OPERATOR'S MANUAL

TAYLOR

Batch Ice Cream Freezer

Model 110

Model 220

TAYLOR
ROCKTON, ILLINOIS 61072

Contents

To the Operator

The freezer you have purchased has been carefully engineered and manufactured to give you dependable operation. The Taylor Freezer Models 110 and 220, 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 110 and 220 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.

Safety

We at Taylor Freezer 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. 3" (76 cm) minimum air space on front, rear, and sides.

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

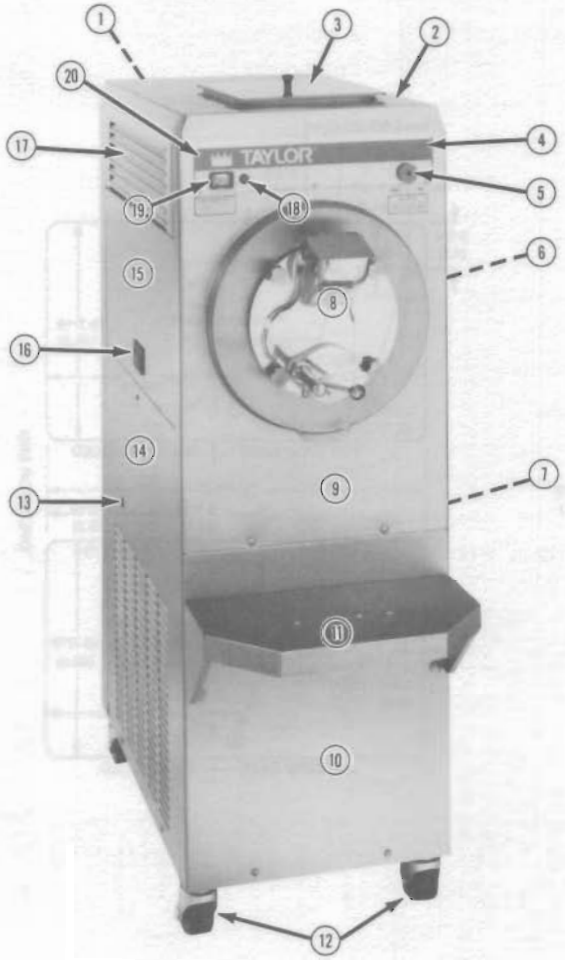
DO NOT remove door, beater and blades, or drive shaft unless all control switches are in the "Off" position.

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

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

Controls and Panels

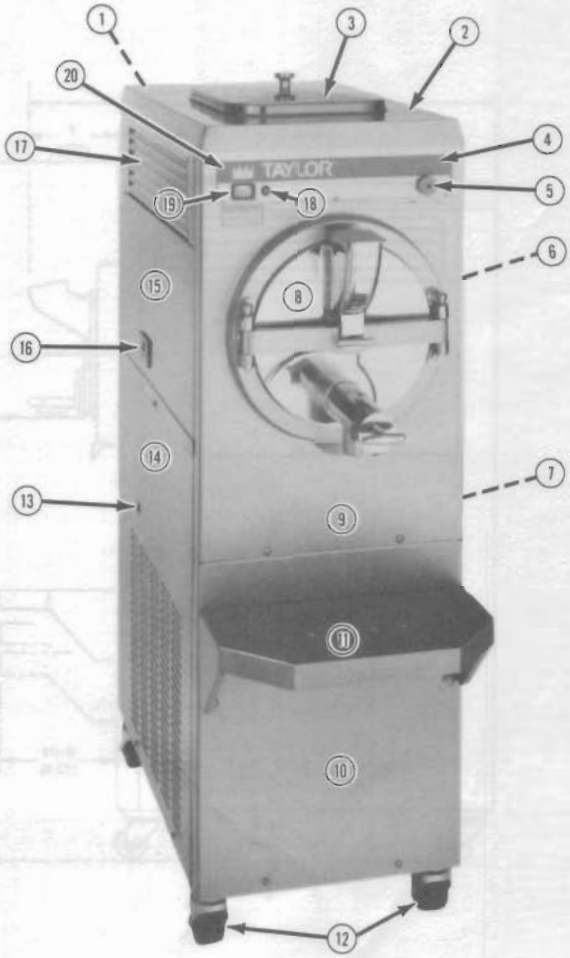
Model 110



Item	Description	Part No. 110	Part No. 220
1	Rear Panel	031749	031749
2	Hood Assembly	X31900	X32156
3	Mix Hopper Cover	030312	X24778
4	Decorative Decal	021872	021872
5	Temperature Control Knob*	013731	013731
6	Right Upper Side Panel	031899	033125
7	Right Lower Side Panel Assembly	X26597	X26597
8	Freezer Door Assembly	X22582-SP	X32938
9	Front Panel Assembly	X31962	X32154
10	Lower Front Panel	032596	032596

*See page 21 for detailed information

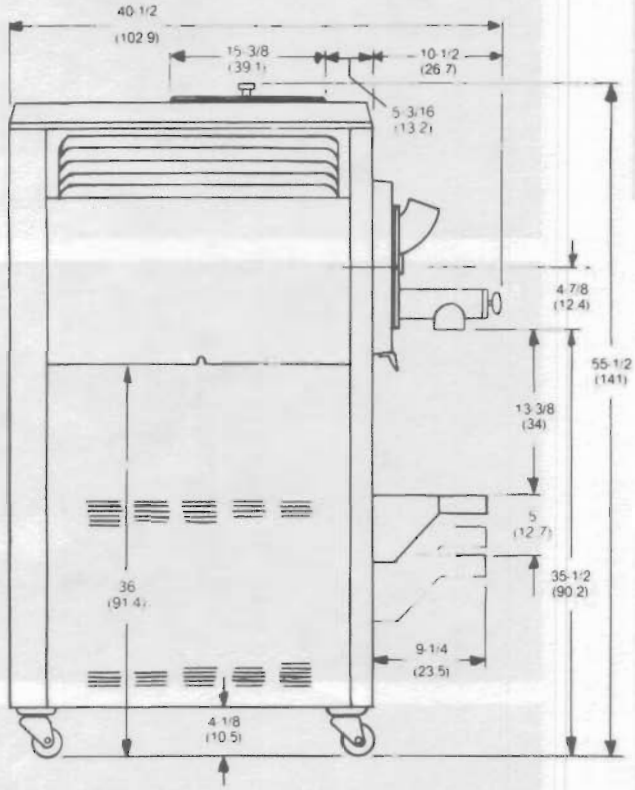
Model 220

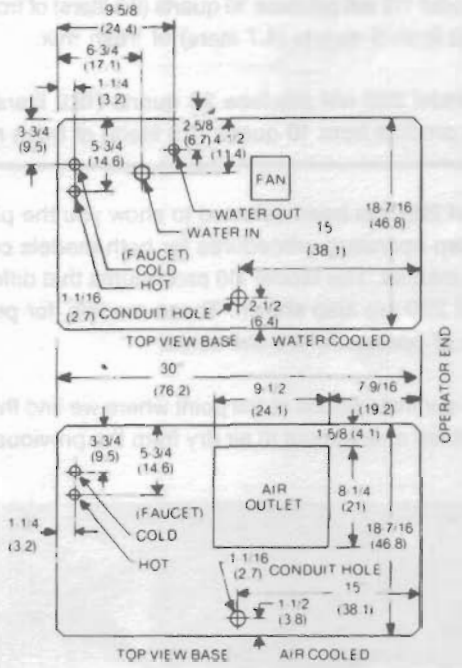


Item	Description	Part No. 110	Part No. 220
11	Adjustable Shelf	031753	031753
12	Swivel Casters	4/021279	2/021279 & 2/30307
13	Reset Button*	014164	014164
14	Left Lower Side Panel	031897	X31896
15	Left Upper Side Panel	031898	033124
16	Rear Drip Tray	027503	027503
17	Side Louver	019566	019566
18	Dial Light*	014118	014118
19	Control Switch ("Eject-Off-Auto")*	014237	014237
20	Front Switch Cover	033027	033027

Specifications

Model 220





(Figures in parentheses indicate centimeters)

- **MIX HOPPER.** One; 10 quart (9.5 liter) capacity.
- **BEATER MOTOR.** One; 1.5 hp.
- **REFRIGERATION UNIT.** One; approximately 12,000 btu/hr compressor. Refrigerant 12.
- **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: 45 Amps. Minimum Wire Ampacity: 32A. Three Phase Maximum Fuse Size: 30 Amps. Minimum Wire Ampacity: 22A.
- **AIR COOLED.** Clearance: 3″ (7.6 cm) around all sides.
- **WATER COOLED.** Water inlet and drain connections at rear of unit 3/8″ FPT.
- **DIMENSIONS.** Width: 18-7/16″ (46.8 cm). Depth: 40-1/2″ (102.9 cm). Height: 55-1/2″ (141.0 cm). Floor Clearance: 4-1/8″ (10.5 cm) mounted on standard casters or legs.
- **APPROXIMATE WEIGHTS.** Net: 500 lbs. (226.8 Kgs.). Crated: 590 lbs. (267.6 Kgs.) 54.8 cu. ft. (1.5 cu.m.).

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

Availability and specifications subject to change without notice

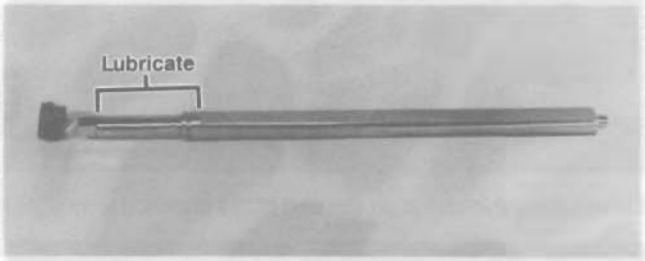
ASSEMBLY

Step 1

Make sure the control switch is in the "Off" position

Step 2

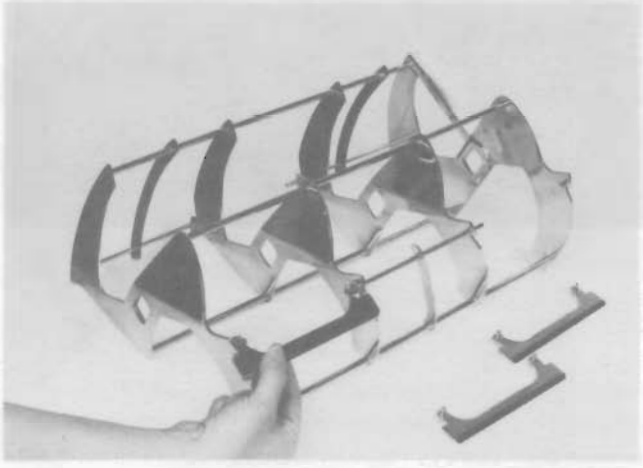
Install drive shaft. Apply an even coat of Taylor Lube to the groove and shaft portion of the drive shaft. DO NOT lubricate the hex end. Slide the shaft seal, small end first, onto the shaft. Push the seal over the shoulder and into the groove in the shaft. Apply additional Taylor Lube inside the large opening of the seal.



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

Step 3

Install beater assembly. First check scraper blades for any nicks or signs of wear. If the blades are in good condition, place rear scraper blade into the grooves on the beater (knife edge to the outside). The pins on the blades fit under the pins on the beater to prevent the blades from falling off.

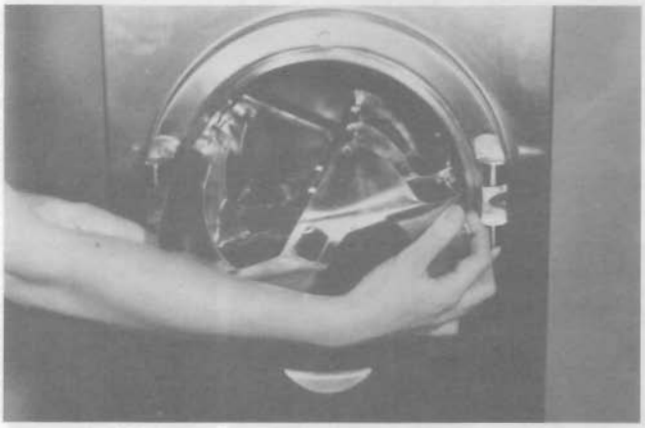


Model 220:

Holding the rear blade on the beater, slide the beater assembly into the freezing cylinder over the drive shaft until the entire blade is inside. Install the middle scraper blade into the two middle holding pins. Slide the beater assembly in farther and install the front scraper blade into the two front holding pins. Slide the beater assembly the rest of the way into the freezing cylinder.

Model 110:

Holding the rear blade on the beater, slide the beater assembly into the freezing cylinder over the drive shaft until the entire blade is inside. Install front scraper blade into the front holding pins and slide the beater assembly the rest of the way into the freezing cylinder.



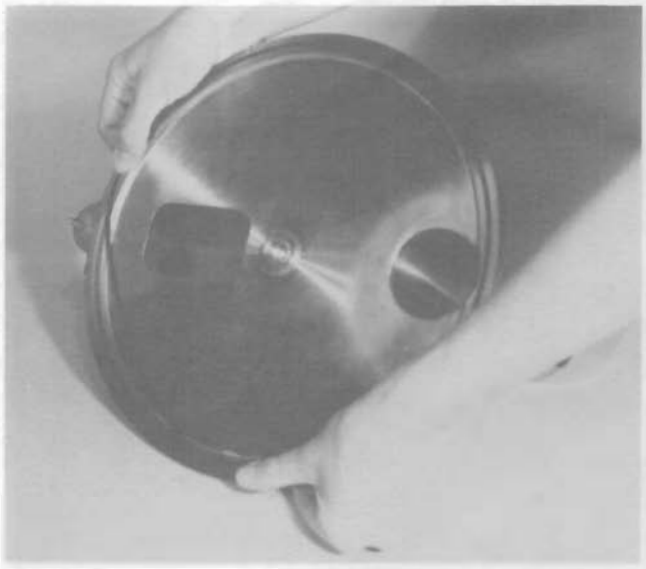
Make sure the beater assembly is pushed all the way to the rear of the freezing cylinder and that the end of the beater shaft protrudes from the end of the beater assembly. When in position, the beater will not protrude beyond the front of the freezing cylinder.

Step 4

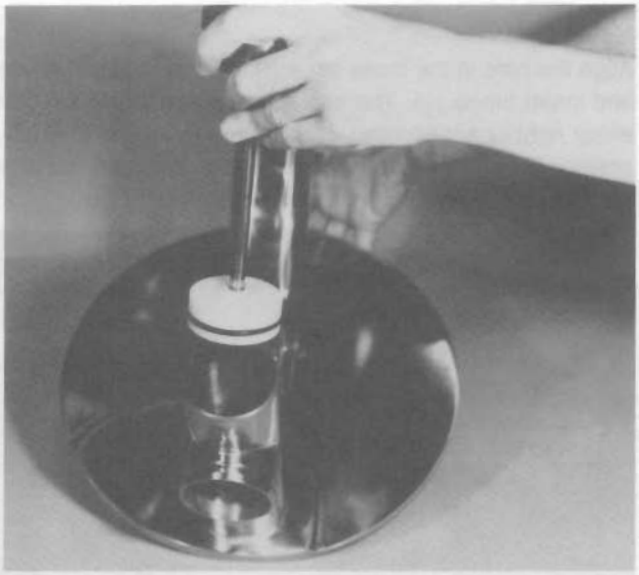
Assemble freezer door.

Model 220:

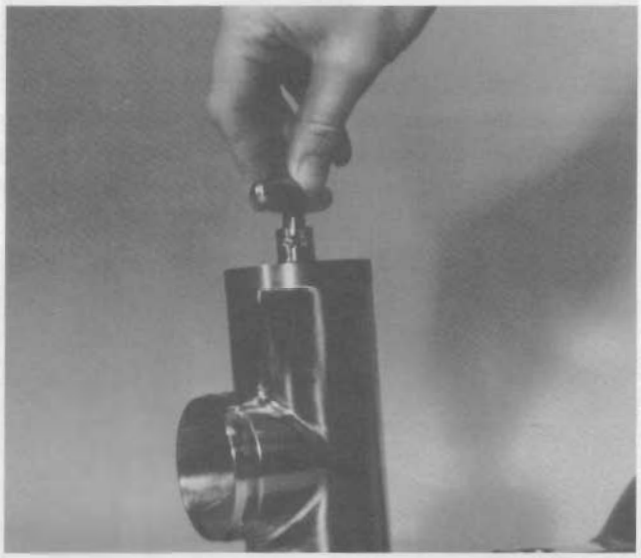
Insert large o-ring into groove on back of freezer door.



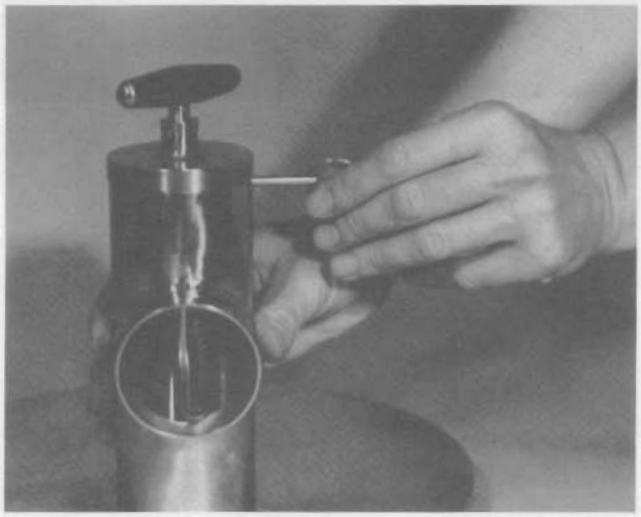
Insert the draw rod assembly, valve piston first, into the valve body.



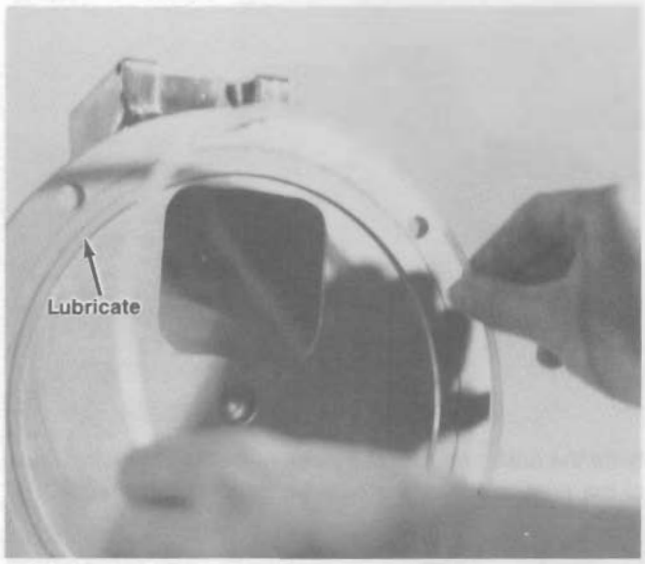
Turn the draw rod handle to lock the bearing holder into place.



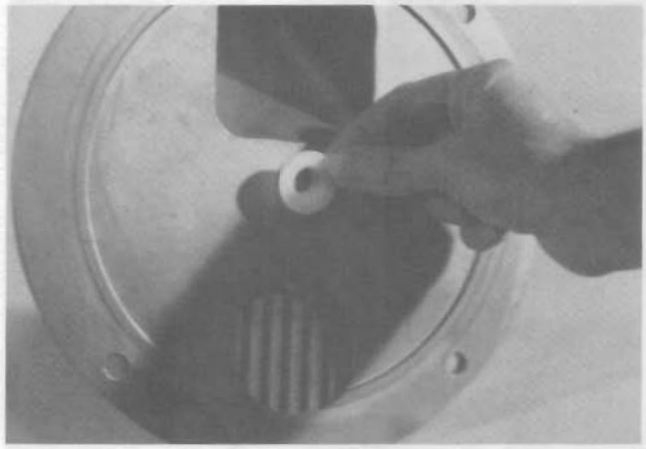
Turn the bearing holder so the holes are aligned with the holes in the valve body. Secure with the keeper pin.



Model 110:
Lightly lubricate groove on back of freezer door and insert clear plastic gasket into groove.



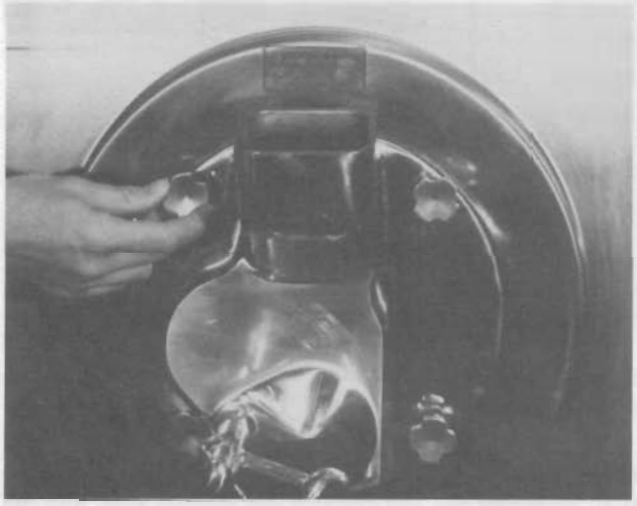
Insert front bearing in the hole in the center on the back of the freezer door.



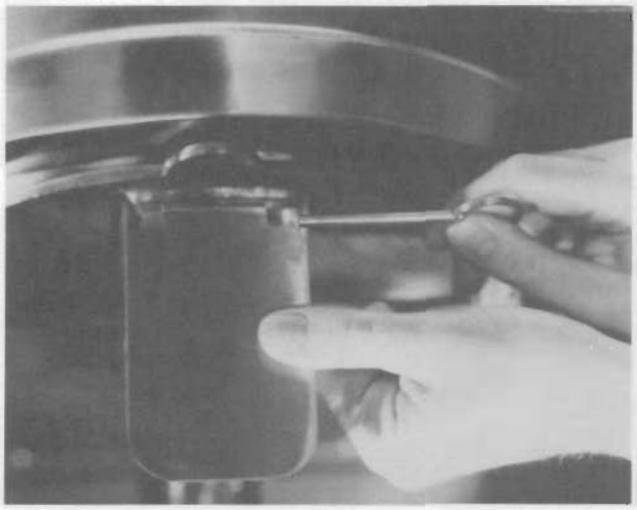
Turn the door over and slide the seal plate over the stem, with the aligning pin hole facing on top.

Model 110:
Holding the freezer door firmly, install door on freezer studs

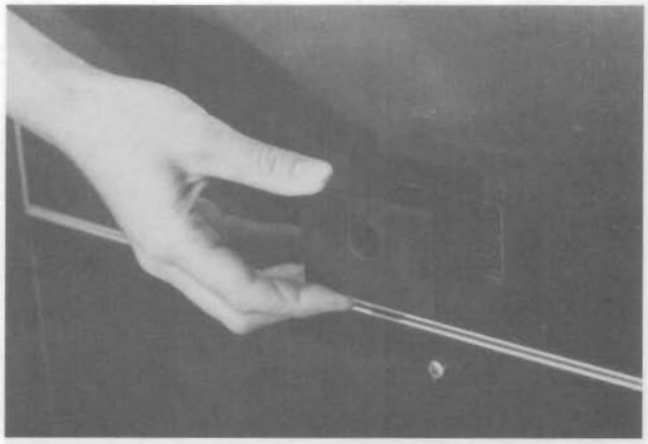
Make sure the freezer door fits securely over the freezing cylinder. With door seated on the freezer studs, install the handscrews. Tighten equally in a criss-cross pattern to insure the door is snug.



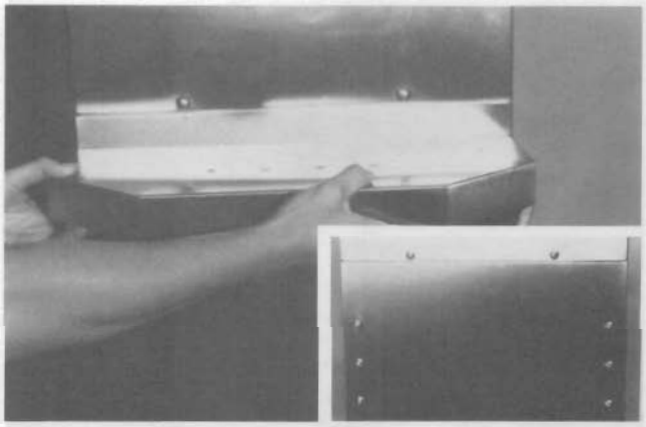
Step 6
Align the holes in the cover cap assembly with the holes on the freezer door. Secure with keeper pin.



Step 7
Slide the rear drip tray into the hole in the left side panel.



Step 8
Install shelf. Choose level desired and align grooves in back of shelf with holding collars. Slide shelf down over holding collars of same height on left and right sides.



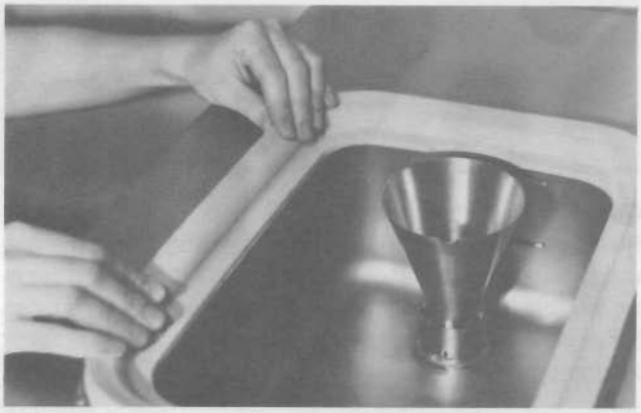
SANITIZING

Step 1
Prepare two gallons (7.6 liters) of an approved 100 PPM sanitizing solution (example: Stera-Sheen) with WARM WATER ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS.

Model 110:
With an empty mix pail beneath the ejection port, lift the draw arm up, opening the ejection port. Draw off all the sanitizing solution. When the sanitizer stops flowing from the ejection port, close the draw arm.

NOTE: You have just sanitized the freezer, therefore, **be sure your hands are sanitized** before going on in these instructions.

Step 7
Assemble the hopper gasket around the top edge of the mix hopper.



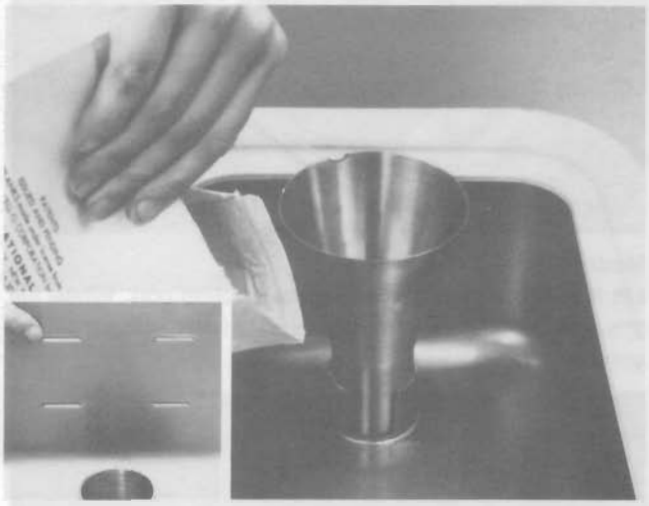
PRIMING

Step 1
Place the funnel in the mix inlet hole at the rear of the hopper. Turn the funnel to the right or left so that the opening in the funnel does **NOT** align with the opening in the mix inlet hole.

Step 2

Model 220:
Pour 10 quarts (9.5 liters) of **fresh** mix into the hopper. This should bring the mix level up to the second graduated mark on the rear wall of the hopper.

Model 110:
Pour 5 quarts (4.7 liters) of **fresh** mix into the hopper.



Step 6
To add fruits and nuts, place the control switch in the "Eject" position. Fruits and nuts may be added through the mix hopper funnel or the opening in the freezer door. If adding fruits or nuts through the **funnel**, use the plunger to press the ingredients down into the freezing cylinder.

NOTE: Do not use plunger when adding fruits and nuts through the opening in the freezer door. The plunger would hit the beater assembly and cause damage.

Model 220:
If adding fruits or nuts through the freezer door, use the small white plastic funnel.

Thoroughly mix the added ingredients until the desired consistency is obtained.

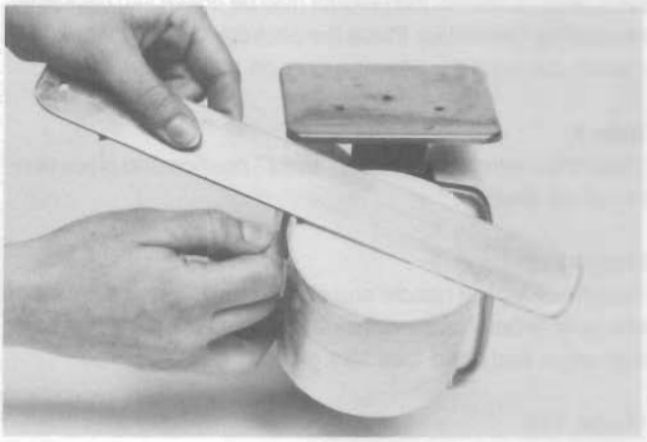
OVERRUN

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

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

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

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



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

Step 5
If the scale does not have overrun graduations, then weigh one pint of mix before freezing. Draw a sample pint of frozen product and level off with a straight edge.

Step 6
Place the pint of product on the scale and read the weight. Divide the weight of the frozen product into the weight of the raw mix for your percent of increase. If the answer is 2, you have 100% overrun. If the answer is between 1 and 2, the decimal represents your overrun.

Example:

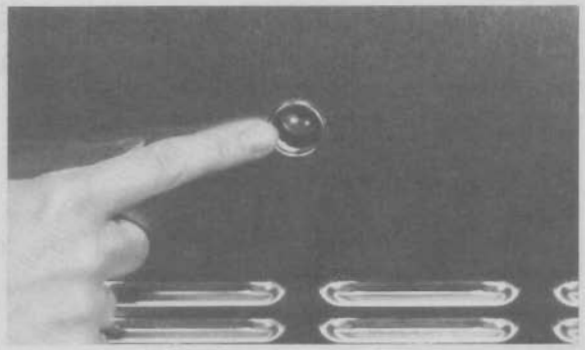
Raw Mix = 15 2 ounces
Frozen Mix = 8 2 ounces

$$8\,2 \overline{)\,15\,2} = 1\,85$$

Overrun = 85%

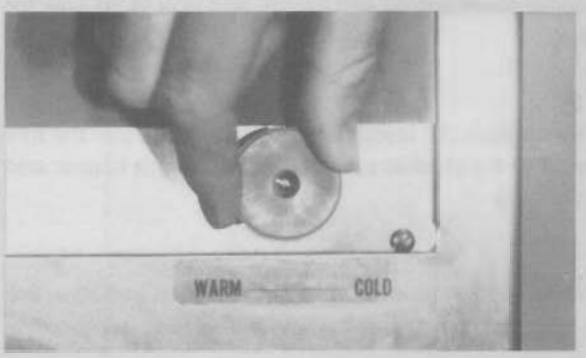
Important: To the Operator

RESET MECHANISM



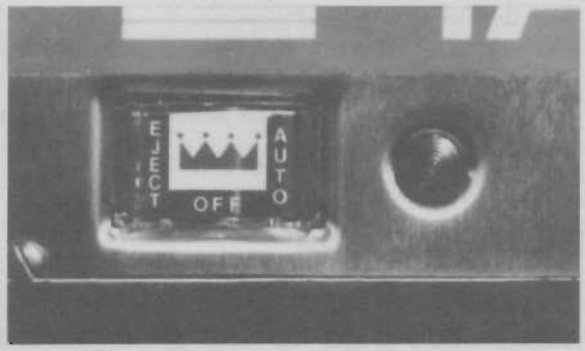
Located on the left side panel is the reset button. The reset protects the beater motor from an overload condition. Should an overload occur, the reset mechanism will trip. To properly reset the freezer, place the control switch in the "Off" position. Depress the reset button firmly. Place the control switch in the "Eject" position and observe the freezer's performance. Return the control switch to the "Auto" position.

TEMPERATURE CONTROL



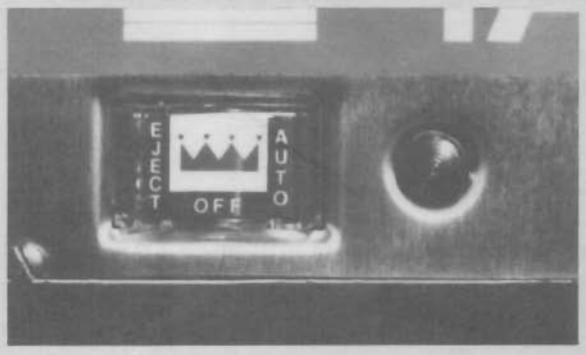
Located on the right front side is the temperature control knob. Turning the adjusting knob CLOCKWISE will decrease product temperature and COUNTER-CLOCKWISE will increase the temperature. **Each quarter turn will vary the temperature approximately two degrees.**

RED DIAL LIGHT



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

CONTROL SWITCH



When the control switch is placed in "Auto," the refrigeration system will operate. When the switch is placed in "Eject," only the beater motor will operate.

SAFETY

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

Model 220:
Remove the keeper pin on the valve body, turn draw rod handle, and pull draw rod assembly out of valve body. Unscrew valve piston and slide bearing holder down off the draw rod. Remove the o-ring from the valve piston and bearing holder. Remove large o-ring and front bearing from back of freezer door. Remove keeper pin from cover cap assembly and remove cover cap assembly.

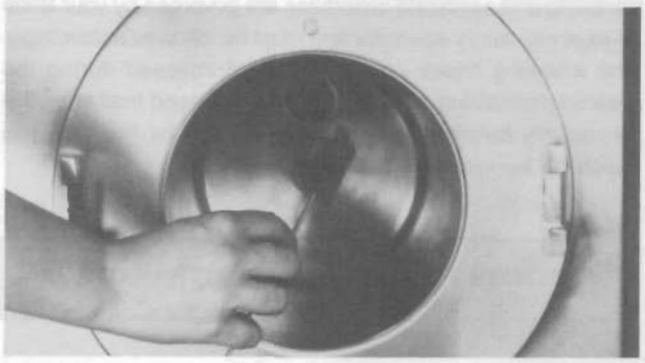
Model 110:
Remove cotter hitch pin from stem cap. Unscrew stem cap from the stem and pull the draw arm up off the stem. Remove the black rubber ball from the back of the draw arm. Slide seal plate up off the stem. Remove gasket and front bearing from back of freezer door. Remove keeper pin from cover cap assembly and remove cover cap assembly.

NOTE: To remove o-rings, use a 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.

Take these parts to the sink for cleaning.

Step 4
Thoroughly brush clean all disassembled parts in the cleaning/sanitizing solution, making sure all lubricant and mix film is removed. Place the sanitized parts on a clean dry surface to air dry.

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



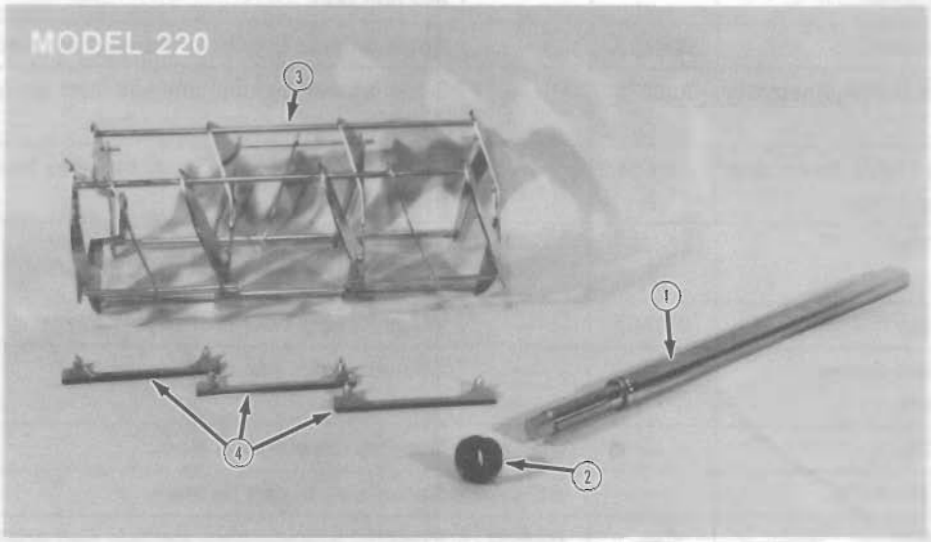
Step 6
Wipe clean the shelf and all exterior surfaces of the freezer.

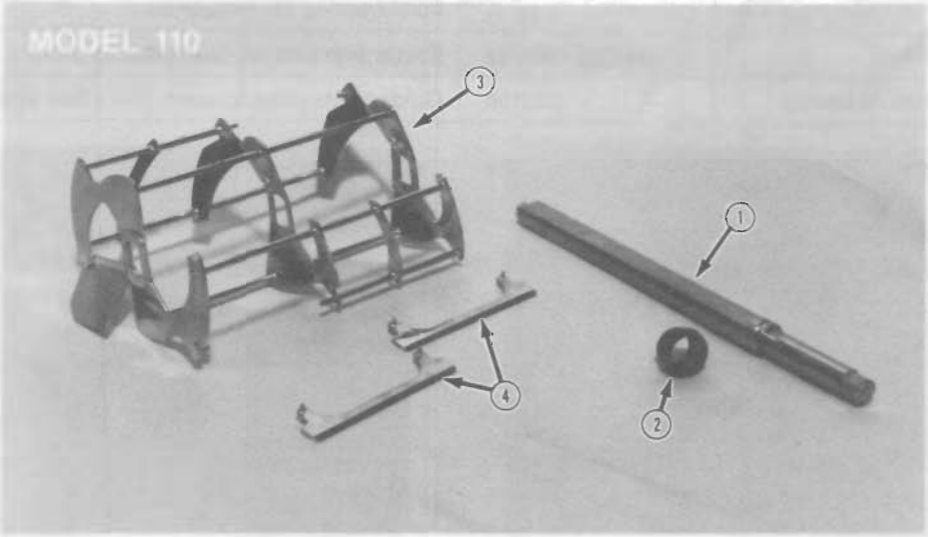
Operator's Troubleshooting Guide

PROBLEM	PROBABLE CAUSE	REMEDY	PAGE REFER.
1. Unit will not run in "Auto."	a. Unit unplugged	a. Plug in wall receptacle	—
	b. Circuit breaker off	b. Turn breaker on	—
	c. Poor ejection	c. Place control switch in "Off." Depress reset button firmly. Place control switch in "Eject" position and observe freezer's performance. Resume normal operation.	21
2. Product not freezing.	a. Dirty condensers.	a. Clean condensers regularly.	24
	b. Control switch is not in the "Auto" position.	b. Place control switch in "Auto."	18
	c. On water cooled units, inadequate water supply.	c. Check to be sure water is turned on. Check hoses for leaks or kinks.	24
3. Drive shaft stuck.	a. Rounded corners on shaft, drive socket, or both.	a. Replace drive shaft, drive socket, or both. Do not lubricate the hex end of drive shaft. Contact service technician.	—
4. Scored walls of freezing cylinder.	a. Improperly installed scraper blades.	a. Install properly.	11
5. Excessive mix leakage in rear drip tray.	a. Worn or missing drive shaft seal.	a. Install or replace seal.	11
	b. Inadequate lubrication of drive shaft seal.	b. Lubricate properly.	11
	c. Worn rear shell bearing.	c. Contact service technician.	—
	d. Wrong type lubricant being used.	d. Use Taylor Lube.	—
6. Buzzer does not sound when freezer cycles off.	a. Buzzer malfunctioning.	a. Contact service technician.	—
7. Overrun too low.	a. Temperature control set too cold.	a. Adjust accordingly.	21
	b. Not enough air blended into product.	b. Place control switch in the "Eject" position to blend in more air. Continue blending until desired overrun is achieved.	19
	c. Improper priming procedures.	c. Follow priming procedures.	17
8. Overrun too high.	a. Not enough mix in freezing cylinder when priming machine.	a. Follow priming procedures.	17
	b. Temperature control set too warm.	b. Adjust accordingly.	21
	c. Left in "Eject" position too long after drawing some product out to place in hardening cabinet.	c. After drawing out first portion, place control switch in "Off." Return to freezer to draw out more product, place control switch in "Eject."	—

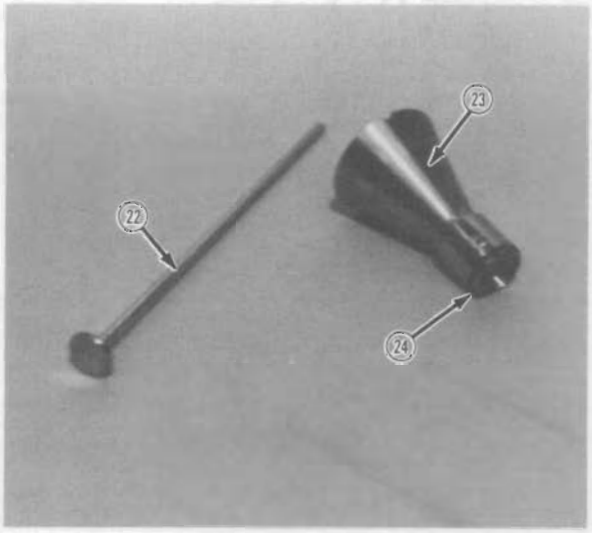
Operator Parts Identification

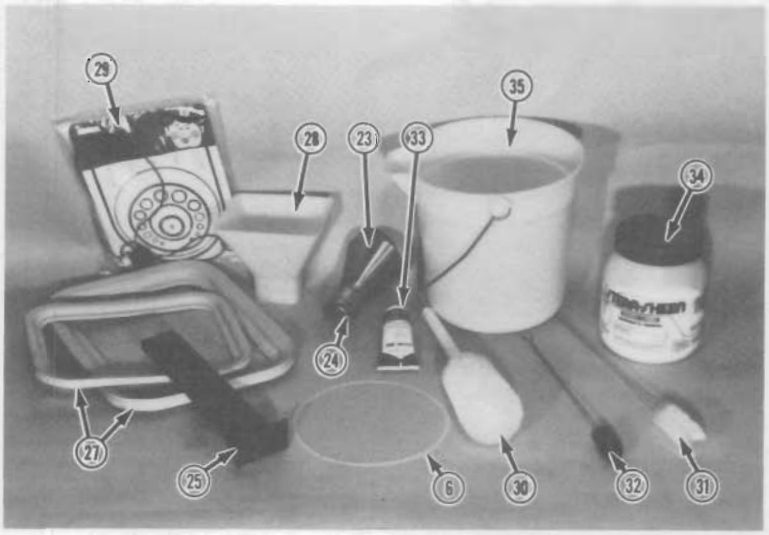
NUMBER	DESCRIPTION	PART NUMBER		FUNCTION
		Model 220	Model 110	
1	Beater Drive Shaft	032276	033026	Connecting part from gear unit to beater assembly. (Follow proper lubricating procedures.)
2	Seal (Drive Shaft)	031316	031316	Provides a seal from product inside freezing cylinder to external areas of freezer. (Follow proper lubricating procedures.)
3	Beater Assembly	X32269	X08413	Turns inside freezing cylinder to blend air and mix and eject product. Drives scraper blades. (Must rotate clockwise from operator's end.)
4	Scraper Blade	X07892 (3)	X07890 (2)	Scrapes frozen product off inside wall of freezing cylinder.

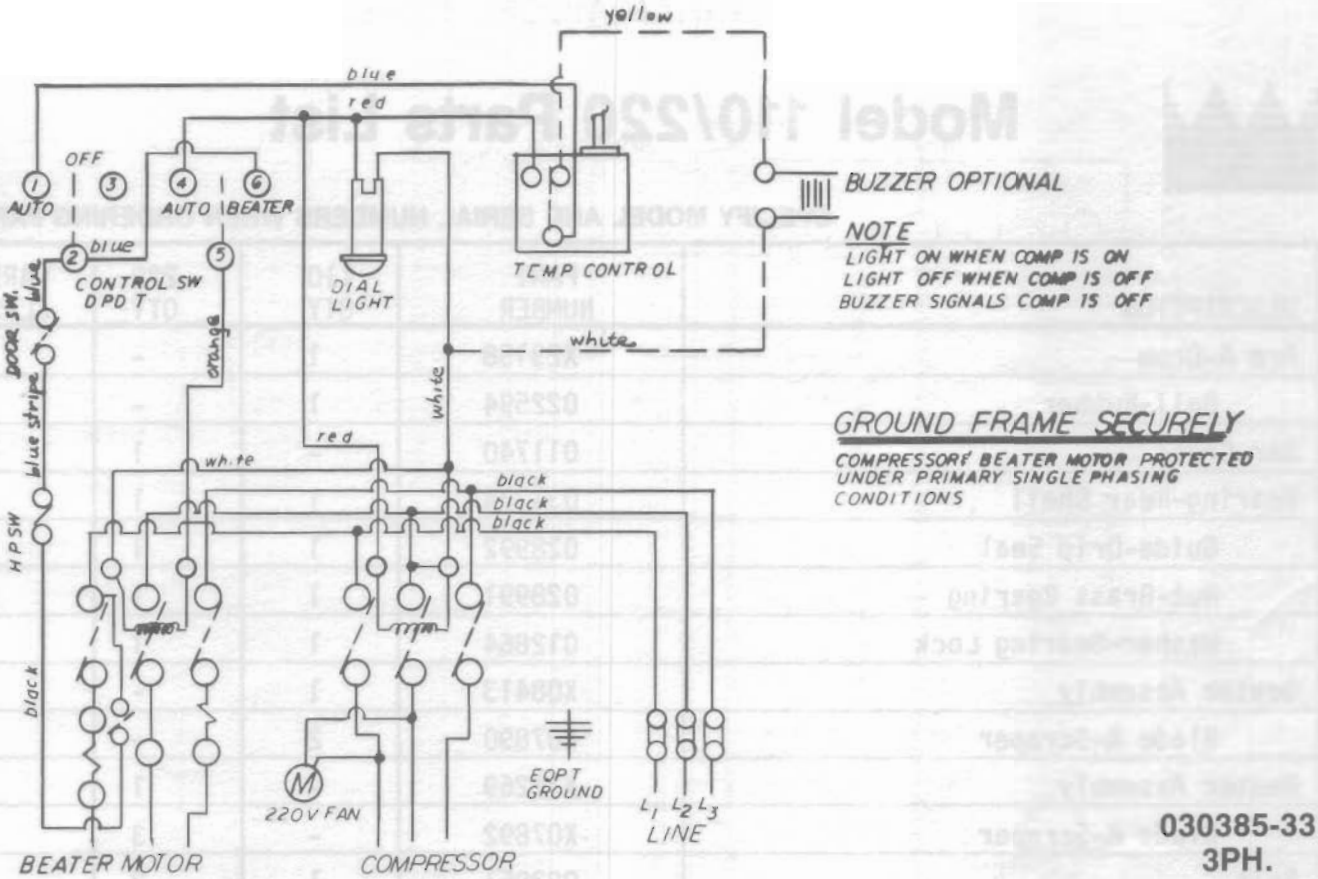




NUMBER	DESCRIPTION	PART NUMBER		FUNCTION
		Model 220	Model 110	
22	Plunger Assembly	X09585	X09585	Device to force fruits or nuts down into freezing cylinder
23	Funnel Assembly	X30308	X30308	Utensil to aid when pouring liquid into freezing cylinder
24	O-Ring (Funnel)	011471	011471	Seals funnel in mix inlet hole
25	Rear Drip Tray	027503	027503	Collects any mix leakage from rear shell bearing (Must be checked daily)
26	Adjustable Shelf	031753	031753	Holds container when product is ejected
27	Mix Hopper Gasket	011412	030339	Seals mix hopper cover onto the mix hopper
28	Plastic Funnel	029670	—	Device to aid when adding fruits or nuts to opening in freezer door
29	Tune-Up Kit Assembly	X33081	X35071	Kit which contains wear items for freezer that need to be replaced every three months
30	White Bristle Brush, 3″ x 7″	023316	023316	Use Mix hopper
31	White Bristle Brush, 1½″ x 2″	014753	014753	Use Mix inlet hole
32	Black Bristle Brush, 1″ x 2″	013071	013071	Use Rear shell bearing
33	Taylor Lube	019680	019680	Approved lubricant for lubricating freezer parts
34	Stera-Sheen	010425	010425	Approved cleaner/sanitizer for cleaning and sanitizing freezer
35	Pail (10 quart - 11.4 liter)	013163	013163	Used when cleaning and sanitizing freezer







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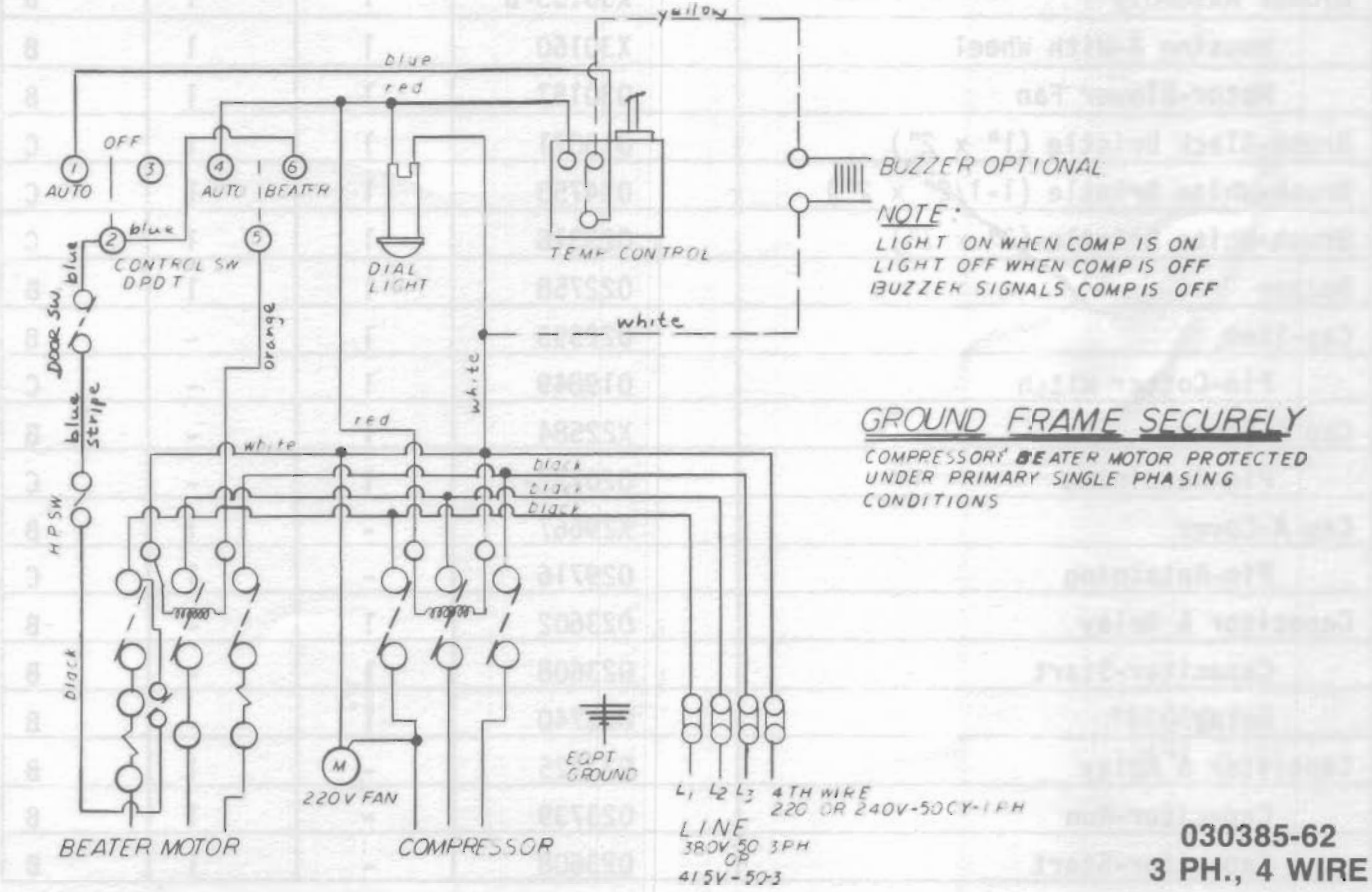

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DESCRIPTION	PART NUMBER	110 QTY	220 QTY	WARR. CLASS
Relay	023607	-	1	B
Card-"Eject-Off-Auto"	027910	1	1	C
Caster-Swivel	021279	4	2	B
Caster-Locking Swivel	030307	-	2	B
Collar-Holding (for Shelf)	019481	6	6	C
Compressor	023578	1	-	*
Compressor	023577	-	1	*
Condenser	013770	1	-	B
Condenser	019558	-	1	B
Control-Temperature	019747	-	1	B
Control-Temperature	012724	1	-	B
Coupling-Drive	012721	1	1	B
Cover-Front Switch	033027	1	1	B
Cover-Mix Hopper	030312	1	-	B
Gasket-Mix Hopper	030339	1	-	C
Cover-Mix Hopper	X24778	-	1	B
Gasket	011412	-	1	C
Knob	025429	-	1	B
Decal-Beater Delay Warning	031166	1	1	-
Decal-"Clean & Sanitize"	030582	1	1	-
Decal-Decorative Taylor	021872	1	1	-
Decal-"Warm-Cold"	013749	1	1	-
Diagram-Wiring	030385	1	1	-
Door A-Freezer	X22582-SP	1	-	B
Bearing-Front	019176	1	-	C
Gasket	010765-1	1	-	C
Door A-Freezer	X32938	-	1	B
Bearing-Front	019176	-	1	C
O-Ring	019046	-	1	C
Dryer-Filter	007498	-	1	B
Dryer-Filter	026270	1	-	B
Element-Heater	014174	1	1	C

* See Taylor Warranty Card

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

DESCRIPTION	PART NUMBER	110 QTY	220 QTY	WARR. CLASS
Lubricant-Super Taylor	019680	1	1	-
Motor-Beater (1.0 hp)	013102	1	-	B
Motor-Beater (1.5 hp)	021522	-	1	B
Pail-(10 Quart-9.5 Liter)	013163	1	1	C
Panel-Lower Front	032596	1	1	B
Panel-Left Lower Side	031897	1	-	B
Panel-Left Upper Side	031898	1	-	B
Panel-Left Upper Side	033124	-	1	B
Panel-Right Upper Side	031899	1	-	B
Panel-Right Upper Side	033125	-	1	B
Panel-Rear	031749	1	1	B
Panel A-Lower Side	X26597	1	1	B
Panel A-Front	X31962	1	-	B
Panel A-Front	X32154	-	1	B
Panel A-Left Lower Side	X31896	-	1	B
Pin A-Crossbar Hinge	X04329	-	2	B
Piston-Valve	030083	-	1	B
O-Ring	020051	-	1	C
Plate-Seal	022591	1	-	B
Plug-Drip Tray Hole	029595	1	1	B
Plunger Assembly	X09585	1	1	B
Pulley-AK32 (for Beater Motor)	007471	1	-	B
Pulley-AK64 (for Gear)	007538	1	-	B
Pulley-2AK32 (for Beater Motor)	016251	-	1	B
Pulley-2AK64H (for Gear)	016117	-	1	B
Relay (for Compressor)	012725	1	1	B
Rod A-Draw	X30079	-	1	B
Sanitizer-Stera Sheen	010425	1	1	-
Screw A-Crossbar	X07233	-	1	B
Shaft-Beater Drive	032276	-	1	B
Seal	031316	-	1	C
Shaft-Beater Drive	033026	1	-	B

* See Taylor Warranty Card

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

DESCRIPTION	PART NUMBER	110 QTY	220 QTY	WARR. CLASS
Hood A	X32156-SP	-	1	B
Line A-Water	X16798	-	2	B
TUB LOCATER	X31780	1	1	B

* See Taylor Warranty Card

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

Notes

Notes

Notes

DESCRIPTION	PART NUMBER	110 QTY	220 QTY	WARR. CLASS
Seal	031316	1	1	C
Shelf-Adjustable	031753	1	1	B
Shell A-Insulated	X34858	1	-	*
Shell A-Insulated	X34861	-	1	*
Starter-Beater Line	014164	1	1	B
Stud-Freezer (for Freezer Door)	023057	4	-	C
Switch-High Pressure	025749	-	1	B
Switch-Rocker	014237	1	1	B
Switch A-Door	X31727	1	1	B
Arm A-Switch	X31728	1	1	B
Pin-External Cotter	014051	1	1	B
Pin-Pivot	015478	1	1	B
Spring-Return	015342	1	1	C
Switch-Micro	009367	1	1	B
Tee-Access	026688	1	1	C
Tray-Drip Tray (for Rear Shell Bearing)	027503	1	1	B
Trim-Left Rear Corner	031894	1	1	B
Trim-Right Rear Corner	031895	1	1	B
Tube A- Cap.	X22751	1	-	B
Tube A-Inlet	X33068	-	1	B
Capillary	020059	-	1	B
Valve-Rotolock	023604	1	1	B
Valve-Thmo. Expansion	017730	1	-	B
Valve-Thmo. Expansion	031665	-	1	B
OPTIONAL FEATURES:				
WATER COOLED:				
Blower	012796	1	1	B
Condenser	018278	1	1	B
Switch-High Pressure	027949	1	-	B
Valve-Water	008363	1	1	B
FAUCET:				
Faucet	016778	-	1	B

* See Taylor Warranty Card

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

DESCRIPTION	PART NUMBER	110 QTY	220 QTY	WARR. CLASS
Funnel Assembly	X30308	1	1	B
O-Ring	011471	1	1	C
Funnel-Plastic	029670	-	1	C
Gasket-Door (1 Extra Box)	010765	1	-	-
Gear-Reducer	021286	1	1	B
Guide A-Drip Tray	X28863	1	1	B
Handscrew (Stud Nut)	008614	4	-	C
Hinge-Crossbar	007296	-	2	B
Screw-Hinge	007245	-	4	C
Hinge-Door	004334	-	1	B
Holder A-Bearing	X30078	-	1	B
O-Ring	020051	-	1	C
Pin-Retaining	029716	-	1	C
Hood Assembly	X32156	-	1	B
Hood Assembly	X31900	1	-	B
Hub (for Gear)	027815	1	1	B
Kit A-Tune-Up	X35071	1	-	-
Bearing-Front (for Freezer Door)	019176	1	-	C
O-Ring (for Funnel)	011471	1	-	C
Seal (for Drive Shaft)	031316	1	-	C
Kit A-Tune-Up	X33081	-	1	-
Bearing-Front (for Freezer Door)	019176	-	1	C
O-Ring (for Freezer Door)	019046	-	1	C
O-Ring (for Funnel)	011471	-	1	C
O-Ring (for Vlv Piston & Brg Hldr)	020051	-	2	C
Seal (for Drive Shaft)	031316	-	1	C
Knob-Control	013731	1	1	B
Label-Moving Parts Warning	024315	3	3	-
Label-Personnel Caution	033161	1	1	-
Label-Taylor Overload Chart	023489-1	1	1	-
Light-Red Dial	014118	1	1	B
Louver-Side	019566	2	2	B

* See Taylor Warranty Card

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

Model 110/220 Parts List

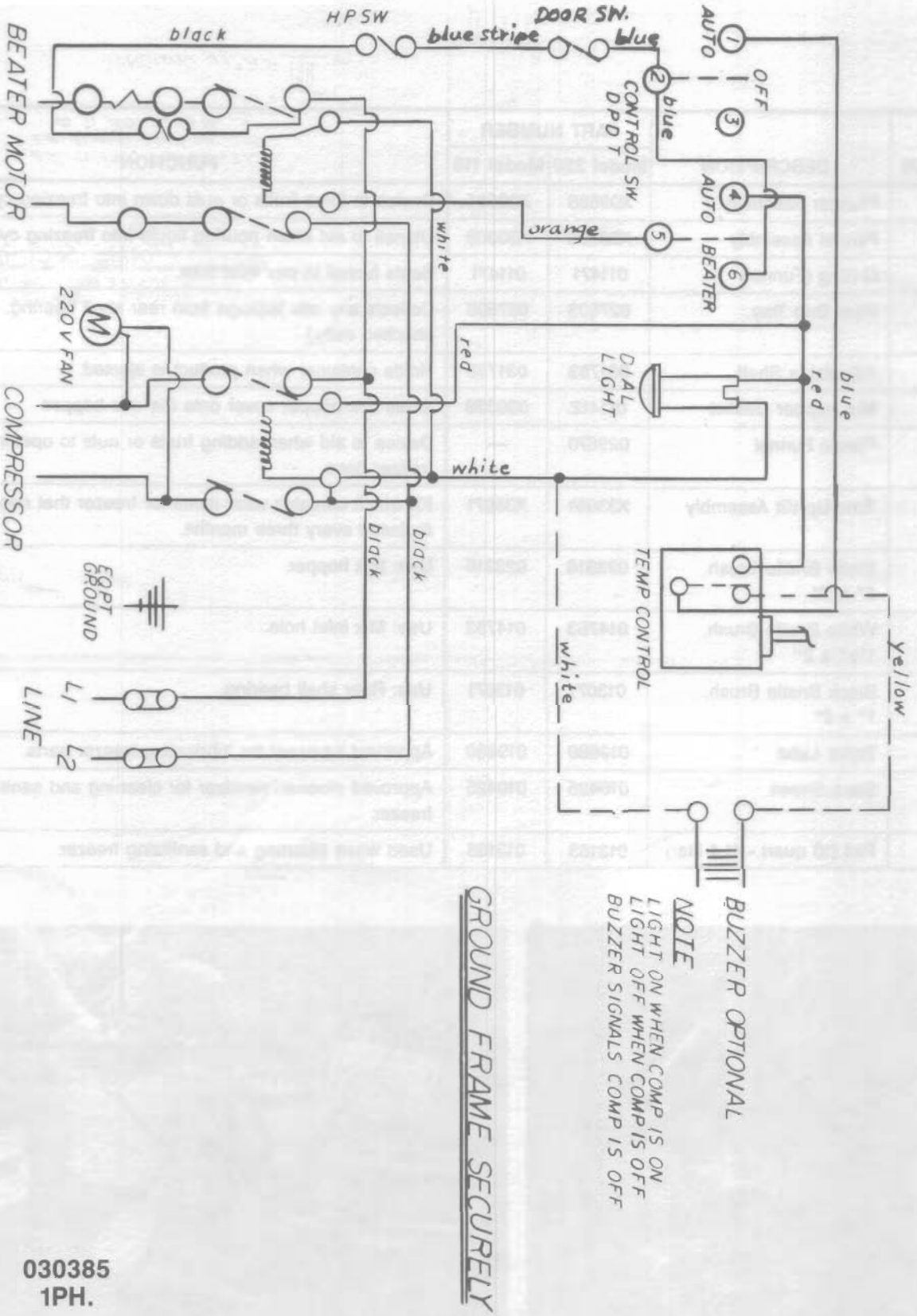
SPECIFY MODEL AND SERIAL NUMBERS WHEN ORDERING PARTS.

DESCRIPTION	PART NUMBER	110 QTY	220 QTY	WARR. CLASS
Arm A-Draw	X23158	1	-	B
Ball-Rubber	022594	1	-	C
Bar-Cross	011740	-	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	X08413	1	-	B
Blade A-Scraper	X07890	2	-	C
Beater Assembly	X32269	-	1	B
Blade A-Scraper	X07892	-	3	C
Belt	003951	1	2	C
Block-Terminal	015987	1	1	B
Blower Assembly	X30153-D	1	1	B
Housing A-With Wheel	X30160	1	1	B
Motor-Blower Fan	030157	1	1	B
Brush-Black Bristle (1" x 2")	013071	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
Buzzer	022758	1	1	B
Cap-Stem	022593	1	-	B
Pin-Cotter Hitch	019849	1	-	C
Cap A-Cover	X22584	1	-	B
Pin-Retaining	020127-7	1	-	C
Cap A-Cover	X29667	-	1	B
Pin-Retaining	029716	-	1	C
Capacitor & Relay	023602	1	-	B
Capacitor-Start	023608	1	-	B
Relay	023740	1	-	B
Capacitor & Relay	023725	-	1	B
Capacitor-Run	023739	-	1	B
Capacitor-Start	023608	-	1	B

*See Taylor Warranty Card

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

WIRING DIAGRAM MODEL 110/220



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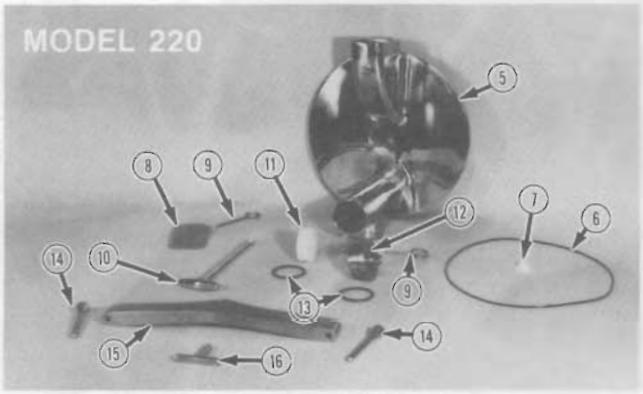
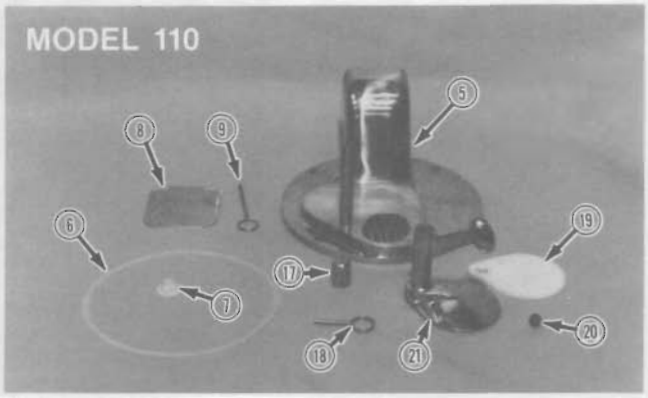
NUMBER	DESCRIPTION	PART NUMBER		FUNCTION
		Model 220	Model 110	
5	Freezer Door Assembly	X32938	X22582-SP	Covers open end of freezing cylinder and provides port for frozen mix to be ejected
6	O-Ring (Freezer Door Gasket (Freezer Door)	019046 —	— 010765-1	Provides seal between freezer door and freezing cylinder (Follow lubricating procedures)
7	Front Bearing	019176	019176	Provides protection from the drive shaft wearing on the freezer door (DO NOT lubricate)
8	Cover Cap Assembly	X29667	X22584	Covers opening in freezer door where fruits and nuts may be added
9	Retaining Pin	029716 (2)	020127-7 (1)	Secures cover cap assembly and draw rod assembly
10	Draw Rod Assembly	X30079	—	Holds valve piston and bearing holder Opens and closes ejection port
11	Valve Piston	030083	—	Seals product flow from the ejection port
12	Bearing Holder Assembly	X30078	—	Seals against product leakage from spout and has latch to lock draw rod assembly in place
13	O-Ring (Valve Piston and Bearing Holder)	020051 (2)	—	Provides seal in valve body between freezing cylinder and ejection port
14	Hinge Pin	X04329 (2)	—	Holds cross bar on freezer
15	Cross Bar	011740	—	Holds freezer door on freezer
16	Cross Bar Screw Assembly	X07233	—	Secures cross bar on freezer door
17	Stem Cap	—	022593	Secures draw arm to stem
18	Cotter Hitch Pin	—	019849	Secures stem cap on stem
19	Seal Plate	—	022591	Prevents leakage from ejection port and protects draw arm from wearing on freezer door
20	Rubber Ball	—	022594	Exerts pressure on seal plate to prevent leakage
21	Draw Arm Assembly	—	X23158	Guides seal plate to open and close ejection port

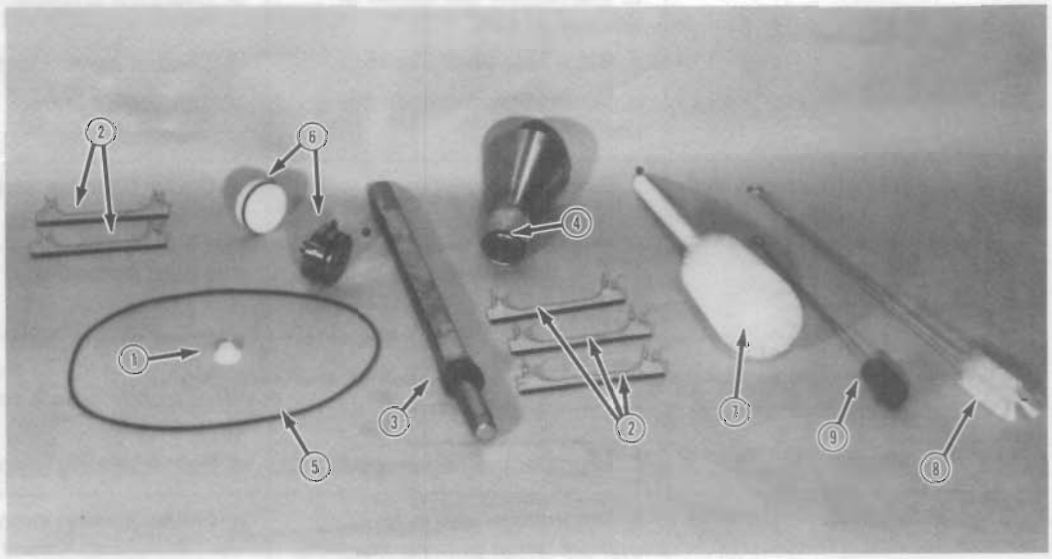




Parts Replacement Schedule

NO.	ITEM	EVERY 3 MONTHS	EVERY 6 MONTHS	ANNUALLY	*QUANTITIES TO BE REPLACED	
					220	110
1.	Front Bearing	X			1	1
2.	Scraper Blades		Inspect & Replace if Necessary	Minimum	3	2
3.	Drive Shaft Seal	X			1	1
4.	Funnel O-Ring	X			1	1
5.	Freezer Door O-Ring	X			1	—
6.	Bearing Holder and Valve Piston O-Ring	X			2	—
7.	White Bristle Brush, 3″ X 7″		Inspect & Replace if Necessary	Minimum	1	1
8.	White Bristle Brush, 1½″X 2″		Inspect & Replace if Necessary	Minimum	1	1
9.	Black Bristle Brush, 1″ X 2″		Inspect & Replace if Necessary	Minimum	1	1

*Refer to "Parts List" on page 32 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 110/220. Ask your Taylor Distributor about the Automatic 3-Month Tune-Up Kit Mailing Program.

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/sanitizing operation. **We recommend that after the necessary batches have been prepared for the day, the machine be cleaned and sanitized.**

ALWAYS FOLLOW LOCAL HEALTH CODES

TROUBLESHOOTING BACTERIA 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 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/sanitizing solution on the brush.
- ☐ 5. Using a screwdriver and cloth towel, keep the female hex drive socket and rear shell bearing clean and free of lubricant and mix deposits.
- ☐ 6. Properly prepare the cleaning/sanitizing solution. Read and follow label directions carefully. Too strong a solution may damage the parts and too weak a solution will not do an adequate job of cleaning and sanitizing.
- ☐ 7. Temperature of liquid mix should not exceed 40°F (4.4°C).
- ☐ 8. Temperature of finished product to be placed in a hardening cabinet should be between 23° and 25° F. (−5.0° to −3.9° C.)

REGULAR MAINTENANCE CHECKS:

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

CLOSING PROCEDURES

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

RINSING

Step 1

Be sure the control switch is in the "Off" position. Remove the hopper cover, gasket and funnel, and take to the sink for cleaning.

Step 2

Pour two gallons (7.6 liters) of **cool**, clean water into the mix hopper. With the brushes provided, scrub the mix hopper and mix inlet hole.

Step 3

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

Step 4

Put the control switch into the "Off" position. Hold a mix pail beneath the ejection port.

Model 220:

Turn the draw rod handle and pull forward, opening the ejection port. When the water stops flowing from the ejection port, push the draw rod back into the valve body and lock into place.

Model 110:

Lift the draw arm up, opening the ejection port. When the water stops flowing from the ejection port, close the draw arm.

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

CLEANING/SANITIZING

Step 1

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

Step 2.

Pour two gallons (7.6 liters) of cleaning/sanitizing 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 hopper and mix inlet hole.

Step 4

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

Step 5

Put the control switch into the "Off" position. Hold an empty mix pail beneath the ejection port.

Model 220:

Turn the draw rod handle and pull forward, opening the ejection port. Draw off all the sanitizing solution. When the sanitizer stops flowing from the ejection port, push the draw rod back into the valve body and lock into place.

Model 110:

Lift the draw arm up, opening the ejection port. Drain off all the sanitizing solution. When the sanitizer stops flowing from the ejection port, close the draw arm.

DISASSEMBLY

Step 1

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

Step 2

Model 220:

Remove the cross bar screw assembly, hinges, cross bar, freezer door, beater assembly, scraper blades, and drive shaft from the freezing cylinder.

Model 110:

Remove the handscrews, freezer door, beater assembly, scraper blades, and drive shaft from the freezing cylinder.

Also remove the adjustable shelf. Take these parts to the sink for further disassembly and cleaning.

Step 3

Remove the rear drip tray from the side panel. **NOTE:** If the drip tray 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 a cleaning/sanitizing solution in WARM WATER ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS.

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

Step 2.

Remove the seal from the drive shaft.

Step 3

From the freezer door:

DRAWING PRODUCT

Step 1

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

Step 2

Place the control switch in the "Eject" position and place container on shelf.

Model 220:

Turn the draw rod handle and pull forward, opening the ejection port. When the container is full, push the draw rod back into valve body and lock into place.

Model 110:

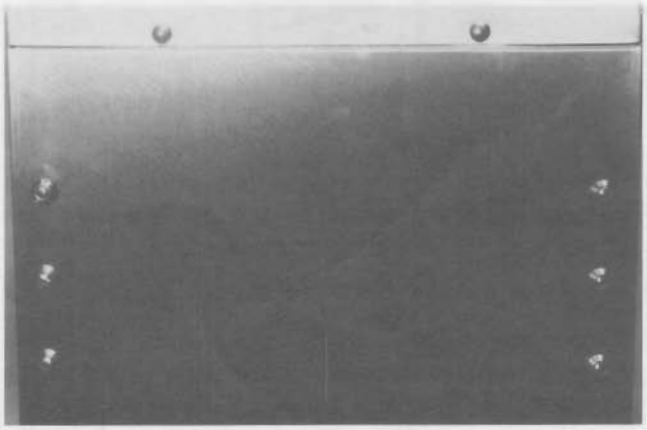
Lift the draw arm up, opening the ejection port. When the container is full, close the draw arm.

Step 3

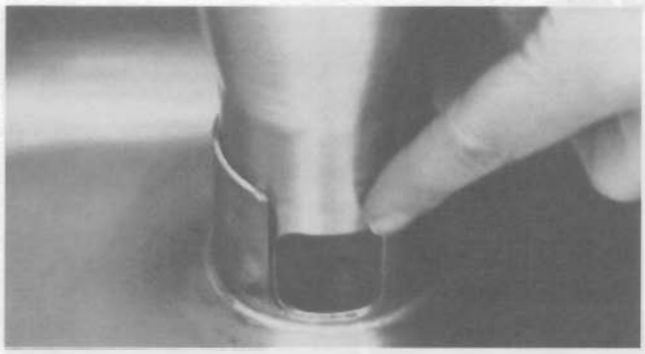
When the freezing cylinder is empty of product, close the ejection port and place the control switch in the "Off" position.

NOTE:

The shelf can be adjusted for large or small containers. Lift upwards on the front edge of the shelf to disengage from the holding collars, then lift away from the freezer. Choose desired height and slide the shelf back down over the holding collars of the same height on right and left sides.



Step 3
Turn the funnel to the right or left so that the opening in the funnel aligns with the opening in the mix inlet hole. Mix being added will force any remaining sanitizing solution in the freezing cylinder out into the mix pail.



Step 4
With the control switch in the "Off" position, hold an empty mix pail beneath the ejection port.

Model 220:
Turn the draw rod handle and pull forward, opening the ejection port. When full strength mix is flowing from the ejection port, push the draw rod back into the valve body and lock into place.

Model 110:
Lift the draw arm up, opening the ejection port. When full strength mix is flowing from the ejection port, close the draw arm.

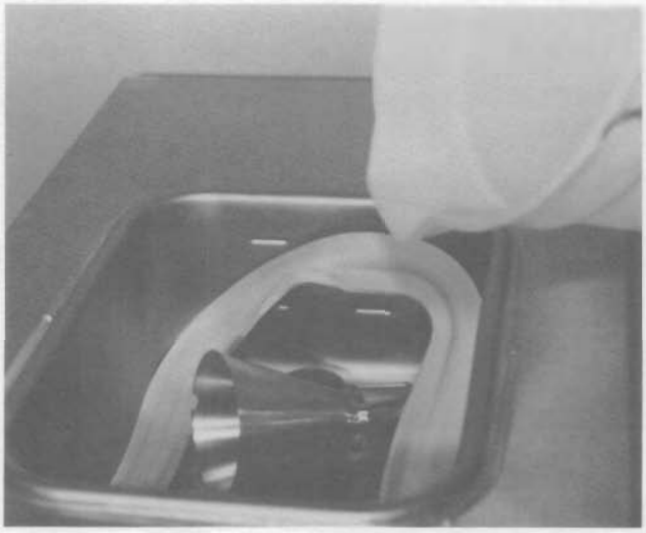
NOTE: The funnel can be returned to its closed position. Another measure of mix can be poured into the hopper in readiness for the next batch while the first batch of mix is freezing.

Step 4
Place the mix hopper cover in position.

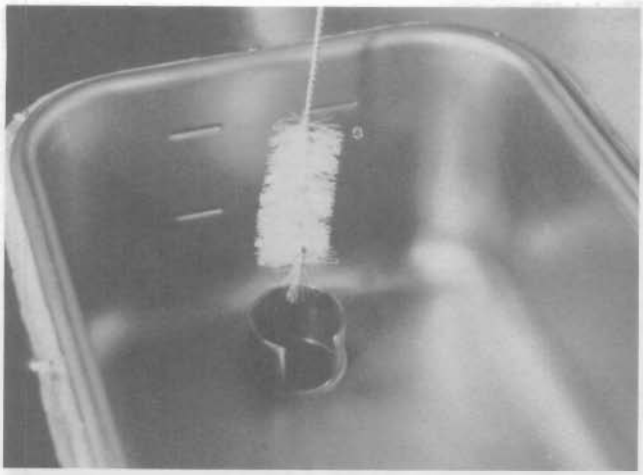
Step 5
Place the control switch in the "Auto" position. When the unit automatically cycles off, a buzzer will sound. This buzzer is an audible signal that the product is down to its proper temperature. Place the control switch in the "Off" position to stop the buzzer.

Step 2
Install o-ring on the bottom of the funnel

Step 3
Lay the funnel and hopper gasket in the bottom of the mix hopper and pour the sanitizing solution into the hopper



Step 4
While the solution is flowing into the freezing cylinder, brush clean the hopper and mix inlet hole

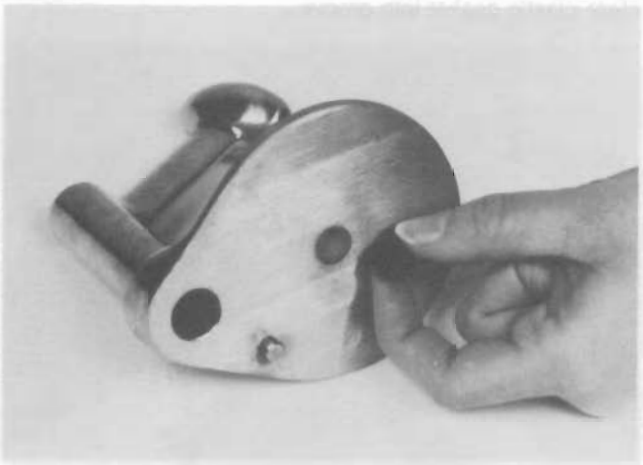


Step 5
Place the control switch in the "Eject" position. This will cause the sanitizing solution in the freezing cylinder to be agitated. Allow to agitate for five minutes.

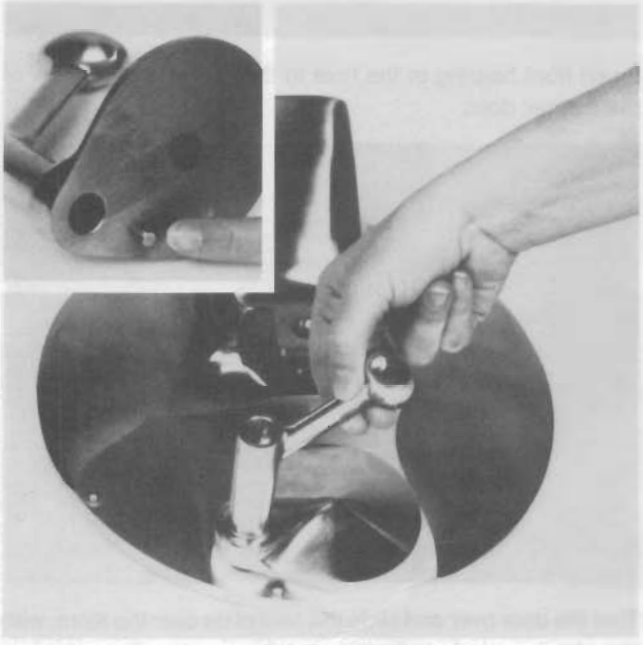
Step 6
Place the control switch in the "Off" position.

Model 220:
With an empty mix pail beneath the ejection port, turn the draw rod handle and pull forward, opening the ejection port. Draw off all the sanitizing solution. When the sanitizer stops flowing from the ejection port, push the draw rod back into the valve body and lock into place.

Put the small black rubber ball into the center hole on the back of the draw arm.



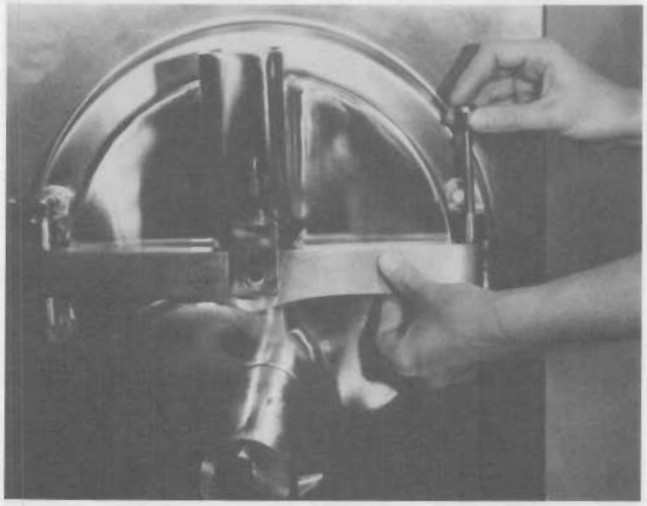
Slide the draw arm over the stem. Align the pin on the back of the draw arm with the hole on top of the seal plate.



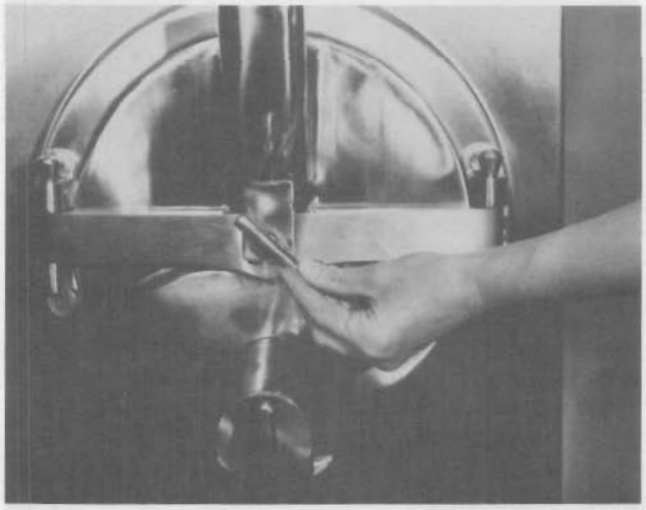
Screw the stem cap over the stem. When snug, tighten the cap and align holes in cap with the stem. Secure with cotter hitch pin.

Step 5
Install freezer door.

Model 220:
Align the hole in the cross bar with the hole in either hinge and insert hinge pin. The cross bar can be assembled for either right or left opening. Holding the freezer door firmly, position the door onto the cross bar. Align the cross bar with the opposite hinge and insert remaining hinge pin.

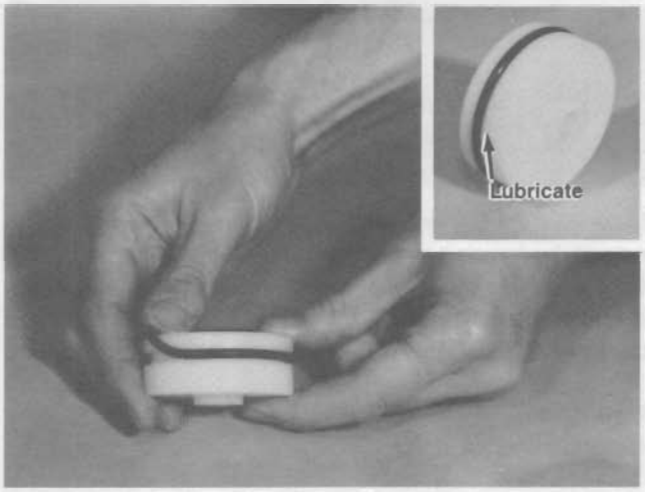


Make sure the freezer door fits securely over the freezing cylinder. With door seated over the front of the freezing cylinder, install cross bar screw assembly in the center of the freezer door through the cross bar. Tighten securely.

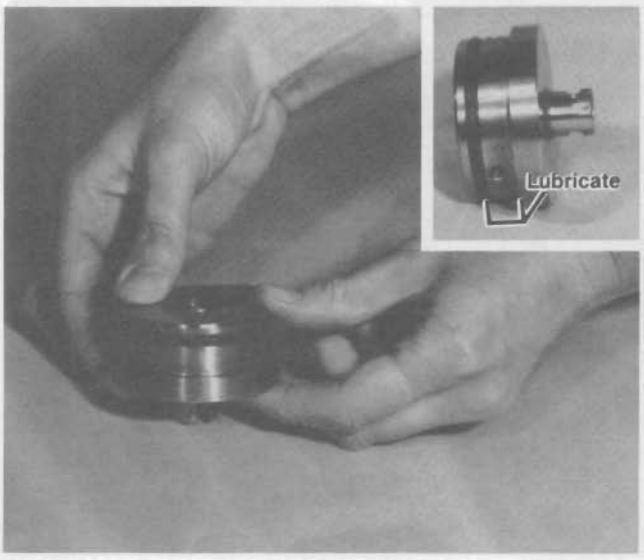


Insert front bearing into the hole in the center on the back of the freezer door.

Slide the o-ring into the groove on the valve piston and lubricate.



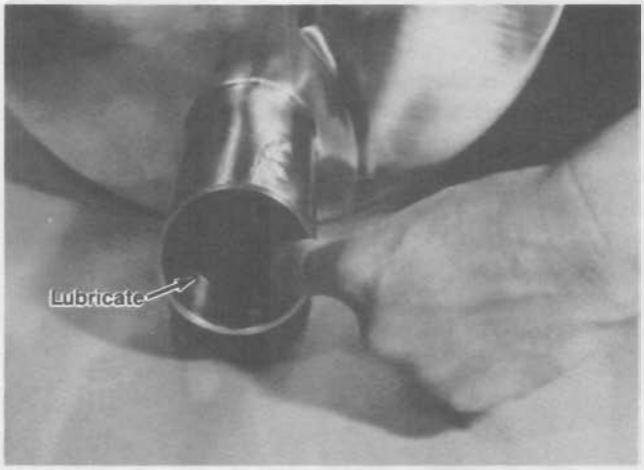
Slide the o-ring into the groove on the bearing holder and lubricate.



Lightly lubricate the draw rod, and slide the bearing holder onto the rod, locking stem first.

Thread the valve piston on the end of the draw rod until tight.

Lightly lubricate the inside of the valve body in the freezer door.



Operating Procedures

The Model 110/220 freezer can produce all flavors of ice cream including those with fruits and nuts. Both freezers are designed for filling pints, quarts or gallons to be placed in a hardening cabinet. Each unit has a 10 quart (9.5 liter) mix hopper.

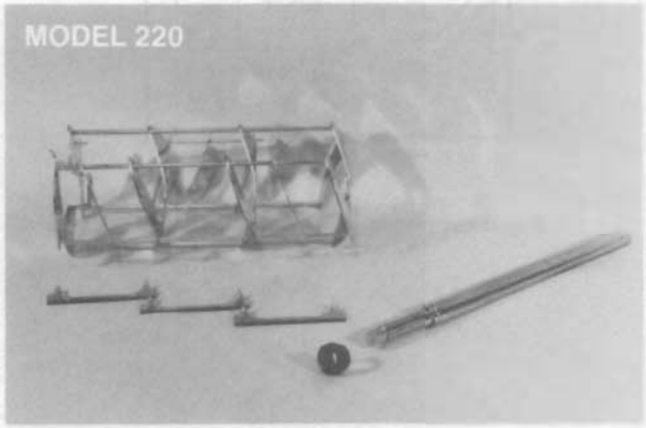
The Model 110 will produce 10 quarts (9.5 liters) of frozen product from 5 quarts (4.7 liters) of fresh mix.

The Model 220 will produce 20 quarts (18.9 liters) of frozen product from 10 quarts (9.5 liters) of fresh mix.

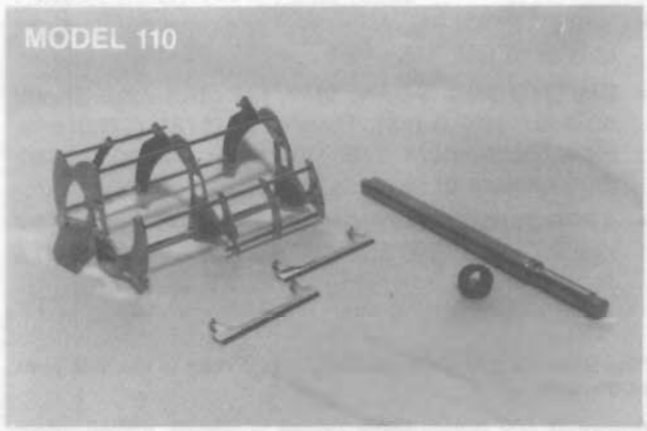
The Model 220 has been selected to show you the pictured step-by-step operating procedures for both models contained in this manual. The Model 110 procedures that differ from the Model 220 are also shown. These models, for practical purposes of operation, are the same.

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

MODEL 220

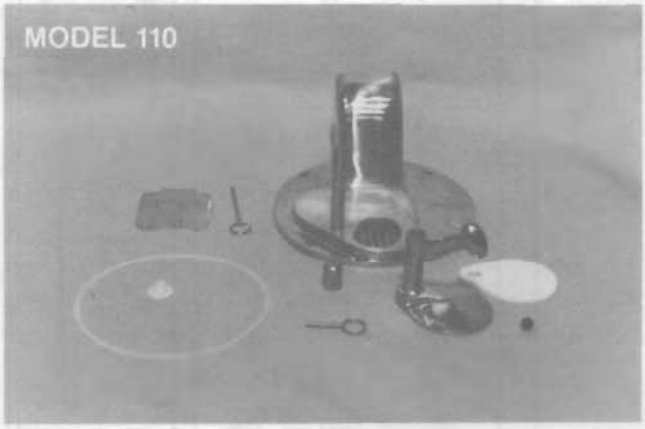


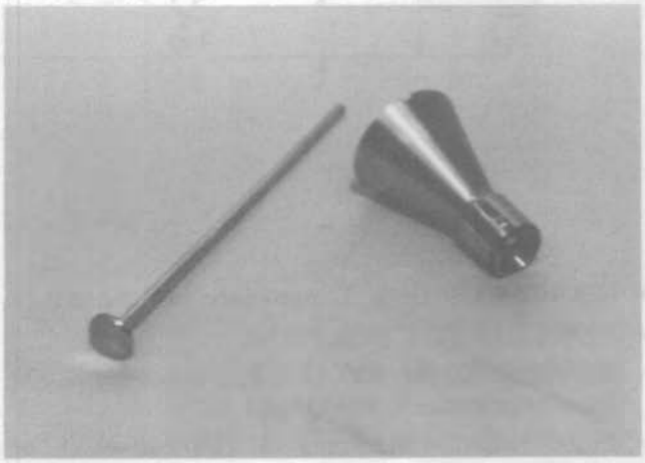
MODEL 110



MODEL 220

MODEL 110



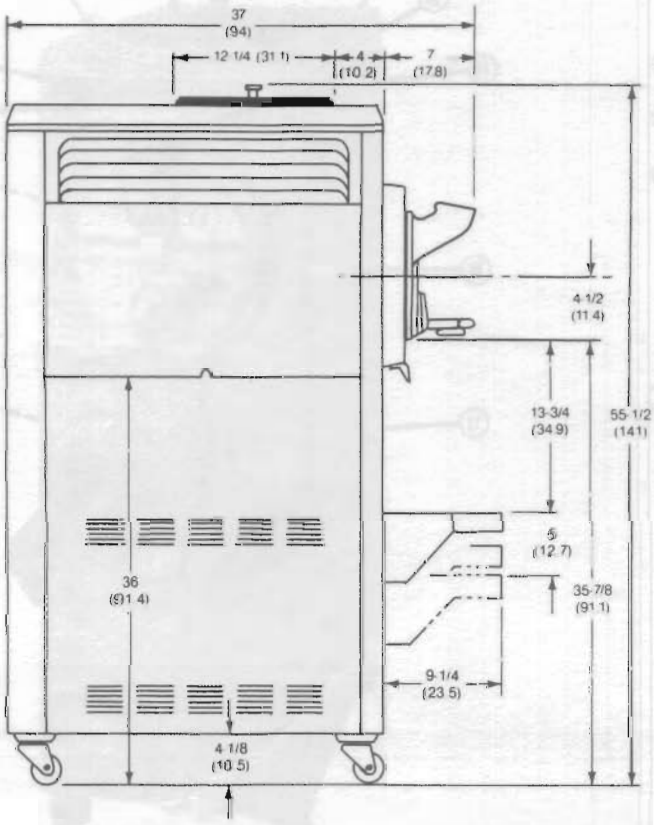


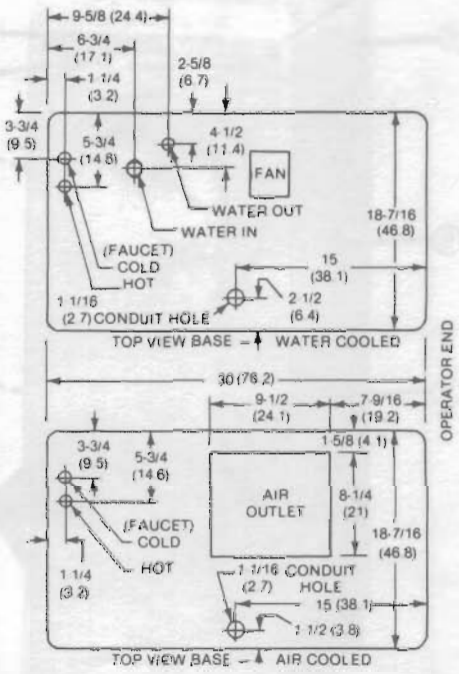
The following procedures will show you how to assemble the parts into the freezer, sanitize them, and prime the freezer with fresh mix to prepare the first batch.

If you are disassembling the machine for the first time or need information to get to this starting point in our instructions, turn to page 22, "Disassembly" and start there.

Specifications

Model 110





- **MIX HOPPER.** One; 10 quart (9.5 liter) capacity.
- **BEATER MOTOR.** One; 1 hp.
- **REFRIGERATION UNIT.** One; approximately 7,000 btu/hr compressor. Refrigerant 12.
- **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: 25 Amps. Minimum Wire Ampacity: 20A. Three Phase Maximum Fuse Size: 15 Amps. Minimum Wire Ampacity: 12A.
- **AIR COOLED.** Clearance: 3″ (7.6 cm) around all sides.
- **WATER COOLED.** Water inlet and drain connections at rear of unit 3/8″ FPT.
- **DIMENSIONS.** Width: 18-7/16″ (46.8 cm). Depth: 39-1/4″ (99.7 cm). Height: 55-1/2″ (141.0 cm). Floor Clearance: 4-1/8″ (10.5 cm) mounted on standard casters or legs.
- **APPROXIMATE WEIGHTS.** Net: 483 lbs. (219.2 Kgs.). Crated: 573 lbs. (259.9 Kgs.) 54.8 cu. ft. (1.5 cu.m.).

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

Availability and specifications subject to change without notice.

Taylor Freezer® Warranty

A warranty card is shipped with every new freezer that leaves the Factory. The warranty card is packed in an envelope which also contains this operator's manual. To put this warranty into effect, please fill out the top portion and return it (no postage necessary if mailed in the United States) to Taylor Freezer as soon as your freezer is installed. KEEP THE BOTTOM PORTION FOR YOUR RECORDS. Refer to the warranty 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 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 Freezer 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 Freezer 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*.

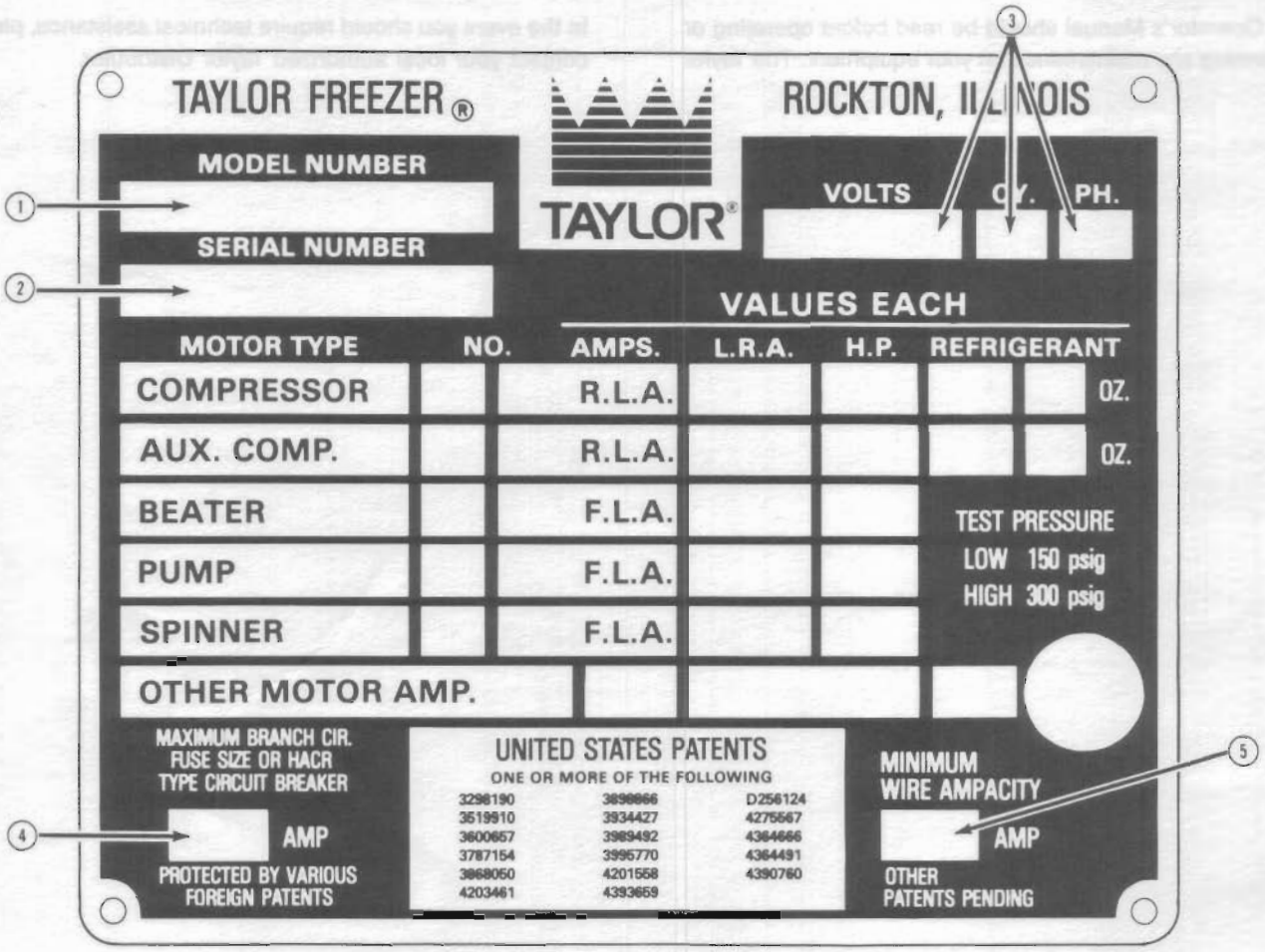
For any questions pertaining to the Taylor Freezer Warranty, please contact your authorized Taylor Distributor or Taylor Freezer, Rockton, Illinois 61072.

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 back panel of the freezer



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 Wire Ampacity: _____ Amps

To the Installer

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 3" (7.6 cm) of clearance around **all** sides of the freezer and 12" (30.5 cm) clearance on the top to allow for adequate air flow across the condenser(s). Failure to allow adequate clearance can reduce the refrigeration capacity of the freezer and possibly cause permanent damage to the compressor.

ELECTRICAL CONNECTIONS

Each freezer requires one power supply for each data plate. Check the data plate(s) 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 located in the left lower side panel.