

## Model 103

## **Batch Freezer**

**Operating Instructions** 



## Complete this page for quick reference when service is required:

| Taylor Distributor:              |       |
|----------------------------------|-------|
| Address:                         |       |
| Phone:                           |       |
| Service:                         |       |
| Parts:                           |       |
| Date of Installation:            |       |
| Information found on data plate: |       |
|                                  |       |
| Model Number:                    |       |
| Serial Number:                   |       |
| Electrical Specs: Voltage        | Cycle |
| Phase                            |       |
| Maximum Fuse Size:               | Amps  |
| Minimum Wire Ampacity:           | Amps  |
| Part Number:                     |       |



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## To the Installer

## **Air Cooled Units**

Air cooled units require a minimum of 6" (15.2 cm) of clearance around all sides of the freezer to allow for adequate air flow across the condenser(s). Failure to allow adequate clearance can reduce the refrigeration capacity of the freezer and possibly cause permanent damage to the compressor.

# Water Connections (Water Cooled Units Only)

An adequate cold water supply must be provided with a hand shut-off valve. On the underside rear of the base pan, two 3/8" I.P.S. water connections for inlet and outlet have been provided for easy hook-up. 1/2" inside diameter water lines should be connected to the machine. (Flexible lines are recommended, if local codes permit.)

Depending on local water conditions, it may be advisable to install a water strainer to prevent foreign substances from clogging the automatic water valve. There will be only one water "in" and one water "out" connection. DO NOT install a hand shut-off valve on the water "out" line! Water should always flow in this order: first, through the automatic water valve; second, through the condenser; and third, through the outlet fitting to an **open trap drain.** 

### FOLLOW YOUR LOCAL HEALTH CODES.

This equipment is intended to be installed in accordance with the National Electrical Code (NEC), NFPA 70. The purpose of this code is the practical safeguarding of persons and property from hazards arising from the use of electricity. This code contains provisions considered necessary for safety. Compliance therewith and proper maintenance will result in an installation essentially free from hazard!

CAUTION: THIS EQUIPMENT MUST BE PROPERLY GROUNDED! FAILURE TO DO SO CAN RESULT IN SEVERE PERSONAL INJURY FROM ELECTRICAL SHOCK!

### **Electrical Connections**

Each freezer requires one power supply. Check the data label on the freezer for fuse, circuit ampacity and electrical specifications. Refer to the wiring diagram provided inside of the electrical box, for proper power connections.

### **60 Cycle Units**

This equipment is supplied with a 3-wire cord and grounding type plug, for connection to a single phase, 60 cycle, branch circuit supply. This unit must be plugged into a properly grounded receptacle. Permanent wiring may be employed, if required by local codes. Instructions for conversion to permanent wiring are as follows:

- 1. Be sure the freezer is electrically disconnected.
- Remove the rear panel and locate the small electrical box at the base of the freezer.
- Remove the factory installed cord and strain relief bushing.
- 4. Route incoming permanent wiring through 7/8" (2.2 cm) hole in base pan.
- Connect two power supply leads. Attach ground (earth) wire to the grounding lug inside the electrical box.
- Be sure the unit is properly grounded before applying power.

Beater rotation must be clockwise as viewed looking into the freezing cylinder.

To correct rotation on a three-phase unit, interchange any two incoming power supply lines at freezer main terminal block only.

To correct rotation on a single-phase unit, change the leads inside the beater motor. (Follow diagram printed on motor.)

Electrical connections are made directly to the terminal block. The terminal block is provided in the electrical box located in the rear of the freezer.

## To the Operator

The freezer you have purchased has been carefully engineered and manufactured to give you dependable operation. The Taylor Model 103 Batch Ice Cream freezer, when properly operated and cared for, will produce a consistent quality product. Like all mechanical products, this machine will require cleaning and maintenance. A minimum amount of care and attention is necessary if the operating procedures outlined in this manual are followed closely.

This Operator's Manual should be read before operating or performing any maintenance on your equipment.

Your Model 103 will NOT eventually compensate and correct for any errors during the set-up or filling operations. Thus, the initial assembly and priming procedures are of extreme importance. It is strongly recommended that personnel responsible for the equipment's operation, both assembly and disassembly, go through these procedures together in order to be properly trained and to make sure that no misunderstandings exist.

In the event you should require technical assistance, please contact your local authorized Taylor Distributor.

## **Compressor Warranty Disclaimer**

The refrigeration compressor(s) on this machine are warranted for the term indicated on the warranty card accompanying this machine. However, due to the Montreal Protocol and the U.S. Clean Air Act Amendments of 1990, many new refrigerants are being tested and developed, thus seeking their way into the service industry. Some of these new refrigerants are being advertised as drop-in replacements for numerous applications. It should be noted that, in the event of ordinary service to this machine's refrigeration system, only the refrigerant specified on the affixed data label should be used. The unauthorized use of alternate refrigerants will void your compressor warranty. It will be the owner's responsibility to make this fact known to any technician he employs.

It should also be noted that Taylor does not warrant the refrigerant used in its equipment. For example, if the refrigerant is lost during the course of ordinary service to this machine, Taylor has no obligation to either supply or provide its replacement either at billable or unbillable terms.

The Taylor Company will continue to monitor the industry and test new alternates as they are being developed. Should a new alternate prove, through our testing, that it would be accepted as a drop-in replacement, then the above disclaimer would become null and void. To find out the current status of an alternate refrigerant as it relates to your compressor warranty, call the local Taylor Distributor or the Taylor Factory. Be prepared to provide the Model/Serial Number of the unit in question.

Section 3 Safety

We at Taylor Company are deeply concerned about the safety of the operator when he or she comes in contact with the freezer and its parts. Taylor has gone to extreme efforts to design and manufacture built-in safety features to protect both you and the service technician. As an example, warning labels have been attached to the freezer to further point out safety precautions to the operator.

### To Operate Safely:

**DO NOT** operate the freezer without reading this operator's manual.

DO NOT operate the freezer unless it is properly grounded.

**DO NOT** allow untrained personnel to operate this machine. Failure to follow this instruction may result in severe personal injury to fingers or hands from hazardous moving parts.

**DO NOT** attempt any repairs unless the main power supply to the freezer has been disconnected. Contact your local authorized Taylor Distributor for service. **DO NOT** operate the freezer with larger fuses than specified on the freezer data label. Consult your electrician.

**DO NOT** operate the freezer unless all service panels and access doors are restrained with screws.

**DO NOT** obstruct air intake and discharge openings: 6" (15.2 cm) minimum air space on front, sides and rear.

DO NOT put objects or fingers in fill or discharge openings.

**DO NOT** remove door, beater or blades, unless the power switch is in the "OFF" position.

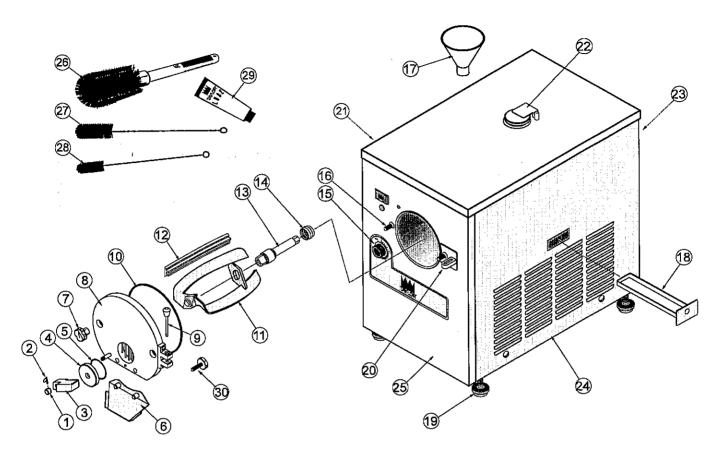
**DO NOT** operate the unit unless the freezer door is secured over the freezing cylinder.

**USE EXTREME CAUTION** when removing the beater assembly. The scraper blades are very sharp and may cause injury.

NOISE LEVEL: Airborne noise emission does not exceed 78 dB(A) when measured at a distance of 1.0 meter from the surface of the machine and at a height of 1.6 meters from the floor.



# **Operator Parts Identification**



| Item | Description                 | Part No. |
|------|-----------------------------|----------|
| 1    | Cap-Stem                    | 027812   |
| 2    | Pin-Clevis 3/16 x 1 SS      | 027813   |
| 3    | Arm-Handle                  | 030042   |
| 4    | Plate-Draw                  | 027811   |
| 5    | O-Ring 2-1/4 OD x .139 W    | 030890   |
| 6    | Spout ADrip                 | X33422   |
| 7    | Nut-Stud                    | 008614   |
| 8    | Door APartial               | X37710   |
| 9    | Pin APivot                  | X37705   |
| 10   | O-Ring 5-7/16 OD x 5-1/4 ID | 033276   |
| 11   | Beater Assembly             | X33417   |
| 12   | Blade-Scraper 17 L          | 033277   |
| 13   | Shaft-Beater                | 033498   |
| 14   | Seal-Drive Shaft            | 032560   |
| 15   | Knob-Timer                  | 030343   |
| 16   | Stud-Freezer Door           | 023057   |

| Item | Description                  | Part No. |
|------|------------------------------|----------|
| 17   | Funnel                       | 034252   |
| 18   | Pan-Drip 11-5/8 Long         | 027503   |
| 19   | Leg-3/4" Min. Length Leveler | 033339   |
| 20   | Hinge Cover Assy. Adaptor    | 037707   |
|      | Panel-Side                   | 033404   |
| 21   | Panel-Side AC L              | 033453   |
| 22   | Cover AMix Inlet             | X24948   |
| 23   | Panel-Rear AC                | 033403   |
| 24   | Panel-Side-Right             | 048977   |
| 25   | Panel-Front                  | 034346   |
| 26   | Brush-Mix Pump Body          | 023316   |
| 27   | Brush-Draw Valve             | 014753   |
| 28   | Brush-Rear Bearing           | 013071   |
| 29   | Lube-Taylor 4 oz.            | 047518   |
| 30   | Screw-Stem                   | 034662   |

## **Important: To The Operator**

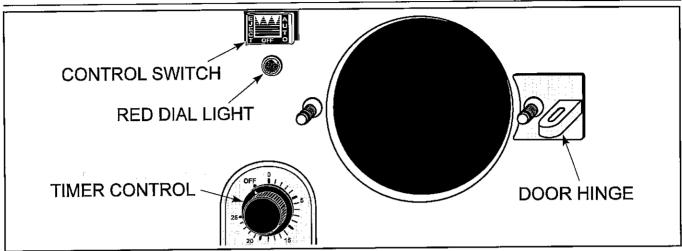


Figure 1

## **Red Dial Light**

Located below the control switch is a red dial light. When the control switch is in the "AUTO" position, this light will come on, indicating the refrigeration system is operable when the timer is set.

## Safety

**NEVER** empty the contents of the freezing cylinder while the control switch is in the "AUTO" position. Always put the control switch into the "EJECT" position when drawing product from the freezing cylinder. As an additional safety feature, this unit will NOT operate if the door is open.

## **Reset Condition**

The Model 103 is equipped with an internal motor overload protection. Should an overload occur, the reset mechanism will trip, cancelling freezer operation. To properly reset the freezer, put the control switch into the "OFF" position. Allow the beater motor to cool. Then return the control switch to its original position.

Note: If the unit went out on reset, the product may have been run too cold or too long. Therefore, after resetting the freezer, check the temperature control or time set.

### **Timer Control**

The Model 103 uses a timer control to operate the compressor and determine the viscosity of the product. After the desired amount of product has been added to the freezing cylinder, turn the timer for the amount of refrigeration required for the batch. Due to mix variations and desired finished product settings, the timer setting will vary.

Once the desired time is set, put the control switch into the "AUTO" position. The compressor and beater motor will operate until the time is up. When the timer setting elapses, the refrigerating process is cancelled. The dial light and beater assembly will continue to operate. A buzzer will sound, signaling the operator to dispense the finished product. Turn the control switch to the "EJECT" position. The product is ready to draw off and serve.

Start with five minutes and increase as needed. Times and temperatures are dependent on specific mix formulations, pre-charge amounts and finished product preferences.

**Note:** Because the freezing cylinder for the first batch is at room temperature, the first batch freeze-down time will be longer than subsequent batches.

## **Door Hinge**

This feature allows the operator to open the door without removal. This feature is primarily used when changing flavors and clean-up is necessary.

### **Control Switch**

When the control switch is placed in "AUTO" and the timer is adjusted to the desired setting, the refrigeration system will operate. When the switch is placed in "EJECT", only the beater motor will operate.

## **Operating Procedures**

The Model 103 is a small 3 quart (2.9 liter) capacity ice cream freezer. It has been designed to produce a rich tasting, nominal overrun ice cream product that can be drawn off and placed in a hardening cabinet or flash freezer. Overrun can be varied depending on mix formulation, amount of pre-charge, and finished product temperature.

We begin our instructions at the point where we find the parts disassembled and laid out to air dry from the previous brush cleaning.

The following procedures will show you how to assemble the parts into the freezer, sanitize them, and prime the freezer with fresh mix to prepare the first batch.

If you are disassembling the machine for the first time or need information to get to this starting point in our instructions, turn to page 12, "Disassembly", and start there.

## **Assembly**

# Step 1 MAKE SURE CONTROL SWITCH IS IN THE "OFF" POSITION.

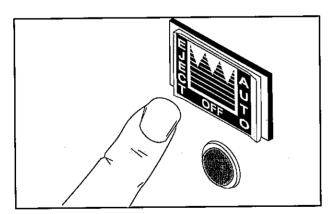


Figure 2

#### Step 2

Install the drive shaft. Lubricate the groove and shaft portion that comes in contact with the bearing on the beater drive shaft. Slide the seal over the shaft and groove until it snaps into place. DO NOT lubricate the hex end of the drive shaft. Partially fill the inside portion of the seal with additional lubricant. Lubricate the flat side of the seal that comes in contact with the bearing.

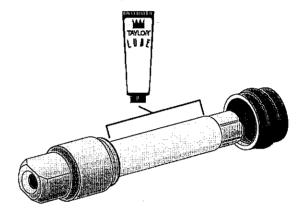


Figure 3

Insert the drive shaft through the rear shell bearing and engage the hex end firmly into the gear box coupling. Be certain that the drive shaft fits into the coupling without binding.

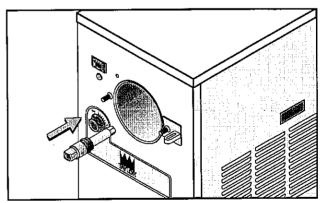


Figure 4

Step 3

Place the plastic scraper blades on the beater, making sure one end of the blade is up against the notch at the front of the beater.

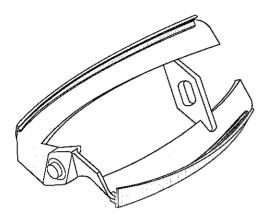


Figure 5

Holding the beater and blades securely, slide the beater into the freezing cylinder about one-third of the way in. Looking into the freezing cylinder, align the hole at the rear of the beater with the flats on the end of the drive shaft.

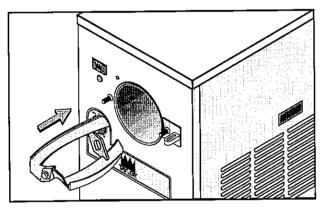


Figure 6

Slide the beater the remainder of the way into the freezing cylinder and over the drive shaft. The beater should fit snugly but not so tight that the beater cannot be turned to engage the drive shaft. When in position, the beater will not protrude beyond the front of the freezing cylinder.

Step 4

Assemble the freezer door. Place the large freezer door o-ring in the groove on the back of the freezer door.

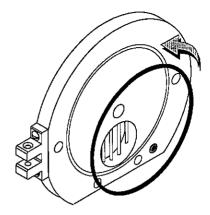


Figure 7

Step 5
Press the o-ring into the groove on the back of the draw plate and lubricate **lightly**.

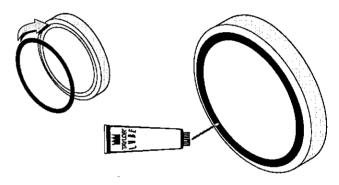


Figure 8

Lay the draw plate, o-ring face down, over the ejection port.

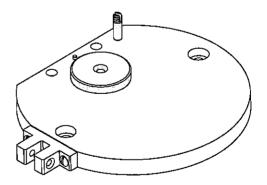


Figure 9

Align the hole in the draw arm over the stem on the freezer door and push down. **Make sure** the draw handle fits into the depression in the draw plate.

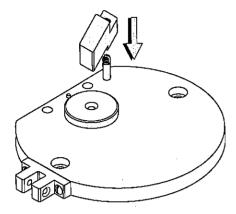


Figure 10

Screw the stem cap over the stem that protrudes from the draw arm. Once snug, tighten one step further to align the hole in the cap.

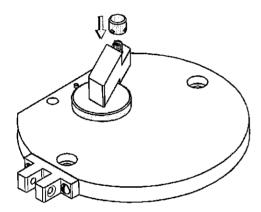


Figure 11

Secure the cap with the clevis pin.

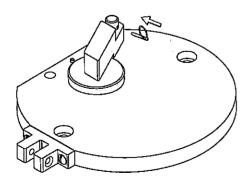


Figure 12

Engage drip spout pins with corresponding holes on the back side of the freezer door.

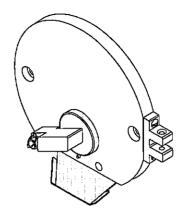


Figure 13

Step 6

Position the door onto the two studs on the front of the freezing cylinder. **Make sure** the hole in the back of the door is aligned with the bearing on the end of the beater.

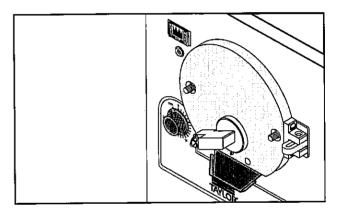


Figure 14

Install the two handscrews onto the studs and tighten equally.

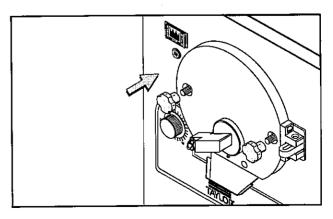


Figure 15

Step 7
Secure the freezer door hinge by installing the pivot pin.

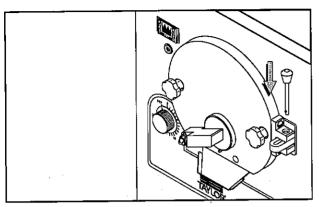


Figure 16

Step 8
Slide the rear drip pan into the hole in the side panel.

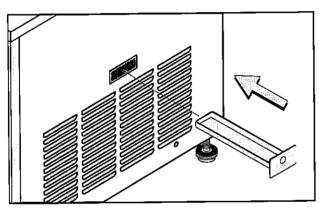


Figure 17

## Sanitizing

### Step 1

Prepare two quarts (1.9 liters) of an approved 100 PPM sanitizing solution (example: Kay-5) with WARM WATER ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS.

### Step 2

Open the mix inlet cover on top of the freezer.

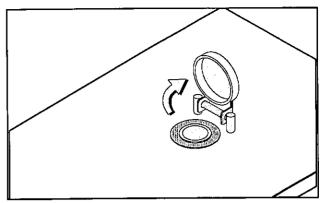


Figure 18

Sanitize your hands and the funnel. Install the funnel into the mix inlet hole on top of the freezer.

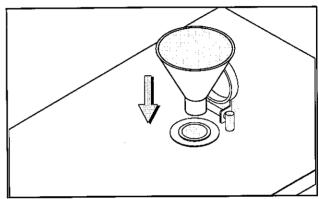


Figure 19

Pour the sanitizing solution into the funnel and allow it to flow into the freezing cylinder.

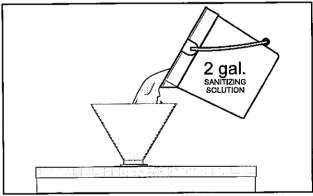


Figure 20

### Step 3

Put the control switch into the "EJECT" position. This will cause the sanitizing solution in the freezing cylinder to be agitated. Allow it to agitate for five minutes.

## KEEP FINGERS OUT OF FILL AND DISCHARGE OPENINGS!

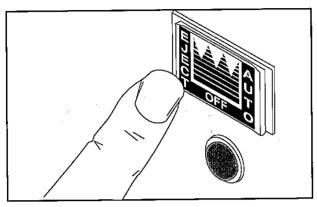


Figure 21

### Step 4

Put the control switch into the "OFF" position. Holding a mix pail beneath the ejection port, open the draw arm and drain the sanitizing solution from the freezing cylinder. Close the draw arm.

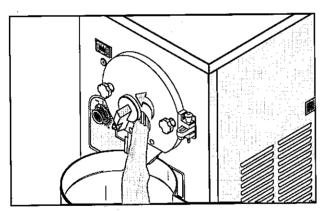


Figure 22

## **Priming**

#### Step 1

With the control switch in the "OFF" position, hold an empty mix pail beneath the ejection port and open the draw arm.

## KEEP FINGERS OUT OF FILL AND DISCHARGE OPENINGS!

### Step 2

Pour the desired amount of mix directly through the funnel.

The mix in the freezing cylinder will force out any remaining sanitizing solution. When full strength mix is flowing from the ejection port, close the draw arm.

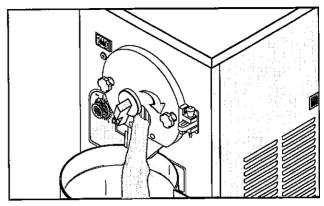


Figure 23

### Step 3

Place the control switch in the "AUTO" position. Remove the funnel and close the mix inlet cover.

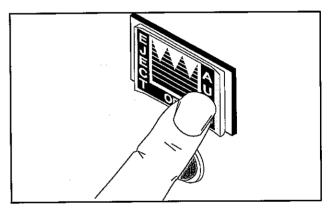


Figure 24

Set the timer for the time required for the batch. Allow the unit to operate until the buzzer sounds and the refrigeration system automatically cycles off.

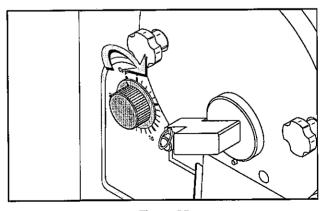


Figure 25

### Overrun

Depending on the overrun desired, the amount of pre-charge can range from 1.5 to 3 quarts. This will give an overrun between 20% to 100%. Overrun which exceeds 100% must not be taken below 26°F (-3.3°C) or the product will not eject. Depending on the mix, product overrun below 100% may be taken as low as 18°F ( (-7.7°C) with no ejection problem. If ejection problems do exist, it would be apparent that the product has been taken too cold.

Place the control switch in the "EJECT" position and take a sample of the product to determine overrun. If the overrun is not at the desired level, leave the control switch in the "EJECT" position to agitate the product and blend more air into the mixture. Continue to take samples until the desired overrun is obtained.

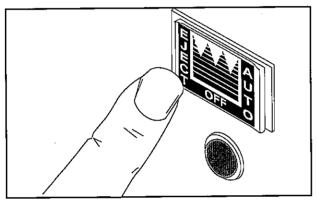


Figure 26

## Step 1 Use a standard overrun scale and a one pint measuring cup.

# Step 2 Place the cup on the scale and adjust the scale pointer to the zero setting.

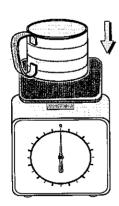


Figure 27

Step 3
Draw off one pint of product, and with a straight edge, level off the top.

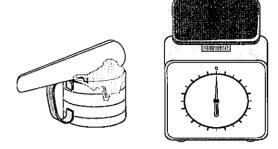


Figure 28

# Step 4 Place the pint of product on the scale and read the overrun directly off of the scale.

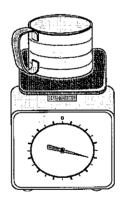


Figure 29

#### Step 5

If the scale does not have overrun graduations, then weigh one pint of mix before freezing. Draw a sample pint of frozen product and level it off with a straight edge.

#### Step 6

Place the pint of product on the scale and read the weight. Divide the weight of the frozen product into the weight of the raw mix for your percent of increase. If the answer is 2, you have 100% overrun. If the answer is between 1 and 2, the decimal represents your overrun.

| Example:   |   |             |               |
|------------|---|-------------|---------------|
| -          |   |             | 1.85          |
|            |   |             | 8.2 15.2      |
| Raw Mix    | = | 15.2 ounces | '             |
| Frozen Mix | = | 8.2 ounces  | Overrun = 85% |

### **Drawing Product**

#### Step 1

When the desired temperature and overrun of the product has been achieved, the product may be drawn into packages or cans for hardening. Place the package or can directly beneath the ejection port of the freezer door.

#### Step 2

Put the control switch into the "EJECT" position and open the draw arm. As the product is being ejected into the container, ingredients such as fruits or nuts may be folded into the container at the same time.

### Step 3

When the freezing cylinder is empty of product, close the draw arm and put the control switch into the "OFF" position. The container may now be placed in a hardening cabinet or flash freezer.

If the next batch to be run is not the same flavor, refer to "Rinsing" on page 12 to clear the freezing cylinder of mix residue. Then repeat Priming, Overrun, and Drawing Procedures.

After the necessary batches have been prepared, the machine should be cleaned. The following procedures will show you how to rinse the freezing cylinder of mix residue, clean, and disassemble the parts from the freezer. The machine should be sanitized at the beginning of each day.

### Rinsing

#### Step 1

BE SURE THE CONTROL SWITCH IS IN THE "OFF" POSITION.

## KEEP FINGERS OUT OF FILL AND DISCHARGE OPENINGS!

#### Step 2

Open the mix inlet cover and install the funnel. Pour two quarts (1.9 liters) of cool, clean water into the funnel and allow it to flow into the freezing cylinder.

#### Sten 3

Put the control switch into the "EJECT" position and allow the water to agitate for approximately one minute.

#### Step 4

Put the control switch into the "OFF" position. Holding a mix

pail beneath the ejection port, open the draw arm and drain the water from the freezing cylinder. Close the draw arm.

Repeat these procedures until the rinse water being drawn from the freezing cylinder is clear.

## Cleaning

### Step 1

Prepare two quarts (1.9 liters) of an approved cleaning solution (example: Kay-5) with WARM WATER ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS.

#### Step 2

Pour the cleaning solution into the funnel and allow it to flow into the freezing cylinder.

#### Step 3

Put the control switch into the "EJECT" position. This will cause the cleaning solution in the freezing cylinder to be agitated. Allow it to agitate for five minutes.

## KEEP FINGERS OUT OF FILL AND DISCHARGE OPENINGS!

### Step 4

Put the control switch into the "OFF" position. Holding a mix pail beneath the ejection port, open the draw arm and drain all the solution from the freezing cylinder. Close the draw arm.

## Disassembly

#### Step :

BE SURE THE CONTROL SWITCH IS IN THE "OFF" POSITION.

#### Step 2

Remove the handscrews from the front of the freezer door.

Remove the pivot pin from the hinge on the freezer door. Then remove the freezer door, beater assembly, scraper blades, and the drive shaft from the freezing cylinder.

#### Step 3

Remove the funnel from the top of the freezer and the rear drip pan from the side panel.

**Note:** If the drip pan is filled with an excessive amount of mix, it is an indication that the seal was installed incorrectly on the beater assembly or should be replaced.

### **Brush Cleaning**

#### Step 1

Prepare a sink with an approved cleaning solution (example: Kay-5) in WARM WATER ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS.

If an approved cleaner other than Kay-5 is used, dilute according to label instructions. **IMPORTANT:** Follow label directions, as too STRONG of a solution can cause parts damage, while too MILD of a solution will not provide adequate cleaning. Make sure all brushes provided with the freezer are available for brush cleaning.

#### Step 2

Remove the seal from the drive shaft.

#### Step 3

From the freezer door, remove the clevis pin from the stem cap, unscrew the stem cap from the stem, pull the draw arm from the stem, remove the o-ring from the draw plate, remove the o-ring from the back of the freezer door, and remove the drip spout, Take these parts to the sink for cleaning.

### Step 4

Thoroughly brush clean all disassembled parts in the cleaning solution, making sure all lubricant and mix film is removed. Place the cleaned parts on a clean dry surface to air dry.

#### Step 5

Return to the freezer with a small amount of cleaning solution. With the black bristle brush, brush clean the rear shell bearing at the back of the freezing cylinder.

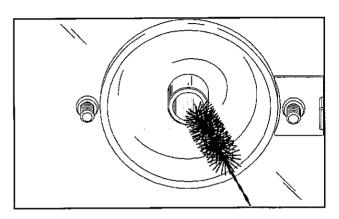


Figure 30

## Step 6 Wipe clean the exterior surfaces of the freezer.

## Important: Operator Checklist

## **During Cleaning and Sanitizing**

ALWAYS FOLLOW LOCAL HEALTH CODES.

Cleaning and sanitizing schedules are governed by your State or local regulatory agencies and must be followed accordingly. The following check points should be stressed during the cleaning and sanitizing operations.

We recommend that after the necessary batches have been prepared for the day, the machine should be cleaned. At the beginning of each day the machine should be sanitized.

## Troubleshooting Bacterial Count

- Thoroughly clean and sanitize the machine regularly, including complete disassembly and brush cleaning.
   Use all brushes supplied for thorough cleaning. The brushes are specially designed to reach all mix passageways.
   Use the white bristle brush to clean the mix inlet hole which extends from the top down to the rear of the freezing cylinder.
   Use the black bristle brush to thoroughly clean the rear shell bearing located at the rear of the freezing cylinder. Be sure to have a generous amount of
- 5. Using a screwdriver and cloth towel, keep the female hex drive socket and rear shell bearing clean and free of lubricant and mix deposits.

cleaning solution on the brush.

- 6. Properly prepare the cleaning or sanitizing solutions. Read and follow label directions carefully. Too strong of a solution may damage the parts and too weak of a solution will not do an adequate job of cleaning or sanitizing.
- ☐ 7. The temperature of liquid mix should not exceed 40°F. (4.4°C.).
- 8. Follow your local health codes when using flavorings, fruits, or nuts in this machine.

## **Regular Maintenance Checks**

- □ 1. Check the rear shell bearing for signs of wear (excessive mix leakage in rear drip pan) and be certain it is properly cleaned.
- 2. Dispose of seals if they are worn, torn, or fit too loosely, and replace with new ones.
- 3. Follow all lubricating procedures as outlined in "Assembly".
- 4. Replace scraper blades that are damaged or nicked. Before installing the beater assembly, be certain that scraper blades are properly attached to the beater assembly.
- 5. If your machine is air cooled, check the condenser for accumulation of dirt and lint. Dirty condensers will reduce the efficiency and capacity of the machine. Condensers should be cleaned monthly with a soft brush. Never use screwdrivers or other metal probes to clean between the fins.
- 6. On water cooled units, check the water lines for kinks or leaks. Kinks can occur when the machine is moved back and forth for cleaning or maintenance purposes. Deteriorated or cracked water lines should be replaced only by an authorized Taylor mechanic.

## Winter Storage

If the place of business is to be closed during the winter months, it is important to protect the freezer by following certain precautions, particularly if the building is to be left unheated and subject to freezing conditions.

Disconnect the freezer from the main power source to prevent possible electrical damage.

On water cooled freezers, disconnect the water supply. Relieve pressure on the spring in the water valve. Use air pressure on the outlet side to blow out any water remaining in the condenser, and then add a liberal amount of permanent type auto anti-freeze. This is extremely important. Failure to follow this procedure may cause severe and costly damage to the refrigeration system.

Wrap detachable parts of the freezer such as beater, blades, drive shaft, and freezer door, and place in a protected dry place. Rubber trim parts and gaskets can be protected by wrapping with moisture-proof paper. All parts should be thoroughly cleaned of dried mix or lubrication accumulations which attract mice and other vermin.

# **Troubleshooting Guide**

|    | PROBLEM  | PROBABLE CAUSE  | REMEDY   | PAGE<br>REF. |
|----|--|---|--|--------------|
| 1. | Poor ejection.   | a. Over refrigeration.                                      | a. Use less time to run the batch.   |              |
|    |  | b. Inadequate pre-charge                                    | b. Increase the pre-charge.  |              |
|    |  | c. The beater is rotating counterclockwise.                 | c. Contact service technician to correct beater rotation to clockwise.   |              |
| 2. | No beater operation with the control switch in "AUTO". | a. The unit is unplugged.                                   | a. Plug into wall receptacle.  |              |
| į  |  | b. The circuit breaker is off, or the fuse is blown.        | <ul> <li>b. Turn the breaker on or replace the fuse.</li> </ul>  |              |
|    |  | c. The unit is out on reset.                                | c. Put the freezer in the "OFF"<br>position. Allow the unit to<br>cool. Resume normal<br>operation, but use less time<br>to run the batch. | 5            |
|    |  | d. The freezer door is open.                                | d. Secure the door for freezer operation.  | 7            |
| 3. | The product is not freezing.                           | a. The timer control is not set or is defective.            | Set time for required batch or contact service technician to replace the timer.  | 5            |
|    |  | b. The condensers are dirty on air cooled units.            | b. Clean condensers monthly.   | 14           |
|    |  | c. The water supply is inadequate on water cooled units.    | c. Check to be sure the water is<br>on. Check hoses for leaks or<br>kinks.   | 14           |
|    |  | d. The control switch is not in the "AUTO" position.        | d. Put the control switch into the<br>"AUTO" position for<br>compressor operation.   | 5            |
| 4. | There is excessive mix leakage in the rear drip tray.  | The seal on the beater drive shaft is missing or worn.      | a. Install or replace the seal on the beater drive shaft.  | 6/16         |
|    |  | b. The rear shell bearing is worn.                          | b. Contact service technician to replace the bearing.  |              |
|    |  | c. There is improper lubrication on the beater drive shaft. | c. Lubricate properly.   | 6            |
| 5. | The buzzer does not sound when the unit cycles off.    | a. The buzzer is malfunctioning.                            | a. Contact service technician to replace the buzzer.   |              |

# Parts Replacement Schedule

| PART<br>DESCRIPTION             | EVERY<br>3 MONTHS | EVERY<br>6 MONTHS              | ANNUALLY | QTY. |
|---------------------------------|-------------------|--------------------------------|----------|------|
| Drive Shaft Seal                | X                 |                                |          | 1    |
| Scraper Blades                  |                   | Inspect for Nicks<br>or Wear   | Minimum  | 2    |
| Freezer Door O-Ring             | х                 |                                |          | 1    |
| Draw Plate O-Ring               | X                 |                                |          | 1    |
| White Bristle Brush, 3" x 7"    |                   | Inspect & Replace if Necessary | Minimum  | 1    |
| White Bristle Brush, 1-1/2 x 2" |                   | Inspect & Replace if Necessary | Minimum  | 1    |
| Black Bristle Brush, 1" x 2"    |                   | Inspect & Replace if Necessary | Minimum  | 1    |

Refer to Parts List on page 17 when ordering the above parts.

| DESCRIPTION                     | PART      | QTY. | WARR. | REMARKS        | PARTS  |
|---------------------------------|-----------|------|-------|----------------|--------|
|                                 | NUMBER    |      | CLASS |                | UPDATE |
| BEATER A. *103*                 | X33417    | -    | 103   |                |        |
| +BLADE-SCRAPER 17L *103*        | 033277    | 2    | . 000 |                |        |
| BEARING-REAR SHELL *NICK.PLATE  | 031324    | 1    | 000   |                |        |
| +GUIDE-DRIP SEAL                | 028992    | 1    | 000   |                |        |
| +NUT-BRASS BEARING              | 028991    | 1    | 000   |                |        |
| +WASHER-BEARING LOCK            | 012864    | 1    | 000   |                |        |
| BELT-V-4L410                    | 007530    | 1    | 000   |                | į      |
| BEZEL *103*                     | 033406    | 1    | 103   |                |        |
| +BUMPER-RUBBER 15/64"HOLE-WHITE | 031667    | 1    | 000   |                |        |
| +SUPPORT-INLET COVER *231-2*    | 027449    | 2    | 103   |                |        |
| BLOCK-TERMINAL-7 POLE           | 9052606   | 1    | 103   |                |        |
| BRUSH-DRAW VALVE 1-1/2"OD X 3"  | 014753    | 1    | 000   |                |        |
| BRUSHMIX PUMP BODY3"X7"WHITE    | 023316    | 1    | 000   |                |        |
| BRUSH-REAR BRG 11N.DX2IN.LGX14  | 013071    | 1    | 000   |                |        |
| BUZZER                          | -857220   | 1    | 103   |                |        |
| COMPRESSOR JRF4-0075-PAA-217    | 033984-12 | 1    | 512   | (115–60–1)     |        |
| +CAPACITOR-RUN- 15UF/370V       | 034222    | 1    | 103   |                |        |
| +CAPACITOR-START- 43-52UF/250V  | 033041    | 1    | 103   | -              |        |
| +RELAY-START-COMPRESSOR         | 024989–12 | 1    | 103   |                |        |
| COMPRESSOR JRF4-0075-PAV-211    | 033984-27 | 1    | 512   | (208/230-60-1) |        |
| +CAPACITOR-RUN-12.5UF/330V      | 025960    | -    | 103   |                |        |
| +CAPACITOR-START 43-52UF/250V   | 033041    | +    | 103   |                |        |
| +RELAY~START~COMPRESSOR         | 024989–12 | 1    | 103   |                |        |
| CONDENSER-AC-9LX14-1/8HX3 ROW   | 032770    | 1    | 103   |                |        |
| CORD-POWER-115V 20A PLUG-77"L   | 025340-12 | 1    | 103   | (115–60–1)     |        |
| CORD-POWER-230V-15A PLUG-75"L   | 025340-27 | 1    | 103   | (208/230–60–1) |        |
| COVER A,-MIX INLET *2312*       | X24948    | 1    | 103   |                |        |
| +PIN-INLET COVER *231-2*        | 027464    | 1    | 103   |                |        |
| DECAL-CLEAN INSTBATCH           | 030582    | 1    | 000   |                |        |
| DECAL-DEC-TAYLOR TIMER-60 HZ    | 034360-60 | 1    | 000   |                |        |
| DECAL-TROUBLESHOOTING           | 038374    | 1    | 000   |                |        |
| DECAL-WARNING *PANEL*           | 036529    | က    | 000   |                |        |

| DESCRIPTION                    | PART      | ΩTY. | WARR. | REMARKS     | PARTS  |
|--------------------------------|-----------|------|-------|-------------|--------|
|                                | NUMBER    |      | CLASS |             | UPDATE |
| DIAGRAM-WIRING*MATCH SPEC*     | 033256    | 1    | 000   |             |        |
| DOOR APARTIAL *103*            | X37710    | 1    | 103   | :           |        |
| ARM-HANDLE *103-121*           | 030042    | 1    | 103   |             |        |
| CAP-STEM *120-121*             | 027812    | 1    | 103   |             | ļ      |
| O-RING-2-1/4 OD X .139W        | 030890    | 1    | 000   |             |        |
| O-RING-5 7/16 ODX5 1/4 IDX3/32 | 033276    | -    | 000   |             |        |
| PIN APIVOT*1 3/4 GRIP*103*     | X37705    | -    | 103   |             |        |
| PIN-CLEVIS 3/16 X 1 SS         | 027813    | +    | 103   |             |        |
| PLATE-DRAW *120-1-6-8*         | 027811    | ļ    | 103   |             |        |
| SCREW-STEM *103*               | 034662    | 1    | 103   |             |        |
| STEM-FREEZER COVER *103*       | 034661    | ļ    | 103   |             |        |
| DRYER-FILTER 1/4 X 1/4FL       | 007497    | 1    | 000   |             |        |
| FASTENER-CLIP 1/4-20 U-TYPE    | 045865    | 4    | 000   | PANEL CLIPS |        |
| FUNNEL                         | 034252    | -    | 103   |             |        |
| GEAR A.*REDUCER                | 012235    | 1    | 212   |             |        |
| GUIDE ADRIP PAN *103*AC        | X33411    | 1    | 103   |             | -      |
| HINGE COVER ASSY ADAPTOR       | 037707    | -    | 103   |             |        |
| HOOD *103                      | 033405    | -    | 103   |             |        |
| KIT ATUNE UP*103*              | X33275    | 1    | 000   |             |        |
| O-RING-2-1/4 OD X .139W        | 030890    | 1    | 000   |             |        |
| SEAL-DRIVE SHAFT               | 032560    | -    | 000   |             |        |
| O-RING-5 7/16 ODX5 1/4 IDX3/32 | 033276    | -    | 000   |             |        |
| TOOL-CLEANING 0-RING REMOVAL   | 048260    | -    | 000   |             |        |
| LABEL-CAUTION GROUND CORD UNIT | 032165    | -    | 000   |             |        |
| LABEL-CAUTION PERSONNEL        | 033161    | -    | 000   |             |        |
| LABEL-DANGER AUTO START        | 021572    | 1    | 000   |             |        |
| LABEL-DOOR CAUTION             | 032749    | -    | 000   |             |        |
| LABEL-MOVING PARTS WARNING     | 024315    | က    | 000   |             |        |
| LEG-3/4"MIN. LENGTH-LEVELER    | 033339    | 4    | 103   |             |        |
| LIGHT-INDICATOR-ORANGE-ROUND   | 017450    | -    | 103   |             |        |
| LUBRICANT-TAYLOR 4 OZ.         | 047518    | -    | 000   |             |        |
| MAN-OPER 103                   | 035150-M  | -    | 000   |             |        |
| MOTOR-1 HP                     | 034097-12 | -    | 212   |             |        |

| DESCRIPTION                    | PART    | QTY. | WARR. | REMARKS    | PARTS  |
|--------------------------------|---------|------|-------|------------|--------|
|                                | NUMBER  |      | CLASS |            | UPDATE |
| MOTOR-FAN-25W                  | 015184- | 1    | 103   |            |        |
| +FAN-5 BLADE 8" PUSH 31DEG CCW | 034098  | 1    | 103   |            |        |
| NUT-STUD *103-110-232*         | 008614  | 2    | 103   | HANDSCREWS |        |
| PAIL-6 QT.                     | 023348  | 1    | 000   | <u>.</u>   |        |
| PAN-DRIP 11-5/8 LONG           | 027503  | 1    | 103   |            |        |
| PANEL-FRONT *103*              | 034346  | 1    | 103   |            |        |
| PANEL-REAR AC *103*            | 033403  | 1    | 103   |            |        |
| PANEL-SIDE *103*               | 033404  | +    | 103   |            |        |
| PANEL-SIDE *103*AC L.          | 033453  | 1    | 103   |            |        |
| PLUG-DRIP TRAY HOLE            | 029595  | 1    | 000   |            |        |
| PULLEY-AK30 X 5/8              | 033559  | 1    | 103   |            |        |
| +HUB-5/8 BORE SPLIT            | 027815  | 1    | 103   |            |        |
| PULLEY-AK74H                   | 009443  | ٠,   | 103   |            |        |
| RELAY-SPDT-30 A-120 V          | 032607- | 2    | 103   |            |        |
| SANITIZER KAY-5 125 PACKETS    | 041082  | 1    | 000   |            |        |
| SHAFT-BEATER                   | 033498  | 1    | 103   |            |        |
| +SEAL-DRIVE SHAFT              | 032560  | Į.   | 000   |            |        |
| SHELL AINSULATED *103*         | X33380  | 1    | 512   |            |        |
| +STUD-FREEZER DOOR *103-232*   | 023057  | 2    | 103   |            |        |
| SHIELD-MIX-GEAR REDUCER 3-3/8" | 013356  | ļ    | 103   |            |        |
| SHROUD-CONDENSER *AC*103*      | 033437  | -    | 103   |            |        |
| SPOUT ADRIP *103*              | X33422  | -    | 103   |            |        |
| SWITCH-ROCKER-DPDT ON-OFF-ON   | 014237  | 1    | 103   |            |        |
| +CARD-SWITCH INDICATOR         | 027910  | 1    | 000   |            | ,      |
| SWITCH-ROLLER-SPDT-20A-125-480 | 025444  | -    | 103   |            | į      |
| TEE-ACCESS 3/8                 | 026687  | 1    | 103   |            |        |
| TIMER-INTERVAL 30 MIN 115 VAC  | 030324- | -    | 103   |            | ļ      |
| +KNOB-TIMER                    | 030343  | 1    | 000   |            |        |
| VALVE-EXP-AUTO-1/4MF X 1/4 FPT | 011704  | -    | 103   |            |        |
| +BOOT-EXPANSION VALVE          | 027137  | -    | 000   |            |        |

# 50 Hz

| DESCRIPTION                   | PART      | QTY. | WARR. | REMARKS              | PARTS  |
|-------------------------------|-----------|------|-------|----------------------|--------|
|                               | NOMBER    |      | CLASS |                      | טרטאור |
| BELT-V-4L390                  | 003951    | ļ    | 000   | (220/240–50–1)       |        |
| BELT-V-4L400                  | 007590    | 1    | 000   | (110/115-50-1) JAPAN | ,      |
| BLOCK-TERMINAL-7 POLE GREEN   | 024156    | 1    | 103   | (220/240–50–1)       |        |
| COMPRESSOR JRF4-0075-PAI-205  | 033984-34 | 1    | 512   | (220/240–50–1)       |        |
| +CAPACITOR-RUN- 12.5UF/330V   | 025960    | 1    | 103   |                      |        |
| +CAPACITOR-START 43-52UF/250V | 033041    | -    | 103   |                      |        |
| +RELAY-START-COMPRESSOR       | 034221    | -    | 103   |                      |        |
| DECAL-DEC-TAYLOR TIMER-50 HZ  | 034360-50 |      | 000   |                      |        |
| PULLEY-AK32 X .6256265        | 007471    | 1    | 103   |                      |        |
| PULLEY-AK64-5/8               | 865700    | 1    | 103   |                      |        |
|                               |           |      |       |                      |        |