

Douglas Machines Corp.

# Conveyor Washer Operation Manual

Douglas Machines Corp.  
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## Do's and Don'ts

### DO

Wear Safety Glasses

Wear Hearing Protection

Wear Gloves

Keep Hands Clear Of Conveyor Belt While Machine Is In Operation

### Don't

Hose Down Any Electrical Enclosures

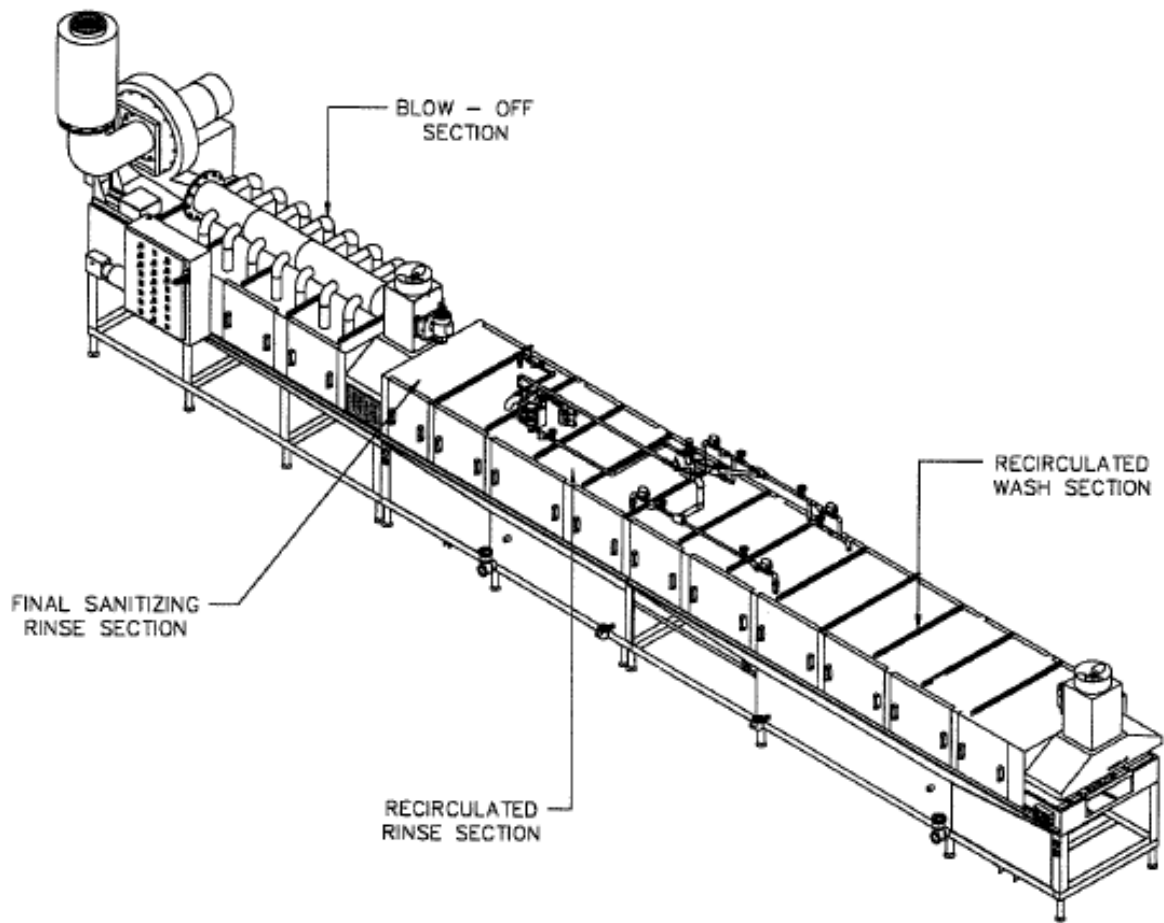
Hose Down Any Electrical Motor

Remove Any Access Panels While Machine Is In Operation

Touch Exterior Of Machine Without Gloves While In Operation  
(exterior is hot)

# Section 1

## Start Up





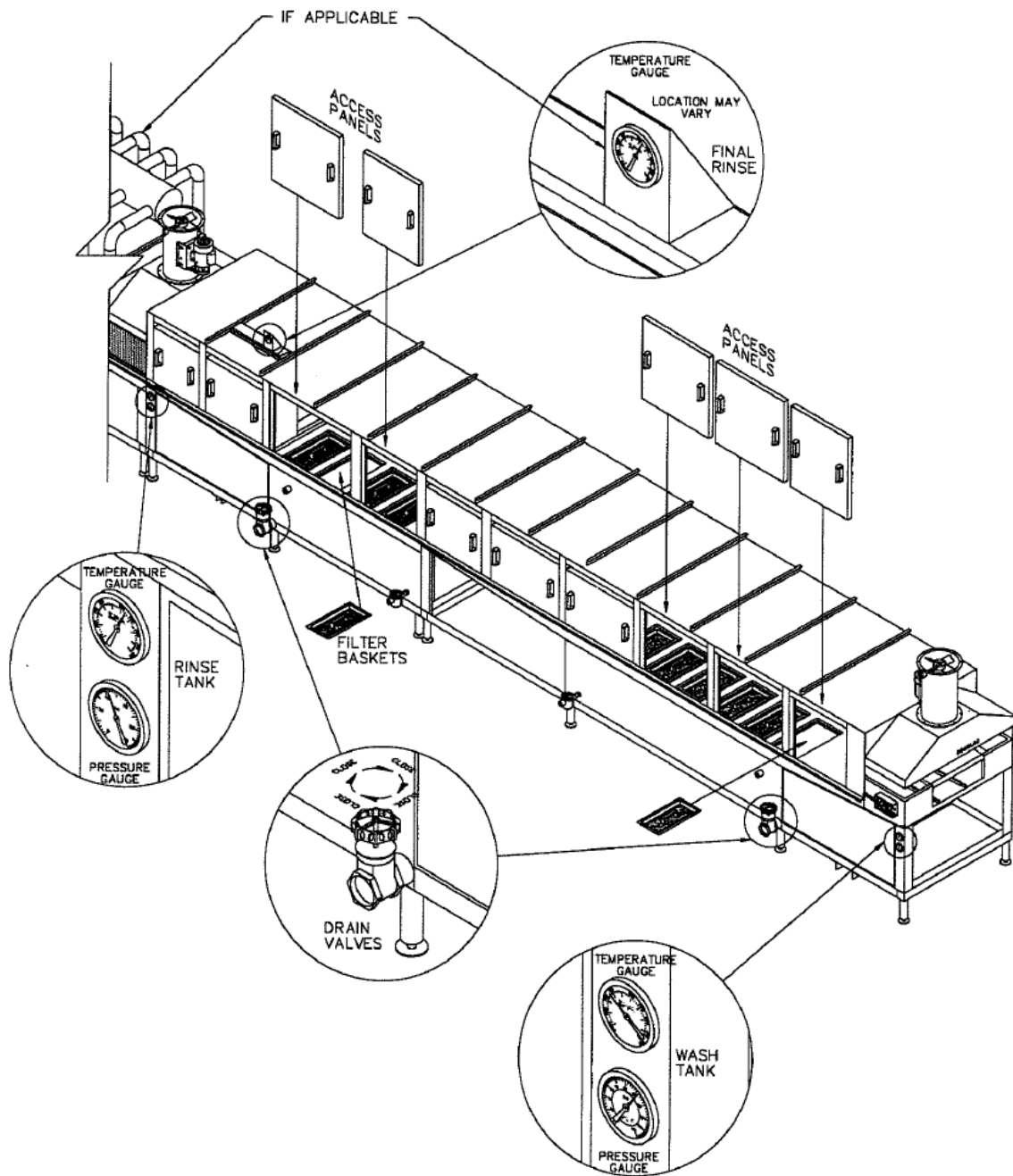


ILLUSTRATION #1

# Start Up

1. This start up procedure is to be used after machine has been shut down and cleaned up as per the Shut Down / Clean Up section in these instructions.
2. Locate filter baskets (illustration 1, section A, page 1). Make sure all filter baskets are in place in the wash and rinse tanks.
3. Locate access panels (illustration 1, section A, page 1). Confirm all access panels are in place.
4. Locate all drain valves (illustration 1, section A, page 1). Make sure all valves are in the closed position. This can be achieved by rotating valve handle in a clockwise motion until handle can no longer be turned.
5. If machine is equipped with an electrical panel main disconnect switch handle. Move handle in upward motion to turn to on position.
6. Locate OFF ON switch (illustration 1, section B, page 2). Turn switch to on position by turning lever to right. This will start the wash and rinse tank to fill with water. After water has reached appropriate level heat source will engage. Temperatures will have been preset at initial start up.

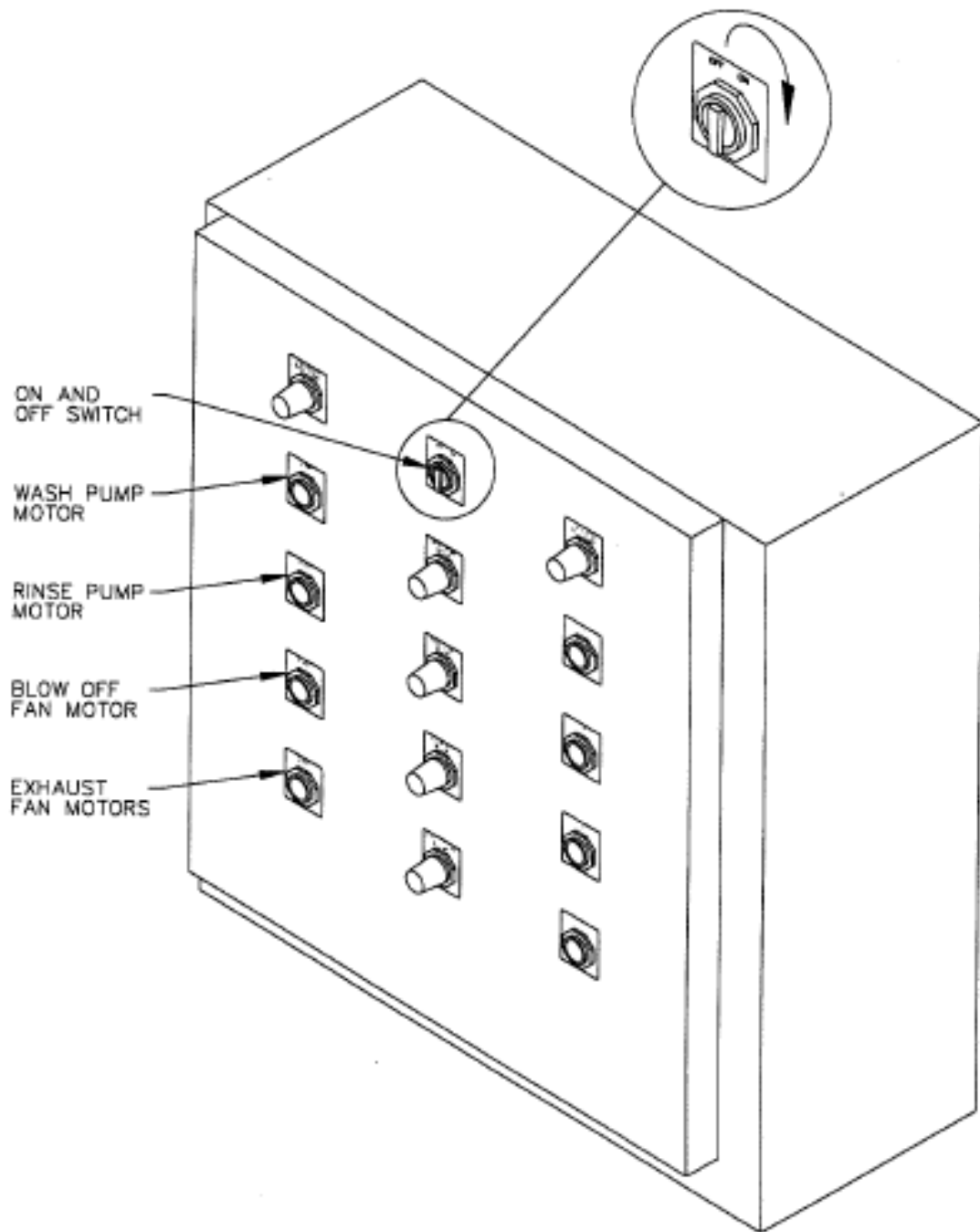


ILLUSTRATION #1

## Start Up

7. Add soap to wash tank (illustration 1, section C, page 3). If machine is not equipped with an automatic soap dispenser, add the appropriate amount of soap to wash tank. Follow soap manufacture guidelines for correct amount. Refer to installation drawing or specification sheet for tank capacity.
  
8. Check temperature gauges (illustration 1, section A, page 1). **Do not start machine till wash tank temperature is 150 degrees and rinse tank temperature is 160 degrees.**
  
9. Start all motors (illustration 1, section B, page 2). Depress start button in following order:
  1. Wash Pump Motor
  2. Rinse Pump Motor
  3. Blow Off Fan Motor
  4. Exhaust Fan Motors
  5. Conveyor Drive Motor
  
10. Load items to be washed. With heavily soiled surfaces facing down, place item to be washed in the center of the lane, do not overlap items. If machine is equipment with push tabs ensure items are placed properly between them and not on top of push tabs.

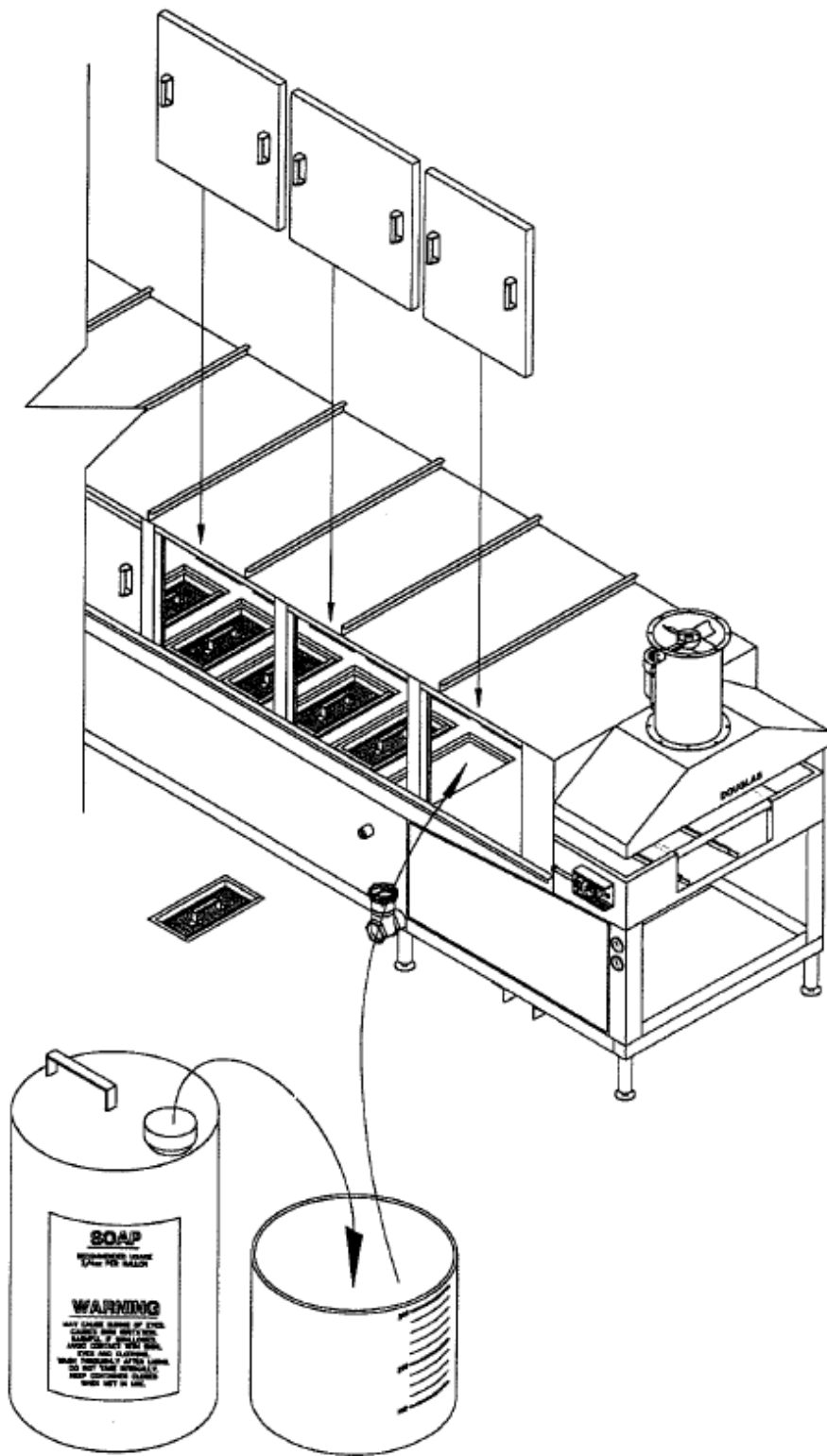


ILLUSTRATION #1

# Section 2

## Shut Down

## Clean Up

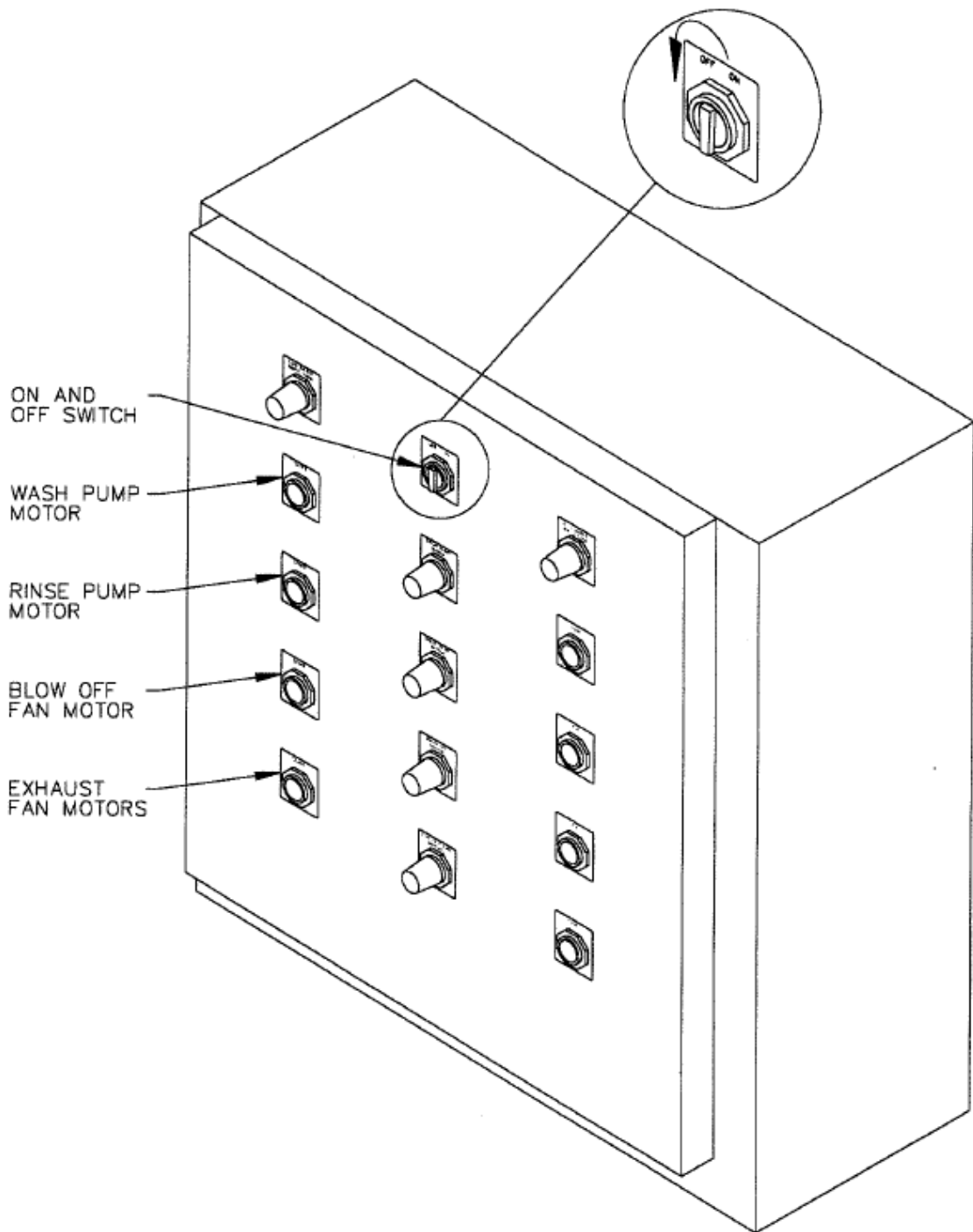


ILLUSTRATION #1

## Shut Down / Clean Up

1. Shut Down / Clean Up is normally performed at the end of each shift, although it may be necessary to perform this more often if items being washed are heavily soiled. You may also have to do this if you feel the cleaning ability of the machine is declining. Removal and cleaning of filter baskets may be necessary more frequently if pumps are cavitating, or if there are any other signs of lack of water supply to pumps.

**Note: No maintenance or cleaning should be performed until all power leading to the machine and at the machine is shut off, and locked out.**

2. Turn off all motors, Off/On switch, and main disconnect if applicable (illustration 1, section D, page 4). To do these depress the stop buttons in the following order:
  1. Conveyor Drive Motor
  2. Exhaust Fan Motor
  3. Blow Off Motor
  4. Rinse Pump Motor
  5. Wash Pump MotorAfter all motors are turned off, turn the Off/On switch to the left, or off position, then turn the main disconnect handle to the off position and lock out.
3. Locate and open rinse and wash tank drain valves fully (illustration 1, section E, page 5). Turn drain valve handles counter clockwise until no more movement is possible to fully open valves.

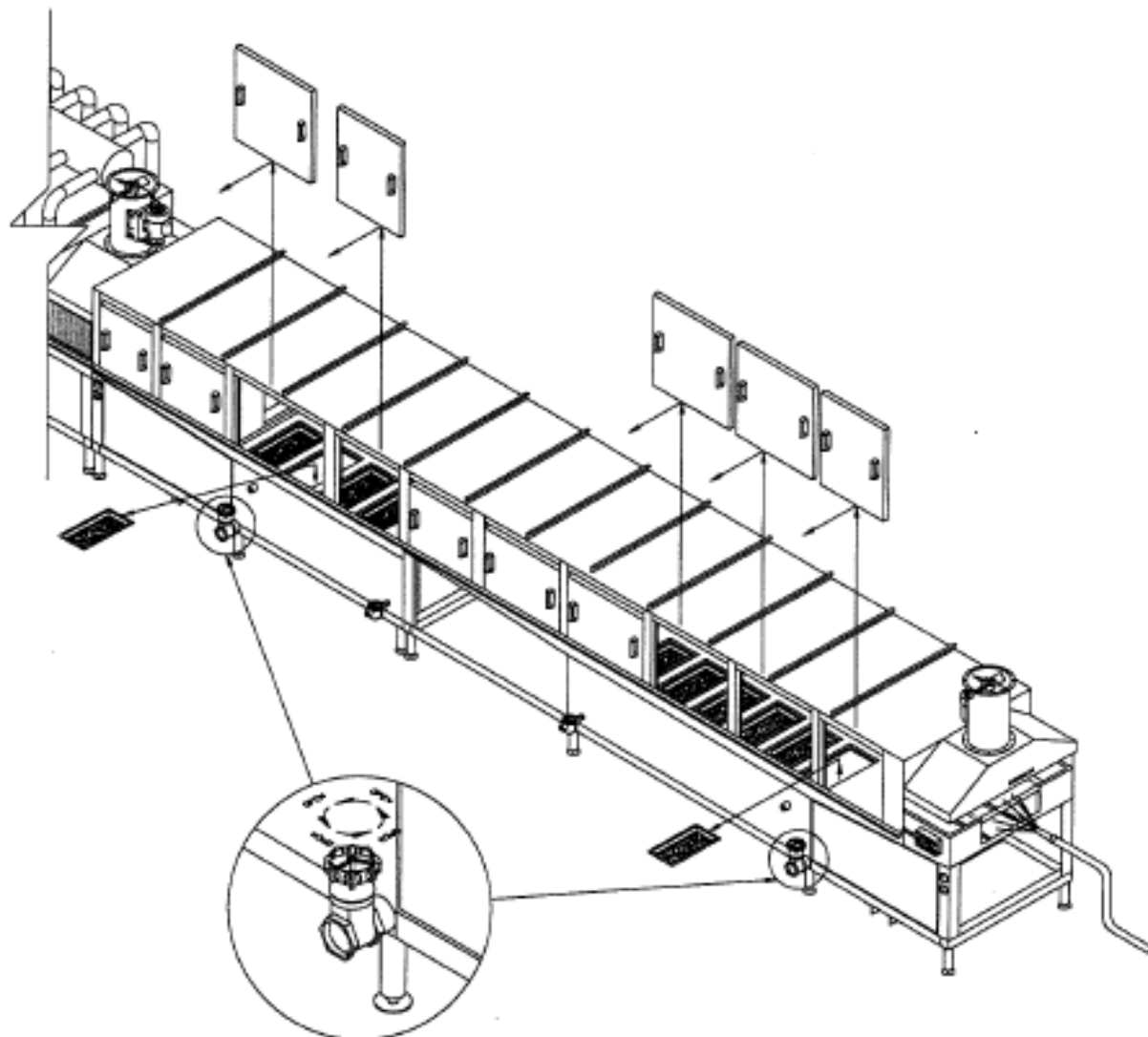


ILLUSTRATION #1

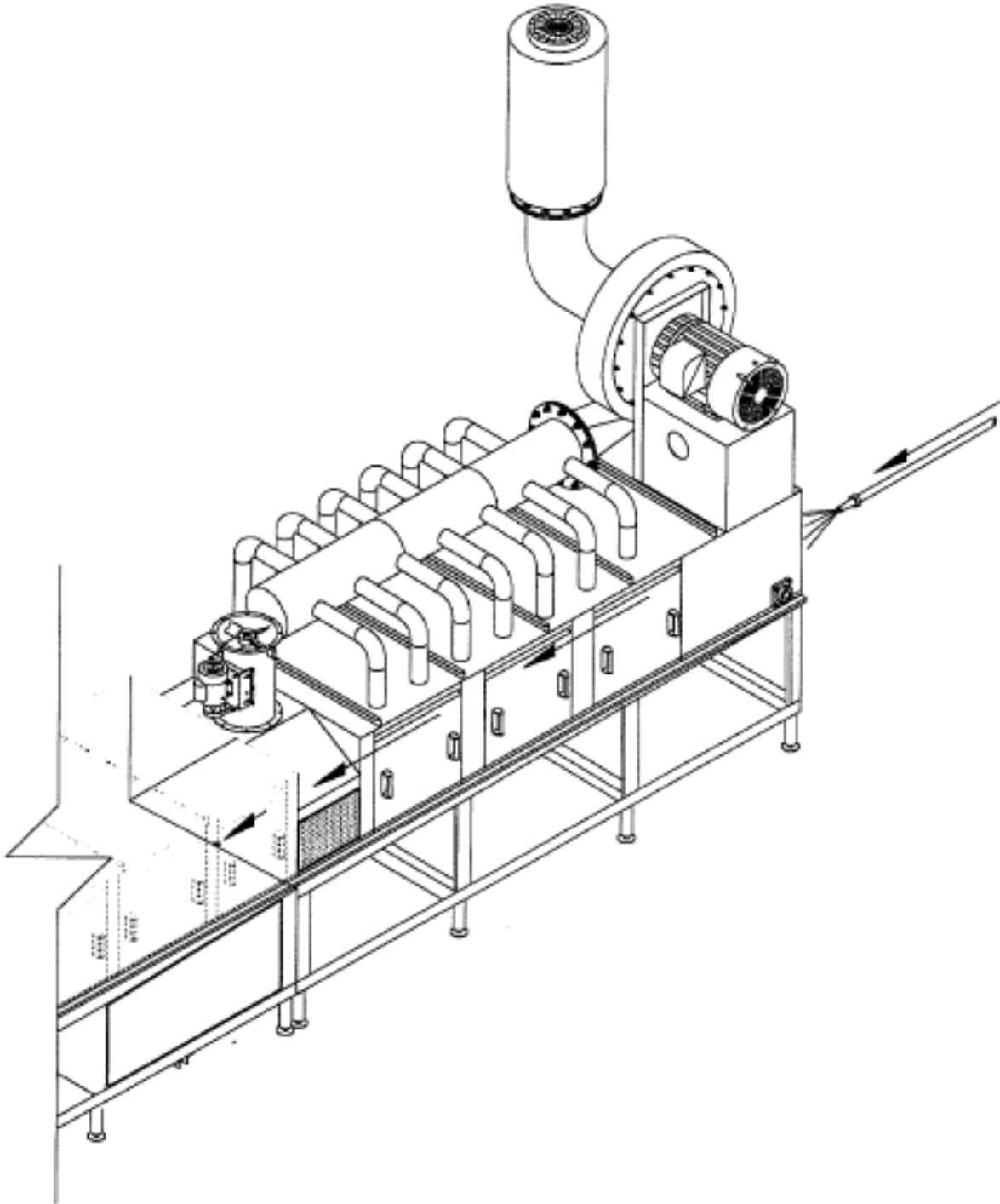


ILLUSTRATION #1

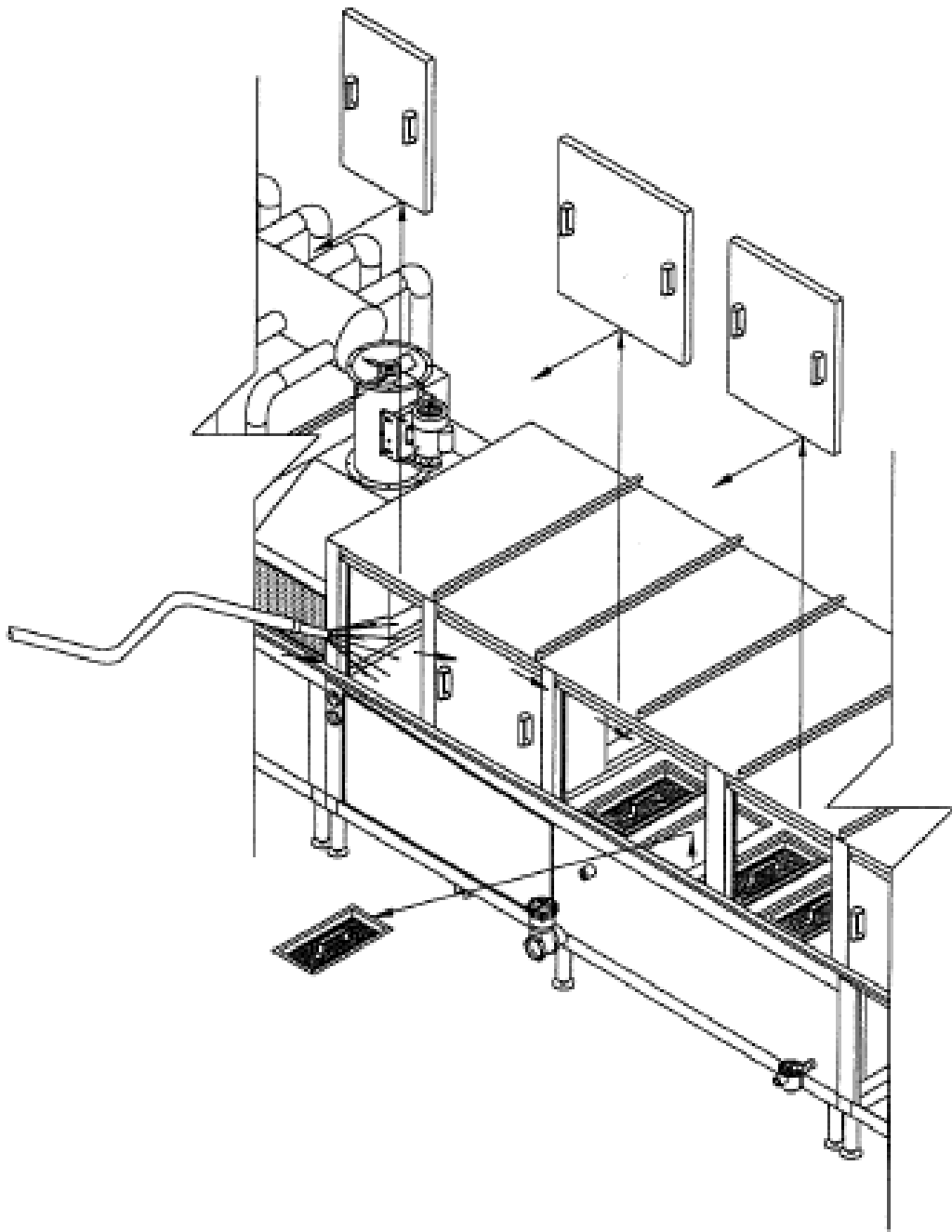


ILLUSTRATION #1

## Shut Down / Clean Up

4. Locate and remove access panel (illustration 1, section E, page 5). To remove panels lift up, then towards outside of machine. Remove only the access panels you feel necessary to complete the clean up steps. You may only want to remove one side of the machine panels, or remove only a few panels at a time. Don't forget to clean the access panels that have been removed.
5. Begin by cleaning the load end or entrance (illustration 1, section E, page 5). Use a hose to spray all debris from the entrance towards and into the wash tank filters, hosing off all surfaces as you go.
6. Now clean blow off section or exit end (illustration 1, section F, page 6). To avoid clogging the drain in this section, remove all large pieces of debris by hand. Now use a hose to spray all remaining debris toward drain.
7. Now clean the rinse section (illustration 1, section G, page 7). Start from the furthest point from the filter baskets. Hose out the entire section, spraying all debris towards and into rinse section filter baskets.
8. Remove and clean filter baskets (illustration 1, section G, page 7). Dispose of all large debris in a proper receptacle. Do not drop or hit the baskets against floor or trash receptacle. Wash all remaining debris into sink or drain.

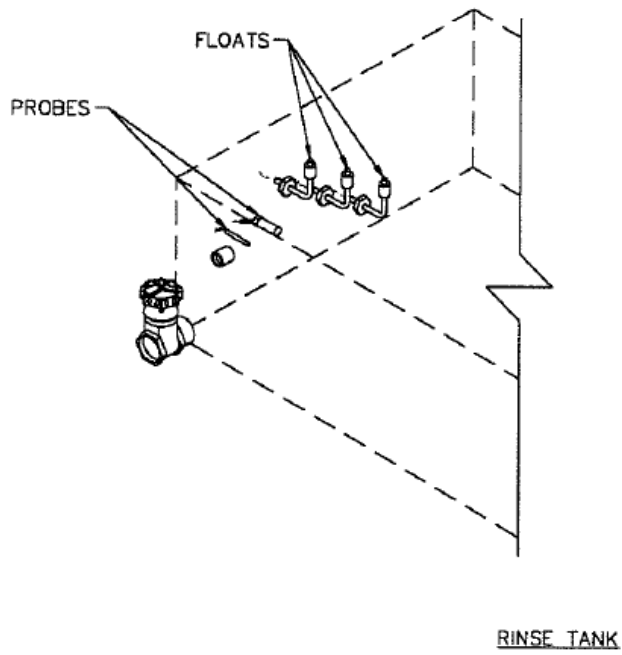
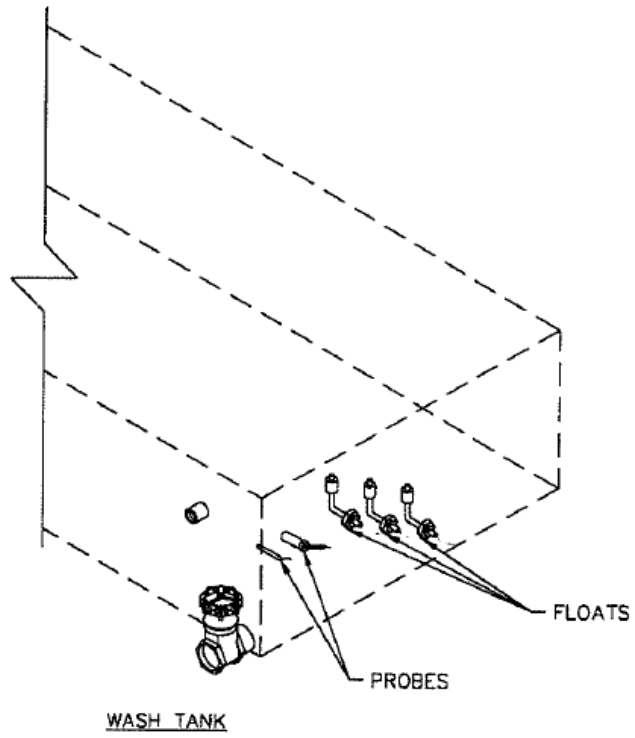
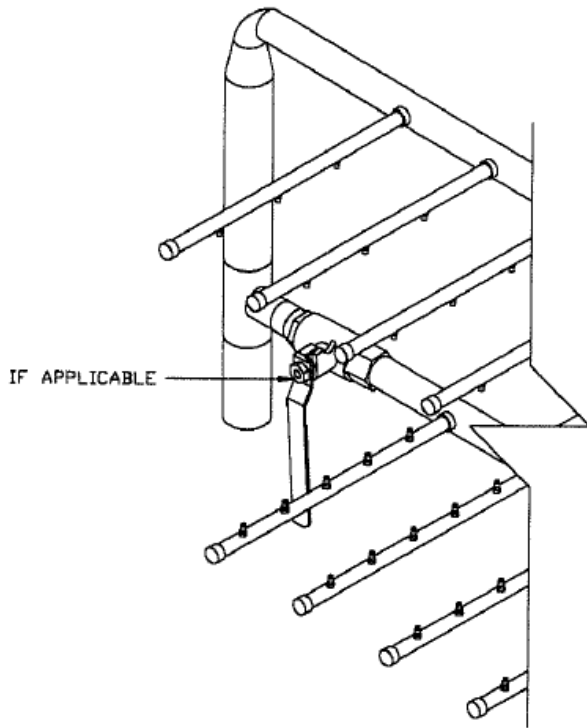


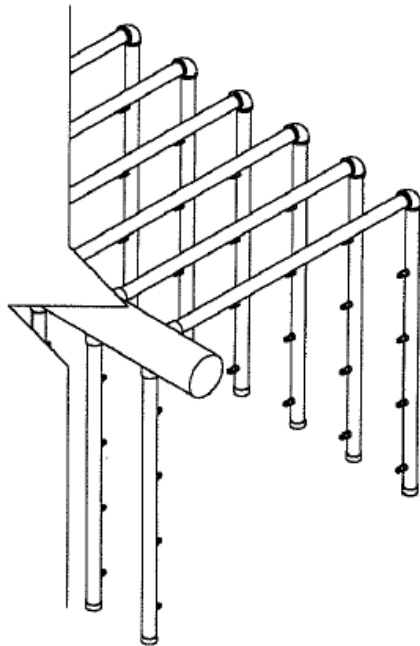
ILLUSTRATION #1

## Shut Down / Clean Up

9. With the filter baskets removed clean the heat source in wash and rinse tanks i.e.; steam coil, gas tube, or electric heating elements (illustration 1, section H, page 8). First, use a hose to spray off entire heat source. If any residue remains on source use a stainless steel wire brush or scraper to remove or loosen. Follow by spraying all residue off the source and into the tank drain.
10. Clean all tank floats, and probes (illustration 1, section H, page 8). Remove as much residue from floats, and probes as possible using a hose, follow with wiping down with a cloth. Use a scotch brite pad or similar to clean all the metal tips attached to the probes. Check that all floats are moving freely up and down.
11. Finish cleaning wash and rinse tanks (illustration 1, section H, page 8). To avoid clogging of drains, remove all large pieces of debris from tanks. Use a hose to spray the entire interior of the tanks, spraying all remaining debris toward and into drains.
12. Install wash, and rinse tank filter baskets (illustration 1, section A, page 1). Inspect for damage, and make sure all baskets are clean. When putting baskets back in place make sure they all fit flush into the filter basket holders.



HORIZONTAL WASH - RINSE PIPES & JETTING  
 (NUMBER OF PIPES & JETS MAY VARY)



VERTICAL WASH - RINSE PIPES & JETTING  
 (NUMBER OF PIPES & JETS MAY VARY)

ILLUSTRATION #1

## Shut Down / Clean Up

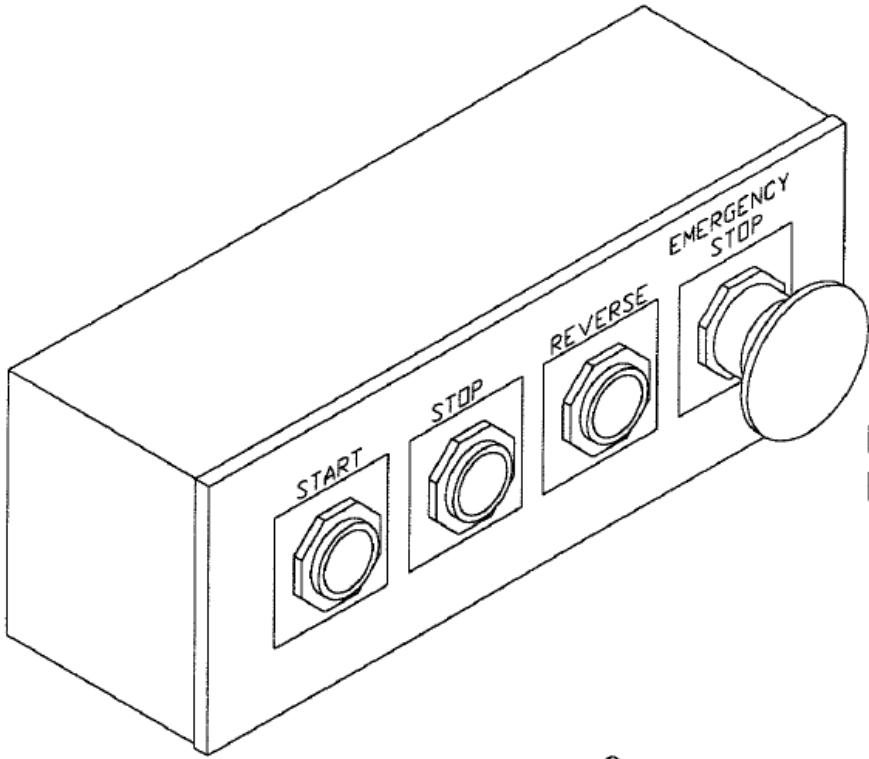
13. Do a visual inspection (illustration 1, section I, page 9). Inspect all wash and rinse jets for obstructions. If any obstructions are found in jets, try to remove the item by pulling it out of the jet. If the item doesn't come out of the jet easily, contact maintenance for assistance. Now visually inspect remainder of the interior and exterior of the machine, looking for any damage or excess wear. If any is found contact maintenance immediately.
  
14. Return all removed access panels (illustration 1, section A, page 1). Make sure all panel have been cleaned, and inspected. Replace panels by placing them into the access panel guides and sliding them down. Making sure they are completely down and in place.



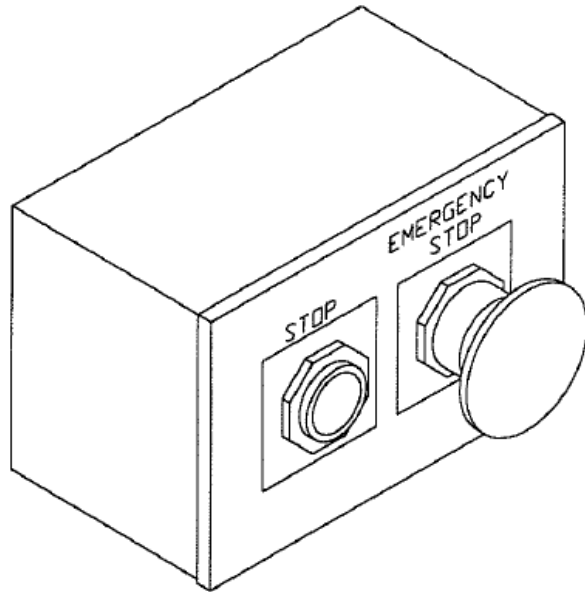
# Section 3

# Emergency

# Stop



LOCATED AT  
ENTRANCE END



LOCATED AT  
EXIT END

ILLUSTRATION #1

# Emergency Stop

The emergency stop buttons are located on both the entrance (load) and exit (unload) ends of the machine (illustration 1, section J, page 10). Locate and remember where these buttons are.

They should be used any time you are unsure or worried about the operation of the machine or if you ever have any safety concerns for yourself or any other person. You only need to push one button to stop the machine.

Remember these buttons shut down the entire machine. Do not use them to stop individual motors or drives during normal operation.

**NOTE: Although the emergency stop shuts off the entire machine, the correct shut off and lock out procedure must be followed before any repairs or rectification is attempted.**

1. Inspection of outside of machine (illustration 1). If you feel that there is a problem externally with the machine and you initiated an emergency stop; a visual inspection should be done at this point. Inspect all external components i.e. pumps, motors, controls, and cabinet. Report all findings to your supervisor and or maintenance immediately.

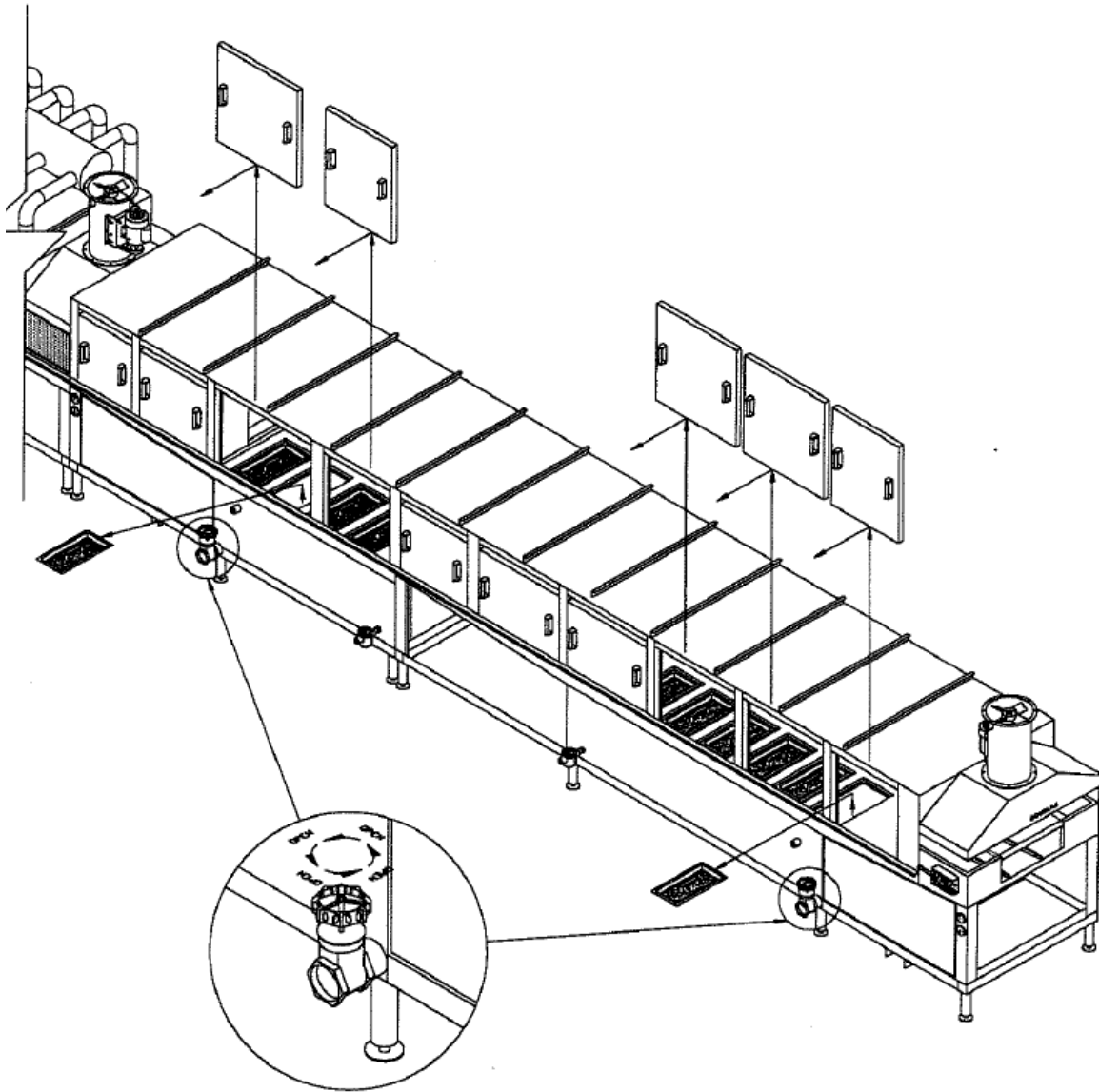


ILLUSTRATION #1

# Emergency Stop

2. Internal problem, removal of access panels (illustration 1, section E, page 5).  
If an emergency stop has been initiated due to an internal problem, such as jamming or loud noises. Removal of access panels may be required. This can be accomplished by lifting up on the panel and pulling toward the outside of the machine.
  
3. Internal inspection. After necessary access panels have been removed, visually inspect interior of the machine. If a jam up has occurred, try to remove the pans by hand. If you can not remove these pans by hand, reversal of the conveyor belt may be necessary. At this point contact your supervisor and or maintenance. If anything else has been found advise your supervisor and or maintenance immediately.
  
4. If an emergency stop has been initiated due to a safety concern and or an injury, contact your supervisor immediately.

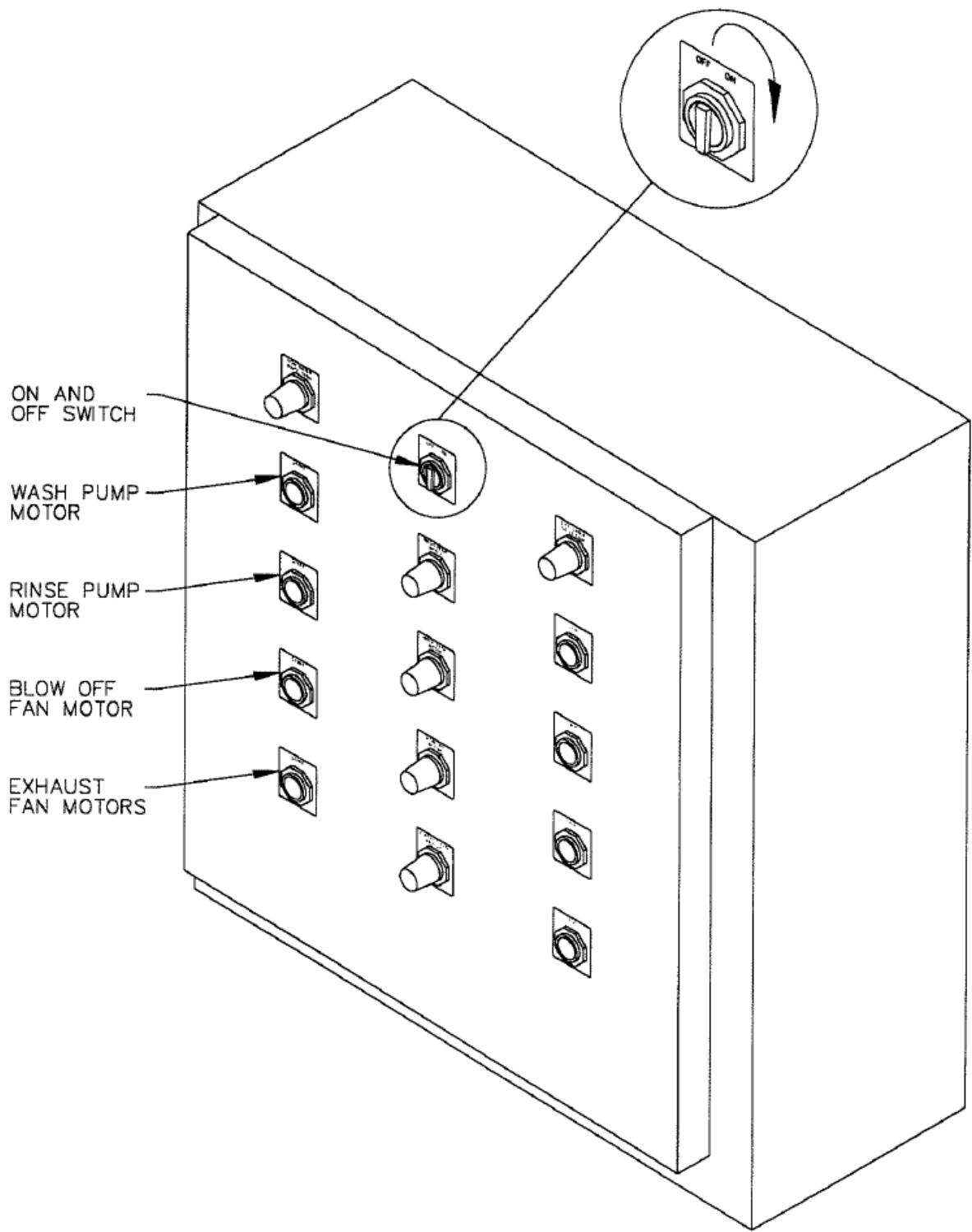


ILLUSTRATION #1

# Emergency Stop

5. If an emergency stop has been initiated by mistake, or you wish to restart the machine after an emergency stop situation has been corrected. Proceed with the following. Disengage the E-Stop button by pulling the button out or toward you. Engage all power leading to the machine. If an emergency stop has been initiated due to a safety concern and or an injury, contact your supervisor immediately.
  
6. Ensure the Off/On switch is in the on position (illustration 1, section B, page 2). Restart all motors in the following sequence.
  1. Wash Pump Motor
  2. Rinse Pump Motor
  3. Blow Off Fan Motor
  4. Exhaust Fan Motor
  5. Conveyor Drive Motor



# Section 4

## General Information

## Do's and Don'ts

### DO

Wear Safety Glasses

Wear Hearing Protection

Wear Gloves

Keep Hands Clear Of Conveyor Belt While Machine Is In Operation

### Don't

Hose Down Any Electrical Enclosures

Hose Down Any Electrical Motor

Remove Any Access Panels While Machine Is In Operation

Touch Exterior Of Machine Without Gloves While In Operation  
(exterior is hot)

# Troubleshooting

## Problem

## Things To Check

Machine Will Not Run	Incoming Power Off/On Switch Emergency Stop Button Engaged Internal Circuit Breakers Main Disconnect Switch
Pumps Will Not Start	Circuit Breakers Overload Tank Filled With Water Tank Probes Or Floats
Machine Will Not Fill With Water	Incoming Water Supply Incoming Water Supply Valves Tank Probes Or Floats Solenoid Valves
Machine Will Not Heat Up (Electric Heated)	Thermostat Heater, Circuit Breakers Tank Probes or Floats Heating Elements
Machine Will Not Heat Up (Gas Heated)	Thermostat Incoming Gas Supply Tank Probes or Floats Ignition System
Machine Will Not Heat Up (Steam Heated)	Thermostat Incoming Steam Supply Condensate Line (If Applicable) Solenoid Valves
Conveyor Belt Will Not Move	Product Jam Circuit Breakers Sprockets, Shafts Drive Controller
Product Jamming Up In Machine	Improper Item Size Damaged Item Hold Down Not Set Properly Heating Elements

# Troubleshooting

## Problem

## Things To Check

Not Cleaning	Pumps Pump Pressure Water Level Tank Temperature Conveyor Belt Speed Soap Spray Jets (Missing or Clogged) Wash Pipe End Caps (Missing) Filter Baskets (Clean And In Place) Item Hold Down System Not Set Correctly Items Loaded Incorrectly
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If you experience any other problems or need any further information please feel free to contact our service department.

Phone # (727) 461-3477

Fax # (727) 449-0029

# LUBRICATION CHART

DEVICE	FREQUENCY	TYPE OF GREASE
WASH PUMP MOTOR	EVERY 3600 HOURS	SHELL DOLLUM CHEVRON SRI
WASH PUMP MOTOR	EVERY 3600 HOURS	SHELL DOLLUM CHEVRON SRI SENTINEL SLNTHT #2
BELT TAKE UP BEARING	EVERY 90 DAYS	SHELL DOLLUM CHEVRON SRI SENTINEL SLNTHT #2
BELT DRIVE END BEARING	EVERY 90 DAYS	SHELL DOLLUM CHEVRON SRI
CONVEYOR BELT GEAR BOX	CHANGE FIRST 1500 HOURS EVERY 5000 AFTERWARDS CHECK LEVEL VISUALLY	MOBIL SHC634 MOBIL 600W MOBIL HECLA SUPER
BLOW OFF UNIT	EVERY 60 DAYS	MOBIL MOBILLITH AW2 TEXACO PREMIUM RB GULF OIL GULF CROWN #2 OR #3 SHELL ALVANIA #2 OR #3
STEAM EXTRACTION FANS	EVERY 90 DAYS	SENTINEL SLNTHT #2

