
Champion®

The Dishwashing Machine Specialists

*For machines beginning with serial no. 84000
thru 99999 and serial no. R1000 and above*

Technical Manual

Single Tank Rack Conveyor with/without Prewash

<u>Basic Model</u>	<u>With (PR22) 22" Prewash</u>	<u>With (PR36) 36" Prewash</u>	<u>With (FFPR26) 26" Front Feed Prewash</u>
44KB	44KPRB	PR36/44KB	FFPR26/44KB
54KB	54KPRB	PR36/54KB	FFPR26/54KB
44WS	66WS	PR36/44WS	FFPR26/44WS
KL44	KL66	PR36/KL44	FFPR26/KL44

Machine Serial No.

March, 2005

Manual P/N **112844** Rev. I

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

Model Number _____ Serial Number _____

Voltage and Phase _____

Champion Service Agency _____ Phone _____

Champion Parts Source _____ Phone _____

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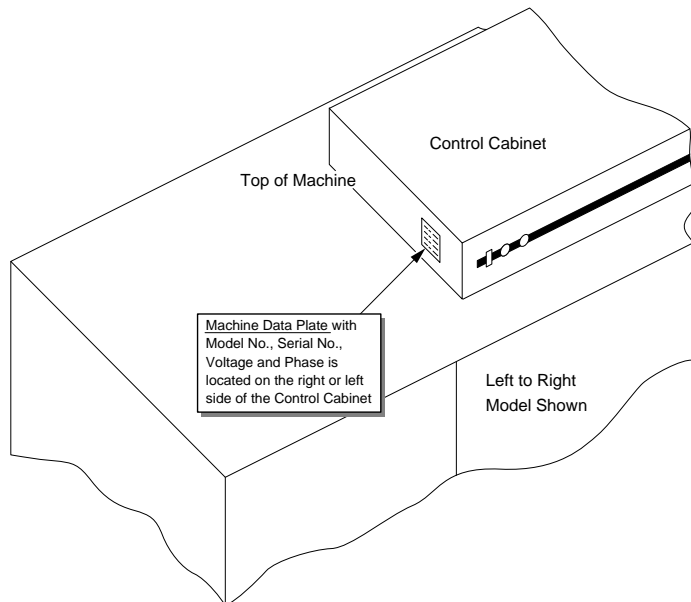
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1 (800) 263-5798

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We strongly recommend that you Fax your orders.

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



Revision History

The revisions listed below cover machine design changes prior to the publication of this manual, P/N [112844](#), dated June, 1998.

Revision Date	Revised Pages	Serial Number Effectivity	Comments
04/01/93	—	84565	Redesign of cradle, replaced cradle roller with slide
04/01/93	—	84545	Additon of stiffener to idle pump mechanism
04/01/93	—	84565	Redesign of wash system, addition of adjustable restrictors
04/01/93	—	—	Removed water shock arrestor from the rinse piping
04/01/93	—	—	Repositioned PRV on rinse piping
04/01/93	—	84565	Redesign of final rinse pipes and nozzles
04/01/93	—	84565	Redesign of drain mechanism and filler panel
04/01/93	—	84565	Redesign of rinse saver switch
04/01/93	—	84545	Redesign and relocation of door safely switch
04/01/93	—	84565	Redesign of drain mechanism and overflow
04/01/93	—	84350	Change in booster to 63Kw
10/20/93	—	85331	Changed 63Kw element combination to (3) 9Kw & (2) 18Kw in the electric booster tank
04/01/93	—	84350	Redesign of booster cabinet components
10/20/93	—	85261	Redesign of control cabinet using Furnas components
09/02/94	—	86424	Replace SST rinse manifold with brass fittings
3/21/95	—	87001	Changed design of ON-OFF/circuit breaker switch, new P/N 111980 issued
5/12/95	—	87150	Redesigned pump assemblies and changed impellers to all stainless steel construction
9/28/95	—	87575	Redesign of booster to use 12Kw heaters
3/3/96	—	88124	Redesign of final rinse switch assembly
7/19/96	—	88503	Redesign of control cabinet terminal block
1/8/97	—	89120	Changed design of pump timer, new P/N 112351
3/5/97	—	89277	Redesign of wash system to debossed spray pipes
11/26/97	—	90513	Redesign of KL 44/66 final rinse assembly, cradle and final rinse switch assembly
8/3/98	—	99999	Changed S/N format to R1000 and above

Revision History

Revision Date	Revised Pages	Serial Number Effectivity	Comments
10/30/98	All	84000- & above	Issue of new manual and new parts replacement lists <i>Supersedes previous manual P/N 110874 beginning with date January 1989 thru June 1993.</i>
12/3/99	142,144	R1649	Added 7CR, 120VAC Hold-in relay to control cabinet circuit to maintain power to booster circuit.
02/01/01	41,42	R1766	Changed pump valve P/N 111696 to 112380 , Oring P/N 111725 to gasket 112338 , and Suction Flange P/N 111841 to 112379 .
02/01/01	68,69	R1529	Insert new piping for outside rinse with electric booster (new figure & parts)
02/01/01	72	R1529	Insert new piping for outside rinse with no electric booster and with steam booster.
02/21/01	135,139,143	—	Change part number 111642 to 108122
02/21/01	136,140,144,163,165	—	Change part number 111826 to 111827
12/05/01	140,144	—	Corrected descriptions on contactors
12/05/01	136,140,143,144	—	Added Fuse size numbers to descriptions
01/02/02	69,73,77	R2426	Change vacuum breaker 3/4" P/N 104429 to 113222
01/02/02	81,85	R2426	Change vacuum breaker 1/2" P/N 100500 to 113220
01/02/02	70,74,78,82 86,89,111,115	R2562	Change vacuum breaker 1/4" P/N 107069 to 113218
01/02/02	69,73,77,81 85,89,111,116	R2346	Change Parker/Evans solenoid valve 1/4" P/N 109885 and 1/2" P/N 109886 to GC solenoid valve 1/2" P/N 113352 along with repair kit, coil and piping changes
01/02/02	112,115,116	R2208	Added new table flange P/N 325492 and track stiffener P/N 325667
01/02/02	125	R1690, R1719 R2074, R2127	Added new water baffles 325159 and 325160
05/20/02	70,74,78,82,86 89,112,116		Added 900836 Kit* Repair, 1/4" & 1/2" Vacuum Breaker and 900837 Kit* Repair, 3/4" Vacuum Breaker
02/05/03	41	—	Replaced impellers with new part numbers.
02/05/03	133	—	Replaced P/N 108391 with 113622 .
02/05/03	139,143	—	Replaced Furnace (Siemens) overloads with Telemecanique (Square D) overloads.
7/22/03	69,70,73,74,77,78,81 82,85,86,89,111,112,115	—	Revised plastic style vacuum breakers with bronze style
7/23/03	133	—	Corrected part numbers on overlays.
3/11/04	45,47,97,99,101,103, 105, 107, 108, 111	R3285	Replaced 111090 with 113721 reed switch.
3/11/04	v	—	Replaced B700933 revision N with revision O.
6/16/05	129		Change quantity on part 105186 .

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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.

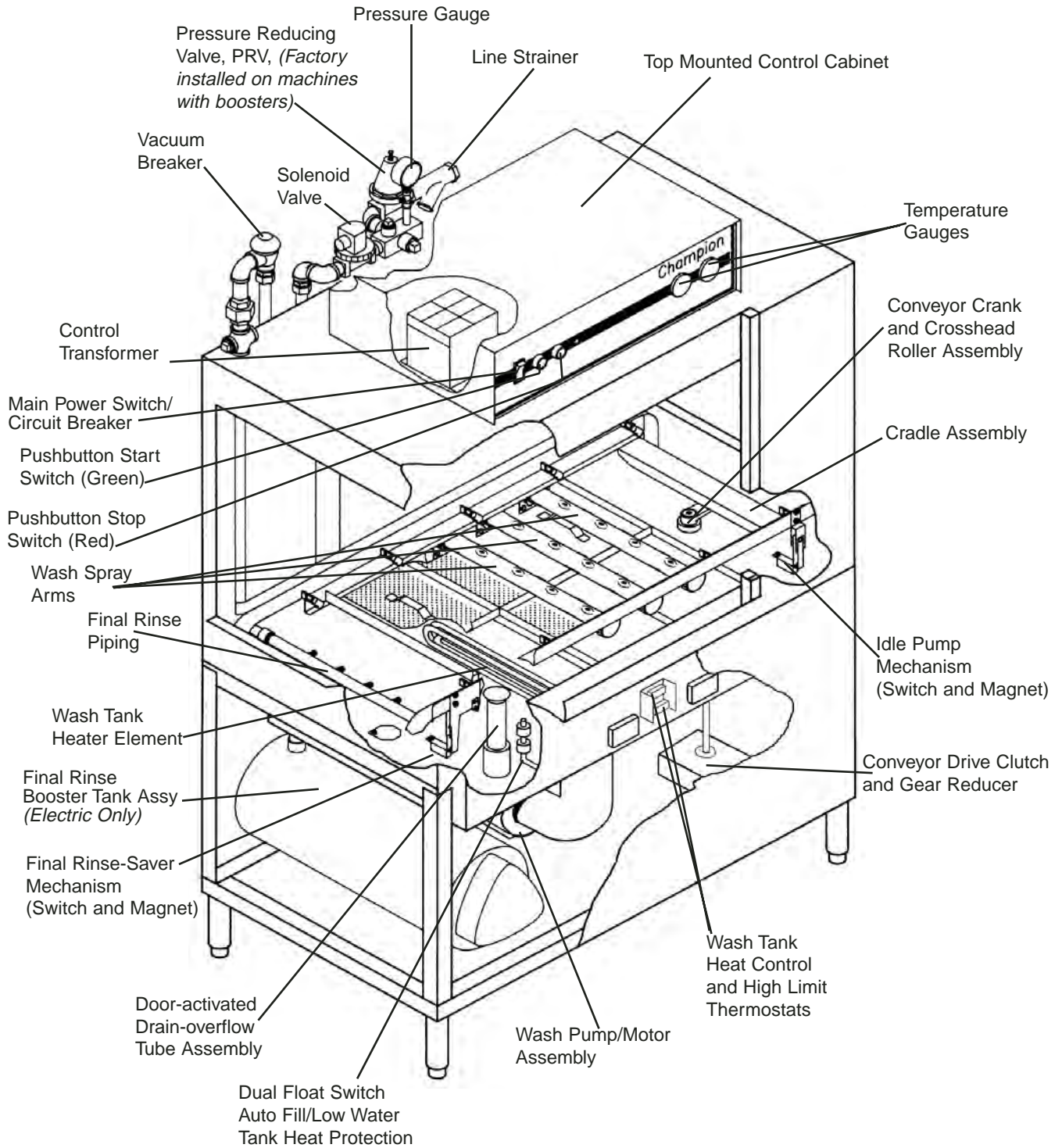
Warranty of Parts: Champion warrants all new machine parts produced or authorized by Champion to be free from defects in material and workmanship for a period of 90 days from date of invoice. If any defect in material and workmanship is found to exist within the warranty period Champion will replace 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.

Rack Conveyor Key Component Locations

(Right to Left Electrical Machine Shown)



INTRODUCTION

Welcome to **Champion**.

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

This manual covers several models. Model numbers are shown on the front cover.

Your machine has been completely assembled, inspected, and thoroughly tested at our factory before it was shipped to your installation site.

This manual contains:

- Warranty information
- Operation and cleaning instructions
- Maintenance instructions
- Troubleshooting guide
- Basic service information
- Replacement parts lists
- 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 service agency. When ordering parts, please supply the model number, serial number, voltage and phase of your machine, the part number, part description, and quantity.

GENERAL

This manual covers the Champion single tank rack conveyor dishwashing machine. This machine is fully automatic and is equipped with a 2 H.P. wash pump motor and a 1/4 H.P. conveyor drive motor. All models are available for right-to-left or left-to-right operation.

This series of dishwashers is modular in design. The following models and options are covered in this manual:

Model Numbers

Single tank - Basic	44KB, 54KB, 44WS, KL44
Single tank with 22" Prewash	44KPRB, 54KPRB, 66WS, KL66
Single tank with 36" Prewash	PR36/44KB, PR36/54KB, PR36/44WS, PR36/KL44
Single tank with 26" Front Feed Prewash	FFPR26/54KB, FFPR26/44WS, FPR26/KL44 FFPR26/44KB

- The 44KB and 54KB basic models, along with their respective prewash options, are high temperature (180°F/82°C final rinse) sanitizing models.
- The 44WS models, along with their respective prewash options, are water and energy saving, high temperature (180°F/82°C final rinse) sanitizing models.
- The KL44 model, along with its respective prewash option, is a low temperature (140°F/60°C final rinse), chemical sanitizing model for use with sodium hypochlorite solution (chlorine bleach) as the sanitizing agent.

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INSTALLATION

Unpacking

**CAUTION:**

Care should be taken when lifting the machine. The piping under the base can be damaged. Remove the dishwasher front panels if lifting from the front with a forklift.

1. Immediately after unpacking your machine, inspect for any shipping damage. If damage is found, save the packing material and contact the carrier upon receipt of the machine.
2. Remove the dishwasher from the skids. Adjust the feet if required, then move the machine to its permanent location. The machine should not be installed within 6 inches [153mm] of any wall or structure.
3. Level the machine by placing a level on the top of the machine and adjusting the feet. Level front-to-back and side-to-side.

Electrical Connections

**NOTE:**

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 tag it to indicate work is being done on that circuit.

1. The electrician should compare the electrical specifications on the machine electrical connection plate (located inside the control cabinet) to the electrical power supply before connecting to the incoming service at a fused disconnect switch.
2. Motor rotation was set at the factory. Ensure proper rotation of the conveyor drive shaft (red arrow on shaft shows direction of rotation). Reversing the motor direction is done in the control cabinet by reversing the wires L1 and L2 on the disconnect switch side of the main electrical connection terminal block (Refer to the electrical diagrams in the back of this manual).
3. A knock-out plug is provided at the rear of the control cabinet for electrical service connections.

**NOTE:**

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

**NOTE:**

Electric boosters require a separate electrical connection (except for the 44WS and 66WS models that have a single point electrical connection).

A fused disconnect switch or circuit breaker (supplied by user) is required to protect each power supply circuit.

Plumbing Connections



CAUTION:

Plumbing connections must comply with local sanitary and plumbing codes.

1. Connect the hot water supply at the final rinse piping connection located behind the control cabinet at the top of the machine.
2. A “Y” line strainer is provided by Champion for machines without boosters. A pressure reducing valve (PRV) is provided by Champion for machines with built-in boosters.
3. If the incoming hot water supply pressure exceeds 25 psi [173 kPa], a PRV must be installed and set to 20-22 psi [138-151 kPa]. The PRV may be purchased from Champion or supplied by others.
4. Install a manual shut-off valve in the steam and water supply lines to accommodate servicing the machine. The valve should be the same size as or larger than the supply line.
5. Provide a suitable gravity drain to connect to a 1-5/8" OD drain tube.

Ventilation

1. Stainless steel watertight ducting should be installed **INSIDE** the 4" x 16" [102mm x 407mm] vent stacks at the load and unload ends. A minimum of 6 air changes per hour of kitchen air is recommended. The typical exhaust ventilation requirements for a rack machine using a 180°F/82°C final rinse are:
 - The load end requires 150 CFM @ 1/4" (SP), [71 Liters/sec] with prewash.
 - The load end requires 200 CFM @ 1/4" (SP), [95 Liters/sec] without prewash.
 - The unload end requires 400 CFM @ 1/4" (SP), [189 Liters/sec].
2. An adjustable damper is supplied with the vent stacks for adjusting the exhaust volume.

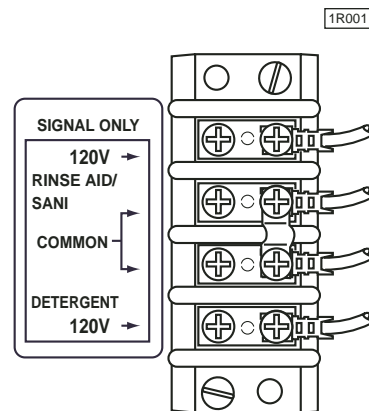


CAUTION:

Exhaust air should not be vented into a wall, ceiling, or concealed space of a building. Condensation will cause damage.

Chemical Connections

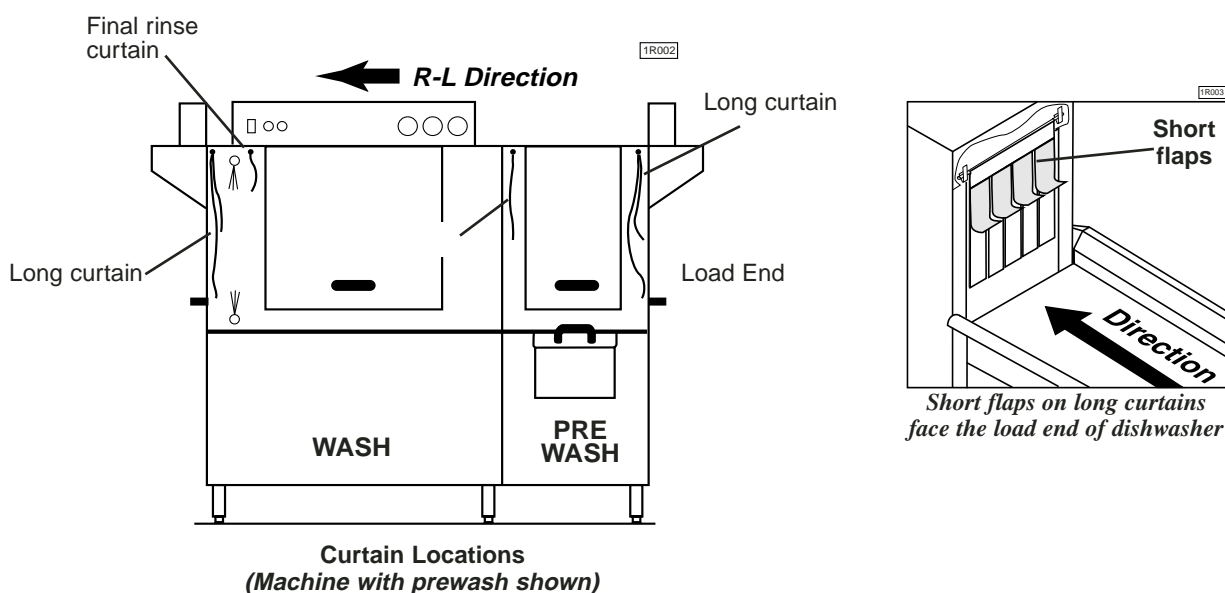
1. Use a qualified detergent/chemical supplier.
2. Labeled control circuit connection terminals are provided in the control cabinet for detergent and rinse agent/sanitizer dispensing equipment (supplied by others).
3. Refer to the illustration below. The illustration shows the terminal board for current production machines beginning with S/N 88503 and above. Signal connection points include:
 - Detergent signal 120VAC, 1 Amp Max amp load.
 - Rinse aid/Sanitizer signal 120VAC, 1 Amp Max amp load.
4. A removable black plug is provided in the load end side of the wash tank for installation of the detergent conductivity cell.



Chemical Connection Terminal Board

Curtain Locations

1. Refer to the illustrations below and hang the curtains as shown.
J-hooks are located in the corners of each section to accept the curtain rods.
 - Standard long curtain 24" x 20-1/4" [610mm x 515mm]
 - High hood long curtain 24" x 22-3/4" [610mm x 578mm]
 - Standard short curtain 24" x 13-1/4" [610mm x 337mm]
 - High hood short curtain 24" x 20-1/4" [610mm x 515mm]
 - Final rinse curtain 24" x 6-1/4" [610mm x 159mm]
2. Make sure the short flaps of the long curtains face the load end of the dishwasher.
The longest curtains always go on each end of the dishwasher.



Completing Installation

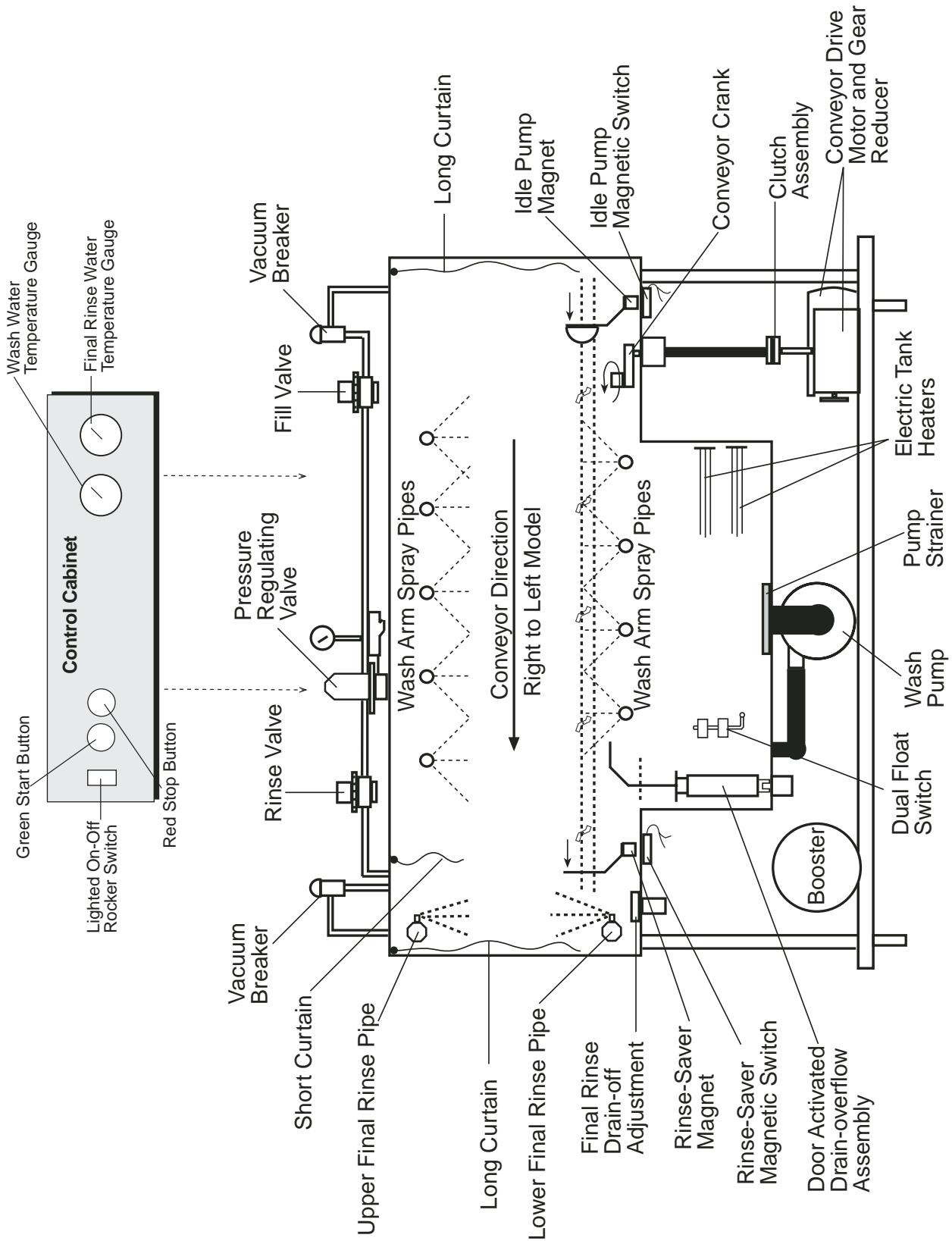


WARNING:

Do not insert racks into machine before tanks fill with water. Operating pumps dry will cause pump seal damage and leakage that can result in a motor failure.

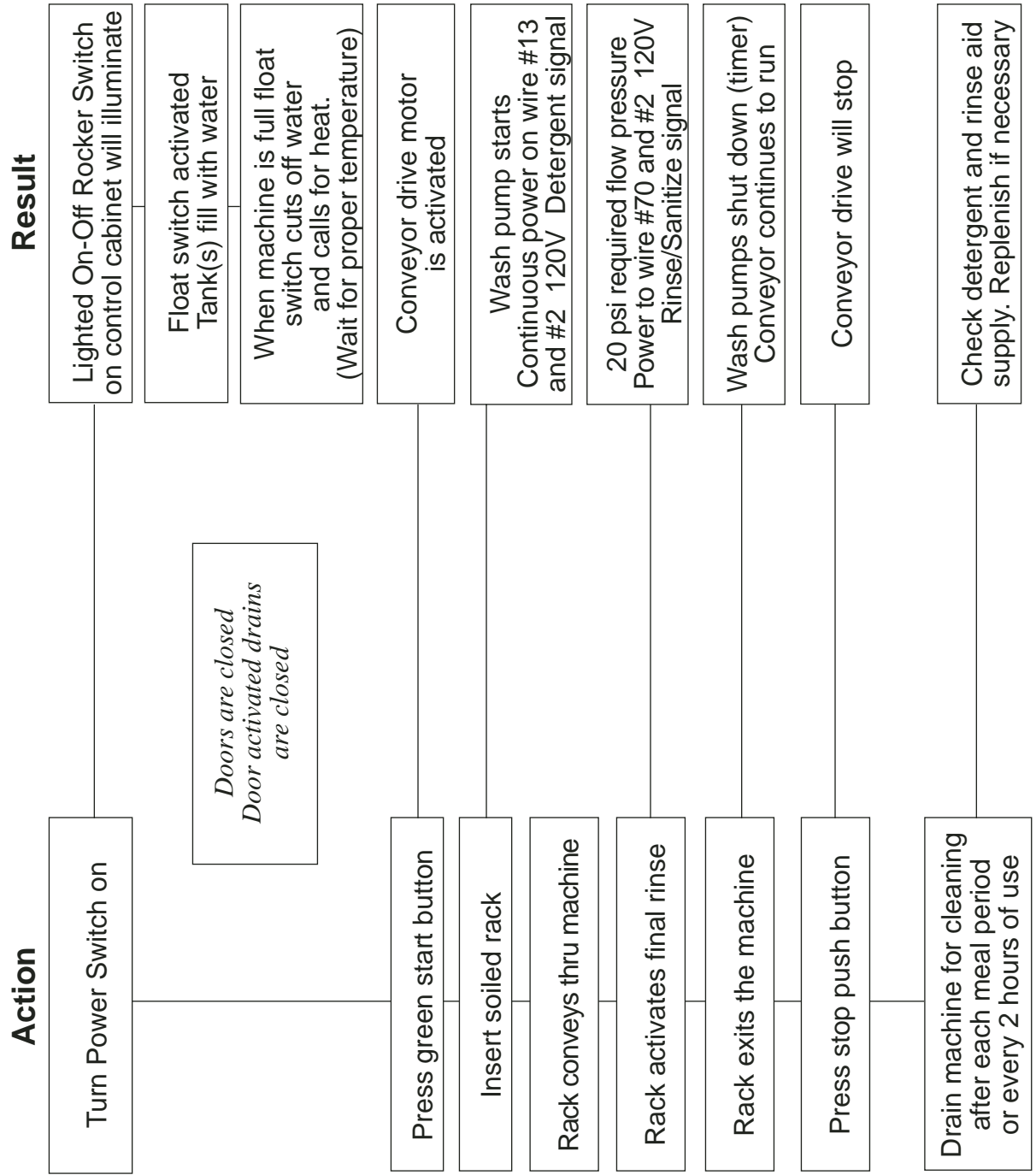
1. Remove any foreign material from inside the machine.
2. Check to insure that drains and overflow pipes are operational and sealed.
3. Position scrap screens on supports above the tanks.
4. After plumbing and electrical connections are completed, fill the tank and wait 10 minutes.
Check all plumbing connections for leaks.
5. Drain the tank and check the drain lines for leaks.
6. The formed down lip of the dishtable should be placed inside the machine. The dishtable should be pitched toward the dishwasher for proper draining by adjusting its leveling feet.
The dishtable should be sealed to the dishwasher.

OPERATION PROCEDURE



**Simplified Rack Conveyor Dishwasher
Right to Left Model**

Rack Conveyor Machine Operation Procedure



OPERATION

Follow the procedure below to operate your dishwasher properly.

1. Check that spray pipes, curtains, overflow drains, and scrap screens are in place and clean.
2. Turn on detergent dispenser switches and check detergent supply.
3. Turn on exhaust vent system (if applicable), and make sure it is operating.
4. Close door(s). Push the power switch to the ON position. Tanks will begin filling with water.
5. When tanks are full, check wash tank temperature gauge. Minimum wash temperatures are:
 - KL44, KL66 - **140°F/60°C**
 - 44KB, 54KB, 44WS - **160°F/71°C**
 - 44KPRB, 54KPRB, 66WS - **160°F/71°C**
6. Press the **START** button on the control cabinet. Only the conveyor will start. The pumps **WILL NOT OPERATE** until the first rack enters the machine.
7. Scrap and pre-flush all items to be washed, and load the items into the rack.
DO NOT OVERLOAD RACKS.
Place dishes edgewise in a peg rack, cups and bowls upside down in a flat rack.
Spread silverware evenly in a single layer in a flat rack or upright (loosely packed) in a cutlery rack.
7. Push the rack into the machine, and the pumps will start automatically.
8. Check the rinse pressure and temperature as the racks pass through the final rinse. This rinse pressure **MUST** be 20-22 psi [138-151 kPa] and the final rinse temperature **MUST** be 180°F/82°C minimum.
9. The pumps will automatically stop shortly after the last rack leaves the machine. The conveyor will continue to run.
10. The machine may be stopped any time during the cycle by pressing the **STOP** button on the control cabinet. When restarted, items inside the machine will be fully washed and rinsed.
11. **CLEAN** scrap screens, scrap baskets (if applicable) and **REPLACE** tank water every 2 hours of operation or after each meal period. Check chemical supply.



CAUTION:

DO NOT allow racks to remain on unload dishtable. This could cause the conveyor to jam and may damage machine. The installation of a table limit switch is highly recommended and will reduce the risk of damage.



WARNING:

Do not leave water in tanks overnight.

MAINTENANCE

The efficiency and life of your machine is increased by regularly scheduled preventive maintenance. A well maintained machine gives better results and service. An investment of a few minutes of daily maintenance will be worthwhile.

The best maintenance you can provide is to keep your machine clean. Components that are not regularly cleaned and flushed will clog and become inoperative.

Intervals shown in the following schedules represent an average length of time between necessary maintenance. Maintenance intervals should be shortened whenever your machine is faced with abnormal working conditions, hard water, or multiple shift operations.

Maintenance Schedule

CLEANING

- **Daily-Every 2 Hours of Operation**

1. Turn power switch to **OFF**.
2. Remove all scrap screens, scrap baskets (if applicable), and pull drain lever(s) to drain water. Clean inside of tanks and flush with clean water. Backflush scrap screens until clean. **Do not strike screens against solid objects.**
3. Remove the spray pipes by a 1/4 turn, counterclockwise. Remove the end plug from each spray pipe. Flush pipe and nozzles until clean. **Do not strike spray pipes against solid objects.** Replace end plugs, verify that rubber seals are in place on manifolds. Reinstall spray pipes using a 1/4 clockwise turn.
4. Remove and clean curtains. Hang them off the dishtable to dry.
5. Leave the doors open between operations to allow drying.
6. Verify that final rinse nozzles are clean and free of internal hard water deposits. Clean rinse nozzle orifices with a small paper clip. Consult your chemical supplier for the proper use and kind of deliming chemical.
7. Report any unusual conditions to your supervisor.

- **As Required**

1. Check temperature and pressure gauge readings.
2. Inspect machine and check pump motor for leaks around the shaft.
3. Check chemical supplies and refill as necessary.

- **Weekly**

1. Inspect all water lines for leaks and tighten at joints if required.
2. Clean all detergent residue from exterior of machine.
3. Check drain/overflow tube for leaks.
4. Clean accumulated scale from heating element.
5. Remove and closely inspect each spray arm for blockage.

- **Weekly (Cont.)**

6. Straighten a paper clip and use it to clear each rinse nozzle.
7. Inspect pawl bars and drive assembly for wear and freedom of travel.
8. Check float switches in tank for freedom of travel.
9. Check idle pump and final rinse levers for freedom of travel.

DELIMING

Your dishwasher should be delimed regularly as required. This will depend on the mineral content of your water.

Inspect your machine interior for lime deposits. If deliming is required, a deliming agent should be used for best results. Consult your chemical supplier for proper type and procedures.

If you have the chemical sanitizing model (KL44 and KL66), **carefully** follow the following procedure before deliming:



DANGER:

Deliming solution, rinse agents, or other acids must not come in contact with household bleach (sodium hypochlorite) or any chemicals containing chlorine, iodine, bromine, or fluorine. Mixing may cause hazardous gases to form. Consult your chemical supplier.

1. Remove the suction tube assembly from the bleach container and place it as close as possible to the floor. Place a catch pan under it.
2. Cycle the machine approximately six times to purge the lines of the bleach.
3. Proceed with deliming process.

TROUBLESHOOTING

In order to find the cause of a breakdown or abnormal operating condition in your dishwasher please ensure that:

1. All switches are ON
2. Drain and overflow tube are in place and seated
3. Wash pipe and rinse nozzles are clean
4. Scrap screen(s) and scrap basket (if applicable) are properly positioned
5. Spray pipes are in their proper positions
6. Thermostat(s) are at their correct setting
7. Sanitizer, detergent, and rinse additive dispensers are adequately filled
8. Doors are fully closed.

If a problem still exists, use the following table for troubleshooting

CONDITION	CAUSE	SOLUTION
Machine will not start	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
	No rack inserted	Place rack in unit
	Overload protector tripped	Reset overload in control box
Low or no water	Main water supply is turned off	Turn on house water supply
	Drain/overflow tube is not in place and seated	Place and seat drain tube
	Machine doors not fully closed	Close doors securely
	Faulty fill valve.....	Contact your service agency
	Stuck or defective float.....	Check floats and clean
	Clogged 'Y' strainer	Clean or replace
Continuous water filling	Stuck or defective float.....	Check floats and clean
	Fill valve will not close.....	Clean or replace
	Drain tube not in place	Look for drain tube in tank
Any motor not running	Overload protector tripped	Reset overload in control box
	Defective motor	Contact your service agency
Wash tank water temperature is low when in use	Incoming water temperature at machine too low	Raise temperature to: 140°F/60°C for 44KB, 54KB, 44WS, 44KPRB, 54KPRB, 66WS 120°F/49°C for KL44, KL66
	Defective thermometer	Check or replace
	Defective thermostat	Check for proper setting or replace
	Defective heater element	Check or replace
	Low steam pressure	Check steam supply pressure
	Defective steam trap	Check or replace
	Defective solenoid valve.....	Check or replace

CONDITION	CAUSE	SOLUTION
Insufficient pumped spray pressure	Clogged pump intake screen.....	Clean
	Clogged spray pipe	Clean
	Scrap screen full	Must be kept clean and in place
	Low water level in tank.....	Check drain and overflow tube
	Pump motor rotation incorrect	Reverse connection between L1 and L2 in control cabinet (3 phase only)
	Defective pump seal	Contact service agent
Insufficient final rinse or no final rinse	Faulty pressure reducing valve	Clean or replace
	Improper setting on pressure reducing valve.....	Set flow pressure to 20-22 psi [138-151 kPa]
	Clogged rinse nozzle and/or pipe	Clean with paper clip/delime
	Improper water line size	Have installer change to proper size
	Clogged 'Y' strainer	Clean or replace
Low final rinse temperature	Low incoming water	Check the booster (KB, KPRB,WS models) be sure the thermostat is set to maintain 180°F/82°C temperature. (KL models) check incoming water is set min. 120°F/49°C-140°F/60°C. Check valve to be sure it is clean and operating.
	Defective thermometer	Check for proper setting or replace
Poor washing results	Detergent dispenser not operating properly.....	Contact detergent supplier
	Insufficient detergents	Contact detergent supplier
	Food Soil concentration too high in wash tank	Drain tank, clean and refill every 2 hours of operation or after each meal period.
	Wash water temperature too low	See condition "Wash Tank Water Temperature" above
	Wash arm clogged.....	Clean
	Improperly scraped dishes	Check scraping procedures
	Ware improperly placed in rack	Use proper racks. Do not overload racks
	Improperly cleaned equipment	Unclog wash sprays and rinse nozzles to maintain proper pressure and flow conditions. Overflows must be open. Keep wash water as clean as possible.
	Electric elements or steam coils has soil/lime buildup	Clean and delime

ELECTRICAL SERVICE

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 fuse. The fuses are marked 1FU and 2FU on the electrical schematic.

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 fuse and replace it.
- 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. 1 shows the fuse block opened and the fuse exposed.

Motor Overloads

Motor overloads are located to the left of the fuse blocks inside the control cabinet. Each motor has one overload to protect it from line voltage electrical overloads. In addition, an auxiliary set of switch contacts is built into the overload. The switch contacts disconnect 120VAC power to the motor contactor coils in the event of an overload condition. Refer to Fig. 2.

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 Overload:

- Flip the starter 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 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. 2 is positioned to adjust the motor overload AMP setting.

- Read the FLA motor amps that applies for the machine voltage on the Motor Nameplate.
- Turn the setting to match nameplate FLA.



Figure 1
Fuse Blocks



Figure 2
Motor Overload

Pump Timer

Refer to Fig. 3

The automatic timer located in the left center of the control cabinet is set at the factory.

The Pump Timer controls the amount of time that the pumps will run before the last rack enters the load end of the dishwasher tunnel.

The Pump Timer is an OFF DELAY timer.

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

The timer has the following user defined settings:

1. Adjustable timer range
2. Timer knob setting
3. Indicator light (ON when timer is counting)
4. 50 Hz or 60 Hz setting on the back of the timer

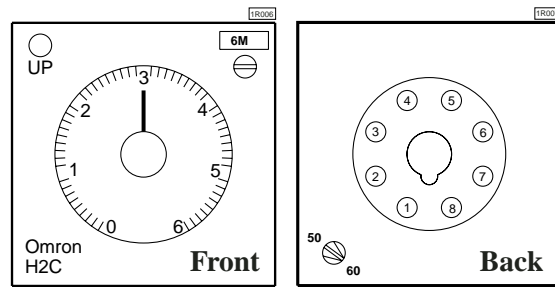


Figure 3
Pump Timer

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.

Operation Sequence:

- A dishrack entering the machine contacts the idle pump switch lever.
- Normally closed contacts of the idle pump switch open, de-energizing control relay 1CR.
- Normally closed contacts (1, 9) of 1CR close and apply 120VAC to reset coil of pump timer.
- Pump timer resets.
- The dishrack moves off the idle pump switch lever. The switch contacts close.
- 1CR energizes and contacts (1, 9) open removing 120VAC from the pump timer reset coil.
- The pump timer begins to time down for its preset time setting.
- The timer is reset each time the idle pump switch is activated. If the timer is reset only once it will time out and shut the pumps off after the rack has exited the dishwasher.

To Check the Pump Timer Setting:

- Turn the power on.
- Place a rack on the conveyor.
- Press the Green start button. The conveyor drive will start.
- When the rack enters the load end the pumps will start.
- Wait for the rack to exit the tunnel at the unload end.
- When the pumps stop, push the red stop button.
- Measure the distance between the exit end of the tunnel and the rack.
- The rack should be about 1 foot past the end of the tunnel.
- If the distance is less than 1 foot, increase the pump timer setting. Continue to increase the timer setting a few seconds at a time until the proper distance is reached.
- If the measured distance is greater than 1 foot, decrease the pump timer setting. Continue to decrease the timer setting a few seconds at a time until the proper distance is reached.

ELECTRICAL SERVICE (Cont.)

Automatic Fill/Low Water Heat Protection

Dual Float Switches –

Refer to Fig. 4

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 contacts are open.
- When the bottom float is up, the bottom reed switch contacts close.

Top Float and Reed Switch:

- The top float controls a fill valve.
- When the top float is down, the top reed switch contacts are open.
- When the top float is up, the top reed switch contacts are closed.

Initial Fill –

- When the tank is completely empty, both floats are down and their reed switch contacts are open.
- 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 float switch 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.

1R008



Figure 4
Dual Float
Switch

ELECTRICAL SERVICE (Cont.)

Thermostat Locations and Adjustments

Refer to Fig. 5

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:

Both thermostats are located on front of tank, inside a black enclosure box behind the front access panel.

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/99°C.
- Press the red button in to reset the high limit.
Determine the cause of the high temperature condition.

Refer to Fig. 6 and Fig. 7.

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 thermostat is enclosed in a black box mounted on the front of the wash tank behind the front access panel.

The high limit thermostat is enclosed in a box mounted on top of the 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/99°C.
- Press the red reset button in to reset the high limit.
Determine the cause of the high temperature condition.

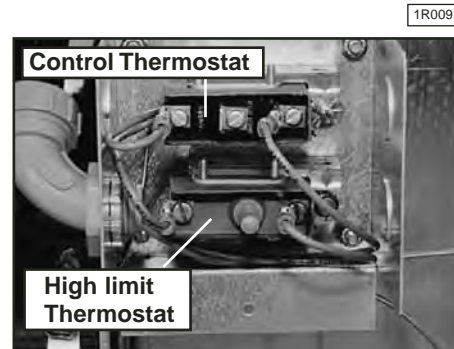


Figure 5
Tank Heat Thermostats

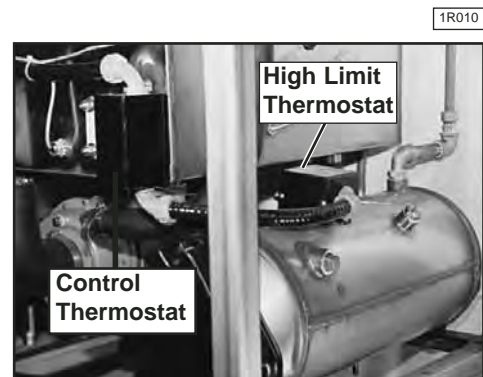


Figure 6
Booster Thermostat Locations



Figure 7
Booster - High Limit Thermostat

ELECTRICAL SERVICE (Cont.)

Heater Element Wiring – Booster Tank and Wash Tank Heater Elements

Refer to the illustrations and follow the steps below to properly install terminal jumpers and to make line power connections to a replacement element.

Step 1. Hold the element assembly with the calrod coils facing toward you.

Step 2. Match your element coil to Configuration A, B, C, or D.

Step 3. Rotate your element coils to match the correct configuration.

Step 4. Flip the element over and match your element to the correct terminal configuration.

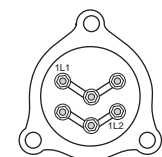
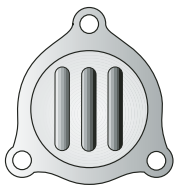
Step 5. Install terminal jumpers according to the illustration for your voltage requirement.

Step 6. Install the element and make your line connections 1L1, 1L2, or 1L3 per the illustration.

Configuration A

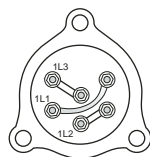
Booster tank element

View of calrod coils

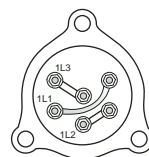


208V/1 Phase

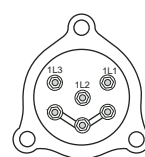
Terminal Connections view of element



208-240V/3 Phase
Delta Connection



480V/3 Phase
575V/3 Phase
Delta Connection

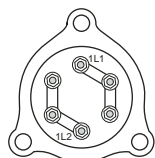
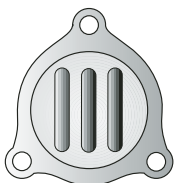


208-240V/3 Phase
Wye Connection for
380-415V/3 Phase

Configuration B

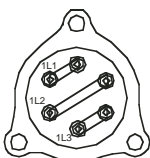
Booster tank element

View of calrod coils

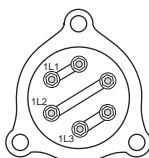


208V/1 Phase

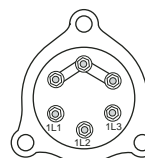
Terminal Connections view of element



208-240V/3 Phase
Delta Connection



480V/3 Phase
575V/3 Phase
Delta Connection

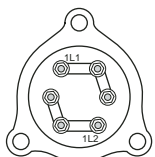


208-240V/3 Phase
Wye Connection for
380-415V/3 Phase

Configuration C

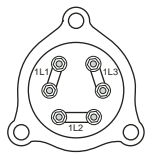
Booster tank element

View of calrod coils

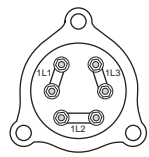


208V/1 Phase

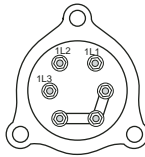
Terminal Connections view of element



208-240V/3 Phase
Delta Connection



480V/3 Phase
575V/3 Phase
Delta Connection

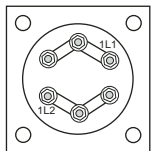
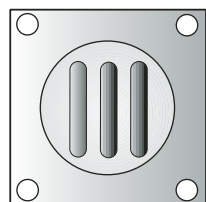


208-240V/3 Phase
Wye Connection for
380-415V/3 Phase

Configuration D

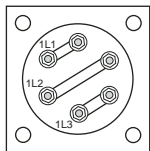
Wash tank element

View of calrod coils

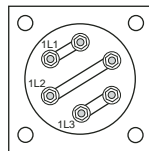


208V/1 Phase

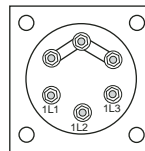
Terminal Connections view of element



208-240V/3 Phase
Delta Connection



480V/3 Phase
575V/3 Phase
Delta Connection



208-240V/3 Phase
Wye Connection for
380-415V/3 Phase

Motors

Motor Specifications

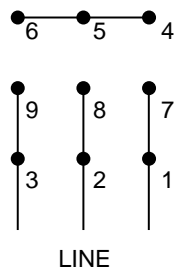
Voltage: Standard motors are multi-voltage
 Low voltage: 208-230VAC
 High voltage: 460VAC or 575VAC only

Phase: Motors may be single or three phase

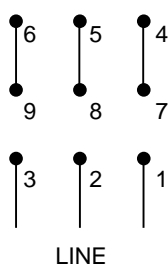
Wiring Connections:

Refer to the diagrams below for 3 phase motor lead wiring.

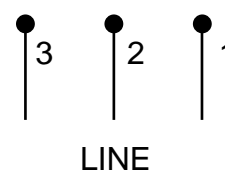
Low voltage 208-230V/3PH



High Voltage 460V/3PH

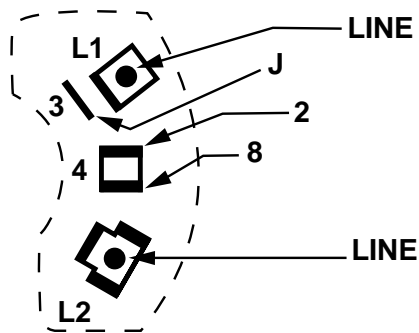


575V/3PH Only



Refer to the diagram at right
for single phase motor lead wiring.

Low voltage 208-230V/1PH Only



Troubleshooting:

Motor will not run:

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

Motor runs hot and trips motor starter overload:

1. Check for proper voltage between L1-L2, or (L1-L2, L2-L3, L1-L3 for 3 phase).
2. Check FLA on motor leads L1, L2, (also L3 for 3 phase) 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. Motor rotation can be reversed by switching L1 and L2 on 3 phase motors. Single phase motor rotation cannot be reversed
7. Replacement motors are available as complete assemblies.
8. Champion cannot provide replacement bearings, stators, or rotors for motor repair parts.

Dual Float Switches –

Troubleshooting:

The dual float controls fill and heat circuits.

Identifying a Dual Float Problem:

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

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

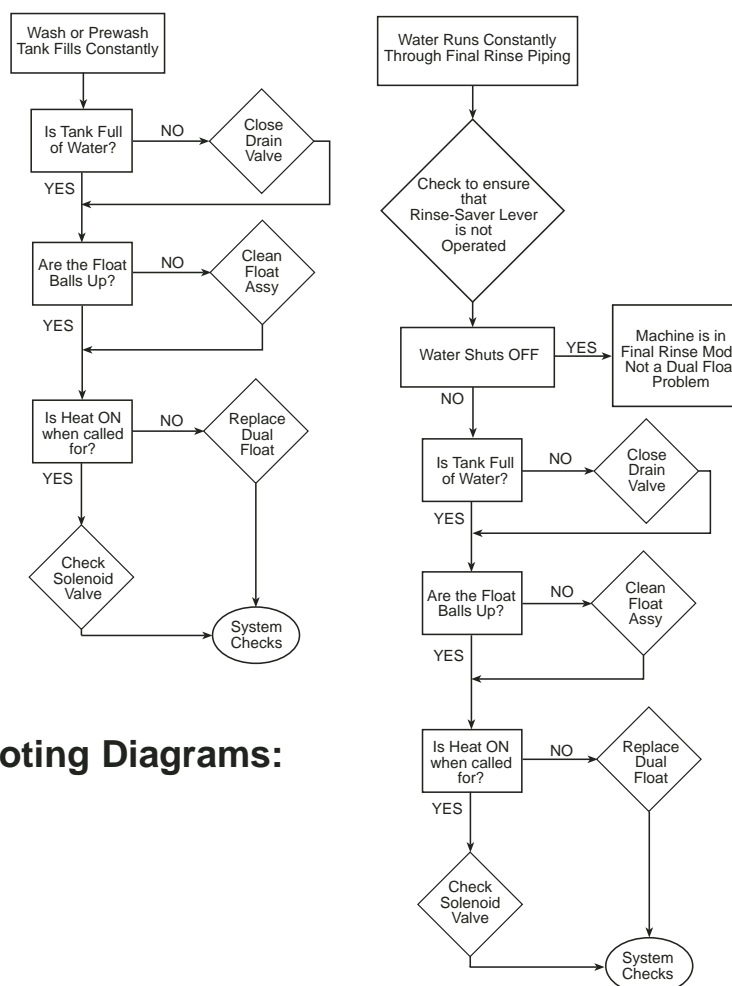
Inspect the Dual Float:

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 [138-151 kPa].
3. Fuses in control cabinet are good (Electric Heat Only).
4. Tank Heat thermostats and/or High limit thermostats operate correctly.
5. Booster Heat thermostats and/or High limit thermostats operate correctly.



Dual Float Troubleshooting Diagrams:

Electric Booster Heater — Element Installation

Refer to Fig. 8 and Fig. 9

Champion built-in boosters are constructed of stainless steel and have locations for three electric booster heater elements.

1. The two booster configurations for rack conveyor models are:

Single tank - 40°F/22°C rise booster

Two tank - 70°F/39°C rise booster (except WS)

The total Kw rating of the booster assembly is determined by the model number of the machine and the minimum temperature of the incoming water supply.

2. **The highest rated Kw element should always be installed in the bottom right corner location of booster canister No. 1.**

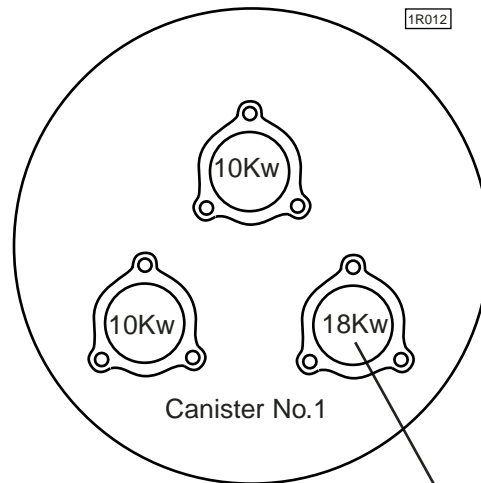


Figure 8
Front View
Typical 40°F/22°C Rise Booster
One Tank – Total 38Kw Shown
For machines built prior to S/N 87575

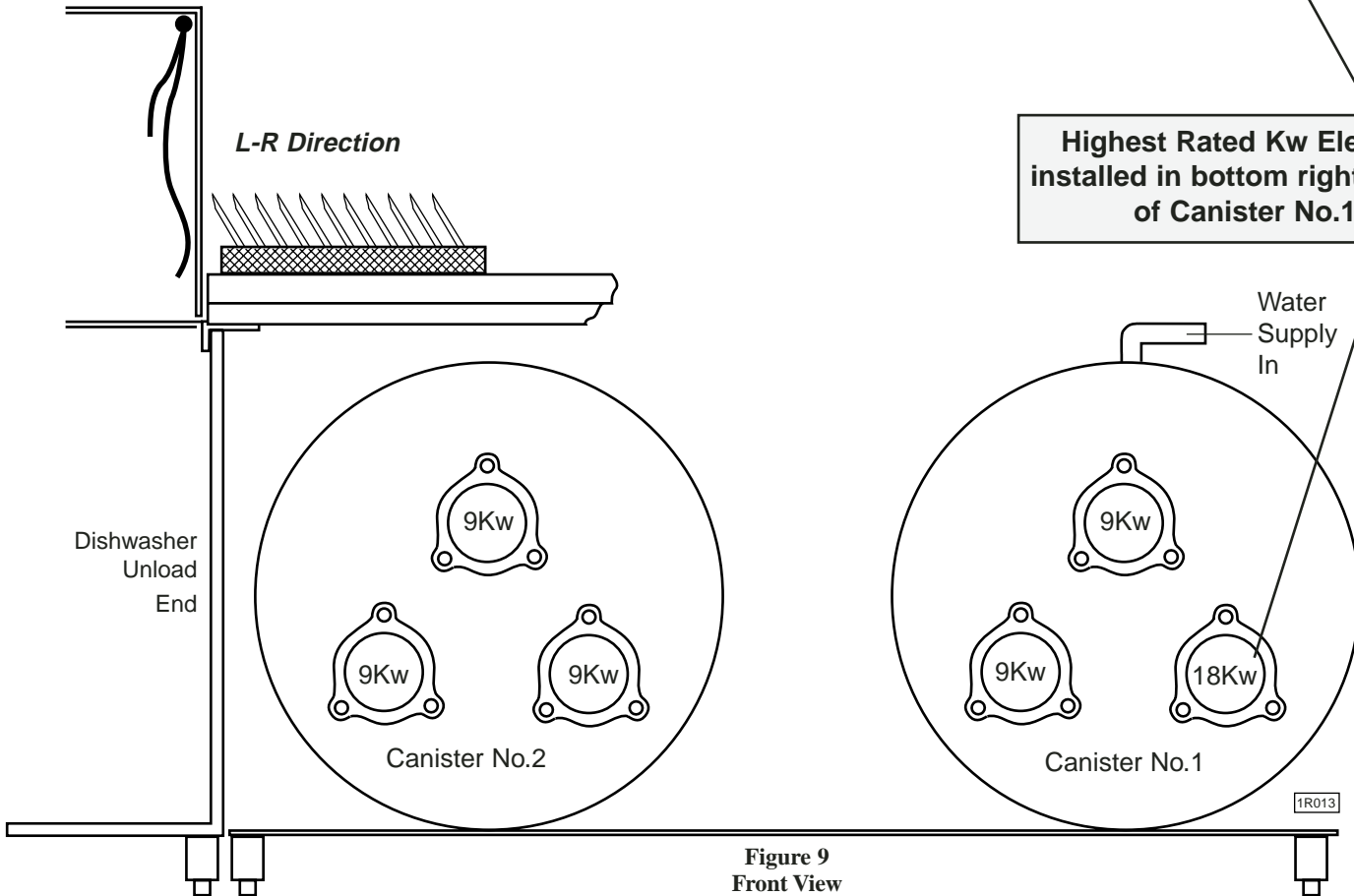


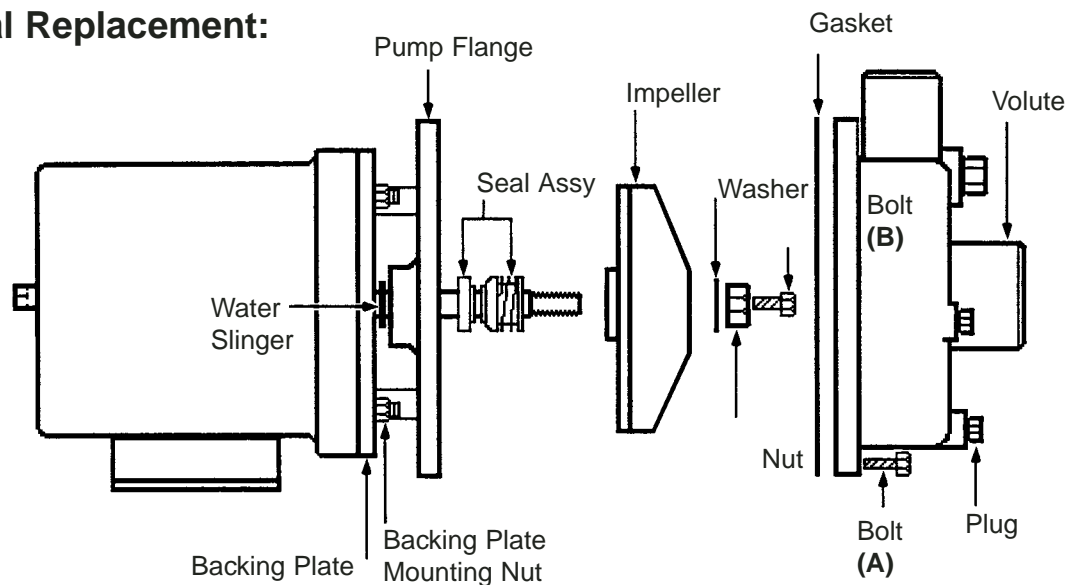
Figure 9
Front View
Typical 70°F/39°C Rise Booster
Two-Tank – Total 63Kw Shown
For machines built prior to S/N 87575

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.



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. Check the impeller counterbore for shim washers. Be sure to reinstall. Not all impellers have shims.
11. Remove the old seal and discard. Check the seal seat in the pump flange and clean thoroughly.
12. Clean the seating surface on the motor shaft with #600 emery paper or crocus cloth.
13. Check the water slinger and replace if worn or missing. Remove the (4) backing plate mtg. nuts to gain access to the slinger.
14. Press the rubber seal and ceramic into the pump flange. Use a water soluble lubricant. Keep the ceramic clean.
15. Install the rotating part of the seal on the shaft with the graphite surface toward the ceramic. Use a water soluble lubricant.
16. Reinstall the impeller, washer, lock-nut, and bolt. Install a new flange gasket. Bolt the volute to the flange.
17. Reinstall the pump and motor assembly on the base of the machine and reconnect the pump hoses.
18. Reconnect the power and fill the tank with water. Check for leaks.
19. Bump start the pump to check the motor for correct rotation.
20. Proper shaft rotation is clockwise looking at the rear of the motor.

MECHANICAL SERVICE (Cont.)

Idle Pump and Rinse-Saver Switch Assemblies

Idle Pump Switch Assembly –

Refer to Fig. 10. The idle pump switch, also called the rack switch is located on the load end of the conveyor track. It is made up of a lever mechanism, a magnet, and a magnetic reed switch. The magnetic switch contacts are closed when the idle pump lever is at rest as pictured in figure 10. When a rack is placed into the machine, it contacts the idle pump lever. The magnet swings away from the magnetic switch. The closed contacts of the switch open and power is removed from control relay 1CR. The normally closed contacts, (1, 9) of 1CR, close and apply 120VAC to the PUMP TIMER RESET COIL. The timer resets and the wash pump(s) start. When the rack moves past the idle pump lever, the magnet returns to its resting state. The magnetic switch contacts close. Power is re-applied to 1CR and the 120VAC is removed from the pump timer reset coil. The timer begins to count down. The idle pump switch will reset the timer each time a rack contacts the lever. If only one rack operates the idle pump switch then the timer will time out after its preset time and the pumps will stop.



Figure 10
Idle Pump Switch Assembly

Magnetic Switch and Magnet –

Refer to Fig. 11. The magnetic switches are located on the underside of the tank hood. Studs are welded on the hood and the switches are nutted securely in place. The magnets are mounted on the ends of the idle pump and rinse-saver levers by screws and nuts. The magnets are enclosed in stainless steel housings.

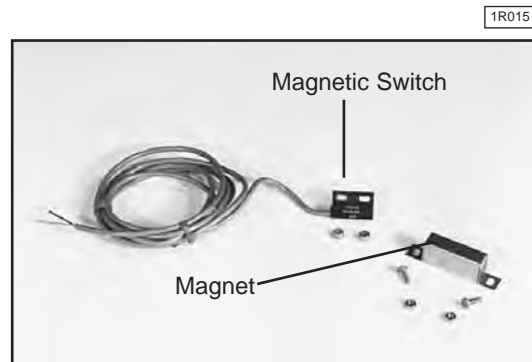


Figure 11
Magnetic Switch and Magnet

Rinse-Saver Switch Assembly –

Refer to Fig. 12. The rinse-saver switch assembly, also called the final rinse switch, is located on the unload end of the conveyor track. It is made up of a lever assembly, magnetic switch, and magnet. The contacts of the magnetic switch are closed when the magnet is in the rest position as pictured in figure 12. The operation of the final rinse is controlled by the rinse-saver switch. When a rack contacts the lever of the switch assembly, the magnet moves away from the magnetic switch. The contacts of the switch open and power is removed from control relay 2CR. The normally closed contacts (12, 4) of 2CR close. 120VAC power is applied to the final rinse water solenoid valve. 180°F/82°C final rinse water is supplied to sanitize the dishes. Power will continue to be applied to the solenoid valve as long as a rack operates the rinse-saver assembly. When the rack moves past the lever, the magnet returns to its rest position. The magnetic switch closes and the final rinse turns off.



Figure 12
Rinse-Saver Switch Mechanism

Conveyor Drive Assembly

Refer to Fig. 14. The conveyor drive assembly is made up of a crank assembly, a clutch assembly, gear reducer, and 1/4 HP motor.

Crank Assembly –

Refer to Fig. 13. The crank assembly mounts inside the dishwasher hood and is made up of a crank, adjustable stud, and crosshead roller. The roller engages the conveyor cradle assembly. The crank assembly rotates in a counter-clockwise direction. The crosshead roller should be adjusted so that it is flush with the bottom of the cradle assembly crosshead.

Clutch Assembly –

Refer to Fig. 14. The clutch assembly is made up of the clutch discs, a clutch shaft, bearing, bearing housing, and seal assembly. The clutch assembly couples the output shaft of the gear reducer to the crank assembly.

Clutch Adjustment –

The clutch assembly is torqued at the factory to 12 ft/lbs. This allows the clutch to slip if the conveyor cradle assembly jams.

Refer to Fig. 17.

To adjust the clutch:

1. Loosen the two set screws in the clutch adjusting nut.
2. Tighten the adjusting nut only enough so that the clutch assembly will slip when a person of moderate build (about 180lbs./82 kg) exerts force against the conveyor cradle assembly.
3. It is extremely important that the clutch assembly slips if the conveyor cradle jams; so be careful not to overtighten the clutch adjusting nut.
4. Tighten the set screws in the adjusting nut and recheck the conveyor cradle assembly.

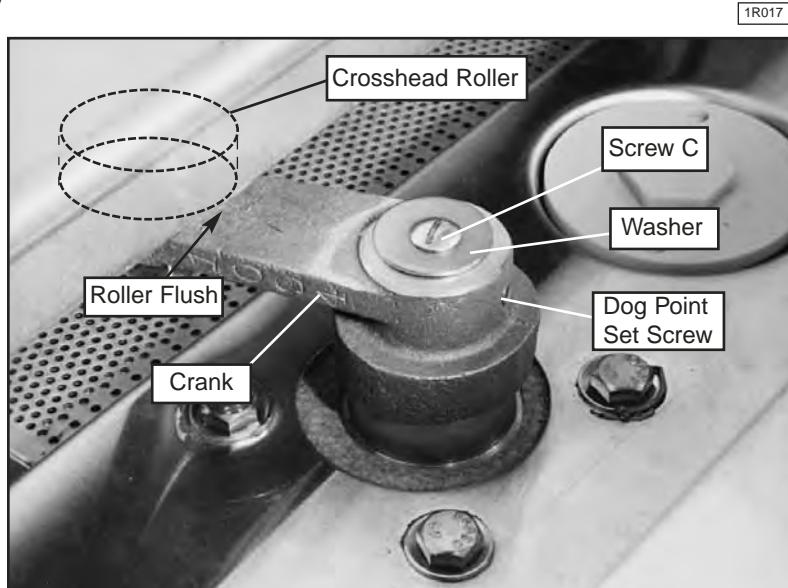


Figure 13 – Crank Assembly

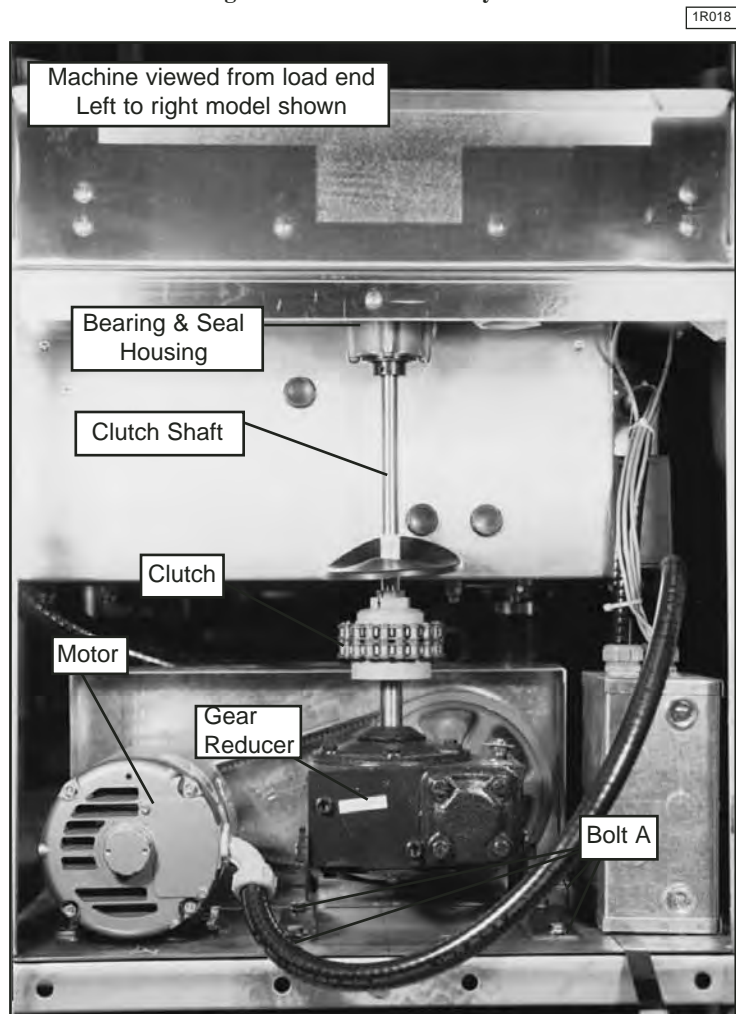


Figure 14 – Conveyor Drive Assembly

1R019

Drive Clutch Replacement –

- Turn off all power to the machine and remove the load end curtain.

Refer to Fig. 15.

1. Remove (Screw A), the 10-32 x 3/8" flat head bracket retaining screw located slightly forward of the idle pump switch assembly.
2. Remove (Screw B), quantity (4), 1/4-20 X 1/2" truss head track mounting screws on the load end of the machine.
3. Lift the cradle and track assembly so that it clears the crosshead roller.

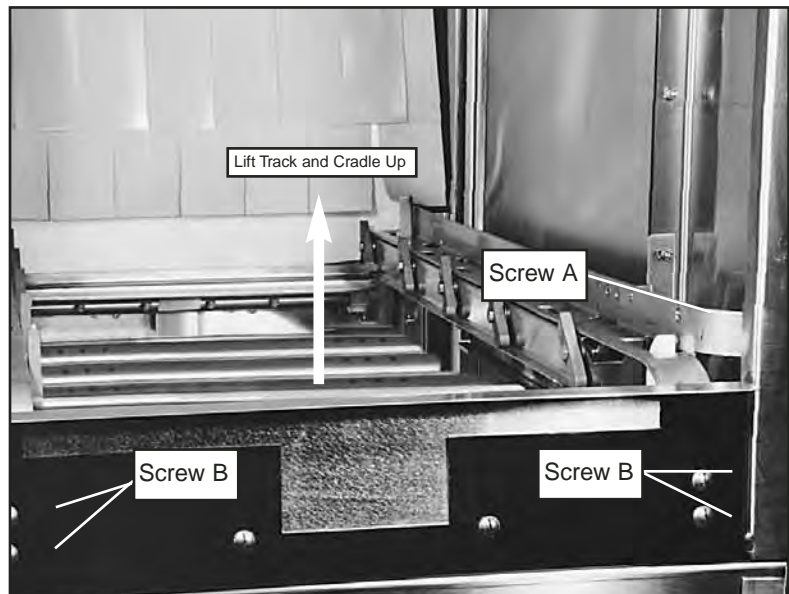


Figure 15
View of Load End of Machine

Refer to Fig. 13.

4. Remove (Screw C), a 10-32 x 3/8" truss head screw and washer from the crank assembly.
5. Loosen the crank dog-point retaining set screw and remove the crank assembly from the clutch shaft.
6. Remove the lower front and side panels to access the clutch and gear reducer.

Refer to Fig. 16.

7. Remove (Screw D), quantity (4), 1/4-20 x 3/8" round head screws that hold the bearing and shaft seal in the bearing housing.
8. Loosen (Screw E), quantity (2), bearing set screws and slide the bearing and seal assembly down the clutch shaft.

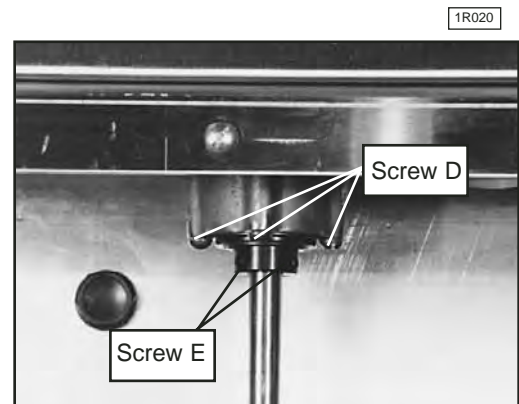


Figure 16
Close-up view of Bearing Housing

Refer to Fig. 17.

9. Loosen (Screw F), quantity (2), clutch set screws on the bottom of clutch assembly. Slide the clutch assembly up until it clears the output shaft of the gear reducer.

Refer to Fig. 14.

10. Remove the V-belt from the motor and gear reducer pulleys.
11. Remove (Bolt A), quantity (4), 5/16-18 x 3/4" hex head bolts holding the gear reducer to the machine base. Slide the gear reducer out.
12. Remove the clutch assembly by pulling the clutch and clutch shaft down and out of the bearing housing.
13. Install the new clutch assembly and re-assemble in reverse order.

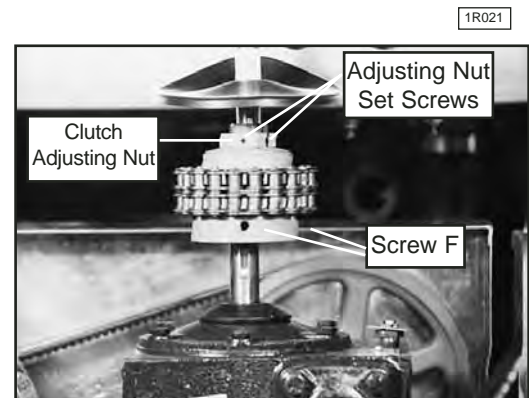


Figure 17
Close-up view of Clutch Assembly

TABLE LIMIT SWITCH INSTALLATION INSTRUCTIONS KIT P/N 407400

I. Introduction

Champion Industries offers a table limit switch as an option to protect the dishwasher conveyor system from jams caused by dishracks backing up at the unload end of the dishtables.

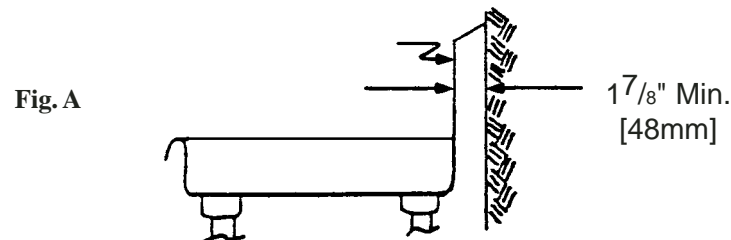
These instructions provide the servicer with a step-by-step method for installing and wiring the table limit switch on a rack conveyor dishwasher.

II. Pre-installation

The minimum clearance necessary to install a table limit switch is 1-7/8" [48mm], measured from the wall to the backside of the dishtable backplash. (See Fig. A)

NOTE:

If you do not have 1-7/8" [48mm] clearance, you will not be able to install the switch assembly.

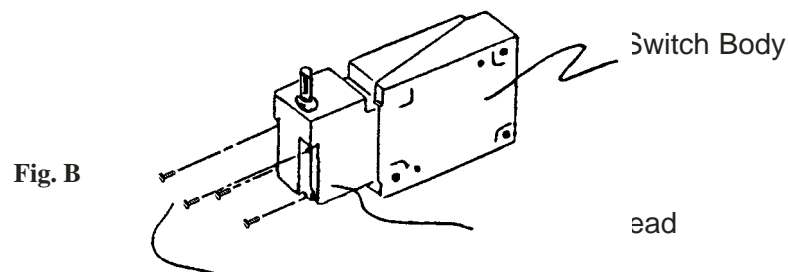


A. Inspect the Installation Kit Be sure that your kit contains:

- | | | | |
|--|--------|---|--------|
| (1) Switch bracket..... | 315339 | (1) Table limit switch assy | 111165 |
| (2) 10-32 x 1/4 truss head screw | 100213 | (1) Switch spring & rod assy | 111166 |
| (2) 10-32 x 1/2 truss head screw | 100097 | (1) Paper template for marking holes .. | 111167 |
| (1) Instruction sheet | 900721 | | |

NOTE:

Refer to Fig. B and note the orientation of the actuator head, 4 screws, and the switch body. If the switch in your kit does not resemble Fig. B, remove the 4 screws holding the actuator head and rotate the head to match the assembly in Fig. B. Re-install the screws.



B. Additional Materials Required for Installation

- (*) Ft. of flexible non-metallic liquid tight 1/2" conduit
- (*) Ft. of #14 gauge wire (2 wires & a ground required)
- (3) Ring terminals #6 stud size
- (1) Ring terminal 1/4-20 stud size
- (2) Wire nuts
- (1) Straight 1/2" liquid tight conduit fitting for (R-L)
- (1) 90° Ell 1/2" liquid tight conduit fitting for (R-L)
- or
- (2) Straight 1/2" liquid tight conduit fittings for (L-R)
- * As required

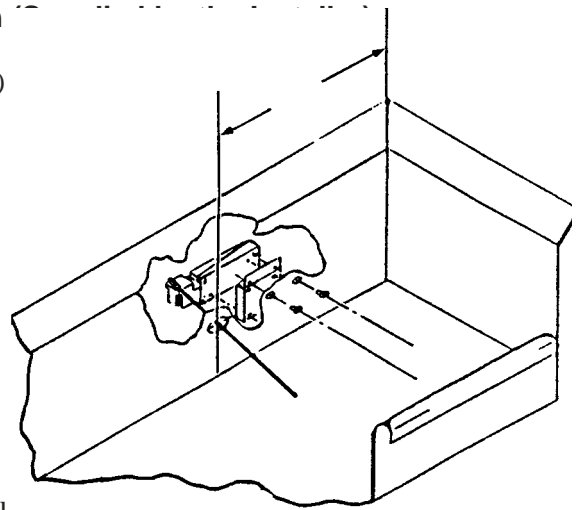


Fig. C
L-R Installation

C. Special Tools Required

- Variable speed drill
- 3/16" drill bit
- 5/16" drill bit (If using a Greenlee® 1/2" conduit punch,
- Hole saw or knock-out punch capable of cutting stainless steel.



NOTE:

Greenlee® makes a knock-out punch for cutting SST. Their 1/2" conduit punch will cut the 7/8" [22mm] hole required for this installation:

- Greenlee®
- P/N 28154Punch
- P/N 28155Die
- P/N 28451Bolt

These parts may be ordered through a local dealer.

III. Installation

A. Cutting and Drilling the Dishtable

- Refer to Fig. C for L-R installation
 - Refer to Fig. D for R-L installation
1. Check the paper template provided in your installation kit.
 2. Note that the template will work for both L-R & R-L operations.
For L-R operation, the 3/16" [5mm] holes are nearest the end of the table. For R-L operation, the 7/8" [22mm] hole is nearest the end of the table.
 3. Using the template measurements, mark and drill the required holes.

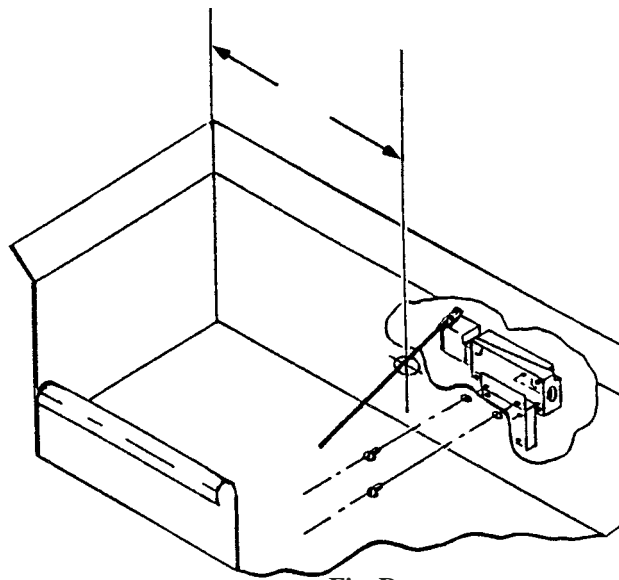


Fig. D
R-L Installation

B. Assemble the Switch and Switch Bracket

- Refer to Fig. C and use the diagram as a guide for assembly.
1. Use (2) 10-32 x 1/4" truss screws to mount the switch bracket to the switch assembly. When properly installed, the switch bracket mounting holes will be above the switch assembly and the shaft of the actuator head will be pointing up.

C. Adjusting the Switch Spring & Rod Assembly

- Refer to Fig. C for L-R installation and Fig. D for R-L installation
- 1. The switch spring and rod assembly pass through the 7/8" [22mm] hole. With the switch in an unoperated state, the rod should be angled towards the discharge end of the dishwasher.
- 2. The rod should touch the edge of the 7/8" [22mm] hole closest to the unload end of the machine. This position will allow the switch rod maximum travel before it contacts the opposite edge of the 7/8" [22mm] hole and will insure that the switch will be operated by the dishrack.
- 3. This is a trial and error adjustment. One suggested method is to hold the switch and rod assembly in position on the outside of the table. Estimate the rod location and lock it down with the 5/32" socket head screw on the end of the rod assembly. Install the switch assembly using the (2) 10-32" x 1/2" truss head screws. Check the switch rod position and adjust as necessary.

IV. Wiring and Final Mounting of the Table Limit Switch Assembly

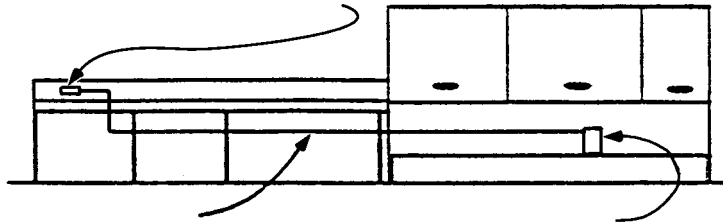
Note 1: Wiring should be made in accordance with local electrical codes.

Note 2: Champion recommends a ground wire from the switch to the junction box.

A. Locating and Wiring of Junction Box

1. Remove the front lower panel of the dishwasher. The junction box is located near the center of the lower frame. (See Fig. E)

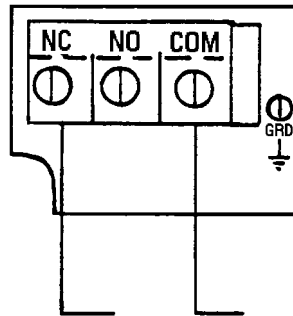
Fig. E



2. Open the junction box and locate two wires marked 7 and 8. the wires are wire-nutted together.
3. Use one of the vacant knock-outs on the junction box and connect a conduit fitting.
4. Measure and cut the conduit and route the #14 gauge wires through conduit and into the junction box.
5. Crimp the 1/4" ring terminal to the ground wire. Locate a 1/4-20 bolt that holds the junction box to the frame of the dishwasher. Remove the nut and put the ground wire on this bolt. Replace the nut and tighten securely.
6. Designate one of the conduit wires as 7 and connect it to wire 7 in the junction box. Designate the remaining conduit wire as 8 and connect it to wire 8 in the junction box. Close the junction box and replace the front panel on the dishwasher.

7. Connect the proper conduit fitting to the table limit switch. Route the #14 gauge wires to the switch and refer to Fig. F for the proper terminal designations.

Fig. F



8. Connect conduit wire 7 to the COM (Common) terminal of the switch terminal block. Connect conduit wire 8 to the NC (Normally Closed) terminal of the switch terminal block. Connect the conduit ground wire to the ground screw in the switch assembly.
9. Close the switch cover.
Apply a thread locking compound to the threads of the 10-32 x 1/2" screws.
Mount the switch assembly to the dishtable.

V. Testing Table Limit Switch Operation

1. Start the dishwasher and load enough racks to activate the limit switch while the conveyor and pumps are running.
2. Observe the dishrack as it contacts the switch rod assembly. The dishwasher conveyor should stop before the rod reaches the end of its travel.
If it does not: Re-adjust the switch rod position in the 7/8" hole to operate earlier or re-check the wiring.
3. Check the dishwasher for correct operation.

REPLACEMENT PARTS

1R022

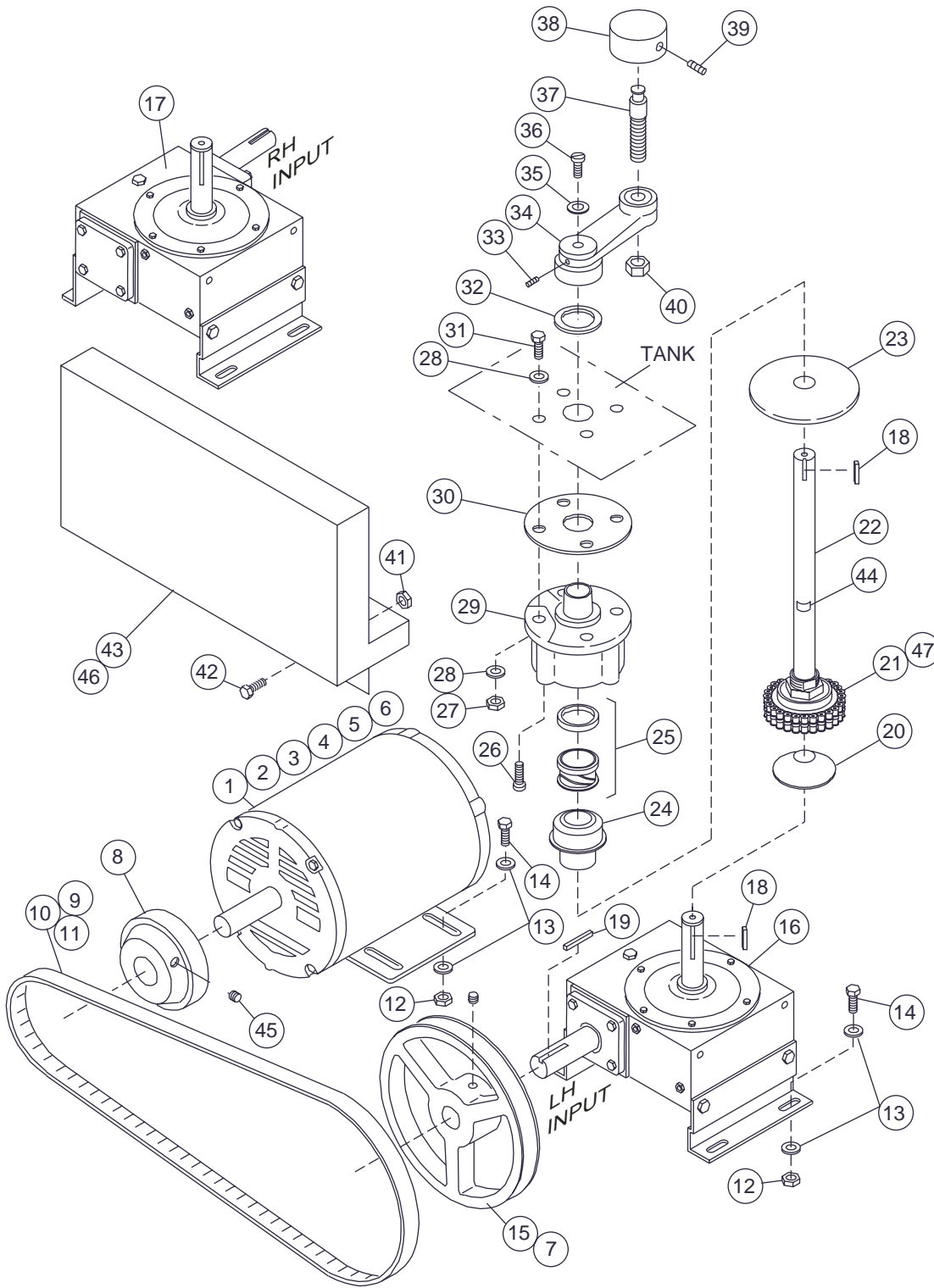


Figure 18 – Conveyor Drive Assembly

CONVEYOR DRIVE ASSEMBLY

Fig. 18 Item No.	Part No.	Part Description	Qty.
1	100249	Motor, 1/4-HP Drive (115V/208-230V-60Hz-1Ph).....	1
2	107181	Motor, 1/4-HP Drive (208-24V-480V-60Hz-3Ph).....	1
3	180225	Motor, 1/4-HP Drive (380V-50Hz-3Ph)	1
4	180274	Motor, 1/4-HP Drive (380V-60Hz-3Ph)	1
5	180145	Motor, 1/4-HP Drive (415V-50Hz-3Ph)	1
6	180240	Motor, 1/4-HP Drive (575V-60Hz-3Ph)	1
7	100458	Sheave (AK74) 3/4" Bore (44WS)	1
8	103162	Sheave (AK25) 1/2" Bore (44KB, 54KB, KL44)	1
9	100801	Belt - 4L370 (44WS, 66WS).....	1
10	100797	Belt - 4L340 (44KB, 54KB)	1
11	100796	Belt - 4L330 (KL44, KL66)	1
12	100142	Nut, grip (5/16-18)	8
13	102376	Washer, flat (5/16")	16
14	100739	Bolt (5/16-18 X 3/4") Hex hd	8
15	100454	Sheave (AK59) 3/4" Bore (44KB, 54KB, KL44)	1
16	110300	Box, gear (L-R)	1
17	110299	Box, gear (R-L)	1
18	104916	Key 3/16" X 3/16" X 3/4" Lg).....	2
19	104915	Key (3/16" X 3/16" X 1 1/4" Lg)	1
20	100870	Slinger, water.....	1
21	109661	Limiter, torque (Includes item 47).....	1
22	202675	Shaft, drive.....	1
23	109374	Shield, drip.....	1
24	100382	Bearing.....	1
25	102244	Seal (5/8") (2-Piece)	1
26	104923	Screw (1/4-20 X 3/8") Round hd.....	4
27	100143	Nut, grip (3/8-16)	4
28	104618	Washer, flat (3/8")	8
29	B1074-1	Housing, bearing	1
30	108820	Gasket, bearing housing	1
31	100153	Bolt (3/8-16 X 1") Hex hd.....	4
32	103180	Ring, wiper	1
33	100771	Screw, set (1/4-20 X 1/4") Socket hd	1
34	202386	Crank	1
35	104925	Washer, flat (1/4" X 1" O.D.)	1
36	100007	Screw (10-32 X 3/8") Truss hd	1
37	100868	Stud, crosshead roller.....	1
38	202381	Roller, crosshead	1
39	100769	Screw, set (3/8-16 X 3/4") Dog Point	1
40	107089	Nut, jam (1/2-13).....	1
41	100141	Nut, grip (1/4-20)	2
42	100734	Bolt (1/4-20 X 1/2") Hex hd	2
43	313360	Guard, belt (44KB, 54KB, KL44)	1
44	110990	Label - Rotation	1
45	N/A	Screw, set (5/16-18 X 3/8") Dog Point	2
46	315562	Guard, belt (44WS)	1
47	105263	Set, clutch pad (1 pair for #250 clutch).....	1
—	900146	Clutch assy (Includes items 18, 21-23, 44).....	—

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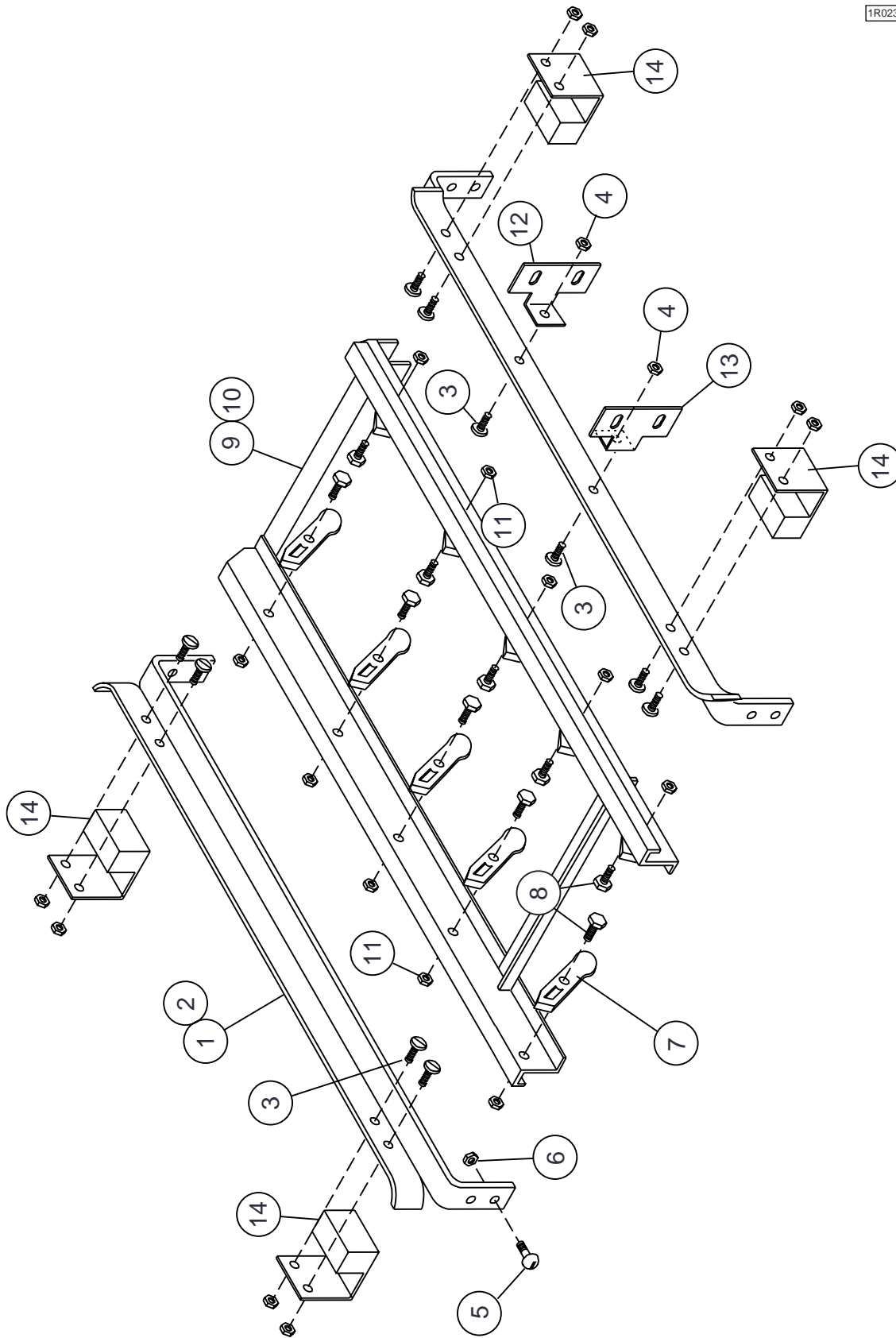


Figure 19 – Track and Cradle Assembly
(For machines beginning with S/N 84565 and above except KL-44/66 beginning with S/N 90513 and above)

TRACK AND CRADLE ASSEMBLY

(For machines beginning with S/N 84565 and above except KL-44/66 beginning with S/N 90513 and above)

Fig.19,19a Item No.	Part No.	Part Description	Qty.
1	311650	Track (44KB, 44WS, KL44)	2
2	313289	Track (54KB)	2
3	111296	Screw (10-32 x 3/8") Flat hd	9
4	100194	Nut, grip (10-32)	
5	100073	Screw (1/4-20 x 1/2") Truss hd	8
6	100141	Nut, grip (1/4-20)	8
7	204513	Pawl.....	10
8	110857	Shoulder bolt	10
9	316899	Cradle (44KB, 44WS, KL44) (Beginning with S/N 84565).....	1
10	316900	Cradle (54KB) (Beginning with S/N 84565)	1
11	100142	Nut, grip (5/16-18)	10
12	315278	Support – Front (RH)	1
13	315279	Support – Front (LH).....	1
14	408092	Slide Assy, Cradle	4
—	408138	Cradle Assy. (44KB/44WS/KL44)(includes items 7, 8, 9, 11)..... (Beginning with S/N 84565 and above)	1
—	408139	Cradle Assy. (54KB)(includes items 7, 8, 10, 11)..... (Beginning with S/N 84565 and above)	1

Fig.19a Item No.	Part No.	Part Description	Qty.
15	312957	Cradle (44KB, 44WS, KL44) (Prior to S/N 84565)	1
16	312956	Cradle (54KB) (Prior to S/N 84565).....	1
—	405927	Cradle Assy. (44KB/44WS/KL44)(includes items 7, 8, 11, 15)..... (Prior to S/N 84565)	1
—	405928	Cradle Assy. (54KB)(includes items 7, 8, 11, 16)..... (Prior to S/N 84565)	1

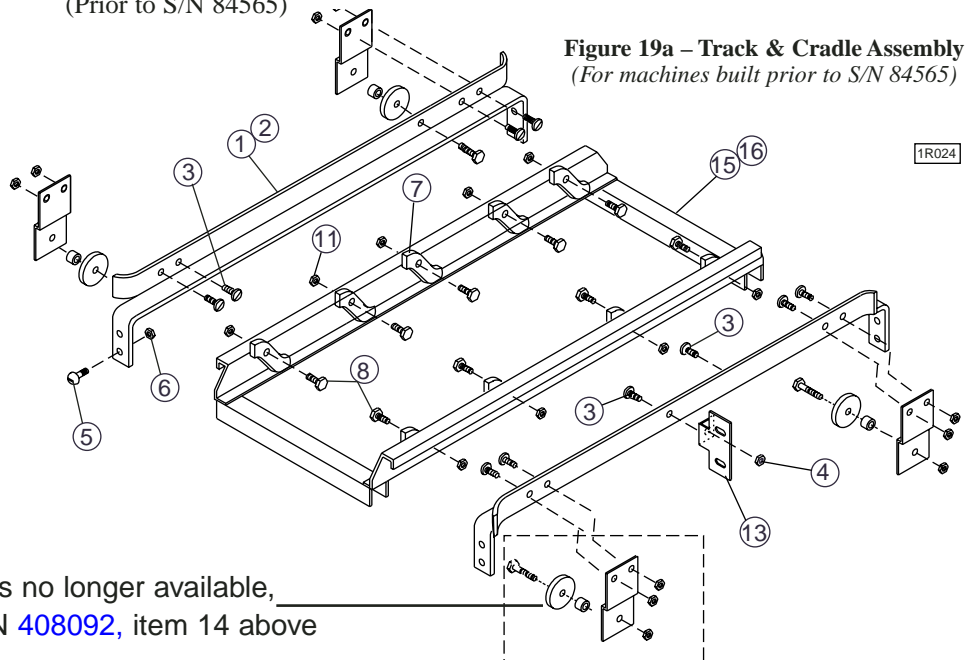


Figure 19a – Track & Cradle Assembly
(For machines built prior to S/N 84565)

Old style roller is no longer available,
replace with P/N 408092, item 14 above

1R025

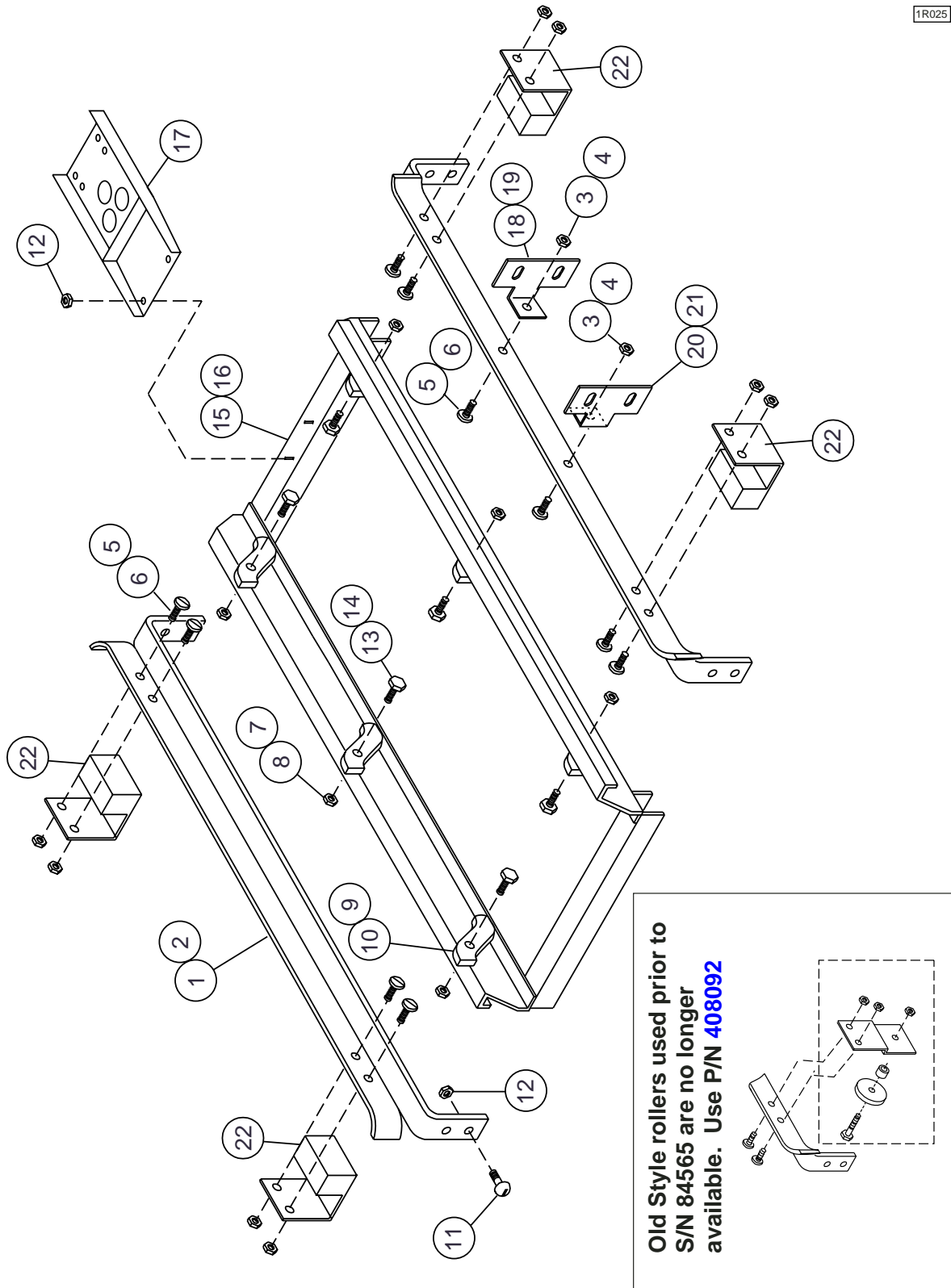


Figure 20 – Track and Cradle Assembly – PR22, PR36
 (All S/N's) (PR36 Shown)

TRACK AND CRADLE ASSEMBLY (PR22, PR36)
(All S/N's) (PR36 Shown)

Fig. 20 Item No.	Part No.	Part Description	Qty.
1	311651	Track (PR22)	2
2	313117	Track (PR36)	2
3	100194	Nut, grip (10-32) (PR22)	9
4	100194	Nut, grip (10-32) (PR36)	10
5	111296	Screw (10-32 x 3/8") Flat hd (PR22)	9
6	111296	Screw (10-32 x 3/8") Flat hd (PR36)	10
7	100142	Nut, grip (5/16-18) (PR22)	4
8	100142	Nut, grip (5/16-18) (PR36)	6
9	204513	Pawl (PR22)	4
10	204513	Pawl (PR36)	6
11	100073	Screw (1/4-20 x 1/2") Truss hd	8
12	100141	Nut, grip (1/4-20)	6
13	110857	Shoulder bolt (PR22)	8
14	110857	Shoulder bolt (PR36)	10
13	312955	Cradle (PR22)	8
16	312954	Cradle (PR36)	1
17	313357	Cradle connector	1
18	315278	Support, Front RH (PR22 R-L)	1
19	315278	Support, Front RH (PR36).....	1
20	315279	Support, Front LH (PR22 L-R)	1
21	315279	Support, Front LH (PR36).....	1
22	408092	Slide Assy, cradle.....	4
—	405925	Cradle Assy (PR22) (includes items 7, 9, 13, 15).....	1
—	405926	Cradle Assy (PR36) (includes items 8, 10, 14, 16).....	1

1R026

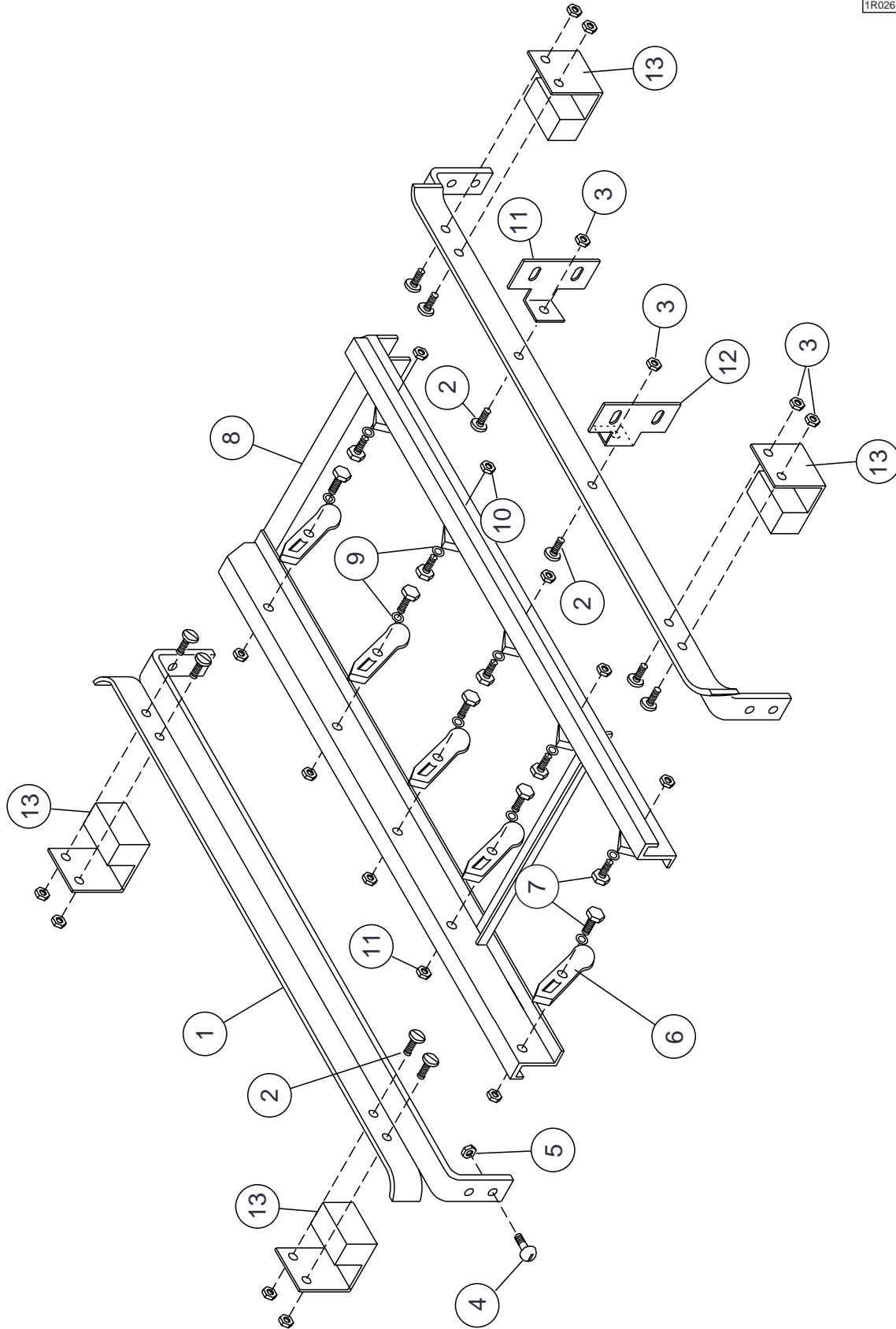


Figure 21 – Track and Cradle Assembly (KL-44/66 Only)
(For machines beginning with S/N 90513 and above)

TRACK AND CRADLE ASSEMBLY (KL-44/66 ONLY)
(For machines beginning with S/N 90513 and above)

Fig. 21 Item No.	Part No.	Description	Qty.
1	311650	Track (KL44)	2
2	111296	Screw 10-32 x 3/8"	9
3	100194	Nut, Grip 10/32	9
4	100073	Screw 1/4-20 x 1/2"	8
5	100141	Nut, Grip 1/4-20	8
6	204513	Pawl	10
7	110857	Shoulder Bolt	10
8	322552	Cradle.....	1
9	102376	Washer 5/16 x 3/4 x 1/16"	10
10	109009	Nut 5/16 w/nylon insert.....	10
11	315278	Support, front (RH)	1
12	315279	Support, front (LH)	1
13	408092	Slide Assy., Cradle.....	4
—	412005	Cradle Assembly (Includes items 6-10)	1

1R027

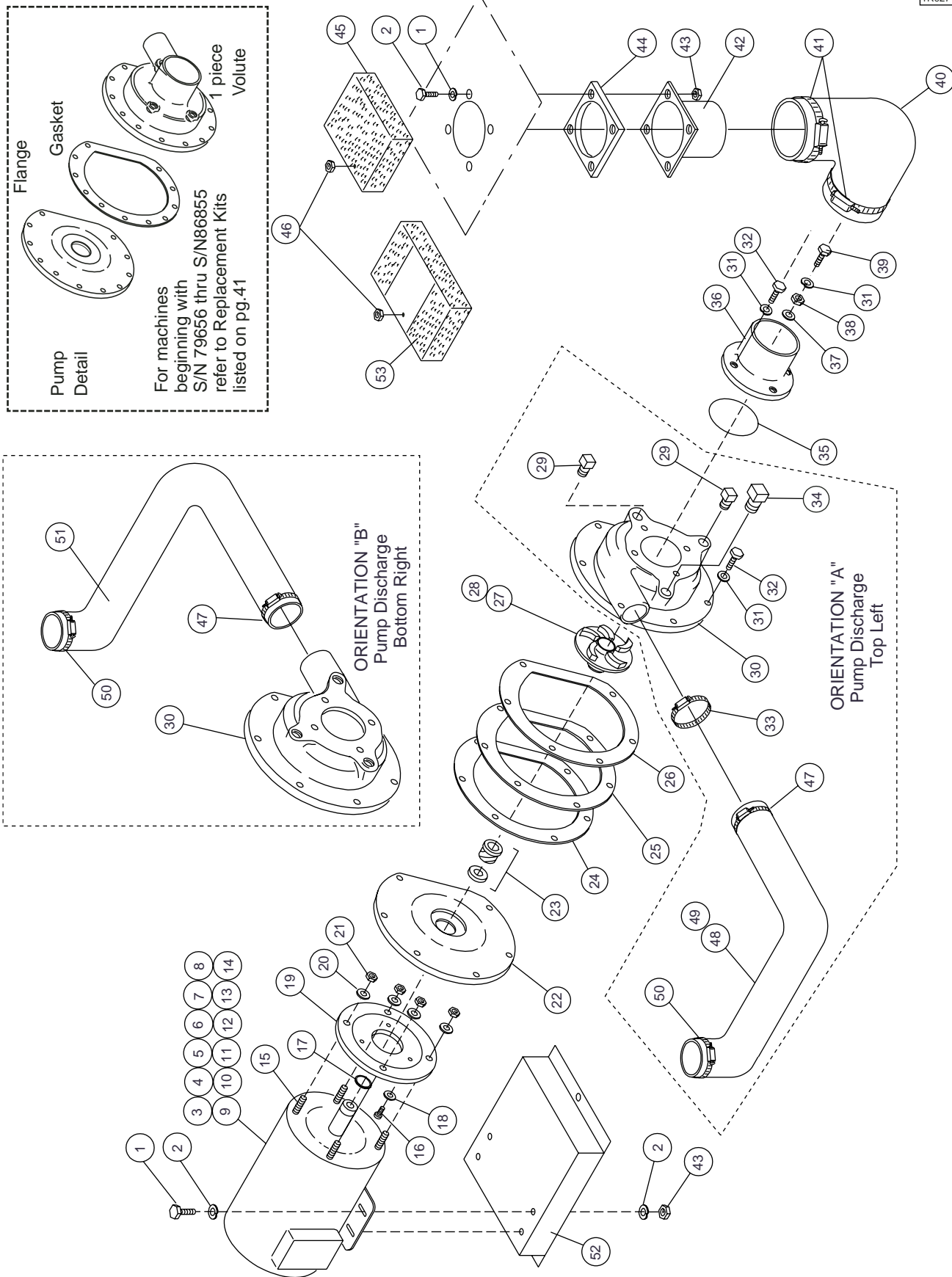


Figure 22 – Motor and Pump Assembly
(Wash and Prewash) (All S/N's)

MOTOR AND PUMP ASSEMBLY
(Wash and Prewash) (All S/N's)

Fig. 22 Item No.	Part No.	Part Description	Qty.
— <i>Machines beginning with S/N 79656 thru S/N 86855 were built with a one piece pump volute (See detail top of page 40). This design is no longer available and is replaced with the kits listed below. Figure 22 and the parts breakdown beginning with Item 1 below will apply to the new pump assembly after conversion with the appropriate kit.</i>			
Replacement Kits (For machines beginning with S/N 79656 thru S/N 86855)			
—	900737	Kit, gasket (Includes Qty. 1 each of Item 24-26)	A/R
—	900738	Kit, Flange/Volute Replacement (Pump seal not included) (Includes items 22, 24-26, 29-39)	1
—	900739	Kit, Pump Assy, 1-HP (Motor not included) (Includes items 19, 22-26, 27, 29-39)	1
—	900740	Kit, Pump Assy, 2-HP (Motor not included) (Includes items 19, 22-26, 28, 29-39)	1
(For machines beginning with S/N 79656 thru S/N 86855 after conversion and all machines beginning with S/N 86856 and above)			
1	100739	Bolt (5/16-18 X 3/4) Hex hd	8
2	102376	Washer, flat (5/16")	12
3	110421	Motor, 2-HP (208-240V/60Hz/1Ph)	1
4	110422	Motor, 2-HP (208-240V/460V/60Hz/3Ph)	1
5	112221	Motor, 2-HP (380V/50Hz/3Ph)	1
6	180273	Motor, 2-HP (380V/60Hz/3Ph)	1
7	180246	Motor, 2-HP (415V/50Hz/3Ph)	1
8	111740	Motor, 2-HP (575V/60Hz/3Ph)	1
9	110419	Motor, 1-HP (115V/208-240V/60Hz/1Ph)	1
10	110420	Motor, 1-HP (208-240V/460V/60Hz/3Ph)	1
11	180245	Motor, 1-HP (380V/50Hz/3Ph)	1
12	180272	Motor, 1-HP (380V/60Hz/3Ph)	1
13	180237	Motor, 1-HP (415V/50Hz/3Ph)	1
14	111739	Motor, 1-HP (575V/60Hz/3Ph)	1
15	110734	Stud, motor	4
16	100754	Screw (10-32 X 1/2") Flat hd	3
17	109654	Slinger, water	1
18	110270	Washer, star (countersunk)	3
19	204460	Plate, backing	1
20	106407	Washer, lock (3/8") Split	4
21	107690	Nut, jam (3/8-16)	4
22	111681	Flange, pump	1
23	111111	Seal, mechanical (5/8")	1
24	111941	Gasket (.0085") (1 notch)	1
25	111942	Gasket (.015") (2 notches)	1
26	111943	Gasket (.032") (3 notches)	2
27	113118	Impeller, SST (1 HP) (2.875") (PR22, PR36)	1
28	113119	Impeller, SST (2 HP) (3.5") (Wash, Rinse)	1
29	102500	Plug (1/4" NPT) Brass	2
30	112380	Volute, pump machined	1

MOTOR/PUMP ASSEMBLY (Cont.)
(Wash and Prewash)

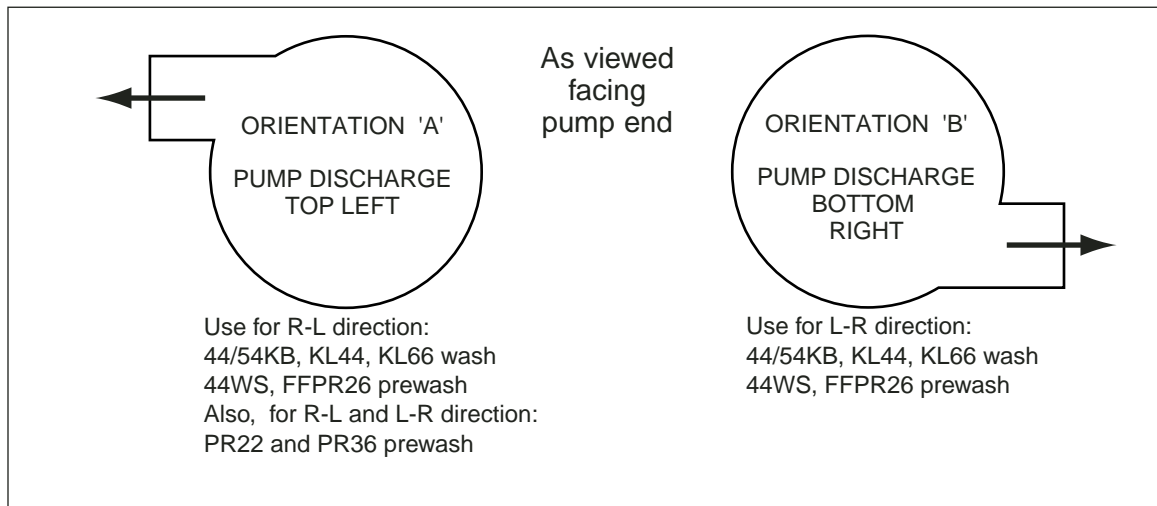
Fig. 22 Item No.	Part No.	Part Description	Qty.
32	100736	Bolt (1/4-20 X 3/4") Hex hd	10
33	111964	Clamp, discharge pump hose.....	1
34	102504	Plug (1/2" NPT) Brass.....	1
35	112338	Gasket, Pump Suction Flange	1
36	112379	Flange, suction machined	1
37	110248	Washer, flat	1
38	110247	Nut, jam (7/16-20) Hex	1
39	100734	Bolt (1/4-20 X 1/2") Hex hd	1
40	109562	Hose, intake	1
41	104203	Clamp, hose (M52)	2
42	307995	Flange, intake.....	1
43	100142	Nut, grip (5/16-18)	8
44	109568	Gasket, flange intake	1
45	311761	Strainer, pump intake (All except KL44/66 wash pump)	1
46	107967	Nut, grip (1/4-20) w/nylon insert	1
47	110858	Clamp, discharge hose.....	1
48	109578	Hose, discharge (<i>Orientation A</i>)	1
		(Use for R-L direction 44/54KB, KL44, 44WS, FFPR26)	
		(Use for R-L & L-R direction PR36 units)	
49	110459	Hose, discharge (<i>Orientation A</i>)	1
		(Use for R-L & L-R direction PR22 units)	
50	104165	Clamp, hose (M40)	1
51	110457	Hose, discharge (<i>Orientation B</i>)	1
		(Use for L-R direction 44/54KB, KL44, 44WS, FFPR26)	
52	312645	Base, motor mount.....	1
53	322550	Strainer, pump intake (KL44/66 wash pump only).....	1

Pump Assemblies – ORIENTATION “A”

—	451524	Pump Assy. IHP, 208-240V/60Hz/IPH (Includes items 1-2, 9, 15-26, 27, 29-32, 34-39)	1
—	451523	Pump Assy. IHP, 208-240V/460v/60Hz/3PH (Includes items 1-2, 10, 15-26, 27, 29-32, 34-39)	1
—	451637	Pump Assy. IHP, 575V/60Hz/3PH (Includes items 1-2, 14, 15-26, 27, 29-32, 34-39)	1
—	451668	Pump Assy. IHP, 380V/50Hz/3PH (Includes items 1-2, 11, 15-26, 27, 29-32, 34-39)	1
—	451674	Pump Assy. IHP, 380V/60Hz/3PH (Includes items 1-2, 12, 15-26, 27, 29-32, 34-39)	1
—	451670	Pump Assy. IHP, 415V/50Hz/3PH (Includes items 1-2, 13, 15-26, 27, 29-32, 34-39)	1
—	451526	Pump Assy. 2HP, 208-240V/60Hz/IPH (Includes items 1-2, 3, 15-26, 28, 29-32, 34-39)	1
—	451525	Pump Assy. 2HP, 208-240V/460V/60Hz/3PH (Includes items 1-2, 4, 15-26, 28, 29-32, 34-39)	1
—	451656	Pump Assy. 2HP, 380V/50Hz/3PH (Includes items 1-2, 5, 15-26, 28, 29-32, 34-39)	1
—	451685	Pump Assy. 2HP, 380V/60Hz/3PH (Includes items 1-2, 6, 15-26, 28, 29-32, 34-39)	1
—	451647	Pump Assy. 2HP, 415V/50Hz/3PH (Includes items 1-2, 7, 15-26, 28, 29-32, 34-39)	1
—	451639	Pump Assy. 2HP, 575V-60Hz-3PH (Includes items 1-2, 8, 15-26, 28, 29-32, 34-39)	1

MOTOR AND PUMP ASSEMBLY (Cont.)
(Wash and Prewash)

Fig. 22 Item No.	Part No.	Part Description	Qty.
Pump Assemblies – ORIENTATION “B”			
—	451361	Pump Assy. IHP, 208-240V/60Hz/IPH (Includes items 1-2, 9, 15-26, 27, 29-32, 34-39)	1
—	451615	Pump Assy. IHP, 208-240V/460V/60Hz/3PH (Includes items 1-2, 10, 15-26, 27, 29-32, 34-39)	1
—	452383	Pump Assy. IHP, 575V/60Hz/3PH (Includes items 1-2, 14, 15-26, 27, 29-32, 34-39)	1
—	451363	Pump Assy. 2HP, 208-240V/60Hz/IPH (Includes items 1-2, 3, 15-26, 28, 29-32, 34-39)	1
—	451362	Pump Assy. 2HP, 208-240V/460V/60Hz/3PH (Includes items 1-2, 4, 15-26, 28, 29-32, 34-39)	1
—	451657	Pump Assy. 2HP, 380V/50Hz/3PH (Includes items 1-2, 5, 15-26, 28, 29-32, 34-39)	1
—	451673	Pump Assy. 2HP, 380V/60Hz/3PH (Includes items 1-2, 6, 15-26, 28, 29-32, 34-39)	1
—	451641	Pump Assy. 2HP, 415V/50Hz/3PH (Includes items 1-2, 7, 15-26, 28, 29-32, 34-39)	1
—	451636	Pump Assy. 2HP, 575V/60Hz/3PH (Includes items 1-2, 8, 15-26, 28, 29-32, 34-39)	1



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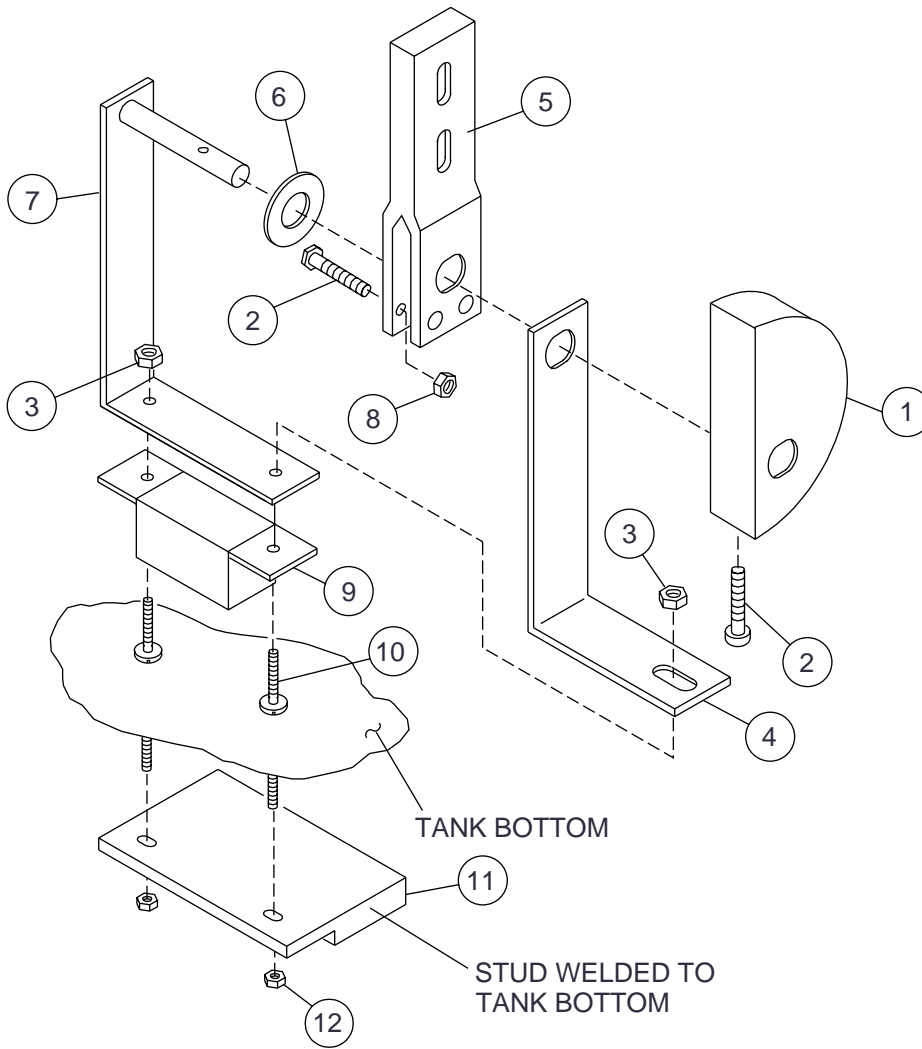


Figure 23 – Idle Pump Mechanism
(All S/N's)

IDLE PUMP MECHANISM
(All S/N's)

Fig. 23 Item No.	Part No.	Part Description	Qty.
1	111030	Cam, idle pump	1
2	107137	Bolt (10-32 X 7/8") Hex hd.....	2
3	104971	Nut, grip (6-32)	2
4	316562	Support bracket, pivot arm	1
5	316565	Support bracket, idle pump	1
6	104618	Washer, flat (3/8")	A/R
7	316560	Pivot arm, idle pump	1
8	100194	Nut, grip (10-32)	1
9	111026	Magnet	1
10	111319	Screw (6-32 x 1/2") Truss hd	2
11	113721	Reed Switch Aleph	1
12	104971	Nut, grip (6-32)	2
—	408221	Idle Pump Mechanism Assy (R-L 44KB, 44WS, KL44, 54KB, PR36) (R-LPR26) (includes items 1-10)	1
—	408220	Idle Pump Mechanism Assy (L-R 44KB, 44WS, KL44, 54KB, PR36) (R-L PR26) (includes items 1-10)	1



NOTE:

For Idle Pump Mechanism on FFPR26, refer to the next page and parts list.

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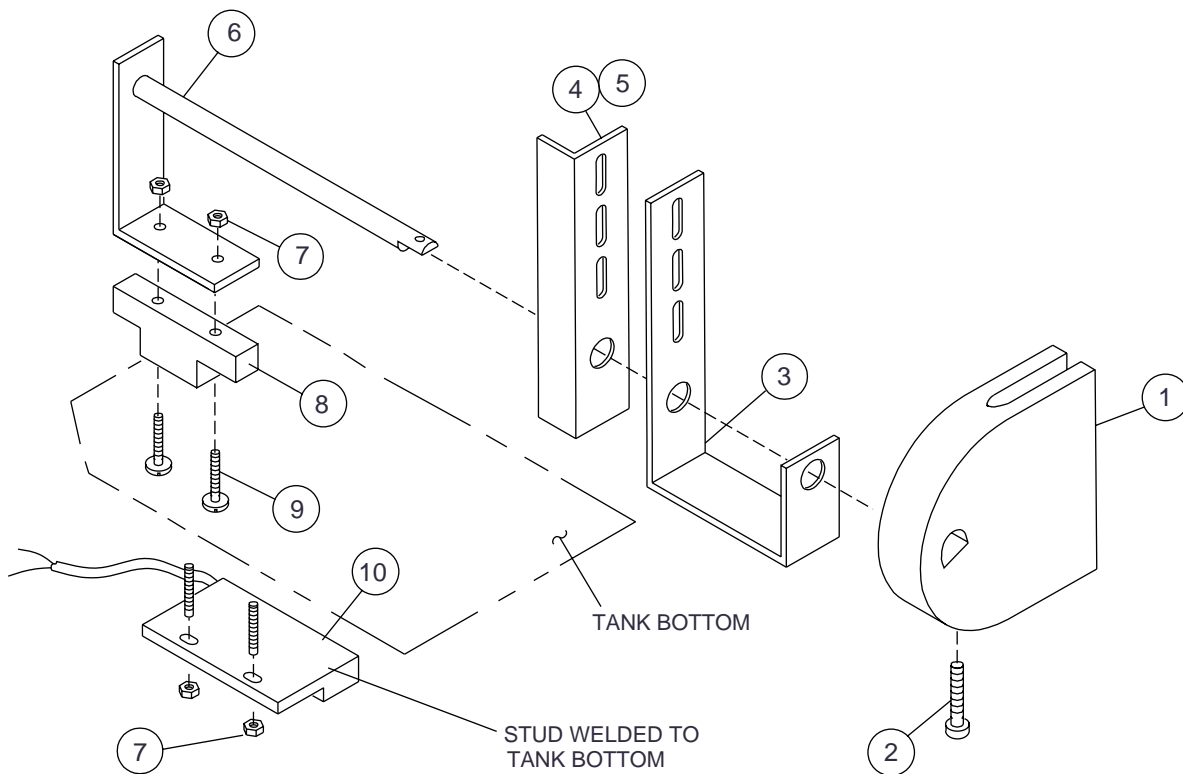


Figure 24 – Idle Pump Switch (FFPR26 Only)
(R-L Shown) (All S/N's)

IDLE PUMP SWITCH (FFPR26 Only)
(R-L Shown) (All S/N's)

Fig. 24 Item No.	Part No.	Part Description	Qty.
1	111029	Cam	1
2	107137	Bolt (10-32 x 7/8") Hex hd	1
3	314093	Support, pivot arm	1
4	315181	Stiffener, (R-L direction machine only)	1
5	315182	Stiffener, (L-R direction machine only)	1
6	314106	Pivot arm	1
7	104971	Nut, grip (6-32)	4
8	111026	Magnet	1
9	111319	Screw (6-32 x 1/2") Truss hd.....	2
10	113721	Switch Reed Aleph	1

1R030

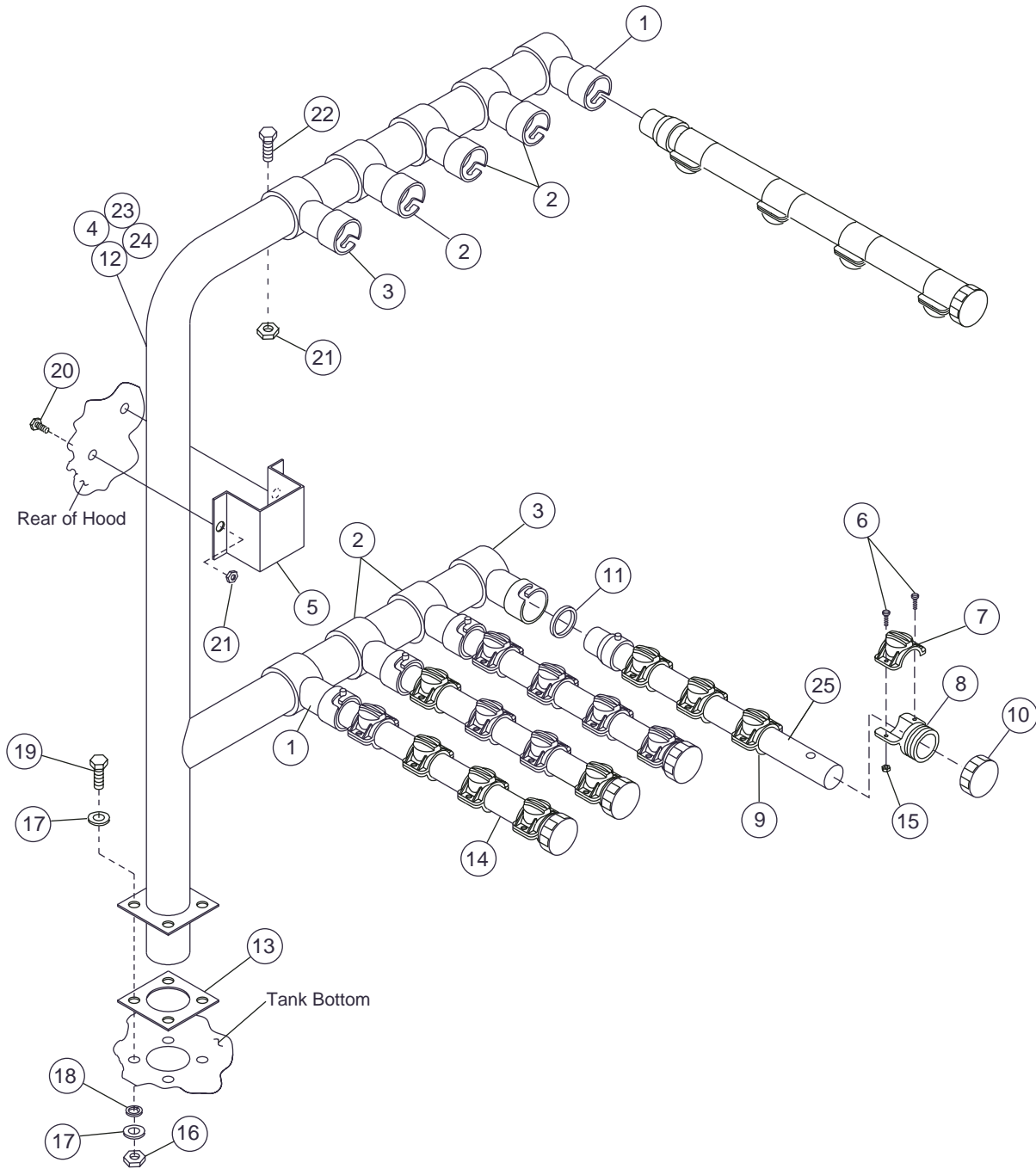


Figure 25 – Wash System Assembly
(For machines prior to S/N 84565)

WASH SYSTEM ASSEMBLY
(For machines prior to S/N 84565)

Fig. 25 Item No.	Part No.	Part Description	Qty.
1	108846	Quick Coupler #3	2
2	108416	Quick Coupler #2	5
3	108847	Quick Coupler #1	2
4	312623	Standpipe (R to L)	1
5	313212	Bracket, Stand Pipe	1
6	108442	Screw, M5 x 15 mm Fillister Head	8
7	108446	Nozzle Top	4
8	108445	Adapter, Cap	1
9	108444	Nozzle Bottom	3
10	108447	Cap	1
11	108443	Gasket	1
12	312618	Standpipe (L to R)	1
13	108345	Gasket, Standpipe	1
14	406136	Spray Pipe Assembly (includes items 6,7,8,9,10,11,15,25)	9
15	108441	Nut, Plain M5	8
16	100154	Nut, Plain 5-16-18	4
17	102376	Washer, Flat 5/16	8
18	106013	Washer, Lock 5/16 Split	4
19	100740	Bolt, 5/16-18 x 1" Hex Head	4
20	100073	Screw, 1/4-20 x 1/2 Truss Head	2
21	100141	Nut, Grip 1/4-20	11
22	100736	Bolt, 1/4-20 x 3/4 Hex Head	9
23	313927	Standpipe (L to R) Hi-Hood	1
24	313928	Standpipe (R to L) Hi-Hood	1
25	—	Spray Pipe (No longer available as separate part, use Item 14)	1

1R031

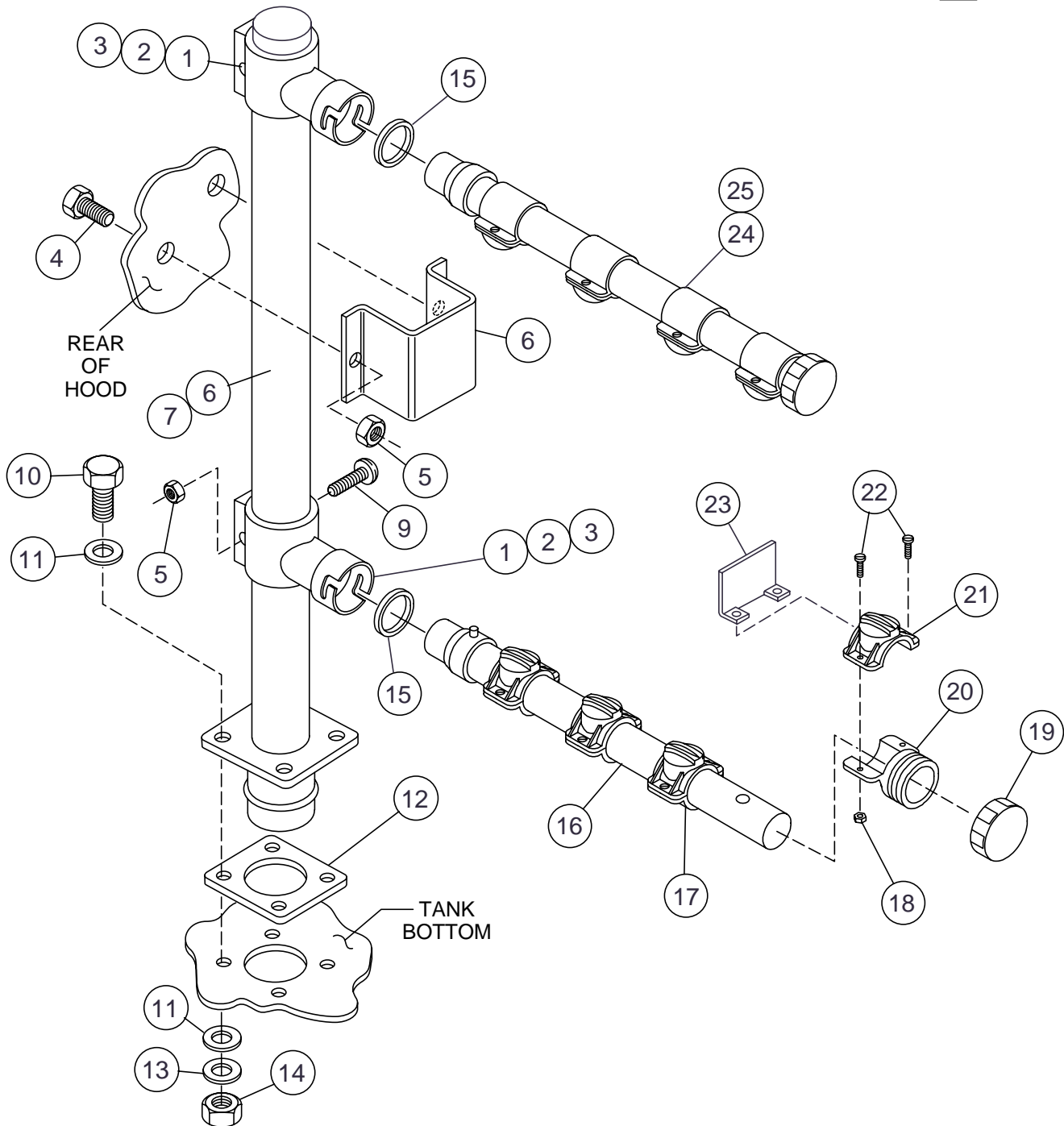


Figure 26 – Wash System Assembly (PR22, FFPR26)
 (For machines prior to S/N 84565)

WASH SYSTEM ASSEMBLY (PR22, FFPR26)*(For machines prior to S/N 84565)*

Fig. 26 Item No.	Part No.	Part Description	Qty.
1	108648	Quick Coupler (PR22) Upper & Lower	2
2	111088	Quick Coupler (FFPR26) (R-L Lower)(L-R Upper).....	1
3	111089	Quick Coupler (FFPR26) (L-R Lower)(R-L Upper).....	1
4	100073	Screw, 1/4-20 x 1/2 Truss Head.....	2
5	100141	Nut, Grip 1/4-20	4
6	313212	Bracket, Standpipe.....	1
7	311649	Standpipe, Standard	1
8	311868	Standpipe, High-Hood.....	1
9	100736	Bolt, 1/4-20 x 3/4 Hex Head	2
10	100740	Bolt, 5/16-18 x 1" Hex Head.....	4
11	102376	Washer, Flat 5/16"	8
12	108345	Gasket, Standpipe	1
13	106013	Washer, Lock 5/16" Split.....	4
14	100154	Nut, Plain 5/16-18	4
15	108443	Gasket, Spray Pipe.....	1
16	-----	Spray Pipe (No longer available as separate part, use Item 24 or 25)	1
17	108444	Nozzle Bottom.....	3
18	108441	Nut, Plain M5	8
19	108447	Cap.....	1
20	108445	Adapter, Cap	1
21	108446	Nozzle Top.....	4
22	108442	Screw, M5 x 15mm Fillister Head.....	8
23	314729	Splash Shield (FFPR26)	1
24	406136	Spraypipe Assy. (PR22) (incl. items 15 thru 22).....	2
25	406789	Spraypipe Assy. (FFPR26) (incl. items 15 thru 23)	2

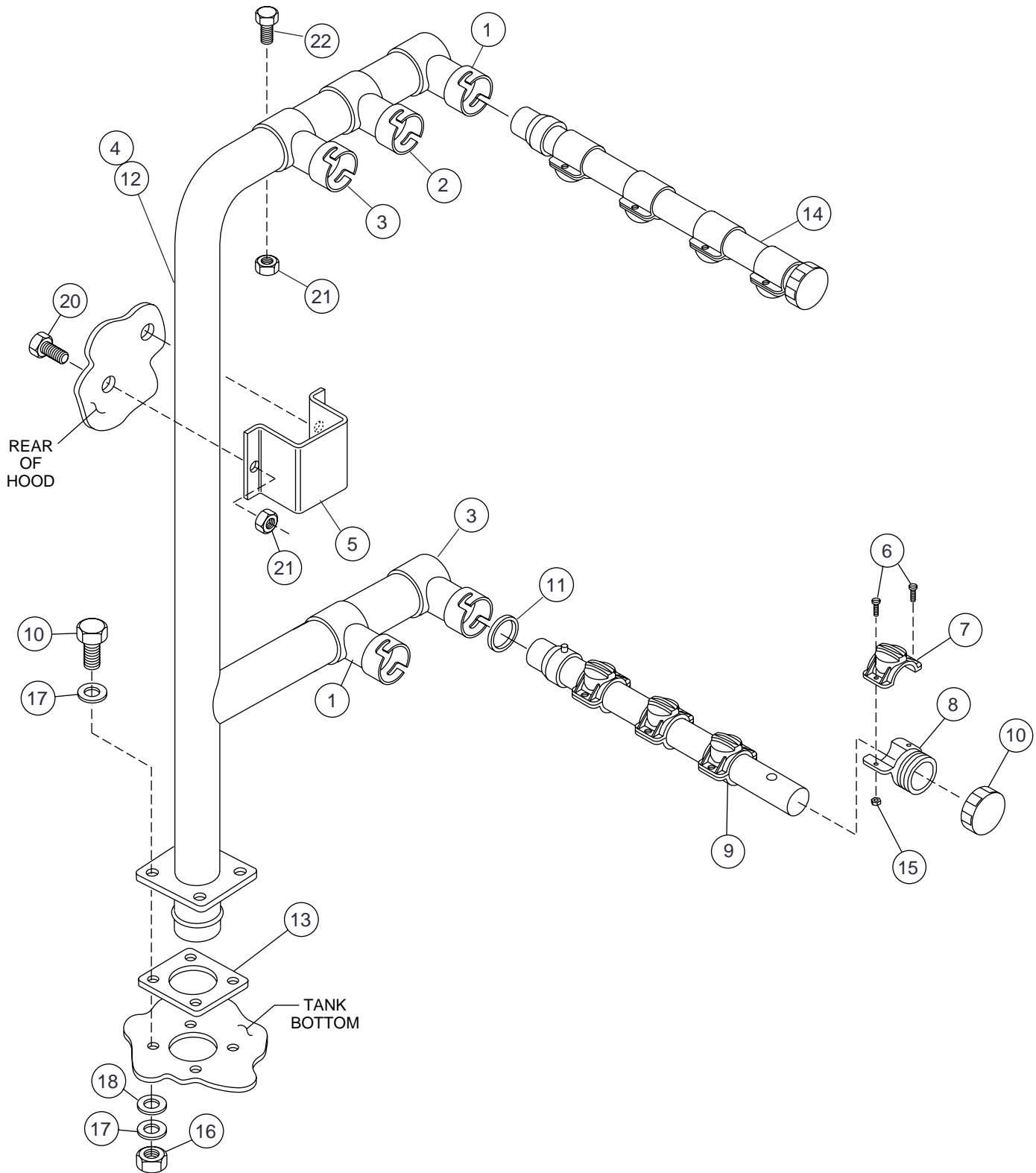


Figure 27 – Wash System Assembly (PR36)
 (For machines prior to S/N 84565)

WASH SYSTEM ASSEMBLY (PR36)
(For machines prior to S/N 84565)

Fig. 27 Item No.	Part No.	Part Description	Qty.
1	108846	Quick Coupler #3	2
2	108416	Quick Coupler #2	1
3	108847	Quick Coupler #1	2
4	313575	Stand Pipe, Standard	1
5	313212	Bracket, Stand Pipe	1
6	108442	Screw M5 x 15mm Fillister Head	8
7	108446	Nozzle Top	4
8	108445	Cap Adapter	1
9	108444	Nozzle Bottom	3
10	108447	Cap	1
11	108443	Gasket, Spray Pipe	1
12	313576	Standpipe, High Hood	1
13	108345	Gasket, Standpipe	1
14	406136	Spray Pipe Assembly (includes item 6,7,8,9,10,15)	5
15	108441	Nut, Plain M5	8
16	100154	Nut, Plain 5/16-18	4
17	102376	Washer, Flat 5/16	8
18	106013	Washer, Lock 5/16 Split	4
19	100740	Bolt, 5/16-18 x 1" Hex Head	4
20	100073	Screw, 1/4-20 x 1/2 Hex Head	2
21	100141	Nut, Grip 1/4-20	7
22	100736	Bolt, 1/4-20 x 3/4 Hex Head	5

1R033

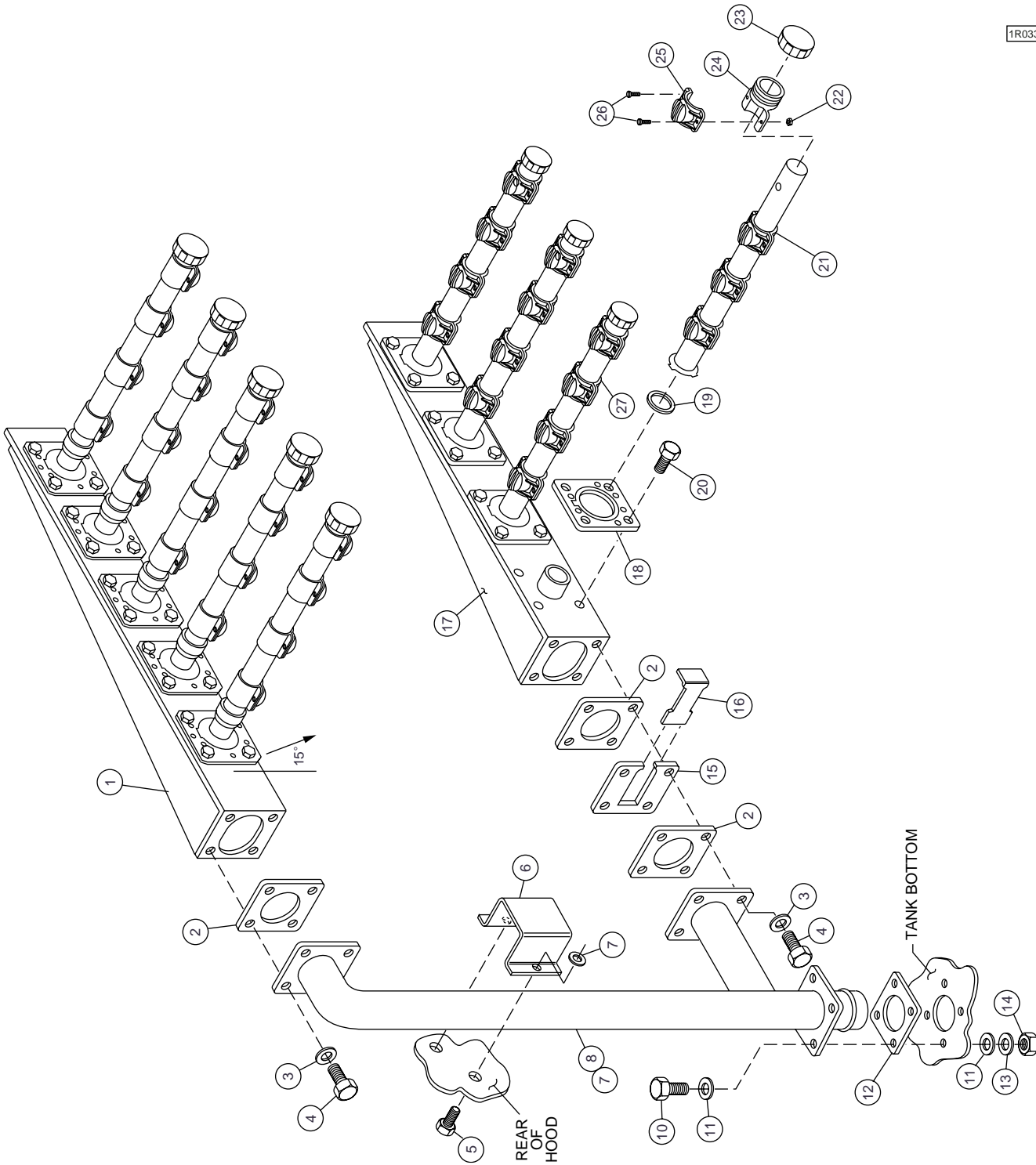


Figure 28 – Wash System Assembly
 (For machines beginning with S/N 84565 thru 89276)

WASH SYSTEM ASSEMBLY
(For machines beginning with S/N 84565 thru 89276)

Fig. 28 Item No.	Part No.	Part Description	Qty.
1	408126	Manifold Assy, upper.....	1
2	111456	Gasket, manifold	3
3	106482	Washer, lock (1/4") split	8
4	100736	Bolt (1/4-20 x 3/4") Hex hd	8
5	100073	Screw (1/4-20 x 1/2") Truss hd	2
6	313212	Bracket, standpipe	1
7	100141	Nut, grip (1/4-20)	2
8	315633	Standpipe (Standard)	1
9	316885	Standpipe (Hi-Hood)	1
10	100740	Bolt (5/16-18 x 1") Hex hd	4
11	102376	Washer, flat (5/16")	8
12	108345	Gasket, standpipe.....	1
13	106013	Washer, lock (5/16") split	4
14	100154	Nut, plain (5/16-18).....	4
15	316772	Plate, restrictor.....	1
16	316773	Slide, restrictor.....	1
17	316681	Manifold Assy, lower.....	1
18	111454	Plate, locking manifold	9
19	111505	O-ring.....	9
20	111370	Bolt (10-32 x 5/8") Hex hd (locking)	36
21	108444	Nozzle, bottom.....	3
22	108441	Nut, plain (M5)	8
23	108447	Cap.....	1
24	108445	Cap, adapter.....	1
25	108446	Nozzle, top.....	4
26	108442	Screw (M5 x 15 mm) Fillister hd	8
*27	408124	Spray Pipe Assy (includes items 21-26) (not shown)	9

* **Note:** P/N 408124 can be replaced with P/N 900775, debossed spraypipe assembly.

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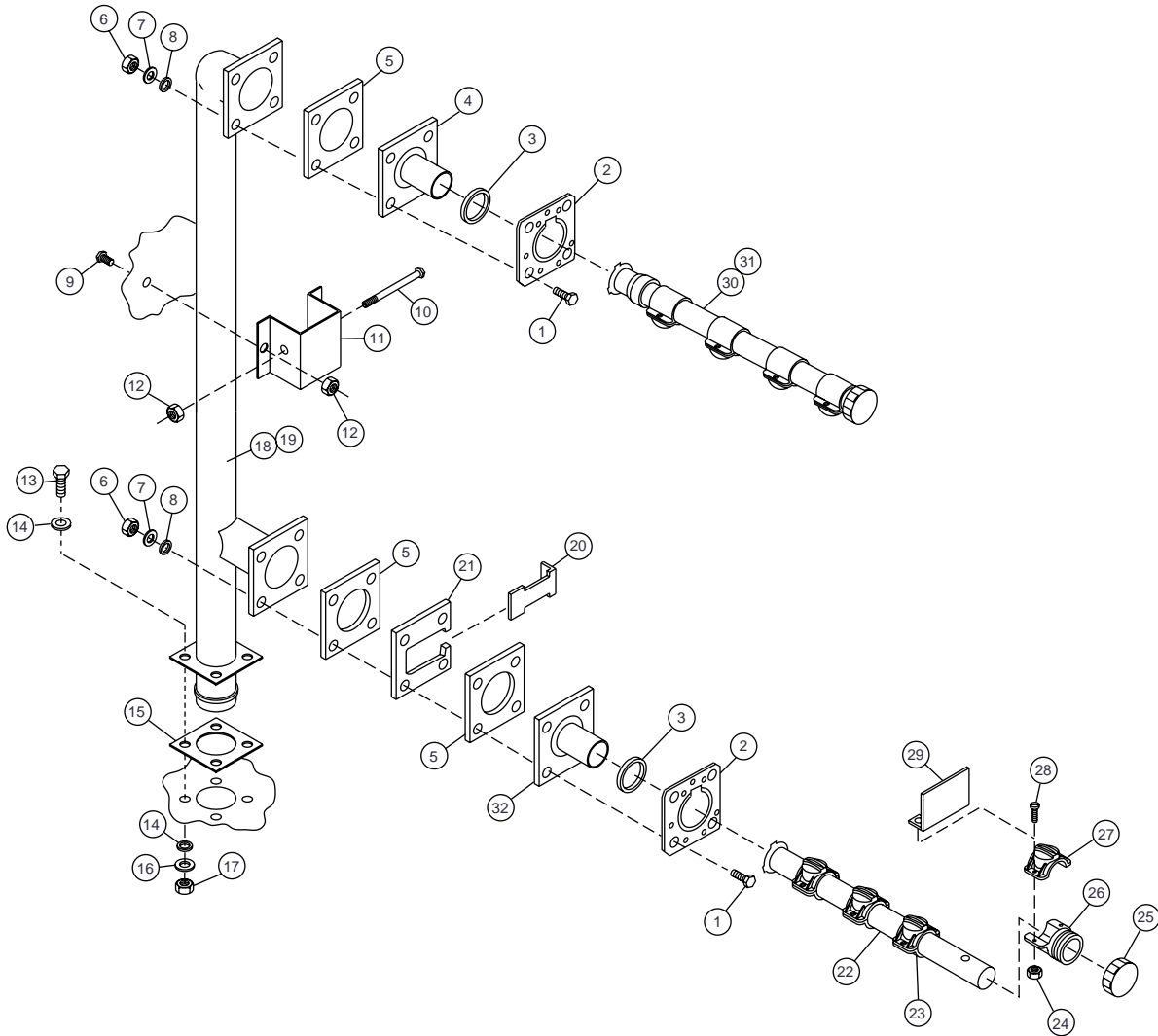


Figure 29 – Wash System Assembly (PR22, FFPR26)
(For machines beginning with S/N 84565 thru 89276)

WASH SYSTEM ASSEMBLY (PR22, FFPR26)
(For machines beginning with S/N 84565 thru 89276)

Fig. 29 Item No.	Part No.	Part Description	Qty.
1	107137	Bolt (10-32 x 7/8") Hex hd	8
2	111454	Locking plate, manifold	2
3	111505	O-ring.....	2
4	316794	Flange Assy, upper	1
5	111456	Gasket, flange	3
6	100194	Nut, grip (10-32)	8
7	106486	Washer, lock (10-32) Split.....	8
8	107033	Washer, flat (10-32)	2
9	100073	Screw, (1/4-20 x 2-1/2") Truss hd	1
10	106028	Bolt (1/4-20 x 2-1/2") Hex hd	1
11	313212	Bracket, standpipe	1
12	100141	Nut, grip (1/4-20)	4
13	100740	Bolt (5/16-18 x 1") Hex hd	4
14	102376	Washer, flat (5/16")	8
15	108345	Gasket, standpipe	1
16	106013	Washer, lock (5/16") Split	4
17	100154	Nut, plain (5/16-18)	4
18	315625	Standpipe, (Standard)	1
19	316885	Standpipe, (High-Hood)	1
20	316773	Slide, restrictor.....	1
21	316772	Plate, restrictor	1
22	-----	Spray pipe (Not available as separate part, use Item 30 or 31)	1
23	108444	Nozzle bottom	3
24	108441	Nut, plain (M5)	8
25	108447	Cap.....	1
26	108445	Adapter, cap.....	1
27	108446	Nozzle top	4
28	108442	Screw (M5 x 15mm) Fillister hd	8
29	314729	Splash shield (FFPR26).....	1
*30	408124	Spraypipe Assy (PR22) (includes items 22-28)	2
*31	408125	Spraypipe Assy (FFPR26) (includes items 22-29)	2
32	408287	Flange Assy, lower.....	1

* **Note:** P/N 408124 and P/N 408125 can be replaced with P/N 900775, debossed
spraypipe assembly.

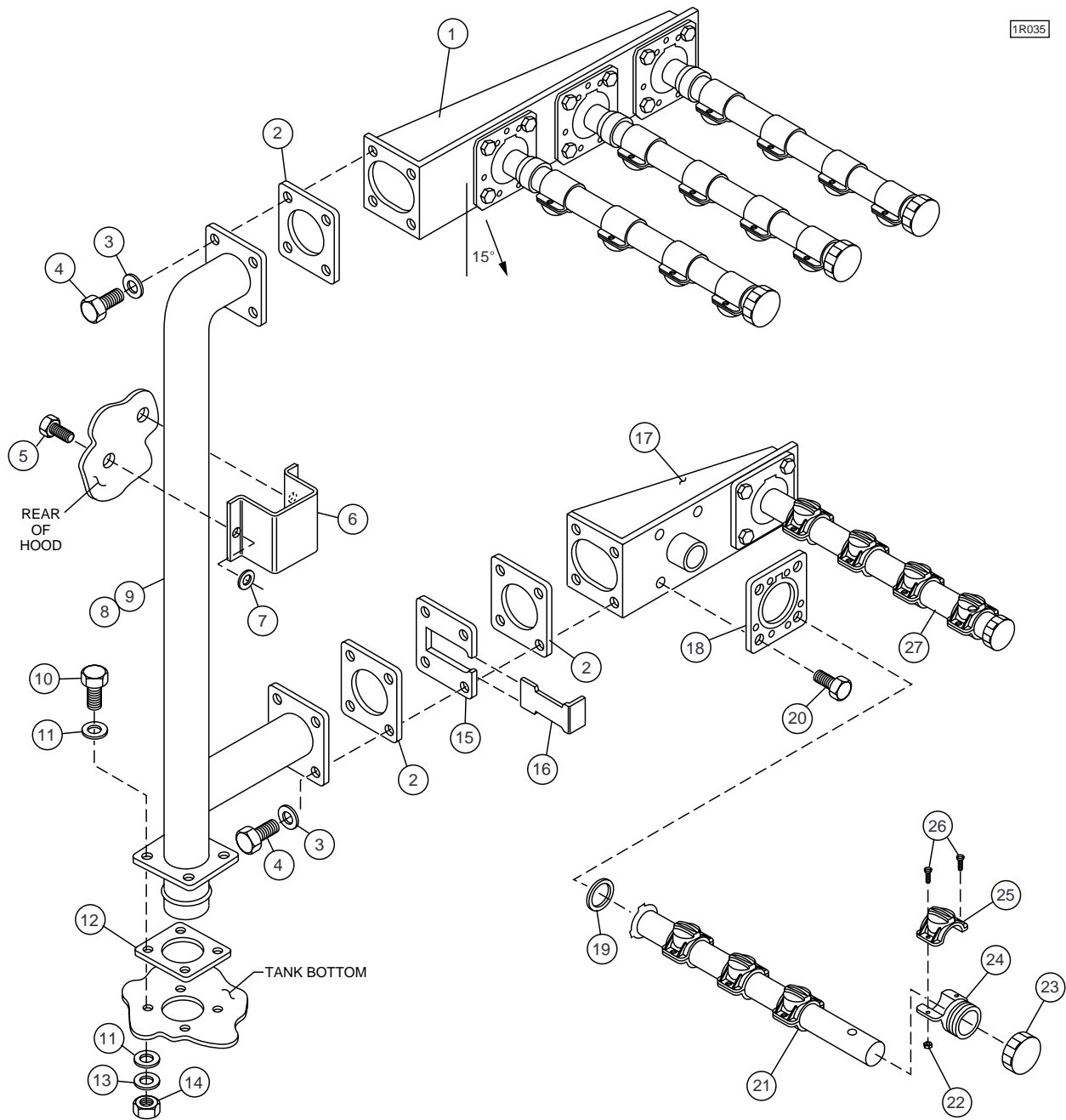


Figure 30 – Wash System Assembly (PR36)
 (For machines beginning with S/N 84565 thru 89276)

WASH SYSTEM ASSEMBLY (PR36)
(For machines beginning with S/N 84565 thru 89276)

Fig. 30 Item No.	Part No.	Part Description	Qty.
1	316688	Manifold Assy, upper	1
2	111456	Gasket, manifold	3
3	106482	Washer, lock (1/4") Split	8
4	100736	Bolt (1/4-20 x 3/4") Hex hd	8
5	100073	Screw (1/4-20 x 1/2") Truss hd	2
6	313212	Bracket, standpipe	1
7	100141	Nut, grip (1/4-20)	2
8	315633	Standpipe (Standard)	1
9	316885	Standpipe (Hi-Hood)	1
10	100740	Bolt (5/16-18 x 1") Hex hd	4
11	102376	Washer, flat (5/16")	8
12	108345	Gasket, standpipe	1
13	106013	Washer, lock (5/16") Split	4
14	100154	Nut, plain (5/16-18)	4
15	316772	Plate, restrictor	1
16	316773	Slide, restrictor	1
17	316691	Manifold Assy, lower	1
18	111454	Locking Plate, manifold	5
19	111505	O-ring	5
20	111478	Bolt (10-32 x 1/2") Hex hd (Locking)	20
21	108444	Nozzle, bottom	3
22	108441	Nut, plain (M5)	8
23	108447	Cap	1
24	108445	Adapter, cap	1
25	108446	Nozzle, top.	4
26	108442	Screw (M5 x 15mm) Fillister hd	8
*27	408124	Spray Pipe Assembly (includes items 21-26)	5
		(SST Spray pipe is not available as a separator part)	

* **Note:** P/N 408124 can be replaced with P/N 900775, debossed spraypipe assembly.

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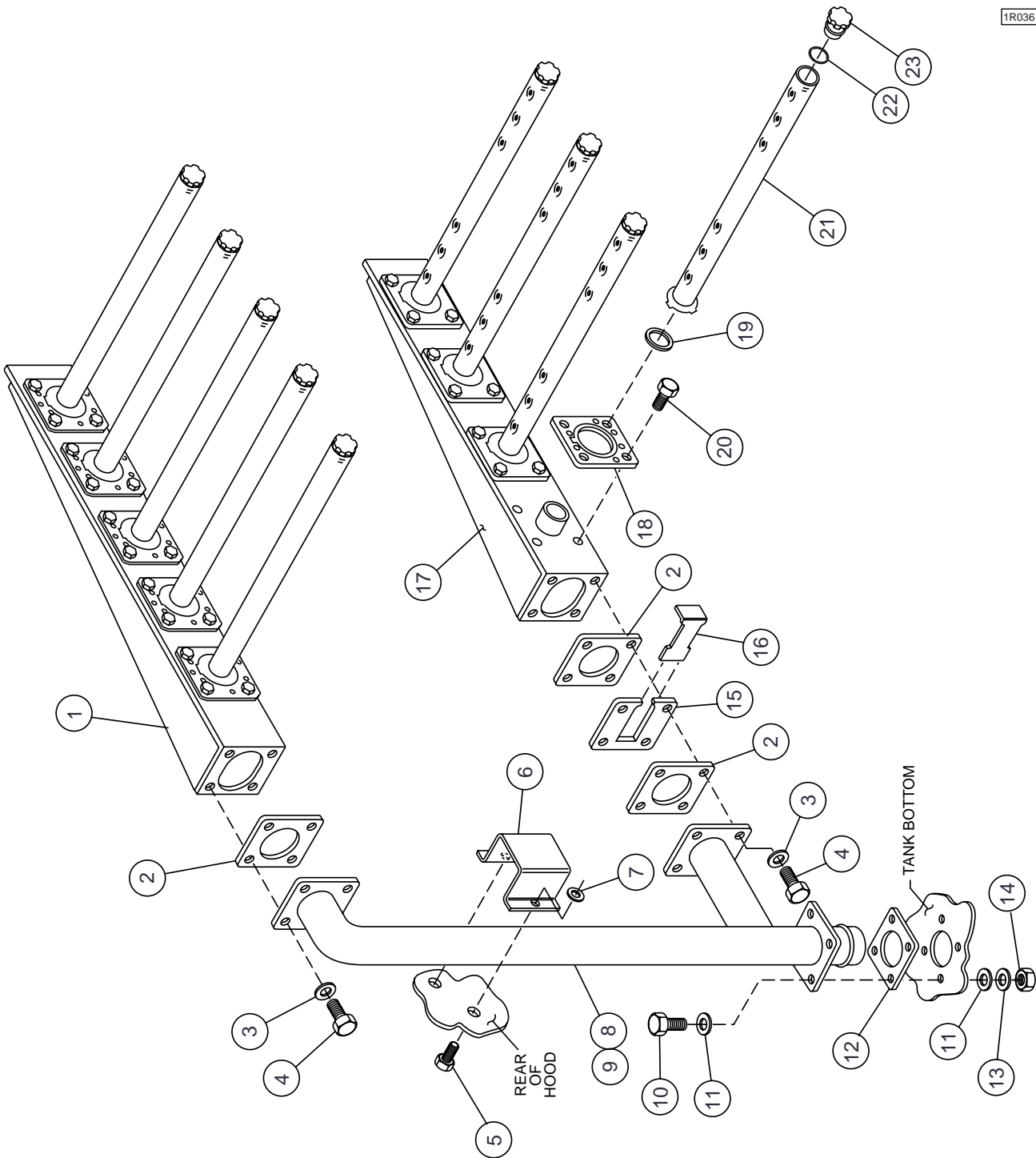


Figure 31 – Wash System Assembly
 (For machines beginning with S/N 89277 and above)

WASH SYSTEM ASSEMBLY
(For machines beginning with S/N 89277 and above)

Fig. 31 Item No.	Part No.	Part Description	Qty.
1	408126	Manifold Assy. 44/54KB	1
2	111456	Gasket Manifold	3
3	106482	Washer Lock 1/4" Split	8
4	100736	Bolt 1/4-20 x 3/4 Hex Head	8
5	100073	Screw 1/4-20 x 1/2 Truss Head	2
6	313212	Bracket, Standpipe.....	1
7	100141	Nut Grip 1/4-20 SST	2
8	315633	Standpipe Weldment (standard).....	1
9	316885	Standpipe Weldment (high hood)	1
10	100740	Bolt 5/16-18 x 1 Hex Head	4
11	102376	Washer 5/16 x 3/4 x 1/16.....	8
12	108345	Gasket 3 x 3 x 1/8"	1
13	106013	Washer Lock 5/16 Split	4
14	100154	Nut Plain 5/16-18	4
15	316772	Plate, Adjustable Restrictor	1
16	316773	Slide, Adjustable Restrictor	1
17	316681	Manifold, Weld 4 Hole	1
18	111454	Locking Plate, Manifold	9
19	111505	O-ring Wash Arm.....	9
20	111478	Bolt 10-32 x 1/2 Hex Head	36
21	321471	Spraypipe Weldment	9
22	104414	O-ring 1 Inch	9
23	112240	Plug Debossed Spraypipe	9
*—	900775	Spraypipe Assy (Includes Items 21-23).....	—

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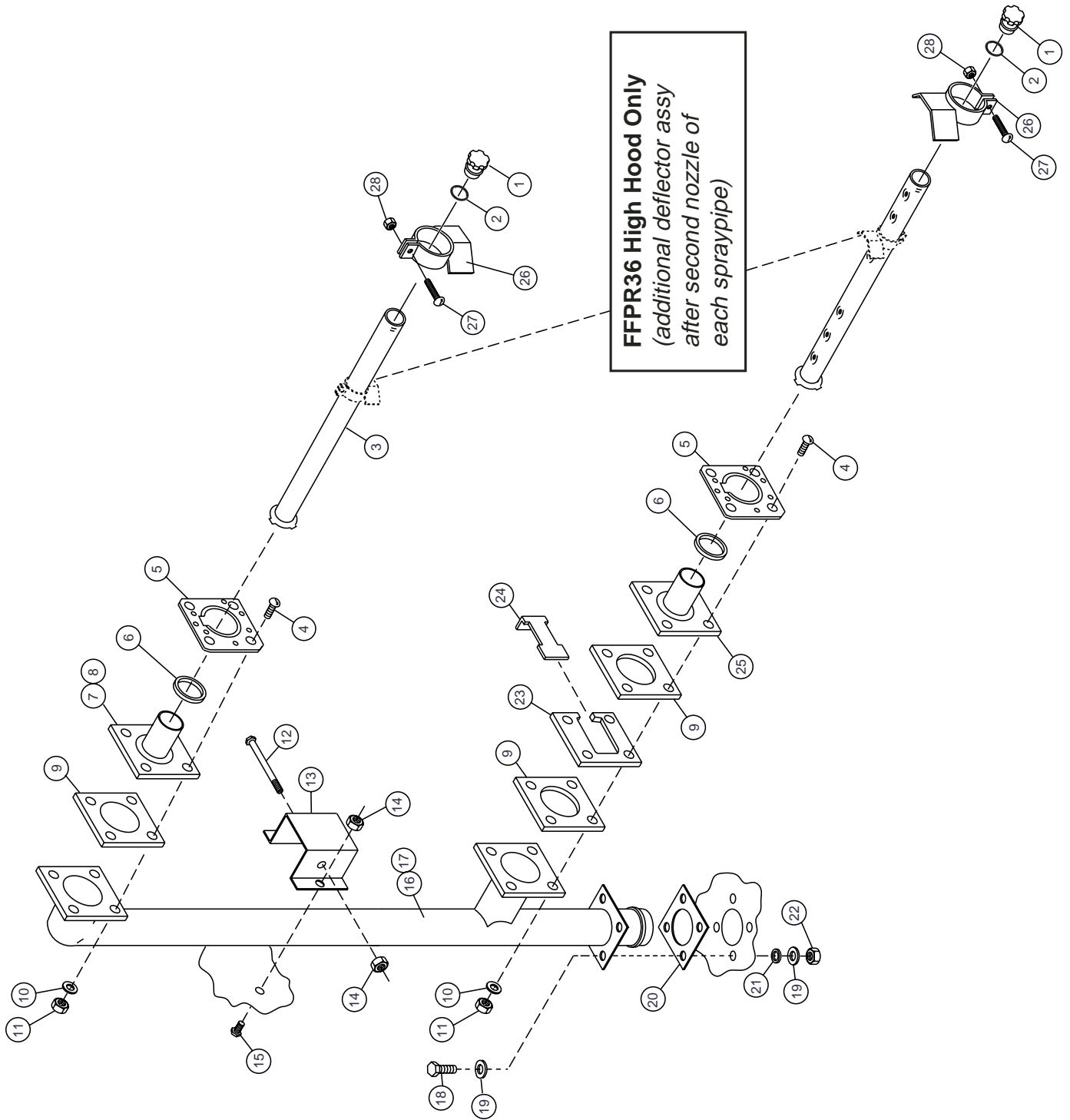


Figure 32 – Wash System Assembly (PR22, FFPR26)
(For machines beginning with S/N 89277 and above)

WASH SYSTEM ASSEMBLY (PR22, FFPR26)
(For machines beginning with S/N 89277 and above)

Fig. 32 Item No.	Part No.	Part Description	Qty.
1	112240	Plug, Debossed Spraypipe	2
2	104414	O-ring 1"	2
3	321471	Spraypipe	2
4	107137	Bolt 10-32 x 7/8" HH	8
5	111454	Locking Plate, Manifold	2
6	111505	O-ring Wash Arm.....	2
7	316794	Flange Weld Standpipe PR22	1
8	408287	Flange Assy. PR26FF	1
9	111456	Gasket, Manifold NG	3
10	106486	Washer Lock #10 Split	8
11	100194	Nut Grip 10-32	8
12	106028	Bolt 1/4-20 x 2 1/2"HH	1
13	313212	Bracket, Standpipe.....	1
14	100141	Nut Grip 1/4-20	2
15	100073	Bolt 1/4-20 x 2 1/2" Truss Head	1
16	315625	Standpipe PR22 & PR26.....	1
17	316886	Standpipe PR22 & PR26 High Hood	1
18	100740	Bolt 5/16-18 x 1 Hex Head	4
19	102376	Washer 4/16 x 3/4 x 1/16.....	8
20	108345	Gasket 3 x 3 x 1/8	1
21	106013	Washer Lock 5/16 Split	4
22	100154	Nut Plain 5/16-18	4
23	316772	Plate, Adjustable Restrictor	1
24	316773	Slide, Adjustable Restrictor	1
25	408287	Flange Assy. Lower PR22 & PR26	1
**26	321904	Deflector, Spraypipe PR26 Only	2
**27	100754	Screw 10-32 x 1/2" Flat Head	2
**28	107966	Nut Grip 10-32 W/Nylon Insert	2
—	900775	Spraypipe Assy (Includes Items 1-3).....	—

**** Note:** FFPR36 High Hood units use Qty. 4 each of Items 26-27.
 (See Fig. 32, pg.62)

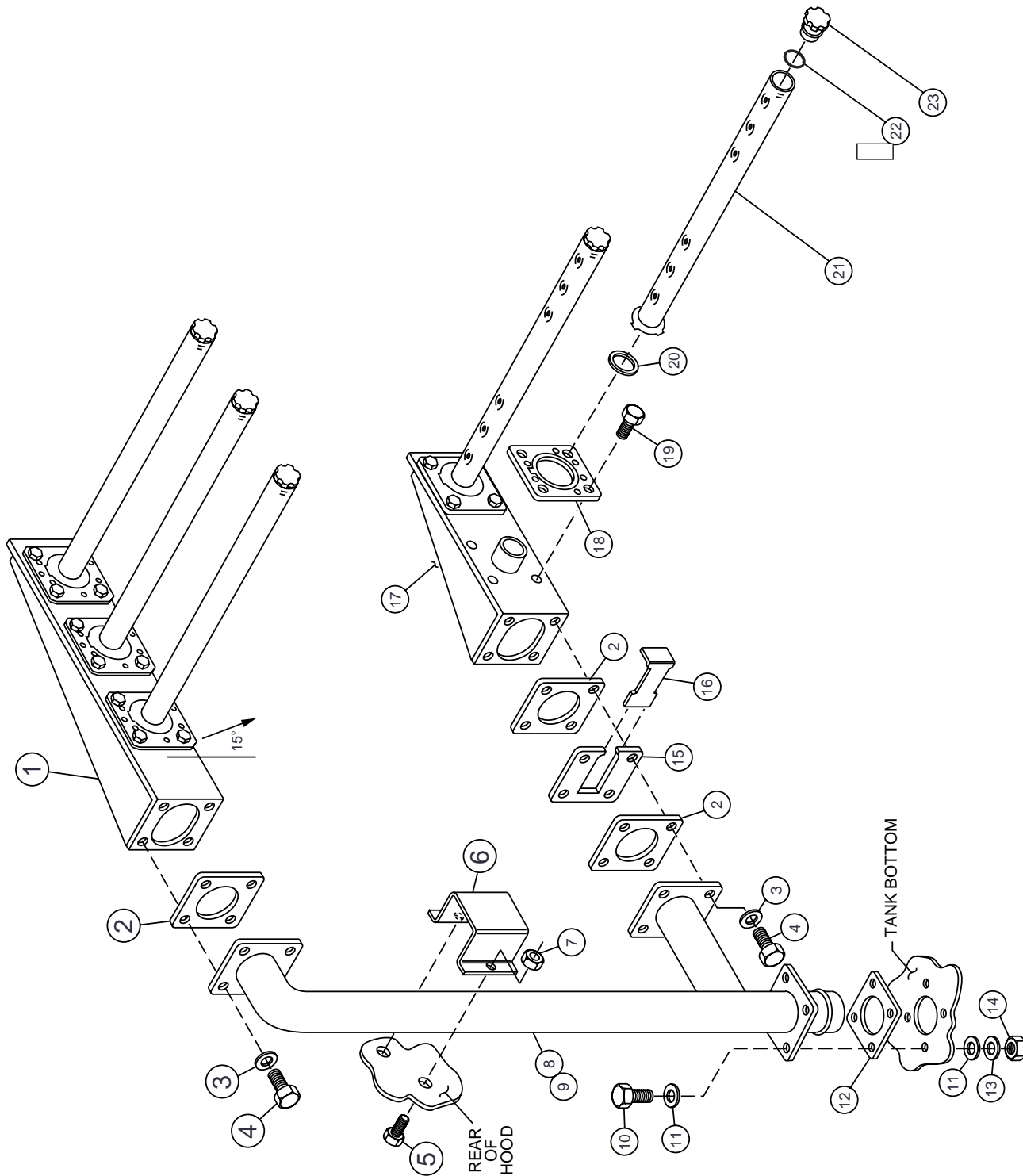
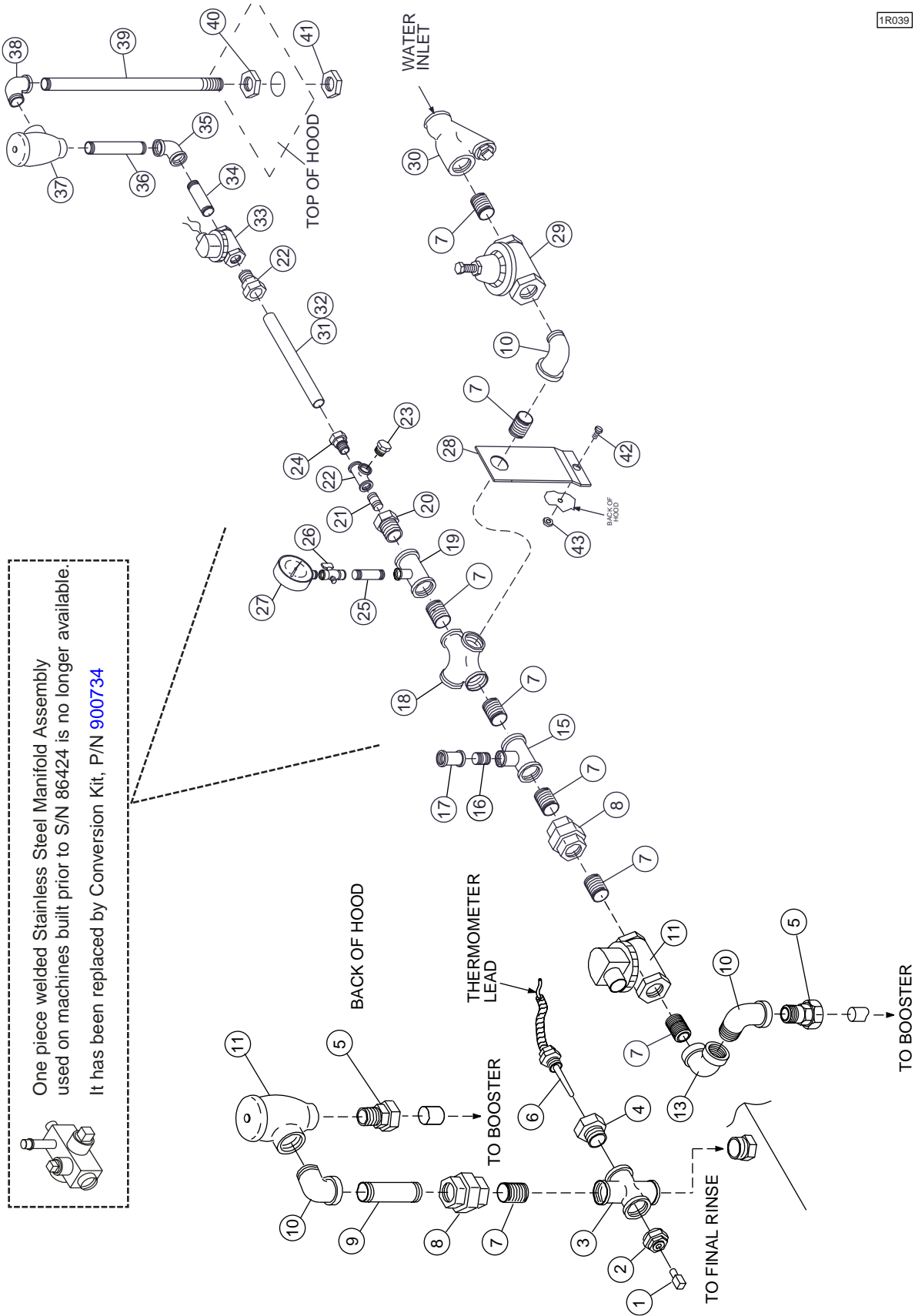


Figure 33 – Wash System Assembly (PR36)
 (For machines beginning with S/N 89277 and above)

WASH SYSTEM ASSEMBLY (PR36)
(For machines beginning with S/N 89277 and above)

Fig. 33 Item No.	Part No.	Part Description	Qty.
1	316688	Manifold Weld 3 Hole	1
2	111456	Gasket, Manifold	3
3	106482	Washer Lock 1/4" Split	8
4	100736	Bolt 1/4-20 x 3/4" HH	8
5	100073	Screw 1/4-20 x 1/2" Truss Head	1
6	313212	Standpipe Brakcet	1
7	100141	Nut Grip 1/4-20	1
8	205221	Standpipe Modified PR36	1
9	316885	Standpipe PR36 High Hood	1
10	100740	Bolt 5/16-18 x 1 Hex Head	4
11	102376	Washer 5/16 x 3/4 x 1/16.....	8
12	108345	Gasket 3 x 3 x 1/8	1
13	106013	Washer Lock 5/16 Split	4
14	100154	Nut Plain 5/16-18	4
15	316772	Plate, Adjustable Restrictor	1
16	316773	Slide, Adjustable Restrictor	1
17	316691	Manifold Weld 2 Hole	1
18	111454	Locking Plate, Manifold	5
19	111478	Bolt 10-32 x 1/2" W/Loctite	20
20	111505	O-ring Wash Arm.....	5
21	321471	Spraypipe Assy. (includes 22 & 23)	5
22	104414	O-ring 1 Inch	5
23	112240	Plug, Debossed Spraypipe	5
—	900775	Spraypipe Assy (Includes Items 21-23).....	—

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One piece welded Stainless Steel Manifold Assembly used on machines built prior to S/N 86424 is no longer available. It has been replaced by Conversion Kit, P/N 900734

Figure 34 – Outside Rinse Piping With Electric Booster
(Prior to Serial Number R1529)

FILL & OUTSIDE RINSE PIPING, ELECTRIC WITH BOOSTER
(Prior to Serial Number R1529)

Fig. 34 Item No.	Part No.	Part Description	Qty.
1	101259	Plug, pipe (1/8 NPT) Brass	1
2	105976	Bushing, Reducing (3/4 NPT x 1/8 NPT) Brass	1
3	100599	Cross (3/4 NPT) Brass.....	1
4	102392	Bushing, Reducing (3/4 NPT x 1/2 NPT) Brass	1
5	109879	Fitting, compression (7/8" OD x 3/4 NPT male)	2
6	108391	Thermometer, 48" lead	1
7	100184	Nipple (3/4 NPT Close) Brass.....	6
8	100571	Union (3/4 NPT) Brass	2
9	102490	Nipple (3/4 NPT x 3 1/2) Brass	1
10	102444	Elbow, street (3/4 NPT x 90°) Brass	2
11	104429	Breaker, vacuum (3/4 NPT) Brass.....	1
—	108351	Kit, repair 3/4" vacuum breaker	1
12	102654	Nipple (3/4 NPT x 4 1/4) Brass	1
13	102442	Elbow (3/4 NPT x 90°) Brass	2
14	111437	Valve, solenoid (3/4 NPT) (120V coil)	1
—	109903	Repair kit (3/4 NPT) solenoid valve	1
—	111472	Replacement coil, (3/4 ") Solenoid valve	1
15	102526	Tee (3/4 NPT x 3/4 NPT x 1/2 NPT) Brass	1
16	100209	Nipple (1/2 NPT x Close) Brass	1
17	102412	Coupling (1/2 NPT Female) Brass	1
18	100599	Cross (3/4 NPT) Brass	1
19	107418	Tee (3/4 NPT x 1/4 NPT) Brass	1
20	102403	Bushing, Reducing (3/4 NPT x 1/4 NPT) Brass	1
21	100947	Nipple (1/4 NPT x Close) Brass	1
22	103403	Tee (1/4 NPT) Brass	1
23	102500	Plug (1/4 NPT) Brass	1
24	109909	Fitting, compression (1/4 NPT x 1/2 O.D.)	1
25	110134	Nipple (1/4 NPT x 2 1/2) Brass	1
26	106418	Petcock (1/4 NPT Female) Brass.....	1
27	100135	Gauge, pressure (0-60 PSI Male)	1
28	311694	Bracket, piping support	1
29	107550	Valve, pressure reducing (3/4 NPT) Brass	1
30	110768	Strainer, line (3/4 NPT) Brass	1
31	107380	Tubing, copper (44KB)	A/R
32	107380	Tubing, copper (54KB)	A/R
33	109885	Valve, solenoid (1/4 NPT) (120V coil)	1
—	111172	Repair kit, (1/4 ") Solenoid valve	1
—	111469	Replacement coil (1/4 ") Solenoid valve	1
34	101262	Nipple (1/4 NPT x 1 1/2) Brass	1
35	102422	Elbow (1/4 NPT x 90°) Brass	1
36	110134	Nipple (1/4 NPT x 2 1/2) Brass	1
37	107069	Breaker, vacuum (1/4 NPT) Brass.....	1
—	108349	Kit, repair 1/4" vacuum breaker	1
38	101261	Elbow, street (1/4 NPT x 90°) Brass	1
39	110135	Nipple (1/4 NPT x 7 1/4) Brass	1
40	100573	Locknut (1/4 NPT) Brass	1
41	201669	Locknut (1/4 NPT) Plated	1
42	100073	Screw (1/4-20 x 1/3) Truss hd	1
43	100141	Nut, grip (1/4-20)	1
—	601247	Piping Assy Final Rinse (includes items 3,-5,7-10,)	1
—	601077	Piping Assy Wash/Rinse (includes items 7-12, 15-27)	1
—	403563	Piping Assy Fill (includes items 24, 31-41)	1
—	900734	Kit, Conversion (Stainless Steel Manifold) (Prior to S/N 86424)	—

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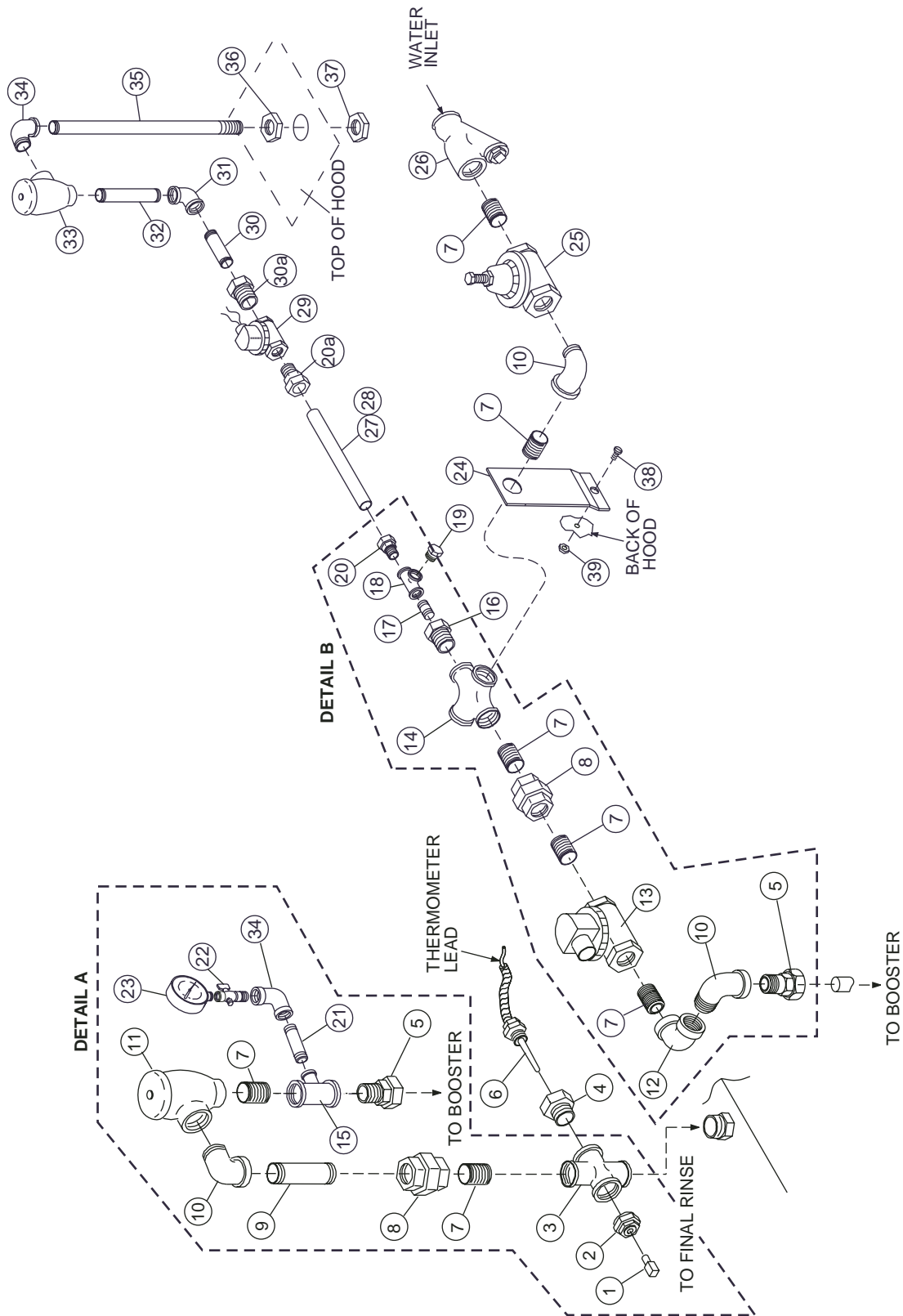


Figure 35 – Outside Rinse Piping With Electric Booster
(After Serial Number R1530)

**OUTSIDE RINSE PIPING
WITH ELECTRIC BOOSTER AFTER SERIAL NUMBER R1530**

Fig. 35 Item No.	Part No.	Part Description	Qty.
1	101259	Pipe Plug 1/8 NPT Brass.....	1
2	105976	Bushing, Reducing (3/4 NPT x 1/8 NPT).....	1
3	100599	Cross (3/4 NPT) Brass.....	1
4	102392	Bushing, Reducing (3/4 NPT x 1/2 NPT) Brass.....	1
5	109879	Compression, fitting (3/4 NPT x 7/8 OD).....	2
6	108391	Thermometer, 48" lead.....	1
7	100184	Nipple, Close (3/4 NPT) Brass.....	7
8	100571	Union (3/4 NPT) Brass.....	2
9	102469	Nipple (3/4 NPTx 2-3/4" 1g) Brass.....	1
10	102444	Elbow, street (3/4 NPT x 90°) Brass.....	1
11	104429	Vacuum Breaker (3/4 NPT) Brass (bronze).....	1
**—	108351	Kit, repair 3/4" vacuum breaker (bronze).....	1
**—	113223	Kit, Repair 3/4" vacuum breaker (plastic).....	1
12	102442	Elbow (3/4 NPT x 90°) Brass.....	1
13	111437	Valve, solenoid (3/4 NPT) (Water).....	1
—	109903	Repair kit, solenoid valve (3/4 NPT).....	1
—	111472	Replacement coil, solenoid valve (3/4 NPT) (120V coil).....	1
14	100599	Cross (3/4 NPT) Brass.....	1
15	107418	Tee (3/4 NPT x 1/4 NPT) Brass.....	1
16	102403	Bushing, Reducing (3/4 NPT x 1/4 NPT) Brass.....	1
17	100947	Nipple (1/4 NPT x Close) Brass.....	1
18	103403	Tee (1/4 NPT) Brass.....	1
19	102500	Plug (1/4 NPT) Brass.....	1
20	109909	Compression, fitting (1/4 NPT x 1/2 OD).....	1
20a	109909	Fitting, compression 1/4" NPT x 1/2" OD (Prior to S/N R2425).....	1
20a	111250	Fitting, compression 1/2" OD x 1/2" MPT (After S/N R2426).....	1
21	110134	Nipple (1/4 NPT x 2 1/2") Brass.....	1
22	106418	Petcock (1/4 NPT Female) Brass.....	1
23	100135	Gauge, pressure (0-60 PSI Male).....	1
24	311694	Bracket, piping support.....	1
25	107550	Valve, pressure reducing (3/4 NPT) Brass.....	1
26	110768	Strainer, line (3/4 NPT).....	1
27	107380	Tubing, copper.....	A/R
28	107380	Tubing, copper.....	A/R
*29	109885	Valve, solenoid (1/4 NPT) (Prior to S/N R2425).....	1
—	111172	Repair kit, (1/4") Solenoid valve.....	1
—	111469	Replacement coil (1/4") (120V) Solenoid coil.....	1
29	113352	Valve Solenoid (1/2" NPT) (After S/N R2436).....	1
—	113392	Repair kit (1/2") Solenoid Valve.....	1
—	113357	Replacement Coil (120V).....	1
30	101262	Nipple (1/4 NPT x 1 1/2) Brass (PR22) (Prior to S/N R2435).....	1
30	102388	Bushing, Reducing 1/2 x 1/4 Brass (After S/N R2436).....	1
30a	100947	Nipple, close 1/4 NPT Brass (After S/N R2436).....	1

**OUTSIDE RINSE PIPING
WITH ELECTRIC BOOSTER AFTER SERIAL NUMBER R1530 (cont.)**

Fig. 35 Item No.	Part No.	Part Description	Qty.
31	102422	Elbow (1/4 NPT x 90°) Brass (PR22)	1
32	110134	Nipple (1/4 NPT x 2 1/2) Brass (PR22)	1
33	107069	Breaker, vacuum (1/4 NPT) Brass (bronze)	1
**—	108349	Kit, repair 1/4" vacuum breaker (bronze)	1
**—	113219	Kit, Repair 1/4" vacuum breaker (plastic).....	1
34	101261	Elbow, street (1/4 NPT x 90°) Brass (PR22).....	1
35	110135	Nipple (1/4 NPT x 7 1/4) Brass (PR22)	1
36	100573	Locknut (1/4 NPT) Brass (PR22)	1
37	201669	Locknut (1/4 NPT) Plated (PR22).....	1
38	100073	Screw (1/4-20 x 1/3) Truss head	1
39	100141	Nut, grip (1/4-20)	1
Detail A	601076	Piping Assy Final Rinse (includes items 1-5,7-11,15,21-23,34)	
Detail B	601247	Piping Assy Wash/Rinse (includes items 5,7,8,10,12-14,16-20,24)	
—	403563	Piping Assy Fill (includes items 20a, 29-36)	
—	900836	Kit* Repair, 1/2" Vacuum Breaker (Includes one each of 108349, 113219 and 113221)	
—	900837	Kit* Repair, 3/4" Vacuum Breaker (Includes one each of 108351 and 113223)	

* Between serial number range R2289 and R2435 maintained 1/4" valves, switching from Parker to GC (See Srv Bulletin #46) then converted to 1/2" valves. Contact factory for machines in this serial number range for correct 1/4" valve.

** Kits 900836 and 900837 were created to repair either style of vacuum breaker (bronze or plastic). Plastic style are no longer available for complete vacuum breakers.

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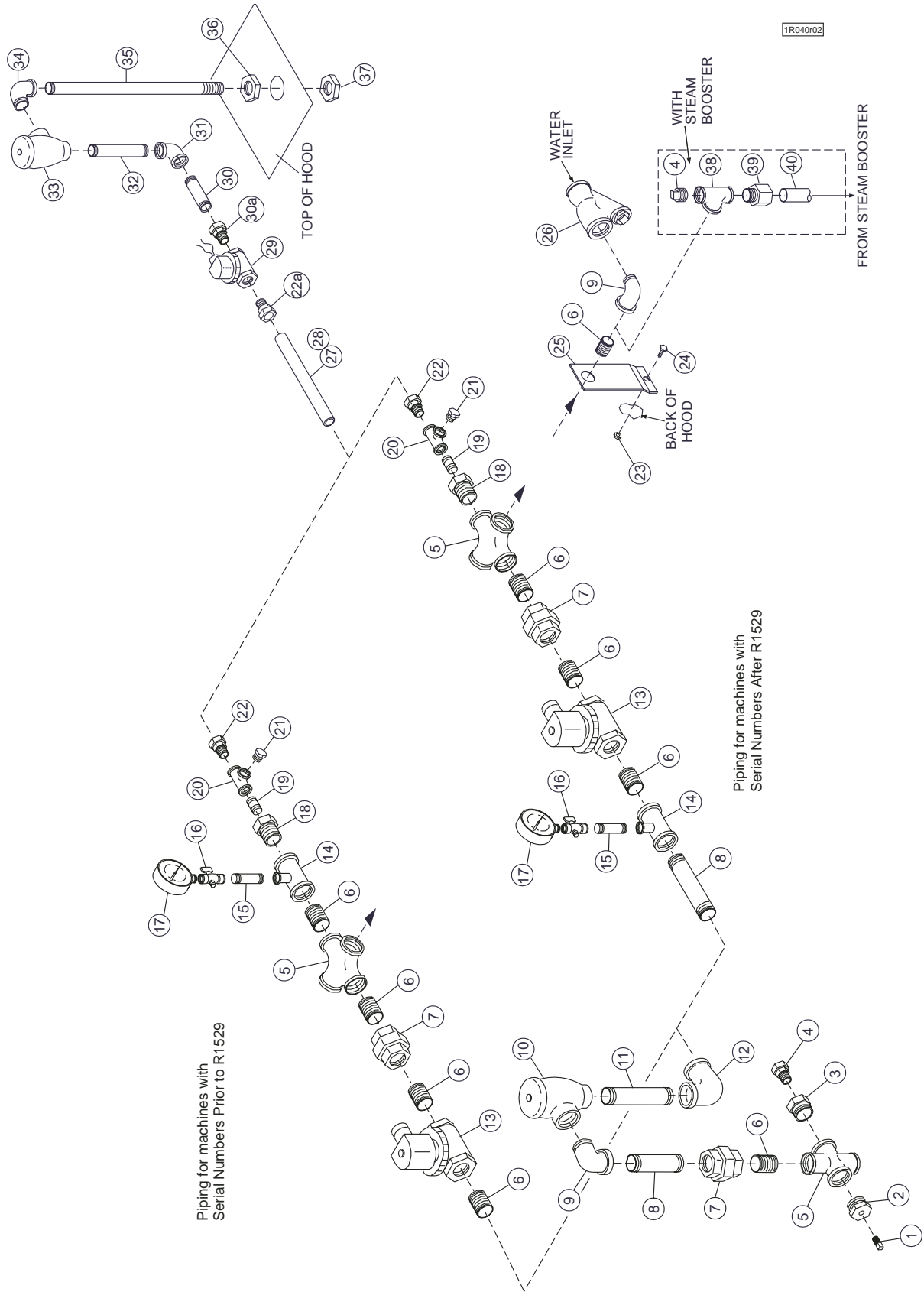


Figure 36 – Fill & Outside Rinse Piping With No Electric Booster or With Steam Booster
(All S/N's)

**FILL & OUTSIDE RINSE PIPING WITH NO BOOSTER
OR WITH STEAM BOOSTER**
(All S/N's)

Fig. 36 Item No.	Part No.	Part Description	Qty.
1	101259	Pipe plug (1/8 NPT) Brass	1
2	105976	Bushing, reducing (3/4 NPT x 1/8 NPT)	1
3	102392	Bushing, reducing (3/4 NPT x 1/2 NPT)	1
4	102504	Pipe plug (1/2 NPT) Brass	2
5	100599	Cross (3/4 NPT) Brass	1
6	100184	Nipple, close (3/4 NPT) Brass	5
7	100571	Union (3/4 NPT) Brass	2
8	102490	Nipple (3/4 NPT x 3-1/2") Brass	1
9	102444	Elbow, street (3/4 NPT x 90°) Brass	2
10	104429	Vacuum breaker (3/4 NPT) Brass (bronze)	1
**—	108351	Kit, repair 3/4" vacuum breaker (bronze)	1
**—	113223	Kit, Repair 3/4" vacuum breaker (plastic).....	1
11	102654	Nipple (3/4 NPT x 4-1/4") Brass.....	1
12	102442	Elbow (3/4 NPT x 90°) Brass	1
13	111437	Valve, solenoid (3/4 NPT) (Water)	1
—	109903	Repair kit, solenoid valve(3/4 NPT)	1
—	111472	Replacement coil, solenoid valve (3/4 NPT) (120V)	1
14	107418	Tee (3/4 NPT x 3/4 NPT x 1/4 NPT) Brass	1
15	110134	Nipple (1/4 NPT x 2 1/2) Brass	1
16	106418	Petcock (1/4 NPT Female) Brass	1
17	100135	Gauge, pressure (0-60 PSI Male)	1
18	102403	Bushing, reducing (3/4 NPT x 1/4 NPT) Brass	1
19	100947	Nipple (1/4 NPT x Close) Brass	1
20	103403	Tee (1/4 NPT) Brass	1
21	102500	Plug, pipe (1/4 NPT) Brass	1
22	109909	Fitting, compression (1/4 NPT x 1/2 O.D.).....	1
22a	109909	Fitting, compression 1/4" NPT x 1/2" OD (Prior to S/N R2425)	1
22a	111250	Fitting, compression 1/2" OD x 1/2" MPT (After S/N R2426)	1
23	100141	Nut, grip (1/4-20)	1
24	100073	Screw (1/4-20 x 1/2") Truss hd	1
25	311694	Bracket, piping support	1
26	110768	Line strainer (3/4 NPT) Brass	1
27	107380	Tubing, copper (44KB)	A/R
28	107380	Tubing, copper (54KB)	A/R
*29	109885	Valve, solenoid (1/4 NPT) (Prior to S/N R2435)	1
—	111172	Repair kit, solenoid valve (1/4 NPT)	1
—	111469	Replacement coil, solenoid valve (1/4 NPT) (120V)	1
29	113352	Valve Solenoid (1/2" NPT) (After S/N R2436)	1
—	113392	Repair kit (1/2") Solenoid Valve	1
—	113357	Replacement Coil (120V)	1
30	101262	Nipple (1/4 NPT x 1-1/2") Brass	1
30	102388	Bushing, Reducing 1/2 x 1/4 Brass (After S/N R2436)	1
30a	100947	Nipple, close 1/4 NPT Brass (Not Shown) (After S/N R2436)	1

**FILL & OUTSIDE RINSE PIPING WITH NO BOOSTER
OR WITH STEAM BOOSTER (cont.)**

(All S/N's)

Fig. 36 Item No.	Part No.	Part Description	Qty.
31	102422	Elbow (1/4 NPT x 90°) Brass	1
32	110134	Nipple (1/4 NPT x 2-1/2") Brass.....	1
33	107069	Vacuum breaker (1/4 NPT) Brass (bronze).....	1
**—	108349	Repair Kit, vacuum breaker (1/4 & 1/2) (bronze).....	1
**—	113219	Kit, Repair 1/4" vacuum breaker (plastic).....	1
34	101261	Elbow, street (1/4 NPT x 90°) Brass	1
35	110135	Nipple (1/4 NPT x 7-1/4" RTOE) Brass	1
36	100573	Locknut (1/4 NPT) Brass	1
37	201669	Locknut (1/4 NPT) Nickel-Plated	1
38	102525	Tee (3/4 NPT x 1/2 NPT x 3/4 NPT) Brass	1
39	109879	Compression, fitting (3/4 NPT X 7/8" O.D.)	1
40	107314	Tubing (7/8" O.D.) Copper	A/R
—	403564	Piping Assy, Wash/Rinse (includes items 1 thru 13, 18,19,20,25,26).....	1
—	403563	Piping Assy, Fill (includes items 26,29 thru 37)	1
—	900734	Kit, Conversion (Stainless Steel Manifold) (Prior to S/N 86424)	—
**—	900836	Kit* Repair, 1/2" Vacuum Breaker (Includes one each of 108349, 113219 and 113221)	
**—	900837	Kit* Repair, 3/4" Vacuum Breaker (Includes one each of 108351 and 113223)	

* Between serial number range R2289 and R2435 maintained 1/4" valves, switching from Parker to GC (see Srv Bulletin #46) then converted to 1/2" valves. Contact factory for machines in this serial number range for correct 1/4" valve.

** Kits 900836 and 900837 were created to repair either style of vacuum breaker (bronze or plastic). Plastic style are no longer available for complete vacuum breakers.

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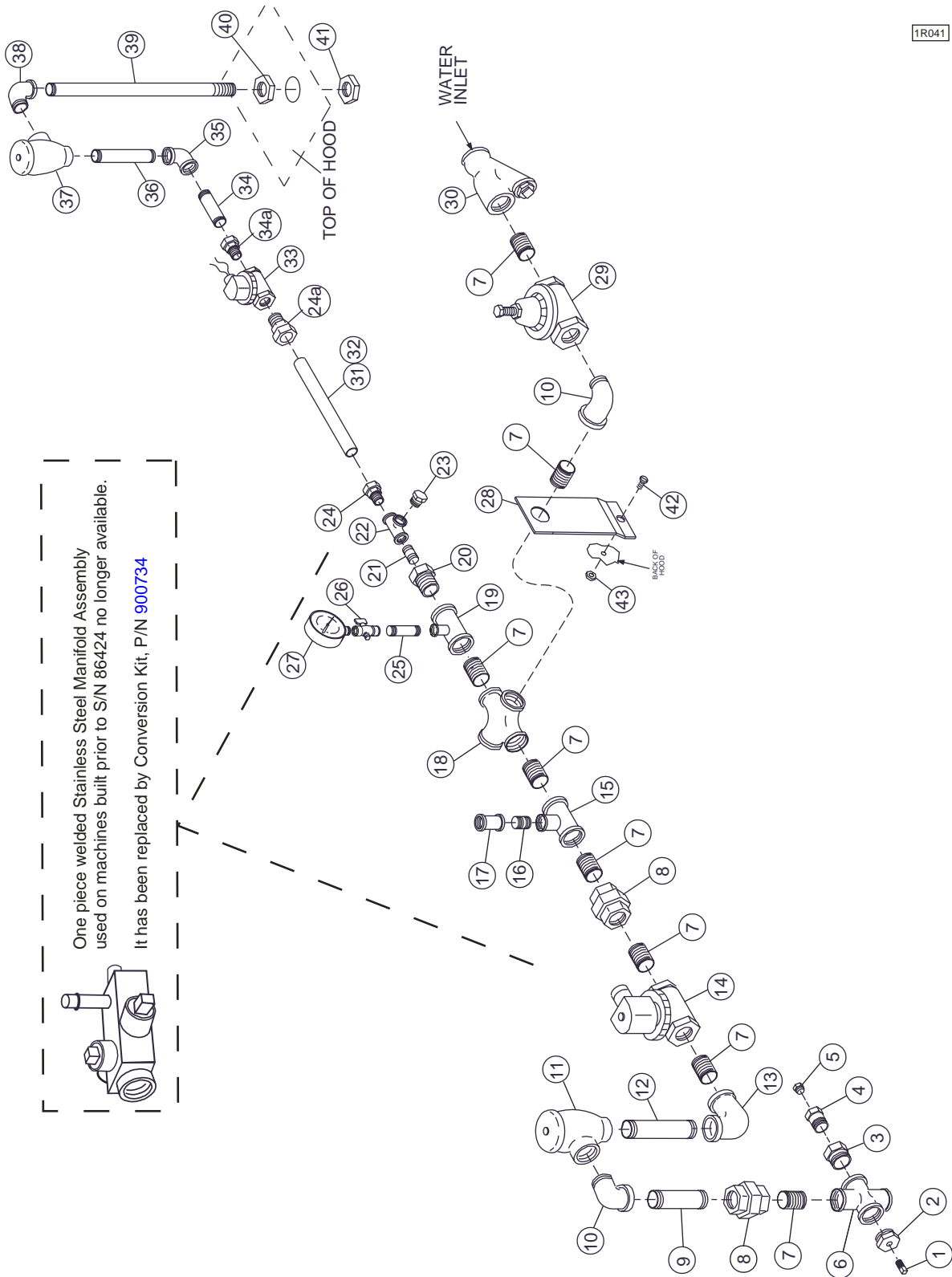


Figure 37 – Fill & Outside Rinse Piping With No Booster (KL44, KL66)
(All S/N's)

**FILL & OUTSIDE RINSE PIPING WITH NO BOOSTER (KL-44, KL-66)
ALL S/N'S**

Fig. 37 Item No.	Part No.	Part Description	Qty.
1	100210	Plug, pipe (1/8 NPT) SST	1
2	111345	Bushing, Reducing (3/4 NPT x 1/8 NPT)	1
3	102393	Bushing, Reducing (3/4 NPT x 1/2 NPT)	1
4	108027	Bushing, Reducing (1/2 NPT x 1/4 NPT)	1
5	107463	Plug, pipe (1/4 NPT)Plastic	1
6	100537	Cross (3/4 NPT) SST.....	1
7	100184	Nipple (3/4 NPT x Close) Brass	6
8	100571	Union (3/4 NPT) Brass	2
9	102490	Nipple (3/4 NPTx 3 1/2) Brass	1
10	102444	Elbow, street (3/4 NPT x 90°) Brass	1
11	104429	Breaker, vacuum (3/4 NPT) Brass (bronze)	1
**—	108351	Kit, repair 3/4" vacuum breaker (bronze)	1
**—	113223	Kit, Repair 3/4" vacuum breaker (plastic).....	1
12	102654	Nipple (3/4 NPT x 4 1/4) Brass	1
13	102442	Elbow (3/4 NPT x 90°) Brass	1
14	111437	Valve, solenoid (3/4 NPT)	1
—	109903	Repair kit, solenoid valve (3/4 NPT)	1
—	111472	Replacement coil, solenoid valve (3/4 NPT) (120V coil).....	1
15	102526	Tee (3/4 NPT x 3/4 NPT x 1/2 NPT) Brass	1
16	100209	Nipple (1/2 NPT x Close) Brass	1
17	102412	Coupling (1/2 NPT Female) Brass	1
18	100599	Cross (3/4 NPT) Brass	1
19	107418	Tee (3/4 NPT x 1/4 NPT) Brass	1
20	102403	Bushing, Reducing (3/4 NPT x 1/4 NPT) Brass	1
21	100947	Nipple (1/4 NPT x Close) Brass	1
22	103403	Tee (1/4 NPT) Brass	1
23	102500	Plug (1/4 NPT) Brass	1
24	109909	Fitting, compression (1/4 NPT x 1/2 O.D.)	1
24a	109909	Fitting, compression 1/4" NPT x 1/2" OD (Prior to S/N R2425).....	1
24a	111250	Fitting, compression 1/2" OD x 1/2" MPT (After S/N R2426)	1
25	110134	Nipple (1/4 NPT x 2 1/2) Brass	1
26	106418	Petcock (1/4 NPT Female) Brass.....	1
27	100135	Gauge, pressure (0-60 PSI Male)	1
28	311694	Bracket, piping support	1
29	107550	Valve, pressure reducing (3/4 NPT) Brass (Not installed at factory)	—
30	110768	Strainer, line (3/4 NPT) Brass	1
31	107380	Tubing, copper (44KB)	A/R
32	107380	Tubing, copper (54KB)	A/R
*33	109885	Valve, solenoid (1/4 NPT) (Prior to S/N R2436)	1
—	111172	Repair kit, solenoid valve (1/4 NPT)	1
—	111469	Replacement coil, solenoid valve (1/4 NPT) (120V coil)	1
33	113352	Valve Solenoid (1/2" NPT) (After S/N R2436)	1
—	113392	Repair kit (1/2") Solenoid Valve	1
—	113357	Replacement Coil (120V)	1

FILL & OUTSIDE RINSE PIPING WITH NO BOOSTER (KL-44, KL-66)
ALL S/N'S (cont.)

Fig. 37 Item No.	Part No.	Part Description	Qty.
34	101262	Nipple (1/4 NPT x 1 1/2) Brass	1
34	102388	Bushing, Reducing 1/2 x 1/4 Brass (After S/N R2436)	1
34a	100947	Nipple, close 1/4 NPT Brass (Not Shown) (After S/N R2436)	1
35	102422	Elbow (1/4 NPT x 90°) Brass	1
36	110134	Nipple (1/4 NPT x 2 1/2) Brass	1
37	107069	Breaker, vacuum (1/4 NPT) Brass (bronze)	1
—	108351	Kit, Repair 3/4" Vacuum Breaker (bronze)	1
—	113219	Kit, Repair 1/4" vacuum breaker	1
38	101261	Elbow, street (1/4 NPT x 90°) Brass	1
39	110135	Nipple (1/4 NPT x 7 1/4) Brass	1
40	100573	Locknut (1/4 NPT) Brass	1
41	201669	Locknut (1/4 NPT) Plated	1
42	100073	Screw (1/4-20 x 1/3) Truss hd	1
43	100141	Nut, grip (1/4-20)	1
—	601247	Piping Assy Final Rinse (includes items 3,4,5,6,7,8,9,10,14)	1
—	601077	Piping Assy Wash/Rinse (includes items 5,8,10,11,12,13,15,17,18,22,23)	1
—	403563	Piping Assy Fill (includes items 23,26,27,28,29,30,31,32,33,34)	1
—	900734	Kit, Conversion (Stainless Steel Manifold) (Prior to S/N 86424)	—
**—	900836	Kit* Repair, 1/2" Vacuum Breaker (Includes one each of 108349, 113219 and 113221)	—
**—	900837	Kit* Repair, 3/4" Vacuum Breaker (Includes one each of 108351 and 113223)	—

* Between serial number range R2289 and R2435 maintained 1/4" valves, switching from Parker to GC (see Srv Bulletin #46) then converted to 1/2" valves. Contact factory for machines in this serial number range for correct 1/4" valve.

** Kits 900836 and 900837 were created to repair either style of vacuum breaker (bronze or plastic). Plastic style are no longer available for complete vacuum breakers.

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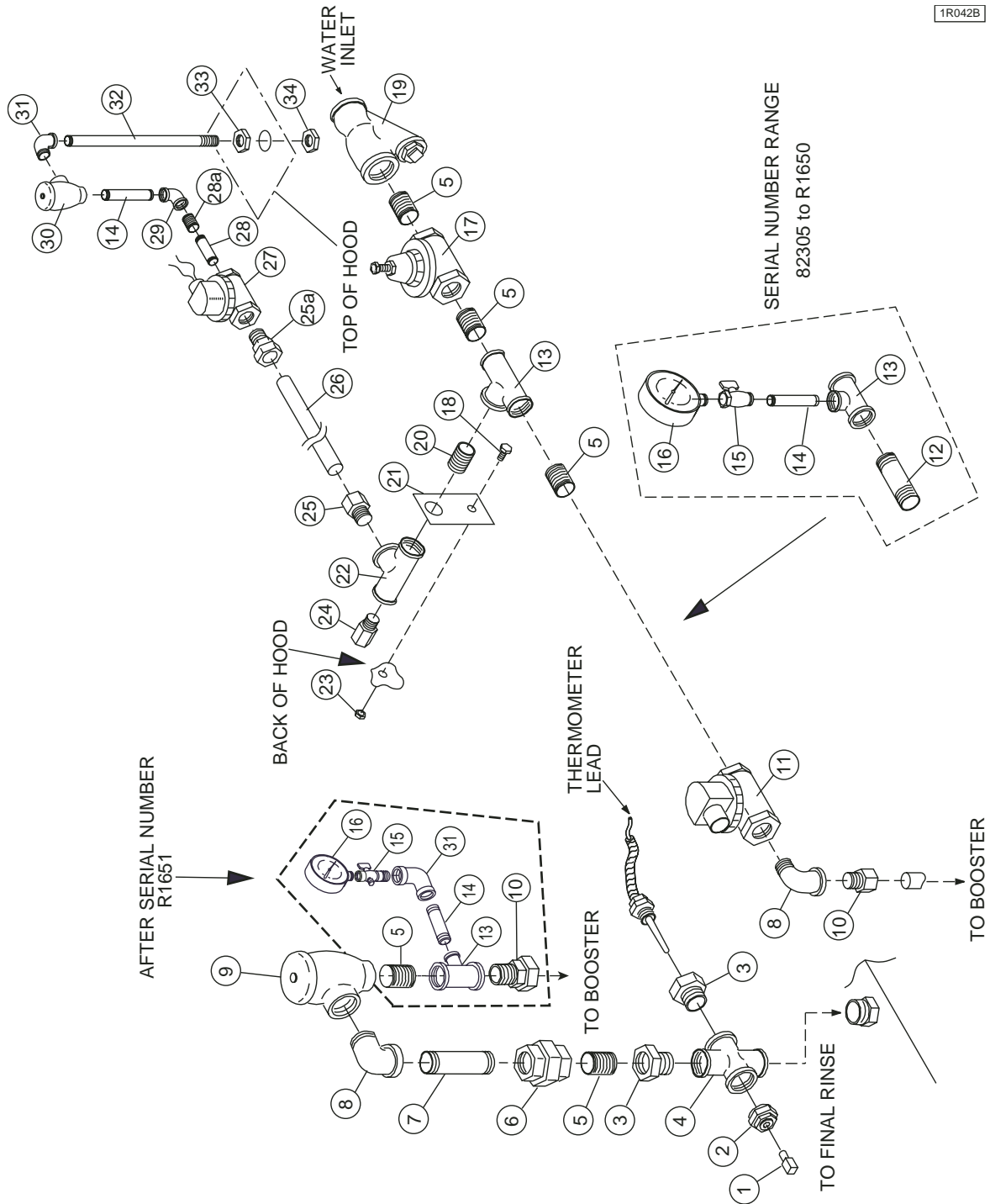


Figure 38 – Fill & Outside Rinse Piping 44WS – With Electric Booster
 (For machines beginning with S/N 82305 and above)

FILL & OUTSIDE RINSE PIPING 44WS – WITH ELECTRIC BOOSTER
(For machines beginning with S/N 82305 and above)

Fig. 38 Item No.	Part No.	Part Description	Qty.
1	101259	Pipe plug (1/8 NPT) Brass	1
2	105976	Bushing, reducing (3/4 NPT x 1/8 NPT)	1
3	102392	Bushing, reducing (3/4 NPT x 1/2 NPT)	2
4	100599	Cross (3/4 NPT) Brass	1
5	100209	Nipple, close (1/2 NPT) Brass	4
6	102549	Union (1/2 NPT) Brass	1
7	102572	Nipple (1/2 NPT x 4 1/2") Brass	1
8	102438	Elbow, street (1/2 NPT x 90°) Brass	1
9	100500	Vacuum breaker (1/2 NPT) (bronze).....	1
—	108349	Kit Repair 1/4 & 1/2 (bronze)	1
—	113221	Repair Kit, 1/2" vacuum breaker (plastic).....	1
10	109925	Fitting, compression (1/2 NPT x 5/8" O.D.)	2
*11	109886	Valve, solenoid (1/2 NPT) (Prior to S/N R2435)	1
—	109902	Repair kit, solenoid valve (1/2 NPT)	1
—	111471	Replacement coil, solenoid valve (1/2 NPT) (120V coil)	1
11	113352	Valve Solenoid (1/2" NPT) (After S/N R2436)	1
—	113392	Repair kit (1/2") Solenoid Valve	1
—	113357	Replacement Coil (120V)	1
12	102567	Nipple (1/2 NPT x 3") Brass	1
13	102517	Tee (1/2 NPT x 1/2 NPT x 1/4 NPT) Brass	1
14	110134	Nipple (1/4 NPT x 2 1/2") Brass	2
15	106418	Petcock (1/4 NPT) Female.....	1
16	100135	Gauge, pressure (0-60 PSI Male)	1
17	108265	Valve, pressure reducing (1/2 NPT)	1
18	100073	Screw (1/4-20 x 1/2") Truss hd	1
19	104421	Strainer, line (1/2 NPT) Brass	1
20	100947	Nipple, close (1/4 NPT) Brass.....	1
21	316238	Bracket, piping support	1
22	103403	Tee (1/4 NPT) Brass	1
23	100141	Nut, grip (1/4-20)	1
24	102500	Plug, pipe (1/4 NPT) Brass (44WS)	1
25	109909	Fitting, compression (1/4 NPT x 1/2" O. D.)	1
25a	109909	Fitting, compression 1/4 NPT x 1/2" (Prior to S/N R2435)	1
25a	111250	Fitting, compression 1/2 OD x 1/2 MPT Brass (After S/N R2436)	1
26	107315	Tubing (1/2" O.D.) Copper	A/R
*27	109885	Valve, solenoid, (1/4 NPT) (Prior to S/N R2435)	1
—	111172	Repair kit, solenoid valve (1/4 NPT)	1
—	111469	Replacement Coil, solenoid valve (1/4 NPT) (120V Coil)	1
27	113352	Valve Solenoid (1/2" NPT) (After S/N R2436)	1
—	113392	Repair kit (1/2") Solenoid Valve	1
—	113357	Replacement Coil (120V)	1
28	101262	Nipple (1/4 NPT x 1-1/2") Brass (Prior to S/N R2435)	1
28	102388	Bushing, reducing (1/2 x 1/4 NPT) (After S/N R2436)	1
28a	100947	Nipple, close 1/4" NPT (After S/N R2436)	1

FILL & OUTSIDE RINSE PIPING 44WS – WITH ELECTRIC BOOSTER (cont.)
(For machines beginning with S/N 82305 and above)

Fig. 38 Item No.	Part No.	Part Description	Qty.
29	102422	Elbow (1/4 NPT x 90°) Brass.....	1
30	107069	Vacuum breaker (1/4 NPT) Brass (bronze).....	1
**—	108349	Repair Kit, 1/4" and 1/2" vacuum breaker (bronze)	1
**—	113219	Kit, Repair 1/4" vacuum breaker (plastic).....	1
31	101261	Elbow, street (1/4 NPT x 90°)Brass	2
32	110135	Nipple (1/4 NPT x 7-1/4" RTOE) Brass	1
33	100573	Locknut (1/4 NPT) Brass	1
34	201669	Locknut (1/4 NPT) Nickel-Plated	1
—	601103	Piping Assy., Wash/Rinse (includes items 5,8,10 thru 17,19,20,22,24,25).....	1
—	601104	Piping Assy, Final Rinse (includes items 1 thru 10).....	1
—	403563	Piping Assy, Fill (includes items 14,25,27 thru 34)	1
**—	900836	Kit* Repair, 1/2" Vacuum Breaker (Includes one each of 108349, 113219 and 113221)	
**—	900837	Kit* Repair, 3/4" Vacuum Breaker (Includes one each of 108351 and 113223)	

* Between serial number range R2289 and R2435 maintained 1/4" valves, switching from Parker to GC (see Srv Bulletin #46) then converted to 1/2" valves. Contact factory for machines in this serial number range for correct 1/4" valve.

** Kits 900836 and 900837 were created to repair either style of vacuum breaker (bronze or plastic). Plastic style are no longer available as a complete vacuum breaker.

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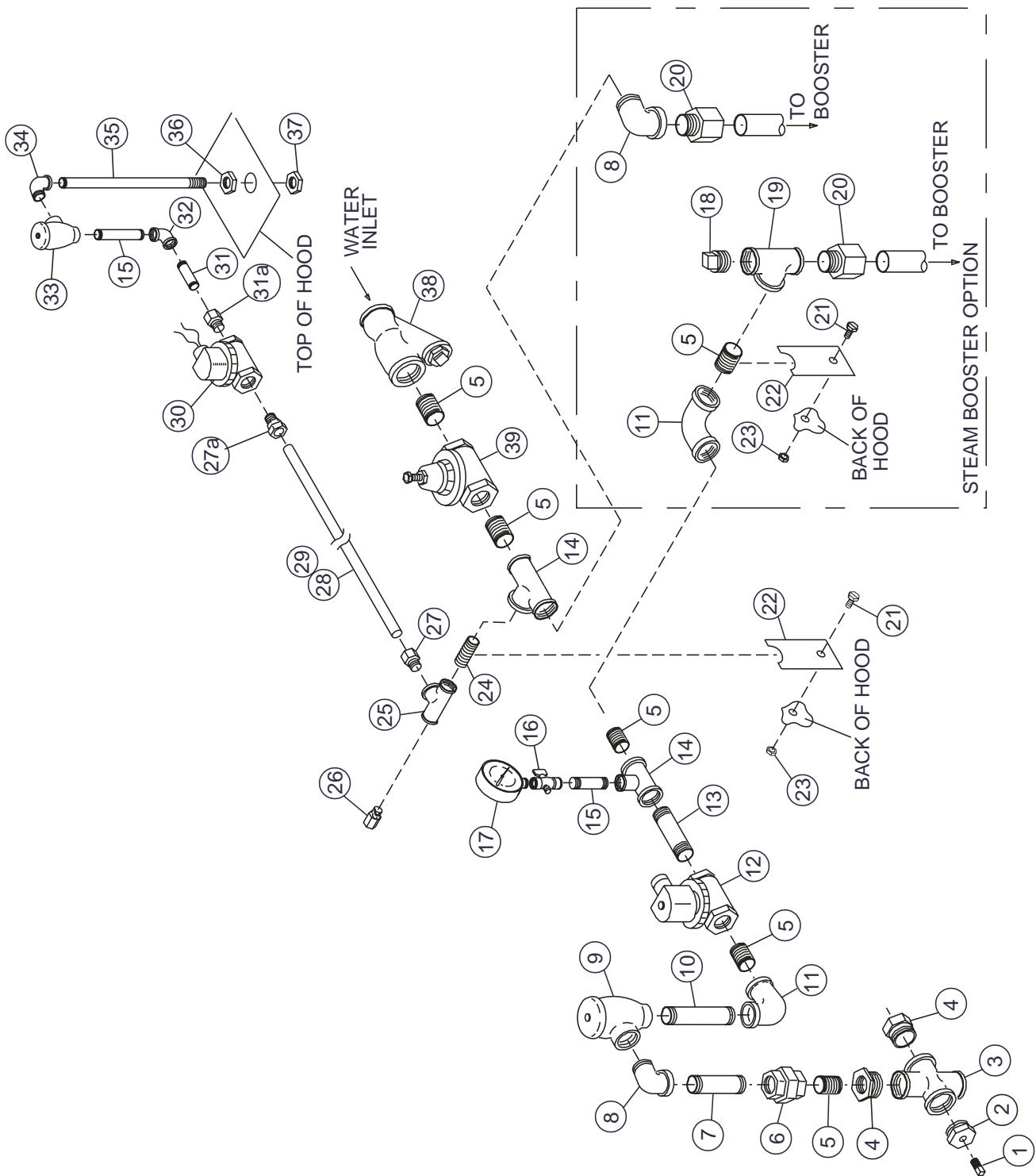


Figure 39 – Fill & Outside Rinse Piping 44WS – No Booster and Steam Booster
 (For machines beginning with S/N 82305 and above)

**FILL AND OUTSIDE RINSE PIPING 44WS
NO BOOSTER AND STEAM BOOSTER**
(For machines beginning with S/N 82305 and above)

Fig. 39 Item No.	Part No.	Part Description	Qty.
1	101259	Pipe plug (1/8 NPT) Brass	1
2	105976	Bushing, reducing (3/4 NPT x 1/8 NPT) Brass	1
3	100599	Cross (3/4 NPT) Brass	1
4	102392	Bushing, reducing (3/4 NPT x 1/2 NPT) Brass	2
5	100209	Nipple, close (1/2 NPT) Brass	4
6	102549	Union (1/2 NPT) Brass	1
7	102569	Nipple (1/2 NPT x 3-1/2") Brass	1
8	102438	Elbow, street (1/2 NPT x 90°) Brass	1
9	100500	Vacuum breaker (1/2 NPT) (bronze).....	1
**—	108349	Repair Kit, 1/4" and 1/2" vacuum breaker (bronze)	1
**—	113221	Kit, Repair 1/2" vacuum breaker (plastic).....	1
10	102572	Nipple (1/2 NPT x 4 1/2") Brass	1
11	102435	Elbow (1/2 NPT x 90°) Brass	2
12	109886	Valve, solenoid (1/2 NPT) (Prior to S/N R2435)	1
—	109902	Repair kit, solenoid valve (1/2 NPT)	1
—	111471	Replacement coil, solenoid valve (1/2 NPT) (120V coil)	1
12	113352	Valve Solenoid (1/2" NPT) (After S/N R2436)	1
—	113392	Repair kit (1/2") Solenoid Valve	1
—	113357	Replacement Coil (120V)	1
12	100209	Nipple, close 1/2" NPT Brass (After S/N R2436)	1
13	102567	Nipple (1/2 NPT x 3") Brass	1
14	102517	Tee (1/2 NPT x 1/2 NPT x 1/4 NPT) Brass	1
15	110134	Nipple (1/4 NPT x 2-1/2") Brass.	1
16	106418	Petcock (1/4 NPT Female) Brass.....	1
17	100135	Gauge, pressure	1
18	102504	Pipe plug (1/2 NPT) Brass	1
19	102514	Tee (1/2 NPT) Brass	1
20	109925	Fitting, compression (1/2 NPT x 5/8" O.D.)	1
21	100073	Screw (1/4-20 x 1/2") Truss hd	1
22	316238	Bracket, piping support	1
23	100141	Nut, grip (1/4-20)	1
24	100947	Nipple, Close (1/4NPT) Brass	1
25	103403	Tee (1/4 NPT) Brass	1
26	102500	Pipe plug (1/4 NPT) Brass (44WS)	1
27	109909	Fitting, compression (1/4 NPT x 1/2" O.D.)	1
27a	109909	Fitting, compression 1/4" NPT x 1/2" OD (Prior to S/N R2425).....	1
27a	111250	Fitting, compression 1/2" OD x 1/2" MPT (After S/N R2426)	1
28	107315	Tubing, copper (1/2 O.D.) (No booster)	A/R
29	107315	Tubing, copper (1/2 O.D.) (With booster)	A/R
*30	109885	Valve, solenoid (1/4 NPT) (Prior to)	1
—	111172	Repair kit, solenoid valve (1/4 NPT)	1
—	111469	Replacement coil, solenoid valve (1/4 NPT) (120V coil)	1
30	113352	Valve Solenoid (1/2" NPT) (After S/N R2436)	1
—	113392	Repair kit (1/2") Solenoid Valve	1
—	113357	Replacement Coil (120V)	1

FILL AND OUTSIDE RINSE PIPING 44WS
NO BOOSTER AND STEAM BOOSTER (cont.)
(For machines beginning with S/N 82305 and above)

Fig. 39 Item No.	Part No.	Part Description	Qty.
31	101262	Nipple (1/4 NPT x 1-1/2) Brass (Prior to S/N R2435)	1
31	102388	Bushing, Reducing 1/2 x 1/4 Brass (After S/N R2436)	1
31a	100947	Nipple, close 1/4 NPT Brass (Not Shown) (After S/N R2436)	1
32	102422	Elbow (1/4 NPT x 90°) Brass	1
33	107069	Vacuum breaker (1/4 NPT) Brass (bronze)	1
**—	108349	Repair Kit, 1/4" and 1/2" vacuum breaker (bronze)	1
**—	113219	Kit, Repair 1/4" vacuum breaker (plastic).....	1
34	101261	Elbow, street (1/4 NPT x 90°) Brass	1
35	110135	Nipple (1/4 NPT x 7 1/4) Brass	1
36	100573	Locknut (1/4 NPT) Brass	1
37	201669	Locknut (1/4 NPT) (Nickel-Plated)	1
38	104421	Line strainer (1/2 NPT) Brass	1
39	108265	Valve, pressure reducing (1/2 NPT)	1
—	601105	Piping Assy. W/R (No booster) (includes items 1 thru 23)	1
—	403563	Piping Assy., fill (includes items 15,23,32 thru 39)	1
**—	900836	Kit* Repair, 1/2" Vacuum Breaker (Includes one each of 108349, 113219 and 113221)	
**—	900837	Kit* Repair, 3/4" Vacuum Breaker (Includes one each of 108351 and 113223)	

* Between serial number range R2289 and R2435 maintained 1/4" valves, switching from Parker to GC (see Srv Bulletin #46) then converted to 1/2" valves. Contact factory for machines in this serial number range for correct 1/4" valve.

** Kits 900836 and 900837 were created to repair either style of vacuum breaker (bronze or plastic). Plastic style are no longer available as a complete vacuum breaker.

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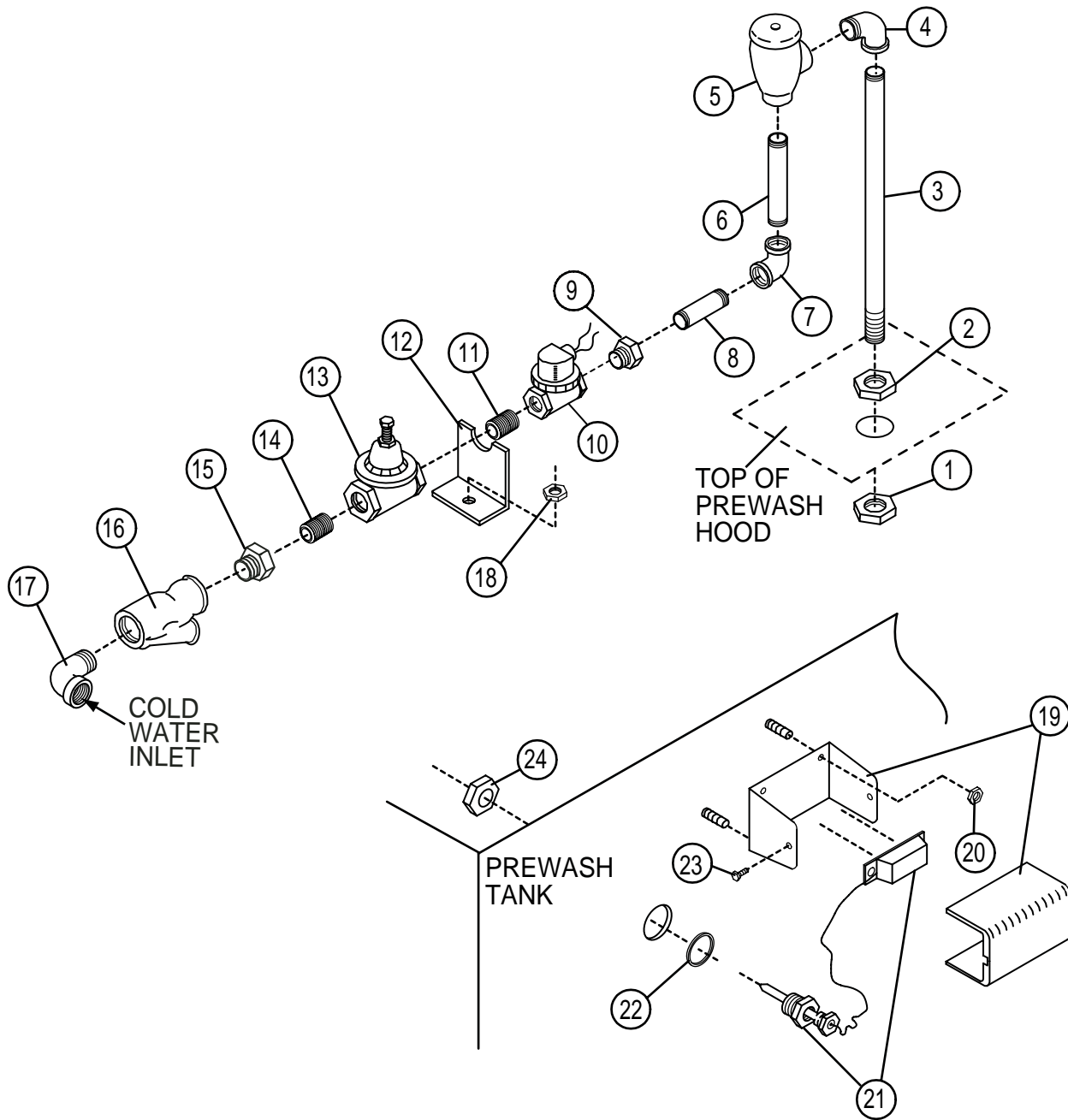


Figure 40 – Cold Water Thermostat for Prewash Option
(All S/N's)

COLD WATER THERMOSTAT FOR PREWASH OPTION
(All S/N's)

Fig. 40 Item No.	Part No.	Part Description	Qty.
1	201669	Locknut (1/4 NPT) (Nickel Plated).....	1
2	100573	Locknut (1/4 NPT) Brass	1
3	110135	Nipple (1/4 NPT x 7 1/4) Brass	1
4	101261	Elbow, street (1/4 NPT x 90°) Brass	1
5	107069	Vacuum breaker (1/4 NPT) Brass (bronze).....	1
***—	108349	Repair Kit, 1/4" and 1/2" vacuum breaker (bronze)	1
***—	113219	Kit, Repair 1/4" vacuum breaker (plastic).....	1
6	110134	Nipple (1/4 NPT x 2-1/2) Brass	1
7	102422	Elbow (1/4 NPT x 90°) Brass	1
8	101262	Nipple (1/4 NPT x 1-1/2) Brass (Prior to S/N R2425)	1
8	100947	Nipple, close 3/4" NPT (After S/N R2426)	1
9	102388	Bushing, reducing (1/2 x 1/4 NPT) (After S/N R2426)	1
**10	109885	Valve, solenoid (1/4 NPT) (Prior to S/N R2435)	1
—	111172	Repair kit, solenoid valve (1/4 NPT).....	1
—	111469	Replacement coil, solenoid valve (1/4 NPT) (120V coil).....	1
10	113352	Valve Solenoid (1/2" NPT) (After S/N R2436)	1
—	113392	Repair kit (1/2") Solenoid Valve	1
—	113357	Replacement Coil (120V)	1
11	100947	Nipple, Close (1/4 NPT) Brass	1
12	319549	Bracket, piping support	1
*13	108265	Valve, pressure reducing (1/2 NPT)	1
*14	100947	Nipple, Close (1/4 NPT) Brass	1
15	102388	Bushing, reducer (1/2 x 1/4) Brass	1
16	104421	Line strainer (1/2 NPT) Brass	1
17	102438	Elbow, street (1/2 NPT x 90°) Brass	1
18	100141	Nut, grip (1/4-20)	1
19	107922	Box, thermostat and cover	1
20	107966	Nut, grip (10-32 w/nylon insert)	2
21	109069	Thermostat w/capillary	1
22	201041	Washer	1
23	106460	Screw (6-32 x 1/4" Truss head).....	2
24	100547	Lockout (1/2" NPT SST).....	1
—	403563	Piping Assy., fill (includes items 1-9).....	1
***—	900836	Kit* Repair, 1/2" Vacuum Breaker (Includes one each of 108349, 113219 and 113221)	1

* Note: Items 13 and 14 are optional unless incoming water supply pressure exceeds 25 PSI [173kPa].

** Between serial number range R2289 and R2435 maintained 1/4" valves, switching from Parker to GC (see Srv Bulletin #46) then converted to 1/2" valves. Contact factory for machines in this serial number range for correct 1/4" valve.

*** Kit 900836 was created to repair either style of vacuum breaker (bronze or plastic). Plastic style is no longer available as a complete vacuum breaker.

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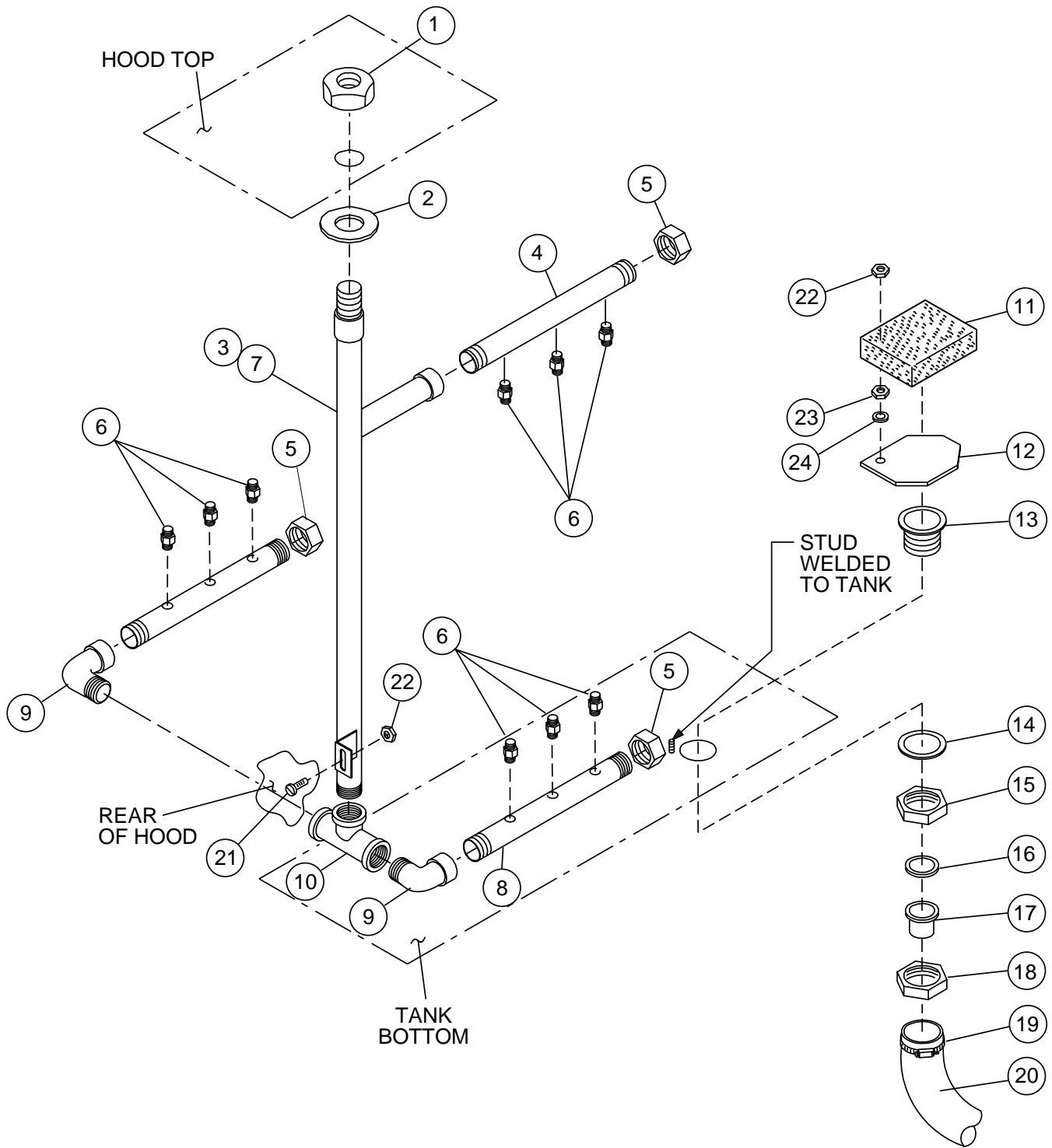


Figure 41 – Inside Rinse Piping and Rinse Drain-Off
(KL-44/66 Only)
(For machines beginning with S/N 90513 and above)

**INSIDE RINSE PIPING AND RINSE DRAIN-OFF
(KL-44/66 ONLY)**

(For machines beginning with S/N 90513 and above)

Fig. 41 Item No.	Part No.	Part Description	Qty.
1	100548	Locknut 3/4 NPT SST	1
2	108620	Gasket Rinse Pipe	1
3	322372	Manifold, Final Rinse (Standard)	1
4	205754	Pipe Final Rinse Upper	1
5	106734	Cap 1/2" Plastic	3
6	112493	Nozzle 1/8 NPTM	9
7	322586	Manifold, Final Rinse (High Hood)	1
8	205755	Pipe Final Rinse Lower	1
9	100554	Tee 1/2" NPT SST	1
10	100516	Elbow Street 1/2 x 90 SST	2
11	311761	Screen, Drain Body	1
12	315682	Restrictor, Drain	1
13	107863	Drain Body	1
14	107864	Washer, Drain Body.....	1
15	107865	Nut, Drain Body	1
16	107866	Washer, Outlet Pipe	1
17	109283	Tail Piece	1
18	107867	Nut, Outlet Pipe	1
19	107340	Hose Clamp	1
20	111400	Hose Drain	1
21	100778	Screw 1/4-20 x 3/8 Truss Head	1
22	100141	Nut Grip 1/4-20	1
23	100003	Nut Plain 1/4-20	1
24	106482	Washer Lock 1/4" Split	1

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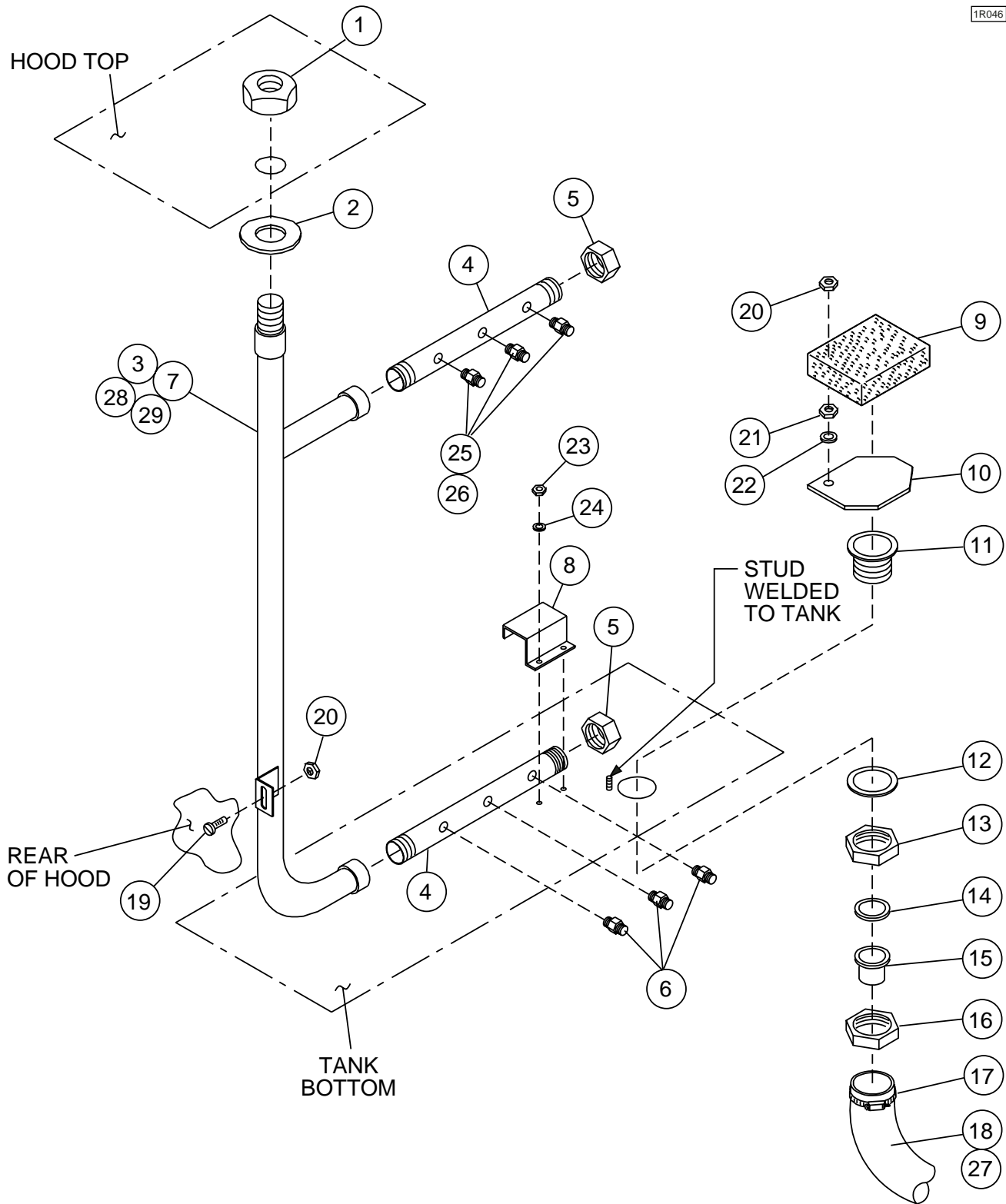


Figure 42 – Inside Rinse Piping and Rinse Drain-Off
(Models KB, WS, KL)
(For machines beginning with S/N 87575 and above)

**INSIDE RINSE PIPING AND RINSE DRAIN-OFF
(MODELS KB, WS, KL)**

(For machines beginning with S/N 87575 and above)

Fig. 42 Item No.	Part No.	Part Description	Qty.
1	100156	Locknut 3/4 NPT Brass	1
2	108620	Gasket Rinse Pipe	1
3	311405	Manifold, Final Rinse (Standard) 44KB, 44WS, 54KB	1
4	205421	Pipe Final Rinse, 44KB, KL44, 54KB, 44WS	2
5	106734	Cap 1/2" Plastic	2
6	112022	Nozzle Spray Lower, 44KB, KL44, 54KB, 44WS	3
7	311404	Manifold, Final Rinse (High Hood) 44KB, 44WS, 54KB	1
8	315294	Support – Rinse Pipe	1
9	311761	Screen, Drain Body	1
10	315682	Restrictor, Drain	2
11	107863	Drain Body	1
12	107864	Washer, Drain Body.....	1
13	107865	Nut, Drain Body	1
14	107866	Washer, Outlet Pipe	1
15	109283	Tail Piece	1
16	107867	Nut, Outlet Pipe	1
17	107340	Hose Clamp	1
18	111400	Hose Drain.....	1
19	100778	Screw 1/4-20 x 3/8 Truss Head	1
20	100141	Nut Grip 1/4-20	1
21	100003	Nut Plain 1/4-20	1
22	106482	Washer Lock 1/4" Split	1
23	104985	Nut, Plain 10-32.....	1
24	106486	Washer, Lock 10-32 Split	1
25	106530	Nozzle, Spray Upper 44KB, 54KB, KL44	3
26	0508376	Nozzle, Spray Upper 44WS	3
27	111444	Hose Drain 54KB	1



SPECIAL NOTE: Model KL44/66 Final Rinse Manifolds

28	317192	Manifold – Final Rinse (Standard KL44) (Prior to S/N 85280)	1
29	317193	Manifold – Final Rinse (High Hood KL44)	1
		(Prior to S/N 85280)	
28	311405	Manifold – Final Rinse (Standard KL44) (Beginning with S/N 85280 thru S/N 90512)	1
29	311404	Manifold – Final Rinse (High Hood KL44)	1
		(Beginning with S/N 85280 thru S/N 90512)	

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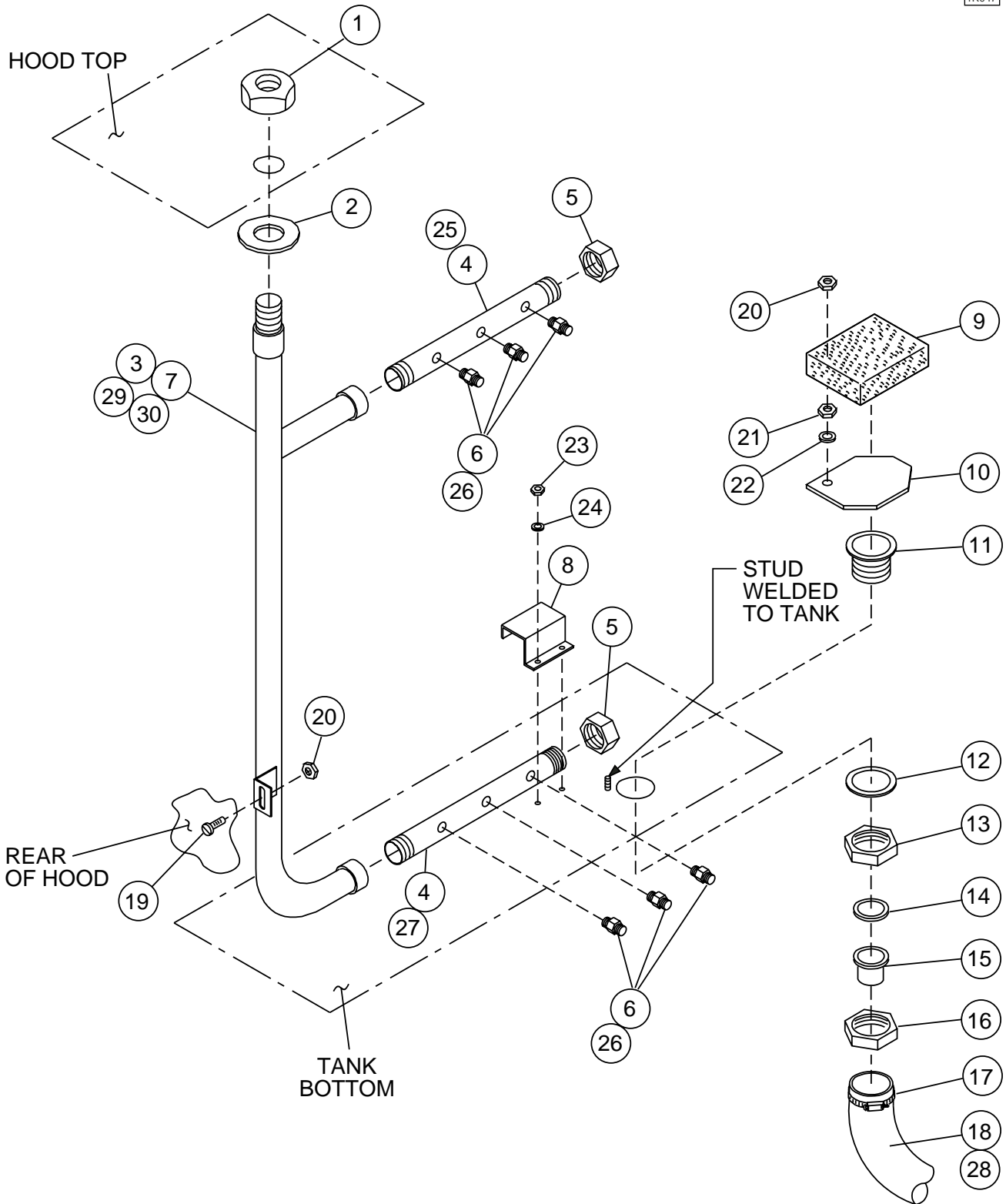


Figure 43 – Inside Rinse Piping and Rinse Drain-Off
 (For machines prior to S/N 87575)

INSIDE RINSE PIPING AND RINSE DRAIN-OFF*(For machines prior to S/N 87575)*

Fig. 43 Item No.	Part No.	Part Description	Qty.
1	100156	Locknut (3/4 NPT) Brass	1
2	108620	Gasket, manifold	1
3	311405	Manifold, final rinse (Standard) (44KB, 44WS, 54KB)	1
4	205107	Rinse Pipe, upper & lower (44KB, KL44)	2
5	106734	Cap, rinse pipe	2
6	111519	Nozzle, final rinse (44KB, KL44, 54KB)	8
7	311404	Manifold, final rinse – (High-Hood) (44KB, 44WS, 54KB)	1
8	315294	Support, rinse pipe	1
9	311761	Screen, drain body	1
10	315682	Restrictor, drain	1
11	107863	Drain body	1
12	107864	Washer, drain body	1
13	107865	Nut, drain body	1
14	107866	Washer, outlet pipe	1
15	109283	Tail piece	1
16	107867	Nut, outlet pipe	1
17	107340	Hose clamp (M28)	2
18	111400	Hose, drain (44KB, KL44, 44WS)	1
19	100778	Screw (1/4-20 x 3/8") Truss hd	1
20	100141	Nut, grip (1/4-20)	2
21	100003	Nut, plain (1/4-20)	1
22	106482	Washer, lock (1/4") Split	1
23	104985	Nut, plain (10-32)	2
24	106486	Washer, lock (10-32) Split	2
25	204810	Rinse pipe, upper (44WS)	1
26	111517	Nozzle, final rinse (44WS)	10
27	205107	Rinse pipe, lower (44WS)	1
28	111444	Hose, drain (54KB)	1

**SPECIAL NOTE: Model KL44/66 Final Rinse Manifolds**

29	317192	Manifold – Final Rinse (Standard KL44) (Prior to S/N 85280)	1
30	317193	Manifold – Final Rinse (High Hood KL44)	1
		(Prior to S/N 85280)	
29	311405	Manifold – Final Rinse (Standard KL44) (Beginning with S/N 85280 thru S/N 90512)	1
30	311404	Manifold – Final Rinse (High Hood KL44)	1
		(Beginning with S/N 85280 thru S/N 90512)	

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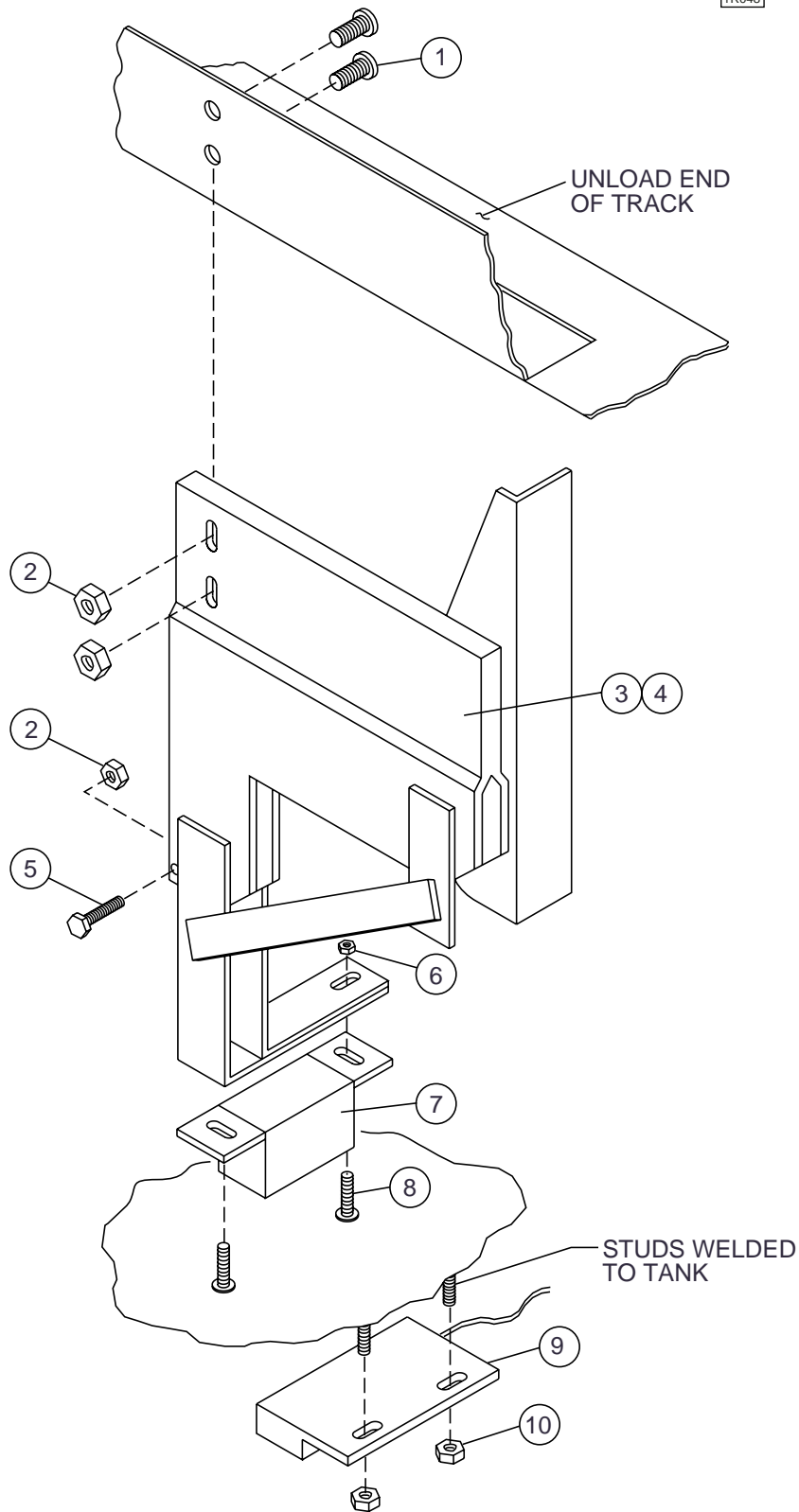


Figure 44 – Rinse Saver Mechanism
(For machines prior to S/N 88123)

RINSE SAVER MECHANISM
(For machines prior to S/N 88123)

Fig. 44 Item No.	Part No.	Part Description	Qty.
1	111296	Screw (10-32 x 3/8") Flat hd.....	2
2	100194	Nut, grip (10-32)	3
3	N/A	Support Assy. (R-L).....	1
4	N/A	Support Assy. (L-R).....	1
5	107137	Bolt (10-32 x 7/8") Hex hd	1
6	104971	Nut, grip (6-32)	2
7	111026	Switch, magnet reed	1
8	111319	Screw (6-32 x 1/2") Truss hd.....	2
9	113721	Switch Reed Aleph	1
10	108954	Nut, grip (6-32 w/nylon insert)	2

This style rinse saver mechanism is no longer available.

Service replacement kits are listed below:

Refer to pages 88-91 for component parts contained in the kits.

—	900735	44KB, 44KPRB, 54KB, 54KPRB, KL44, 44WS, 66WS Machine direction L-R
—	900736	44KB, 44KPRB, 54KB, 54KPRB, KL44, 44WS, 66WS Machine direction R-L

1R049

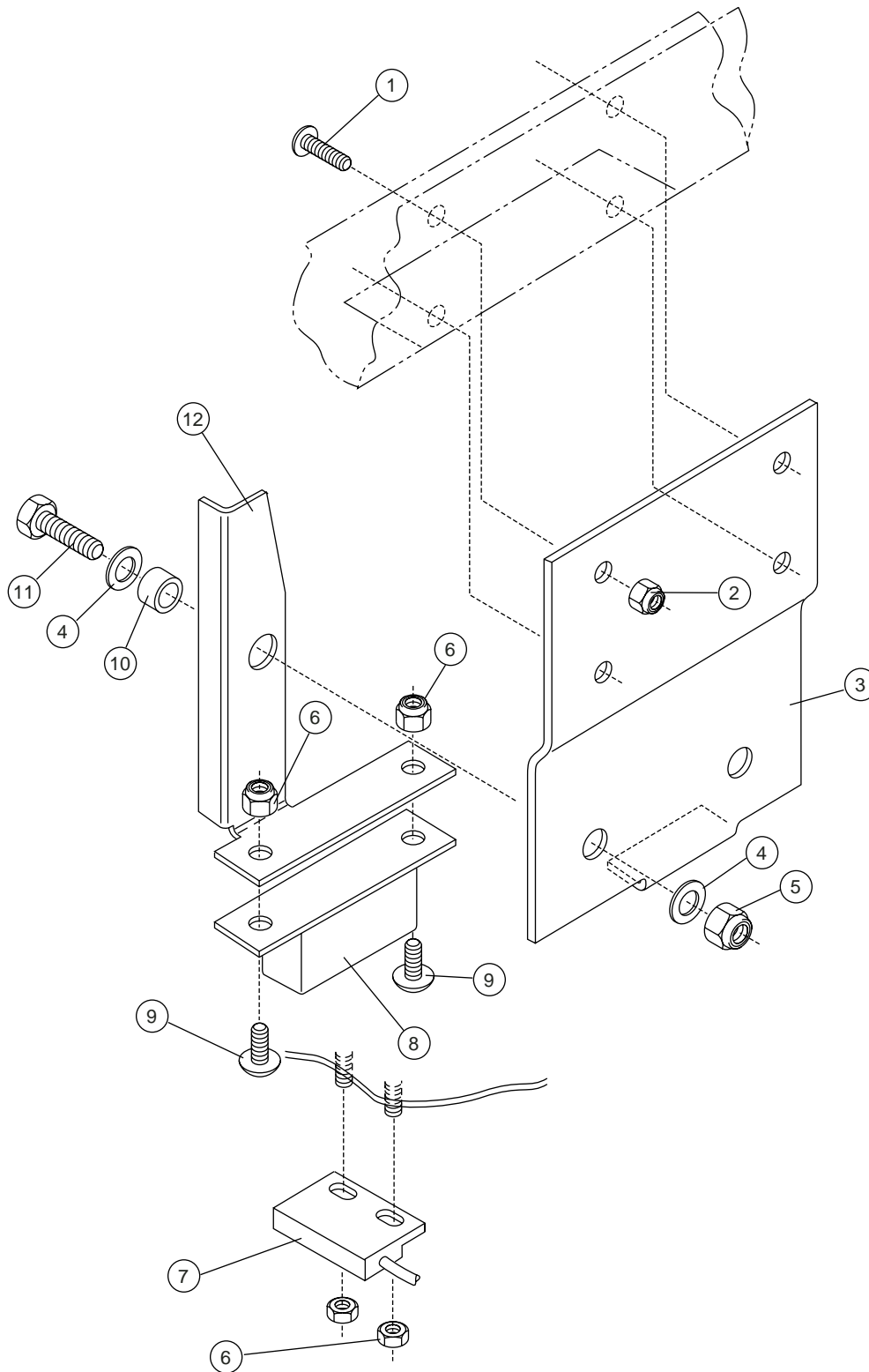


Figure 45 – Rinse Saver Mechanism (L-R Shown)
(For machines beginning with S/N 88123 and above)

RINSE SAVER MECHANISM (L-R SHOWN)
(For machines beginning with S/N 88123 and above)

Fig. 45 Item No.	Part No.	Part Description	Qty.
1	100754	Screw 10-32 x 1/2" Flat Head	4
2	100194	Nut Grip 10-32	4
3	319302	Bracket, Rinse Switch Mounting.....	1
4	106026	Washer 1/4 x 5/8 x 1/16 SST.....	2
5	100141	Nut, Grip 1/4-20 SST	1
6	104971	Nut Grip 6-32	4
7	113721	Reed Switch Aleph	1
8	111026	Magnet SST	1
9	106382	Screw 6-32 x 3/8 Truss Head	2
10	205377	Sleeve, Rinse Switch	1
11	100736	Bolt 1/4-20 x 3/4 Hex Head	1
12	319303-2	Arm, Rinse Switch (L-R)	1
—	411101	Rinse Actuator Assy. (L-R)	1
		(includes items 3-8 and 9-12)	

See next page for R-L Rinse Saver Mechanism

1R050

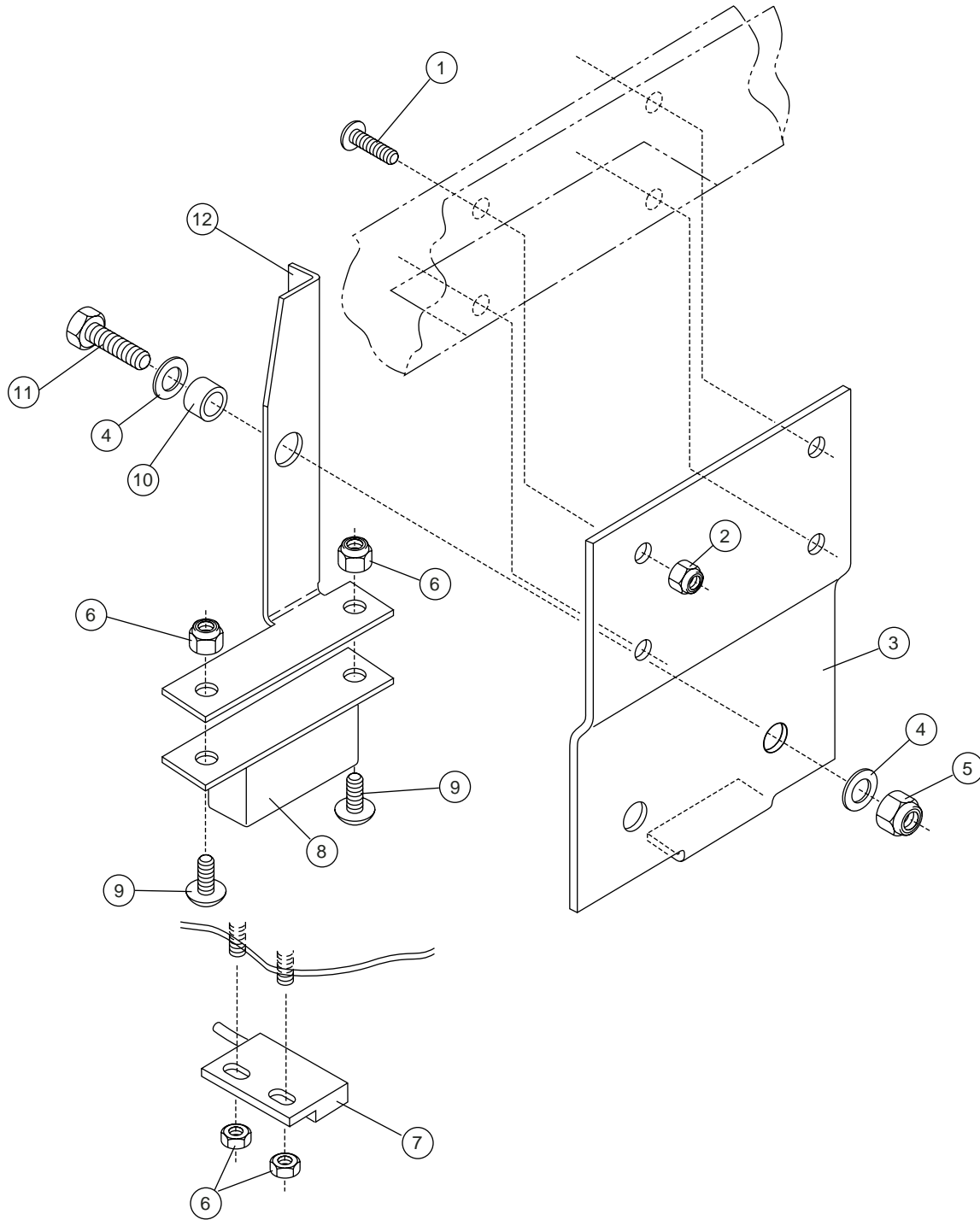


Figure 46 – Rinse Saver Mechanism (R-L Shown)
(For machines beginning with S/N 88123 and above)

RINSE SAVER MECHANISM (R-L SHOWN)
(For machines beginning with S/N 88123 and above)

Fig. 46 Item No.	Part No.	Part Description	Qty.
1	100754	Screw 10-32 x 1/2" Flat Head	4
2	100194	Nut Grip 10-32	4
3	319302	Bracket, Rinse Switch Mounting.....	1
4	106026	Washer 1/4 x 5/8 x 1/16 SST.....	2
5	100141	Nut, Grip 1/4-20 SST	1
6	104971	Nut Grip 6-32	4
7	113721	Reed Switch Aleph	1
8	111026	Magnet SST	1
9	106382	Screw 6-32 x 3/8 Truss Head	2
10	205377	Sleeve, Rinse Switch	1
11	100736	Bolt 1/4-20 x 3/4 Hex Head	1
12	319303-1	Arm, Rinse Switch (R-L)	1
—	411100	Rinse Actuator Assy. (R-L)	1
		(includes 3-6 and 8-12)	

See previous page for L-R Rinse Saver Mechanism

1R051

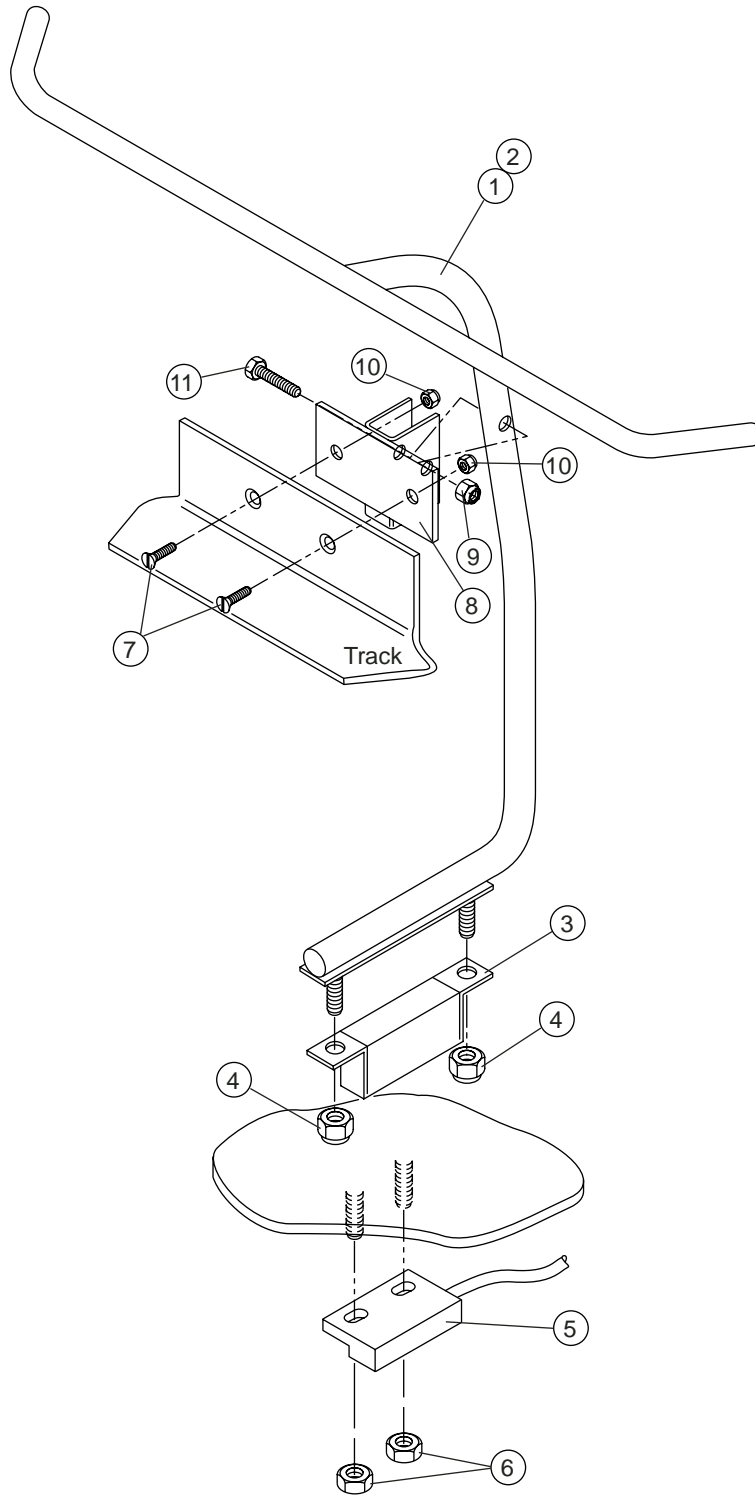


Figure 47 – Rinse Saver Mechanism (KL-44/66 Only)
(For machines beginning with S/N 90513 and above)

RINSE SAVER MECHANISM (KL-44/66 ONLY)
(For machines beginning with S/N 90513 and above)

Fig. 47 Item No.	Part No.	Part Description	Qty.
1	322554	Final Rinse Lever (R-L)	1
2	322555	Final Rinse Lever (L-R)	1
3	111026	Magnet SST	1
4	108954	Nut Grip 6-32 w/Nylon Insert	2
5	113721	Reed Switch Aleph	1
6	104971	Nut Grip 6-32	2
7	100754	Screw 10-32 x 1/2 Flat Head.....	2
8	322574	Mtg. Bracket Rinse Lever	1
9	100141	Nut Grip 1/4-20	1
10	107966	Nut Grip 10-32 w/Nylon Insert	2
11	100738	Bolt 1/4-20 x 1" Hex Head	1

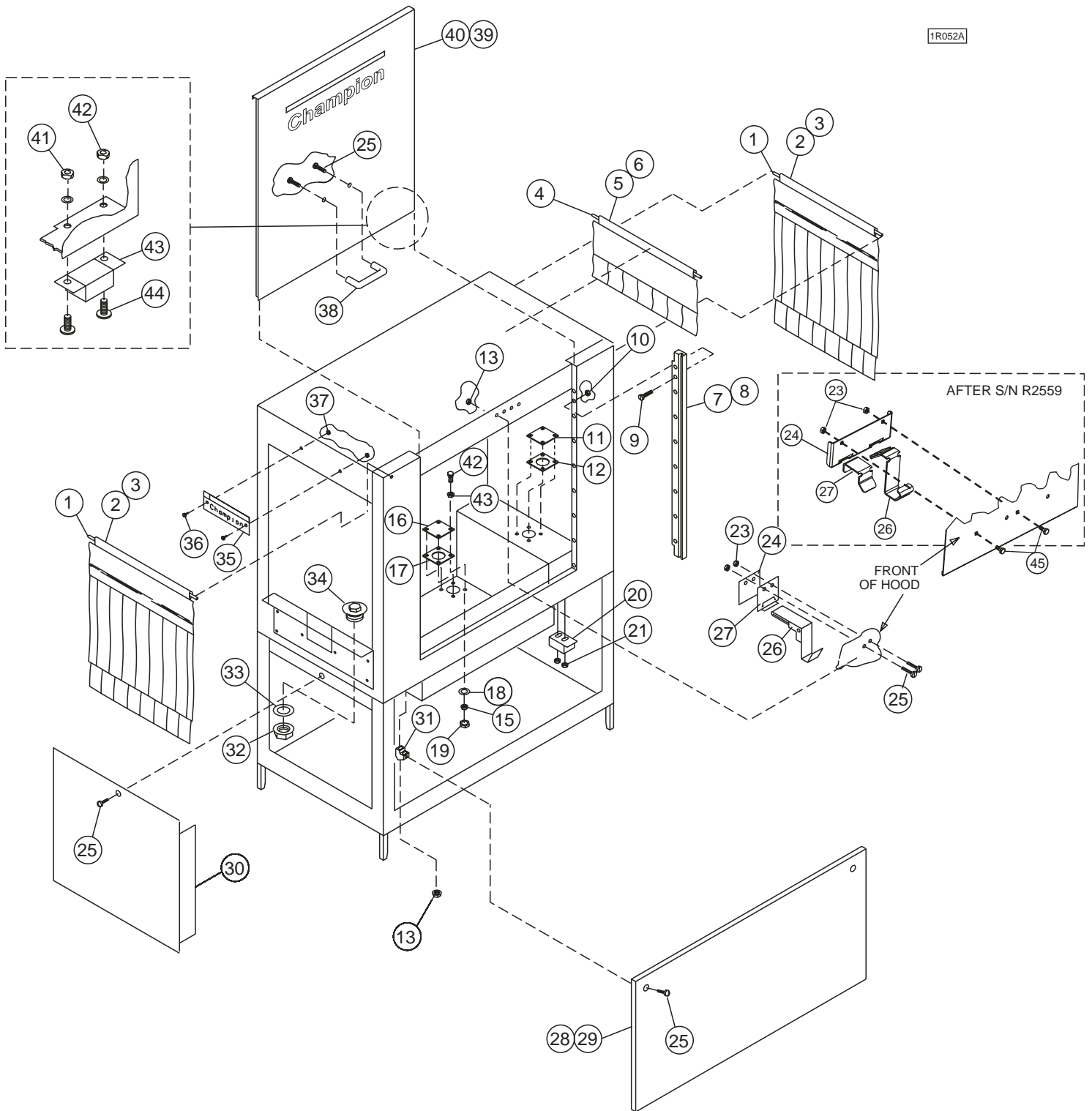


Figure 48 – Doors, Curtains, Miscellaneous

DOORS, CURTAINS, MISCELLANEOUS

Fig. 48 Item No.	Part No.	Part Description	Qty.
1	108250	Rod, curtain (End)	2
2	108042	Curtain, end (Standard)	2
3	109588	Curtain, end (High-Hood)	2
4	204506	Rod, curtain (Center)	1
5	109723	Curtain, center (Standard)	1
6	109723	Curtain, center (High-Hood)	1
7	110691	Guide, door (Standard)	2
8	110692	Guide, door (High-Hood)	2
9	107970	Screw (3-32 x 1") Fillister hd	14
10	107965	Nut, grip (8-32) w/nylon insert	14
11	312003	Plate, drive blockoff.....	1
12	110741	Gasket, drive blockoff	1
13	100141	Nut, grip (1/4-20)	6
14	100740	Bolt (5/16-18 x 1") Hex hd	12
15	102376	Washer, flat (5/16")	24
16	312101	Plate, standpipe blockoff	1
17	108345	Gasket, standpipe blockoff	1
18	106013	Washer, lock (5/16") split	12
19	100154	Nut, plain (5/16-18).....	12
20	113721	Switch Reed Aleph	2
21	108954	Nut, grip (6-32) w/nylon insert	4
22	107999	Bolt (1/4-20 x 3/4") Hex hd	1
23	100141	Nut, grip (1/4-20)	1
24	313359	Stop, door (Prior to S/N R2558)	1
—	325922	Stop, door stop/catch combo (Prior to S/N R2559)	1
25	100073	Screw (1/4-20 x 1/2") Truss hd	4
26	325921	Hook, door catch (Prior to S/N R2558)	1
—	325921	Hook, door stop/catch combo (Prior to S/N R2559)	1
27	317345	Bracket, door catch (Prior to S/N R2558).....	1
—	325920	Bracket, door stop/catch combo (After S/N R2559)	1
28	311303	Panel, front (44KB, KL44, 44WS, 54KB)	1
29	313292	Panel, front 10" (54KB) (Not shown)	1
30	313036	Panel, end.....	1
31	108578	Bracket, panel	2
32	107865	Nut, drain blockoff.....	1
33	107864	Washer, drain blockoff.....	1
34	110755	Plug, drain	1
35	109158	Nameplate 'Champion'	2
36	107015	Screw (4-40 x 1/4") Round hd.....	4
37	107016	Nut (4-40) w/nylon insert	4
38	108966	Handle, door	1
39	316992	Door - 24" (Standard)	1
40	316990	Door - 24" (High-Hood)	1
41	100194	Nut, grip (10-32)	2
42	106486	Washer, lock (10-32) split	2
43	111026	Switch, magnet reed	1
44	100007	Screw (1-32 x 3/8") Truss hd.....	2
45	100735	Bolt (1/4-20 x 5/8) Hex head.....	2
—	314388	Plate, drain blockoff (Not shown)	1
—	108345	Gasket, drain blockoff (Not shown)	1

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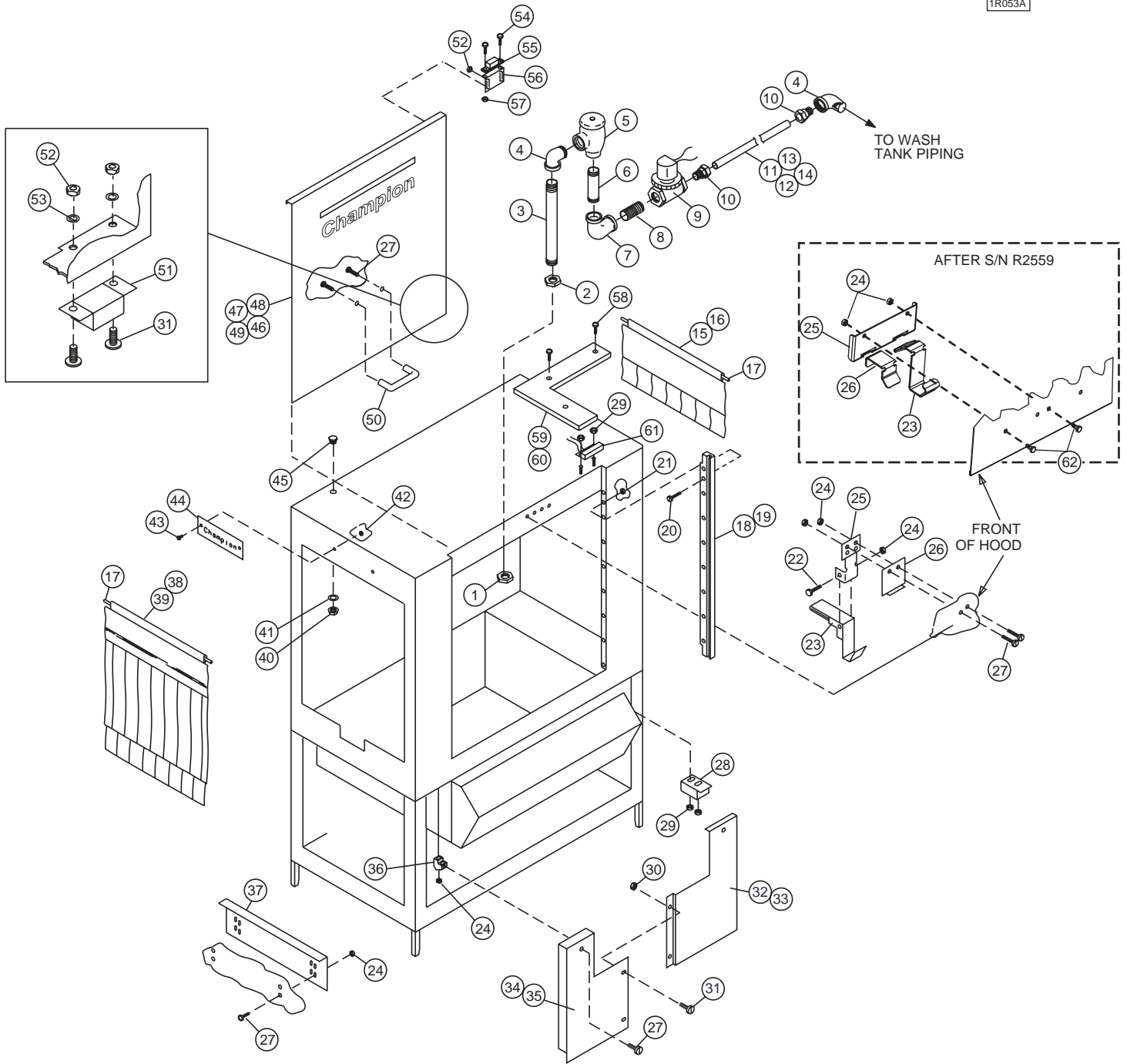


Figure 49 – Hood (PR22, PR36)
 (For machines prior to S/N 87575)

HOOD (PR22, PR36)
(For machines prior to S/N 87575)

Fig. 49 Item No.	Part No.	Part Description	Qty.
1	201669	Locknut (1/4 NPT) Nickel.....	1
2	100573	Locknut (1/4 NPT) Brass	1
3	110135	Nipple, RTOE (1/4 NPT x 7-1/4") Brass	1
4	101261	Elbow, street (1/4 NPT x 90) Brass	2
5	107069	Vacuum breaker 1/4"	1
—	108349	Repair kit, 1/4" & 1/2" vacuum breaker	1
6	110134	Nipple (1/4 NPT x 2-1/2") Brass	1
7	102422	Elbow (1/4 NPT x 90) Brass	1
8	101262	Nipple (1/4 NPT x 1-1/2") Brass.....	1
9	109885	Valve, solenoid 1/4"	1
—	111172	Repair kit, solenoid valve (1/4" NPT)	1
—	111469	Replacement coil, solenoid valve (1/4" NPT) (120V coil).....	1
10	109909	Fitting, compression (1/4 NPT x 1/2")	2
11	107315	Tubing, copper (1/2" O.D.) (44KB, 44WS, KL44) w/PR36	A/R
12	107315	Tubing, copper (1/2" O.D.) (54KB) w/PR36	A/R
13	107315	Tubing, copper (1/2" O.D.) (44KB, 44WS, KL44) w/PR22	A/R
14	107315	Tubing, copper (1/2" O.D.) (54KB) w/PR22.....	A/R
15	108043	Curtain, center (Standard)	1
16	109589	Curtain, center (High-Hood)	1
17	108250	Rod, curtain	2
18	110691	Guide, door (Standard)	2
19	110692	Guide, door (High-Hood)	2
20	107970	Screw (8-32 x 1") Fillister hd	14
21	107965	Nut, grip (8-32) w/Nylon insert	14
22	100073	Screw (1/4-20 x 1/2") Truss hd	10
23	317344	Hook, door catch (Prior to S/N R2558)	1
—	325921	Hook, door stop/catch combo (After S/N R2559)	1
24	100141	Nut, grip (1/4-20)	6
25	317345	Bracket, door catch (Prior to S/N R2558).....	1
—	325920	Bracket, door stop/catch combo (After S/N R2559).....	1
26	313359	Door stop (Prior to S/N R2558)	1
—	325922	Stop door stop/catch combo (After S/N R2559).....	1
27	100073	Screw, 1/4-20 x 1/2" Truss Hd	10
28	113721	Switch Reed Aleph (PR22)	1
29	108954	Nut, grip (6-32) w/Nylon insert	2
30	107966	Nut, grip (10-32) w/Nylon insert	4
31	100007	Screw, (10-32 x 3/8") Truss Hd.....	4
32	313698	Panel, front RH (PR22)	1
33	313968	Panel, front RH (PR36)	1
34	311302	Panel, front LH (PR22)	1
35	313967	Panel, front LH (PR36)	1
36	108578	Bracket, panel	2
37	312863	Table flange	1
38	108042	Curtain, end (Standard)	1
39	109588	Curtain, end (High-Hood)	1
40	110856	Nut (1/4" NPT) Plug	1
41	110750	Gasket 1/4"	1

HOOD (PR22, PR36) (Cont.)
(For machines prior to S/N 87575)

Fig. 49 Item No.	Part No.	Part Description	Qty.
42	107016	Nut, grip (440) w/Nylon insert	2
43	107015	Screw (440 x 1/4") Round hd	2
44	109158	Nameplate, "Champion"	1
45	110855	Plug (1/4" NPT).....	1
46	316991	Door (14") Standard (PR22)	1
47	317009	Door (14") High-Hood (PR22)	1
48	316992	Door (24") Standard (PR36)	1
49	316990	Door (24") High-Hood (PR36)	1
50	108966	Handle, door	1
51	111026	Magnet, reed switch.....	1
52	100194	Nut,grip (10-32).....	2
53	106486	Washer, lock (#10) Split	2
54	106382	Screw, 6-32 x 3/8" Truss Hd (PR36)	2
55	111026	Magnet, Reed Switch (PR36).....	1
56	317125	Bracket, magnet (PR36)	1
57	104971	Nut, grip 6-32 (PR36)	2
58	100212	Screw, 10-32 x 3/4" Truss Hd	3
59	317124	Chaseway, reed switch (PR36 w/ 44KB, KL44. 44WS)	1
60	317126	Chaseway, reed switch (PR36 w/ 54KB).....	1
61	113721	Reed Switch Aleph (PR36)	1
62	100735	Bolt (1/4-20 x 5/8) Hex Head	2
—	403563	Piping Assy, fill (includes item - 1-10)	A/R
—	108618	Gasket, hood	1

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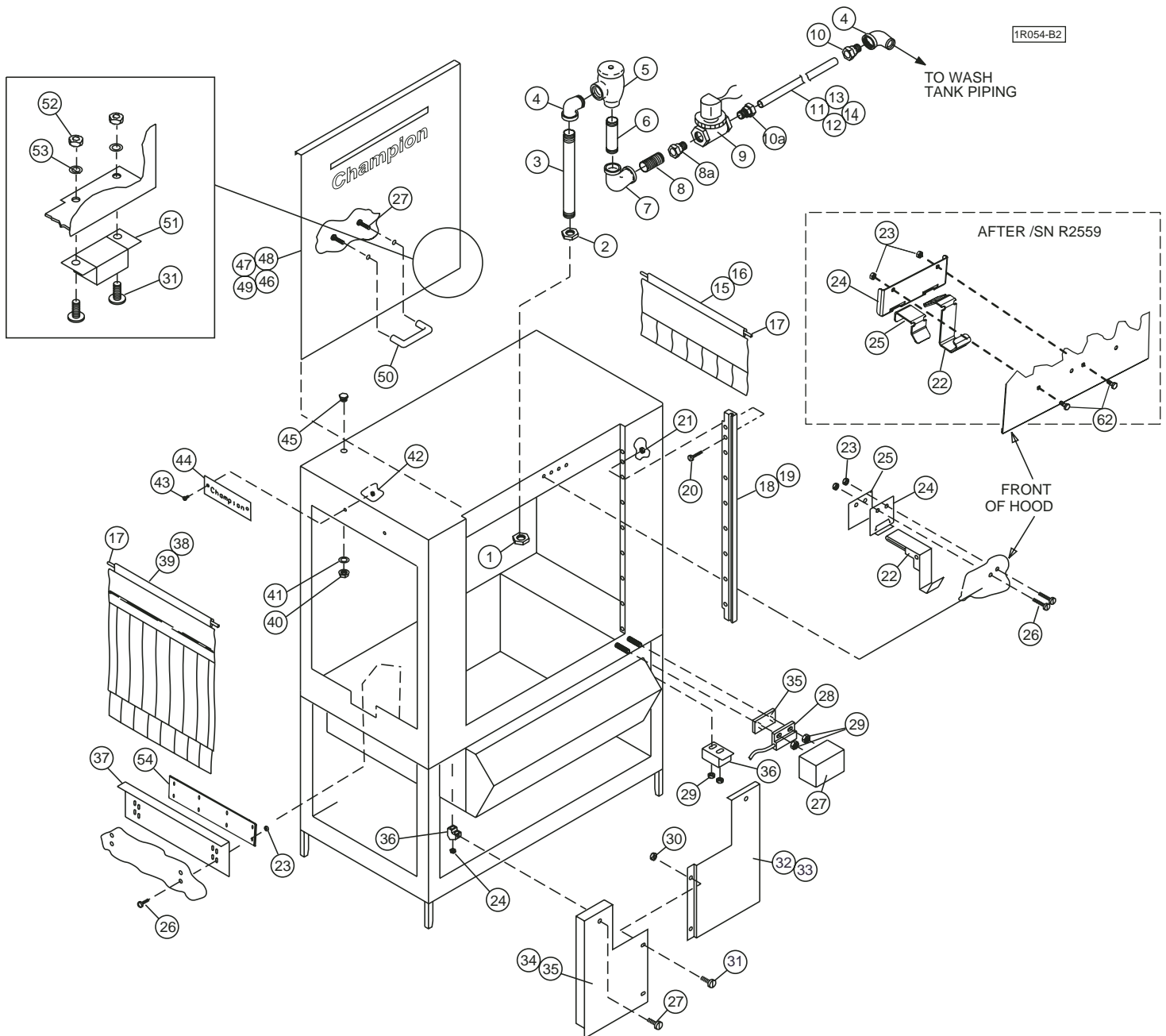


Figure 50 – Hood (PR22, PR36)
 (For machines beginning with S/N 87575 and above)

HOOD (PR22, PR36)*(For machines beginning with S/N 87575 and above)*

Fig. 50 Item No.	Part No.	Part Description	Qty.
1	201669	Locknut (1/4 NPT) Nickel.....	1
2	100573	Locknut (1/4 NPT) Brass	1
3	110135	Nipple, RTOE (1/4 NPT x 7-1/4") Brass	1
4	101261	Elbow, street (1/4 NPT x 90) Brass	2
5	107069	Vacuum breaker 1/4" (bronze).....	1
**—	108349	Repair Kit, 1/4" vacuum breaker (bronze)	1
—	113219	Kit, Repair 1/4" vacuum breaker (plastic).....	1
6	110134	Nipple (1/4 NPT x 2-1/2") Brass	1
7	102422	Elbow (1/4 NPT x 90) Brass	1
8	101262	Nipple (1/4 NPT x 1-1/2") Brass (Prior to S/N R2435)	1
8	100947	Nipple, close 1/4 NPT Brass (Not Shown) (After S/N R2441)	1
8a	102388	Bushing, Reducing 1/2 x 1/4 Brass (After S/N R2441)	1
*9	109885	Valve, solenoid 1/4" (Prior to S/N R2435)	1
—	111172	Repair kit, solenoid valve (1/4" NPT)	1
—	111469	Replacement coil, solenoid valve (1/4" NPT) (120V coil)	1
9	113352	Valve Solenoid (1/2" NPT) (After S/N R2441)	1
—	113392	Repair kit, valve 1/2"	1
—	113357	Replacement coil (120V).....	1
10	109909	Fitting, compression (1/4 NPT x 1/2")	1
10a	109909	Fitting, compression (1/4 NPT x 1/2") (Prior to S/N R2440).....	1
10a	111250	Fitting, compression 1/2 OD x 1/2 MPT Brass (After S/N R2441)	1
11	107315	Tubing, copper (1/2" O.D.) (44KB, 44WS, KL44) w/PR36	A/R
12	107315	Tubing, copper (1/2" O.D.) (54KB) w/PR36	A/R
13	107315	Tubing, copper (1/2" O.D.) (44KB, 44WS, KL44) w/PR22	A/R
14	107315	Tubing, copper (1/2" O.D.) (54KB) w/PR22.....	A/R
15	108043	Curtain, center (Standard)	1
16	109589	Curtain, center (High-Hood)	1
17	108250	Rod, curtain	2
18	110691	Guide, door (Standard)	2
19	110692	Guide, door (High-Hood)	2
20	107970	Screw (8-32 x 1") Fillister hd	14
21	107965	Nut, grip (8-32) w/Nylon insert	14
22	317344	Hook, door catch (Prior to S/N R2558)	1
—	325921	Hook, door stop/catch combo (After S/N R2559)	1
23	100141	Nut, grip (1/4-20)	6
24	317345	Bracket, door catch (Prior to S/N R2558)	1
—	325920	Bracket, door stop/catch combo (After S/N R2559).....	1
25	313359	Door stop (Prior to S/N R2558)	1
—	325922	Stop door stop/catch combo (After S/N R2559).....	1
26	100073	Screw (1/4-20 x 1/2") Truss hd	10
27	319991-2	Cover, door switch (PR36)	1
28	113721	Reed Switch Aleph	1
29	108954	Nut, grip (6-32) w/Nylon insert	6
30	107966	Nut, grip (10-32) w/Nylon insert	4
31	100007	Screw (10-32 x 3/8") Truss hd.....	4
32	313698	Panel, front RH(PR22, PR36)	1
33	311302	Panel, front RH(PR22)	1

HOOD (PR22, PR36) (Cont.)*(For machines beginning with S/N 87575 and above)*

Fig. 50 Item No.	Part No.	Part Description	Qty.
34	313967	Panel, front LH(PR36).....	1
35	319993	Back plate, door switch (PR36).....	1
36	108578	Bracket, panel	2
37	317690	Table flange (Prior to S/N R2207)	1
37	325492	Table Flange (KL44, 44KB, 44WS) (After S/N R2208	2
38	108042	Curtain, end (Standard)	1
39	109588	Curtain, end (High-Hood)	1
40	110856	Nut (1/4" NPT) Plug	1
41	110750	Gasket 1/4"	1
42	107016	Nut, grip (440) w/Nylon insert	2
43	107015	Screw (440 x 1/4") Round hd	2
44	109158	Nameplate, "Champion"	1
45	110855	Plug (1/4" NPT).....	1
46	316991	Door (14") Standard (PR22)	1
47	317009	Door (14") High-Hood (PR22)	1
48	316992	Door (24") Standard (PR36)	1
49	316990	Door (24") High-Hood (PR36)	1
50	108966	Handle, door	1
51	111026	Magnet, reed switch.....	1
52	100194	Nut,grip (10-32).....	2
53	106486	Washer, lock (#10) Split	2
54	111478	Bolt (10-32 x 1/2" hex) w/Loctite	1
55	325667	Track Stiffener	2
55	100735	Bolt (1/4-20 x 5/8) Hex Head	2
—	403563	Piping Assy, fill (includes item - 1-10)	A/R
—	108618	Gasket, hood	1
**—	900836	Kit * Repair 1/2 Vacuum Breaker (includes one each of 108349, 113, 219, and 113221)	

* Between serial number range R2289 and R2440 maintained 1/4" valves, switching from Parker to GC (see Srv Bulletin #46) then converted to 1/2" valves. Contact factory for machines in this serial range for correct 1/4" valve.

** Kit 900836 was created to repair either style of vacuum breaker (bronze or plastic). Plastic style is no longer available as a complete vacuum breaker.

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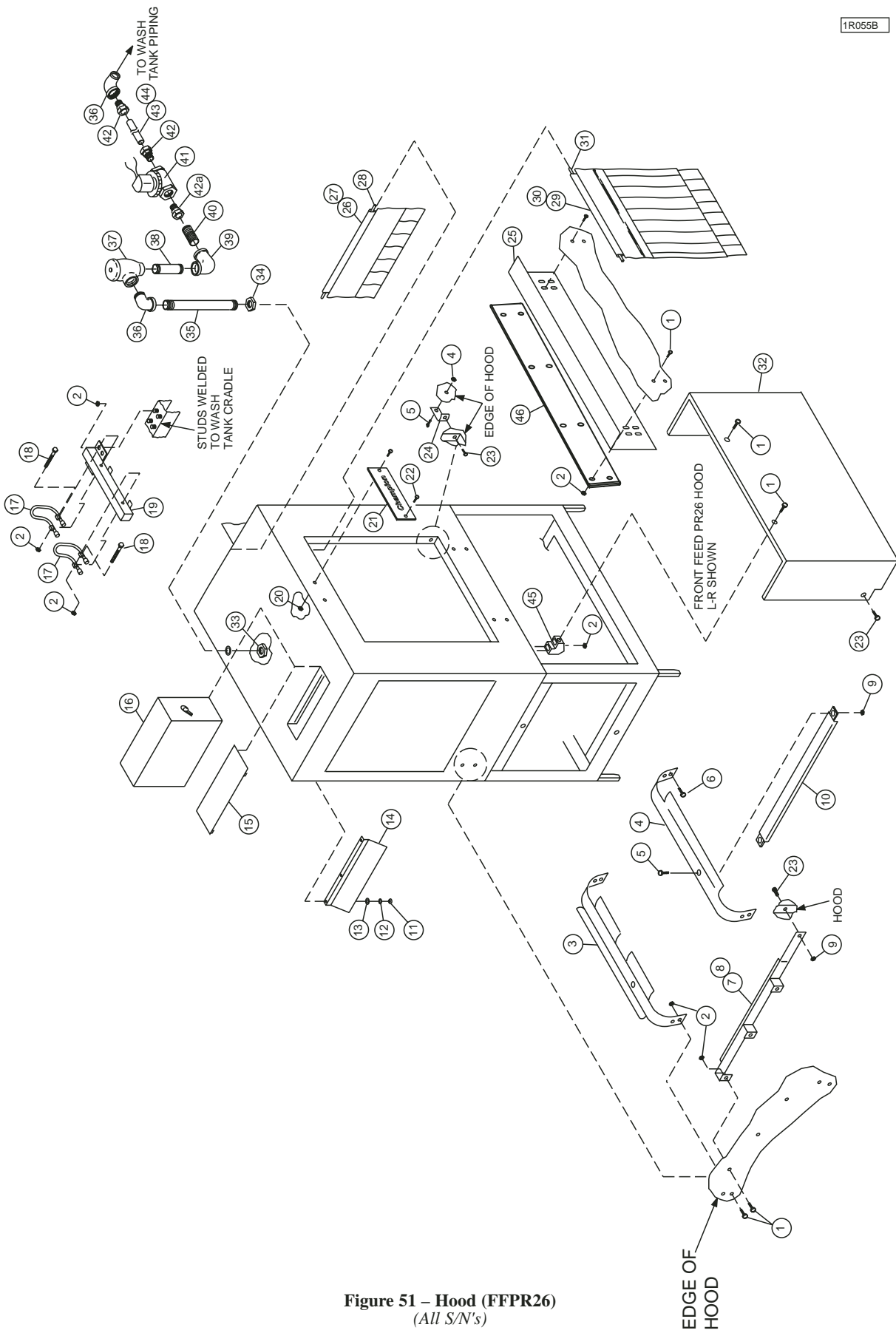


Figure 51 – Hood (FFPR26)
(All S/N's)

HOOD (FFPR26)
(ALL S/N'S)

Fig. 51 Item No.	Part No.	Part Description	Qty.
1	100073	Screw (1/4-20 x 1/2") Truss hd	11
2	100141	Nut, grip (1/4-20)	19
3	314489	Track, rear	1
4	314515	Track, front	1
5	100754	Screw (10-32 x 1/2") Flat hd	3
6	100736	Bolt (1/4-20 x 3/4") Hex hd	4
7	314762	Track, side (L R)	1
8	314512	Track, side (R-L)	1
9	100194	Nut, grip (10-32)	4
10	315392	Track support	1
11	104985	Nut, plain (10-32)	3
12	106486	Washer, lock (#10) Split	3
13	107033	Washer, flat (#10)	3
14	315122	Splash shield, vent	1
15	315125	Cover, No vent (Optional)	1
16	401487	Vent Stack Assy	1
17	313598	Lever, pawl bar	2
18	107999	Bolt (1/4-20 x 1-3/4") Hex hd	2
19	314772	Pawl bar	1
20	107016	Nut, grip (440) w/Nylon Insert	2
21	109158	Nameplate "Champion"	1
22	107015	Screw (440 x 1/4") Round hd	2
23	100097	Screw (10-32 x 1/2") Truss hd	2
24	314516	Rack guide	1
25	312863	Table flange (For machines prior to S/N 87575).....	1
—	317690	Table flange (For machines beginning with S/N 87575 thru R2207)	1
25	325942	Table flange (KL44, 44KB, 44WS) (After S/N R2208)	2
26	108043	Curtain, center (Standard)	1
27	109589	Curtain, center (High-Hood)	1
28	108250	Curtain rod, Center	1
29	108042	Curtain, end (Standard)	1
30	109588	Curtain, end (High-Hood)	1
31	111146	Curtain rod, End	1
32	314730	Front panel	1
33	201669	Locknut (1/4 NPT) (Nickel-Plated)	1
34	100573	Locknut (1/4 NPT) Brass	1
35	110135	Nipple, RTOE (1/4 NPT x 7-1/4") Brass	1
36	101261	Elbow, street (1/4 NPT x 90°) Brass	2
37	107069	Vacuum breaker (1/4 NPT) (bronze).....	1
*—	108349	Repair Kit, vacuum breaker 1/4" & 1/2" (bronze)	1
*—	113219	Repair Kit, 1/4" vacuum breaker (plastic).....	1
38	110134	Nipple (1/4 NPT x 2-1/2") Brass	1
39	102422	Elbow (1/4 NPT x 90°) Brass	1
40	101262	Nipple (1/4 NPT x 1-1/2") Brass (Prior to S/N R2436)	1
40	100947	Nipple, close 1/4" NPT (After S/N R2436)	1
40a	102388	Bushing, reducing (1/2 x 1/4 NPT) (After S/N R2436)	1
—	900836	Kit Repair, 1/2" Vacuum Breaker (Includes one each of 108349, 113219 and 113221)	

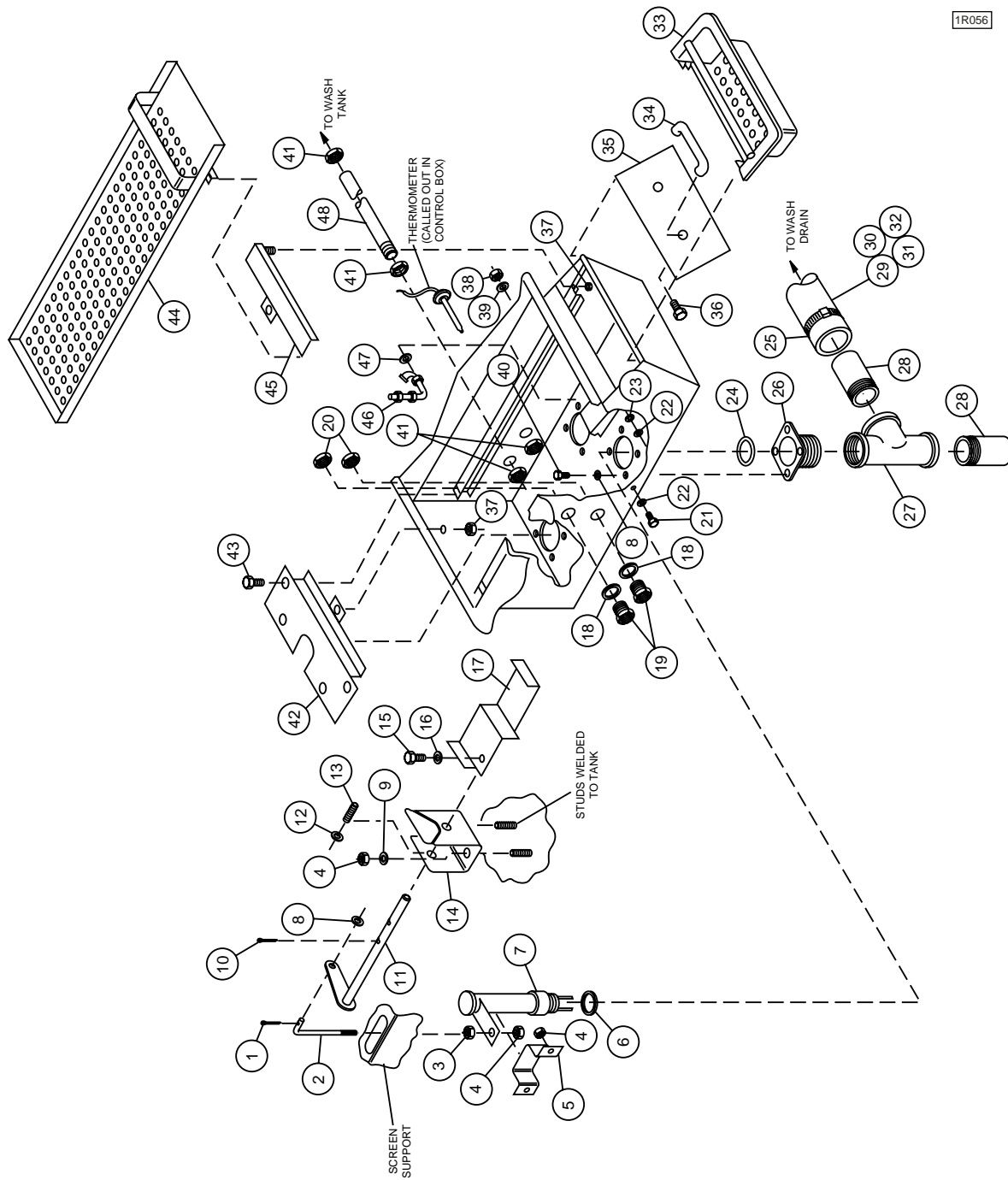
* Kit 900836 was created to repair either style of vacuum breaker (bronze or plastic). Plastic style is no longer available as a complete vacuum breaker.

HOOD (FFPR26) (Cont.)
(ALL S/N'S)

Fig. 51 Item No.	Part No.	Part Description	Qty.
*41	109885	Valve, solenoid (1/4 NPT) (Prior to S/N R2436)	1
—	111172	Repair kit, solenoid valve (1/4 NPT)	1
—	111469	Replacement coil, solenoid valve (1/4 NPT) (120V coil).....	1
41	113352	Valve Solenoid (1/2" NPT) (After S/N R2436)	1
—	113392	Repair kit (1/2") Solenoid Valve	1
—	113357	Replacement Coil (120V)	1
42	109909	Fitting, compression (1/4 NPT x 1/2" O.D.)	1
42a	109909	Fitting, compression 1/4 NPT x 1/2" (Prior to S/N R2435)	1
42a	111250	Fitting, compression 1/2 OD x 1/2 MPT Brass (After S/N R2436)	1
43	107315	Tubing, copper (1/2" O.D.) (44KB, 44WS, KL44)	A/R
44	107315	Tubing, copper (1/2" O.D.) (54KB)	A/R
45	108578	Bracket, panel	2
—	108618	Gasket, hood	A/R
—	403563	Piping Assy Fill (includes items – 33 thru 42)	1
46	325667	Track Stiffener	2

*Between serial number range R2289 and R2435 maintained 1/4" valves, switching from Parker to GC (see Srv Bulletin #46) then converted to 1/2" valves. Contact factory for machines in this serial number range for correct 1/4" valve.

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Figure 52 – Tank (PR22)
 (For machines beginning with S/N 84565 and above)

TANK (PR22)*(For machines beginning with S/N 84565 and above)*

Fig. 52 Item No.	Part No.	Part Description	Qty.
1	108875	Cotter pin (3/32" x 1/2")	1
2	205121	Lift rod, overflow	1
3	107967	Nut, grip (1/4-20) w/Nylon Insert	1
4	100141	Nut, grip (1/4-20)	5
5	314294	Support, overflow	1
6	111532	O-ring, overflow	1
7	316916	Overflow tube (5-1/2")	1
8	106026	Washer, flat (1/4")	5
9	106482	Washer, lock (1/4") Split	2
10	108875	Cotter pin (3/32" x 1/2")	1
11	317051	Lift arm	1
12	102376	Washer, flat (5/16")	1
13	111391	Spring, latch bracket	1
14	316552	Latch bracket	1
15	105254	Bolt (10-32 x 1/2") Hex hd	1
16	106486	Washer, lock (#10) Split	1
17	316554-1	Drain lever.	1
18	109034	Gasket (1/2 NPT) Plug	2
19	108418	Plug (1/2 NPT) Plastic	2
20	108417	Nut (1/2 NPT) Plastic	2
21	106314	Bolt (3/8-16 x 1/2") Hex hd	1
22	104618	Washer, flat (3/8")	2
23	100143	Nut, grip (3/8-16)	1
24	112257	O-ring, drain body	1
25	107340	Clamp, hose (M28)	2
26	111034	Drain body	1
27	111060	Tee (1-1/2 NPT x 1-1/4 NPT x 1-1/4 NPT) Galvanized	1
28	111113	Nipple, toe (1-1/4 NPT x 2") Galvanized	2
29	204979	Hose, drain, L-R (44KB, 44WS, KL44)	1
30	204980	Hose, drain, L-R (54KB)	1
31	204973	Hose, drain, R-L (44KB, 44WS, KL44)	1
32	204977	Hose, drain, R-L (54KB)	1
33	311272	Scrap basket	1
34	108966	Handle, cover	1
35	305706	Cover, scrap basket (Prior to S/N 86395)	1
—	320988	Cover, scrap basket (Beginning with S/N 86395)	1
36	100073	Screw (1/4-20 x 1/2") Truss hd	2
37	100194	Nut, grip (10-32)	4
38	104584	Nut, plain (1/2-13)	1
39	104882	Washer, flat (1/2")	1
40	100735	Bolt (1/4-20 x 5/8") Hex hd	4
41	100547	Locknut (1/2 NPT) SST	5
42	311628	Screen support rear	1
43	100097	Screw (10-32 x 1/2") Truss hd.....	2
44	305763	Scrap screen	1
45	312649	Screen support, front	1
46	110854	Float switch	1
—	111151	C-clip (2 per float switch)	2
47	110750	Gasket, float switch	1
48	204533	Nipple, crossflow (1/2 NPT x 13-1/2" SST).....	1
—	408213	Drain Mechanism Assy (Includes items 10-17)	1

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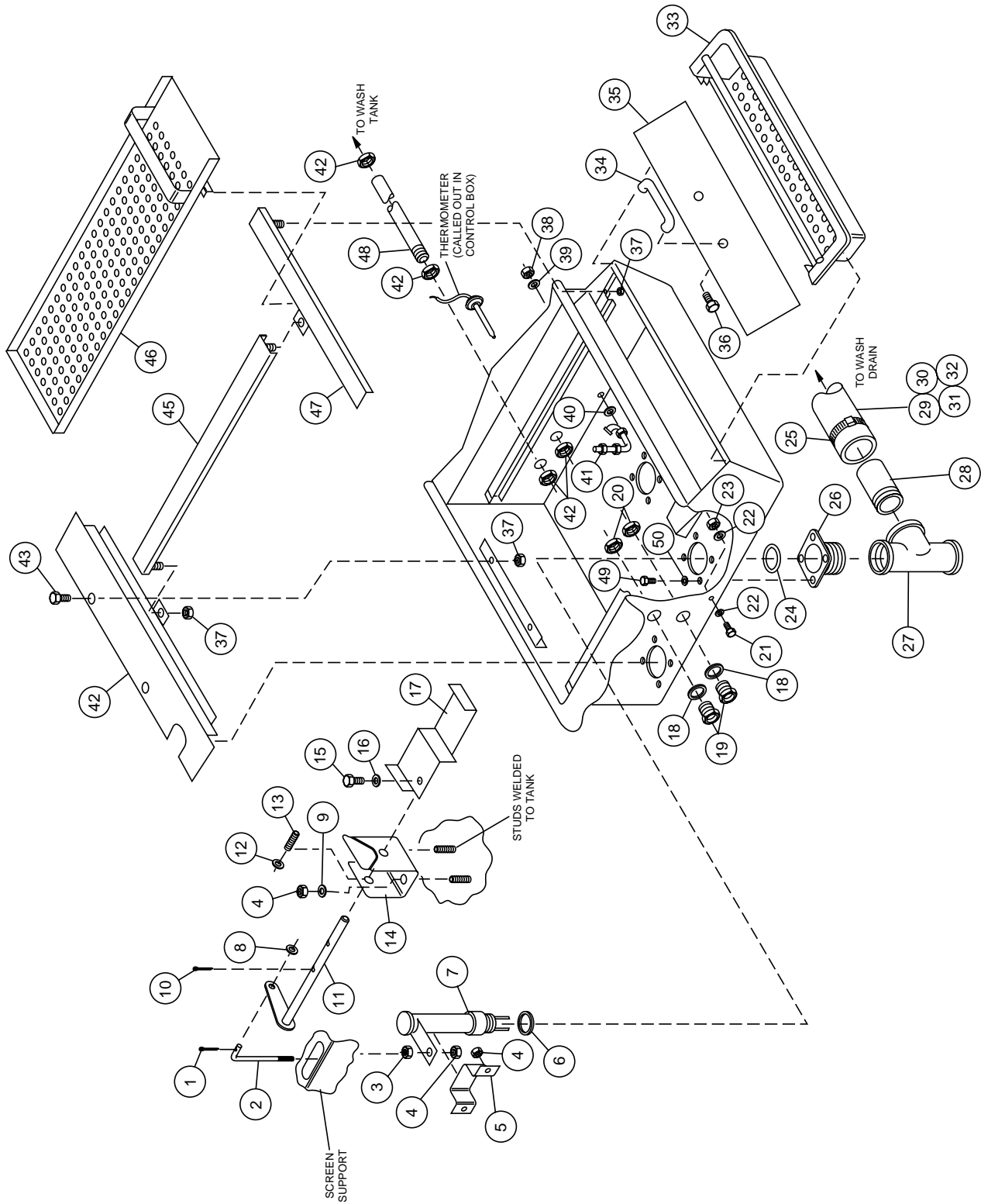


Figure 53 – Tank (PR36)
 (For machines beginning with S/N 84565 and above)

TANK (PR36)*(For machines beginning with S/N 84565 and above)*

Fig. 53	Part		
Item No.	No.	Part Description	Qty.
1	108875	Cotter pin (3/32" x 1/2")	1
2	205121	Lift rod, overflow	1
3	107967	Nut, grip (1/4-20) w/Nylon insert	1
4	100141	Nut, grip (1/4-20)	5
5	314294	Support, overflow	1
6	111532	O-ring, overflow.....	1
7	316916	Overflow tube (5-1/2")	1
8	106026	Washer, flat (1/4")	5
9	106482	Washer, lock (1/4") Split	2
10	108875	Cotter pin (3/32" x 1/2")	1
11	317051	Lift arm	1
12	102376	Washer, flat (5/16")	1
13	111391	Spring, latch bracket	1
14	316552	Latch bracket	1
15	111478	Bolt (10-32 x 1/2") Hex hd	1
16	106486	Washer, lock (#10) Split	1
17	317163-1	Drain lever	1
18	109034	Gasket (1/2 NPT) Plug	2
19	108418	Plug (1/2 NPT) Plastic.....	2
20	108417	Nut (1/2 NPT) Plastic	2
21	106314	Bolt (3/8-16 x 1/2") Hex hd	1
22	104618	Washer, flat (3/8")	2
23	100143	Nut, grip (3/8-16)	1
24	112257	O-ring, drain body	1
25	107340	Clamp, hose (M28)	2
26	111034	Drain body	1
27	111060	Tee (1-1/2 NPT x 1-1/4 NPT x 1-1/4 NPT) Galvanized	1
28	111113	Nipple, tee (1-1/4 NPT x 2") Galvanized	1
29	111117	Hose, drain, L-R (44KB, 44WS, KL44)	5 ft.
30	111117	Hose, drain, L-R (54KB).....	5 ft.
31	111117	Hose, drain, R-L (44KB, 44WS, KL44)	3 ft.
32	111117	Hose, drain, R-L (54KB)	4 ft.
33	311273	Scrap basket	1
34	108966	Handle, cover.....	1
35	305720	Cover, scrap basket	1
36	100073	Screw (1/4-20 x 1/2") Truss hd	2
37	100194	Nut, grip (10-32)	4
38	104584	Nut, plain (1/2-13)	1
39	104882	Washer, flat (1/2")	1
40	110750	Gasket, flat switch	1
41	110854	Float switch	1
—	111151	C-clip (2 per float switch)	2
42	100547	Locknut (1/2 NPT) SST	5
43	313811	Screen support, rear	1
44	100097	Screw (10-32 x 1/2") Truss hd.....	2
45	306910	Screen support, Center	1
46	305783	Scrap screen	2
47	313959	Screen support, front	1
48	204539	Nipple, crossflow (1/2 NPT x 14-1/2") SST	1
49	100735	Bolt (1/4-20 X 5/8") Hex hd	4
50	106026	Washer, flat (1/4")	4

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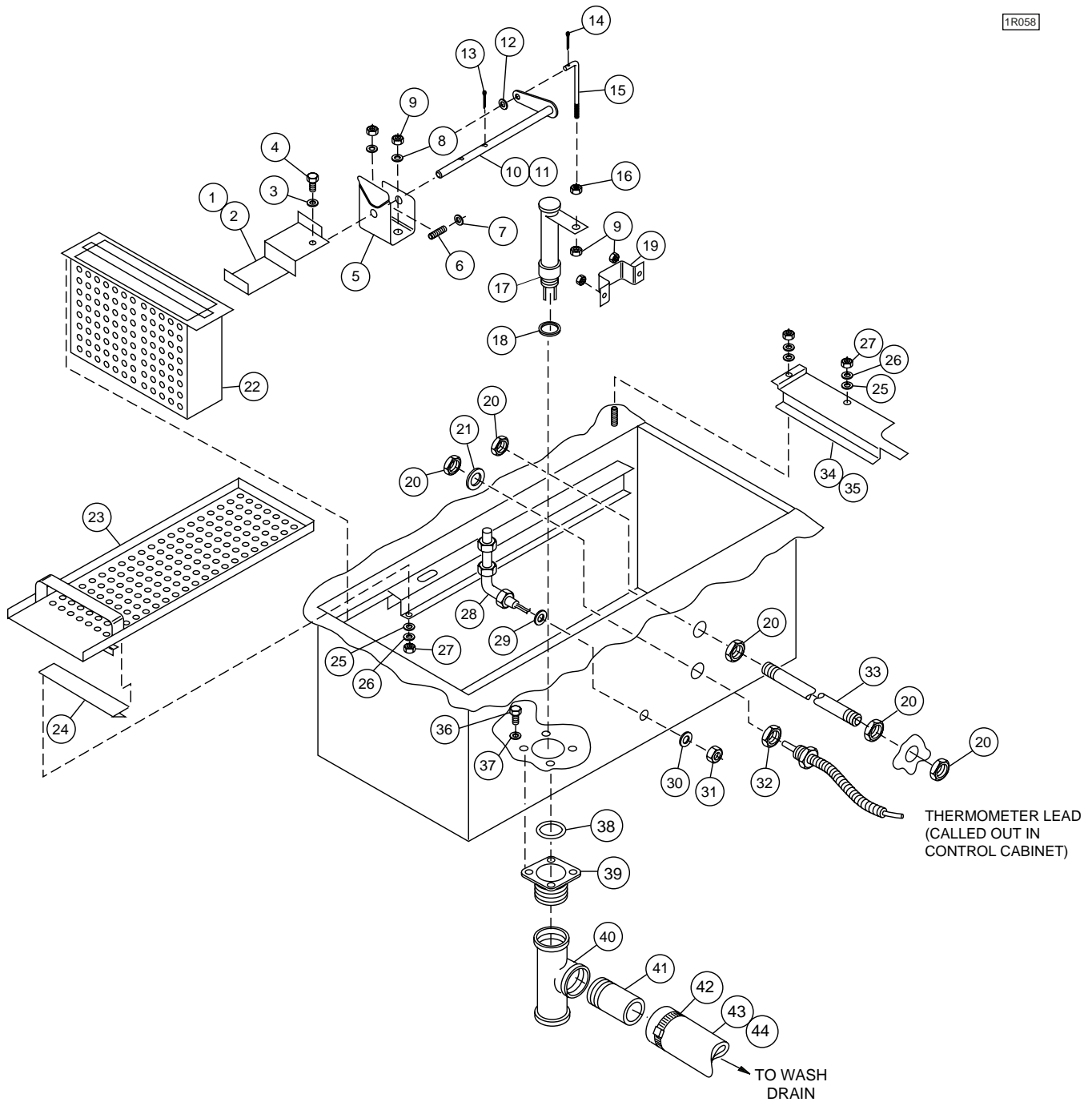
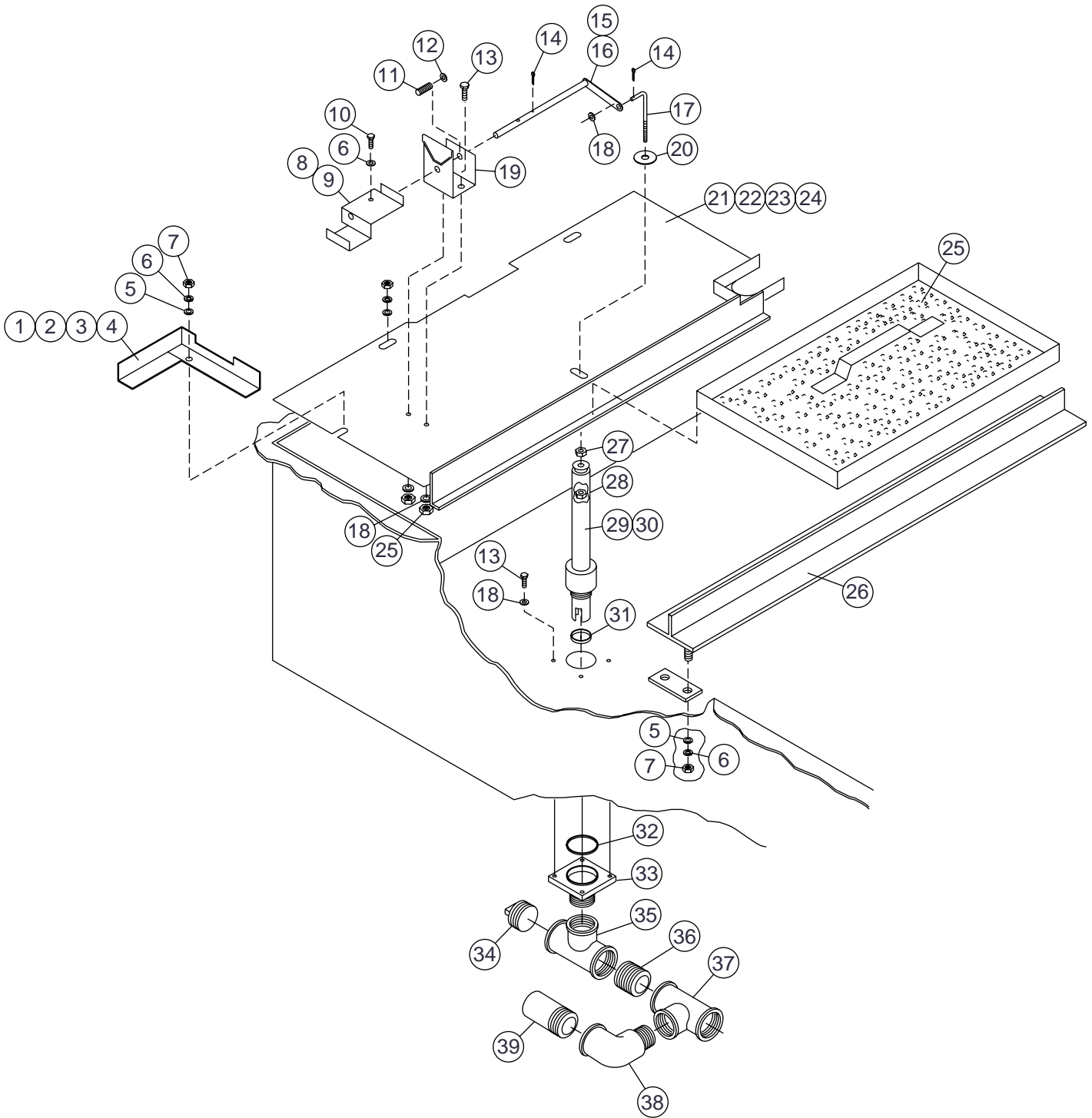


Figure 54 – Tank (FFPR26)
 (For machines beginning with S/N 84565 and above)

TANK (FFPR26)*(For machines beginning with S/N 84565 and above)*

Fig. 54 Item No.	Part No.	Part Description	Qty.
1	316554	Drain lever (L-R)	1
2	316554-1	Drain lever (R-L)	1
3	106486	Washer, lock (#10) Split	1
4	111478	Bolt (10-32 x 1/2") Hex hd	1
5	316552	Latch bracket	1
6	111391	Spring, latch bracket	1
7	102376	Washer, flat (5/16")	1
8	106482	Washer, lock (1/4) Split	2
9	100141	Nut, grip (1/4-20)	5
10	317050	Lift arm (L,R)	1
11	317051	Lift arm (R-L)	1
12	106026	Washer, flat (1/4")	1
13	108875	Cotter pin (3/32" x 1/2")	1
14	108875	Cotter pin (3/32" x 1/2")	1
15	205121	Lift rod, overflow	1
16	107967	Nut, grip (1/4-20) w/Nylon Insert	1
17	316916	Overflow tube (5-1/2")	1
18	111532	O-ring, overflow	1
19	314294	Support, overflow	1
20	100547	Locknut (1/2 NPT) SST	5
21	109034	Gasket, thermometer	2
22	314771	Scrap basket	1
23	305763	Scrap screen	1
24	312649	Screen support, front	1
25	107033	Washer, flat (#10)	4
26	106486	Washer, lock (#10)	4
27	104985	Nut, plain (10-32)	4
28	110854	Float switch	1
—	111151	C-clip (2 per float switch)	2
29	110750	Gasket float switch	1
30	107589	Washer, lock (1/2")	1
31	104584	Nut, plain (1/2-13).	1
32	201041	Washer, flat (7/8" I.D. x 1/8" Thick)	1
33	204981	Nipple, crossflow (1/2" NPT x 11") SST	1
34	314763	Screen support, Rear (L,R)	1
35	314764	Screen support, Front (R-L)	1
36	100735	Bolt (1/4-20 x 5/8") Hex hd	4
37	106026	Washer, flat (1/4")	4
38	112257	O-ring, drain body	1
39	111034	Drain body	1
40	111060	Tee (1-1/2 NPT x 1-1/4 NPT x 1-1/4 NPT) Galvanized.	1
41	111113	Nipple, toe (1-1/4 NPT x 2") Galvanized	2
42	107340	Clamp, hose (M28)	1
43	111117	Hose, drain (44KB, KL44, 44WS)	3 ft.
44	111117	Hose, drain (54KB)	4 ft.
—	408212	Drain Mechanism Assy (L-R) (Includes Items 1,3-7,10,13)	1
—	408213	Drain Mechanism Assy (R-L) (Includes Items 2-7, 11, 13)	1



**Figure 55 – Drain Unit and Screens
Wash Tank**
(For machines beginning with S/N 84565 and above)

**DRAIN UNIT AND SCREENS
WASH TANK**

(For machines beginning with S/N 84565 and above)

Fig. 55 Item No.	Part No.	Part Description	Qty.
1	317037	Baffle, water, R-L (44KB).....	1
1	325159	Baffle, water, R-L (44KB, 44WS) (After S/N R1690)	1
2	317036	Baffle, water, L-R (44KB)	1
2	325160	Baffle, water, L-R (KL44, 44KB, 44WS) (After S/N R1719)	1
3	317039	Baffle, water, R-L (54KB).....	1
3	325159	Baffle, water, R-L (54KB) (After S/N R2127)	1
4	317038	Baffle, water, L-R (54KB).....	1
4	325160	Baffle, water, L-R (54KB) (After S/N R2074)	1
5	107033	Washer, flat (#10)	7
6	106486	Washer, lock (#10) Split	8
7	104985	Nut, plain (10-32)	7
8	316554-1	Drain lever (R-L)	1
9	316554-2	Drain lever (L-R)	1
10	111478	Bolt (10-32 x 1/2") Hex hd	1
11	111391	Spring, overflow lift	1
12	102376	Washer, flat (5/16")	1
13	100735	Bolt (1/4-20 x 5/8") Hex hd	6
14	108875	Cotter pin (3/32" x 1/2")	2
15	317051	Lift arm, (R-L)	1
16	317050	Lift arm, (L-R)	1
17	205080	Lift rod, overflow	1
18	106026	Washer, flat (1/4")	7
19	316552	Latch bracket	1
20	102376	Washer, lift rod	1
21	317041	Support, drain/Screen-R-L (44KB, KL44, 44WS)	1
22	317040	Support, drain/Screen-L-R (44KB, KL44, 44WS)	1
23	317043	Support, drain/Screen-R-L (54KB)	1
24	317042	Support, drain/Screen-L-R (54KB)	1
25	305164	Screen.	6
26	305163	Support, screen	2
27	107967	Nut, grip (1/4-20) w/nylon insert	1
28	100141	Nut, grip (1/4-20)	1
29	314463	Overflow (7") (44KB, KL44, 44WS)	1
30	314457	Overflow (7-1/2") (54 KB)	1
31	111532	O-ring, overflow	1
32	112257	O-ring.....	1
33	111034	Drain body	1
34	100579	Pipe plug (1-1/4 NPT) Galvanized	1
35	111059	Tee (1-1/4" NPT x 1-1/4" NPT x 1-1/2" NPT)	1
36	101062	Nipple close 1 1/4" NPT galvanized	1
37	111655	Tee red (1-1/4" NPT x 1-1/4"NPT x 1" NPT).....	1
38	111656	Elbow street 1" NPT galvanized	1
39	204383	Nipple toe 1" NPT x 2" galvanized.....	1

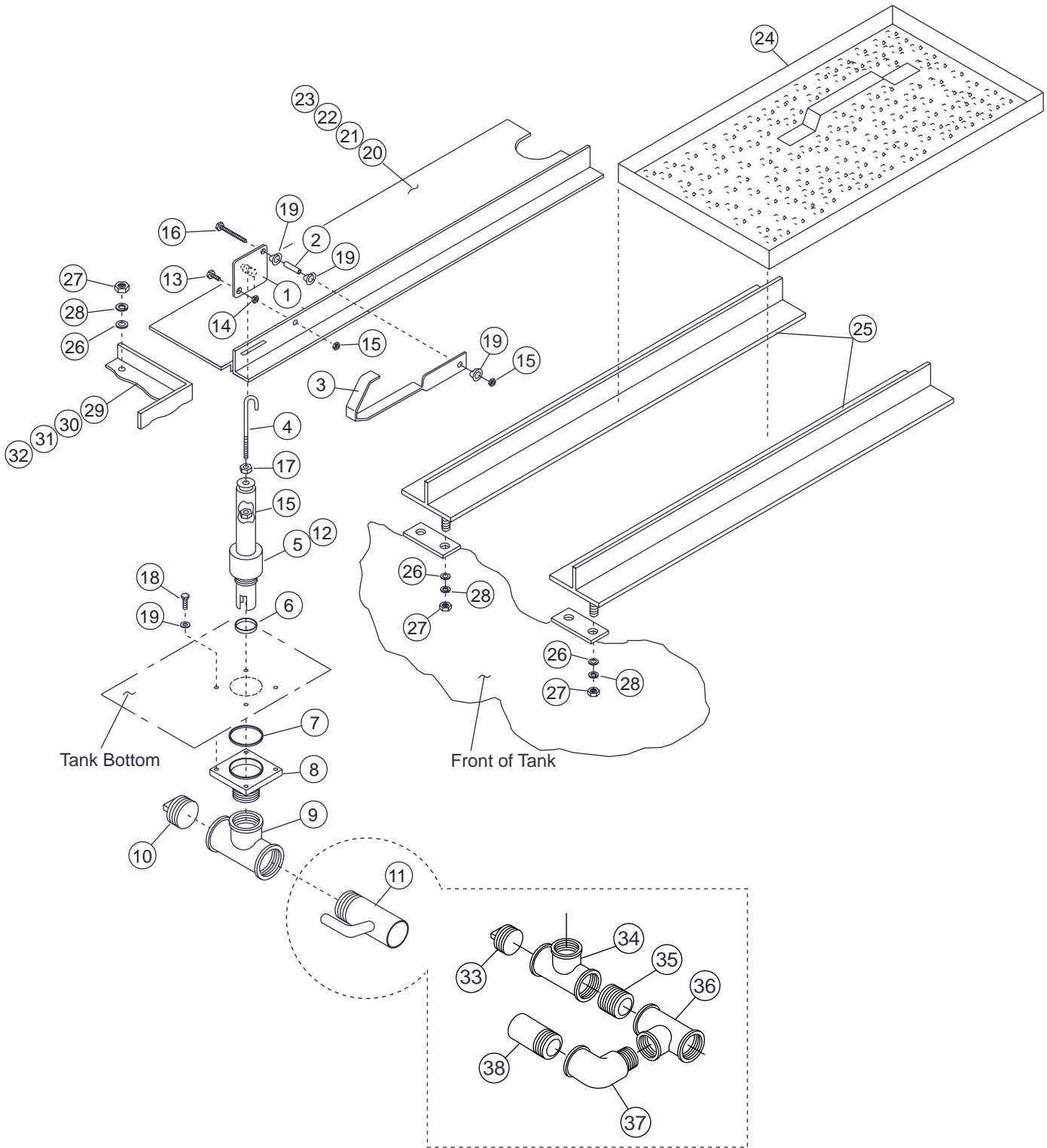



Figure 56 – Drain Unit and Screens
Wash Tank
 (For machines beginning with S/N 80677 thru S/N 84565)

DRAIN UNIT AND SCREENS WASH TANK

(For machines beginning with S/N 80677 thru 84565)

Fig. 56 Item No.	Part No.	Part Description	Qty.
1	314118	Cam	1
2	111441	Spacer (9/32 x 1-3/4"	1
3	314112	Lever, drain	1
4	315177	Lift rod, overflow	1
5	314463	Overflow (7") (44KB, KL44, 44WS)	1
6	111532	O-ring, overflow	1
7	112257	O-ring.....	1
8	111034	Drain body	1
9	111059	Tee 1-1/4" x 1-1/4" x 1-1/2" Galvanized.....	1
10	100579	Pipe, plug 1-1/4" Galvanized.....	1
*11	—	Pipe, rinse drain off (No longer available. Use Items 33-38 listed below)	—
12	314457	Overflow (7-1/2") (54 KB)	1
13	100736	Bolt (1/4-20 x 3/4" Hex hd)	1
14	100003	Nut, plain 1/4-20	1
15	100141	Nut, grip (1/4-20)	3
16	106028	Bolt (1/4-20 x 2-1/2" Hex hd)	1
17	107967	Nut grip (1/4-20 w/nylon insert)	1
18	100735	Bolt (1/4-20 x 5/8") Hex hd	4
19	106026	Washer, flat (1/4")	7
20	311496	Support, drain/Screen-R-L (44KB, KL44, 44WS)	1
21	311500	Support, drain/Screen-L-R (44KB, KL44, 44WS)	1
22	313303	Support, drain/Screen-R-L (54KB)	1
23	313305	Support, drain/Screen-L-R (54KB)	1
24	305164	Screen.	6
25	305163	Support, screen	2
26	107033	Washer, flat (#10)	6
27	104985	Nut, plain (10-32)	6
28	106486	Washer, lock (#10) Split	6
29	314362	Baffle, water, R-L (44KB).....	1
30	314363	Baffle, water, L-R (44KB)	1
31	315103	Baffle, water, R-L (54KB).....	1
32	315102	Baffle, water, L-R (54KB).....	1
	* NOTE:	Item 11 above is no longer available and is replaced by Items 33-38 listed below. All machines are now produced with Items 33-34 beginning with S/N 86681 above.	
33	100579	Pipe plug (1-1/4 NPT) Galvanized	1
34	111059	Tee (1-1/4" NPT x 1-1/4" NPT x 1-1/2" NPT)	1
35	101062	Nipple close 1 1/4" NPT galvanized	1
36	111655	Tee red 1 1/4" x 1 1/4" x 1".....	1
37	111656	Elbow street 1" NPT galvanized	1
38	204383	Nipple toe 1 x 2 galvanized.....	1

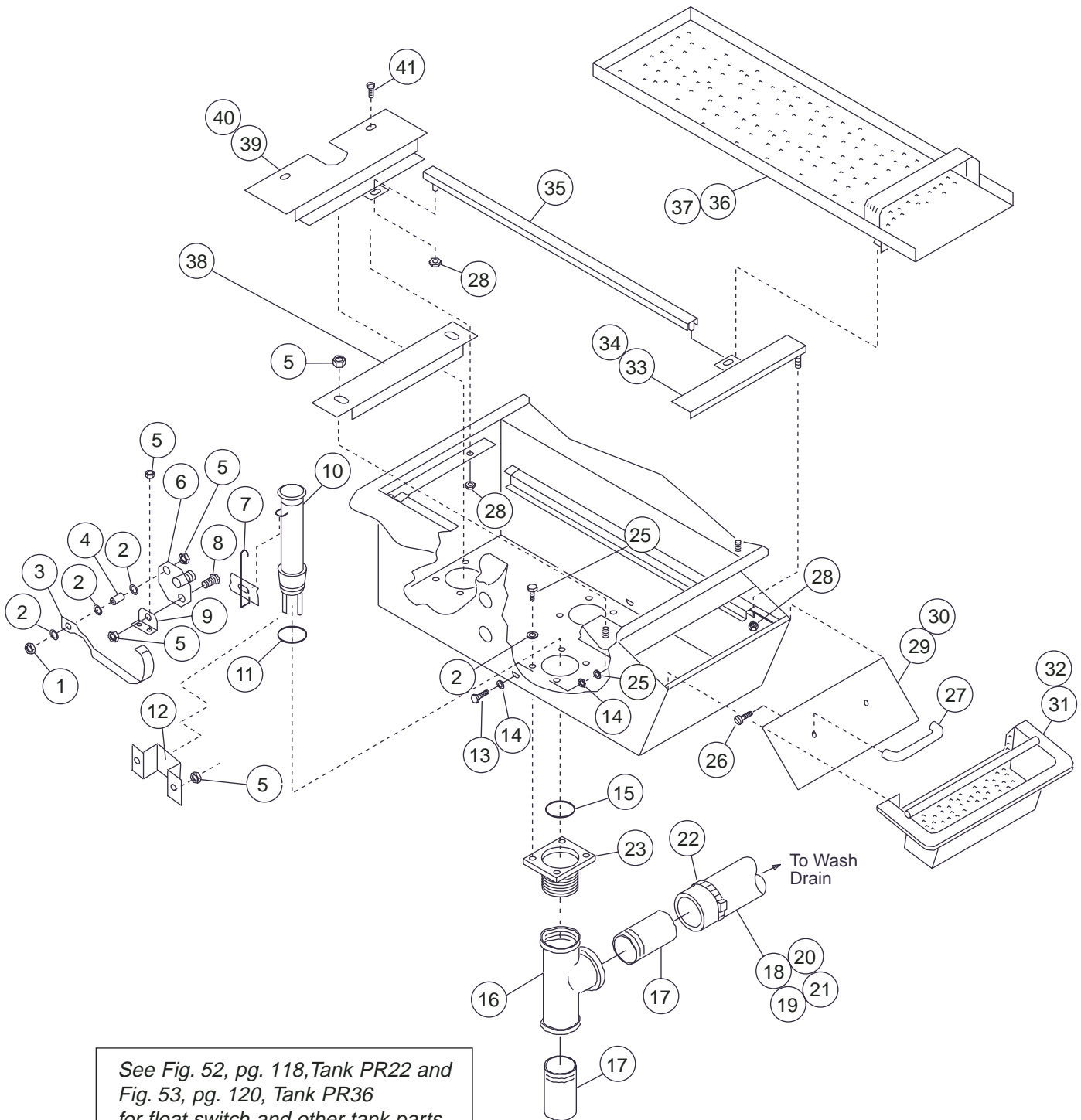


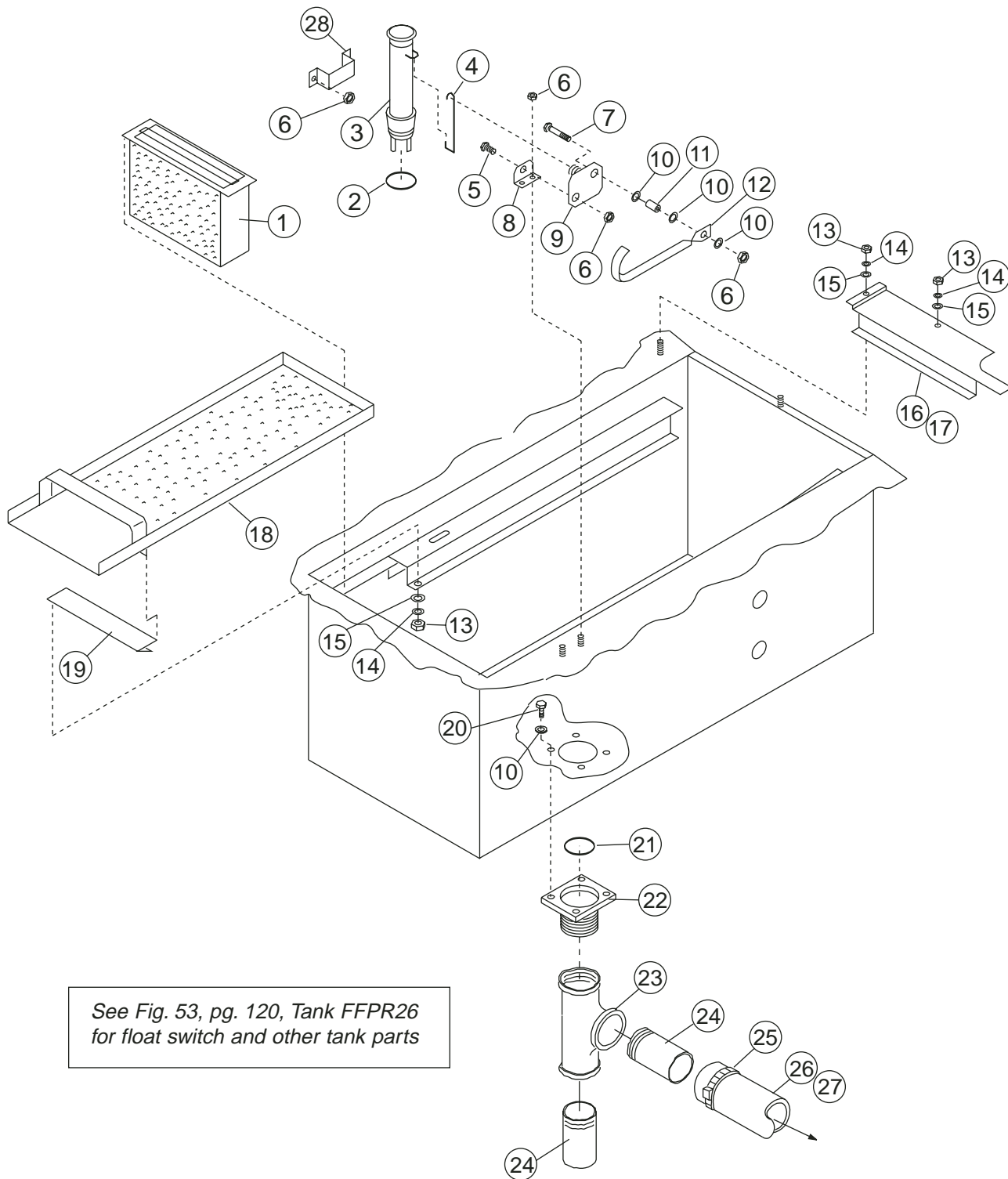
Figure 57 – Drain Unit and Screens (PR22, PR36)
 (For machines beginning with S/N 80677 thru S/N 84565)

**DRAIN UNIT AND SCREENS
(PR22, PR36)**

(For machines beginning with S/N 80677 thru 84565)

Fig. 57 Item No.	Part No.	Part Description	Qty.
1	100738	Bolt (1-4/20 x 1" Hex Hd).....	1
2	106026	Washer, flat 1/4-20.....	3
3	314112	Lever, drain	1
4	105186	Spacer (9-32 x 1/2")	1
5	100141	Nut, grip (1/4-20)	1
6	314118	Cam	1
7	314293	Rod, lift	1
8	100736	Bolt (1/4-20 x 3/4" Hex Hd)	1
9	314462	Bracket, cam	1
10	314117	Overflow (5-1/2") PR22, PR36	1
11	111532	O-ring, overflow.....	1
12	314294	Support, overflow	1
13	106314	Bolt (3/8-16 x 1/2" Hex Hd)	1
14	104618	Washer, flat 3/8"	2
15	112257	O-ring.....	1
16	111060	Tee, 1-1/2" x 1-1/4" x 1-1/4" Galvanized	1
17	111113	Nipple, TOE 1-1/4" NPT x 2" Glvanized	2
18	204979	Hose, drain (44KB, 44WS, KL44) (L-R)	1
19	204980	Hose, drain (54KB) (L-R)	1
20	204973	Hose, drain (44KB, 44WS, KL44) (R-L)	1
21	204977	Hose, drain (54KB) (R-L)	1
22	107340	Clamp, hose	2
23	111034	Drain body	1
24	100143	Nut, grip (3/8-16)	1
25	100735	Bolt (1/4-20 x 5/8" Hex hd)	4
26	100073	Screw (1/4-20 x 1/2" Truss Hd).....	2
27	108966	Handle, cover	1
28	100194	Nut, grip 10-32	6
29	305720	Cover, scrap basket (PR36)	1
30	305706	Cover, scrap basket (PR22)	1
31	311723	Basket, scrap basket (PR36)	1
32	311722	Basket, scrap basket (PR22)	1
33	313959	Support, screen front (PR36).....	1
34	312649	Support, screen front (PR22).....	1
35	306910	Support, screen center (PR36 Only)	1
36	305783	Screen (PR36)	2
37	305763	Screen (PR22)	2
38	315096	Support, drain lever (PR36).....	1
39	313811	Support, screen rear (PR36)	1
40	311628	Support, screen rear (PR22)	1
41	100097	Screw (10-32 x 1/2" Truss Head)	2

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See Fig. 53, pg. 120, Tank FFPR26
for float switch and other tank parts

Figure 58 – Drain Unit and Screens (FFPR26)
(For machines beginning with S/N 80677 thru S/N 84565)

DRAIN UNIT AND SCREENS (FFPR26)
(For machines beginning with S/N 80677 thru 84565)

Fig. 58 Item No.	Part No.	Part Description	Qty.
1	314771	Basket, scrap basket (FFPR26)	1
2	111532	O-ring, overflow.....	1
3	314117	Overflow (5-1/2")	1
4	314293	Rod, lift	1
5	100736	Bolt (1/4-20 x 3/4" Hex Hd)	1
6	100141	Nut, grip (1/4-20)	6
7	100738	Bolt (1-4/20 x 1" Hex Hd).....	1
8	314462	Bracket, cam	1
9	314118	Cam	1
10	106026	Washer, flat 1/4-20.....	7
11	105186	Spacer (9-32 x 1/2")	1
12	314112	Lever, drain	1
13	104985	Nut, plain (10-32)	4
14	106486	Washer, lock #10	4
15	107033	Washer, flat #10	4
16	314763	Support, screen rear (L-R).....	1
17	314764	Support, screen rear (R-L).....	1
18	305763	Screen (FFPR26)	2
19	312649	Support, screen front (FFPR26)	1
20	100735	Bolt (1/4-20 x 5/8" Hex Hd)	4
21	112257	O-ring.....	1
22	111034	Drain body	1
23	111060	Tee, 1-1/2" x 1-1/4" x 1-1/4" Galvanized	1
24	111113	Nipple, TOE 1-1/4" NPT x 2" Glvanized	2
25	107340	Clamp, hose	2
26	204971	Hose, drain (44KB, 44WS, KL44) (L-R)	1
27	204974	Hose, drain (54KB)	1
28	314294	Support, overflow	1

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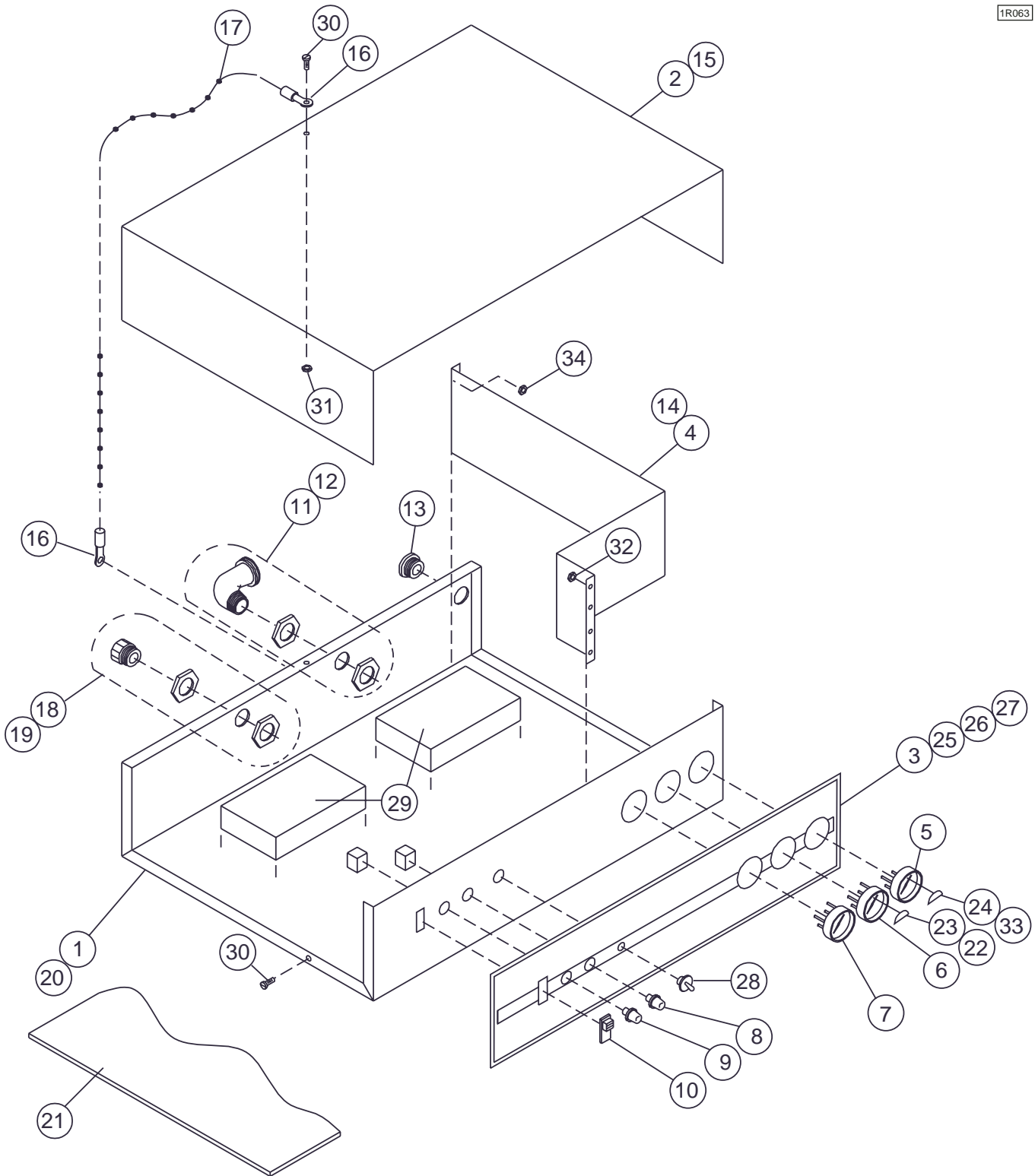


Figure 59 – Control Cabinet
 (For machines beginning with S/N 84000 and above)

CONTROL CABINET*(For machines beginning with S/N 84000 and above)*

Fig. 59 Item No.	Part No.	Part Description	Qty.
1	313410	Control box 26"(44KB, 54KB, KL44, 44KPRB, 54KPRB, KL66)..... (Prior to S/N 85303)	1
1	317186	Control box 36" (44KB, 54KB, KL44, 44KPRB, 54KPRB, KL66) 44WS, 66WS) (Beginning with S/N 85303 and above)	1
2	304863	Cover, control cabinet 26" (44KB, 54KB, KL44, 44KPRB, 54KPRB, KL66) (Prior to S/N 85303)	1
2	317405	Cover, control cabinet 36" (44KB, 54KB, KL44, 44KPRB, 54KPRB, KL66) (Beginning with S/N 85303 and above)	1
3	110866	26" Decal (44KB, 54KB, KL44) 44WS (Prior to S/N 85303)	1
4	305169	Separator (44KB, 54KB, KL44, 44KPRB, 54KPRB, KL66)	1
5	113622	Thermometer- 4' Gas Filled - Final Rinse (Replaces 108391)	1
6	107440	Thermometer- 8' - Wash	1
7	107440	Thermometer- 8' - Prewash	1
8	900726	Kit, Stop Pushbutton (Red)	1
9	900725	Kit, Start Pushbutton (Green)	1
10	110844	Power switch/Circuit breaker - 5A (Prior to S/N 87001)	1
—	111980	Power switch/Circuit Breaker- 5A (Beginning with S/N 87001)	
11	110920	Connector (1" x 90°)	1
12	100882	Connector (1-1/4" x 90°) (44WS, 66WS)	1
13	107964	Bushing	1
14	305300	Separator (44WS, 66WS)	1
15	304864	Cover, control cabinet (44WS) (Prior to S/N 85303)	1
16	107368	Coupling, chain end	2
17	107367	Chain, bead	1 ft.
18	110919	Connector (1")	1
19	100881	Connector (1-1/4") (44WS, 66WS).....	1
20	313409	Control box 30" (44WS, 66WS) (Prior to S/N 85303)	1
21	109056	Insulation	1
22	112091	Label - Thermometer Overlay - Wash 120°F (KL44)	1
23	112087	Label - Thermometer Overlay - Wash 150° (44KB, 44WS, 54KB)	1
24	113644	Label -Thermometer Overlay - Final Rinse 180°F (44KB,44WS,54KB)	1
25	111340	30" Decal (44WS)(Prior to S/N 85303)	1
—	111593	36" Decal (44WS)(Beginning with S/N 85303 and above)	1
26	110867	30" Decal (44KPRB, 54KPRB, KL66)(Prior to S/N 85303)	1
—	111594	36" Decal (44KPRB, 54KPRB, KL66, 44WS, 66WS)	1
		(Beginning with S/N 85303 and above)	
27	111341	30" Decal (66WS)(Prior to S/N 85303)	1
28	107351	Switch, toggle DPOT (Blower, Dryer)	1
29	111357	Pad,vibration damping.....	2
30	100097	Screw (10-32 x 1/2") Truss hd	4
31	100194	Nut, grip (10-32)	2
32	107966	Nut, grip (10-32) w/nylon insert	2
33	112092	Label, thermometer overlay - Final Rinse (KL44)	1
—	900725	Kit, Start pushbutton (Green) (Kit includes: Qty. 1 each P/N 111614, green pushbutton and P/N 111617, Contact Block N.O.)	
—	900726	Kit, Stop pushbutton (Red) (Kit includes: Qty. 1 each P/N 111615, red pushbutton and P/N 111616, Contact Block N.C.)	

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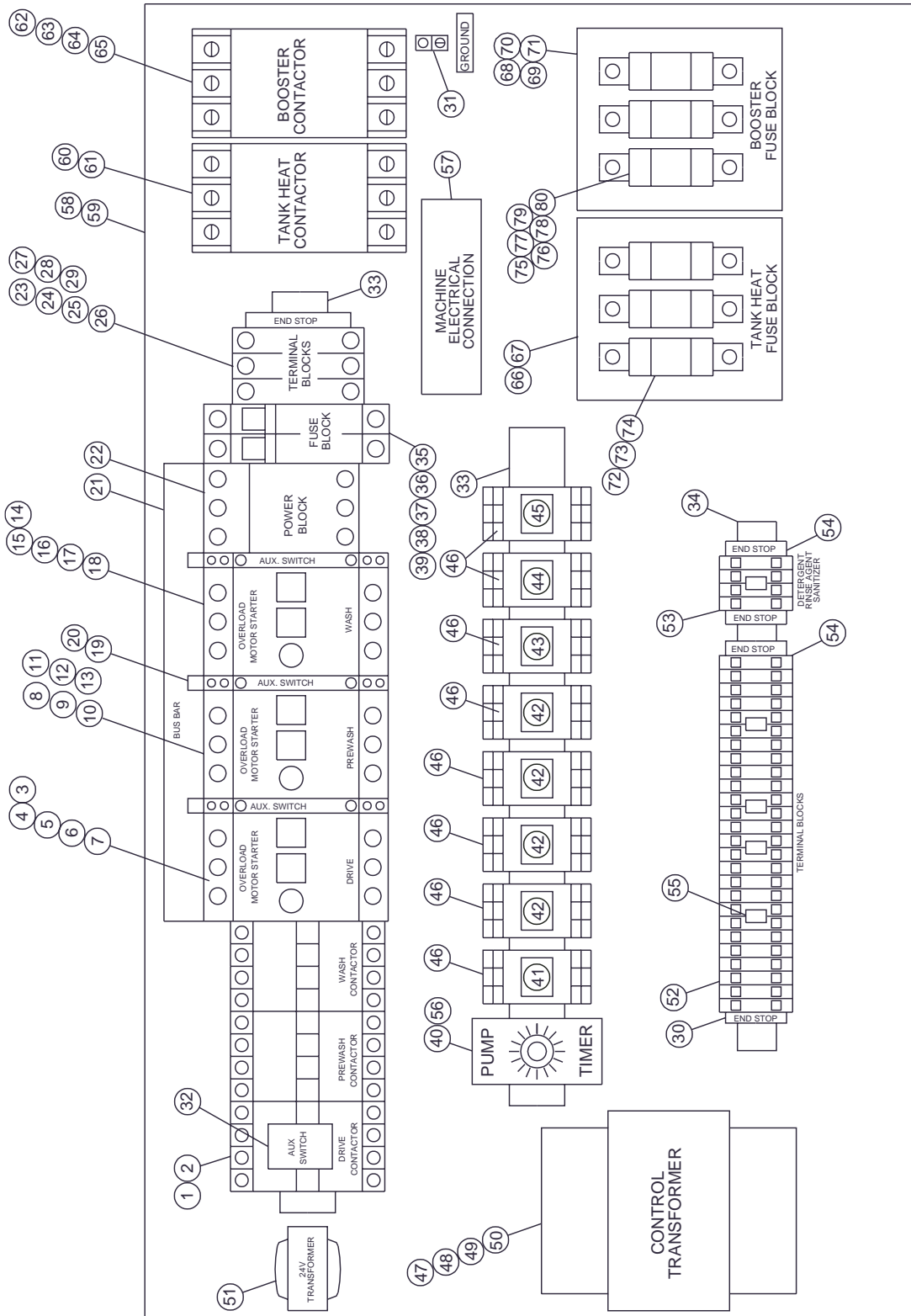


Figure 60 – Control Panel
 (For machines beginning with S/N 84000 thru S/N 85261)

CONTROL PANEL*(For machines beginning with S/N 84000 thru S/N 85261)*

Fig. 60 Item No.	Part No.	Part Description	Qty.
1	108122	Contactora (Motor) 12 Amp, 3 Pole w/Aux Switch (44KB, 54KB, KL44,44WS)	2
2	108122	Contactora (Motor) 12 Amp, 3 Pole w/Aux Switch (44KPRB, 54KPRB, KL66, 66WS)	3
3	110805	Overload, Motor - 1/4HP Drive (208-240VAPH)	1
4	110804	Overload, Motor - 1/4HP Drive (208-240V/3PH).....	1
5	110802	Overload, Motor - 1/4HP Drive (380V,415V/3PH).....	1
6	110802	Overload, Motor - 1/4HP Drive (440-480V/3PH).....	1
7	110801	Overload, Motor - 1/4HP Drive (575V/3PH)	1
8	110807	Overload, Motor - 1HP Prewash (208-240VAPH)	1
9	110806	Overload, Motor - 1HP Prewash (208V/3PH)	1
10	110805	Overload, Motor - 1HP Prewash (220-240V/3PH)	1
11	110804	Overload, Motor - 1HP Prewash (380V,415V/3PH)	1
12	110804	Overload, Motor - 1HP Prewash (440-480V/3PH)	1
13	110804	Overload, Motor - 1HP Prewash (575V/3PH)	1
14	110809	Overload, Motor - 2HP Wash (208-240V/1PH).....	1
15	110807	Overload, Motor - 2HP Wash (208-240V/3PH)	1
16	110806	Overload, Motor - 2HP Wash (380V,415V/3PH)	1
17	110805	Overload, Motor - 2HP Wash (440-480V/3PH)	1
18	110805	Overload, Motor - 2HP Wash (575V 3PH)	1
19	110811	Auxillary contact (44KB, 54KB, KL44, 44WS)	2
20	110811	Auxillary contact (44KPRB, 54KPRB, KL66, 66WS)	3
21	110812	Bus bar - 3 Pole	1
22	110813	Block, bus bar	1
23	110971	Terminal block (208-240V1PH)	2
24	110912	Terminal block (208-240V/3PH).....	3
25	111229	Terminal block (44WS, 66WS) (208-240V/3PH).....	3
26	110912	Terminal block (380-415V/3PH).....	3
27	110912	Terminal block (440-480V/3PH) (575V/3PH)	3
28	110912	Terminal block (44WS, 66WS) (480V/3PH)	3
30	110900	End stop	5
31	103309	Wire lug, ground	1
32	108130	Auxillary switch (Drive Contactora) KL44, KL66	1
33	110849	Din rail - 16-1/2" (specify length 16 1/2")	2
34	110849	Din rail - 12" (specify length 12").....	1
35	111153	Fuse block.....	2
36	111823	Fuse (208-240V) (ATDR-6)	2
37	111821	Fuse (380V,415V) (ATDR-3)	2
38	111821	Fuse (440-480V) (ATDR-3)	2
39	111115	Fuse (575V) (ATMR-2).....	2
40	112351	Timer 0-6 Min. Off Delay	1
41	111068	Relay- 120V	1
42	111067	Relay - 24V (44KB, 54KB, KL44, 44WS)	1
43	111067	Relay - 24V (44KPRB, 54KPRB, KL66, 66WS)	5

CONTROL PANEL (Cont.)*(For machines prior to S/N 85261 thru 84000)*

Fig. 60 Item No.	Part No.	Part Description	Qty.
44	111067	Relay-24V (Table Limit Switch)	1
45	111068	Relay-120V (Booster-Electric)	1
46	111036	Socket, relay (1 Per Relay)	A/R
47	107091	Transformer, control (500VA) (208-240V)	1
48	107091	Transformer, control (500VA) (440-480V)	1
49	109148	Transformer, control (500VA) (380-415V)	1
50	111046	Transformer, control (500VA) (575V)	1
51	111277	Transformer, control (120V to 24V)	1
52	110862	Terminal block	20
53	110862	Terminal block (Dispenser connections)	4
54	110863	End plate	4
55	110901	Jumper	5
56	112352	Socket, timer	1
57	108615	Data plate, machine electrical connection	1
58	314103	Inner panel (Prior to S/N 85303).....	1
—	317185	Inner panel (Beginning with S/N 85303 and above).....	1
59	314073	Inner panel (44WS, 66WS) (Prior to S/N 85303).....	1
—	317185	Inner panel (44WS, 66WS) (Beginning with S/N 85303 and above)	1
60	111827	Contactor (Heat-Electric) 60Amp 3 Pole (208-240V)(44WS, 44/54KPRB)	1
61	111827	Contactor (Heat-Electric) 60Amp 3 Pole (440-480V) (575V)	1
62	111827	Contactor (Booster-Electric 40°) 60Amp 3 Pole (208-240V).....	1
63	111827	Contactor (Booster-Electric 40°) 60Amp 3 Pole (440-480V) (575V) ...	1
64	111231	Contactor (Booster-Electric 70°) 75Amp 3 Pole(208-240V)(44WS,66WS)	1
65	111827	Contactor (Booster-Electric 70°) 60Amp 3 Pole (440-480V)(575V)	1
66	108275	Fuse block (Heat-Electric) (208-240V) 44WS, 66WS	1
67	106925	Fuse block (Heat-Electric) (440-480V)(575V) 44WS, 66WS	1
68	108275	Fuse block (Booster-Electric 40°) (208-240V) 44WS, 66WS	1
69	106925	Fuse block (Booster-Electric 40°) (440-480V) (575V) 44WS, 66WS ..	1
70	108424	Fuse block (Booster-Electric 70°) (208-240V) 44WS, 66WS	1
71	180171	Fuse block (Booster-Electric 70°) (440-480V) (575V) 44WS, 66WS ..	1
72	111230	Fuse (OT-60) (Heat-Electric) (208-220V) 44WS, 66WS	3
73	111240	Fuse (FT-50) (Heat Electric) (220-240V) 44WS, 66WS.....	3
74	108517	Fuse (ATMR-25) (Heat-Electric) (440-480V) 44WS, 66WS	3
—	100917	Fuse (ATMR-15) (Heat-Electric) (575V)	3
75	111230	Fuse (OT-60) (Booster-Electric 40°) (208-220V) 44WS, 66WS	3
76	111240	Fuse (OT-50) (Booster-Electric 40°) (220-240V) 44WS, 66WS	3
77	108517	Fuse (ATMR-25) (Booster-Electric 40°) (440-480V) 44WS, 66WS	3
—	100922	Fuse (ATMR-20) (Booster-Electric 40°) (575V) 44WS, 66WS	3
78	108448	Fuse (JJN-90) (Booster-Electric 70°) (208-220V) 44WS, 66WS.	3
79	180059	Fuse (A3T80) (Booster-Electric 70°) (220-240V) 44WS, 66WS.	3
80	180173	Fuse (A4J40) (Booster-Electric 70°) (440-480V) 44WS, 66WS	3
—	180172	Fuse (A4J35) (Booster-Electric 70°) (575V) 44WS, 66WS	3

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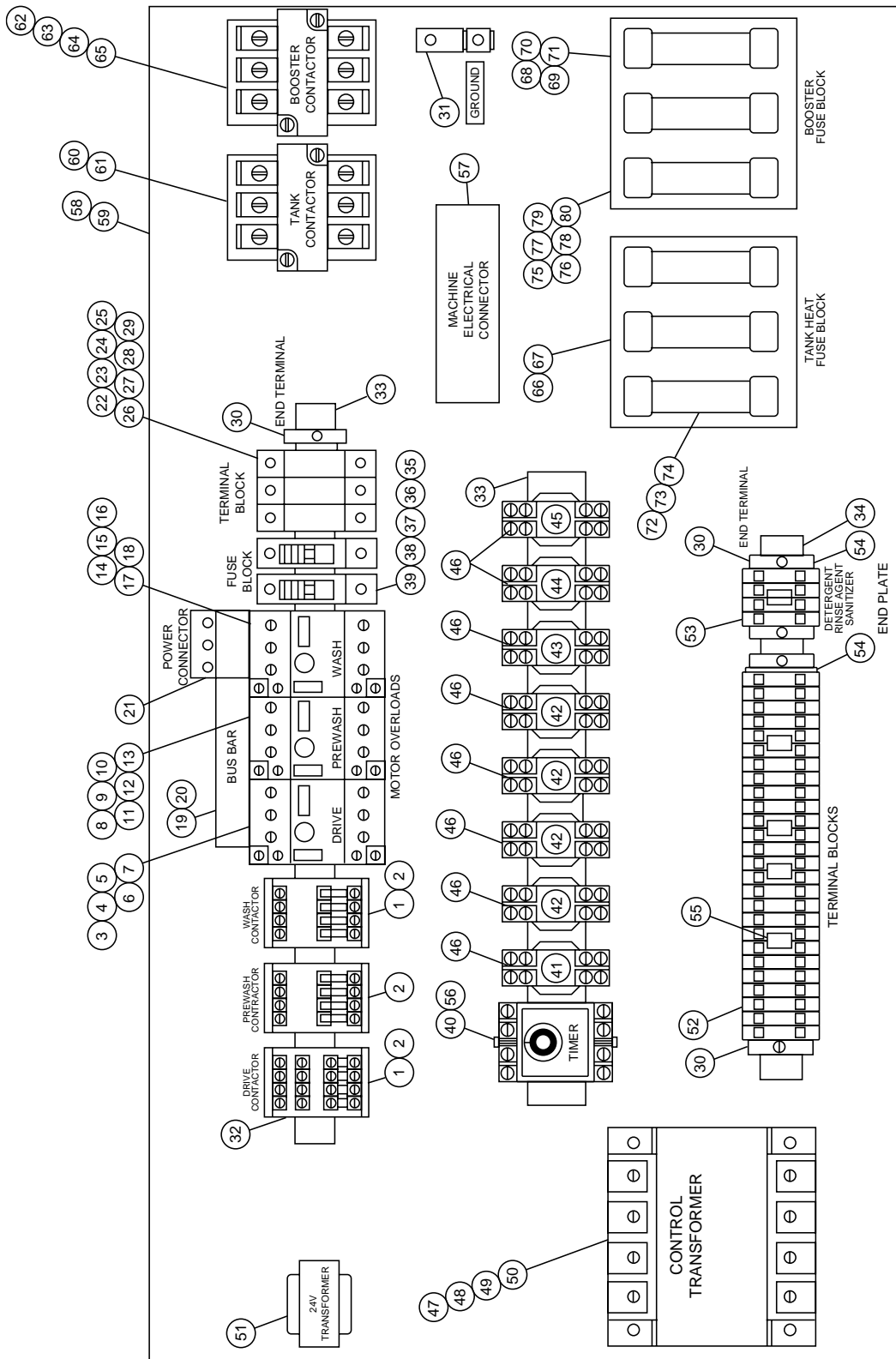


Figure 61 – Control Panel
 (For machines beginning with S/N 85261 thru 88502)

CONTROL PANEL*(For machines beginning with S/N 85261 thru 88502)*

Fig. 61 Item No.	Part No.	Part Description	Qty.
1	108122	Contactor (Motor) 12 Amp, 3 Pole w/Aux Switch (44-54KB, KL44, 44WS).....	2
2	108122	Contactor (Motor) 12 Amp, 3 Pole w/Aux Switch (44-54KPRB, KL66, 66WS)	3
3	110805	Starter Mtr OL GV2-M08 w/Aux-1/4 HP Drive (208-240V/IPH).....	1
4	110803	Starter Mtr OL GV2-M06 w/Aux-1/4 HP Drive (208-240V/3PH)	1
5	110802	Starter Mtr OL GV2-M05 w/Aux-1/4 HP Drive (380-415V/3PH)	1
6	110802	Starter Mtr OL GV2-M05 w/Aux-1/4 HP Drive (440-480V/3PH)	1
7	110801	Starter Mtr OL GV2-M04 w/Aux-1/4 HP Drive (575V/3PH)	1
8	110807	Starter Mtr OL GV2-M14 w/Aux-1HP Prewash (208-240V//IPH)	1
9	110805	Starter Mtr OL GV2-M08 w/Aux-1HP Prewash (208V/IPH)	1
10	110805	Starter Mtr OL GV2-M08 w/Aux-1HP Prewash (220-240V/3PH)	1
11	110804	Starter Mtr OL GV2-M07 w/Aux-1HP Prewash (380-415V/3PH)	1
12	110804	Starter Mtr OL GV2-M07 w/Aux-1HP Prewash (440-480V/3PH)	1
13	110803	Starter Mtr OL GV2-M06 w/Aux-1HP Prewash (575V/3PH)	1
14	111630	Overload, Motor-2HP Wash (208-240V/ IPH)	1
15	110806	Starter Mtr OL GV2-M10 w/Aux-2HP Wash (208-240V/3PH).....	1
16	110805	Starter Mtr OL GV2-M08 w/Aux-2HP Wash (380-415V/3PH).....	1
17	110805	Starter Mtr OL GV2-M08 w/Aux-2HP Wash (440-480V/3PH).....	1
18	110804	Starter Mtr OL GV2-M07 w/Aux-2HP Wash (575V/3PH)	1
19	111633	Bus bar 2 Unit (44KB, 54KB, KL44, 44WS)	1
20	111671	Bus bar 3 Unit (44KPRB, 54KPRB, KL66, 66WS)	1
21	111636	Power connector, 3 pole.....	1
22	110971	Terminal block (208-240V/IPH) 44WS, 66WS	2
23	110912	Terminal block (208-240V/IPH) 44-54KB, 44-54KPRB, KL44, KL66.....	2
24	110971	Terminal block (208-220V/3PH) 44WS, 66WS, 70°Rise	3
25	110912	Terminal block (208-240V/3PH) 44WS, 66WS, 40°Rise	3
26	110912	Terminal block (208-240V/3PH).....	3
27	110912	Terminal block (380-415V/3PH).....	3
28	110912	Terminal block (440-480V/3PH).....	3
29	110912	Terminal block (575V/3PH)	3
30	110900	End stop	5
31	103309	Wire lug-ground.....	1
32	111639	Auxiliary switch (Drive contactor) KL44, KL66	1
33	110849	Din Rail 16-1/2" (specify length 16 1/2").....	2
34	110849	Din Rail 12" (specify length 12")	1
35	111153	Fuse block.....	2
36	100906	Fuse (208-240V)	2
37	100906	Fuse (380-415V)	2
38	100906	Fuse (440-480V)	2
39	100906	Fuse (575V)	2
40	112351	Timer 0-6 Min. Off Delay 112351	1
41	111068	Relay-120V	1
42	111067	Relay-24V (44KB, 54KB, KL44, 44WS)	4
43	111067	Relay 24V (44KPRB, 54KPRB, KL66, 66WS)	5
44	111067	Relay-24V (Table limit switch)	1
45	111068	Relay-120V (Booster-Electric)	1

CONTROL PANEL (Cont.)*(For machines beginning with S/N 85261 thru 88502)*

Fig. 61 Item No.	Part No.	Part Description	Qty.
46	111036	Socket, relay (1 Per Relay)	A/R
47	107091	Transformer, Control (500VA) (208-240V)	1
48	107091	Transformer, Control (500VA) (440-480V)	1
49	109148	Transformer, Control (500VA) (380-415V)	1
50	111046	Transformer, Control (500VA) (575V)	1
51	111277	Transformer, Control (120V to 24V)	1
52	110862	Terminal block	20
53	110862	Terminal block (Dispenser connections)	4
54	110863	End plate	4
55	110901	Jumper	5
56	112352	Socket, timer	1
57	108615	Data plate, machine electrical connection	1
58	314103	Inner panel 317185 44/54KPRB	1
59	314073	Inner panel (44WS, 66WS) 317185	1
60	111827	Contactor (Heat-Electric) 60Amp 3 Pole (208-240V)	1
61	111827	Contactor (Heat-Electric) 50Amp 3 Pole (440-480V) (575V)	1
62	111827	Contactor (Booster-Electric 40°) 60Amp 3 Pole (208-240V) 44KB/WS, 44/54KPRB	1
63	111827	Contactor (Booster-Electric 40°) 50Amp 3 Pole (440-480V) (575V)	1
64	111231	Contactor (Booster-Electric 70°) 75Amp 3 Pole (208-240V)(44WS,66WS)	1
65	105514	Contactor (Booster-Electric 70°) 50Amp 3 Pole (440-480V) (575V)	1
66	108275	Fuse block 250V/60A (Heat-Electric) (208-240V) 44WS, 66WS.....	1
67	106925	Fuse block 600V/30A (Heat-Electric) (440-480V) (575V) 44WS, 66WS..	1
68	108275	Fuse block 250V/60A (Booster-Electric 40°) (208-240V) 44WS, 66WS	1
69	106925	Fuse block 600V/30A (Booster-Electric 40°) (440-480V) (575V) 44WS, 66WS	1
70	108424	Fuse block 600V/100A (Booster-Electric 70°) (208-240V) 44WS, 66WS	1
71	180171	Fuse block 600V/60A (Booster-Electric 70°) (440-480V) (575V) 44WS, 66WS	1
72	111230	Fuse (OT-60) (Heat-Electric) (208-220V) 44WS, 66WS	3
73	111240	Fuse (FT-50) (Heat Electric) (220-240V) 44WS, 66WS.....	3
74	108517	Fuse (ATMR-25) (Heat-Electric) (440-480V) 44WS, 66WS	3
—	100922	Fuse (ATMR-20) (Heat-Electric) (575V) 44WS, 66WS.....	3
75	111230	Fuse (OT-60) (Booster-Electric 40°) (208-220V) 44WS, 66WS	3
76	111240	Fuse (FT-50) (Booster-Electric 40°) (220-240V) 44WS, 66WS	3
—	180174	Fuse (A4J-45) (Booster-Electric 40°) (208-220V) 44KPRB	3
77	108517	Fuse (ATMR-25) (Booster-Electric 40°) (440-480V) 44WS, 66WS	3
—	100922	Fuse (ATMR-20) (Booster-Electric 40°) (575V) 44WS, 66WS	3
78	108448	Fuse (JJN-90) (Booster-Electric 70°) (208-220V) 44WS, 66WS.	3
79	180059	Fuse (A3T-80) (Booster-Electric 70°) (220-240V) 44WS, 66WS.	3
80	180173	Fuse (JKS-40) (Booster-Electric 70°) (440-480V) 44WS, 66WS.	3
—	180172	Fuse (JKS-35) (Booster-Electric 70°) (575V) 44WS, 66WS	3

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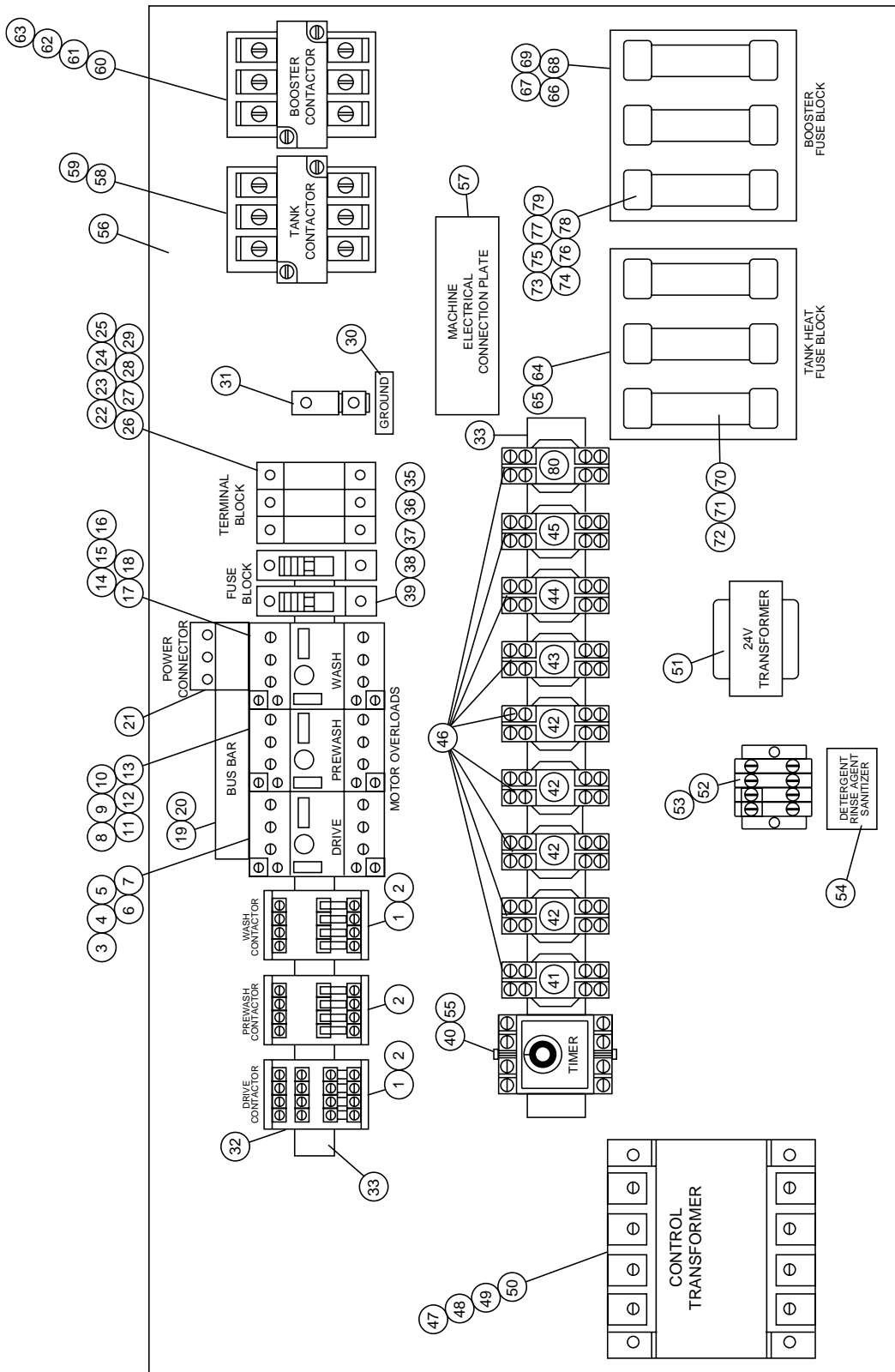


Figure 62 – Control Panel
 (For machines beginning with S/N 88503 and above)

CONTROL PANEL*(For machines beginning with S/N 88503 and above)*

Fig. 62 Item No.	Part No.	Part Description	Qty.
1	108122	Contactor (Motor) 12 Amp, 3 Pole w/Aux Switch (44-54KB, KL44, 44WS).....	2
2	108122	Contactor (Motor) 12 Amp, 3 Pole w/Aux Switch (44-54KPRB, KL66, 66WS)	3
3	110805	Starter Mtr OL GV2-M08 w/Aux-1/4 HP Drive (208-240V/1PH)	1
4	110803	Starter Mtr OL GV2-M06 w/Aux-1/4 HP Drive (208-240V/3PH)	1
5	110802	Starter Mtr OL GV2-M05 w/Aux-1/4 HP Drive (380-415V/3PH)	1
6	110802	Starter Mtr OL GV2-M05 w/Aux-1/4 HP Drive (440-480V/3PH)	1
7	110801	Starter Mtr OL GV2-M04 w/Aux-1/4 HP Drive (575V/3PH)	1
8	110807	Starter Mtr OL GV2-M14 w/Aux-1HP Prewash (208-240V//1PH)	1
9	110805	Starter Mtr OL GV2-M08 w/Aux-1HP Prewash (208V/1PH)	1
10	110805	Starter Mtr OL GV2-M08 w/Aux-1HP Prewash (220-240V/3PH)	1
11	110804	Starter Mtr OL GV2-M07 w/Aux-1HP Prewash (380-415V/3PH)	1
12	110804	Starter Mtr OL GV2-M07 w/Aux-1HP Prewash (440-480V/3PH)	1
13	110803	Starter Mtr OL GV2-M06 w/Aux-1HP Prewash (575V/3PH)	1
14	111630	Overload, Motor -2HP Wash (208-240V/ 1PH).....	1
15	112691	Overload, Motor -2HP Wash (208-240V/3PH)	1
16	111627	Overload, Motor -2HP Wash (380-415V/3PH)	1
17	111627	Overload, Motor -2HP Wash (440-480V/3PH)	1
18	112692	Overload, Motor -2HP Wash (575V/3PH)	1
19	111633	Bus bar 2 Unit (44KB, 54KB, KL44, 44WS)	1
20	111671	Bus bar 3 Unit (44KPRB, 54KPRB, KL66, 66WS)	1
21	111636	Power connector, 3 pole.....	1
22	111833	Terminal block (208-240V/1PH) 44WS, 66WS	1
23	111833	Terminal block (208-240V/1PH) 44-54KB, 44-54KPRB, KL44, KL66 ..	1
24	111833	Terminal block (208-220V/3PH) 44WS, 66WS, 70° Rise	1
25	111833	Terminal block (208-240V/3PH) 44WS, 66WS, 40° Rise	1
26	111833	Terminal block (208-240V/3PH)	1
27	111833	Terminal block (380-415V/3PH).....	1
28	111833	Terminal block (440-480V/3PH).....	1
29	111833	Terminal block (575V/3PH)	1
30	104873	Label, ground.....	1
31	103309	Wire lug-ground.....	1
32	111639	Auxiliary switch (Drive contactor) KL44, KL66	1
33	110849	Din Rail 16-1/2" (specify length 16 1/2")	2
34	110849	Din Rail 12" (specify length 12")	1
35	111153	Fuse block.....	2
36	111823	Fuse (ATDR-6) (208-240V)	2
37	111822	Fuse (ATDR-5) (380-415V)	2
38	111821	Fuse (ATDR-3) (440-480V)	2
39	111821	Fuse (ATDR-3) (575V)	2
40	112351	Timer 0-6 Min. Off Delay	1
41	111068	Relay-120V	1
42	111067	Relay-24V (44KB, 54KB, KL44, 44WS)	4
43	111067	Relay 24V (44KPRB, 54KPRB, KL66, 66WS)	5
44	111067	Relay-24V (Table limit switch)	1
45	111068	Relay-120V (Booster-Electric)	1

CONTROL PANEL (Cont.)*(For machines beginning with S/N 88503 and above)*

Fig. 62 Item No.	Part No.	Part Description	Qty.
46	111036	Socket, relay (1 Per Relay)	A/R
47	107091	Transformer, Control (500VA) (208-240V)	1
48	107091	Transformer, Control (500VA) (440-480V)	1
49	109148	Transformer, Control (500VA) (380-415V)	1
50	111046	Transformer, Control (500VA) (575V)	1
51	111277	Transformer, Control (120V to 24V)	1
52	107171	Terminal block (4 pole)	1
53	112279	Jumper, shorting	1
54	112296	Label, chemical connections	1
55	112352	Socket, timer	1
56	317185	Inner panel 44/54KPRB,44WS, 66WS	1
57	108615	Data plate, machine electrical connection	1
58	111827	Contactor (Heat-Electric) 60Amp 3 Pole (208-240V) 44/54KPRB	1
59	111827	Contactor (Heat-Electric) 50Amp 3 Pole (440-480V) (575V)	1
60	111827	Contactor (Booster-Electric 40°) 60Amp 3 Pole (208-240V) 44WS, 44KB, 44/54KPRB	1
61	111827	Contactor (Booster-Electric 40°) 50Amp 3 Pole (440-480V) (575V)	1
62	111231	Contactor (Booster-Electric 70°) 75Amp 3 Pole (208-240V)(44WS,66WS)	1
63	111827	Contactor (Booster-Electric 70°) 60Amp 3 Pole (440-480V) (575V)	1
64	108275	Fuse block (Heat-Electric) (208-240V) 44WS, 66WS.....	1
65	106925	Fuse block (Heat-Electric) (440-480V) (575V) 44WS, 66WS.....	1
66	108275	Fuse block (Booster-Electric 40°) (208-240V) 44WS, 66WS	1
67	106925	Fuse block (Booster-Electric 40°) (440-480V) (575V) 44WS, 66WS ..	1
68	108424	Fuse block (Booster-Electric 70°) (208-240V) 44WS, 66WS	1
69	180171	Fuse block (Booster-Electric 70°) (440-480V) (575V) 44WS, 66WS ..	1
70	111230	Fuse (OT-60) (Heat-Electric) (208-220V) 44WS, 66WS	3
71	111240	Fuse (OT-50) (Heat Electric) (220-240V) 44WS, 66WS	3
72	108517	Fuse (ATMR-25) (Heat-Electric) (440-480V) 44WS, 66WS	3
—	100922	Fuse (ATMR-20) (Heat-Electric) (575V) 44WS, 66WS	3
73	111230	Fuse (OT-60) (Booster-Electric 40°) (208-220V) 44WS, 66WS	3
74	111240	Fuse (OT-50) (Booster-Electric 40°) (220-240V) 44WS, 66WS	3
—	100922	Fuse (ATMR-20) (Booster-Electric 40°) (575V) 44WS, 66WS	3
76	108448	Fuse (JN-90) (Booster-Electric 70°) (208-220V) 44WS, 66WS.....	3
77	180059	Fuse (A3T80)(Booster-Electric 70°) (220-240V) 44WS, 66WS.....	3
78	180173	Fuse (A4J40) (Booster-Electric 70°) (440-480V) 44WS, 66WS.....	3
—	180172	Fuse (A4J35) (Booster-Electric 70°) (575V) 44WS, 66WS.	3
79	180174	Fuse (A4J45) (Booster-Electric 40°) (208-220V) 44KPRB	3
80	111068	Relay-120V (Booster Hold-in)	1
		Beginning w/serial no. R1649 and above	

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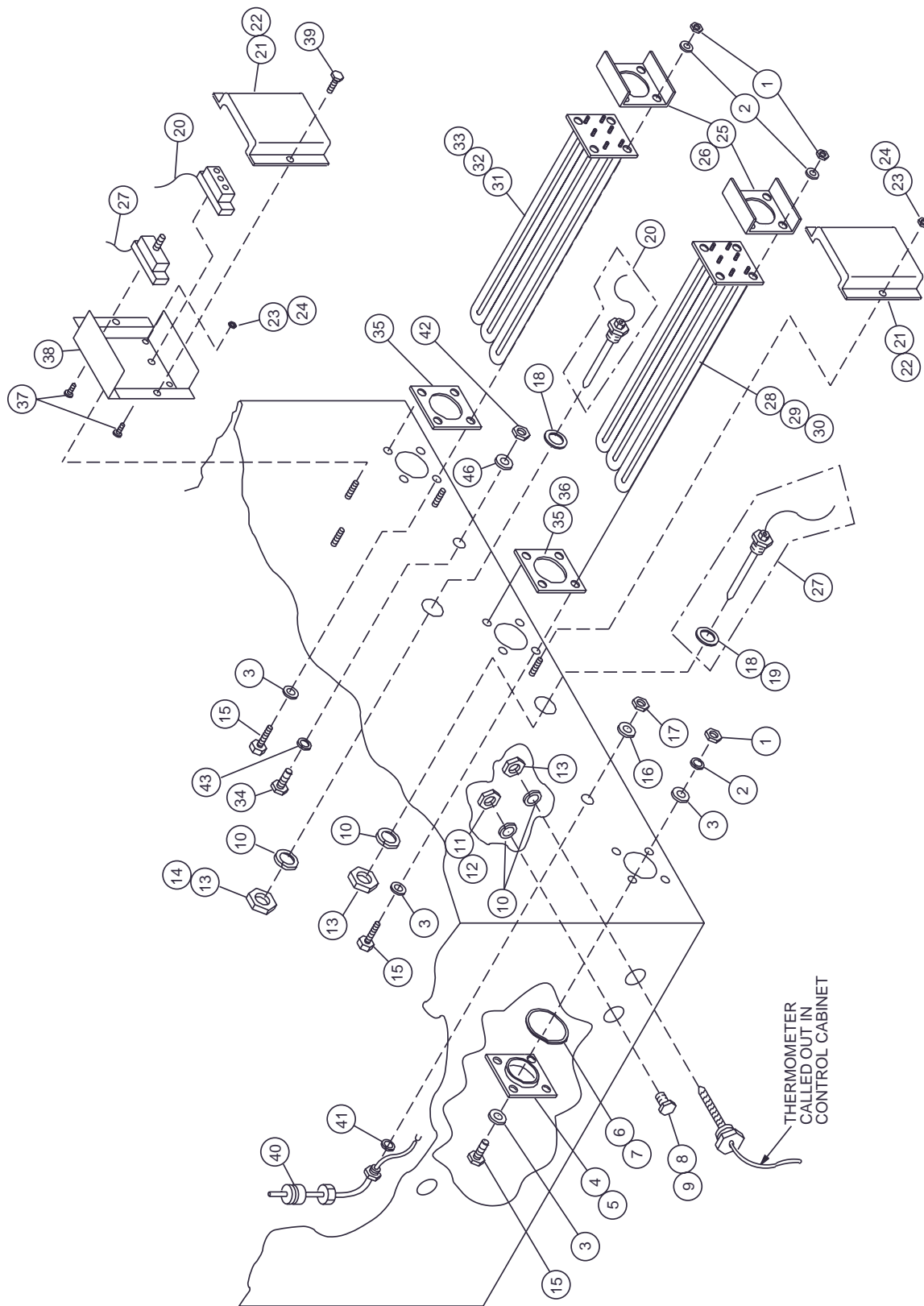


Figure 63 – Tank Heat (Electric, R-L Shown)

TANK HEAT (ELECTRIC, R-L SHOWN)

Fig. 63 Item No.	Part No.	Part Description	Qty.
1	100154	Nut, plain (5/16-18).....	12
2	106013	Washer, lock (5/16") Split	12
3	102376	Washer, flat (5/16")	16
4	109683	Flange, blockoff (44KB, 44WS)	1
5	109683	Flange, blockoff (KL44)	2
6	112257	O-ring (44KB, 44WS)	1
7	112257	O-ring (KL44)	2
8	108418	Plug (1/2 NPT) Plastic (44KB, 54KB, 44WS)	5
9	108418	Plug (1/2 NPT) Plastic (KL44)	6
10	109034	Gasket (1/2 NPT) Plug	8
11	108417	Nut (1/2 NPT) Plug (44KB, 54KB, 44WS)	5
12	108417	Nut (1/2 NPT) Plug (KL44)	6
13	100547	Locknut (1 1/2 NPT) SST (44KB, 54KB, 44WS)	3
14	100547	Locknut (1/2 NPT) SST (KL44)	2
15	100740	Bolt (5/16-18 x 1") Hex hd	12
16	107589	Washer, lock (1/2")	1
17	104584	Nut, plain (1/2-13)	1
18	201041	Washer (7/8" ID x 1/8") (44KB, 54KB, 44WS)	3
19	201041	Washer (7/8" ID x 1/8") (KL44)	2
20	109069	Thermostat w/capillary	1
21	109682	Cover, heater (44KB, 54KB, 44WS)	3
22	109682	Cover, heater (KL44)	1
23	107966	Nut, grip (10-32) w/nylon insert (44KB, 54KB, 44WS)	2
24	107966	Nut, grip (10-32) w/nylon insert (KL44)	4
25	308949	Junction box, heater (44KB,54KB,44WS)	2
26	308949	Junction box, heater (KL44)	1
27	110561	Thermostat (High-Limit) w/capillary	1
28	109751	Heater Element-10KW (208V)	1
29	107844	Heater Element-10KW (240V)	1
30	107846	Heater Element-10KW (480V)	1
—	111120	Heater Element-10KW (575V)	1
31	107839	Heater Element-5KW (208V) (44KB, 54KB, 44WS)	1
32	107840	Heater Element-5KW (240V) (44KB, 54KB, 44WS).....	1
33	107842	Heater Element-5KW (480V) (44KB, 54KB, 44WS).....	1
—	111123	Heater Element-5KW (575V) (44KB, 54KB, 44WS).....	1
34	106314	Bolt (3/8-16 x 1/2") Hex hd	1
35	108345	Gasket, heater (44KB, 54KB, 44WS)	2
36	108345	Gasket, heater (KL44)	1
37	100100	Screw (8-32 x 1/4") Round hd	2
38	314102	Box, dual thermostat	1
39	100097	Screw (10-32 x 1/2") Truss hd	2
40	110854	Switch, float	1
41	110750	Gasket, float switch	1
—	111151	C-clip (2 per float switch)	2
42	100143	Nut, grip (3/8-16)	1
43	104618	Washer, flat (3/8")	2

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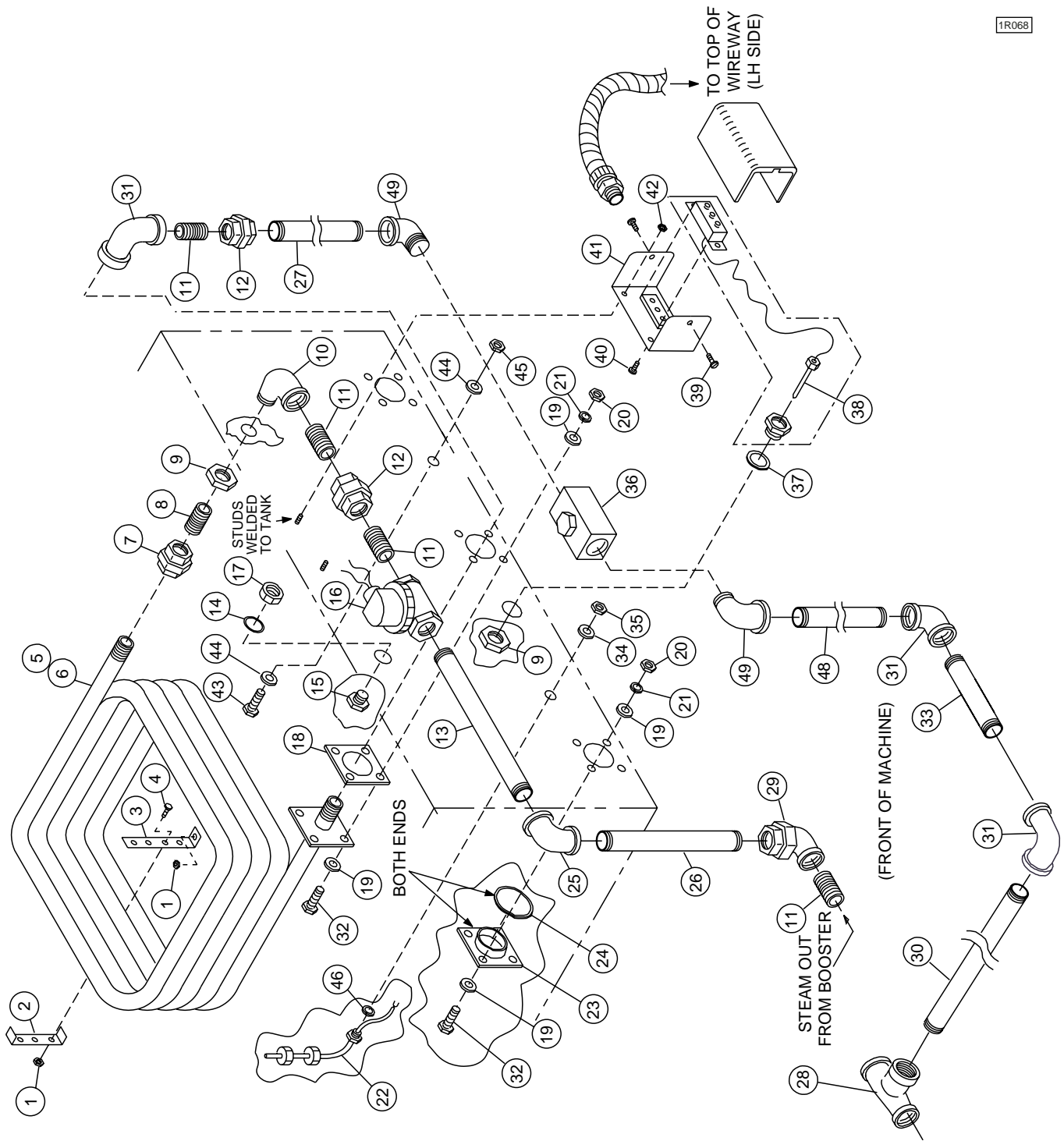


Figure 64 – Tank Heat (Steam Coils, R-L Shown)

TANK HEAT (STEAM COILS, R-L SHOWN)

Fig. 64 Item No.	Part No.	Part Description	Qty.
1	100141	Nut, grip (1/4-20)	3
2	B2850-2	Bracket, steam coil	1
3	B2850-1	Bracket, steam coil	1
4	104585	Bolt (1/4-20 x 1-1/4") Hex hd	3
5	305138	Steam coil, (R-L)	1
6	305137	Steam coil, (L-R)	1
7	102550	Union (1/2" NPT) SST	1
8	100704	Nipple (1/2" NPT x 1-3/4 RTOE) SST	1
9	100547	Locknut (1/2" NPT) SST	3
10	105738	Elbow, reducing (3/4" NPT x 1/2" NPT x 90°) B.I.	1
11	105803	Nipple (3/4" NPT) Close	1
12	105779	Union (3/4" NPT)	1
13	105846	Nipple (3/4" NPT x 12") B.I.	2
14	109034	Gasket (1/2" NPT) Plug	8
15	108418	Plug (1/2" NPT) Plastic	6
16	109887	Valve, solenoid (3/4" NPT)	1
—	109903	Repair kit, solenoid valve (3/4")	1
—	111472	Replacement coil, solenoid valve (3/4") (120V coil)	1
17	108417	Nut (1/2" NPT), Plastic	6
18	108345	Gasket, steam coil	1
19	102376	Washer, flat (5/16")	16
20	100154	Nut, plain (5/16)	8
21	106013	Washer, lock (5/16") Split	8
22	110854	Switch, dual float	1
—	111151	C-clip (2 per float switch)	2
23	109683	Flange, blockoff	2
24	112257	O-ring.....	2
25	105730	Elbow (3/4" NPT x 90°) B.I.	1
26	105782	Nipple close (1/2" NPT) B.I.	2
27	105783	Nipple (1/2"NPT x 2") B.I.	2
28	105757	Tee (3/4" NPT x 1/2" NPT x 1/2") B.I.	1
29	106485	Union, elbow (3/4" NPT x 90°) Female B.I.	1
30	107488	Nipple (1/2" NPT x 3 1/2") B.I.	1
31	102288	Elbow (1/2" NPT x 90°) B.I.	3
32	100740	Bolt (5/16-18 x 1")	8
33	112322	Nipple (1/2" NPT x 23") B.I.	1
34	107589	Washer, lock (1/2")	1
35	104584	Nut, plain (1/2"-13)	1
36	111380	Steam trap (1/2")	1
37	201041	Washer (7/8" I.D. x 1/8" thick)	1
38	109069	Thermostat w/capillary	1
39	106460	Screw (6-32 x 1/4") Truss hd	2
40	100100	Screw (8-32 x 1/4") Round hd	1
41	107922	Box and cover, thermostat	1
42	107966	Nut, grip (10-32) W/Nylon insert	2
43	106314	Bolt (3/8-16 x 1/2") Hex hd	2
44	104618	Washer, flat (3/8")	2
45	100143	Nut, grip (3/8-16")	1
46	110750	Gasket, float switch	1
47	105778	Union (1/2" NPT) B.I.	1
48	111306	Nipple (1/2" NPT x 5-1/2).....	1
49	100147	Elbow, street (1/2" NPT x 90°) B.I.....	1

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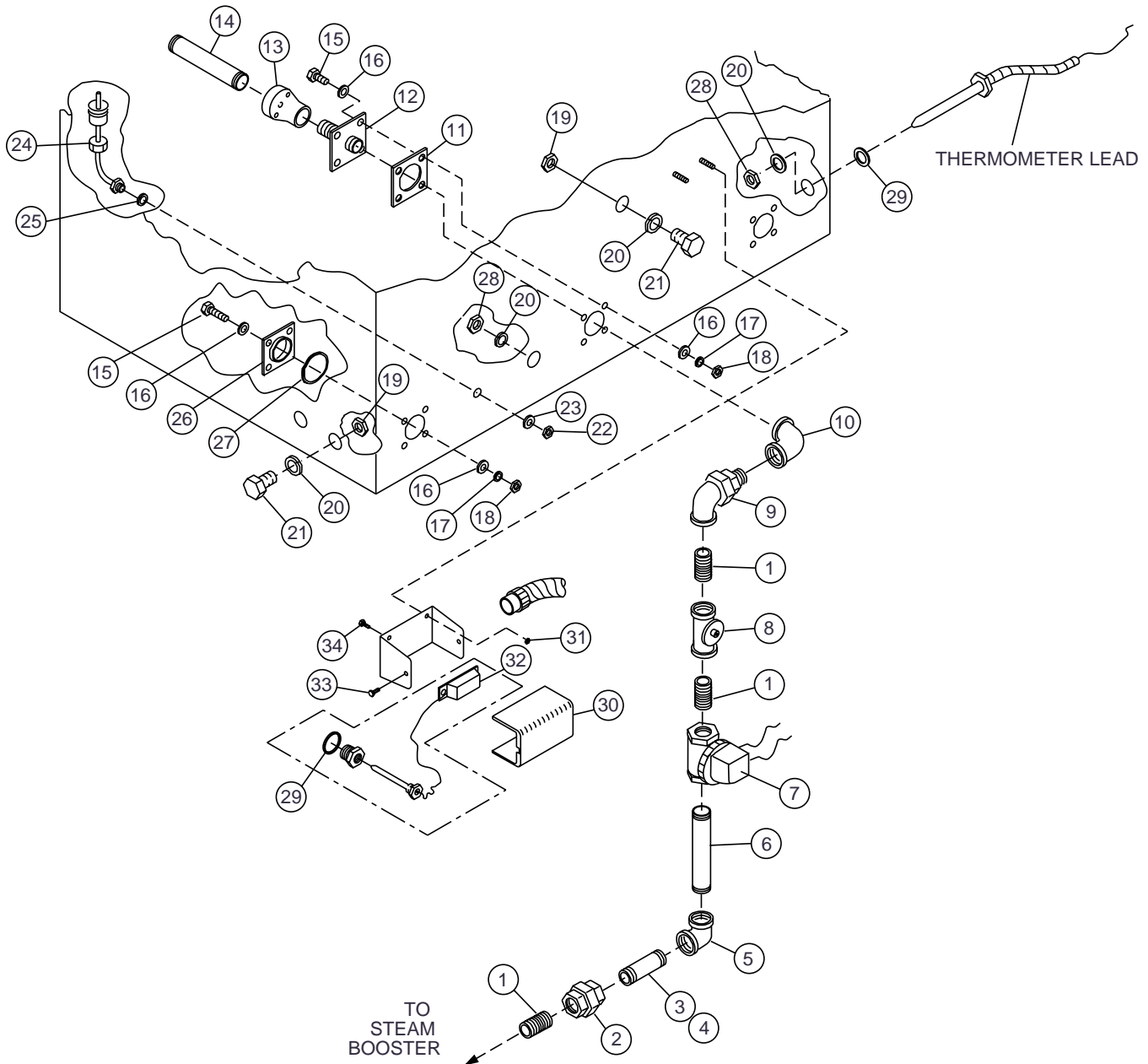
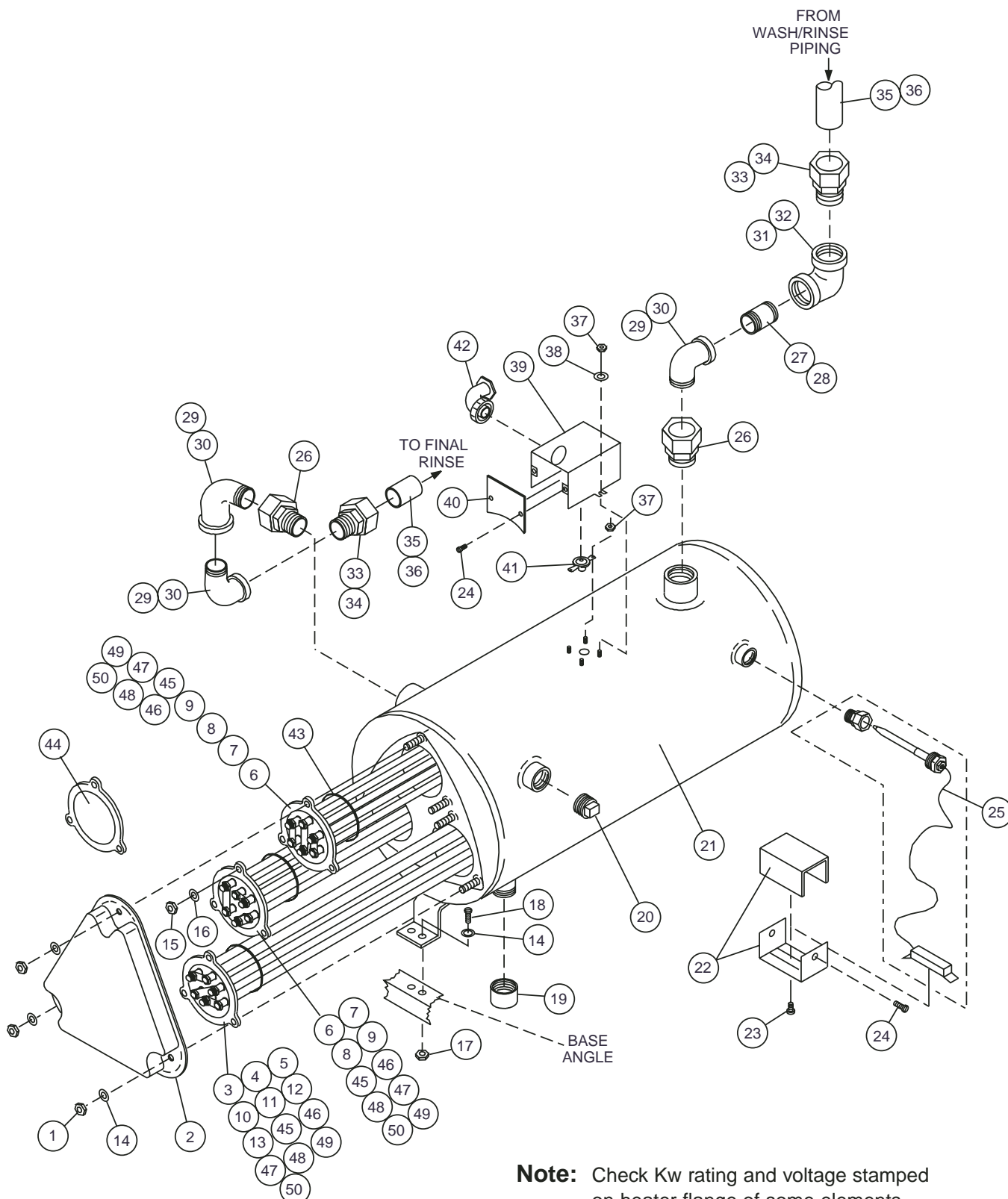


Figure 65 – Tank Heat (Steam Injector, R-L Shown)

TANK HEAT (STEAM INJECTOR, R-L SHOWN)

Fig. 65 Item No.	Part No.	Part Description	Qty.
1	105803	Nipple (3/4 NPT) Close B.I.....	3
2	105779	Union (3/4 NPT) B.I.....	1
3	105806	Nipple (3/4 NPT x 2") B.I.(44KB, 44WS, KL44)	1
4	105841	Nipple (3/4 NPT x 10") B.I. (54KB)	1
5	105730	Elbow (3/4 NPT x 90°) B.I.....	1
6	105817	Nipple (3/4 NPT x 4") B.I.....	1
7	109887	Valve, solenoid (3/4 NPT)	1
—	109903	Repair kit, solenoid valve (3/4 NPT)	1
—	111472	Replacement coil, solenoid valve(3/4 NPT) (120V coil).....	1
8	100853	Valve, check (3/4 NPT)	1
9	107502	Union elbow (3/4 NPT x 90° Male) B.I.....	1
10	105738	Elbow, reducing (3/4 NPT x 1/2 NPT x 90°) B.I.	1
11	108345	Gasket, heater	1
12	305143	Flange Assembly	1
13	201110	Injector, steam	1
14	101677	Nipple (1" NPT x 9" TOE) SST	1
15	100740	Bolt (5/16-18 x 1")	12
16	102376	Washer, flat (5/16")	24
17	106013	Washer, lock (5/16") Split	12
18	100154	Nut, plain (5/16-18).....	12
19	108417	Nut (1/2 NPT) Plug, Plastic	4
20	109034	Gasket (1/2 NPT) Plug	6
21	108418	Plug (1/2 NPT) Plastic.....	4
22	104584	Nut, plain (1/2-13)	1
23	107589	Washer, flat (1/2")	1
24	110854	Switch, float	1
—	111151	C-clip (2 per float switch)	2
25	110750	Gasket, float switch	1
26	109683	Block off	2
27	112257	O-ring.....	2
28	100547	Locknut (1/2 NPT)	2
29	201041	Washer (7/8" ID x 1/8" THK)	2
30	107922	Box and Cover, thermostat	1
31	107966	Nut, grip (10-32) w/nylon insert	2
32	109069	Thermostat W/capillary	1
33	106460	Screw (6-32 x 1/4") Truss hd	2
34	100100	Screw (8-32 x 1/4") Round hd	1



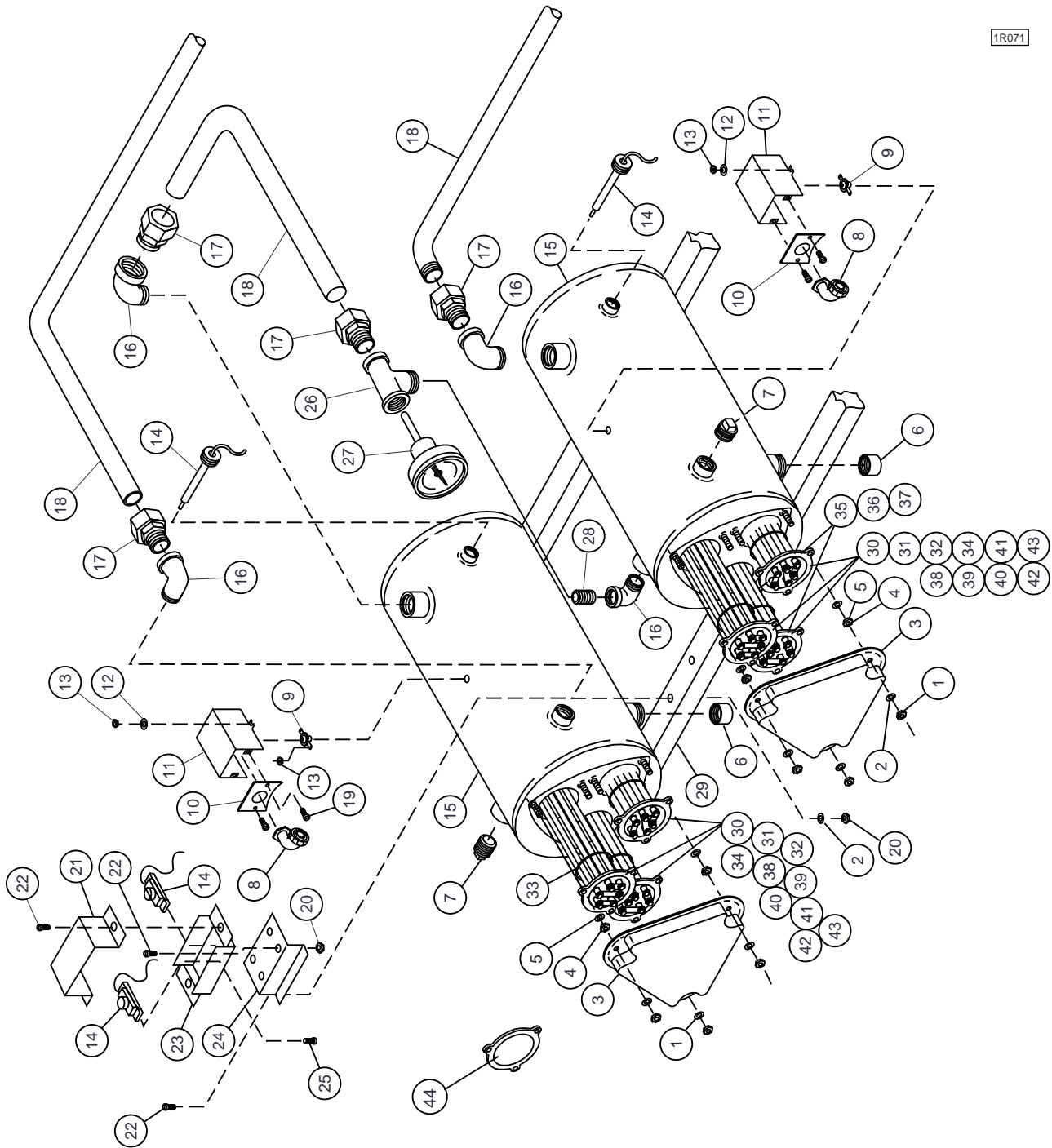
Note: Check Kw rating and voltage stamped on heater flange of some elements.

Figure 66 – Electric Booster (40°F/22°C Rise)

ELECTRIC BOOSTER (40°F/22°C RISE)

Fig. 66 Item No.	Part No.	Part Description	Qty.
1	107967	Nut, grip (1/4-20) w/nylon insert	9
2	108576	Cover, booster	1
3	111265	Heater - 18KW (208V) (380V/3PH, connected WYE).....	1
4	111266	Heater - 18KW (240V) (415V/3PH, connected WYE).....	1
5	111267	Heater - 18KW (480V)	1
6	111232	Heater - 10KW (208V) (380V/3PH, connected WYE).....	2
7	111233	Heater - 7.5/10KW (44WS) (240V) (415V/3PH, connected WYE).....	1
8	111234	Heater - 10KW (480V)	2
9	111383	Heater - 10KW (575V) (44WS)	2
10	111235	Heater - 5KW (208V) (380V/3PH connected WYE) (44WS)	1
11	111236	Heater - 5KW (240V) (415V/3PH, connected WYE) (44WS).....	1
12	111237	Heater - 5KW (480V) (44WS)	1
13	111384	Heater - 5KW (575V) (44WS)	1
14	106026	Washer, flat (1/4")	7
15	100003	Nut, plain (1/4-20).....	9
16	106482	Washer, lock (1/4") Split	9
17	100141	Nut, grip (1/4-20)	4
18	100734	Bolt (1/4-20 x 1/2") Hex hd	4
19	100113	Cap (3/4 NPT) SST	1
20	102505	Pipe plug (3/4 NPT) Brass	1
21	305407	Tank, booster assembly	1
22	107922	Box cover, thermostat	1
23	100100	Screw (8-32 x 3/8) Round hd	1
24	106460	Screw (6-32 x 3/8) Truss hed	2
25	109069	Thermostat, heat	1
26	102392	Bushing (3/4 NPT x 1/2 NPT) Brass (44WS).....	2
27	102567	Nipple (1/2 NPT x 3") Brass (44WS)	1
28	102469	Nipple (3/4 NPT x 2-3/4").....	1
29	102438	Elbow, street (1/2 NPT x 90°) Brass (44WS)	3
30	102444	Elbow, street (3/4 NPT x 90°) Brass	3
31	102435	Elbow (1/2 NPT x 90°) Brass (44WS)	1
32	102442	Elbow (3/4 NPT x 90°) Brass	1
33	109925	Fitting, compression (1/2" Copper x 1/2 NPT) (44WS)	2
34	109879	Fitting, compression (3/4 NPT x 3/4) Copper.....	1
	109880	Fitting, compression (3/4 Copper x 90°) (Not shown)	A/R
35	107314	Tubing (3/4) Copper	A/R
36	107380	Tubing (1/2) Copper	A/R
37	107966	Nut, grip (10-32) w/Nylon insert	4
38	107033	Washer, flat (#10)	2
39	110929	Box, thermostat	1
40	110930	Cover, box	1
41	110562	Thermostat, Hi Limit.....	1
42	103217	Connector, sealtite (1/2" x 90°).....	1
43	109985	O-ring.....	3
44	109458	Blockoff, heater (44WS 40° Rise)	1
45	112059	Heater 12KW (208V/3PH) (Beginning with S/N 87575 & above)	3
46	111334	Heater 12KW (240V/3PH) (Beginning with S/N 87575 & above)	3
47	112059	Heater 12KW (380V/3PH, WYE) (Begin with S/N 87575 & above)	3
48	111334	Heater 12KW (415V/3PH, WYE) (Begin with S/N 87575 & above)	3
49	112060	Heater 12KW (480V/3PH) (Beginning with S/N 87575 & above)	3
50	112061	Heater 12KW (575V/3PH) (Beginning with S/N 87575 & above)	3
—	110836	Connector, sealtite (1/2" Straight) (Not shown)	A/R

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Note: Check Kw rating and voltage stamped on heater flange of some elements.

Figure 67 – Electric Booster (70°F/39°C Rise)

ELECTRIC BOOSTER (70°F/39°C RISE)

Fig. 67 Item No.	Part No.	Part Description	Qty.
1	107967	Nut, grip (1/4-20) w/Nylon insert	6
2	106026	Washer, flat (1/4)	16
3	108576	Cover, booster	2
4	100003	Nut, plain (1/4-20)	18
5	106482	Washer, lock (1/4) Split	18
6	100113	Cap (3/4 NPT) SST	2
7	102505	Pipe plug (3/4 NPT) Brass	2
8	103217	Connector, sealtite (1/2" x 90°)	A/R
9	110562	Thermostat, High Limit	2
—	110836	Connector, sealtite (1-12" Straight) (Not shown)	A/R
10	110930	Cover, thermostat - High Limit	2
11	110929	Box, thermostat - High Limit	2
12	107033	Washer, flat (#10)	4
13	107966	Nut, grip (10-32) w/Nylon Insert	6
14	109069	Thermostat, heat	2
15	305407	Tank, booster assembly	2
16	102444	Elbow, street (3/4 NPT x 90°) Brass	4
17	109879	Fitting, compression (3/4 NPT x 3/4) Copper	4
—	109880	Fitting, compression (3/4 Copper x 90°) (Not shown)	A/R
18	102104	Tubing (3/4) Copper	A/R
19	111319	Screw (6-32 x 1/2") Truss hd.	4
20	100141	Nut, grip (1/4-20)	12
21	109682	Cover, thermostat box	1
22	100734	Bolt (1/4-20 x 1") Hex hd	12
23	314102	Box, dual thermostat	1
24	309319	Bracket - 2 Thermostats	1
25	100100	Screw (8-32 x 1/4") Round hd.	2
26	102525	Tee (3/4 NPT x 1/2 NPT x 3/4 NPT) Brass	1
27	104682	Thermometer - 2" Stem	1
28	100184	Nipple (3/4 NPT) Close	1
29	314908	Base - 2 Tank	1
30	111308	Heater Element - 9KW (208V) (380V/3PH, connected WYE)	3
31	111305	Heater Element - 9KW (240V) (415V/3PH, connected WYE)	3
32	108579	Heater Element - 9KW (480V)	3
33	109985	O-ring	3
34	111122	Heater Element - 9KW (575V) 40° Rise	4
35	111265	Heater Element - 18KW (208V)	2
36	111266	Heater Element - 18KW (240V)	2
37	111267	Heater Element - 18KW (480V)	2
38	112059	Heater 12KW (208V/3PH) (Beginning with S/N 87575 and above)	3
39	111334	Heater 12KW (240V/3PH) (Beginning with S/N 87575 and above)	3
40	112059	Heater 12KW (380V/3PH, WYE) (Begin with S/N 87575 and above) ..	3
41	111334	Heater 12KW (415V/3PH, WYE) (Begin with S/N 87575 and above) ..	3
42	112060	Heater 12KW (480V/3PH) (Beginning with S/N 87575 and above)	3
43	112061	Heater 12KW (575V/3PH) (Beginning with S/N 87575 and above)	3
44	109458	Block off plate	1

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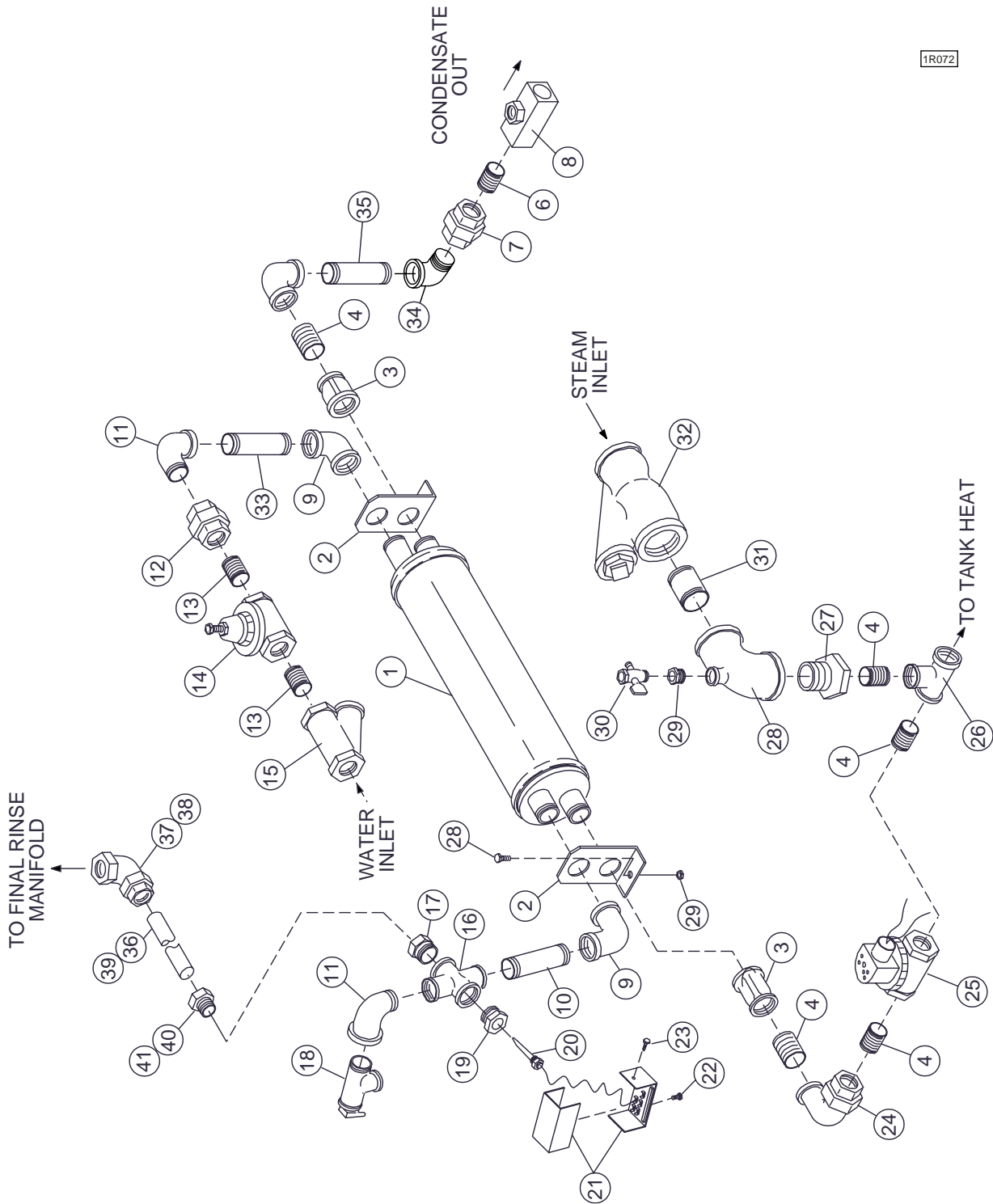


Figure 68 – K2 Steam Booster

K2 STEAM BOOSTER

Fig. 68 Item No.	Part No.	Part Description	Qty.
1	311654	Booster-K2 (Includes items 2-4, 9)	1
2	315596	Support bracket-booster.....	2
3	105725	Coupling, red 1" x 3/4" BI	2
4	105803	Nipple 3/4" NPT close BI	5
5	105738	Elbow, red 3/4" NPT x 1/2" NPT BI.....	1
6	105782	Nipple 1/2" NPT close BI	1
7	105778	Union 1/2" NPT BI	1
8	111380	Steam trap 1/2" NPT	1
9	102442	Elbow 3/4" NPT x 90° brass	2
10	102489	Nipple 3/4" NPT x 2 1/2" NPT brass	1
11	102444	Elbow street 3/4" NPT x 90° brass	2
12	100571	Union 3/4" NPT brass	1
13	100184	Nipple 3/4" NPT close brass	2
14	107550	Pressure regulating valve 3/4"	1
15	110768	Strainer, line 3/4" NPT brass.....	1
16	100599	Cross 3/4" NPT brass	1
17	109879	Fitting compression (3/4" NPT Male x 3/4" Copper)	1
18	104649	Valve, relief 3/4" NPT brass	1
19	102392	Bushing, red 3/4" NPT x 1/2" NPT brass	1
20	109069	Thermostat w/capillary	1
21	107922	Box & cover, thermostat	1
22	100100	Screw 8-32 x 3/8" round head.....	1
23	106460	Screw 6-32 x 3/8" truss head.....	1
24	106485	Union elbow 3/4" NPT female	1
25	109887	Valve, solenoid 3/4" NPT	1
—	109903	Repair Kit, solenoid valve (3/4"NPT).....	1
—	111472	Replacement coil, solenoid valve (3/4" NPT) 120V coil)	1
26	105752	Tee, 3/4" NPT BI.....	1
27	103522	Bushing, reducer (1" NPT x 3/4" NPT) BI.....	1
28	105771	Tee (1-1/4" NPT x 1/2" NPT x 1-1/4" NPT) BI	1
29	102402	Bushing, reducer (1/2" NPT x 1/4" NPT) BI	1
30	100123	Petcock, (1/4" NPT male) brass	1
31	105875	Nipple (1-1/4" NPT x 3") brass.....	1
32	100263	Strainer, line (1-1/4" NPT) brass.....	1
33	102490	Nipple, (3/4" NPT x 3 1/2") brass.....	1
34	100147	Elbow street (1/2"NPT x 90°) BI	1
35	107488	Nipple (1/2" NPT x 3 1/2") BI	1
36	107314	Tubing 3/4" copper (44KB, KL44, 54KB)	A/R
37	109880	Fitting 3/4" x 3/4" x 90° (44KB, KL44, 54KB)	1
38	109910	Fitting, compression 1/2" x 1/2" x 90° (44WS)	1
39	107380	Tubing 1/2" copper (44WS)	A/R
40	109879	Fitting, (3/4" NPT x 3/4" Copper) (44KB, KL44, 54KB)	1
41	109925	Fitting, compression (1/2" NPT x 1/2" Copper) (44WS)	1

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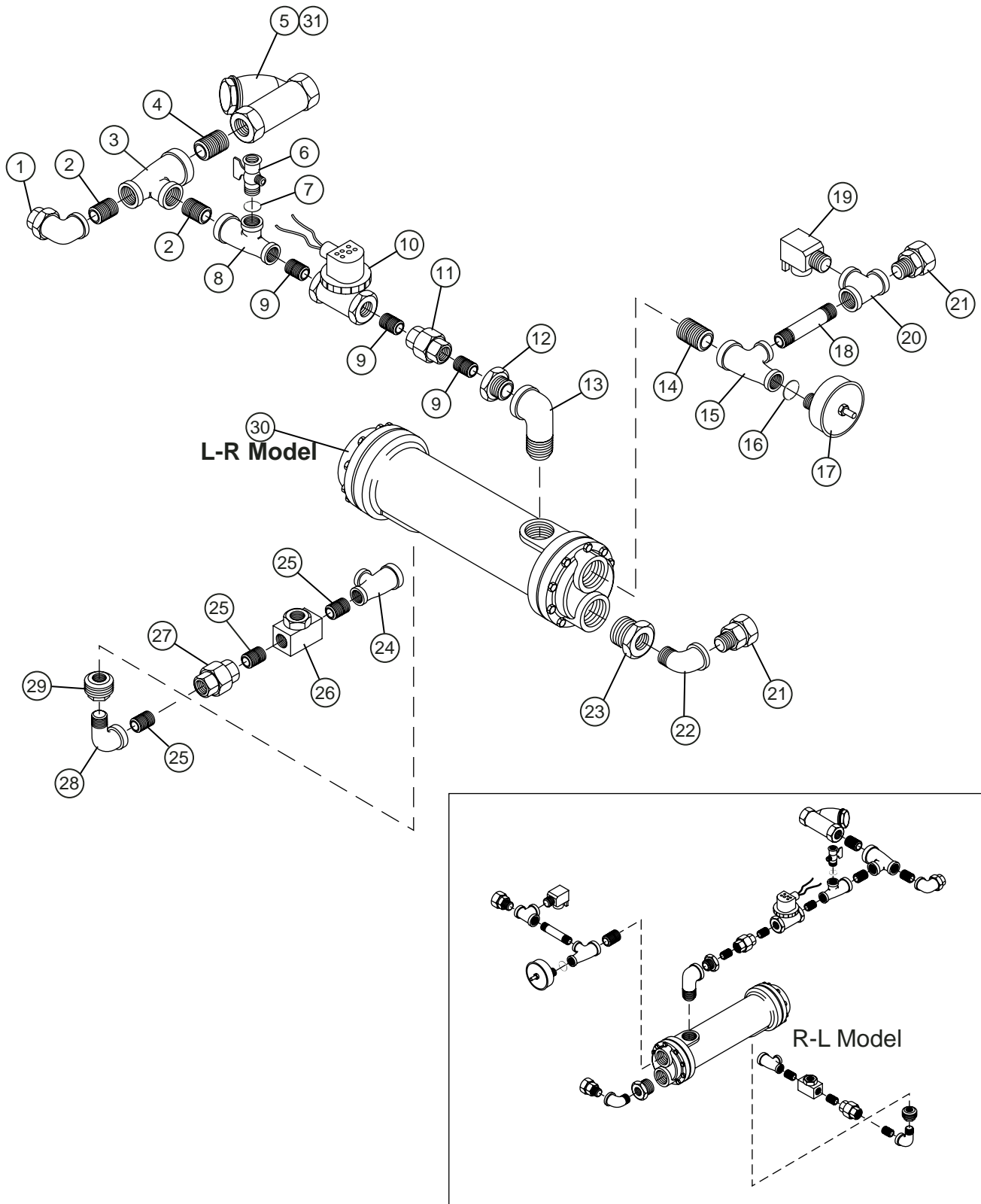


Figure 69 – Thrush Steam Booster (40°F/22°C -70°F/39°C Rise)

THRUSH STEAM BOOSTER
(40°F/22°C & 70°F/39°C RISE)

Fig. 69 Item No.	Part No.	Part Description	Qty.
1	107211	Union Elbow 1" x 90° NPT BI	1
2	105847	Nipple close 1" NPT BI.....	2
3	105774	Tee red 1 1/2" x 1" x 1" NPT BI.....	1
4	105881	Nipple close 1 1/2" NPT BI	1
5	101249	Strainer line 1 1/2" NPT	1
6	100123	Cock gauge 1/4"	1
7	102402	Bushing red 1/2" x 1/4" NPT	1
8	112346	Tee red 1" x 3/4" x 1/2" NPT	1
9	105803	Nipple close 3/4" NPT.....	3
10	109887	Valve, 3/4" NPT	1
—	109903	Repair Kit, solenoid valve (3/4"NPT).....	1
—	111472	Replacement coil, solenoid valve (3/4" NPT) 120V coil)	1
11	105779	Union 3/4" NPT BI	1
12	100978	Bushing red 1/2" x 3/4" BI	1
13	107500	Elbow street 1/12" x 90'	1
14	101061	Nipple close 1 1/4" NPT brass	1
15	100583	Tee 1 1/4" x 3/4" x 3/4" NPT brass.....	1
16	102392	Bush red 3/4" x 1/2" NPT brass	1
17	100128	Fenwal Thermostat.....	1
18	102490	Nipple 3/4"NPT x 3 1/2" NPT brass	1
19	104649	Relief Valve 3/4"	1
20	102521	Tee 3/4" NPT brass	1
21	109879	Fitting Comp 7/8" OD x 3/4" NPT male.....	2
22	102444	Elbow street 3/4" NPT x 90° NPT brass	1
23	102399	Bushing red 1-1/4" NPT x 3/4" brass	1
24	112354	Tee red 1" x 1/2" x 3/4" NPT BI.....	1
25	105782	Nipple close 1/2" NPT BI	3
26	111380	Steam trap 1/2" NPT	1
27	105778	Union 1/2" NPT BI	1
28	100147	Elbow street 1/2" NPT x 90° BI	1
29	112349	Bushing red 1-1/2" NPT x 1/2" BI	1
30	112308	Amtrol Steam Booster	1
31	105749	Plug 3/4" NPT BI	1

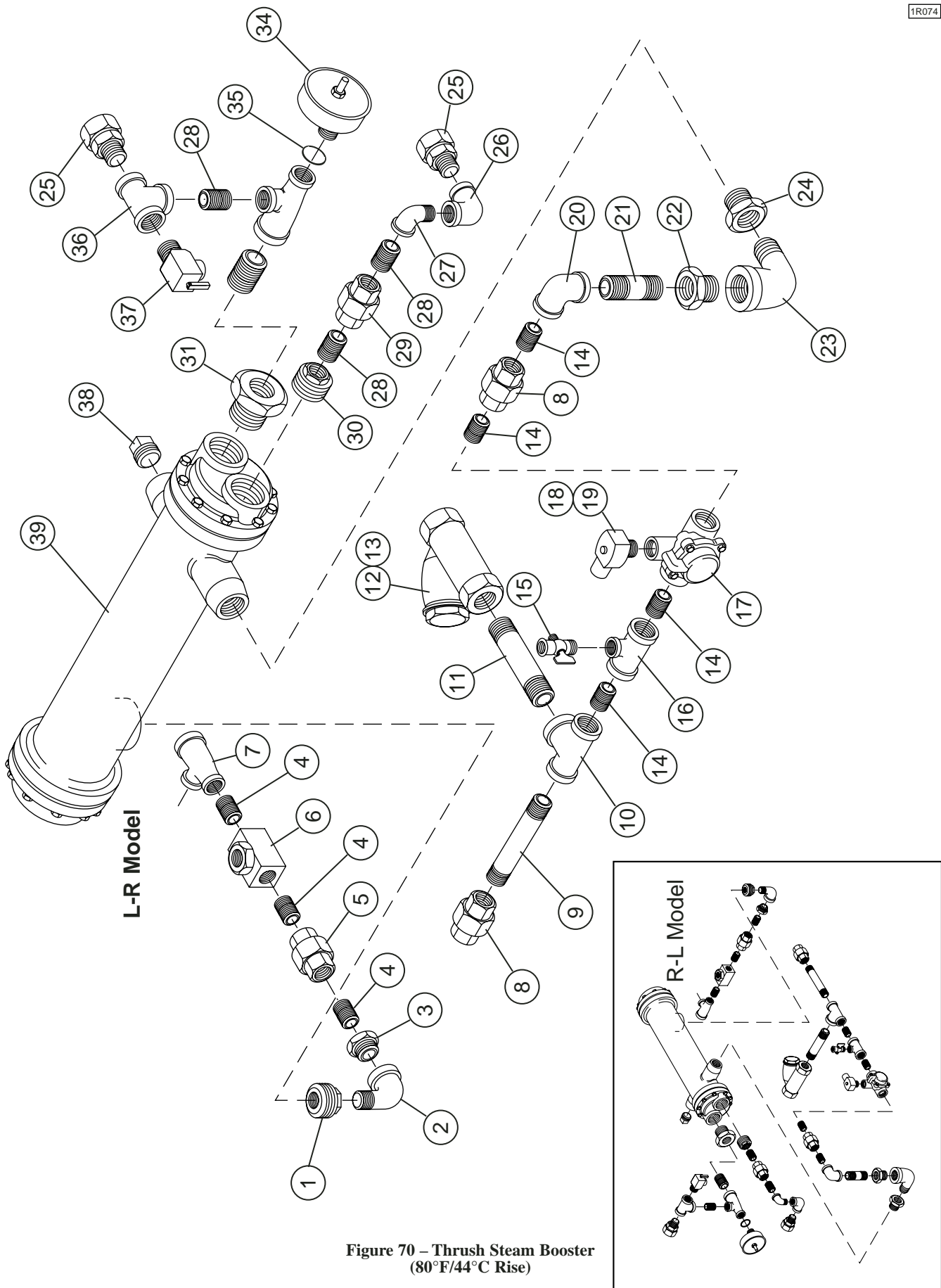


Figure 70 – Thrush Steam Booster
(80°F/44°C Rise)

**THRUSH STEAM BOOSTER
(80°F/44°C RISE)**

Fig. 70 Item No.	Part No.	Part Description	Qty.
1	112341	Bushing red 2" x 3/4" BI.....	1
2	105731	Elbow street 3/4" x 90" BI	1
3	103465	Bushing red 3/4" x 1/2" BI	1
4	105782	Nipple close 1/2" NPT BI	3
5	105778	Union 1/2" NPT BI	1
6	111380	Steam trap 1/2" NPT	1
7	112354	Tee red 1" x 1/2" x 3/4" NPT BI.....	1
8	105780	Union 1" NPT BI.....	1
9	105860	Nipple 1" NPT x 8" BI.....	1
10	110196	Tee red 1" x 1" x 1-1/2" NPT BI.....	1
11	106606	Nipple 1-1/2" NPT x 6" BI.....	1
12	101249	Strainer Line 1-1/2" NPT BI	1
13	105749	Plug 3/4" NPT BI	1
14	105847	Nipple close 1" NPT BI.....	4
15	100123	Gauge cock 1/4"	1
16	112358	Tee red 1" x 1" x 1/4" NPT BI	1
17	110005	Valve, 1" NPT steam	1
18	110120	Steam coil 120V	1
19	110007	Repair kit 1" steam	1
20	105733	Elbow 1" NPT x 90° BI	1
21	105851	Nipple 1" NPT x 2 1/2" BI.....	1
22	100979	Bushing red 1 1/2" x 1" NPT BI	1
23	107500	Elbow street 1-1/2" NPT x 90° BI.....	1
24	100983	Bushing red 2" x 1-1/2" NPT BI.....	1
25	109879	Fitting com 7/8" OD x 3/4" NPT male	2
26	102442	Elbow 3/4" x 90' brass.....	1
27	102444	Elbow street 3/4" x 90' brass	1
28	100184	Nipple close 3/4" NPT brass	3
29	100571	Union 3/4" NPT brass	1
30	106583	Bushing red 2" x 3/4" NPT brass	1
31	106498	Bushing red 2" x 1-1/4" NPT brass.....	1
32	101061	Nipple close 1-1/4" NPT brass	1
33	100583	Tee 1 1/4" x 3/4" x 3/4" brass	1
34	100128	Fenwal Thermostat.....	1
35	102392	Bushing red 3/4" NPT x 1/2" NPT brass	1
36	102521	Tee 3/4" NPT brass	1
37	104649	Relief valve 3/4" NPT	1
38	112355	Plug 2" NPT BI	1
39	112309	Amtrol Steam Booster.....	1

1R075

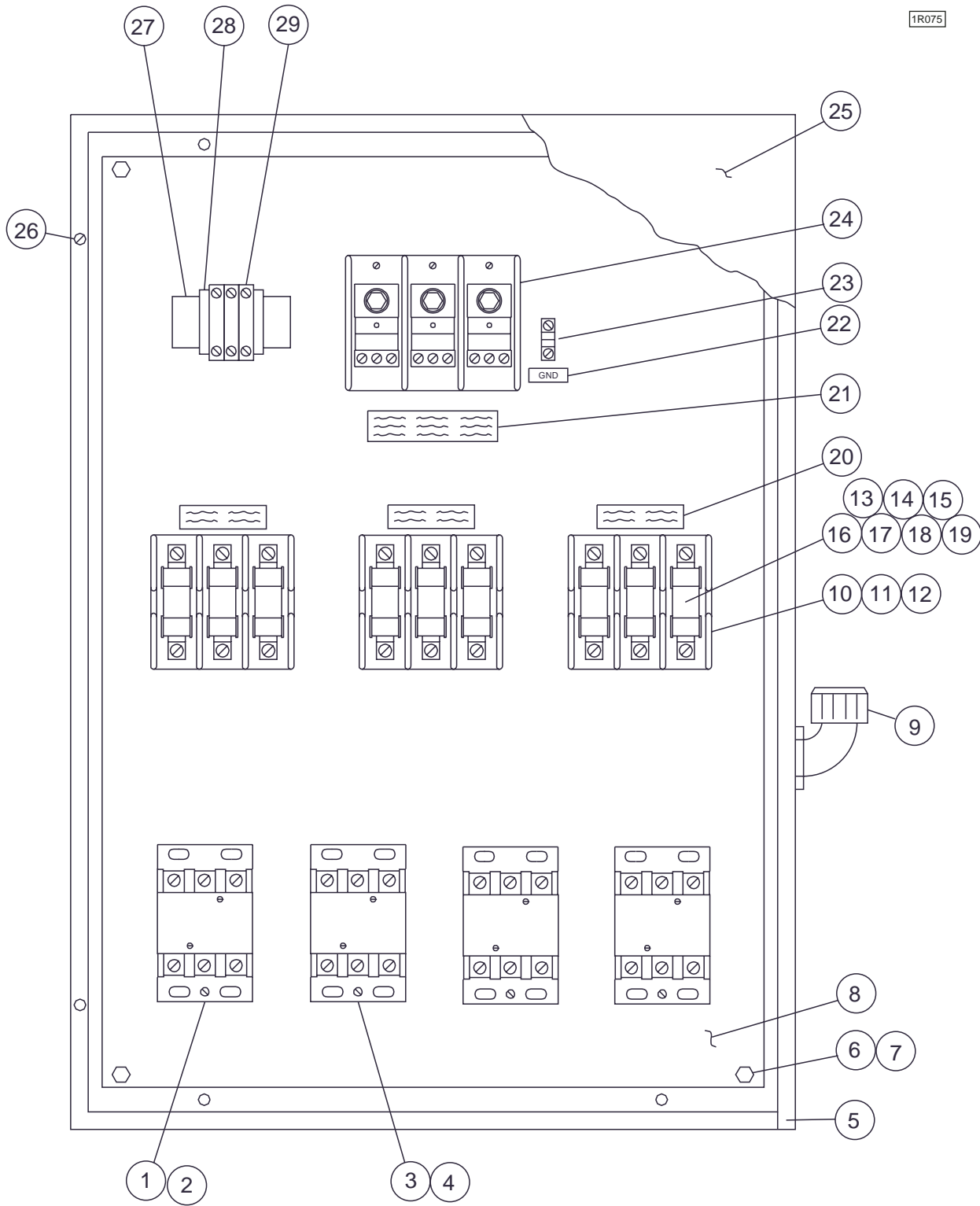


Figure 71 – Control Panel, Electric Booster (70°F/39°C Rise)

CONTROL PANEL, ELECTRIC BOOSTER (70°F/39°C RISE)

Fig. 71 Item No.	Part No.	Part Description	Qty.
1	111827	Contractor - 60A - 3 Pole (208V-240V) 44/66WS	3
2	111827	Contractor - 60A - 3 Pole (208-240V) 44/66WS	1
2	111827	Contractor - 60A - 3 Pole (208-240V) 44/66WS	1
2	111827	Contractor - 60A - 3 Pole (380V, 415V, 480V) 44/66WS	1
3	111827	Contractor - 60A - 3 Pole (208V-240V, 480V, 575V)	1
4	111827	Contractor - 60A - 3 Pole (380V, 415V)	1
5	313774	Control cabinet	1
6	106482	Washer, lock (1/4") Split	4
7	100734	Bolt (1/4-20 x 1/2") Hex hd	4
8	313743	Inner panel	1
9	110920	Connector, sealtite (1" x 90°)	2
10	108424	Fuse block (208V-240V) (Prior to S/N 85303)	3
—	180171	Fuse block (208V-240V) (Beginning with S/N 85303 and above)	1
11	180171	Fuse block (380V, 415V)	3
12	180171	Fuse block (480V) (575V)	2
13	180060	Fuse 70A, 250V (208V-240V)	6
14	180042	Fuse 100A, 300V (208V)	3
15	108448	Fuse 90A, 250V (240V)	3
16	180176	Fuse 60A, 600V (380V, 415V, 480V)	3
17	180175	Fuse 50A, 600V (380V, 415V, 480V)	3
—	180173	Fuse 40A (208V-240V) 44/66WS	3
18	180174	Fuse 45A, 600V (380V, 480V, 575V)	6
19	180172	Fuse 35A, 600V (415V, 575V)	6
20	108498	Label, fuse amps	A/R
21	108615	Label, machine electrical connection	1
22	104873	Label, ground	1
23	103310	Lug, ground	1
24	109014	Terminal block (208V-240V, 380V, 415V)	1
25	313744	Cover, control cabinet	1
26	100097	Screw (10-32 x 1/2") Truss hd	2
27	110849	Din rail (480V, 575V/3PH)	A/R
28	110900	End stop (480V, 575V/3PH)	2
29	110912	Terminal block (480V, 575V/3PH)	3
29	109014	Terminal block (208-240, 380V, 415V) (Do not use items 27, 28 with P/N 109014)	1
—	701156-1	Control Cabinet Assy. (208V) (Includes items 1, 3, 5-8, 10, 14, 15, 20-26)	1
—	701156-2	Control Cabinet Assy. (240V) (Includes items 1, 3, 5-8, 10, 13, 15, 20-26)	1
—	701156-3	Control Cabinet Assy. (480V) (Includes items 2, 3, 5-8, 12, 16, 17, 20-29)	1
—	701156-4	Control Cabinet Assy. (380V) (Includes items 2, 4-8, 11, 16, 18, 20-26)	1
—	701156-5	Control Cabinet Assy. (415V) (Includes items 2, 4-8, 11, 16, 19-26)	1
—	701176-6	Control Cabinet Assy. (575V) (Includes items 2, 4-8, 11, 16, 18, 19-26)	1

1R076

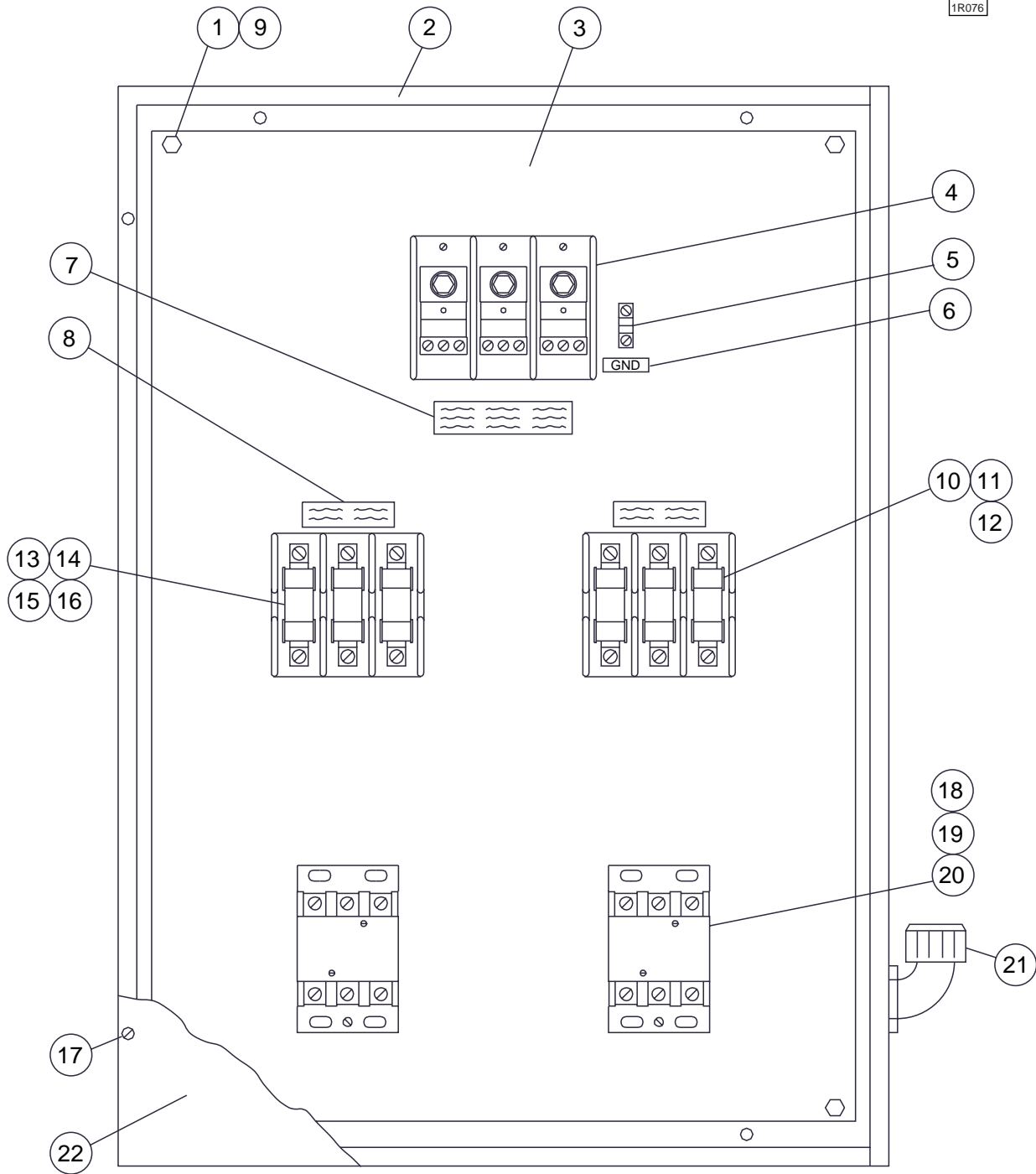


Figure 72 – Control Panel, Electric Booster (40°F/22°C Rise)

CONTROL PANEL, ELECTRIC BOOSTER (40°F/22°C RISE)

Fig. 72 Item No.	Part No.	Part Description	Qty.
1	100734	Bolt (1/4-20 x 1/2") Hex hd	4
2	313774	Control cabinet	1
3	313743	Inner panel	1
4	109014	Terminal block	1
5	103310	Lug, ground	1
6	104873	Label, ground.....	1
7	108615	Label, machine electrical connection	1
8	108498	Label, fuse amps	2
9	106482	Washer, lock (1/4") Split	4
10	108424	Fuse block (208V-240V) 44KB/PRB (Prior to S/N 85303)	2
10	180171	Fuse block (208V-240V) 44KB/PRB (Beginning S/N 85303 & above)	2
11	180171	Fuse block (380V, 415V, 575V).....	2
12	180171	Fuse block (480V) (575V).....	1
13	180060	Fuse 70A, 600V (208V-240V) 44KB/KPRB	6
—	180175	Fuse 50A, 600V (240V/1PH)	8
—	180173	Fuse 40A, 600V (240V/3PH)	9
14	180176	Fuse 60A, 600V (480V)	3
15	180172	Fuse 35A, 600V (575V)	6
16	180174	Fuse 45A, 600V (208-240V, 380V, 415V)	6
17	100097	Screw (10-32 x 1/2") Truss hd.....	2
18	111827	Contractor - 60 Amp, 3 Pole (208V-240V)	2
19	111827	Contractor - 60 Amp, 3 Pole (480V).....	1
20	111827	Contractor - 60 Amp, 3 Pole (208-240V, 380V, 415V, 575V)	2
21	110920	Connector, sealtite (1" x 90°)	2
22	313744	Cover, control cabinet	1
—	701336-1	Control Cabinet Assy. (208V-240V) (Includes items 1-8, 10, 13, 18)	1
—	701336-5	Control Cabinet Assy. (480V) (Includes items 1-8, 12, 14, 19)	1
—	700985-7	Control Cabinet Assy. (380V) (Includes items 1-8, 11, 16, 20)	1
—	700985-8	Control Cabinet Assy. (415V) (Includes items 1-8, 11, 16, 20)	1
—	700985-5	Control Cabinet Assy. (575V) (Includes items 1-8, 11, 15, 20)	1

1R077

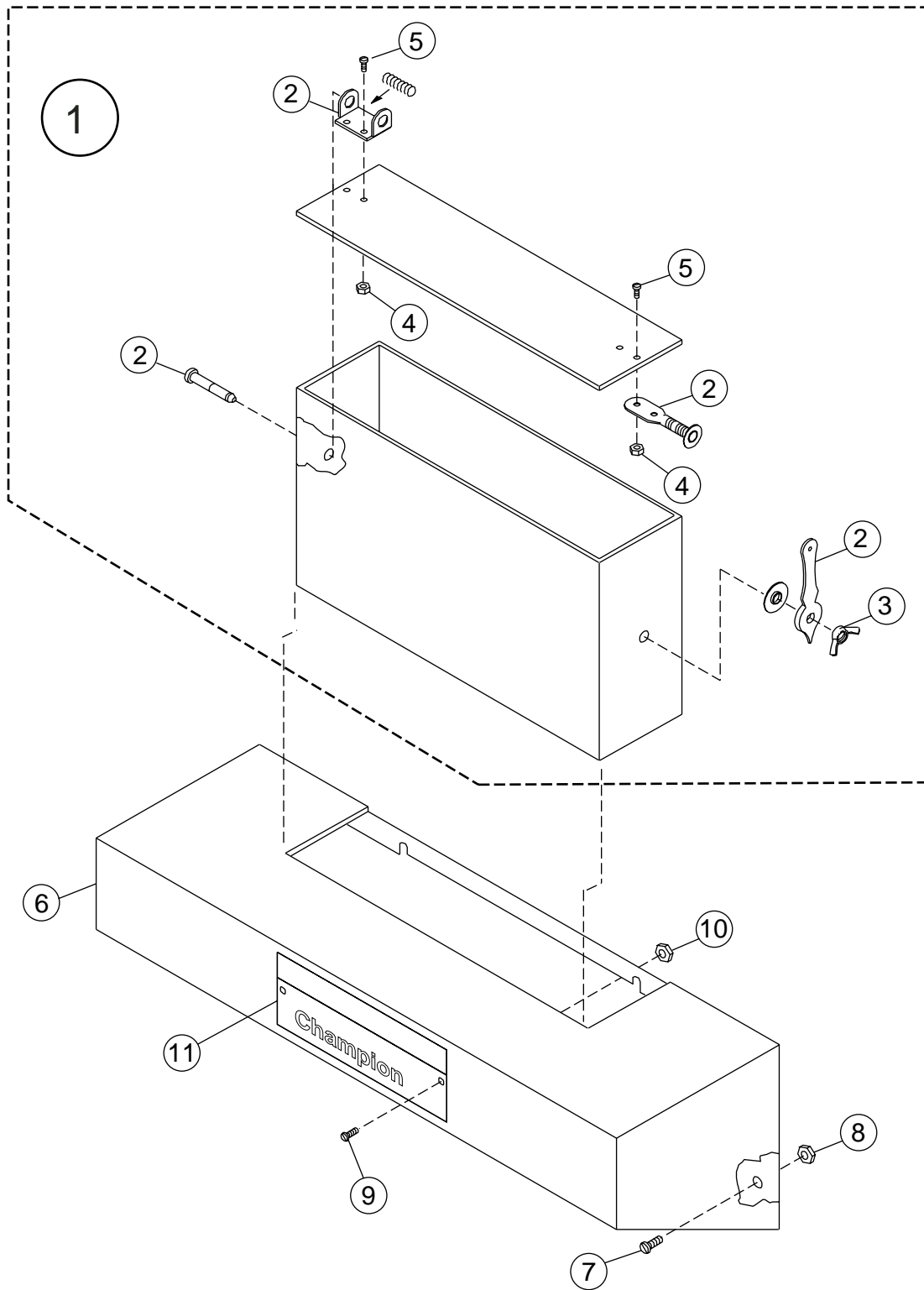


Figure 73 – Vent Hood Assembly

VENT HOOD ASSEMBLY

Fig. 73 Item No.	Part No.	Part Description	Qty.
1	401487	Vent Stack Assembly (Includes items 2-5)	1
2	201589	Regulator Assembly	1
3	112258	Nut, wing (1/4-20 SST)	1
4	108954	Nut, grip (6-32) w/nylon insert	4
5	104883	Screw (6-32 x 3/8") Round hd.....	4
6	307228	Vent hood.....	1
7	100734	Bolt (1/4-20 x 1/2") Hex hd	4
8	100141	Nut, grip (1/4-20)	4
9	107015	Screw (4-40 x 1/4") Round hd.....	2
10	107016	Nut, grip (4-40) w/nylon insert	2
11	109158	Nameplate "Champion"	1
—	401889-S	Vent Hood Assembly (Includes items 1-10)	—

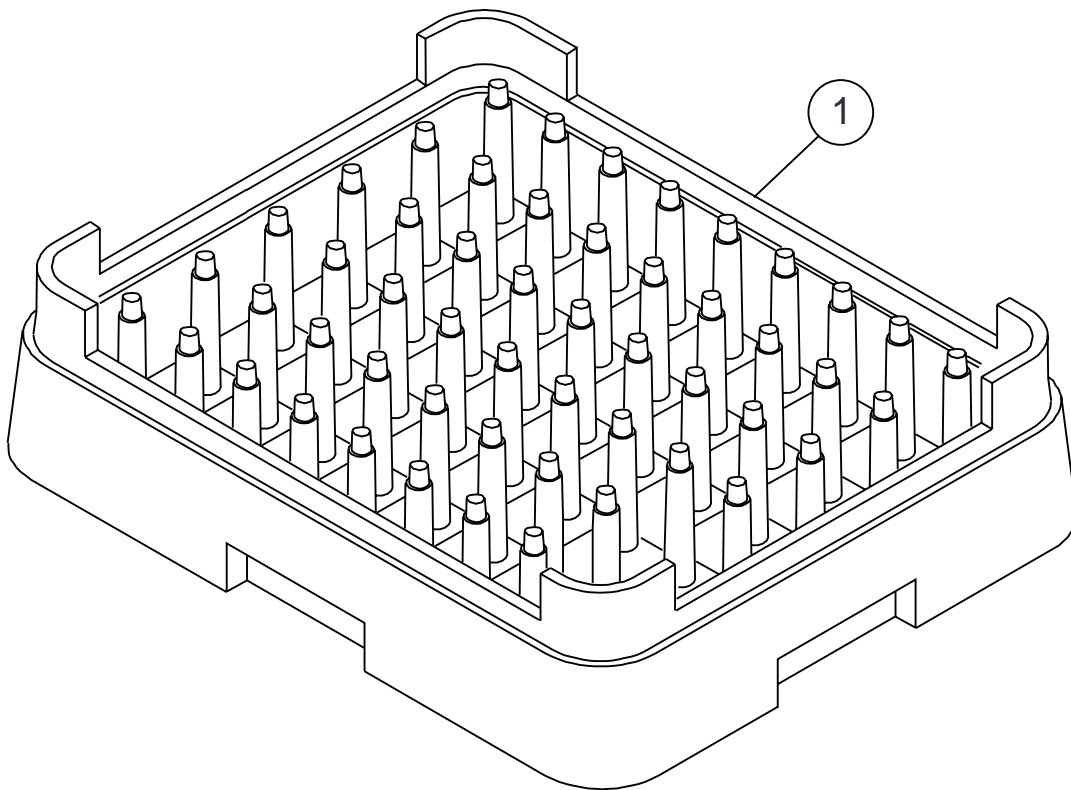
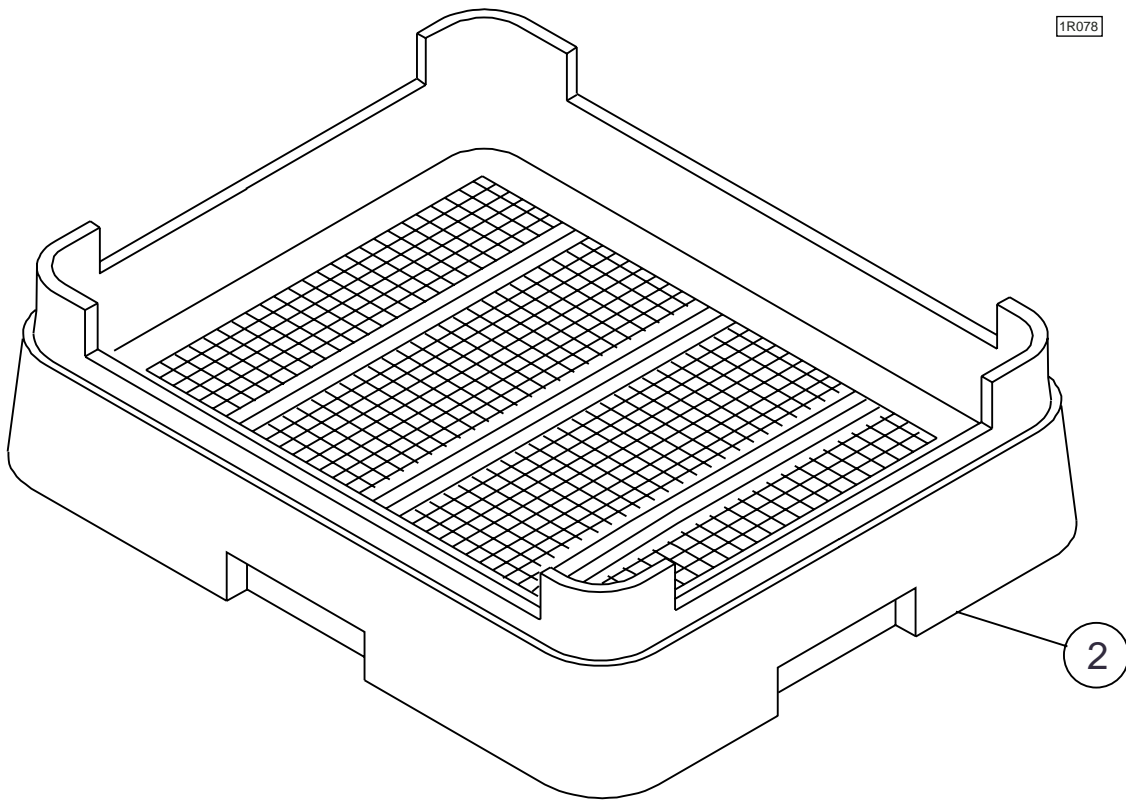


Figure 74 – Dish Racks

DISH RACKS

<u>Fig. 74 Item No.</u>	<u>Part No.</u>	<u>Part Description</u>	<u>Qty.</u>
1	101285	Rack, peg	1
2	101273	Rack, combination	1

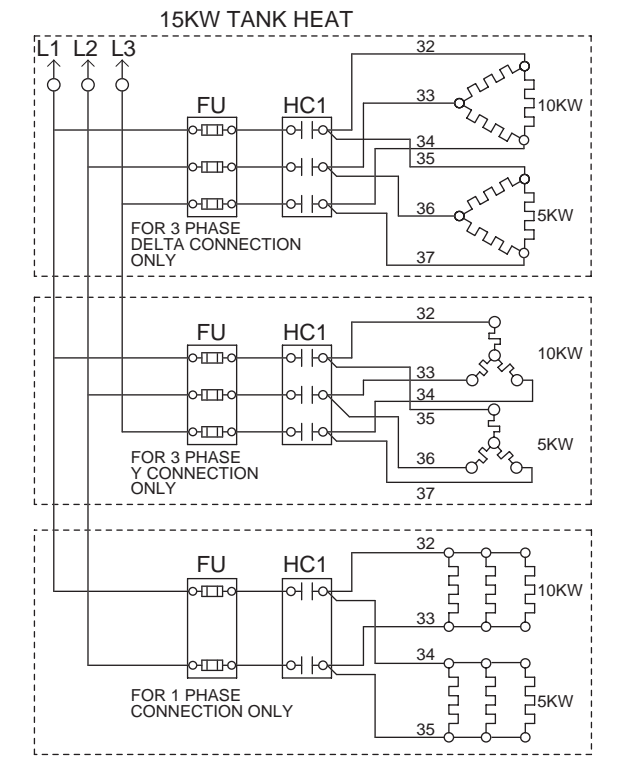
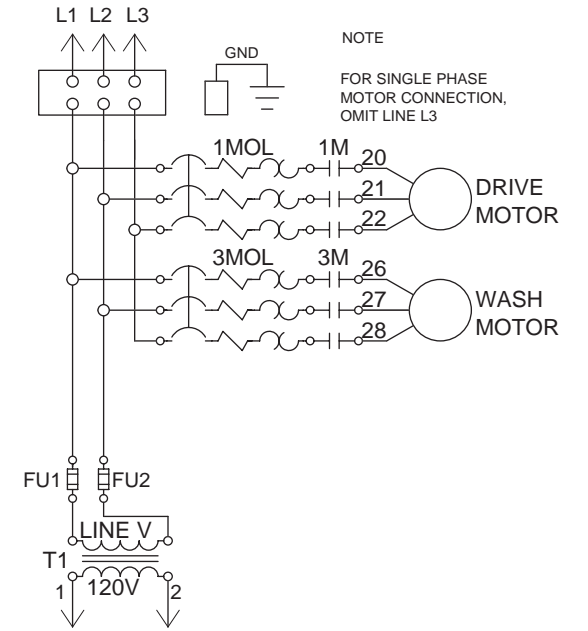
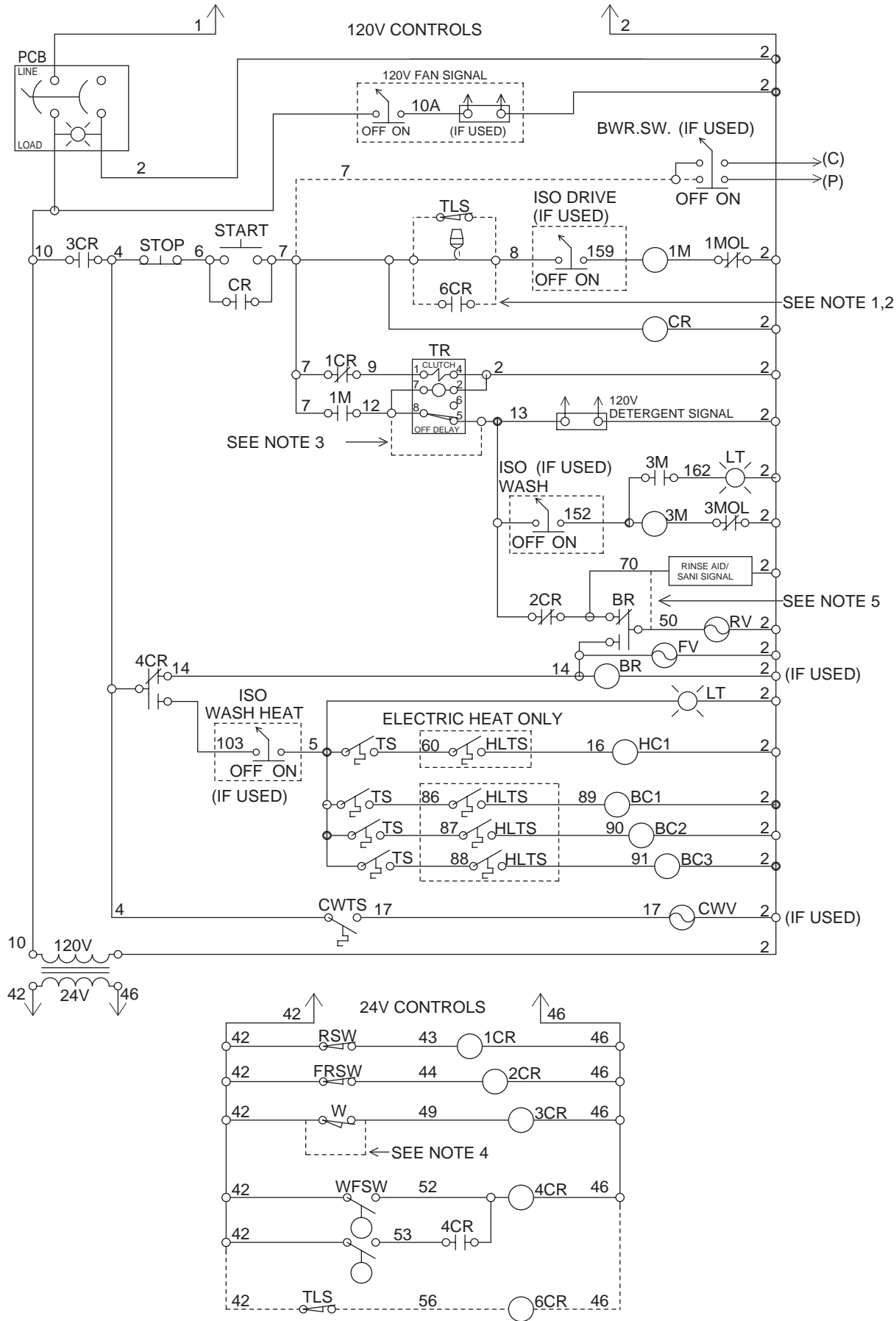
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ELECTRICAL SCHEMATICS

NOTES:

1. WIRE NO. 7 AND 8 ARE CONNECTED TOGETHER IN JUNCTION BOX.
2. WHEN TABLE LIMIT SWITCH IS USED, SEPARATE WIRE 7 AND 8, WIRE TABLE LIMIT SWITCH (TLS) AS SHOWN. WHEN MACHINE IS SUPPLIED WITH MOTORIZED RACK ADVANCE (MRA) AND A 120V TLS IS USED, CONNECT WIRES INTO DISH MACHINE JUNCTION BOX. DISCONNECT WIRE 7 AND ADD TLS IN SERIES.
3. JUMPER TO BE USED WHEN IDLE PUMP IS NOT USED.
4. USE JUMPER WHEN DOOR SAFETY SWITCHES ARE NOT USED.
5. BR RELAY USED WITH A BUILT IN BOOSTER, WITHOUT BUILT IN BOOSTER A JUMPER BETWEEN WIRE 50 AND 70 IS USED.

1CR	RACK SWITCH SWITCH RELAY
2CR	FINAL RINSE SWITCH RELAY
3CR	DOOR SAFETY SWITCH RELAY
4CR	WASH FILL HOLD-IN RELAY
6CR	TABLE LIMIT SWITCH HOLD-IN RELAY
1M	DRIVE MOTOR CONTACTOR
1MOL	DRIVE MOTOR OVERLOAD
3M	WASH MOTOR CONTACTOR
3MOL	WASH MOTOR OVERLOAD
5M	BLOWER MOTOR CONTACTOR
5MOL	BLOWER MOTOR OVERLOAD
BC-	BOOSTER HEAT CONTACTOR/STEAM VALVE
BR	BOOSTER RELAY
BWR.SW.	BLOWER SWITCH
CR	HOLD-IN RELAY
CWTS	COLD WATER THERMOSTAT
DSS	DOOR SAFETY SWITCH
FU	FUSE/FUSE BLOCK
FV	FILL VALVE
HC-	HEAT CONTACTOR
HLTS	HIGH LIMIT THERMOSTAT
ISO	ISOLATION SWITCH (IF USED)
LT	ISOLATION SWITCH LIGHT (IF USED)
MSW	MOTOR STOP SWITCH (IF USED)
PCB	POWER SWITCH/CIRCUIT BREAKER
RSW	RACK SWITCH
RV	RINSE VALVE
T1	CONTROL TRANSFORMER
TLS	TABLE LIMIT SWITCH
TR	PUMP TIMER
TS	THERMOSTAT



CUSTOMER TO SUPPLY RATED VOLTAGE/PHASE/Hz, AS SPECIFIED PER ORDER, TO DISCONNECT SWITCH. ALL POWER SUPPLIED TO EACH CONNECTION POINT MUST COMPLY WITH ALL LOCAL ELECTRIC CODES.			
DR.BY	A.LANNI	SCALE	1=1
DATE	94-11-15	SHEET	1 OF 1

REV.	DESCRIPTION	DATE	BY
E	REMOVE HC2 ON 1PH TANK HEAT REDRAW B SIZE	94-11	AL
F	MOVE ISO TO OTHER SIDE OF 4CR	94-11	AL
G	REMOVE MOTOR SWITCH, ADD FAN SWITCH	95-05-25	AL

REV.	DESCRIPTION	DATE	BY
H	CHANGE BR RELAY NOTE	96-02-14	AL
I	ADDED AUX CONTACTS TO ISO SWITCH	5MAY97	JCN
J	REDRAWN POWER SWITCH/CIRCUIT BREAKER	2FEB98	JCN

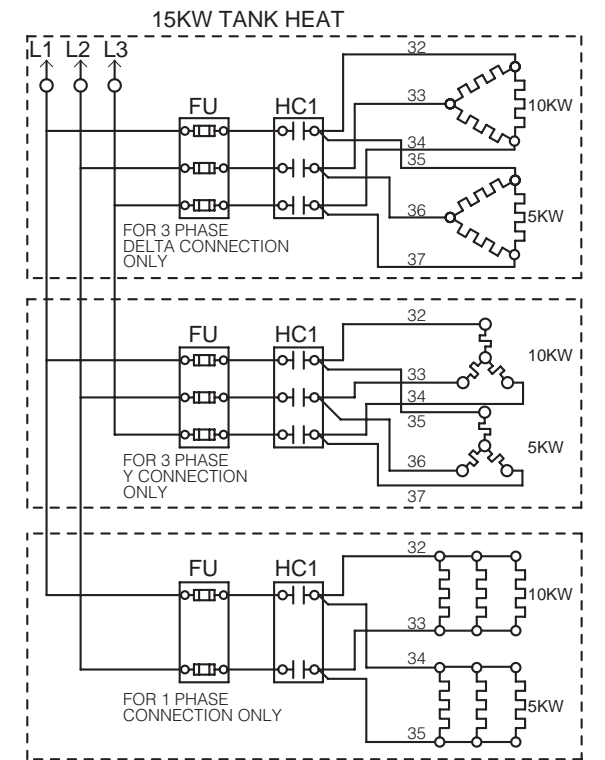
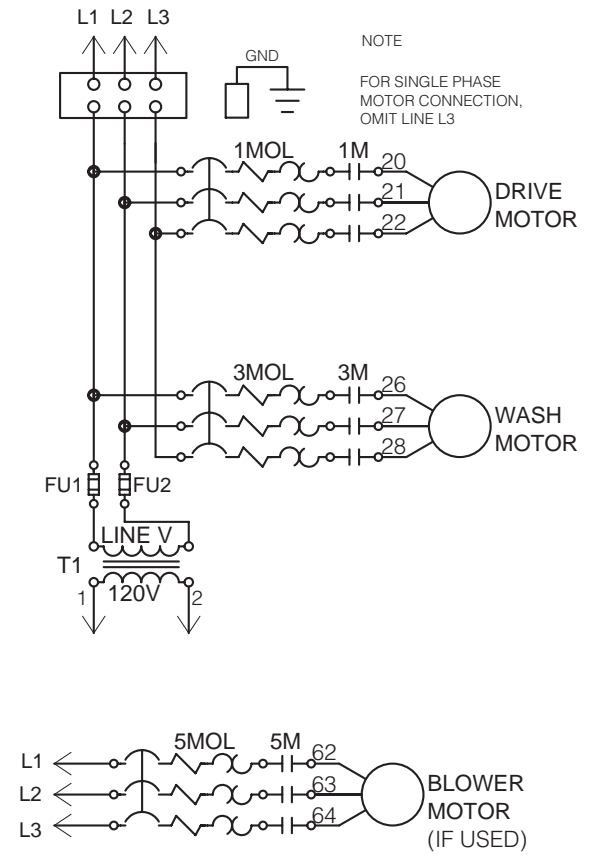
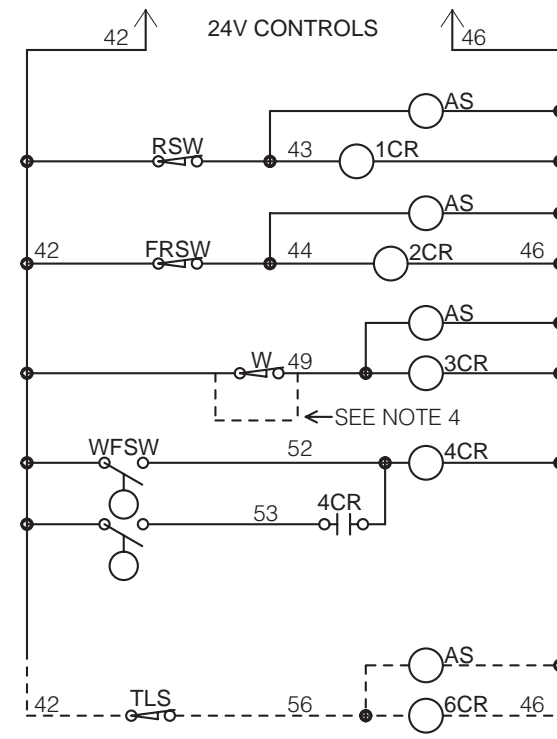
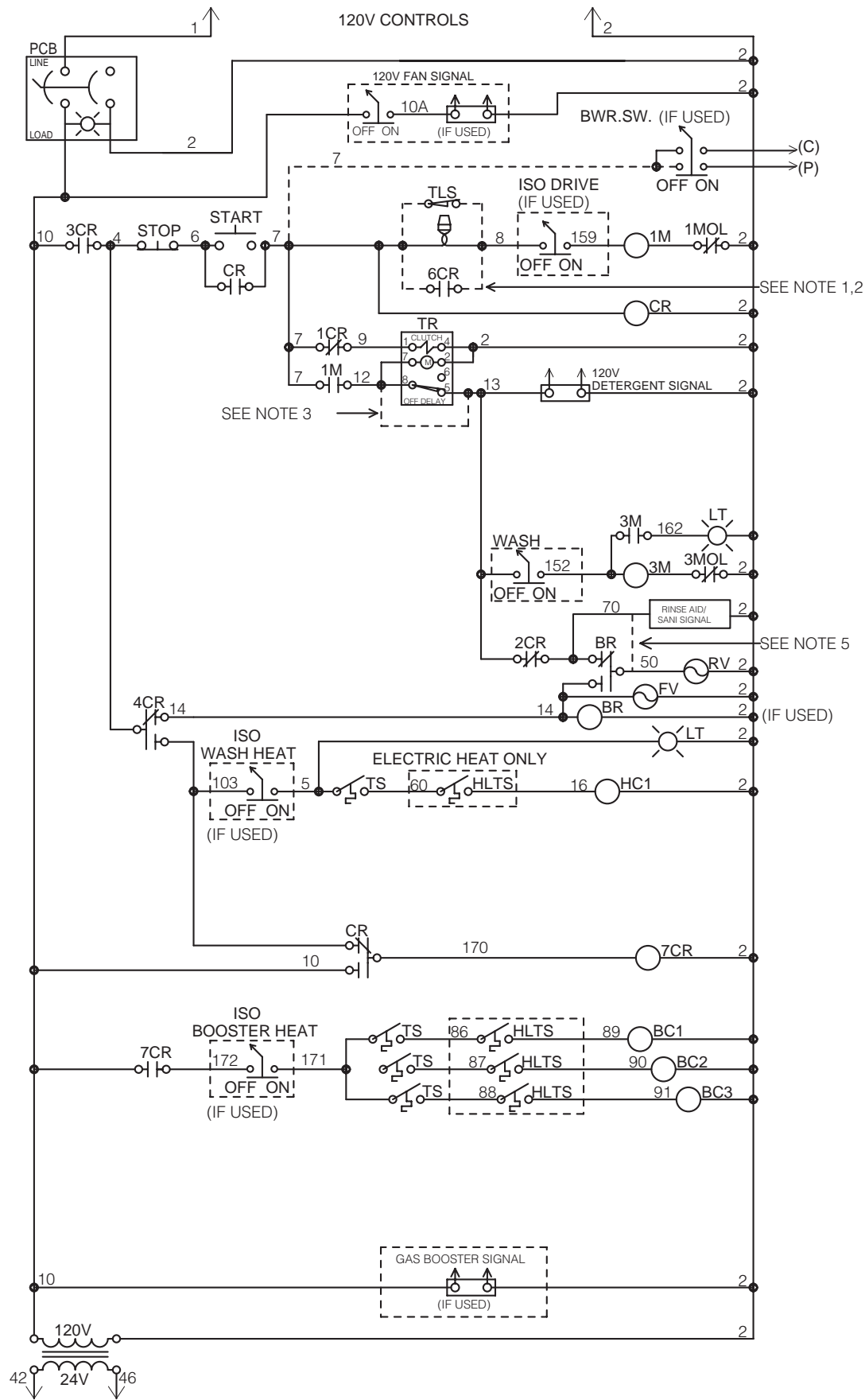
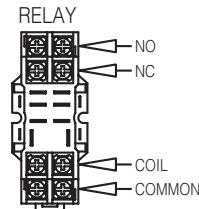
Champion The Dishwashing Machine Specialists		44/54KB STEAM/ELECTRIC	
		B 700930	REV. J

NOTES:

1. WIRE NO. 7 AND 8 ARE CONNECTED TOGETHER IN JUNCTION BOX.
2. WHEN TABLE LIMIT SWITCH IS USED, SEPARATE WIRE 7 AND 8, WIRE TABLE LIMIT SWITCH (TLS) AS SHOWN. WHEN MACHINE IS SUPPLIED WITH MOTORIZED RACK ADVANCE (MRA) AND A 120V TLS IS USED, CONNECT WIRES INTO DISH MACHINE JUNCTION BOX. DISCONNECT WIRE 7 AND ADD TLS IN SERIES.
3. JUMPER TO BE USED WHEN IDLE PUMP IS NOT USED.
4. USE JUMPER WHEN DOOR SAFETY SWITCHES ARE NOT USED.
5. BR RELAY USED WITH A BUILT IN BOOSTER, WITHOUT BUILT IN BOOSTER A JUMPER BETWEEN WIRE 50 AND 70 IS USED.

1CR	RACK SWITCH RELAY
2CR	FINAL RINSE SWITCH RELAY
3CR	DOOR SAFETY SWITCH RELAY
4CR	WASH FILL HOLD-IN RELAY
6CR	TABLE LIMIT SWITCH HOLD-IN RELAY
7CR	BOOSTER HEAT HOLD-IN RELAY
1M	DRIVE MOTOR CONTACTOR
1MOL	DRIVE MOTOR OVERLOAD
3M	WASH MOTOR CONTACTOR
3MOL	WASH MOTOR OVERLOAD
5M	BLOWER MOTOR CONTACTOR
5MOL	BLOWER MOTOR OVERLOAD
AS	ARC SUPPRESSOR
BC-	BOOSTER CONTACTOR/STEAM VALVE
BR	BOOSTER RELAY
BWR.SW.	BLOWER SWITCH
CR	HOLD-IN RELAY
DSS	DOOR SAFETY SWITCH
FU	FUSE/FUSE BLOCK
FV	FILL VALVE
HC-	HEAT CONTACTOR/STEAM VALVE
HLTS	HIGH LIMIT THERMOSTAT (IF USED)
ISO	ISOLATION SWITCH (IF USED)
LT	ISOLATION LIGHT (IF USED)
MSW	MOTOR STOP SWITCH (IF USED)
PCB	POWER SWITCH/CIRCUIT BREAKER
RSW	RACK SWITCH
RV	RINSE VALVE
T1	CONTROL TRANSFORMER
TLS	TABLE LIMIT SWITCH
TR	PUMP TIMER
TS	THERMOSTAT

DIAGRAM STATE
POWER OFF
DOORS CLOSED
TANKS EMPTY



CUSTOMER TO SUPPLY RATED VOLTAGE/PHASE/Hz, AS SPECIFIED PER ORDER, TO DISCONNECT SWITCH. ALL POWER SUPPLIED TO EACH CONNECTION POINT MUST COMPLY WITH ALL LOCAL ELECTRIC CODES.			
DR.BY	A.LANNI	SCALE	
DATE	15NOV94	SHEET	1 OF 1

REV.	DESCRIPTION	DATE	BY
I	ADDED MOTOR AUX CONTACTS TO ISO CKT	5MAY97	JCN
J	REDRAWN POWER SWITCH/CIRCUIT BREAKER	2FEB98	JCN
K	ADDED GAS BOOSTER SIGNAL	12JUNE98	JCN

REV.	DESCRIPTION	DATE	BY
L	ADDED NEW BOOSTER LOGIC	3DEC99	JCN
M	REMOVED UNUSED CWT REFERENCE	4OCT01	JCN
N	ADDED ARC SUPPRESSORS	1FEB02	JCN

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The Dishwashing Machine Specialists

44/54KB
STEAM/ELECTRIC

B 700930

REV. **N**

1CR	RACK SWITCH RELAY
2CR	FINAL RINSE SWITCH RELAY
3CR	DOOR SAFETY SWITCH RELAY
4CR	WASH FILL HOLD IN RELAY
5CR	PREWASH FILL HOLD IN RELAY
6CR	TABLE LIMIT SWITCH HOLD IN RELAY
7CR	BOOSTER HEAT HOLD IN RELAY
1M	DRIVE MOTOR CONTACTOR
1MOL	DRIVE MOTOR OVERLOAD
2M	PREWASH MOTOR CONTACTOR
2MOL	PREWASH MOTOR OVERLOAD
3M	WASH MOTOR CONTACTOR
3MOL	WASH MOTOR OVERLOAD
5M	BLOWER MOTOR CONTACTOR
5MOL	BLOWER MOTOR OVERLOAD
AS	ARC SUPPRESSOR
BC-	BOOSTER CONTACTOR/STEAM VALVE
BR	BOOSTER RELAY
BWR.SW.	BLOWER SWITCH
CR	HOLD-IN RELAY
CWTS	COLD WATER THERMOSTAT
DSS	DOOR SAFETY SWITCH
FU	FUSE/FUSE BLOCK
FV	FILL VALVE
HC-	HEAT CONTACTOR
HLTS	HIGH LIMIT THERMOSTAT (IF USED)
ISO	ISOLATION SWITCH (IF USED)
LT	ISOLATION SWITCH LIGHT (IF USED)
MSW	MOTOR STOP SWITCH (IF USED)
PCB	POWER SWITCH/CIRCUIT BREAKER
PWFV	PREWASH FILL VALVE
RSW	RACK SWITCH
RV	RINSE VALVE
T1	CONTROL TRANSFORMER
TLS	TABLE LIMIT SWITCH
TR	PUMP TIMER
TS	THERMOSTAT

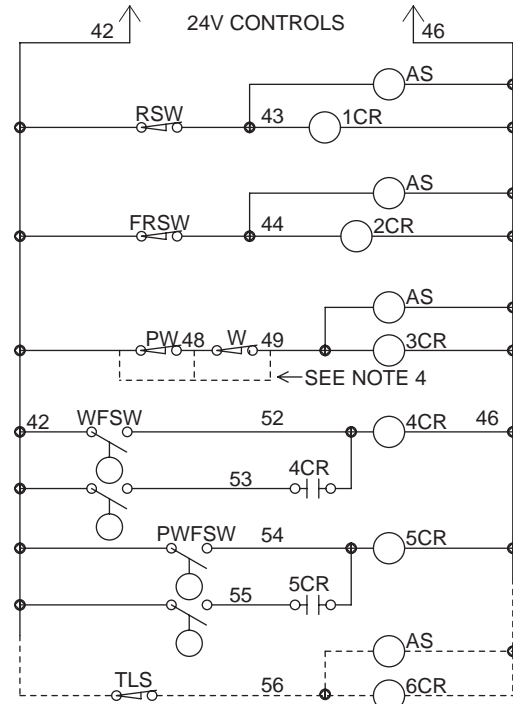
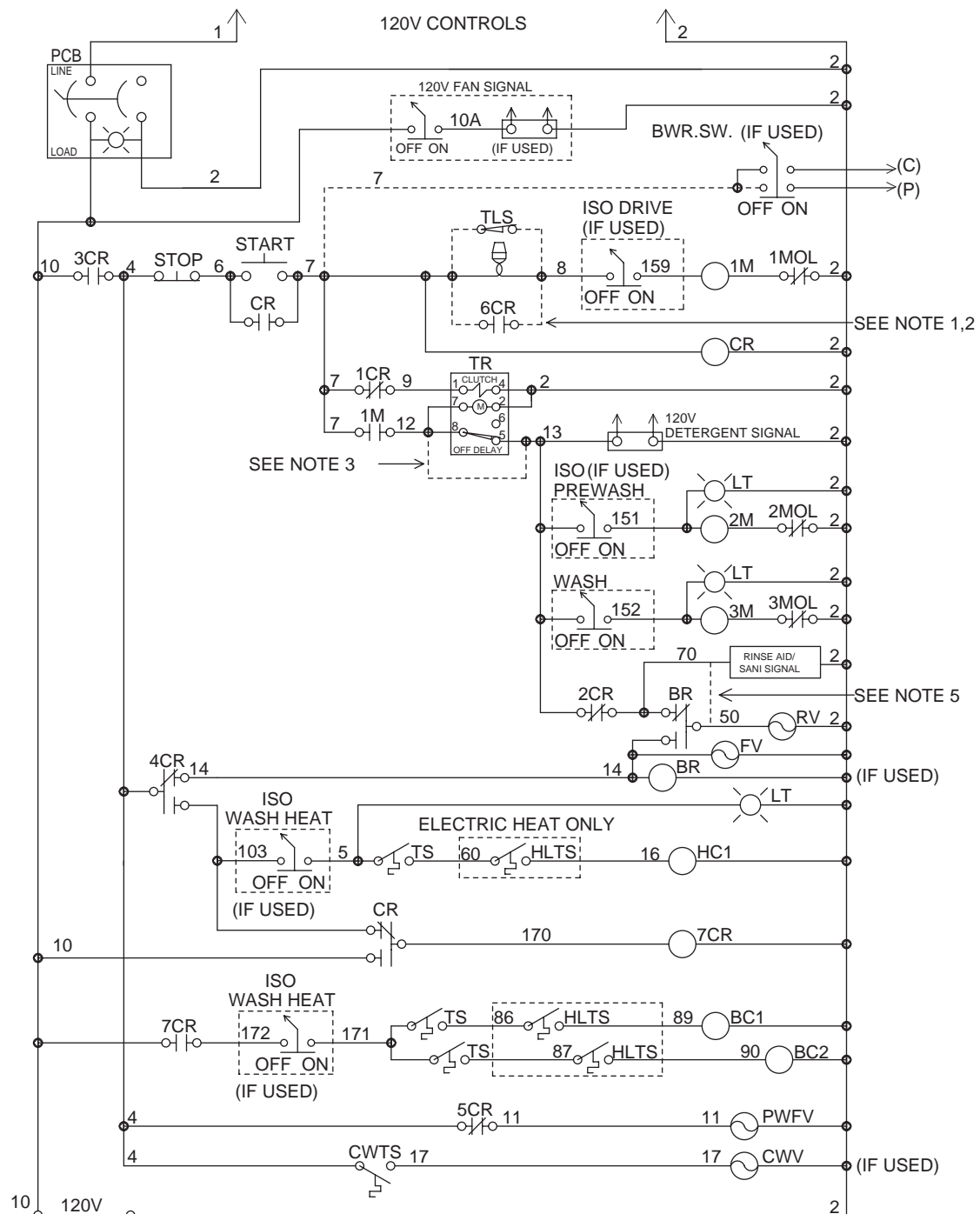
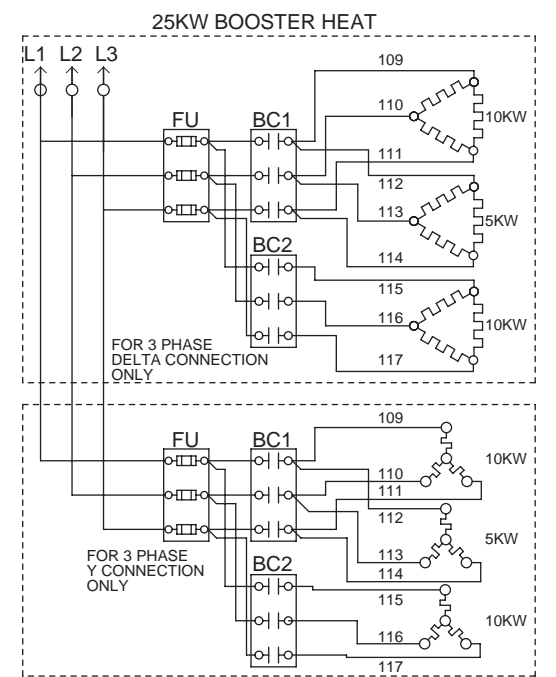
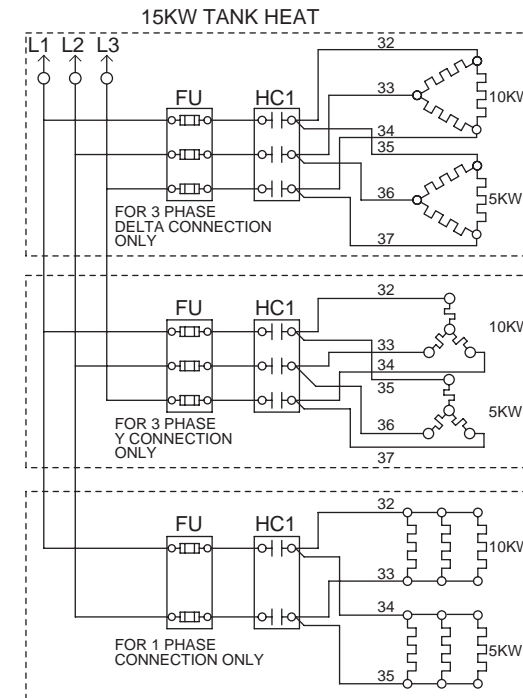
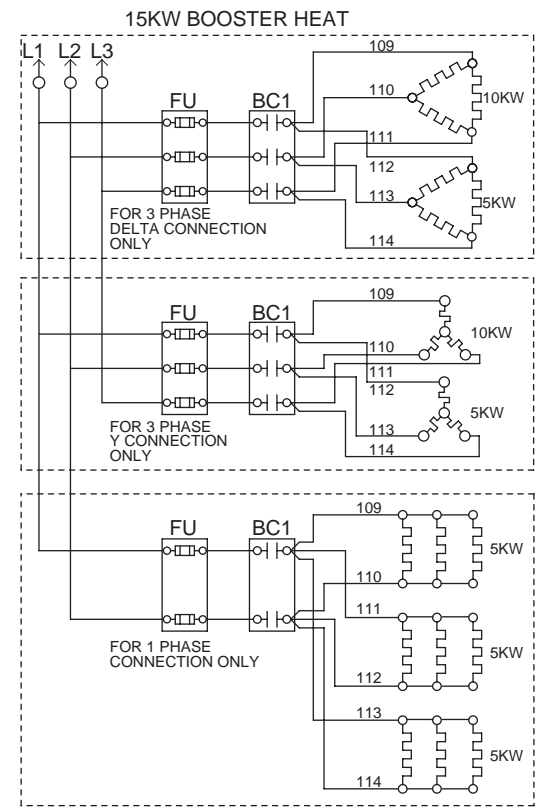
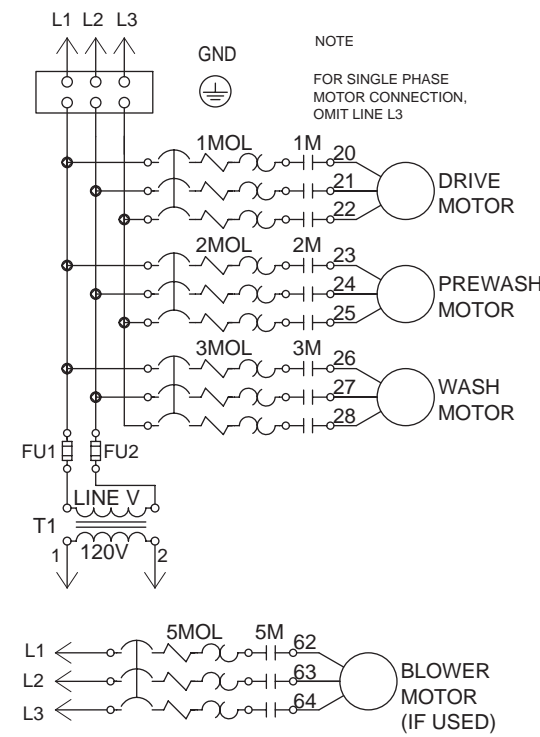


DIAGRAM STATE
POWER OFF
DOORS CLOSED
TANKS EMPTY



REV.	DESCRIPTION	DATE	BY
C	REMOVE HC2, BC2 ON 1PH HEAT	94-2	AL
D	REDRAW, B SIZE	94-8	AL
E	MOVE ISO TO OTHER SIDE OF 4CR	94-11	AL
F	REMOVE MOTOR SWITCH, ADD FAN SWITCH	95-04-19	AL
G	CHANGE BR RELAY NOTE	96-02-14	AL
H	REDRAWN POWER SWITCH/CIRCUIT BREAKER	20MAY98	JCN
I	CHANGED BOOSTER LOGIC, ADDED 7CR	3DEC99	JCN

CUSTOMER TO SUPPLY RATED VOLTAGE/PHASE/Hz, AS SPECIFIED PER ORDER, TO DISCONNECT SWITCH. ALL POWER SUPPLIED TO EACH CONNECTION POINT MUST COMPLY WITH ALL LOCAL ELECTRICAL CODES.

AUTHENTICATION	
DR.BY	A.LANNI
DATE	94-11-15
APP.BY	
DATE	
SCALE	
SHEET	1 OF 1

Champion
The Dishwashing Machine Specialists

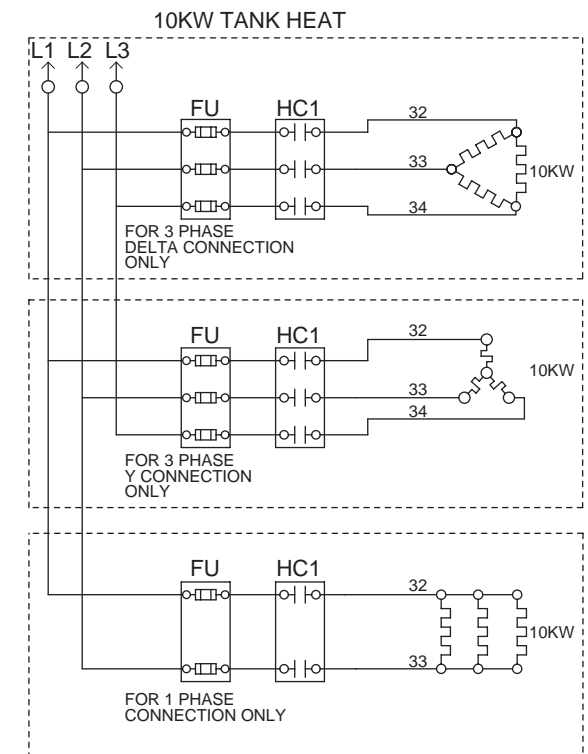
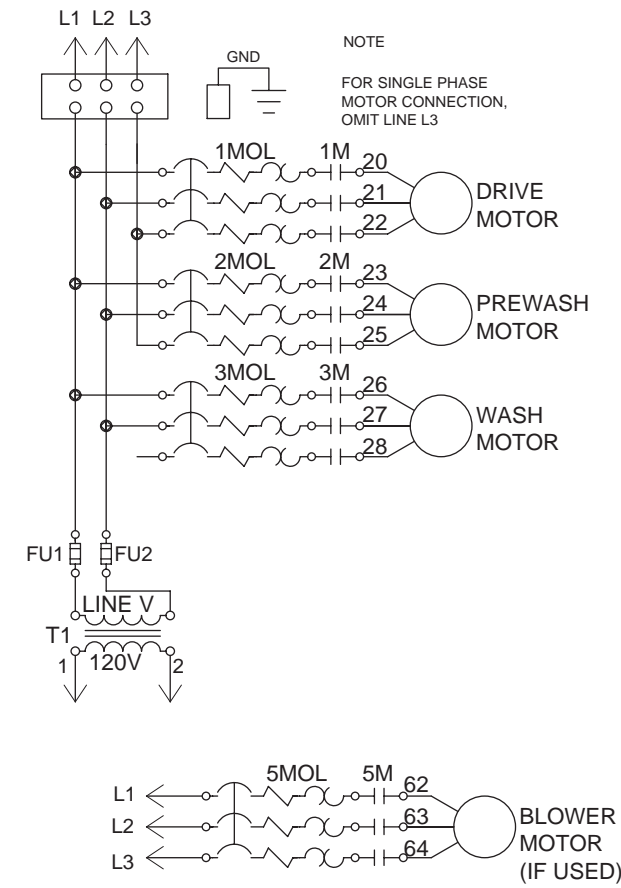
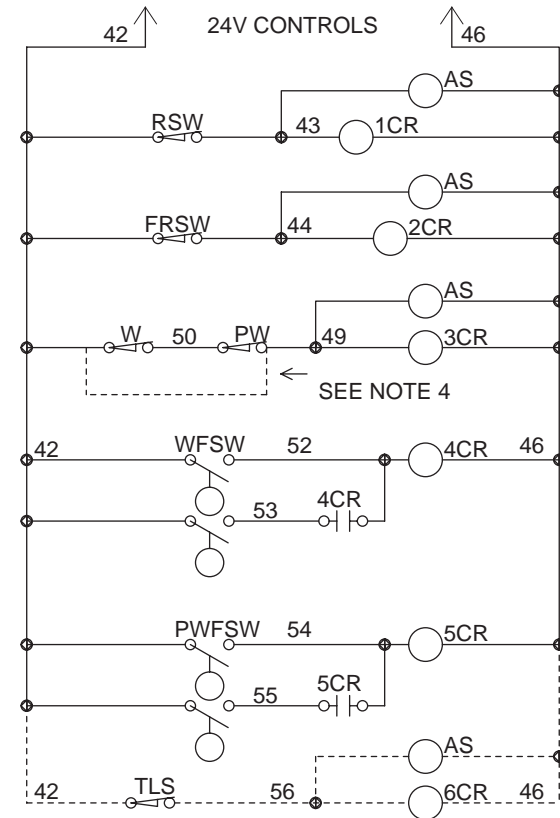
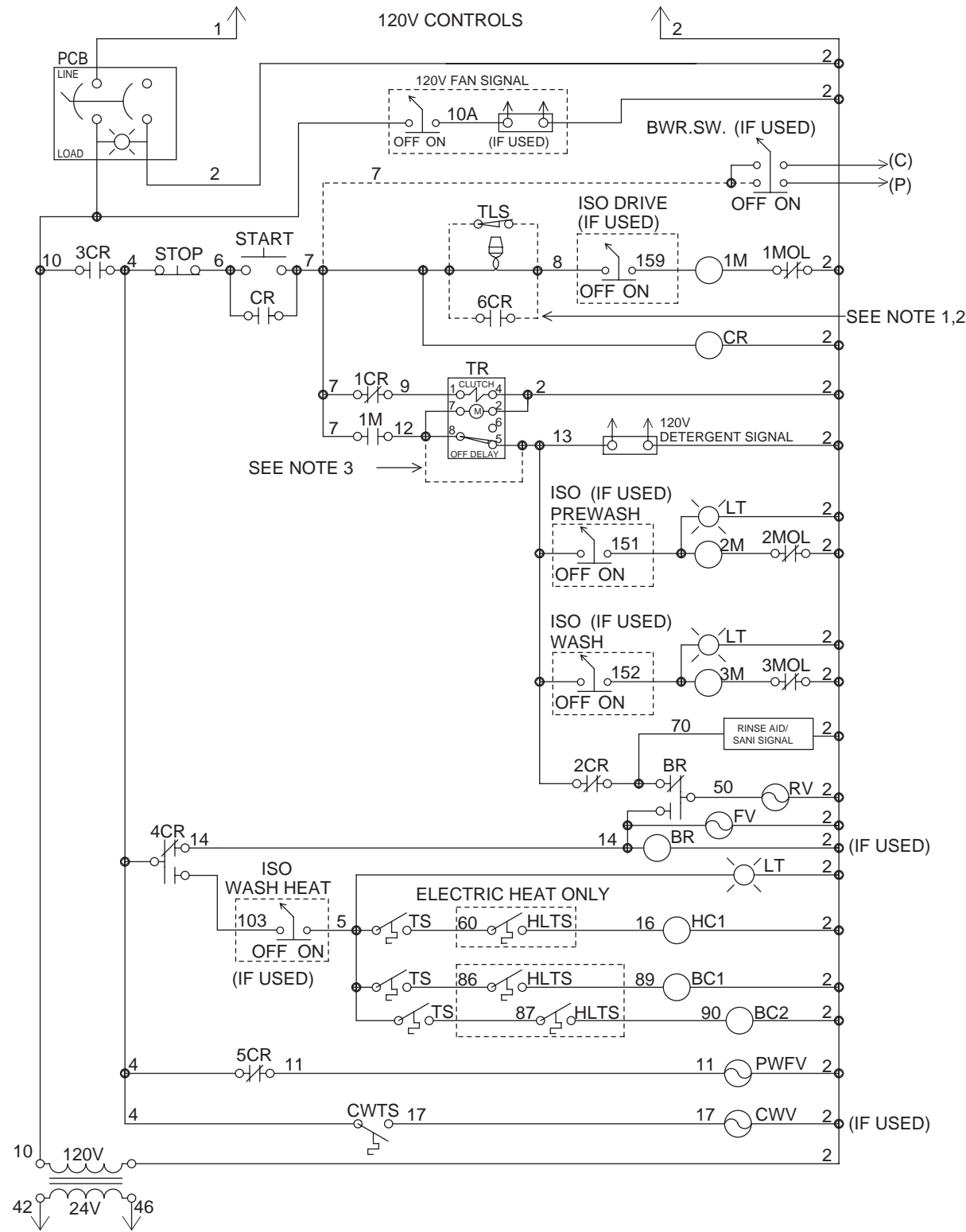
TITLE **66/WS STEAM/ELECTRIC**

B 701021 REV. **J**

NOTES:

1. WIRE NO. 7 AND 8 ARE CONNECTED TOGETHER IN JUNCTION BOX.
2. WHEN TABLE LIMIT SWITCH IS USED, SEPARATE WIRE 7 AND 8, WIRE TABLE LIMIT SWITCH (TLS) AS SHOWN.
WHEN MACHINE IS SUPPLIED WITH MOTORIZED RACK ADVANCE (MRA) AND A 120V TLS IS USED, CONNECT WIRES INTO DISH MACHINE JUNCTION BOX. DISCONNECT WIRE 7 AND ADD TLS IN SERIES.
3. JUMPER TO BE USED WHEN IDLE PUMP IS NOT USED.
4. USE JUMPER WHEN DOOR SAFETY SWITCHES ARE NOT USED.

1CR	RACK SWITCH RELAY
2CR	FINAL RINSE SWITCH RELAY
3CR	DOOR SAFETY SWITCH RELAY
4CR	WASH FILL HOLD IN RELAY
5CR	PREWASH FILL HOLD IN RELAY
6CR	TABLE LIMIT SWITCH HOLD IN RELAY
1M	DRIVE MOTOR CONACTOR
1MOL	DRIVE MOTOR OVERLOAD
2M	PREWASH MOTOR CONTACTOR
2MOL	PREWASH MOTOR OVERLOAD
3M	WASH MOTOR CONTACTOR
3MOL	WASH MOTOR OVERLOAD
5M	BLOWER CONTACTOR
5MOL	BLOWER MOTOR OVERLOAD
AS	ARC SUPPRESSOR
BC-	BOOSTER CONTACTOR/STEAM VALVE
BR	BOOSTER RELAY
BWR.SW.	BLOWER SWITCH
CR	HOLD IN RELAY
CWTS	COLD WATER THERMOSTAT
DSS	DOOR SAFETY SWITCH
FU	FUSE/FUSE BLOCK
FV	WASH FILL VALVE
HC-	HEAT CONTACTOR/STEAM VALVE
HLTS	HIGH LIMIT THERMOSTAT (IF USED)
ISO	ISOLATION SWITCH (IF USED)
LT	ISOLATION SWITCH LIGHT (IF USED)
MSW	MOTOR STOP SWITCH (IF USED)
PCB	POWER SWITCH/CIRCUIT BREAKER
PWFSW	PREWASH FLOAT SWITCH
PWFV	PREWASH FILL VALVE
RSW	RACK SWITCH
RV	RINSE VALVE
T1	CONTROL TRANSFORMER
TLS	TABLE LIMIT SWITCH
TR	PUMP TIMER
TS	THERMOSTAT
WFSW	WASH FLOAT SWITCH



CUSTOMER TO SUPPLY RATED VOLTAGE/PHASE/Hz, AS SPECIFIED PER ORDER. TO DISCONNECT SWITCH, ALL POWER SUPPLIED TO EACH CONNECTION POINT MUST COMPLY WITH ALL LOCAL ELECTRIC CODES.			
DR.BY	A.LANNI	SCALE	1=1
DATE	94-11-15	SHEET	1 OF 1

REV.	DESCRIPTION	DATE	BY
E	REDRAWN POWER SWITCH/CIRCUIT BREAKER	20MAY98	JCN
F	ADDED ARC SUPPRESSOR	1FEB02	JCN
G	ADDED MISSING 5CR RELAY COIL TO 120 VOLT CIRCUIT	11 MAR 02	MJM

REV.	DESCRIPTION	DATE	BY

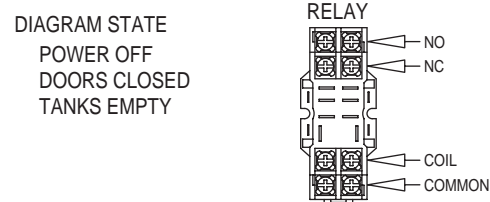
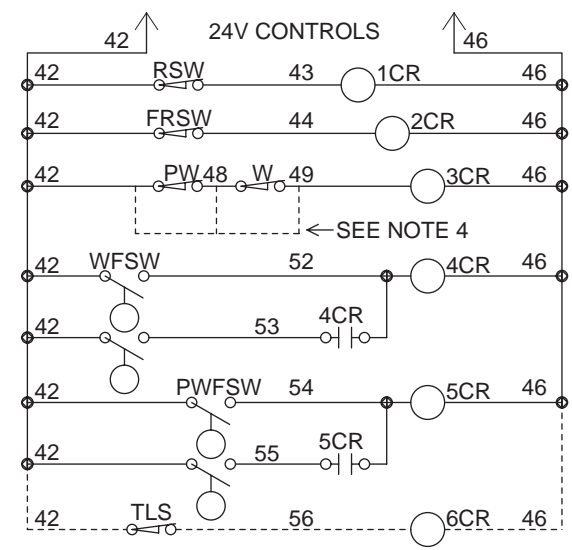
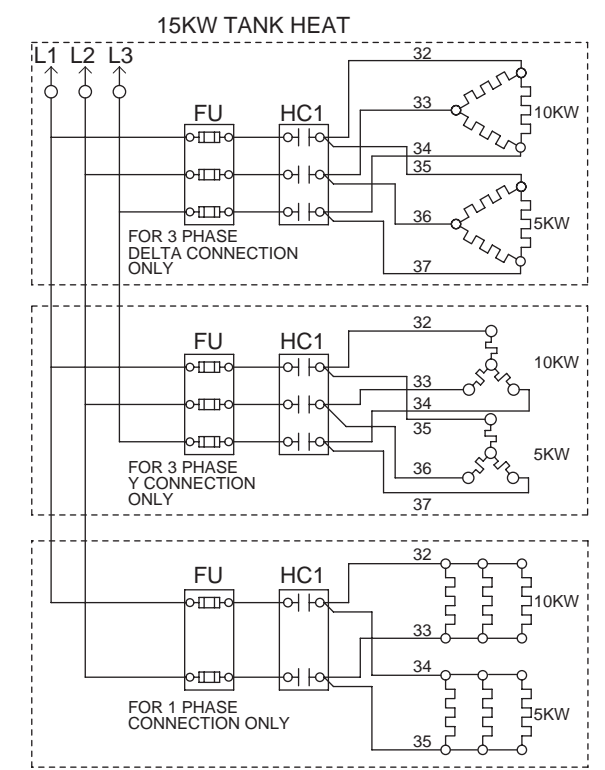
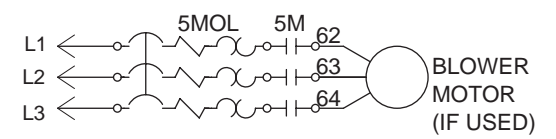
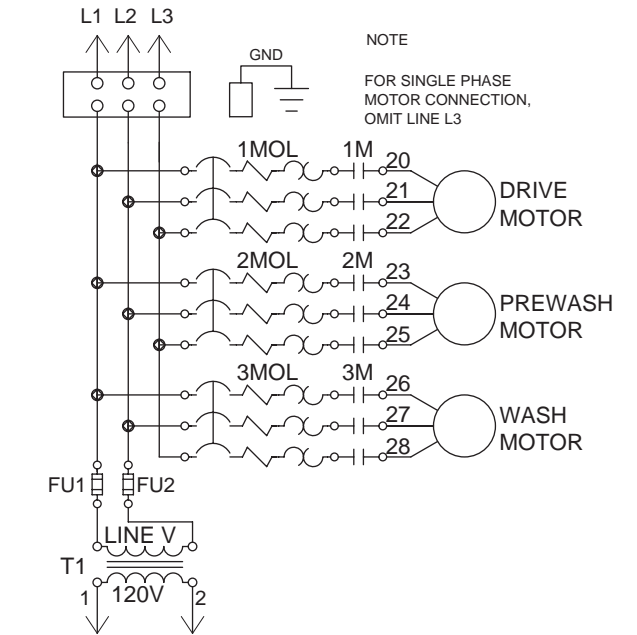
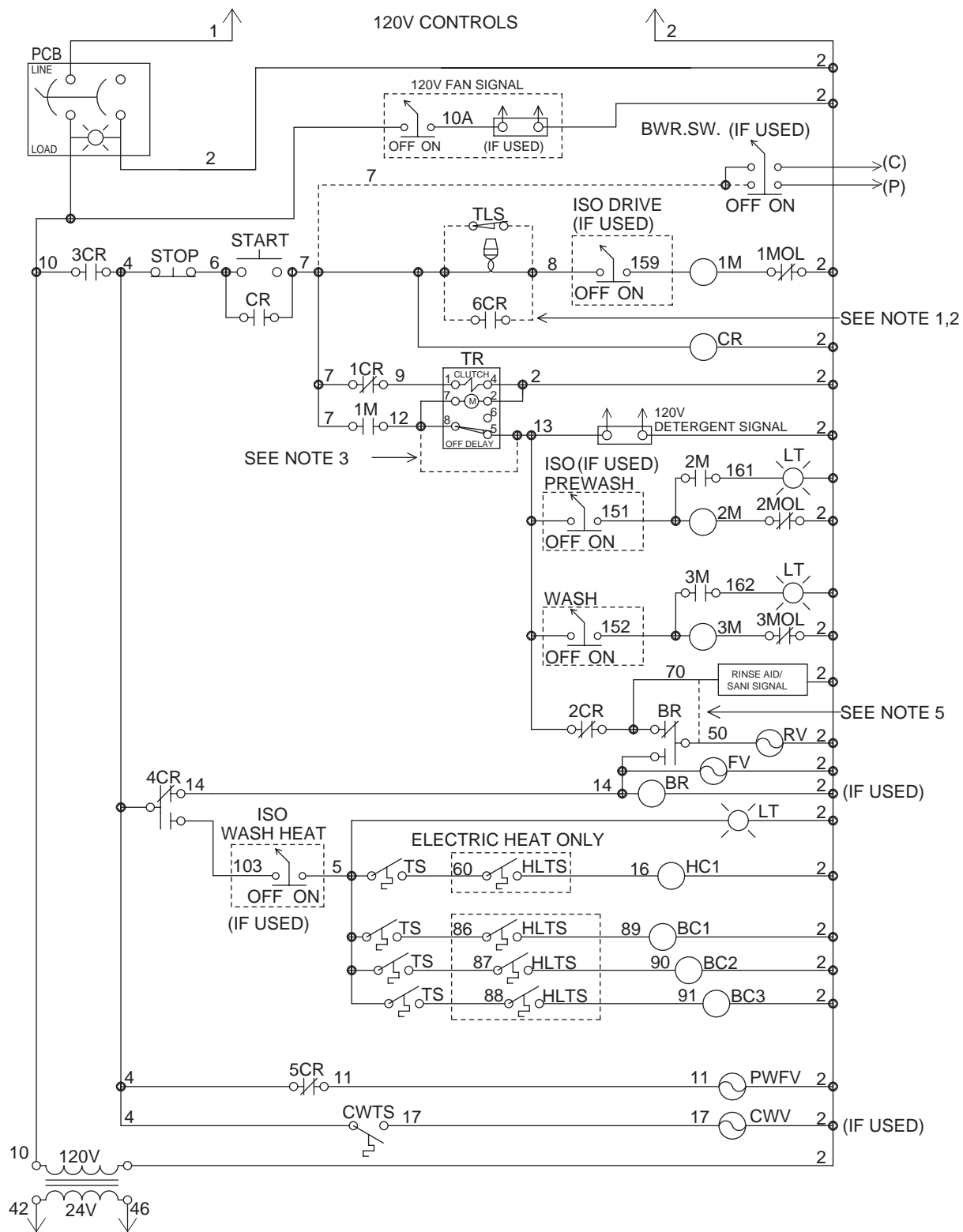
Champion The Dishwashing Machine Specialists		KL-66 STEAM/ELECTRIC	
		B 700932	REV. G

**

NOTES:

1. WIRE NO. 7 AND 8 ARE CONNECTED TOGETHER IN JUNCTION BOX.
2. WHEN TABLE LIMIT SWITCH (TLS) IS USED, SEPARATE WIRE 7 AND 8, WIRE TABLE LIMIT SWITCH (TLS) AS SHOWN. WHEN MACHINE IS SUPPLIED WITH MOTORIZED RACK ADVANCE (MRA) AND A 120V TLS IS USED, CONNECT WIRES INTO DISH MACHINE JUNCTION BOX. DISCONNECT WIRE 7 AND ADD TLS IN SERIES.
3. JUMPER TO BE USED WHEN IDLE PUMP IS NOT USED.
4. USE JUMPER WHEN DOOR SAFETY SWITCHES ARE NOT USED.
5. BR RELAY USED WITH A BUILT IN BOOSTER, WITHOUT BUILT IN BOOSTER A JUMPER BETWEEN WIRE 50 AND 70 IS USED.

1CR	RACK SWITCH RELAY
2CR	FINAL RINSE SWITCH RELAY
3CR	DOOR SAFETY SWITCH RELAY
4CR	WASH FILL HOLD-IN RELAY
5CR	PREWASH FILL HOLD-IN RELAY
6CR	TABLE LIMIT SWITCH HOLD-IN RELAY
1M	DRIVE MOTOR CONTACTOR
1MOL	DRIVE MOTOR OVERLOAD
2M	PREWASH MOTOR CONTACTOR
2MOL	PREWASH MOTOR OVERLOAD
3M	WASH MOTOR CONTACTOR
3MOL	WASH MOTOR OVERLOAD
5M	BLOWER MOTOR CONTACTOR
5MOL	BLOWER MOTOR OVERLOAD
BC-	BOOSTER CONTACTOR/STEAM VALVE
BR	BOOSTER RELAY
BWR.SW.	BLOWER SWITCH
CR	HOLD-IN RELAY
CWTS	COLD WATER THERMOSTAT
DSS	DOOR SAFETY SWITCH
FU	FUSE/FUSE BLOCK
FV	FILL VALVE
HC-	HEAT CONTACTOR/STEAM VALVE
HLTS	HIGH LIMIT THERMOSTAT (IF USED)
ISO	ISOLATION SWITCH (IF USED)
LT	ISOLATION LIGHT (IF USED)
MSW	MOTOR STOP SWITCH (IF USED)
PCB	POWER SWITCH/CIRCUIT BREAKER
PWFV	PREWASH FILL VALVE
RSW	RACK SWITCH
RV	RINSE VALVE
T1	CONTROL TRANSFORMER
TLS	TABLE LIMIT SWITCH
TR	PUMP TIMER
TS	THERMOSTAT



CUSTOMER TO SUPPLY RATED VOLTAGE/PHASE/Hz, AS SPECIFIED PER ORDER, TO DISCONNECT SWITCH. ALL POWER SUPPLIED TO EACH CONNECTION POINT MUST COMPLY WITH ALL LOCAL ELECTRIC CODES.			
DR.BY	A.LANNI	SCALE	1=1
DATE	94-11-15	SHEET	1 OF 1

REV.	DESCRIPTION	DATE	BY
F	MOVE ISO TO OTHER SIDE OF 4CR	94-11	AL
G	REMOVE MOTOR SWITCH, ADD FAN SWITCH	95-04-19	AL
H	CHANGE BR RELAY NOTE	96-02-14	AL

REV.	DESCRIPTION	DATE	BY
I	ADDED RELAY DIAGRAM	96-12-09	JCN
J	ADDED MOTOR AUX CONTACTS TO ISO CKT	16APRIL97	JCN
K	REDREW POWER SWITCH/CIRCUIT BREAKER	30JAN98	JCN

The Dishwashing Machine Specialists

44/54KPRB
STEAM/ELECTRIC

B 700933

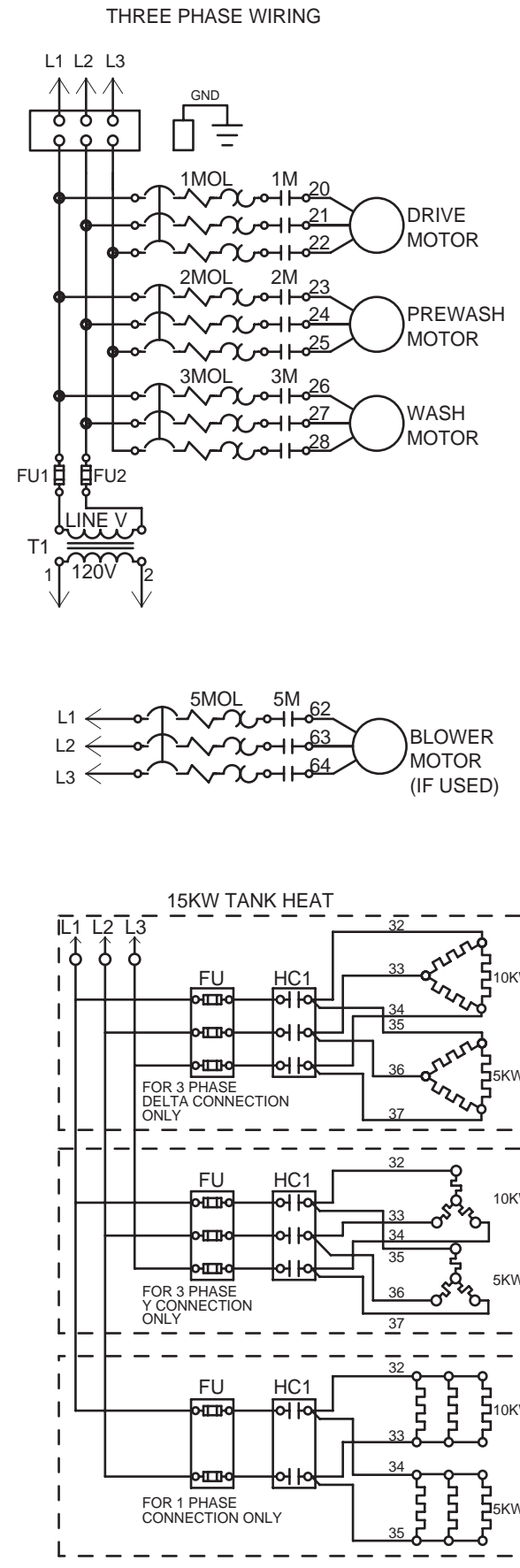
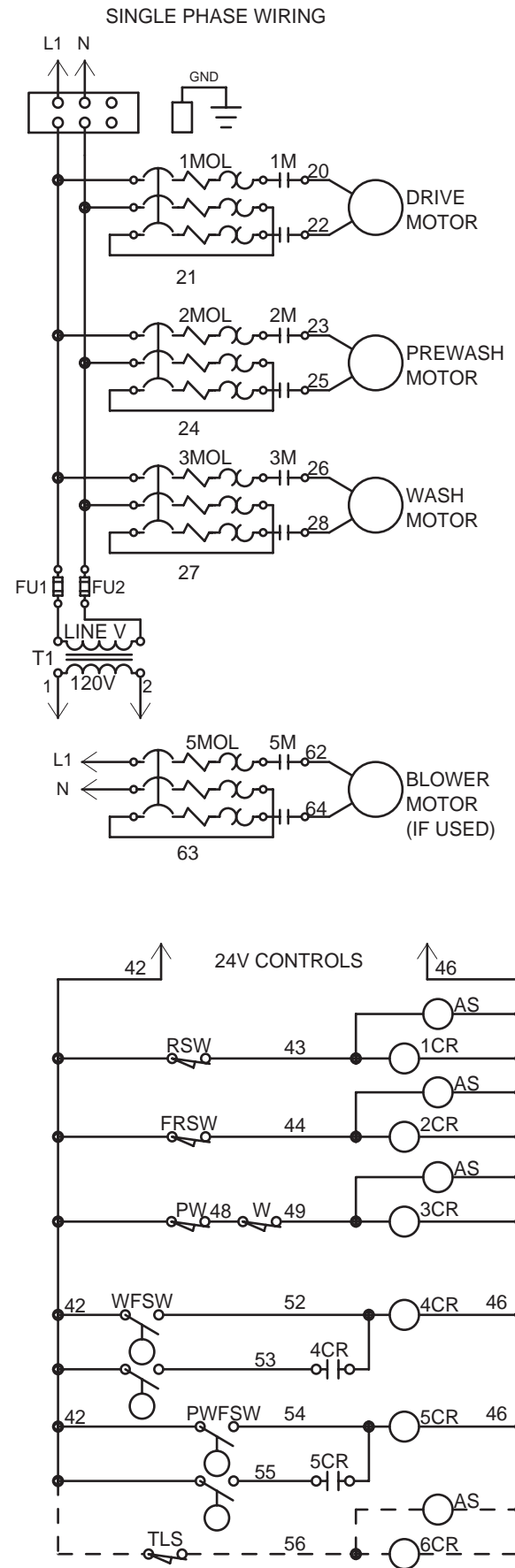
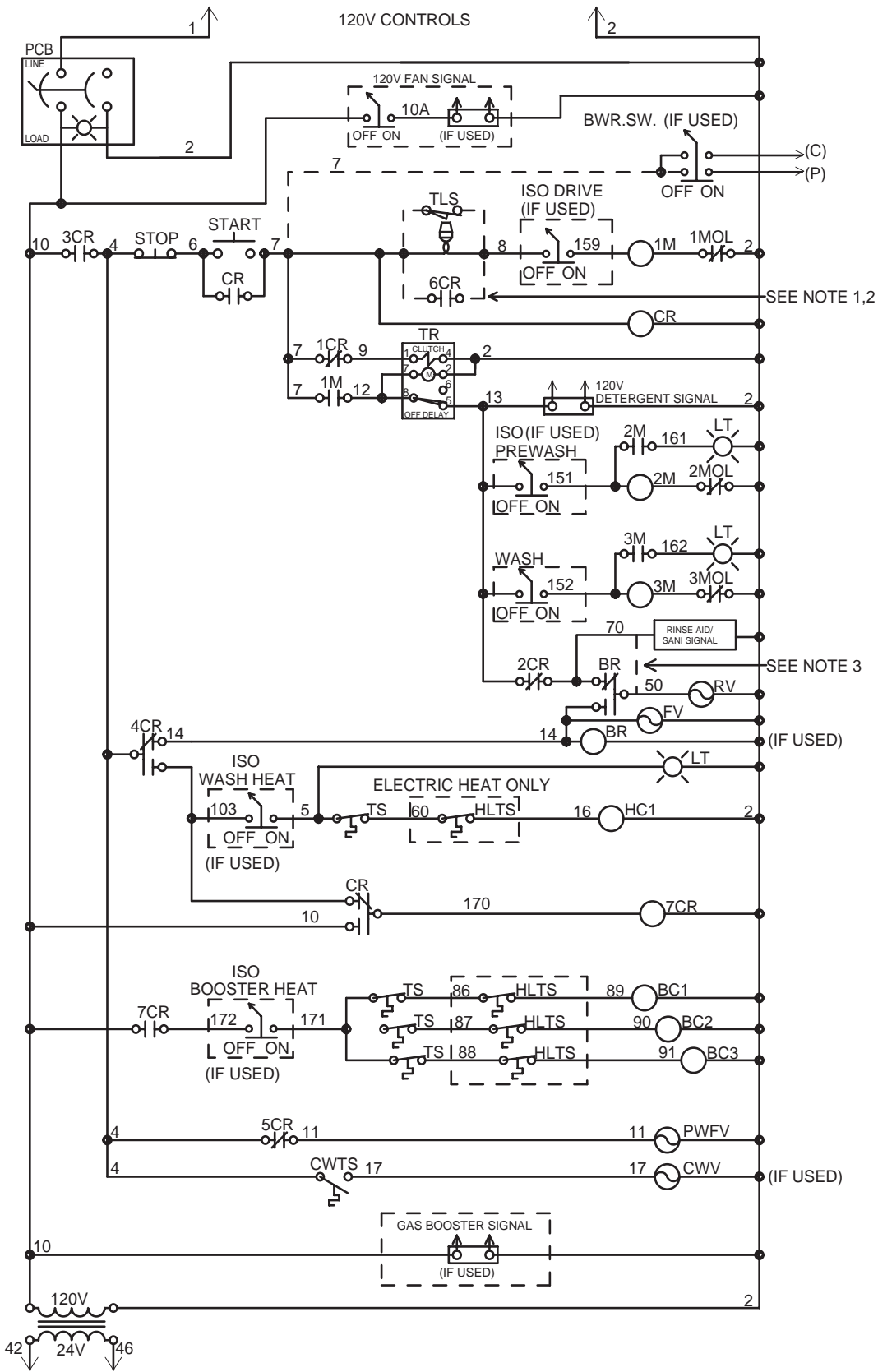
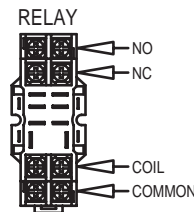
REV. **K**

NOTES:

1. WIRE NO. 7 AND 8 ARE CONNECTED TOGETHER IN JUNCTION BOX.
2. WHEN TABLE LIMIT SWITCH IS USED, SEPARATE WIRE 7 AND 8, WIRE TABLE LIMIT SWITCH (TLS) AS SHOWN. WHEN MACHINE IS SUPPLIED WITH MOTORIZED RACK ADVANCE (MRA) AND A 120V TLS IS USED, CONNECT WIRES INTO DISH MACHINE JUNCTION BOX. DISCONNECT WIRE 7 AND ADD TLS IN SERIES.
3. BR RELAY USED WITH A BUILT IN BOOSTER, WITHOUT BUILT IN BOOSTER A JUMPER BETWEEN WIRE 50 AND 70 IS USED.

1CR	RACK SWITCH RELAY
2CR	FINAL RINSE SWITCH RELAY
3CR	DOOR SAFETY SWITCH RELAY
4CR	WASH FILL HOLD-IN RELAY
5CR	PREWASH FILL HOLD-IN RELAY
6CR	TABLE LIMIT SWITCH HOLD-IN RELAY
7CR	BOOSTER HEAT HOLD-IN RELAY
1M	DRIVE MOTOR CONTACTOR
1MOL	DRIVE MOTOR OVERLOAD
2M	PREWASH MOTOR CONTACTOR
2MOL	PREWASH MOTOR OVERLOAD
3M	WASH MOTOR CONTACTOR
3MOL	WASH MOTOR OVERLOAD
5M	BLOWER MOTOR CONTACTOR
5MOL	BLOWER MOTOR OVERLOAD
AS	ARC SUPPRESSOR
BC-	BOOSTER CONTACTOR/STEAM VALVE
BR	BOOSTER RELAY
BWR.SW.	BLOWER SWITCH
CR	HOLD-IN RELAY
CWTS	COLD WATER THERMOSTAT
DSS	DOOR SAFETY SWITCH
FU	FUSE/FUSE BLOCK
FV	FILL VALVE
HC-	HEAT CONTACTOR/STEAM VALVE
HLTS	HIGH LIMIT THERMOSTAT (IF USED)
ISO	ISOLATION SWITCH (IF USED)
LT	ISOLATION LIGHT (IF USED)
MSW	MOTOR STOP SWITCH (IF USED)
PCB	POWER SWITCH/CIRCUIT BREAKER
PWFV	PREWASH FILL VALVE
RSW	RACK SWITCH
RV	RINSE VALVE
T1	CONTROL TRANSFORMER
TLS	TABLE LIMIT SWITCH
TR	PUMP TIMER
TS	THERMOSTAT

DIAGRAM STATE
POWER OFF
DOORS CLOSED
TANKS EMPTY



CUSTOMER TO SUPPLY RATED VOLTAGE/PHASE/Hz, AS SPECIFIED PER ORDER, TO DISCONNECT SWITCH. ALL POWER SUPPLIED TO EACH CONNECTION POINT MUST COMPLY WITH ALL LOCAL ELECTRIC CODES.			
DR.BY	A.LANNI	SCALE	
DATE	15NOV94	SHEET	1 OF 1

REV.	DESCRIPTION	DATE	BY
J	ADDED MOTOR AUX CONTACTS TO ISO CKT	16APRIL97	JCN
K	REDREW POWER SWITCH/CIRCUIT BREAKER	30JAN98	JCN
L	ADDED GAS BOOSTER SIGNAL	12JUNE98	JCN

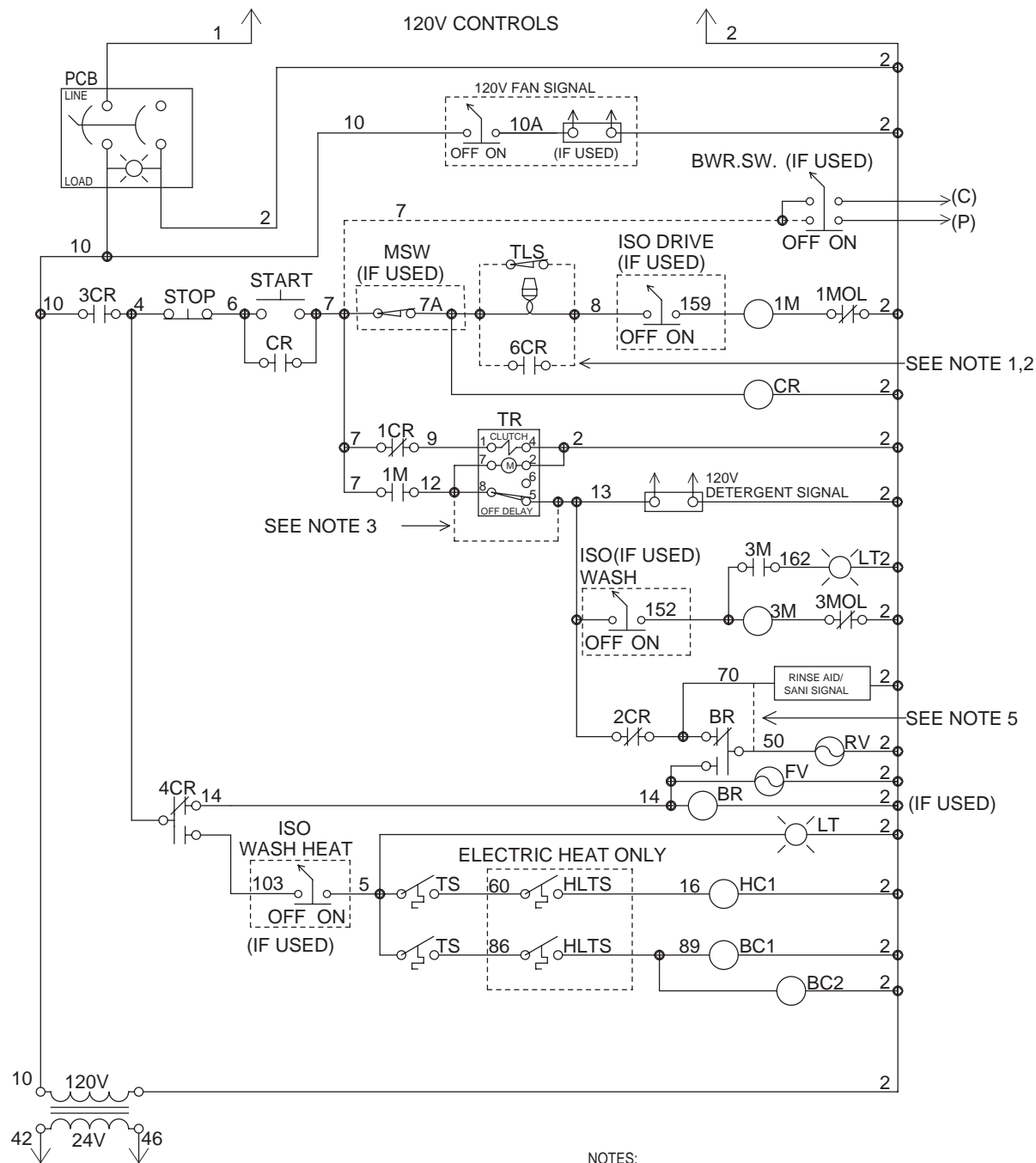
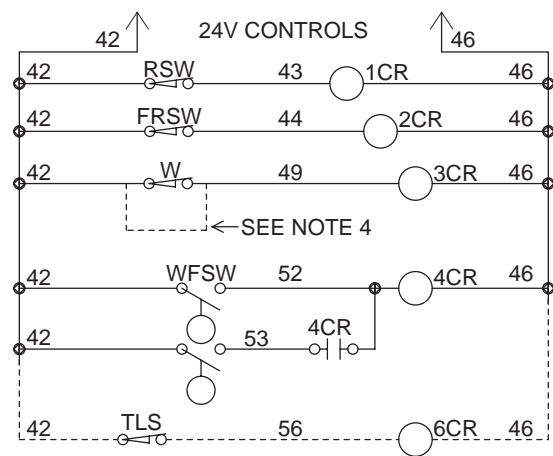
REV.	DESCRIPTION	DATE	BY
M	ADDED NEW BOOSTER LOGIC	3DEC99	JCN
N	ADDED ARC SUPPRESSOR TO REED CIRCUITS	30MAR01	JCN
O	ADDED SINGLE PHASE WIRING	02SEP03	JAM

The Dishwashing Machine Specialists

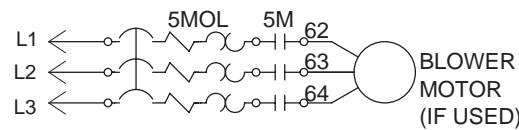
44/54KPRB
STEAM/ELECTRIC

B 700933

REV. **O**



1CR	RACK SWITCH RELAY
2CR	FINAL RINSE SWITCH RELAY
3CR	DOOR SAFETY SWITCH RELAY
4CR	WASH FILL HOLD IN RELAY
6CR	TABLE LIMIT SWITCH HOLD IN RELAY
1M	DRIVE CONTACTOR
1MOL	DRIVE MOTOR OVERLOAD
3M	WASH CONTACTOR
3MOL	WASH MOTOR OVERLOAD
5M	BLOWER CONTACTOR
5MOL	BLOWER MOTOR OVERLOAD
BC-	BOOSTER CONTACTOR/STEAM VALVE
BR	BOOSTER RELAY
BWR.SW.	BLOWER SWITCH
CR	HOLD-IN RELAY
CWTS	COLD WATER THERMOSTAT
DSS	DOOR SAFETY SWITCH
FU	FUSE/FUSE BLOCK
FV	FILL VALVE
HC-	HEAT CONTACTOR
HLTS	HIGH LIMIT THERMOSTAT (IF USED)
ISO	ISOLATION SWITCH (IF USED)
LT	ISOLATION SWITCH LIGHT (IF USED)
MSW	MOTOR STOP SWITCH (IF USED)
PCB	POWER SWITCH/CIRCUIT BREAKER
RSW	RACK SWITCH
RV	RINSE VALVE
T1	CONTROL TRANSFORMER
TLS	TABLE LIMIT SWITCH
TR	PUMP TIMER
TS	THERMOSTAT



- NOTES:
1. WIRE NO. 7 AND 8 ARE CONNECTED TOGETHER IN JUNCTION BOX.
 2. WHEN TABLE LIMIT SWITCH IS USED, SEPARATE WIRE 7 AND 8, WIRE TABLE LIMIT SWITCH (TLS) AS SHOWN. WHEN MACHINE IS SUPPLIED WITH MOTORIZED RACK ADVANCE (MRA) AND A 120V TLS IS USED, CONNECT WIRES INTO DISH MACHINE JUNCTION BOX. DISCONNECT WIRE 7 AND ADD TLS IN SERIES.
 3. JUMPER TO BE USED WHEN IDLE PUMP IS NOT USED.
 4. USE JUMPER WHEN DOOR SAFETY SWITCHES ARE NOT USED.
 5. BR RELAY USED WITH A BUILT IN BOOSTER, WITHOUT BUILT IN BOOSTER A JUMPER BETWEEN WIRE 50 AND 70 IS USED.

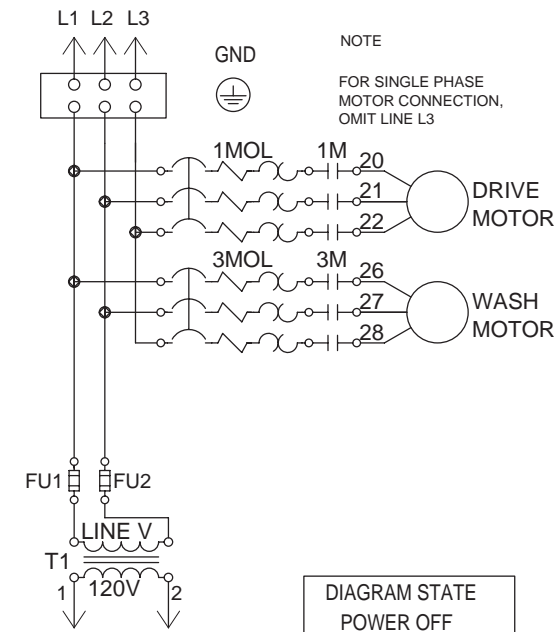
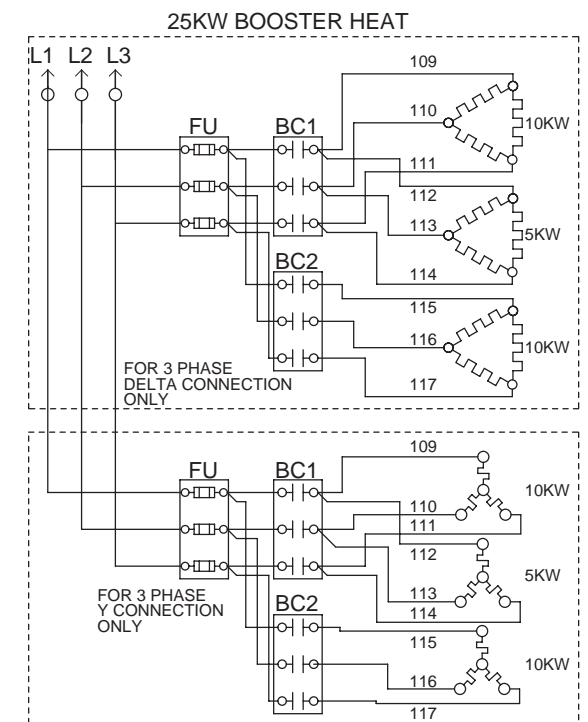
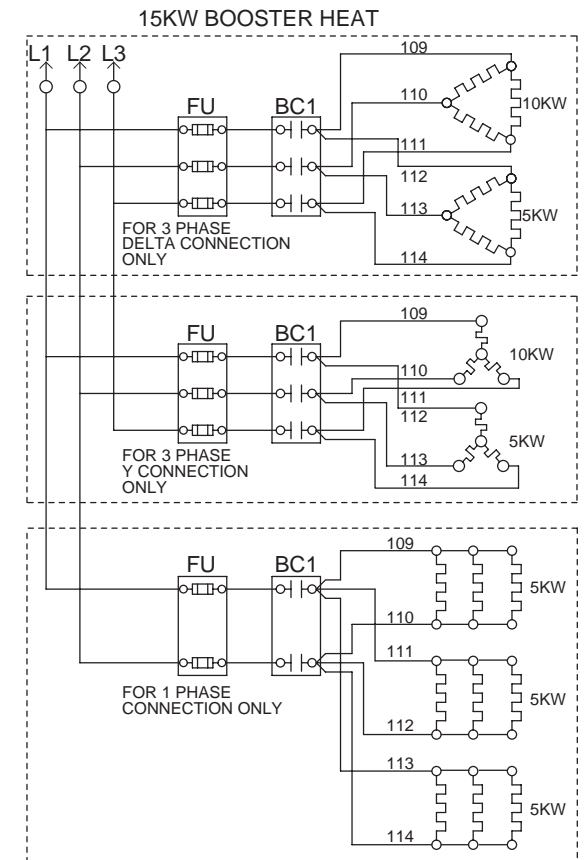
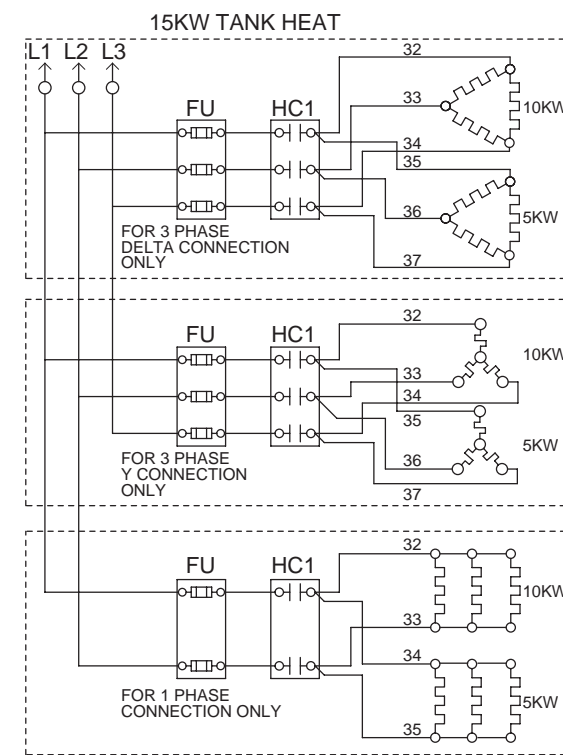


DIAGRAM STATE
POWER OFF
DOORS CLOSED
TANKS EMPTY



REV.	DESCRIPTION	DATE	BY
C	REMOVE HC2, BC2 ON 1o HEAT	94-2	AL
D	ADD DRIVE MOTOR STOP SWITCH OPTION	94-2	AL
E	REDRAW, B SIZE	94-8	AL
F	MOVE ISO TO OTHER SIDE OF 4CR	94-11	AL
G	CHANGE BR RELAY NOTE	96-02-14	AL
H	ADDED MOTOR AUX CONTACT TO ISO CKT.	16APRIL97	JCN
I	REMOVED CWT, BC2 TO OPERATE WITH BC1	10DEC97	JCN
J	REDRAWN POWER SWITCH/CIRCUIT BREAKER	20MAY98	JCN

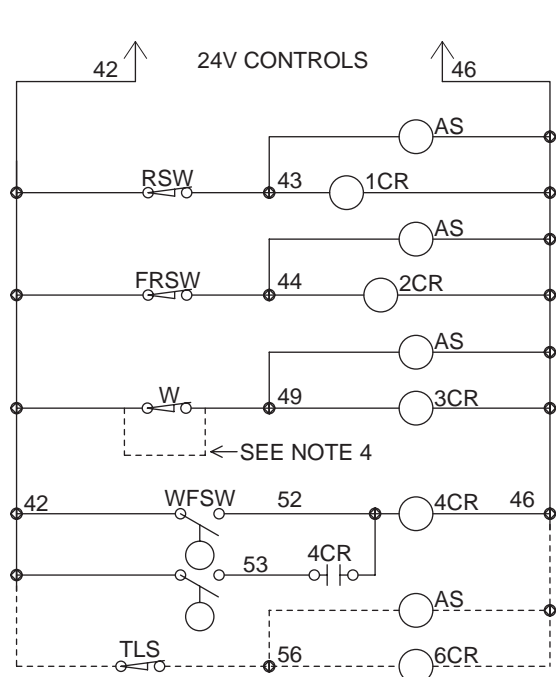
CUSTOMER TO SUPPLY RATED VOLTAGE/PHASE/Hz, AS SPECIFIED PER ORDER, TO DISCONNECT SWITCH. ALL POWER SUPPLIED TO EACH CONNECTION POINT MUST COMPLY WITH ALL LOCAL ELECTRICAL CODES.

AUTHENTICATION	
DR.BY	A.LANNI
DATE	94-11-15
APP.BY	
DATE	
SCALE	1=1
SHEET	1 OF 1

Champion
The Dishwashing Machine Specialists

TITLE **44/WS**
STEAM/ELECTRIC

B 701020 REV. **J**



1CR	RACK SWITCH RELAY
2CR	FINAL RINSE SWITCH RELAY
3CR	DOOR SAFETY SWITCH RELAY
4CR	WASH FILL HOLD IN RELAY
6CR	TABLE LIMIT SWITCH HOLD IN RELAY
1M	DRIVE CONTACTOR
1MOL	DRIVE MOTOR OVERLOAD
3M	WASH CONTACTOR
3MOL	WASH MOTOR OVERLOAD
5M	BLOWER CONTACTOR
5MOL	BLOWER MOTOR OVERLOAD
AS	ARC SUPPRESSOR
BC-	BOOSTER CONTACTOR/STEAM VALVE
BR	BOOSTER RELAY
BWR.SW.	BLOWER SWITCH
CR	HOLD-IN RELAY
CWTS	COLD WATER THERMOSTAT
DSS	DOOR SAFETY SWITCH
FU	FUSE/FUSE BLOCK
FV	FILL VALVE
HC-	HEAT CONTACTOR
HLTS	HIGH LIMIT THERMOSTAT (IF USED)
ISO	ISOLATION SWITCH (IF USED)
LT	ISOLATION SWITCH LIGHT (IF USED)
MSW	MOTOR STOP SWITCH (IF USED)
PCB	POWER SWITCH/CIRCUIT BREAKER
RSW	RACK SWITCH
RV	RINSE VALVE
T1	CONTROL TRANSFORMER
TLS	TABLE LIMIT SWITCH
TR	PUMP TIMER
TS	THERMOSTAT

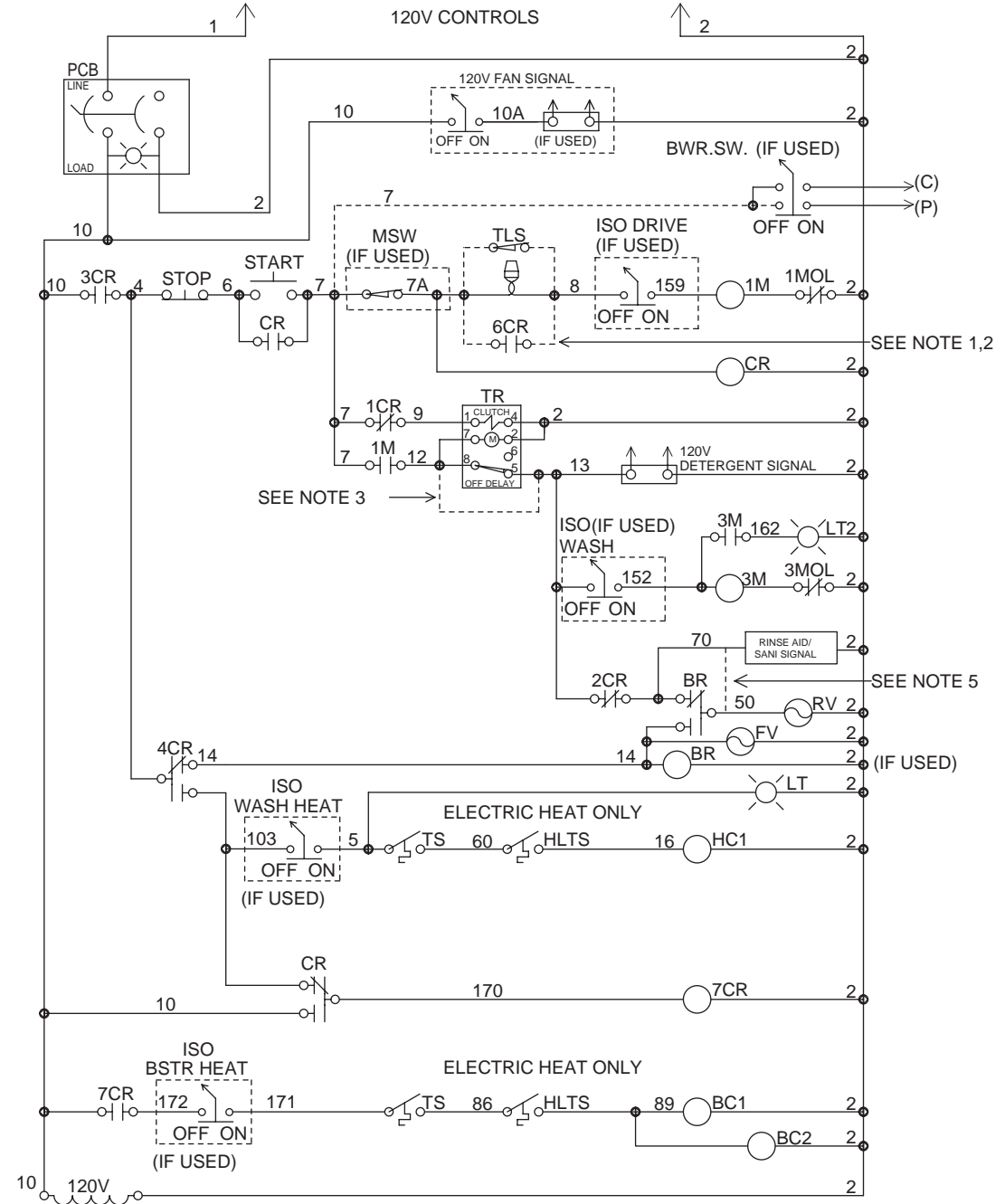
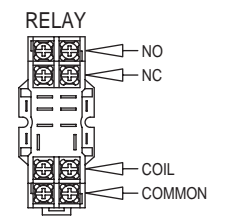
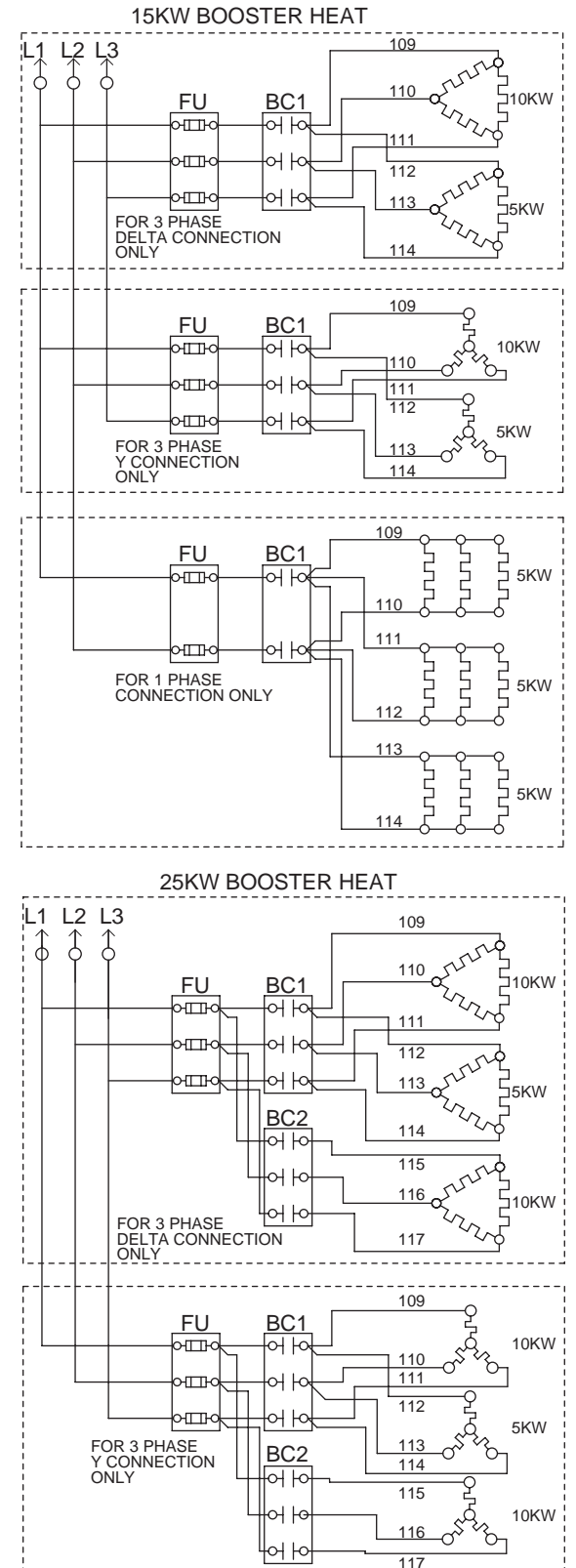
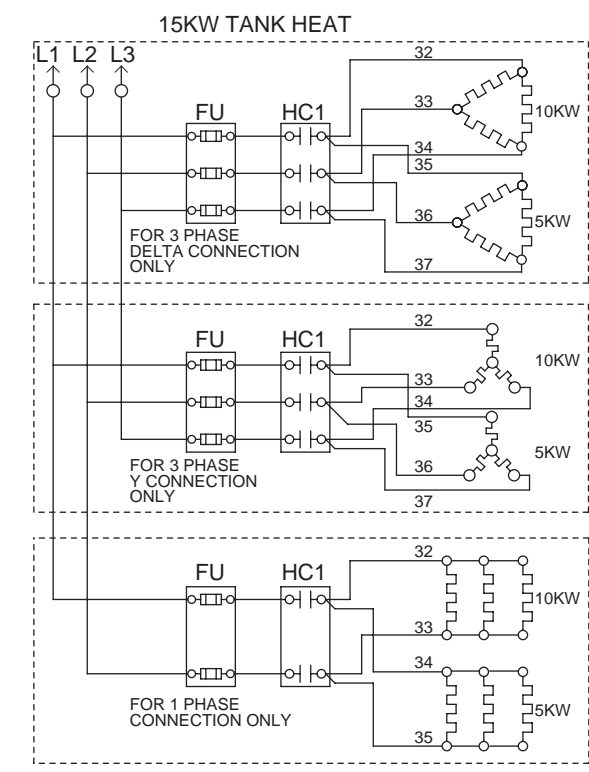
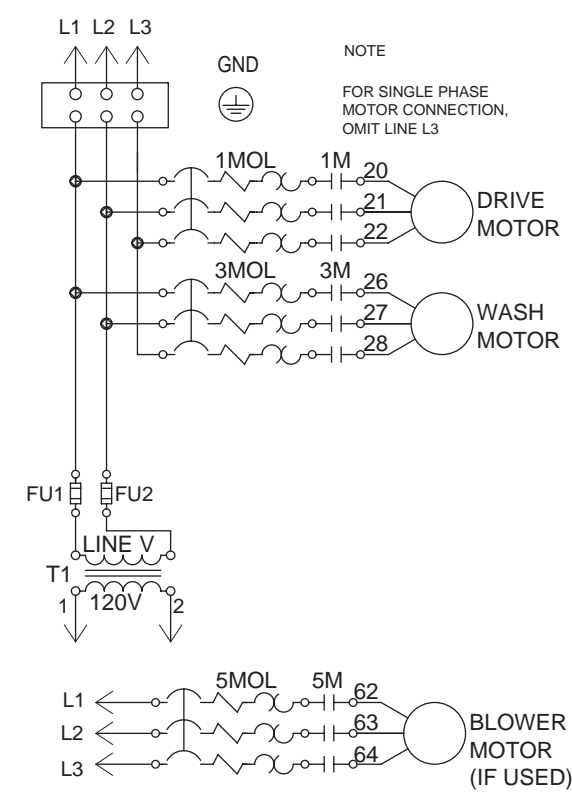


DIAGRAM STATE
POWER OFF
DOORS CLOSED
TANKS EMPTY



- NOTES:
1. WIRE NO. 7 AND 8 ARE CONNECTED TOGETHER IN JUNCTION BOX.
 2. WHEN TABLE LIMIT SWITCH IS USED, SEPARATE WIRE 7 AND 8, WIRE TABLE LIMIT SWITCH (TLS) AS SHOWN. WHEN MACHINE IS SUPPLIED WITH MOTORIZED RACK ADVANCE (MRA) AND A 120V TLS IS USED, CONNECT WIRES INTO DISH MACHINE JUNCTION BOX. DISCONNECT WIRE 7 AND ADD TLS IN SERIES.
 3. JUMPER TO BE USED WHEN IDLE PUMP IS NOT USED.
 4. USE JUMPER WHEN DOOR SAFETY SWITCHES ARE NOT USED.
 5. BR RELAY USED WITH A BUILT IN BOOSTER, WITHOUT BUILT IN BOOSTER A JUMPER BETWEEN WIRE 50 AND 70 IS USED.



REV.	DESCRIPTION	DATE	BY
F	MOVE ISO TO OTHER SIDE OF 4CR	94-11	AL
G	CHANGE BR RELAY NOTE	96-02-14	AL
H	ADDED MOTOR AUX CONTACT TO ISO CKT.	16APRIL97	JCN
I	REMOVED CWT, BC2 TO OPERATE WITH BC1	10DEC97	JCN
J	REDRAWN POWER SWITCH/CIRCUIT BREAKER	20MAY98	JCN
K	CHANGED BOOSTER LOGIC	3DEC99	JCN
L	ADDED ARC SUPPRESSOR	1FEB01	JCN

CUSTOMER TO SUPPLY RATED VOLTAGE/PHASE/Hz, AS SPECIFIED PER ORDER, TO DISCONNECT SWITCH. ALL POWER SUPPLIED TO EACH CONNECTION POINT MUST COMPLY WITH ALL LOCAL ELECTRICAL CODES.

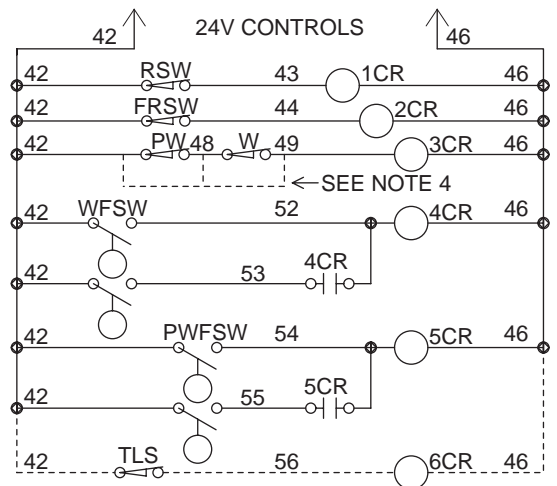
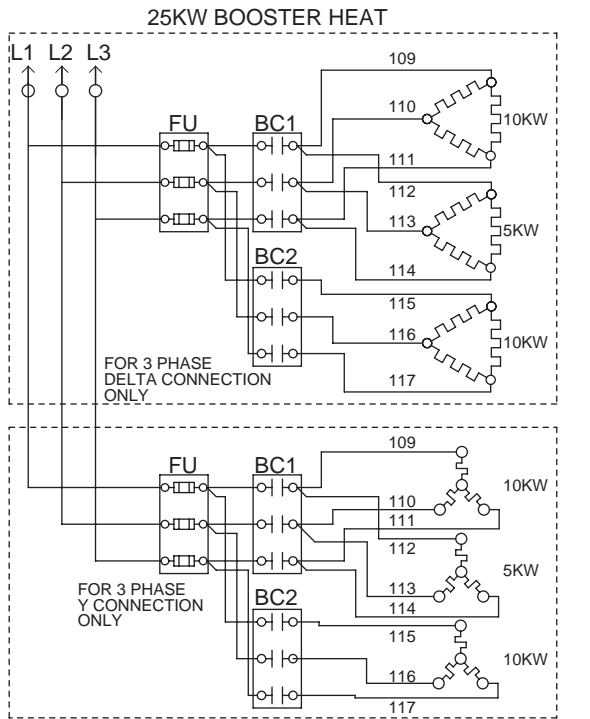
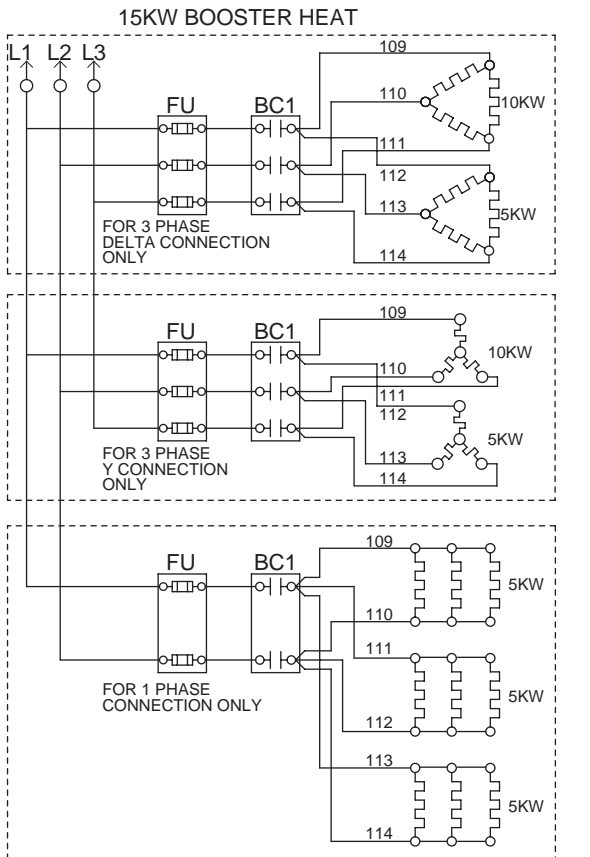
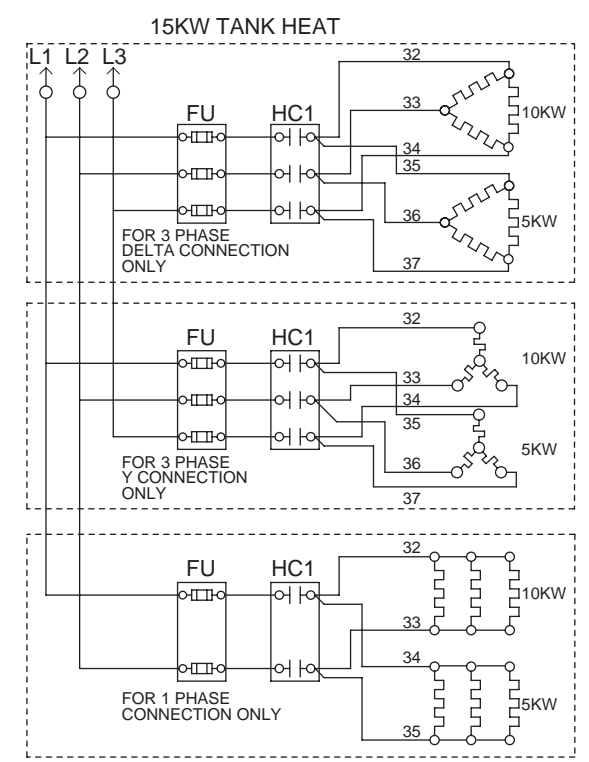
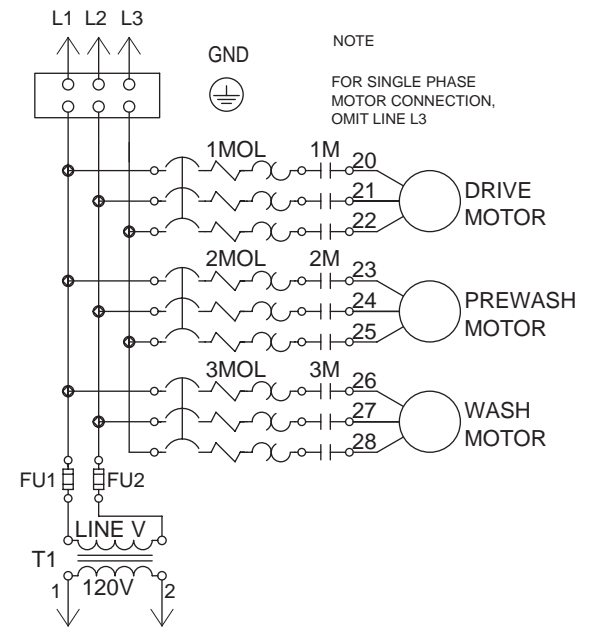
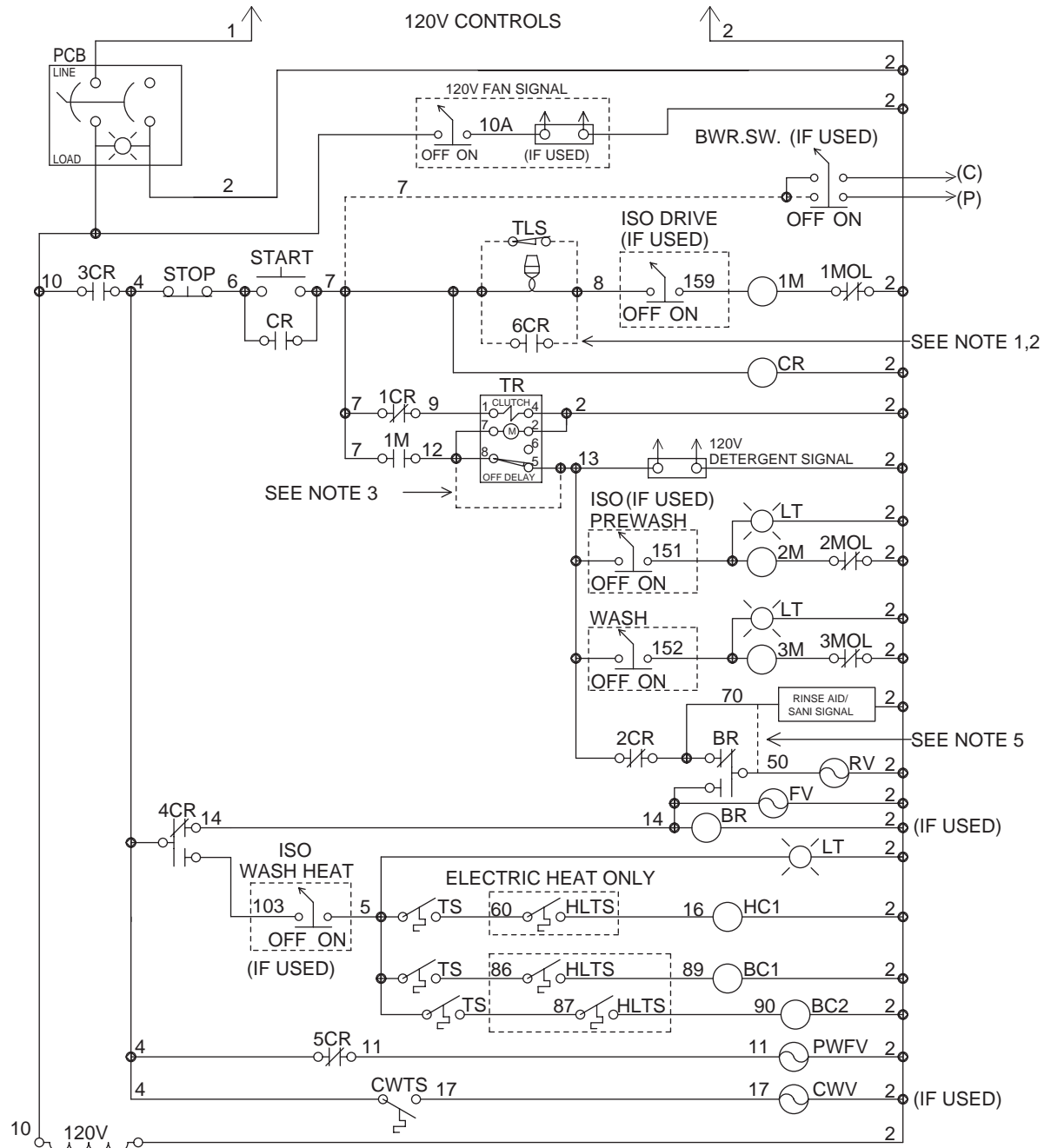
AUTHENTICATION	
DR.BY	A.LANNI
DATE	94-11-15
APP.BY	
DATE	
SCALE	1=1
SHEET	1 OF 1

Champion
The Dishwashing Machine Specialists

TITLE **44/WS STEAM/ELECTRIC**

B 701020 REV. **L**

1CR	RACK SWITCH RELAY
2CR	FINAL RINSE SWITCH RELAY
3CR	DOOR SAFETY SWITCH RELAY
4CR	WASH FILL HOLD IN RELAY
5CR	PREWASH FILL HOLD IN RELAY
6CR	TABLE LIMIT SWITCH HOLD IN RELAY
1M	DRIVE MOTOR CONTACTOR
1MOL	DRIVE MOTOR OVERLOAD
2M	PREWASH MOTOR CONTACTOR
2MOL	PREWASH MOTOR OVERLOAD
3M	WASH MOTOR CONTACTOR
3MOL	WASH MOTOR OVERLOAD
5M	BLOWER MOTOR CONTACTOR
5MOL	BLOWER MOTOR OVERLOAD
BC-	BOOSTER CONTACTOR/STEAM VALVE
BR	BOOSTER RELAY
BWR.SW.	BLOWER SWITCH
CR	HOLD-IN RELAY
CWTS	COLD WATER THERMOSTAT
DSS	DOOR SAFETY SWITCH
FU	FUSE/FUSE BLOCK
FV	FILL VALVE
HC-	HEAT CONTACTOR
HLTS	HIGH LIMIT THERMOSTAT (IF USED)
ISO	ISOLATION SWITCH (IF USED)
LT	ISOLATION SWITCH LIGHT (IF USED)
MSW	MOTOR STOP SWITCH (IF USED)
PCB	POWER SWITCH/CIRCUIT BREAKER
PWFV	PREWASH FILL VALVE
RSW	RACK SWITCH
RV	RINSE VALVE
T1	CONTROL TRANSFORMER
TLS	TABLE LIMIT SWITCH
TR	PUMP TIMER
TS	THERMOSTAT



- NOTES:
1. WIRE NO. 7 AND 8 ARE CONNECTED TOGETHER IN JUNCTION BOX.
 2. WHEN TABLE LIMIT SWITCH IS USED, SEPARATE WIRE 7 AND 8, WIRE TABLE LIMIT SWITCH (TLS) AS SHOWN. WHEN MACHINE IS SUPPLIED WITH MOTORIZED RACK ADVANCE (MRA) AND A 120V TLS IS USED, CONNECT WIRES INTO DISH MACHINE JUNCTION BOX. DISCONNECT WIRE 7 AND ADD TLS IN SERIES.
 3. JUMPER TO BE USED WHEN IDLE PUMP IS NOT USED.
 4. USE JUMPER WHEN DOOR SAFETY SWITCHES ARE NOT USED.
 5. BR RELAY USED WITH A BUILT IN BOOSTER, WITHOUT BUILT IN BOOSTER A JUMPER BETWEEN WIRE 50 AND 70 IS USED.

REV.	DESCRIPTION	DATE	BY
B	RENUMBER BOOSTER, REDRAW	94-1	AL
C	REMOVE HC2, BC2 ON 1PH HEAT	94-2	AL
D	REDRAW, B SIZE	94-8	AL
E	MOVE ISO TO OTHER SIDE OF 4CR	94-11	AL
F	REMOVE MOTOR SWITCH, ADD FAN SWITCH	95-04-19	AL
G	CHANGE BR RELAY NOTE	96-02-14	AL
H	REDRAWN POWER SWITCH/CIRCUIT BREAKER	20MAY98	JCN

CUSTOMER TO SUPPLY RATED VOLTAGE/PHASE/Hz, AS SPECIFIED PER ORDER, TO DISCONNECT SWITCH. ALL POWER SUPPLIED TO EACH CONNECTION POINT MUST COMPLY WITH ALL LOCAL ELECTRICAL CODES.

AUTHENTICATION	
DR.BY	A.LANNI
DATE	94-11-15
APP.BY	
DATE	
SCALE	1=1
SHEET	1 OF 1

Champion
The Dishwashing Machine Specialists

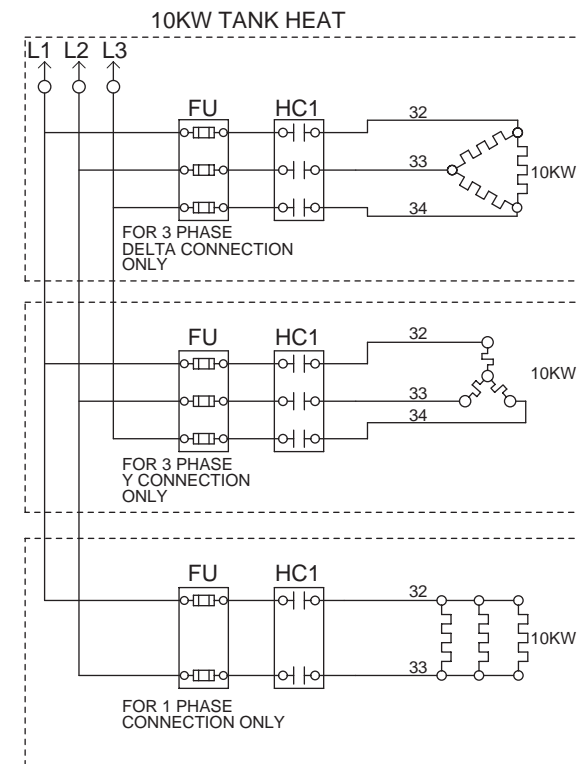
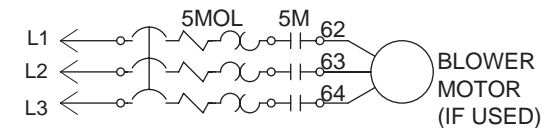
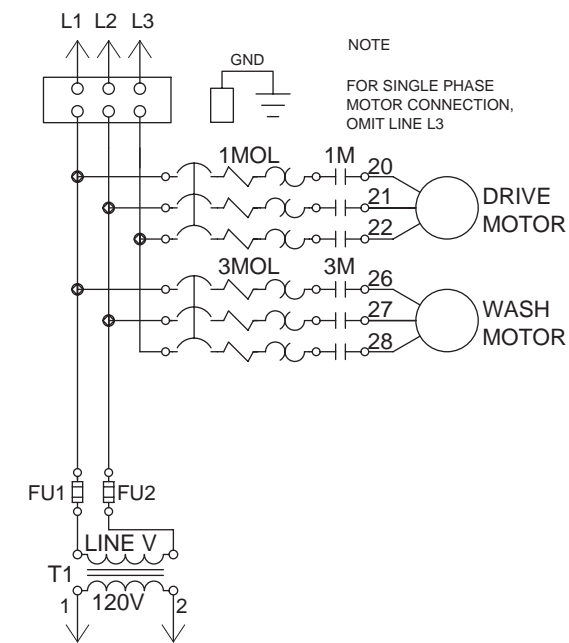
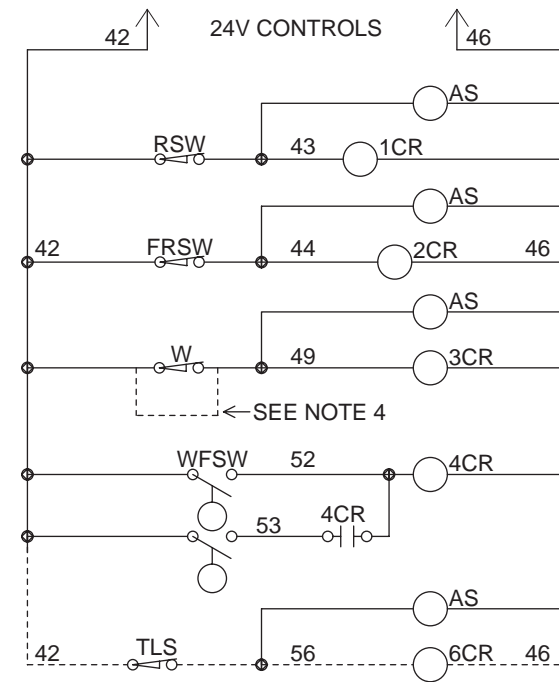
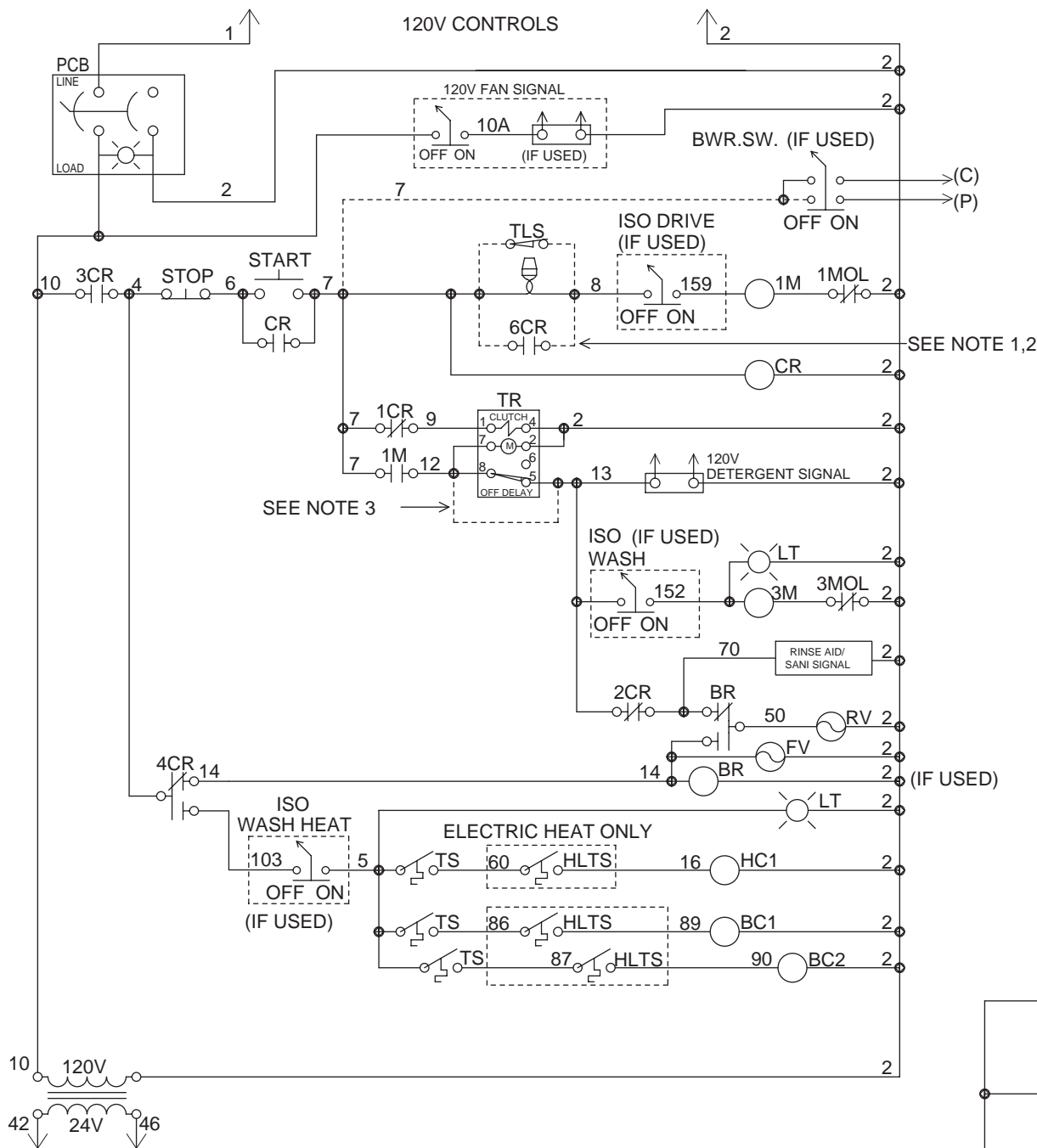
TITLE **66/WS STEAM/ELECTRIC**

B 701021 REV. **H**

NOTES:

1. WIRE NO. 7 AND 8 ARE CONNECTED TOGETHER IN JUNCTION BOX.
2. WHEN TABLE LIMIT SWITCH IS USED, SEPARATE WIRE 7 AND 8, WIRE TABLE LIMIT SWITCH (TLS) AS SHOWN. WHEN MACHINE IS SUPPLIED WITH MOTORIZED RACK ADVANCE (MRA) AND A 120V TLS IS USED, CONNECT WIRES INTO DISH MACHINE JUNCTION BOX. DISCONNECT WIRE 7 AND ADD TLS IN SERIES.
3. JUMPER TO BE USED WHEN IDLE PUMP IS NOT USED.
4. USE JUMPER WHEN DOOR SAFETY SWITCHES ARE NOT USED.

1CR	RACK SWITCH RELAY
2CR	FINAL RINSE SWITCH RELAY
3CR	DOOR SAFETY SWITCH RELAY
4CR	WASH FILL HOLD IN RELAY
6CR	TABLE LIMIT SWITCH HOLD IN RELAY
1M	DRIVE MOTOR CONACTOR
1MOL	DRIVE MOTOR OVERLOAD
3M	WASH MOTOR CONTACTOR
3MOL	WASH MOTOR OVERLOAD
5M	BLOWER CONTACTOR
5MOL	BLOWER MOTOR OVERLOAD
AS	ARC SUPPRESSOR
BC-	BOOSTER CONTACTOR/STEAM VALVE
BR	BOOSTER RELAY
BWR.SW.	BLOWER SWITCH
CR	HOLD IN RELAY
CWTS	COLD WATER THERMOSTAT
DSS	DOOR SAFETY SWITCH
FU	FUSE/FUSE BLOCK
FV	WASH FLOAT SWITCH
HC-	HEAT CONTACTOR/STEAM VALVE
HLTS	HIGH LIMIT THERMOSTAT (IF USED)
ISO	ISOLATION SWITCH (IF USED)
LT	ISOLATION SWITCH LIGHT (IF USED)
MSW	MOTOR STOP SWITCH (IF USED)
PCB	POWER SWITCH/CIRCUIT BREAKER
RSW	RACK SWITCH
RV	RINSE VALVE
T1	CONTROL TRANSFORMER
TLS	TABLE LIMIT SWITCH
TR	PUMP TIMER
TS	THERMOSTAT
WFSW	WASH FLOAT SWITCH



CUSTOMER TO SUPPLY RATED VOLTAGE/PHASE/Hz, AS SPECIFIED PER ORDER, TO DISCONNECT SWITCH. ALL POWER SUPPLIED TO EACH CONNECTION POINT MUST COMPLY WITH ALL LOCAL ELECTRIC CODES.			
DR.BY	A.LANNI	SCALE	1=1
DATE	94-11-15	SHEET	1 OF 1

REV.	DESCRIPTION	DATE	BY
B	ADD FAN SIGNAL AND DRIVE ISO RENUMBER BOOSTER THERMOSTAT	93-11	AL
C	MOVE ISO TO OTHER SIDE OF 4CR REDRAW B SIZE	94-11	AL
D	REMOVE MOTOR SWITCH, ADD FAN SWITCH	95-05-03	AL

REV.	DESCRIPTION	DATE	BY
E	REDRAWN POWER SWITCH/CIRCUIT BREAKER	20MAY98	JCN
F	REMOVED UNUSED CWT REFERENCE	4OCT01	JCN
G	ADDED ARC SUPPRESSOR	1FEB02	JCN

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KL-44
STEAM/ELECTRIC

REV. **G**

B 700931