	Stretch Wrapper SOP		
	Owner: T. Guire	AGCO-WH-PKG-0011	
	Approved by: B. Aman	Rev: 2	Rev. Date: 05/11/2023

1. **Scope** - Used by Packaging & Warehouse personnel operating stretch wrappers or replacing stretch wrap on those machines.

2. **Purpose** - Provide guidelines & steps for startup, proper pallet wrapping, safe entry, stretch wrap replacement, routine operations, shutdown, & cleaning.

3. **References** – N/A

4. **Safety Considerations / Requirements**

Hazardous Materials

CO2/Gas Exposure

Glass Exposure

Special Safety Equipment Required

Confined Space Permit Required

Lockout Tagout Procedures Required

Exclusive Control – as detailed in LOTO Guide – must be performed before entering gate to change rolls of stretch wrap or clear jams.

Substance Containment Procedure Required

Other:

5. **Additional Personal Protective Equipment (PPE) Requirements** - Assumes Safety Glasses, Safety Shoes, Bump Cap and Hearing Protection are worn in required areas and locations.

Chemical Suit/Apron & Coat

Chemical Gloves

Cut Resistant Gloves

Rubber Boots

Other:

Face Shield

Goggles


Dust Mask

Arm Guards

6. **Equipment and Materials** - Personal lock for exclusive control, safety knife, new roll of stretch wrap – if replacing wrap.

7. **Food Safety Risks and Requirements** – N/A

8. **Quality Considerations** – Ensure that all pallets are wrapped according to product specifications.

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9. Environmental – N/A

10. Applicable Job Title – Packaging Operator, Warehouse Operator

11. Terminology and Acronyms - SOP = Standard Operating Procedure

12. Special Notes – N/A

13. Procedure

Steps	Image and/or Additional Information
Startup	
<p>1. If Stretch Wrapper was locked out, restore equipment to service using LOTO guide.</p> <p>2. If stretch wrap is needed, bring a pallet from the MA aisle racking – making sure that the code on the pallet matches the code on the Kitting Sheet.</p> <p>If you notice that there are 2 or fewer pallets of wrap in the MA aisle, notify Lead or Supervisor so more can be ordered.</p>	



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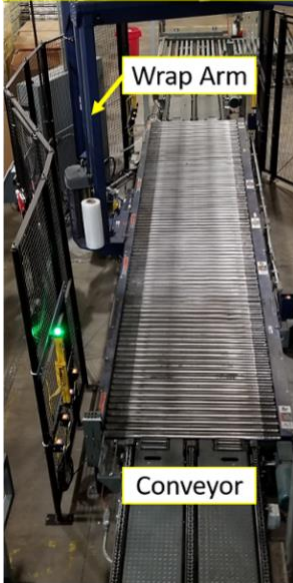
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Steps

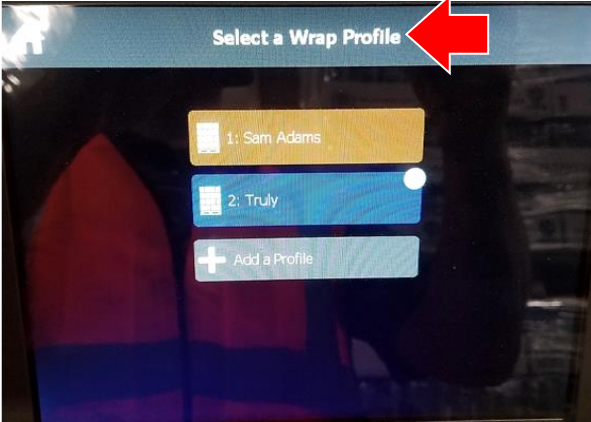
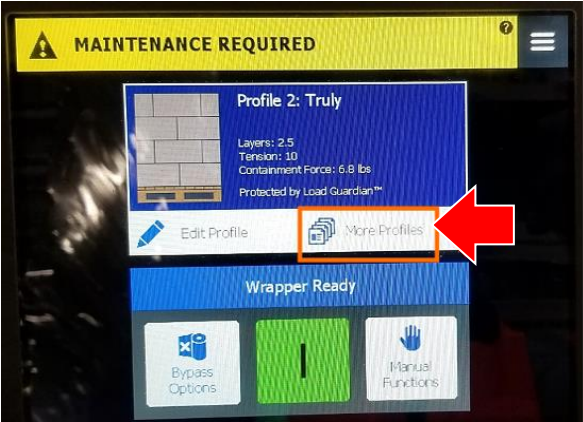
Image and/or Additional Information

- 3. Ensure Stretch Wrapper is clean & safe to operate:
 - a. Check Wrapper & area within guards is clean as discussed in section on Cleaning
 - b. Ensure Maintenance work is not in progress, equipment is clear of all tools or obstructions, lockouts are removed, guard doors are closed, & all E-stops are pulled out (OFF).

No obstructions to pallet motion along conveyor.
No obstruction to movement of wrap arm, film carriage or cutter assembly.



- 4. If current "Wrap Profile" on home screen is not correct, press "More Profiles," then select profile





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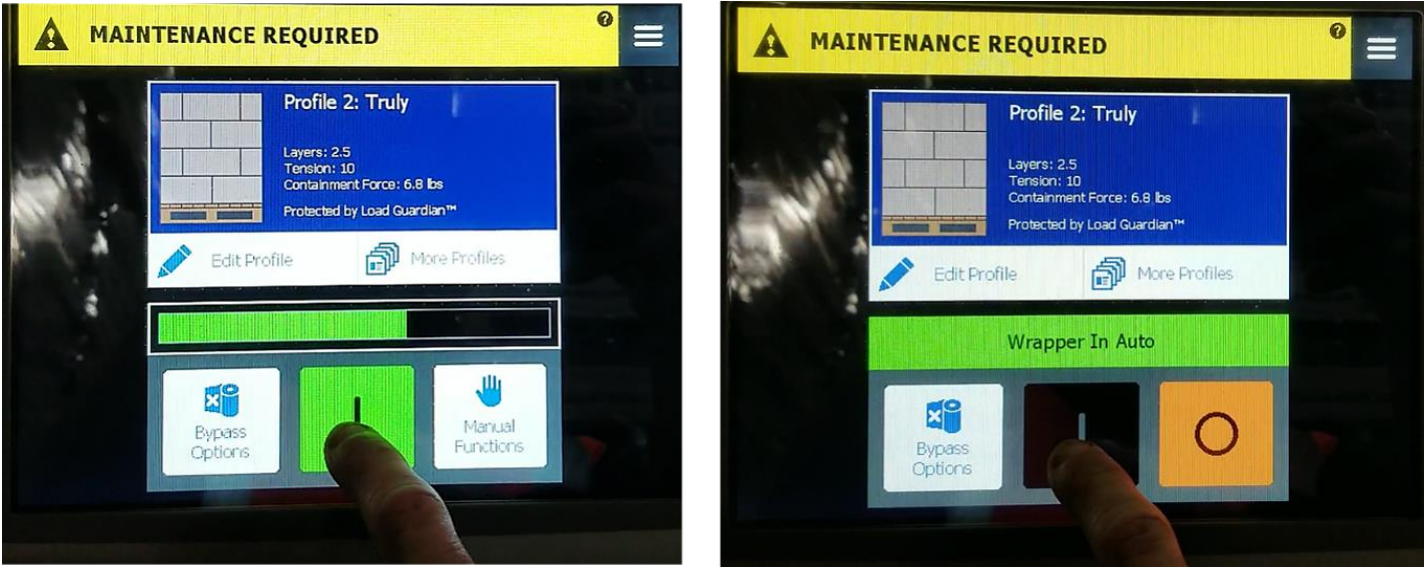
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Steps	Image and/or Additional Information
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- 5. If any alarm conditions shown:
 - a. Correct alarm condition, then close alarm message
 - b. Press "Safety Reset" button
 - c. Ready for production when "Wrapper Ready" status shown



- 6. If stretch wrap has already been loaded, & conditions above met, start Wrapper in Auto mode by pressing & holding the green button until "Wrapper in Auto" appears onscreen





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Steps	Image and/or Additional Information
<p>7. Examine wrapping process & first few completed pallets that have exited Wrapper discharge & come to a stop on discharge conveyor. Look for:</p> <ol style="list-style-type: none"> Multiple wraps applied to bottom of pallet before it begins traveling to top Multiple wraps applied to top of pallet before it travels back to bottom Completed wrap not too tight to damage product but keeps product on pallet in a square, upright position that will remain stable when transported by fork truck or stacked in warehouse or in transport trucks. Wrap cut cleanly for a smooth separation of pallet. Film tail pushed against wrapped pallet so that no loose end remains that could unravel. <p>If issues arise that operator can't fix, always shut down machine & alert a Lead/Supervisor. A Lead will also determine if a Maintenance Technician is needed.</p>	 <ul style="list-style-type: none"> b Top of pallet gets multiple wraps c Carton layers are square Pallet stands up straight, not leaning Not too loose or too tight (damaging cartons) d Tail of wrap smoothed against wrap on pallet a Bottom of cases & top of wood pallet get multiple wraps



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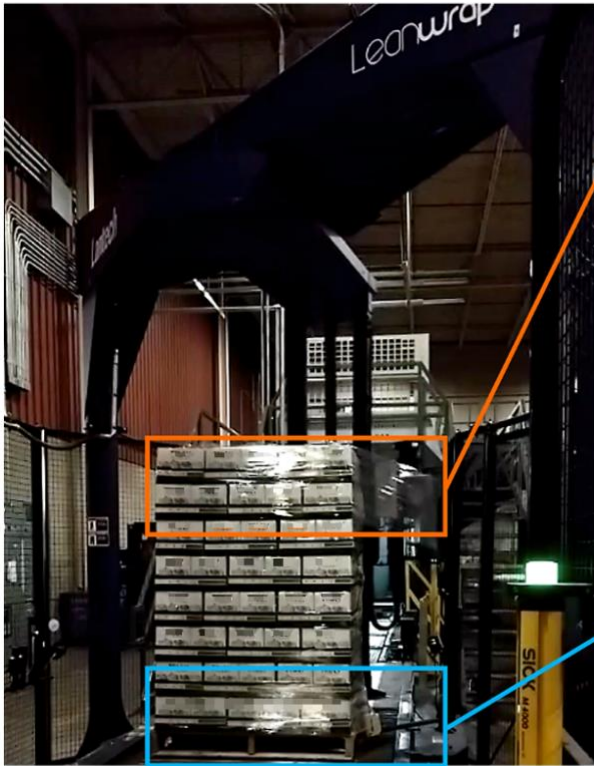


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Steps	Image and/or Additional Information
	<p data-bbox="735 453 1523 741">b </p> <p data-bbox="735 741 1523 919">Multiple layers of wrap on top & bottom of pallet. At top, wrap extends to top of case. At bottom, wrap extends to top of wood pallet.</p> <p data-bbox="735 919 1523 1213">a </p>



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Steps	Image and/or Additional Information
Entering Guarded Area – REQUIRES EXCLUSIVE CONTROL	
<ul style="list-style-type: none"> • Cleaning/Jam Clearing/Film Roll Changes all require entering guarded area, which can expose operator to deadly force if wrapper is restarted unexpectedly. • BEFORE ENTERING, lock & tag machine per LOTO Guide or lock interlock door in open position – which will maintain EXCLUSIVE CONTROL (See photos below). 	
<ol style="list-style-type: none"> To enter guarded area: <ol style="list-style-type: none"> Press Stop button, which will light up pushbutton at access gate Press illuminated “Request to Exit Gate 1” pushbutton Slide bolt for door interlock out, away from door, allowing it to open. Place lock through bolt & secure lock closed. Door interlock cannot make connection to restart wrapper. Remove key. You have EXCLUSIVE CONTROL. Any other employees who enter must also do steps d & e. 	
Loading/Replacing Stretch Wrap	
<ul style="list-style-type: none"> • Complete whenever a roll is completed, or wrap has ripped. 	
<ol style="list-style-type: none"> Prior to beginning a film change, or reloading film after a break, make sure that Film Carriage has come back to Home Position (which should happen automatically). If not, “Jog Home” function may be used. 	



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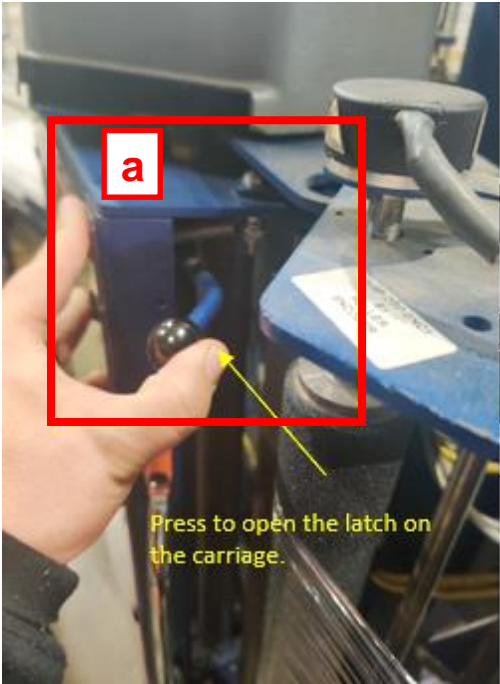


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Steps	Image and/or Additional Information
<p>2. Remove core of old roll of film:</p> <ul style="list-style-type: none">a. Open latch to carriage.b. Roll excess stretch film in carriage back onto cardboard roll before removing.c. Note direction arrows point on cardboard roll. New roll will need to be placed with arrows in same direction.d. Remove tail from film clamp.e. Lift roll from film post.f. If film is not tangled around stretch rollers inside film carriage, pull remaining film out.	 <p data-bbox="375 890 431 968">a</p> <p data-bbox="418 1276 704 1339">Press to open the latch on the carriage.</p>  <p data-bbox="829 1360 886 1438">b</p> <p data-bbox="911 1346 1235 1438">Open carriage and roll any additional back onto depleted roll</p>  <p data-bbox="1105 842 1162 919">c</p> <p data-bbox="1068 940 1214 1066">Note which direction the arrows are pointing</p>



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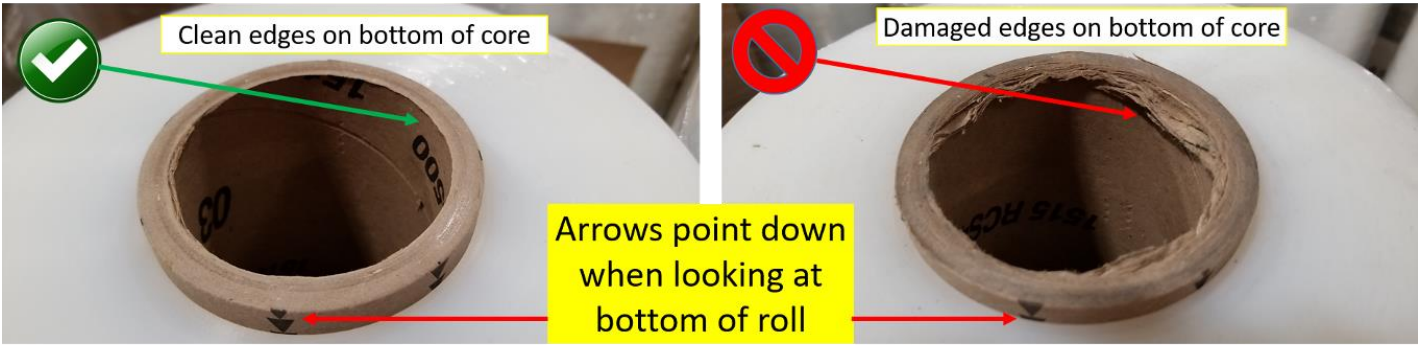
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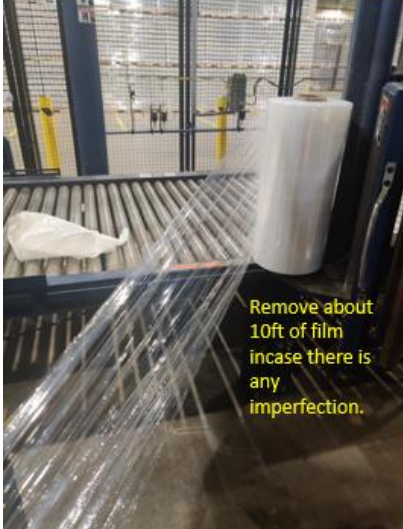
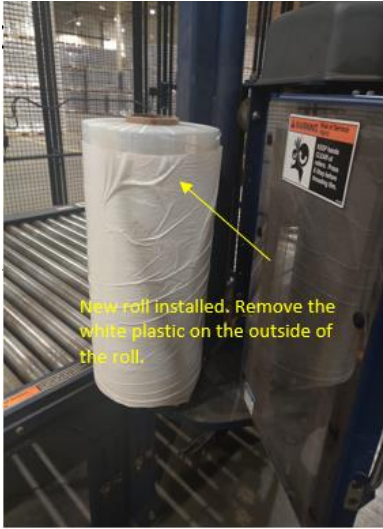
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Steps	Image and/or Additional Information
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3. Before loading a roll onto film post:
- Make sure that bottom of cardboard core of film roll is not damaged, as this can lead to difficulty in loading/removing roll from film post, & poor spinning of roll . If damaged, mark & do not use.
 - If problem found with multiple rolls, determine if another pallet or lot of can be used. Ensure samples are provided to QA for vendor feedback/credit.



4. When using a new roll, check for damage (nicks, cuts, holes ...) to outer layers of stretch wrap.
- Even if no damage seen, it is wise to unwrap at least 10 feet. If damage is deep, more than 10 feet may need to be removed.
 - Cut off damaged (or precautionary) layers before using roll.





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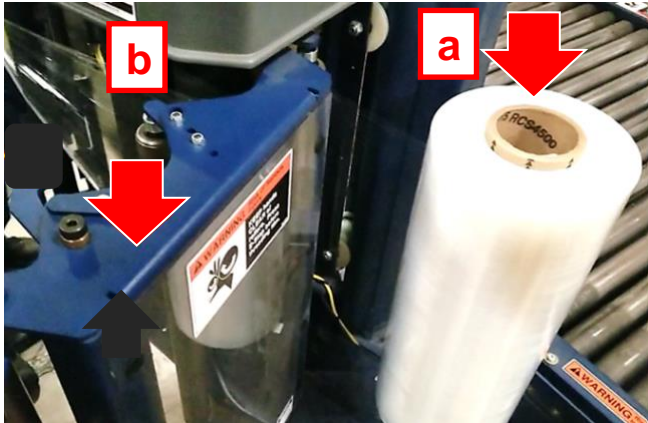

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Steps	Image and/or Additional Information
<p>5. Load new roll:</p> <ul style="list-style-type: none">a. Place new roll onto film post with arrows on roll pointing up (tacky side of film facing pallet)b. Open EZ Thread Gate by releasing latch & pulling gate handle. Open as far as possible.	
<p>6. Thread film roll:</p> <ul style="list-style-type: none">a. Begin by pulling film behind first roller, the pivoting idler.	



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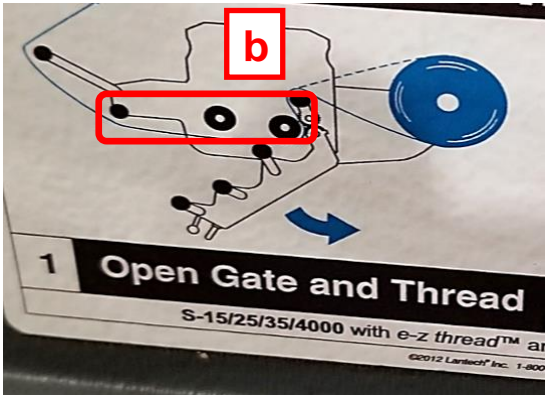
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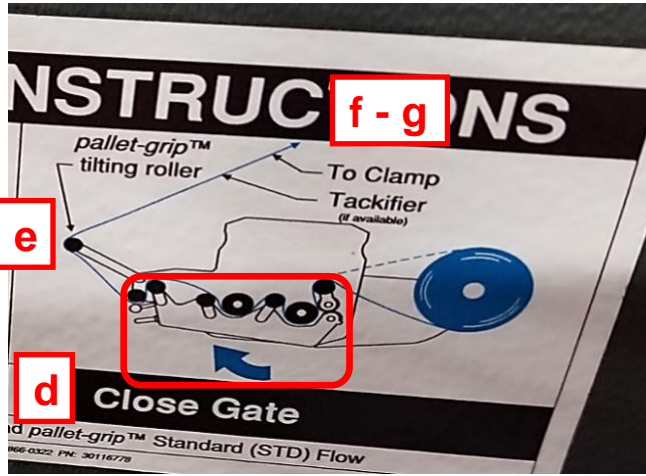
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Steps	Image and/or Additional Information
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6. Threading Film Roll, continued:
- b. Stretch film across the inside rollers – this will be about 6 to 8 feet.
 - c. Film must go behind guide arm.



6. Threading Film Roll, continued:
- d. Close EZ Thread Gate.
 - e. Pull film taut around last roller (pallet-grip tilting roller)
 - f. Push film tail downwards into film clamp until it stops. Film should be smooth (not sagging)
 - g. If necessary, trim tail by pulling down across film cutter in film clamp





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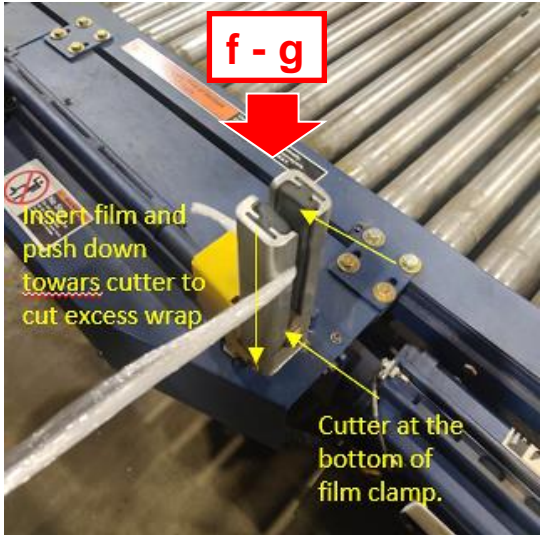
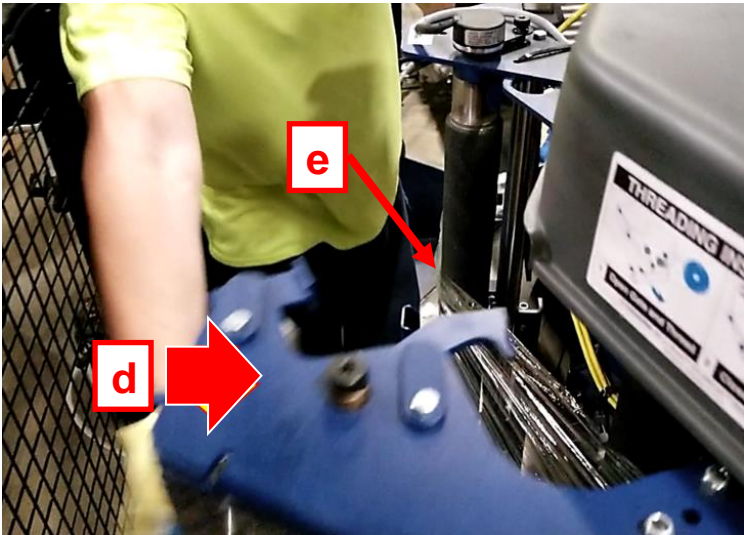
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Steps	Image and/or Additional Information
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7. If stretch wrap rips while wrapping a pallet:
- Look for signs of what may have caused the rip, then correct problem.
 - Re-load wrap as discussed in above.
8. After stretch wrap replaced do the following:
- Dispose of all trash in garbage cans.
 - Empty rollers go into gaylord near lines. Rolls that still have wrap on them are saved for hand wrapping.
 - Remove lock & secure gate. Pull E-Stop & power up control panel. Wrapper is ready to be put back into use.

Routine Operations & Monitoring	Complete throughout shift or at frequency noted on form/documentation
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- If a pallet trips a light curtain by over-traveling while coming to the position directly at the entrance to the Shrink Wrapper, press the "Infeed Light Curtain Reset" button.





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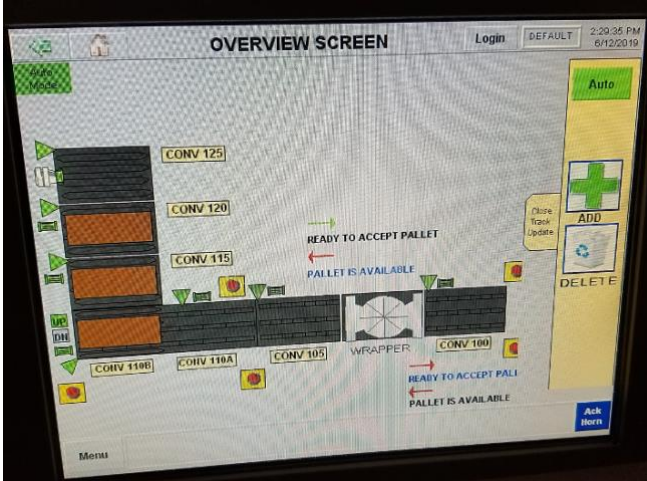
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Steps	Image and/or Additional Information
<p>2. If a pallet fails to move forward within Stretch Wrapper itself, first check for an alarm on HMI & correct, if possible, without entering gate.</p> <p>If necessary to enter gate, follow instructions in section above entitled “Entering Guarded Area,” look for a potential cause, & correct it if found.</p> <ul style="list-style-type: none"> Remove obstructions such as pieces broken off from pallets If a faulty sensor is the cause, contact Maintenance 	
<p>3. If a pallet fails to move forward along conveyors between Palletizer & Wrapper, or on one of Wrapper’s discharge conveyors, use HMI on Palletizer Conveyors panel to troubleshoot & correct situation.</p> <p>If you cannot correct it, contact Maintenance.</p>	
<p>4. Periodically throughout shift, examine wrapping process & completed pallets as discussed in Step 7 of “Startup” section.</p> <p>If issues found:</p> <ol style="list-style-type: none"> Shut down immediately & notify your Lead/Supervisor. Do not start machine in production mode until problem is corrected. Remove any cases from line that are defective. <p>If issue is impacting product quality or integrity, notify QA to hold product from last good check.</p>	
<p>5. Notify line technician if there is an issue that needs immediate attention or that can be resolved quickly. If line technician cannot repair immediately, complete a Maintenance Work request prior to end of shift.</p>	



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Steps	Image and/or Additional Information
<p>6. Monitor area continually for safety to ensure there are no hazards (slipping, tripping or otherwise).</p> <p>Before beginning any non-routine tasks, review task with line lead/supervisor to ensure all safety precautions are taken prior to starting.</p>	<p><u>Awareness</u></p> <p>Historical data shows:</p> <ul style="list-style-type: none"> Slipping & tripping hazards are the main cause of injuries on can line. Employees are injured when performing non-routine tasks.
<p>7. Maintain good housekeeping & GMPs throughout shift. If necessary, shut down to clean area.</p>	<p>Keep machine & area clean to ensure safety, product integrity & equipment uptime.</p>

Good Housekeeping



Shutdown	
<p>1. For extended shutdowns & maintenance, machine should be locked & tagged as described in LOTO Guide. For short shutdown periods, press "Cycle Stop" then E-stop.</p> <p>If it is necessary to perform LOTO on conveyors before & after Stretch Wrapper, see the Pallet Conveyor LOTO Guide.</p>	



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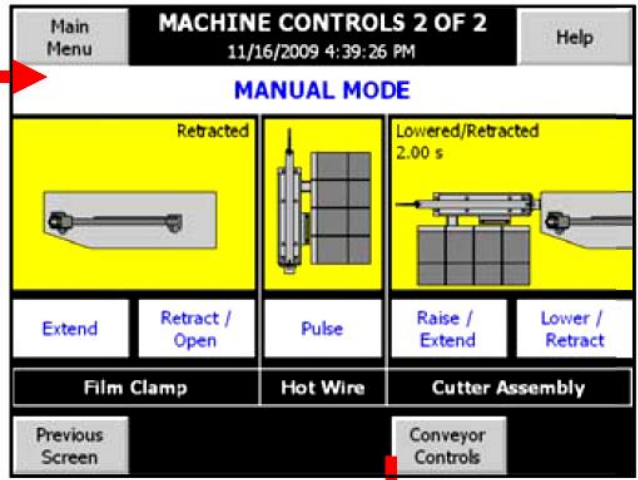
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Steps	Image and/or Additional Information
Cleaning	Complete throughout shift or at frequency noted on form/documentation
If cleaning after shutdown, follow the LOTO Guide instructions on locking and tagging energy sources before you begin cleaning.	
<p>1. Whenever line is down, you may enter gate safely as described in section above entitled "Entering Guarded Area," then remove wrap, cans, cartons, or pallet debris found in area.</p> <p>If a pallet has fallen, causing cans to break open, clean up all liquid spills to remove stickiness from floor or on Wrapper. While doing so, wear proper PPE & avoid cutter wire which may still be hot.</p>	 <p>No buildup of cartons, cans, pallet debris, cores or plastic wrap under or around Wrapper</p>
<p>2. If film breaks are occurring frequently at beginning of wrap cycle, check for a buildup on rubber-covered stretch rollers that comes from adhesive on tacky side of film. You may clean this off with ammonia or detergent based cleaners.</p>	
<p>3. Once weekly or more frequently if needed, use "Hot Wire Pulse" function on Manual Controls menu to clean cutter wire of any wrap buildup.</p>	

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Steps	Image and/or Additional Information
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4. Once weekly, clean all photo eyes & light curtains with a lens cleaner, making sure that sensors are in correct position.



To make updates to this document, please note any changes or revisions to this document and route to your supervisor. Your input is critical. Thank You.

Revision History

Rev. Date	Rev	Rev. by	Approved by	Approval Date	Revisions
07/10/2022	1	T. Guire	M. Blanck	07/10/2022	New template with new header.
05/11/2023	2	M. Aman T. Guire	B. Aman	05/16/2023	Moved into new template. Revision to exclusive control measures required in "Entering Guarded Area" section. Additional pictures & revised instruction for steps 2 and 4-8 of "Loading/Replacing Stretch Wrap".