



MODEL CS 70



Door-Type Low Temperature Chemical Sanitizing Dishwasher

OWNER'S INSTALLATION, OPERATION AND MAINTENANCE MANUAL



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AN ELECTRICAL WIRING DIAGRAM IS LOCATED INSIDE
THE COVER OF THE CONTROL BOX OF THIS MACHINE.

THE MEIKO MODEL CS 70 DISHWASHER HAS BEEN DESIGNED
EXCLUSIVELY FOR THE WASHING OF DISHES, GLASSWARE, CUTLERY
AND KITCHEN UTENSILS IN A COMMERCIAL OR INSTITUTIONAL SETTING
AND MUST NOT BE USED FOR ANY OTHER PURPOSE.

MEIKO ACCEPTS NO RESPONSIBILITY FOR DAMAGE TO THE APPLIANCE, SURROUNDING
EQUIPMENT OR ENVIRONMENT THAT IS CAUSED BY INAPPROPRIATE INSTALLATION OR
OPERATION, OR FROM ANY SERVICE THAT IS UNDERTAKEN BY NON-AUTHORIZED
PERSONNEL, OR FROM THE USE OF ANY PARTS EXCEPT THOSE THAT ARE APPROVED BY THE
MANUFACTURER. ANY SUCH INSTALLATION, USE OR SERVICE WILL IMMEDIATELY VOID THE
MANUFACTURER'S WARRANTY.

ANY MODIFICATIONS TO THE APPLIANCE THAT ARE PERFORMED WITHOUT THE WRITTEN
PERMISSION OF MEIKO WILL IMMEDIATELY VOID THE MANUFACTURER'S WARRANTY.

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1 INTRODUCTION

1.1 Overview of Equipment

The MEIKO Model CS 70 **kube** is a commercial dishwasher designed for cleaning dishes, glassware, trays, cutlery and kitchen utensils with a minimum of employee intervention or supervision.

A control keypad allows easy selection of On/Fill and Off/Drain cycles. A digital display permits easy monitoring of operation.

Other features of the unit that affect operation include:

CS 70 - advanced microprocessor technology for maintenance and end user dishmachine settings

Auto Prime - Timed priming function on all chemical pumps

Temp Safe - User-selectable temperature-based automatic drain/refill feature to ensure desired wash and rinse temperatures

Delime Cycle - Automatically fills machine, signals for delimer, delimes for five minutes, then drains and rinses machine

Fully automatic operation - automatic fill, automatic start, and automatic drain

Proof of delivery window - provides a visual indication that chemicals are being dispensed

For efficient and SAFE operation, be sure to follow the installation and operating instructions provided in this manual. In particular, all safety symbols and notices on the equipment and in the supplied documentation must be followed.

IMPORTANT

The Model CS 70 **kube** dishwasher has been designed exclusively for the washing of dishes, glassware, trays, cutlery and kitchen utensils in a commercial or institutional setting and must not be used for any other purpose.

1.2 General Safety Information

The following symbols and headings are used throughout this manual to indicate possible hazards to persons or to the equipment. The symbols and headings are shown in order of importance. The descriptive text following these headings is *italicized* for easy recognition.



WARNING! *Possible hazard to persons, such as from electrical shock, crushing, or hot surfaces.*

CAUTION

Possible hazard to the dishwasher or to other equipment.

IMPORTANT

Vital information or tips for the installer or operator.

NOTE

Information or tips for the installer or operator.

2 TRANSPORT AND SHIPPING

IMPORTANT

- *Observe any notices on the crating material that pertain to shipping.*
- *Use care when transporting the equipment.*
- *Customers are required to **inspect all equipment upon receipt** for freight damage, concealed or otherwise. If a shipment is signed for without noting freight damage, the receiving firm accepts all responsibility, and MEIKO cannot collect for a future discovery of freight damage.*

If equipment arrives at the customer's site with crate and/or package damage, the factory strongly suggests refusal of the shipment due to damage claim. Immediately contact MEIKO Customer Service at 1-800-55-MEIKO (1-800-556-3456), providing full details on the customer, serial number and extent of damage present.



WARNING! *In NO EVENT should a damaged appliance be installed or operated!*

3 INSTALLATION

3.1 Overview of Installation

The owner should contract with qualified personnel to move the appliance to the installation location, unpack it, and prepare it for final utility connections. In most cases, local codes prevent the final utility connections from being made by any party other than a licensed electrician and/or plumber.

IMPORTANT

It is the responsibility of the owner to ensure that all aspects of the installation comply with all applicable local and national codes.

IMPORTANT

The appliance's warranty is not valid until a MEIKO Authorized Service Agent performs a Startup and Demonstration on the appliance. This Demonstration should be scheduled after installation.

Installation of the dishwasher involves the following steps:

- Verifying that the utility connections are present, are appropriate for the appliance, and comply with all applicable local and national codes.
- Unwrapping the appliance (leaving the shipping skid in place for easier movement) and checking for shipping damage.
- Moving the appliance to the installation location, removing the skid, and leveling the feet.
- Connecting the electrical supply.
- Connecting the warewasher's detergent, rinse aid and sanitizer tubes to appropriate dispensers.
- Connecting the fresh water supply.
- Connecting the accumulator drain.
- Connecting the machine to tabling.
- Contacting your MEIKO Authorized Service Agent to perform a Startup and Demonstration on the appliance. This step also validates the appliance's warranty.

3.2 Requirements Before Installation

Before the installer can uncrate and move the appliance to the installation location, the following conditions **MUST** be met:

- **INSTALLATION AREA REQUIREMENTS**
 - The area **MUST** be frost-free. Freezing temperatures (32°F/0°C or lower) inhibit proper operation and can damage internal components.
 - The area **MUST** have a firm floor surface. It is possible to compensate for uneven flooring by adjusting the feet.
 - The area should be away from appliances, furniture or surfaces that can be damaged by water. If this is not possible, these items should be protected from the small quantities of water that are splashed during normal operation of the dishwasher.
- **UTILITY CONNECTION REQUIREMENTS**
 - Connections must be present and ready for hookup to the appliance. All utility supplies must comply with the electrical information labels, with the information on the data plate, and with all applicable local and national codes.
 - Electrical leads and the water supply line (supplied by the customer) must be present.
 - Appropriate detergent, rinse aid and sanitizer containers should be installed and ready for connection to the appliance.
- **GENERAL REQUIREMENTS**

Authorized personnel should be available to perform the actual utility connections.

3.3 Uncrating, Positioning and Leveling

1. Remove all shipping and packaging material from the appliance, including supports and wrappings. Leave the shipping skid in place at this time to allow for easier movement to the installation location.
2. Check for shipping damage as described in Section 2, "Transport and Shipping." If damage is present, immediately contact MEIKO Customer Service at **1-800-55-MEIKO** (1-800-556-3456), providing full details on the customer, serial number and extent of damage present.
3. Move the appliance to the installation area and remove the skid. Use caution to avoid damaging the appliance or any of its components.
4. Using a spirit level, check that the appliance is level in both directions (front-to-back AND side-to-side). If necessary, level the appliance by rotating the bottom section of each foot.

CAUTION

The dishwasher **MUST** be level for proper operation.

3.4 Accessing the Utility Connections

Water supply and drain connections are accessed from the lower right side of the dishwasher. The electrical supply enters through a strain relief at the back of the control box. The terminal block is located inside the control box.

To open the control box:

1. Remove AND RETAIN the two screws on the top edge of the cover panel. See Figure 3-1.
2. Swing the cover panel down to access the interior of the box. The main electrical supply terminal block is located on the back wall of the box.

Figure 3-1

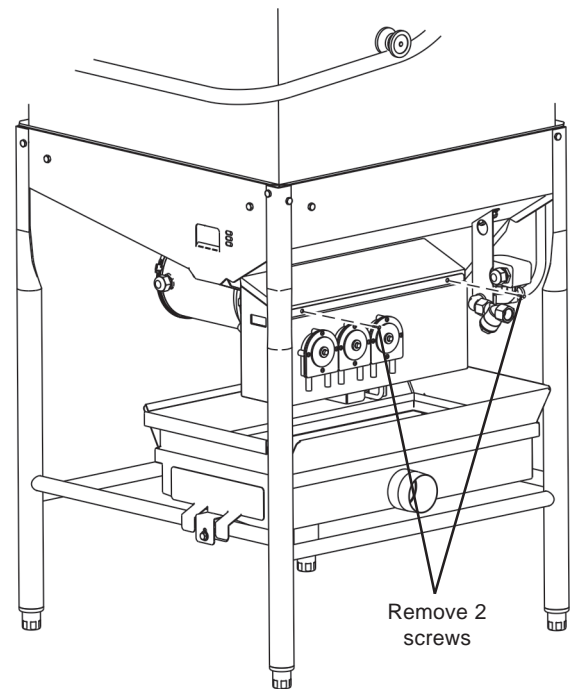
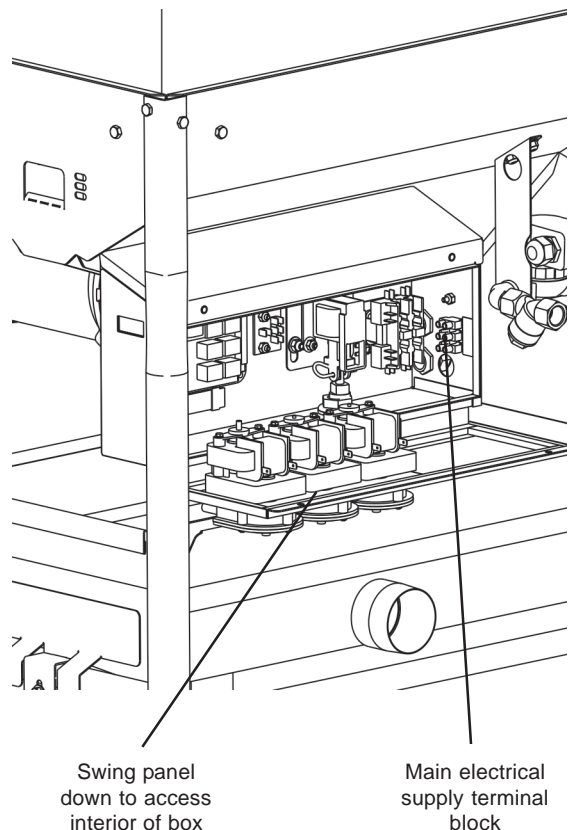


Figure 3-2



3.5 Main Electrical Supply Connection



WARNING!

Check that the circuit breaker/fused disconnect is in the OFF position and that the unit is switched off before making the electrical utility connections.

IMPORTANT

In some cases, local codes dictate that electrical supply connections be made only by a certified professional.

1. Check that the incoming power leads are of sufficient rating for the appliance's current draw. Amperage and minimum supply wire specifications are shown on the serial plate and on the electrical information label.

2. Check that the incoming power leads are long enough to permit the unit to be repositioned for servicing.
3. Locate the strain relief for the electrical supply wiring at the lower rear of the control box (Figure 3-3). Thread the incoming supply leads through the strain relief and to the main electrical supply terminal block on the back wall of the box.
4. Refer to Figure 3-4 and the electrical wiring diagram. Connect the power supply and ground leads as indicated.
5. Adjust the strain relief to fasten the wiring in place. You should leave enough slack in the wiring to prevent stress on the terminal connections.

Figure 3-3: Utility connections

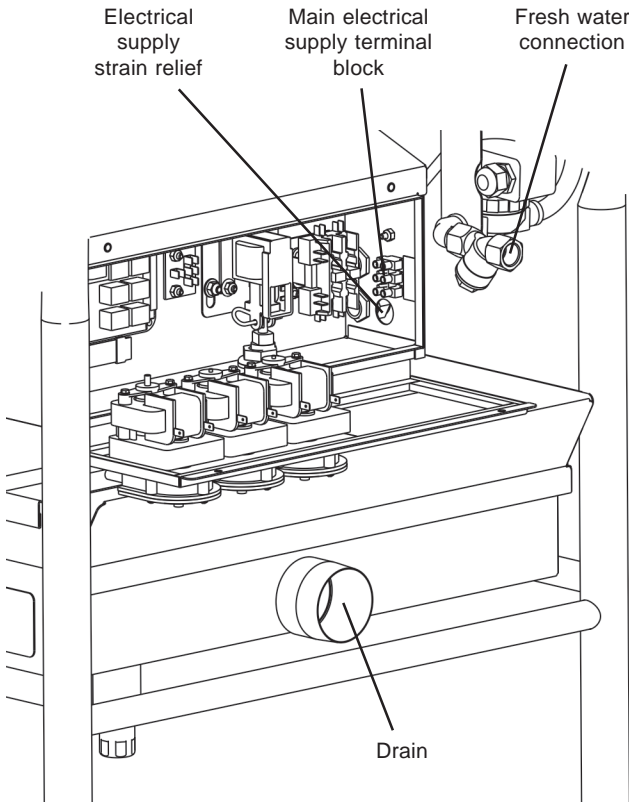
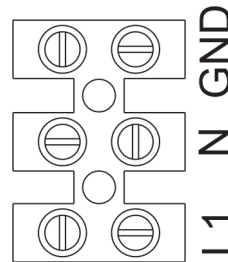


Figure 3-4: Main electrical supply connections



115V, 60 Hz, 1 Phase:
 L1 = "hot" (line)
 N = neutral
 GND = ground

3.6 Dispensing system overview

The CS 70 is equipped with liquid detergent, rinse aid and sanitizer pumps. Each pump is equipped with a supply tube that exits the rear of the machine. A stiffener tube is also provided for the ends of each tube. The end of the tube with the stiffener should be inserted and fastened into appropriate liquid chemical containers (supplied by others).

During operation, chemicals are automatically dispensed according to the timed settings for each pump, which can be individually configured as required. A proof of delivery window provides a visual indication that chemicals are being dispensed.

See Figure 3-5.

3.7 Connecting Chemical Containers

1. Check that all chemicals are compatible with the unit. In particular, a commercial (not a domestic) detergent **MUST** be used.
2. Check that the containers are correctly installed or positioned according to the manufacturer's instructions.
3. Each chemical dispensing pump is equipped with a supply tube that exits the rear of the machine. A stiffener tube is also provided for the end of each tube.
4. Assemble a stiffener tube onto the end of each of the chemical tubes using two tie wraps. See Figure 3-6.
5. Locate the RED liquid detergent tube, marked DET. Insert the tube stiffener into the liquid detergent container and fasten it in place.
6. Locate the BLUE liquid rinse aid tube marked RIN. Insert the tube stiffener into the liquid rinse aid container and fasten it in place.
7. Locate the CLEAR or WHITE liquid sanitizer tube marked SAN. Insert the tube stiffener into the liquid sanitizer container and fasten it in place.

Figure 3-5: Dispensing system components

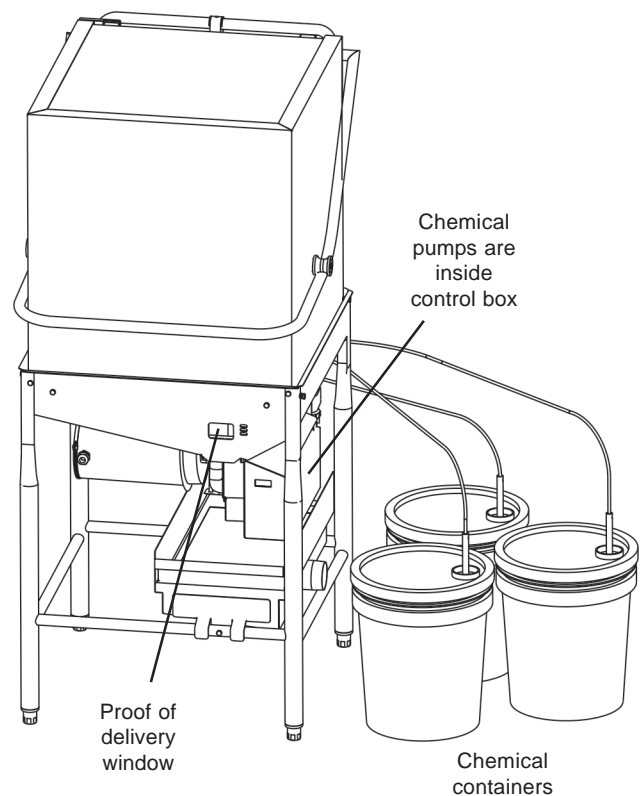
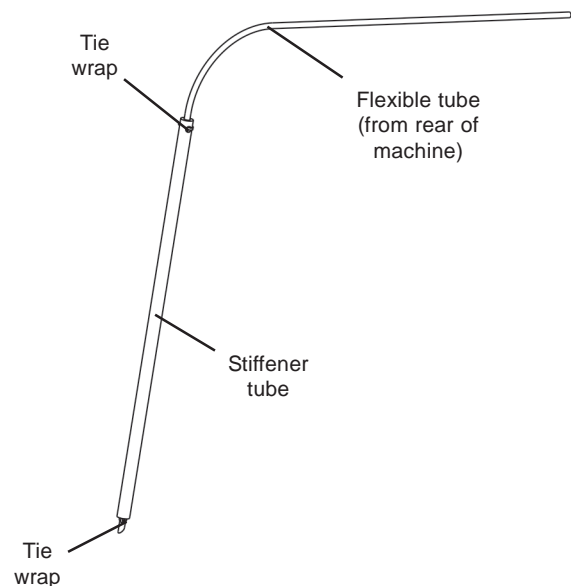


Figure 3-6: Assembling the stiffener tubes



3.8 Fresh Water Supply Connection

CAUTION

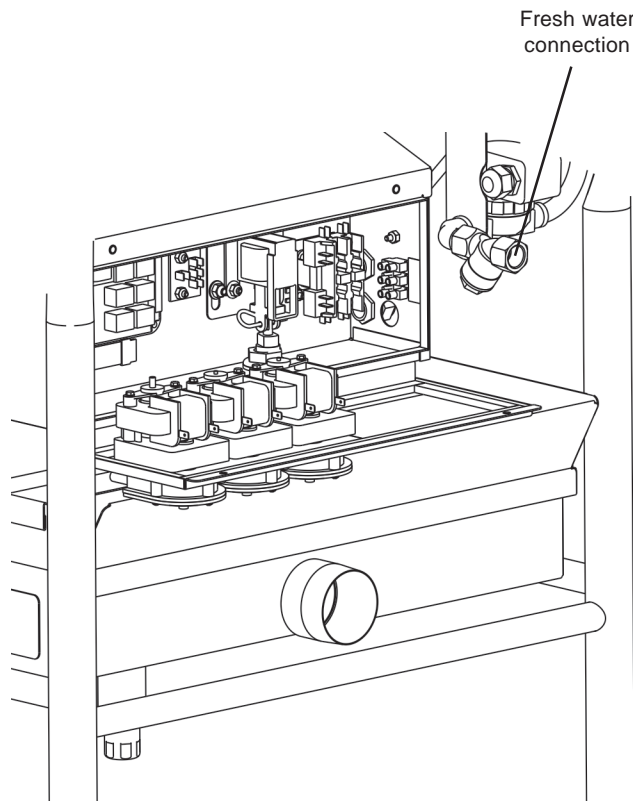
Before connecting the water supply, the line MUST be flushed clean of all debris, including (but not limited to) pipe sealant, metal particles, solder, etc. This debris can damage the appliance.

IMPORTANT

In some cases, local codes dictate that water supply connections be made only by a certified professional.

1. Check that iron or other metal particles cannot contaminate the fresh water supplied to the dishwasher.
2. Check that the incoming water pressure is within the acceptable range for the appliance (maximum 100 psi, 6.89 bars).
3. Check the incoming water temperature. MEIKO recommends a water temperature of 140°F/60°C for optimum operation.
4. Check the incoming water hardness. MEIKO recommends a hardness of 4-6 grains per U.S. gallon.
5. Because the water inlet incorporates a “Y” strainer, an additional “Y” strainer in the water supply is unnecessary unless required by local, national or international codes.
6. Connect the customer-supplied water line to the street elbow fitting on the fill assembly. Use a sealing compound on the threads to ensure that no leaks are present in the connection. See Figure 3-7.
7. Check that the water line is long enough to permit the unit to be repositioned for servicing.

Figure 3-7: Fresh water connection



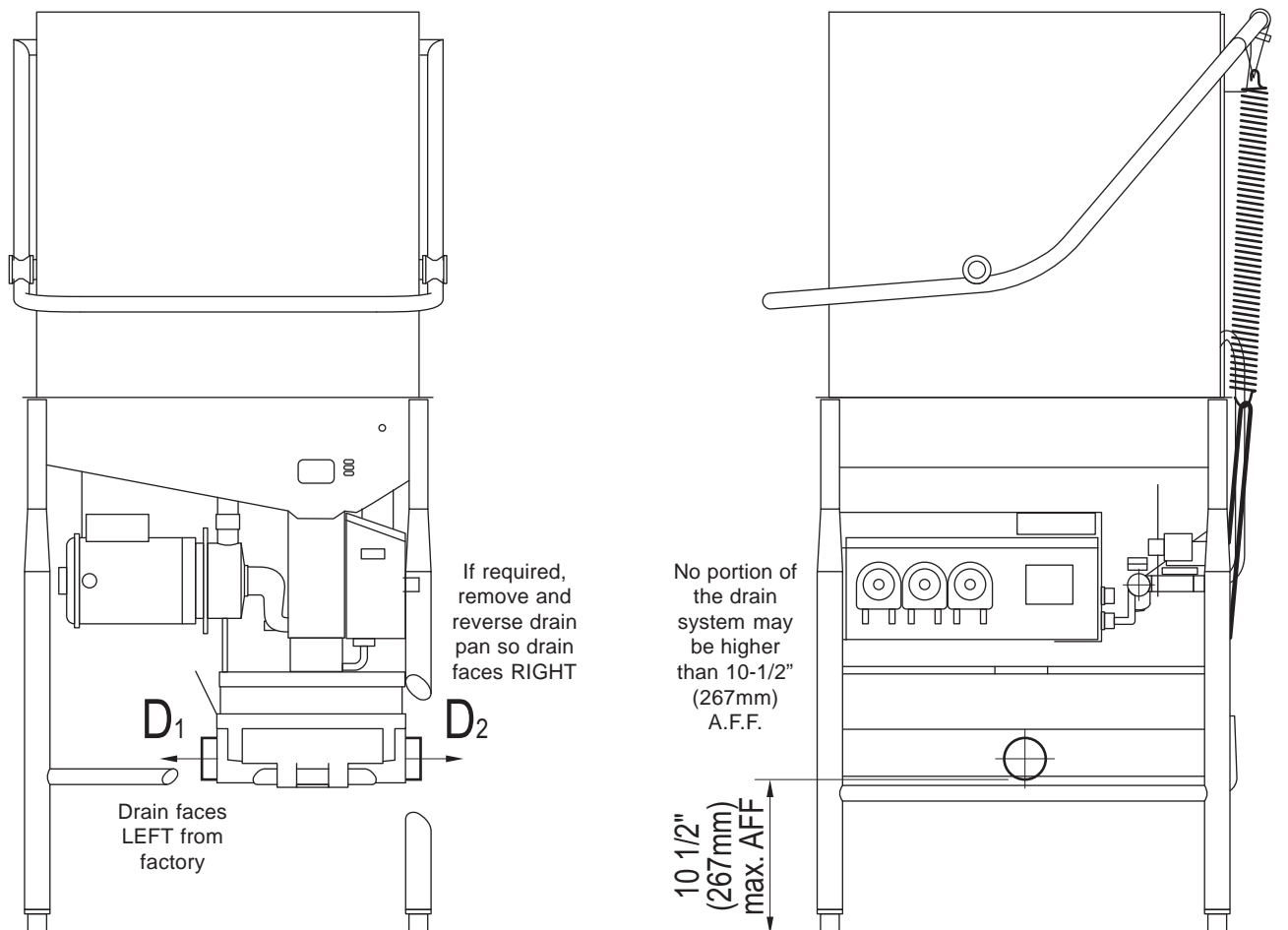
3.9 Drain Connection

1. Check that the floor drain is correctly sized for the machine. A drain with a minimum diameter of 2"/51mm is strongly recommended.
2. Check the type of drain that will be used. (wall or floor).
3. Check the position of the machine drain in reference to the intended facility drain. If required, the drain pan can be removed and reversed to change the position of the drain. See Figure 3-8.
4. Route the drain line to the drain. In some cases, a grease trap (supplied by others) must be fitted into the waste water line. If this trap is required for your installation, check that it is present.

CAUTION

The CS 70 uses a gravity drain system. No portion of the drain system may be higher than 10-1/2" (267mm) A.F.F. to ensure correct drain operation. See Figure 3-8.

Figure 3-8: Drain configuration and connection



3.10 Tabling Attachment

The CS 70 can be positioned in either of two tabling configurations; straight through, or in a corner installation. See Figure 3-9.

1. **IF** the machine will be positioned in a corner, perform the following steps before attaching the tables:

- Position the machine so that the LEFT REAR corner of the machine faces the corner of the wall, as shown in Figure 3-9. For corner installations, this placement is necessary to ensure that the control panel can be reached by the operator.
- Remove the FRONT rack guide as shown in Figure 3-9. The guide is held in place by two screws. Replace the guide on the LEFT SIDE position in the 2 mounting holes provided.

2. Position the machine and tables as follows:

- Check that the centerline of the opening at the end of each table is aligned with the centerline of the rack track of the machine. See Figure 3-10.
- Check that the surface height of each table matches the height of the rack track of the machine, to ensure a smooth transition. The standard table surface height is 34" (864mm).
- Check that the machine is level.

Figure 3-9: Straight-through and corner tabling configurations

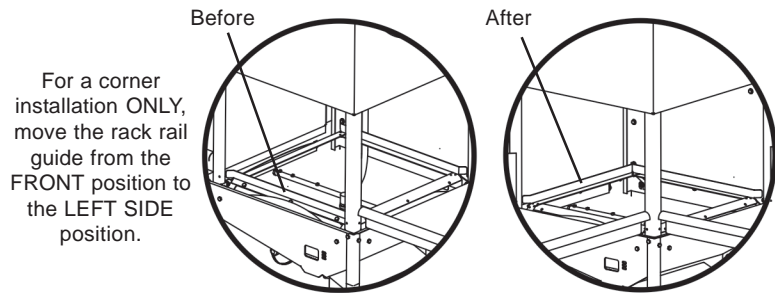
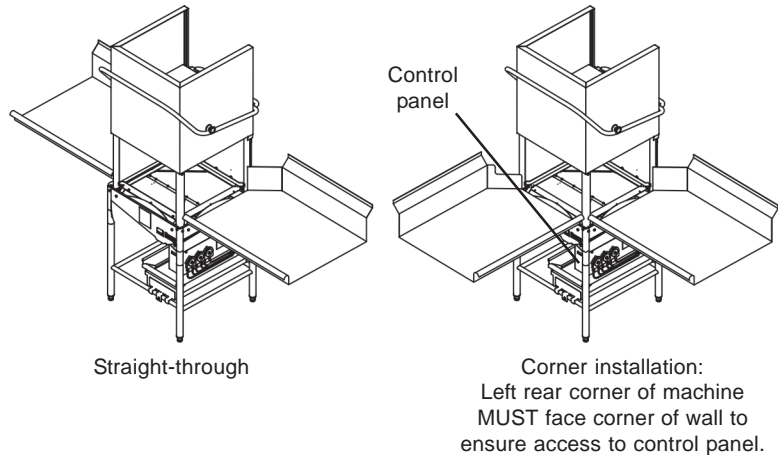
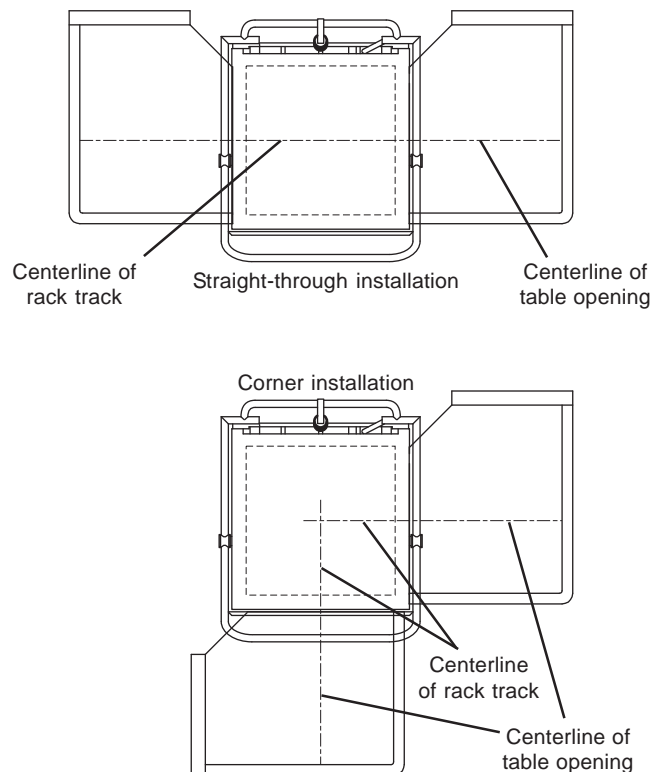


Figure 3-10: Aligning the table centerlines with the dishmachine



The height of the machine, and of most tables, can be adjusted by rotating the feet at the end of the legs.

CAUTION

After adjusting the height of the machine, always check that it is level to ensure proper operation.

3. Position each table lip-in at the machine. Be sure to seat the lip-in against the inner, vertical mounting surface. The lip-in flange should be no more than 1" in height as shown in Figure 3-11.
4. For corner installations, check that the sides of the front table do not interfere with the door handle when the door is closed. If it is necessary to trim the table sides to clear the handle, refer to Figure 3-12.
5. After the tables have been positioned correctly, secure them to the machine using silicone sealant.

Figure 3-11: Tabling attachment

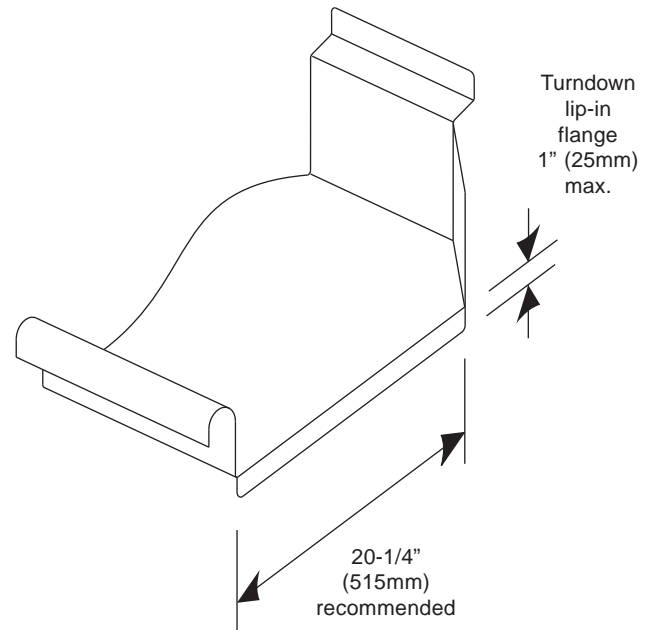
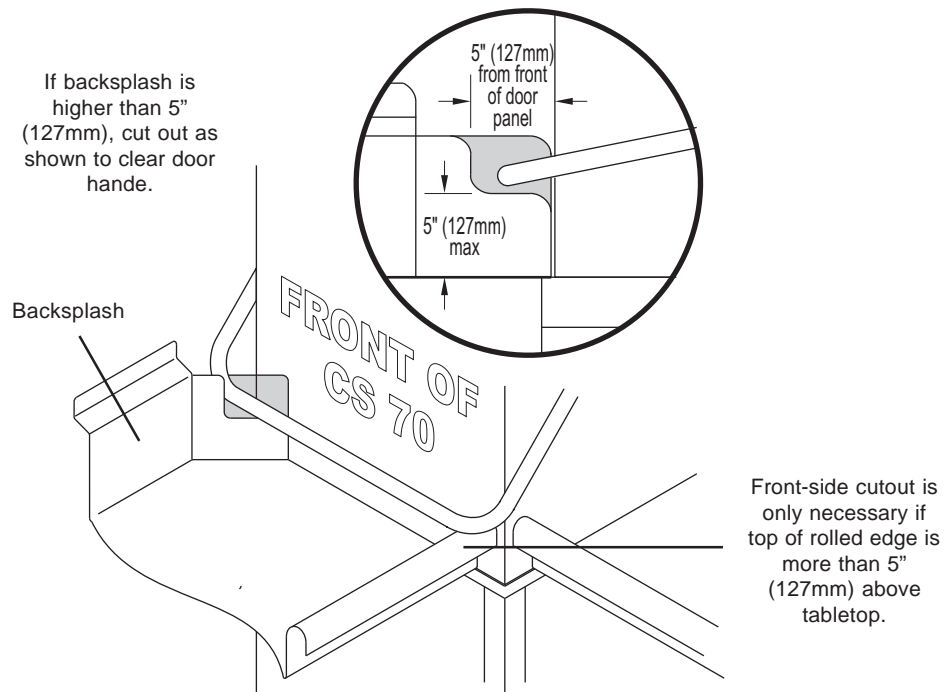


Figure 3-12: Door handle clearance for corner installations



NOTE

An optional false panel is available to prevent splashing onto the walls or floor. The false panel may be used with either straight-through or corner tabling configurations. Mounting instructions are provided with the false panel. Contact MEIKO Customer Service at 1-800-55-MEIKO (1-800-556-3456) to order.

3.11 Final Assembly

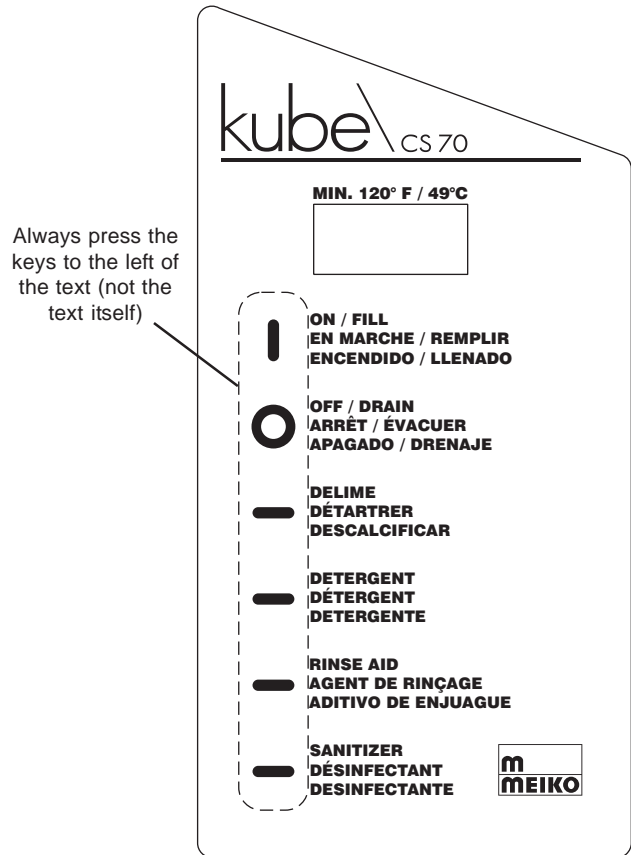
1. Check and tighten all electrical terminal screws.
2. Replace the control box cover panel and fasten in place with its two screws (Figure 3-1).
3. Switch the circuit breaker/fused disconnect to the ON position. Be sure to prime the chemical pumps and check for correct chemical concentration before operating the unit.

3.12 Priming the Liquid Detergent, Rinse Aid and Sanitizer Lines

The chemical supply lines must be primed before operating the unit. Keys are provided on the control panel for this purpose. The active area for each key is the symbol just to the left of the text description. See Figure 3-13.

1. Turn the machine on by pressing the **ON/ FILL** button.
2. Prime the detergent pump. Press the **DETERGENT** key twice, rapidly. The pump will prime for 40 seconds and automatically turn off.
3. Prime the rinse aid pump. Press the **RINSE AID** key twice, rapidly. The pump will prime for 5 minutes and automatically turn off.
4. Prime the sanitizer pump. Press the **SANITIZER** key twice, rapidly. The pump will prime for 40 seconds and automatically turn off.
5. If necessary, the pumps can be manually primed for any length of time desired by holding down the appropriate button.

Figure 3-13: kube\CS 70 control panel



3.13 Checking for Correct Chemical Concentration

The normal factory settings for chemical injection are:

- Detergent - 0.256 oz. per gallon of wash water (2.0 ml per liter).
- Rinse additive - 0.0256 oz. per gallon of rinse water (0.2 ml per liter).
- Sanitizer - titrated using sodium hypochlorite (NaClO) to 50 ppm minimum. Other chemical sanitizing solutions (iodine, etc.) may be used if permitted by local, national and international codes.
- These settings are factory defaults, but **all** settings used should **always** be checked to ensure proper operation.

To check if the normal settings are correct for your chemicals, *RUN THREE EMPTY LOADS* to completely cycle the water supply and obtain accurate test results. This will only take a few minutes. Then, run a sample load with soiled ware and examine the results.

- If the detergent setting is too low, the ware will not be adequately cleaned.
- If the rinse aid setting is too low, spotting or streaking may occur on the ware.
- The sanitizer setting should be confirmed by the chemical leasing company professional using an approved method (typically test strips are used).
- If too much detergent or rinse aid is added, the extra chemicals will be wasted. This is often difficult to detect except by determining how long your chemical supplies last. If the chemicals are being exhausted quickly, you may need to have the chemical concentration adjusted.
- If it is necessary to adjust any of the chemical injection settings, refer to *Section 4, Programming* for instructions.

IMPORTANT

In all cases, any adjustments of the chemical injection settings are to be performed either by a chemical leasing company professional, or by a MEIKO authorized service agent. Changes by unauthorized personnel may void your warranty.

If you need to contact your Authorized Service Agency, please contact MEIKO Technical Support at **1-800-868-3840**.

4 PROGRAMMING

Before operating the machine, it may be necessary to access the programming mode of the CS 70 controller to select the desired options and adjust the chemical concentration.



WARNING!

It is possible to select settings in programming mode that may result in ware that is not correctly washed or rinsed. Always ensure that correct settings are selected!

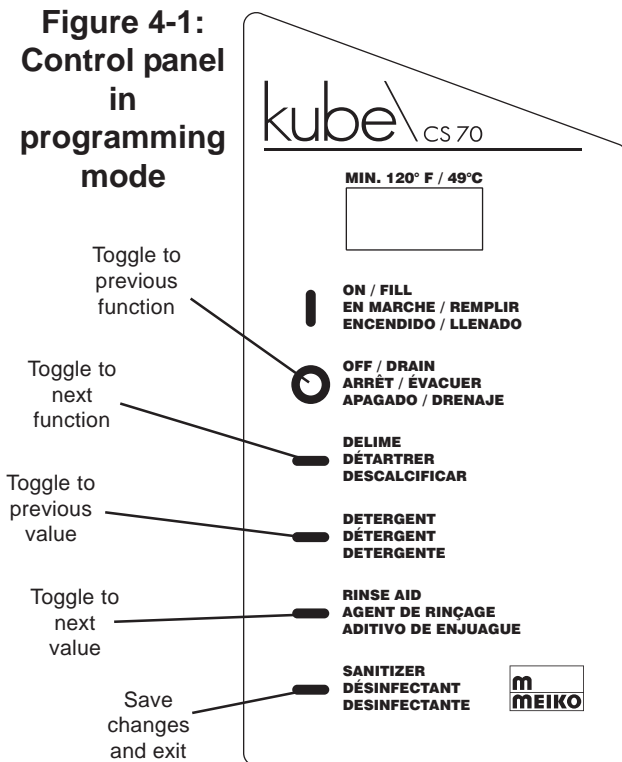
To access programming mode:

1. Check that the circuit breaker/fused disconnect is in the ON position.
2. Check that the machine is turned OFF. If necessary press the OFF/DRAIN key and wait for the machine to drain.
3. Press and hold the SANITIZER button until the machine enters programming mode.

NOTE

If the machine is not turned off first, pressing the SANITIZER button will simply prime the sanitizer pump. It is not possible to enter programming mode with the machine already turned on.

Figure 4-1:
Control panel
in
programming
mode



Once the machine is in programming mode:

- Press the OFF/DRAIN and DELIME keys to scroll up and down through the functions.
- Press the DETERGENT and RINSE AID keys to change the value/state shown.
- Press the SANITIZER key again to save changes and exit programming mode. The machine will then drain and turn off.

The programmable functions available are:

1. **Fill Time**
Length of fill in seconds. Selectable from 1-20.
2. **Drain/Fill**
Length of drain in seconds. Selectable from 0.1-5.0.
3. **Detergent**
Run time for detergent pump (per cycle) in seconds. Selectable from 0.1-20.0 (approx. flow rate is 1.8 mL/sec).
4. **Sanitizer**
Run time for sanitizer pump (per cycle) in seconds. Selectable from 0.1-10.0 (approx. flow rate is 1.8 mL/sec).
5. **Rin. Aid**
Run time for rinse aid pump (per cycle) in seconds. Selectable from 0.1-10.0 (approx. flow rate is 0.25 mL/sec).
6. **TDrain (temperature)**
Selects the temperature for the (optional) Temp Safe automatic drain/refill feature. If enabled, the wash tank temperature is checked whenever a cycle starts. If it is below the temperature chosen here, the machine will drain and refill before washing. Selectable from 100-130 in degrees F. Enabled or disabled by function 8, below.

NOTE

If the machine is configured to display temperatures in degrees Celsius (C), the technician must first translate the desired temperature into degrees F to enter it here.

7. **Temp C/F**
Select to display temperatures in degrees Fahrenheit (F) or Celsius (C).
8. **TDrain (enable/disable)**
Enables or disables the Temp Safe automatic temperature-based drain/refill feature, using the temperature selected in function 6 above.
9. **Cycle**
Selects one of two approved total cycle times for the machine. Choices are long (90 sec - default) or short (72 sec).

5 OPERATION

5.1 Location and Description of Controls

The dishwasher controls are on the keypad on the front panel, just below the wash tank. See Figure 5-1.

ON/FILL (I) key

With machine off:

- Press once to turn machine on
- Press together with **OFF/DRAIN** key to display total cycle count

With machine on:

- Press once to start manual fill

OFF/DRAIN (O) key

With machine off:

- Press together with **ON/FILL** key to display total cycle count

With machine on:

- Drains the machine and turns it off

DELIME key

With machine off:

- Begins an automatic delime cycle.

The machine will begin to fill, and “ADD DELIMER” will appear in the display. The operator should open the door, add a commercially-available deliming agent intended for use with commercial dishwashers (following the manufacturer’s instructions), and close the door. The machine will then delime automatically for five minutes, drain, refill, activate a rinse cycle, then drain again and turn off.

With machine on:

- Displays total cycle count

DETERGENT key

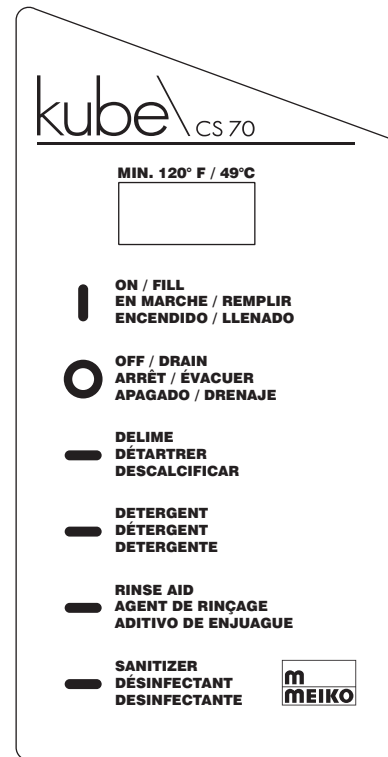
With machine off:

- No effect

With machine on:

- Primes the detergent pump. The key may be held down for manual priming, or rapidly pressed twice to prime automatically for 40 seconds.

Figure 5-1: Control panel



RINSE AID key

With machine off:

- No effect

With machine on:

- Primes the rinse aid pump. The key may be held down for manual priming, or rapidly pressed twice to prime automatically for 5 minutes.

SANITIZER key

With machine off:

- Enters programming mode (refer to Section 4, Programming)

With machine on:

- Primes the sanitizer pump. The key may be held down for manual priming, or rapidly pressed twice to prime automatically for 40 seconds.

5.2 Startup

Check the level of the external detergent, rinse aid and sanitizer containers. If necessary, replace or refill the containers.

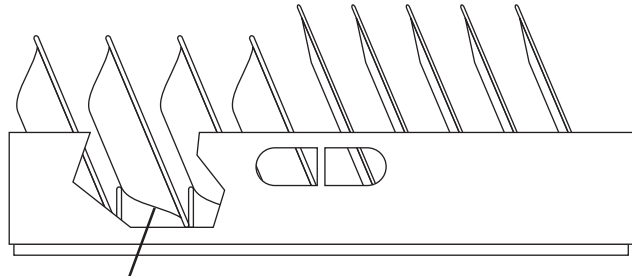
Press any the **ON/FILL (I)** key to turn on the dishwasher.

The machine will begin to fill automatically. When fill has completed, the display will read **READY**. The machine is now ready for operation.

5.3 Loading

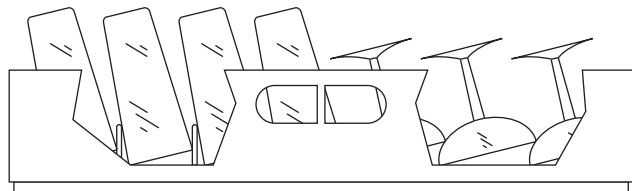
The loading guidelines shown here will lead to faster, more efficient cleaning of your ware.

Load plates, soup bowls, etc. at an angle with the inside face pointing up. Ensure that water cannot pool in the bottom of bowls.



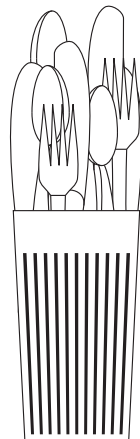
Position bowls to allow water to drain

Load hollow or concave dishware (glasses, large bowls, etc.) upside-down and at an angle. This allows water to drain more quickly, preventing stains.



For greater efficiency in loading cutlery, you can use cutlery holders. When loading them:

- Do not overload the holders.
- Always load knives, forks and spoons with the handle **DOWN**.
- Do not load identical ware into any given holder. Instead, load an assortment of knives, forks and spoons into each holder. Identical ware is often too closely spaced for effective cleaning.



Do not stack items in the dishwasher. Stacked items require longer or multiple cleaning cycles because the wash water cannot reach the food residue as effectively. It is more efficient to load the dishwasher with fewer items and run multiple, shorter cycle times.

5.4 Operation

Slide a loaded dishrack into the machine, and close the door. The cycle will begin automatically.

During the cycle, the display will show the following functions:

1. Wash
2. Detergent dispense
3. Drain
4. Fill
5. Sanitizer dispense
6. Rinse Aid dispense
7. Rinse
8. Cycle complete

If desired, the cycle can be stopped at any time by pressing the **OFF/DRAIN (O)** key OR by opening the door.



WARNING!

If the door is opened suddenly, hot water can spray out of the dishwasher. To prevent this from happening:

- *Open the door slowly until the dishwasher stops operating, OR*
- *Press the **OFF/DRAIN (O)** key to stop the wash/rinse cycle before opening the door.*

At the end of the cycle, the machine will stop operating and the display will read READY. Open the door to remove the dishrack. Note that water vapor will escape when the door is opened; this is normal.



WARNING!

Use caution when handling hot dishware.

5.5 Between Cycles

Between cycles, leave the door of the machine closed. If the door is left open, the wash tank water will cool more quickly.

If the Temp Safe automatic temperature-based drain/refill feature is enabled, the wash tank temperature is checked whenever a cycle is started. If the temperature is below the selected temperature for the Temp Safe feature, the machine will automatically drain and refill before the cycle starts. This typically occurs if the machine is left idle for a period of time.

When you are ready to start a new cycle, refer to Section 5.3, "Loading."

5.6 Shutdown

At the end of the shift, press the **OFF/DRAIN (O)** key. The machine will automatically drain and turn off.

After the dishwasher has drained and turned off, open the door. Remove any food particles, scraps or bones from the scrap screens. Then, refer to *Section 6, Cleaning* if required.

MEIKO recommends that the door of the dishwasher be left open overnight to allow it to air thoroughly.

6 CLEANING



WARNING!

Before ANY cleaning, check that the circuit breaker/fused disconnect is in the OFF position and that the unit is switched off.

IMPORTANT

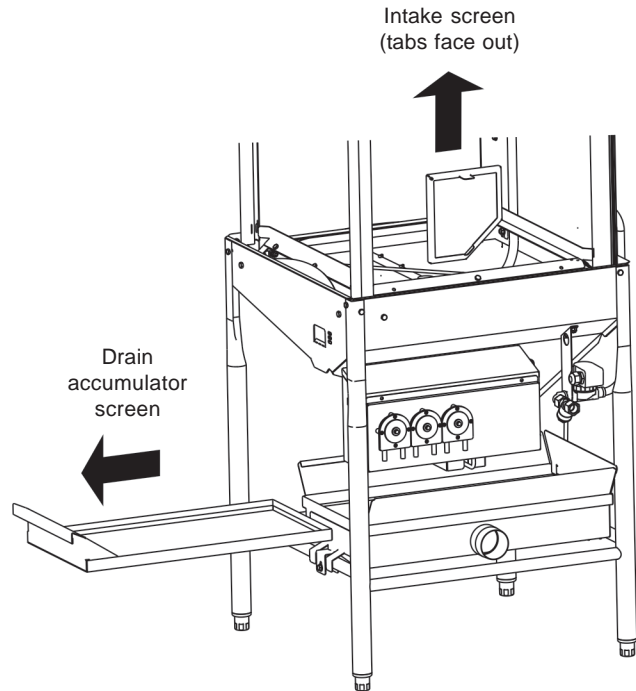
The headings *Daily Cleaning* and *Weekly Cleaning* in this section are general recommendations based on typical soiling.

If soil begins to accumulate, the unit should be cleaned more frequently. Extensive food soil deposits inside the machine work against optimal performance. Some items may not be cleaned as effectively, resulting in the need for repeated washing.

6.1 Daily Cleaning (or as required)

1. At the end of the shift, press the **OFF/ DRAIN (O)** key. The machine will automatically drain and turn off.
2. After the dishwasher has drained and turned off, open the door. Remove any food particles, scraps or bones from the scrap screens.
3. Remove the intake screen and clean it thoroughly using a brush and warm water.
4. Remove the drain accumulator screen and clean it thoroughly using a brush and warm water.
5. MEIKO recommends that the door of the dishwasher be left open overnight to allow it to air thoroughly.
6. Reassemble all components into the machine before operation. Note that the intake screen must be reinstalled with the tabs facing out. See Figure 6-1.

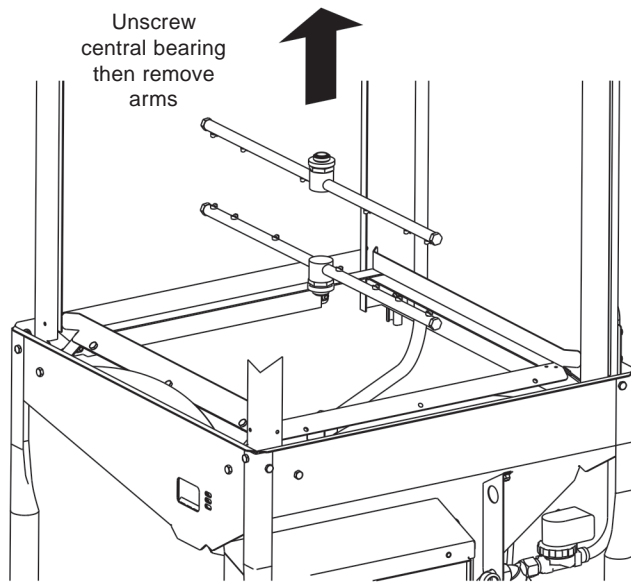
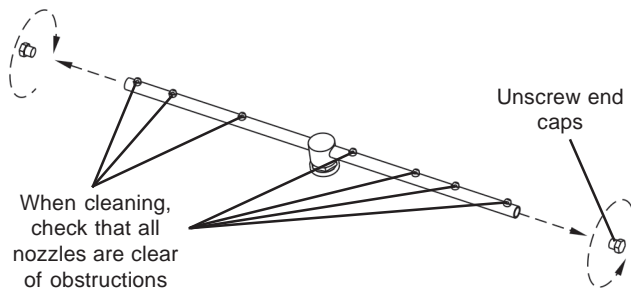
Figure 6-1: Screen removal



6.2 Weekly Cleaning (or as required)

Once per week, or as required, perform the following steps:

1. Open the door. Remove and clean the intake and accumulator screens as described in *Section 6.1, Daily Cleaning*.
2. Remove and disassemble the wash/rinse arms as shown in Figure 6-2.
 - To remove the arms, unscrew the central bearing from the wash/rinse manifold inside the machine.
 - To disassemble the arms, unscrew both end caps.
3. Clean the arms with a brush and warm running water. For each arm, be sure to check that all of the nozzles are clear of obstructions and debris.
4. Reassemble all components into the machine before operation. Note the following:
 - The intake screen must be reinstalled with the tabs facing out. See Figure 6-1.
 - The upper and lower wash/rinse arms (and their end caps) are interchangeable.

Figure 6-2: Wash/rinse arm removal**Figure 6-2: Wash/rinse arm disassembly**

6.3 Exterior cleaning (as required)

CAUTION

When cleaning the exterior of the dishwasher, be sure to follow these guidelines:

- MEIKO strongly recommends using detergent when cleaning the exterior of the unit, instead of commercial stainless steel cleaners. These cleaners can damage the surface of the control panel.
- Never use abrasive cleaners or pads when cleaning the exterior of the dishwasher. These can scratch the surface of the unit.



WARNING!

Ensure that detergents and stainless steel cleaners are kept out of the interior of the dishwasher. If the interior of the unit requires cleaning, refer to the delimiting procedures (Section 6.4).

6.4 Delimiting (as required)

Lime scale deposits will occur over time on the interior of the dishwasher if it is operated using a hard water supply. MEIKO recommends a hardness of 4-6 grains per U.S. gallon.

A delimiting or de-scaling process can be used to remove these deposits, as well as any accumulated food residue.

CAUTION

When delimiting the interior, be sure to follow these guidelines:

- Use delimiting agents designed for use with commercial dishwashers.
- Follow the instructions for the delimiting agent that is used.

The machine features an automatic delimiting cycle. To delimit the machine:

1. Check that the machine is off and that the tank is drained.
2. Press the **DELIME** key.
3. The machine will begin to fill, and "ADD DELIMER" will appear in the display.
4. Open the door, add a commercially-available delimiting agent intended for use with commercial dishwashers (following the manufacturer's instructions). Close the door.
5. The machine will delimit automatically for five minutes, drain, refill, activate a rinse cycle, then drain again and turn off.
6. After the delimiting cycle, inspect the interior for any remaining delimiting agent residue. If residue is present, remove it using a soft cloth and hot water.

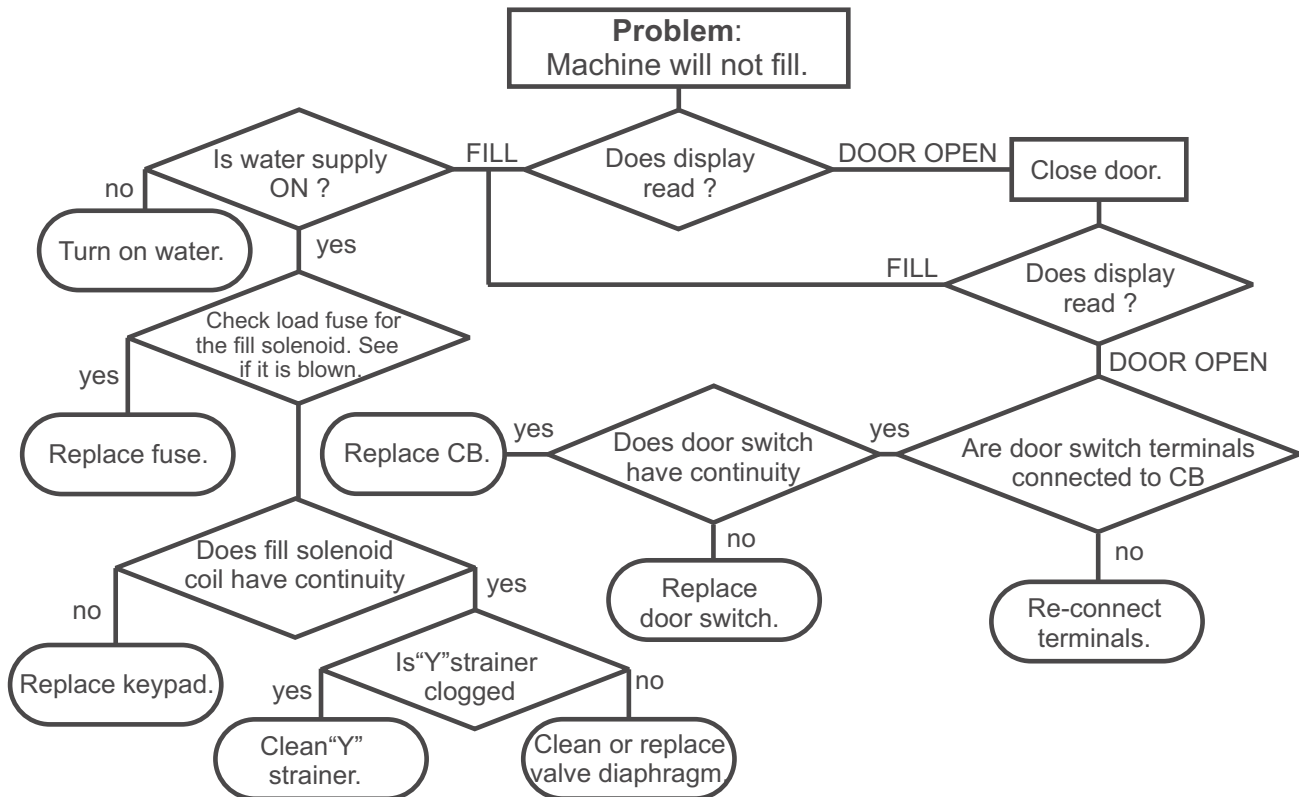
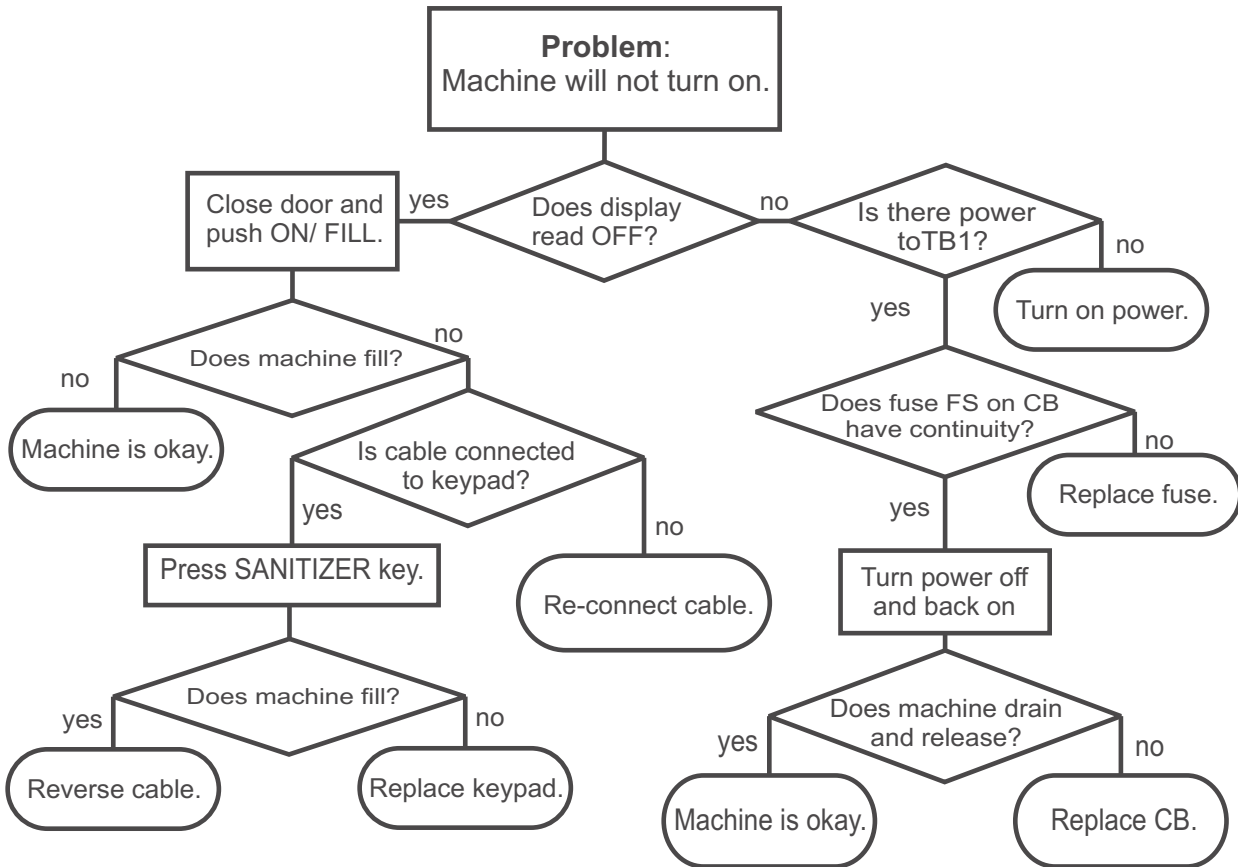


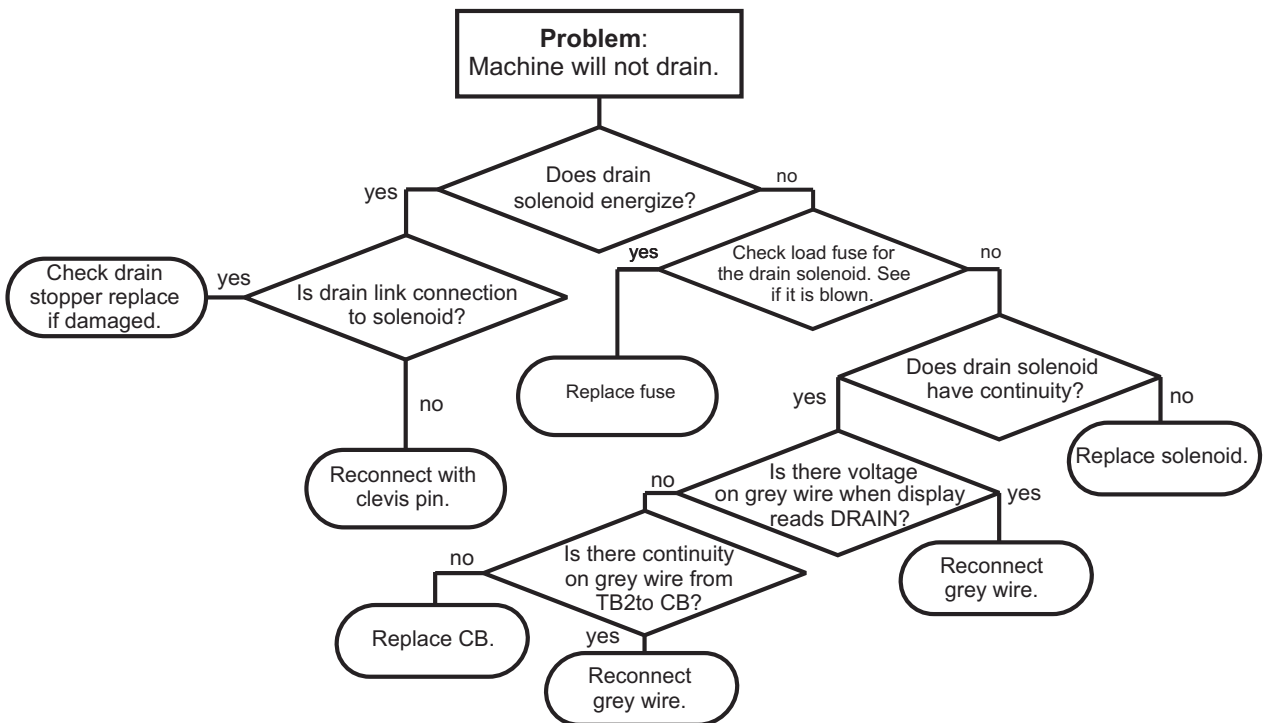
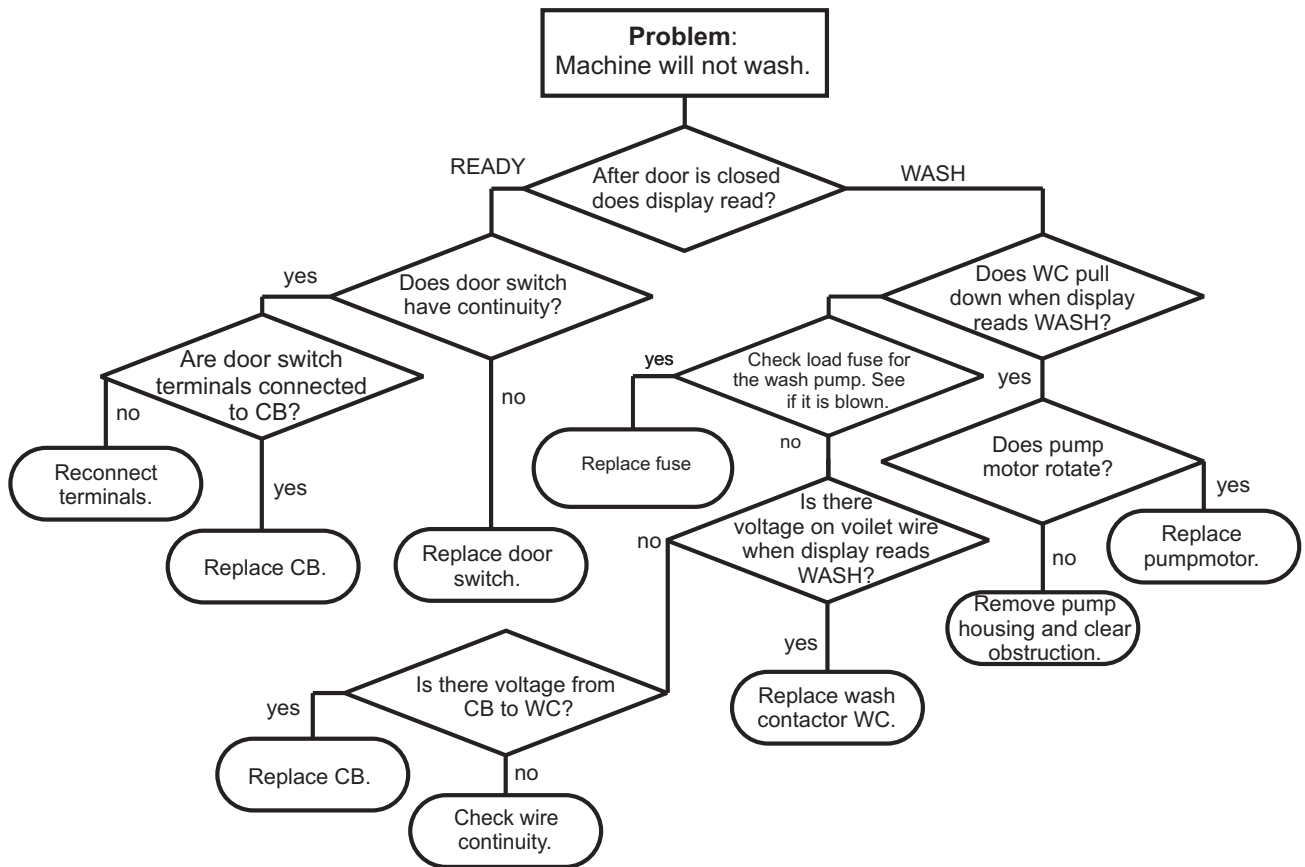
WARNING!

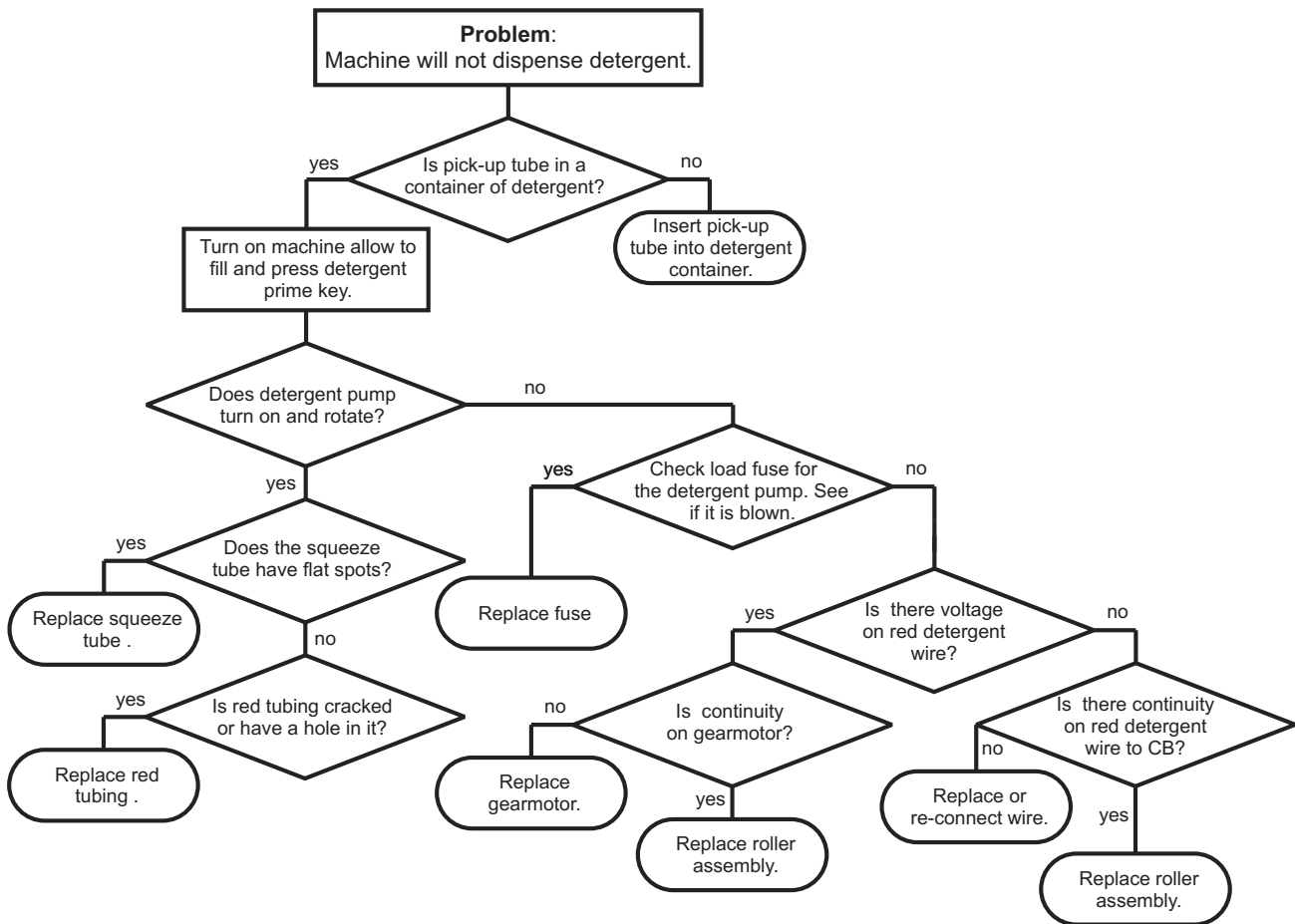
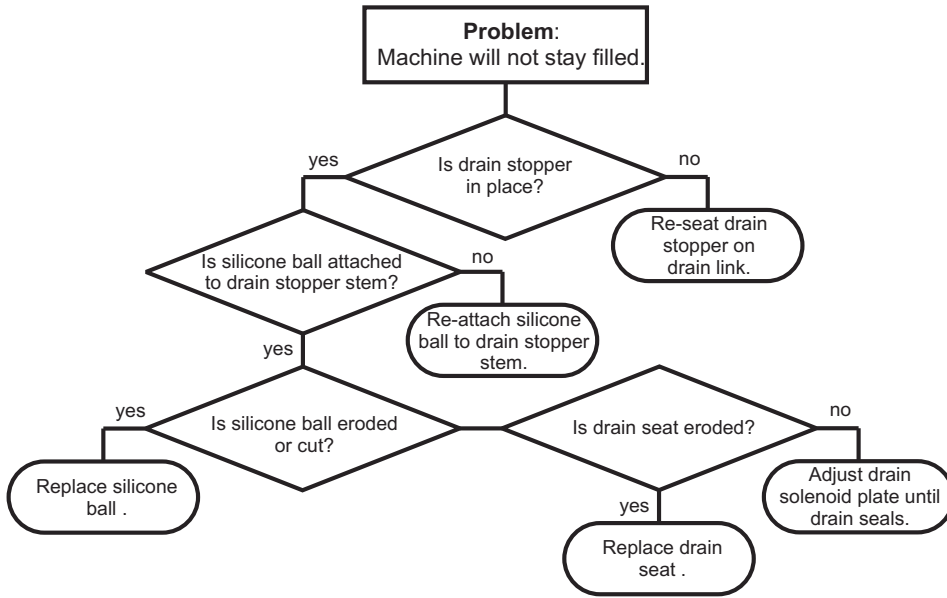
Ensure that ALL residue of the delimiting agent is removed. Residue from the agent can:

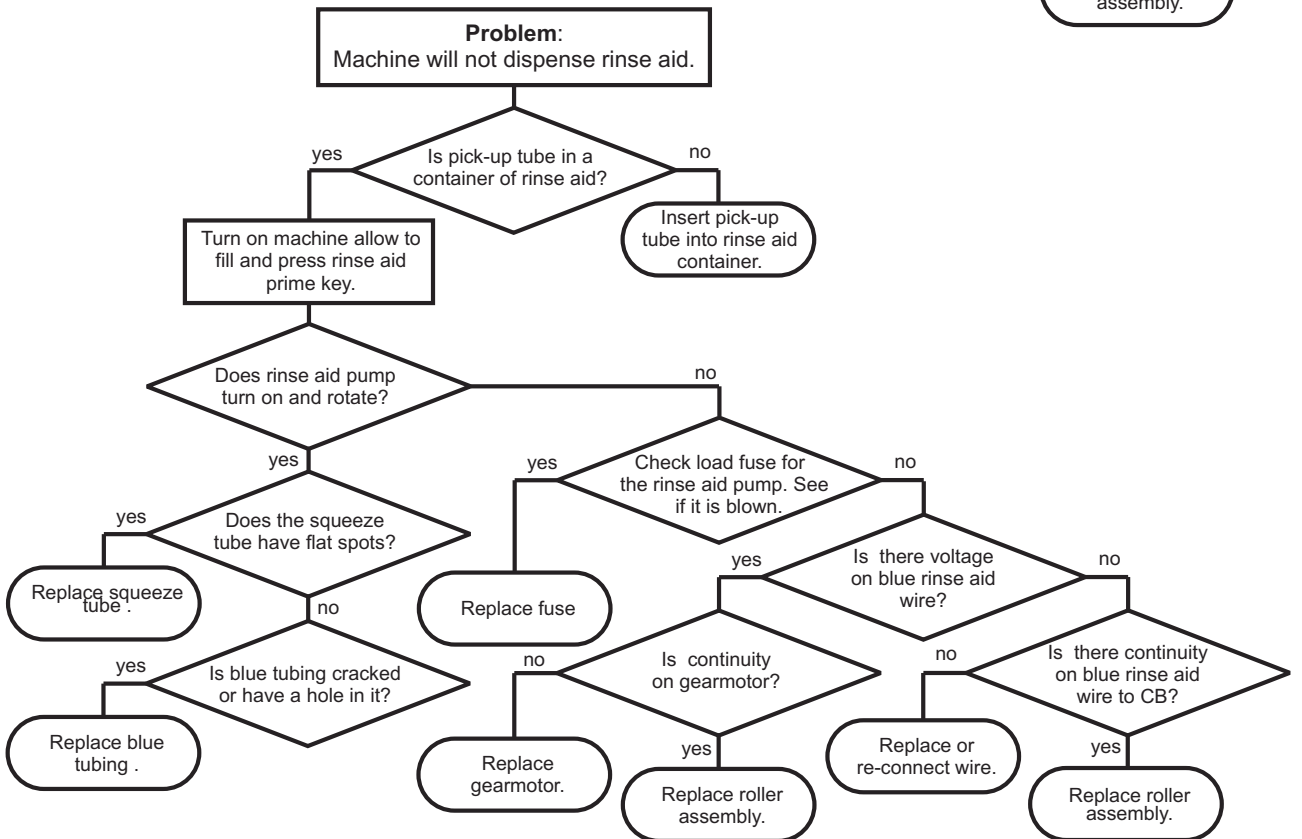
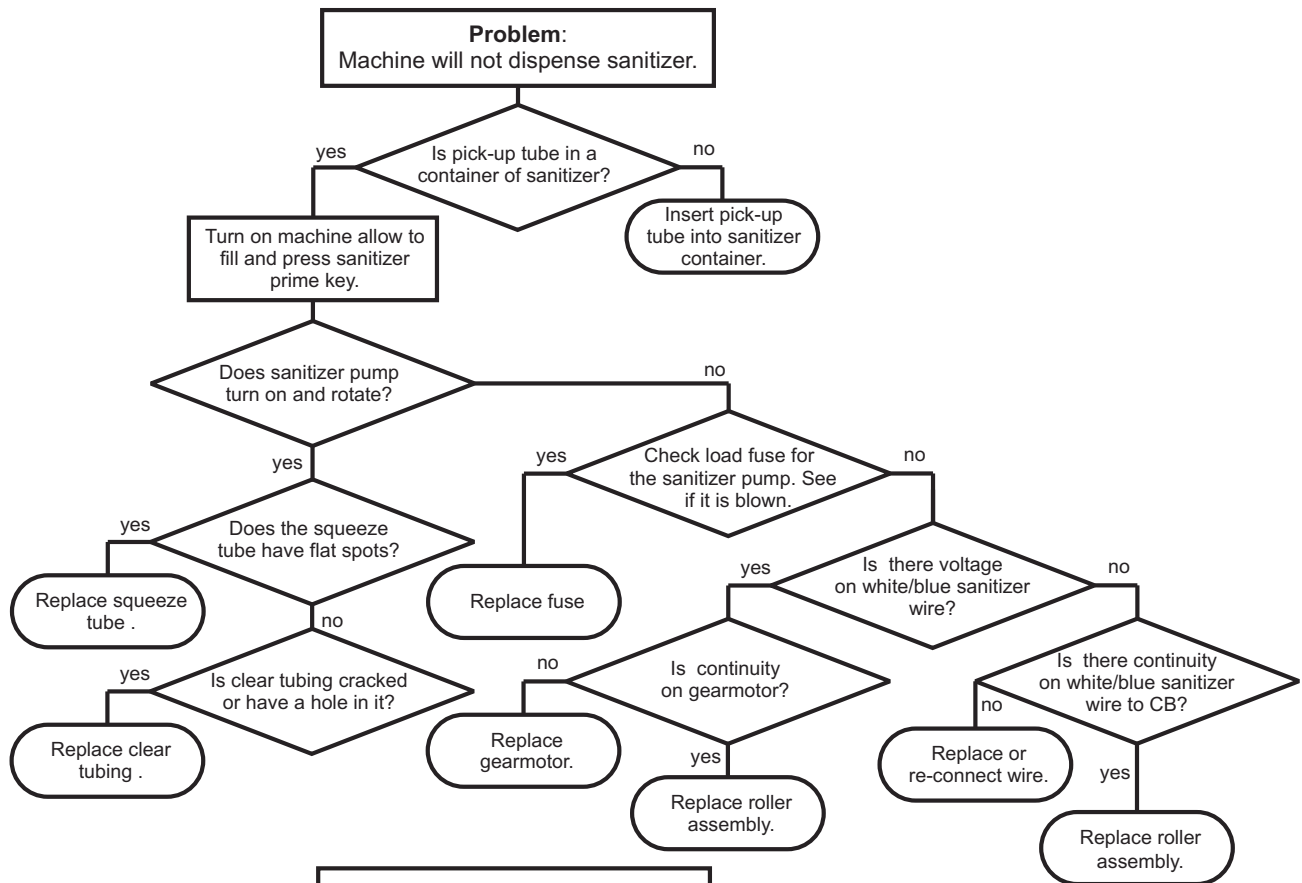
- Pose a health hazard;
- Damage seals and plastic components inside the dishwasher.

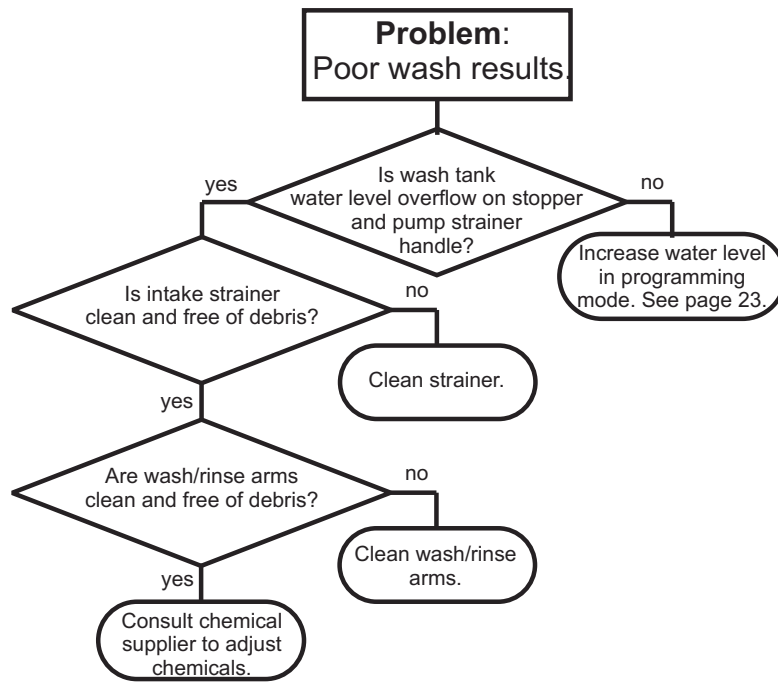
7 TROUBLESHOOTING







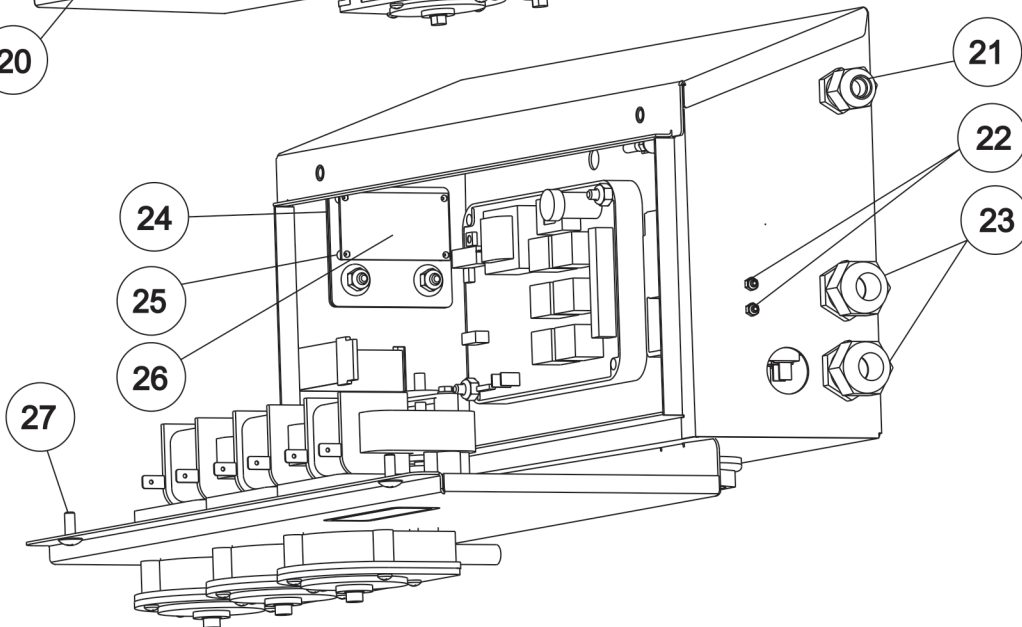
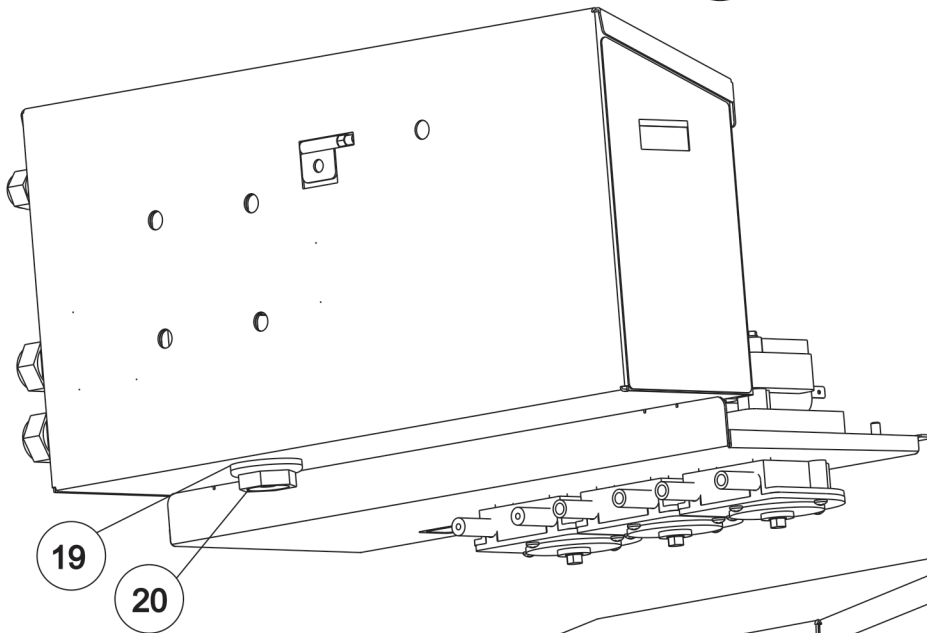
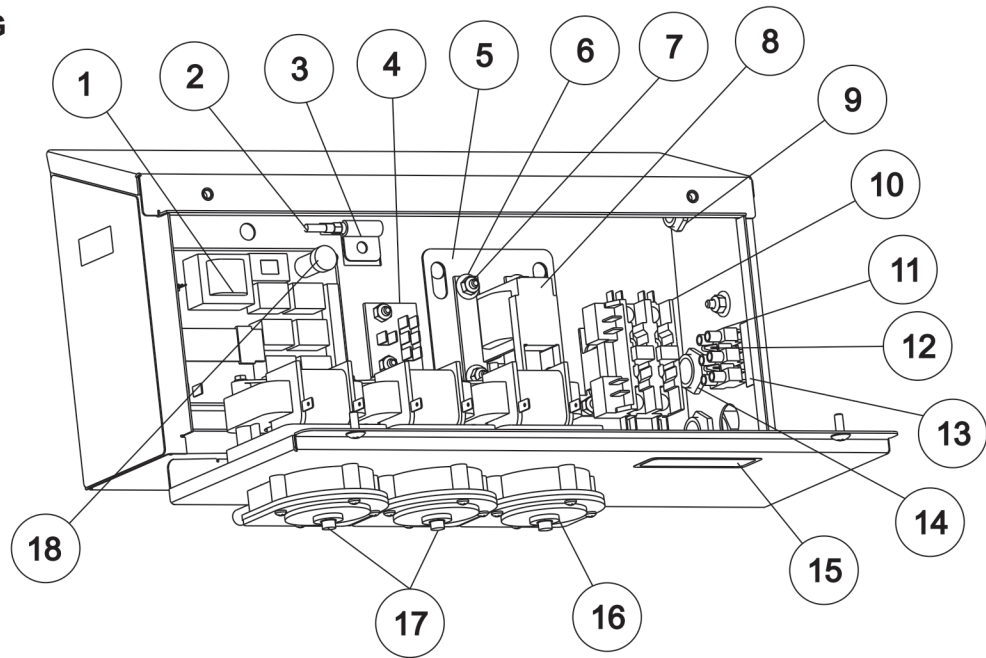




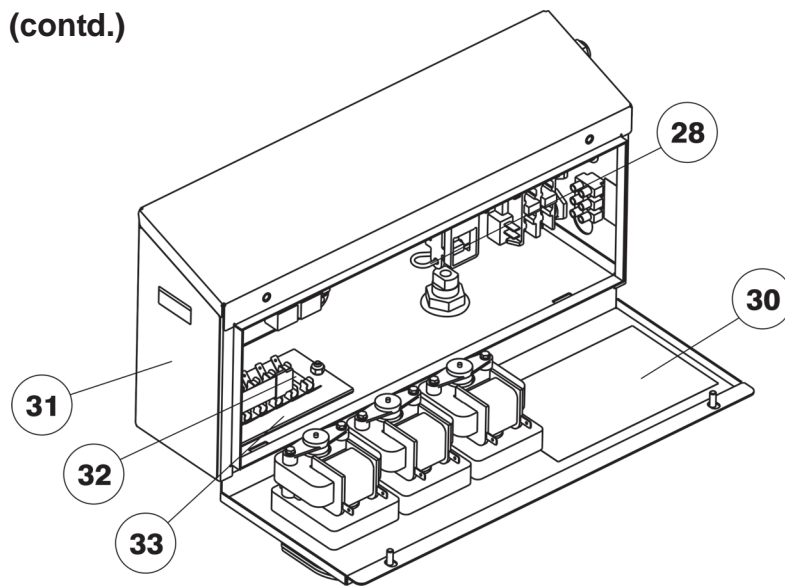
Notes

8 PARTS LISTING

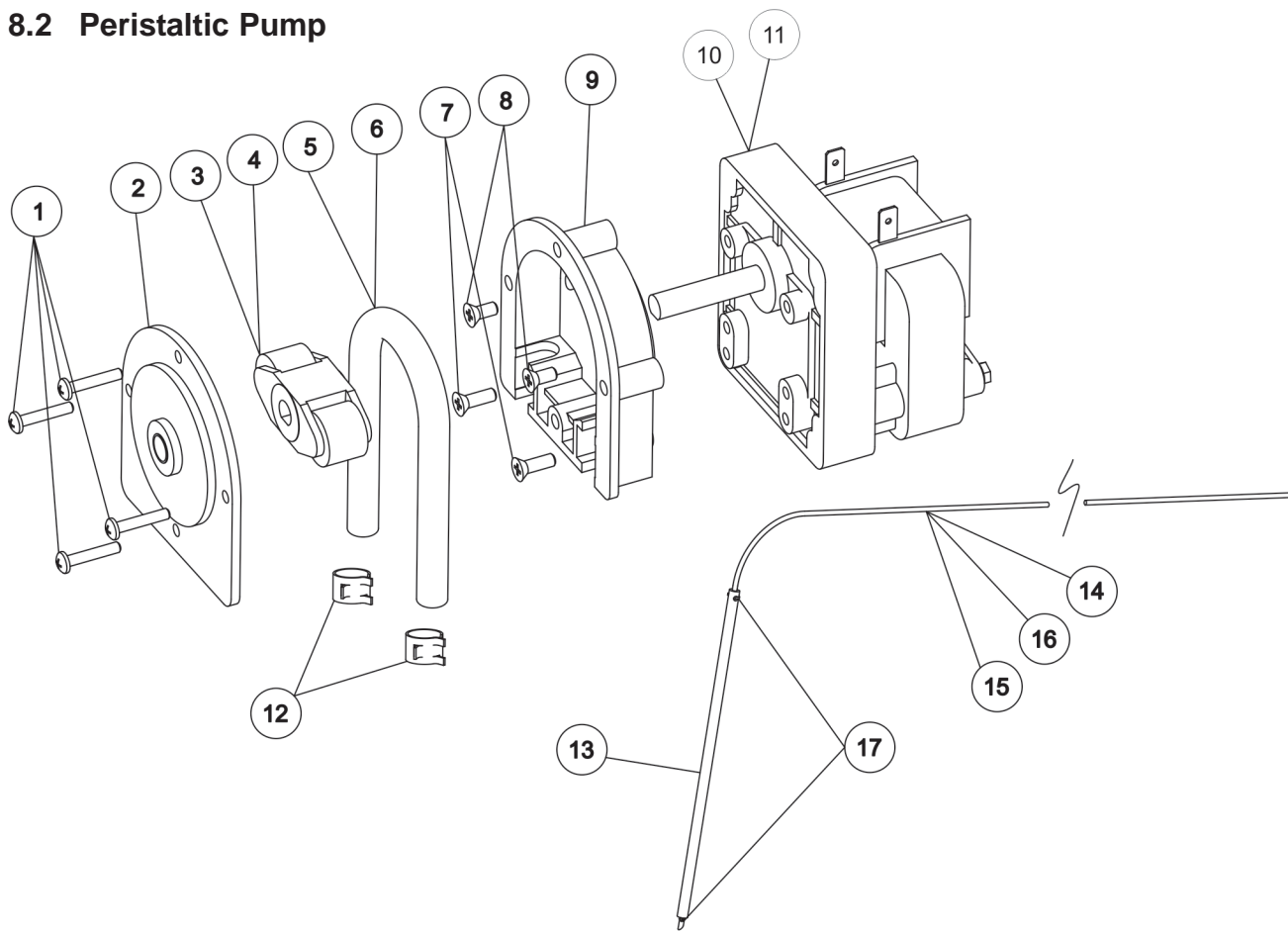
8.1 Control Box



8.1 Control Box (contd.)



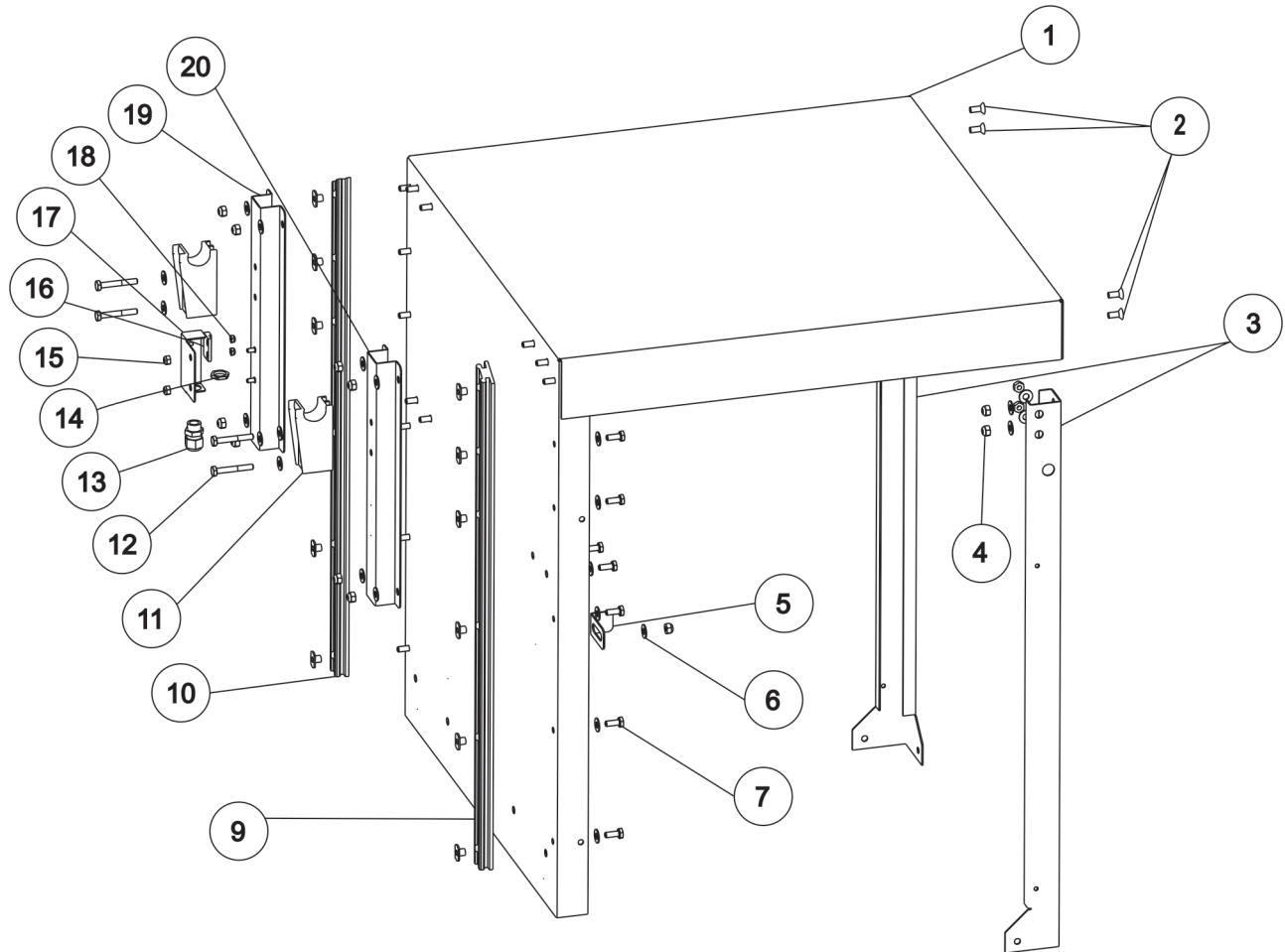
ITEM	QTY	PART NO.	DESCRIPTION
1	1	9208087	Timer
2	1	9208443	Temperature Sensor
3	1	9639363	Support for Temperature Sensor
4	1	9208220	Terminal strip
5	1	9207925	Plate, Solenoid
6	7	0340020	M5 Flat Washer 5.3 X 15 X 2 18-8 S/S
7	14	9208121	Locknut, Nylon 10-24
8	1	9208085	Solenoid, drain
9	1	9530068	Nut, Liquid tite fitting 16mm
10	1	9208401	Wash Motor Contactor
11	1	9208221	Power terminal strip
12	2	9208450	6-32 x 7/8" pan head phil S/S
13	1	9208397	Label, Power connection
14	2	9535167	Nut, Liquid tite fitting 22mm
15	1	9208440	Label, Caution Trilingual
16	1	9208218	Pump, Dosing 14 RPM
17	1	9208086	Pump, Dosing 36 RPM
18	1	9208442	Fuse, 4 amp 250 volt Fast Blow
19	1	-	Gasket, Rubber Bulk Head Plug
20	1	9207974	Guide, Drain with nut
21	1	9524391	Fitting, Liquidtite 16MM
22	1	9208449	Locknut, 6-32 nylon S/S
23	2	9524392	Fitting, Liquidtite 22MM
24	1	9208244	Weldment, display mount
25	4	9208219	Standoff, PCB
26	1	9208241	Display, LCD
27	2	9208237	Screw, 10-32 x 1/2" Truss head phil
28	1	9208222	Hairpin Cotter Pin
30	1	9208240	Label, Schematic
31	1	9208090	Label, Touch pad
32	6	9208780	Fuse, 3 amp 250 volt Fast Blow
33	1	9208754	Fuse, Terminal board

8.2 Peristaltic Pump

ITEM	QTY	PART NO.	DESCRIPTION
-	2	9208452	Detergent, Sanitizer pump complete
-	1	9208451	Rinse aid pump complete
-	-	9208086	Detergent, Sanitizer pump kit*
-	-	9208218	Rinse aid pump kit*
1	4	-	Pump, Cover Screws*
2	1	-	Pump, Cover*
3	1	-	Roller assembly detergent/sanitizer (purple)*
4	1	-	Roller assembly rinse aid (red)*
5	1	9208230	Squeeze tube detergent/sanitizer*
6	1	9208233	Squeeze tube rinse aid*
7	2	-	Pump, Housing screws long*
8	2	-	Pump, Housing screws short*
9	1	-	Pump, Housing*
10	1	9208228	Gearmotor detergent/sanitizer 36 rpm
11	1	9208231	Gearmotor rinse aid 14 rpm
12	2	9208453	Clamp, chemical tube
13	1	9207250	Stiffener, chemical tube
14	10'	9208252	Tube, detergent red
15	10'	9208253	Tube, sanitizer clear
16	10'	9208432	Tube, rinse aid blue
17	2	9208453	Tie wrap small

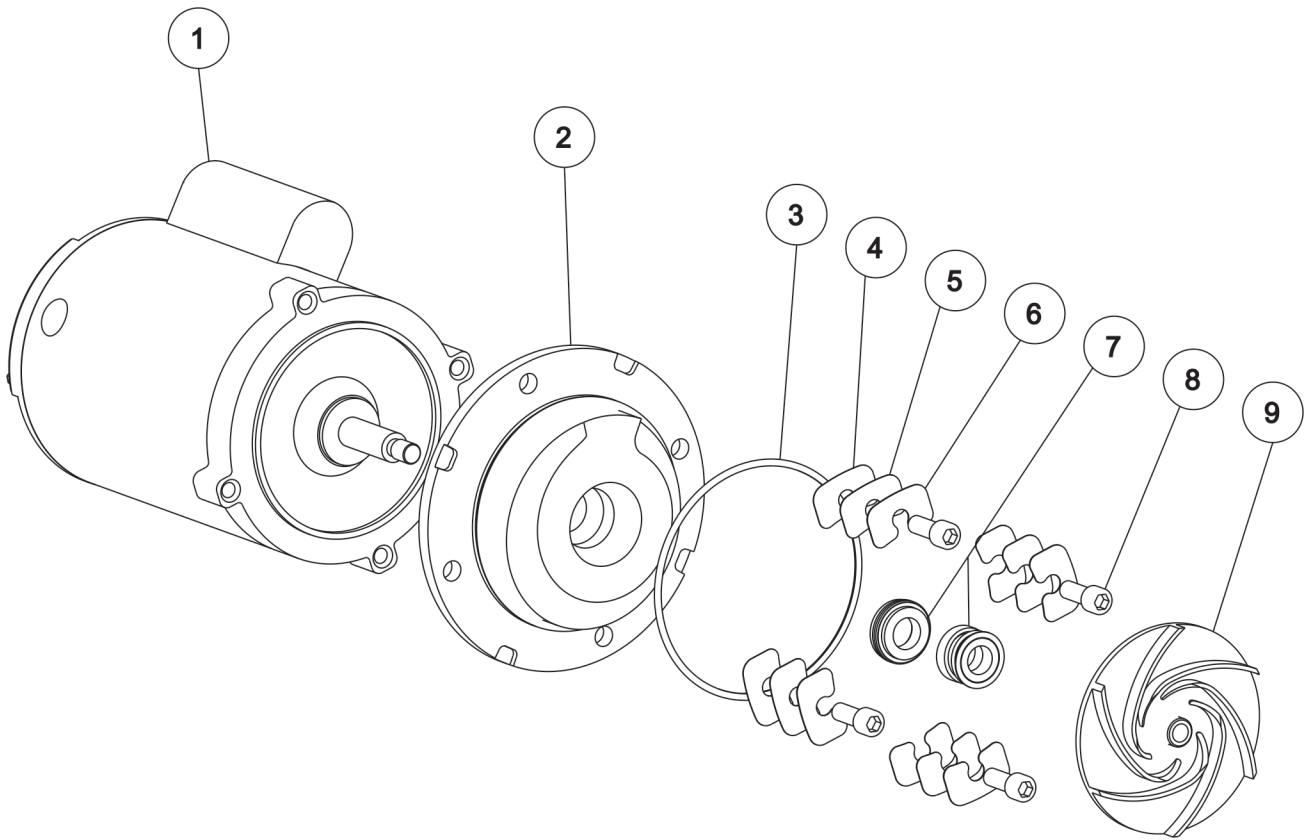
* Parts included in pump kit.

8.3 Hood Assembly



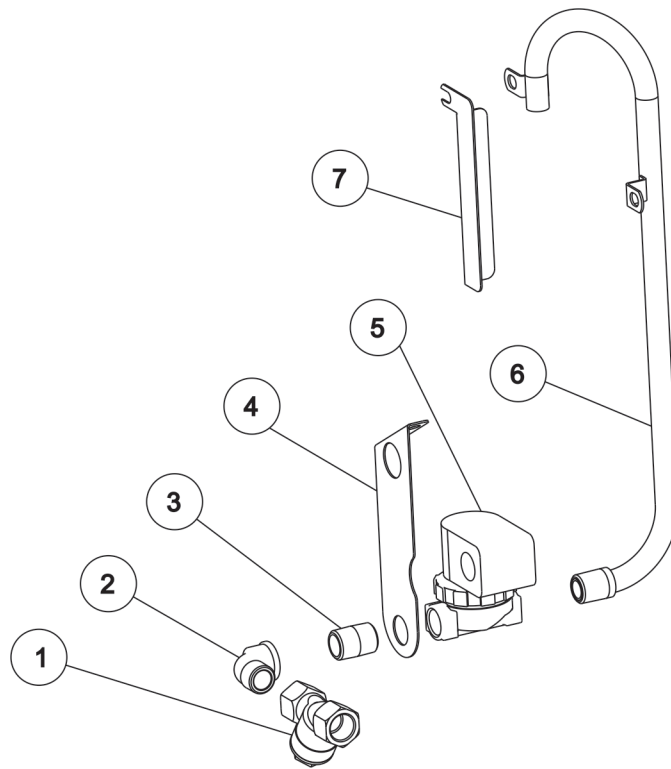
ITEM	QTY	PART NO.	DESCRIPTION
1	1	9208276	Hood, Weldment
2	4	9208080	Screw, 1/4-20 x5/8" Flathead Phillips
3	2	9207922	Support, Hood upright
4	25	9208072	Locknut, 1/4-20
5	1	9207911	Support, Wash manifold
6	33	9208071	Washer, 1/4" Flat
7	20	9208478	Screw, 1/4-20 x 1/2", thread rolling, SS
9	1	0463052	Guide, Door Left
10	1	0463053	Guide, Door Right
11	2	0620449	Support, Cantilever Arm
12	4	9208076	Hex bolt, 1/4-20 x 1 3/4"
13	1	9524391	Fitting, Liquid tite 16mm
14	1	9530068	Nut, Liquid tite fitting 16mm
15	2	9208121	Locknut, 10-24
16	1	9552735	Switch, Door magnetic
17	1	9208277	Cover, Door switch weldment
18	2	9208239	Locknut, 4-40
19	1	9208278	Stiffener, Hood right weldment
20	1	9208036	Stiffener, Hood

8.4 Wash Motor Assembly



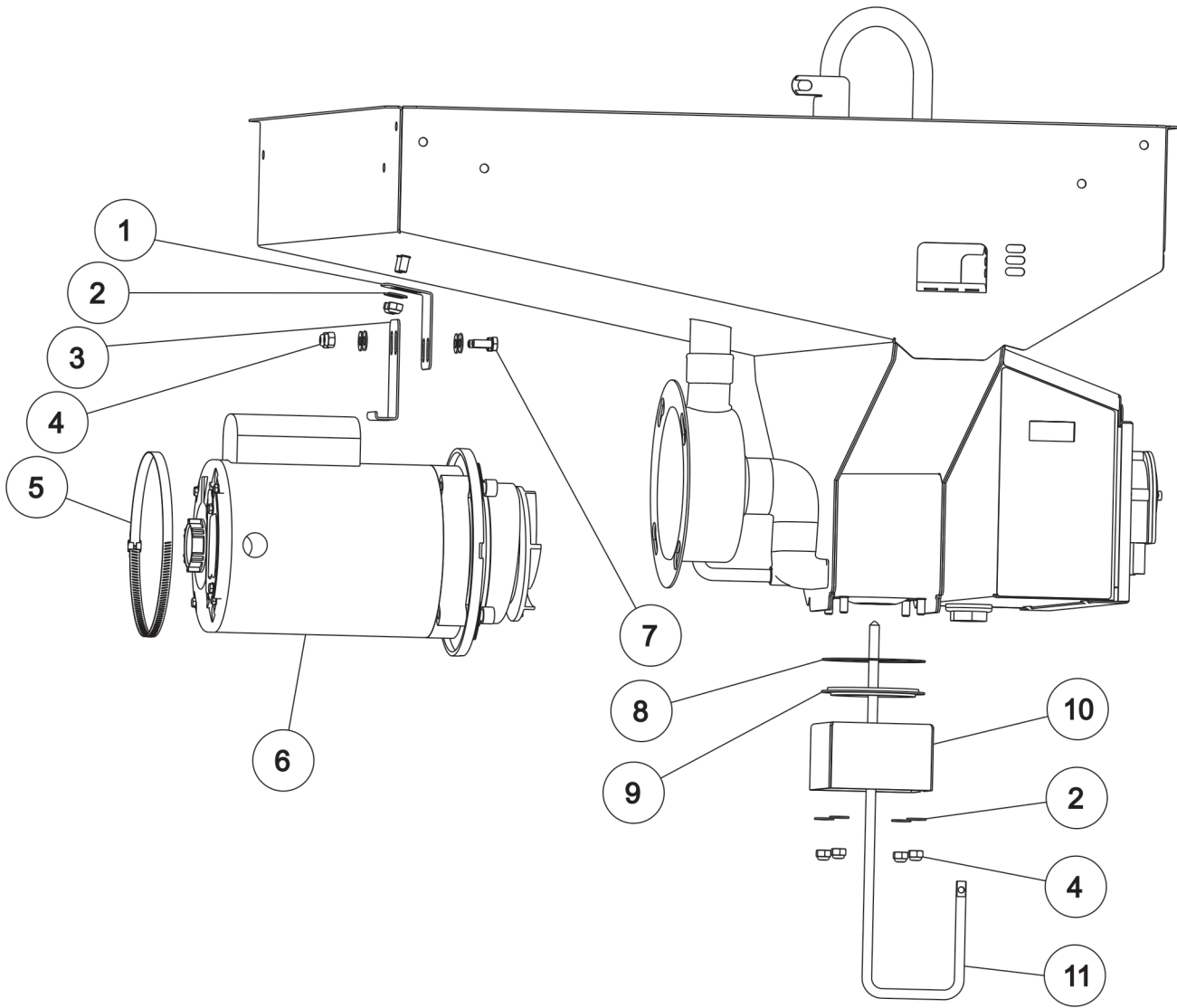
ITEM	QTY	PART NO.	DESCRIPTION
-	1	9208502	Wash Motor Assembly complete
1	1	-	Motor, 3/4 HP OPD 1/60
2	1	-	Seal Plate
3	1	9208284	O-Ring, Buna-N
4	4	9208295	Plastic Shim, .010" Thick
5	4	9208296	Plastic Shim, .015" Thick
6	4	9208297	Plastic Shim, .020" Thick
7	1	9208282	Mechanical Seal, 5/8" T16 Car,Cer, Buna
8	4	-	Screw, Socket head 3/8" x 1.25" S/S
9	1	-	Impellar, Cast Open

8.5 Fill Assembly



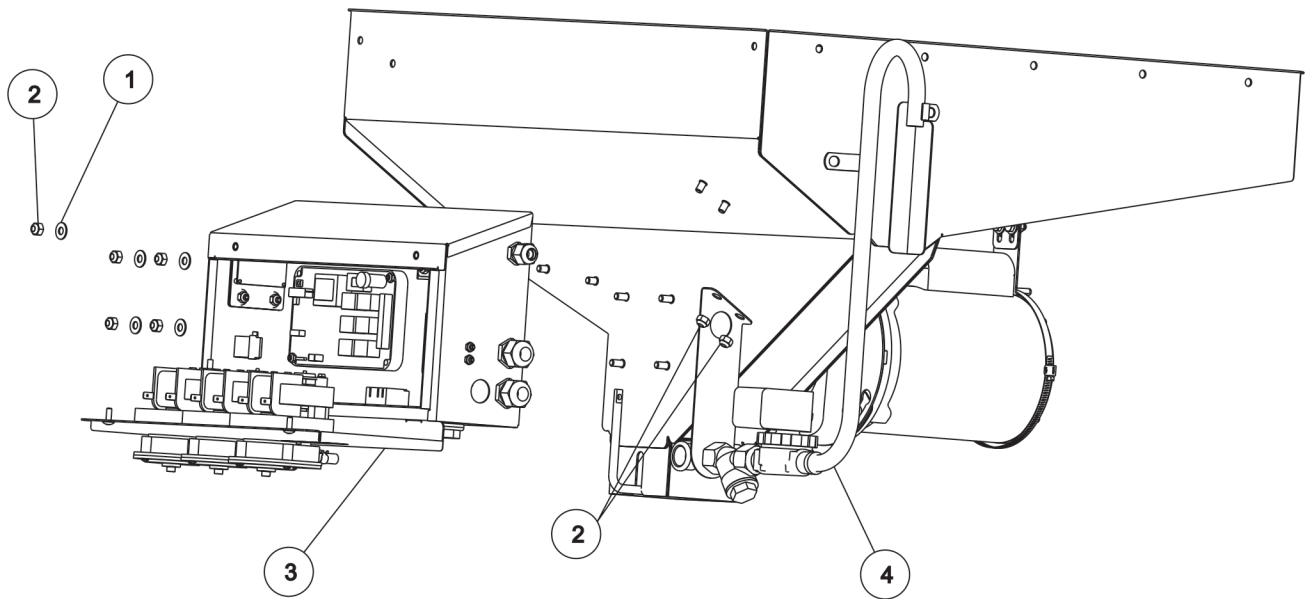
ITEM	QTY	PART NO.	DESCRIPTION
1	1	0225002	"Y" Strainer, 1/2" NPT Brass
2	1	0215019	Street Elbow, 1/2" NPT Brass
3	1	9651479	Close Nipple, 1/2" NPT Brass
4	1	9208063	Bracket, Fill support
5	1	9208430	Solenoid Valve, 1/2" NPT Brass 120V
6	1	9208298	Weldment, Airgap Assembly
7	1	9208186	Splash Shield, Airgap

8.6 Tub Assembly and Drain



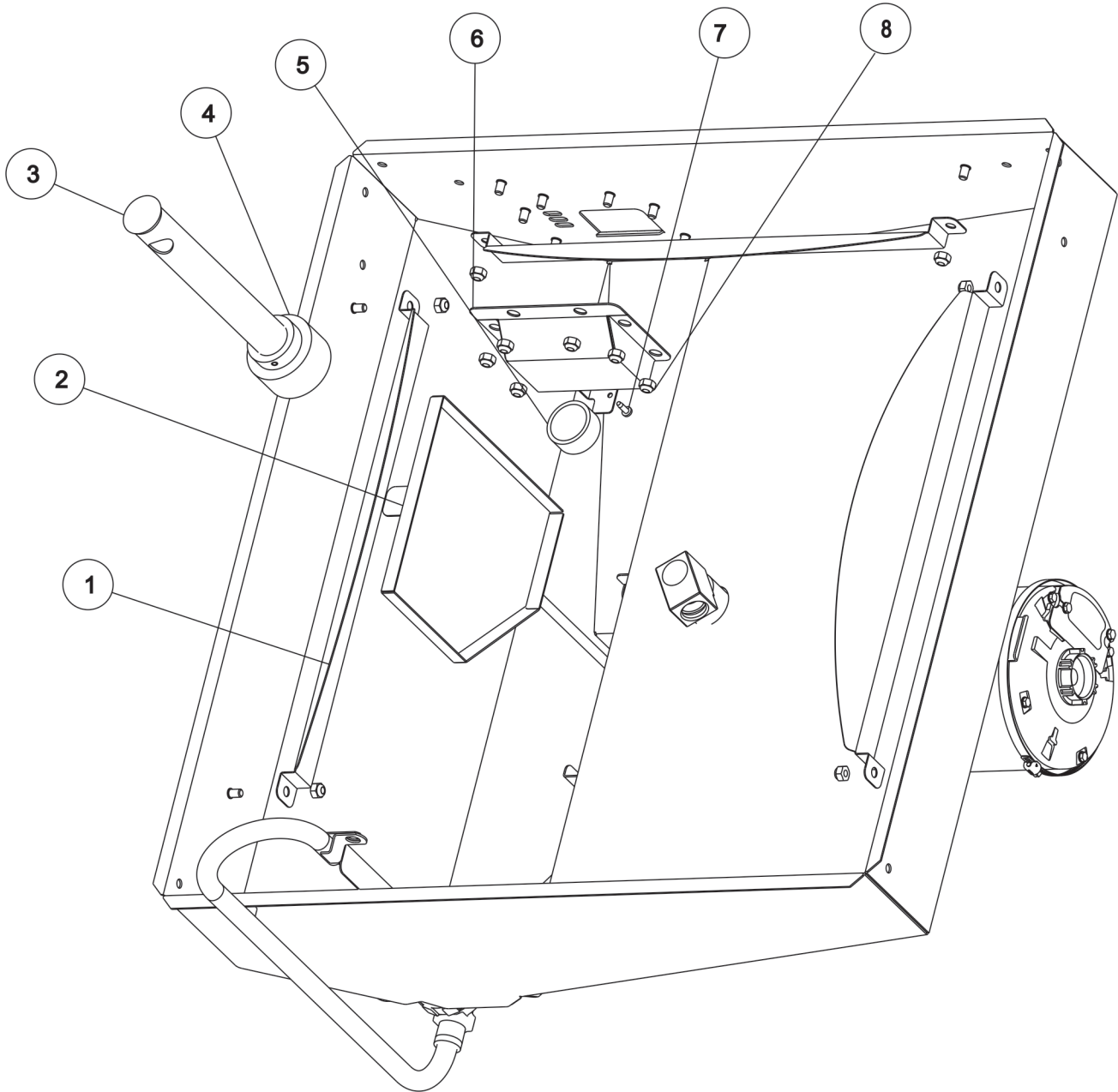
ITEM	QTY	PART NO.	DESCRIPTION
-	1	9207915	Weldment, tub
1	1	9207912	Bracket, pump support top
2	10	9208071	Washer, 1/4"
3	1	9208211	Bracket, pump support bottom
4	8	9208072	Locknut, 1/4-20
5	1	9208115	Clamp, wormgear 3 5/8" - 6 1/2"
6	-	Section 8.4	Wash Motor Assembly
7	2	9208075	Hex bolt, 1/4-20 x 5/8" lg. S/S
8	1	9207947	Gasket, drain seat
9	1	9207946	Seat, drain
10	1	9208021	Chute, drain
11	1	9207948	Link, drain

8.6 Tub Assembly and Drain (contd.)



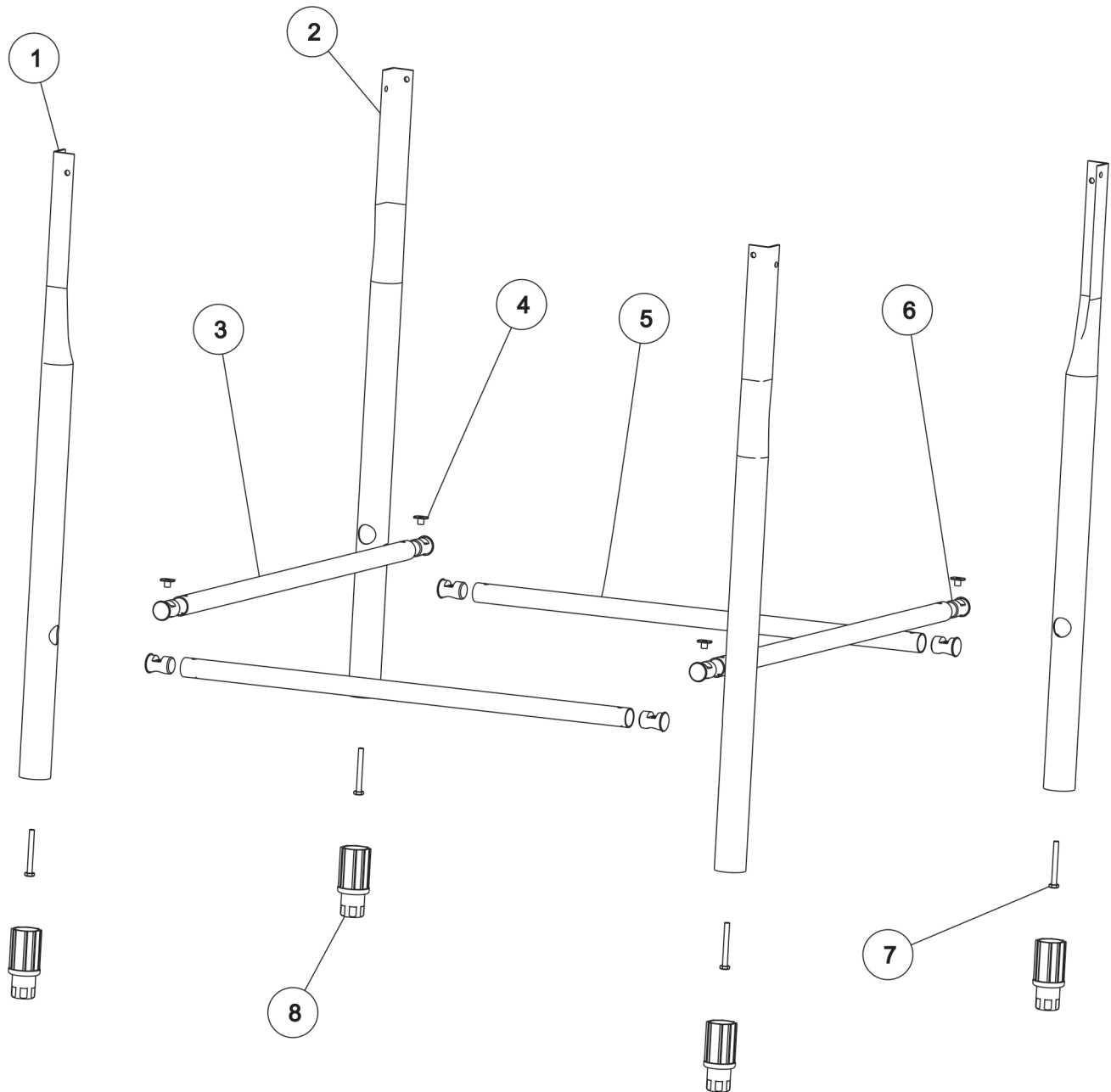
ITEM	QTY	PART NO.	DESCRIPTION
-	1	9207915	Weldment, tub
1	1	9208071	Washer, 1/4"
2	7	9208072	Locknut, 1/4-20
3	-	Section 8.1	Control box assembly
4	-	Section 8.5	Fill assembly

8.7 Interior Tub Components



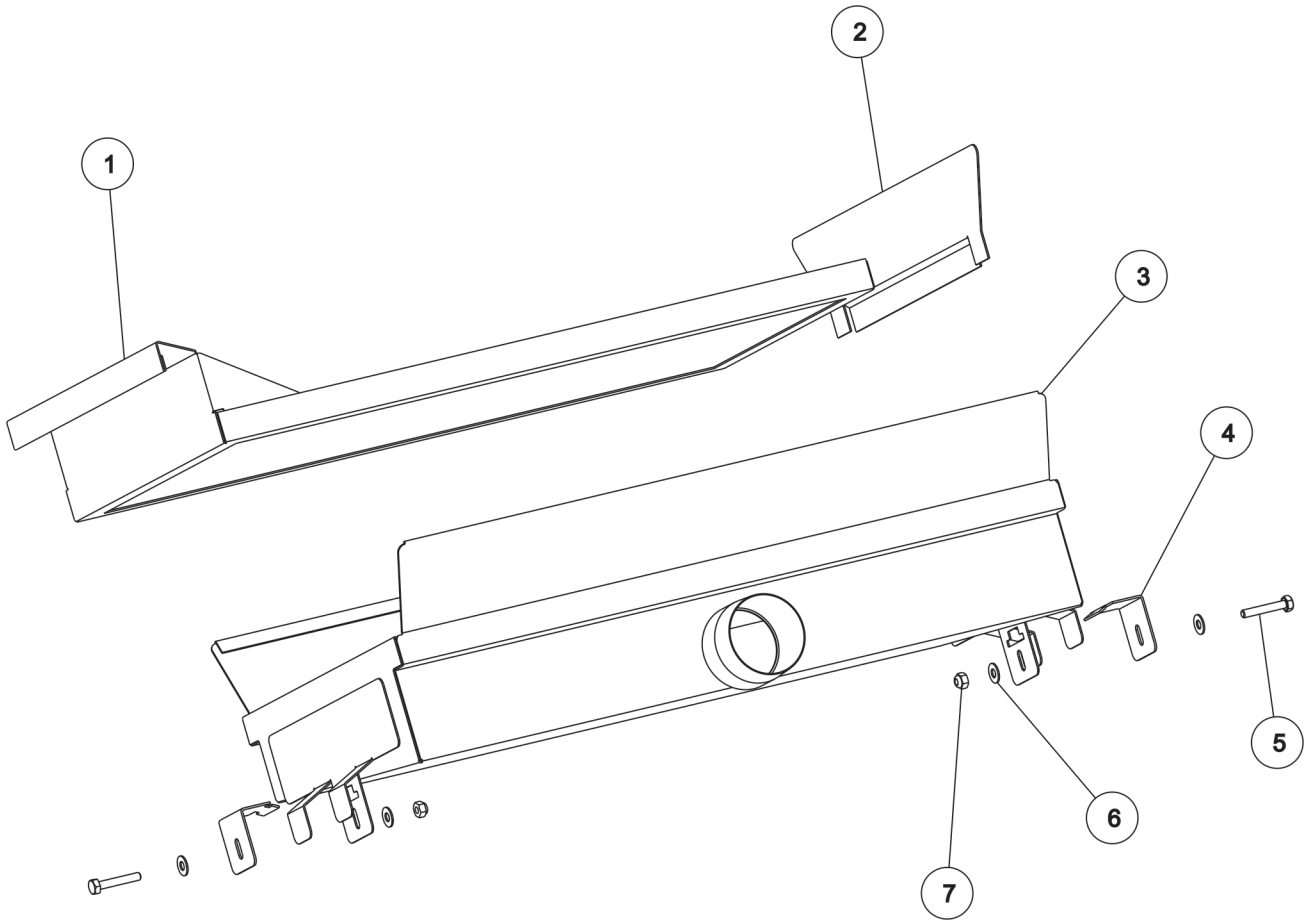
ITEM	QTY	PART NO.	DESCRIPTION
-	1	9207915	Weldment, tub
1	3	9207988	Shield, splash
2	1	9208316	Strainer, intake
3	1	9208101	Stopper, drain tube
4	1	9207930	Stopper, drain ball
5	1	9207950	Pan, chemical
6	1	9208315	Weldment, shield proof of delivery
7	1	0330020	Screw, #10 x 1/2" sheetmetal
8	12	9208072	Locknut, 1/4-20

8.8 Frame Assembly



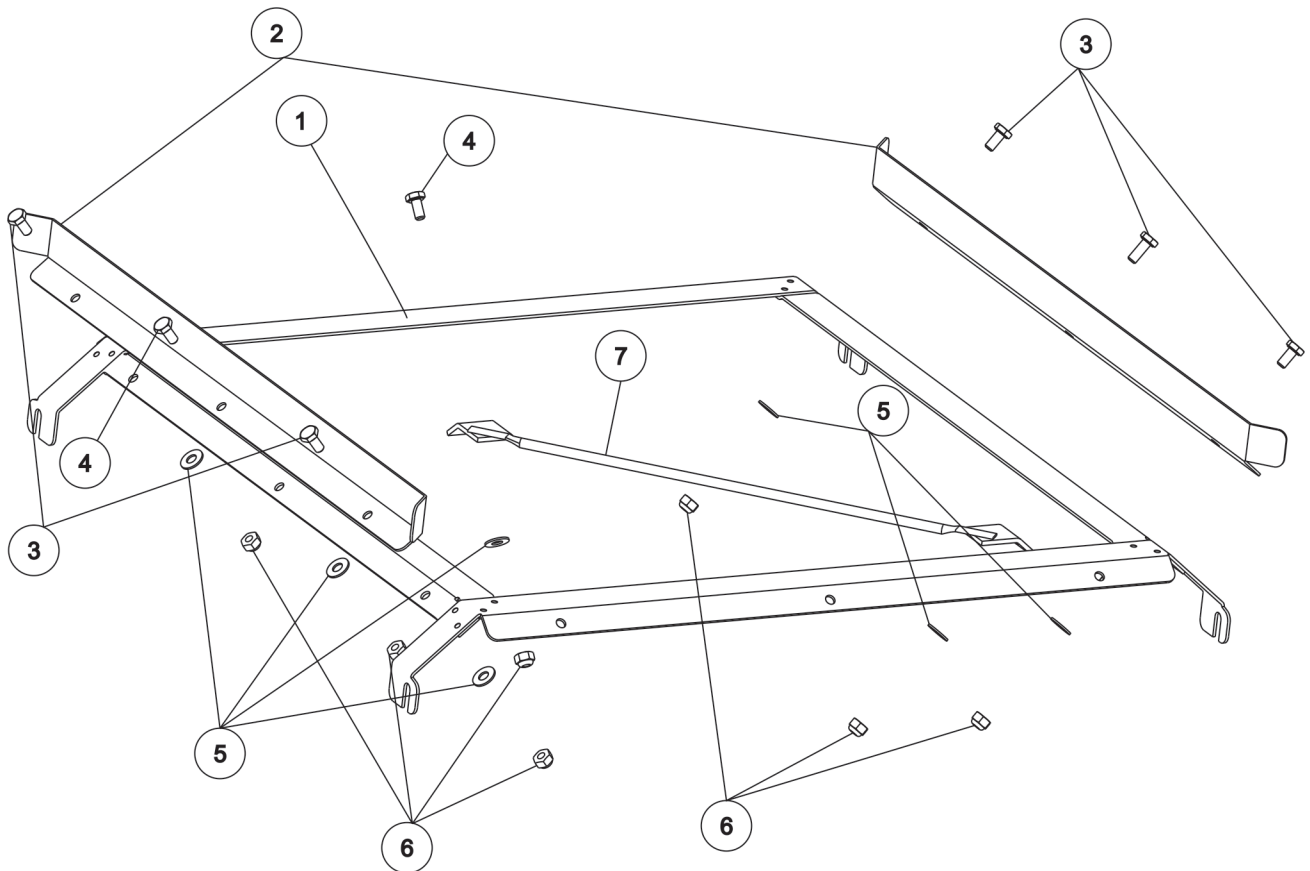
ITEM	QTY	PART NO.	DESCRIPTION
1	2	9207938	Leg, Frame A
2	2	9207939	Leg, Frame B
3	2	9207954	Rail, Frame short
4	4	9207942	Nut, Tee 14-20
5	2	9207955	Rail, Frame long
6	4	9207941	Plug, Leg
7	4	9207965	Bolt, Hex 1/4-20 x 2" lg.
8	4	9207936	Foot, Bullet

8.9 Accumulator Assembly



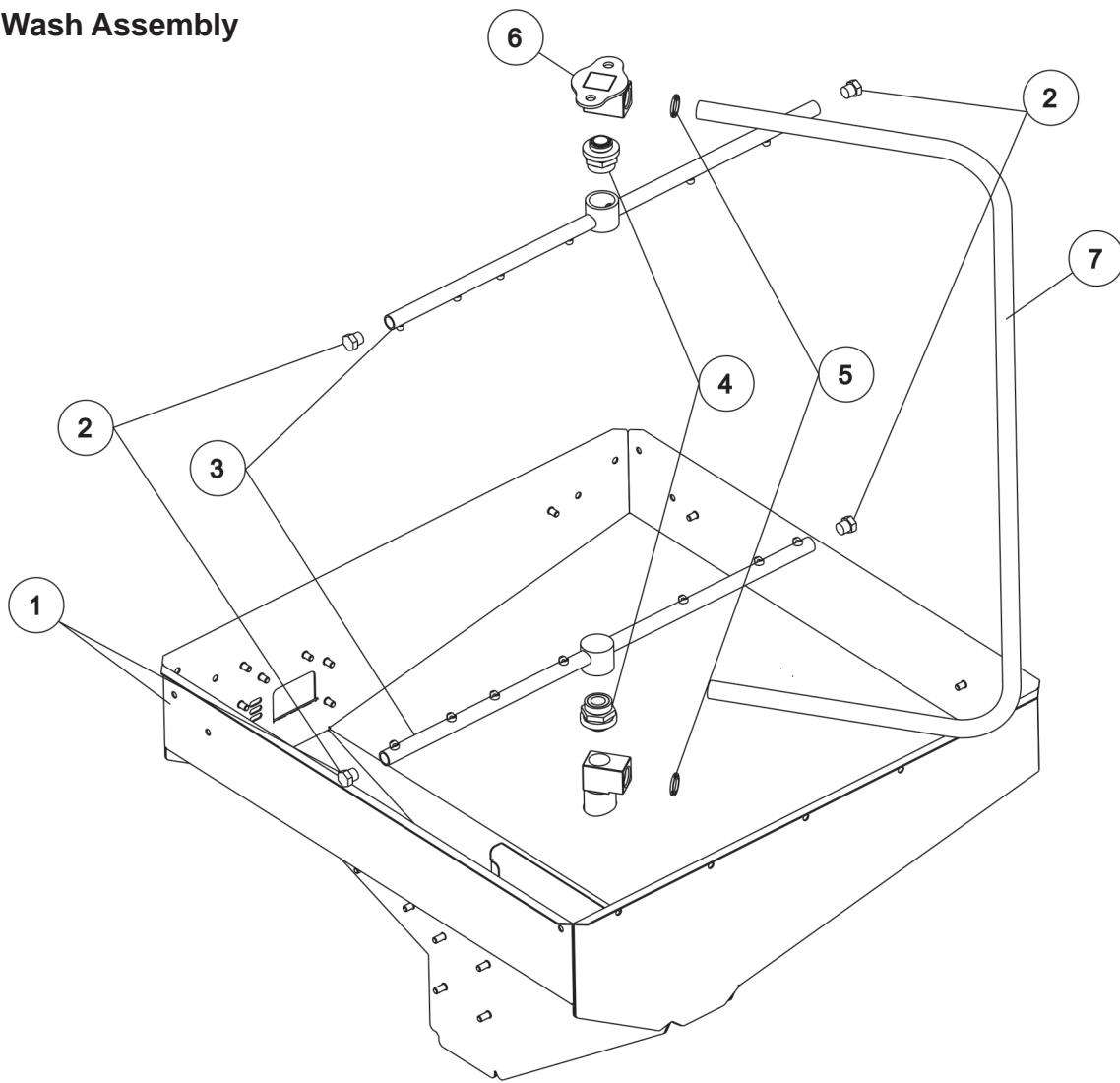
<i>ITEM</i>	<i>QTY</i>	<i>PART NO.</i>	<i>DESCRIPTION</i>
1	1	9208324	Scrap screen, accumulator
2	1	9208402	Shield, scrap
3	1	9208322	Weldment, scrap accumulator
4	2	9208319	Clamp, accumulator
5	2	9208073	Bolt, 1/4-20 x 2" hex head S/S
6	4	9208071	Washer, 1/4"
7	2	9208072	Locknut, 1/4-20

8.10 Rack Guide Assembly



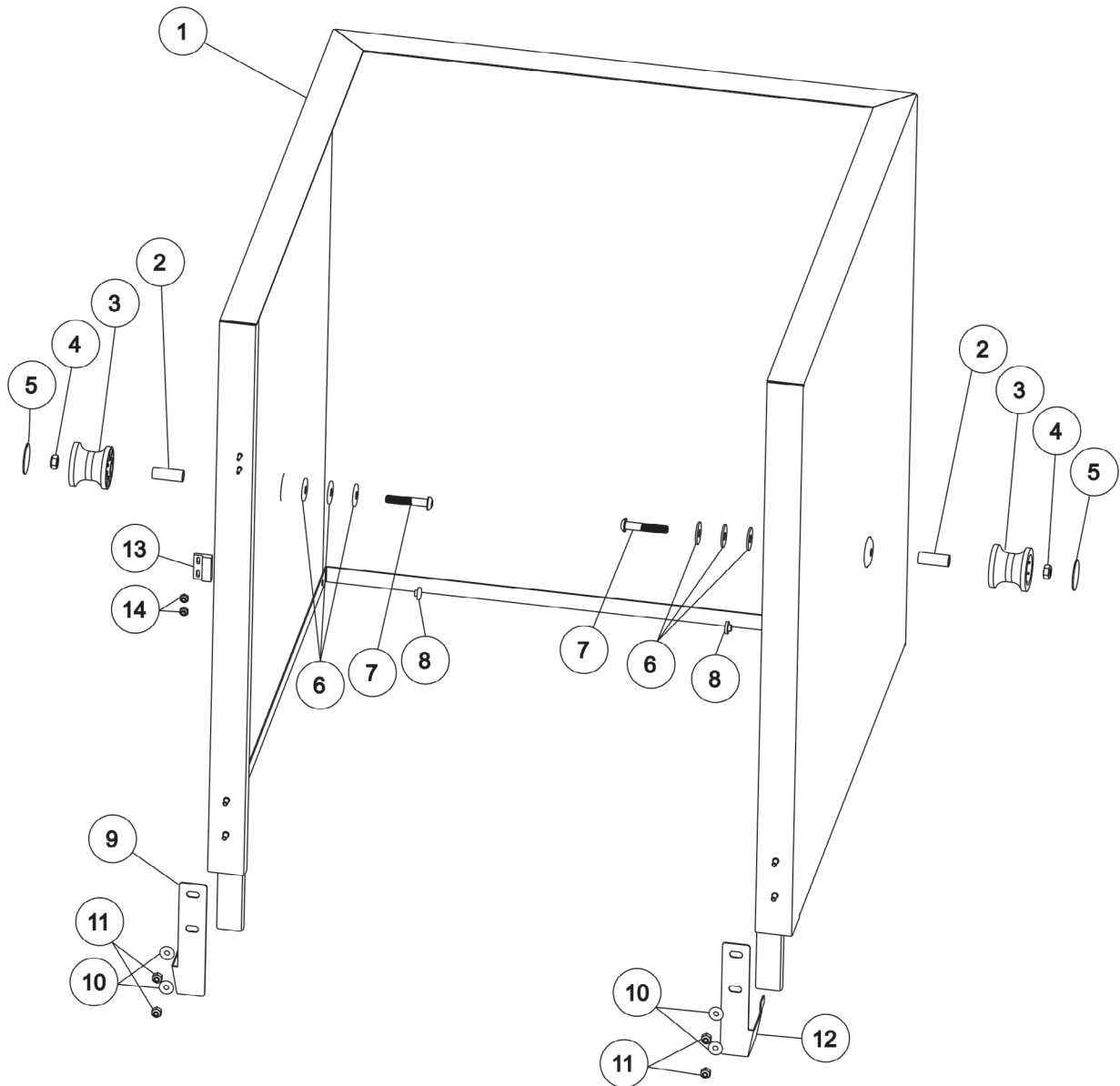
ITEM	QTY	PART NO.	DESCRIPTION
1	1	9207984	Weldment, rack guide
2	2	9207983	Guide, rack guide
3	5	9208079	Bolt, 1/4-20 x 1/2" hex head S/S
4	2	9208075	Bolt, 1/4-20 x 5/8" hex head S/S
5	7	9208071	Washer, 1/4"
6	7	9208072	Locknut, 1/4-20
7	1	9208412	Weldment, angle support (option only)

8.11 Wash Assembly



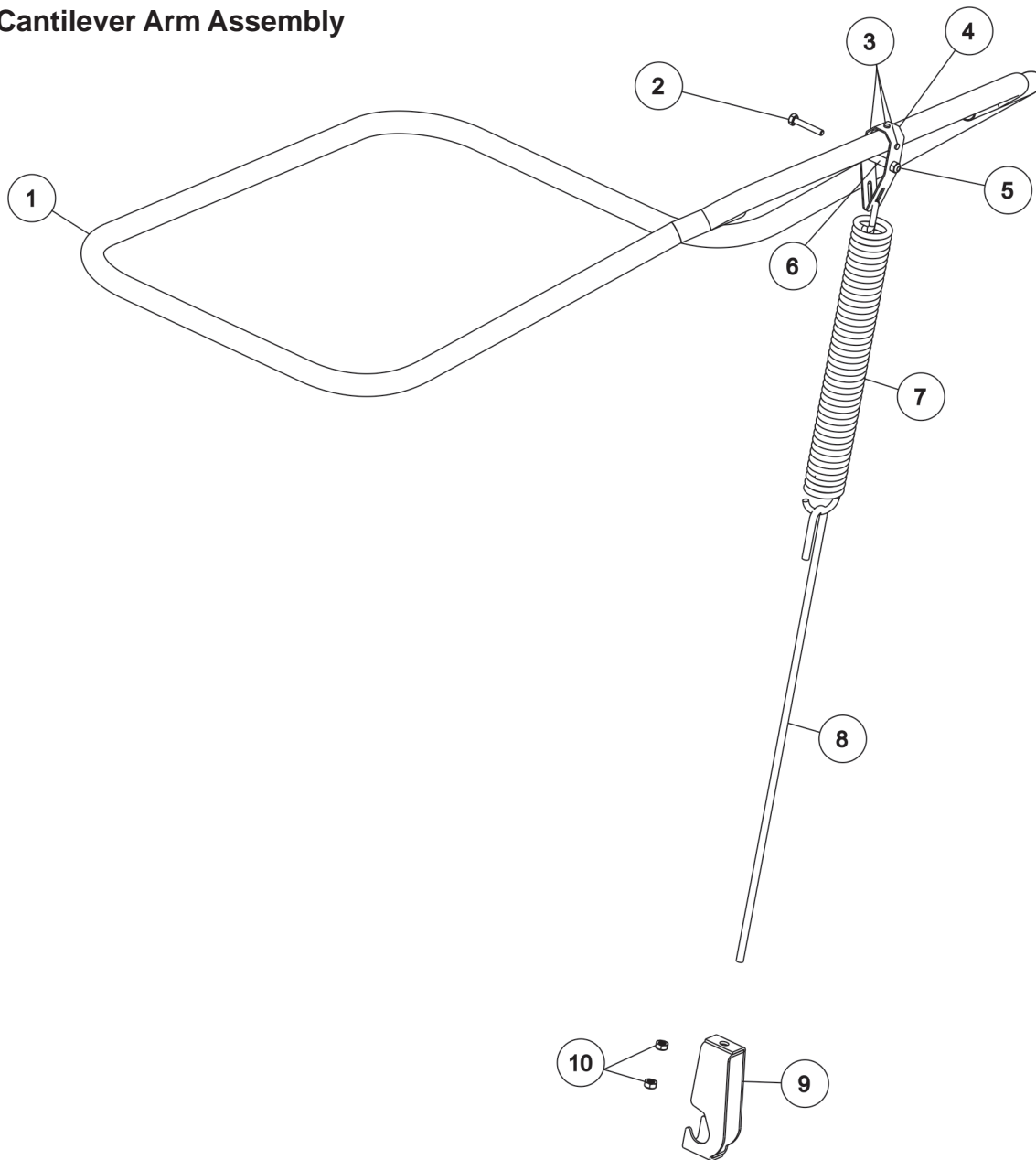
<i>ITEM</i>	<i>QTY</i>	<i>PART NO.</i>	<i>DESCRIPTION</i>
1	1	9207915	Weldment, tub
2	4	9208095	Cap, wash arm end
3	2	9208096	Wash arm, low temp
4	2	9680601	Bearing, wash arm
5	2	9208415	O-ring, wash manifold
6	1	9207968	Weldment, manifold top
7	1	9207934	Manifold, wash

8.12 Door Assembly



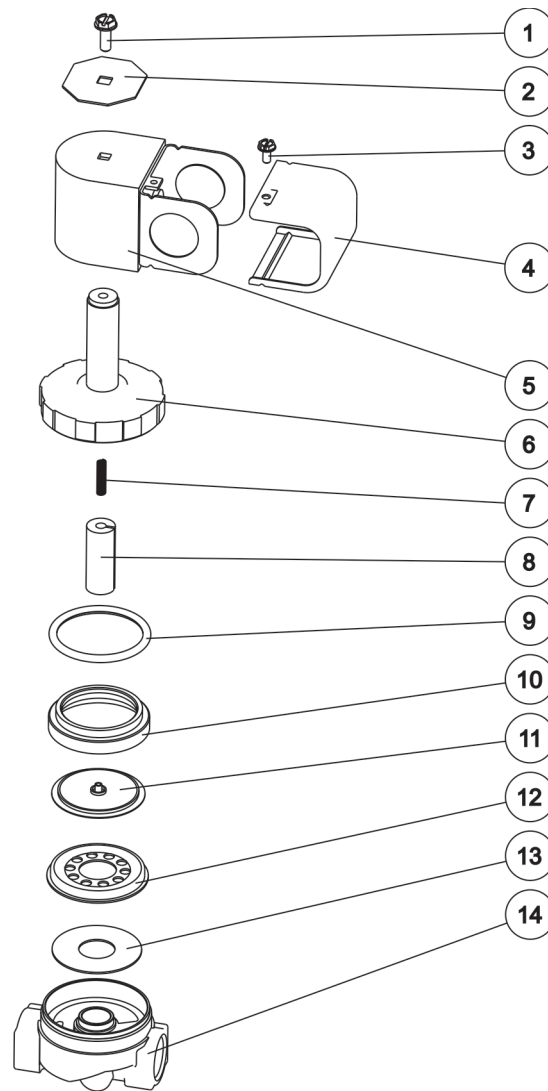
ITEM	QTY	PART NO.	DESCRIPTION
1	1	9208326	Weldment, door wrap
2	2	9208118	Support, top inner door
3	2	0620451	Roller, lever arm
4	2	9208117	Locknut, 5/16-18 thin S/S
5	2	8004480	Cap, roller
6	6	0340055	Washer, flat 8mm S/S
7	2	9208116	Bolt, 5/16-18x 1 3/4" button socket head S/S
8	2	9207923	Wear button
9	1	9208190	Guide, door splash right
10	4	340058	Washer, flat 5mm S/S
11	4	9208121	Locknut, 10-24 S/S
12	1	9208191	Guide, door splash left
13	1	9208144	Magnet, flange mount
14	2	9208239	Locknut, 4-40 S/S

8.13 Cantilever Arm Assembly



ITEM	QTY	PART NO.	DESCRIPTION
1	1	0251103	Door, lever
2	1	-	Bolt, 1/4-20x1 1/2" Hex Head S/S
3	3	9207923	Wear button
4	1	9208406	Strap, cantilever arm
5	2	-	Locknut, 1/4-20 S/S
6	1	-	Spacer tube
7	1	0430006	Spring, door
8	1	9207927	Rod, spring
9	1	9208416	Weldment, yoke spring rod
10	2	9208448	Hexnut, 5/16-18 S/S

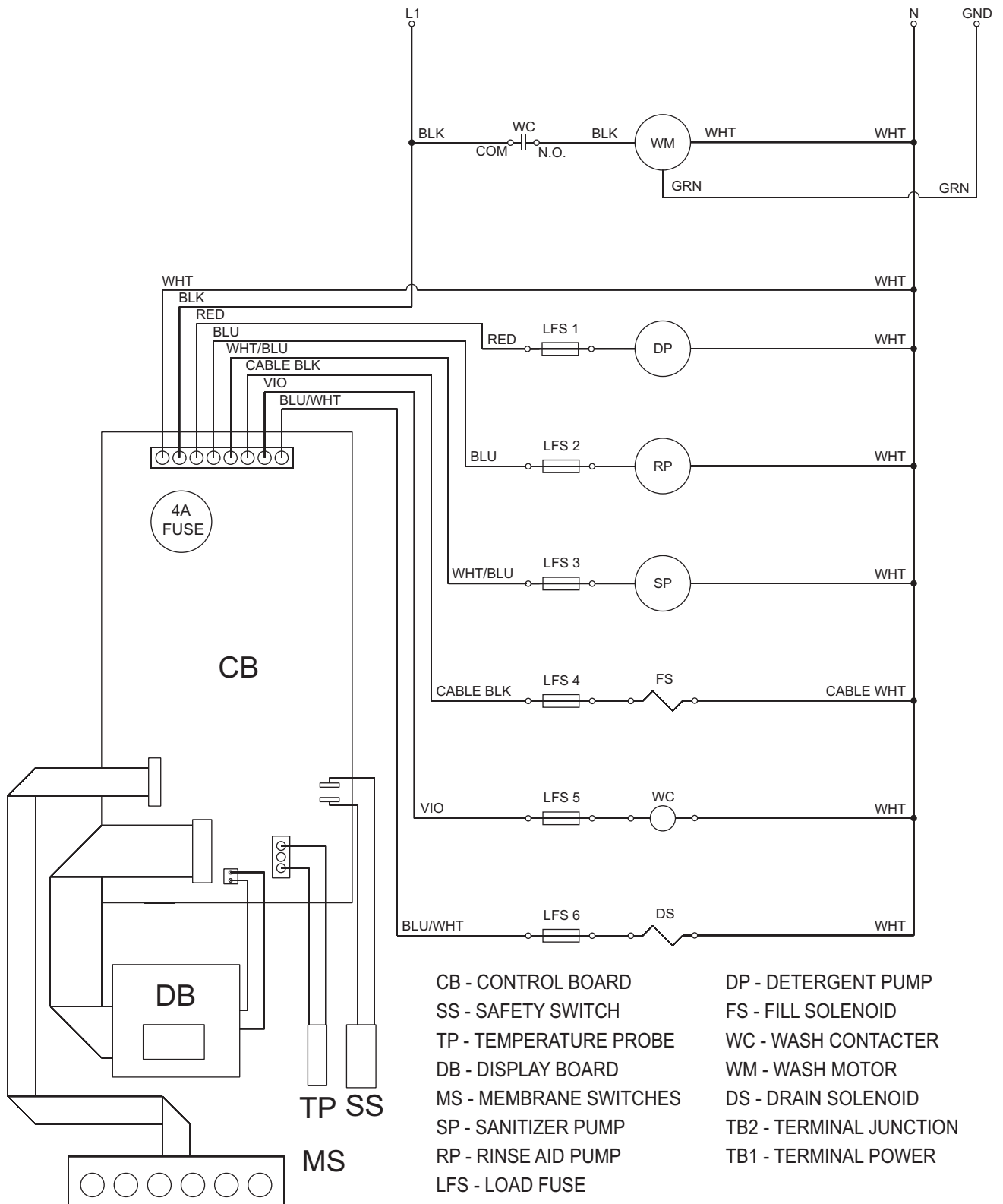
8.14 Fill Valve



ITEM	QTY	PART NO.	DESCRIPTION
		9208430	Valve complete
		9250138	Rebuild kit (inc. 1 each of items 7-11)
		9208417	Replacement Coil
1	1	-	Screw, coil
2	1	-	Data plate
3	1	-	Screw, coil cover
4	1	-	Cover, coil
5	1	9208417	Coil, 120 V 60 HZ
6	1	-	Valve, bonnet
	-	9250138	Rebuild kit (inc. 1 each of items 7-11)
7	1		Spring, plunger (inc. in kit)
8	1		Plunger (inc. in kit)
9	1		O-ring (inc. in kit)
10	1		Retainer, diaphragm (inc. in kit)
11	1		Diaphragm (inc. in kit)
12	1	-	Retainer, screen
13	1	-	Screen
14	1	-	Body, valve

9 WIRING DIAGRAMS

9.1 Ladder schematic, 115V/60Hz/1Ph





If you need service...

MEIKO dishwashers are designed for solid reliability as much as for outstanding cleaning ability. With proper care, your dishwasher should provide years of trouble-free operation.

If service is necessary, contact your local MEIKO Authorized Service Agent. With factory training, OEM parts and direct support from the factory, MEIKO's nationwide service network is highly qualified to quickly restore your dishwasher to regular operation.

An Authorized Service Agency Listing was supplied with your dishwasher. If you do not have the listing, visit MEIKO's website at www.meiko.us, or call 1-800-868-3840 for assistance.