

# Champion

The Dishwashing Machine Specialists

*For machines beginning with  
serial no. 85299 thru 89787*

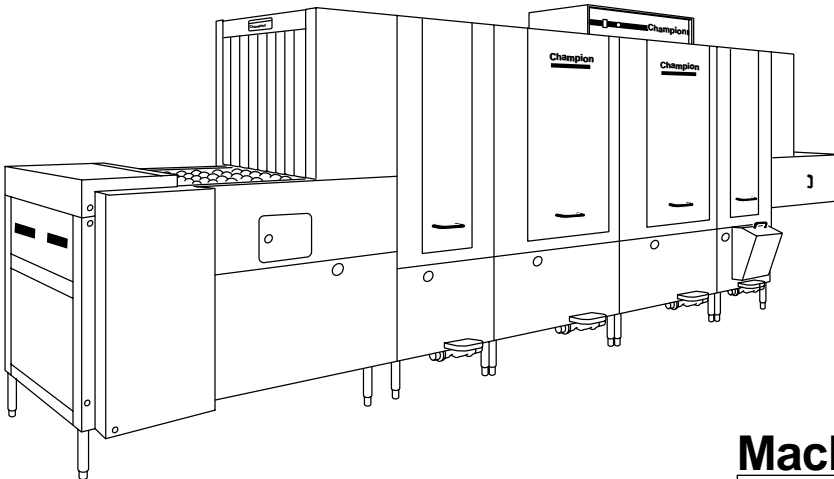
## Technical Manual

### Upright Conveyor Dishwasher

Model

UC-C  
24" Conveyor

UC-CW  
30" Conveyor



**Machine Serial No.**

**February, 2003**

**Manual P/N 111694** REV. D

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**Champion Industries, Inc.**

Complete the information below so it will be available for quick reference.

Model Number \_\_\_\_\_ Serial Number \_\_\_\_\_

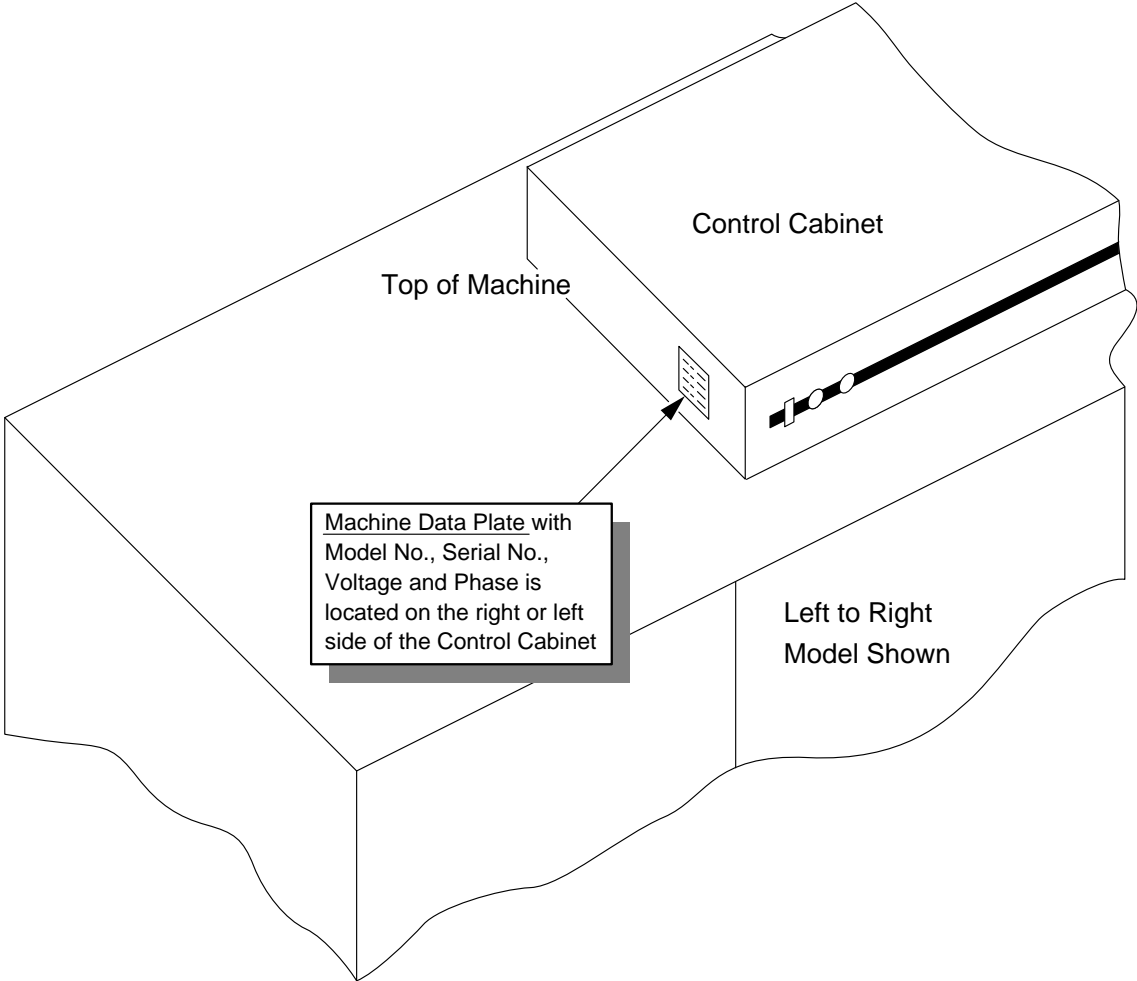
Voltage and Phase \_\_\_\_\_

Champion Parts Distributor \_\_\_\_\_ Phone \_\_\_\_\_

Champion Service Agency \_\_\_\_\_ Phone \_\_\_\_\_

Champion Industries Service: 1-800-858-4477 Champion Service Fax: 1-336-661-1660  
In Canada call: 1-800-263-5798 Fax: 1-905-562-4618

**NOTE:** When calling to order parts, be sure to have the model number, serial number, voltage, and phase of your machine.



## Revision History

Revision Date	Revised Pages	Serial Number Effectivity	Comments
12/10/93	All	85259	Reissue of manual and new replacement parts lists
5/1/94	21, 29	—	Added conveyor warning
5/1/94	52	—	Added items 60 and 61 to parts list
5/1/94	52	—	Corrected part number item 43 in parts list
5/1/94	60	—	Corrected reference for item 23
5/1/94	60	—	Added items 59-64 to parts list
5/1/94	75	—	Added item 4, P/N 110288 to parts list
5/1/94	98	—	Added reference for item 3 to fig. 47
6/30/95	60-63	—	Revised pages
6/30/95	64-65	—	Revised pages adding conveyor shut-off assy.
6/30/95	66	—	Added new pg. with baffles & back-flow piping
6/30/95	78-80	86849	Redesign of pump assy.
6/30/95	100-101	—	Revised pages, added photo of electric blower dryer
6/30/95	111, 114, 115, 116	—	Revised electric booster diagrams
6/30/95	118-119	—	Revised electric tank heater diagrams
6/30/95	121-124	—	Revised electrical schematics
11/13/95	121-124	87839	Revised electrical schematics, added 7CR control relay
12/16/96	48-50, 52-54	89072	Redesign of spray pipes (debossed)
1/6/97	33, 98	89120	Changed design of timers
12/8/97	53, 57	89120	Changed P/N 109985 to 112257
12/8/97	79	—	Corrected discharge hose application for Item 4
12/8/97	98	—	Corrected Item 16, fuse description added 3A, 5A, 6A fuses
2/5/03	53	—	Replace 108391 with 113622 thermometer

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# NOTES



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# The Dishwasher Formula

## Five Elements for Cleaning Dishes

**A Perfect Score** means **Clean Ware** for your customers...

**Peak Dishwasher Performance** for you.

	<b>Point Value</b>
<b>1. Time</b> .....	<b>20</b>
Wash and rinse times (set by NSF and Champion) allow everything to work.	
<b>2. Temperature</b> .....	<b>20</b>
Heated water penetrates and loosens soil on dishes.	
<b>3. Mechanical Action</b> .....	<b>20</b>
Pumps produce water pressure which flushes the soil off dishes.	
<b>4. Chemical Action</b> .....	<b>20</b>
Detergent breaks down grease and loosens soil particles.	
<b>5. Procedure</b> .....	<b><u>20</u></b>
Pre-scraping and rinsing removes large food particles from the dishes. Proper washroom ventilation and humidity shortens dish drying time.	
<b>SCORE</b>	<b>100</b>



## LIMITED WARRANTY

Champion Industries Inc. (herein referred to as Champion), P.O. Box 4149, Winston-Salem, North Carolina 27115, and P.O. Box 301, 2674 N. Service Road, Jordan Station, Canada, L0R 1S0 , warrants machines, and parts, as set out below.

**Warranty of Machines:** Champion warrants all new machines of its manufacture bearing the name “Champion” and installed within the United States and Canada to be free from defects in material and workmanship for a period of one (1) year after the date of installation or fifteen (15) months after the date of shipment by Champion, whichever occurs first. [See below for special provisions relating to glasswashers.] The warranty registration card must be returned to Champion within ten (10) days after installation. If warranty card is not returned to Champion within such period, the warranty will expire after one year from the date of shipment.

Champion will not assume any responsibility for extra costs for installation in any area where there are jurisdictional problems with local trades or unions.

If a defect in workmanship or material is found to exist within the warranty period, Champion, at its election, will either repair or replace the defective machine or accept return of the machine for full credit; provided, however, as to glasswashers, Champion’s obligation with respect to labor associated with any repairs shall end (a) 120 days after shipment, or (b) 90 days after installation, whichever occurs first. In the event that Champion elects to repair, the labor and work to be performed in connection with the warranty shall be done during regular working hours by a Champion authorized service technician. Defective parts become the property of Champion. Use of replacement parts not authorized by Champion will relieve Champion of all further liability in connection with its warranty. In no event will Champion’s warranty obligation exceed Champion’s charge for the machine. The following are not covered by Champion’s warranty:

- a. Lighting of gas pilots or burners.
- b. Cleaning of gas lines.
- c. Replacement of fuses or resetting of overload breakers.
- d. Adjustment of thermostats.
- e. Adjustment of clutches.
- f. Opening or closing of utility supply valves or switching of electrical supply current.
- g. Cleaning of valves, strainers, screens, nozzles, or spray pipes.
- h. Performance of regular maintenance and cleaning as outlined in operator’s guide.
- i. Damages resulting from water conditions, accidents, alterations, improper use, abuse, tampering, improper installation, or failure to follow maintenance and operation procedures.
- j. Wear on Pulper cutter blocks, pulse vanes, and auger brush.

*Examples of the defects not covered by warranty include, but are not limited to:* (1) Damage to the exterior or interior finish as a result of the above, (2) Use with utility service other than that designated on the rating plate, (3) Improper connection to utility service, (4) Inadequate or excessive water pressure, (5) Corrosion from chemicals dispensed in excess of recommended concentrations, (6) Failure of electrical components due to connection of chemical dispensing equipment installed by others, (7) Leaks or damage resulting from such leaks caused by the installer, including those at machine table connections or by connection of chemical dispensing equipment installed by others, (8) Failure to comply with local building codes, (9) Damage caused by labor dispute.

**Warranty of Parts:** Champion warrants all new machine parts produced or authorized by Champion to be free from defects in material and workmanship for a period of 90 days from date of invoice. If any defect in material and workmanship is found to exist within the warranty period Champion will replace the defective part without charge.

**DISCLAIMER OF WARRANTIES AND LIMITATIONS OF LIABILITY. CHAMPION’S WARRANTY IS ONLY TO THE EXTENT REFLECTED ABOVE. CHAMPION MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED, TO ANY WARRANTY OF MERCHANTABILITY, OR FITNESS OF PURPOSE. CHAMPION SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES. THE REMEDIES SET OUT ABOVE ARE THE EXCLUSIVE REMEDIES FOR ANY DEFECTS FOUND TO EXIST IN CHAMPION DISHWASHING MACHINES AND CHAMPION PARTS, AND ALL OTHER REMEDIES ARE EXCLUDED, INCLUDING ANY LIABILITY FOR INCIDENTALS OR CONSEQUENTIAL DAMAGES.**

Champion does not authorize any other person, including persons who deal in Champion dishwashing machines to change this warranty or create any other obligation in connection with Champion Dishwashing Machines.

## INTRODUCTION

Welcome to **Champion...**

and thank you for allowing us to take care of your dishwashing needs.

**This manual covers the basic Upright Conveyor Dishwasher models UC-C and UC-CW.**

Your machine was completely assembled, inspected, and thoroughly tested at our factory. Then it was disassembled and crated in sections for delivery to your installation site.

The reassembly and installation of your machine is performed by others. However, Champion can arrange for an Authorized Champion Service Agency to supervise the reassembly and installation. Electrical wiring and plumbing services, including final connections to the machine are supplied by others.

This manual contains:

- Warranty information
- Installation and operation procedures
- Maintenance instructions
- Troubleshooting guide
- Basic service information
- Replacement parts lists
- Wiring diagrams and electrical schematics

Complete and return your warranty registration card within ten (10) days after the installation of your machine.

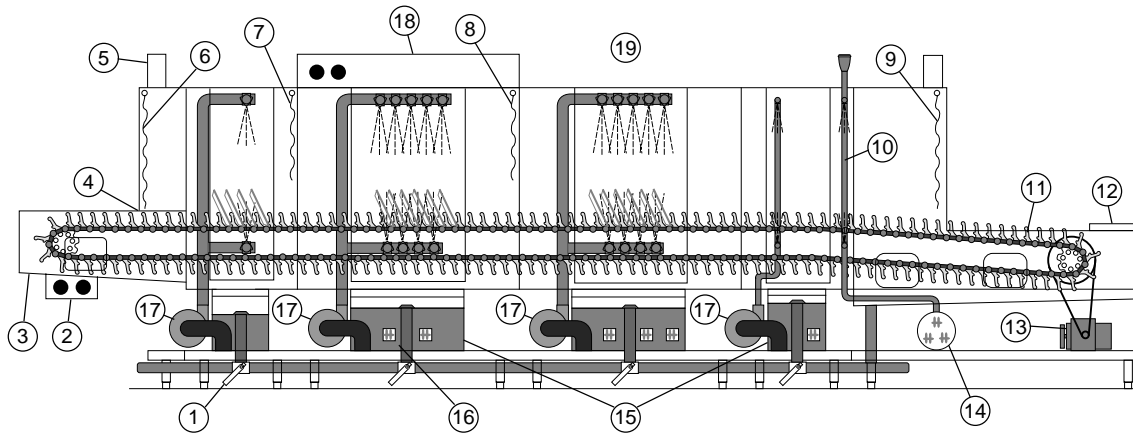
All information, illustrations and specifications contained in this manual are based upon the latest product information available at the time of publication. **Champion** constantly improves its products and reserves the right to make changes at any time or to change specifications or design without notice and without incurring obligation.

For your protection, factory authorized parts should always be used for repairs.

Replacement parts may be ordered from your **Champion** authorized parts distributor or from your **Champion** authorized service agency.\* When ordering parts, please supply the model number, serial number, voltage, and phase of your machine.

\***Champion** can only ship parts to customers by C.O.D.

## GENERAL



**Figure 1**  
**Left to Right Machine**

## Components and Features

### Major Components

The major components of the UC-C and UC-CW upright conveyor dishwashing machines are listed in Figure 1.

- |   |   |
|---|---|
| 1. Ball drain valve                                   | 11. Peg belt (24" for UC-C) (30" for UC-CW)       |
| 2. Load end push button Start-Stop station            | 12. Sliding conveyor shut-off shelf               |
| 3. Load end Recirculating flushing nozzles            | 13. Conveyor drive assembly                       |
| 4. Electric Eyes-Energy Sentinel (idle pump shut-off) | 14. Optional steam or electric booster            |
| 5. Vent openings with 7" stainless steel stacks       | 15. Steam coil/injectors or electric tank heat    |
| 6. Load Section-Long Curtain                          | 16. Low water tank heat protection float switches |
| 7. Prewash Section-Short Curtain                      | 17. High Pressure recirculating pumps             |
| 8. Wash Section-Short Curtain                         | 18. Top-mounted control cabinet                   |
| 9. Unload Section-Long Curtain                        | 19. Automatic Fill                                |
| 10. Final Rinse Piping                                |   |

The UC-C and the UC-CW Upright Conveyors are fully automatic dishwashing machines consisting of modular sections. Each section is available in a choice of lengths to satisfy your specific space and warewashing requirements. Champion's ability to custom build your machine to meet your application gives you the most powerful and versatile dishwashing machine on the market today.

### Standard Features

- All models are constructed of heavy-gauge stainless steel including the panels, base, legs, and feet.
- All Models are available for either Right to Left or Left to Right operation.
- All models are high temperature (180°F final rinse) sanitizing machines.
- All Models have a single common water connection and a single common electrical connection. (A separate electrical connection is required for an optional electric booster or blower dryer).
- All models have chemical dispensing equipment connection provisions inside the control cabinet.
- Standard Voltages are available in: 208/60/3      240/60/3      460/60/3

For non-standard voltages please consult the factory.

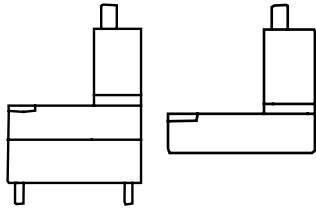
## Options

Your machine may be equipped with one or more of the following options:

- Auto fill with drain interlock
- Stainless steel back panel
- Conveyor Belts
  - Flat belt
  - Cup belt
  - Thermal tray belt
  - Silverware belt (with or without riser)
  - Belts with upper rods
  - or any combination of the above.
- Blower-dryer, steam or electric (Minimum 9 foot unload required)
- Bumper rail, machine mounted
- Cold water thermostat (for prewash section)
- Conveyor, variable speed, electric
- Doors, one piece lift-out for low ceiling installations
- Doors both sides of hood
- Energy sentinel and rinse saver gate switch system
- External scrap bucket on 4 foot prewash (Standard on 2 foot prewash)
- External scrap bucket on 4 foot wash, 6 and 8 foot wash and/or rinse
- Fused disconnect switch for machine and/or booster (unmounted)
- Insulated hoods, insulated panels
- Isolation switches for motors and/or electric tank heat
  - Motor pump, 2-HP optional in lieu of 1-HP on 2 foot prewash
  - Motor pump, 3-HP optional in lieu of 1-HP on 2 foot prewash
- Side safety rails
- Split unload section for shipping
- Start/Stop station, unload end
  - Steam pressure regulating valve (mounted)
  - Tray unloader (sample of tray and cart required)
  - Water pressure regulating valve (mounted) — Standard with built-in booster
- Champion steam boosters (built-in)      Champion electric boosters (built-in)
 

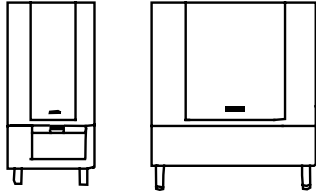
40°F Rise through 70°F Rise	40°F Rise through 70°F Rise
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**Modular Sections (Details and Dimensions)**



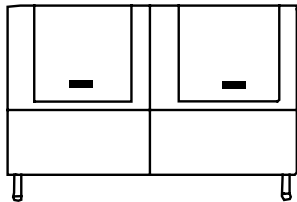
**A-Load**

The minimum available length of the load section is 3 feet and comes in a cantilevered design. The 4-8 foot load sections come in a base and leg design.



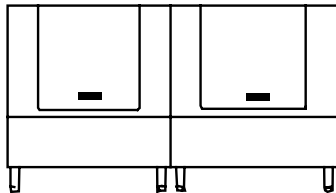
**B-Prewash**

Prewash sections are available in 2' and 4' lengths. The 2' section includes a standard external scrap basket and uses a 1-HP pump motor. The 4' prewash uses a 3-HP pump motor. The external scrap basket is optional on the 4' prewash.



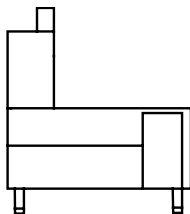
**C-Wash/Rinse  
C3/C6**

The C3 module is a 3' section for either wash or rinse. The C6 is a combination of a 3' wash section and 3' power rinse section. Both sections have a 3-HP pump motor. External scrap baskets are optional.



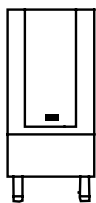
**C-Wash/Rinse  
C4/C8**

The C4 wash or rinse section is a 4' module. The C8 is a combination of a 4' wash and a 4' power rinse section. Both sections have a 3-HP pump motor. The external scrap baskets are optional.



**D-Unload**

The unload section provides space for handling clean ware and is available in a minimum length of 4'. Longer sections are recommended for maximum drying or when an optional blower dryer assembly is used.



**E-EconoRinse**

This Option is for the UC-CW only. The EconoRinse section is designed to capture and recirculate the final rinse water one additional time before it is used in the rest of the machine. The section measures 2' and uses a 1/4-HP pump motor.

## INSTALLATION

### Unpacking

- Immediately after unpacking your machine, check for any possible shipping damage. If any damage is found, save the packing materials, including the skids, and contact the carrier immediately.
- All the loose parts for your machine and the hardware needed for the assembly of the sections are contained in a box located on one of the skids.

### Locating

- Before moving the sections into position, inspect the location site and be sure that the electrical, plumbing, and ventilation services are provided in the correct locations. Champion provides a Plumbing and Electrical Connections Drawing, (P&E), detailing these requirements. Compare the site connections with the machine to ensure that they will match when the machine is set in its permanent location.
- With each section on its skid, place it as close to its permanent position as possible.



#### **CAUTION:**

*Each section has piping underneath the base. Lift the section carefully to avoid damaging the piping.*

- Carefully lift each section, and remove the skid. Remove any tape and shipping brackets.
- Remove the wireway covers on the rear of each section and lay the wire bundles to the outside.
- Open all the doors. If you choose to remove the baffles for easier access to the section ends, be sure to note their location for correct reassembly later. (See Pg. 18, Fig. 3)
- Roll the conveyor belt toward the inside of the sections to make the section assembling easier.
- Move the center section (Wash/Rinse) to its final position and thread the feet in as far as possible.
- Move the other sections into position, leaving about 6 inches of separation between them. Thread all feet in as far as possible. **DO NOT BOLT THE SECTIONS TOGETHER AT THIS TIME.**

### Assembling the Sections

- Check the height of each section and determine which section is the highest due to floor variations.
- Begin with the Wash/Rinse section and adjust its height. Keep in mind that the other sections will be leveled in relation to this section. Therefore, the height of the wash/rinse section must compensate for floor height variations.
- Level the wash/rinse section side to side and front to back in several places using a bubble level.
- Run a 1/2" bead of silicone sealant on the face of all sides of the hood gasket of the section end you are going to join.

## Assembling the Sections (continued)

- Move the next section closer to the prepared end of the center section and adjust the feet of the second section so that the bolt holes around the hood and gasket align.
- Slide the connecting hoses and clamps on the drain pipes and cross-flow pipes. Do not tighten.
- Level the second section side to side and front to back in several places using a bubble level.
- Check the alignment of the conveyor tracks inside the machine, drains, cross-flows and wireways.
- Bolt the HOOD sections together FIRST, using the 5/16-18 X 3/4" bolts, lockwashers and nuts from the hardware kit.
- Bolt the base together NEXT, using the 1/2-13 X 1" bolts, lockwashers, and nuts from the hardware kit.
- Recheck the level of the assembled sections and relevel the second section if necessary.
- Adjust the hoses on the drain pipes and cross-flow pipes and tighten the clamps.
- Feed the wire bundles through the wireways and connect the wires.
  - Match corresponding numbers and connect them together.
  - Connect all white and #2 wires together. White and #2 wires are neutral wires.
- Connect the copper water lines at the rear of the sections. Be careful not to cross-thread the connectors.
- Connect the steam piping below the base (applicable to steam machines only).
- Install the baffles if you removed them prior to connecting the sections.
- Repeat the entire process for each section until the machine is completely assembled.

## Assembling the Conveyor Belt

- Start at the unload end of the machine and pull the conveyor belt around the sprockets until approximately 1-1/2 feet of belt is exposed on the upper track of the machine.
- Pull a section of belt from the next section along the upper track into the unload end.
- Join the belt sections together by feeding a conveyor rod through the links, spacers, and rollers. Install a cotter pin on each end of the rod to secure the assembly.
- Continue this procedure until all the conveyor belt sections are joined.
- Adjust the conveyor belt tension at the load end by turning the adjusting bolts on the take-up assemblies. The take-up assemblies are located on either side of the load end conveyor shaft. Loosen the adjusting bolt locknuts.
- Turn each take-up adjusting bolt clockwise equally making sure that the conveyor shaft remains square with the end of the machine.
- Note the slack in the lower portion of the belt and be sure that the adjustment removes the slack.
- Check for the proper belt tension by lifting up the conveyor belt at the unload end. Proper tension has been reached when the belt can be lifted off the track a maximum of 1-1/2 to 2 inches. Tighten the adjusting bolt locknuts.
- RECHECK THE BELT TENSION IN 2-3 WEEKS AND READJUST AS NECESSARY.  
(See Initial Start Up #17, Pg. 19)



## Completing the Assembly



### CAUTION:

*Overtightening the belt can result in damage to the belt and the conveyor belt drive assembly.*

- Trim any excess silicone sealant that may have squeezed out from between the assembled sections. Apply a finish bead of silicone around the section joints.
- Install the vent stacks on the load and unload sections of the machine. Make sure the damper handles face toward the front of the machine.
- Install the curtains. Long curtains hang in hooks on each end of the machine. Short curtains hang in hooks on the inside of the machine. (See Fig. 6, Pg. 20)
- Check each tank and the interior of the machine and remove any foreign material.
- Install the screen supports, scrap screens, and access panels.

## Installing the Optional Blower Dryer (Steam or Electric)

The blower dryer is available in either electric or steam and is shipped on a separate skid along with the machine. The vent cowl and mounting hardware for the blower dryer are shipped in the box containing the dishwashing machine parts and hardware.

- Remove the blower dryer from the skid and install the unit on the top of the unload section of the machine.
- Bolt the blower dryer in place using the 5/16-18 X 3/4" bolts, flat washers, and lock washers from the hardware kit.
- Fasten the vent cowl on the discharge end of the blower dryer using the 1/4-20 plain nuts, flat washers, and lock washers from the hardware kit.
- Connect the electrical wiring by moving the prewired flexible conduit into position with the 3" X 5" junction box located on the side of the blower dryer.
  - Secure the conduit to the junction box.
  - Match the corresponding wire numbers in the junction box and the conduit and connect them together.
  - Connect all white and #2 wires together. White and #2 wires are neutral wires.

## PLUMBING CONNECTIONS



### CAUTION:

*Plumbing connections must comply with local sanitary and plumbing codes.*

- Connect all supply connections for water, steam, and drain lines at the points indicated on the P&E Connections Drawing.
- Tags are wired to the machine piping to indicate these connection points.
- Shut-off valves should be installed in all supply lines to allow for servicing of the machine.
- Pressure Reducing Valves, supplied by Champion or others, should be installed on the incoming water supply lines and the incoming steam supply lines as close to the machine as possible.
- Water Hammer Arrestor meeting ASSE-1010 standard or equivalent, should be installed in the common water supply line at the service connection.
- HOT WATER**  
 3/4" NPT 140°F. Flow pressure 20-22 PSI (For machine with built-in 40° rise steam/electric booster)  
 3/4" NPT 110°F. Flow pressure 20-22 PSI (For machine with built-in 70° rise steam/electric booster)  
 3/4" NPT 180°F. Flow pressure 20-22 PSI (For machine without built-in booster)
- COLD WATER**  
 1/2" NPT 65°F tempering cold water connection. (For prewash with cold water thermostat)
- STEAM**  
 Refer to the P&E Connections Drawing or consult the factory.  
 Blower Dryer- 3/4" NPT @ 85lbs/hr consumption at 15 psi flow pressure.
- DRAIN**  
 1-1/2" NPT machine connection 3/4" NPT booster relief to an open drain.

## ELECTRICAL CONNECTIONS



### WARNING:

*Electrical and grounding connections must comply with the National Electrical Code and/or Local Electrical Codes.*



### WARNING:

*When working on the dishwasher, disconnect the electric service and place a tag at the disconnect switch to indicate work is being done on that circuit.*

- A qualified electrician must compare the electrical power supply with the machine electrical specifications stamped on the MACHINE ELECTRICAL CONNECTION PLATE located inside the control cabinet before connecting to the incoming service at a fused disconnect switch.
- Motor rotation was set at the factory. Correct rotation is indicated by a direction arrow decal on the conveyor drive sprocket. The sprocket can be found at the unload end of the machine behind a stainless steel panel.
- Reversing motor rotation must be performed in the Control Cabinet. Reverse the wires L1 and L2 on the disconnect switch side of the main electrical connection terminal block.

- ❑ A knock-out plug is provided at the rear of the control cabinet for electrical service connections.
- ❑ Electric boosters and Electric blower dryers each require a separate electric connection.
- ❑ A fused disconnect switch or circuit breaker (supplied by others) is required to protect each power supply circuit.
- ❑ MOTOR STARTER OVERLOAD levers must be checked to ensure they are in the ON position.

## VENTILATION CONNECTIONS

- ❑ Stainless steel watertight ducting should be installed above the machine.
- ❑ Duct connections must be made to the inside of the machine vent stacks.
- ❑ Exhaust air must not be vented into a wall, ceiling, or concealed space of the building.
- ❑ Machine Ventilation Requirements:

MODEL	UC-C	UC-CW	UC-CW-WS
LOAD END	300 CFM at 1/4" S.P.	400 CFM at 1/4" S.P.	300 CFM at 1/4" S.P.
UNLOAD END*	800 CFM at 1/4" S.P.	900 CFM at 1/4" S.P.	800 CFM at 1/4" S.P.

\*With an optional Blower dryer, increase room ventilation by 600 CFM at 1/4" S.P. at the unload end.

- ❑ A Minimum of six (6) air changes per hour (provided by building ventilation system) is recommended for the warewashing area.

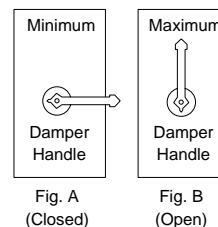
## MACHINE VENT DAMPER SETTINGS

- ❑ Each vent stack is equipped with an adjustable damper.
- ❑ Proper adjustment of the dampers collects moist vapor as it exits the machine. This prevents moisture from escaping into the wash room.



### CAUTION:

*Opening the dampers too much will remove heat from the machine interior and may make it difficult to maintain the proper wash/rinse tank temperatures. Set the dampers to best meet your particular installation. Figure A and B show the minimum and maximum vent settings.*

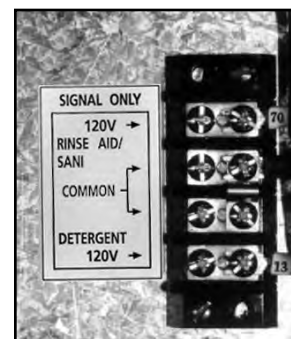


## CHEMICAL CONNECTIONS

- ❑ Labeled connection points are provided inside the control cabinet for chemical dispensing equipment.

These connection points include:

- ❑ A 120VAC detergent signal between Wire #10 and Common.
- ❑ A 120VAC rinse aid signal between Wire #12 and Common.
- ❑ Removable black plugs are located at various points on the wash tank for the mounting of a conductivity cell.
- ❑ A removable plug on the final rinse piping is provided as a rinse aid injection point.



**Figure 2**  
Control Cabinet  
Chemical Connections

## INITIAL START UP



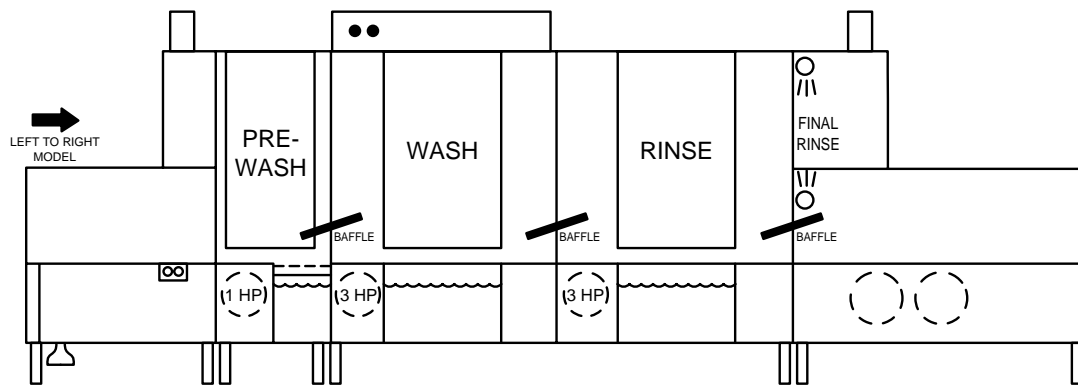
**NOTE:**

*Perform the following checks and adjustments before placing the machine into service.*

1. Check the interior of the machine and remove any foreign material.
2. Check the exterior of the machine — make sure that the conveyor belt is free of tape and foreign material.

**Baffles** - Tank baffles redirect the flow of water from the spray arm systems back into the tanks. This prevents water loss and keeps the wash, rinse, and final rinse water in the proper tank.

3. Check the baffles — make sure that they are installed and positioned according to Fig 3 below.



**Figure 3 Baffle Locations**

4. Close the tank drain valves along the lower front of the machine.
5. Open the water supply valves. Check for leaks and take corrective action as required.
6. Open the steam supply valves (if applicable). Check for leaks and take corrective action if required.
  - Machine steam valves
  - Blower Dryer (if applicable) steam valves
7. Turn the main power on at the breaker panel or fused disconnect switch.
  - Machine main power
  - Electric booster main power (if applicable)
8. Flip the Power Switch on the front of the Control Cabinet to the “ON” position.
  - The Red power on light will illuminate.
  - The machine will begin to fill with water.
9. Allow the machine to completely fill with water.
  - The water will shut off automatically.
10. Check for leaks and take corrective action if required.
11. Monitor the tank thermometers for the proper temperature reading.
  - Allow sufficient time for the tank heat to reach operating temperature.
  - Refer to the chart below.

TANK	Prewash	Wash	Power Rinse
TEMPERATURE °F	120° - 140°	150° - 170°	160° - 180°

12. Move the conveyor shut-off shelf located at the end of the unload section toward the machine.
  - This resets the automatic conveyor stop system.
  - When an object on the conveyor contacts the shut-off shelf, the conveyor stops.
13. Press the GREEN start button on the front of the control cabinet.
14. Check the direction of rotation of the conveyor belt by observing the direction arrow decal on the large conveyor drive sprocket. The sprocket is located on the side of the unload section.
15. If rotation direction is incorrect, reverse wires L1 and L2 on the disconnect switch side of the main electrical connection terminal block located inside the control cabinet.
16. Adjust the conveyor belt drive clutch. The clutch is located on the large conveyor drive sprocket on the side of the unload section. Refer to Fig. 4.

**To adjust:**

- a. Tighten the clutch nut on the center of the drive sprocket until the conveyor begins to move.
- b. Have a person of average build (about 185 lbs.) hold the belt with both hands and pull against the direction of travel.
- c. Continue tightening the clutch nut until maximum effort against the direction of travel is required to stop the belt.

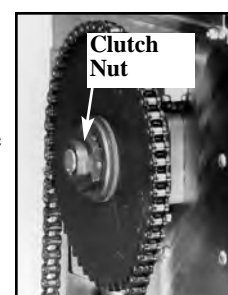


**NOTE:**

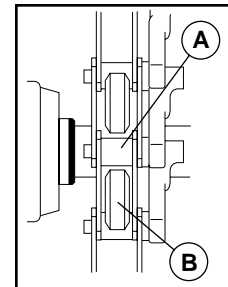
*Final adjustment of the clutch depends upon the overall length of the conveyor belt and the maximum weight that may be placed on the conveyor belt during normal operation.*

**CHECK AND ADJUST CLUTCH MONTHLY.**

17. Check the alignment of the conveyor belt. Adjust the take-up assemblies so that Conveyor Rollers (A) track evenly on Conveyor Sprockets (B). See Fig. 5.
18. Check the Energy Sentinel (idle pump shut-off) by placing a tray or dish on the moving conveyor belt.
  - The pumps will start as the object enters the tunnel of the machine.
  - The optional econorinse pump starts with the final rinse.
  - Check pump motor rotation, CW when viewed from the rear of motor.
19. Check the final rinse temperature as the object enters the final rinse area.
  - The Final rinse temperature must be 180-195°F.
  - Adjust the temperature of the incoming water supply if necessary.
  - Adjust the booster thermostat setting if necessary.
20. Check the Final rinse water pressure as the object enters the final rinse area.
  - The final rinse pressure must be 20-22 PSI.
  - Adjust the Pressure Reducing Valve setting if necessary.
21. Check that the pumps and final rinse shut-off before the object reaches the conveyor shut-off shelf.
22. Check that the conveyor belt stops when the object pushes the conveyor shut-off shelf.
23. Move the shut-off shelf toward the tunnel of the machine. The conveyor belt will start moving again.
24. Push the RED stop button. The conveyor belt will stop moving.
25. Flip the power switch on the control cabinet to OFF. The red power light will go out.
26. Open all the drain valves and check that the house drains can handle the flow.
27. Remove any protective film from the stainless steel and install the side panels and chain guard.



**Figure 4 - Conveyor Belt Drive Clutch**



**Figure 5 - Conveyor Belt Alignment**

## OPERATION

### Operation Steps

Perform the following steps to place your machine in operation. Refer to Fig. 6.

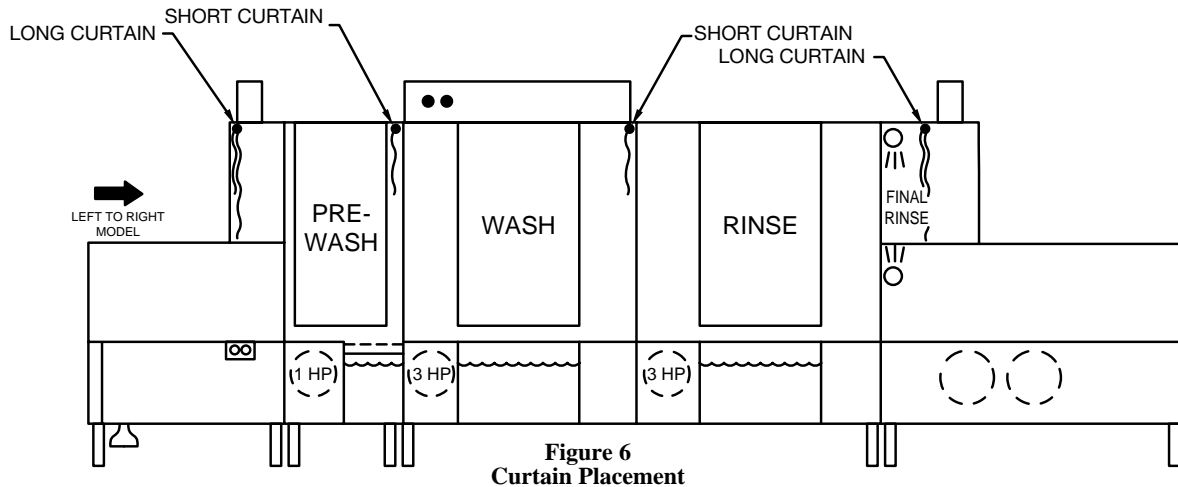


Figure 6  
Curtain Placement

1. Check the curtains for correct placement in the machine.
  - Be sure the short flaps of the Long Curtains face the load end of the machine.
2. Check the spray pipes.
  - Be sure the spray pipe gasket is installed on the end of spray pipe before installing.
  - Spray pipes are installed by inserting the pipe into the coupler and turning 1/4 turn clockwise.
3. Check the scrap screens.
  - Install any scrap basket covers.
4. Check that the conveyor shut-off shelf is pushed toward the machine tunnel.
5. Close the drain valves, located under the base of each tank.
  - When the drain handle is horizontal, the valve is open.
  - When the valve handle is vertical, the valve is closed
6. Check the detergent and rinse aid supplies (supplied by others).
7. Turn on the detergent and rinse-aid dispensers (supplied by others).
8. Close all the doors making sure the door safety switches are activated.
9. Flip the Power Switch on the front of the control cabinet to "ON".
  - The RED power light will illuminate.
  - The machine will automatically fill with water.
  - When the tanks are full, the water will stop and the tank heat will come on.
10. Fig. 7 illustrates the automatic fill operation.

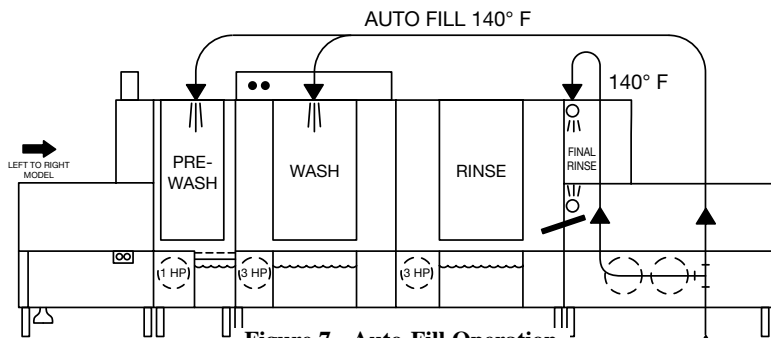


Figure 7 - Auto-Fill Operation

**OPERATION (continued)**

11. Wait for the tanks to reach operating temperature.
12. Monitor the temperature gauges located below the doors. Refer to the chart below for the proper temperature readings.

TANK	Prewash	Wash	Power Rinse
TEMPERATURE °F	120° - 140°	150° - 170°	160° - 180°

**WARNING:**

*This machine contains moving conveyor parts*

- *Use caution when working near conveyor.*
- *Disconnect power to machine when cleaning or servicing.*

13. Press the GREEN start button on the front of the control cabinet or the green start button on the START/STOP station located at the load end of the machine.
  - The conveyor belt will begin to move. (Pumps do not run at this time)
  - If the conveyor belt does not move, recheck the position of the conveyor shut-off shelf — and,
  - Place the conveyor shut-off shelf in the operating position.
14. Scrap and flush the ware before loading it on the conveyor belt.  
For the best washing results:
  - Stagger objects across the conveyor belt.
  - Cups, glasses, and silverware are best washed in racks. Distribute silverware evenly in a single layer in the bottom of a flat rack.

As an object enters the tunnel of the load end, it will block the electric eyes. This starts the pumps.

  - An Automatic timer controls the pump run time.
  - The final rinse, also controlled by an automatic timer, will start as an object moves near the final rinse area. The optional econorinse pump starts with the final rinse.
15. Check the final rinse temperature as the final rinse begins.
  - The temperature gauge is located on the top of the machine in the final rinse piping.
  - The correct reading must be between 180°-195°F.
16. Check the final rinse flow pressure during the final rinse.
  - The pressure gauge is located on the lower panel of the unload section.
  - The correct flow pressure must be between 20-22 PSI. The pressure gauge may read more than 22 PSI before and after the final rinse cycle. This is a normal condition.

As an object exits the tunnel of the machine the automatic timers will:

  - Shut off the final rinse and the pumps before the object reaches the conveyor shut-off shelf.
  - If the conveyor belt is loaded with a number of objects, the final rinse and the pumps will continue to run until an object pushes the conveyor shut-off shelf into the OFF position.
  - The conveyor belt and the final rinse will stop.
  - The automatic timers will stop.

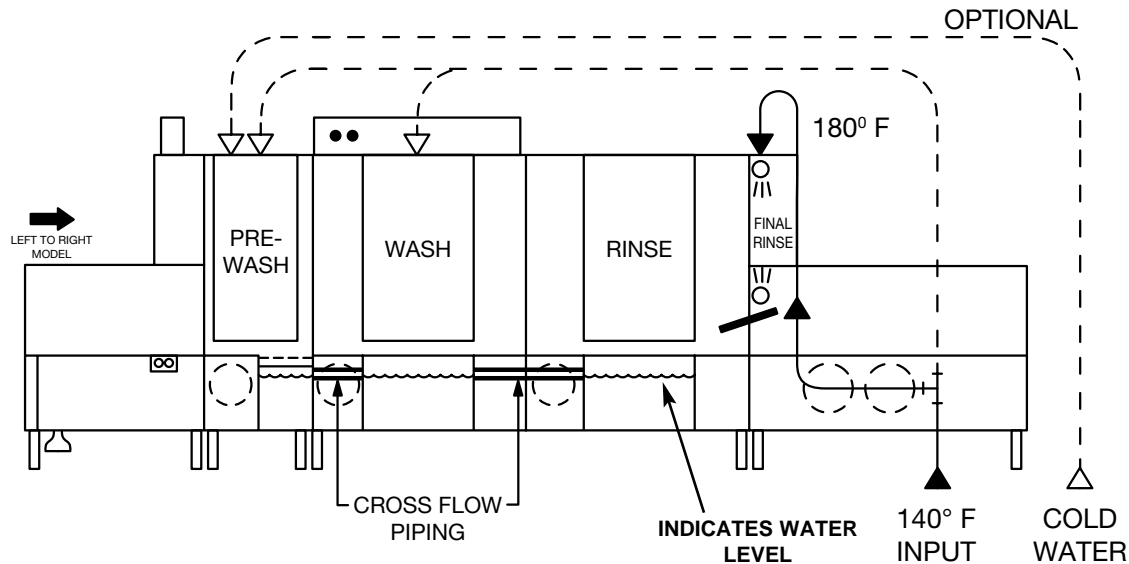
**OPERATION (continued)**

17. Push the conveyor shut-off shelf towards the tunnel of the machine to return it to its operating position. This will:
  - Restart the conveyor belt and the final rinse.
  - The automatic timers will restart where they left off. This ensures that any objects remaining on the conveyor belt will be completely washed and sanitized by the final rinse.
18. Press the RED stop button on the control cabinet or the START/STOP station on the load section.
  - The conveyor will stop.
  - The final rinse will stop.
  - The pumps will stop.
19. Press the GREEN start button on the control cabinet or the START/STOP station on the load end. The conveyor, the final rinse, and the pumps will start again.
  - The machine will continue to run until the automatic timers complete their timed cycles or an object pushes the conveyor shut-off shelf to the "OFF" position.

Fresh make-up water is added to the tanks as required automatically.

- A majority of the fresh water comes from the Final Rinse.
- Additional make-up water is supplied by valves activated by float switches located in each tank.

Refer to Fig. 8 below for the typical fresh water make-up supply.



**Figure 8**  
**Fresh Water Make-up**



## MAINTENANCE

Regularly scheduled maintenance will increase the efficiency and life of your machine. A well maintained machine gives better washing results and service. Undoubtedly, the time that you invest in daily maintenance now, will pay-off in the future.

Cleaning your machine is the best maintenance that you can provide. Components that are not regularly flushed and cleaned do not perform well.

The Maintenance Intervals shown in the following schedules are the minimum requirements necessary for the proper performance of your machine. Shorten the maintenance intervals whenever your machine is faced with abnormal working conditions, hard water, or multiple shift operations.

### Maintenance Schedule

#### CLEANING

- **Every 2 Hours or After Each Meal Period**
    1. When the last object on the conveyor belt exits the tunnel of the machine, the pumps will shut off automatically.
    2. Press the RED stop button on the control cabinet or the START/STOP station on the load section.
      - The conveyor will stop.
    3. Flip the Power switch on the front of the control cabinet to “OFF”.
      - The Red power on light will go out.
    4. Open the doors.
    5. Open the drain valves and allow the machine to drain.
      - The valve is open when the handle is placed in the horizontal position.
    6. Remove the scrap screens and scrap baskets.
      - Back flush the screens and baskets and reinstall in the machine.
      - Check spray nozzles.
    7. Close the drain valves and doors.
    8. Flip the Power Switch on the front of the control cabinet to the “ON” position.
      - The RED power light will illuminate.
      - The machine will automatically refill with water.
  - **Every 8 Hours or at the End of the Day**
    1. Press the RED stop button on the control cabinet or the START/STOP station on the load section.
    2. Flip the Power Switch on the front of the control cabinet to the “OFF” position.
    3. Remove all the scrap screens and baskets.
    4. Back flush the scrap screens and baskets until clean.
- DO NOT STRIKE SCREENS OR BASKETS AGAINST SOLID OBJECTS TO CLEAN.**
5. Open the drain valves and allow the tanks to drain.

## CLEANING (continued)



### CAUTION:

*Do Not Leave Water in the Tanks Overnight.*

6. Flush the inside of the load and unload sections with clean water.
7. Flush the inside of the tanks with clean water and wipe away any residue.
8. Flush the pump suction strainers, the tank drain screens, and the drain screen on the unload section.
9. Flush the inside of the machine again making sure all drains are clean and free flowing.
10. Remove the spray pipes by turning 1/4 turn counterclockwise.
  - Remove the end cap from each spray pipe
  - Flush the pipe and nozzles until clean.Do not strike the spray pipes on solid objects to clean.
  - Replace the end caps
  - Make sure that the rubber gaskets are in place on the end of the spray pipe.
11. Reinstall the spray pipes by turning 1/4 turn clockwise.
12. Clean the final rinse pipe nozzles of any mineral deposits.  
(A straightened paper clip works very well as a cleaning tool).
13. Remove and clean the curtains. Allow the curtains to air dry.
14. Reassemble the machine.
15. Leave the doors open to allow the interior of the machine to air dry.
16. Clean the exterior of the machine. **DO NOT HOSE DOWN WITH WATER.**
17. Report any unusual conditions to your supervisor.

## Lubrication

### • Every 3 months

1. Check the oil level in the conveyor drive gear reducer. Refill with SAE 90 gearcase oil.
2. Add grease to the conveyor shaft bearings; usually one pump from a grease gun using a general purpose grease.
3. Motor bearings do not require lubrication.
4. Apply a thin coat of grease to the conveyor drive sprocket chain. Avoid getting grease on the drive clutch; wipe any excess grease off immediately.

## Operation Checks

### • Daily

1. Check temperature gauges for proper readings.
2. Check pressure gauge for proper reading.
3. Check pumps for leaks around motor shaft.
4. Inspect general condition of machine.
5. Check chemical supplies (supplied by others) and refill as necessary.

## Operation Checks

### • Weekly

1. Inspect all water lines for leaks and tighten at joints if required.
2. Clean all detergent residue from the exterior of the machine.
3. Check the drains for leaks.
4. Clean accumulated mineral deposits from the tank heating elements or steam coils.
5. Remove and inspect each spray pipe for blockage and clean if required.
6. Clean the final rinse nozzles of accumulated mineral deposits.
7. Check the float switches located in each tank to ensure they move freely.
8. Inspect the conveyor belt for broken or worn parts.
9. Inspect the electric eyes and clean the lenses.
10. Inspect the conveyor shut-off shelf for freedom of travel.
11. Check the conveyor drive clutch adjustment.

## Deliming

Mineral deposits, which are frequently referred to as lime because of their white color, accumulate in the interior of the machine over time. The amount of lime build-up depends on the mineral content of your water supply. Machines in regions of the country that have hard water (high mineral content) will require more frequent deliming than in regions with soft water (low mineral content).



### **NOTE:**

*Consult your chemical supplier for an appropriate deliming solution.*



### **WARNING:**

*Deliming solutions or other acids must not come in contact with household bleach (sodium hypochlorite) or any chemicals containing chlorine, iodine, bromine, or fluorine. Mixing will cause hazardous gases to form. Skin contact with deliming solutions can cause severe irritation and possible chemical burns. Consult your chemical supplier for specific safety precautions.*

### • Weekly or as required

1. Inspect the interior of the machine for lime deposits.
2. Follow the chemical supplier's recommendations for the deliming solution.
3. Thoroughly flush the interior of the machine when the deliming is complete.

## TROUBLESHOOTING

On occasion your machine may not operate as expected.

Use the checklist below before you decide that a mechanical or electrical failure has occurred.

### Checklist

1. Are the main disconnect switches, breakers, or motor overloads turned ON?
2. Are the main water and steam supplies turned ON?
3. Are the drain valves closed?
4. Are the spray pipes and rinse nozzles clean?
5. Are the spray pipes in the proper locations?
6. Are the pump intakes clean.
7. Are the scrap screens clean and in place?
8. Are the thermostats correctly adjusted?
9. Are the high limit temperature thermostats reset?
10. Are the doors fully closed?
11. Are the conveyor shut-off and drive assemblies in operating condition?
12. Are the chemical supplies adequately filled?

If a problem still exists after verifying the checklist, refer to the following Troubleshooting Chart.

CONDITION	CAUSE	SOLUTION
Conveyor will not run	Door not closed .....	Make sure doors are fully closed
	Door safety switch faulty .....	Contact your service agency
	Start switch faulty .....	Contact your service agency
	Main switch OFF .....	Check disconnect
	Control panel power switch OFF.....	Flip switch ON
	Conveyor shut-off shelf operated.....	Move shelf toward tunnel of machine
	Motor overload protector tripped.....	Reset overload in control cabinet
	Green start button not pressed .....	Press green start button
Conveyor runs but Prewash, Wash, and Power Rinse pump will not run	Nothing on the conveyor.....	Load the conveyor
	Electric eyes (Idle pump shut-off) system faulty .....	Clean the electric eye lenses
		Flip the Automatic/Manual switch in the control cabinet to MANUAL and Contact your service agency
Optional EconoRinse pump will not run	Final Rinse Timer not calling for operation .....	Refer to EconoRinse section operation Appendix A (Page 104)
	Motor overload tripped .....	Reset overload in control cabinet
	Defective motor.....	Contact your service agency

## TROUBLESHOOTING

CONDITION	CAUSE	SOLUTION
A single pump will not run	Motor overload tripped ..... Defective motor.....	Reset overload in control cabinet Contact your service agency
Low or no water	Main water supply is turned off..... Drain valves are open..... Doors are not fully closed..... Faulty fill valve..... Stuck or defective float switch..... Cross-flow piping misadjusted/ clogged ..... Clogged strainer at supply connection ..... PRV misadjusted or defective.....	Turn on house water supply Close all drain valves Close doors Contact your service agency Free float /Contact service agency Adjust cross-flow setting/Clean piping Clean strainer screen Readjust pressure setting or replace PRV
Continuous water filling	Stuck or defective float switch..... Fill valve will not close..... Drain valves open.....	Free float/Contact service agency Clean valve,repair or replace valve Close drain valves
Wash/Power Rinse tank temperature is low when machine is operating	Incoming water temperature at machine is too low .....  Defective thermometer..... Defective thermostat ..... Defective electric heater element..... Low steam pressure or volume ..... Defective steam trap..... Defective solenoid valve.....	Raise incoming temperature 140°F minimum for 40° rise booster 110°F minimum for 70° rise booster 180° F minimum without booster Check or replace Readjust setting or replace Check or replace Check steam supply pressure Check or replace Check or replace
Prewash tank temperature is too high (Optional Cold Water thermostat Only)	Incoming cold water temperature too high..... Defective cold water thermostat .....	Lower incoming water temperature to maximum of 65°F Check or replace
Insufficient pumped spray pressure	Clogged pump intake screen..... Clogged spray pipe..... Scrap screen full..... Low water level in tank ..... Pump motor rotation incorrect..... Defective pump seal.....	Clean Clean Must be kept clean and in place Check drain valves Reverse wires L1 and L2 in control cabinet Contact service agency
Insufficient final rinse or no final rinse	Faulty pressure reducing valve (PRV) ..... Improper setting on PRV ..... Clogged rinse nozzle or pipe ..... Improper water line size..... Clogged "Y" strainer.....	Clean or replace Set Flow pressure to 20-22 PSI Clean Installer must change to proper size Clean or replace

## TROUBLESHOOTING

CONDITION	CAUSE	SOLUTION
Low final rinse temperature	Low incoming water temperature .....	Raise incoming water temperature 140°F for 40° rise booster 110°F for 70° rise booster 180°F without booster
	Defective thermometer.....	Check or replace
	Defective thermostat .....	Recalibrate or replace
	High limit thermostat tripped.....	Reset or replace
	Low steam pressure.....	Check steam supply pressure
Poor washing results	Detergent dispenser not operating .....	Contact the chemical supplier
	Detergent supplied not strong enough .....	Contact the chemical supplier
	Wash water temperature too low .....	See Condition “Wash/Rinse tank water temperature too low”
	Spray pipes clogged .....	Clean
	Improperly scrapped dishes .....	Check scrapping procedures
	Ware improperly loaded on conveyor .....	Stagger ware on belt
	Maintenance not performed as required .....	See Maintenance Schedule
	Electric elements/steam coils have .... lime build-up .....	Clean and delime Contact the chemical supplier
	Poor drying results	Excessive humidity in warewashing area .....
Improperly stacked dishes after washing .....		Check unloading procedures
Insufficient rinse-aid .....		Contact chemical supplier
Final rinse temperature too low .....		See Condition “Final Rinse temperature too low”

## BASIC SERVICE

### To the Reader—

This section is intended for qualified service and maintenance personnel only.

**DO NOT ATTEMPT ADJUSTMENTS OR REPAIRS IF YOU ARE NOT QUALIFIED.**

A qualified servicer is someone who has:

1. A thorough knowledge of all safety precautions and procedures.
2. A thorough knowledge of basic electricity and electrical troubleshooting methods.
3. A thorough knowledge of dishwashing machine mechanics and operation.



**WARNING:**

***Serious personal injury may result***

*if persons lacking the proper training or experience attempt to adjust or repair a Champion Dishwashing Machine.*

*—In addition—*

***Serious or permanent damage to the machine may result***

*if persons lacking the proper training or experience attempt to adjust or repair a Champion Dishwashing Machine.*



**WARNING:**

***This machine contains moving conveyor parts***

*- Use caution when working near conveyor.*

*- Disconnect power to machine when cleaning or servicing.*

### To the Qualified Servicer—

The following service information explains procedures for adjusting and repairing some of the major components on the UC-C and UC-CW dishwashers. In addition, you will find some basic guidelines for troubleshooting and evaluating problems.

Champion dishwashers contain some unique design features that may be unfamiliar to you. We have included explanations about a number of these features.

This Basic Service section does not cover all possible repair procedures. However, if you require additional service support, you can call:

**Champion National Service**

**1-800-858-4477**

**Please have the Model and Serial Number of the machine ready when you call.**

**Note:****Champion offers a variety of options for the Upright Conveyor dishwasher.**

It is extremely important that you identify the options installed on the machine BEFORE you begin repairs.

The basic operation of the upright conveyor is the same for all models. If you are not completely familiar with the design and operation of your machine, please read all the information contained in this manual before attempting any repairs. What appears to be a serious problem at first, may be corrected with a simple maintenance or operation check.

**ELECTRICAL SERVICE**

**Power Requirements:** All models require 3 Phase power.

Standard voltages are available in 208/60/3 240/60/3 460/60/3

Non-standard voltages are available—Consult the factory.

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**Service Connections:** The main power connection is made at a single point in the Control Cabinet. Optional Electric Boosters have a separate service connection. Optional Electric Blower dryers have a separate service connection.

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**Line Voltage:**

Three phase line voltage is supplied to:	Pump motors Drive Motor Optional Blower Dryer motor Electric tank heater elements Optional Booster tank heater elements
Single phase line voltage is supplied to:	Control Transformer — (In control cabinet) [Step-down Line Voltage:120VAC]

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**Control Voltage:** 120VAC is supplied by the secondary of the control transformer to:

Control cabinet switches Remote pushbutton stations The Electric Eye circuit input Pump & Final Rinse Timers Solenoid Valves Thermostats Contactors Motor starter overloads Hold-in Relay 24VAC Control Transformer [Step-down 120VAC:24VAC]
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## Electrical Service (Continued)

### Control Voltage (24VAC)

24VAC control voltage  
is supplied to:

Door Safety Switches  
Float switches  
Conveyor switch  
Control Relays:  
1CR - for Door safety switches  
2CR - for Rinse tank float switch  
3CR - for Wash tank float switch  
4CR - for Prewash tank float switch  
5CR - for Opt. EconoRinse float switch  
6CR - for Conveyor switch

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## Troubleshooting

### Schematics

Champion places an electrical schematic in the control cabinet of every machine before it is shipped. Schematics are included at the back of this manual as well. Be aware that these schematics include options that may not apply to your machine. Options are enclosed in dashed lines with the words (IF USED) next to them on the schematic. Disregard any options that appear on the schematics which are not a part of your machine.

### Tools

All electrical repairs can be made with: Standard set of hand tools  
Volt/Ohm Meter (VOM)  
Clip-on AC current tester

### Circuit Tests

Use a clip-on AC current tester to check the 3-phase motors and electric heaters.  
Use a VOM to test the 120VAC and the 24VAC control circuits and their associated components.



#### **NOTE:**

*Do not use chassis ground when performing voltage checks.*

*Doing so will result in false and inaccurate readings.*

***PERFORM VOLTAGE CHECKS BY READING FROM THE HOT SIDE OF THE 120VAC LINE AND ANY WHITE WIRE. (Wire #2 on the electrical schematic).***



#### **WARNING:**

***USE EXTREME CAUTION when performing tests on energized circuits.***



#### **WARNING:**

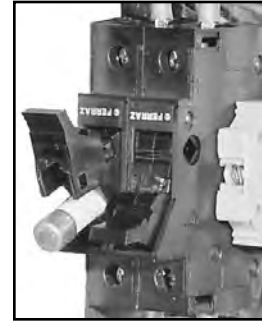
***When repairing a circuit, disconnect the power at the main service disconnect switch and place a tag at the disconnect switch to indicate that work is being performed on the circuit.***

## ELECTRICAL SERVICE (Continued)

### Repairs

#### Fuse Blocks—120VAC Control Voltage

Two fuse blocks, located in the center rear of the main control cabinet protect the main control transformer. Each fuse block holds a 5 AMP fuse. The fuses are marked 1FU and 2FU on the electrical schematic.



**Figure 9**  
Fuse Blocks

#### To Replace the fuse:

- Disconnect power to the machine at the main service switch.
- Flip the tab on the top of the fuse block to open the block.
- Remove the 5 AMP fuse and replace with another 5 AMP fuse.
- Close the fuse block and turn the main power on.
- If the fuse blows again, DO NOT INCREASE THE FUSE SIZE.
- DETERMINE THE CAUSE OF THE OVERLOAD.

Fig. 9 shows the fuse block opened and the fuse exposed.

### Motor Starter Overloads

Combination motor starters/Trip overloads are located to the left of the fuse blocks inside the control cabinet. Each 3-phase motor has one Motor Starter overload to protect it from Line Voltage electrical overloads. In addition, an auxiliary set of switch contacts is built into the motor starter overload. The switch contacts disconnect 120VAC power to the Motor Contactor Coils in the event of an overload condition. Refer to Fig. 10.

#### Note the Switch Lever on the Overload:

- If the switch lever is off with the “0” showing then the overload has tripped on an overload.

#### To Reset the Motor Starter Overload:

- Flip the overload switch to the On position.
- Run the dishwasher and test the AMP draw of the motor in question. If the motor checks okay then there may be a wiring problem or the overload may be defective.

#### To Replace a Motor Starter Overload:

- Disconnect the wires to the overload.
- Release the mounting catch on the front side of the overload, push forward and lift out.
- Snap the new overload into place and reconnect the wires.

#### To adjust the overload setting:

- The screwdriver in Fig. 10 is positioned to adjust the motor overload AMP setting.
- Read the FLA motor amps on the Motor Nameplate.
- Turn the setting to match the Nameplate.



**Figure 10**  
Motor Starter Overload

## Pump Timer and Final Rinse Timer

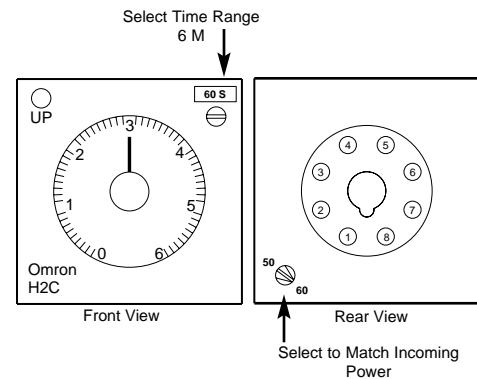
The timers have the following user-defined settings:

1. Adjustable time range
2. Timer knob setting
3. 50 Hz or 60 Hz setting
4. Indicator light (“ON” when timer is counting)

The Pump Timer is an OFF DELAY timer.

The Final Rinse Timer is an ON DELAY timer.

Each timer is clearly marked with a tag noting the time set by the factory.



**Figure 11**  
Timers

### To Replace a Timer:

- Disconnect power to the machine at the main service switch.
- Remove the defective timer and install the replacement.
- Adjust the new timer setting to match the setting of the original timer.

### To Check the Pump Timer Setting:

- Turn the power on.
- Place an object on the conveyor.
- Press the Green start button. The conveyor will start.
- When the object enters the load end tunnel the pumps will start.
- Wait for the object to exit the tunnel at the unload end.
- When the pumps stop, push the conveyor shut-off shelf to stop the conveyor.
- Measure the distance between the exit end of the tunnel and the object.
- The object should be about 1 foot past the end of the tunnel.
- If the distance is less than 1 foot, increase the pump timer setting 10 seconds. Continue to increase the timer setting in 10 second increments until the proper distance is reached.
- If the measured distance is greater than 1 foot, decrease the pump timer setting 10 seconds. Continue to decrease the timer setting in 10 second increments until the proper distance is reached.

### To Check the Final Rinse Timer Setting:

- Turn the power on.
- Place an object on the conveyor.
- Press the Green start button. The conveyor will start.
- When the object enters the tunnel the pumps will start.
- Wait for the final rinse to begin.
- Press the Red stop button the instant the final rinse begins.
- Open the power rinse tank door and measure the distance between the object and the final rinse pipes.
- The object should be 2 feet from entering the final rinse area.
- If the distance is less than 2 feet between the object and the final rinse pipes then, decrease the final rinse timer setting 10 seconds. Continue this process until the proper distance is reached.
- If the measured distance is greater than 2 feet then, increase the final rinse timer setting 10 seconds. Continue this process until the proper distance is reached.
- Run a final test to check both timer settings.

## ELECTRICAL SERVICE (Continued)

### Electric Eye Energy Sentinel System (Idle Pump Shut-off/Rinse Saver)

#### Circuit Explanation—

The electric eyes are infrared sensors and are located on the load end of the machine. The sensors consist of an emitter and a receiver. Together, these components generate a logic signal. The logic module, processes the signal produced by the sensors and switches the 120VAC control voltage supplied to the pump timer.

When an object moving on the conveyor breaks the infrared beam between the sensors, the normally open (N.O.) logic module contacts (EER) close and complete the 120VAC circuit (Wires #7 and #27 in the control cabinet). The pump timer resets and the pump motors start. The pump timer and the final rinse timer begin to time down.

The pump timer resets each time the beam is broken. This keeps the pumps and final rinse operating until all of the objects loaded on the conveyor belt have exited the tunnel at the unload end of the machine.

#### Component Location—

Refer to Fig. 12:

The Emitter is mounted on the back of the load section.  
The Receiver is mounted on the front of the load section.  
The Logic Module is mounted in a stainless steel enclosure on the base of the 4-8 foot load section and on the underside of the 3 foot cantilevered load section behind the end panel.

#### Sensor Adjustments—

##### 1. Cleaning

Be sure the emitter and receiver lenses are clean.  
Wipe the lenses clean with a soft cloth and common rubbing alcohol.

##### 2. Alignment

Sensors do not normally require aligning except when replacing a defective unit.  
The sensors are aligned visually. Make sure the lenses oppose one another across the conveyor belt.

#### Sensor Replacement—

1. The Emitter is coded SP12EL.
2. The Receiver is coded SP12RL.
3. Remove the sensor from the stainless steel cover. Disconnect the cable.
4. Refer to Fig. 13 and mount the new sensor in its cover using the nuts provided. Recess the sensor 1/16" in the cover to protect the lens.

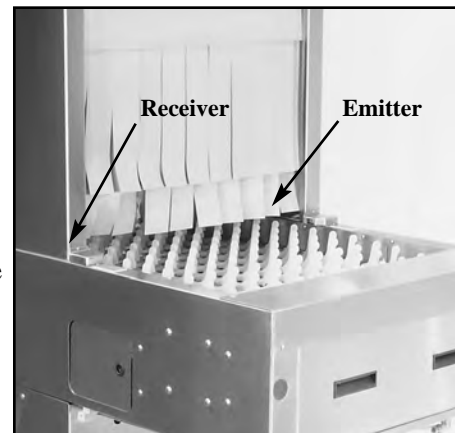


Figure 12  
Electric Eye Location

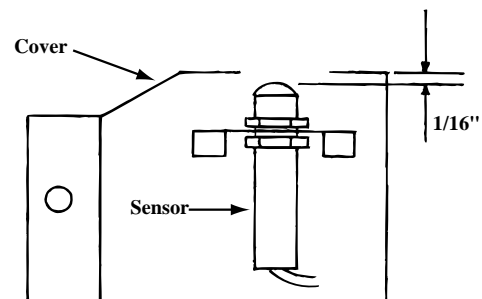


Figure 13  
Sensor Mounting

## Electric Eye Energy Sentinel System (Cont.d)

### Logic Module

Refer to Fig. 14

The logic module is a solid state amplifier. Its 120VAC input is supplied by the control transformer in the control cabinet. The logic module provides DC power to the sensors. The sensors produce a logic signal when the infrared beam is broken by an object moving on the conveyor. The logic module processes the logic signal. When an object blocks the beam the Normally Open contacts (EER) of the logic module (Pins #6 and #5) close completing the 120VAC circuit to the pump timer reset coil. The pump timer resets. When the object clears the beam, the N.O. contacts (EER) open removing 120VAC from the pump timer coil allowing the pump timer to time out.

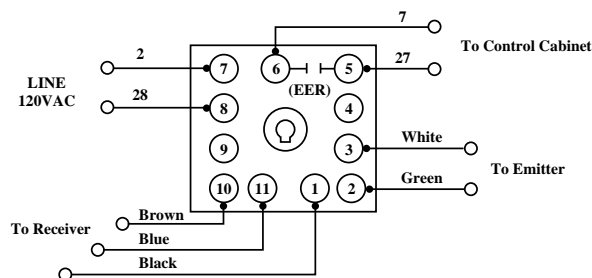


Figure 14  
Logic Module Socket  
Wiring Diagram

### Logic Module Adjustments

Refer to Fig. 15

The logic module has a row of (4) program switches on its side for initial programming. The switches are set at the factory. But, if you must replace a logic module, you will be required to set the switches before you install the logic module.

—Set ALL the Program Switches to OFF.

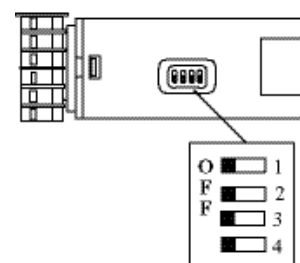


Figure 15  
Program Switches

Refer to Fig. 16.

On the front of the logic module is a small adjustment screw labeled GAIN. It is a 14 Turn potentiometer.

—Always turn the screw 14 Turns Clockwise.

This sets the logic module sensitivity at full range.

### Logic Module (LED) Indicators

On either side of the GAIN screw are two Light Emitting Diodes or (LED's).

The LED on the left is labeled "Signal In". When the circuit is operating properly, the "Signal In" LED is ON indicating that the Receiver is detecting the infrared beam from the Emitter. (Objects on the Conveyor are not blocking the beam) The LED on the right is labeled "Load Out". When the circuit is operating properly, the "Load Out" LED indicates the output condition of the module. If the "Load Out" LED is ON, an object on the conveyor is blocking the beam. 120VAC is connected to the Pump Timer. (Wire #9 and Wire #2 on the Pump Timer). IF the "Load Out" LED is OFF, 120VAC is disconnected from the Pump Timer.

When the "Load Out" LED is ON, the "Signal In" LED is OFF.  
When the "Load Out" LED is OFF, the "Signal In" LED is ON.

Logic Module  
(Front)

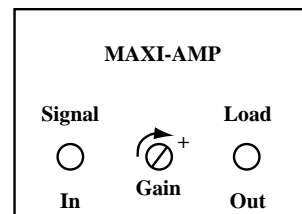


Figure 16  
Gain Adjustment  
and LED's

## Electric Eye Energy Sentinel System (Cont.d)

### Electric Eye Bypass Switch



**NOTE:**

All Upright Conveyor models have a switch located in the center of the main control cabinet for bypassing the Electric Eye Energy Sentinel System (See Fig. 17).

Place the switch in the Automatic position to activate the Electric Eye system.

- Pumps run when an object enters the load end tunnel.
- Timers control the pump run time and the final rinse.

(Refer to the Pump Timer and Final Rinse Timer service section for instructions on timer settings)

Place the switch in the Manual position to disconnect the Electric Eye System.

- Pumps and final rinse run continuously when the Green start button is pressed.
- Pumps and final rinse shut down when the Red stop button is pressed.

The Bypass switch allows the operation of the machine when the electric eye system is not functioning.

### Troubleshooting

Refer to Fig. 18.

A failure in the electric eye system most often results in the following conditions:

1. Pumps run constantly.
2. Pumps will not run at all.

To isolate the defective component:

Inspect the Components—

1. Make sure that the Bypass switch is in the automatic position.
2. Inspect and clean the lenses of the receiver and the emitter.
3. Visually inspect the alignment of the receiver and the emitter.
4. Remove the cover from logic module enclosure and turn the GAIN screw on the logic module Clockwise 14 turns. Check the LED's on the module as you perform the following:
 

<ol style="list-style-type: none"> <li>a. Block the Beam Completely</li> <li>- The "Signal In" LED should be OFF.</li> <li>- The "Load Out" LED should be ON.</li> </ol>	<ol style="list-style-type: none"> <li>b. Unblock the Beam Completely</li> <li>- The "Signal In" LED should be ON.</li> <li>- The "Load Out" LED should be OFF.</li> </ol>
--	--



Figure 17  
By Pass Switch

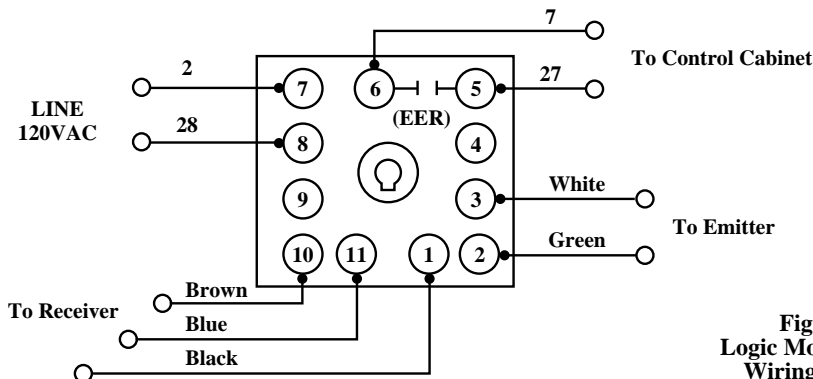


Figure 18  
Logic Module Socket  
Wiring Diagram

## Electric Eye Energy Sentinel System (Cont.d)

### Troubleshooting

#### Voltage Tests—

Refer to Fig. 18

1. If the LED's operate according to Steps 4a and 4b then,  
—Check the voltage on Pin #6 and Pin #5 of the logic module socket.  
When the LOAD OUT LED is OFF, the correct reading is 120VAC.  
When the LOAD OUT LED is ON, the correct reading is 0.0VAC.
2. If the readings in Step 1 were correct, then,  
—Check the voltage on wire #9 and wire #2 at the Pump Timer Socket in the main control cabinet. Correct reading is 120VAC when the LOAD OUT LED is ON.
3. If you read 120VAC in Step 2 then, the Electric Eye system is operating correctly.  
—Troubleshoot the pump timer or the associated circuitry.
4. If you did not read 120VAC at the pump timer in step 2, then continue testing the electric eye circuit.

#### Checking the Logic Module:

5. Check the voltage input on Pin #7 and Pin #8 of the logic module socket.  
—Correct reading is 120VAC.
6. Remove the emitter and receiver wires from Pins #3, #2, #1, #11, and #10 on the logic module socket.
7. Both the SIGNAL IN LED and the LOAD OUT LED should be OFF.
8. Set the VOM to 50 volt DC scale and connect the negative lead to Pin #1.  
Connect the positive lead to:
  - a. Pin #3 — The correct reading is +12 to +13VDC.
  - b. Pin #10 — The correct reading is +7 to +8VDC.
9. If you did not obtain the readings in Step 8a and Step 8b, then replace the logic module.

#### Checking the Sensors:

10. Reconnect the Emitter and Receiver leads to logic module socket.
11. Connect the VOM and test the Emitter:
  - a. Connect the Negative lead to Pin #2 and the Positive lead to Pin #3.  
— A reading of 0.9 to 1.2VDC is normal and indicates a good emitter.  
— A reading higher than normal indicates an open wire or a bad emitter.  
— A reading of less than 0.9VDC indicates a short in the wires to the emitter.Connect the VOM and test the Receiver:
  - b. Connect the Positive lead to Pin #10 and the Negative lead to Pin #11.  
— A reading of 1 to 1.5VDC is normal and indicates a good receiver.  
— A reading higher than normal indicates an open wire or a bad receiver.  
— A reading of less than 1VDC indicates a short in the wires to the receiver.
12. If the logic module and the sensors check good and the system still fails to operate it may indicate an interface problem between the components. In this case, substitute parts

## ELECTRICAL SERVICE (Continued)

### Automatic Fill/Low Water Heat Protection

#### Dual Float Switches—

Refer to Fig. 19

Each tank contains a dual float. The device consists of an angled stem containing two reed switches. Two stainless steel ball floats slide over the stem and are free to move up and down. The floats contain magnets. When the float moves on the stem, it opens and closes its associated reed switch inside the stem. The reed switches control relays. The relays control the automatic fill and heat for different parts of the machine. Float switches and their relays operate on 24VAC.

#### Circuit Explanation—

The following is a general explanation of the float switch circuit. Refer to the electrical schematic on your machine for a detailed description of the individual floats, relays, and wiring.

#### Bottom Float and Reed Switch:

- The bottom float controls the heat.
- When the bottom float is down, the bottom reed switch is Normally Open (NO).
- When the bottom float is up, the bottom reed switch is Normally Closed (NC).

#### Top Float and Reed Switch:

- The top float controls a fill valve.
- When the top float is down, the top reed switch is Normally Open (NO).
- When the top float is up, the top reed switch is Normally Closed (NC).

#### The Top and Bottom Floats work together:

#### Initial Fill—

- When the tank is completely empty, the top float is down and its reed switch is NO.
- The control relay for the float switch is de-energized.
- The fill valve for the tank is energized and the tank begins to fill with water.
- As the water level in the tank rises, the bottom float begins to move up.
- When the bottom float is completely up, its NO reed switch contacts close.
- This prepares the heat circuit, but the heat Does Not energize at this time.
- The tank continues to fill until the top float is completely up.
- The top float's NO reed switch contacts close. Its control relay energizes.
- The fill valve de-energizes.
- The heat circuit energizes through the NC contacts of the bottom float and the contacts of the control relay.

#### During Normal Operation—

- If the water level in a tank falls below the level of the top float, the top float moves down and its reed switch contacts open.
- When the water level falls below the level of the bottom float, the bottom float moves down and its reed switch opens.
- The control relay de-energizes. The fill valve energizes and refills the tank.
- The heat circuit will de-energize until the water level in the tank raises the top float again.
- The bottom float keeps the heat circuit ready as long as the water level is above the level of the bottom float.



**Figure 19**  
**Dual Float Switch Assembly**



## Automatic Fill/Low Water Heat Protection (Cont.d)

### Troubleshooting:

Each dual float controls the fill and heat circuit for a particular part of the machine.

Refer to the chart below :

DUAL FLOAT LOCATION →	POWER RINSE TANK	WASH TANK	PREWASH TANK
DUAL FLOAT CONTROLS →	<ul style="list-style-type: none"> <li>• 2CR control relay</li> <li>• Water level in rinse tank</li> <li>• Rinse tank heat</li> <li>• Booster tank heat — (Champion Built-in Only)</li> <li>• Fill through final rinse valve final rinse piping and nozzles</li> </ul>	<ul style="list-style-type: none"> <li>• 3CR control relay</li> <li>• Water level in wash tank</li> <li>• Wash tank heat</li> <li>• Fill through wash tank fill solenoid valve</li> <li>• Water enters machine at top of hood</li> </ul>	<ul style="list-style-type: none"> <li>• 4CR control relay</li> <li>• Water level in prewash tank</li> <li>• NOTE: Prewash tank does not have tank heat</li> <li>• Fill through prewash tank fill solenoid valve</li> <li>• Water enters the machine at top of hood</li> </ul>



### NOTE:

*The Power Rinse Tank dual float controls the heat circuit of the OPTIONAL Champion built-in booster (Steam or Electric). 120VAC Booster Control Voltage is supplied from the rinse tank heat control thermostat to the booster heat control thermostat.*

### Identifying a Dual Float Problem:

The most common trouble conditions associated with a dual float failure are:

#### Wash / Prewash Tank

1. The tank fills constantly.
2. The tank heat will not come on.

#### Power Rinse Tank

1. The final rinse runs constantly/No rinse tank heat.
2. The booster heat will not come on.

### Inspect the Dual Float:

1. Be sure that the dual float assembly is clean and free of scale build-up.
2. Be sure that the stainless steel balls on the float assembly move up and down freely.

In addition to checking the float operation, perform the following—

### System Checks:

1. All drain valves are fully closed.
2. Incoming water supply Flow Pressure is 20-22 PSI.
3. Fuses in control cabinet are good (Electric Heat Only).
4. Steam supply and steam traps operate correctly.
5. Tank Heat thermostats and/or High limit thermostats operate correctly.
6. Booster Heat thermostats and/or High limit thermostats operate correctly.
7. Electric Eye Bypass switch is in the Automatic position.

Refer to the Troubleshooting Diagrams on the next page.

## DUAL FLOAT TROUBLESHOOTING DIAGRAMS

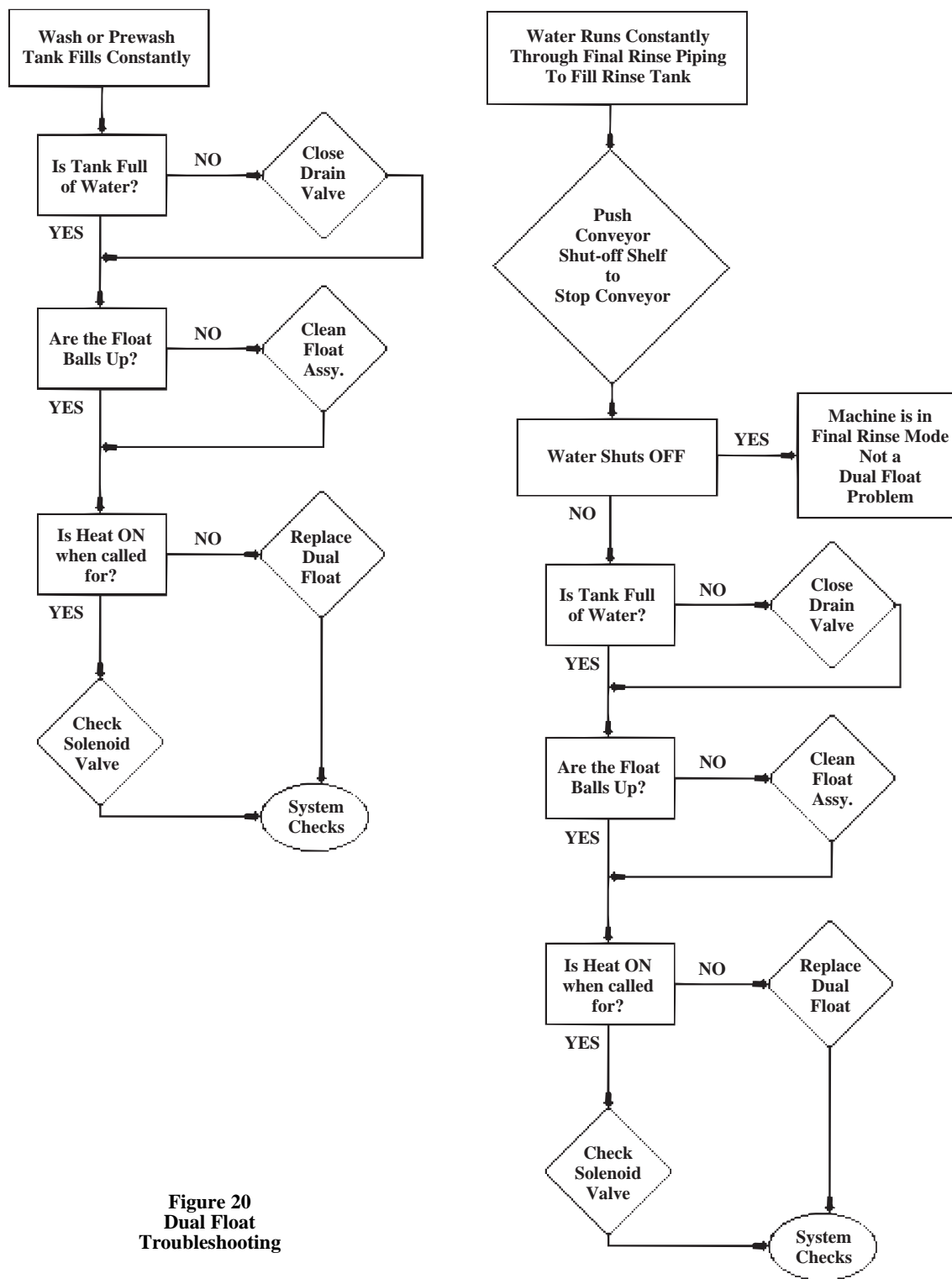


Figure 20  
Dual Float  
Troubleshooting

## ELECTRICAL SERVICE (Continued)

### Thermostat Locations and Adjustments

Refer to Fig. 21

Electric tank heat is controlled by two thermostats.

1. The Control Thermostat which regulates the temperature.
2. The High Limit Thermostat which protects from overheating.

#### Location:

Tank with Refuse Bucket-Both thermostats located on the side of the tank.

Tank without Refuse Bucket-Both thermostats located on the front of the tank.

#### Adjustment:

The Control Thermostat has an adjustment screw on one side.

- The thermostat is wired Normally Closed.
- Turn the adjustment screw clockwise to increase the temperature in the tank and counterclockwise to decrease the temperature in the tank.

The High Limit Thermostat is not adjustable. It contains a red reset button in its center.

- The red button pops out if the temperature in the tank exceeds 210°F.
  - Press the red button in to reset the high limit.
- Determine the cause of the high temperature condition.

Refer to Fig. 22 and Fig. 23.

Electric Booster Heat is controlled by two thermostats.

1. The Control Thermostat which regulates the temperature.
2. The High Limit Thermostat which protects from overheating.
3. Each tank has a control and a high limit thermostat.

#### Location:

The control thermostats are enclosed in black boxes mounted in front of the booster tanks on the base of the unload section of the machine. The high limit thermostats are enclosed in boxes mounted on the top of each booster tank.

#### Adjustment:

The control thermostat has an adjustment screw on one side.

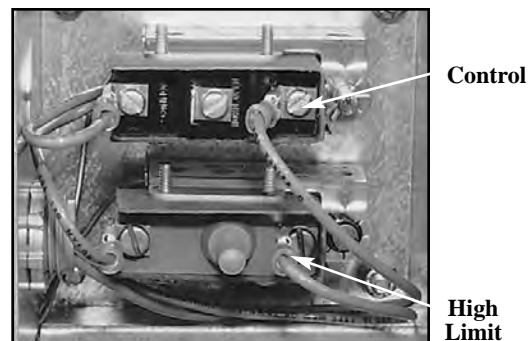
- The thermostat is wired Normally Closed.
- Turn the adjustment screw clockwise to increase the booster tank temperature and counterclockwise to decrease the booster tank temperature.

The High Limit Thermostat is a bimetal snap design. It is not adjustable.

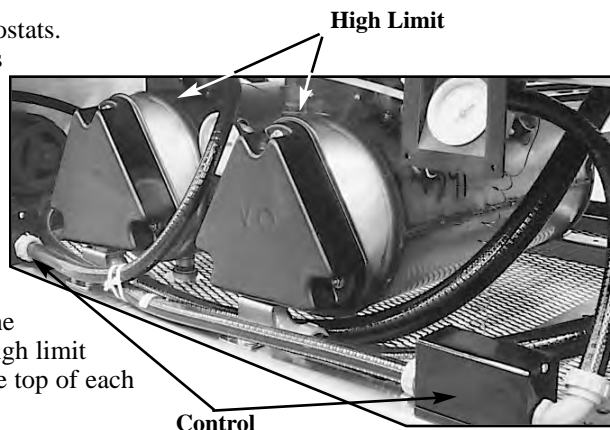
- A button with a red dot in the center pops out when the temperature exceeds 210°F.
- Press the red reset button in to reset the high limit. Determine the cause of the high temperature condition.

#### Tank Heat and Booster Heat (Steam)

Control thermostats regulate the steam supplied for tank heat and steam booster. The control thermostats are the same type as the electric heat. High limit thermostats are not required. High temperature protection is supplied by a steam pressure relief valve.



**Figure 21**  
Electric Tank Heat Thermostats



**Figure 22**  
Electric Booster  
Thermostats



**Figure 23**  
Booster High Limit

## ELECTRICAL SERVICE (Continued)

### Motors

#### Motor Specifications:

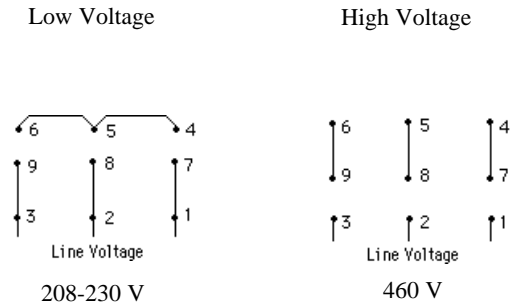
Voltage: Standard motors are multi-voltage  
 Low Voltage: 208-230V  
 High Voltage: 460V  
 Non-standard motors are single voltage  
 575V (Canada)

Phase: All motors are 3-phase.

Horsepower: Prewash Pump: 1 or 2 HP  
 Wash Pump: 3 HP  
 Rinse Pump: 3 HP  
 EconoRinse Pump: 1/4 HP  
 Conveyor Drive: 1/2 HP  
 Blower dryer: 2 HP

#### Wiring Connections

Refer to the diagrams below for



**Figure 24**  
**Motor Wiring Connections**

#### Troubleshooting:

Motor will not run:

1. Check incoming 3-phase power to control cabinet.
2. Check for tripped motor starter overload in control cabinet.  
 (Refer to Motor Starter overload service section for the proper setting)
3. Check for 3-phase power at motor contactor.

Motor runs hot and trips motor starter overload:

1. Check for proper voltage between L1-L2, L2-L3, L1-L3.
2. Check FLA on motor leads L1, L2, L3 using amp tester.  
 (Motor full load amp (FLA) ratings are stamped on motor nameplate).

#### Motor Replacement:

1. Disconnect the power to the machine.
2. Disconnect the wires at the motor junction box.
3. Make note of the motor connections in order to phase the replacement correctly.
4. Install the new motor and check for proper rotation.
5. Proper shaft rotation is clockwise looking at the rear of the motor.
6. Replacement motors are available as complete assemblies.
7. Champion cannot provide replacement bearings, stators, or rotors as individual motor repair parts.
8. When requesting a replacement motor, please have available:
  - The machine model number.
  - The machine serial number.
  - The motor location, i.e. (prewash tank, conveyor drive, etc.) and the machine voltage.

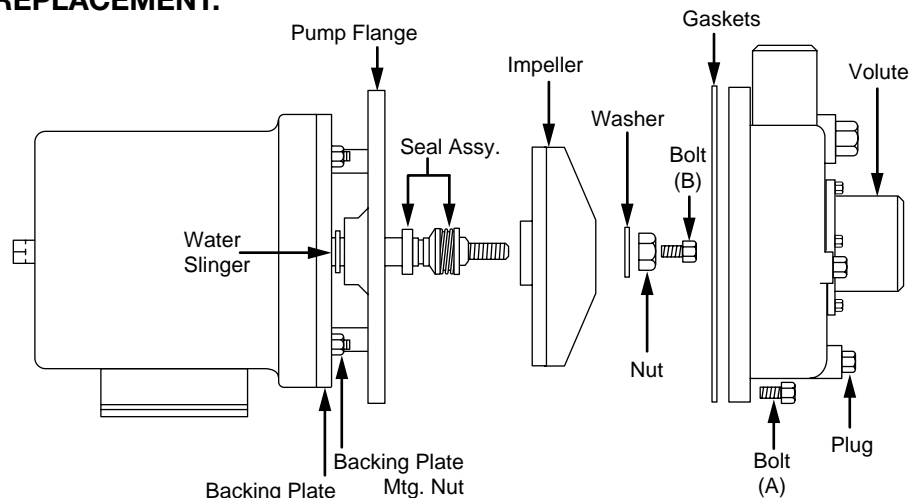
## MECHANICAL SERVICE

### PUMP SEAL REPLACEMENT:



#### WARNING:

*Disconnect all power to the machine at the main power source and place a tag at the disconnect switch to show that work is being done on the circuit.*



**Figure 25**  
**Pump Seal Replacement**

1. Disconnect the power to the machine.
2. Drain the machine. Remove the plug from the lowest point on the pump volute and drain the pump.
3. Remove the pump hoses.
4. Disconnect the wires to the motor at the motor junction box.
5. Unbolt the motor from the base of the machine and remove the motor and pump.
6. Remove all the bolts (A) on the volute and carefully remove the volute from the pump flange.
7. Lock the motor shaft holding the square end of the rear shaft with a wrench or vise grips.
8. Remove the impeller retaining bolt (B). Remove the large retaining nut and washer.
9. Remove the impeller using a strap wrench. Turn it counterclockwise.  
**Do not strike the impeller with a hammer to loosen or remove it.**
10. Remove the old seal and discard. Check the seal seat in the pump flange and clean thoroughly.
11. Clean the seating surface on the motor shaft with #600 emory paper or crocus cloth.
12. Check the water slinger and replace if worn or missing. Remove the (4) backing plate mtg. nuts to gain access to the slinger.
13. Press the rubber seal and ceramic into the pump flange. Use a water soluble lubricant. Keep the ceramic clean.
14. Install the rotating part of the seal on the shaft with the graphite surface toward the ceramic. Use a water soluble lubricant.
15. Reinstall the impeller, washer, lock-nut, and bolt. Install new flange gaskets. Bolt the volute to the flange.
16. Reinstall the pump and motor assembly on the base of the machine and reconnect the pump hoses.
17. Reconnect the power and fill the tank with water. Check for leaks.
18. Bump start the pump to check the motor for correct rotation.
19. Proper shaft rotation is clockwise looking at the rear of the motor.

## MECHANICAL SERVICE (Continued)

### Cross Flow Elbow Adjustment

The wash tank receives a portion of its fill water via the cross flow piping between the wash tank and power rinse tank. Also, the UC-CW-WS, water saver model has cross flow piping between the power rinse tank and the Econorinse (E2) tank. The cross flow of water is gravity fed.

The cross flow elbow is located in the rear corner of the wash tank (power rinse tank on UC-CW-WS only). It tilts at an angle which is preset at the factory. This angle controls the amount of water that flows from the power rinse tank into the wash tank. For UC-CW-WS models only, the angle of the cross flow elbow controls the flow of water from the Econorinse tank (E2) into the power rinse tank.

#### Setting the Elbow Angle:

Refer to Fig. 26

1. Position the elbow with the outlet pointing straight up.
2. Turn the elbow down and away from the back of the tank to approximately 11 o'clock as viewed facing the elbow mounting flange hex head bolts.
3. Measure the distance from the bottom of the tank up to edge of the elbow.
4. Adjust the elbow angle until the measured distance equals 9-1/4".
5. The setting should be checked periodically to ensure that the adjustment is maintained.

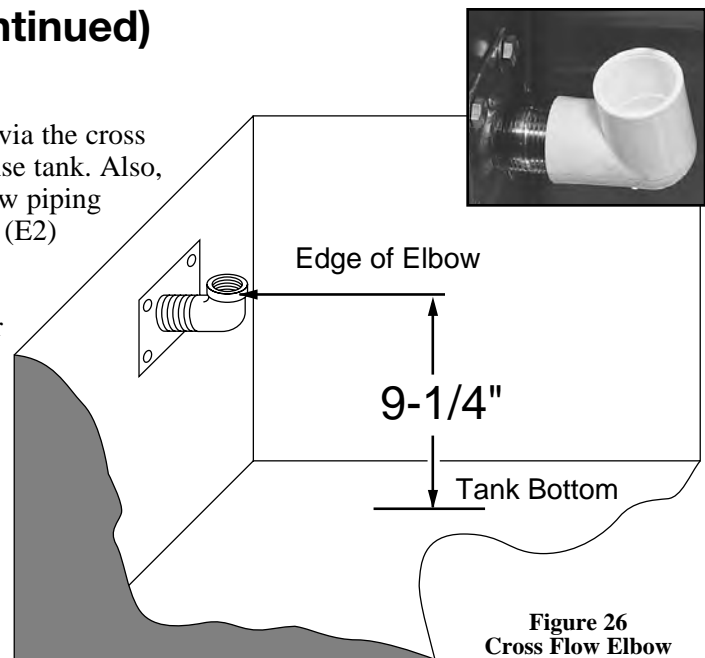


Figure 26  
Cross Flow Elbow

#### Solenoid Valve Repair:

Champion uses Asco and Parker solenoid valves. Repair kits and replacement coils are available from Champion Industries and Champion Parts Distributors.

Refer to Fig. 27 and Fig. 28

#### To Repair a solenoid Valve:

1. Turn off the water or steam supply.
2. Disconnect the power to the machine.
3. If repairing a Parker valve:
  - a. Remove the screw holding the coil.
  - b. Lift the coil off the bonnet.
  - c. Unscrew the top of the valve.
  - d. Inspect the valve body. If pitted or scored, replace the entire valve.
  - e. Replace the parts contained in the repair kit. Reassemble the valve.
4. If repairing an Asco valve:
  - a. Remove the cap holding the coil.
  - b. Remove the (4) bonnet bolts.
  - c. Inspect the valve body and replace if pitted.
  - d. Replace the parts in the kit. Reassemble the valve.



Figure 27 - Parker Valve



Figure 28  
Asco Valve

## REPLACEMENT PARTS



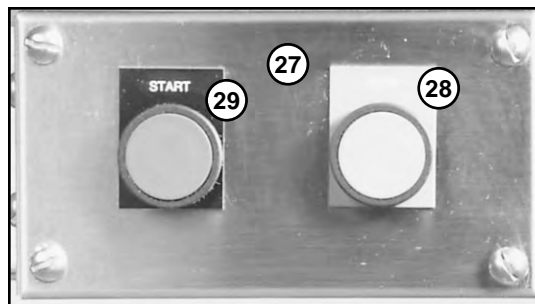
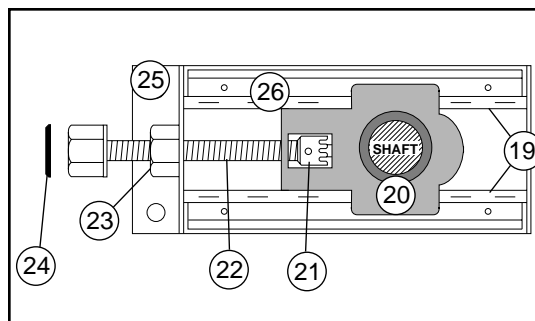
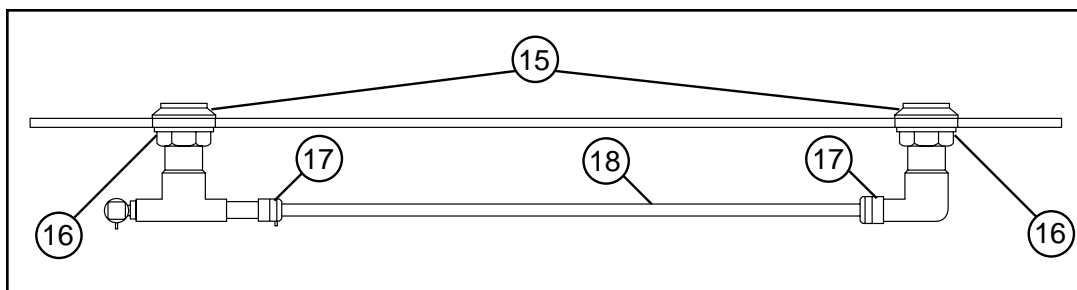
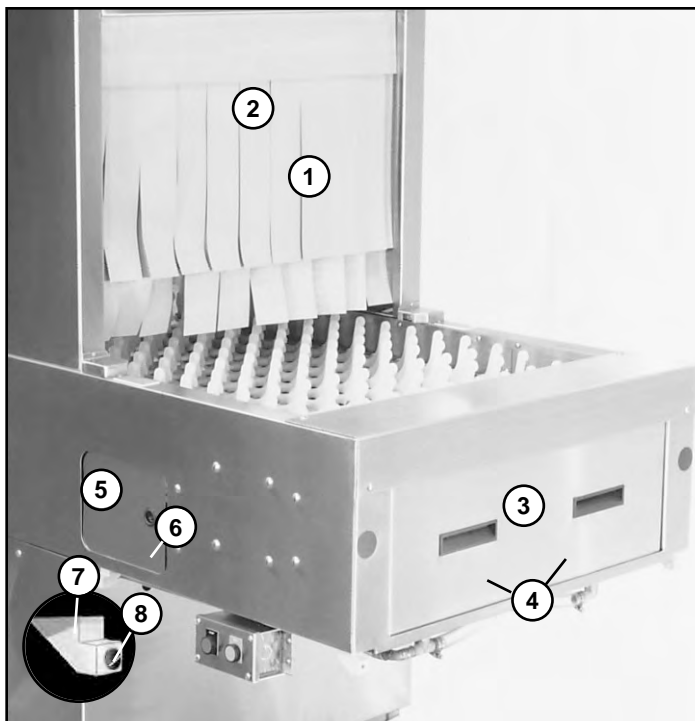
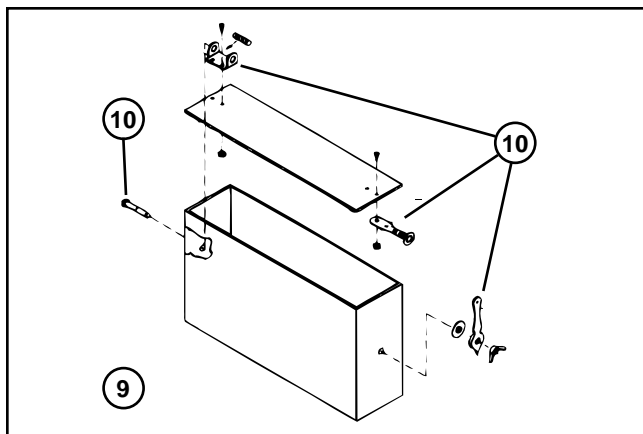
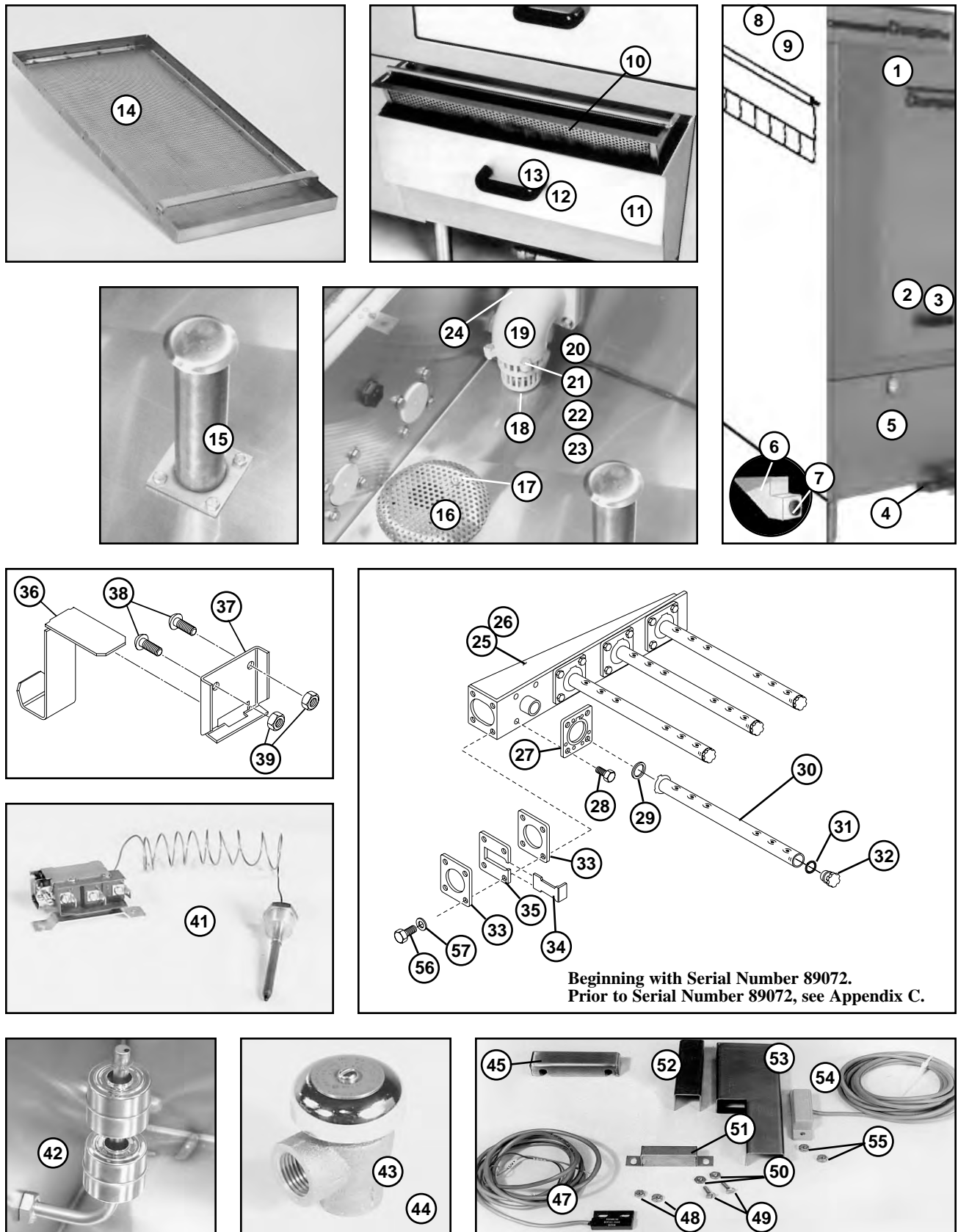


Figure 29 - Load Section



		<b>LOAD SECTION</b>	
<b>Fig. 29 Item No.</b>	<b>Part No.</b>	<b>Part Description</b>	<b>Qty</b>
1	108572	Curtain, Long (26 X 19-1/4) UC-C .....	1
1	108570	Curtain, Long (32 X 24-3/4) UC-CW.....	1
2	108641	Rod Curtain, (5/16 X 28-1/2) UC-C .....	1
2	108642	Rod, Curtain (5/16 X 33-5/8) UC-CW .....	1
3	317136	Door, Access UC-C.....	1
3	317135	Door, Access UC-CW .....	1
4	111561	Handle, Access Door UC-C/CW .....	2
5	305626	Door, Sliding Access .....	2
6	108581	Cap Plug, Sliding Access Door .....	2
7	108578	Bracket, Perimeter Panel.....	4
8	100073	Screw, Perimeter Panel (1/4-20 X 20 X 1/2 Truss Head).....	4
9	401486	Stack, Vent (4 X 24).....	1
10	201589	Damper, Regulator Assembly .....	1
11	111492	Receiver, Electric Eye .....	1
12	111493	Module, Logic .....	1
13	111494	Socket, Logic Module .....	1
14	111491	Emitter, Electric Eye .....	1
15	106153	Nozzle, Flushing .....	2
16	108417	Nut, Retaining .....	2
17	105994	Clamp, Hose .....	2
18	107935	Tube (5/8 ID X 15/16 OD).....	4-1/2 ft.
19	309386	Track, Take-up Bearing Assembly.....	4
20	109959	Bearing, Idler Shaft .....	2
21	111082	Roll Pin.....	2
22	309397	Screw, Adjusting .....	2
23	107691	Nut, Jam .....	2
24	109029	Plug, Plastic.....	2
25	309385	Bracket, Take-up .....	2
26	110085	Nut, Castle.....	2
27	406225	Station, Start/Stop (Complete Assembly) .....	1
28	102291	Nameplate, Stop .....	1
29	102290	Nameplate, Start.....	1
30	111616	Contact Block, NC .....	1
31	111617	Contact Block, NO .....	1
32	111615	Pushbutton, RED (Stop).....	1
33	111614	Pushbutton, GREEN (Start) .....	1



## PREWASH SECTION

<b>Fig. 30 Item No.</b>	<b>Part No.</b>	<b>Part Description</b>	<b>Qty</b>
1	308900	Door, (12"-B2 Section) UC-C.....	1
1	307882	Door, (24"-B3/B4 Section) UC-C.....	1
1	307891	Door, (12"-B2 Section) UC-CW.....	1
1	307458	Door, (24"-B3/B4 Section) UC-CW.....	1
2	108966	Handle, Door UC-C/CW.....	1
3	110383	Screw, Door Handle (M8 X 12MM).....	2
4	109072	Valve, Drain.....	1
5	108391	Thermometer (4 ft.) Gas Filled (Replaces 113622).....	1
6	108578	Bracket, Perimeter Panel.....	2
7	100073	Screw, Perimeter Panel (1/4-20 X 20 X 1/2 Truss Head).....	2
8	108573	Curtain, Short (26 X 14) UC-C.....	1
8	108571	Curtain, Short (32 X 19) UC-CW.....	1
9	108641	Rod, Curtain (5/16 X 28-1/2) UC-C.....	1
9	108642	Rod, Curtain (5/16 X 33-5/8) UC-CW.....	1
10	310068	Basket, Refuse (Standard on B2 Section) UC-C/CW.....	1
10	310308	Basket, Refuse (Optional on B4 Section) UC-C/CW.....	1
11	305706	Cover, Refuse Basket (Standard on B2 Section) UC-C/CW.....	1
11	305720	Cover, Refuse Basket (Optional on B4 Section) UC-C/CW.....	1
12	108966	Handle, Refuse Basket Cover, (All) UC-C/CW.....	1
13	100073	Screw, Handle (1/4-20 X 1/2 Truss hd).....	2
14	305763	Screen, Scrap (B2 Section w/ refuse bucket) UC-C.....	1
14	305705	Screen, Scrap (B2 Section w/ refuse bucket) UC-CW.....	1
14	305705	Screen, Scrap (B2 Section w/o refuse bucket) UC-CW.....	1
14	305783	Screen, Scrap (B4 Section w/ Optional refuse bucket) UC-C...	1
14	306164	Screen, Scrap (B4 Section w/o Optional refuse bucket) UC-C.	1
14	305680	Screen Scrap (B4 Section w/ Optional refuse bucket) UC-CW	1
14	305721	Screen, Scrap (B4 Section w/o Optional refuse bucket) UC-CW	1
15	308322	Overflow (7-3/4").....	1
16	304816	Strainer (6" Diameter).....	1
17	100141	Nut, Strainer, Retaining.....	1
18	108609	Strainer, Suction.....	1
19	108608	Elbow, Suction Strainer.....	1
20	100736	Bolt (1/4-20 X 3/4 Hex).....	3
21	100003	Nut, Plain (1/4-20 SST).....	3
22	106026	Washer, Flat.....	3
23	106482	Washer, Lock.....	3
24	104640	Gasket, Elbow Suction Strainer.....	1
25	321406	Upper Manifold UC-C B2 (Not shown).....	1
25	320779	Upper Manifold UC-CW B2 (Not shown).....	1
25	321410	Upper Manifold UC-C B3.....	1
25	320368	Upper Manifold UC-CW B3.....	1
25	321404	Upper Manifold UC-C B4.....	1
25	321408	Upper Manifold UC-CW B4.....	1
26	321407	Lower Manifold UC-C B2 (Not Shown).....	1

## PREWASH SECTION (CONT.)

Fig. 30 Item No.	Part No.	Part Description	Qty
26	320780	Lower Manifold UC-CW B2 (Not Shown) .....	1
26	321411	Lower Manifold UC-C B3 .....	1
26	320369	Lower Manifold UC-CW B3 .....	1
26	321405	Lower Manifold UC-C B4 .....	1
26	321409	Lower Manifold UC-CW B4 .....	1
27	111454	Locking Plate (Per Spraypipe) .....	1
28	111478	Bolt 10-32 x 1/2 Hex hd SS (Per Locking Plate) .....	4
29	111505	O-Ring, Spraypipe (Per Spraypipe) .....	1
30	321473	Spraypipe UC-C B2 .....	2
30	321472	Spraypipe UC-CW B2 .....	2
30	321473	Spraypipe UC-C B3 .....	7
30	321472	Spraypipe UC-CW B3 .....	7
30	321473	Spraypipe UC-C B4 .....	9
30	321472	Spraypipe UC-CW B4 .....	9
31	104414	O-Ring, Spraypipe End Plug (Per Spraypipe) .....	1
32	112240	Plug, Spraypipe End (Per Spraypipe) .....	1
*	900776	Spraypipe Assembly UC-C (Includes Items 7, 8 & 9)	
*	900777	Spraypipe Assembly UC-CW (Includes Items 7, 8 & 9)	
33	111456	Manifold Gasket (Per Manifold).....	1
33	111456	Manifold Gasket (Per Restrictor Plate).....	1
34	321307	Slide, Adjustable Restrictor, Lower Manifold .....	1
35	319195	Plate, Adjustable Restrictor, Lower Manifold .....	1
36	317344	Door Catch Hook .....	1
37	317345	Door Catch Bracket.....	1
38	100073	Screw (1/4-20 x 1/2 Truss Head) .....	2
39	100141	Nut, Grip (1/4-20 x 1/2).....	1
41	109069	Thermostat (Optional) Cold Water .....	1
42	110854	Float Switch, Dual.....	1
43	100500	Breaker, Vacuum 1/2" .....	1
44	108349	Repair Kit, 1/2" Vacuum Breaker (Not Shown) .....	1
45	314187	Cover, Magnet (Large).....	1
47	111090	Switch, Reed .....	1
48	108954	Nut, Grip (6/32 w/Nylon Insert) .....	2
49	100007	Screw (10-32 x 3/8" Truss Head) .....	2
50	100194	Nut, Grip (10-32) .....	2
*51	111026	Magnet, Large .....	1
*52	314196	Cover, Magnet.....	1
*53	314197	Cover, Reed Switch (Large).....	1
*54	111025	Switch, Reed (Large) .....	1
*55	107966	Nut, Grip (10-32 w/ Nylon Insert).....	2
56	100736	Bolt, 1/4-20 x 3/4 Hex (Per Manifold) .....	4
57	106482	Washer, 1/4 Split Lock (Per Manifold).....	4

**\*SPECIAL NOTE:** For machines prior to S/N 87589.  
For machines beginning with S/N 87589 refer to page 108, Appendix B.

**WASH/RINSE SECTION**

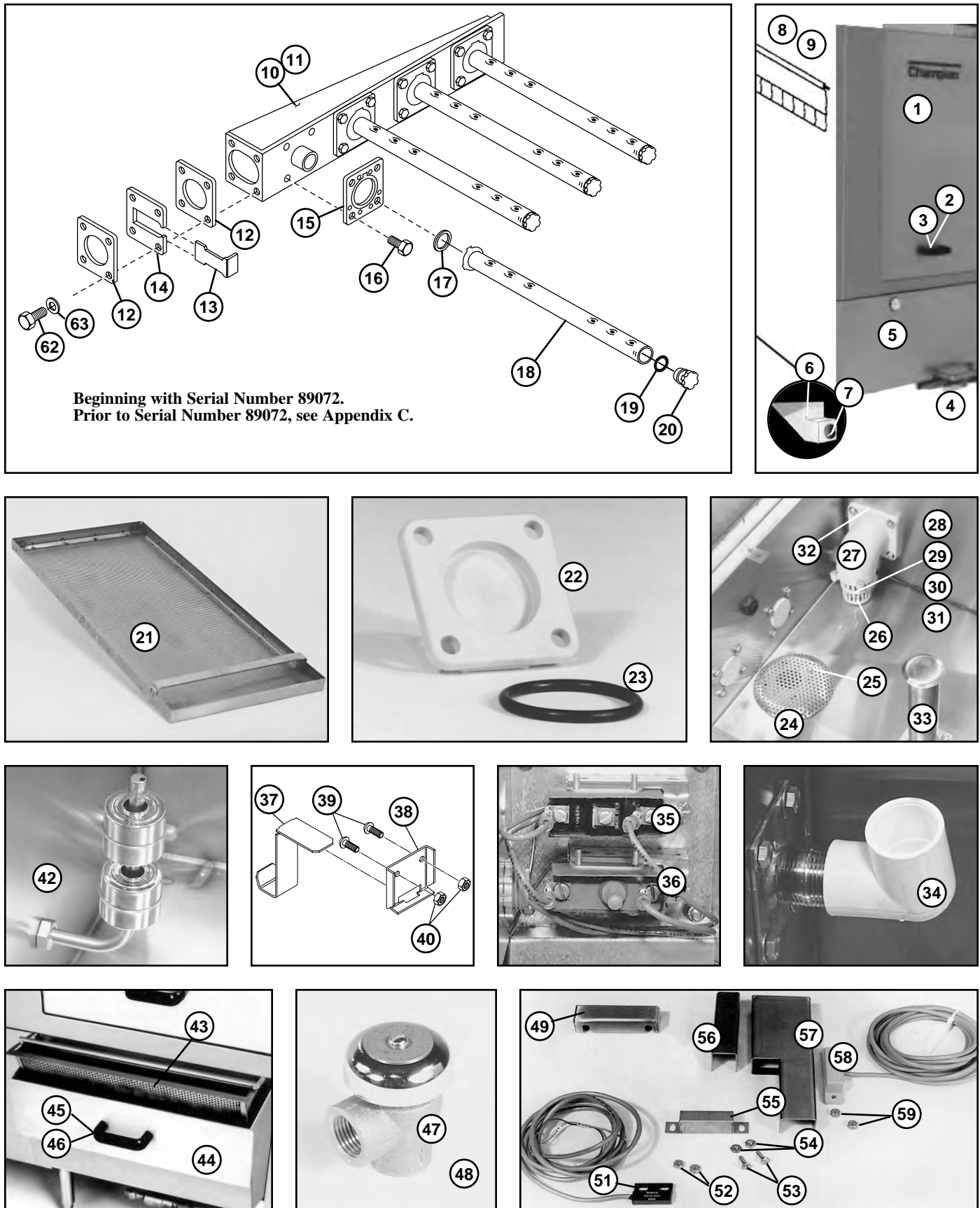


Figure 31 - Wash/Rinse Section

<b>WASH / RINSE</b>			
<b>Fig. 31 Item No.</b>	<b>Part No.</b>	<b>Part Description</b>	<b>Qty</b>
1	307882	Door, (24"-C3/C4 Section) UC-C.....	1
1	307458	Door, (24"-C3/C4 Section) UC-CW .....	1
2	108966	Handle, Door UC-C/CW.....	1
3	100073	Screw, Door Handle (1/4-20 X 1/2 Truss hd).....	2
4	109072	Valve, Drain.....	1
5	113622	Thermometer (4 ft.) Gas Filled (Replaces 108391).....	1
6	108578	Bracket, Perimeter Panel.....	2
7	100073	Screw, Perimeter Panel (1/4-20 X 20 X 1/2 Truss Head).....	2
8	108573	Curtain, Short (26 X 14) UC-C.....	1
8	108571	Curtain, Short (32 X 19) UC-CW .....	1
9	108641	Rod, Curtain (5/16 X 28-1/2) UC-C .....	1
9	108642	Rod, Curtain (5/16 X 33-5/8) UC-CW .....	1
10	321410	Upper Manifold UC-C C3 .....	1
10	320368	Upper Manifold UC-CW C3.....	1
10	321404	Upper Manifold UC-C C4 .....	1
10	321408	Upper Manifold UC-CW C4.....	1
11	321411	Lower Manifold UC-C C3 .....	1
11	320369	Lower Manifold UC-CW C3 .....	1
11	321405	Lower Manifold UC-C C4 .....	1
11	321409	Lower Manifold UC-CW C4 .....	1
12	111456	Manifold Gasket (Per Manifold).....	1
12	111456	Manifold Gasket (Per Restrictor Plate).....	1
13	321307	Slide, Adjustable Restrictor, Lower Manifold .....	1
14	319195	Plate, Adjustable Restrictor, Lower Manifold .....	1
15	111454	Locking Plate, Manifold (Per Spraypipe) .....	1
16	111478	Bolt 10-32 x 1/2 Hex hd SS (Per Locking Plate) .....	4
17	111505	O-Ring, Wash Arm (Per Spraypipe) .....	1
18	321473	Spraypipe, UC-C C3 .....	7
18	321472	Spraypipe, UC-CW C3 .....	7
18	321473	Spraypipe, UC-C C4 .....	9
18	321472	Spraypipe, UC-CW C4 .....	9
19	104414	O-Ring, Sprayarm End Plug (Per Spraypipe).....	1
20	112240	Plug, Spraypipe End (Per Spraypipe) .....	1
*	900776	Spraypipe Ass'y UC-C (Includes Items 18, 19 & 20).....	A/R
*	900777	Spraypipe Ass'y UC-CW (Includes Items 18, 19 & 20).....	A/R
21	308257	Screen, Scrap (C3 Section w/Optional refuse bucket) UC-C....	2
21	308256	Screen, Scrap (C3 Section w/o Optional refuse bucket) UC-C.	2
21	305783	Screen, Scrap (C4 Section w/ Optional refuse basket) UC-C ...	2
21	306164	Screen, Scrap (C4 Section w/o Optional refuse bucket) UC-C.	2
21	308231	Screen, Scrap (C3 Section w/ Optional refuse bucket) UC-CW	2
21	308196	Screen, Scrap (C3 Section w/o Optional refuse bucket) UC-CW	2
21	305680	Screen, Scrap (C4 Section w/ Optional refuse bucket) UC-CW	2
21	305721	Screen, Scrap (C4 Section w/o Optional refuse bucket) UC-CW	2
22	109683	Flange .....	A/R
23	112257	O-Ring.....	A/R
24	304816	Strainer (6" Diameter).....	1
25	100141	Nut, Strainer, Retaining.....	1
26	108609	Strainer, Suction .....	1

## WASH / RINSE (CONT.)

Fig. 31 Item No.	Part No.	Part Description	Qty
27	108608	Elbow, Suction Strainer.....	1
28	100736	Bolt (1/4-20 X 3/4 Hex).....	3
29	100003	Nut, Plain (1/4-20 SST) .....	3
30	106026	Washer, Flat.....	3
31	106482	Washer, Lock.....	3
32	104640	Gasket, Suction Strainer Elbow .....	1
33	308321	Overflow 9" (C3 Wash Tank) UC-C/CW .....	1
33	305840	Overflow 9-1/2" (C3 Rinse Tank) UC-C/CW .....	1
33	305840	Overflow 9-1/2" (C4 Wash Tank) UC-C/CW .....	1
33	305840	Overflow 9-1/2" (C4 Rinse Tank) UC-C/CW .....	1
34	110852	Elbow, Cross-flow, 1 X 90° (Wash Tank Only).....	1
35	109069	Thermostat, Control (Steam or Electric).....	1
36	110561	Thermostat, High Limit (Electric Only) .....	1
37	317344	Door Catch Hook .....	1
38	317345	Door Catch Bracket.....	1
39	100073	Screw, Door Handle (1/4-20 X 1/2 Truss Head) .....	2
40	100141	Nut, Grip (1/4-20 SST) .....	1
41	107999	Bolt (1/4-20 X 1-3/4 Hex) .....	1
42	110854	Float Switch, Dual (C3 Wash Tank) UC-C/CW .....	1
42	111019	Float Switch, Dual (C3 Rinse Tank) UC-C/CW.....	1
42	110854	Float Switch, Dual (C4 Wash/Rinse Tank) UC-C/CW.....	1
42	110854	Float Switch, Dual (C4 Wash/Rinse Tank) UC-CW-WS .....	1
43	310303	Basket, Refuse (Optional on C3 Section) UC-C/CW .....	1
43	310308	Basket, Refuse (Optional on C4 Section) UC-C/CW .....	1
44	308237	Cover, Refuse Basket, (Optional on C3 Section) UC-C/CW ....	1
44	305720	Cover, Refuse Basket (Optional on C4 Section) UC-C/CW ....	1
45	108966	Handle, Refuse Basket Cover, (All) UC-C/CW .....	1
46	100073	Screw, Handle (1/4-20 X 1/2 Truss hd) .....	2
47	100500	Breaker, Vacuum 1/2" .....	1
48	108349	Repair Kit, 1/2" Vacuum Breaker (Not Shown) .....	1
49	314187	Cover, Magnet (Large).....	1
51	111090	Switch, Reed .....	1
52	108954	Nut, Grip (6/32 w/ Nylon Insert) .....	2
53	100007	Screw (10-32 X 3/8 Truss Head) .....	2
54	100194	Nut, Grip (10-32) .....	2
*55	111026	Magnet, Large .....	1
*56	314196	Cover, Magnet.....	1
*57	314197	Cover, Reed Switch (Large).....	1
*58	111025	Switch, Reed (Large) .....	1
*59	107966	Nut, Grip (10-32 w/ Nylon Insert).....	2
60	100735	Bolt (1/4-20 X 5/8 Hex) .....	9
61	100141	Nut, Grip (1/4-20 SST) .....	9
62	100735	Bolt 1/4-20 x 5/8 Hex hd SS (Per Manifold).....	4
63	106482	Washer, 1/4 split lock (Per Manifold).....	4

**\*SPECIAL NOTE:** For machines prior to S/N 87589.  
For machines beginning with S/N 87587 refer to page 108, Appendix B.



**ECONORINSE SECTION**  
**(Optional)**

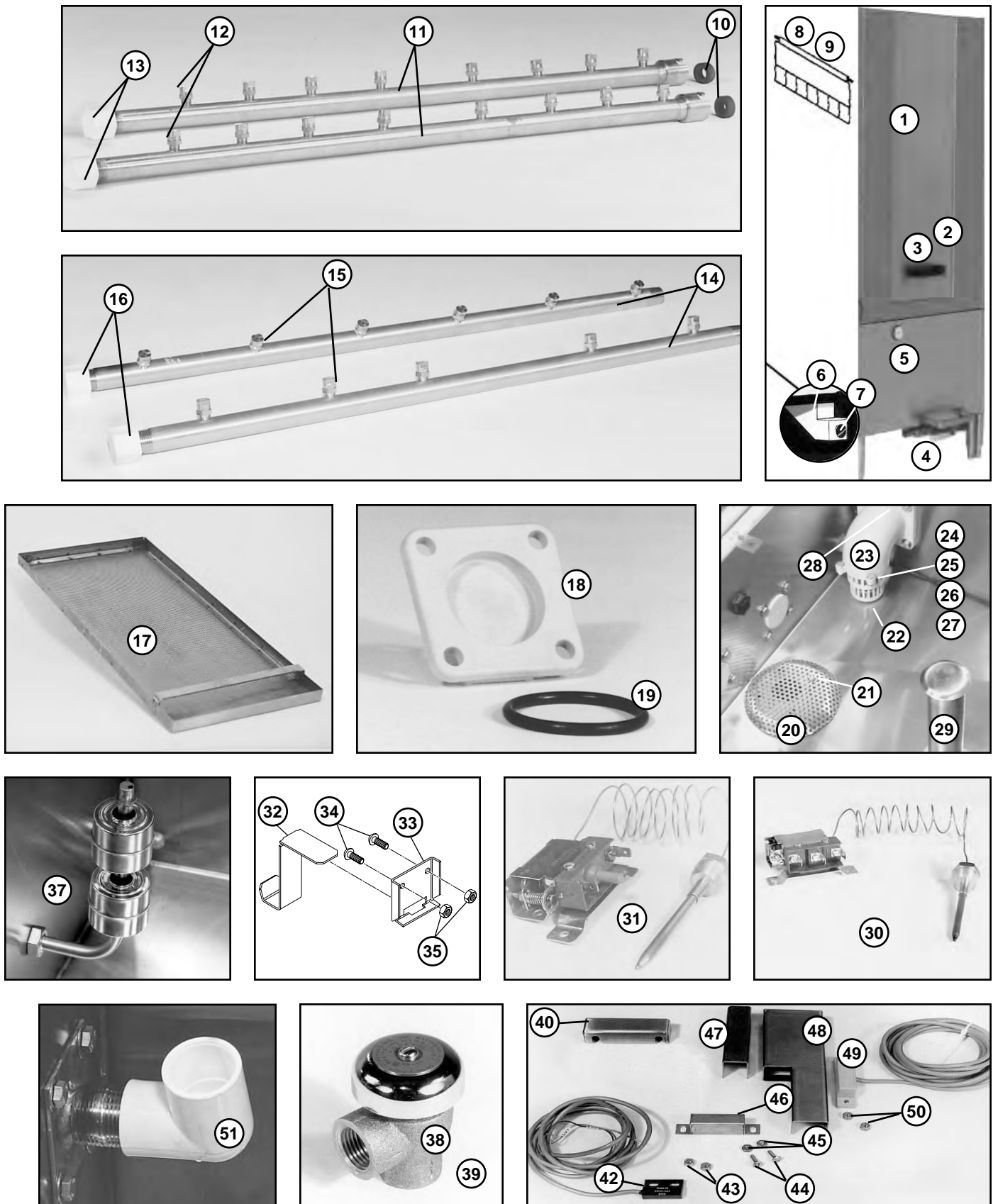


Figure 32 - EconoRinse Section

## ECONORINSE SECTION OPTION AVAILABLE ON UC-CW ONLY

<b>Fig. 32 Item No.</b>	<b>Part No.</b>	<b>Part Description</b>	<b>Qty</b>
1	307891	Door (12") .....	1
2	108966	Handle, Door .....	1
3	100073	Screw, Door Handle (1/4-20 X 1/2 Truss hd) .....	2
4	109072	Valve, Drain .....	1
5	108391	Thermometer (4 Ft.) .....	1
6	108578	Bracket, Perimeter Panel .....	4
7	100073	Screw, Perimeter Panel (1/4-20 X 20 X 1/2 Truss Head) .....	4
8	204949	Curtain, Short (32 X 10) .....	1
9	111695	Rod, Curtain (5/16 X 32-3/4) .....	1
10	111320	Gasket .....	2
11	316182	Rinse Pipe, EconoRinse .....	2
12	180281	Nozzle, EconoRinse Pipe (1/8" NPT-#8030) .....	16
13	106734	Cap (1/2") .....	2
14	313825	Rinse Pipe, Final Rinse (C8 Section) .....	2
14	205127	Upper Rinse Pipe, Final Rinse (C6 Section) (5 Nozzles) .....	1
14	205128	Lower Rinse Pipe, Final Rinse (C6 Section) (4 Nozzles) .....	1
15	180282	Nozzle, Upper Final Rinse Pipe (C6 Section) (1/8" NPT-#8005) .....	5
15	180282	Nozzle, Lower Final Rinse Pipe (C6 Section) (1/8" NPT-#8005) .....	4
15	180282	Nozzle, Final Rinse Pipe (C8 Section) (1/8" NPT-#8005) .....	12
16	106734	Cap (1/2") .....	2
17	305721	Screen, Scrap .....	1
18	109683	Flange .....	A/R
19	112257	O-Ring .....	A/R
20	304816	Strainer (6" Diameter) .....	1
21	100141	Nut, Strainer, Retaining .....	1
22	108609	Strainer, Suction .....	1
23	108608	Elbow, Suction Strainer .....	1
24	100736	Bolt (1/4-20 X 3/4 Hex) .....	3
25	100003	Nut, Plain (1/4-20 SST) .....	3
26	106026	Washer, Flat .....	3
27	106482	Washer, Lock .....	3
28	104640	Gasket, Elbow Suction Strainer .....	1
29	305839	Overflow 10" .....	1
30	109069	Thermostat, Control (Steam or Electric) .....	1
31	110561	Thermostat, High Limit (Electric Only) .....	1
32	317344	Door Catch Hook .....	1
33	317345	Door Catch Bracket .....	1
34	100073	Screw (1/4-20 X 1/2 Truss Head) .....	2
35	100141	Nut, Grip (1/4-20 X 1/2) .....	1
36	107999	Bolt (1/4-20 X 1-3/4 Hex) .....	1

## ECONORINSE SECTION (CONT.)

<b>Fig. 32 Item No.</b>	<b>Part No.</b>	<b>Part Description</b>	<b>Qty</b>
37	110854	Float Switch, Dual.....	1
38	100500	Breaker, Vacuum 1/2" .....	1
39	108349	Repair Kit, 1/2" Vacuum Breaker (Not Shown) .....	1
40	314187	Cover, Magnet (Large) .....	1
42	111090	Switch, Reed .....	1
43	108954	Nut, Grip (6/32 w/ Nylon Insert) .....	2
44	100007	Screw (10-32 X 3/8" Truss Head) .....	2
45	100194	Nut, Grip (10-32) .....	2
*46	111026	Magnet, Large .....	1
*47	314196	Cover, Magnet .....	1
*48	314197	Cover, Reed Switch (Large).....	1
*49	111025	Switch, Reed (Large) .....	1
*50	107966	Nut, Grip (10-32 w/ Nylon Insert) .....	2
51	110852	Elbow, Cross-Flow 1 x 90° .....	1

[See Appendix A for the operation of the Optional UC-CW EconoRinse Section]

**\*SPECIAL NOTE:** For machines prior to S/N 87589.  
For machines beginning with S/N 87589 refer to page 108, Appendix B.

**UNLOAD SECTION**

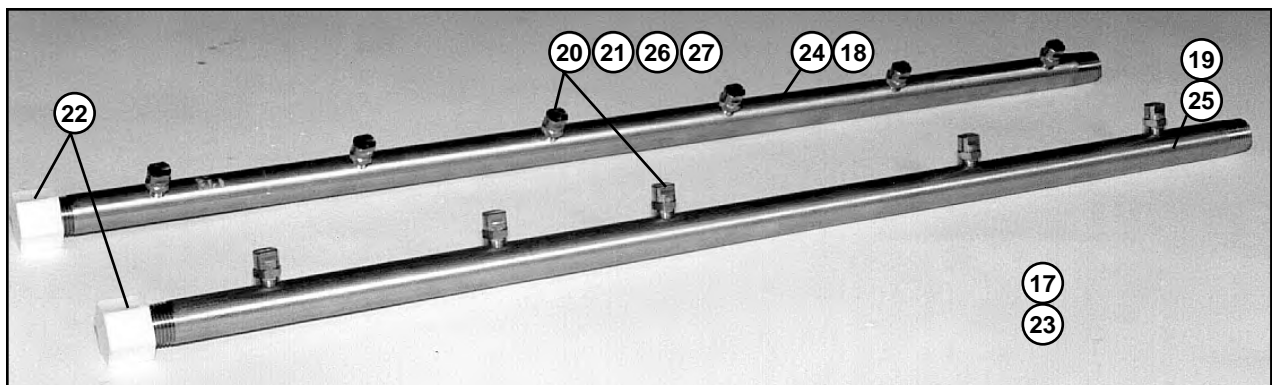
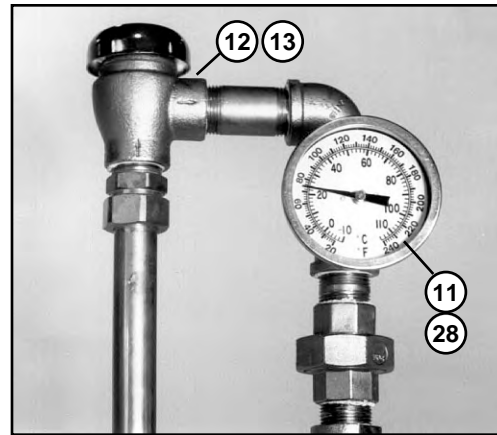
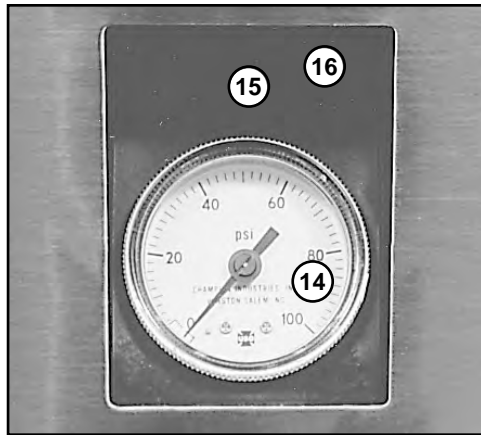
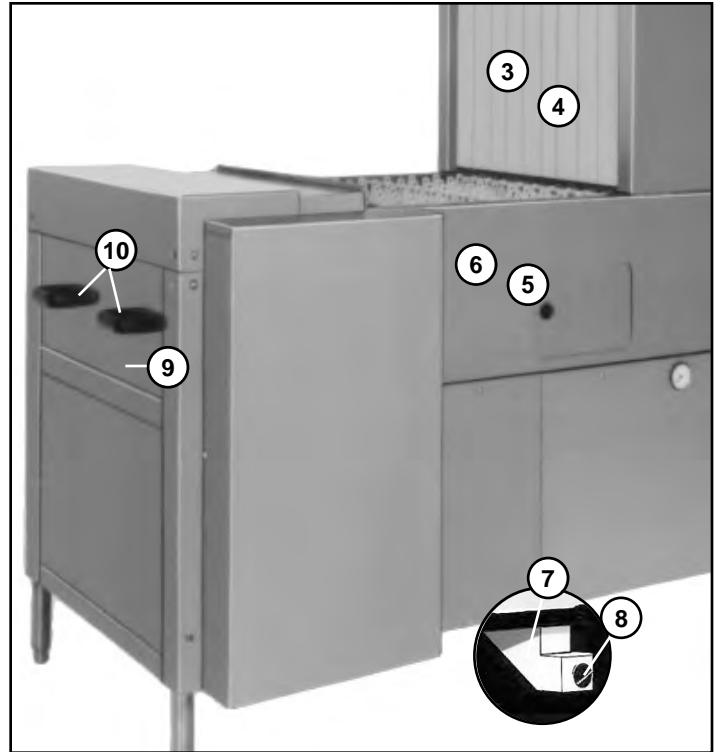
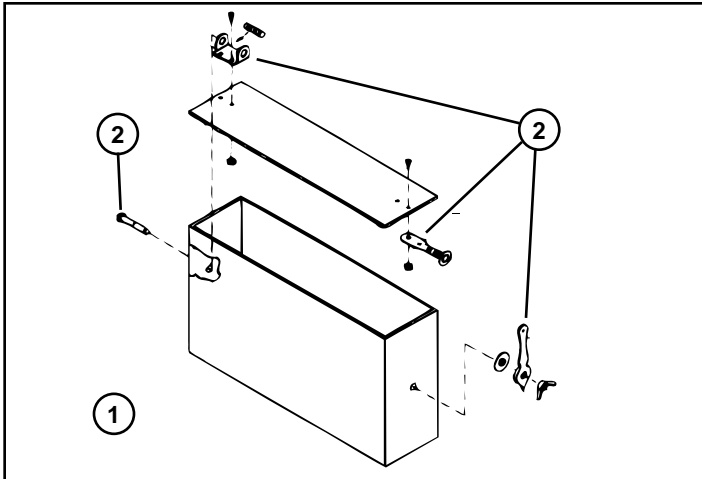


Figure 33 - Unload Section

## UNLOAD SECTION

<b>Fig. 33 Item No.</b>	<b>Part No.</b>	<b>Part Description</b>	<b>Qty</b>
1	401486	Stack, Vent (4 X 24).....	1
2	201589	Damper, Regulator Assembly .....	1
3	108572	Curtain, Long (26 X 19-1/4) UC-C .....	1
3	108570	Curtain, Long (32 X 24-3/4) UC-CW.....	1
4	108641	Rod, Curtain (5/16 X 28-1/2) UC-C .....	1
4	108642	Rod, Curtain (5/16 X 33-5/8) UC-CW .....	1
5	305626	Door, Sliding Access .....	2
6	108581	Grommet, Sliding Access Door .....	2
7	108578	Bracket, Perimeter Panel.....	4
8	100073	Screw, Perimeter Panel (1/4-20 X 20 X 1/2 Truss Head).....	4
9	317136	Door, Access UC-C.....	1
9	317135	Door, Access UC-CW .....	1
10	111561	Handle, Access Door UC-C/CW .....	2
11	104682	Thermometer, Final Rinse.....	1
12	104429	Breaker, Vacuum (3/4").....	1
13	108351	Repair Kit, Vacuum Breaker (3/4") (Not Shown).....	1
14	109812	Gauge, Pressure (0-100 PSI).....	1
15	110244	Support, Pressure Gauge .....	1
16	107414	Tubing, Pressure Gauge (Not Shown) .....	4 ft.
17	311403	Manifold, Final Rinse, UC-C (Not Shown).....	1
18	313826	Upper Pipe, Final Rinse, UC-C (Not Shown) .....	1
19	205130	Lower Pipe, Final Rinse, UC-C (Not Shown) .....	1
20	104005	Nozzle, Upper Final Rinse Pipe, (1/8" NPT-#8010) UC-C .....	5
21	104005	Nozzle, Lower Final Rinse Pipe, (1/8" NPT-#8010) UC-C .....	4
22	106734	Cap (1/2") UC-C/CW.....	2
23	311402	Manifold, Final Rinse UC-CW (Not Shown) .....	1
24	313825	Upper Pipe, Final Rinse, UC-CW.....	1
25	317343	Lower Pipe, Final Rinse, UC-CW .....	1
26	104005	Nozzle, Upper Final Rinse Pipe, (1/8" NPT-#8010) UC-CW ...	6
27	104005	Nozzle, Lower Final Rinse Pipe, (1/8" NPT-#8010) UC-CW...	5
28	104748	Overlay, gauge (180°-195°).....	1

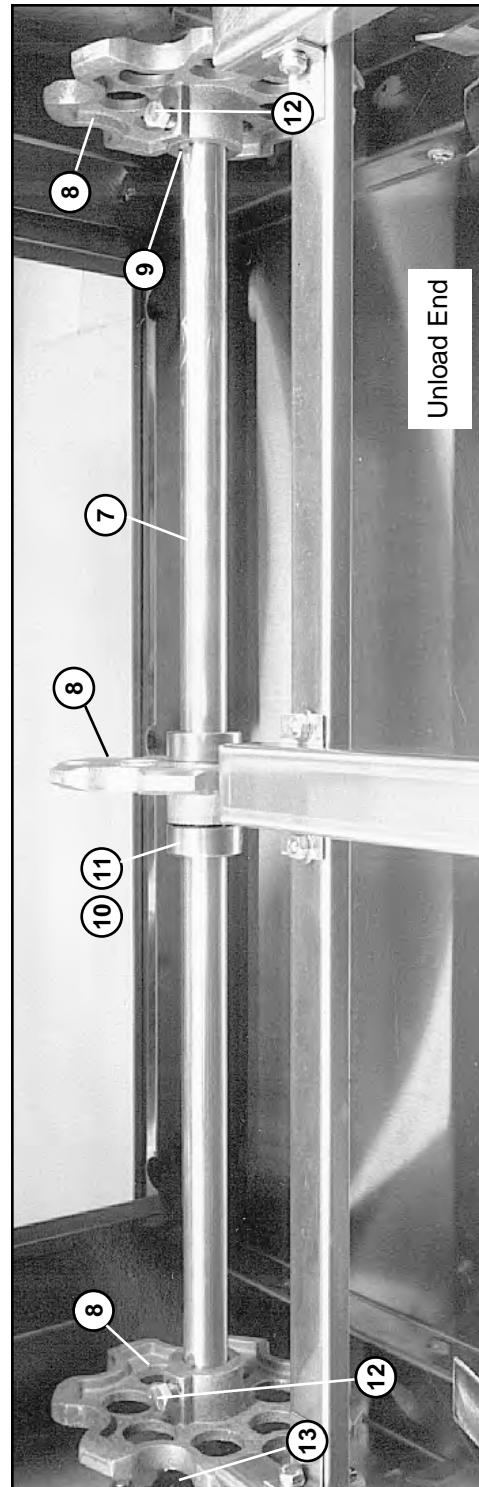
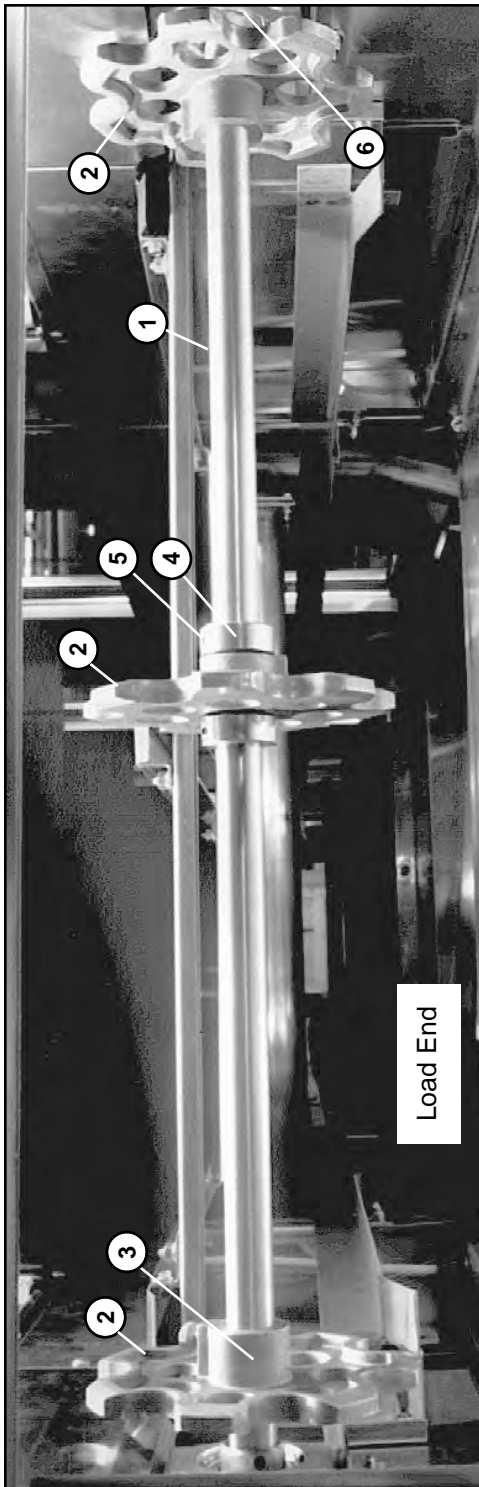


Figure 34 - Drive Shaft Assembly



## DRIVE SHAFT ASSEMBLY

<b>Fig. 34 Item No.</b>	<b>Part No.</b>	<b>Part Description</b>	<b>Qty.</b>
1	108955	Shaft, Idle (1 X 28-7/16) UC-C .....	1
1	108869	Shaft, Idle (1 X 33-5/8) UC-CW .....	1
2	108434	Sprocket, Conveyor Belt, UC-C .....	2
2	108434	Sprocket, Conveyor Belt, UC-CW .....	3
3	107305	Key (1/4 X 1/4 X 1-1/2).....	A/R
4	104713	Collar, (1") UC-C.....	2
4	104713	Collar (1") UC-CW.....	4
5	106457	Set Screw (3/8-16 X 1/2) .....	A/R
6	403980	Take-up Assembly (RH/LH) UC-C/CW .....	2
7	108870	Shaft, Drive (1 X 32-13/16) UC-C .....	1
7	108868	Shaft, Drive (1 X 38-1/16) UC-CW .....	1
8	108434	Sprocket, Conveyor Belt, UC-C .....	2
8	108434	Sprocket, Conveyor Belt, UC-CW.....	3
9	107305	Key (1/4 X 1/4 X 1-1/2).....	A/R
10	104713	Collar (1") UC-C.....	2
10	104713	Collar (1") UC-CW.....	4
11	106457	Set Screw (3/8-16 X 1/2) .....	A/R
12	111480	Bolt, Sprocket Retaining (3/8-16 X 3/4).....	A/R
13	109958	Bearing, Drive UC-C/CW .....	2
14	109388	Shock Absorber, Grommet (Located on drive shaft) (Not Shown) .....	2

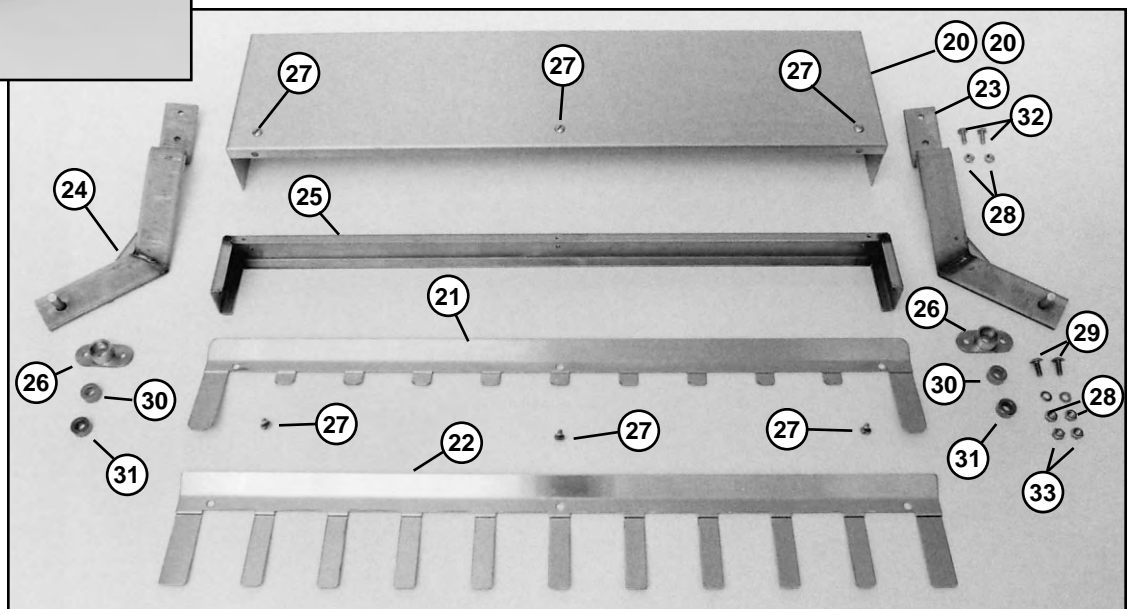
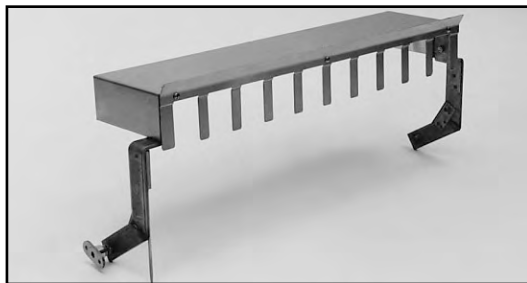
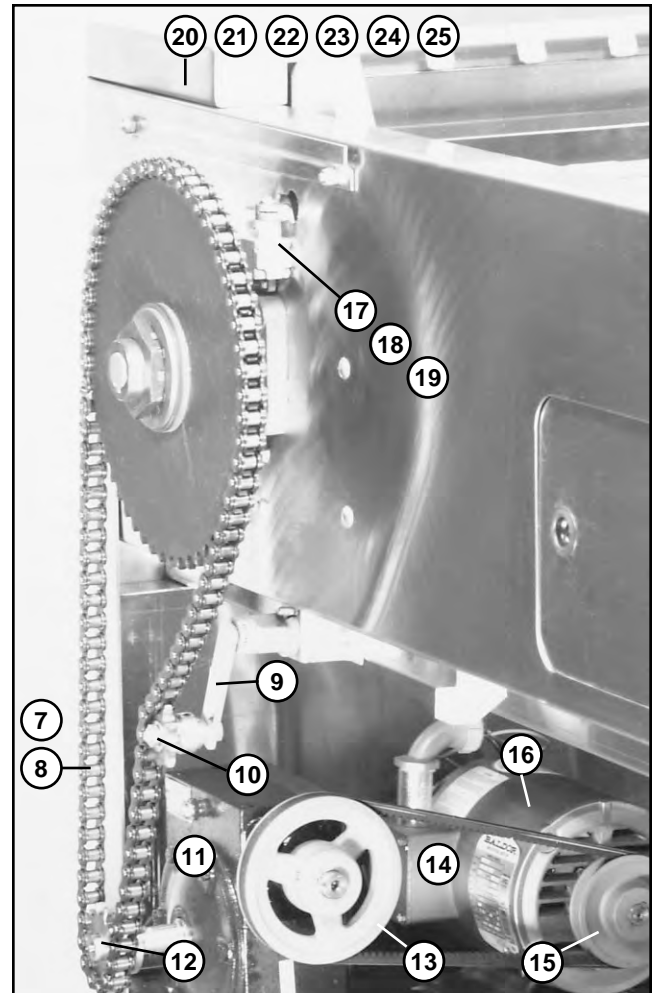
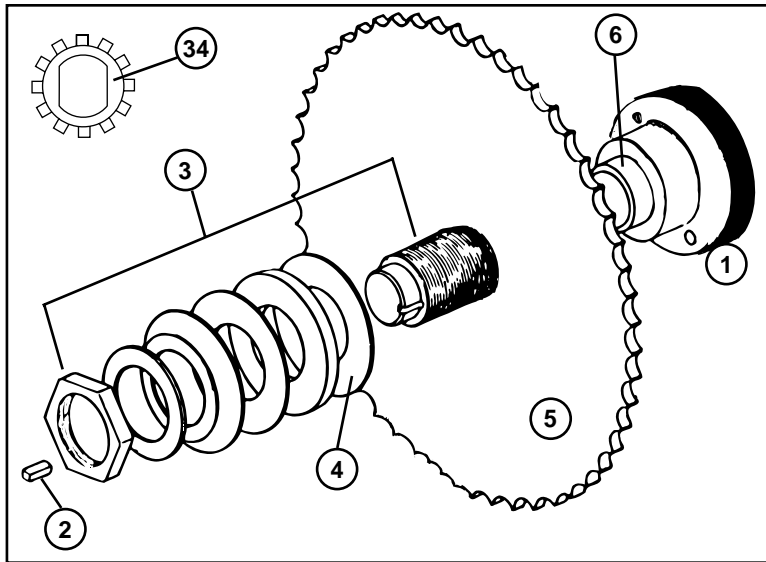


Figure 35 - Conveyor Drive and Shut-off Assembly

## CONVEYOR DRIVE AND SHUT-OFF ASSEMBLY

<b>Fig. 35 Item No.</b>	<b>Part No.</b>	<b>Part Description</b>	<b>Qty.</b>
1	109958	Bearing, Drive UC-C/CW .....	2
2	106679	Key (1/4 X 1/4 X 2-1/2) UC-C/CW .....	1
3	100485	Clutch, Torque Limiter, (Complete Assembly) UC-C/CW .....	1
4	102315	Clutch Disc Assembly (Complete Set #350) UC-C/CW .....	1
5	201976	Sprocket, Drive UC-C/CW .....	1
6	104271	Bushing (.54" Long for Torque Limiter Clutch) UC-C/CW .....	1
7	101156	Chain (#50 5/8" Steel) UC-C/CW .....	4-1/2 ft.
8	101149	Link, Connecting #50.....	1
9	110076	Tensioner, Chain UC-C/CW .....	1
10	106521	Sprocket, Idler .....	1
11	110299	Gearbox, RH w/Bracket UC-C/CW .....	1
11	110300	Gearbox, LH w/Bracket UC-C/CW .....	1
12	105285	Sprocket, Gearbox (11T).....	1
13	100451	Sheave, Gearbox (RH/LH) UC-C/CW .....	1
14	100791	V-Belt .....	1
15	103164	Sheave, Motor (C6 Section) UC-C/CW .....	1
15	103170	Sheave, Motor (C8 Section) UC-C/CW .....	1
16	107183	Motor, 1/2 HP (208-240/480V/60/3PH) UC-C/CW .....	1
16	180230	Motor, 1/2 HP (575/60/3PH) UC-C/CW .....	1
16	180038	Motor, 3/4 HP (208-240/480V/60/3PH) UC-CW.....	1
17	107341	Switch, Limit, Conveyor Shut-off Shelf UC-C/CW.....	1
18	111074	Lever, Rod Switch.....	1
19	111075	Head, Limit Switch .....	1
20	309739	Cover, Conveyor Shut-off UC-C .....	1
20	309738	Cover, Conveyor Shut-off UC-CW.....	1
21	309725	Finger, Short Conveyor Shut-off UC-C (Standard Belt w/upper rod)	1
21	309719	Finger, Short Conveyor Shut-off UC-CW (Standard Belt w/upper rod)	1
22	309724	Finger, Long Conveyor Shut-off UC-C (Standard Belt w/o upper rod)	1
22	309718	Finger, Long Conveyor Shut-off UC-CW (Standard Belt w/o upper rod)	1
23	316369	LH Assembly, Conveyor Shut-off UC-C/CW .....	1
24	316370	RH Assembly, Conveyor Shut-off UC-C/CW .....	1
25	316366	Top, Conveyor Shut-off UC-C.....	1
25	316367	Top, Conveyor Shut-off UC-CW .....	1
26	202393	Flange Seal .....	2
27	100007	Screw 10-32 X 3/8 Truss .....	6
28	106482	Washer Lock 1/4 Split.....	8
29	100779	Screw 1/4-20 X 5/8 Truss .....	4
30	104266	Bushing 3/8 X 3/4 X 3/8 Bronze .....	2
31	104586	Collar 3/8 inch SST.....	2
32	100735	Bolt 1/4-20 X 5/8 Hex .....	4
33	100141	Nut Grip 1/4-20 SST.....	4
34	107700	Lockwasher, Tab .....	1

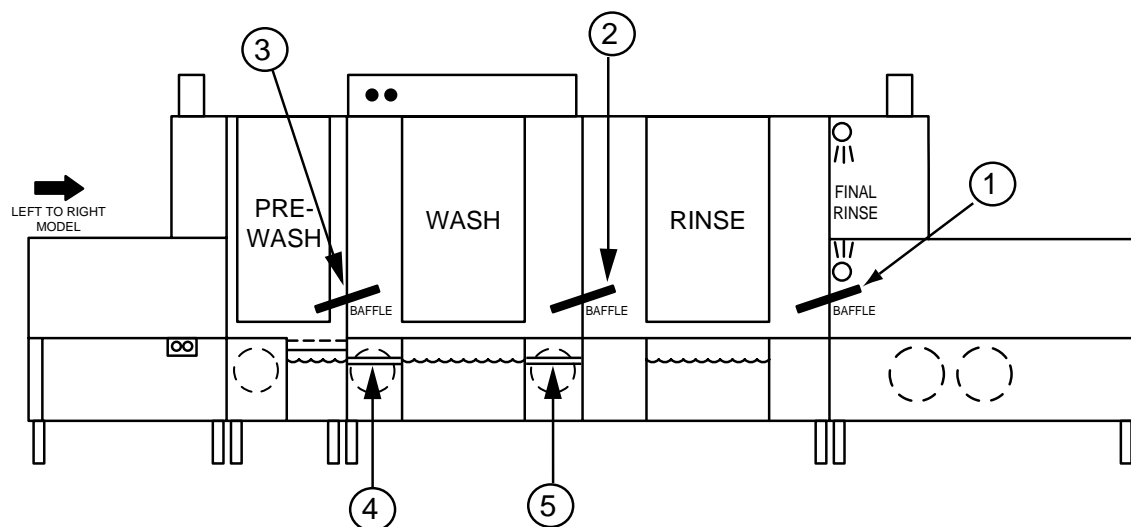


Figure 36 - Baffles & Back Flow Piping

**BAFFLES & BACK FLOW PIPING**

Fig. 36 Item No.	Part No.	Part Description	Qty.
1	311040	Right Hand Baffle (2 piece) UC .....	1
	311045	Left Hand Baffle (2 piece) UC .....	1
1	311040	Right Hand Baffle (2 piece) UC/CW .....	1
	311041	Left Hand Baffle (2 piece) UC/CW .....	1
2	307461	Wash Baffle UC .....	1
2	307460	Wash Baffle UC/CW .....	1
3	307461	Prewash Baffle UC.....	1
3	307460	Prewash Baffle UC/CW .....	1
4	202458	Hose (1-7/8 x 18") .....	2
5	202458	Hose (1-7/8 x 18") .....	2

## **CONVEYOR BELTS**

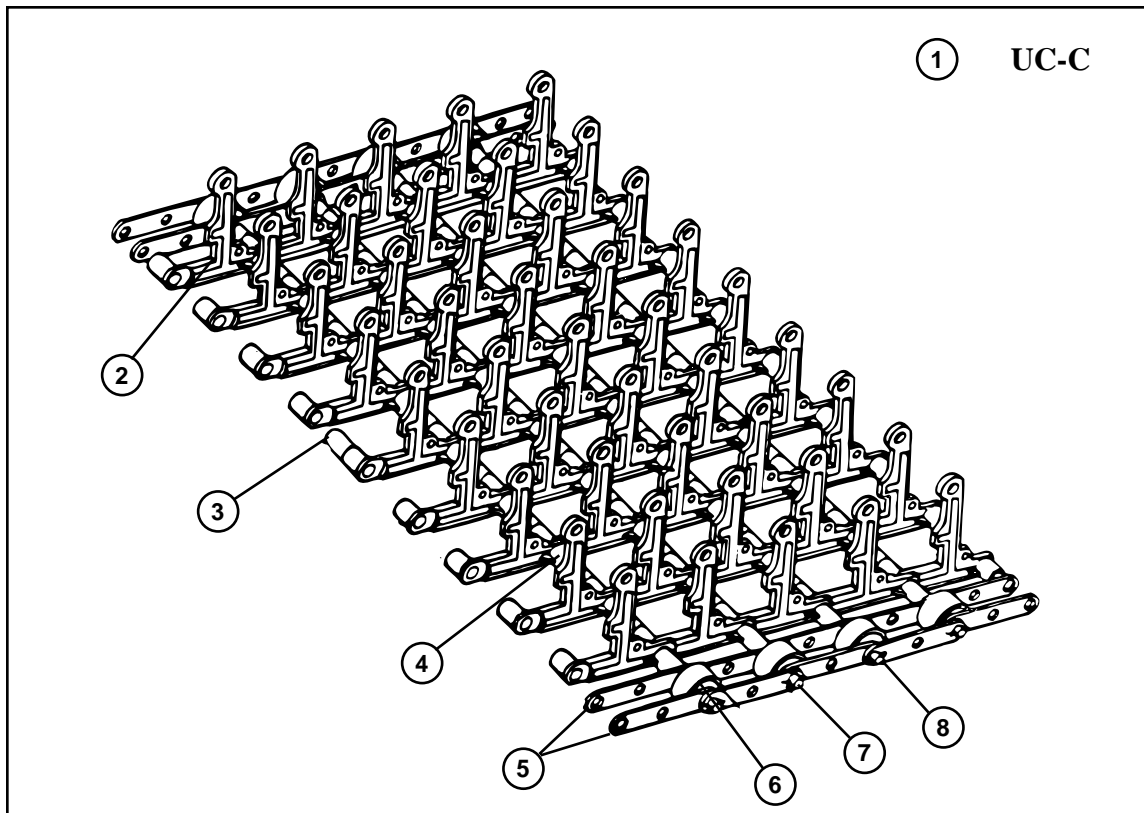
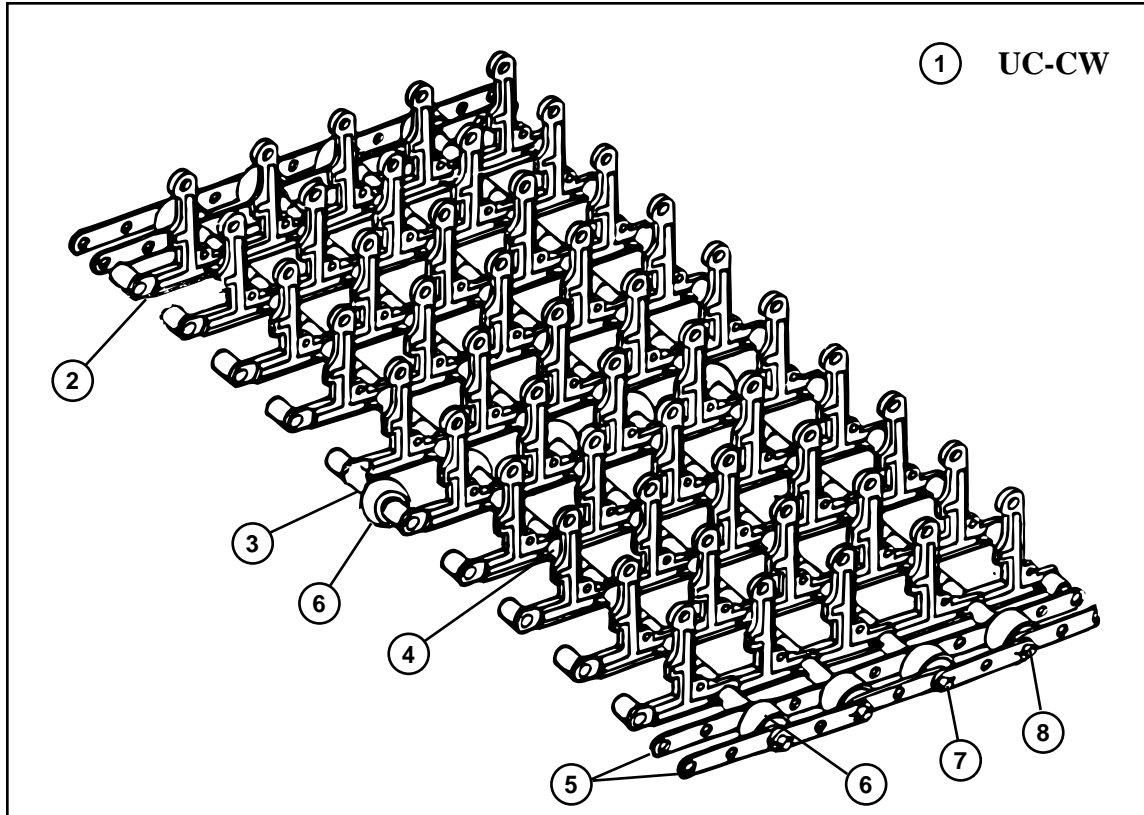


Figure 37 - Peg Belt

**UC-CW PEG BELT**

**Note 1:** Total number of Rod Sections required for belt replacement vary depending on Machine Length.

**Note 2:** Quantities listed below are per one (1) ROD SECTION.

<b>Fig. 37 Item No.</b>	<b>Part No.</b>	<b>Part Description</b>	<b>Qty.</b>
1	404104	Rod Section, Peg Belt, UC-CW .....	A/R
2	110092	Link, Upright.....	10
3	108378	Spacer (11/32 X 5/16).....	2
4	108438	Spacer (11/32 X 1-13/32).....	8
5	108435	Link, Straight End, Stainless Steel .....	4
6	108437	Roller, Plastic .....	3
7	108875	Pin, Cotter .....	2
8	108381	Rod, Drilled Stainless Steel (5/16 X 29-1/4).....	1

**UC-C PEG BELT**

**Note 1:** Total number of Rod Sections required for belt replacement vary depending on Machine Length.

**Note 2:** Quantities listed below are per one (1) ROD SECTION.

<b>Fig. 37 Item No.</b>	<b>Part No.</b>	<b>Part Description</b>	<b>Qty.</b>
1	404105	Rod Section, Peg Belt, UC-C.....	A/R
2	110092	Link, Upright.....	9
3	108378	Spacer (11/32 X 5/16).....	1
4	108377	Spacer (11/32 X 1-3/32).....	8
5	108435	Link, Straight End, Stainless Steel .....	4
6	108437	Roller, Plastic .....	2
7	108875	Pin, Cotter .....	2
8	108380	Rod, Drilled Stainless Steel (5/16 X 24) .....	1

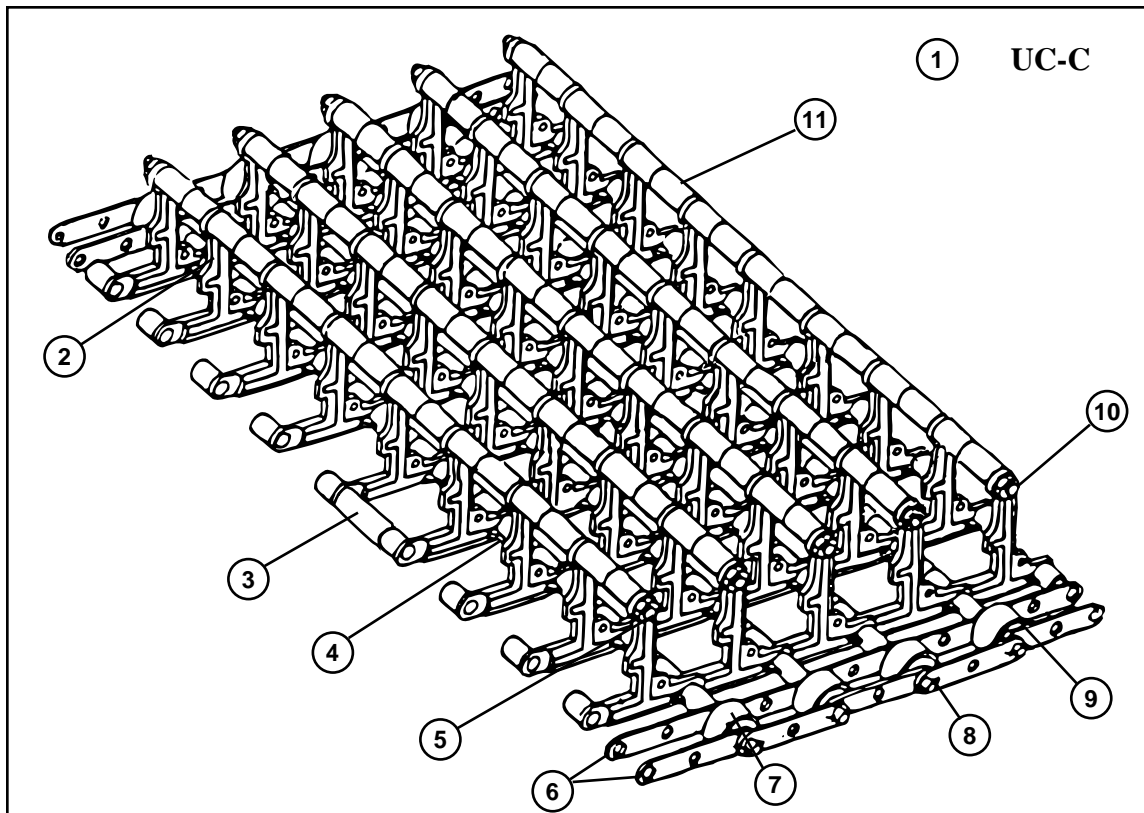
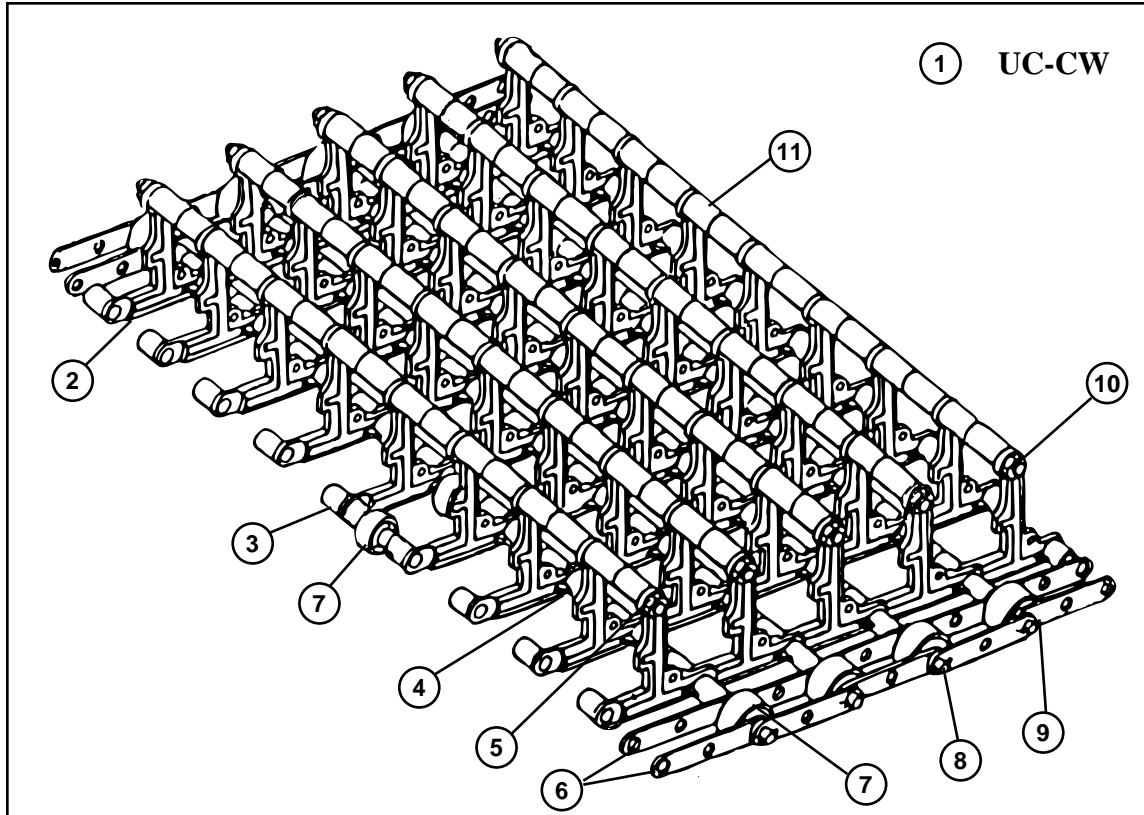


Figure 38 - Peg Belt with Upper Rod



**UC-CW PEG BELT with UPPER ROD**

**Note 1:** Total number of Rod Sections required for belt replacement vary depending on Machine Length.

**Note 2:** Quantities listed below are per one (1) ROD SECTION.

<b>Fig. 38 Item No.</b>	<b>Part No.</b>	<b>Part Description</b>	<b>Qty.</b>
1	404106	Rod Section, Peg Belt w/ Upper Rod, UC-CW .....	A/R
2	110092	Link, Upright.....	10
3	108378	Spacer (11/32 X 5/16) .....	2
4	108438	Spacer (11/32 X 1-13/32).....	8
5	100141	Nut, Grip (1/4-20 SST) .....	2
6	108435	Link, Straight End, Stainless Steel .....	4
7	108437	Roller, Plastic .....	3
8	108875	Pin, Cotter .....	2
9	108381	Rod, Drilled Stainless Steel (5/16 X 29-1/4).....	1
10	202601	Rod, Threaded Stainless Steel (1/4 X 26).....	1
11	108439	Spacer (1/2 X 9/32 X 2-9/16) .....	9

**UC-C PEG BELT with UPPER ROD**

**Note 1:** Total number of Rod Sections required for belt replacement vary depending on Machine Length.

**Note 2:** Quantities listed below are per one (1) ROD SECTION.

<b>Fig. 38 Item No.</b>	<b>Part No.</b>	<b>Part Description</b>	<b>Qty.</b>
1	404114	Rod Section, Peg Belt w/ Upper Rod, UC-C.....	A/R
2	110092	Link, Upright.....	9
3	108378	Spacer (11/32 X 5/16) .....	1
4	108377	Spacer (11/32 X 1-3/32).....	8
5	100141	Nut, Grip (1/4-20 SST) .....	2
6	108435	Link, Straight End, Stainless Steel .....	4
7	108437	Roller, Plastic .....	2
8	108875	Pin, Cotter .....	2
9	108380	Rod, Drilled Stainless Steel (5/16 X 24) .....	1
10	108376	Rod, Threaded Stainless Steel (1/4 X 20-5/8) .....	1
11	108379	Spacer (1/2 X 9/32 X 2-1/4) .....	8

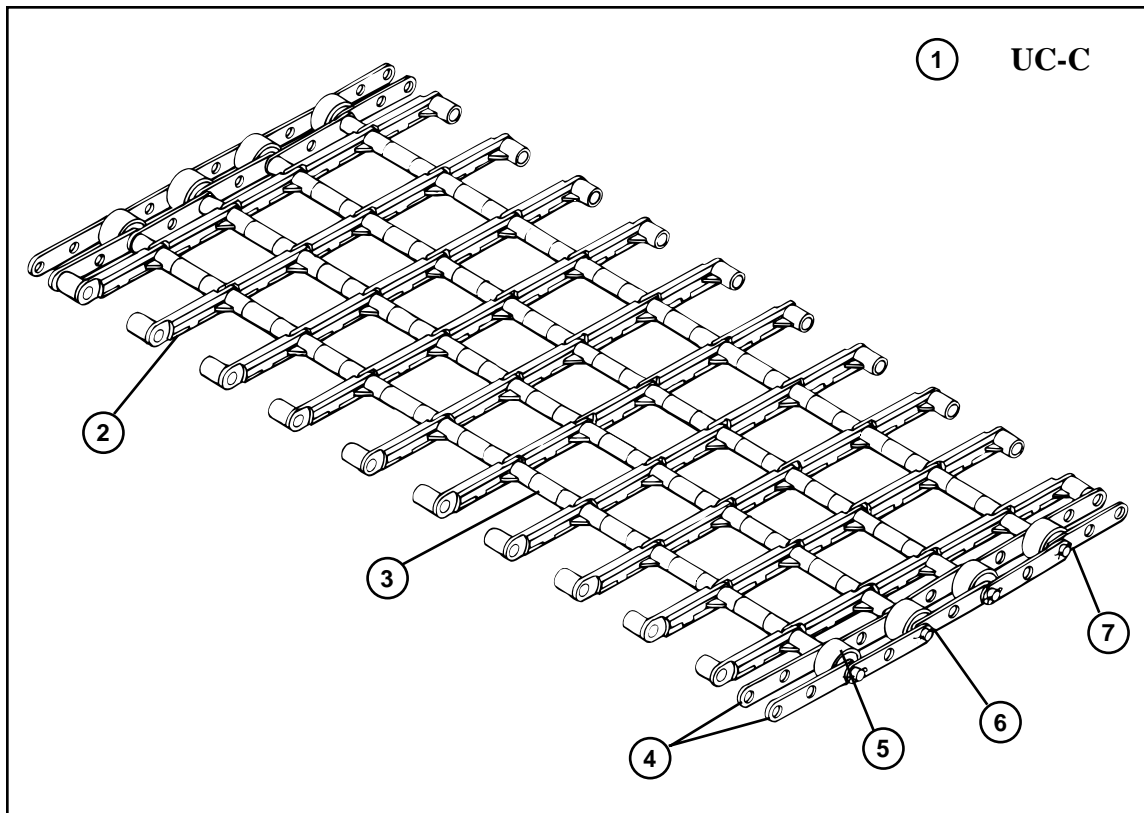
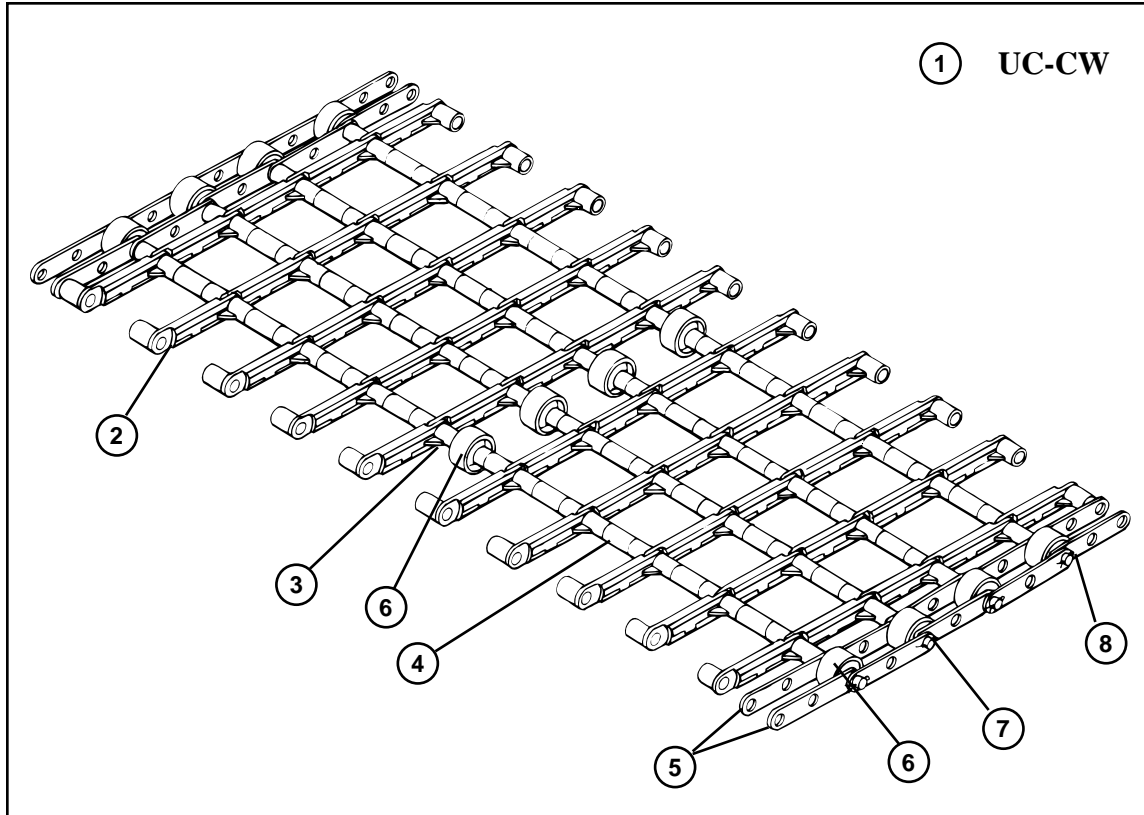


Figure 39 - Flat Belt

**UC-CW FLAT BELT**

**Note 1:** Total number of Rod Sections required for belt replacement vary depending on Machine Length.

**Note 2:** Quantities listed below are per two (2) ROD SECTIONS.

<b>Fig. 39 Item No.</b>	<b>Part No.</b>	<b>Part Description</b>	<b>Qty.</b>
1	402237	TWO Rod Sections, Flat Belt, UC-CW .....	A/R
2	110094	Link, Flat .....	20
3	108378	Spacer (11/32 X 5/16) .....	6
4	108438	Spacer (11/32 X 1-13/32) .....	16
5	108435	Link, Straight End, Stainless Steel .....	8
6	108437	Roller, Plastic .....	6
7	108875	Pin, Cotter .....	4
8	108381	Rod, Drilled Stainless Steel (5/16 X 29-1/4) .....	2

**UC-C FLAT BELT**

**Note 1:** Total number of Rod Sections required for belt replacement vary depending on Machine Length.

**Note 2:** Quantities listed below are per two (2) ROD SECTIONS.

<b>Fig. 39 Item No.</b>	<b>Part No.</b>	<b>Part Description</b>	<b>Qty.</b>
1	402294	TWO Rod Sections, Flat Belt, UC-C .....	A/R
2	110094	Link, Flat .....	18
3	108377	Spacer (11/32 X 1-3/32) .....	16
4	108435	Link, Straight End, Stainless Steel .....	8
5	108437	Roller, Plastic .....	4
6	108875	Pin, Cotter .....	4
7	108380	Rod, Drilled Stainless Steel (5/16 X 24) .....	2

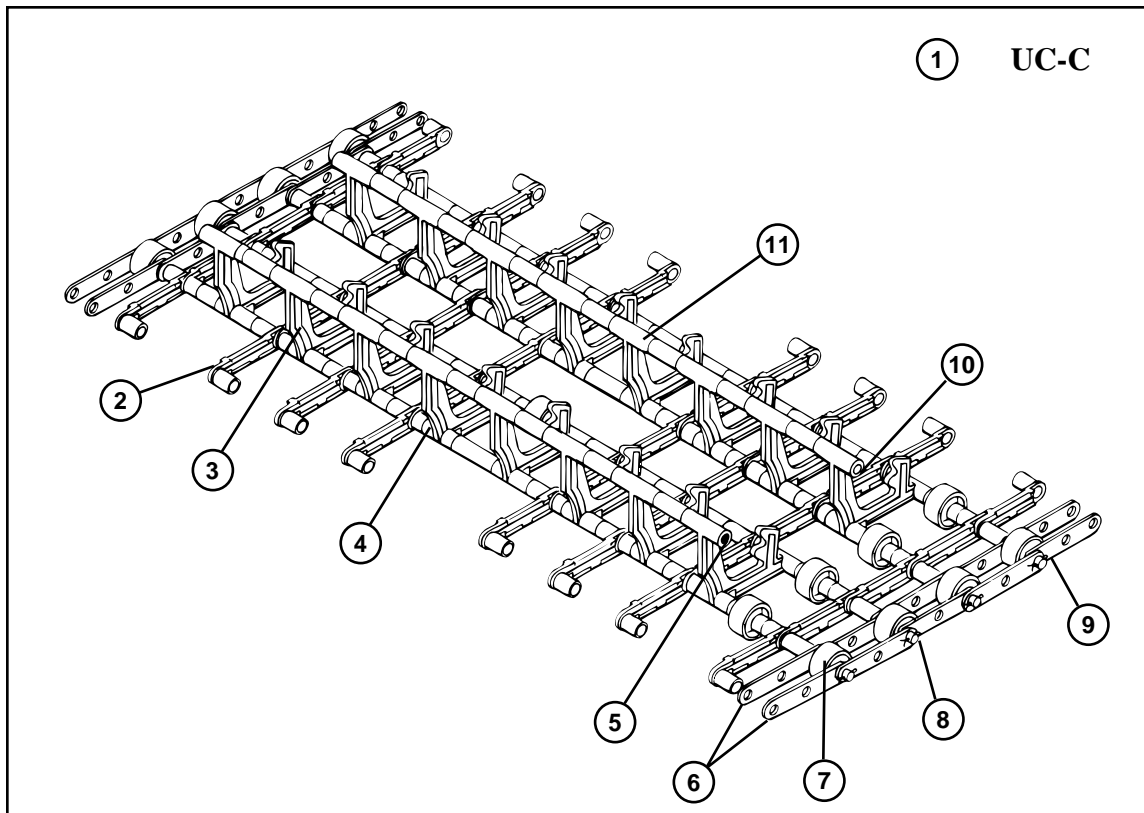
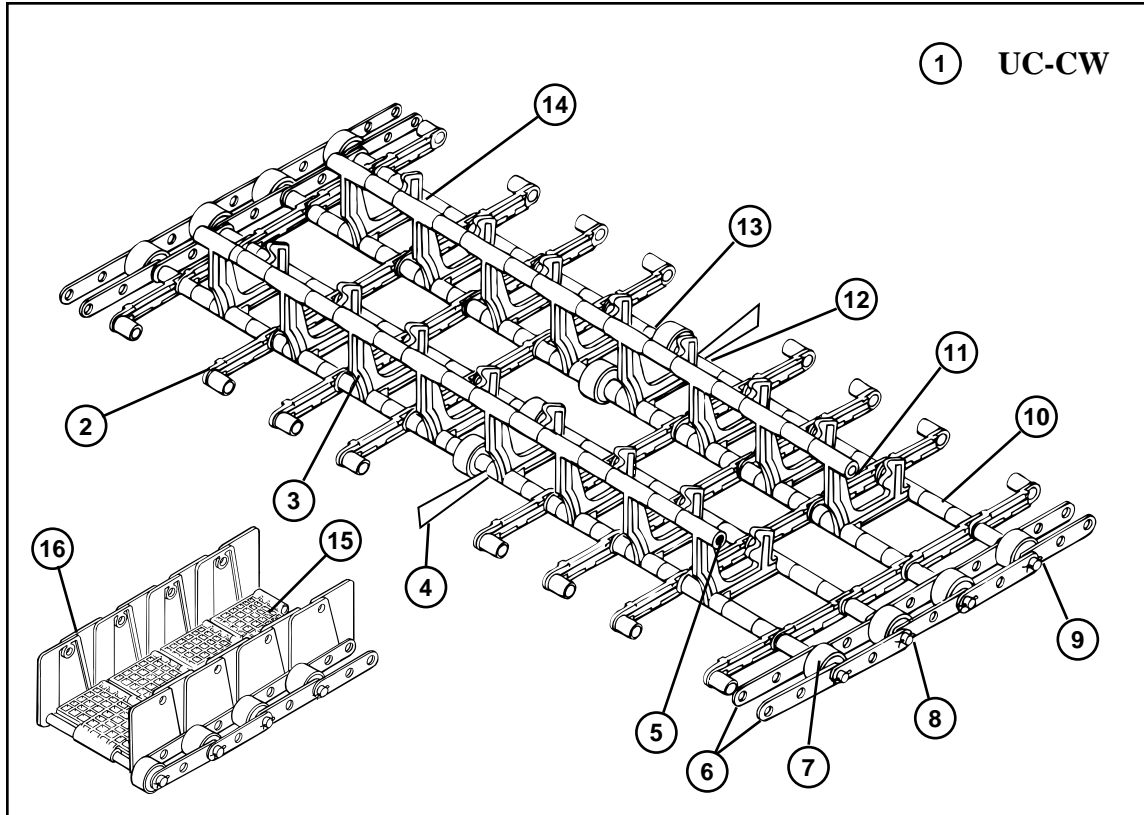


Figure 40 - Insulated Tray Belt (Silverware Belt Optional)

## UC-CW INSULATED TRAY BELT

**Note 1:** Total number of Rod Sections required for belt replacement vary depending on Machine Length.

**Note 2:** Quantities listed below are per two (2) ROD SECTIONS.

<b>Fig. 40 Item No.</b>	<b>Part No.</b>	<b>Part Description</b>	<b>Qty.</b>
1	402238	TWO Rod Sections, Insulated Tray Belt, UC-CW .....	A/R
2	110094	Link, Flat .....	16
3	109030	Link, Upright Poly .....	8
4	204995	Link, Flat Modified .....	1
5	100141	Nut, Grip (1/4-20 SST) .....	2
6	108435	Link, Straight End, Stainless Steel .....	8
7	108437	Roller, Plastic .....	6
8	108875	Pin, Cotter .....	4
9	108381	Rod, Drilled Stainless Steel (5/16 X 29-1/4) .....	2
10	109282	Spacer (11/32 X 1-1/32) .....	4
11	109224	Rod, Threaded Stainless Steel (1/4 X 22-1/4) .....	1
12	102376	Washer (5/16 X 3/4 X 1/16) .....	2
13	108378	Spacer (11/32 X 5/16) .....	2
14	109187	Spacer (9/32 X 1-13/32) .....	7
<b>SILVERWARE BELT</b>			
15	109164	Link, Flat, Silverware Belt .....	2
16	109163	Link, Side, Silverware Belt .....	4

## UC-C INSULATED TRAY BELT

**Note 1:** Total number of Rod Sections required for belt replacement vary depending on Machine Length.

**Note 2:** Quantities listed below are per two (2) ROD SECTIONS.

<b>Fig. 40 Item No.</b>	<b>Part No.</b>	<b>Part Description</b>	<b>Qty.</b>
1	402295	TWO Rod Sections, Insulated Tray Belt, UC-C .....	A/R
2	110094	Link, Flat .....	12
3	109030	Link, Upright Poly .....	8
4	109282	Spacer (11/32 X 1-1/32) .....	3
5	100141	Nut, Grip (1/4-20 SST) .....	2
6	108435	Link, Straight End, Stainless Steel .....	8
7	108437	Roller, Plastic .....	4
8	108875	Pin, Cotter .....	4
9	108380	Rod, Drilled Stainless Steel (5/16 X 24) .....	2
10	109225	Rod, Threaded Stainless Steel (1/4 X 21-3/4) .....	1
11	109187	Spacer (9/32 X 1-13/16) .....	6

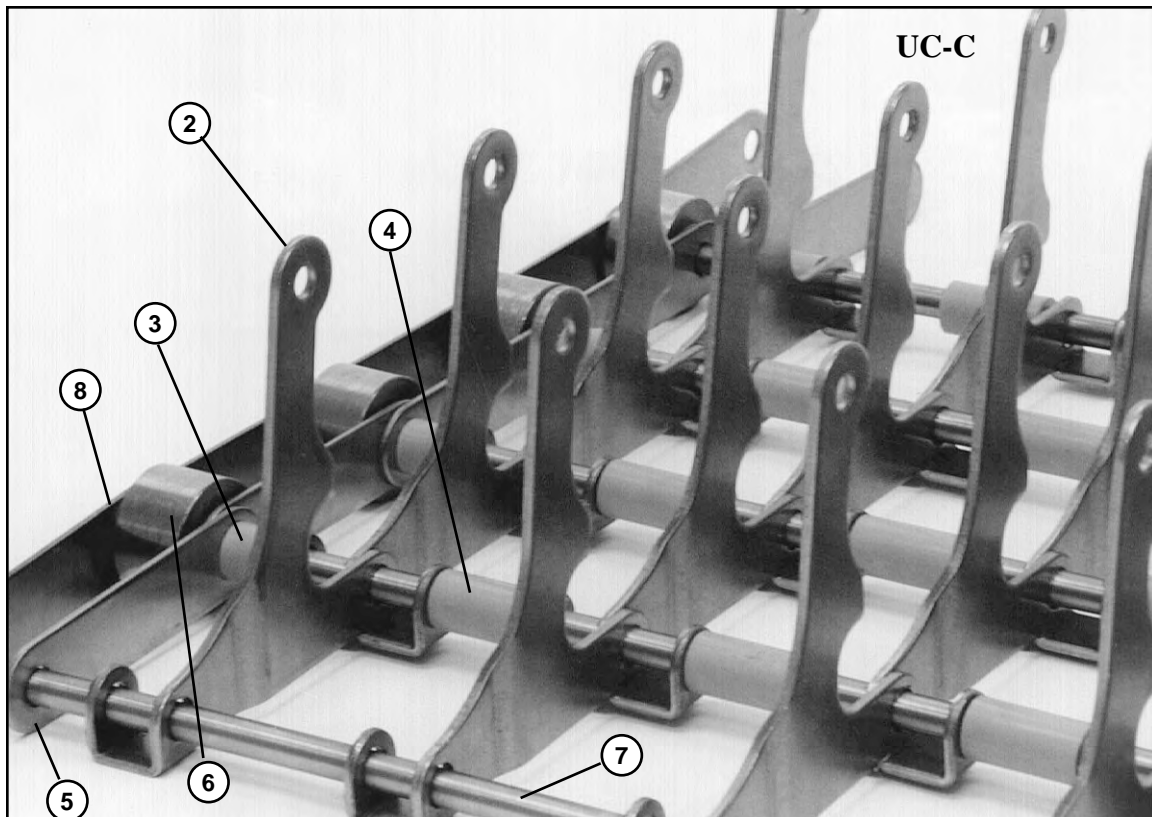
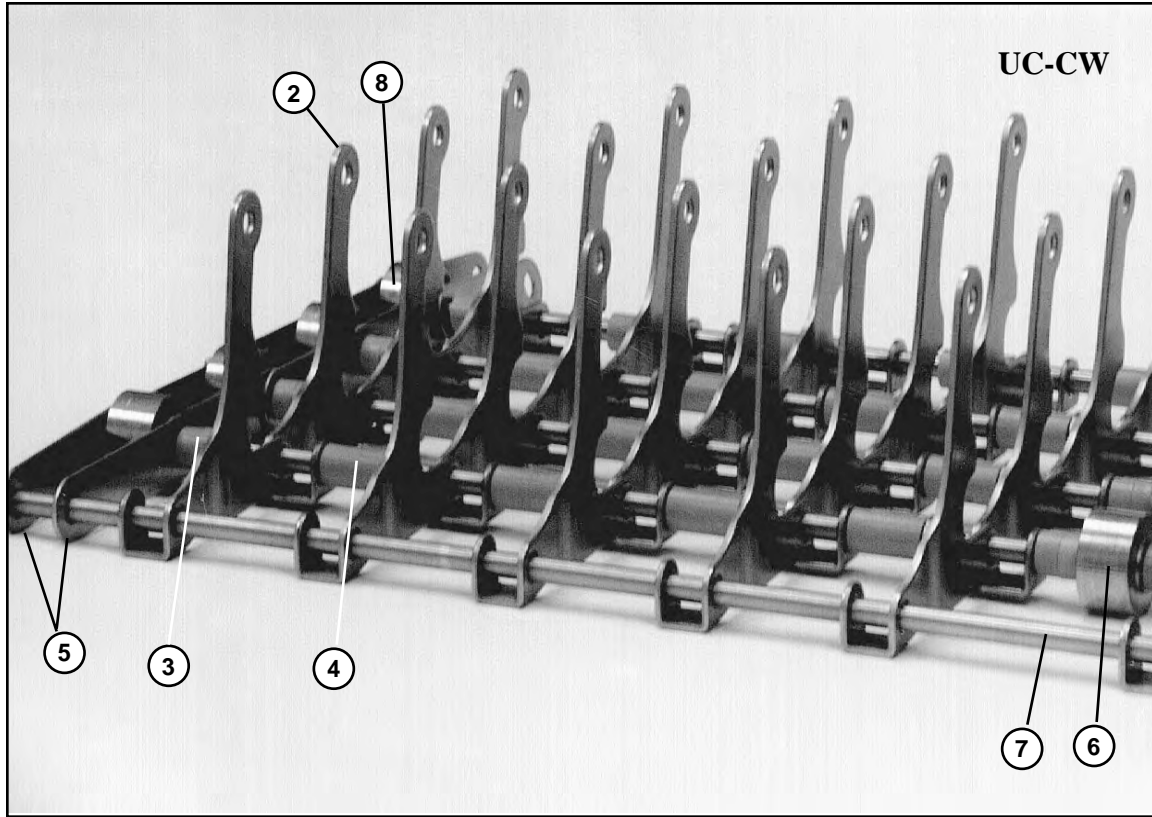


Figure 41 - Stainless Steel Peg Belt

**UC-CW STAINLESS STEEL PEG BELT**

**Note 1:** Total number of Rod Sections required for belt replacement vary depending on Machine Length.

**Note 2:** Quantities listed below are per one (1) ROD SECTION.

<b>Fig. 41 Item No.</b>	<b>Part No.</b>	<b>Part Description</b>	<b>Qty.</b>
1	408013	Rod Section, Stainless Steel Peg Belt, UC-CW .....	A/R
2	111421	Link, Stainless Steel Upright .....	10
3	109282	Spacer (11/32 X 1-1/32).....	8
4	108378	Spacer (11/32 X 5/16).....	8
5	108435	Link, Straight End, Stainless Steel .....	4
6	108375	Roller, Stainless Steel.....	3
7	108381	Rod, Drilled Stainless Steel (5/16 X 29-1/4).....	1
8	108875	Pin, Cotter (Not Shown) .....	2

**UC-CW Stainless Steel Peg Belt with Upper Rod**

(Items 2 thru 8 above and the Parts Listed Below)

—	100141	Nut, Grip (1/4-20 SST) (Not Shown) .....	2
—	202601	Rod, Threaded (1/4 X 26) (Not Shown).....	1

**UC-C STAINLESS STEEL PEG BELT**

**Note 1:** Total number of Rod Sections required for belt replacement vary depending on Machine Length.

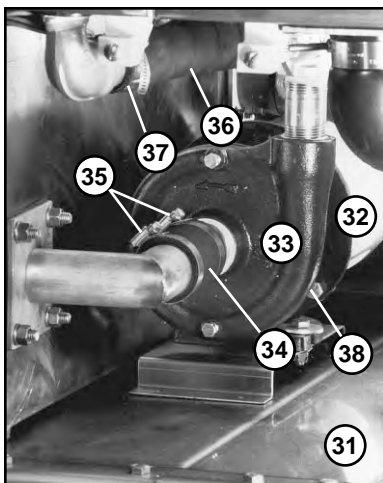
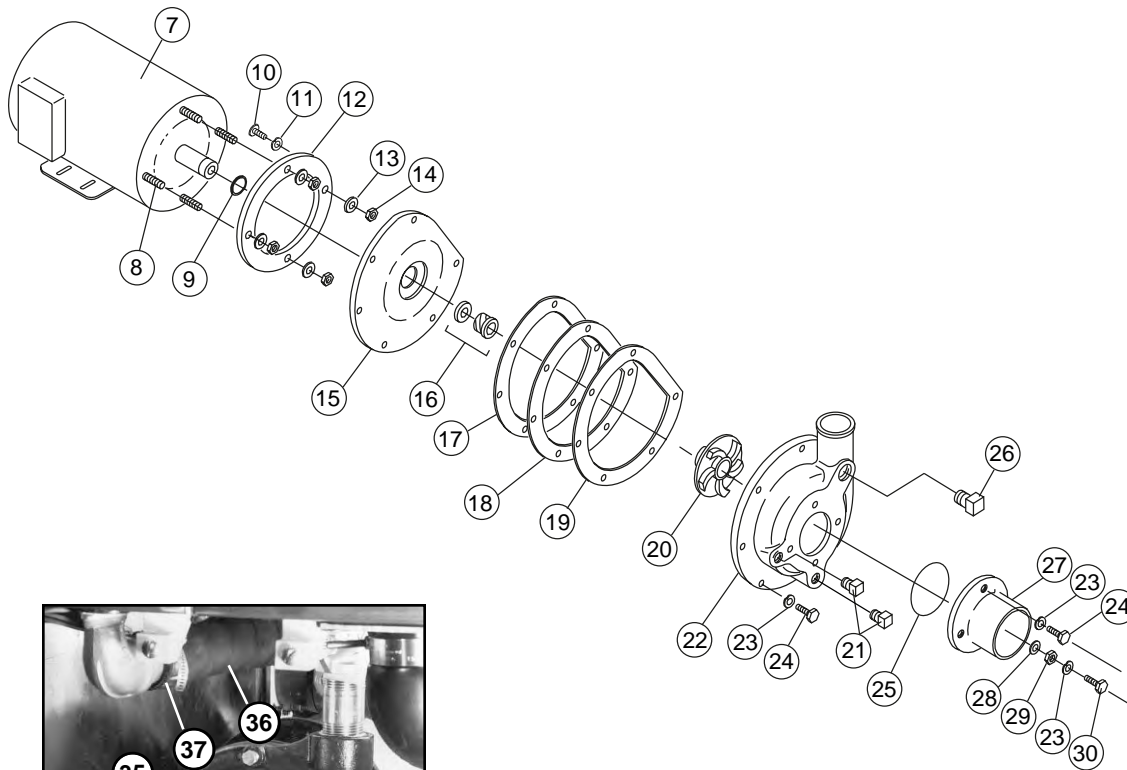
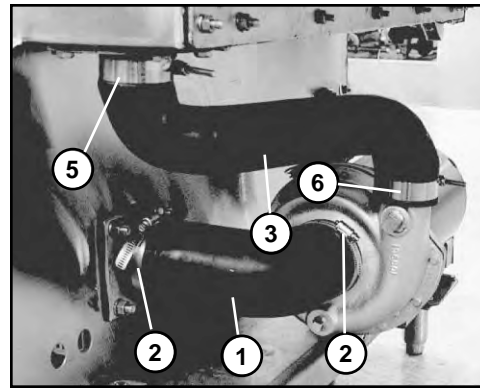
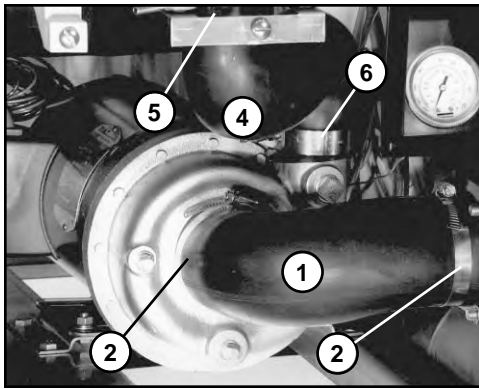
**Note 2:** Quantities listed below are per one (1) ROD SECTION.

<b>Fig. 41 Item No.</b>	<b>Part No.</b>	<b>Part Description</b>	<b>Qty.</b>
1	—	Rod Section, Stainless Steel Peg Belt, UC-C .....	A/R
2	111421	Link, Stainless Steel Upright .....	8
3	109282	Spacer (11/32 X 1-1/32).....	7
4	108377	Spacer (11/32 X 1-3/32).....	2
5	108435	Link, Straight End, Stainless Steel .....	4
6	108375	Roller, Stainless Steel.....	2
7	108380	Rod, Drilled Stainless Steel (5/16 X 24) .....	1
8	108875	Pin, Cotter (Not Shown) .....	2

**UC-C Stainless Steel Peg Belt with Upper Rod**

(Items 2 thru 8 above and the Parts Listed Below)

—	100141	Nut, Grip (1/4-20 SST) (Not Shown) .....	2
—	205067	Rod, Threaded (1/4 X 18-3/8) (Not Shown).....	1
—	105197	Spacer (11/32 X 2-7/16).....	7



See bottom of Page 80 for  
Optional EconoRinse Pump parts  
(UC-CW Only)

Figure 42 - Pump Assembly



## PUMP ASSEMBLY

Fig. 42 Item No.	Part No.	Part Description	Qty.
1	109562	Hose, Pump Suction UC-C/CW.....	1
2	104203	Clamp, Suction Hose.....	2
3	110289	Hose, Pump Discharge (R-L, B2 Section Only) UC-C/CW.....	1
4	110290	Hose, Pump Discharge (C4/B4), (B2, L-R) UC-C/CW.....	1
4	110288	Hose, Pump Discharge (C3/B3) UC-C/CW.....	1
5	104165	Clamp, Discharge Hose.....	1
6	111964	Clamp, Discharge Hose.....	1
7	110420	Motor, 1 HP Prewash (208-240V/460V/60/3PH).....	1
7	180245	Motor, 1 HP Prewash (380V/50/3PH).....	1
7	180272	Motor, 1 HP Prewash (380V/60/3PH).....	1
7	180237	Motor, 1 HP Prewash (415/50/3PH).....	1
7	180232	Motor, 1 HP Prewash (575V/60/3PH).....	1
7	180210	Motor, 1 HP Prewash (600V/60/3PH).....	1
7	180212	Motor, 1 HP Prewash (220V/50/3PH).....	1
7	110422	Motor, 2 HP Prewash (208-240V/460V/60/3PH).....	1
7	180226	Motor, 2 HP Prewash (380V/50/3PH).....	1
7	180273	Motor, 2 HP Prewash (380V/60/3PH).....	1
7	180246	Motor, 2 HP Prewash (415V/50/3PH).....	1
7	180231	Motor, 2 HP Prewash (575V/60/3PH).....	1
7	110424	Motor, 3 HP Prewash, Wash/Rinse (208-240/460V/60/3PH)....	1
7	180229	Motor, 3 HP Prewash, Wash/Rinse (575V/60/3PH).....	1
7	180239	Motor, 3 HP Prewash, Wash/Rinse (415V/50/3PH).....	1
7	180257	Motor, 3 HP Prewash, Wash/Rinse (380V/50/3PH).....	1
8	110734	Stud, Motor.....	4
9	109654	Slinger, Water.....	1
10	100754	Screw, 10-32 X 1/2" Flat Head.....	3
11	110270	Washer, Star Countersunk.....	3
12	204460	Plate, Backing.....	1
13	106407	Washer, Lock.....	4
14	107690	Nut, Jam 3/8-16.....	4
15	111681	Flange, Pump.....	1
16	111111	Seal, Shaft.....	1
17	111941	Gasket, (.0085") (1 notch).....	A/R
18	111942	Gasket, (.015") (2 notches).....	1
19	111943	Gasket, (.032") (3 notches).....	2
20	111754	Impeller, SST (2.875") (1 HP motor).....	1
20	111756	Impeller, SST (3.5") (2 HP motor).....	1
20	111687	Impeller, SST (4.0") (3 HP motor).....	1
21	102500	Plug, 1/4" NPT Brass.....	2
22	111696	Volute, Pump.....	1
23	106482	Washer, Lock 1/4" Split.....	11
24	100736	Bolt, 1/4-20 X 3/4" Hex Head.....	10
25	111725	O-Ring.....	1
26	102504	Plug, 1/2" NPT Brass.....	1
27	111841	Flange, Suction.....	1

**PUMP ASSEMBLY (CONT.)**

<b>Fig. 42 Item No.</b>	<b>Part No.</b>	<b>Part Description</b>	<b>Qty.</b>
28	110248	Washer, Flat.....	1
29	110247	Nut, Hex Jam 7/16-20.....	1
30	100734	Bolt, 1/4-20 X 1/2" Hex Head.....	1
—	405919	Motor/Pump Assy. (Complete) 1 HP Prewash UC-C/CW (208-240/480V/60/3)	
—	405920	Motor/Pump Assy. (Complete) 2 HP Prewash UC-C/CW (208-240/480V/60/3)	
—	405921	Motor/Pump Assy. (Complete) 3 HP Prewash UC-C/CW (208-240/480V/60/3)	
—	405922	Motor/Pump Assy. (Complete) 3 HP C3 Section - Wash/Rinse (208-240/480V/60/3) UC-C/CW	
—	405923	Motor/Pump Assy. (Complete) 3 HP C4 Section - Wash/Rinse (208-240/480V/60/3) UC-C/CW	

**ECONORINSE SECTION OPTION AVAILABLE ON UC-CW ONLY**

<b>Fig. 42 Item No.</b>	<b>Part No.</b>	<b>Part Description</b>	<b>Qty.</b>
31	180280	Motor and Pump Assembly, 1/4 HP (208-240/460V/60/3PH)..	1
32	180327	Motor, 1/4 HP (208-240/460V/60/3PH) EconoRinse.....	1
33	900728	Pump Assembly (Less Motor).....	1
34	205202	Hose, Suction (1-5/8 I.D. X 4-3/4).....	1
35	107340	Clamp, Suction Hose.....	2
36	205201	Hose, Discharge (1-3/8 I.D. X 9-1/2).....	1
37	107340	Clamp, Discharge Hose.....	2
38	180326	Bolt, (Pump to Motor).....	4
—	108598	Gasket, pump (Not Shown).....	1
—	180325	Seal, shaft (Not Shown).....	1
—	180324	Impeller, 1/4 HP EconoRinse Pump (Not Shown) Prior to 1-1-96.....	1
—	112106	Impeller, 1/4 HP EconoRinse Pump Beginning 1-1-96.....	1
—	112107	Volute (Not Shown), Beginning 1-1-96.....	1
—	900756	Kit, Volute, Impeller & Repair Kit (Not Shown) Beginning 1-1-96.....	1
—	900727	Repair kit with seal, 1/4 HP pump (Not Shown) For Machines built prior to 1-1-96 (Threaded impeller)..... Includes: Pump gasket, Pump shaft w/ set screws, Water slinger, shaft seal	1
—	900757	Repair kit with seal, 1/4 HP pump (Not Shown) For Machines built after 1-1-96 (Keyed impeller)..... Includes: Pump gasket, Pump shaft w/ set screws, Water slinger, shaft seal	1

## **ELECTRIC TANK HEAT**

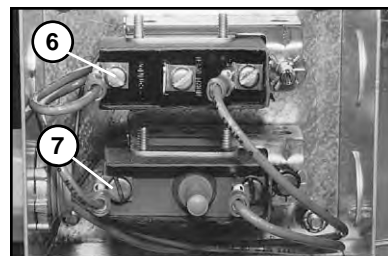
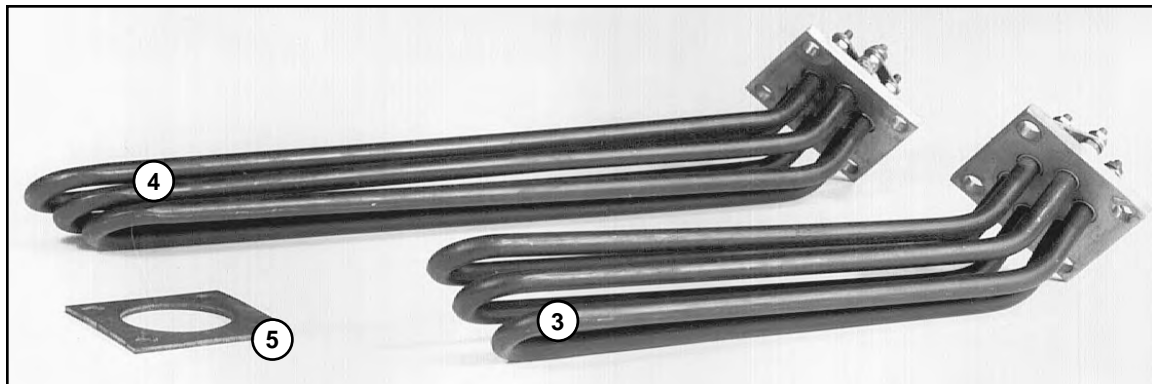
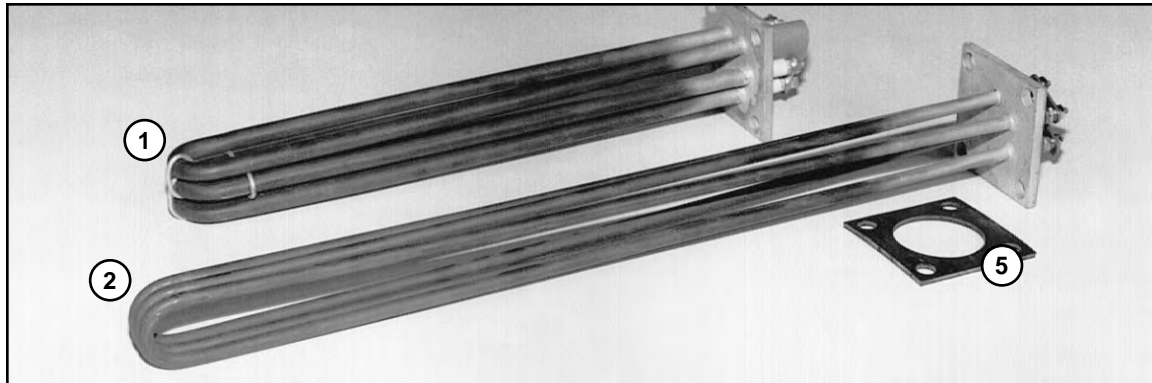
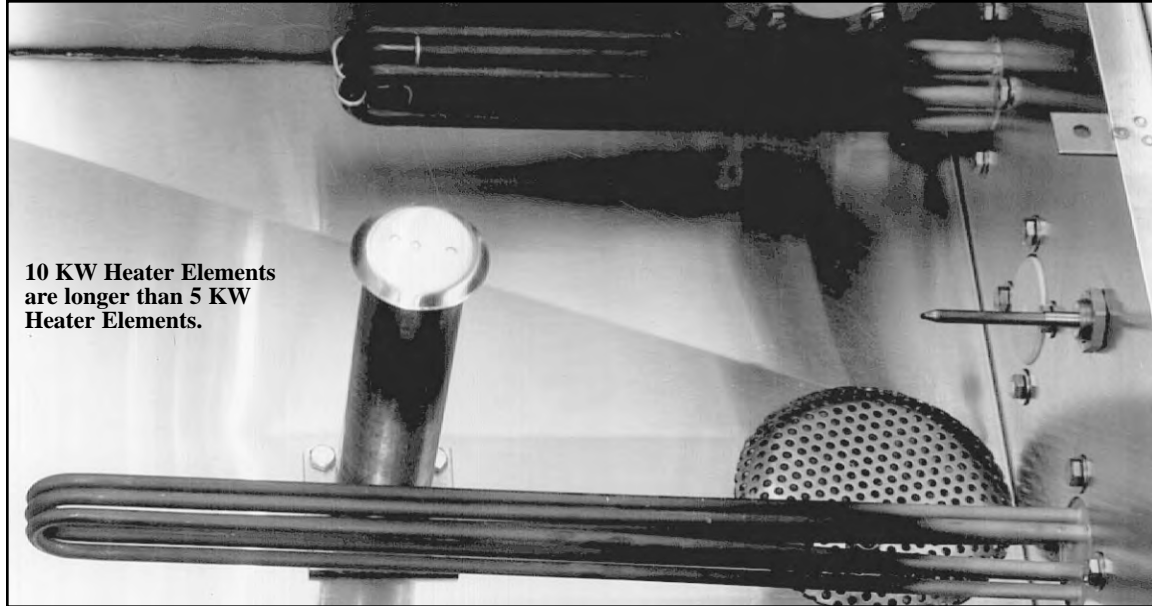


Figure 43 - Electric Tank Heat

**UC-C and UC-CW  
(C3/C4 Section)**

**Wash or Power Rinse Tank without Optional Refuse Bucket**

<b>Fig. 43 Item No.</b>	<b>Part No.</b>	<b>Part Description</b>	<b>Qty.</b>
1	107839	Element, Straight Tank Heater (5KW, 208V/3PH).....	A/R
1	107840	Element, Straight Tank Heater (5KW, 240V/3PH).....	A/R
1	107842	Element, Straight Tank Heater (5KW, 480V/3PH).....	A/R
1	111123	Element, Straight Tank Heater (5KW, 575V/3PH).....	A/R
5	108345	Gasket, Tank Heater (one per element) .....	A/R
2	109751	Element, Straight Tank Heater (10KW, 208V/3PH).....	A/R
2	107844	Element, Straight Tank Heater (10KW, 240V/3PH).....	A/R
2	107846	Element, Straight Tank Heater (10KW, 480V/3PH).....	A/R
2	111120	Element, Straight Tank Heater (10KW, 575V/3PH).....	A/R
5	108345	Gasket, Tank Heater (one per element) .....	A/R
6	109069	Thermostat, Control UC-C/CW (one per tank) .....	A/R
7	110561	Thermostat, High Limit UC-C/CW (one per tank).....	A/R

**UC-C and UC-CW  
(C3 Section)**

**Wash or Power Rinse Tank with Optional Refuse Bucket**

<b>Fig. 43 Item No.</b>	<b>Part No.</b>	<b>Part Description</b>	<b>Qty.</b>
3	109789	Element, Angled Tank Heater (5KW, 208V/3PH).....	A/R
3	109791	Element, Angled Tank Heater (5KW, 240V/3PH).....	A/R
3	109793	Element, Angled Tank Heater (5KW, 480V/3PH).....	A/R
3	N/A	Element, Angled Tank Heater (5KW, 575V/3PH).....	A/R
5	108345	Gasket, Tank Heater (one per element) .....	A/R
4	109790	Element, Angled Tank Heater (10KW, 208V/3PH).....	A/R
4	109792	Element, Angled Tank Heater (10KW, 240V/3PH).....	A/R
4	109794	Element, Angled Tank Heater (10KW, 480V/3PH).....	A/R
4	111121	Element, Angled Tank Heater (10KW, 575V/3PH).....	A/R
5	108345	Gasket, Tank Heater (one per element) .....	A/R
6	109069	Thermostat, Control UC-C/CW (one per tank) .....	A/R
7	110561	Thermostat, High Limit UC-C/CW (one per tank).....	A/R

(See Next Page for Additional Elements)

**UC-C and UC-CW  
(C4 Section)  
Wash or Power Rinse Tank with Optional Refuse Bucket**

<b>Fig. 43 Item No.</b>	<b>Part No.</b>	<b>Part Description</b>	<b>Qty.</b>
3	107839	Element, Straight Tank Heater (5KW, 208V/3PH).....	A/R
3	107840	Element, Straight Tank Heater (5KW, 240V/3PH).....	A/R
3	107842	Element, Straight Tank Heater (5KW, 480V/3PH).....	A/R
1	111123	Element, Straight Tank Heater (5KW, 575V/3PH).....	A/R
5	108345	Gasket, Tank Heater (one per element) .....	A/R
4	109751	Element, Tank Heater (10KW, 208V/3PH) .....	A/R
4	107844	Element, Tank Heater (10KW, 240V/3PH) .....	A/R
4	107846	Element, Tank Heater (10KW, 480V/3PH) .....	A/R
4	111120	Element, Tank Heater (10KW, 575V/3PH) .....	A/R
5	108345	Gasket, Tank Heater (one per element) .....	A/R
6	109069	Thermostat, Control UC-C/CW (one per tank) .....	A/R
7	110561	Thermostat, High Limit UC-C/CW (one per tank).....	A/R

**UC-CW ONLY  
ECONORINSE SECTION (Optional)**

<b>Fig. 43 Item No.</b>	<b>Part No.</b>	<b>Part Description</b>	<b>Qty.</b>
1	111258	Element, Straight, Tank Heater (15KW, 208V/3PH).....	1
1	111259	Element, Straight, Tank Heater (15KW, 240V/3PH).....	1
1	111260	Element, Straight, Tank Heater (15KW, 480V/3PH).....	1
1	—	Element, Straight, Tank Heater (15KW, 575V/3PH).....	N/A
5	108345	Gasket, Tank Heater (one per element) .....	A/R
6	109069	Thermostat, Control UC-C/CW (one per tank) .....	A/R
7	110561	Thermostat, High Limit UC-C/CW (one per tank).....	A/R

## **STEAM TANK HEAT**

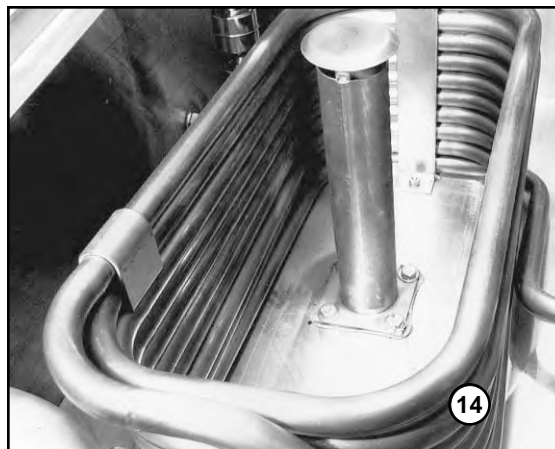
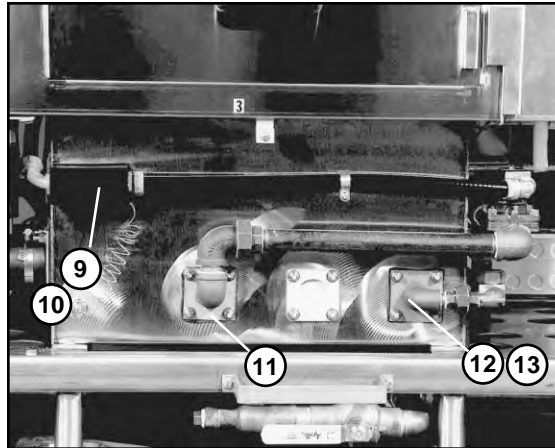
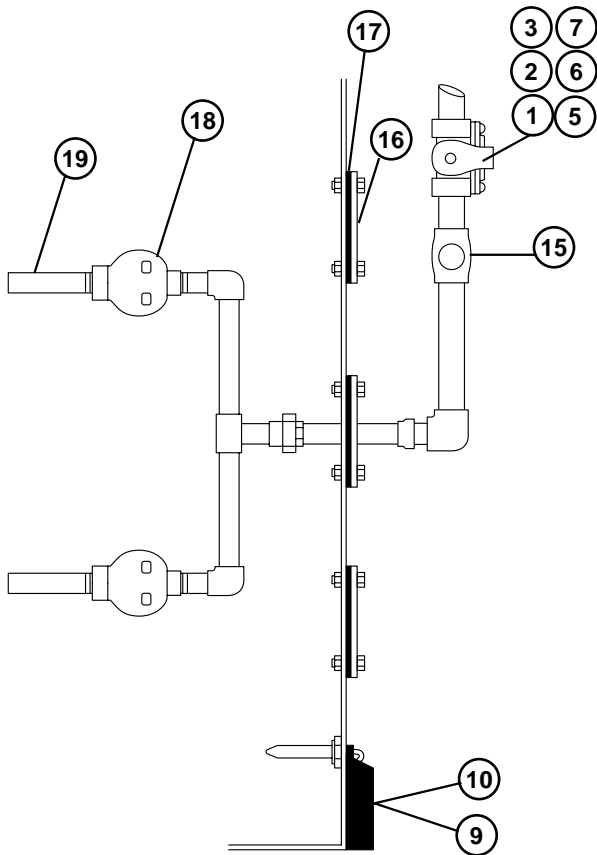
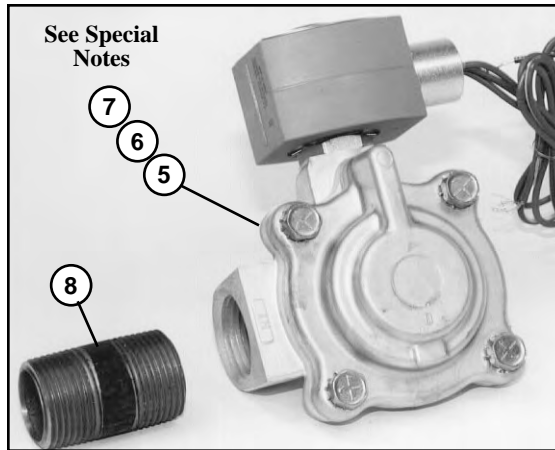
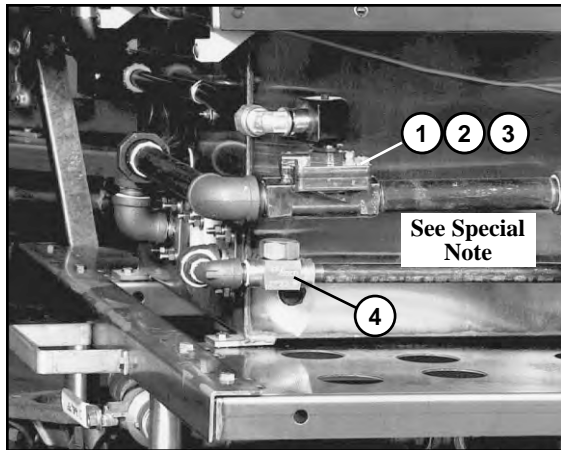


Figure 44 - Steam Tank Heat



## STEAM TANK HEAT

<b>Fig. 44 Item No.</b>	<b>Part No.</b>	<b>Part Description</b>	<b>Qty.</b>
*1	109888	Valve, Steam Solenoid (1" Parker) UC-C/CW—Prior to S/N 85330	NLA
*2	109904	Repair Kit (1" Parker) UC-C/CW—Prior to S/N 85330.....	1
*3	108516	Coil, Solenoid (1" Parker) UC-C/CW—Prior to S/N 85330.....	1
4	111380	Trap, Steam .....	1
**5	110005	Valve Steam Solenoid (1" Asco) UC-C/CW—Beginning w/ S/N 85330	1
**6	110007	Repair Kit (1" Asco) UC-C/CW—Beginning w/ S/N 85330....	1
**7	110120	Coil, Solenoid (1" Asco) UC-C/CW—Beginning w/ S/N 85330	1
***8	105850	Nipple (1 X 2)—See Special Note***.....	1
9	107922	Box & Cover, Thermostat.....	1
10	109069	Thermostat, Control .....	1
11	315253	Weldment, Steam Inlet.....	1
12	315254	Weldment, Steam Outlet .....	1
13	104639	Gasket, Weldment .....	2
14	315241	Coil, Steam, (C3 Section, Wash/Rinse) .....	1
		(Standard Pressure, 15-30 PSI) UC-C/CW	
14	307384	Coil, Steam, C4 Section, Wash/Rinse) .....	1
		(Standard Pressure, 15-30 PSI) UC-C/CW	
15	100854	Valve, Check (1").....	1
16	109683	Flange.....	A/R
17	109985	O-Ring, Flange.....	1
18	201110	Injector, Steam .....	A/R
19	101677	Nipple, Stainless Steel (1 X 9).....	A/R

(See Next Page for Special Steam Coils)

**SPECIAL NOTES:**

- \* Prior to S/N 85330 all UC-C and UC-CW used P/N 109888, Parker 1" Steam Solenoid Valve which is no longer available.  
This valve has been replaced by an ASCO 1" Solenoid valve.  
Valve repair kits and replacement coils will still be available for the Parker 1" Steam Solenoid valve.
- \*\* Beginning with S/N 85330 and above all UC-C and UC-CW now use a P/N 110005, Asco 1" Steam Solenoid Valve.
- \*\*\* When replacing a Parker 1" Steam Valve with an Asco 1" Steam Valve order Item 8, P/N 105850, Nipple (1 X 2) to compensate for the difference in valve body size between the Parker and Asco valves.

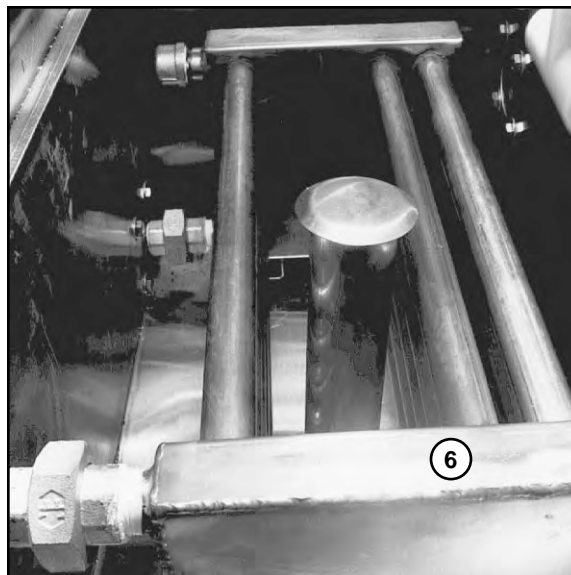
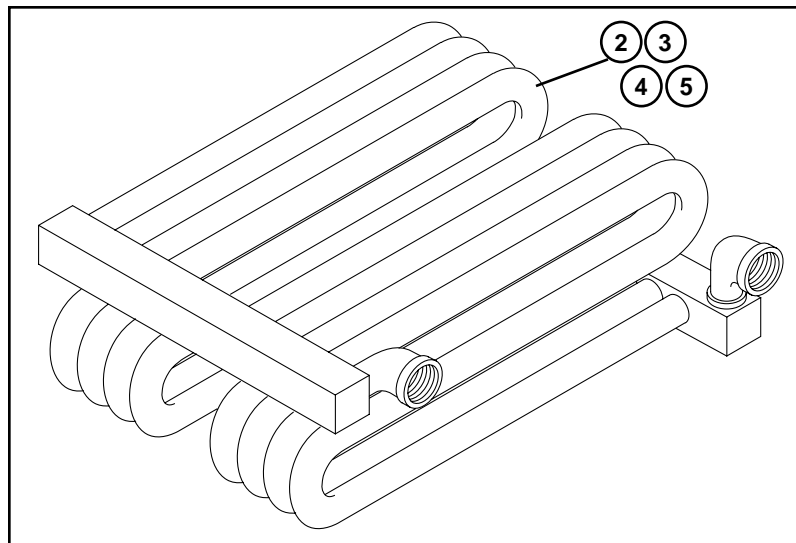
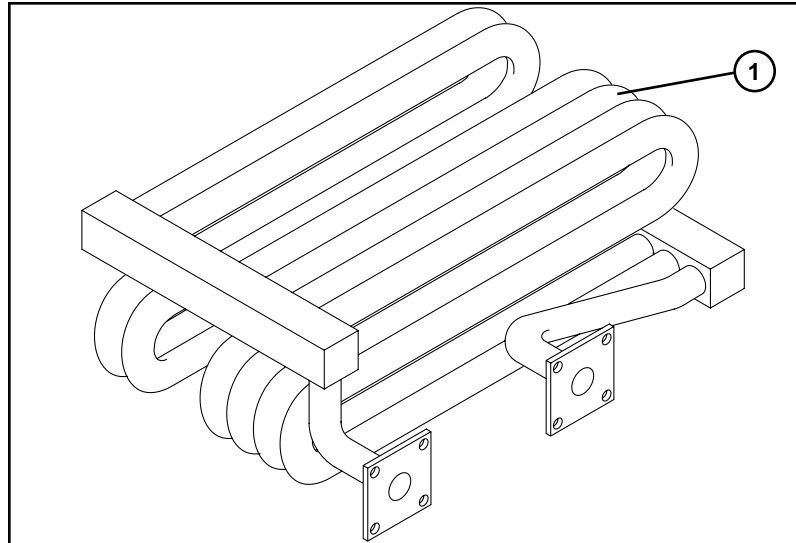


Figure 45 - Steam Coils (Low Pressure / Ultra Low Pressure / EconoRinse)

**LOW PRESSURE STEAM COILS  
(11-14 PSI)**

<b>Fig. 45 Item No.</b>	<b>Part No.</b>	<b>Part Description</b>	<b>Qty.</b>
1	310554	Coil, Steam, (C3 Section, Wash/Rinse) ..... (Low Pressure, 11-14 PSI) UC-C	1
2	315567	Coil, Steam, (C3 Section, Wash/Rinse) ..... (Low Pressure, 11-14 PSI) UC-CW	1
3	314737	Coil, Steam, (C4 Section, Wash/Rinse) ..... (Low Pressure, 11-14 PSI) UC-C/CW	1

**ULTRA LOW PRESSURE STEAM COILS  
(7-10 PSI)**

<b>Fig. 45 Item No.</b>	<b>Part No.</b>	<b>Part Description</b>	<b>Qty.</b>
4	315567	Coil, Steam, (C3 Section, Wash/Rinse) ..... (Ultra Low Pressure, 7-10 PSI) UC-C/CW	1
5	314737	Coil, Steam, (C4 Section, Wash/Rinse) ..... (Ultra Low Pressure, 7-10 PSI) UC-C/CW	1

**ECONORINSE STANDARD PRESSURE STEAM COIL  
EconoRinse Section Option Available on UC-CW Only)**

<b>Fig. 45 Item No.</b>	<b>Part No.</b>	<b>Part Description</b>	<b>Qty.</b>
6	316787	Coil, Steam, (E2 Section, EconoRinse) ..... UC-CW Only	1

41	106679	Key (1/4 X 1/4 X 2-1/2) UC-C/CW .....	1
42	100485	Clutch, Torque Limiter, (Complete Assembly) UC-C/CW .....	1
43	102315	Clutch Disc Assembly (Complete Set #350) UC-C/CW .....	1
44	201976	Sprocket, Drive UC-C/CW .....	1
45	104271	Bushing (.54" Long for Torque Limiter Clutch) UC-C/CW .....	1
46	101156	Chain (#50 5/8" Steel) UC-C/CW .....	4-1/2 ft.
47	101149	Link, Connecting #50.....	1
48	110076	Tensioner, Chain UC-C/CW .....	1
49	106521	Sprocket, Idler .....	1
50	110299	Gearbox, RH w/ Bracket UC-C/CW.....	1
50	110300	Gearbox, LH w/ Bracket UC-C/CW.....	1
51	105285	Sprocket, Gearbox (11T) .....	1
52	100451	Sheave, Gearbox (RH/LH) UC-C/CW .....	1
53	100791	V-Belt .....	1
54	103164	Sheave, Motor (C6 Section) UC-C/CW .....	1
54	103170	Sheave, Motor (C8 Section) UC-C/CW .....	1
55	107183	Motor, 1/2 HP (208-240/480V/60/3PH) UC-C/CW .....	1
55	180230	Motor, 1/2 HP (575/60/3PH) UC-C/CW .....	1
55	180038	Motor, 3/4 HP (208-240/480V/60/3PH) UC-CW.....	1
56	107341	Switch, Limit, Conveyor Shut-off Shelf UC-C/CW .....	1
57	111074	Lever, Rod Switch.....	1
58	111075	Head, Limit Switch .....	1
59	309739	Cover, Conveyor Shut-off UC-C .....	1
59	309738	Cover, Conveyor Shut-off UC-CW.....	1
60	309725	Finger, Short Conveyor Shut-off UC-C (Standard Belt w/ upper rod)	1
60	309719	Finger, Short Conveyor Shut-off UC-CW(Standard Belt w/ upper rod)	1
61	309724	Finger, Long Conveyor Shut-off UC-C (Standard Belt w/o upper rod)	1
61	309718	Finger, Long Conveyor Shut-off UC-CW(Standard Belt w/o upper rod)	1
62	316369	LH assembly, Conveyor shut-off UC-C/CW .....	1
63	316370	RH assembly, Conveyor shut-off UC-C/CW .....	1
64	316366	Top, Conveyor Shut-off UC-C.....	1
64	316367	Top, Conveyor Shut-off UC-CW .....	1

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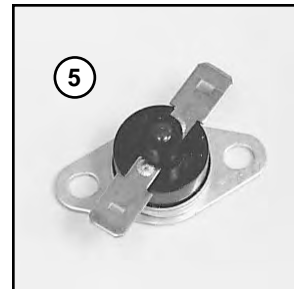
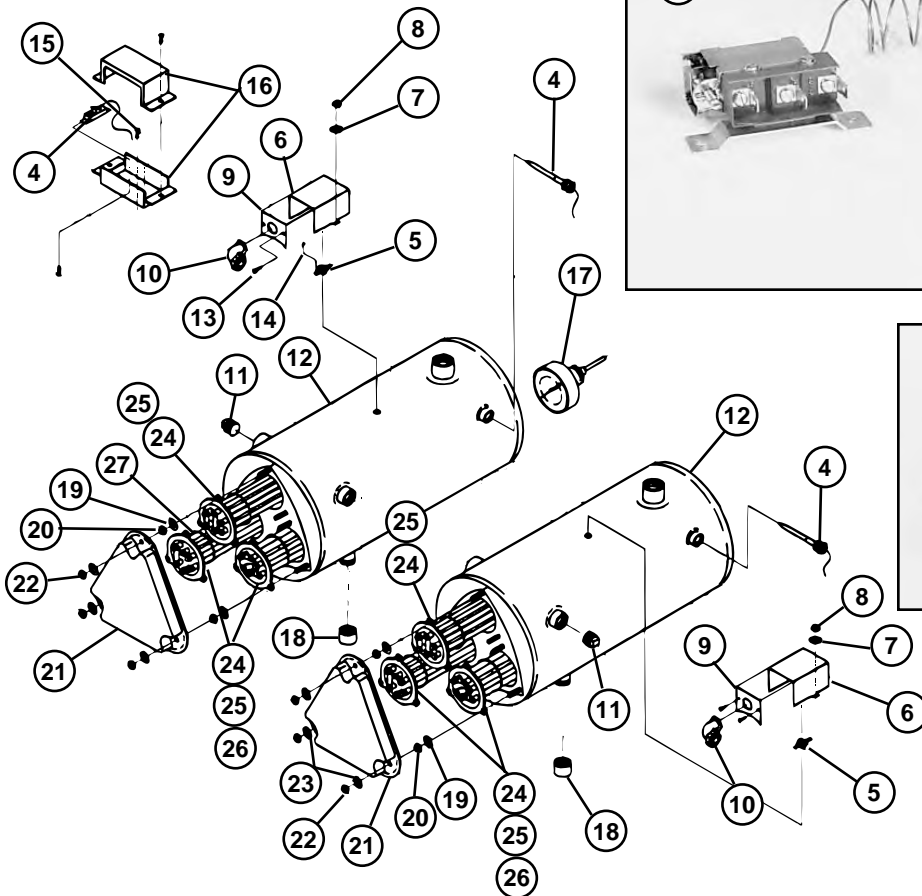
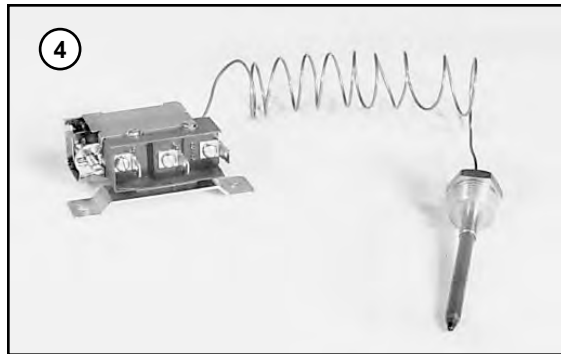
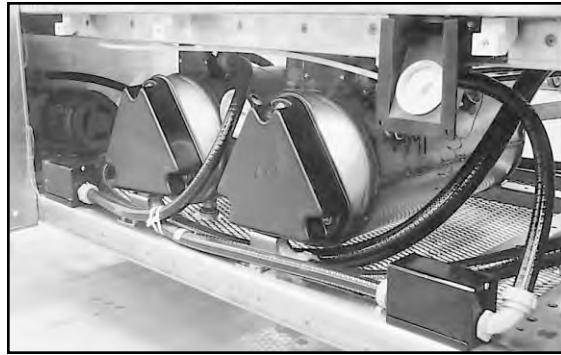


Figure 46 - Electric Booster

## ELECTRIC BOOSTER

<b>Fig. 46 Item No.</b>	<b>Part No.</b>	<b>Part Description</b>	<b>Qty.</b>
1	109887	Valve, Solenoid (3/4").....	1
—	109903	Repair Kit, Solenoid Valve (3/4").....	1
—	108516	Coil, Solenoid Valve (3/4").....	1
2	109886	Valve, Solenoid (1/2").....	A/R
—	109902	Repair Kit, Solenoid Valve (1/2").....	1
—	108516	Coil, Solenoid Valve (1/2").....	1
3	107550	Valve, Pressure Reducing (3/4").....	1
4	109069	Thermostat, Control (one per tank).....	A/R
5	110562	Thermostat, High Limit (one per tank).....	A/R
6	110929	Box, High Limit Thermostat (one per tank).....	A/R
7	107033	Washer, Flat #10.....	2
8	107966	Nut, Grip (10-32 w/ Nylon Insert).....	2
9	110930	Cover, Box, High Limit Thermostat (one per tank).....	A/R
10	103217	Connector, Sealtite Elbow (1/2 X 90°).....	1
11	102505	Plug, Brass (3/4 NPT).....	1
*12	305407	Tank, Booster (Specify Model Number of Machine).....	A/R
13	111319	Screw (6-32 X 1/2 Truss Head) (two per box).....	A/R
14	107966	Nut, Grip (10-32 w/ Nylon Insert) (two per high limit thermostat).....	A/R
15	100100	Screw (8-32 X 1/4 Rhd Head) (two per box).....	A/R
16	107922	Box and Cover Assembly, Thermostat (one per tank).....	A/R
17	104682	Thermometer (2" Stem).....	A/R
18	102505	Plug, Brass (3/4" NPT) (one per tank).....	A/R
19	106482	Washer, Split (1/4") (three per element).....	A/R
20	100003	Nut, Plain (1/4") (three per element).....	A/R
21	108576	Cover, Booster (one per tank).....	A/R
22	107967	Nut, Grip (1/4-20 w/ Nylon Insert) (three per booster cover)...	A/R
23	106026	Washer, Flat (1/4") (three per booster cover).....	A/R
24	111235	Element, Booster (5KW, 208V/3PH).....	A/R
24	111236	Element, Booster (5KW, 240V/3PH).....	A/R
24	111235	Element, Booster (5KW, 380V/3PH) (Connected WYE).....	A/R
24	111236	Element, Booster (5KW, 415V/3PH) (Connected WYE).....	A/R
24	111237	Element, Booster (5KW, 480V/3PH).....	A/R
24	111384	Element, Booster (5KW, 575V/3PH).....	A/R
27	109985	O-Ring, Booster Element (one per element).....	A/R
25	111308	Element, Booster (9KW, 208V/3PH).....	A/R
25	111305	Element, Booster (9KW, 240V/3PH).....	A/R
25	111308	Element, Booster (9KW, 380V/3PH) (Connected WYE).....	A/R
25	111305	Element, Booster (9KW, 415V/3PH) (Connected WYE).....	A/R

**ELECTRIC BOOSTER (CONT.)**

<b>Fig. 46 Item No.</b>	<b>Part No.</b>	<b>Part Description</b>	<b>Qty.</b>
25	108579	Element, Booster (9KW, 480V/3PH).....	A/R
25	111122	Element, Booster (9KW, 575V/3PH).....	A/R
27	109985	O-Ring, Booster Element (one per element) .....	A/R
26	112059	Element, Booster (12KW, 208V/3PH).....	A/R
26	111334	Element, Booster (12KW, 240V/3PH).....	A/R
26	112059	Element, Booster (12KW, 380V/3PH) (Connected WYE).....	A/R
26	111334	Element, Booster (12KW, 415V/3PH) (Connected WYE).....	A/R
26	112060	Element, Booster (12KW, 480V/3PH).....	A/R
26	112061	Element, Booster (12KW, 575V/3PH).....	A/R
26	111265	Element, Booster (18KW, 208V/3PH).....	A/R
26	111266	Element, Booster (18KW, 240V/3PH).....	A/R
26	111265	Element, Booster (18KW, 380V/3PH) (Connected WYE).....	A/R
26	111266	Element, Booster (18KW, 415V/3PH) (Connected WYE).....	A/R
26	111267	Element, Booster (18KW, 480V/3PH).....	A/R
26	111600	Element, Booster (18KW, 575V/3PH).....	A/R
27	109985	O-Ring, Booster Element (one per element) .....	A/R

**\*SPECIAL NOTE:** Optional Electric Boosters are available in a number of TOTAL KILOWATT Configurations. Refer to the Chart below to determine the number of Booster tanks and total number of elements for the most common configurations.

<b>Total Kilowatt of Booster Tanks</b>	<b>Total Number of Booster Tanks</b>	<b>Total Number of Elements</b>	<b>Element Combinations</b>
23KW	1	3	(2) 9KW & (1) 5KW
27KW	1	3	(3) 9KW
36KW	1	3	(2) 9KW & (1) 18KW
45KW	2	5	(5) 9KW
54KW	2	6	(6) 9KW
63KW	2	7	(5) 9KW & (2) 18KW
72KW	3	8	(8) 9KW
57KW	2	6	(5) 9KW & (1) 12KW



## **STEAM BOOSTER**

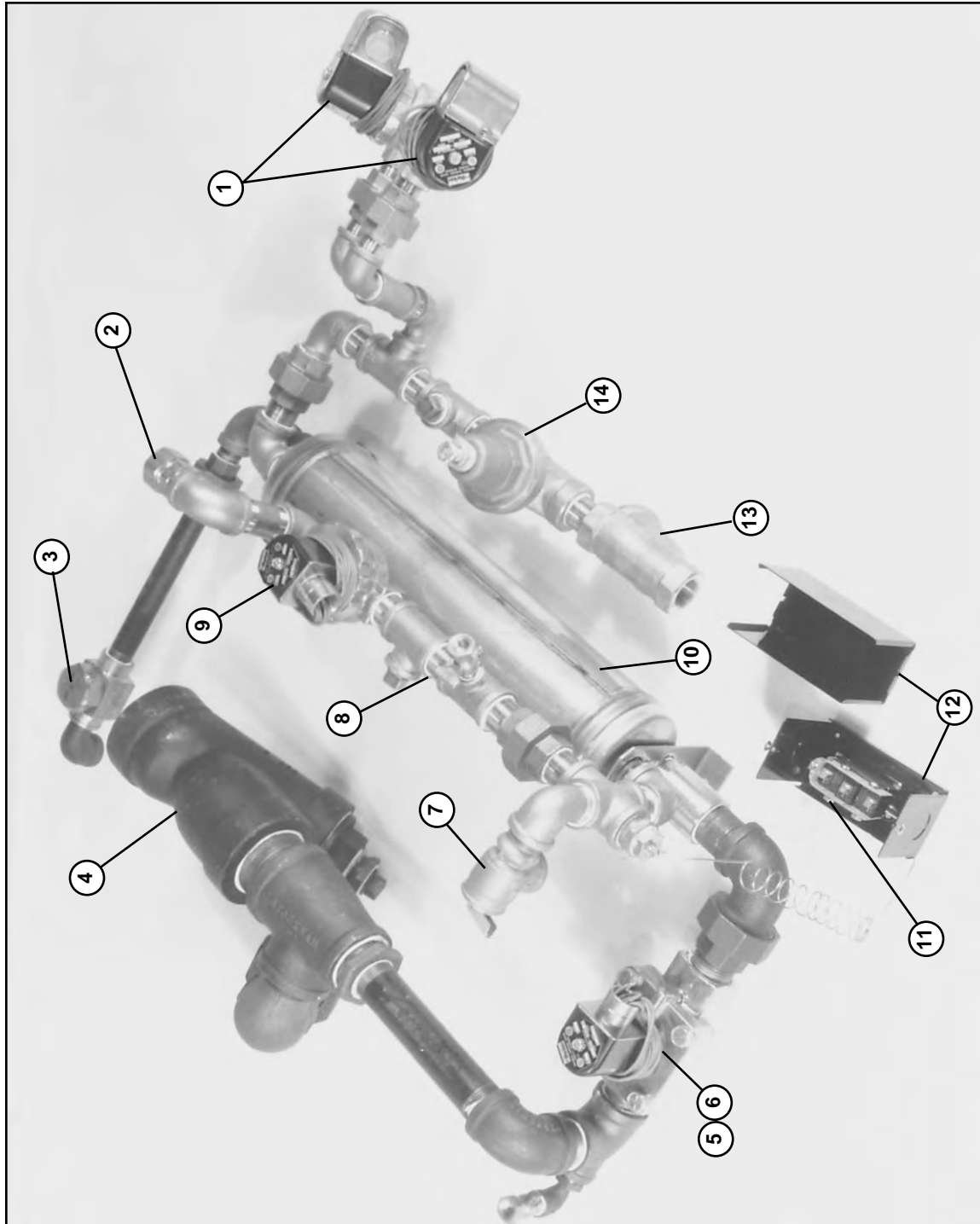
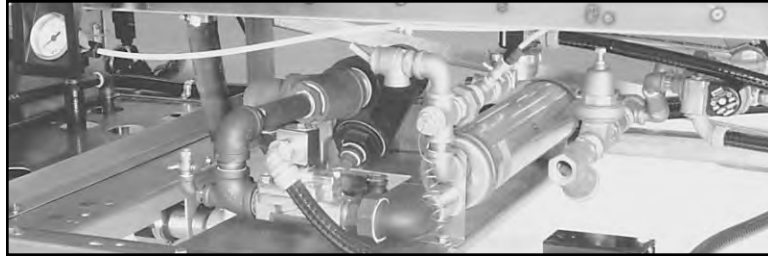


Figure 47 - Steam Booster

## STEAM BOOSTER

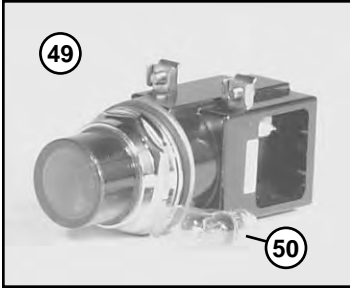
<b>Fig. 47 Item No.</b>	<b>Part No.</b>	<b>Part Description</b>	<b>Qty.</b>
1	109886	Valve, Solenoid (1/2").....	2
—	109902	Repair Kit, Solenoid Valve (1/2").....	1
—	108516	Coil, Solenoid Valve (1/2").....	1
2	109879	Fitting, Compression (7/8" OD X 3/4 NPT Male) .....	1
3	111380	Trap, Steam .....	1
4	106051	Strainer, Line (2").....	1
*5	109888	Valve, Steam Solenoid (1" Parker) UC-C/CW—Prior to S/N 85330	NLA
—	109904	Repair Kit (1" Parker) UC-C/CW—Prior to S/N 85330 .....	1
—	108516	Coil, Solenoid (1" Parker) UC-C/CW—Prior to S/N 85330.....	1
**6	110005	Valve Steam Solenoid (1" Asco) UC-C/CW—Beginning w/ S/N 85330	1
***6	105850	Nipple (1 X 2)—See Special Note*** .....	1
—	110007	Repair Kit (1" Asco) UC-C/CW—Beginning w/ S/N 85330....	1
—	110120	Coil, Solenoid (1" Asco) UC-C/CW—Beginning w/ S/N 85330	1
7	104649	Valve, Relief (3/4") .....	1
8	100123	Cock, Gauge (1/4") .....	1
9	111437	Valve, Solenoid, Hot Water (3/4") .....	1
—	109903	Repair Kit, Solenoid Valve (3/4").....	1
—	108516	Coil, Solenoid Valve (3/4").....	1
10	311653	Booster, Tank Assembly .....	1
11	109069	Thermostat, Control .....	1
12	107922	Box & Cover Assembly, Thermostat .....	1
13	110768	Strainer, Line (3/4") .....	1
14	107550	Valve, Pressure Reducing (3/4") .....	1
—	600752	Booster Assembly Complete (Includes Items 1-4, 6, 7-13) .....	1

**SPECIAL NOTES:**

- \* Prior to S/N 85330 all UC-C and UC-CW used P/N 109888, Parker 1" Steam Solenoid Valve which is no longer available. This valve has been replaced by an ASCO 1" Solenoid valve. Valve repair kits and replacement coils will still be available for the Parker 1" Steam Solenoid valve.
- \*\* Beginning with S/N 85330 and above all UC-C and UC-CW now use a P/N 110005, Asco 1" Steam Solenoid Valve.
- \*\*\* When replacing a Parker 1" Steam Valve with an Asco 1" Steam Valve order, P/N 105850, Nipple (1 X 2) to compensate for the difference in valve body size between the Parker and Asco valves.

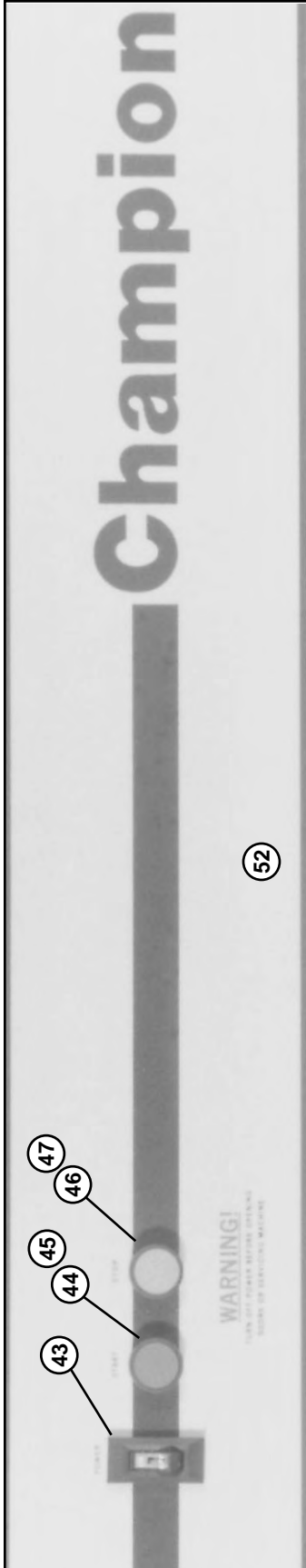


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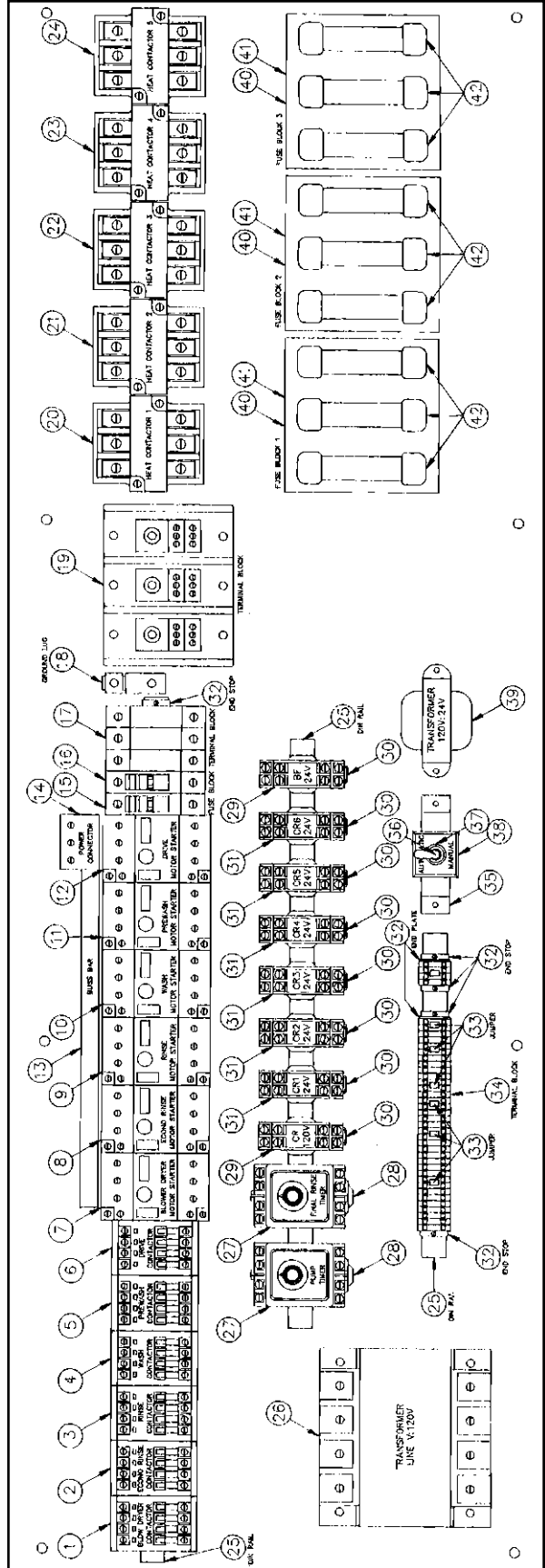


Figure 48 - Control Cabinet

## CONTROL CABINET

Fig. 48 Item No.	Part No.	Part Description	Qty.
1	111642	Contactor, (Motor)12A w/ Aux Switch (Opt. Steam Blower Dryer)	1
2	111642	Contactor, (Motor) 12A w/ Aux Switch (Opt. Econo Rinse) UC-CW Only	1
3	111642	Contactor, (Motor) 12A w/ Aux Switch (Power Rinse Pump Motor) ..	1
4	111642	Contactor, (Motor) 12A w/ Aux Switch (Wash Pump Motor) ..	1
5	111642	Contactor, (Motor) 12A w/ Aux Switch (Prewash Pump Motor)	1
6	111642	Contactor, (Motor) 12A w/ Aux Switch (Drive Motor) .....	1
7	111629	Overload, Motor Starter-2HP (Opt.Steam Blower Dryer) (208-240V/3PH)	1
7	111628	Overload, Motor Starter-2HP (Opt. Steam Blower Dryer) (380V/3PH)	1
7	111627	Overload, Motor Starter-2HP (Opt. Steam Blower Dryer) (415V/3PH)	1
7	111627	Overload, Motor Starter-2HP (Opt. Steam Blower Dryer) (480V/3PH)	1
7	111627	Overload, Motor Starter-2HP (Opt. Steam Blower Dryer) (575V/3PH)	1
8	111625	Overload, Motor Starter-1/4HP (Opt. EconoRinse) (208-240V/3PH) ...	1
8	111624	Overload, Motor Starter-1/4HP (Opt. EconoRinse) (380-415V/3PH) ...	1
8	111624	Overload, Motor Starter-1/4HP (Opt.EconoRinse) (480V/3PH)	1
8	111628	Overload, Motor Starter-1/4HP (Opt. EconoRinse) (575V/3PH)	1
9	111629	Overload, Motor Starter-3HP Power Rinse (208-240V/3PH) ...	1
9	111628	Overload, Motor Starter-3HP Power Rinse (380-415V/3PH) ...	1
9	111628	Overload, Motor Starter-3HP Power Rinse (480V/3PH) .....	1
9	111627	Overload, Motor Starter-3HP Power Rinse (575V/3PH) .....	1
10	111629	Overload, Motor Starter-3HP Wash (208-240V/3PH).....	1
10	111628	Overload, Motor Starter-3HP Wash (380-415V/3PH).....	1
10	111628	Overload, Motor Starter-3HP Wash (480V/3PH) .....	1
10	111627	Overload, Motor Starter-3HP Wash (575V/3PH) .....	1
11	111627	Overload, Motor Starter-1HP Prewash (208-240V/3PH) .....	1
11	111626	Overload, Motor Starter-1HP Prewash (380-415V/3PH) .....	1
11	111626	Overload, Motor Starter-1HP Prewash (480V/3PH) .....	1
11	111625	Overload, Motor Starter-1HP Prewash (575V/3PH) .....	1
11	112691	Overload, Motor Starter-2HP Prewash (208-240V/3PH) .....	1
11	111627	Overload, Motor Starter-2HP Prewash (380-415V/3PH) .....	1
11	111627	Overload, Motor Starter-2HP Prewash (480V/3PH) .....	1
11	112692	Overload, Motor Starter-2HP Prewash (575V/3PH) .....	1
11	111629	Overload, Motor Starter-3HP Prewash (208-240V/3PH) .....	1
11	111628	Overload, Motor Starter-3HP Prewash (380-415V/3PH) .....	1
11	111628	Overload, Motor Starter-3HP Prewash (480V/3PH) .....	1
11	111627	Overload, Motor Starter-3HP Prewash (575V/3PH) .....	1
12	111626	Overload, Motor Starter-1/2HP Drive (208-240V/3PH) .....	1
12	111625	Overload, Motor Starter-1/2HP Drive (380-415V/3PH) .....	1
12	111625	Overload, Motor Starter-1/2HP Drive (480V/3PH).....	1
12	111624	Overload, Motor Starter-1/2HP Drive (575V/3PH).....	1
13	111633	Bus Bar, 2 Unit.....	1
13	111671	Bus Bar, 3 Unit.....	1
13	111634	Bus Bar, 4 Unit.....	1
13	111635	Bus Bar, 5 Unit.....	1
14	111636	Power Connector, 3 Pole.....	1

## CONTROL CABINET (CONT.)

Fig. 48 Item No.	Part No.	Part Description	Qty.
15	111153	Fuse Block.....	2
16	111823	Fuse, 6A (208-240V) .....	2
16	111822	Fuse 5A (380-415V) .....	2
16	111821	Fuse 3A (480-575V) .....	2
17	110912	Block, Terminal (115 AMP) .....	1
18	103310	Wire Lug, Ground (Use with 115A Terminal Block) .....	1
18	103311	Wire Lug, Ground (Use with 200A or 310A Terminal Block) .	1
19	110971	Block, Terminal (200 AMP) .....	1
19	109014	Block, Terminal (310 AMP) .....	1
*20	105514	Contactor, (Heat-Electric) 50Amp 3 Pole.....	A/R
*20	103210	Contactor, (Heat-Electric) 60Amp 3 Pole.....	A/R
*21	105514	Contactor, (Heat-Electric) 50Amp 3 Pole.....	A/R
*21	103210	Contactor, (Heat-Electric) 60Amp 3 Pole.....	A/R
*22	105514	Contactor, (Heat-Electric) 50Amp 3 Pole.....	A/R
*22	103210	Contactor, (Heat-Electric) 60Amp 3 Pole.....	A/R
*23	105514	Contactor, (Heat-Electric) 50Amp 3 Pole.....	A/R
*23	103210	Contactor, (Heat-Electric) 60Amp 3 Pole.....	A/R
*24	105514	Contactor, (Heat-Electric) 50Amp 3 Pole.....	A/R
*24	103210	Contactor, (Heat-Electric) 60Amp 3 Pole.....	A/R
25	110849	Din Rail (Specify Length).....	A/R
26	107091	Transformer, Control 500VA (208-240V/3PH,480V/3PH) .....	1
26	109148	Transformer, Control 500VA (380-415V/3PH) .....	1
26	111046	Transformer, Control 500VA (575V/3PH).....	1
27	112351	Timer (0-6 Min.) beginning Serial No. 89120..... (Directly replaces Timer P/N 109338 used previously)	1
28	112352	Socket, Timer, beginning Serial No. 89120..... (Not necessary if replacing timer P/N 109338)	1
29	111068	Relay, 120VAC.....	1
30	111036	Socket, Relay (one per relay).....	A/R
31	111067	Relay, 24VAC.....	A/R
32	110900	End Stop, Din Rail .....	4
33	110901	Jumper, Terminal Block .....	A/R
34	110862	Block, Terminal.....	1
35	304326	Bracket, Switch .....	1
36	107198	Switch, Toggle (Bypass) .....	1
37	108370	Washer, Lock.....	1
38	104858	Nameplate (Automatic/Overload).....	1
39	111277	Transformer, Control (120VAC to 24VAC).....	1

**\*\*SPECIAL NOTE:**

Heat Contactors, Fuse Blocks, and Fuses depend on the Electric Heat Options installed.  
Refer to Figure 59 — UC Electric Tank Heat — page 122.

The Data Tables list: Total Tank Heater Kilowatts  
Recommended Contactor Amp Rating  
Required Fuse Rating

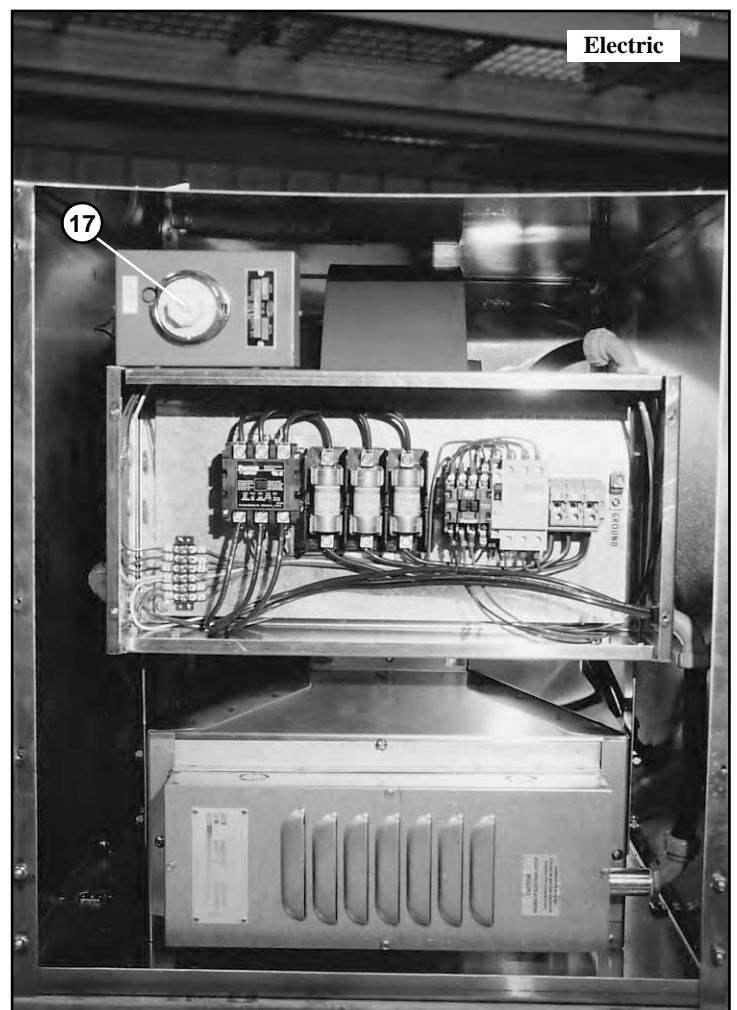
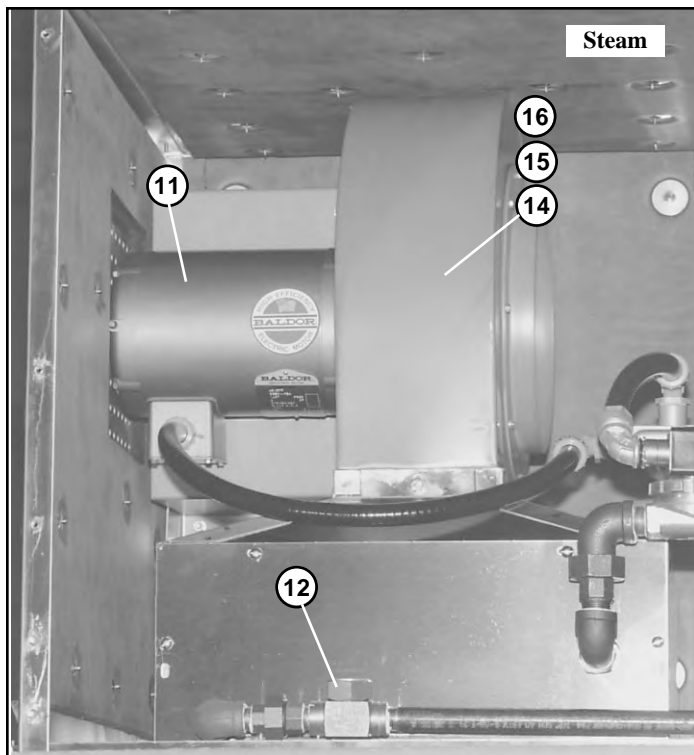
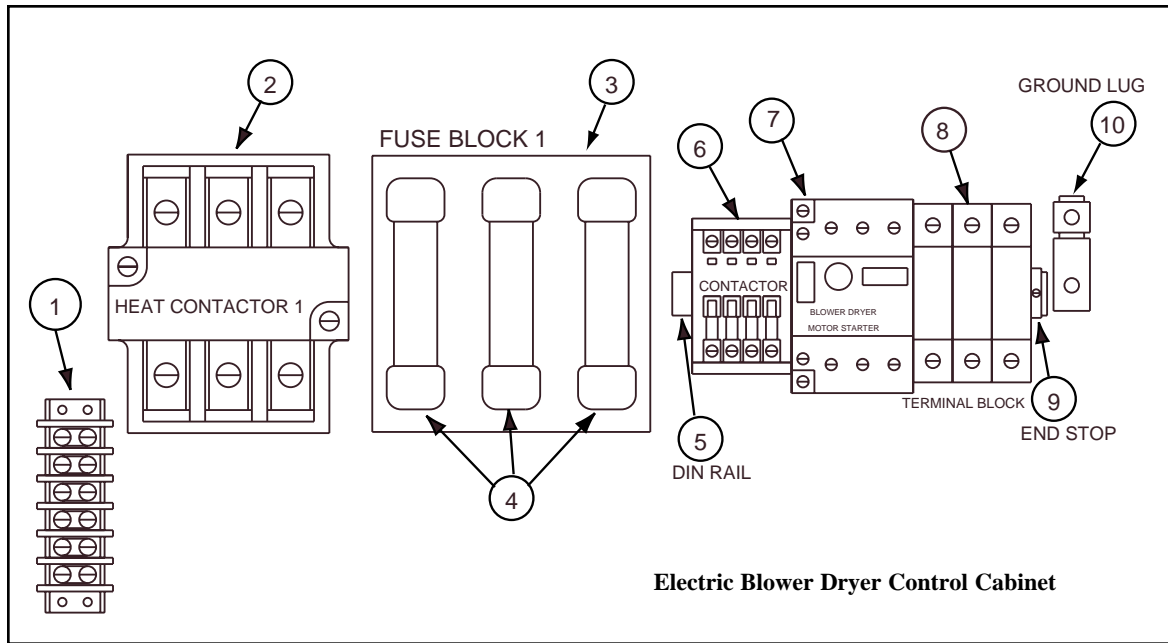
## CONTROL CABINET (CONT.)

<b>Fig. 48 Item No.</b>	<b>Part No.</b>	<b>Part Description</b>	<b>Qty.</b>
**40	180171	Fuse Block 600V (15Amp to 60Amp Fuse).....	A/R
**41	108424	Fuse Block 600V (70Amp to 100Amp Fuse).....	A/R
**42	111682	Fuse 15A (Class J) .....	A/R
**42	180243	Fuse 25A (Class J) .....	A/R
**42	111683	Fuse 30A (Class J) .....	A/R
**42	180172	Fuse 35A (Class J) .....	A/R
**42	180173	Fuse 40A (Class J) .....	A/R
**42	180174	Fuse 45A (Class J) .....	A/R
**42	180175	Fuse 50A (Class J) .....	A/R
**42	180176	Fuse 60A (Class J) .....	A/R
**42	180060	Fuse 70A (Class T) .....	A/R
**42	180059	Fuse 80A (Class T) .....	A/R
**42	108448	Fuse 90A (Class T) .....	A/R
**42	180042	Fuse 100A (Class T) .....	A/R
43	110844	Power Switch/Circuit Breaker 5A (Prior to S/N 86995).....	1
43	111980	Power Switch/Circuit Breaker 5A (Beginning with S/N 86995 and above).....	1
44	111614	Pushbutton-(Green)-Start .....	1
45	111617	Contact Block (NO) .....	1
46	111615	Pushbutton-(Red)-Stop.....	1
47	111616	Contact Block (NC) .....	1
48	100322	Optional Selector Switch (2 Position) .....	A/R
—	100305	Contact Block (NO), Selector Switch.....	1
—	100304	Contact Block (NC), Selector Switch .....	1
49	100302	Optional Pilot Lght.....	A/R
50	104759	Bulb, Pilot Light.....	1
51	107351	Optional Toggle Switch.....	1
52	111156	Decal (38"/48") .....	1

**\*\*SPECIAL NOTE:**

Heat Contactors, Fuse Blocks, and Fuses depend on the Electric Heat Options installed.  
Refer to Figure 59 — UC Electric Tank Heat — page 118.

The Data Tables list: Recommended Contactor Amp Rating  
Required Fuse Rating  
Total Tank Heater Kilowatts



**Note:**

**Steam Blower Dryer Electrical Control Components are located in Main Control Cabinet.**

(See Figure 48, Page 96 for Parts)

**Figure 49 - Blower Dryer (Optional)**



## OPTIONAL BLOWER DRYER (BD5)

Fig. 49 Item No.	Part No.	Part Description	Qty.
1	108272	Terminal Block.....	1
2	111231	Contactor, (Heat-Electric) 75A 3 Pole (208-240V/3PH).....	1
2	103210	Contactor, (Heat-Electric) 60A 3 Pole (380-415V/3PH).....	1
2	105514	Contactor, (Heat-Electric) 50A 3 Pole (480V/3PH).....	1
2	105514	Contactor, (Heat-Electric) 50A 3 Pole (575V/3PH).....	1
3	108424	Block, Fuse 600V (100Amp) (208-240V/3PH).....	1
3	180171	Block, Fuse 600V (60Amp) (380-415, 480, 575V/3PH).....	1
4	108448	Fuse 90A (JJN Class T) (208V/3PH) .....	3
4	180059	Fuse 80A (JJN Class T) (240V/3PH) .....	3
4	180176	Fuse 60A (A4J) (380-415V/3PH).....	3
4	180174	Fuse 45A (A4J) (480V/3PH) .....	3
4	180172	Fuse 35A (A4J) (575V/3PH) .....	3
5	204558	Din Rail .....	1
6	111642	Contactor, (Motor) 12A w/ Aux Switch (All Voltages).....	1
7	111629	Overload, Motor Starter-2HP (208-240V/60/3PH) .....	1
7	111628	Overload, Motor Starter-2HP (380-415V/60/3PH) .....	1
7	111627	Overload, Motor Starter-2HP (480V/60/3PH).....	1
7	111627	Overload, Motor Starter-2HP (575V/60/3PH).....	1
8	110912	Block, Terminal 115A.....	3
9	110900	End Stop .....	2
10	103310	Wire Lug, Ground .....	1
—	108338	Element, Heater (25KW, 208V/60/3PH) .....	1
—	108339	Element, Heater (25KW, 240V/60/3PH) .....	1
—	108340	Element, Heater (25KW, 480V/60/3PH) .....	1
—	111138	Element, Heater (25KW, 575V/60/3PH) .....	1
11	101201	Motor, Blower 2HP (208-240/480V/60/3PH) (Steam or Electric) (Prior to S/N 87550).....	1
11	111830	Motor, Blower 2HP (208-240/480V/60/3PH) (Steam or Electric) (Beginning with S/N 87550).....	1
11	180234	Motor, Blower 2HP (575V/60/3PH) (Steam or Electric) (Prior to S/N 87550).....	1
11	112111	Motor, Blower 2HP (575V/60/3PH) (Steam or Electric) (Beginning with S/N 87550).....	1
12	111380	Trap, Steam .....	1
13	109887	Valve, Solenoid (3/4") .....	1
—	109903	Repair Kit, Solenoid Valve (3/4") .....	1
—	108516	Coil, Solenoid Valve (3/4") .....	1
14	110150	Housing Assy, Blower (Steam or Electric) (Prior to S/N 87550).....	1
		Includes:	
		1 P/N 112032 Inlet Cone	1 P/N 112035 Pedestal, Drive
		1 112033 Housing Assy	1 112110 Inlet Cone, Shoulder
		1 112034 Upper Drive, Side	1 111992 Impeller
14	410865	Housing Assy, Blower (Steam or Electric) (Beginning with S/N 87550)	1
		Includes:	
		1 P/N 112032 Inlet Cone	1 P/N 112035 Pedestal
		1 112033 Housing Assy	1 111831 Impeller
		1 112034 Upper Drive, Side	
15	204788	Wheel, Blower (Clockwise) (R-L install) (Steam or Electric) .....	A/R
16	204787	Wheel, Blower (CCW) (L-R install) (Steam or Electric) .....	A/R
—	109987	Coil, Steam (Not Shown).....	1
17	108335	Thermostat.....	1

Note: See Appendix B, page 108 for instructions to convert a BD5 blower dryer built prior to S/N 87550 to a high pressure BD5.

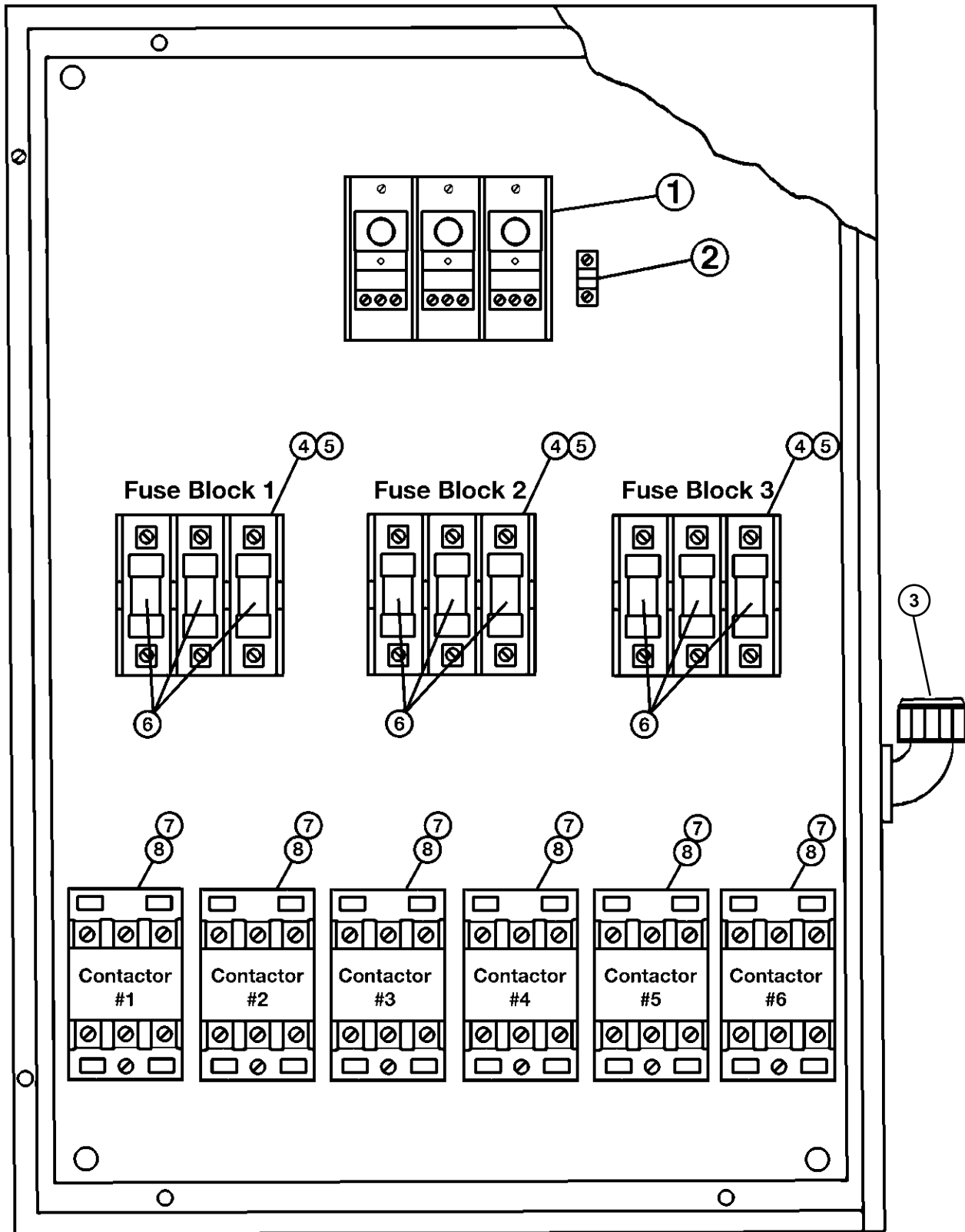


Figure 50 - Control Panel, Electric Booster

**CONTROL PANEL, ELECTRIC BOOSTER**

<b>Fig. 50 Item No.</b>	<b>Part No.</b>	<b>Part Description</b>	<b>Qty.</b>
1	109014	Block, Terminal 310A (All Voltages) .....	1
2	103310	Wire Lug, Ground .....	1
3	110920	Connector, Sealtite (1" X 90°) .....	1
4	108424	Block, Fuse 600V (100Amp) (208-240V/60/3PH).....	A/R
5	180171	Block, Fuse 600V (60Amp) (380-415, 480, 575V/60/3PH) .....	A/R
6	180172	Fuse 35A (Class J) .....	A/R
6	180173	Fuse 40A (Class J) .....	A/R
6	180174	Fuse 45A (Class J) .....	A/R
6	180175	Fuse 50A (Class J) .....	A/R
6	180176	Fuse 60A (Class J) .....	A/R
6	180060	Fuse 70A (Class T) .....	A/R
6	180059	Fuse 80A (Class T) .....	A/R
6	108448	Fuse 90A (Class T) .....	A/R
6	180042	Fuse 100A (Class T) .....	A/R
7	103210	Contactor, (Heat-Electric) 60A 3 Pole .....	A/R
8	105514	Contactor, (Heat-Electric) 50A 3 Pole .....	A/R

Refer to the Charts below for the Booster Cabinet Components for the 45KW, 54KW, 72KW and 81KW Electric Boosters.

Refer to the Booster Wiring Diagram charts for the 23KW, 27KW, 36KW, and 63KW Booster Component data.

**45KW Booster 208V**

<b>Component</b>	<b>Rating</b>	<b>P/N</b>
Contactor #1, 3	60A	103210
Contactor #2	50A	105514
Fuse Block #1, 2	100A	108424
Fuses for (Block #1)	100A	180042
Fuses for (Block #2)	70A	180060

**45KW Booster 240V**

<b>Component</b>	<b>Rating</b>	<b>P/N</b>
Contactor #1, 3	60A	103210
Contactor #2	50A	105514
Fuse Block #1, 2	100A	108424
Fuses for (Block #1)	90A	108448
Fuses for (Block #2)	70A	180060

**45KW Booster 380V**

<b>Component</b>	<b>Rating</b>	<b>P/N</b>
Contactor #1	60A	103210
Contactor #3	50A	105514
Fuse Block #1, 2	60A	180171
Fuses for (Block #1)	60A	180176
Fuses for (Block #2)	45A	180174

**45KW Booster 415V**

<b>Component</b>	<b>Rating</b>	<b>P/N</b>
Contactor #1	60A	103210
Contactor #3	50A	105514
Fuse Block #1, 2	60A	180171
Fuses for (Block #1)	60A	180176
Fuses for (Block #2)	45A	180174

## CONTROL PANEL, ELECTRIC BOOSTER (CONT.)

**45KW Booster 480V**

Component	Rating	P/N
Contactora #1	50A	105514
Contactora #3	50A	105514
Fuse Block #1, 2	60A	180171
Fuses for (Block #1 )	50A	180175
Fuses for (Block #2)	35A	180172

**54KW Booster 208V**

Component	Rating	P/N
Contactora #1, 3	60A	103210
Contactora #2, 4	50A	105514
Fuse Block #1, 2	100A	108424
Fuses for (Block #1 )	100A	180042
Fuses for (Block #2)	100A	180042

**54KW Booster 380V**

Component	Rating	P/N
Contactora #1	60A	103210
Contactora #3	60A	103210
Fuse Block #1, 2	60A	180171
Fuses for (Block #1 )	60A	180176
Fuses for (Block #2)	60A	180176

**54KW Booster 480V**

Component	Rating	P/N
Contactora #1	50A	105514
Contactora #3	50A	105514
Fuse Block #1, 2	60A	180171
Fuses for (Block #1 )	45A	180174
Fuses for (Block #2)	45A	180174

**72KW Booster 208V**

Component	Rating	P/N
Contactora #1, 2	60A	103210
Contactora #3, 4	60A	103210
Fuse Block #1, 2, 3, 4	100A	108424
Fuses for (Block #1, 2)	70A	180060
Fuses for (Block #2, 4)	70A	180060

**45KW Booster 575V**

Component	Rating	P/N
Contactora #1	50A	105514
Contactora #3	50A	105514
Fuse Block #1, 2	60A	180171
Fuses for (Block #1)	35A	180172
Fuses for (Block #2)	35A	180172

**54KW Booster 240V**

Component	Rating	P/N
Contactora #1, 3	60A	103210
Contactora #2, 4	50A	105514
Fuse Block #1, 2	100A	108424
Fuses for (Block #1)	90A	108448
Fuses for (Block #2)	90A	108448

**54KW Booster 415V**

Component	Rating	P/N
Contactora #1	60A	103210
Contactora #3	60A	103210
Fuse Block #1, 2	60A	180171
Fuses for (Block #1)	60A	180176
Fuses for (Block #2)	60A	180176

**54KW Booster 575V**

Component	Rating	P/N
Contactora #1	50A	105514
Contactora #3	50A	105514
Fuse Block #1, 2	60A	180171
Fuses for (Block #1)	35A	180172
Fuses for (Block #2)	35A	180172

**72KW Booster 240V**

Component	Rating	P/N
Contactora #1, 2	60A	103210
Contactora #3, 4	60A	103210
Fuse Block #1, 2, 3, 4	100A	108424
Fuses for (Block #1, 2)	70A	180060
Fuses for (Block #2, 4)	70A	180060

## CONTROL PANEL, ELECTRIC BOOSTER (CONT.)

72KW Booster 380V

Component	Rating	P/N
Contactora #1, 2	50A	105514
Contactora #3, 4	50A	105514
Fuse Block #1, 2, 3, 4	60A	180171
Fuses for (Block #1, 2)	45A	180176
Fuses for (Block #2, 4)	45A	180176

72KW Booster 480V

Component	Rating	P/N
Contactora #1	60A	103210
Contactora #3	60A	103210
Fuse Block #1, 3	60A	180171
Fuses for (Block #1)	60A	180176
Fuses for (Block #3)	60A	180176

81KW Booster 208V

Component	Rating	P/N
Contactora #1, 3, 5	60A	103210
Contactora #2, 4, 6	50A	105514
Fuse Block #1, 2, 3	100A	108424
Fuses for (Block #1, 2)	100A	180042
Fuses for (Block #3)	100A	180042

81KW Booster 380V

Component	Rating	P/N
Contactora #1, 3	60A	103210
Contactora #5	60A	103210
Fuse Block #1, 2, 3	60A	180171
Fuses for (Block #1, 2)	60A	180176
Fuses for (Block #3)	60A	180176

81KW Booster 480V

Component	Rating	P/N
Contactora #1, 3	50A	105514
Contactora #5	50A	105514
Fuse Block #1, 2, 3	60A	180171
Fuses for (Block #1, 2)	45A	180174
Fuses for (Block #3)	45A	180174

72KW Booster 415V

Component	Rating	P/N
Contactora #1, 2	50A	105514
Contactora #3, 4	50A	105514
Fuse Block #1, 2, 3, 4	60A	180171
Fuses for (Block #1, 2)	35A	180172
Fuses for (Block #2, 4)	35A	180172

72KW Booster 575V

Component	Rating	P/N
Contactora #1	50A	105514
Contactora #3	50A	105514
Fuse Block #1, 3	60A	180171
Fuses for (Block #1)	45A	180174
Fuses for (Block #3)	45A	180174

81KW Booster 240V

Component	Rating	P/N
Contactora #1, 3, 5	60A	103210
Contactora #2, 4, 6	50A	105514
Fuse Block #1, 2, 3	100A	108424
Fuses for (Block #1, 2)	90A	108448
Fuses for (Block #3)	90A	108448

81KW Booster 415V

Component	Rating	P/N
Contactora #1, 3	60A	103210
Contactora #5	60A	103210
Fuse Block #1, 2, 3	60A	180171
Fuses for (Block #1, 2)	60A	180176
Fuses for (Block #3)	60A	180176

81KW Booster 575V

Component	Rating	P/N
Contactora #1, 3	50A	105514
Contactora #5	50A	105514
Fuse Block #1, 2, 3	60A	180171
Fuses for (Block #1, 2)	45A	180174
Fuses for (Block #3)	45A	180174

## **APPENDIXES**

## APPENDIX A

### EconoRinse Section (E2)

- This Option is for the UC-CW only. The EconoRinse section is installed between the power rinse section and the unload section. It is designed to capture and recirculate the final rinse water one additional time before it is used in the rest of the machine. The section measures 2 feet in length and is equipped with a 1/4-HP pump motor. Machines equipped with the EconoRinse section carry the model number UC-CW-WS. The WS stands for Water Saver.

### Curtain Location

- The E2 section contains one curtain located in the center of the section. The curtain measures 32" X 10" and hangs from hooks located in the top of the hood.

### EconoRinse Spray Pipes

- Two quick-release stainless steel spray pipes, (upper and lower) are located at the entrance end of the E2 section. The spray pipes have removable caps for fast cleaning.

### Tank Heat

- The E2 tank heat options are available in either electric or steam. Electric tank heat uses a single 15KW heater element. Steam tank heat uses a steam coil or injector.  
**THE PROPER TANK HEAT TEMPERATURE SETTING IS 170°F.**

### Operation

- The EconoRinse 1/4 HP Recirculating Pump runs ONLY when the final rinse operates.
1. Flip the main power switch on the front of the control cabinet to "ON". The Red light will illuminate.
  2. Press the Green start button. The conveyor belt will begin to move.
  3. Place an object on the conveyor belt. When an object on the belt enters the tunnel at the load end of the machine it breaks the electric eye beam.
    - The prewash, wash, and power rinse pumps run.
    - The E2 pump DOES NOT run at this time.
  4. The Final Rinse Timer controls the operation of the E2 1/4HP pump.
    - As an object on the conveyor nears the EconoRinse section the Final Rinse Timer times out.
    - The EconoRinse pump will run. The final rinse will operate as well.
  5. The EconoRinse pump will stop at the same time as the final rinse. In addition,
    - If the conveyor shut-off shelf is moved to the OFF position, the E2 pump will stop. When the shut-off shelf is returned to the ON position, the E2 pump will run until the final rinse stops.
  6. If the Electric Eye Bypass Switch located inside the main control cabinet is placed in the Manual position, the E2 pump will run constantly along with the other pumps whenever the Green start button is operated.

## APPENDIX B

### Door Safety Switch and Magnet Mounting

Beginning with serial number 87589 and above, the upright conveyor door safety switch magnets will be installed on the inside edge of the door.

The door safety magnetic reed switch will be mounted on the outside of the machine behind a redesigned cover close to the door safety switch magnet.

Refer to Fig. 1 and the parts list below for the component parts.

Item No.	Part No.	Description	Qty.
1	319991-2	Cover, door safety magnetic reed switch	1
2	111478	Bolt (10-32 X 1/2 Hex hd)	1
3	108954	Nut, grip (6-32 w/nylon insert)	6
4	111090	Switch, magnetic reed	1
5	319993	Plate, cover mounting	1
6	111026	Magnet, door safety switch	1
7	100007	Screw (10-32 X 3/8 Truss hd)	2
8	106486	Washer, lock (10-32 split)	2

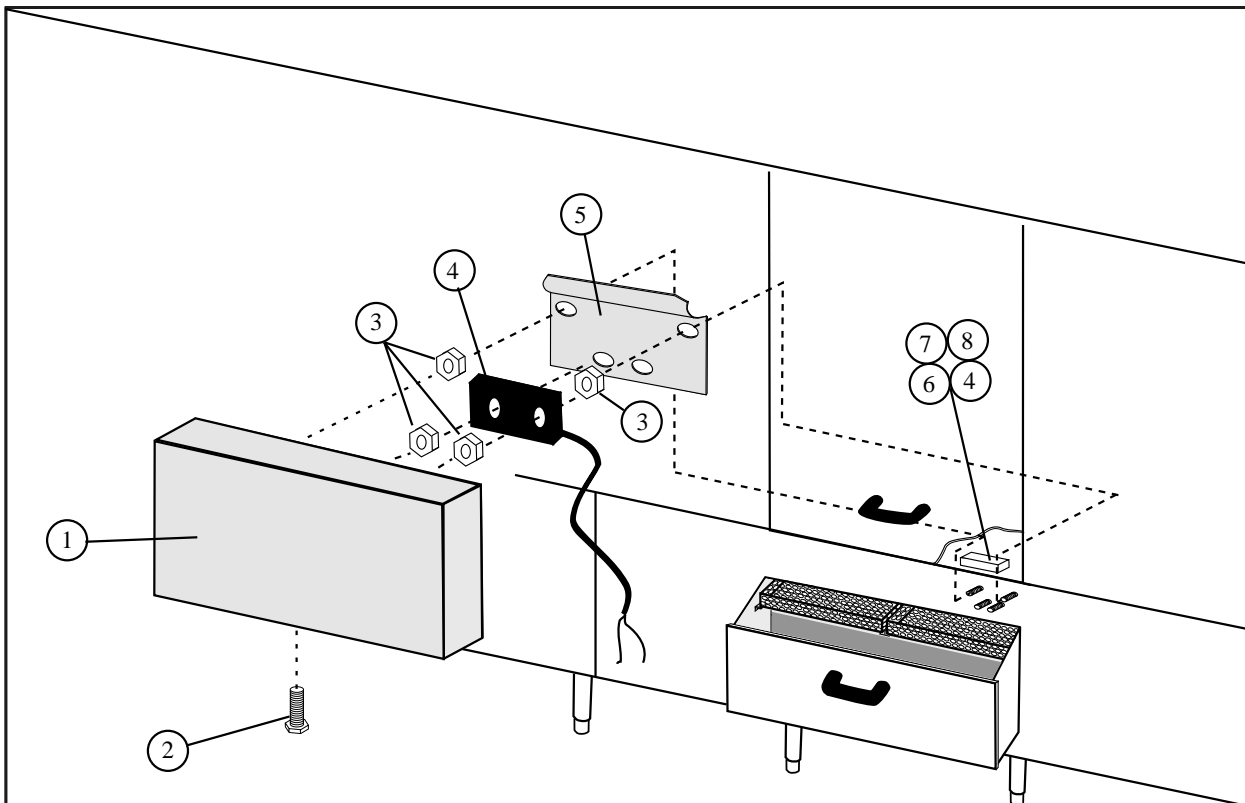
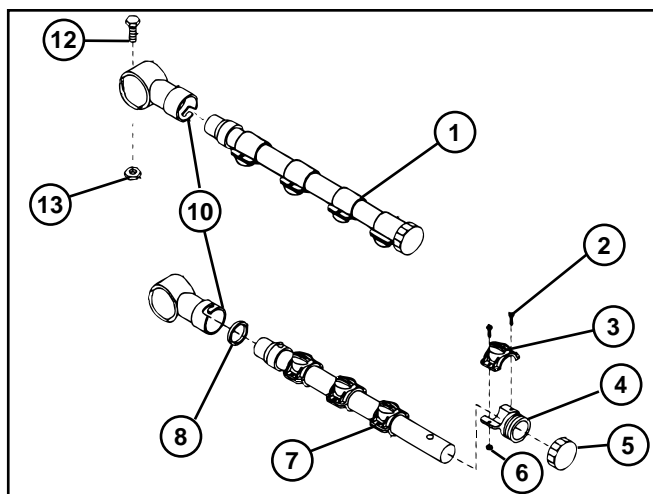


Figure 1- Door Safety Switch and Magnet

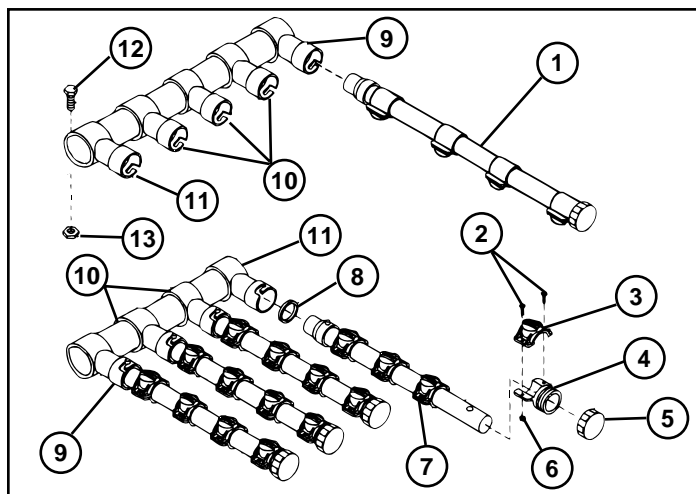


## APPENDIX C

### Prewash and Wash/Rinse Spraypipes



**B2 Prewash Spraypipes**



**B4 Prewash & C3/C4 Wash/Rinse Spraypipes**

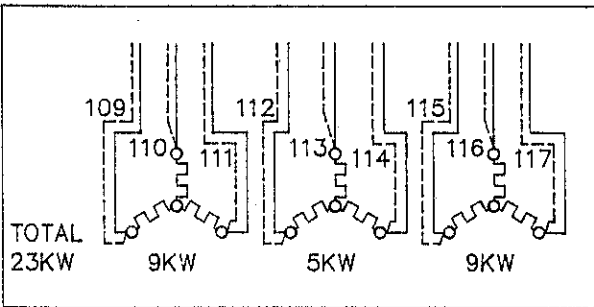
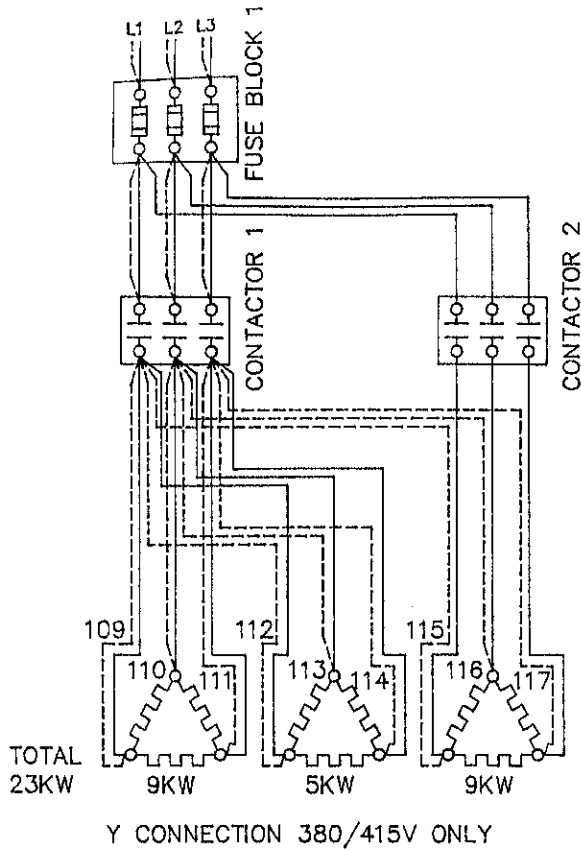
Item No.	Part No.	Description	Qty.
1	401511	Spraypipe Assembly UC-C B2	2
1	401512	Spraypipe Assembly UC-CW B2	2
1	401511	Spraypipe Assembly UC-C C3	7
1	401512	Spraypipe Assembly UC-CW C3	7
1	401511	Spraypipe Assembly UC-C B4/C4	9
1	401512	Spraypipe Assembly UC-CW B4/C4	9
2	108442	Bolt (M5 x 15MM) (Per Nozzle)	2
3	108446	Nozzle Top (Per Nozzle)	1
4	108445	Cap Adapter (Per Spraypipe)	1
5	108447	End Cap, Spraypipe (Per Spraypipe)	1
6	108441	Nut, Hex (M5) (Per Nozzle)	2
7	108444	Nozzle Bottom (Per Nozzle)	1
*	900779	Nozzle Kit, Inner (Includes Items 2, 3, 6 & 7)	
*	900780	Nozzle Kit, End, Less Cap (Includes Items 2, 3, 4 & 6)	
8	108443	O-Ring, Spraypipe (Per Spraypipe)	1
9	108847	Quick Coupler #1, UC-C/CW B4/C3/C4	2
10	108416	Quick Coupler #2, UC-C/CW B2	2
10	108416	Quick Coupler #2, UC-C/CW C3	3
10	108416	Quick Coupler #2, UC-C/CW B4/C4	5
11	108846	Quick Coupler #3, UC-C/CW B4/C3/C4	2
12	100735	Bolt (1/4-20 x 5/8 Hex SS) (Per Quick Coupler)	1
13	100141	Nut, 1/4-20 Grip SS (Per Quick Coupler)	1

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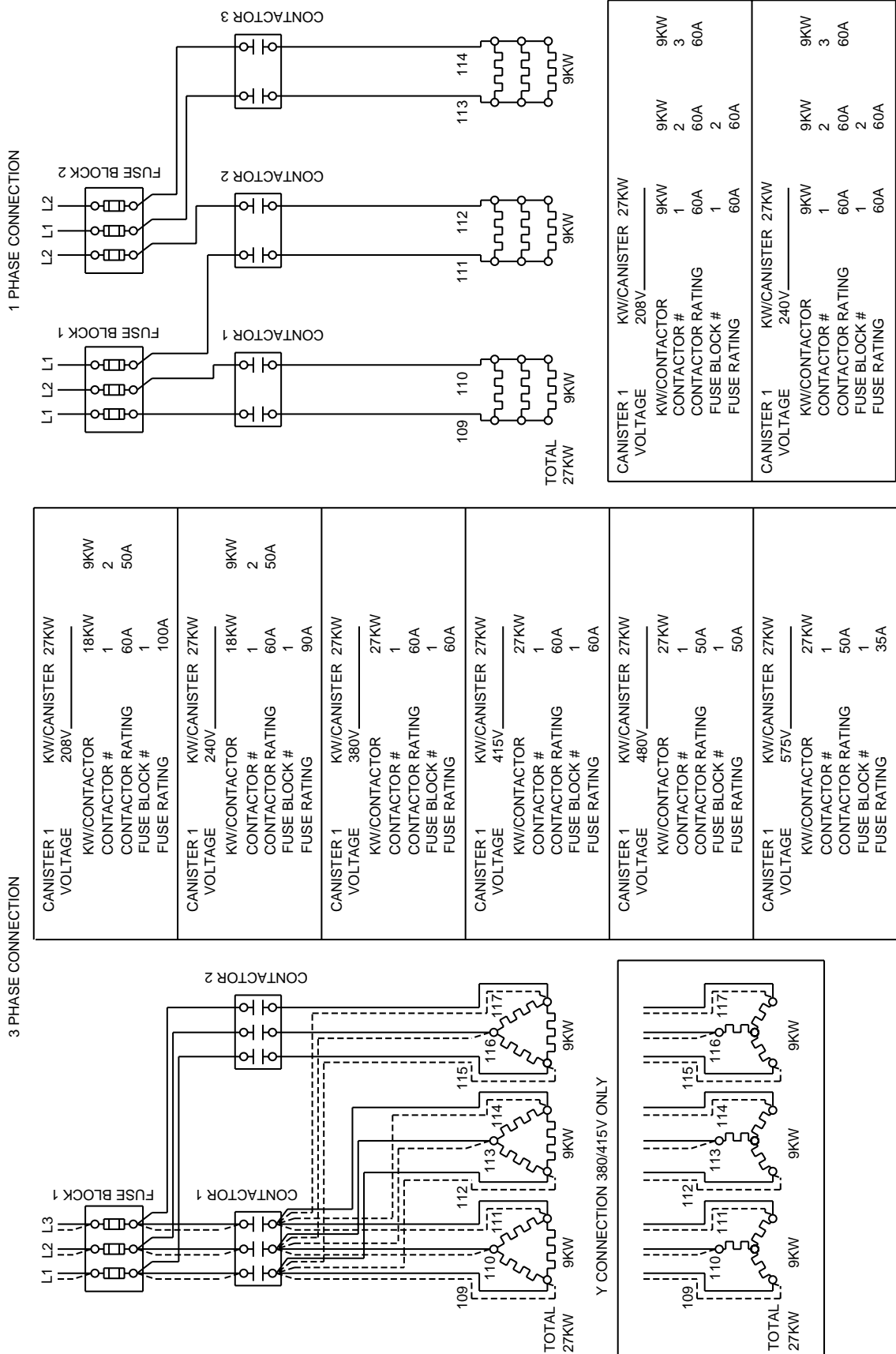
## WIRING DIAGRAMS

3 PHASE CONNECTION



CANISTER 1	KW/CANISTER	23KW	
VOLTAGE	208V		
KW/CONTACTOR	14KW	9KW	
CONTACTOR #	1	2	
CONTACTOR RATING	50A	50A	
FUSE BLOCK #	1		
FUSE RATING	80A		
CANISTER 1	KW/CANISTER	23KW	
VOLTAGE	240V		
KW/CONTACTOR	14KW	9KW	
CONTACTOR #	1	2	
CONTACTOR RATING	50A	50A	
FUSE BLOCK #	1		
FUSE RATING	80A		
CANISTER 1	KW/CANISTER	23KW	
VOLTAGE	380V		
KW/CONTACTOR	23KW		
CONTACTOR #	1		
CONTACTOR RATING	50A		
FUSE BLOCK #	1		
FUSE RATING	45A		
CANISTER 1	KW/CANISTER	23KW	
VOLTAGE	415V		
KW/CONTACTOR	23KW		
CONTACTOR #	1		
CONTACTOR RATING	50A		
FUSE BLOCK #	1		
FUSE RATING	45A		
CANISTER 1	KW/CANISTER	23KW	
VOLTAGE	480V		
KW/CONTACTOR	23KW		
CONTACTOR #	1		
CONTACTOR RATING	50A		
FUSE BLOCK #	1		
FUSE RATING	35A		
CANISTER 1	KW/CANISTER	23KW	
VOLTAGE	575V		
KW/CONTACTOR	23KW		
CONTACTOR #	1		
CONTACTOR RATING	50A		
FUSE BLOCK #	1		
FUSE RATING	35A		

Figure 51 - Electric Booster - 23 KW



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Figure 52 - Electric Booster - 27 KW

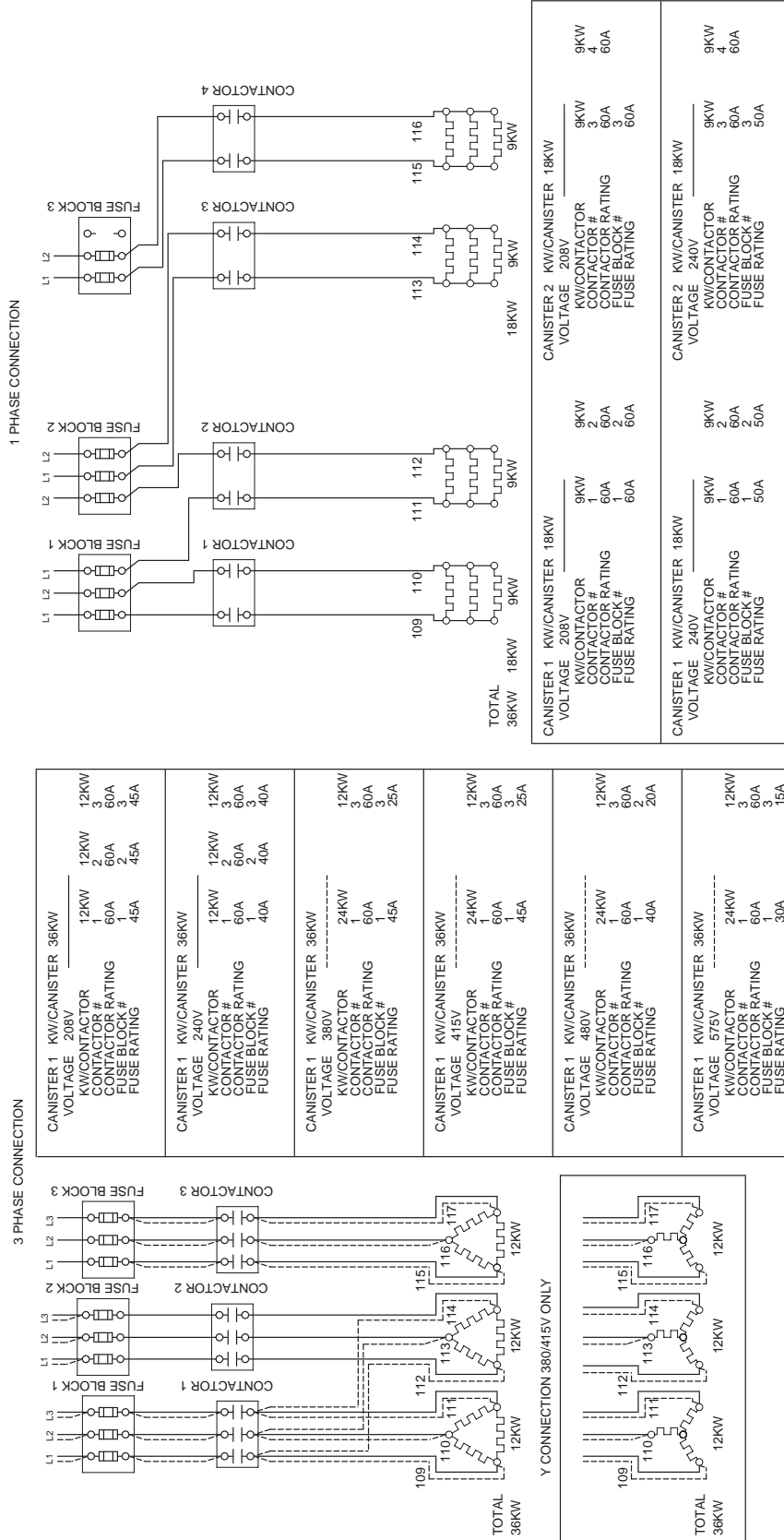


Figure 53 - Electric Booster - 36 KW

<p>CANISTER 1 KW/CANISTER 27KW VOLTAGE 208V KW/CONTACTOR 18KW CONTACTOR # RATING 60A FUSE BLOCK # RATING 100A</p>	<p>CANISTER 2 KW/CANISTER 18KW VOLTAGE 208V KW/CONTACTOR 18KW CONTACTOR # RATING 60A FUSE BLOCK # RATING 70A</p>
<p>CANISTER 1 KW/CANISTER 27KW VOLTAGE 240V KW/CONTACTOR 18KW CONTACTOR # RATING 60A FUSE BLOCK # RATING 90A</p>	<p>CANISTER 2 KW/CANISTER 18KW VOLTAGE 240V KW/CONTACTOR 18KW CONTACTOR # RATING 60A FUSE BLOCK # RATING 70A</p>
<p>CANISTER 1 KW/CANISTER 27KW VOLTAGE 380V KW/CONTACTOR 27KW CONTACTOR # RATING 60A FUSE BLOCK # RATING 60A</p>	<p>CANISTER 2 KW/CANISTER 18KW VOLTAGE 380V KW/CONTACTOR 18KW CONTACTOR # RATING 60A FUSE BLOCK # RATING 45A</p>
<p>CANISTER 1 KW/CANISTER 27KW VOLTAGE 415V KW/CONTACTOR 27KW CONTACTOR # RATING 60A FUSE BLOCK # RATING 60A</p>	<p>CANISTER 2 KW/CANISTER 18KW VOLTAGE 415V KW/CONTACTOR 18KW CONTACTOR # RATING 60A FUSE BLOCK # RATING 45A</p>
<p>CANISTER 1 KW/CANISTER 27KW VOLTAGE 480V KW/CONTACTOR 27KW CONTACTOR # RATING 50A FUSE BLOCK # RATING 50A</p>	<p>CANISTER 2 KW/CANISTER 18KW VOLTAGE 480V KW/CONTACTOR 18KW CONTACTOR # RATING 50A FUSE BLOCK # RATING 35A</p>
<p>CANISTER 1 KW/CANISTER 27KW VOLTAGE 575V KW/CONTACTOR 27KW CONTACTOR # RATING 50A FUSE BLOCK # RATING 35A</p>	<p>CANISTER 2 KW/CANISTER 18KW VOLTAGE 575V KW/CONTACTOR 18KW CONTACTOR # RATING 50A FUSE BLOCK # RATING 35A</p>

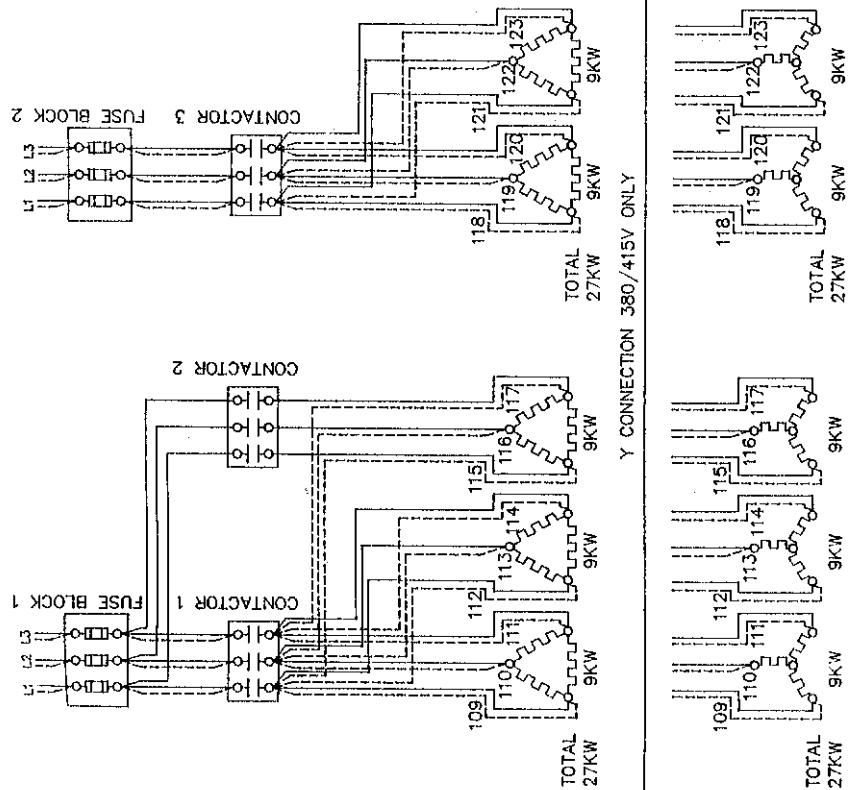
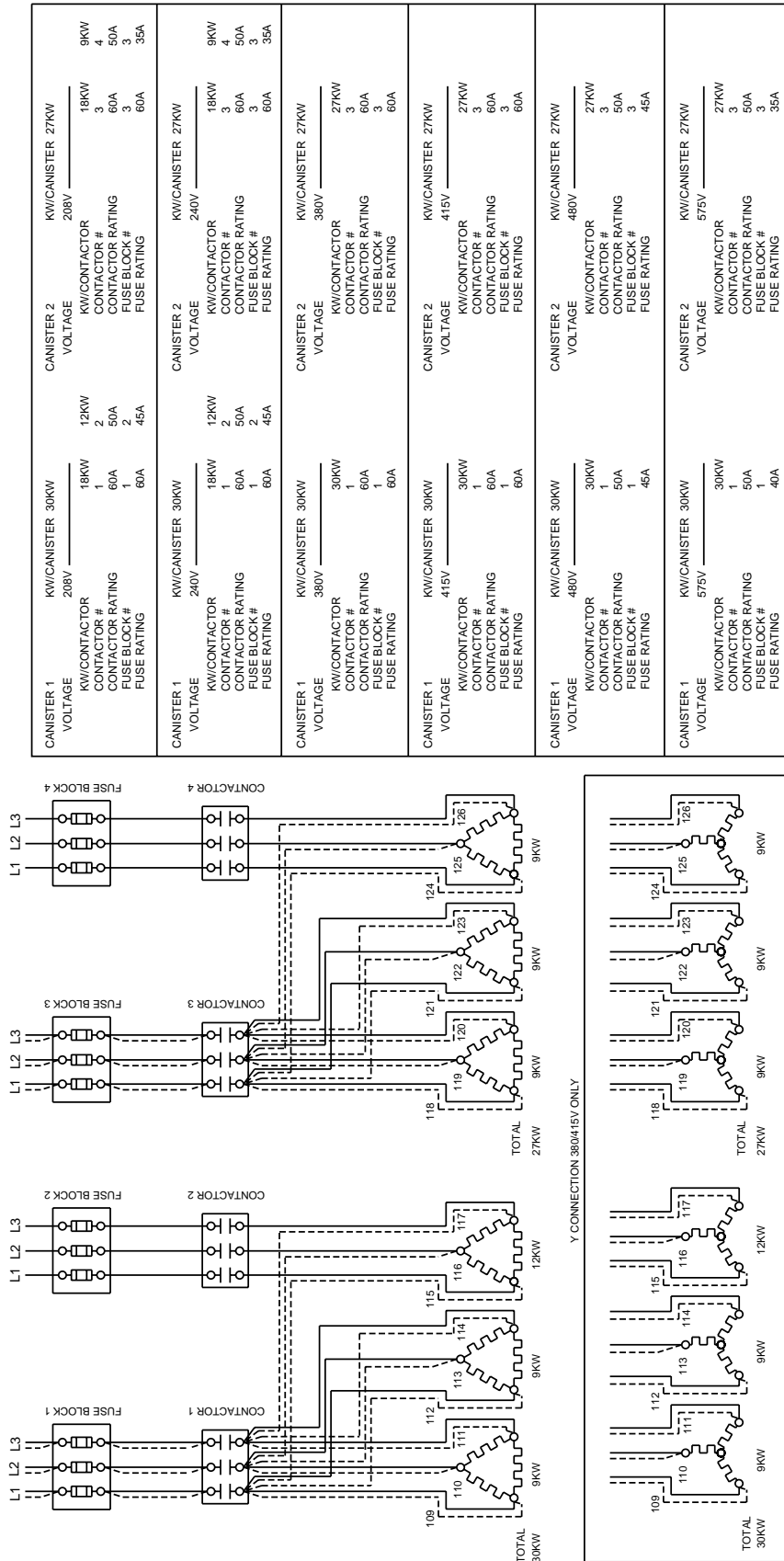


Figure 54 - Electric Booster - 45 KW



CANISTER 1		CANISTER 2	
VOLTAGE	KW/CANISTER	VOLTAGE	KW/CANISTER
208V	30KW	208V	27KW
KW/CONTACTOR	18KW	KW/CONTACTOR	18KW
CONTACTOR #	1	CONTACTOR #	3
FUSE BLOCK #	60A	FUSE BLOCK #	60A
FUSE RATING	60A	FUSE RATING	60A
		FUSE RATING	35A
CANISTER 1		CANISTER 2	
VOLTAGE	KW/CANISTER	VOLTAGE	KW/CANISTER
240V	30KW	240V	27KW
KW/CONTACTOR	18KW	KW/CONTACTOR	18KW
CONTACTOR #	1	CONTACTOR #	3
FUSE BLOCK #	60A	FUSE BLOCK #	60A
FUSE RATING	60A	FUSE RATING	60A
		FUSE RATING	35A
CANISTER 1		CANISTER 2	
VOLTAGE	KW/CANISTER	VOLTAGE	KW/CANISTER
380V	30KW	380V	27KW
KW/CONTACTOR	30KW	KW/CONTACTOR	27KW
CONTACTOR #	1	CONTACTOR #	3
FUSE BLOCK #	60A	FUSE BLOCK #	60A
FUSE RATING	60A	FUSE RATING	60A
		FUSE RATING	60A
CANISTER 1		CANISTER 2	
VOLTAGE	KW/CANISTER	VOLTAGE	KW/CANISTER
415V	30KW	415V	27KW
KW/CONTACTOR	30KW	KW/CONTACTOR	27KW
CONTACTOR #	1	CONTACTOR #	3
FUSE BLOCK #	60A	FUSE BLOCK #	60A
FUSE RATING	60A	FUSE RATING	60A
		FUSE RATING	60A
CANISTER 1		CANISTER 2	
VOLTAGE	KW/CANISTER	VOLTAGE	KW/CANISTER
480V	30KW	480V	27KW
KW/CONTACTOR	30KW	KW/CONTACTOR	27KW
CONTACTOR #	1	CONTACTOR #	3
FUSE BLOCK #	50A	FUSE BLOCK #	50A
FUSE RATING	45A	FUSE RATING	45A
		FUSE RATING	45A
CANISTER 1		CANISTER 2	
VOLTAGE	KW/CANISTER	VOLTAGE	KW/CANISTER
575V	30KW	575V	27KW
KW/CONTACTOR	30KW	KW/CONTACTOR	27KW
CONTACTOR #	1	CONTACTOR #	3
FUSE BLOCK #	50A	FUSE BLOCK #	50A
FUSE RATING	40A	FUSE RATING	35A
		FUSE RATING	35A

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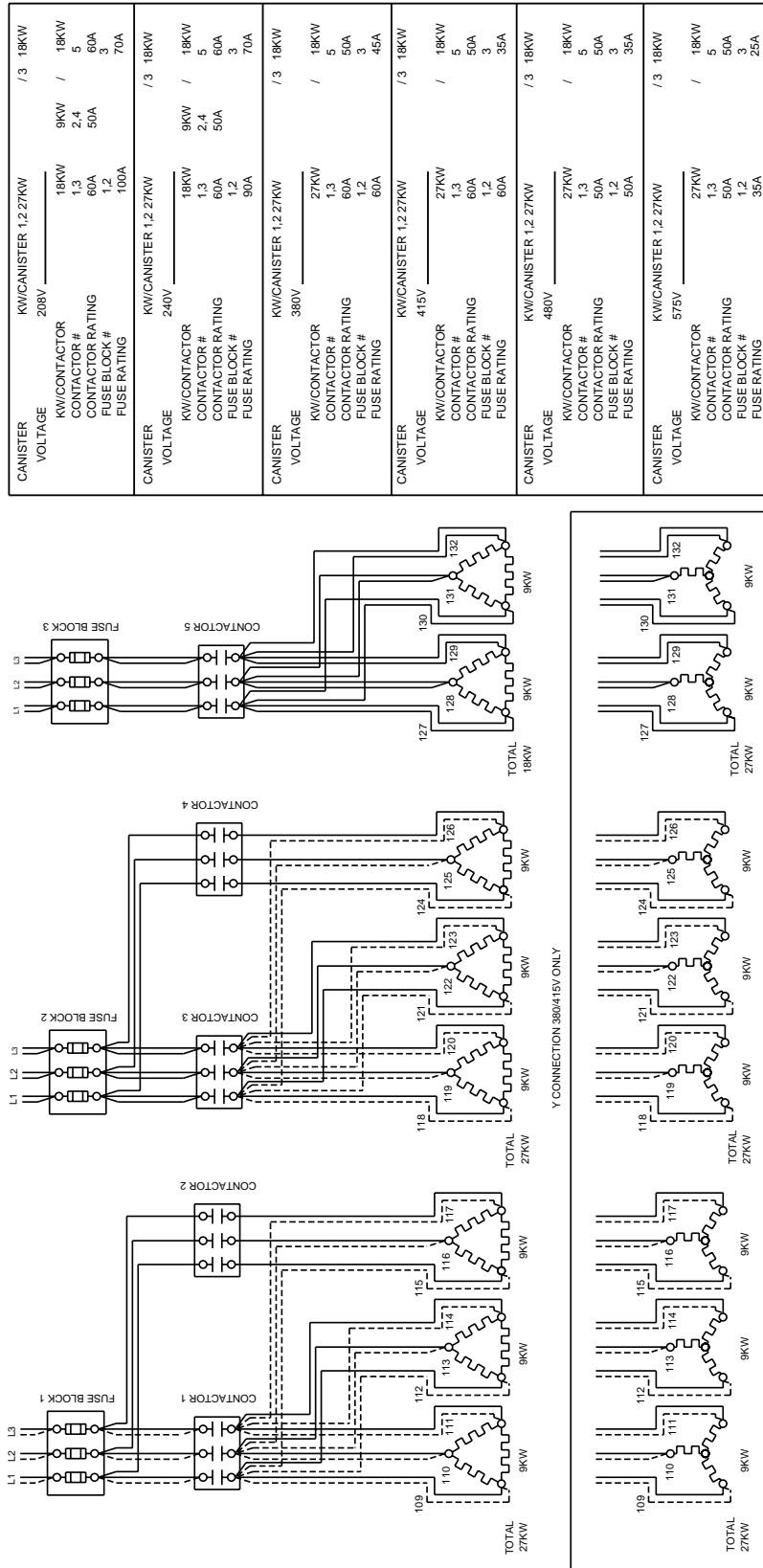
Figure 55 - Electric Booster - 57 KW



**The 54KW and the 63KW Electric Booster  
are no longer available.**

**They have been replaced by  
The 57KW Electric Booster.**

**Refer to Figure 55, Page 118  
for 57KW Diagram.**



B700847/B

Figure 57 - Electric Booster - 72 KW

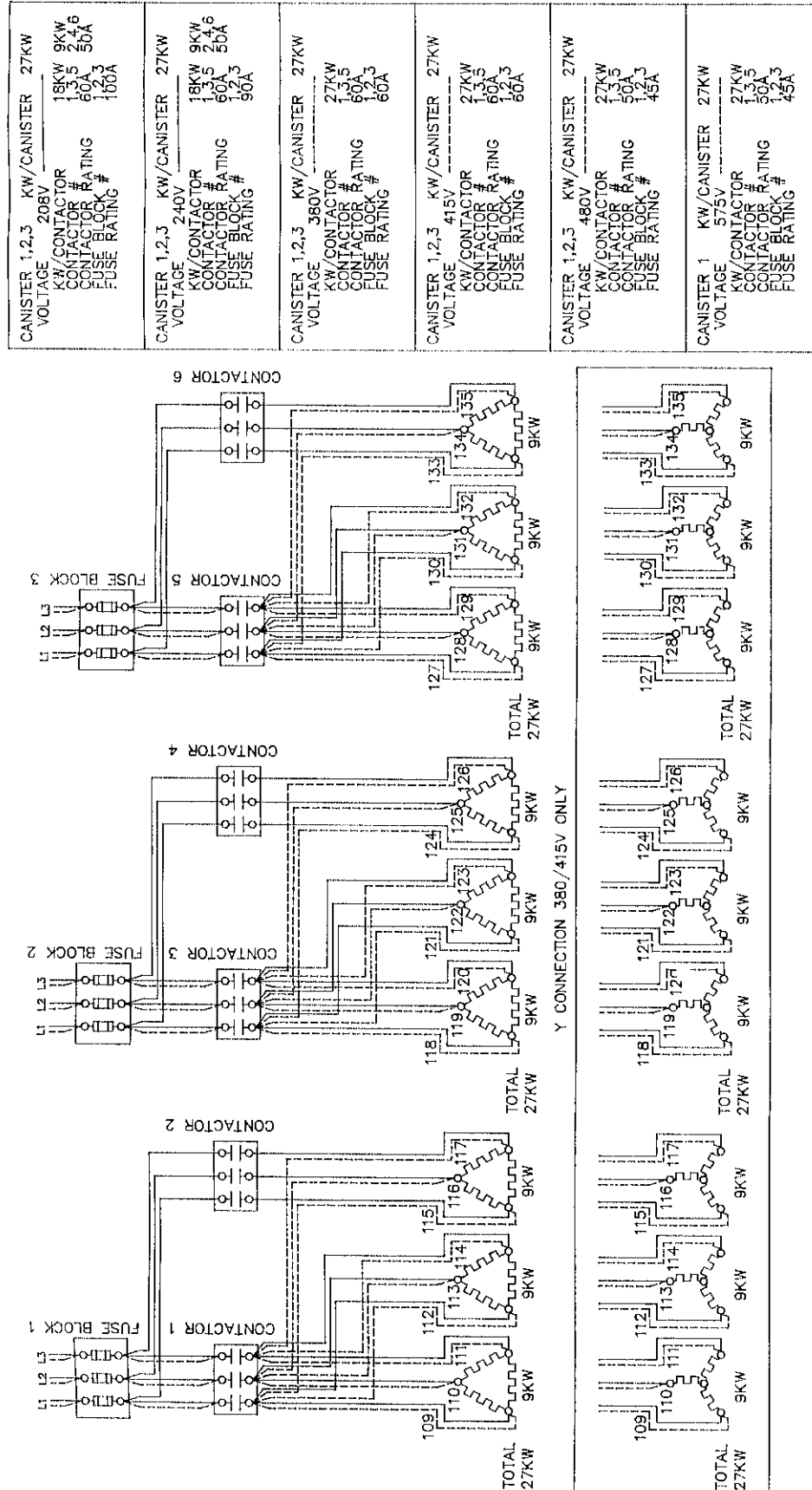
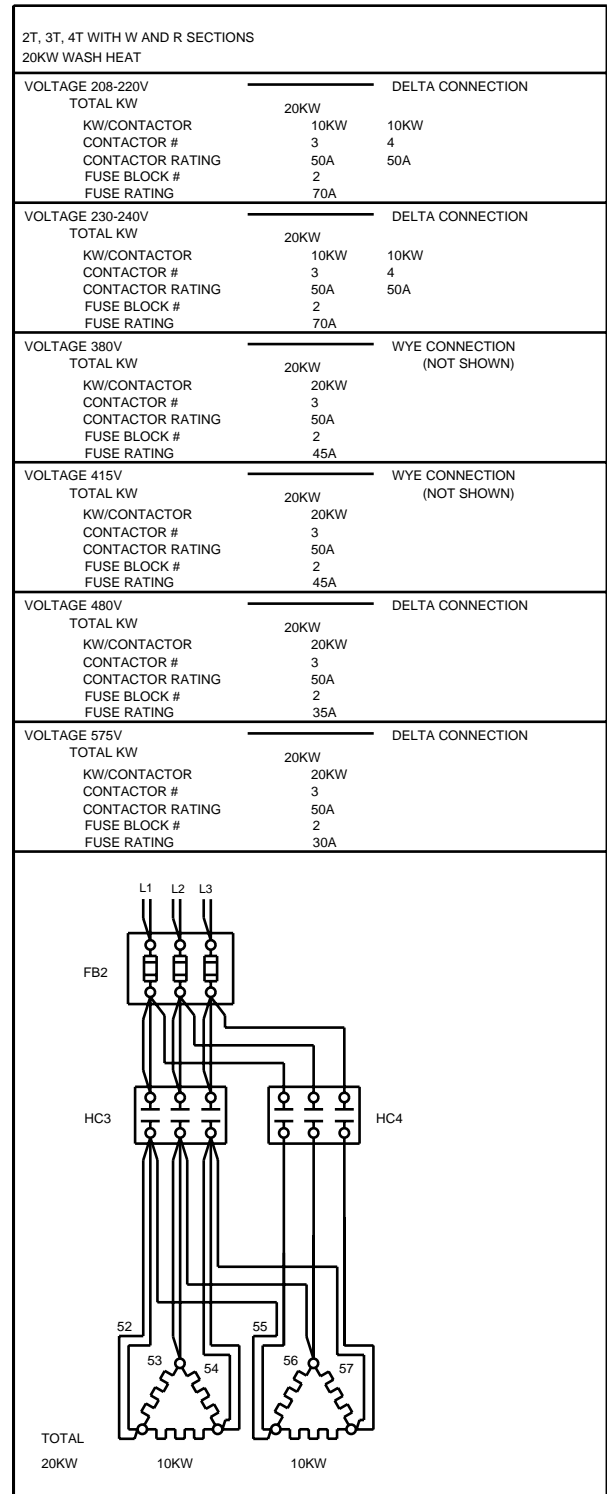
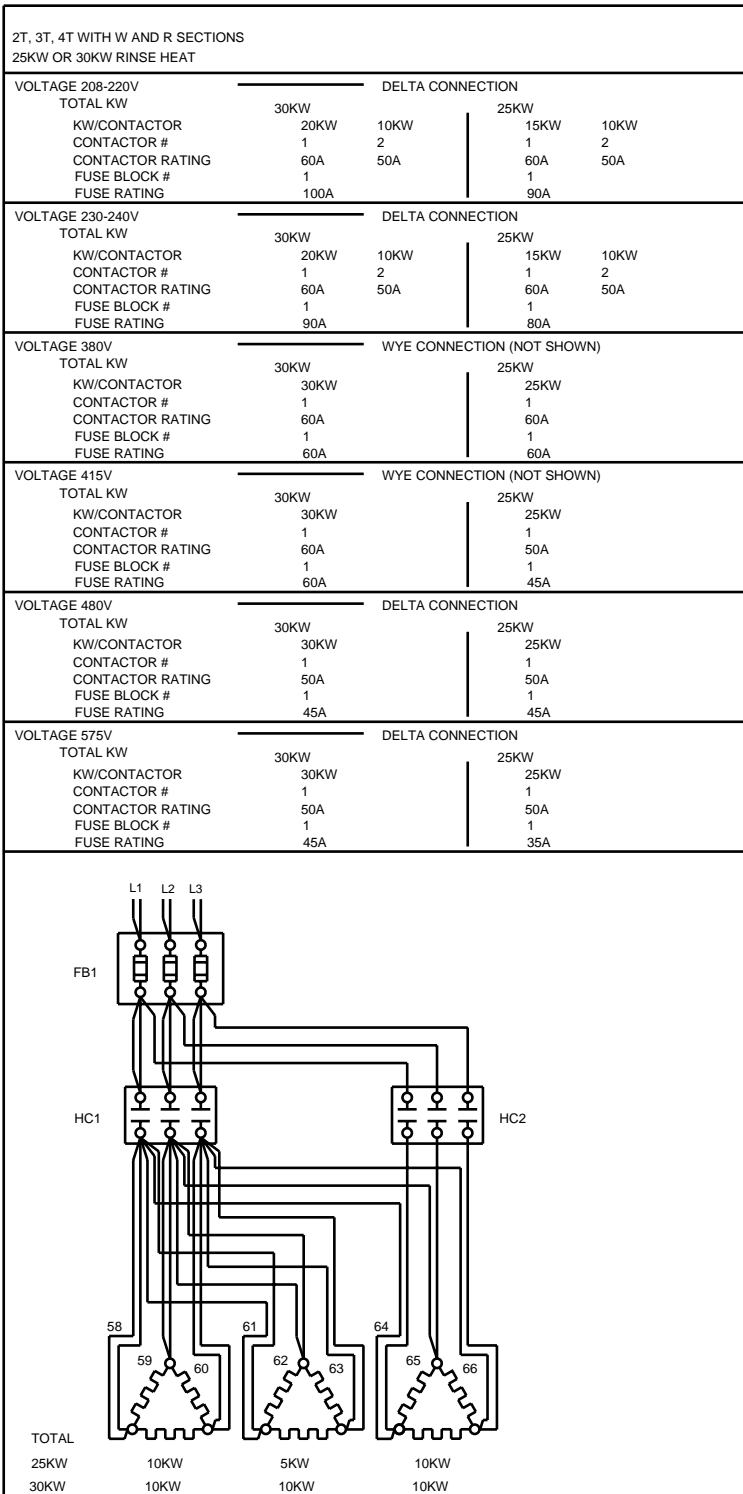


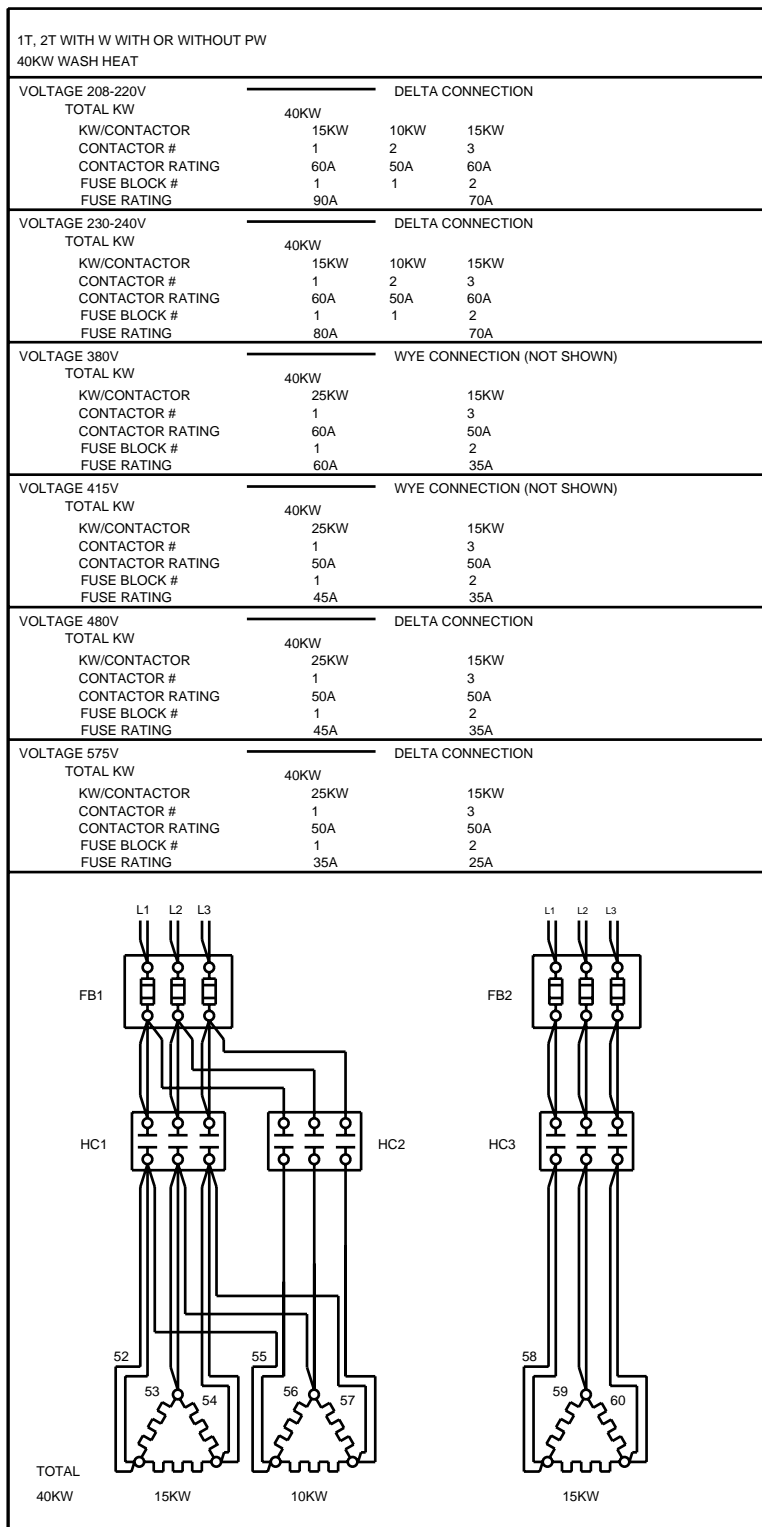
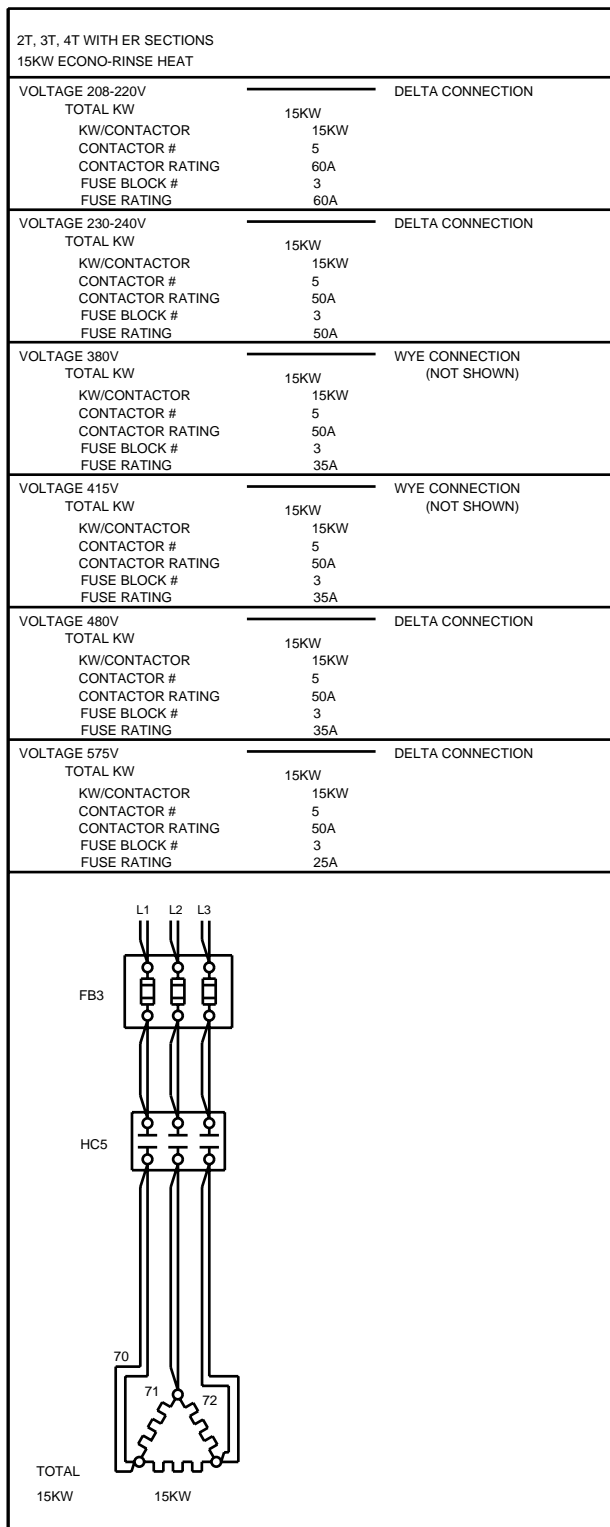
Figure 58 - Electric Booster - 81 KW

# WIRING DIAGRAMS



ER	ECONO RINSE	R	RINSE TANK
FB-	FUSE BLOCK	T	MACHINE TANK
HC-	HEAT CONTACTOR	W	WASH TANK
PW	PREWASH TANK		

Figure 59 - Electric Tank Heat



B752512/D

ER	ECONO RINSE	R	RINSE TANK
FB-	FUSE BLOCK	T	MACHINE TANK
HC-	HEAT CONTACTOR	W	WASH TANK
PW	PREWASH TANK		

Figure 59 - Electric Tank Heat (cont'd)

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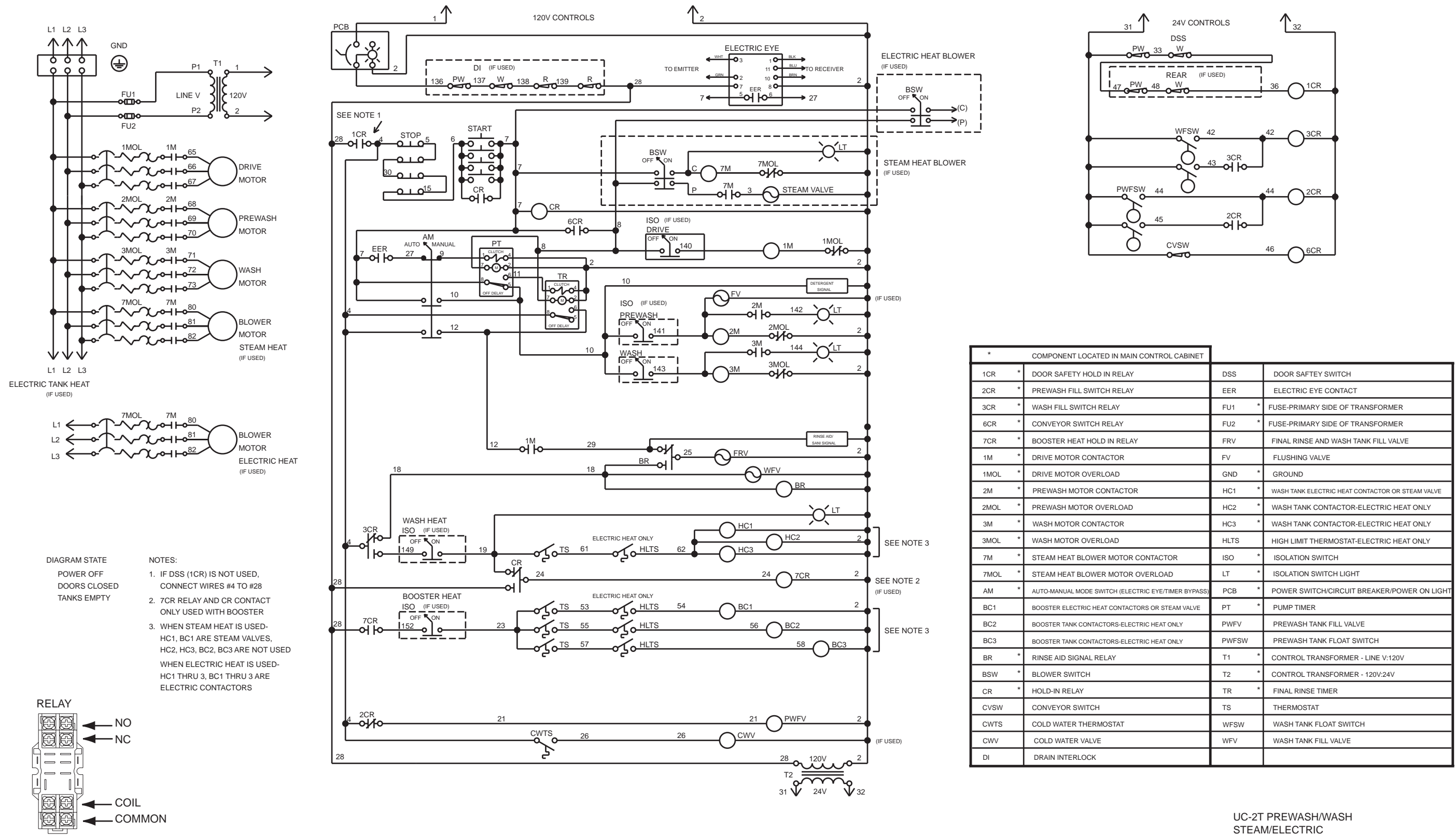


Figure 60 - Electrical Schematic UC-C/CW (2 Tank-Steam/Electric)

UC-2T PREWASH/WASH  
STEAM/ELECTRIC  
B701402

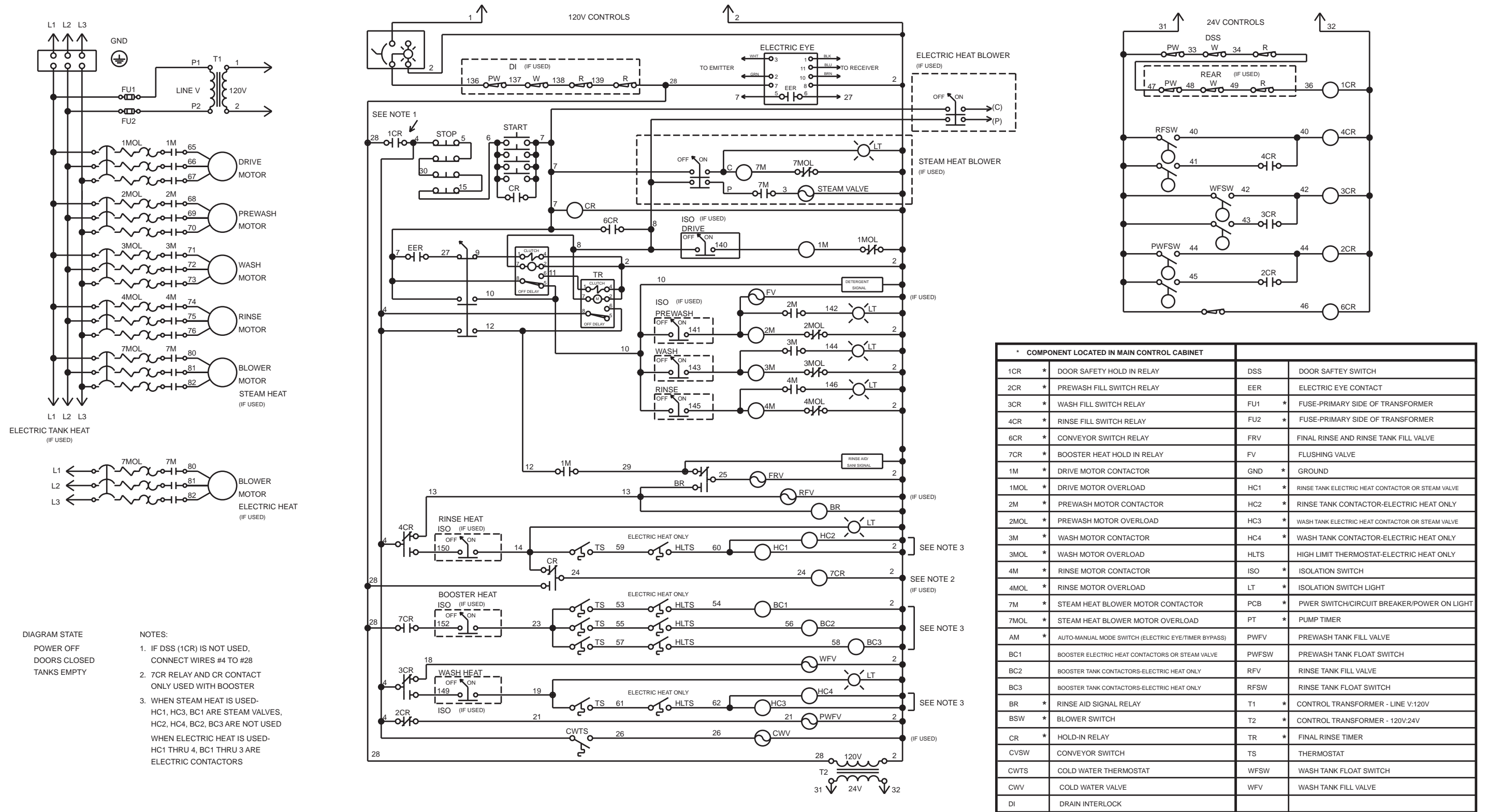


Figure 61 - Electrical Schematic UC-C/CW (3 Tank-Steam/Electric)

UC-3T  
STEAM/ELECTRIC  
B701401



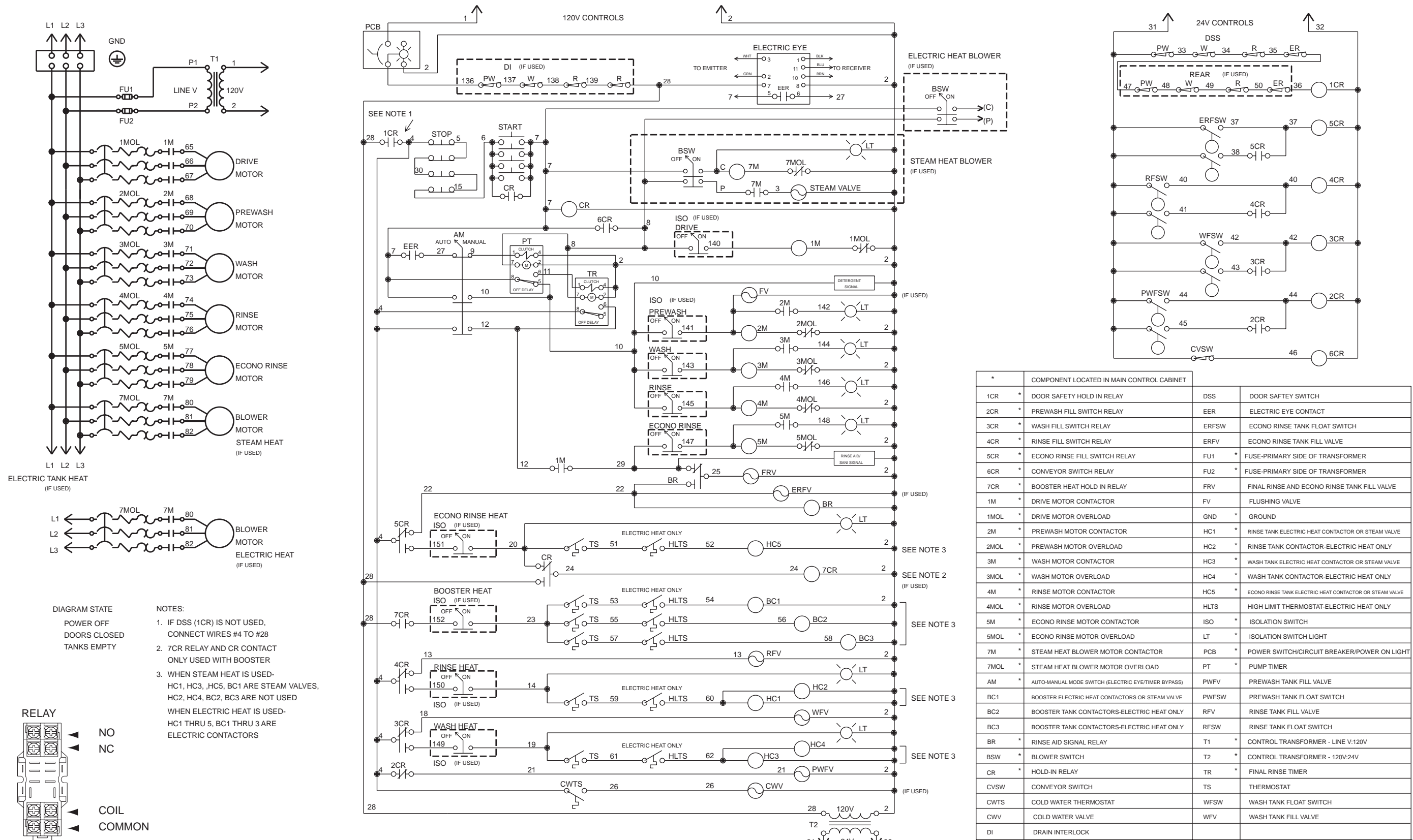


Figure 62 - Electrical Schematic UC-C/CW (4 Tank-Steam/Electric) Water Saver

UC-4T-WS  
 STEAM/ELECTRIC  
 B701400