



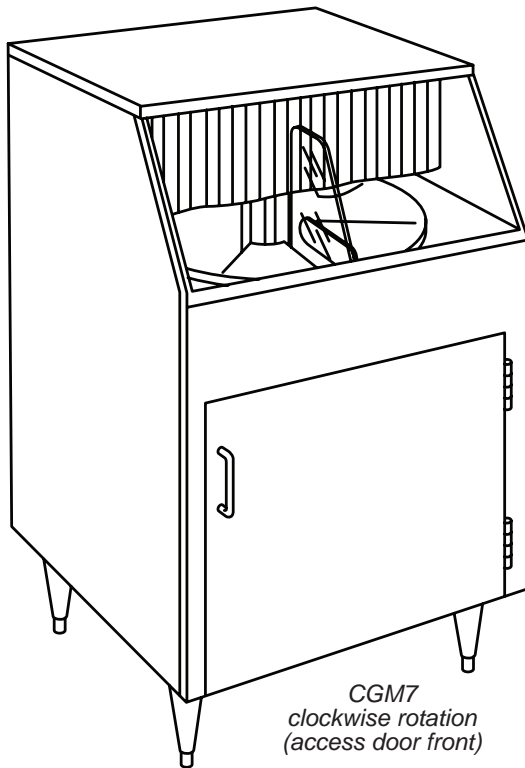
Champion

Installation Manual with Service Replacement Parts

Rotary-type Conveyor Glasswasher

Models:

CGM7 Clockwise Rotation
(access door front)



CGM7
clockwise rotation
(access door front)

Glasswasher serial no.



Issue Date: 7.20.12

Manual P/N 0512652 rev. E

For machines beginning with S/N G080410261

3765 Champion Boulevard
Winston-Salem, NC 27105
336/661-1556 Fax: 336/661-1660
Toll-free: 800.858.4477

2674 N. Service Road, Jordan Station
Ontario, Canada L0R 1S0
905/562-4195 Fax: 905/562-4618
Toll-free: 800.263.5798

Printed in the USA



For future reference, record your glasswasher information in the box below.

Model Number_____	Serial Number_____	
Voltage_____	Hertz_____	Phase_____
Service Agent _____	Tel:_____	
Parts Distributor _____	Tel:_____	

National Service Department

In Canada:

Toll-free: 800/ 263-5798

Tel: 905/ 562-4195

Fax: 905/ 562-4618

email: service@moyerdiebellimited.com

In the USA:

Toll-free: 800/ 858-4477

Tel: 336/ 661-1556

Fax: 336/ 661-1660

email: service@championindustries.com

ATTENTION:

The glasswasher model no., serial no., voltage, Hz and phase are needed to identify your machine and to answer questions.

Please have this information on-hand if you call for service assistance.

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REGISTER YOUR PRODUCT ONLINE

Make sure you are connected to the internet then enter the address below.

In the U.S.A

<http://www.championindustries.com/register>

In Canada

<http://www.championindustries.com/canada/register>

Champion[®]

PRODUCT REGISTRATION BY FAX

COMPLETE THIS FORM AND FAX TO:

(336) 661-1660 in the USA

1-(800) 204-0109 in Canada

PRODUCT REGISTRATION CARD

Model

Serial #

Date of Installation: ___/___/___

Company Name: _____

Address: _____
(Street) Province Postal Code

Telephone #: () _____ --- _____

Contact: _____

Installation Company: _____

Address: _____

Telephone #: _____

Contact: _____

FAILURE TO REGISTER YOUR PRODUCT MAY VOID YOUR WARRANTY

IMPORTANT

IMPORTANT

Revision History

A revision might be a part number change, a new instruction, or other information that was not available at print time. We reserve the right to make changes to these instructions without notice and without incurring any liability by making the changes. Equipment owners may request a revised manual, at no charge, by calling 1 (800) 858-4477 in the USA or by calling 1 (800) 263-5798 in Canada.

Revision Date	Revised Pages	Serial Number Effectivity	Revision Description
5.6.08	All	G080410261	Released first edition
7.7.08	1-5	G080410261	Revised unpacking instructions to include leg installation procedure
10.20.08	36-37	G080410261	Added chemical tubing to parts list P/N 0502666
10.20.08	38-39	G080410261	Added parts breakdown for Drain Tray/Waste Collector DF71
2.15.10	22-23	G080410261	Changed Item 11 to P/N 0501437
5.27.10	35	G080410261	Changed Item 26 to P/N 201669
7.20.12	All	G080410261	Removed CGM7-1, CGM7-2 models from manual
	40	G080410261	Added Drain Tray Conversion Instructions

Dear Owner:

Thank you for choosing our glasswasher.

We appreciate your business.

This manual covers:

Model CGM7

Rotary-Type Glasswasher, Clockwise Conveyor Rotation
(access door front)

The installation, and initial start-up of your glasswasher must be performed by qualified electricians, plumbers, and authorized service technicians who are trained in commercial glasswashers.

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Limited Warranty

LIMITED WARRANTY

Champion Industries Inc., (herein referred to as "The Company"), 3765 Champion Blvd., Winston-Salem, NC 27105, and Champion-Moyer Diebel P.O. Box 301, 2674 N. Service Road, Jordan Station, Canada, L0R 1S0, warrants machines, and parts, as set out below.

Warranty of Machines: "The Company" warrants all new machines of its manufacture bearing the name "The Company" 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 "The Company", whichever occurs first. [See below for special provisions relating to glasswashers.] The warranty registration card must be returned to "The Company" within ten (10) days after installation. If warranty card is not returned to "The Company" within such period, the warranty will expire after one year from the date of shipment.

"The Company" 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, "The Company", 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, "The Company'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 "The Company" elects to repair, the labor and work to be performed in connection with the warranty shall be done during regular working hours by a "The Company" authorized service technician. Defective parts become the property of The Company. Use of replacement parts not authorized by "The Company" will relieve "The Company" of all further liability in connection with its warranty. In no event will "The Company's" warranty obligation exceed "The Company's" charge for the machine. The following are not covered by "The Company'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 .
- 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: "The Company" warrants all new machine parts produced or authorized by "The Company" 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 "The Company" 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 GLASSWASHERS AND CHAMPION PARTS, AND ALL OTHER REMEDIES ARE EXCLUDED, INCLUDING ANY LIABILITY FOR INCIDENTALS OR CONSEQUENTIAL DAMAGES.

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

Installation

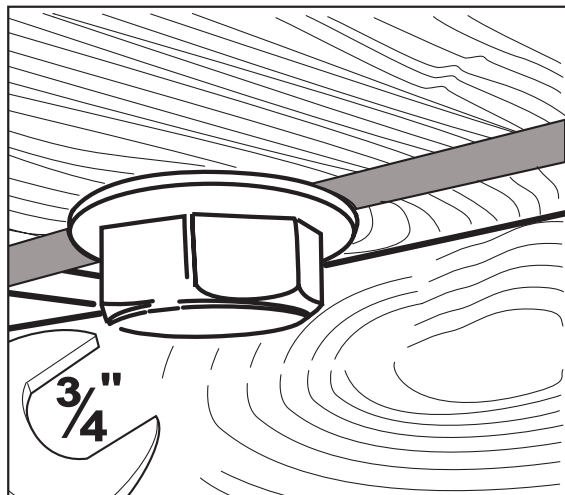
Unpacking

1. Move the glasswasher to its permanent location.
2. Open the door and remove the box marked "LEGS".
The box contains (4) 6" [152cm] screw-in legs.
These legs are threaded tightly into the base of the machine.
3. Remove (2) 1/2-13 x 2" bolts holding the glasswasher to the pallet.
4. Lift the front door off the bottom hinges and set carefully aside.
5. The illustrations below show one method to install the legs without lifting the glasswasher completely off the pallet.

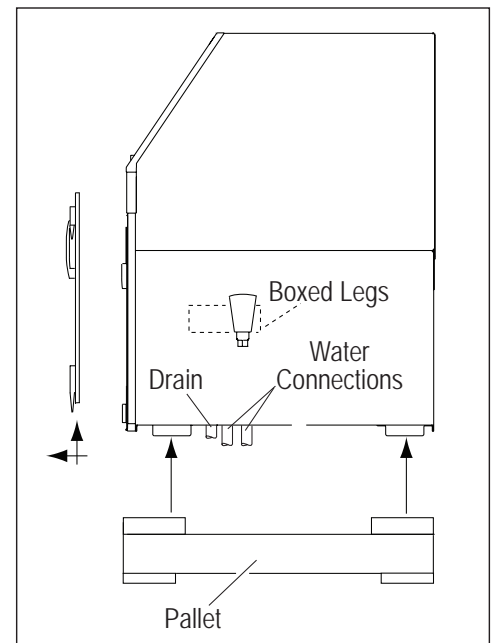
CAUTION!

The glasswasher water inlet plumbing and the drain piping extend below the pallet.

Use extreme care when moving the glasswasher to prevent damage to the glasswasher plumbing.



Remove the (2) pallet bolts holding the glasswasher to the pallet.

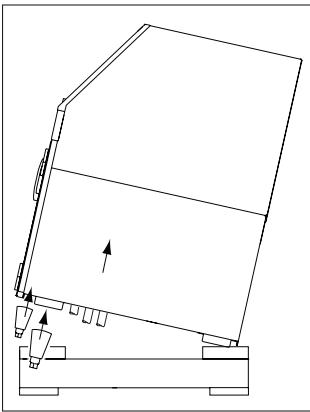


Glasswasher plumbing connections extend below the pallet.

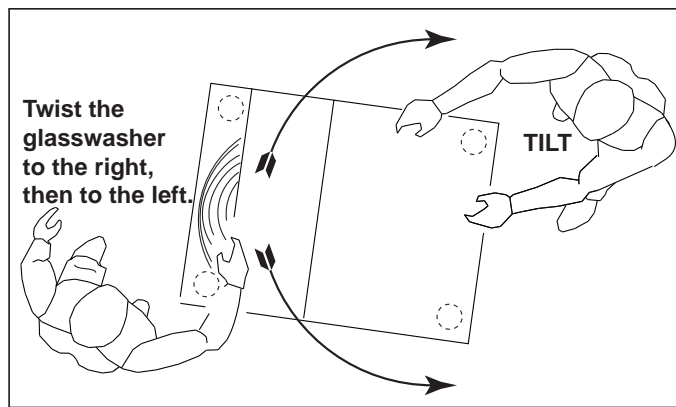
Installation (continued)

Unpacking (continued)

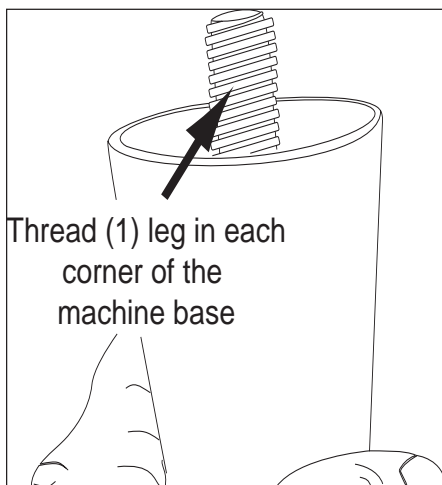
6. Use 2 people to move the machine in order to install the legs.
7. Have 1 person behind the glasswasher tilt it back as the person in front twists the machine to the right. This makes the front left leg mounting hole accessible.
8. Screw 1 of the legs tightly into place. Repeat this process for the remaining legs.
9. Lift the glasswasher off the pallet, and re-install the front door..
10. Level the glasswasher front-to-back and side-to-side by adjusting the leg bullet feet in or out.
11. Compare the site utilities with the data plate specifications. If they agree, then proceed with the installation according to the diagrams on the next page.
12. Remove the packing material in the glasswasher and discard, then remove any protective film on the machine.



Tilt the machine back to clear plumbing connections.

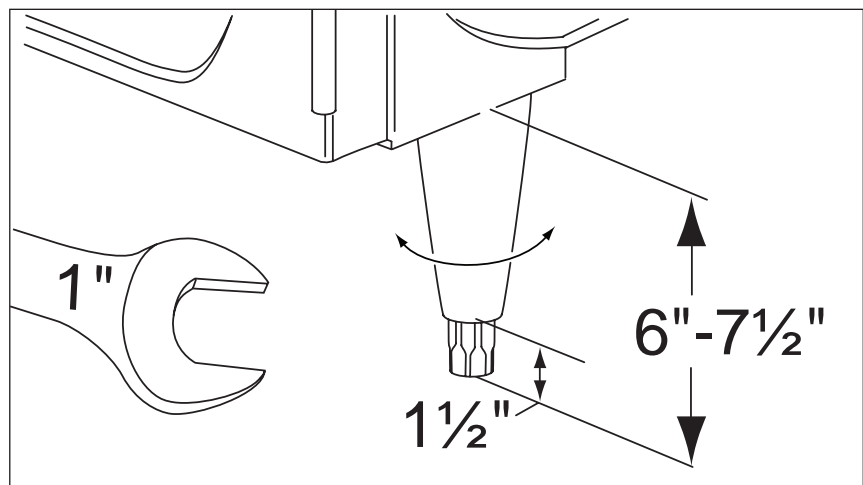


Twist the machine to the right until the front right leg mounting hole is accessible.



Thread (1) leg in each corner of the machine base

Make sure to install the legs tightly.



Level front-to-back and side-to-side

Utility Connections

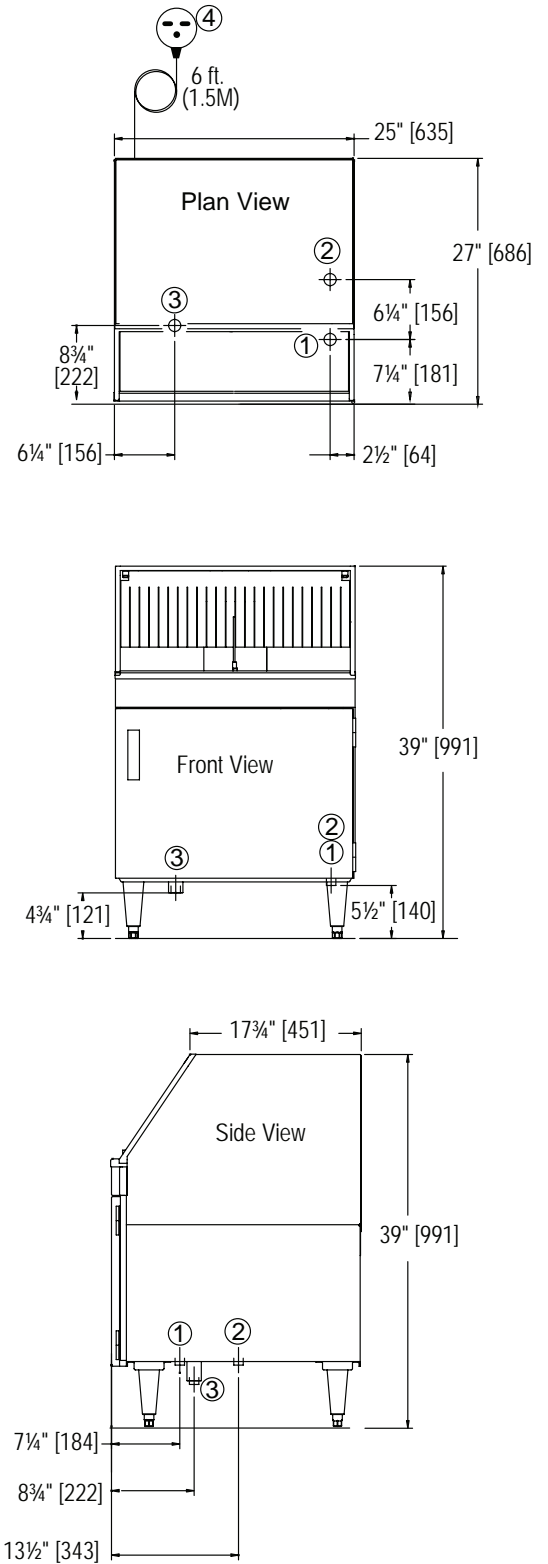
ATTENTION

All utility connections must be performed by qualified people that will follow electric, plumbing, and sanitary codes and regulations.

1	<p>Hot Water Connection: 140-160°F/60-71°C ½" IPS Flow pressure 25-95 PSI [173-655 kPa].</p> <p>Install water shut-off valves and check-valves in the water inlet supply lines and <u>as close to the machine as possible</u>.</p>
2	<p>Cold Water Connection: 75°F/24°C ½" IPS Flow pressure 25-95 PSI [173-655 kPa].</p> <p>Install water shut-off valves and check-valves in the water inlet supply lines and <u>as close to the machine as possible</u>.</p>
3	<p>Drain Connection: Gravity 1½" Tailpiece (slip-fit) Maximum drain flow 3 US gallons/min [11L/min]</p>
4	<p>Electric Connection: 208-230VAC/50-60HZ/1PH Min/Max 15A 6 ft. /1.5 m flexible cord and plug supplied NEMA 6-15P electric outlet</p>

Contact the Manufacturer's National Service Dept. for assistance.

Champion Industries 1-800 858-4477



Installation (continued)

Chemicals

Glassware cleaning chemicals

1. A qualified chemical supplier should supply liquid detergent, sanitizer and rinse-aid for the glasswasher. The glasswasher manufacturer does not sell glassware washing chemicals.
2. A chemical's formulation and strength vary depending on the chemical supplier; therefore, the specifications given below are approximations only.
3. The glasswasher has 3 built-in chemical dispensing pumps for

Detergent - Use a commercial grade non-chlorinated detergent specifically made for glasswashers. The recommended concentration of detergent should be .35%

Sanitizer - 2 types of sanitizer may be used.

(5.25%) Sodium hypochlorite (*chlorine bleach*) to provide a minimum concentration of 50 ppm in the final rinse. The 50 ppm concentration must be checked using test strips to make sure the proper concentration is maintained.

Iodophor (*Iodine formulated with a rinse agent*), to provide a minimum concentration of 12.5ppm in the final rinse. The 12.5 ppm concentration must be checked using test strips to make sure the proper concentration is maintained.

Rinse-aid Consult your chemical supplier for the proper type of rinse-aid to use in the glasswasher.

Installing chemical supply containers and chemical pick-up tubes

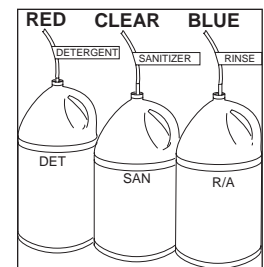
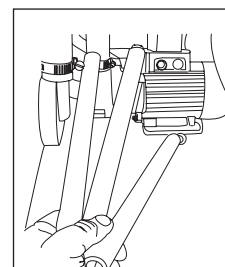
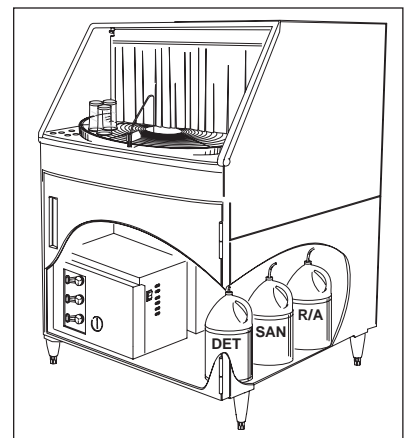
1. There is enough space inside the lower compartment to hold 3 one gallon containers for detergent, sanitizer, and rinse-aid.

The contents of each container must be marked clearly.

2. The glasswasher comes equipped with 3 gray tubes, called stiffener tubes, and tubing for each chemical pump. The tubing inserted in the chemical container has a strainer.
3. The outlet tubes from the supply containers to the chemical pumps are marked with color-coded labels, they are:

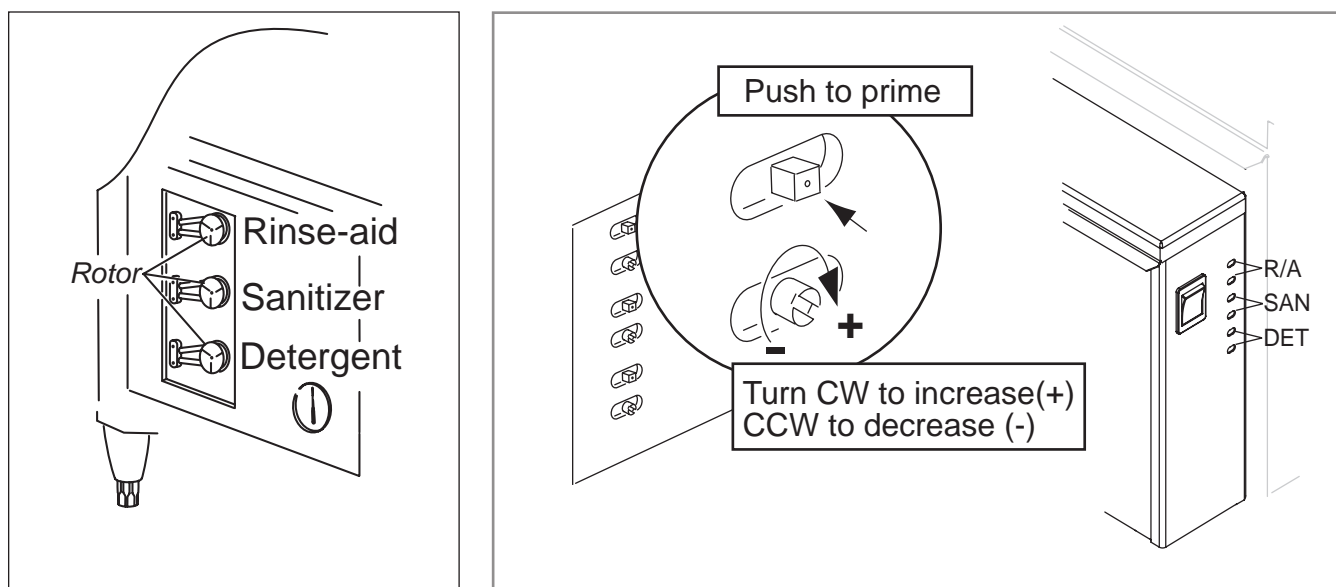
RED -	Detergent	(DET)
CLEAR -	Sanitizer	(SAN)
BLUE -	Rinse-aid	(R/A)

4. Pull the stiffener tubes and chemical tubing forward and out of the compartment. Make sure the tubing is not tangled or kinked.
5. Insert the stiffener tube and pick-up tubing into its container and stow the supply containers in the lower compartment as shown to the right.



Priming the Chemical Injectors and Approximate Chemical Settings

Each chemical injector can be adjusted using its prime button and concentration adjusting screw. These controls are located on the right side of the control box located in the lower compartment of the glasswasher. The white injector rotors are visible through the control box window.



Chemical Injector Prime and Concentration Controls

ALL OF THE CHEMICAL SETTINGS BELOW ARE APPROXIMATIONS.

CONSULT A QUALIFIED CHEMICAL REPRESENTATIVE TRAINED IN THE USE OF THE TEST EQUIPMENT REQUIRED FOR TAKING SAMPLES AND PERFORMING ADJUSTMENTS.

1. Priming the Pumps:

Make sure the proper chemical pick-up tube is in its supply container, then push and hold the prime button until the detergent, sanitizer and rinse-aid feed tubes are full of chemical.

2. Approximate Chemical Settings:

The approximate chemical volume dispensed by the chemical injector rotors can be determined by counting the number of revolutions of the injector rotor.

Detergent - 1 revolution in 1-second of the detergent pump rotor ~ 0.35% concentration.

Sanitizer - 1 revolution in 5-seconds ~ 12.5 ppm of Iodophor or 50 ppm of chlorine.

Rinse-aid - 1 revolution in 8-seconds ~ the median volume recommended.

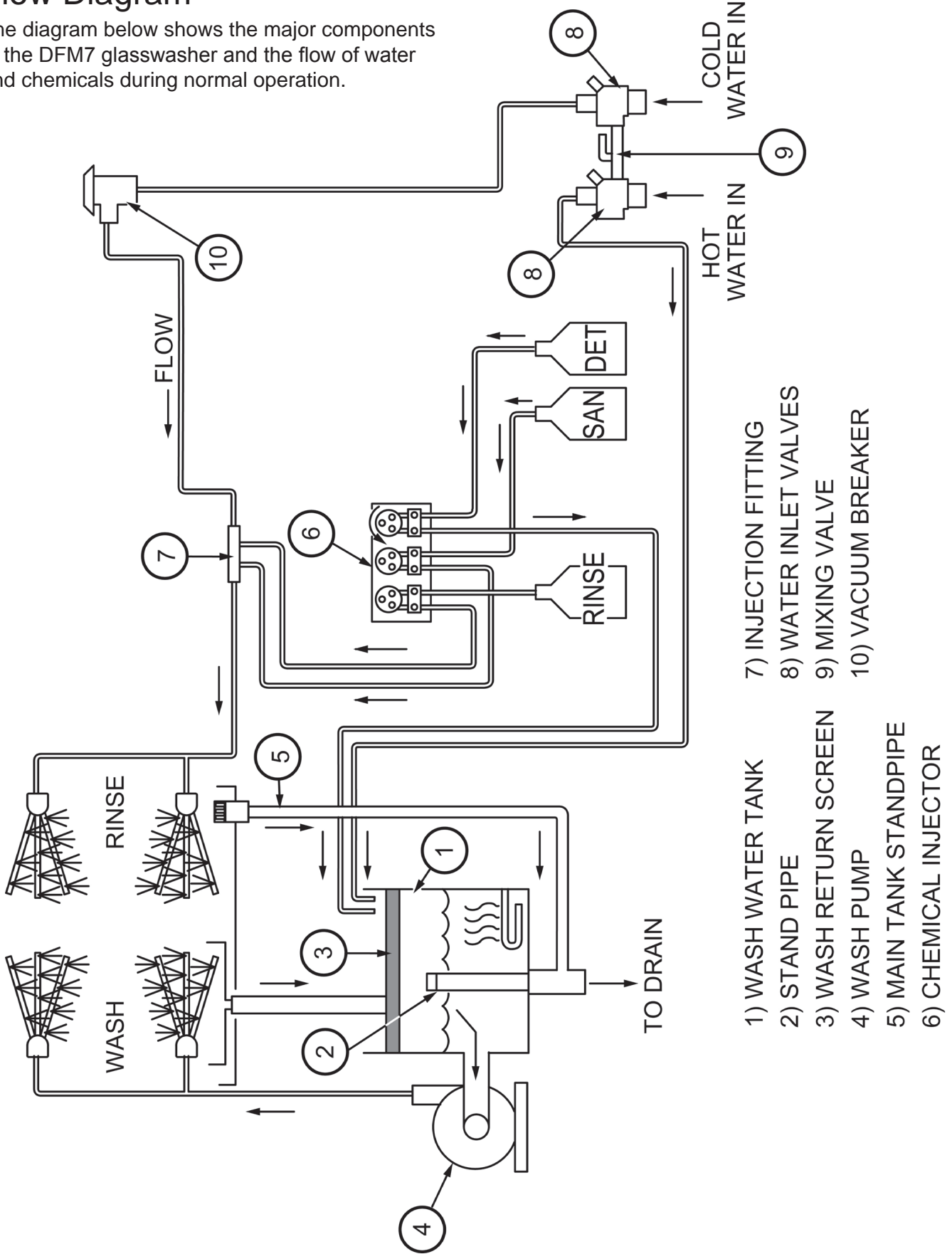
Turn the Injector Concentration screws clockwise to increase or counter-clockwise to decrease the volume of dispensed chemical.

3. The detergent chemical setting must be performed when the hot-water fill solenoid valve is open. The hot-water valve is open when the power switch is in the ON position during initial fill and when the detergent tank float assembly calls for hot water

The sanitizer and the rinse-aid setting can be performed whenever the cold-water fill solenoid valve is open. The cold-water fill valve is open whenever the glasswasher power switch is ON and the conveyor is turning. A separate rinse-aid is not needed when Iodophor is used as a sanitizer. Turn the Injector Concentration Screw fully counter-clockwise until the rinse-aid injector rotor stops turning.

Flow Diagram

The diagram below shows the major components of the DFM7 glasswasher and the flow of water and chemicals during normal operation.

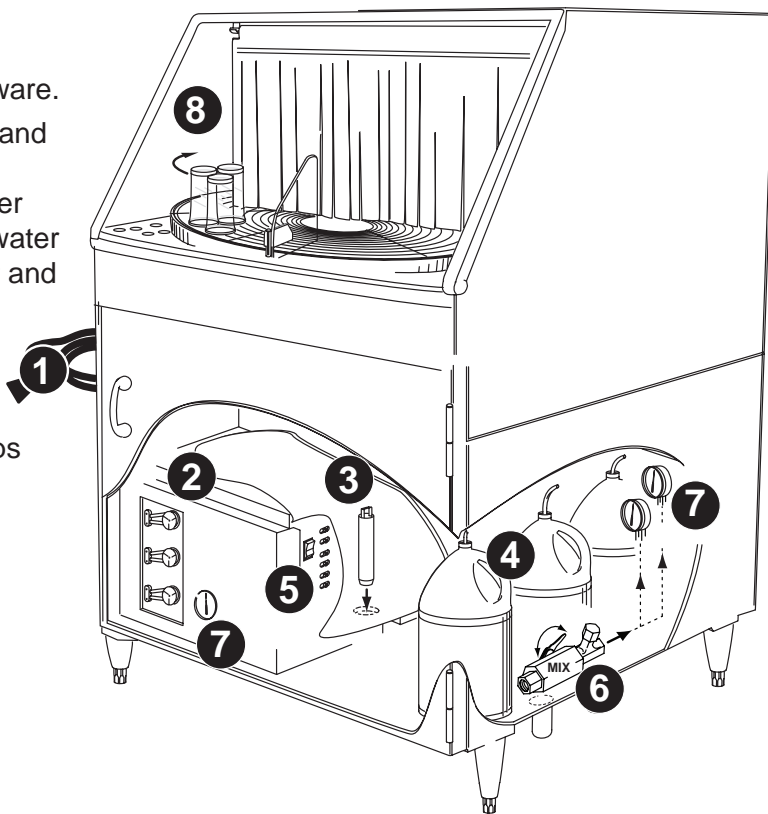


- 1) WASH WATER TANK
- 2) STAND PIPE
- 3) WASH RETURN SCREEN
- 4) WASH PUMP
- 5) MAIN TANK STANDPIPE
- 6) CHEMICAL INJECTOR
- 7) INJECTION FITTING
- 8) WATER INLET VALVES
- 9) MIXING VALVE
- 10) VACUUM BREAKER

Quick Operation Guide

The glass washing machine is designed to automatically wash a wide variety of glassware.

The glass washer consists of a wash section and rinse section. Glasses rotate on a conveyor through each section. A wash tank in the lower compartment holds heated wash water. The water level in the wash tank is maintained by a float and cam-operated switch. The wash tank water temperature is controlled by a heater and a thermostat. The rinse water is supplied from the cold water supply. Chemicals are automatically dispensed by built-in chemical pumps



1

Plug machine power cord into a **208-230VAC/60/1, 15A** wall receptacle. Turn main power and water service ON.

2

Remove lower wash tank scrap screen.

3

Install the drain/overflow tube into the drain located at the front of the wash tank bottom. Re-install the scrap screen removed in Step 2.

4

Pull the chemical pick-up tubes out of the machine. Colored labels I.D. each tube. Place tube into its supply container.

5

Make sure a glass is against the conveyor stop switch. Push the rocker switch UP to the ON position until the wash tank is full of water.

Then, push and hold each chemical Prime button until chemical supply tubes are full.

Prime R/A
Prime Sani
Prime Det.

On
Off
Flush

6

The incoming cold water supply temperature must be a minimum temperature of 75°F/24°C. Adjust the temperature of the incoming cold water temperature by opening or closing the mixing valve located between the hot water and the cold water solenoid valves.

7

Check the cold water temperature gauge and the cold water pressure gauge as you adjust the mixing valve. The minimum temperature should be 75°F/24°C. The pressure gauge should read a flowing pressure of 4-6 psi/24-36 kPa. Check the wash tank temperature gauge for 140°F/60°C-160°F/71°C.

Pressure
Temperature
Wash Tank Heat

8

Place glassware on the conveyor. The conveyor stops automatically when the clean glassware operates the conveyor stop switch.

Operation (continued)

Assembling the Glasswasher

- Make sure the power switch is in the OFF position.
- Install the wash arms and rinse spray arms. The spray arms have locating notches in the end of each arm. Push the spray arm straight into the hub. Do not twist.
- Install the conveyor assembly as follows:
 - Insert the conveyor into the wash chamber keeping the rear raised.
 - Pull the conveyor forward until it meshes with the drive gear located at the front of the wash chamber.
 - Continue to pull the conveyor forward as you lower it on the pivot.
- Install the stainless steel cylinder in the center of the conveyor.
- Install the conveyor shut-off assembly (plexiglass divider).
- Install the right and left hand tray.
- Install the curtain assembly.
- Install the upper and lower scrap screens.
- Install the standpipe in the detergent tank.
Twist slightly to make sure it seats securely in the drain.
- Install the drain tray/waste collector (*if equipped*).
Make sure the drain fitting is secure.
- Make sure the chemical supply containers are full.
- Close the door.

Filling the Wash Tank

- Ensure that the overflow drain tube is in place in the detergent tank.
- Flip power on-off/flush switch to the "ON" position. The water will fill until the proper level is reached then turn the heating element "ON".
- The water temperature is controlled by a heater and a thermostat. The thermostat should be set for minimum 140°F/60°C.

Operating Instructions

- Open the door; flip power on-off/flush switch to the "ON" position. Wash tank will automatically fill.
- Ensure there is product in the detergent, sanitizer and rinse agent containers.
- Detergent is fed from the supply container into the detergent tank in controlled amounts by the detergent pump. Use detergent at strength recommended by your chemical supplier.
- Load glasses on the conveyor. The glass washer conveyor will start and stop with the conveyor shut-off (Plexi-glass Divider) switch.

Cleaning Instructions

The cleaning instructions are attached to the inside of glasswasher front door.

Daily Cleaning or after 8 hours of Operation:

1. Make sure that any glasses on the conveyor are clean, then remove them from the conveyor.
2. Push the On/Off/Flush switch on the right-hand side of the glasswasher control box to the Off position.
3. Remove the splash curtain from the curtain hooks located at each end of the splash curtain rod.
3. Remove the (2) stainless steel conveyor guards located at each corner of the glasswasher and the plexiglass stop assembly.
4. Remove the cylindrical stainless steel conveyor guard located in the center of the glasswasher.
5. Remove the conveyor by lifting the rear of the conveyor while pulling it forward to disengage the conveyor drive gear located at the right front corner of the wash chamber.
6. Take these parts to a sink, and wash in hot soapy water using a soft brush and cloth, then rinse with fresh water and set aside to air dry.

**DO NOT CLEAN WITH HARSH DETERGENTS OR ABRASIVE SCOURING PADS.
DO NOT STRIKE THE CONVEYOR ON THE FLOOR OR ANY HARD SURFACE.**

7. Clean the wash chamber interior with hot soapy water, then rinse with fresh water. Wipe the interior with a soft cloth. Allow the wash chamber to air dry overnight.
8. Remove the upper scrap screen, remove large debris in a trash can, take screen to a sink and flush screen with fresh water.

DO NOT STRIKE SCREENS ON HARD SURFACES.

9. Remove the lower scrap screen, remove large debris in a trash can, take screen to a sink and flush clean with fresh water.
10. Remove the stainless steel wash tank cover; clean with hot soapy water at a the wash sink. Wipe clean and dry.
11. Remove the detergent wash tank drain/overflow to drain the tank, then flush the tank with fresh water and wipe with a clean cloth.
12. Reassemble the glasswasher in reverse order for continued operation, or leave disassembled overnight to aid drying.

DO NOT LEAVE WATER IN THE GLASSWASHER OVERNIGHT

Weekly Cleaning, after 7 days or 56 hours of Operation.

1. Complete 1-11 in the Daily Cleaning above.
2. Remove chemical supply containers if they are stowed inside the glasswasher, wipe any chemical spills with a damp cloth. Detergent and sanitizer (Chlorine) are corrosive on metal and must be removed as much as possible.
3. Check the inlet chute on the right-side of the detergent tank and flush with fresh warm water to clean any chemical residue.
4. Check chemical supply lines. If a line(s) are restricted, remove the pick-up tube(s) from the container(s), then insert each pick-up tube in separate container(s) filled with fresh warm water.
5. PUSH and HOLD the PRIME BUTTON labeled for the matching chemical tube until the water moves freely through the supply tubing. Repeat for each chemical making sure that the warm water is fresh and free of any other chemical.
6. Return the the pick-up tube(s) to the chemical container matching the label on the supply tube(s), then PUSH and HOLD the PRIME BUTTON for the matching chemical(s) until the chemical moves freely through the supply tube(s).
7. Inspect the chemical dispensing pumps visible behind the plexiglass window located on the front of the control box. PUSH and HOLD a each PRIME BUTTON. One white wheel behind the window for each PRIME BUTTON pushed and held.
8. Find the spray tube assemblies, (3 spray tubes each) located in the wash chamber. There are (2) assemblies in the top and (2) assemblies in the bottom. Pull (1) assembly at a time. Check the black O-ring on the spray tube hub for damage, replace if missing.
9. Insert and twist the small brass drill bit (reamer) in the each spray tube hole to clean. Insert and twist the large drill on the wood handle. Push the large reamer down the length of the spray tubes. Insert and twist the long brush in each spray tube to remove loose debris. Flush the spray tube assembly, then reinstall in the glasswasher. Repeat for each spray tube assembly.
10. Reassemble the glasswasher in reverse order for continued operation, or leave disassembled overnight to aid drying.

Troubleshooting

The following troubleshooting guide can help identify a problem and provide a solution. Inspect your glasswasher before you contact an authorized service representative.

Problem	Cause(s)	Solution(s)
Glasswasher will not turn ON.	Main breaker/fuse box OFF	Turn breaker/fuse box ON.
	Disconnect fuse blown/breaker tripped.	Turn breaker/fuse box ON. Replace fuse/Reset Breaker.
	Glasswasher ON/OFF switch OFF. Power cord unplugged.	Flip ON/OFF switch ON. Plug-in power cord.
	Clean glass(es) touching the conveyor shut-off switch.	Remove clean glasses from the rinse-side of the glasswasher.
Conveyor will not rotate.	Conveyor center hub out of position.	Reposition the conveyor.
	Conveyor support(s) out of position and/or broken.	Reposition or replace support(s).
	Drive gear out of position.	Reposition drive gear.
	Gear teeth on conveyor worn or broken.	Replace the conveyor.
	Gear teeth on drive gear worn or broken.	Replace drive gear.
	Object jamming the conveyor.	Remove object.
Conveyor will not stop rotating.	Conveyor drive motor defective.	Authorized service agent may replace conveyor drive motor.
	Conveyor stop switch needs adjustment or switch is defective.	Authorized Service Agent may adjust or replace switch.
Conveyor rotates in wrong direction.	The drive motor is turning the conveyor backward.	Authorized Service Agent may remove drive motor rotate motor stator 180° and re-install.
Upper scrap screen is hard to remove.	Large debris, such as broken glass is on screen.	Remove conveyor and lower spray arm(s). Remove debris.
	Scrap screen bent and/or broken.	Authorized Service Agent may repair or replace damaged screen.
	Door magnet broken or missing.	Replace door magnet.
Front door will not close remain closed.	Door bent or broken.	Straighten or replace door.
	Floor is not level.	Use bubble level and turn bullet feet in/out to adjust machine level.
Glasswasher not level or rocks back and forth.	Leg(s) are not screwed firmly into machine base.	Tighten leg(s) or replace.

Problem	Cause(s)	Solution(s)
Water sprays out the front of the glasswasher.	Splash curtain is missing, positioned incorrectly or damaged.	Re-install the splash curtain or replace the splash curtain.
	Spray arm(s) are damaged or missing.	Replace spray arm(s).
	Glass(es) interferes with splash curtain.	Reload glass(es).
	Clogged spray arm(s) makes water come out in wrong direction.	Clean the spray arm(s).
Poor washing results.	Water volume from wash and/or rinse spray arm(s) low.	Clean spray arm(s).
	Water level in detergent tank low.	Re-install drain/overflow tube in wash tank. Service Agent must adjust water level switch until water level is below top of overflow.
	Water level float ball stuck or filling with water.	Clean float ball, replace if filling with water.
	Water level switch defective.	Authorized service agent may replace switch.
	Detergent and/or rinse-aid supply low.	Refill chemical supplies.
	Wash pump and/or water valve(s) and/or line strainers clogged or defective.	Authorized service agent may replace wash pump and/or solenoid valve(s). Clean line strainers.
	Detergent tank temperature low.	Raise incoming water temperature or adjust thermostat for 140°F/60°C in detergent tank.
Chemical injectors out of adjustment.	Contact chemical supplier to calibrate settings.	
Chemical supply container(s) fill with water.	Peristaltic tube(s) are stretched or worn on the glasswasher chemical pump(s).	Inspect and replace tube(s).
	Flow control washer in cold water solenoid valve is defective.	Contact service agent to repair solenoid valve.

Troubleshooting

Problem	Cause(s)	Solution(s)
Water temperature below 145°F/66°C in detergent tank.	Detergent tank thermostat temperature setting low.	Increase thermostat setting to 145°F/66°C
	Thermostat is defective.	Authorized service agent may replace thermostat.
	Detergent tank heater is defective.	Authorized service agent may replace detergent tank heater.
	Incoming water temperature is below 140°F/60°C.	Raise incoming water temperature to 140°F/60°C.
Water leaking under glasswasher.	Pump water seal defective.	Authorized service agent may replace pump seal.
	Glasswasher drain line is clogged.	Clean drain line.
	Upper wash compartment drain screen is clogged.	Clean drain screen.
	Detergent tank drain screen is clogged.	Clean detergent tank drain screen.
	Building drain line is clogged.	Clean building drain line.
	Condensation is forming on the underside of wash compartment.	Open rinse water mixing valve until temperature of water 70°F/21°C
	Vacuum breaker at rear of glasswasher leaking.	Replace vacuum breaker.

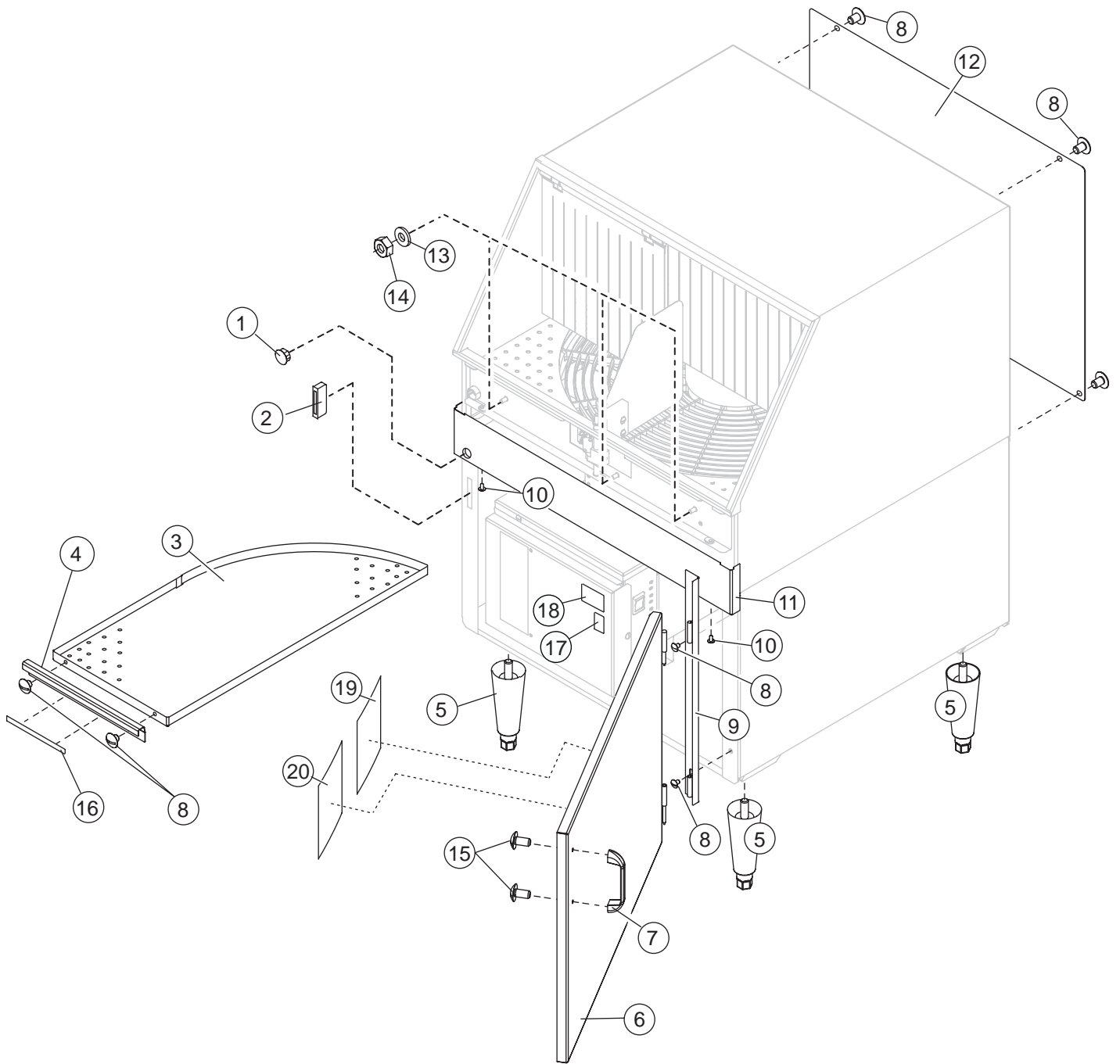
Problem	Cause(s)	Solution(s)
Water flows into glasswasher when ON/OFF switch is in the OFF position.	Flowing water supply line pressure measured at the glasswasher exceeds 95 psi [655 kPa].	Incoming water pressure must be 5 PSI/35 kPa on pressure gauge located on right-side of glasswasher lower compartment
	Defective solenoid valve(s).	Authorized service agent may rebuild or replace the solenoid valve(s).
	Defective AUTO-FILL switch.	Service agent replace the switch.
Chemical(s) are not flowing into the glasswasher.	Rinse water pressure too high	Reduce flowing water pressure measured at the glasswasher below 95 psi [655 kPa].
	Chemical container(s) are empty.	Refill the container(s).
	Chemical supply line(s) are clogged.	Remove the supply line(s) from the chemical containers and flush with warm water.
	Chemical supply and/or pump tube(s) are broken.	Replace supply line(s) and/or pump tube(s).
	No power to chemical dispensing pump(s).	Authorized service agent may replace chemical dispensing pump.
	Dispensing pump is defective.	Authorized service agent must inspect and repair
	Chemical pumps out of adjustment	Chemical supplier must adjust chemical pumps.

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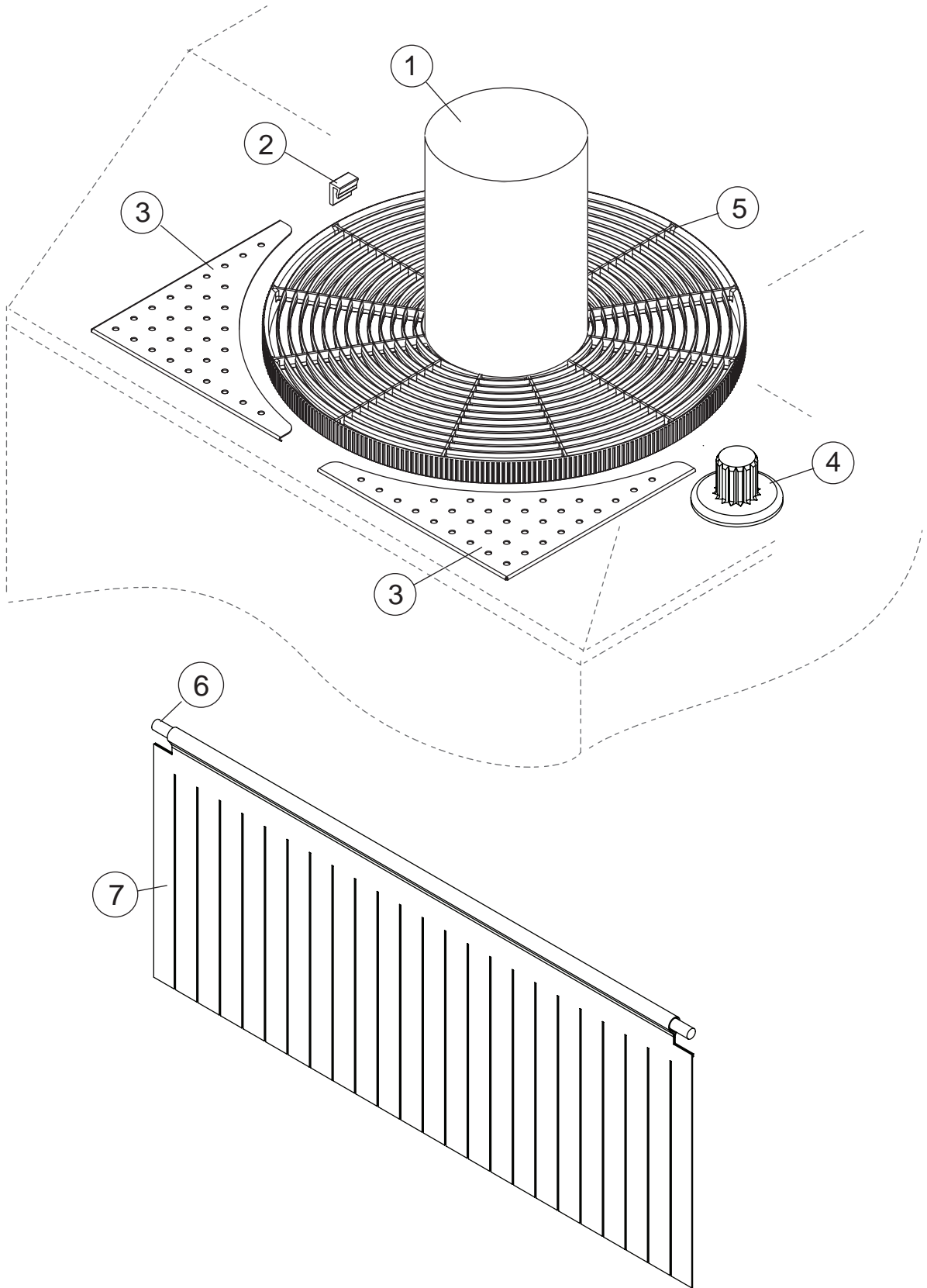
Service Replacement Parts

Illustration List _____	Page
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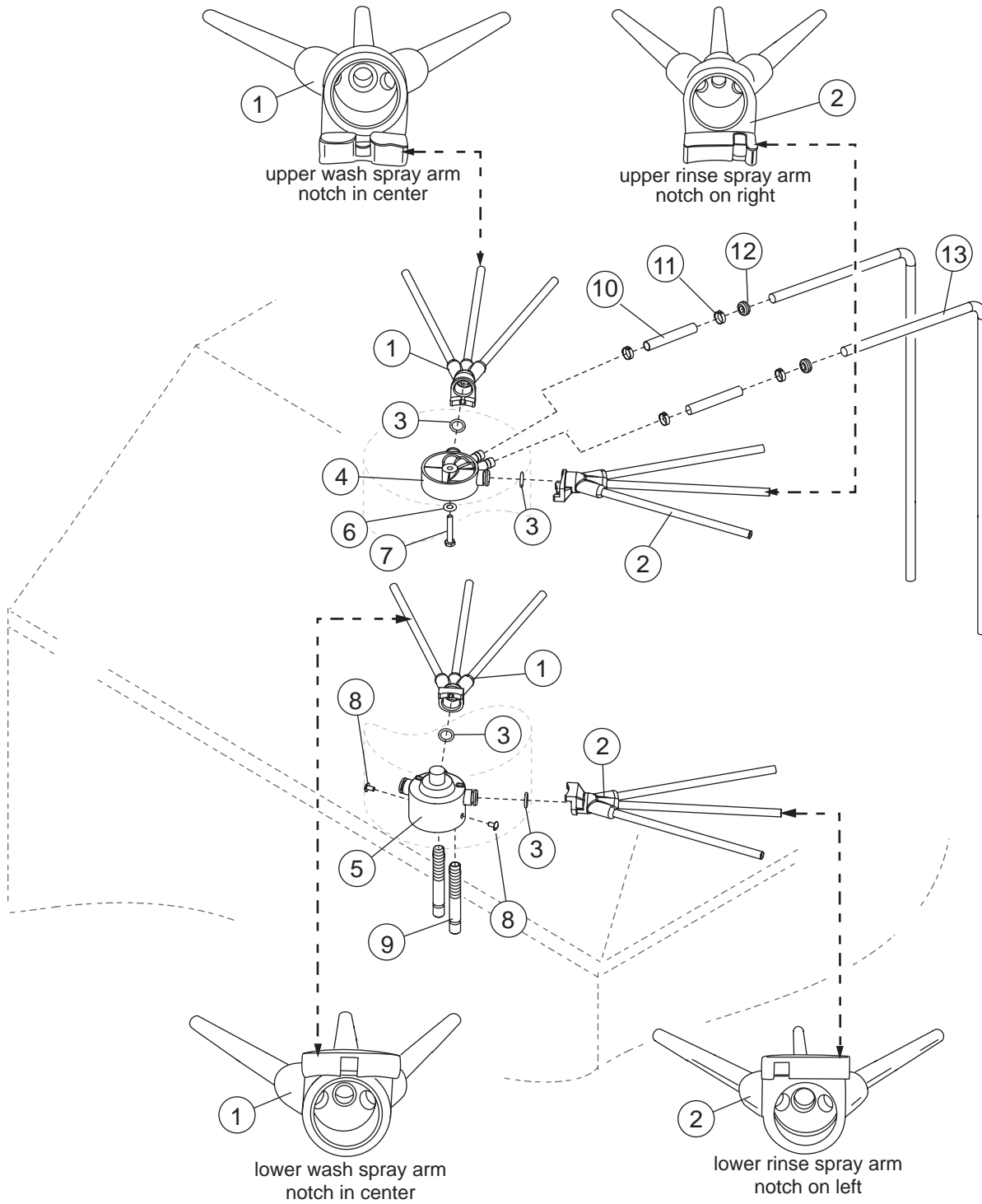
Base Assembly



Item No.	Qty.	Part No.	Description
1	1	112519	Cap Plug, 1"
2	1	0501885	Magnetic Door Catch
3	1	0712644	Wash Tank Scrap Screen
4	1	0312608	Wash Tank Scrap Screen Handle
5	4	0501873	Leg 6"
6	1	0712643	Door Assy.
7	1	0501921	Door Handle
8	10	100007	Screw, 1/4-20 X1/2" truss head
9	1	0712647	Door Bracket Assy.
10	2	0501412	Screw, 10-32 x 3/8"
11	1	0312598	Front Panel
12	1	0312597	Rear Panel
13	2	106026	Flat Washer 1/4"
14	2	107697	1/4-20 Nylon Lock nut
15	2	0501464	Screw, 10-24 x 3/8"
16	1	0507471	Label (<i>CLEAN SCREENS DAILY</i>)
17	1	0503301	Label (<i>WARNING...</i>)
18	1	0505112	Data Plate Label
19	1	0512659	Cleaning Instructions Label
20	1	0512658	Electrical Schematic



Item No.	Qty.	Part No.	Description
1	1	0312603	Conveyor Hub
2	4	0312695	Conveyor Guide Block
3	2	0312604	Conveyor Tray
4	1	0506886	Drive Gear
5	1	0506885	Conveyor
6	1	0312610	Curtain Rod (3/8"D x 24"L)
7	1	0512549	Curtain

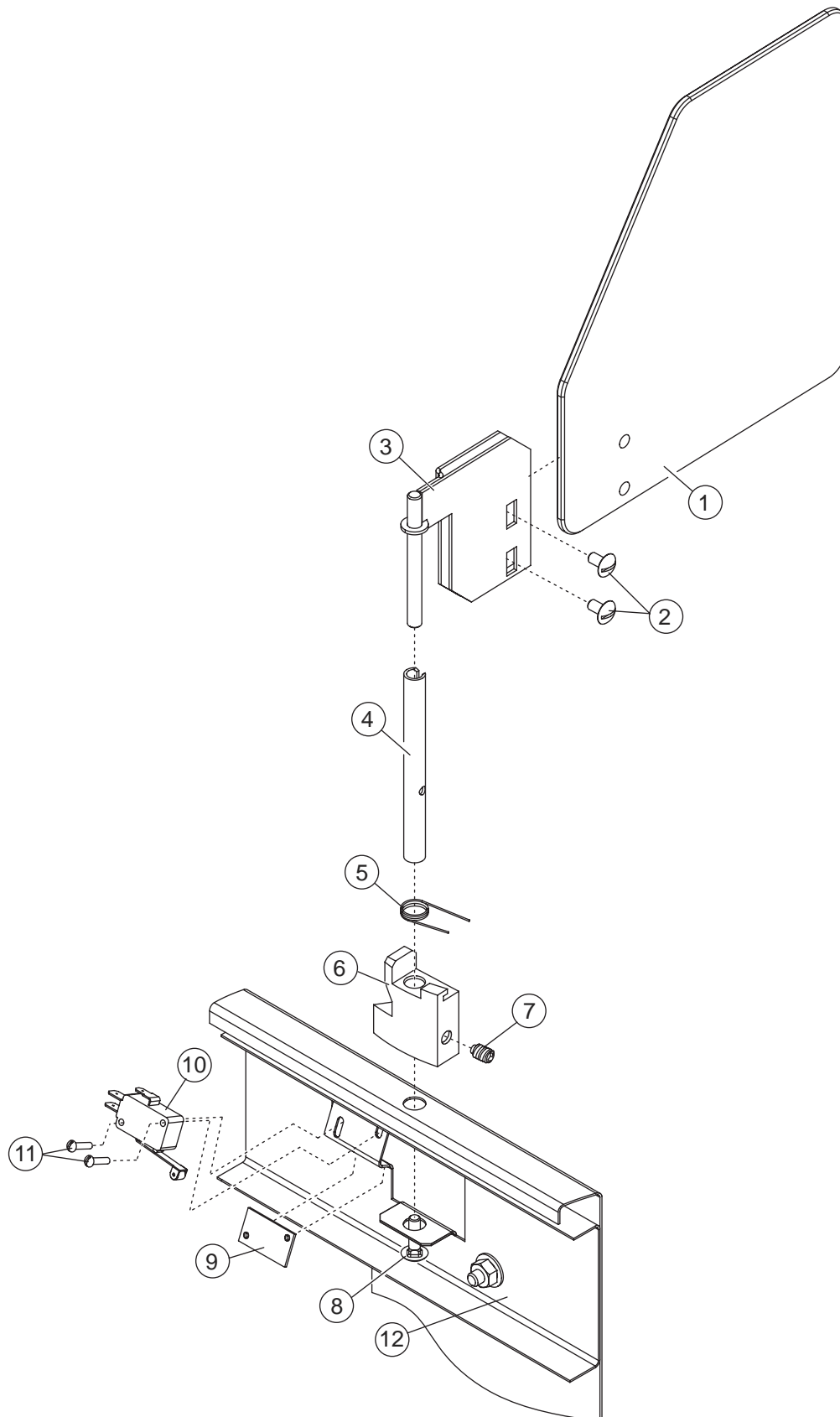


Item No.	Qty.	Part No.	Description
*1	2	0501613	Wash Arm
*2	2	0501738	Rinse Arm
3	4	0501608	O-ring
4	1	0501610	Top Manifold
5	1	0301622	Bottom Manifold
6	1	106026	Flat Washer, 1/4"
7	2	0501422	Bolt, 1/4-20 x 1-1/2"
8	2	0501412	Screw, 10-32 x 3/8"
9	2	0500813	Bottom Manifold Inlet Tube
10	AR	0502663	Braided Hose, 3/8"
11	4	0303679	Gear Clamp #6
12	2	0509478	Grommet
13	1	0300908	3/8" SST Tube

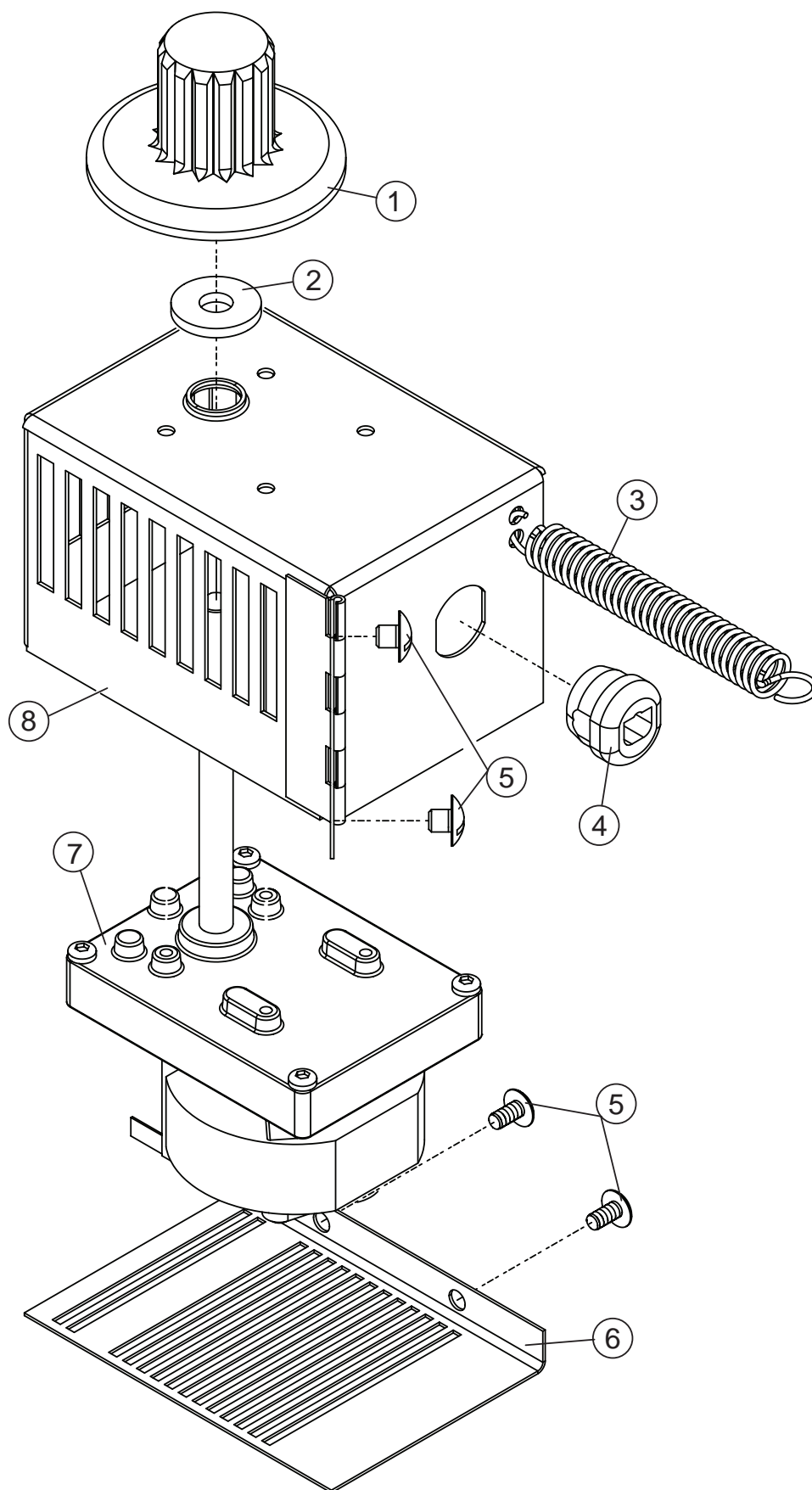
Note:

* Wash and rinse spray arms have notches to make sure they are installed correctly.

Conveyor Stop Switch

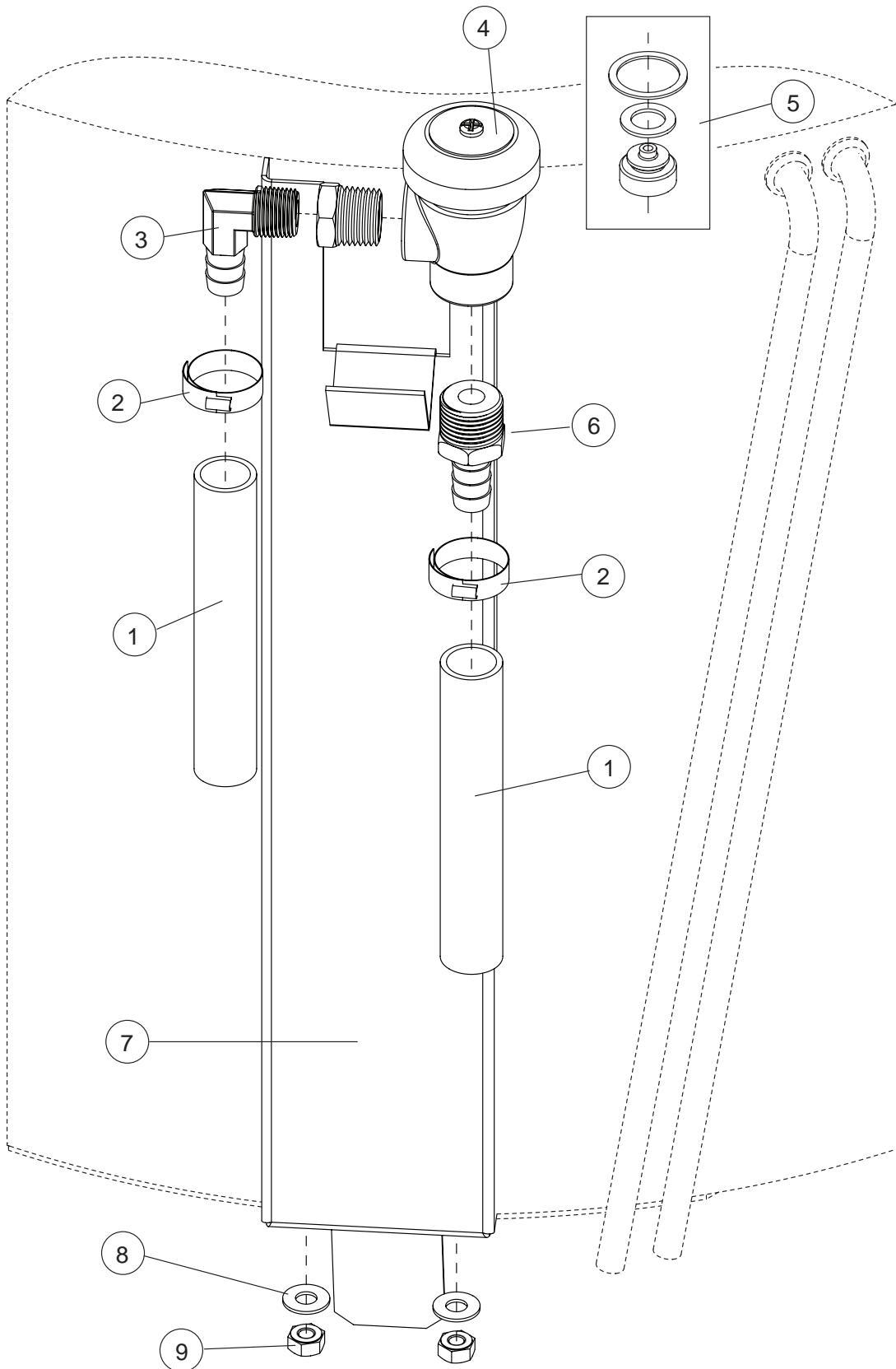


Item No.	Qty.	Part No.	Description
1	1	0512556	Divider Plate
2	2	0501412	Screw 10-32 x 3/8"
3	1	0712648	Shut-off Arm Assy.
4	1	0512555	Conveyor Shut-off Shaft
5	1	0512559	Spring
6	1	0512557	Conveyor Shut-off Cam
7	1	0510854	Dog-point Screw 1/4-20 x 1/2"
8	1	0510493	Carriage Bolt 10-24 x 1/2"
9	1	0312605	Switch nut plate
10	1	0501379	Switch 15A
11	2	0501437	Screw 4-40 x 1/2"
12	1	0312600	Bracket, Facia (Flat)
—	1	0712735	Shut-off Assembly (Includes Items 1, 2, 3)

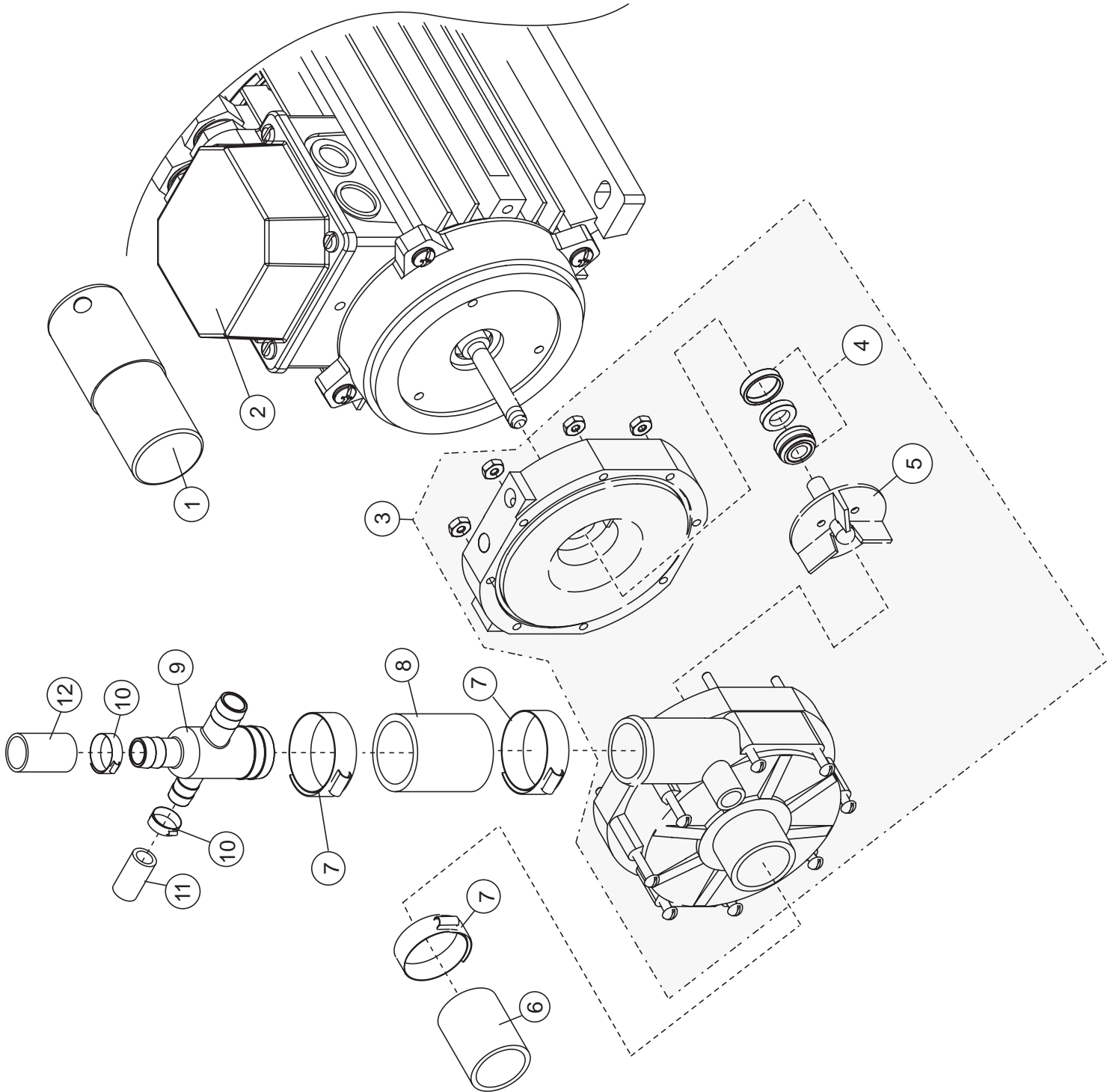


Item No.	Qty.	Part No.	Description
1	1	0506886	Drive Gear
2	1	0507264	Water Slinger
3	1	0501923	Extension Spring
4	1	0512713	Snap Bushing
5	4	0501412	Screw 10-32 x 3/8"
6	1	0307617	Drive Motor Housing Cover
7	1	0512532	Drive Motor
8	1	0712712	Drive Motor Housing

Vacuum Breaker Assembly

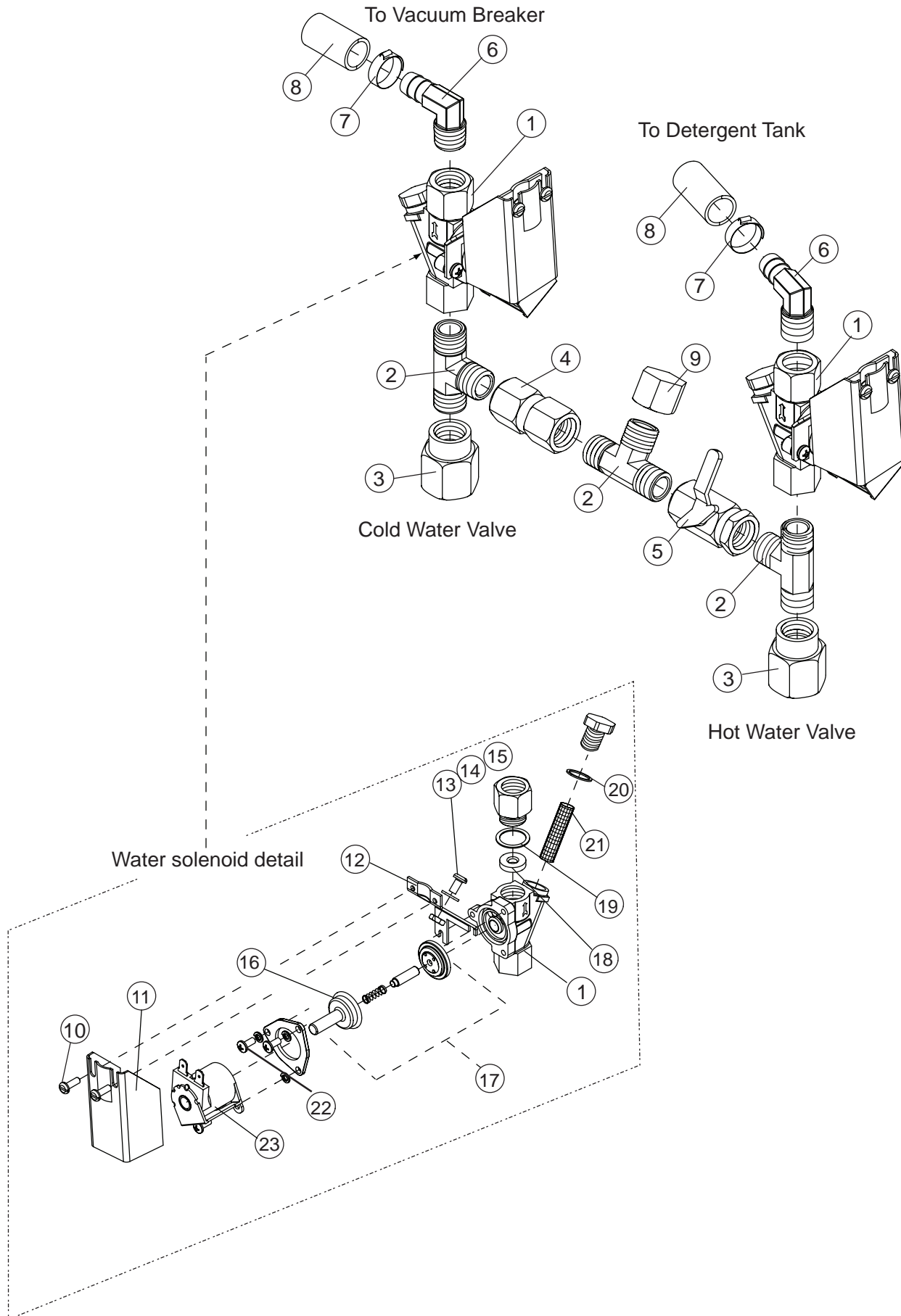


Item No.	Qty.	Part No.	Description
1	A/R	0502665	1/2" I.D. Braided Hose
2	2	0503679	7/16" Gear Clamp
3	1	0502653	3/8" MPT x 1/2" MPT Hose Barb
4	1	100500	1/2" Vacuum Breaker
5	1	0508366	Vacuum Breaker Repair Kit
6	1	0502651	1/2" MPT x 1/2" Hose barb
7	1	0312684	Plumbing Support
8	2	106026	Washer, Flat 1/4"
9	2	107967	Nylon Locknut 1/4-20

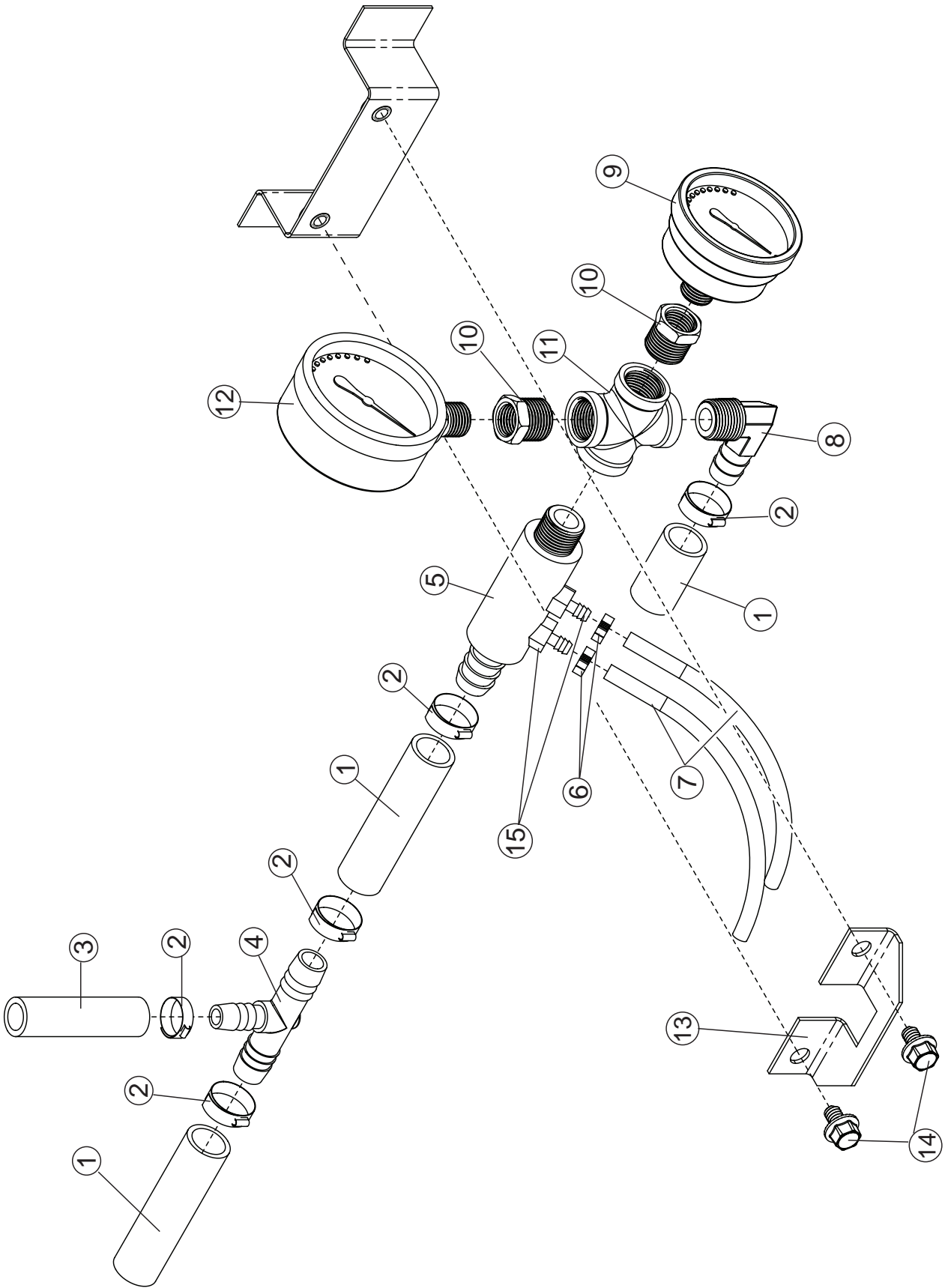


Item No.	Qty.	Part No.	Description
1	1	0512679	Motor Capacitor 6.3uF, 370VAC
* 2	1	0512531	Wash Pump/Motor Assy. Complete 230V/50-60Hz/1Ph
3	1	0512678	Pump Kit <i>(Items 4 & 5 are included in the kit)</i>
4	1	0512677	Wash Pump Shaft Seal
5	1	0512680	Wash Pump Impeller
6	6"	0507320	Hose 1" ID x 1-1/4" OD
7	AR	0502563	Hose Clamp #6
8	6"	0502668	Braided Hose 1" ID
9	1	0501632	Pump Hose Connector
10	AR	0503679	Hose Clamp #16
11	AR	0502665	Braided Hose 1/2"
12	AR	0502663	Braided Hose 3/8"

* Note: The pump motor is not available as a separate service replacement part.

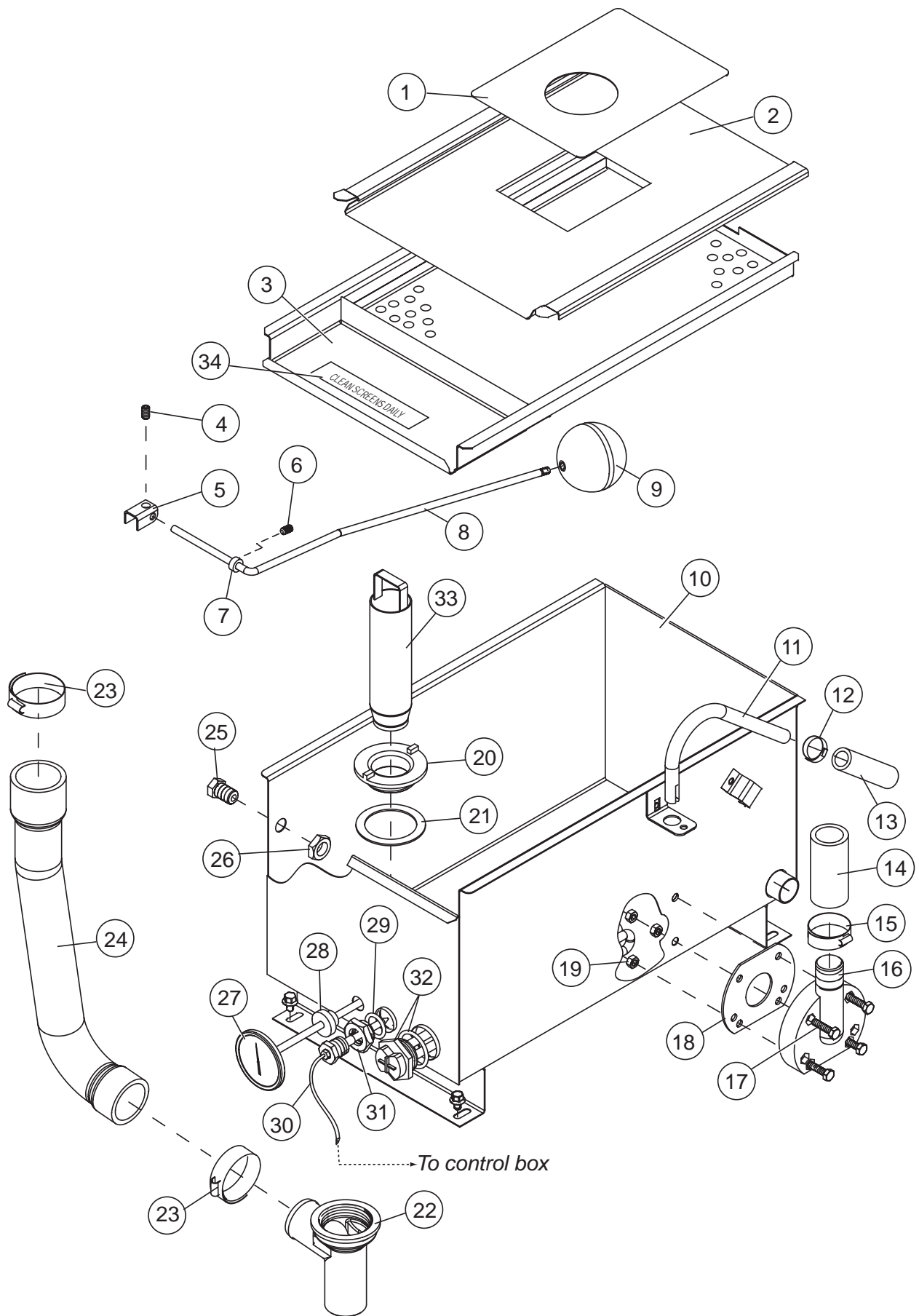


Item No.	Part No.	Description	Qty.
1	0502783	Solenoid Valve, 230VAC/60 HZ	2
2	0502802	3/8" MPT Tee	3
3	0503801	3/8" Fem x 1/2" Adapter	1
4	0507324	3/8" Check Valve	1
5	0502768	Mixing Valve	1
6	0502653	3/8" x 1/2' 90° Hose Barb	2
7	0503679	7/16" Gear Clamp	2
8	0502665	1/2" I.D. Braided Hose	AR
9	0509659	Brass Cap	1
10	0504822	Screw 8-32 x 1/2"	2
11	0306208	Cable Clamp Cover	2
12	0307373	Cable Clamp Assy.	2
13	0501404	Screw 10-32 x 3/8" Brass	2
14	0501493	Lock Washer #10	2
15	0501533	Nut 10-32 Brass	2
16	0505229	Solenoid Guide	1
17	0502811	Diaphragm Kit	AR
18	0502810	Flow Washer (2.6 gpm)	1
19	0502807	Brass Washer	1
20	0502804	Brass Washer	1
21	0502803	Screen	1
22	0501406	Screw 8-32 x 1/2"	2
23	0502806	Coil, Solenoid Valve, 230VAC/60	1



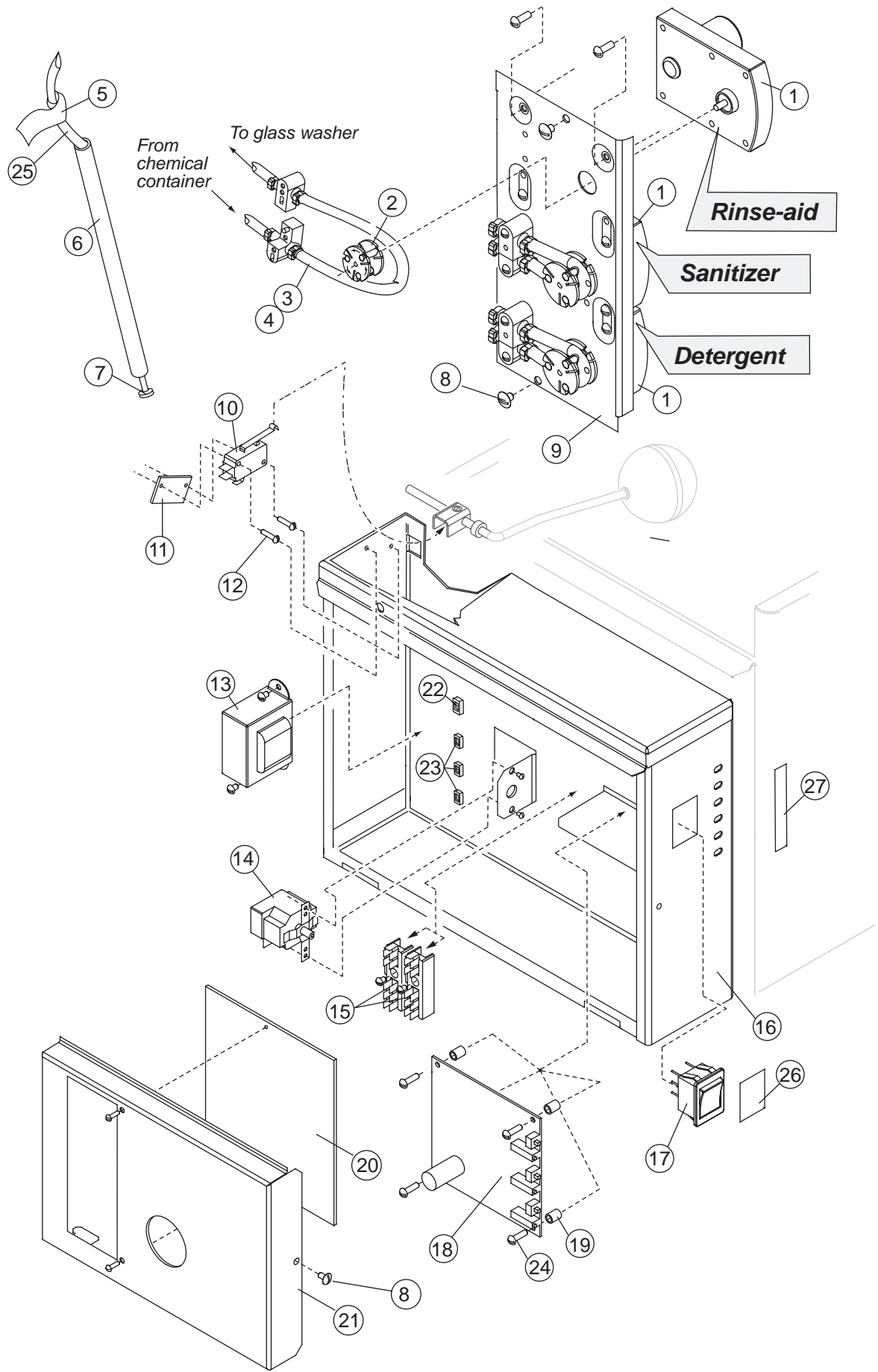
Item No.	Qty.	Part No.	Description
1	AR	0502665	1/2" I.D. Braided Hose
2	5	0503679	7/16" Gear Clamp
3	AR	0502663	3/8" I.D. Braided Hose
4	1	0502652	1/2" x 1/2" x 3/8" Tee
5	1	0503669	Injector Barb Fitting
6	2	0501519	Cable Tie 4"
7	AR	0502666	Chemical Tubing 1/8" IDx1/4"OD
8	1	0502653	3/8" MPT x 1/2" 90° Hose Barb
9	1	0503668	Thermometer
10	2	0502577	3/8 x 1/4" Reducer Bushing
11	1	0502583	3/8" FPT Cross Connector
12	1	0507100	0-30 PSI Pressure Gauge
13	1	0300918	Plumbing Clamp
14	2	0512185	Bolt, 1/4-20 x 3/8"
15	2	0502645	1/8" hose barb fitting

Detergent tank Assembly

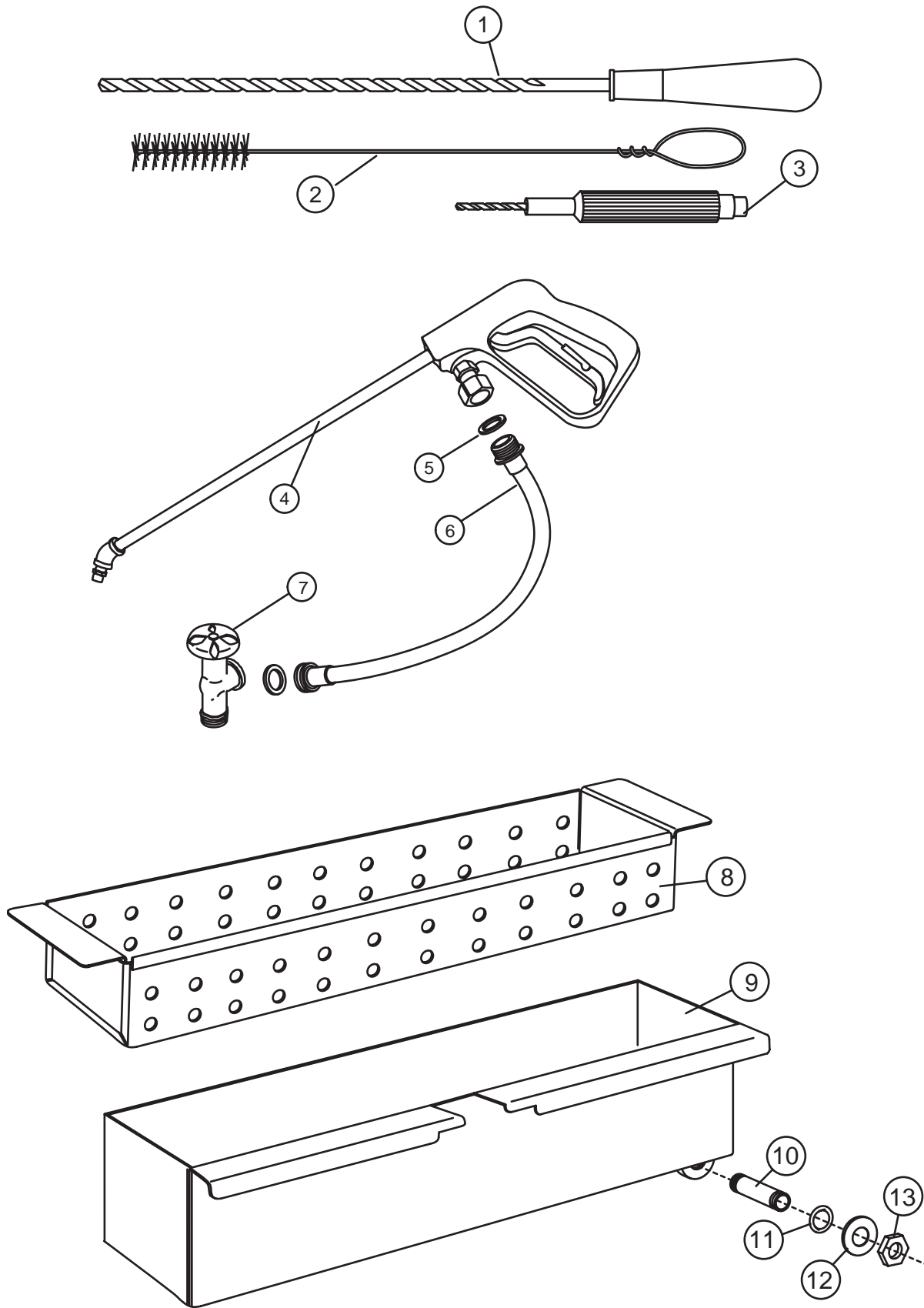


Item No.	Qty.	Part No.	Description
1	1	0312592	Steam Cover
2	1	0312591	Detergent Tank Cover
3	1	0712641	Detergent Tank Screen
4	1	0501395	Set Screw 1/4-20
5	1	0312682	Float Cam
6	1	0501397	Set Screw 6-40
7	1	0703673	Cam Bushing (set screw included)
8	1	0512554	Float Rod
9	1	0503670	Float Ball
10	1	0712640	Detergent Tank
11	1	0307427	Water Inlet Tube
12	1	0503679	Hose Clamp #6
13	A/R	0502665	Braided Hose 1/2"
14	6"	0502668	PVC Hose 1" ID x 1-3/8" OD
15	1	0502563	Gear Clamp 1"
16	1	108051	Elbow Flange
17	4	0507431	Bolt M6 x 25mm (metric)
18	1	107886	Inlet Chute Gasket
19	4	107435	Nut, M6 (metric)
20	1	0512535	Molded Drain Seat
21	1	0512536	Drain Gasket
22	1	0512534	Molded Drain Tee
23	2	0502571	Hose Clamp 1-1/2"
24	1	0512533	Molded Drain Hose
25	1	0512550	Float Rod Bushing
26	1	201669	1/4" NPS NP Brass Nut
27	1	0501600	Stem Thermometer 8"
28	1	0501896	Thermometer Seal
29	1	0501836	O-ring
30	1	0507323	Thermostat
31	1	0501650	Thermostat Adapter
32	1	0507315	Detergent Tank Heater 3kW
33	1	0700948	Detergent Tank Standpipe
34	1	0507471	Label (CLEAN SCREENS DAILY)

Control Box Assembly



Item No.	Qty.	Part No.	Description
1	3	0501353	Injector Motor, 140RPM 12VDC
2	3	0707142	Injector Rotor Assembly
3	2	0706635	Element Tube 45CC (DET, SANI)
4	1	0706634	Element Tube 15CC (R/A)
5	1	0503695	Chemical Tube Detergent Label
-----	1	0503694	Chemical Tube Sanitizer Label
-----	1	0505483	Chemical Tube Rinse-aid Label
6	3	0306363	Stiffener Tube
7	3	0501869	Strainer
8	12	0501411	Screw 10-32 x 1/4"
9	1	0312588	Chemical Pump Panel
10	1	0501379	Water Level Switch 15A
11	1	0312605	Switch Nut Plate 4-40
12	2	0501433	Screw, 4-40 x 5/8"
13	1	0508920	Transformer, 240VAC/18VAC, 30VA
14	1	0507323	Control Thermostat
15	2	0503749	Terminal Board 11-PNT
16	1	0312587	Control Box
17	1	0512539	Rocker Switch ON/OFF/FLUSH
18	1	0508433	Motor Control Circuit Board
19	4	0508710	Control Circuit Board Spacer
20	1	0312590	Control Box Cover Window
21	1	0312589	Control Box Cover
22	1	0503647	Strain Relief Bushing (Large)
23	3	0512713	Strain Relief Bushing (1/2")
24	4	106695	Screw, 6-32 x 1/2"
25	AR	0502666	Chemical Tubing, 1/8" ID x 1/4" OD
26	1	0503693	Label, FLUSH/OFF/ON
27	1	0512663	Label, Chemical Prime Adjust
---	1	0512538	Harness, Wiring (Not shown)



Options and Accessories

Item No.	Qty.	Part No.	Description
1	1	0708986	Tube Scraper
2	1	0501826	Tube Brush
3	1	0501633	Jet Reamer (comes with Drill)

Item No.	Qty.	Part No.	Description
4	1	0510571	Wash Down Nozzle Complete (Includes Items 4,5 & 6)
5	1	0505320	1/2" Hose Washer
6	1	0501833	1/2" x 10' Hose Assy.
7	1	0506643	Faucet

Item No.	Qty.	Part No.	Description
---	1	0712551	Drain Tray Conversion Kit* (Replaces Items 8-13)
8	1	0712632	Drain Tray, Welded
9	1	0712633	Drain Screen, Welded
10	1	0512686	Nipple, 3/8" x 1/2" SST
11	1	0512688	O-ring
12	1	0512687	Washer, 1-5/16" x 5/8" x .08"
13	1	201097	Locknut

*Refer to next page for Drain Tray Conversion Instructions

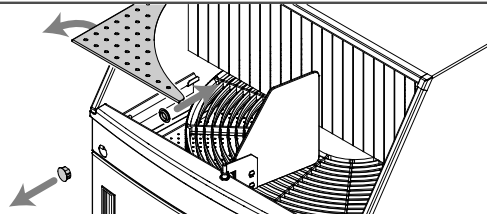
DRAIN TRAY - ROTARY GLASSWASHER (0712551 (FLAT) OR 0712734 (CURVED)) INSTALLATION INSTRUCTIONS

PARTS LIST:

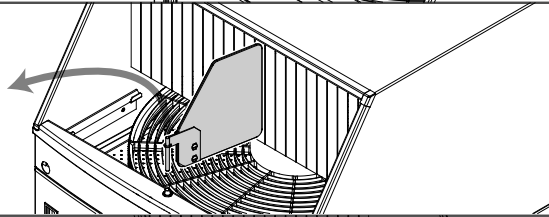
ITEM	DESCRIPTION	QTY/PER
0512717	TRAY, DRAIN FLAT MOLDED (included with 0712551 kit - flat front)	1
0512719	SCREEN, DRAIN TRAY FLAT (included with 0712551 kit - flat front)	1
0512718	TRAY, DRAIN CURVED MOLDED (included with 0712734 kit - curved front)	1
0512720	SCREEN, DRAIN TRAY CURVED (included with 0712734 kit - curved front)	1
0512943	TUBE, DRAIN TRAY	1
0512946	NUT, 5/8-20 BULKHEAD, POLYPROPYLENE	2
0503716	GROMMET, RUBBER 5/8 ID X 1-1/8 OD X 5/16 THK	1
0507265	HOSE, BRAIDED PVC 5/8 ID X 7/8 OD X 2-1/2 LONG	1
0512977	CLAMP, NYLON 7/8	1

INSTRUCTIONS:

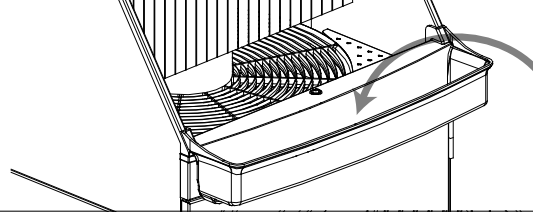
- 1 Remove left side pick-up plate allowing access to internal button plug. Remove the internal button plug and button plug on the front fascia of the machine.



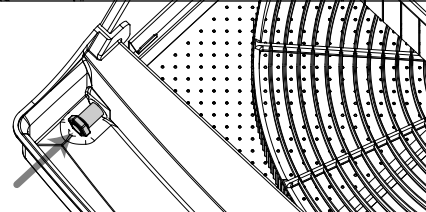
- 2 Remove the activation swing arm.



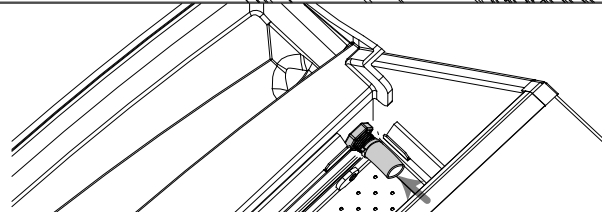
- 3 Install the drain tray over the front edge ensuring the swing arm receiver clears the hole provided. The drain tube must line up with the pre-existing hole.



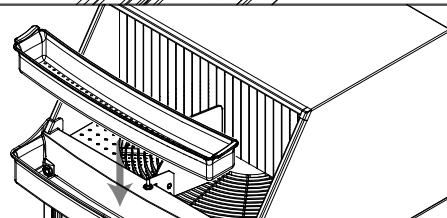
- 4 Push the metal drain tube through the drain holes so that it is fully extended into the machine (pre-assembled nut is firm against the drain tray's grommet).

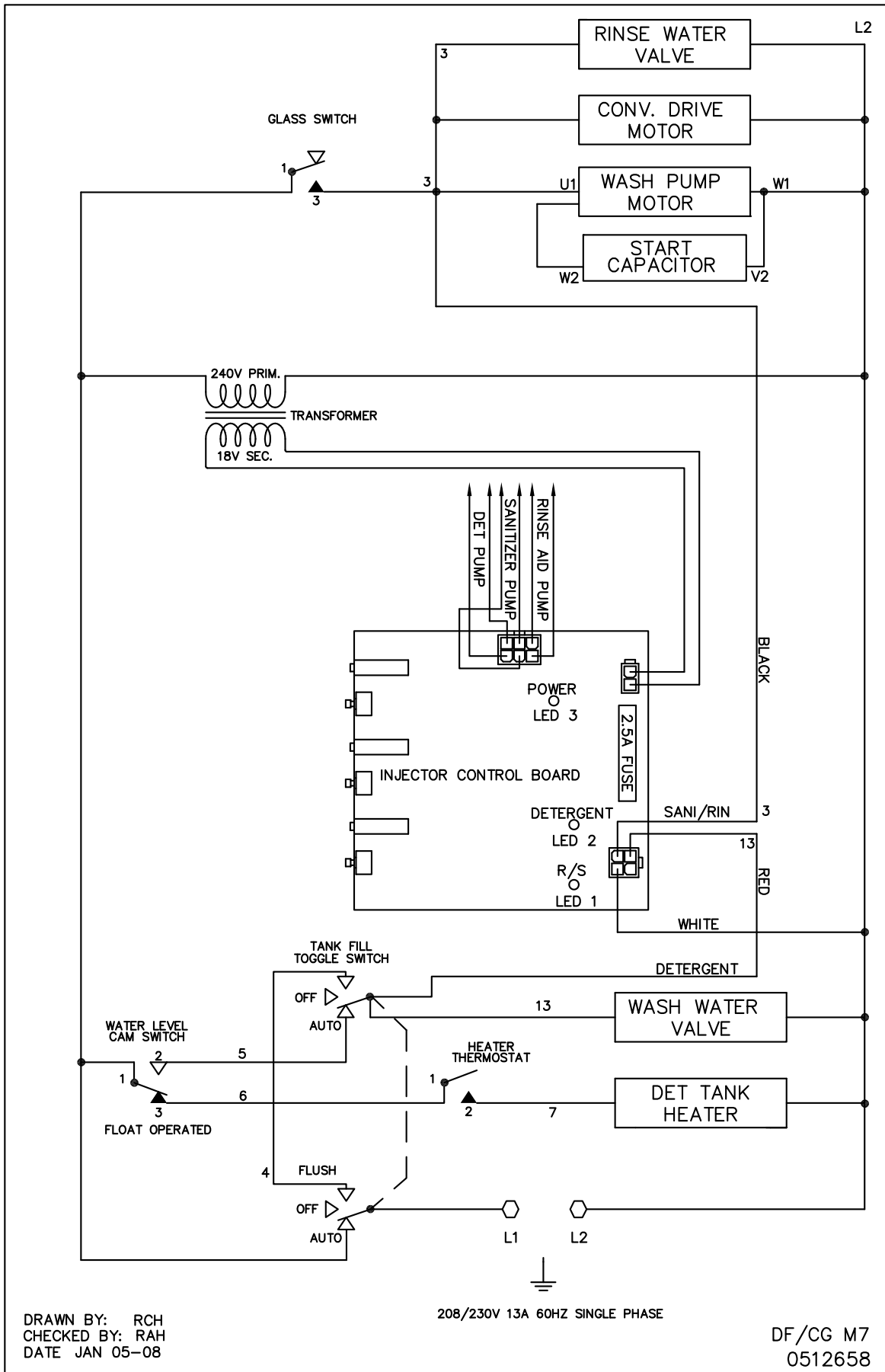


- 5 Screw the bulkhead nut to the drain tube that is protruding into the tank with the nut face containing dimples facing the inside of the machine. Attach braided hose to protruding end, and secure using the provided hose clamp. Ensure the hose is pointed slightly downward.



- 6 Replace the left pick-up plate and the activation swing arm, ensuring the arm's movement is not hindered. Assemble the screen into the tray.





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