

DONPER^{USA}

COMMERCIAL FROZEN DRINK MACHINE

USER MANUAL

SAFETY PRECAUTIONS

It is important to comply with all of the following safety precautions or severe personal injury or damage to the machine may occur.

1. Prior to operating the machine, every operator must read and understand the operating instructions in this manual. If any potential operator does not understand any instruction in this manual, they should not operate the machine. Please call Donper USA's tech support line for any questions on the content of this manual.
2. It is important to observe all warning labels on the machine. If any warning labels are missing or damaged, replace them immediately.
3. Do not wear loose fitting garments or jewelry when operating or servicing the machine as these items may become attached to moving components of the machine and may cause serious bodily injury.
4. Stay alert at all times during operation of the machine.
5. Keep operating area near the machine clean and dry to avoid accidents and possible bodily injury.
6. Do not attempt any repairs or service until the main power supply to the machine has been unplugged.
7. Do not put objects or fingers in the dispense valve aperture as serious bodily injury may occur.
8. Do not operate machine if any excessive noise or vibration occurs. Contact your authorized service agent when any unusual noise or vibration begins and do not operate the machine until the service agent has repaired the machine.
9. Be certain the machine is installed with adequate space for proper air circulation, as failure to provide sufficient ventilation will reduce machine performance and void the machine warranty.



MACHINE APPLICATION AND SPECIFICATIONS

Model XF124

The machine consists of a freezing cylinder with a rotating internal auger or beater bar that is belt-driven by an electric motor. The auger has plastic scraper blades that scrape frozen product off of the inside of the refrigerated cylinder walls. The consistency or thickness control in the XF124 is a very reliable mechanical control system, whereby a torque sensing assembly on the drive motor determines when the cooling compressor should be turned off to maintain desired product consistency. A self-closing dispensing valve is attached to the front of the freezing cylinder and this valve assembly is transparent to allow the user to view the product in the freezing cylinder. The unit has an adjustable consistency control inside the right side panel of the machine (which should not be adjusted with the machine on or plugged in) and a mix low indicator light on the front of the machine to alert the user when more mix should be added to the hopper machine. The hopper of the machine is refrigerated to precool the product before it goes into the freezing cylinder so that your freeze and recovery times will be shortened. When properly maintained and operated, the XF124 will provide many years of service. Proper care includes regular cleaning and maintenance. To minimize the amount of maintenance necessary, follow the operating procedures outlined in this manual.

Product Tips

The XF124 was designed to dispense a wide variety of frozen beverages including frozen margaritas, daiquiris, fruit juice, lemonade, slushes, and other frozen cocktails. These products can be served in consistencies ranging from thin to fairly thick. A red spring is used on the drive motor to adjust product consistency to serve thin to medium products. The yellow spring is used for thicker products. The spring is located next to the drive motor behind the right side panel. Over an extended period of time, some products, such as frozen cocktails that contain alcohol, have a tendency to separate or stratify in the machine hopper. Separation of product in the hopper can result in frozen product quality inconsistency, so it is advised to stir the mix in the hopper occasionally to eliminate product separation.

Contact your local health department regarding its regulations for proper mix handling and storage.

Feed Tube

The XF124 uses a metering device, known as a feed tube, to feed a ratio of liquid mix and air into the freezing cylinder, and to reduce the frozen product rising out of the freezing cylinder back into the hopper.

Product Mix

Freezing characteristics are affected by the amount of sweeteners, solids, and alcohol in the mix. The amount of sweeteners and solids is called BRIX and can be measured with a refractometer. A BRIX reading of between 11 and 16 will provide optimum machine operation. Mixes with this BRIX level will freeze down to a smooth, uniform consistency. Mixes with a BRIX measurement above 16 may take longer to freeze and may be soft and/or wet in consistency when dispensed. Mixes with a BRIX level below 11 may have larger ice crystals and may dispense slower than usual. Alcohol content also affects product freezing characteristics, as a higher alcohol content lowers the freezing temperature of the mix and may prevent the machine from cooling the mix to the temperature where the mix will be at the proper thickness. For maximum output capacity, pre-chill mix before adding it to the machine. Pre-chilled mix reduces the cooling system workload and speeds the initial freeze time. It is normal for output capacity to decrease when warm mix is added or when the machine is operated in a warm or humid location.

Machine Specifications

Dimensions (H x W x D)	26.5" x 13" x 29" (67 cm x 33 cm x 74 cm)
Electrical	115V / 60Hz / 1 PH Dedicated 15 Amp circuit
Circuit NEMA #	5-15R
Drive Motor	1/2 hp,
Compressor	3/4 hp
Cooling	Air-cooled
Actual Weight	175 lbs (79.4 kg)
Mix Hopper Capacity	5 gallons (18.9 liters)
Freezing Cylinder Capacity	1-1/2 gallons (5.7 liters)
Refrigerant	R404a

INSTALLATION

1. Place the XF124 on a level counter that is stable and strong enough to safely support the machine's full weight with mix in it (typically 250 lbs).
2. Make sure machine is to be placed in a location that is within 6' of a properly grounded circuit and allows adequate space (at least 6 inches) on each of the left, right, and back sides of the machine for proper air circulation.

NOTE: Failure to allow adequate ventilation will substantially reduce the machine's performance, may cause damage to the machine, and may void the warranty due to improper operation of the machine.

NOTE: Locating the unit in high ambient temperatures (over 90°F) will reduce the performance of the machine.

3. Reverse the position of the dispense valve handle. During shipment the handle is positioned close to the unit to prevent damage. Remove the pin on the dispense valve and rotate the handle in the dispense valve half a turn. This will position the end of the handle away from the machine about 4 inches. Replace the pin in the dispense valve and the valve is ready for use.
4. Be sure ON-OFF-CLEAN switch (toggle switch located underneath the lighted sign on the left front side of the machine) is in the "OFF" position.
5. Connect the power cord directly to a properly grounded 120V/60Hz, 20 Amp DEDICATED circuit. No other equipment should be on the same circuit as the XF124.

DO NOT USE AN EXTENSION CORD TO POWER THE XF124 OR DAMAGE TO THE MACHINE MAY OCCUR DUE TO THE VOLTAGE DROP IN THE EXTENSION CORD.

DO NOT MODIFY THE POWER CORD OR PLUG IN ANY WAY OR SEVERE BODILY INJURY CAN OCCUR.

ONLY OPERATE THE MACHINE ON A 3 PRONG GROUNDED PLUG OR SERIOUS BODILY INJURY MAY OCCUR.

RUNNING THE XF124 ON AN INADEQUATE POWER SUPPLY OR OTHERWISE NOT COMPLYING WITH THE REQUIREMENTS OF THIS SECTION WILL CAUSE DAMAGE TO THE MACHINE AND WILL VOID THE WARRANTY.

6. Pour liquid mix into the hopper.
7. Insert the feed tube in the hopper hole (if desired).
8. Turn the power switch to the ON position to begin freezing the mix.

OPERATION AND ADJUSTMENTS

How to Operate

1. Sanitize unit before use.
2. Fill the mix storage hopper and
3. Turn power switch to "ON" position.
4. Allow product to freeze in barrel. Compressor will turn off when product reaches pre-set consistency.
5. To dispense product pull down valve handle and release when done.
6. If product consistency is not as desired, adjust per the instructions herein.
7. Refill mix storage hopper when "mix out" light is ON.
8. Clean the unit regularly following local health codes.
9. Perform maintenance when necessary to increase the life of the unit. See the chart in this manual for regular maintenance schedule.

Mix Low Function

1. The XF124 senses when mix is low in hopper. When the mix level in the hopper is low, the RED mix low light located in the front of the machine next to the valve block will illuminate red.

NOTE: Do not run the unit under mix low conditions for long periods of time. This can affect machine performance or damage components of the machine.

Consistency Adjustment

From time to time, it may become necessary to re-adjust the consistency or thickness of the XF124 to compensate for variation between different mixes or to switch from one type of product to another. This adjustment is made as follows:

1. Disconnect electrical power to the machine.

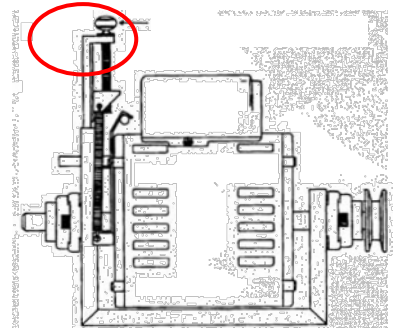
WARNING: DO NOT ATTEMPT TO ADJUST THE MACHINE UNTIL ELECTRICAL POWER HAS BEEN DISCONNECTED.

2. Remove right side panel (facing the front of the machine, the right side panel)
3. Use the adjustment screw, situated on the front of the drive motor mounting bracket to change product thickness. Turn the thumbscrew (3 full turns for red spring, 1 turn for yellow spring) to make a noticeable change in consistency

NOTE: Clockwise (when looking down at the top of the adjustment screw) is for thicker product consistency and counter clockwise is for thinner product consistency.

4. Reinstall the side panel, reconnect power.
5. Turn machine to "ON" and allow it to freeze to desired consistency.
6. Check product. Repeat process until desired consistency is achieved.

NOTE: When making changes to a thicker setting, recheck consistency again after the compressor has stopped cooling and has cycled off. When adjusting (counter-clockwise) to a thinner consistency, a large portion of product must be drawn from the dispense valve to reduce the product thickness below the new set point, and then allow the machine to refreeze product to the new setting, which may again be checked once the compressor has stopped cooling and the machine has cycled off.



CARE AND CLEANING

1. Cleaning and sanitizing frequency must be followed according to state and local health department regulations.

NOTE: Each time the machine is fully disassembled, all food zone machine components (all parts of the machine that come in contact with the product being dispensed) must be thoroughly washed and sanitized using procedures recommended by the local health department. In lieu of local health department recommendations, use a three compartment sink; one compartment to wash parts in detergent, one compartment to rinse, and one to sanitize.

Drain and Rinse

1. If the machine is empty, proceed to the Disassembly and Cleaning section below. If there is product in the machine, turn the front panel switch to "CLEAN" and drain the remaining mix from the machine by dispensing the product into a bucket from the dispensing nozzle.
2. Close the dispensing valve and turn machine to "OFF".
3. Remove the feed tube and pour water into the storage hopper. Allow the water to fill the freezing cylinder.
4. Turn the panel switch to "CLEAN" for 5 minutes.
5. Open the dispensing valve and drain the water from the machine.
6. Turn the machine "OFF".
7. Repeat steps 3-5 until the water drained from the machine is clear.

Disassembly and Cleaning

1. Disassemble the dispensing valve assembly.
2. Pull out valve handle retaining pin while supporting the valve plunger from the bottom. **Picture**
3. Push up on the valve plunger and remove the stainless handle. **Picture**
4. Slide the valve plunger and spring downward to remove. **Picture**
5. Remove knobs and carefully remove the front dispensing valve assembly, leaving the beater bar assembly in the cylinder.
6. Remove the O-rings from the plunger assembly and back of the dispensing valve body.
NOTE: To remove an O-ring, first wipe off all of the lubricant using a clean paper towel. Pinch the O-ring upward using a dry paper towel between your index finger and thumb. When a loop is formed in the O-ring, roll it out of the groove with your other thumb. Always remove the O-ring farthest from the end of the plunger first. Carefully inspect the O-rings and replace if necessary.
7. Remove the beater bar assembly from inside the freezing cylinder taking care to avoid damaging the rear seal assembly at the back of the freezing cylinder. Disassemble the beater bar assembly by removing the stator rod and front and rear stator rod bearings.
8. Slide the shaft seal off the beater bar shaft and inspect for damage.
9. Remove feed tube from bottom of hopper and remove O-rings.
10. Remove drip tray and empty contents.
11. Take all components to the cleaning area.
12. Prepare 1 gallon solution of hot tap water and a good grade of dishwashing detergent.
13. Thoroughly wash all components in a warm, mild detergent solution including the inside of the freezing cylinder and the mix storage hopper. **DO NOT WASH COMPONENTS IN A DISHWASHER.**
14. Use a medium sized brush to clean the bottom of the valve body and the inside of the plunger bore with mild detergent solution taking care to remove only remaining lubricant.
15. The exterior of the machine should be cleaned as needed with a mild food safe cleaner and cloth. Do not use abrasive cleaners, such as cleansers or steel wool to clean the machine or damage may occur.

Reassembly

NOTE: Allow all parts to dry completely before reassembly.

1. Reassemble drip tray and re-install on front of unit.

2. Wet the inner rubber lip of the rotary half of the seal and the back end of the beater bar shaft with water.
3. Slide rotary half of assembly onto the beater bar shaft, RUBBER FIRST, with the smooth sealing surface facing the back of the beater bar. (See Figure U). Be sure the rotary half is fully seated against the shoulder of the shaft.
4. Insert the stationary half of the seal into the ribbed rubber boot with the polished surface facing out (forward).
5. Lightly lubricate the ribbed rubber boot of the stationary ceramic seal (taking care not to get any lubricant on the polished surface) and insert it straight back into the recess at the back of the freezing cylinder, RUBBER FIRST. (See Figure V)

NOTE: The stationary half of the seal must be completely dry before reassembling. If the circular half of the seal is white, make sure that the grooved side is toward the rubber. If the circular half is black, be sure the glossy side is facing out.

6. Reassemble the beater bar assembly, as shown in Figure W. Insert the larger front and smaller rear white plastic bearings into beater bar, then slip in the stator rod.
7. Carefully and slowly guide the beater bar into the freezing cylinder, taking care not to damage the seal assembly. Turn beater bar shaft until it engages the square drive coupling. Slide the beater bar back into the cylinder so that the two smooth sealing surfaces meet. (See Figure X)
8. Inspect and lightly lubricate the large square o-ring and refit it into the back of the valve block assembly. Install the valve assembly on the front studs and tighten the knobs until they are finger tight. Do not use tools to tighten knobs.

NOTE: Failure to lightly lubricate the large o-ring can result in product leakage.

Sanitizing and Refilling

1. Reassemble feeduretor by installing the two o-rings at the bottom of the feed tube.
2. Place the feeduretor assembly in the bottom of the hopper.
3. Install the o-rings on valve plunger and lay plunger assembly on a clean piece of paper towel.
4. Prepare a minimum of 2.5 gallons (9.5 liters) of sanitizing solution (Kay-5 Sanitizer/Cleaner or equivalent) following the manufacturer's instructions. NOTE: Add 1 ounce of Kay-5 to 2.5 gallons (9.5 liters) of 120°F (50°C) water to achieve a concentration of 100 parts per million.
5. Dip a medium sized brush into the sanitizing solution and sanitize the inside bore of the dispensing valve. (Figure Y)
6. Place a small amount of lubricant onto a piece of clean paper toweling. Use a clean piece of paper toweling to pick up the small end of the valve plunger assembly. Apply a thin film of lubricant from the other piece of paper toweling. (Figure Z)
7. Slide the valve plunger spring over the small end of the valve plunger and, using another clean piece of paper toweling, pick up the valve plunger at the outlet end and insert plunger and spring into the valve body. (Figure AA)
8. Push up on the valve plunger and insert the stainless steel handle. (Figure BB)
9. Holding the handle down slightly so that the hole in the handle and valve block are aligned, insert the dispensing valve handle retaining pin. (Figure CC)
10. Pour sanitizing solution into the mix storage hopper and allow the solution to fill freezing cylinder. Use a large brush to sanitize all hopper surfaces. (Figure DD)
11. Turn panel switch to "CLEAN" and allow machine to run for 5 minutes.
12. Open dispensing valve and drain solution. Allow the beater bar to push remaining sanitizer out of the freezing cylinder. Once the sanitizing solution is drained, turn panel switch to "OFF".
13. Place a small amount of sanitary lubricant onto another piece of clean paper toweling. Use a clean piece of paper toweling to pick up the large end of the feeduretor from the bottom of the hopper taking care not to touch the sanitized feeduretor with your bare hand (Figure EE). Apply the lubricant on the other piece of paper toweling to the two o-rings on the bottom of the feeduretor assembly (Figure EE).
14. Place the lubricated feeduretor assembly on a clean piece of paper toweling.
15. Prepare fresh product according to manufacturer's instructions.

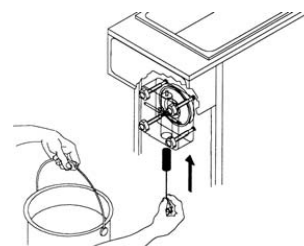


Figure Y Sanitize Valve Body

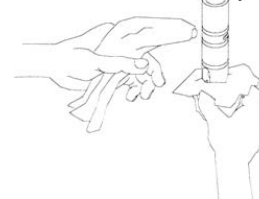


Figure Z Lubricate Plunger

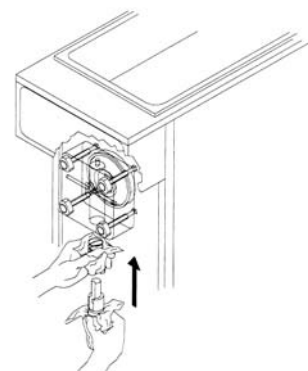


Figure AA Installing Plunger and Spring

16. Hold open the dispensing valve and pour product (approx. 10 oz.) into the hopper to allow this product to chase out any remaining sanitizer. Watch the product flowing out of the dispensing valve and close the valve when the new mix has purged the sanitizer remaining in the cylinder.
17. Use a clean piece of paper toweling to insert the sanitized feeduretor assembly into the inlet hole in the hopper.
18. Fill mix storage hopper with fresh product. Cover hopper with hopper lid.
19. Turn front panel switch to "ON". Allow the machine to reach proper consistency.

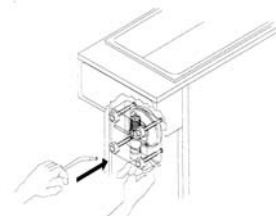


Figure BB Insert Valve Handle

Clean-In-Place Procedure (Daily Cleaning)

This equipment has been approved for a Clean-In-Place procedure that does not require complete disassembly on a daily basis. The unit still requires regular complete disassembly for cleaning and sanitizing. To perform the C-I-P procedure follow the instruction below:

1. Empty any product in the machine and turn to OFF.
2. Disassemble the dispensing valve assembly following the instructions in Disassembly and Cleaning.
NOTE: Leave the valve block in place. Only disassemble the plunger, handle, spring, o-rings and pin.
3. Remove feeduretor assembly from hopper and remove o-rings.
4. Take all components to the cleaning area.
5. Carefully inspect the o-rings for cracks, chips or cuts and replace if necessary.
6. Prepare 1 gallon solution of hot tap water and a good grade of dishwashing detergent.
7. Thoroughly wash all parts including handle, pin, valve plunger, spring, feeduretor assembly and all o-rings in detergent solution.
8. Use a medium sized brush to clean the bottom of the valve body and the inside of the plunger bore with detergent solution taking care to remove any remaining lubricant.
9. Reassemble following the instructions under Sanitizing and Refilling.

NOTE: Run the unit with sanitizer on "CLEAN" for 20 minutes before draining and refilling.

MAINTENANCE

WARNING: DISCONNECT POWER FOR MAINTENANCE. DO NOT ATTEMPT TO PERFORM MAINTENANCE ON THE MACHINE UNTIL ELECTRICAL POWER HAS BEEN DISCONNECTED.

Suggested Daily Maintenance

1. Clean, lubricate and sanitize the machine following guidelines.
2. Clean the exterior of the machine using a soft wet cloth. (Wipe down spinner if attached)
3. Empty drip tray.

Parts Replacement Schedule

Part Description	Monthly	Every 3 Months	Every 6 Months	Annually	Quantities to be Replaced
Shaft Seal (W0340201 or W0340210)				Replace	1
Drive Shaft (W0451067)				Inspect & replace if necessary	1
Drive Belts (W0450209)				Inspect & replace if necessary	1
Scraper blades (if equipped) (W1431084)			Replace		2
Square cut o-ring on valve body/face plate (W0340055)				Inspect & replace if necessary	1
Front stator flange bearing (W0430032)				Replace	1
Rear stator flange bearing (W0430024)				Replace	1
Dispense valve O-rings (W0340022)		Replace			Thick Product Plunger: 2 Standard Product Plunger: 3
Feed tube O-rings (W0340011)		Replace			2 or 3
Condenser	Inspect & clean if necessary (Air-cooled units only)				1

Preventative Maintenance Procedure (Every 6 to 12 Months)

A preventative maintenance visit should be performed every 6 to 12 months depending on the usage and environment where the unit is placed. (Ex. seasonal machines - once before season, year round machines - twice per year). The following procedures should be performed during a preventative maintenance visit. This does not take the place of daily care and cleaning procedures as described by local health codes and the manual. PM kit #W0890157 contains the standard replacement parts needed for preventative maintenance including O-rings, standard seal kit stator bearings and drive belt. Units with a coconut oil product seal should order all parts separately. Units with scraper blade beater bar will require the scraper blades be ordered separately.

- Verify ventilation is adequate (Air-cooled units: 6" minimum on both sides, open at top, and as far as possible from dust sources; Water-cooled units: 0" on both sides, 3-6" at rear of unit and open at top).
- Verify adequate water flow and drain connections on water-cooled versions.
- Check product temperature and consistency for proper setting (refer to product manufacturer's recommendation) adjust if necessary. Where equipped be sure to check the temperature in both the hopper and cylinder.
- Ensure product is being mixed properly and is within specification (check brix - most products should be around 13% - refer to product manufacturer's recommendations for exact recommended brix).
- Check for any leaks.
- Empty product from the unit. Disassemble unit completely (as if for cleaning).
- Clean and sanitize all disassembled parts following the cleaning instructions in the manual.
- Clean and sanitize hopper, freezing cylinder and splash zones on the machine.
- Check condition of all panels and lids - replace if necessary.
- Check beater bar scraper blades for wear if equipped - replace once per year minimum.
- Check beater bar for signs of wear - replace if necessary. Verify alignment when replacing.
- Check valve body gasket for wear - replace once per year minimum.
- Check valve body knobs (used to hold valve body in place) - replace if necessary.
- Check condition of shaft seals and stator bearings - replace once per year minimum.
- Inspect drip cup at back end of freezing cylinder for signs of seal leakage.
- Replace o-rings on hopper float (where necessary), dispense valves and feed tubes (lubricate).
- Lubricate parts where appropriate (dispense valve o-rings, feed tube o-rings, rubber boot of stationary shaft seal).
- Re-assemble unit and sanitize hopper and freezing cylinder by running CLEAN cycle.
- Clean and sanitize spinner if equipped.
- Check operation of merchandiser and mode lights - replace light bulbs if necessary.
- Clean reusable filter if equipped. Check condition of filter and replace if necessary.
- Clean condenser.
- Inspect the drive shaft and motor shaft bearings for excessive wear (drive shaft hole rounding out) - replace if necessary. Verify alignment when replacing.
- Check V-belt tension (should be 1/2" - 5/8") and verify all set screws are tightened - adjust if out of range. Replace belt once per year minimum.
- Verify compressor operation and machine controller operation.
- Check electrical connections (outlet should be properly grounded with amperage capacity equal to or over the amperage specified on the serial tag).
- Check fan operation (condenser fan) and clean fan blades if necessary.
- Review proper periodic care and cleaning instructions (disassembly, cleaning, sanitizing, lubrication, and re-assembly) with store personnel. Train store personnel to follow proper procedures (stress importance of store level maintenance ie. lubrication, filter cleaning, etc.).
- Make sure store personnel have appropriate supplies (lubricant, cleaning brushes and sanitizer) to care for machine.

How to Clean Condenser (Air-Cooled Unit Only)

NOTE: Loss of refrigeration efficiency will result if condenser is allowed to become dirty. Excessive compressor run time or loss of capacity are a good indication that the condenser needs to be cleaned.

1. Disconnect electrical power.
2. Remove side panels.
3. Place a damp towel over the side of the condenser opposite the fan motor.
4. Use compressed air or CO2 blow out dirt from the fan side of the condenser. An alternate cleaning method is to use a condenser brush and vacuum cleaner.

CAUTION: PROCEDURE CAN CREATE A LOUD NOISE.

How to Clean Exposed Filter (Air-Cooled Unit Only)

1. Slide exposed filter out of the rails by pulling forward on the filter. It is recommended to remove the filter by using the palm of your hand and applying even pressure to the face of the filter.
2. Clean filter with liquid soap and water.
3. Soak filter for 15 minutes.
4. Rinse filter with heavy stream of water, opposite the direction of air flow. Allow filter to dry.
5. Slide the filter into the rails until the filter contacts the stop on the top rail.

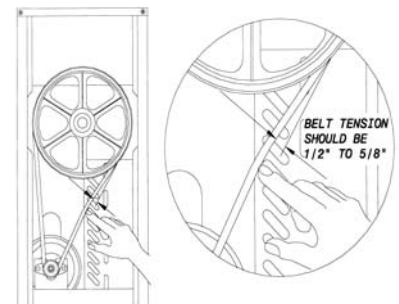
How to Clean Concealed Filter (Air-Cooled Unit Only)

1. For concealed filters lift lid and pull up on filter tab to remove filter.
2. Clean filter with liquid soap and water.
3. Soak filter for 15 minutes.
4. Rinse filter with heavy stream of water, opposite the direction of air flow. Allow filter to dry.
5. Slide filter into top of filter cover with removal clip up and the air flow arrows facing the existing panel.

How to Adjust Belt

CAUTION: Unplug the machine before performing any adjustments. This procedure must be done by a qualified technician.

Check the belt tension. The proper belt deflection is 1/2" over all. If the deflection is more than 1/2" the motor will need to be lowered. If the deflection is less than 1/2", the motor will need to be raised. Follow this procedure to adjust the motor to achieve proper belt tension. (See Figure FF)



1. Unplug the machine and remove both side and rear panels.
2. Locate the motor flange bearings. These are the side mounted bearings that hold the motor to the cradle. The motor is double shafted and the shaft extends through a bearing on each end. The bearing is held to the motor cradle by two Allen bolts on each bearing.
3. Loosen the Allen bolts on each bearing. Do not loosen the setscrews that hold the bearing collar to the motor shaft.
4. Lower the motor or raise the motor as needed. The motor must be kept level from front to back. Do not lower or raise only one end of the motor. This will result in excessive belt wear and belt noise.
5. Tighten all four Allen bolts down. Align the motor pulley with the top pulley if needed.
6. The motor pulley should be in alignment with the large (driven) top pulley. Use a straight edge along the top pulley.
7. If the pulleys are not in alignment, loosen the setscrew on the motor pulley and move either in or out as needed.
8. Tighten the setscrew back down on the motor shaft (use of non-permanent Loctite is recommended). Please be sure the setscrew is tightened down on the flat surface of the motor shaft.
9. Return the unit back to service.

How to Change Back Lit Sign Merchandiser Bulb

1. Remove the two screws located on the top of either side of the sign.
2. Lower the metal enclosure that frames the merchandiser insert.
3. Pull merchandiser enclosure down and out.
4. Replace bulb inside by pulling bulb straight out of the socket. Firmly insert the new bulb into the socket.
5. Reassemble. For ease of assembly, put merchandiser and plastic lenses in light box before placing metal enclosure back on.

GENERAL TROUBLESHOOTING

Machine problems originate from three sources - improper operation, mix problems or mechanical malfunction.

ALWAYS CHECK FOR IMPROPER OPERATION AND MIX PROBLEMS FIRST, AS THEY ARE THE MOST COMMON CAUSE OF MOST EQUIPMENT PROBLEMS.

CAUTION: ALWAYS DISCONNECT POWER BEFORE ATTEMPTING ANY MAINTENANCE PROCEDURES.

Only a qualified service technician should perform electrical and mechanical adjustments or repairs.

PROBLEM	PROBABLE CAUSE	REMEDY
Machine will not run or freeze down	<ul style="list-style-type: none"> Machine not plugged in Circuit breaker tripped or fuse blown Machine in CLEAN or OFF position Obstructed condenser air flow (Air-cooled units) Compressor not operating Beater bar not installed Low refrigerant charge 	<ul style="list-style-type: none"> Plug machine in Reset breaker or replace fuse Switch to ON position Clean condenser. Allow 6" (15 cm) on both sides Check for cause and correct Install beater bar (auger) Check for leaks, repair and recharge
Product too soft	<ul style="list-style-type: none"> Consistency setting too loose Consistency setting at maximum (red spring) Product BRIX level too high Too much alcohol in mix 	<ul style="list-style-type: none"> Readjust consistency control Change to yellow consistency spring Lower liquid product BRIX level Lower alcohol content
Product too stiff	<ul style="list-style-type: none"> Consistency adjuster set too firm 	<ul style="list-style-type: none"> Readjust consistency setting or change to red spring
Product will not dispense	<ul style="list-style-type: none"> Product BRIX level too low Power switch OFF Inadequate mix in hopper. Red MIX LOW light on Consistency adjuster set too firm Feeduretor inlet hole clogged Drive belt broken or off pulley Drive shaft worn 	<ul style="list-style-type: none"> Increase product BRIX level Turn power switch ON Refill hopper Readjust consistency setting Unclog feeduretor inlet hole Repair or replace Inspect square drive shaft pocket for excessive wear, replace
Leakage from drain tube, front of machine above drip tray	<ul style="list-style-type: none"> Worn or defective shaft seal Seal installed incorrectly 	<ul style="list-style-type: none"> Replace seal and then lubricate at each cleaning Remove and install seal
Excessive Dispensing Valve Leaks	<ul style="list-style-type: none"> Worn or defective o-ring(s) 	<ul style="list-style-type: none"> Replace and lubricate
Clicking sound from inside machine	<ul style="list-style-type: none"> Low voltage Extension cord is used 	<ul style="list-style-type: none"> Use dedicated circuit with proper rating Connect directly to power source or use power cord of proper size
Thumping sound from inside machine	<ul style="list-style-type: none"> Worn belt 	<ul style="list-style-type: none"> Replace belt
Scraping sound during freeze down	<ul style="list-style-type: none"> Frozen product scraping off of cylinder walls No product in machine 	<ul style="list-style-type: none"> Sound should go away when product is frozen to proper consistency Fill with product
Premature seal wear	<ul style="list-style-type: none"> Incorrect installation of beater bar Improper drive shaft clearance Incorrect shaft alignment 	<ul style="list-style-type: none"> Advise careful installation Adjust to proper Align shaft
Merchandiser light flickers when machine cycles	<ul style="list-style-type: none"> Low voltage 	<ul style="list-style-type: none"> Connect machine to dedicated circuit with proper rating

If you still need help, call our Service Department at (800) 695-4500 (Monday through Friday 8am - 8pm EST) or an authorized service center in your area. Please have the model and serial number ready so that accurate information may be given. Prior authorization must be obtained from Grindmaster's Technical Services Department for all warranty claims