

Model 490

Shake Freezer

Original Operating Instructions

050271-M



2/96 (Original Publication) (Updated 12/14/11)

Complete this page for quick reference when service is required:

Taylor Distributor:			
	:		
Information found	d on data plate:		
Model Number:			
Serial Number:			
		Cycle	
	Phase		
Maximum Fuse Siz			
Minimum Wire Am	pacity:		Amps
Part Number:			

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Table of Contents

Section 1	To the Installer	1
Installer S	afety	1
Site Prepa	aration	1
Air Cooled	I Units	2
Water Cor	nnections (Water Cooled Units Only)	2
Electrical (Connections	2
Beater Ro	tation	3
Refrigerar	nt	3
Section 2	To the Operator	4
Section 3	Safety	5
Section 4	Operator Parts Identification	7
Model 490)	7
Beater Do	or Asssembly	8
Section 5	Important: To the Operator	9
Indicator L	Lights: "Add Mix" / "Mix Out"	9
Overload I	Mechanism	9
Section 6	Operating Procedures	10
Assembly		10
Sanitizing		13
Priming .		14
Closing Pr	ocedures	15
Draining F		
Dialilling	Product from the Freezing Cylinder	15
•	Product from the Freezing Cylinder	15 16
Rinsing .		
Rinsing . Cleaning		16

Table of Contents Model 490

Table of Contents - Page 2

Section 7	Important: Operator Checklist	18
During Cle	eaning and Sanitizing	18
Troublesh	ooting Bacterial Count	18
Regular M	aintenance Checks	18
Winter Sto	orage	19
Section 8	Troubleshooting Guide	20
Section 9	Parts Replacement Schedule	23
Section 10	Parts List	24
Wiring Dia	grams	30

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

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

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050271-M



Taylor Company 750 N. Blackhawk Blvd. Rockton, IL 61072

Model 490 Table of Contents

To the Installer

The following are general installation instructions. For complete installation details, please see the check out card.

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

Installer Safety

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

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

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

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

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

Site Preparation

Review the area where the unit will be installed before uncrating the unit. Make sure all possible hazards to the user or equipment have been addressed.

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

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

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

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

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

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Air Cooled Units

DO NOT obstruct air intake and discharge openings:

Air cooled units require a minimum of 6" (152 mm) of clearance on both sides of the freezer. It is recommended to place the rear of the unit against the wall to prevent recirculation of warm air. Failure to allow adequate clearance can reduce the refrigeration capacity of the freezer and possibly cause permanent damage to the compressors.

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. (for single-head units) or two 1/2" I.P.S. (for double-head units) 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 for both single-head and double-head units. DO NOT install a hand shut-off valve on the water "out" line! Water should always flow in this order: first, through the automatic water valve; second, through the condenser; and third, through the outlet fitting to an open trap drain.

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

Electrical Connections

In the United States, this equipment is intended to be installed in accordance with the National Electrical Code (NEC), ANSI/NFPA 70-1987. The purpose of the NEC code is the practical safeguarding of persons and property from hazards arising from the use of electricity. This code contains provisions considered necessary for safety. In all other areas of the world, equipment should be installed in accordance with the existing local codes. Please contact your local authorities.



FOLLOW YOUR LOCAL ELECTRICAL CODES!

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

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

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



 Stationary appliances which are not equipped with a power cord and a plug or another device to disconnect the appliance from the power source must have an all-pole disconnecting device with a contact gap of at least 3 mm installed in the external installation.

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

Beater Rotation

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

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

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

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

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

Refrigerant

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

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

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

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

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

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

To the Operator

The freezer you have purchased has been carefully engineered and manufactured to give you dependable operation. The Taylor Model 490, when properly operated and cared for, will produce a consistent quality product. Like all mechanical products, it 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.

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

The Model 490 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.

Note: Warranty is valid only if the parts are authorized Taylor parts, purchased from an authorized Taylor Distributor, and the required service work is provided by an authorized Taylor service technician. Taylor reserves the right to deny warranty claims on equipment or parts if non-approved parts or refrigerant were installed in the machine, system modifications were performed beyond factory recommendations, or it is determined that the failure was caused by neglect or abuse.

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

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

The user is responsible for returning the product to the appropriate collection facility, as specified by your local code.

For additional information regarding applicable local laws, please contact the municipal facility and/or local distributor.

Compressor Warranty Disclaimer

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

It should be noted, that Taylor does not warrant the refrigerant used in its equipment. For example, if the refrigerant is lost during the course of ordinary service to this machine, Taylor has no obligation to either supply or provide its replacement either at billable or unbillable terms. Taylor does have the obligation to recommend a suitable replacement if the original refrigerant is banned, obsoleted, or no longer available during the five year warranty of the compressor.

Taylor will continue to monitor the industry and test new alternates as they are being developed. Should a new alternate prove, through our testing, that is 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 Taylor Distributor or the Taylor Factory. Be prepared to provide the Model/Serial Number of the unit in question.

Section 3 Safety

We, at Taylor Company, are concerned about the safety of the operator 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.

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

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

Per IEC 60335-1 and its part 2 standards, "This appliance is to be used only by trained personnel. It is not intended for use by children or people with reduced physical, sensory, or mental capabilities, or lack of experience and knowledge, unless given supervision or instruction concerning the use of the appliance by a person responsible for their safety."

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

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



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

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



- DO NOT allow untrained personnel to operate this machine.
- DO NOT operate the freezer unless all service panels and access doors are restrained with screws.
- DO NOT remove any internal operating parts (example: freezer door, beater, scraper blades, etc.) unless all control switches are in the OFF position.

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

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

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

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

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

DO NOT obstruct air intake and discharge openings:

6" (152 mm) minimum air space is required on both sides. It is recommended to place the rear of the unit against the wall to prevent recirculation of warm air. Failure to follow this instruction may cause poor freezer performance and damage to the machine.

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

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

Operator Parts Identification

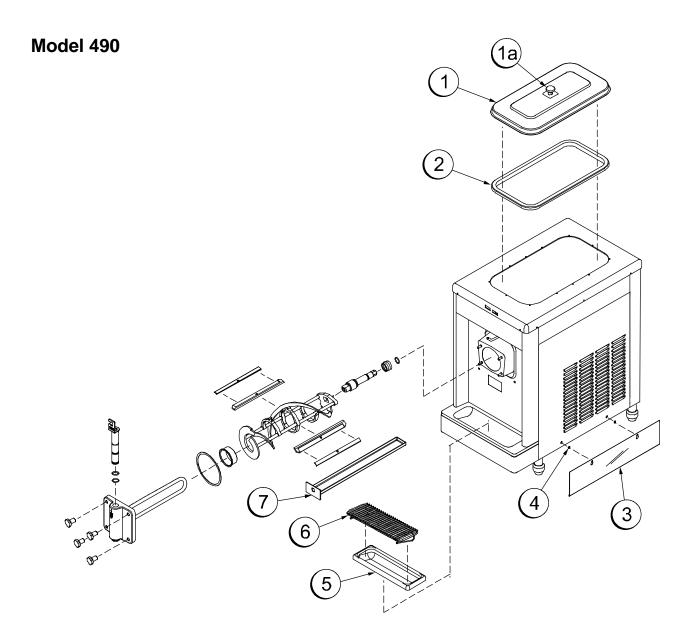


Figure 1

Item	Description	Part Number
1	Hopper Cover A.	X38458-SER
1a	Knob-Mix Cover	025429
2	Gasket-Hopper Cover	038375
3	Deflector-Air	048549

Item	Description	Part Number
4	Collar-Holding	019481
5	Drip Tray	046275
6	Splash Shield	046177
7	Drip Pan	035034

090807

Beater Door Asssembly

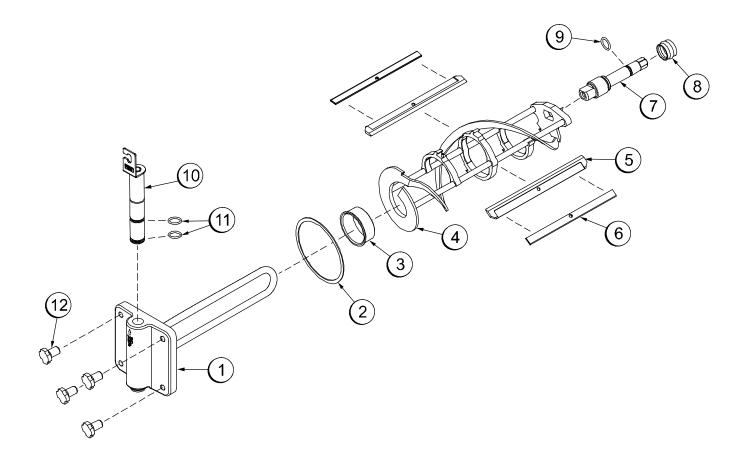


Figure 2

Item	Description	Part No.
1	Freezer Door Assembly	X30272-SER
2	Gasket-Door	016672
3	Front Bearing	013116
4	Beater Assembly	X46233
5	Scraper Blade	046237
6	Clip-Scraper Blade	046238

Item	Description	Part No.
7	Beater Shaft	036412
8	Seal-Beater Shaft	032560
9	O-Ring-Beater Shaft	025307
10	Draw Valve Assembly	X48364
11	O-Ring-Draw Valve	020571
12	Stud Nut	021508

Important: To the Operator

Indicator Lights: "Add Mix" / "Mix Out"

The "Mix Low" light is located on the front of the machine. When the light is flashing, it indicates that the mix hopper has a low supply of mix and should be refilled as soon as possible. The Model 490 utilizes a "Mix Out" light. When flashing, it indicates there is no mix in the hopper and the compressor stops running until mix is replenished. This eliminates possible damage to the beater, blades, drive shaft and door.

Overload Mechanism

The overload mechanism protects the beater motor from an overload condition. Should an overload occur, the overload mechanism will discontinue machine operation. To properly reset the freezer, place the control switch in the "OFF" position. Allow the unit to cool. Place the control switch in the "WASH" position and observe the freezer's performance.

Note: If an overload condition occurs while the unit is operating in the "AUTO" mode, the unit will not return to the "AUTO" mode once the overload has reset. The draw handle must be lifted before the unit will return to AUTO. Likewise, if power is restored to a unit following a power interruption, it is necessary to raise the draw handle to resume "AUTO" operation.

The overload is inherent in the beater motor. There is no manual reset.

Operating Procedures

The Model 490 stores 20 quarts (18.9 liters) of mix in the hopper. The mix flows **by gravity** through an air tube down into the freezing cylinder.

Instructions begin when we enter the store in the morning and find the parts disassembled and laid out to air dry from the previous night's cleaning.

The following procedures will show you how to assemble the parts into the freezer, sanitize them, and prime the freezer with fresh mix in preparation to serve your first product.

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

Assembly

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

Step 1

Install the drive shaft. Slide the o-ring into the first groove on the drive shaft. Lubricate the groove and the 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 and evenly lubricate the flat side of the seal that comes in contact with the bearing.

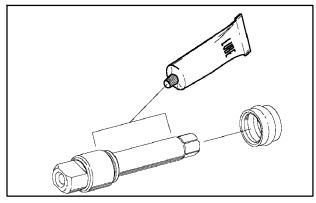


Figure 3

Insert the drive shaft through the rear shell bearing in the freezing cylinder and engage the hex end firmly into the gear box coupling.

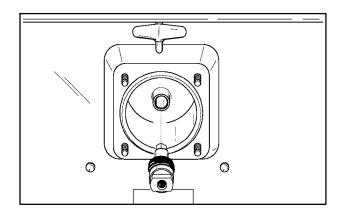


Figure 4

Step 2 Install the beater assembly. First check the scraper blades for any nicks or signs of wear. If any nicks are present, replace the blade(s).

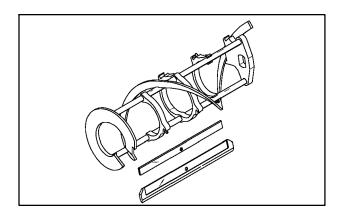


Figure 5

Note: To prevent costly damage, the hole on the scraper blade must fit securely over the pin.

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 on the beater (knife edge to the outside). Holding the rear blade on the beater, slide the assembly into the freezing cylinder halfway, tail end first. Install the front scraper blade over the front holding pin. Slide the beater assembly completely into the freezing cylinder.

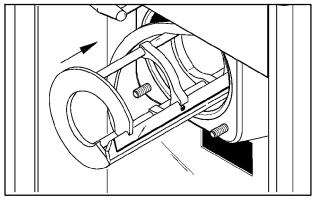
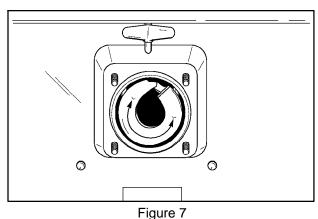


Figure 6

Make sure the beater assembly is in position over the drive shaft. Turn the beater slightly to be certain that the beater is properly seated. When in position, the beater will not protrude beyond the front of the freezing cylinder.



Step 3

Install the draw valve. Slide the two o-rings into the grooves on the draw valve and lubricate the bottom 1/2 of the valve.

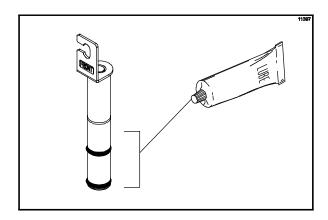


Figure 8

Lubricate the inside of the freezer 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.

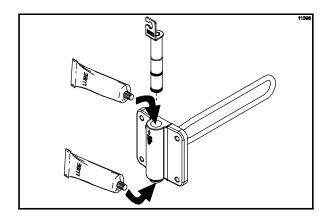


Figure 9

Install the freezer door. Place the freezer door gasket into the groove on the back of the freezer door. Slide the front bearing over the baffle rod so the flanged edge is against the door. DO NOT LUBRICATE THE GASKET OR BEARING.

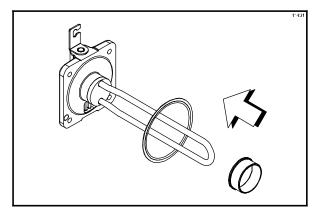


Figure 10

Insert the baffle rod through the beater in the freezing cylinder. With the door seated on the freezer studs, install the handscrews. Tighten equally in a criss-cross pattern to insure the door is snug.

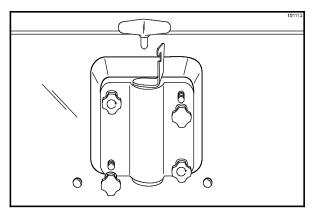


Figure 11

Rotate the draw valve bracket to the left and center it into position by raising the draw arm and placing it into the slotted groove of the draw valve bracket.

Note: The draw valve bracket must be positioned with the notch to the left.

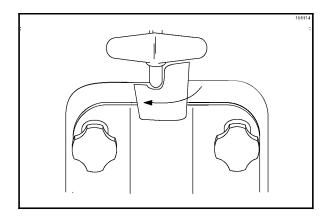


Figure 12

Step 5

Lay the air tube and hopper gasket in the bottom of the mix hopper.

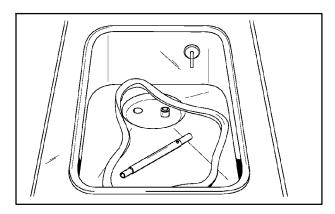


Figure 13

Slide the center drip pan into the hole in the front panel.

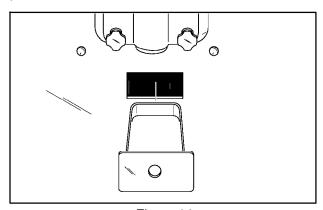


Figure 14

Step 7

Install the front drip tray and splash shield under the door spout.

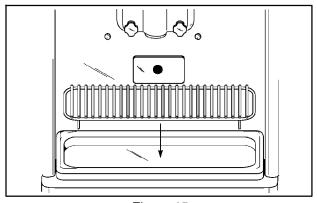


Figure 15

Sanitizing

Step 1

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

Step 2

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

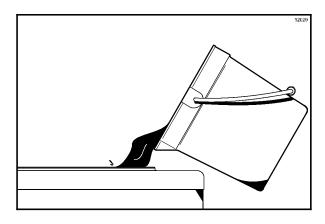


Figure 16

Step 3

While the solution is flowing into the freezing cylinder, brush clean the hopper. In cleaning the mix hopper, take particular care in brushing the mix level sensing probes, the mix inlet hole and the air tube.

Place the control switch in the "WASH" position. This will cause the sanitizing solution in the freezing cylinder to agitate. Allow the solution to agitate for five minutes.

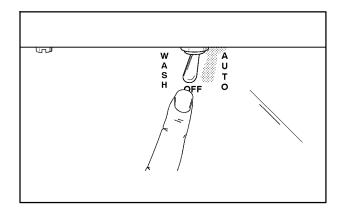


Figure 17

Step 5

Place an empty pail beneath the door spout and raise the draw arm. Draw off all the sanitizing solution. When the sanitizer stops flowing from the door spout, lower the draw arm and place the control switch in the "OFF" position.

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

Step 6

Assemble the hopper gasket around the top edge of the mix hopper. Stand the air tube in the corner of the mix hopper.

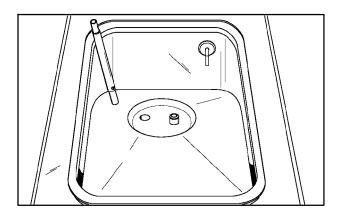


Figure 18

Priming

Prime the machine as close to the time of first product draw as possible.

Step 1

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

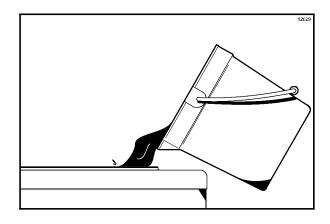


Figure 19

Step 2

When the mix has stopped bubbling down into the freezing cylinder, and the mix out probe is satisfied, install the air tube in the mix inlet hole.

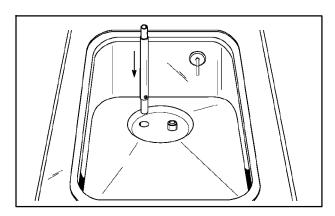


Figure 20

Step 3

Fill the hopper with mix. As the mix level comes in contact with the mix level sensing probe on the wall of the hopper, the "MIX LOW" light will extinguish.

Place the control switch in the "AUTO" position. Rotate the draw valve and lift the draw arm to start the compressor. When the unit cycles off, the product will be at serving temperature.

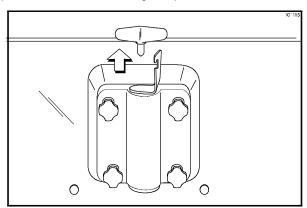


Figure 21

Step 5

Place the mix hopper cover in position.

Note: When drawing product, gently raise the draw arm to the fully opened position.

Closing Procedures

To disassemble the Model 490, 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.

Step 2

Remove the hopper cover, gasket, and air tube. Take these items to the sink for cleaning.

Step 3

If local health codes permit the use of rerun, place a sanitized, NSF approved stainless steel rerun container beneath the door spout. Place the control switch in the "WASH" position and raise the draw arm. When all the product stops flowing from the door spout, lower the draw arm and place the control switch in the "OFF" position. Place the sanitized lid on the rerun container and place it in the walk-in cooler. See page 18 for instructions regarding the proper use of rerun.

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



ALWAYS FOLLOW LOCAL HEALTH CODES.

Rinsing

Step 1

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

Step 2

With a mix pail beneath the door spout, place the control switch in the "WASH" position and raise the draw arm. Drain all the rinse water from the freezing cylinder. When the rinse water stops flowing from the door spout, lower the draw arm and place the control switch in the "OFF" position.

Repeat this procedure until the rinse water being drawn from the freezing cylinder is clear.

Cleaning

Step 1

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

Step 2

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

Step 3

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

Step 4

Place the control switch in the "WASH" position. This will cause the cleaning solution in the freezing cylinder to agitate.

Step 5

Place an empty mix pail beneath the door spout and raise the draw arm. Draw off all the cleaning solution. When the solution stops flowing from the door spout, lower the draw arm and place the control switch in the "OFF" position.

Disassembly

Note: Failure to remove, brush clean and air dry these items, will result in damage to the related components.

Step 1

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

Step 2

Remove the handscrews, freezer door, gasket, front bearing, beater, scraper blades, and drive shaft from the freezing cylinder. Take these items to the sink for cleaning.

Step 3

Remove the drip pan from the machine.

Note: If the drip pan is filled with an excessive amount of mix, this indicates that the drive shaft seal and o-ring should be replaced or was improperly lubricated.

Step 4

Remove the front drip tray and splash shield.

Brush Cleaning

Step 1

Prepare a sink with an approved 100 PPM cleaning solution (examples: Kay-5® or Stera-Sheen®). USE WARM WATER AND FOLLOW THE MANUFACTURER'S SPECIFICATIONS.

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

Step 2

Remove the seal and o-ring from the drive shaft.

Step 3

Remove the scraper blade clips from the scraper blades.

Remove the draw valve from the freezer door. Remove the two o-rings from the draw valve.

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 o-rings without falling into the open grooves.

Step 5

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 in the freezer door. Place all the cleaned parts on a clean dry surface to air dry overnight.

Step 6

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

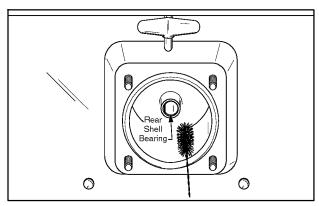


Figure 22

Step 7

Using single service towels, wipe clean all exterior surfaces of the freezer.

Section 7 Important: Operator Checklist

During Cleaning and Sanitizing



ALWAYS FOLLOW LOCAL HEALTH CODES.

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

CLEANING AND SANITIZING MUST BE PERFORMED DAILY.

Troubleshooting Bacterial Count

- □ 1. Thoroughly clean and sanitize the machine regularly, including complete disassembly and brush cleaning.
- 2. Use all brushes supplied for thorough cleaning. The brushes are specially designed to reach all mix passageways.
- ☐ 3. Use the white bristle brush to clean the mix feed tube which extends from the hopper up 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 the foam and discard, then mix the rerun with fresh mix in a ratio of 50/50 during the day's operation.

- 6. 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 solution may not do an adequate job of cleaning or sanitizing.
- ☐ 7. The temperature of the mix in the mix hopper and walk-in cooler should be below 40°F. (4.4°C.).

Regular Maintenance Checks

- 1. Rotate the 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 down.
- □ 3. Before installing the beater, be certain that the scraper blades are properly attached over the beater pins, and into the blade clip.
- 4. Dispose of o-rings and seals that are worn, torn, or fit too loosely, and replace with new ones.
- 5. Check the rear shell bearing for signs of wear (excessive mix leakage in rear drip pan) and be certain it is properly cleaned.
- ☐ 6. Using a screwdriver and cloth towel, keep the female drive socket and the rear shell bearing free of lubricant and mix deposits.

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- 7. Follow all lubricating procedures as outlined in "Assembly".
 8. On air-cooled units, check the condenser for an accumulation of dirt and lint. Dirty condensers will reduce the efficiency and capacity of the machine. The condensers should be cleaned monthly. Remove the side panels to gain access to the condensers. Use a soft brush to clean between the fins of the
 - metal probes to clean between the fins. **Note:** For machines equipped with an air filter, it will be necessary to vacuum clean the filters on a monthly schedule.

condenser. Never use screwdrivers or other

9. On water-cooled units, check the water lines for kinks or leaks. Kinks can occur when the machine is moved back and forth for cleaning or maintenance purposes. Deteriorated or cracked water lines should be replaced only by an authorized Taylor mechanic.

Winter Storage

To protect the freezer during the winter months when the place of business is closed, it is important that certain precautions be followed; 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 units, disconnect the water supply. Use air pressure to blow out any remaining water in the condensers. **This is extremely important.** Failure to follow this procedure can cause severe and costly damage to the refrigeration system.

Your local Taylor Distributor can perform this service for you.

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

Troubleshooting Guide

PROBLEM	PROBABLE CAUSE	REMEDY	PAGE REF.
No product being dispensed (draw valve open and machine in "AUTO" mode).	a. Freeze-up in the mix inlet hole.	a. Call service technician to adjust mix hopper temperature.	
	b. Beater motor out on reset.	b. Allow the motor to cool.	9
	c. Beater rotating counter-clockwise from operator end.	c. Contact service technician to correct rotation to clockwise from operator end.	
	d. Circuit breaker off or blown fuse.	d. Turn breaker on or replace fuse.	
	e. Inadequate mix in the mix hopper.	e. Fill mix hopper with mix.	14
2. Product too stiff.	a. EVC control set incorrectly.	a. Contact service technician.	
	b. Inadequate mix in hopper.	b. Fill hopper with mix.	14
3. Product too soft.	a. EVC control set incorrectly.	a. Contact service technician.	
	b. Not enough air space around unit.	b. Allow for adequate air flow across the condenser.	2
	c. Worn scraper blades.	c. Replace regularly.	18
	d. Dirty condenser.	d. Clean monthly.	19
	e. Out-of-date mix.	e. Use only fresh mix.	
Mix in mix hopper too cold.	a. Temperature out of adjustment.	a. Call service technician.	
Mix in mix hopper too warm.	a. Temperature out of adjustment.	a. Call service technician.	
	b. Warm mix placed in hopper.	b. Mix should be below 40°F. (4.4°C.) when placed in hopper.	18
	c. Mix hopper cover or gasket not in position.	c. Place cover and gasket in position.	15

PROBLEM	PROBABLE CAUSE	REMEDY	PAGE REF.
Drive shaft stuck in the drive coupling.	a. Rounded corners of drive shaft, coupling or both.	a. Call service technician to correct cause and replace the necessary components. Do not lubricate hex end of drive shaft.	
	b. Mix and lubricant collected in drive coupling.	b. Brush clean rear shell bearing area regularly.	17
	c. Misalignment of rear bearing plate.	c. Contact service technician.	
7. Freezing cylinder walls scored.	a. Beater assembly bent.	a. Call service technician to repair or replace beater and to correct cause of insuffi- cient mix in freezing cylinder.	
	b. Missing or worn front bearing on freezer door.	b. Install or replace front bearing.	23
Excessive mix leakage into drive shaft drip pan.	a. Missing or worn drive shaft seal on drive shaft.	a. Install or replace regularly.	23
	b. Drive shaft seal installed inside out.	b. Install seal properly.	10
	c. Missing or worn drive shaft o-ring.	c. Install or replace regularly.	10
	d. Worn rear shell bearing.	d. Call service technician to replace rear shell bearing.	
Excessive mix leakage from door spout.	a. Missing or worn draw valve o-rings.	a. Install or replace regularly.	23
	b. Inadequate lubrication of draw valve o-rings.	b. Lubricate properly.	11
	c. Wrong type lubricant being used (Example: petroleum base lubricant).	c. Use proper lubricant (Example: Taylor Lube).	10
10. No freezer operation after placing the unit in "AUTC		a. Plug into wall receptacle.	
	b. Circuit breaker off or blown fuse.	b. Turn breaker on or replace fuse.	
	c. Beater motor out on reset.	c. Allow the motor to cool.	9
	d. The draw arm is not activated.	d. After placing the freezer in the AUTO mode, the draw arm must be raised to activate the AUTO cycle.	15

PROBLEM	PROBABLE CAUSE	REMEDY	PAGE REF.
11. Product not feeding into freezing cylinder.	a. Inadequate level of mix in the mix hopper.	a. Fill the mix hopper with mix.	14
	b. Mix inlet hole frozen.	b. Mix hopper temperature needs adjustment. Call service technician.	

Parts Replacement Schedule

PART DESCRIPTION	EVERY 3 MONTHS	EVERY 6 MONTHS	ANNUALLY
Scraper Blade	X		
Drive Shaft Seal	Х		
Drive Shaft O-Ring	Х		
Freezer Door Gasket	Х		
Front Bearing	Х		
Draw Valve O-Ring	Х		
White Bristle Brush, 3" x 7"		Inspect & Replace if Necessary	Minimum
White Bristle Brush, 1-1/2" x 2"		Inspect & Replace if Necessary	Minimum
Black Bristle Brush, 1" x 2"		Inspect & Replace if Necessary	Minimum
Double-Ended Brush		Inspect & Replace if Necessary	Minimum

Parts List

DESCRIPTION	PART	WARR.	REMARKS	PARTS
	NUMBER	CLASS	ח	JPDATE
BEARING-FRONT	013116	000		
BEARING-REAR SHELL *PLASTIC*	032511	000		
+GUIDE-DRIP SEAL	028992	000		
+NUT-BRASS BEARING	028991	000		
+O-RING 1-1/16OD X .070 WALL	018432	000		
+WASHER-BEARING LOCK	012864	000		
BEARING-UNIT-REAR 1 PULLEY			SEE KIT AREAR BEARING UNIT	
BEATER A7QT-1 PIN-SUPPORT	X46233	103		
+BLADE-SCRAPER-PLASTIC 9-13/16L	046237	000		
+CLIP-SCRAPER BLADE	046238	103		
BELT-POLY V-525J10	047728	000		
BLOCK-TERMINAL 2P	039422	103	208-230V 60HZ 1PH	
BLOCK-TERMINAL 3P L1,L2,L	039423	103	208-230V 60HZ 3PH	
BRUSH-REAR BRG 1IN.DX2IN.LGX14	013071	000		
BRUSH-DOUBLE ENDED-PUMP&FEED T	013072	000		
BRUSH-DRAW VALVE 1-1/2"OD X 3"	014753	000	S/N K8054099 & UP- REPLACES 013073 - BETTER FIT	
BRUSH-MIX PUMP BODY-3"X7"WHITE	023316	000		
BUSHING-PANEL	013289	103		
COMPRESSOR L63B562BBCB	048727-27E	512	S/N K5085883 & UP - 208-230V 60HZ 1PH - BRISTOL	
+CAPACITOR-RUN 30UF/370V	038487	103		
+CAPACITOR-START 161-193UF/250V	031790	103		
+RELAY-START-COMPRESSOR	047067	103		
COMPRESSOR L63B562DBLB	048727-33E	512	S/N K6035543 & UP - 208-230V 60HZ 3PH - BRISTOL	
COMPRESSOR *RS80C1E-CAV*	051958-27	512	S/N K5085882 & PRIOR - 208-230V 60HZ 1PH COPELAND	
COPELAND - S/N J8109480/UP - 208-230V 60HZ 1PH				
+Capacitor-Run	012906	103		
+Capacitor-Start	033044-1	103		
+Relay-Start-Compressor	051957-27	103		
COMPRESSOR M50B103BBCB	047065-	512	BRISTOL - PRIOR TO J8109480	135
+CAPACITOR-RUN 15UF/370V	027087	103	230-60-1	
+CAPACITOR-START-124-149UF/250V	047069	103	230-60-1	
+RELAY-START-COMPRESSOR	047067	103	230-60-1	

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DESCRIPTION	PART NUMBER	WARR. CLASS	REMARKS	PARTS UPDATE
CONDENSER-AC-15LX14HX2.59T-3RW	046558	103		
COUPLING ATORQUE-SHAKE-HEX	X47000	103		
COUPLING-TORQUE-DRIVE	046866	103		
COUPLING-TORQUE-LOAD-HEX	039397	103		
PIN-COUPLING-TORQUE	039453	103		
PIN-STOP-TORQUE COUPLING725L	042312	103		
SCREW-5/16-18 X 3/8 ALLEN SET	025376	000		
SCREW-SHOULDER 3/16D X 1/2L-SS	039455	000		
SPRING-3/8 ODX3/16 IDXIL-GREEN	039454	103		
COVER AHOPPER-STD	X38458-SER	103		
KNOB-MIX COVER	025429	103		
DECAL-CLEAN INSTHOPPER	019029	000		
DECAL-DEC-TAYLOR-490	048359	000		
DECAL-TROUBLESHOOTING	038374	000		
DEFLECTOR-AIR	048549	103		
DIAGRAM-WIRING *390*	047730-27	000	208-230V 60HZ 1PH	
DIAGRAM-WIRING *390*	047730-33	000	208-230V 60HZ 3PH	
DOOR-PARTIAL-1 SPOUT-SHAKE	X30272-SER	103		
+GASKET-DOOR 5.177ID X 5.9380D	016672	000		
+KNOB-DRAW VALVE	013635	103		
+NUT-LOCK KNOB	013649	103		
+VALVE ADRAW *490*	X48364	103		
+O-RING-1-1/16 OD X.139W	020571	000		
DRYER-FILTER 3/8 X 1/4 SOLDER	048901	000	REPLACES 045866	135
GASKET-DOOR 5.177ID X 5.9380D	016672	000		
GASKET-HOPPER COVER-20 QT-SGL	038375	000		
GUIDE ADRIP PAN	X47190	103		
HARNESS-WIRE MAIN CTRL	063734-27G	103	208-230V 60HZ 1PH	
HARNESS-WIRE-MAIN CTRL	063002-33G	103	208-230V 60HZ 3PH	
HARNESS-WIRE BTR MTR *390	063003-RBC	103	1PH & 3PH	
НООД	021222-SP4	103	S/N M1094715 & PRIOR	
KIT AREAR BEARING UNIT	X39162-SER	103	INCLUDES RETAINING PLATE	129
KIT ATUNE UP*490*	X48398	000		

⁺ Available Separately

DESCRIPTION	PART NUMBER	WARR. CLASS	REMARKS	PARTS UPDATE
BEARING-FRONT	013116	000		
GASKET-DOOR 5.177ID X 5.9380D	016672	000		
O-RING-1-1/16 OD X.139W	020571	000	DRAW VALVE	
O-RING-7/8 OD X .139W	025307	000	DRIVE SHAFT	
SEAL-DRIVE SHAFT	032560	000		
TOOL-O-RING REMOVAL	048260-WHT	000		
LABEL-DOOR-WARN-MOVE PARTS	032749	000		
LABEL-SWITCH-WASH/OFF/AUTO-SYMBOL	014502	000		
LABEL-WARN-COVER	051433	000		
LABEL-3PH MTR PROT/1PH C-ENG	025949	000	208-230V 60HZ 3PH	
LEG-4" SS-W/ORING	013458	103		
LIGHT-ADD MIX-AMBER-RECTANGULR	047141-27	103		
LIGHT-MIX OUT-AMBER-RECTANGULAR	050036-27	103	J8109480 REPLACES X47219-27	135
LOUVER-SIDE-TOP	051192	103	S/N M1094715 & PRIOR	222
LUBRICANT-SUPER TAYLOR	047518	000		
MOTOR-1/2 HP	059742-27	212	GE S/N K6035004 & UP	
+CAPACITOR-RUN 10UF/370V	866650	103		
+CAPACITOR-START 72-88UF/330V	29757	103		
MOTOR-1/2 HP	024839-27	212	A.O.SMITH S/N K6021470 & PRIOR	
+CAPACITOR-RUN 7.5UF/370V	034749	103		
+CAPACITOR-START 43-52UF/250V	033041	103		
MOTOR-FAN 80 WATT-1550 RPM CW	051744-27	103	J8109480/UP - REPLACED 029770 1998	
+FAN-5 BLADE 12" PUSH 32 DEG CCW	047279	103		
+CAPACITOR-RUN (FAN MOTOR)	051785	103		
NUT-STUD *GENERAL USAGE*	021508	103		
PCB ADUAL MIX LVL/CONT. FILL	X41420-SER	103		
PCB ACONTROL (NEW)	X51393-SER	212		
CHIP-SOFTWARE - REV 1.01	X40869-SER	103		
PCB AEVC2	X50645-SER	212		
PAIL-6 QT.	023348	000		
PAN-DRIP 19-1/2 LONG	035034	103		
PANEL AFRONT	X47004	103		
PANEL-REAR	047008	103		

⁺ Available Separately

DESCRIPTION	PART	WARR.	REMARKS	PARTS
	NUMBER	CLASS		UPDATE
PANEL-SIDE-LEFT *390*	906890	103	S/N M1094716 & UP	222
PANEL-SIDE *390* RIGHT	068924	103	S/N M1094716 & UP	222
PANEL-SIDE - LEFT	047006	103	S/N M1094715 & PRIOR	222
PANEL-SIDE - RIGHT	047007	103	S/N M1094715 & PRIOR	222
PLATE-DEC	043456	103		
PROBE AMIX LOW-HT	X42077	103	MIX LOW/HOPPER *REPLACES X44439	
+DISC-PROBE *SQ HOLE*	030965	103		
+SPACER-PROBE *SQ HOLE*	996080	103		
PROBE AMIX OUT-SQUARE HOLE	X41348	103	MIX OUT\HOPPER	
+O-RING-1/20D X .070W	024278	000		
+SPACER-PROBE-SQUARE HOLE-7/8	041346	103		
+SPACER-PROBE-ROUND HOLE-5/8DIA	041347	103		
PULLEY-10J- 1.125PD-5/8BORE	028857	103	MOTOR - 60HZ	
PULLEY-10J-12"PD-5/8BORE	025480	103	GEAR	
RELAY-3 POLE-20A-208/240 50/60	066795-33	103	REPLACES 012725-33	
RELAY-DPDT-20 A-24VAC	026581-03	103		
SANITIZER KAY-5 CASE 125 PCKTS	041082	000		
SENSOR AEVC-SLUSH-15"	X66231M	103	S/N K8027256 & UP	
SENSOR AEVC-SLUSH-15"	X44354	103	S/N K8025458 & PRIOR	
SHAFT-BEATER	036412	103		
+O-RING-7/8 OD X .139W	025307	000		
+SEAL-DRIVE SHAFT	032560	000		
SHELL AINSULATED *390/4	X68900-SER	512	S/N M1094716 & UP	222
STUD-NOSE CONE	022822	103		
SHELL AINSULATED	X46984-SER	512	S/N M1094715 & PRIOR	222
+STUD-NOSE CONE	022822	103		
SHIELD-SPLASH-WIRE 13-11/16L	046177	103		
SWITCH ADRAW *490*	X48369-SER	103	start here	
ARM ADRAW VALVE	X28874	103		
PIN-PIVOT	015478	103		
E-RING 3/16 .335 OD 1500-18P	049178	000		
SPRING-RETURN	015342	103		
SWITCH-LEVER-SPDT-10A-125-25	028889	103		

⁺ Available Separately

DESCRIPTION	PART	WARR.	REMARKS	PARTS
	NUMBER	CLASS		UPDATE
SCREW-4-40X1/2 HEX HEAD-3/16	042604	000		
SWITCH-PRESSURE 440 PSI-SOLD	048230	103		135
TRANS240V PR1/24V SEC 10 VA	030132-27	103		
TRAY-DRIP 14.8	046275	103		
TRIM-CORNER LEFT	047002	103		
TRIM-CORNER RIGHT	047003	103		
TRIM-FRONT	050913	103		
TUBE-CAPILLARY .021ID X 9 FT	020059	103		
TUBE-FEED-3/8 HOLE	015176-9	103		
VALVE-ACCESS 1/4FL X 1/4SOLDER	044404	103		
VALVE-ACCESS-1/4MFL X 3/80DSDR	053565	103		
VALVE-EPR 1/4S	022665	103		
VALVE-EXP-AUTO-1/4S X1/4 FPT	046365	103		
+BOOT-EXPANSION VALVE	006050	000		
WATER COOLED				
ACCUMULATOR-COPPER 2"DIA 10"	047062	103		
BRACKET-FAN	038641	103		
BRACKET-VALVE-WATER MOUNT	22280	103		
CLAMP-HOSE 3/4 ID CONST T	067113	000		
CONDENSER-WC-SPIRAL 11-1/2 OD	049309	103		
COUPLING-3/8 NPT BLACK PIPE	010878	103		
HOSE-RUBBER 1/2"ID X 7/8"OD	R50200	000		
MOTOR-FAN 9 WATT 1550RPM-CW	012768-27	103		
+FAN-5 BLADE 7 " PUSH 30DEG CW	016289	103		
SWITCH-PRESSURE 350 PSI-S	048231	103	DISCHARGE LINE	
VALVE-ACCESS-1/4 MFLX1/4 S-90	047016	103		
VALVE-WATER 3/8 REG/HEAD PRESS	046686	103		

⁺ Available Separately

DESCRIPTION	PART NUMBER	WARR. CLASS	REMARKS	PARTS UPDATE
50 HZ				
BLOCK-TERMINAL 2P L1,N	039421	103		
BLOCK-TERMINAL 7P GREEN	024156	103		
PULLEY-10J-11"PD-5/8BORE	025570	103		
PULLEY-10J- 1.25PD-5/8BOR	033141	103		
BELT-POLY V-510J10	047049	000		
DIAGRAM-WIRING *490*	047730-40	000		
COMPRESSOR L63B562BBKB	048727-40E	512	S/N K8115637 & UP - 220-240V 50HZ 1PH - BRISTOL	
+CAPACITOR-RUN 15UF/370V	027087	103		
+CAPACITOR-START 161-193UF	031790	103		
+RELAY-START-COMPRESSOR	048766	103		
COMPRESSOR RS80CIE-CAZ-224 - COPELAND	051958-40	512	K8115636 & PRIOR - 220-240V 50HZ 1PH -COPELAND	
+CAPACITOR-RUN 20UF/370V	023606	103		
+CAPACITOR-START 64-77UF/250V	051960	103		
+RELAY-START-COMPRESSOR	051957-40	103		
FUSE-1 AMP-BUSS GLR 1	050449	000		
HOLDER-FUSE-IN LINE-TYPE	045606	103		
MOTOR-FAN 100W 220-240V 5	047178-34	103		
+CAPACITOR-RUN 4UF/370V	019624	103		
+BOOT-CAPACITOR	031314	000		
MOTOR-1/2 HP	059742-40	103	S/N K8115637 & UP	
MOTOR-1/2 HP	024839-34	103	S/N K8115636 & PRIOR	

⁺ Available Separately

