STOELTING
A VOLLRATH® COMPANY

Model SO218 / SO318
SERVICE MANUAL

Manual No. 513573 Rev.3

This manual provides basic information about the machine. Instructions and suggestions are given covering its operation and care.

The illustrations and specifications are not binding in detail. We reserve the right to make changes to the machine without notice, and without incurring any obligation to modify or provide new parts for machines built prior to date of change.

DO NOT ATTEMPT to operate the machine until instructions and safety precautions in this manual are read completely and are thoroughly understood. If problems develop or questions arise in connection with installation, operation, or servicing of the machine, contact Stoelting.

STOELTING®
A VOLLRATH® COMPANY

stoeltingfoodservice.com

Stoelting Foodservice Equipment
502 Highway 67
Kiel, WI 53042-1600
U.S.A.

Main Tel: 800.558.5807
Fax: 920.894.7029

Customer Service: 888.429.5920
Fax: 800.545.0662
Email: foodservice@stoelting.com

A Few Words About Safety

Safety Information

Read and understand the entire manual before operating or maintaining Stoelting equipment.

This manual provides the operator with information for the safe operation and maintenance of Stoelting equipment. As with any machine, there are hazards associated with their operation. For this reason safety is emphasized throughout the manual. To highlight specific safety information, the following safety definitions are provided to assist the reader.

The purpose of safety symbols is to attract your attention to possible dangers. The safety symbols, and their explanations, deserve your careful attention and understanding. The safety warnings do not by themselves eliminate any danger. The instructions or warnings they give are not substitutes for proper accident prevention measures.

If you need to replace a part, use genuine Stoelting parts with the correct part number or an equivalent part. We strongly recommend that you do not use replacement parts of inferior quality.

Safety Alert Symbol:

This symbol Indicates danger, warning or caution. Attention is required in order to avoid serious personal injury. The message that follows the symbol contains important information about safety.

Signal Word:

Signal words are distinctive words used throughout this manual that alert the reader to the existence and relative degree of a hazard.

WARNING

The signal word “WARNING” indicates a potentially hazardous situation, which, if not avoided, may result in death or serious injury and equipment/property damage.

CAUTION

The signal word “CAUTION” indicates a potentially hazardous situation, which, if not avoided, may result in minor or moderate injury and equipment/property damage.

CAUTION

The signal word “CAUTION” not preceded by the safety alert symbol indicates a potentially hazardous situation, which, if not avoided, may result in equipment/property damage.

NOTE (or NOTICE)

The signal word “NOTICE” indicates information or procedures that relate directly or indirectly to the safety of personnel or equipment/property.

TABLE OF CONTENTS

LIST OF ILLUSTRATIONS

SECTION 1
INTRODUCTION

1.1 REMOTE POSSIBILITIES

The Stoelting Optima delivers frozen drink profits by the pitcher. The Model SO218/318 is a high-volume producer of ready-to-serve frozen cocktails or frozen neutral base for those special drink recipes. From an extra-small space, the Optima's compact design and high capacity output will give you extra-large profits.

Figure 1. Model SO218/318

1.2 FEATURES

High Capacity
- 15-18 gallons per hour output
- Thick, stackable slush for post-mixing
- Or, ready-to-serve pre-mixed products

High Efficiency Evaporator/ Auger
- Stainless steel construction
- Long life auger blades
- Quiet, smooth operation
- 8 qt. freezing cylinder capacity

Consistency Control
- Adjustable for thick or thin products
- Sensitive to product demand
- 24 volt control circuits

Dispensing Head Door
- "No-Freeze" design prevents blockages
- Fast dispense for quick fill of pitchers
- Controlled dispense for drinks by the glass
- Convenient pull-type handle
- Attractive, clear, see-thru design
- Visible, moving product for merchandising appeal

1.3 DISPENSER SPECIFICATIONS

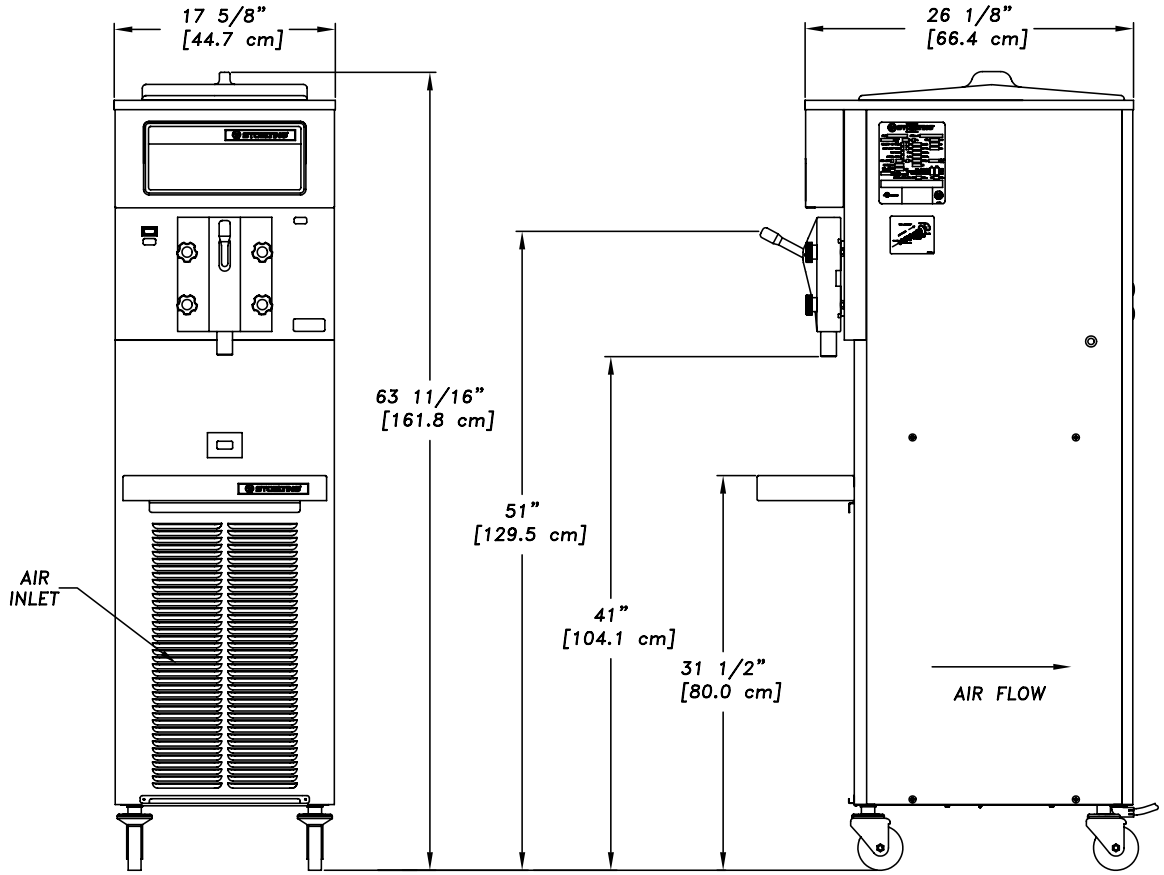


Figure 2. Dispenser Specifications

Electrical
- 208/230/60/1
- 20 amp circuit & plug
- 12 running amps

Refrigeration
- HFC-404A environmentally-friendly refrigerant
- SO318 Air-cooled or water-cooled, self contained
- SO218 Air-cooled or water-cooled, self contained

Crated Dimensions
- Width: 25" (63.5cm)
- Depth: 51" (129.5cm)
- Height: 66" (167.6cm)
- Weight: 410lbs.(186kg)

Dimensions
- Width: 17-5/8"(44.7cm)
- Depth: 26-1/8"(66.4cm)
- Height: 63-11/16"(161.8cm) w/casters
- Weight: 315lbs.(142.9kg)

SECTION 2
INSTALLATION INSTRUCTIONS

2.1 SAFETY PRECAUTIONS

Do not attempt to operate the freezer until the safety precautions and operating instructions in this manual are read completely and are thoroughly understood.

Take notice of all warning labels on the freezer. The labels have been put there to help maintain a safe working environment. The labels have been designed to withstand washing and cleaning. All labels must remain legible for the life of the freezer. Labels should be checked periodically to be sure they can be recognized as warning labels.

If danger, warning or caution labels are needed, indicate the part number, type of label, location of label, and quantity required along with your address and mail to:

STOELTING, LLC
ATTENTION: Customer Service
502 Hwy. 67
Kiel, Wisconsin 53042

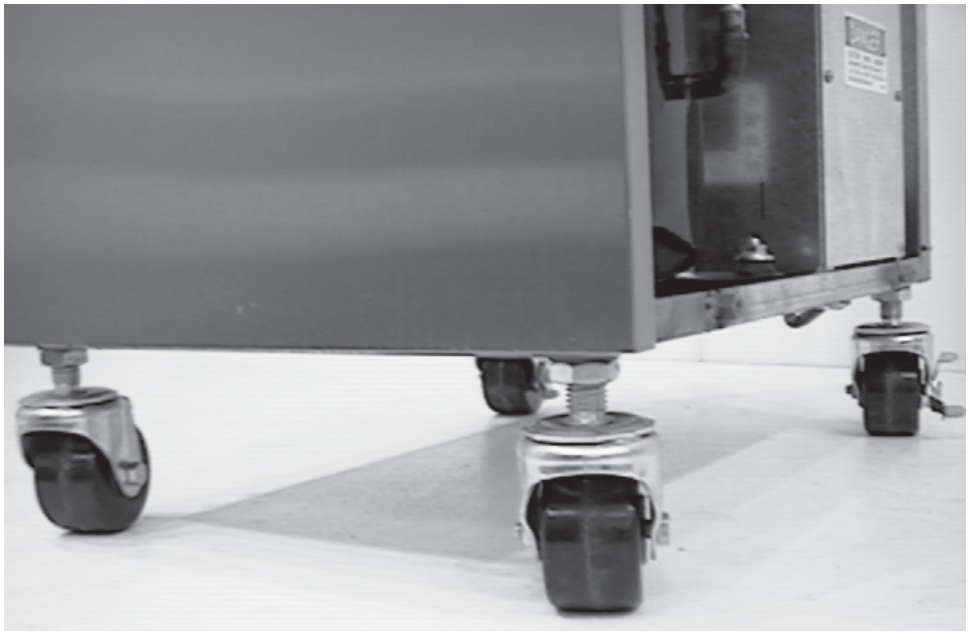


Figure 3. Leveling Unit

2.2 SHIPMENT AND TRANSIT

The freezer has been assembled, operated and inspected at the factory. Upon arrival at the final destination, the complete freezer must be checked for any damage which may have occurred during transit.

With the method of packaging used, the freezer should arrive in excellent condition. THE CARRIER IS RESPONSIBLE FOR ALL DAMAGE IN TRANSIT, WHETHER VISIBLE OR CONCEALED. **Do not** pay the freight bill until the freezer has been checked for damage. Have the carrier note any visible damage on the freight bill. If concealed damage and/or shortage is found later, advise the carrier within 10 days and request inspection. The customer must place claim for damages and/or shortages in shipment with the carrier. **Stoelting, Inc. cannot make any claims against the carrier.**

2.3 FREEZER INSTALLATION

Installation of the freezer involves moving the freezer close to its permanent location, removing all crating, setting in place, assembling parts, and cleaning.

A. Uncrate the freezer.

B. The freezer must be placed in a solid level position. To level adjust casters.

C. The freezer is equipped with an air cooled condenser and requires correct ventilation; the front is the intake and the back is the discharge. Both front and back require 3" clearance for proper operation.

D. Place all switches in the OFF position.

E. Connect the power cord. The plug is designed for 208/230 volt/20 amp duty. The unit must be connected to a properly grounded receptacle. The electrical cord furnished as part of the freezer has a three prong grounding type plug. The use of an extension cord is not recommended. If one must be used, use one with a size 12 gauge or heavier with a ground wire. **Do not** use an adaptor to get around grounding requirements.

CAUTION

DO NOT ALTER OR DEFORM PLUG IN ANY WAY!

F. Install the drip tray, cover and other miscellaneous parts on the freezer.

2.4 INSTALLING PERMANENT WIRING

If permanent wiring is required by local codes, the following procedure must be performed.

WARNING

DISCONNECT FREEZER FROM THE SOURCE OF ELECTRICAL SUPPLY BEFORE SERVICING.

A. Remove the right side panel and electrical box cover to gain access to the power cord connection.

B. Disconnect the black and white wires from the terminal block (L1 and L2). Disconnect the green ground wire from the grounding screw.

C. Remove the strain relief connector from the bottom of the freezer base.Remove the power cord.

D. Install permanent wiring according to local code.

E. Connect black wire to L1 on the terminal block. Connect the white wire to L2 on the terminal block. Connect the green or yellow and green striped ground wire to the grounding screw.

F. Replace all panels.

SECTION 3
INITIAL SETUP AND OPERATION

3.1 OPERATOR'S SAFETY PRECAUTIONS

SAFE OPERATION IS NO ACCIDENT; Observe these rules:

A. **Know the freezer.** Read and understand the Operating Instructions.

B. **Notice all warning labels on the freezer.**

C. **Wear proper clothing.** Avoid loose fitting garments, and remove watches, rings or jewelry which could cause a serious accident.

D. **Maintain a clean work area.** Avoid accidents by cleaning up the area and keeping it clean.

E. **Stay alert at all times.** Know which switch, push button or control you are about to use and what effect it is going to have.

F. **Disconnect electrical cord for maintenance.** Never attempt to repair or perform maintenance on the freezer until the main electrical power has been disconnected.

G. **Do not operate under unsafe operating condi tions.** Never operate the freezer if unusual or excessive noise or vibration occurs.

3.2 OPERATING CONTROLS AND INDICATORS

Before operating the freezer, it is required that the operator know the function of each operating control. Refer to Figure 4 for the location of the operating controls on the freezer.

A. Pump OFF/ON Switch (Model SO318 only)
The pump OFF/ON Switch is a two position switch. In the OFF position the pump will not run. In the ON position the pump will run until the proper liquid level is reached, then stop. If the hopper does not fill completely, place the switch in the OFF position, then back to ON to continue filling.

WARNING

THE CLEAN/OFF/SERVE SWITCH MUST BE PLACED IN THE OFF POSITION WHEN DISASSEMBLING FOR CLEANING OR SERVICING. THE FREEZER MUST BE DISCONNECTED FROM ELECTRICAL SUPPLY BEFORE REMOVING ANY ACCESS PANEL.

B. CLEAN/OFF/SERVE Switch
The CLEAN/OFF/SERVE switch is a three position toggle and refrigeration switch used to control the operation of the agitator. When the switch is placed in the CLEAN position, the agitator will rotate.

When the switch is placed in the OFF position, nothing will operate. When the switch in placed in the SERVE position, the agitator and refrigeration system will run until proper consistency is reached then stop.

C. Mix Low Light
The Mix Low light will illuminate when you are low on mix.

CAUTION

DO NOT OPERATE FREEZER WHEN THE LOW MIX LIGHT IS ILLUMINATED OR DAMAGE TO THE FREEZER COULD RESULT.

D. Front Door Interlock Switch
When the front door is removed the freezer will not run. When the front door is installed a stanless steel peg will close the switch and the freeezer will run.

E. High Pressure Cutout Switch (water cooled only)
The high pressure cutout switch (high limit control) is located on the lower left side. When the switch is tripped nothing will run. Push to reset.

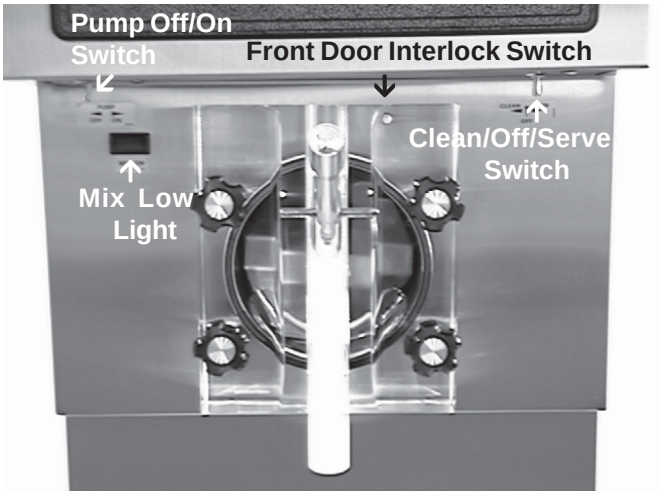


Figure 4. Controls

3.3 DISASSEMBLY OF FREEZER PARTS

CAUTION

PLACE THE CLEAN/OFF/SERVE SWITCH IN THE OFF POSITION BEFORE DISASSEMBLING FOR CLEANING OR SERVICING.

Inspection for worn or broken parts should be made at every disassembly of the freezer for cleaning or other purposes. All worn or broken parts should be replaced to ensure safety to both the operator and the customer and to maintain good freezer performance and a quality product. Frequency of cleaning must comply with the local health regulations.

To disassemble the freezer, refer to the following steps:

A. Disconnect hose from hopper cover (Model SO318 only).

B. Remove hopper cover.

C. Remove retaining clip and adaptor (Model SO318 only).

D. Remove the front door by turning off the knobs, and then pull the front door off the studs.

Figure 5. Disassembling Freezer

E. Remove the spigot body from the front door by pulling the retaining pin out of the spigot handle. Push the spigot body thru the bottom of the front door.

F. Remove the agitator assembly from the freezer. Pull the agitator assembly out of the freezer barrel.

G. Keep the rear of the agitator assembly tipped up once it is clear of the freezer barrel to avoid dropping rear seal.

H. Remove the front agitator support bearing and the two agitator blades.

I. Remove the rear seal assembly.

J. Wipe socket lubricant from the drive end (rear) of the agitator with a cloth or paper towel.

K. Remove all "O" Rings.

WARNING
DO NOT USE ANY TYPE OF SHARP OBJECT TO REMOVE THE "O" RINGS.

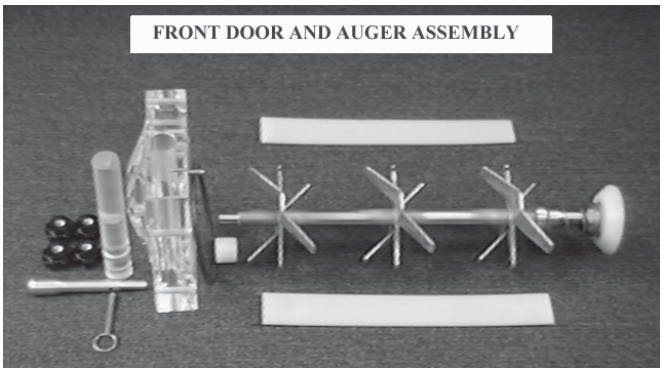


Figure 6. Front Door and Auger Assembly

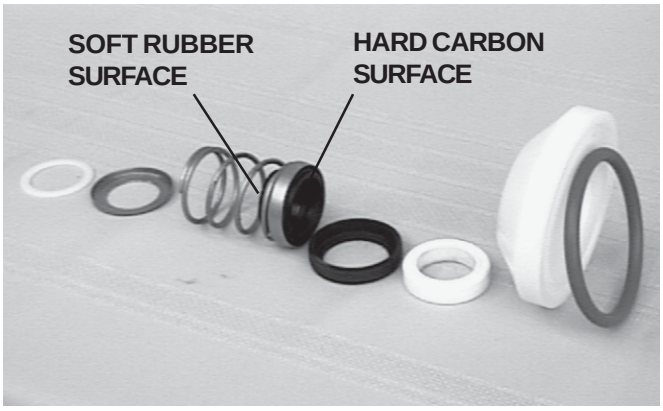


Figure 7. Rear Seal Assembly

3.4 CLEANING THE FREEZER PARTS

Place all loose parts in a pan or container and take to the wash sink for cleaning. To clean freezer parts refer to the following steps:

A. Place all parts in warm mild detergent water and clean with brushes provided. Rinse all parts with clean hot water.

CAUTION
DO NOT DAMAGE PARTS BY DROPPING OR ROUGH HANDLING.

B. Wash the freezer barrel with warm detergent water and brushes provided.

C. The exterior should be kept clean at all times to perserve the lustre of the stainless steel. A mild alkaline cleaner is recommended. Use a soft cloth or sponge to apply the cleaner.

D. Remove the drip tray insert and drain tray. Clean with a soap solution. Rinse with clean hot water.

3.5 SANITIZE FREEZER AND FREEZER PARTS

A. Use a sanitizer mixed according to manufacturer's instructions to provide a 100 parts per million strength solution. Mix sanitizer in quantities of no less than 2 gallons (7.5 liters) of 120°F water. Allow the sanitizer to contact the surfaces to be sanitized for 5 minutes. Any sanitizer must be used only in accordance with the manufacturer's instructions.

B. Place all parts in the sanitizing solution, then remove and let air dry.

3.6 ASSEMBLY OF FREEZER

To assemble the freezer parts, refer to the following steps:

NOTE
Petro-Gel sanitary lubricant or equivalent must be used when lubrication of parts is specified.

NOTE

The United Sates Department of Agriculture and the Food and Drug Administration require that lubricants used on food processing equipment be certified for this use. Use lubricants only in accordance with the manufacturer's instructions.

A. Assemble spigot "O" Rings onto parts dry, **without lubrication**. Then apply a thin film of sanitary lubrication to exposed surfaces of the "O" Rings.

B. Assemble the rear seal assembly onto the agitator. Be sure the "O" Ring is in place before installing the rear seal. Do not lubricate.

C. Lubricate the agitator drive (rear) with a small amount of white socket lubricant. A small container of socket lubricant is shipped with the freezer.

D. Install the two plastic agitator blades onto the agitator. Install front agitator bearing to the door.

E. Push the auger into the freezer barrel and rotate slowly until the agitator engages the drive socket.

F. Install the spigot body with "O" Rings into the front door from the bottom. Push straight up until the spigot is in place. Place the spigot handle into the spigot and insert the retainer pin.

G. Install door "O" Ring after lubricating.

H. Install the front door on the freezer.

I. Install the knobs on the freezer studs.

CAUTION

FINGER TIGHTEN THE KNOBS EVENLY. DO NOT OVER-TIGHTEN KNOBS.

Look for the proper seal between the freezer barrel door, "O" Ring, and front door.

J. Install hose adaptor onto hopper cover and secure with retainer clip (SO318 only). Figure 8.

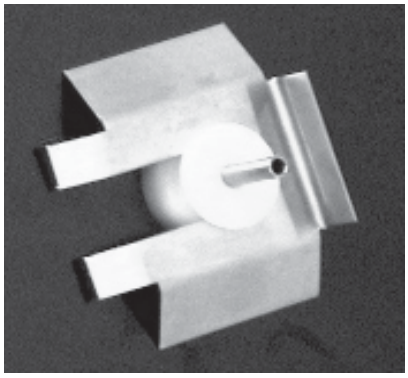


Figure 8. Retainer Clip

K. Install hopper cover.

L. Connect mix hose to hopper cover (Model SO318 only).

3.7 SANITIZING

Sanitizing must be done after the freezer is clean and just before filling with mix. **Sanitizing the night before is not effective.** However, you should always clean the freezer and parts after using it.

WARNING

THE UNITED STATES DEPARTMENT OF AGRICULTURE AND FOOD AND DRUG ADMINISTRATION REQUIRE THAT ALL CLEANING AND SANITIZING SOLUTIONS USED WITH FOOD PROCESSING EQUIPMENT BE CERTIFIED FOR THIS USE. USE "STERA-SHEEN" OR EQUIVALENT.

When sanitizing the freezer, refer to local sanitary regulations for applicable codes and recommended sanitizing products and procedures. The frequency of sanitizing must comply with local health regulations. Mix sanitizer according to manufacturer's instructions to provide a 100 parts per million strength solution. Mix sanitizer in quantities of no less than 2 gallons (7.5 liters) of 120°F water. Allow sanitizer to contact the surfaces to be sanitized for 5 minutes. Any sanitizer must be used only in accordance with the manufacturer's instructions.

NOTE

Stoelting, Inc. has found that STERA-SHEEN GREEN LABEL SANITIZER AND CLEANER does an effective job of properly sanitizing and cleaning a soft serve freezer. We therefore include a sample with each new freezer. For further information read the directions on the packet. Other products may be as effective.

CAUTION

PROLONGED CONTACT OF SANITIZER WITH FREEZER MAY CAUSE CORROSION OF STAINLESS STEEL PARTS.

In general, sanitizing may be conducted as follows:

A. Prepare 4 gallons (15 liters) of sanitizing solution following manufacturer's instructions, then pour into hopper (pump thru auto fill, SO318 only).

B. Place the CLEAN/OFF/SERVE switch in the CLEAN position. Check for leaks around the front door seal.

C. After five minutes, open spigot to drain sanitizing solution. When solution has drained, place the CLEAN/OFF/SERVE switch in the OFF position. Allow the freezer barrel to drain completely.

3.8 INITIAL FREEZE DOWN AND OPERATION

This section covers the recommended operating procedures to be followed for the safe operation of the freezer.

A. Sanitize just prior to use.

B. Place the CLEAN/OFF/SERVE switch in the OFF position.

C. With the spigot open, pour one cup of mix into the hopper. Allow approximately 8 oz. of sanitizing solution and mix to drain out. Close the spigot and fill the hopper with mix.

D. Place the CLEAN/OFF/SERVE switch in the SERVE position. The product will be ready to serve in about 15 minutes.

3.9 REMOVING PRODUCT

Before disassembly, all product must be removed.

A. Open spigot and completely drain freezer.

B. Prepare not less than 3 gallons of warm detergent water and pour into hopper (pump thru auto fill SO318 only).

C. Use a brush to clean the hopper then completely drain freezer.

Figure 9. Consistency Control

3.10 GENERAL OPERATION INFORMATION

The SO218/318 is a cocktail/slush freezer. It is available in 208-230 volt, either air-cooled or water-cooled. The air-cooled version has front-to-back airflow requiring three inches of air space in the front and back for proper refrigeration. This unit is not supplied with a pump, however, Stoelting does offer the Fill-O-Matic II (electric) and Fill-O-Matic III (gas) pumps FOR THE SO318. This freezer is intended for use with non-dairy products only and will produce 15-18 GPH.

1. Filling

To fill the freezer, pour mix into hopper until full. To fill freezers with the optional Fill-O-Matic pump, connect the pump and turn the fill switch on. This will open the solenoid valve and the freezer will begin to fill. The liquid level control circuit is designed with a fill timer. This timer is designed to shut the compressor off if the top level probe is not satisfied before the timer expires. If the top level probe is not satisfied before the timer times out, it locks the compressor out and freezing will not occur, if this happens, turn the fill switch off and then back on, this will reset the timer.

2. Operation

Once the freezer is full of mix, turn the clean-off-serve switch to the “serve” position. The drive motor will start immediately. The compressor utilizes a 10 second delay-on-make / delay-on-break timer therefore, the compressor will start 10 seconds later. The compressor will continue to run until the drive motor torque switch is satisfied, then after a 10 second delay stop. The drive motor runs continuously in the “serve” or “clean” switch positions. There is no night mode or standby mode. If product is left in the freezer overnight we recommend to simply turn the freezer off. Do not run the freezer in “clean” overnight. Freeze down time will typically be 6-10 minutes depending on the type of product used and the starting product temperature.

3. Pump Operation

When the mix level in the hopper drops below the bottom level probe, the solenoid valve opens and the pump begins to fill until the top level probe is satisfied. When satisfied, the solenoid valve closes, and pump will continue to run until shut off pressure is reached. The electric pump will run until the pressure reaches the cut-out pressure of the pump. A gas pump will continue to run until the pressure in the mix line equals the gas pressure of the pump. If you wish to use the product in the hopper prior to cleaning, turn the pump off and turn the freezer fill switch off. This will disable the fill timer and allow the compressor to continue to run. Be cautioned that once the hopper is empty, the barrel could freeze up. Only run the freezer until the hopper is empty or damage may occur.

4. Fill Timer Operation

The timer has ten dip switches, all switches placed in the “on” position are added together to make up the total time delay. This freezer leaves the factory with 64, 128 and 256 in the “on” position, this is a total of 448 seconds. The preset time should be enough to fill the hopper up to the top level probe. Fill time may be dependent on what style pump is employed. The purpose of the timer is to disable the compressorif the mix supply runs out. When the timer expires, the mix low light will illuminate. If the mix low light is illuminated, the compressor is locked out of the electrical circuit and will not run. It may be necessary to change the timer settings to more closely match the pumping capacity of your pump.

SECTION 4
PREVENTIVE MAINTENANCE

4.1 ROUTINE CLEANING

To remove spilled or dried mix from the freezer exterior, simply wash in the direction of the finish with warm soapy water and wipe dry. Do not use highly abrasive materials as they will mar the finish.

4.2PREVENTATIVE MAINTENANCE

It is recommended that a maintenance schedule be followed to keep the freezer clean and operating properly.

WARNING

NEVER ATTEMPT TO REPAIR OR PERFORM MAINTENANCE ON FREEZER UNTIL THE MAIN ELECTRICAL POWER HAS BEEN DISCONNECTED.

A. Daily

1. The exterior should be kept clean at all times to preserve the lustre of the stainless steel. A mild alkaline cleaner is recommended. Use a soft cloth or sponge to apply the cleaner.

B. Weekly

1. Check “O” Rings and rear seal for excessive wear and replace if necessary.

2. Remove the drip tray and insert. Clean the drip tray and insert and front of the freezer with a soap solution.

C. Monthly

CAUTION

THE FREEZER HAS AN AIR COOLED CONDENSER AND MUST HAVE PROPER AIR CIRCULATION. FAILURE TO CLEAN THE CONDENSER ON A REGULAR BASIS MAY RESULT IN SERIOUS FREEZER DAMAGE AND COULD VOID FREEZER WARRANTY.

1. Visually inspect the condenser for dirt by shining a light through the coil from the fan side of the condenser.

2. If the condenser is dirty, using compressed air or CO2 tank, blow out the dirt from the fan side of the condenser.

3. An alternative method of cleaning the condenser is to use a condenser brush and vacuum.

NOTE

If the condenser is not kept clean, loss of refrigeration efficiency will result, causing extended run time or soft product consistency.

4.3 EXTENDED STORAGE

Refer to the following steps for storage of the freezer over any long period of shutdown time:

A. Turn CLEAN/OFF/SERVE switch to the OFF position.

B. Disconnect (unplug) from the electrical supply source.

C. Clean thoroughly with a warm detergent all parts that come in contact with the mix. Rinse in clear water and dry all parts. Do not sanitize.

NOTE

Do not let the cleaning or sanitizing solution stand in the hopper or in the freezer barrel during the shutdown period.

D. Remove, disassemble, and clean the front door, and agitator parts. Place the agitator blades and the front agitator support bearing in a plastic bag with a moist paper towel to prevent them from becoming brittle.

4.4 CONSISTENCY ADJUSTMENT

The consistency adjustment knob is located behind the right side panel near the back. Remove black plug to access. To adjust use a straight bladed screwdriver. Turn clockwise for a thicker product and counterclockwise for a thinner product. Allow 15-30 minutes for the product to change consistency.

SECTION 5
REFRIGERATION SYSTEM

5.1 REFRIGERATION SYSTEM

The refrigeration system is a dual purpose system. The system is designed to operate the hopper and the evaporator simultaneously at different temperatures. The system is designed for efficient use with R404A as the refrigerant. The proper charges are indicated on the nameplate. Figure 10.

Figure 10. Nameplate

5.2 COMPRESSOR

The compressor is designed specifically for use with R404A.

A. Winding Test

To test the compressor motor windings for possible problems perform the following steps:

WARNING

DISCONNECT FREEZER FROM ELECTRICAL SUPPLY SOURCE BEFORE SERVICING.

1. Remove the retaining screws from the right side panel and slide the side panel out and down.

2. Remove the compressor terminal cover by inserting a standard screw driver between the terminal cover and retaining frame, pry out side then hold with your hand while prying the other side then remove cover. (Fig.11)

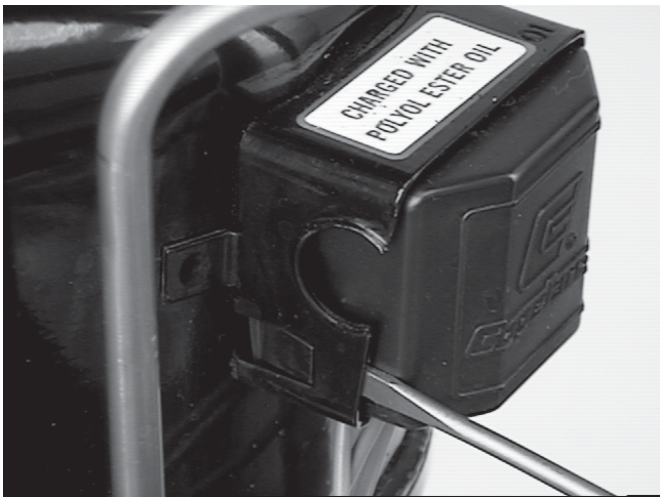


Figure 11. Compressor Terminal Cover Removal

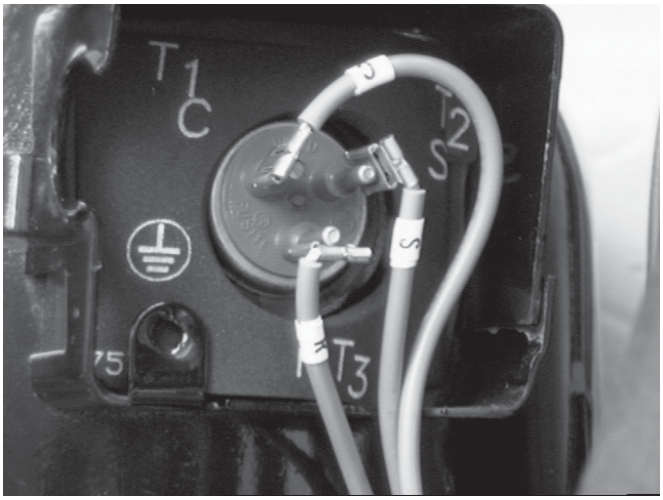


Figure 12. Compressor Connections

NOTE

The following values are for Tecumseh model CS14K6E-PFV-235 with the compressor at or about room temperature. For other models or brands consult the manufacturer's service data manual.

3. Connect ohmmeter to terminal C and R. Resistance through the run winding should be 1.10 ohms with the ohmmeter set at times one. (Fig. 13)

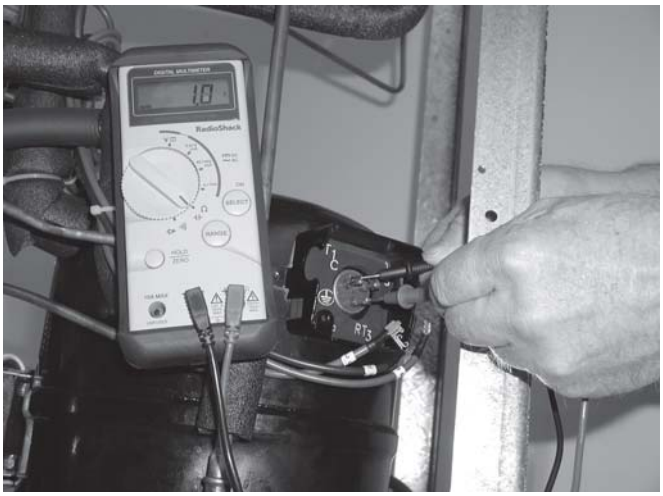


Figure 13. Ohm Meter Connection

4. Connect ohmmeter to terminal C and S. Resistance through the start winding should be 5.94 ohms with the ohmmeter set at times one.

5. To check if windings are shorted to ground connect one ohmmeter lead to a bare metal part on the compressor such as any copper line leading to or from the compressor and checking terminals C, R, and S.

NOTE

The compressor is equipped with an internal overload protector. If the compressor trips the overload check for high amperage draw.

5.3 CONDENSER

The air cooled condenser is a copper tube and aluminum fin type. Condensing is totally dependent on air flow. A plugged condenser or restrictions in the louvered grill will restrict air flow. This will lower the capacity of the system and damage the compressor.

The condenser must be kept clean from dirt and grease. The freezer must have a minimum clearance of 6" at the left and right side of the unit for free flow of air. Make sure the freezer is not pulling over 100° F. of air in from other equipment in the area.

The condenser filter and condenser require periodic cleaning. To clean refer to the following procedures:

WARNING

DISCONNECT FREEZER FROM ELECTRICAL SOURCE BEFORE SERVICING.

1. Remove the condenser filter by pulling straight out to the front. Then visually inspect for dirt. If the filter is dirty, shake or brush excess dirt off the filter and wash in warm soapy water. Once the filter is clean rinse thoroughly in warm, clear water and shake dry, taking care not to damage the filter in any way.

2. Remove the retaining screws from the the right side and back panel and slide the panels out and down.

3. Visually inspect the condenser for dirt by shining a light through the coil from the back (inside) of the condenser. Figure 14.

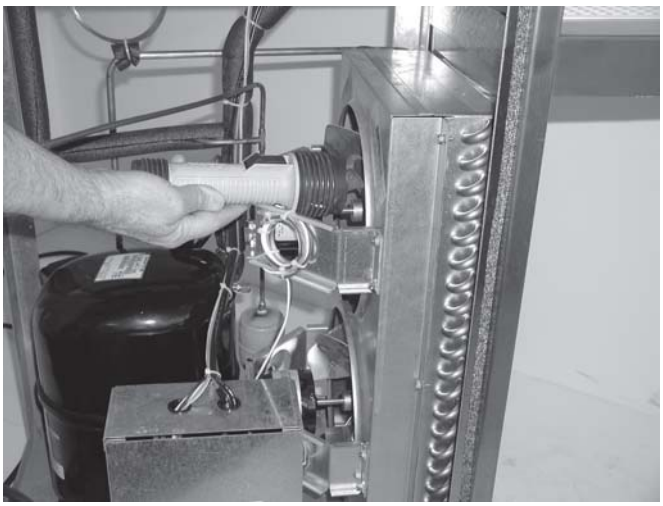


Figure 14. Condenser

4. If the condenser is dirty, place a wet towel over the front (outside) of the condenser.

5. Using compressed air or CO2 tank, blow out the dirt from the back (inside) of the condenser. Most of the dirt will cling to the wet towel.

An alternative method of cleaning the condenser is to use a condenser brush and vacuum.

NOTE

If the condenser is not kept clean, loss of refrigeration efficiency will result, causing extended run time or soft product consistency.

5.4 EVAPORATOR

An TXV (thermostatic expansion valve) is used to meter the refrigerant to the evaporator. The self regulating TXV is preset at the factory for approximately 28 PSIG at 75°F ambient temperature.

A. TXV Adjustments

To determine whether or not the TXV is in need of adjustment, perform the following procedure:

WARNING

DISCONNECT FREEZER FROM ELECTRICAL SOURCE BEFORE SERVICING.

1. Remove the retaining screws from the bottom of the left and right side panels and slide the panels out and down.

2. Remove the cap from the low side access port and install a 0 - 100 PSIG gauge. Figure 15

Figure 15. Access Ports

3. Plug the freezer in, start the refrigeration cycle and read the pressure.

4. The proper gauge reading should be approximately 28 PSIG at 75°F. (21.1°C) Ambient temperature at the end of pull down. If the readings are not within these parameters continue with the following steps:

NOTE

Before performing the following procedures be absolutely certain it is necessary to adjust the TXV and the freezer is full of cold mix.

5. Remove the cap on the TXV and using a service wrench, turn the valve stem 1/4 (90°) turn counter clockwise for more cooling or clockwise for less cooling. Figure 16.

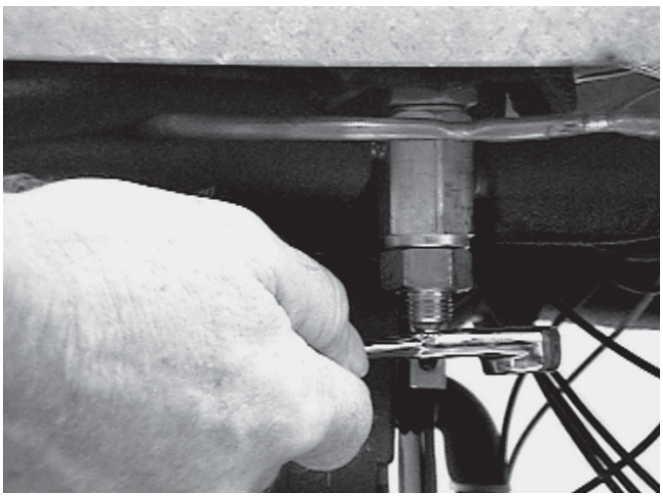


Figure 16. TXV

6. Should the readings not reach 28 PSIG repeat step #7 until the correct reading is obtained.

7. Once the 28 PSIG reading is obtained, replace the cap on the TXV, remove the pressure gauge and replace the low side schrader valve cap.

B. TXV Removal

CAUTION

IF THE TXV IS REPLACED THE HEAT SINK (WET CLOTH) MUST BE USED TO PREVENT DAMAGE TO THE VALVE.

WARNING

DISCONNECT FREEZER FROM ELECTRICAL SOURCE OF SUPPLY BEFORE SERVICING.

1. Assuming the left side, right side and back panels are removed, perform the following procedures for removing the TXV.

2. Remove the bulb from the suction line exiting from the evaporator.

3. Recover refrigerant charge and leave a port open to prevent pressure buildup during TXV removal.

4. Remove any insulation from the TXV and the immediate surrounding lines.

5. Remove or push back any foam insulation from surrounding lines.

6. Apply a heat sink (wet cloth) to the valve dome. Figure 17.

7. Unsweat the suction line and liquid line from the TXV and remove the TXV with heat sink.

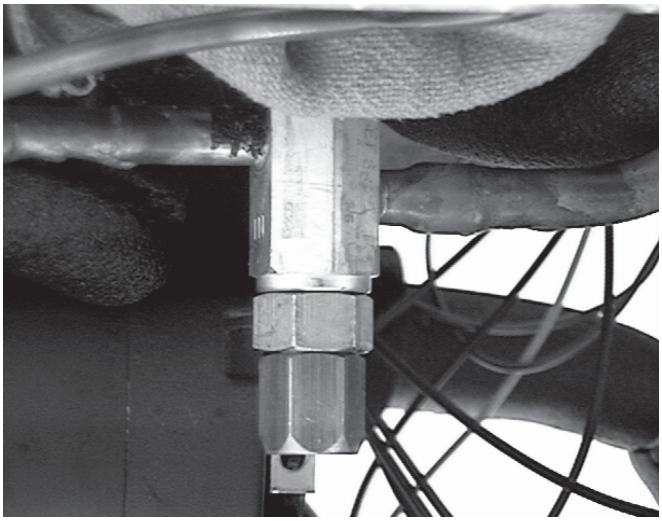


Figure 17. Heat Sink

C. TXV Replacement
To replace the TXV perform the following procedures:

CAUTION
WHEN REPLACING THE TXV A HEAT SINK (WET CLOTH) MUST BE USED TO PREVENT DAMAGE TO THE VALVE.

1. Position the TXV with the heat sink so the liquid and suction line correspond with the proper valve ports. Figure 17.

2. With an open port braze the liquid line and suction line to the TXV using the appropriate brazing material.

3. Remove the heat sink from the TXV.

4. Replace foam insulation to the surrounding lines.

5. Replace any insulation to the TXV and immediate surrounding areas.

6. Install bulb on suction line exiting the evaporator.

NOTE
The TXV bulb should always be mounted on the top of the horizontal line with the capillary end facing the flow of refrigerant. Good contact between the bulb and suction line is necessary for proper operation of the valve. The bulb must also be well insulated.

7. Purge and evacuate the system.

8. Break the vacuum to 0 PSIG with dry nitrogen, then open an access port.

9. Remove the dryer by unsweating the refrigeration lines then with an open port sweat in the replacement dryer. Make certain the arrow points in the direction of flow. Figure 18.

Figure 18. Drier

10. Triple evacuate the system. Evacuate twice to 1500 microns of mercury, break in the vacuum each time with dry nitrogen. Then evacuate to 500 microns of mercury.

11. Recharge the system to nameplate specifications and leak test.

5.5 HOPPER
A parallel refrigeration circuit feeds the hopper. A capillary tube is used to meter the refrigerant to the hopper. An E.P.R. valve (Evaporator Pressure Regulating) is used to control the refrigerant at the outlet. The E.P.R. controls the hopper pressure so, during heavy dispensing periods, hopper temperatures will not drop and freeze the mix in the hopper. The adjustable E.P.R. valve is preset at the factory. If the hopper temperature is too cold or too warm, an E.P.R. valve adjustment may be necessary.

A. E.P.R. Valve Adjustment
To adjust the E.P.R. valve, refer to the following procedures:

1. Remove the phillips head screws from the bottom of the right side panel and remove the side panel by sliding out and down.

2. Remove the cap from the E.P.R. access port. Figure 19.

Figure 19. EPR and Access Port

3. Install a 0-100 P.S.I.G. gauge onto the E.P.R. access port.

4. Start the refrigeration cycle and read the pressure.

NOTE
The ideal E.P.R. valve setting (69-71 PSIG) will not allow mix to freeze to the walls of the hopper.

5. If the pressure gauge reading does not fall between 69-71 PSIG parameters, proceed with the following steps:

6. Loosen the lock nut on the E.P.R. valve and using a small screwdriver, turn the valve stem 1/4 (90°) turn counter clockwise for more cool ing or clockwise for less cooling. Figure 20.

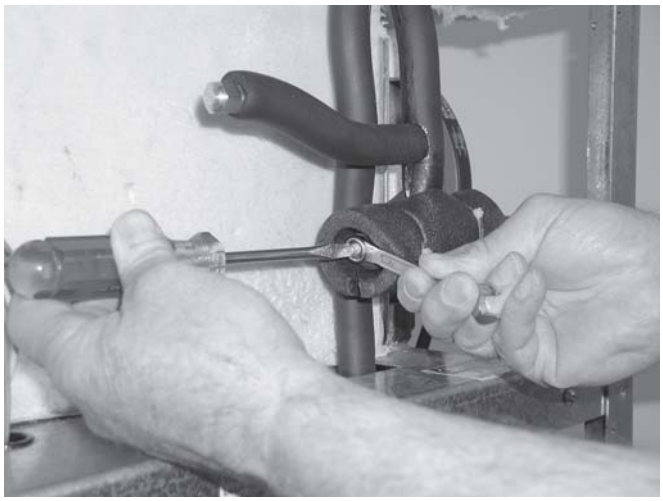


Figure 20. EPR Valve Adjustment

7. Allow the system to level out for 3 - 5 minutes before taking another pressure reading.

8. Should the reading still not fall between 69-71 PSIG, repeat steps 6 and 7 until the correct reading is obtained.

9. Once the 69-71 PSIG reading is obtained, tighten the locknut snugly, remove the pressure gauge and replace the E.P.R. access valve cap.

10. Replace the side panel.

B. E.P.R. Removal

CAUTION

IF THE E.P.R. VALVE IS REPLACED THE HEAT SINK (WET CLOTH) MUST BE USED TO PRE-VENT DAMAGE TO THE VALVE.

1. Assuming the right side and back panels are removed, perform the following procedures for removing the E.P.R. valve.

WARNING

DISCONNECT THE FREEZER FROM ELECTRICAL SUP-PLY SOURCE BEFORE SERVICING.

2. Recover refrigerant charge and leave the port open to prevent pressure build-up during E.P.R. valve removal.

3. Remove foam rubber insulation from the sur-rounding lines.

4. Apply a heat sink (wet cloth) to the E.P.R. valve. Figure 21.

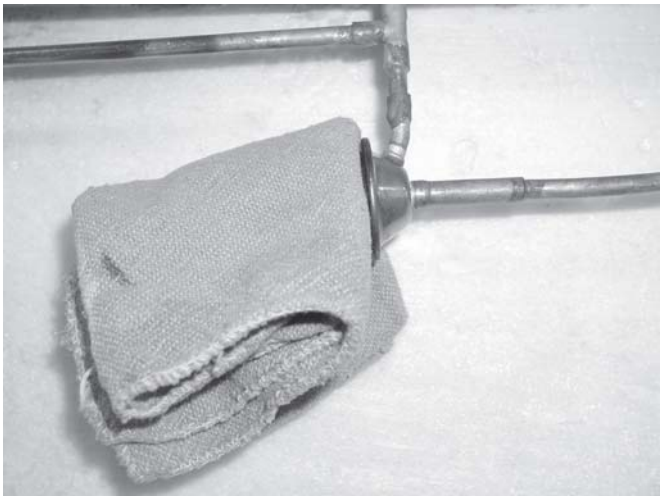


Figure 21. EPR Heat Sink

5. Unsweat the hopper evaporator line and the line leading to the low side of the main system from the E.P.R. valve.

6. Remove the E.P.R. valve with the heat sink.

C. E.P.R. Replacement

CAUTION

IF THE E.P.R. VALVE IS REPLACED THE HEAT SINK (WET CLOTH) MUST BE USED TO PRE-VENT DAMAGE TO THE VALVE.

1. Position the E.P.R. valve with the heat sink, so the hopper evaporator outlet line and the line leading to the low side of the main system correspond with the proper ports.
2. With an open port braze the lines to the E.P.R. valve using the appropriate brazing material.
3. Remove the heat sink from the E.P.R. valve.
4. Replace any foam insulation to the surrounding lines.
5. Purge and evacuate the system.

6. Break the vacuum to 0 PSIG with dry nitrogen, then open an access port.

7. Remove the dryer by unsweating the refrigeration lines then with an open port sweat in the replacement dryer. Make certain the arrow points in the direction of flow. Figure 22.

Figure 22. Filter Drier

8. Triple evacuate the system, evacuate twice to 1500 microns of mercury, break in the vacuum each time with dry nitrogen, then evacuate to 500 microns of mercury.

9. Recharge the system to the nameplate specifications and leak test.

5.6 CAPILLARY TUBE

Capillary tube replacement may be necessary if the correct hopper cooling cannot be obtained.

A. Capillary Tube Removal

WARNING

DISCONNECT FREEZER FROM ELECTRICAL SUPPLY SOURCE BEFORE SERVICING.

1. Remove the retaining screws from the right side panel and pull the side panel out and down.

2. Recover refrigerant charge and leave a port open to prevent pressure build-up during capillary tube dryer assembly removal.

3. Unsweat capillary tube dryer assembly at the dryer inlet and at the hopper inlet located at the side of the hopper. Figure 23.

Figure 23. Drier Cap. Tube Assembly

NOTE

Before unsweating the capillary tube at the hopper inlet it will be necessary to remove the foam insulation from the capillary tube at that connection.

4. Remove the capillary tube dryer assembly.

B. Capillary Tube Replacement

1. Position the capillary tube dryer assembly so the large diameter tube is in position to be brazed first using the appropriate brazing material.

2. Position the smaller diameter tube at the side of the hopper and braze the tube to the hopper inlet using the appropriate brazing material.

3. Replace the foam insulation to the hopper inlet connections.

4. Purge and evacuate the system.

5. Break the vacuum to 0 PSIG with dry nitrogen, then open an access port.

6. Remove the dryer by unsweating the refrigeration lines then with an open port sweat in the replacement dryer. Make sure the arrow points in the direction of flow.

7. Triple evacuate the system. Evacuate twice to 1500 microns of mercury, break in the vacuum each time with dry nitrogen. Then evacuate to 500 microns of mercury.

8. Recharge the system to nameplate specifications and leak test.

SECTION 6
ELECTRICAL

6.1 ELECTRICAL

The control system operates from drive motor torque. When the product in the barrel freezes it puts a greater load on the drive motor. As the resistance builds up the drive motor body begins to rotate in the opposite direction of the motor shaft overcoming spring tension. When the motor has rotated far enough it contacts a microswitch shutting off the compressor. After time has passed or some product has been drawn the resistance in the barrel decreases and the spring pulls the motor back. The micro switch then closes and the compressor starts. There is a 10 second time delay on the compressor start and stop. The drive motor runs continuously.

6.2 FRONT ELECTRICAL BOX

The front electrical box contains the CLEAN-OFF-SERVE switch, pump OFF/ON switch (SO318 only), safety switch and mix low light. The box also contains the drive contactor, 24 volt transformer, liquid level control, ON/OFF time delay timer and auto fill time delay relay (SO318 only). Figure 24.

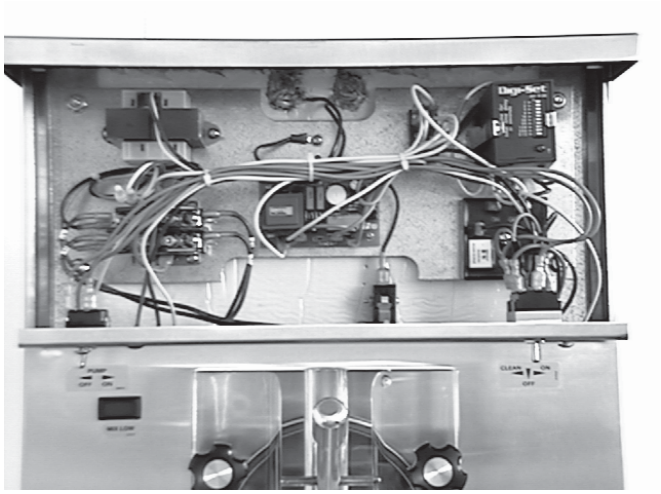


Figure 24. Electrical Panel

To replace electrical components perform the following procedures:

A. Switches

1. Remove the decorative panel by loosening the two screws at the bottom of the panel, then pull out and down.

2. Identify and disconnect the wires from the switch.

3. Remove the retaining nut and push out through the hole. Figure 25.

4. Push the replacement switch through the hole install and tighten the retaining nut, then reconnect the wires.

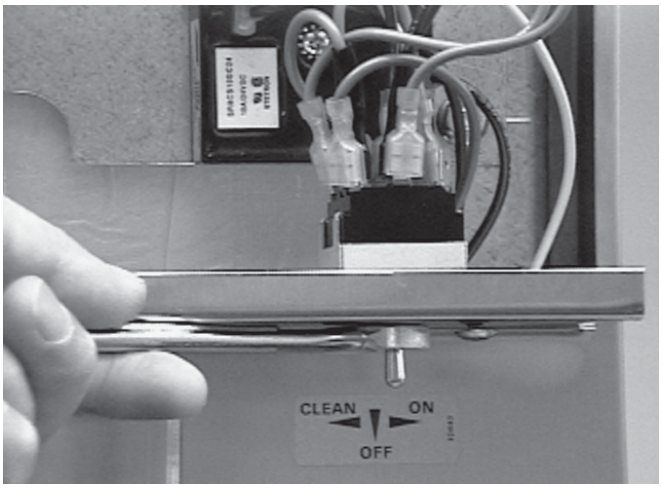


Figure 25. Switch Removal

5. Replace the electrical panel and secure with the four retaining screws.

B. Indicator

1. Remove the decorative panel by loosening the two screws at the bottom of the panel, then pull out and down.

2. Identify and disconnect the wires from the indicator.

3. Squeeze the four plastic retainers together and push out through the hole. Figure 26.

4. Push the replacement through the hole and reconnect the wires.

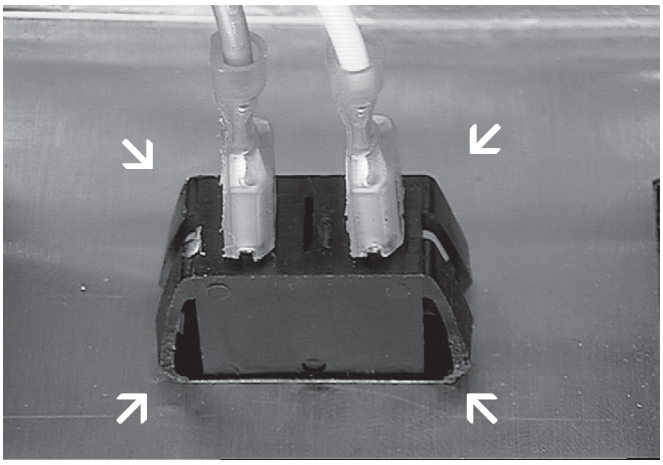


Figure 26. Light Bulb Replacement

5. Replace the electrical panel and secure the two retaining screws.

C. Safety Switch

1. Remove the two retaining screws from the switch and lift out. Figure 27.

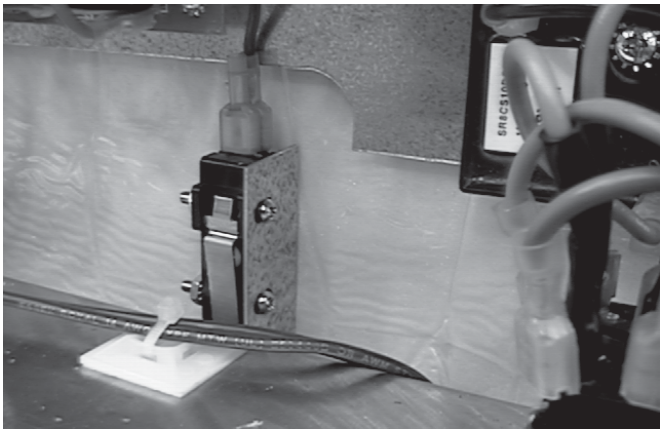


Figure 27. Safety Switch

2. Remove the two wires from the switch.
3. Connect the two wires to the replacement switch.
4. Locate and secure the replacement switch with the two retaining screws.

D. Liquid Level Control (Low Mix Light)

1. Identify and remove the wires. Figure 28.
2. Remove the four retaining screws.

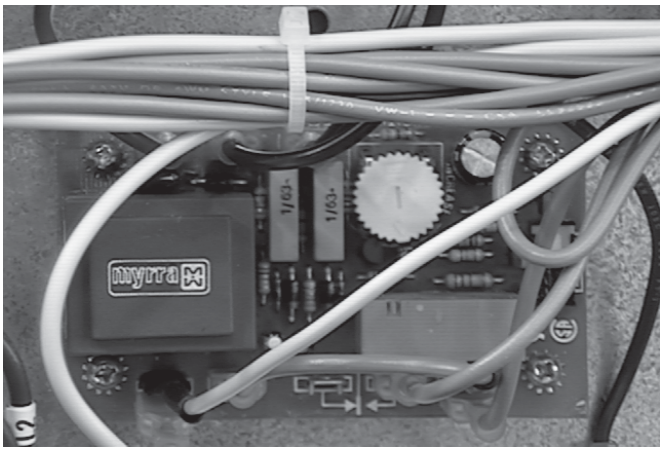


Figure 28. Liquid Level Control

3. Remove the failed control.
4. Locate and secure the replacement control. Take care to insure the wires are replaced properly or the control will not work.

E. 24 Volt Transformer

1. Identify and remove the four wires.
2. Remove the two retaining screws, and remove transformer.
3. Terminate the wires on the replacement transformer per the wiring diagram.
4. Locate and secure the replacement transformer with the two retaining screws.
5. Reconnect the four wires.

F. Drive Contactor

1. Identify and remove the wires.
2. Remove the two retaining screws and remove the contactor.
3. Locate and secure the replacement contactor with the two retaining screws.
4. Reconnect the wires.

G. Compressor ON/OFF Time Delay Relay

1. Identify and remove the wires.
2. Remove the retaining screw and remove the relay.
3. Locate and secure the replacement relay with the retaining screw.
4. Reconnect the two wires.
5. Adjust on and off times to 10 seconds.

WARNING

ALL REPAIRS MUST BE COMPLETED AND ALL PANELS REPLACED BEFORE CONNECTING THE FREEZER TO THE ELECTRICAL POWER. THE REMAINING ELECTRICAL COMPONENTS CAN BE REPLACED BY PERFORMING THE FOLLOWING PROCEDURES:

H. Pump Time Delay Relay (SO318 only)

1. Release the two retainers by pushing to the side. Figure 29.

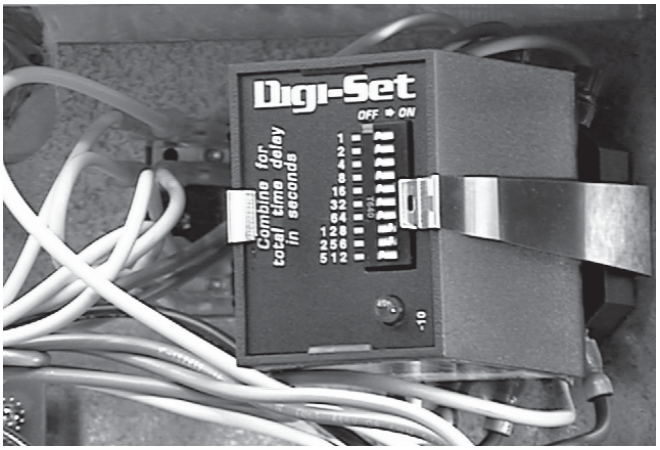


Figure 29. Pump Relay

2. Unplug faulty relay.
3. Plug in replacement relay.
4. Push the two retainers onto the relay.

I. Torque Switch

1. Remove the retaining screws from the right side panel and slide out and down.
2. Identify and remove the wires and dummy terminal from the switch.

3. Remove the two retaining screws holding the switch to the bracket. Fig. 30.

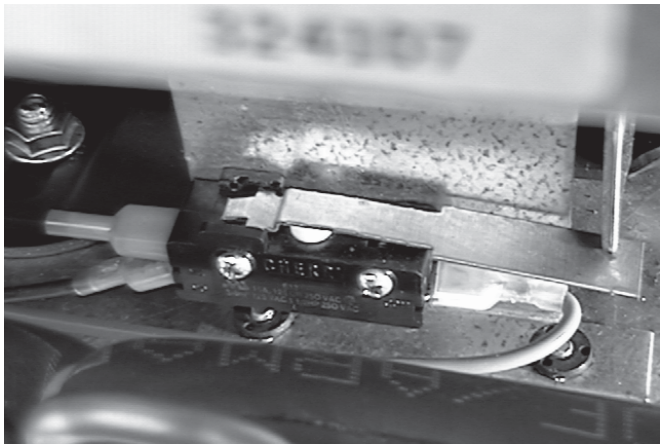


Figure 30. Torque Switch

4. Locate the replacement switch onto the bracket and secure.
5. Connect the two wires and dummy terminal.

6.3 COMPRESSOR ELECTRICAL BOX

Remove the retaining screws from the right side panel and pull the side panel out and down. Remove two screws holding the electrical box cover and remove cover.

A. Compressor Contactor

1. Identify and remove the wires. Fig. 31.

Figure 31. Compressor Contactor

2. Remove the two retaining screws and remove the contactor.
3. Locate and secure the replacement contactor with the two retaining screws.
4. Reconnect the wires.

B. Relay

1. Identify and remove the wires.
2. Remove the retaining screw and remove the relay.
3. Locate and secure the replacement relay with the two retaining screws.
4. Reconnect the wires.

C. Start and Run Capacitors

1. Identify and remove the wires.
2. Remove retaining bracket.
3. Install replacement capacitors and secure with bracket.
4. Reconnect the wires.

WARNING

ALL REPAIRS MUST BE COMPLETED AND ALL PANELS REPLACED BEFORE CONNECTING THE FREEZER TO THE ELECTRICAL POWER. THE REMAINING ELECTRICAL COMPONENTS CAN BE REPLACED BY PERFORMING THE FOLLOWING PROCEDURES:

6.4 MAJOR COMPONENT REPLACEMENT

Prepare for component removal. The procedures in this section must be followed completely in the order in which they appear. To remove any or all of the major components of the freezer, the following steps must be performed first.

WARNING

DISCONNECT FREEZER FROM ELECTRICAL SOURCE BEFORE SERVICING.

Remove the retaining screws from the side panels and back panel, then remove panels.

A. Condenser Fan Motor Replacement

1. Identify the wires and disconnect. Fig. 32.

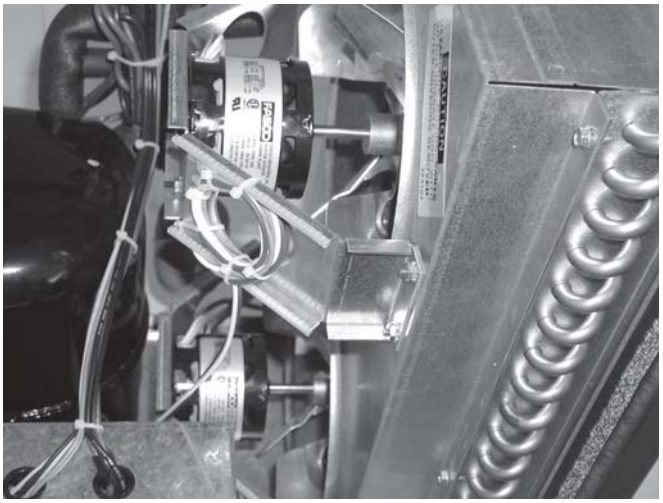


Figure 32. Fan Motor

2. Cut the necessary tie straps.

3. Remove the four retaining nuts and washers.

4. Remove the assembly from the freezer, and remove the fan blade and fan bracket.

NOTE

Take a measurement of the fan blade position on the shaft on the failed motor and position it in the same place on the replacement motor shaft and secure. Install the fan bracket onto the replacement fan motor and secure.

5. Locate the fan assembly into the freezer and secure with the four retaining nuts and washers.

6. Properly terminate and reconnect all wires and secure the wires with plastic tie straps.

B. Condenser Replacement

1. Recover the refrigerant charge and leave a port open to prevent pressure build-up during condenser replacement.

2. Unsweat the two refrigerant lines. Then cover exposed refrigerant lines to protect them from debris while preparing the condenser for removal.

3. To remove the condenser drill out the blind rivets holding the condenser assembly to the frame. Figure 33. Rivets can be accessed by removing the lower front sheet metal . In addition to the sheet metal retaining screws there are two acorn nuts under the drip tray.

Figure 33. Condenser

NOTE

When replacing the front sheet metal re-seal the seams with R.T.V.

4. Remove the condenser.

5. Install the replacement condenser, and position the condenser and shroud to align the holes. Then secure with the 3/16" blind rivets or 3/16" screws, nuts, and washers.

6. Braze the two refrigerant lines to the condenser with an open access port to prevent pressure build up.

7. Purge and evacuate the system.

8. Break the vacuum to 0 PSIG with dry nitrogen then open an access port.

9. Remove the dryer by unsweating the refrigeration lines then with an open port sweat in the replacement dryer. Make certain the arrow points in the direction of flow.

10. Triple evacuate the system. Evacuate twice to 1500 microns of mercury, break in the vacuum each time with dry nitrogen. Then evacuate to 500 microns of mercury.

11. Recharge the system to nameplate specifications and leak test.

C. Compressor Replacement

1. Remove the compressor terminal cover by inserting a screwdriver between the terminal cover and retaining frame, and pry out side, then hold with your hand while prying the other side, then remove cover.

2. Identify and remove the three wires. Figure 34.

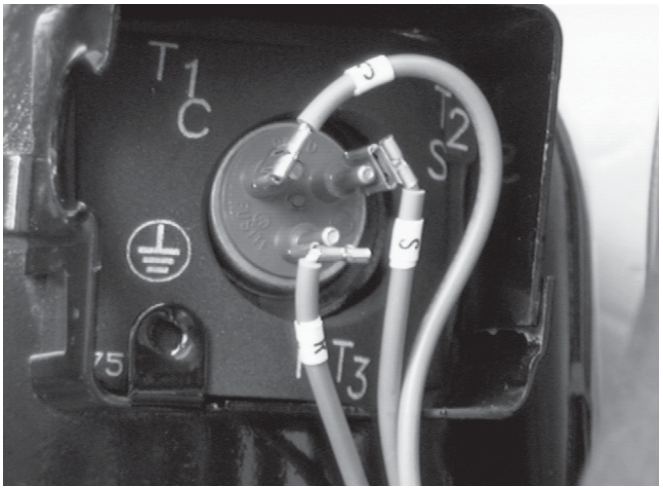


Figure 34. Electrical Wires

3. Remove the four nuts, washers, and bolts holding the compressor to the frame. Figure 35.

Figure 35. Compressor

4. Recover the refrigerant charge and leave a port open to prevent pressure build-up during compressor replacement.

5. Remove and/or protect insulation that may be contacted by flame or extreme heat, then unsweat the discharge and suction line.

6. Remove the compressor through the right side of the freezer.

7. Remove the four rubber compressor mounts from the failed compressor.

NOTE

Rubber mounts are not always furnished with replacement compressors.

8. Check the compressor for a burn out condition using an acid test kit. If acid is found, clean out the system per the compressor manufacturers instructions.

9. Plug all open ports of the failed compressor.

NOTE

A compressor returned to the company with any open ports will void the warranty. Always plug any open ports on a compressor that has been removed.

10. Install the four rubber mounts on the replacement compressor.

11. Install the replacement compressor into the freezer and secure with the four bolts, washers and nuts.

12. Remove the cap plugs from the replacement compressor and with an open port braze the suction and discharge lines to the compressor.

13. Connect the black wire to the overload and the white wire to the relay. Then install the cover and retaining clip.

14. Purge and evacuate the system.

15. Break the vacuum to 0 PSIG with dry nitrogen, and open an access port.

16. Remove the dryer by unsweating the refrigeration lines and then with an open port sweat in the replacement dryer. Make certain the arrow points in the direction of the flow.

17. Triple evacuate the system. Evacuate twice to 1500 microns of mercury, break in the vacuum each time with dry nitrogen. Then evacuate to 500 microns of mercury.

18. Recharge the system to nameplate specifications.

19. Leak test and replace insulation.

D. Drive Motor Replacement

1. Remove the cover plate then identify and remove the four wires.

2. Disconnect the ground wire.

3. Disconnect the torque spring by removing the nut on the motor bracket and sliding off. Figure 36.

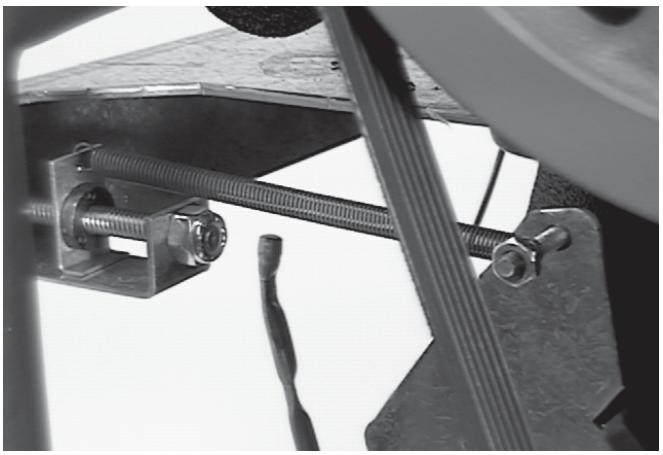


Figure 36. Torque Spring

4. Remove the two cap screws from the torque switch bracket and move the bracket to the side. Figure 37.

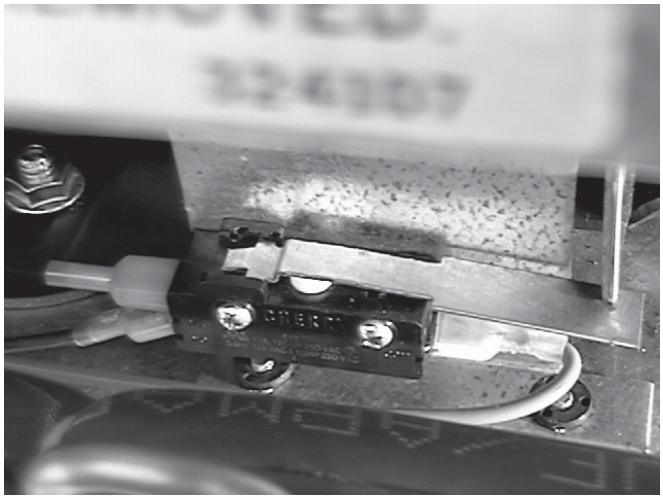


Figure 37. Torque Switch Bracket

5. Pull back belt tensioner and remove belt. Figure 38.

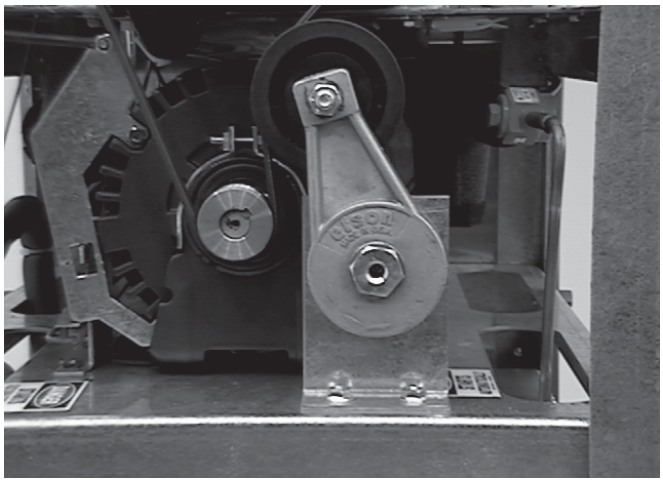


Figure 38. Belt Tensioner

6. Remove the four retaining bolts, nuts and washers.

7. Slide the motor out through the back.

8. Measure the position of the pulley before removing.

9. Remove the pulley and bracket, then install on the replacement motor in the same position.

10. Locate the replacement motor in the freezer with the rubber pads in place over the mounting holes.

11. Secure the motor with the four bolts, nuts, and washers.

12. Pull back the belt tensioner and install belt. Check for proper alignment.

13. Install torque spring onto bracket and replace nut.

14. Locate torque switch bracket and secure with the two screws.

15. Connect the electrical wires. Do not overlook the ground wire, it must be connected.

If the belt tensioner needs adjustment perform the following procedures:

a. With idler loosely snug against mounting bracket, rotate idler until belt is contacted.

b. With a wrench on large idler nut, rotate idler into belt until indicator mark (single mark on idler half against mounting bracket) aligns with first mark closest to indicator mark (3 - 4.5 lbs. of tension).

c. Tighten cap screw to lock idler into position.

E. Bearing Assembly Replacement

1. Remove the agitator assembly from the barrel.

2. Pull back the belt tensioner and remove the belt.

3. Measure the position of the pulley hub, then remove by removing the three cap bolts and turning two of the bolts in the threaded holes to separate the hub from the pulley.

4. Remove the four retaining bolts and washers, then remove the bearing and pulley assembly through the back of the freezer. Figure 39.

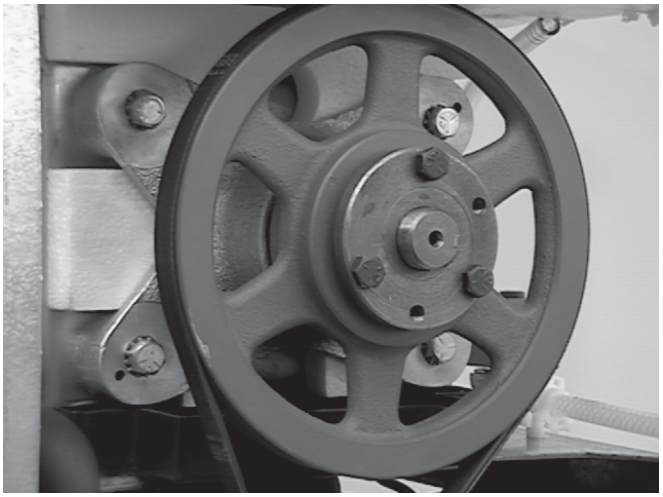


Figure 39. Bearing Assembly

5. Install the bearing assembly on the barrel and secure with the four retaining bolts and washers. Pull back the belt tensioner and install the belt. Check for proper alignment.

6. Locate the pulley on the replacement part and securely tighten the three bolts.

F. Axial Fan Replacement

1. Disconnect the two wires.

2. Remove the two 3/16" mounting screws, nuts and washers.

3. Remove right side fan bracket, then remove fan from right side. Figure 39.

4. Locate replacement motor in freezer.

5. Mount right side bracket to frame and motor, then secure left side bracket to motor and tighten all bolts, screws, nuts and washers.

6. Reconnect the two wires.

SECTION 7
TROUBLESHOOTING

PROBLEM:	CAUSE	CORRECTION
Drive motor overload trips. (Freezer shuts down when running)	Improper Brix reading.	Refill with product that has Brix reading between 11 and 13.
	Low voltage.	Check power supply
Product dispenses incorrectly.	No mix in product cylinder or low mix in hopper.	Keep product cylinder and hopper full.
	Scraper blade missing from agitator.	Replace scraper blade.
	Freezer is being overdrawn.	Slow down rate of draw.
Product is too thin.	Toggle switch in OFF or CLEAN position.	Place toggle switch in SERVE position.
	Ambient temperature is about 100°F (37.7°C).	Move or direct hot air away from freezer.
	Freezer is being overdrawn.	Slow down the rate of draw.
	Condenser is dirty.	Clean condenser.
Agitator Does Not Rotate	Drive motor overload tripped off.	Turn freezer off for 5 minutes, allow automatic reset.
	Agitator stuck or frozen.	Thaw product in freezer if frozen.
	No power to drive motor.	Check wire harness and switches in drive circuit and repair or replace.
	Drive motor is defective.	Check and replace if necessary.
No Ice Crystals on Initial Freeze Down	Blown fuse in building or no input power to freezer.	Check for blown fuse or input power to freezer.
	Mix too rich.	Take "Brix" reading. Fill with properly mixed product.
	Restricted air flow to freezer.	Air enters in the front and discharges out the back, make certain both areas are clear. NOTE: A few earlier models had side to side air flow.
	Consistency set for too thin a product.	Set consistency to a thicker product.
Spigot Leaking or Stuck.	Spigot "O" rings defective or missing.	Drain mix to below spigot level. Remove spigot, clean, replace "O" rings as needed, lubricate and install.
	Dried mix in spigot assembly.	Drain mix to below spigot level. Remove spigot retainer and spigot. Disassemble and clean with hot water and brush. Lubricate, re-assemble and install. Fill with liquid mix.

SECTION 8
REPLACEMENT PARTS INFORMATION

8.1 ORDERING PARTS

To assure receipt of the proper replacement parts, supply your dealer or distributor with the following information:

A. **MODEL NUMBER** of equipment.

B. **SERIAL NUMBER** of model (stamped on nameplate).

C. **PART NUMBER, PART NAME, AND QUANTITY NEEDED.** Many part names and numbers are listed on drawings included in this manual.

NOTE

Minimum billing is $50.00.

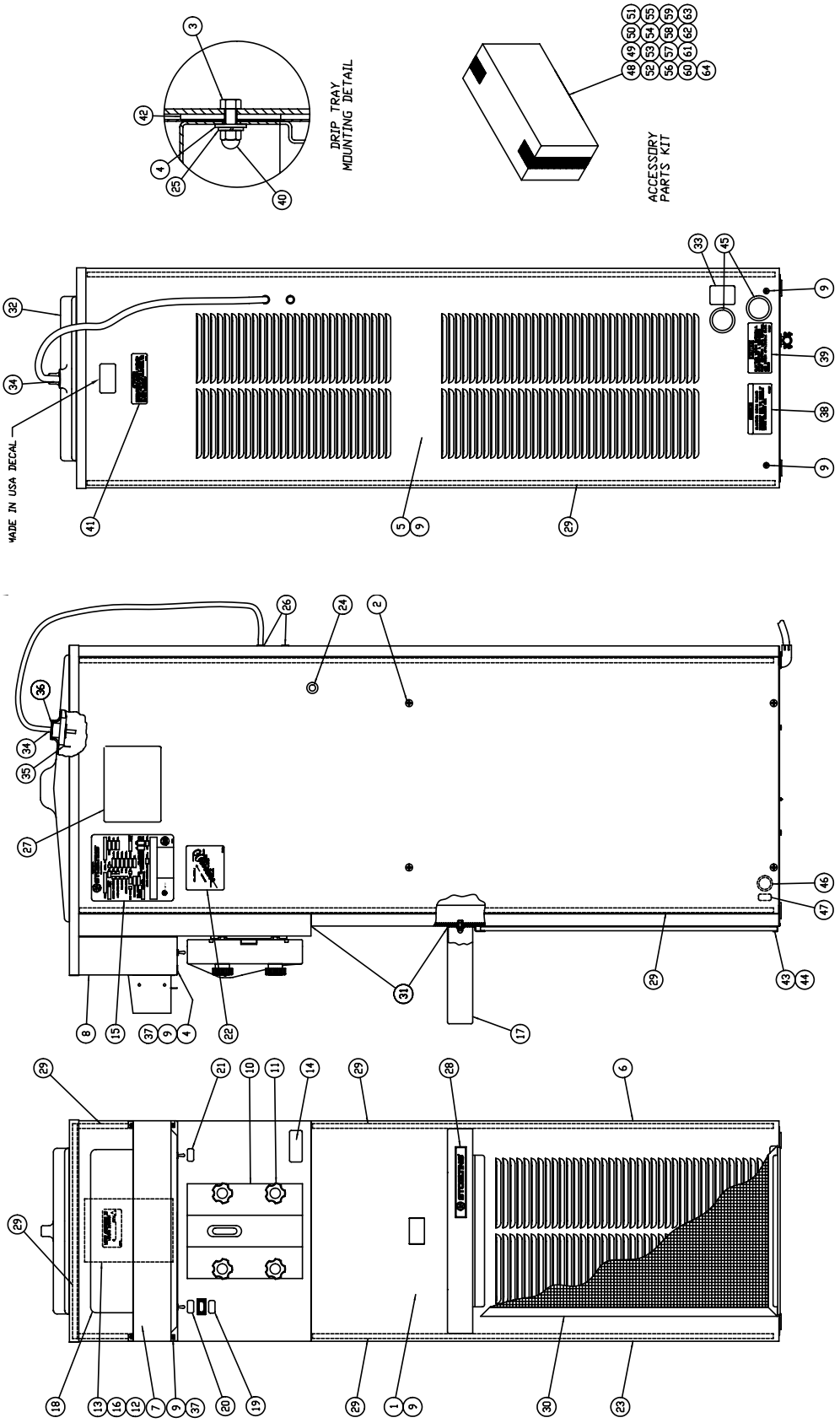
D. **WIRING DIAGRAMS** reflect changes in effect with the Serial Number which are also indicated by a suffix.

DECALS AND TAGS

PART NUMBER	DESCRIPTION
324105	DECAL - CAUTION: ELECT. SHOCK
324107	DECAL - CAUTION MOVING PARTS
324141	DECAL - CAUTION: ROTATING BLADES
324798	DECAL - CLEAN-OFF-SERVE SWITCH
324208	DECAL - REFRIG. LEAK CHECK
324393	DECAL - STOELTING SWIRL LOGO
324509	DECAL - CLEANING (SS & SHAKE)
324566	DECAL - WIRED ACCORDING TO . . .
324686	DECAL - DANGER STARTS AUTOMATICALLY
324689	DECAL - REAR SEAL ASSEMBLY
324799	DECAL - PUMP ON/OFF
324801	DECAL - MIX LOW
324825	DECAL - HEADER

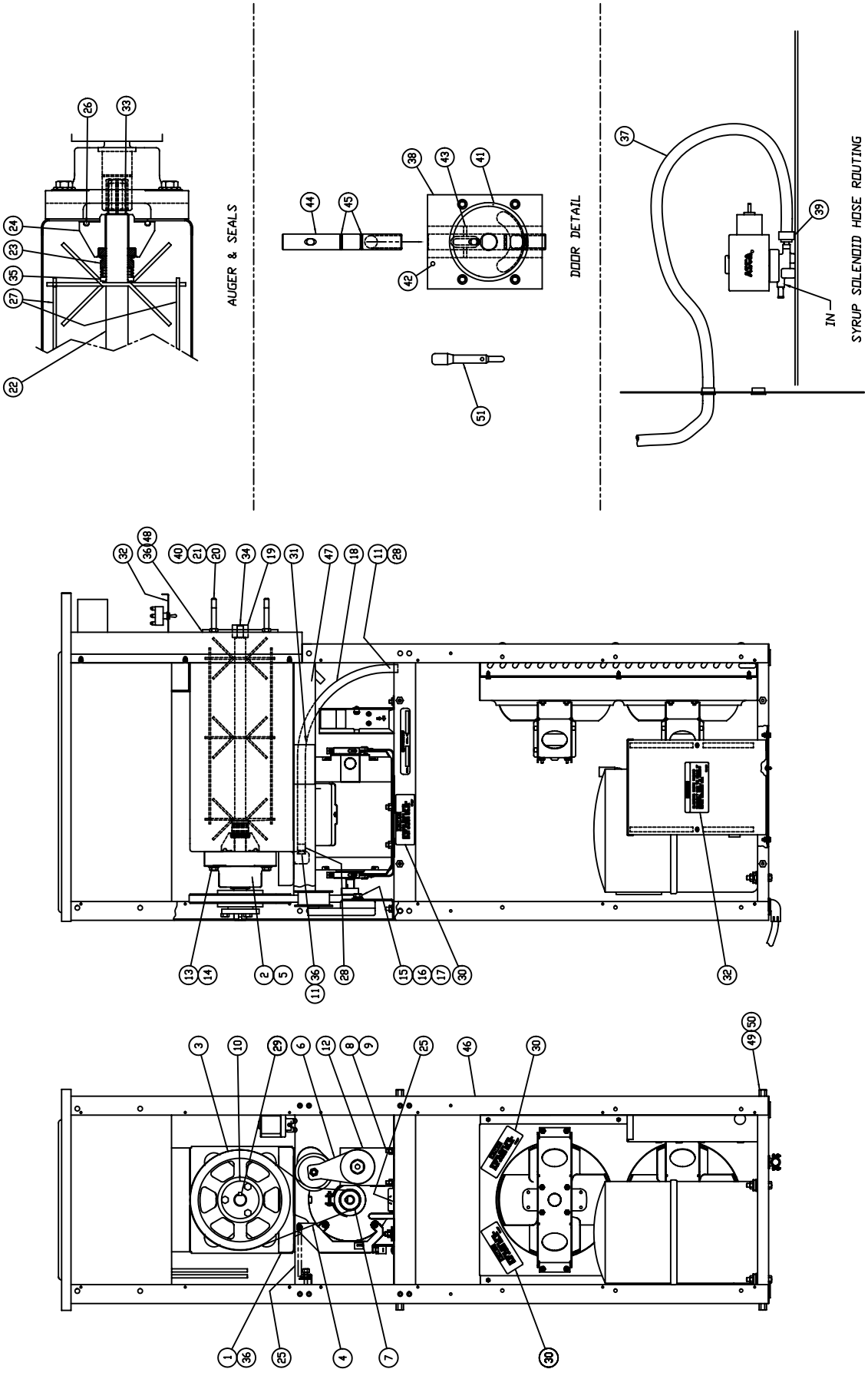
SECTION 9
REFERENCE DRAWINGS

See Next Page.


DRIP TRAY
MOUNTING DETAIL
ACCESSORY
PARTS KIT
MADE IN USA DECAL

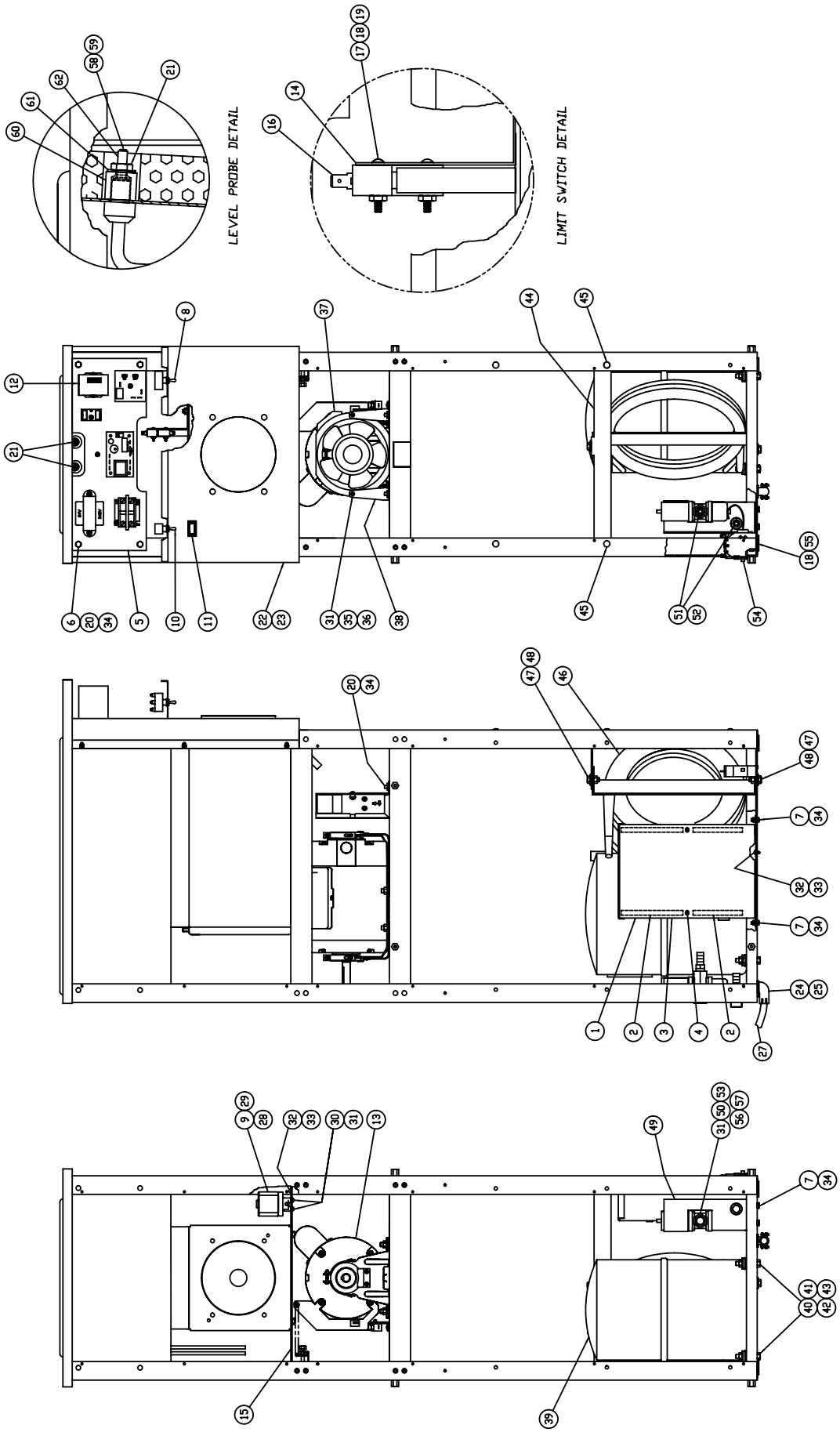
ITEM	STOELTING PN			DESCRIPTION
1	4177656			FRONT PANEL
2	647899			SCREW MACH 1/4-20 X 3/8 TRS
3	644116			SCREW CAP 1/4-20 X 3/4 HX HD
4	766457			WASHER ROUND 5/8X9/32 SS
5	4177657			REAR PANEL
6	4177658			RIGHT SIDE PANEL
7	3177443			BOTTLE RACK
8	3177442			PANEL, HEADER
9	647653			SCREW MACH 10-24 X 3/8 TRS HD
10	3177296			FRONT DOOR ASSEMBLY
11	482019			KNOB BLACK
12	324566			DECAL - WIRED ACCORDING TO
13	SEE ELEC ASSY			WIRING DIAGRAM
14	324141			DECAL CAUTION-ROTATING BLADES
15				MODEL I.D. PLATE
16	130000			BAG,ENVELOPE FRONT LOADING
17	3177662			DRIP TRAY
18	324725			DECAL - HEADER
19	324722			DECAL - MIX LOW
20	324712			PUMP ON/OFF
21	324163			DECAL CLEAN-OFF-ON SWITCH
22	324689			DECAL, REAR SEAL ASSEMBLY
23	4177659			LEFT SIDE PANEL
24	584235			PLUG, FINISHING
25	766066			WASHER LOCK 1/4IN MED SS
26	223064			BUSHING, SNAP 1/2" I.D.
27	324509			DECAL CLEANING (SS & SHAKE)
28	324393			DECAL STOELTING SWIRL LOGO
29	714003			STRIP 3/8 WIDE CORK/RUBBER
30	368236			FILTER, EXTERNAL (A/C ONLY)
31	M820309			SEALANT DOW CORNING ALUMINUM
32	2177315			COVER, MODIFIED HOPPER

ITEM	STOELTING PN			DESCRIPTION
33	324065			DECAL WATER INLET (W/C ONLY)
34	264235			CLAMP HOSE 3/8 - 9/16 MIN/MAX
35	2177316			CLIP, RETAINING
36	2177317			MIX INLET ASSEMBLY
37	463004			INSERT THREADED #10-24
38	324105			DECAL CAUTION-ELECT SHOCK
39	324106			DECAL CAUTION WIRING MAT'L
40	538030			NUT CAP 1/4-20 THD, STANDARD
41	324584			DECAL, ADEQUATE VENTILATION
42	2177653			SPACER, DRIP TRAY
43	2177655			FILTER GUIDE RAIL (A/C ONLY)
44	628007			RIVET 1/8DIA X .232LG STEEL (A/C ONLY)
45	584170			PLUG BLK PLASTIC 1-5/8 DIA (A/C ONLY)
46	422074			GROMMET RUBBER BLACK
47	324200			DECAL MANUAL RESET (W/C ONLY)
48	744252			DRAIN TRAY
49	236013			CARD CHECKLIST
50	2177660			AIR BLOCKOFF PANEL
51	513571			OWNERS MANUAL
52	M880519			FOAM, AMCEL
53	744266			TRAY, DRIP
54	417009			GRID, DRIP TRAY
55	2170877			HANDLE, SPIGOT
56	1156610			CASTER KIT
57	208135			BRUSH NYLON 4 X 8 16 OVERALL
58	208380			BRUSH NYLON 1/4 X 14 X 3
59	508135			LUBRICANT, PETRO-GEL 40Z.TUBES
60	637000			SANITIZER/CARD - PURDY
61	508048			LUBRICANT, SPLINE 2 OZ BOTTLE
62	208401			BRUSH NYLON 1DIA X3 10 OVERALL
63	624655			RING O 1X1-1/4X1/8 70 DURO
64	624857			RING O 21/4IDX25/8ODX3/16CS


AUGER & SEALS
DOOR DETAIL
IN
SYRUP SOLENOID HOSE ROUTING

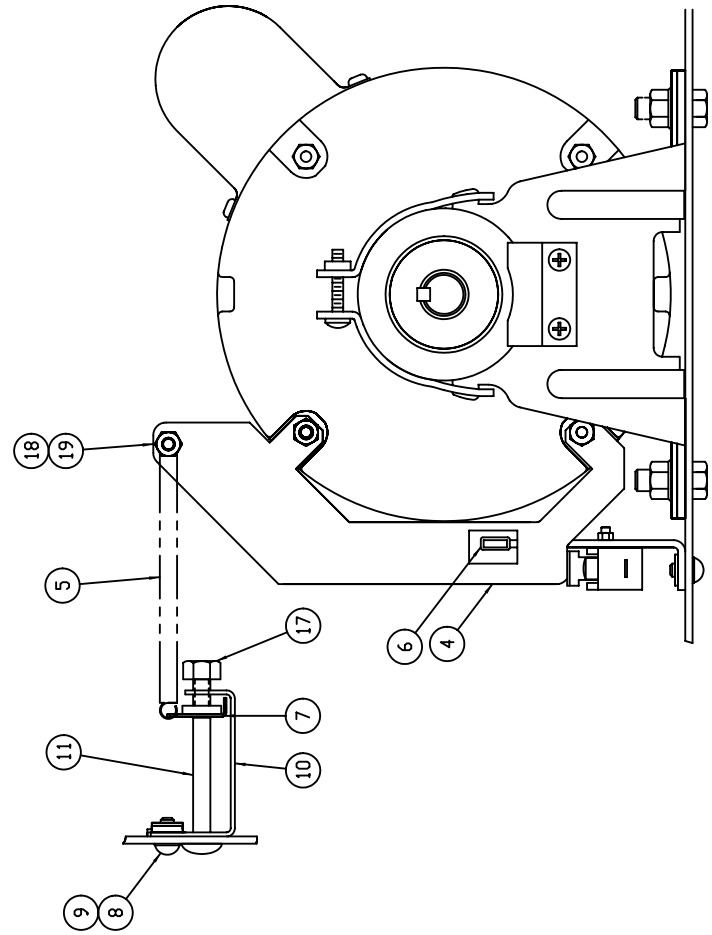
ITEM	STOELTING PN			DESCRIPTION
1	744269			TRAY, DRAIN
2	464463			INSULATION, EVAPORATOR REAR PAD
3	598332			PULLEY, POLY-V 8.0" O.D. 6 GROOVE
4	152227			BELT POLY-V 34" LONG 6 GROOVE
5	3170878			BEARING HOUSING ASSEMBLY
6	454016			IDLER
7	598011			PULLEY POLY-V 1.50"OD 6 GROOVE
8	538335			NUT HEX 1/4-20 X 7/16 STL ZP
9	644091			SCREW CAP 1/4-20 X 1/2 HX HD
10	599171			BUSHING, PULLEY
11	1172693			DRAIN TUBE
12	2171878			BRACKET, IDLER
13	766982			WASHER SHAKEPROOF 3/8 ZINC
14	644605			SCREW CAP 3/8-16 X 2 HX HD ZP
15	644541			SCREW CAP 3/8-16 X 1 HX HD ZP
16	767216			WASHER FLAT 3/8X1X7/16 14GA ZP
17	766082			WASHER LOCK 3/8IN MED SS
18	756085			TUBING 1/2 ID X 5/8 OD CLR PVC
19	1170882			BUSHING, AUGER
20	1170897			STUD, DOOR
21	538359			NUT HEX JAM 3/8-16 X 9/16 SS
22	4177009			AUGER WELDMENT
23	667892			SEAL, SHAFT
24	3172965			ADAPTER, REAR SEAL
25	324686			DECAL, DANGER STARTS AUTOMATIC
26	624857			RING O 2-1/4 ID X 2-5/8 OD X 3/16 CS

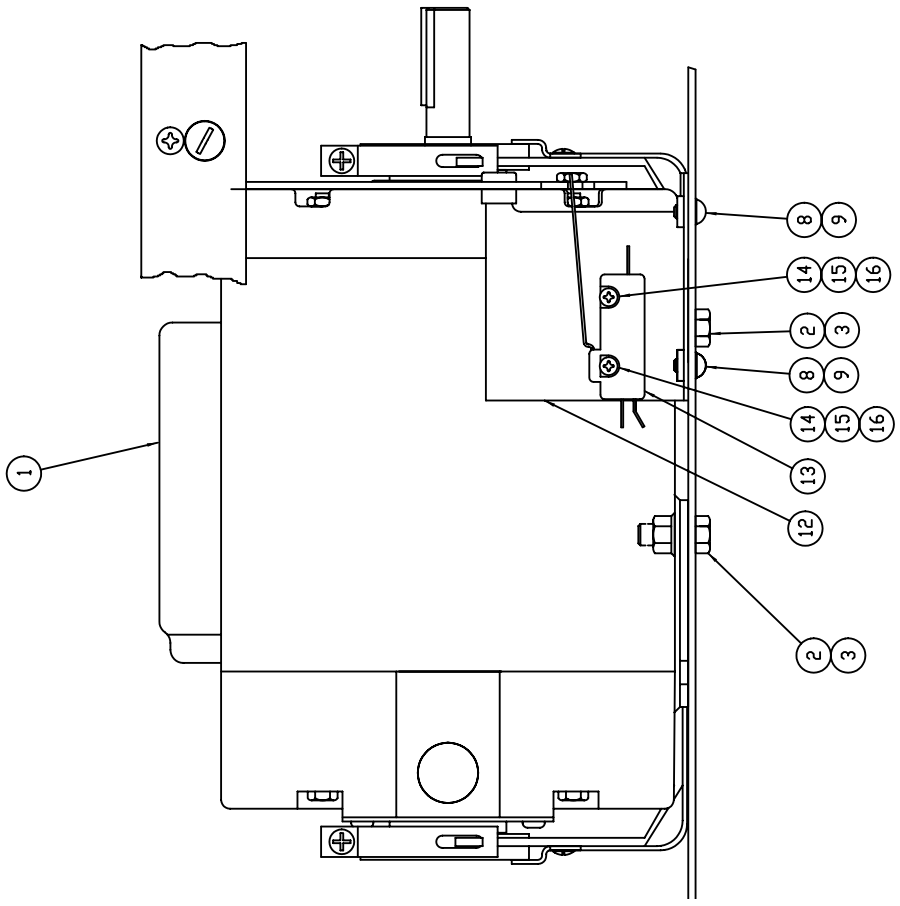
ITEM	STOELTING PN			DESCRIPTION
27	162157			BLADE, SCAPER FOR R118
28	264061			CLAMP, LOOP JAW TYPE 5/8
29	1981462-0175			KEYSTOCK, SQ CR 1/4 X 1/4 X 1 3/4
30	324107			DECAL CAUTION MOVING PARTS
31	324208			DECAL REFRIG LEAK CHECK
32	324105			DECAL CAUTION-ELECT SHOCK
33	508033			LUBRICANT FEL-PRO #51171
34	508135			LUBRICANT, PETRO-GEL 40Z.TUBES
35	2177118			WASHER, ACETRON 1.25 OD X .94ID X .06
36	M820309			SEALANT DOW CORNING ALUMINUM
37	756067			TUBING PLASTIC 1/4IDX7/16OD
38	336525			DOOR, FRONT
39	264064			CLAMP LOOP JAW TYPE 1/2
40	M820071			ADHESIVE LOCTITE 271
41	625310			RING QUAD 5.75 ID
42	1171908			DOOR PIN
43	570196			PIN, 1/4"X2-1/2" COTTERLESS
44	3177001			SPIGOT
45	624655			RING O 1X1-1/4X1/8 70 DURO
46	4177663			FRAME WELDMENT
47	4177277			BASE, EVAPORATOR
48	4177280			EVAPORATOR, FOAMED
49	701008			PANEL STANDOFF
50	644073			SCREW CAP 1/4-20 X 3/8 HX HD
51	2170877			HANDLE, SPIGOT


LEVEL PROBE DETAIL
LIMIT SWITCH DETAIL

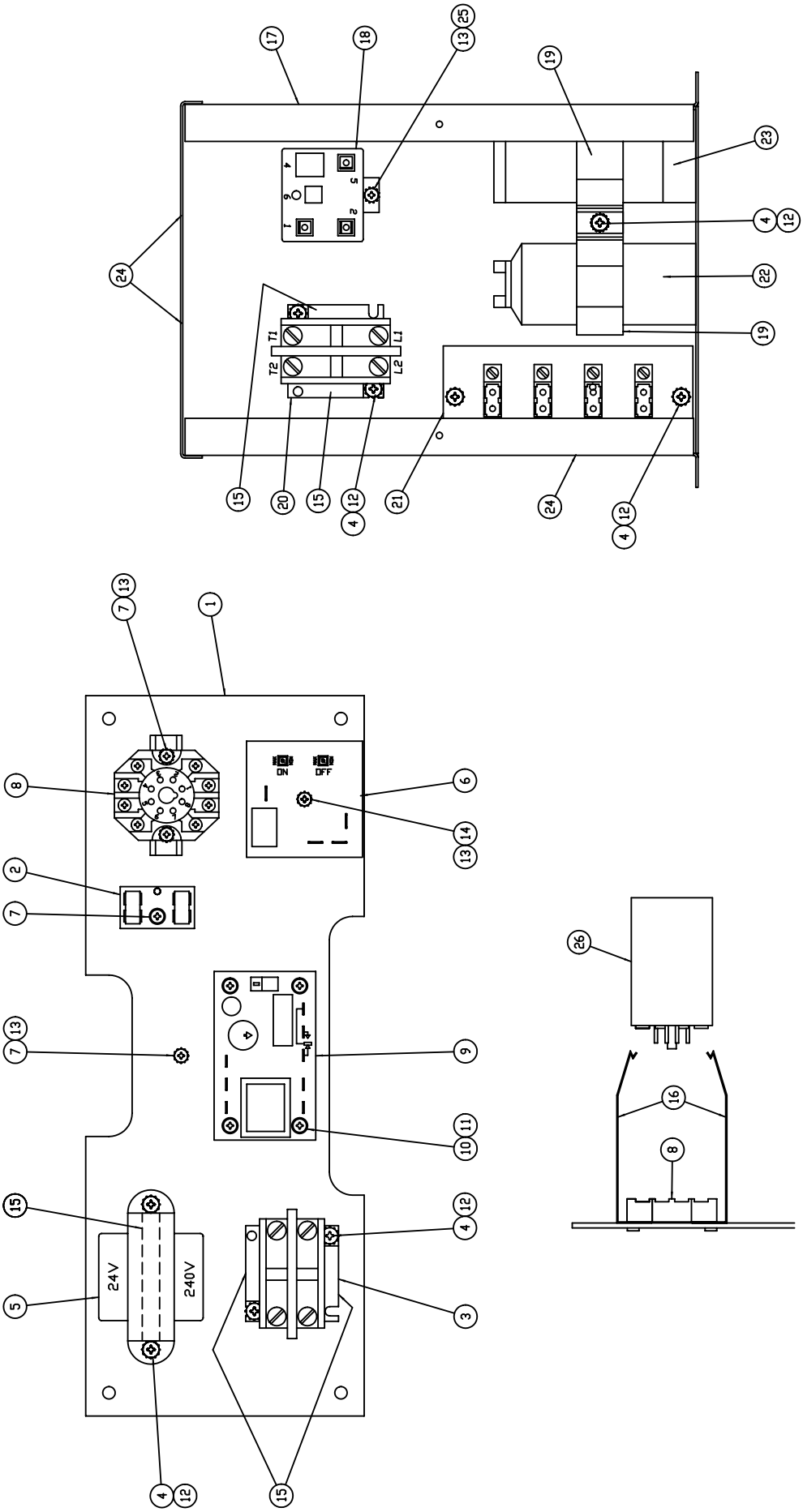
ITEM	STOELTING PN		DESCRIPTION
1			ELECTRICAL BOX ASSEMBLY
2	714003		STRIP 3/8 WIDE CORK/RUBBER
3	2177308		ELECTRICAL BOX COVER
4	649076		SCREW TAP 8-32 X 3/8 PAN HD PH
5			ELECTRICAL PANEL ASSEMBLY
6	463010		INSERT THREADED 1/4-20
7	538335		NUT HEX 1/4-20 X 7/16 STL ZP
8	718534		SWITCH TOGGLE 10AMP 250V
9	732129		TERMINAL STA-KON 16-14 WIRE
10	718532		SWITCH TOGGLE 10AMP 250V
11	458104		INDICATOR, LIGHT 28V RED LENS
12	618518		RELAY, TIME DELAY
13			ROCKING MOTOR ASSEMBLY
14	2177314		BRACKET, DOOR SAFETY SWITCH
15	223058		BUSHING SNAP 11/16 ID HOLE 7/8
16	1170836-02		LIMIT SWITCH ASSEMBLY
17	647441		SCREW MACH 6-32 X 1 RD HD PH
18	766933		WASHER SHAKEPROOF 6X5/16
19	538265 -DS		NUT HEX #6-32 X 5/16 STL ZP
20	766964		WASHER SHAKEPROOF 1/4 ZINC
21	538296		NUT HEX #10-24 X 3/8 SS
22	3177289		FRONT SHROUD
23	647653		SCREW MACH 10-24 X 3/8 TRS HD
24	221545		BUSHING, INSUL ANTI-SHORT
25	292601		CONNECTOR CONDUIT 3/8 x 90°
26	756053		SHRINK TUBING 1/2 DIA
27	430119		HARNESS CORD 9FT
28	763458		SYRUP SOLENOID
29	732097		TERMINAL QUICK CONNECT MALE
30	649107		SCREW TAP 10-16 X 1/2 HX HD ZP
31	766940		WASHER SHAKEPROOF 8 ZINC PLATE

ITEM	STOELTING PN		DESCRIPTION
32	649104		SCREW TAP 10-24 X 3/8 RD HD PH
33	766948		WASHER SHAKEPROOF 10 ZINC
34	644091		SCREW CAP 1/4-20 X 1/2 HX HD
35	647529		SCREW MACH 8-32 X 1/2 RD HD PH
36	538280		NUT HEX 8-32X11/32X1/8 STL
37	357037		FAN AXIAL 6 INCH 230VAC
38	2177611		BRACKET, FAN MOUNTING
39	282018-SV		COMPRESSOR 208-230/60/1PH
40	422156		GROMMET KIT WITH SLEEVES
41	644371		SCREW CAP 5/16-18 X 1-3/4 HX
42	767211		WASHER FLAT 5/16,7/8X3/8X14GA
43	538351		NUT HEX 5/16-18 LOCKING FLANGE
44	3177676		BRACKET, CONDENSER
45	628046		RIVET BLIND 1/4
46	284104		WATER COOLED CONDENSER
47	538356		NUT HEX LOCKING FLANGE ZP
48	644522		SCREW CAP 3/8-16 X 3/4 HX HD
49	3177608		BRACKET, WATER VALVE
50	763181		VALVE WATER 3/8NPT
51	369833		FITTING,BARBED 1/2X3/8 BRASS
52	728190		TEFLON THRD SEAL TAPE 520"/ROL
53	M820172		ADHESIVE LOCTITE 242-31
54	718710		SWITCH, HIGH LIMIT CONTROL
55	647393		SCREW MACH 6-32 X 3/8 RD HD PH
56	647513		SCREW MACH 8-32 X 3/8 RD HD PH
57	766431		WASHER ROUND
58	2177302		MIX PROBE ASSEMBLY
59	2177301		MIX PROBE ASSEMBLY
60	1157996		SPACER
61	766430		WASHER ROUND
62	M820071		ADHESIVE LOCTITE

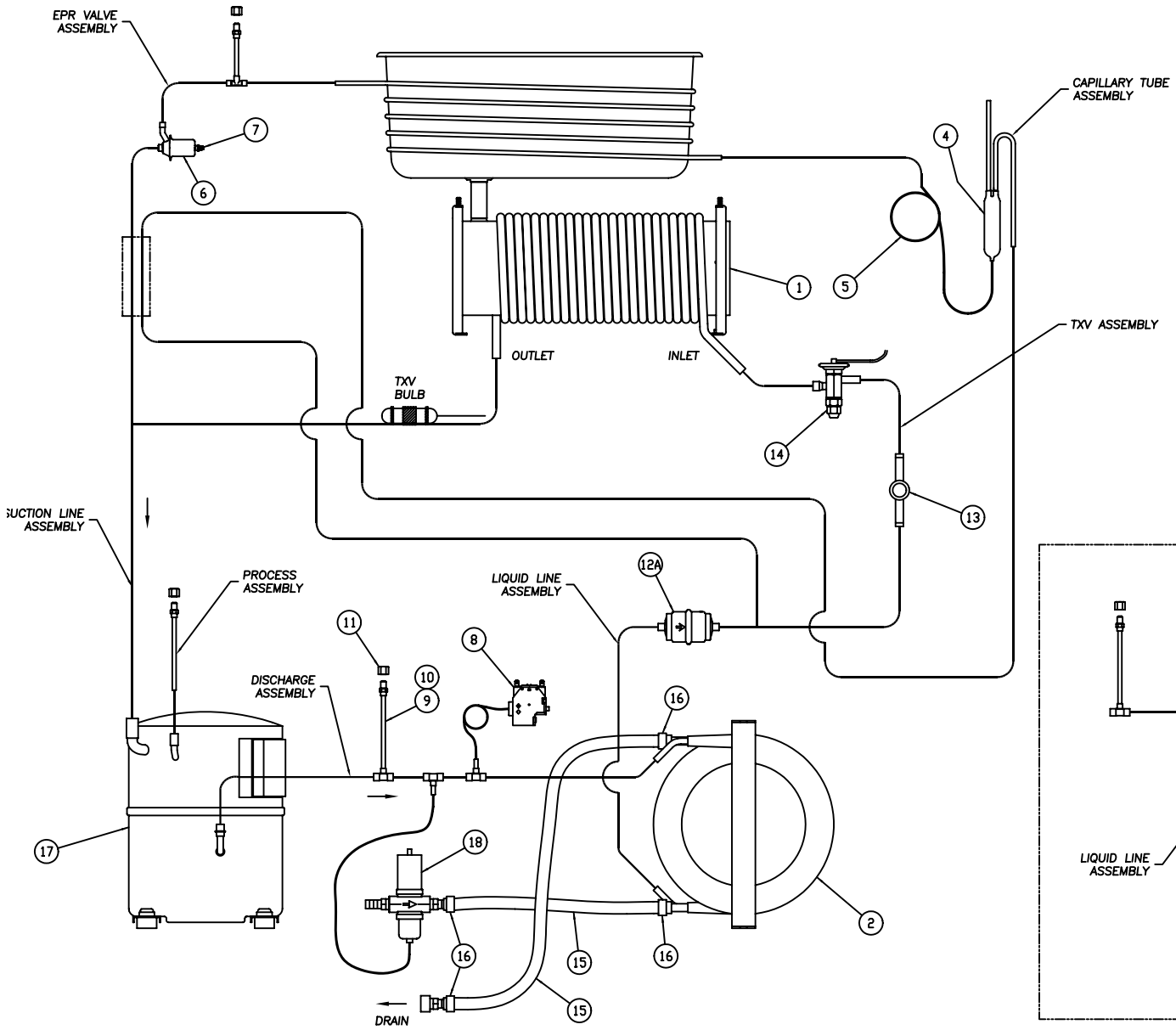

18
19
5
17
7
11
10
9
8
6
4

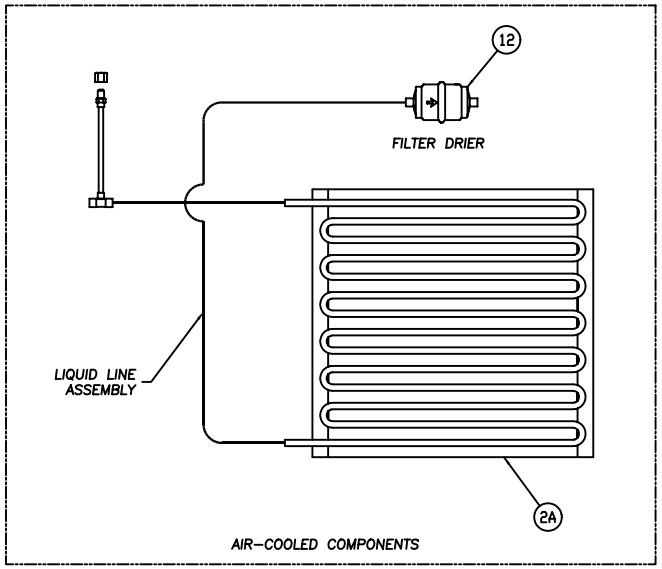

8
9
14
15
16
2
3
8
9
14
15
16
13
12
1
2
3

ITEM	STOELTING PN		DESCRIPTION
1	522414 -SV		MOTOR, .5HP, 1140RPM, 115/60/1
2	644307		SCREW CAP 5/16-18 X 3/4 HX HD
3	538351		NUT HEX 5/16-18 LOCKING FLANGE
4	2177312		BRACKET, MOTOR
5	695763		SPRING, EXT .240 OD X 3 FREE LENGTH
6	756209		TUBING, VACUUM 7/32 ID X 13/32 OD
7	1171924		BRACKET, ADJUSTING
8	647658		SCREW MACH 10-24 X 3/8 RD HD
9	766948		WASHER SHAKEPROOF 10 ZINC
10	1171923		BRACKET, ADJUSTING SCREW
11	647979		SCREW, 1/4-20 X 2-1/2 SS SLOTTED
12	2177106		BRACKET, TORQUE SWITCH
13	1170836 -SV		LIMIT SWITCH ASSEMBLY
14	647441		SCREW MACH 6-32 X 1 RD HD PH
15	538265		NUT HEX #6-32 X 5/16 STL ZP
16	766933		WASHER SHAKEPROOF 6X5/16
17	538333		NUT, 1/4-20 NYLOC
18	M820071		ADHESIVE LOCTITE #271 RED
19	538280		NUT HEX 8-32X11/32X1/8 STL


ON
OFF
24V
240V
T1
T2
L1
L2

ITEM	STOELTING PN		DESCRIPTION
1	2177306		ELECTRICAL PANEL
2	732010		TERMINAL BLOCK
3	295011		CONTACTOR MAGNETIC 2 POLE
4	647658		SCREW MACH 10-24 X 3/8 RD HD PH
5	744142		TRANSFORMER 240/24 VAC
6	739544		TIMER, DELAY-ON-MAKE, DELAY-ON-BREAK
7	647529		SCREW MACH 8-32 X 1/2 RD HD PH
8	688058		SOCKET RELAY 8 PIN OCTAL
9	296179		LIQUID LEVEL CONTROL
10	647393		SCREW MACH 6-32 X 3/8 RD HD PH
11	766933		WASHER SHAKEPROOF 6X5/16
12	766948		WASHER SHAKEPROOF 10 ZINC
13	766940		WASHER SHAKEPROOF 8 ZINC PLATE
14	647560		SCREW MACH 8-32 X 1 RD HD PH
15	714003		STRIP 3/8 WIDE CORK/RUBBER
16	266085		HOLD DOWN CLIP
17	3177307		ELECTRICAL BOX
18	618142		RELAY MOTOR START (COPE-COMP)
19	2156689		CAPACITOR BRACKET (2.0 DIA)
20	295011		CONTACTOR MAGNET 2POLE 24V
21	732016		TERMINAL BOARD
22	231057		CAPACITOR RUN 35 MFD 370VAC
23	231058		CAPACITOR START 145/174 MFD
24	223058		BUSHING SNAP 11/16 ID HOLE 7/8
25	647512		SCREW MACH 8-32 X 3/8 RD HD
26	618518		RELAY, TIME DELAY


EPR VALVE ASSEMBLY
CAPILLARY TUBE ASSEMBLY
TXV ASSEMBLY
OUTLET
INLET
TXV BULB
SUCTION LINE ASSEMBLY
PROCESS ASSEMBLY
LIQUID LINE ASSEMBLY
DISCHARGE ASSEMBLY
DRAIN
1
2
4
5
6
7
8
9
10
11
12A
13
14
15
16
17
18


12
FILTER DRIER
LIQUID LINE ASSEMBLY
2A
AIR-COOLED COMPONENTS

ITEM	STOELTING PN	QTY	DESCRIPTION
1	4177280		EVAPORATOR, FOAMED
2	284104		WATER COOLED CONDENSER
2A	284083		AIR-COOLED CONDENSER
3	615205	28 OZ	REFRIGERANT, R404A (W/C ONLY)
3A	615205	34 OZ	REFRIGERANT, R404A (A/C ONLY)
4	342020		DRIER
5	231101-SV		CAPILLARY TUBE .072 X .026
6	762978		VALVE EPR
7	M900184		EPR VALVE CAP
8	718710		SWITCH, HIGH LIMIT CONTROL
9	375813		ACCESS FITTING ASSEMBLY
10	762359		VALVE CORE
11	232085		CAP, QUICK SEAL, 1/4" SAE
12	342004		DRIER, 1/4" (A/C ONLY)
12A	342008		DRIER, 3/8 (W/C ONLY)
13	458003		INDICATOR, SIGHT GLASS 1/4
14	762443		VALVE, EXPANSION 1 TON
15	450061		HOSE,WATER 1/2 250PSI GOODYEAR
16	264238		CLAMP, HOSE #87/16 - 29/32
17	282018-SV		COMPRESSOR 208-230/60/1PH
18	763181		VALVE WATER 3/8NPT

Fill-O-Matic II

The Fill-O-Matic II is a self contained auto-fill system designed to be used with the Model SO318 and DQSO318 Freezer. The pump is built onto the cover of a 10 gallon mix vat. A draw tube extends to the bottom of the container to supply the pump with mix, the mix then passes thru a screen, thru the pump and discharges thru a hose to the freezer. The pump is controlled by a pressure switch. The pump starts at 45 PSI and stops at 60 PSI.

Cleaning

1. Empty mix container completely.

2. Pour 2 gallons of quite warm detergent water into the mix container and pump thru the pump and hoses.

NOTE

Do not allow the pump to run dry for more than a few minutes to prevent damage to the pumps components.

3. Remove the strainer by turning counter clockwise, then thoroughly clean.

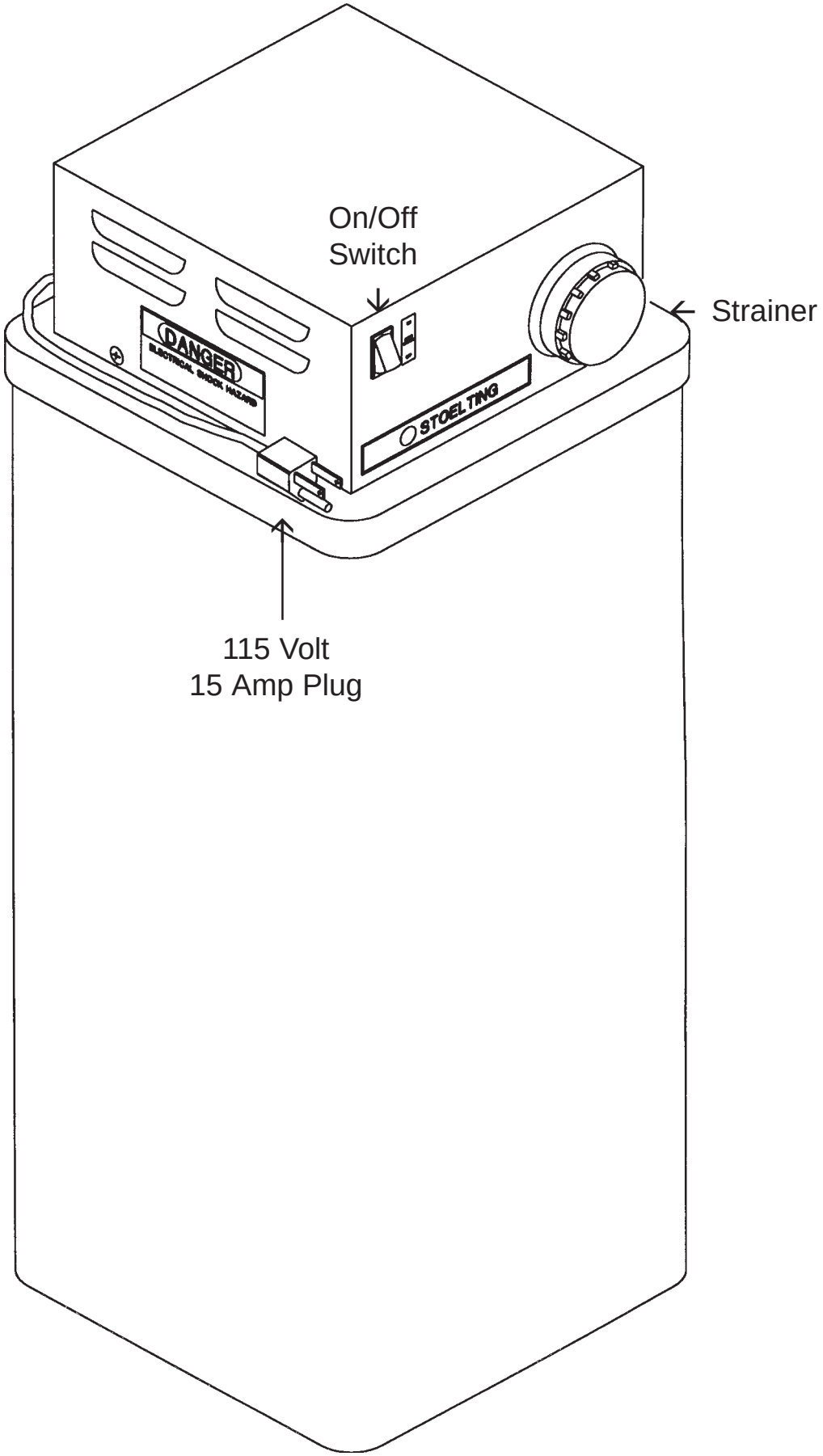
4. Apply a film of petro-gel to the male threads and "o" ring before reassembly. Do not over tighten.

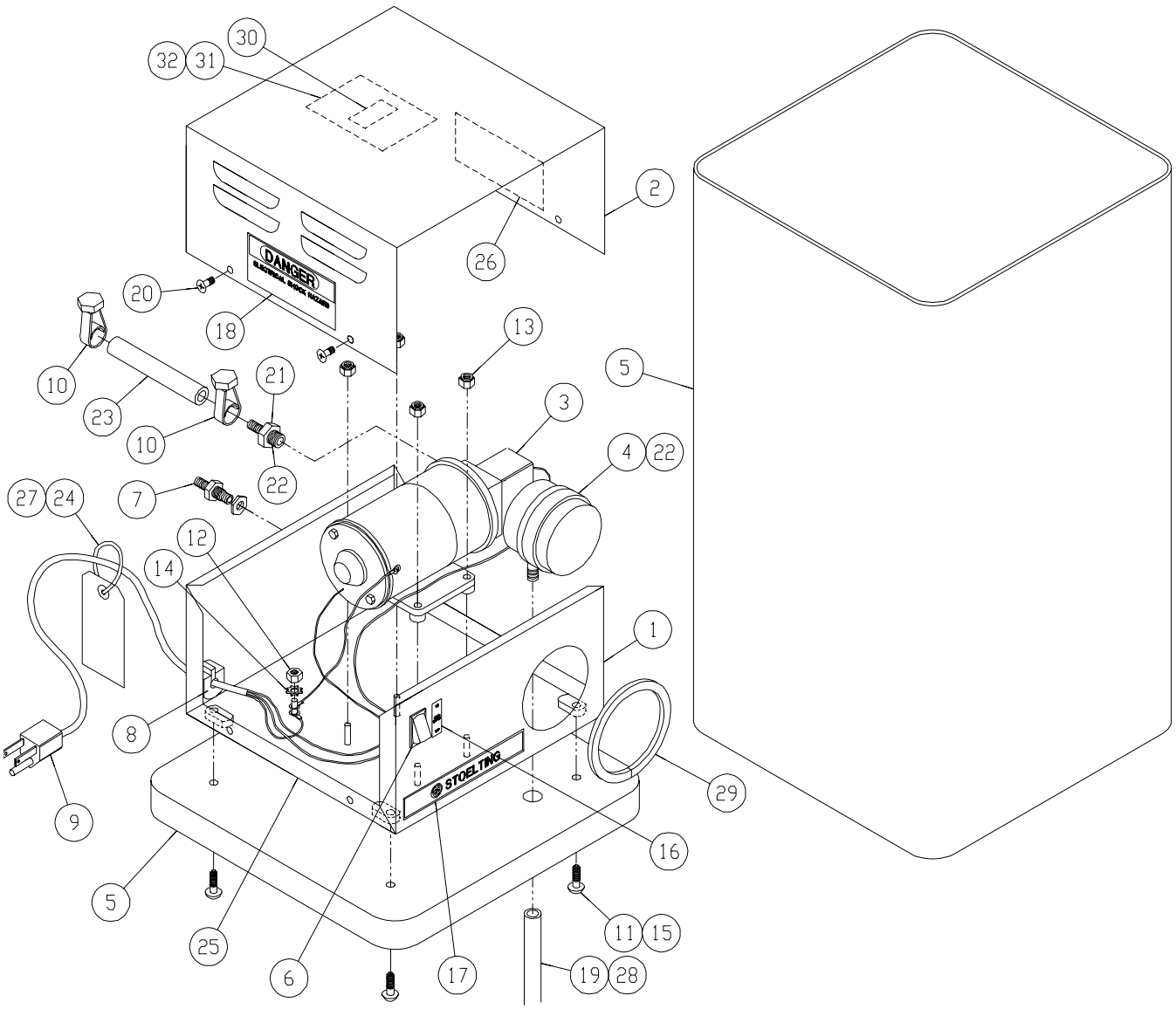
Sanitizing

1. Use a sanitizer mixed according to manufacturers instructions to provide a 100 parts per million strength solution. Mix sanitizer in quantities of no less than 2 gallons (7.5 liters) of 120° water. Allow the sanitizer to contact the surfaces to be sanitized for 5 minutes. Any sanitizer must be used only in accordance with the manufacturers instructions.

2. Pour the sanitizer into the mix container and pump thru the pump and hoses.

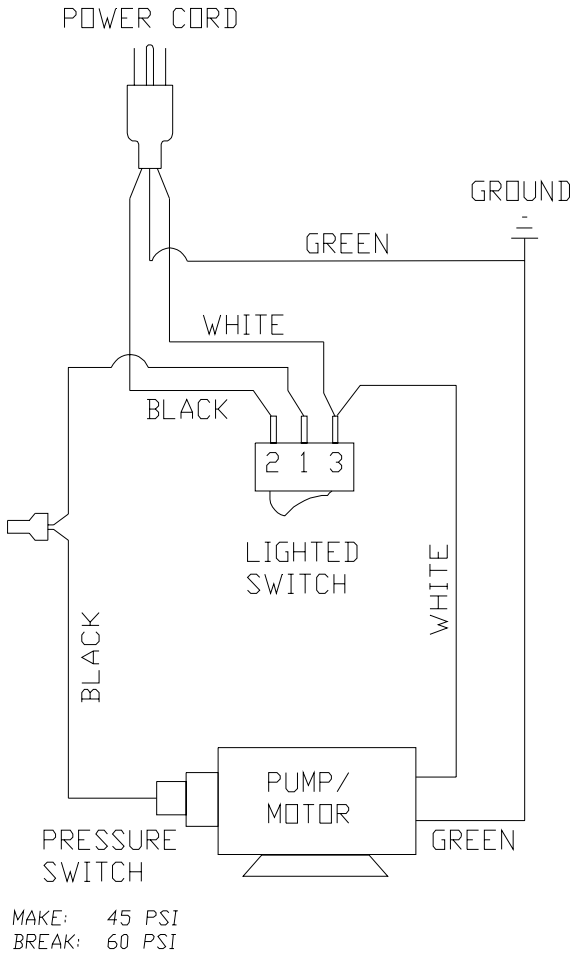
3. Make sure all the sanitizer has been pumped out and the container is completely empty, then fill with mix and start the pump pushing out any sanitizer that may be remaining in the hoses. The freezer barrel and hopper can now be filled.


On/Off
Switch
Strainer
DANGER
ELECTRICAL SHOCK HAZARD
STOELTING
115 Volt
15 Amp Plug

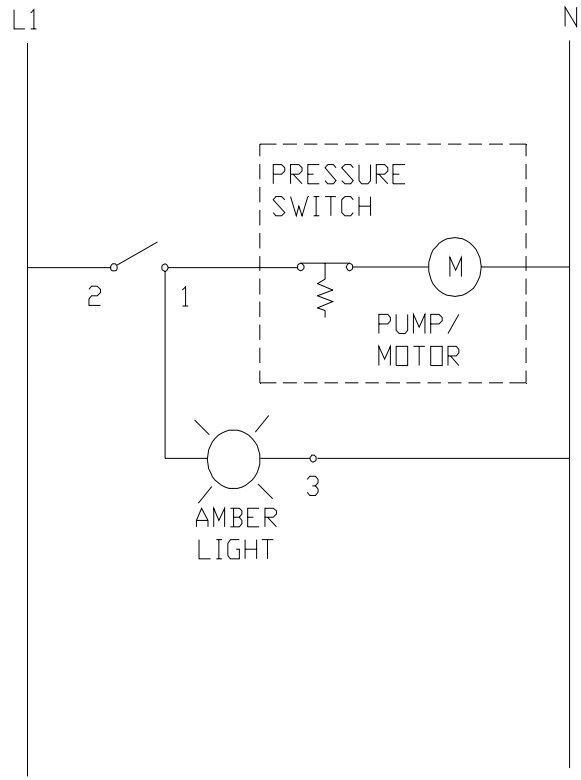


ITEM	STOELTING PN	QTY	DESCRIPTION
1	4177437	1	BASE, PUMP BOX
2	4159646	1	COVER, PUMP BOX
3	601161	1	PUMP, DUPLEX DIAPHRAM
4	712004	1	STRAINER, INLET, 3/8 NPT
5	2177441	1	TANK, MIX, 15 GAL W/COVER (MACHINED)
6	718896	1	SWITCH, ROCKER, LIGHTED
7	375911	1	FITTING, BULKHEAD
8	223162	1	BUSHING STRAIN RELIEF 7/8 HOLE
9	430022	1	HARNESS CORD 6.50FT (21)
10	264235	2	CLAMP HOSE 3-8/9-16 MIN/MAX D
11	647899	4	SCREW, MACH 1/4-20 X 3/8 TRS
12	538306	1	NUT HEX #10-32 X 3/8 SS
13	538307	4	NUT HEX NYLOCK #10-32 18-8 SS
14	766948	1	WASHER SHAKEPROOF 10 ZINC
15	M820172	ASREQ	ADHESIVE LOCTITE 242-31
16	324150	1	DECAL PUMP DRIVE SWITCH

ITEM	STOELTING PN	QTY	DESCRIPTION
17	324393	1	DECAL STOELTING SWIRL LOGO
18	324105	1	DECAL CAUTION-ELECT SHOCK
19	756190	30IN	TUBING PLASTIC 5/16IDX1/2OD
20	647653	4	SCREW MACH 10-24 X 3/8 TRS HD
21	375913	1	FITTING, 3/8 NPT X 1/4 TUBE
22	M002841	ASREQ	TAPE TEFLON THD SEAL
23	756187	4'	TUBING, BRAIDED 1/4IDX7/16OD
24	739040	4	TIE 8.0 LG X 1/8 WIDE NEUTRAL
25	M850004	ASREQ	RTV DOW CORNING 734
26	324743	1	DECAL, NOT FOR USE W/PRODUCT - PULP
27	723529	1	TAG CAUTION
28	1147968	1	TUBE, MIX PICK UP
29	254121	9.63IN	CHANNEL, PUSH-ON VINYL TRIM
30	324566	1	DECAL - WIRED ACCORDING TO
31	.	1	WIRING DIAGRAM - SEE ELEC ASSY
32	130000	1	BAG,ENVELOPE FRONT LOADING



LADDER DIAGRAM



STOELTING
KIEL, WISCONSIN U.S.A. 53042

ELECTRICAL WIRING DIAGRAM

MODELS: 4177349
DIAGRAM NO. : 3177440-WD
REVISION NUMBER: 0

CAUTION

DISCONNECT POWER SUPPLY BEFORE SERVICING

3177440-WD

Fill-O-Matic III

The Fill-O-Matic III is a gas powered auto-fill system designed to be used with Slush and Cocktail Freezers. The pump is built to hang on the side of a 10 gallon mix vat. The pump can be driven by either regulated CO_2, nitrogen or filtered compressed air. A draw tube extends to the bottom of the container to supply the pump with mix, the mix then passes thru the pump and discharges thru a hose to the freezer. The pump is controlled by pressure in the mix line verses gas pressure to the pump. Set the gas pressure to the pump between 20 to 40 PSIG.

Cleaning

1. Empty mix container completely.

2. Pour 2 gallons of quite warm detergent water into the mix container and pump thru the pump and hoses.

NOTE

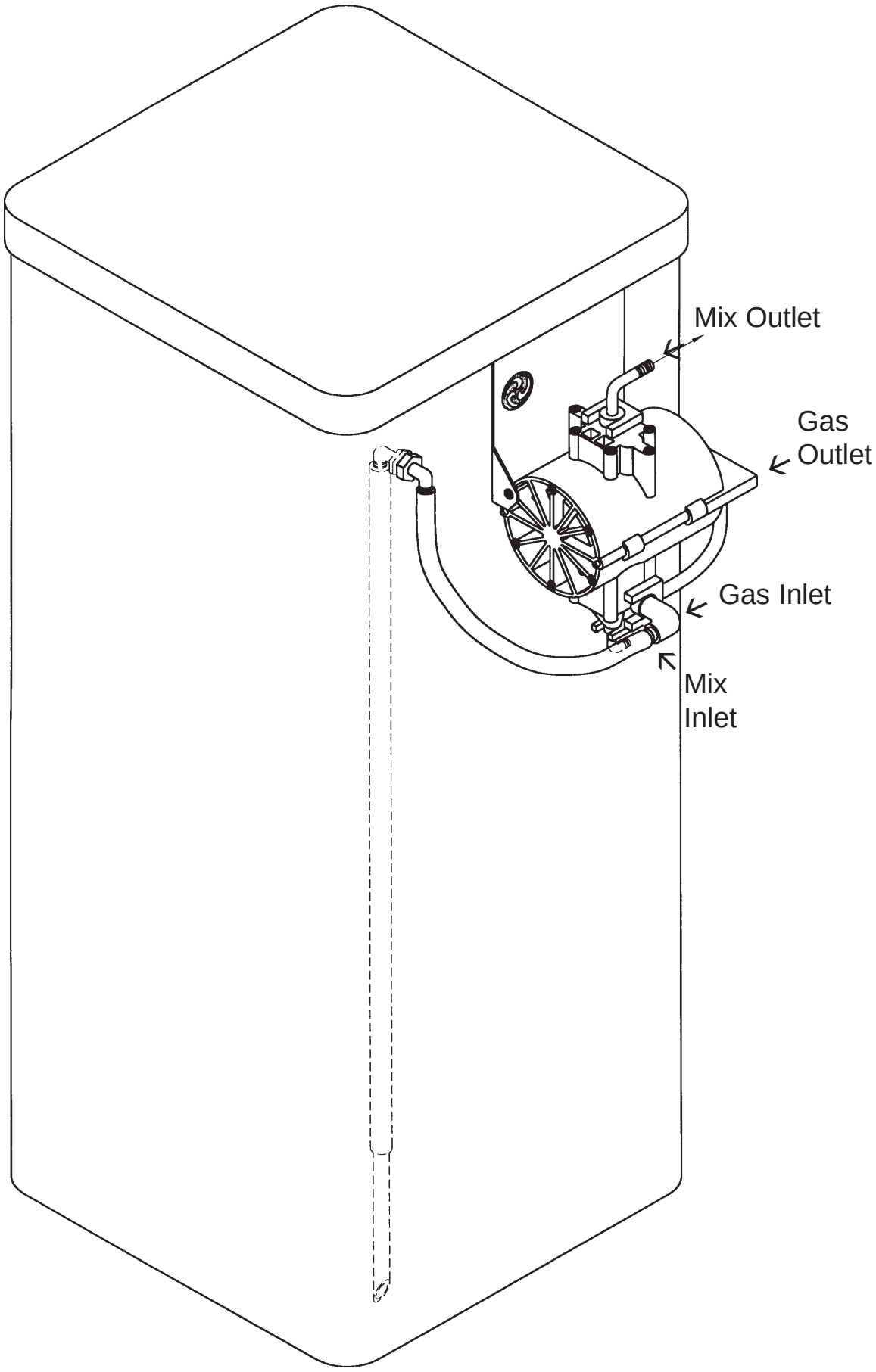
Do not allow the pump to run dry for more than a few minutes to prevent damage to the pumps components.

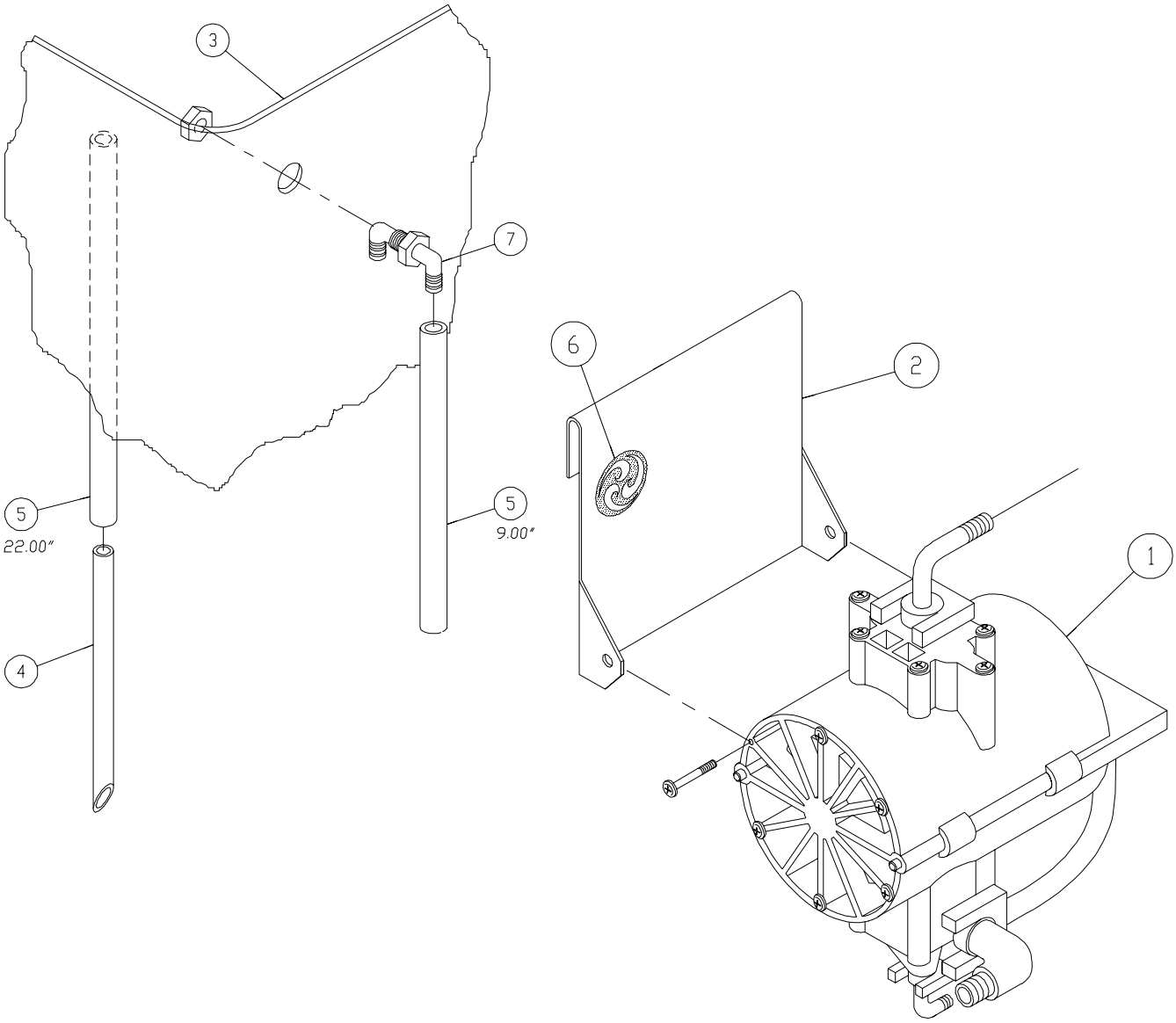
Sanitizing

1. Use a sanitizer mixed according to manufacturers instructions to provide a 100 parts per million strength solution. Mix sanitizer in quantities of no less than 2 gallons (7.5 liters) of 120° water. Allow the sanitizer to contact the surfaces to be sanitized for 5 minutes. Any sanitizer must be used only in accordance with the manufacturers instructions.

2. Pour the sanitizer into the mix container and pump thru the pump and hoses.

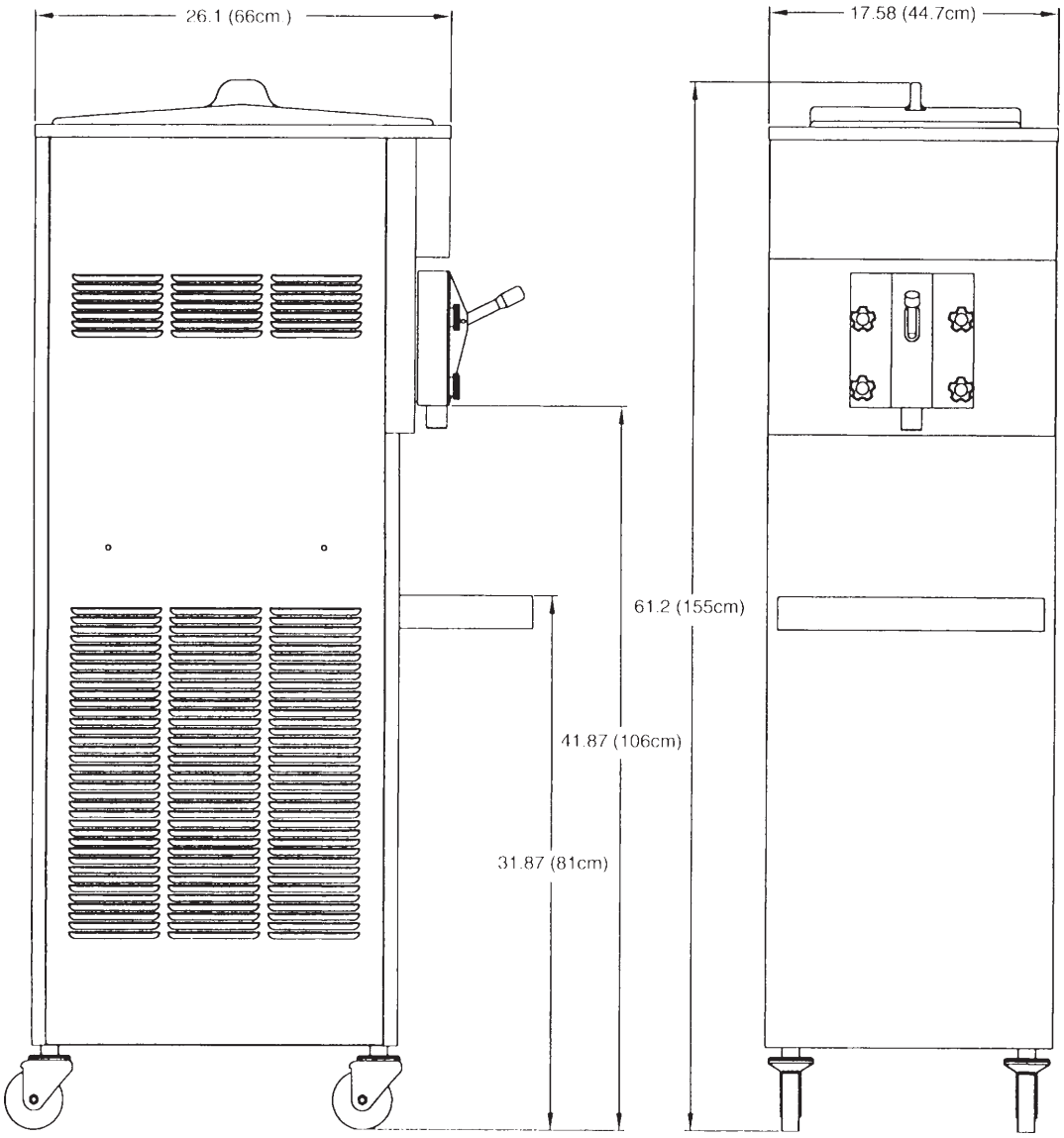
3. Make sure all the sanitizer has been pumped out and the container is completely empty, then fill with mix and start the pump pushing out any sanitizer that may be remaining in the hoses. The freezer barrel and hopper can now be filled.


Mix Outlet
Gas
Outlet
Gas Inlet
Mix
Inlet



ITEM	STOELTING PN	QTY	DESCRIPTION
1	600103	1	PUMP, GAS OPERATED
2	3177371	1	BRACKET, GAS PUMP
3	724025	1	15GA TANK W/CVR 11.5"SQR X 27"
4	1147968	1	TUBE, PICK-UP
5	756190	31 IN	TUBING PLASTIC 5/16IDX1/2OD
6	324294	1	DECAL, STOELTING SWIRL
7	369755	1	FITTING, BULKHEAD, 3/8"
8	M840161	1	BOX12X14X28 200# TEST
9	1995673	1	INSTRUCTION CARD
10	M880519	ASREQ	FOAM, AMCEL

SECTION 11
ADDENDUM



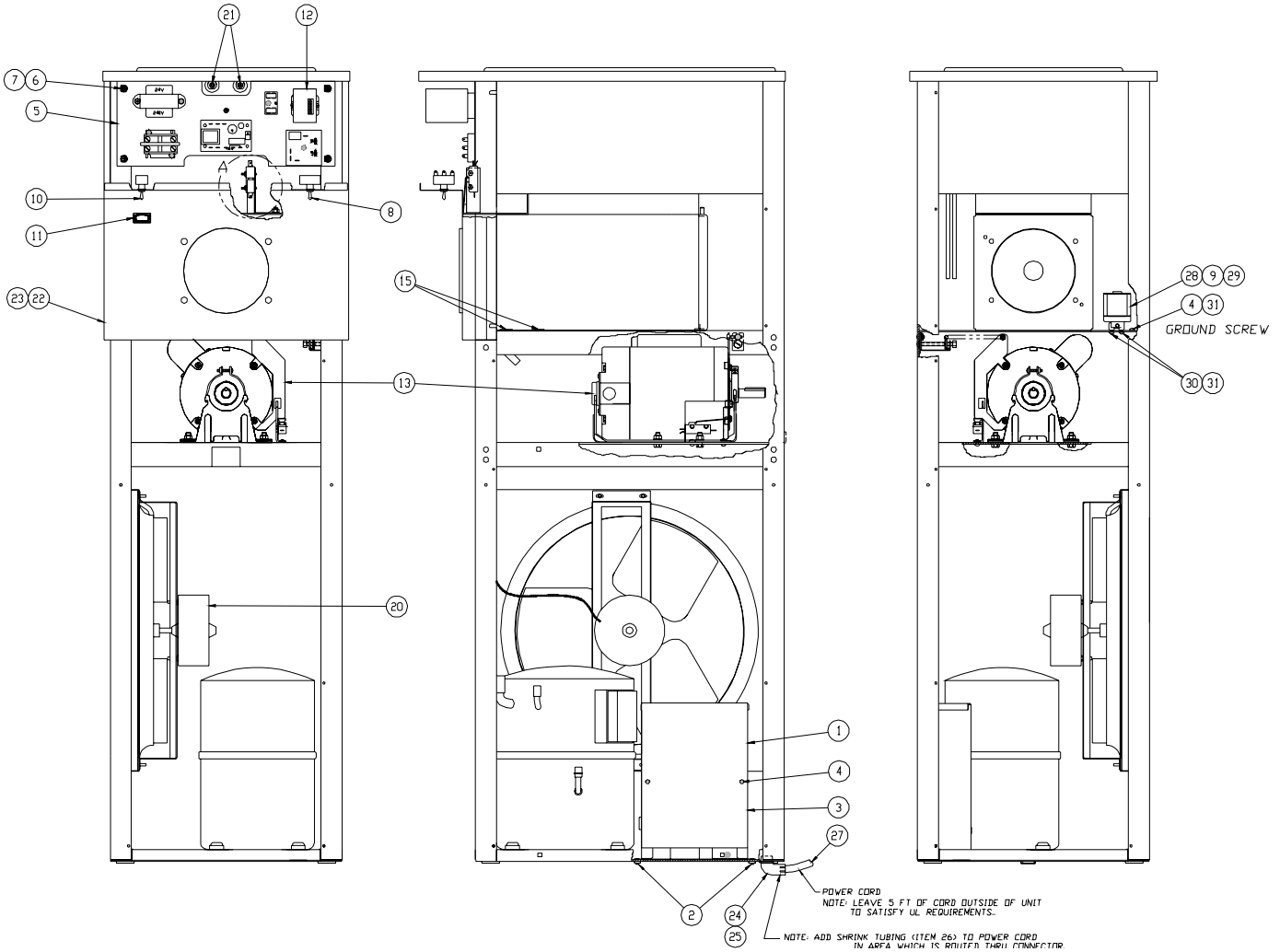
Dispenser Specifications

Electrical
- 208/230/60/1
- 20amp circuit & plug
- 12 running amps
- 1/2 HP Drive Motor

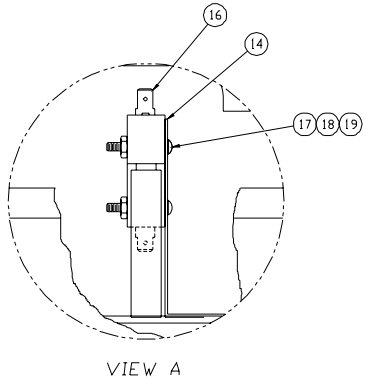
Refrigeration
- HFC-404A environmentally-friendly refrigerant
- 2 HP (14,800 BTUH) high-efficiency compressor Air cooled or Water cooled.

Crated Dimensions
- Width: 22" (55.9cm)
- Depth: 30" (76.2cm)
- Height: 66" (167.7cm)
- Weight: 400lbs.(182kg)

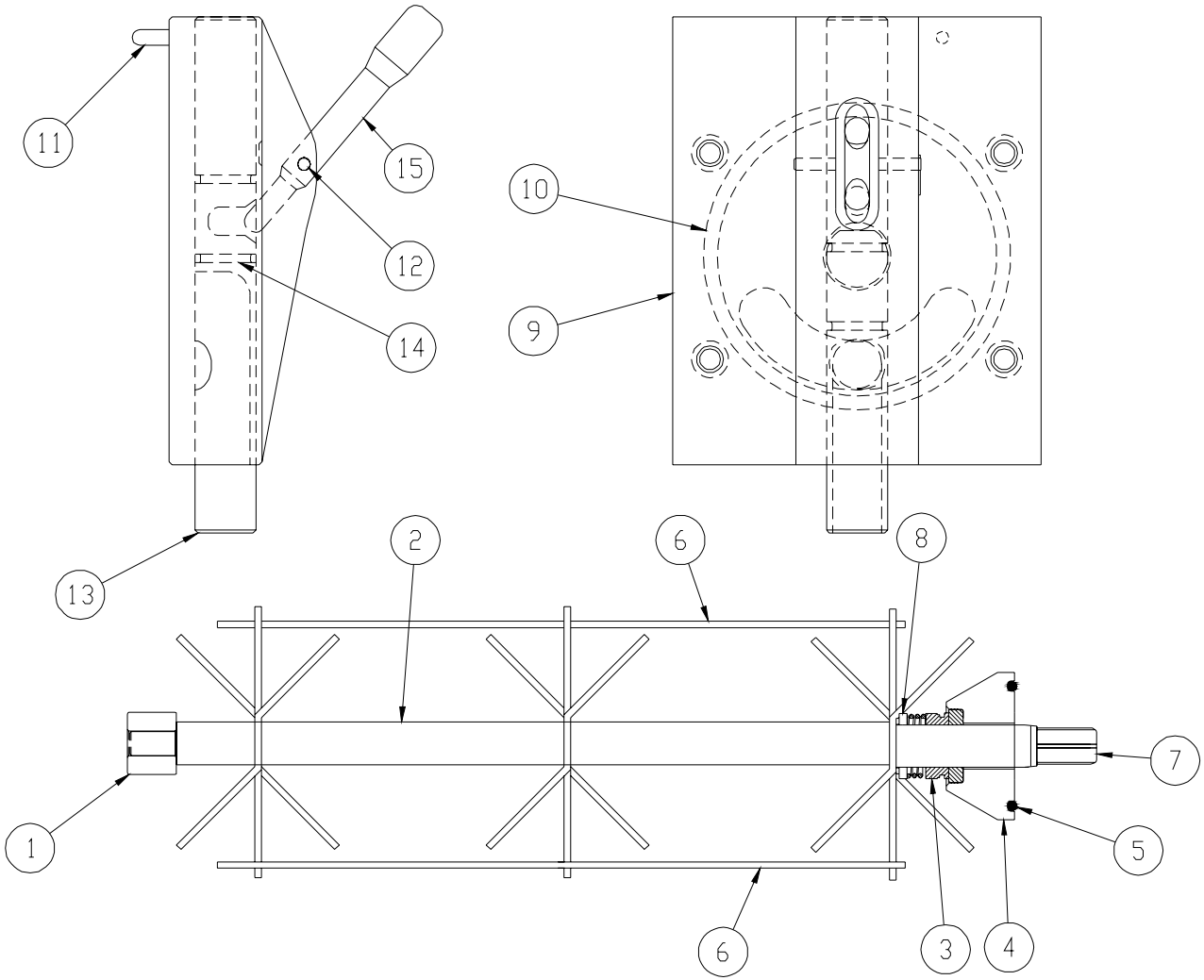
Dimensions
- Width: 17.6"(44.7cm)
- Depth: 26.1"(66cm)
- Height: 61.2"(155cm) w/casters
- Weight: 350lbs.(159kg)



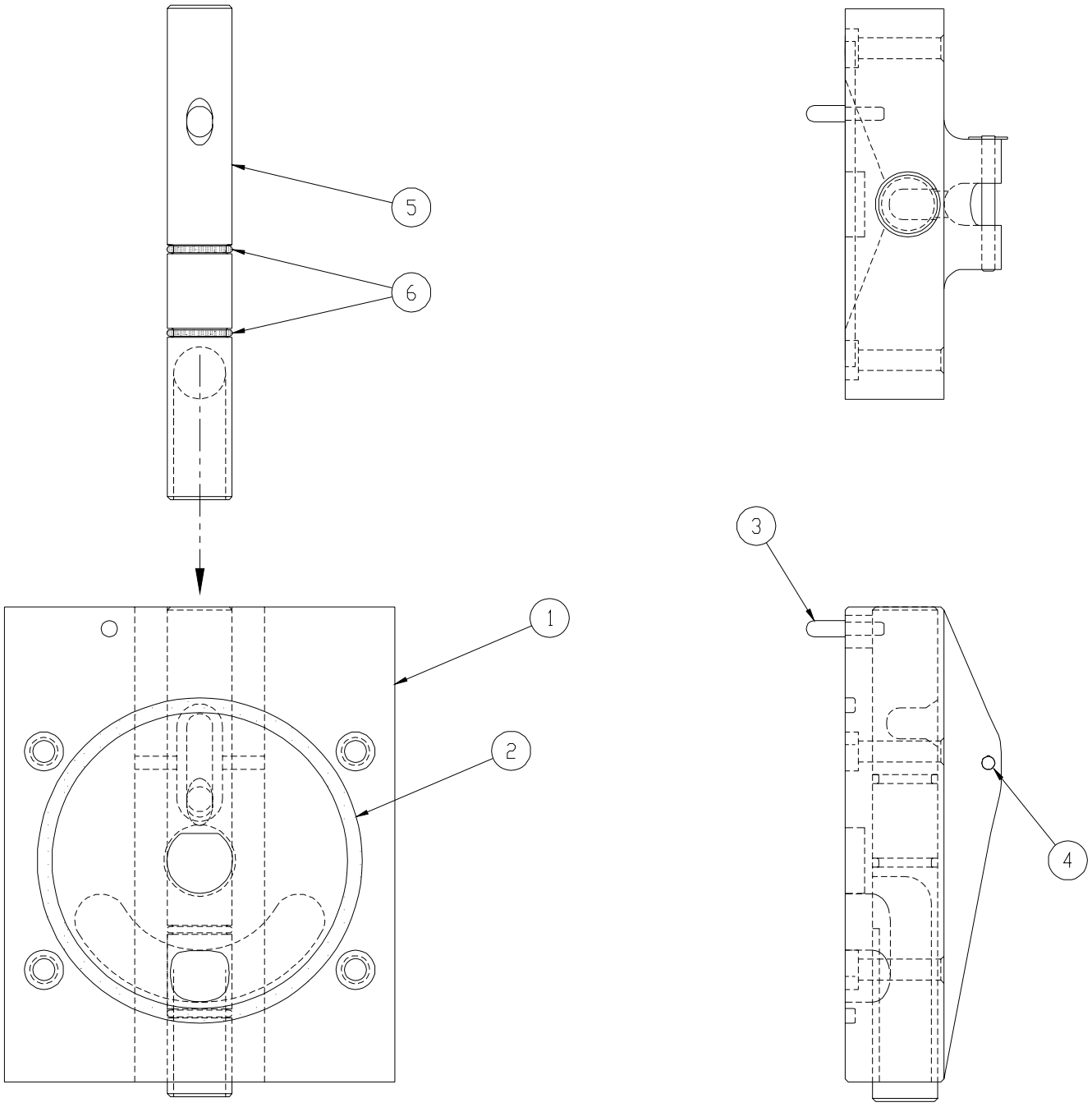
ITEM	STOELTING PN	QTY	DESCRIPTION
1	SEE SHEET 2	1	ELECTRICAL BOX ASSEMBLY
2	647658	4	SCREW MACH 10-24 X 3/8 RD HD
3	2177308	1	ELECTRICAL BOX COVER
4	649076	3	SCREW TAP 8-32 X 3/8 PAN HD PH
5	SEE SHEET 3	1	ELECTRICAL PANEL ASSEMBLY
6	644073	4	SCREW CAP 1/4-20 X 3/8 HX HD
7	538335	4	NUT HEX 1/4-20 X 7/16 STL ZP
8	718534	1	SWITCH TOGGLE 10AMP 250V
9	732129	1	TERMINAL STA-KON 16-14 WIRE
10	718532	1	SWITCH TOGGLE 10AMP 250V
11	458104	1	INDICATOR, LIGHT 28V RED LENS
12	618518	1	RELAY, TIME DELAY
13	SEE SHEET 4	1	ROCKING MOTOR ASSEMBLY
14	2177314	1	BRACKET, DOOR SAFETY SWITCH
15	223058	2	BUSHING SNAP 11/16 ID HOLE 7/8
16	1170836-DS	1	LIMIT SWITCH ASSEMBLY
17	647441	2	SCREW MACH 6-32 X 1 RD HD PH
18	766933	8	WASHER SHAKEPROOF 6X5/16
19	538265	2	NUT HEX #6-32 X 5/16 STL ZP
20	522291	1	FAN MOTOR 115/208-240V 60/50HZ
21	538296	2	NUT HEX #10-24 X 3/8 SS
22	3177289	1	FRONT SHROUD
23	647653	6	SCREW MACH 10-24 X 3/8 TRS HD
24	221545	1	BUSHING, INSUL ANTI-SHORT
25	292601	1	CONNECTOR CONDUIT 3/8 x 90°
26	756053	4 IN.	SHRINK TUBING 1/2 DIA
27	430119	1	HARNESS CORD 9FT
28	763458	1	SYRUP SOLENOID
29	732097	2	TERMINAL QUICK CONNECT MALE
30	649107	2	SCREW TAP 10-16 X 1/2 HX HD ZP
31	766940	3	WASHER SHAKEPROOF 8 ZINC PLATE



ITEM	STOELTING PN	QTY	DESCRIPTION	8	2177118	1	WASHER, ACETRON 1.25 OD X .94ID X .060"
1	1170882	1	BUSHING, AUGER	9	336525-SV	1	DOOR, FRONT
2	4177009	1	AUGER WELDMENT	10	625310	1	RING QUAD 5.75 ID
3	667892	1	SEAL, SHAFT	11	1171908	1	DOOR PIN
4	3172965	1	ADAPTER, REAR SEAL	12	570196	1	PIN, 1/4"X2-1/2" COTTERLESS
5	624857	1	RING O 21/4IDX25/8ODX3/16CS	13	3177001	1	SPIGOT
6	162157	2	BLADE, SCAPER	14	624655	2	RING O 1X1-1/4X1/8 70 DURO
7	508033	AS REQ	LUBRICANT FEL-PRO #51171	15	2170877	1	HANDLE, SPIGOT

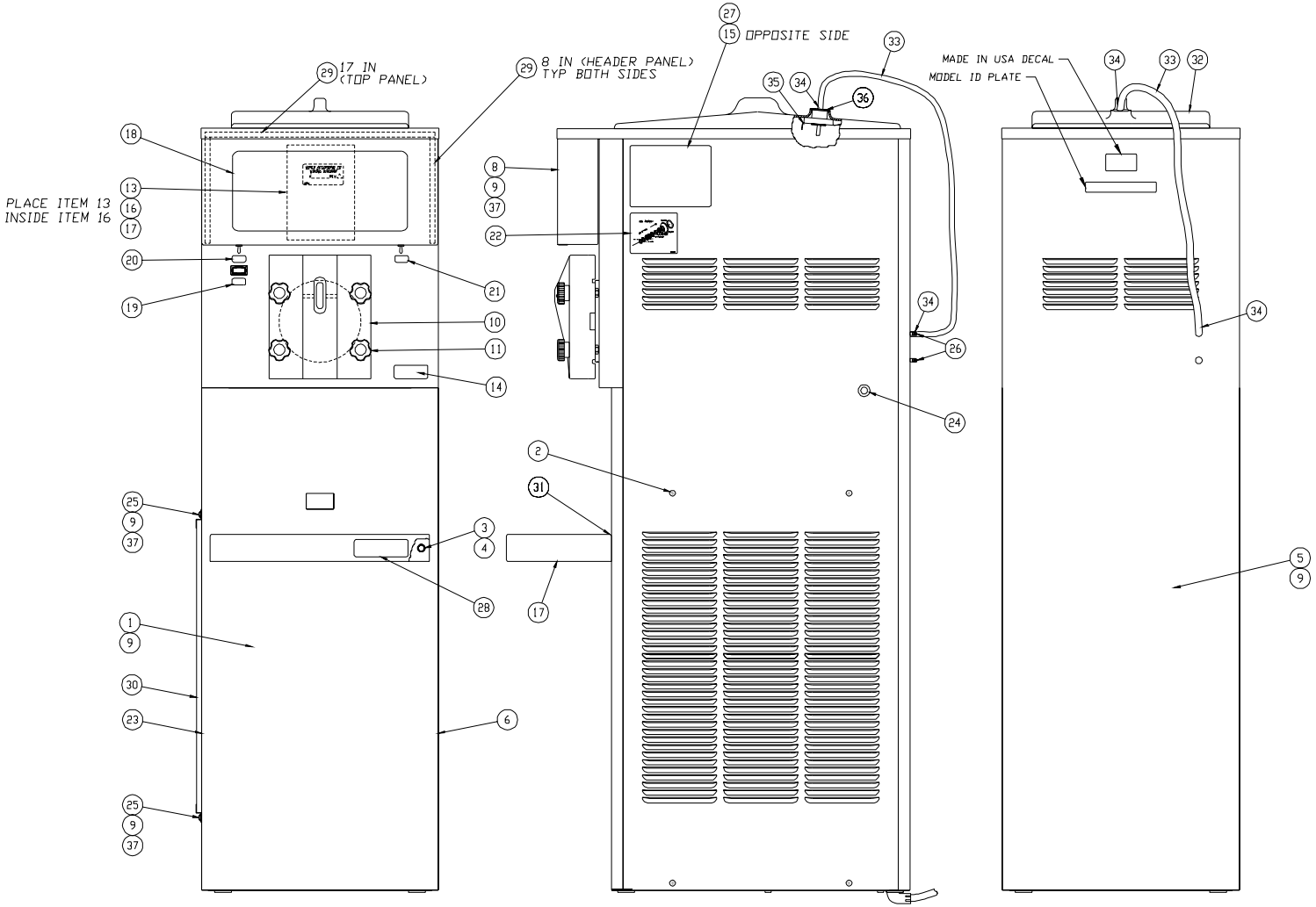


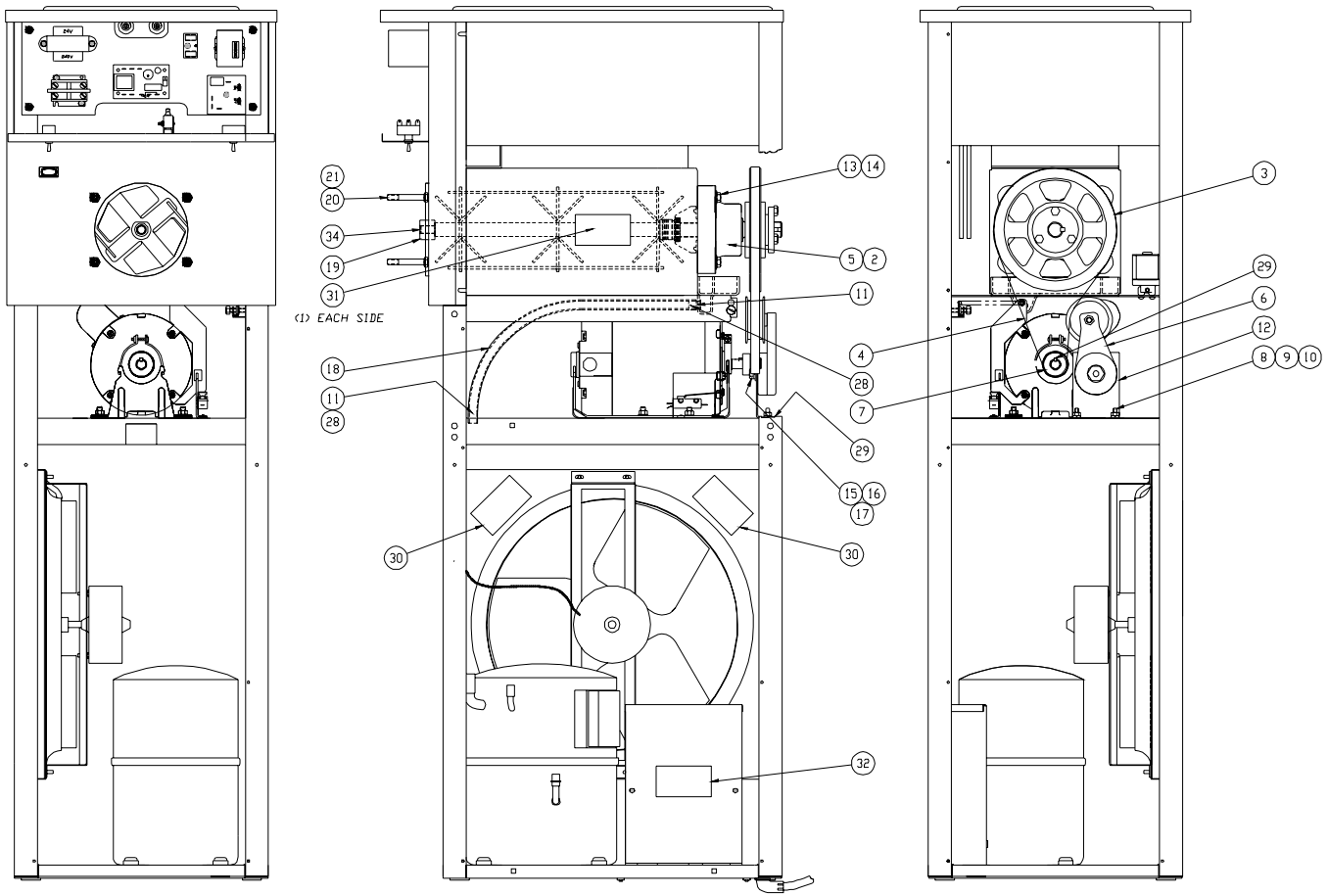
ITEM	STOELTING PN	QTY	DESCRIPTION
1	336525-SV	1	DOOR, FRONT
2	625310	1	RING QUAD 5.75 ID
3	1171908	1	PIN, DOOR
4	570196	1	PIN, 1/4 X 2-1/2 COTTERLESS
5	3177001	1	SPIGOT
6	624655	2	RING O 1X1-1/4X1/8 70 DURO

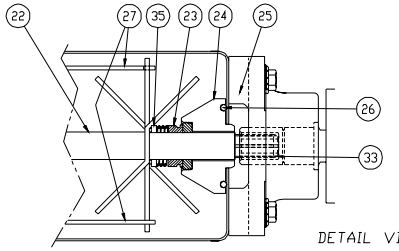


ITEM	STOELTING PN	QTY	DESCRIPTION
1	4177288	1	FRONT PANEL
2	647900	8	SCREW MACH 1/4-20 X 1/4 TRS
3	766457	2	WASHER ROUND 5/8X9/32 SS
4	644093	2	SCREW CAP 1/4-20 X 1/2 HX HD
5	4177285	1	REAR PANEL
6	4177286	1	PANEL, RIGHT SIDE
7			
8	3177290	1	HEADER PANEL
9	647653	24	SCREW, MACH 10-24 X 3/8 TRS HD
10	3177296	1	FRONT DOOR ASSY
11	482019	4	KNOB BLACK
12	324566	1	DECAL - WIRED ACCORDING TO
13	.	1	SEE ELEC ASSY
14	324141	1	DECAL CAUTION-ROTATING BLADES
15	.	1	MODEL ID PLATE
16	130000	1	BAG,ENVELOPE FRONT LOADING
17	3177287	1	DRIP TRAY
18	324725	1	DECAL - HEADER

19	324722	1	DECAL - MIX LOW
20	324712	1	PUMP ON/OFF
21	324163	1	DECAL CLEAN-OFF-ON SWITCH
22	324689	1	DECAL-REAR SEAL ASSEMBLY
23	4177313	1	PANEL, LEFT SIDE
24	584235	1	PLUG, FINISHING
25	2177311	2	RAIL, FILTER GUIDE
26	375911	2	BULKHEAD FITTING
27	324509	1	DECAL CLEANING (SS & SHAKE)
28	324393	1	DECAL STOELTING SWIRL LOGO
29	714003	33 IN	STRIP 3/8 WIDE CORK/RUBBER
30	368216	1	FILTER, EXTERNAL
31	M820309	ASREQ	SEALANT DOW CORNING ALUMINUM
32	2177315	1	COVER, MODIFIED HOPPER
33	756067	30 IN	TUBING PLASTIC 1/4IDX7/16OD
34	264064	2	CLAMP LOOP JAW TYPE 1/2
35	2177316	1	CLIP, RETAINING
36	2177317	1	MIX INLET ASSEMBLY
37	463004	12	INSERT THREADED #10-24

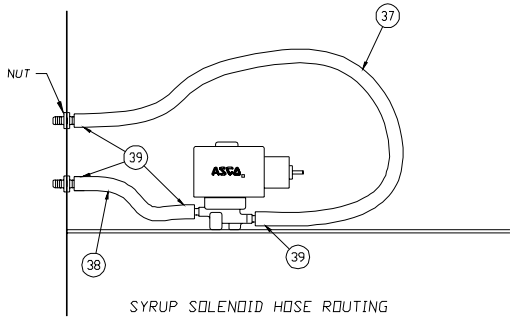






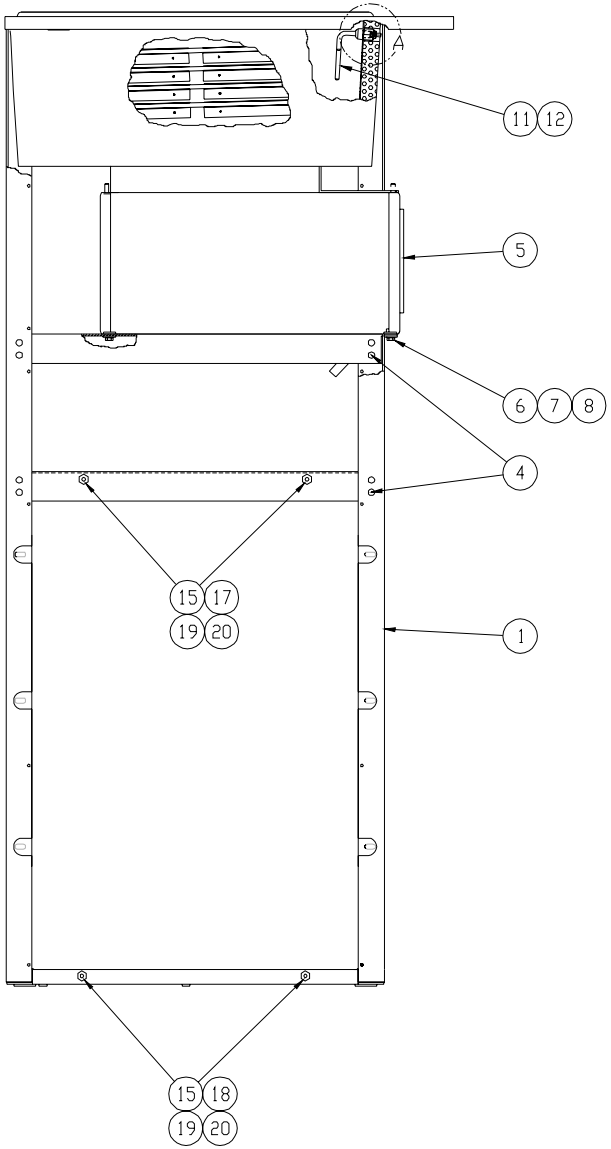
DETAIL VIEW - AUGER & SEALS

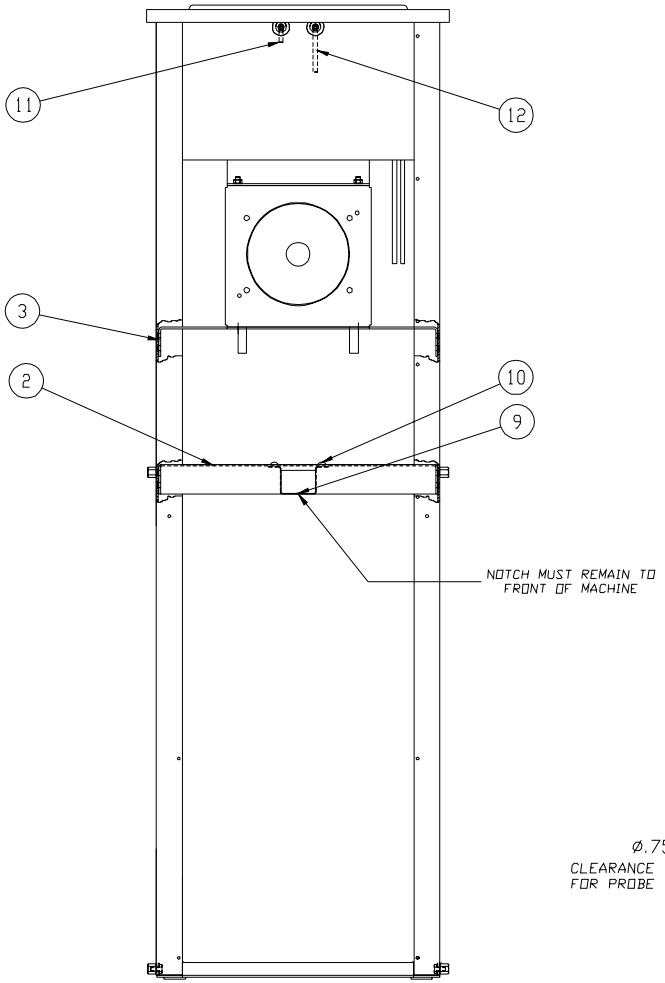
ITEM	STOELTING PN	QTY	DESCRIPTION
1	744269	1	DRIP TRAY PER DWG 744269 C
2	464463	1	INSULATION,EVAPORATOR REAR PAD
3	598332	1	PULLEY, POLY-V 8.0" O.D. 6 GROOVE
4	152227	1	BELT, POLY-V 34" LONG 6 GROOVE
5	3170878	1	BEARING HOUSING ASSEMBLY
6	454016	1	IDLER PER DWG 454016A
7	598011	1	PULLEY, POLY-V 1.50" O.D. 6 GROOVE
8	538335	2	NUT HEX 1/4-20 X 7/16 STL ZP
9	644091	2	SCREW CAP 1/4-20 X 1/2 HX HD
10			
11	1172693	2	DRAIN TUBE
12	2171878	1	BRACKET, IDLER
13	766982	4	WASHER SHAKEPROOF 3/8 ZINC
14	644605	4	SCREW CAP 3/8-16 X 2 HX HD ZP
15	644541	1	SCREW CAP 3/8-16 X 1 HX HD ZP
16	767216	1	WASHER FLAT 3/8X1X7/16 14GA ZP
17	766082	1	WASHER LOCK 3/8IN MED SS
18	756085	19.0"	TUBING, 1/2 ID X 5/8 OD CLEAR PVC
19	1170882	1	AUGER BUSHING
20	1170897	4	DOOR STUD
21	538359	4	NUT HEX JAM 3/8-16 X 9/16 SS
22	4177009	1	AUGER WELDMENT
23	667892	1	SEAL, SHAFT
24	3172965	1	REAR SEAL ADAPTER
25	324686	1	DECAL - DANGER STARTS AUTOMATICALLY
26	624857	1	RING O 21/4IDX25/8ODX3/16CS
27	162157	2	BLADE, SCRAPER
28	264061	2	CLAMP, LOOP TYPE JAW 5/8
29	1981462-0200	1	KEYSTOCK SQ CR 1/4 X 1/4 X 2.00
30	324107	3	DECAL CAUTION MOVING PARTS
31	324208	2	DECAL REFRIG LEAK CHECK
32	324105	1	DECAL CAUTION-ELECT SHOCK
33	508033	AS REQ	LUBRICANT FEL-PRO #51171
34	508135	AS REQ	LUBE GREASE PETROL GEL 4 OZ
35	2177118	1	WASHER, ACETRON 1.250D X .941D X .060"
36	M820309	AS REQ	SEALANT, DOW CORNING
37	756067	16 IN	TUBING PLASTIC 1/4IDX7/16OD
38	756187	6.25"	TUBING BRAIDED 1/4IDX7/16OD
39	264064	4	CLAMP LOOP JAW TYPE 1/2



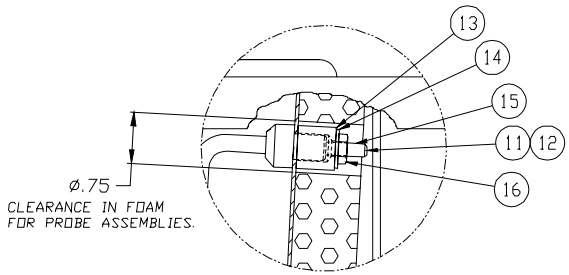
SYRUP SOLENOID HOSE ROUTING

NOTES:
1) SEAL DRAIN TUBE (ITEM 11) TO DRIP TRAY (ITEM 1) WITH SEALANT (ITEM 36).
2) ATTACH DRIP TRAY (ITEM 1) TO REAR OF EVAPORATOR WITH SEALANT (ITEM 36).

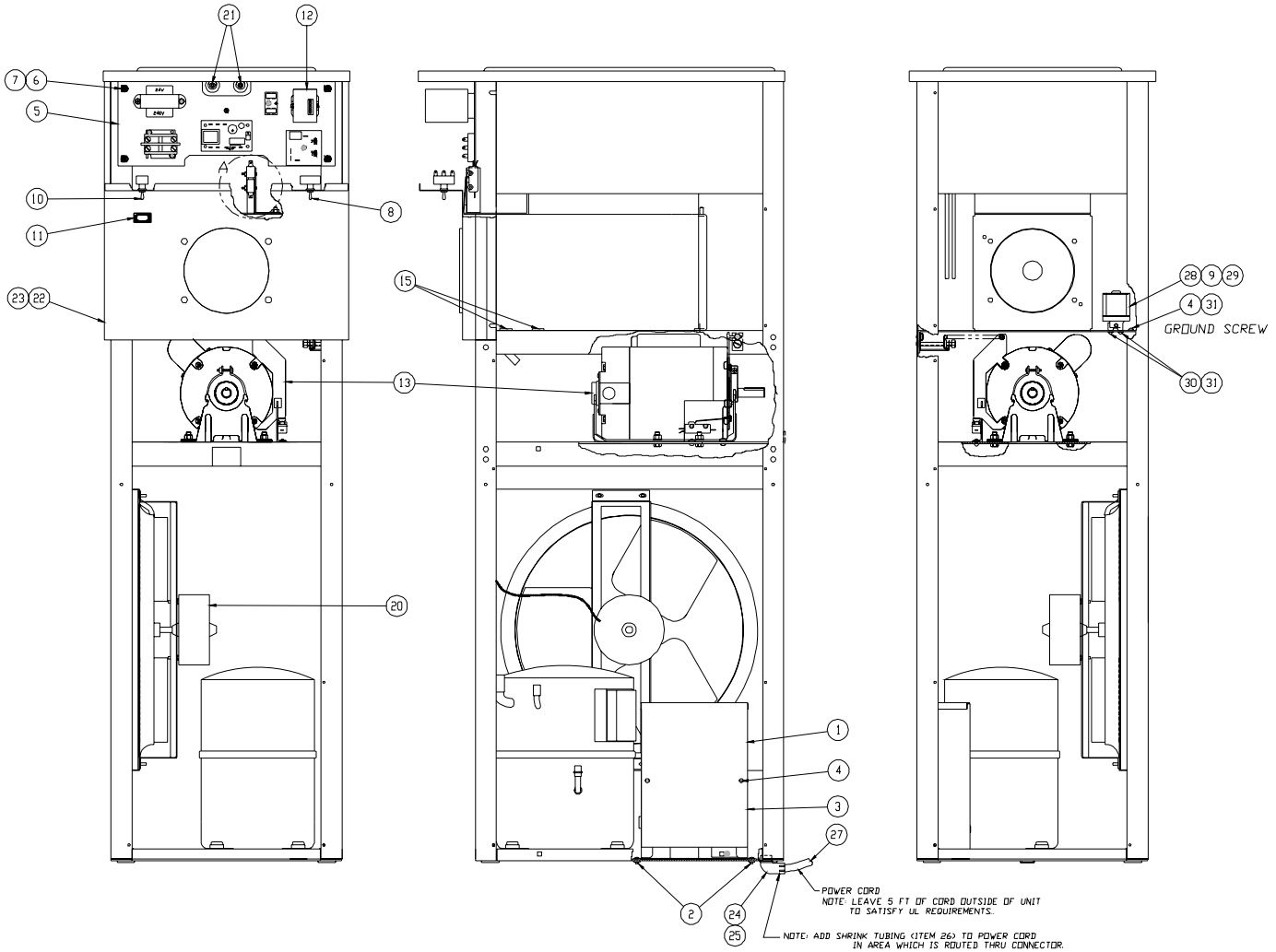




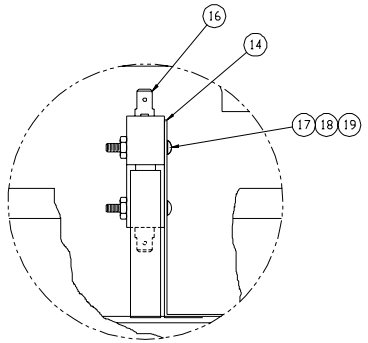
ITEM	STOELTING PN	QTY	DESCRIPTION
1	4177284	1	FRAME WELDMENT
2	4177275	1	BASE, MOTOR MOUNTING
3	4177277	1	BASE, EVAPORATOR
4	628032	16	RIVET C'SUNK 3/16"DIA.ALUMINUM
5	4177280	1	EVAPORATOR, FOAMED
6	644115	4	SCREW CAP 1/4-20 X 3/4 HX HD
7	766065	4	WASHER LOCK 1/4IN MED ZP
8	767205	4	WASHER FLT 1/4X3/4X5/16 MED ZP
9	2177304	1	BRACKET, DRAIN TRAY SUPPORT
10	628046	4	RIVET BLIND 1/4
11	2177302	1	MIX PROBE ASSEMBLY (SHORT)
12	2177301	1	MIX PROBE ASSEMBLY (LONG)
13	1157996	2	SPACER
14	766430	2	WASHER ROUND
15	M820071	.000	ADHESIVE LOCTITE
16	538296	2	NUT HEX #10-24 X 3/8 SS
17	701008	4	PANEL STANDOFF 5/8"
18	701010	4	PANEL STANDOFF 1/2"
19	644091	8	SCREW CAP 1/4-20 X 1/2 HX HD
20	766965	8	WASHER STAR 1/4 (IN/EX)



VIEW A

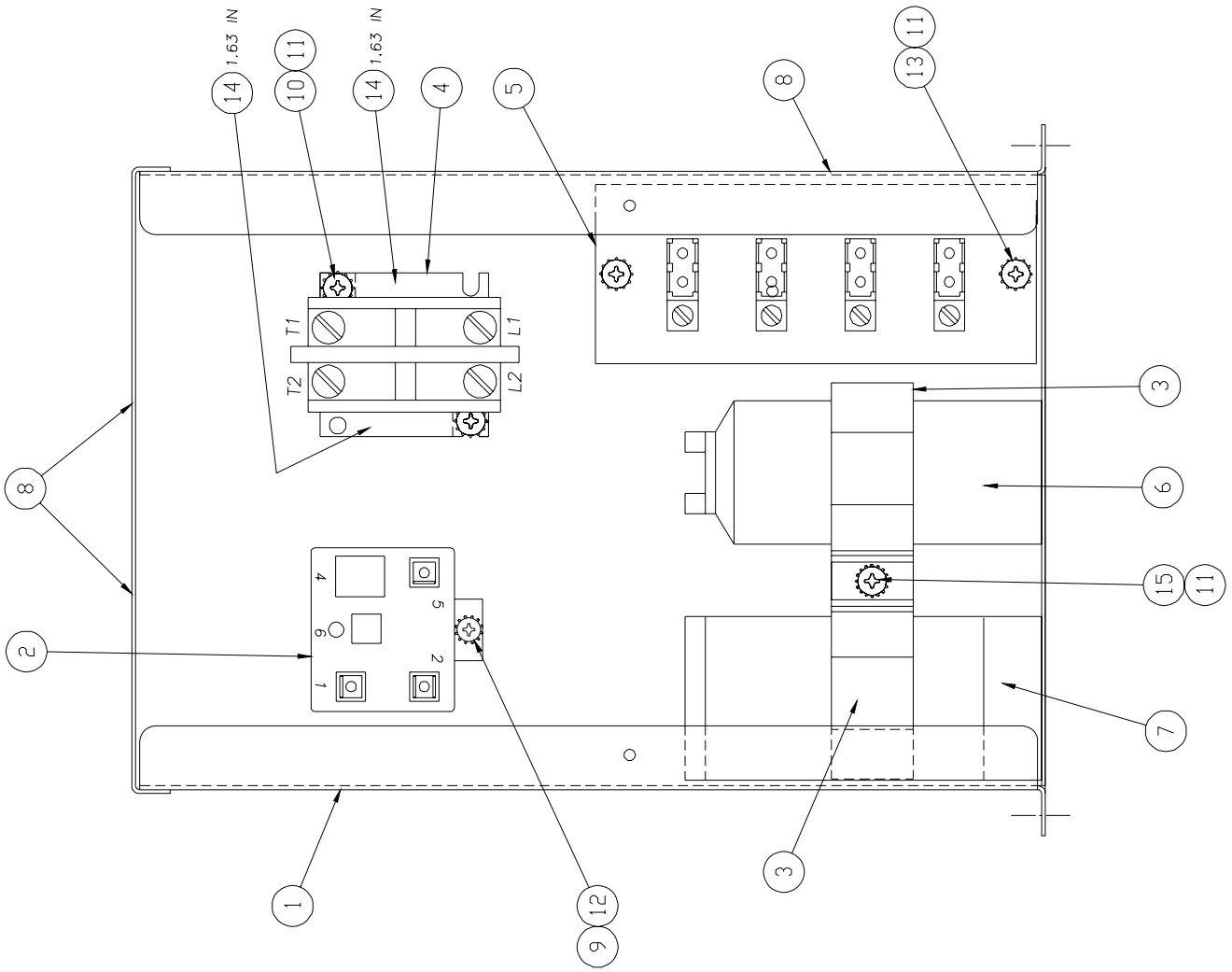


ITEM	STOELTING PN	QTY	DESCRIPTION
1	SEE SHEET 2	1	ELECTRICAL BOX ASSEMBLY
2	647658	4	SCREW MACH 10-24 X 3/8 RD HD
3	2177308	1	ELECTRICAL BOX COVER
4	649076	3	SCREW TAP 8-32 X 3/8 PAN HD PH
5	SEE SHEET 3	1	ELECTRICAL PANEL ASSEMBLY
6	644073	4	SCREW CAP 1/4-20 X 3/8 HX HD
7	538335	4	NUT HEX 1/4-20 X 7/16 STL ZP
8	718534	1	SWITCH TOGGLE 10AMP 250V
9	732129	1	TERMINAL STA-KON 16-14 WIRE
10	718532	1	SWITCH TOGGLE 10AMP 250V
11	458104	1	INDICATOR, LIGHT 28V RED LENS
12	618518	1	RELAY, TIME DELAY
13	SEE SHEET 4	1	ROCKING MOTOR ASSEMBLY
14	2177314	1	BRACKET, DOOR SAFETY SWITCH
15	223058	2	BUSHING SNAP 11/16 ID HOLE 7/8
16	1170836-02	1	LIMIT SWITCH ASSEMBLY
17	647441	2	SCREW MACH 6-32 X 1 RD HD PH
18	766933	8	WASHER SHAKEPROOF 6X5/16
19	538265	2	NUT HEX #6-32 X 5/16 STL ZP
20	522291	1	FAN MOTOR 115/208-240V 60/50HZ
21	538296	2	NUT HEX #10-24 X 3/8 SS
22	3177289	1	FRONT SHROUD
23	647653	6	SCREW MACH 10-24 X 3/8 TRS HD
24	221545	1	BUSHING, INSUL ANTI-SHORT
25	292601	1	CONNECTOR CONDUIT 3/8 x 90°
26	756053	4 IN.	SHRINK TUBING 1/2 DIA
27	430119	1	HARNESS CORD 9FT
28	763458	1	SYRUP SOLENOID
29	732097	2	TERMINAL QUICK CONNECT MALE
30	649107	2	SCREW TAP 10-16 X 1/2 HX HD ZP
31	766940	3	WASHER SHAKEPROOF 8 ZINC PLATE

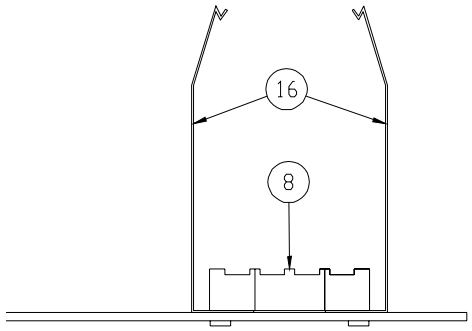


VIEW A

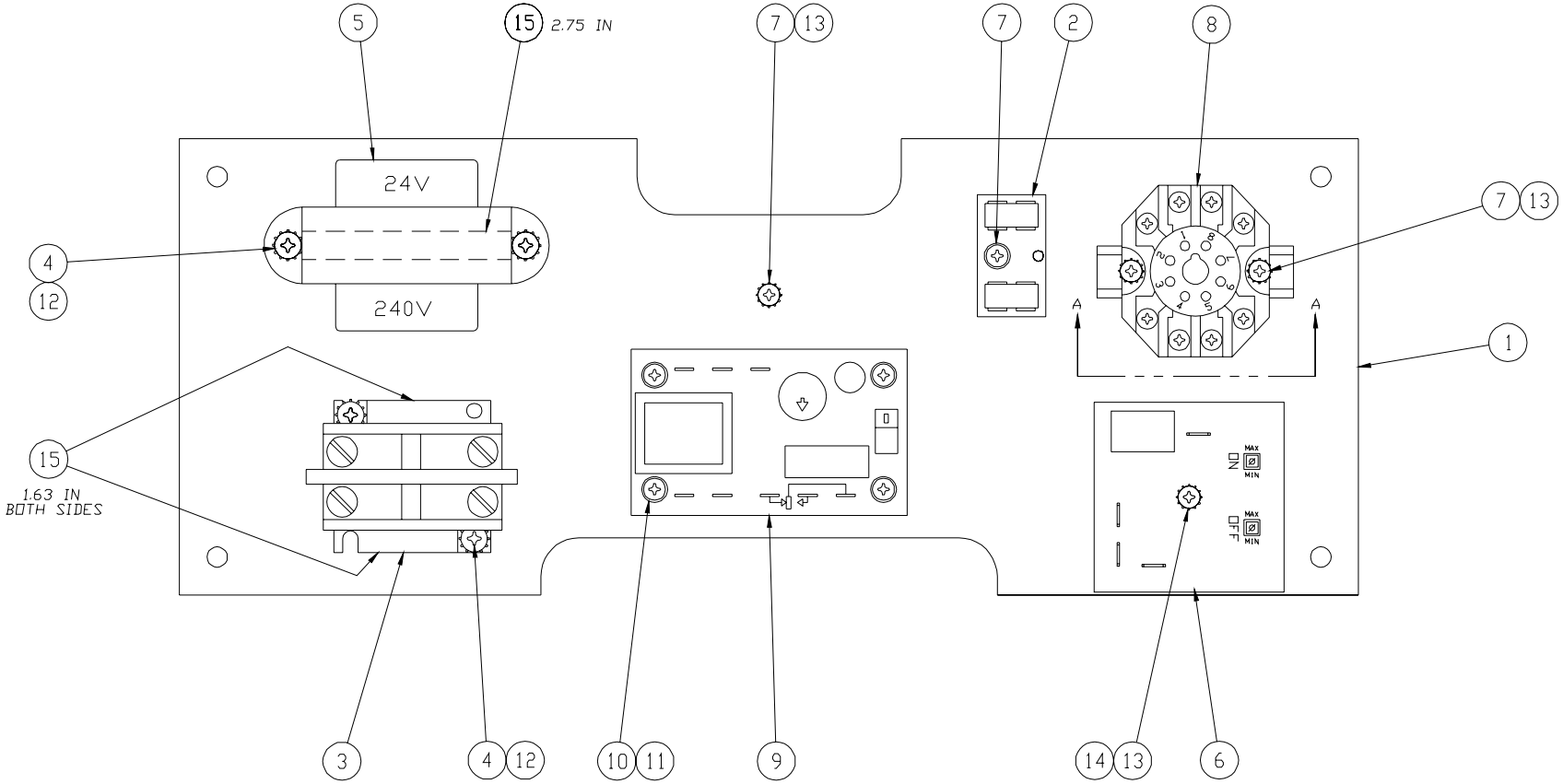
ITEM	STOELTING PN	QTY	DESCRIPTION
1	3177307	1	ELECTRICAL BOX
2	618142	1	RELAY MOTOR START (COPE-COMP)
3	2156689	2	CAPACITOR BRACKET (2.0 DIA)
4	295011	1	CONTACTOR MAGNET 2POLE 24V
5	732016	1	TERMINAL BOARD
6	231057	1	CAPACITOR RUN 35 MFD 370VAC
7	231058	1	CAPACITOR START 145/174 MFD
8	223058	3	BUSHING SNAP 11/16 ID HOLE 7/8
9	649076	1	SCREW TAP 8-32 X 3/8 PAN HD PH
10	649104	2	SCREW TAP 10-24 X 3/8 RD HD PH
11	766948	5	WASHER SHAKEPROOF 10 ZINC
12	766940	1	WASHER SHAKEPROOF 8 ZINC PLATE
13	649112	2	SCREW TAP 10-24 X 1/2 TRS HD
14	714003	.27 FT	STRIP 3/8 WIDE CORK/RUBBER
15	647658	1	SCREW MACH 10-24 X 3/8 RD HD



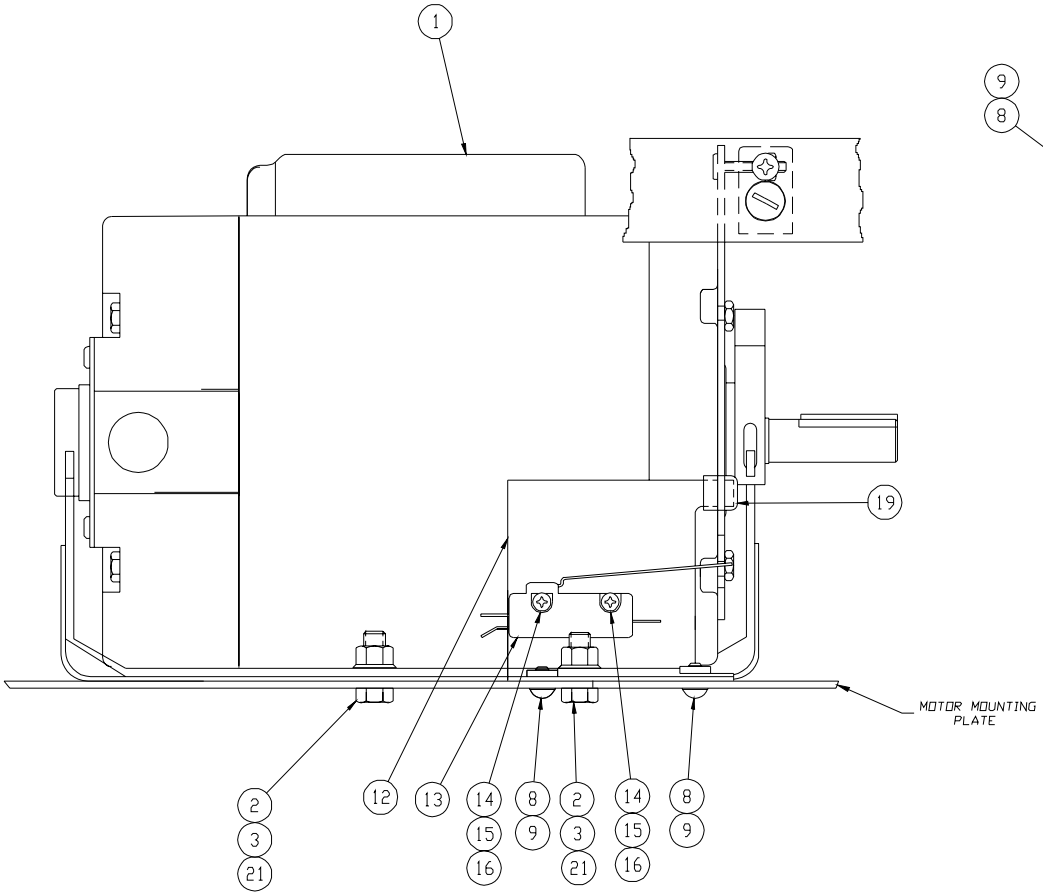
ITEM	STOELTING PN	QTY	DESCRIPTION
1	2177306	1	ELECTRICAL PANEL
2	732010	1	TERMINAL BLOCK
3	295011	1	CONTACTOR MAGNETIC 2 POLE
4	647658	4	SCREW MACH 10-24 X 3/8 RD HD PH
5	2172830-02	1	TRANSFORMER 240/24 VAC
6	739544	1	TIMER, DELAY-ON-MAKE, DELAY-ON-BREAK
7	647529	4	SCREW MACH 8-32 X 1/2 RD HD PH
8	688058	1	SOCKET RELAY 8 PIN OCTAL
9	296179	1	LIQUID LEVEL CONTROL
10	647393	4	SCREW MACH 6-32 X 3/8 RD HD PH
11	766933	4	WASHER SHAKEPROOF 6X5/16
12	766948	4	WASHER SHAKEPROOF 10 ZINC
13	766940	4	WASHER SHAKEPROOF 8 ZINC PLATE
14	647560	1	SCREW MACH 8-32 X 1 RD HD PH
15	714003	.5 FT	STRIP 3/8 WIDE CORK/RUBBER
16	266085	2	HOLD DOWN CLIP

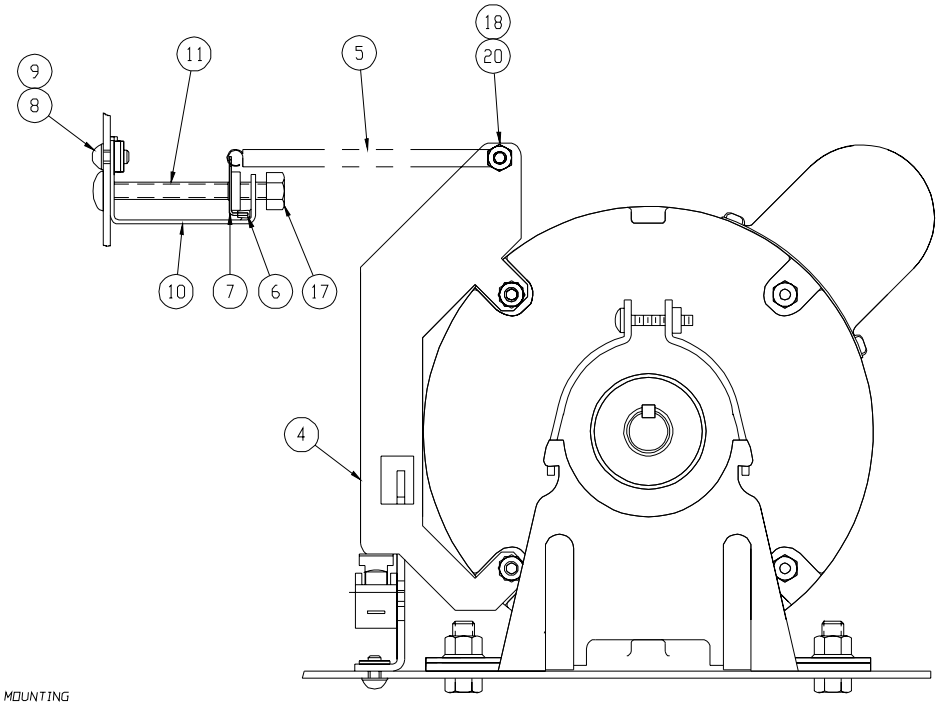


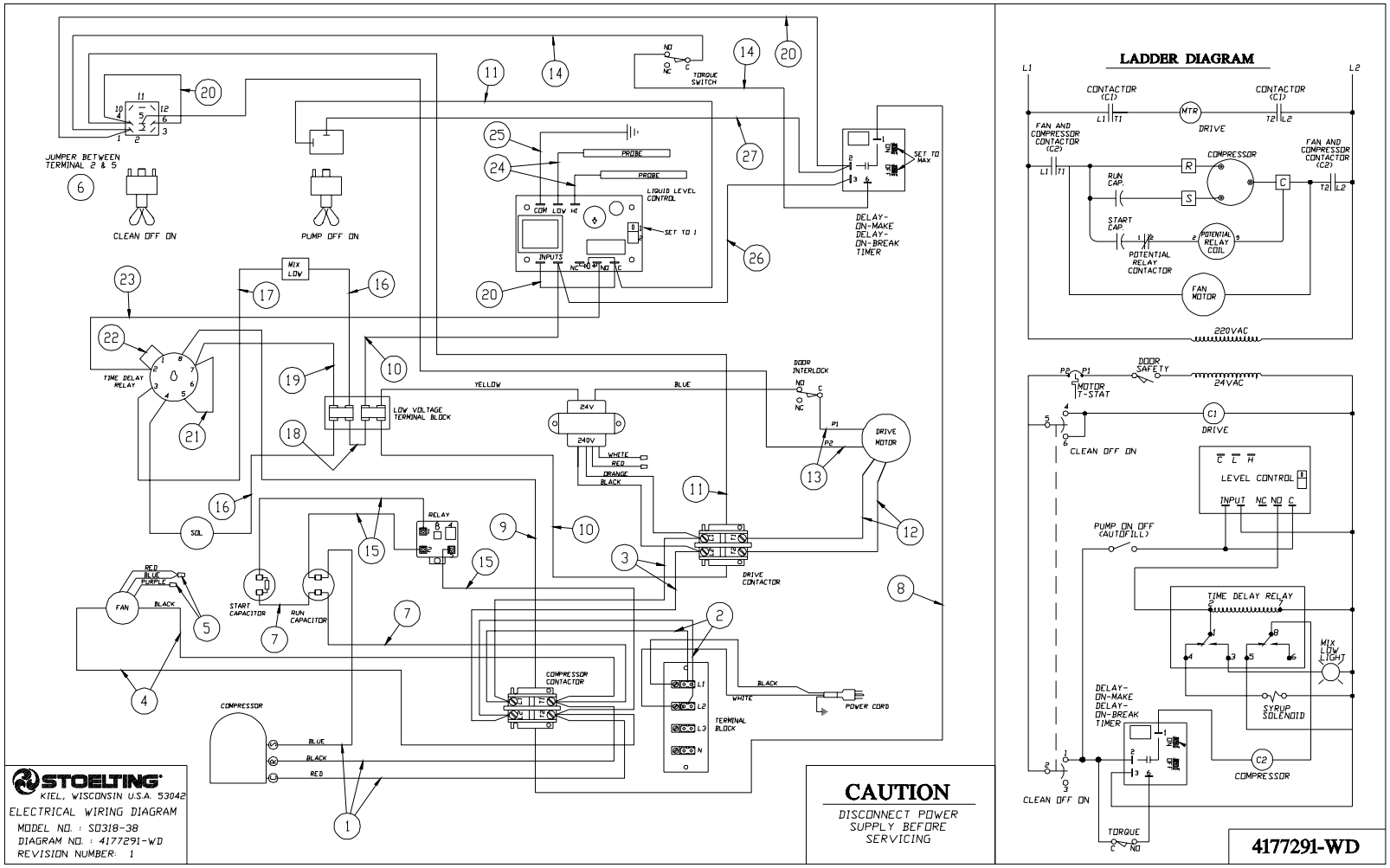
VIEW A-A



ITEM	STOELTING PN	QTY	DESCRIPTION
1	522414	1	MOTOR, .5HP, 1140RPM, 115/60/1
2	644307	4	SCREW CAP 5/16-18 X 3/4 HX HD
3	538351	4	NUT HEX 5/16-18 LOCKING FLANGE
4	2171922	1	BRACKET, MOTOR
5	695763	1	SPRING, EXT .240 OD X 3 FREE LENGTH
6	714035	.62"	STRIP, EDGE LINER PROTECTOR
7	1171924	1	BRACKET, ADJUSTING
8	647658	3	SCREW MACH 10-24 X 3/8 RD HD
9	766948	3	WASHER SHAKEPROOF 10 ZINC
10	1171923	1	BRACKET, ADJUSTING SCREW
11	647979	1	SCREW, 1/4-20 X 2-1/2 SS SLOTTED
12	2177106	1	BRACKET, TORQUE SWITCH
13	1170836	1	LIMIT SWITCH ASSEMBLY
14	647441	2	SCREW MACH 6-32 X 1 RD HD PH
15	538265	2	NUT HEX #6-32 X 5/16 STL ZP
16	766933	2	WASHER SHAKEPROOF 6X5/16
17	538333	1	NUT, 1/4-20 NYLOC
18	M820071	AS REQ	ADHESIVE LOCTITE #271 RED
19	232009	1	CAP, PLASTIC .062 X .437 X 1/2 LG
20	538280	1	NUT HEX 8-32X11/32X1/8 STL
21	766568	4	WASHER RUBBER 2-1/4X3/8X1/8THK



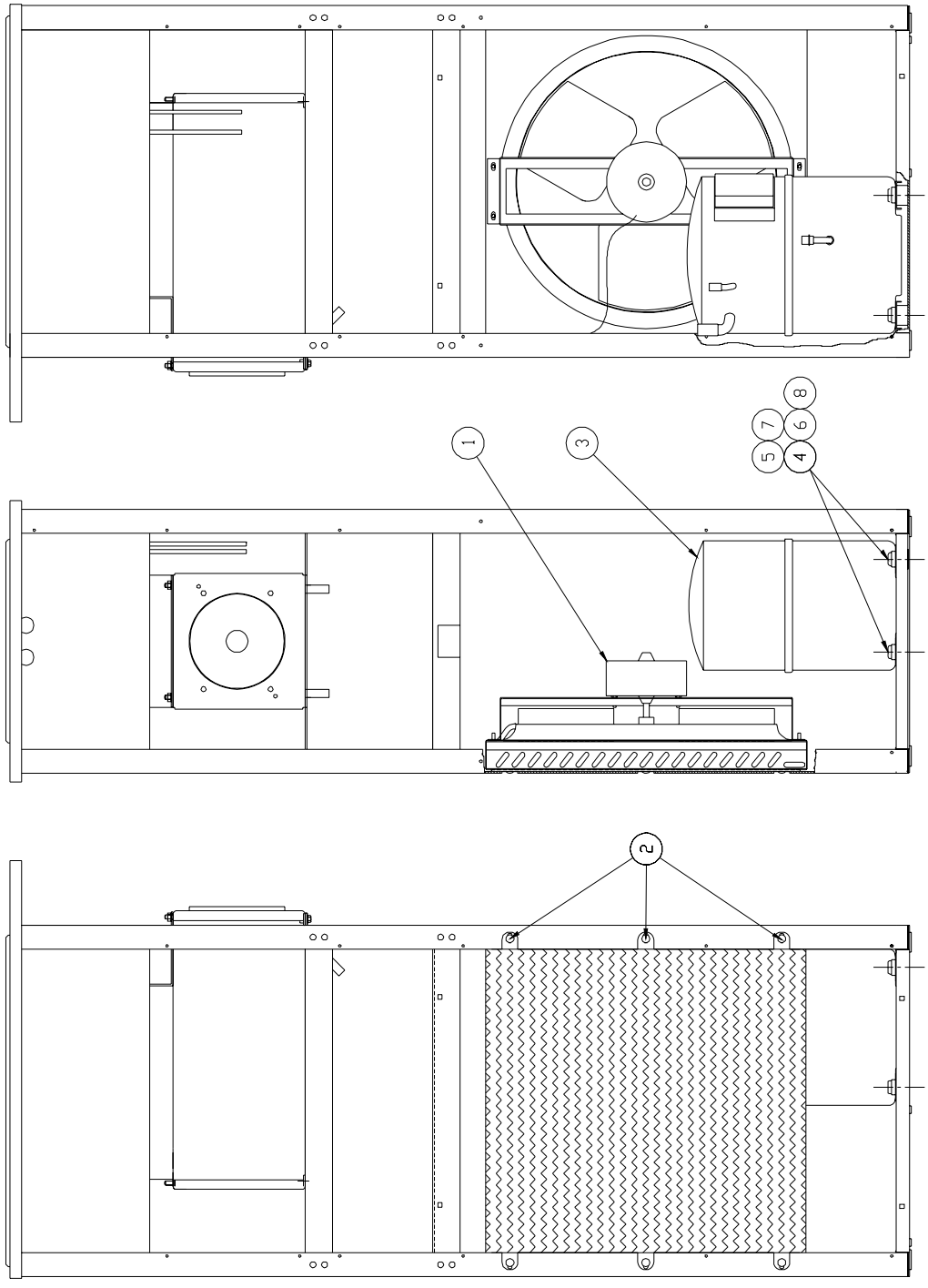


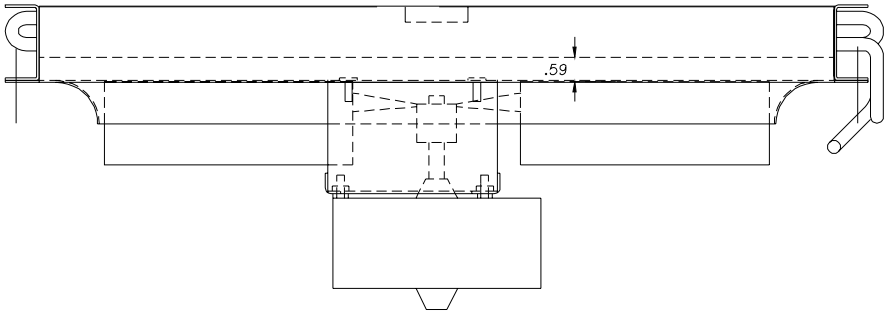


ITEM	STOELTING PN	QTY	DESCRIPTION
1	430450	1	HARNESS, WIRE (COMPRESSOR)
2	430459	2	WBJ09C2B HARNESS
3	430822	2	WAA70D2B HARNESS
4	732307	2	QUICK CONNECT, FEMALE
5	732133	2	TERMINAL
6	430823	1	WGG04E2L HARNESS
7	430706	2	WAA08D2B HARNESS
8	430824	1	WAA60E2L HARNESS
9	430825	1	WAH60E2Y HARNESS
10	430761	2	WAB12E2Y HARNESS
11	430751	2	WAA20E2L HARNESS
12	430708	2	WAX40D2B HARNESS
13	430792	2	WAX48E2L HARNESS

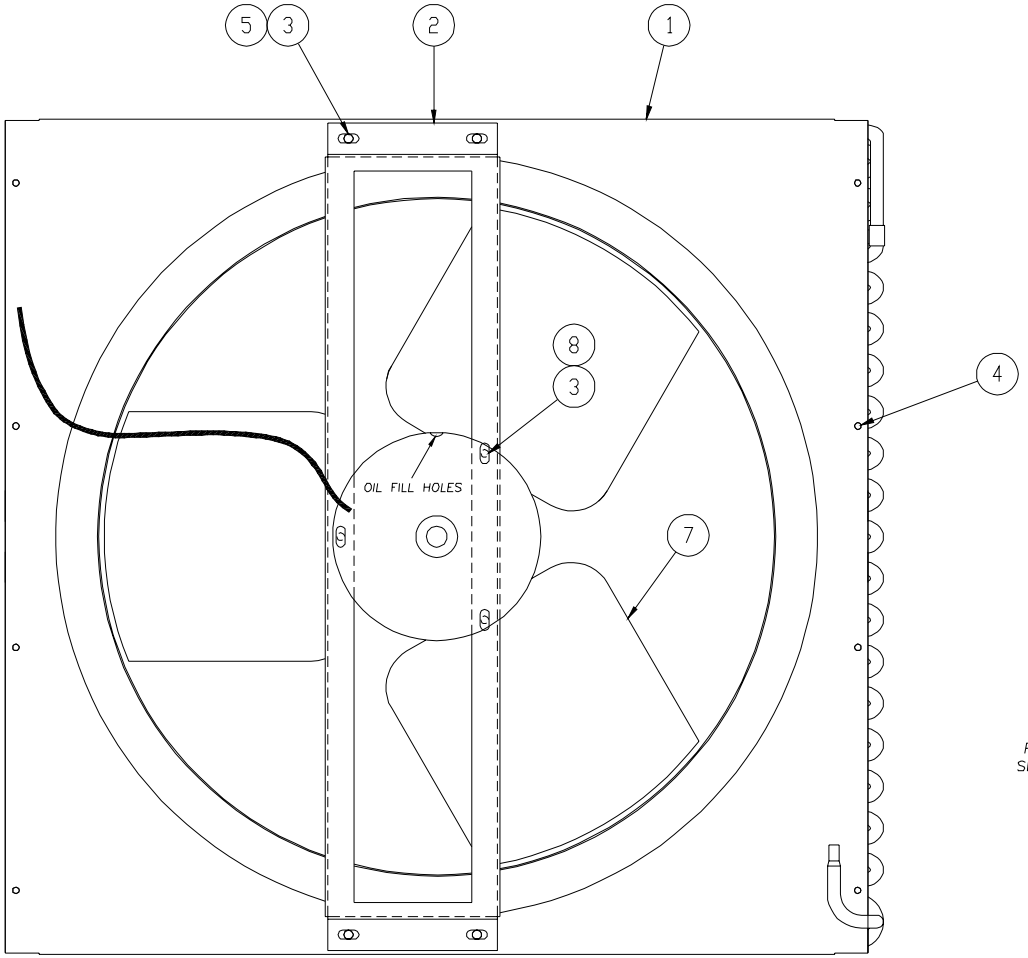
14	430498	2	WAA34E2L HARNESS
15	1140441	3	WAE08D2R HARNESS
16	430750	2	WAA18E2Y HARNESS
17	430235	1	WAH24E2L HARNESS
18	430749	1	WAA04E2Y HARNESS
19	430503	1	WAH10E2Y HARNESS
20	430785	3	WAG04E2L HARNESS
21	430827	1	WHH10E2Y HARNESS
22	430828	1	WHH04E2L HARNESS
23	430789	1	WAH12E2L HARNESS
24	430829	2	WAP08E2L HARNESS
25	430830	1	WAN08E2T HARNESS
26	430237	1	WAG10F2Y HARNESS
27	430787	1	WAG18E2L HARNESS

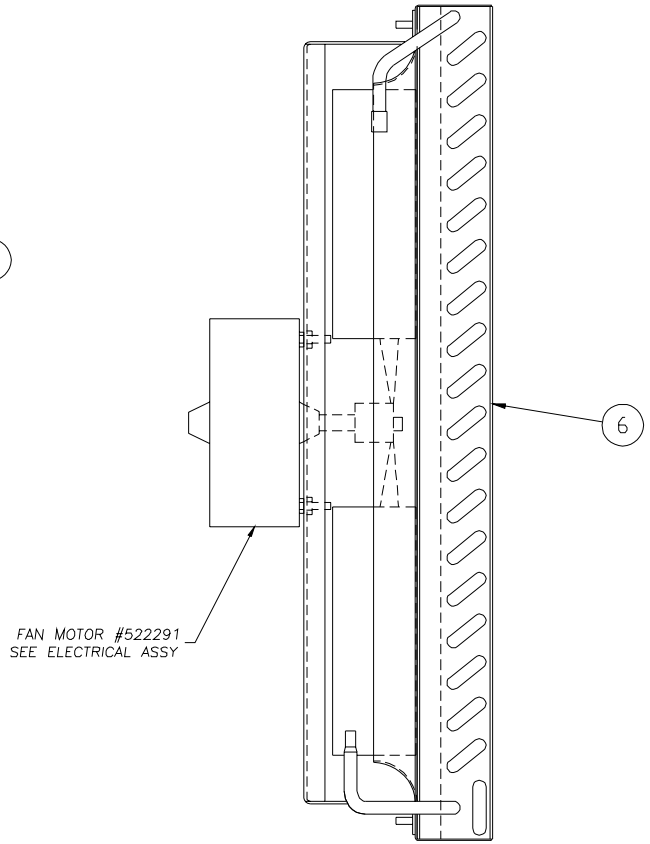
ITEM	STOELTING PN	QTY	DESCRIPTION
1	SEE SHEET 2	1	CONDENSER ASSEMBLY
2	628064	6	RIVET, DRIVE 1/4 X 1/4
3	282018	1	COMPRESSOR 208-230/60/1PH
4	422156	1	GROMMET KIT WITH SLEEVES
5	644371	4	SCREW CAP 5/16-18 X 1-3/4 HX
6	767211	4	WASHER FLAT 5/16.7/8X3/8X14GA
7	766073	4	WASHER LOCK 5/16 .125X.078 MED
8	538351	4	NUT HEX 5/16-18 LOCKING FLANGE





ITEM	STOELTING PN	QTY	DESCRIPTION
1	4159457	1	CONDENSER SHROUD
2	3156518	1	FAN BRACKET
3	766948	7	WASHER SHAKEPROOF 10 ZINC
4	628007	8	RIVET 1/8DIA X .232LG STEEL
5	538297	4	NUT HEX FULL 10-24 ZP
6	284071	1	CONDENSER COIL 20X19.125X2-ROW
7	162077	1	FAN BLADE 16"
8	538305	3	NUT HEX #10-32 X 3/8 STL ZP





NOTES

1: BRAZE AND APPLY RUST INHIBITOR

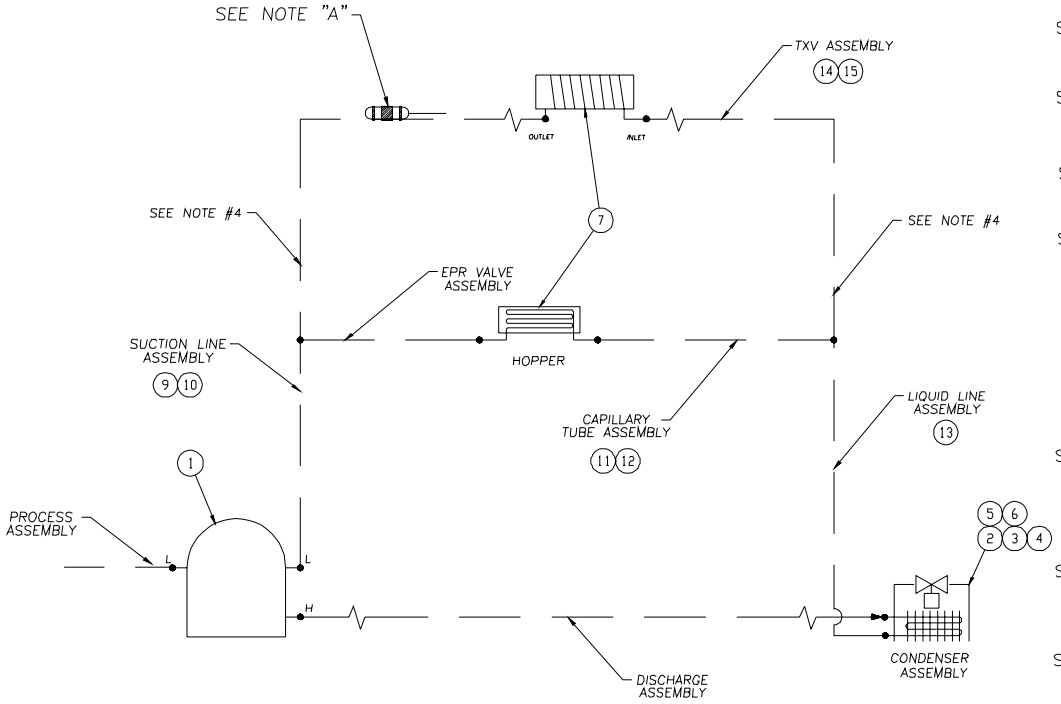
2: WHEN BRAZING CONNECTIONS TO EXPANSION VALVE USE HEAT SINK TO PROTECT FROM OVER HEATING.

3: INSTALL DRIER LAST TO PREVENT CONTAMINATION OF DESSICANT.

4: INSULATE ALL 1/4" & 1/2" TUBING IN EPR VALVE ASSY & (SUCTION LINE) USING INSULATION AND INSULATING TAPE. INSULATE 1/2" TUBING FROM TXV VALVE TO EVAPORATOR.

5: WRAP TXV WITH INSULATING TAPE

ITEM	STOELTING PN	QTY	DESCRIPTION
1	282018	1	COMPRESSOR 208-230/60/1PH
2	284071	1	CONDENSER COIL 20X19.125X2-ROW
3	4159457	1	CONDENSER SHROUD
4	522291	1	FAN MOTOR 115/208-240V 60/50HZ
5	3156518	1	FAN BRACKET
6	162077	1	FAN BLADE 16"
7	4177280	1	EVAPORATOR, FOAMED
8	615205	28 OZ	REFRIGERANT, R404A, DUPONT HP62
9	762978	1	VALVE EPR R22
10	M900184	1	EPR VALVE CAP
11	231101	1	CAPILLARY TUBE .072 X .026
12	342020	1	DRIER
13	342004	1	DRIER
14	458003	1	INDICATOR, SIGHT GLASS 1/4
15	762443	1	VALVE, EXPANSION 1 TON



NOTE A: EXPANSION VALVE BULB MOUNTING

NOTE: INSURE HANDS ARE CLEAN PRIOR TO STARTING STEP 1.

STEP 1 CLEAN BULB AND SUCTION LINE WITH ALCOHOL, LOCATE TXV BULB ON SUCTION LINE. ORIENT BULB ON TOP OF SUCTION LINE.

STEP 2 CUT A 4" LONG PIECE OF ALUMINUM TAPE, CUT THIS PIECE IN HALF, RESULTING IN (2) 1" X 4" PIECES. SECURE BULB TO SUCTION LINE WITH FOIL TAPE.

STEP 3 APPLY A SMALL AMOUNT OF SILICONE OVER TXV CAPILLARY TUBE TO FORM A COMPLETE SEAL WHEN ALUMINUM TAPE IS APPLIED IN STEP 4.

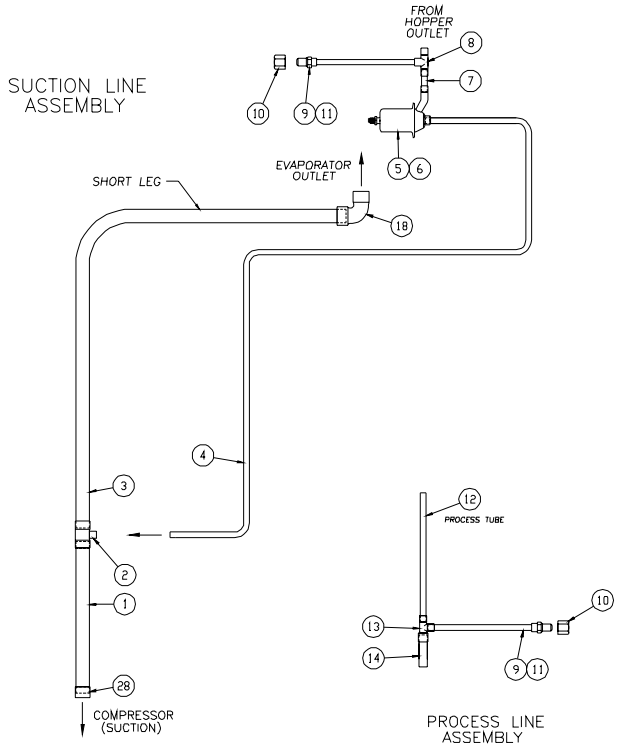
STEP 4 CUT (6) 4" LONG STRIPS OF ALUMINUM TAPE. WRAP FIRST 4" LONG PC. ONE TAPE WIDTH FROM END OF BULB (OPPOSITE CAPILLARY SIDE).
NOTE: ALL WRAPS ARE STRAIGHT NON-SPIRALLING.
APPLY SECOND PC. WITH 1/2 OVERLAP. FORM OPEN END CLOSED.
APPLY THIRD & FOURTH WRAPS WITH 1/2 OVERLAP.
APPLY FIFTH WRAP WITH 1/2 OVERLAP PARTIALLY COVERING SILICONE. FORM OPEN END CLOSED
APPLY SIXTH WRAP OVER CAPILLARY TUBE. SEAL OVER SILICONE. SILICONE SHOULD OOZE DUE TO SEALING. PRESS AND FORM ALUMINUM TAPE IN PLACE TO INSURE A GOOD SEAL.

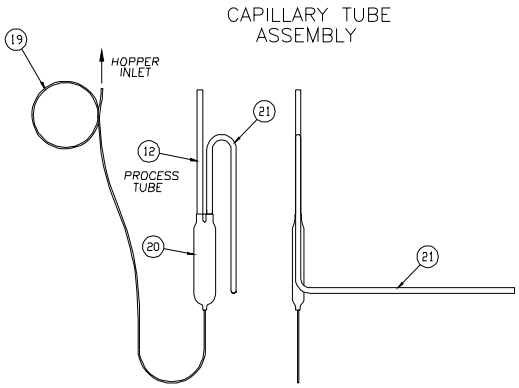
STEP 5 CLEAN ALUMINUM WRAP WITH ALCOHOL. STARTING AT CAPILLARY END OF BULB, STRAIGHT WRAP (2) FULL TURNS OF FOAM TAPE. SPIRAL WRAP WITH 1/2 OVERLAPS UNTIL FLUSH WITH END OF ALUMINUM TAPE. FINISH WITH (2) FULL STRAIGHT WRAPS.

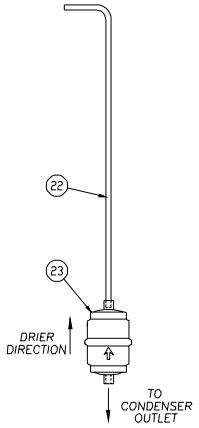
STEP 6 INSULATE SUCTION LINE FROM EVAPORATOR TO BULB AND FROM BULB TO NEXT COMPONENT USING INSULATION. PULL TAPES & PRESS SEAM TOGETHER FIRMLY. ADHERE INSULATION TO EVAPORATOR WITH ADHESIVE.

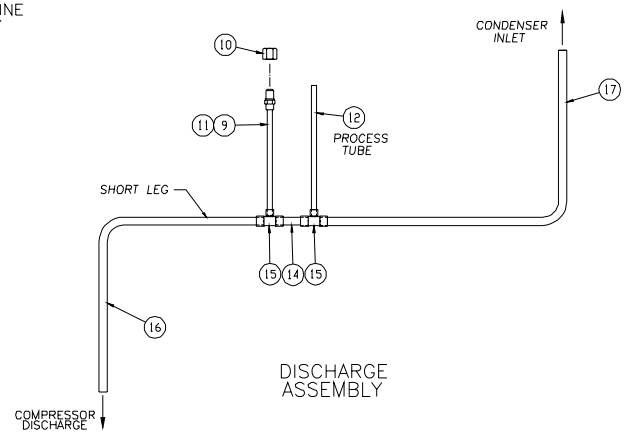
STEP 7 CUT INSULATION APPROX 1/2" LONGER THAN THE AREA TO BE COVERED OVER BULB. APPLY ADHESIVE TO ALL ENDS TO BE CONTACTED. FIRMLY PRESS ALL SURFACES TO BE SEALED, CREATING AN AIR TIGHT SEAL. APPLY TIES AFTER ADHESIVE HAS CURED.

EPR ASSEMBLY









ITEM	STOELTING PN	QTY	DESCRIPTION
1	4177292-11	1	REFRIGERATION TUBING, SEE SHEET 5
2	375268	1	FTG SOLDER TEE 5/8 X5/8 X1/4OD
3	4177292-12	1	REFRIGERATION TUBING, SEE SHEET 5
4	4177292-01	1	REFRIGERATION TUBING, SEE SHEET 5
5	762978	1	VALVE EPR R22
6	M900184	1	EPR VALVE CAP
7	4177292-02	2	REFRIGERATION TUBING, SEE SHEET 5
8	375242	2	FTG SOLDER TEE 1/4 OD
9	375813	3	ACCESS FITTING ASSEMBLY
10	232085	3	CAP, QUICK SEAL, 1/4" SAE
11	762359	3	VALVE CORE
12	4177292-03	4	REFRIGERATION TUBING, SEE SHEET 5
13	375254	2	FTG SOLDER TEE 3/8 X1/4 X1/4OD
14	4177292-08	2	REFRIGERATION TUBING, SEE SHEET 5
15	375253	2	FTG SOLDER TEE 3/8 X3/8 X1/4OD
16	4177292-07	1	REFRIGERATION TUBING, SEE SHEET 5
17	4177292-09	1	REFRIGERATION TUBING, SEE SHEET 5
18	375021	1	FITTING SOLDER ELBOW 1/2 X 5/8
19	231101	1	CAPILLARY TUBE .072 X .026
20	342020	1	DRIER
21	4177292-04	1	REFRIGERATION TUBING, SEE SHEET 5
22	4177292-05	1	REFRIGERATION TUBING, SEE SHEET 5
23	342004	1	DRIER
24	4177292-06	1	REFRIGERATION TUBING, SEE SHEET 5
25	458003	1	INDICATOR, SIGHT GLASS 1/4
26	762443	1	VALVE, EXPANSION 1 TON
27	4177292-10	1	REFRIGERATION TUBING, SEE SHEET 5
28	375134	1	FITTING, REDUCER 3/4 OD 5/8 ID