

2 Preventive Maintenance Index

Priority	Color Legend
1	Critical to safe and proper machine function
2	Necessary for continued trouble-free operation
3	Recommended for best machine function

Priority	Task Description	Period	Refer to
1	Clear lug paths of product/large debris	DAILY	page 5-6
1	Check vacuum/cups function	DAILY	page 5-7
1	Clean sensor eyes	DAILY	page 5-8
2	Clean glue and product spills	DAILY	page 5-8
2	Check temp./cooling of electrical cabinets	DAILY	page 5-9
2	Check lubricant reservoir fill level	WEEKLY	page 5-13
2	Check pneumatic cylinders for full motion	WEEKLY	page 5-13
2	Check chain tension, wear, alignment	MONTHLY	page 5-23
2	Check/clean external vacuum filters	2 WEEKS	page 5-15
2	Check supply air filters	2 WEEKS	page 5-16
2	Check servo motors' status	2 WEEKS	page 5-16
2	Check auto-lubrication function, interval	MONTHLY	page 5-17
2	Wash down machine	MONTHLY	page 5-17
2	Check/tighten machine fasteners	MONTHLY	page 5-18
2	Clean light curtains	2 MONTHS	page 5-19
2	Check/replace vacuum pump blades (vanes)	3 MONTHS	page 5-20
2	Replace vacuum pump internal filters	6 MONTHS	page 5-21
2	Lubricate manual grease points	6 MONTHS	page 5-23
2	Check/replace air conditioner inlet air filter	YEARLY	page 5-20
3	General machine cleaning	DAILY or at pack/flower changes	page 5-10
3	Check for loose connections/vibration	DAILY	page 5-12

3 Preventive Maintenance Details

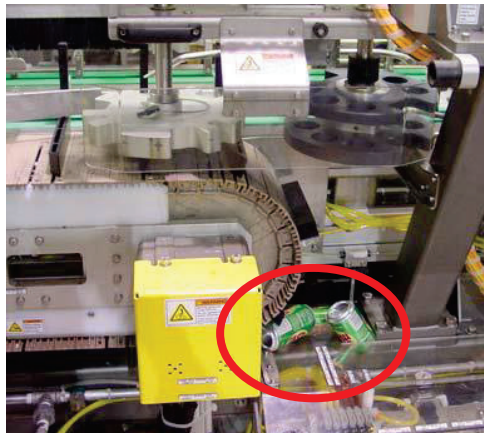
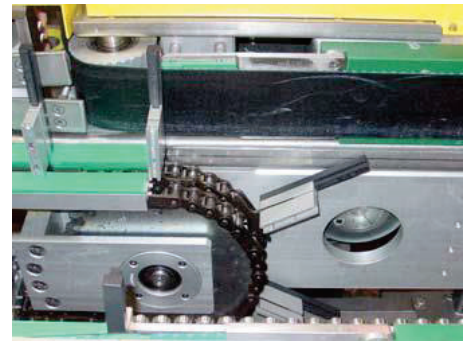
Daily Preventive Maintenance

Note: When unable to perform the following procedures every day, perform when changing flavors or during machine changeovers.

1

Check all lug paths for product and debris

Check for damaged product and large debris which may block machine motion. Pay particular attention to outfeed and area under load-side folding wheel.



Daily Preventive Maintenance, continued

1

Check condition and function of vacuum and cups

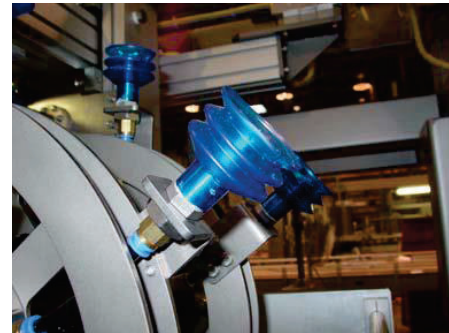
a. Inspect vacuum cups - replace worn cups

- Check vacuum cups for tears, ragged edges, and other wear.
- Check that cups hold firmly to carton when vacuum is on.
- Brown discoloration on white cups indicates a torn area.
- Replace any worn cups.



If worn, replace vacuum cup as follows:

1. Remove the cup screw, using a screwdriver or allen wrench through the side holes, as shown.
2. Remove the old vacuum cup, and replace with a new cup.
3. Replace the cup screw and tighten



Check vacuum function by jogging a few cartons through the feeder

- Check that cartons are pulled from the hopper
- Check that cartons are transferred properly through the feeder.

Daily Preventive Maintenance, continued

1

Clean sensor eyes

Use warm, wet rag to clean all photo eyes and reflectors (i.e., open flap detector, intrusion detection, deformed carton sensors).

**2**

Clean glue and product spills

Using warm, wet soapy rag or pressure washer, remove spilled and/or dried liquid from:

a. Carton flap guides



b. All pneumatic cylinders

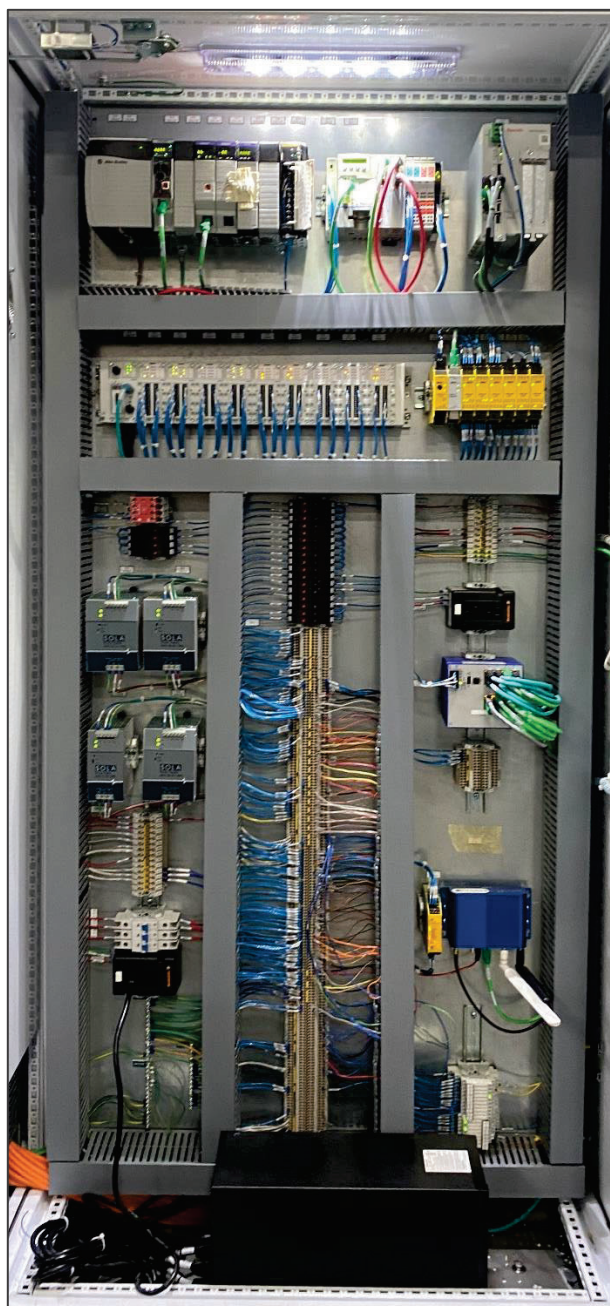


Daily Preventive Maintenance, continued

2

Check temperature/cooling of electrical cabinets

Inspect electrical cabinets for cooling issues (i.e. condensation, cabinet temperature). If problems are found, check fuses and look for drain blockage.

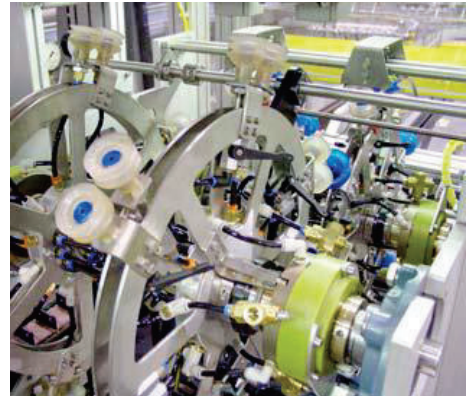


Daily Preventive Maintenance, continued

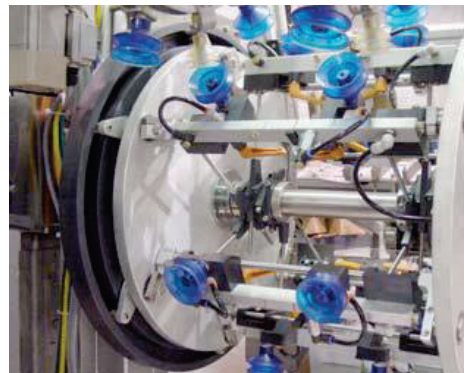
3

Perform general machine cleaning

- a. Visually check the machine for any trash or debris and remove.
- b. Using air, blow debris off of the entire machine, including:
 - All vacuum cups and vacuum ports on the three-wheel feeder



- Cam follower paths (wheel one of carton feeder)

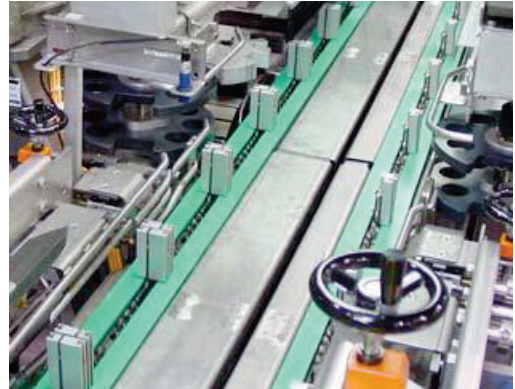


- Carton flap guides along the carton carrier section of the machine

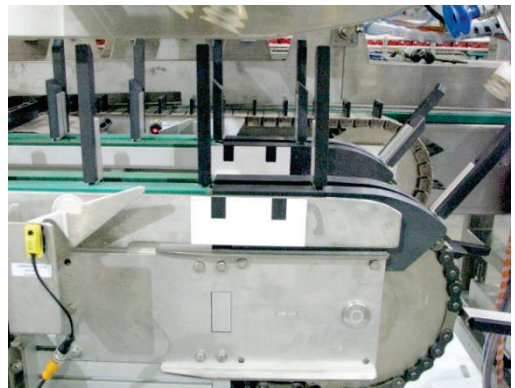


Daily Preventive Maintenance, continued

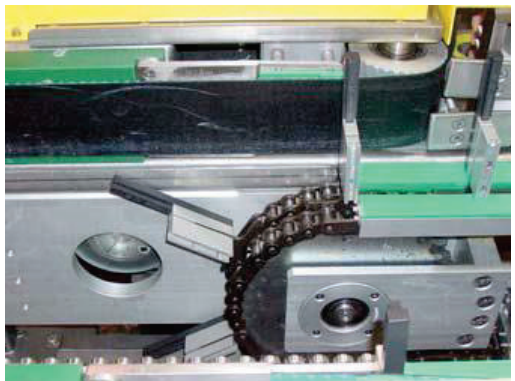
- Carton carrier lug paths



- Infeed sprockets



- Outfeed sprockets



- All flooring, tread, and horizontal surfaces



Daily Preventive Maintenance, continued

3

Check for loose connections/vibration

- a. Visually inspect hoses and cables for loose connections – tighten where needed.
- b. Listen for excessive noise or vibration in shafts, servo motors, and chains.

Weekly Preventive Maintenance

2

Check lubricant reservoir fill level

⚠ WARNING

DO NOT OPEN when pressurized. Tank is under pressure when air is active. It can cause bodily injury if opened while under pressure.

**2**

Add oil to air lubricator at feeder for magazine vibrator

If machine is equipped with air lubricator for magazine vibrator.

**2**

Check motion of pneumatic cylinders

Cycle all pneumatic cylinders through full range of motion and watch for movement of gluing assembly, flap folders, glue guns, deadplates and hold downs. Make sure that the slide and deadplates do not stick.



Weekly Preventive Maintenance, continued

2

Wash down entire machine

Use soapy water solution to wash entire machine and remove all spilled liquids.



⚠ WARNING

Do not wet the glue guns! Water applied to hot glue guns may flash directly into steam, creating a burn hazard!

⚠ CAUTION

Do not use water around the light curtains. Overspray water on light curtains may cause faulty operation. Direct water spray may short light curtains, causing permanent component damage.

Bi-weekly Preventive Maintenance

2

Check/clean vacuum pump external air filters

If needed, replace filters as follows:

- a. Remove the cover from the vacuum pump filter.
- b. Remove the old, dirty filter and insert a new, clean filter.
- c. Replace the cover.
- d. Repeat steps a. through c. for the other filters.

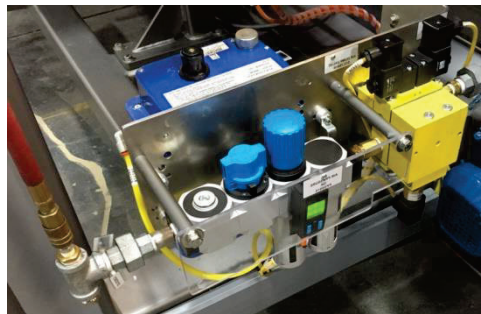


Bi-weekly Preventive Maintenance, continued

2

Check supply air filters

Check compressed air filters, located on the non-operator side of the machine just upstream of the load-fold assembly. The filters have an autocleaning mechanism, so verify that the glass bowls are empty.



2

Check status of servo motors

Check status of all motors at the servo diagnostics screen.

40 0 PPM 1b		ONLINE MODE		FORMAT NAME: CIP-CLEANING	
SERVO DRIVE STATUS					
01-LH Outside Carrier Cha		A0013 Ready for power on			
02-LH Inside Carrier Chai		A0013 Ready for power on			
03-RH Inside Carrier Chai		A0013 Ready for power on			
04-RH Outside Carrier Cha		A0013 Ready for power on			
05-Feeder Wheel 1		A0013 Ready for power on			
06-Feeder Wheel 2		A0013 Ready for power on			
07-Feeder Wheel 3		A0013 Ready for power on			
PAGE 1					
Automatic		DOWN STREAM DOWN PRODUCT LANE 6		Operator 1	

Monthly Preventive Maintenance

2

Check auto-lubrication function, interval



DO NOT OPEN when pressurized. Tank is under pressure when air is active. It can cause bodily injury if opened while under pressure.

**2**

Check chains for tension, wear, alignment

Check all chains for alignment and wear; re-tension chains as necessary.

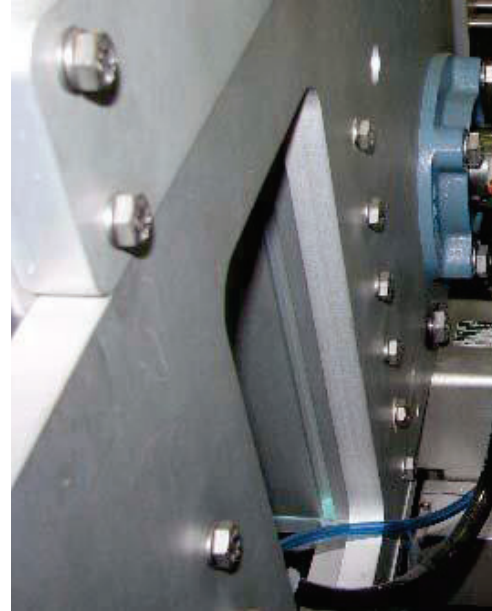


Monthly Preventive Maintenance, continued

2

Check/tighten machine fasteners

Inspect all fasteners and re-tighten as needed.



Two-Month Preventive Maintenance

2

Clean Light Curtains

Clean light curtains every two months with a mild detergent or window cleaner and a damp cloth.



Avoid cleaners containing alcohol - they may damage the acrylic lens cover.



3-Month Preventive Maintenance

2

Check/replace vacuum pump blades

Check the blades (vanes) after a year, then check every three months afterwards and replace if necessary.

Note: The blades must be replaced as a complete set.



See “Vacuum Pumps Maintenance” on page 5-**Error! Bookmark not defined.**

2

Check/replace filters in electrical cabinet air conditioners

Check the air filter every three months.
Replace if dirty or clogged:

- Remove the grille from the air conditioner by sliding up and lifting away from cabinet.
- Remove filter retaining screw
- Slide dirty filter out and dispose.
- Insert new filter behind retaining tabs (WestRock part number U5020364P).
- Replace retaining screw.
- Replace grille.



Semi-annual Preventive Maintenance

2

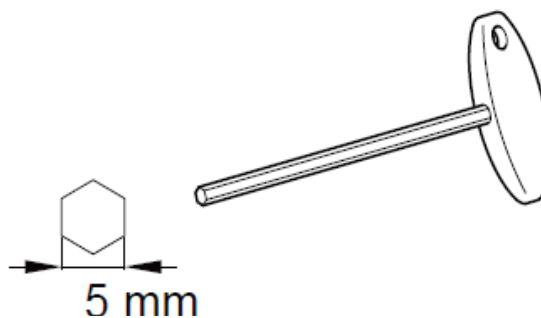
Replace vacuum pump internal filters

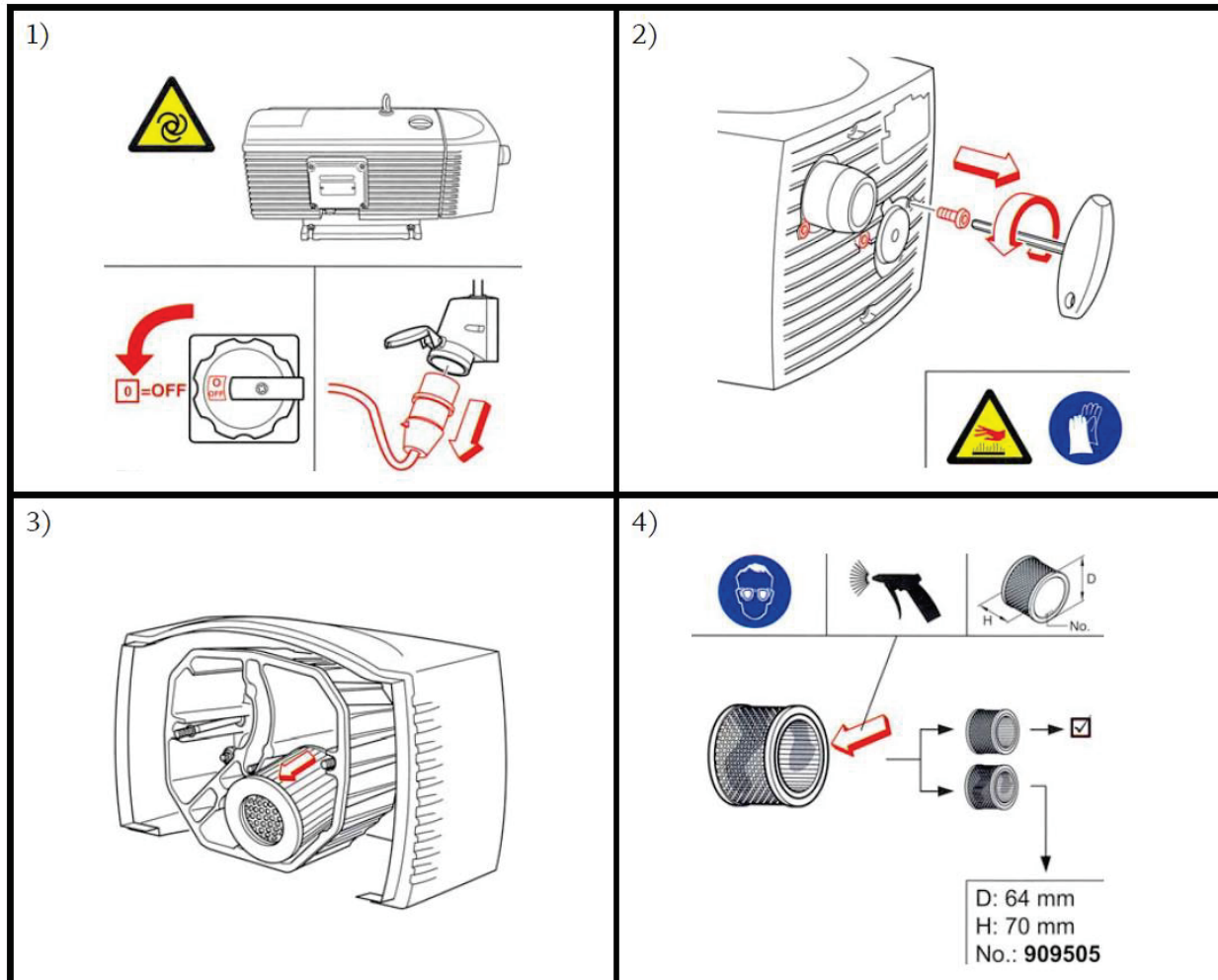


Vacuum pump becomes very hot during use. Allow pump to cool prior to checking filter.

- a. Before replacing internal filter, turn the vacuum pump off from the Control screen and lockout.
- b. Follow these illustrated steps to remove and clean the internal filter:

Tool required:



Semi-annual Preventive Maintenance, continued

c. Reverse illustrated steps 1) through 3) to replace internal filter:

Semi-annual Preventive Maintenance, continued

2

Lubricate manual grease points

Apply lubricant to the grease nipples at the carrier drive shaft (left and right sides - outfeed end):

