STOELTING®
A VOLLRATH® COMPANY

Model 2118
OPERATORS MANUAL

Manual No. 513506 Sept. 1988

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

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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.

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SECTION 1
INTRODUCTION

1.1 DESCRIPTION

The Stoelting® 2118 counter freezer is pressure fed. The freezer is equipped with fully automatic controls to provide a uniform product. The freezer is designed to operate with almost any type of commercial cocktail mix available.

This manual is designed to assist qualified service personnel in the installation, operation and servicing of the Stoelting Model 2118 pressurized freezer.

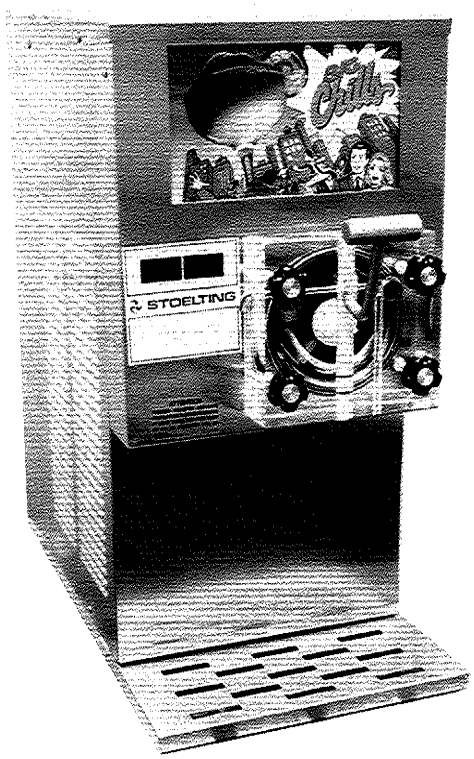
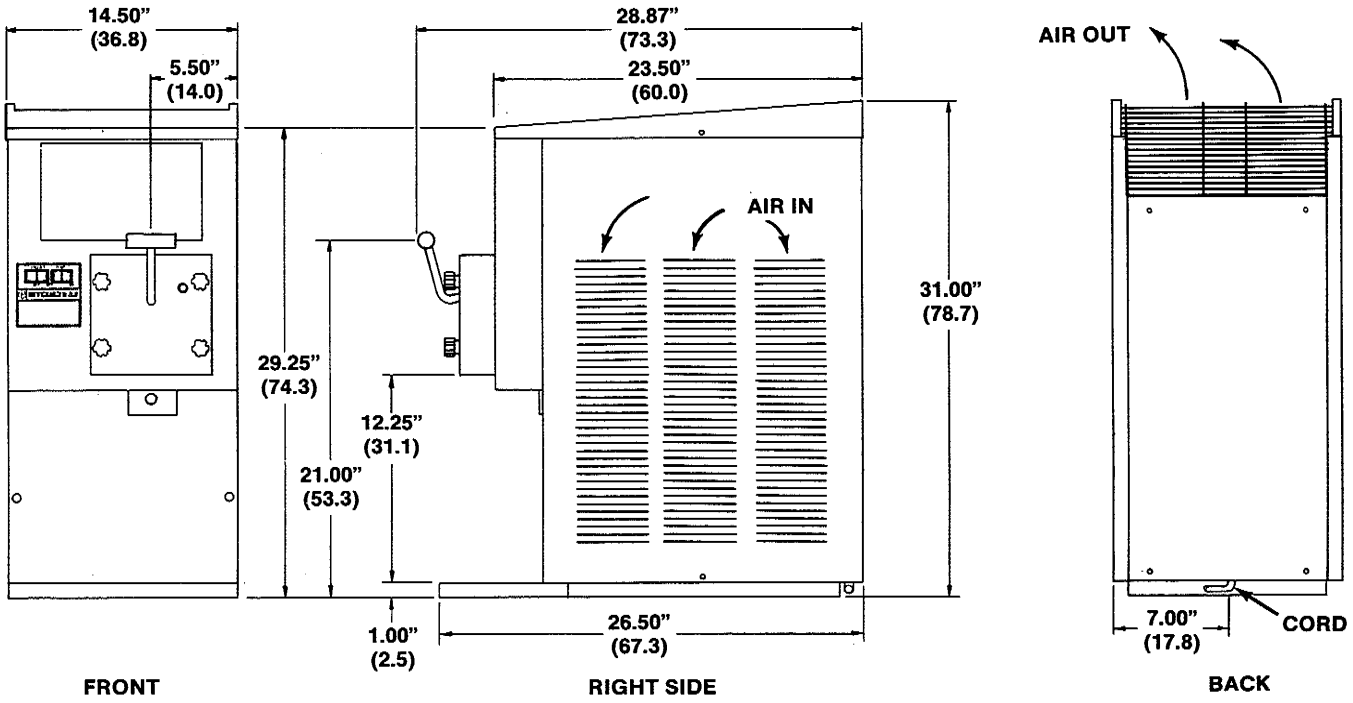


Figure 1. Model 2118 Freezer

1.2 SPECIFICATIONS



Figures in parenthesis are centimeters.

1.2 SPECIFICATIONS

MODEL 2118
COUNTER MODEL
PRESSURIZED

DIMENSIONS
Freezer: 14.50" (36.8 cm) wide x 28.87" (73.3 cm) deep x 31.00" (78.7 cm) high
Crated: 16.50" (41.9 cm) wide x 30.87" (78.4 cm) deep x 33.19" (84.3 cm) high

WEIGHT
Freezer: 194 lbs. (88.0 kg) Crated: 210 lbs. (95.2 kg)

ELECTRICAL
1 phase, 115 volts**
3/4 HP Drive Motor; 5800 BTUH* Compressor (frozen product output)
Approximate 16 total Running Amps.
Use 20 Amp circuit breaker.

**A transformer is required if voltage is over 126.5 volts or under 103 volts.
*Under normal operating conditions.

COOLING
Air cooled requires minimum 6" (15.2 cm) air clearance on right and left hand side and 10" (25.4 cm) air clearance above unit. No clearance needed in the rear. (See illustration page 7, Fig. 3)

WARRANTY
One year warranty on parts only.

STANDARD FEATURES
Manual, cleaning brushes, lubricants and spare parts kit.

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 (Fig. 2). 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, INC.
ATTENTION: Customer Service
P.O. Box 127
Kiel, Wisconsin 53042

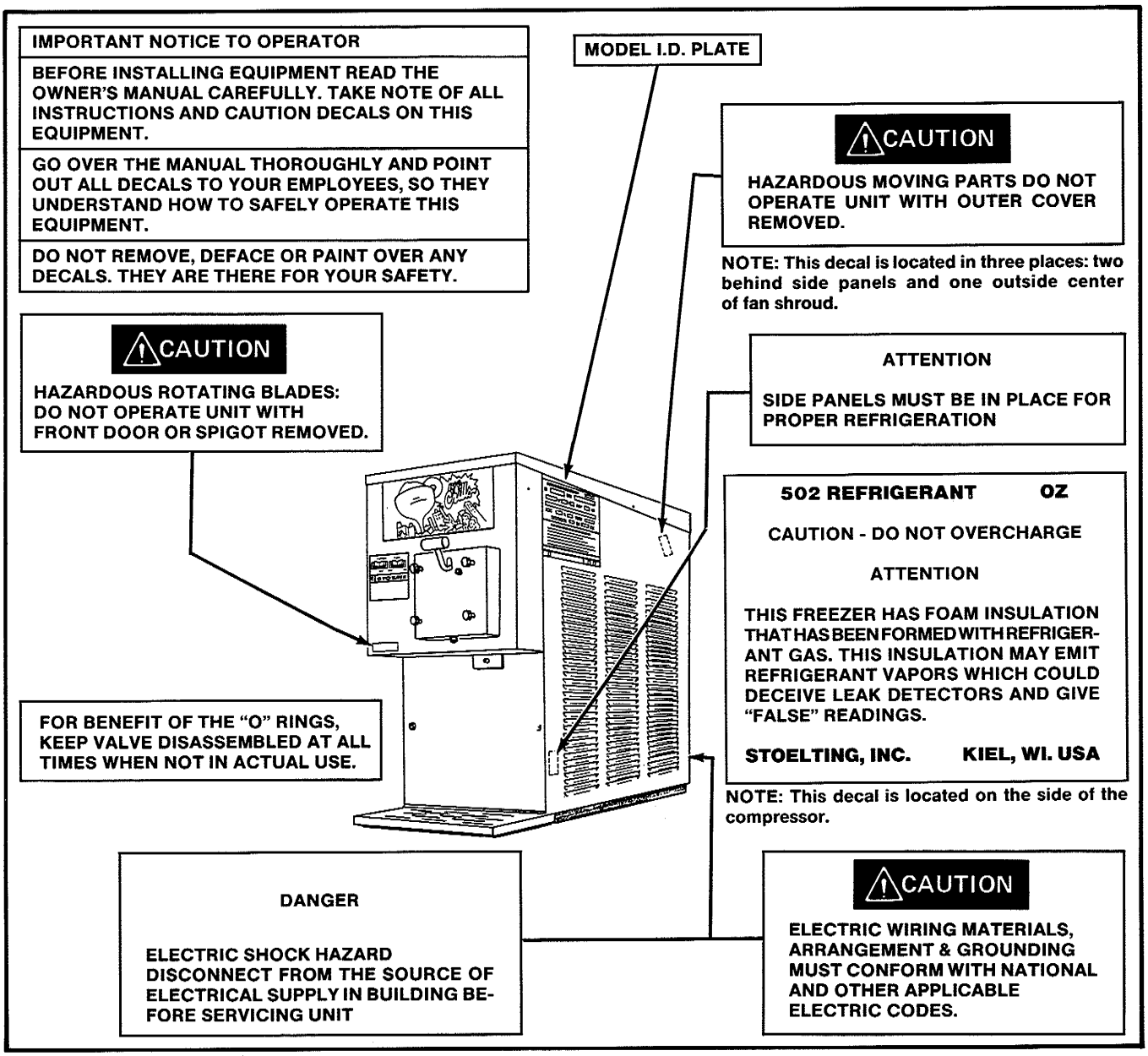


Figure 2. Warning Label Locations

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.**

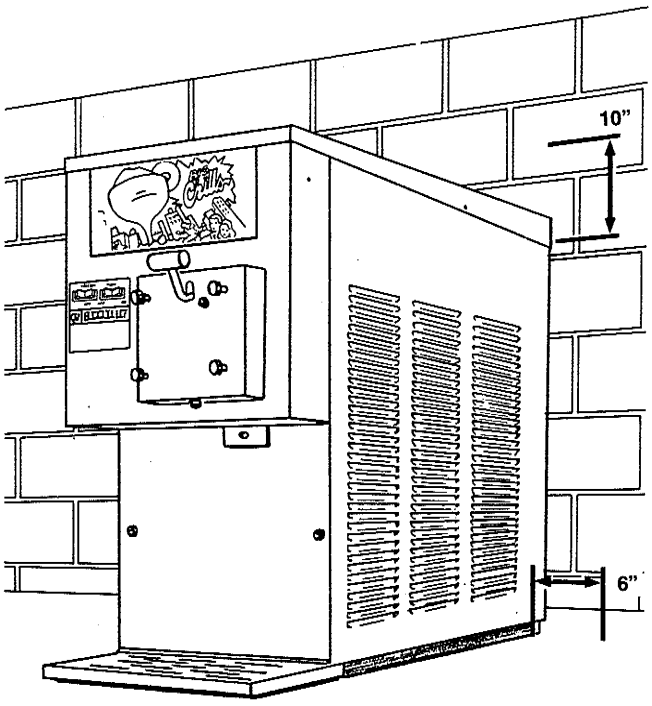


Figure 3. Space and Ventilation Requirements

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.

NOTE
Accurate leveling is necessary for correct drainage of freezer barrel.

C. The freezer is equipped with an air cooled condenser and requires correct ventilation. The right and left sides of the freezer are the air intakes and **must** have 6" (15.2 cm) clearance. Air discharges out the top at the rear of the unit. **Do not** obstruct the discharge. Allow a 10" (25.4 cm) clearance above the unit (Fig. 3).

⚠ CAUTION
Failure to provide adequate ventilation will void warranty!

D. Place the CLEAN-OFF-ON switch in the OFF position.

E. Connect the power cord. The plug is designed for 115 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 (Fig. 4). 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 requirement.

⚠ CAUTION
Do not alter or deform plug in any way!

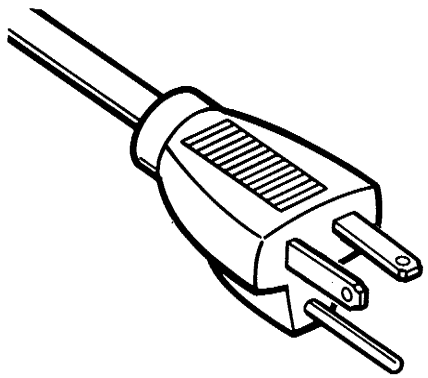


Figure 4. Electrical Plug

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

G. Use Fig. 5 to help determine installation position.

⚠ CAUTION

Failure to install the freezer and cabinet within recommended limits will result in poor performance of the mix dispensing system, premature component failure and cancellation of the warranty.

Any sanitary container can be used (customer to provide the container). Maximum distance for the hose (3/8" ID minimum) is 30' total.

- Position 1 - 30' horizontal
- Position 2 - 20' maximum above and 10' horizontal = 30' total
- Position 3 - 10' maximum below and 20' horizontal = 30' total (the pump will not self prime at more than 13' below the freezer)

Additional tubing and connectors in 10' lengths are available from Stoelting, Inc.

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 side and back panels to gain access to the power cord connection.

B. Disconnect the black and white wires from the terminal block (L1 and common). Disconnect the green ground wire from the grounding screw (Fig. 6).

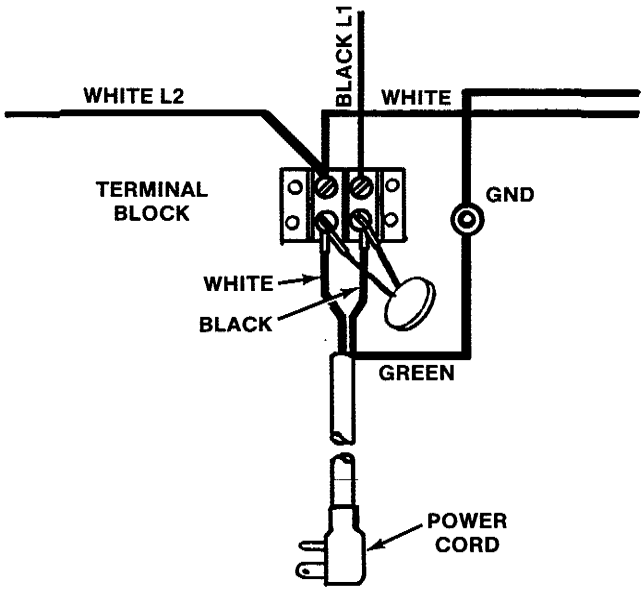


Figure 6. Power Cord Connection

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 (brass screw) on the terminal block. Connect the white wire to the common (silver screw) on the terminal block. Connect the green or yellow and green striped ground wire to the grounding screw.

F. Replace the side and back panels.

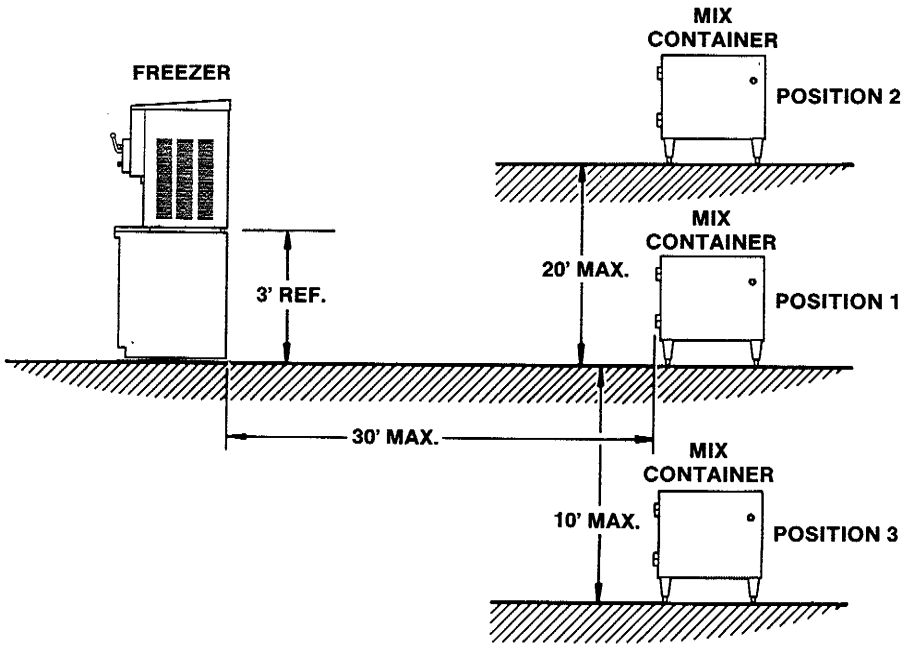


Figure 5. Installation Positions

SECTION 3
INITIAL SET-UP 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 conditions.** 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 7 for the location of the operating controls on the freezer.

⚠ WARNING

THE CLEAN-OFF-ON 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.

A. CLEAN-OFF-ON SWITCH

The CLEAN-OFF-ON switch is a three position rocker switch used to control the operation of the refrigeration system and agitator. When the switch is placed in the CLEAN position, the refrigeration system will be off and the agitator **will** rotate for cleaning.

When the switch is placed in the OFF position, the refrigeration system and agitator **will not** operate.

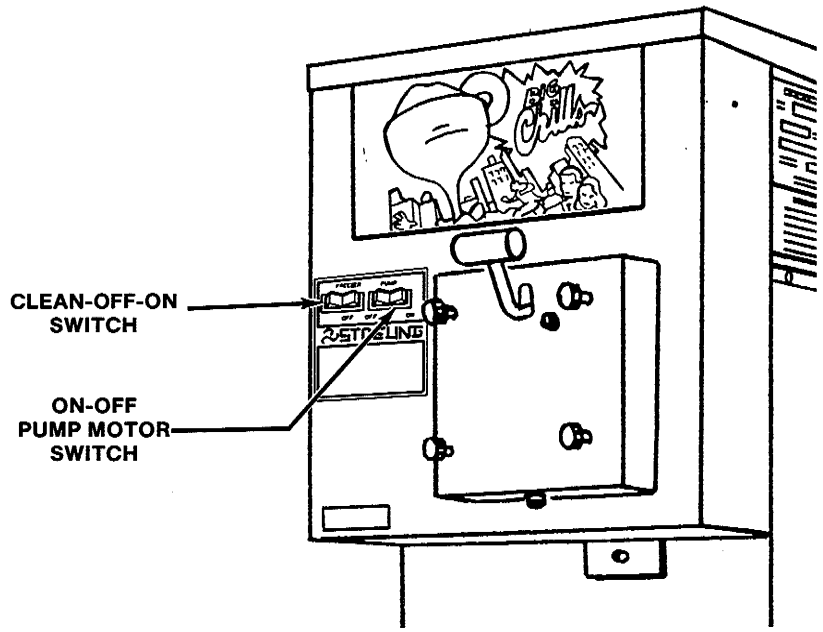


Figure 7. Controls

When the switch is placed in the ON position, the refrigeration system and agitator **will** operate automatically, and the decorative panel will light. The switch should be placed in the ON position for normal operation.

B. PUMP ON-OFF SWITCH

The pump on-off 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 cut-off pressure is reached, then stop.

3.3 DISASSEMBLY OF FREEZER PARTS

⚠ CAUTION

PLACE THE CLEAN-OFF-ON ROCKER 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.

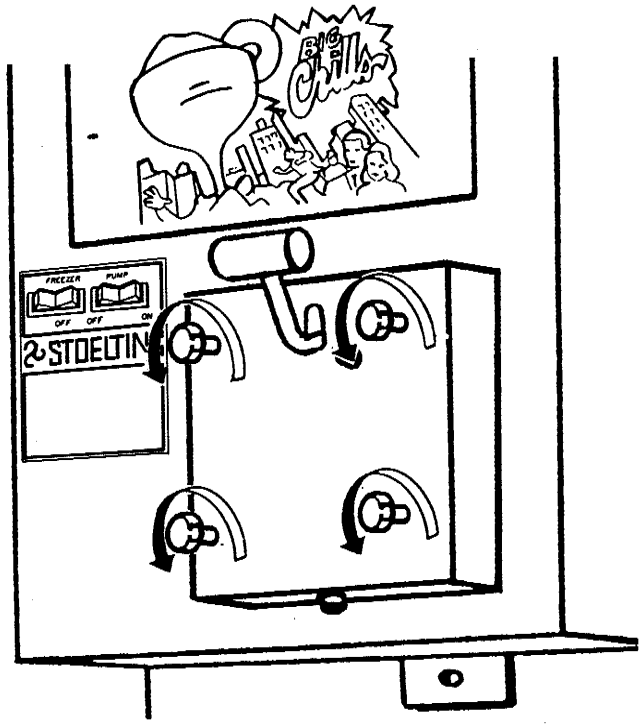


Figure 8. Removing Front Door

To Disassemble the freezer, refer to the following steps:

A. Remove the front door by turning off the knobs, and then pull the front door off the studs (Fig. 8).

B. 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 (Fig. 9).

C. Remove the air bleed valve by turning off the black knob and pushing out the back.

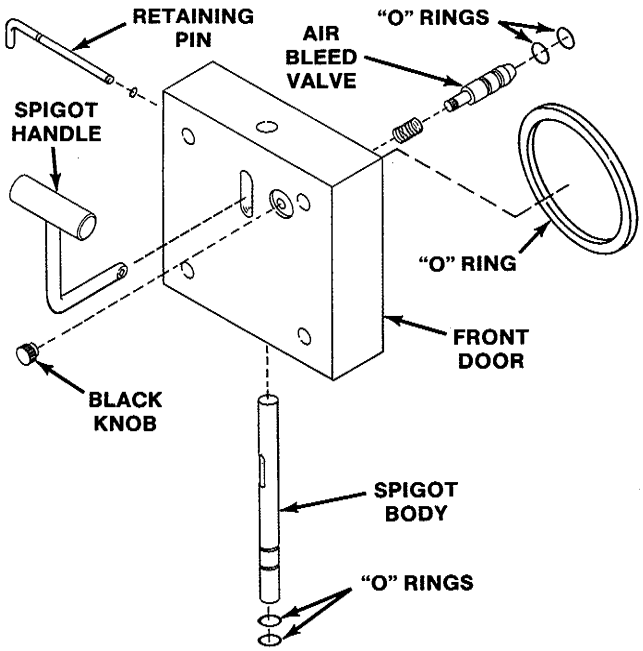


Figure 9. Removing Spigot

D. Remove the agitator assembly from the freezer (Fig. 10). Pull the agitator assembly out of the freezer barrel.

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

F. Remove the front agitator support bearing and center blade. Remove the two agitator blades.

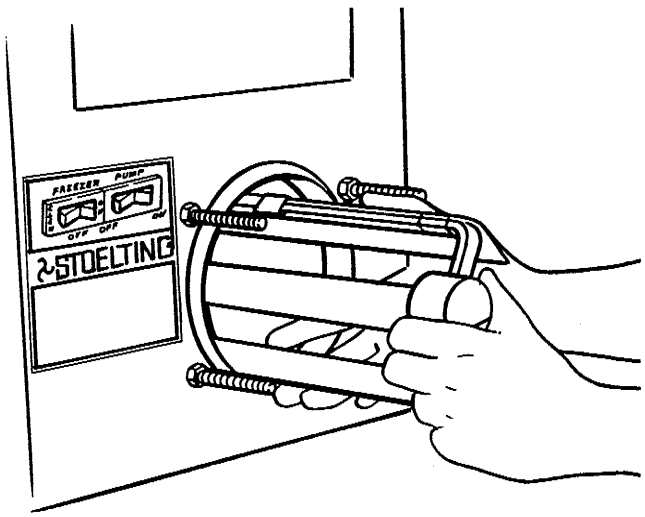


Figure 10. Agitator Assembly

G. Remove the rear seal.

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

I. Remove all "O" Rings from parts by first wiping off the lubricant using a clean paper towel. Then squeeze the "O" Ring upward with a dry cloth (Fig. 11). When a loop is formed, grasp the loop with the other hand and roll out of the "O" Ring groove toward the top of the part.

⚠ WARNING

Do **not** use any type of sharp object to remove the "O" Rings.

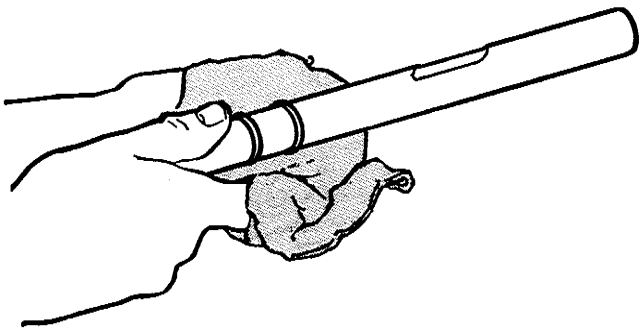


Figure 11. Removing "O" Ring

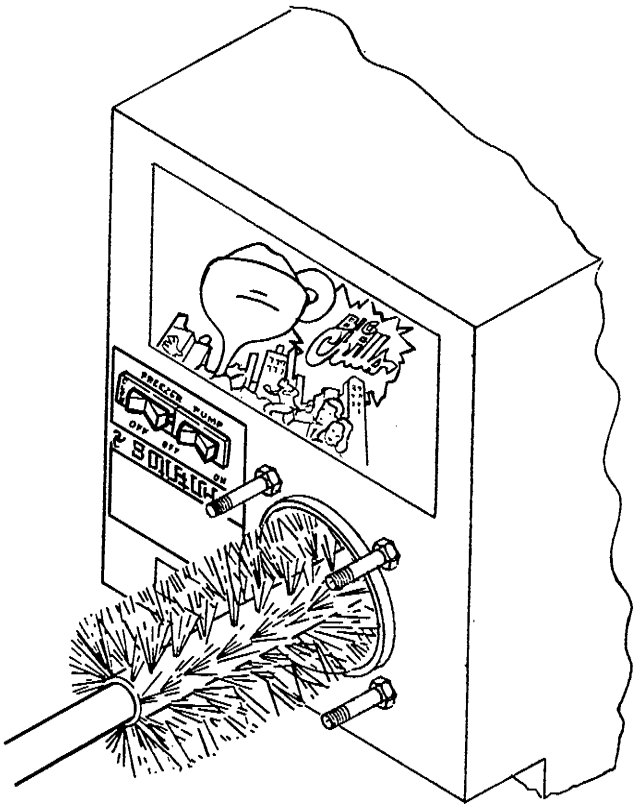


Figure 12. Cleaning Freezer Barrel

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 (Fig. 12).

C. 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.

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 States 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 all "O" Rings onto parts dry, **without lubrication**. Then apply a thin film of sanitary lubrication to exposed surfaces of the "O" Rings. Apply a thin film of sanitary lubricant to metal part of rear seal and "O" Ring. Also apply a thin film of sanitary lubricant inside the hole on the front of the agitator (Fig. 13).

B. Assemble the rear seal onto the agitator with the metal insert to the front. Be sure the "O" Ring is in place before installing the rear seal.

C. Lubricate the inside of the agitator drive socket (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 the center blade and front agitator bearing.

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

F. Position the center blade in a horizontal position.

G. Install the spigot body with "O" Rings into the front door from the bottom (Fig. 14). Push straight up until the spigot is in place. Place the spigot handle through the spigot and insert the retainer pin.

H. Install the air bleed valve with "O" Rings and spring. Install the black knob.

I. Install door "O" Ring after lubricating.

J. Install the front door on the freezer.

K. Install the knobs on the freezer studs.

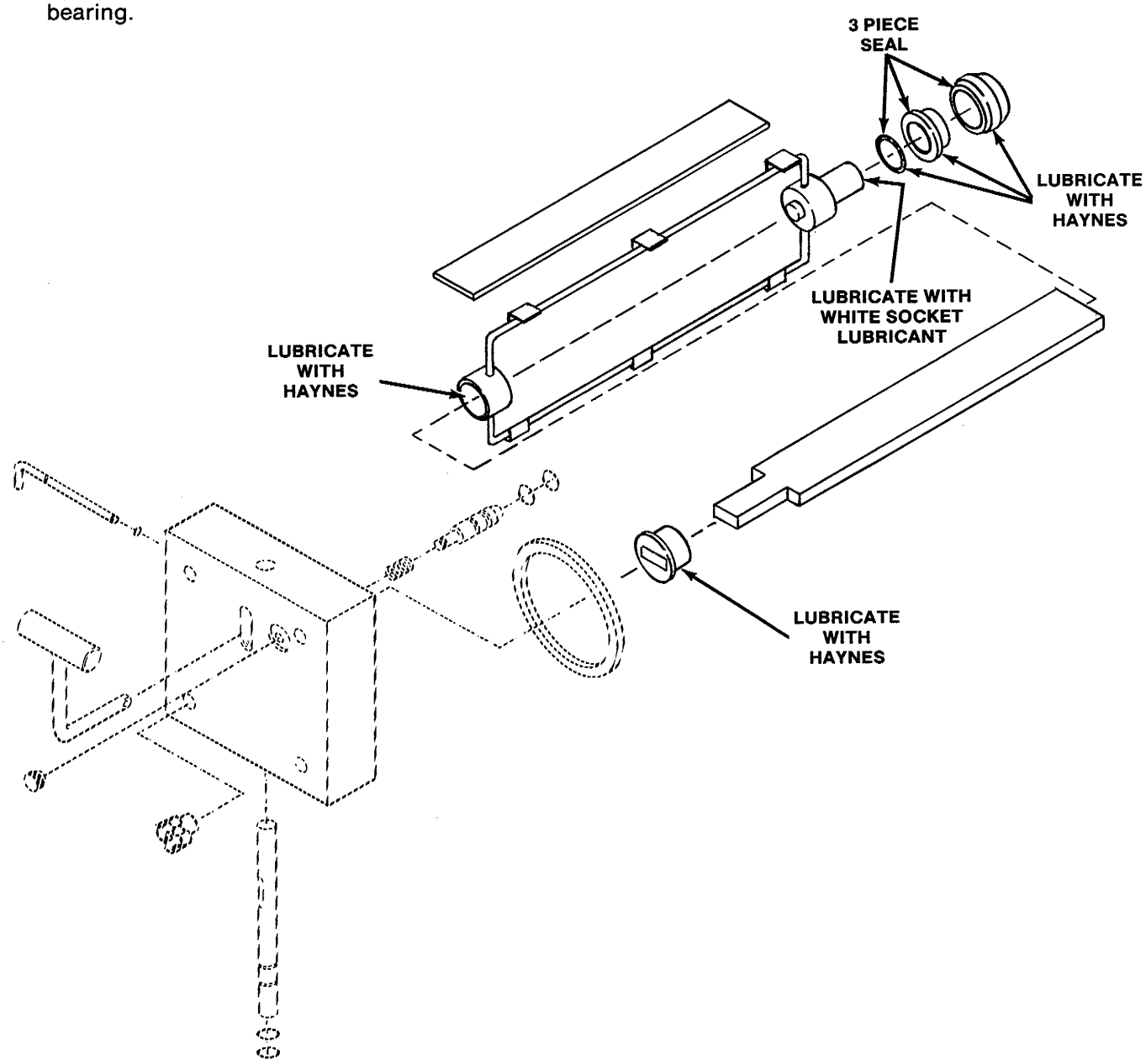


Figure 13. Exploded View of Agitator

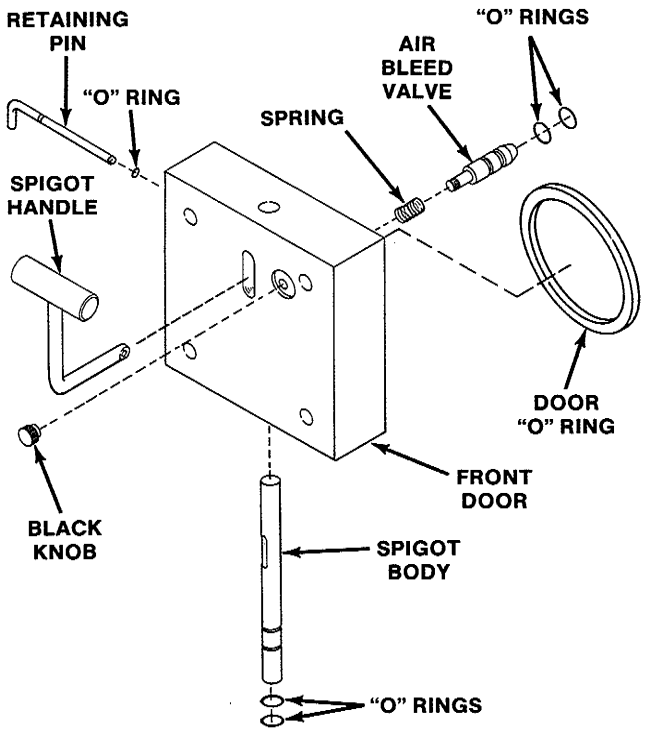


Figure 14. Exploded View of Front Door

⚠ 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.

3.7 SANITIZING

Sanitizing must be done after the freezer is clean and just before the hopper is filled 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 THE FOOD AND DRUG ADMINISTRATION REQUIRE THAT ALL CLEANING AND SANITIZING SOLUTIONS USED WITH FOOD PROCESSING EQUIPMENT BE CERTIFIED FOR THIS USE. USE "SANI-KWIK" OR EQUIVALENT.

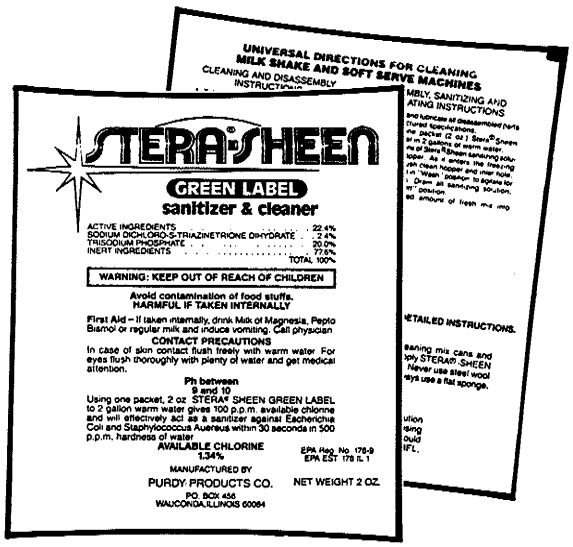
When sanitizing the freezer, refer to local sanitary regulations for applicable codes and recommended sanitizing products and procedures. The frequency of sanitizing must comply with local health regulations. Mix sanitizer according to manufacturer's instructions to provide a 100 parts per million strength 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 2 gallons (7.5 liters) of sanitizing solution following manufacturer's instructions. Place the draw tube into the container (Fig. 15).

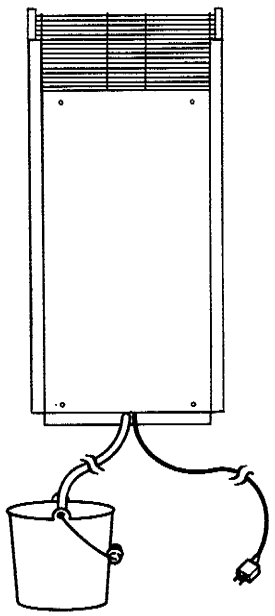


Figure 15. Sanitizing Procedure (Rear View Illustration)

B. Place the pump switch in the on position (Fig. 16). Pull out the air bleed until sanitizer fills the barrel to within 1/2" of the valve. Allow the valve to close. The pump will continue to pump until the correct pressure is reached.

C. Place the CLEAN-OFF-ON rocker switch in the CLEAN position. Check for leaks around the front door seal (Fig. 16).

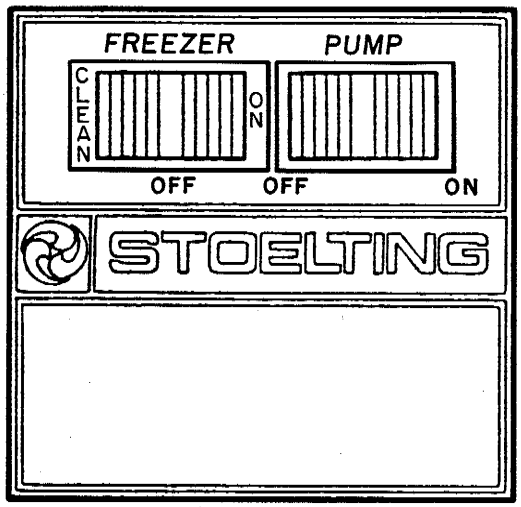


Figure 16. Controls

D. After five minutes, open spigot to drain sanitizing solution. When solution has drained, place the CLEAN-OFF-ON switch and pump switch in the OFF position. Allow the freezer barrel to drain completely (Fig. 17).

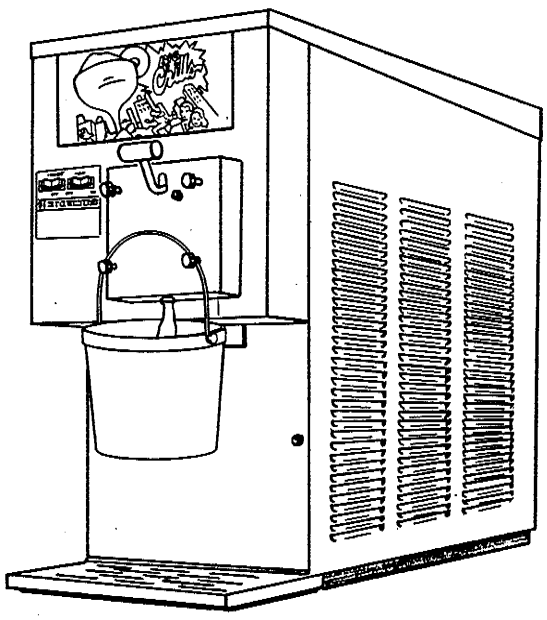


Figure 17. Spigot Opened and Solution Draining

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-ON switch in the OFF position.

C. Place the draw tube into a container of mix with the spigot open. Turn the pump switch to the ON position. Allow approximately 8 oz. of sanitizing solution and mix to be pumped out. Close the spigot and pull out the air bleed valve. Allow the barrel to fill to within 1/2" of the valve. Then close the valve (Fig. 18).

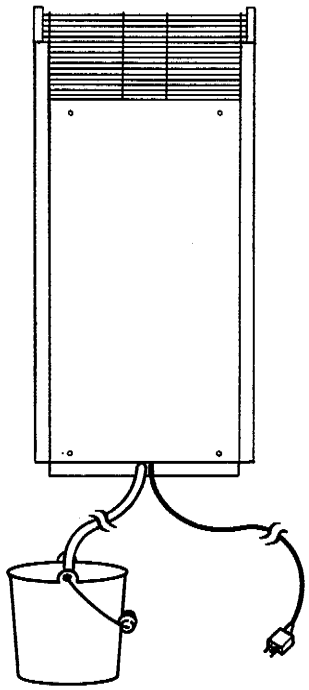


Figure 18. Filling the Freezer with Mix (Rear View Illustration)

D. Place the CLEAN-OFF-ON rocker switch in the ON position. The product will be ready to serve in about 15 minutes.

3.9 CONSISTENCY ADJUSTMENT

The freezer is set for the proper consistency from the factory. If you need to make an adjustment, turn the adjusting screw clockwise for a firmer product and counterclockwise for a softer product.

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.

4.2 PREVENTIVE 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 by pulling out. Clean the drip tray 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 shinning a light through the coil from the bottom of the condenser (Fig. 19).

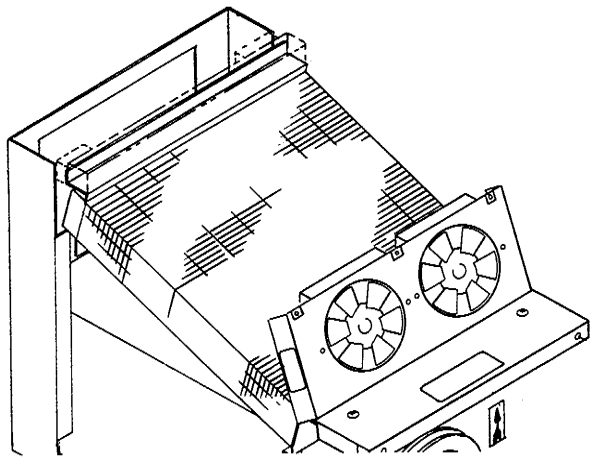


Figure 19. Condenser

2. If the condenser is dirty, place a wet towel under the condenser.

3. Using compressed air or CO_2 tank, blow out the dirt from the top of the condenser. Most of the dirt will cling to the wet towel.

NOTE

This procedure will result in a very loud noise.

4. 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 the CLEAN-OFF-ON 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 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, center blade and the front agitator support bearing in a plastic bag with a moist paper towel to prevent them from becoming brittle.

SECTION 5
REPLACEMENT PARTS AND REFERENCE DRAWINGS

5.1 HOW TO ORDER 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.

Figure Number	Reference Number	Part Number	Description
		324014	Decal Blk Arrow on White Back
		324063	Decal Instuct for Dr Socket
		324073	Decal Atten Side Pnls Must Be
		324105	Decal Caution-Elec Shock
		324106	Decal Caution Wiring Mat'l
		324107	Decal Caution Moving Parts
		324141	Decal Caution-Rotating Blades
		324186	Decal Drive Reset
		324234	Decal Attention Adequate Vent
		324242	Decal Temp Adjustment
		324332	Decal Compressor
		324419	Decal Transparent
		324420	Decal Wiring Diagram
		324472	Decal Cover
		324473	Decal Switch & Name Plate
		324474	Decal 25 Watts Maximum

FRONT DOOR AND AGITATOR ASSEMBLY PARTS LIST

Figure Number	Reference Number	Part Number	Description
20	1	1147146	Door Handle Retaining Pin
20	2	624515	"O" Ring 1/8 x 1/4 x 1/16
20	3	4147155	Front Door
20	4	162158	Agitator Blade
20	5	3147112	Agitator Shaft Assembly
20	6	624669	"O" Ring 1.18 ID x 1.56 OD x .18
20	7	1147984	Rear Seal Adapter
20	8	667868	Rear Seal
20	9	1147178	Center Blade
20	10	1147105	Front Support Bearing
20	11	624555	"O" Ring 3/8 x 1/2 x 1/16
20	12	625310	Quad Ring 5.75 ID
20	13	1147967	Pressure Relief Valve
20	14	694261	Compression Spring
20	15	2147128	Spigot
20	16	624585	"O" Ring 9/16 x 3/4 x 3/32
20	17	482019	Knob
20	18	482004	Knob
20	19	2147131	Handle

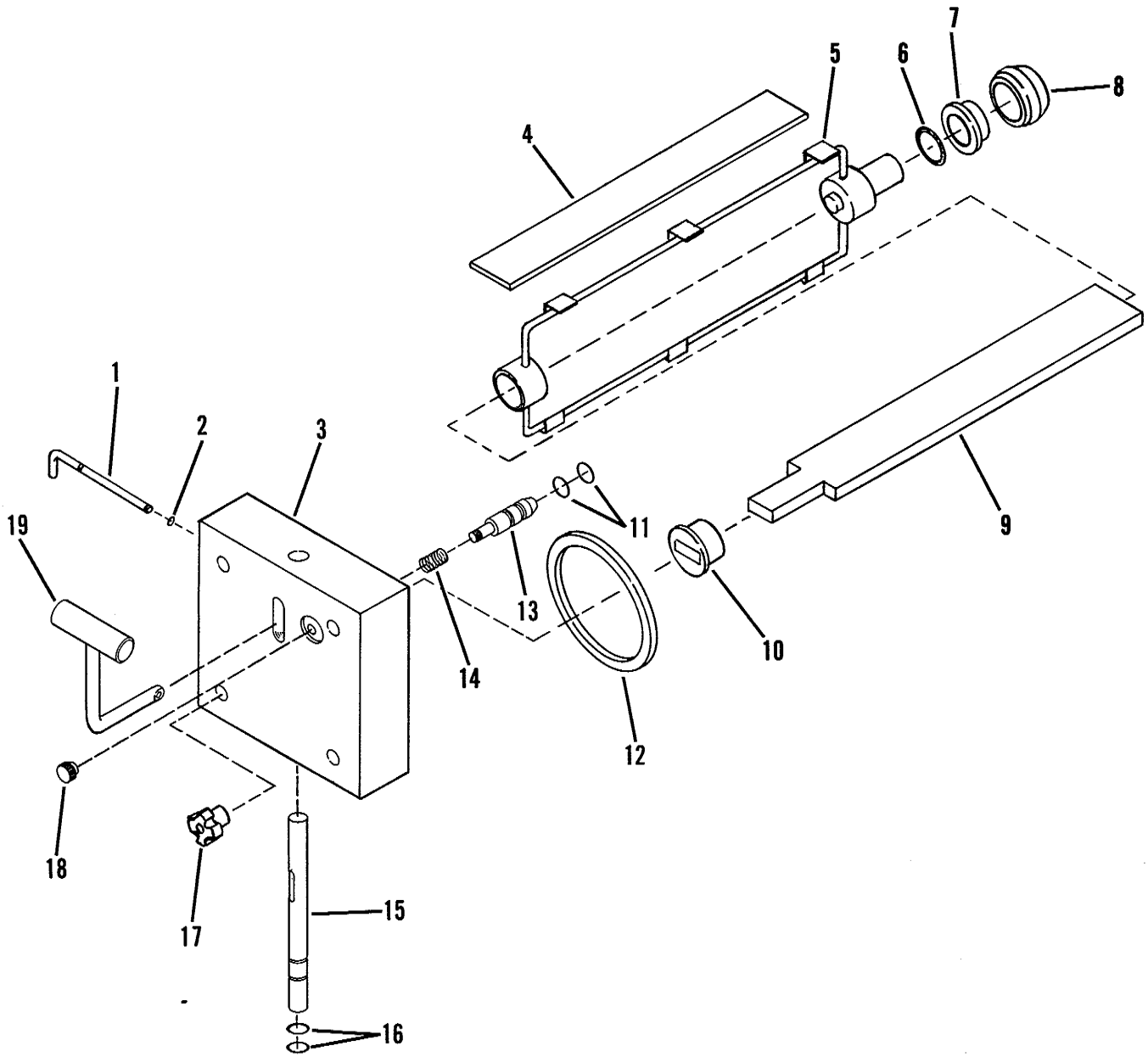


Figure 20. Front Door and Agitator Assembly

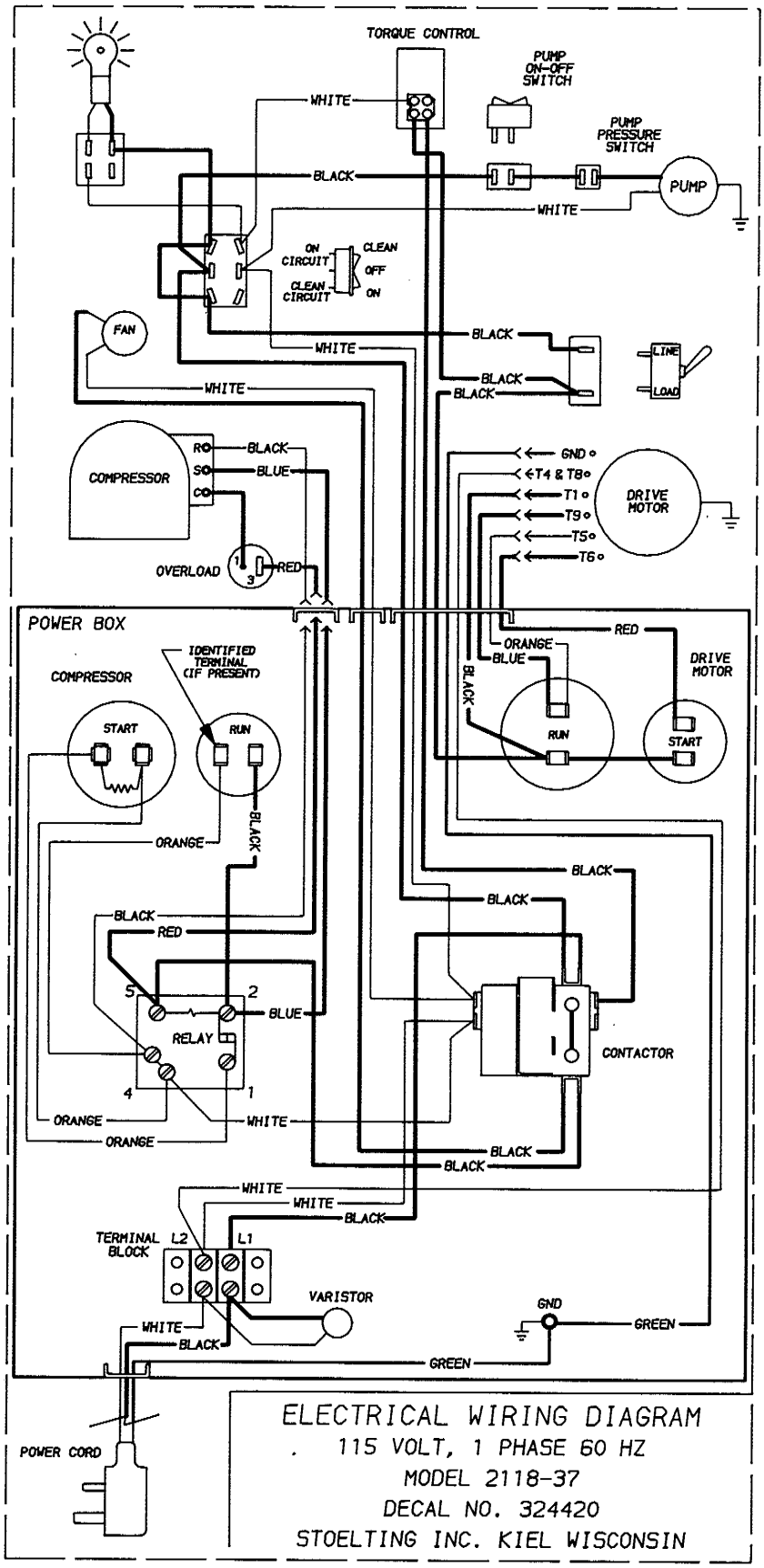


Figure 21. Wiring Diagram