carefully disconnect each one.



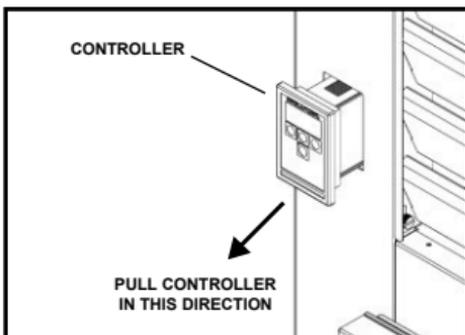
- Firmly grasp and compress the rounded portion of the middle prong on each holder clip. Slowly slide each holder clip off the controller. Set clips aside.

### NOTE:

**Be sure ALL components have been disconnected from the Controller before performing the next step.**



- Slowly pull Controller through mounting hole and set aside.



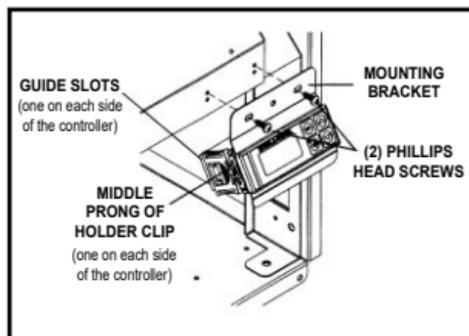
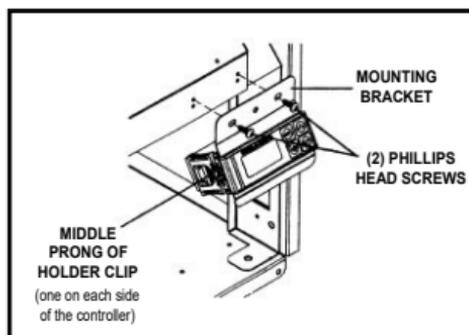
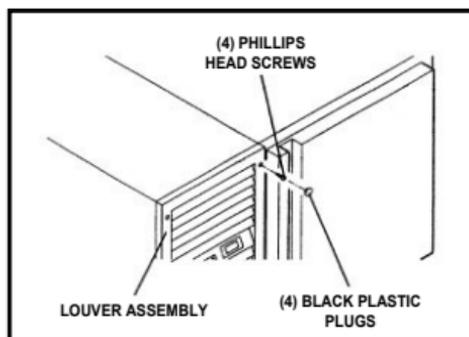
**TO RE-INSTALL CONTROLLER, REVERSE THE PRECEEDING PROCEDURE.**

## V. REMOVAL/INSTALLATION

### V. a - ALL HORIZONTAL CONTROLLERS:

To remove INTELA-TRAUL® (p/n's 337-60096-00 and 337-60097-00) Horizontal Controller from the unit in which it is installed, proceed as follows:

**WARNING: DISCONNECT ALL POWER BEFORE PROCEEDING**



1. Check to make sure that the power cable is disconnected from the wall.
2. Remove the four (4) black plugs that are located in each corner of the power pack louver assembly. Set plugs aside.
3. Remove the four (4) Phillips head screws holding the louver assembly in place. Set screws and louver assembly aside.
4. Remove the two (2) Phillips head screws that hold the Controller and the bracket assembly to the condenser fan assembly. Set screws aside.
5. Locate all nine (9) Controller connections, then carefully disconnect each one.
6. Firmly grasp and compress the rounded portion of the middle prong on each holder clip. Slowly slide each holder clip off the Controller. Set clips aside.

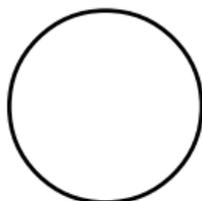
**TO RE-INSTALL CONTROLLER, REVERSE THE PRECEDING PROCEDURE.**

## VI. PROBLEM DIAGNOSIS

### VI. a - HOW TO USE THE TROUBLESHOOTING TREES:

The troubleshooting trees on the following pages were developed as an aid to the service technician in determining the exact solution to a certain problem or malfunction. When used as designed, the troubleshooting trees can lead you from a general symptom to the most likely component to suspect as the cause of the problem.

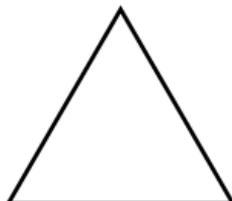
The trees are made up of three different types of boxes:



**QUESTION**



**CHECK**



**SOLUTION**

#### **QUESTION**

Boxes ask a yes/no question and the answer will lead to either another question box, a check box, or a solution box.

#### **CHECK**

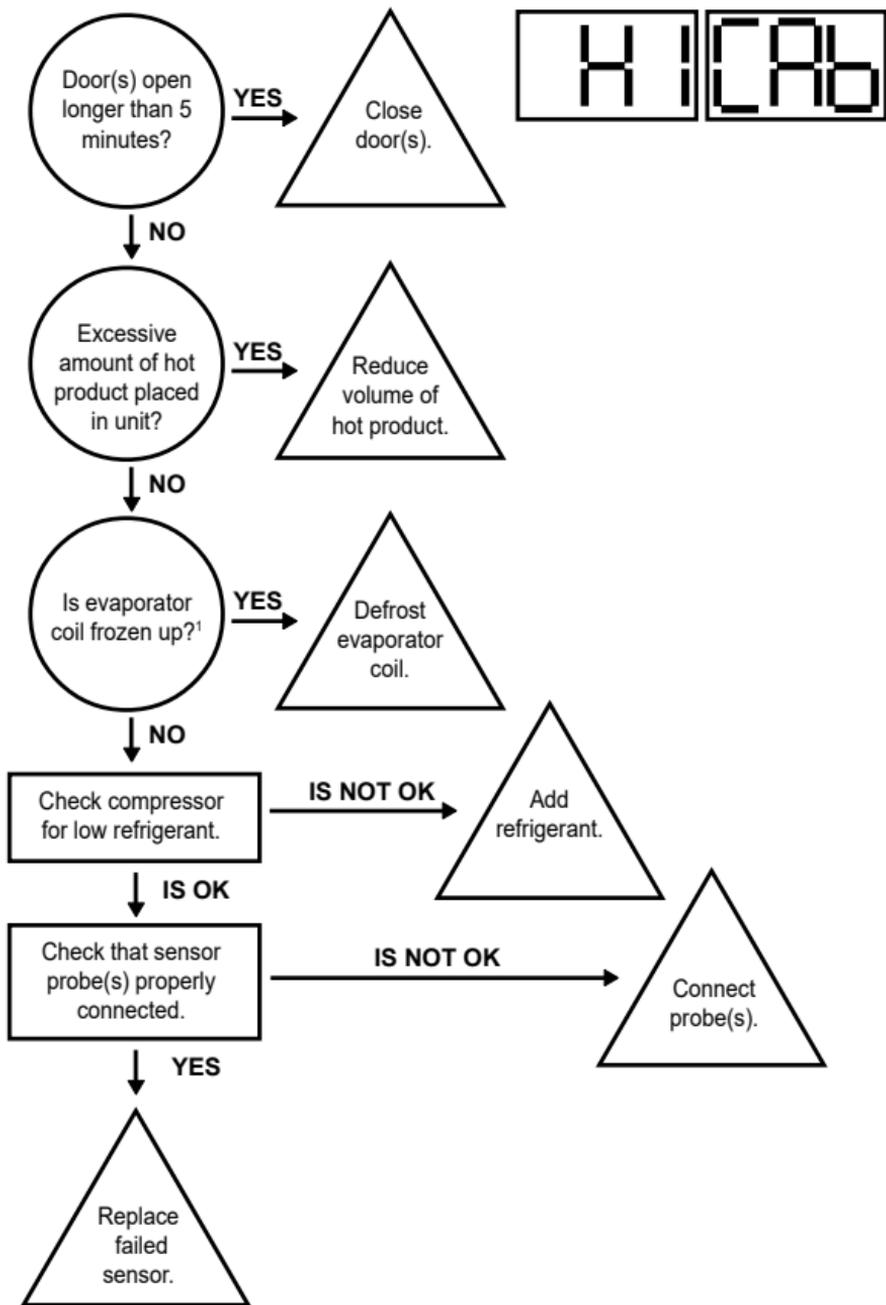
Boxes will suggest a point to check for proper operation, and will often refer you to a page in either the SERVICE INFORMATION or the REMOVAL/INSTALLATION sections of this manual. The result of the check may lead to another box, or a solution box.

#### **SOLUTION**

Boxes suggest the most likely component to cause the malfunction described in the heading of the tree. When reaching a solution box, do not immediately assume the component is defective. The final step is to use the SERVICE INFORMATION section of this manual to verify that the component is defective.

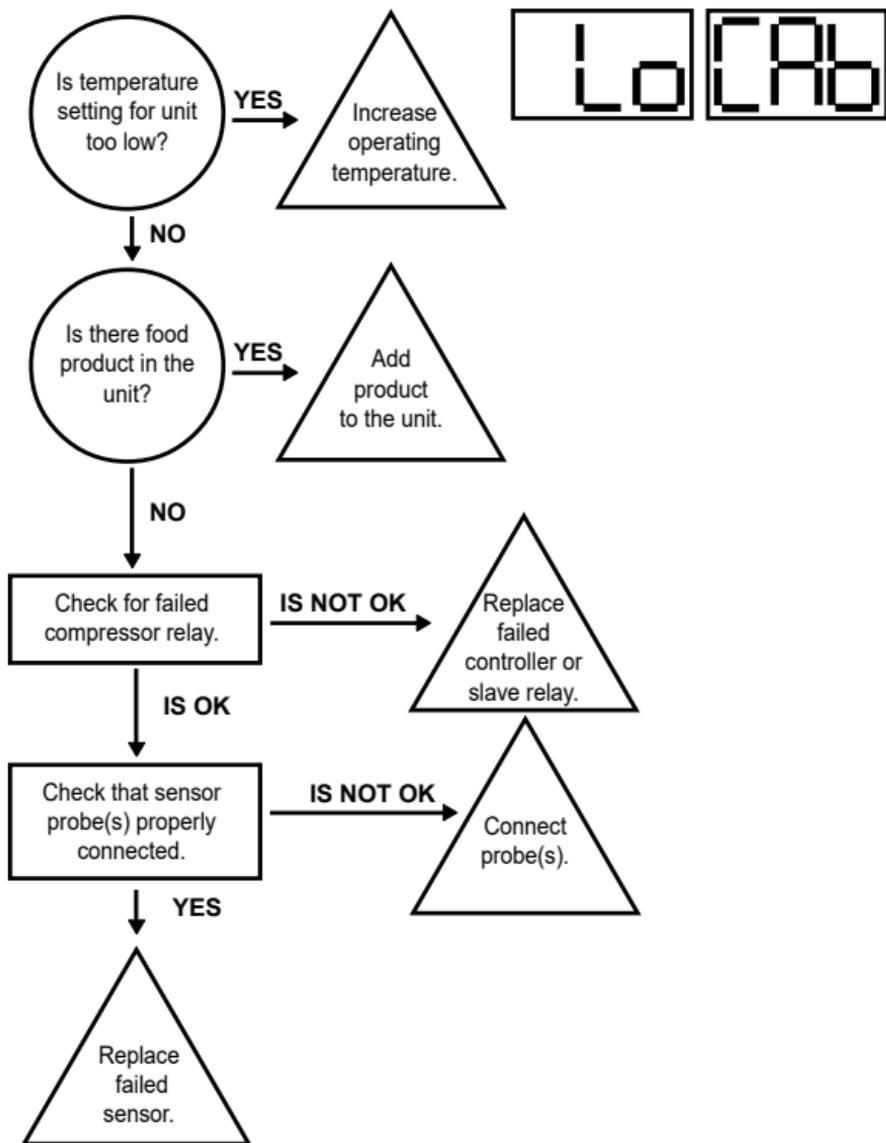
To use the troubleshooting trees, first find the page with the heading describing the type of problem occurring. Begin at the top of the page and follow the tree, step-by-step. When a check box is reached, refer to the suggested section to make the check suggested. Once a solution box is reached, refer to the suggested section to verify that the component in the solution box is indeed defective, and repair or replace per the direction in that section.

## VI. b- HIGH TEMPERATURE ALARM



<sup>1</sup>= See procedure on page 9.

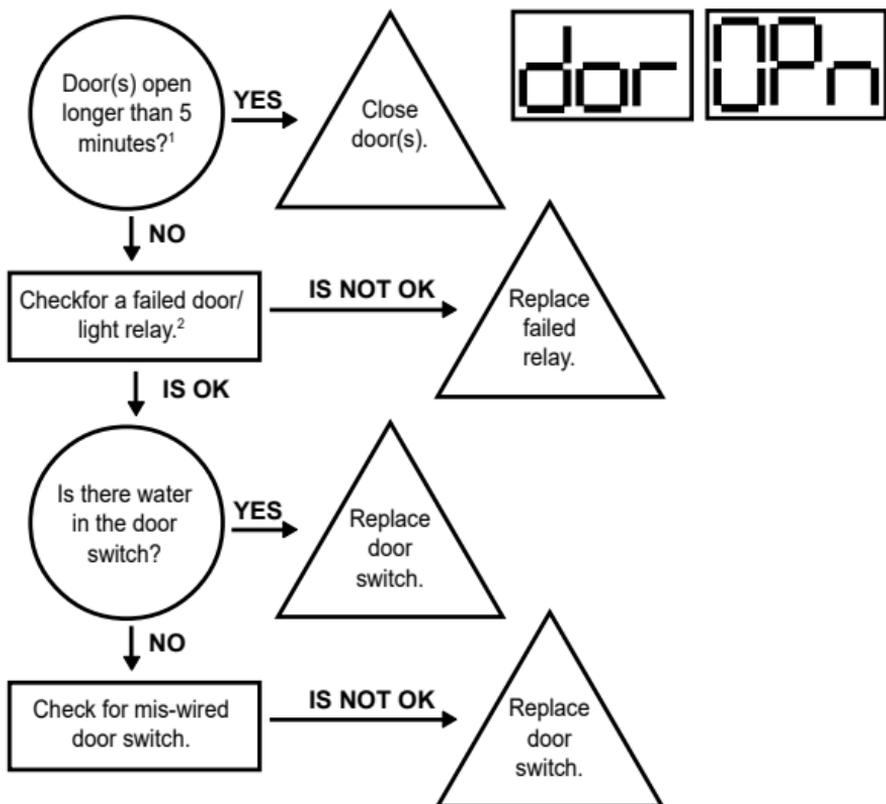
## VI. c- LOW TEMPERATURE ALARM



### **NOTE ON HOT FOOD UNITS ONLY**

Hot food units are designed to hold hot food at set temperature. The cabinet is not designed to heat cold products.

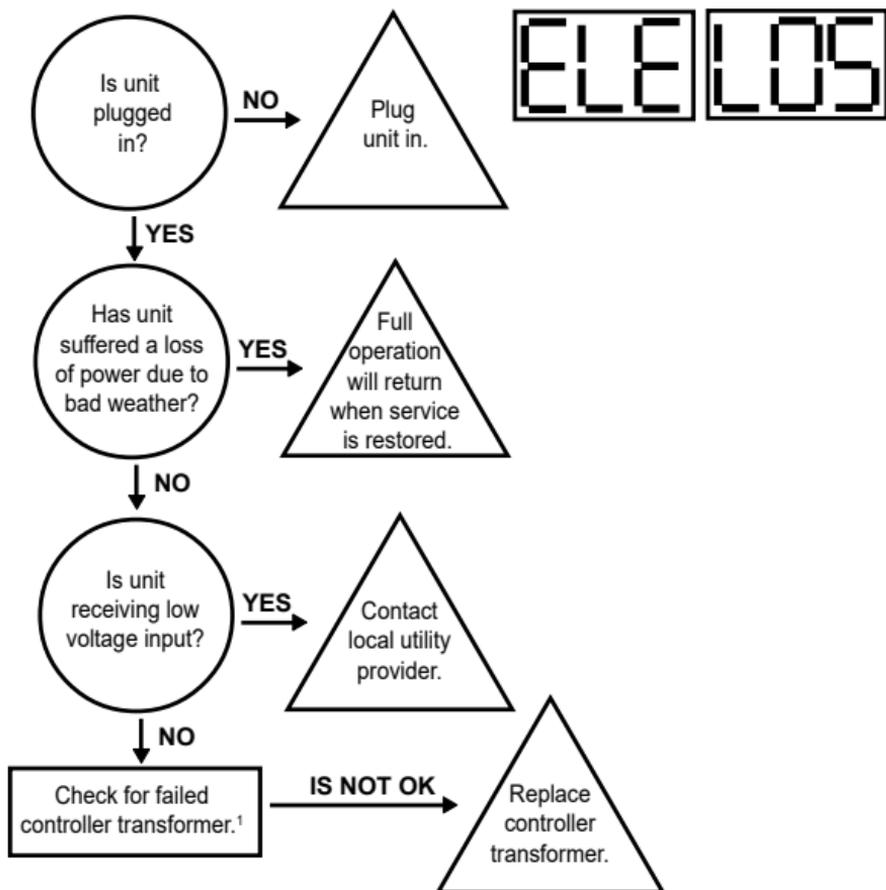
## VI. d- DOOR OPEN ALARM



1= H1 and MIT 1 control versions only.

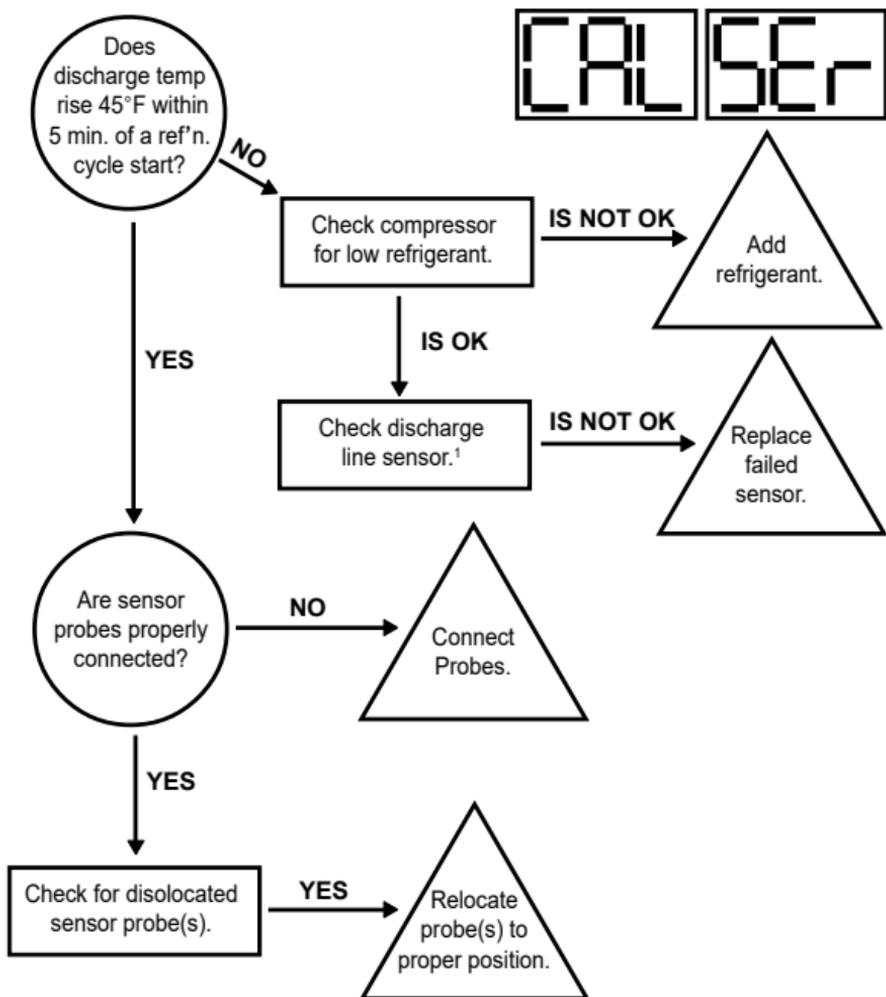
2= See procedure on page 7.

## VI. e- POWER LOSS ALARM



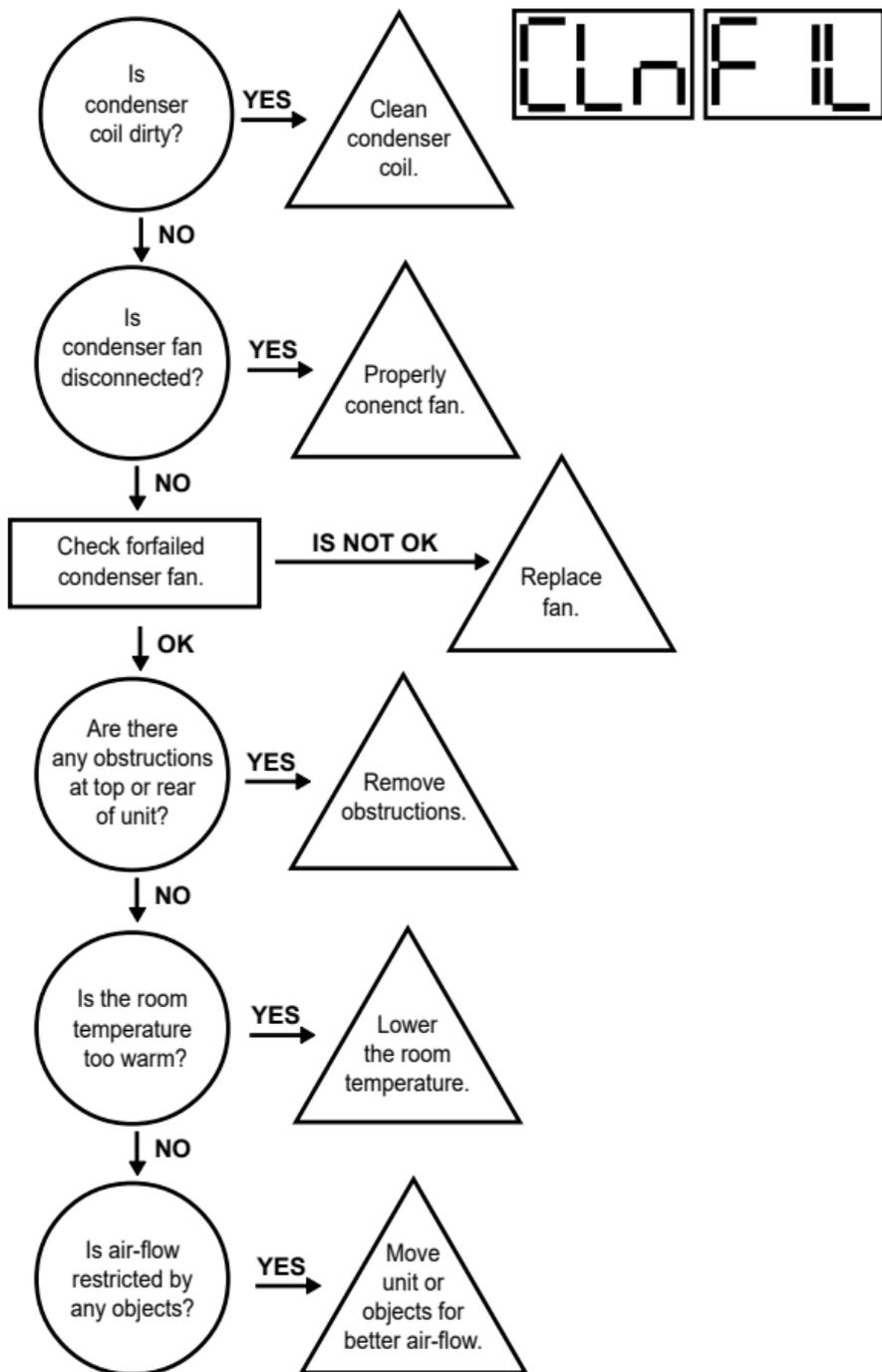
1= See procedure on page 8.

## VI. f- SYSTEM LEAK ALARM



<sup>1</sup>= See procedure on page 8.

## VI. g - CONDENSERCLEAN ALARM



## VII. ACCESSING THE ENGINEERING LEVEL

### VII. a - ACCESSING THE ENGINEERING LEVEL:

Not all control parameters can be adjusted at the customers level of access. To adjust these other parameters it is first necessary to gain access to the ENGINEERING LEVEL. Please follow the below procedure in order to enter this level.

	The Display Will Read
Step 1: Press  . Display will read "CUS."	
Step 2: Press  until "EnG" is displayed.	
Step 3: Press  . Display will read "000" with the left digit flashing.	
Step 4: Press  until the left digit changes to an "9".	
Step 5: Press  . Display will read "900" with the center digit flashing.	
Step 6: Press  until the center digit changes to an "9".	
Step 7: Press  . Display will read "990" with the right digit flashing.	
Step 8: Press  until the right digit changes to an "E".	
Step 9: The display will read (99E), press  .	
Step 10: Press  . The display will now read "FOC" - See Note.	

NOTE: R & A Series Only, for G-Series models press  for the control to display "FOC."

## VIII. CONTROL PARAMETERS

### VIII. a - PARAMETER DESCRIPTIONS:

FOC	3-digit code which identifies the .hex file loaded at the factory.
ADR	Device address for NAFEM networks.
BAU	Communications rate when connected into a NAFEM network.
NAF	Allow the control to communicate with a NAFEM network.
SPH	High value of desired cabinet temperature range.
SPL	Low value of desired cabinet temperature range.
SHL	Lowest temperature of allowed range for setting of SPH.
SHH	Highest temperature of allowed range for setting of SPH.
SLL	Lowest temperature of allowed range for setting of SPL.
SLH	Highest temperature of allowed range for setting of SPL.
RO	Difference, in degrees, between displayed & measured temperature.
HI	The highest temperature the cabinet air temperature is allowed to reach before triggering a High-Temp alarm.
LO	The lowest temperature the cabinet air temperature is allowed to reach before triggering a Low-Temp alarm.
SCL	Sets the temperature display scale (fahrenheit or celsius).
HAD	Time, in minutes, that the controller delays triggering the High-Temp alarm at any start-up or at the end of a defrost cycle.
LAD	Time, in minutes, that the controller delays triggering the Low-Temp alarm if cabinet air temperature equal or below SPL setting.
AC	The amount of time, in minutes, that the compressor must be off between cycles.
DEF	Defines the type of heat used to defrost the coil: Electric, Hot Gas, None or Off-Cycle.
IBD	The amount of time, in hours, between the end of the drip time& start of the next defrost cycle.
DDC	The maximum amount of time, in minutes, that the heat will be on during a defrost cycle.
CDE	The temperature of the evaporator coil that indicates the end of a defrost heat cycle.
DDE	The amount of time, in minutes, between the defrost heat being turned off and the compressor turning on.
BDD	The delay time, in minutes, between the end of the drip time and and before the evaporator blower turns on.
BSD	The temperature of the evaporator coil that triggers the evaporator blower to turn on after drip time ends.
ODD	The maximum amount of time, in minutes, that the display will read the last temperature recorded before entering the defrost cycle.
SD	Allows a technician to start or stop a defrost cycle.
CFA	Allows the customer to turn the clogged filter alarm ON/OFF ( R & A Series only).
CCR	The minimum amount of time, in minutes, that the compressor must be running before generating a clogged filter alarm.
CDL	The discharge line temperature that will trigger a clogged filter alarm.
DOA	Allows the customer to turn the door open alarm ON/OFF in units equipped with the appropriate hardware.
DAD	The time, in minutes, that a door must be open before triggering a door open alarm.

## VIII. CONTROL PARAMETERS

### VIII. a - PARAMETER DESCRIPTIONS (continued):

APD	The amount of time, in seconds, that a visual alarm text will be displayed.
ATD	Alarm temperature delay.
AAS	Allows the customer to set the type of audible alarm style, either Blast, OFF or Continuous.
CL	Allows the customer to set the time of day.
DAY	Allows the customer to set the date.
DS	Sets daylight savings time On or OFF.
DL1	Selects the time to start a defrost lockout.
DL2	Selects the time to start a defrost lockout.
DL3	Selects the time to start a defrost lockout.
DL4	Selects the time to start a defrost lockout.
DCF	Allows the customer to set the percentage of time that the door perimeter heaters will operate, to control surface condensation.
CON	The amount of time the compressor will run in the event of a cabinet air sensor failure.
COF	The amount of time, in minutes, that the compressor will be OFF in the event of a cabinet air sensor failure.
EL	Displays the evaporator temperature at the time (press set or the up arrow button to display this feature).
DL	Displays the discharge line temperature at the time (press set or the up arrow button to display this feature).
CB	When activated (by pressing the set or up arrow buttons), will display the cabinet air temperature at the time the button is pressed.
PLn	When activated will display the approximate line voltage.
RCO	Will energize the compressor relay for 10 seconds when activated.
RdF	Will energize the heater relay for 10 seconds when activated.
RFA	Will energize the blower relay for 10 seconds when activated.
RDH	Will energize the door heater relay for 10 seconds when activated.
Pro	Parameter used only when reflashing the program memory.
CEP	When activated, will return all of the parameters to the initial factory settings.
REF	Displays the revision level of the software loaded into memory.

# VIII. CONTROL PARAMETERS

## VIII. b - PARAMETER ACCESS & UNITS OF MEASUREMENT:

H1, MIT I & MIT II CONTROL VERSIONS ONLY

Control Parameter	Description	Access	Unit of Measure
ADR*	Device Address	ENG	
BAU*	Comm. Baud Rate in K	ENG	KBaud
NAF*	NAFEM Communications Enable	ENG	On/Off
SPH	Temperature Set-Point High	CUS	Degree
SPL	Temperature Set-Point Low	CUS	Degree
SHL	Set-Point High/Low	ENG	Degree
SHH	Set-Point High/High	ENG	Degree
SLL	Set-Point Low/Low	ENG	Degree
SLH	Set-Point Low/High	ENG	Degree
RO	Room Offset	CUS	Degree
HI	Upper Temperature Limit	ENG	Degree
LO	Lower Temperature Limit	ENG	Degree
SCL	Temperature Scale	CUS	F or C
HAD	High-Temperature Alarm Delay	ENG	Minute
LAD	Low-Temperature Alarm Delay	ENG	Minute
AC	Anticycling	ENG	Minute
DEF	Defrost Type	ENG	Electric/Gas/Off
IBD	Intervals Between Defrosts	ENG	Hours
DDC	Maximum Defrost Duration	ENG	Minute
CDE	Coil Temperature At End of Defrost Cycle	ENG	Degree
DDE	Drip Time At End of Defrost Cycle	ENG	Minute
BDD	Blower Delay At Drip Time	ENG	Minute
BSD	BSD After Defrost End	ENG	Degree
ODD	Display Hold After Defrost	ENG	Minute
SD	Start/Stop Defrost	CUS	Start/Stop
CFA	Clogged Filter Alarm	n/a	On/Off
CCR	Clogged Filter Compressor Run Time	n/a	Minute
CDL	Clogged Filter Alarm Temperature	n/a	Degree
DOA	Door Open Alarm	ENG	On/Off
DAD	Door Display Alarm Delay	ENG	Minute
APD	Alarm Pause Delay	ENG	Second
ATD	Alarm Temperature Delay	ENG	Second
AAS	Audible Alarm Style	CUS	On/Off
CL	Set The Clock Time	CUS	H/N/S
DAY	Set The Clock Date	CUS	Y/N/D
DS	Daylight Savings	CUS	On/Off
DL1	Defrost Lockout 1	CUS	Time/Off
DL2	Defrost Lockout 2	CUS	Time/Off
DL3	Defrost Lockout 3	CUS	Time/Off
DL4	Defrost Lockout 4	CUS	Time/Off
DCF	Dewpoint Correction Factor	CUS	%
CON	Compressor Default On Time	ENG	Minute
COF	Compressor Off Time	ENG	Minute
EL	Evaporator Coil Temperature	CUS	Degree
DL	Discharge Line Temperature	CUS	Degree
CB	Cabinet Air Temperature	CUS	Degree
PLn*	Display Line Voltage	ENG	Volts
RCO*	Cycle Compressor Relay	ENG	On/Off
RdF*	Cycle Defrost Relay	ENG	On/Off
RFA*	Cycle Blower/Fan Relay	ENG	On/Off
RDH*	Cycle Door Heater Relay	ENG	On/Off
PRO*	Go To Bootloader For Programming	ENG	
CEP*	Clear EEPROM & Load Defaults	ENG	
REF*	Software Version/Revision/Step	n/a	

\*MIT II control version only.

# VIII. CONTROL PARAMETERS

## VIII. c - G-SERIES PARAMETER SETTINGS (MIT II Control Version):

Control Parameter	Freezer Models				Refrigerator Models		
	GF1	GF2	GF3	GF4	GR1	GR2	GR3
ADR*	2	2	2	2	2	2	2
BAU*	9.6	9.6	9.6	9.6	9.6	9.6	9.6
NAF*	ON	ON	ON	ON	ON	ON	ON
SPH	-5.2	0.1	0.1	32	38.1	39.2	39.2
SPL	-10	-4	-4	26.1	34	37	37
SHL	-8	-3.1	-3.1	30.2	36	39.2	39.2
SHH	-5.2	0.1	0.1	34	40	40	40
SLL	-13	-6.2	-6.2	26.1	32	34	34
SLH	-10	-4	-4	28	34	37	37
RO	0	0	0	0	0	0	0
HI	0.1	5	5	35.2	41	41	41
LO	-18.4	-10	-10	20	30.2	30.2	30.2
SCL	F	F	F	F	F	F	F
HAD	n/a	n/a	n/a	n/a	n/a	n/a	n/a
LAD	n/a	n/a	n/a	n/a	n/a	n/a	n/a
AC	3	3	3	3	3	3	3
DEF	ELE	ELE	ELE	ELE	OFF	ELE	OFF
IBD	4.0	4.0	4.0	4.0	1.0	2.0	1.0
DDC	20	20	20	20	10	20	10
CDE	75	75	75	75	45.1	70	45.1
DDE	2	2	2	2	2	2	2
BDD	1	1	1	1	0	0	0
BSD	32	32	32	32	32	32	32
ODD	10	10	10	10	10	10	10
SD	Starts a new defrost cycle at any time or stops a current defrost cycle.						
CFA	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CCR	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CDL	n/a	n/a	n/a	n/a	n/a	n/a	n/a
DOA	n/a	n/a	n/a	n/a	n/a	n/a	n/a
DAD	n/a	n/a	n/a	n/a	n/a	n/a	n/a
APD	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ATD	n/a	n/a	n/a	n/a	n/a	n/a	n/a
AAS	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CL	Set the hours and minutes in military time.						
DAY	Set the year, month, day of the month and day of the week.						
DS	ON	ON	ON	ON	ON	ON	ON
DL1	OFF	OFF	OFF	OFF	OFF	OFF	OFF
DL2	OFF	11:30am	OFF	OFF	OFF	OFF	OFF
DL3	OFF	5:30pm	OFF	OFF	OFF	OFF	OFF
DL4	OFF	OFF	OFF	OFF	OFF	OFF	OFF
DCF	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CON	19	19	19	19	11	11	11
COF	7	7	7	7	10	10	10
EL	Will display evaporator coil temp in real time every time an arrow is pressed.						
DL	Will display discharge line temp in real time every time an arrow is pressed.						
CB	Will display cabinet air temp in real time every time an arrow is pressed.						
PLn*	Will display power line voltage in real time every time an arrow is pressed.						
RCO*	Turns ON/OFF the compressor relay for 10-seconds or until an arrow is pressed.						
RdF*	Turns ON/OFF the defrost relay for 10-seconds or until an arrow is pressed.						
RFA*	Turns ON/OFF the blower relay for 10-seconds or until an arrow is pressed.						
RDH*	Turns ON/OFF the door heater triac for 10-seconds or until an arrow is pressed.						
PRO*	Set the controller in receiving mode for programming.						
CEP*	Clear all controller memories and reloads the factory default parameters.						
REF*	Firmware revision in the format X9.9 (X=version, 9=major revision, 9=minor revision).						

\*MIT II control version only.

## VIII. CONTROL PARAMETERS

### VIII. d - R-SERIES PARAMETER SETTINGS (MIT II Control Version):

Control Parameter	Refrigerator Models							
	RA1	RA2	RA3	RA4	RA5	RA6	RA7	RA8
ADR	2	2	2	2	2	2	2	2
BAU	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6
NAF	ON	ON	ON	ON	ON	ON	ON	ON
SPH	39.2	39.2	39.2	39.2	38.1	38.1	39.2	39.2
SPL	37	37	37	37	34	34	37	37
SHL	39.2	39.2	39.2	39.2	36	36	39.2	39.2
SHH	40	40	40	40	40	40	40	40
SLL	34	34	34	34	32	32	34	34
SLH	37	37	37	37	34	34	37	37
RO	0	0	0	0	0	0	0	0
HI	41	41	41	41	41	41	41	41
LO	30.2	30.2	30.2	30.2	30.2	30.2	30.2	30.2
SCL	F	F	F	F	F	F	F	F
HAD	15	15	15	15	15	15	15	15
LAD	2	2	2	2	2	2	2	2
AC	3	3	3	3	3	3	3	3
DEF	OFF	OFF	OFF	OFF	OFF	OFF	ELE	ELE
IBD	1.0	1.0	1.0	1.0	1.0	1.0	2.0	2.0
DDC	10	10	10	10	10	10	20	20
CDE	45.1	45.1	45.1	45.1	45.1	45.1	70	70
DDE	2	2	2	2	2	2	2	2
BDD	0	0	0	0	0	0	0	0
BSD	32	32	32	32	32	32	32	32
ODD	10	10	10	10	10	10	10	10
SD	Starts a new defrost cycle at any time or stops a current defrost cycle.							
CFA	OFF	ON	OFF	ON	ON	ON	OFF	ON
CCR	20	20	20	20	20	20	20	20
CDL	220.1	220.1	220.1	220.1	220.1	220.1	220.1	220.1
DOA	ON	ON	ON	ON	ON	ON	ON	ON
DAD	15	15	15	15	15	15	15	15
APD	2	2	2	2	2	2	2	2
ATD	10	10	10	10	10	10	10	10
AAS	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
CL	Set the hours and minutes in military time.							
DAY	Set the year, month, day of the month and day of the week.							
DS	ON	ON	ON	ON	ON	ON	ON	ON
DL1	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
DL2	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
DL3	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
DL4	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
DCF	100	100	100	100	100	100	100	100
CON	11	11	11	11	11	11	11	11
COF	10	10	10	10	10	10	10	10
EL	Will display evaporator coil temp in real time every time an arrow is pressed.							
DL	Will display discharge line temp in real time every time an arrow is pressed.							
CB	Will display cabinet air temp in real time every time an arrow is pressed.							
PLN*	Will display power line voltage in real time every time an arrow is pressed.							
RCO*	Turns ON/OFF the compressor relay for 10-seconds or until an arrow is pressed.							
RdF*	Turns ON/OFF the defrost relay for 10-seconds or until an arrow is pressed.							
RFA*	Turns ON/OFF the blower relay for 10-seconds or until an arrow is pressed.							
RDH*	Turns ON/OFF the door heater triac for 10-seconds or until an arrow is pressed.							
PRO*	Set the controller in receiving mode for programming.							
CEP*	Clear all controller memories and reloads the factory default parameters.							
REF*	Firmware revision in the format X9.9 (X=version, 9=major revision, 9=minor revision).							

\*MIT II control version only.

## VIII. CONTROL PARAMETERS

### VIII. e - R-SERIES PARAMETER SETTINGS (MIT II Control Version):

Control Parameter	Freezer Models				
	RF1	RF2	RF3	RF4	RF5
ADR	2	2	2	2	2
BAU	9.6	9.6	9.6	9.6	9.6
NAF	ON	ON	ON	ON	ON
SPH	-15.4	-10	0.1	0.1	-5.2
SPL	-20.2	-15.4	-4	-4	-10
SHL	-15.4	-13.6	-2.2	-2.2	-8
SHH	-10	-10	0.1	0.1	-5.2
SLL	-20.2	-20.2	-6.2	-6.2	-13
SLH	-17	-15.4	-4	-4	-10
RO	0	0	0	0	0
HI	5.2	5.2	5	5	0.1
LO	-25.6	-25.6	-10	-10	-17.8
SCL	F	F	F	F	F
HAD	15	15	15	15	15
LAD	2	2	2	2	2
AC	3	3	3	3	3
DEF	ELE	ELE	ELE	ELE	ELE
IBD	4.0	4.0	4.0	4.0	4.0
DDC	30	20	20	20	20
CDE	55	75	75	70	70
DDE	5	2	2	2	2
BDD	1	1	1	1	1
BSD	-10	32	32	32	32
ODD	10	10	10	10	10
SD	Starts a new defrost cycle at any time or stops a current defrost cycle.				
CFA	ON	OFF	OFF	ON	ON
CCR	20	20	20	20	20
CDL	220.1	220.1	220.1	220.1	220.1
DOA	ON	ON	ON	ON	ON
DAD	15	15	15	15	15
APD	2	2	2	2	2
ATD	10	10	10	10	10
AAS	OFF	OFF	OFF	OFF	OFF
CL	Set the hours and minutes in military time.				
DAY	Set the year, month, day of the month and day of the week.				
DS	ON	ON	ON	ON	ON
DL1	OFF	OFF	OFF	OFF	OFF
DL2	OFF	OFF	OFF	OFF	OFF
DL3	OFF	OFF	OFF	OFF	OFF
DL4	OFF	OFF	OFF	OFF	OFF
DCF	100	100	100	100	100
CON	19	19	19	19	19
COF	7	7	7	7	7
EL	Will display evaporator coil temp in real time every time an arrow is pressed.				
DL	Will display discharge line temp in real time every time an arrow is pressed.				
CB	Will display cabinet air temp in real time every time an arrow is pressed.				
PLn	Will display power line voltage in real time every time an arrow is pressed.				
RCO	Turns ON/OFF the compressor relay for 10-seconds or until an arrow is pressed.				
RdF	Turns ON/OFF the defrost relay for 10-seconds or until an arrow is pressed.				
RFA	Turns ON/OFF the blower relay for 10-seconds or until an arrow is pressed.				
RDH	Turns ON/OFF the door heater triac for 10-seconds or until an arrow is pressed.				
PRO	Set the controller in receiving mode for programming.				
CEP	Clear all controller memories and reloads the factory default parameters.				
REF	Firmware revision in the format X9.9 (X=version, 9=major revision, 9=minor revision).				

## VIII. CONTROL PARAMETERS

### VIII. f - UNDERCOUNTER PARAMETER SETTINGS (MIT II Control Version):

Control Parameter	UF1	UF2	UP1	UP2
ADR	2	2	2	2
BAU	9.6	9.6	9.6	9.6
NAF	ON	ON	ON	ON
SPH	0.1	38.1	38.1	38.1
SPL	-4	33.8	33.8	33.8
SHL	-0.31	36	36	36
SHH	0.1	40	40	40
SLL	-6.2	32	32	32
SLH	-4	34	34	34
RO	0	0	0	0
HI	5	41	41	41
LO	-10	30.2	30.2	30.2
SCL	F	F	F	F
HAD	15	15	15	15
LAD	2	2	2	2
AC	3	3	3	3
DEF	GAS	GAS	OFF	OFF
IBD	4.0	4.0	1.0	1.0
DDC	20	20	10	10
CDE	75	75	45.1	45.1
DDE	5	2	2	2
BDD	1	1	0	0
BSD	-10	32	32	32
ODD	10	10	10	10
SD	Starts a new defrost cycle at any time or stops a current defrost cycle.			
CFA	OFF	OFF	N/A	OFF
CCR	20	20	N/A	20
CDL	220.1	220.1	N/A	220.1
DOA	OFF	OFF	N/A	OFF
DAD	15	15	N/A	15
APD	2	2	2	2
ATD	10	10	N/A	10
AAS	OFF	OFF	N/A	OFF
CL	Set the hours and minutes in military time.			
DAY	Set the year, month, day of the month and day of the week.			
DS	ON	ON	ON	ON
DL1	OFF	OFF	OFF	OFF
DL2	OFF	OFF	OFF	OFF
DL3	OFF	OFF	OFF	OFF
DL4	OFF	OFF	OFF	OFF
DCF	100	100	100	100
CON	19	19	11	11
COF	7	7	10	10
EL	Will display evaporator coil temp in real time every time an arrow is pressed.			
DL	Will display discharge line temp in real time every time an arrow is pressed.			
CB	Will display cabinet air temp in real time every time an arrow is pressed.			
PLn	Will display power line voltage in real time every time an arrow is pressed.			
RCO	Turns ON/OFF the compressor relay for 10-seconds or until an arrow is pressed.			
RdF	Turns ON/OFF the defrost relay for 10-seconds or until an arrow is pressed.			
RFA	Turns ON/OFF the blower relay for 10-seconds or until an arrow is pressed.			
RDH	Turns ON/OFF the door heater triac for 10-seconds or until an arrow is pressed.			
PRO	Set the controller in receiving mode for programming.			
CEP	Clear all controller memories and reloads the factory default parameters.			
REF	Firmware revision in the format X9.9 (X=version, 9=major revision, 9=minor revision).			

**HOURS OF OPERATION:**

Monday thru Friday 7:30 am - 4:30 pm CST



Quality Refrigeration

**Traulsen**

4401 Blue Mound Road Fort Worth, TX 76106  
Phone: (800) 825-8220 Fax-Svce: (817) 740-6757  
Website: [www.traulsen.com](http://www.traulsen.com)

## TRAULSEN TECHNICAL BULLETIN

PRODUCT SERVICE DEPARTMENT

TROY, OH. 45374-0001

### THERMAL EXPANSION VALVE CHANGE TO INTERNAL EQUALIZER

#### Introduction

Thermal expansion valves used on all R404a refrigeration systems were externally equalized type. New builds and service parts are now internal equalizer type TXV.

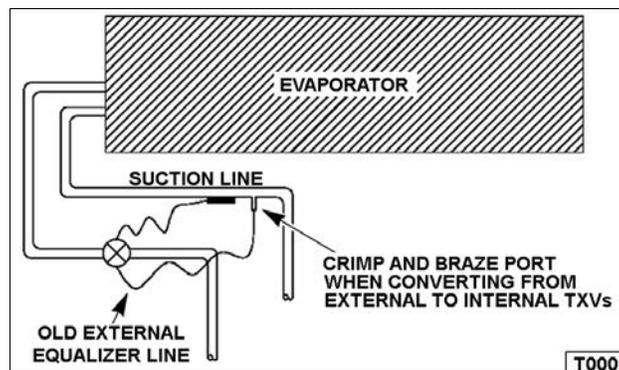
#### Service Parts

If you order any of the external equalized valves, the appropriate internal equalized valve will be sent.

External Equalizer	Description	Internal Equalizer	Description
325-60080-15	TXV, FBSE 1/4 ZP	325-60080-26	TXV, AA 1/4 SW35
325-60080-16	TXV, FBSE 1/8 ZP	325-60080-25	TXV, AA 1/8 SW35
325-60080-20	TXV, AAE 1/8 SW30	325-60080-25	TXV, AA 1/8 SW35
325-60080-21	TXV, AAE 1/4 SW30	325-60080-26	TXV, AA 1/4 SW35
325-60080-22	TXV, AAE 1/4 SW50	325-60080-36	TXV, AA 1/4 SW50
325-60080-23	TXV, AAE 1/2 SW50	325-60080-34	TXV, AA 1/2 SW50

#### Procedure

1. Recover refrigerant or pump system down.
2. Remove thermal expansion valve and external equalizer line from system.
3. Install replacement TXV in high pressure line.
4. Crimp the external equalization port closed and braze shut.
5. Place the refrigeration system back into operation using approved refrigeration system service procedures.



## TRAULSEN TECHNICAL BULLETIN

PRODUCT SERVICE DEPARTMENT

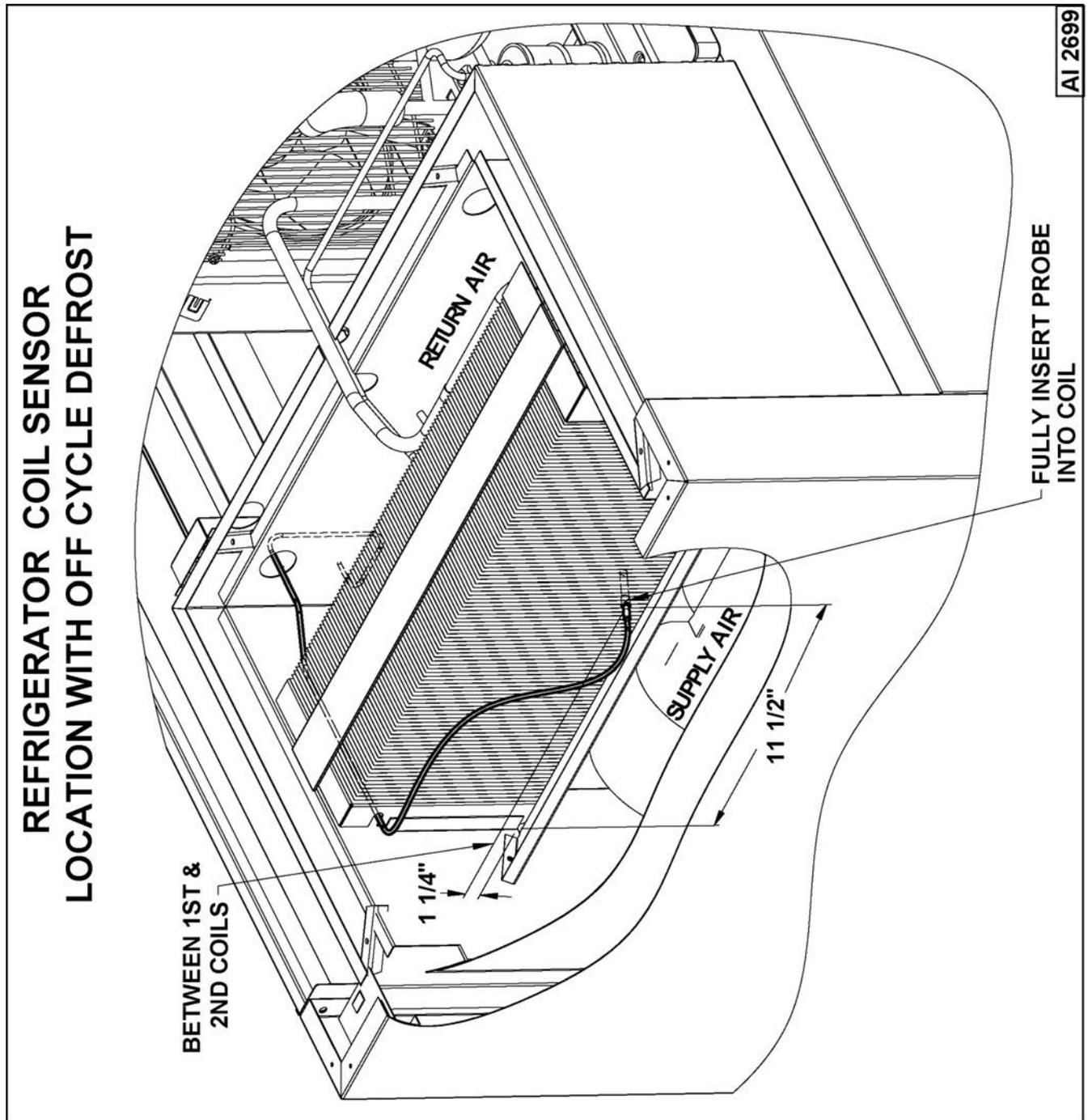
TROY, OH. 45374-0001

### TRAULSEN EQUIPMENT TEMPERATURE SENSOR LOCATIONS

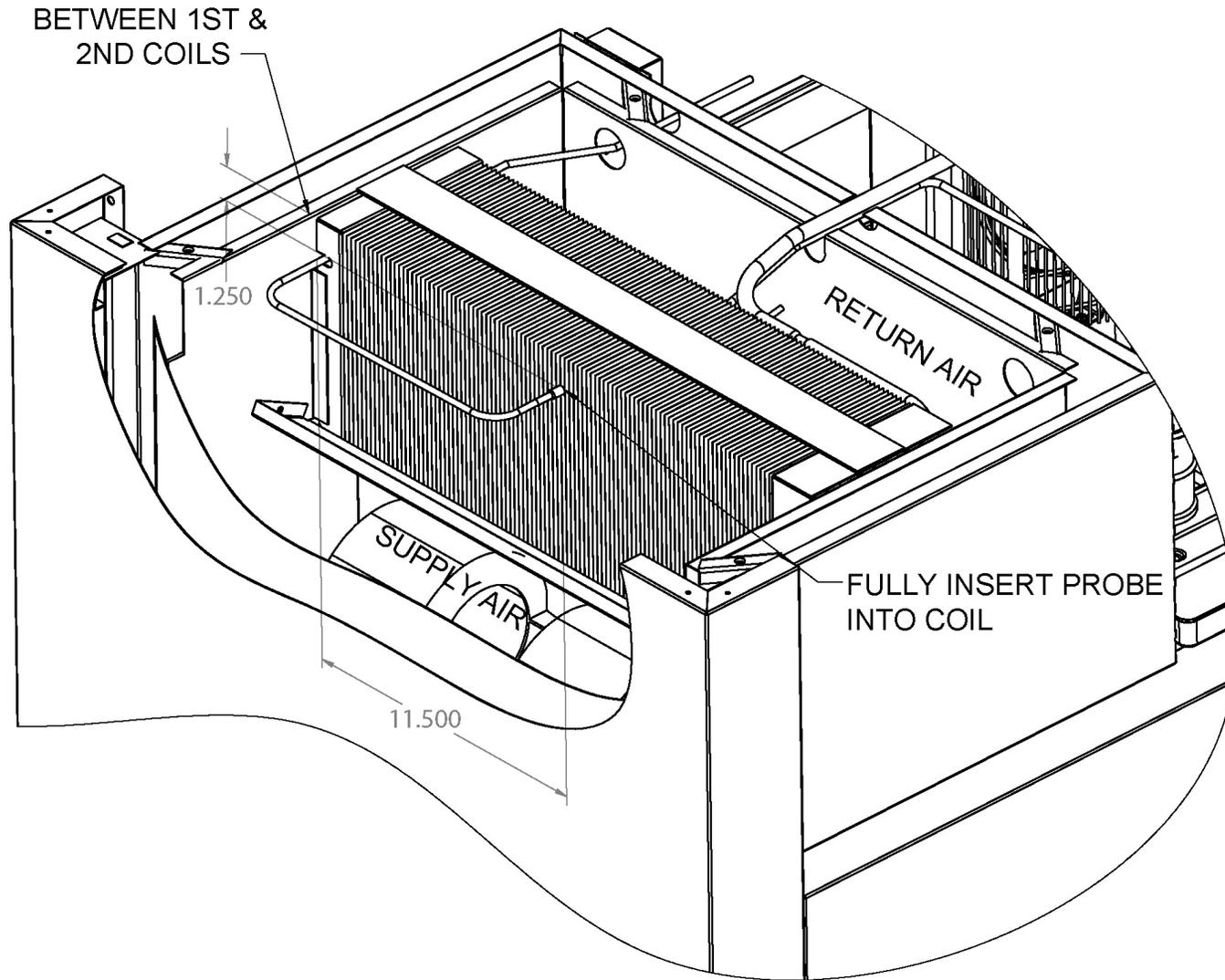
#### Introduction

To inform the field of proper sensor locations on Traulsen refrigeration systems.

#### Service Information

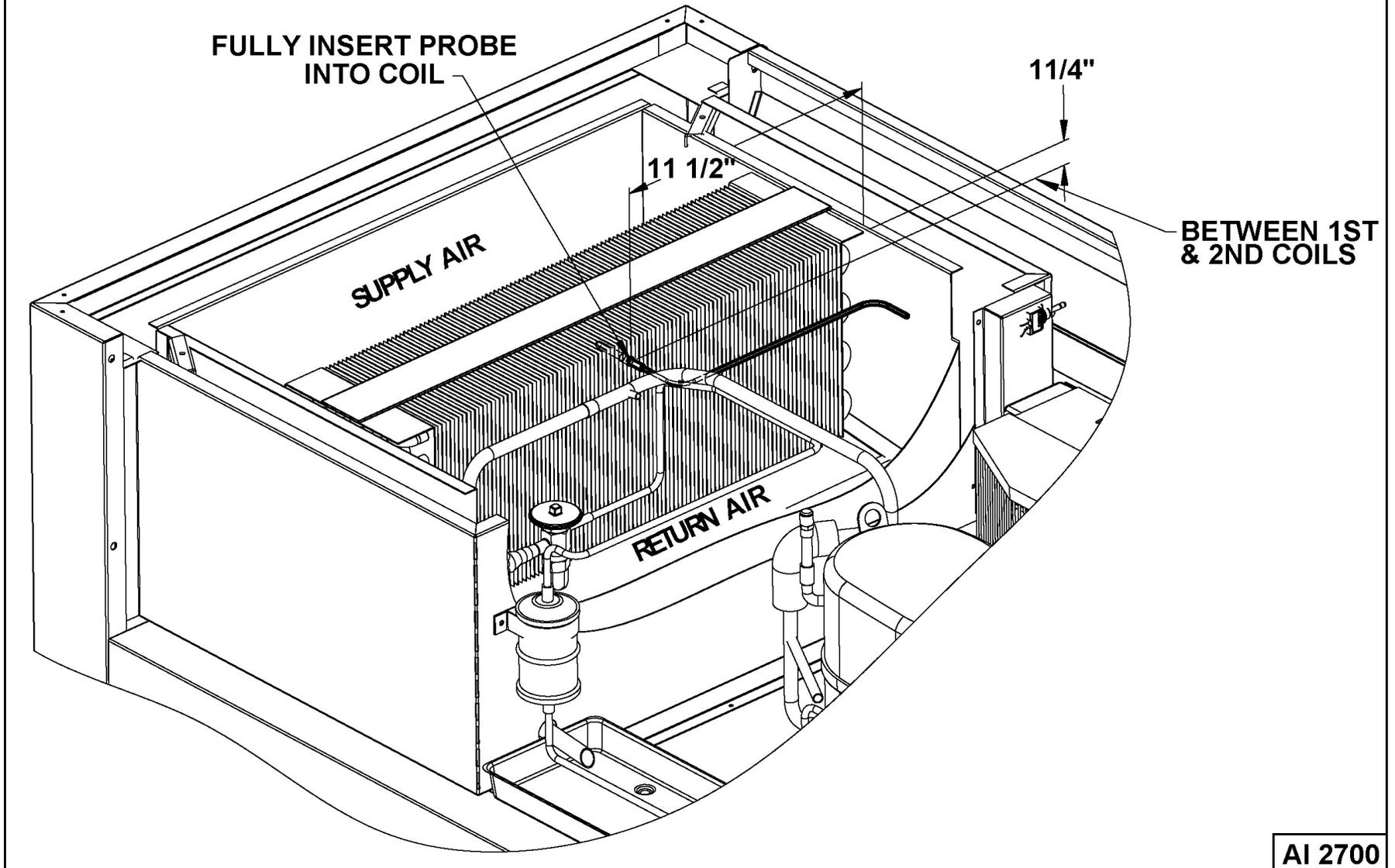


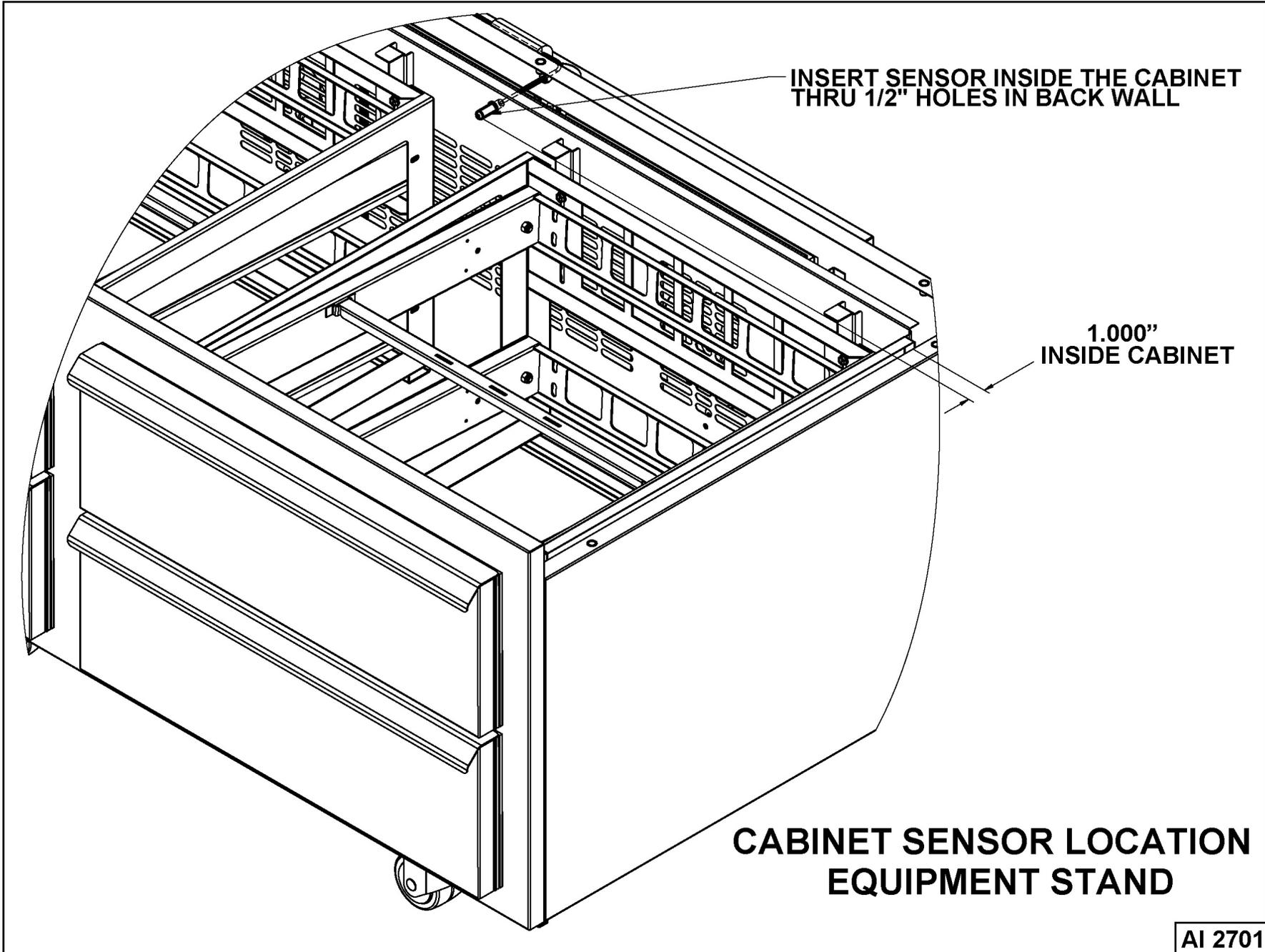
# REFRIGERATOR COIL SENSOR LOCATION WITH ELECTRIC DEFROST

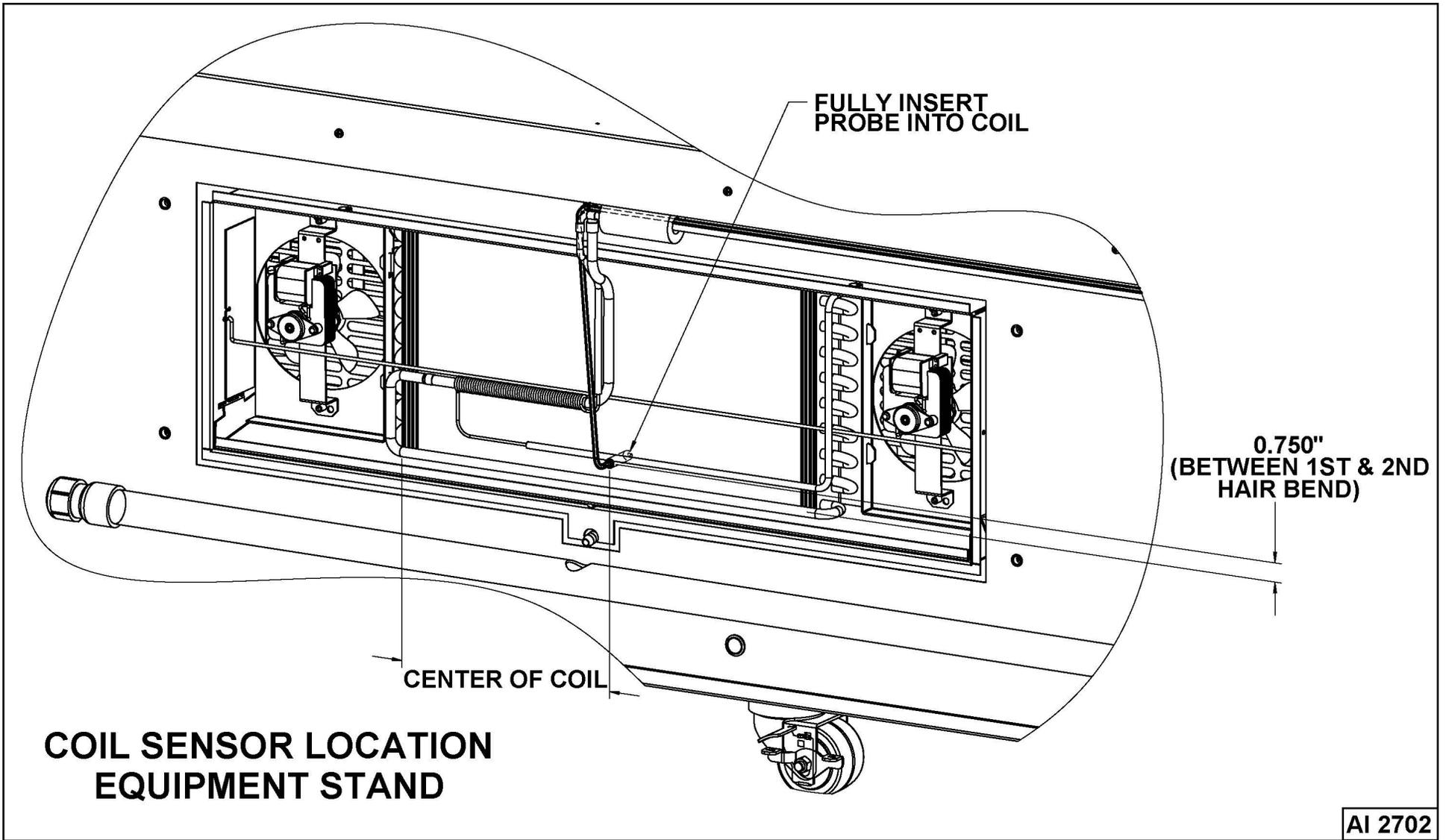


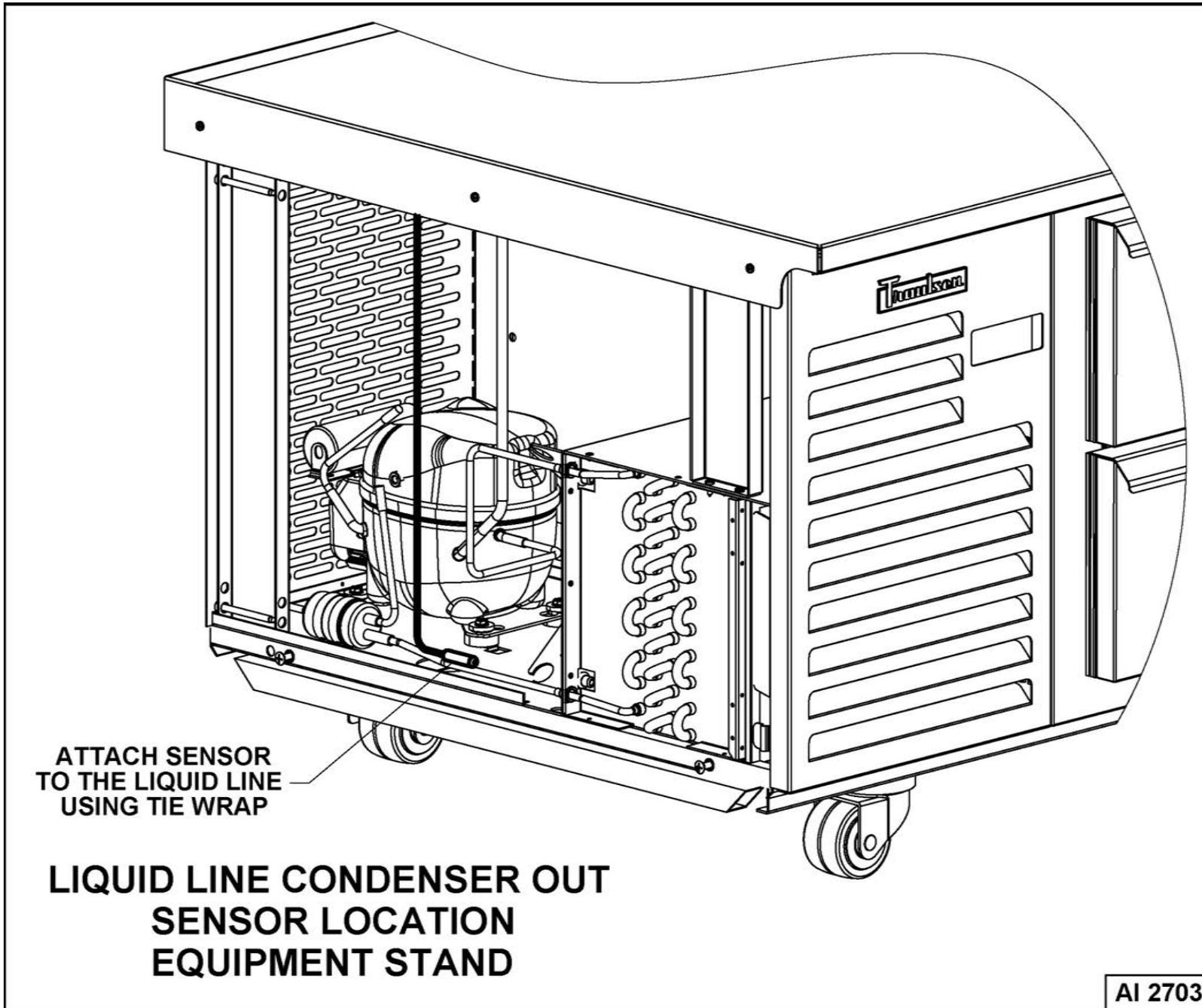
AI 2714

# FREEZER COIL SENSOR LOCATION



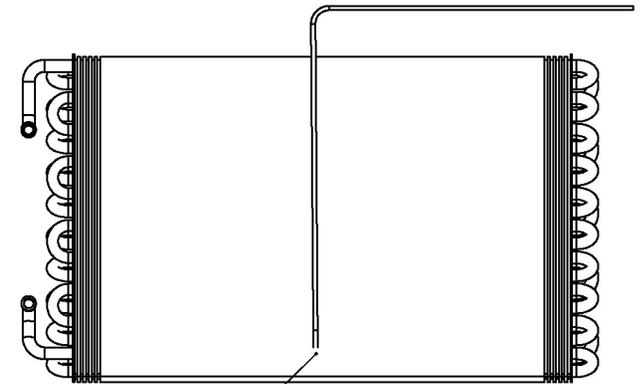
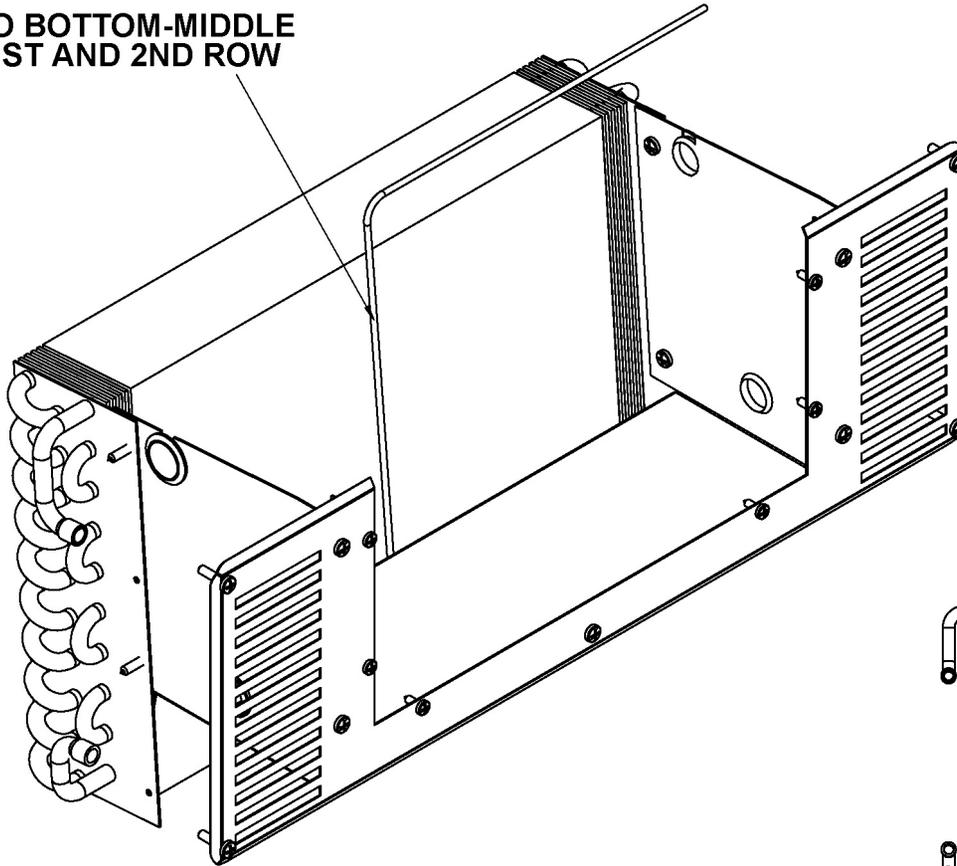






## SENSOR PLACEMENT, COIL, FULL SIZE UNDERCOUNTERS

INSERT SENSOR INTO BOTTOM-MIDDLE  
OF COIL, BETWEEN 1ST AND 2ND ROW

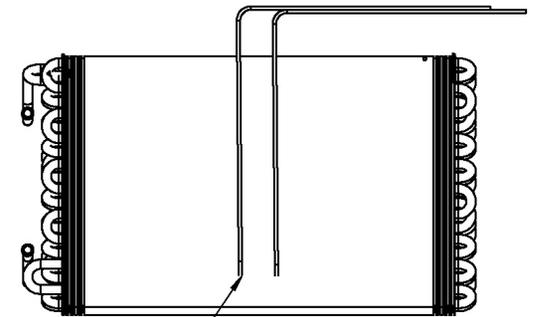
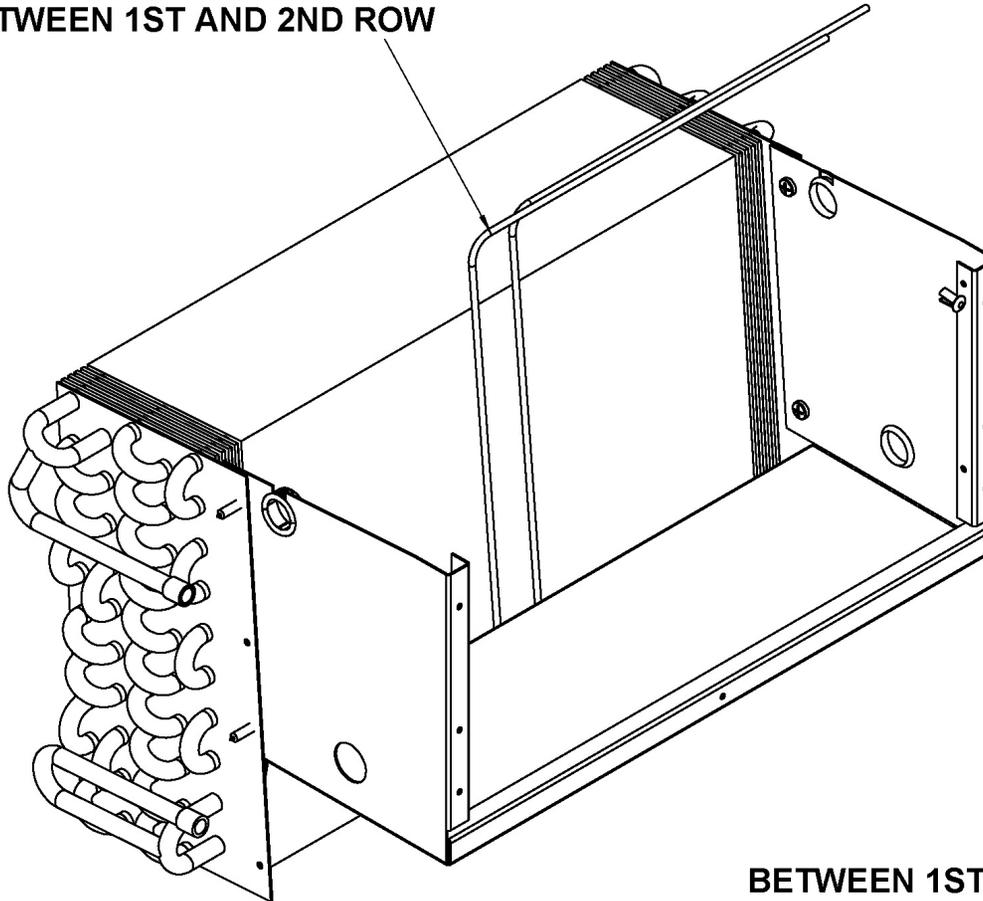


BETWEEN 1ST AND 2ND ROW

AI 2704

## SENSOR PLACEMENT, COIL, RBC50

INSERT SENSORS INTO BOTTOM-MIDDLE  
OF COIL, BETWEEN 1ST AND 2ND ROW

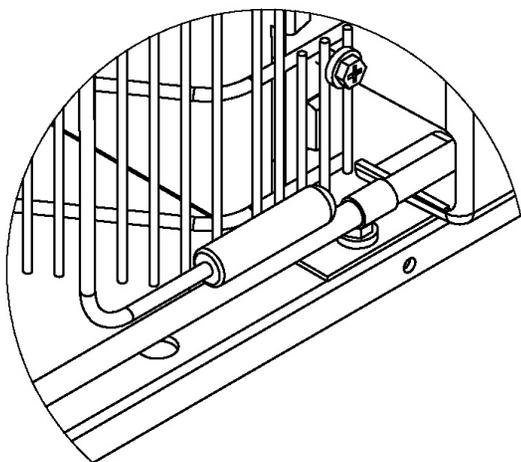


BETWEEN 1ST AND 2ND ROW

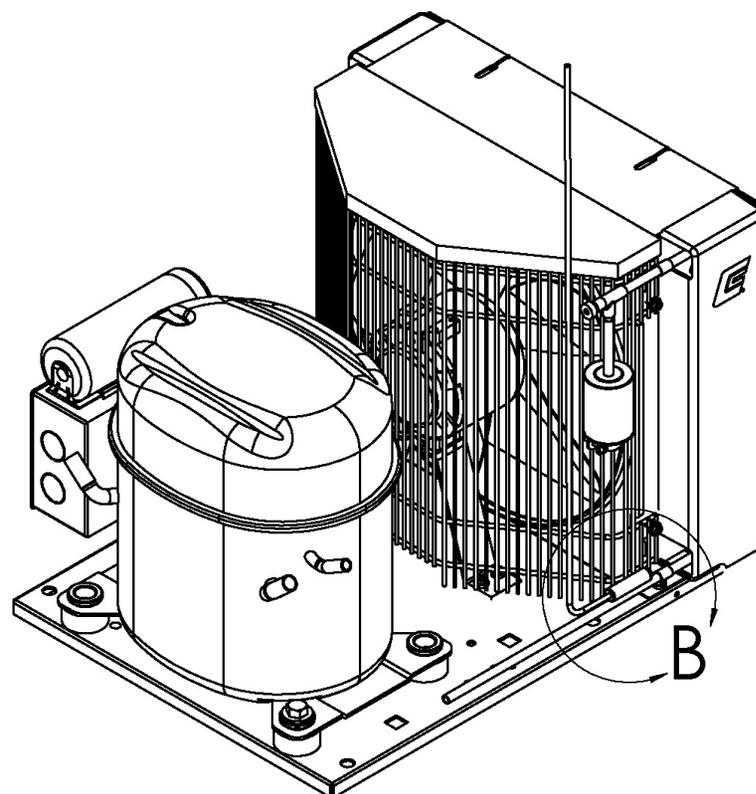
AI 2705

# SENSOR PLACEMENT, LIQUID LINE SENSOR, ALL UPRIGHT CABINETS WITH COPELAND CONDENSING SYSTEMS

**INSTRUCTIONS: PLACEMENT OF P/N 337-60072-TAB (337-60407-TAB) IS CRITICAL. PLACE ON COPPER TUBING EXITING THE CONDENSER, CLOSE TO THE DRIER. HOLD IN PLACE WITH METAL TAPE, INSULATE WITH GREY FOAM TAPE, AND USE SCREW-ON CLAMP.**



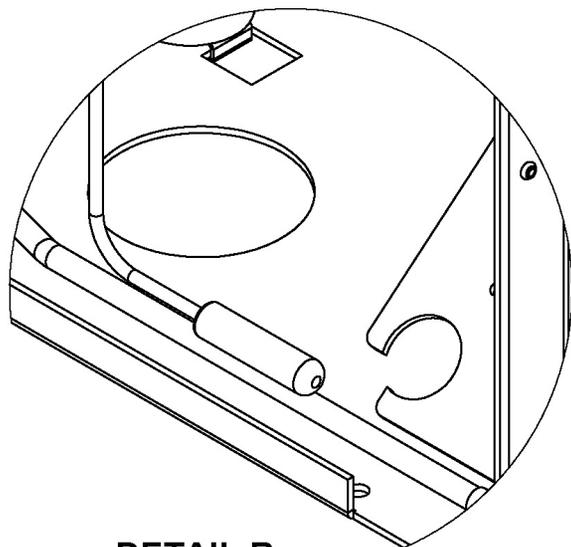
**DETAIL B  
SCALE 1 : 2  
NOTE TAPE AND CLAMP  
NOT SHOWN**



**AI 2706**

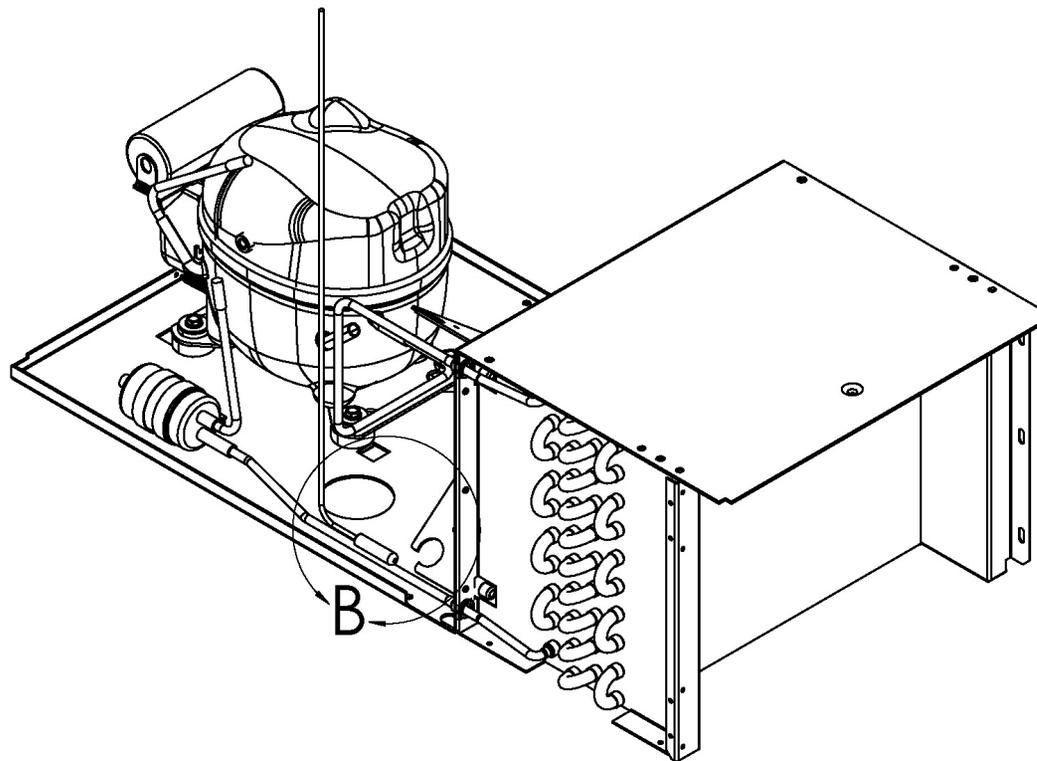
## SENSOR PLACEMENT, LIQUID LINE SENSOR, ALL FULL SIZE UNDERCOUNTERS

**INSTRUCTIONS:** PLACEMENT OF P/N 337-60072-TAB (337-60407-TAB) IS CRITICAL. PLACE ON COPPER TUBING EXITING THE CONDENSER, CLOSE TO THE DRIER. HOLD IN PLACE WITH METAL TAPE, INSULATE WITH GREY FOAM TAPE, AND USE SCREW-ON CLAMP.



**DETAIL B  
SCALE 1 : 2**

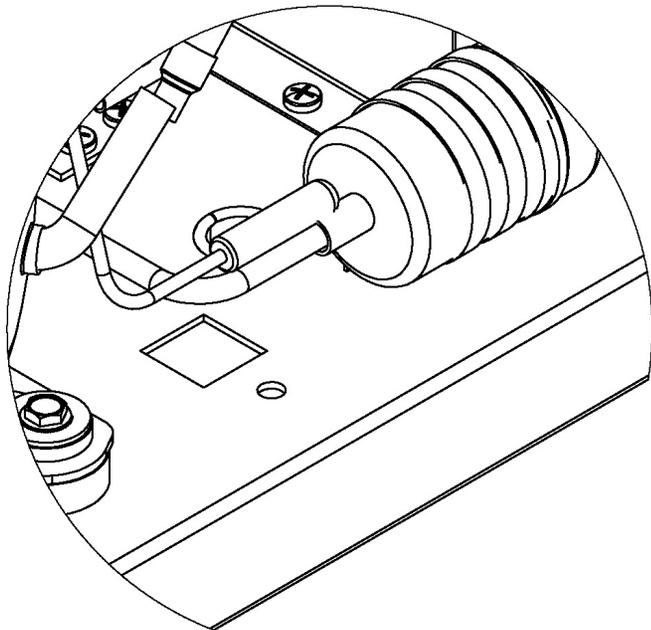
**NOTE: TAPE AND CLAMP NOT SHOWN**



**AI 2707**

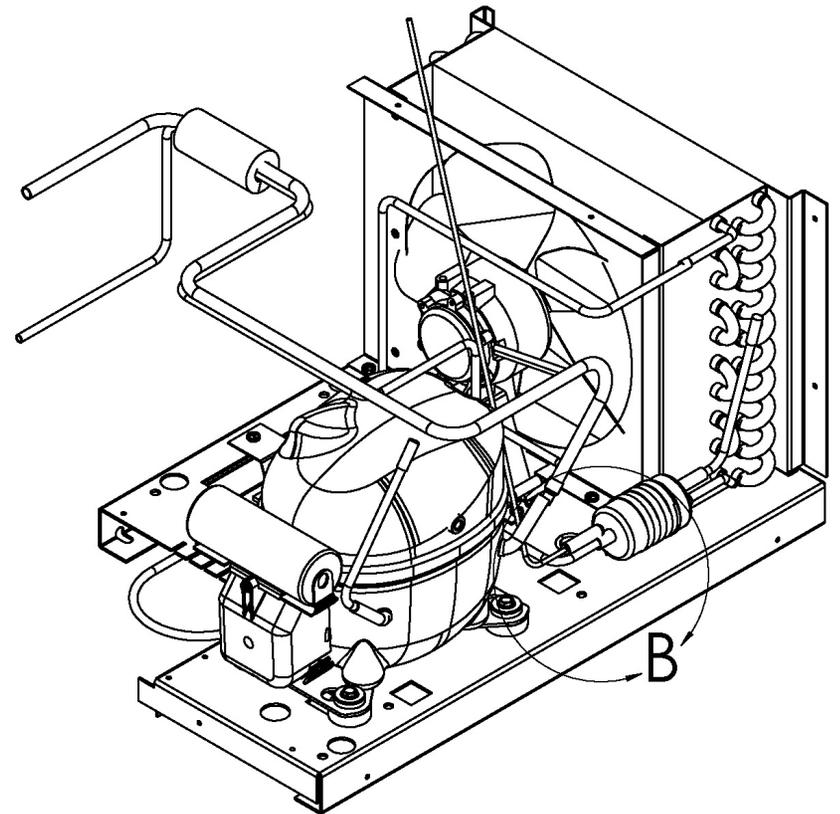
# SENSOR PLACEMENT, LIQUID LINE SENSOR, ALL UPRIGHT CABINETS WITH TRAUlsen CONDENSING SYSTEMS

INSTRUCTIONS: PLACEMENT OF P/N 337-60072-TAB (337-60407-TAB) IS CRITICAL. PLACE ON COPPER TUBING EXITING THE CONDENSER, CLOSE TO THE DRIER. HOLD IN PLACE WITH METAL TAPE, INSULATE WITH GREY FOAM TAPE, AND USE SCREW-ON CLAMP.



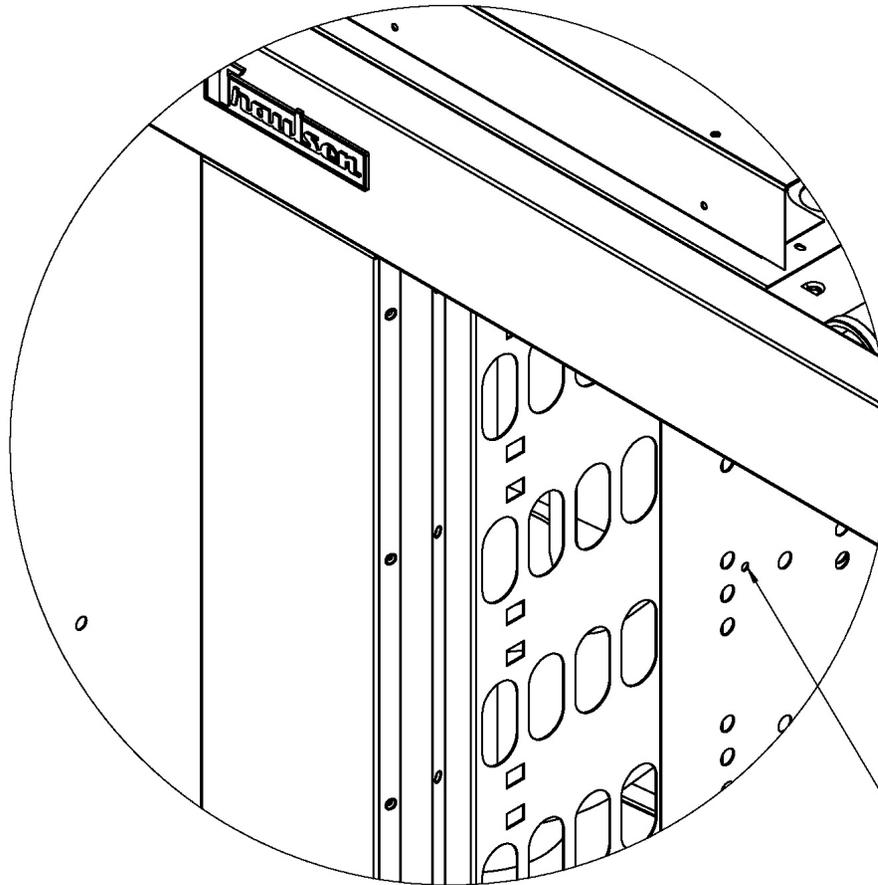
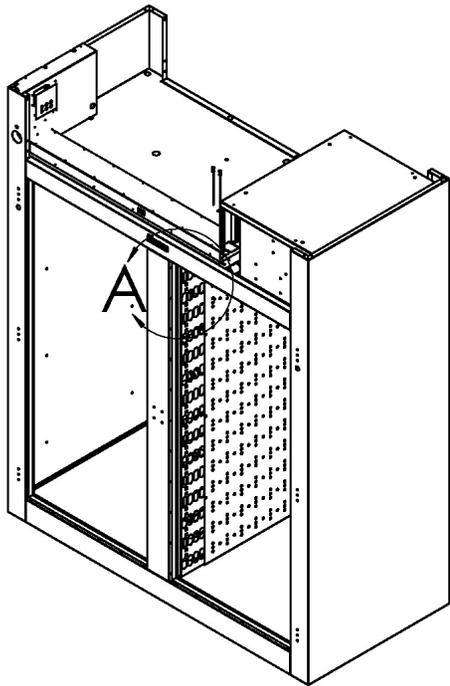
DETAIL B  
SCALE 1 : 2

NOTE: TAPE AND CLAMP NOT SHOWN



AI 2708

# CABINET SENSOR LOCATION, EVENTHAW



SENSOR LOCATION  
HOLE  
(PRE PUNCHED)

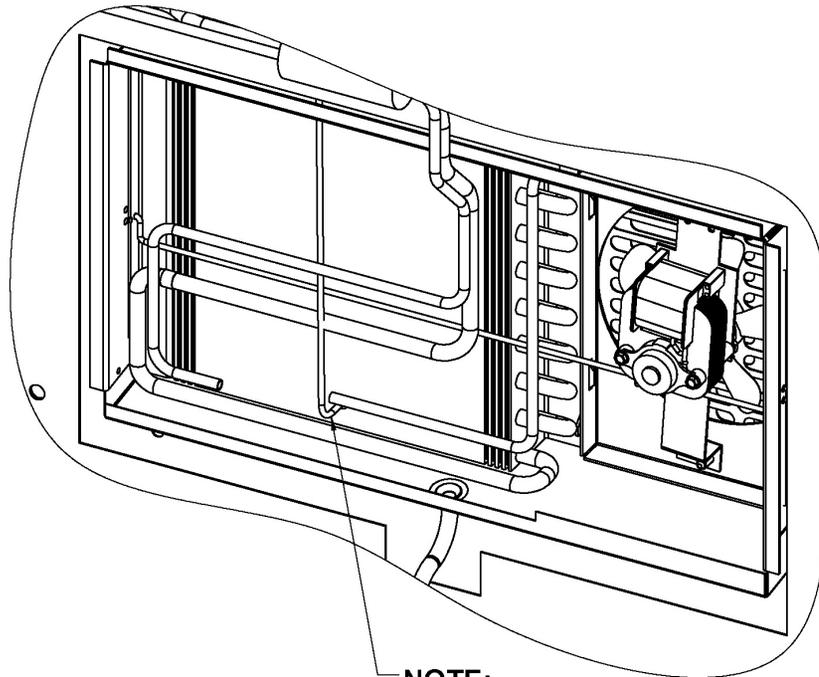
**NOTE: MOUNT SENSOR INSIDE RIGHT HAND SIDE AIR CHAMBER.  
SENSOR WILL BE IN PATH OF BLOWER OUTLET AIR.  
SENSOR MOUNTED POINTING DOWN.**

DETAIL A  
SCALE 1 : 4

AI 2709

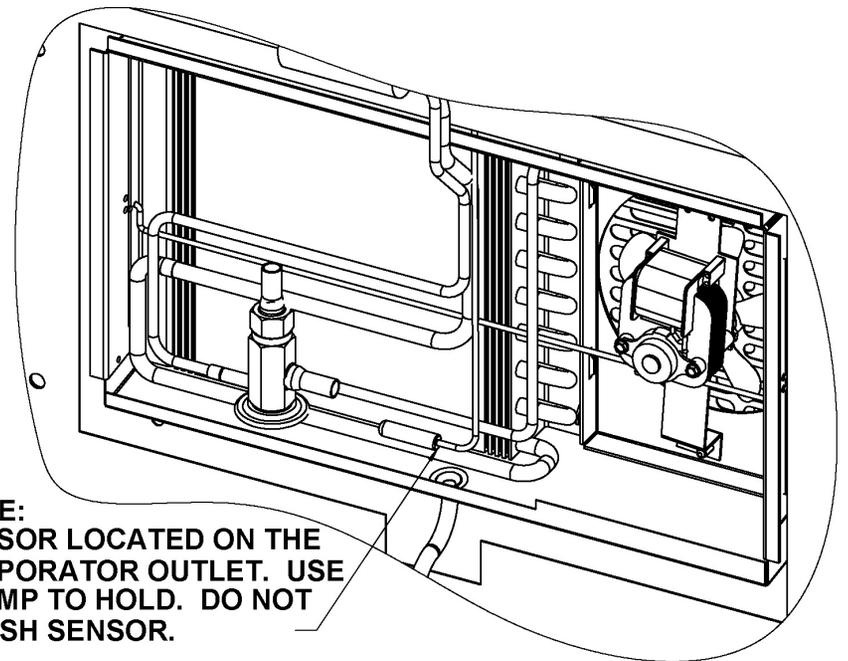
## COIL SENSOR LOCATION, 1 SECTION DUAL TEMP

### REFRIGERATOR COIL SENSOR LOCATION



**NOTE:**  
SENSOR LOCATED IN THE MIDDLE  
OF THE EVAPORATOR COIL,  
BETWEEN 1ST AND 2ND PASS.

### FREEZER COIL SENSOR LOCATION



**NOTE:**  
SENSOR LOCATED ON THE  
EVAPORATOR OUTLET. USE  
CLAMP TO HOLD. DO NOT  
CRUSH SENSOR.

AI 2710

# TRAULSEN TECHNICAL BULLETIN

PRODUCT SERVICE DEPARTMENT

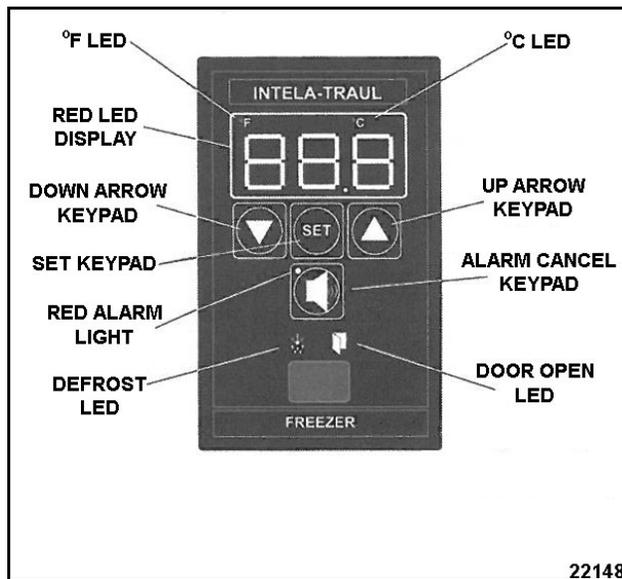
TROY, OH. 45374-0001

## TRAULSEN INTELA-TRAUL REFRIGERATOR & FREEZER CONTROLS CABINET TEMPERATURE SET POINT CHANGE

### Introduction

To inform the field of instructions to change cabinet temperature set point on Traulsen Intela-Traul refrigerator & freezer controls (control software revision code C32 & above) manufactured after January 4<sup>th</sup> 2010.

### Enter Customer Access Mode



**NOTE:** If 30 seconds elapse between keypad presses, the controller will revert to a cabinet temperature display (normal operation). If the wrong security code is entered, the controller will revert to a cabinet temperature display (normal operation). To save settings & exit customer access mode, press the alarm cancel keypad or not pressing any keypads for 30 seconds.

1. Use security code 0A1 by.

0A1

2. Pressing the Set keypad until CUS is displayed.

CUS

3. Press the Set keypad until left zero is flashing with three zeros displayed.

000

4. Press the Set keypad until center zero is flashing with three zeros displayed.

000

5. Press the Down Arrow until A is shown in center display.

0A0

6. Press Set keypad until right zero is flashing with 0A0 displayed.

0A0

7. Press the Up Arrow until 1 is flashing in right display.

0A1

8. Press the Set keypad. Display should read SP (Thermostat Set Point) indicating controller is in Customer Access Mode.

SP

### Change Cabinet Temperature Set Point

1. Press the Up or Down Arrows until SP is shown in the display.

SP

2. Press Set keypad to change set point cutout cabinet temperature value.
3. Press the Up or Down Arrows until the desired cabinet set point is displayed (Example -10°F). This will be the current cabinet temperature set point at cutout.

- 10

4. Press the Set keypad to save the change.
5. Allow controller to return to the cabinet temperature display (normal operation).
6. Check for proper operation.

## TRAULSEN TECHNICAL BULLETIN

PRODUCT SERVICE DEPARTMENT

TROY, OH. 45374-0001

### TRAULSEN 2010 DOE COMPLIANT INTELA - TRAU CONTROL REVISION C32 OR GREATER

#### Introduction

To comply with 2010 Department of Energy requirements on Traulsen refrigerator / freezer equipment manufactured after January 1, 2010, changes were made to the control for all R, A, & G series refrigerator / freezer models. The changes have been made to the defrost, fan cycling, door frame heater, and set point adjustment outlined under this TTB.

Traulsen has taken precaution during this designing process to ensure that product longevity and temperature performance stay consistent with prior designs. These are mainstays of Traulsen's product & philosophy and have not been negatively affected as we strive for energy efficient products and operation. For questions regarding these changes please contact Traulsen at 1-800-825-8220 option 3.

#### Identifying 2010 DOE Compliant Control

##### Control Version Method

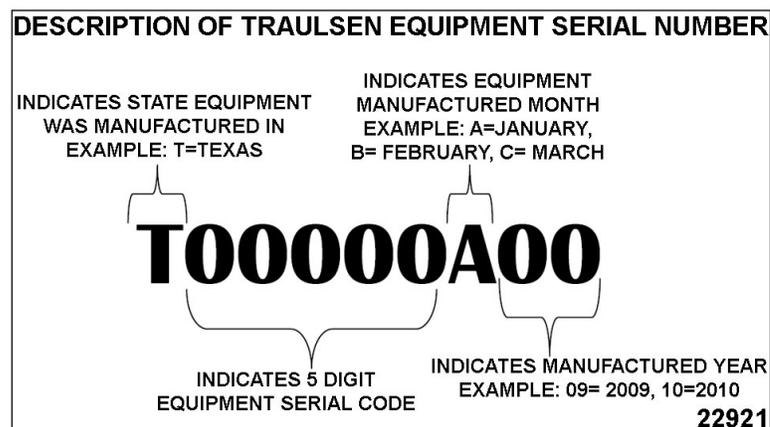
1. Turn control power on by cycling the cabinet On/Off power switch.
2. Verify control display revision number (C ##) during power up.

**NOTE:** If control revision is C32 or greater, the control is DOE compliant and will function as outlined in this TTB.

##### Serial Number Method

1. Access equipment data plate.
2. Verify the equipment manufacturing date from the equipment serial number. Refer to following diagram on how to verify the equipment manufactured date.

**NOTE:** If serial number manufacturing date is January 2010 or later, the control is DOE compliant and will function as outlined in this TTB.



#### Refrigerator Function with DOE Compliant Control

Refrigerators with Intela-Traul control with revision C32 or greater will have an electric defrost cycle that occurs every 8 hrs. for 25 minutes. The evaporator fans will cycle Off with cabinet door openings; The evaporator fan(s) will cycle On & Off during a compressor Off cycle. Evaporator fans will remain On during a compressor On cycle

unless the door is opened. Door frame heaters will cycle On an Off with the compressor.

DEFROST FUNCTION REFRIGERATOR		
Parameter	Value	Description
Def	ELE	Defrost type: Electric
lbd	8	Defrost intervals: 8hrs.
ddc	25	Defrost length: 25mins.
Cde	45	Defrost termination temperature 45°F.

REFRIGERATOR FUNCTION				
	Evaporator Fans		Door Frame Heaters	
	On	Off	On	Off
Compressor On	100%	0%	100%	0%
Compressor Off	Fan(s) cycle (On/Off)	Fan(s) cycle (On/Off)	0%	100%
Door Open	0%	100%	N/A	N/A
Door Closed	Compressor cycle state (On/Off)		N/A	N/A

**Freezer Function with DOE Compliant Control**

Freezer with Intela-Traul control with revision C32 or greater will have an electric defrost cycle that occurs every 4 hrs. for 30 minutes. The evaporator fans will cycle Off with cabinet door openings. The evaporator fan(s) will cycle On & Off during a compressor Off cycle. Evaporator fans will remain On during a compressor On cycle unless the door is opened. Door frame heaters will cycle On and Off with the compressor.

DEFROST FUNCTION FREEZER		
Parameter	Value	Description
Def	ELE	Defrost type: Electric
lbd	4	Defrost intervals: 4hrs.
ddc	30	Defrost length: 30mins.
Cde	45	Defrost termination temperature 45°F.

FREEZER FUNCTION				
	Evaporator Fans		Door Frame Heaters	
	On	Off	On	Off
Compressor On	100%	0%	100%	0%
Compressor Off	Fan(s) cycle (On/Off)	Fan(s) cycle (On/Off)	0%	100%
Door Open	0%	100%	N/A	N/A
Door Closed	Compressor cycle state (On/Off)		N/A	N/A

## Set Point Adjustments

Previous versions of the Intela-Traul control (before revision C32) used SPH (Set Point High) and SPL (Set Point Low) for set point adjustments. The DOE compliant Intela-Traul control (revision C32 or later) uses SP (Set Point) and SPd (Set Point Differential) for adjustment of the set point. SPd default setting is 2. SP default setting is (35 for refrigerators) (-3 for freezers) which cycles the thermostat at a cabinet temperature of (37°F On and 35°F Off for refrigerators) (-1°F On and -3°F Off for freezers).

The following are the parameters that will appear in the customer menu control display with a DOE compliant Intela-Traul control with software revision C32 or greater.

	Thermostat Set Point		Defrost Lockout 1
	Thermostat Set Point Differential		Defrost Lockout 2
	Room Temperature Offset		Defrost Lockout 3
	Temperature Scale		Defrost Lockout 4
	Start Manual Defrost		Cabinet Air Temperature
	Audible Alarm Style *		Evaporator Coil Sensor Temperature
	Time (24-hour clock)		Liquid Line Sensor Temperature *
	Date (month - day - year)		Cabinet Serial Number
	Daylight Savings		

\* Not used with G Control

22922

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