SaniServ®

"Reliability from the team that Serves the Best"

Frozen Beverage Dispensers
108 & 704 Models

Operation Manual

SaniServ P.O. Box 1089 Mooresville, Indiana 46158

Distributor Name: _____

Address: _____

Phone: _____

Date of Installation: _____

Model Number: _____

Serial Number: _____

Installer/Service Technician: _____

SERVICE: Always contact your SaniServ dealer or distributor for service questions or service agency referral. If your SaniServ dealer or distributor cannot satisfy your service requirements, he is authorized to contact the factory for resolution.

Note: It is the Owner's responsibility to maintain the Service Record located on the inside rear cover of this manual. An accurate record of service performed can greatly expedite troubleshooting of problems and significantly reduce repair costs.

PARTS: Always order parts from your SaniServ dealer or distributor. When ordering replacement parts, specify the part numbers, give the description of the part, the model number and the serial number of the machine.

WARRANTY: Remove the Check Test Start (CTS) form and fill it out in its entirety. Return the original (white) copy to SaniServ. The Dealer/Distributor retains the second (yellow) copy and the Owner/Operator retains the third (pink) copy.

The Manufacturer's Limited Warranty is printed on the reverse side of the Owner/Operator copy.

IMPORTANT

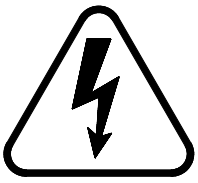
TO VALIDATE THE WARRANTY, THE CTS FORM MUST BE COMPLETED AND RETURNED TO THE FACTORY WITHIN 30 DAYS OF INSTALLATION.

Note: The Check Test Start function must be performed by a qualified technician.

STATEMENT OF INTENDED USE

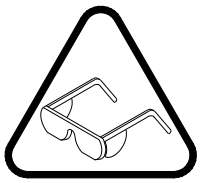
All SaniServ Machines covered in this manual are designed for one specific end use - to freeze and dispense frozen beverages.

PICTOGRAM LEGEND



ELECTRICAL SHOCK HAZARD

TIP AND CRUSH HAZARD



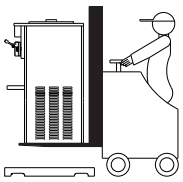
PROTECT EYES SPLASH HAZARD

HAND PINCH OR ENTRAPMENT HAZARD

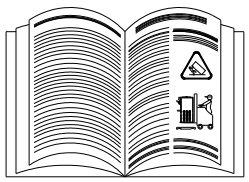
SHARP MACHINE PARTS HAZARD

CLEANOUT OPERATION

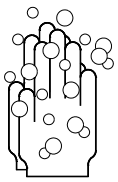
FROZEN PRODUCT



USE MECHANICAL LIFT EQUIPMENT



READ AND UNDERSTAND



WASH HANDS BEFORE PROCEEDING

WARNING

This machine was designed to produce frozen slush beverages only.

Do NOT attempt to operate this machine with softserve or shake type product mix.

Damage to the machine may occur and warranty will be void.

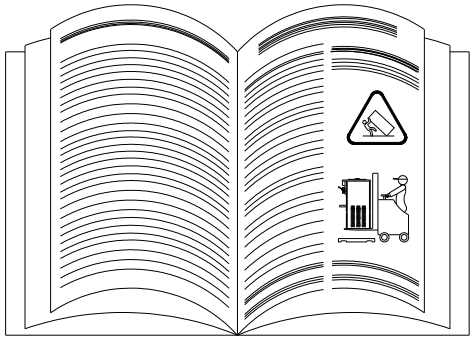
Table of Contents

Illustrations

Introduction

This manual provides a general system description of the SaniServ Frozen Beverage Dispensers. It has been prepared to assist in the training of personnel on the proper installation, operation, and maintenance of the machines.

Read and fully understand the instructions in this manual before attempting to install, operate, or perform routine maintenance on the machines.



The following sections of the manual must be performed in sequence:

1. Installation
2. Installer's Preoperational Check
3. Disassembly & Cleaning
4. Assembly & Lubrication
5. Sanitizing & Operation
6. Consistency Adjustment

Installation

⚠ WARNING

ALWAYS USE A SUFFICIENT NUMBER OF PEOPLE OR MECHANICAL LIFTING EQUIPMENT TO PROTECT ALL PERSONNEL FROM PERSONAL INJURY DURING THE REMAINING STEPS.

1. Raise the machine to install the four legs packed in the mix pan or the four casters packed in a box on the skid or on the front mounted drip tray. **Be certain all four are tight! Thread lock is suggested.**

2. Carefully lower the machine to the floor and place it where it will be installed.

3. Level the unit by turning the bottom part of each leg clockwise or counterclockwise (Fig. 1). The machine **MUST** be level to operate properly.

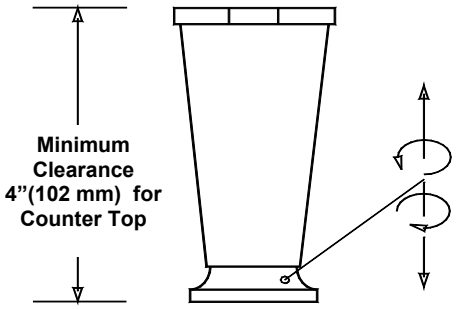


Fig. 1

A MINIMUM 6" (152 MM) CLEARANCE MUST BE MAINTAINED AT THE REAR AND SIDES OF THE MACHINE FOR ADEQUATE VENTILATION.

IMPORTANT

ALWAYS CHECK ELECTRICAL SPECIFICATIONS ON THE DATA PLATE OF THE MACHINE. THE DATA PLATE SPECIFICATIONS WILL ALWAYS SUPERSEDE THE INFORMATION IN THIS MANUAL.

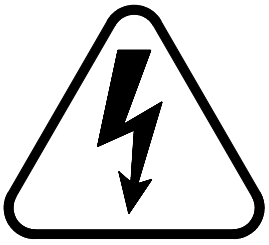
4. Electrical and refrigeration specifications are located on the data plate on the rear panel of the individual machines. Consult local authorities for information regarding plumbing and electrical codes in your area. Remove the left and right side panels for power hook-up.

Note: All SaniServ machines should have their own dedicated circuits to prevent low voltage conditions caused by other operating equipment.

5. The water line connections on water-cooled machines is located on the back side of the machine. The IN/OUT lines are clearly marked and equipped with 3/4" garden hose fittings.

⚠ WARNING

FAILURE TO PROVIDE FOR PROPER EARTH GROUND ACCORDING TO LOCAL ELECTRICAL CODES COULD RESULT IN SERIOUS ELECTRICAL SHOCK OR DEATH. DO NOT USE EXTENSION CORDS. INSTALL THE PROPER SIZE WIRE FOR THE REQUIRED MACHINE AMPS. BE CERTAIN TO OBSERVE LOCAL CODES IN SELECTING WIRE OR CORD SIZE AND TYPE.



DO NOT TURN MACHINE ON UNTIL THE INSTALLER'S PRE-OPERATIONAL CHECK SECTION IS COMPLETE.

Installer's Preoperational Check

THE FOLLOWING ITEMS MUST BE PERFORMED BEFORE ATTEMPTING TO OPERATE THE EQUIPMENT:

⚠ WARNING

1. Make certain that proper electrical connections have been made. Plug power cord into power outlet.

2. Set each control switch (Fig. 2) to the **"CLEANOUT"** position momentarily to verify the direction of rotation of the dasher. Looking at the front of the machine, the dasher should rotate counter-clockwise.

3. Set each control switch to the **"OFF"** position.

In the event the dasher turns clockwise, **STOP** and do not proceed any further. On three-phase units, reverse the polarity.

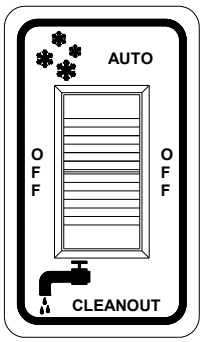


Fig. 2
Control Switch

⚠ CAUTION

UNDER NO CIRCUMSTANCES SHOULD THE UNIT BE OPERATED IN THE "AUTO" POSITION FOR MORE THAN THREE MINUTES WITH EMPTY FREEZING CYLINDERS . DOING SO WILL RESULT IN DAMAGE TO THE MACHINE.

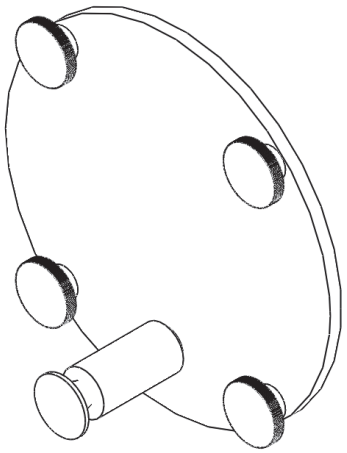


Fig. 3
Machine Front Plate

WARNING

This machine was designed to produce frozen slush beverages only.

Do NOT attempt to operate this machine with softserve or shake type product mix.

Damage to the machine may occur and warranty will be void.

Disassembly and Cleaning

CONSULT YOUR LOCAL HEALTH AGENCY FOR LOCAL CLEANING AND SANITIZING REQUIREMENTS.

This unit does not come pre-sanitized from the factory. Before serving product, the dispenser must be disassembled, cleaned, lubricated, and sanitized. Please be aware that these instructions are general guidelines. Cleaning and sanitizing procedures must conform to local Health Authority requirements.

Emptying Machine

Prior to the disassembly and cleaning of parts, the machine must be emptied of product. Use the following procedures (Steps 1 through 3). If this is first time operation, disregard these steps.

⚠ CAUTION

DO NOT INSERT ANY OBJECTS OR TOOLS (FIG. 4) INTO THE MIX INLET HOLE, RESTRICTOR TUBE HOLE, OR FRONT PLATE DISPENSING HOLE WHILE THE MACHINE IS RUNNING. DAMAGE TO THE MACHINE OR PERSONAL INJURY MAY RESULT

1. Remove the restrictor tube (Fig. 5) from the mix inlet holes and lay in the bottom of the mix pans.

2. Set control switch (Fig. 6) to the **"CLEANOUT"** position and dispense all product from the freezing cylinder by pulling out on the spigot handle (Fig. 7) to empty the machine.

3. Set each control switch to the **"OFF"** (center) position. Close the spigot handle(s) (Fig. 7) before proceeding to cleaning.

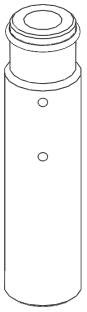


Fig. 5
Restrictor Tube

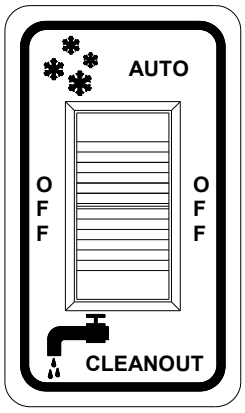


Fig. 6
Control Switch

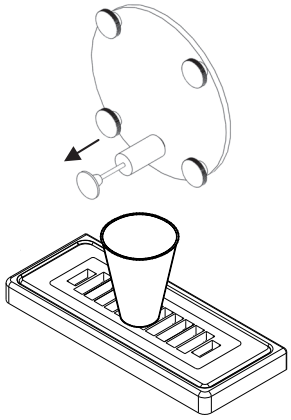


Fig. 7
Dispensing Product

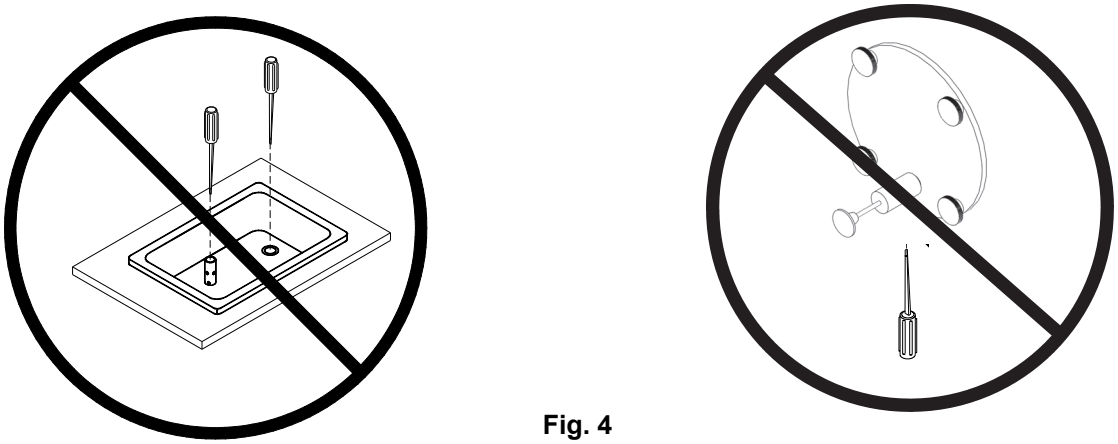


Fig. 4
Do Not Insert Objects or Tools

Disassembly and Cleaning Procedure

1. Fill the machine with cold water and set control switch (Fig. 8) to the **"CLEANOUT"** position. **DO NOT** use hot water which could damage the machine. Let the machine agitate 1 to 2 minutes, then drain the water by pulling out on the spigot handle (Fig. 9). Repeat the above procedure as necessary to make certain all product is removed from the machine. After the machine is empty, set each control switch to the **"OFF"** position.

2. Prepare a suitable detergent and water solution at a temperature of approximately 125°F. (52°C.) to 130°F. (55°C.). For best cleaning results select a concentrated anti-bacterial dishwashing detergent containing biodegradable anionic and nonionic surfactants. **Avoid detergents containing phosphates. DO NOT** use an abrasive detergent on any part of the dispenser.

⚠ CAUTION

DO NOT USE HOT WATER.
DOING SO MAY DAMAGE THE MACHINE.

3. Make certain that the machine is **"OFF".** Fill the mix pan with the cleaning solution. Clean the mix pan thoroughly with a brush as the solution drains into the freezing cylinder. Clean the mix inlet tube and the restrictor tube holes with the brush provided.

4. Set the control switch to the **"CLEANOUT"** position and agitate for approximately 1 to 2 minutes and then drain the water by pulling out on the spigot handle. After the unit is empty, set each control switch to the **"OFF"** position.

⚠ CAUTION

DO NOT USE ANY TOOLS OR SHARP OBJECTS TO REMOVE ANY O-RINGS FROM THIS MACHINE. SHARP OBJECTS WILL DAMAGE THE O-RINGS.

5. Remove the front plate by turning the black plastic knobs in a counterclockwise direction (Fig. 10). Disassemble the front plate in the following manner:

a. Unscrew Spigot Assembly from Front Plate.
b. Unscrew Spigot Handle Knob from Plunger Shaft.
c. Remove Spigot Plunger and Spring from Spigot Body.
d. Remove Spigot Body O-ring and Front Plate O-ring.
e. Remove the o-rings from the spigot plunger by grasping the part with one hand and with a dry cloth in the other hand, squeeze the o-ring upward. When a loop is formed, grasp the o-ring with the other hand and roll it out of its groove and off the spigot plunger (Fig. 11).

6. Remove the restrictor tube from the mix pan and remove the o-ring in the same manner used to remove the o-rings from the spigot plunger. Clean the inside of the tube with the brush provided.

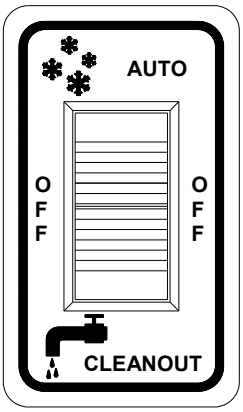


Fig. 8
Control Switch

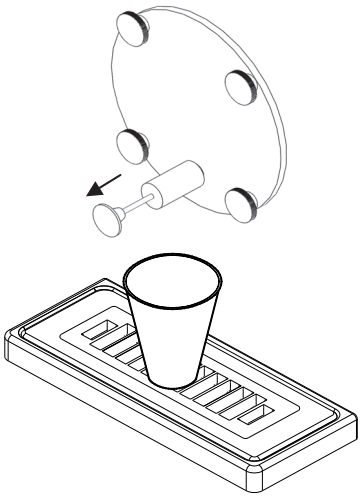


Fig. 9
Dispensing Product

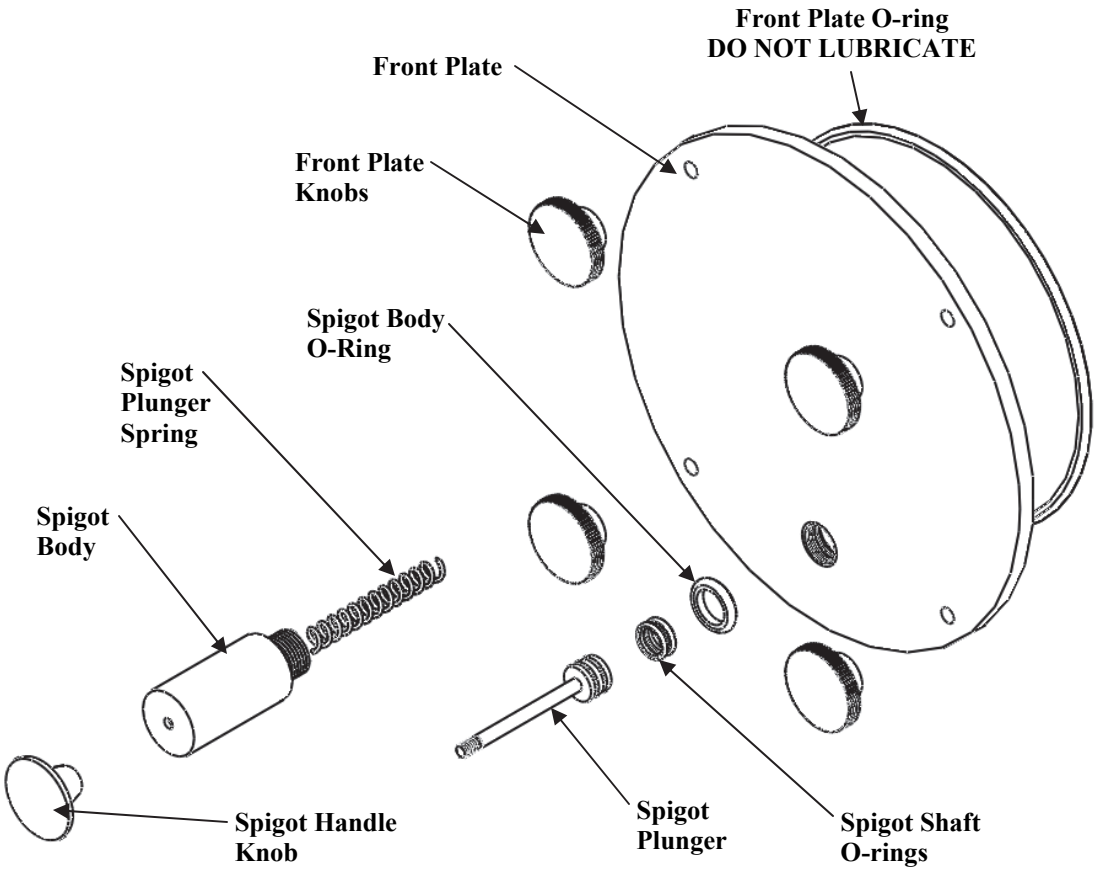


Fig. 10
Front Plate Assembly

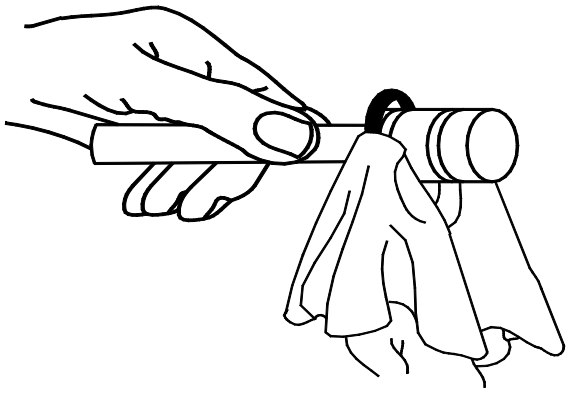


Fig. 11
O-Ring Removal

7. Remove the dasher assembly being careful not to damage the scraper blades, then disassemble in the following manner:

a. Remove and take apart the rear seal assembly.
b. (108 Only, Fig. 12) Remove the blades from the dasher by first rotating blade upward and then unsnapping one end from the support rod.
c. (704 Only, Fig 13) Remove the blades from the dasher by pulling scraper blades from support pins.
d. Remove front bushings from dasher.

BLADES MUST BE REMOVED FOR CLEANING

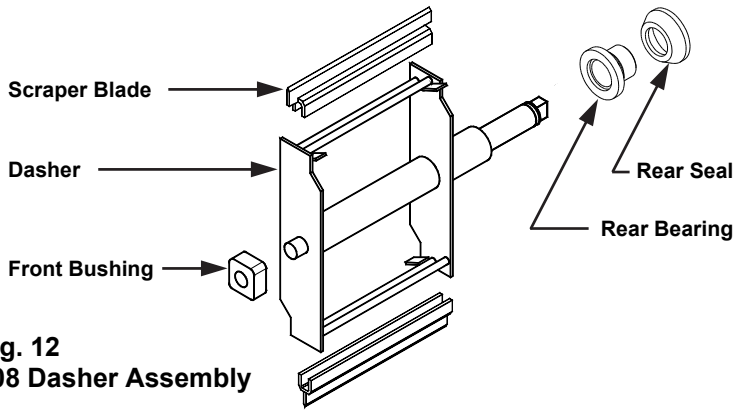


Fig. 12
108 Dasher Assembly

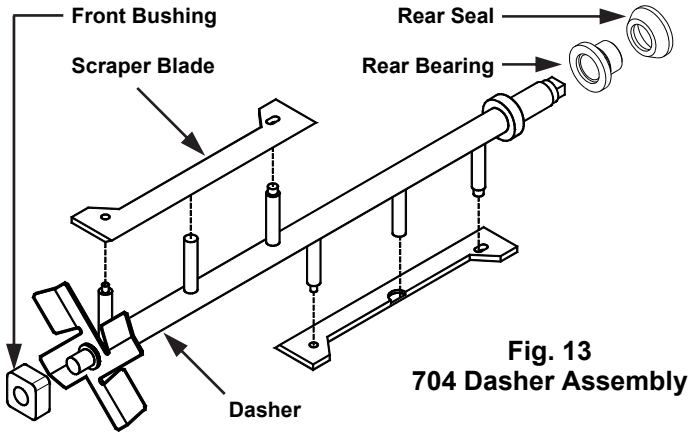


Fig. 13
704 Dasher Assembly

8. Remove the mix pan lid, drip tray and drip tray insert (Fig. 14).

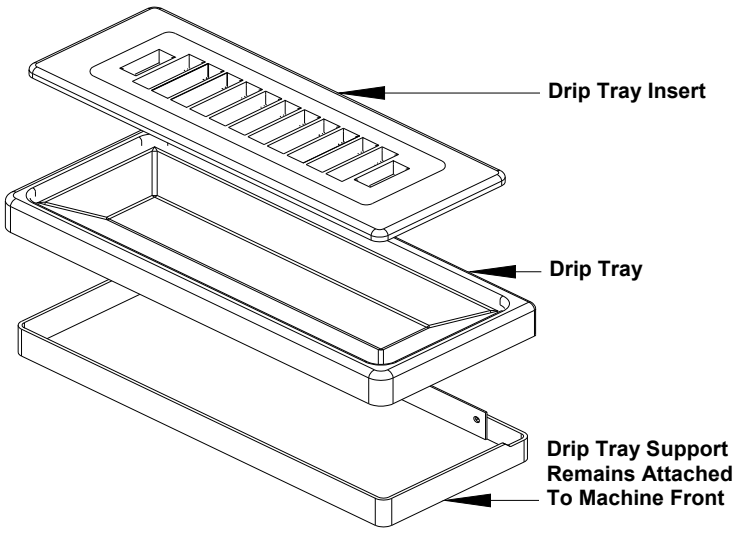
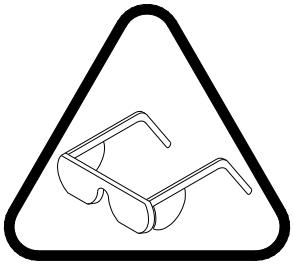


Fig. 14
Drip Tray Assembly

9. For best cleaning results select a concentrated anti-bacterial dishwashing detergent containing biodegradable anionic and nonionic surfactants.
NOTE: Avoid detergents containing phosphates.

⚠ CAUTION

WEAR SAFETY GLASSES - DO NOT SPLASH DETERGENT SOLUTION IN EYES



Be certain to follow the manufacturer's mixing instructions when adding the dishwashing detergent concentrate to water.

10. Place all parts in a three partition sink filled with the following solutions:

a. In one partition, detergent solution diluted to the manufacturer's suggested concentration for use.
b. In a second partition, clear rinse water.
c. In a third partition, sanitizing rinse solution which will produce a 200 parts per million (PPM) Chlorine residual or whatever Chlorine residual is required by your Local Health Authority.

11. Use the brushes to clean all holes and ports in the parts (Fig. 15).

⚠ CAUTION

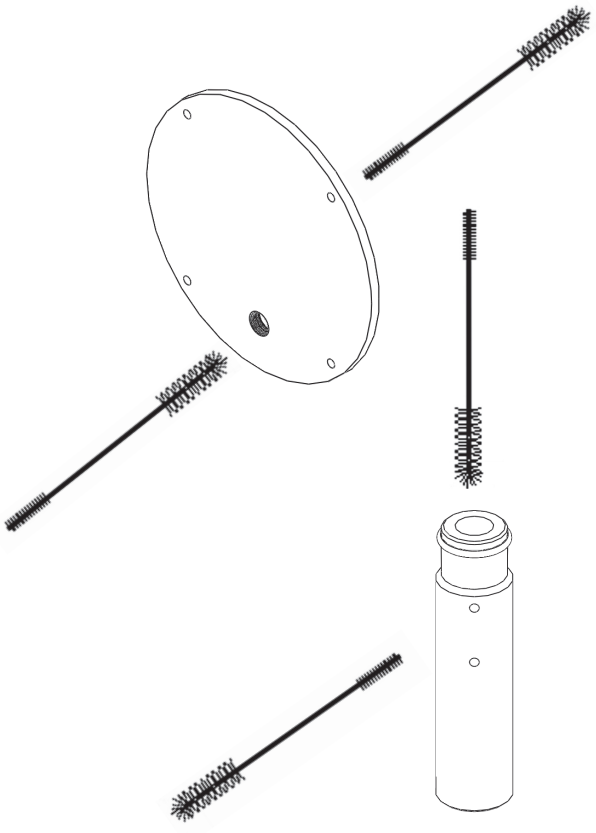
DO NOT use an abrasive detergent

12. After thoroughly washing the parts in the detergent solution, rinse them in the clear rinse water. Place the parts in the sanitizing solution for at least five minutes or whatever your Local Health Authority requires, and then air dry the parts before for assembly and lubrication.

⚠ CAUTION

DO NOT ALLOW THE PARTS TO SOAK IN SANITIZER FOR SEVERAL HOURS.
DO NOT WIPE THE PARTS DRY - AIR DRY ONLY.

Fig. 15
Clean ALL Holes and Ports with Brushes



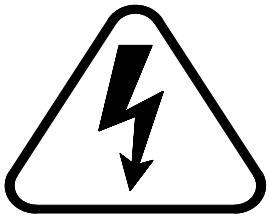
13. The remainder of the machine including the mix pan and freezing cylinder must be cleaned in place using a mild detergent solution followed by a clear rinse. Clean the exterior with a damp cloth.

⚠ CAUTION

DO NOT use an abrasive cleaner on the exterior of the machine or on any of the panels (guards).

⚠ WARNING

WHEN CLEANING THE MACHINE, DO NOT ALLOW EXCESSIVE AMOUNTS OF WATER AROUND ANY ELECTRICALLY OPERATED COMPONENTS OF THE MACHINE. ELECTRICAL SHOCK OR DAMAGE TO THE MACHINE MAY RESULT.



Assembly and Lubrication

Use a food grade lubricant* ONLY. SaniServ part number 1150 is recommended and is available from your local authorized SaniServ dealer or distributor. **Lubrication must be performed daily.**

* The SaniServ recommended product is a colorless to white, odorless, tasteless food contact lubricant accepted by the United States Food and Drug Administration (FDA) with a USDA rating of H1 and certified for food contact by NSF International.

1. Lubricate and assemble the dasher assembly in the following manner:

a. Apply a generous amount of lubricant to the shoulder of the dasher and the area of the shaft where the white plastic portion of the assembled rear seal contacts the shaft (Fig. 16a & 16b). This is easily performed by running a 1/4" (6 mm) bead of lubricant around the shoulder of the dasher.

⚠ CAUTION

b. Assemble and install the rear seal with the rubber portion toward the rear of the freezing cylinder as indicated in Fig. 16.

DO NOT LUBRICATE THE RUBBER PORTION OF THE REAR SEAL. LUBRICATION ON THE REAR SEAL WILL DAMAGE THE MACHINE.

c. Install the front bearing on the dasher.

d. (704 Only) Install the Scraper Blade onto dasher by placing the Scraper Blades onto support pins on dasher. (The Scraper blades will only go on one way.)

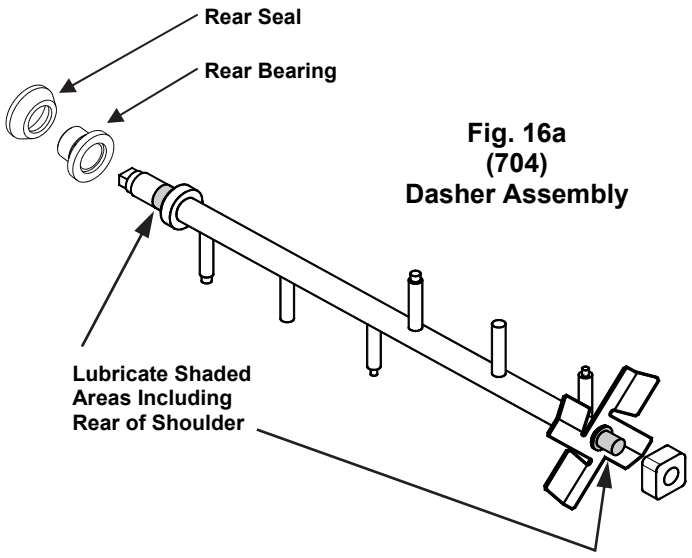


Fig. 16a
(704)
Dasher Assembly

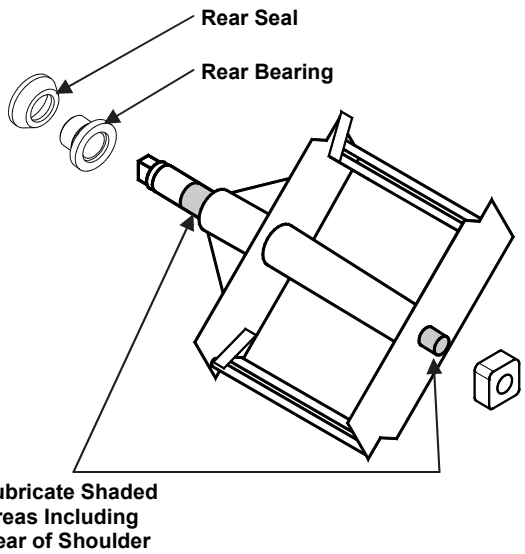


Fig. 16b
(108)
Dasher Assembly

e. (108 Only) Install the scraper blades onto the dasher assembly by holding the blades perpendicular to the tabs (Fig. 17) and then snapping them over the flat area of the support rod. Then rotate the blades downward in a counterclockwise direction as viewed from the front of the dasher (Fig. 18). **BE CERTAIN THAT THE SCRAPER BLADES REST UPON THE DASHER TABS.**

Note: Reverse the blades at each cleaning to maintain sharpness. In addition, the blades are equipped with a wear mark (Fig. 19). When the blade is worn to this wear mark, it must be replaced.

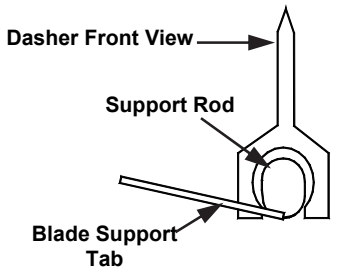


Fig. 17
108 Scraper Blade Installation

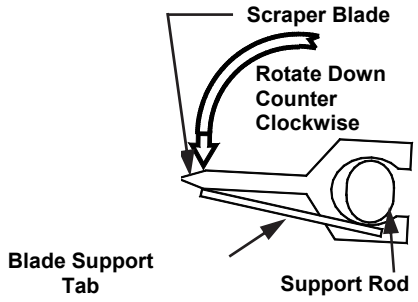


Fig. 18
108 Scraper Blade Installation

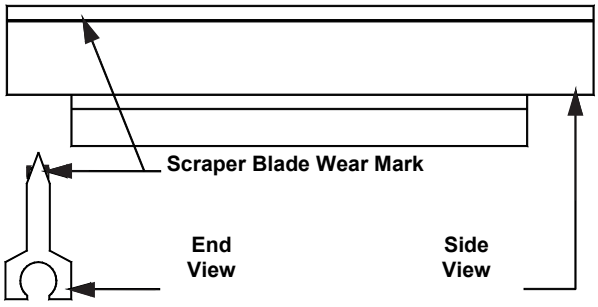


Fig. 19
Scraper Blade Wear Mark

f. Insert the dasher assembly into the freezing cylinder as far as possible (Fig. 20) being careful not to damage the scraper blades. Damage will occur to the scraper blades and the dispenser will not operate properly if the scraper blades are installed facing in a clockwise direction (Fig. 21).

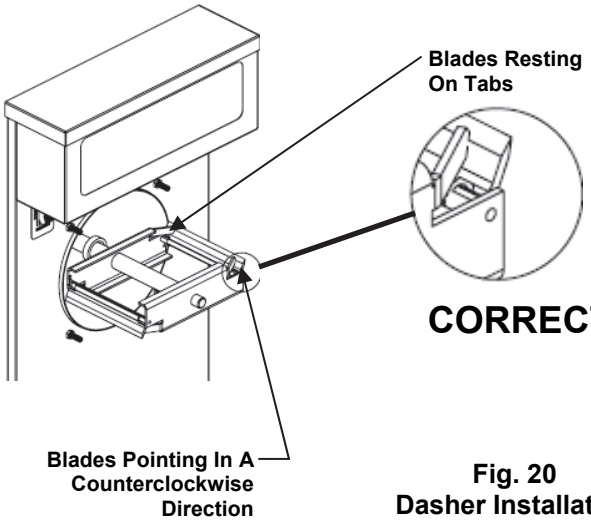


Fig. 20
Dasher Installation

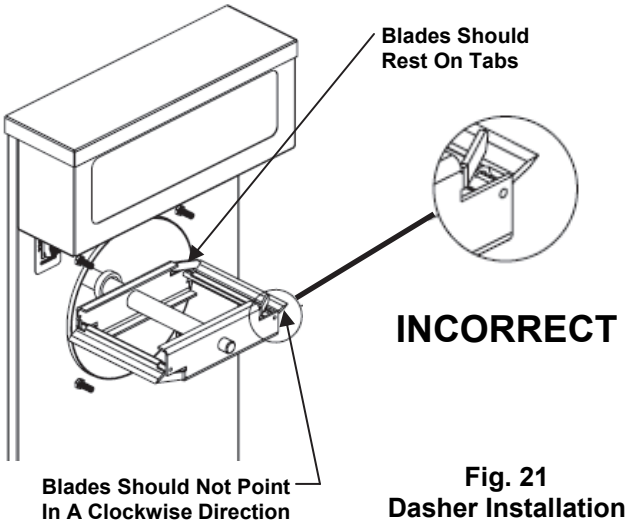


Fig. 21
Dasher Installation

g. While maintaining force against the dasher, rotate it slowly until the tongue of the dasher engages the groove in the drive system at the rear of the cylinder. The outer most portion of the dasher should be recessed approximately 1/4” (6 mm) to 3/8” (10 mm) inside the freezing cylinder. No part of the dasher should extend outside the cylinder. Scraper blades should be visible, extending approximately 1/8” (3 mm) beyond the dasher.

2. Lubricate and assemble the front plate assembly in the following manner:

a. Install the two o-rings on the spigot plunger by rolling them onto the plunger. Seat the o-rings in the grooves. Be certain that they are not twisted. Smooth the lubricant into the grooves and over the sides of the plunger assembly (Fig. 23).

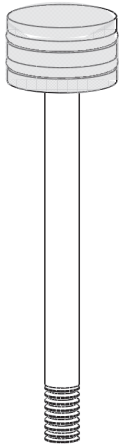


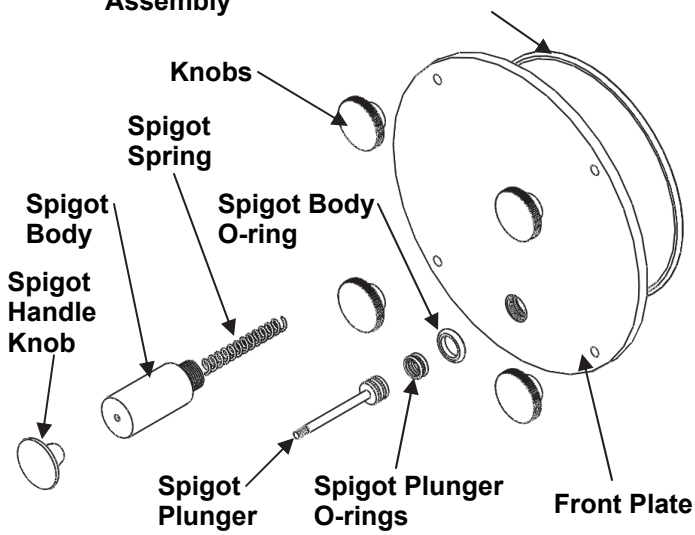
Fig. 23
Spigot Plunger Lubrication

b. Slide the Spigot Spring onto the Spigot plunger.
c. Insert the lubricated Spigot Plunger and Spring into the Spigot Body (Fig. 24), making certain that the spigot plunger shaft is coming out the front of the Spigot Body.
d. Screw on the Spigot Handle Knob onto the Spigot Plunger Shaft on the front of the Spigot Body.
e. Place Spigot Body O-ring (do not lubricate) onto Spigot Body (Fig. 25), and screw the Spigot body onto the Front Plate.
f. Install the front plate o-ring (do not lubricate).

DO NOT LUBRICATE THE FRONT PLATE O-RING

g. Secure the front plate assembly with the four plastic knobs. Simultaneously, turn the knobs in a clockwise direction. Tighten the knobs evenly. **DO NOT** tighten one knob all the way down and then the other. Doing so may result in front plate breakage. Only moderate force is required. **DO NOT** over tighten. Close the spigot plunger.

Fig. 24
Front Plate Assembly



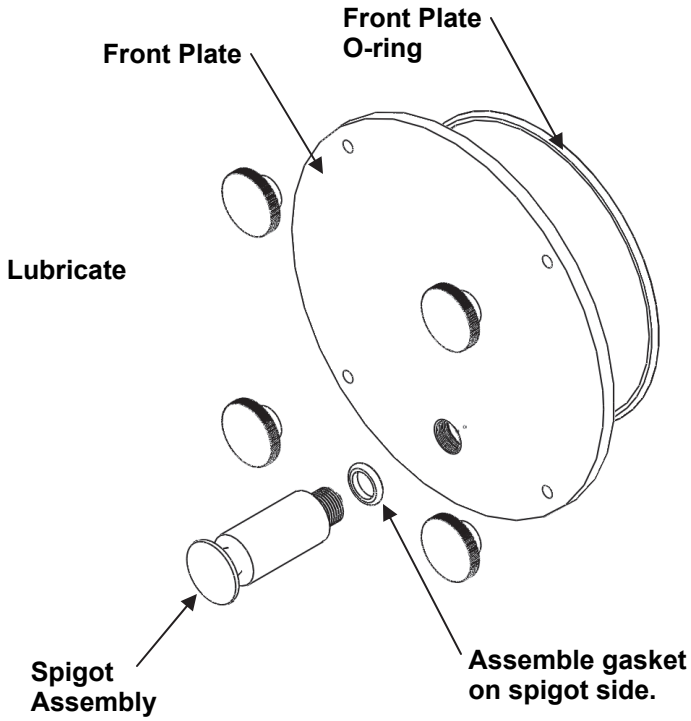


Fig. 25
Front Plate & Spigot Assembly

5. Install the drip tray and drip tray insert (Fig. 26).

6. Install the o-ring on the restrictor tube (Fig. 27) if removable. Apply lubricant sparingly over the o-ring. Place the restrictor tube in the bottom of the mix pan for sanitizing. Make certain that lubricant does not block the mix inlet hole on the restrictor tube.

7. Proceed to the **"Sanitizing"** section of this manual.

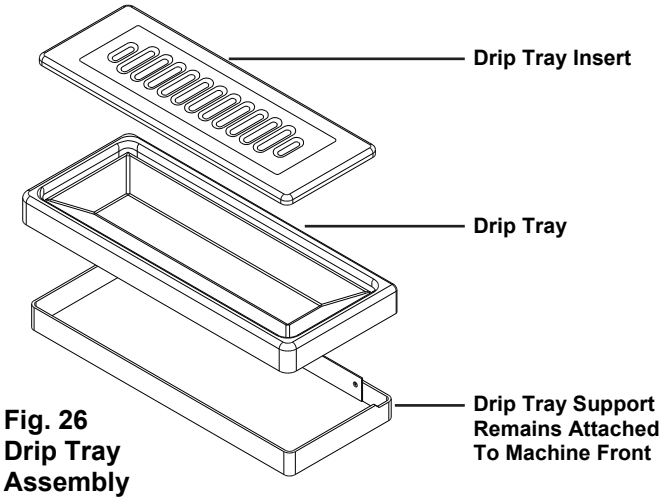


Fig. 26
Drip Tray
Assembly

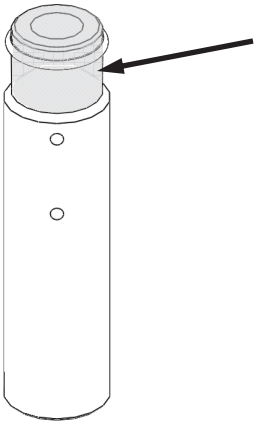
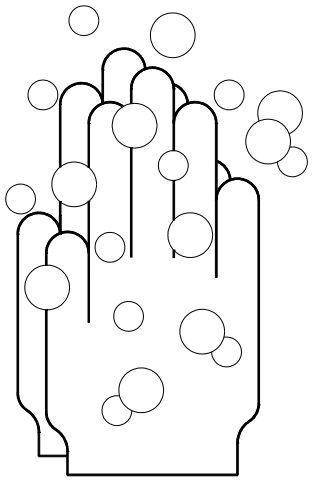


Fig. 27
Restrictor Tube
Lubrication

Sanitizing

Prior to operation, the machine must be sanitized. The unit must have already been cleaned and lubricated.
Note: Sanitize immediately before use, not several hours before or the previous evening.

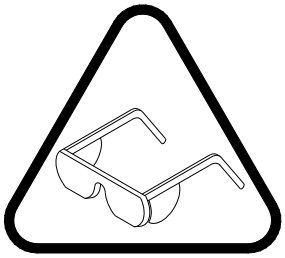
1. First, wash hands with a suitable antibacterial hand soap. For best results select a concentrated anti-bacterial hand soap containing biodegradable anionic and nonionic surfactants.



2. Prepare approximately 2 to 3 gallons (8 to 12 liters) of sanitizing solution equivalent to 200 ppm chlorine residual or the residual required by your local health agency.

3. Carefully pour the solution into the mix pan.

4. Using a sanitary brush, wipe the solution onto the sides of the mix pan, over the mixout probe in the bottom of the mix pan, and the underside of the mix pan lid.



5. Set the control switch (Fig. 8) to the **"CLEANOUT"** position and let the unit agitate for approximately three to five minutes.

NOTE: DO NOT set the control switch to the **"AUTO"** position. Doing so would freeze the sanitizing solution and may result in damage to the machine.

⚠ WARNING

DO NOT INSERT ANY TOOLS OR OBJECTS INTO THE MIX INLET HOLE, RESTRICTOR TUBE HOLE, OR THE DISPENSING HOLE IN THE FRONT PLATE. DAMAGE TO THE MACHINE OR PERSONAL INJURY MAY RESULT (FIG. 28)

6. Set the control switch to the **"OFF"** position and drain the solution from the machine. Proceed directly to the **"Operation"** section of this manual.

⚠ WARNING

DO NOT RINSE OUT THE MACHINE

DO NOT ALLOW SANITIZING SOLUTION TO REMAIN IN THE MACHINE FOR SEVERAL HOURS. DOING SO COULD DAMAGE THE MACHINE.

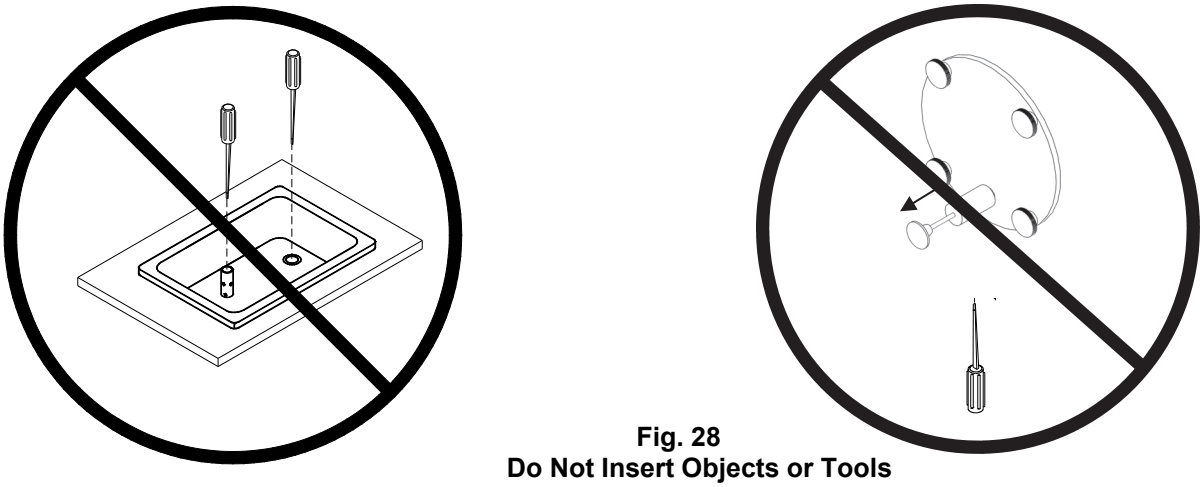


Fig. 28
Do Not Insert Objects or Tools

Operation (Filling and Starting)

Always start with a cleaned and sanitized dispenser as per previous instructions. Following these instructions is critical to the maximum operating efficiency of the machine.

1. Remove the restrictor tube from the bottom of the mix pan and set aside in a sanitary location.

2. Place a 16 oz. cup under the spigot and open the spigot handle. Pour approximately one quart of fresh product mix into the mix pan. (This will chase the sanitizing solution from the mix pan and freezing cylinder.) Close the spigot handle when the sanitizer is purged from the system.

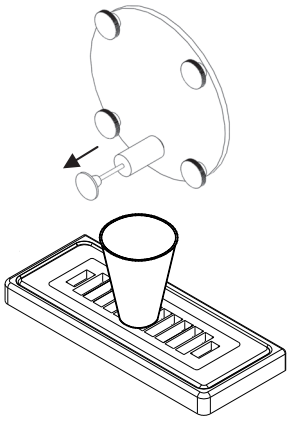


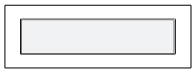
Fig. 29
Dispensing Product

3. Fill the freezing cylinder until the mix comes out of the recirculation hole on units with two mix inlet holes or until the freezing cylinder stops bubbling on units with only one mix inlet hole.

4. Install the removable restrictor tube with a gentle twisting motion into the front hole if the mix pan has two mix inlet holes. For units with only one hole, simply insert the restrictor tube in the only mix inlet hole.

5. Fill the mix pan with chilled, properly mixed product. Keep the mix level in the mix pan at least one inch (25 mm) deep at all times to avoid starving the freezing cylinder. A **MIXOUT** light (Fig. 30) located on the front of the machine is activated when the mix solution drops to a potentially damaging level.

Fig. 30
MIXOUT Light



6. Set the control switch to the **"AUTO"** position to start the machine.

7. Allow the compressor to cycle 3 or 4 times dispensing a sample of the product after each cycle to check for consistency. If the machine is not dispensing the product at the desired consistency after four full cycles, refer to the Consistency Control Section of this manual. Initial pull-down time may vary due to model, product and ambient conditions.

8. Replace the mix pan lid and always operate the machine with the lid on the mix pan reservoir.

Note: SaniServ dispensers are designed to run frozen beverage products having a Brix (sugar content) range of 12.5 to 14 with a dispense temperature of 26°F to 28°F (-3.3°C to -2.2°C).

Brix reading is taken by placing a small sample of normally diluted concentrate on the viewer of a refractometer. If a refractometer is not available, contact the mix supplier.

Do not use a mix with a Brix reading of less than 12.5. Doing so may result in serious damage to the machine.

If the Brix reading is above 14.0 or the alcohol content is too high, the freezing point of the solution may be too low to form slush.

DO NOT ATTEMPT TO MAKE FROZEN BEVERAGE USING ARTIFICIALLY SWEETENED PRODUCT.

MACHINE OPERATIONS WITH ELECTRONIC CONSISTENCY CONTROL

Control Switch Positions

"CLEANOUT" Position: The dasher motor operates continuously and the compressor will not come on. The mix out level sensor will turn on the **"MIXOUT"** light but will not activate the beeper.

"AUTO" Position: The dasher motor operates continuously. Upon machine start up the compressor will run until proper product consistency is reached. Then the compressor will shut off.

If the liquid level sensor detects a low level condition, it will flash the **"MIXOUT"** light and activate the beeper for three minutes or until the mix pan is filled to satisfy the mix level probe. If the beeper is activated for more than three minutes, the light will begin to glow continuously, the beeping tone will slow down, and the machine will no longer freeze product.

Helpful Hints

Closed Hours/Shut-Down: If the machine is turned off during closed hours, to resume operation:

1. Set the control switch to the **"CLEANOUT"** position.

2. Dispense two quarts (2 liters) of product into a sanitized pitcher and pour it back into the mix pan. Doing so serves as a mixing process to eliminate any overnight separation.

NOTE: NEVER POUR FROZEN PRODUCT INTO THE MIX PAN. LET IT MELT FIRST.

3. Set the control switch to the **"AUTO"** position and resume operation.

Mixing: Make certain that the product is prepared per label instructions. The machine is designed to operate with frozen product base having a brix range of 12.5 to 14.0. To ensure consistency and quality, use a mixing container large enough to hold 5 gallons (20 liters) with 1 gallon (4 liter) markings to allow accurate mixing of the frozen beverage base. Stir well before adding to the mix solution to the mix pan. Refrigerate the base after diluting. Keep the empty gallon bottles with their lids or caps installed and refill them with diluted base for easy access during busy operating periods.

Filling: Always fill the machine at the start of each day. Fresh prechilled mix will produce the best results.

Mix Pan Lid: Be sure to leave the lid in place on top of the machine to prevent any foreign materials from contaminating the mix.

Drip Tray: This should be removed daily and cleaned to remove residue (Fig. 29).

Front Plate: This component (Fig. 25) is the plastic device from which the product is dispensed. It is designed and made for strength and durability. However, through improper use, it can be damaged. Use the following information for proper care.

1. Do not lubricate the large o-ring on the rear of the front plate. If lubricated, it will not seal properly and product will leak from the front plate (Fig. 25).

2. Do not over tighten the knobs.

3. Always tighten the front plate knobs evenly. Do not attempt to turn one knob all the way down and then the other(s). Doing so will bind the front plate and result in breakage.

4. Do not attempt to wash the front plate or any other machine components in a dishwasher.

Mix Out Light: When the mix out light comes on, fill the mix pan. The mix pan must be filled immediately to prevent air from entering the freezing cylinder. If air enters the freezing cylinder, it will create the condition known as “starving the machine”, causing freeze-up and vibration. If this condition occurs, set the control switch to the **"OFF"** position and add mix to the mix pan. Allow the freezing cylinder to refill and return the control switch to the **"AUTO"** position.

WARNING

This machine was designed to produce frozen slush beverages only.

Do NOT attempt to operate this machine with softserve or shake type product mix.

Damage to the machine may occur and warranty will be void.

Consistency Adjustment for 108 Models

WARNING: Adjustments to mechanical and electronic consistency control systems should be made ONLY by trained service personnel. Power must be removed from the machine before panels (guards) or protective covers are removed. Once the panels (guards) are removed, an adjustment is made, protective panels (guards) are replaced, power is restored to the machine, and the consistency setting is tested. This process is repeated as necessary until the desired product consistency is obtained.

The mechanical control system is a very simple method of controlling the consistency of the finished product. The machine operates without a temperature control. Refrigeration is controlled by measuring the torque on the dasher motor and the consistency of the product. The tension of a spring against the torque idler determines how long the unit will run by activating a limit switch which turns the compressor on and off. The longer the compressor runs, the harder the product. The less it runs, the softer the product. Run time and belt tension directly relate to product temperature.

Initial adjustments have been performed at the factory. However, to satisfy individual product preferences, the following adjustments may be required:

1. Remove power, then remove the right side panel (guard) as viewed from the front of the machine.

2. Using a regular straight flat blade screwdriver, turn the mechanical consistency (torque adjustment) screw (Fig. 31) clockwise to make the product harder or counterclockwise to make the product softer. Do not adjust more than one turn each time.

⚠ CAUTION

Do not attempt to adjust the belt idler screw (s) marked "Do Not Adjust".

⚠ WARNING

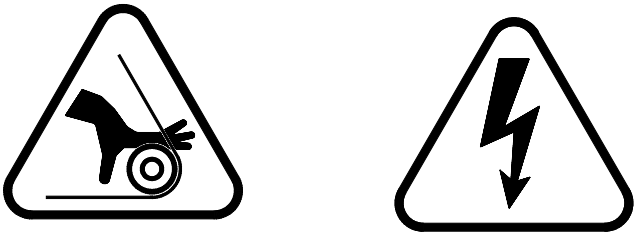
EXTREME CARE SHOULD BE EXERCISED TO KEEP HANDS AND TOOLS AWAY FROM MOVING PARTS. PERSONAL INJURY COULD RESULT.

3. Replace the side panel (guard), restore power, and start the machine. Wait 10 - 15 minutes or until the compressor cycles off, then check the consistency of the product.

4. Repeat steps 1, 2 and 3 until the desired product consistency is obtained.

IMPORTANT

NOTE: If product does not freeze to a hard enough consistency, the problem may not be in the machine. To verify, use a thermometer to measure the product temperature. The problem is **NOT** in the machine if the temperature of non-alcoholic product is between 26°F. and 28°F. (-3.3°C. and -2.2°C.). Product with alcohol is usually 19°F. to 22°F. (-7.2°C. to -5.6°C.). Make certain the product mix was prepared to the manufacturer's recommendation.



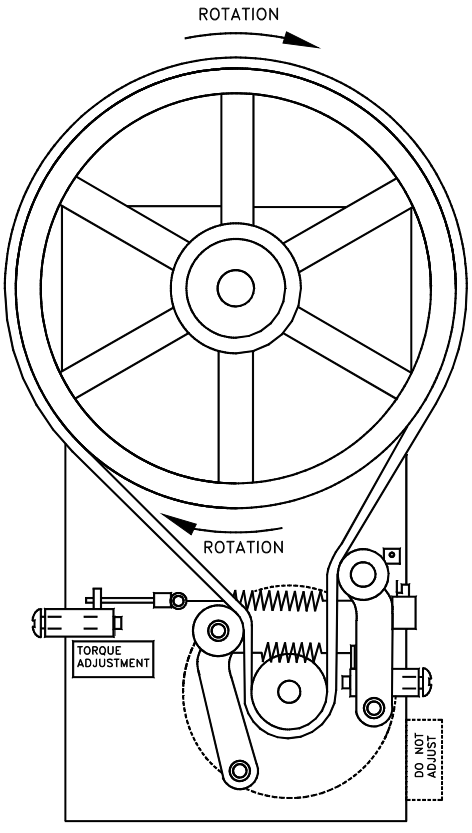
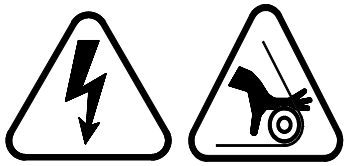


Fig. 31
Mechanical Consistency Control
(108 only)

Consistency Adjustment for 704 Models

Adjustments to the Electronic Consistency Control System should only be made by a certified SaniServ service technician. DO NOT attempt to make adjustments or repairs on the machine.

Initial adjustments have been performed at the factory. However, to satisfy individual preferences, the following adjustments may be required:



⚠ WARNING

USE EXTREME CAUTION. ELECTRICAL SHOCK HAZARD EXISTS EVEN WHEN THE UNIT IS IN THE "OFF" POSITION. WHEN THE WIRING BOX COVER IS REMOVED, DO NOT TOUCH ANYTHING IN THE WIRING BOX EXCEPT THE POTENTIOMETER.

1. Remove the right side panel as viewed from the front of the machine.

2. Set the control switch to the **"AUTO"** position. Note: The unit will not operate if the mix pan is empty.

3. Locate the three LED's - green, yellow, and red—(Fig. 32). These are used as a reference point to adjust for proper consistency. Initially, all of the LED's are off. This indicates that the mix is too thin. The compressor will now come on. As the product thickens, the green, then the yellow, then the red LED illuminate.

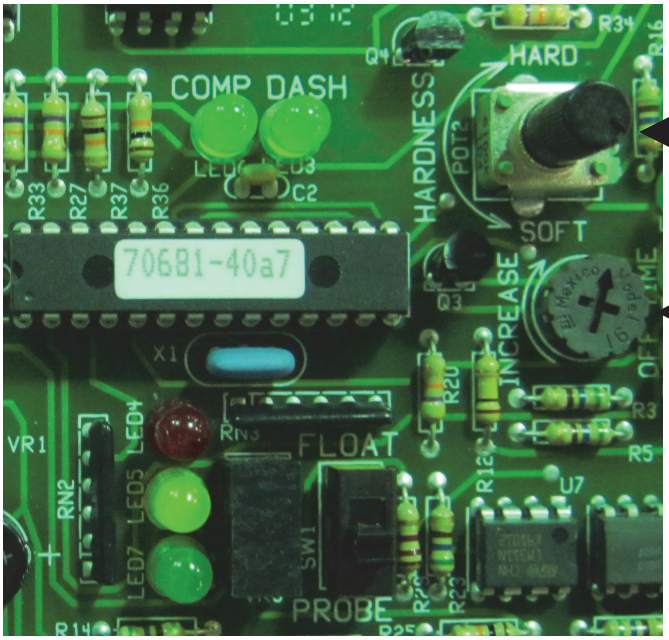
4. Turn the hardness potentiometer (Fig. 32) clockwise to make the product harder or counterclockwise to make the product softer. **Note: The potentiometer is very sensitive. Adjust in small increments**

5. Let the compressor and dasher cycle off. Dispense some product. If too thin, **turn the hardness potentiometer clockwise.**

6. If the product is too thick, **turn the hardness potentiometer counterclockwise**.

7. After each adjustment, allow for one full cycle before dispensing product and checking consistency again. Repeat procedure until proper consistency is achieved.

NOTICE: <u>DO NOT ADJUST</u> the off time potentiometer. This has been preset at the factor for a Model 704. Improper adjustment may cause the compressor to short cycle and damage the machine.



Consistency LED's (Green, Yellow, Red)

Fig. 32
Electronic Consistency Control

Hardness Potentiometer—Adjust in small increments
Clockwise = Thicker Product
Counterclockwise= Softer Product

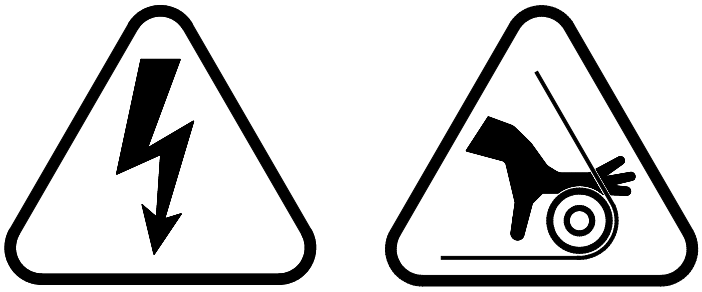
Off Time Potentiometer—DO NOT ADJUST
The correct setting for a 704 is maximum adjustment, or all the way clockwise. This has been preset at the factory.

NOTE: If product does not freeze to a hard enough consistency, the problem may not be in the machine. To verify, use a thermometer to measure the product temperature. The problem is **NOT** in the machine if the temperature of non-alcoholic product is between 26°F. and 28°F. (-3.3°C. and -2.2°C.). Product with alcohol is usually 19°F. to 22°F. (-7.2°C. to -5.6°C.). Make certain the product mix was prepared to the manufacturer's recommendation.

Routine Maintenance (Owner-Operator)

⚠ WARNING

DISCONNECT THE MACHINE FROM ITS POWER SOURCE BEFORE PERFORMING ANY ROUTINE MAINTENANCE. PERSONAL INJURY OR DAMAGE TO THE MACHINE COULD RESULT IF THIS PRACTICE IS NOT OBSERVED.



Daily: Inspect the machine for signs of product leaks past seals and gaskets. If proper assembly does not stop leaks around gaskets or seals, check for improper lubrication and worn or damaged parts. Replace parts as needed.

Periodically: Inspect the scraper blades (Fig. 33) to see that they are straight and sharp. If worn, damaged or warped, the blades will not scrape the cylinder walls correctly and the freezing capacity will be reduced. Clean the drip chute assembly (Fig. 34) with warm water and detergent solution.

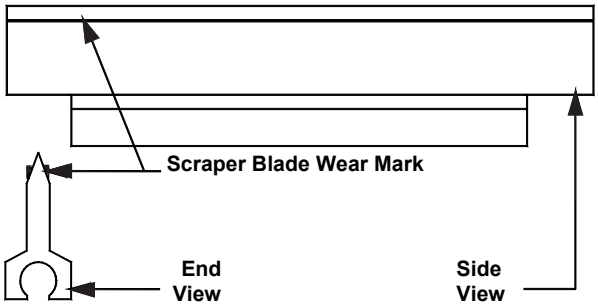


Fig. 33
Scraper Blade Wear Mark

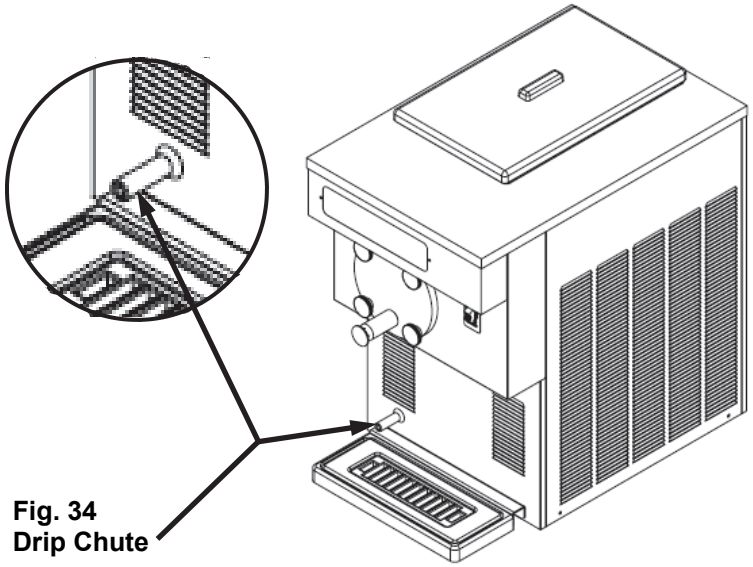


Fig. 34
Drip Chute

Routine Maintenance (Trained Service Technician)

⚠ WARNING

CONDENSER FINS ARE VERY SHARP
USE EXTREME CAUTION WHEN CLEANING

Quarterly: Thoroughly clean the condenser fins on all air-cooled machines. Remove all lint and dust with a vacuum cleaner or compressed air (Fig. 35) to clean fins. A dirty condenser greatly reduces refrigeration capacity and efficiency. When using compressed air, place a damp cloth on the opposite side of the condenser to catch the flying dirt or lint.

Annually: Check the belts for signs of wear or cracking. Remove panels and clean all parts inside of the machine including the base, side panels, fan blades, condensers, etc.

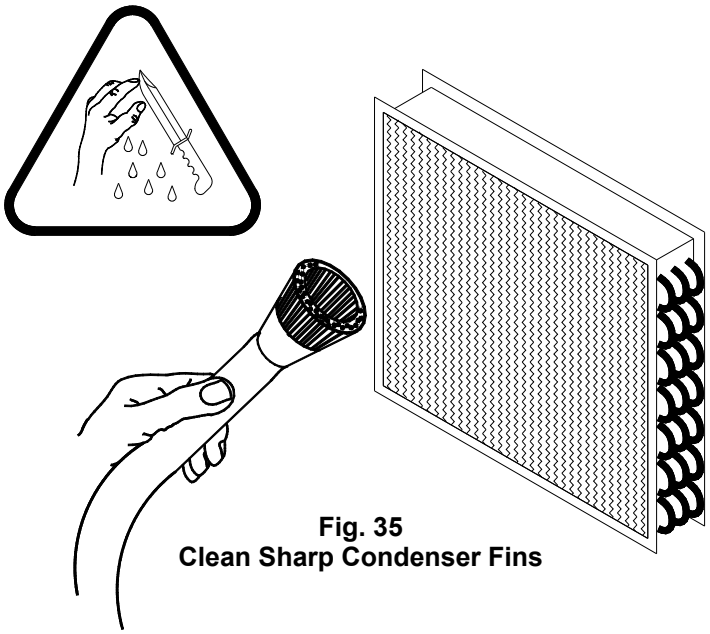
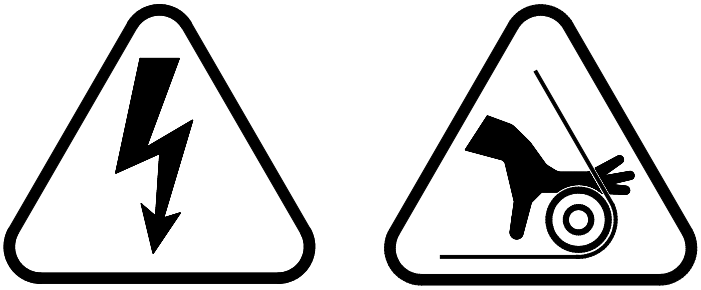


Fig. 35
Clean Sharp Condenser Fins

⚠ WARNING

HAZARDOUS MOVING PARTS



Semiannually: It is advisable to clean and lubricate the idler arms to ensure their smooth operation. Use the following procedures:

1. Make certain that **ALL** power to the dispenser is off.

2. Remove both side panels first, then remove the rear panel of the machine.

3. Use a pencil to mark the position of the nut (Fig 36) on the side of the belt idler arm spring adjustment mechanism. Relieve the tension on the spring by turning the adjustment screw near the label which warns: **DO NOT ADJUST**. Disconnect the spring from the belt idler arm by placing needle nose pliers on one end of the spring and pulling the end out of the retainer. **Note the color of the springs for reassembly.**

4. Remove the nut from the pivot point of the belt idler arm assembly.

5. Remove the belt idler arm and inspect the pivot point sleeve. These areas should be free of rust, debris, or dried lubricant. If any of these substances are found, they must be removed.

6. Clean and polish the sleeve surface with a fine grade of emery cloth.

7. Reinstall the belt idler arm.

NOTE: BE CERTAIN NOT TO OVERTIGHTEN THE LOCKING NUT. ON SOME UNITS IT IS POSSIBLE TO OVERTIGHTEN THE LOCKING NUT AND CAUSE THE IDLER ARMS TO BIND. THE ARMS SHOULD MOVE FREELY.

8. Repeat the process for the torque idler arm.

9. Install the belt making certain that there is no grease on the belt or pulleys. Step to the side of the unit and view the belt to determine whether or not it is properly aligned (straight from top to bottom).

10. Reinstall the torque idler arm spring and the belt idler arm spring and turn the adjustment screws returning the adjustment nuts to the pencil marks you placed on the side of each adjustment mechanism in step 3 above.

11. Repeat steps 3 - 9 for the other side if your machine has two freezing cylinders and then place the unit back into operation. Check the product for proper consistency and adjust as required. When the consistency is right, replace the rear and both side panels.

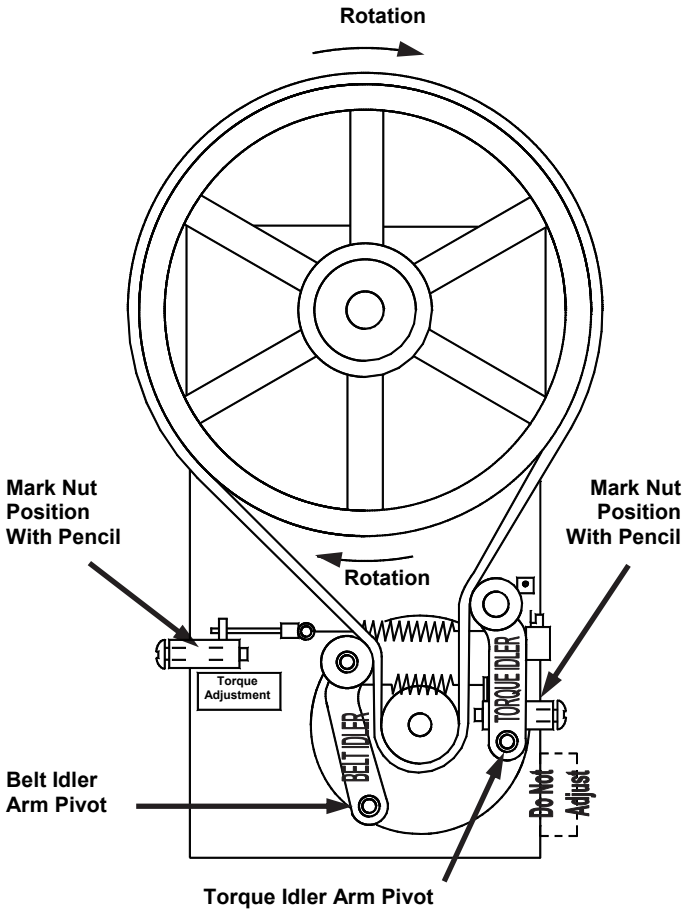


Fig. 36
Spring Adjustment Mechanism
(108 only)

MODEL 704 COUNTER TOP MOUNTING INSTRUCTIONS

CAUTION

If the Model 704 is installed on legs,
the legs must be secured to the counter top.

For optimum performance in all installations, SaniServ recommends the use of the counter top rubber mounting pad described in this instruction set.

Illustrations:

Illustration #1 ..... Models 704 slush machine mounted to a counter top using the 1/4" thisck rubber pad supplied.

Illustration #2 ..... Rubber pad sandwiched between the slush machine and the counter top.

Illustration #3 ..... Proper placement of the rubber pad in the counter top.

CAUTION

The Model 704 weighs approximately 300 pounds

Installation Procedure:

1. Place the diecut rubber pad in position in the counter top.

2. Carefully lift the slush machine into place over the rubber pad.

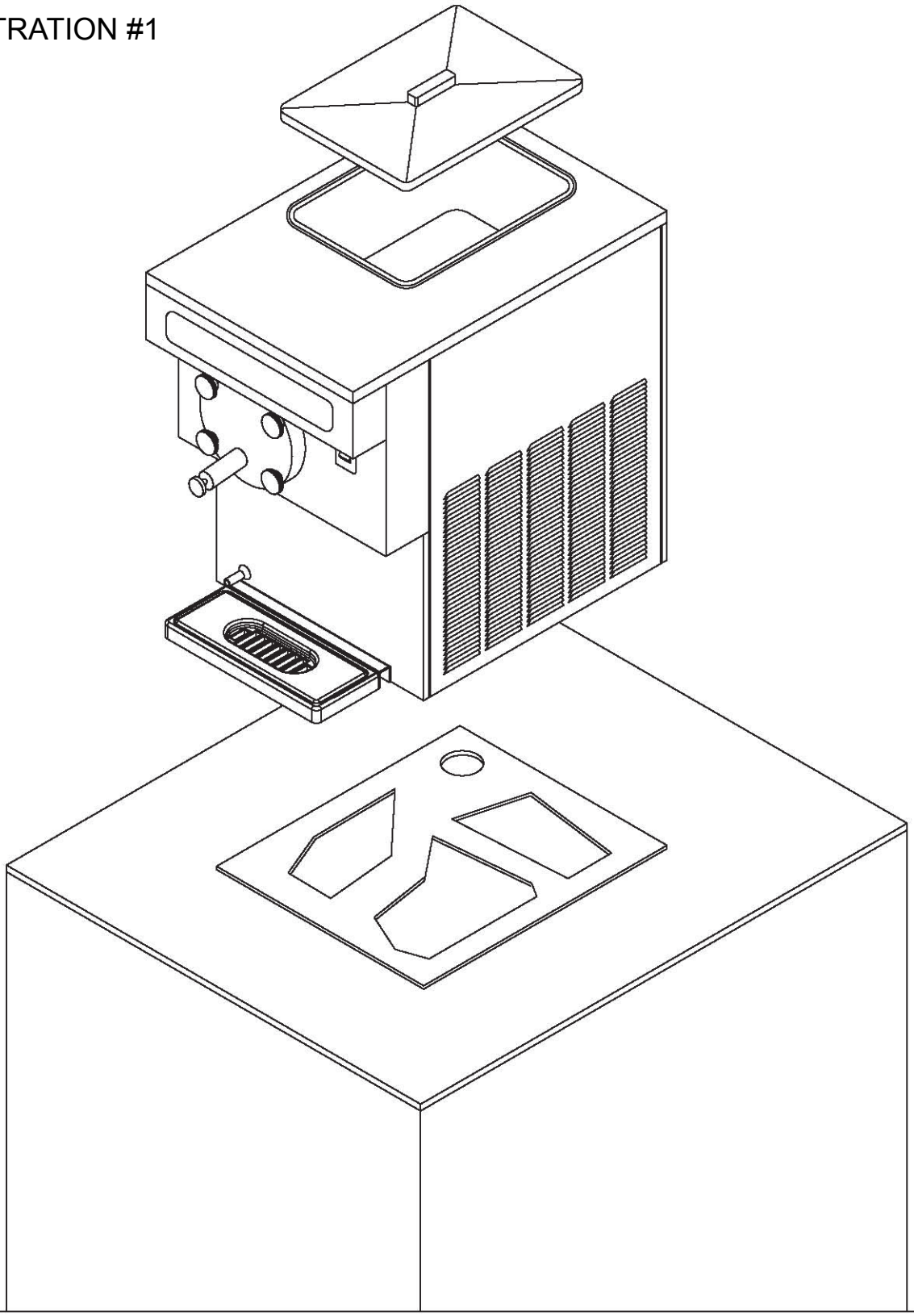
3. Lower the machine into place on top of the rubber pad.

Caution: *Be certain that the rubber pad and the machine are in alignment as the machine makes contact with the pad. Because of the weight of the machine, it is difficult to slide the machine to correct mis-alignment.*

Special Notes: *If the countertop is not flat, it will be necessary to apply RTV or other suitable adhesive/ caulking to eliminate any pockets, cracks, or crevices which could harbor bacteria. If it is necessary to apply RTV, it is suggested that a fillet with a minimum 1/8" radius be applied between the rubber pad and the counter top to facilitate cleaning and minimize the accumulation of contaminants.*

It may be helpful to bond the rubber pad to the countertop before installing the machine, but bonding is not required to achieve a good, watertight seal on a smooth, flat surface.

ILLUSTRATION #1



704 MOUNTED FLUSH TO A COUNTER TOP

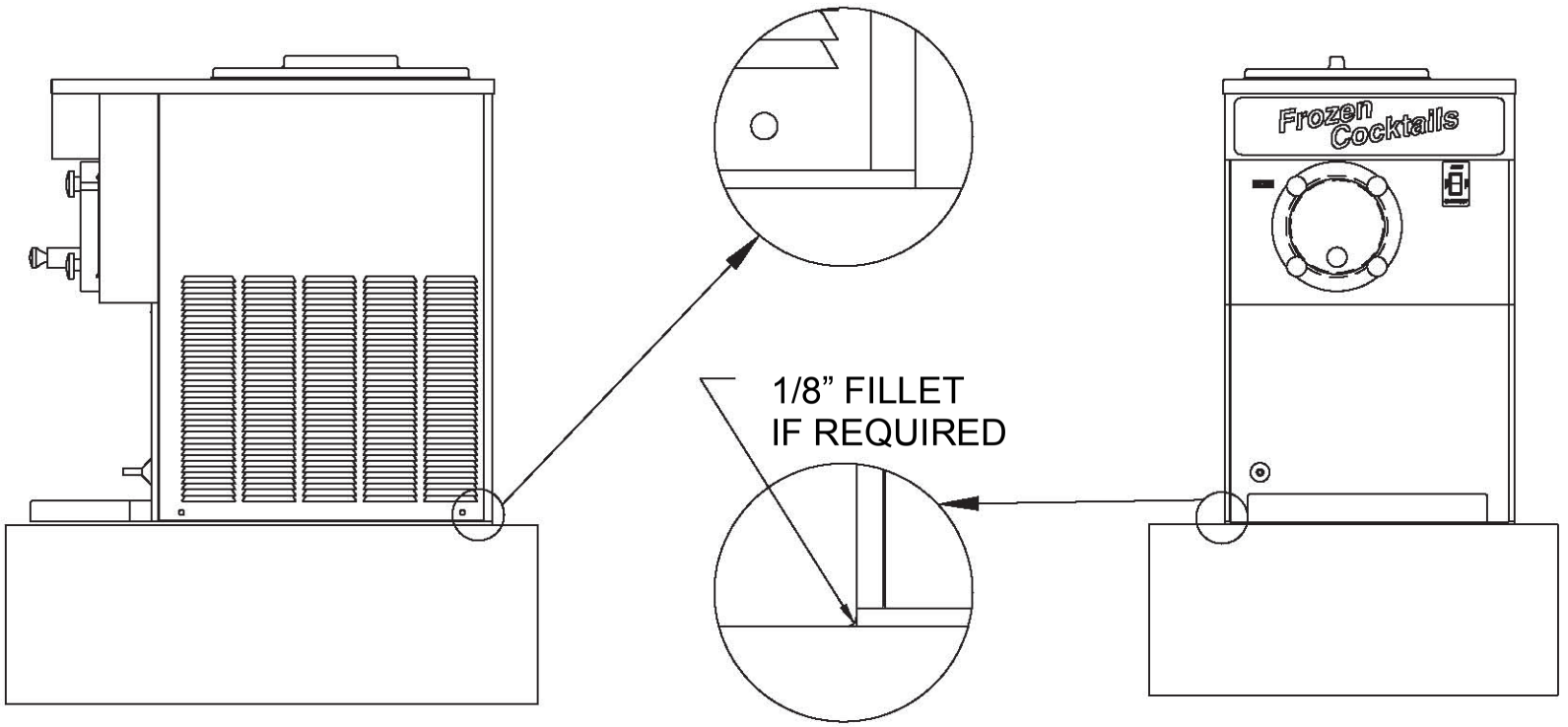
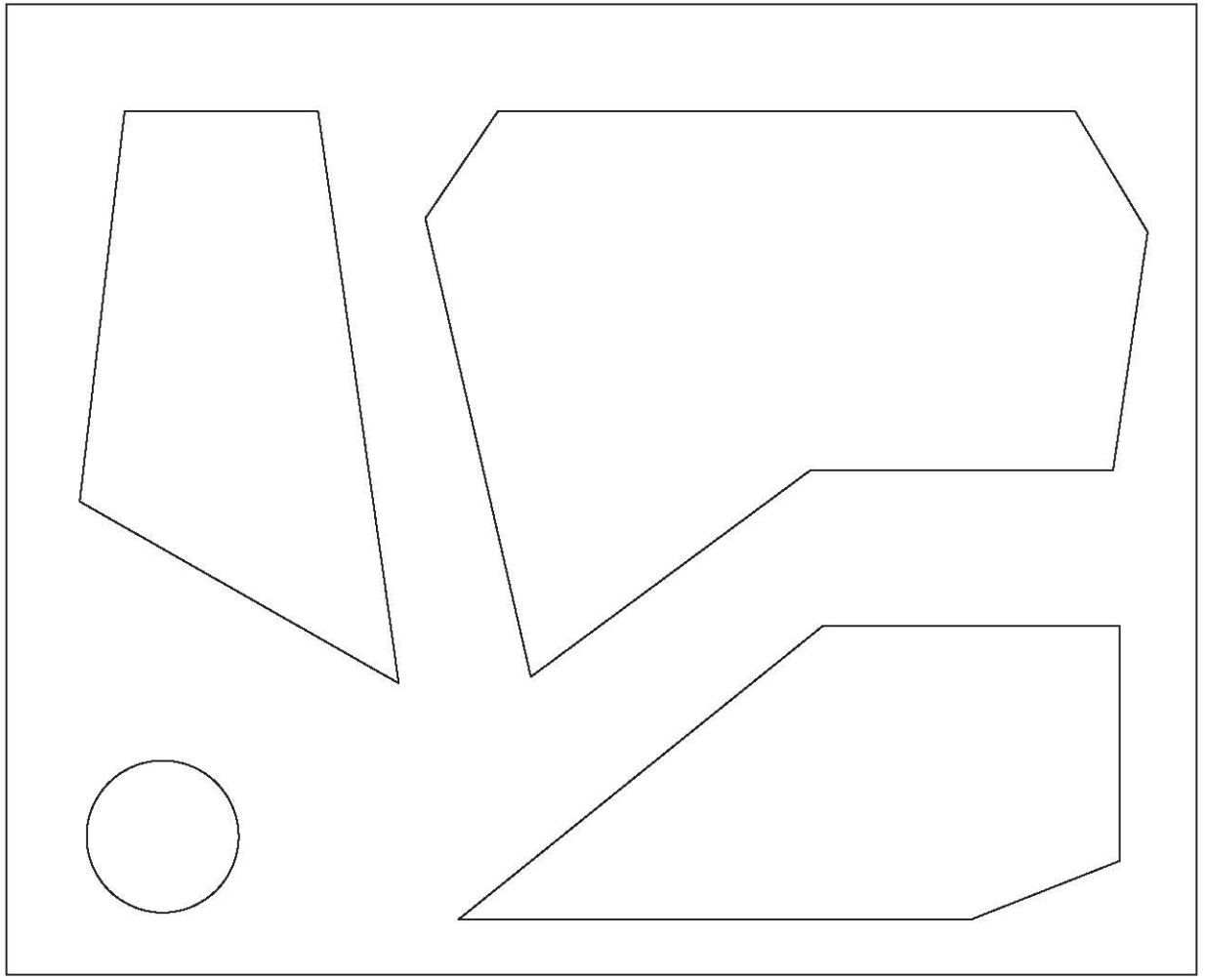


ILLUSTRATION #2

TOP VIEW OF P/N 108876

FRONT OF MACHINE



Please make these simple checks prior to contacting you service provider. Because adjustments to the machine are not covered under the terms of warranty, these tips can save you time and money. If you feel you are not comfortable performing trouble-shooting suggestions, please contact your local certified service provider.

Machine will not start	✓ Make sure electrical cord is correctly seated in the electrical receptacle. ✓ Check circuit breaker in electrical panel.
Product is Soft	✓ Do not make a consistency adjustment at this point. Always check product temperature first. Should be between 25-28 degrees non-alcoholic frozen beverage and 18-22 degrees alcoholic frozen beverage. If using a frozen beverage product and temperature is lower than listed, product has too much sugar, alcohol or combination. Correct ingredients and start with freshly mixed product. ✓ Check for properly **mixed product**. Replace as necessary ✓ Check for dull **scraper blades**. Blades should be sharp. Replace every 6 months. ✓ Check **Condenser** for dirt or obstructions. See Quarterly Maintenance ✓ Confirm that the condenser fan is running. ✓ Confirm 6" of airflow on all both sides and back of machine. ✓ High **ambient temperature**. Recommended machine ambient temperature not to exceed 82 degrees.
Product is too Thick	✓ Check for properly **mixed product**. ✓ Confirm **freezing cylinder** is not starved of product. See glossary **(Starved Cylinder)** ✓ Check product temperature. Should be between 25-28 degrees non-alcoholic frozen beverage and 18-22 degrees alcoholic frozen beverage. ✓ Check for missing scraper blade. Check dasher assemblies. ✓ Check for sticking spigot lever and or switch. If stuck in the up position, will cause unit to run continually. ✓ Restrictor tube installed in rear hole. Install in front hole of mix-pan reservoir.
Front Plate Leaking	✓ Confirm **front plate** o-ring is not ripped or torn. Replace if necessary. Replace seals and o-rings every six months. ✓ Do not lubricate **front plate** o-ring. ✓ Confirm **spigot plunger** o-rings are not ripped or torn. Replace if necessary. Replace every six months. ✓ Confirm spigot plunger o-rings are lubricated daily. ✓ Tighten **front plate** knobs evenly.
Product leaking from the drip chute and or drip tube.	✓ **Rear Seal** is worn. Replace. Note: Replace seals, o-rings and gaskets every six months. ✓ Do Not Lubricate the rubber portion of the **rear seal** ✓ The shaft of the **dasher** where the rear seal is installed must be lubricated daily. ✓ Front plate knobs loose.
Squeaking , chirping noises and or vibration heard.	✓ Use properly **mixed product**. Replace as necessary. ✓ Confirm **freezing cylinder** is not starved of product. See glossary **(Starved Cylinder)** ✓ Check lubrication ✓ Confirm all panel screws are installed and tightened ✓ Adjust width of drip tray bracket. ✓ Check for dull **scraper blades**. Blades should be sharp. Replace every 6 months.
Who to contact for service and parts	✓ If you do not have a local service and parts provider, contact your SaniServ Dealer/Distributor. Visit www.saniserv.com to locate a Distributor or a Service Agent (Customer Support Section).

Trouble Shooting Glossary

Ambient Temperature. The temperature of the air in the immediate vicinity of the operating machine. High ambient temperature can reduce the capacity with an air-cooled condenser.

Capacity. The total capacity of frozen product that a freezer can produce in a given period usually stated in gallons per hour (G.P.H.).

Condenser. The part of the refrigeration mechanism that receives hot, high-pressure refrigeration gas from the compressor and cools gaseous refrigerant until it returns to a liquid state.

Consistency. The viscosity or thickness of the product in the freezing cylinder.

Consistency Control. A control that senses the thickness or viscosity of the product in the freezing cylinder.

Dasher. The part of the freezer that scrapes frozen product off the inside of the freezing cylinder and blends the product. In a gravity freezer, this assembly also moves the product forward to be dispensed.

Front Plate. Seals the front of the freezing cylinder and provides a means for dispensing the product. On gravity fed freezers, the front plate indirectly holds the dasher in place. It also provides compression for the rear seal.

Front Plate Pressure Relief Valve. Spring-loaded button located on the front plate when depressed will allow air to escape from the cylinder. Used only on specific frozen beverage machines.

Freezing Cylinder. The part of the refrigeration mechanism in which the refrigerant vaporizes and absorbs heat. This is the part of the freezer where the liquid product is frozen.

Mix-pan. Is the top container that product is poured into. It is used as storage until product is needed for the freezing cylinder.

Mixing Product / Product Temperatures. If your using a product that has to be mixed with water or other ingredients, it is imperative the product is mixed consistently everyday. If not, the machine will not run consistent and could possibly damage components. Always mix to the product manufactures recommendations. The machine is designed to operate with a frozen product that falls within these temperatures (non-alcoholic frozen beverage 25-28 degrees and alcoholic frozen beverage 18-22 degrees).

Rear Seal. This part is stationary during operation and must not move. When installed and lubed properly, seals mix in cylinder. When installed and lubed improperly, it causes main shafted bearing failure.

Scraper Blades. The component that scrapes the frozen product from the freezing cylinder surface. Blades must be sharp, as dull blades will leave product on the freezing cylinder, insulating the mix from the refrigerant.

Spigot Plunger. The mechanism on the front plate through which the product is dispensed.

Starved Cylinder. A starved cylinder is often mistaken for a freeze up or product too thick. A starved cylinder (starving) is created when a larger percentage of frozen product is dispensed from the freezing cylinder than the percentage of liquid product entering the freezing cylinder from the mix-pan. There are several causes of starving.

1. Overdrawing: Dispensing more product from the machine than it's designed to do. This would occur if a machine were undersized for its application.
2. Mix out light not working therefore not alerting operator the need to add product.
3. Pouring frozen or semi frozen product into the mix-pan reservoir. This will form a blockage in the restrictor tube and not allow liquid product to flow into the cylinder.
4. Mix-pan too cold, allowing product to freeze in mix-pan and restricting product flow.
5. Restrictor tube installed into the rear hole, should be installed in the front hole of the mix-pan reservoir.

Service Record

Date	Service Performed	Serviceman's Signature

451 E. County Line Road
P.O. Box 1089
Mooresville, Indiana 46158-5089

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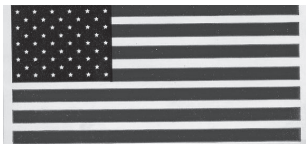

Proudly made in the U.S.A.

Technical Publication
Publ. No. 105504
Updated 6/13