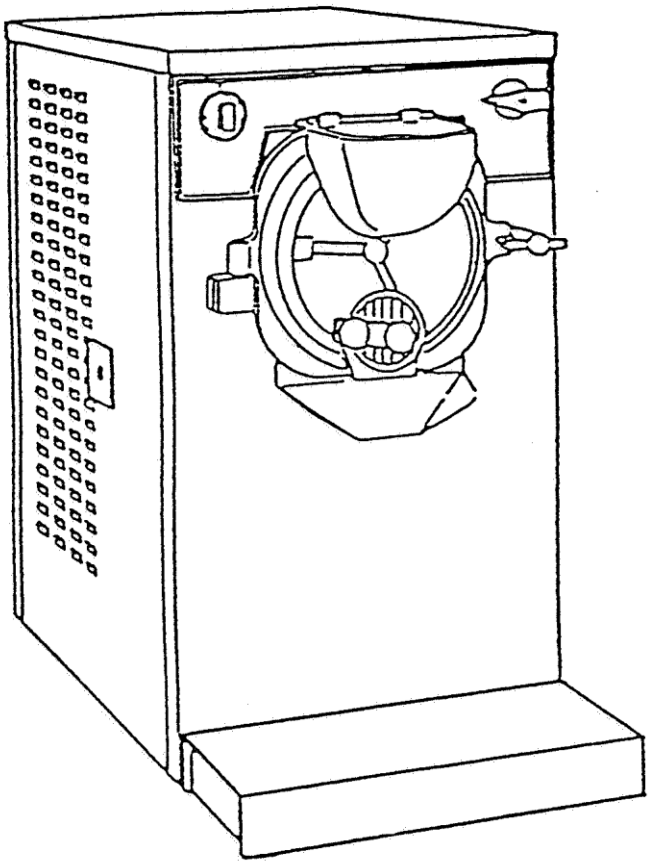
CARPIGIANI
CORPORATION OF AMERICA
technology for a sweeter world



LB 1OO/B

BATCH FREEZER

OPERATION and SERVICE MANUAL

CARPIGIANI CORPORATION OF AMERICA

3760 INDUSTRIAL DRIVE - WINSTON-SALEM, N. C. 27105 - PHONE 336-661-9893 FAX 336-661-9895

FOREWORD

Thank you for selecting CARPIGIANI to meet today's fast growing demands. Your CARPIGIANI freezer has been manufactured at one of the most modern freezer manufacturing plants in the U.S.A., our Winston-Salem, North Carolina facility, utilizing the most advanced equipment and technology available in the industry. We at CARPIGIANI, take great pride and care in the manufacture of each and every freezer, using only the finest components available, to provide you with years of trouble-free operation.

Over twenty-five years of experience in the manufacturing of dispensing equipment have guided us in the preparation of this Operation and Service Manual. PLEASE READ IT CAREFULLY.
Keep it for future reference and most of all, follow the instructions from the very time your machine is put into service.

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

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IMPORTANT
Failure to closely follow set-up, 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 maintained.

In the event this unit should malfunction, please contact your Carpigiani Distributor or authorized service agency.

PART I
INSTALLATION

Before starting this procedure, make certain the shipping case does not show any evidence of having been dropped, tampered with or abused in such a way as to indicate that its contents may have been damaged in transit.

IMPORTANT:
Should the outside of the shipping case give any indication of possible hidden damage, state this on the bill of lading before signing. Contact the carrier immediately and request an inspection of the damage. lf this procedure is not adhered to, you will forfeit your right to file a damage claim and be responsible for subsequent repair costs.

A) UNCRATING

Proceed as follows:

1. Remove the machine from its carton and remove all protective crating material.

2. Remove the single screw at the bottom of each side panel. Remove the side panels by pulling in a downward and outward direction, allowing the panel to slide free. The protective plastic coating which is laminated to the panels can now be removed by simply peeling off.

B) POSITIONING THE MACHINE

1. The machine is now ready to be positioned onto your counter. The counter must be capable of supporting 225 lbs., and should be vibration free. Reinforce it if necessary. Remember, when choosing a location, your unit is air cooled, proper air flow will need to be maintained. Allow at least six (6) inches on either side and a minimum twelve (12) inches between the rear of the machine and any obstruction. (Ref. Fig. 1)

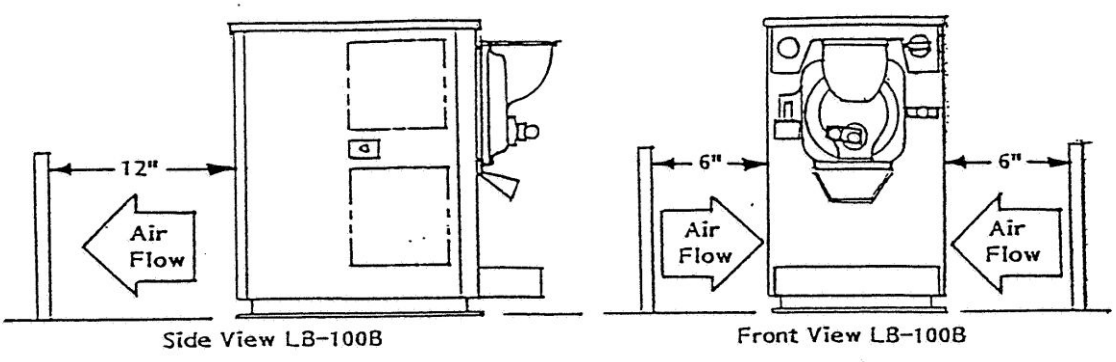


FIGURE 1

Clearances Required For Proper Air Cooling

NOTE:
If these clearances are not maintained, the production capacity will be reduced, cycling will increase and the potential exists that the machine will stop immediately.

2. The machine should be within four feet of the power supply outlet.

3. Position the machine for easy accessibility when cleaning, servicing and performing routine maintenance.

4. Position the machine away from direct sunlight. For every 2° F above 68° F, the machine's performance will decrease by approximately 1%.

5. Once the machine is set in position, it should be levaled as accurately as possible.

C) ELECTRICAL REQUIREMENTS

All wiring installed to operate this freezer must be in accordance with the National Electrical Code and/or local electrical codes, rules and regulations. The machine must be properly grounded. It is recommended the power supply be installed by a licensed electrician.

VOLTACE LB 1OO/B: 208-230 Volts
FUSE SIZE: 25 AMP Max
MIN. CIRCUIT AMPACITY: 15A

POWER SUPPLY must be adequate to meet requirements at all times.
Voltage configurations, with the machine in operation, should not exceed = 10% of the normal or rated voltage.

The model LB 100/B requires a 208-230 Volt, 60 Hertz dedicated circuit (no other electrical appliances on the circuit). A separate circuit breaker rated at 15 AMPS is required.

ADEQUATE WIRING must be provided with respect to wire size or gauge. This includes the direct power line to the machine electrical and connection box.
Carpigiani batch freezers are equipped with protection for the beater motor. Should the line voltage drop, or in the un1ikely event a short circuit occurs, the overload protector will automatically disconnect the contactor. This will stop the machine immediately so that no permanent damage will be caused to the motor.

To restart the freezer, depress the reset button which is accessible through an opening at the lower right corner of the right side panel. The protector must cool for several minutes before the reset will operate (Ref. Fig. 2).

The compressor is internally protected. lf the Klixon protector trips due to an overload condition, the compressor will stop and automatically restart once the protector has cooled for several minutes.

D) ELECTRICAL CONNECTIONS (REF. FIG. 5).

Having removed the right side pane!, the machine's electrical component/ wiring connection box can be located at the lower right corner. Remove the electrical connection box cover.

The power line is first passed through the access hole located at the bottom right rear of the machine The line is then passed upward through the access hole in the bottom deck directly into the electrical connection box. The power line may now be connected to terminals L1 and L2. Use appropriate electrical wiring hardware and connectors as governed by electrical codes.

In all installations, the machine MUST be properly grounded. Adequate ground continuity is assured by running and securely fastening a ground line (conductor) to the ground lug located in the electrical connection box.

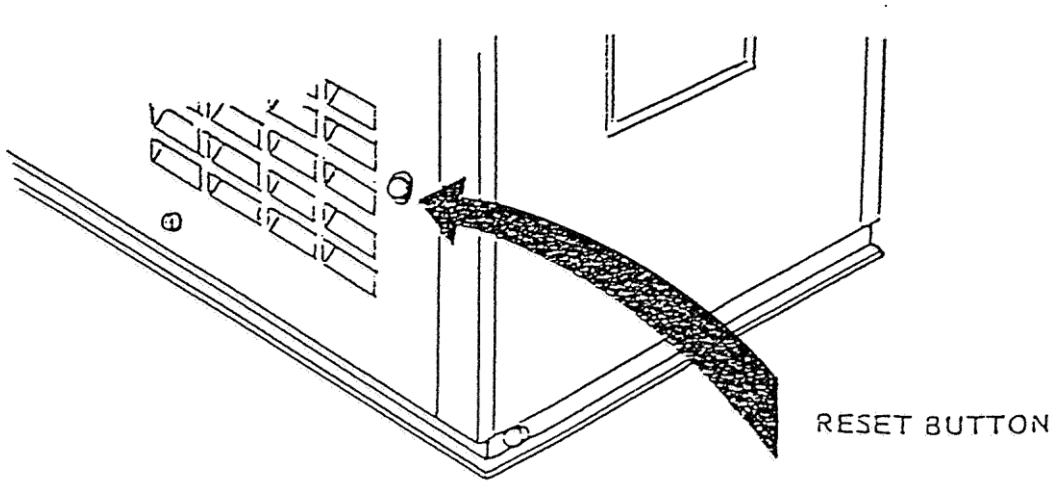


FIGURE 2
E) COMPLETING THE INSTALLATION

Sanitary regulations may require that the counter model machine be sealed to the counter top. To seal, proceed as follows:

1. Clean the counter top thoroughly to remove any dirt, dust, etc.

2. Clean the lower rim, or bottom flange of the machine base (Ref. Fig. 3).

3. Apply a bead (approx. 1/4" wide) of General Electric RTV102 silicone sealant (or equivalent) to the bottom surface of the base.

4. Place the machine on the counter in the location chosen.

5. Remove any excess sealant by slowly running a flat edged tool (spackling tool) around the flange of the base frame. This will create aseamless joint between the frame and the counter top (Ref. Fig. 3).

6. Allow sealant to dry thoroughly (refer to sealant manufacturer's directions) before operating the machine.

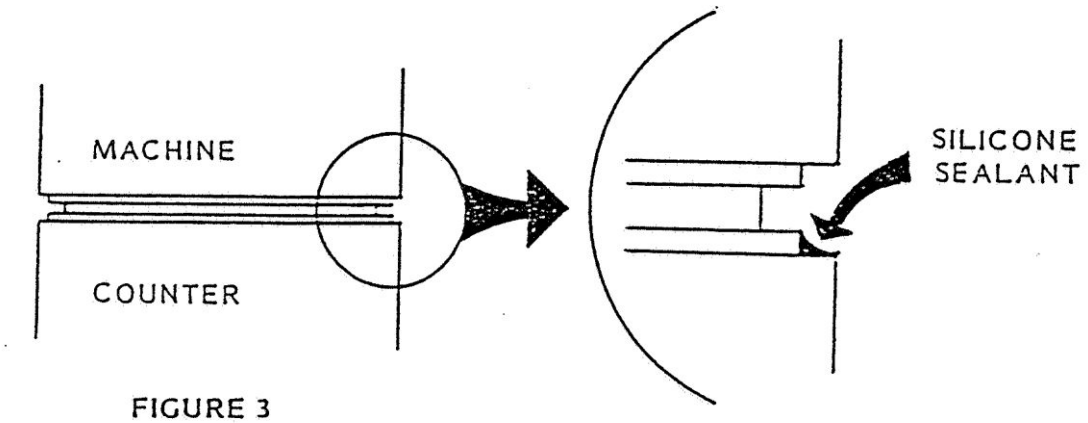


FIGURE 3

PART II
EXPLANATION OF CONTROLS

All operator controls are conveniently located at the front of the machine. (Ref. Fig. 4).

A) THE SELECTOR SWITCH

The selector switch is a four position, four function switch. The positions of the switch (Ref. Fig. 4) along with respective functions are as follows:

1. 0FF - The machine does not operate in this position.

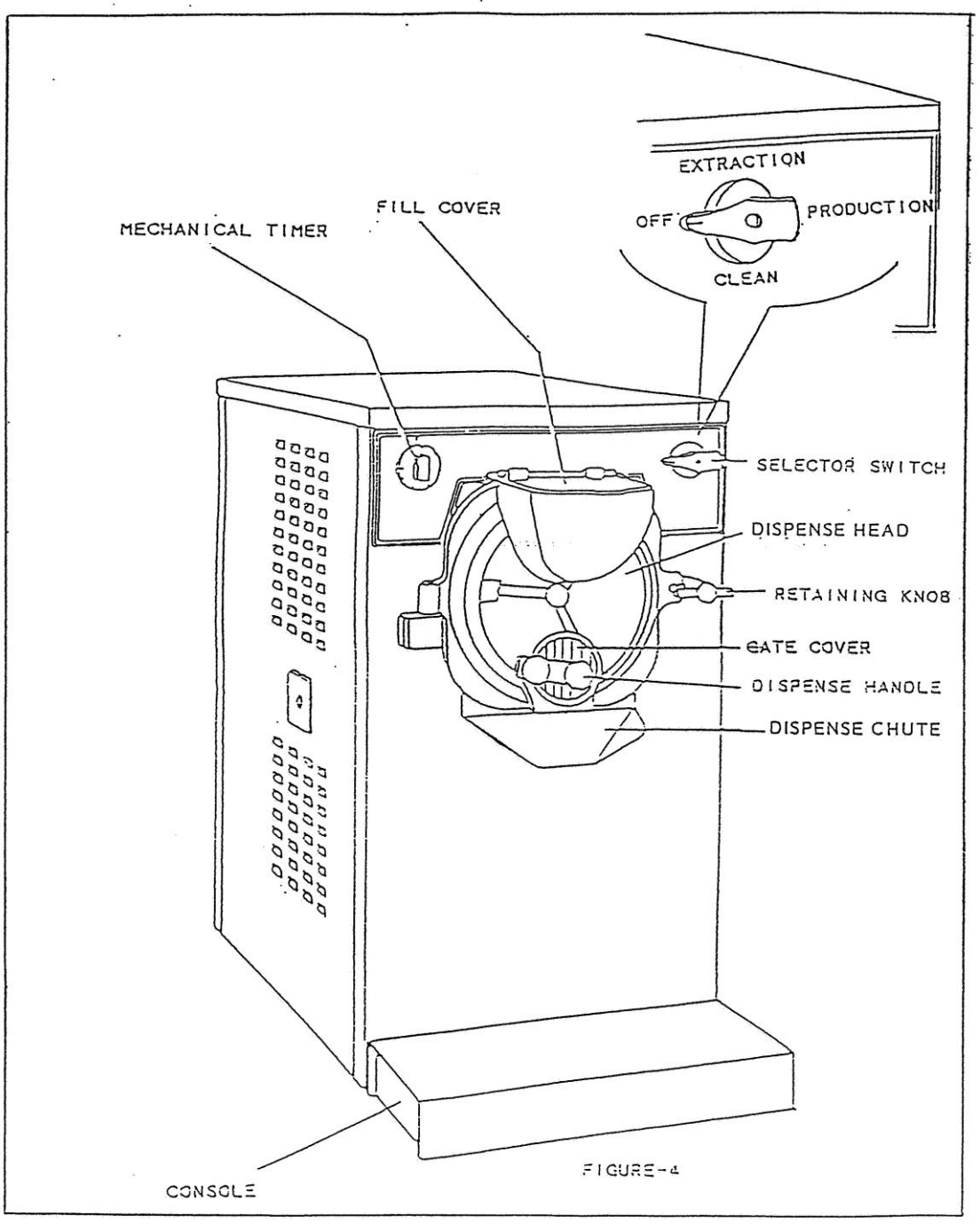


FIGURE-4

2. PRODUCTION - This position is used to freeze the mix ingredients to a finished product. Both compressor and beater are in operation.

3. EXTRACTION - This position is used for dispensing of frozen, finished product. The beater is in operation and the compressor is inactivated.

4. CLEAN - This position is used for cleaning and sanitizing procedures. Only the beater motor is activated in this mode. All refrigeration circuits are de-energized.

B) MECHANICAL TIMER (Ref. Fig. 4)

The mechanical timer is a device for setting the minutes required to produce a batch of finished product. At the end of the freeze cycle the timer will signal and audible reminding the operator the production cycle, finished product, is completed. The timer is a reminder only and does not turn off the machine. The timer will be discussed in detail in Part VI, Starting The Machine.

C) DISPENSE HANDLE (Ref. Fig. 4)

Moving the dispense handle in an upward direction raises the gate cover for dispensing finished product. A downward motion closes the gate.

D) ELECTRICAL CONTROL PANEL (Ref. Fig. 5)

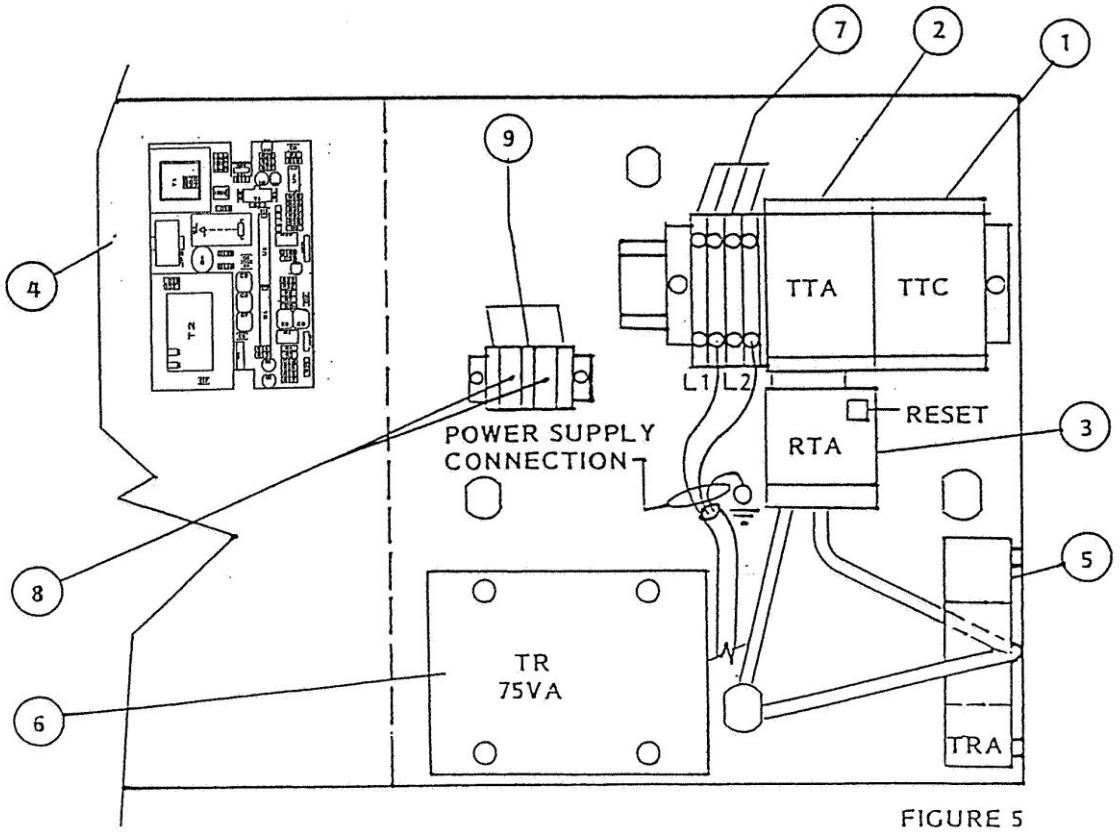


FIGURE 5

The Electrical Control Panel, located behind the right hand side panel and in the lower right corner, contains the components for the machine controlling circuit. This panel is to be accessed only by trained, experienced technicians.

WARNING!
DISCONNECT FREEZER FROM THE SOURCE OF ELECTRICAL SUPPLY BEFORE ATTEMPING TO SERVICE.

The following is an explanation of the control panel components:

1. COMPRESSOR CONTACTOR - Activates the refrigeration compressor. When the machine is operated in the PRODUCTION mode, the compressor contactor will be energized by the electronic Hard-O-Matic control (H.O.M.).

2. BEATER MOTOR CONTACTOR - Activates the beater drive motor. The beater motor contactor is energized by the selector switch when either in the PROOUCTION, EXTRACTION or CLEAN MODES.

3. OVERLOAD PROTECTOR - Senses the current (amperage) supplied to the beater motor. In the event of a current overload, the protector will trip and stop the entire machine. The trip AMPS have been pre-set at the factory and are indicated on the control panel cover. This device also contains the overload reset mechanism. lf reset is required, position the selector switch to the 0FF position before pushing the reset button. Return selector switch to the desired mode.

4. ELECTRONIC HARD-O-MATIC (H.O.M.) - Automatically senses and controls product consistency when the freezer is operating in the PRODUCTION mode. Depending on signals received from the beater drive motor, the H.O.M. activates or stops the refrigeration system to maintain pre-set product consistency.

5. CURRENT TRANSFORMER - Monitors beater motor current characteristics and provides signal to H.O.M.

6. TRANSFORMER (MAIN) - Steps down the primary 208-230 line voltage to 24 volt secondary supply for the control circuit.

7. TERMINAL BLOCKS (208-230Volt) inter-connection point for high voltage components, I.E. compressor, main transformer, beater motor, and condenser fan motor. Also, used to connect power supply wires

8e9 TERMINAL BLOCKS (24 Volt) - Serves as the interconnection point for all 24 volt controlling circuit components.

E) OTHER CONTROLS

1. HIGH PRESSURE CUT-OUT CONTROL- Located on the right side of the freezer's upper left corner, and is installed into the compressor discharge line (high pressure side). In the event of a high pressure condition, it will shut down the compressor. Reset is automatic when the high pressure subsides. A common cause for cut-out is restricted air flow through the condenser coil.

2. SAFETY SWITCH DISPENSE HEAD - The switch is located behind the front panel and is a normally open switching device that is mechanically activated to the closed position when the dispense head is securely closed and latched with the retaining knob. Should an attempt be made to open the dispense head during freezer operation, the switch automatically opens de-energizing the machine.

PART III
INITIAL CLEANING PROCEDURE

The new machine must be completely disassembled, washed, and sanitized prior to starting. Proceed as follows:

1. Remove the items packaged with the freezer, (spare parts or start-up kit, sample sanitizer, and sanitary lubricant).

   THE SPARE PARTS OR START UP KIT will include; a complete set of replacement o-rings and rubber seals, o-ring extractor, cleaning brush, a tube of sanitary lubricant, four sample packages of sanitizer, a spatula, and the operation and Service Manual.

   HELPFUL SUGGESTION:
   Before proceeding with the disassembly of the freezer, it is recommended that a plastic dish pan be used in which to place the parts. This will minimize the possibility of misplacing or damaging the various component parts.

2. Proceed with the disassembly by removing the dispense head (Ref. Fig. 6).
   Grasp and pull the retaining knob outward. Rotate the knob clockwise one quarter turn to unlatch the dispense head.
   Swing the dispense head open and lift upward removing it from the hinge pin.

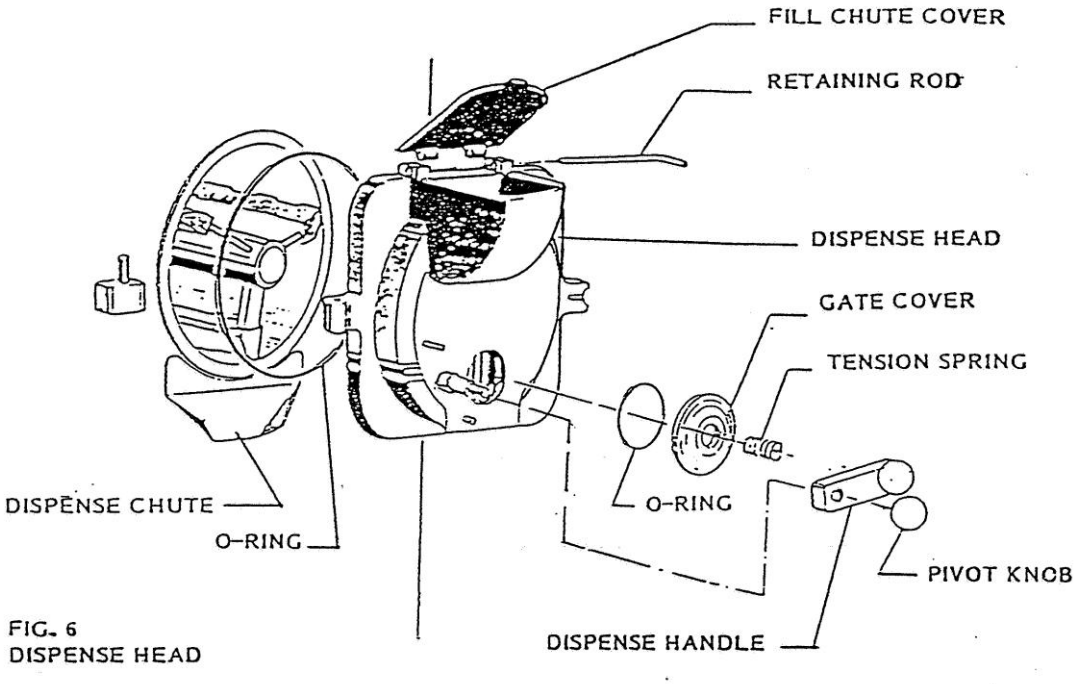


FIG. 6
DISPENSE HEAD

3. Further disassemble the dispense head by removing the fill cover retaining rod and the plastic fill cover.
   To remove the dispense handle and gate cover, carefully unscrew the dispense handle pivot knob at the left and slowly pull the handle forward releasing the handle, tension spring and gate cover.

4. Remove the beater from the freezer cylinder with a straight and forward pull. Slide the rubber beater shaft (hp) seal off of the beater shaft.

5. Using the O-RING EXTRACTOR, remove the large o-ring from the back of the dispense head, and the gate cover o-ring.

6. The machine is now completely disassembled. The parts will be washed, rinsed and sanitized. (Ref. Fig. 7).

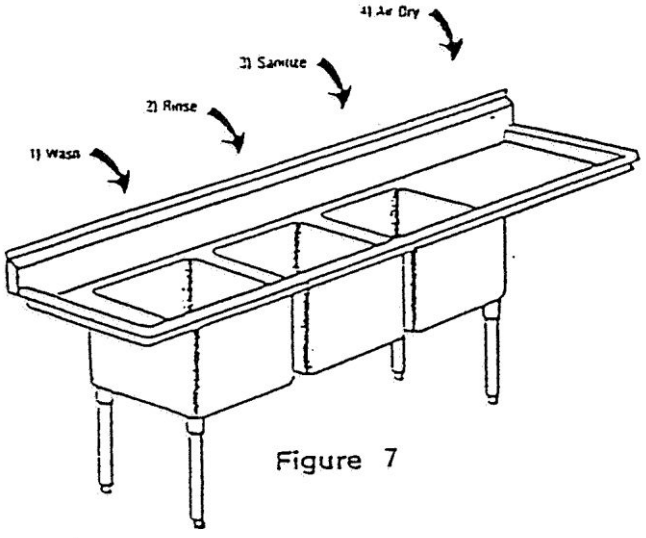


Figure 7

7. Wash the removed machine parts in luke-warm water (80^0-90^0F) and mild non-foaming detergent. Scrub each of the parts with the cleaning brushes provided in the machines spare parts kit.

DO NOT USE HOT WATER FOR PROCESSING ANY OF THE PLASTIC PARTS AS DAMAGE TO THE PARTS CAN RESULT.

8. Using your three-tank sink, wash rinse, and sanitize all of the disassembled machine parts. Mix the sanitizing solution to a 100 ppm 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 sin. Do not towel or sponge dry these parts.

9. The cylinder walls must also be washed and rinsed using luke warm water (80°-90°F), mild detergent, and followed by wiping with sanitized water. Allow cylinder to air dry or reassemble wet.

PART IV
ASSEMBLING THE FREEZER

Once the cylinder and parts have been washed, rinsed and sanitized, the freezer is ready to be re-assembled. Prior to beginning the reassembly procedure, sanitize your hands by submerging in sanitizing solution. Re-assemble as follows:

A) ASSEMBLING THE BEATER

1. Lubricate and install the BEATER LIP SEAL. Using the sample sanitary lubricant included in the STARTUP KIT, lightly coat the front and back surfaces of the seal and slide the seal onto the beater shaft.

2. Insert the BEATER into the freezing cylinder. Hold the beater horizontal and slide it into the cylinder until it will go no further. Be sure the BEATER LIP SEAL is in place.

3. Rotate the BEATER until you feel the drive shaft engage and push the beater further toward the rear to properly seat.

B) ASSEMBLING THE DISPENSE HEAD (Ref. Fig. 6).

1. Begin by gathering all of the parts required to assemble the DISPENSE HEAD. These parts include: one (1) dispense head o-ring, dispense head, fill cover, fill cover retaining rod, gate. cover, gate cover o~ing$_1$ tension spring, dispense handle and retaining knob.

2. Install the o-ring into the gate cover o-ring groove. Lightly lubricate the o-ring with sanitary lubricant for free movement of the gate cover during dispensing.

3. Position the tension spring between the handle and gate cover recess and remount the handle onto the pivot stud. Install the white plastic retaining knob.

4. Re-attach the fill cover to the fill chute by inserting its retaining rod.

5. Install the dispense head o-ring into the o-ring groove located on the back side of the head. lubricate the o-ring with a light coating of sanitary lubricant.

6. Attach the DISPENSE HEAD to the freezer by guiding the head pivot onto the hinge pin.

7. Close the dispense head and latch into place with the retaining knob.

The machine is now completely assembled and ready to be sanitized.

PART V
SANITIZING THE FREEZER

Prior to starting the freezer with the product that will be served, the freezer must be sanitized.

Sanitizing the freezer is most important as the procedure retards the growth of bacteria and insures acceptable product test results when examined by local Health and/or Agriculture Departments.

The frequency of cleaning and sanitizing cycles must comply with local Health Regulations. If uncertain about the regulations in your area, contact the local Board of Health or Department of Agriculture.

To begin the sanitizing process, you will need a clean pail, wire wisk, and a soft plastic bristle brush.

1. 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 100 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 its effectiveness.

2. Lift the fill chute cover and pour the sanitizing solution into the cylinder until the solution rises in the fill chute.

3. Turn the selector switch to the CLEAN position for 30 seconds. The beater will run allowing the sanitizing solution to come in contact with all internal product contact areas. During the 30 second CLEAN period, the remainder of the one gallon of sanitizing solution should be added filling the fill chute.

4. Turn the selector to the OFF position.

5. Using a sanitized soft bristle brush, brush the dispense chute, the underside of the fill chute cover, and the sides of the fill chute that will come in contact with product. Close the fill cover. Allow the sanitizing solution to remain in contact with the product areas or three (3) to five (5) minutes.

6. Place a clean pail under the dispense chute and slowly raise the dispense handle and gate cover to drain the sanitizing solution from the cylinder.

7. Allow the sanitizer to drain completely. Close the dispense handle

HELPFUL SUGGESTION: When the sanitizer has stopped flowing from the dispense head, leave the dispense handle in the OPEN position and turn the selector switch to the CLEAN position for two to three seconds to assist in removal of the last bit of sanitizer.

DO NOT RINSE THE MACHINE WITH FRESH WATER AFTER THE SANITIZING PROCESS HAS BEEN COMPLETED AS THIS ACTION WOULD COMPLETELY NEGATE THE ENTIRE PROCESS

CAUTION:
It is recommended that the beater be turned as little as possible during the washing and sanitizing processes as excessive rotation can result in premature wear of beater blade surfaces.

PART VI
STARTING THE FREEZER

Only after the machine has been thoroughly cleaned and sanitized is the freezer ready for production of the initial batch.

You have the finest, fastest and most dependable freezer manufactured. Congratulations! You are now ready to make hard ice cream, sherbets, ices, gelato and more.

A successful retail business depends: entirely on the quality of the product it produces. Therefore you are urged to choose wisely only quality ingredients for the formulation of your frozen products. Please remember, inexpensive and inferior ingredients will result in a similar inferior product and a dissatisfied customer.

Please observe the following recommendations:

1. Make your mixes from high quality natural products or obtain from a reliable and trustworthy supplier.

2 Do not serve the product to the customer unless its quality and appearance are entirely satisfactory.

3. Be sure the machine is kept clean at all times.

4. In the event the freezer requires service, always contact an authorized CARPIGIANI Technician.

Batch sizes will vary depending on the mix ingredients, desired overrun, etc. Experience will be the teacher for judging the desired size of each batch For example, when making ices, a larger quantity of mix may be poured into the cylinder as the final finished batch will have less expansion due to minimum overrun.

The initial quantity of mix to be poured into the cylinder is a minimum of 1.7 quarts (54 oz.) and 2.2 quarts (70 oz.) maximum. As a guide, when charging the cylinder with mix, the horizontal mix level mark on the dispense head will indicate a fill of 1.9 quarts (60 oz.).

Prepare 1.7 to 2.2 quarts of liquid mix, approximately 38° to 42°F, in a clean, sanitized measuring container.

PART VII
OPERATING THE FREEZER

1. Pour the mix into the fill chute and dose the chute cover.

2. Set the timer to 10 minutes and the selector switch to PRODUCTION. (Ref. Fig. 4, Pg. 5).

3. Allow the machine to freeze the product to the desired consistency. The timer may produce an audible prior to or after the completion of the freeze cycle. The 10minute timer setting is an average. Exact timing must be arrived at based on the mix used; desired overrun and firmness, and the consistency control setting to be discussed in
   PART VIII TECHNICAL INFORMATION.

4. On the initial batch when the timer sounds at 10 minutes, turn the selector switch to EXTRACTION. Lift the dispense handle and draw the finished batch from the cylinder into a sanitized, cold container. After dispensing is complete return the selector switch to 0FF.

Note that the second batch will be made in a lesser time. Again, exact timing must be concluded based on the desired finished product characteristics.

When working with different flavours, plan the sequence of batches before hand. Example, always start with vanilla, possibly cherry vanilla, vanilla chip, followed by coffee, walnut or other light colored flavours. Naturally, chocolate would be the final flavour dispensed.

Always remember to use quality ingredients. Producing quality ice creams, ices or sherbets will guarantee a superior product and a happy customer.

PART VIII
TECHNICAL INFORMATION

A) REFRIGERATION

Compressor: Hermetic, 1,7 H.P., R404 Refrigerant
Voltage: 208-230 Volt, Single Phase, 60 Hertz
Suction Pressure: 18 PSI
Discharge (Head) Pressure: 255 PSI
Cooling System: Air
Refrigerant Charge: 1,25 lb

B) BEATER MOTOR

Voltage: 208-230 Volt, Single Phase, 60 Hertz, 1 H.P.
H.O.M: Cut-out Amperage 4.9
Overload Cut-out Amperage 5.6

1. Adjusting Batch Temperature

   The LB 1OO/B uses a Hard-O-Matic system which is referred to as H.O.M. This electronic device controls the refrigeration system for the freezing cylinder by 'sensing' the consistency or hardness of the product inside the freezing cylinder. No thermostats are used with this system.

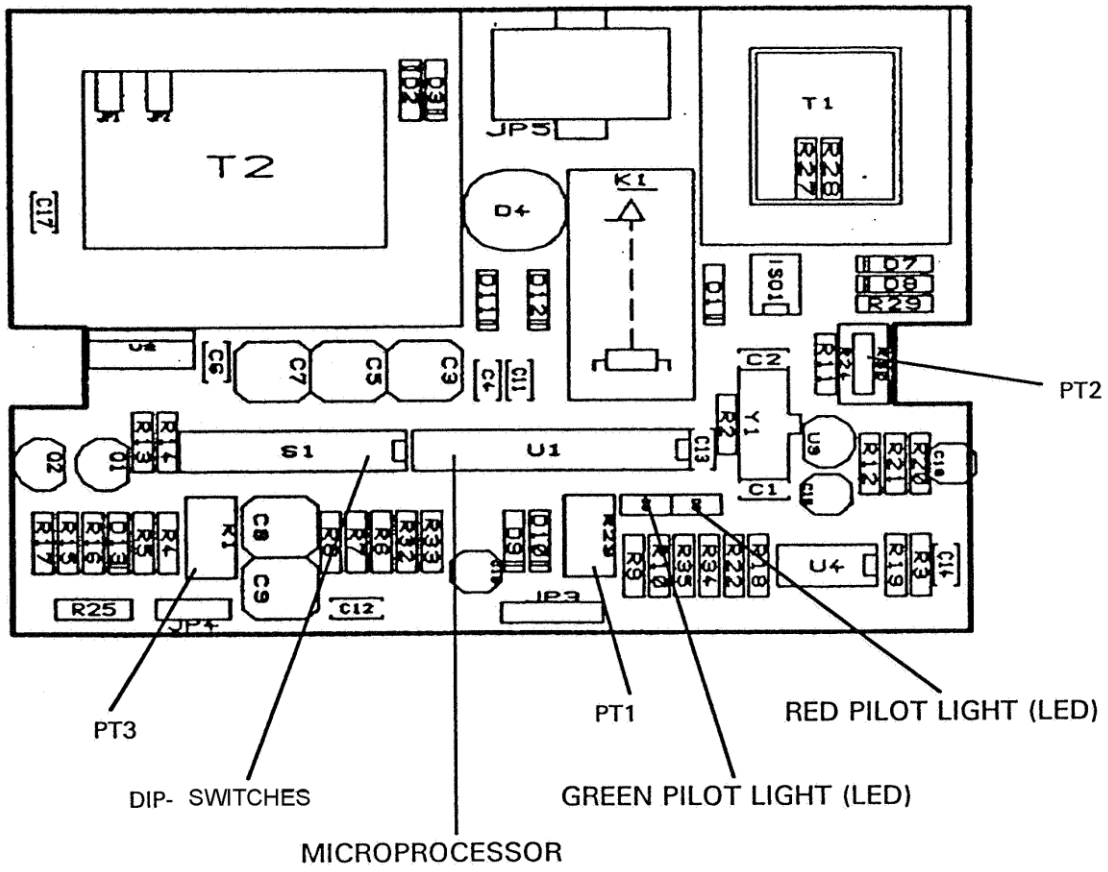
   The firmness of the batch product will depend on the setting of the H.O.M. electronic control.

   The compressor must cut off when the current, absorbed by the beater motor, reaches the amperage indicated on the label in the electrical control box (H.O.M. Cut-out AMPS). By using an ammeter and clamping around one leg of the power line feeding the beater motor, it is possible to read the amperage drawn by the motor. Factory set cut-out is 7.6 AMPS.

2. Electronic Hard-O-Matic Control Adjustment

SETTING PROCEDURE

The HOM board includes 3 potentiometers PT1, PT2 and PT3, 2 pilot lights (LED), one red and one green, and 8 DIP SWITCHES (see FIG.1).



In order to set the HOM board, you must first configure the DIP SWITCHES according to the type of machine. See the table below.

Machine	DIP	1	2	3	4	5	6	7	8
	Voltage & Phase								
LB 100/B	208-230/1	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF

1. Check the Dipswitch position (see table 1).

2. Fill the cylinder with liquid mix and turn the main selector switch to the PRODUCTION mode.

3. Connect a clamp tester on a phase of the beater motor to read the current.

4. Set the machine in Production.

   PT1 Setting:
   Don't move it. Its position has no effect.

   PT3 Setting:
   Turn 20 turns clockwise

   PT2 Setting:
   It's the main setting of the HOM board; turning clockwise increases the current when the compressor cuts off.
   When the current of the beater motor reaches a value near the name plate value, turn the PT2 trimmer anticlockwise until the red led shuts off and the green led lights on.
   Turn PT2 slowly anticlockwise until the compressor stops once you reached the 100% of the Beater motor name plate current.

P.S.:
If the compressor motor never stops it 's necessary to make 2 turns through the current transformer

C) DRIVE SYSTEM

The rotation of the beater is counter clockwise and is motivated by a belt drive system.

PART IX
MAINTENANCE

Your CARPIGIANI machine has been designed, engineered and manufactured to achieve high performance and long durability.

The life expectancy of a machine, any machine, does not depend only on the quality of its components and design, but also on the beneficial effects of basic procedures.

It is important to you, therefore, to become familiar with a few of these basic procedures:

1. Remove 'O' rings only with the 'O' ring extractor supplied with the machine.

2. Clean the machine according to the instructions.

3. Lubricate all 'O' rings and seals, as instructed.

4. The wearing or the improper cleaning of the beater shaft seal, will result in leakage from the rear. Check the drip tray frequently and replace the seal when necessary.

5. Replace any 'O' ring that has a nick in it. lf not replaced, it will leak and interfere with the proper performance of the machine.

6. When all the spare parts supplied with the machine are used, re-order immediately. Do not wait until the part is required again.

7. NEVER use the AUTO position for washing, sanitizing and initially filling the freezing cylinder.

8. IMPORTANT - During the washing and sanitizing period, run the machine only for time strictly necessary for this operation. Prolonged use of the beater in the Cleaning position may cause severe damage to the machine.

9. Always wash metal, plastic or rubber parts in lukewarm water. NEVER, NEVER USE HOT WATER.

IMPORTANT
As the model LB 1OO/B is an air-cooled machine, its efficiency depends on the air cooled condenser. The fins of the condenser must be cleaned every two or three months to assure efficiency.

WARNING
Extreme care must be taken when removing side, rear or control box panels.

Always turn the Selector Switch to the 0FF position. Also, turn off the Disconnect Switch on the electrical supply line before exposing any electrical connections and/or moving parts, such as belts, pulleys, fan blades and beater.

TROUBLE SHOOTING GUIDE

PROBLEM	POSSIBLE CAUSE	SUGGESTED REMEDY
1) Machine will not start	a) No power to the machine	a) Check circuit breaker, selector switch position, and power supply wiring
	b) Off on overload	b) Wait 5 minutes and push reset button
	c) Malfunctioning selector switch	c) Contact service agency
	d) Dispense head safety switch not energized	d) Check if dispense head is properly closed and if pin is activating the safety switch located behind the front panel
	e) Beater motor and compressor contactor not energized	e) Check if 24 volt transformer is operating properly
2) Product too soft	a) H.O.M. control out of calibration or malfunctioning	a) Contact authorized service agency
	b) Machine low on refrigerant	b) Contact authorized service agency
	c) Insufficient freezing time	c) Increase freezing time
3) Product too hard	a) Freezing time too long	a) Check for proper freeze time and the H.O.M. setting
4) Machine will not freeze	a) Restricted air flow	a) Remove obstruction or restriction
	b) Compressor not working	b) Contact authorized service agency
	c) System refrigerant low	c) Contact authorized service agency
	d) Malfunctioning H.O.M.	d) Contact authorized service agency
	e) Malfunctioning contactor	e) Contact authorized service agency
	f) Insufficient power supply	f) Contact authorized service agency
5) Compressor will not start	a) Low line voltage	a) Check power supply voltage. Determine voltage drop
	b) Open starting capacitor. Relay contacts not closing	b) Replace start capacitor. Replace defective relay
	c) Off on high pressure	c) Clean condenser. Refrigerant over-charge
6) Compressor operates long or continuously	a) Shortage of refrigerant	a) Repair leak and recharge
	b) Dirty condenser	b) Clean condenser
	c) Location too warm	c) Change to cooler location
7) Burnt rubber odour	a) Product in cylinder frozen too hard	a) Refer to H.O.M. adjustment
	b) Drive belt slipping	b) Tighten belt
8) Mix dripping from dispense head	a) Damaged or worn o-ring	a) Replace suspect o-ring
9) Mix dripping from side overflow drip tray	a) Damaged or worn beater seal	a) Replace beater seal