
ELECTRO FREEZE®

Operator's Manual

with Illustrated Parts List

**Batch Freezer
Model
B12 and B24**

184891 10/05

**Operator's Manual
for
Batch Freezer
Models B12 and B24**

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! - continued

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 decals and order replacements.

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 to repair the freezer until the main power supply has been disconnected. Contact your local Electro Freeze Distributor for authorized service.

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 to the right. 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 your local authorized Electro Freeze Distributor or 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.

You may contact your local authorized Electro Freeze Distributor, as follows:

Name: _____

Address: _____

Phone: _____

or — for factory service assistance — contact H. C. Duke & Son, Inc., Electro Freeze Service Department by phone, fax or e-mail:



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

Fax: (309) 755-9858

E-mail: service@hcduke.com

(The decals on the next page are numbered 1, 2, 3 and 4. 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 | HC165025 | Decal — Beater Warning (1) |
| 2 | HC165126-01 | Decal — Panel Removal Batch (3) |
| 3 | HC164171 | Decal — Ventilation 6" & 20" (Air Cooled) (1) |
| 4 | HC164172 | Decal — Ventilation 3" & 4" (Water Cooled) (1) |

Safety Decal Locations - continued

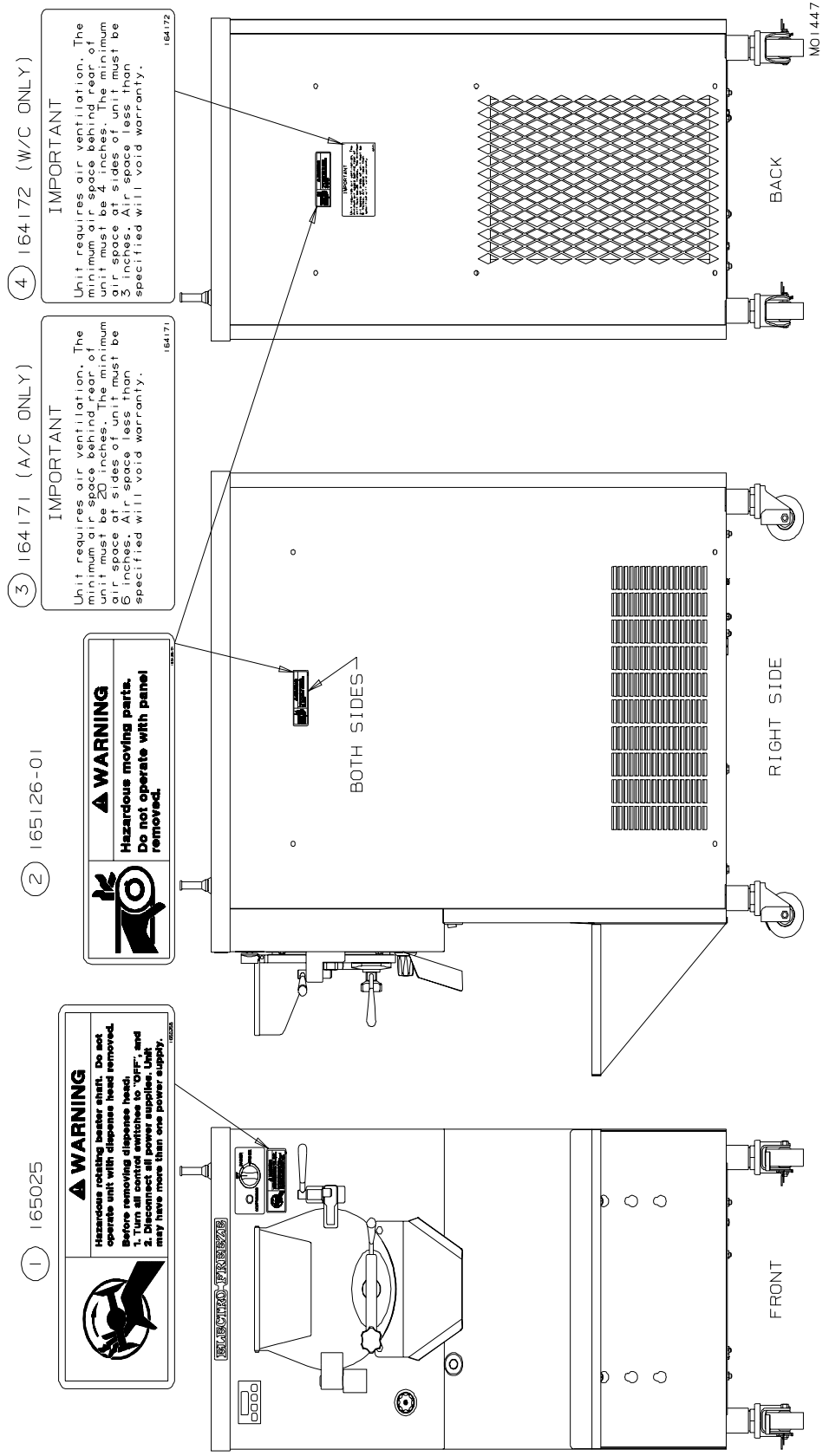


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Part II

**Models B12 and B24 Replacement Parts Manual
with Illustrations*** * Refer to Part II

Table of Contents for help with locating part numbers and illustrations.



1 Introduction

Batch freezer models B12 and B24 are designed to produce Italian Ice, water ice and ice cream with a product serving temperature range of 18 to 25° (-7.8 to -4°C). Use of other products in this machine is considered misuse (see Warranty).

This manual has been prepared to assist you in the proper operation and general maintenance of the *Electro Freeze* models B12 and B24 Batch Freezer.

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

If you require technical assistance, please contact your local authorized *Electro Freeze* Distributor, as follows:

Name: _____

Address: _____

Phone: _____

For factory service assistance — contact H. C. Duke & Son, Inc., *Electro Freeze* Service Department as follows.



Phone: (309) 755-4553

(800) 755-4545

FAX: (309) 755-9858

E-mail: service@hcduke.com

2 Note to Installer

This freezer must be installed and serviced by an *Electro Freeze* Distributor or 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

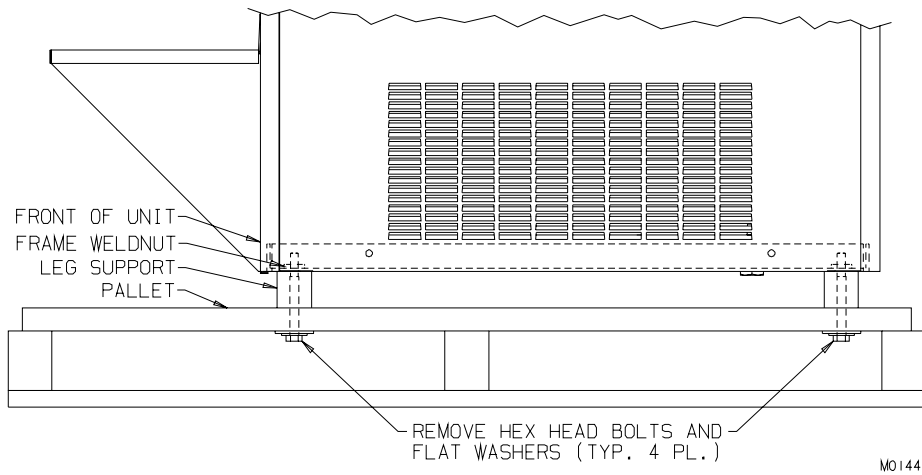


CAUTION
Be sure to properly support the machine when removing bolts and installing legs or casters.

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

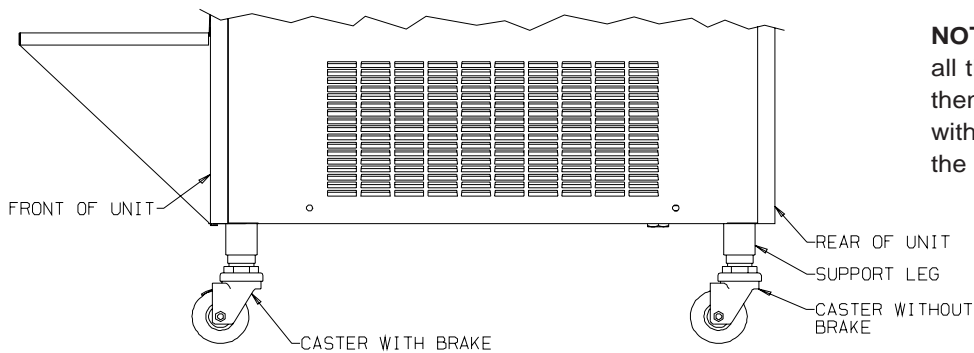
punctured, note the damage on the carrier's freight bill and notify the carrier's local agent immediately.

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 the casters (figure 2-2).



M01448

Figure 2-1 Machine Bolted to Shipping Base



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

M01449

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. Freezers require a specific amount of air space to operate efficiently. Water cooled models require a minimum 4-inch clearance on the rear panel and 3-inch clearance on both side panels for adequate ventilation. Air cooled models require a minimum 20-inch clearance on the rear panel and 6-inch clearance on both side panels for adequate ventilation.

3. On water cooled models, a 1/2-inch FPT cold water inlet and 1/2-inch FPT water waste connection are provided on the bottom of the freezer. 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. The water pressure must be between 35-140 psig (241-965 kPa) for proper operation. Male adapters are available from your distributor to provide a 3/4-inch female swivel hose connection. During operation, check floor drain to be sure it can handle draining capacity.

4. A 1/2-inch potable cold water connections is provided to supply the rinse/fill valve. When connecting water hose to fitting, be sure the water hose is a certified potable water grade type.

5. Place the freezer in its final location and adjust the 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 (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. Voltage fluctuations with the machine in operation must not be more than 10% of the nominal nameplate rating. 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 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 (figure 3-1) 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 behind the left, side panel.

4. For 3 phase freezers dasher shaft rotation must be counterclockwise as viewed from the front of the freezer.

3 Specifications

3.1 Particulars

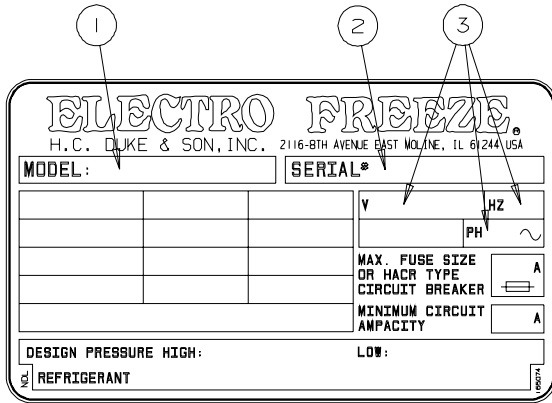
B12

| | | | |
|-----------------------------|--------------------------------------|-----------------------------|--------------------------------------|
| Width (in/cm) | 24-3/16 / 61.54 | Beater Motor | 2 HP / 1.5 kw |
| Height (in/cm) | 53-7/16 / 135.7 | Refrigerant | R-404a |
| Depth | | Charge | |
| Air Cooled (in/cm) | 36 / 91.4 | Air Cooled (lb/kg) | 3 / 1.40 |
| Water Cooled (in/cm) | 36 / 91.4 | Water Cooled (lb/kg) | 1.38 / .63 |
| Weight (lbs/kg) | 655 / 297 | Cooling | Air or Water |
| Voltage* | 208-230 / 60 / 1 208-230 / 60 / 3 | Cylinder (qts/ltr) | 14 / 13.3 |
| Min.Circuit Ampacity | | | |
| 1 Phase | 30 | | |
| 3 Phase | 20 | | |
| Compressor | 2HP / 11,800 BTUH | | *Contact factory for other voltages. |

B24

| | | | |
|-----------------------------|--------------------------------------|-----------------------------|--------------------------------------|
| Width (in/cm) | 24-3/16 / 61.4 | Beater Motor | 3 HP / 2.3 kw |
| Height (in/cm) | 53-7/16 / 135.7 | Refrigerant | R-404a |
| Depth | | Charge | |
| Air Cooled (in/cm) | 49 / 116.7 | Air Cooled (lb/kg) | 3.31 / 1.50 |
| Water Cooled (in/cm) | 36 / 91.5 | Water Cooled (lb/kg) | 2.38 / 1.08 |
| Weight (lbs/kg) | 790 / 358 | Cooling | Air or Water |
| Voltage* | 208-230 / 60 / 1 208-230 / 60 / 3 | Cylinder (qts/ltr) | 26 / 24.6 |
| Min.Circuit Ampacity | | | |
| 1 Phase | 40 | | |
| 3 Phase | 30 | | |
| Compressor | 3HP / 21,000 BTUH | | *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

3.3 Reference Information

Write in Reference Information HERE!



Fill in the following information as soon as you receive the freezer. (The item numbers —encircled, below — correspond to the callout numbers in figure 3-1.)

- ① **Model Number:** _____
- ② **Serial Number:** _____
- ③ **Electrical Spec:** Voltage _____
Phase _____ Hertz _____

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 freezer.

Date of installation: _____

Installed by: _____

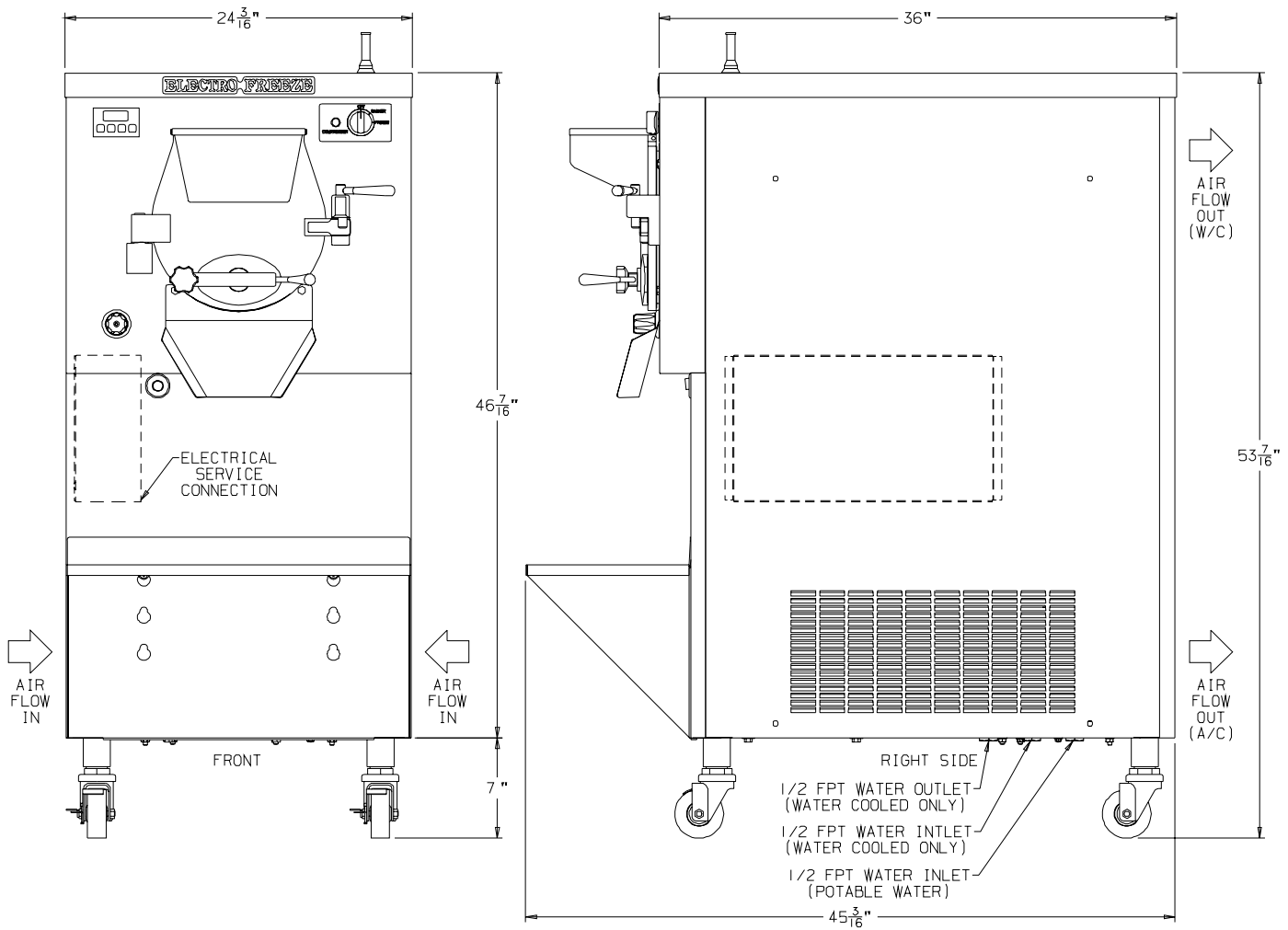
Address: _____

Phone: _____

3.5 Dimensions

The dimensions of the B12 freezers are provided in figure 3-2, below.

Model B12



M01450

Figure 3-2 Dimensions B12

– continued

3.5 Dimensions (continued)

The dimensions of the B24 freezers are provided in figure 3-3, below.

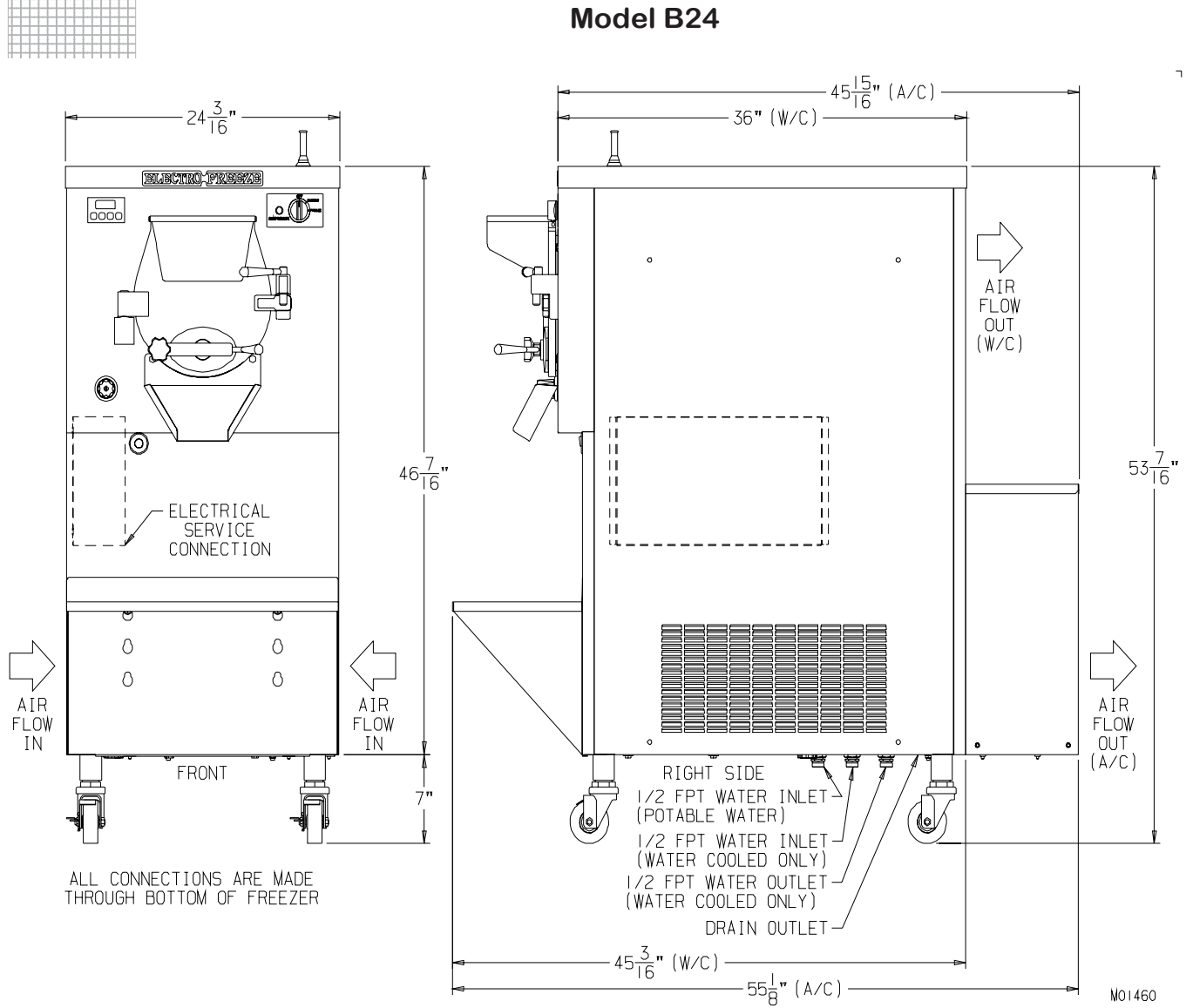


Figure 3-3 Dimensions B24

4 Part Names and Functions

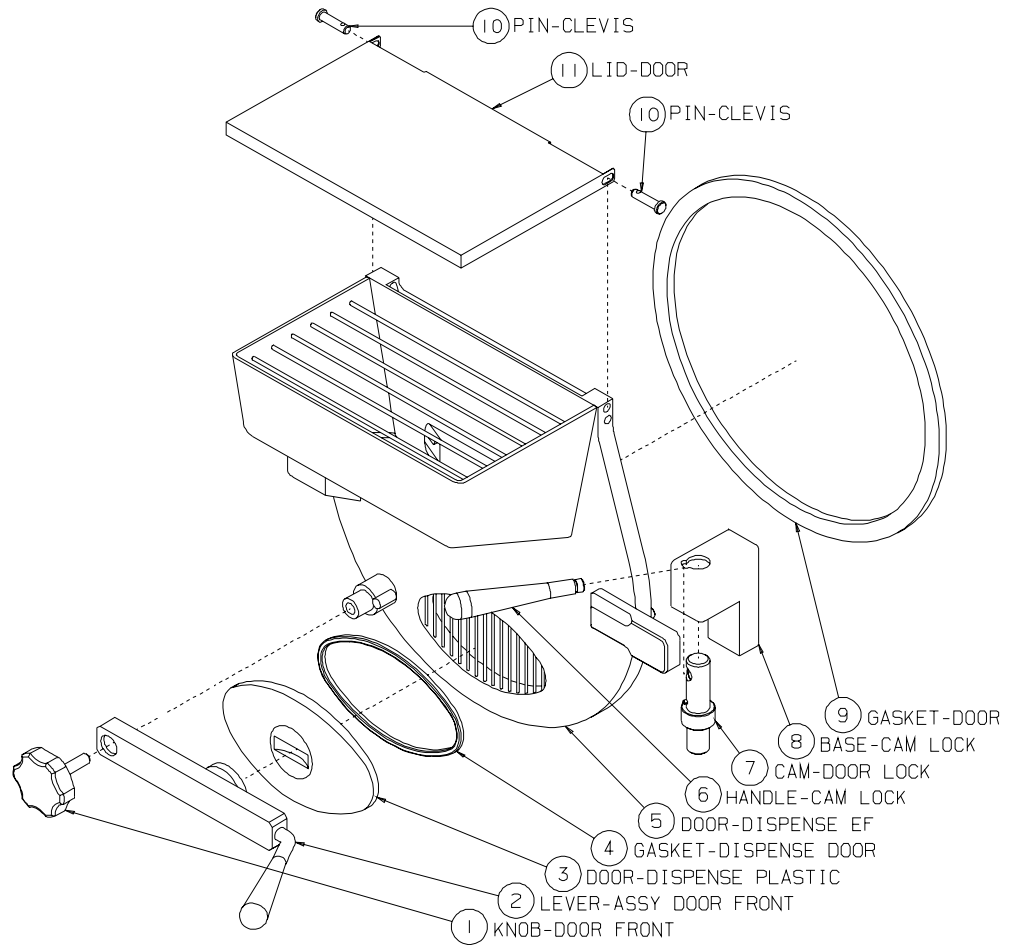
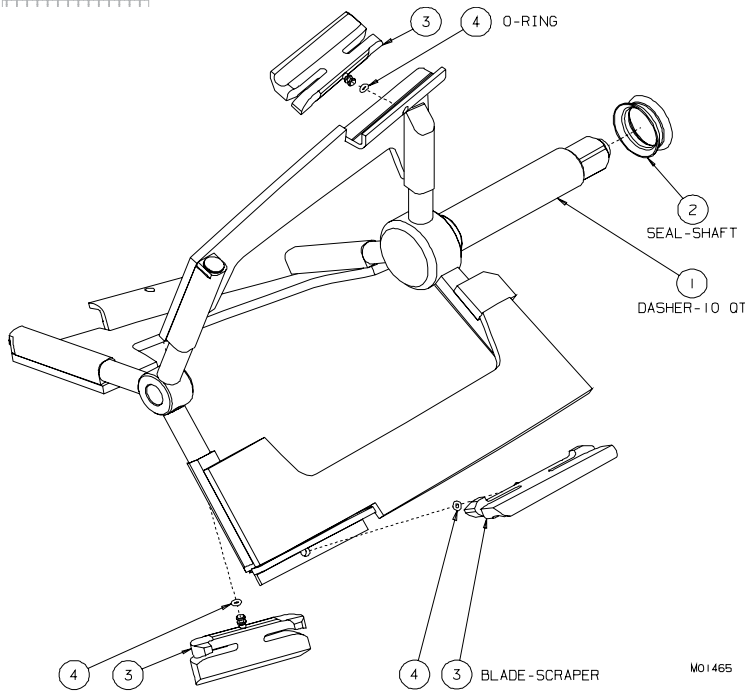


Figure 4-1 Door Assembly

- | | |
|--|---|
| <p>1 KNOB - DOOR FRONT Tightens lever to door.</p> <p>2 LEVER - ASSY. DOOR FRONT Lever for opening the dispense door.</p> <p>3 DOOR - DISPENSE PLASTIC Covers the opening in the door assembly to dispense product.</p> <p>4 GASKET - DISPENSE DOOR Seals the plastic dispense door to door assembly. Must be lubricated.</p> <p>5 DOOR - DISPENSE EF Encloses the freezing cylinder and provides an opening for product to be dispensed.</p> <p>6 HANDLE - CAM LOCK Handle for cam lock. Handle can be unscrewed so cam can be removed for cleaning.</p> | <p>7 CAM - DOOR LOCK Locks door assembly in place.</p> <p>8 BASE - CAM LOCK Used to hold door lock cam.</p> <p>9 GASKET - DOOR Provides seal between door and freezer cylinder.</p> <p>10 PIN - CLEVIS Connects lid to door and allows lid to swing open.</p> <p>11 LID - DOOR Provides covering for mix inlet.</p> |
|--|---|

4 Part Names and Functions



- ① **DASHER**
Blends product during freezing.
- ② **SEAL-SHAFT**
Seals the dasher to the cylinder wall. **Must be lubricated.**
- ③ **BLADE-SCRAPER**
Scrapes cylinder wall during freezing. Three blades are used on the B12 dasher. Six scraper blades are used on the B24 dasher.
- ④ **O-RING - SCRAPER BLADE**
Used to hold the scraper blade to the dasher.

Figure 4-2 B12 Dasher Assembly

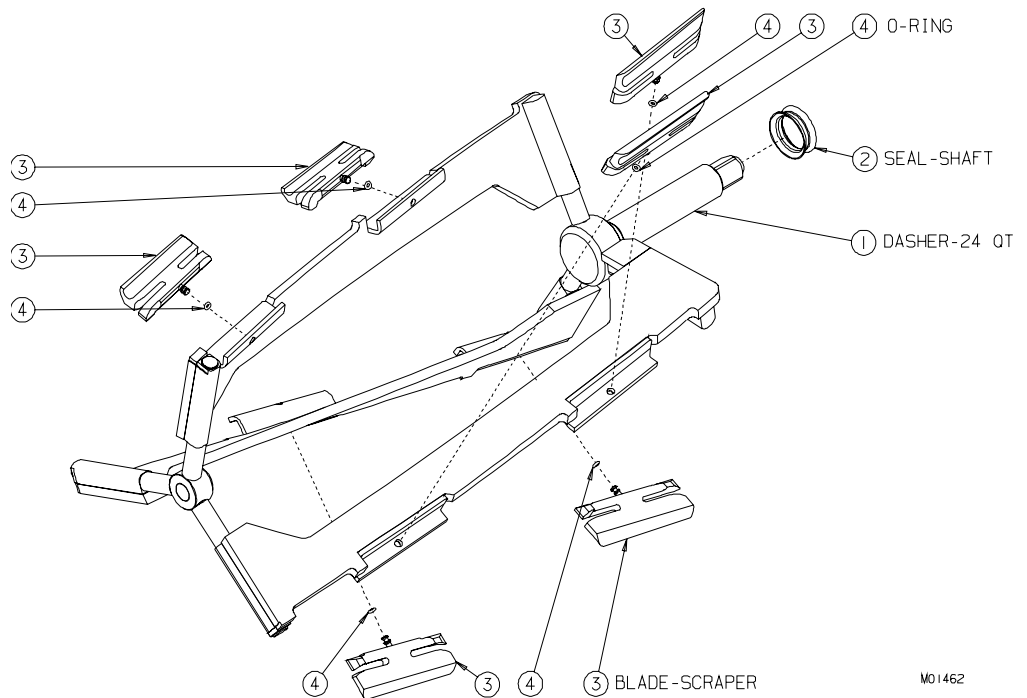


Figure 4-3 B24 Dasher Assembly

5 Operator Controls and Indicators

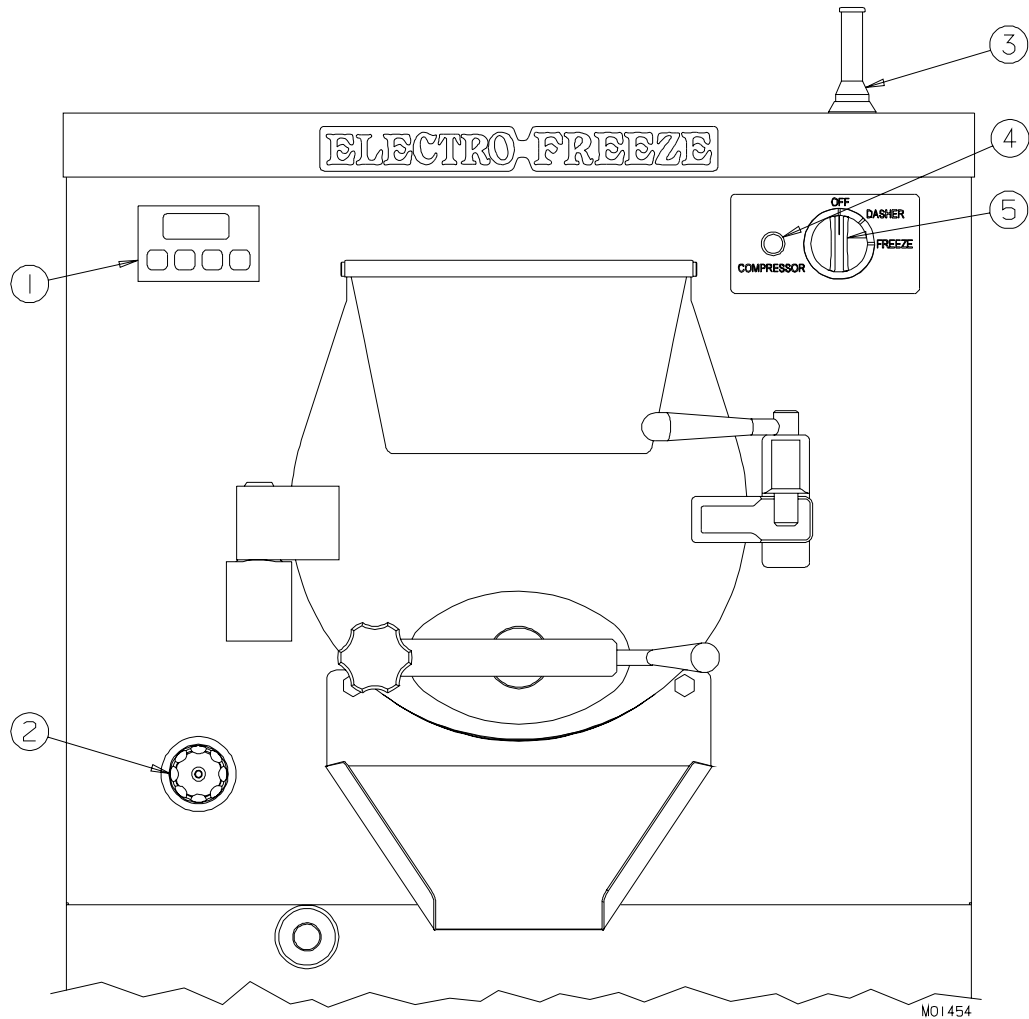


Figure 5-1

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



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 - continued

5.1 Digital Timer ①

This timer is used for alerting the operator for a specific action such as adding flavors or the end of the cycle is near. End of cycle will produce an audible tone. Press stop to end alert

signal. The arrow keys increase or decrease time. The start and stop/reset keys control timing. See Section 6 for detailed instructions.

5.2 Rinse/Fill Valve ②

A quarter turn valve used to control water in rinsing or filling operations.

5.3 Rinse/Fill Hose ③

Water hose used to rinse or fill freezer.

5.4 Compressor Light ④

Indicates operation of the refrigeration system.

5.5 Selector Switch ⑤

a. **“OFF”** — The dasher will not operate nor will the cylinder be refrigerated when the switch is in this position.

b. **“DASHER”** — This position will start the dasher motor. Use this position for cleaning, sanitizing, and dispensing product.

c. **“FREEZE”** — This position activates the refrigeration system. The compressor will continue to freeze the

product until the torque switch turns off the refrigeration. The dasher will continue to run and refrigeration will cycle as needed.

NOTE: To save wear on the freezer, after the compressor light turns off, turn the switch to **“DASHER”** and immediately dispense product. Turn the selector switch **“OFF”** when the cylinder is empty.

NOTE: The dasher motor will not operate when the door is open.

6 Digital Timer

6.1 Digital Timer Keys

The four keys are marked START, STOP/RESET, arrow pointing UP and arrow pointing DOWN (see figure 9-1). These keys are used to operate and program the unit. The following is a listing of each of the keys and their functions:

1. START

This is a multifunction key:

- Its primary function is to start the timer. It may start the timer either from the RESET or HOLD mode.
- The second function for this key is in the SETUP mode. (See SETUP)

2. STOP/RESET

This is a multifunction key:

- When the timer has counted down to 0:00, this is used to reset it for the next run. It places the unit in the RESET mode and reloads the display with the previous time selection.
- If the Timer is still counting down, depressing the STOP/RESET key once will place it in the HOLD mode. If the Timer is in the HOLD mode, depressing the key once will place it in the RESET mode.
- The key is also used in entering the SETUP mode. (See SETUP)

NOTE: by depressing the STOP/RESET key at power up, the timer will default to zeroes in the program.

- The key is also used to change a preset value. If the timer is in the HOLD mode, depressing and holding the key down will allow the UP or DOWN keys to set the new value.

3. UP

This is a multifunction key:

- In the RESET Mode, with the Clock Logic parameter set to 0, the key will adjust the time to be counted down as currently viewed in the display. Depressing the key once and releasing will allow the accurate setting of the least significant digit. Holding the key down will activate the automatic, rapid incrementing of the display.
- In the RESET Mode, with the Clock Logic parameter set to 1, the key will select the next Preset Time. Each depression of the key will select the next higher preset number.
- In the SETUP mode, depressing the UP key will cause the display to advance. Depressing the key once and releasing will allow the accurate setting of the least significant digit. Holding the key down will activate the automatic, rapid incrementing of the display.

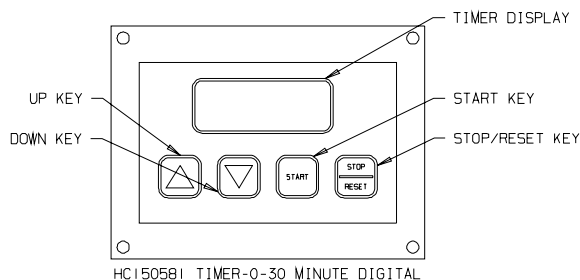


Figure 6-1 Timer

6.2 Digital Timer Setup

1. The SETUP mode is entered by depressing and holding the STOP/RESET key and then depressing the START key. While in this mode, the START key is used to step through the parameters. The following chart is a listing of the Code prompts that will appear in the display, when in the SETUP mode. The code will alternately flash with the selected value to indicate to the user the parameter that is currently viewed or set.

a. P1 thru P5 - The five Presets determine the duration of the available timer periods when Presets are used (CL = 1).

b. CL - The Clock Logic setting determines if the timer will be restricted to the preset times or if a unique time may be set by the operator.

c. AC - The Access Code is the number that must be matched to allow entry into the Programming mode. This number may be changed at any time, but a note should be kept of its value. If set to >0=, this function is eliminated.

2. To exit the SETUP mode, the RESET key is depressed. When exiting, the unit automatically enters a SAVE mode. This causes the parameters to be written into the EEPROM memory. This is a permanent (10 year minimum life) memory that does not require battery backup.

3. **ACCESS CODE** - In some cases, it may be desirable to restrict access to the SETUP mode. An Access Code system is incorporated. If the Access Code is set to >0000=, the function is eliminated and the system operates as previously described. The code is any number from 1 to 9999, as programmed into the system by the customer's authorized personnel. Once this code is entered, any attempt to enter the SETUP mode will cause 'CODE' to appear in the Timer display. The UP and DOWN keys are then used to enter the Access Code. Once the proper code has been selected, the user simply depresses the START key to gain entry into the SETUP parameters.

| Code | Description | Setting Range | Factory Setting |
|------|----------------|---------------------------------------|-----------------|
| P1 | PreSet Time #1 | 0:00 to 99:59 Min:Sec | 10 Minutes |
| P2 | PreSet Time #2 | 0:00 to 99:59 Min:Sec | 15 Minutes |
| P3 | PreSet Time #3 | 0:00 to 99:59 Min:Sec | 20 Minutes |
| P4 | PreSet Time #4 | 0:00 to 99:59 Min:Sec | 25 Minutes |
| P5 | PreSet Time #5 | 0:00 to 99:59 Min:Sec | 30 Minutes |
| CL | Clock Logic | 0 = Use Direct Set 1 = Use Presets | 0 |
| AC | Access Code | 0000 to 9999 | >0000= |

6.3 Digital Timer Operation

6.3.1 Manual Mode

The timer is factory set to the manual mode (CL=0) of operation. When the freezer is powered up, a preset time will be displayed in the window.

1. To change this time:
 - a) Press ▲ or ▼ keys to scroll to desired time. Keeping the key depressed will increase speed of time change.
 - b) Press "Start" and timer will count down.
 - c) Press "Stop/Reset" twice and timer will reset to new setting.
2. To start timer:
 - a) Press "Start"
3. During countdown
 - a) To stop, press "Stop" and display will stop and flash "Hold".
 - b) To continue from current time, press start.
 - c) To reset to original time, press "Reset" twice.
4. At the end of countdown:
 - a) Display will read "Done" and the timer will make beep sound.
 - b) Press "Stop" to end beep sound and reset timer.

6.3.2 Pre-set Time Mode

The timer can be operated in the preset time mode (CL=1) of operation.

1. To view preset time setting and change to preset time mode:
 - a) Press "Stop/Reset" one second, hold and press "Start" once. This will display code P1 and flash between P1 and its current time setting. While continuing to hold "Stop/Reset" press "Start" again to advance to P2, P3, P4, P5, CL and AC.
 - b) At CL the setting will read 00. Release "Stop/Reset" and press ▲ to change to "01". This will activate preset time mode.
 - c) Press "Stop/Reset" again to enter preset time mode. Now, the ▲ and ▼ keys will scroll to 5 preset times. Select desired time and press "Start" to start countdown, "Stop" once to hold countdown, and "Stop" twice to reset timer.
2. To change preset times:
 - a) Press "Stop/Reset" one second, hold and press "Start" once. This will display code P1 and flash between P1 and its current time setting.
 - b) Release "Stop/Reset" and use the ▲ and ▼ keys to change time. Press "Stop/Reset" once to set new time and exit program.
 - c) Repeat A & B for changing P2, P3, P4, and P5 settings.

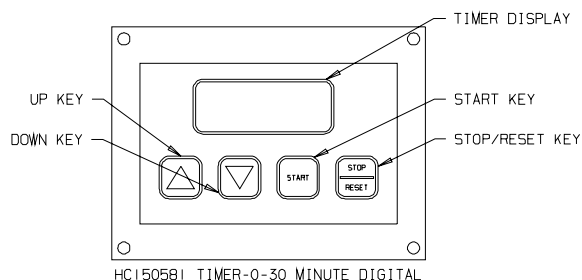



Figure 6-1 Timer

7 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 supply is disconnected.

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. The freezer should be disassembled, cleaned, reassembled, lubricated and sanitized daily to ensure the best possible product quality and freezer operation.

Persons assembling, cleaning, or sanitizing the freezer must wash and sanitize hands and forearms with an approved sanitizer.

7.1 Cleaning Accessories

The following accessories shipped with the freezer are necessary for cleaning, sanitizing and disassembly/assembly.

1. BRUSH. 9/16-inch diameter with 36-inch handle, used for cleaning the drain tube.
2. BRUSH. 6-inch by 2-3/4-diameter with 9-inch handle, used for cleaning the cylinder and shelf.
3. BRUSH. 1-inch diameter with an overall length of 12 inches, used to clean the door, gratings, o-ring grooves, and all other parts.
4. TOOL - O-RING REMOVAL. Aids in removing O-rings.
5. BOTTLE, WASH. Used to sanitize the inlet and outlet chutes and the face of the door.
6. LUBRICANT-PETROL GEL. Approved lubricant for moving parts and O-rings. See assembly instructions for lubricating points.

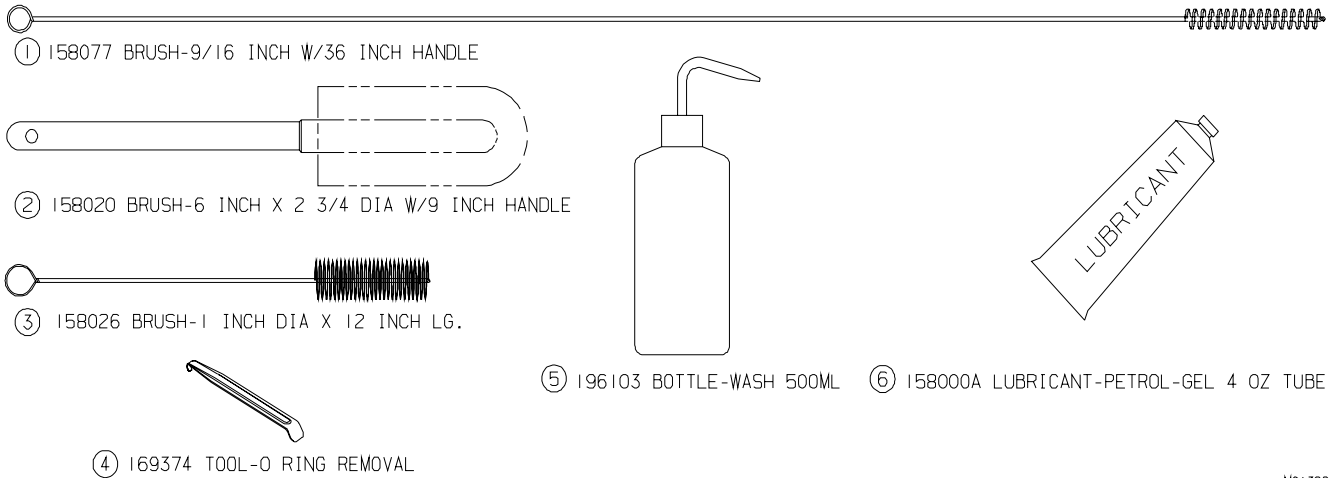



Figure 7-1

7.2 Disassembly Instructions

It is important that the freezer be disassembled, washed, lubricated and sanitized before operation. For maximum life on moving parts, disassemble and sanitize at the end of every day of operation. Disassemble freezer as follows:

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. Remove product from the cylinder as outlined in section 10.1 Draining Product from the Cylinder.

2. Open the cam door lock (6-7, figure 7-3) and remove the dasher (figure 7-2) from the freezer by pulling straight out. Take the dasher to a three compartment sink.

3. Remove the shaft seal (2) and scraper blades (3) from the dasher. Remove the o-rings (4) from the scraper blades.

– continued

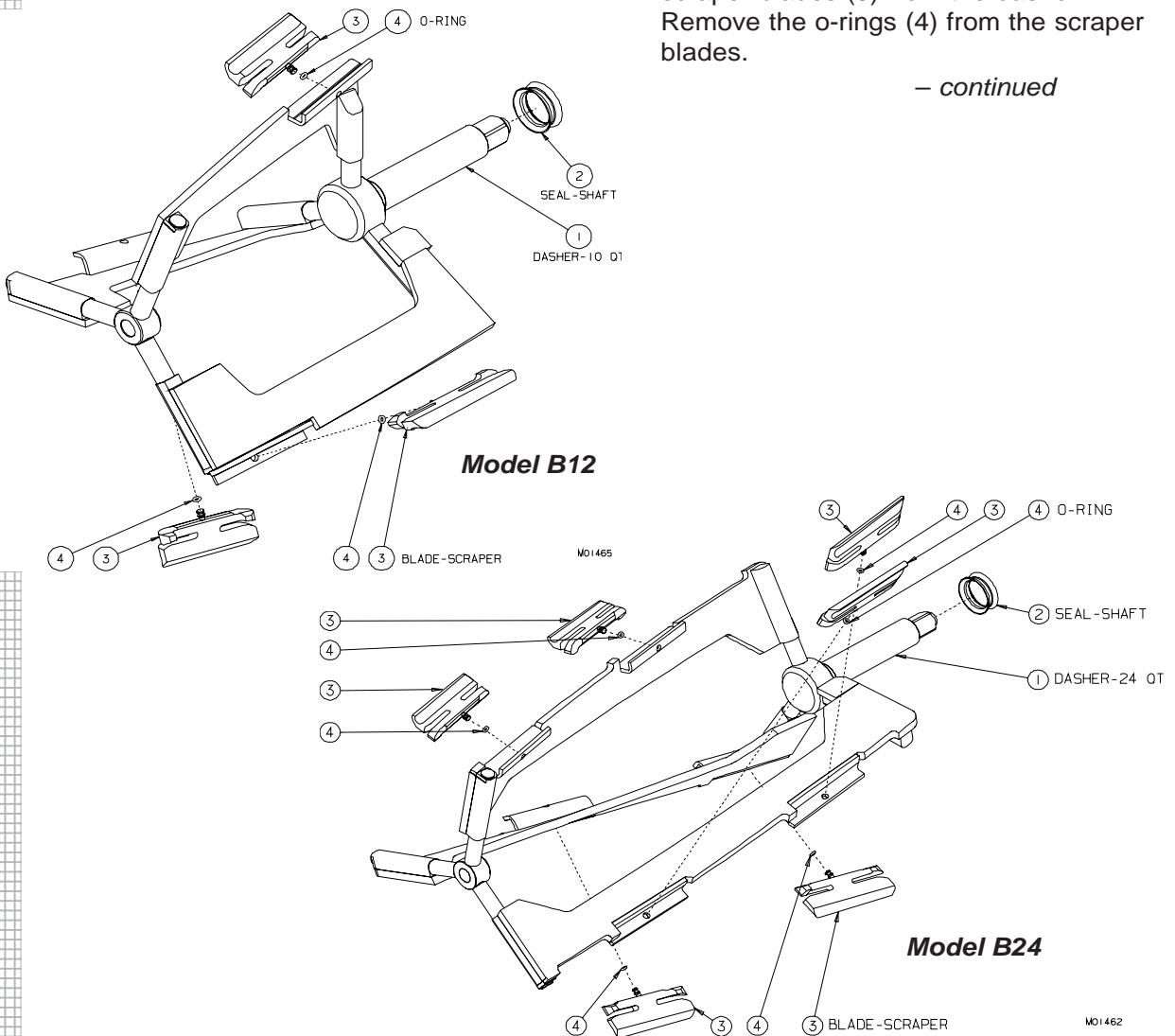


Figure 7-2 Dasher Assembly

7.2 Disassembly Instructions - continued

4. Lift the door (5, figure 7-3) off the hinge and take to sink.

5. Unscrew the door knob (1) and remove the lever (2) and plastic dispense door (3). Remove the gasket (4) from the plastic dispense door.

6. Remove the lid (11), clevis pins (10) and door gasket (9) from the door assembly.

7. Remove cam lock (7) and handle (6) by unscrewing the handle and sliding cam down through the cam base.

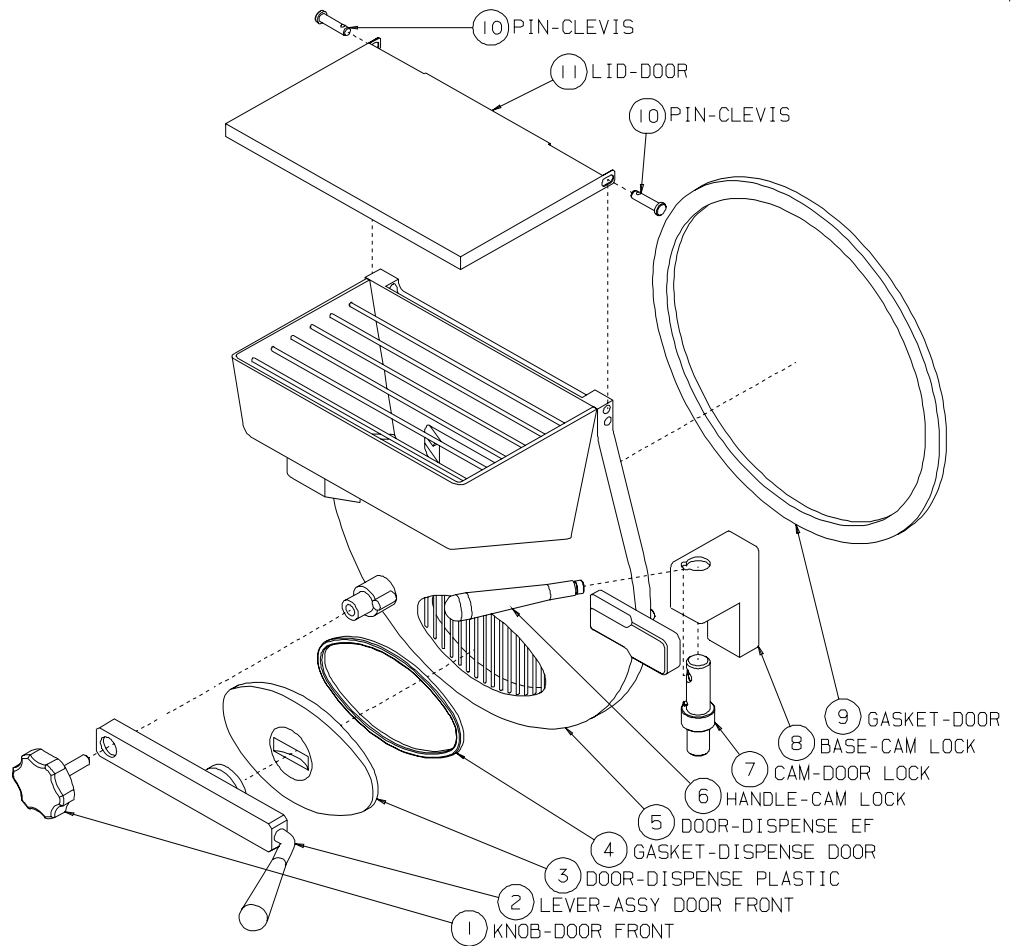


Figure 7-3 Door Assembly

7.3 Cleaning Instructions

The cleaning instructions explained in this section are procedures to remove bacteria and maintain a clean, sanitary freezer. The batch freezer must be disassembled, washed and sanitized according to the instructions in this manual before start-up to ensure the best possible cleanliness.



CAUTION

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



CAUTION

To prevent bacteria growth, use only approved sanitizers to sanitize the machine. Failure to do so could create a health hazard.

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

1. Wash and sanitize your hands.
2. Prepare a three-compartment sink for washing, rinsing, and sanitizing 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: Sanitizing solution must be mixed according to manufacturer's instructions to yield 100 ppm available chlorine solution (example: Stera Sheen Green Label). Use warm water (100 to 110°F or 38 to 43°C) to wash, rinse, and sanitize.

3. Wash all parts removed from the freezer thoroughly with a dish detergent solution. Clean the following parts with the appropriate supplied brush:

- a. The door, gasket, door guard pins, lid, clevis pins, and gasket groove.
- b. The dispensing door, gasket groove, gasket, spacer, spring, screw, lever and knob.
- c. The door cam and handle.

⇒ **Important:**

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

4. After all parts are washed and rinsed place them in the sanitizing solution. For proper sanitizing, the parts must remain fully immersed in the sanitizing solution for 5 minutes. Allow parts to air-dry after sanitizing.

5. Using a warm dish detergent solution thoroughly brush the inside of the cylinder including the back wall and dispensing chute. Rinse with sanitizing solution.

6. Wash the shelf assembly with a warm dish detergent solution and rinse with clear water.

7. Wash the outside of the freezer with a warm dish detergent solution. Rinse with clear water.

Replace worn brushes. Use only Electro Freeze original or authorized replacement parts. See Alphabetized Parts List in Part II of this Manual to order new brushes.

8 Assembly

Correct assembly is essential to prevent leakage of the 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.

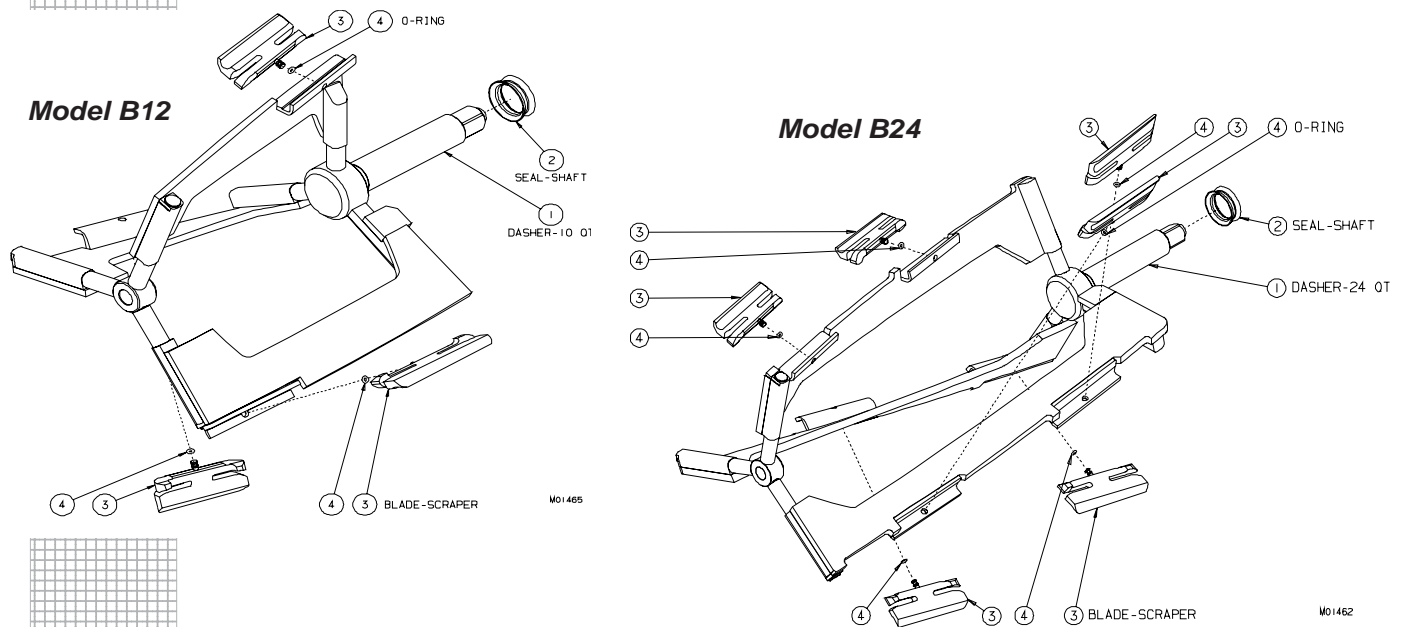


Figure 8-1 Dasher Assembly



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.

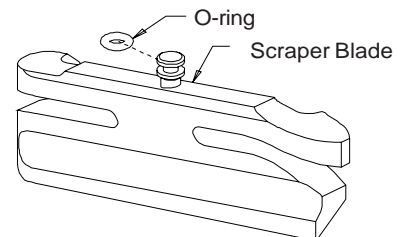


Figure 8-2 Scraper Blade

1. Wash and sanitize your hands and forearms.

2. See Figures 8-1 and 8-2. Install an o-ring (4) in the groove on each scraper blade pin (3) this will hold the blade in place. Place a small amount of lubricate on the o-ring. Assemble the scraper blades (3) on the dasher by placing the pin through the hole on the dasher (1). The scraper blade is designed to be installed only one way. Repeat until

all scraper blades are installed on the dasher. (Six on model B24 and three on model B12.)

3. Lubricate the shaft seal (2) and place on the end of the dasher (1).

4. Insert dasher assembly into freezer cylinder. Press each scraper blade down as it contacts the cylinder. Rotate and push the dasher until it engages the drive shaft.

– continued

8 Assembly - continued

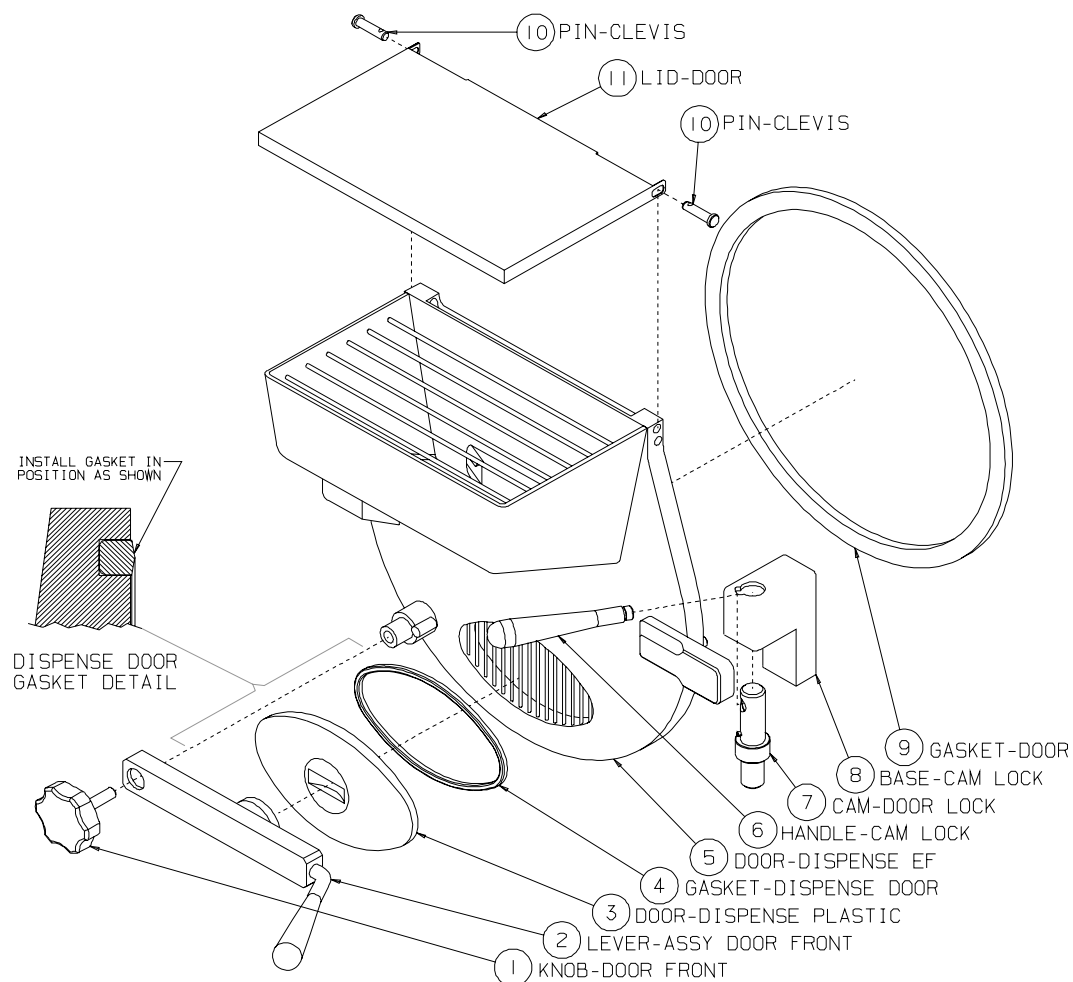


Figure 8-3 Door Assembly

5. See Figure 8-3. Lightly lubricate the dispense gasket (4) and place in the groove in the plastic dispense door (3).

7. Insert knob (1) through door lever (2) and screw one revolution into door (5). Slide the plastic dispense door (3) in position over the lever (2) and tighten the knob (1).

8. Install door lid (11) on door (5) and hold in place with clevis pins (10).

9. Lightly lubricate the gasket groove on the back of the door (5).

10. Insert the door gasket (9) in the groove and lubricate face of gasket.

10. Lubricate the door lock cam (7) and insert it up through the cam lock base (8). Screw the cam lock handle (6) into the cam lock (7).

11. Lubricate freezer door hinge pin, slide the door assembly on the hinge, close, and lock in place with the cam handle.

NOTE: If the door does not close easily, recheck engagement of beater shaft.

9 Start-up Instructions

9.1 Sanitizing

The washing and sanitizing instructions explained in this manual are important procedures to remove bacteria and maintain a clean, sanitary freezer. The batch freezer must be disassembled and washed according to the instructions in the manual before 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 and conform to the requirements for meeting federal, state and local laws concerning the frequency of cleaning and sanitizing the freezer.

Within one hour prior to operation, sanitize your machine and utensils. Metal and plastic cans will require sanitizing. Keep cleaned containers covered in the hardening cabinet to prevent any melt down of ice cream.

1. Wash and sanitize your hands and forearms.

2. Prepare 2 gallons (7.6 liters) of sanitizing solution in a container. The sanitizing solution must be mixed according to manufacturer's instructions to yield 100 PPM (parts per million) available chlorine solution (example: Stera-Sheen Green Label). Use warm

water (100-110°F or 37-43°C) to wash, rinse, and sanitize. Fill the wash bottle in the accessories with the sanitizing solution.

⇒ **Important:**

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

⇒ **Important:**

Do not insert any tools or objects into the chute while the freezer is running.

⇒ **Important:**

Do not use the "FREEZE" position on the selector switch with water or sanitizer in the cylinder. The freezer will be damaged.

3. Using the appropriate brush, soaked in sanitizer, wash the door lid, inlet and dispensing chutes with the sanitizing solution. Sanitize the utensils that will come into contact with product.

4. Reconnect the main power supply.

5. Pour the sanitizing solution into the freezer inlet chute. Turn the selector switch to the "DASHER" position allow the dasher to run for 20-30 seconds.

6. Turn the selector switch to the "OFF" position and allow to soak for four minutes. During this time, use the wash bottle with sanitizer and spray down the dispense door, chute, and all surfaces that will be in contact with product.

NOTE: Operate dasher ONLY for the time necessary to sanitize. This will avoid unnecessary wear of scraper blades.

7. Place an empty container under the door and open the dispensing door to drain the sanitizing solution.

8. The machine is now sanitized and ready for mix. DO NOT touch any sanitized parts.

9.2 Product Preparation

The batch freezer is a versatile machine designed for several types of products. Some of the products on this list are Italian ice, water ice, and cream ice. Each product will have its own recipe and some popular formulas are available from your local Electro Freeze distributor. With experience, personal-

ized recipes to fit your customers demands can be developed. Finished product torque settings are preset at the factory for ice cream. Contact your service representative for torque adjustments.

9.3 Freezing Product

1. Pour desired amount of mix into the cylinder using the chute in the dispense door. See the following chart for minimum and maximum quantities.

| <i>Model</i> | Gallons of Mix Per Batch | |
|--------------|---------------------------------|--------------------------|
| | <i>Minimum</i> | <i>Maximum</i> |
| B12 | 1 Gallon (3.5 liters) | 2 Gallons (7 liters) |
| B24 | 2.5 Gallons (9.5 liters) | 4 Gallons (16 liters) |

2. Turn the selector switch to the "FREEZE" position.

NOTE: The compressor light will activate to indicate freezing.

3. Freezing time will vary for different flavors. Set the times according to your recipe and press start. When product has reached the desired consistency, the torque system will automatically shut off the refrigeration system. The dasher will continue to operate.

NOTE: To save wear on components **do not allow dasher to run continuously** as the refrigeration will restart.

4. Place a clean sanitized container on the shelf. Turn the selector switch to "DASHER" and slowly open the dispense door and allow the dasher to dispense the product.

5. When cylinder is empty turn the selector switch to the "OFF" position.

NOTE: This unit is not designed for product storage. A single batch of product should not remain in the cylinder for longer than one hour.

9.4 Overrun

As mix is frozen in the freezing cylinder, air is incorporated into the mix to increase its volume, as well as enhance the taste and texture of the finished product. The increase in volume is called *overrun*. Fifty percent overrun means a volume increase of 50% — 10 gallons of liquid mix has become 15 gallons of finished product.

Controlled overrun is important to maintain consistency in product quality. Too much overrun (air) results in a light, fluffy product lacking the cold, refreshing appeal of a quality product. Too little overrun results in a wet, heavy product.

To correctly measure the overrun, perform the following steps:

- a. Place an empty pint container on the scale* and adjust your scale to zero.
- b. Remove container from scale and fill with liquid product to the top. Weigh container and record.
- c. Replace liquid product with frozen product, being sure to leave no voids or air spaces in the container.
- d. Strike off the excess product so it is even with the top of the container and measure the weight.
- e. Use the following formula to figure overrun percentage:

“Weight of liquid mix minus weight of frozen product/divided by the frozen weight times 100.”

Example:

| | |
|-----------------------------------|------------------------|
| Weight of one pint of liquid mix | =18 oz. |
| Weight of one pint frozen product | = <u>12 oz.</u> |
| Difference | = 6 oz. |
| 6.0 oz. divided by 12 oz. | = .5 |
| | .5 x 100 = 50% overrun |

* Your Electro Freeze Distributor can provide a scale and container (P/N HC158049) that is graduated in overrun percentage.

Overrun will vary depending upon the type and amount of mix you use.

10 Closing Procedures

10.1 Draining Product from Freezer

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. After product has been removed from the freezer, use the rinse hose to fill the cylinder with 2 gallons (7.6 liters) of cold water. Turn the selector switch to the “DASHER” position for 15 seconds.

2. Turn the selector switch “OFF” and slowly open the dispense door and drain the water from the cylinder.

3. Repeat if necessary. Do not touch food zone parts.

4. Once the dasher and cylinder are completely rinsed, the next batch can be prepared for freezing.

⇒ **Important:**

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

⇒ **Important:**

Do not use the “FREEZE” position on the selector switch with water in the cylinder. The freezer will be damaged.

5. Refer to Section 7, Disassembly and Cleaning.

11 Routine Maintenance

Electro Freeze recommends the following schedule to help maintain your freezer 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 your local Electro Freeze Distributor or H. C. Duke & Son, Inc.

DAILY

1. Disassemble, wash, rinse, sanitize, air-dry, reassemble and sanitize all parts which come into contact with the 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. Lubricate parts as detailed in manual.
4. Inspect the dasher and blades for wear.
4. Wipe all exterior surfaces of the freezer to remove any splattered mix.
5. Check overrun and temperature of the product.

MONTHLY

1. Test Door Switch.

The door switch feature is designed to prevent the dasher 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. Open the dispense door and remove dasher assembly.
4. Connect the main power supply.
5. Turn the selector switch to the "DASHER" position.



CAUTION

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

6. With the door open, look inside the freezing cylinder toward the rear, the drive shaft coupling should **NOT** be turning. Turn the selector switch "OFF" position 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 selector switch to the "OFF" position, disconnect the main power supply and contact your Electro Freeze distributor for service. **DO NOT** place the freezer in service until the problem has been corrected.

2. Water Condenser.

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

11

Routine Maintenance - continued

ANNUALLY

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. Have drive belt checked by your Electro Freeze Distributor.
2. Have the inside of the freezer cleaned, including base, side panels, condenser, etc., by your Electro Freeze Distributor.
3. Have water-cooled condenser checked and flushed clean by your Electro Freeze Distributor.



11

Routine Maintenance - continued

WINTER STORAGE

To protect the unit during seasonal shutdown, it is important to store the freezer properly. Use the following procedures:

1. Disconnect all power to the freezer.
2. Disassemble and wash all parts that come into contact with the mix using a warm, mild detergent solution. Rinse in clear water and air-dry all parts thoroughly. Clean drain tube and all exterior panels.
3. Store the loose parts, such as the door assembly and dasher 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.

⇒ **Important:**

The water valve must be opened in order to blow out the condenser. Failure to purge the freezer of water can result in severe damage to the refrigeration system. Call your Electro Freeze Distributor for service.

6. On water-cooled freezers, disconnect the water supply. Use compressed air to blow out all remaining water in the condenser.

USE ONLY ORIGINAL OR AUTHORIZED REPLACEMENT PARTS WITH THIS FREEZER.

If you have any questions on items that are not included in this schedule or problems that require service assistance, please call your local distributor or H.C. Duke & Son, Inc.,
Electro Freeze, Service Department for factory service assistance.

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

FAX: (309) 755-9858

E-mail: service@hcduke.com.

12 Troubleshooting Tables



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 adjustments must be done by an Electro Freeze Distributor or authorized 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. Some freezers have more than one disconnect switch.

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 - continued

| PROBLEM | PROBABLE CAUSE | REMEDY |
|------------------------|---|--|
| Unit does not operate. | 1. Freezer disconnected from power supply. | 1. Connect power to the freezer. |
| | 2. Door open. | 2. Close and latch door. |
| | 3. Fuse or breaker blown at main disconnect. | 3. Make sure your freezer is connected to a separate circuit independent from any other electrical equipment. Have technician check fuse or breaker size and check for low voltage; if not within 5% of nameplate rating call power company. |
| | 4. Component failure. | 4. Contact your Electro Freeze Distributor for service. |
| | 5. Faulty switch. | 5. Contact your Electro Freeze Distributor for service. |
| | 6. Disconnected or broken wire in electrical circuit. | 6. Contact your Electro Freeze Distributor for service. |

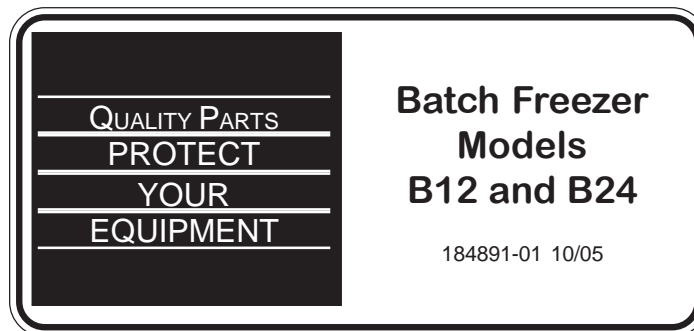
| | | |
|---|--|---|
| Compressor does not operate or operates improperly. | 1. Inadequate water supply. | 1. Check water supply for 2-1/2 gallons/minute flow rate and 80°F (26°C) or less temperature. |
| | 2. Trouble in compressor condensing circuit. | 2. Contact your Electro Freeze Distributor for service. |
| | 2. Faulty start capacitor, run capacitor or relay. (Single phase only) | 2. Contact your Electro Freeze Distributor for service. |
| | 3. Faulty contactor. | 3. Contact your Electro Freeze Distributor for service. |
| | 4. Disconnected or broken wire in switch or capacitor relay box. | 4. Contact your Electro Freeze Distributor for service. |
| | 5. Compressor tripped on internal protector. | 5. Allow to cool up to 3 hours. |
| | 6. Freezer tripped out on high or low pressure cutout. | 6. Contact your Electro Freeze Distributor for service. |

12 Troubleshooting Tables - continued

| PROBLEM | PROBABLE CAUSE | REMEDY |
|---|--|--|
| Compressor will not start – hums intermittently (cycling on overload) | 1. Improperly wired. | 1. Contact your Electro Freeze Distributor for service. |
| | 2. Low line voltage. | 2. Ask power company to increase voltage to not less than 5% below data plate rating or install transformer. Check for inadequate wire size. |
| | 3. Faulty contactor. | 3. Contact your Electro Freeze Distributor for service. |
| | 4. Disconnected or broken wire in switch or capacitor relay box. | 4. Contact your Electro Freeze Distributor for service. |
| Unit operates long or continuously. | 1. Water condenser partial restriction. | 1. Check hose for kinking or restriction, if not contact your Electro Freeze Distributor for service. |
| | 2. Shortage of refrigerant | 2. Contact your Electro Freeze Distributor for service. |
| | 3. Moisture in system. | 3. Contact your Electro Freeze Distributor for service. |
| | 4. Compressor failing. | 4. Contact your Electro Freeze Distributor for service. |
| Dasher motor does not operate. | 1. Door assembly is not installed or closed properly. | 1. Install door assembly. |
| | 2. Magnetic door switch defective. | 2. Contact your Electro Freeze Distributor for service. |
| | 3. Loose connection in control circuit. | 3. Contact your Electro Freeze Distributor for service. |
| | 4. Open starter coil or overload relay.. | 4. Contact your Electro Freeze Distributor for service. |
| | 5. Faulty capacitor assembly. (Single phase only.) | 5. Contact your Electro Freeze Distributor for service. |
| | 6. Faulty dasher motor or start switch | 6. Contact your Electro Freeze Distributor for service. |
| | 7. Motor tripped out on overload. | 7. Wait 5 minutes for auto reset to work. |

ELECTRO FREEZE®

REPLACEMENT PARTS MANUAL with ILLUSTRATIONS



**KEEP YOUR FREEZER IN EXCELLENT CONDITION. ALWAYS CONTACT
YOUR ELECTRO FREEZE DISTRIBUTOR FOR REPLACEMENT PARTS.**

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.

Place your parts order through your local authorized Electro Freeze Distributor.

Name: _____

Address: _____

Phone: _____

If you require any further assistance, contact H. C. Duke & Son, Inc. *Electro Freeze* as follows:



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

FAX: (309) 755-9858

E-mail: service@hcduke.com

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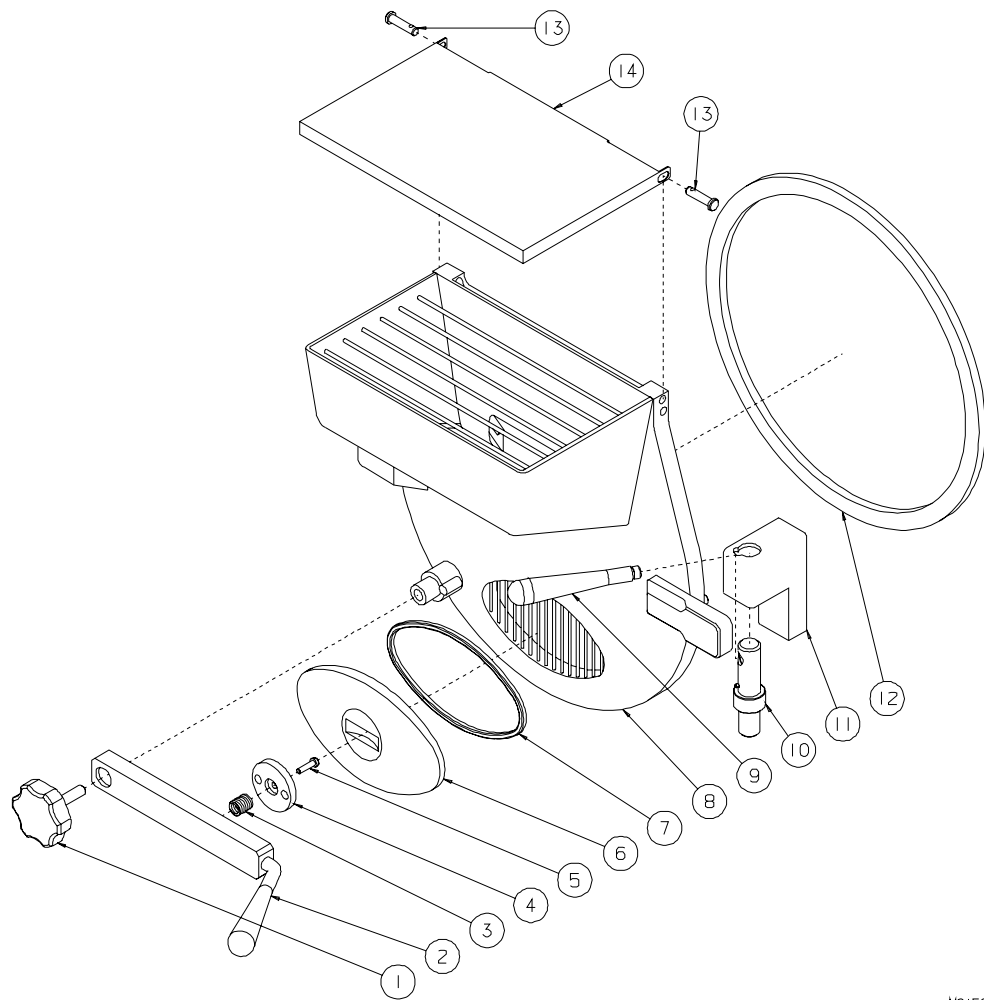
PART II

ILLUSTRATIONS

| | | |
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OTHER LISTS and INFORMATION

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M01508

Figure 1 Door Assembly

| Item | Part No. | Description |
|------|-------------|------------------------|
| * | HC119828 | Door-Assy. Complete |
| 1 | HC120040 | Knob-Door Front |
| 2 | IC155185140 | Lever-Door Front |
| 3 | IC178100060 | Spring-Compression SST |
| 4 | IC107170900 | Spacer-Door Front |
| 5 | IC511530420 | Screw-FHMS M4 x 20 SST |
| 6 | IC118125050 | Door-Dispense plastic |
| 7 | IC158200710 | Gasket-Dispense Door |
| 8 | IC118130800 | Door-Dispense EF |
| 9 | HC140209 | Handle-Cam Lock |
| 10 | HC119455 | Cam-Assy. Door Lock |
| 11 | HC140208 | Base-Cam Lock |
| 12 | IC158200090 | Gasket-Door |
| 13 | HC160353 | Pin-Clevis |
| 14 | HC140198 | Lid-Door |

*Includes items 1 through 8 and 12 through 14

Not Shown

HC119825 Kit-Dispense Door Switch Batch

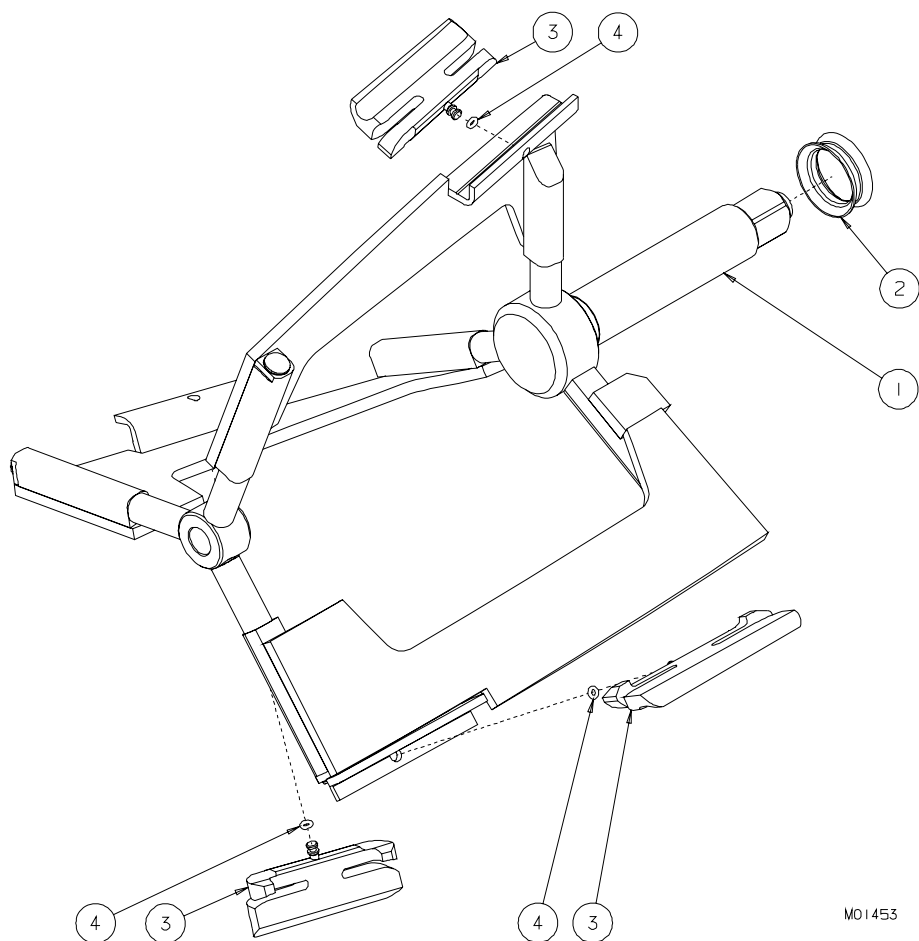
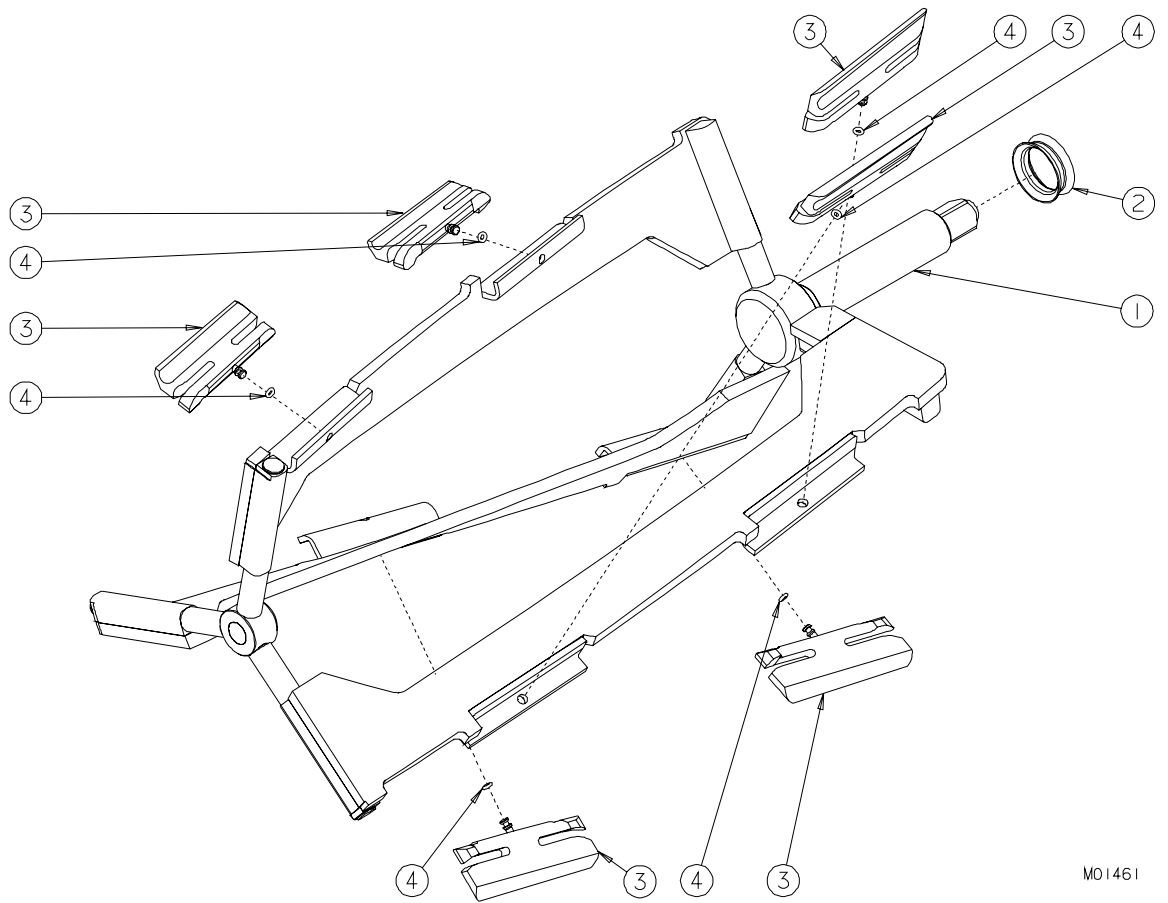


Figure 2 B12 Dasher Assembly

| Item | Part No. | Description |
|------|-------------|----------------------------|
| 1 | IC142061040 | Dasher-12 qt. B12 |
| 2 | IC177120280 | Beater Seal Shaft Silicone |
| 3 | IC141116030 | Blade-Scraper |
| 4 | HC160646 | O-ring (Scraper Blade) |



M01461

Figure 3 B24 Dasher Assembly

| Item | Part No. | Description |
|------|-----------------------------|----------------------------|
| 1 | IC142061030 | Dasher-24 qt. B24 |
| 2 | IC177120280 | Beater Seal Shaft Silicone |
| 3 | IC141116030 | Blade-Scraper |
| 4 | HC160646 | O-ring (Scraper Blade) |

Figure 4 B12 Panel View (Sheet 1 of 2)

M01457

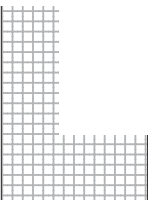
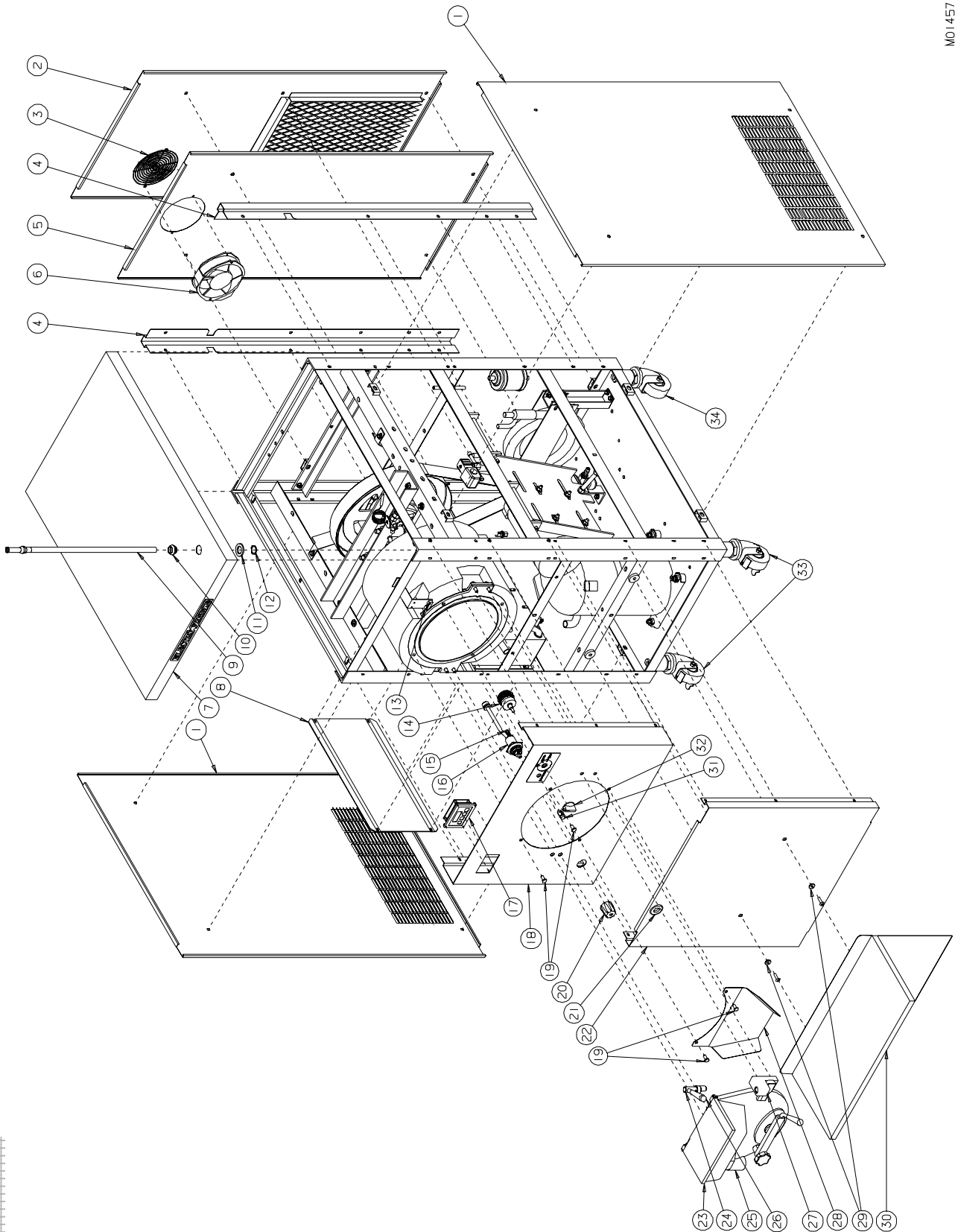


Figure 4 B12 Panel View (Sheet 2 of 2)

| Item | Part No. | Description |
|------|-------------|---|
| 1 | HC140213 | Panel-Side |
| 2 | HC119604 | Panel-Assy. Rear (Air Cooled) |
| 3 | HC151009 | Guard-Finger (Water Cooled) |
| 4 | HC140218 | Channel-Rear Corner |
| 5 | HC140342 | Panel-Rear W/C (Water Cooled) |
| 6 | HC151000 | Fan-Axial 230v 212 CFM 35w 50/60 (Water Cooled) |
| 7 | HC119616 | Panel-Assy. Top |
| 8 | HC140224 | Cover-Electric Box |
| 9 | HC119469 | Hose-Assy. Braided (with nozzle) |
| 10 | HC140347 | Guide-Nozzle |
| 11 | HC160182 | Washer-Flat 24mm Nylon |
| 12 | HC160430 | Ring-Retaining 24mm External |
| 13 | HC119825 | Kit-Dispense Door Switch Batch |
| 14 | HC150515 | Switch-Rotary 2P (Selector) |
| 15 | HC155618 | Adapter-3/8 Hose x 1/4 MPT BR |
| 16 | HC155489 | Valve-1/4 Turn Faucet |
| 16A | HC160755 | Hose-Flex 3/8 Comp x 1/2 IPS |
| 17 | HC150581 | Timer-0-30 Minute Digital |
| 18 | HC119606 | Panel-Assy. Upper Front |
| 19 | HC140290 | Screw-HXHC M8 x 20mm Rounded |
| 20 | HC162631 | Knob-Fluted Metal Faucet |
| 21 | HC159063 | Grommet-1-5/8 OD x 3/4 ID x 1-1/4 GRV. |
| 22 | HC140341 | Panel-Lower Front |
| 23 | HC119828 | Door-Assy. Complete (See Figure 1) |
| 24 | HC119455 | Cam-Assy. Door Lock |
| 25 | IC164100230 | Door Hinge |
| 26 | HC140209 | Handle-Cam Lock |
| 27 | HC140208 | Base-Cam Lock |
| 28 | HC140236 | Chute-Mix Dispense |
| 29 | HC140354 | Spacer-Shelf Mounting |
| 29A | HC159219 | Screw-TRPM 1/4-20 x 1 SST |
| 30 | HC119656 | Shelf-Assy. Batch |
| 31 | HC150550 | Light-Indicator 28v Amber |
| 32 | HC162637 | Knob-Selector Switch Black |
| 33 | HC162105 | Caster-1-1/4 ST PT w/Brake |
| 33A | HC150736 | Nut-Lock Conduit 1-1/4 |
| 34 | HC162106 | Caster-1-1/4 ST PT w/o Brake |
| 34A | HC150736 | Nut-Lock Conduit 1-1/4 |

| Hardware for Panels | | |
|---------------------|----------|-----------|
| Panel | Screw | Nut-Speed |
| Channel | HC160076 | HC159133 |
| Front-Lower | HC160076 | HC159133 |
| Front-Upper | HC160076 | HC160304 |
| Rear | HC160048 | HC160117 |
| Side | HC160048 | HC160117 |
| Top | HC160076 | HC159132 |

| Decals | |
|-------------|--------------------------|
| Part No. | Description |
| HC165025 | Beater Warning |
| HC165454 | Cleaning Instructions |
| HC165091 | Clear Overlay |
| HC165126-01 | Panel Removal Batch |
| HC165461 | Selector Switch |
| HC164171 | Ventilation 6" & 20" A/C |
| HC164172 | Ventilation 3" & 4" W/C |

Figure 5 B24 Panel View (Sheet 1 of 2)

NO1464

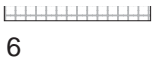
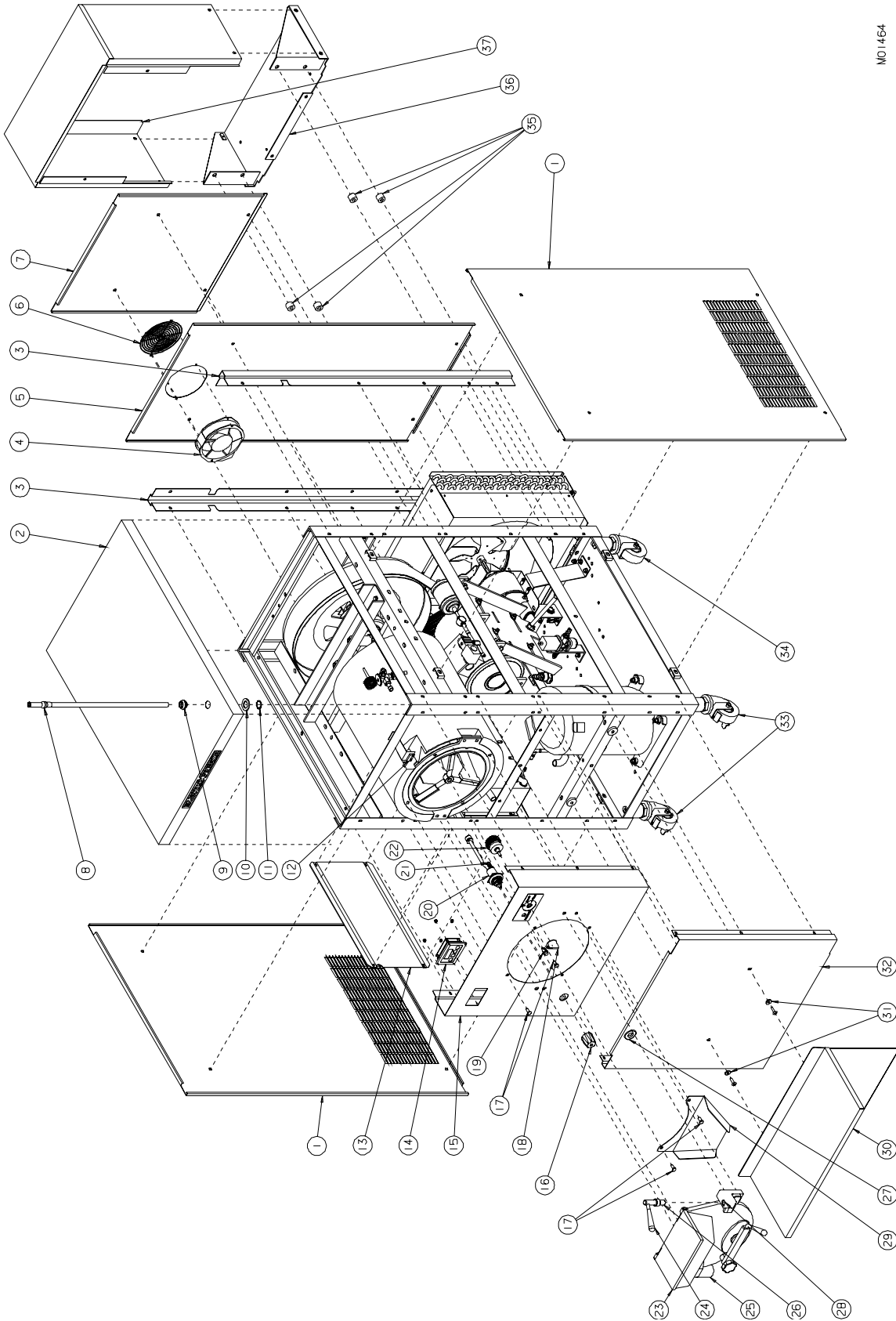


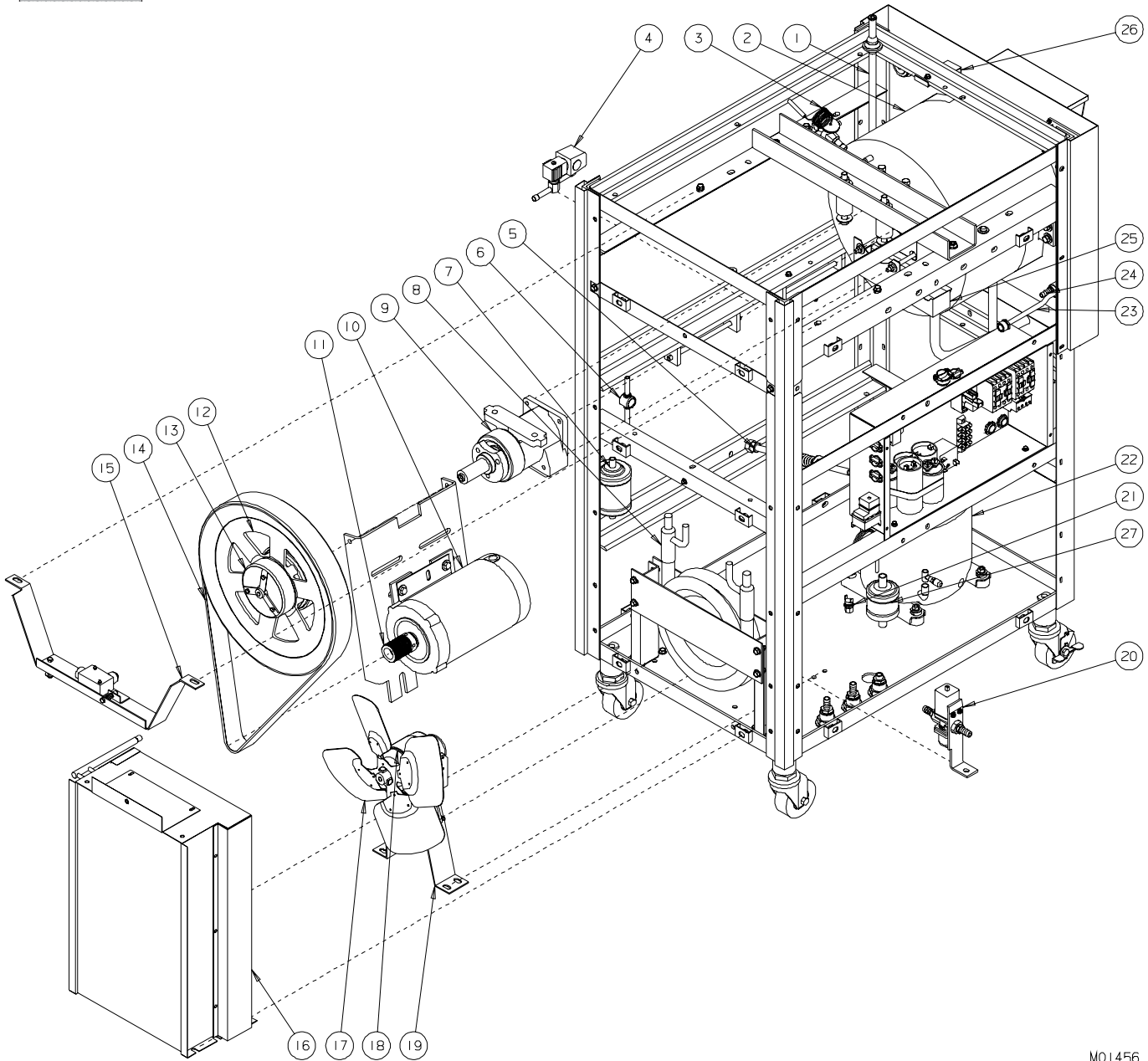
Figure 5 B24 Panel View (Sheet 2 of 2)

| Item | Part No. | Description |
|------|-------------|---|
| 1 | HC140213 | Panel-Side |
| 2 | HC119616 | Panel-Assy. Top |
| 3 | HC140218 | Channel-Rear Corner |
| 4 | HC151000 | Fan-Axial 230v 212 CFM 35w 50/60 (Water Cooled) |
| 5 | HC140342 | Panel-Rear W/C (Water Cooled) |
| 6 | HC151009 | Guard-Finger (Water Cooled) |
| 7 | HC140215 | Panel-Rear (Air Cooled) |
| 8 | HC119469 | Hose-Assy. Braided (with nozzle) |
| 9 | HC140347 | Guide-Nozzle |
| 10 | HC160182 | Washer-Flat 24mm Nylon |
| 11 | HC160430 | Ring-Retaining 24mm External |
| 12 | HC119825 | Kit-Dispense Door Switch Batch |
| 13 | HC140224 | Cover-Electric Box |
| 14 | HC150581 | Timer-0-30 Minute Digital |
| 15 | HC119606 | Panel-Assy. Upper Front |
| 16 | HC162631 | Knob-Fluted Metal Faucet |
| 17 | HC140290 | Screw-HXHC M8 x 20 Rounded |
| 18 | HC162637 | Knob-Selector Switch Black |
| 19 | HC150550 | Light-Indicator 28v Amber |
| 20 | HC155489 | Valve-1/4 Turn Faucet |
| 20A | HC160755 | Hose-Flex 3/8 Comp x 1/2 IPS |
| 21 | HC155618 | Adapter-3/8 Hose x 1/4 MPT BR |
| 22 | HC150515 | Switch-Rotary 3P (Selector) |
| 23 | HC119828 | Door-Assy. Complete EF Batch |
| 24 | HC140209 | Handle-Cam Lock |
| 25 | IC164100230 | Door Hinge |
| 26 | HC119455 | Cam-Assy. Door Lock |
| 27 | HC159063 | Grommet-1-5/8 OD x 3/4 ID x 1-1/4 GRV |
| 28 | HC140208 | Base-Cam Lock |
| 29 | HC140236 | Chute-Mix Dispense |
| 30 | HC119656 | Shelf-Assy. Batch |
| 31 | HC140354 | Spacer-Shelf Mounting |
| 31A | HC159219 | Screw-TRPM 1/4-20 x 1 SST |
| 32 | HC140341 | Panel-Lower Front |
| 33 | HC162105 | Caster-1-1/4 ST PT w/Brake |
| 33A | HC150736 | Nut-Lock Conduit 1-1/4 |
| 34 | HC162106 | Caster-1-1/4 ST PT w/o Brake |
| 34A | HC150736 | Nut-Lock Conduit 1-1/4 |
| 35 | HC132707 | Spacer-Cylinder Mtg. Plate (Air Cooled) |
| 36 | HC119464 | Shelf-Assy. Condenser (Air Cooled) |
| 37 | HC119465 | Cover-Assy. Condenser (Air Cooled) |

| Hardware for Panels | | |
|---------------------|----------|-----------|
| Panel | Screw | Nut-Speed |
| Channel | HC160076 | HC159133 |
| Front-Lower | HC160076 | HC159133 |
| Front-Upper | HC160076 | HC160304 |
| Rear | HC160048 | HC160117 |
| Side | HC160048 | HC160117 |
| Top | HC160076 | HC159132 |

| Decals | |
|-------------|--------------------------|
| Part No. | Description |
| HC165025 | Beater Warning |
| HC165454 | Cleaning Instructions |
| HC165091 | Clear Overlay |
| HC165126-01 | Panel Removal Batch |
| HC165461 | Selector Switch |
| HC164171 | Ventilation 6" & 20" A/C |
| HC164172 | Ventilation 3" & 4" W/C |

Figure 6 B12 Rear View (Sheet 1 of 2)



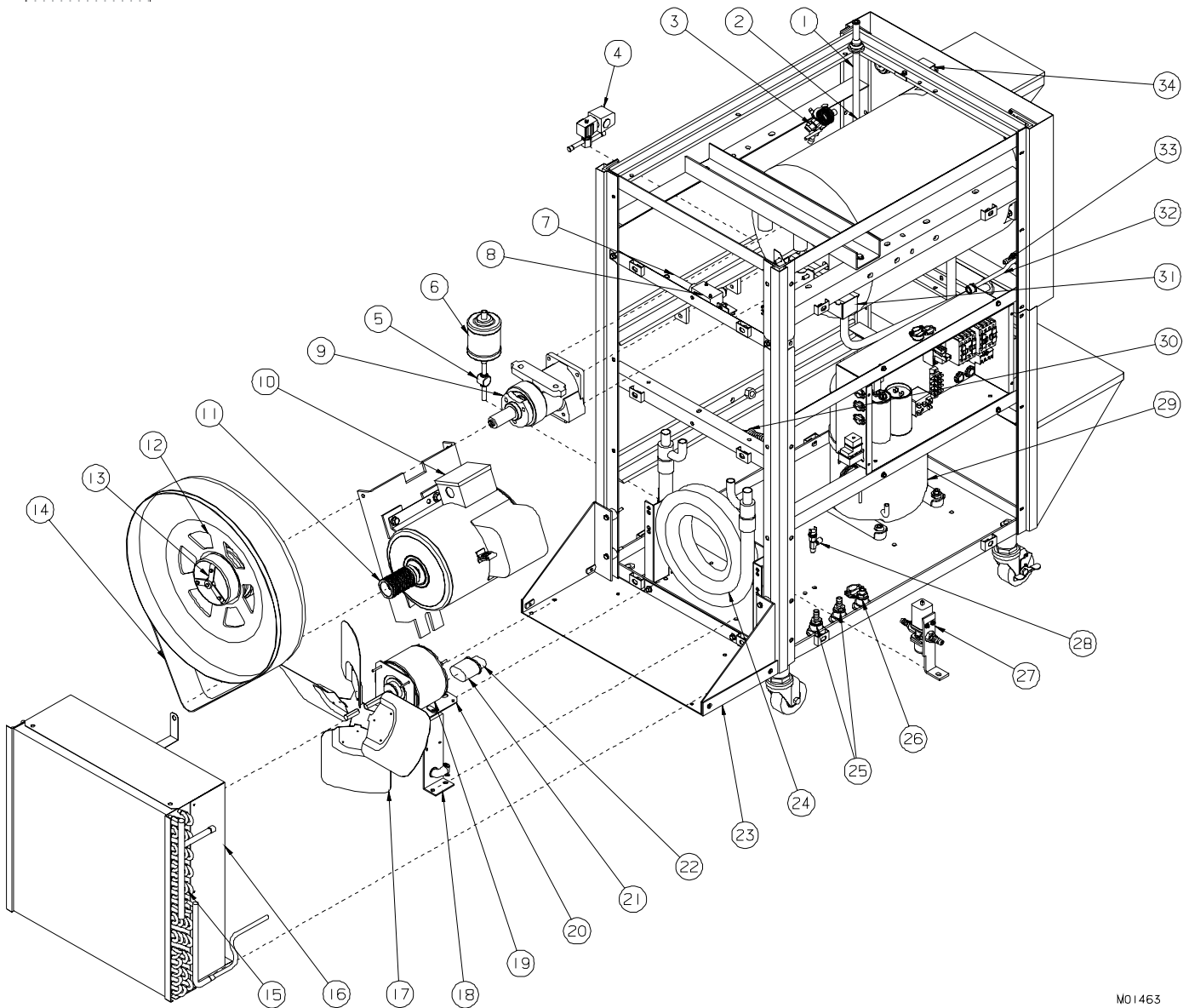
M01456

| Item | Part No. | Description |
|------|-------------|--|
| 1 | HC119469 | Hose-Assy. Braided |
| 1A | HC140346 | Guide-Wash Hose |
| 2 | IC115154960 | Cylinder-Complete includes |
| 3 | IC581101054 | ... Thermostatic Expansion Valve 68Z3438 |
| 3A | IC581110613 | ... Orifice-N° 03 068-2079 (Expansion Valve) |
| 4 | HC155491 | Valve-Solenoid 24v |

Figure 6 B12 Rear View (Sheet 2 of 2)

| Item | Part No. | Description |
|------|-------------|--|
| 5 | HC140183 | Rod-Belt Tension |
| 5A | HC162325 | Spring-Compression |
| 5B | HC140271 | Tube-Motor Tension Spring |
| 6 | HC155059 | Glass-Sight |
| 7 | HC155054 | Drier-Filter 16 cu in |
| 8 | HC155029 | Condenser-Water (Water Cooled) |
| 9 | IC157080300 | Drive-Assy. Shaft includes IC521111300 ... Bearing RIV 3209-2RS1 IC521111337 ... Bearing RIV 6209-2RS1 IC164110130 ... Housing Bearing & Shaft IC158115180 ... Ring Bearing Spacer IC157155070 ... Shaft-Assy Drive IC158155200 ... Spacer Bearing IC513101550 ... Washer Spacer 45 55 1 DIN988 |
| 10 | HC119816 | Motor-2 HP 208-230-1-60 FE (1 Phase) HC150294 Capacitor-Start (2 required) HC150244 Capacitor-Run |
| or | HC151048 | Motor-2 HP 208-230-3-60 FE (3 Phase) |
| 11 | HC140337 | Sheave-20J 1.575 OD .875 Shaft |
| 12 | IC153105090 | Pulley-Axial |
| 13 | | Clutch Assembly (See Figure 5) |
| 14 | HC153102 | Belt-Poly V 650J20 |
| 15 | | Torque Switch Assy. (See Figure 9) |
| 16 | HC118787 | Shroud-Assy. Condenser (Air Cooled) |
| 16A | HC155125 | Condenser-Air . (Air Cooled) |
| 17 | HC159015 | Blade-Fan 14 in 20° (Air Cooled) |
| 18 | HC151011 | Motor-Fan 75w 230-1-60 (Air Cooled) |
| 19 | HC139235 | Bracket-Fan Motor Support (Air Cooled) |
| 20 | HC155410 | Valve-Water 3/8 |
| 20A | HC155444 | Kit-Water Valve Repair |
| 21 | HC155405 | Cut Out-High Pressure (Water Cooled) |
| or | HC155450 | Cut Out-High Pressure (Air Cooled) |
| 22 | HC119540 | Compressor-Assy. 208-230-1-60 includes HC155574 Cap-Access Valve HC151463 Capacitor-Run HC151436 Capacitor-Start HC155054 Drier-Filter 16 cu in HC151462 Relay-Compressor Start HC155419 Valve-Access |
| or | HC119541 | Compressor-Assy. 208-230-3-60 includes HC155574 Cap-Access Valve HC155054 Drier-Filter 16 cu in HC155419 Valve-Access |
| 23 | HC155489 | Valve-1/4 Turn Faucet |
| 24 | HC155618 | Adapter-3/8 Hose x 1/4 MPT BR |
| 25 | HC119605 | Tube-Assy. Drain |
| 26 | HC119825 | Kit-Dispense Door Switch Batch |
| 27 | HC155133 | Muffler-Discharge (Water Cooled) |

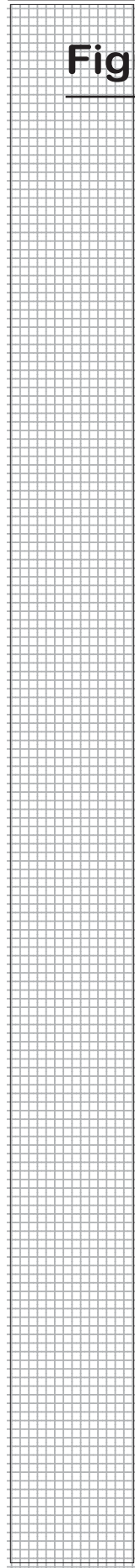
Figure 7 B24 Rear View (Sheet 1 of 2)



M01463

| Item | Part No. | Description |
|------|-------------|--|
| 1 | HC119469 | Hose-Assy. Braided |
| 1A | HC140346 | Guide-Wash Hose |
| 2 | IC115154970 | Cylinder-Complete includes |
| 3 | IC581101054 | Thermostatic Expansion Valve 68Z3438 |
| 3A | IC581110614 | Orifice-N° 04 068-2084 (Expansion Valve) |
| 4 | HC155491 | Valve-Solenoid 24v |
| 5 | HC155059 | Glass-Sight |
| 6 | HC155054 | Drier-Filter 16 cu in |
| 7 | IC107103220 | Bracket-Microswitch |
| 7A | HC140340 | Bracket-Torque Switch Mounting |
| 7B | IC178150390 | Spring-Microswitch Adjusting |
| 8 | IC572300142 | Microswitch Rear PG |

Figure 7 B24 Rear View (Sheet 2 of 2)



Item Part No. Description

- 9 [IC157080300](#) Drive-Assy. Shaft includes
 - [IC521111300](#) Bearing RIV 3209-2RS1
 - [IC521111337](#) Bearing RIV 6209-2RS1
 - [IC164110130](#) Housing Bearing & Shaft
 - [IC158115180](#) Ring Bearing Spacer
 - [IC157155070](#) Shaft-Assy Drive
 - [IC158155200](#) Spacer Bearing
 - [IC513101550](#) Washer Spacer 45 55 1 DIN988 C70
- 10 [IC551713072](#) Motor-3HP 115/208-230-1-60 LE includes Built on Capacitor
 - (1 Phase)
 - [HC150514](#) Capacitor-Start w/Resistor
- or [IC551713042](#) Motor-3HP 208-230/460-3-60 LE (3 Phase)
- 11 [HC140349](#) Sheave-30J 1.969 OD 1.125 Shaft
- 11A [HC160442](#) Ring-Retaining 38mm Internal
- 11B [HC160184](#) Washer-Flat M20 Blue
- 12 [IC153105120](#) Axial Pulley 45J 500 95
- 13 Clutch Assembly (See Figure 8)
- 14 [IC531300148](#) Belt-Drive Poly V
- 15 [HC155132](#) Condenser-Air (Air Cooled)
- 16 [HC119463](#) Shroud-Assy Condenser (Air Cooled)
- 17 [HC159016](#) Blade-Fan 18 in 30° (Air Cooled)
- 18 [HC140240](#) Bracket-Fan Motor Support (Air Cooled)
- 19 [HC151046](#) Motor-Fan 1/4hp 208-230v 60 (Air Cooled)
- 20 [HC119462](#) Bracket-Assy. Fan Motor (Air Cooled)
- 21 [HC151461](#) Capacitor-Run (Air Cooled)
- 22 [HC199041](#) Boot-Capacitor Protector (Air Cooled)
- 23 [HC119464](#) Shelf-Assy. Condenser (Air Cooled)
- 24 [HC155032](#) Condenser-Water 3 Ton (Water Cooled)
- 25 [HC155586](#) Adapter-Bulkhead 1/2 FPT (Water Cooled)
- 25A [HC155616](#) Adapter-1/2 Hose BARB x 1/2 MPT (Water Cooled)
- 26 [HC155586](#) Adapter-Bulkhead 1/2 FPT
- 26A [HC155629](#) Adapter-3/8 Comp x 1/2 MPT BR
- 27 [HC155410](#) Valve-Water 3/8
- 27A [HC155444](#) Kit-Water Valve Repair
- 28 [HC155405](#) Cut Out-High Pressure (Water Cooled)
- or [HC155450](#) Cut Out-High Pressure (Air Cooled)
- 29 [HC119508](#) Compressor-Assy. 208-230-1-60 includes
 - [HC150362](#) Capacitor-Run
 - [HC151460](#) Capacitor-Start
 - [HC155054](#) Drier-Filter 16 cu in
 - [HC151459](#) Relay-Compressor
- or [HC119815](#) Compressor 208-230/3/60 includes
 - [HC155054](#) Drier-Filter 16 cu in
- 29A [HC165534](#) Insulation-Compr Wrap Bristol
- 29B [HC160419](#) Rivet-Ratchet Plastic (Compressor Wrap)
- 29C [HC155419](#) Valve-Access
- 30 [HC140183](#) Rod-Belt Tension
- 30A [HC162325](#) Spring-Compression
- 30B [HC140271](#) Tube-Motor Tension Spring
- 31 [HC119458](#) Tube-Assy. Drain
- 32 [HC155489](#) Valve-1/4 Turn Faucet
- 33 [HC155618](#) Adapter-3/8 Hose x 1/4 MPT BR
- 34 [HC119825](#) Kit-Dispense Door Switch Batch

Figure 8 Drive Assembly (Sheet 1 of 2)

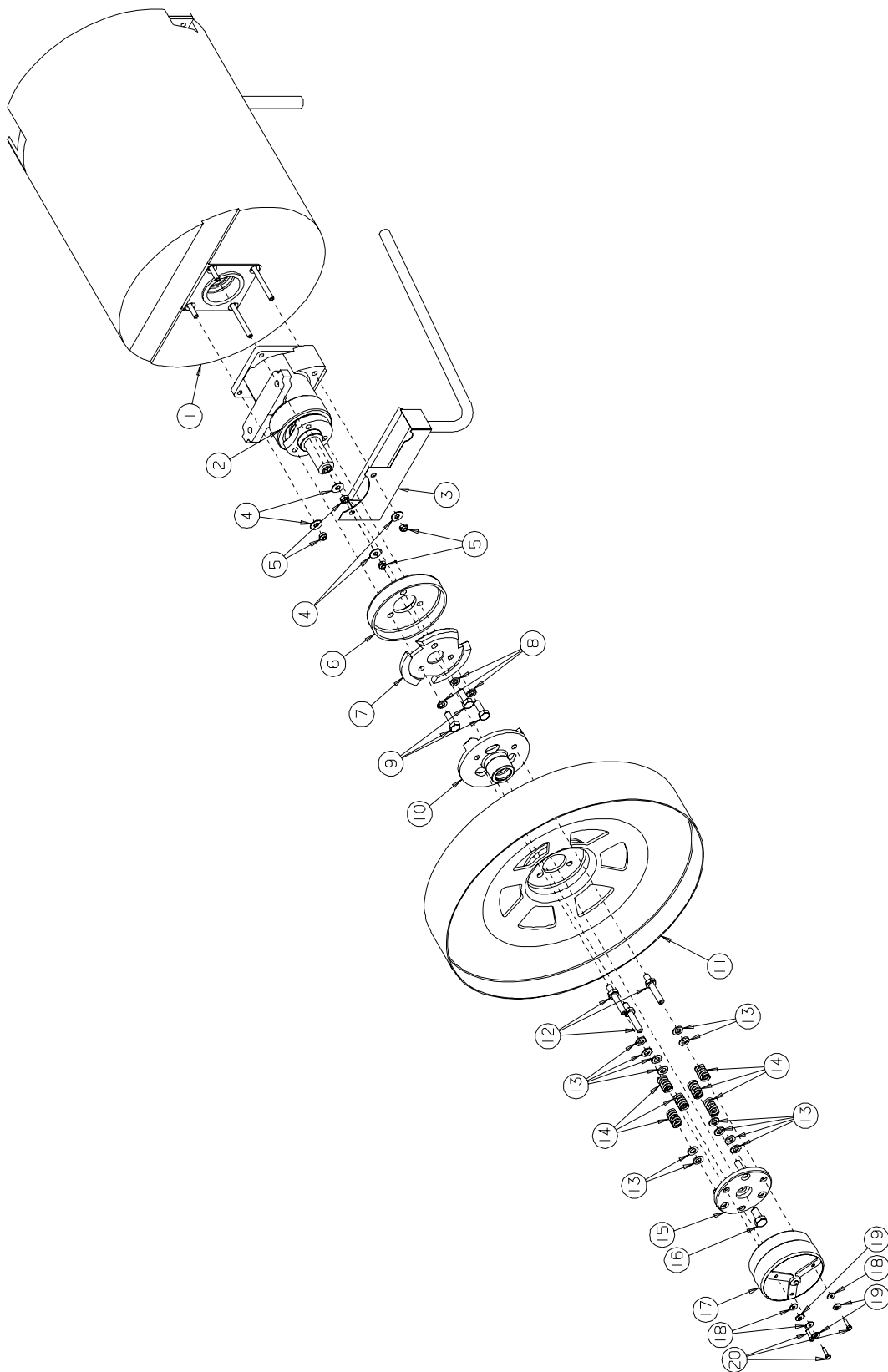


Figure 8 Drive Assembly (Sheet 2 of 2)

| Item | Part No. | Description |
|----------|-------------------|--------------------------------------|
| 1 | IC115154960 | Cylinder-Complete (B12) |
| | IC115154970 | Cylinder-Complete (B24) |
| 2 | IC157080300 | Drive-Assy. |
| 3 | HC119605 | Tube-Assy. Drain (B12) |
| | HC119458 | Tube-Assy. Drain (B24) |
| 4 | HC160131 | Washer-Flat 5/16 ZN |
| 5 | HC160194 | Nut-El Stop M8 ZN Blue |
| 6 | IC164118520 | Cover-Clutch Front |
| 7 | IC164115020 | Clutch-Drive |
| 8 | HC160192 | Screw-HXHC M10 X 30mm CL 8.8 ZN Blue |
| 9 | HC160210 | Washer-Ext Tooth Lock M10 ZN Blue |
| 10 | IC164116020 | Clutch-Driven |
| 11 | IC153105090 | Pulley-Axial (Model B12) |
| | IC153105120 | Pulley-Axial 45J 500 95 (Model B24) |
| 12 | IC171110120 | Stud-Clutch Spring |
| 13 | HC159931 | Washer-Flat M10 x 19mm OD ZN Blue |
| 14 | IC178150200 | Spring-Clutch |
| 15 | IC164117020 | Base-Clutch Spring |
| 16 | HC160085 | Screw-HXHM M12 x 25mm ZN Blue |
| 17 | IC164118600 | Cover-Clutch Rear |
| 18 | HC160138 | Washer-Flat #10 ZN |
| 19 | HC160189 | Washer-Lock M5 ZN Blue |
| 20 | HC159987 | Screw-HXHM M5 x 20mm ZN Blue |
| 21 | HC140387 | Spacer-Sheave |

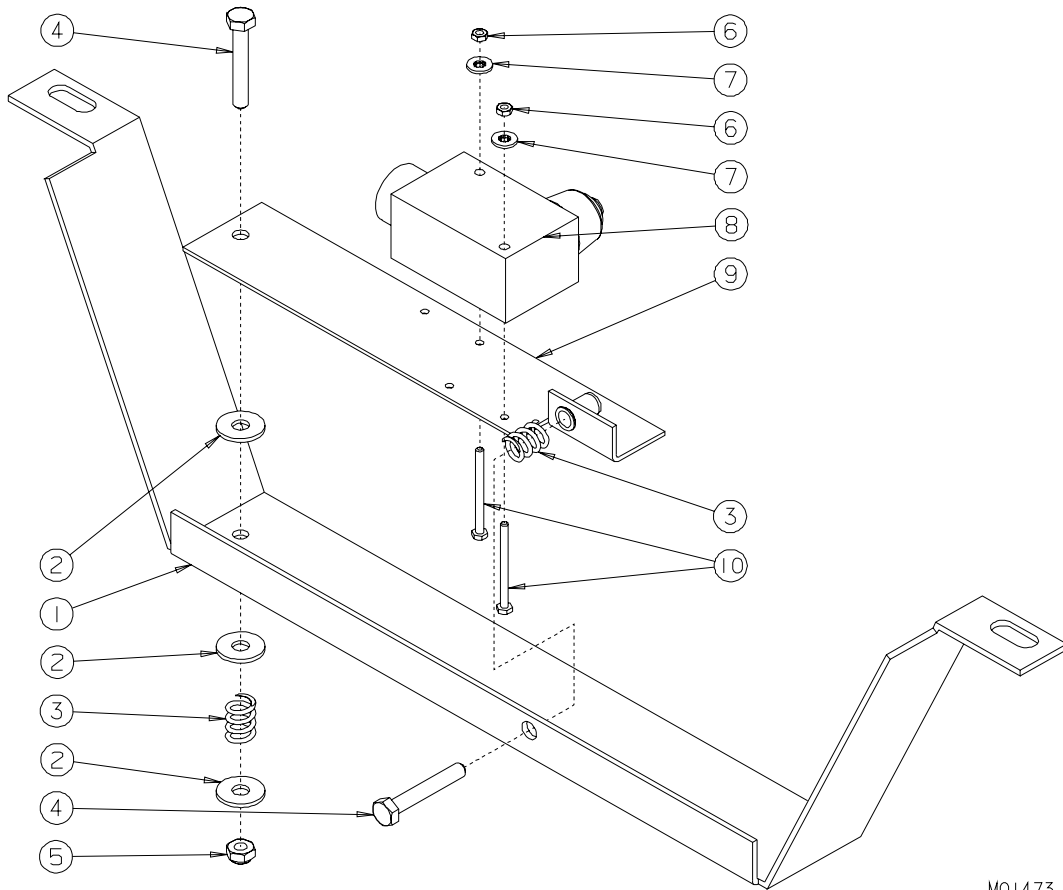
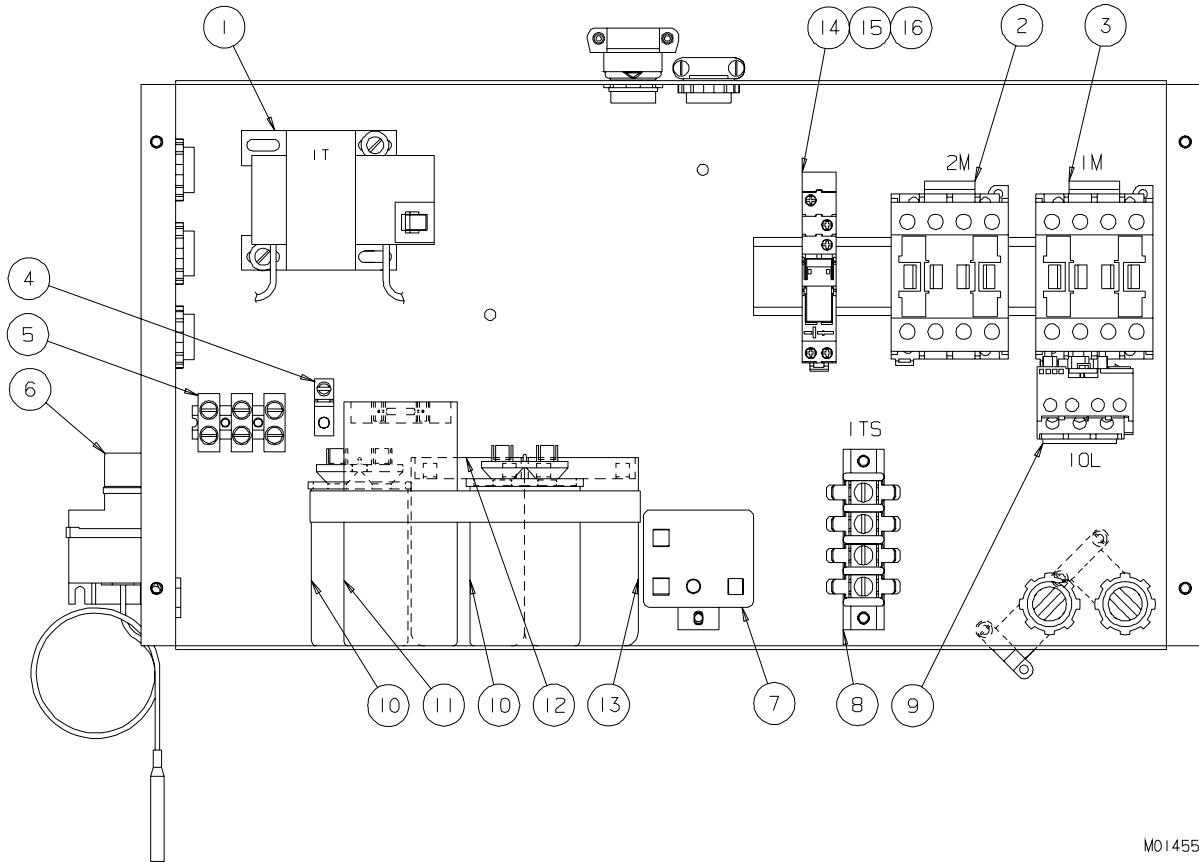


Figure 9 Torque Switch Assembly

| Item | Part No. | Description |
|------|-------------|--------------------------------------|
| 1 | HC140334 | Bracket-Torque Switch Mounting (B12) |
| 2 | HC140340 | Bracket-Torque Switch Mounting (B24) |
| 3 | IC178150390 | Spring-Microswitch Adjusting |
| 4 | HC160091 | Screw-HXHM M6 x 40mm ZN Blue |
| 5 | HC160185 | Nut-EI Stop M6 ZN Blue |
| 6 | HC159958 | Nut-Hex M3 ZN Blue |
| 7 | HC160191 | Washer-INT Tooth M3 ZN Blue |
| 8 | IC572300142 | Microswitch-Rear PG |
| 9 | IC107103220 | Bracket-Microswitch |
| 10 | HC159956 | Screw-HXHM M3 x 40mm ZN Blue |

See Figures 6 and 7 - Torque switch is mounted differently.



M01455

Figure 10 Electric Box

| Item | Part No. | Description |
|------|--------------|--|
| 1 | IC574100325 | Transformer-75VA/24VAC/MURD |
| 2 | HC150160 | Contactor-IEC 25A 4 Pole 24v Coil (Dasher) |
| 2A | HC150169 | Coil-Replace 24VAC DPBF25 |
| 3 | HC150160 | Contactor-IEC 25A 4 Pole 24v Coil (Compressor and Fan) |
| 3A | HC150169 | Coil-Replace 24VAC DPBF25 |
| 4 | HC150745 | Connector-Mech Grounding CU |
| 5 | HC139055-01 | Strip-Terminal 3 Pole |
| 6 | HC155482 | Cut Out-Low Pressure 0 PSIG |
| 7 | HC151462 | Relay-Compressor Start (B12 - 1 Phase) |
| | HC151459 | Relay-Compressor (B24 - 1 Phase) |
| 8 | HC150795 | Strip-Terminal |
| 9 | HC150162 | Relay-Overload 6-10A Auto Reset (B12 - 1 Phase, B12 and B24 - 3 Phase) |
| | HC150163 | Relay-Overload 14-32A Auto Reset (B24 - 1 Phase) |
| 10 | HC150294 (2) | Capacitor-Start (Motor) (B12 - 1 Phase) |
| 11 | HC150244 | Capacitor-Run (Motor) (B12 - 1 Phase) |
| 12 | HC151463 | Capacitor-Run (Compressor) (B12 - 1 Phase) |
| | HC150362 | Capacitor-Run (Compressor) (B24 - 1 Phase) |
| 13 | HC151436 | Capacitor-Start (Compressor) (B12 - 1 Phase) |
| | HC151460 | Capacitor-Start (Compressor) (B24 - 1 Phase) |
| 14 | HC150164 | Relay-Miniature SPDT 24v Coil |
| 15 | HC150165 | Socket-Miniature Relay Clamp |
| 16 | HC150166 | Clip-Miniature Relay Retaining |

Accessories

| Part No. | Description |
|-----------|--|
| HC155613 | Adapter-1/2 MPT x 3/4 Garden BR |
| HC196103 | Bottle-Wash 500ml |
| HC158026 | Brush-1 inch dia x 12 inch long |
| HC158020 | Brush-6 inch x 2-3/4 w/9 inch handle |
| HC158077 | Brush-9/16 inch w/36 inch handle |
| HC162105 | Caster-1 1/4 ST PT w/brake |
| HC162106 | Caster-1 1/4 ST PT w/o brake |
| HC158051 | Cup-Overrun Measuring 1 Pint (use with P/N HC158049 scale) |
| HC158000A | Lubricant-Petrol Gel 4 oz. tube (per tube) |
| HC150736 | Nut-Lock Conduit 1 1/4 (casters) |
| HC158013 | Sanitizer-Stera Sheen Sample |
| HC158014 | Sanitizer-Stera Sheen case/4 jars |
| HC158014A | Sanitizer-Stera Sheen 4 lb. jar |
| HC158049 | Scale-Overrun |
| HC169374 | Tool-O-ring Removal |

Alphabetized Parts List for Model B12 and B24

Important: All parts shown are for standard models designed for 230V/1PH/60HZ or 208-230V/3PH/60HZ.

| PART DESCRIPTION | PART NUMBER | QTY | SERIAL NUMBER (FROM - TO) |
|---|-----------------------|-----|---------------------------|
| Adapter-1/2 Hose BARB x 1/2 MPT (Water Cooled) (B24) | HC155616 | 2 | E2K - |
| Adapter-1/2 MPT x 3/4 Garden BR (Accessories) | HC155613 | 1 | E2K - |
| Adapter-3/8 Comp x 1/2 MPT BR (B24) | HC155629 | 1 | E2K - |
| Adapter-3/8 Hose x 1/4 MPT BR | HC155618 | 1 | E2K - |
| Adapter-Bulkhead 1/2 FPT (Water Cooled)(B24) | HC155586 | 2 | E2K - |
| Axial Pulley (B12) | IC153105090 | 1 | E2K - |
| Axial Pulley 45J 500 95 (B24) | IC153105120 | 1 | E2K - |
| Base-Cam Lock | HC140208 | 1 | F2K - |
| Base-Clutch Spring | IC164117020 | 1 | F2K - |
| Bearing RIV 3209-2R51 (Bearing-Assy) | IC521111300 | 1 | F2K - |
| Bearing RIV 6209-2R51 (Bearing-Assy) | IC521111337 | 1 | F2K - |
| Bearing-Assy. includes | See Drive-Assy. Shaft | | |
| Beater Seal Shaft Silicone | IC177120280 | 1 | F2K - |
| Belt-Poly V 30J (B24) | IC531300148 | 1 | F2K - |
| Belt-Poly V 650 J20 (B12) | HC153102 | 1 | E2K - |
| Blade-Fan 14 in. 20° (Air Cooled) (B12) | HC159015 | 1 | E2K - |
| Blade-Fan 18 in. 30° (Air Cooled) (B24) | HC159016 | 1 | E2K - |
| Blade-Scraper | IC141116030 | 6 | F2K - |
| Boot-Capacitor Protector (Air Cooled)(B24) ... | HC199041 | 1 | F2K - |
| Bottle-Wash 500ml | HC196103 | 1 | F2K - |
| Bracket-Assy. Fan Motor (Air Cooled) (B24) ... | HC119462 | 1 | E2K - |
| Bracket-Fan Motor Support(Air Cooled)(B12) . | HC139235 | 1 | E2K - |
| Bracket-Fan Motor Support(Air Cooled)(B24) . | HC140240 | 1 | E2K - |
| Bracket-Microswitch | IC107103220 | 1 | E2K - |
| Bracket-Torque Switch Mtg. (B12) | HC140334 | 1 | E2K - |
| Bracket-Torque Switch Mtg. (B24) | HC140340 | 1 | E2K - |

* As Required
NLA = No Longer Available

Use only original or authorized replacement parts with this freezer.

Alphabetized Parts List for Model B12 and B24

Important: All parts shown are for standard models designed for 230V/1PH/60HZ or 208-230V/3ph/60HZ..

| PART DESCRIPTION | PART NUMBER | QTY | SERIAL NUMBER (FROM – TO) |
|--|-------------|-----|---------------------------|
| Brush-1 inch dia x 12 inch long | HC158026 | 1 | F2K – |
| Brush-9/16 inch w/36 inch handle | HC158077 | 1 | F2K – |
| Brush-6 inch x 2-3/4 w/9 inch handle | HC158020 | 1 | F2K – |
| Cam-Assy. Door Lock (Door Assy) | HC119455 | 1 | F2K – |
| Cap-Access Valve (B12) | HC155574 | 1 | F2K – |
| Capacitor-Run (Compressor) (B12 - 1 Phase) .. | HC151463 | 1 | F2K – |
| Capacitor-Run (Compressor) (B24 - 1 Phase) .. | HC150362 | 1 | F2K – |
| Capacitor-Run (Fan Motor) (B24 - A/C) | HC151461 | 1 | F2K – |
| Capacitor-Run (Motor) (B12 - 1 Phase) | HC150244 | 1 | F2K – |
| Capacitor-Start (Compressor) (B12 - 1 Phase) .. | HC151436 | 1 | F2K – |
| Capacitor-Start (Compressor) (B24 - 1 Phase) .. | HC151460 | 1 | F2K – |
| Capacitor-Start (Motor) (B12 - 1 Phase) | HC150294 | 2 | F2K – |
| Capacitor-Start w/Resistor (Motor) (B24 - 1 Phase) | HC150514 | 1 | F2K – |
| Caster-1 1/4 ST PT w/Brake | HC162105 | 2 | F2K – |
| Caster-1-1/4 ST PT w/o Brake | HC162106 | 2 | F2K – |
| Channel-Rear Corner | HC140218 | 2 | F2K – |
| Chute-Mix Dispense | HC140236 | 1 | F2K – |
| Clamp-Hose 13/16 to 1-1/2 | HC160754 | 2 | F2K – |
| Clip-Minature Relay Retaining (Electric Box) .. | HC150166 | 1 | F2K – |
| Clutch-Drive | IC164115020 | 1 | F2K – |
| Clutch-Driven | IC164116020 | 1 | F2K – |
| Coil-Replace 24VAC DPBF25 (Contactor) | HC150169 | * | F2K – |
| Compressor-Assy. 208-230-1-60 (B12 - 1 Phase) includes compressor and | HC119508 | 1 | F2K – |
| Cap-Access Valve | HC155574 | 1 | F2K – |
| Capacitor-Run | HC150463 | 1 | F2K – |
| Capacitor-Start | HC151436 | 1 | F2K – |
| Drier-Filter 16 cu in | HC155054 | 1 | F2K – |
| Relay-Compressor Start | HC151462 | 1 | F2K – |
| Valve-Access | HC155419 | 1 | F2K – |

* As Required
NLA = No Longer Available

Use only original or authorized replacement parts with this freezer.

Alphabetized Parts List for Model B12 and B24

Important: All parts shown are for standard models designed for 230V/1PH/60HZ or 208-230V/3PH/60HZ.

| PART DESCRIPTION | PART NUMBER | QTY | SERIAL NUMBER (FROM - TO) |
|---|-------------|-----|---------------------------|
| Compressor-Assy. 208-230-1-60 (B24 - 1 Phase) | | | |
| includes compressor and | HC119508 | 1 | F2K - |
| Capacitor-Run | HC150362 | 1 | F2K - |
| Capacitor-Start | HC151460 | 1 | F2K - |
| Drier-Filter 16 cu in | HC155054 | 1 | F2K - |
| Relay-Compressor | HC151459 | 1 | F2K - |
| Compressor-Assy. 208-230-3-60 (B12 - 3 Phase) | | | |
| includes compressor and | HC119541 | 1 | F2K - |
| Cap-Access Valve | HC155574 | 1 | F2K - |
| Drier-Filter 16 cu in | HC155054 | 1 | F2K - |
| Valve-Access | HC155419 | 1 | F2K - |
| Compressor-Assy. 208-230-3-60 (B24 - 3 Phase) | | | |
| includes compressor and | HC119815 | 1 | F2K - |
| Drier-Filter 16 cu in | HC155054 | 1 | F2K - |
| Condenser-Air (B12)(Air Cooled) | HC155125 | 1 | F2K - |
| Condenser-Air (B24)(Air Cooled) | HC155132 | 1 | F2K - |
| Condenser-Water (B12)(Water Cooled)..... | HC155029 | 1 | F2K - |
| Condenser-Water 3 Ton (B24)(Water Cooled) .. | HC155032 | 1 | F2K - |
| Connector-Mech Grounding CU | HC150745 | 1 | F2K - |
| Contactor-IEC 25A 4 Pole 24v Coil | | | |
| (Dasher & Compressor/Fan)(Electric Box) ... | HC150160 | 2 | F2K - |
| Cover-Assy. Condenser (B24)(Air Cooled) ... | HC119465 | 1 | F2K - |
| Cover-Clutch Front | IC164118520 | 1 | F2K - |
| Cover-Clutch Rear | IC164118600 | 1 | F2K - |
| Cover-Electric Box | HC140224 | 1 | F2K - |
| Cup-Overrun (use with P/N HC158049 scale) .. | HC158051 | 1 | F2K - |
| Cut Out-High Pressure (Air Cooled) | HC155450 | 1 | F2K - |
| Cut Out-High Pressure (Water Cooled)..... | HC155405 | 1 | F2K - |
| Cut Out-Low Pressure 0 PSIG(Electric Box) .. | HC155482 | 1 | F2K - |
| Cylinder-Complete (B12) | IC115154960 | 1 | F2K - |
| Cylinder-Complete (B24) | IC115154970 | 1 | F2K - |
| * As Required NLA = No Longer Available | | | |

Use only original or authorized replacement parts with this freezer.

Alphabetized Parts List for Model B12 and B24

Important: All parts shown are for standard models designed for 230V/1PH/60HZ or 208-230V/3ph/60HZ..

| PART DESCRIPTION | PART NUMBER | QTY | SERIAL NUMBER (FROM – TO) |
|--|-------------------|---------|---------------------------|
| Dasher-12 qt. (B12) | IC142061040 | 1 | F2K – |
| Dasher-24 qt. (B24) | IC142061030 | 1 | F2K – |
| Decal-Beater Warning | HC165025 | 1 | F2K – |
| Decal-Cleaning Instructions | HC165454 | 1 | F2K – |
| Decal-Clear Overlay | HC165091 | 1 | F2K – |
| Decal-Panel Removal Batch | HC165126-01 | 3 | F2K – |
| Decal-Selector Switch | HC165461 | 1 | F2K – |
| Decal-Ventilation 6-inch Rear | HC169054 | 1 | F2K – |
| Decal-Ventilation 3" & 4" (Water Cooled) | HC164172 | 1 | F2K – |
| Decal-Ventilation 6" & 20" (Air Cooled) | HC164171 | 1 | F2K – |
| Door Hinge | IC164100230 | 1 | F2K – |
| Door-Assy. Complete EF Batch | HC119828 | 1 | F2K – |
| Knob-Door Front | IC173100490 | 1 | F2K – |
| Lever-Door Front | IC155185140 | 1 | F2K – |
| Spring-Compression SST | IC178100060 | 1 | F2K – |
| Spacer-Door Front | IC107170900 | 1 | F2K – |
| Screw-FHMS M4 x 20 SST | IC511530420 | 1 | F2K – |
| Door-Dispense | IC118125050 | 1 | F2K – |
| Gasket-Dispense Door | IC158200710 | 1 | F2K – |
| Door-Dispense EF | IC118130800 | 1 | F2K – |
| Gasket-Door | IC158200090 | 1 | F2K – |
| Pin-Clevis | HC160353 | 2 | F2K – |
| Lid-Door | HC140198 | 1 | F2K – |
| Door-Dispense (Door-Assy.) | IC118125050 | 1 | F2K – |
| Door-Dispense EF (Door-Assy.) | IC118130800 | 1 | F2K – |
| Drier-Filter 16 cu in | HC155054 | 1 | F2K – |
| Drive-Assy. Shaft includes | IC157080300 | 1 | F2K – |
| Bearing RIV 3209-2R51 | IC521111300 | 1 | F2K – |
| Bearing RIV 6209-2R51 | IC521111337 | 1 | F2K – |
| Housing Bearing & Shaft | IC164110130 | 1 | F2K – |
| Ring Bearing Spacer | IC158115180 | 1 | F2K – |
| Shaft-Assy Drive | IC157155070 | 1 | F2K – |
| Spacer Bearing | IC158155200 | 1 | F2K – |
| Washer Spacer 45 55 1 DIN988 | IC513101550 | 1 | F2K – |

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Alphabetized Parts List for Model B12 and B24

Important: All parts shown are for standard models designed for 230V/1PH/60HZ or 208-230V/3PH/60HZ.

| PART DESCRIPTION | PART NUMBER | QTY | SERIAL NUMBER (FROM - TO) |
|---|-----------------------------------|---------|---------------------------|
| Fan-Axial 230v 212CFM 35watt 50/60 | HC151000 | 1 | F2K - |
| Gasket-Dispense Door (Door Assy) | IC158200710 | 1 | F2K - |
| Gasket-Door (Door Assy)..... | IC158200090 | 1 | F2K - |
| Glass-Sight | HC155059 | 1 | F2K - |
| Grommet-1-5/8 OD x 3/4 ID x 1-1/4 GRV. | HC159063 | 1 | F2K - |
| Guard-Finger | HC151009 | 1 | F2K - |
| Guide-Nozzle | HC140347 | 1 | F2K - |
| Guide-Wash Hose | HC140346 | 1 | F2K - |
| Handle-Cam Lock (Door Assy) | HC140209 | 1 | F2K - |
| Hose-Assy. Braided (with nozzle) | HC119469 | 1 | F2K - |
| Hose-Flex 3/8 Comp x 1/2 IPS | HC160755 | 1 | F2K - |
| Housing Bearing & Shaft (Drive Shaft Assy.) ... | IC164110130 | | F2K - |
| Insulation-Compr Wrap Bristol (B24)..... | HC165534 | 1 | F2K - |
| Kit-Dispense Head Switch Batch..... | HC119825 | 1 | F2K - |
| Kit-Water Valve Repair | HC155444 | 1 | F2K - |
| Knob-Door Front (Door Assy.) | IC173100490 | 2 | F2K - |
| Knob-Fluted Metal Faucet | HC162631 | 1 | F2K - |
| Knob-Selector Switch Black | HC162637 | 1 | F2K - |
| Lever-Door Front (Door Assy)..... | HC155184140 | 1 | F2K - |
| Lid-Door (Door Assy) | HC140198 | 1 | F2K - |
| Light-Indicator 28v Amber | HC150550 | 1 | F2K - |
| Lubricant-Petrol Gel 4 oz. tube (per tube)..... | HC158000A | * | F2K - |
| Microswitch-Rear PG | IC572300142 | 1 | F2K - |

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Alphabetized Parts List for Model B12 and B24

Important: All parts shown are for standard models designed for 230V/1PH/60HZ or 208-230V/3ph/60HZ..

| PART DESCRIPTION | PART NUMBER | QTY | SERIAL NUMBER (FROM – TO) |
|--|-------------|-----|---------------------------|
| Motor-2HP 208-230-1-60 FE (1 Phase)(B12) includes motor and | HC119816 | 1 | F2K – |
| Capacitor-Run | HC150244 | 1 | F2K – |
| Capacitor-Start | HC150294 | 2 | F2K – |
| Motor-2HP 208-23-3-60 FE (3 Phase)(B12) ... | HC151048 | 1 | F2K – |
| Motor-3HP 115/208-230-1-60 LE | IC551713072 | 1 | F2K – |
| Motor-3HP 208-230/460-3-60 LE | IC551713042 | 1 | F2K – |
| Motor-Fan 1/4HP 208-230v 60 (Air Cooled)(B24) | HC151046 | 1 | F2K – |
| Motor-Fan 75w 230-1-60 (Air Cooled)(B12) | HC151011 | 1 | F2K – |
| Muffler-Discharge (Water Cooled B12) | HC155133 | 1 | J2K – |
| Nut-El Stop M6 ZN Blue(Switch-Assy. Torque) | HC160185 | 1 | F2K – |
| Nut-El Stop M8 ZN Blue (Drive-Assy.) | HC160194 | 4 | F2K – |
| Nut-Hex M3 ZN Blue (Switch-Assy. Torque) | HC159958 | 2 | F2K – |
| Nut-Lock Conduit 1-1/4 | HC150736 | 4 | F2K – |
| Nut-Speed #10-24 .025-064SST(Top Panel).. | HC159132 | 4 | F2K – |
| Nut-Speed #10-24 .156-.187 (Rear Channel and Lower Front Panel) | HC159133 | 18 | F2K – |
| Nut-Speed 1/4-20 .064-.125 (Rear & Side Panels) | HC160117 | 12 | F2K – |
| Oriface-N° 03 068-2079(Cylinder Assy.)(B12) . | IC581110613 | 1 | F2K – |
| Oriface-N° 04 068-2084(Cylinder Assy.)(B24) . | IC581110614 | 1 | F2K – |
| O-ring (Scraper Blade)(B12) | HC160646 | 4 | F2K – |
| O-ring (Scraper Blade)(B24) | HC160646 | 6 | F2K – |
| Panel-Assy. Rear (Air Cooled)(B12) | HC119604 | 1 | F2K – |
| Panel-Assy. Top | HC119616 | 1 | F2K – |
| Panel-Assy. Upper Front | HC119606 | 1 | F2K – |
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Alphabetized Parts List for Model B12 and B24

Important: All parts shown are for standard models designed for 230V/1PH/60HZ or 208-230V/3PH/60HZ.

| PART DESCRIPTION | PART NUMBER | QTY | SERIAL NUMBER (FROM - TO) |
|--|-------------------|---------|---------------------------|
| Panel-Lower Front | HC140341 | 1 | F2K - |
| Panel-Rear (Air Cooled)(B24) | HC140215 | 1 | F2K - |
| Panel-Rear (Water Cooled) | HC140342 | 1 | F2K - |
| Panel-Side | HC140213 | 2 | F2K - |
| Pin-Clevis (Door Assy) | HC160353 | 2 | F2K - |
| Pulley-Axial (B12) | IC153105090 | 1 | F2K - |
| Pulley-Axial 45 J 500 95 (Driven)(B24) | IC153105120 | 1 | F2K - |
| Relay-Compressor (1 Phase)(B24) | HC151459 | 1 | F2K - |
| Relay-Compressor Start (1 Phase)(B12) | HC151462 | 1 | F2K - |
| Relay-Miniature SPDT 24v Coil(Electric Box) | HC150164 | 1 | F2K - |
| Relay-Overload 6-10A Auto Reset (B12)(B24-3 Phase) (Electric Box) | HC150162 | 1 | F2K - |
| Relay-Overload 14-32A Auto Reset (B24-1 Phase) (Electric Box) | HC150163 | 1 | F2K - |
| Ring Bearing Spacer (Bearing-Assy) | IC158115180 | 1 | F2K - |
| Ring-Retaining 24mm Ext. | HC160430 | 1 | F2K - |
| Rivet-Ratchet Plastic(Compressor Wrap)(B24) | HC160419 | 4 | F2K - |
| Rod-Belt Tension | HC140183 | 1 | F2K - |
| Sanitizer-Stera Sheen (per case/4 jars) | HC158014 | * | F2K - |
| Sanitizer-Stera Sheen (sample) | HC158013 | * | F2K - |
| Screw-FHMS M4 x 20 SST (Door Assy.) | IC511530420 | 1 | F2K - |
| Screw-HXHM M3 x 40mm ZN Blue (Torque Switch Assy.) | HC159956 | 2 | F2K - |
| Screw-HXHM M5 x 20mm ZN Blue (Drive Assy.) | HC159987 | 3 | F2K - |

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Alphabetized Parts List for Model B12 and B24

Important: All parts shown are for standard models designed for 230V/1PH/60HZ or 208-230V/3ph/60HZ..

| PART DESCRIPTION | PART NUMBER | QTY | SERIAL NUMBER (FROM – TO) |
|--|------------------------------|----------|---------------------------|
| Screw-HXHM M6 x 40mm ZN Blue (Torque Switch Assy.) | HC160091 | 2 | F2K – |
| Screw-HXHC M8 x 20 Rounded (Panel View) | HC140290 | 4 | F2K – |
| Screw-HXHC M10 X 30mm CL 8.8 ZN Blue (Drive Assy.) | HC160192 | 3 | F2K – |
| Screw-HXHM M12 x 25mm ZN Blue (Drive Assy.) | HC160085 | 1 | F2K – |
| Screw-TRPM #10-24 x 1/2SST(Rear Channel) (Side, Top and Front panels) | HC160076 | 20 | F2K – |
| Screw-TRPM 1/4-20 x 1/2 SST | HC160048 | 12 | F2K – |
| Screw-TRPM 1/4-20 x 1 SST | HC159219 | 2 | F2K – |
| Seal-Shaft | IC177120280 | 1 | F2K – |
| Shaft-Assy. Drive | <i>See Drive-Assy. Shaft</i> | | |
| Sheave-20J 1.575 OD .875 Shaft (Drive)(B12) | HC140220 | 1 | F2K – |
| Sheave-30J 1.969 OD 1.125 Shaft (Drive)(B24) | HC140349 | 1 | F2K – |
| Shelf-Assy. Batch | HC119656 | 1 | F2K – |
| Shelf-Assy. Condenser (Air Cooled)(B24) | HC119464 | 1 | F2K – |
| Shroud-Assy. Condenser (Air Cooled)(B24) | HC119463 | 1 | F2K – |
| Shroud-Assy. Condenser (Air Cooled)(B12) | HC118787 | 1 | F2K – |
| Socket-Miniature Relay Clamp (Electric Box) . | HC150165 | 1 | F2K – |
| Spacer-Bearing (Drive Assy.) | IC158155200 | 1 | F2K – |
| Soacer-Cylinder Mtg. Plate (Air Cooled) | HC132707 | 4 | F2K – |
| Spacer-Door Front (Door Assy.) | IC107170900 | 1 | F2K – |
| Spacer-Shelf Mounting | HC140254 | 2 | F2K – |
| Spring-Clutch (Drive Assy.) | IC178150200 | 6 | F2K – |
| Spring-Compression | HC162325 | 1 | F2K – |
| Spring-Compression SST (Door Assy) | IC178100060 | 1 | F2K – |
| Spring-Microswitch Adjusting (Torque Switch Assy.) | IC178150390 | 2 | F2K – |

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Alphabetized Parts List for Model B12 and B24

Important: All parts shown are for standard models designed for 230V/1PH/60HZ or 208-230V/3PH/60HZ.

| PART DESCRIPTION | PART NUMBER | QTY | SERIAL NUMBER (FROM - TO) |
|---|-------------|-----|---------------------------|
| Strip-Terminal (Electric Box) | HC150795 | 1 | F2K - |
| Strip-Terminal 3 Pole (Electric Box) | HC139055-01 | 1 | F2K - |
| Stud-Clutch Spring (Drive Assy.) | C171110120 | 3 | F2K - |
| Switch-Rotary 3P | HC150515 | 1 | F2K - |
| Thermostatic Expansion Valve 68Z3438 | IC581101054 | 1 | F2K - |
| Timer-0-30 Minute Digital | HC150581 | 1 | F2K - |
| Transformer-75VA/24VAC/MURD | IC574100325 | 1 | F2K - |
| Tube-Assy. Drain (B12) | HC119605 | 1 | F2K - |
| Tube-Assy. Drain (B24) | HC119458 | 1 | F2K - |
| Tube-Motor Tension Spring | HC140271 | 1 | F2K - |
| Valve-1/4 Turn Faucet | HC155489 | 1 | F2K - |
| Valve-Access | HC155419 | 1 | F2K - |
| Valve-Assy Water includes | 113769-01 | 1 | F2K - |
| Valve-Water 3/8 | HC155410 | 1 | F2K - |
| Valve-Solenoid 24v | HC155491 | 1 | F2K - |
| Valve-Thermostatic Expansion 68Z3438 | IC581101054 | 1 | F2K - |
| Valve-Water 3/8 | HC155410 | 1 | F2K - |
| Washer-Ext Tooth Lock M10 ZN Blue , | HC160210 | 3 | F2K - |
| Washer-Flat #10 ZN (Drive Assy.) | HC160138 | 6 | F2K - |
| Washer-Flat M20 Blue (B24) | HC160184 | 1 | F2K - |
| Washer-Flat 24mm Nylon | HC160182 | 1 | F2K - |
| Washer-Flat 5/16 ZN (Drive Assy.) | HC160131 | 2 | F2K - |
| Washer-Flat M10 x 19mm OD ZN Blue(Drive Assy.) | HC159931 | 12 | F2K - |
| Washer-INT Tooth M3 ZN Blue(Torque Assy.) | HC160191 | 2 | F2K - |
| Washer-Lock M5 ZN Blue (Drive Assy.) | HC160189 | 3 | F2K - |
| Washer-Spacer (Bearing-Assy) | IC513101550 | 1 | F2K - |

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