

Example Cleaning Procedure

SHUT DOWN THE MACHINE AND USE THE PROPER LOCKOUT/TAGOUT PROCEDURES TO TURN OFF THE ELECTRICAL SUPPLY TO THE MACHINE BEFORE CLEANING. RISK OF DEATH BY ELECTRIC SHOCK OR DAMAGE TO THE MACHINE.

⚠ DANGER



Take appropriate steps to cover external electrical components and unsealed panels to avoid damage caused by water infiltration. Damage by water infiltration is not covered under warranty.

The addition of optional components on your machine may require modification to the following procedures. If you are unsure how to clean any items on your machine, please contact your Viking Masek representative before conducting any cleaning activities.

- (1) If the machine is in operation, stop the machine by pressing the “Stop” button on the control console. Pressing the stop button allows the machine to progress to the programmed stop point.
- (2) Push the “Emergency Stop” button to put the machine in a safe state to shut it down.
- (3) Turn the main power switch to the OFF position and employ lock/tag-out procedures defined by your company SOP to disconnect the power supply to the machine.
- (4) Open the safety guard doors and remove any cartons or product from the machine.
- (5) Take the appropriate steps to cover all sensitive electrical machine components mentioned for your machine type (washdown or non-washdown), customized additions, and cleaning method.



Do not direct flowing water onto the components of the machine that are sensitive to water infiltration. Failure to adhere to this guidance can result in the failure of the component or machine.

- (6) Use an air gun and hose to clear any loose product from the machine.
- (7) Clean all surfaces with detergent if and as needed using damp rags, brushes, or light use of water, to meet the requirements for your machine application and your internal SOP. Do not spray machines with a hose or submerge electronic components in water.
- (8) Thoroughly rinse or wipe off all detergent from the machine. Dried detergent can create a corrosive residue and compromise the equipment's sanitation.
- (9) Use micro-fiber or lint-free towels to dry the machine.

Lubrication and Maintenance

Proper lubrication and preventive maintenance are necessary to ensure your packaging machine's proper functioning and longevity. Use this section as a guide to establish and maintain your lubrication schedules and procedures. Due to variations in the operating environment, hours of service, and production rate, it is impossible to prescribe a schedule that applies to all users. Refer to the guidelines presented within this chapter before putting your machine into production. Utilize the suggested frequency as a baseline to develop maintenance and lubrication schedules specific to your organization and usage.



FOLLOW YOUR COMPANY SOP FOR LOCKOUT TAGOUT PROCEDURES BEFORE CONDUCTING MACHINE MAINTENANCE AND LUBRICATION PROCEDURES. FAILURE TO WORK ON THE MACHINE WHEN IT IS NOT IN A SAFE STATE COULD RESULT IN SEVERE INJURY AND POSSIBLE DEATH

Type of Lubricant

Gear Boxes		Bearings	
ARAL	Degol BG/220	KLONDIKE	Food-Grade Grease EP-2
CASTROL	Optileb GT/220	VICKERS	Vickerlube FG EP Grease 2 -- Part# 25437
VICKERS	Vickerlube FG -- Part# 15926	CASTROL/ TRIBOL	Food-proof Optileb GR 823-2
FUCHS	FM Gear Oil 220	FUCHS	Cassida Grease EPS 2
CASSIDA	FM Gear Oil 220	KLÜBER	Klübersynt UH1 14-151
MOBIL	Mobil: DTE FM Series (#32, #46, & #68)	MOBIL	Mobilgrease FM 101 and FM222
PSC/ BLUESKY	Stratus FG	SCHAEFFER'S SPECIALIZED:	271 Synthetic Food-Grade Grease H1
CASTROL/ TRIBOL	Tribol Food-Proof 1810/220		

FOOD GRADE GREASE AND OIL OPTIONS

Cartoning machines package a variety of products in differing environments. For the machine to be compatible with a broad range of packaging applications, using food-grade grease and oil is recommended to lubricate all non-sealed bearings and moving parts that require regular relubrication.





Verify Lubricant Types with Manufacturer!



Viking Masek cannot be held responsible for using improper lubricants and for damages of the machine/machine parts by using improper and not approved lubricants. Viking Masek does not guarantee the certification of the lubricant to be food grade. All lubricants correspond (according to the information from the manufacturers) to the food grade lubrication types according to H1/FDA 178.3570. Lubricant's temperature range -25 to 40°C (-13 to 104°F).


Preventative Maintenance and Lubrication Checks

Developing a preventative maintenance Standard Operating Procedure (SOP) is essential to ensure your machine's consistent operation and longevity. The frequency of preventative maintenance tasks will depend on individual usage patterns, applications, and environment. The following is a task list intended to guide the development of your SOP for your individual cartooning machine and packaging application. This list is not exhaustive; if you identify a task for your individual machine and application, add it to your SOP.

 DANGER USE PROPER LOCKOUT/TAGOUT PROCEDURES AND PPE BEFORE PERFORMING MAINTENANCE TASKS. ONLY QUALIFIED PERSONNEL SHOULD PERFORM MAINTENANCE PROCEDURES. RISK OF SEVERE INJURY BY POWERED AND MOVING COMPONENTS.

Suggested Frequency	Task	Description
Daily, after cleaning, or every Shift	Check all safety switches for condition security and function.	Check safety switches for security/condition and function. With the main power on and faults reset. Open and close the doors and verify that the main air valve releases the air pressure when the doors open. Check that door open fault occurs.
	Check E-stop function	Press the e-stop and check that the main air valve releases the air pressure. Check to ensure that E-stop pressed fault occurs on the HMI and that the machine enters a safe state.
	Wipe dust off all sensors. Check and clean the Main Air Pressure Regulator filter and container.  <i>Shut off the air supply before removing the container.</i>	Dependent on environment and application, check or clean dust off all optical and proximity sensors. Check the filter container on the Main Air Pressure Regulator for water, oil, and debris. Clean if present. <i>Note: The Machine requires a supply of clean, dry air. A dirty or moist air supply could void certain warranties.</i>
	Visually check for loose hardware	Check for loose nuts bolts and air fittings. Witness mark, as necessary.
	Check for glue buildup	Check and clean glue buildup, on paddles and machine parts.
	Visually check for ruptured or damaged chain links.	If a ruptured or damaged link is found repair immediately.

Suggested Frequency	Task	Description
Weekly,	Check the tension of all chains and belts.  <i>Caution: Use proper PPE and lockout/tagout</i>	Check the tension off all conveyor chains and belts. The tension should not be loose enough to potentially allow the chain or belt to slip and cause damage but should not be so tight that it would cause premature belt or bearing failure.
	Check linear guides for play and binding.  <i>Caution: Use proper PPE and lockout/tagout; the knife is sharp.</i>	Check linear chain guides and slides for abnormal wear and play.
	Check lubrication on chains	Ensure chains have a thin layer of lubricant. If chains are dry amend lubrication frequency
	Check or clean the vacuum pump filter.	Check and clean the vacuum pump filter—unscrew the front cover, take off cover, take our paper filters, clean with pressurized air, reassemble (directions on top of pump).
	Check suction cups for wear and damage.	Check condition of suction cups, replace as necessary.

Suggested Frequency	Task	Description
Monthly	Check for pneumatic system leaks.	Check for air leaks from air lines, cylinders, regulators, and the associated connections for the pneumatic system. Repair or replace as necessary.
	Inspect moving parts and check/tighten all nuts and bolts.	Machine vibration can cause nuts and bolts to work loose, inspect all moving mechanical parts for abnormal wear and tighten nuts and bolts, as necessary. Witness mark as necessary
	Lubricate bearings, chains and rod ends (articulated heads)	Spray though chains and rod ends with food safe silicone spray. Amend frequency dependent on machine usage patterns.
	Check gluing machine connections.  <i>Caution: Hot glue can cause severe burns, use the necessary precautions to avoid injury.</i>	Check gluing machine connections for tightness and wear. Replace or repair as necessary.

RESPONSIBLE PERSON:

PREVENTIVE MAINTENANCE SCHEDULE: CARTONING MACHINE (CAM)																																
DAY		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
WEEK																																
MONTH																																
DAILY	Check machine operation during production																															
	Remove any dust and impurities with pressure air																															
	Wipe the lens of photocells with fine cloth																															
	Remove any glue buildup																															
	As needed, clean dust and impurities from the inside of the machine with damp cloth																															
WEEKLY	Check chain tension																															
	Check belt tension																															
	Check for wear of suction cups																															
	Lubrication of articulated heads with oil																															
	Lubricate chain system																															
	Lubrication of bearing housings																															
	Lubrication of the linear guide																															
	Clean dust and impurities from the inside of the machine																															
	Clean filters of electrical cabinets																															
Clean filters of vacuum pumps																																
MONTHLY	Check motion axes																															
	Check function of pneumatic cylinders																															
	Check tension of chains																															
	Check tension of belts																															
	Lubricate chain systems with oil																															
	Lubricate bearing housings																															
	Lubricate articulated heads																															
	Lubricate linear guides																															
	Lubricate screw rods of the side and vertical adjusting system																															
Lubricate sliding bushings																																

RESPONSIBLE PERSON:

PREVENTIVE MAINTENANCE SCHEDULE: LOAD MACHINE (LOM)		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
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