



H. C. DUKE & SON, INC.
2116 - 8th Avenue • East Moline, Illinois 61244

OPERATOR'S MANUAL



Arctic Rush®
Model 195

184983 5/06

Operator's Manual
for the
Arctic Rush®
Model 195 Freezers

SAFETY FIRST!

Follow these four steps to safety

1. Recognize Safety Information Look for this safety alert symbol throughout this manual.



When you see this symbol on your freezer or in this manual, be alert to the potential for personal injury. Follow recommended precautions and safe operating practices.

2. Understand Signal Words



The signal words — **DANGER, WARNING and CAUTION** — are used with the safety alert symbol (**DANGER** decals on the freezer may or may not have the safety alert symbol, but the message is the same). Decals with the words **DANGER, WARNING or CAUTION** appear on the freezer. **DANGER** identifies the most serious hazard. Decals with the words **DANGER or WARNING** are typically near specific hazards on the freezer. General precautions are listed on **CAUTION** safety decals.

In this manual, **CAUTION** messages with the safety alert symbol  call attention to safety messages.

SAFETY FIRST!

3. Follow Safety Instructions



Read and understand all safety messages in this manual. Read and understand the decal safety messages on your freezer. Take notice of the location of all decals on the freezer and keep the safety decals in good condition. Check them periodically and replace missing, damaged or illegible safety decals. The safety decals must remain in place and legible for the life of the freezer. If you need new decals, use the information and illustrations on pages iv and v of this manual to identify the decal and contact H.C. Duke & Son, Inc.

DO NOT attempt to operate the freezer until you read and understand all safety messages and the operating instructions in this manual.

4. Operate Safely



DO NOT allow untrained personnel to maintain or service this machine. Failure to follow this instruction may result in severe personal injury. ***DO NOT*** operate the freezer unless all service panels and access doors are secured with screws. ***DO NOT*** attempt any repairs to the freezer until the main power supply has been disconnected. Contact H.C. Duke & Son, Inc. Service Department for original equipment parts.

Safety Decal Locations

Do not attempt to operate the freezer until all safety precautions and operating instructions in this manual are read and understood.

Take notice of all warning, caution, instruction and information decals (or labels) on the freezer as shown in the figure on the next page. The labels have been put there to help maintain a safe working environment.

The labels have been designed to withstand washing and cleaning. All labels must remain legible for the life of the freezer. Check labels periodically to be sure they can be recognized as warning labels.

If it is necessary to replace *any* label, please contact H.C. Duke & Son, Inc. When ready to order you will need to determine the (1) part number, (2) type of label, (3) location of label, and (4) quantity required, and include a return shipping address.

For factory service assistance, contact H. C. Duke & Son, Inc., Service Department by phone, FAX or e-mail:



Phone: (309) 755-4553
or (800) 755-4545

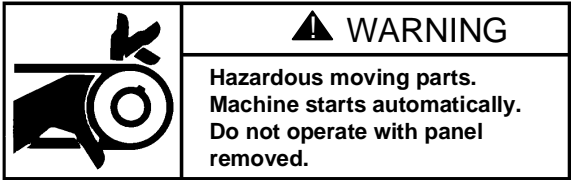
FAX: (309) 755-9858

E-mail: service@hcduke.com

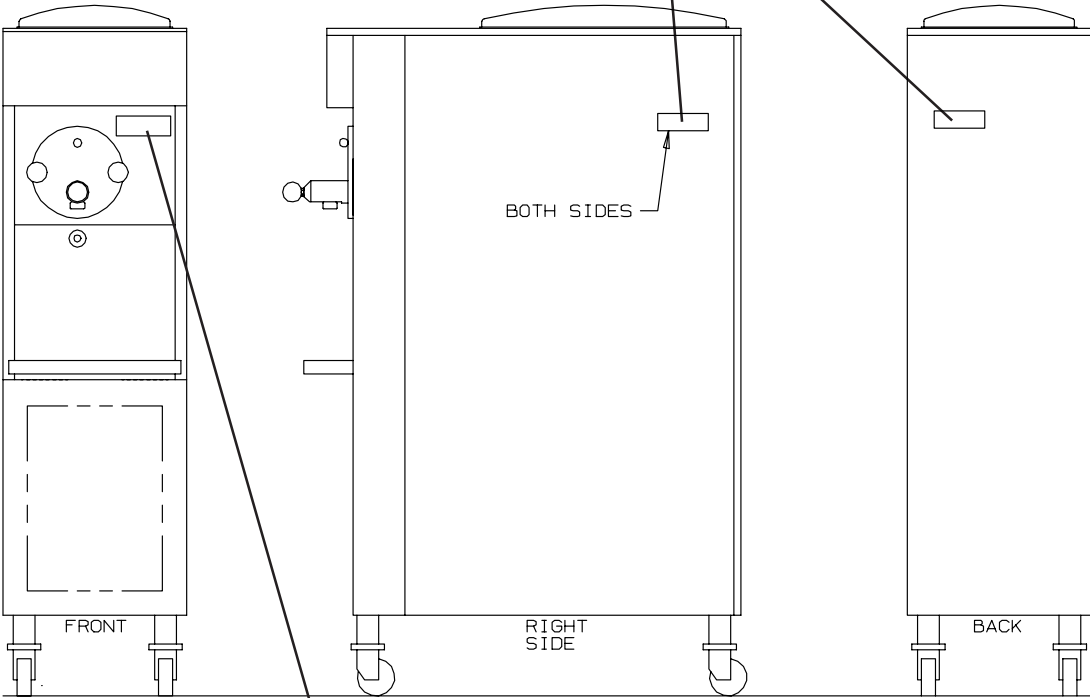
(The decals on the next page are numbered 1 and 2. Those numbers correspond to the numbers in the table below. The table provides the part number, description, and quantity for each decal.)

No.	Part No.	Description (QTY)
1	HC165126	Decal — Panel Removal Warning (3)
2	HC165025	Decal — Beater Warning (1)

Safety Decal Locations



1 HC165025



M00022

2 HC165126

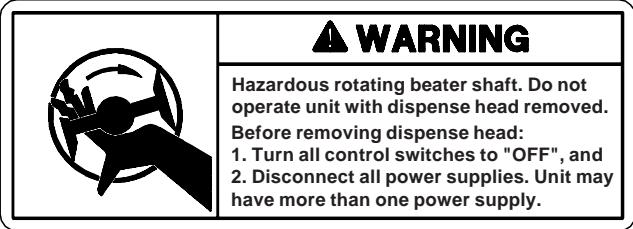


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PART II

MODEL 185 REPLACEMENT PARTS with ILLUSTRATIONS *

* Refer to Part II Table of Contents for help with locating part numbers and illustrations.

1 Introduction

Model 195 is specifically designed to dispense a high quality, smooth-frozen, noncarbonated, water and sugar based drink that is served in a variety of flavors. The product can be a neutral base or a pre-mixed flavor.

This manual has been prepared to assist you in the proper operation and general maintenance of your Arctic Rush® freezer.

Your freezer will not compensate for, or correct, any assembly or priming errors made during the initial start-up. So it is important that you follow the assembly and priming procedures detailed in this manual.

Be sure all personnel responsible for equipment operation completely read and understand this manual before operating the freezer. When properly operated and maintained, your freezer will produce a consistent quality product.

If you require technical assistance, please contact the Service Department at H. C. Duke & Son, Inc. as follows:



Phone number: (309) 755-4553
or (800) 755-4545

FAX number: (309) 755-9858

E-mail address: service@hcduke.com

— or for local service contact:

Name: _____

Address: _____

Phone: _____

2 Note to Installer

This freezer must be installed and serviced by an authorized service technician in accordance with the installation instructions.

After installation the warranty registration card must be completed and returned to validate the warranty

2.1 Uncrating and Inspection



CAUTION

Be sure to properly support the machine when removing bolts and installing legs or casters.

When the unit is received and while the carrier is still present, inspect the shipping carton for any damage that may have occurred in transit. If the SHOCKWATCH® label indicates red and/or the carton is broken, torn, or

punctured, note the damage on the carrier's freight bill and notify the carrier's local agent immediately.

1. Remove the carton from the pallet, and move the machine as close as possible to the permanent location.
2. Remove the shipping bolts on the bottom of the freezer (figure 2-1) and install either the legs or casters (figure 2-2).

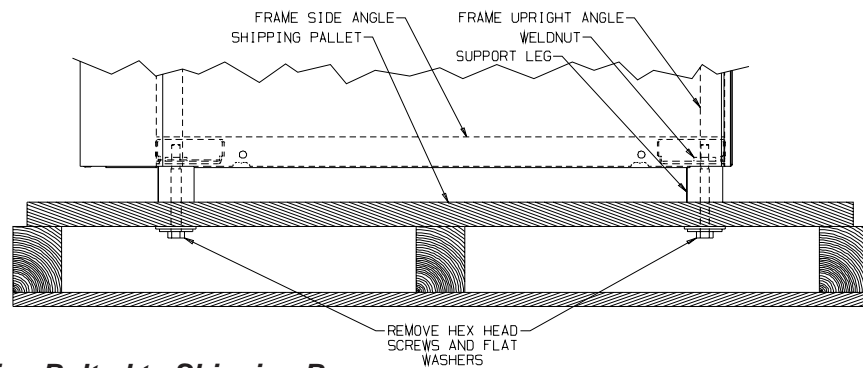
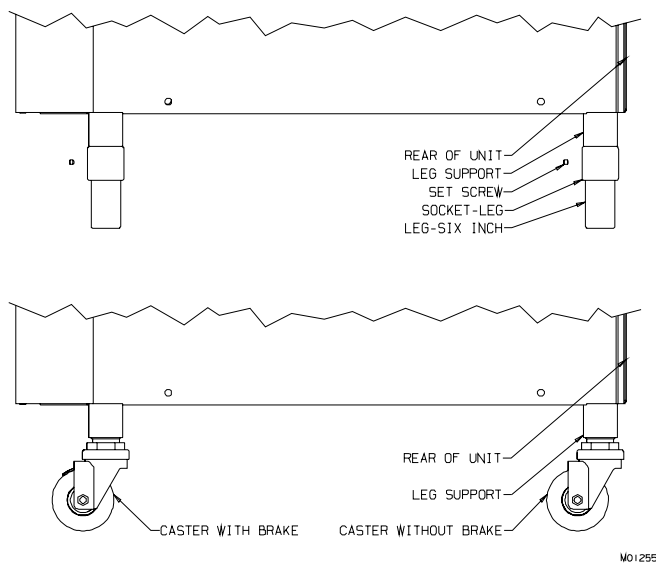


Figure 2-1 Machine Bolted to Shipping Base



NOTE: Screw casters or legs all the way in coupling, then adjust out to level side to side with 1/4" slope to the front.

Figure 2-2 Installing Mounting Legs or Casters

2.2 Installation



CAUTION
All materials and connections must conform to local requirements and be in compliance with the National Electrical Code (NEC).

1. Where codes permit, we recommend that the freezer be installed on casters and have flexible water and electrical connections for easier service and cleaning.
2. All models require a minimum 6-inch clearance on the side and rear panels for adequate ventilation.

3. **Water cooled** models require a 3/8-inch MPT water inlet and water waste connection. The connections are found on the bottom to access remove lower front panel. They are tagged "Water Inlet" and "Water Waste." A manual shut-off valve should be installed in the water inlet line at the time of installation.

4. Place the freezer in its final location and adjust the legs or casters so that it is level side-to-side and the front is approximately 1/4-inch lower than the rear to allow proper drainage of the freezing cylinder.

2.3 Electrical Requirements



CAUTION
To prevent accidental electrical shock, a receptacle with a positive earth ground is required.

1. Always verify electrical specifications on the data plate (see figure 3-1) of each individual freezer. Data plate specifications will always supersede the information in this manual.

2. Supply voltage must be within \pm 10% of voltage indicated on the nameplate. Also, on three-phase systems, voltage between phases must be balanced within 2%. (More than a 6 volt difference between any two voltage measurements at 208-230 volts indicates a possible imbalance.) Request your local power company to correct any voltage problem.

3. An easily accessible main power disconnect must be provided for all poles of the fixed wiring to the freezer.

2.4 Electrical Connections



CAUTION
To prevent accidental electrical shock, a receptacle with a positive earth ground is required.

1. Check the data plate for fuse size, wire ampacity, and electrical specifications.
2. Refer to the wiring diagram provided for proper power connections.

3. Electrical connections are made in the junction box located mid-level behind the lower front panel.

4. Use a flexible connection when permissible. All materials and connections must conform to local codes and/or the National Electrical Code (NEC). Supply voltage must be within 10% of voltage indicated on the nameplate.

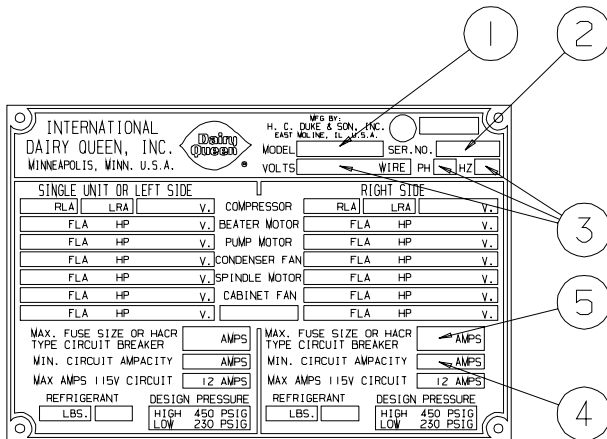
3 Specifications

3.1 Particulars

Width (in/cm)	16/41	Refrigerant	404a
Height (in/cm)	58/147	Charge	3.75 lb/1.70 kg
Depth (in/cm)	36/91	Cooling	Air or water
Weight (lbs/kg)	525/238	Hopper	20 qts/18.9 L
*Voltage	230-1-60, 2 wire	Cylinder	12 qts/11.4 L
Min. Circuit Ampacity	22.5 (air) 21.0 (water)		
Compressor	2 HP		
Beater Motor	.5 HP		

*Contact factory for other voltages.

3.2 Data Plate



The data plate provides important information that the operator should record and have available for parts ordering, warranty inquiries, and service requests.

Figure 3-1 Data Plate

3.3 Reference Information

Write in Reference Information HERE!



Fill in the following information as soon as you receive your Arctic Rush® 195. (The item numbers correspond to the callout numbers in figure 3-1, above.)

- ① Model Number: _____
- ② Serial Number: _____
- ③ Electrical Spec: Voltage _____
Phase _____ Hertz _____
- ④ Maximum Fuse Size: _____
- ⑤ Minimum Circuit Ampacity: _____

3.4 Installation Date

Fill in the date of installation, and the name, address, and phone number of the installer in the space provided below. This information will be needed when ordering parts or service for the Arctic Rush® 195 slush freezer.

Date of installation: _____

Installed by: _____

Address: _____

Phone: _____

3.5 Dimensions

Figure 3-2, below, provides the dimensions of the Arctic Rush® 195 slush freezer.

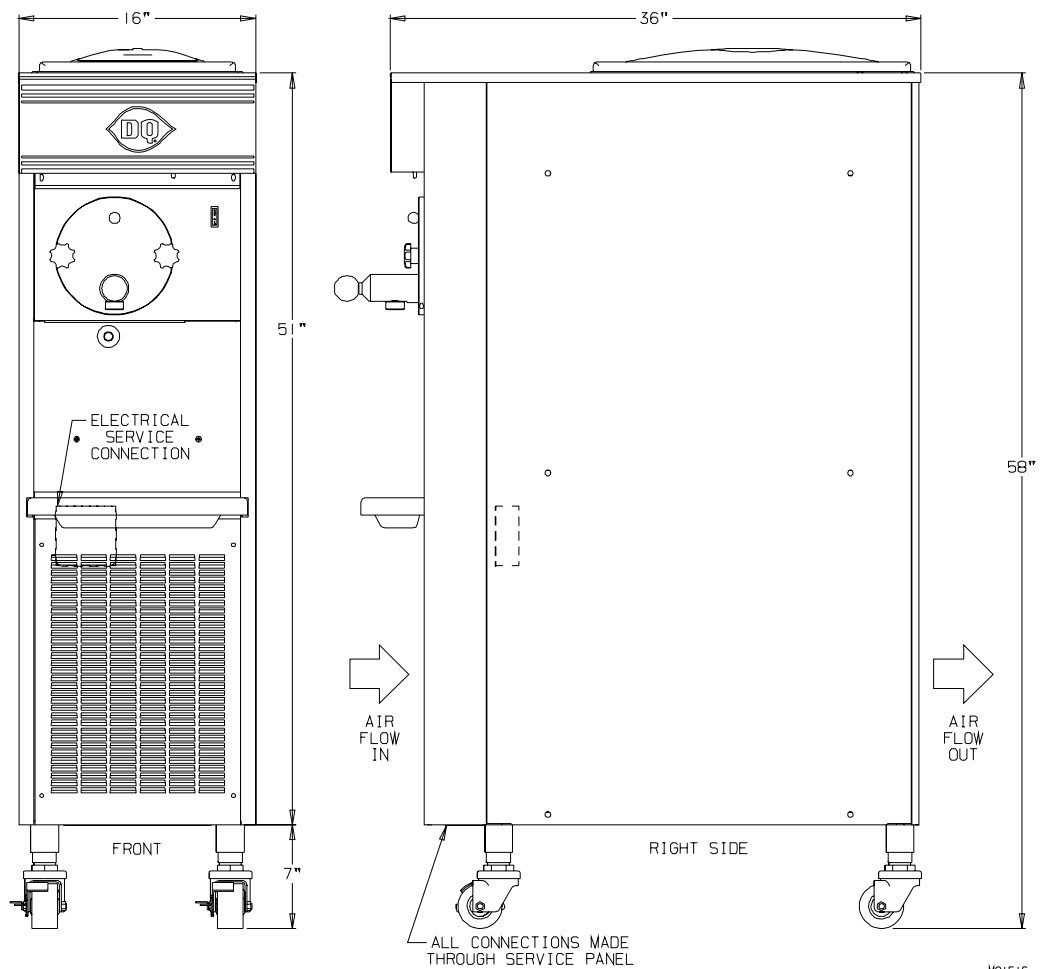


Figure 3-2

4 Part Names and Functions

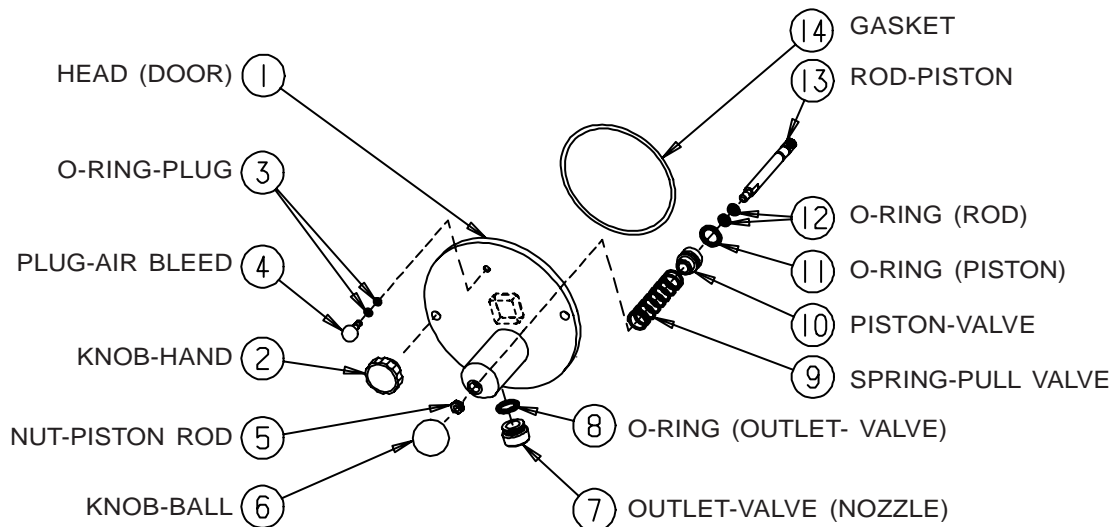


Figure 4-1 Head Assembly

The following numbered paragraphs (1 through 14) refer to figure 4-1, above.

- | | |
|--|---|
| <p>① HEAD (DOOR) Encloses the freezing cylinder and provides an opening for product to be dispensed.</p> <p>② KNOB - HAND Secures the head to the freezing cylinder.</p> <p>③ O-RING - PLUG Seals the air relief plug in the head.</p> <p>④ PLUG - AIR BLEED Seals the air bleed opening in the head when closed. Allows air to be removed from the cylinder in the filling process.</p> <p>⑤ NUT - PISTON ROD Keeps plunger assembly from going into the cylinder if the ball knob is removed.</p> <p>⑥ KNOB - BALL (DISPENSE) Used to open and close the plunger to start and stop the flow of product from the freezer.</p> <p>⑦ OUTLET VALVE (NOZZLE) Shapes the frozen product when dispensed.</p> | <p>⑧ O-RING - OUTLET VALVE Seals the outlet valve in the head.</p> <p>⑨ SPRING - PISTON Enables the piston to self close after dispensing.</p> <p>⑩ PISTON - VALVE Seals the product opening in the head when closed. Allows product to flow when open.</p> <p>⑪ O-RING - VALVE PISTON Seals the piston in the head. Must be lubricated to seal and glide properly.</p> <p>⑫ O-RING - PISTON ROD Holds the piston in place on the rod.</p> <p>⑬ ROD - ASSY. PISTON Attaches piston to the knob ball for dispensing.</p> <p>⑭ GASKET - Seals the head to the freezing cylinder. Must be lubricated.</p> |
|--|---|

4 Part Names and Functions

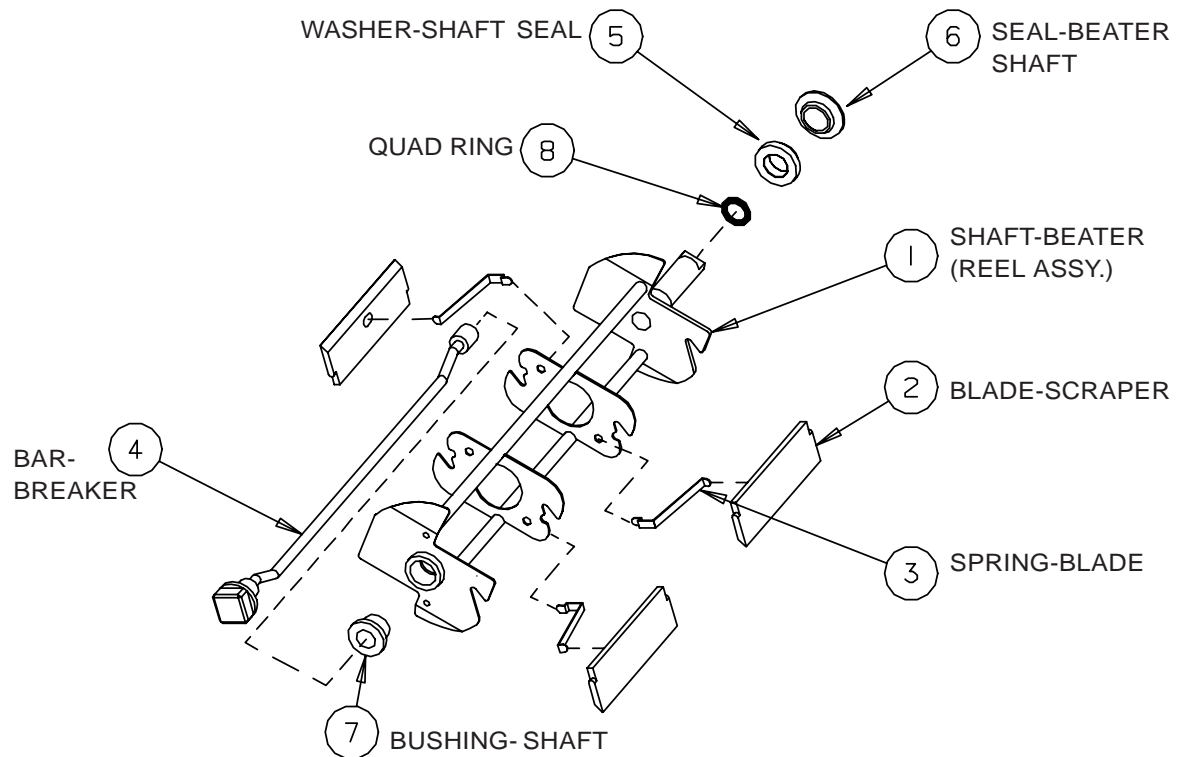


Figure 4-2 Beater Shaft Assembly

The following numbered paragraphs (1 through 8) refer to figure 4-2, above.

- | | |
|---|---|
| <p>① SHAFT - BEATER (REEL ASSY.)
Rotates in the freezing cylinder to keep product blended.</p> <p>② BLADE - SCRAPER Scrapes the frozen product from the freezing cylinder wall.</p> <p>③ SPRING - BLADE Holds the blade against the cylinder wall.</p> <p>④ BAR - BREAKER Keeps product blended in the center of the beater shaft.</p> <p>⑤ WASHER - SHAFT SEAL Holds the cup portion of the shaft seal to the beater shaft. Must be lubricated.</p> | <p>⑥ SEAL - BEATER SHAFT Seals the opening between the freezing cylinder and the beater shaft. Do not lubricate.</p> <p>⑦ BUSHING - SHAFT BREAKER BAR Holds breaker bar in beater shaft.</p> <p>⑧ QUAD RING Separates beater shaft and washer shaft seal.</p> |
|---|---|

5 Operator Controls and Indicators

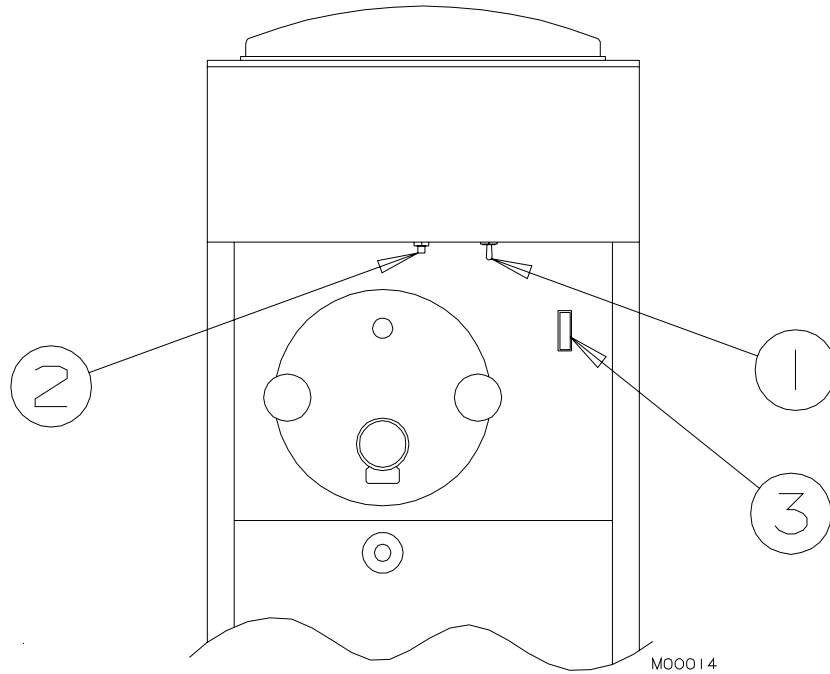


Figure 5-1

The following paragraphs describe the operator controls and indicators. Refer to figure 5-1 for location of these controls and indicators on the freezer.

NOTE: The head must be in place for the beater to operate.



CAUTION
Test operation of the head switch prior to placing the freezer in service. See Section 11, Routine Maintenance, Monthly.

5 Operator Controls and Indicators

5.1 Selector Switch ①

This three-position (toggle) switch selects the mode of operation of the freezer.

- a. **“CLEAN” (left)** — This position operates the beater only (no refrigeration). This position must be used in all cleaning and sanitizing operations.
- b. **“OFF” (center)** — In this position the beater motor and refrigeration system will not operate.

Important:

Do not use the “FREEZE” position with water or sanitizer in the cylinder or hopper—freezer will be damaged.

- c. **“FREEZE” (right)** — This position activates both the beater motor and refrigeration unit. This is the normal operating position.

5.2 Overload – Reset ②

This control protects the beater motor against failure from an overload condition by automatically shutting down the freezer. To restart properly, turn the selector switch to “OFF”, wait 2-3 minutes, then depress the reset button and turn the selector switch back to the “FREEZE” or “CLEAN” position.

Important:

If the overload trips frequently, your freezer should be checked for proper product consistency and voltage. Contact your service technician or the Service Dept. at H. C. Duke & Son, Inc.

5.3 Indicator Light –“ADD MIX” (Optional) ③

When blinking, this light indicates the mix in the hopper is low and should be refilled as soon as possible. Always maintain at least 2 inches (5.1 cm) of mix in the hopper. For best operating results, *keep hopper full.*

Important:

If proper mix level is not maintained, a freeze-up may occur and damage the freezer.

6 Disassembly and Cleaning



CAUTION

To avoid electrical shock or contact with moving parts, make sure all switches are in the "OFF" position and that the main power source is disconnected.

NOTE: IF freezer has mix in the cylinder, refer to Closing Procedures, Section 9.2 "Draining Product from the Freezer?" before proceeding.

It is important that the freezer be disassembled, washed, lubricated and sanitized before operation.

The cleaning and sanitizing instructions explained in this manual are required to maintain a clean, sanitary freezer. Your freezer should be disassembled, cleaned, reassembled, lubricated and sanitized to ensure the best possible product and freezer operation. Persons assembling, cleaning or sanitizing the freezer must first wash and sanitize their hands and forearms with an approved sanitizer.

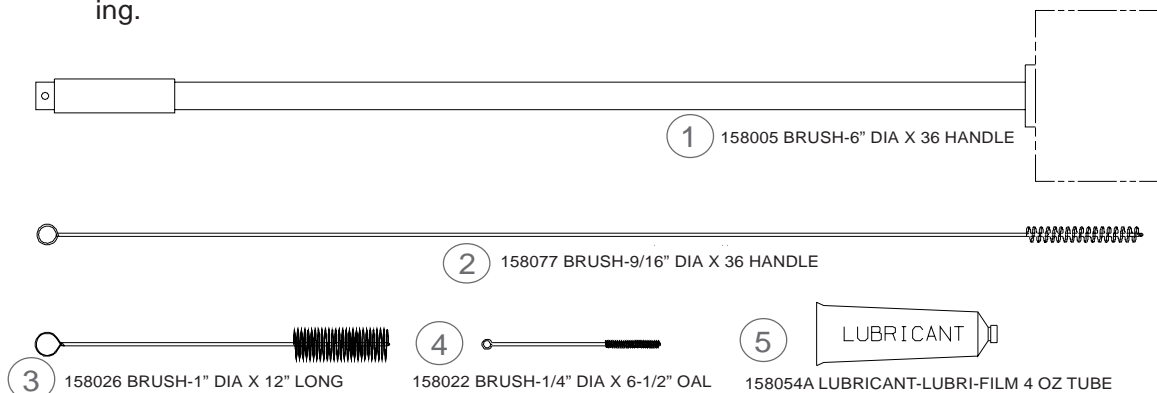
6.1 Cleaning Accessories

The following accessories are shipped with your freezer and are used when cleaning and sanitizing your freezer.

1. P/N HC158005 BRUSH, Cylinder. 6-inch diameter with a 36-inch handle.
2. P/N HC158077 BRUSH. 9/16-inch diameter 36-inches long, used for cleaning the drain tube.
3. P/N HC158026 BRUSH. 1-inch diameter 12-inches long used to clean the disassembled shaft seal and bushing.

4. P/N HC158022 BRUSH. 1/4-inch diameter with 6-1/2-inch handle used for cleaning the head and beater shaft holes.

5. P/N HC158054A LUBRICANT, Lubri-Film. Approved lubricant for moving parts and O-rings. See Assembly, Section 7 for lubricating points.



M01518

Figure 6-1

6.2 Disassembly Instructions

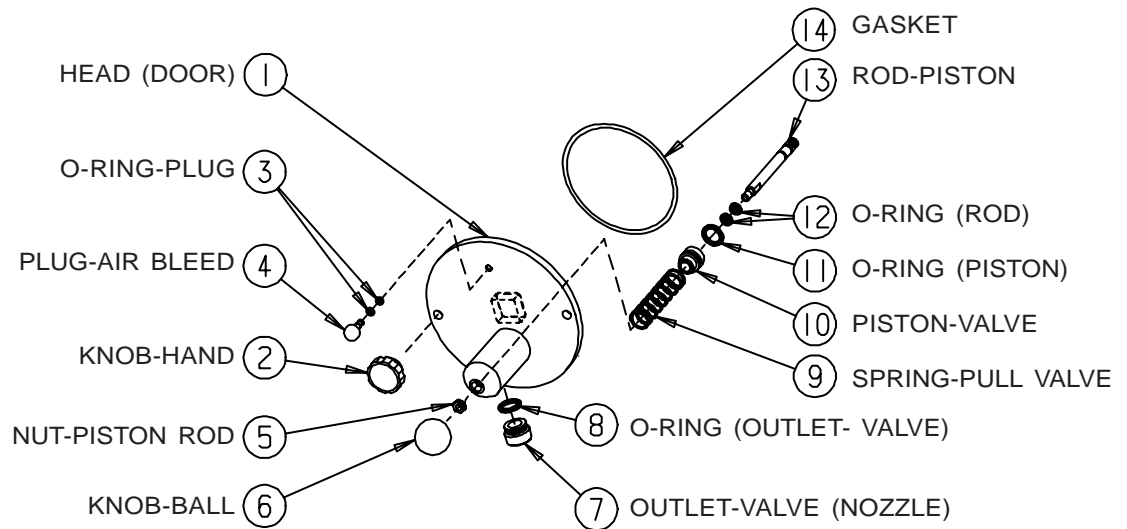


Figure 6-2



CAUTION

To avoid electrical shock or contact with moving parts, make sure all switches are in the "OFF" position and that the main power supply is disconnected.



CAUTION

To prevent bacteria growth, remove ALL O-rings when disassembling for cleaning. Failure to do so could create a health hazard.

NOTE: If there is product in the freezer, refer to **Closing Procedures, Draining Product, paragraph 9-1.**

1. Remove the two hand knobs (figure 6-2, item 2) and pull the dispensing head (1) straight out.

2. Remove the ball knob (6), nut (5), air bleed plug (4) and outlet-valve (7) from the head (1).

3. Remove the piston assembly (10, 11, 12, 13) and spring (9) by pushing the piston rod (13) through the back of the head (1).

4. Remove the O-rings (11, 12) from the piston assembly. Remove the O-ring (8) from the valve outlet (7). Remove two O-rings (3) from the air bleed plug (4).

5. Remove the head gasket (14) from the head (1).

6. Remove the beater shaft (figure 6-3, item 1) from the cylinder.

7. Remove scraper blades (2), springs (3), seal (5 and 6), quad ring (8), breaker bar (4), and bushing (7) from the beater shaft (1).

8. Remove the cup seal from the plastic washer on the shaft seal assembly as shown in figure 6-4.

9. Remove hopper cover, drip tray and insert. (See Replacements Parts Section - Panels)

6.2 Disassembly Instructions — continued

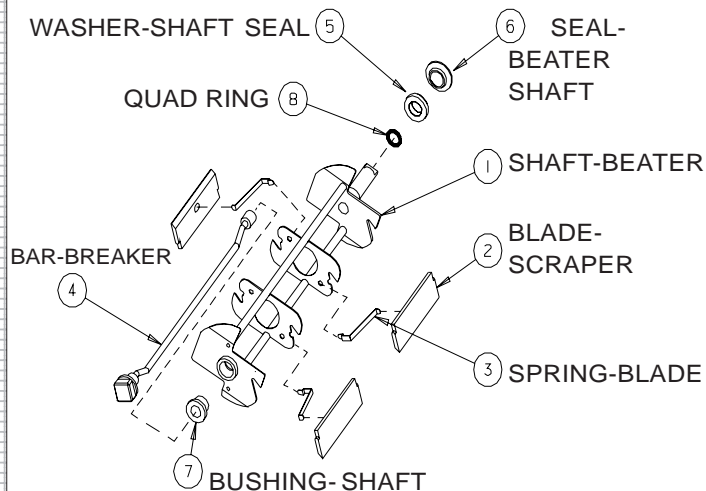


Figure 6-3 Beater Shaft

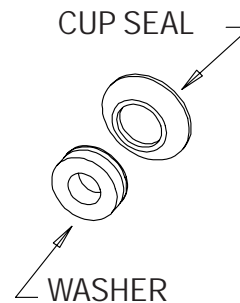


Figure 6-4 Shaft Seal Assembly

6.3 Cleaning Instructions

NOTE: It is your responsibility to be aware of the requirements for meeting federal, state and local laws concerning the frequency of cleaning and sanitizing your freezer.



CAUTION

To prevent bacteria growth, remove ALL O-rings when cleaning. Failure to do so could create a health hazard.



CAUTION

Electric shock hazard. Do not splash water on switches or allow water to flow onto electrical components inside the machine.

1. Prepare a three-compartment sink for cleaning parts removed from the freezer, per applicable health codes. Also, prepare a clean surface to air-dry all parts.

IMPORTANT:

Do not use unapproved sanitizer or laundry bleach. These materials may contain high concentrations of chlorine and will chemically attack freezer components.

NOTE: The sanitizer should be mixed according to the manufacturer's instructions to yield 100 PPM strength chlorine solution. (example: Stera-Sheen Green Label.) Use warm water (100° to 110°F or 38° to 43°C) to wash, rinse, and sanitize.

– continued

6.3 Cleaning Instructions — continued

2. Wash all parts removed from the freezer thoroughly with a warm mild dish detergent soap. Clean the following parts with the appropriate supplied brush:

- a. The dispense head piston openings, breaker bar bushing cavity, air bleed hole, dispense outlet-valve opening, and the head mounting, as shown in figure 6-5.
- b. The shaft cup seal, bushing, outlet-valve, piston O-ring grooves, and rod as shown in figure 6-6.
- c. The beater shaft inside spring mounting holes and the scraper blade mounting indentations as shown in figure 6-7.

Important:

Do not leave parts in sanitizer for more than 15 minutes.

3. After ALL parts are washed, rinse and place in the sanitizer solution. For proper sanitizing, the parts must remain fully immersed in the sanitizer for 5 minutes. Allow parts to air-dry after sanitizing.

4. Remove the hopper cover and the bottle rack, take to the sink area to wash with the dish detergent solution. Rinse with clean water.

5. With the dish detergent solution thoroughly brush the inside of the hopper, the mix feed port to the cylinder, the drain tube (figure 6-8), and the inside of the cylinder making certain to clean the back wall of the cylinder. Rinse with clean water.

6. Wipe down the freezer with the dish detergent solution and rinse with clean water.

Replace worn brushes. Use only original or authorized replacement parts. See Accessories Parts list in Part II of this manual to order new brushes.

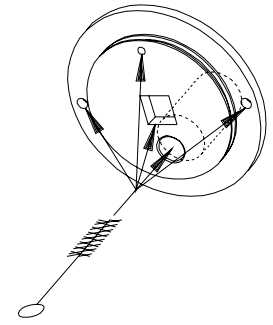


Figure 6-5

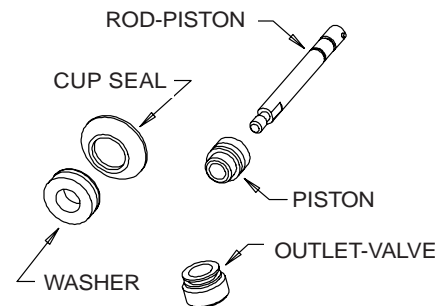


Figure 6-6

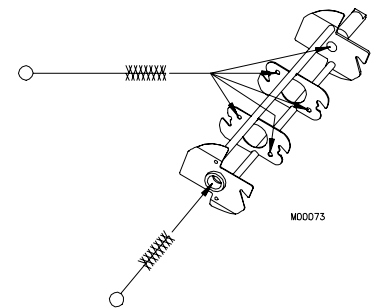


Figure 6-7

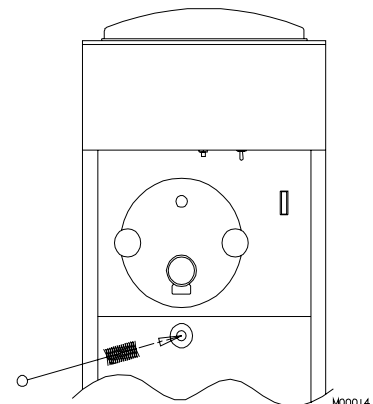


Figure 6-8

7 Assembly

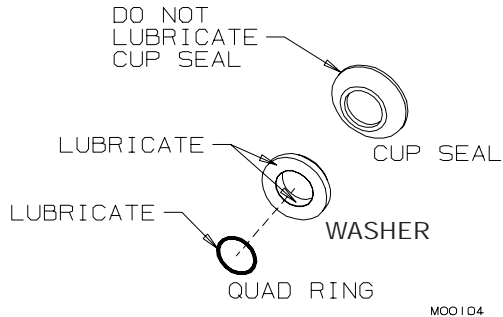


Figure 7-1 Shaft Seal assembly

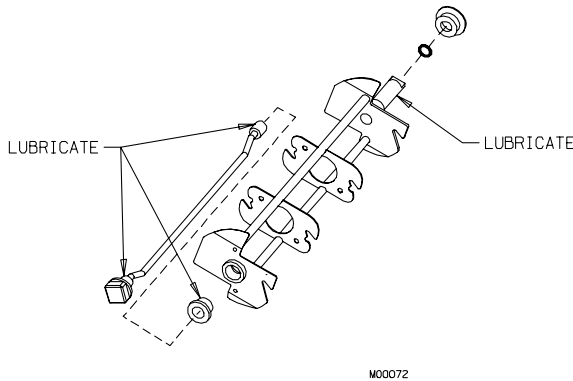


Figure 7-2 Install shaft seal assembly on beater shaft

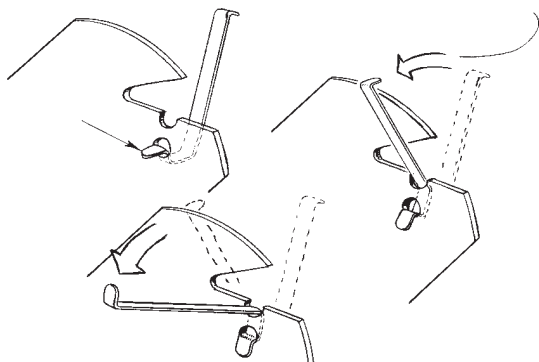



Figure 7-3 Install blade springs

Correct assembly of the freezer is essential to prevent leakage of product and damage to the freezer. To assemble the freezer you will need an approved lubricant (such as Petrol-Gel). Make sure all parts of the assemblies have been washed and sanitized before assembling. Persons assembling the freezer must first wash and sanitize their hands and forearms with an approved sanitizer.

CAUTION


To avoid electrical shock or contact with moving parts, make sure all switches are in the "OFF" position and that the main power supply is disconnected.

1. Assemble the cup seal on the bushing to complete the beater shaft seal (see figure 7-1). Apply a moderate amount of approved sanitary lubricant, such as Petrol-Gel, to the internal surface and the face of the plastic washer opposite the bell shaped portion of the seal.

NOTE: Do not allow any lubricant to come into contact with the bell-shaped rubber portion of the seal.

2. Place the quad ring over the rear of the beater shaft and lubricate. Install the beater shaft seal (figure 7-2) over the rear of the beater shaft, with the bell-shaped portion facing the rear and the washer portion against the quad ring.

3. Apply lubricant to the bearing areas of the breaker bar and bushing (figure 7-2).

Important:
The beater bushing (shown in figure 7-2) must be installed or the freezer will be damaged.

4. Insert the breaker bar into center of beater shaft. Lubricate the bearing surfaces and insert the breaker bar into the hole in rear beater shaft disc (figure 7-2).

—continued

7 Assembly — continued

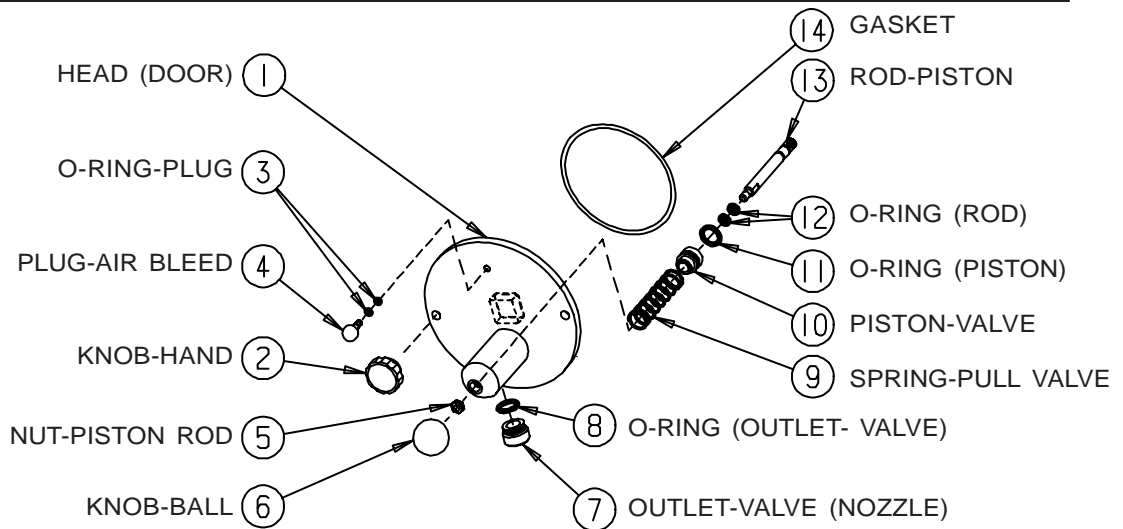


Figure 7-4

5. Attach the blade springs to the beater plates as shown in figure 7-3.

6. Insert scraper blades into the proper beater plate slots so that end of the spring rests in the groove on the bottom side of the blade.

7. Insert the assembled beater into the cylinder by placing the rear blade on the bottom of the cylinder and depressing the front blade and spring. This will center the beater shaft and allow alignment with the drive shaft. Rotate the beater assembly while pushing, until shank has fully engaged the drive shaft.

8. Slide the beater toward you about ½-inch. (This is necessary to align and install the head properly.)

9. Assemble piston assembly (figure 7-4, items 10, 11, 12, 13) by installing the first rod O-ring (12) in groove farthest from the threads on piston rod (13). Then slide piston (10) over O-ring, large diameter end first. Now install the second (holding) rod O-ring (12) on rod (13) in groove closest to the threads. Install and lubricate piston O-ring (11).

10. Insert spring (9) into back side of head piston body.

11. Insert the piston assembly, threaded end first, through the center of

the spring in the piston body until the piston is flush with the back of the head.

12. Thread nut (5) on piston rod until it is off threaded portion, then screw the ball knob (6) down tight.

13. Install and lubricate the outlet-valve O-ring (8) then insert the outlet-valve (7) into the piston body.

14. Install and lubricate the two air bleed plug O-rings (3) then insert plug (4) into the head.

15. Install the head gasket (14) into the groove in the back of the head and lubricate.

NOTE: If the head does not slide easily into place, recheck engagement of beater with the drive shaft.

Important:

DO NOT use excessive force when tightening the hand knobs. Excessive force will damage the head. Tighten finger-tight only.

16. Install dispensing head on freezer by sliding head over threaded studs and aligning square end of breaker bar with square in dispensing head. Slide head into cylinder and install hand knobs, being careful to tighten simultaneously and finger tight only.

8 Start-up Instructions

8.1 Sanitizing

The washing and sanitizing instructions explained in this manual are important procedures designed to remove bacteria and maintain a clean, sanitary freezer. The Arctic Rush® freezer must be disassembled and cleaned according to the instructions in the manual before assembly and sanitizing to ensure the best possible cleanliness.



CAUTION

To prevent bacteria growth, use only approved sanitizers to sanitize the machine. Sanitizing must be done just prior to starting the machine. Failure to do so could create a health hazard.

Important:

Do not use unapproved sanitizers or laundry bleach. These materials may contain high concentrations of chlorine and will chemically attack freezer components.

NOTE: It is your responsibility to be aware of the requirements for meeting federal, state and local laws concerning the frequency of cleaning and sanitizing the freezer.

1. Wash and sanitize your hands and forearms.
2. Prepare 4 gallons (15.2 liters) of sanitizing solution (example: Stera-Sheen Green Label) in a container. Sanitizing solution must be mixed according to manufacturer's instructions to yield 100 PPM strength chlorine solution.

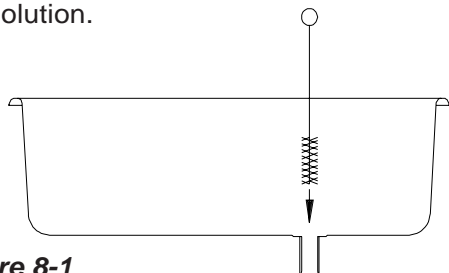


Figure 8-1

Important:

Never let the sanitizer remain in the freezer for more than 15 minutes.

Important:

Do not insert any tools or objects into the port from the hopper to the cylinder or the head dispensing hole while the freezer is running.

3. Pour sanitizing solution into the hopper pan. Using a clean brush, wash down the hopper walls and the mix feed tube from the hopper to the cylinder, as shown in figure 8-1. Wipe the hopper cover with the sanitizing solution.

Important:

DO NOT use the "FREEZE" position with sanitizer in the cylinder. The freezer will be damaged.

4. When the cylinder has filled with sanitizing solution, reconnect the power supply to the freezer. Turn the selector switch to the "CLEAN" position and allow the beater to run for 5 minutes.

5. At this time check for leaks around the head, piston, and drain tube.

Important:

DO NOT hang containers from the dispensing spout. Doing so will damage the head.

6. Turn the selector switch to the "OFF" position. Place an empty container under the dispensing head and drain the solution by opening the piston to allow the cylinder and hopper to empty.

8.2 Product Preparation

Important:

DO NOT use the freezer for purposes other than freezing a “slush” product or cocktail mix, and DO NOT attempt to freeze plain water. This will result in damage to the freezer.

1. Use a container of sufficient capacity and with gallon measurement markings to accurately mix in quantities required by the product manufacturer’s instructions.

2. Prepare at least 5 gallons (18.9 L) of mix. Follow the directions exactly as shown on product label.

EXAMPLE: For powdered neutral base, add contents of package and 5 lbs. (2.3 kg) of

sugar with enough water to make 5 gallons (18.9 L) of neutral base. Never add more water than instructions call for.

NOTE: The product should register between 11-13 Brix on a refractometer or a hydrometer.

3. If you so desire, you may precool the slush mix and thereby gain added capacity in your freezer. Cool at 36°F (2.2°C). **DO NOT FREEZE.**

4. Always thoroughly stir mix before filling machine. Ingredients can separate over time and change Brix reading.

8.3 Priming

Priming the freezer removes excess air from the freezing cylinder and sets the proper consistency for the first cylinder of product.

1. While holding the piston open, pour the mix directly into the hopper, allowing the mix to force out the remaining sanitizer (approximately 8 ounces or 250 ml).

2. When *pure* mix appears (all sanitizer is expelled), close the piston.

Important:

Failure to completely remove sanitizer or water from the freezing cylinder before placing in “FREEZE” will damage the freezer.

3. Remove the air bleed plug and allow cylinder to completely fill with mix. Replace the air bleed plug when mix reaches the bottom of the air plug opening.

4. Finish filling the hopper with mix. The freezer will hold 8 gallons—12 quarts in the freezer cylinder and 20 quarts in the hopper (30.3 Liters—11.4 L in cylinder and 18.9 L in hopper.)

NOTE: DO NOT ALLOW THE LEVEL OF MIX IN THE HOPPER TO FALL BELOW 1/3 FULL.

5. Turn the selector switch to the “FREEZE” position.

6. Place the hopper cover over the hopper.

7. When the mix has been frozen to the proper consistency, the compressor will automatically shut off. It will restart whenever the product consistency changes. The beater will run continually.

8. See Arctic Rush® Mix Information, Section 10, for determining consistency and making adjustments.

9. If your slush mix is above 70°F (21°C), it will take approximately 10 minutes to freeze down to the proper consistency.

9 Closing Procedures

9.1 Night Operation

NOTE: It is your responsibility to be aware of, and conform to, the requirements for meeting local, state, and federal laws concerning the frequency of cleaning and sanitizing the freezer.

1. If the mix is nonperishable (sugar base), place the selector switch in the "OFF" position at the end of the day.
2. Clean the drip tray and all soiled surfaces with dish detergent solution and rinse with clear water. Flush dispense opening with warm water and sanitizing solution.

3. To restart the freezer on the following day, place the selector switch in the "FREEZE" position. The mix in the cylinder will still be partially frozen and this will reduce the freezing time to 5–10 minutes.

3. If the mix is perishable (fruit base), leave the selector switch in the "FREEZE" position or drain the product from the freezer, Section 9.2.

9.2 Draining Product from the Freezer

To remove frozen product from the cylinder, perform the following steps:

1. Place the selector switch in the "CLEAN" position.
2. Place a clean, sanitized container under the dispensing nozzle.
3. Dispense the semi-frozen product until it quits flowing. Cover the product container and place it in the cooler.

NOTE: Follow state and local health codes concerning reuse of mix.

Important:

Do not use hot water. Damage to the freezer could occur.

4. Pour 2 gallons (7.6 L) of cold water into the hopper.
5. Dispense the cold water. Follow with a gallon of warm water and repeat until the water runs clear. Turn the selector switch to the "OFF" position.
6. Prepare a total of 4 gallons (15.2 liters) of sanitizing solution in a bucket. The sanitizing solution must be mixed according to manufacturer's instructions to yield 100ppm available chlorine solution (example: Stera-Sheen Green Label).

7. Remove the air bleed plug and pour the sanitizing solution into the hopper. When the sanitizing solution appears at the air bleed opening, replace the plug.

8. When the cylinder has filled with sanitizing solution, turn the selector switch to the "CLEAN" position and allow the beater to run for 5 minutes.

9. Place an empty container under the dispensing head, and slowly open the piston and drain the sanitizer out of the cylinder and hopper. Turn the selector switch to "OFF".

10. Refer to Section 6, Disassembly and Cleaning.



10 Arctic Rush® Mix Information

10.1 Determining Product Consistency

1. For Arctic Rush® mix, use a clear, straight-sided glass of any size and draw off a full glass of frozen product (slush flavor bottles work well).
2. Allow the glass to stand for 2 minutes.
3. The product is of proper consistency when the upper $\frac{3}{4}$ is “slushy snow” and the lower $\frac{1}{4}$ is liquid.

10.2 Adjusting Product Consistency

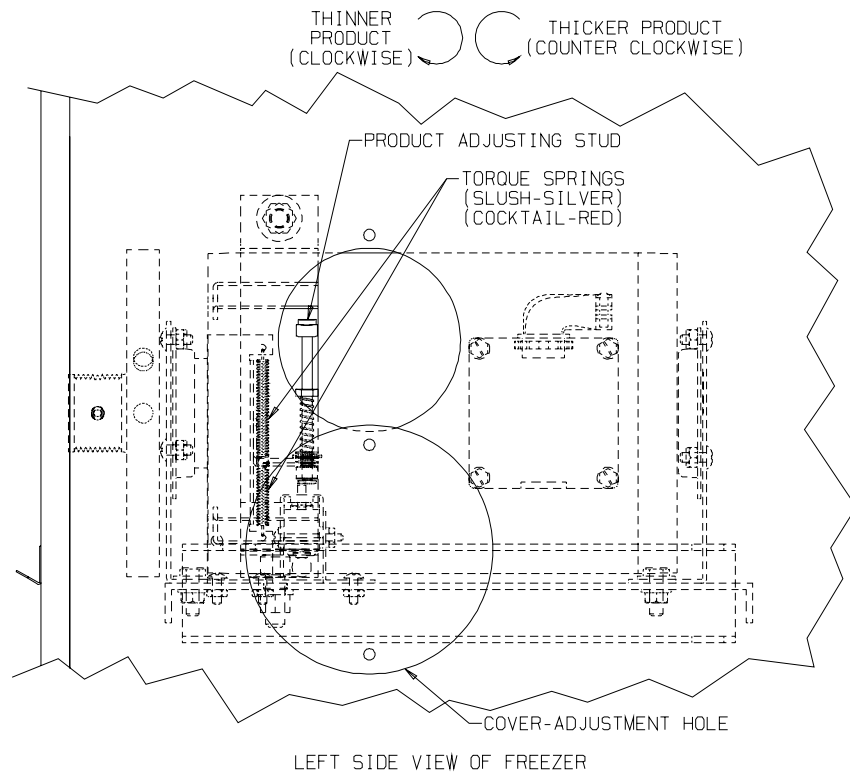


Figure 10-1

M01213

Product consistency has been preset at the factory. Further adjustment may be necessary to obtain your desired consistency. For instruction on adjusting product consistency, proceed with the following steps.

1. Allow the freezer to operate until the compressor shuts off. Dispense sufficient product to check consistency. (Refer to Section 10.1 Determining Product Consistency.)



CAUTION

To avoid electrical shock or contact with moving parts, make sure all switches are in the “OFF” position and that the main power supply is disconnected.

10.2 Adjusting Product Consistency — continued

2. Find the small adjustment cover on the left side freezer panel.

3. Remove the top screw holding the cover and loosen the bottom, letting the cover swing away from the access hole.

4. Look into the access hole and you will see an arm extending from the drive motor (see figure 10-1.) The arm is held in place by springs on both the top and bottom. At the end of this arm is a nylon adjusting stud. This stud will adjust the consistency of the product.

5. If the product is **too thin**, turn the adjusting stud **counterclockwise** (up) 1/2 turn. If the product is **too**

thick, turn the adjusting stud **clockwise** (down) 1/2 turn. Close cover and reconnect power. Turn selector switch to "FREEZE" and wait until the compressor has cycled off.

6. Recheck the product consistency in 30 minutes. Repeat steps and recheck until proper consistency is obtained. Close cover and reinstall screw.

CAUTION



To avoid electrical shock or contact with moving parts, make sure all switches are in the "OFF" position and that the main power supply is disconnected.

10.3 Refractometer/Brix Reading

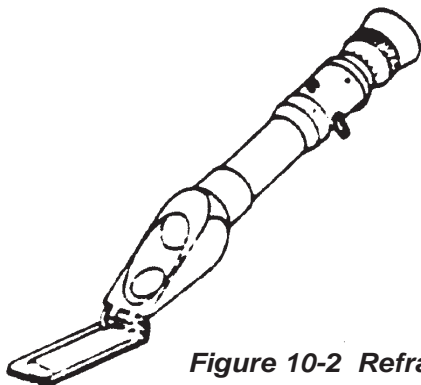


Figure 10-2 Refractometer

A refractometer measures soluble sugar content of mix, expressed in percentage weight. This is normally referred to as a "Brix Reading." The typical refractometer uses a scale from 0% to 32%.

Adjust the refractometer according to the manufacturer's instructions.

NOTE: A refractometer is a delicate instrument and must be handled with care. Never immerse the entire refractometer in a cold drink. Cooling the refractometer will cause it to give inaccurate readings. A refractometer cannot be used to read dietetic syrups.

Open the hinged side of the refractometer and place a few drops of mix on the slide.

Close the slide and look through the eye piece, holding the refractometer up against the light. A line will appear across a graduated scale which indicates the Brix level.

Acceptable Brix level is 11-13 on a refractometer.

NOTE: Never go below 11 on the Brix Reading.

Some experimentation may be necessary before correct Brix and serving temperature will be found. Generally, the higher the Brix reading the lower the serving temperature. Conversely, the lower the Brix reading, the higher the required serving temperature. If the complaint concerns product appearance, (ie. too runny or too stiff) always first take a Brix reading of the mix because variation in sugar content will have a direct bearing on actual freezing point.

11 Routine Maintenance

H. C. Duke & Son, Inc. recommends the following schedule to help maintain your equipment in *like-new* operating condition. Take the time to learn and perform these routine procedures and receive in return many years of valuable service from your freezer. Protect your investment.



This safety symbol identifies procedures that could cause personal injury. If you are uncertain about a procedure and its safety, or have any questions on the safety precautions, contact H.C. Duke & Son, Inc.

Daily

1. Wipe all exterior surfaces of the freezer to remove any splattered mix.

NOTE: It is your responsibility to be aware of, and conform to, the requirements for meeting federal, state and local laws concerning cleaning intervals, cleaning and sanitizing procedures.



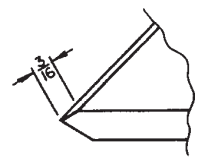
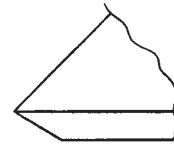
Weekly

1. Disassemble and thoroughly clean, rinse, sanitize, air dry, reassemble and sanitize all parts from this freezer that come into contact with mix.



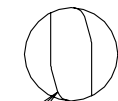
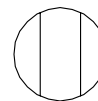
CAUTION
To prevent bacteria growth, remove all O-rings when cleaning. Failure to do so could create a health hazard.

2. Clean the cylinder and drain tube with the appropriate brushes.
3. Upon cleaning, inspect and lubricate all seals and O-rings as described in the manual that come into contact with mix. Replace as needed.
4. Carefully inspect all parts for wear, including seals, O-rings, and blades. Replace as required.



Replace blades if worn 3/16" or more.

5. Check the beater shank and drive shaft for wear.



WORN SHAFT TANG

A worn coupling will have a non-parallel shape on the drive opening.

11 Routine Maintenance

Monthly

A. Test Head Switch.

The head switch feature is designed to prevent the beater shaft from being accidentally activated. It is essential that the proper operation of this switch be verified on a routine basis. Use the following instructions to test for proper operation:

1. Be sure all switches are in the "OFF" position.
2. Disconnect the main power supply.
3. Remove the dispense head and beater shaft assembly.
4. Connect the main power supply.
5. Turn the selector switch to the "CLEAN" position.

6. Look inside the freezing cylinder toward the rear. The drive shaft coupling should **NOT** be turning. Turn the switch off and disconnect the main power supply.

7. If the drive shaft coupling is turning, or you are unable to determine whether or not the shaft is turning, turn the switch to the "OFF" position, disconnect the main power supply and contact your local authorized service company. **DO NOT** place the freezer in service until the problem has been fixed.

B. Water Condenser.

Check the outlet water temperature of water-cooled condensers at the floor drain. Water temperatures should be about 95°F with a 70°F water inlet temperature.



CAUTION
Moving parts. **DO NOT** place hands in the freezing cylinder. Severe personal injury could result.

Quarterly

A. Clean Condenser Fins.

1. On air cooled freezers have the condenser fins cleaned by your local authorized service company.

Important:
Never use a screwdriver or sharp object to clean between fins.

11 Routine Maintenance

Annually

Contact your authorized H.C. Duke & Son, Inc. Service Representative to perform the following services:

1. Have qualified refrigeration technician inspect and clean the beater drive motor.
2. Have qualified refrigeration replace drive belt and lubricate fan motor as needed.
3. Have qualified refrigeration clean the inside of the freezer including base, side panels, condenser, etc.
4. Have qualified refrigeration check water-cooled condenser and flush clean if necessary (water-cooled only).
5. Have qualified refrigeration check the refrigeration system and make any necessary adjustments.

USE ONLY ORIGINAL OR AUTHORIZED REPLACEMENT PARTS WITH THIS FREEZER

(See Illustrated Replacement Parts Manual)

If you have any questions on items that are not included in this schedule or problems where service assistance is needed, please call H. C. Duke & Son, Inc., Service Department, for factory service assistance at
(309) 755-4553 or (800) 755-4545.

Winter Storage

To protect the unit during seasonal shutdown, it is important to store your Arctic Rush® freezer properly. Please use the following procedures:

1. Disconnect all power to the freezer.
2. Disassemble and wash all parts that come into contact with the mix with a warm, mild detergent solution. Rinse in clear water and dry all parts thoroughly.
3. Store the loose parts, such as the parts in the head assembly and beater assembly, in a safe dry place.
4. Do not lay heavy objects on the plastic or rubber parts.
5. Cover the freezer and all loose parts to protect them from dust or other elements that could contaminate them while in storage. Place the freezer in a dry location.
6. Have air-cooled condenser fins cleaned by a service technician to remove all forms of dirt, lint, and dust.

Important:

For water-cooled freezers, failure to purge the freezer of water may result in severe damage to the refrigeration system.

7. ***Call an authorized service technician to perform this step.*** For water-cooled freezers, disconnect the water supply. Use compressed air to blow out all remaining water in the condenser.

12 Troubleshooting Tables

SAFETY



This safety alert symbol identifies important personal safety messages in this manual. When you see this symbol, be alert to the possibility of personal injury. **DO NOT** attempt to continue until the safety precautions are thoroughly understood.



CAUTION

All maintenance and adjustments must be done by a qualified service technician.



CAUTION

To avoid electrical shock or contact with moving parts, make sure all switches are in the “OFF” position and that the main power supply is disconnected.



Note: For Water-cooled freezers connected to glycol cooling systems, freezers must be switched to city water prior to trouble-shooting freezers.

IMPORTANT:







Some refrigerants are hazardous to the earth's atmosphere. To protect our environment, use a refrigerant recovery/recycling unit when removing refrigerant from the system.





12 Troubleshooting Tables

PROBLEM	PROBABLE CAUSE	REMEDY
Freezer does not operate.	1. Freezer unplugged.	1. Plug in freezer.
	2. Fuse or breaker blown at main disconnect. <div style="text-align: center; margin-top: 10px;">  </div>	2. Have service technician make sure your freezer is connected to a separate circuit independent from any other electrical equipment. Have service technician check fuse or breaker size and check for low voltage; if not within 10% of nameplate rating call the power company.
	3. Beater motor out on overload.	3. Allow motor to cool off, reset circuit breaker, and check product consistency.
	4. Our on high pressure.	4. Contact your local service company.
	5. Component failure.	5. Contact your local service company.
Product will not freeze.	1. Improper mixing of product. Brix too high.	1. Follow mixing instructions on product label. See Section 10.1, Determining Product Consistency.
	2. Component failure.	2. Contact your local service company.
	3. Upper torque spring not connected. <div style="text-align: center; margin-top: 10px;">  </div>	3. Install torque spring. See Section 10.2, Adjusting Product Consistency.

12 Troubleshooting Tables

PROBLEM	PROBABLE CAUSE	REMEDY
Product too thin.	1. Improper mixing of product. Brix too high.	1. Follow mixing instructions on product label. See Section 10.1, Determining Product Consistency.
	2. Adjustment screw not properly set. 	2. Adjust screw for proper consistency. See Section 10.2, Adjusting Product Consistency.
	3. Component failure.	3. Contact your local service company.
Product too thick.	1. Improper mixing of product. Brix too low. 	1. Follow mixing instructions on product label. See Section 10.1, Determining Product Consistency.
	2. Adjustment screw not properly set. 	2. Adjust screw for proper consistency. See Section 10.2, Adjusting Product Consistency.
	3. Lower torque spring not connected. 	3. Install torque spring. See Section 10.2, Adjusting Product Consistency.
	4. Component failure.	4. Contact your local service company.
Leakage of product from drain tube.	1. Cup seal leaking or improperly installed. 	1. Replace cup seal or install properly.
	2. Beater shaft assembly damaged.	2. Contact your local service company.
Product leaking around head.	1. Head quad ring defective. 	1. Replace quad ring.
	2. Hand knobs not drawn up properly.	2. Tighten hand knobs (hand tighten only).
	3. Damaged or worn o-ring on the spigot assembly.	3. Replace and lubricate o-rings on spigot assembly.
	4. Damaged head assembly.	4. Contact your local service company.

12 Troubleshooting Tables

PROBLEM	PROBABLE CAUSE	REMEDY
Freezer vibrates.	1. Insufficient supply of mix.	1. Fill hopper at least 1/3 full – keep hopper this full at all times.
	2. Improper mixing of product. Brix too low. 	2. Follow mixing instructions on product label. See Section 10.2, Adjusting Product Consistency.
	3. Worn blades. 	3. Replace blades.
	4. Freezer not level.	4. Level freezer.
	5. Low on refrigerant.	5. Contact your local service company.
Poor or slow product recovery.	1. Dirty or blocked condenser, restricted air flow and/or high room temperature.	1. Remove obstruction and/or lower room temperature. Have condenser cleaned by your local service company,
	2. Dispensing too much product too fast.	2. Check freezer capacity rating.
	3. Product too warm going into freezer.	3. Precool – DO NOT FREEZE.
	4. Component failure.	4. Contact your local service company.
Compressor starts, but remain in start windings.	1. Low line voltage.	1. Check for other equipment on the same circuit. Call power company or your local service company.
	2. Improperly wired.	2. Contact your local service company.
	3. Current relay defective.	3. Contact your local service company.
	4. Start capacitor weak.	4. Contact your local service company.
	5. High discharge pressure.	5. Check air condenser. If it needs to be cleaned contact your local service company.

12 Troubleshooting Tables

PROBLEM	PROBABLE CAUSE	REMEDY
Contactor chatters or coil burned out.	1. Low line voltage	1. Contact your local service company to check voltage. Check for other equipment on the same circuit.
Head pressure too low.	1. Shortage of refrigerant	1. Contact your local service company.
Freezer operates long or continuously.	1. Shortage of refrigerant.	1. Contact your local service company.
	2. Dirty condenser (air cooled).	2. Have condenser cleaned by your local service company.
	3. Moisture in system.	3. Contact your local service company.
	4. Compressor failing.	4. Contact your local service company.
	5. Setting to cold	5. Adjust warmer. See Section 10.2, Adjusting Product Consistency,
Head pressure too high.	1. Refrigerant overcharge.	1. Contact your local service company.
	2. Air in system.	2. Contact your local service company.
	3. Dirty condenser (air cooled).	3. Have condenser cleaned by your local service company.
	4. Freezer location too warm.	4. Relocate freezer away from restriction. Be sure nothing is placed against the back of the freezer.
Noisy Compressor.	1. Tubing rattling.	1. Contact your local service company.
	2. Motor off of internal springs. Springs broken or bent.	2. Replace compressor, contact your local service company.

12 Troubleshooting Tables

PROBLEM	PROBABLE CAUSE	REMEDY
Compressor will not start – hums intermittently (cycling on overload).	1. Improperly wired.	1. Contact your local service company.
	2. Low line voltage.	2. Contact your local service company.
	3. Open starting capacitor or current relay.	3. Contact your local service company.
	4. High discharge pressure.	4. Check air condenser. If it needs to be cleaned contact your local service company
Start capacitors burned out.	1. Voltage too low.	1. Contact your local service company.
	2. Improper capacitor.	2. Contact your local service company.



Keep your freezer in excellent condition.
 Contact H. C. Duke & Son, Inc. for replacement parts
 and service assistance.
 Phone: 309-755-4553 or 800-755-4545
 Fax: 309-755-9858
 E-mail: service@hcduke.com

QUALITY PARTS
PROTECT
YOUR
EQUIPMENT



H. C. DUKE & SON, INC.
2116 - 8th Avenue • East Moline, Illinois 61244

REPLACEMENT PARTS MANUAL
with Illustrations



Model 195

184983-01 5/06

Replacement Parts Orders

You must have the serial number of your freezer when ordering parts — parts may differ with a particular serial number of the same model.

Parts are listed using terminology that best fits the function of the part. The illustrations in this section will help you to find the correct part number and description. The alphabetized parts list can be used to verify part numbers pertaining to the serial number of your unit.

Place your parts orders by phone, FAX, letter or e-mail to:

H. C. Duke & Son, Inc.
 Service Department
 2116 - 8th Avenue
 East Moline, IL 61244



Phone: (309) 755-4553
 or (800) 755-4545

FAX: (309) 755-9858

E-mail: service@hcduke.com

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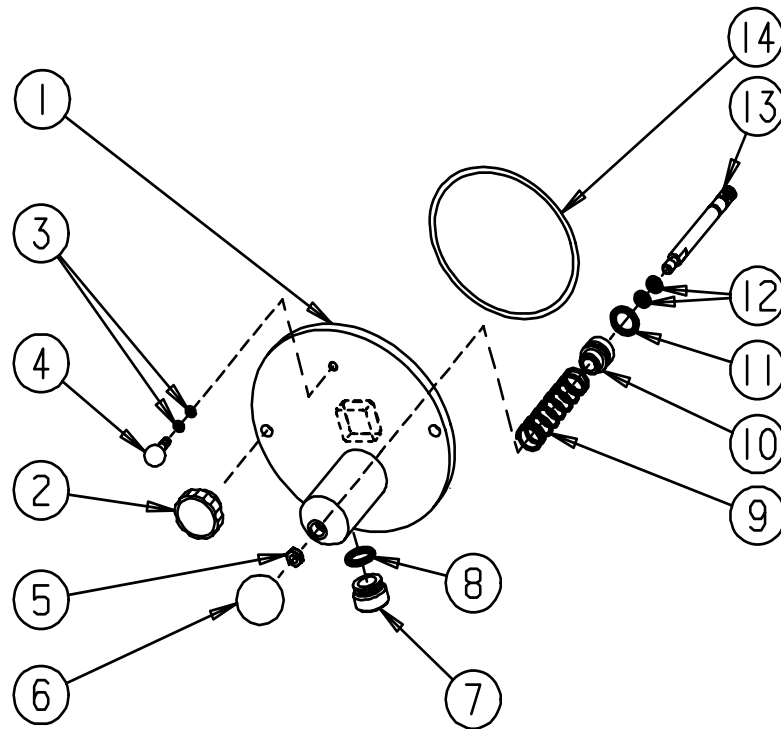


Figure 1 Head Assembly

Item	Part No.	Description
	HC117897*	Door (Head)-Assy. Complete
1A	HC119674	Door (Head)- Assy. Pull Valve (Door ONLY)
2	HC162634	Knob-Fluted Torque Black 3/8-16 (Hand)
2A	HC114341	Stud-Assy. Cylinder 1-15/16 in. (not shown)
3	HC160561	O-Ring (Plug)
4	HC115416	Plug-Assy. Air Bleed
5	HC139274	Nut-Piston Rod
6	HC162629	Knob-Ball 3/8-10 THD Black
7	HC136249-01	Outlet-Valve (Nozzle)
8	HC160582	O-Ring (Outlet Valve)
9	HC162319	Spring-Pull Valve
10	HC136253	Piston-Valve
11	HC160582	O-Ring (Plunger)
12	HC160610	O-Ring (Rod)
13	HC113999	Rod-Assy. Piston
14	HC160504	Gasket

Not Shown:

HC116410 Kit-Dispense Head Switch

* Includes items 1, 3 through 14.

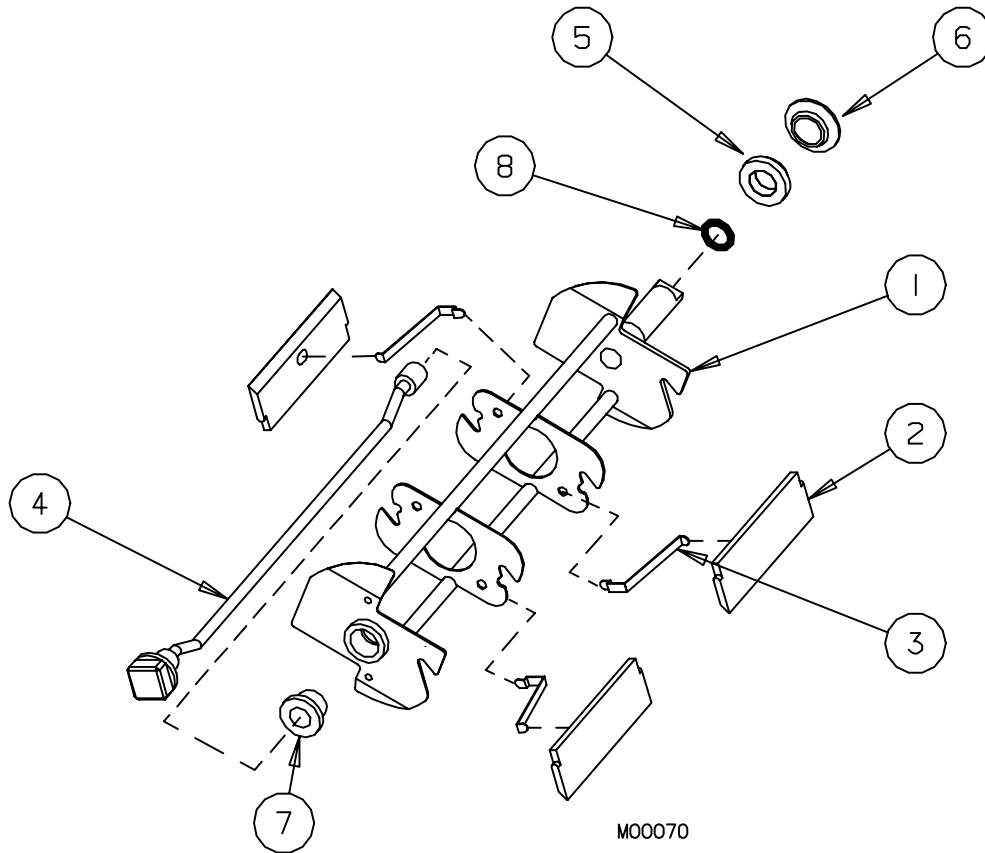


Figure 2 Beater Shaft Assembly

Item	Part No.	Description
1	HC118786	Reel-Assy. 6 in. Dia. 26 in. Long (Beater Shaft)
2	HC139771	Blade-Scraper
3	HC134649	Spring-Blade
4	HC118784	Breaker-Assy.
5	HC139006*	Washer-Shaft Seal
6	HC160557*	Seal-Beater Shaft
7	HC138947	Bushing-Reel
8	HC160597	Quad Ring

* Can be purchased together as
 HC117215..... Seal-Assy. Shaft

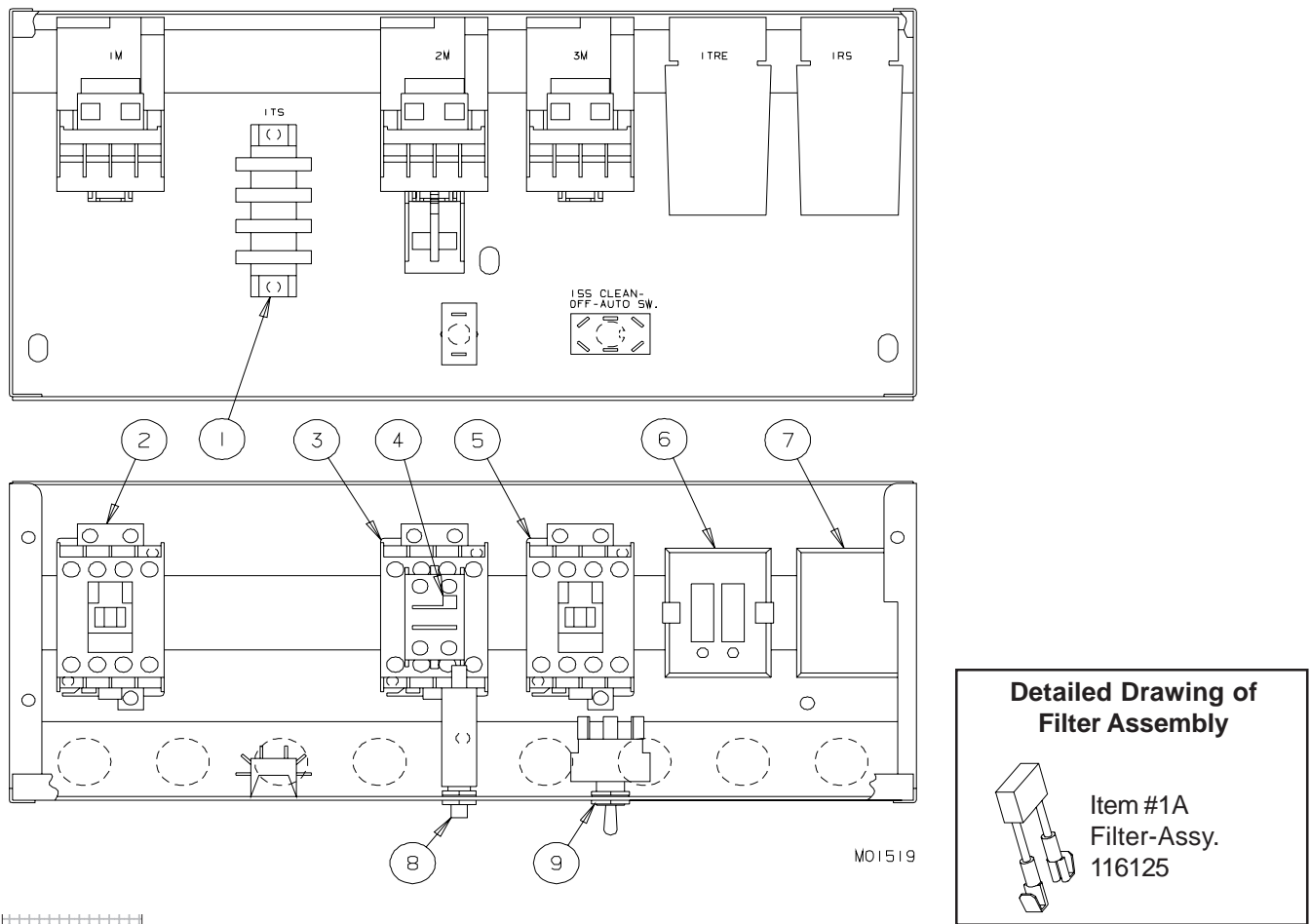


Figure 3 Electrical Box

Item	Part No.	Description
1	HC150795	Strip-Terminal
1A	HC116125	Filter-Assy. (See Detailed Drawing)
2	HC150155	Contactora-IEC 23A 208-230v Coil (Beater)
2A	HC150156	Coil-A/B 208-230v (Replacement Coil) (not shown)
3	HC150155	Contactora-IEC 23A 208-230v Coil (Compressor)
3A	HC150156	Coil-A/B 208-230v (Replacement Coil) (not shown)
4	HC150146	Deck-Adder 1 NO 1 NC
5	HC150155	Contactora-IEC 23A 208-230v Coil (Hopper)
5A	HC150156	Coil-A/B 208-230v (Replacement Coil) (not shown)
6	HC150262	Timer-DOM/DOB Adj. 230VAC
7	HC150202	Indicator-Mix Level (Optional)
7A	HC150119	Socket-Octal (not shown)
7B	HC150120	Clip-Retainer (Set of 2) (not shown)
7C	HC150540	Light-Indicator 230v (not shown)
8	HC150473	Breaker-Circuit 2.0 Amps*
9	HC150463	Switch-Toggle DPDT Ctr OFF (Selector)

* Check amperage marked on circuit breaker — if different than 2.0 Amps- call to get proper part.

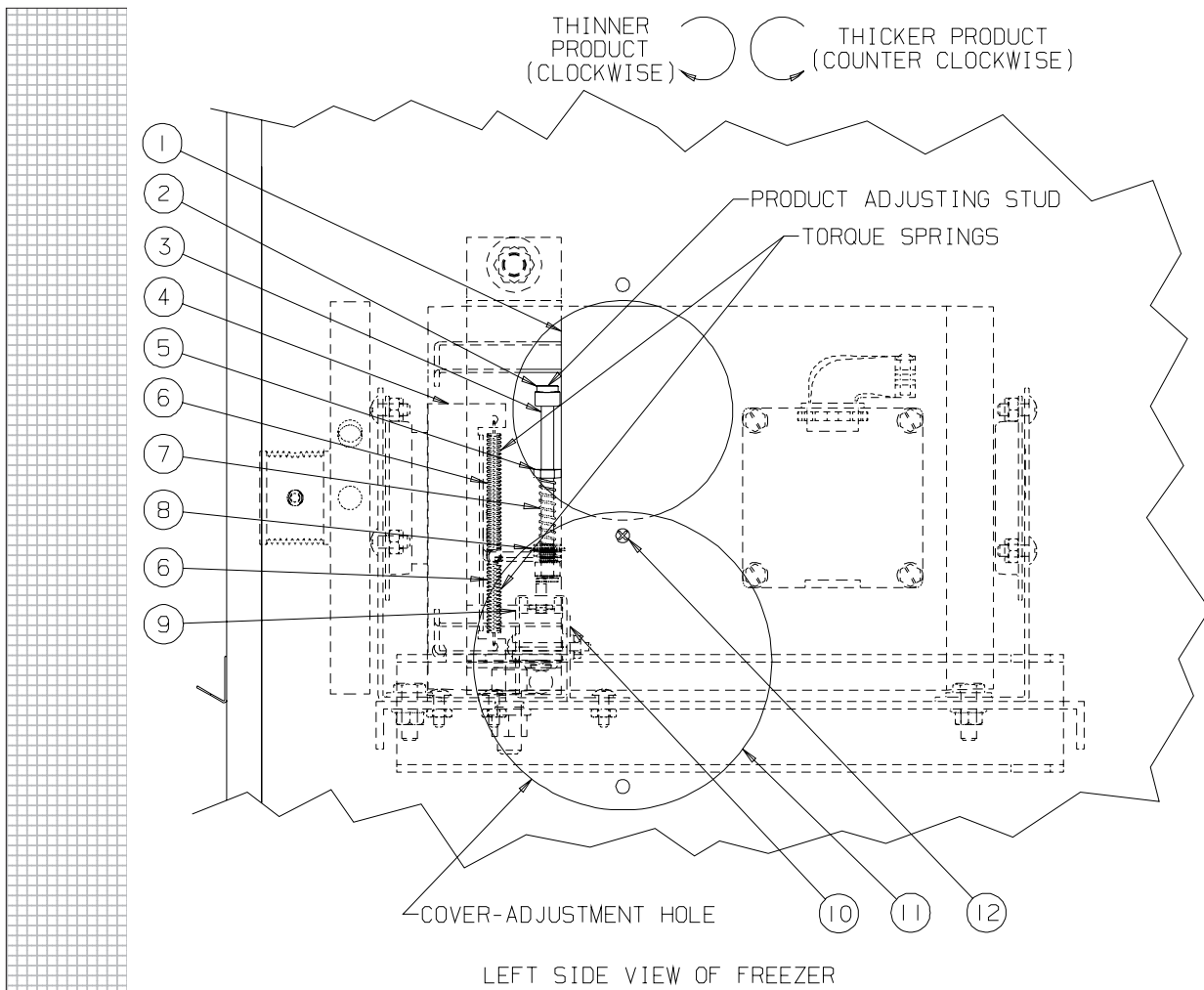
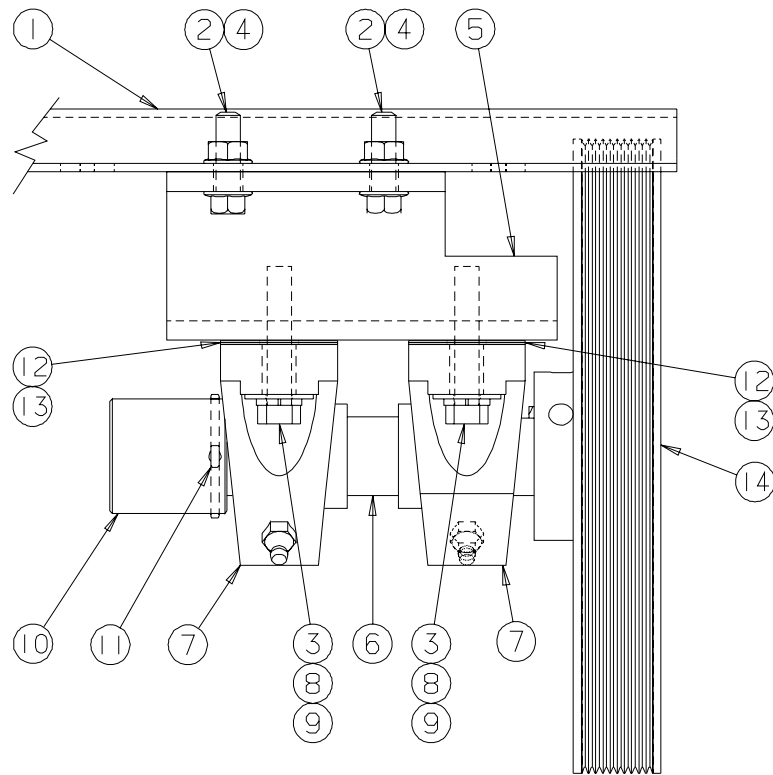


Figure 4 Consistency Control

Item	Part No.	Description
1	HC116968	Band-Assy. Motor
2	HC160092	Nut-Cap #10-32 Nylon
3	HC139544	Stud-Adjusting
4	HC134661	Bracket-Spring Torque Control
5	HC160344	Nut-Hex #10-32 ZN
6	HC162338	Spring-Extension Torque
7	HC162346	Spring-Adjusting Screw (Stud)
8	HC160138	Washer-Flat #10 ZN (Adjusting Screw)
9	HC136388	Switch-Torque
10	HC134632	Bracket-Switch Mounting
11	HC136959	Cover-Adjustment Hole (Access)
12	HC160076	Screw-TRPM #10-24 x 1/2 SST-Cover Access



M01219

Figure 5 Drive Shaft and Bearing Assembly

Item	Part No.	Description
1	HC118777	Plate-Assy. Cylinder and Bearing Mtg
2	HC159944	Screw-HXSF 5/16-18 X 1 ZN
3	HC160131	Washer-Flat 5/16 ZN
4	HC159947	Nut-HXSF 5/16-18 ZN
5	HC139772	Plate-Bearing Mounting
6	HC139774	Shaft-Drive
7	HC153030	Bearing-1 In. Pillow Block (w/ring and collar)
8	HC160347	Screw-HXHC 5/16-18 x 1-3/8 ZN
9	HC160142	Washer-Lock 5/16 ZN
10	HC133415	Cap-Coupling
11	HC159248	Pin-Cotter 2-1/4 x 1/8 ZN
12	HC135380	Shim-Bearing
13	HC135381	Shim-Bearing 24GA
14	HC153644	Sheave-1 Bore 8.00 OD/PD (Driven)
14A	HC153323	Key-Drive 1/4 SQ x 1-1/2

Not Shown:

- HC118776 Bar-Assy. Bearing Alignment Loaner
- HC118776-01 Bar-Assy. Bearing Alignment

Figure 6 Motor and Bearing Assembly
(Page 1 of 2)

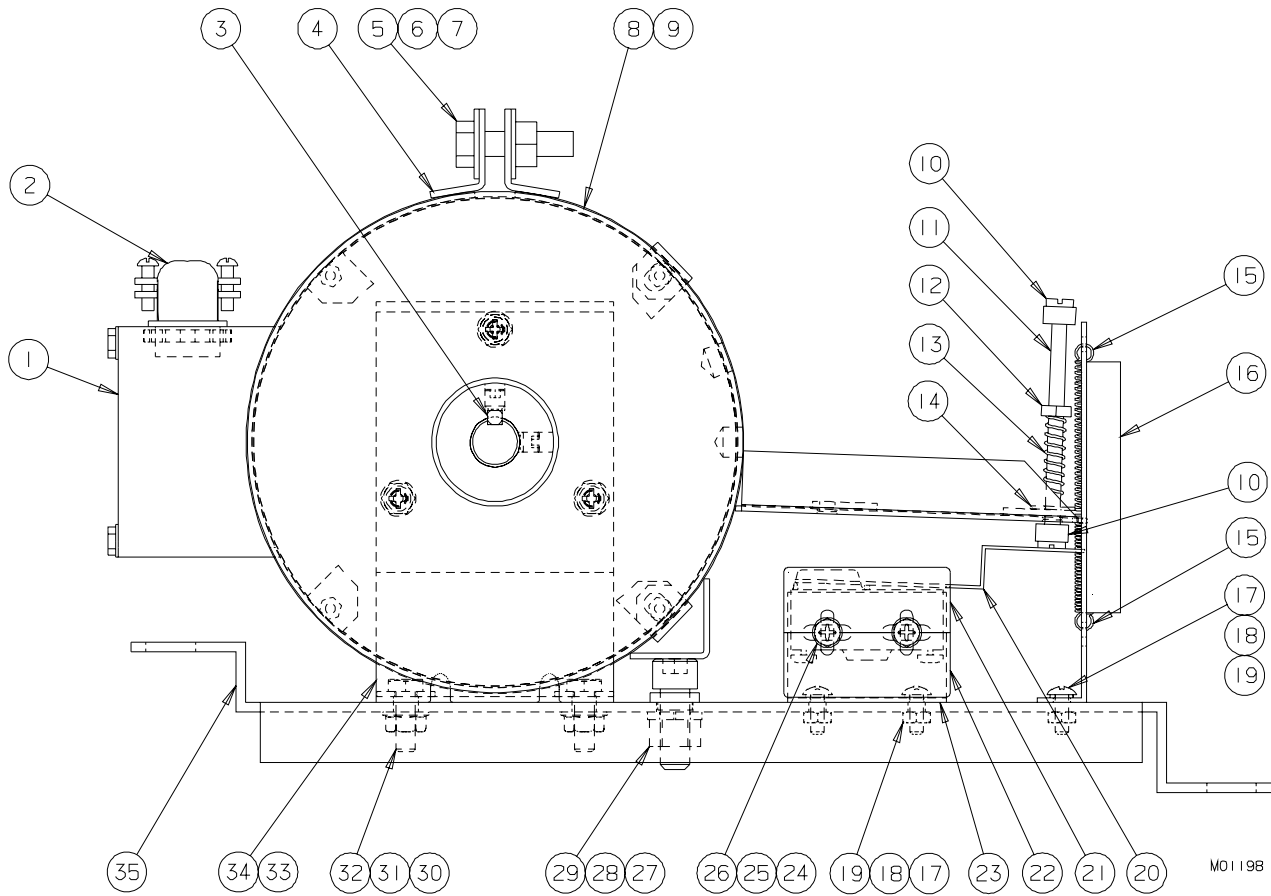


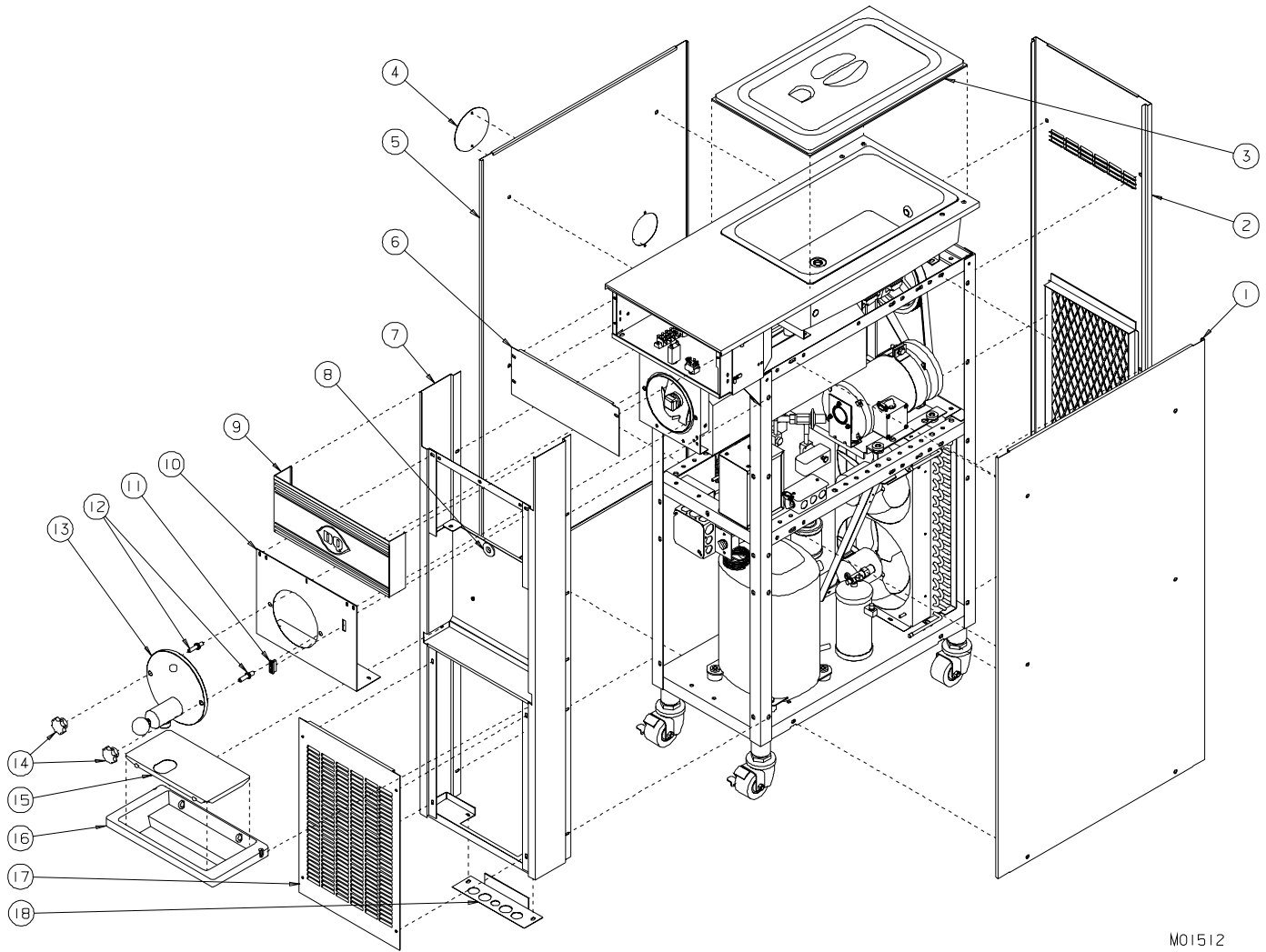
Figure 6 Motor and Bearing Assembly (Page 2 of 2)

Item	Part No.	Description
1	HC117342	Motor & Bearing-Assy. Field Replacement includes motor and: ... HC150293 Capacitor-Run HC150294 ... Capacitor-Start HC117282 ... Bearing-Assy. Retainer (Front) HC117283 ... Bearing-Assy. Retainer (Rear)
or	118134	Kit-Motor & Capacitors includes motor and: 150293 ... Capacitor-Run 150294 ... Capacitor-Start
2	HC150705	Connector-3/8 x 90°
3	HC153322	Key-Drive 3/16 SQ x 1-1/2
4	HC116968	Band-Assy. Motor
5	HC160010	Screw-HXHC 5/16-18 x 1-1/4 ZN
6	HC160131	Washer-Flat 5/16 ZN
7	HC159220	Nut-Lock-5/16-18 ZN
8	HC153635	Flywheel-Driver Sheave
9	HC160495	Screw-SK Set 1/4-20 x 1/4 BKOX
10	HC160092	Nut-Cap #10-32 Nylon
11	HC139544	Stud-Adjusting
12	HC160344	Nut-Hex #10-32 ZN
13	HC162346	Spring-Adjusting Screw/Stud
14	HC160138	Washer-Flat #10 ZN (Adjusting Screw)
15	HC162338	Spring-Extension Torque
16	HC134661	Bracket-Spring Torque Control
17	HC160049	Screw-TRPM #8-32 x 1/2 SST (Space)
18	HC160470	Washer-Lock #8 ZN
19	HC160102	Nut-Hex #8-32 ZN
20	HC136388	Switch-Torque
21	HC135003	Cover-Switch Top
22	HC135004	Cover-Switch Bottom
23	HC134632	Bracket-Switch Mounting
24	HC160156	Screw-TRHM #6-32 x 1-1/4 SST
25	HC160393	Washer-Flat #6 Brass
26	HC160309	Nut-Hex #6-32 ZN
27	HC160013	Screw-HXHC 3/8-16 x 1 ZN
28	HC160143	Washer-Lock 3/8 ZN
29	HC160453	Nut-Hex 3/8-16 ZN
30	HC160021	Screw-HXSF 1/4-20 ZN
31	HC160130	Washer-Flat 1/4 ZN
32	HC159951	Nut-HXSF 1/4-20 ZN
33	HC117282	Bearing-Assy. Retainer (Front) HC153010 ... Bearing-Motor Mount
34	HC117283	Bearing-Assy. Retainer (Rear) HC153010 ... Bearing-Motor Mount
35	HC118903	Plate-Assy. Motor ADJ

Not Shown:

- HC153124 ... Belt-Poly V (Drive)
- HC159950 ... Screw-HXSF 1/4-20 x 1/2 ZN (Rear Motor Plate)
- HC159951 ... Nut-HXSF 1/4-20 ZN (Rear Motor Plate)

**Figure 7 Panels - Air Cooled
& Air Cooled Remote (Page 1 of 2)**



M01512

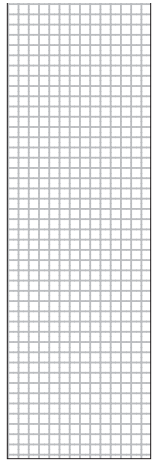


Figure 7 Panels - Air Cooled & Air Cooled Remote (Page 2 of 2)

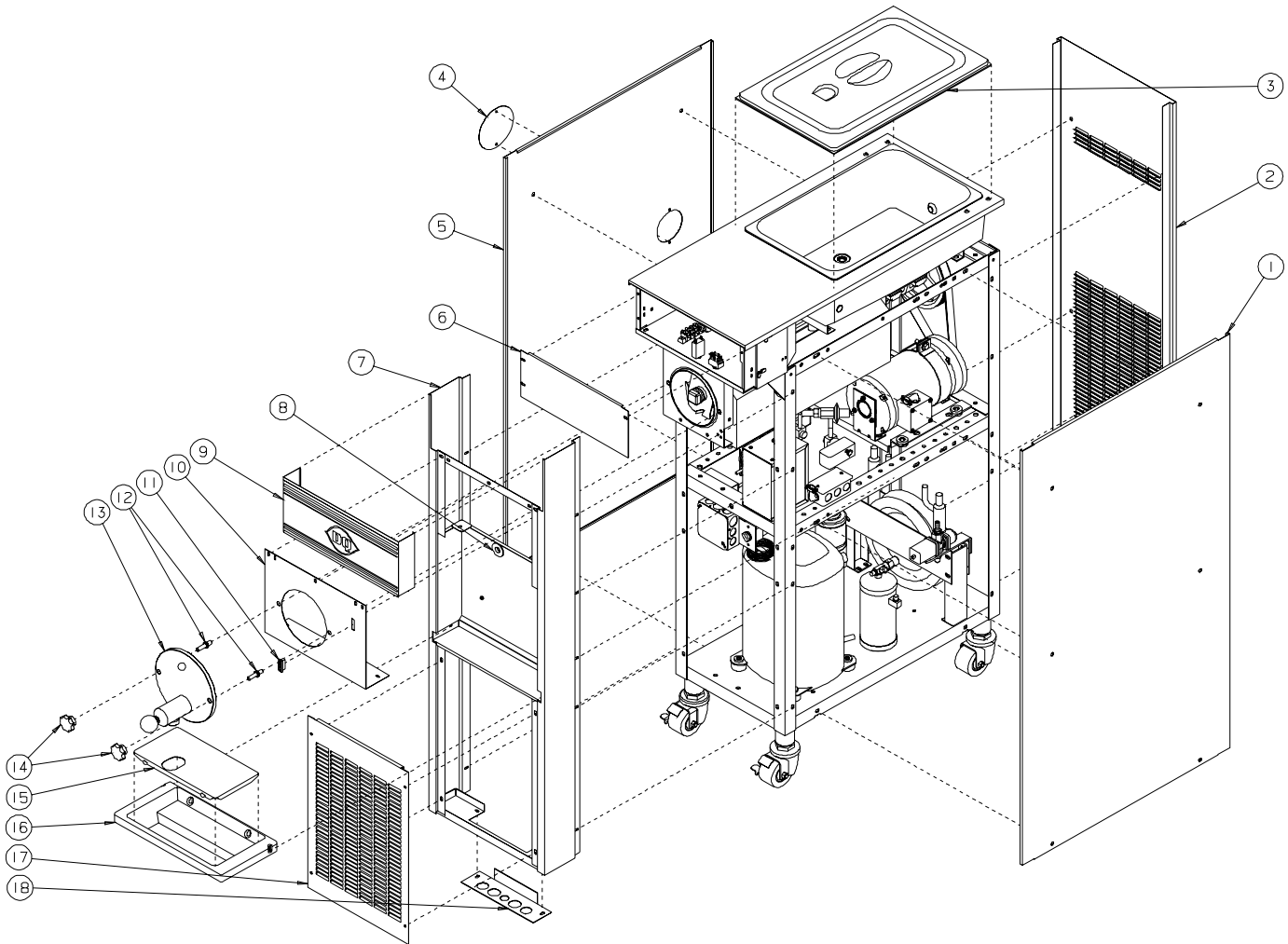
Item	Part No.	Description
1	HC132277-C	Panel-Side RH
2	HC118788	Panel-Assy. Rear (Air Cooled)
2A	HC140258	Panel-Upper Rear 16 inch (Air Cooled Remote)(Not Shown)
2B	HC140259	Panel-Lower Rear (Air Cooled Remote)(Not Shown)
3	HC196121	Cover-Hopper
4	HC136959	Cover-Adjustment Hole
5	HC138810-C	Panel-Side LH
6	HC116357	Cover-Assy. Electrical Box
7	HC116994	Panel-Assy. Front HC159175 ... Catch-Bullet .268 OD x .343 ST (Drip Tray) HC160289 ... Nut-Push Round .265
8	HC199016	Grommet-Rubber 5/8 ID
9	HC119336-04	Trimstrip-Assy. 16 in. IDQ
10	HC137224-01	Panel-Dispense
11	HC150540	Light-Indicator 230v (Optional)
12	HC114341	Stud-Assy. Cylinder 1-15/16
13	HC117897	Door(Head)-Assy. Complete (See Figure 1)
14	HC162634	Knob-Fluted Torque Black 3/8-16
15	HC116980	Insert-Assy. Drip Tray HC199030 ... Bumper-Rubber
16	HC196119-01	Tray-Drip 16 in. White
17	HC136944	Panel-Lower Front 16 in.
18	HC132683	Panel-Service

LH = Left hand side of the freezer facing the front of the freezer.
RH = Right hand side of the freezer facing the front of the freezer.

Panel Decals & Labels	
Part No.	Description
HC165119	6" Air Flow
HC165025	Beater Warning
HC165065	Cleaning Instructions
HC165091	Clear Overlay
HC165061	Logo
HC165126	Panel Removal
HC164081	Label-Trimstrip

Hardware for Panels				
Panel	Screw	Nut-Speed	Spacer	Nut-Speed on Frame
Dispense	HC160076	HC159132	n/a	n/a
Front	HC160076	HC159132	n/a	HC159067
Rear	HC160048	HC160117	n/a	n/a
Side	HC159219	HC160114	HC138456	n/a
Trimstrip	HC160076	n/a	n/a	n/a
n/a – Not Applicable				

Figure 8 Panels - Water Cooled (Page 1 of 2)



M01513

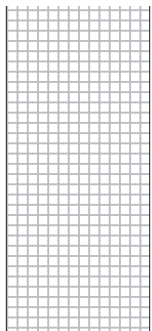


Figure 8 Panels - Water Cooled (Page 2 of 2)

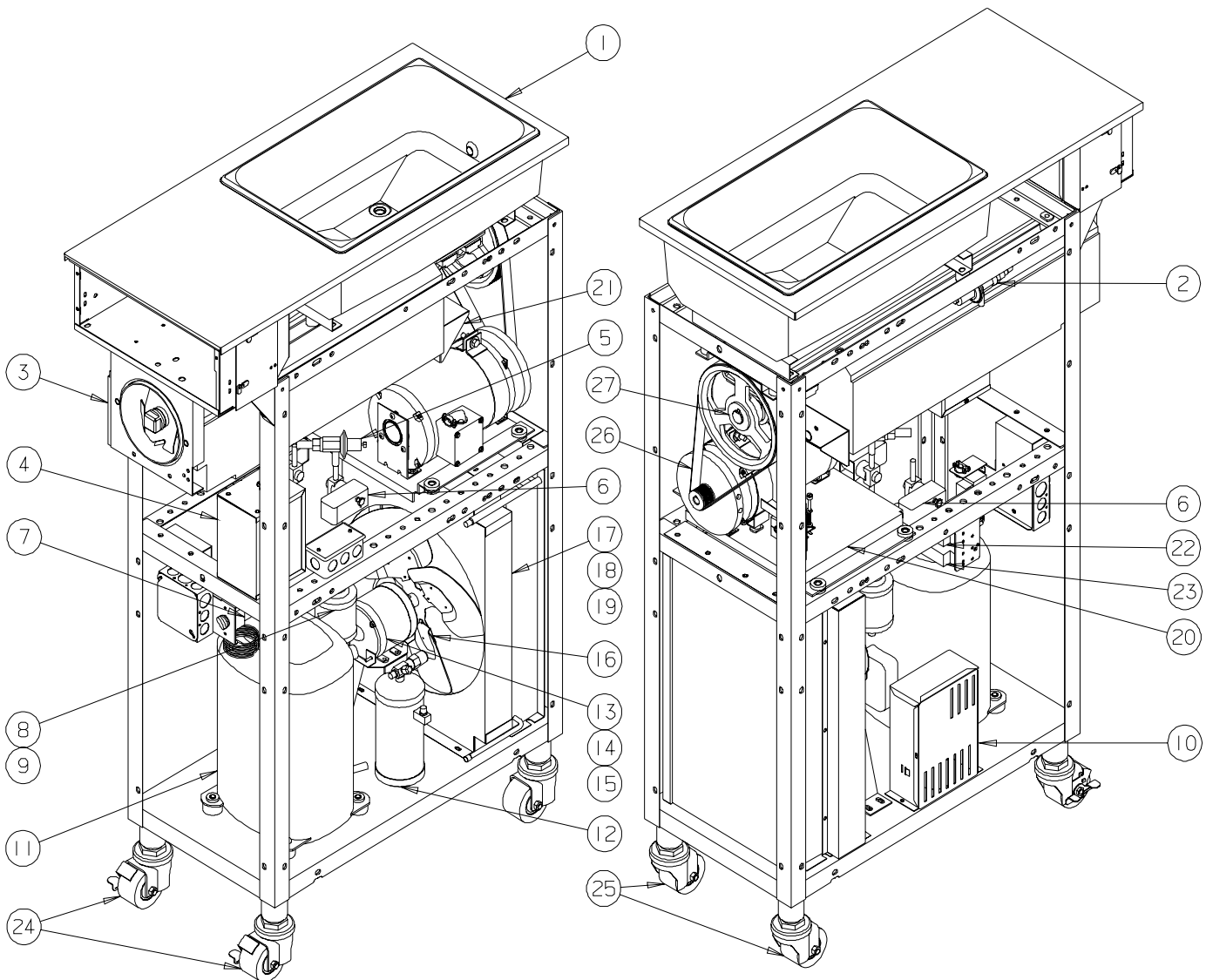
Item	Part No.	Description
1	HC132277-C	Panel-Side RH
2	HC139856	Panel-Rear
3	HC196121	Cover-Hopper
4	HC136959	Cover-Adjustment Hole
5	HC138810-C	Panel-Side LH
6	HC116357	Cover-Assy. Electrical Box
7	HC116994	Panel-Assy. Front HC159175 ... Catch-Bullet .268 OD x .343 ST (Drip Tray) HC160289 ... Nut-Push Round .265
8	HC199016	Grommet-Rubber 5/8 ID
9	HC119336-04	Trimstrip-Assy. 16 in. IDQ
10	HC137224-01	Panel-Dispense
11	HC150540	Light-Indicator 230v (Optional)
12	HC114341	Stud-Assy. Cylinder 1-15/16
13	HC117897	Door(Head)-Assy. Complete (See Figure 1)
14	HC162634	Knob-Fluted Torque Black 3/8-16
15	HC116980	Insert-Assy. Drip Tray HC199030 ... Bumper-Rubber
16	HC196119-01	Tray-Drip 16 in. White
17	HC136944	Panel-Lower Front 16 in.
18	HC132683	Panel-Service

LH = Left hand side of the freezer facing the front of the freezer.
RH = Right hand side of the freezer facing the front of the freezer.

Panel Decals & Labels	
Part No.	Description
HC165119	6" Air Flow
HC165025	Beater Warning
HC165065	Cleaning Instructions
HC165091	Clear Overlay
HC165061	Logo
HC165126	Panel Removal
HC164081	Label-Trimstrip

Hardware for Panels				
Panel	Screw	Nut-Speed	Spacer	Nut-Speed on Frame
Dispense	HC160076	HC159132	n/a	n/a
Front	HC160076	HC159132	n/a	HC159067
Rear	HC160048	HC160117	n/a	n/a
Side	HC159219	HC160114	HC138456	n/a
Trimstrip	HC160076	n/a	n/a	n/a
n/a – Not Applicable				

Figure 9 Front & Rear Assembly Views Air Cooled & Air Cooled Remote (Page 1 of 2)



FRONT ISOMETRIC VIEW

REAR ISOMETRIC VIEW

M01207

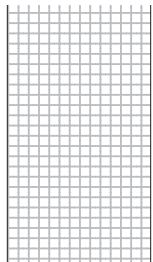
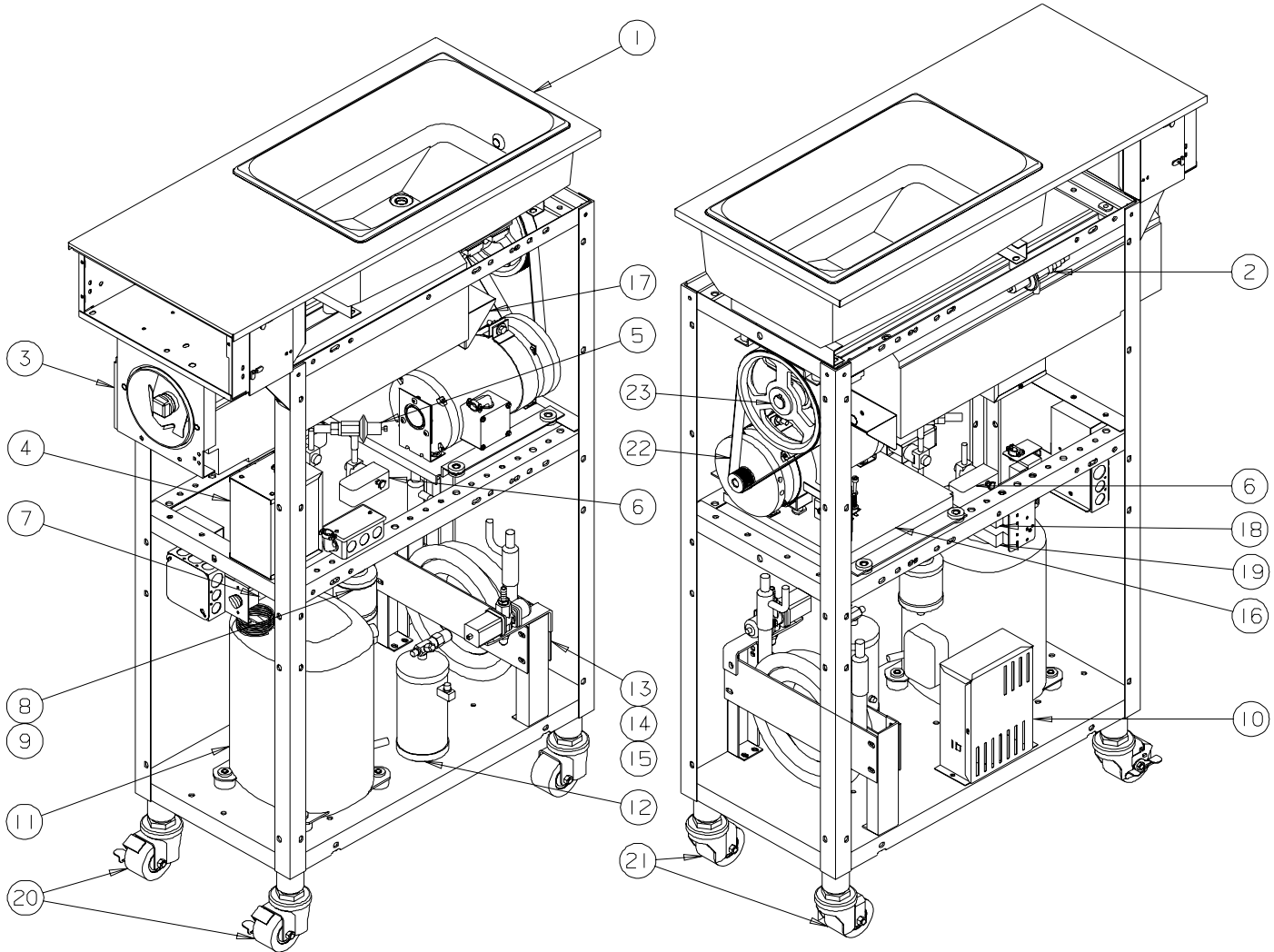


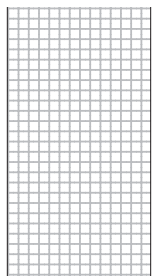
Figure 10 Front & Rear Assembly Views Water Cooled (Page 1 of 2)



FRONT ISOMETRIC VIEW

REAR ISOMETRIC VIEW

M01208



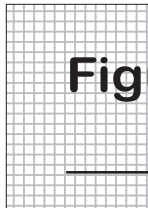


Figure 10 Front & Rear Assembly Views Water Cooled (Page 1 of 2)

Item	Part No.	Description
1	HC118783	Panel-Assy. Hopper & Top
2	HC155449	Valve-Automatic Expansion (Hopper)
2A	HC165531	Insulator-Expansion Valve
3	HC118779	Cylinder-Assy. Complete
4	HC116979	Box-Assy. Capacitor & Relay (Motor)
	HC150293	Capacitor-Run
	HC150294	Capacitor-Start
5	HC155490	Valve-Automatic Expansion (Cylinder)
5A	HC165531	Insulator-Expansion Valve
6	HC155421	Valve-Solenoid 208/230v
6A	HC155434	Kit-Solenoid Valve Repair
6B	HC150352	Coil-Solenoid 208/240v 50/60 Hz
7	HC161202	Thermostat-5° Fixed Differential
8	HC155054	Drier-Filter 16 cu in
9	HC155059	Glass-Sight
10	HC151362	Box-Assy. Capacitor & Relay
	HC150398	Capacitor-Start
	HC150399	Capacitor-Run
	HC150401	Relay
11	HC118234	Compressor-Assy. 208-230-1-60 AV includes compressor and:
	HC150398	Capacitor-Start
	HC150399	Capacitor-Run
	HC155054	Drier-Filter 16 cu in
	HC150401	Relay
	HC155419	Valve-Access
11A	HC151433	Grommet-Compressor Mtg.
11B	HC151434	Sleeve-Compressor Mtg.
11C	HC155574	Cap-Access Valve
12	HC155057	Receiver-3 lb. 3/8 ID Sweat
13	HC139813	Bracket-Water Condenser
14	HC155030	Condenser-Water
15	HC112080	Valve-Assy. Water includes
	HC155410	Valve-Water 3/8
15A	HC155444	Kit-Water Valve Repair
16	HC118904	Motor & Mount-Assy. (See figure 6)
17	HC119290	Tube-Assy. Drain
18	HC155425	Cut Out-High Pressure
19	HC155403	Cut Out-Low Pressure
20	HC162133	Caster-Low Profile w/Brake
20A	HC150736	Nut-Lock Conduit 1-1/4

Item	Part No.	Description
21	HC162134	Caster-Low Profile w/o Brake
21A	HC150736	Nut-Lock Conduit 1-1/4
22	HC153124	Belt-Poly V
23	HC153644	Sheave-1" Bore 8.00 OD/PD
23A	HC153323	Key-Drive 1/4 SQ x 1-1/2
23B	HC160033	Screw-SK Set 16-18 x 3/8

Not Shown:

HC116410	Kit-Dispense Head Switch
HC112978	Leg-Assy. Six Inch

Figure 11 Air Cooled Remote Condenser Assembly (Page 1 of 2)

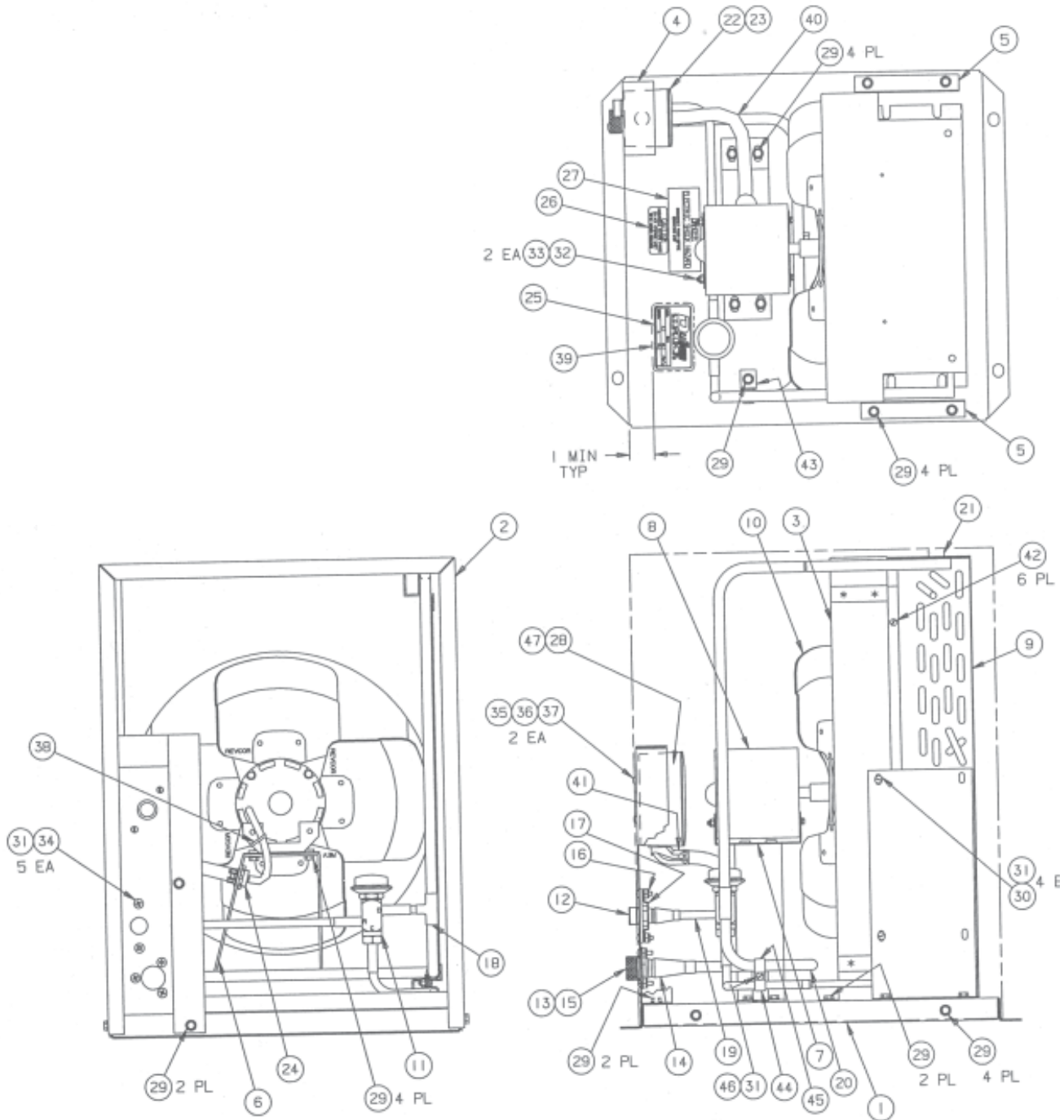


Figure 11 Air Cooled Remote Condenser Assembly (Page 2 of 2)

Item	Part No.	Description
*	HC119483	Condenser-Assy. 2 Hp 1 Fan Remote (Complete)
1	HC119484	Base-Assy. Condenser
2	HC119485	Cover-Assy. Condenser
3	HC118787	Shroud-Assy. Condenser
4	HC119192	Bracket-Assy. Electric
5	HC140257	Brace-Condenser
6	HC117471	Bracket-Assy. Fan
7	HC139235	Bracket-Fan Motor Support
8	HC151084	Motor-1/10HP 208/230-1-50/60
9	HC155125	Condenser-Air
10	HC159021	Blade-Fan 14IN1 9/20 DEG
11	HC155454	Valve-Head Pressure Control
12	HC153420	Coupling-Refr 3/8 Mac 3/8 SWT
13	HC153418	Coupling Refr 1/2 Mac 1/2 SWT
14	HC153502	Flange-Refr Coupling Mount
15	HC153503	Cap-Dust Refr Coupling
16	HC191538	Plate-Coupling Mtg
17	HC140040	Retainer-Coupling Mtg.
18	HC155547	Tee-Red 1/2X 1/2X3/8 SOL CU
19	HC189801	Tubing-Copper 3/8 X .032 Wall
20	HC189802	Tubing-Copper 1/2 X .032 Wall
21	HC160577	Tape Sponge 5/8 THK X 3/4 WlIde
22	HC150732	Box-Electric 2-3/4 X 4- 1/2 X 2
23	HC150737	Cover-Electric Box 2-3/4 X 4-1/2
24	HC150706	Connector-3/8 Straight
25	*	Decal-Nameplate DUKE 1-3/4 X 3
26	HC165127	Decal-Cover Removal
27	HC165186	Decal-Electric Shock
28	HC165205	Decal-Ground
29	HC159950	Screw-HXSF 1/4-20 X 1/2 AN
30	HC160075	Screw-RDHM 0 10-24 X 3/8 AN
31	HC160304	Nut -EL STOP 0 10-24 ZN
32	HC160200	Nut-EL STOP 08-32 ZN
33	HC160128	Washer-I NT Tooth 08-32 ZN
34	HC160372	Screw-TRPM 010-24 X 5/8 SST
35	HC160370	Screw-PNHM 08-32 X 1/2 ZN
36	HC160102	Nut-HEX 08-32 ZN
37	HC160470	Washer-LOCK 08 ZN
38	HC150808	Tie-Cable Wrap
39	HC165084	Decal-Clear Overlay 2X3-1/4
40	HC150665	Conduit-1/2 Thinwall Extraflex
41	HC150705	Connector-3/8 X 90 DEG
42	HC160037	Screw-PNH TAP 08 X 3/8 ZN
43	HC140291	Bracket-ELL
44	HC160741	Clamp Tube 3/8
45	HC160742	Clamp-Tube 1/2
46	HC160411	Screw-RDHM 010-24 X 1/2 SST
47	HC150756	Terminal-Ring 14-16GA

* Contact the Electro Freeze factory at 309-755-4553 or 800-755-4545.

Use only original or authorized replacement parts with this freezer

Accessories

Part No.	Description
HC199504	Bottle-Flavor Plastic
HC158022	Brush 1/4 Dia. 2 Lg. 6-1/2 Overall Length
HC158077	Brush-9/16 in. w/36 in. Handle
HC158026	Brush-1 in. dia. 12 in. Long
HC158005	Brush-6 in. w/36 in. Handle
HC158010	Brush-6" dia.w/o Handle
HC165241	Decal-Six Flavor Slush
HC169212	Dispenser-Cup (EL20 6-12 oz.)
HC169213	Dispenser-Cup (EL30 16-24 oz.)
HC155634	Fitting -Tank 3/4" (15 Gallon Tank)
HC116980	Insert-Assy. Drip Tray
HC118169	Kit-O-ring 185 & 195
HC158054A	Lubricant-Lubri-Film 4 oz. Tube
HC169124	Pump-Slush Flavor Plastic (For use with HC199504)
HC118148	Rack-Assembly 5 Jar Flavor Complete
HC158043	Rod-Stir Stainless
HC158014	Sanitizer-Stera Sheen Case/4
HC158014A	Sanitizer-Stera Sheen 4 lb. jar
HC113324	Spigot-Assy. w/Fitting & Gasket
HC162703	Spigot- 3/4 Plastic Drum (Spigot only for 15 Gallon Container)
HC169302	Pump-Submersible
HC113073	Tank-Assy. 15 Gallon Mix (w/lid and spigot)
HC163300	Tank-15 Gallon PVC w/lid
HC169374	Tool-O-Ring Removal
HC196119-01	Tray-Drip 16 in. White
HC196058	Tubing-1/2" I.D. x 5/8 O.D. PVC

Alphabetized Parts List

IMPORTANT: All parts shown are for standard models designed for 230V/1PH/60Hz.

PART DESCRIPTION	PART NUMBER	QTY	SERIAL NUMBER (FROM – TO)
Band-Assy. Motor (Consistency Control)	HC116968	1	F2L-1981 –
Bar-Assy. Bearing Alignment	HC118776-01	1	F2L-1981 –
Bar-Assy. Bearing Alignment Loaner	HC118776	1	F2L-1981 –
Bar-Breaker (Beater Shaft Assembly)	HC117178	1	F2L-1981 –
Base-Assy. Condenser (ACR)	HC119484	1	F2L-1981 –
Bearing -1 " Pillow Block (w/Ring and Collar) ..	HC153030	2	F2L-1981 –
Bearing-Assy. Retainer (Front) (Motor & Bearing Assy.)	HC117282	1	F2L-1981 –
Bearing-Assy. Retainer (Rear) (Motor & Bearing Assy.)	HC117283	1	F2L-1981 –
Beater Shaft (Reel)-Assy. 6 in. Dia. 24 in. Long (Beater Shaft Assembly)	HC118786	1	F2L-1981 –
Bearing-Motor Mount	HC153010	1	F2L-1981 –
Belt-Poly V (Drive)	HC153124	1	F2L-1981 –
Blade-Fan 14 in. 20 deg. (AC and ACR)	HC159021	2	F2L-1981 –
Blade-Scraper (Beater Shaft Assembly)	HC139771	3	F2L-1981 –
Board(Strip)-Terminal (Electrical Box)	HC150795	1	F2L-1981 –
Bottles-Flavor Plastic	HC199504	*	F2L-1981 –
Box-Assy. Capacitor & Relay (AVA Compressor)	HC151362	1	F2L-1981 –
Capacitor-Run	HC150399	1	
Capacitor-Start	HC150398	1	
Relay-Start/Run	HC150401	1	
Box-Assy. Capacitor & Relay (Motor)	HC116979	1	F2L-1981 –
Capacitor-Run	HC150293	1	
Capacitor-Start	HC150294	1	
Box-Electric 2-3/4 x 4-1/1 x 2 (ACR)	HC150732	1	F2L-1981 –
Brace-Condenser (ACR)	HC140257	2	F2L-1981 –
* As Required			
** Items Included In O-Ring Kit No. HC118169			
*** LH or HR — Left or right hand is determined as you face the front of freezer.			
WC = Water Cooled AC = Air Cooled ACR = Air Cooled Remote			

Alphabetized Parts List

IMPORTANT: All parts shown are for standard models designed for 230V/1PH/60Hz.

PART DESCRIPTION	PART NUMBER	QTY	SERIAL NUMBER (FROM – TO)
Bracket-Assy. Electric Box (ACR)	HC119192	1	F2L-1981 –
Bracket-Assy. Fan (AC & ACR)	HC117471	1	F2L-1981 –
Bracket-Fan Motor Support (AC & ACR)	HC139235	1	F2L-1981 –
Bracket-Spring Torque Control (Consistency Control)	HC134661	1	F2L-1981 –
Bracket-Switch Mtg. (Consistency Control)	HC134632	1	F2L-1981 –
Bracket-Water Condenser (Water Cooled)	HC139813	2	F2L-1981 –
Breaker-Assy. (Beater Shaft Assembly)	HC118784	1	F2L-1981 –
Breaker-Circuit-2.0 Amp (Electrical Box)	HC150473	1	F2L-1981 –
Brush-1/4 in dia. 2 LG 6-1/2 Overall Length .	HC158022	1	F2L-1981 –
Brush-9/16 in. w/36 in. Handle	HC158077	1	F2L-1981 –
Brush-1 in dia. 12 inches Long	HC158026	1	F2L-1981 –
Brush-6 in. dia.w/36 in. Handle	HC158005	1	F2L-1981 –
Brush-6" dia.w/o Handle	HC158010	1	F2L-1981 –
Bumper-Rubber (Drip Tray Insert)	HC199030	4	F2L-1981 –
Bushing-Reel (Beater Shaft Assembly)	HC138947	1	F2L-1981 –
Bushing-Remote Auto Fill	HC155537	1	F2L-1981 –
Cap-Access Valve (Compressor)	HC155574	1	F2L-1981 –
Cap-Dust Refr. Coupling (ACR)	HC153503	1	F2L-1981 –
Cap-Coupling (Drive Shaft)	HC133415	1	F2L-1981 –
Capacitor-Run (AVA Compressor)	HC150399	1	F2L-1981 –
Capacitor-Run (Motor)	HC150293	1	F2L-1981 –
Capacitor-Start (AVA Compressor)	HC150398	1	F2L-1981 –
Capacitor-Start (Motor)	HC150294	1	F2L-1981 –
Caster-Low Profile w/Brake	HC162133	2	F2L-1981 –
Caster-Low Profile w/o Brake	HC162134	2	F2L-1981 –
Clip-Retainer (Set of 2) (Electrical Box)	HC150120	1	F2L-1981 –
<p>* As Required ** Items Included In O-Ring Kit No. HC118169 *** LH or RH — Left or right hand is determined as you face the front of freezer. WC = Water Cooled AC = Air Cooled ACR = Air Cooled Remote</p>			

Use only original or authorized replacement parts with this freezer

Alphabetized Parts List

IMPORTANT: All parts shown are for standard models designed for 230V/1PH/60Hz.

PART DESCRIPTION	PART NUMBER	QTY	SERIAL NUMBER (FROM – TO)
Coil-A/B 208-230v (Replacement Coil) (Electrical Box).....	HC150156	3	F2L-1981 –
Coil-Solenoid 208/240v 50/60 Hz	HC155434	1	F2L-1981 –
Compressor-Assy. 208-230-1-60.....	HC118234	1	F2L-1981 –
includes compressor and			
Capacitor-Start	HC150398	1	
Capacitor-Run	HC150399	1	
Drier-Filter 16 cu in.	HC155054	1	
Relay-Start	HC150401	1	
Valve-Access	HC155419	1	
Condenser-Air (AC and ACR)	HC155125-C	1	F2L-1981 –
Condenser-Assy 2HP 1 Fan (ACR)(Complete)	HC119483	1	F2L-1981 –
Condenser-Water (WC)	HC155030	1	F2L-1981 –
Conduit-1/2 Thinwall Extra Flex	HC150665	1	F2L-1981 –
Connector-3/8 x 45 Deg	HC150712	1	F2L-1981 –
Connector-3/8 x 90° (Motor & Bearing Assy.) ...	HC150705	1	F2L-1981 –
Contacto-23A 208-230v Coil (Compressor, Hopper & Motor)	HC150155	3	F2L-1981 –
Container-15 Gallon (only).....	HC163300	1	F2L-1981 –
Container-15 Gallon (w/lid and spigot)	HC113073	1	F2L-1981 –
Control-Fan Pressure (ACR)	HC155466	1	F2L-1981 –
Coupling-Refr. 1/2MQC 1/2 SW (ACR)	HC153418	1	F2L-1981 –
Coupling-Refr. 3/8MQC 3/8 SW (ACR)	HC153420	1	F2L-1981 –
Cover- Adjustment Hole (Access) (Consistency Control)	HC136959	1	F2L-1981 –
Cover-Assy. Capacitor & Relay	HC117821	1	F2L-1981 –
Cover-Assy. Condenser (ACR)	HC119485	1	F2L-1981 –
Cover-Assy. Electrical Box	HC116357	1	F2L-1981 –
Cover-Electric Box 2-3/4 x 4-1/2 (ACR)	HC150737	1	F2L-1981 –
* As Required			
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Alphabetized Parts List

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PART DESCRIPTION	PART NUMBER	QTY	SERIAL NUMBER (FROM – TO)
Cover-Hopper	HC196121	1	F2L-1981 –
Cover-Switch Bottom (Motor & Bearing Assy.) .	HC135004	1	F2L-1981 –
Cover-Switch Top (Motor & Bearing Assy.)	HC135003	1	F2L-1981 –
Cup Seal.....	HC160557	1	F2L-1981 –
Cut Out-High Pressure	HC155425	1	F2L-1981 –
Cut Out-Low Pressure (AC and WC)	HC155403	1	F2L-1981 –
Cut Out-Low Pressure (ACR)	HC155465	1	F2L-1981 –
Cylinder-Assy. Complete	HC118779	1	F2L-1981 –
Decal-6" Air Flow	HC165119	1	F2L-1981 –
Decal-Beater Warning	HC165025	1	F2L-1981 –
Decal-Cleaning Instructions	HC165065	1	F2L-1981 –
Decal-Clear Overlay	HC165091	1	F2L-1981 –
Decal-Cover Removal (ACR)	HC165127	1	F2L-1981 –
Decal-Electric Shock (ACR).....	HC165186	1	F2L-1981 –
Decal-Ground (ACR).....	HC165205	1	F2L-1981 –
Decal-Logo	HC165061	1	F2L-1981 –
Decal-Panel Removal	HC165126	7	F2L-1981 –
Decal-Six Flavor Slush	HC165241	1	F2L-1981 –
Decal-Trimstrip IDQ Slush 16 in.	HC165076	1	F2L-1981 –
Decal-Trimstrip	"See Label"		
Deck-Adder 1 NO 1 NC (Electrical Box)	HC150146	1	F2L-1981 –
Dispenser-Cup-EL20 6-12 oz.	HC169212	1	F2L-1981 –
Dispenser-Cup-EL30 16-24 oz.	HC169213	1	F2L-1981 –
Door-Assy.	See "Head Assembly"		
Drier-Filter	HC155054	1	F2L-1981 –

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PART DESCRIPTION	PART NUMBER	QTY	SERIAL NUMBER (FROM – TO)
Filter-Assy. (Electrical Box)	HC116125	1	F2L-1981 –
Fitting & Gaskets-3/4" Tank (15 Gallon)	HC155634	1	F2L-1981 –
Flange-Refr. Coupling Mount 1/2	HC153502	1	F2L-1981 –
Flywheel-Driver Sheave (Motor & Bearing Assy.).....	HC153635	1	F2L-1981 –
Gasket (Head) (Head Assembly).....	HC160504	1**	F2L-1981 –
Glass-Sight	HC155059	1	F2L-1981 –
Grommet-Compressor Mounting	HC151433	3	F2L-1981 –
Grommet-Rubber 5/8 ID (Panels).....	HC199016	1	F2L-1981 –
Hanger-Drain Tube	HC136843	1	F2L-1981 –
Head Assembly-Complete includes	HC117897	1	F2L-1981 –
Door-Assy. Pull Valve	HC119674	1	
Gasket	HC160504	1	
Knob-Ball 3/8-16 THD Black	HC162629	1	
Nut-Piston Rod	HC139274	1	
O-ring	HC160561	2	
O-ring	HC160582	2	
O-ring	HC160610	2	
Outlet-Valve	HC136249-01	1	
Piston-Valve	HC136253	1	
Plug-Assy. Air Bleed	HC115416	1	
Rod-Assy. Piston	HC113999		
Spring-Pull Valve	HC162319	1	
Indicator-Mix Level (Electrical Box)	HC150202	1	F2L-1981 –
Insert-Assy. Drip Tray (Panels).....	HC116980	1	F2L-1981 –
Insulator-Expansion Valve	HC165531	2	F2L-1981 –
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Alphabetized Parts List

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PART DESCRIPTION	PART NUMBER	QTY	SERIAL NUMBER (FROM – TO)
Kit-Dispense Head Switch	HC116410	1	F2L-1981 –
Kit-Solenoid Valve	HC155434	*	F2L-1981 –
Kit-Water Valve Repair	HC155444	*	F2L-1981 –
Key-Drive 1/4 SQ x 1-1/2	HC153323	1	F2L-1981 –
Key-Drive 3/16 SQ x 1-1/2 (Motor & Bearing Assy.).....	HC153322	1	F2L-1981 –
Kit-Motor & Capacitors	HC118134	1	F2L-1981 –
Capacitor-Run	HC150293	1	
Capacitor-Start	HC150294	1	
Kit-O-ring 185 & 195	HC118169	1	F2L-1981 –
Knob-Ball 3/8-16 THD Blacke (Head Assy.)	HC162629	1	F2L-1981 –
Knob-Fluted Torque Black 3/8-16 (Hand)	HC162634	2	F2L-1981 –
Label-Set-Flavors	HC165241	*	F2L-1981 –
Label-Trimstrip	HC164081	1	F2L-1981 –
Leg-Adjustable 6-inch	HC112978	4	F2L-1981 –
Light-Indicator (Electrical Box)	HC150540	1	F2L-1981 –
Lubricant-Lubri-Film 4 oz. Tube	HC158054A ...	*	F2L-1981 –
Motor & Mount-Assy. Complete	HC118904	1	F2L-1981 –
Motor & Beaing Assy. Field Replacement.....	HC117342	1	F2L-1981 –
includes motor and			
Bearing-Assy. Retainer (front)	HC117282	1	
Bearing-Assy. Retainer (rear)	HC117283	1	
Capacitor-Run	HC150293	1	
Capacitor-Start	HC150294	1	
Motor & Capacitors Kit	HC118134	1	F2L-1981 –
Capacitor-Run	HC150293	1	
Capacitor-Start	HC150294	1	
Motor-1/10hp 208-230-1-50/60 (Fan)(ACR) ...	HC151084	2	F2L-1981 –
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PART DESCRIPTION	PART NUMBER	QTY	SERIAL NUMBER (FROM – TO)
Nozzle (Outlet-Valve)	HC136249-01	1	F2L-1981 –
Nozzle (NLA use HC136249-01)	HC138768	1	F2L-1981 –
Nut-Cap #10-32 Nylon (Consistency Control) ..	HC160092	2	F2L-1981 –
Nut-Hex #6-32 ZN (Motor & Bearing Assy.)	HC160309	2	F2L-1981 –
Nut-Hex #8-32 ZN (Motor & Bearing Assy.)	HC160102	2	F2L-1981 –
Nut-Hex #10-32 ZN (Consistency Control)	HC160344	1	F2L-1981 –
Nut-Hex 3/8-16 ZN (Motor & Bearing Assy.)	HC160453	1	F2L-1981 –
Nut-HXSF 1/4-20 ZN (Motor & Bearing Assy.)..	HC159951	4	F2L-1981 –
Nut-HXSF 5/16-18 ZN (Drive Shaft & Bearing Assy.)	HC159947	6	F2L-1981 –
Nut-Lock 5/16 18 ZN (Motor & Bearing Assy.)..	HC159220	6	F2L-1981 –
Nut-Lock Conduit 1-1/4 (Casters)	HC150736	4	F2L-1981 –
Nut-Piston Rod (Head Assembly)	HC139274	1	F2L-1981 –
Nut-Push Round .265 (Front Panel Assy.)	HC160289	2	F2L-1981 –
Nut-Speed 1/4-20 (Rear Panel)	HC160117	*	F2L-1981 –
Nut-Speed 1/4-20 BP&O (Side Panel)	HC160114	*	F2L-1981 –
Nut-Speed #10-24 (On Frame)	HC159067	*	F2L-1981 –
Nut-Speed #10-24 .025-.064 SST (Front & Dispense Panels)	HC159132	1	F2L-1981 –
Nut-Speed 1/8 SPR STL	HC160291	2	F2L-1981 –
O-Ring-Kit.....	HC118169	*	F2L-1981 –
O-Ring (Plug) (Head Assembly)	HC160561	2**	F2L-1981 –
O-Ring (Outlet Valve) (Head Assembly)	HC160582	2**	F2L-1981 –
O-Ring (Rod) (Head Assembly)	HC160610	2**	F2L-1981 –
Outlet-Valve (Plunger) (Head Assembly)	HC136249-01	1	F2L-1981 –
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Alphabetized Parts List

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PART DESCRIPTION	PART NUMBER	QTY	SERIAL NUMBER (FROM – TO)
Panel-Assembly Front.....	HC116994-C ..	1	F2L-1981 –
Panel-Assembly Hopper and Top	HC118786	1	F2L-1981 –
Panel-Assembly Rear (Air Cooled)	HC118788	1	F2L-1981 –
Panel-Dispense	HC137224-01 .	1	F2L-1981 –
Panel-Lower Front 16 in.....	HC136944	1	F2L-1981 –
Panel-Lower Rear (ACR)	HC140259	1	F2L-1981 –
Panel-Rear (Water Cooled)	HC139856-C ..	1	F2L-1981 –
Panel-Side LH	HC138810-C ..	1	F2L-1981 –
Panel-Service	HC132683	1	F2L-1981 –
Panel-Side RH	HC132277-C ..	1	F2L-1981 –
Pin-Cotter 2-1/4 x 1/8 (Drive Shaft)	HC159248	1	F2L-1981 –
Piston-Valve (Head Assembly)	HC136253	1	F2L-1981 –
Plate-Assembly Cylinder & Bearing	HC118777	1	F2L-1981 –
Plate-Assy. Motor Adjust (Motor & Bearing Assy.)	HC118903	1	F2L-1981 –
Plate-Bearing Mounting	HC139772	1	F2L-1981 –
Plate-Coupling Mtg.	HC191538	1	F2L-1981 –
Plug-Assy. Air Bleed (Head Assembly)	HC115416	1	F2L-1981 –
Plunger/Piston (Head Assembly)	HC136253	1	F2L-1981 –
Pulley-Driven	HC153644	1	F2L-1981 –
Pulley-Driver.....	HC153635	1	F2L-1981 –
Setscrew.....	HC160495	1	F2L-1981 –
Pump (only)-Submersible	HC169302	1	F2L-1981 –
Pump-Submersible-Hook & Hose (NLA use HC169302)	HC110027	1	F2L-1981 –
Pumps-Flavor Bottles Glass	HC169125	*	F2L-1981 –
Pumps-Flavor Bottles Plastic	HC169124	*	F2L-1981 –

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PART DESCRIPTION	PART NUMBER	QTY	SERIAL NUMBER (FROM – TO)
Quad-Ring	HC160597 **	F2L-1981 –
Rack-Assembly 5 Jar Flavor Complete.....	HC118148	..... 1	F2L-1981 –
Receiver-3 lb. (AC and WC)	HC155057	..... 1	F2L-1981 –
Receiver-10-1/2 lb. 3/8 ID Sweat (ACR)	HC155064	..... 1	F2L-1981 –
Reel-Assy 6 in. Dia. 26 in. Long (Beater Shaft Assembly)	HC118786	..... 1	F2L-1981 –
Relay-Start/Run (AVA Compressor)	HC150401	..... 1	F2L-1981 –
Retainer-Assembly Bearing (Front)	HC117282	..... 2	F2L-1981 –
Retainer-Assembly Bearing (Rear)	HC117283	..... 2	F2L-1981 –
Retainer-coupling Mtg.	HC140040	..... 1	F2L-1981 –
Rod-Assy. Piston (Plunger) (Head Assembly) (P/N HC136252 is rod only)	HC113999	..... 1	F2L-1981 –
Rod-Stir-Stainless.....	HC158043	..... 1	F2L-1981 –
Sanitizer-Stera Sheen 4 lb. Jar	HC158014C	... *	F2L-1981 –
Sanizier-Stera Sheen Case/4	HC158014	..... *	F2L-1981 –
Seal Assy.-Complete	HC117215	..... 1**	F2L-1981 –
Seal-Beater Shaft.....	HC160557		
Washer-Shaft Seal	HC139006		
Seal-Beater Shaft.....	HC160557	..... 1	F2L-1981 –
Screw-FLHM #4-40 x 1/2 SST	HC160362	..... 2	F2L-1981 –
Screw-FSHC 3/8-16 x 1	HC159953	..... 4	F2L-1981 –
Screw-HXHC 3/8-16 x 1 ZN (Motor & Bearing Assy.).....	HC160013 1	F2L-1981 –
Screw-HXHC 5/16-18 x 1-1/4 ZN (Motor & Bearing Assy.).....	HC160010 1	F2L-1981 –
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PART DESCRIPTION	PART NUMBER	QTY	SERIAL NUMBER (FROM – TO)
Screw-HXHC 5/16-18 x 1-1/2 ZN (Drive Shaft & Bearing Assy.)	HC160011	4	F2L-1981 –
Screw-HXSF 1/4-20 x 1/2 ZN (Drive Shaft & Bearing Assy.)	HC159950	2	F2L-1981 –
Screw-HXHC 1/4-20 x 3/4 ZN (Motor & Bearing Assy.)	HC159948	2	F2L-1981 –
Screw-HXSF 5/16-18 x 1 ZN (Drive Shaft & Bearing Assy.)	HC159944	4	F2L-1981 –
Screw-Panel (Rear) 1/4-20 x 1/2	HC160048	1	F2L-1981 –
Screw-TRPM 1/4-20 x 1 SST (Side Panel)	HC159219	*	F2L-1981 –
Screw-TRPM #6-32 x 1-1/4 SST (Motor & Bearing Assy.)	HC160156	2	F2L-1981 –
Screw-TRPM #8- 32 x 1/2 SST (Motor & Bearing Assy.)	HC160049	4	F2L-1981 –
Screw-TRPM #10-24 x 1/2 SST (Cover Access)(Consistency Control) (Trimstrip, Dispense and Front Panels)	HC160076	*	F2L-1981 –
Screw-Product Adjusting (Plastic)	HC196015	1	F2L-1981 –
Screw-SK Set 1/4-20 x 1/4 (Motor & Bearing Assy.)	HC160495	2	F2L-1981 –
Screw-SK Set 5/16-18 x 3/8 BKOX (Driven Sheave)	HC160033	2	F2L-1981 –
Screw-Spacer 8-32 x 1/2	HC160049	1	F2L-1981 –
Seal-Assy. Shaft includes	HC117215	1	F2L-1981 –
Seal-Beater Shaft	HC160557	1	F2L-1981 –
Washer-Shaft Seal	HC139006	1	F2L-1981 –
Shaft-Beater (Reel-Assy 6 in. x 24 in.)	HC118786	1	F2L-1981 –
Shaft-Drive	HC117336	1	F2L-1981 –
Sheave-1 Bore 8.00 OD/PD (Driven)	HC153644	1	F2L-1981 –
Shim-Bearing	HC135380	4	F2L-1981 –
Shim-Bearing 24GA	HC135381	4	F2L-1981 –

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PART DESCRIPTION	PART NUMBER	QTY	SERIAL NUMBER (FROM – TO)
Shroud-Assy. Condenser (AC & ACR)	HC118787	1	F2L-1981 –
Sleeve-Compressor Mounting	HC151434	4	F2L-1981 –
Socket-Octal (Electric Box)	HC150119	1	F2L-1981 –
Spacer-Panel	HC138456	*	F2L-1981 –
Spigot-3/4 Plastic Drum (Spigot only for 15 Gallon Container)	HC162703	1	F2L-1981 –
Spigot-Assy. w/Fitting & Gasket	HC113324	1	F2L-1981 –
Spring-Adjusting Screw/Stud (Consistency Control)	HC162346	1	F2L-1981 –
Spring-Extension Torque (Consistency Control)	HC162338	2	F2L-1981 –
Spring-Pull Valve (Plunger)(Head Assembly)....	HC162319	1	F2L-1981 –
Spring-Blade	HC134679	3	F2L-1981 –
Strip-Rear Panel	HC136946-C	1	F2L-1981 –
Strip-Terminal (Electrical Box)	HC150795	1	F2L-1981 –
Stud-Adjusting (Consistency Control)	HC139544	1	F2L-1981 –
Stud-Cylinder	HC114341	2	F2L-1981 –
Switch-Dispense Head Kit	HC116410	1	F2L-1981 –
Switch-Toggle DPDT Ctr OFF (Selector) (Electrical Box)	HC150463	1	F2L-1981 –
Switch-Torque (Consistency Control)	HC136388	1	F2L-1981 –
Tank-15 Gallon PVC w/lid	HC162703	1	F2L-1981 –
Tank-Assy. 15 Gallon (w/lid and spigot)	HC113073	1	F2L-1981 –
Thermostat-5 deg. Fixed Diff. (Hopper)	HC161202	1	F2L-1981 –
Timer-DOM/DOB Adjustable (Electrical Box) ..	HC150262	1	F2L-1981 –
Tray-Drip 16 in. White	HC196119-01	1	F2L-1981 –
Trimstrip-Assembly 16 in. IDQ	HC119336-04	1	F2L-1981 –
Tube-Assembly Drain	HC119290	1	F2L-1981 –
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PART DESCRIPTION	PART NUMBER	QTY	SERIAL NUMBER (FROM – TO)
Tubing-1/2" I.D. x 5/8 O.D. PVC	HC196058	*	F2L-1981 –
Valve-Access (AVA Compressors)	HC155419	1	F2L-1981 –
Valve-Assy. Water (Water Cooled)	HC112080	1	F2L-1981 –
Valve-Water 3/8	HC155410		
Valve-Automatic Expansion (Cylinder)	HC155490	1	F2L-1981 –
Valve-Automatic Expansion (Hopper)	HC155449	1	F2L-1981 –
Valve-Check 5/8 ODF Sweat (ACR)	HC155487	1	F2L-1981 –
Valve-Head Pressure Control (ACR)	HC155454	1	F2L-1981 –
Valve-Solenoid 208/230v (Cylinder & Hopper)	HC155421	2	F2L-1981 –
Valve-Solenoid Kit	HC155434	*	F2L-1981 –
Valve-Water Repair Kit	HC155444	*	F2L-1981 –
Washer-Flat #6 Brass (Motor & Bearing Assy.)	HC160393	4	F2L-1981 –
Washer-Flat #10 ZN (Consistency Control)	HC160138	1	F2L-1981 –
Washer-Flat 1/4 ZN (Motor & Bearing Assy.)	HC160130	1	F2L-1981 –
Washer-Flat 5/16 ZN (Drive Shaft & Bearing Assy.)	HC160131	16 ...	F2L-1981 –
Washer-Lock #8 ZN (Motor & Bearing Assy.) ...	HC160470	4	F2L-1981 –
Washer-Lock 3/8 ZN (Motor & Bearing Assy.) ..	HC160143	1	F2L-1981 –
Washer-Lock 5/16 ZN (Drive Shaft & Bearing Assy.)	HC160142	2	F2L-1981 –
Washer-Shaft Seal (Beater Shaft)	HC139006	1** ..	F2L-1981 –
Water-Valve Assy. (Water Cooled)	HC112080	1	F2L-1981 –
Valve-Water 3/8	HC155410	1	F2L-1981 –
Water-Valve Repair Kit (Water Cooled)	HC155444	*	F2L-1981 –
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