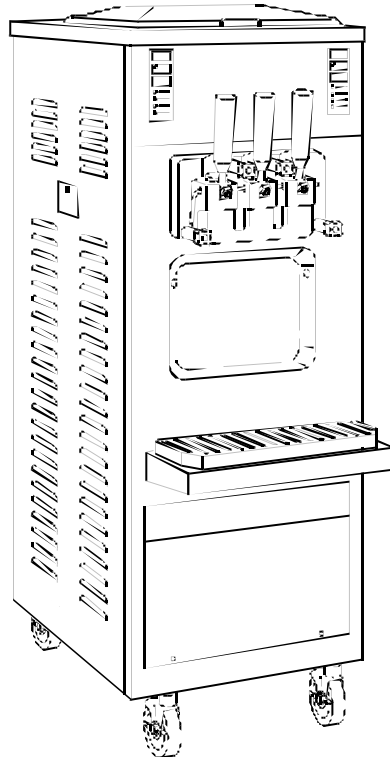




P.O. Box 4069 • Winston-Salem, NC 27115 • 336-661-9893 • 336-661-9895 (Fax)



UF 263

**Soft Serve Freezer
Double Flavor Floor Model**

OPERATION MANUAL

Foreword

Thank you for selecting Carpigiani to meet your operation and growing demands. Your Carpigiani freezer has been manufactured utilizing the most advanced technology and modern equipment available in the industry. We at Carpigiani, take great pride and care in the manufacturing of each and every freezer, using only the finest components available, to provide you with many years of trouble free operation.

Many years of experience in the manufacturing of soft serve dispensing equipment have guided us in the preparation of this Operation Manual. *PLEASE READ IT CAREFULLY* and keep it in an available place for future reference and most of all, follow the instructions carefully.

On the following pages, you will find important information and procedures, which describe the proper installation, sanitizing, operation, and maintenance of your Carpigiani freezer. We feel certain that your compliance with these instructions will assure excellent performance, trouble-free operation and profitable business for years to come.

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!! IMPORTANT !!

Failure to closely follow operational and maintenance procedures may result in damage to the unit and / or void your warranty. Carpigiani Corporation will not be responsible for any machine not properly operated or maintained.

Part I – Installation

Before starting this procedure, ensure that the shipping carton does not show any evidence of damage due to dropping or mishandling. This may indicate that the freezer was damaged during transit or delivery.

!! IMPORTANT !!

Should the outside of the shipping carton give any indication of possible damage, state this on the bill of lading prior to signing. Contact the freight carrier and request an inspection of damage. If this procedure is not adhered to, you will forfeit your rights to file a damage claim and be responsible for subsequent repair costs.

A) Uncrating the Freezer

- 1) The outer shipping carton is secured to the shipping pallet with strapping. When cutting this strapping, do so with caution as it may spring out quickly. After cutting the strapping, lift the shipping carton straight up and off of the freezer.
- 2) Remove the protective foam boards and plastic wrapping from the outside of the freezer.
- 3) The freezer is also secured to the shipping pallet with strapping. Again, exercise caution when cutting this strapping since it may spring out quickly.
- 4) You must now remove the side panels from the freezer prior to lifting the freezer off of the pallet with a lift truck. To remove the side panels, first remove the side drip chutes and lower chute cover on both side panels. Next remove the screws in each side panel and gently pull down and away from the machine frame. Remove the protective plastic coating from the outer panel surfaces.

B) Positioning the Machine

After removing the machine from the shipping pallet, it is now ready to be located in its final location.

Prior to choosing a location keep in mind that the freezer should be accessible for periodic maintenance and have adequate space for necessary airflow.

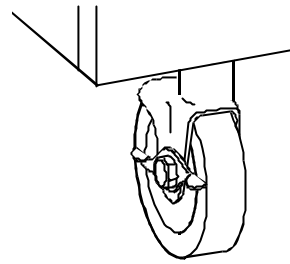


Figure 1

- 1) The freezer is equipped with pivoting casters to allow for ease of movement. When placed in its final location, lock the caster brakes to prevent unwanted movement of the freezer. (Refer to Figure 1)
- 2) The freezer must also be level to ensure proper drainage from the mix tanks and cylinders. To level, place a level on all corners and shim the casters as needed.

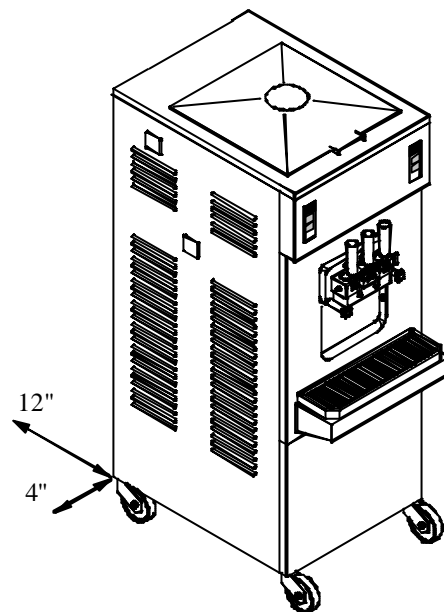


Figure 2

- 3) If your freezer is air cooled, you ***MUST*** have adequate spacing on both sides and rear of the machine. You should have a minimum of 4 inches of clearance on both sides and 12 inches of clearance on the rear of the machine. This will ensure an adequate airflow is maintained. (Ref. to Figure 2)

Note: If these clearances are not maintained, the production capacity will be reduced, cycling will be increased and the potential will exist that the machine will stop completely

4) It is necessary to clean the air condenser each month to remove dust, paper, etc., which may obstruct airflow. Prior to cleaning the condenser from the inside, disconnect the machines power supply.

5) The machine should be connected to a fused disconnect no more than six feet away. Electrical installation **MUST** comply with state and / local electrical codes.

6) Never position the machine in direct sunlight or near a heat source. This will reduce its performance and possible damage the freezer.

7) Water connections (Water Cooled Only) are made at the rear of the machine. A minimum of ½ inch (ID) water supply and drain lines are recommended. Both the water inlet and outlet lines must remain unobstructed or the machine performance will be affected.

C) Electrical Requirements

All wiring installed to operate the freezer must be in accordance with the National Electric Code and / or local electrical codes and regulations.

!! IMPORTANT !!

This machine must be properly grounded. Failure to properly ground the freezer may result in dangerous and / or fatal electric shock.

The main machine power supply must meet requirements at all times of operation. Voltage fluctuations **must not** exceed plus or minus 5% of the rated nameplate voltage.

All Carpigiani machines are equipped with step down transformers for the control circuit supply. These transformers have a “multi-tap” input which must be wired to match the inlet voltage (ie. 208 or 230 vac). Failure to wire to the correct supply voltage can result in machine malfunction.

Electrical Connection – (Refer to Fig. 3)

Having removed the side panels from the frame, the main power connection box is located on the bottom of the frame. The connection box is labeled “Connect Power Line Here”. Connect the power supply wires to the machines using the appropriate electrical hardware and strain relief devices.

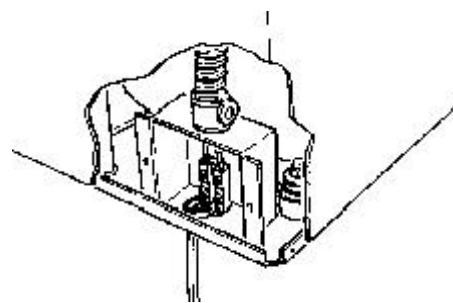


Figure 3

After the electrical connections are completed, turn the power supply on. At this time you must check the beater / auger motor rotation. The correct beater rotation (Facing the front of the machine) should be clockwise.

D) Completing the Installation

1) All of the setup and calibration of this freezer should be performed by an approved Carpigiani Service Technician. Failure to calibrate this freezer properly can result in freezer damage and a voided warranty.

2) After installation and calibration of both electrical and refrigeration circuits, the side panels should be reinstalled.

!! IMPORTANT !!

Failure to closely follow factory setup and maintenance procedures will result in a voided warranty. Carpigiani Corporation will not be responsible for any freezer which is not setup or maintained in accordance with factory procedures.

NOTE: Always turn the machine OFF and disconnect the power supply switch to the freezer prior to exposing any electrical connections or moving parts.

On the following pages you will find important information and procedures which describe the proper sanitizing, operation, and maintenance of your Carpigiani Freezer. We are certain that your full compliance with instructions and procedures will result in many years of trouble free operation.

In the event this unit should malfunction or need maintenance, please contact your local Carpigiani Distributor or Authorized Service Agent.

Part II – Explanation of Controls

A) Electronic Touch Pad – (Refer to figure 4)

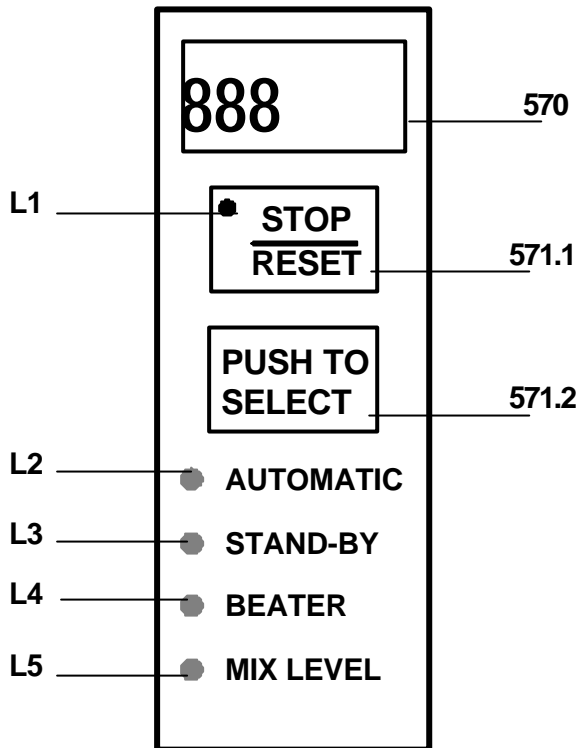


Figure 4

This machine is equipped with two independent electronic touch control pads. Each electronic touch pad operates one side of the freezer.

Indicator Lights – L1 through L4

These indicators illuminate to show the selected machine function. When illuminated, the machine is in that respective mode.

Indicator Light – L5

This light will illuminate when the mix tank is low or out of mix. It is also possible to activate a low mix level beeper in the programming mode.

Monitor – Position 570

This numerical monitor will display the cylinder product consistency while the machine is freezing product in the automatic mode. When not freezing the product in the cylinder, it will display mix tank temperature in *ALL* modes.

Stop / Reset – Position 571.1

When in this mode, the indicator light L1 will be lit and the machine functions off. From this mode you can access the programming mode or switch to operating modes.

Push to Select – Position 571.2

By pressing this button you can select any of the

following machine modes:

- Automatic
- Stand-by
- Beater

The indicator light will illuminate corresponding to the mode selected with the touch pad.

Automatic Mode

When placed in this mode the indicator light L2 will illuminate and the machine will start the freezing process in the cylinder. During this freezing process, a number indicating the cylinder consistency will be displayed (monitor #570, the lower the number, softer the product). The machine will continue to freeze the product in the cylinder (numbers will increase) until the preset HOT number value is achieved. After achieving the preset cylinder consistency number (HOT) the machine will then start cooling the mix tank and display mix tank temperature.

Stand-By Mode

When placed in this mode the indicator light L3 will illuminate. This mode is used during prolonged idle periods. The mix temperature in both cylinder and mix storage tank is maintained below 40 degrees F by the electronic temperature probes. Product should not be served while in this mode as it will be too soft. The Monitor (#570) will only display the temperature in the mix tank while in this mode.

NOTE: If the mix level in the tank is below 1/2 full, a warmer than actual temperature will be displayed on the Monitor #570. The actual mix temperature will remain at a safe temperature below 40 degrees F.

Beater Mode

When placed in this mode the indicator light L4 will illuminate. This mode is used during the start-up (pump fed), cleaning and sanitizing of the machine. While in this mode the *ONLY* the beater / auger drive motor will operate. This mode has a built in safety device which will automatically switch the machine to the stop mode after 15 minutes of operation. This safety prevents an operator from inadvertently leaving the freezer in this mode for extended periods of time, which could damage the freezer.

Mix Tank Low Level Indicator

When low on mix in the mix storage tank, the indicator light L5 will illuminate. This will indicate that more mix is needed to operate the freezer. Each mix tank has a maximum capacity of 18 quarts each. **DO NOT** attempt to operate the freezer while low on mix or your freezer may be damaged. It is also possible to activate a beeper to sound when mix is low in the Automatic and Stand-By modes. This is done through the programming mode.

B) Dispensing Handles – (Refer to Figure 5)

The dispensing handles control the flow and extraction rate of finished product. The left handle serves product from the left cylinder, the right handle serves product from the right cylinder and the center dispenses equally from both cylinders. You should *ONLY* dispense product when the machine is in the automatic mode.

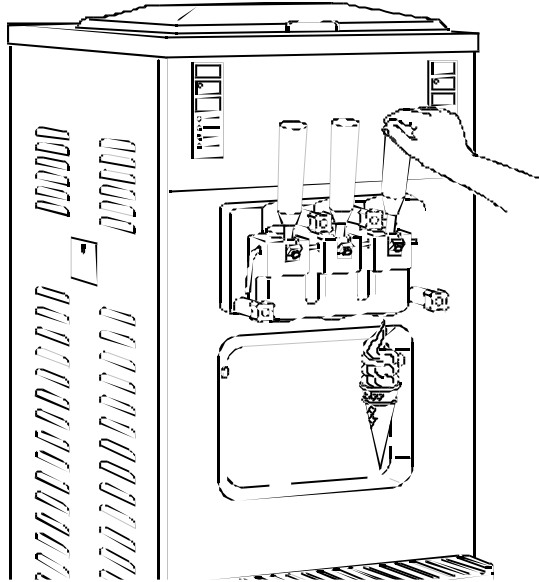


Figure 5

C) Photo Sensor Switches – (Refer to Figure 6)

In the Automatic mode the Photo Sensor Switches (Position #920) activate the beater / auger motors to dispense product. To activate the photo sensor switches, simply place your hand with a cone or cup under the dispensing head, pull the dispensing handle and dispense product.

NOTE: You must activate the photo sensor switch, starting the beater drive motor prior to dispensing product.

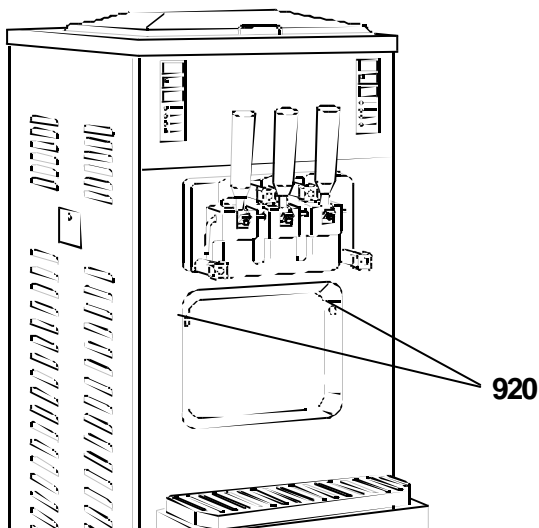


Figure 6

D) Dispensing Head Safety Switch

This machine is equipped with a dispensing head safety switch. With the dispensing head removed, the machine will not operate and Alarm 9 (AL9) will appear on the front touch pad monitor. Please refer to machine alarms on page 27 for more details.

E) Electrical Control Panel – (Refer to figure 7)

The electrical control panel is located on the bottom of the front panel. This control panel contains all of the machines electrical control components. *ONLY* a Carpigiani Authorized Technician should access this control panel.

!! IMPORTANT WARNING !!

Disconnect the freezer power supply before opening the Electrical Control Panel and / or servicing.

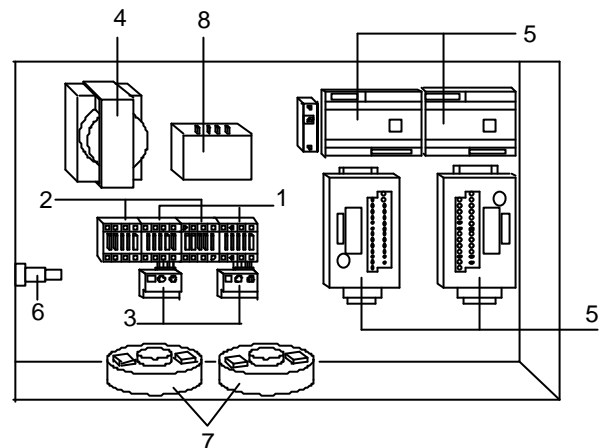


Figure 7

The following is an explanation of some of the components inside the electrical control panel.

1) Beater Motor Contactors - (Left /Right) – Activates the beater drive motor. In the “BEATER” mode, the contactor is energized by the front switch pad. In the “AUTO” mode, the contactor is energized by the photo sensor or 10 minute cycling timer.

2) Compressor Contactor – Activates the refrigeration compressor. When the unit is in the “AUTO” mode, the compressor contactor can be energized by the electronic HOT setting or the Tev Temperature probe. In the “Stand-By” mode, the contactor is energized by the Tev and Tec temperature probes.

- 3) Beater Motor Overload Protector - (Left/Right) – Monitors the current draw of the beater drive motor. If the motor draws excessive amperage, the overload will trip and Alarm 1 (RtA) will be displayed on the touch pad monitor.
- 4) Main Transformer – This transformer reduces the incoming line voltage to 24 volts for the primary control circuit.
- 5) Electronic Control Boards – (Left/Right) – These boards control and monitor *ALL* functions of the machine.
- 6) Safety Fuse – This fuse protects the high voltage side of the main transformer in the event of a short circuit. If tripped, all of the machines controls and touch pads will be inoperative.
- 7) Current Monitoring Transformer – (Left/Right) – These transformers monitor the current draw of the beater drive motors.
- 8) Secondary Transformer – This transformer reduces the voltage from 24 volts to 11 volts for the electronic control circuit.

F) Other Controls

- 1) Refrigeration Solenoid Valves – These valves are located behind the front panel. These valves are used to control the flow of refrigerant to the cylinders or mix storage tanks. These valves are designated with EVC for each cylinder and EVV for the mix storage tank. (Refer to Figure 8)

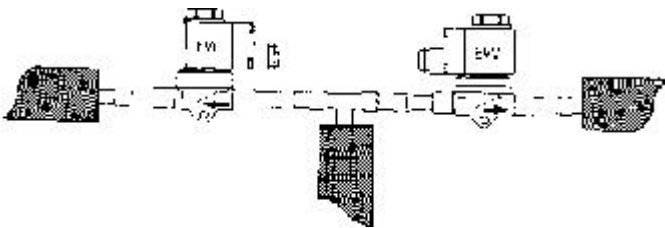


Figure 8

- 2) High Pressure Safety Switch – In the event of restricted airflow (Air Cooled) or restricted water flow (Water Cooled), this switch will turn off the compressor contactor. While tripped, the beater motors will continue to run until the refrigerant pressure is reduced enough to reset the safety switch. After resetting, both the compressor and motor(s) will resume running.

Part III–Initial Cleaning Procedure

!! IMPORTANT !!

Before starting this procedure, place the machine in the STOP mode on the touch pad.

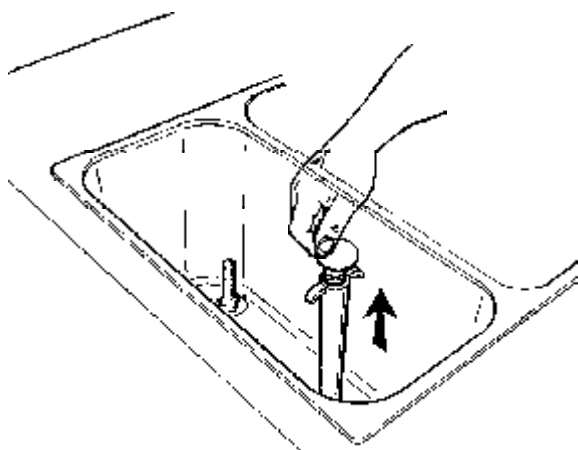
This is a new machine and although clean, it must be completely disassembled, washed and sanitized before adding fresh product. Please proceed as follows:

1) Remove the mix tank cover and spare parts items packed inside the mix tank. The spare parts kit will include: spatula, cleaning brushes, sanitary lubricant, oring removal tool, sanitizer packets, spare orings and seals, and operation manual. Place these items in a convenient place for future reference.

Helpful Suggestion: Before proceeding with the disassembly of the freezer, we recommend the use of a clean plastic pan or pail to place the removed parts into. This will minimize the possibility of misplacing or damaging these components.

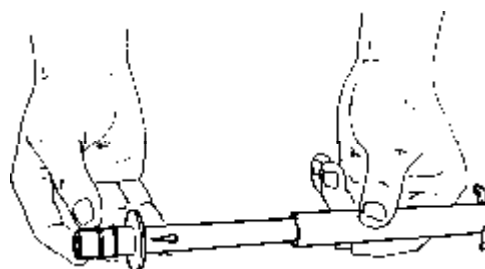
A) Gravity Fed Machines

Proceed with the disassembly process by removing the gravity feed tubes, which are located inside each mix storage tank. These should be pulled straight up and out of the tanks.

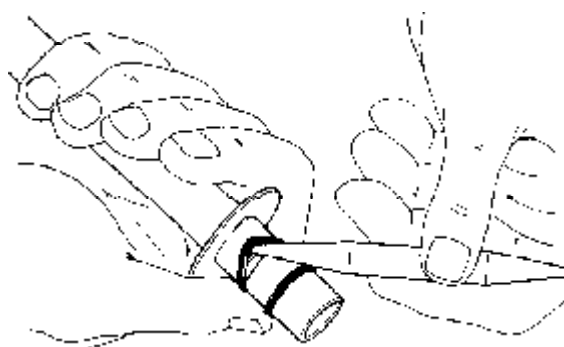


Once removed, the gravity feed tubes must be disassembled. To disassemble, first remove the splash guard from the center of the tube.

Next remove the outer regulating sleeve from the center tube by pulling straight off.



Finally remove the orings on the end of the center tube using *ONLY* the oring removal tool included in your spare parts kit.

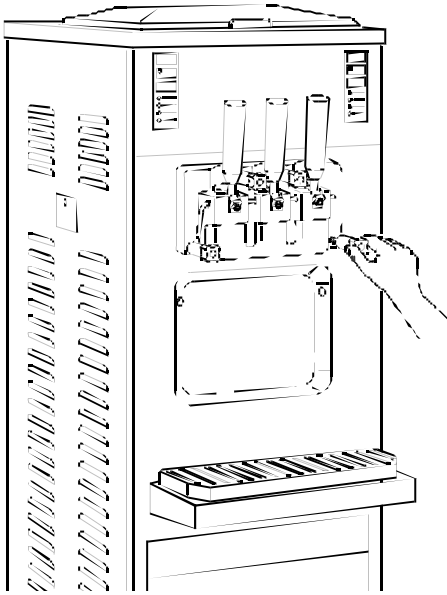


!! WARNING !!

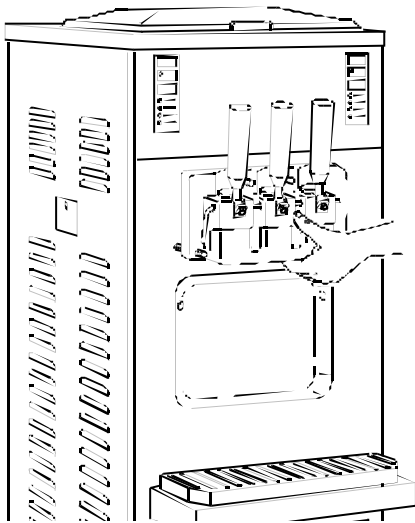
Never use anything other than the oring remover provided in your tool kit. Removing the orings with other objects or tools can possibly damage the orings and plastic parts.

B) Disassembling the Dispensing Head

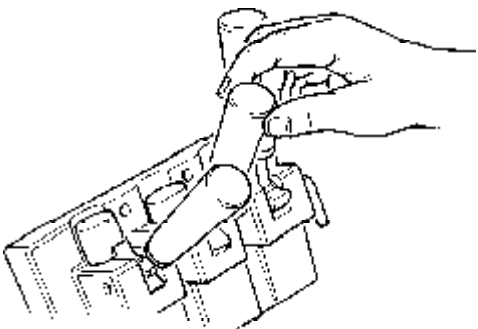
Loosen and remove the four dispensing head-retaining knobs. The knobs are removed by turning counter clockwise until loose.



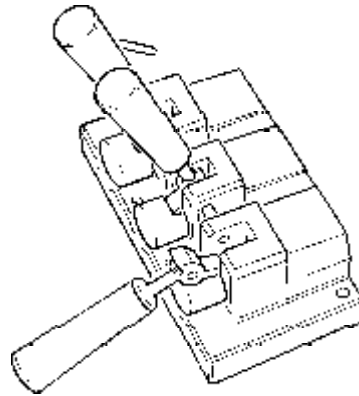
Remove the dispensing head by pulling straight out and away from the machine.



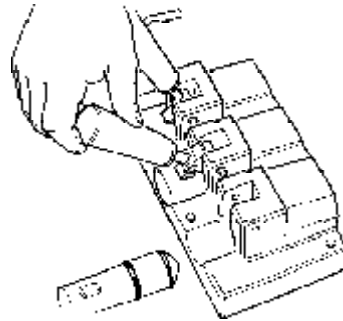
Disassemble the dispensing head by first opening all of the dispensing handles.



Pull the handle-retaining rod out far enough to allow the handle to disengage.



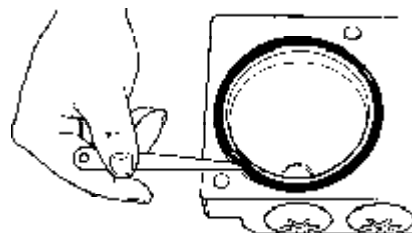
Return the retaining rod to its original position. Using the metal rod as a base, lever the piston from the dispensing head with the handle. Repeat this for the remaining pistons.



Using the oring removal tool, remove the orings from each of the pistons.



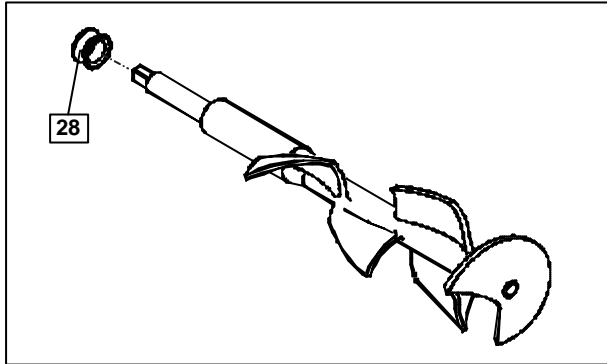
Turn the dispensing head over and remove the two large orings from the rear of the dispensing head.



C) Removing the Beaters / Augers

Remove the beaters / auger assemblies from each cylinder by pulling straight out of the machine towards you.

Disassemble each beater / auger by first removing the rear rubber beater shaft seal (ref. 28).



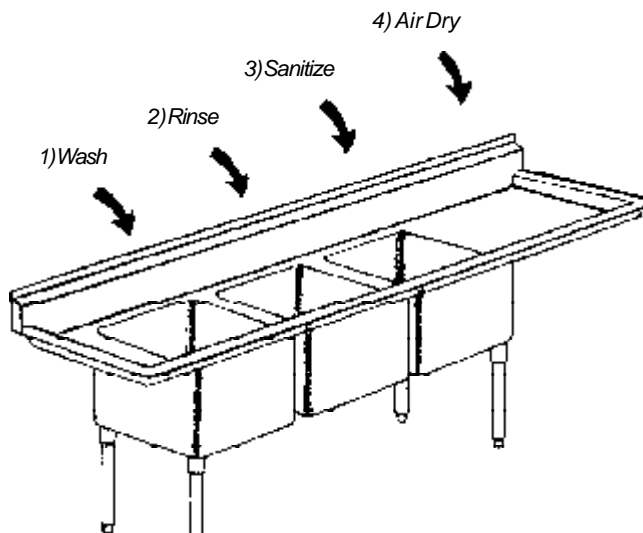
The machine is now completely disassembled. The removed parts must now be washed, rinsed, and sanitized.

E) Cleaning Operation

Wash the removed machine parts in luke warm (80-90 F) water and mild non-foaming detergent. Scrub each of the parts with the cleaning brushes provided in the machines spare parts kit.

!! IMPORTANT !!

DO NOT use hot water on any of the plastic parts as this may result in damaging these parts.

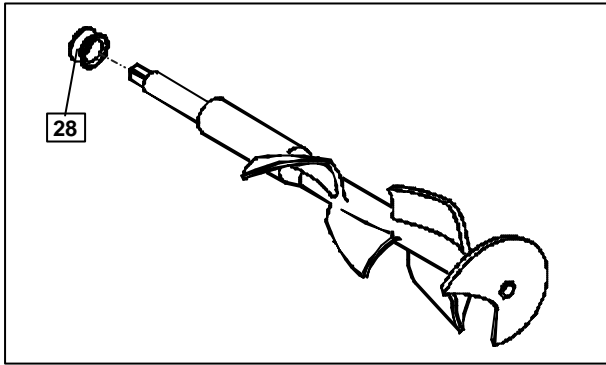


Using your three-tank sink, wash, rinse, and sanitize all of the disassembled machine parts. Mix the sanitizing solution to a 200ppm concentration with warm water. Allow the parts to soak in the sanitizing solution for 3-5 minutes before removing. Allow the parts to air-dry on the clean, sanitized counter at the end of the sink. **DO NOT** towel or sponge dry these parts.

Part IV - Assembling the Freezer

A) Installing the Beater / Augers

Next, lubricate the rear of the metal washer on the beater frame with three 3/8" drops of the sanitary lubricant spaced equally on the washer.



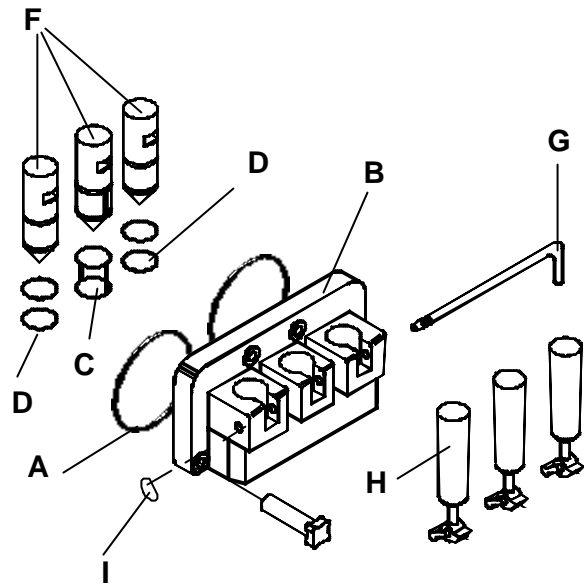
Slide the rubber beater seal (ref. 28) onto the beater frame end. Using the sanitary lubricant, place three more 3/8" drops of lubricant on the flat side of the beater seal (next to the beater shaft). DO NOT lubricate the "V" groove of the seal as this is not the sealing surface of the seal.

Insert both beater into the freezing cylinders. Holding the beater horizontal, gently slide it straight into the cylinder until it can go no farther.

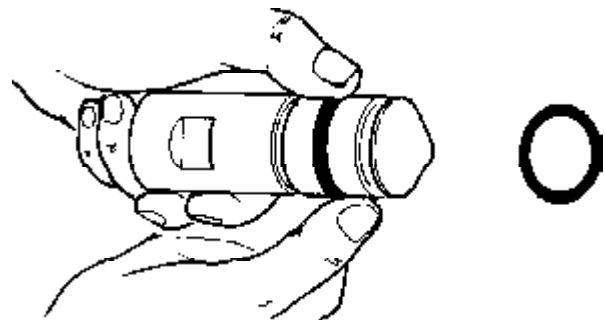
Once installed, rotate the beater to engage the beater frame into the drive coupling in the transmission. This engagement will allow the beater frame to go another 3/4" into the cylinder. Push the beater frame until it can go no further.

B) Assembling the Dispensing Head

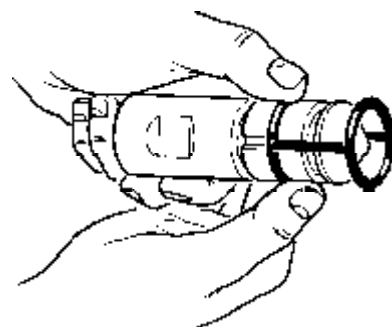
Locate the parts that will be needed to assemble the dispensing head. These parts include: A) Dispensing head orings, B) Dispensing head, C) Center piston oring, D) End piston orings (4), F) Pistons, G) Handle retaining rod, H) Dispensing handles, and I) Retaining rod oring.



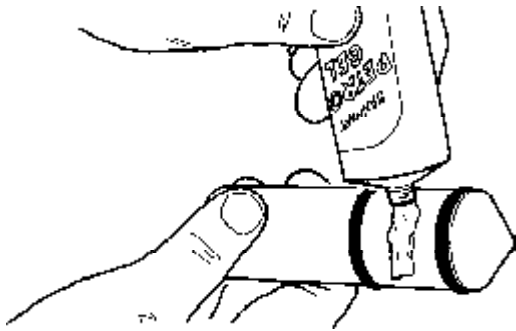
After locating all of the required parts, start by assembling orings onto the end pistons.



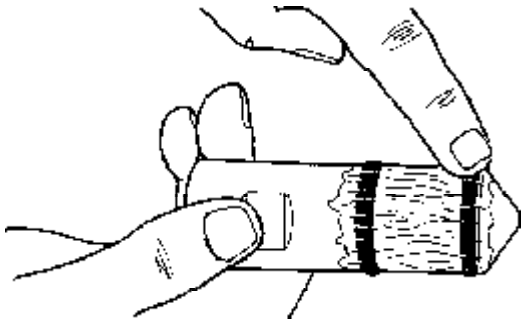
Install the center piston oring onto the center piston.



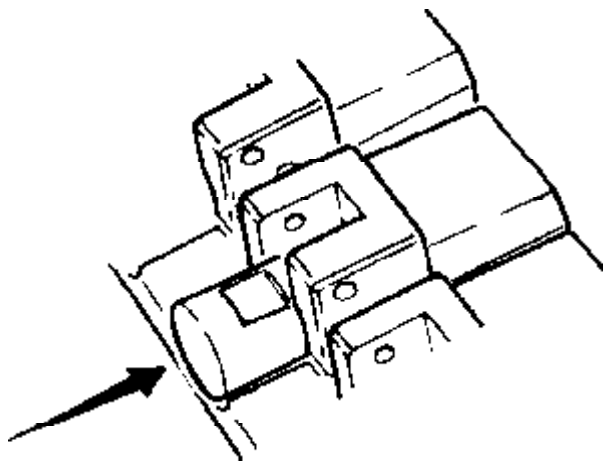
Once the orings have been installed onto the three pistons, place a bead of lubricant between the orings.



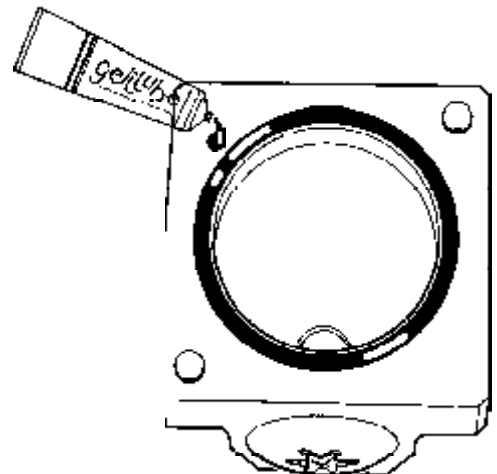
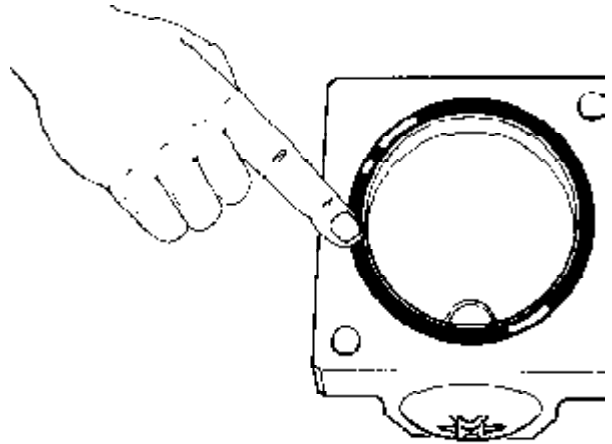
Spread the lubricant to lightly coat the piston surface between and including the orings. This will ensure free movement of the pistons and dispensing handles.



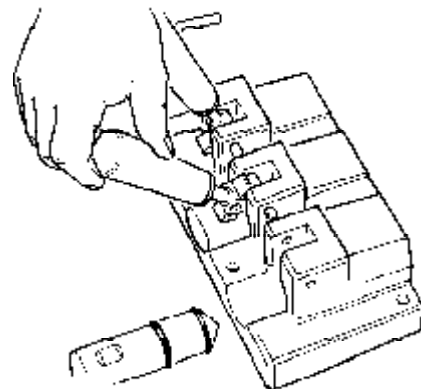
Insert the center piston into the center chamber of the dispensing head. The center piston is identified with the one piece "H" type oring. When installing, align the square handle recess with the rectangular cut out of the head. Repeat this process with both end pistons.



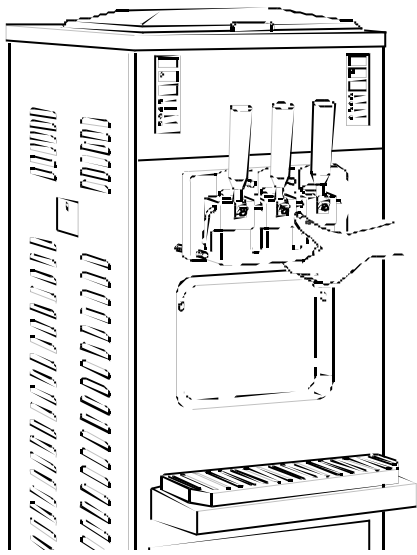
Turn over the dispensing head and insert the two large orings into the grooves in the dispensing head. *Lightly* lubricate the outside of these orings.



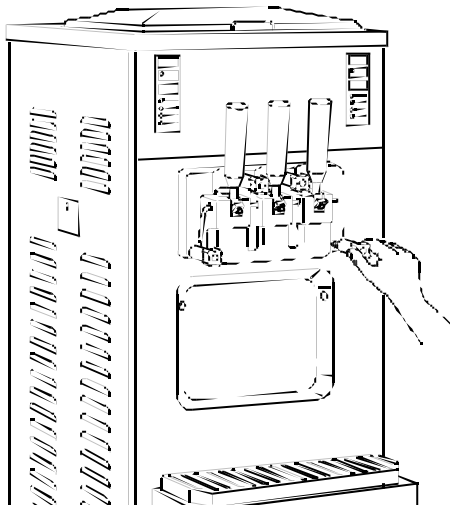
Install the dispensing handles onto the head by placing the rounded side of the metal cam into the piston notch. Insert the metal retaining rod into the dispensing head and piston cams. When all three handles are installed, affix the small oring into the metal retaining rods oring groove.



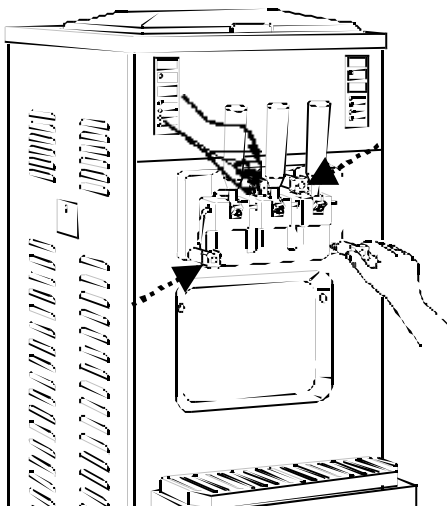
You are now ready to install the dispensing head assembly onto the front of the freezer.



Finger tighten the four metal dispensing head-retaining knobs.

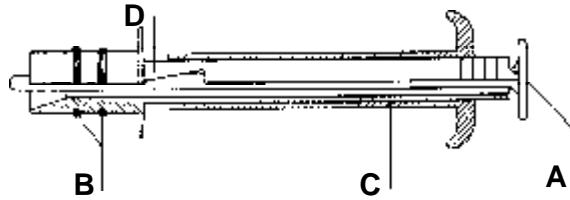


Hand tighten the knobs in a criss-cross pattern as shown below.

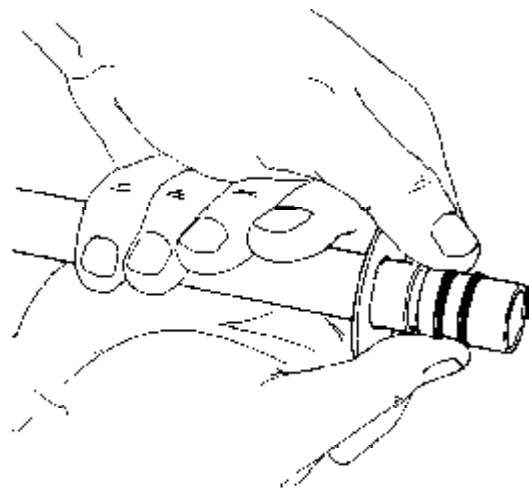


C) Assembling the Gravity Feed Tubes

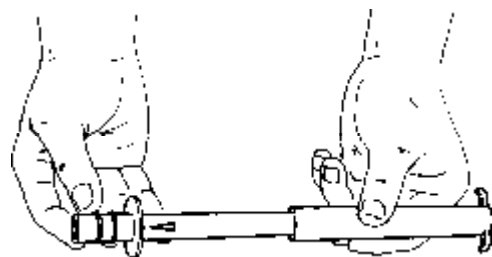
Locate the parts needed to assemble the gravity feed tubes. This should include: A) Splash guard, B) Orings (2per), C) Outer regulating sleeve, D) Center gravity feed tube



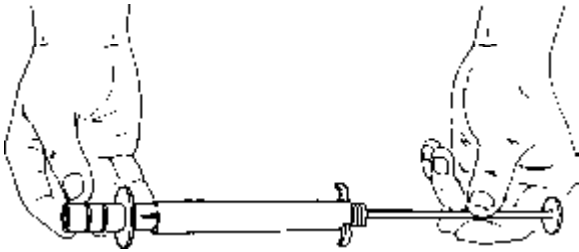
Next, slide the two orings onto the center gravity feed tube oring grooves.



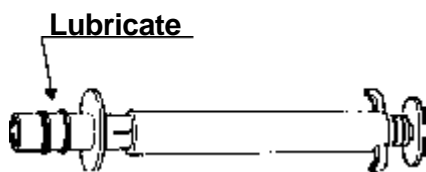
Slide the outer regulating sleeve onto the center feed tube. Make sure that the two finger hooks are at the top of the feed tube (farthest away from the orings at the bottom).



Insert the splash guards into the top hole of the gravity feed tube.



Lightly lubricate both orings on each tube with the sanitary lubricant. When finished, place a feed tube uninstalled at the bottom of each mix tank.



Part V - Sanitizing the Freezer

Prior to filling the machine with fresh liquid mix, the assembled machine must be sanitized. The frequency of cleaning and sanitizing must comply with your local and / or state health regulations. If uncertain of these regulations, contact your local Health Departments or Department of Agriculture.

Sanitizing your freezer is very important. This procedure will retard the growth of bacteria and insure excellent product bacteria test results performed by your local inspectors.

To begin, you will need the sanitizer, spatula, large cleaning brush, (all included in the start up kit), and clean pail.

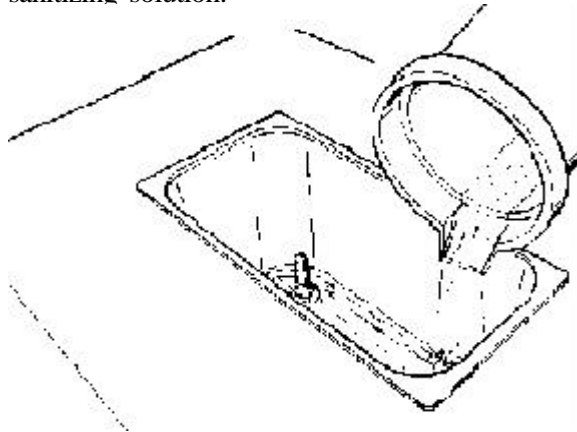


Mix the sanitizer (Stera Sheen green label or equivalent) into the clean pail with at least two gallons of warm water. Mix the sanitizer and water to make a 200-PPM. concentration of sanitizer solution. Using the spatula, stir the solution until the sanitizer is completely dissolved.

!! IMPORTANT !!

Do not exceed the formula recommended by the sanitizer manufacturer as it will not add to the sanitizing effectiveness. DO NOT use straight chlorine bleach since it does not clean properly and will damage plastic components. Do not leave the sanitizing solution in the freezer longer than one hour as it can corrode some parts.

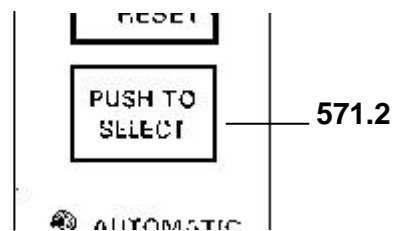
With the dispensing handles closed, pour an even amount of the sanitizer solution into both mix tanks. With the large cleaning brush, clean all surfaces of the mix storage tanks with the sanitizing solution.



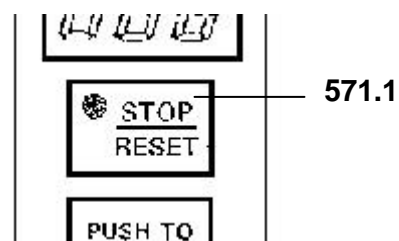
With the cylinders full of the sanitizer solution, push the “Push to Select” button on the front touch pad (#571.2) until the beater mode is selected. Allow the machine to run in the beater mode for approximately 30 seconds.

!! IMPORTANT !!

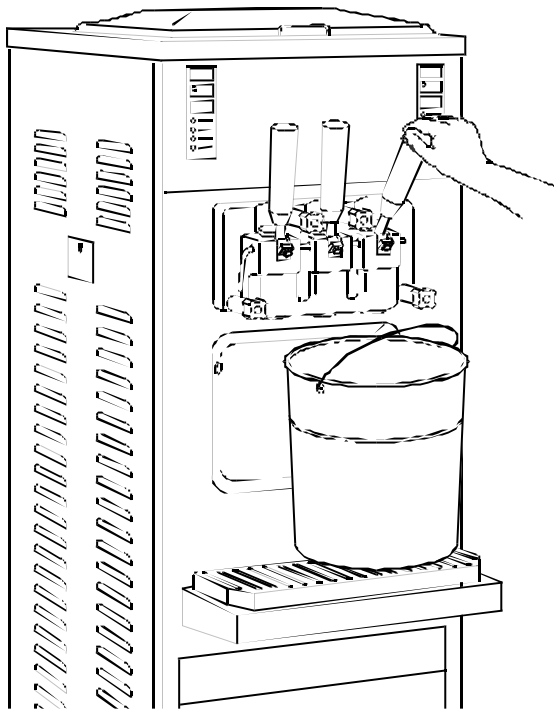
Do not select the “Automatic” or “Stand-By” modes while sanitizer is in the machine as this can possibly damage your freezer. Select only the “Beater” mode while cleaning or sanitizing the freezer.



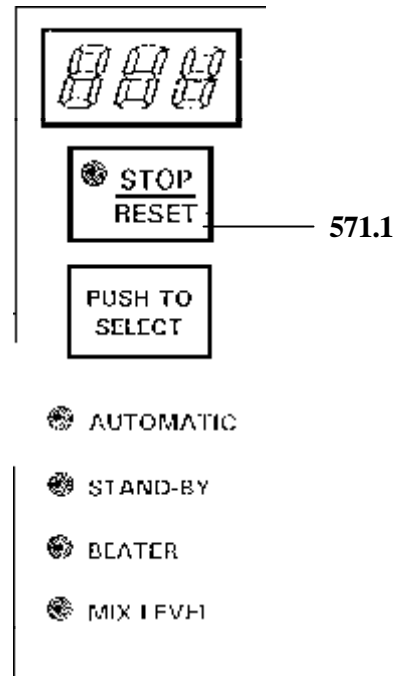
Press the “Stop – Reset” button (#571.1) and place the machine in the OFF / Stop mode. Allow the sanitizer to remain in contact with all of the product surfaces for 3 to 5 minutes.



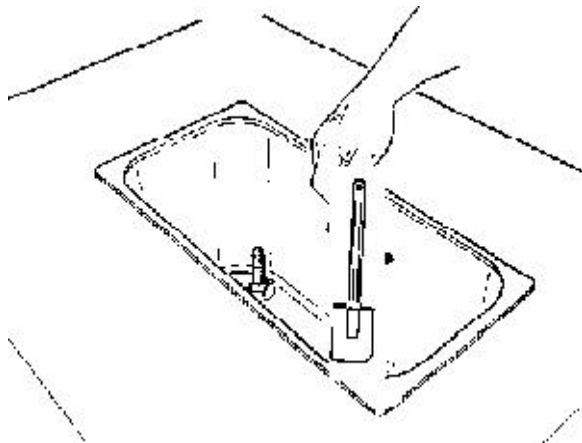
Place the clean pail under the dispensing head and pull the handles, allow the sanitizer to completely drain from the freezer. After the sanitizer has completely drained, close the three dispensing handles.



“Push to Select” button on the front touch pad (#571.2) until the beater mode is selected. Allow the machine to run in the beater mode for approximately 10 seconds then push the “Stop” button on the touch pad. This will remove any of the remaining sanitizer from the cylinders.



With your spatula, direct any remaining liquid in the bottom of the tank to the cylinder feed hole.



!! IMPORTANT !!

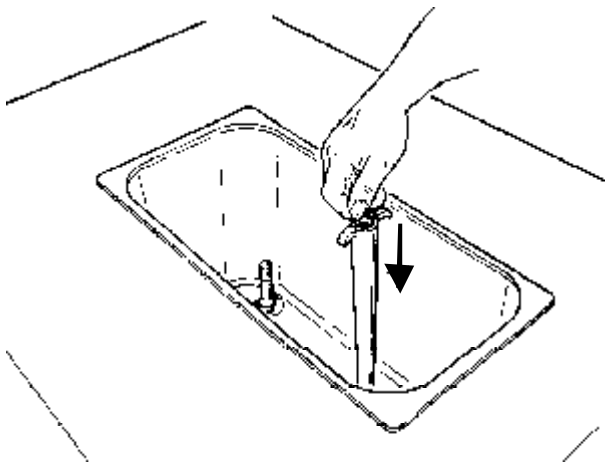
The freezer is now sanitized and ready to be filled with fresh liquid mix. Do not wipe out any residual sanitizing solution from the bottom of the mix storage tanks as this will contaminate the machine with bacteria. Prior to dumping the sanitizing solution from the pail, submerge your hands to sanitize since you must next install the Gravity Feed Tubes or Pump Feed Elbows into the cylinder feed hole.

Part VI – Starting the Freezer

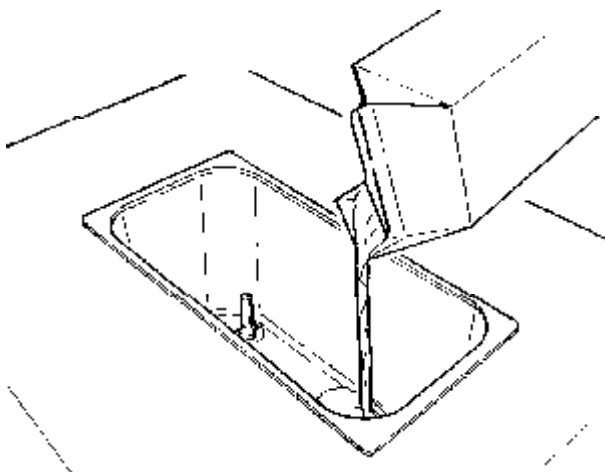
Only after completing the cleaning and sanitizing procedures should you fill the machine with fresh mix. The mix being used *MUST* be free of ice, seeds, pulp, and completely dissolved if made from powder. The products used in these freezers must be a homogenous liquid.

A) Gravity Fed Machine

With your clean, sanitized hands, remove the splash guard and outer regulating sleeve from the gravity feed tubes. Install only the center feed tube into the cylinder feed hole. Reinstall the splash guard on both tubes



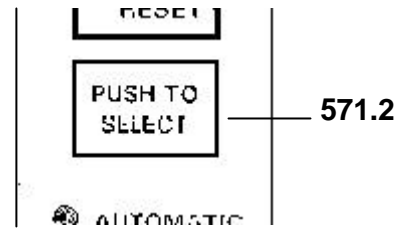
Fill each mix tank with fresh liquid mix. Each mix tank has a maximum capacity of 18 quarts. The minimum recommended mix quantity is 6 quarts.



Allow the cylinders to fill with mix. When the air bubbles stop coming out of the gravity feed tube, the mix has filled the cylinder to its maximum capacity. Remove the splash guard and install the outer regulating sleeve onto the gravity feed tube.

Set to the closed position (bottom) and replace the splash guard.

You may now start the freezing process by pressing the “Select” button (#571.2) and selecting the Automatic mode.

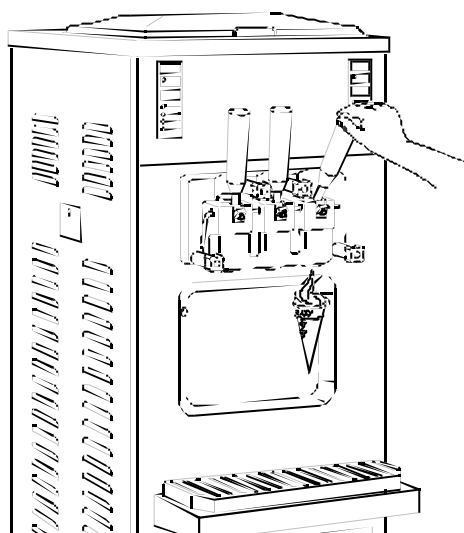


The initial freeze time is approximately 4-7 minutes. Do not dispense product until the machine has cycled off. Before dispensing product you must also open the outer regulating sleeve on the feed tube. The draw rate, portion size, and mix viscosity will determine the final regulating sleeve setting. Our standard setting is 2 or 3 notches up from the bottom. Adjust for your specific application.

Part VII – Operating the Freezer

The machine will automatically stop the freezing process after achieving the pre-set “consistency” value (number displayed on the touch pad monitor). This will indicate that the product is ready to be served. At this time the compressor will continue to run and automatically switch to cooling the mix storage tanks.

To serve product, simply place a cup, container, or cone under the dispensing spout and slowly pull the dispensing handle down. At this time the beater / auger drive motor should start and product start coming out. As the product begins to flow, move the container in a circular fashion to create a tapering tower if frozen product.

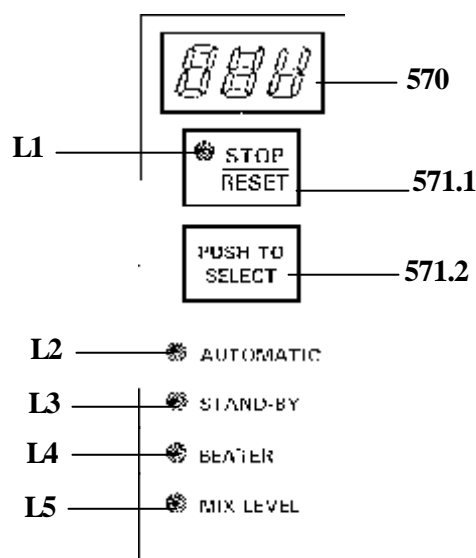


When the desired portion has been dispensed, close the handle and pull the container with product straight down to add a peak.

Dispense the product without exceeding the freezer's production capacity. If you do not exceed this pace and are careful to refill the machine with fresh mix, you can be sure you will rarely have to pause in selling product, even during peak times. A standard draw rate is $\frac{3}{4}$ to 1 ounce of product dispensed per second. The larger the portion size, the slower it should be drawn.

A) Stand-By Mode

During long pauses between servings, press the “Push to Select” button (#571.2) and select the “Stand-By” mode of operation. In this mode, you will significantly reduce the energy consumption of the freezer. When placed in this mode the indicator light L3 will illuminate. The mix temperature in both cylinders and mix storage tanks are maintained below 40 degrees F by the electronic temperature probes. Product should not be served while in this mode as it will be too soft. The Monitor (#570) will only display the temperature in the mix tank while in this mode.



When you want to begin serving product again, press the “Push to Select” button (#571.2) and select the “Automatic” mode. Allow the machine to cycle off on the consistency control before serving product.

B) Gravity Fed Machines

The gravity feed tube consists of two tubes, one sliding inside of the other, and a center splash guard. The inner tube blends the flow of air and mix into the freezing cylinder. Air enters through the top of the tube, mix through the bottom. (Refer to figure 9)

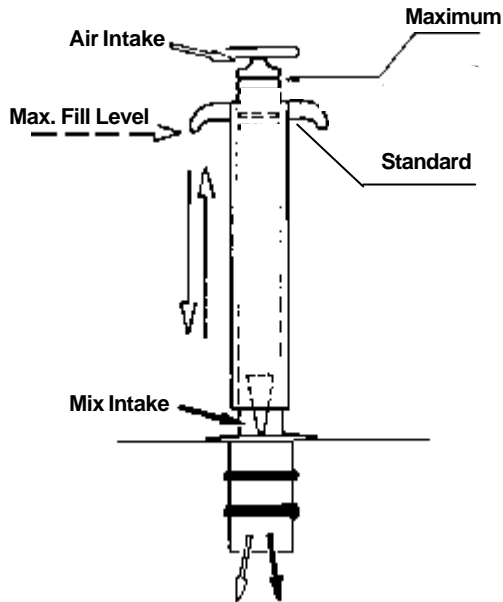


Figure 9

The outer tube is actually a regulating valve. Lifting or closing this outer tube changes the hole opening size on the inner tube which allows more or less mix to enter the freezing cylinder. Since the air inlet hole size does not change, the air inlet is constant.

You can vary the overrun (yield) by allowing more or less mix to enter the cylinder by changing. You do this by opening or closing the outer regulator sleeve setting on the inner feed tube.

The inner splash guard keeps mix from splashing the underside of the mix tank cover as well as eliminate clogging of the feed tube.

The draw rate, portion size, and mix viscosity will determine the final regulating sleeve setting. Our standard setting is 2 to 3 notches up from the bottom. Open the outer tube to increase the mix amount. Close the outer tube to decrease the mix amount. Adjust for your specific application.

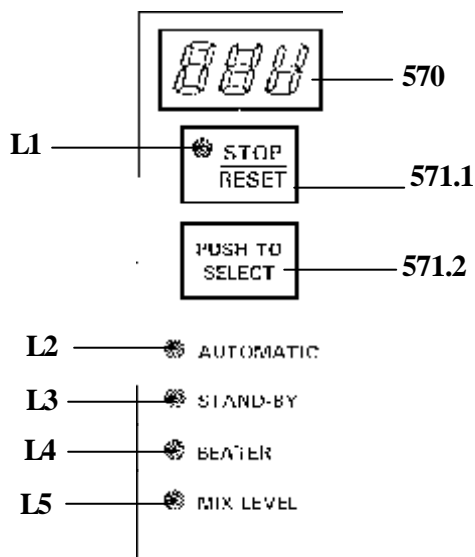
Part VIII – Periodic Cleaning Procedures

Cleaning and sanitizing schedules for your freezer are determined by your local Health Department and / or Department of Agriculture and must be followed accordingly. Check with your local organization prior to determining your cleaning schedule.

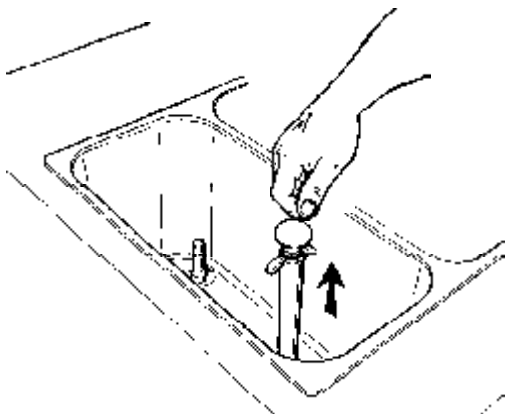
After determining your schedule, proceed as follows:

A) Gravity Fed Machines

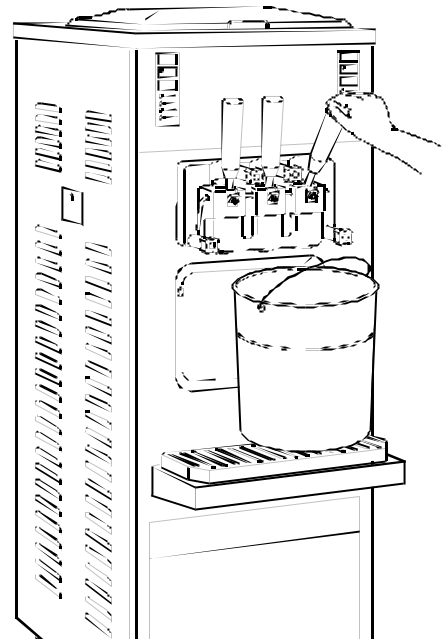
With frozen mix in the machine, select the Beater mode on the front touch pad by pressing the Push to Select button (#571.2) until pilot light #L4 illuminates. Allow the machine to operate in the beater mode for 4 to 5 minutes. This will soften the product and allow for easier product removal.



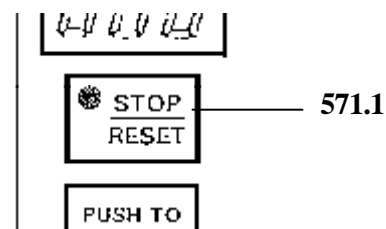
Remove the gravity feed tube assemblies from each mix tank by pulling straight up and out of each tank.



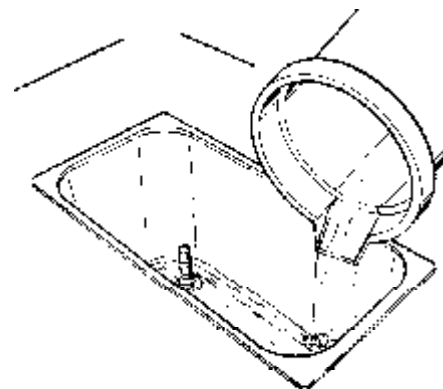
With the machine still in the Beater mode, place a pail under the dispensing head. Slowly pull the two end handles and allow all of the product to drain from the machine.



After the product has drained, press the Stop / Reset button (#571.1) on the front touch pad. This will turn the machine to the OFF mode.

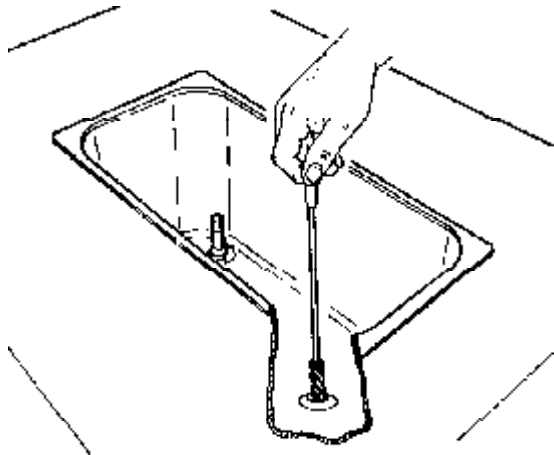


Fill each mix tank with luke warm (80-90F) water and a non-foaming dish washing detergent solution.

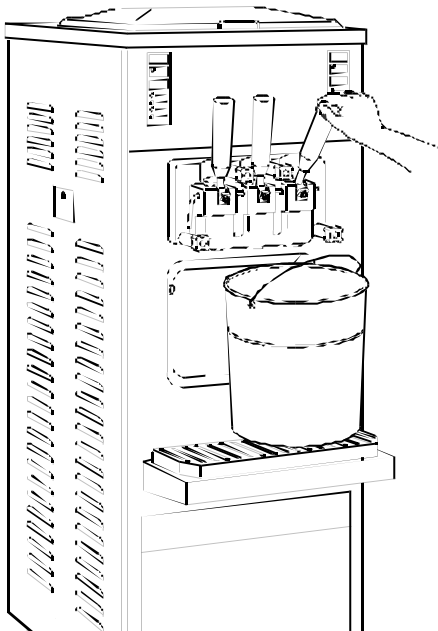


Press the Push to Select button on the front touch pad (#571.2), and carefully select the Beater mode. Allow the machine to run for 1 – 2 minutes then push the Stop / Reset button (#571.1) on the touch pad. Drain all of the water and soap solution from the machine. Repeat this process until the water drained is clear.

Prior to draining the last time, brush clean all surfaces of the mix storage tanks with the cleaning brushes provided with the freezer.



Drain the remaining water and soap solution from the freezer.



You are now ready to disassemble and clean your freezer. Please refer to Part III – Initial Cleaning Procedure of this operation manual for instructions on how to proceed.

!! IMPORTANT !!

You MUST disassemble the machine after draining and follow the described cleaning and sanitizing procedures as described in this operation manual in order to maintain acceptable hygienic levels in your product.

Part IX – Technical Information

A) Refrigeration:

Compressor – Hermetic / Low Temperature
 Suction Pressure (Cylinder) – 18-20 psig.
 (Mix Tank) – 20-25psig.
 Discharge Pressures – 250 to 260psig.
 Refrigerant Type – R-404A ONLY
 Cooling Type – Air or Water
 Cylinder valve type – TXV w/equalizer
 Mix tank valve type – AXV
 Refrigerant Charge- See Machine Data

Plate

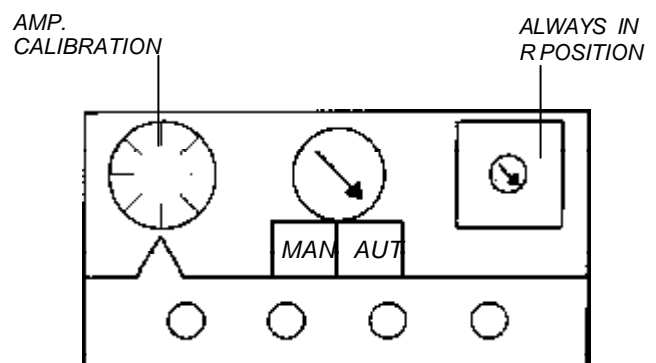
B) Beater / Auger Drive Motors

Motor Type – Leeson - ODP with C flange
 Beater Rotation-(facing front of freezer) - CCW
 Approximate H.O.T Amps – 4.8 single phase
 3.8 three phase
 Minimum Operating Voltage – 208 vac.
 Maximum Operating Voltage – 240 vac.

C) Thermal Overload

Overload Setting – 7.5 Amps (single phase)
 5.0 Amps (three phase)
 Overload Ranges – 5.0– 8.5 amps – single phase
 4.5–6.0 amps – three phase

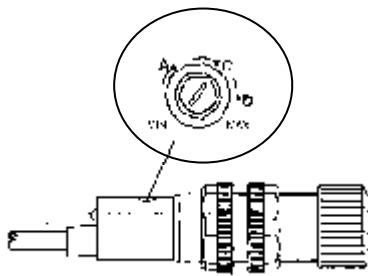
Thermal Overload – Calibrations and Settings (Top View)



C) Proximity Switches

The sensitivity of these switches can be adjusted with a small screwdriver. The trimmer location is on the switch body nearest the front panel.

To adjust the sensitivity, you must remove the switch from its bracket attached to the front panel. The adjustment screw should be turned very carefully either in a clockwise direction to increase the range or counter clockwise to decrease the range of operation. Each switch should operate independently of one another except when product is drawn from the center dispensing handle which should activate both motors.



Part X – Maintenance

Your Carpigiani freezer has been designed, engineered, and manufactured to achieve high performance and long durability. The life expectancy of any machine depends not only on the quality of engineering, and components used, but also on the basic maintenance procedures.

It is important for you to become familiar with a few of the basic operating procedures.

- Only remove orings with the oring extractor provided in the machine spare parts kit.
- Clean and sanitize the freezer in accordance with the instructions in this operation manual.
- Lubricate all orings and seals as instructed.
- The wearing or the improper cleaning of the beater shaft seals will result in product leakage into the rear of the machine. Check the side drip chutes frequently and replace seals when necessary.
- Replace any oring that is leaking or damaged.
- When all of the spare parts supplied in the spare parts kit are used, re-order immediately. Do not wait until the part is urgently needed or causes the machine to be inoperative without it.
- **NEVER** use the Automatic or Stand-By mode in the cleaning, sanitizing or initial filling of the freezer. This can damage the freezer and its components.
- During the washing, cleaning and sanitizing procedures, operate the machine in the BEATER mode as little as possible. This will minimize component wear on the freezer.
- When removing and installing the freezer parts, handle these with care. **DO NOT** drop or bang together as this will damage the parts and affect the freezers performance.
- **NEVER** use **HOT WATER** when washing, cleaning, or sanitizing your freezer or its parts. **ALWAYS** use luke warm water (80 - 90F).

!! IMPORTANT !!

If your machine is Air Cooled, its efficiency depends on a clean air cooled condenser. The fins of the condenser must be straight and cleaned a minimum of every two or three months. Prior to cleaning the air condenser, place the machine in the STOP or OFF mode and disconnect power to the freezer.

If your machine is Water Cooled, it is important that it is not stored at a temperature below 32 degrees F. Before storing at a temperature below 32 degrees you must remove all liquids from the freezer and winterize the water condenser coil. This should be performed by an authorized service technician to avoid damage to the freezer.

The following is a recommended wearable parts replacement schedule. This is for normal operation of the freezer and will vary based on the volume and type of product served as well as operational and cleaning procedures.

Replacement Schedule

Orings and Seals – Every 6 months or as needed
Drive Belts – Every 2 years or as needed
Plastic Parts - As need when leaking, scratched, or broken
Check Gearbox Grease Levels – Annually
Electrical Components – When malfunctioning.

!! IMPORTANT !!

Prior to opening any of the machines outer panels, place both sides in the STOP / OFF mode and disconnect the machines power supply. Failure to do so can result in serious injury and or death.

A) Trouble Shooting Guide – Gravity Fed Freezers

| Problem | Possible Cause | Suggested Solution |
|------------------------------------|---|---|
| 1) Product too soft | a) Drawing faster than the machine can produce b) H.O.T. control set too low for product c) Low on refrigerant | a) Slow down draw rate b) Set H.O.T. Setting to a higher value c) Contact Authorized Service Agent |
| 2) No product dispenses from head | a) No mix in mix tank b) Gravity feed tube setting too small | a) Add Mix to mix tanks b) Open the feed tube setting to a larger hole opening |
| 3) Low product overrun | a) Defective / leaking oring on feed tube b) Gravity feed sleeve open too wide | a) Replace all orings on feed tubes b) Adjust the outer sleeve to a smaller opening |
| 4) Machine will not start | a) No power to the machine b) Alarm #1 (RTA) on display monitor c) Control pad does not function d) Alarm #9 (IMS) on display monitor e) Power to the freezer but no functions work | a) Check plug, disconnect, fuses or breaker for the machine b) Motor has drawn excessive amps, press Stop/Reset on touch pad. c) Contact a Carpigiani Authorized Service Technician d) Assemble dispensing head on freezer or Contact Service Tech. e) Contact a Carpigiani Authorized Service Technician |
| 5) Machine Runs Continuously | a) Restricted air flow (Air Cooled) b) Low on refrigerant c) H.O.T. setting too high for product used e) Not enough mix in cylinder to reach H.O.T. | a) Clean air condenser or contact a Carpigiani Authorized Service Tech. b) Contact a Carpigiani Authorized Service Technician c) Set the H.O.T. setting to a lower value e) Open feed tube and allow more mix in the cylinder |
| 6) Machine will not Freeze product | a) Restricted air flow (Air Cooled) b) Low on refrigerant c) Compressor not functioning d) Insufficient power supply (low voltage) e) Insufficient water flow (water cooled) | a) Clean air condenser or contact a Carpigiani Authorized Service Tech. b) Contact a Carpigiani Authorized Service Technician c) Contact a Carpigiani Authorized Service Technician d) Contact a Carpigiani Authorized Service Technician e) Contact a Carpigiani Authorized Service Technician |

B) Machine Safety Alarms

This freezer is equipped with built in, self monitoring (Safety) devices, which will interrupt operation of the freezer if activated. When activated, the little red LED light at the bottom right corner of the display monitor will illuminate and flash. (refer to Figure 12)

This LED will flash when the alarm has been activated. It will stop flashing, but remain lit when the machine has reset and resumed operation. To deactivate the LED, press the Stop / Reset button on the touch pad. An alarm code will display (AL1 through AL9), press the Stop / Reset button again and the LED light should go out.

ALARM CODES

| Alarm # | Description | Call Technician |
|-----------|--------------------------|--|
| AL1 (rta) | Motor overload tripped | No- Press Stop / Reset Yes if not resetting in 10 minutes |
| AL2 (te2) | Secondary cylinder probe | Yes if not resetting |
| AL3 (te1) | TE1 Probe out of order | Yes if not resetting |
| AL5 (tev) | Mix tank probe out | Yes if not resetting |
| AL6 (tec) | Cylinder probe out | Yes if not resetting |
| AL7 (tgv) | Tank display probe out | Yes if not resetting |
| AL8 (Ice) | Cylinder too cold | No- Allow more mix to enter the cylinders |
| AL9 (Ims) | Dispensing head switch | No- Install dispensing head or Yes if not resetting |

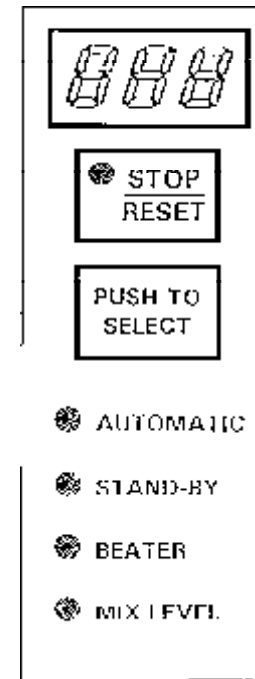


Figure 12