



Warewashing Systems

INSTALLATION, OPERATION, AND SERVICE MANUAL



TEMPSTAR® SERIES DOOR-TYPE DISHMACHINES

TempStar Manual • 07610-003-61-42-X

TEMPSTAR®

**MANUFACTURER'S LIMITED WARRANTY
(APPLICABLE ONLY IN THE UNITED STATES AND CANADA)**

WARRANTY REGISTRATION:

To register your Jackson Dishmachine's warranty go to www.jacksonwws-warranty.com or call 1-888-800-5672. Failure to register the Dishmachine will void the warranty.

ONE YEAR LIMITED PARTS AND LABOR WARRANTY

For a period of one (1) year from date of original installation of a new Jackson Dishmachine (but in no event to exceed eighteen (18) months from date of shipment from Jackson's factory), Jackson WWS, Inc. (Jackson) will repair or replace, at its discretion, any original part that proves defective in materials or workmanship at the time the Dishmachine was purchased; provided that (i) the Dishmachine has not been altered, (ii) the Dishmachine has been properly installed, maintained, and operated under normal use conditions and in accordance with the applicable installation, operation and service manual available on the Jackson website, and (iii) a warranty claim is reported to a Jackson Authorized Service Agency within the warranty period. This warranty includes replacement with Jackson specified genuine replacement parts, purchased directly from a Jackson Authorized Parts Distributor or Service Agency. Use of generic replacement parts may create a hazard and shall void this warranty.

THIS WARRANTY DOES NOT APPLY OUTSIDE THE UNITED STATES AND CANADA.

Jackson will pay the labor to repair or replace a defective original part as a part of the warranty, provided that a Jackson Authorized Service Agency performs the labor. Any repair or replacement work by anyone other than a Jackson Authorized Service Agency is the sole responsibility of the purchaser. Labor coverage is limited to regular hourly rates; Jackson will not pay overtime premiums or emergency service charges.

Accessory components (such as table limit switches, pressure regulators, and drain water tempering kits) that are not installed by Jackson at the factory and are shipped with the Dishmachine carry only a (1) one-year parts warranty. Labor to repair or replace these components is not included in the warranty or covered by Jackson. Booster heaters not manufactured by Jackson are not covered by this warranty but are warranted by their respective manufacturers.

This warranty is void if any defect or failure is a direct result from shipping, handling, fire, water, accident, alteration, modification, misuse, abuse, flood, acts of God, burglary, casualty, attempted repair by unauthorized persons, use of replacement parts not authorized by Jackson, improper installation, installation not in accordance with local electrical and plumbing codes, if the serial number has been removed or altered, if the Dishmachine is used for any purpose other than originally intended, or if the equipment is installed for residential use.

Jackson does not authorize any other entity or person, including, without limitation, any entity or person who deals in Jackson Dishmachines, to change this warranty or create any other obligation in connection with Jackson Dishmachines.

TRAVEL LIMITATIONS:

Jackson limits warranty travel time to the customer site within 50 miles of the Jackson authorized service agent's office and during regular business hours. Jackson will not pay for travel time and mileage that exceeds these limits, or any fees such as those for air or boat travel without prior authorization.

REPLACEMENT PARTS WARRANTY:

For a period of (90) ninety days from the date of installation by a Jackson Authorized Service Agency (but in no event to exceed (180) one-hundred-eighty days from the date of purchase from a Jackson Authorized Parts Distributor or Service Agency), Jackson will repair or replace, at its discretion, any Jackson genuine replacement parts that prove defective in materials or workmanship at the time the replacement parts were installed. This warranty does not include paying the labor to repair or replace the replacement part. This warranty is subject to all conditions, exclusions and limitations applicable to the Dishmachine.

**MANUFACTURER'S LIMITED WARRANTY (CONT.)
(APPLICABLE ONLY IN THE UNITED STATES AND CANADA)**

PRODUCT CHANGES:

Jackson reserves the right to make changes in design and specification of any component of the Dishmachine as engineering or necessity requires.

DISCLAIMER OF WARRANTIES:

THERE ARE NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE OR MERCHANTABILITY, THAT ARE NOT SET FORTH HEREIN, OR THAT EXTEND BEYOND THE DURATION HEREOF.

LIMITATION OF REMEDIES AND LIABILITIES:

YOUR SOLE AND EXCLUSIVE REMEDY UNDER THIS LIMITED WARRANTY SHALL BE PRODUCT REPAIR OR REPLACEMENT AS PROVIDED HEREIN.

UNDER NO CIRCUMSTANCES WILL JACKSON BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES, OR FOR DAMAGES IN THE NATURE OF PENALTIES. JACKSON'S LIABILITY ON ANY CLAIM OF ANY KIND WITH RESPECT TO THE GOODS OR SERVICES COVERED HEREUNDER SHALL IN NO CASE EXCEED THE PRICE OF THE GOODS OR SERVICES OR PART THEREOF WHICH GIVES RISE TO THE CLAIM.

ITEMS NOT COVERED:

THIS WARRANTY DOES NOT COVER (1) ADJUSTMENTS INCLUDING, BUT NOT LIMITED TO, TIMER CAMS, THERMOSTATS, DOORS, TANK HEATER ADJUSTMENTS OR CLUTCHES; (2) AIR FREIGHT OR OVERNIGHT FREIGHT; (3) ANY AMOUNT EXCEEDING ORIGINAL PURCHASE PRICE; (4) CLEANING OF DRAIN VALVES, GAS LINES, RINSE/WASH NOZZLES, STRAINERS, SCREENS, OR SPRAY PIPES; (5) CLEANING OR DELIMING OF THE DISHMACHINE OR ANY COMPONENT INCLUDING, BUT NOT LIMITED TO, WASH ARMS, RINSE ARMS AND STRAINERS; (6) CONDITIONS CAUSED BY THE USE OF INCORRECT (NON-COMMERCIAL) GRADE DETERGENTS; (7) CORROSION FROM CHEMICALS DISPENSED IN EXCESS OF RECOMMENDED CONCENTRATIONS; (8) COSMETIC DAMAGE, INCLUDING BUT NOT LIMITED TO, SCRATCHES, DENTS, CHIPS, AND OTHER DAMAGE TO THE DISHMACHINE FINISHES, UNLESS SUCH DAMAGE RESULTS FROM DEFECTS IN MATERIALS AND WORKMANSHIP AND IS REPORTED TO JACKSON WITHIN (30) THIRTY DAYS FROM THE DATE OF INSTALLATION; (9) DAMAGE CAUSED BY LABOR DISPUTE; (10) DAMAGES RESULTING FROM IMPROPER CONNECTION TO UTILITY SERVICE; (11) DAMAGES RESULTING FROM WATER CONDITIONS, INADEQUATE OR EXCESSIVE WATER PRESSURE, ACCIDENTS, ALTERATIONS, IMPROPER USE, ABUSE, HANDLING, OVERLOADS, TAMPERING, IMPROPER INSTALLATION OR FAILURE TO FOLLOW MAINTENANCE AND OPERATING PROCEDURES; (12) DISCOLORATION, RUST OR OXIDATION OF SURFACES RESULTING FROM CAUSTIC OR CORROSIVE ENVIRONMENTS, INCLUDING, BUT NOT LIMITED TO, HIGH SALT CONCENTRATIONS, HIGH MOISTURE OR HUMIDITY, OR EXPOSURE TO CHEMICALS; (13) ELECTRIC BOOSTERS, FEED LINES, FLEX HOSE, FUSES, GARBAGE DISPOSALS, OR GAS PILOTS; (14) EXCESSIVE LIME, MINERAL, OR ALKALINE BUILDUP; (15) EXPENSES DUE TO DISCONNECTION, DELIVERY, RETURN AND REINSTALLATION; (16) FAILURE OF ELECTRICAL COMPONENTS DUE TO CONNECTION OF CHEMICAL DISPENSING EQUIPMENT INSTALLED BY OTHERS; (17) FAILURE OF FACILITY WATER HEATER TO MAKE TEMPERATURE; (18) FAILURE TO MAINTAIN WATER HARDNESS LOWER THAN 3.0 GRAINS, PH BETWEEN 7.0 AND 8.5 AND TOTAL DISSOLVED SOLIDS BELOW 250 PPM; (19) FAILURE TO COMPLY WITH LOCAL ELECTRICAL BUILDING CODES; (20) 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; (21) OPENING OR CLOSING OF UTILITY SUPPLY VALVES OR SWITCHING OF ELECTRICAL SUPPLY CURRENT; (22) PERFORMANCE OF REGULAR MAINTENANCE AND CLEANING AS OUTLINED IN THE OPERATOR'S GUIDE; (23) REMOVAL OR REINSTALLATION OF INACCESSIBLE DISHMACHINES OR BUILT-IN FIXTURES THAT INTERFERE WITH SERVICING, REMOVAL OR REPLACEMENT OF THE DISHMACHINE; (24) REPLACEMENT WEAR ITEMS INCLUDING, BUT NOT LIMITED TO, CURTAINS, DRAIN BALLS, DOOR GUIDES, GASKETS, O-RINGS, SEALS, SQUEEZE TUBES, AND BEARINGS; (25) RESIDENTIAL USE; (26) USE WITH UTILITY SERVICE OTHER THAN THAT DESIGNATED ON THE RATING PLATE.

REVISION HISTORY

| Revision | Date | Made by | Process | Details |
|----------|----------|---------|--|---|
| A | 11-11-08 | ARL | 8045 | Release to Production. |
| B | 4-22-09 | ARL | 8094 | Added new NSF rating. |
| C | 6-22-09 | JC | 8114 | Removed NSF Rating from steam heated machine. |
| D | 7-24-09 | ARL | 8104 | Added information regarding electrical field conversion. |
| E | 2-2-10 | RLC | N/A | Added information about Fused Universal Timer pg. 19. |
| F | 1-10-13 | RLC | 8252 | Updated schematic and control box assembly for rotary switch/Removed EnergyStar Logo. |
| G | 3-7-13 | RLC | NDB-219 | Updated Jackson logo and company name. |
| H | 12-17-13 | MHH | N/A | Corrected part number for "right false panel kit," pg. 43. Removed "STOP" warning page, pg. 3. |
| I | 5-28-14 | MHH | 8287 | New bearing and P/N on rinse arm assy, pg. 41. |
| J | 11-17-14 | KAP | N/A | Updated Drain Quench Image on pg. 45. Added Drain Quench Miscellaneous Parts on pg. 55. |
| K | 1-6-15 | KAP | N/A | Updated part number for O-ring and Diaphragm on pg. 39. P/N 06401-003-07-42 was replaced by P/N 4810-200-03-18. |
| L | 1-14-15 | KAP | QOF-386 | Removed regulator and added Y-Strainer to the assemblies on pgs. 4, 36, and 38. Paragraph content was changed on pg. 7. Changed the PSI flow on pg. 15 |
| M | 3-2-15 | KAP | QOF-386 | Updated wire colors on schematic pgs. 49, 50, 51, 52, and 53. |
| N | 4-6-15 | KAP | N/A | Inserted note pertaining to corner installation pg. 5. |
| P | 5-8-15 | KAP | N/A | Added: VER operating capacities on pg. 2, pressure regulator option dimensions on pg. 5, VER Machine Dimensions on pg. 6, VER pipe line size on pg. 9, door interlock items on pg. 23, thermister to rinse tank assembly on pg. 30, VER plumbing pgs. 41 and 42, VER and energy recovery assembly pg. 46, solid state BB/LT schematic on page 58 and 60. Updated tub and tub assembly thermostats on pgs. 25-28 and schematic pgs. 54 and 55. |
| Q | 6-25-15 | KAP | N/A | Updated Schematic on pgs. 65 and 67. |
| - | 8-25-15 | KAP | N/A | Updated P/N for item #5 on pg. 25. |
| - | 10-13-15 | KAP | N/A | Updated P/N for solenoid valve. Changed P/N from 04820-002-01-32 to 04820-002-01-56. |
| R | 11-9-15 | JH | N/A | Corrected P/N for item #33 on pg. 34. |
| S | 11-30-15 | JH | N/A | Added delime instructions. |
| T | 1-11-16 | JH | QOF-386 | Changed item 12 on pg. 35 to 05700-003-07-76. Added 05700-004-23-78 and 05700-004-23-79 to view (pg. 31) and parts list (pg. 32). |
| U | 3-14-17 | JH | N/A | Added dimensions for notch cut into table on corner installations pg. 4. Corrected total amps and typical electrical circuit for 230 V, 50 Hz, 1 Phase LT/NB machines on pg. 7 to 35 A and 40 A, respectively. Corrected P/N for item 6 on pgs. 36 and 39. Changed item 19 to item 17 in Tube Length Chart on pg. 51. Changed valve (item 15) view and P/N to 04810-003-71-56 on pgs. 51 and 52. Changed valve (item 7) view and P/N to 04810-003-71-56 on pg. 53. Removed views that showed pressure regulator in certain locations. Created Plumbing Options, pg. 54, with the pressure regulator and arrestor as options. Added wash arm end-cap as item #21 to pg. 58. Added external device wiring instructions. Added instructions for programming new exhaust fan timer. Added rinse arm bearing replacement instructions. Updated schematics. Changed name of delime switch throughout from NORMAL/DELIME to AUTO/MANUAL. Updated Delime Instructions and added instructions for low-temp machine. Added water level probe cleaning to the Shutdown and Cleaning section. Updated to new manual format. Audited and corrected all P/Ns in the manual. |
| V | 9-24-18 | JH | 8392 8480 8533 8536 8567 8576 8599 | Added: links to exhaust fan timer instructions, Chemical Connections section, Motor Rotation section, new exhaust fan timer, fuses, page for new rinse tank, new phase conversion kit, list of applicable kits, and new rinse tank schematics. Changed: steam pressure to 10-30 PSI, P/N for contactor item #4 on pg. 25, rinse arm bearing assembly, rinse arm bearing kit P/N. Replaced thermostat and components with solid state thermostat and components. Updated: electrical requirements, pgs. 6-7, motor P/Ns, heater P/Ns, plumbing to new rinse tank plumbing, VER plumbing to new rinse tank plumbing, pg. 54-55 with new view and parts list. |
| W | 3-24-21 | JH | N/A | Removed LT from manual. Added 50 Hz models to Electrical Requirements section. Added VER System Assembly section. Included resistance-to-temperature table. Changed gauge P/N on VER System page and added item #21. Updated drain water tempering kit P/N on Kits page. |
| X | 7-5-22 | JH | 8748 | Added power supply and relay to Control Box pages (used on machines with door interlock and VER machines with DC fans). Added DC fan to VER System pages with note on models affected. Updated applicable schematics to show AC and DC fans. |

Jackson®

Warewashing Systems

TempStar®

Door-type dishmachine; ENERGY STAR® qualified, electrically-heated, high-temp, hot-water sanitizing, with booster heater.

TempStar® NB

Door-type dishmachine; electrically-heated, high-temp, hot-water sanitizing, with no rinse booster.

TempStar® S

Door-type dishmachine; steam-heated, high-temp, hot-water sanitizing.

TempStar® VER

Door-type dishmachine; electrically-heated, high-temp, hot-water sanitizing, with booster heater and ventless energy recovery system.

The manufacturer provides technical support for all of the dishmachines detailed in this manual. We strongly recommend that you refer to this manual before making a call to our technical support staff. Please have this manual open when you call so that our staff can refer you, if necessary, to the proper page. Technical support is not available on holidays.

Contact technical support toll-free at 1-888-800-5672.

Technical support is available for service personnel only.

TABLE OF CONTENTS

GUIDES

| | |
|-------------------------------|---|
| Symbols..... | 1 |
| Abbreviations & Acronyms..... | 1 |

SPECIFICATIONS

| | |
|-------------------------------|---|
| TempStar/NB/S Dimensions..... | 2 |
| VER Dimensions..... | 3 |
| Table Dimensions..... | 4 |
| Operating Parameters..... | 5 |
| Electrical Requirements..... | 6 |

INSTALLATION

| | |
|---|----|
| Installation Instructions..... | 8 |
| <i>Inspection</i> | 8 |
| <i>Unpacking</i> | 8 |
| <i>VER System Assembly</i> | 8 |
| <i>Leveling</i> | 12 |
| <i>Plumbing</i> | 12 |
| <i>Water Supply Connection</i> | 12 |
| <i>Steam Line Connection</i> | 13 |
| <i>Pressure Regulator</i> | 13 |
| <i>Shock Absorber</i> | 13 |
| <i>Connecting the Drain Line</i> | 13 |
| <i>Exhaust Fan Timer</i> | 13 |
| <i>Chemical Connections</i> | 14 |
| <i>Plumbing Check</i> | 14 |
| <i>Electrical Power Connections</i> | 15 |
| <i>Motor Rotation</i> | 16 |
| <i>Voltage Check</i> | 16 |
| <i>Surrounding Area</i> | 16 |
| <i>Temperature Setpoints</i> | 16 |
| <i>False Panel/Corner Install</i> | 16 |

OPERATION

| | |
|--|----|
| Operating Instructions..... | 17 |
| <i>Preparation</i> | 17 |
| <i>Power Up</i> | 17 |
| <i>Filling the Wash Tub</i> | 17 |
| <i>Ware Preparation</i> | 17 |
| <i>Daily Machine Preparation</i> | 17 |
| <i>Warm-Up Cycles</i> | 18 |
| <i>Washing a Rack of Ware</i> | 18 |
| <i>Operational Inspection</i> | 18 |
| <i>Shutdown & Cleaning</i> | 18 |
| <i>VER Coil Cleaning</i> | 20 |

TABLE OF CONTENTS

OPERATION

| | |
|-------------------------|----|
| Detergent Control | 21 |
| Delimiting | 22 |

MAINTENANCE

| | |
|--------------------------------|----|
| Preventative Maintenance | 23 |
|--------------------------------|----|

TROUBLESHOOTING

| | |
|-----------------------|----|
| Troubleshooting | 24 |
|-----------------------|----|

PARTS

| | |
|--|----|
| Control Box | 26 |
| Hood | 31 |
| Door & Arm | 32 |
| Tub | 35 |
| Steam Tub | 38 |
| Frame | 41 |
| Rinse Tank | 42 |
| Steam Coil | 44 |
| Motors | 45 |
| Heaters | 47 |
| Plumbing | 49 |
| Plumbing - NB | 51 |
| Plumbing - Steam | 52 |
| Plumbing - VER | 54 |
| Plumbing Options | 55 |
| Wash & Rinse Assemblies | 56 |
| VER System | 58 |
| VER Door Interlock | 60 |
| VER Door Interlock Override | 61 |
| 460 V Machine Transformer Mounting Box | 62 |
| Kits | 63 |

SCHEMATICS

| | |
|---|----|
| TempStar/VER, 208-230 V, New Rinse Tank | 64 |
| TempStar/VER, 460 V, New Rinse Tank | 65 |
| TempStar/VER, 208-230 V, Old Rinse Tank | 66 |
| TempStar/VER, 460 V, Old Rinse Tank | 67 |
| NB, 208-230 V | 68 |
| NB, 460 V | 69 |
| Steam, 208-230 V | 70 |
| SDI Options | 71 |

SYMBOLS



- Risk of Injury to Personnel



- Risk of Damage to Equipment



- Risk of Electrical Shock



- Caustic Chemicals



- Reference Data Plate



- Lockout Electrical Power

NOTICE - Important Note



- Instructions Hyperlink

ABBREVIATIONS & ACRONYMS

ANSI - American National Standards Institute

Btu/Hr - British Thermal Units per Hour

CFM - Cubic Feet per Minute

GHT - Garden Hose Thread

GPH - Gallons per Hour

GPM - Gallons per Minute

GPG - Grains per Gallon

HP - Horsepower

Hz - Hertz

ID - Inside Diameter

kW - Kilowatts

MCA - Minimum Circuit Ampacity

MOP - Maximum Overcurrent Protection

NFPA - National Fire Protection Association

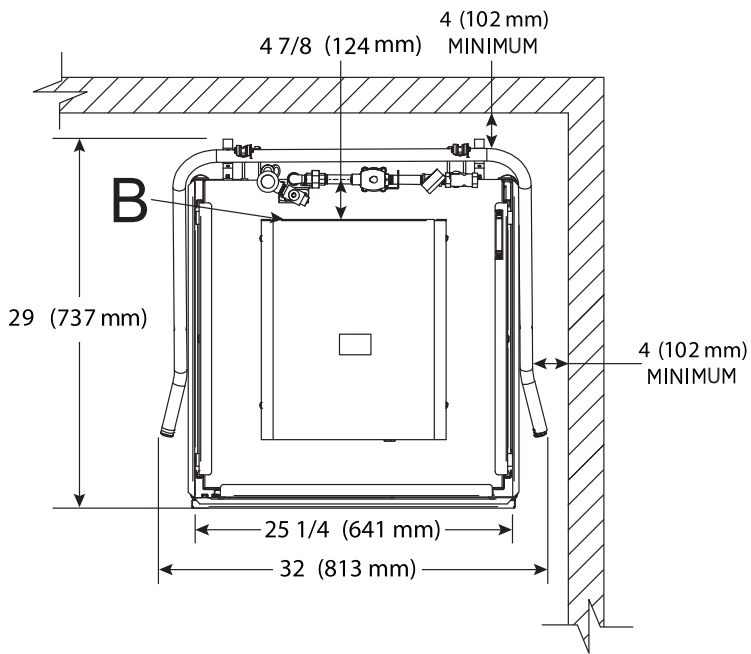
NPT - National Pipe Thread

OD - Outside Diameter

PRV - Pressure Regulating Valve

PSI - Pounds per Square Inch

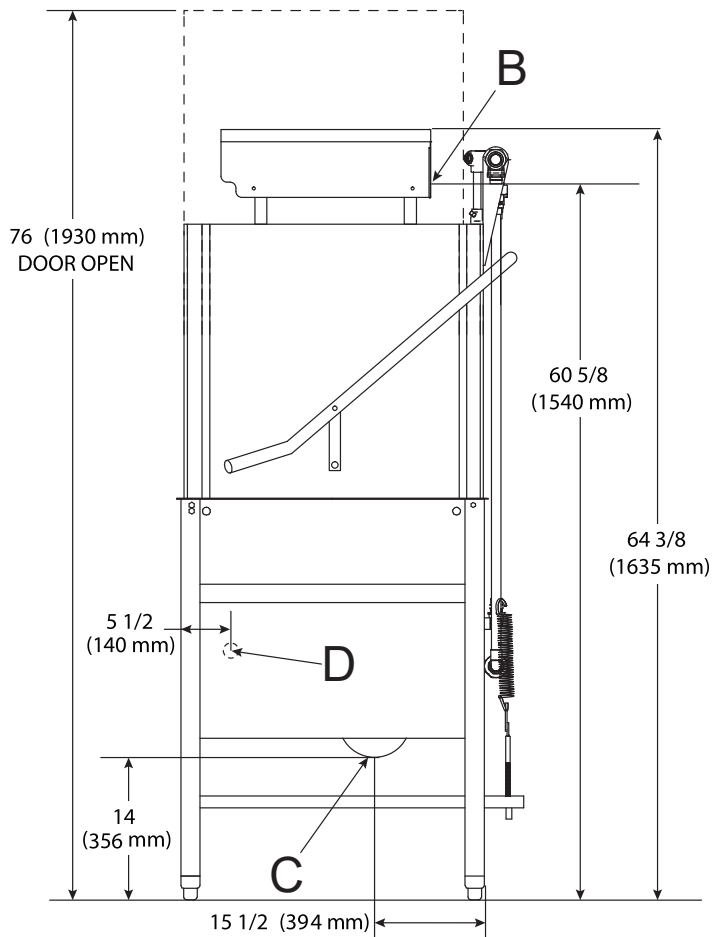
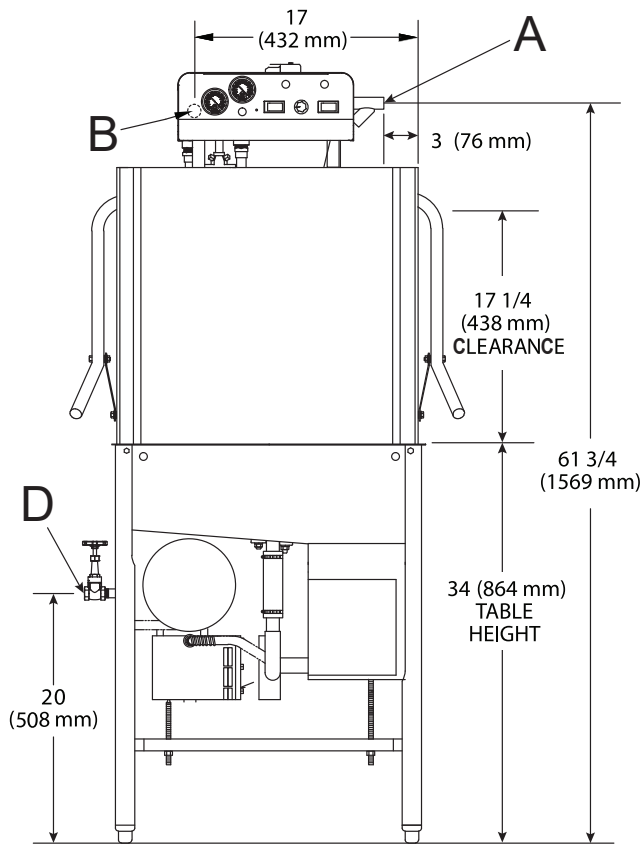
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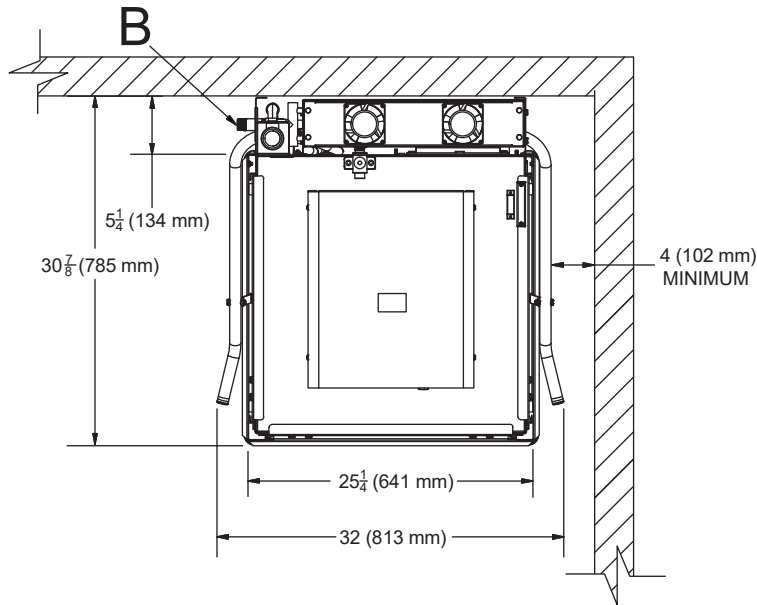


LEGEND

- A - Water Inlet (1/2" NPT)
- B - Electrical Connection Point
- C - Drain (1 1/2" NPT)
- D - Optional Steam Connection (3/4" NPT)

All dimensions from the floor can be increased 1 1/8" using the machine's adjustable feet.

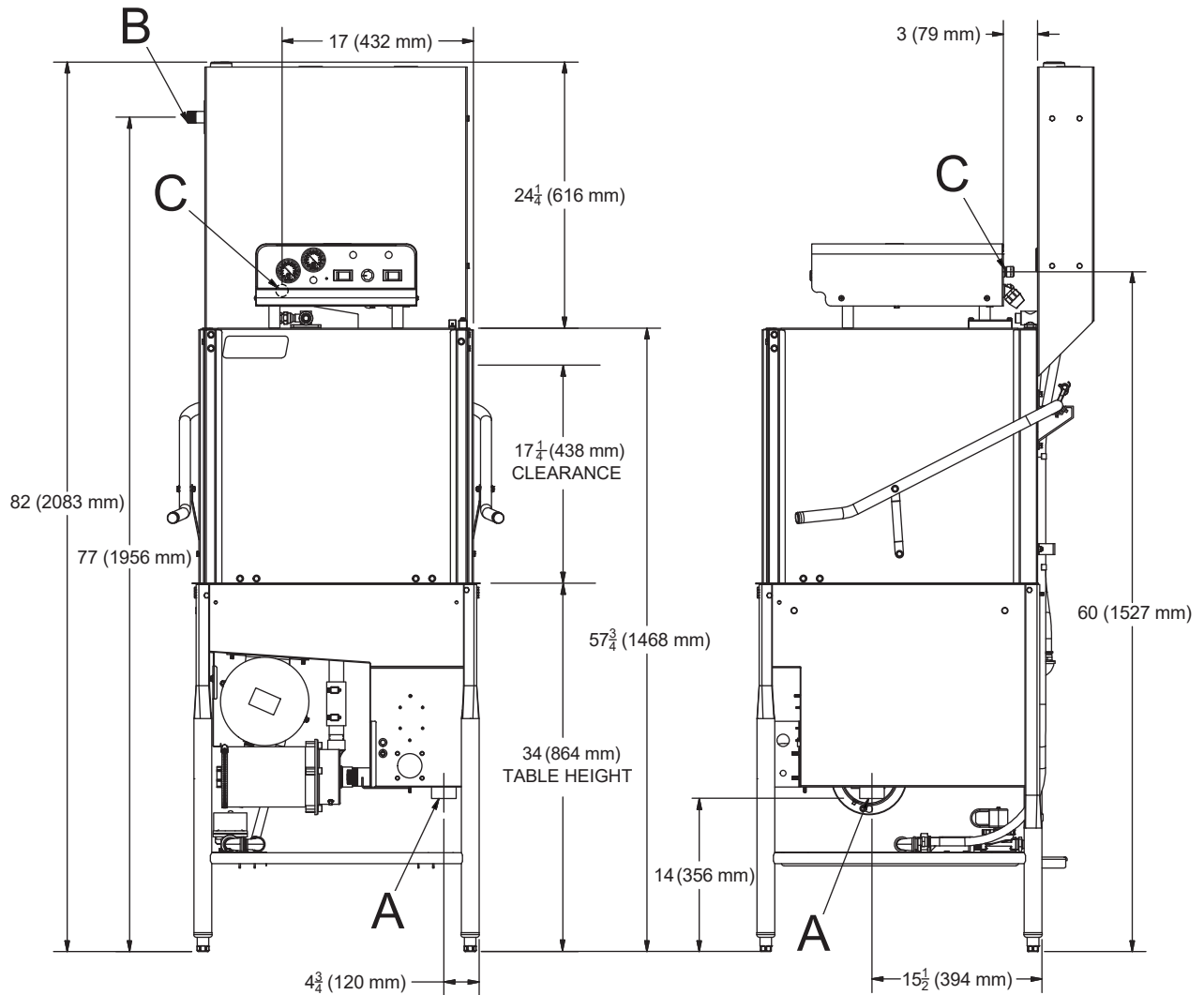




LEGEND

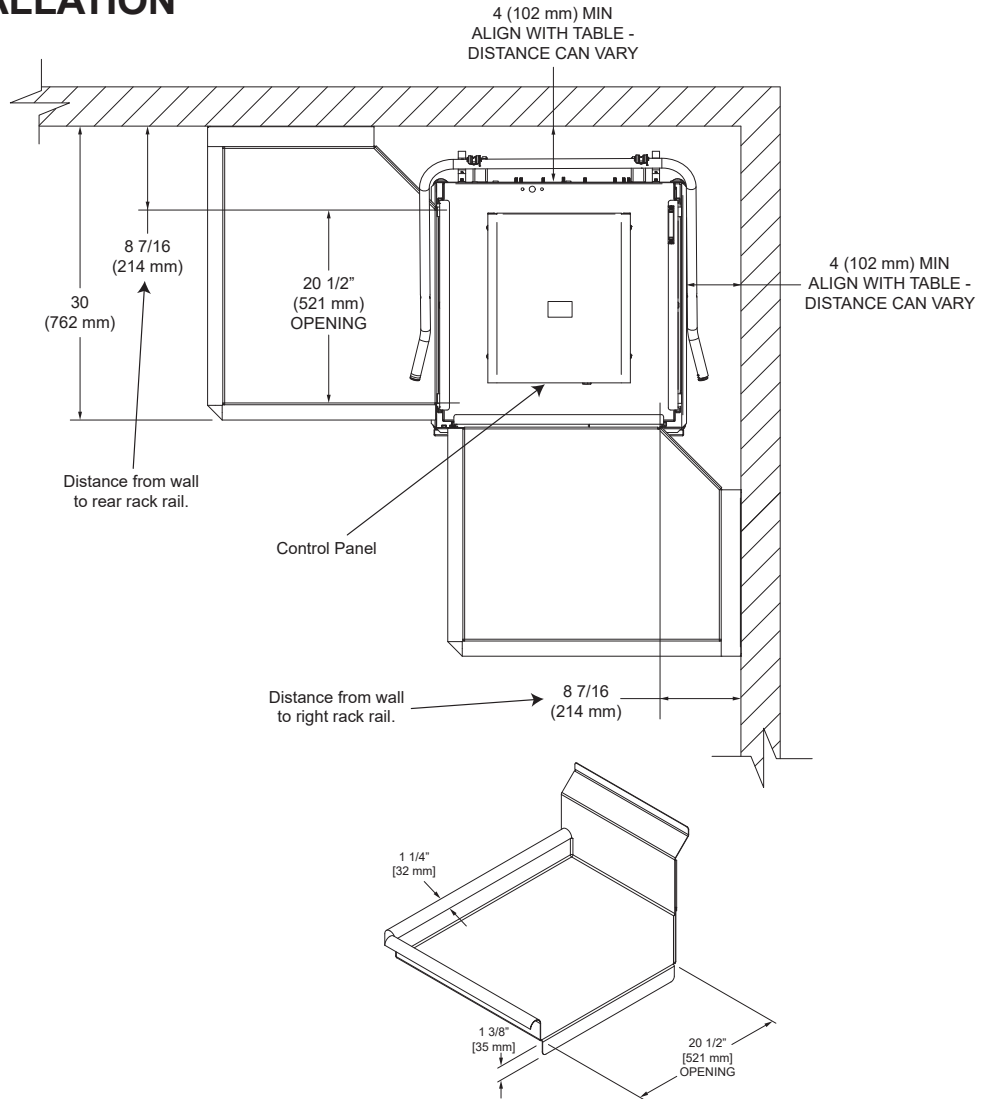
- A - Drain (1 1/2" NPT)
- B - Water Inlet (3/4" NPT)
- C - Electrical Connection

All dimensions from the floor can be increased 1 1/8" using the machine's adjustable feet.

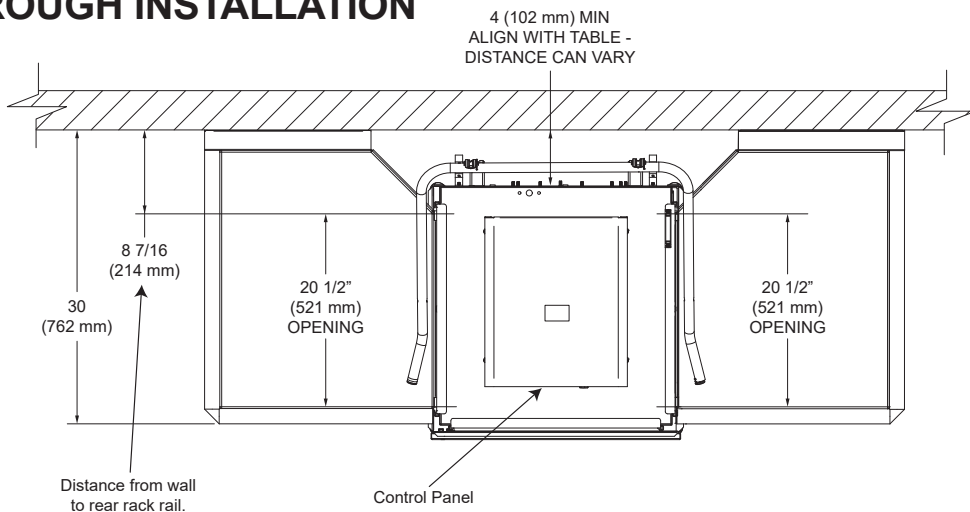


CORNER INSTALLATION

For corner install instructions:



STRAIGHT-THROUGH INSTALLATION



SPECIFICATIONS

OPERATING PARAMETERS

PERFORMANCE/CAPABILITIES

Operating Capacity:

TempStar/NB/S

| | |
|------------------|------|
| Racks per Hour | 58 |
| Dishes per Hour | 1450 |
| Glasses per Hour | 2088 |

VER

| | |
|------------------|------|
| Racks per Hour | 39 |
| Dishes per Hour | 975 |
| Glasses per Hour | 1404 |

Minimum Operating Cycle (seconds):

TempStar/NB/S

| | |
|------------------|----|
| Wash Time | 40 |
| Rinse Time | 13 |
| Dwell Time | 4 |
| Total Cycle Time | 57 |

VER

| | |
|--------------------|----|
| Wash Time | 40 |
| Rinse Time | 13 |
| Dwell Time | 4 |
| Condensate Removal | 30 |
| Total Cycle Time | 87 |

Tank Capacity (Gallons/Liters):

| | |
|------------|----------|
| Wash Tank | 8.0/30.3 |
| Rinse Tank | 2.0/7.6 |

Steam Requirements:

| | |
|--------------------------------|-------|
| Coil Size | 3/4" |
| Steam Flow Pressure (PSI) | 10-30 |
| Consumption at 15 PSI (lbs/hr) | 45 |

WATER REQUIREMENTS

TempStar/VER

| | |
|-----------------------------------|----------------|
| Minimum Wash Temperature (°F/°C) | 150/66 |
| Minimum Rinse Temperature (°F/°C) | 180/83 |
| Inlet Water Temperature: | |
| 12 kW Rinse Heater (°F/°C) | 140/60 |
| 14 kW Rinse Heater (°F/°C) | 110/44 |
| VER (°F/°C) | 40-90/4.4-32.2 |
| Flow Pressure (PSI) | 10 ± 2 |
| Water Line Size | 1/2" |
| Water Line Size (VER) | 3/4" |
| Drain Line Size | 1 1/2" |

NB

| | |
|-----------------------------------|--------|
| Minimum Wash Temperature (°F/°C) | 150/66 |
| Minimum Rinse Temperature (°F/°C) | 180/83 |
| Inlet Water Temperature (°F/°C) | 180/83 |
| Flow Pressure (PSI) | 10 ± 2 |
| Water Line Size | 1/2" |
| Drain Line Size | 1 1/2" |

S

| | |
|-----------------------------------|--------|
| Minimum Wash Temperature (°F/°C) | 150/66 |
| Minimum Rinse Temperature (°F/°C) | 180/83 |
| Inlet Water Temperature (°F/°C) | 180/83 |
| Flow Pressure (PSI) | 10 ± 2 |
| Water Line Size | 3/4" |
| Drain Line Size | 1 1/2" |

ENERGY SPECIFICATIONS

VER

| | |
|---------------|-------------|
| Latent Heat | 4678 Btu/Hr |
| Sensible Heat | 5190 Btu/Hr |

NOTICE



Always refer to the machine data plate for specific electrical and water requirements. The material provided on this page is for reference only and is subject to change without notice.

Local codes may require more stringent protection than what is displayed here and on the data plate. Always verify with your electrical service contractor that your circuit protection is adequate and meets all applicable national and local codes. Numbers in this manual are for reference and may change without notice. On three-phase machines, imbalanced wild leg goes to L3. Also see the Motor Rotation section.



TEMPSTAR 70° Rise (14 kW) & TEMPSTAR VER

| Volts | Phase | Freq | Wash Motor | Wash Heater | Rinse Heater | Total Load | MCA | MOP |
|-------|-------|-------|------------|-------------|--------------|------------|--------|------|
| 208 | 3 | 60 Hz | 5.0 A | 11.4 A | 29.2 A | 45.6 A | 46.9 A | 50 A |
| 230 | 3 | 60 Hz | 5.0 A | 12.6 A | 32.3 A | 49.9 A | 51.2 A | 55 A |
| 460 | 3 | 60 Hz | 1.24 A | 6.3 A | 16.1 A | 23.7 A | 24.0 A | 25 A |
| 208 | 1 | 60 Hz | 5.0 A | 19.7 A | 50.6 A | 75.3 A | 76.6 A | 80 A |
| 230 | 1 | 60 Hz | 5.0 A | 21.8 A | 55.9 A | 82.7 A | 84.0 A | 90 A |
| 208 | 3 | 50 Hz | 7.8 A | 11.4 A | 29.2 A | 48.4 A | 50.3 A | 55 A |
| 230 | 3 | 50 Hz | 7.8 A | 12.6 A | 32.3 A | 52.6 A | 54.6 A | 60 A |
| 380 | 3 | 50 Hz | 1.7 A | 8.3 A | 21.3 A | 31.3 A | 31.7 A | 35 A |
| 415 | 3 | 50 Hz | 1.7 A | 7.6 A | 14.6 A | 23.8 A | 24.3 A | 25 A |
| 208 | 1 | 50 Hz | 7.8 A | 19.7 A | 50.6 A | 78.0 A | 80.0 A | 85 A |
| 230 | 1 | 50 Hz | 7.8 A | 21.8 A | 55.9 A | 85.5 A | 87.4 A | 95 A |

TEMPSTAR 40° Rise (12 kW)

| Volts | Phase | Freq | Wash Motor | Wash Heater | Rinse Heater | Total Load | MCA | MOP |
|-------|-------|-------|------------|-------------|--------------|------------|--------|------|
| 208 | 3 | 60 Hz | 5.0 A | 11.4 A | 25.0 A | 41.4 A | 42.7 A | 45 A |
| 230 | 3 | 60 Hz | 5.0 A | 12.6 A | 27.7 A | 45.3 A | 46.6 A | 50 A |
| 460 | 3 | 60 Hz | 1.24 A | 6.3 A | 13.8 A | 21.4 A | 21.7 A | 25 A |
| 208 | 1 | 60 Hz | 5.0 A | 19.7 A | 43.3 A | 68.0 A | 69.3 A | 70 A |
| 230 | 1 | 60 Hz | 5.0 A | 21.8 A | 47.9 A | 74.7 A | 76.0 A | 80 A |
| 208 | 3 | 50 Hz | 7.8 A | 11.4 A | 25.0 A | 44.2 A | 46.1 A | 50 A |
| 230 | 3 | 50 Hz | 7.8 A | 12.6 A | 27.7 A | 48.0 A | 50.0 A | 55 A |
| 380 | 3 | 50 Hz | 1.7 A | 8.3 A | 31.6 A | 41.6 A | 42.0 A | 45 A |
| 415 | 3 | 50 Hz | 1.7 A | 7.6 A | 21.6 | 30.9 A | 31.3 A | 35 A |
| 208 | 1 | 50 Hz | 7.8 A | 19.7 A | 43.3 A | 70.8 A | 72.8 A | 80 A |
| 230 | 1 | 50 Hz | 7.8 A | 21.8 A | 47.9 A | 77.5 A | 79.4 A | 85 A |

Local codes may require more stringent protection than what is displayed here and on the data plate. Always verify with your electrical service contractor that your circuit protection is adequate and meets all applicable national and local codes. Numbers in this manual are for reference and may change without notice. On three-phase machines, imbalanced wild leg goes to L3. Also see the Motor Rotation section.



TEMPSTAR NB

| Volts | Phase | Freq | Wash Motor | Wash Heater | Total Load | MCA | MOP |
|-------|-------|-------|------------|-------------|------------|--------|------|
| 208 | 3 | 60 Hz | 5.0 A | 11.4 A | 16.4 A | 17.7 A | 20 A |
| 230 | 3 | 60 Hz | 5.0 A | 12.6 A | 17.6 A | 18.9 A | 20 A |
| 460 | 3 | 60 Hz | 1.24 A | 6.3 A | 7.5 A | 7.8 A | 15 A |
| 208 | 1 | 60 Hz | 5.0 A | 19.7 A | 24.7 A | 26.0 A | 30 A |
| 230 | 1 | 60 Hz | 5.0 A | 21.8 A | 26.8 A | 28.1 A | 30 A |
| 208 | 3 | 50 Hz | 7.8 A | 11.4 A | 19.2 A | 21.1 A | 25 A |
| 230 | 3 | 50 Hz | 7.8 A | 12.6 A | 20.4 A | 22.3 A | 30 A |
| 380 | 3 | 50 Hz | 1.7 A | 8.3 A | 10.0 A | 10.4 A | 15 A |
| 415 | 3 | 50 Hz | 1.7 A | 7.6 A | 9.3 A | 9.7 A | 15 A |
| 208 | 1 | 50 Hz | 7.8 A | 19.7 A | 27.5 A | 29.4 A | 35 A |
| 230 | 1 | 50 Hz | 7.8 A | 21.8 A | 29.6 A | 31.5 A | 35 A |

TEMPSTAR S

| Volts | Phase | Freq | Wash Motor | Total Load | MCA | MOP |
|-------|-------|-------|------------|------------|-------|------|
| 208 | 3 | 60 Hz | 5.0 A | 5.0 A | 6.3 A | 15 A |
| 230 | 3 | 60 Hz | 5.0 A | 5.0 A | 6.3 A | 15 A |
| 460 | 3 | 60 Hz | 1.24 A | 1.24 A | 1.6 A | 15 A |
| 208 | 1 | 60 Hz | 5.0 A | 5.0 A | 6.3 A | 15 A |
| 230 | 1 | 60 Hz | 5.0 A | 5.0 A | 6.3 A | 15 A |

INSPECTION

Before installing the machine, check packaging and machine for damage. If packaging is damaged, the machine might also be damaged. If there is damage to both packaging and machine, do not throw away the packaging. The machine has been inspected and packed at the factory and is expected to arrive in new, undamaged condition. However, rough handling by carriers or others might result in damage to the machine while in transit. If so, do not return the machine to the manufacturer. Instead, contact the carrier and ask them to send a representative to the site to inspect the damage and complete an inspection report. You must contact the carrier and the dealer within 48 hours of receiving the machine.

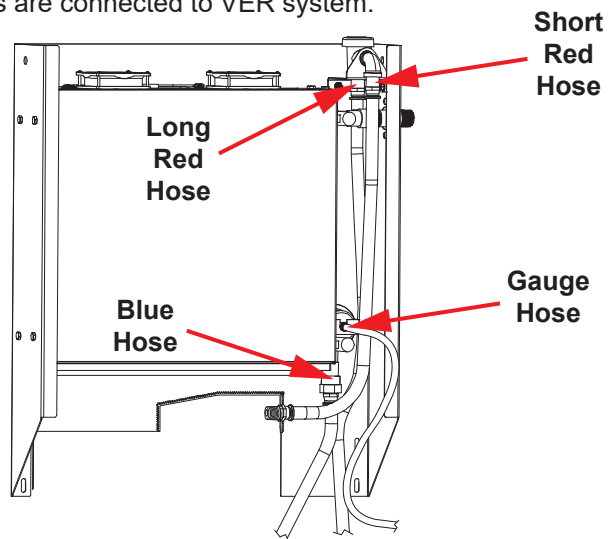
Do not throw away packaging if damage is evident!

UNPACKING

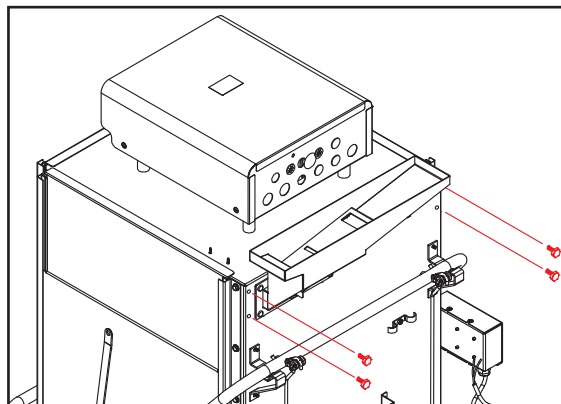
Unpack the machine and ensure there are no missing parts. If an item is missing, contact the manufacturer immediately. VER system for VER model is shipped in separate packaging and must be installed before proceeding with machine installation.

VER SYSTEM ASSEMBLY

1. Ensure hoses are connected to VER system.



2. Locate bag inside the machine with four 1/4-20 bolts. These secure VER system to the machine.



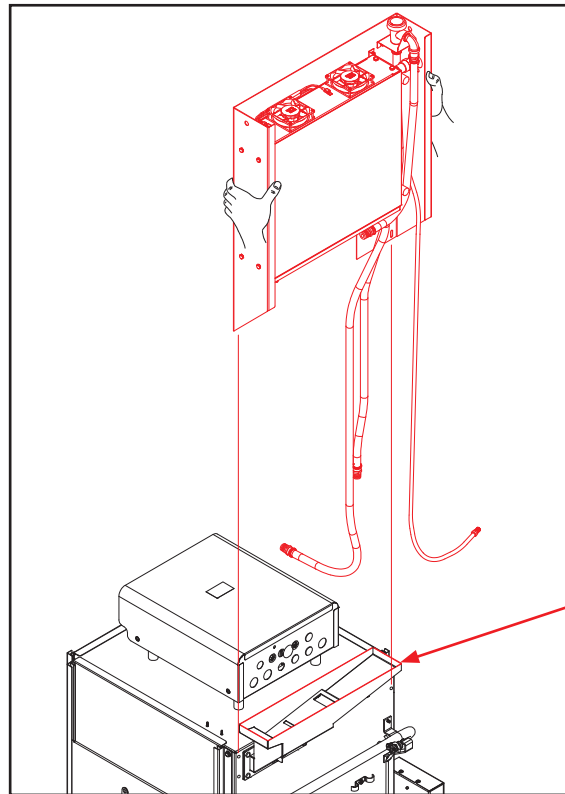
Locate bolts in bag inside the machine.

VER SYSTEM ASSEMBLY

- Lift VER system up and over lower air inlet, then align and slide into lower air inlet. VER system slides inside lower air inlet at the seam.

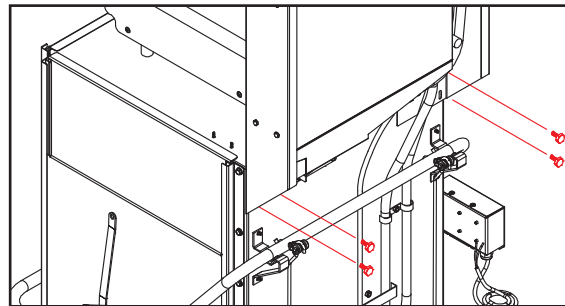


WARNING! Use proper lifting techniques or use a lifting aid.



Lower Air Inlet Seam

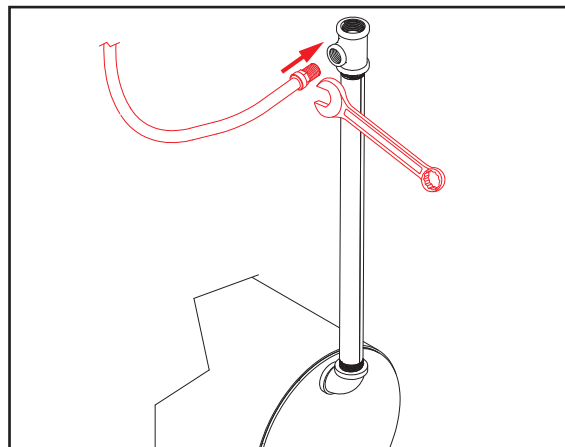
- Install four 1/4-20 bolts located in Step 1 with 7/16 wrench.



7/16 wrench used in this step.

Bolts located in Step 1 used in this step.

- Use 9/16 wrench to connect gauge hose to side of tee on plumbing from booster.



9/16 wrench used in this step.

Apply thread tape to threads of hose before connecting.

Hose is cut-to-length and will only reach intended connection point.

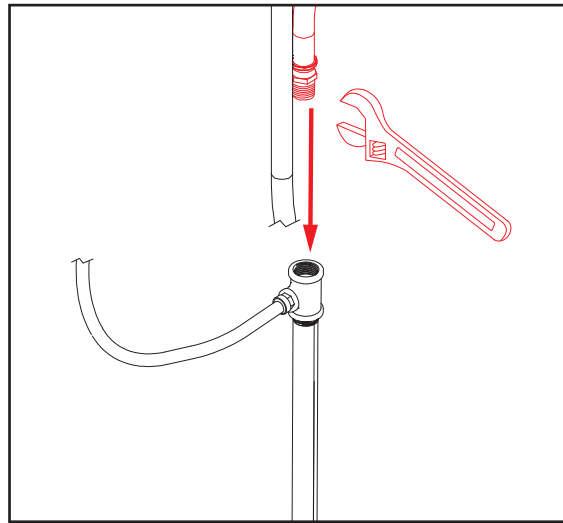
VER SYSTEM ASSEMBLY

- Use adjustable wrench to connect long red hose to top of tee on plumbing from booster.

Adjustable wrench used in this step.

Apply thread tape to threads of hose before connecting.

Hose is cut-to-length and will only reach intended connection point.

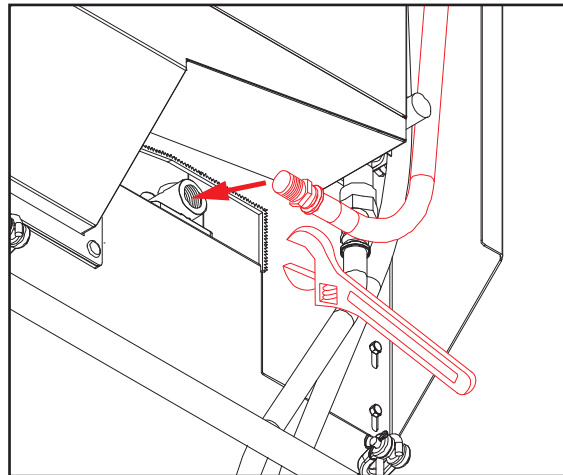


- Use adjustable wrench to connect short red hose to rinse injector.

Adjustable wrench used in this step.

Apply thread tape to threads of hose before connecting.

Hose is cut-to-length and will only reach intended connection point.

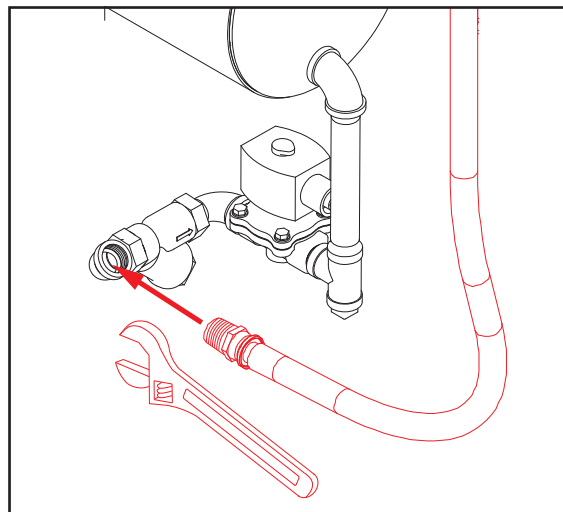


- Use adjustable wrench to connect blue hose to coupling on plumbing going to booster.

Adjustable wrench used in this step.

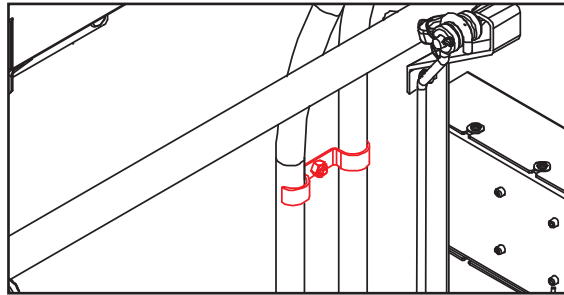
Apply thread tape to threads of hose before connecting.

Hose is cut-to-length and will only reach intended connection point.

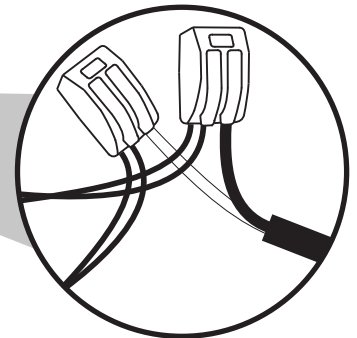
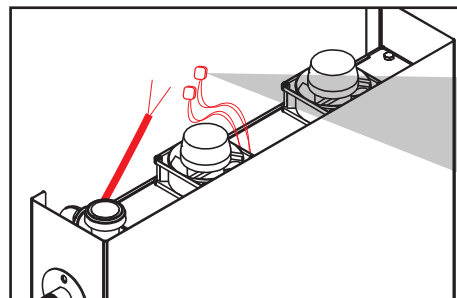


VER SYSTEM ASSEMBLY

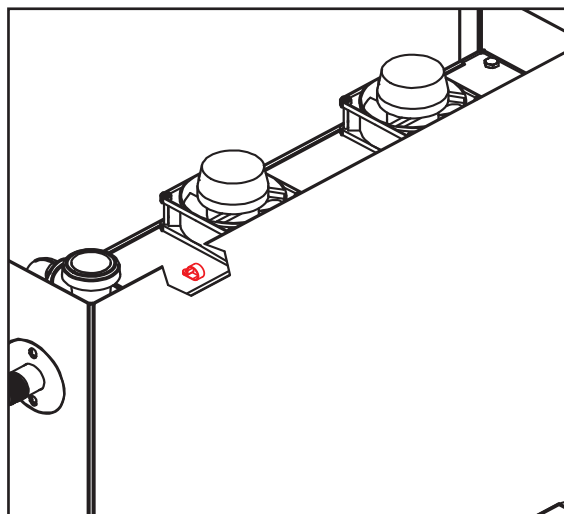
9. Tidy hoses by sliding them under clamps.



10. Locate wire connectors at top of VER system (near fans) and connect black wire and white wire from machine control box (located in black cord routed from control box), black in one connector and white in the other.



11. Tidy wires and lock them in place with p-clamp on top of VER system.



12. VER system is now assembled.

Black wire and white wire are shipped disconnected on end shown, but are already connected inside control box.



CAUTION! *Fan wires must be connected to black wire and white wire before proceeding with machine installation!*

LEVELING The machine must be level in its operating location to prevent damage to the machine during operation and to ensure best results. The machine comes with four adjustable bullet feet, which can be turned using a pair of channel locks (or by hand if the machine can be raised safely). Ensure that the machine is level from side-to-side and front-to-back before making any connections.

PLUMBING Plumbing connections must comply with all applicable local, state, and national plumbing codes. The plumber is responsible for ensuring the incoming water line is thoroughly flushed before connecting it to any component of the machine. It is very important to remove all foreign debris from the water line that might potentially get trapped in the valves or cause an obstruction. Any valves that are fouled as a result of foreign matter left in the water line—and any expenses resulting from this fouling—are not the responsibility of the manufacturer.

Plumber MUST flush the incoming water line!

A water hardness test MUST be performed.

A water hardness test must be performed to determine if a water treatment system needs to be installed.

WATER SUPPLY CONNECTION: WATER HARDNESS GREATER THAN 3 GPG If water hardness tests at greater than 3 GPG, install the Scaltrol Water Treatment system (see the Plumbing Options page) into the water line before the machine's incoming water connection point. A water shut-off valve should be installed to allow access for service.

WATER SUPPLY CONNECTION: WATER HARDNESS LOWER THAN 3 GPG If water hardness tests at lower than 3 GPG, install the water supply line directly to the machine's incoming water connection point. A water shut-off valve should be installed to allow access for service.

STEAM LINE CONNECTION



Steam model comes with lines to connect the source steam. Connect all steam lines to the machine as all applicable codes provide. See machine data plate for information concerning steam flow pressure. Click [here](#) or on the instructions icon for the Steam Booster manual.

PRESSURE REGULATOR



The manufacturer recommends installation of a pressure regulating valve (PRV) in the incoming water line to ensure proper flowrate at all times and offers these devices as options (see the Plumbing Options page). The PRV comes standard on the TempStar VER but ships inside the machine. Click [here](#) for install instructions.

Do not confuse static pressure with flow pressure. Static pressure is the line pressure in a “no flow” condition (all valves and services are closed). Flow pressure is the pressure in the fill line when the fill valve is opened during the cycle.

SHOCK ABSORBER

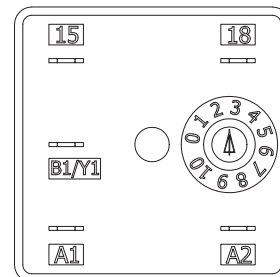
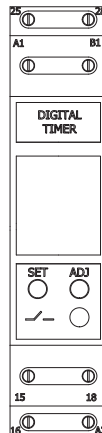
The manufacturer also recommends installation of a shock absorber in the incoming water line and offers these devices as options (see the Plumbing Options page). This prevents line hammer/hydraulic shock—induced by the solenoid valve as it operates—from causing damage to the equipment.

CONNECTING THE DRAIN LINE

The machine's drain is a gravity-discharge drain. All piping from the 1 1/2” NPT connection on the wash tank must be pitched (1/4” per foot) to the floor or sink drain. All piping from the machine to the drain must be a minimum 1 1/2” NPT and must not be reduced. There must also be an air-gap between the machine drain line and the floor sink or drain. If a grease trap is required by code, it should have a flow capacity of 5 GPM.

EXHAUST FAN TIMER

Determine which exhaust fan timer is on the machine (located in the control box) and click the instructions icon below that timer to access programming instructions.



CHEMICAL CONNECTIONS

Chemical connections should be made by chemical supplier.

Using deionized water or other aggressive fluids will result in corrosion and failure of components and will void the warranty.

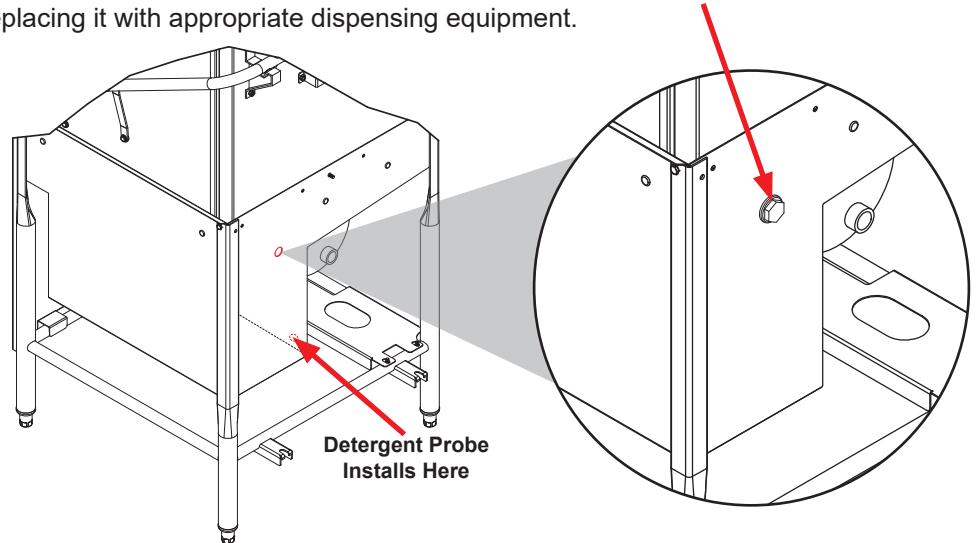


WARNING! Some of the chemicals used in dishwashing can cause chemical burns if they come in contact with skin. Wear protective gear when handling these chemicals. If any skin comes in contact with these chemicals, immediately follow the instructions provided with the chemicals for treatment.



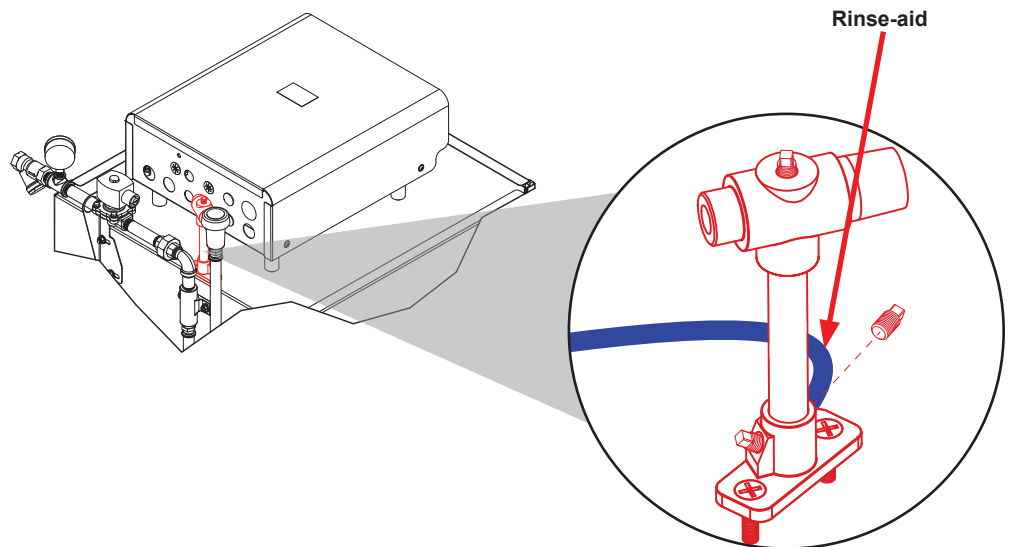
Detergent

Connect detergent by removing bulkhead fitting on back of the machine and replacing it with appropriate dispensing equipment.



Rinse-aid

Connect rinse-aid by removing brass plug at base of rinse injector and replacing it with appropriate dispensing equipment. See Plumbing - VER page for a depiction of VER rinse injector.



Dispenser Electrical Connections

Electrical connections for chemical dispensers are made on a fuse block inside control box. Click [here](#) for a depiction of fuse block and connection locations.

PLUMBING CHECK

Slowly turn on water supply to the machine after incoming fill line and drain line have been installed. Check for any leaks and repair as required. All leaks must be repaired before operating the machine.

ELECTRICAL POWER CONNECTIONS

Electrical and grounding conductors must comply with applicable portions of National Electric Code ANSI/NFPA 70 (latest edition) and/or other electrical codes.

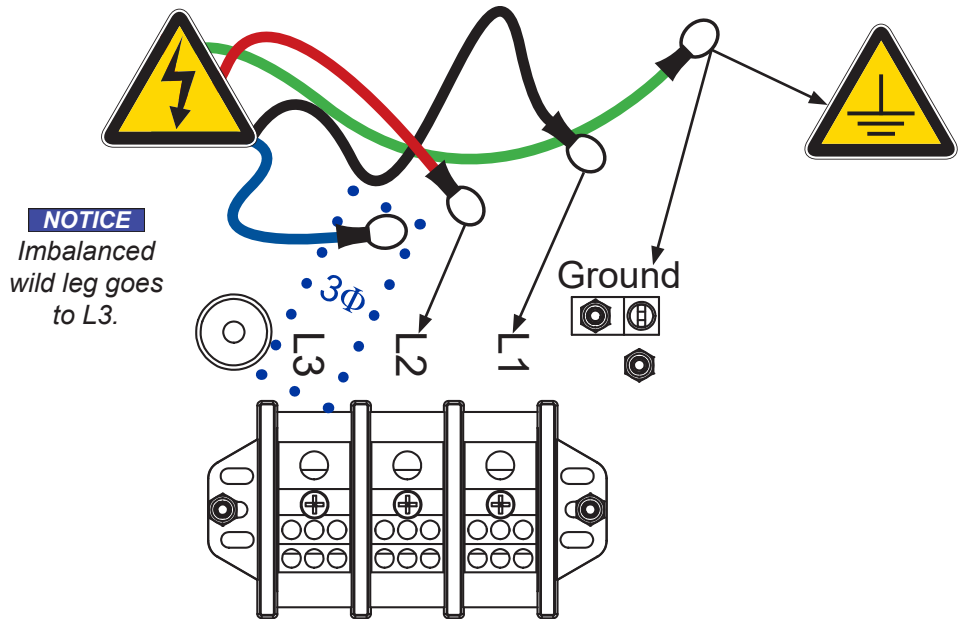


Disconnect electrical power supplies and lockout/tagout in accordance with appropriate procedures and codes at the disconnect switch.

If necessary, see Heaters page for phase conversion kit.

Data plate is located on right side of the machine. Refer to data plate for machine operating requirements, machine voltage, total amperage, and serial number.

1. Open control box by using a phillips screwdriver to remove four screws on front cover of control box.
2. Install 3/4" conduit into pre-punched holes in back of control box.
3. Route power wires and connect to power block and grounding lug.
4. Install service wires (L3 for 3-Phase only) to appropriate terminals as they are marked on terminal block.



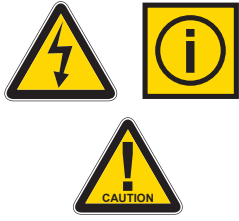
5. Install grounding wire into lug provided.
6. Tighten connections.

NOTICE "DE-OX" or similar anti-oxidation agent should be used on all power connections.



CAUTION! Improperly connecting external devices can cause damage to the machine and/or electrical infrastructure! Click [here](#) for a wiring guide.

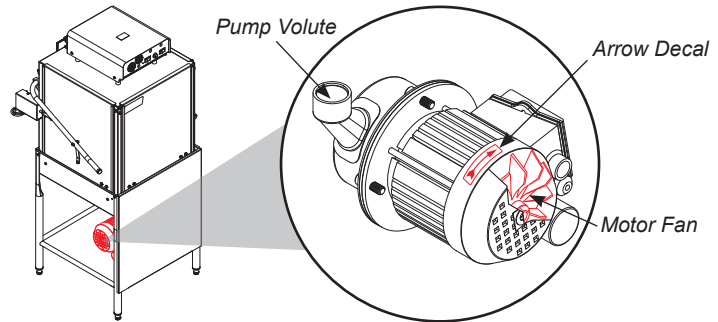
MOTOR ROTATION



CAUTION! On 3-Phase machines only, correct pump motor rotation must be verified before operation!

On 3-Phase machines only, correct pump motor rotation must be verified before the machine is operated. Failure to do so can result in damage to the machine and components.

1. Follow Filling the Wash Tub section.
2. Locate wash pump motor and identify arrow decal which shows correct motor rotation (if no decal is present, correct rotation is away from pump volute).



3. Flip mode switch to "MANUAL" and start the machine.
4. Observe rotation of motor fan and quickly stop the machine.
5. If rotation is incorrect, disconnect electrical power and reverse L1 and L2 connections at terminal block shown in section above.

VOLTAGE CHECK



Ensure power switch is in "OFF" position and apply power to the machine. Check incoming power at terminal block and ensure it corresponds with voltage listed on data plate. If not, contact a qualified service agency. Do not run the machine if voltage is too high or too low. Shut off service breaker and advise all proper personnel of the location of breaker and any problems. Replace control box cover and tighten-down screws.

SURROUNDING AREA

This is a commercial dishmachine and reaches temperatures that can exceed those generated by a residential machine. Surrounding countertops, cabinets, flooring material, and subflooring material must be designed and/or selected with these higher temperatures in mind.

NOTICE Any damage to surrounding area caused by heat/moisture to materials that are not recommended for higher temperatures will not be covered under warranty or by the manufacturer.

TEMPERATURE SETPOINTS

The temperature setpoints on the machine have been set at the factory. They should only be adjusted by an authorized service agent.

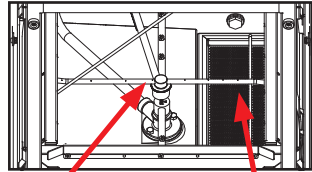
FALSE PANEL/ CORNER INSTALL

The manufacturer offers an optional False Panel Kit for corner installations. See the Kits page for kit part number. Click [here](#) for false panel/corner install instructions.

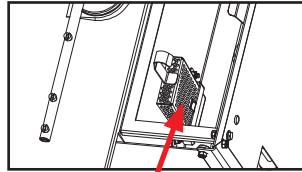


PREPARATION Before operating the machine, verify the following:

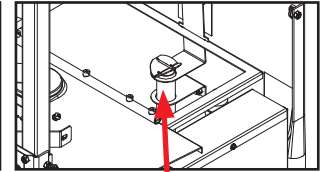
1. Tank is clean and free of debris.
2. Wash arms, rinse arms, sump strainer, and scrap screen are all installed correctly.
3. Standpipe is installed.



Wash & Rinse Arms, Scrap Screen



Sump Strainer



Standpipe

POWER UP To energize the machine, turn on power at service breaker. Voltage should have been previously verified. If not, verify voltage.

FILLING THE WASH TUB Ensure mode switch is in "AUTO" position, and place power switch into "ON" position. The machine will fill automatically and shut-off when appropriate level is reached (just below scrap screen). Wash tub must be completely filled before operating wash pump to prevent damage to components. Once wash tub is filled, the machine is ready for operation.

WARE PREPARATION Proper ware preparation will help ensure good results and fewer re-washes. If not prepared properly, ware might not come out clean and efficiency of the machine will be reduced. Putting unscrapped dishes into the machine affects its performance, so scraps should always be removed from ware before being loaded into a rack. Pre-rinsing and pre-soaking are good ideas, especially for silverware and casserole dishes.

Place cups and glasses upside-down in racks so they don't hold water during the cycle. The machine sanitizes as well as cleans. To do this, ware must be properly prepared before being placed in the machine.

DAILY MACHINE PREPARATION Refer to Preparation section and follow instructions there. Afterward, ensure chemicals are supplied to the machine. If not, contact chemical supplier.

WARM-UP CYCLES

For first operation of each day, it might be necessary to run the machine through three cycles to ensure all cold water is out of the system and to verify that the machine is operating correctly. To cycle the machine, ensure power is on and tub has filled to correct level. Lift and close door and cycle light will illuminate. The machine will start, run through cycle, and shut-off automatically. Repeat this two more times. The machine is now ready.

WASHING A RACK OF WARE

To wash a rack, open door completely (avoiding hot water that might drip) and slide rack into the machine.

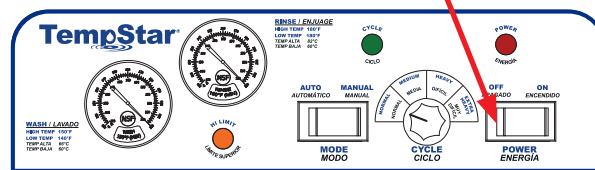
Close door and the machine will start automatically. Once cycle is complete, open door and remove rack of clean ware. Replace with a rack of soiled ware and close door. Repeat this process.

OPERATIONAL INSPECTION

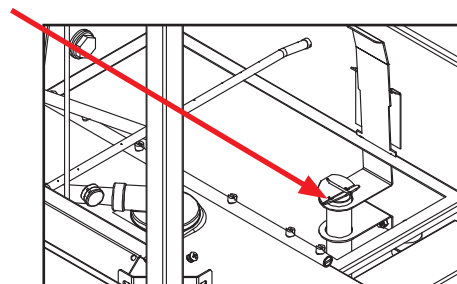
Based on use, scrap screen might become clogged with soil and debris as workday progresses. Operators should regularly inspect scrap screen to ensure it has not become clogged. If clogged, it will reduce washing capability of the machine. Instruct operators to clean-out scrap screen at regular intervals or as required by workload. Do NOT beat strainers to remove debris.

SHUTDOWN & CLEANING

1. Turn machine off by flipping power switch to "OFF."



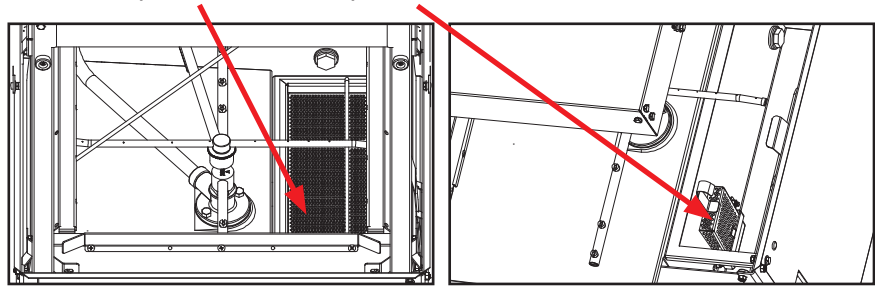
- 2. Open door and allow steam/heat to escape.
- 3. Remove standpipe and allow tub to drain.



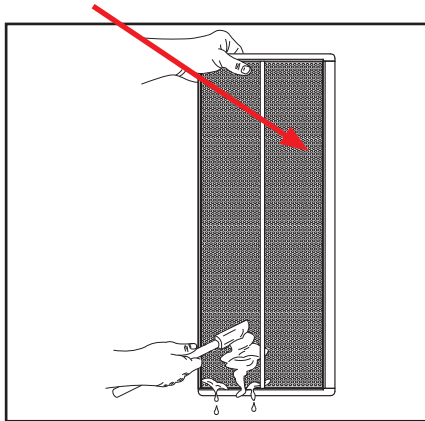
WARNING! Wash tank water will be hot!

**SHUTDOWN &
CLEANING**

4. Remove scrap screen and sump strainer.

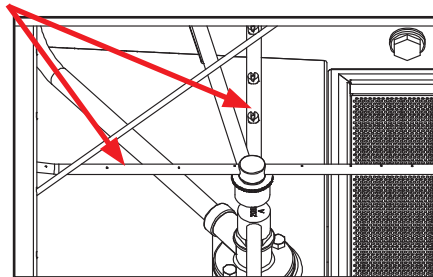


5. Use a hand-scraper to scrape foodsoil into a trash basket.

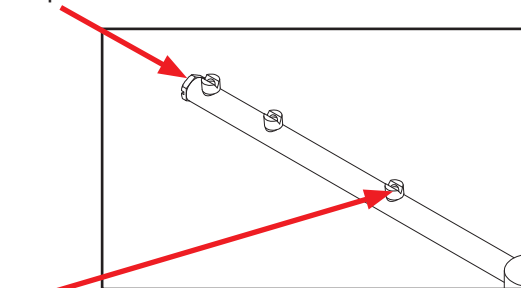


6. Rinse with pre-rinse hose and replace.

7. Remove all wash and rinse arms.



8. Remove end-caps from the arms.



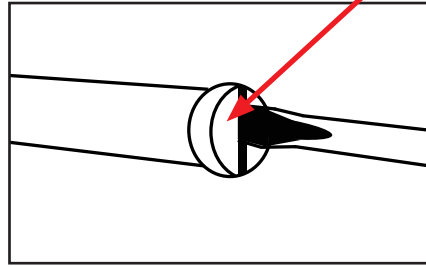
9. Clean nozzles with a brush.

10. Use a small wire or toothpick to remove remaining debris or lime deposits from nozzles.

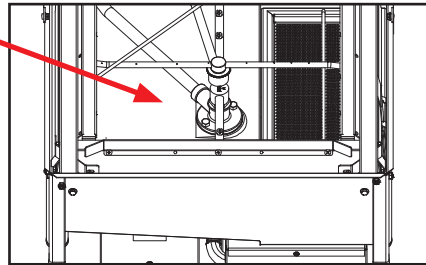
11. Flush arms with water.

**SHUTDOWN &
CLEANING**

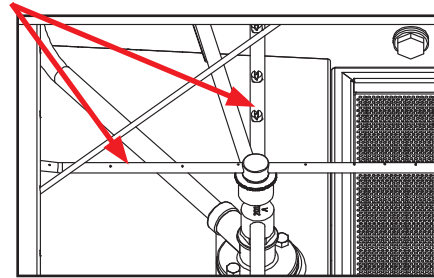
12. Replace end-caps and ensure they are tight.



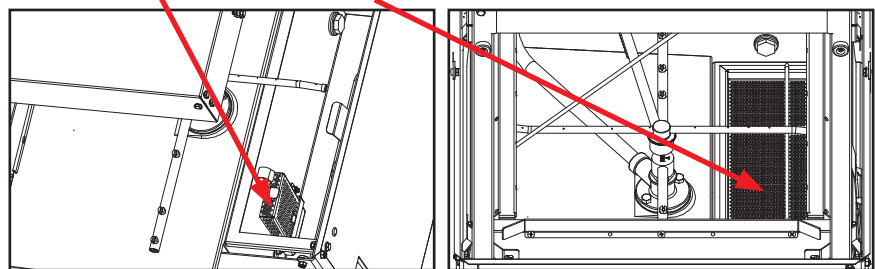
13. Spray or wipe out interior of the machine.



14. Replace wash and rinse arms.



15. Ensure sump strainer and scrap screen are clean and securely in place.



16. Use stainless steel polish to clean and protect outside of the machine.

VER COIL CLEANING

Coil on VER model must be inspected periodically. If the coil is greasy, dirty, or there is scale build-up, click [here](#) for cleaning instructions.



DETERGENT CONTROL

Detergent usage and water hardness are two factors that contribute greatly to how efficiently the machine will operate. Using detergent in proper amounts can become a source of substantial savings. A qualified water treatment specialist can determine what is needed for maximum efficiency from the detergent.

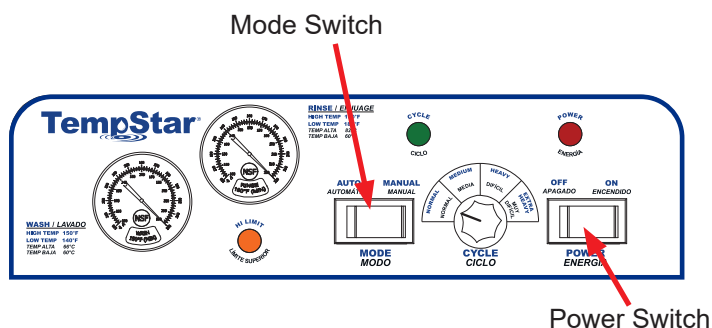
See Water Supply Connection section for more information on water treatment.

1. Hard water greatly affects performance of the machine, causing amount of detergent required for washing to increase. If the machine is installed in an area with hard water, the manufacturer recommends installation of water treatment equipment.
2. Deposited solids from hard water can cause spotting that will not be removed with a drying agent. Treated water will reduce this occurrence.
3. Treated water might not be suitable for use in other areas of operation and it might be necessary to install a water treatment system for the water going to the machine only. Discuss this option with a qualified water treatment specialist.
4. Machine operators should be properly trained on how much detergent is to be used per cycle. Meet with a water treatment specialist and detergent vendor to discuss a complete training program for operators.
5. The machine requires chemicals be provided for proper operation and sanitization and require installation of third-party chemical feeders to introduce these chemicals to the machine. Contact a chemical supplier with any questions.
6. Water temperature is an important factor in ensuring the machine functions properly. The machine's data plate details what the minimum temperatures must be for the incoming water supply, the wash tank, and the rinse tank. If minimum requirements are not met, there is a possibility that dishes will not be clean or sanitized.
7. Instruct machine operators to observe the required temperatures and to report when they fall below the minimum allowed. A loss of temperature can indicate a larger problem.



DELIMING To delime the machine, follow steps below. Tank capacities of the machine can be found on Operating Parameters page.

1. Remove rinse arms and place in sink with delimiting solution.
2. Disconnect or turn off chemical feeder pumps.
3. Add delimiting solution per chemical supplier's instructions.
4. Close door and turn the machine on in "MANUAL" mode.
5. Run the machine for length of time recommended by chemical supplier.
6. Flip mode switch to "AUTO" to shut the machine off.
7. Open door and step away for five minutes.
8. Inspect inside of the machine. If the machine is not delimed, run again.
9. When clean, drain and re-fill the machine.
10. Run two cycles in "AUTO" to remove residual delimiting solution.
11. Drain and re-fill the machine.
12. Flush rinse arms with water and replace.



CAUTION! *The machine is not recommended for use with deionized water or other aggressive fluids. Using deionized water or other aggressive fluids will result in corrosion and failure of components and will void the warranty.*

PREVENTATIVE MAINTENANCE



The manufacturer highly recommends that any maintenance and repairs not specifically discussed in this manual be performed only by qualified service personnel.

WARNING! *Unqualified personnel performing maintenance on the machine may void the warranty, lead to larger problems, or cause harm to the operator.*

Following operating and cleaning instructions in this manual will result in the most efficient results from the machine. As a reminder, here are some steps to take to ensure the machine is being used the way it was designed to work:



CAUTION!
Do NOT beat strainers to remove debris!

1. Ensure water temperatures match those listed on machine data plate. A loss of temperature can indicate a larger problem.
2. Ensure all strainers are clean and securely in place before operating the machine. When cleaning out strainers, do NOT beat them on waste cans. Wipe out strainers with a rag and rinse with water if necessary. Use a toothpick to dislodge any stubborn debris.
3. Ensure all wash and rinse arms are secure in the machine before operating.
4. Ensure standpipe is in position before operating.
5. Remove as much soil from dishes by hand as possible before loading into racks.
6. Do not overfill racks.
7. Ensure glasses are placed upside-down in rack.
8. Ensure all chemicals being injected into the machine are at correct concentrations.
9. Clean the machine at end of every day/shift per Shutdown and Cleaning section.
10. Follow all safety procedures, whether listed in this manual or put forth by local, state, or national codes/regulations.

RESISTANCE-TO-TEMPERATURE VALUES

| R (kΩ) | °F |
|--------|-------|
| 11.58 | 69.8 |
| 10.37 | 75.2 |
| 9.30 | 80.6 |
| 7.78 | 89.6 |
| 3.05 | 140.0 |
| 2.54 | 150.8 |
| 2.18 | 159.8 |
| 1.58 | 179.6 |
| 1.45 | 185.0 |
| 1.33 | 190.4 |
| 1.16 | 199.4 |
| 0.96 | 212.0 |



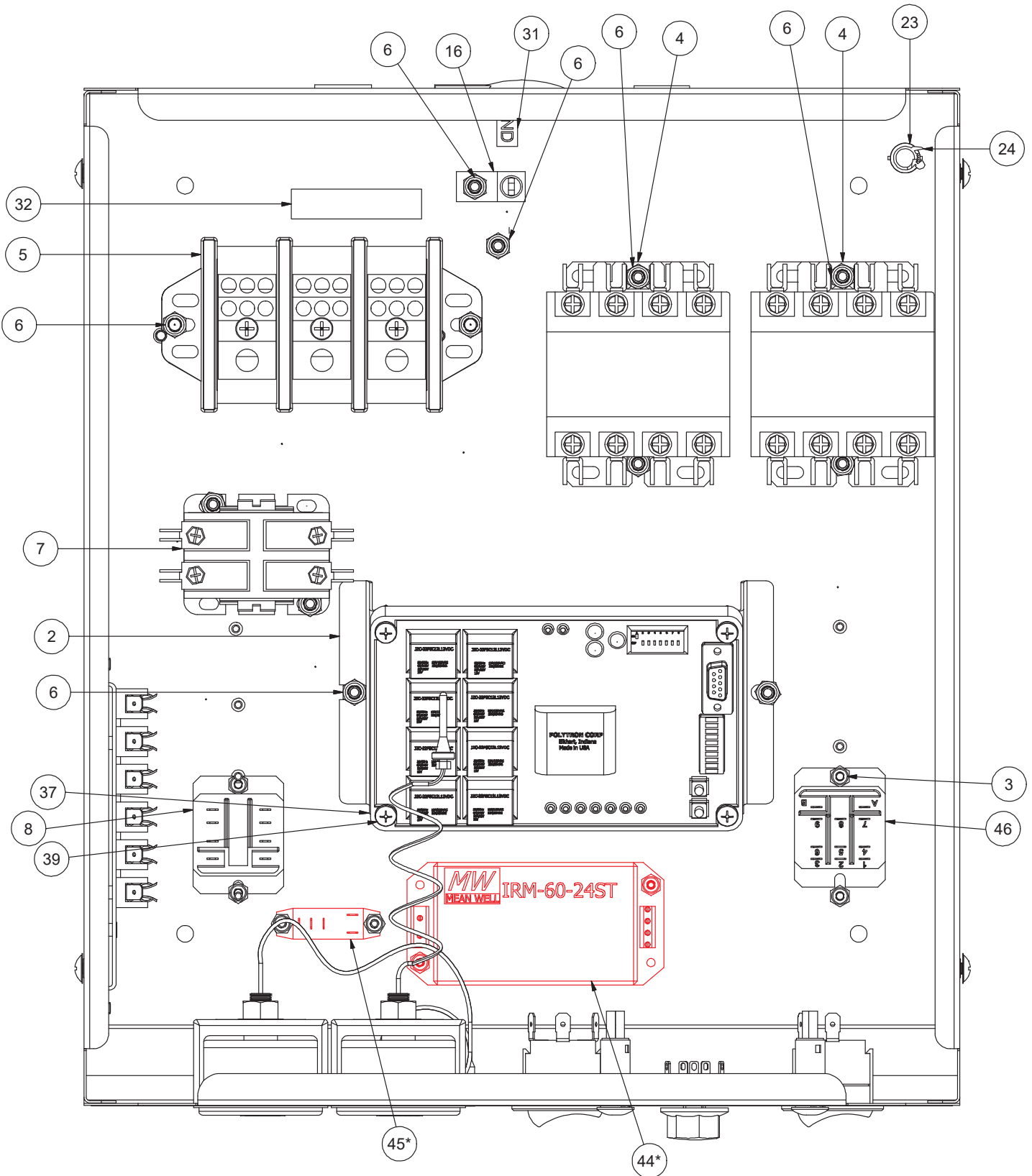
WARNING! Inspection, testing, and repair of electrical equipment should only be performed by a qualified service technician. Many tests require the machine have power to it and live electrical components be exposed. USE EXTREME CAUTION WHEN TESTING THE MACHINE.

| OBSERVATION | POSSIBLE CAUSE | REMEDY |
|--|--|--|
| Machine will not fill after door is closed. Power "ON" light is illuminated. | <ol style="list-style-type: none"> 1. Faulty rinse solenoid valve. 2. Faulty door switch. 3. Fouled/faulty high-level probe. | <ol style="list-style-type: none"> 1. Repair or replace valve as required. 2. Verify wiring of switch; if correct, replace switch. 3. Clean probe if fouled. If clean and still not working, replace. |
| Machine will not fill after door is closed. Power "ON" light is NOT illuminated. | <ol style="list-style-type: none"> 1. Service breaker tripped. 2. Machine not connected to power source. 3. Faulty power source. | <ol style="list-style-type: none"> 1. Reset. If breaker trips again, contact an electrician to verify amp draw of the machine. 2. Verify the machine has been properly connected to power source. 3. Verify wiring of switch; if correct, replace switch. |
| Machine will not run after door is closed. Power "ON" light is illuminated and the machine is filling. | <ol style="list-style-type: none"> 1. Timer is faulty. 2. Wash motor faulty/damaged. 3. Wash motor contactor faulty. | <ol style="list-style-type: none"> 1. Verify timer is receiving power. If so, replace timer assembly. 2. Verify wash motor is getting power. If so, replace motor. 3. Check for continuity; if contacts are open, replace contactor. |
| Machine runs continuously in the wash cycle. | <ol style="list-style-type: none"> 1. Machine is in Delime mode. 2. Timer motor is faulty. 3. Cam timer jammed by obstruction. | <ol style="list-style-type: none"> 1. Flip mode switch to "AUTO." 2. Verify timer is rotating. If not, verify motor is receiving power. If so, replace motor and/or timer assembly. 3. Remove obstruction. |
| Wash or rinse heater does not work. | <ol style="list-style-type: none"> 1. Faulty heater element. 2. Faulty heater contactor. 3. Misadjusted/faulty thermostat(s). | <ol style="list-style-type: none"> 1. Check element for continuity; if open, replace heater. 2. Replace contactor. 3. Verify operation and setting of thermostats, replace if necessary. |
| Machine fills slowly and/or rinse is weak. | <ol style="list-style-type: none"> 1. Clogged or obstructed rinse arms. 2. Low incoming water pressure. 3. Y-strainer is clogged. | <ol style="list-style-type: none"> 1. Remove and clean rinse arms. 2. Adjust water pressure regulator to ensure there is 10 ± 2 PSI flow. 3. Clean out Y-strainer. |
| Rinse water not reaching required temperature. | <ol style="list-style-type: none"> 1. Faulty rinse heater. 2. Mis-adjusted/faulty thermostat(s). 3. Rinse thermometer is defective. | <ol style="list-style-type: none"> 1. Check element for continuity; if open, replace heater. 2. Verify operation and setting of thermostats, replace if necessary. 3. Replace thermometer. |

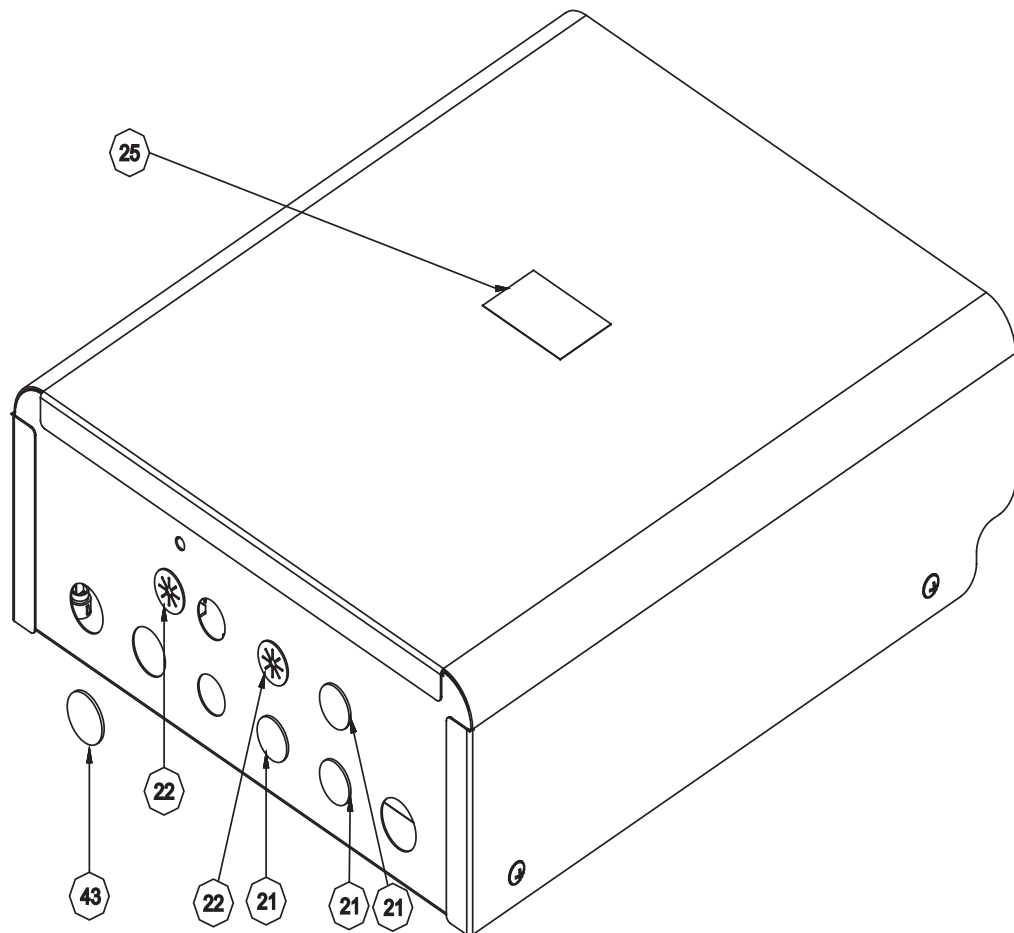
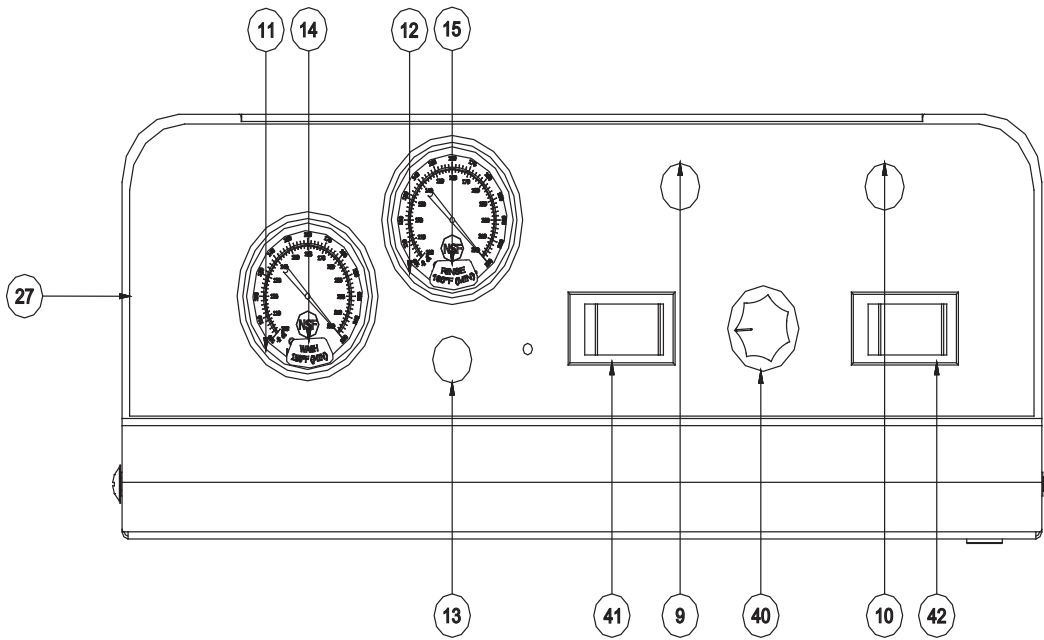


WARNING! Inspection, testing, and repair of electrical equipment should only be performed by a qualified service technician. Many tests require the machine have power to it and live electrical components be exposed. USE EXTREME CAUTION WHEN TESTING THE MACHINE.

| OBSERVATION | POSSIBLE CAUSE | REMEDY |
|--|--|--|
| Machine doesn't drain when power switch is flipped to "OFF." | <ol style="list-style-type: none"> 1. Drain clogged. 2. Standpipe not removed before draining. | <ol style="list-style-type: none"> 1. Remove obstruction. 2. Remove standpipe and run drain cycle again. |
| Incorrect water pressure displayed during Fill or Rinse modes. | <ol style="list-style-type: none"> 1. Water turned off. | <ol style="list-style-type: none"> 1. Turn water on. |
| Wash water is not reaching required temperature. | <ol style="list-style-type: none"> 1. Faulty wash heater. 2. Misadjusted/faulty thermostat(s). 3. Wash thermometer is defective. | <ol style="list-style-type: none"> 1. Check element for continuity; if open, replace heater. 2. Verify operation and setting of thermostats, replace if necessary. 3. Replace thermometer. |
| Door will not close completely. | <ol style="list-style-type: none"> 1. Improper spring tension. 2. Obstruction in door channel. 3. Door panels are not square with frame. | <ol style="list-style-type: none"> 1. Adjust spring tension as required by loosening (not removing) spring bolt nuts and adjusting tension. Tighten nuts back when done. 2. Remove obstruction. 3. Adjust frame to accommodate the door panels. |
| Water leaks at wash pump. | <ol style="list-style-type: none"> 1. Wash pump seal defective. 2. Petcock or pump drain (if equipped) not shut/tight. 3. Loose hoses (hose clamps) on the wash pump. | <ol style="list-style-type: none"> 1. Replace seal. 2. Close or tighten. 3. Tighten hose clamps. |
| Will not rinse during autocycle. | <ol style="list-style-type: none"> 1. Defective rinse solenoid. 2. Faulty timer. 3. No water to the machine. | <ol style="list-style-type: none"> 1. Repair or replace rinse solenoid as required. 2. Replace timer. 3. Verify there is water at 10 ± 2 PSI connected to the machine. |
| Dishes are not coming clean. | <ol style="list-style-type: none"> 1. Machine temperatures are not up to minimum requirements. 2. No detergent/too much detergent. | <ol style="list-style-type: none"> 1. Verify incoming water, rinse water, and wash water match required temperatures as listed on machine data plate. 2. Adjust detergent concentration as required for amount of water held by the machine. |



*Power supply and relay used only on machines with door interlock and VER machines with DC fans.

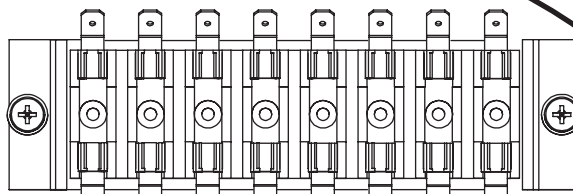
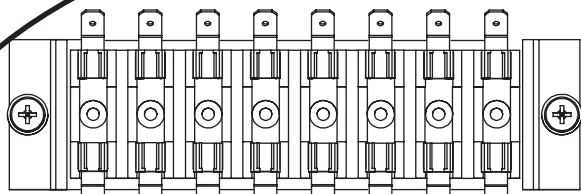


Fuses

208/230 V

or

460 V



WARNING: DISCONNECT POWER TO MACHINE BEFORE SERVICING

| | | | |
|---------------------------------|--------------------------------------|--------------------------------|---------------------------------|
| EXHAUST FAN CONTROL | CONSTANT VOLTAGE CONNECTION | RINSE-AID DISPENSER CONNECTION | DETERGENT DISPENSER CONNECTION |
| MAXIMUM LOAD 1 AMP, 240/120 VAC | LIVE WHEN MACHINE POWER SWITCH IS ON | LIVE WHEN RINSE VALVE IS OPEN | LIVE WHEN WASH PUMP MOTOR IS ON |
| INPUT L1 (EXTERNAL) | OUTPUT TO EXT. RELAY | FUSE: 3 AMP SLOW-ACTING L1 OUT | FUSE: 3 AMP SLOW-ACTING L1 OUT |

WARNING: DISCONNECT POWER TO MACHINE BEFORE SERVICING

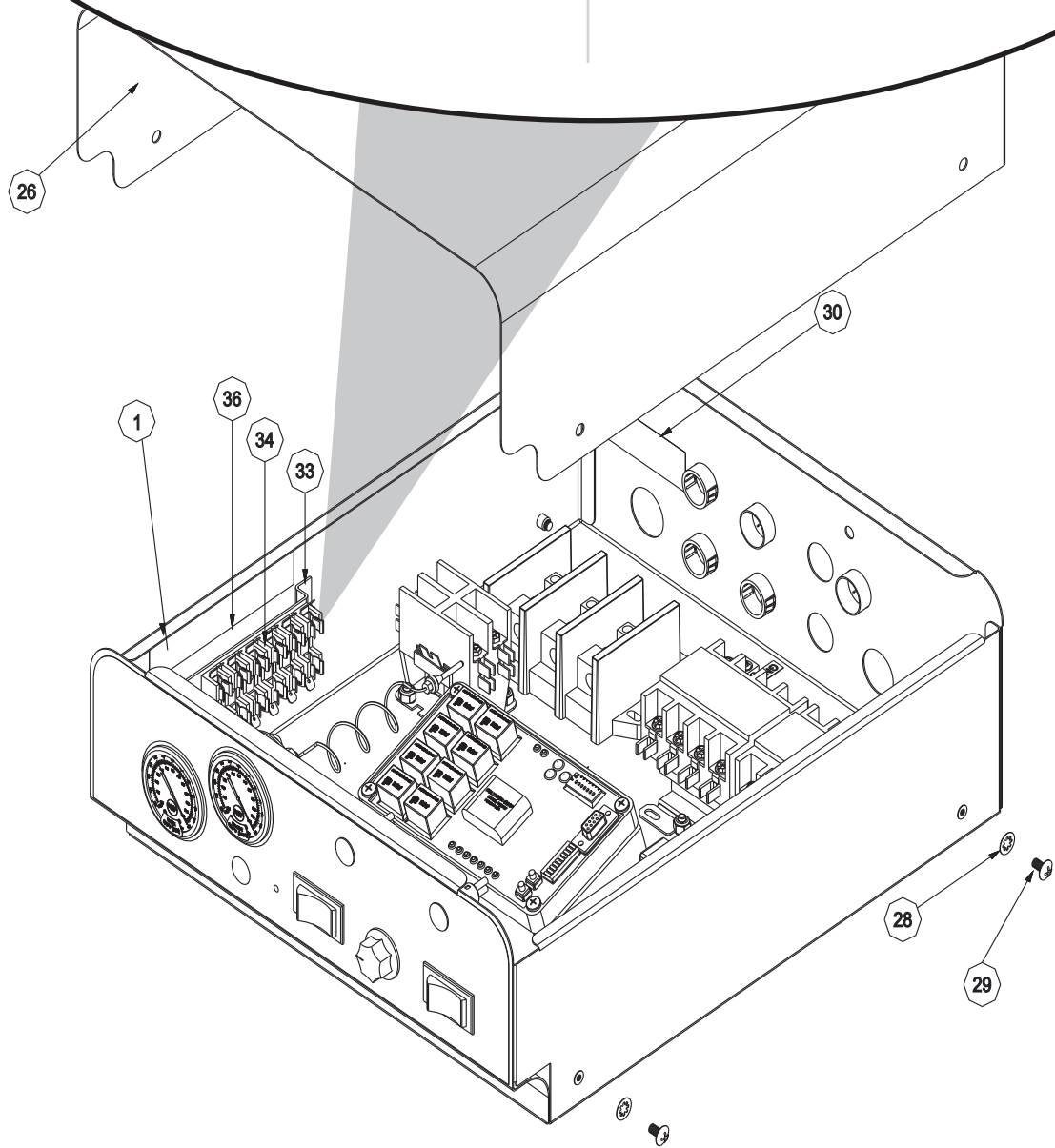
| | | | |
|---------------------------------|--------------------------------------|-----------------------------------|--------------------------------------|
| EXHAUST FAN CONTROL | CONSTANT VOLTAGE CONNECTION | RINSE-AID DISPENSER CONNECTION | DETERGENT DISPENSER CONNECTION |
| MAXIMUM LOAD 1 AMP, 240/120 VAC | LIVE WHEN MACHINE POWER SWITCH IS ON | LIVE WHEN RINSE VALVE IS OPEN | LIVE WHEN WASH PUMP MOTOR IS ON |
| INPUT L1 (EXTERNAL) | OUTPUT TO EXT. RELAY | FUSE: 1 A SLOW-ACTING 240 VAC OUT | FUSE: 200 mA SLOW-ACTING 240 VAC OUT |

Fuse, 1 A, Fast-acting
05999-004-47-87
Littelfuse P/N - 0312001.HXP
Qty - 2 (2 per output)

Fuse, 3 A, Slow-acting
05999-004-44-34
Littelfuse P/N - 0313003.HXP
Qty - 6 (2 per output)

Fuse, 1 A, Fast-acting
05999-004-47-87
Littelfuse P/N - 0312001.HXP
Qty - 2 (2 per output)

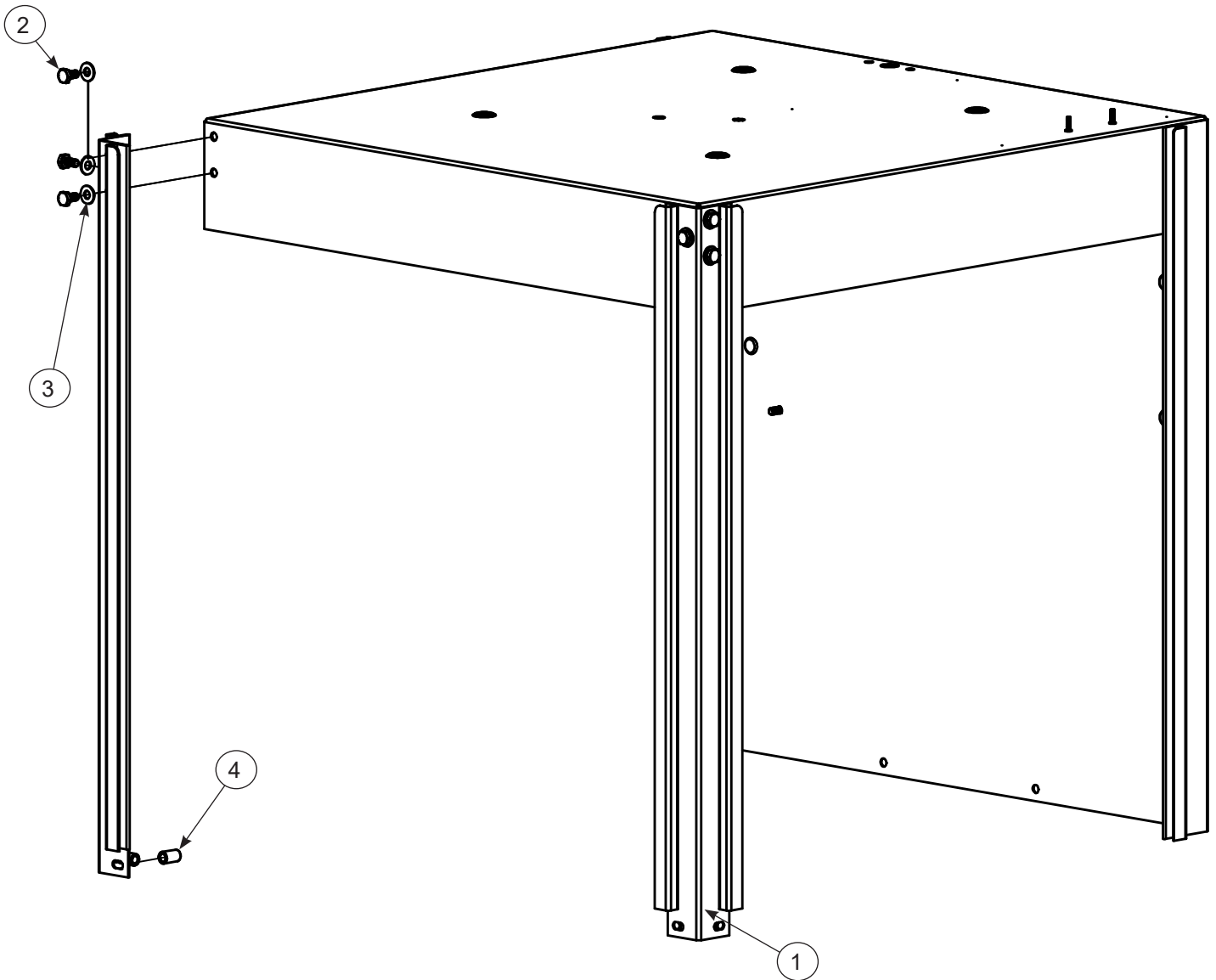
Fuse, 200 mA, Slow-acting
05999-004-44-33
Littelfuse P/N - 0313.200HXP
Qty - 6 (2 per output)



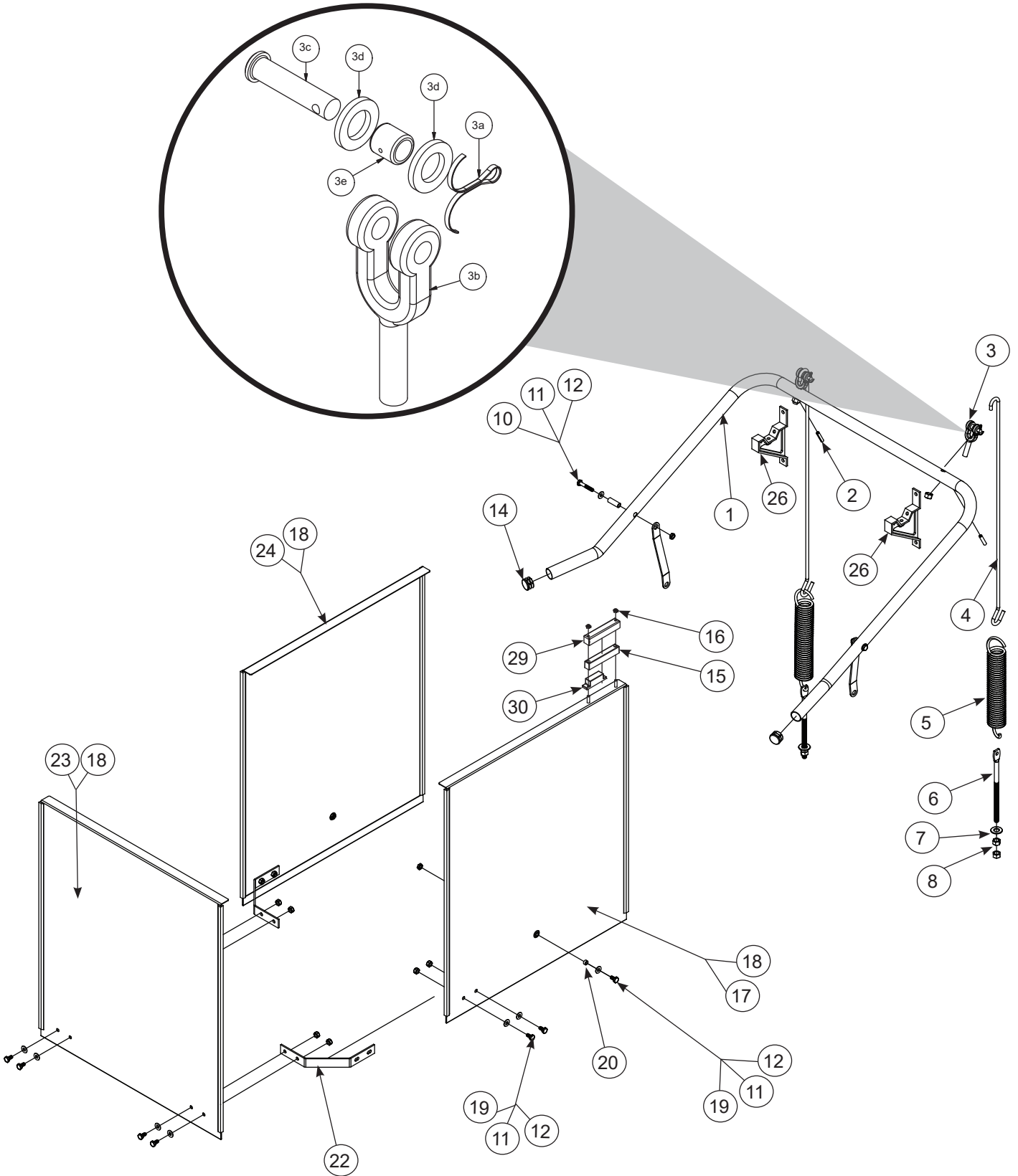
| ITEM | QTY | DESCRIPTION | PART NUMBER |
|------|-----|---|-----------------|
| 1 | 1 | Control Box Weldment | 05700-003-30-14 |
| 2 | 1 | Timer Bracket | 05700-003-02-08 |
| 3 | 2 | Locknut, 6-32 | 05310-373-03-00 |
| 4 | 2 | Contactor, 4-Pole | 05945-004-43-74 |
| 5 | 1 | Terminal Block | 05940-011-48-27 |
| 6 | 17 | Locknut, 10-24 | 05310-373-01-00 |
| 7 | 1 | Contactor, Wash Motor | 05945-002-74-20 |
| 8 | 1 | Relay | 05945-111-47-51 |
| 8a | 1 | Relay, (415 V, 3 PH, 5 Wire Only) | 05945-111-89-75 |
| 9 | 1 | Light, Green | 05945-111-44-43 |
| 10 | 1 | Light, Red | 05945-111-44-45 |
| 11 | 1 | Temperature Gauge, 96" | 06685-004-31-46 |
| 12 | 1 | Temperature Gauge, 48" | 06685-004-31-47 |
| 13 | 1 | Light, Yellow | 05945-111-44-44 |
| 14 | 1 | Decal, Wash 150 °F Min | 09905-002-97-61 |
| 15 | 1 | Decal, Rinse 180 °F Min | 09905-002-97-62 |
| 16 | 1 | Ground Lug | 05940-200-76-00 |
| 17 | 1 | Bracket, Liquid Level Control Board | 05700-002-13-22 |
| 18 | 1 | Liquid Level Control Board | 06680-200-08-21 |
| 19 | 6 | Tricnut, 6-32 | 05340-118-04-00 |
| 20 | 3 | Screw, 6-32 x 5/8" | 05305-011-39-85 |
| 21 | 3 | Plug, 1/2" | 05975-011-47-81 |
| 22 | 2 | Grommet, 7/8" Split | 05975-200-40-00 |
| 23 | 1 | Bushing Snap | 05975-210-05-00 |
| 24 | 1 | Clamp, Hose 1/4" - 1/3" | 05975-002-61-43 |
| 25 | 1 | Decal, Warning-Disconnect Power | 09905-004-08-16 |
| 26 | 1 | Cover, Top Mount Control Box | 05700-002-23-03 |
| 27 | 1 | Decal, Control Box | 09905-003-97-36 |
| 28 | 4 | Lockwasher, Int. Tooth #10 | 05311-273-03-00 |
| 29 | 4 | Screw, 10-32 x 3/8" Phillips Truss Head | 05305-173-12-00 |
| 30 | 1 | Decal, Copper Conductors | 09905-011-47-35 |

| ITEM | QTY | DESCRIPTION | PART NUMBER |
|------|-----|--|------------------|
| 31 | 1 | Decal, Ground | 09905-011-86-86 |
| 32 | 1 | Decal, L1, L2 | 09905-002-78-67 |
| 33 | 1 | Bracket, Fuse Strip | 05700-002-42-03 |
| 34 | 1 | Fuse Holder, 6-pole | 05920-002-42-13 |
| 35 | 2 | Screw, 6-32 x 3/8" with Tooth Washer | 05305-002-25-91 |
| 36 | 1 | Decal, Dispenser Connection | 09905-003-34-09 |
| | 1 | Decal, Dispenser Connection (460 V Machine Only) | 09905-004-43-81 |
| 37 | 1 | Kit, Universal Timer with Bracket | 06401-003-80-83 |
| | | Universal Timer, Fused | 05945-003-75-23 |
| 38 | 4 | Locknut, 10-32 | 05310-373-02-00 |
| 39 | 4 | Screw 10-32 x 1" | 05305-002-19-42 |
| 40 | 1 | Switch, Rotary Selector | 05930-003-97-61 |
| 41 | 1 | Switch, Operation | 05930-301-53-00 |
| 42 | 1 | Switch, Power | 05930-011-49-55 |
| 43 | 1 | Dome Plug | 05975-002-29-94 |
| 44* | 1 | Power Supply, In 100-240 V DC, 1.8 A, Out 24 V, 2.5 A* | 05950-004-81-79* |
| 45* | 1 | Relay, 10 A, 220 V* | 05945-004-84-93* |
| 46 | 1 | Relay, 240 V | 05945-002-47-74 |
| 47 | 1 | Transformer, 460 V Machine Only (Not Shown) | 05950-111-65-93 |
| 47a | 1 | Fuse Holder, Single, 460 V Machine Only (Not Shown) | 05920-011-72-89 |
| 47b | 1 | Fuse, 1 A, Bussman P/N FNQ-R-1, 460 V Machine Only (Not Shown) | 05920-002-67-23 |
| 48 | 1 | Pump Contactor, 460 V Machine Only (Not Shown) | 05945-002-65-00 |
| 49 | 1 | Overload, 4NK0AKY 1.7-2.6, 460 V Machine Only (Not Shown) | 05945-002-65-02 |

*Power supply and relay used only on machines with door interlock and VER machines with DC fans.

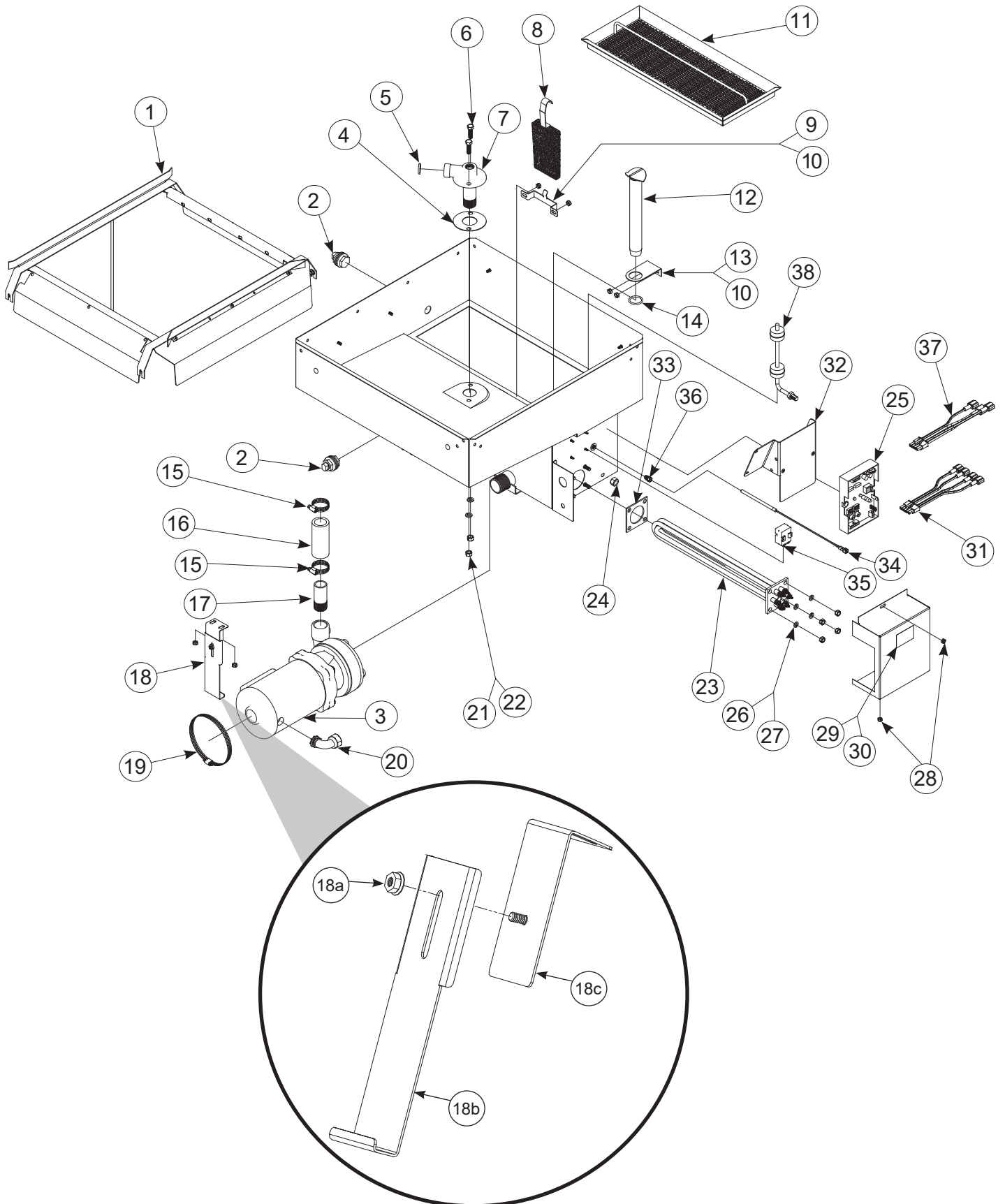


| ITEM | QTY | DESCRIPTION | PART NUMBER |
|------|-----|---|-----------------|
| 1 | 2 | Hood Support | 05700-002-78-99 |
| 2 | 6 | Bolt, 1/4-20 x 1/2" | 05305-274-21-00 |
| 3 | 6 | Washer, Flat, SS, 1/4-20 | 05311-174-01-00 |
| 4 | 4 | Spacer, Sleeve Hood | 05700-003-55-15 |
| 5 | 6 | Locknut, 1/4-20 with Nylon Insert (Not Shown) | 05310-374-01-00 |



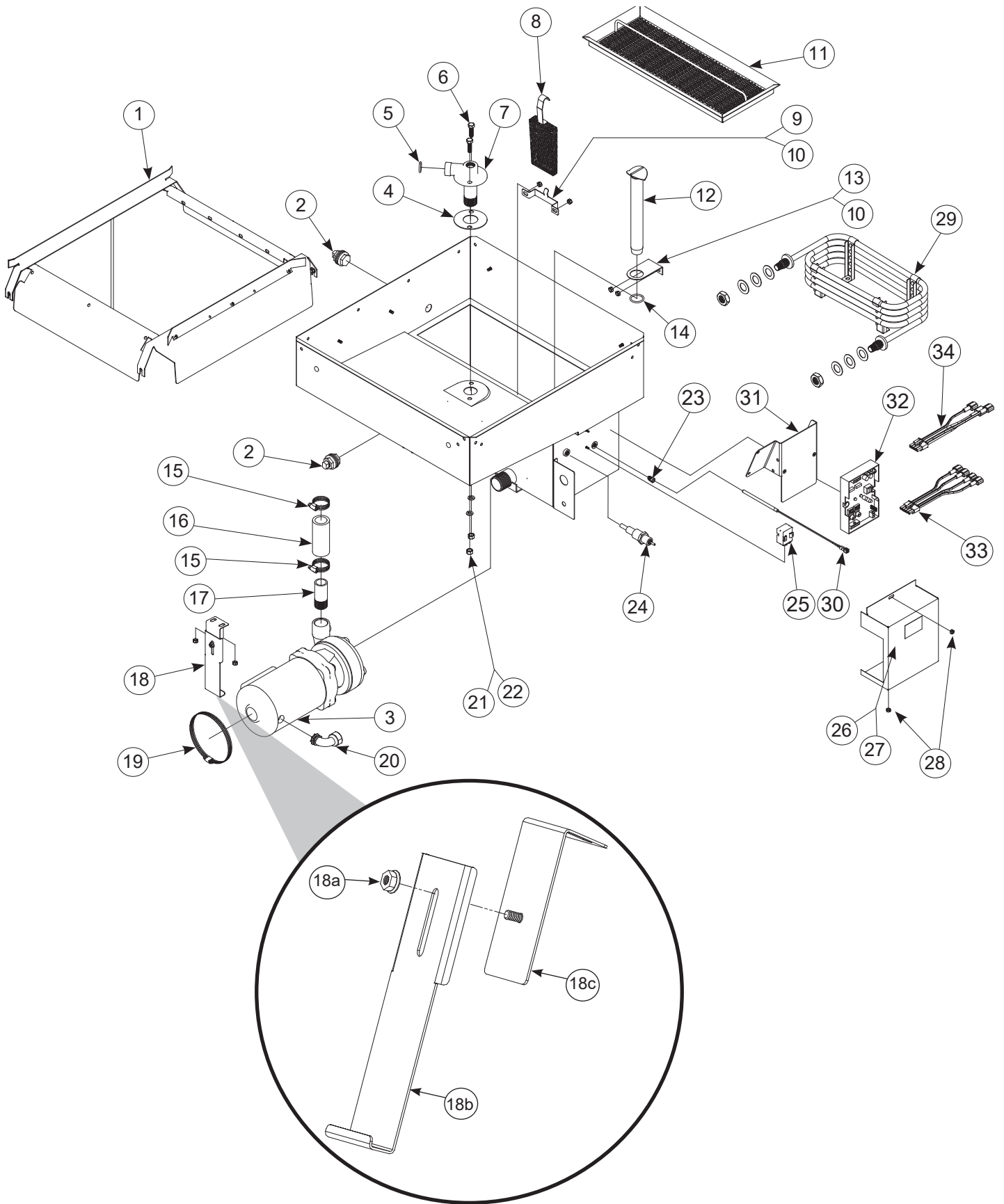
| ITEM | QTY | DESCRIPTION | PART NUMBER |
|------|-----|---|-----------------|
| 1 | 1 | Cantilever Arm | 05700-031-50-67 |
| 2 | 2 | Spring Pin, 1/4" x 1 1/8" | 05315-407-06-00 |
| 3 | 2 | Yoke Assembly | 05700-000-75-77 |
| 3a | 1 | Cotter Pin | 05315-207-01-00 |
| 3b | 1 | Yoke | 05700-000-75-78 |
| 3c | 1 | Clevis Pin, 5/16" x 1 3/8" | 05315-700-01-00 |
| 3d | 2 | Nylon Washer | 05311-369-03-00 |
| 3e | 1 | Bushing | 03120-100-03-00 |
| 4 | 2 | Rod, Spring | 05700-003-67-39 |
| 5 | 2 | Spring | 05340-109-02-00 |
| 6 | 2 | Bolt, Cantilever Hanger Eye 3/8-16 | 05306-956-05-00 |
| 7 | 2 | Washer, 3/8" ID x 7/8" OD | 05311-176-02-00 |
| 8 | 4 | Nut, 3/8-16 S/S Hex | 05310-276-01-00 |
| 9 | 2 | Connector, Cantilever Arm | 05700-011-90-99 |
| 10 | 2 | Screw, 1/4-20 x 1 1/2" | 05305-274-23-00 |
| 11 | 4 | Washer, 1/4" | 05311-174-01-00 |
| 12 | 4 | Locknut, 1/4-20 Hex with Nylon Insert Low Profile | 05310-374-02-00 |
| 13 | 2 | Sleeve, Cantilever Arm | 05700-000-85-69 |
| 14 | 2 | Plug, Cantilever Arm | 05340-011-35-00 |
| 15 | 1 | Magnet, Reed Switch | 05930-111-51-68 |
| 16 | 2 | Locknut, 8-32 Hex with Nylon Insert | 05310-272-02-00 |
| 17 | 1 | Door, Right Side (Complete Assembly) | 05700-004-07-47 |
| | 1 | Door, Right Side (Weldment with Studs) | 05700-002-29-85 |
| 18 | 6 | Guide, Door | 05700-111-33-59 |
| 19 | 2 | Screw, 1/4-20 x 1/2" | 05305-274-02-00 |
| 20 | 2 | Spacer, PB Bolt | 05700-000-29-40 |
| 21 | 4 | Locknut, 1/4-20 Hex with Nylon Insert (Not Shown) | 05310-374-01-00 |
| 22 | 2 | Door Connector Bracket | 05700-021-33-39 |
| 23 | 1 | Door, Front with Decal (Complete Assembly) | 05700-002-30-89 |
| | 1 | Door Only, Front | 05700-002-67-71 |

| ITEM | QTY | DESCRIPTION | PART NUMBER |
|------|-----|--|-----------------|
| 24 | 1 | Door, Left Side (Complete Assembly) | 05700-002-30-87 |
| | 1 | Door, Left Side (VER, Complete Assembly) | 05700-004-24-32 |
| | 1 | Door Only, Left Side | 05700-002-29-86 |
| | 1 | Door Only, Left Side (VER) | 05700-004-24-34 |
| 25 | 1 | Door Connecting Plate (Not Shown) | 05700-002-20-78 |
| 26 | 2 | Bracket, Cantilever Arm Support | 09515-003-15-64 |
| 27 | 1 | Wear Button, 1/2" Dia. UHMW (Not Shown) | 05700-011-88-01 |
| 28 | 1 | Door Interlock Bracket (Not Shown) | 05700-004-23-17 |
| 29 | 1 | Cover, Door Magnet | 05700-004-07-39 |
| 30 | 1 | Switch, Door/Cycle | 05930-003-05-84 |



| ITEM | QTY | DESCRIPTION | PART NUMBER |
|------|-----|-------------------------------------|-------------------|
| 1 | 1 | Track Assembly | 05700-002-01-00 |
| 2 | 2 | Bulk Head Plug | 04730-609-05-00 |
| 3 | 1 | Wash Motor | See Motors page. |
| 4 | 1 | Gasket | 05700-111-35-03 |
| 5 | 1 | O-ring | 05330-111-35-15 |
| 6 | 4 | Bolt, Hex 3/8-16 x 1 1/4" Long | 05305-276-10-00 |
| 7 | 1 | Lower Wash Manifold | 05700-031-46-00 |
| 8 | 1 | Sump Strainer | 05700-002-16-13 |
| 9 | 1 | Bracket, Sump Strainer | 05700-001-22-24 |
| 10 | 8 | Locknut, 1/4-20 with Nylon Insert | 05310-374-02-00 |
| 11 | 1 | Scrap Screen | 05700-003-07-76 |
| 12 | 1 | Standpipe | 05700-001-25-69 |
| 12a | 1 | Support, Ball Stop Lift (Not Shown) | 05700-002-91-55 |
| 12b | 1 | Ball Stop Lift (Not Shown) | 05700-002-91-54 |
| 13 | 1 | Overflow Support Bracket | 05700-001-27-55 |
| 13a | 1 | Shim, Overflow Support (Not Shown) | 05700-002-96-48 |
| 14 | 1 | O-ring | 05330-400-05-00 |
| 15 | 2 | Clamp, Hose 1 5/16" to 2 1/4" | 04730-719-01-37 |
| 16 | 1 | Discharge Hose | 05700-011-88-24 |
| 17 | 1 | Nipple | 05700-021-34-84 |
| 18 | 1 | Pump Support Bracket Assembly | 05700-002-00-46 |
| 18a | 1 | Nut, 1/4-20 Hex Nut | 05310-011-66-49 |
| 18b | 1 | Pump Support Adjustable Bracket | 05700-002-20-41 |
| 18c | 1 | Bracket, Pump Support | 05700-002-68-31 |
| 19 | 1 | Clamp, Hose 5 5/8" to 6" | 04730-011-34-90 |
| 20 | 1 | Connector, 1/2" | 05975-111-01-00 |
| 21 | 4 | Nut, 3/8-16 Hex | 05310-276-01-00 |
| 22 | 4 | Lockwasher 3/8" | 05311-276-01-00 |
| 23 | 1 | Heater | See Heaters page. |
| 24 | 1 | Nut, Float Switch | 05310-011-72-58 |
| 25 | 1 | Thermostat, Elan Electric Dual | 06685-004-17-27 |

| ITEM | QTY | DESCRIPTION | PART NUMBER |
|------|-----|----------------------------------|-----------------|
| 26 | 4 | Lockwasher, 5/16", Split | 05311-275-01-00 |
| 27 | 4 | Nut, Hex, 5/16-18 | 05310-275-01-00 |
| 28 | 4 | Locknut, 10-24 with Nylon Insert | 05310-373-01-00 |
| 29 | 1 | Cover, Wash Heater | 05700-031-47-57 |
| 30 | 1 | Decal, Warning-Disconnect Power | 09905-004-08-16 |
| 31 | 1 | Harness, 5-Connector | 05700-004-23-78 |
| 32 | 1 | Thermostat Mounting Bracket | 05700-004-22-17 |
| 33 | 1 | Wash Heater Gasket | 05330-011-47-79 |
| 34 | 1 | Probe, Thermistor 4" | 06685-004-17-26 |
| 35 | 1 | Thermostat, High Limit | 05930-004-33-12 |
| 36 | 1 | Fitting, 1/4" Imperial Brass | 05310-924-02-05 |
| 37 | 1 | Harness, 4-Connector | 05700-004-23-79 |
| 38 | 1 | Float Switch | 06680-121-70-71 |

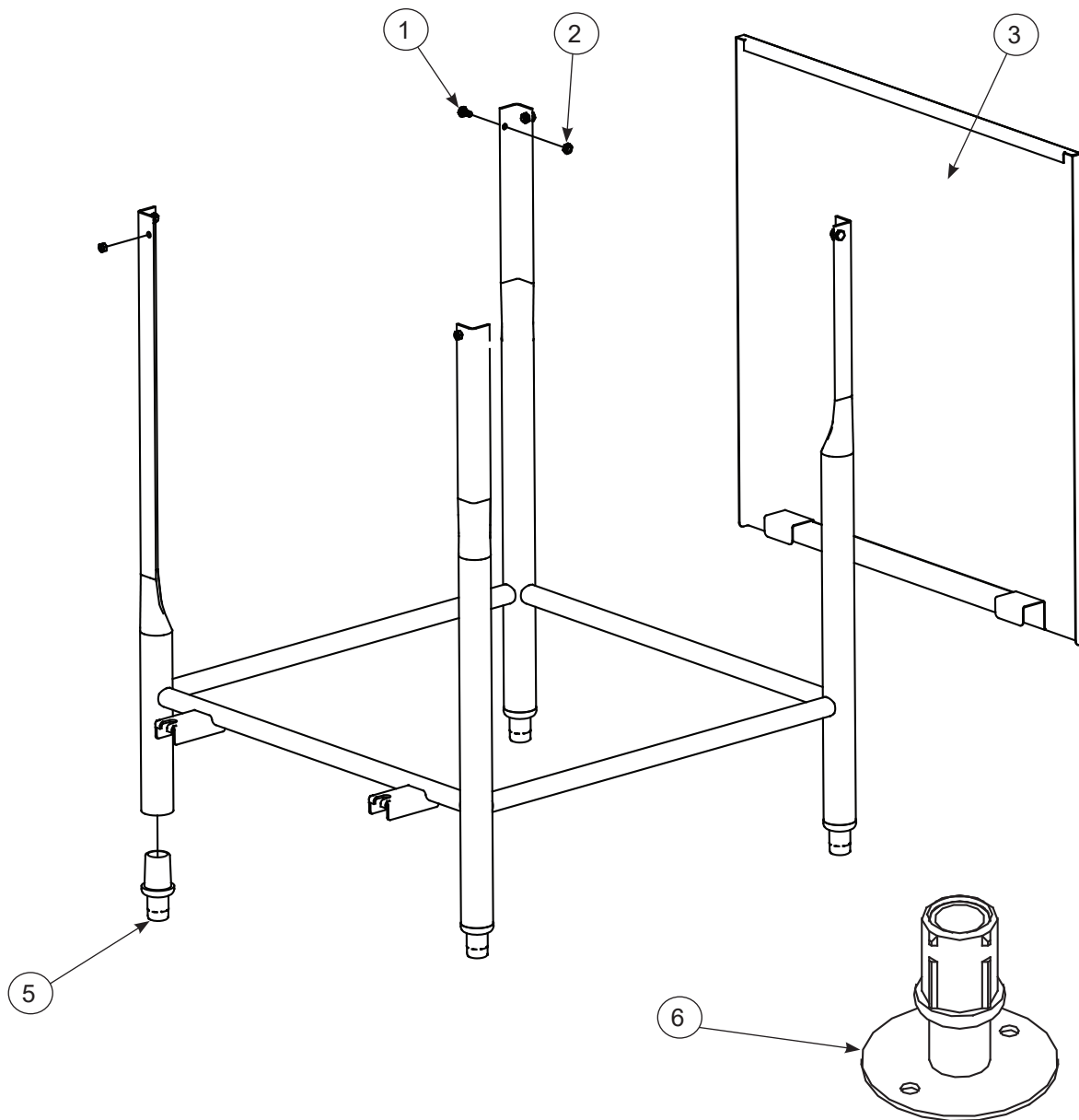


| ITEM | QTY | DESCRIPTION | PART NUMBER |
|------|-----|-------------------------------------|------------------|
| 1 | 1 | Track Assembly | 05700-002-01-00 |
| 2 | 2 | Bulk Head Plug | 04730-609-05-00 |
| 3 | 1 | Wash Motor | See Motors page. |
| 4 | 1 | Gasket | 05700-111-35-03 |
| 5 | 1 | O-ring | 05330-111-35-15 |
| 6 | 4 | Bolt, Hex 3/8-16 x 1 1/4" Long | 05305-276-10-00 |
| 7 | 1 | Lower Wash Manifold | 05700-031-46-00 |
| 8 | 1 | Sump Strainer | 05700-002-16-13 |
| 9 | 1 | Bracket, Sump Strainer | 05700-001-22-24 |
| 10 | 8 | Locknut, 1/4-20 with Nylon Insert | 05310-374-02-00 |
| 11 | 1 | Scrap Screen | 05700-003-07-76 |
| 12 | 1 | Standpipe | 05700-001-25-69 |
| 12a | 1 | Support, Ball Stop Lift (Not Shown) | 05700-002-91-55 |
| 12b | 1 | Ball Stop Lift (Not Shown) | 05700-002-91-54 |
| 13 | 1 | Overflow Support Bracket | 05700-001-27-55 |
| 13a | 1 | Shim, Overflow Support (Not Shown) | 05700-002-96-48 |
| 14 | 1 | O-ring | 05330-400-05-00 |
| 15 | 2 | Clamp, Hose 1 5/16" to 2 1/4" | 04730-719-18-00 |
| 16 | 1 | Discharge Hose | 05700-011-88-24 |
| 17 | 1 | Nipple | 05700-021-34-84 |
| 18 | 1 | Pump Support Bracket Assembly | 05700-002-00-46 |
| 18a | 1 | Nut, 1/4-20 Hex Nut | 05310-011-66-49 |
| 18b | 1 | Pump Support Adjustable Bracket | 05700-002-20-41 |
| 18c | 1 | Bracket, Pump Support | 05700-002-68-31 |
| 19 | 1 | Clamp, Hose 5 5/8" to 6" | 04730-011-34-90 |
| 20 | 1 | Connector, 1/2" | 05975-111-01-00 |
| 21 | 4 | Nut, 3/8-16 | 05310-276-01-00 |
| 22 | 4 | Lockwasher 3/8" | 05311-276-01-00 |
| 23 | 1 | Fitting, 1/4" Imperial Brass | 05310-924-02-05 |

| ITEM | QTY | DESCRIPTION | PART NUMBER |
|------|-----|----------------------------------|-----------------|
| 24 | 1 | Probe, High Water | 06680-200-02-68 |
| 25 | 1 | Thermostat, High Limit | 05930-004-33-12 |
| 26 | 1 | Cover, Wash Heater | 05700-031-47-57 |
| 27 | 1 | Decal, Warning-Disconnect Power | 09905-004-08-16 |
| 28 | 2 | Locknut, 10-24 with Nylon Insert | 05310-373-01-00 |
| 29 | 1 | Steam Coil | 05700-031-41-37 |
| 30 | 1 | Probe, Thermistor 4" | 06685-004-17-26 |
| 31 | 1 | Thermostat Mounting Bracket | 05700-004-22-17 |
| 32 | 1 | Thermostat, Electric Dual | 06685-004-17-27 |
| 33 | 1 | Harness, 5-Connector | 05700-004-23-78 |
| 34 | 1 | Harness, 4-Connector | 05700-004-23-79 |



Click [here](#) for the Steam Booster manual.



| ITEM | QTY | DESCRIPTION | PART NUMBER |
|------|-----|---------------------------------------|-----------------|
| 1 | 4 | Bolt, 1/4-20 x 1/2" | 05305-274-02-00 |
| 2 | 4 | Locknut, 1/4-20 Hex with Nylon Insert | 05310-374-02-00 |
| 3 | 1 | Front Panel | 05700-002-36-65 |
| 4 | 4 | Bullet Foot | 05340-108-01-03 |
| 5 | 4 | Flanged Bullet Foot (Optional) | 05340-002-34-86 |

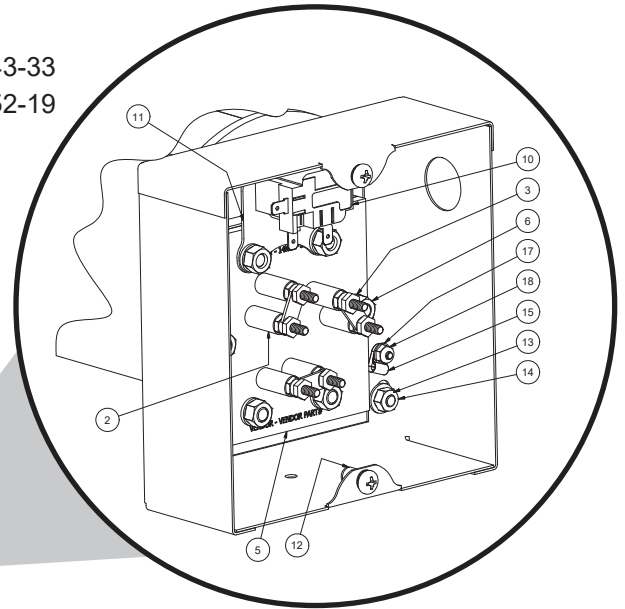
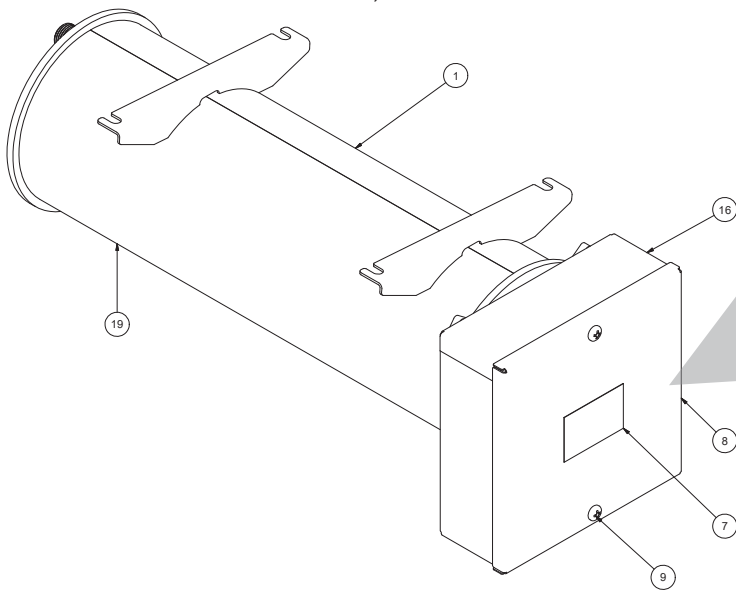
Complete Assemblies

208-230 V, 14 kW 70° Rise - 05700-004-43-33

208-230 V, 12 kW 40° Rise - 05700-004-52-19

460 V, 14 kW 70° Rise - 05700-004-53-22

460 V, 12 kW 40° Rise - 05700-004-53-21

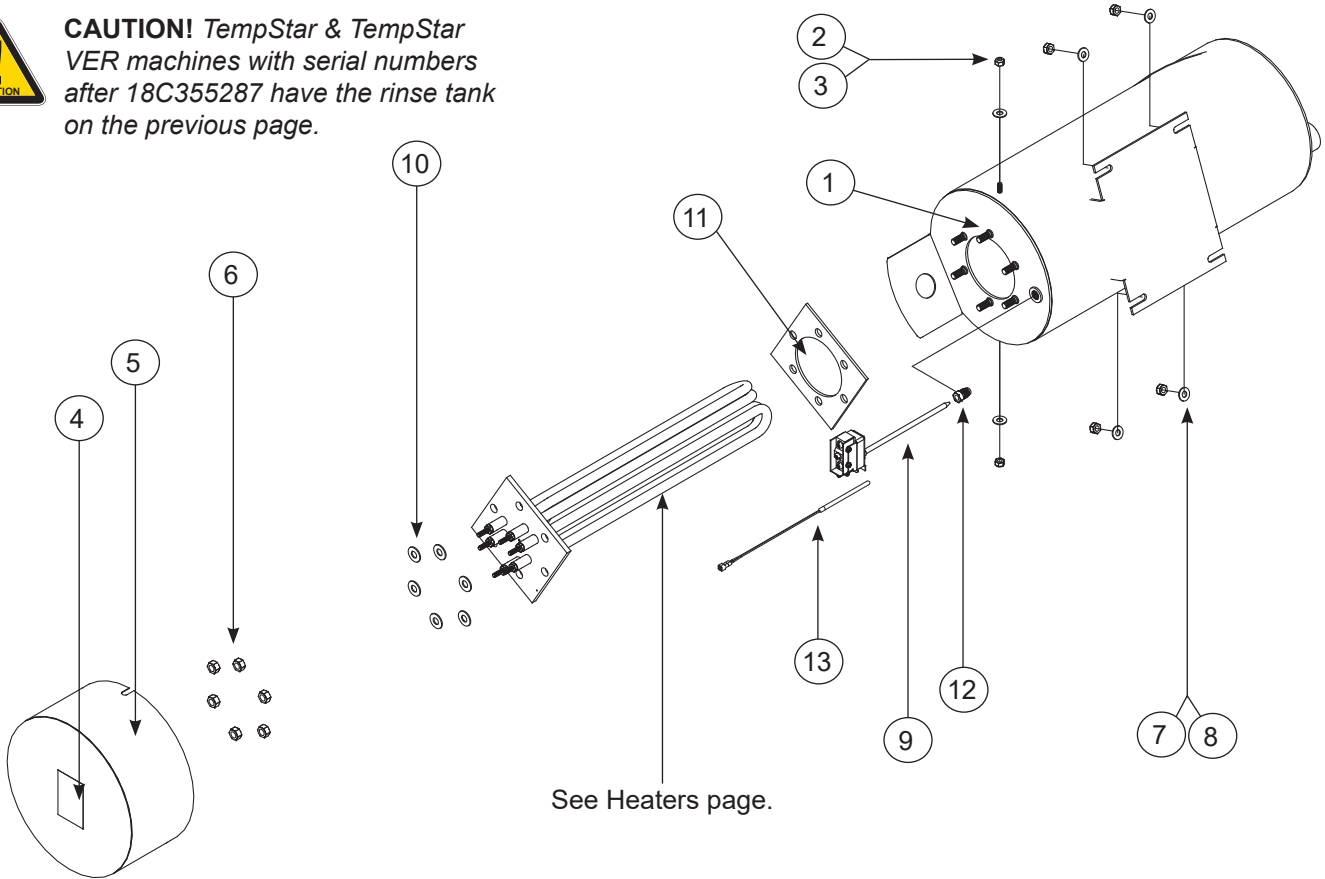


CAUTION! TempStar & TempStar VER machines with serial numbers before 18C355287 have the rinse tank on the next page.

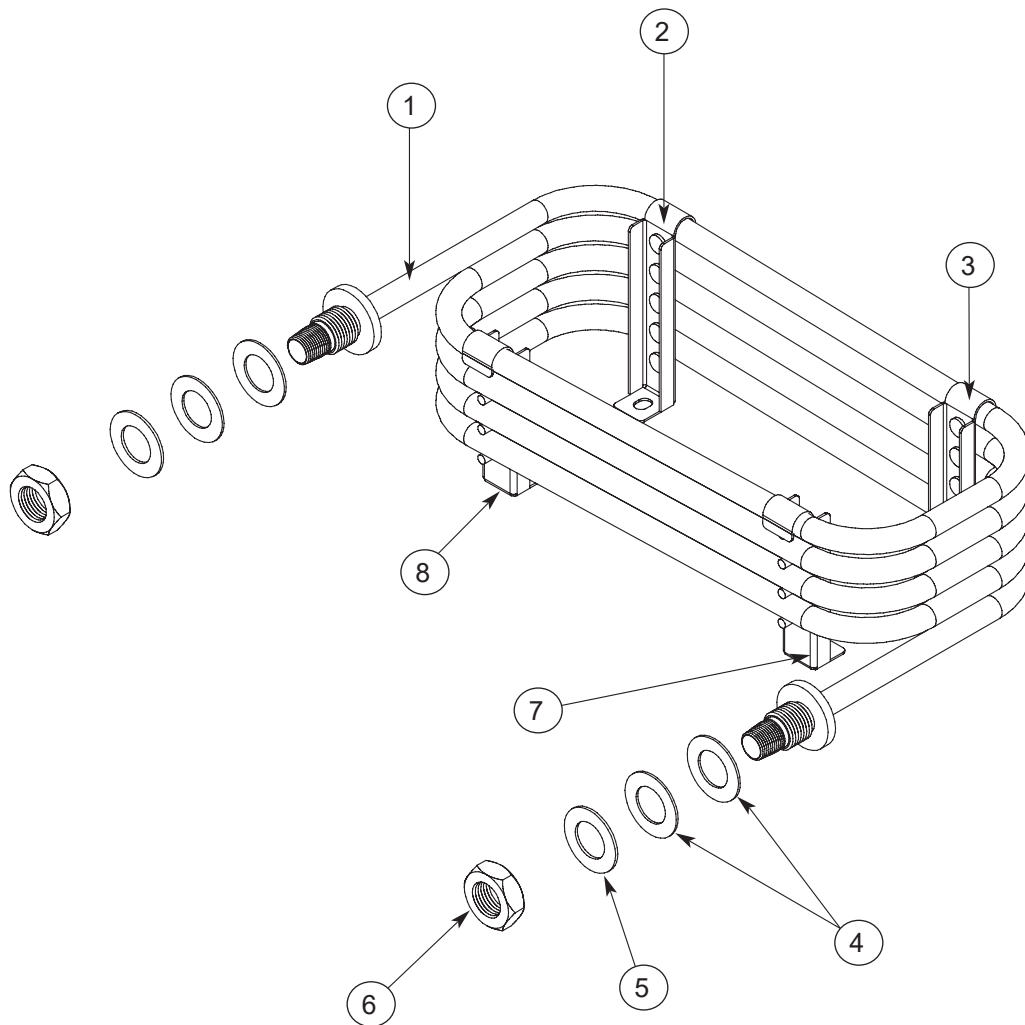
| ITEM | QTY | DESCRIPTION | PART NUMBER |
|------|-----|---------------------------------------|-------------------|
| 1 | 1 | Tank, Rinse | 05700-004-50-86 |
| 2 | 1 | Heater, Rinse | See Heaters page. |
| 3 | 6 | Lockwasher, Split 5/16" | 05311-275-01-00 |
| 4 | 1 | Fitting, 1/4", Brass Nut/Sleeve | 05310-924-02-05 |
| 5 | 1 | Gasket, Rinse Heater | 05330-200-02-70 |
| 6 | 6 | Nut, Hex 5/16-18 | 05310-275-01-00 |
| 7 | 1 | Decal, Warning-Disconnect Power | 09905-100-75-93 |
| 8 | 1 | Cover, Heater | 05700-004-51-34 |
| 9 | 2 | Screw | 05305-004-27-82 |
| 10 | 1 | Thermostat, High-limit | 05930-004-33-12 |
| 11 | 1 | Bracket, High-limit Thermostat | 05700-004-36-84 |
| 12 | 2 | Nut, 1/4-20 | 05310-004-23-96 |
| 13 | 4 | Washer, 1/4-20 | 05311-174-01-00 |
| 14 | 4 | Locknut, 1/4-20 Hex with Nylon Insert | 05310-374-01-00 |
| 15 | 1 | Clamp, Wire 1/8", P-clip | 05975-601-10-15 |
| 16 | 1 | Cover Door, New Rinse Tank | 05700-004-52-21 |
| 17 | 1 | Washer, Flat | 05311-173-02-00 |
| 18 | 1 | Locknut, Hex 8-32 | 05310-272-02-00 |
| 19 | 1 | Plug, 1/4", Brass (Not Shown) | 04730-209-01-00 |



CAUTION! TempStar & TempStar VER machines with serial numbers after 18C355287 have the rinse tank on the previous page.



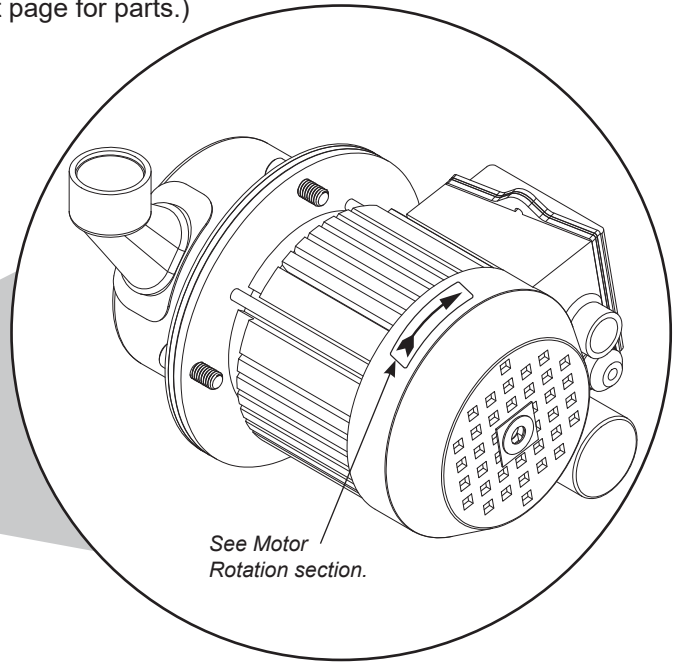
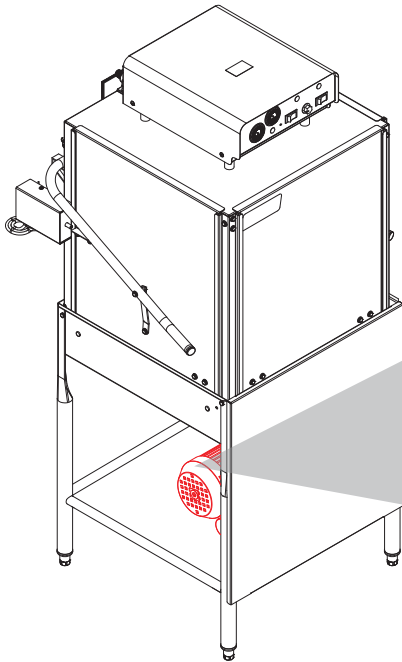
| ITEM | QTY | DESCRIPTION | PART NUMBER |
|------|-----|-----------------------------------|-----------------|
| 1 | 1 | Tank, Rinse | 05700-004-44-07 |
| 2 | 2 | Locknut, 10-24 with Nylon Insert | 05310-373-01-00 |
| 3 | 2 | Washer, #10 Flat | 05311-173-01-00 |
| 4 | 1 | Decal, Warning-Disconnect Power | 09905-004-08-16 |
| 5 | 1 | Booster Tank Cover | 05700-001-29-30 |
| 6 | 6 | Nut, Hex, 5/16-18 | 05310-275-01-00 |
| 7 | 4 | Locknut, 1/4-20 with Nylon Insert | 05310-374-01-00 |
| 8 | 4 | Washer, 1/4", Flat | 05311-174-01-00 |
| 9 | 1 | Thermostat, Rinse | 05930-510-03-79 |
| | 1 | Kit, Rinse Thermostat Replacement | 06401-011-66-55 |
| 10 | 6 | Washer, 5/16" | 05311-275-01-00 |
| 11 | 1 | Gasket, Rinse Heater | 05330-200-02-70 |
| 12 | 1 | Fitting, 1/4" Imperial Brass | 05310-924-02-05 |
| 13 | 1 | Probe, Thermistor 4" | 06685-004-17-26 |



| ITEM | QTY | DESCRIPTION | PART NUMBER |
|------|-----|------------------------------|-----------------|
| | | Complete Steam Coil Assembly | 05700-002-08-62 |
| 1 | 1 | Steam Coil | 05700-021-41-38 |
| 2 | 1 | Stand C, Steam Coil Support | 05700-002-08-52 |
| 3 | 1 | Stand D, Steam Coil Support | 05700-002-08-53 |
| 4 | 4 | Gasket, Steam Coil | 05700-001-17-86 |
| 5 | 2 | Washer, Steam Coil | 05700-001-17-87 |
| 6 | 2 | Adapter, Steam Coil Nut | 05310-011-17-85 |
| 7 | 1 | Stand A, Steam Coil Support | 05700-002-08-50 |
| 8 | 1 | Stand B, Steam Coil Support | 05700-002-08-51 |

Complete Assemblies

(See next page for parts.)



The models covered in this manual come supplied with various wash motor assemblies (a wash motor assembly includes the wash motor and the pump end), depending on the characteristics of the machine. To ensure you order the correct wash motor assembly for the model you are servicing, please refer to the following table:

| MODEL | VOLTS | Hz | PHASE | WASH MOTOR ASSEMBLY |
|-------|-------|----|-------|------------------------------|
| All | 208 | 60 | 1 | 06105-004-24-80 ¹ |
| All | 208 | 60 | 3 | 06105-004-24-80 ¹ |
| All | 230 | 60 | 1 | 06105-004-24-80 ¹ |
| All | 230 | 60 | 3 | 06105-004-24-80 ¹ |
| All | 460 | 60 | 3 | 06105-121-64-21 ² |

¹Use P/N 06105-004-32-04 to order the motor only.

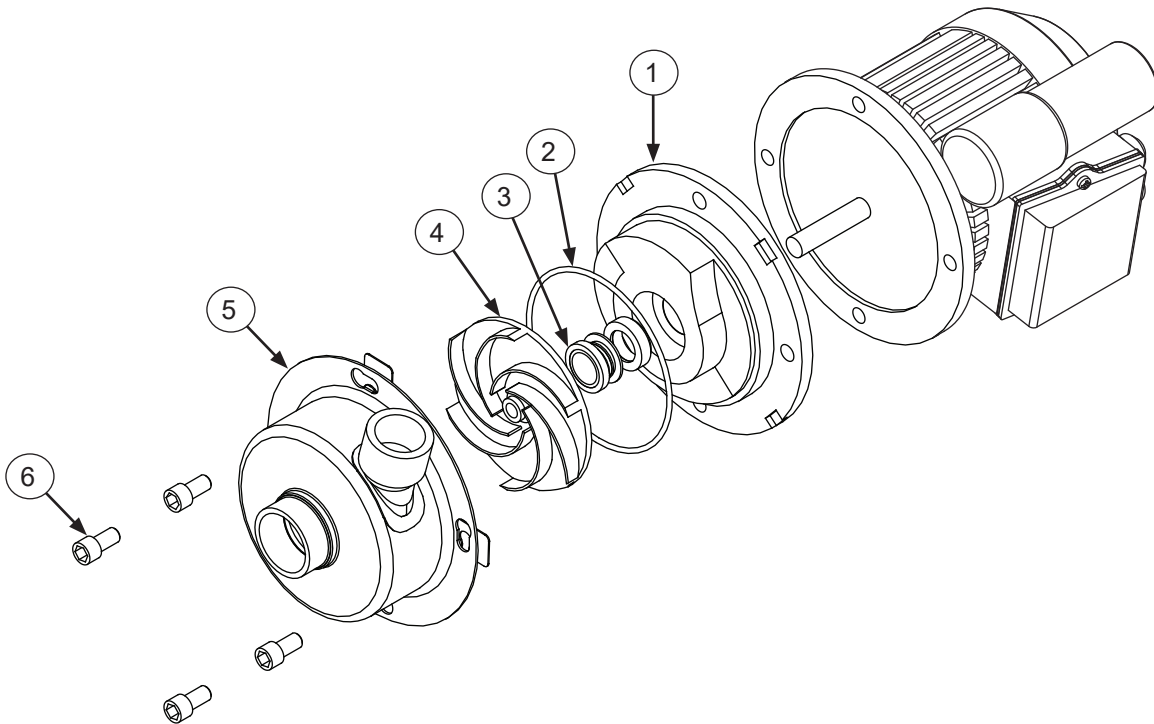
²Use P/N 06105-002-62-71 to order the motor only.

NOTICE

When servicing a wash motor, it is important to refer to the wiring schematic found on the motor to ensure the motor is wired correctly. Different manufacturers of motors might not use the same wire color codes and your new motor might not connect using the same wires. Always refer to the wiring diagrams on the motor you are installing. If the motor you are installing has had the schematic removed, contact the manufacturer immediately for technical support.

Parts

(See previous page for complete assemblies.)



The models covered in this manual come supplied with various wash motors (see previous page), depending on the characteristics of the machine. To ensure you order the correct parts for the model you are servicing, please refer to the following table:

| ITEM | QTY | DESCRIPTION | PART NUMBER |
|------|-----|------------------------------|-----------------|
| 1 | 1 | Seal Plate, 208/230 V | 05700-002-81-87 |
| | 1 | Seal Plate, 460 V | 05700-002-06-22 |
| 2 | 1 | Case O-ring, 208/230 V | 05330-002-81-83 |
| | 1 | Case O-ring, 460 V | 05330-002-87-02 |
| 3 | 1 | Mechanical Seal, 208/230 V | 05330-002-34-22 |
| | 1 | Mechanical Seal, 460 V | 05330-002-87-16 |
| 4 | 1 | Impeller Assembly, 208/230 V | 05700-002-81-86 |
| | 1 | Impeller Assembly, 460 V | 05700-002-06-19 |
| 5 | 1 | Pump Casing 208/230 V | 05700-002-85-01 |
| | 1 | Pump Casing 460 V | 05700-002-06-20 |
| 6 | 1 | Case Capscrew, 208/230 V | 05305-002-81-88 |

TempStar

| Volts | Hz | Phase | Wash Heater | Rinse Heater (12 kW) | Rinse Heater (14 kW) |
|-------|----|-------|-----------------|----------------------|----------------------|
| 208 | 50 | 1 | 04540-121-47-39 | 04540-121-47-40 | 04540-121-63-38 |
| 208 | 50 | 3 | 04540-121-47-39 | 04540-121-47-40 | 04540-121-63-38 |
| 208 | 60 | 1 | 04540-121-47-39 | 04540-121-47-40 | 04540-121-63-38 |
| 208 | 60 | 3 | 04540-121-47-39 | 04540-121-47-40 | 04540-121-63-38 |
| 230 | 50 | 1 | 04540-121-47-39 | 04540-121-47-40 | 04540-121-63-38 |
| 230 | 50 | 3 | 04540-121-47-39 | 04540-121-47-40 | 04540-121-63-38 |
| 230 | 60 | 1 | 04540-121-47-39 | 04540-121-47-40 | 04540-121-63-38 |
| 230 | 60 | 3 | 04540-121-47-39 | 04540-121-47-40 | 04540-121-63-38 |
| 380 | 50 | 3 | 04540-002-44-31 | 04540-002-44-32 | 04540-121-63-38 |
| 415 | 50 | 3 | 04540-002-43-09 | 04540-002-43-10 | N/A |
| 440 | 50 | 3 | 04540-121-65-99 | 04540-100-01-15 | 04540-121-63-39 |
| 460 | 60 | 3 | 04540-121-65-99 | 04540-100-01-15 | 04540-121-63-39 |

TempStar VER

| Volts | Hz | Phase | Wash Heater | Rinse Heater (14 kW) |
|-------|----|-------|-----------------|----------------------|
| 208 | 50 | 1 | 04540-121-47-39 | 04540-121-63-38 |
| 208 | 50 | 3 | 04540-121-47-39 | 04540-121-63-38 |
| 208 | 60 | 1 | 04540-121-47-39 | 04540-121-63-38 |
| 208 | 60 | 3 | 04540-121-47-39 | 04540-121-63-38 |
| 230 | 50 | 1 | 04540-121-47-39 | 04540-121-63-38 |
| 230 | 50 | 3 | 04540-121-47-39 | 04540-121-63-38 |
| 230 | 60 | 1 | 04540-121-47-39 | 04540-121-63-38 |
| 230 | 60 | 3 | 04540-121-47-39 | 04540-121-63-38 |
| 380 | 50 | 3 | 04540-002-44-31 | 04540-121-63-38 |
| 415 | 50 | 3 | 04540-002-43-09 | N/A |
| 440 | 50 | 3 | 04540-121-65-99 | 04540-121-63-39 |
| 460 | 60 | 3 | 04540-121-65-99 | 04540-121-63-39 |

TempStar NB

| Volts | Hz | Phase | Wash Heater |
|-------|----|-------|-----------------|
| 208 | 50 | 1 | 04540-121-47-39 |
| 208 | 50 | 3 | 04540-121-47-39 |
| 208 | 60 | 1 | 04540-121-47-39 |
| 208 | 60 | 3 | 04540-121-47-39 |
| 230 | 50 | 1 | 04540-121-47-39 |
| 230 | 50 | 3 | 04540-121-47-39 |
| 230 | 60 | 1 | 04540-121-47-39 |
| 230 | 60 | 3 | 04540-121-47-39 |
| 380 | 50 | 3 | 04540-002-44-31 |
| 415 | 50 | 3 | 04540-002-43-09 |
| 440 | 50 | 3 | 04540-121-65-99 |
| 460 | 60 | 3 | 04540-121-65-99 |

TempStar with Round-Flanged Rinse Heater

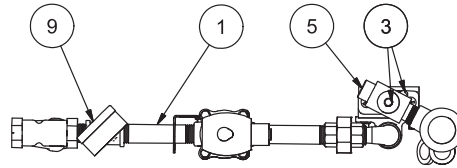
| Volts | HZ | Phase | Wash Heater | Rinse Heater (12 kW) | Rinse Heater (14 kW) |
|-------|----|-------|-----------------|----------------------|----------------------|
| 208 | 50 | 1 | 04540-121-47-39 | 04540-003-58-27 | 04540-003-58-28 |
| 208 | 50 | 3 | 04540-121-47-39 | 04540-003-58-27 | 04540-003-58-28 |
| 208 | 60 | 1 | 04540-121-47-39 | 04540-003-58-27 | 04540-003-58-28 |
| 208 | 60 | 3 | 04540-121-47-39 | 04540-003-58-27 | 04540-003-58-28 |
| 230 | 50 | 1 | 04540-121-47-39 | 04540-003-58-27 | 04540-003-58-28 |
| 230 | 50 | 3 | 04540-121-47-39 | 04540-003-58-27 | 04540-003-58-28 |
| 230 | 60 | 1 | 04540-121-47-39 | 04540-003-58-27 | 04540-003-58-28 |
| 230 | 60 | 3 | 04540-121-47-39 | 04540-003-58-27 | 04540-003-58-28 |

Heater Phase Conversion Kit

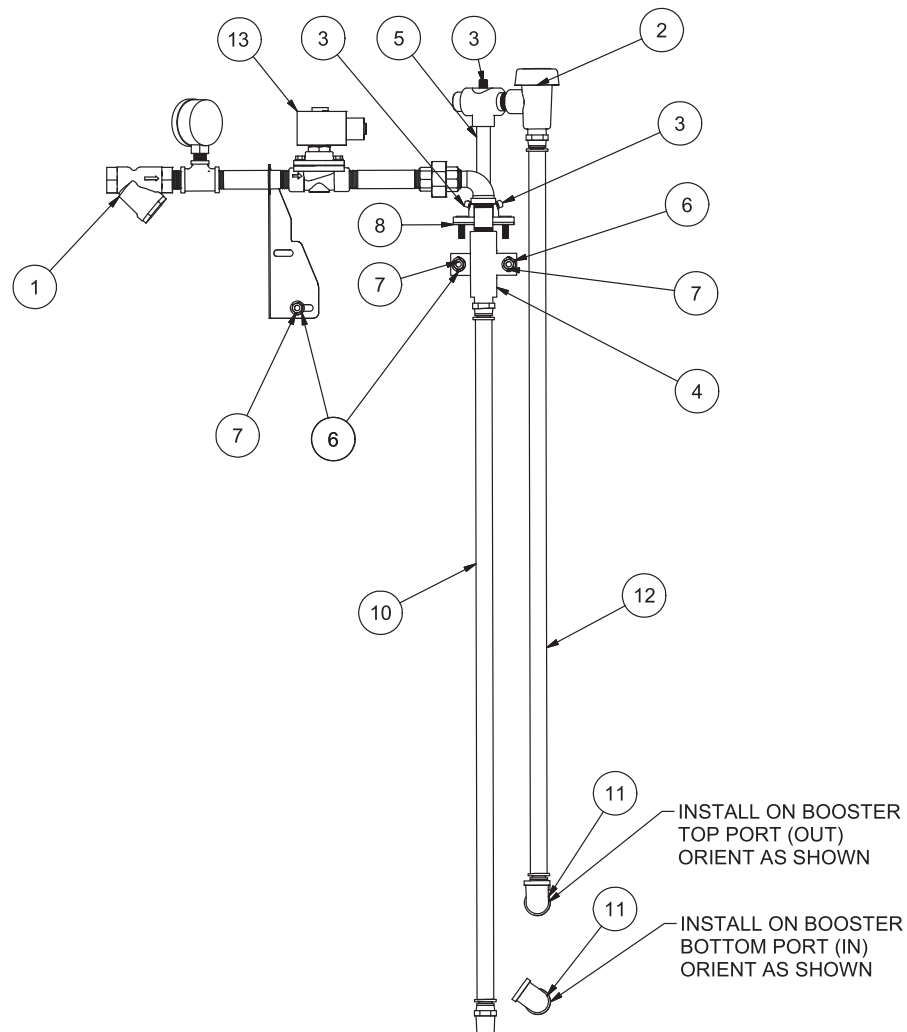
06401-004-00-22

Complete Plumbing Assembly
05700-004-54-52

Top View



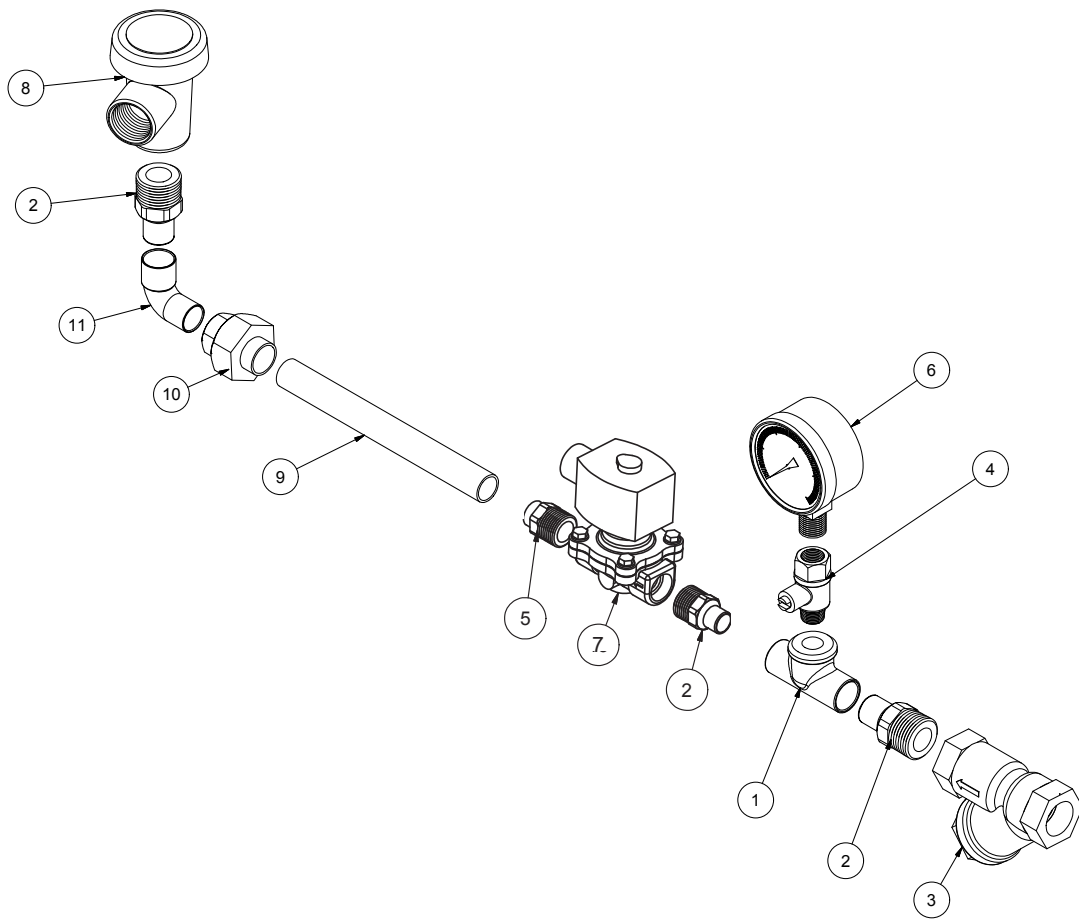
Back View



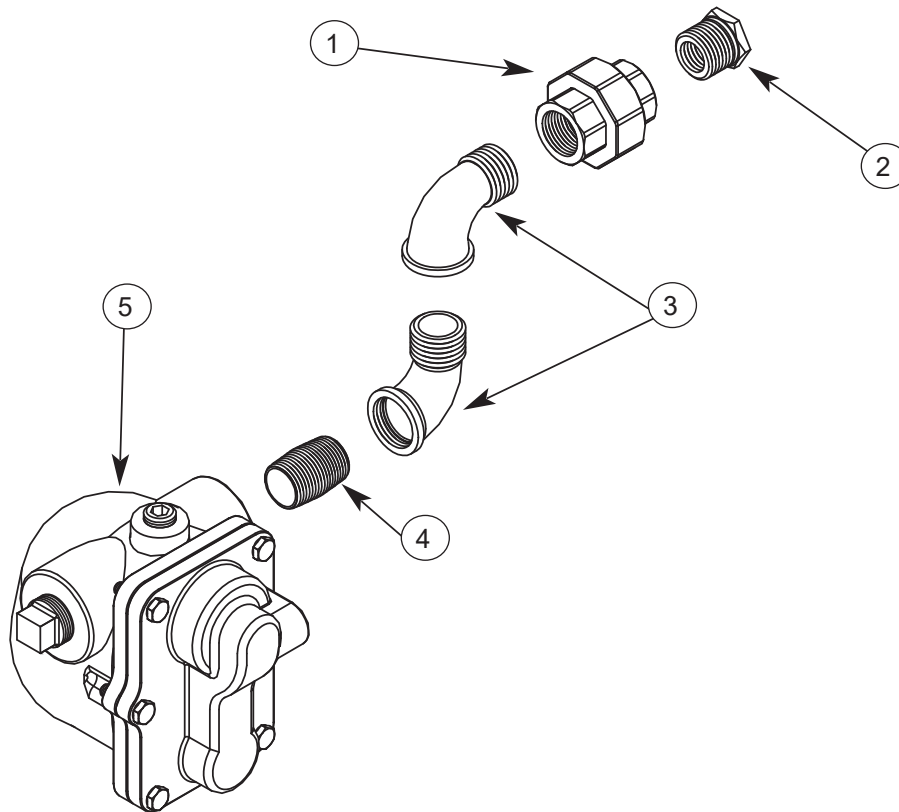
NOTICE

When servicing plumbing components, take care not to damage the threads of each individual item. Damaged threads can cause leaks and loss of pressure, which could adversely affect the performance of the machine. It is strongly recommended that thread tape—used in conservative amounts—be applied to threads when joining components together. Do not use thread-sealing compounds, sometimes referred to as “pipe dope.” Compounds can be ejected from the threads during the tightening process and become lodged in key components, rendering them useless, including solenoid valves and pressure gauge ball valves.

| ITEM | QTY | DESCRIPTION | PART NUMBER |
|------|--------|--|------------------------------------|
| | 1 | Plumbing, Complete Assembly | 05700-004-54-52 |
| 1 | 1 | Plumbing, Inlet | 05700-004-47-98 |
| 2 | 1 | Vacuum Breaker, 1/2" Brass | 04820-003-06-13 |
| 3 | 3 | Plug, Rinse Injector, 1/8" Brass | 04730-209-07-37 |
| 4 | 1 | Casting, 1/2" Flanged Coupling | 05700-004-47-97 |
| 5 | 1 1 | Rinse Injector Gasket, Rinse Injector (Not Shown) | 05700-002-56-75 05330-111-42-81 |
| 6 | 3 | Washer, 1/4-20 Hex with Nylon Insert | 05311-174-01-00 |
| 7 | 3 | Locknut, 1/4-20 Hex with Nylon Insert | 05310-374-01-00 |
| 8 | 1 | Gasket, Rinse Manifold | 05330-003-75-91 |
| 9 | 1 | Decal, 10 PSI | 09905-004-50-73 |
| 10 | 1 | Hose, 1/2" x 31" Blue | 05700-004-54-56 |
| 11 | 2 | Elbow, 1/2" 90-degree Brass | 04730-011-42-96 |
| 12 | 1 | Hose, 1/2" x 33" Red | 05700-004-51-62 |
| 13 | 1 | Solenoid Valve, 1/2" | 04810-003-71-56 |



| ITEM | QTY | DESCRIPTION | PART NUMBER |
|------|-----|---------------------------------|-----------------|
| | | Complete Assembly | 05700-003-60-73 |
| 1 | 1 | Tee, Brass, 1/2" x 1/2" x 1/4" | 04730-411-25-01 |
| 2 | 3 | Adapter, 1/2" | 04730-011-59-53 |
| 3 | 1 | Y-Strainer, 1/2" | 04730-217-01-10 |
| 4 | 1 | Ball Valve, Bronze, 1/4" | 04810-011-72-67 |
| 5 | 1 | Adapter, 1/2" | 04730-401-03-01 |
| 6 | 1 | Pressure Gauge, 0-100 PSI | 06685-111-88-34 |
| 7 | 1 | Valve, Solenoid, 1/2" 208-240 V | 04810-003-71-56 |
| 8 | 1 | Vacuum Breaker, 1/2" | 04820-003-06-13 |
| 9 | 1 | Tube, Copper 1/2" x 5 3/4" | 05700-002-91-03 |
| 10 | 1 | Union, 1/2" | 04730-412-05-01 |
| 11 | 1 | Elbow, 1/2" 90-Degree | 04730-406-31-01 |

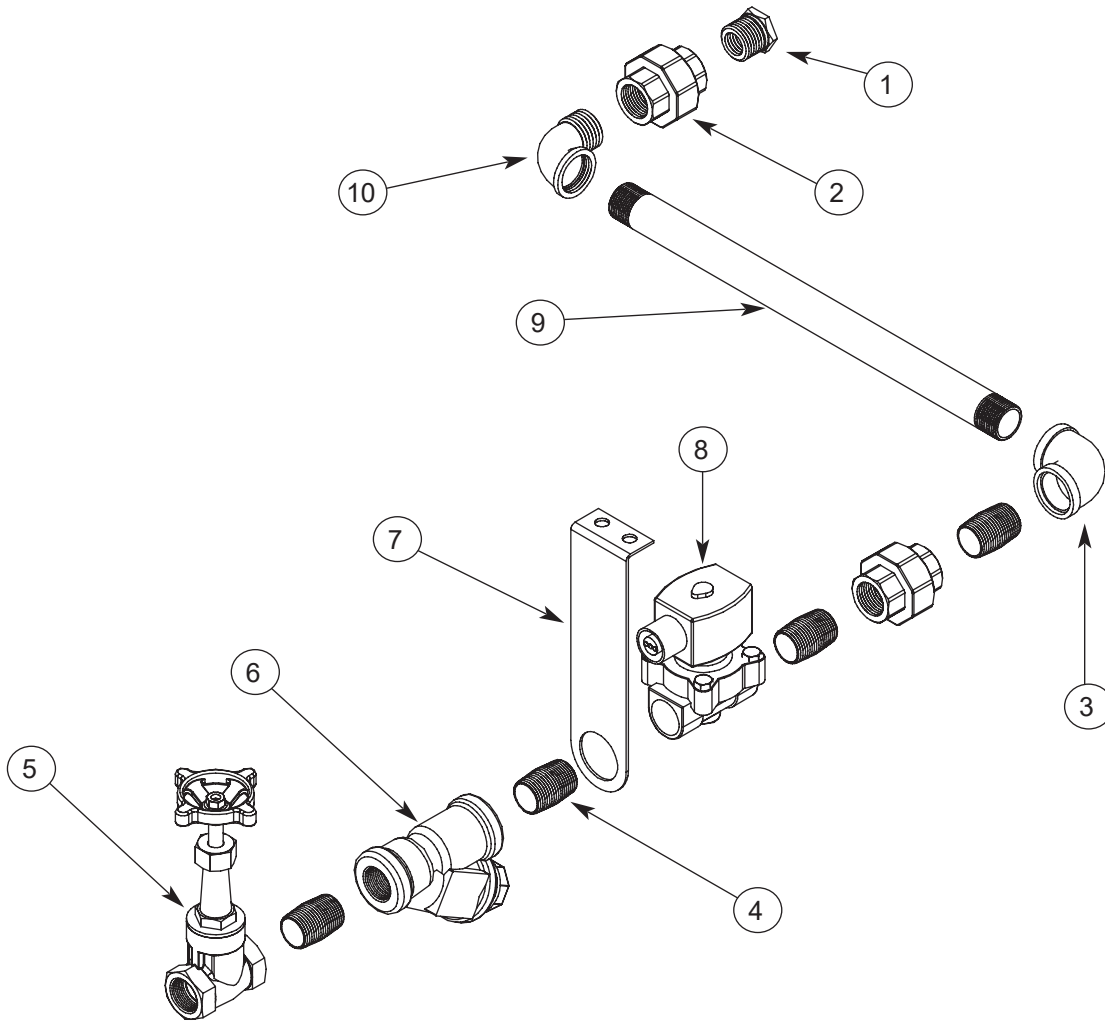
**NOTICE**

When servicing plumbing components, take care not to damage the threads of each individual item. Damaged threads can cause leaks and loss of pressure, which could adversely affect the performance of the machine. It is strongly recommended that thread tape—used in conservative amounts—be applied to threads when joining components together. Do not use thread-sealing compounds, sometimes referred to as “pipe dope.” Compounds can be ejected from the threads during the tightening process and become lodged in key components, rendering them useless, including solenoid valves and pressure gauge ball valves.

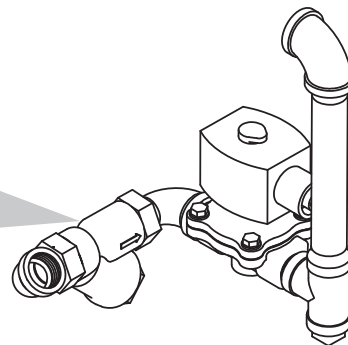
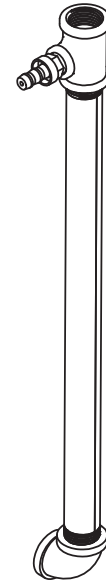
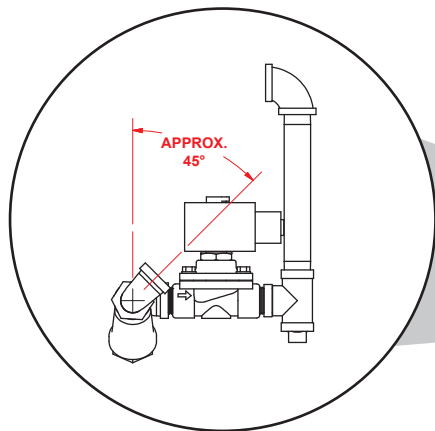
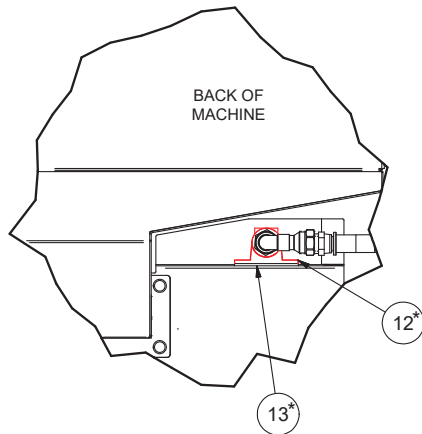
| ITEM | QTY | DESCRIPTION | PART NUMBER |
|------|-----|---------------------------------|-----------------|
| | | Complete Assembly | 05700-002-01-55 |
| 1 | 1 | Union, 3/4", Black Iron | 04730-912-01-00 |
| 2 | 1 | Bushing, Reducing, 3/4" to 1/2" | 04730-911-02-34 |
| 3 | 2 | Elbow, 3/4" 90-degree Street | 04730-011-87-37 |
| 4 | 1 | Nipple, Close, 3/4", Black Iron | 04730-907-01-00 |
| 5 | 1 | Steam Trap, 3/4" | 06680-500-02-77 |



Click [here](#) for the Steam Booster manual.



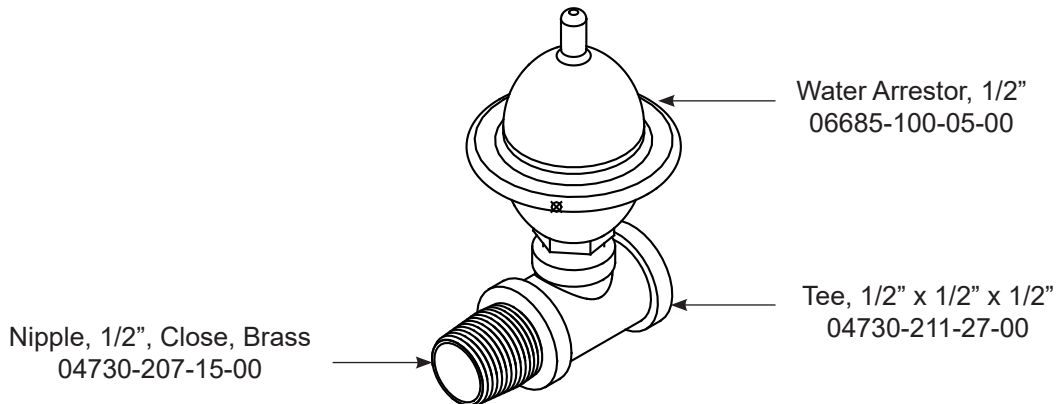
| ITEM | QTY | DESCRIPTION | PART NUMBER |
|------|-----|---------------------------------------|-----------------|
| | | Complete Assembly | 05700-002-01-60 |
| 1 | 1 | Bushing, Reducing, 3/4" to 1/2" | 04730-911-02-34 |
| 2 | 2 | Union, 3/4", Black Iron | 04730-912-01-00 |
| 3 | 1 | Elbow, 3/4", Black Iron | 04730-906-10-34 |
| 4 | 4 | Nipple, Close, 3/4", Black Iron | 04730-907-01-00 |
| 5 | 1 | Gate Valve, 3/4" | 04820-100-19-00 |
| 6 | 1 | Y-Strainer, 3/4", Black Iron | 04730-217-01-32 |
| 7 | 1 | Bracket, Steam Plumbing Support | 05700-002-01-63 |
| 8 | 1 | Solenoid Valve, Steam Plumbing, 220 V | 04820-002-01-56 |
| 9 | 1 | Black Iron Pipe, 3/4" | 05700-002-20-83 |
| 10 | 1 | Elbow, 3/4" 90-degree Street | 04730-011-87-37 |



| ITEM | QTY | DESCRIPTION | PART NUMBER |
|------|-----|--|-----------------|
| | | Complete Assembly | 05700-004-53-48 |
| 1 | 2 | Elbow, 1/2", 90-degree Street Brass | 04730-206-08-00 |
| 2 | 2 | Nipple, 1/2" Close Brass | 04730-207-15-00 |
| 3 | 1 | Valve, Solenoid, 1/2" 208-240 V | 04810-003-71-56 |
| 4 | 1 | Y-Strainer, 1/2" | 04730-217-01-10 |
| 5 | 2 | Elbow, 1/2" 90-degree Brass | 04730-011-42-96 |
| 6 | 1 | Tee, 1/2" x 1/2" x 1/4" | 04730-002-22-56 |
| 7 | 1 | Fitting, 1/4" Barb x 1/4" Swivel | 04730-011-95-41 |
| 8 | 1 | Nipple, 1/2" x 1/4" Brass, Low PSI | 05700-004-53-43 |
| 9 | 1 | Tee, 1/2" Brass | 04730-211-27-00 |
| 10 | 1 | Nipple, 1/2" x 6" Brass | 04730-003-62-38 |
| 11 | 1 | Plug, 1/2" Brass Pipe | 04730-209-03-00 |
| 12* | 1 | Rinse Injector, VER | 09515-004-22-73 |
| | 3 | Plug, Rinse Injector, 1/8" Brass (Not Shown) | 04730-209-07-37 |
| 13* | 1 | Gasket, Rinse Injector | 05330-111-42-81 |

*These items are not included in the complete plumbing assembly and must be ordered separately.

SHOCK ABSORBER (WATER ARRESTOR) OPTION

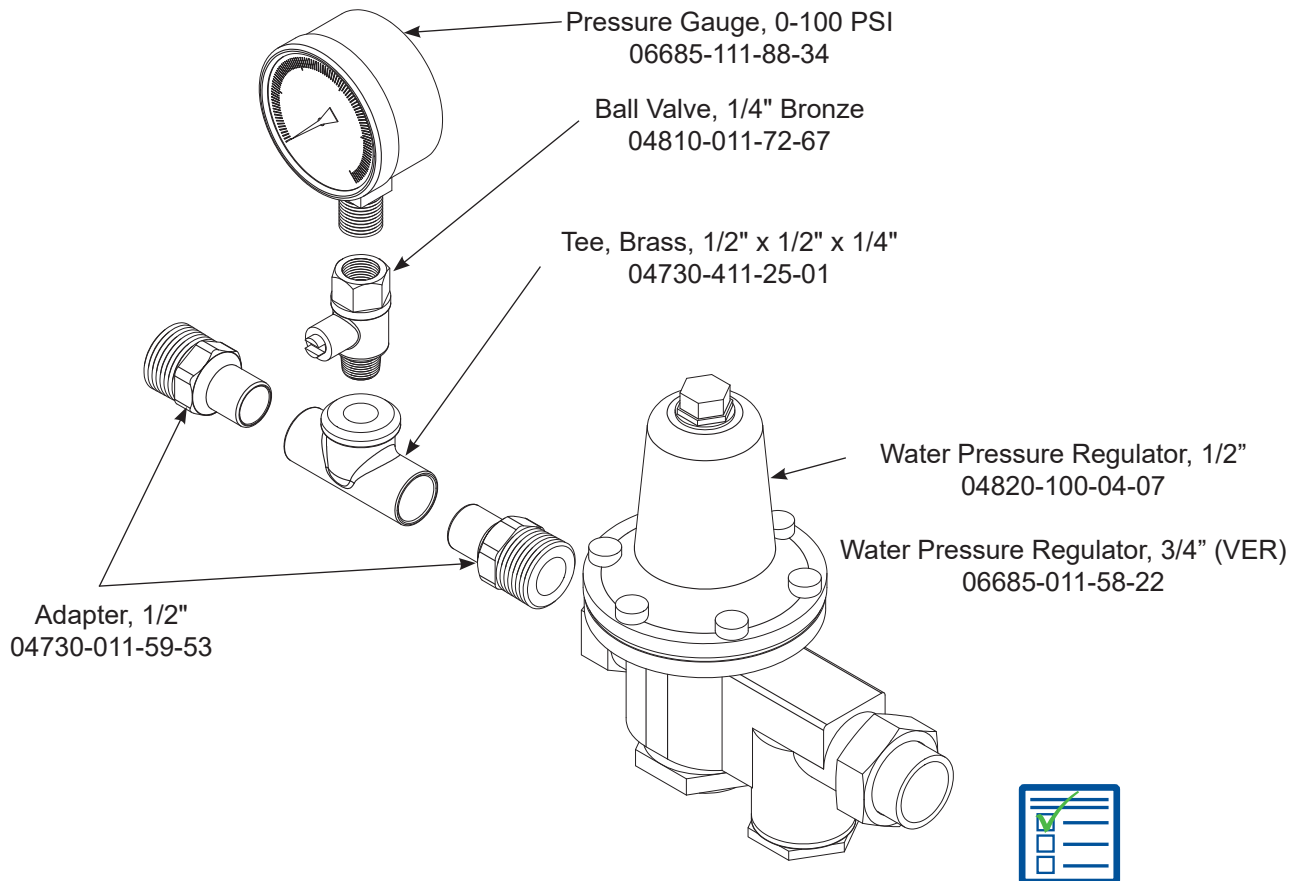


WATER TREATMENT OPTION

Scaltrol System
04730-003-05-76

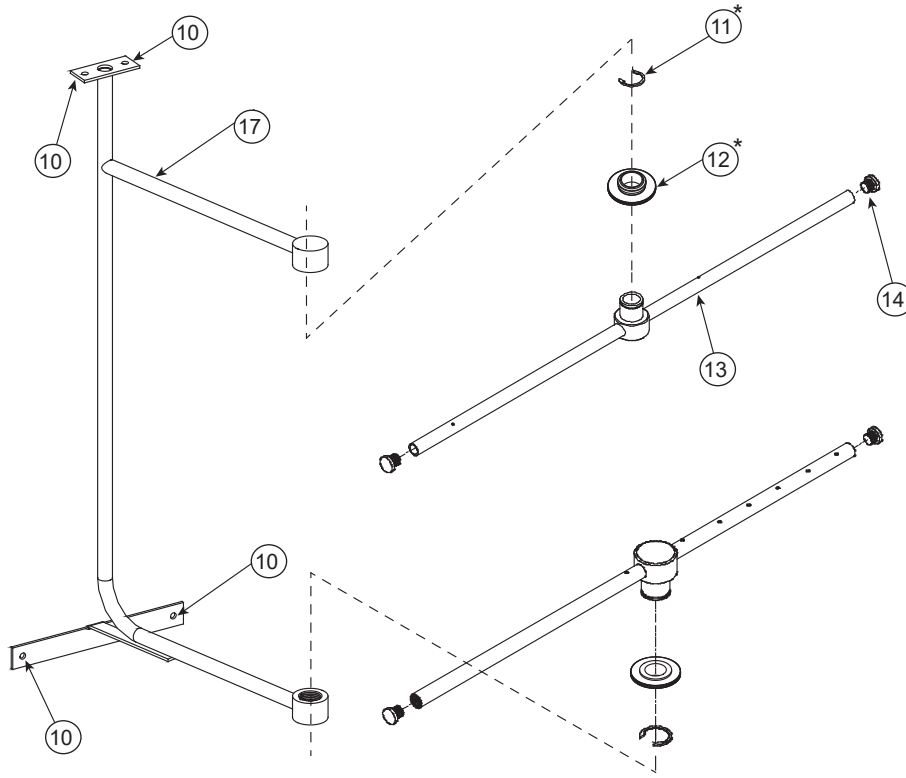
Replacement Cartridge
(inspect at least every 6 months)
RSC-100

PRESSURE REGULATING VALVE OPTION*

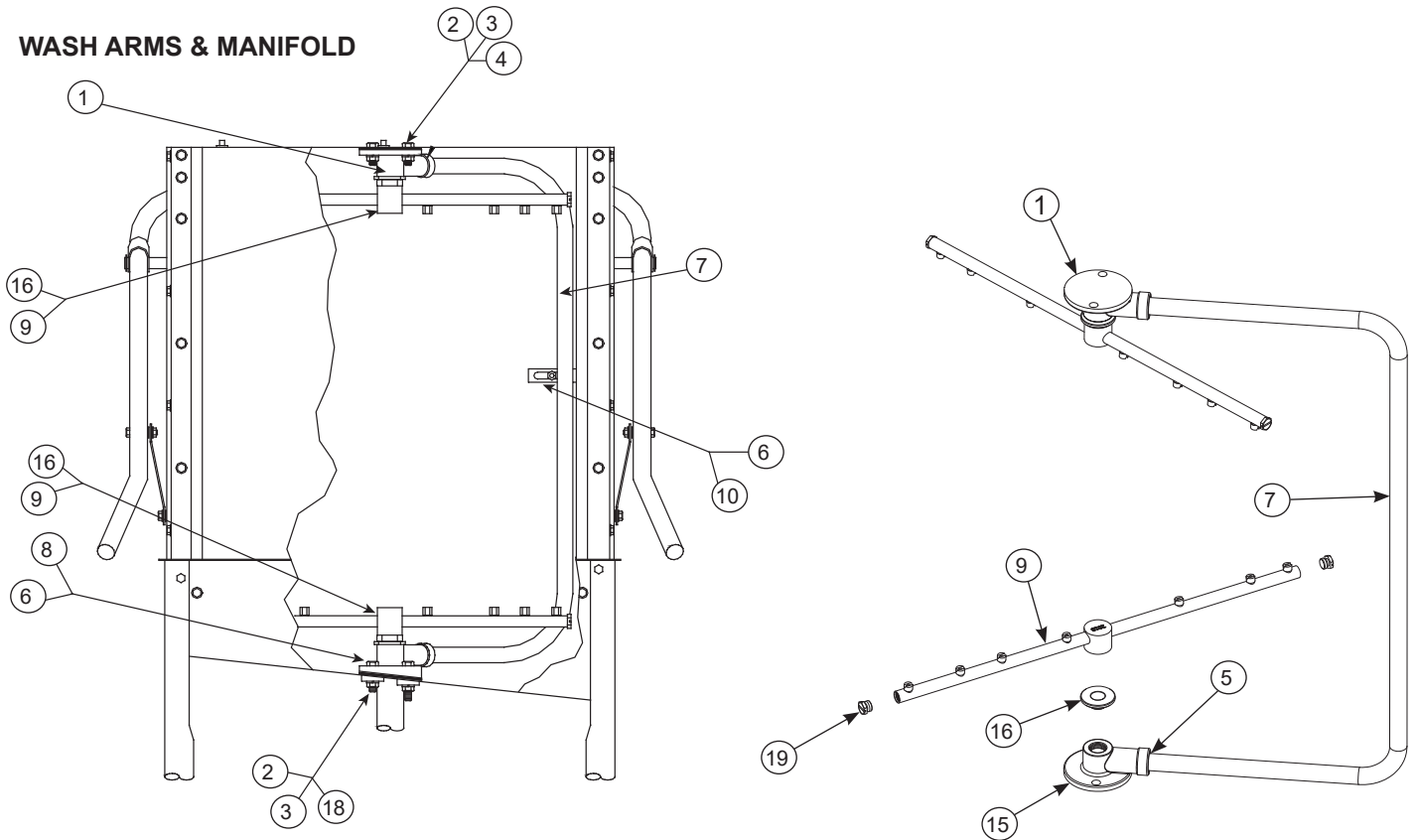


*PRV comes standard on the TempStar VER but ships inside the machine. Click [here](#) for install instructions.

FINAL RINSE ARMS & MANIFOLD

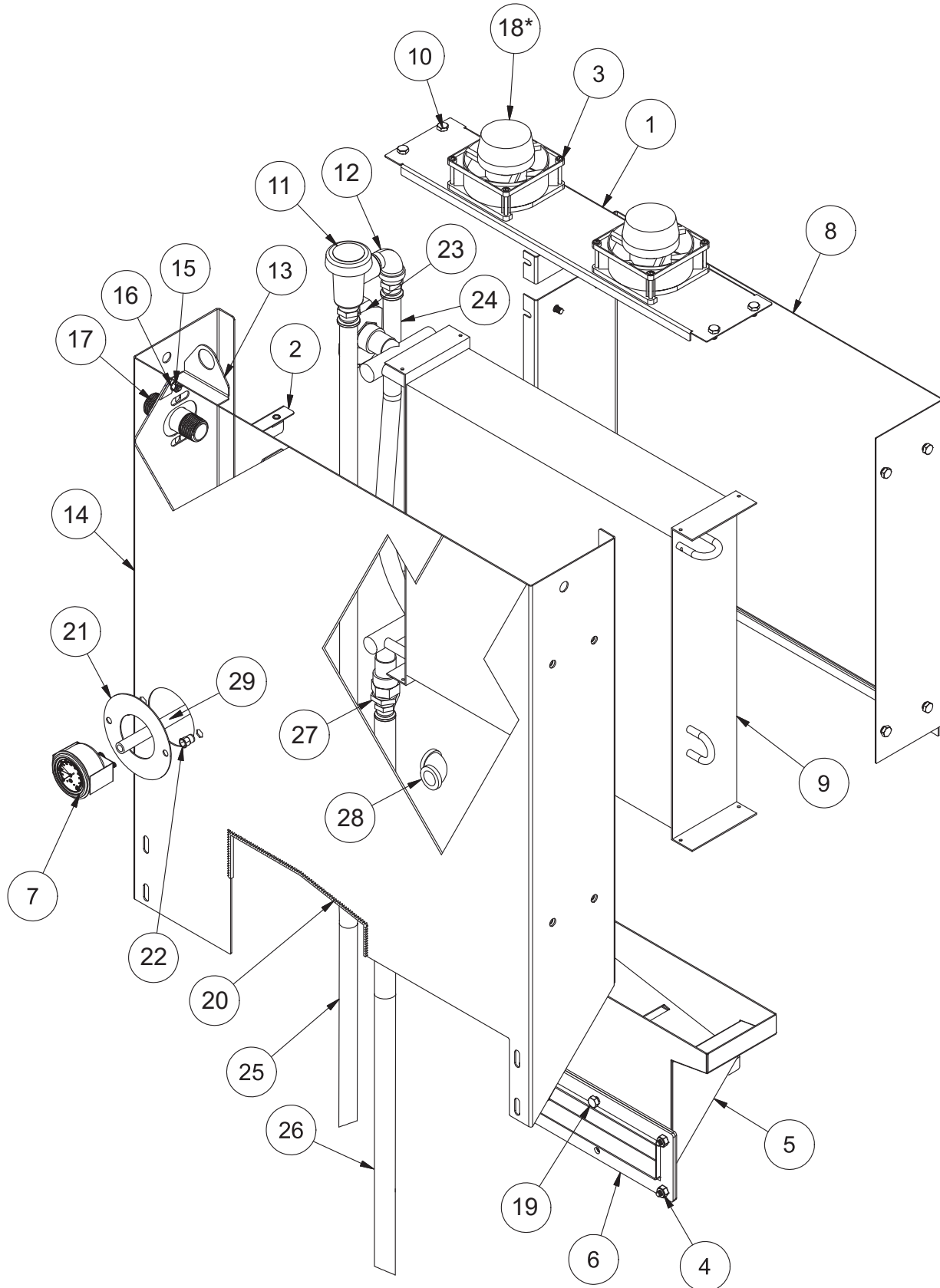


WASH ARMS & MANIFOLD



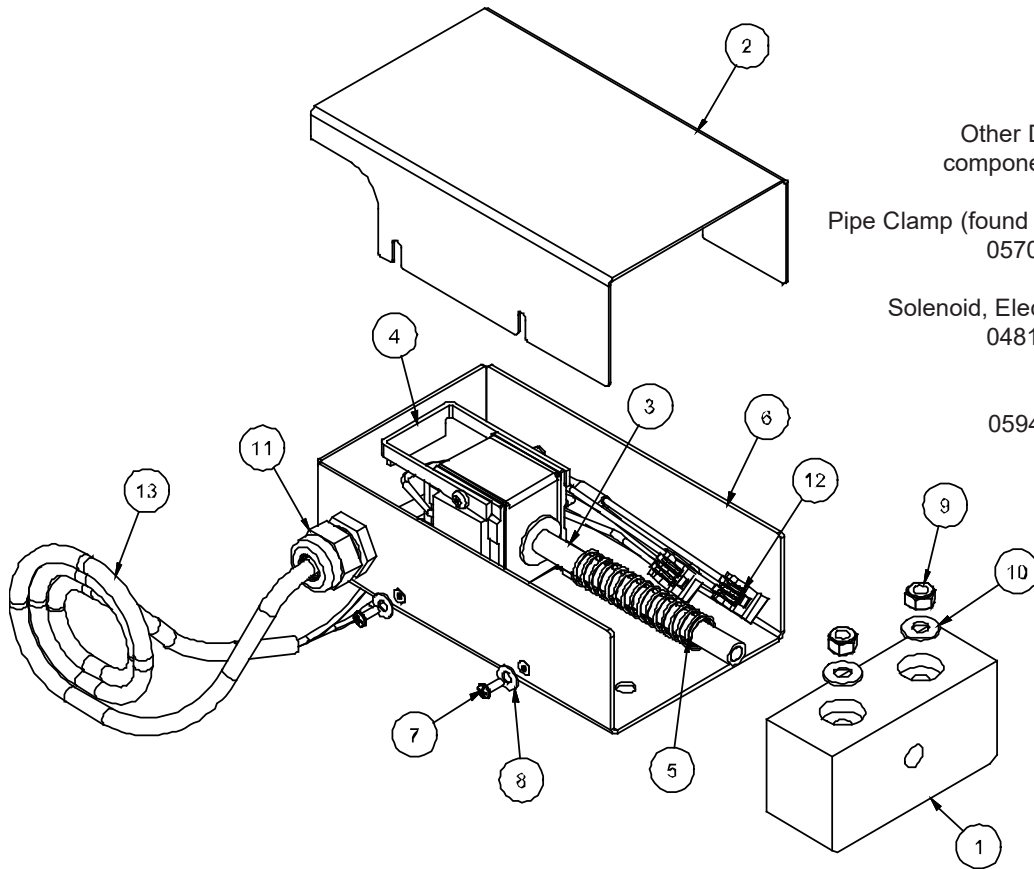
| ITEM | QTY | DESCRIPTION | PART NUMBER |
|------|-----|---------------------------------------|-----------------|
| 1 | 1 | Upper Manifold | 05700-031-34-82 |
| 2 | 4 | Nut, 3/8-16 Hex | 05310-276-01-00 |
| 3 | 4 | Lockwasher, 3/8" | 05311-276-01-00 |
| 4 | 2 | Bolt, Hex 3/8-16 x 7/8" | 05306-011-36-95 |
| 5 | 2 | O-ring | 05330-111-35-15 |
| 6 | 1 | Positioning Bracket, Manifold Tube | 05700-011-34-63 |
| 7 | 1 | Tube, Wash Manifold | 05700-131-15-07 |
| 8 | 2 | Gasket, Manifold | 05700-111-35-03 |
| 9 | 1 | Wash Arm | 05700-004-13-13 |
| 10 | 5 | Locknut, 1/4-20 Hex with Nylon Insert | 05310-374-01-00 |
| 11* | 2 | Clip, Retaining, Rinse Head Bushing | 05340-112-01-11 |
| 12* | 2 | Bearing Assembly, Rinse Arm | 05700-004-54-71 |
| 13 | 2 | Rinse Arm | 05700-003-58-94 |
| 14 | 4 | Rinse Arm End-cap | 04730-111-60-41 |
| 15 | 1 | Lower Wash Manifold | 05700-031-46-00 |
| 16 | 2 | Bearing Assembly | 05700-021-35-97 |
| 17 | 1 | Rinse Manifold Assembly | 05700-021-47-61 |
| 18 | 2 | Bolt, Hex 3/8-16 x 1 1/4" | 05305-276-10-00 |
| 19 | 4 | Wash Arm End-cap | 05700-003-31-59 |

*Rinse Arm Bearing Kit
(Includes items 11 and 12)
06401-004-57-50



| ITEM | QTY | DESCRIPTION | PART NUMBER |
|------|-----|---------------------------------------|-------------------------------------|
| | 1 | VER System, Complete Assembly | 05700-004-53-47 |
| 1 | 1 | Plate, Fan Mounting | 05700-004-18-07 |
| 2 | 1 | Upper Shroud | 05700-004-18-06 |
| 3 | 8 | Screw, 6-32 x 1 3/4" | 05305-004-19-80 |
| 4 | 4 | Locknut, 1/4-20 Hex with Nylon Insert | 05310-374-01-00 |
| 5 | 1 | Exhaust Box | 05700-004-18-04 |
| 6 | 1 | Gasket, Heat Exchanger | 05330-004-18-22 |
| 7 | 1 | Gauge | 06680-004-19-78 |
| 8 | 1 | Coil Box, Back | 05700-004-18-03 |
| 9 | 1 | Coil, Heat Exchanger | 04420-004-19-61 |
| 10 | 12 | Bolt, 1/4-20 x 3/8" Hex | 05305-274-20-00 |
| 11 | 1 | Vacuum Breaker, 1/2" Brass | 04820-003-06-13 |
| 12 | 1 | Elbow, 1/2", 90-degree Street Brass | 04730-206-08-00 |
| 13 | 1 | Bracket, Vacuum Breaker | 05700-004-18-91 |
| 14 | 1 | Shroud, Heat Exchanger | 05700-004-18-92 |
| 15 | 6 | Locknut, 10-24 Hex with Nylon Insert | 05310-373-01-00 |
| 16 | 6 | Washer, Flat | 05311-173-02-00 |
| 17 | 1 | Inlet, Cold Water | 05700-004-19-01 |
| 18* | 2 | Fan, 85-236 V AC Fan, 24 V DC* | 05999-004-19-46 05999-004-81-80* |
| 19 | 2 | Screw, 1/4-20 x 5/8" Hex Head | 05305-274-24-00 |
| 20 | 1 | Edge Protector | 05700-004-25-62 |
| 21 | 1 | Ring, Pressure Gauge | 05700-004-35-70 |
| 22 | 4 | Nut, 1/4-20 | 05310-004-23-96 |
| 23 | 1 | Bracket, Water Inlet | 05700-004-41-27 |
| 24 | 1 | Hose, 1/2" x 24" Red | 05700-004-19-89 |
| 25 | 1 | Hose, 1/2" x 38" Red | 05700-004-31-81 |
| 26 | 1 | Hose, 1/2" x 48" Blue | 05700-004-48-23 |
| 27 | 1 | Bushing, 3/4" x 1/2" | 04730-002-56-27 |
| 28 | 1 | Elbow, 1/2", 90-degree Brass | 04730-011-42-96 |
| 29 | 1 | Hose, 1/4" x 30" Black | 05700-004-63-75 |

*Serial numbers between 21D392817 and 22G407504 have DC fans.



Other Door Interlock components (not shown):

Pipe Clamp (found on the side of the machine)
05700-000-35-05

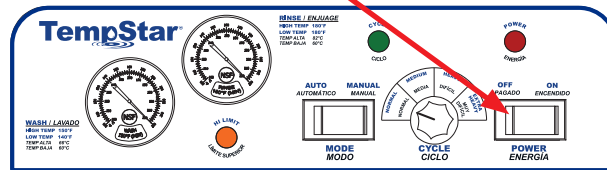
Solenoid, Electrical Interlock Option
04810-100-61-33

Relay
05945-111-47-51

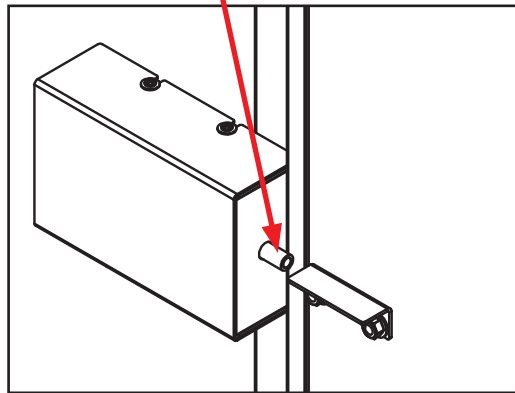
| ITEM | QTY | DESCRIPTION | PART NUMBER |
|------|-----|------------------------------|-----------------|
| | | Door Interlock Assembly | 05700-004-23-06 |
| 1 | 1 | Guide Block, Door Lock | 09330-004-22-72 |
| 2 | 1 | Cover, Door Lock Mounting | 05700-004-22-80 |
| 3 | 1 | Rod, Interlock Weldment | 05700-004-23-15 |
| 4 | 1 | Solenoid, Horizontal 1" Push | 04820-004-24-11 |
| 5 | 1 | Spring, Compression | 05935-004-24-10 |
| 6 | 1 | Base, Door Interlock Box | 05700-004-24-25 |
| 7 | 8 | Screw, 3/8" Pan Head | 05305-171-02-00 |
| 8 | 8 | Washer, Flat | 05311-173-02-00 |
| 9 | 2 | Locknut, 1/4-20 | 05310-374-01-00 |
| 10 | 2 | Washer, 1/4-20 | 05311-174-01-00 |
| 11 | 1 | Fitting | 05975-011-59-50 |
| 12 | 2 | Connector, 2-Conductor | 05935-004-03-49 |
| 13 | 1 | Cord, SJ 55" LG | 05700-004-24-31 |

The following instructions are for models equipped with the Door Interlock option. These instructions should only be used if the door interlock fails to unlatch and the door won't open.

1. Turn machine off by flipping the power switch to "OFF."

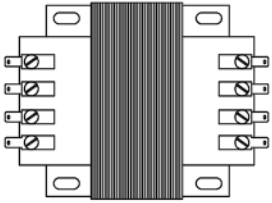


2. If this doesn't disengage the interlock rod, push the rod back by hand.

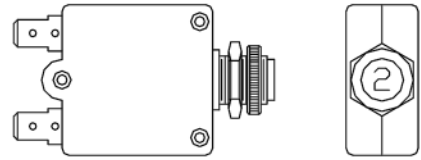
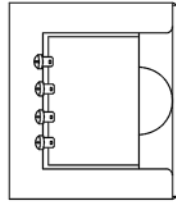


3. The door should now open.
4. Contact a qualified service agency to have the interlock serviced.

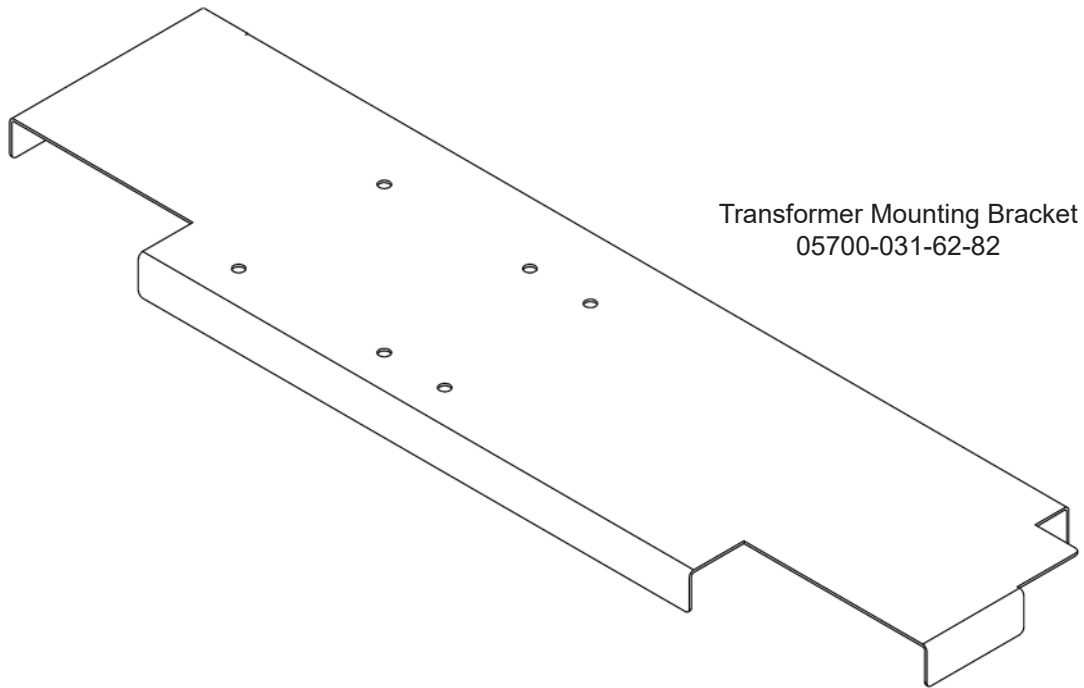
460 V MACHINE TRANSFORMER MOUNTING BOX



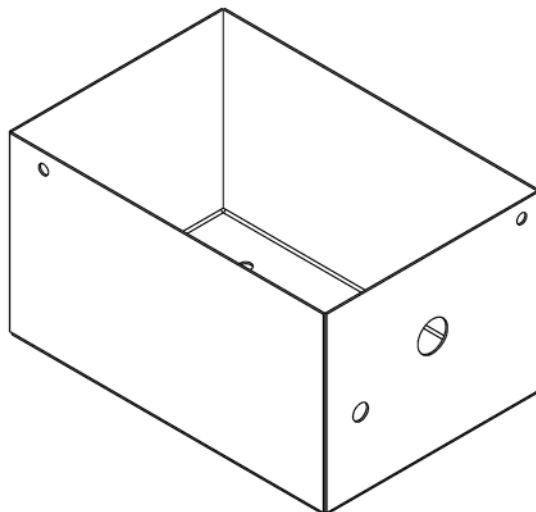
460 V Transformer
05950-111-65-93



2 A Circuit Breaker
05925-111-64-18



Transformer Mounting Bracket
05700-031-62-82



Transformer Mounting Box
05700-002-10-01

Transformer Mounting Box Top
(Not Shown)
05700-000-78-53

Call 1-880-800-5672 to order kits for TempStar models and use the part numbers below:

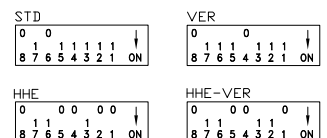
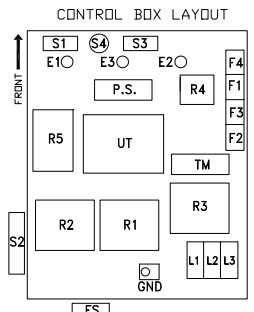
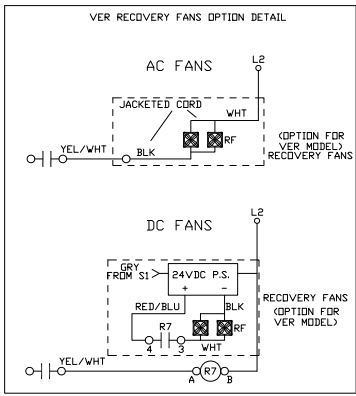
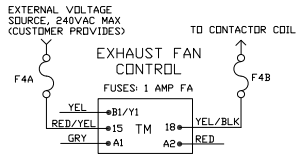
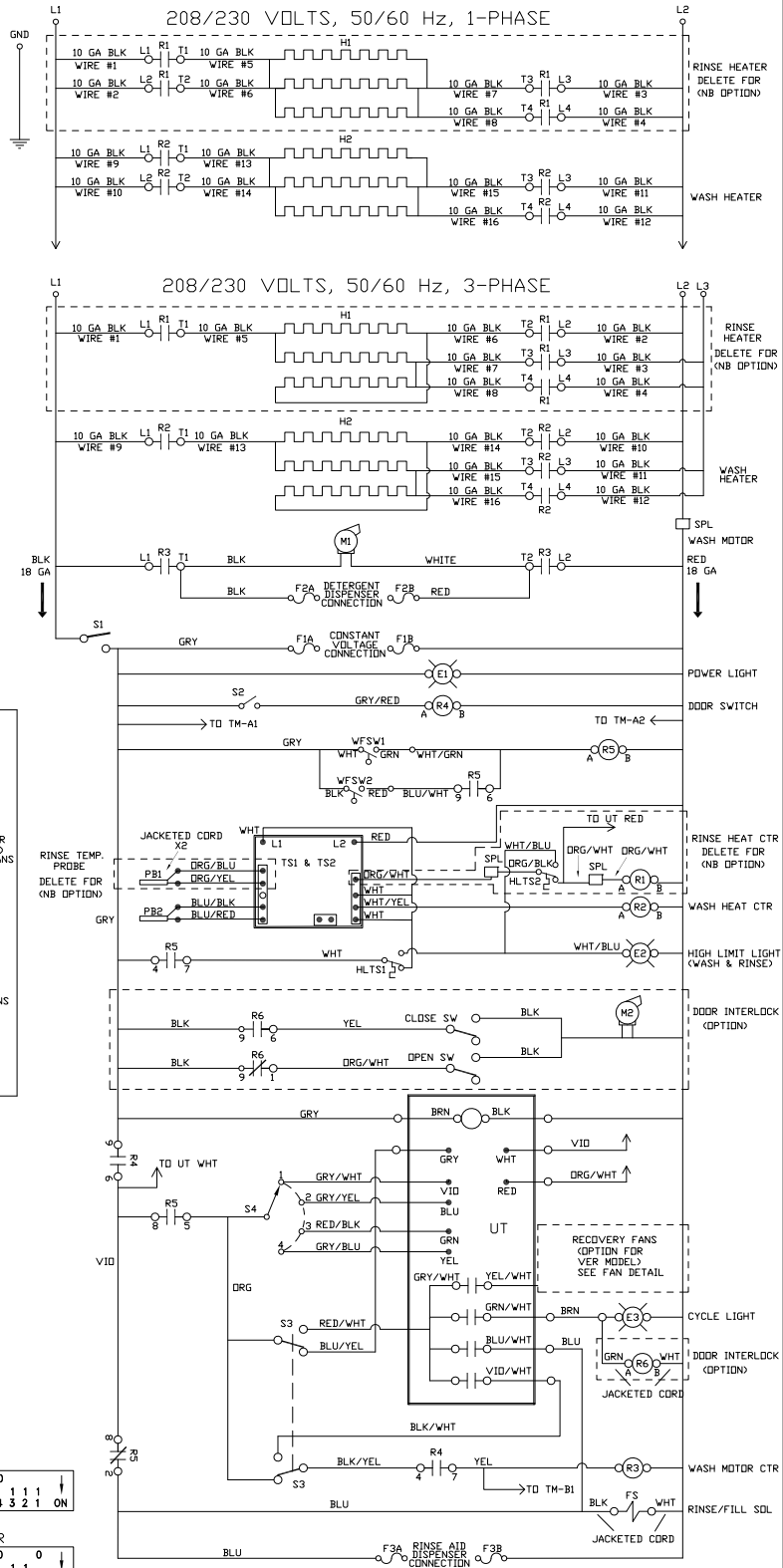
| DESCRIPTION | PART NUMBER |
|-------------------------------|-----------------|
| Door Interlock Kit | 06401-004-03-23 |
| Door Magnet Cover Kit | 06401-004-07-73 |
| Drain Water Tempering Kit | 06401-004-85-80 |
| Exhaust Fan Contactor Kit | 05700-004-35-35 |
| False Panel Kit | 05700-002-75-59 |
| Phase Conversion Kit | 06401-004-00-22 |
| Fans Conversion Kit, AC to DC | 06401-004-83-93 |
| TempStar Go Box* | 06401-003-62-04 |

*The Go Box is a kit of the most-needed parts to successfully complete a repair in the first call 90% or more of the time.

LEGEND

- L1,L2,L3 POWER DISTRIBUTION BLOCK
- GND GROUND
- RINSE HEATER
- H2 WASH HEATER
- M2 WASH MOTOR
- DDDR INTERLOCK MOTOR
- R2 RINSE HEATER CONTACTOR
- R3 WASH HEATER CONTACTOR
- R4 CONTROL RELAY
- R5 FILL RELAY
- R6 DDOR INTERLOCK (OPTIONAL)
- R7 FUSE, CONSTANT VOLTAGE CONN.
- R8 VER RECOVERY FAN RELAY
- F2 FUSE, DETERGENT DISPENSER
- F3 FUSE, RINSE DISPENSER
- F4 FUSE, EXHAUST FAN
- S1 POWER SWITCH
- S2 DDOR SWITCH
- S3 AUTO/MANUAL (DELIME) SWITCH
- S4 CYCLE SELECTOR
- E2 POWER LIGHT
- E3 HEATER OVERLOAD LIGHT
- E3 CYCLE LIGHT
- HLTS1 HIGH LIMIT, WASH HEATER
- HLTS2 HIGH LIMIT, RINSE HEATER
- TS1 RINSE HEATER THERMOSTAT
- TS2 WASH HEATER THERMOSTAT
- WFSW1 WASH FLDAT SWITCH 1
- WFSW2 WASH FLDAT SWITCH 2
- FS RINSE/FILL SOLENOID
- UT UNIVERSAL TIMER
- TM EXHAUST FAN TIMER
- PB1 RINSE TEMP PROBE
- PB2 WASH TEMP PROBE
- RF RECOVERY FANS (OPTIONAL)
- SPL SPLICE
- P.S. DC POWER SUPPLY

TEMPSTAR & WAREFORCE SCHEMATIC
STD/VER/HHE/HHE-VER
STD NB/HHE NB



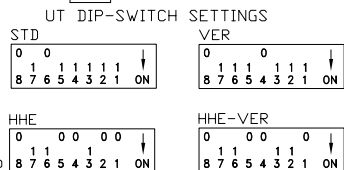
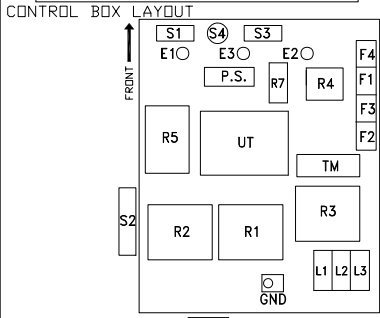
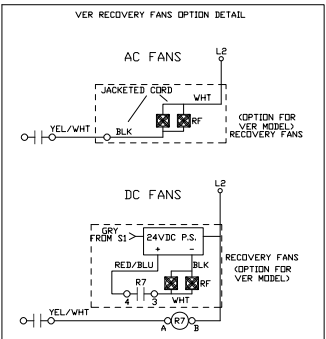
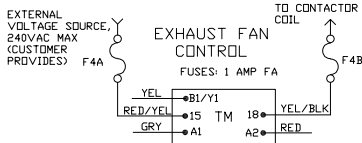
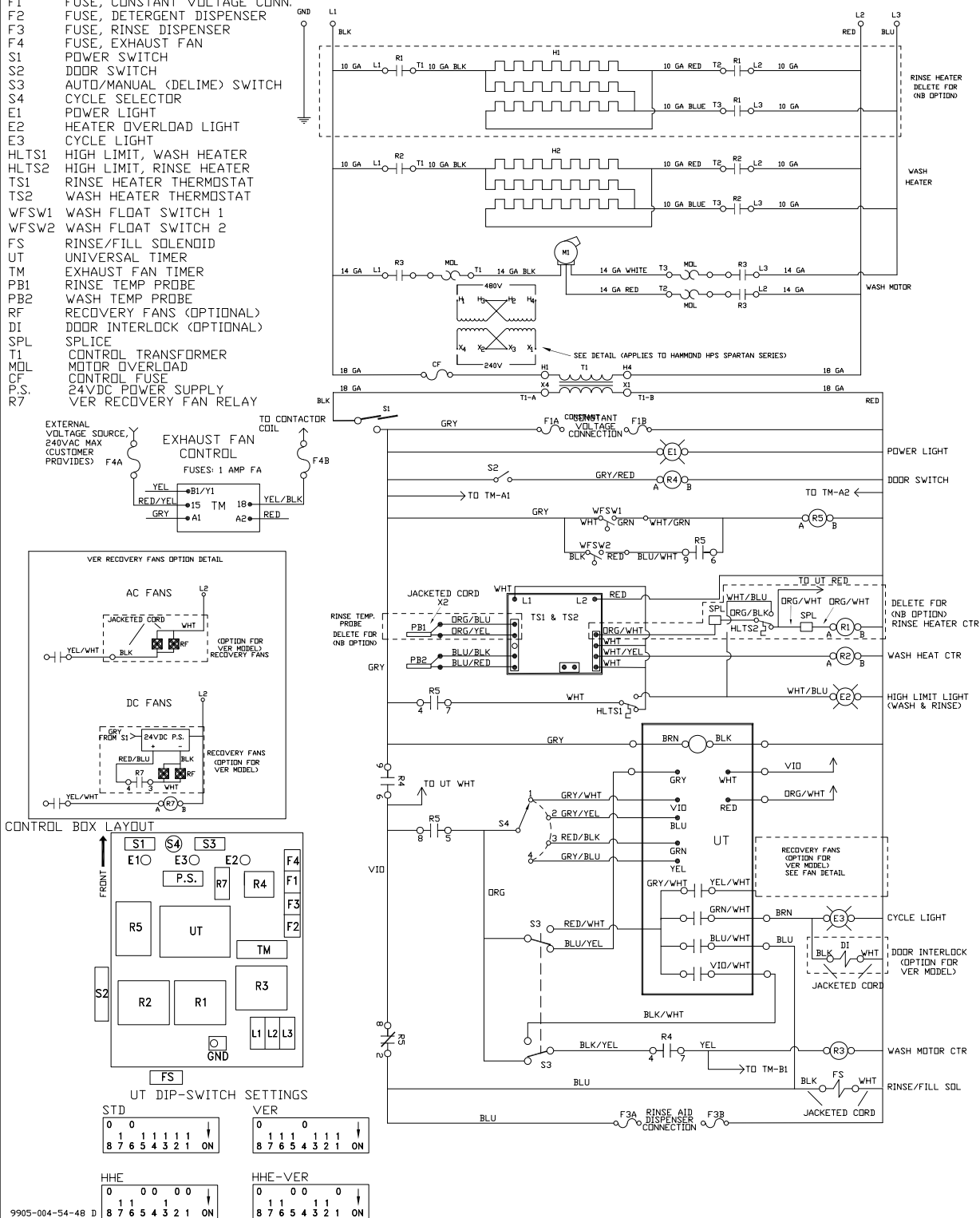
9905-004-54-47 E

LEGEND

- L1,L2,L3 POWER DISTRIBUTION BLOCK
- GND GROUND
- H1 RINSE HEATER
- H2 WASH HEATER
- M1 WASH MOTOR
- R1 RINSE HEATER CONTACTOR
- R2 WASH HEATER CONTACTOR
- R3 WASH MOTOR CONTACTOR
- R4 CONTROL RELAY
- R5 FILL RELAY
- F1 FUSE, CONSTANT VOLTAGE CONN.
- F2 FUSE, DETERGENT DISPENSER
- F3 FUSE, RINSE DISPENSER
- F4 FUSE, EXHAUST FAN
- S1 POWER SWITCH
- S2 DOOR SWITCH
- S3 AUTO/MANUAL (DELIME) SWITCH
- S4 CYCLE SELECTOR
- E1 POWER LIGHT
- E2 HEATER OVERLOAD LIGHT
- E3 CYCLE LIGHT
- HLTS1 HIGH LIMIT, WASH HEATER
- HLTS2 HIGH LIMIT, RINSE HEATER
- TS1 RINSE HEATER THERMOSTAT
- TS2 WASH HEATER THERMOSTAT
- WFSW1 WASH FLOAT SWITCH 1
- WFSW2 WASH FLOAT SWITCH 2
- FS RINSE/FILL SOLENOID
- UT UNIVERSAL TIMER
- TM EXHAUST FAN TIMER
- PB1 RINSE TEMP PROBE
- PB2 WASH TEMP PROBE
- RF RECOVERY FANS (OPTIONAL)
- DI DOOR INTERLOCK (OPTIONAL)
- SPL SPLICE
- T1 CONTROL TRANSFORMER
- MOL MOTOR OVERLOAD
- CF CONTROL FUSE
- P.S. 24VDC POWER SUPPLY
- R7 VER RECOVERY FAN RELAY

TEMPSTAR & WAREFORCE SCHEMATIC STD/VER/HHE/HHE-VER STD NB/HHE NB

460 VOLTS, 50/60 Hz, 3-PHASE

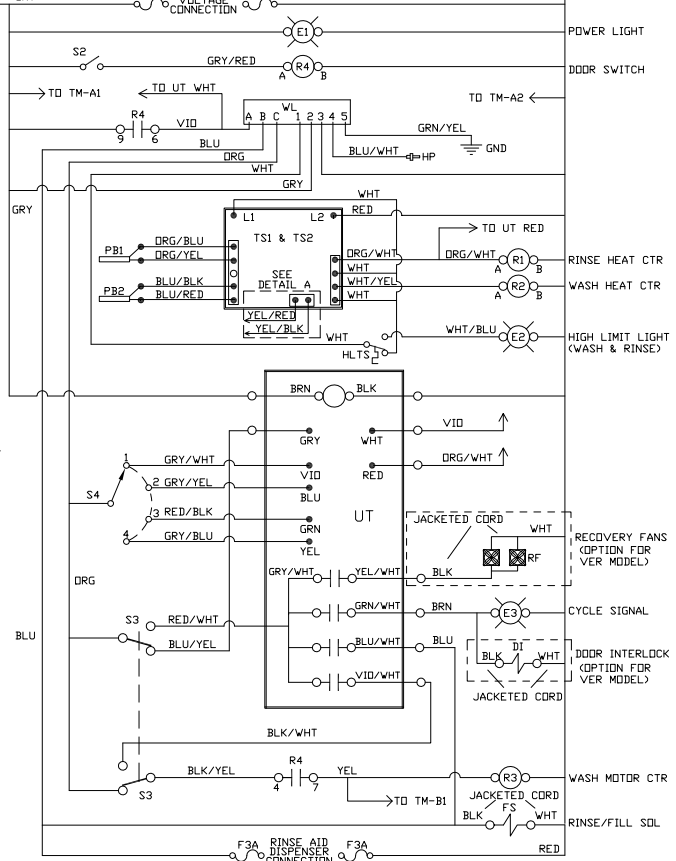
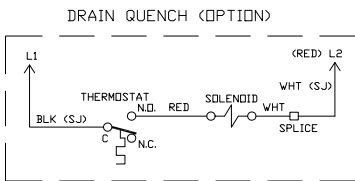
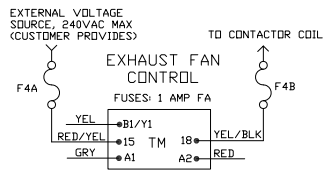
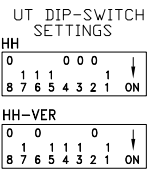
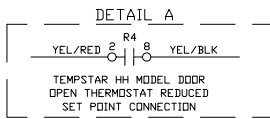
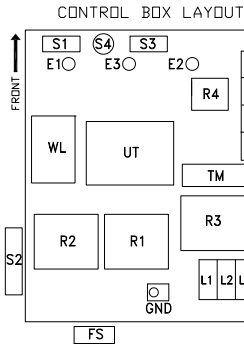
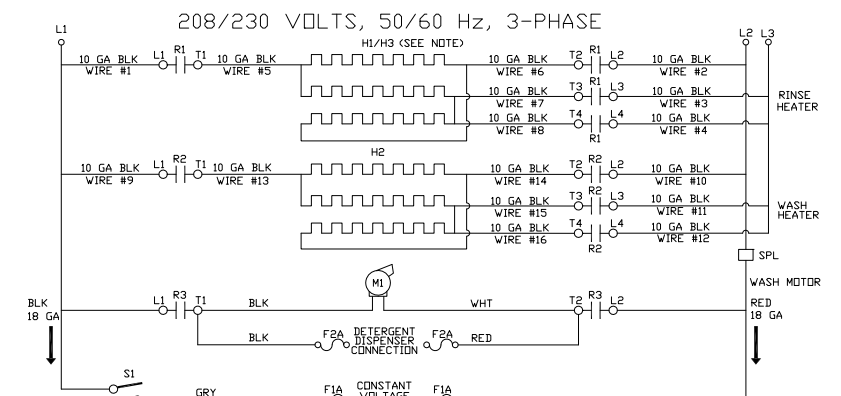
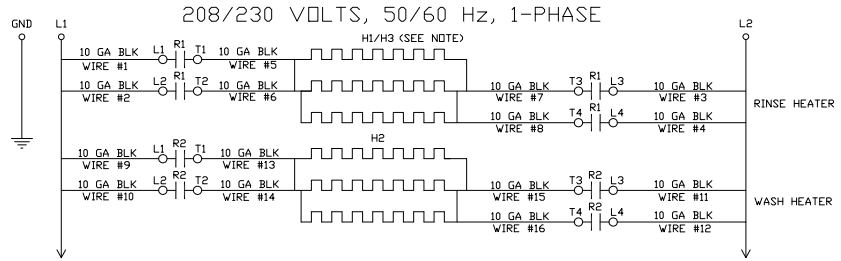


TEMPSTAR SCHEMATIC HH/HH-VER

LEGEND

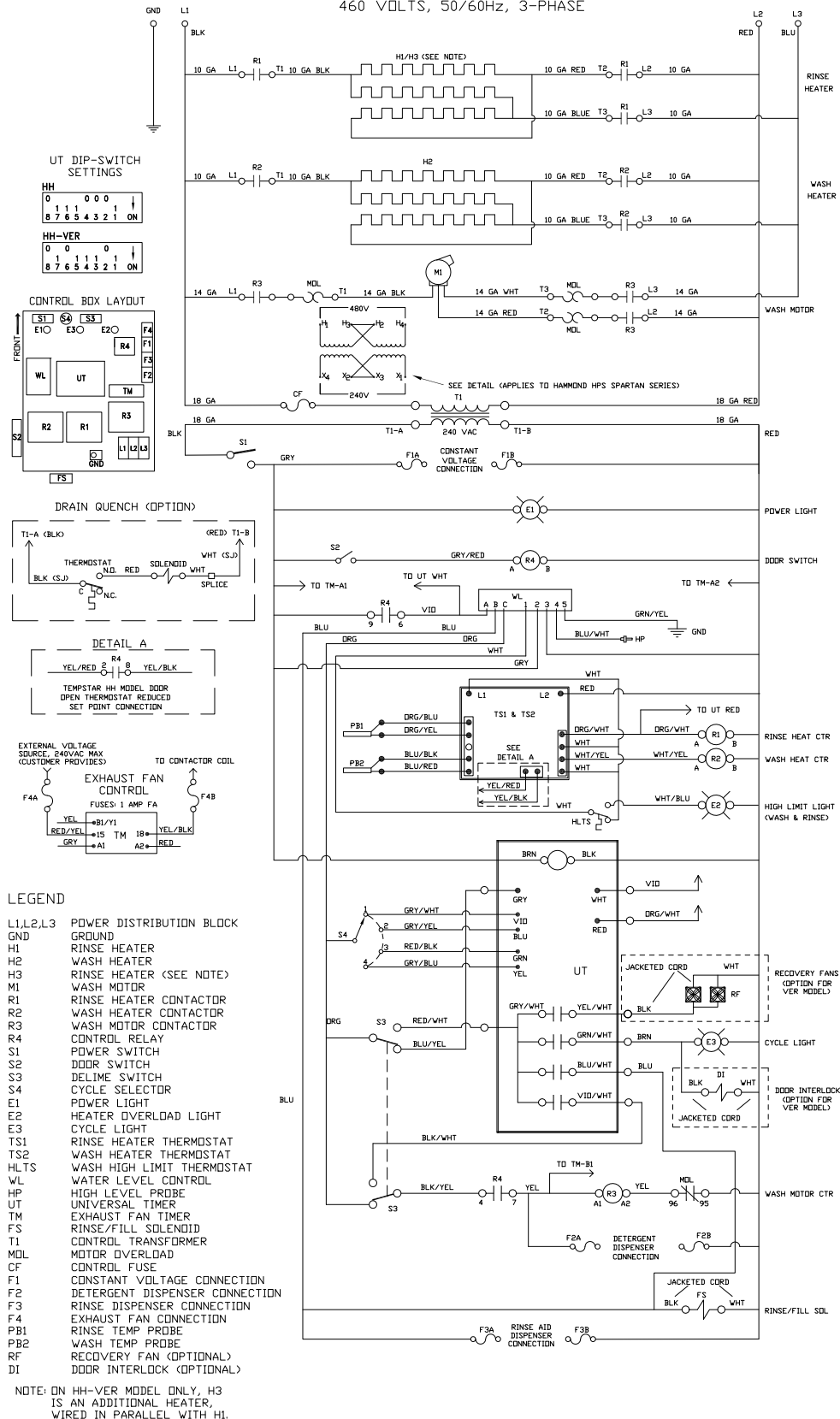
- L1,L2,L3 POWER DISTRIBUTION BLOCK
- GND GROUND
- H1 RINSE HEATER
- H2 WASH HEATER
- H3 RINSE HEATER (SEE NOTE)
- M1 WASH MOTOR
- R1 RINSE HEATER CONTACTOR
- R2 WASH HEATER CONTACTOR
- R3 WASH MOTOR CONTACTOR
- R4 CONTROL RELAY
- F1 FUSE, CONSTANT VOLTAGE CONN.
- F2 FUSE, DETERGENT DISPENSER
- F3 FUSE, RINSE DISPENSER
- F4 FUSE, EXHAUST FAN
- S1 POWER SWITCH
- S2 DDDR SWITCH
- S3 AUTO/MANUAL (DELIME) SWITCH
- S4 CYCLE SELECTOR
- E1 POWER LIGHT
- E2 HEATER OVERLOAD LIGHT
- E3 CYCLE LIGHT
- HLTS1 HIGH LIMIT, WASH HEATER
- HLTS2 HIGH LIMIT, RINSE HEATER
- TS1 RINSE HEATER THERMOSTAT
- TS2 WASH HEATER THERMOSTAT
- HP HIGH WATER LEVEL PROBE
- WL WATER LEVEL CONTROL
- FS RINSE/FILL SOLENOID
- UT UNIVERSAL TIMER
- TM EXHAUST FAN TIMER
- PB1 RINSE TEMP PROBE
- PB2 WASH TEMP PROBE
- RF RECOVERY FANS (OPTIONAL)
- DI DOOR INTERLOCK (OPTIONAL)
- SPL SPLICE

NOTE: ON HH-VER MODEL ONLY, H3 IS AN ADDITIONAL HEATER, WIRED IN PARALLEL WITH H1.



TEMPSTAR SCHEMATIC HH/HH-VER

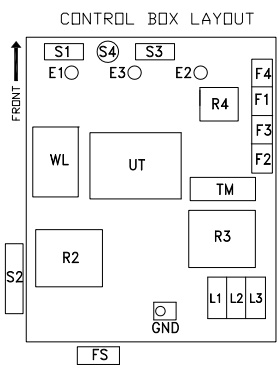
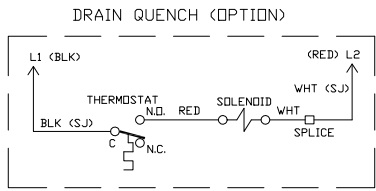
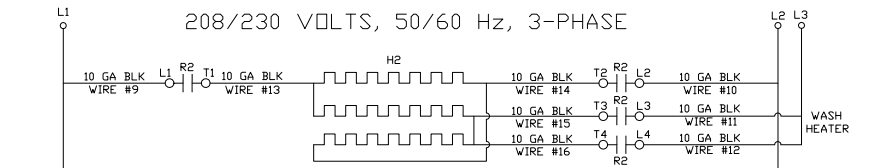
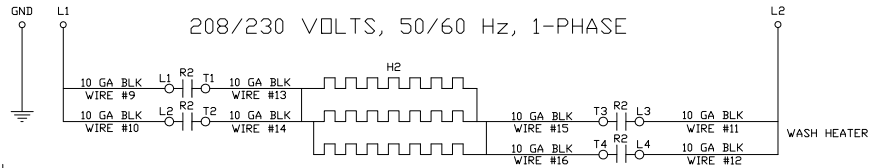
460 VOLTS, 50/60Hz, 3-PHASE



TEMPSTAR SCHEMATIC
NB/HH-NB/HHE-NB

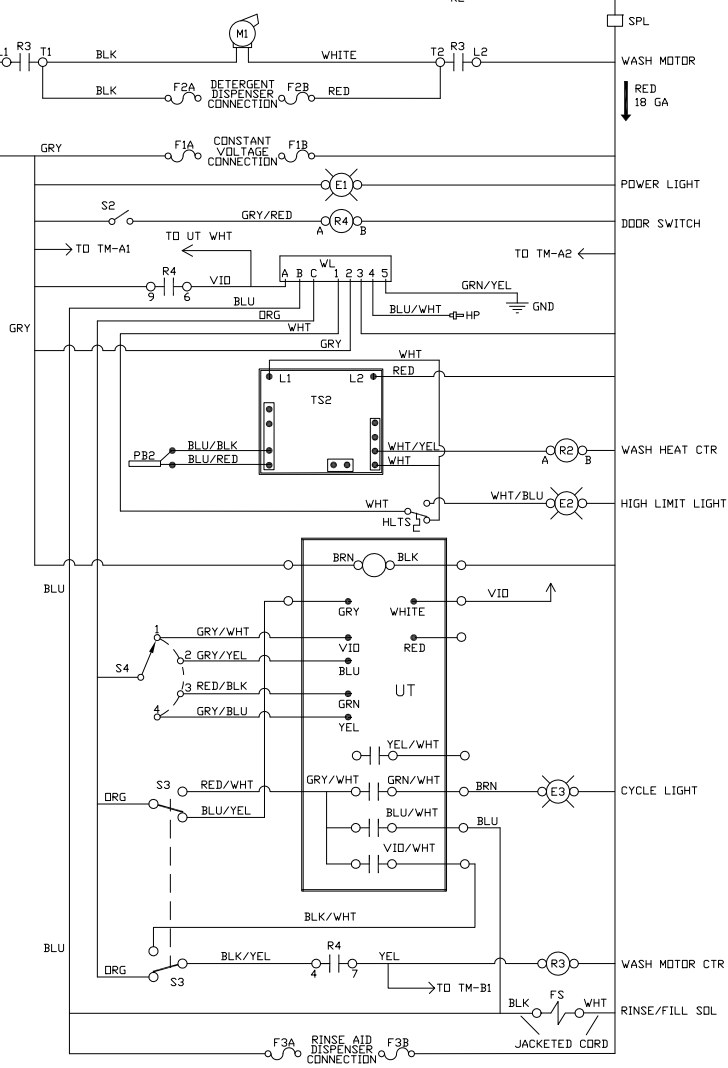
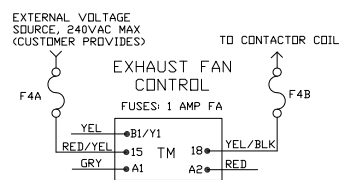
LEGEND

- L1,L2,L3 POWER DISTRIBUTION BLOCK
- GND GROUND
- H2 WASH HEATER
- M1 WASH MOTOR
- R2 WASH HEATER CONTACTOR
- R3 WASH MOTOR CONTACTOR
- R4 CONTROL RELAY
- F1 CONSTANT VOLTAGE CONNECTION
- F2 DETERGENT DISPENSER FUSE BLOCK
- F3 RINSE DISPENSER FUSE BLOCK
- F4 EXHAUST FAN FUSE BLOCK
- S1 POWER SWITCH
- S2 DOOR SWITCH
- S3 AUTO/MANUAL (DELIME) SWITCH
- S4 CYCLE SELECTOR
- E1 POWER LIGHT
- E2 HEATER OVERLOAD LIGHT
- E3 CYCLE LIGHT
- HLTS WASH HEATER HIGH LIMIT
- TS2 WASH HEATER THERMOSTAT
- HP HIGH WATER LEVEL PROBE
- WL WATER LEVEL CONTROL
- FS RINSE/FILL SOLENOID
- UT UNIVERSAL TIMER
- TM EXHAUST FAN TIMER
- PB2 WASH TEMP PROBE
- SPL SPLICE



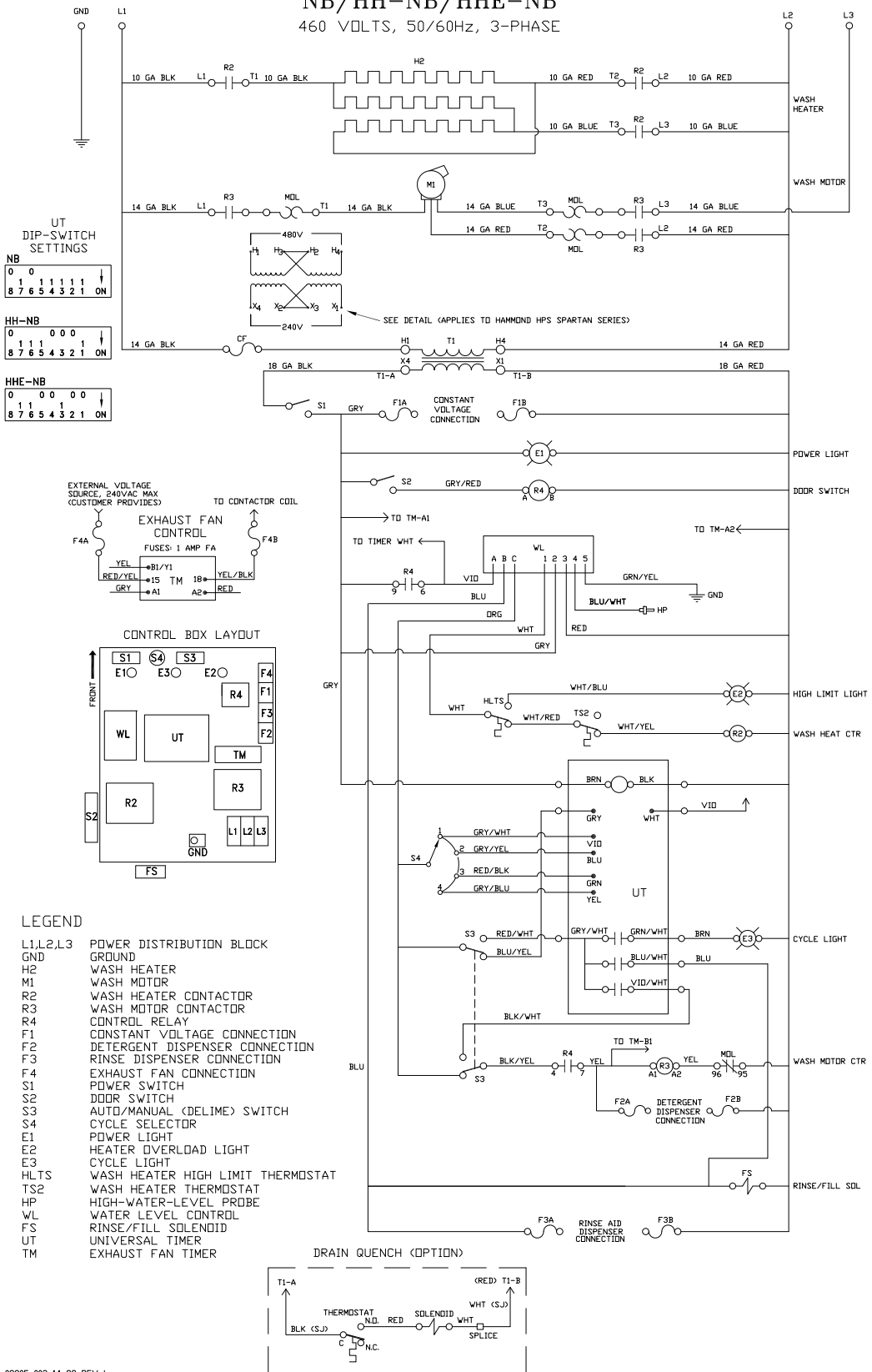
UT DIP-SWITCH SETTINGS

| | | | | | | | |
|--------|---|---|---|---|---|---|------|
| NB | | | | | | | |
| 0 | 0 | | | | | | |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | ↓ |
| 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 ON |
| HH-NB | | | | | | | |
| 0 | | | | 0 | 0 | 0 | ↓ |
| 1 | 1 | 1 | | 1 | | 1 | ↓ |
| 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 ON |
| HHE-NB | | | | | | | |
| 0 | | | | 0 | 0 | 0 | ↓ |
| 1 | 1 | | | 1 | | | ↓ |
| 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 ON |



09905-003-14-97 REV K

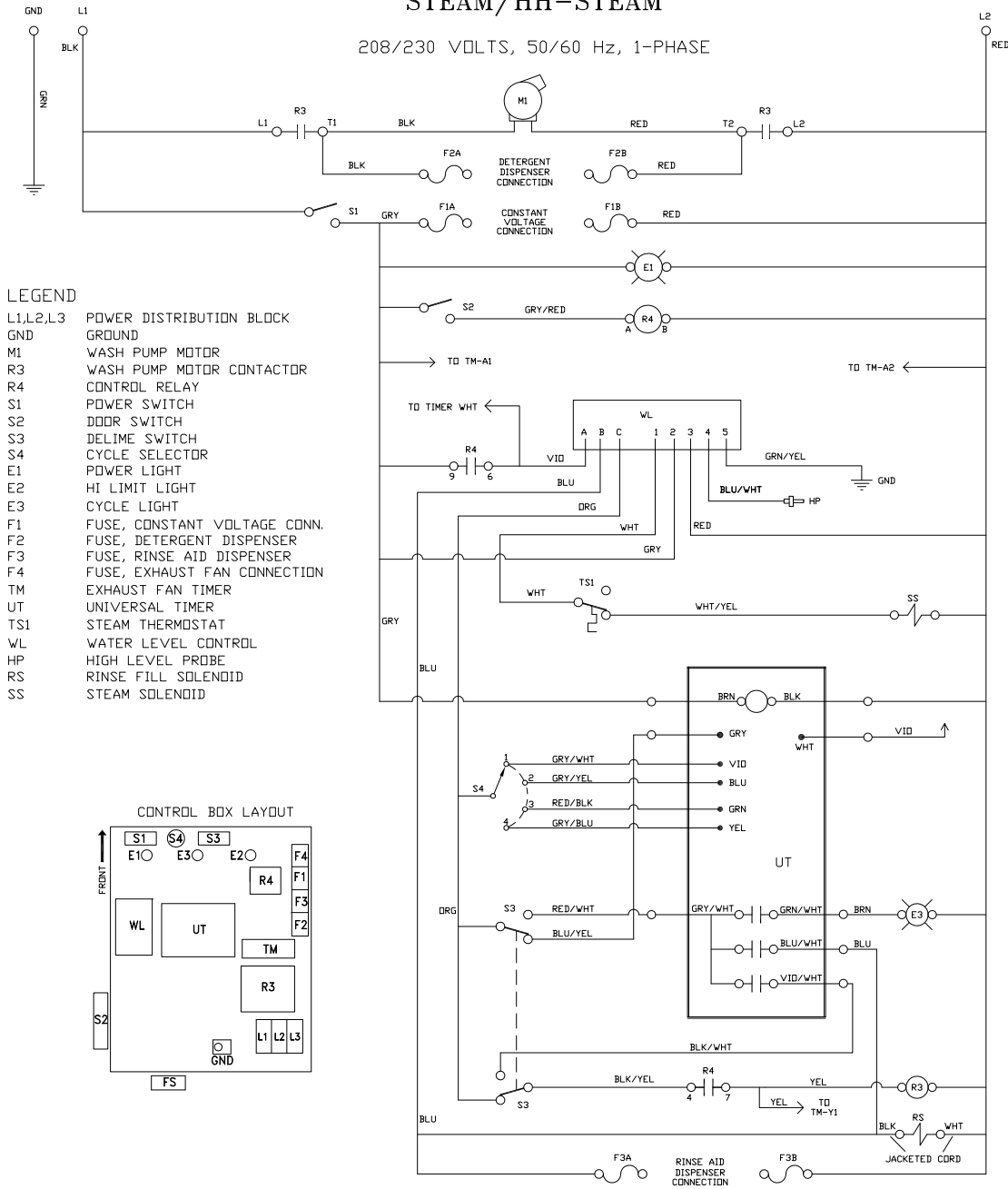
TEMPSTAR SCHEMATIC
NB/HH-NB/HHE-NB
460 VOLTS, 50/60Hz, 3-PHASE



09905-003-14-98 REV L

TEMPSTAR SCHEMATIC
STEAM/HH-STEAM

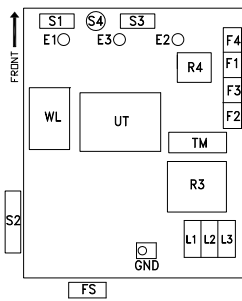
208/230 VOLTS, 50/60 Hz, 1-PHASE



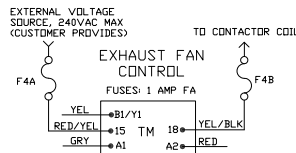
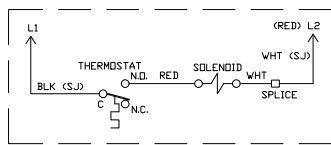
LEGEND

- L1,L2,L3 POWER DISTRIBUTION BLOCK
- GND GROUND
- M1 WASH PUMP MOTOR
- R3 WASH PUMP MOTOR CONTACTOR
- R4 CONTROL RELAY
- S1 POWER SWITCH
- S2 DDDR SWITCH
- S3 DELIME SWITCH
- S4 CYCLE SELECTOR
- E1 POWER LIGHT
- E2 HI LIMIT LIGHT
- E3 CYCLE LIGHT
- F1 FUSE, CONSTANT VOLTAGE CONN.
- F2 FUSE, DETERGENT DISPENSER CONNECTION
- F3 FUSE, RINSE AID DISPENSER
- F4 FUSE, EXHAUST FAN CONNECTION
- TM EXHAUST FAN TIMER
- UT UNIVERSAL TIMER
- TS1 STEAM THERMOSTAT
- WL WATER LEVEL CONTROL
- HP HIGH LEVEL PROBE
- RS RINSE FILL SOLENOID
- SS STEAM SOLENOID

CONTROL BOX LAYOUT



DRAIN QUENCH (OPTION)



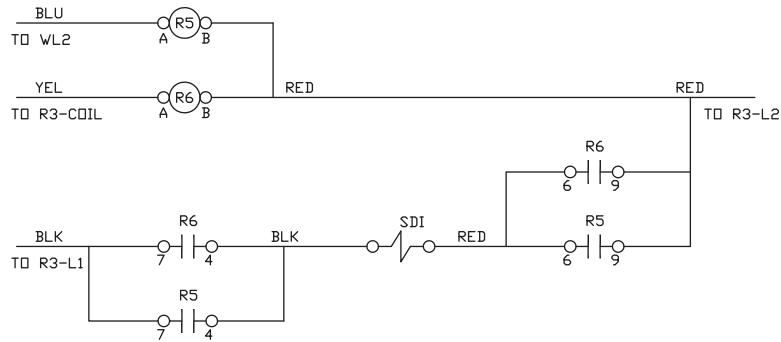
UT DIP-SWITCH SETTINGS

| | | | | | | | |
|-------|---|---|---|---|---|---|----|
| STEAM | | | | | | | |
| 0 | 0 | | | | | | |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| | | | | | | | ON |

| | | | | | | | |
|----------|---|---|---|---|---|---|----|
| HH-STEAM | | | | | | | |
| 0 | | | | 0 | 0 | 0 | |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| | | | | | | | ON |

09905-003-14-99 REV G

TEMPSTAR SDI OPTION FOR 208/230 VAC CIRCUIT

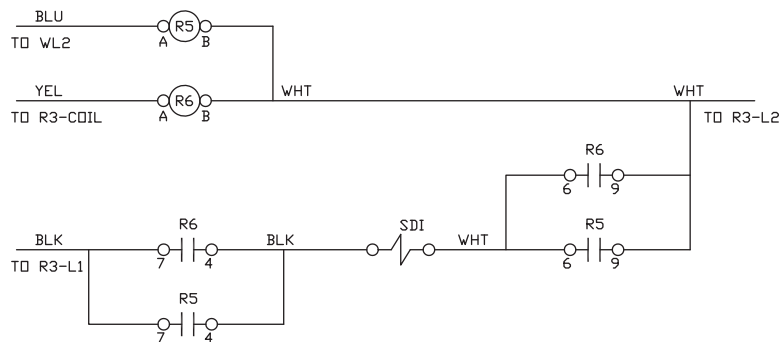


LEGEND

- R5 RELAY, RINSE
- R6 RELAY, WASH
- SDI SOLENOID, SAFETY DOOR INTERLOCK

09905-002-35-85 REV B

TEMPSTAR SDI OPTION FOR 120 VAC CIRCUIT



LEGEND

- R5 RELAY, RINSE
- R6 RELAY, WASH
- SDI SOLENOID, SAFETY DOOR INTERLOCK

09905-002-55-78 REV B



Jackson WWS, Inc. • 6209 N. US Hwy 25E • Gray, KY 40734 USA
1.888.800.5672 • www.jacksonwws.com