OPERATOR'S MANUAL

Model 104
Batch Freezer

Original Operating Instructions

053064-M

8/13/08 (Original Publication)
(Updated 8/3/15)

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: _____ A

Minimum Wire Ampacity: _____ A

Taylor Company
a division of Carrier Commercial Refrigeration, Inc.
750 N. Blackhawk Blvd.
Rockton, IL 61072

Table of Contents

Note: Continuing research results in steady improvements; therefore, information in this manual is subject to change without notice.

Note: Only instructions originating from the factory or its authorized translation representative(s) are considered to be the original set of instructions.

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Section 1 To the Installer

The following information has been included in the manual as safety and regulatory guidelines. For complete installation instructions, please see the Installation Checklist.

Installer Safety

 In all areas of the world, equipment should be installed in accordance with existing local codes. Please contact your local authorities if you have any questions.

Care should be taken to ensure that all basic safety practices are followed during the installation and servicing activities related to the installation and service of Taylor equipment.

- Only authorized Taylor service personnel should perform installation and repairs on the equipment.
- Authorized service personnel should consult OSHA Standard 29CFRI910.147 or the applicable code of the local area for the industry standards on lockout/tagout procedures before beginning any installation or repairs.
- Authorized service personnel must ensure that the proper PPE is available and worn when required during installation and service.
- Authorized service personnel must remove all metal jewelry, rings, and watches before working on electrical equipment.

 The main power supply(s) to the freezer must be disconnected prior to performing any repairs. Failure to follow this instruction may result in personal injury or death from electrical shock or hazardous moving parts as well as poor performance or damage to the equipment.

Note: All repairs must be performed by an authorized Taylor Service Technician.

 This unit has many sharp edges that can cause severe injuries.

Site Preparation

Review the area the unit is to be installed in before uncrating the unit, making sure that all possible hazards the user or equipment may come into have been addressed.

For Indoor Use Only: This unit is designed to operate indoors, under normal ambient temperatures of 70°-75°F (21°-24°C). The freezer has successfully performed in high ambient temperatures of 104°(40°C) at reduced capacities.

 This unit must **NOT** be installed in an area where a water jet or hose can be used. **NEVER** use a water jet or hose to rinse or clean the unit. Failure to follow this instruction may result in electrocution.

 This unit must be installed on a level surface to avoid the hazard of tipping. Extreme care should be taken in moving this equipment for any reason. Two or more persons are required to safely move this unit. Failure to comply may result in personal injury or equipment damage.

The authorized installer should inspect the unit for damage and promptly report any damage to the local authorized Taylor distributor.

This piece of equipment is made in the USA and has USA sizes of hardware. All metric conversions are approximate and vary in size.

Air Cooled Units

DO NOT obstruct air intake and discharge openings:

Air cooled units require a minimum of 3" (76 mm) 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.

Electrical Connections

In the United States, this equipment is intended to be installed in accordance with the National Electrical Code (NEC), ANSI/NFPA 70-1987. The purpose of the NEC 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. In all other areas of the world, equipment should be installed in accordance with the existing local codes. Please contact your local authorities.

FOLLOW YOUR LOCAL ELECTRICAL CODES!

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

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

This unit is provided with an equipotential grounding lug that is to be properly attached to the rear of the frame by the authorized installer. The installation location is marked by the equipotential bonding symbol (5021 of IEC 60417-1) on both the removable panel and the equipment's frame.

- Stationary appliances which are not equipped with a power cord and a plug or another device to disconnect the appliance from the power source must have an all-pole disconnecting device with a contact gap of at least 3 mm installed in the external installation.
- Appliances that are permanently connected to fixed wiring and for which leakage currents may exceed 10 mA, particularly when disconnected, not used for long periods, or during initial installation, shall have protective devices such as a GFI to protect against the leakage of current, installed by authorized personnel to the local codes.
- Supply cords used with this unit shall be oil-resistant, sheathed flexible cable, not lighter than ordinary polychloroprene or other equivalent synthetic elastomer-sheathed cord (Code designation 60245 IEC 57) installed with the proper cord anchorage to relieve conductors from strain, including twisting, at the terminals and protect the insulation of the conductors from abrasion.

  If the supply cord is damaged, it must be replaced by the manufacturer, its service agent, or similarly qualified person, in order to avoid a hazard.

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.
2. Remove the rear panel and locate the small electrical box at the base of the freezer.
3. Remove the factory installed cord and strain relief bushing.
4. Route incoming permanent wiring through 7/8" (22 mm) hole in base pan.
5. Connect two power supply leads. Attach ground (earth) wire to the grounding lug inside the electrical box.
6. Be sure the unit is properly grounded before applying power.

Beater Rotation

 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.

Refrigerant

 In consideration of our environment, Taylor proudly uses only earth friendly HFC refrigerants. The HFC refrigerant used in this unit is R404A. This refrigerant is generally considered non-toxic and non-flammable, with an Ozone Depleting Potential (ODP) of zero (0).

However, any gas under pressure is potentially hazardous and must be handled with caution.

NEVER fill any refrigerant cylinder completely with liquid. Filling the cylinder to approximately 80% will allow for normal expansion.

 Use only R404A refrigerant that conforms to the AHRI standard 700 specification. The use of any other refrigerant may expose users and operators to unexpected safety hazards.

 Refrigerant liquid sprayed onto the skin may cause serious damage to tissue. Keep eyes and skin protected. If refrigerant burns should occur, flush immediately with cold water. If burns are severe, apply ice packs and contact a physician immediately.

Taylor reminds technicians to be cautious of government laws regarding refrigerant recovery, recycling, and reclaiming systems. If you have any questions regarding these laws, please contact the factory Service Department.

 WARNING: R404A refrigerant used in conjunction with polyolester oils is extremely moisture absorbent. When opening a refrigeration system, the maximum time the system is open must not exceed 15 minutes. Cap all open tubing to prevent humid air or water from being absorbed by the oil.

Section 2 To the Operator

The freezer you have purchased has been carefully engineered and manufactured to give you dependable operation. The Taylor Model 104 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 104 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.

Note: Your Taylor warranty is valid only if the parts are authorized Taylor parts, purchased from the local authorized Taylor Distributor, and only if all required service work is provided by an authorized Taylor service technician. Taylor reserves the right to deny warranty claims on units or parts if non- Taylor approved parts or incorrect refrigerant were installed in the unit, system modifications were performed beyond factory recommendations, or it is determined that the failure was caused by abuse, misuse, neglect, or failure to follow all operating instructions. For full details of your Taylor Warranty, please see the Limited Warranty section in this manual.

If the crossed out wheeled bin symbol is affixed to this product, it signifies that this product is compliant with the EU Directive as well as other similar legislation in effect after August 13, 2005. Therefore, it must be collected separately after its use is completed, and cannot be disposed as unsorted municipal waste.

The user is responsible for returning the product to the appropriate collection facility, as specified by your local code. For additional information regarding applicable local laws, please contact the municipal facility and/or local distributor.

Compressor Warranty Disclaimer

The refrigeration compressor(s) on this unit are warranted for the term stated in the Limited Warranty section in this manual. 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 unit's refrigeration system, **only the refrigerant specified on the affixed data label should be used**. The unauthorized use of alternate refrigerants will void your Taylor compressor warranty. It is the unit 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. Taylor does have the obligation to recommend a suitable replacement if the original refrigerant is banned, obsoleted, or no longer available during the five year warranty of the compressor.

Taylor 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 concerned about the safety of the operator at all times when they are coming in contact with the unit and its parts. Taylor makes every effort to design and manufacture built- in safety features to protect both operators and service technicians.

Installing and servicing refrigeration equipment can be hazardous due to system pressure and electrical components. Only trained and qualified service personnel should install, repair, or service refrigeration equipment. When working on refrigeration equipment, observe precautions noted in the literature, tags and labels attached to the unit, and other safety precautions that may apply. Follow all safety code requirements. Wear safety glasses and work gloves.

 **IMPORTANT - Failure to adhere to the following safety precautions may result in severe personal injury or death. Failure to comply with these warnings may damage the machine and its components. Component damage will result in part replacement expense and service repair expense**.

 **DO NOT** operate the freezer without reading this Operator Manual. Failure to follow this instruction may result in equipment damage, poor freezer performance, health hazards, or personal injury.

 This appliance is to be used only by trained personnel. It is not intended for use by children or people with reduced physical, sensory, or mental capabilities, or lack of experience and knowledge, unless given supervision or instruction concerning the use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.

 **DO NOT** use a water jet to clean or rinse the freezer. Failure to follow these instructions may result in serious electrical shock.

- **DO NOT** operate the freezer unless it is properly grounded.
- **DO NOT** operate the freezer with larger fuses than specified on the data label.
- All repairs must be performed by an authorized Taylor service technician.
- The main power supplies to the machine must be disconnected prior to performing any repairs.
- For Cord Connected Units: Only Taylor authorized service technicians or licensed electricians may install a plug or replacement cord on this unit.
- Stationary appliances which are not equipped with a power cord and a plug or another device to disconnect the appliance from the power source must have an all-pole disconnecting device with a contact gap of at least 3 mm installed in the external installation.
- Appliances that are permanently connected to fixed wiring and for which leakage currents may exceed 10 mA, particularly when disconnected, not used for long periods, or during initial installation, shall have protective devices such as a GFI to protect against the leakage of current and be installed by authorized personnel to the local codes.
- Supply cords used with this unit shall be oil-resistant, sheathed, flexible cable, not lighter than ordinary polychloroprene or other equivalent synthetic elastomer-sheathed cord (Code designation 60245 IEC 57) installed with the proper cord anchorage to relieve conductors from strain, including twisting, at the terminals and protect the insulation of the conductors from abrasion.

  If the supply cord is damaged, it must be replaced by the manufacturer, its service agent, or similarly qualified person, in order to avoid a hazard.

Failure to follow these instructions may result in electrocution. Contact your local authorized Taylor Distributor for service.

This unit is provided with an equipotential grounding lug that is to be properly attached to the rear of the frame by the authorized installer. The installation location is marked by the equipotential bonding symbol (5021 of IEC 60417-1) on both the removable panel and the equipment's frame.

- **DO NOT** allow untrained personnel to operate this machine.
- **DO NOT** operate the freezer unless all service panels and access doors are restrained with screws.
- **DO NOT** remove the door, beater or scraper blades unless the power switch is in the OFF position.

Failure to follow these instructions may result in severe personal injury to fingers or hands from hazardous moving parts.

- **DO NOT** put objects or fingers in fill or discharge openings. Failure to follow this instruction may result in contaminated product or personal injury from blade contact.
- **USE EXTREME CAUTION** when removing the beater assembly. The scraper blades are very sharp and may cause injury.

 Access to the service area of the unit is restricted to persons having knowledge and practical experience with the appliance, in particular as far as safety and hygiene are concerned.

 This freezer must be placed on a level surface. Failure to comply may result in personal injury or equipment damage.

 Cleaning and sanitizing schedules are governed by your Federal, State, or local regulatory agencies and must be followed accordingly. Please refer to the cleaning section of this manual for the proper procedure to clean this unit.

 This machine is designed to maintain product temperature under 41°F (5°C). Any product being added to this machine must be below 41°F (5°C). Failure to follow this instruction may result in health hazards and poor freezer performance.

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

DO NOT obstruct air intake and discharge openings: 3" (76 mm) minimum air space around all sides. Failure to follow this instruction may cause poor freezer performance and damage to the machine.

For Indoor Use Only: This unit is designed to operate indoors, under normal ambient temperatures of 70°-75°F (21°-24°C). The freezer has successfully performed in high ambient temperatures of 104°(40°C) at reduced capacities.

DO NOT run the machine without product. Failure to follow this instruction can result in damage to the machine.

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.

Section 4 Operator Parts Identification

Model 104

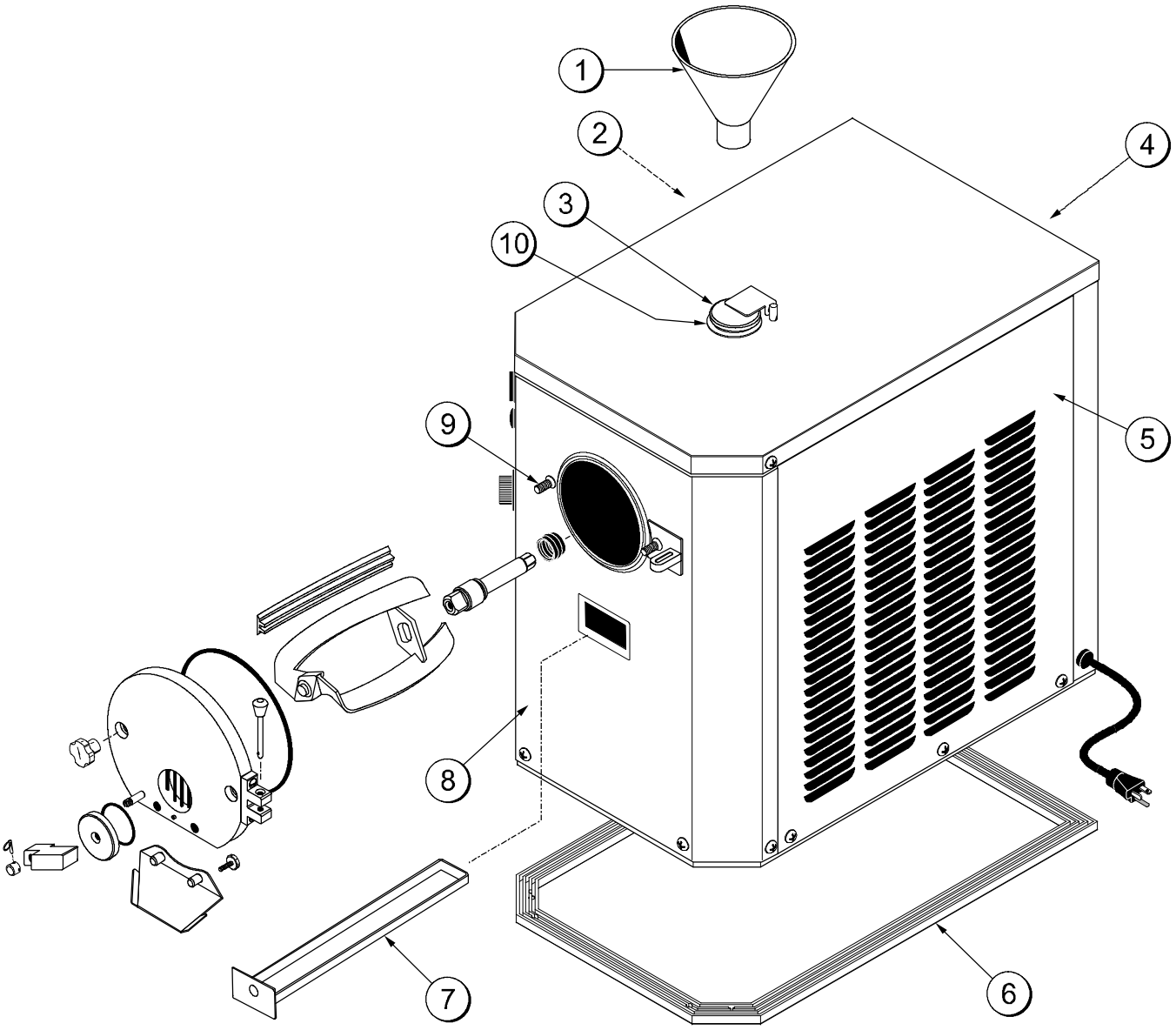

Figure 1

ITEM	DESCRIPTION	PART NO.
1	FUNNEL	034252
2	PANEL- SIDE LEFT	051039
3	COVER A.- MIX INLET	X24948
4	PANEL- REAR	051040
5	PANEL- SIDE RIGHT	051038

ITEM	DESCRIPTION	PART NO.
6	GASKET- BASE PAN	049420
7	PAN- DRIP 13- 1/4 LONG	039027
8	PANEL A.- FRONT	X51043
9	STUD- FREEZER	023057
10	BEZEL	033406

Beater Door Assembly

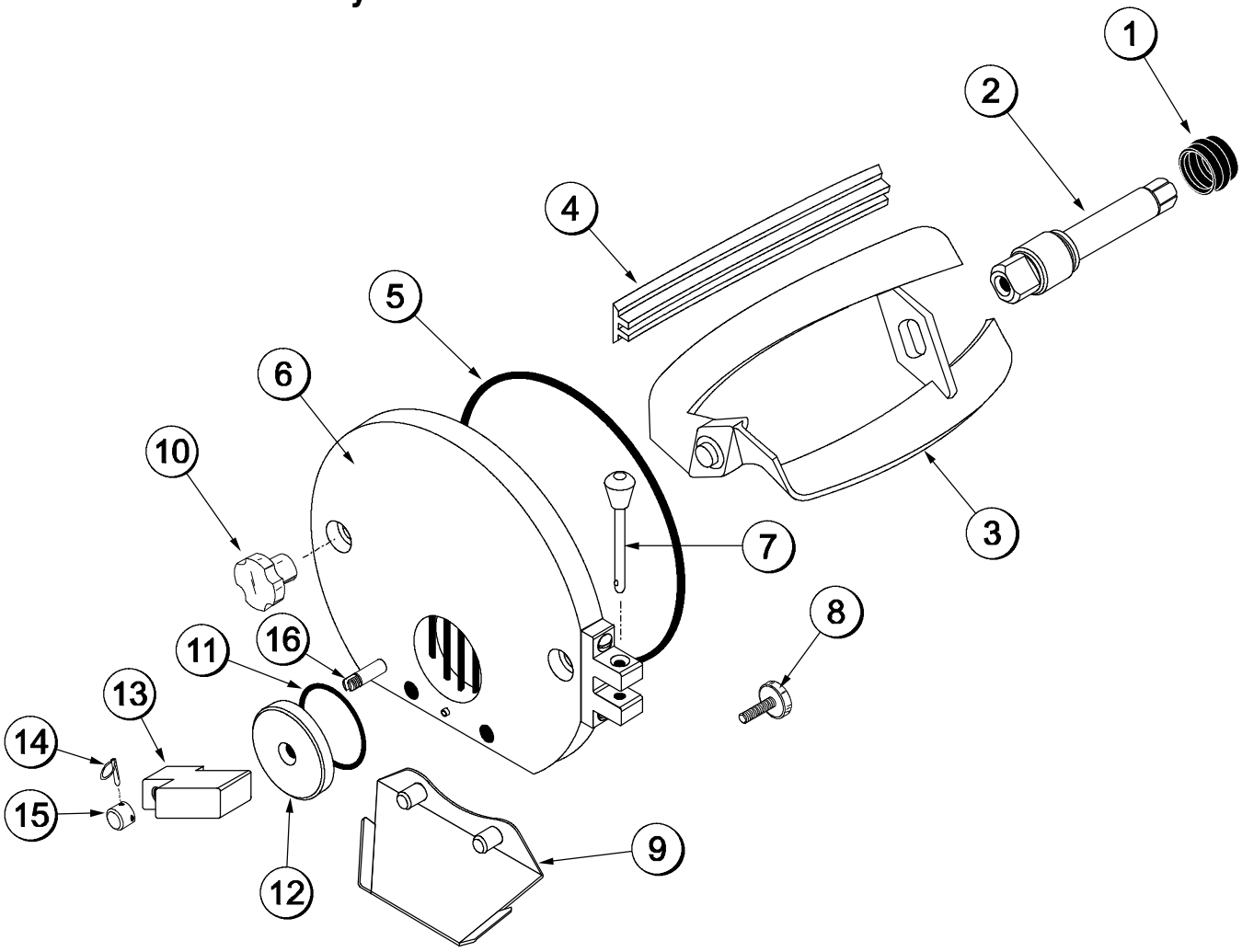

Figure 2

ITEM	DESCRIPTION	PART NO.
1	SEAL- DRIVE SHAFT	032560
2	SHAFT- BEATER	033498
3	BEATER ASSEMBLY	X33417
4	BLADE- SCRAPER 7- 1/4" L	033277
5	O- RING 5- 7/16 OD X 5- 1/4	033276
6	DOOR A.- PARTIAL	X37710
7	PIN A.- PIVOT 1- 3/4 GRIP	X37705
8	SCREW- STEM	034662

ITEM	DESCRIPTION	PART NO.
9	SPOUT A.- DRIP	X33422
10	NUT- STUD	008614
11	O- RING 2- 1/4 OD X .139 W	030890
12	PLATE- DRAW	027811
13	ARM- HANDLE	030042
14	PIN- QUICK RELEASE 3/16	027813
15	CAP- STEM	027812
16	STEM- FREEZER COVER	034661

Accessories

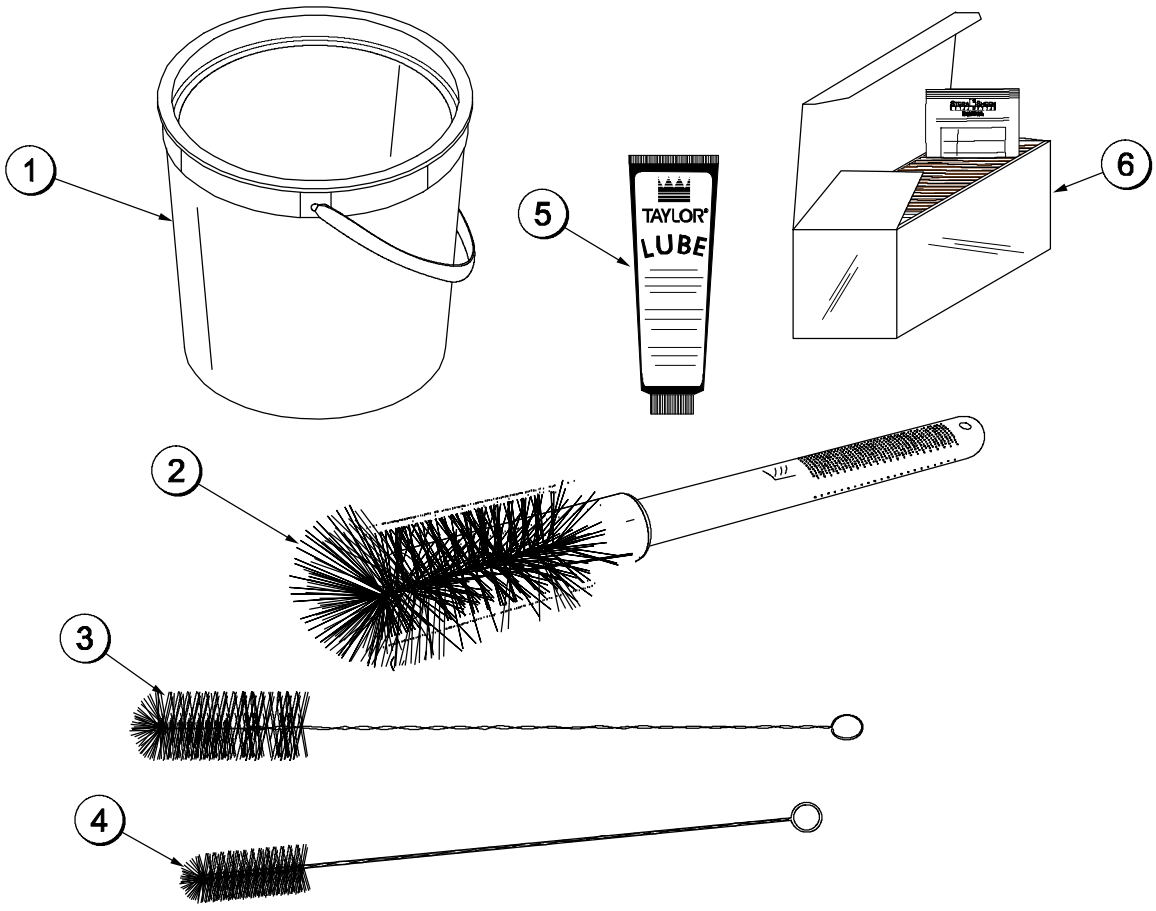

Figure 3

ITEM	DESCRIPTION	PART NO.
1	PAIL-6 QT	023348
2	BRUSH-MIX PUMP BODY 3” X 7”	023316
3	BRUSH-REAR BEARING 1” X 2”	013071

ITEM	DESCRIPTION	PART NO.
4	BRUSH-DRAW VALVE 1-1/2”	014753
5	LUBRICANT-TAYLOR 4 OZ.	047518
6	SANITIZER-STERA SHEEN	SEE NOTE

***Note:** A sample container of sanitizer is sent with the unit. For reorders, order Stera Sheen part no. 055492 (100 2 oz. packs) or Kay- 5 part no. 041082 (200 packs).

Section 5 Important: To The Operator

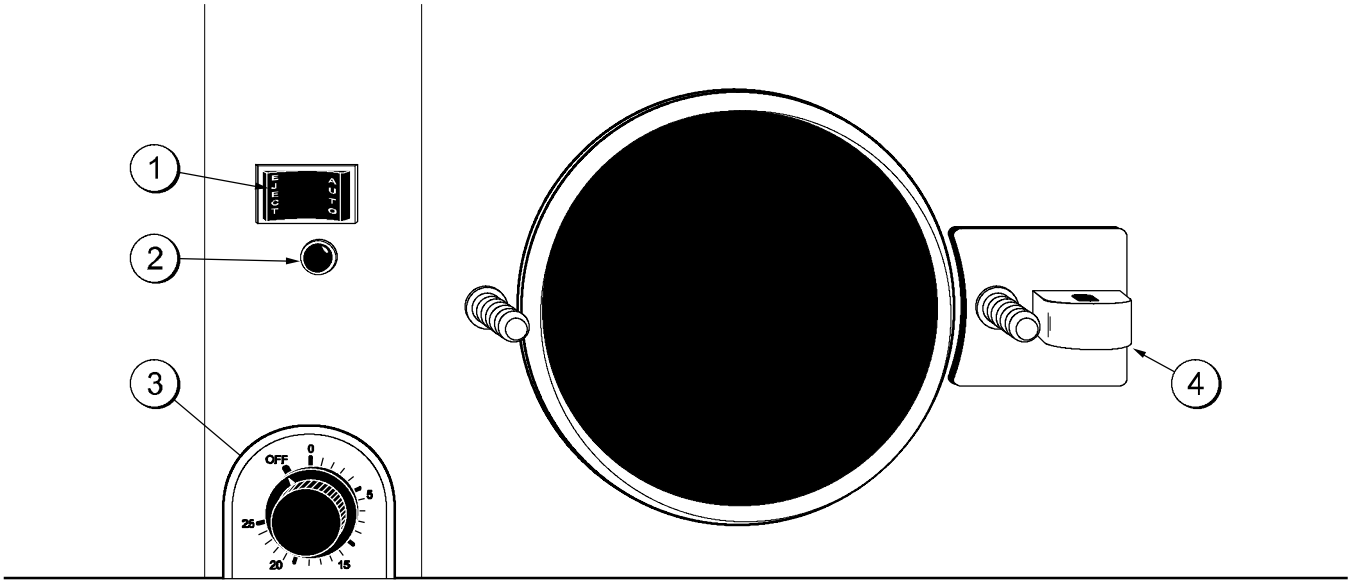

Figure 4

ITEM	DESCRIPTION
1	CONTROL SWITCH
2	ORANGE DIAL LIGHT
3	TIMER CONTROL
4	DOOR HINGE

Control Switch (Item 1)

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

Orange Dial Light (Item 2)

Located below the control switch is an orange 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.

Timer Control (Item 3)

The Model 104 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 viscosity, 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 tone 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 (Item 4)

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

Reset Condition

The Model 104 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 the time set.

Section 6 Operating Procedures

The Model 104 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 19, “Disassembly”, and start there.

Assembly

Step 1

MAKE SURE CONTROL SWITCH IS IN THE OFF POSITION. Failure to do so may cause personal injury or component damage.

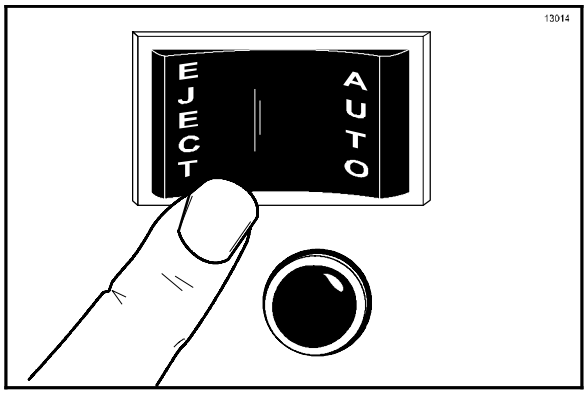

Figure 5

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.

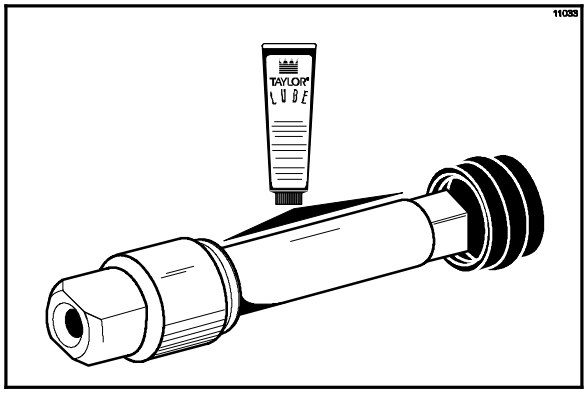

Figure 6

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.

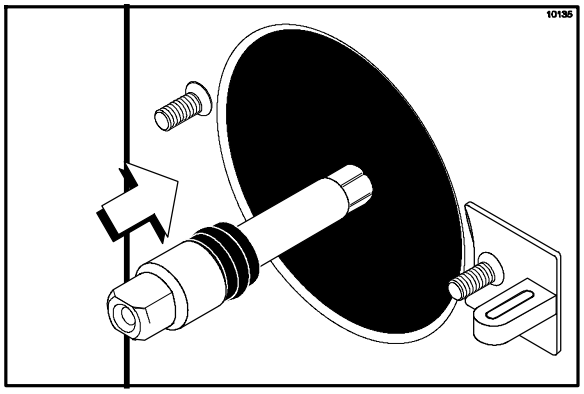

Figure 7

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.

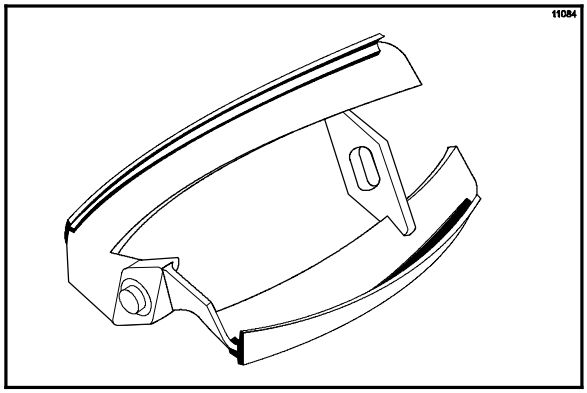

Figure 8

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.

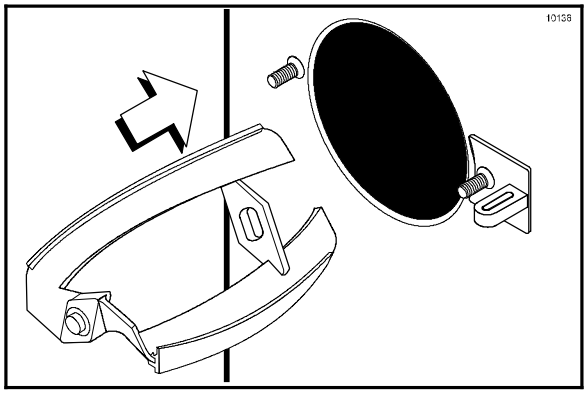

Figure 9

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.

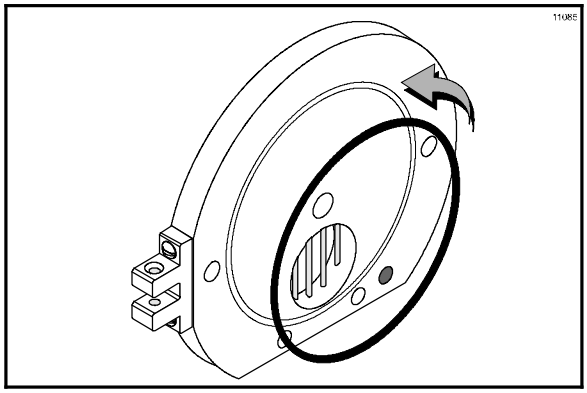

Figure 10

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

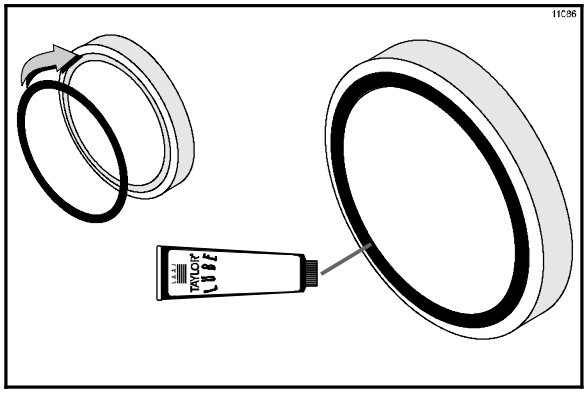

Figure 11

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

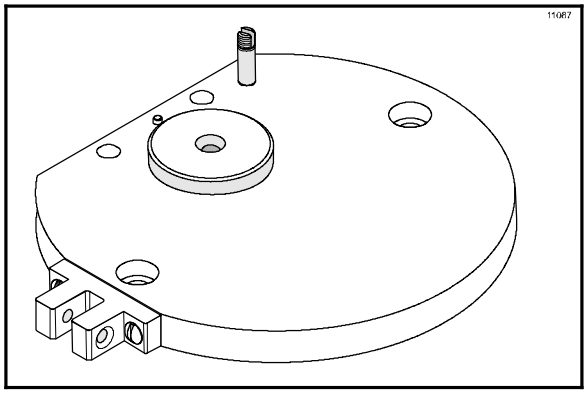

Figure 12

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

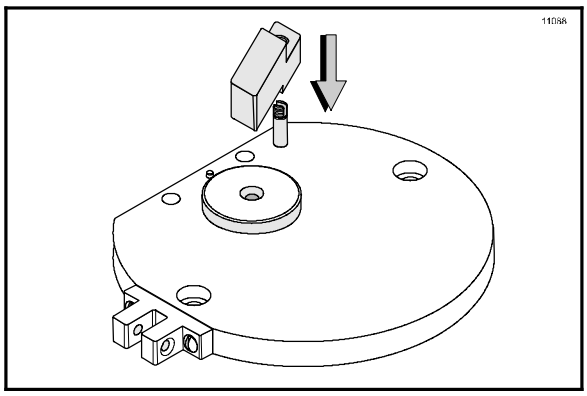

Figure 13

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.

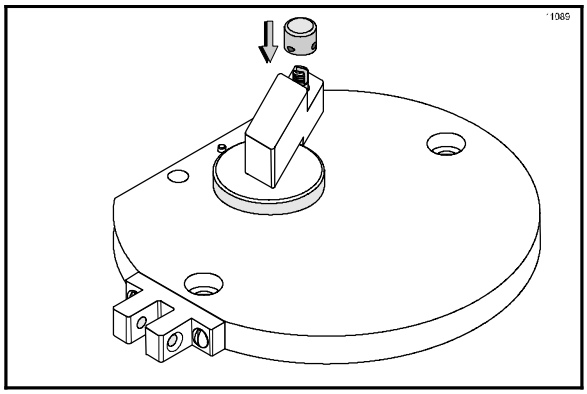

Figure 14

Secure the cap with the clevis pin.

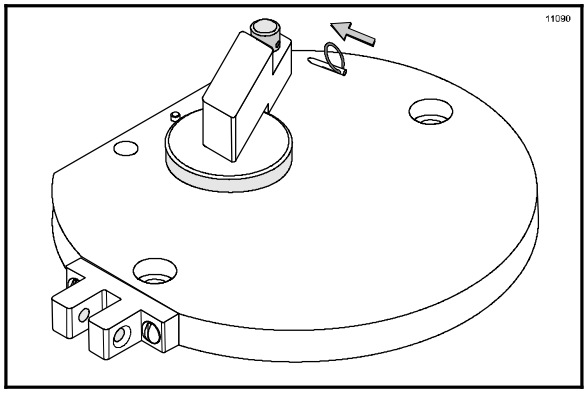

Figure 15

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

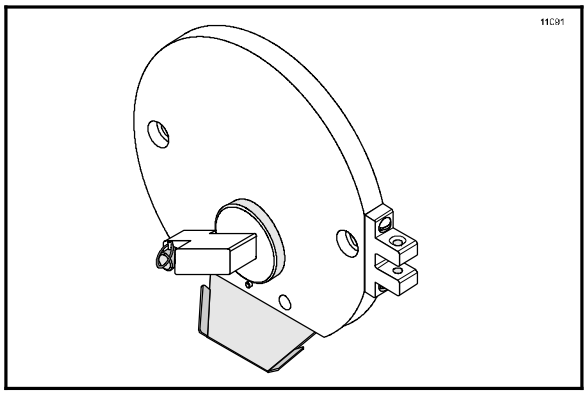

Figure 16

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.

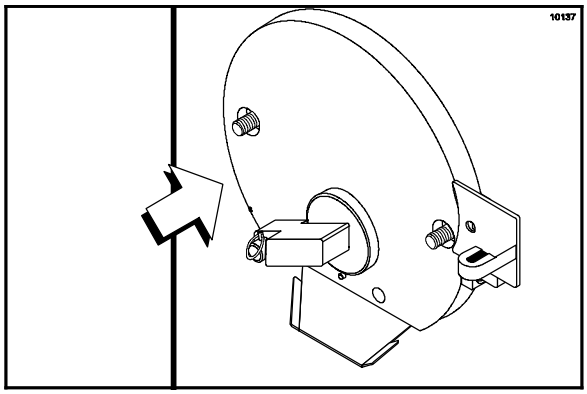

Figure 17

Install the two handscrews onto the studs and tighten equally.

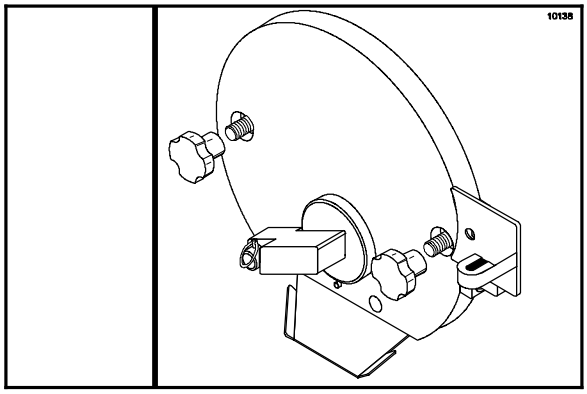

Figure 18

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

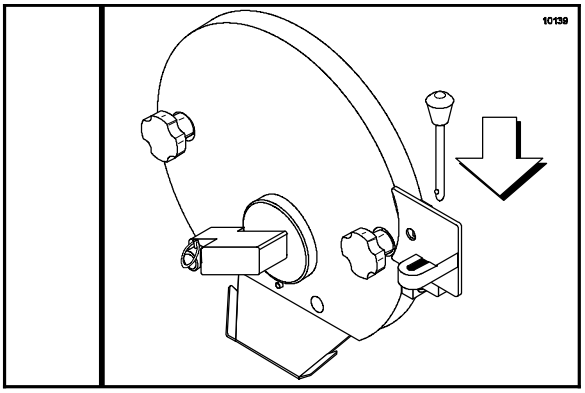

Figure 19

Step 8
Slide the drip pan into the hole in the front panel.

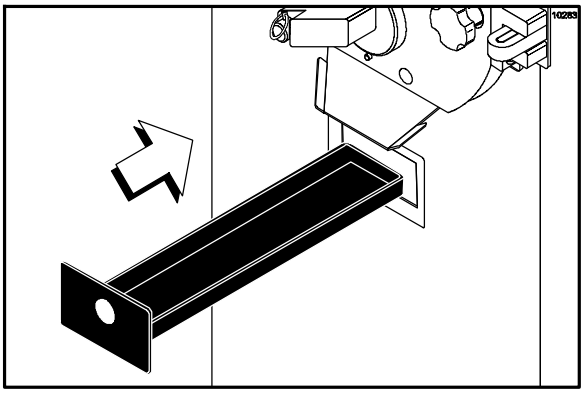

Figure 20

Sanitizing

Step 1
Prepare two quarts (1.9 liters) of an approved 100 PPM sanitizing solution (example: Kay-5® or Stera-Sheen®). USE WARM WATER AND FOLLOW THE MANUFACTURER'S SPECIFICATIONS.

Step 2
Open the mix inlet cover on top of the freezer.

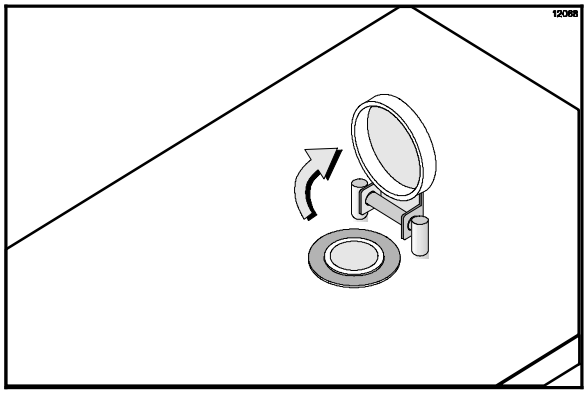

Figure 21

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

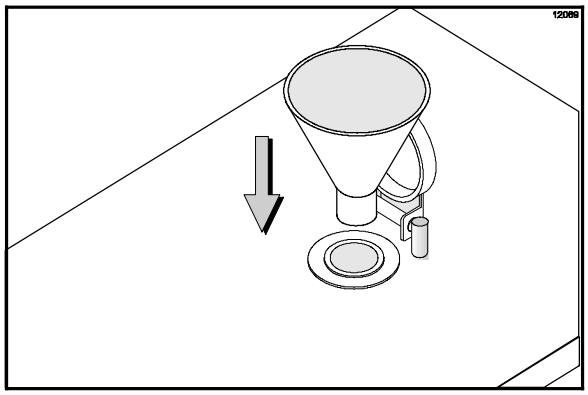

Figure 22

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

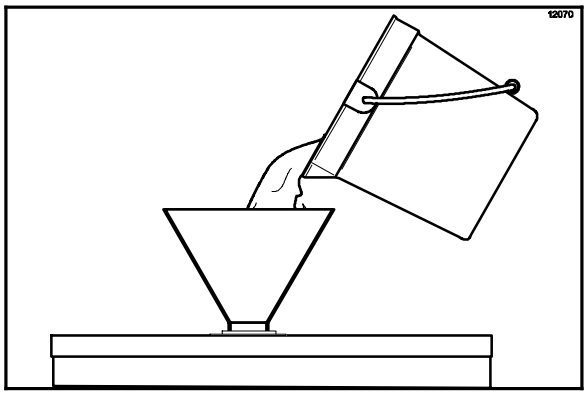

Figure 23

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! Failure to do so may result in personal injury or component damage.

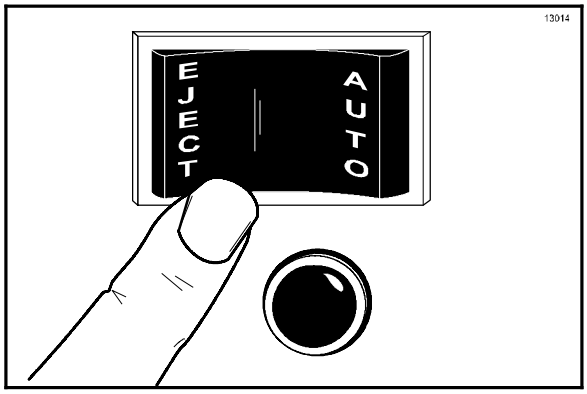

Figure 24

Step 4
Put the control switch into the OFF position. Holding a pail beneath the ejection port, open the draw arm and drain the sanitizing solution from the freezing cylinder. Close the draw arm.

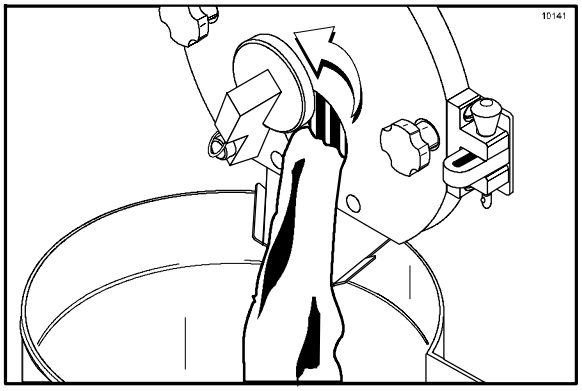

Figure 25

Priming

Step 1
With the control switch in the OFF position, hold an empty pail beneath the ejection port and open the draw arm.

KEEP FINGERS OUT OF FILL AND DISCHARGE OPENINGS! Failure to do so may result in personal injury or component damage.

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.

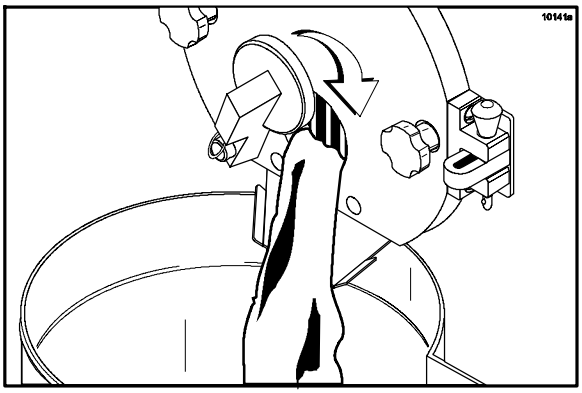

Figure 26

Step 3
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.

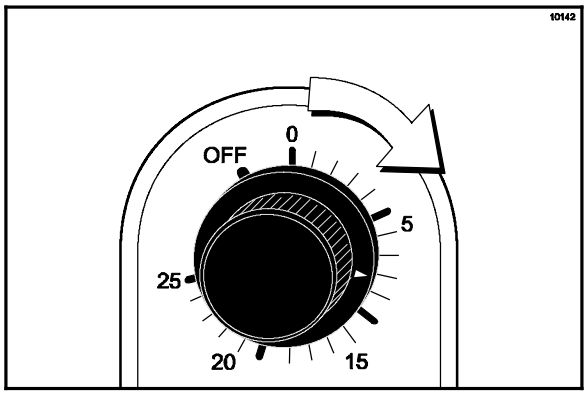

Figure 27

Step 4
Place the control switch in the AUTO position. Remove the funnel and close the mix inlet cover.

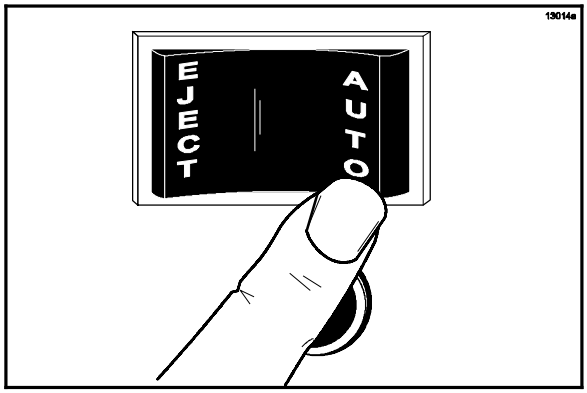

Figure 28

Overrun

Depending on the overrun desired, the amount of pre- charge can range from 1.5 to 3 quarts (1.4 to 2.8 liters). 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.

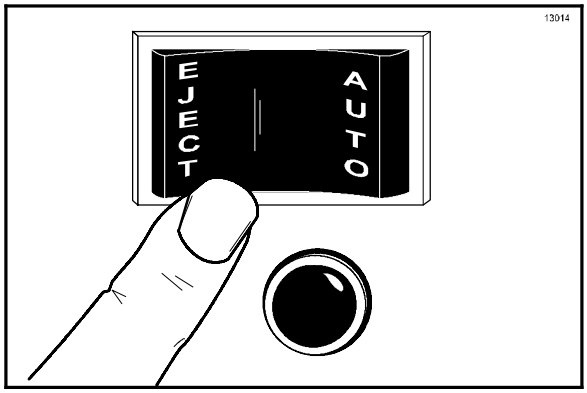

Figure 29

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.

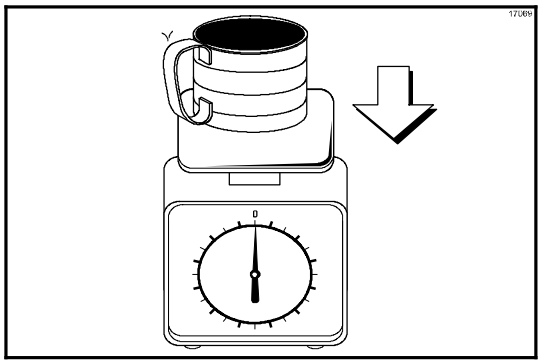

Figure 30

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

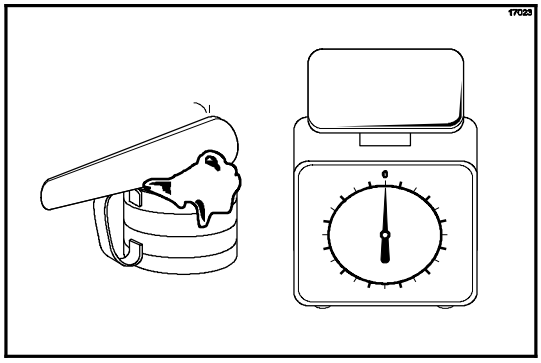

Figure 31

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

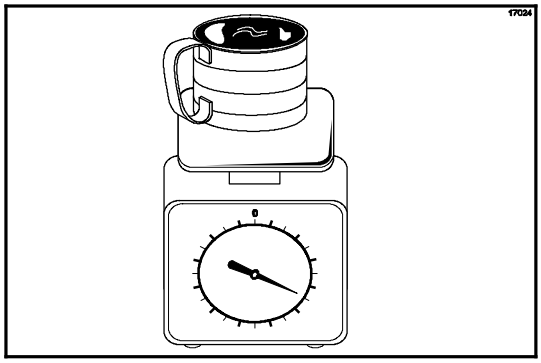

Figure 32

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:

$$8.2 \overline{)\,15.2} = 1.85$$

Raw Mix = 15.2 oz. (431 g)
Frozen Mix = 8.2 oz. (232 g) 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 18 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. Failure to do so may cause personal injury or component damage.

KEEP FINGERS OUT OF FILL AND DISCHARGE OPENINGS! Failure to do so may result in personal injury or component damage.

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.

Step 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 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® or Stera- Sheen®). USE WARM WATER AND FOLLOW 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!** Failure to do so may result in personal injury or component damage.

Step 4
Put the control switch into the OFF position. Holding a pail beneath the ejection port, open the draw arm and drain all the solution from the freezing cylinder. Close the draw arm.

Disassembly

Step 1

 **BE SURE THE CONTROL SWITCH IS IN THE OFF POSITION.** Failure to do so may cause personal injury or component damage.

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 front 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® or Stera- Sheen®). USE WARM WATER AND FOLLOW THE MANUFACTURER'S SPECIFICATIONS.

If an approved cleaner other than Kay- 5® or Stera- Sheen® 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.

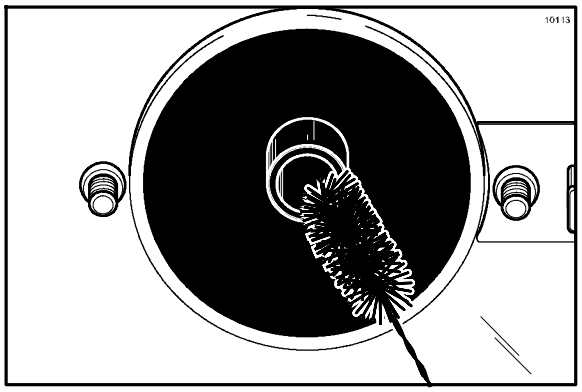

Figure 33

Step 6
Wipe clean the exterior surfaces of the freezer.

Section 7 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

☐ 1. Thoroughly clean and sanitize the machine regularly, including complete disassembly and brush cleaning.

☐ 2. Use all brushes supplied for thorough cleaning. The brushes are specially designed to reach all mix passageways.

☐ 3. Use the white bristle brush to clean the mix inlet hole which extends from the top down to the rear of the freezing cylinder.

☐ 4. 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 cleaning solution on the brush.

☐ 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.

☐ 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.
Note: For machines equipped with an air filter, it will be necessary to vacuum clean the filters on a monthly schedule.

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.

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.

Section 8 Troubleshooting Guide

PROBLEM	PROBABLE CAUSE	REMEDY	PAGE 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 the AUTO position.	a. The unit is unplugged.	a. Plug into wall receptacle.	- -
	b. The circuit breaker is off, or the fuse is blown.	b. Turn the breaker on or replace the fuse.	- -
	c. The unit is out on reset.	c. Put the freezer in the OFF position. Allow the unit to cool. Resume normal operation, but use less time to run the batch.	10
	d. The freezer door is open.	d. Secure the door for freezer operation.	13
3. The product is not freezing.	a. The timer control is not set or is defective.	a. Set time for required batch or contact service technician to replace the timer.	10
	b. The condensers are dirty on air cooled units.	b. Clean condensers monthly.	21
	c. The control switch is not in the AUTO position.	c. Put the control switch into the AUTO position for compressor operation.	10
4. There is excessive mix leakage in the rear drip tray.	a. The seal on the beater drive shaft is missing or worn.	a. Install or replace the seal on the beater drive shaft.	12 / 23
	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.	12
5. The buzzer does not sound when the unit cycles off.	a. The buzzer is malfunctioning.	a. Contact service technician to replace the buzzer.	- -

Section 9 Parts Replacement Schedule

PART DESCRIPTION	EVERY 3 MONTHS	EVERY 4 MONTHS	EVERY 6 MONTHS	ANNUALLY	QTY.
Drive Shaft Seal	X				1
Scraper Blades		X	Minimum		2
Freezer Door O- Ring	X				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

Section 10 Limited Warranty on Equipment

TAYLOR COMPANY LIMITED WARRANTY ON FREEZERS

Taylor Company, a division of Carrier Commercial Refrigeration, Inc. ("Taylor") is pleased to provide this limited warranty on new Taylor-branded freezer equipment available from Taylor to the market generally (the "Product") to the original purchaser only.

LIMITED WARRANTY

Taylor warrants the Product against failure due to defect in materials or workmanship under normal use and service as follows. All warranty periods begin on the date of original Product installation. If a part fails due to defect during the applicable warranty period, Taylor, through an authorized Taylor distributor or service agency, will provide a new or re- manufactured part, at Taylor's option, to replace the failed defective part at no charge for the part. Except as otherwise stated herein, these are Taylor's exclusive obligations under this limited warranty for a Product failure. This limited warranty is subject to all provisions, conditions, limitations and exclusions listed below and on the reverse (if any) of this document.

Product	Part	Limited Warranty Period
Soft Serve	Insulated shell assembly	Five (5) years
Frozen Yogurt **Shakes**	Refrigeration compressor (except service valve)	Five (5) years
Smoothies	Beater motors	Two (2) years
Frozen Beverage	Beater drive gear	Two (2) years
Batch Desserts	Printed circuit boards and Softech controls beginning with serial number H8024200	Two (2) years
	Parts not otherwise listed in this table or excluded below	One (1) year

LIMITED WARRANTY CONDITIONS

1. If the date of original installation of the Product cannot be verified, then the limited warranty period begins ninety (90) days from the date of Product manufacture (as indicated by the Product serial number). Proof of purchase may be required at time of service.
2. This limited warranty is valid only if the Product is installed and all required service work on the Product is performed by an authorized Taylor distributor or service agency, and only if genuine, new Taylor parts are used.
3. Installation, use, care, and maintenance must be normal and in accordance with all instructions contained in the Taylor Operator's Manual.
4. Defective parts must be returned to the authorized Taylor distributor or service agency for credit.
5. The use of any refrigerant other than that specified on the Product's data label will void this limited warranty.

LIMITED WARRANTY EXCEPTIONS

This limited warranty does **not** cover:

1. Labor or other costs incurred for diagnosing, repairing, removing, installing, shipping, servicing or handling of defective parts, replacement parts, or new Products.
2. Normal maintenance, cleaning and lubrication as outlined in the Taylor Operator's Manual, including cleaning of condensers.

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3. Replacement of wear items designated as Class “000” parts in the Taylor Operator’s Manual.
4. External hoses, electrical power supplies, and machine grounding.
5. Parts not supplied or designated by Taylor, or damages resulting from their use.
6. Return trips or waiting time required because a service technician is prevented from beginning warranty service work promptly upon arrival.
7. Failure, damage or repairs due to faulty installation, misapplication, abuse, no or improper servicing, unauthorized alteration or improper operation or use as indicated in the Taylor Operator’s Manual, including but not limited to the failure to use proper assembly and cleaning techniques, tools, or approved cleaning supplies.
8. Failure, damage or repairs due to theft, vandalism, wind, rain, flood, high water, water, lightning, earthquake or any other natural disaster, fire, corrosive environments, insect or rodent infestation, or other casualty, accident or condition beyond the reasonable control of Taylor; operation above or below the electrical or water supply specification of the Product; or components repaired or altered in any way so as, in the judgment of the Manufacturer, to adversely affect performance, or normal wear or deterioration.
9. Any Product purchased over the Internet.
10. Failure to start due to voltage conditions, blown fuses, open circuit breakers, or damages due to the inadequacy or interruption of electrical service.
11. Electricity or fuel costs, or increases in electricity or fuel costs from any reason whatsoever.
12. Damages resulting from the use of any refrigerant other than that specified on the Product’s data label will void this limited warranty.
13. Any cost to replace, refill or dispose of refrigerant, including the cost of refrigerant.
14. **ANY SPECIAL, INDIRECT OR CONSEQUENTIAL PROPERTY OR COMMERCIAL DAMAGE OF ANY NATURE WHATSOEVER.** Some jurisdictions do not allow the exclusion of incidental or consequential damages, so this limitation may not apply to you.

This limited warranty gives you specific legal rights, and you may also have other rights which vary from jurisdiction to jurisdiction.

LIMITATION OF WARRANTY

THIS LIMITED WARRANTY IS EXCLUSIVE AND IS IN LIEU OF ALL OTHER WARRANTIES, CONDITIONS AND/OR REMEDIES UNDER THE LAW, INCLUDING ANY IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. THE ORIGINAL OWNER’S SOLE REMEDY WITH RESPECT TO ANY PRODUCTS SHALL BE REPAIR OR REPLACEMENT OF DEFECTIVE COMPONENTS UNDER THE TERMS OF THIS LIMITED WARRANTY. ALL RIGHTS TO CONSEQUENTIAL OR INCIDENTAL DAMAGES (INCLUDING CLAIMS FOR LOST SALES, LOST PROFITS, PRODUCT LOSS, PROPERTY DAMAGES OR SERVICE EXPENSES) ARE EXPRESSLY EXCLUDED. THE EXPRESS WARRANTIES MADE IN THIS LIMITED WARRANTY MAY NOT BE ALTERED, ENLARGED, OR CHANGED BY ANY DISTRIBUTOR, DEALER, OR OTHER PERSON, WHATSOEVER.

LEGAL REMEDIES

The owner **must** notify Taylor in writing, by certified or registered letter to the following address, of any defect or complaint with the Product, stating the defect or complaint and a specific request for repair, replacement, or other correction of the Product under warranty, mailed at least thirty (30) days before pursuing any legal rights or remedies.

Taylor Company
a division of Carrier Commercial Refrigeration, Inc.
750 N. Blackhawk Blvd.
Rockton, IL 61072, U.S.A.

Section 11 Limited Warranty on Parts

TAYLOR COMPANY LIMITED WARRANTY ON TAYLOR GENUINE PARTS

Taylor Company, a division of Carrier Commercial Refrigeration, Inc. (“Taylor”) is pleased to provide this limited warranty on new Taylor genuine replacement components and parts available from Taylor to the market generally (the “Parts”) to the original purchaser only.

LIMITED WARRANTY

Taylor warrants the Parts against failure due to defect in materials or workmanship under normal use and service as follows. All warranty periods begin on the date of original installation of the Part in the Taylor unit. If a Part fails due to defect during the applicable warranty period, Taylor, through an authorized Taylor distributor or service agency, will provide a new or re- manufactured Part, at Taylor’s option, to replace the failed defective Part at no charge for the Part. Except as otherwise stated herein, these are Taylor’s exclusive obligations under this limited warranty for a Part failure. This limited warranty is subject to all provisions, conditions, limitations and exclusions listed below and on the reverse (if any) of this document.

Part’s Warranty Class Code or Part	Limited Warranty Period
Class 103 Parts[1]	Three (3) months
Class 212 Parts[2]	Twelve (12) months
Class 512 Parts	Twelve (12) months
Class 000 Parts	No warranty
Taylor Part #072454 (Motor- 24VDC *C832/C842*)	Four (4) years

LIMITED WARRANTY CONDITIONS

1. If the date of original installation of the Part cannot be otherwise verified, proof of purchase may be required at time of service.
2. This limited warranty is valid only if the Part is installed and all required service work in connection with the Part is performed by an authorized Taylor distributor or service agency.
3. The limited warranty applies only to Parts remaining in use by their original owner at their original installation location in the unit of original installation.
4. Installation, use, care, and maintenance must be normal and in accordance with all instructions contained in the Taylor Operator’s Manual.
5. Defective Parts must be returned to the authorized Taylor distributor or service agency for credit.
6. This warranty is not intended to shorten the length of any warranty coverage provided pursuant to a separate Taylor Limited Warranty on freezer or grill equipment.
7. The use of any refrigerant other than that specified for the unit in which the Part is installed will void this limited warranty.

[1, 2] Except that Taylor Part #032129SER2 (Compressor-Air-230V SERV) and Taylor Part #075506SER1 (Compressor-Air-115V 60HZ) shall have a limited warranty period of twelve (12) months when used in Taylor freezer equipment and a limited warranty period of two (2) years when used in Taylor grill equipment.

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LIMITED WARRANTY EXCEPTIONS

This limited warranty does **not** cover:

1. Labor or other costs incurred for diagnosing, repairing, removing, installing, shipping, servicing or handling of defective Parts, replacement Parts, or new Parts.
2. Normal maintenance, cleaning and lubrication as outlined in the Taylor Operator's Manual, including cleaning of condensers or carbon and grease buildup.
3. Required service, whether cleaning or general repairs, to return the cooking surface assemblies, including the upper platen and lower plate, to an operational condition to achieve proper cooking or allow proper assembly of release sheets and clips as a result of grease build-up on the cooking surfaces, including but not limited to the platen and plate, sides of the shroud or top of the shroud.
4. Replacement of cooking surfaces, including the upper platen and lower plate, due to pitting or corrosion (or in the case of the upper platen, due to loss of plating) as a result of damage due to the impact of spatulas or other small wares used during the cooking process or as a result of the use of cleaners, cleaning materials or cleaning processes not approved for use by Taylor.
5. Replacement of wear items designated as Class "000" Parts in the Taylor Operator's Manual, as well as any release sheets and clips for the Product's upper platen assembly.
6. External hoses, electrical power supplies, and machine grounding.
7. Parts not supplied or designated by Taylor, or damages resulting from their use.
8. Return trips or waiting time required because a service technician is prevented from beginning warranty service work promptly upon arrival.
9. Failure, damage or repairs due to faulty installation, misapplication, abuse, no or improper servicing, unauthorized alteration or improper operation or use as indicated in the Taylor Operator's Manual, including but not limited to the failure to use proper assembly and cleaning techniques, tools, or approved cleaning supplies.
10. Failure, damage or repairs due to theft, vandalism, wind, rain, flood, high water, water, lightning, earthquake or any other natural disaster, fire, corrosive environments, insect or rodent infestation, or other casualty, accident or condition beyond the reasonable control of Taylor; operation above or below the gas, electrical or water supply specification of the unit in which a part is installed; or Parts or the units in which they are installed repaired or altered in any way so as, in the judgment of Taylor, to adversely affect performance, or normal wear or deterioration.
11. Any Part purchased over the Internet.
12. Failure to start due to voltage conditions, blown fuses, open circuit breakers, or damages due to the inadequacy or interruption of electrical service.
13. Electricity, gas or other fuel costs, or increases in electricity or fuel costs from any reason whatsoever.
14. Damages resulting from the use of any refrigerant other than that specified for the unit in which the Part is installed will void this limited warranty.
15. Any cost to replace, refill or dispose of refrigerant, including the cost of refrigerant.
16. **ANY SPECIAL, INDIRECT OR CONSEQUENTIAL PROPERTY OR COMMERCIAL DAMAGE OF ANY NATURE WHATSOEVER.** Some jurisdictions do not allow the exclusion of incidental or consequential damages, so this limitation may not apply to you.

This limited warranty gives you specific legal rights, and you may also have other rights which vary from jurisdiction to jurisdiction.

LIMITATION OF WARRANTY

THIS LIMITED WARRANTY IS EXCLUSIVE AND IS IN LIEU OF ALL OTHER WARRANTIES, CONDITIONS AND/OR REMEDIES UNDER THE LAW, INCLUDING ANY IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. THE ORIGINAL OWNER'S SOLE REMEDY WITH RESPECT TO ANY PRODUCTS SHALL BE REPAIR OR REPLACEMENT OF DEFECTIVE PARTS UNDER THE TERMS OF THIS LIMITED WARRANTY. ALL RIGHTS TO CONSEQUENTIAL OR INCIDENTAL DAMAGES (INCLUDING CLAIMS FOR LOST SALES, LOST PROFITS, PRODUCT LOSS, PROPERTY DAMAGES OR SERVICE EXPENSES) ARE EXPRESSLY EXCLUDED. THE EXPRESS WARRANTIES MADE IN THIS LIMITED WARRANTY MAY NOT BE ALTERED, ENLARGED, OR CHANGED BY ANY DISTRIBUTOR, DEALER, OR OTHER PERSON, WHATSOEVER.

LEGAL REMEDIES

The owner **must** notify Taylor in writing, by certified or registered letter to the following address, of any defect or complaint with the Part, stating the defect or complaint and a specific request for repair, replacement, or other correction of the Part under warranty, mailed at least thirty (30) days before pursuing any legal rights or remedies.

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