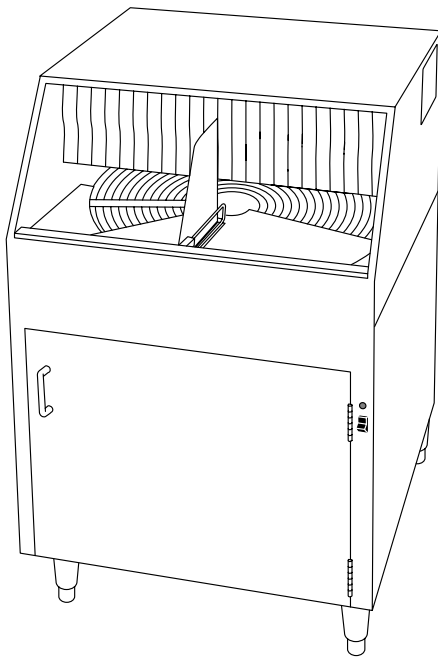

Champion

The Dishwashing Machine Specialists

Technical Manual



Rotary Glasswasher

Model
CG1
CG2

Machine Serial No.

June, 2000

Manual P/N 111556 REV. E

P.O. Box 4149
Winston-Salem, North Carolina 27115-4149

Champion Industries, Inc.

336/661-1556

Fax: 336/661-1660

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

Model Number _____ Serial Number _____

Voltage and Phase _____

Champion Parts Distributor _____ Phone _____

Champion Service Agency _____ Phone _____

Champion Industries Service: 1-800-858-4477 Champion Service Fax: 1-336-661-1660

We strongly recommend that you Fax your orders.

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

Revision History

Revision Date	Revised Pages	Serial Number Effectivity	Comments
09/07/90	All	16231	Issued manual and service parts list, Revision A
10/03/94	4	18354	Tank switch shuts down machine, revised the schematic
05/03/95	4	18629	Changed to new style chemical injection board, revised the schematic
06/07/95	—	18674	Changed to narrow control box, eliminated float rod bearing
02/02/97	All	—	Reissue of manual and service parts lists, Revision C
02/28/00	39	—	Revised wash down hose assy. parts list
6/18/00	33	G2147	Revised vacuum breaker parts

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LIMITED WARRANTY

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

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

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

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

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

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

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

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

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

INTRODUCTION

Welcome to **Champion...**

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

This manual covers the Models CG1 and CG2 glasswashers.

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

This manual contains:

- Warranty Information
- Operation and Cleaning Instructions
- Maintenance Instructions
- Troubleshooting Guide
- Basic Service Information
- Replacement Parts Lists
- Electrical Schematics

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

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

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

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

INSTALLATION

Unpacking

1. Remove the packing from the top of the conveyor stack.
2. Remove all packing from glass operated switch and right and left trays. Check that the right and left hand trays are positioned properly.
3. Check that the drain deflector is secure in the rinse drain.
4. Check the position of the splash curtain.
5. Check that the conveyor is level and the drive gear is engaged in the conveyor's outer rim grooves.
6. Remove the packing from within and above the detergent tank.
7. Ensure the standpipe is in position in the detergent tank.



NOTE:

The standpipe is located inside the wash return screen for shipping.

8. Ensure that the wash return screen in the detergent tank is in position.
9. Check that the lower drain screen is in position.

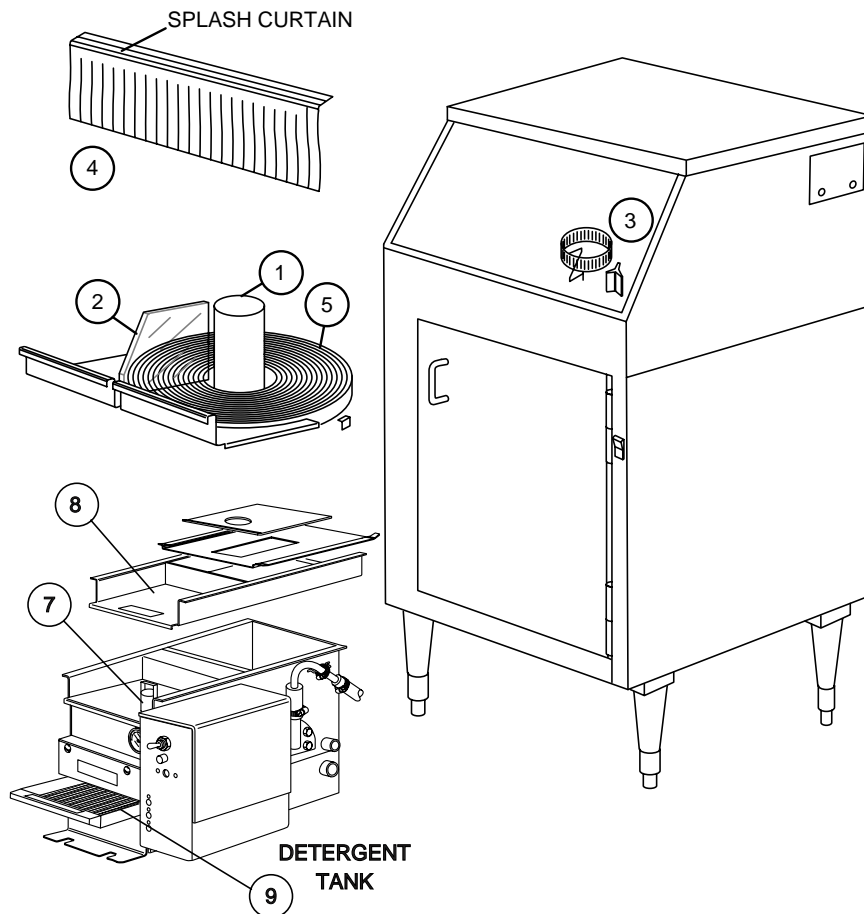


Figure 1 — Unpacking Parts

INSTALLATION (Cont'd)

Measurements

	Uncrated	Crated
Height	39" (991)	40-1/2"(1181)
Width	25-1/4" (640)	27" (685)
Depth	25-1/8" (638)	27-1/2" (698)
Ship Wt.	154lb/70kg	176lb/80kg

*adjustable foot height 1-3/4" (45) max.
height 40-3/4" (1035)

Utility Locations

1. Hot Water
2. Cold Water
3. Drain

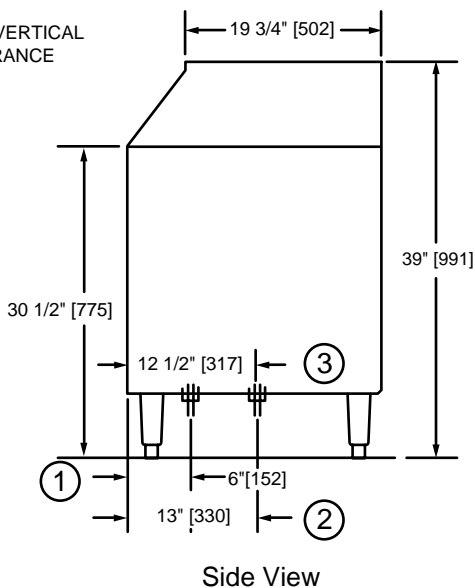
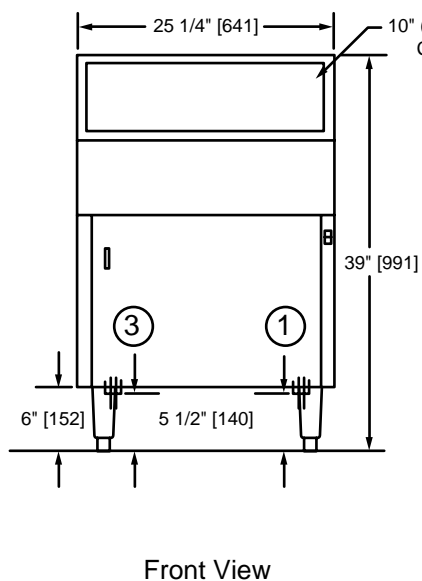
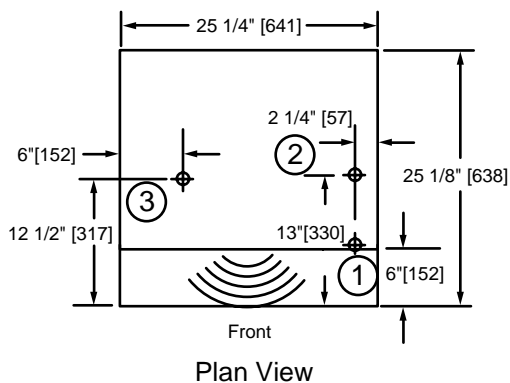


Figure 2 — Machine Measurements

INSTALLATION (Cont'd)

Electrical Connections

1. The Glass Washer has a six foot power cord with a “U” ground tandem plug for connection to a **power** receptacle.
2. Provide a nonlocking 250 volt, 15 ampere, 2 pole, 3 wire grounding receptacle within four feet of the base of the Glass Washer(CSA TYPE 6-15R). This should be installed by a qualified electrician to meet the specifications of the local electrical code.
3. This machine operates from 208 to 240 volts.

**NOTE:**

This machine is 50Hz and 60Hz compatible.

Plumbing Connections

Hot Water Connection

1. Connect a minimum 1/2" water line to the hot water solenoid valve. Supply temperature must be minimum 140°F/60°C, with a flow pressure between 25-95 PSI/172-656 kPa.
2. Hot water consumption is approximately 10 Imp. gph./12 U.S. gph/45 litres/h.

Cold Water Connection

1. Connect a minimum 1/2" water line to the cold water solenoid valve. Flow pressure must be between 25-95 PSI/172-656 kPa.
2. Open mixing valve located between hot and cold solenoid valves for areas with very cold rinse water to heat the rinse water which will prevent glasses from cracking.
3. Cold water consumption is approximately 2.4 Imp. gpm/2.8 U.S. gpm/10.6 litres/min.

**NOTE:**

Install check valves on the hot and cold water lines as close as possible to the water inlet.

Drain Connection

1. This machine is gravity drain. Connect a 1-1/2" drain line where indicated.
2. PVC pipe is generally recommended as copper is prone to attack by the sanitizing chemicals.

**WARNING:**

Plumbing and electrical connections should be made by a qualified workman who will observe all the applicable plumbing, sanitary and safety codes. Before all utilities are installed, ensure that all the bullet feet are in contact with the floor and at the desired level.

OPERATION

General

1. The wash tank is equipped with a float assembly that operates a single cam-operated switch.
2. The water temperature is controlled by a heater and a thermostat. The thermostat should be between 140°F/60°C and 160°F/ 71°C.

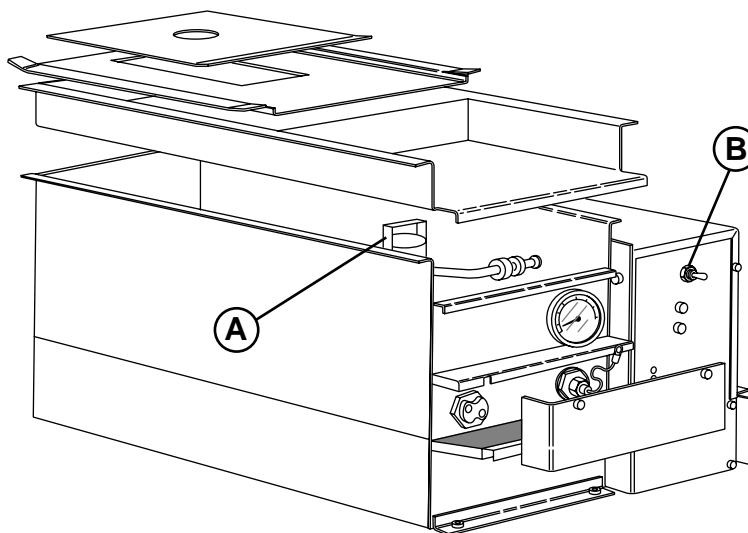


Figure 3 — Wash Tank

To Fill the Wash Tank

Ensure that the standpipe (A) is in place. Put switch (B) to the “ON-FILL” position. The water will fill until the proper level is reached then turn the heating element ON.

Detergent is fed from the supply container into the detergent tank in controlled amounts by the detergent pump. Use detergent at a strength of 0.35% or as recommended by your chemical supplier.

To Flush the Wash Tank

The selector switch (B) may be pulled down to the “FLUSH” position to clean the detergent tank during cleaning operations. The glasswasher will not wash dishes in the flush position. To use the flush function: Remove the standpipe (A) and drain the tank. Push the selector switch (B) down to the flush position. Water will enter the detergent tank as long as the switch is held in the “FLUSH” position. When desired flushing is complete, release switch (B).

NOTE:

Use a commercial grade NON-CHLORINATED liquid detergent manufactured specifically for glassware washing machines. Your chemical representative should test the solution to ensure the proper strength to achieve the best cleaning results.

NOTE:

Many of the chemicals used in glass and dishwashers are harmful to the skin and eyes in their concentrated form. Use extreme caution when handling containers to prevent accidental exposure.

Operating Instructions

1. Open door, flip toggle switch located on wash tank to the “ON-FILL” position. Wash tank will automatically fill.
2. Ensure there is product in the detergent, sanitizer and rinse agent containers.
3. Load glasses on the conveyor. Start machine with switch located on front right side of unit. Machine will now stop and start with shut-off arm.

OPERATION (Cont'd)

APPROXIMATE CHEMICAL SETTINGS

General

Approximate chemical settings can be obtained by counting the revolutions of the injector rotors.

1. For detergent, one revolution per second equals approximately 0.35% concentration.

**NOTE:**

Detergent pump only operates when hot water tank is filling.

2. For sanitizer, one revolution in 5 seconds equals approximately 12.5 ppm Iodine or 50 ppm chlorine.
3. For rinse agent, one revolution in 8 seconds is recommended.

To Adjust Detergent Injector:

1. When a new detergent container is installed, push the prime button in and hold until the detergent feed tube is full.
2. Install the detergent tank standpipe and switch tank fill toggle switch up to the "ON-FILL" position. The detergent feeder will now feed detergent into the detergent tank with water fill.
3. To increase detergent volume, turn the detergent adjustment screw clockwise.
4. To decrease the detergent volume, turn the detergent adjustment screw counter-clockwise.

To Adjust Sanitizer Injector:

1. When a new sanitizer container is installed, push the prime button in and hold until sanitizer feed tube is full.
2. Start the washer with rocker switch located on the front of the machine. Take a sample from the final rinse spray tube to check sanitizer level.
3. To increase the volume of sanitizer, turn the adjustment screw clockwise.
4. To decrease the volume of sanitizer, turn the adjustment screw counter-clockwise.

**NOTE:**

If Iodopher is being used as a sanitizer, it is not necessary to use a separate rinse agent. To turn rinse agent injector "OFF" in this case, turn the adjustment screw counter-clockwise until the pump stops turning.

**NOTE:**

If a sodium Hypochlorite (Chlorine) based sanitizer at a minimum concentration of 50PPM in the final rinse is used, use chlorine test papers to verify and monitor the 50PPM chlorine level.

OPERATION (Cont'd)

To Adjust Rinse Agent Injector:

1. When a new rinse agent container is installed, push the prime button in and hold until the rinse injector feed tube is full.
2. Start the washer. Take a sample from the final rinse spray tubes.
3. To increase the volume of rinse agent, turn the adjustment screw clockwise.
4. To decrease the volume of rinse agent, turn the adjustment screw counter-clockwise.

**NOTE:**

To meet the requirements of N.S.F. standards, Iodophor in a concentration of 12.5 ppm or chlorine at 50 ppm must be used in the final rinse.

OPERATION (Cont'd)

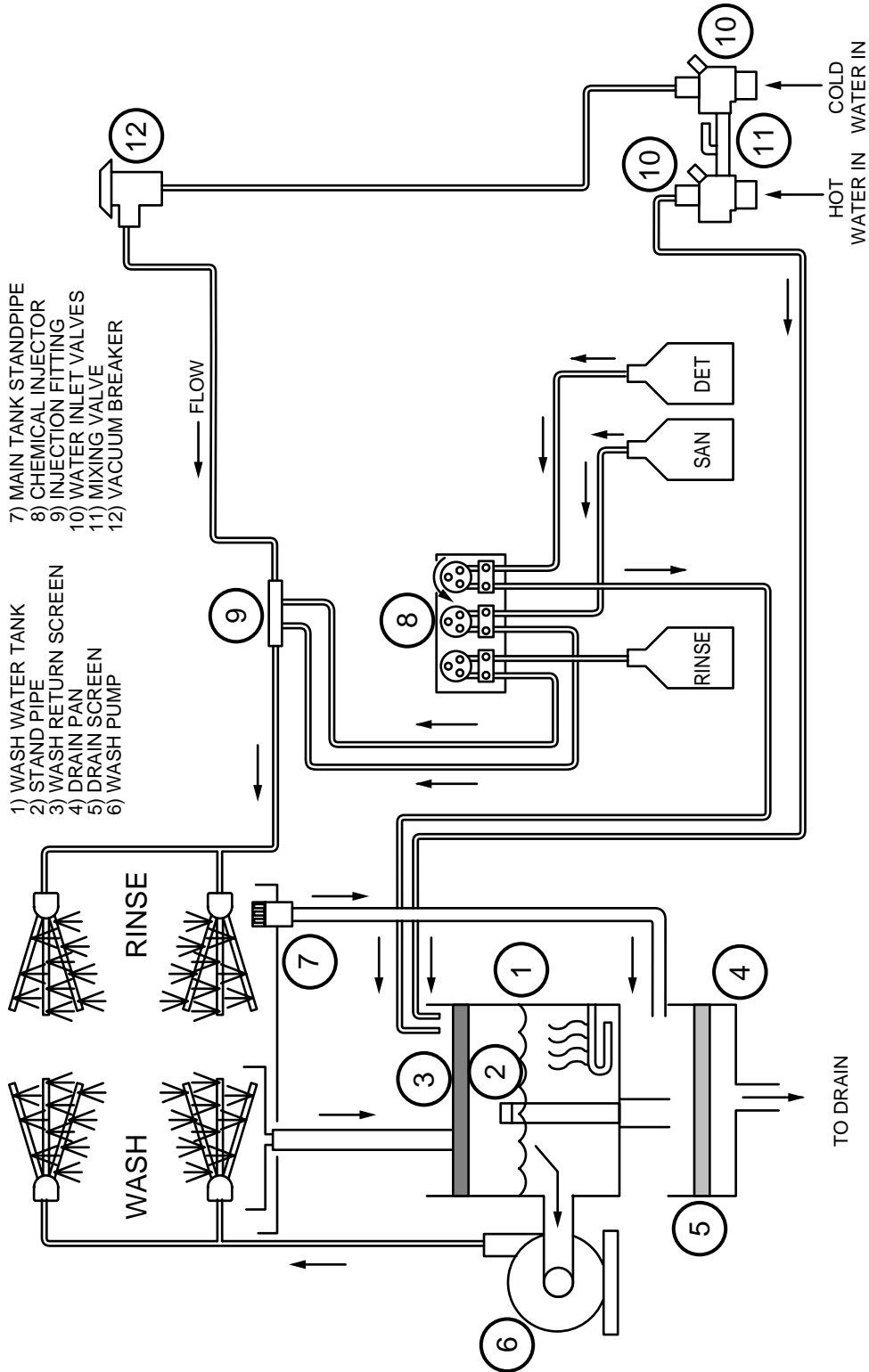


Figure 4 — Plumbing Diagram

MAINTENANCE

CLEANING

Daily Cleaning Instructions

1. Remove the drain tray/waste collector (if installed), from the front of your glasswasher.
2. Turn glasswasher off by flipping the toggle switch located on the wash tank to the “OFF” position.
3. Remove right and left hand trays and splash curtain. Wash them with hot soapy water, rinse thoroughly, then dry.
4. Remove the conveyor as follows: Remove cylinder in center of conveyor, flip shut-off rod to the side, lift conveyor from center and pull out.
5. Remove lower wash and rinse arms. Clean wash and rinse areas with hot soapy water. Rinse thoroughly, then dry.
6. Replace lower wash and rinse arms (they only fit one way). Replace conveyor as follows: With back end of conveyor raised, mesh drive gear with side of conveyor, pull conveyor towards you until center of conveyor drops onto pivot. Replace cylinder in center of conveyor, flip shut-off bar back to normal position. Replace left hand tray ensuring shut-off arm rests within the retainer, then replace right hand tray. Replace curtain.
7. Remove and clean upper and lower wash tank screens.
8. Remove stand pipe from the detergent tank, wash down the interior of the detergent tank. Replace stand pipe and upper and lower wash tank screens.

**NOTE:**

Do not leave water in tank overnight!!!

9. Replace drain tray/waste collector (if installed) making sure hose is connected.
10. Ensure there is product in the detergent, sanitizer and rinse agent containers. Close door.

Weekly Cleaning Instructions

1. Remove upper and lower wash and rinse arms from the manifold and clean spray tubes with reamer, tube brush, and tube scraper provided.
2. Remove detergent, sanitizer, and rinse agent feed lines from containers and place them in a container of hot water. Hold prime buttons in until the feed lines have been thoroughly flushed. Replace the feed lines to their proper container and prime product through lines.

TROUBLESHOOTING

CONDITION	CAUSE	SOLUTION
Conveyor does not turn	No power	Check fuse panel Turn power switch on
	Drive motor burnt out	Replace
	Obstruction in wash or rinse	Remove obstruction
	Micro-switch on switch support.....	Adjust or replace bracket faulty or not making contact
	Conveyor not in position.....	Position properly
Excessive overspray from hood section	Splash curtain not in position	Install or adjust
	Washer running without any	Keep conveyor loaded with glasses glasses on conveyor
	Spray tubes fallen off hub.....	Ensure spray tube is pushed firmly on to hub connection
Lack of pressure at wash spray tubes	Spray tubes plugged.....	Clear and clean with reamer, scraper, and brush
	No water in detergent tank.....	Ensure water supply is on Ensure detergent tank stand pipe is in position Ensure the tank fill switch is in "ON-FILL" position and that tank fills with water Ensure the float switch is activated by the float cam Ensure the tank fill solenoid valve is operational
	Obstruction in wash arm	Clear obstruction
	Pump not operating	Check power supply to machine Check pump capacitor Replace pump if required
	Pump operating but no pressure.....	Check condition of impeller and stub shaft Replace if needed
Lack of pressure in rinse spray tubes	Rinse spray tubes dirty.....	Clean thoroughly with reamer, scraper, and brush provided
	Shut-off valve on supply	Open valve line closed
	Low water pressure	Minimum 25PSI flow pressure required
	Rinse solenoid valve will	Check coil not operate Check and install rebuild kit Replace if necessary
	Rinse solenoid valve strainer	Remove screen and clean plugged
Water continues to flow to detergent tank or spray tubes with machine off	Solenoid valve not seating	Clean seat Install diaphragm kit Replace valve

CONDITION	CAUSE	SOLUTION
Water temperature low in detergent tank	Thermostat setting low	Adjust thermostat
	Thermostat defective	Replace
	Defective float switch	Replace
	Heater burnt out	Check and replace
	Incoming water temp. low	Ensure water level is above element Hot water supply min. 145°F/66°C
Water on floor around machine	Pump seal leaking	Replace
	Rinse drain in wash area plugged	Clear obstruction, clean machine
	Wash return screen in detergent tank plugged	Clean
	Drain screen under detergent tank plugged	Clean
	Main drain plugged	Clean
	Detergent tank covers are not positioned properly causing condensation	Position all top covers to completely cover top of tank
	Fill chute has lime build-up	De-scale detergent tank
	Chemical containers filling with water	Dirty rinse tubes
	Element tube worn	Replace
	Worn flow washer in solenoid valve	Replace
Chemicals not feeding	No product in containers	Refill container
	Product gelling or crystallizing in chemical line	Flush all lines with hot water and use fresh supply of chemical
	Chemical supply strainer plugged	Clean with hot water
	Speed adjustment set too low	Increase by turning clockwise while machine is running/filling
	No power to pump	Check power LED on chemical control board Check signal LED for detergent, sanitize/rinse on board Replace board if necessary
	Pump motor defective	Replace pump motor
	Element tube stretched	Replace

REPLACEMENT PARTS

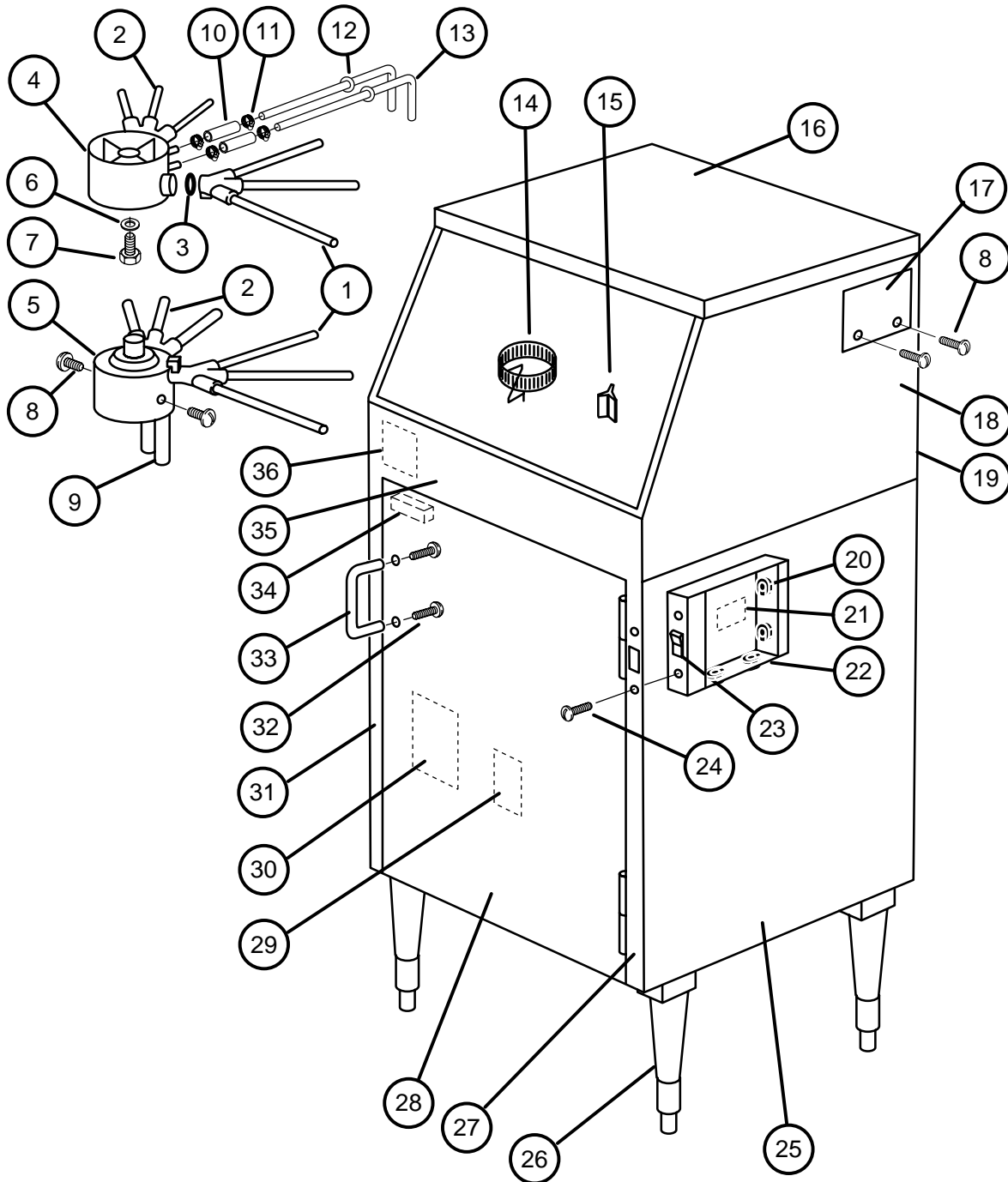


Figure 5 — Main Assembly

MAIN ASSEMBLY

Fig. 5 Item No.	Part No.	Part Description	Qty.
1	0501738	Rinse Arm DF, DF-1	2
1	0501692	Wash Arm DF-2 (Counter-Clockwise units only)	2
2	0501613	Wash Arm DF, DF-1	2
2	0501740	Rinse Arm DF-2 (Counter-Clockwise units only)	2
3	0501608	“O” Ring.....	4
4	0501610	Top Manifold.....	1
5	0301622	Bottom Manifold.....	1
6	0300823	Flat Washer, 1/4"	1
7	0501422	Bolt, 1/4-20 x 1 1/2"	1
8	0501412	Screw, 10-32 x 3/8	4
9	0500813	Bottom Manifold Inlet Tube	2
10	0502663	3/8 Braided Tubing (5" Long).....	2
11	0503679	7/16" Gear Clamp	4
12	0509478	Grommet.....	2
13	0300908	Wash/Rinse Tube.....	2
14	0700911	Deflector Screen Assembly (Rinse)	1
15	0300841	Drain Deflector (Wash).....	1
16	0301003	Top Panel.....	1
17	0300855	Access Cover for Vacuum Breaker	1
18	0307395	Side Trim Wrap	1
19	0707692	Wash Tank	1
20	0503574	Strain Relief Fitting.....	4
21	0503301	Label, Warning	1
22	0707413	Switch Box Assembly	1
23	0501361	Rocker Switch	1
24	0501411	Screw, 10-32 x 1/4	2
25	0707690	DFM6 Base	1
26	0501873	Cast Foot- Gray	4
27	0707394	Front Trim Assembly (Right Hand).....	1
28	0707399	Door Assembly.....	1
29	0507474	Wiring Schematic	1
30	0507472	Label, Daily Cleaning	1
31	0307396	Front Trim (Left Hand)	1
32	0501464	Screw, 10-24 x 3/8	2
33	0501921	Door Handle	1
34	0501885	Magnetic Door Catch	1
35	0307398	Front Trim	1
36	0505111	Label, Machine Rating	1
NS	0706923	Tank Support	1
NS	0506442	Tank Insulation, Rear	1
NS	0506443	Tank Insulation, Center	1
NS	0506444	Tank Insulation, Front	1

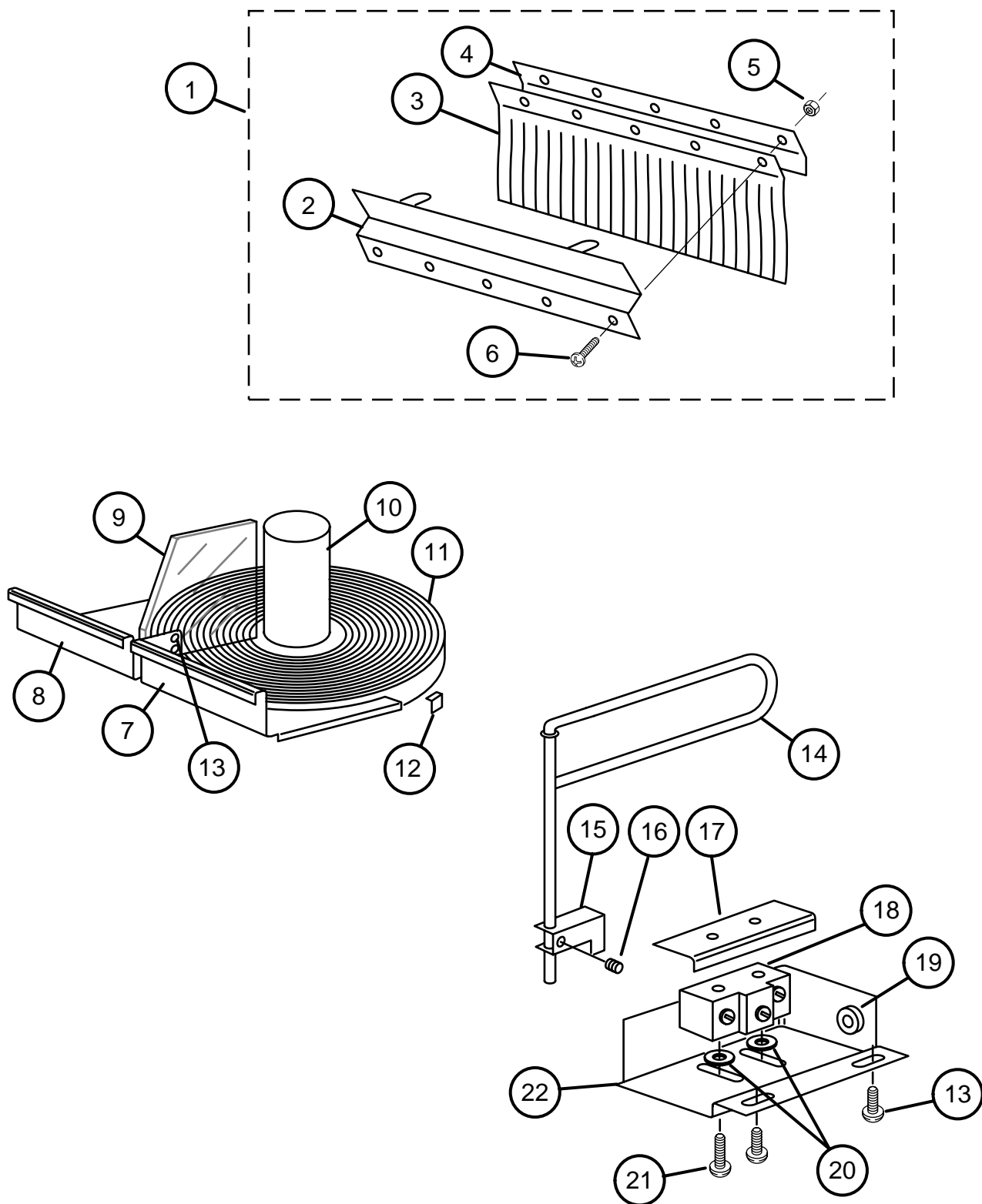


Figure 6 — Conveyor/Curtain/Switch Assembly

CONVEYOR/CURTAIN/SWITCH ASSEMBLY

Fig. 6 Item No.	Part No.	Part Description	Qty.
1	0700354	Curtain Assembly Complete	1
2	0700997	Curtain Support	1
3	0501625	Spray Curtain	1
4	0300998	Curtain Clamp	1
5	0501538	Nut, 8-32	5
6	0501408	Screw, 8-32 x 1/4	5
7	0301021	Right Hand Tray DF, DF1.....	1
7	0701128	Right Hand Tray DF2	1
8	0707434	Left Hand Tray DF, DF1	1
8	0701119	Left Hand Tray DF2.....	1
9	0503810	Plexiglass Divider	1
10	0307266	Conveyor Hub	1
11	0506885	Conveyor Moulded.....	1
12	0307322	Glide Block	4
13	0501412	Screw, 10-32 x 3/8	4
14	0701011	Shut-off Rod Assembly	1
15	0300848	Activator Assembly DF, DF1.....	1
15	0708685	Activator Assembly DF2	1
16	0501395	Set Screw, 1/4-20 x 5/16	1
17	0301012	Nut Plate	1
18	0501382	Tripswitch, Sealed.....	1
19	0503574	Strain Relief	1
20	0501483	Delrin Washer.....	2
21	0503723	Screw, 6-32 x 1"	2
22	0300980	Switch Support Bracket DF, DF1, DF2 (CW rotation)	1
22	0301008	Switch Support Bracket DF2 (CCW rotation).....	1

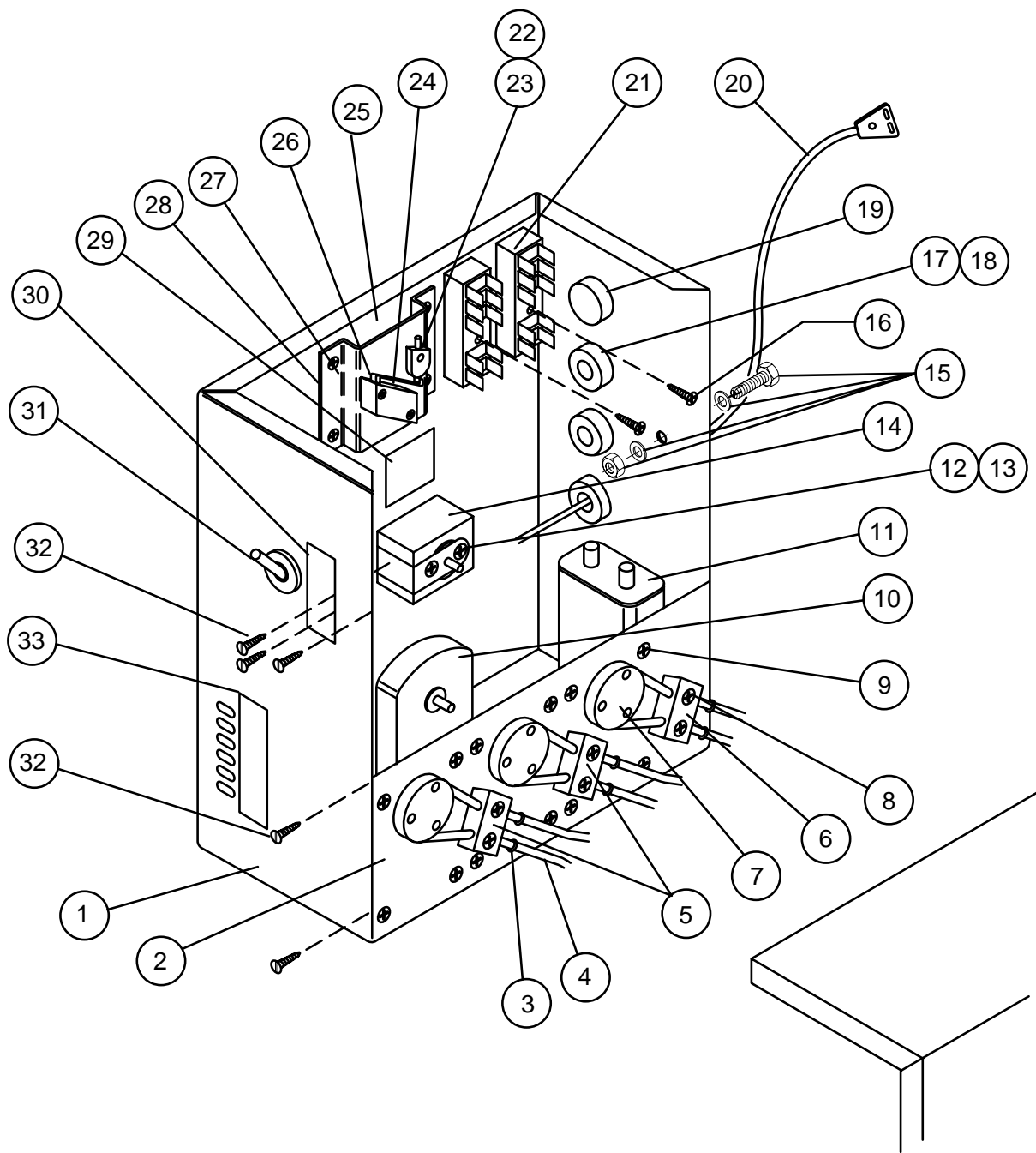


Figure 7 — Control Box

CONTROL BOX

Fig. 7 Item No.	Part No.	Part Description	Qty.
1	0707403	Control Box (prior to S/N 18673).....	1
1	0709049	Control Box (starting @ S/N 18674).....	1
2	0307405	Injector Motor Plate	1
3	0501519	Tie, Nylon 4 in	6
4	0502666	1/8 x 1/4 OD Tubing	AR
5	0706635	45CC Element Tube	2
6	0706634	15CC Element Tube	1
7	0707142	Rotor Assembly.....	3
8	0506589	Screw, 6-32 x 7/8"	6
9	0504822	Screw, 8-32 x 1/2"	12
10	0501353	Chemical Injector Motor	3
11	0507314	Start Capacitor (3 uF).....	1
12	0307422	Thermostat Bracket	1
13	0501450	Screw, 6-32 x 3/16"	4
14	0507323	Thermostat.....	1
15	0503592	Label, Ground	1
15	0501403	Screw, Ground, 10-32 x 3/4"	2
15	0501533	Nut, Ground, 10-32	2
15	0501493	Washer, Lock, Ground, #10	2
15	0501472	Washer, Flat, Ground	3
16	0503648	Screw, 8-32 x 5/16"	2
17	0503647	Strain Relief Bushing (Medium).....	1
18	0503574	Strain Relief Bushing (Small).....	2
19	0501887	7/8" Button Plug.....	1
20	0507372	Power Cord.....	1
21	0503749	Terminal Board.....	2
22	0701933	Water/Heater Cam c/w Set Screw	1
23	0501397	Set Screw, 6-40 x 3/16"	1
24	0501379	Float Switch	1
25	0307369	Nut Plate for Float Switch (starting @ S/N 18674).....	1
26	0501433	Screw, 4-40 x 5/8"	2
27	0501411	Screw, 10-32 x 1/4"	8
28	0309053	Float Switch Support (starting @ S/N 18674).....	1
29	0503642	Label, 2.5 Amp Fuse.....	1
30	0503693	Label, Switch Up.....	1
31	0501373	3-Position Switch	1
32	0501412	Screw, 10-32 x 3/8"	8
33	0507470	Label, Injector Prime.....	1

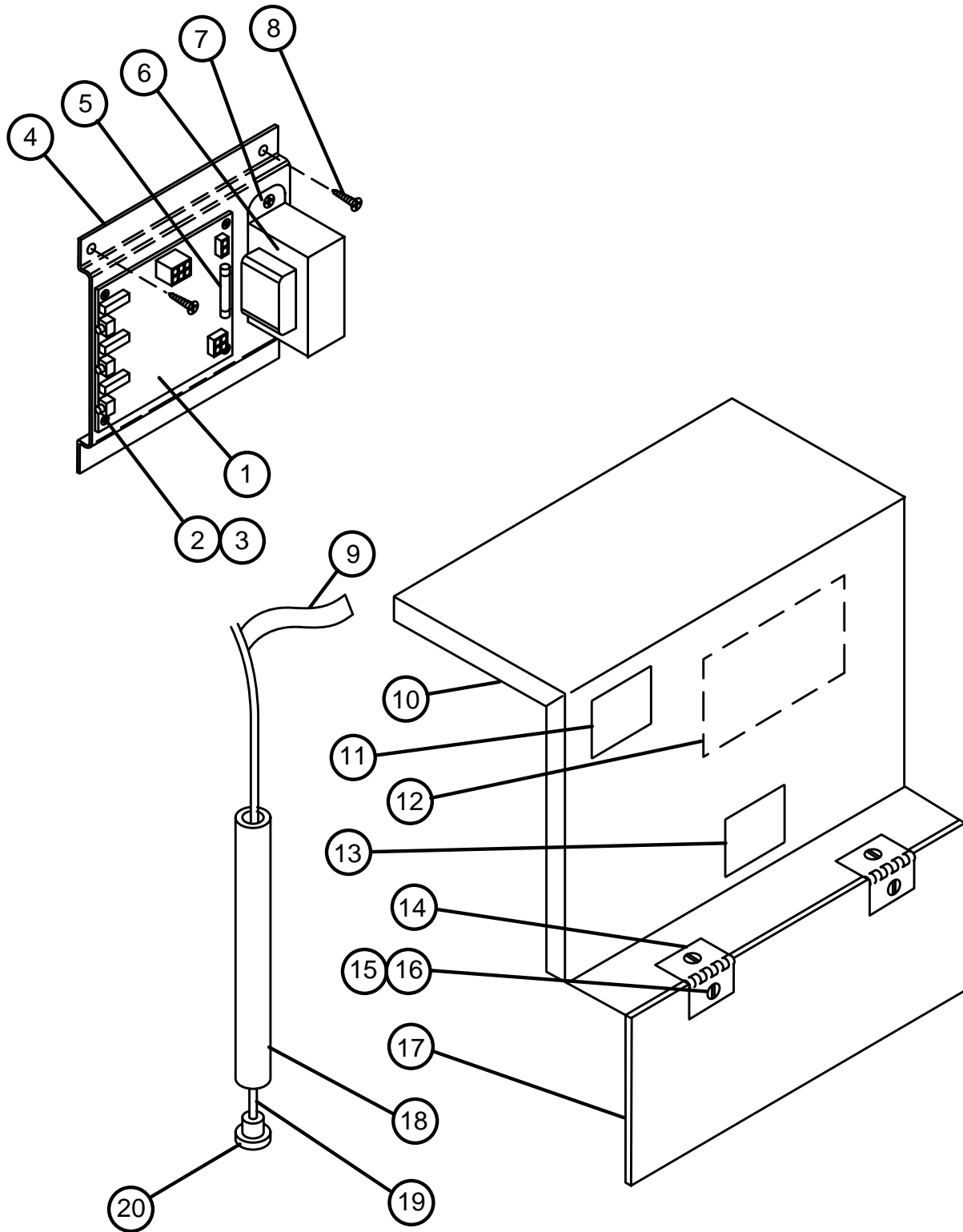


Figure 8 — Control Box Cover/Chemical Injector Board

CONTROL BOX COVER/CHEMICAL INJECTOR BOARD

Fig. 8 Item No.	Part No.	Part Description	Qty.
1	0508433	Circuit Board (starting @ S/N 18629).....	1
2	106695	Screw, 6-32 x 1/2".....	4
3	0508710	Spacer, 5/16 lg.....	4
4	0309037	Support Bracket (starting @ S/N18629).....	1
5	0503637	Fuse, 2.5 Amp	1
6	0508920	Transformer (starting @ S/N 18629).....	1
7	0501450	Screw, 6-32 x 3/16".....	4
8	0501411	Screw, 10-32 x 1/4".....	2
9	0503695	Label, Detergent.....	1
9	0505483	Label, Rinse.....	1
9	0503694	Label, Sanitizer	1
10	0307408	Control Box Cover (prior to S/N 18674).....	1
10	0309052	Control Box Cover (starting @ S/N 18674).....	1
11	0503301	Label, Warning.....	1
12	0509061	Label, Circuit Board (starting @ S/N 18629).....	1
13	0503343	Label, Warranty Void	1
14	0300986	Hinge, Cover	2
15	0501408	Screw, 8-32 x 1/4".....	4
16	0501538	Nut, 10-32	4
17	0307409	Injector Pump Cover.....	1
18	0306363	Dip Tube.....	3
19	0502666	Hose, 1/8" I.D. x 1/4" O.D.....	AR
20	0501869	Strainer	3
NS	0507370	Wiring Harness (Drive Motor, Solenoid Valves).....	1
NS	0507578	Wiring Harness, Circuit Board (prior to S/N 18629)	1
NS	0509039	Wiring Harness, Circuit Board (starting @ S/N 18629).....	1
NS	0503739	Aluminum Spacer, Float Switch (prior to S/N 18674).....	2

 **NOTE:**

The circuit board shown in this diagram started at S/N 18629. Prior units will require circuit board conversion kit P/N 0708523. Once this kit has been installed, all replacement parts except the wiring harness will be as shown. Replacement wiring harness for circuit board kit is P/N 0509038.

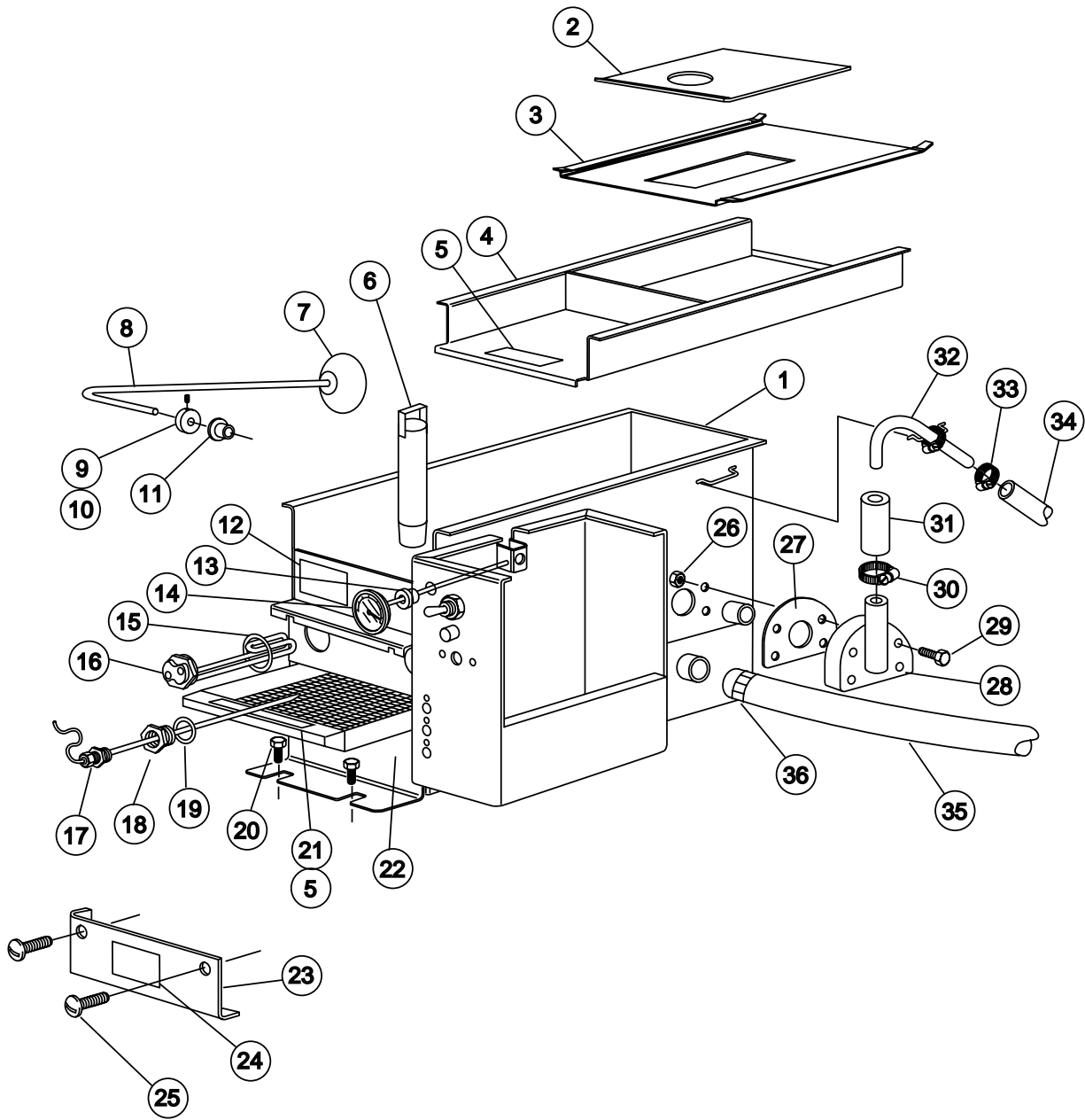


Figure 9 — Detergent Tank

DETERGENT TANK

Fig. 9 Item No.	Part No.	Part Description	Qty.
1	0707415	Detergent Tank (up to S/N 18673).....	1
1	0709054	Detergent Tank (starting @ S/N 18673).....	1
2	0307379	Detergent Tank Cover Lid.....	1
3	0307378	Detergent Tank Rear Cover.....	1
4	0707375	Detergent Tank Screen Assembly.....	1
5	0507471	Label, Clean Screens Daily.....	2
6	0700948	Standpipe Assembly.....	1
7	0503670	Float Ball.....	1
8	0507426	Float Rod.....	1
9	0703673	Cam Bushing c/w Set Screw.....	1
10	0501397	Set Screw 6-40 x 3/16".....	
11	0503701	Timer Shaft Bearing (not req'd after S/N 18673).....	2
12	0505112	Label, Data.....	1
13	0501896	Thermometer Seal.....	1
14	0501600	8" Thermometer.....	1
15	0503588	Heater "O" Ring.....	1
16	0507315	3 KW Heater c/w "O" Ring.....	1
17	0507323	Thermostat (Capillary only shown).....	1
18	0501650	Thermostat Adaptor.....	1
19	0501836	Adaptor "O" Ring.....	1
20	0501419	Bolt, 1/4-20 x 1/2".....	1
21	0707383	Drain Pan Screen Assembly.....	1
22	0707380	Drain Pan Assembly.....	1
23	0307423	Heater Cover.....	1
24	0503301	Label, Warning.....	1
25	0501412	Screw, 10-32 x 3/8".....	2
26	107435	Nut, M6.....	4
27	107886	Inlet Chute Gasket.....	1
28	108051	Elbow Flange.....	1
29	0507431	Bolt, M6 x 25mm.....	4
30	0502563	1" Gear Clamp.....	1
31	0502668	1" I.D. Braided Hose.....	AR
32	0307427	Inlet Water Tube.....	1
33	0503679	7/16" Gear Clamp.....	2
34	0502665	1/2" I.D. Braided Hose.....	1
35	0502662	1-1/2" Vac-U-Flex Hose.....	19"
36	0502571	1-1/2" Gear Clamp.....	1

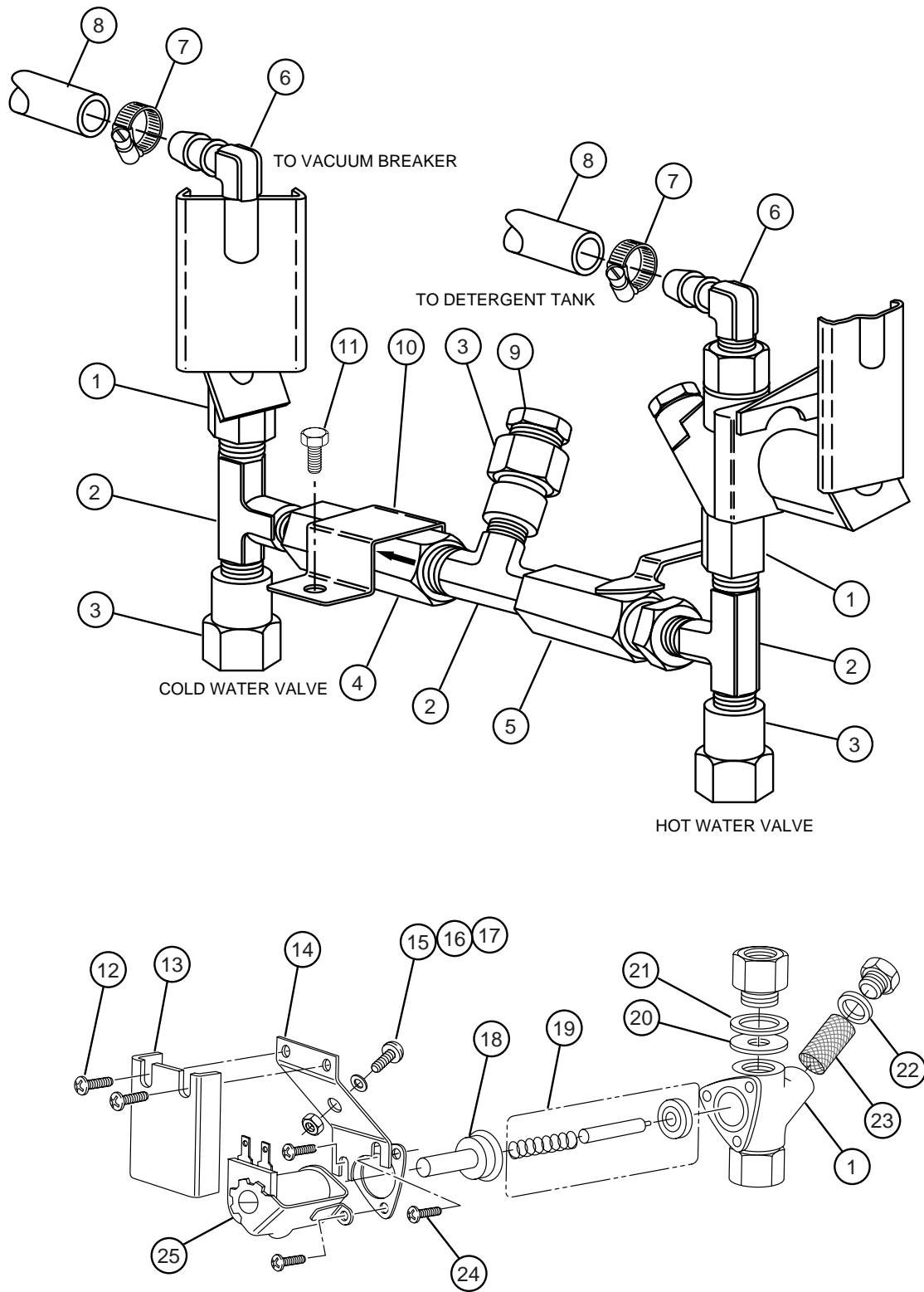


Figure 10 — Inlet Plumbing

INLET PLUMBING

Fig. 10 Item No.	Part No.	Part Description	Qty.
1	0502783	230V 60HZ Solenoid Valve	2
2	0503802	3/8" MPT Tee	3
3	0503801	3/8" Fem x 1/2" Fem Adapter	2
4	0507324	3/8" Check Valve.....	1
5	0502768	Mixing Valve.....	1
6	0502653	3/8" x 1/2" 90° Hose Barb	2
7	0503679	7/16" Gear Clamp	2
8	0502665	1/2" I.D. Braided Hose.....	AR
9	0509659	Brass Cap	1
10	0307688	Inlet Plumbing Clamp	1
11	0501419	Bolt, 1/4-20 x 1/2"	2
12	0504822	Screw, 8-32 x 1/2"	2
13	0306208	Cable Clamp Cover.....	1
14	0307373	Cable Clamp Assembly.....	1
15	0501404	Screw, 10-32 x 3/8", Brass.....	2
16	0501493	Lock Washer, #10.....	2
17	0501533	Nut, 10-32, Brass	2
18	0505229	Solenoid Guide.....	1
19	0502811	Diaphragm Kit.....	AR
20	0502810	Flow Washer (2.6 GPM)	1
21	0502807	Washer, Brass	1
22	0502804	Washer, Brass	1
23	0502803	Screen	1
24	0501406	Screw, 8-32 x 1/2".....	2
25	0502806	Coil -230V 60HZ	1

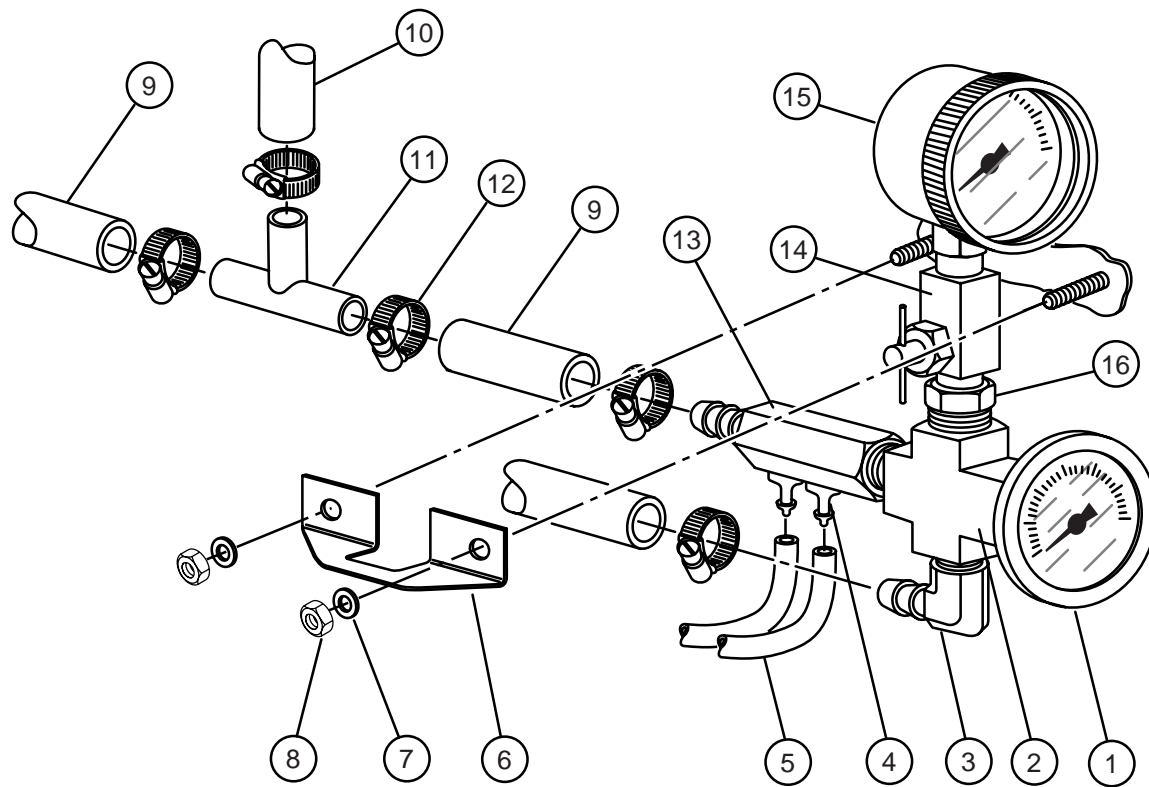


Figure 11 — Sanitizer Plumbing

SANITIZER PLUMBING

Fig. 11 Item No.	Part No.	Part Description	Qty.
1	0503668	Thermometer	1
2	0502583	3/8" FPT Cross Connector	1
3	0502653	3/8" MPT x 1/2" 90° Hose Barb	1
4	0502645	1/8" Hose Barb	2
5	0502666	1/8" Hose.....	AR
6	0300918	Plumbing Clamp.....	1
7	0501501	Lock Washer, 1/4"	2
8	0501539	Nut, 1/4-20	2
9	0502665	1/2" I.D. Braided Hose.....	AR
10	0502663	3/8" I.D. Braided Hose.....	AR
11	0502652	1/2 x 1/2 x 3/8" Tee.....	1
12	0503679	7/16" Gear Clamp	5
13	0503669	Injector Barb Fitting.....	1
14	0502781	Needle Valve	1
15	0507100	0-30 PSI Pressure Gauge	1
16	0502577	3/8 x 1/4" Reducer Bushing.....	1

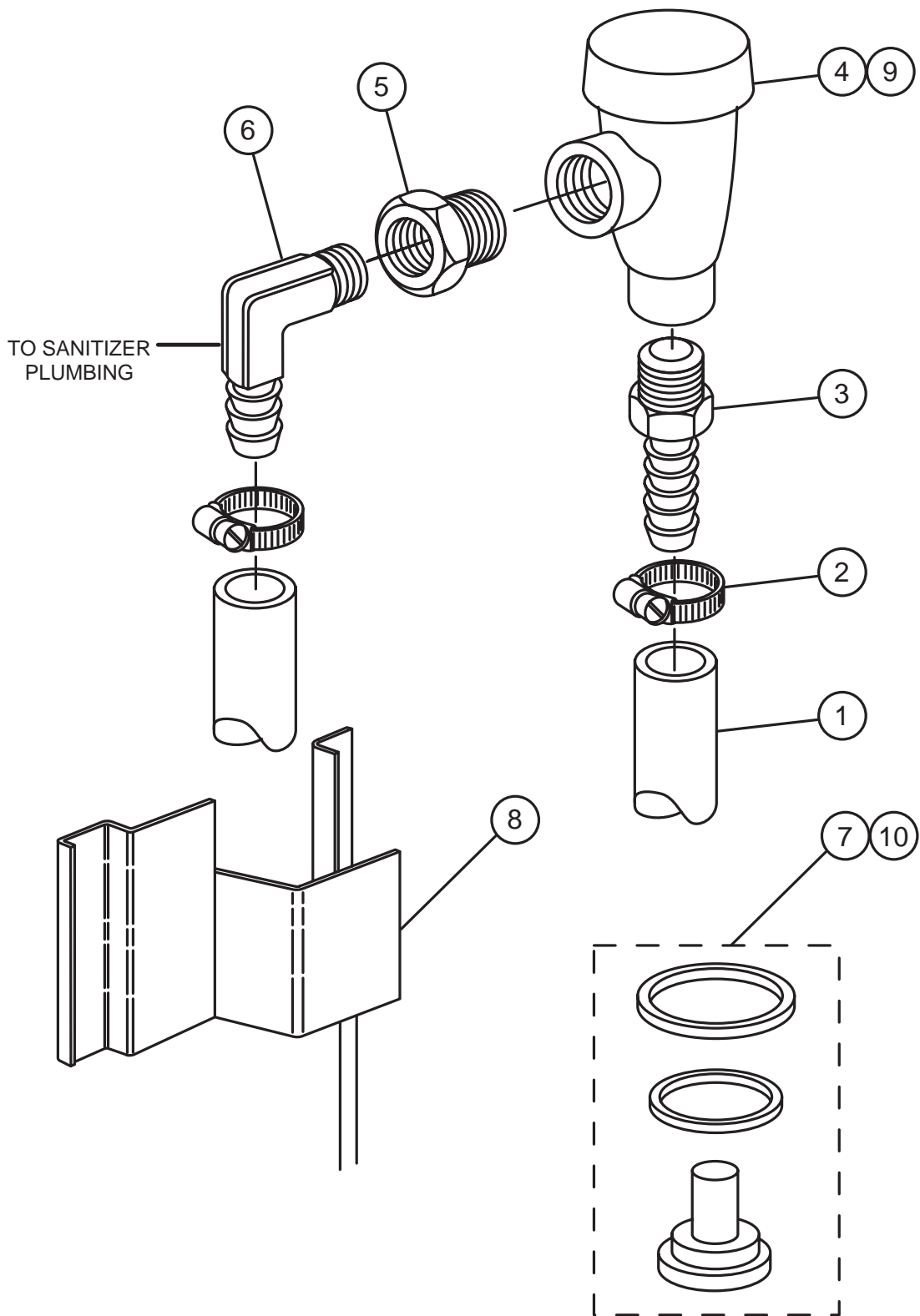


Figure 12 — Vacuum Breaker Plumbing Support

VACUUM BREAKER PLUMBING SUPPORT

Fig. 12 Item No.	Part No.	Part Description	Qty.
1	0502665	1/2" x 3/4" Inner Braided Tubing	AR
2	0503679	7/16" Gear Clamp	2
3	0502651	1/2" MPT x 1/2" Hose Barb.....	1
4	0502751	1/2" Vacuum Breaker (prior to S/N G2147)	1
5	0502650	1/2" x 3/8" Reducer Bushing	1
6	0502653	3/8" MPT x 1/2" 90° Hose Barb	1
7	0508366	Vac Breaker Kit (prior to S/N G2147).....	AR
8	0307391	Plumbing Support.....	1
9	113220	1/2" vacuum breaker	1
		(beginning with S/N G2147 and above)	
10	113221	Repair kit, vacuum breaker	1
		(beginning with S/N G2147 and above)	

**NOTE:**

Watts vacuum breaker repair kit is not available . . . use item #4.

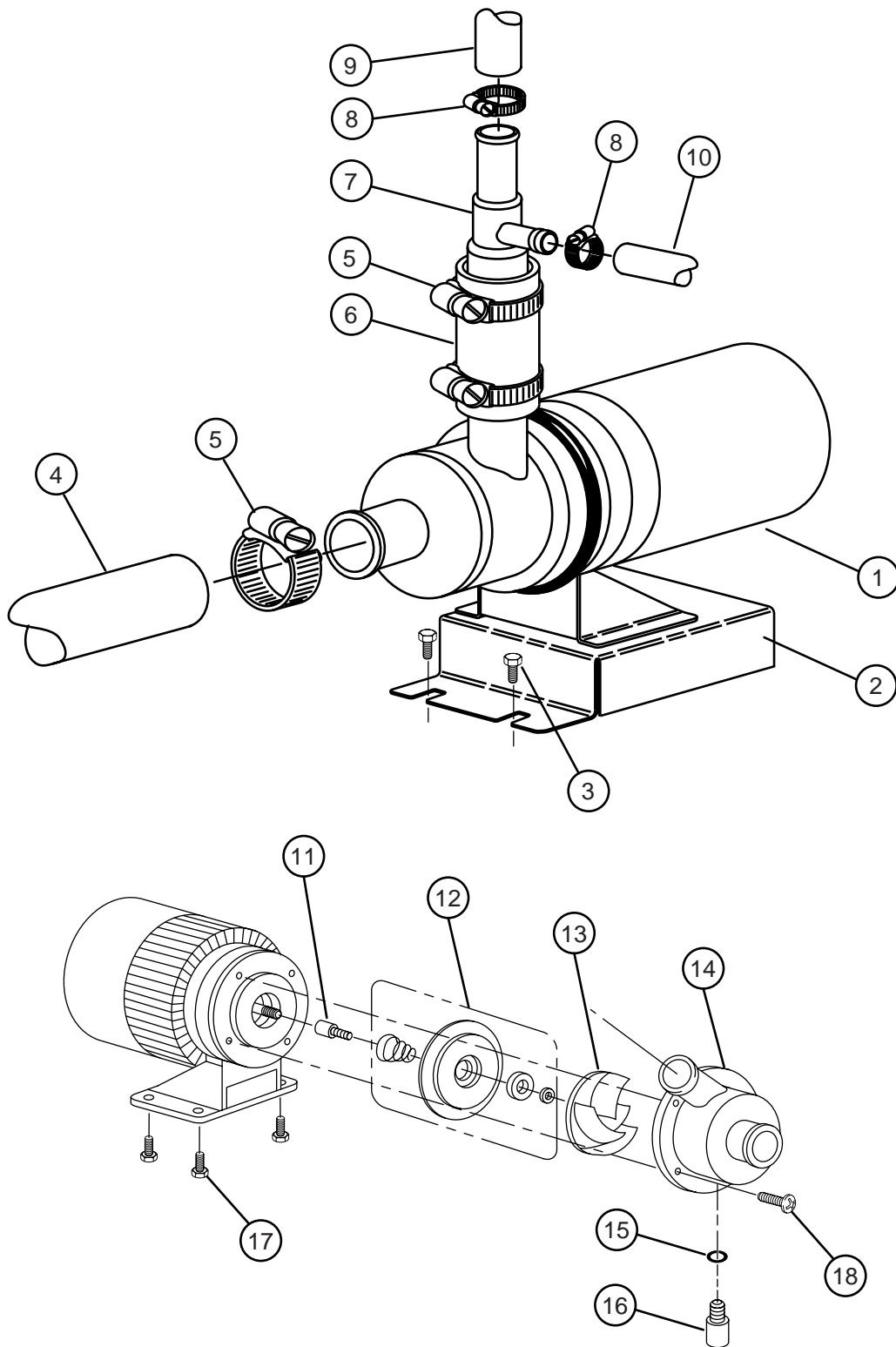


Figure 13 — Wash Pump

WASH PUMP

Fig. 13 Item No.	Part No.	Part Description	Qty.
1	0507313	Wash Pump Complete	1
2	0307410	Wash Pump Base	1
3	0501419	Bolt, 1/4-20 x 1/2"	2
4	0507320	1" I.D. X 1-1/4" O.D. PVC Hose.....	AR
5	0502563	1" Gear Clamp.....	4
6	0502668	1" I.D. Braided Hose	AR
7	0501632	Pump Hose Connector	1
8	0503679	7/16" Gear Clamp	2
9	0502665	1/2" I.D. Braided Hose.....	AR
10	0502663	3/8" I.D. Braided Hose.....	AR
11	0502734	Stub Shaft.....	1
12	0502730	Seal Kit c/w Spring	AR
13	0502729	Impeller	1
14	0502731	Pump Housing	1
15	0501635	"O" Ring, 5/16 I.D. X 1/16W	1
16	0502732	Housing Seal Screw	1
17	0503648	Screw, 8-32 x 5/16"	4
18	0501406	Screw, 8-32 x 1/2"	4

**NOTE:**

Motor is not available as a separate item.

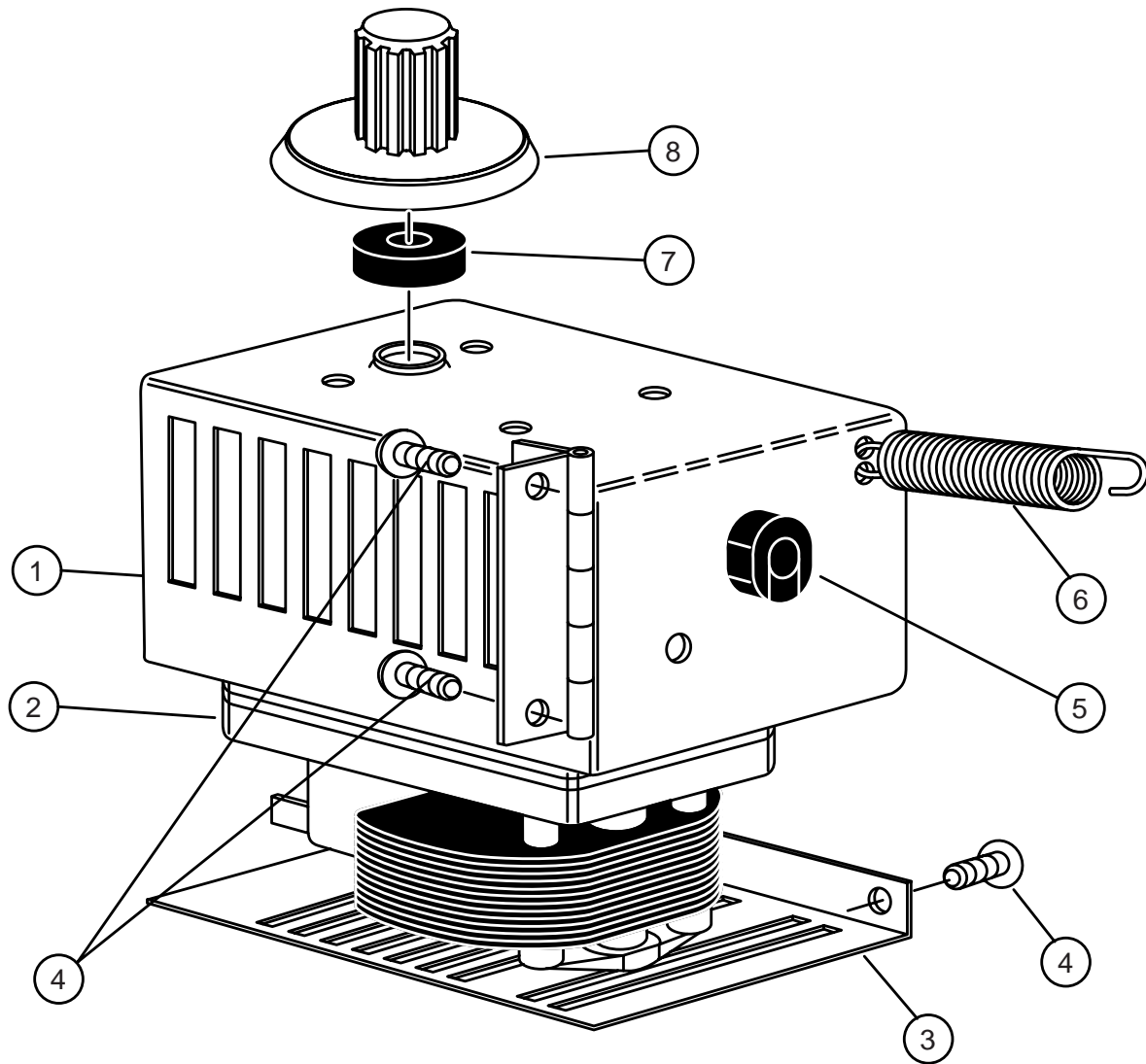


Figure 14 — Drive Complete

DRIVE COMPLETE

Fig. 14 Item No.	Part No.	Part Description	Qty.
1	0707388	Drive Motor Housing Assembly	1
2	0507145	Drive Motor.....	1
3	0307617	Drive Motor Housing Cover	1
4	0501412	Screw, 10-32 x 3/8	4
5	0503574	Strain Relief Bushing	1
6	0501923	Extension Spring	1
7	0507264	Slinger Washer	1
8	0506886	Drive Gear.....	1

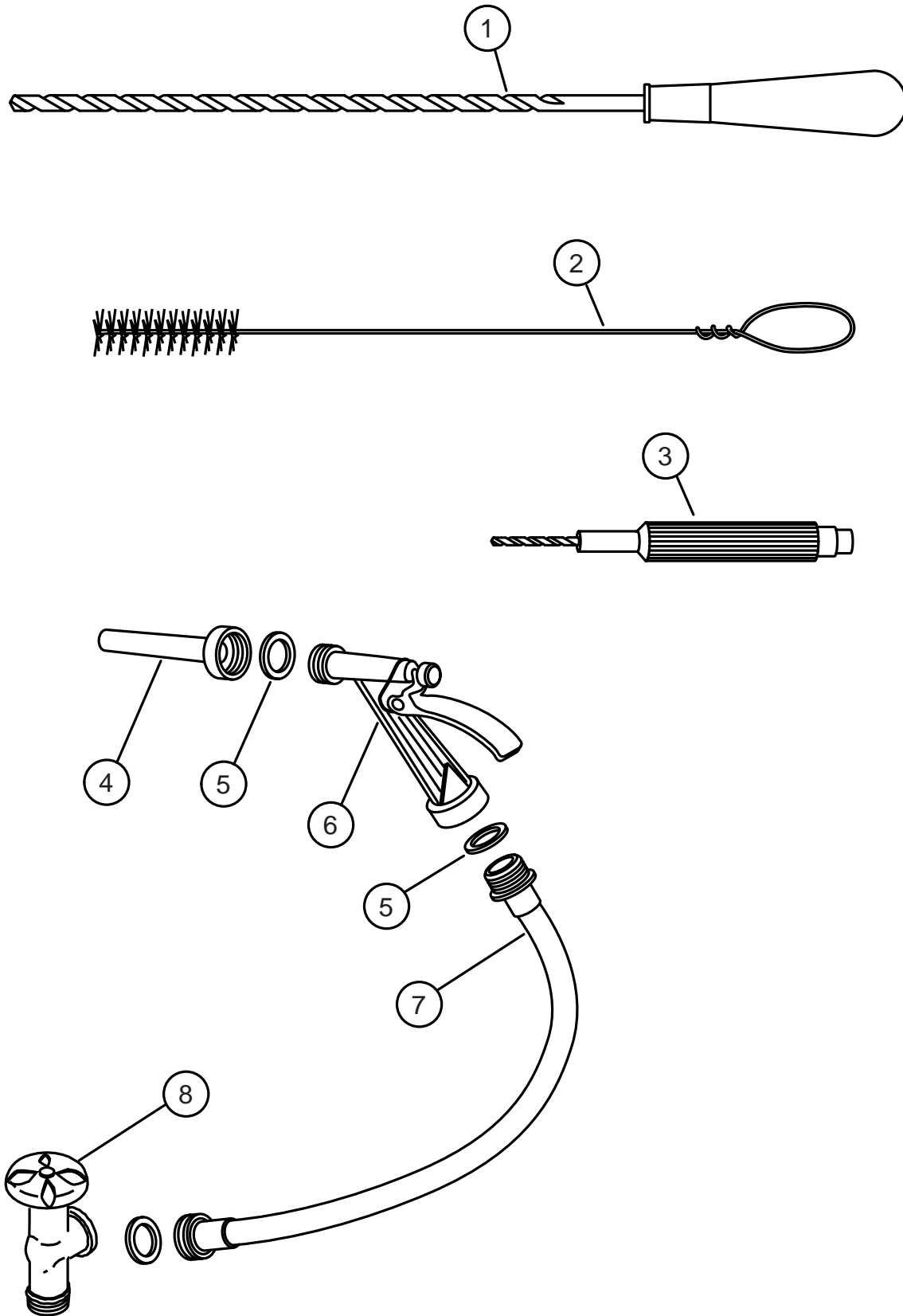


Figure 15 — Cleaning Accessories

CLEANING ACCESSORIES

Fig. 15 Item No.	Part No.	Part Description	Qty.
1	0708986	Tube Scraper	1
2	0501826	Tube Brush	1
3	0501633	Jet Reamer c/w Drill	1
4	0703454	Wash Down Nozzle.....	1
5	0505320	1/2" Hose Washer.....	1
6	0502779	Nozzle.....	1
7	0501833	1/2" x 10' Hose Assembly.....	1
8	0506643	Faucet	1

OPTIONAL ACCESSORIES (not shown)

Fig. 16 Item No.	Part No.	Part Description	Qty.
–	0707544	Drain Tray and Waste Collector (DF70A)	
–	0700896	Screen	
–	0708098	Drain pan	
–	0503930	Drain hose, 48"	
–	0501874	Caster, reg	
–	0501876	Caster, locking	
–	0507255	Hose, 1/2 female quick disconnect, 10'	
–	0507256	Hose, 1/2 male quick disconnect, 16"	
–	0707258	Quick Disconnect Package (including casters)	
–	0701962	Caster Kit (2 Locking, 2 Regular)	
–	0708453	Hand Sink and Wet Waste Receiver (SW46)	
–	0701956	Wash Down Hose (includes items 4 - 8)	

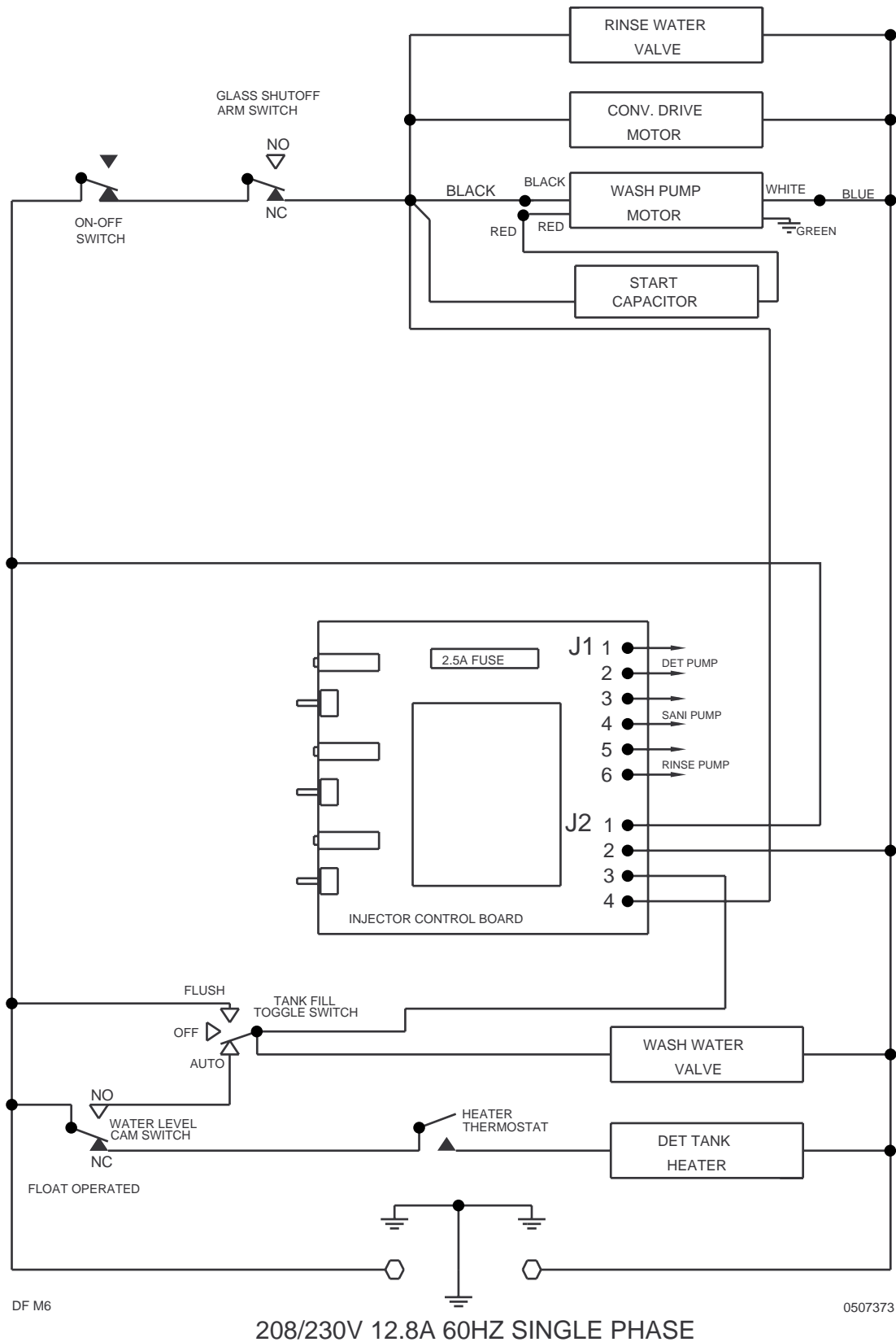


Figure 17 — Electrical Diagram (S/N 16211 through 18353)

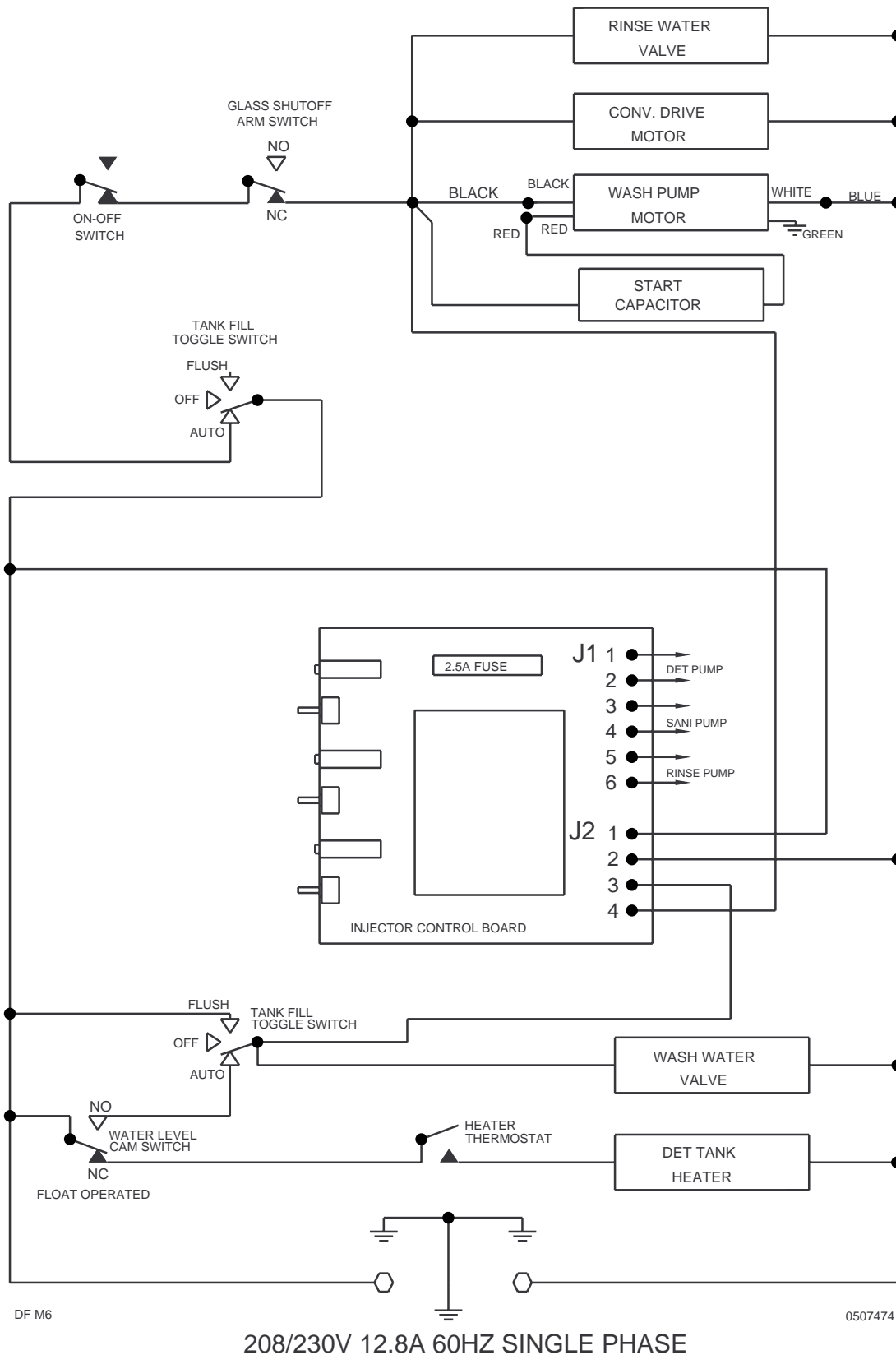


Figure 18 — Electrical Diagram (S/N 18354 through 18628)

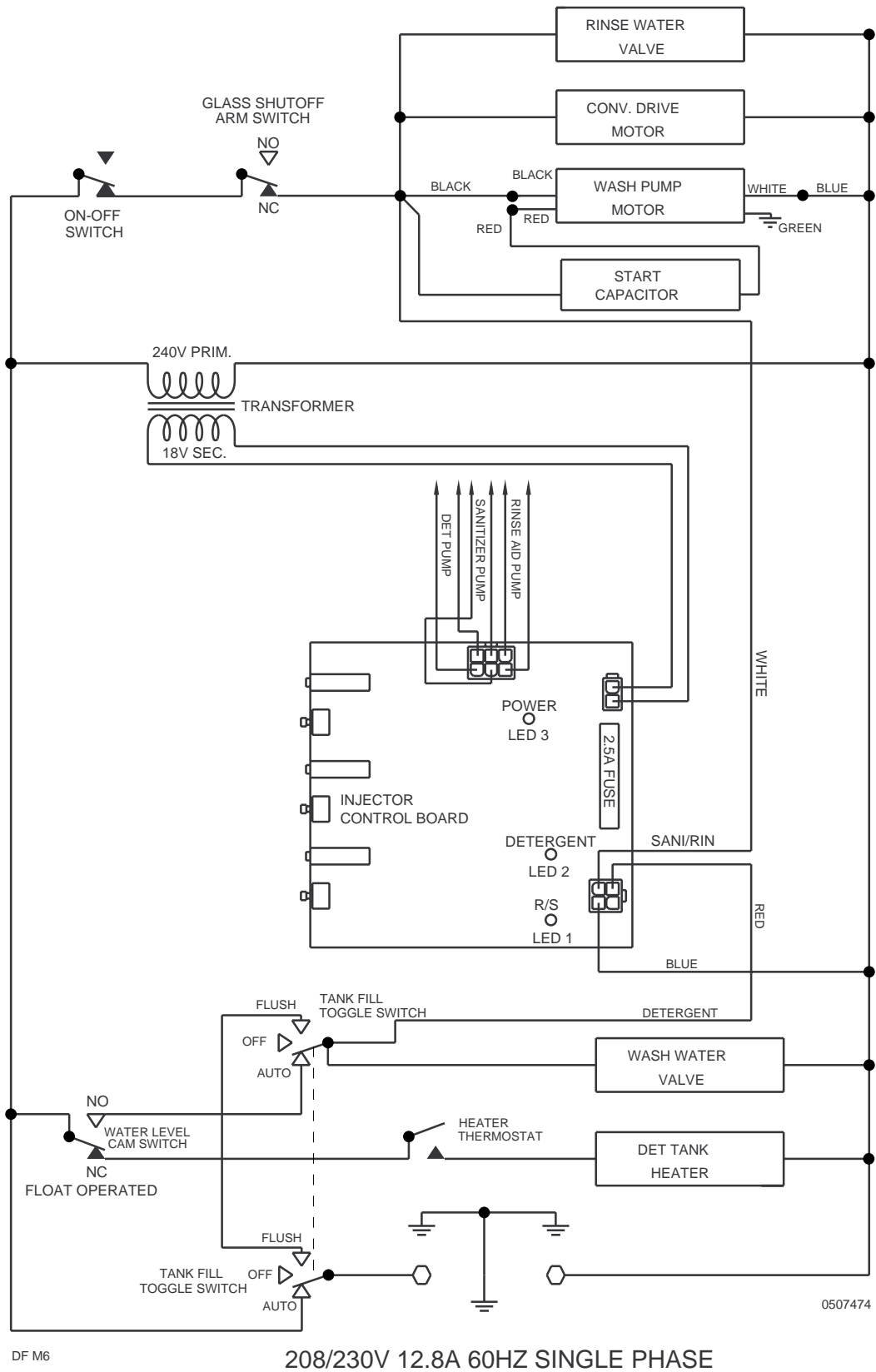


Figure 19 — Electrical Diagram (beginning with S/N 18629)

