OPERATOR'S MANUAL

Model 60/62
Shake Freezers

Original Operating Instructions

051059-M

4/00 (Original Publication)
Updated 9/26/16

Complete this page for quick reference when service is required:

Taylor Distributor: _____

Address: _____

Phone: _____

Service: _____

Parts: _____

Date of Installation: _____

Information found on the data label:

Model Number: _____

Serial Number: _____

Electrical Specs: Voltage _____ Cycle _____

Phase _____

Maximum Fuse Size: _____ A

Minimum Wire Ampacity: _____ A

051059–M

TAYLOR
United Technologies

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 machine 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 where the unit will be installed before uncrating the unit. Make sure that all possible hazards to the user and the equipment 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 people are required to safely move this unit. Failure to comply may result in personal injury or equipment damage.

Uncrate the unit and inspect it for damage. Report any damage to your 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.

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.**

A back flow prevention device is required on the incoming water connection side. Please refer to the applicable National, State, and local codes for determining the proper configuration.

Air Cooled Units

DO NOT obstruct air intake and discharge openings:

Air cooled units require adequate clearance around the sides of the freezer to allow for adequate air flow across the condenser.

Counter Models: 6" (152 mm) minimum air space on both sides. It is recommended to place the rear of the unit against the wall to prevent recirculation of warm air.

Console Models: 3" (76 mm) minimum air space on each side and rear of unit when air deflector is employed.

Failure to allow adequate clearance can reduce the refrigeration capacity of the freezer and possibly cause permanent damage to the compressor.

Electrical Connections

Each unit requires one power supply for each data label on the unit. Check the data label(s) on the freezer for branch circuit overcurrent protection or fuse, circuit ampacity, and other electrical specifications. Refer to the wiring diagram provided inside the control box for proper power 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. Compliance therewith and proper maintenance will result in an installation essentially free from hazard!

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!

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 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.

Beater Rotation

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

Note: The following procedures must be performed by an authorized Taylor service technician.

To correct the 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 the diagram printed on the motor.)

Electrical connections are made directly to the terminal block provided in the main control box.

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 Models 60 and 62, when properly operated and cared for, will produce a consistent quality product. Like all mechanical products, these machines 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. The Taylor Models 60 and 62 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, sit down together and go through these procedures 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.

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.

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

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Section 3 Safety

We, at Taylor Company, are 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.

 **IMPORTANT – Failure to adhere to the following safety precautions may result in severe personal injury. 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.

 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** 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 freezer data label.
- All repairs must be performed by an authorized Taylor service technician.
- The main power supplies to machine must be disconnected prior to performing repairs.
- Cord Connected Units: Only Taylor authorized service technicians may install a plug 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.

- **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 any internal operating parts (examples: freezer door, beater, scraper blades, etc.) unless all control switches are in the OFF position.

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

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

- **DO NOT** put objects or fingers in the door spout. This may contaminate the product and cause severe personal injury from blade contact.
- **USE EXTREME CAUTION** when removing the beater asssembly. The scraper blades are very sharp.

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 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 obstruct air intake and discharge openings:

Counter Models: 6” (152 mm) minimum air space on both sides. Place the rear of the unit against the wall to prevent recirculation of warm air.

Console Models: 3” (76 mm) minimum air space on each side and rear of unit when air deflector is employed.

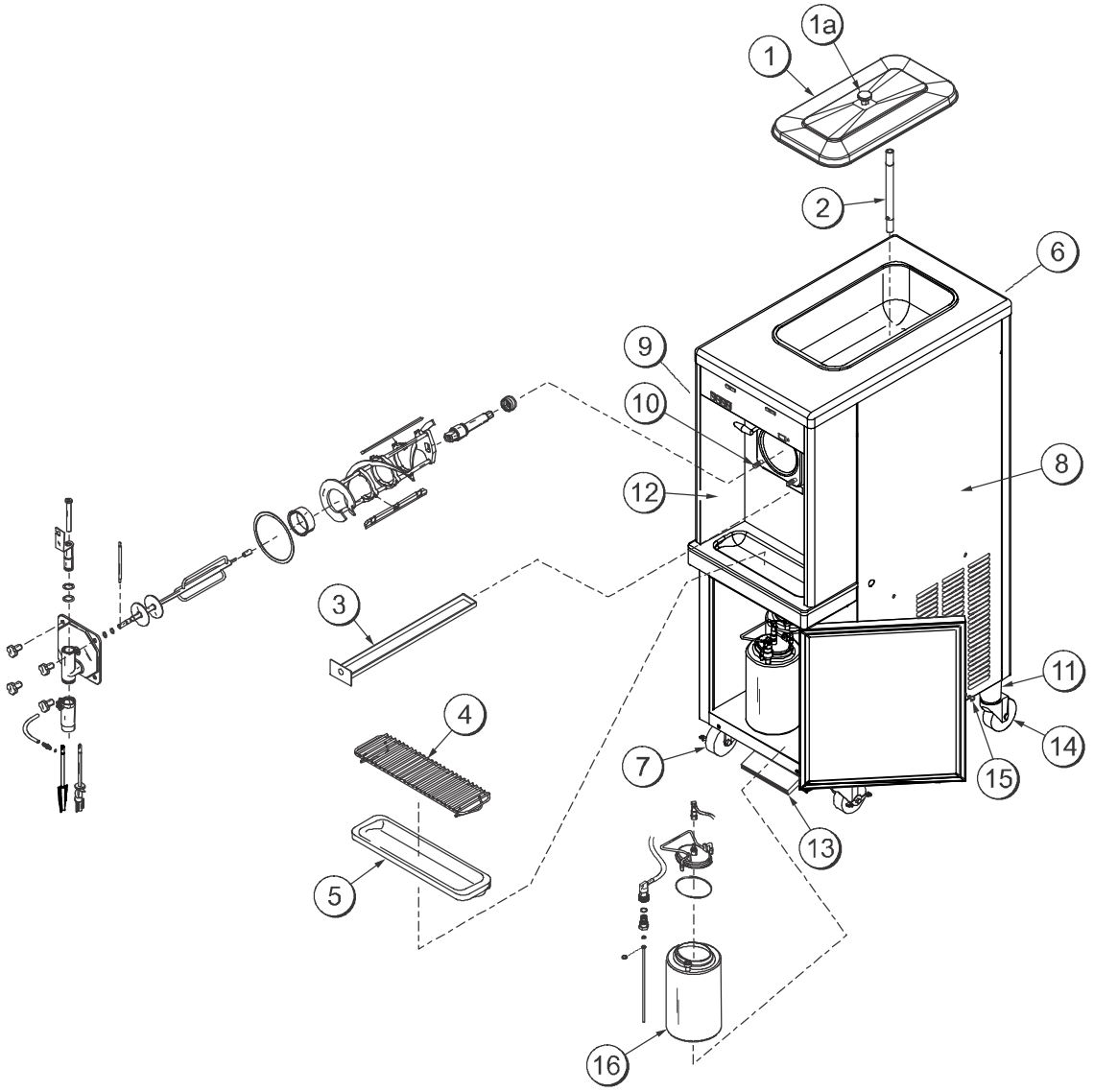
Failure to allow adequate clearance can reduce the refrigeration capacity of the freezer and possibly cause permanent damage to the compressor.

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.

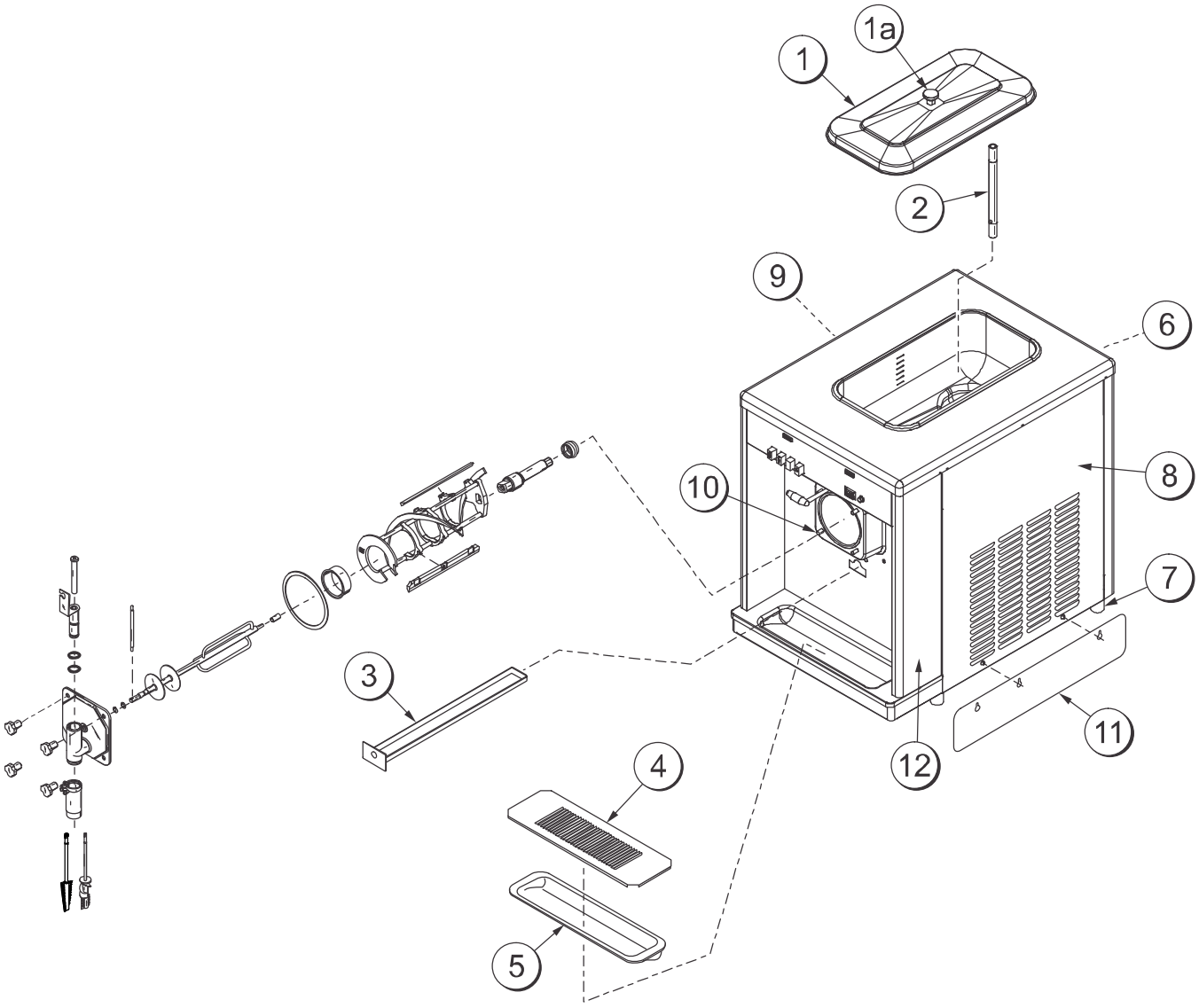
Section 4 Operator Parts Identification



Item	Description	Part No.
1	Cover A.- Hopper- Std.	X38458- SER
1a	Knob- Mix Cover	025429
2	Tube- Feed- 1/4 Hole	015176- 5
3	Pan- Drip 19- 1/2 Long	035034
4	Shield- Splash- Wire 13- 11/16 L	046177
5	Tray- Drip 14.8	046275
6	Panel- Rear w/Louvers	026980- SP
7	Caster- 4” Swv 5/8 Stem w/Brake	034081
8	Panel - Side	067722

Item	Description	Part No.
9	Panel - Side	067721
10	Stud- Nose Cone 5/16- 18	011390
11	Adaptor A.- Caster	X18915
12	Panel A.- Front	X46634
13	Pedal A.- Foot	X48826
14	Caster- Swv 5/8 Stem 4” Wheel	018794
15	Screw- 1/4- 20 x 3/8 Rhm- Stnls	011694
16	Tank- SYR- 4 QT	045533

Model 62



Item	Description	Part No.
1	Cover A.–Hopper–Std.	X38458–SER
1a	Knob–Mix Cover	025429
2	Feed Tube	015176–5
3	Pan–Drip 19–1/2 Long	035034
4	Shield–Splash	022765
5	Tray–Drip 16–7/8 L x 5–1/8	020157
6	Panel–Rear	039021
7	Leg–4” SS w/O–ring	013458

Item	Description	Part No.
8	Panel–Side–Right	085411
9	Panel A.–Side Left	X85409
10	Stud–Nose Cone 5/16–18 x 3/8–1	011390
11	Skirt–Air Flow	049069
12	Panel A.–Front	X49996–1
13	Leg–4” SS w/O–ring	013458

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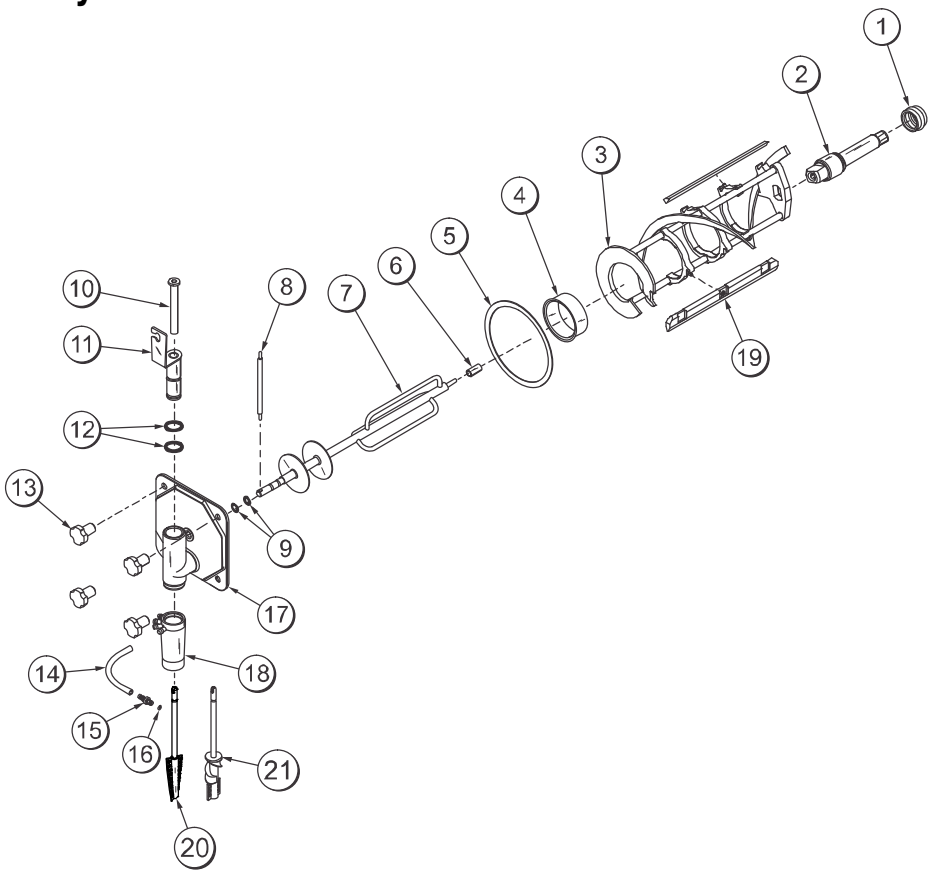
Beater Assembly

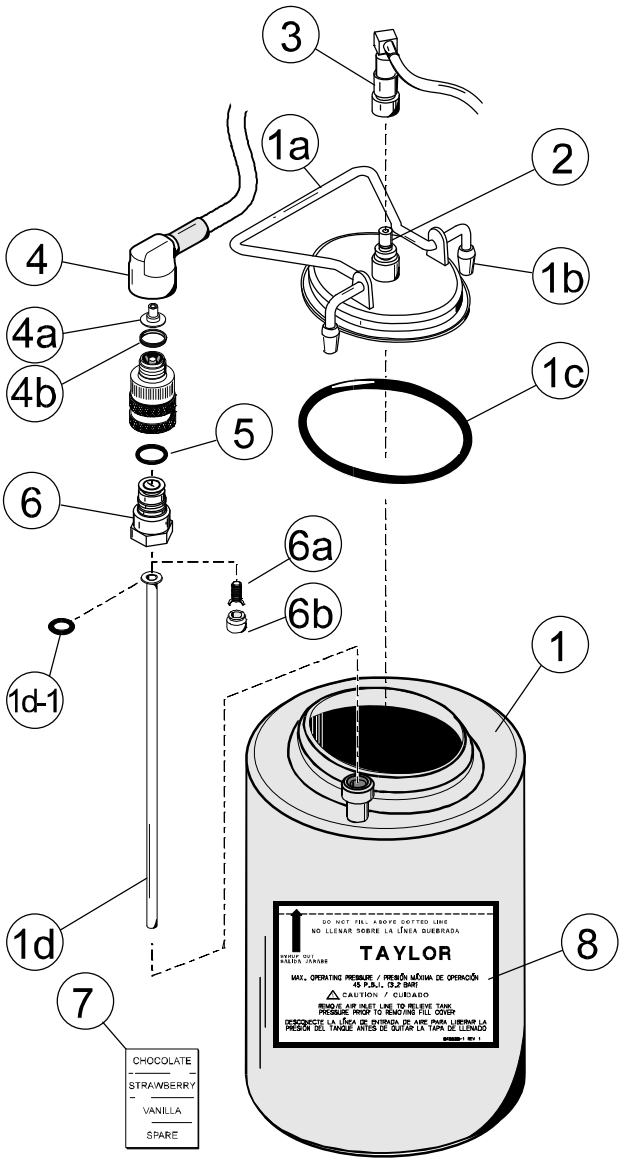


ITEM	DESCRIPTION	PART NO.
1	SEAL–DRIVE SHAFT	032560
2	SHAFT–BEATER	035527
3	BEATER A.–7QT–1 PIN	X46233
4	BEARING–FRONT	013116
5	GASKET–DOOR	016672
6	BEARING–GUIDE	014496
7	TORQUE A.	X17381
8	ARM–TORQUE	014500
9	O–RING–.291 ID X .080W	018550
10	BEARING–SPINNER	017032
11	VALVE A.–DRAW	X46671
12	O–RING–1–1/16 OD X.139W	084545
13	NUT–STUD	021508
*14	TUBE–VINYL 3/16ID X 1/16 WALL (MODEL 60)	020940–6
15	FITTING–QD MALE INSERT (MODEL 60)	036296

ITEM	DESCRIPTION	PART NO.
16	O–RING–5/16 OD X .070W (MODEL 60)	016272
17	DOOR A.–PARTIAL–1 SPT	X17373–SER
18	HOUSING–SPINNER *4 SPIG	017269
19	BLADE–SCRAPER–PLASTIC	081094
20	BLADE A.–SPINNER (USED IN 006227CANH, 006233CANH, 006027CANH, 006033CANH, 0H6027CWMK & 0H6033CWMK ONLY)	X16961
21	BLADE A.–SPINNER 8–3/8" (NOT USED IN 006227CANH, 006233CANH, 006027CANH, 006033CANH, 0H6027CWMK& 0H6033CWMK)	X35570
**22	FITTING–QD FEMALE PANEL MOUNT (MODEL 60)	036295

ITEMS 14, 15, 16, & 21 USED ON MODEL 60 ONLY
*BULK PART NUMBER IS R30314
**NOT SHOWN

Syrup Tank

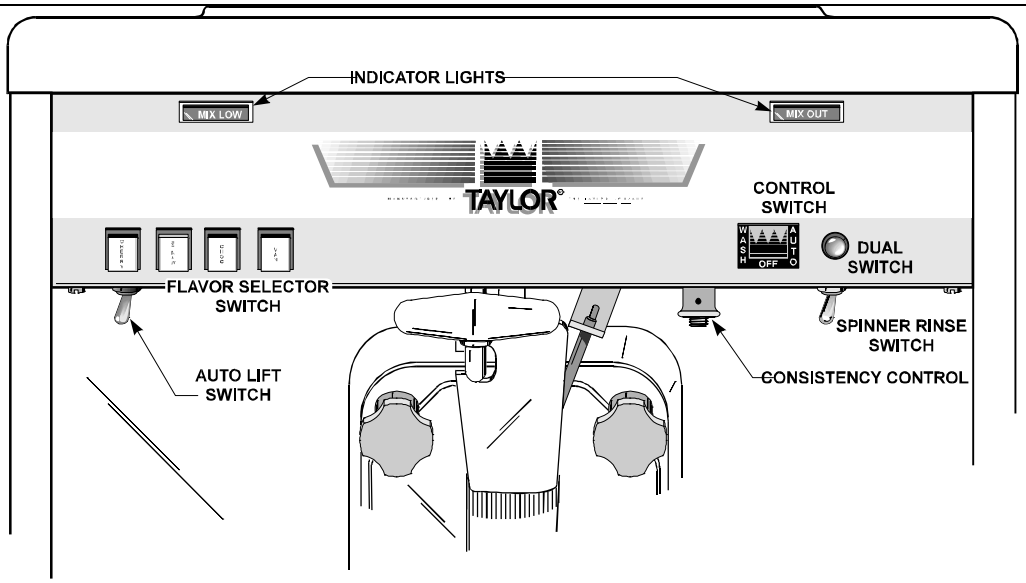


Item	Description	Part No.
1	Tank–Syr–4 Qt.	045533
1a	Cover–Tank 8 Qt. w/Inlet Ftg.	035759–1
1b	Tip–Nylon–White Translucent	042747
1c	O–Ring–3.437 ID x .275 W	016037
1d	Tube–Dip–4 Qt. Syr. Tank	015441–7
1d1	O–Ring–.291 ID x .080 W	018550
2	Plug–Q.D. CO2 1/8 MP	021077
3	Socket–Q.D. CO2 90° 1/4 Barb	021524
4	Socket–Q.D. Liq.– 90° 1/4 Barb	021026

Item	Description	Part No.
*4a	Restrictor–Syrup	025816
4b	Gasket–Rubber	023551
5	O–Ring–5/8 OD x .103 W	016030
6	Plug–Q.D. Liq. 3/4–18 FP	021081
6a	Valve A.–Q.D. Plug	021081–2
6b	Insert	021081–1
7	Decal–Set 4 Syrup Flavor	021523
8	Decal–Syrup Tank Instruction	045533–1

*Not used on chocolate

Section 5 Important: To the Operator



To better communicate in the International arena, the words on many of our operator switches and buttons have symbols to indicate their functions. Your Taylor equipment is designed with these International symbols.

The following chart identifies the symbol definitions used on the operator switches:

= The “ON/AUTO” button.

= The “OFF” button.

= The “MIX” button.

= The “WASH” button.

= The “MIX LOW” button.

= The “MIX OUT” button.

= The “FILL” button.

= The “RINSE” button.

Control Switch

The center position is “OFF”. The left position is “WASH”, which activates the beater motor only. The right position is “AUTO”. It activates the beater motor and the refrigeration system. To activate the refrigeration system, raise the draw arm momentarily.

Dial Light

A red dial light is located on the right side of the control switch. When the control switch is in the “AUTO” position, this light will come on, indicating that the refrigeration system is operable.

Indicator Light (“Mix Low”)

The mix low indicator light is located on the front of the machine directly above the flavor selector switch. When the light flashes, it indicates that the mix hopper has a low supply of mix and should be refilled as soon as possible. If mix is not added, a starved freezing cylinder will cause damage to the beater, blades, and drive shaft.

Indicator Light (“Mix Out”)

A mix out indicating light is located on the front of the machine directly above the control switch. When the light is on, the machine will shut down to prevent a starved freezing cylinder.

Reset Mechanism

The reset protects the beater motor from an overload condition. If an overload occurs, the reset mechanism will trip. To properly reset the freezer, set the control switch to “OFF”. Lift up the right upper side panel and press the reset button firmly. Turn the control switch to “WASH” and observe the freezer’s performance. Return the control switch to the “AUTO” position to resume normal operation.

If the reset mechanism should trip again, contact your authorized Taylor Distributor to resolve the problem.

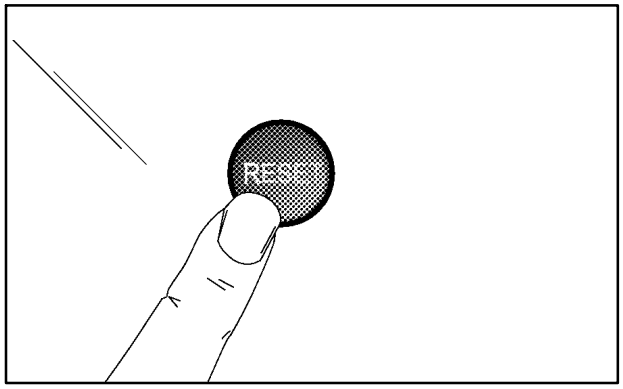


Figure 1

Consistency Control*

The viscosity (thickness) of the shake is controlled by a sensing device called the consistency control. The consistency control switch is located below the control switch. To achieve a thicker shake, turn the knob clockwise and counterclockwise to achieve a thinner shake consistency.

Allow the refrigeration system to cycle on and off two or three times before an accurate consistency can be evaluated.

Spinner Rinse Switch*

The spinner rinse switch is located next to the consistency control knob. To clean the spinner housing from syrup residue:

1. Place the control switch in the “AUTO” position.
2. Hold a cup under the spinner housing.
3. Press the spinner rinse switch. Water will flow until the switch is released.
4. Release the switch when the housing has been thoroughly rinsed.

Auto Lift Switch (Model 60 Only)*

The auto lift switch is located below the flavor selector switch. To draw product, the auto lift switch may be used. Press the switch. Just before the desired level in the cup is reached, release the switch. The draw arm will lower the draw valve and the product will stop flowing.

Foot Pedal (Model 60 Only)

The foot pedal is located on the lower front of the machine. To draw product from the Model 60, the foot pedal may be used. Press the foot pedal. Just before the desired level in the cup is reached, release the foot pedal. The draw arm will lower the draw valve and the product will stop flowing.

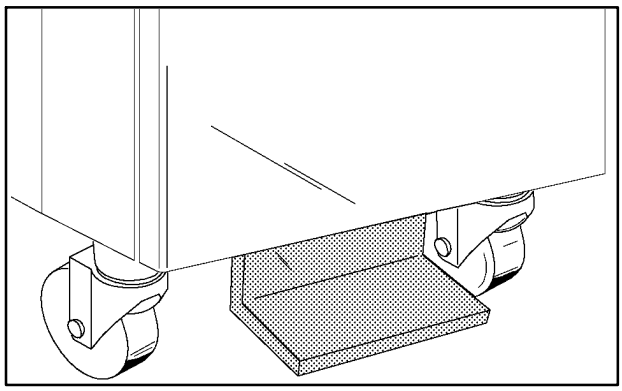


Figure 2

Flavor Selector Switch*

The flavor selector switch consists of four flavor buttons. The left button controls the No. 1 tank and its lines. The second button from the left controls the No. 2 tank and its lines. The third button from the left controls the No. 3 tank and its lines. The right selector button (“Van”) is the “OFF” button and may be used to dispense the unflavored product as a vanilla shake.

*See illustration, page 11.

Section 6 Operating Procedures

The Models 60 and 62 have one, 7 quart (6.6 liter) freezing cylinder. These totally automatic freezers offer four separate flavors. Each flavor is blended and ejected from the same spout. (Use only single strength syrup that is free of pulp and seeds.)

We begin our instructions at the point where we enter the store in the morning and find the parts disassembled and laid out to air dry from the previous night's brush cleaning.

These opening procedures will show you how to assemble these parts into the freezer, sanitize them, and prime the freezer with fresh mix in preparation to serve your first shake.

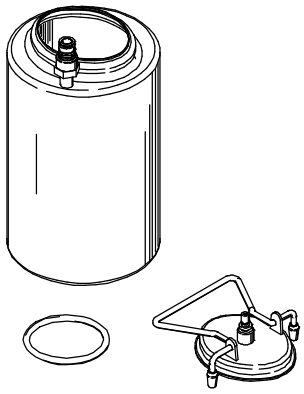


Figure 3

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 25 "Disassembly", and start there.

Assembly

Note: When lubricating parts, use an approved food grade lubricant (example: Taylor Lube).

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

Step 1
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 the groove until it snaps into place. **DO NOT** lubricate the hex end of the drive shaft. Fill the inside portion of the seal with 1/4" more lubricant. Lubricate the flat side of the seal that comes in contact with the bearing.

Note: Make sure seal is not installed inside–out. The ridge that protrudes in the center of the seal should be on the **outside.**

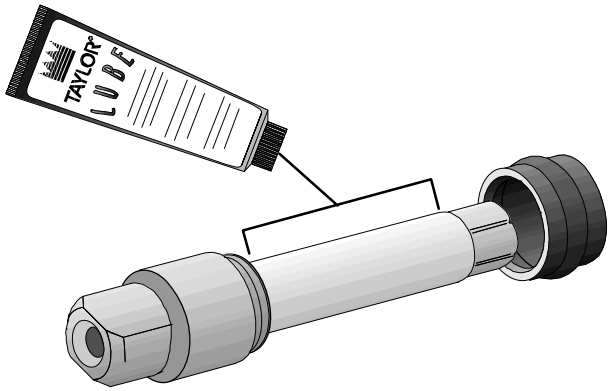


Figure 4

Insert the drive shaft into the freezing cylinder, hex end first, and into the rear shell bearing until the seal fits securely over the rear shell bearing. Be certain the drive shaft fits into the drive coupling without binding.

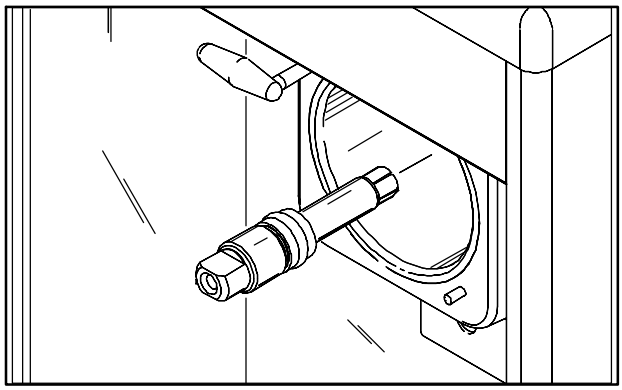


Figure 5

Step 2
Before installing the beater assembly, inspect the scraper blades.

Check the scraper blades for any signs of wear or damage. If a scraper blade is nicked or worn, replace both blades.

If the blades are in good condition, place the rear scraper blade over the two rear holding pins (knife edge to the outside).

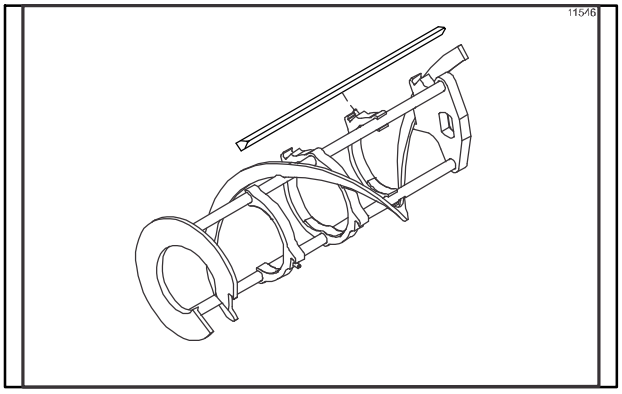


Figure 6

Holding the rear blade on the beater, slide it halfway into the freezing cylinder. Install the front scraper blade over the front holding pins. Slide the beater assembly the rest of the way into the freezing cylinder.

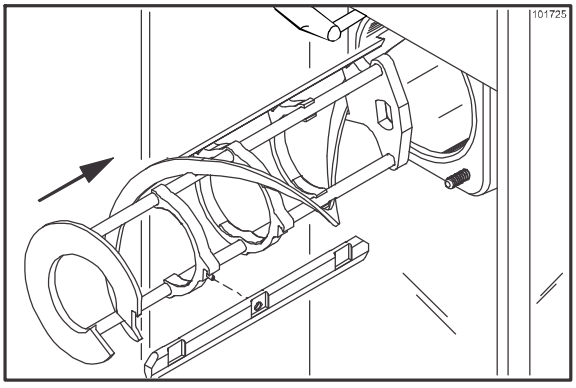


Figure 7

Make sure the beater assembly is in position over the drive shaft. Turn the beater slightly to be certain that the beater assembly is properly seated.

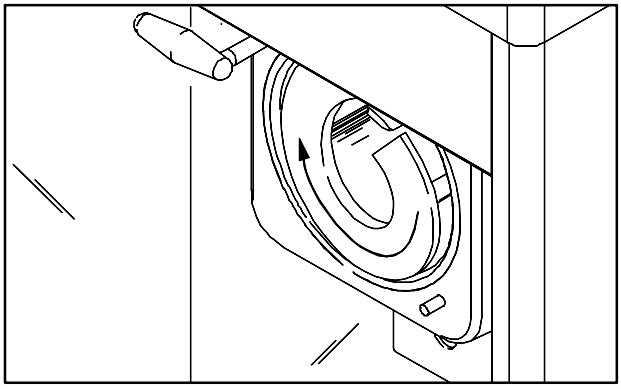


Figure 8

Step 3
Install the torque rotor assembly. Assemble the torque rotor by sliding the two o−rings on the front of the shaft and lubricate them thoroughly to prevent leaking. Place the white plastic guide bearing on the rear of the rotor shaft. **DO NOT** lubricate the plastic guide bearing

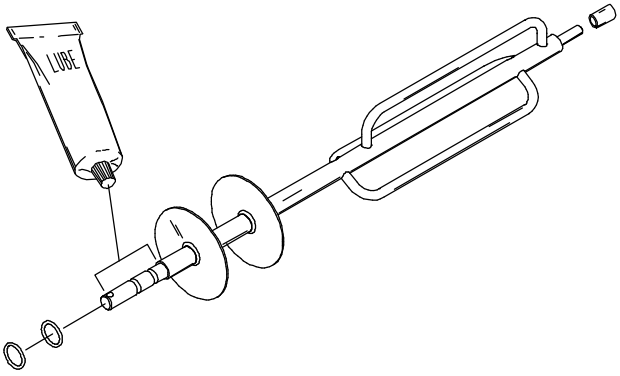


Figure 9

Insert the torque rotor, plastic guide bearing end first, **making sure** that it fits into the hole in the beater drive shaft. Rotate it several times to check for proper positioning.

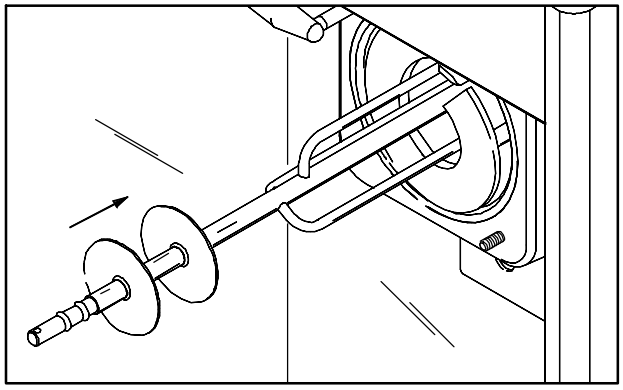


Figure 10

Step 4
Before assembling the freezer door, check the following for any nicks, cracks, or signs of wear:
door bearing, door gasket, draw valve, o−rings, and all sides of the door assembly, including the inside of the draw valve bore. Replace any damaged parts.

Step 5
Install the draw valve. Lubricate the plastic spinner bearing. Insert the plastic spinner bearing into the top of the draw valve.

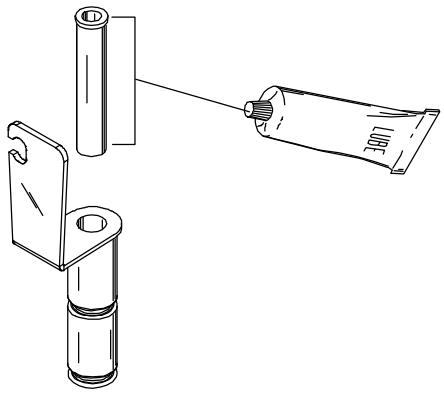


Figure 11

Slide the two o−rings onto the draw valve and lubricate the draw valve.

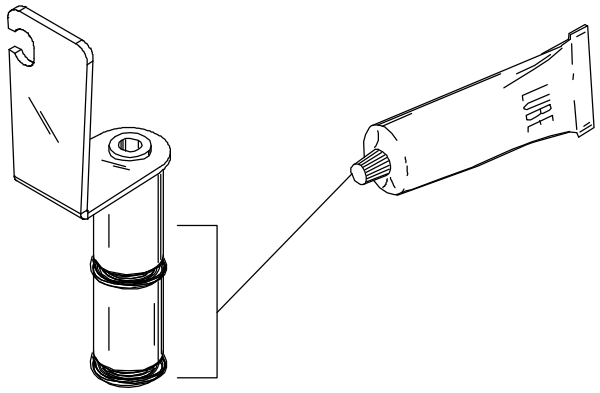


Figure 12

Lubricate the inside of the door spout, top and bottom. Insert the draw valve into the freezer door from the top. It will be necessary to rotate the draw valve to the right when assembling the door to the freezer.

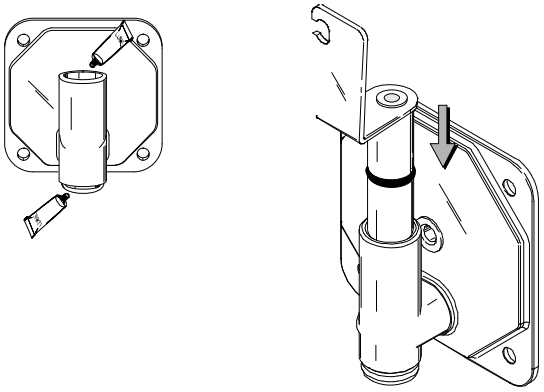


Figure 13

Step 6
Place the large rubber gasket into the groove on the back side of the freezer door. **DO NOT** lubricate the gasket.

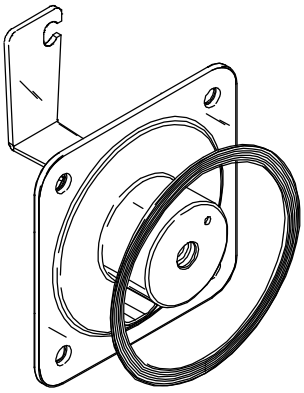


Figure 14

Slide the white plastic front bearing onto the bearing hub, making certain that the flanged end of the bearing sleeve is resting against the freezer door. **DO NOT** lubricate the front bearing.

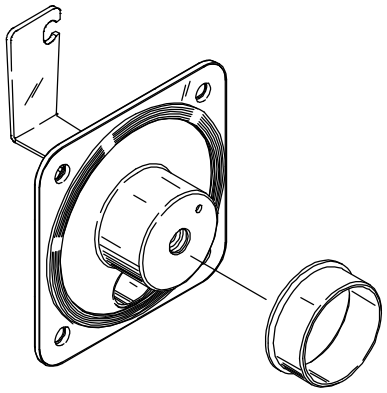


Figure 15

Install the door on the freezer by placing the torque rotor shaft into the center hole of the freezer door. Position the door on the four studs on the front of the freezing cylinder.

Install the four handscrews onto the door and tighten them equally in a criss–cross pattern.

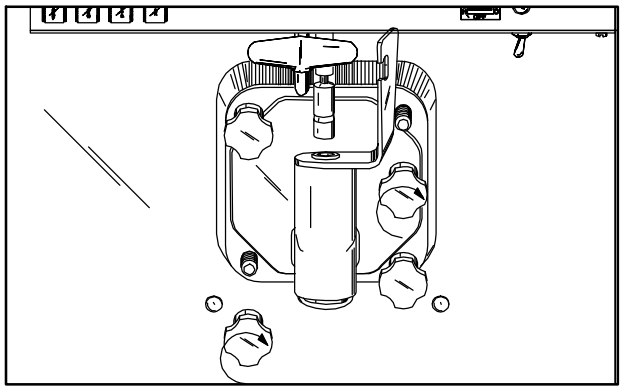


Figure 16

Step 7
Install the drip pan. Slide the drip pan into the hole in the front panel.

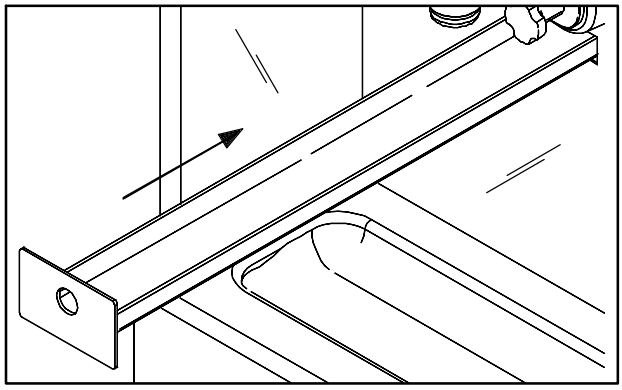


Figure 17

Step 8
Install the spinner housing. Snap the plastic spinner housing onto the bottom of the door spout.

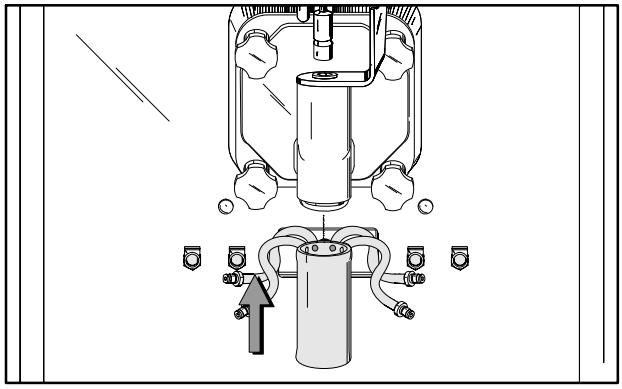


Figure 18

Lubricate the spinner blade shaft, and insert the spinner blade from the bottom into the center of the draw valve.

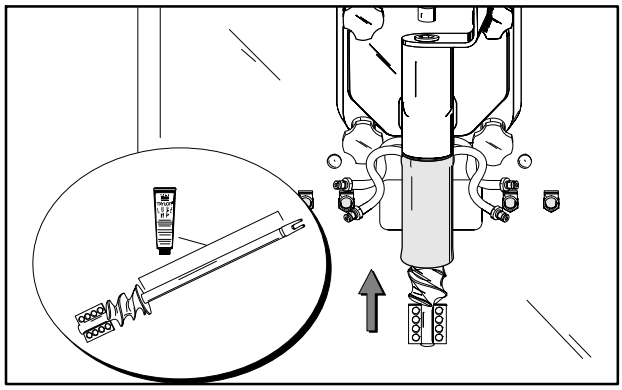


Figure 19

Locate the spinner coupling and slip it over the slotted end of the spinner blade shaft. Raise the slip collar on the coupling and turn the shaft from the bottom until the spinner coupling slips down into its locking position.

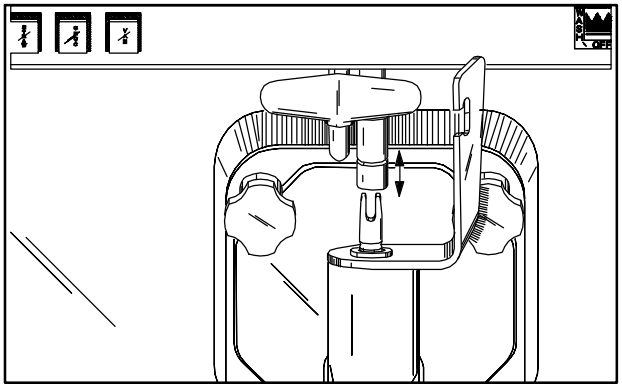


Figure 20

Rotate the draw valve to the left, and center it in position on the draw arm. Place the draw arm into the slotted groove of the draw valve bracket.

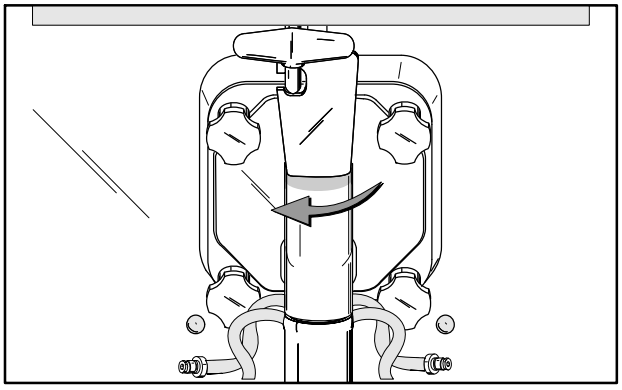


Figure 21

Step 9
Install the torque arm. Position the torque arm by first slipping it up through the slot in the operating arm. Secondly, align the other end down in the hole in the torque rotor shaft which protrudes from the door.

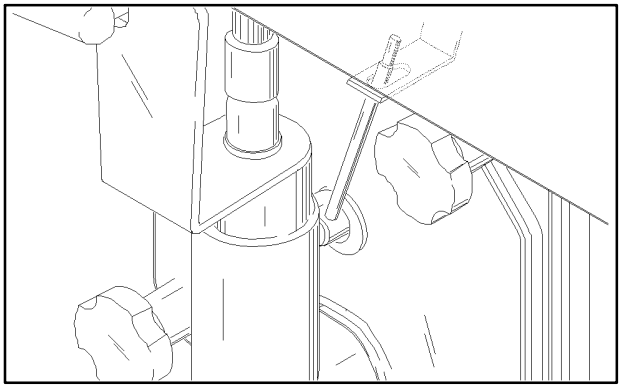


Figure 22

Check the torque arm by moving it back and forth to be sure it moves freely and easily.

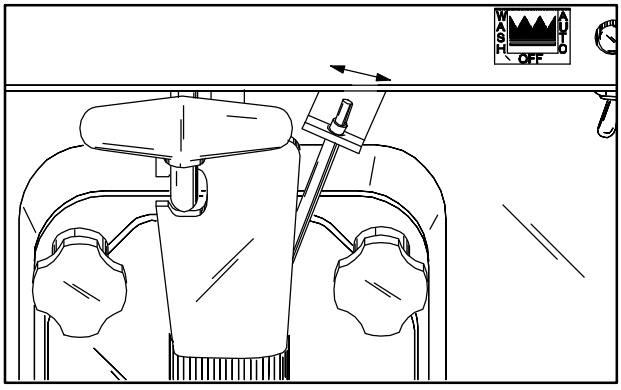


Figure 23

Step 10
Connect the syrup lines. Connect the syrup lines of the spinner housing to the quick disconnect fittings on the front panel.

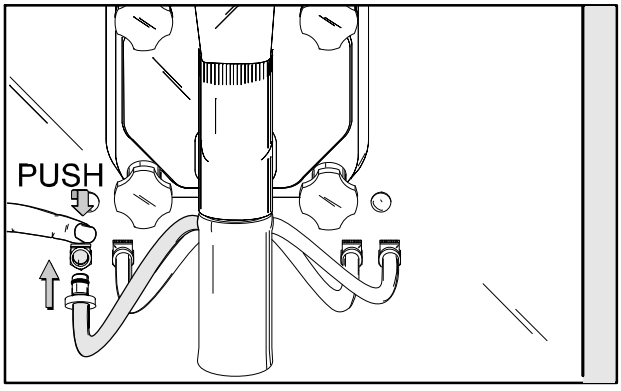


Figure 24

Step 11
Install the front drip tray and the splash shield.

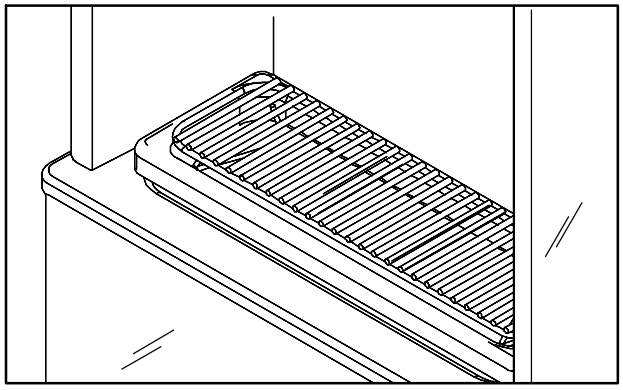


Figure 25

Sanitizing

Step 1
Prepare an approved 100 PPM sanitizing solution (examples: 2–1/2 gal. [9.5 liters] of Kay–5® or 2 gal. [7.6 liters] of Stera–Sheen®). USE WARM WATER AND FOLLOW THE MANUFACTURER'S SPECIFICATIONS.

NOTE: BEFORE HANDLING SANITIZED PARTS, SANITIZE YOUR HANDS!

Step 2
Lay the feed tube in the bottom of the mix hopper.

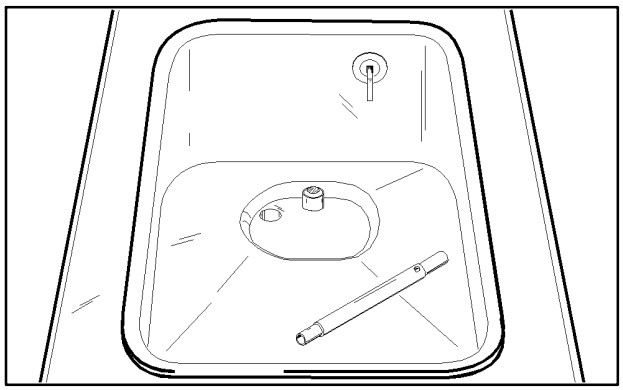


Figure 26

Step 3
Pour the sanitizing solution into the mix hopper and allow it to flow into the freezing cylinder.

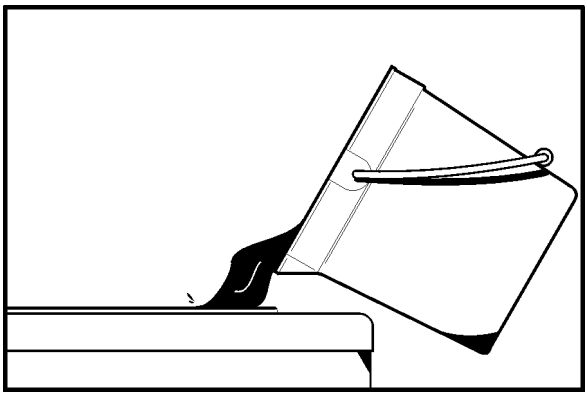


Figure 27

While the sanitizing solution is bubbling down into the freezing cylinder, brush clean the mix hopper. While cleaning the mix hopper, be sure to brush the mix level sensing probe on the rear wall of the hopper.

Figure 28

Brush clean the mix inlet hole and the feed tube.

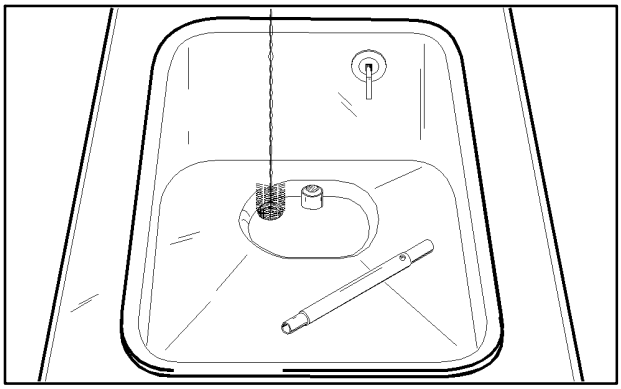


Figure 29

Step 4
Press the far right button on the syrup selector switch (”VAN”). Place the control switch in the “WASH” position. This will allow the solution to agitate in the freezing cylinder. Allow the solution to agitate for five minutes.

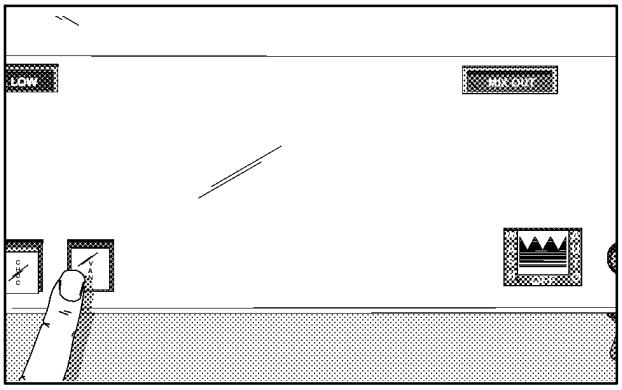


Figure 30

Step 5
Place an empty pail beneath the spinner housing and raise the draw arm. Draw off all the sanitizing solution. When the solution stops flowing from the spinner housing, lower the draw arm and place the control switch in the “OFF” position.

IMPORTANT! The unit must NOT be placed in “AUTO” until all sanitizing solution has been removed from the freezing cylinder and proper priming procedures have been completed. Failure to follow this instruction may result in damage to the freezing cylinder.

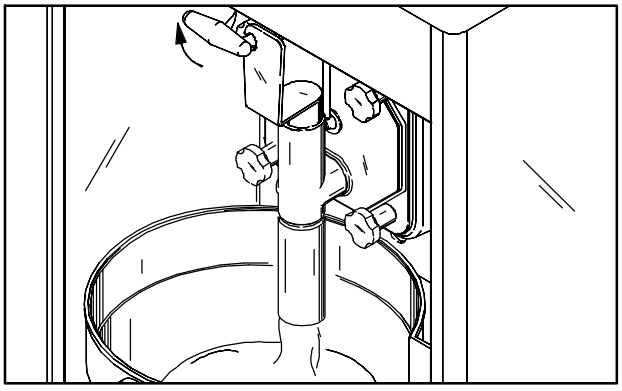


Figure 31

Step 6
Stand the feed tube in the corner of the mix hopper.

Priming

Step 1
Be sure the syrup selector switch is in the “OFF” position (“Van”).

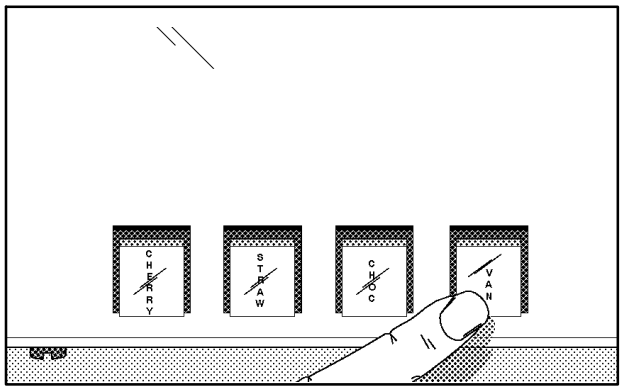


Figure 32

Step 2
With a pail beneath the spinner housing, raise the draw arm. Pour two gallons (7.6 liters) of FRESH mix into the mix hopper and allow it to flow down into the freezing cylinder. This will force out any sanitizing solution. When full strength mix is flowing from the spinner housing, lower the draw arm. Discard the remaining sanitizing solution.

IMPORTANT! Failure to remove all sanitizing solution may result in damage to the freezing cylinder.

When the mix has stopped bubbling down into the freezing cylinder, install the feed tube in the mix inlet hole. During “AUTO” operation be sure the end of the feed tube with the hole in it is submerged in the mix.

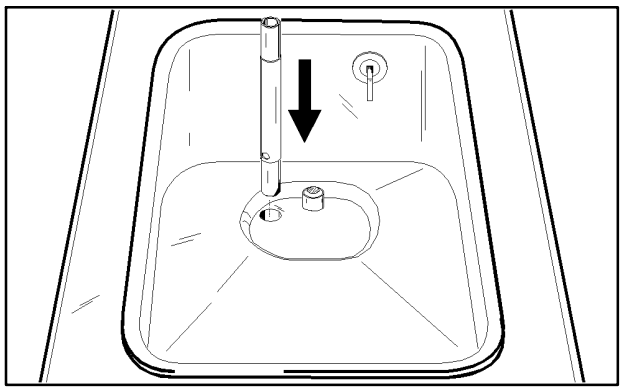


Figure 33

Step 3
Place the control switch in the “AUTO” position.

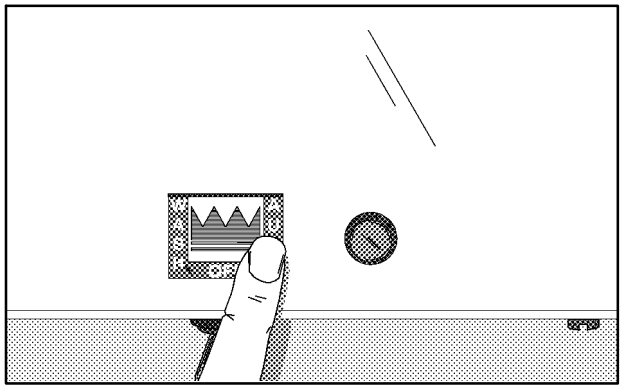


Figure 34

Step 4
To initiate freeze down, rotate the draw valve to the right so it is disengaged from the draw arm. Lift the draw arm momentarily. This will start the freezing cycle. Lower the draw arm and re−engage the draw valve. When the unit cycles off, the product is ready to serve.

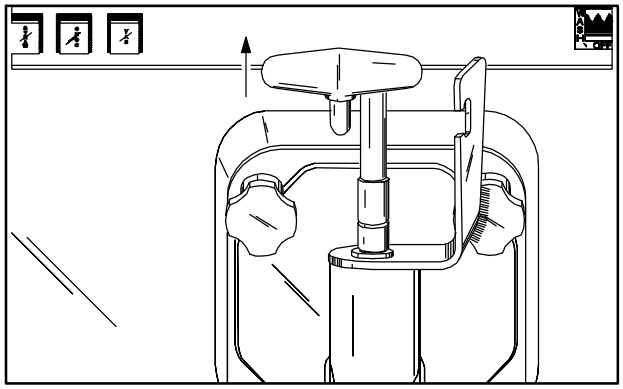


Figure 35

Step 5
Fill the mix hopper with mix. As the mix level comes in contact with the mix sensing probe on the rear wall of the hopper, the “MIX LOW” light will stop flashing.

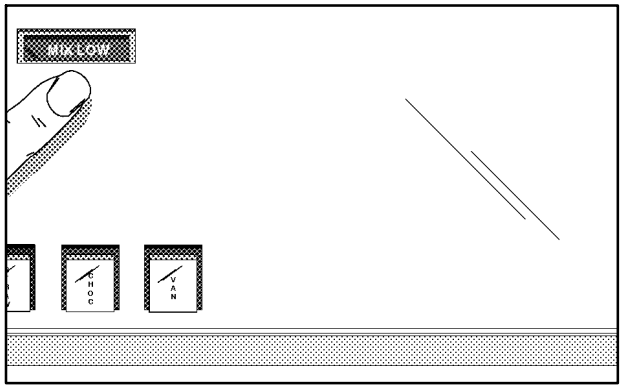


Figure 36

Place the mix hopper cover in position.

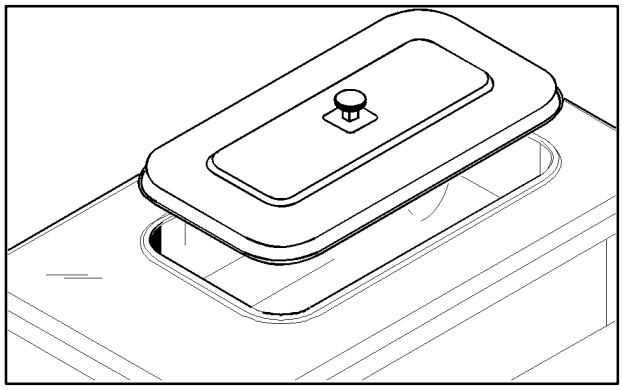


Figure 37

Syrup System

Two main objectives in your opening procedures must be to:

1. fill the syrup tanks.

2. calibrate the syrup flow.

The syrup system must be checked **daily** to insure the high quality shake you desire.

Important: Use only single strength syrup that is free of pulp and seeds.

Model 60

The syrup tanks are located in the lower front syrup cabinet. The air lines and syrup lines are color spiral wrapped. Be sure to match the color wrapped air and syrup line to the right flavor syrup tank.

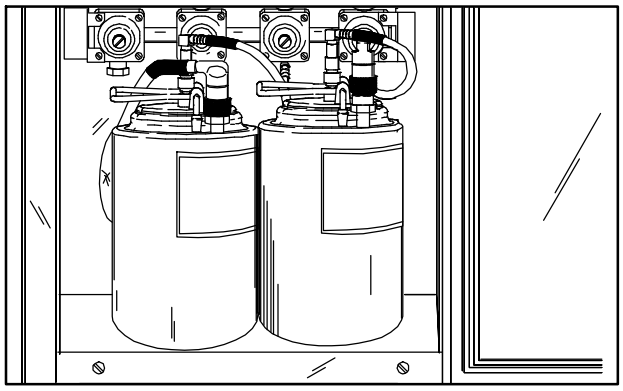


Figure 38

Model 62

The syrup tanks should be located within reach of the syrup lines. The air lines and syrup lines are color spiral wrapped. Be sure to match the color wrapped air and syrup line to the right flavor syrup tank. Compressed air or CO_2 may be used to propel the syrups.

Step 1
Filling the syrup tanks: Pull back the collar of the quick disconnect fittings for the air lines. Allow the air pressure to dissipate from the syrup tanks. Disconnect the syrup lines.

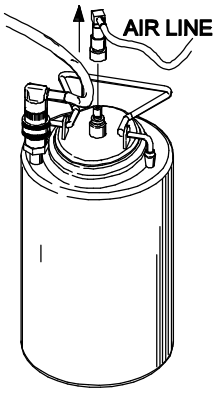


Figure 39

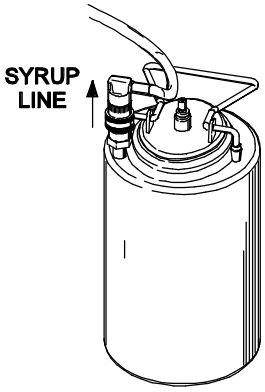


Figure 40

Remove the syrup tank lid by lifting up on the locking lever. Fill the syrup to the indicating mark on the label.

Important: Do not overfill the tanks.

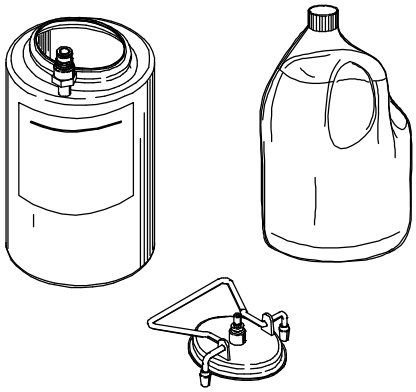


Figure 41

Install the tank lid. Match the spiral wrapped air and syrup lines to the syrup tank and connect them accordingly.

Note: Refer to page 26 for cleaning and sanitizing the syrup tanks.

Step 2

Calibrating the syrup flow: It is vital that the correct amount of syrup is incorporated into the mix to obtain a quality shake. Too much syrup often causes thin shakes. Too little syrup often causes thick shakes.

To determine the rate of syrup flow, use a calibrating cup indicating the ounces of liquid. Generally the proper rate of syrup flow is 1 ounce (29.6 ml.) of syrup in 6 seconds. Once this rate is set, the correct amount of syrup will be blended with the shake base regardless of the size of shake served.

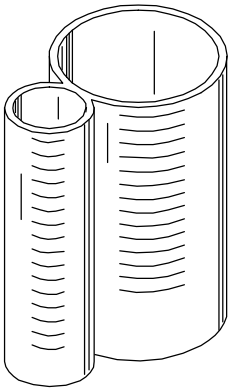


Figure 42

Rest the draw arm on top of the draw valve. Place the control switch in the “WASH” position.

Hold an empty cup under the spinner housing and from the left, press the first flavor button and purge this syrup line until pure syrup begins to flow steadily.

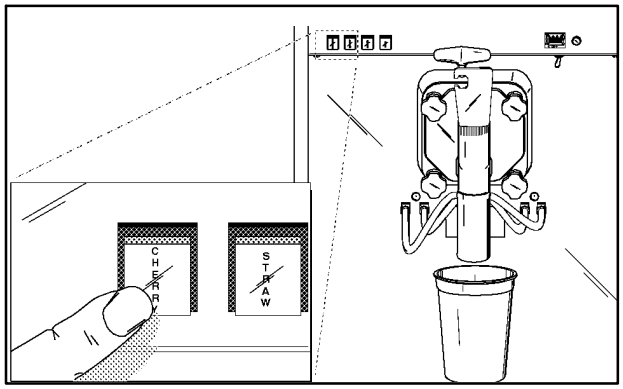


Figure 43

Note: It is very important to remove any sanitizing solution and/or air from the syrup lines for accurate calibration.

When pure syrup is flowing steadily from the spinner housing, press the far right button (“Van”) to stop the syrup flow.

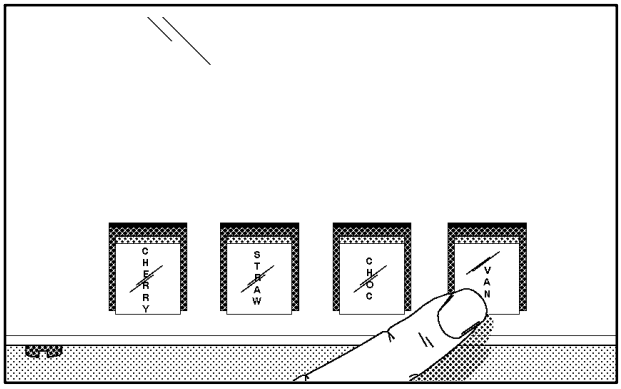


Figure 44

Position the large section of the calibrating cup under the spinner housing.

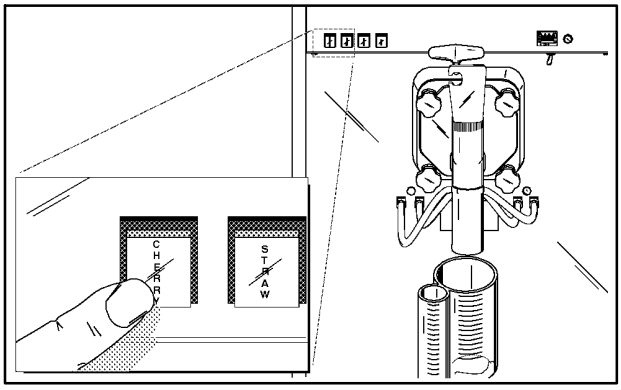


Figure 45

With a timing device, press the first flavor button catching the syrup in the calibrating cup. When the timing device reaches 6 seconds, press the far right button (“Van”) to stop the syrup flow. If the amount of syrup received is 1 ounce (29.6 ml.), the syrup is properly calibrated.

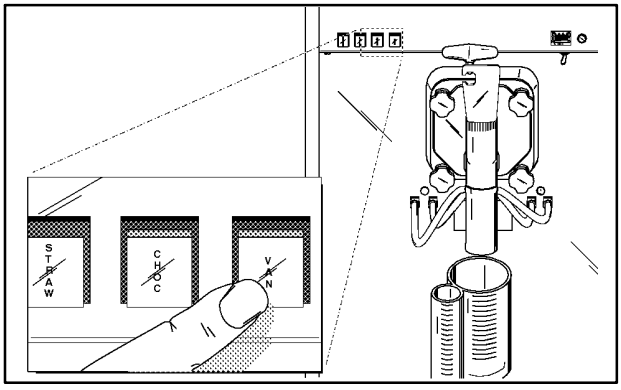


Figure 46

070131

Step 3
Adjusting the syrup pressure: If the amount of syrup received is less than 1 ounce (29.6 ml.), the syrup pressure must be increased. If the amount received is more than 1 ounce (29.6 ml.), the pressure must be decreased.

Model 60

Inside the syrup compartment is an air pressure manifold with individual regulators to control the amount of pressure to each tank and syrup line. The left regulator is used for syrup line number one and so on.

Model 62

To make these pressure adjustments, use the pressure regulators supplied with your freezer. The left regulator is used for syrup line number one and so on.

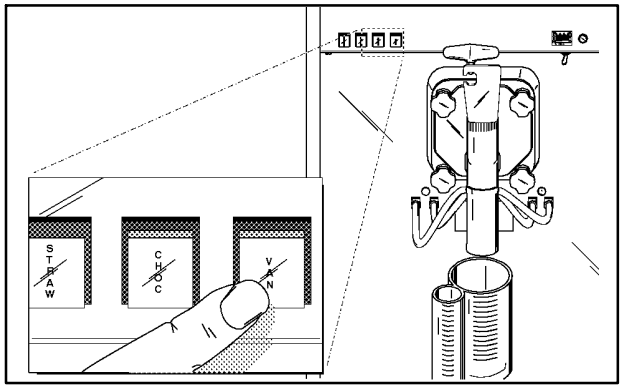


Figure 47

If less than 1 ounce (29.6 ml.) is received, the pressure must be increased. Loosen the lock nut. Using a flatblade screwdriver, turn the adjusting screw CLOCKWISE.

Recheck the syrup calibration. Tighten the lock nut after the correct calibration is achieved.

If more than 1 ounce (29.6 ml.) of syrup is received, the pressure must be decreased. Loosen the lock nut and turn the adjusting screw COUNTERCLOCKWISE to zero. Remove the air line to the syrup tank to allow the pressure in the tank to escape. Reconnect the air line. Adjust the regulator to the new pressure setting and recheck the syrup calibration. Tighten the lock nut.

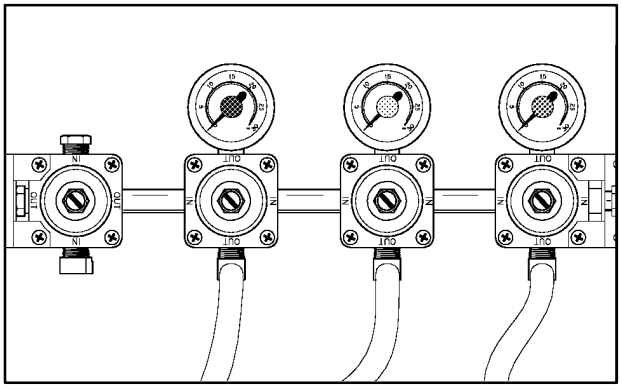


Figure 48

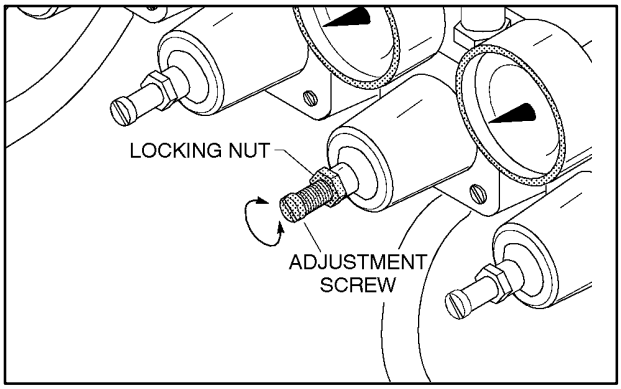


Figure 49

Repeat the calibration procedures for each additional syrup line.

Note: Refer to page 27 for cleaning and sanitizing the syrup lines.

Drawing Product

Step 1
Prepare to draw product by holding a cup under the spinner housing. Press a desired flavor selection button.

Step 2

Model 60

To draw product, push the auto lift toggle switch or press the foot pedal. This will cause the:

A. Draw arm to lift the draw valve to the open position.
B. Beater and spinner to start and the solenoid valve (if flavor is used) to open.
C. A constant amount of flavor is blended into the product as it flows out of the freezer.

Release the auto lift toggle switch or the foot pedal just before the desired level in the cup is reached. The draw arm will lower the draw valve and the product will stop flowing.

IMPORTANT RECOMMENDATION: The Model 60 incorporates an auto lift system. This system may be activated by either a hand switch or foot pedal. Drawing product may also be accomplished by lifting the draw arm.

Model 62

To draw product, raise the draw handle fully. This will cause the:

A. Beater and spinner to start and the solenoid valve (if flavor is used) to open.

B. A constant amount of flavor is blended into the product as it flows out of the freezer.

Lower the draw handle and the product will stop flowing.

Closing Procedures

To disassemble this machine, the following items will be needed:

- Two cleaning pails
- Sanitized stainless steel rerun can with lid
- Necessary brushes (provided with freezer)
- Cleaner/Sanitizer
- Single service towels

Draining Product From The Freezing Cylinder

Step 1
Place the control switch in the “OFF” position as far ahead of cleaning time as possible to allow the frozen product to soften for easier cleaning.

Step 2
Press the far right button on selector switch assembly (“Van”).

Step 3
Remove the spinner blade by lifting the slip collar on the spinner coupling. Pull the spinner blade out from the bottom of the spinner housing.

Step 4
Remove the mix hopper cover and feed tube from the mix hopper. Take these parts to the sink for cleaning.

Step 5
If local health codes permit the use of rerun, place a sanitized, NSF approved stainless steel rerun container beneath the spinner housing and place the control switch in the “WASH” position.

Model 60: Drain all the product remaining in the freezing cylinder and mix hopper by pressing the auto lift toggle switch or pressing the foot pedal. When the flow of product stops, release the auto lift toggle switch or foot pedal. Place the control switch in the “OFF” position.

Model 62: Drain all the product remaining in the freezing cylinder and mix hopper by raising the draw handle. When the flow of product stops, release the draw handle. Place the control switch in the “OFF” position.

Place a sanitized lid on the rerun container and place it in the walk–in cooler. (**Note:** For additional information regarding the proper use of rerun, see item 5 on page 29.)

Note: If local health codes DO NOT permit the use of rerun, the product must be discarded. Follow the instructions in Step 5, except drain the product into a pail and properly discard the mix.

ALWAYS FOLLOW LOCAL HEALTH CODES.

Rinsing

Step 1
Pour two gallons (7.6 liters) of **cool,** clean water into the mix hopper. With the brushes provided, brush clean the mix hopper, mix inlet hole, and mix level sensing probe.

Step 2
Press the far right switch on the selector switch assembly (“Van”). Place the control switch in the “WASH” position.

Step 3

Model 60

With an empty pail under the spinner housing, push the auto lift toggle switch or press the foot pedal and drain off all the rinse water. When the flow of rinse water stops, release the auto lift toggle switch or foot pedal.

Model 62

With an empty pail under the spinner housing, raise the draw handle and drain off all the rinse water. When the flow of rinse water stops, release the draw handle.

Place the control switch in the “OFF” position.

Step 4
Repeat this procedure until the rinse water being discharged is **clear.**

Cleaning

Step 1
Prepare an approved 100 PPM cleaning solution (examples: 2−1/2 gal. [9.5 liters] of Kay−5® or 2 gal. [7.6 liters] of Stera−Sheen®). USE WARM WATER AND FOLLOW THE MANUFACTURER’S SPECIFICATIONS.

Step 2
Pour the cleaning solution into the hopper and allow it to flow into the freezing cylinder.

Step 3
While the solution is flowing into the freezing cylinder, brush clean the mix hopper, mix inlet hole, and the mix level sensing probe.

Step 4
Place the control switch in the “WASH” position. This will cause the cleaning solution in the freezing cylinder to be agitated.

Step 5
Place an empty pail beneath the spinner housing. Be sure the far right button (“Van”) on the selector switch assembly is pressed.

Step 6

Model 60

Press the auto lift toggle switch or press the foot pedal and drain out all the solution. When the solution stops flowing from the spinner housing, release the auto lift toggle switch or foot pedal.

Model 62

Raise the draw handle and drain out all the solution. When the solution stops flowing from the spinner housing, release the draw handle.

Place the control switch in the “OFF” position. Take the pail to the sink and discard the solution.

Disassembly

MAKE SURE THAT ALL SWITCHES ARE IN THE “OFF” POSITION BEFORE DISASSEMBLY.

Step 1
Remove the torque arm. Separate the spinner housing from the freezer door. **Note:** Pull the spinner housing towards you.

Step 2
Disengage the draw arm from the draw valve and rotate the draw valve to the right.

Step 3
Remove the freezer door, door gasket, front bearing, torque rotor assembly, beater, scraper blades, and drive shaft and seal from the freezing cylinder. **Note:** When removing the door, take extreme care to separate the torque rotor shaft from the door. Costly damage will result if these parts are dropped during disassembly. Take all these parts to the sink for cleaning.

If the guide bearing is not on the end of the torque rotor shaft, it is still lodged in the beater drive shaft. To remove, insert the torque arm into the side hole of the drive shaft and push the bearing forward.

Step 4
Take the front drip tray and the splash shield to the sink for cleaning.

Step 5
Remove 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 drive shaft seal should be replaced or that it was improperly lubricated.

Brush Cleaning

Step 1
Prepare a sink with an approved cleaning solution (examples: Kay-5® or Stera–Sheen®). USE WARM WATER ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS. If an approved cleaner other than Kay–5® or Stera–Sheen® is used, dilute according to label instructions.

I**MPORTANT:** Follow label directions. Too STRONG of a solution can cause parts damage; 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 draw valve from the freezer door. Remove the spinner bearing from the draw valve. Remove all o–rings from the draw valve and torque rotor assembly. Remove the seal from the drive shaft. Remove the feed tube from the hopper.

Note: To remove o–rings, use a single service towel to grasp the o–ring. Apply pressure in an upward direction until the o–ring pops out of its groove. With the other hand, push the top of the o–ring forward, and it will roll out of the groove and can be easily removed. If there is more than one o–ring to be removed, always remove the rear o–ring first. This will allow the o–ring to slide over the forward rings without falling into the open grooves.

Step 3
Thoroughly brush clean all disassembled parts in the cleaning solution, making sure all lubricant and mix film is removed. Take particular care to brush clean the draw valve core and the holes in the freezer door.

Step 4
Place the cleaned parts on a clean, dry surface to air dry overnight.

Step 5
Take a small amount of cleaning solution to the freezer. With the black bristle brush, brush clean the rear shell bearing at the back of the freezing cylinder.

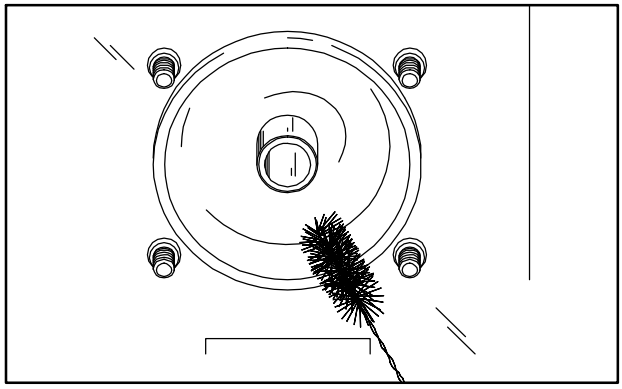


Figure 50

Step 6
Wipe clean all exterior surfaces of the freezer.

Sanitizing Syrup System

Two main objectives in your closing procedures must be to:

1. Discard all syrup at least once a week, and
2. Flush the syrup lines at least once a week.

This must be done on a regular basis to keep a build–up of old syrup from clogging the lines and to break the bacteria chain which develops in the tanks and lines.

IMPORTANT: Calibrating the syrup flow must be done every morning, **especially** after flushing the syrup lines. Use only single strength syrup that is free of pulp and seeds.

Step 1
Sanitizing syrup tanks: Pull back on the collar of the quick disconnect fitting of the air line. Allow the air pressure to dissipate from the syrup tank. Disconnect the syrup line.

Remove the syrup tank from its compartment. Remove the syrup tank lid by lifting up on the locking lever, and discard the remaining syrup.

Rinse the syrup tank with clean, warm water.

Prepare 1/2 gallon (1.9 liters) of the recommended sanitizing solution with warm water in the syrup tank. Brush clean the inside and outside of the tank.

Using an adjustable wrench, remove the syrup line fitting from each tank. Remove the dip tube and o−ring from the syrup tank.

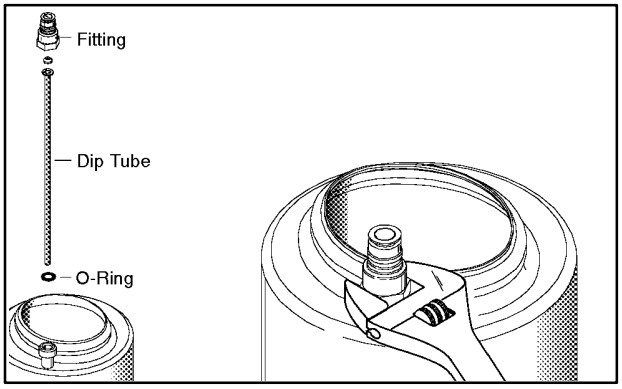


Figure 51

Thoroughly brush clean the dip tube, syrup line fitting, and o−ring, using the sanitizing solution. Reassemble dip tube, o−ring, and syrup line fitting.

Pour out all the sanitizing solution and place the tank in an upside−down position on a clean, dry surface to air dry.

Repeat this procedure for all syrup tanks.

Step 2
Sanitizing syrup lines: Prepare one gallon (3.8 liters) of the recommended sanitizing solution with warm water in the spare syrup tank. Replace and lock the tank lid into position. Place this tank in the syrup compartment.

Step 3
Remove the syrup lines from the spinner housing. Wash and sanitize the spinner housing.

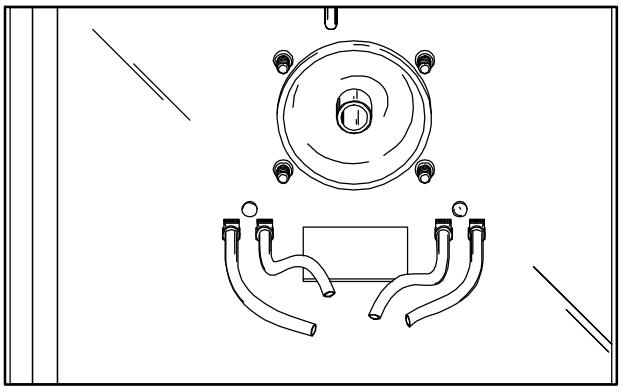


Figure 52

Step 4
Install the freezer door and the draw valve on the freezer. Raise the draw arm and rest the arm on the top of the draw valve.

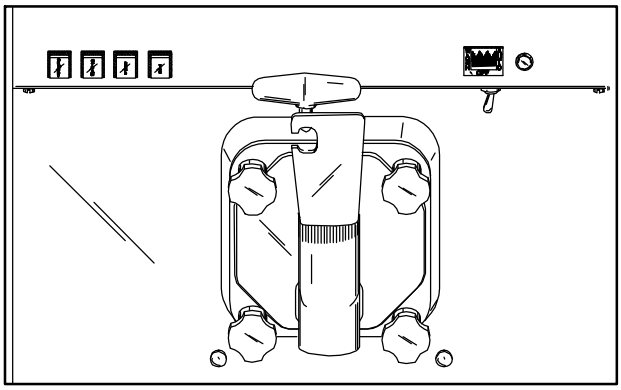


Figure 53

Step 5
Press the far right button on the selector switch assembly (“Van”), and place the control switch in “WASH”. This will partially close the electrical circuit so the syrup lines can be flushed by merely pressing the flavor buttons.

Step 6
Connect the No. 1 air pressure line and syrup line to the tank filled with sanitizing solution.

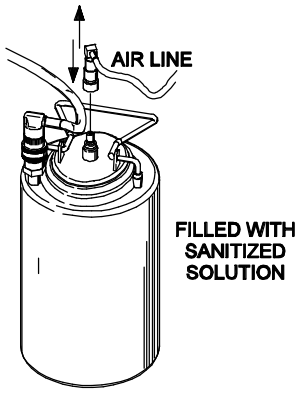


Figure 54

Step 7
Place an empty pail beneath the ends of the syrup lines. Press the left flavor button and flush the No. 1 syrup line until the solution runs clear. Press the far right button ("Van") to stop the flow of sanitizing solution.

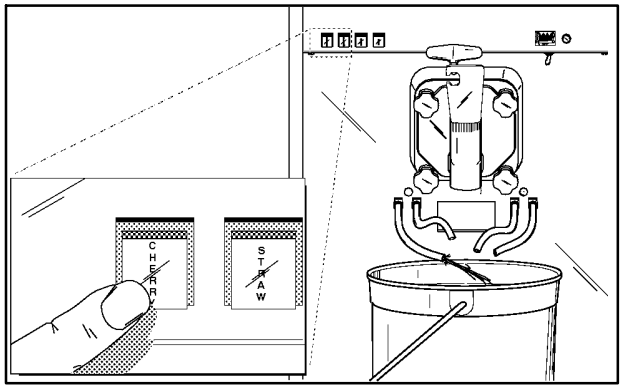


Figure 55

Note: This procedure will thoroughly clean the ends of the syrup lines that attach to the spinner housing to prevent bacteria build–up.

Step 8
Disconnect the No. 1 air and syrup lines from the tank now partially filled with sanitizer.

Step 9
Connect the No. 2 air and syrup lines to the tank and repeat the procedure by pressing the second flavor button from the left, and so on, until all three syrup lines have been cleaned and sanitized.

Step 10
The fourth syrup line is for the spinner rinse. To effectively sanitize the end of this syrup line, use a small amount of fresh sanitizer on a brush and brush clean the end of the fourth syrup line. Press the spinner rinse button to further flush this rinse line.

Repeat this step for each syrup line.

Step 11
Disconnect the air line and syrup line from the tank with the remaining sanitizer in it. Remove the tank lid and pour out all the remaining sanitizing solution. Place the tank in an upside down position on a clean, dry surface to air dry.

Step 12
Attach the syrup lines to the spinner housing.

Step 13
Remove the freezer door and the draw valve.

Section 7 Important: Operator Checklist

During Cleaning and Sanitizing:

Cleaning and sanitizing schedules are governed by federal, state, or local regulatory agencies, and must be followed accordingly. If the unit has a "Standby mode", it must not be used in lieu of proper cleaning and sanitizing procedures and frequencies set forth by the ruling health authority. The following check points should be stressed during the cleaning and sanitizing operations.

 **CLEANING AND SANITIZING MUST BE PERFORMED DAILY.**

 **ALWAYS FOLLOW LOCAL HEALTH CODES.**

Troubleshooting Bacterial Count:

☐ 1. Thoroughly clean and sanitize 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 bristle brush to clean the mix inlet hole which extends from the mix hopper 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. IF LOCAL HEALTH CODES PERMIT THE USE OF RERUN make sure the mix rerun is stored in a sanitized, covered stainless steel container and used the following day. DO NOT prime the machine with rerun. When using rerun, skim off foam and discard; then mix it with fresh mix in a ratio of 50/50 during the day's operation.

☐ 6. On a designated day of the week, run the mix as low as feasible and discard after closing. This will break the rerun cycle and reduce the possibility of high bacteria and coliform counts.

☐ 7. Properly prepare the cleaning and 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.

☐ 8. Empty all syrup from the tanks and discard at least once a week.

☐ 9. Thoroughly clean and sanitize the syrup lines at least once a week.

☐ 10. Temperature of mix in mix hopper and walk–in cooler should be below 40°F. (4.4°C.).

Regular Maintenance Checks:

☐ 1. Rotate scraper blades to allow both sides of the knife edge to wear evenly. This will contribute to self–sharpening and help maintain fast, efficient freezing.

☐ 2. Replace scraper blades that are nicked, damaged or worn.

☐ 3. Before installing beater, be certain that scraper blades are properly attached over the beater pins

☐ 4. Check rear shell bearing for signs of wear (excessive mix leakage in rear drip pan) and be certain it is properly cleaned.

☐ 5. Using a screwdriver and cloth towel, keep the female hex drive socket clean and free of lubricant and mix deposits.

☐ 6. Dispose of o−rings and seals if they are worn, torn, or fit too loosely, and replace with new ones.

☐ 7. Follow all lubricating procedures as outlined in “Assembly”.

☐ 8. 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.

☐ 9. 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 spring in water valve. Use air pressure on the outlet side to blow out any water remaining in the condenser. **This is extremely important.** Failure to follow this procedure may cause severe and costly damage to the refrigeration system.

Your local Taylor Distributor can perform this service for you.

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. No product being dispensed.	a. Inadequate mix in mix hopper.	a. Fill mix hopper.	20
	b. Control switch is in the “OFF” position.	b. Place control switch in the “AUTO” position.	20
	c. Freeze–up in mix inlet tube.	c. Call service technician to adjust mix hopper temperature.	– – –
	d. Beater motor out on reset.	d. Reset freezer.	12
	e. Wrong beater rotation.	e. Call service technician to correct rotation. Should rotate clockwise from the operator’s end.	– – –
	f. Beater motor will not activate with draw arm in the raised position.	f. An electrical problem requiring a service call.	– – –
	g. Frozen clumps of product blocking flow of mix to freezing cylinder.	g. Improper handling of rerun. Rerun must be thawed completely and foam must be skimmed off. Always mix 50% fresh mix with 50% rerun.	29
	h. Draw arm not engaged in draw valve.	h. Center draw valve on draw arm.	17
2. Product too stiff.	a. Improper lubrication of torque rotor o–rings.	a. Lubricate o–rings properly.	14
	b. Improper consistency control adjustment.	b. Product, with no syrup blended, should be dispensed at 26 to 28°F (–3.3 to –2.2°C).	12
	c. Torque rotor binding.	c. Before installing the torque arm, check to see if torque rotor can be rotated freely without binding.	14
	d. Not enough syrup being blended with product.	d. Calibrate the syrup system. Syrup delivery should be 1 oz. (29.6 ml.) in 6 seconds.	22
	e. Torque arm not installed.	e. Install torque arm.	17

PROBLEM	PROBABLE CAUSE	REMEDY	PAGE REF.
3. Product too soft.	a. Improper consistency control adjustment.	a. Product, with no syrup blended, should be dispensed at 26 to 28°F (–3.3 to –2.2°C).	12
	b. Torque rotor binding.	b. Before installing the torque arm, check to see if the torque rotor can be rotated freely w/o binding.	14
	c. Improper lubrication of torque rotor o–rings.	c. Lubricate o–rings properly.	14
	d. Lubrication of torque rotor guide bearing.	d. Do not lubricate guide bearing.	14
	e. Too much syrup being blended with product.	e. Calibrate the syrup system. Syrup delivery should be 1 oz. (29.6 ml.) in 6 seconds.	22
	f. Bad scraper blades.	f. Replace scraper blades.	35
	g. Dirty condenser.	g. Brush condenser clean every 30 days.	30
4. Large pressure adjustments are necessary to receive 1 oz. (29.6 ml.) in 6 seconds.	a. Hardened syrup in syrup line.	a. Sanitize syrup lines once a week.	26
	b. Syrup line and air line not matched properly to syrup tank.	b. Match syrup and air lines to syrup tank.	21
5. Mix hopper too warm.	a. Product too warm when placed in hopper.	a. Check temperature in storage cooler.	29
	b. Control switch in the “OFF” position.	b. Place in “AUTO” position.	20
	c. Needs temperature adjustment.	c. Call service technician to make adjustment.	– – –
6. Mix hopper too cold.	a. Needs temperature adjustment.	a. Call service technician to make adjustment.	– – –
7. Machine short cycling (rapid on and off cycles).	a. Dirty air cooled condenser.	a. Brush clean every 30 days.	30
	b. Inadequate water supply on water cooled unit.	b. Check water supply.	2
	c. Defective condenser fan.	c. Call service to repair or replace.	– – –
	d. No air space surrounding machine.	d. Maintain specified air clearance.	2

PROBLEM	PROBABLE CAUSE	REMEDY	PAGE REF.
8. The freezing cylinder walls are scored.	a. The scraper blades are damaged.	a. Replace the scraper blades.	NO TAG
	b. Unit was placed in AUTO before all sanitizing solution was removed from freezing cylinder.	b. Place unit in AUTO **only** after priming is complete and all sanitizing solution is removed.	19
	c. The front bearing is missing or worn on the freezer door.	c. Install or replace the front bearing.	16
	d. The beater assembly is bent.	d. Call service technician to repair or replace the beater and to correct the cause of insufficient mix in the freezing cylinder.	– – –
	e. Broken beater pins.	e. Call service technician to repair or replace.	– – –
9. Drive shaft stuck in gear box coupling.	a. Lubrication on hex end of shaft.	a. Call service techician for removal.	– – –
	b. Rounded corners of hex end of drive shaft.	b. Replace defective drive shaft.	– – –
	c. Rounded corners of coupling on gear box.	c. Call service technician to replace gear box.	– – –
10. Excessive leakage of mix into rear drip pan.	a. Worn or missing seal on drive shaft.	a. Replace every 3 months.	35
	b. Inadequate lubrication of drive shaft.	b. Follow lubrication procedures in “Assembly”.	13
	c. Bad rear shell bearing.	c. Call service technician to replace rear shell bearing.	– – –
	d. Drive shaft and beater working forward.	d. Call service technician.	– – –
11. Machine will not operate when control switch is in “AUTO”.	a. Draw arm not raised.	a. Raise draw arm momentarily to activate system.	20
	b. Beater motor out on reset.	b. Reset freezer.	12
	c. Circuit breaker off.	c. Turn breaker on.	– – –
	d. Water turned off (water cooled units).	d. Re–establish water supply.	– – –
	e. Power cord unplugged.	e. Plug cord into wall receptacle.	– – –

PROBLEM	PROBABLE CAUSE	REMEDY	PAGE REF.
12. Water continues to flow through spinner housing.	a. Rinse solenoid stuck open.	a. Call service technician for repair.	– – –
13. Lift motor continues to raise draw valve after draw of product has been made.	a. Micro switch needs adjustment.	a. Call service technician for repair.	– – –
14. Air compressor runs too often for normal usage.	a. Air leak in system.	a. Use a soap solution to locate the leak.	– – –
15. Spinner shaft will not rotate to blend syrup into product.	a. Flexible cable broken.	a. Call service technician to replace cable.	– – –
	b. Pin missing in female quick disconnect.	b. Call service technician to replace disconnect.	– – –
	c. Spinner motor out on thermal overload.	c. Inadequate lubrication of spinner shaft. Lubricate entire length of shaft.	16
16. Excessive drippage of product from spinner housing.	a. Worn o–rings on draw valve.	a. Replace every 3 months.	35
	b. Wrong o–rings on draw valve.	b. Check o–ring size.	– – –
	c. Inadequate lubrication of spinner shaft.	c. Follow lubrication procedures in “Assembly”.	16

Section 9 Parts Replacement Schedule

PART DESCRIPTION	EVERY 3 MONTHS	EVERY 6 MONTHS	ANNUALLY	QUANTITIES TO BE REPLACED
Drive Shaft Seal	X			1
Scraper Blades	Inspect & Replace if Necessary	Minimum		2
Freezer Door Gasket	X			1
Front Bearing	X			1
Draw Valve O−Rings	X			2
Torque Rotor Guide Bearing	X			1
Torque Rotor O−Rings	X			2
Feed Assembly O−Rings	X			2
Double Ended Brush		Inspect & Replace if Necessary	Minimum	1
Black Bristle Brush, 1” x 2”		Inspect & Replace if Necessary	Minimum	1
Bristle Brush, 1−1/2” x 2”		Inspect & Replace if Necessary	Minimum	1
Bristle Brush, 3” x 7”		Inspect & Replace if Necessary	Minimum	1

Tune−Up Kits are available from your Taylor Distributor. Keep your freezer in top condition with the above replacement parts in a “Tune−Up Kit” for your model of freezer! Ask your Taylor Distributor about the Automatic 3−Month Tune−Up Kit Mailing Program.

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 **Frozen Yogurt** **Shakes** **Smoothies** **Frozen Beverage** **Batch Desserts**	Insulated shell assembly	Five (5) years
	Refrigeration compressor (except service valve)	Five (5) years
	Beater motors	Two (2) years
	Beater drive gear	Two (2) years
	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.

131108

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.

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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.

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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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750 N. Blackhawk Blvd.
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