

# OWNERS MANUAL

TO

Spaceman Machines

6490 and 6690



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# Section 1 - To The Installer

**THIS MACHINE IS DESIGNED FOR INDOOR USE ONLY.**

**DO NOT** install the machine in an area where a water jet could be used to clean or rinse the machine. Failure to follow this instruction may result in serious electrical shock.

## **Electrical Connections**

This equipment is supplied with a 3-wire cord and grounding type plug, for connection to a single phase, 50 cycle, branch circuit supply. This unit must be plugged into a properly grounded receptacle. The cord and plug provided are 10 amp. for 220/50/1; therefore, the wall outlet must also be 10 amp. for 220/50/1. Check the data label, located on the side panel for electrical specifications. Air cooled units require a minimum of 77 mm of clearance around all sides of the freezer to allow for adequate air flow across condenser. Failure to allow adequate clearance can reduce the refrigeration capacity of the freezer and possibly cause permanent damage to the compressor. Permanent wiring may be employed, if required by local codes. Instructions for conversion to permanent wiring are as follows:

- 1 Be sure the freezer is electrically disconnected.
- 2 Remove the back panel and locate the small electrical box at the base of the freezer.
- 3 Remove the factory installed cord and strain relief bushing.
- 4 Route incoming permanent wiring through 22 mm hole in base pan.
- 5 Connect two power supply leads. Attach ground wire to the grounding lug inside the electrical box.
- 6 Be sure unit is properly grounded before applying power.

## **ALWAYS FOLLOW LOCAL HEALTH CODES**

Equipment should be installed in accordance with the existing local codes. Please contact your local authorities.

Stationary appliances which are not equipped with a power cord and a plug or other device to disconnect the appliance from the power source must have an all-pole disconnecting device with a contact gap of at least 3mm installed in the external installation.

**CAUTION: THIS EQUIPMENT MUST BE PROPERLY GROUNDED! FAILURE TO DO SO CAN RESULT IN SEVERE PERSONAL INJURY FROM ELECTRICAL SHOCK!**

Beater rotation must be clockwise as viewed looking into the freezing cylinder of any model freezer.

## Section 2 - To the Operator

The freezer you have purchased has been carefully engineered and manufactured to give you dependable operation. The model 690, when properly operated and cared for, will produce a consistent quality product. Like all mechanical products, they will require cleaning and maintenance. A minimum amount of care and attention is necessary if the operating procedures outlined in this manual are followed closely.

This Operator's Manual should be read before operating or performing any maintenance on your equipment.

Your freezer will NOT eventually compensate for and correct any errors during the set-up or filling operations. Thus, the initial assembly and priming procedures are of extreme importance. It is strongly recommended that personnel responsible for the equipment's operation, both assembly and disassembly, sit down together and go through these procedures in order to be properly trained and to make sure that no misunderstandings exist.

In the event you should require technical assistance, please contact your local authorized Distributor.

**Note: Constant research results in steady improvements; therefore, information in this manual is subject to change without notice.**

The user is responsible for returning the product to the appropriate collection facility, as specified by your local code.

For additional information regarding applicable local laws, please contact the municipal facility and/or local distributor.

### **Compressor Warranty Disclaimer**

As many new refrigerants are being tested and developed, thus seeking their way into the service industry. Some of these new refrigerants are being advertised as drop-in replacements for numerous applications. It should be noted that, in the event of ordinary service to this machine's refrigeration system, **only the refrigerant specified on the affixed data label should be used**. The unauthorized use of alternate refrigerants will void your compressor warranty. It will be the owner's responsibility to make this fact known to any technician he employs.

It should also be noted that Spaceman does not warrant the refrigerant used in its equipment. For example, if the refrigerant is lost during the course of ordinary service to this machine, Spaceman has no obligation to either supply or provide its replacement. Spaceman does have the obligation to recommend a suitable replacement if the original refrigerant is banned, obsoleted, or no longer available during the warranty of the compressor.

We will continue to monitor the industry and test new alternates as they are being developed. Should a new alternate prove, through our testing, that it would be accepted as a drop-in replacement, then the above disclaimer would become null and void. To find out the current status of an alternate refrigerant as it relates to your compressor warranty, call the local Distributor or the Factory.

## Section 3 - Safety

We are concerned about the safety of the operator when he or she comes in contact with the freezer and its parts. We have gone to extreme efforts to design and manufacture built-in safety features to protect both you and the service technician.

**IMPORTANT----** Failure to adhere to the following safety precautions may result in severe personal injury.

Failure to comply with these warnings may also damage the machine and its components. Component damage will result in part replacement expense and service repair expense.

### **To Operate Safely:**

**DO NOT** operate the freezer without reading this operator's manual. Failure to follow this instruction may result in equipment damage, poor freezer performance, health hazards, or personal injury.

**DO NOT** operate the freezer unless it is properly grounded.

**DO NOT** attempt any repairs unless the main power supply to the freezer has been disconnected.

**DO NOT** operate the freezer with larger fuses than specified on the freezer data label. Failure to follow these instructions may result in electrocution or damage to the machine. Contact your local authorized Distributor for service.

**DO NOT** use a water jet to clean or rinse the freezer. Failure to follow this instruction may result in serious electrical shock.

**DO NOT** allow untrained personnel to operate this machine.

**DO NOT** operate the freezer unless all service panels and access doors are restrained with screws.

**DO NOT** remove the door, beater and blades, or drive shaft unless all control switches are in the OFF position.

**DO NOT** put objects or fingers in door spout. Failure to follow these instructions may result in contaminated product or severe personal injury to fingers or hands from hazardous moving parts.

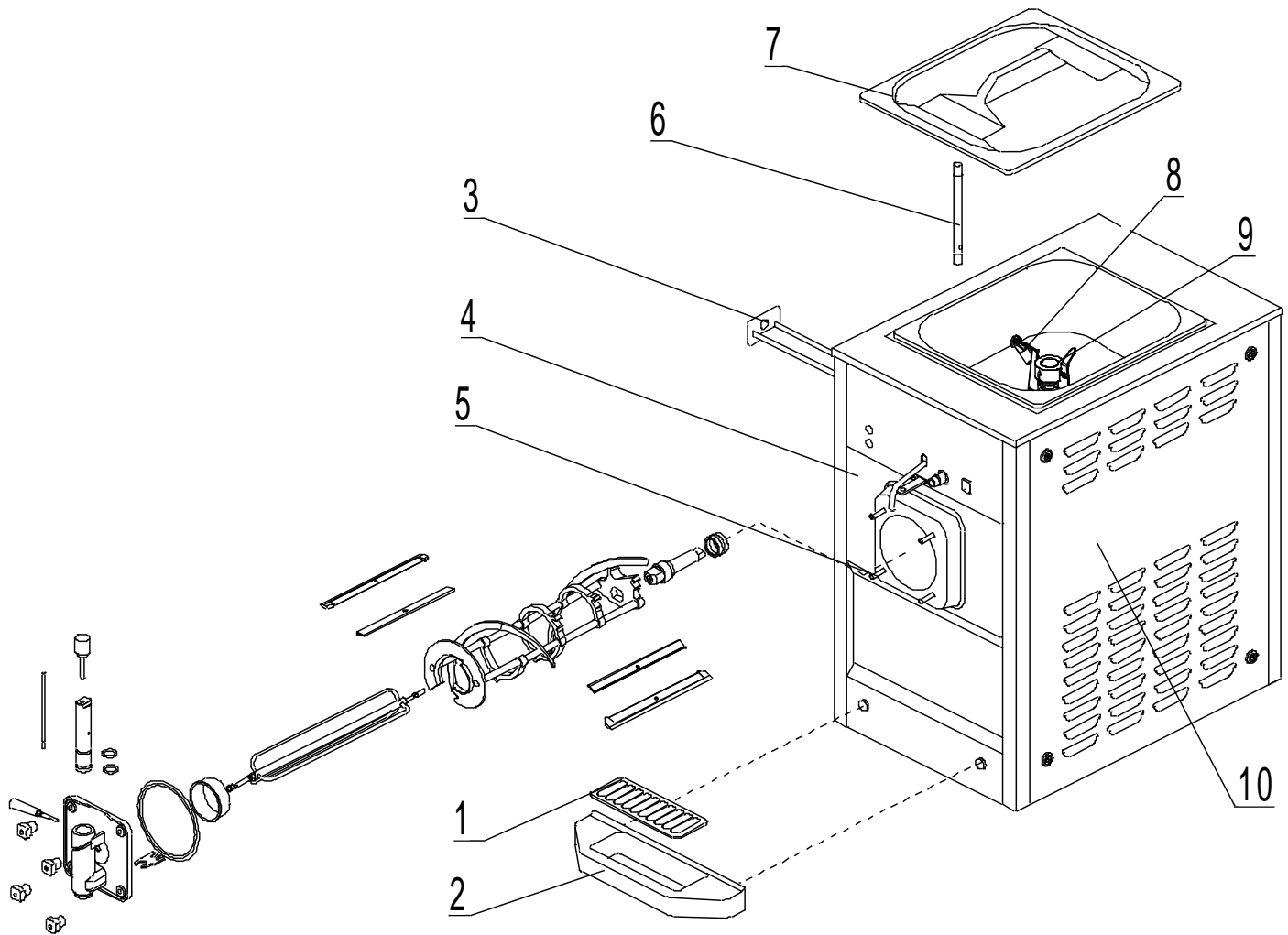
**USE EXTREME CAUTION** when removing the beater assembly. The scraper blades are very sharp and may cause injury.

**This freezer must be placed on a level surface. Failure to comply may result in personal injury or equipment damage.**

**DO NOT** obstruct air intake and discharge openings: 77 mm minimum air space on all sides. Failure to follow this instruction may cause poor freezer performance and damage to the machine.

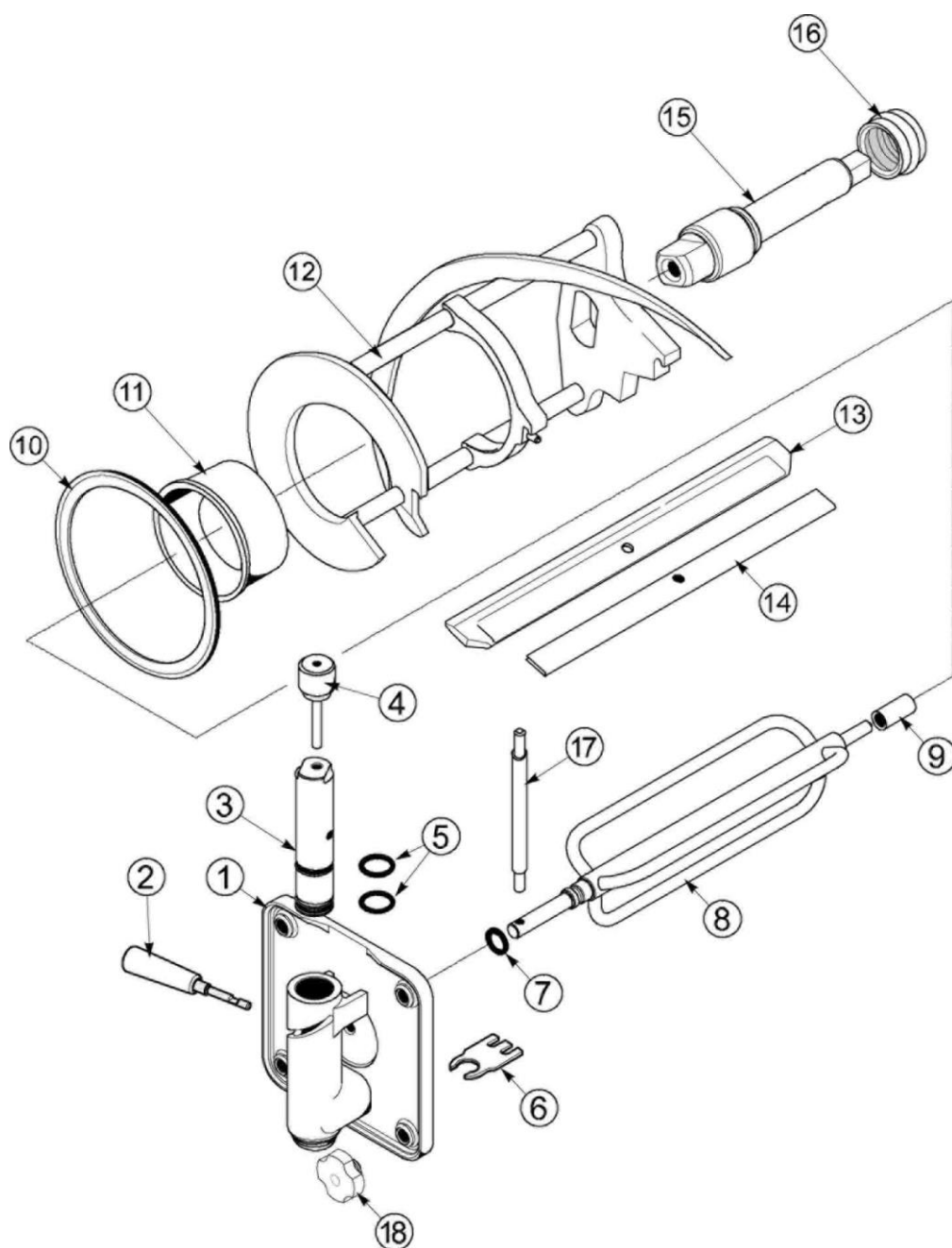
**This freezer is designed to operate under normal ambient temperatures of 21~24 °C. The freezer has successfully performed in high ambient temperatures of 40°C. at reduced capacities.**

## Section 4 - Parts and Operation



| Item | Description    | Part     | Item | Description      | Part     |
|------|----------------|----------|------|------------------|----------|
| 1    | Shield-Splash  | 69049320 | 6    | Feed Tube        | 69049639 |
| 2    | Tray-Drip      | 69049319 | 7    | Cover            | 69025663 |
| 3    | Pan-Drip       | 69027504 | 8    | Mix low sensor   | 69049679 |
| 4    | Panel -Front   | 69050678 | 9    | Agitator         | 69049325 |
| 5    | Stud-Nose Cone | 69013496 | 10   | Panel-Side Right | 69049640 |





| Item | Description      | Part No. | Item | Description           | Part No. |
|------|------------------|----------|------|-----------------------|----------|
| 1    | Dispensing door  | 69039248 | 10   | Gasket-Door           | 69014030 |
| 2    | Handle draw      | 69047384 | 11   | Bearing-Front         | 69013116 |
| 3    | Valve draw       | 69047734 | 12   | Beater                | 69049490 |
| 4    | Valve Handle Pin | 69025929 | 13   | Blade-Scraper-Plastic | 69046237 |
| 5    | O-Ring           | 69032504 | 14   | Clip-Scraper Blade    | 69046238 |
| 6    | Buster Ice       | 69047735 | 15   | Shaft-Beater          | 69035418 |
| 7    | O-Ring           | 69018550 | 16   | Seal-Drive Shaft      | 69032560 |
| 8    | Torque Assembly  | 69050382 | 17   | Arm-Torque            | 69025660 |
| 9    | Bearing-Guide    | 69014496 | 18   | Nut-Stud              | 69029880 |

## Viscosity Adjustment

The viscosity (thickness) of the slush can be adjusted by turning the viscosity adjustment screw on the upper right side of the front panel. Turn the viscosity adjustment screw clockwise for a thicker product, or counterclockwise for a thinner product. After making an adjustment, allow the refrigeration system to cycle 2 or 3 times to accurately evaluate the viscosity.

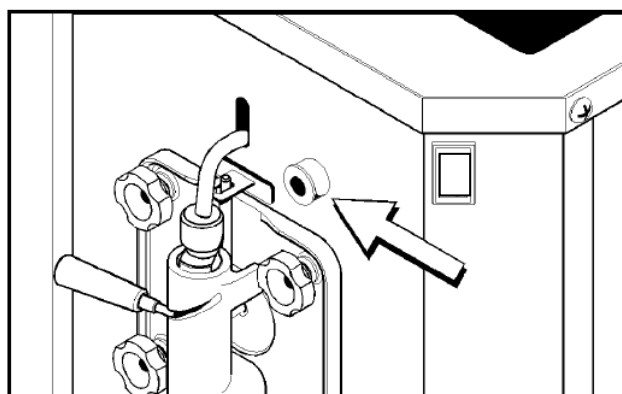


Figure 1

## Power Switch

The center position is “OFF”. The “DOWN” position is “AUTO”, which activates the beater motor and the refrigeration system. The “UP” position is “WASH”, which activates the beater motor only.

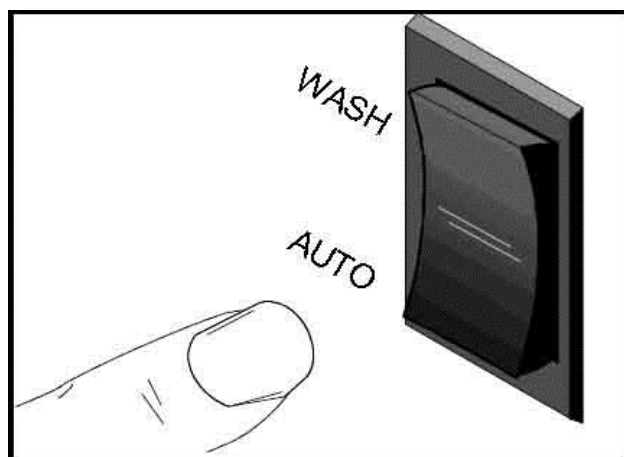


Figure 2

## Reset Button

The reset button is located in the rear panel. The reset protects the beater motor from an overload condition.

If an overload occurs, the reset mechanism will trip. To properly reset the freezer, place the power switch in the “OFF” position. Press the reset button firmly. Place the power switch in the “WASH” position and observe the freezer’s performance. Once satisfied, place the control switch in the “AUTO” position. Figure 3

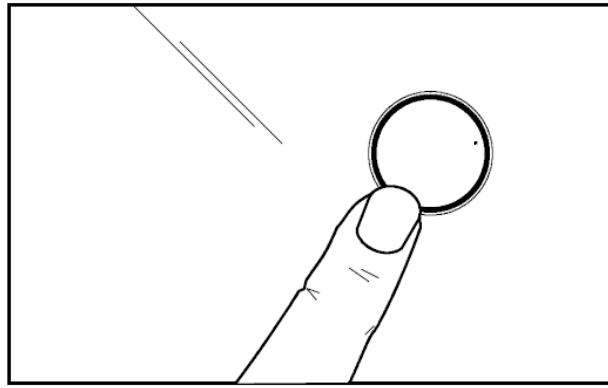


Figure 3

**IMPORTANT:** Do not use metal objects to press the reset button.

### Indicator Light - “Mix Low”

A mix level indicating light is located on the front of the machine. When the light is flashing, it indicates that the mix hopper has a low supply of product and should be refilled as soon as possible.

### Indicator Light - “Mix Out”

A mix out indicating light is located on the front of the machine. When the light is flashing, it indicates that the hopper is empty and the mix supply needs replenishing. To prevent damage to the unit, refrigeration discontinues automatically when the mix out indicator lights.

The Model 6640 and 6690 freezer is designed to produce shake or slush product at the desired thickness. This unit has a 4 quart freezing cylinder.

We begin our instructions at the point where we enter the store in the morning and find the parts disassembled and laid out to air dry from the previous night’s brush cleaning.

These opening procedures will show you how to assemble these parts into the freezer, sanitize them, and prime the freezer with fresh mix in preparation to serve your first portion.

## Assembly

**Note:** When lubricating parts, use an approved food grade lubricant.

### Step 1

Lubricate the shaft portion that comes in contact with the bearing. **DO NOT** lubricate the square end of the drive shaft. Lubricate the boot seal groove and slide the boot seal over the shaft and groove until it snaps into place. Fill the inside portion of the seal with more lubricant and evenly lubricate the end of the seal that fits onto the rear shell bearing. Install the drive shaft. Figure 4

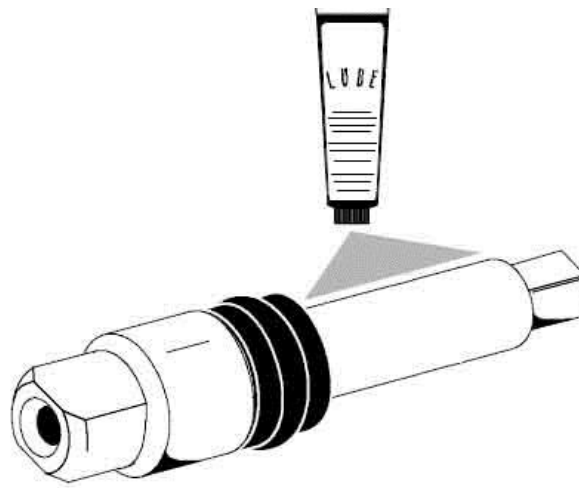


Figure 4

**Note:** Do not install the boot seal inside out.

Insert the beater drive shaft into the rear shell bearing and engage the square end firmly into the female socket of the drive unit. Be certain that the drive shaft fits into the drive coupling without binding. Figure 5

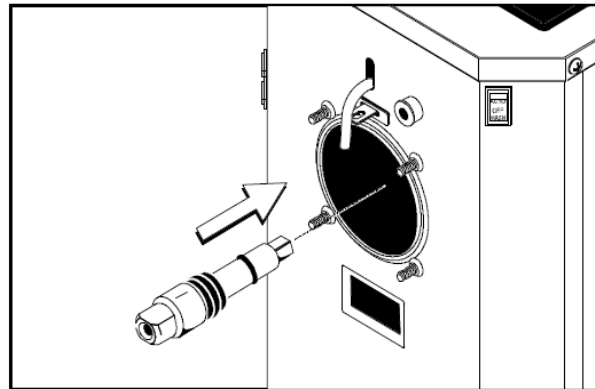


Figure 5

## Step 2

Install the beater assembly. First check the scraper blade for any nicks or signs of wear. If any nicks are present, replace the blade. If the blade is in good condition, place the clip over the blade and install the blade and clip on the beater assembly. Be sure the holes in the blade and the clip are securely positioned over the beater pin.

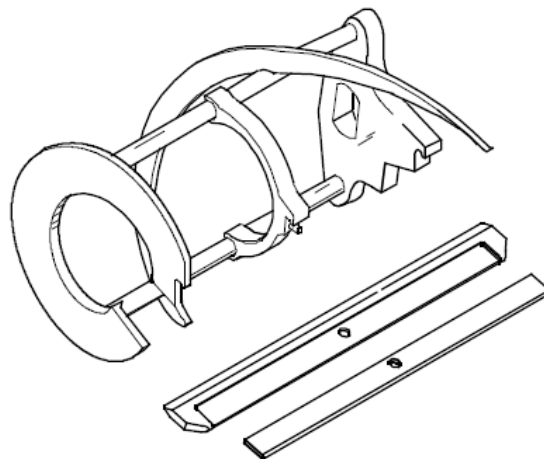


Figure 6

Holding the beater securely, slide the beater into the freezing cylinder and align the hole at the rear of the beater with the flats on the end of the drive shaft.

Slide the beater the remainder of the way into the freezing cylinder and over the end of the drive shaft. The beater assembly will not protrude beyond the front of the freezing cylinder.

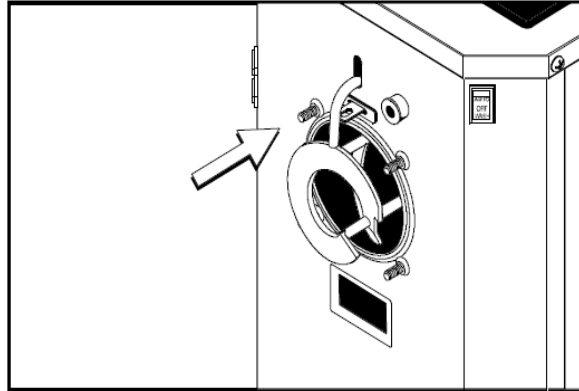


Figure 7

### Step 3

Install the plastic guide bearing on the short end of the torque rotor. Slide the o-ring into the groove on the long end of the torque rotor and lubricate the o-ring. Do not lubricate the guide bearing. Figure 8

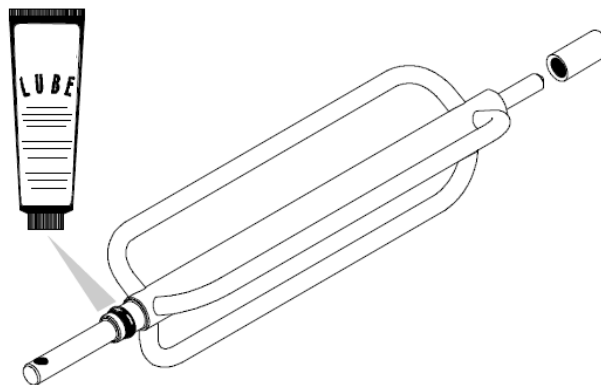


Figure 8

### Step 4

Insert the torque rotor end with the guide bearing into the pilot hole in the center of the drive shaft. The hole in the torque rotor shaft should be rotated to the 12 o'clock position. Figure 9

### Step 5

Assemble the freezer door with the "Ice Buster" (door spout clearing device). To assemble the door with the ice buster, install the o-rings on the draw valve and lubricate. Figure 10

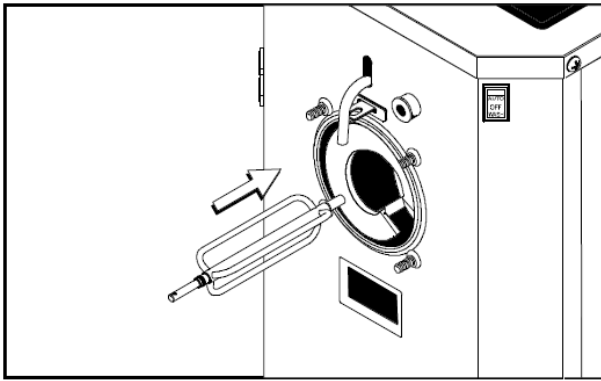


Figure 9

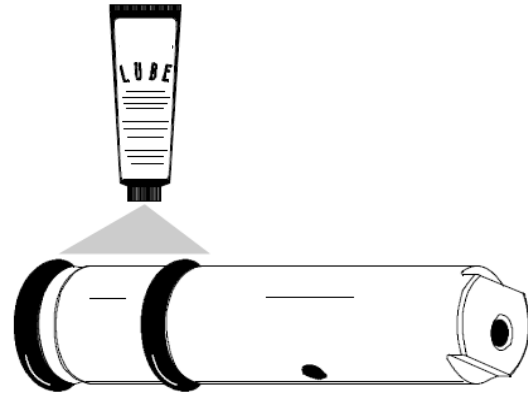


Figure 10

Insert the draw valve into the door, leaving approximately 1/2" of the valve sticking out the top of the door. Figure 11

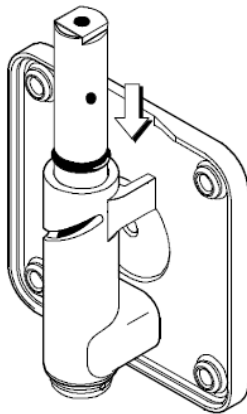
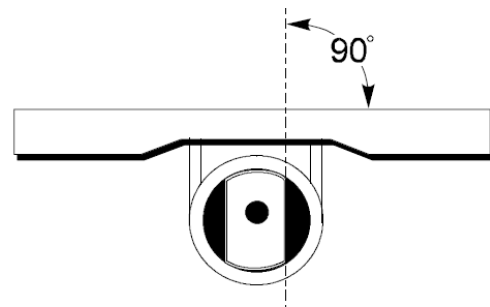


Figure 11



Rotate the draw valve so the flats on the top of the draw valve are perpendicular to the door face - above right.

Insert the ice buster through the door spout and into the slot located just above the lower o-ring. Figure 13

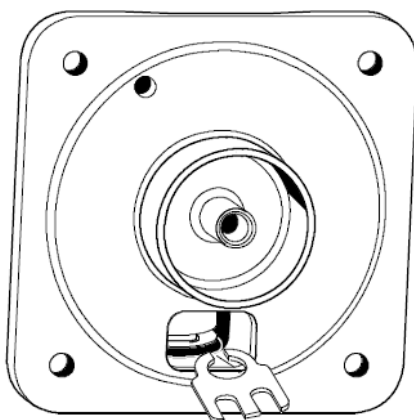


Figure 13

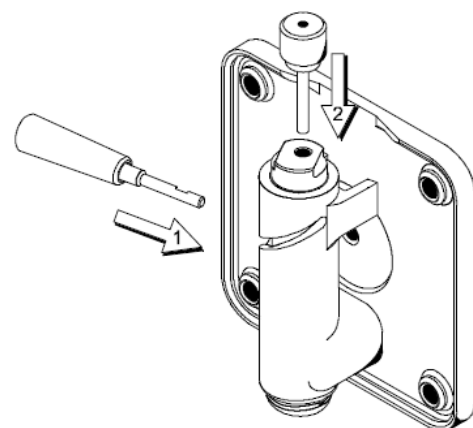


Figure 14

With the ice buster in place, rotate the draw valve to allow installation of the draw handle. This will lock the ice buster in place. Install the draw handle pin, and close the draw valve by moving the handle to the left. Figure 14

Place the large rubber gasket into the groove on the back side of the freezer door. Slide the white, plastic front bearing onto the bearing hub, making certain that the flanged end of the bearing is resting against the freezer door. DO NOT lubricate the door gasket or front bearing.. Figure 15

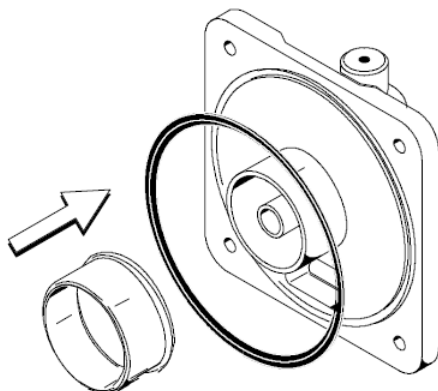


Figure 15

### Step 6

Position the torque arm by inserting it through the slot in the torque switch arm and down into the hole in the torque rotor which protrudes from the door. Verify proper installation by moving the torque rotor back and forth to be sure it moves freely and easily. Figure 16

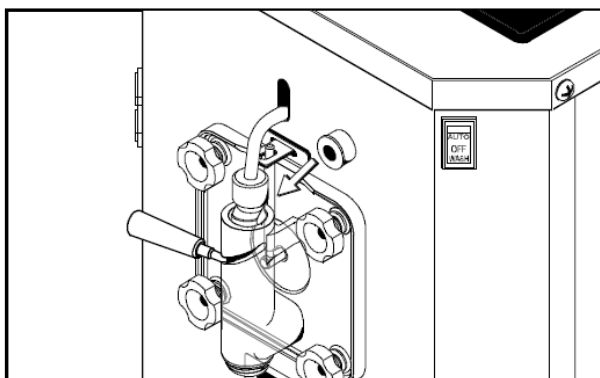


Figure 16

### Step 7

Install the front drip pan. Slide the long drip pan into the hole in the front panel. Figure 17

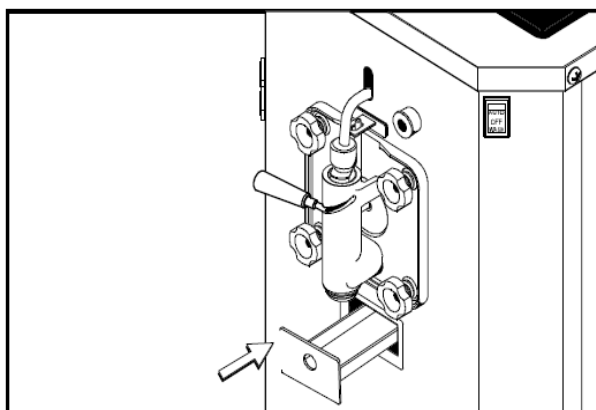


Figure 17

**Step 8**

Install the front drip tray and splash shield beneath the door spout. Figure 18

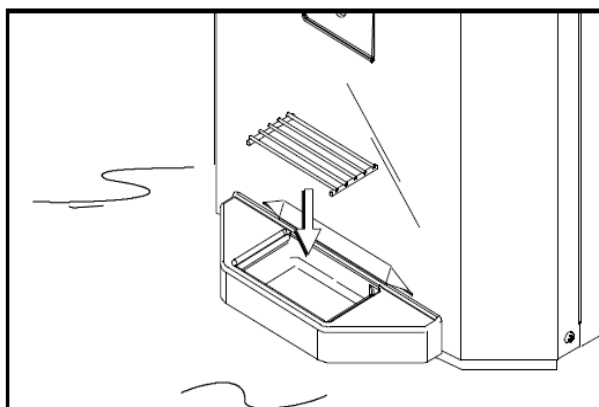


Figure 18

**Step 9**

Lay the feed tube in the bottom of the mix hopper. Figure 19

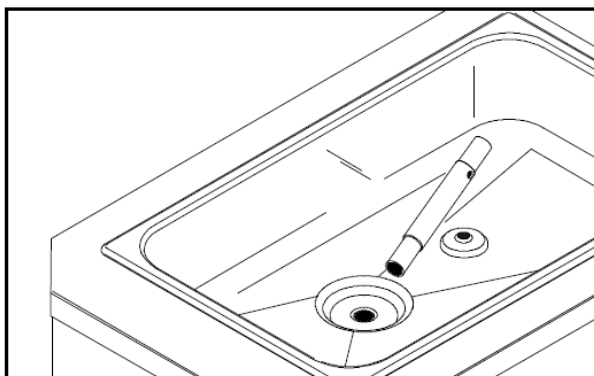


Figure 19

**Sanitizing****Step 1**

Prepare 10 liters of an approved 100 PPM sanitizing solution. USE WARMWATER AND FOLLOW THE MANUFACTURER'S SPECIFICATIONS.

**Step 2**

Pour the 10 liters of sanitizing solution into the hopper and allow it to flow into the freezing cylinder.

**Step 3**

While the solution is flowing into the freezing cylinder, brush clean the mix hopper, feed tube and mix inlet hole.

**Step 4**

Place the power switch in the "WASH" position. This will agitate the sanitizing solution in the freezing cylinder. Allow the solution to agitate for five minutes.

**Step 5**

Place an empty mix pail beneath the door spout and move the draw handle to the right. Draw off all the sanitizing solution. When the sanitizer stops flowing from



the door spout, move the draw handle to the left and place the control switch in the “OFF” position.

### **Step 6**

Stand the feed tube in the corner of the hopper.

### **Priming**

#### **Step 1**

With a pail beneath the door spout, move the draw handle to the right. Pour 20 liters of FRESH mix into the hopper and allow it to flow into the freezing cylinder. This will force out any remaining sanitizing solution. When full strength mix is flowing from the door spout, move the draw handle to the left.

#### **Step 2**

When the mix has stopped bubbling down into the freezing cylinder, install the air/mix feed tube (optional) in the mix inlet hole with the hole side down. Figure 20

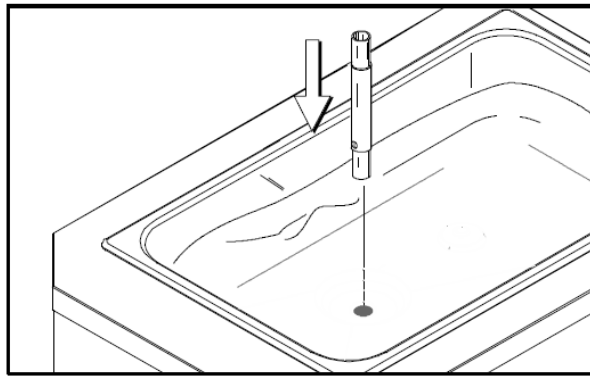


Figure 20

#### **Step 3**

Place the power switch in the “AUTO” position. When the unit cycles off, the product will be at serving viscosity. The viscosity (thickness) of the slush can be adjusted by turning the viscosity adjustment screw on the upper right of the front panel. Turn the viscosity adjustment screw clockwise for a thicker product, or counterclockwise for a thinner product. After making an adjustment, allow the refrigeration system to cycle 2 or 3 times to accurately evaluate the viscosity.

#### **Step 4**

Place the mix hopper cover in position. Periodically, during the day’s operation, check to be sure there is a substantial amount of mix in the hopper.

### **Closing Procedure**

To disassemble this unit, the following items will be needed:

- Two cleaning pails
- Necessary brushes
- Cleaner
- Single service towels

## **Draining Product From The Freezing Cylinder**

### **Step 1**

Place the power switch in the “OFF” position as far ahead of cleaning time as possible to allow frozen product to soften for easier cleaning.

### **Step 2**

Raise the hopper cover. If the unit is equipped with a feed tube, take it to the sink for cleaning.

### **Step 3**

With a sanitized pail beneath the door spout, place the power switch in the “WASH” position and move the draw handle to the right. When all the product stops flowing from the door spout, move the draw handle to the left and place the power switch in the “OFF” position. If local health codes permit, empty the rerun into the rerun can. Cover the container and place it in the walk-in cooler.

**Note: If local health codes. DO NOT permit the use of rerun, the product must be discarded. Follow the instructions in the previous step, except drain the product into a mix pail and properly discard the mix.**

## **Rinsing**

### **Step 1**

Pour 10 liters of cool, clean water into the mix hopper. With the brushes, scrub the mix hopper and the mix inlet hole.

### **Step 2**

With a pail beneath the door spout, place the power switch in the “WASH” position and move the draw handle to the right. Drain all the rinse water from the freezing cylinder. When the rinse water stops flowing from the door spout, move the draw handle to the left and place the control switch in the “OFF” position. Repeat this procedure until the rinse water being drawn from the freezing cylinder is clear.

## **Cleaning**

### **Step 1**

Prepare 10 liters of an approved cleaning solution. USE WARM WATER AND FOLLOW THE MANUFACTURER’S SPECIFICATIONS.

### **Step 2**

Pour the 10 liters of cleaning solution into the hopper and allow it to flow into the freezing cylinder.

### **Step 3**

While the solution is flowing into the freezing cylinder, brush-clean the mix hopper and mix inlet hole.

### **Step 4**

Place the power switch in the “WASH” position. This will agitate the cleaning

### **Step 5**

Place an empty pail beneath the door spout and move the draw handle to the right. Draw off all the cleaning solution. When the solution stops flowing from the door spout, move the draw handle to the left, and place the power switch in the "OFF" position.

## **Disassembly**

### **Step 1**

BE SURE THE PLUG IS DISCONNECTED FROM THE SOCKET

### **Step 2**

Remove the hand screws, freezer door, beater assembly, torque rotor, scraper blade and drive shaft from the freezing cylinder. Take these parts to the sink for cleaning.

### **Step 3**

Remove the front drip tray and the splash shield. Take these parts to the sink for cleaning.

### **Step 4**

Remove the rear drip pan from the front panel. Note: If the drip pan is filled with an excessive amount of mix, it is an indication the drive shaft seal should be replaced or properly lubricated.

## **Brush Cleaning**

### **Step 1**

Prepare a sink with a cleaning solution. USE WARM WATER AND FOLLOW THE MANUFACTURER'S SPECIFICATIONS.

**IMPORTANT:** Follow the label directions. Too STRONG of a solution can cause parts damage, while too MILD of a solution will not provide adequate cleaning.) Make sure all brushes provided with the freezer are available for brush cleaning.

### **Step 2**

Remove the o-ring and seal from the drive shaft. Remove the o-ring and the bearing from the torque rotor.

### **Step 3**

Remove the draw valve, ice buster, front bearing, and gasket from the freezer door. Remove all o-rings.

**Note:** To remove the o-ring, use a single service towel to grasp the o-ring. Apply pressure in an upward direction until the o-ring pops out of its groove. With the other hand, push the top of the o-ring forward until it rolls out of the groove and can be removed easily.

### **Step 4**

Thoroughly brush-clean all disassembled parts in the cleaning solution, making sure all lubricant and mix film is removed. Place all the cleaned parts on a clean,

dry surface to air dry.

**Step 5**

Return to the freezer with a small amount of cleaning solution. Brush-clean the rear shell bearing at the back of the freezing cylinder with the brush. Figure 21

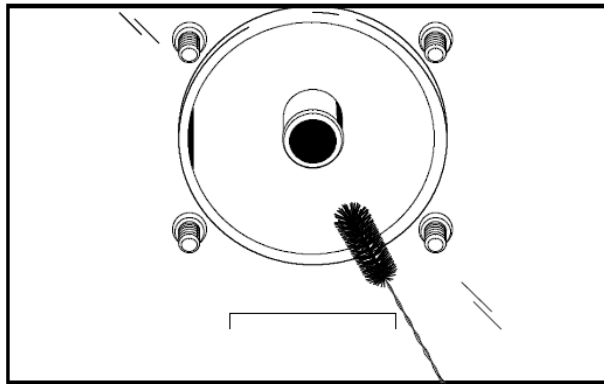


Figure 21

**Step 6**

Wipe clean all exterior surfaces of the freezer.

# Section 5 - Operator Checklist

During Cleaning and Sanitizing:

## **ALWAYS FOLLOW LOCAL HEALTH CODES**

Cleaning and sanitizing schedules are governed by your State or local regulatory agencies and must be followed accordingly. The following check points should be stressed during the cleaning and sanitizing operations.

## **WE RECOMMEND DAILY CLEANING AND SANITIZING.**

### **Troubleshooting Bacterial Count:**

1. Thoroughly clean and sanitize machine regularly, including complete disassembly and brush cleaning.
2. Use all brushes supplied for thorough cleaning. The brushes are specially designed to reach all mix passageways.
3. Use the white bristle brush to clean the mix feed tube, which extends from the hopper down to the rear of the freezing cylinder.
4. Use the black bristle brush to thoroughly clean the rear shell bearing located at the rear of the freezing cylinder. Be sure to have a generous amount of cleaning solution on the brush.
5. IF LOCAL HEALTH CODES PERMIT THE USE OF RERUN, make sure the mix rerun is stored in a sanitized, covered stainless steel container and used the following day. DO NOT prime the machine with rerun. When using rerun, skim off the foam and discard, then mix the rerun with fresh mix in a ratio of 50/50 during the day's operation.
6. On a designated day of the week, run the mix as low as feasible and discard after closing. This will break the rerun cycle and reduce the possibility of high bacteria and coli form counts.
7. Properly prepare the cleaning and sanitizing solutions. Read and follow label directions carefully. Too strong of a solution may damage the parts and too weak of a solution will not do an adequate job of cleaning or sanitizing.
8. Temperature of mix in mix hopper and walk-in cooler should be below 4.4C.

### **Regular Maintenance Checks:**

1. Replace scraper blades that are nicked, damaged or worn down. Before installing beater, be certain the scraper blade is properly attached.
2. Check rear shell bearing for signs of wear (excessive mix leakage in drip pan) and be certain it is properly cleaned.

3. Using a screwdriver and cloth towel, keep the rear shell bearing and the female square drive socket clean and free of lubricant and mix deposits.
4. Dispose of o-rings and seals if they are worn, torn, or fit too loosely, and replace with new ones.
5. Follow all lubricating procedures as outlined in “Assembly”.
6. Check the condenser(s) for accumulation of dirt and lint. Dirty condensers will reduce the efficiency and capacity of the machine. Condensers should be cleaned monthly with a soft brush.

**Never** use screwdrivers or other metal probes to clean between the fins.

**Note:** For machines equipped with an air filter, it will be necessary to vacuum clean the filters on a monthly schedule.

### **Winter Storage**

If the place of business is to be closed during the winter months, it is important to protect the freezer by following certain precautions, particularly if the building is to be left unheated and subject to freezing conditions. Disconnect the freezer from the main power source to prevent possible electrical damage.

Your local Distributor can perform this service for you.

Wrap detachable parts of the freezer such as beater, blades, drive shaft, and freezer door, and place in a protected dry place. Rubber trim parts and gaskets can be protected by wrapping with moisture-proof paper. All parts should be thoroughly cleaned of dried mix or lubrication accumulations which attract mice and other vermin.

## Section 6 - Troubleshooting Guide

| PROBLEM  | PROBABLE CAUSE   | REMEDY   |
|--|--|--|
| 1. No product being dispensed.                         | <p>a. Power switch is in the "OFF" position.</p> <p>b. Improper mixing of product.</p> <p>c. Inadequate mix in hopper.</p> <p>d. Product frozen-up in freezing cylinder.</p> <p>e. Unit out on reset.</p> <p>f. Beater assembly is not rotating at all or counterclockwise. Control switch is not in "AUTO".</p> <p>g. Unit unplugged at wall receptacle.</p> <p>h. Tripped circuit breaker or blown fuse.</p> | <p>a. Place power switch in the "AUTO" position.</p> <p>b. Carefully follow directions for mixing product.</p> <p>c. Fill hopper with mix.</p> <p>d. Adjust viscosity adjustment accordingly.</p> <p>e. Place power switch in the "OFF" position. Press the reset button. Return control switch to "AUTO".</p> <p>f. The power switch must be in "AUTO". If beater is rotating counterclockwise, call service technician to correct rotation.</p> <p>g. Plug in power cord.</p> <p>h. Reset circuit breaker or replace fuse.</p> |
| 2. Unit will not operate in the "AUTO" or "WASH" mode. | <p>a. Unit unplugged at wall receptacle.</p> <p>b. Tripped circuit breaker or blown fuse.</p> <p>c. Unit out on reset.</p>   | <p>a. Plug in power cord.</p> <p>b. Reset circuit breaker or replace fuse.</p> <p>c. Place the power switch in the "OFF" position. Press the reset button. Return control switch to "AUTO".</p>  |
| 3. No compressor operation in the "AUTO" mode.         | <p>a. Beater motor is out on overload.</p> <p>b. Condenser dirty A/C.</p>  | <p>a. Place control switch in "OFF" position. Press the reset button. Return control switch to "AUTO".</p> <p>b. Clean condenser monthly.</p>  |
| 4. Product too thick.                                  | <p>a. Inadequate mix in hopper.</p> <p>b. Improper mixing of product.</p> <p>c. The viscosity adjustment is set incorrectly.</p> <p>d. The torque arm is not installed.</p>  | <p>a. Fill hopper with mix.</p> <p>b. Carefully follow directions for mixing product.</p> <p>c. Adjust the viscosity control.</p> <p>d. Install the torque arm.</p>  |

| <b>PROBLEM</b>                           | <b>PROBABLE CAUSE</b>  | <b>REMEDY</b>   |
|--|--|---|
| 5. Product too thin.                     | a. Missing, incorrectly installed, or bad scraper blade.<br><br>b. Improper mixing of product.<br><br>c. The viscosity adjustment is set incorrectly.<br><br>d. Incorrect beater rotation.<br><br>e. Dirty condensers. | a. Install or replace scraper blade.<br><br>b. Carefully follow directions for mixing product.<br><br>c. Adjust accordingly.<br><br>d. Contact service technician.<br><br>e. Clean regularly. |
| 6. Scored walls of freezing cylinder.    | a. Broken pin on beater assembly.<br><br>b. Front bearing worn or missing.   | a. Repair or replace beater assembly.<br><br>b. Replace or install front bearing.   |
| 7. Excessive leakage into rear drip pan. | a. Improper or inadequate lubrication of drive shaft seal.<br><br>b. Bad or missing seal on drive shaft.<br><br>c. Worn rear shell bearing.  | a. Use correct lubricant and follow lubrication procedures.<br><br>b. Replace seal every 3 months.<br><br>c. Contact service technician for replacement.                                      |
| 8. Excessive leakage from door spout.    | a. Improper or inadequate lubrication of draw valve o-rings.<br><br>b. Bad or missing o-rings on draw valve.   | a. Use correct lubricant and follow lubrication procedures.<br><br>b. Replace o-rings every 3 months.   |
| 9. Unable to remove drive shaft.         | a. Lubrication on square end of drive shaft.<br><br><br><br>b. Rounded corners of drive shaft, drive coupling, or both.  | a. Do not lubricate square end. Contact service technician for replacement.<br><br><br><br>b. Contact service technician to replace drive shaft, drive coupling, or both.                     |



## Section 7 - Parts Replacement Schedule

| PART DESCRIPTION    | EVERY 3 MONTHS | EVERY 6 MONTHS | ANNUALLY | QUANTITIES TO BE REPLACED |
|---------------------|----------------|----------------|----------|---------------------------|
| Drive Shaft Seal    | X              |                |          | 1                         |
| Drive Shaft O-Ring  | X              |                |          | 1                         |
| Scraper Blade       | X              |                |          | 1                         |
| Freezer Door Gasket | X              |                |          | 1                         |
| Front Bearing       | X              |                |          | 1                         |
| Draw Valve O-Rings  | X              |                |          | 2                         |