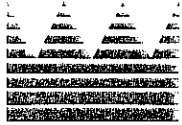
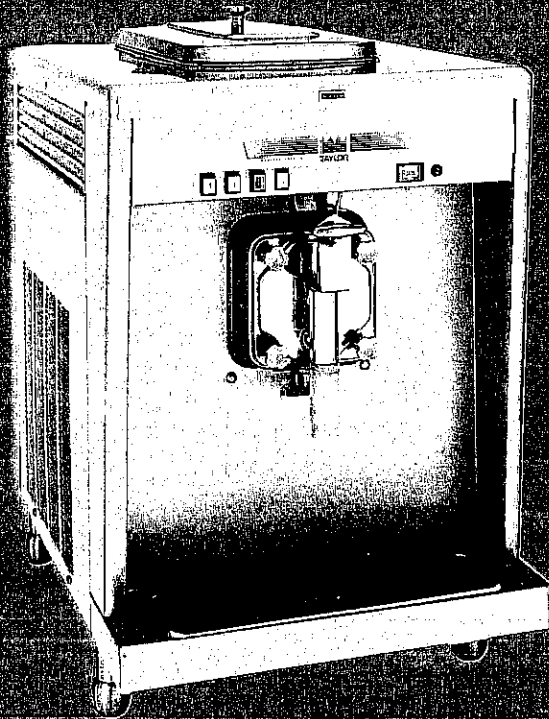


# OPERATOR'S MANUAL

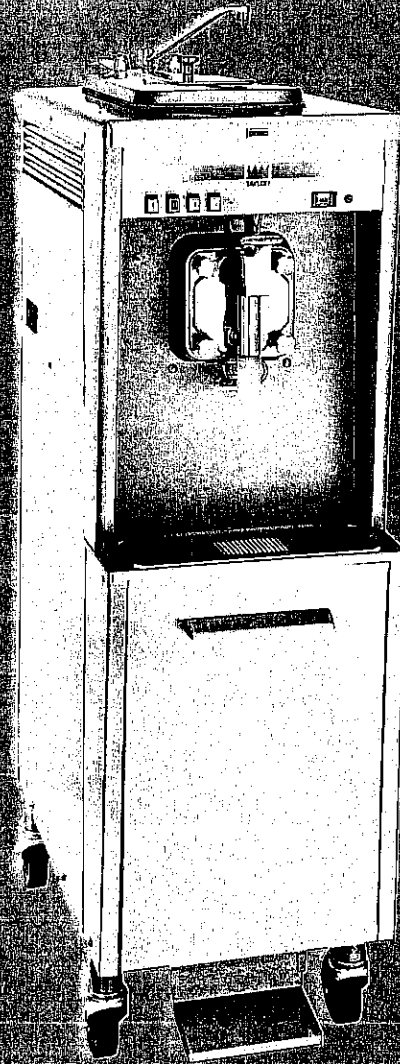


# TAYLOR

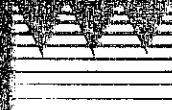
Model 453



Model 452



**Shakermaster**



**TAYLOR**  
ROCKTON, ILLINOIS 61072



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# To the Installer

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## **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**.

## **AIR COOLED UNITS**

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

## **ELECTRICAL CONNECTIONS**

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

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

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

Beater rotation must be clockwise as viewed looking into the barrel of any model freezer.

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 provided in the main control box mounted on the right hand side of the freezer for the Model 452 and on the left hand side of the freezer for the Model 453.



# To the Operator

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The freezer you have purchased has been carefully engineered and manufactured to give you dependable operation. The Taylor Models 452 and 453, 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 452 and 453 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.

## COMPRESSOR WARRANTY DISCLAIMER

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

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

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



# Data Plate

The freezer data plate provides necessary information that the operator should record and refer to when this information is requested by:

- A. Electrician
- B. Service Technician

- C. Parts Manager for service parts
- D. Warranty status

The data plate is located on the rear panel of the freezer.

**TAYLOR**

**PART NUMBER** \_\_\_\_\_

**MODEL NUMBER** \_\_\_\_\_

**VOLTS** \_\_\_\_\_ **HZ** \_\_\_\_\_ **PH** \_\_\_\_\_

**SERIAL NUMBER** \_\_\_\_\_

**VALUES EACH**

	NO.	COOLING	HEATING	LRA/HP	REFRIGERANT
COMPRESSOR		RLA	RLA	LRA	OZ.
COMPRESSOR		RLA	RLA	LRA	OZ.
COMPR.-AUX.		RLA	RLA	LRA	OZ.
BEATER MOTOR		FLA	FLA	HP	DESIGN PRESSURE- ALL CIRCUITS (PSIG) LOW: _____ HIGH: _____
BEATER MOTOR		FLA	FLA	HP	
COOLING MOTOR		FLA	FLA	HP	MAX. BR. CIR. FUSE OR HACR CIR. BREAKER _____ A.
PUMP MOTOR		FLA	FLA	HP	
PUMP MOTOR		FLA	FLA	HP	MIN. CIRCUIT CAPACITY _____ A.
AGIT. MOTOR		FLA	FLA	HP	TOTAL AMPS _____
		FLA	FLA	HP	UNITED STATES PATENT ONE OR MORE OF THE FOLLOWING 4201550    4544065    PROTECTED BY 4203461    4580905    VARIOUS 4275587    4732013    FOREIGN 4384491    4078760    PATENTS- 4384686    0256124    OTHER 4380760               PATENTS 4393859               PENDING
		FLA	FLA	HP	
		FLA	AMP	HP	
		FLA	AMP	HP	
		FLA	AMP	HP	

**TAYLOR COMPANY    ROCKTON, ILLINOIS, U.S.A.**

MADE IN U.S.A.    44124 REV

Complete for quick reference when this information is requested:

1. Model Number: \_\_\_\_\_
2. Serial Number: \_\_\_\_\_
3. Electrical Specs: Voltage \_\_\_\_\_ Cycle \_\_\_\_\_  
Phase \_\_\_\_\_
4. Maximum Fuse Size: \_\_\_\_\_ Amps
5. Minimum Circuit Ampacity: \_\_\_\_\_ Amps
6. Part Number: \_\_\_\_\_



# Safety

---

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

## To Operate Safely:

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

**DO NOT** operate the freezer unless it is properly grounded.

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

**DO NOT** attempt any repairs unless the main power supply to the freezer has been disconnected. Contact your local authorized Taylor Distributor for service.

**DO NOT** operate the freezer with larger fuses than specified on the freezer data plate. Consult your electrician.

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

**DO NOT** obstruct air intake and discharge openings:

**Counter Models:** 6" (15.2 cm) minimum air space on sides and rear, and 4" (10.2 cm) on bottom.

**Console Models:** 6" (15.2 cm) minimum air space on sides and rear, and 7-1/2" (19.1 cm) on bottom.

**DO NOT** put objects or fingers in door spout or spinner housing.

**DO NOT** remove door, beater and blades, drive shaft or torque rotor shaft unless all control switches are in the "OFF" position.

**USE EXTREME CAUTION** when removing the beater assembly. The scraper blades are very sharp and may fall free of the beater and could cut unless properly handled.





# Taylor Company<sup>®</sup> Warranty

A warranty checkout card is shipped with every new freezer that leaves the factory. The warranty checkout card is packed in an envelope which also contains this operator's manual. Refer to the warranty checkout card and the warranty classifications listed in the parts list at the back of this manual when service is performed on your freezer.

It is strongly recommended that the operator take the necessary time to carefully read through the complete warranty information contained in the warranty checkout card. Any questions or unclear statements found within the card should be made clear to you upon delivery of the freezer. Thoroughly understand your warranty protection before you begin operation.

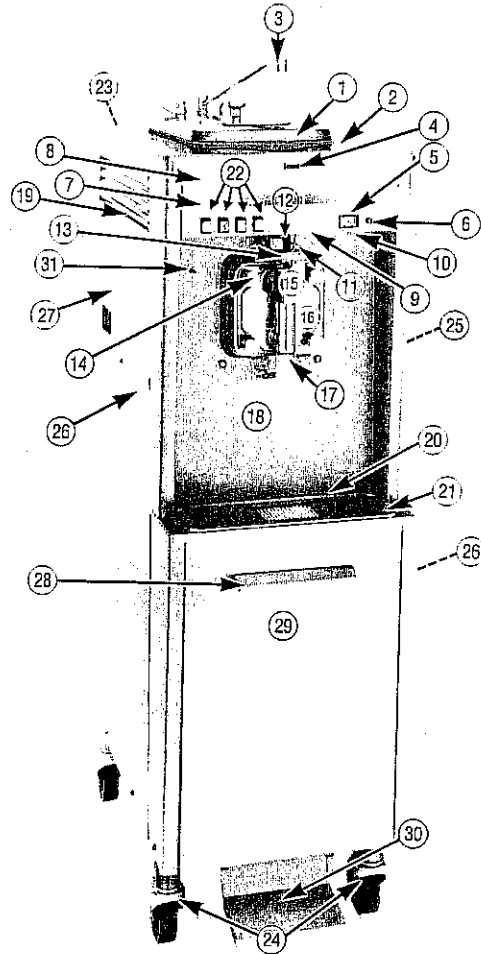
Taylor Company stands behind the quality of design and manufacturing that is put into every model we make . . . more so than anyone else in the industry. The Taylor Company Warranty is a strong example of this and exemplifies how important we feel it is to keep you a satisfied and proud owner of a Taylor freezer.

For any questions pertaining to the Taylor Warranty, please contact your authorized Taylor Distributor or Taylor Company, Rockton, Illinois 61072.



# Controls and Panels

## Model 452



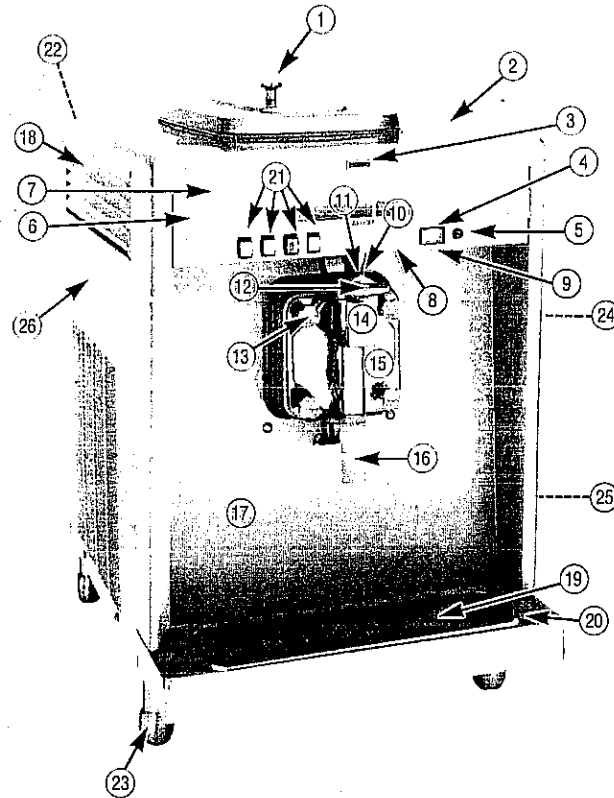
Item	Description	Part No.	Item	Description	Part No.
1	Mix Hopper Cover Assembly	X38458	17	Spinner Housing	017269
2	Hood	023267-SP	18	Front Panel Assembly	X17050
3	Faucet	016778	19	Side Louver	013631
4	Indicator Light ("Mix Low")*	023056-	20	Splash Shield	022763
5	Control Switch ("Wash-Off-Auto")*	014237	21	Drip Tray	013690
6	Dial Light*	014118	22	Push Button Selector Switch*	016982
7	Decorative Decal	021872	23	Rear Panel	026980
8	Decorative Plate	022626	24	Swivel Casters	018794
9	Consistency Control Knob*	014499	25	Right Upper Side Panel	028707
10	Spinner Rinse Toggle Switch*	016250	26	Lower Side Panel Assembly	X24397
11	Torque Arm	014500	27	Left Upper Side Panel	028706
12	Flexible Spinner Drive Shaft	016787	28	Drawer Handle	017027
13	Draw Arm Knob	013635	29	Drawer Assembly	X34606
14	Handscrew	021508	30	Foot Pedal Bracket Assembly	X17597
15	Draw Valve Assembly	X17379	31	Auto Lift Motor Push Button Switch	016530
16	Freezer Door Assembly	X17373			

\* See page 16 for more detailed information.



# Controls and Panels

## Model 453



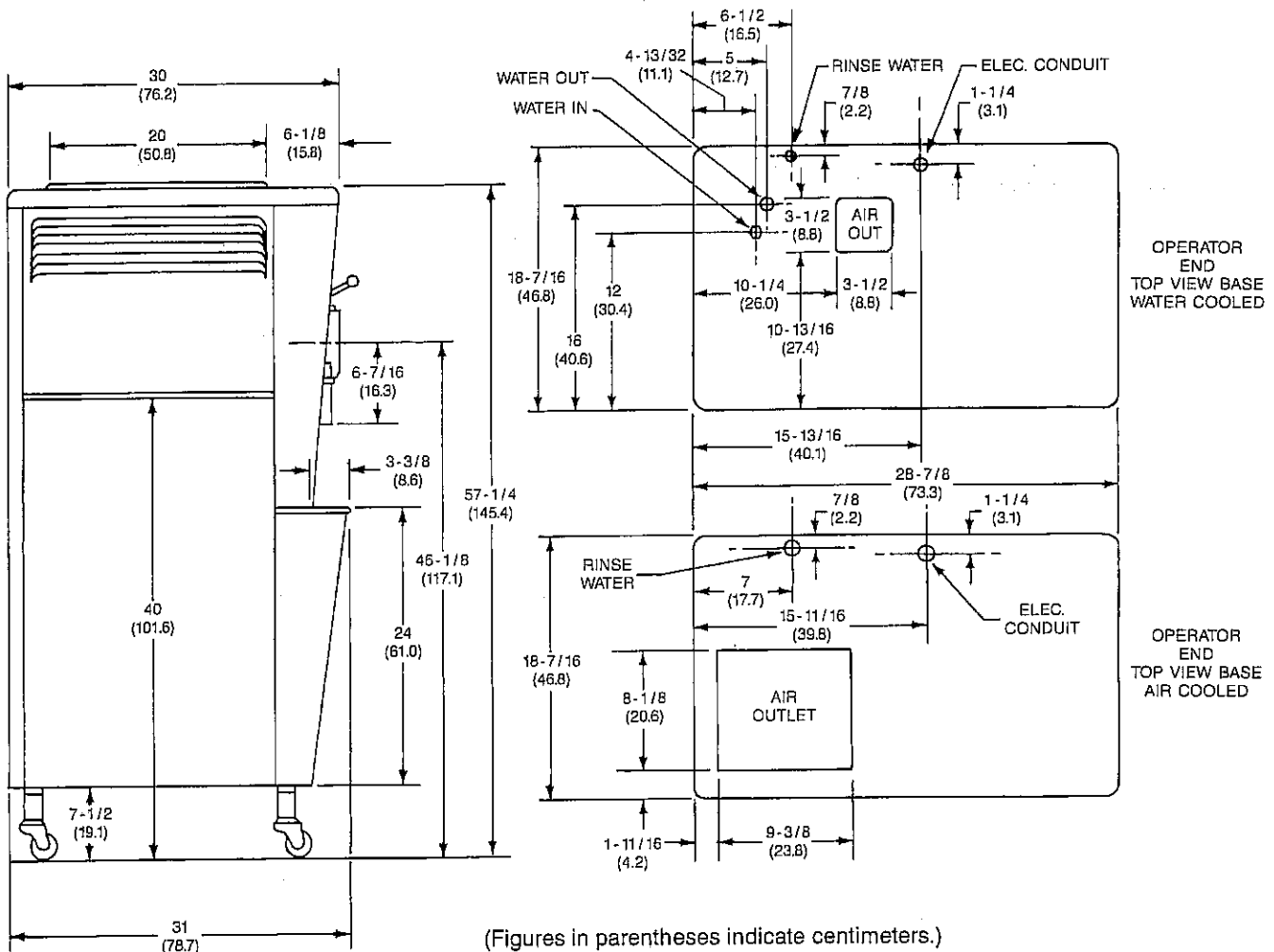
Item	Description	Part No.	Item	Description	Part No.
1	Mix Hopper Cover Assembly	X38458	15	Freezer Door Assembly	X17373
2	Hood	039025	16	Spinner Housing	017269
3	Indicator Light ("Mix Low")*	023056	17	Front Panel Assembly	X39005
4	Control Switch ("Wash-Off-Auto")*	014237	18	Side Louver	013631
5	Dial Light*	014118	19	Splash Shield	022765
6	Decorative Decal	021872	20	Drip Tray	020157
7	Decorative Plate	039022	21	Push Button Selector Switch*	016982
8	Consistency Control Knob*	014499	22	Rear Panel	039021
9	Spinner Rinse Toggle Switch*	016250	23	Leg	013458
10	Torque Arm	014500	24	Right Upper Side Panel	028707
11	Flexible Spinner Drive Shaft	016787	25	Right Lower Side Panel	039024
12	Draw Arm Knob	013635	26	Left Side Panel Assembly	X24684
13	Handscrew	021508			
14	Draw Valve Assembly	X17379			

\*See page 16 for more detailed information.



# Specifications

## Model 452



- **MIX HOPPER.** One; 20 quart (18.9 liter) capacity. Refrigerated and insulated.
- **BEATER MOTOR.** One; 1 hp.
- **REFRIGERATION UNIT.** One; approximately 13,000 btu/hr compressor. Refrigerant 502.
- **ELECTRICAL.** Standard is 208/230-60-1 or 208/230-60-3; however, other electrical characteristics are available. Each unit requires electrical service\* — Single Phase Maximum Fuse Size: 30 Amps. Minimum Wire Ampacity: 23A. Three Phase Maximum Fuse Size: 25 Amps. Minimum Wire Ampacity: 18A.
- **AIR COOLED.** Clearance: 6" (15.2 cm) around all sides and 7-1/2" (19.1 cm) on bottom.

- **WATER COOLED.** Water inlet and drain connections at rear of unit 3/8" FPT.
- **DIMENSIONS.** Width: 18-7/16" (46.8 cm). Depth: 31" (78.7 cm). Height: 57-1/4" (145.4 cm). Floor Clearance: 7-1/2" (19.1 cm) mounted on standard casters or legs.
- **APPROXIMATE WEIGHTS.** Net: 520 lbs. (235.9 Kgs.). Crated: 580 lbs. (263.1 Kgs.) 35.4 cu. ft. (1.0 cu.m.).

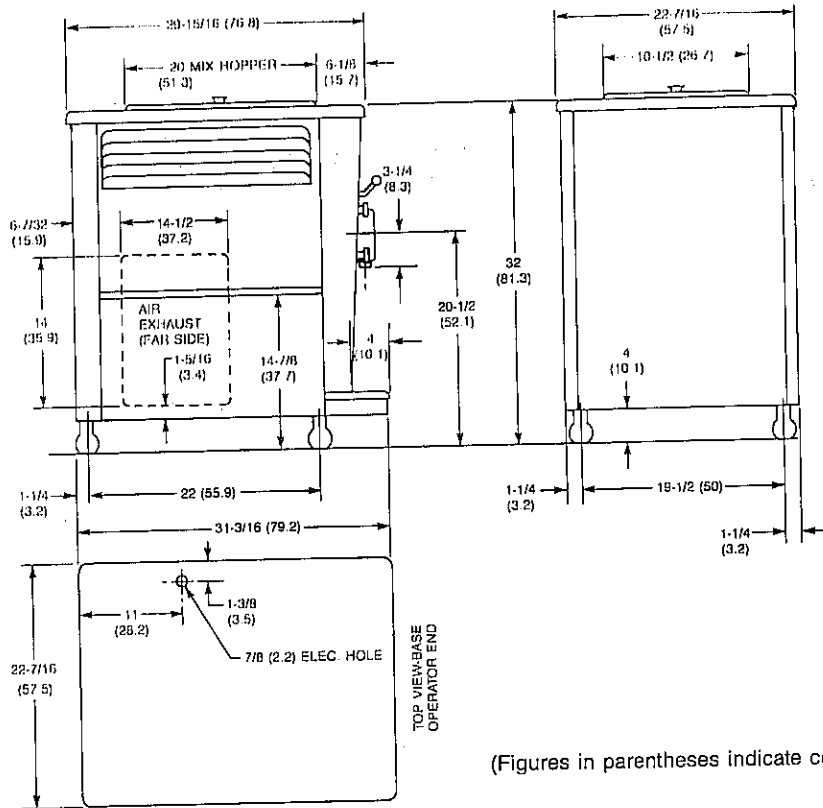
\*For exact electrical information, always refer to the data plate of the unit.

Availability and specifications subject to change without notice.



# Specifications

## Model 453



(Figures in parentheses indicate centimeters.)

- **MIX HOPPER.** One; 20 quart (18.9 liter) capacity. Refrigerated and insulated.
- **BEATER MOTOR.** One; 1 hp.
- **REFRIGERATION UNIT.** One; approximately 13,000 btu/hr compressor. Refrigerant 502.
- **ELECTRICAL.** Standard is 208/230-60-1; however, other electrical characteristics are available. Each unit requires electrical service\* — Single Phase Maximum Fuse Size: 25 Amps. Minimum Wire Ampacity: 19A.
- **AIR COOLED.** Clearance: 6" (15.2 cm) around all sides and 4" (10.2 cm) on bottom.

- **WATER COOLED.** Water inlet and drain connections at rear of unit 3/8" FPT.
- **DIMENSIONS.** Width: 22-7/16" (57.5 cm). Depth: 31-3/16" (79.2 cm). Height: 32" (81.3 cm). Counter Clearance: 4" (10.2 cm) mounted on standard legs.
- **APPROXIMATE WEIGHTS.** Net: 388 lbs. (176.1 Kgs.). Crated: 430 lbs. (195.1 Kgs.) 23.5 cu. ft. (.66 cu.m.).

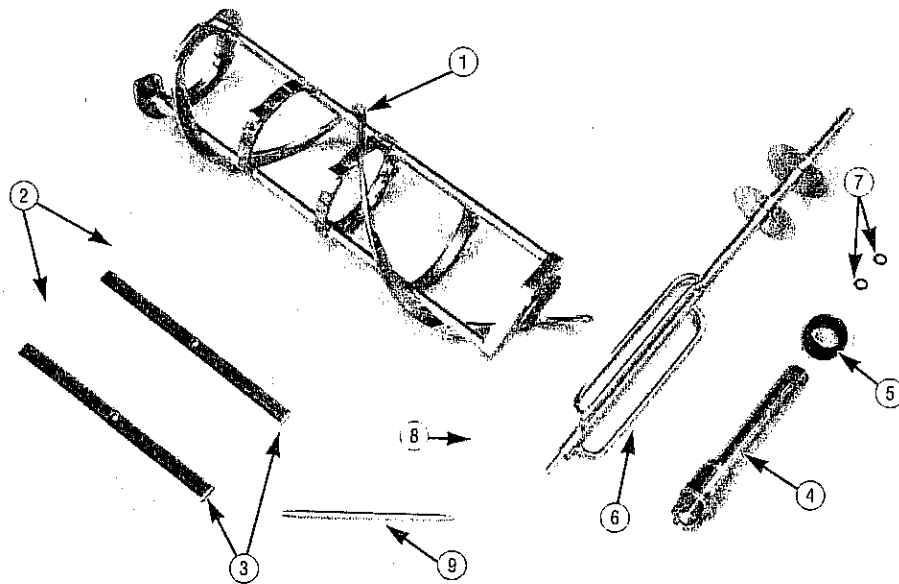
\*For exact electrical information, always refer to the data plate of the unit.

Availability and specifications subject to change without notice.

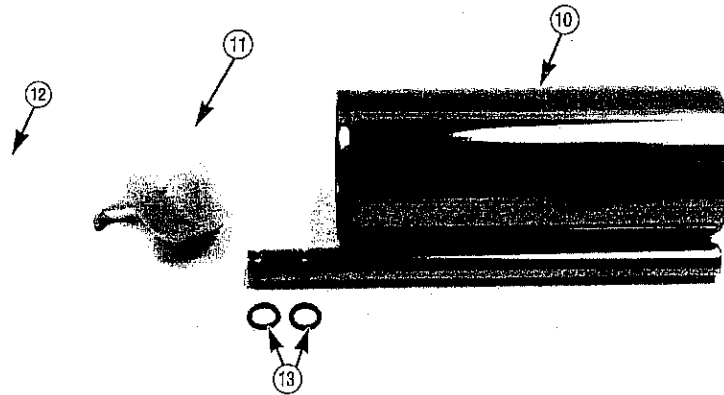


# Operator Parts Identification

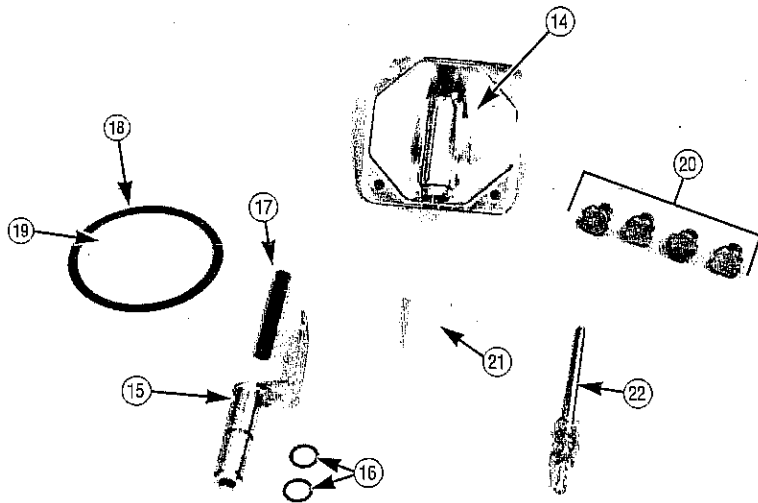
ITEM	DESCRIPTION	FUNCTION
1	Beater Assembly	Turns inside freezing cylinder to blend air and mix and eject product. The beater should turn clockwise when observed from the operator's end. Drives scraper blades.
2	Scraper Blades	To scrape frozen product off inside wall of freezing cylinder. Must be sharp.
3	Scraper Blade Clips	Strengthens scraper blades.
4	Drive Shaft	Connecting part from gear unit to beater. (Must be properly lubricated.)
5	Seal (Drive Shaft)	Provides seal from product inside cylinder to external areas of freezer. (Must be lubricated.)
6	Torque Rotor Assembly	Senses viscosity of product. Moves the torque arm as the product becomes thick.
7	O-Rings (Torque Rotor)	Provides seal between rotor assembly and the freezer door. (Must be lubricated.)
8	Guide Bearing (Torque Rotor)	Aligns and supports torque rotor shaft. Allows rotor tip to turn freely in shaft. (DO NOT lubricate.)
9	Torque Arm	Provides connection between operating arm and the torque rotor shaft.



ITEM	DESCRIPTION	FUNCTION
10	Feed Assembly	Regulates amount of mix and allows air to come with it into the freezing cylinder.
11	Float Assembly	Regulates the amount of mix that enters the feed assembly.
12	Float Cap	Works in conjunction with the float assembly.
13	O-Rings (Feed Assembly)	Provides a seal so that mix will not enter the freezing cylinder. (Must be lubricated.)



ITEM	DESCRIPTION	FUNCTION
14	Freezer Door	Covers the open end of the freezing cylinder and provides a port for frozen mix to be ejected.
15	Draw Valve	Seals off mix port in freezer door. Opens port when raised, allowing frozen mix to be ejected.
16	O-Rings (Draw Valve)	Provides seal against drippage from the draw valve and seals product from traveling up the shaft. (Must be lubricated.)
17	Spinner Bearing (Draw Valve)	Houses spinner shaft: (Must be lubricated.)
18	Door Gasket	Provides a seal between the freezer door and the freezing cylinder. (DO NOT lubricate.)
19	Front Bearing	Allows beater to turn freely on hub of freezer door. (DO NOT lubricate.)
20	Handscrews	Tightening mechanism to secure door to freezing cylinder. Tighten equally in a criss-cross pattern.
21	Spinner Housing	Protects spinner blade and blends syrup and mix.
22	Spinner Blade	Blends mix and syrup. (Shaft must be lubricated.)





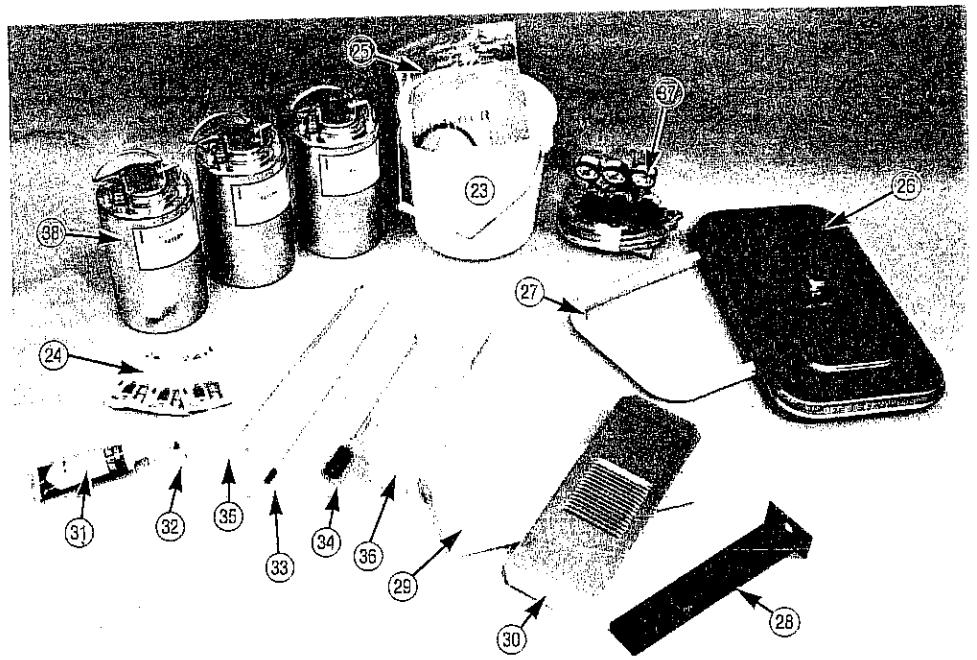
# Accessories

ITEM	DESCRIPTION	FUNCTION
23	Pail (10 quart—9.5 liter)	Used for cleaning and sanitizing freezer.
24	Kay-5	Approved cleaner and sanitizer for the freezer and its components.
25	Tune-Up Kit Assembly	Kit for wear items that should be replaced every three months.
26	Mix Hopper Cover Assembly	Cover to protect mix in the mix hopper.
27	Mix Hopper Gasket	Seals around mix hopper and on mix hopper cover.
28	Rear Drip Pan	Used to collect any leakage from the rear shell bearing. (Must be checked daily.)
29	Front Drip Tray	Used to collect any leakage from the spinner housing.
30	Splash Shield	Prevents any leakage from spinner housing from splashing out of front drip tray.
31	Taylor Lube	Approved lubricant for moving parts and wear items. (Follow lubricating procedures in this manual.)
32	Applicator Tip	Screws onto the Taylor Lube tube to enable ease in application of lubricant to flexible spinner shaft.
33	Double-Ended Brush	Use: Syrup lines, syrup tank dip tube, o-ring grooves on all parts.
34	Black Bristle Brush, 1" x 2"	Use: Rear shell bearing.
35	White Bristle Brush, 1½" x 2"	Use: Freezer door port and mix inlet hole.
36	White Bristle Brush, 3" x 7"	Use: Mix hopper and feed assembly.
37	Remote Regulator Line Assembly	Remote system which has pressure regulators, gauges, valves, and air lines for the syrup system.
38	Syrup Tank* (4 quart - 3.8 liter)	Provides storage of syrup.
39**	Quick Disconnect Plug (Syrup)	Connection between the syrup line and the syrup tank.
40**	O-Ring (Q. D. Plug)	Seals between the syrup line quick disconnect plug and the socket to prevent leakage. (Must be lubricated.)
41**	Quick Disconnect Plug	Connection between the air line and the syrup tank.
42**	Syrup Tank Cover*	Locks in place on syrup tank.

ITEM	DESCRIPTION	FUNCTION
43**	Rubber Tip*	Protects syrup tank when locking cover on.
44**	Gasket*	Seals cover on syrup tank.
45**	Dip Tube*	Passageway for syrup from bottom of syrup tank to syrup line.
46**	O-Ring (Dip Tube)*	Seals against leakage when quick disconnect is attached.

\*When ordering syrup tank (#38): syrup tank cover (#42), rubber tips (#43), gasket (#44), dip tube (#45) and o-ring (#46) are included.

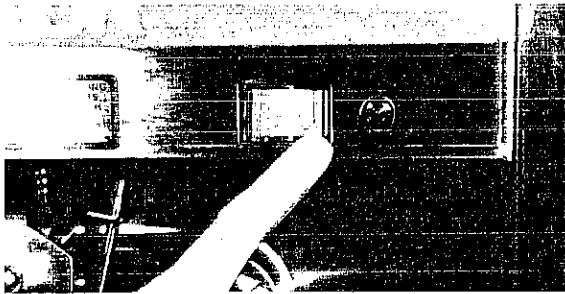
\*\*Not shown.





# Important: To the Operator

## CONTROL SWITCH

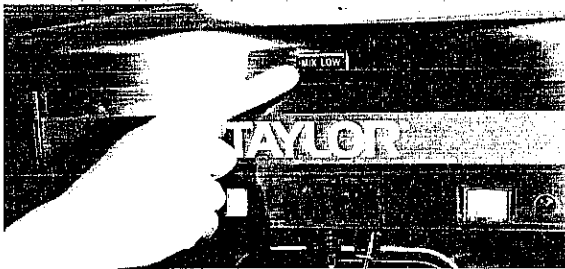


The center position is "OFF." The left position is "WASH," which activates the beater motor only. The right position is "AUTO," which activates the beater motor and refrigeration system to freeze down and maintain the product in the freezing cylinder. To activate the refrigeration system, momentarily raise the draw arm.

## DIAL LIGHT

Located on the right side of the control switch is a red dial light. 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")



Located on the front of the machine directly above the control switch is a mix level indicating light. When the light flashes, it indicates that the mix hopper has a low supply of mix and should be refilled as soon as possible. Should you neglect to add mix, a starved freezing cylinder will cause damage to the beater, blades, and drive shaft.

## RESET MECHANISM



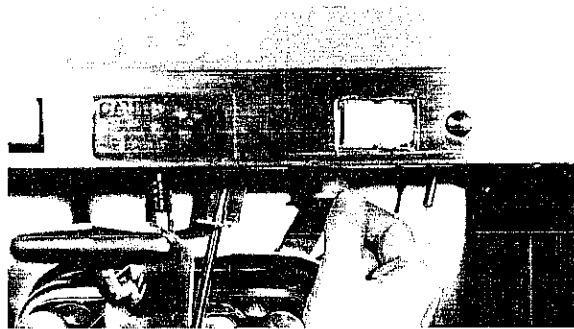
The reset protects the beater motor from an overload condition. Should an overload occur, the reset mechanism will trip. To properly reset the freezer, set the control switch to "OFF". Lift up the right upper side panel and depress the reset button firmly.

**NOTE: Do not use metal objects to press the reset button.**

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 of the beater motor going out on reset.

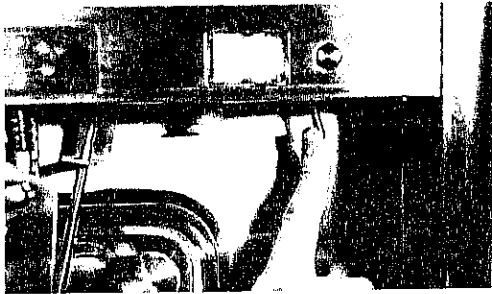
## CONSISTENCY CONTROL



The viscosity (thickness) of the shake is controlled by a sensing device called the consistency control. Located below the control switch is the consistency control knob. 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 2 or 3 times before an accurate consistency can be evaluated.

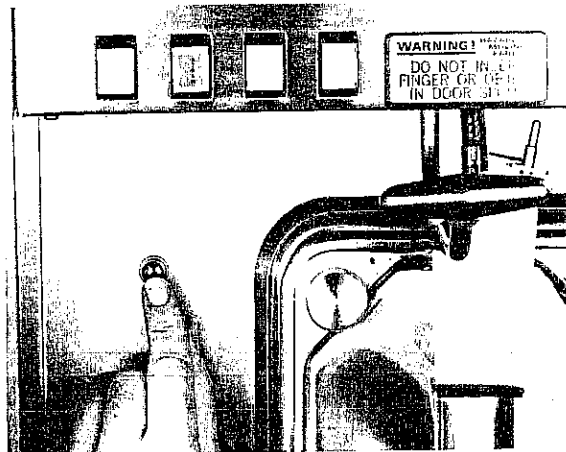
## SPINNER RINSE SWITCH



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

- a. Place the control switch in the "AUTO" position.
- b. Hold a cup under the spinner housing.
- c. Press the spinner rinse switch. Water will flow until the switch is released.
- d. Release the switch when the housing has been thoroughly rinsed.

## AUTO LIFT BUTTON (Found on Model 452 Only)



Located on the front panel is the auto lift button. To draw product from the Model 452, the auto lift button may be used. Depress the button. Just before the desired level in the cup is reached, release the button. The draw arm will lower the draw valve and the product will stop flowing.

## FOOT PEDAL (Found on Model 452 Only)

Located on the lower front of the machine is the foot pedal. To draw product from the Model 452, the foot pedal may be used. Depress 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.

## FLAVOR SELECTOR SWITCH



Consists of four (4) flavor buttons. The left button is the No. 1 tank and lines. The second from the left button is the No. 2 tank and lines. The third from the left button is the No. 3 tank and lines. The right selector button ("Van") is "OFF" and may be used to dispense the unflavored product as a vanilla shake.

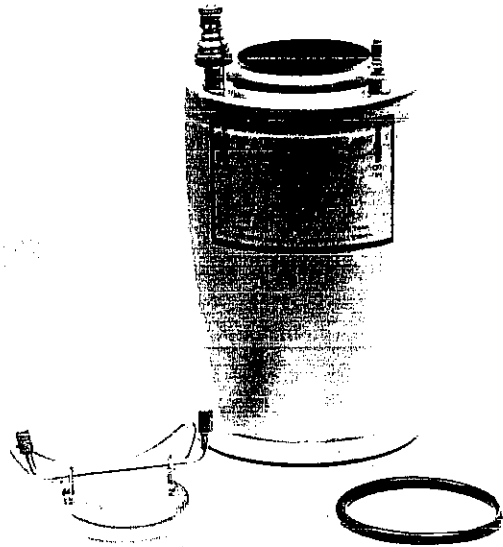
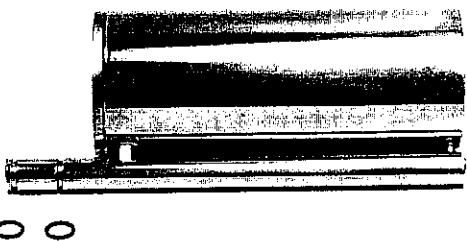
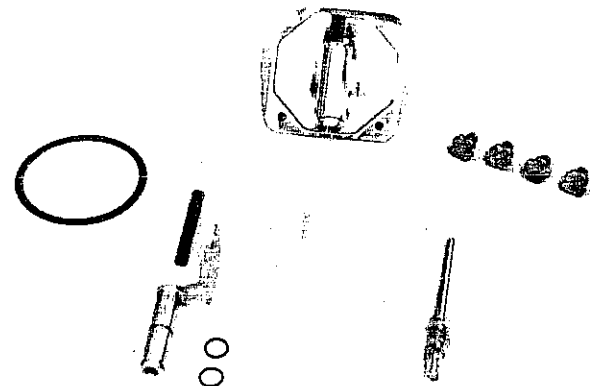
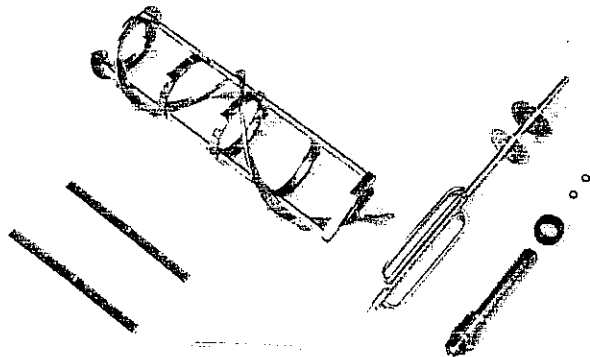


# Operating Procedures

The Models 452 and 453 have one 7 quart (6.6 liter) freezing cylinder. These totally automatic freezers offer four separate flavors completely blended and ejected from one 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.



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 29, "Disassembly," and start there.

## ASSEMBLY

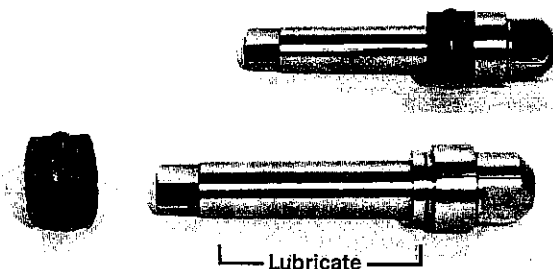
**NOTE:** When lubricating parts, use an approved food grade lubricant (example: Taylor Lube).

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

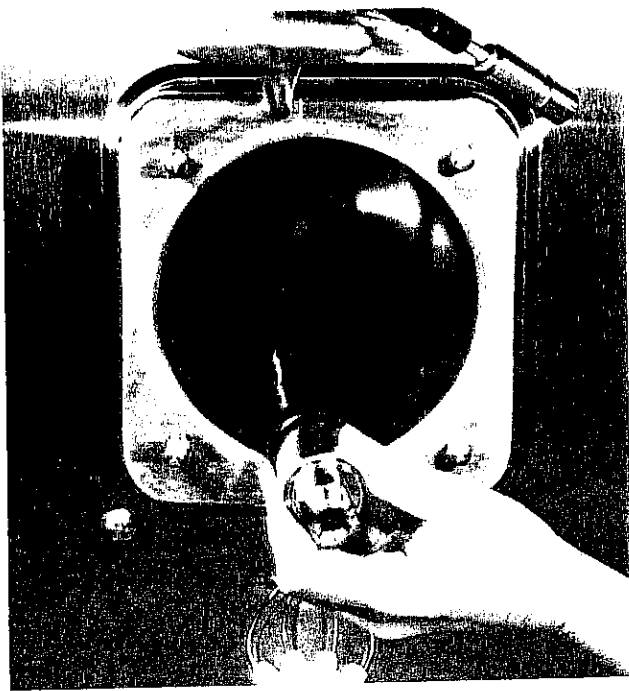
### Step 1

Install 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. 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**.



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.



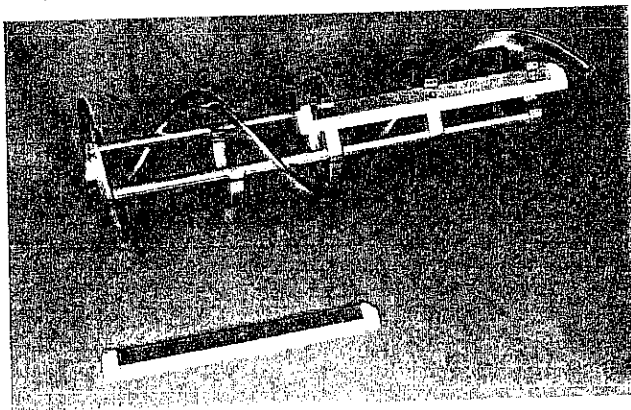
### Step 2

Install beater assembly. First check scraper blades for any nicks or signs of wear. If any nicks are present, replace both blades.

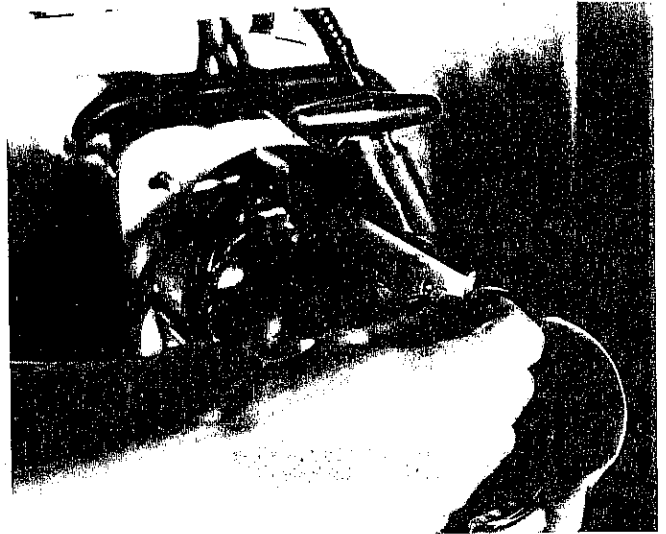
**NOTE:** Both scraper blades should be replaced every four months.

If blades are in good condition, install the scraper blade clips on the scraper blades. Place the rear scraper blade over the rear holding pin (knife edge to the outside).

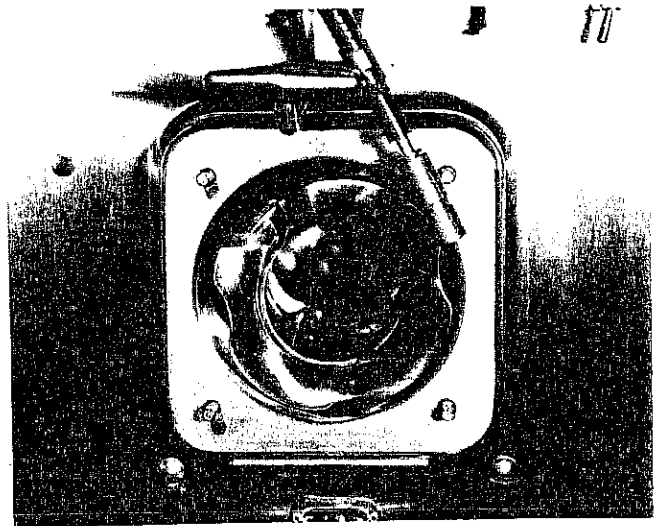
**NOTE:** The hole on the scraper blade must fit securely over the pin to prevent costly damage.



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

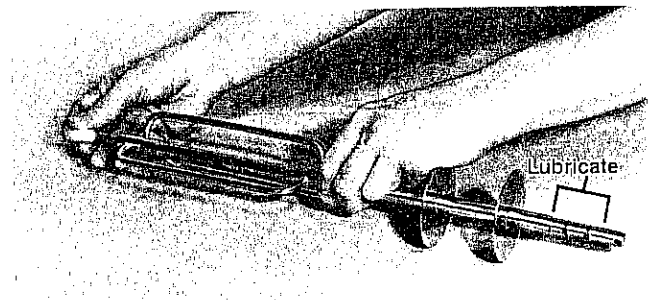


Make sure the beater assembly is in position over the drive shaft. Turn the beater slightly to be certain that the beater assembly is properly seated.

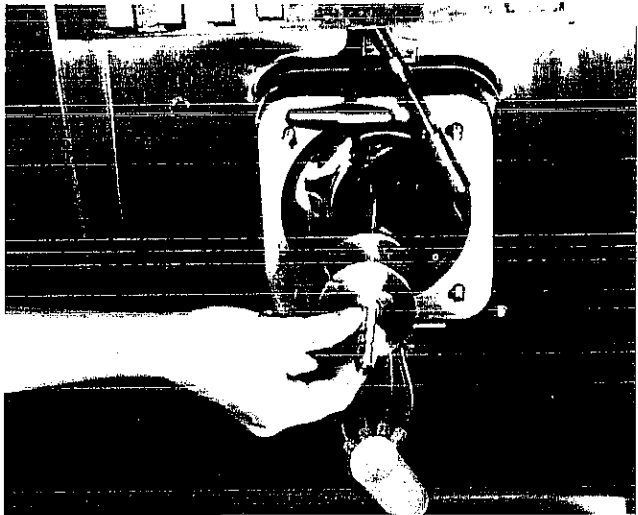


### Step 3

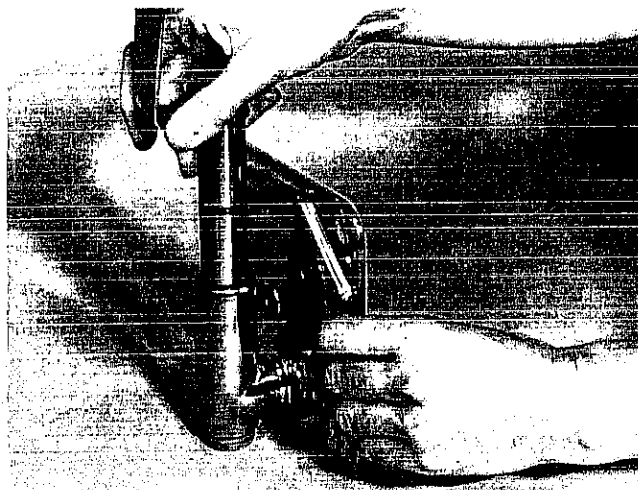
Install torque rotor assembly. Assemble the torque rotor by sliding the two o-rings on the front of the shaft and lubricate them thoroughly to prevent leaking. Place the white plastic guide bearing on the rear of the rotor shaft. **DO NOT** lubricate plastic guide bearing.



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.

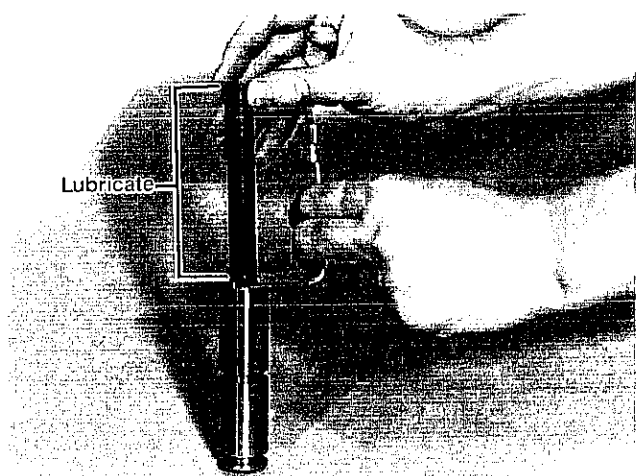


Lubricate the inside of the door spout, top and bottom, and insert the draw valve into the freezer door from the top. It will be necessary to rotate the draw valve to the right when assembling the door to the freezer.



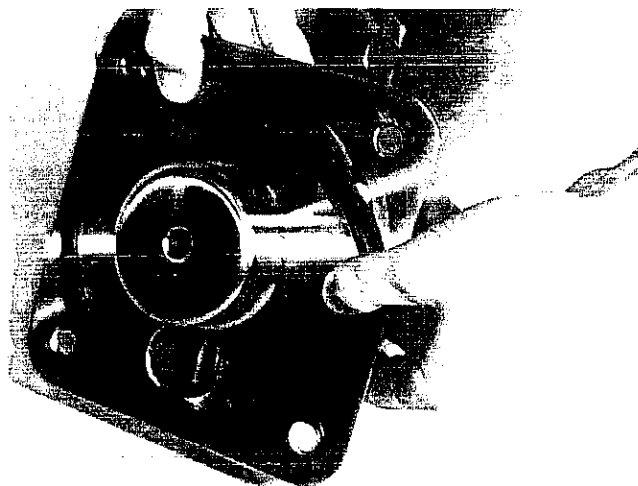
#### Step 4

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

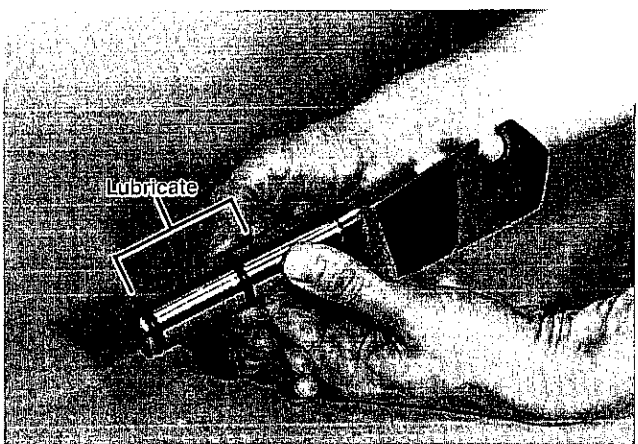


#### Step 5

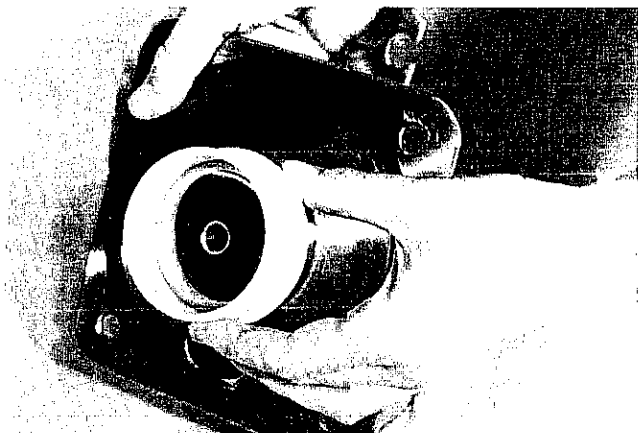
Install freezer door. Place the large rubber gasket into the groove on the back side of the freezer door. **DO NOT** lubricate the gasket.



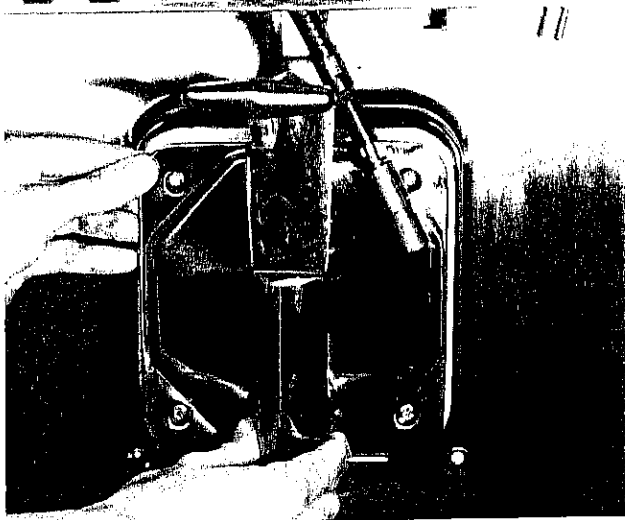
Slide the two o-rings onto the draw valve and lubricate.



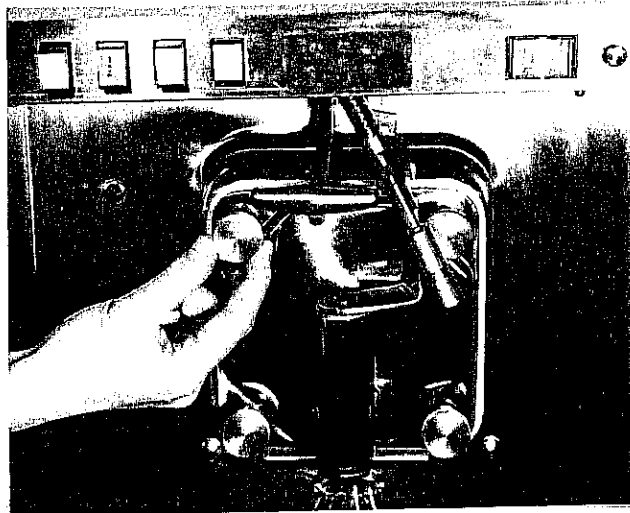
Slide the white plastic front bearing onto the bearing hub, making certain that the flanged end of the bearing sleeve is resting against the freezer door. **DO NOT** lubricate the front bearing.



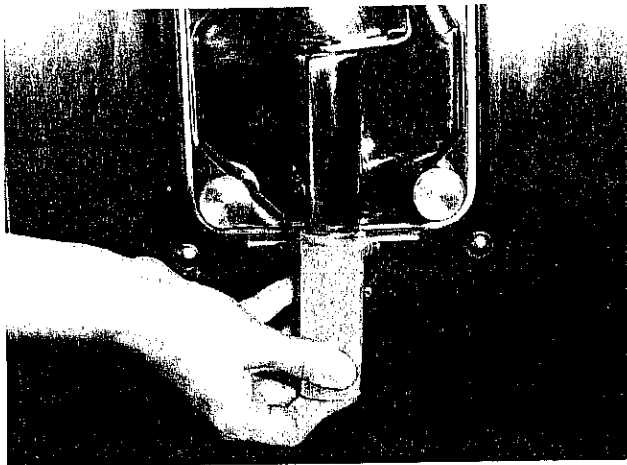
Assemble the door to the freezer by putting the torque rotor shaft into the center hole of the freezer door. Position the door on the four studs on the front of the freezing cylinder.



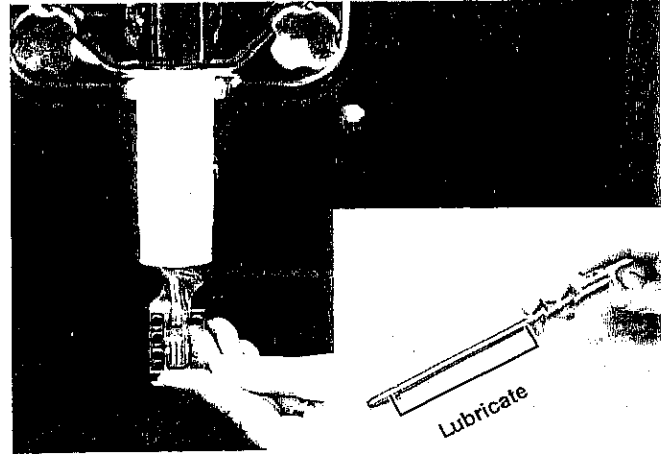
Install the four handscrews onto the door and tighten them equally in a criss-cross pattern.



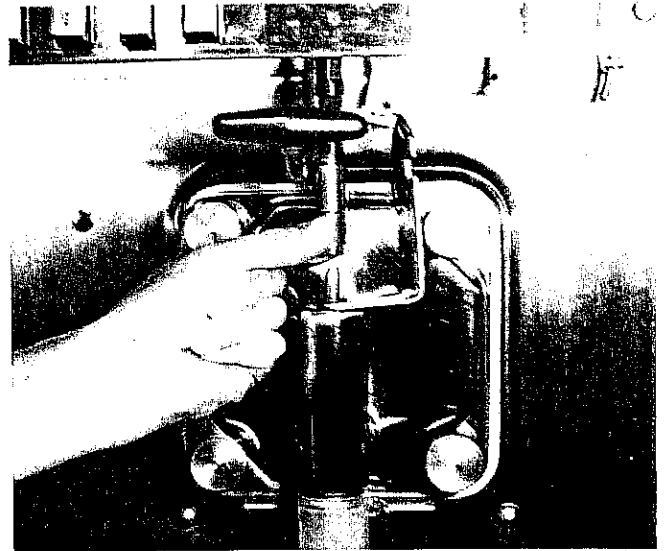
**Step 6**  
Install spinner blade. Snap the plastic spinner housing onto the bottom of the door spout.



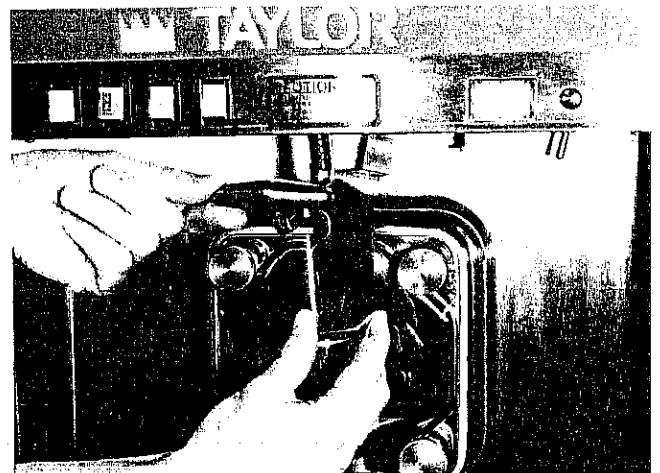
Lubricate the spinner blade shaft, and insert the spinner blade from the bottom into the center of the draw valve.



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.

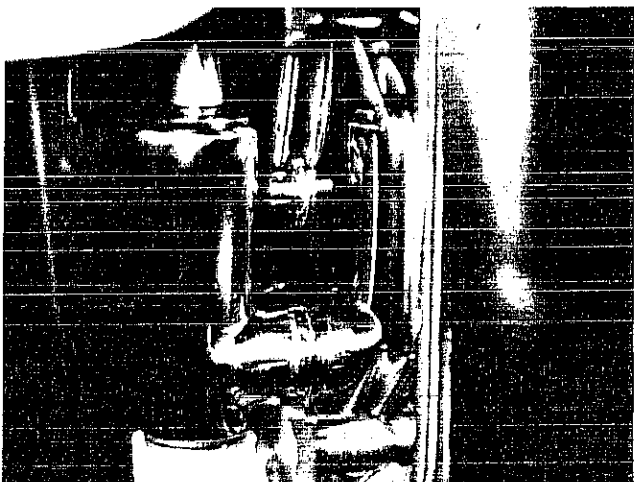


Rotate the draw valve to the left, and center it in position on the draw arm, putting it into the slotted groove of the draw valve bracket.

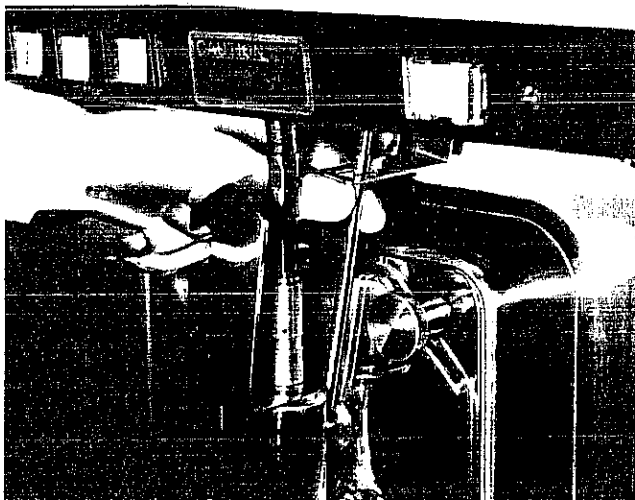


### Step 7

Install 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.

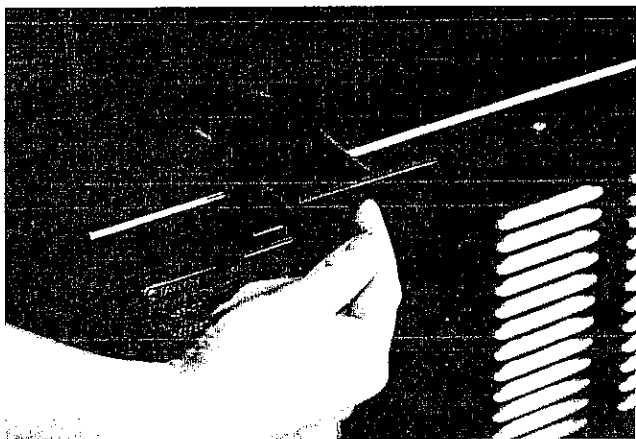


Check the torque arm by moving it back and forth to be sure it moves freely and easily.



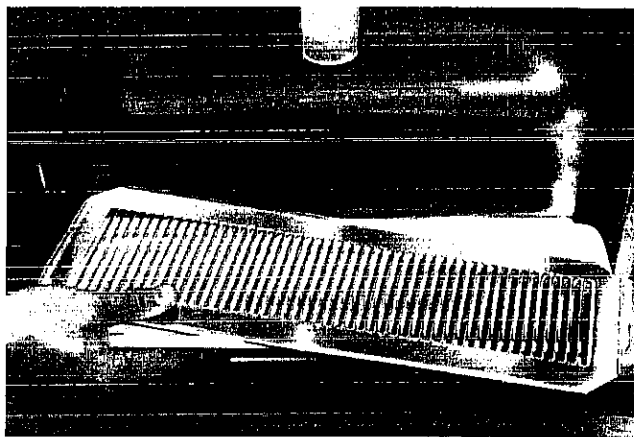
### Step 8

Install rear drip pan. Slide the drip pan into the hole in the side panel.



### Step 9

Install front drip tray and splash shield.



## SANITIZING

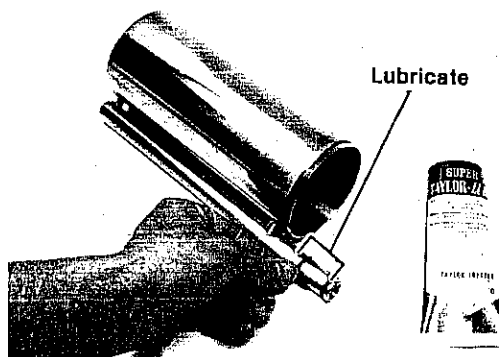
### Step 1

Prepare two gallons (7.6 liters) of an approved 100 PPM sanitizing solution (example: Kay-5) with WARM WATER ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS.

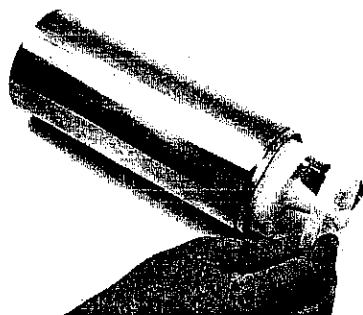
**NOTE:** Before handling sanitized parts, sanitize your hands!

### Step 2

Assemble feed assembly. Slide the two small o-rings into the grooves of the feed tube. Lubricate the o-rings.



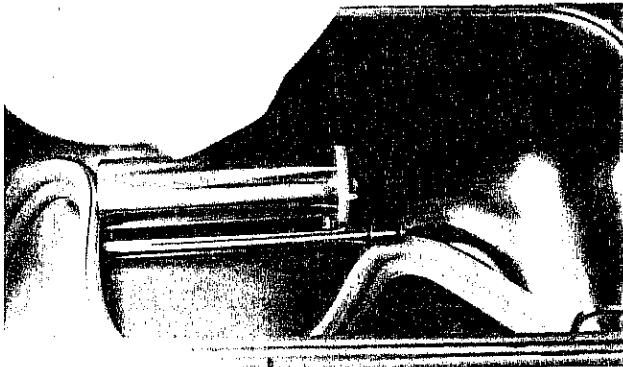
The float and float cap should stay attached. Place the float end first into the bottom of the feed assembly and snap the cap into place.



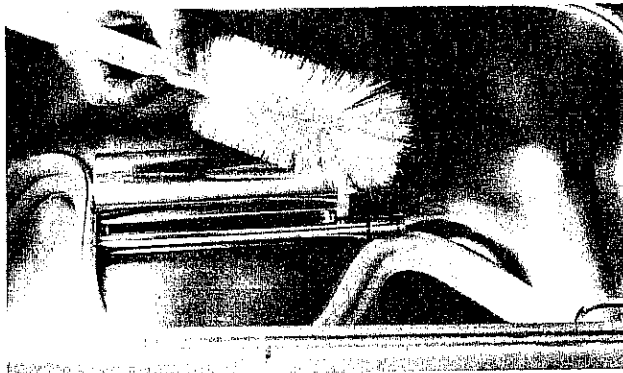
Lay the feed assembly and hopper gasket in the bottom of the mix hopper.

### Step 3

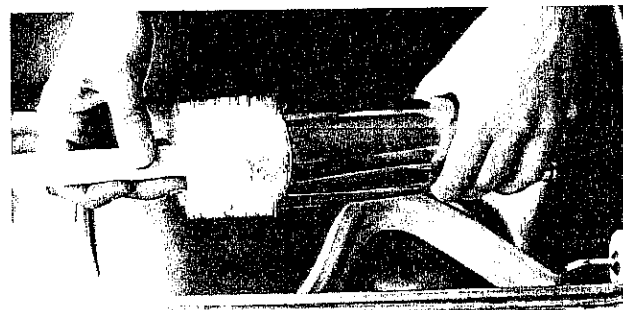
Pour the sanitizing solution into the mix hopper and allow it to flow into the freezing cylinder.



While the sanitizing solution is bubbling down into the freezing cylinder, brush clean the mix hopper. In cleaning the mix hopper, take particular care in brushing the mix level sensing probe on the rear wall of the hopper.

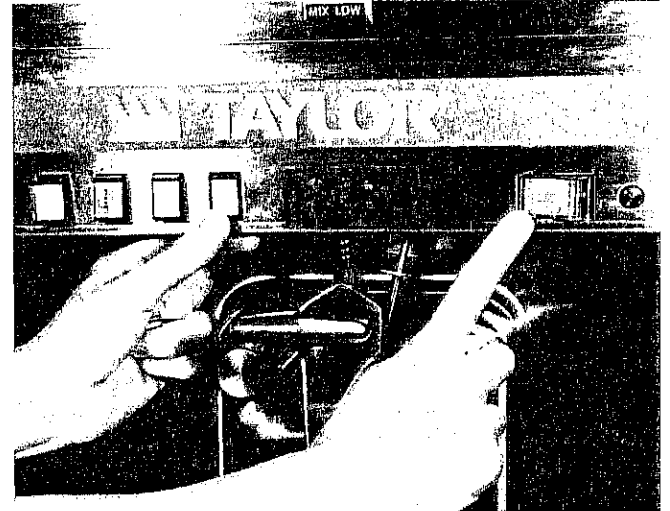


Brush clean the mix inlet hole and feed assembly.



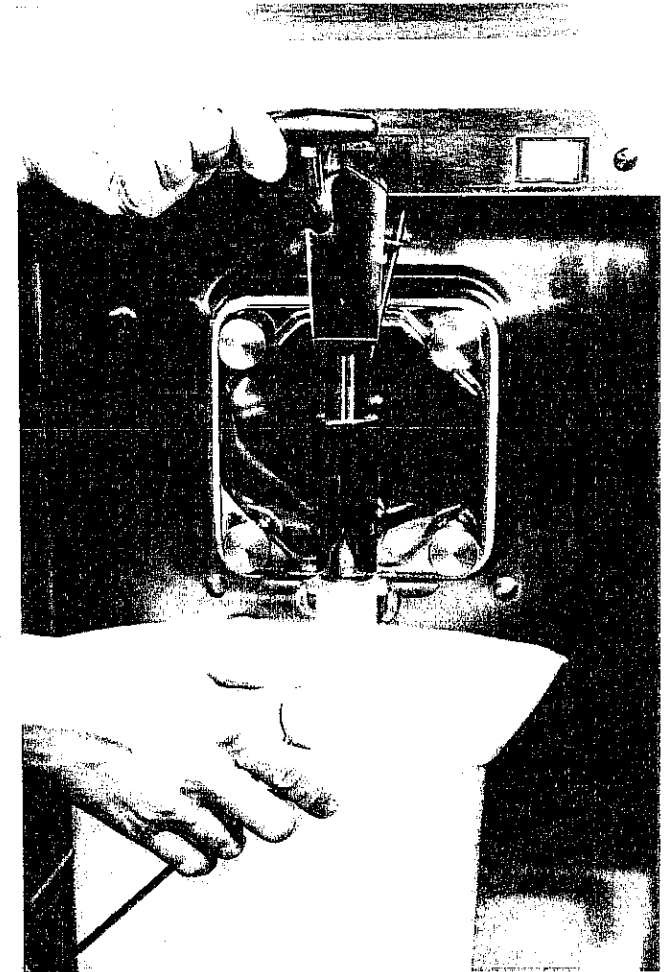
### Step 4

Depress the far right button on the syrup selector switch assembly ("Van") and place the control switch in the "WASH" position. This will allow the solution to agitate in the freezing cylinder. Allow to agitate for five minutes.



### Step 5

Place an empty mix 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.

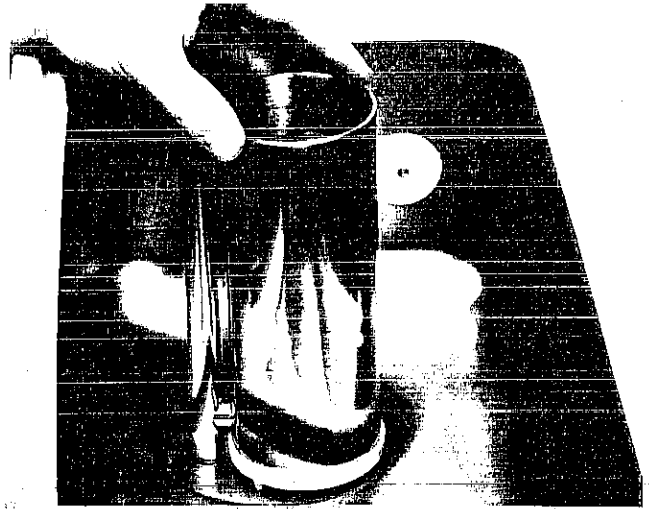


**Step 6**

Assemble the hopper gasket around the top edge of the mix hopper. Stand the feed assembly in the corner.



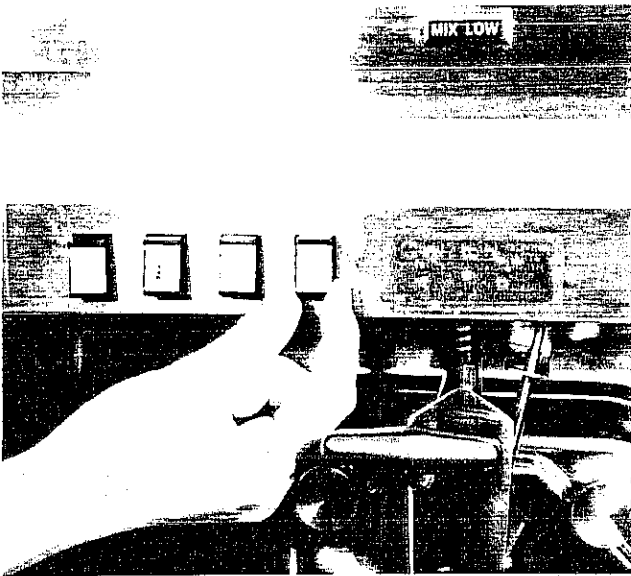
When the mix has stopped bubbling down into the freezing cylinder, install the feed assembly in the mix inlet hole.



**PRIMING**

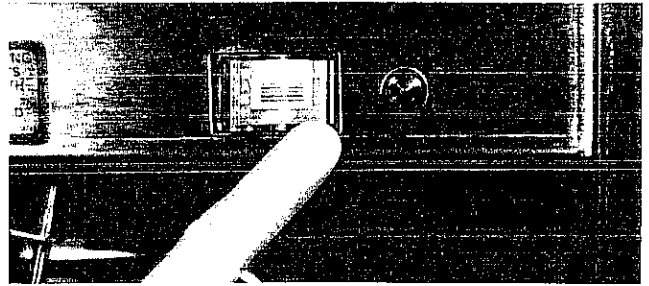
**Step 1**

Check to be sure the syrup selector switch assembly is in the "OFF" position ("Van").



**Step 3**

Place the control switch in the "AUTO" position.



**Step 4**

To initiate freeze down, rotate the draw valve bracket 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 bracket. When the unit cycles off, the product is ready to serve.

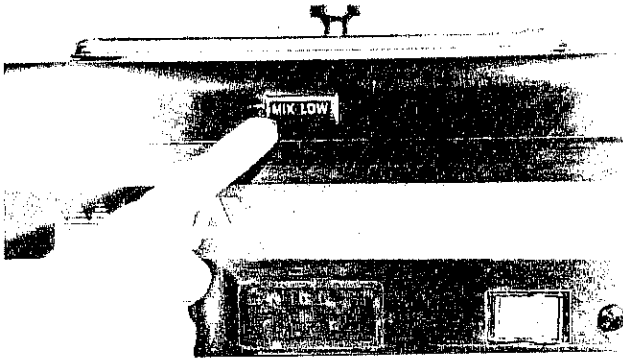
**Step 2**

With a mix pail beneath the spinner housing, raise the draw arm. Pour 2 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.

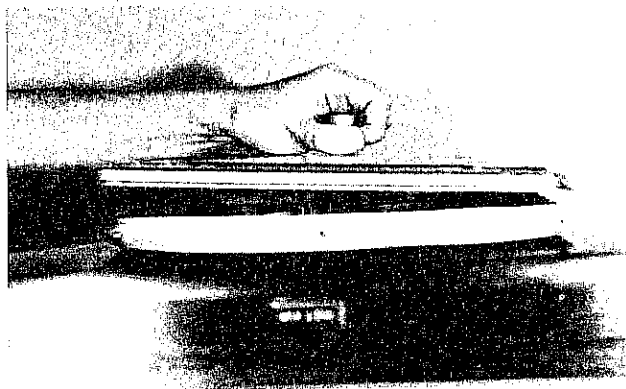


**Step 5**

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.



Place the mix hopper cover in position.



**SYRUP SYSTEM**

Two main objectives in your opening procedures must be to (1) fill the syrup tanks and (2) calibrate the syrup flow. This must be checked **daily** to insure the high quality shake you desire.

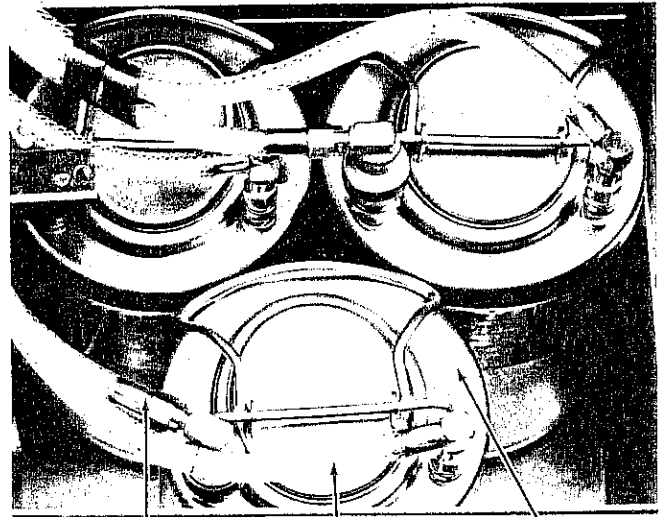
**IMPORTANT:** Use only single strength syrup that is free of pulp and seeds.

**Model 452:**

The syrup tanks are located in the front of the freezer. The tanks are placed on a roll-out syrup drawer for ease of accessibility. It is important to note that the tanks at the rear of the drawer should have the fittings towards the front to allow proper closing of the drawer. 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.

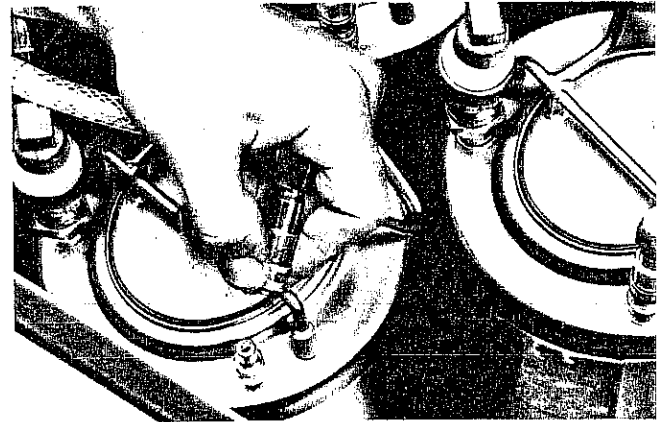
**Model 453:**

The syrup tanks should be located within reach of the syrup lines. The air 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<sub>2</sub> may be used to propel the syrups.

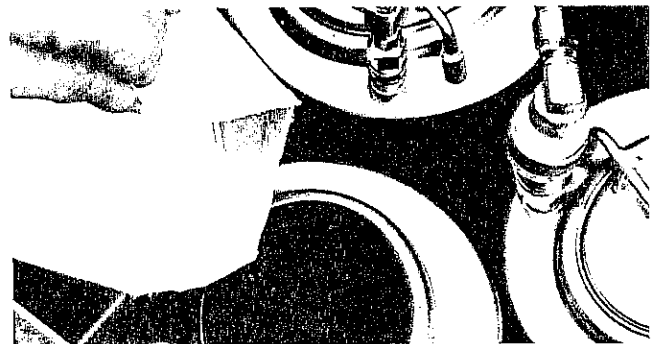


**Step 1**

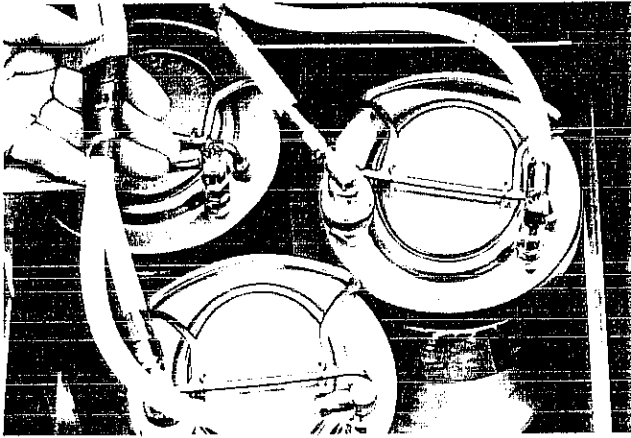
**Filling the syrup tanks:** Pull back on the collar of the quick disconnect fittings for the air lines. Allow the air pressure to dissipate from the syrup tanks. Disconnect the syrup lines.



Remove the syrup tank lid by lifting up on the locking lever and fill the syrup to the indicating mark on the label. **Important: Do not overfill the tanks.**



Replace the tank lid and match the spiral wrapped air and syrup lines to the syrup tank and connect.

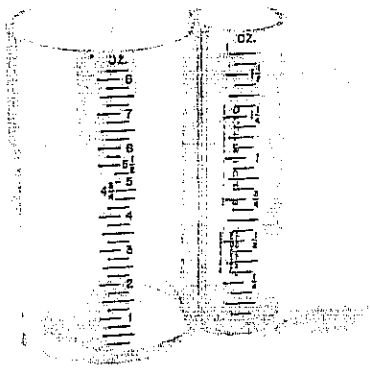


**NOTE:** Refer to page 30 for cleaning and sanitizing the syrup tanks.

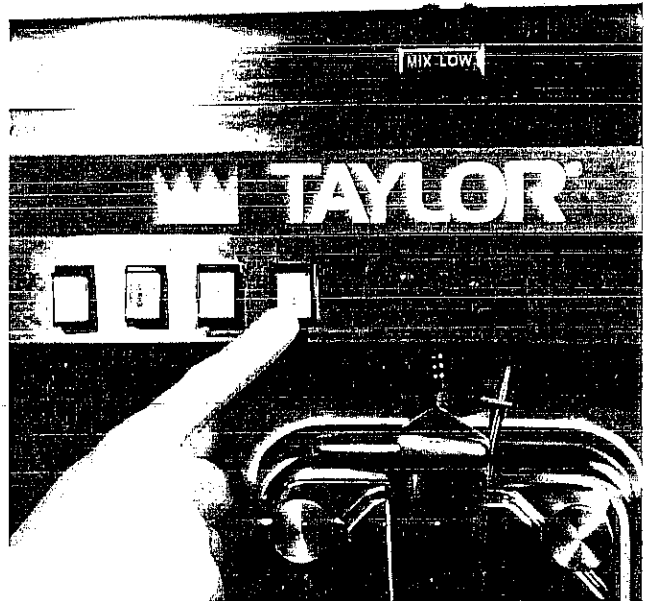
#### Step 2

**Calibrating the syrup flow:** It is vital that the correct amount of syrup be incorporated into the mix to obtain a quality shake. The cause of too-thin shakes is often too much syrup. The cause of too-thick shakes is often too little syrup.

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.

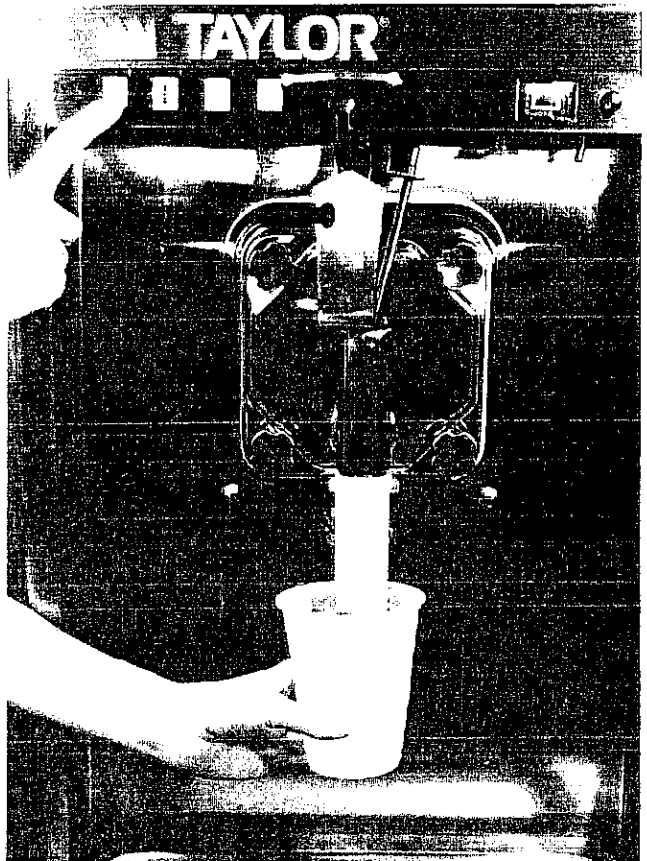


Depress the far right button ("Van") on the selector switch assembly. This button is used to stop the syrup flow (OFF) and when you wish to draw an unflavored shake.



Rest the draw arm on top of the draw valve bracket. Place the control switch in the "WASH" position.

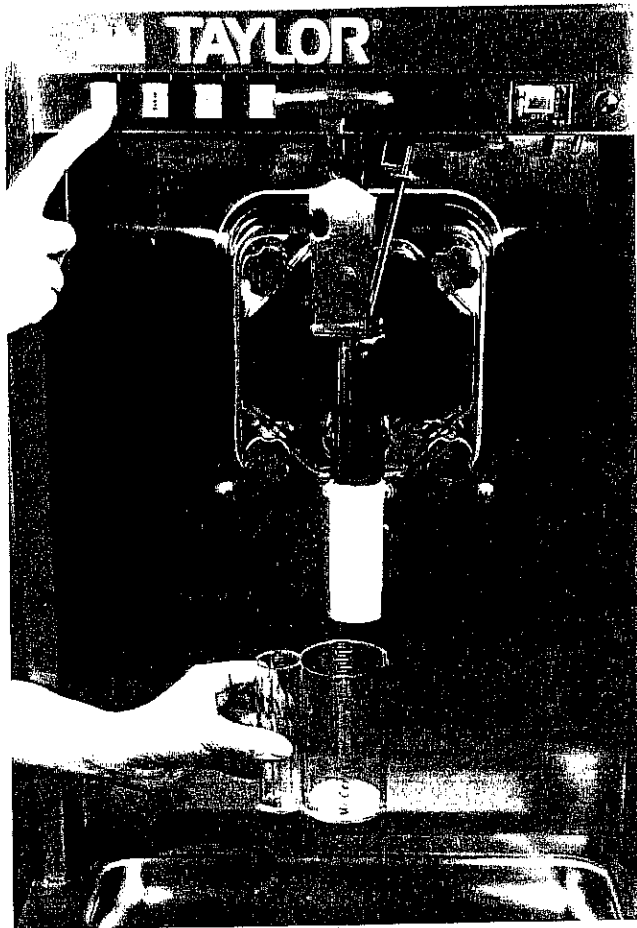
Hold an empty cup under the spinner housing and from the left, press the first flavor button and purge this syrup line until pure syrup begins to flow steadily.



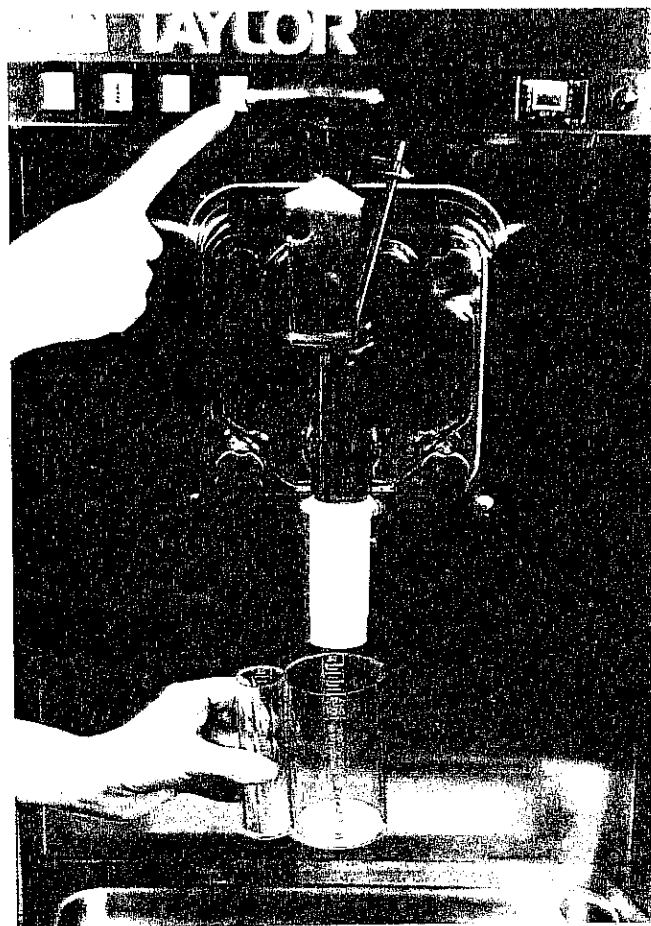
**NOTE:** It is very important to remove any sanitizing solution and/or air from the syrup lines for accurate calibration.

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

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



With a timing device, depress the first flavor button catching the syrup in the calibrating cup. When the timing device reaches 6 seconds, depress 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.

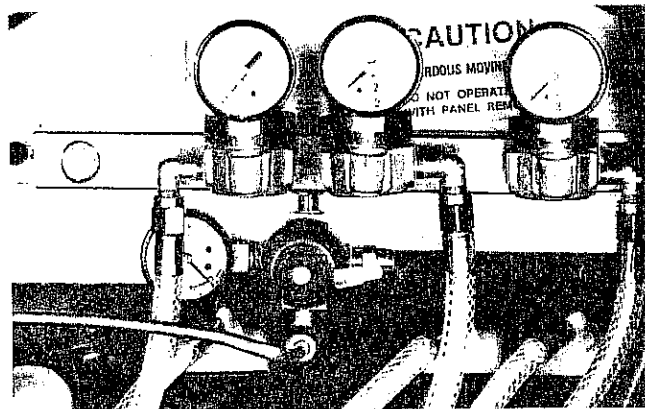


### Step 3

**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 452:

To make these pressure adjustments, use the pressure regulators located in the left upper side panel. The left regulator is used for syrup line number one and so on.

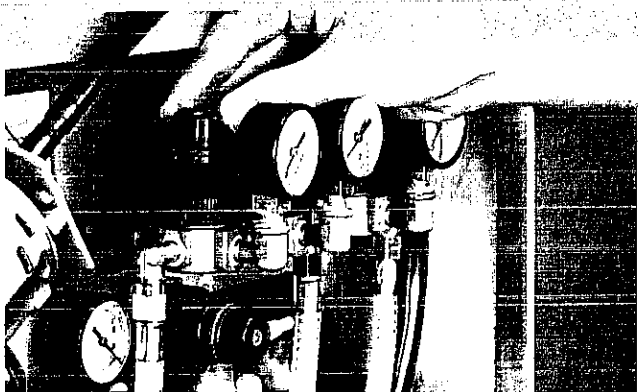


**Model 453:**

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.

If less than 1 ounce (29.6 ml.) is received, the pressure must be increased. Pull up on the red locking ring and turn the adjusting knob **clockwise**. Push down the red locking ring to lock in place.

If more than 1 ounce (29.6 ml.) of syrup is received the pressure must be decreased. Pull up on the red locking ring and turn the adjusting knob **counterclockwise** to zero. Remove the air supply fitting to the syrup tank to allow the pressure in the tank to dissipate. Reconnect the air supply fitting. Adjust the regulator to the new pressure setting and recheck the syrup calibration. Push the red locking ring down to lock the regulator into its fixed position.



Lower the draw arm and re-engage the draw valve bracket. Repeat this procedure for the remaining flavors.

**NOTE:** Refer to page 30 for cleaning and sanitizing the syrup lines.

## CLOSING PROCEDURES

To disassemble the Models 452 and 453, the following items will be needed:

- Two cleaning pails
- Sanitized stainless steel rerun can with lid
- Necessary brushes (provided with freezer)
- Cleaner
- 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

Depress 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, gasket and feed assembly from the mix hopper. Take these parts to the sink for cleaning.

### Step 5

With a sanitized pail beneath the spinner housing, place the control switch in the "WASH" position.

### Model 452:

Drain all the product remaining in the freezing cylinder and mix hopper by pressing the auto lift button or depressing the foot pedal.

### Model 453:

Drain all the product remaining in the freezing cylinder and mix hopper by raising the draw arm.

### Step 6

#### Model 452:

When the flow of product stops, release the auto lift button or foot pedal.

#### Model 453:

When the flow of product stops, lower the draw arm.

Place the control switch in the "OFF" position. If local health codes permit, empty the rerun into a sanitized stainless steel rerun can. Cover the container and place in the walk-in cooler.

**FOLLOW YOUR 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

Depress the far right button on the selector switch assembly ("Van"). Place the control switch in the "WASH" position.

#### Model 452:

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

#### **Model 453:**

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

Place the control switch in the "OFF" position.

#### **Step 3**

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

## **CLEANING**

#### **Step 1**

Prepare two gallons (7.6 liters) of an approved cleaning solution (example: Kay-5) with WARM WATER ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS.

#### **Step 2**

Pour the two gallons (7.6 liters) of 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 depressed.

#### **Model 452:**

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

#### **Model 453:**

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

Place the control switch in the "OFF" position.

## **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 bracket and rotate the bracket 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**

Remove the scraper blade clips from the scraper blades.

#### **Step 5**

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

#### **Step 6**

Remove the rear drip pan from the side panel. **NOTE:** If the drip pan is filled with an excessive amount of mix, it is an indication that the drive shaft seal should be replaced or was improperly lubricated.

## **BRUSH CLEANING**

#### **Step 1**

Prepare a sink with an approved cleaning solution (example: Kay-5) in WARM WATER ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS. If an approved cleaner other than Kay-5 is used dilute according to label instructions.

**IMPORTANT:** Follow label directions, as too STRONG of a solution can cause parts damage, while too MILD of a solution will not provide adequate cleaning. Make sure all brushes provided with the freezer are available for brush cleaning.

#### **Step 2**

Remove the 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 o-rings and white plastic cap from the feed assembly. **DO NOT separate the float from the float cap.**

**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

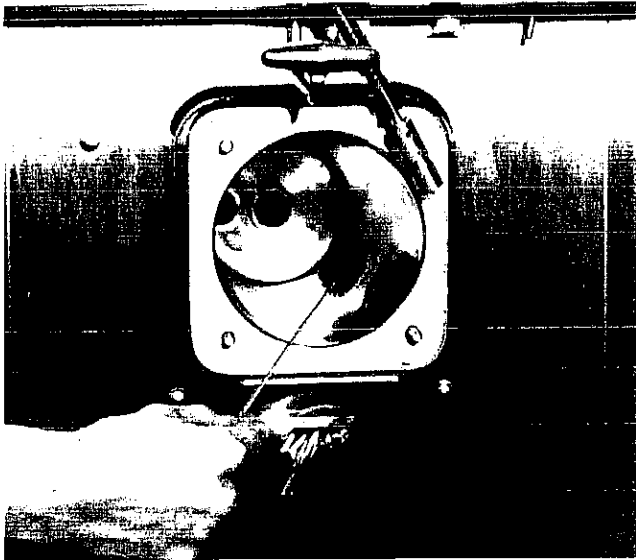
Thoroughly brush clean all disassembled parts in the cleaning solution, making sure all lubricant and mix film is removed. Take particular care to brush clean the draw valve core and holes in the freezer door.

### 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.



### 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 (a) to keep a build-up of old syrup from clogging the lines, and (b) 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 one-half 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. Remove the dip tube and o-ring from the syrup tank.

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 off 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.

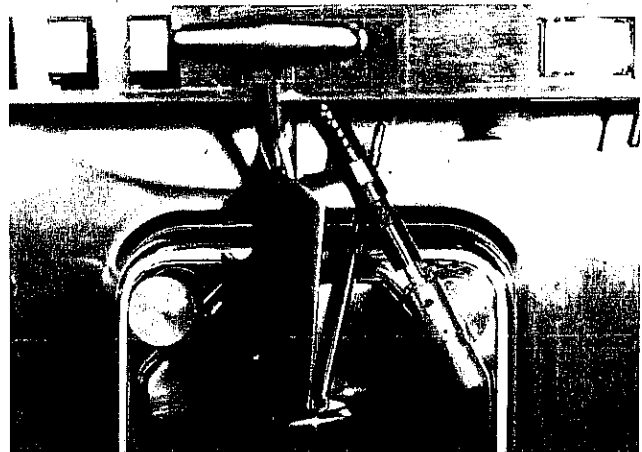
### Step 3

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



### Step 4

Assemble only the freezer door and draw valve to the freezer. Raise the draw arm and rest the arm on the top of the draw valve bracket.

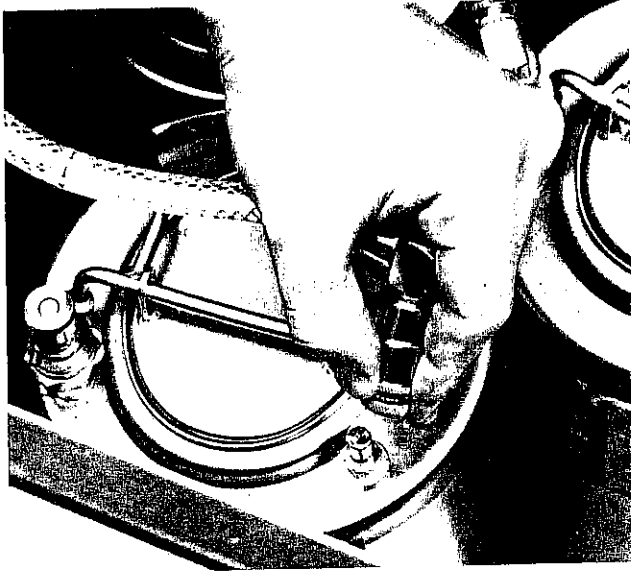


#### Step 5

Depress 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 depressing the flavor buttons.

#### Step 6

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



#### Step 7

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



**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.

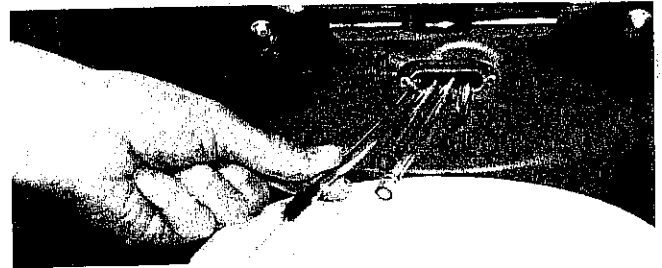
#### Step 9

Connect the No. 2 air and syrup lines to the tank and repeat the procedure by depressing the 2nd from the left flavor button 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. Depress 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 off 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 draw valve.

## LUBRICATING SPINNER CABLE

The spinner cable must be lubricated weekly.

#### Step 1

At the spinner end of the cable, slide grease retainer sheath up, exposing tapered lubrication hole.

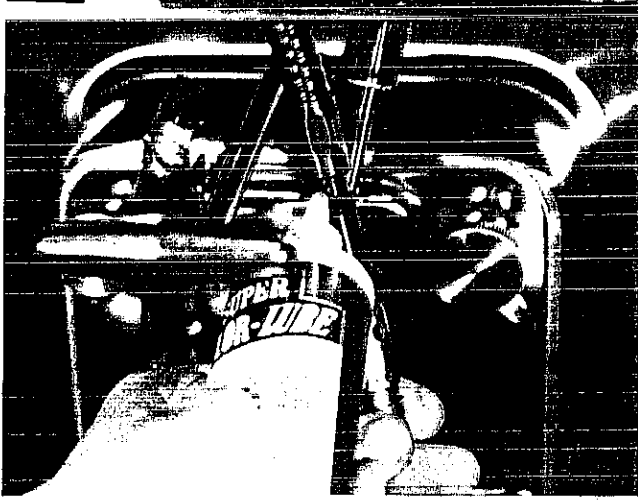


**Step 2**

Attach applicator tip to Taylor Lube tube.

**Step 3**

Insert tip firmly into hole, and squeeze out a small amount of lubricant.

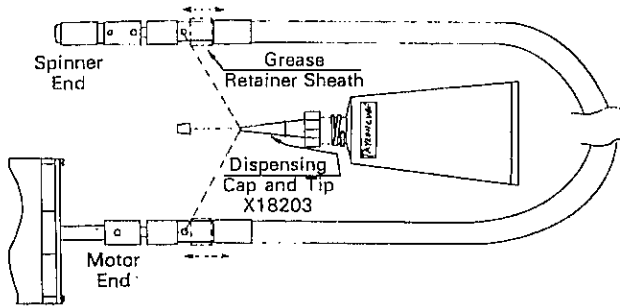


**Step 4**

Slide grease retainer sheath down over the hole.

**Step 5**

Lift left upper side panel and repeat these steps for the motor end of the shaft.





# Important: Operator Checklist

## DURING CLEANING AND SANITIZING:

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 DAILY CLEANING AND SANITIZING.**

**ALWAYS FOLLOW LOCAL HEALTH CODES.**

## TROUBLESHOOTING BACTERIA COUNT:

- 1. Thoroughly clean and sanitize machine regularly, including complete disassembly and brush cleaning.
- 2. Use all the brushes supplied for thorough cleaning. The brushes are specially designed to reach all mix passageways.
- 3. Use the small white 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 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 bent, 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 or 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 must be cleaned **monthly** with a soft brush. **Never** use screwdrivers or other metal probes to clean between the fins.
- 9. If your machine is water cooled, 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 Company 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 remaining water in the condenser, and

then add a liberal amount of permanent type auto anti-freeze. **This is extremely important.** Failure to follow this procedure may cause severe and costly damage to the refrigeration system.

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



# Operator's Troubleshooting Guide

PROBLEM	PROBABLE CAUSE	REMEDY	PAGE REFER.
1. No product being dispensed.	a. Inadequate mix in mix hopper.	a. Fill mix hopper.	25
	b. Control switch in the "OFF" position.	b. Place control switch in the "AUTO" position.	24
	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.	16
	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.	33
	h. Draw arm not engaged in draw valve bracket.	h. Center draw valve bracket on draw arm.	21
2. Product too stiff.	a. Improper lubrication of torque rotor o-rings.	a. Lubricate o-rings properly.	19
	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.).	16
	c. Torque rotor binding.	c. Before installing the torque arm, check to see if torque rotor can be rotated freely without binding.	20
	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.	26
	e. Torque arm not installed.	e. Install torque arm.	22
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.).	16
	b. Torque rotor binding.	b. Before installing the torque arm, check to see if the torque rotor can be rotated freely without binding.	20
	c. Improper lubrication of torque rotor o-rings.	c. Lubricate o-rings properly.	19
	d. Lubrication of torque rotor guide bearing.	d. Do not lubricate guide bearing.	19
	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.	26
	f. Bad scraper blades.	f. Replace scraper blades.	38
	g. Dirty condenser.	g. Brush condenser clean every 30 days.	33

PROBLEM	PROBABLE CAUSE	REMEDY	PAGE REFER.
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.	30
	b. Syrup line and air line not matched properly to syrup tank.	b. Match syrup and air lines to syrup tank.	25
5. Mix hopper too warm.	a. Product too warm when placed in hopper.	a. Check temperature in storage cooler.	33
	b. Bad mix hopper gasket.	b. Replace gasket.	—
	c. Control switch in the "OFF" position.	c. Place in "AUTO" position.	24
	d. Needs temperature adjustment.	d. 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.	33
	b. Inadequate water supply on water cooled unit.	b. Check water supply.	33
	c. Defective condenser fan.	c. Call service technician to repair or replace.	—
	d. No air space surrounding machine.	d. Minimum 6" (15.2 cm) air space on sides and rear.	5
8. Freezing cylinder walls scored.	a. Gear box out of alignment.	a. Call service technician to realign gear box.	—
	b. Bent beater assembly.	b. Call service technician to repair or replace.	—
	c. Missing front bearing.	c. Replace front bearing.	—
	d. Broken beater pin(s).	d. 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 technician 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.	38
	b. Inadequate lubrication of drive shaft.	b. Follow lubrication procedures in "Assembly."	18
	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.	24
	b. Beater motor out on reset.	b. Reset freezer.	16
	c. Circuit breaker off.	c. Turn breaker on.	—

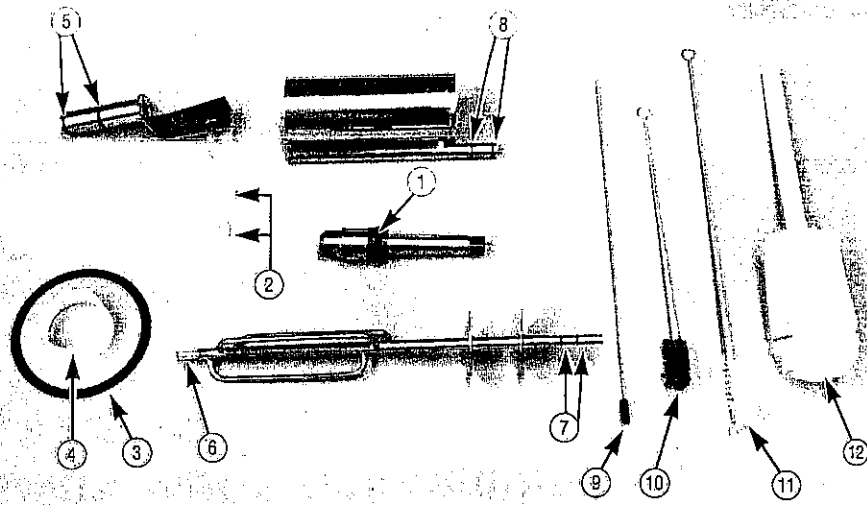
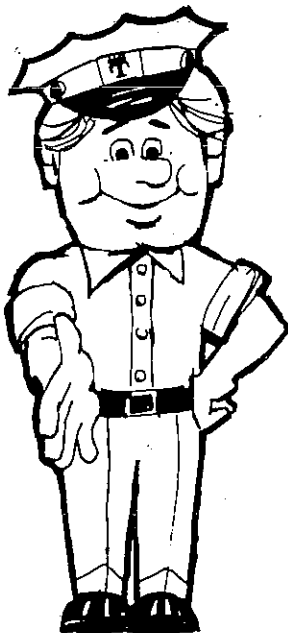
PROBLEM	PROBABLE CAUSE	REMEDY	PAGE REFER.
11. Machine will not operate when control switch is in "AUTO." (continued).	d. Water turned off (water cooled units). e. Power cord unplugged.	d. Re-establish water supply. e. Plug cord into wall receptacle.	— —
12. Water continues to flow through spinner housing.	a. Rinse solenoid stuck open.	a. Call service technician for repair.	—
13. Model 452: 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. b. Pin missing in female quick disconnect. c. Spinner motor out on thermal overload.	a. Call service technician to replace cable. b. Call service technician to replace disconnect. c. Inadequate lubrication of spinner shaft. Lubricate entire length of shaft.	— — 21
16. Excessive drippage of product from spinner housing.	a. Worn o-rings on draw valve. b. Wrong o-rings on draw valve. c. Inadequate lubrication of spinner shaft.	a. Replace every 3 months. b. Check o-ring size. c. Follow lubrication procedures in "Assembly."	38 — 21



# Parts Replacement Schedule

ITEM	EVERY 3 MONTHS	EVERY 4 MONTHS	EVERY 6 MONTHS	ANNUALLY	*QUANTITIES TO BE REPLACED
1. Drive Shaft Seal	X				1
2. Scraper Blades		X			2
3. Freezer Door Gasket	X				1
4. Front Bearing	X				1
5. Draw Valve O-Rings	X				2
6. Torque Rotor Guide Bearing			Inspect & Replace if Necessary	Minimum	1
7. Torque Rotor O-Rings	X				2
8. Feed Assembly O-Rings	X				2
9. Double-Ended Brush			Inspect & Replace if Necessary	Minimum	1
10. Black Bristle Brush, 1" x 2"			Inspect & Replace if Necessary	Minimum	1
11. White Bristle Brush, 1 1/2" x 2"			Inspect & Replace if Necessary	Minimum	1
12. White Bristle Brush, 3" x 7"			Inspect & Replace if Necessary	Minimum	1

\*Refer to "Parts List" on page 39 when ordering above parts.



"Mr. Taylor" 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 the Models 452 and 453. Ask your Taylor Distributor about the Automatic 3-Month Tune-Up Kit Mailing Program.



# Parts List Models 452 and 453

SPECIFY MODEL AND SERIAL NUMBERS WHEN ORDERING PARTS.

DESCRIPTION	PART NUMBER	452 QTY.	453 QTY.	WARR. CLASS
Accumulator A-Air	X29785	1		B
Accumulator A-Air	X29786	1		B
Ferrule	021082	2		C
Tube-Nylobrade	020568-12	1		C
Valve-Drain	024537	1		B
Adaptor A-Caster	X18915	4		B
Base-Terminal Block	015986	1	1	B
Bearing-Rear Shell	031324	1	1	C
+Guide-Drip Seal	028992	1	1	C
+Nut-Brass Bearing	028991	1	1	C
+Washer-Bearing Lock	012864	1	1	C
Beater Assembly	X46233	1	1	B
+Blade-Scraper	046237	2	2	C
+Clip-Scraper Blade	046238	2	2	B
Pin-Scraper Blade	009839	2	2	C
Belt	007590	1		C
Belt	003951		1	C
Blade A-Spinner	X35570	1	1	B
Block-Terminal	015987	1	1	B
Blower Assembly	X30153-	1		B
Housing A-w/Wheel	X30160	1		B
Motor-Blower Fan	030157-	1		B
Bracket A-Foot Pedal	X17597	1		B
Bracket A-Pedal	X17598	1		B
Collar-Holding	017606	2		B
Pedal A-Foot	X17601	1		B
Spring-Return	017140	2		B
Bracket A-Left Roller	X34616	1		B
Bracket A-Drawer Slide	X19145	1		B
Slide-Left Drawer	034590-1	1		B
Bracket A-Right Roller	X34617	1		B
Bracket A-Drawer Slide	X19145	1		B

\*See Taylor Warranty Card  
+Sold Separately

SPECIFY VOLTAGE, CYCLE & PHASE OF FREEZER  
WHEN ORDERING ELECTRICAL REPLACEMENT PARTS.

DESCRIPTION	PART NUMBER	452 QTY.	453 QTY.	WARR. CLASS
Slide-Right Drawer	034590-2	1		B
Brush-Black Bristle (1" x 2")	013071	1	1	C
Brush-Double Ended	013072	1	1	C
Brush-White Bristle (1 1/2" x 2")	014753	1	1	C
Brush-White Bristle (3" x 7")	023316	1	1	C
Capacitor-Run	037431	1	1	B
Capacitor-Start (for Spinner Motor)	020246	1	1	B
Capacitor-Start	031790	1	1	B
Caster-Swivel	018794	4		B
Compressor	036880-	1	1	*
Compressor A-Air	X32266-	1		B
Compressor	032129-	1		B
Switch-Pressure	016308	1		B
Valve-Check	020959	1		B
Condenser	025700		1	B
Condenser	019113	1		B
Control-Mix Level	031799-	1	1	B
Coupling A-Faucet	X27436-1	1		B
Coupling A-Flexible Shaft	X17106	1	1	B
Coupling-Drive	017107	1	1	B
Pin-Roll	015971	1	1	C
Cover A-Mix Hopper	X38458	1	1	B
+Gasket-Mix Cover	038375	1	1	C
Knob-Mix Cover	025429	1	1	B
Cup-Divided Syrup	017203	1	1	C
Decal-Clean & Sanitize	019029	1	1	C
Decal-Syrup Flavor (4)	021523	1	1	C
Decal-Syrup Flavor Instruction	020997	1	1	C
Decal-Syrup Tank Instruction	045533-1	3	3	C
Decal-Troubleshooting	038374	1	1	C
Decal-Taylor Decorative	021872	1	1	C
Decal-Warning	036529	3	3	C

\*See Taylor Warranty Card  
+Sold Separately

**SPECIFY VOLTAGE, CYCLE & PHASE OF FREEZER  
WHEN ORDERING ELECTRICAL REPLACEMENT PARTS.**

DESCRIPTION	PART NUMBER	452 QTY.	453 QTY.	WARR. CLASS
Diagram-Wiring	034706-		1	C
Diagram-Wiring	029875-	1		C
Door A-Freezer	X17373	1	1	B
+Bearing-Front	013116	1	1	C
+Gasket-Door	016672	1	1	C
Drawer Assembly	X34606	1		B
Dryer-Filter	007497	1		C
Dryer-Filter	026270		1	C
Element-Heater	014174-	1	1	C
Faucet-Central	016778	1		B
Feed Assembly	X18030-8	1	1	B
+Cap-Valve Seat	011148	1	1	B
+Float Assembly	X11145	1	1	B
+O-Ring	018572	2	2	C
Gear-Reducer	012235	1	1	*
Guide A-Drip Pan	X39015		1	B
Guide A-Drip Pan	X28698	1		B
Handle-Drawer	017027	1		B
Handscrew (Stud Nut)	021508	4	4	B
Hood	023267-SP	1		B
Hood	039025		1	B
Housing-Spinner	017269	1	1	B
Kit A-Tune-Up	X35576	1	1	C
Bearing-Front (for Freezer Door)	013116	1	1	C
Bearing-Guide (for Torque Rotor)	014496	1	1	C
Gasket-Cover (for Freezer Door)	016672	1	1	C
O-Ring (for Draw Valve)	020571	2	2	C
O-Ring (for Float Assembly)	018572	2	2	C
O-Ring (for Syrup Q.D.)	016030	3	3	C
O-Ring (for Torque Rotor)	018550	2	2	C
Seal (for Drive Shaft)	032560	1	1	C
Knob-Adjustment (Consistency Control)	014499	1	1	B

\*See Taylor Warranty Card  
+Sold Separately

**SPECIFY VOLTAGE, CYCLE & PHASE OF FREEZER  
WHEN ORDERING ELECTRICAL REPLACEMENT PARTS.**

DESCRIPTION	PART NUMBER	452 QTY.	453 QTY.	WARR. CLASS
+Screw-Adjustment	014498	1	1	B
Knob-Draw Arm	013635	1	1	B
+Nut-Lock Knob	013649	1	1	C
Label-Flavor Select (6)	017164	1	1	C
Label-Spinner Cable Lubrication Instruction	018342	1	1	C
Label-Taylor Overload Chart	023489-1	1	1	C
Leg-4" (w/O-Ring)	013458		4	B
Light-Indicator	023056-	1	1	B
Light-Red Dial	014118	1	1	B
Line A-Air (46")	X29725	1		B
Adaptor-Swivel	016715	1		B
Ferrule	021082	2		C
Label-Red	022707	2		C
Socket-Q.D.	021524	1		B
Tube-Nylobrade	020568-46	1		C
Line A-Air (46")	X29727	1		B
Adaptor-Swivel	016715	1		B
Ferrule	021082	2		C
Label-White	022709	2		C
Socket-Q.D.	021524	1		B
Tube-Nylobrade	020568-46	1		C
Line A-Air (52")	X29726	1		B
Adaptor-Swivel	016715	1		B
Ferrule	021082	2		C
Label-Brown	022710	2		C
Socket-Q.D.	021524	1		B
Tube-Nylobrade	020568-52	1		C
Line A-Water	X16798	2		B
Lip-Nose Cone Drip	036435	1	1	C
Louver-Side	013631	2	2	B
Lubricant-Super Taylor	019680	1	1	C
+Tip-Applicator (for Spinner Cable)	018203	1	1	C

\*See Taylor Warranty Card  
+Sold Separately

**SPECIFY VOLTAGE, CYCLE & PHASE OF FREEZER  
WHEN ORDERING ELECTRICAL REPLACEMENT PARTS.**

DESCRIPTION	PART NUMBER	452 QTY.	453 QTY.	WARR. CLASS
Manifold A-Regulator	X29706	1		B
Gauge-Pressure	027875	3		B
Gauge-Pressure	021029	1		B
Manifold Assembly	X25290	1		B
Regulator-Pressure	020514	4		B
Restrictor A-Air	X21161	1		B
Valve-Pressure Relief	021148	1		B
Motor-Beater (1.0 hp)	013102-	1	1	*
Motor-Fan	029770-		1	B
+Blade-Fan (10" Push)	029771		1	B
Motor-Spinner	016005-	1	1	B
Motor A-Auto Lift	X29871-	1		B
Bearing-Roller	017611	1		B
Cam-Lift	017039	1		B
Motor-Auto Lift Gear Drive	016985-	1		B
Pin-Roll	017163	1		B
Switch-Unimax	016999	2		B
Pail (10 Quart - 9.5 Liter)	013163	1		C
Pail (6 Quart - 5.7 Liter)	023348		1	C
Pan-Rear Drip	039027		1	B
Pan-Rear Drip	027503	1		B
Panel-Left Upper Side	028706	1		B
Panel-Rear	039021		1	B
Panel-Rear	026980	1		B
Panel-Right Lower Side	039024		1	B
Panel-Right Upper Side	028707	1	1	B
Panel A-Front	X17050	1		B
Panel A-Front	X39005		1	B
Panel A-Left Side	X24684		1	B
Panel A-Lower Side	X24397	2		B
Plate-Decorative	039022		1	B
Plate-Decorative	022626	1		B

\*See Taylor Warranty Card  
+Sold Separately

**SPECIFY VOLTAGE, CYCLE & PHASE OF FREEZER  
WHEN ORDERING ELECTRICAL REPLACEMENT PARTS.**

DESCRIPTION	PART NUMBER	452 QTY.	453 QTY.	WARR. CLASS
Plate-Faucet	016796	1		B
Plug-Drip Tray Hole	029595	1		C
Plug-Q.D. (CO2)	021077	3	3	B
Plug-Q.D. (Syrup)	021081	3	3	B
+O-Ring	016030	3	3	C
Probe A-Mix	X30922		1	B
+Disc-Probe	030965		1	B
+Spacer-Probe	030966		1	B
Probe A-Mix	X35135	1		B
+Disc-Probe	030965	1		B
+Spacer-Probe	030966	1		B
Pulley (for Beater Motor)	019153	1	1	B
Pulley (for Gear)	007538	1	1	B
Regulator A-Remote	X23969		1	B
Line A-Air	X23997		1	B
Adaptor-Swivel	016715		1	B
Ferrule	021082		2	C
Socket-Q.D.	021524		1	B
Tube-Nylobrade	020568-18		1	C
Line A-Air	X24018		1	B
Adaptor-Swivel	016715		1	B
Ferrule	021082		2	C
Socket-Q.D.	021524		1	B
Tube-Nylobrade	020568-30		1	C
Line A-Air	X24309		1	B
Adaptor-Swivel	016715		1	B
Ferrule	021082		2	C
Socket-Q.D.	021524		1	B
Tube-Nylobrade	020568-24		1	C
Line A-Air	X24382-96		1	B
Adaptor-Swivel	016715		2	B
Ferrule	021082		2	C

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DESCRIPTION	PART NUMBER	452 QTY.	453 QTY.	WARR. CLASS
Tube-Nylobrade	020568-96		1	C
Manifold A-Regulator	X23994		1	B
Decal-Flavor Color (4)	022105		1	C
Gauge-Pressure	021029		3	B
Manifold Assembly	X25293		1	B
Regulator-Pressure	020514		4	B
Restrictor A-Air	X21161		1	B
Valve-Pressure Relief	021148		1	B
Washer-Flare	018595		4	C
Wrap-Brown Spiral	022362-2		1	C
Wrap-Plain Spiral	022362		1	C
Wrap-Red Spiral	022362-1		1	C
Relay-Compressor Line	012725-	1	1	B
Relay-Plug-In (for Auto Lift)	017146-	1		B
Relay-Spinner	016006-	1	1	B
Relay-Start	037430	1	1	B
Rotor A-Torque	X17381	1	1	B
+Arm-Torque	014500	1	1	B
+Bearing-Guide	014496	1	1	C
+O-Ring	018550	2	2	C
Sanitizer-Kay-5	041082	1	1	C
Shaft-Drive	035527	1	1	B
+Seal-Drive Shaft	032560	1	1	C
Shaft-Extension	034693	1	1	B
Shaft-Flexible Drive	016787	1	1	B
Shell A-Insulated	X22992	1	1	*
Shield-Splash	022765		1	B
Shield-Splash	022763	1		B
Socket-Relay	017082	1		B
Spring-Torque (Black)	015007	1		B
Spring-Torque (Green)	014497		1	B
Starter-Beater Line	014164-	1	1	B

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+Sold Separately

**SPECIFY VOLTAGE, CYCLE & PHASE OF FREEZER  
WHEN ORDERING ELECTRICAL REPLACEMENT PARTS.**

DESCRIPTION	PART NUMBER	452 QTY.	453 QTY.	WARR. CLASS
Stud-Nose Cone (for Freezer Door)	011390	4	4	B
Switch-Pressure	030886		1	B
+Boot-Pressure Switch	034682		1	C
Switch-Push Button (Auto Lift)	016530	1		B
Switch-Push Button Selector (4)	016982	1	1	B
Housing-Push Button	017562	4	4	C
Insert-Heat	017562-3	4	4	C
Insert-Retaining	017562-4	4	4	C
Insert-White	017562-2	4	4	C
Screen-Display	017562-1	4	4	C
Switch-Rocker (Control Switch)	014237	1	1	B
+Card-"Wash-Off-Auto"	014091	1	1	C
Switch-Toggle	016250	1	1	B
Switch A-Draw	X29870	1	1	B
Arm A-Draw	X17041	1	1	B
Lift A-Draw Arm	X30643	1	1	B
Pin-External Cotter	014051	1	1	C
Pin A-Pivot	X17092	1	1	B
Switch-Micro	009367	3	3	B
Switch A-Foot	X29873	1		B
Seal-Switch	017460	1		C
Switch-Micro	016339	1		B
Switch A-Torque (Consistency Control)	X29869	1	1	B
Hub A-Arm	X17033	1	1	B
Switch-Unimax	014472	1	1	B
Tank-Syrup (4 Quart - 3.8 Liter)	015441-4	3		B
Cover	015441-6	3		B
Gasket (for Cover)	016037	3		C
O-Ring (for Dip Tube)	018550	3		C
Tip-Nylon (for Cover)	042747	6		C
Tube-Dip	015441-7	3		B
Tank-Syrup (4 Quart - 3.8 Liter)	045533		3	B

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+Soid Separately

**SPECIFY VOLTAGE, CYCLE & PHASE OF FREEZER  
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DESCRIPTION	PART NUMBER	452 QTY.	453 QTY.	WARR. CLASS
Cover	035759-1		3	B
Gasket (for Cover)	016037		3	C
O-Ring (for Dip Tube)	018550		3	C
Tip-Nylon (for Cover)	042747		6	C
Tube-Dip	015441-7		3	B
Timer-Cycle (4 Minute)	024955-	1	1	B
Timer-Delay (5 Seconds Off)	016822-	2	2	B
Tray-Front Drip	020157		1	B
Tray-Front Drip	013690	1		B
Trim-Front	039347		1	B
Trim-Left Front Corner	017127	1		B
Trim-Rear Corner	013811		2	B
Trim-Rear Corner	013620	2		B
Trim-Right Front Corner	017128	1		B
Tube A-Capillary	X29702	1		B
Tube A-Capillary	X22751		1	B
Valve-Access	044404	1	1	B
Valve-Access	044455	1	1	B
Valve-Auto Expansion	037392	1	1	B
+Boot-Expansion Valve	027137	1	1	C
Valve-E.P.R.	022665	1	1	B
Valve A-Draw	X17379	1	1	B
+Bearing-Spinner	017032	1	1	C
+O-Ring	020571	2	2	C
Valve A-Solenoid Rinse	X41655-	1		B
Tube-Vinyl	020940-12	1		C
Valve-Solenoid	041599-	1		B
Valve A-Three Flavor Solenoid	X41654-	1		B
Adaptor	016614	6		B
Ferrule	017954	3		C
Ferrule	021082	6		C
Label-Brown	022710	2		C

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+Sold Separately

**SPECIFY VOLTAGE, CYCLE & PHASE OF FREEZER  
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DESCRIPTION	PART NUMBER	452 QTY.	453 QTY.	WARR. CLASS
Label-Red	022707	2		C
Label-White	022709	2		C
Restrictor-Syrup	030917	2		C
Socket-Q.D.	021026	3		B
Tube-Nylobrade	020568-40	1		C
Tube-Nylobrade	020568-43	1		C
Tube-Nylobrade	020568-45	1		C
Tube-Vinyl	020940-15	3		C
Valve-Solenoid	041589-	3		B
Wrap-Brown Spiral	022362-2	1		C
Wrap-Plain Spiral	022362	1		C
Wrap-Red Spiral	022362-1	1		C
Valve A-Three Flavor Solenoid	X41657-		1	B
Adaptor	016614		7	B
Ferrule	017954		4	C
Ferrule	021082		7	C
Label-Brown	022710		1	C
Label-Red	022707		1	C
Label-White	022709		1	C
Restrictor-Syrup	030917		2	C
Socket-Q.D.	021026		3	B
Tube-Nylobrade	020568-161		1	C
Tube-Nylobrade	020568-156		1	C
Tube-Nylobrade	020568-159		1	C
Tube-Vinyl	020940-25		1	C
Tube-Vinyl	020940-24		1	C
Tube-Vinyl	020940-20		2	C
Valve-Solenoid	041599-		1	B
Valve-Solenoid	041589-		3	B
Wrap-Brown Spiral	022362-2		1	C
Wrap-Plain Spiral	022362		1	C
Wrap-Red Spiral	022362-1		1	C

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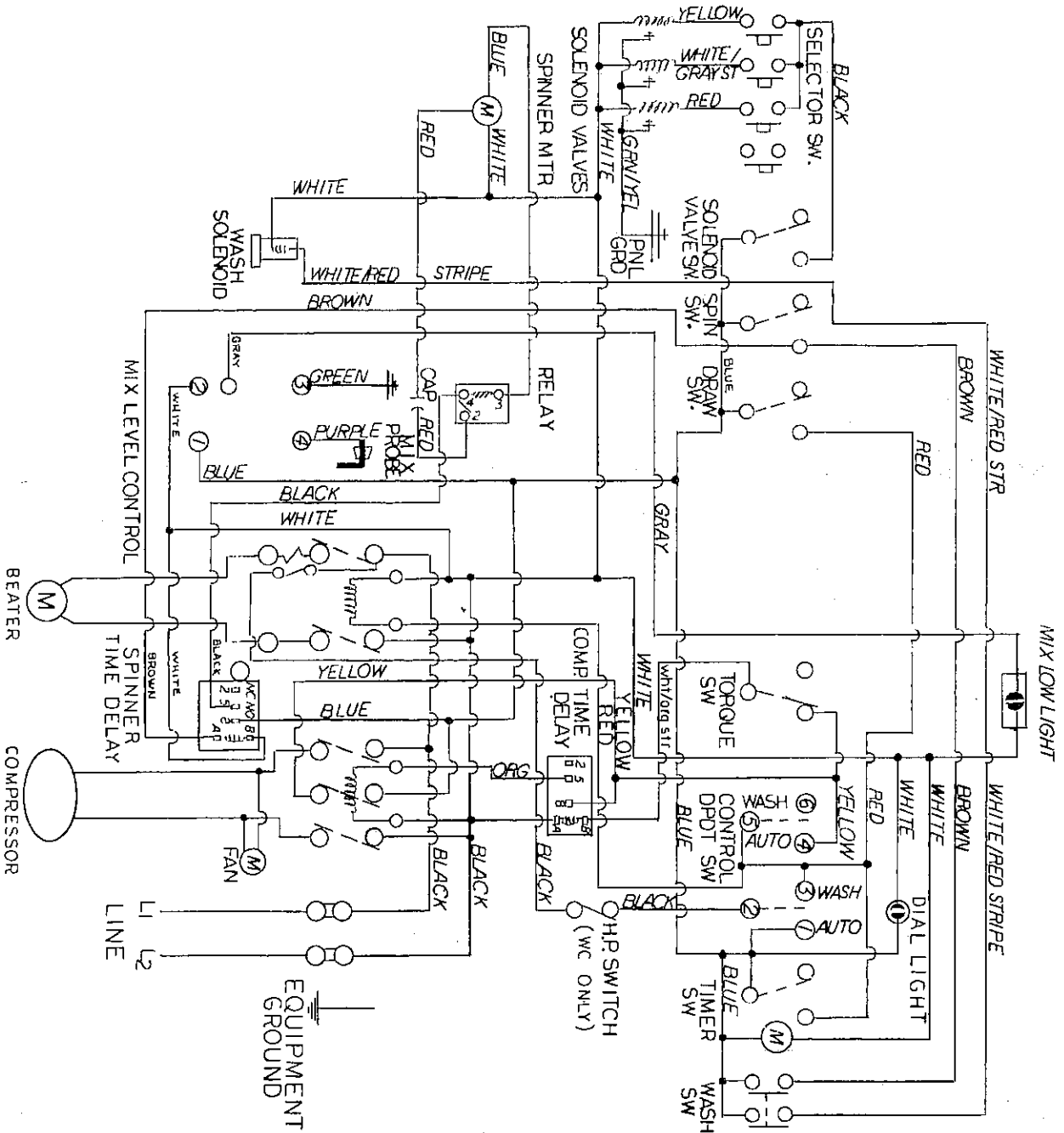
**SPECIFY VOLTAGE, CYCLE & PHASE OF FREEZER  
WHEN ORDERING ELECTRICAL REPLACEMENT PARTS.**

DESCRIPTION	PART NUMBER	452 QTY.	453 QTY.	WARR. CLASS
OPTIONAL FEATURES				
SEPARATE HOPPER REFRIGERATION				
Belt	007098	1		C
Compressor (Danfoss)	027310	1		*
Condenser	027155	1		B
Control-Temperature	027505	1		B
Decal-Mix Refrigeration "On-Off"	021665	1		C
Dryer-Capillary	027595	1		C
Label-Mix Cooling Adjustment	020217	1		C
Motor-Fan	027309-	1		B
Switch-Toggle	012626	1		B
Valve-Access	029406	1		B
WATER COOLED				
Blower	012796-	1		B
+Guard-Blower	022505	1		B
Condenser	018278	1		B
Condenser	011529		1	B
Motor-Fan	015184-		1	B
+Blade-Fan (10" Push)	013043		1	B
Switch-High Pressure	025749	1	1	B
Valve-Water	008363	1	1	B
50 CYCLE				
Belt	007530	1		C
Belt	009613		1	C
Block-Terminal	015987	2		B
Capacitor-Run	012906	1	1	B
Capacitor-Start	038143	1	1	B
Pulley (for Beater Motor)	033559	1	1	B
Relay-Start	038146	1	1	B

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**SPECIFY VOLTAGE, CYCLE & PHASE OF FREEZER  
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# WIRING DIAGRAM MODEL 453

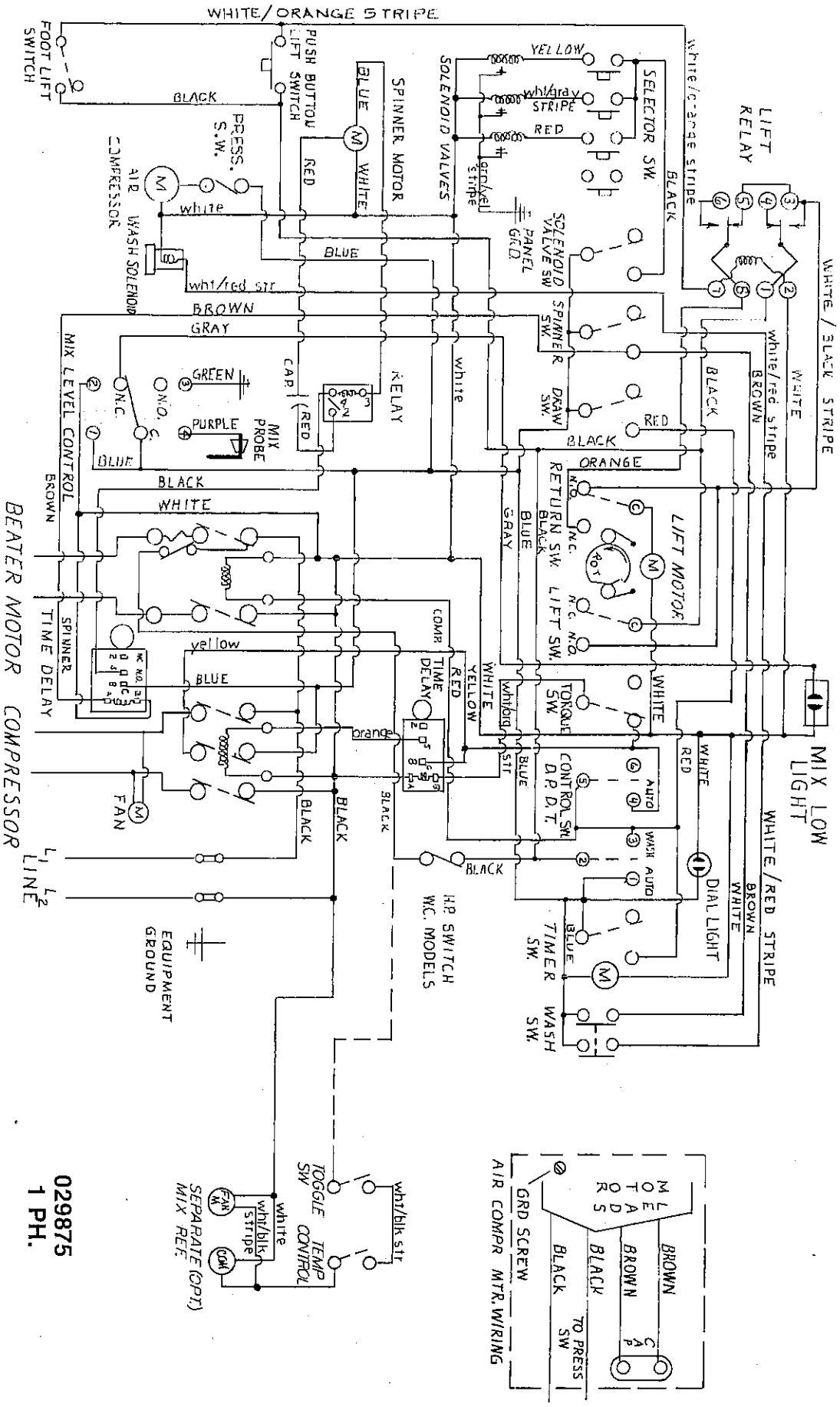


GROUND FRAME SECURELY

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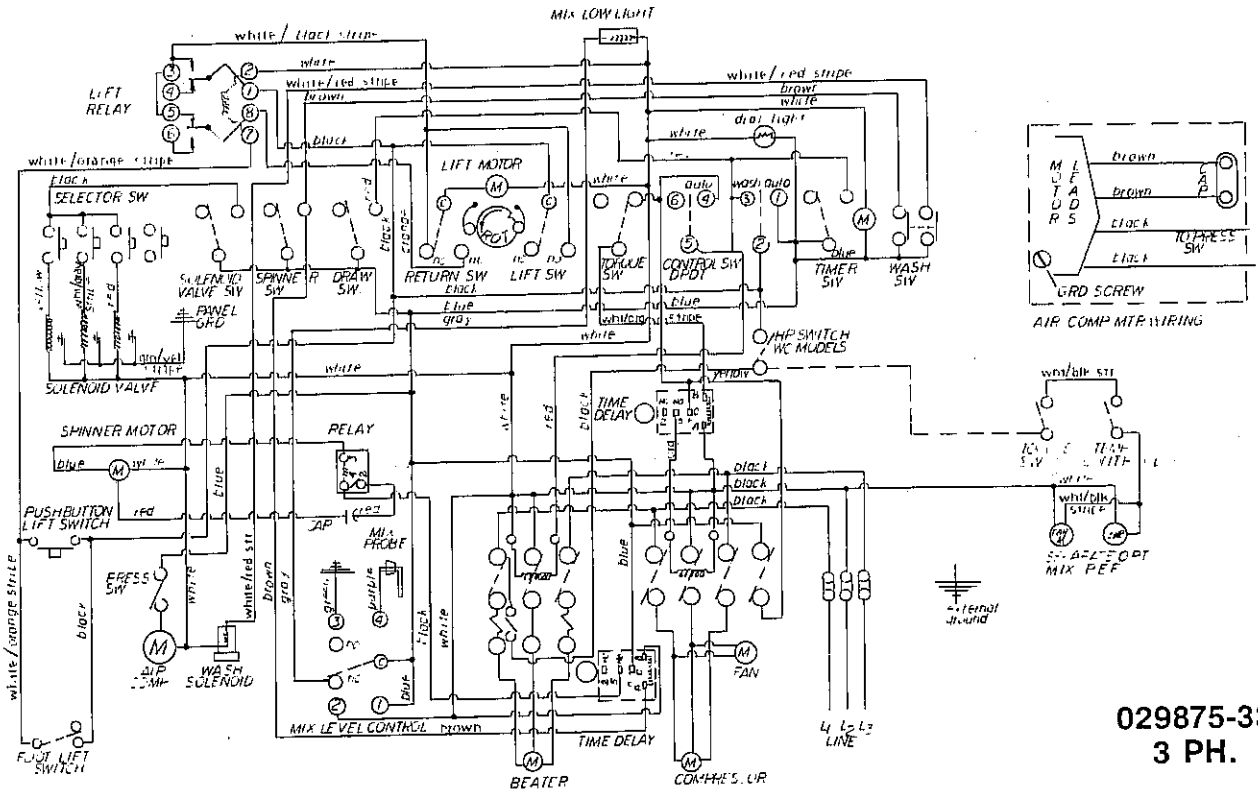
# WIRING DIAGRAM MODEL 452



GROUND FRAME SECURELY

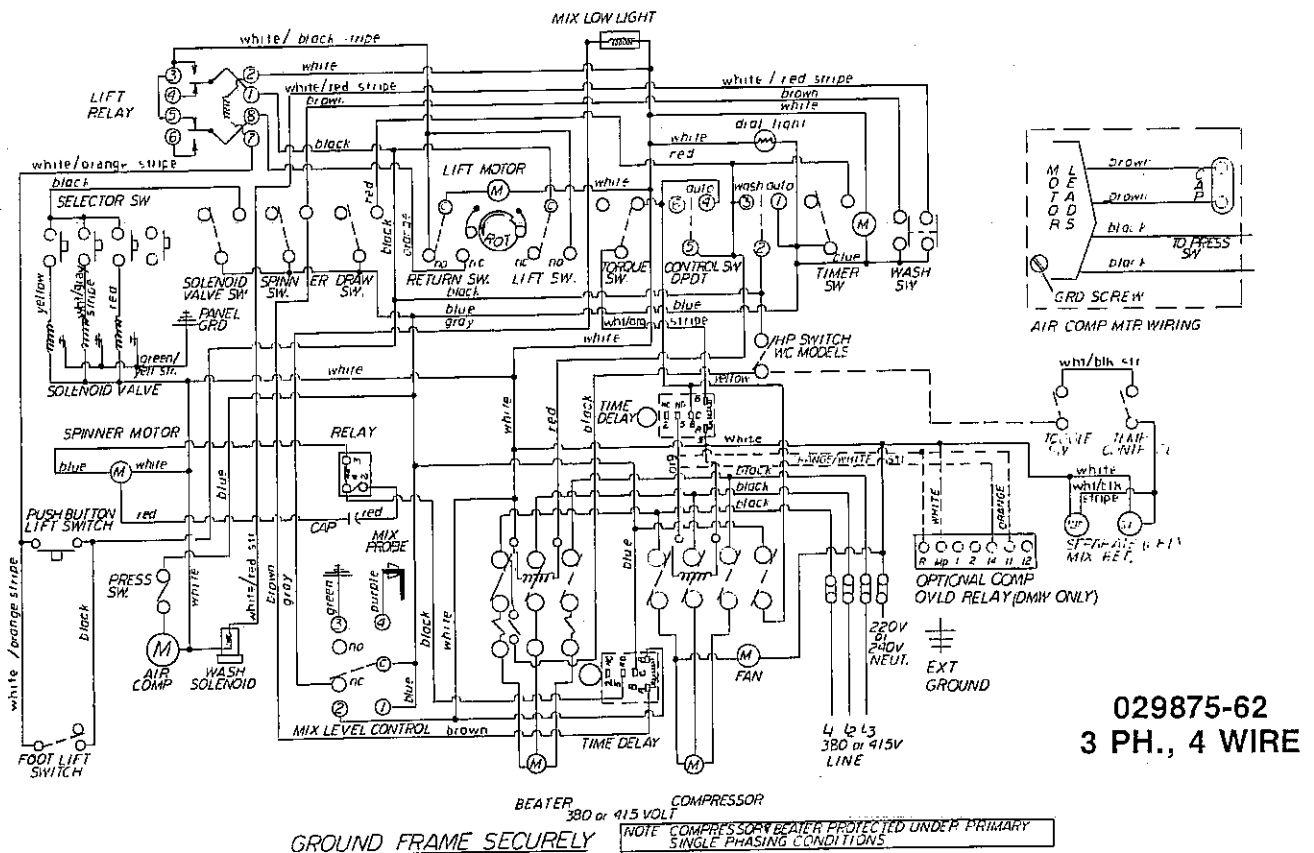
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# WIRING DIAGRAM MODEL 452



GROUND FRAME SECURELY

NOTES: COMPRESSOR BEATER PROTECTED UNDER PRIMARY SINGLE PHASING CONDITIONS



GROUND FRAME SECURELY

NOTE: COMPRESSOR BEATER PROTECTED UNDER PRIMARY SINGLE PHASING CONDITIONS