

9240 System Operations & Maintenance Manual

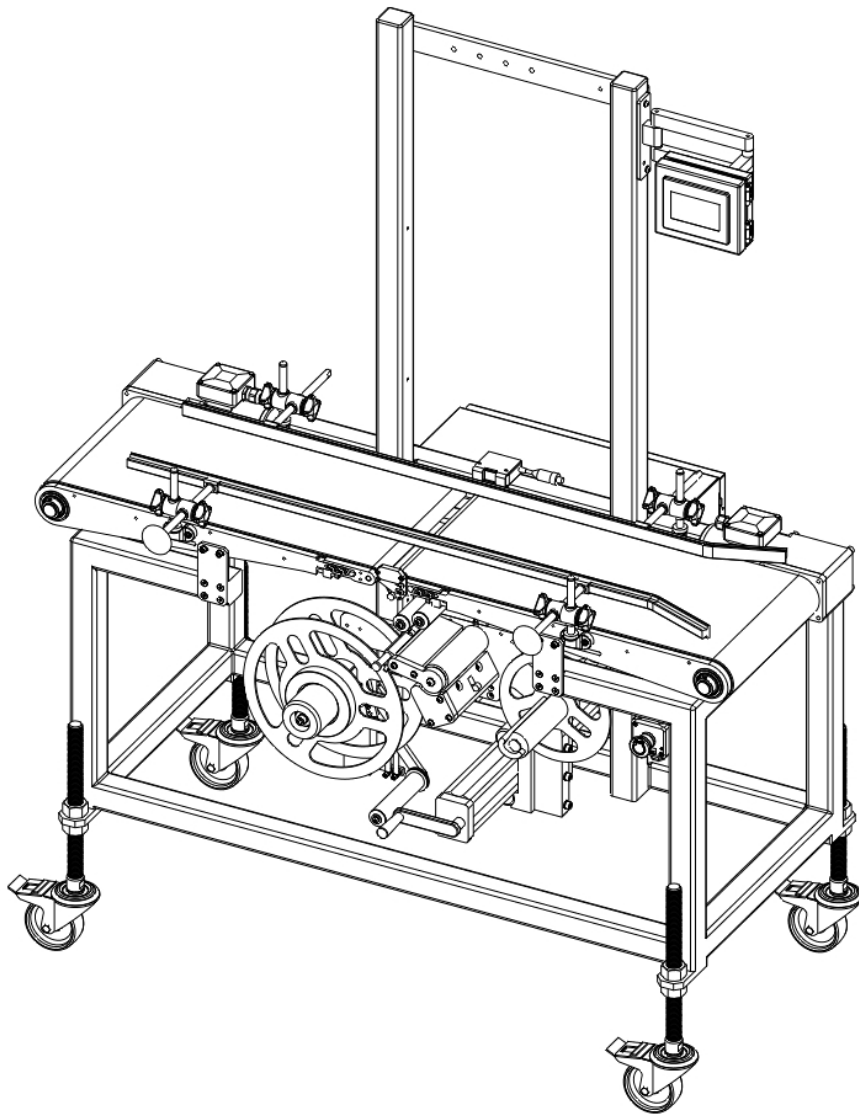


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INTRODUCTION

AUDIENCE

This manual has been designed and written for use by purchasing, operations, maintenance, and engineering personnel who have solid baseline knowledge of packaging related machines.

HOW TO USE THIS MANUAL

This document has been organized into eight sections.

Section 1 - System Overview containing the equipment theory of operation, and electrical and pneumatic requirements.

Section 2 - Operating Instructions needed to correctly use this labeler and outlines the instructions for cleaning and sanitation.

Section 3 - Procedures for the mechanical setup of the 9240 system.

Section 4 - Explanations of the HMI and possible displayed HMI screens.

Section 5 - Explanations of the controls and electrical set-up of the 9240 system.

Section 6 - Explanations of necessary procedures for replacing Wear Parts.

Section 7 - Procedures for troubleshooting the 9240 system.

Section 8 - Recommended spare parts list for the 9240 system.

DISCLAIMERS

Satisfactory performance from the 9240 system is subject to the proper application, installation, operation and maintenance as designed by EPI for each customer.

DO NOT, under any circumstances, override or modify any of the safety features provided by EPI on this machine. Doing so will void any responsibility by EPI for the resulting unsafe condition.

EPI is not responsible for poor operation or any other issues that are a direct result of the workmanship of the labels.

CONTACT INFORMATION

Questions about any aspect of the machine may be directed to:

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New Freedom, PA 17349
United States of America

Phone: (717) 235-8344

Fax: (717) 235-0608

E-mail: sales@epilabelers.com

MANUAL REVISION HISTORY

<u>Revision</u>	<u>Notes</u>	<u>Date</u>
1.0	Initial Release	02/02/2018
2.0	Update to MS2 Series Labeling Head, added Recipe Section, Updated Label Sensor and Output, updated spare parts	09/28/2020

SECTION 1: SYSTEM OVERVIEW

SYSTEM OVERVIEW:

The 9240 system is designed to apply pressure sensitive labels to moving objects including but not limited to, cartons, cheese blocks, and finished products.

ELECTRICAL REQUIREMENTS:

Voltage - 120 VAC Standard
Current - 6 Amps @ 120VAC
Frequency - 60 Hz

NOTE: Voltage setting cannot be changed in the field from 110V to 220V or other voltages. Labeler must be configured at the factory for specified voltage. Please refer to the included electrical specifications to determine voltage.

There is a 10A circuit breaker located inside of the control box.

PNEUMATIC REQUIREMENTS:

The 9240 system does not require external air supply. Optional and/or custom features may require supply air; requirements will be specified on a case-by-case basis.

METHOD OF OPERATION

The 9240 system uses an infeed and outfeed conveyor, powered by a single inverter. This conveyor has a separated gap that allows for bottom label application.

The labeler utilizes a stepper motor driven nip roller to pull the label stock through a series of rollers off of the supply spool. The supply spool has a spring-tensioned dancer/brake arm which maintains light tension on the label liner. The labels pass through a label sensor prior to the peeler bar. The label is separated from by the peeler bar. The label is directly applied to the product as it is separated by the peeler bar. The stop position of the liner is determined automatically based on the length of the label. The waste/liner is wound up on the rewind assembly; which is driven off of the stepper motor. The process repeats with every product signal.

The speed of the Stepper Motor is determined by either a speed-matching encoder, or the HMI; the HMI can be used to manually set the application speed if desired.

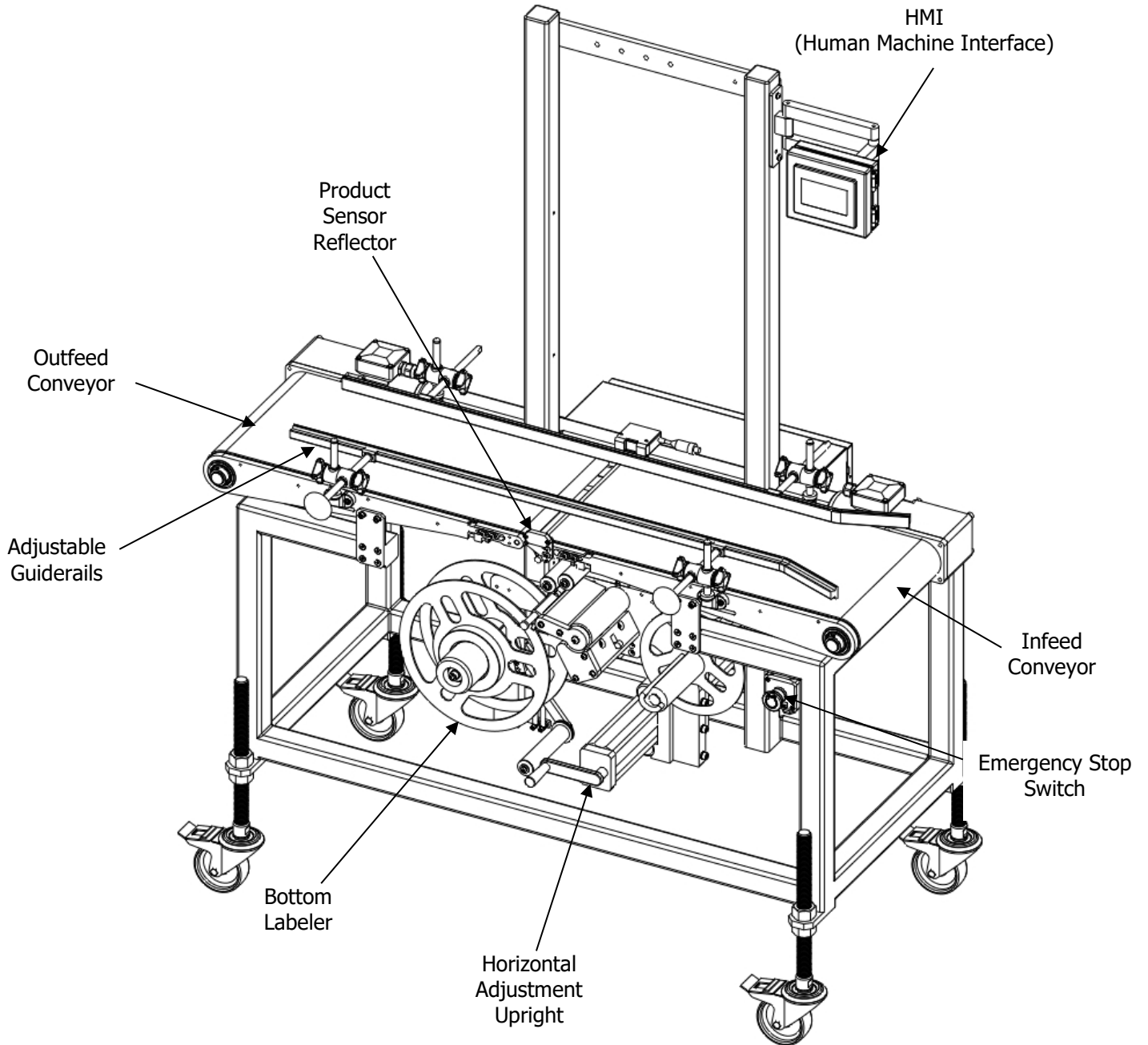
WARNING!

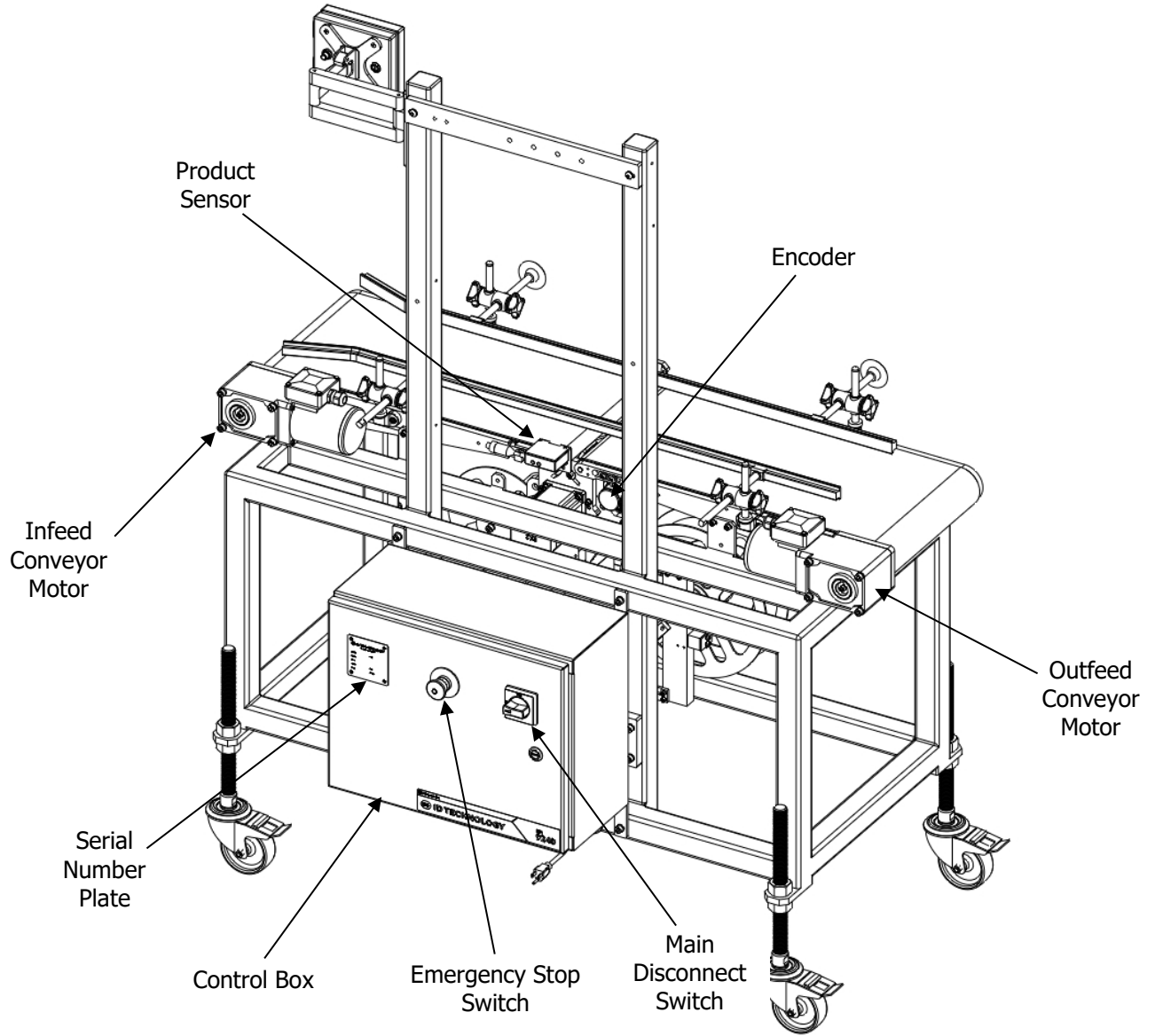
This manual gives a general overview of the components, safe operation, and maintenance of the 9240 system. This manual covers an example of an M-Series labeling system. Your particular unit may be different than the 9240 system pictured in this manual. Always refer to the Assembly Drawings and Schematics on the provided USB manual. If any item in the manual or with the 9240 system itself remains unclear, please contact EPI for assistance.

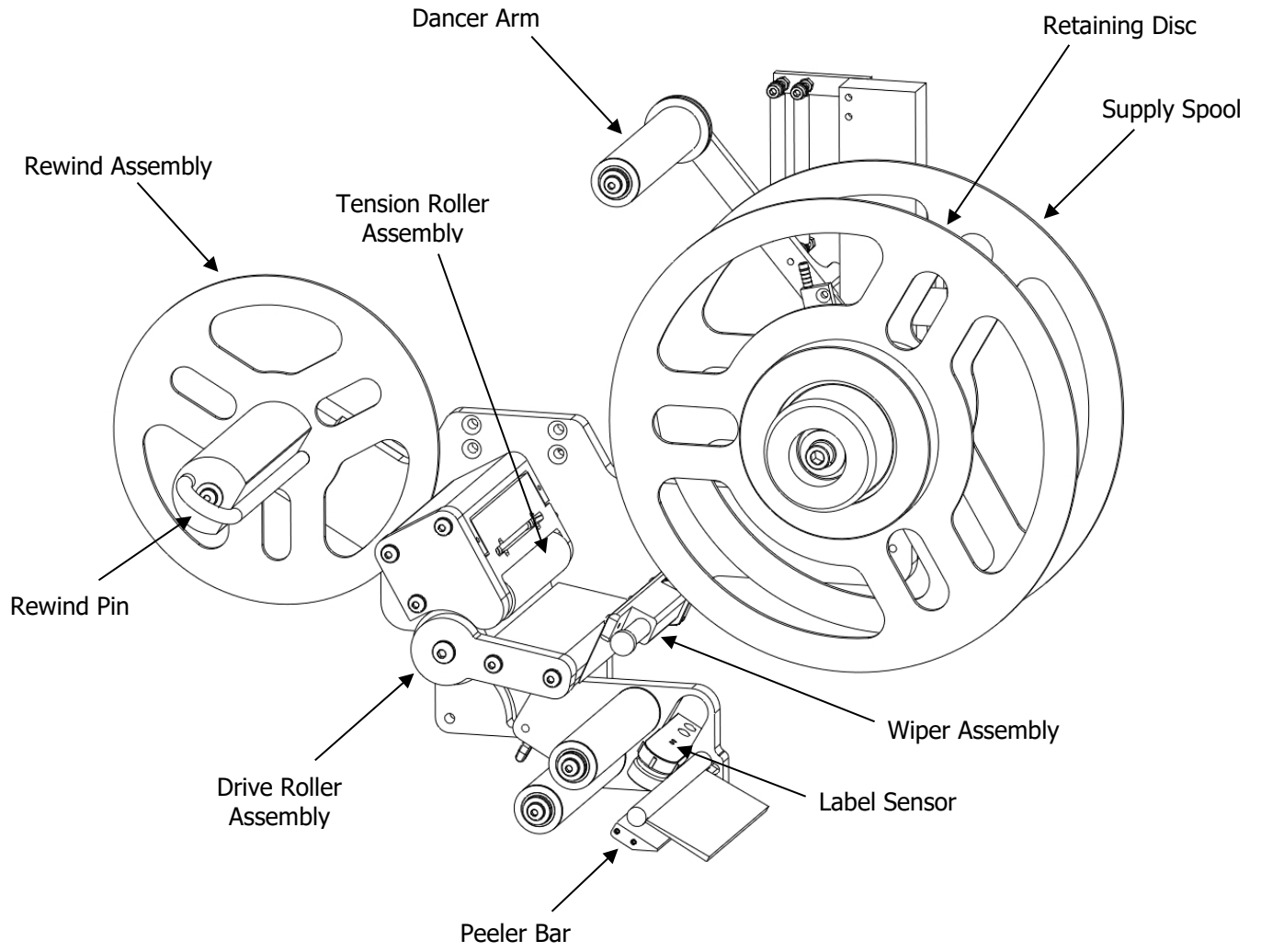
EPI recommends installation and training for every machine including each 9240 system that is installed in any customer's facility. Proper training helps to reduce downtime.

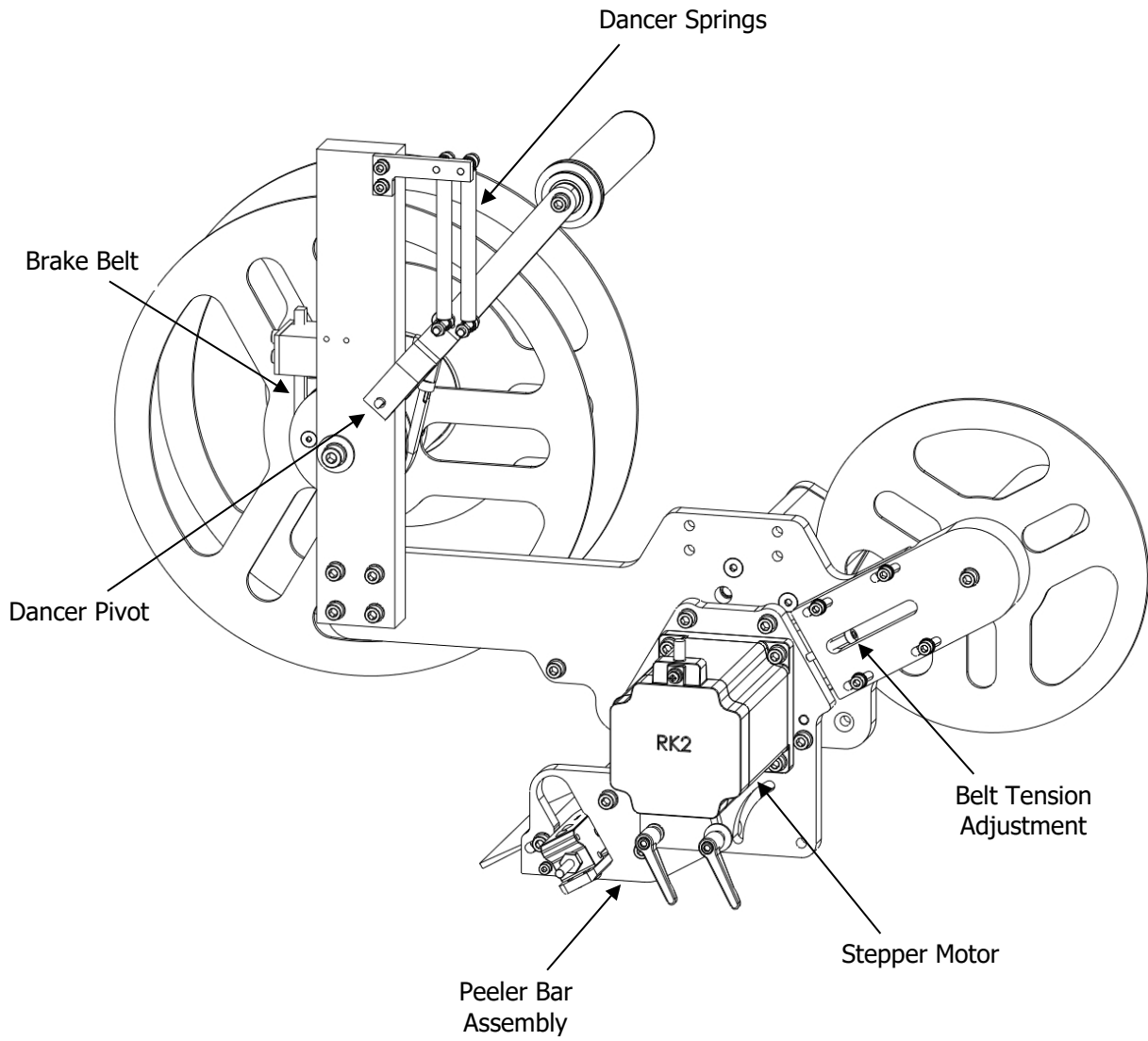
SECTION 2: OPERATION AND MAINTENANCE

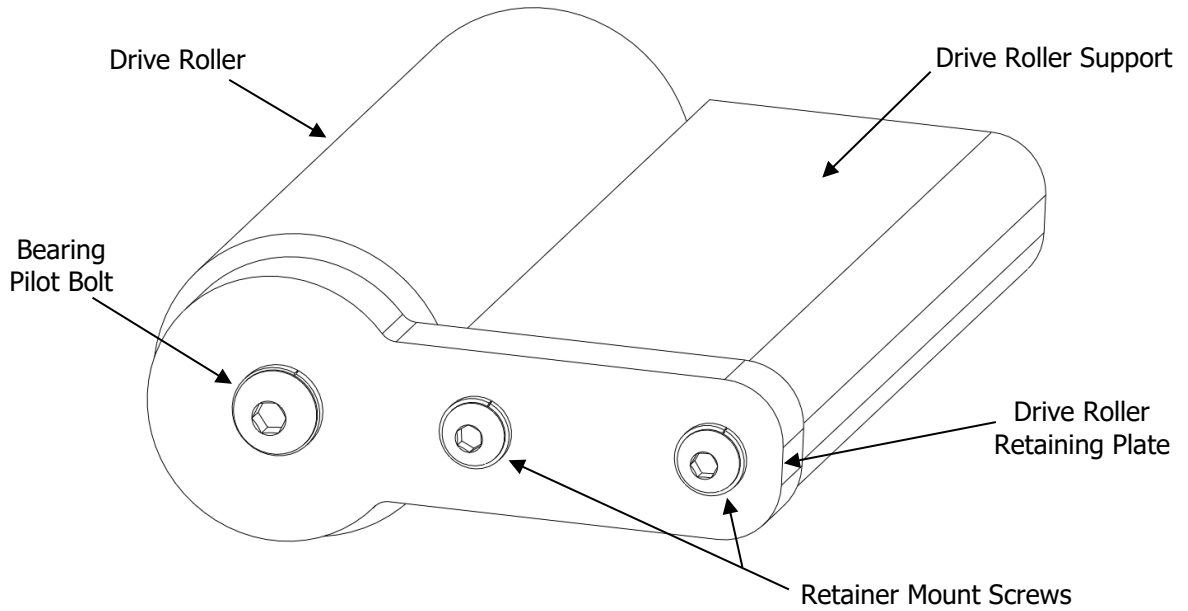
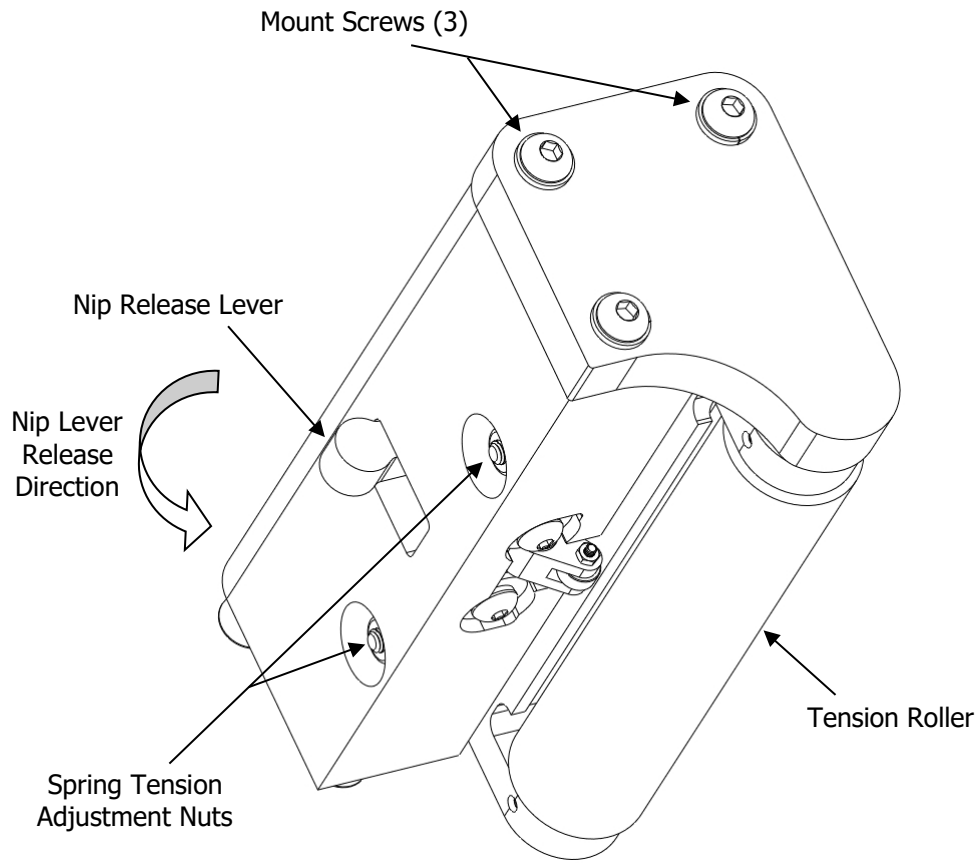
COMPONENT NAMES





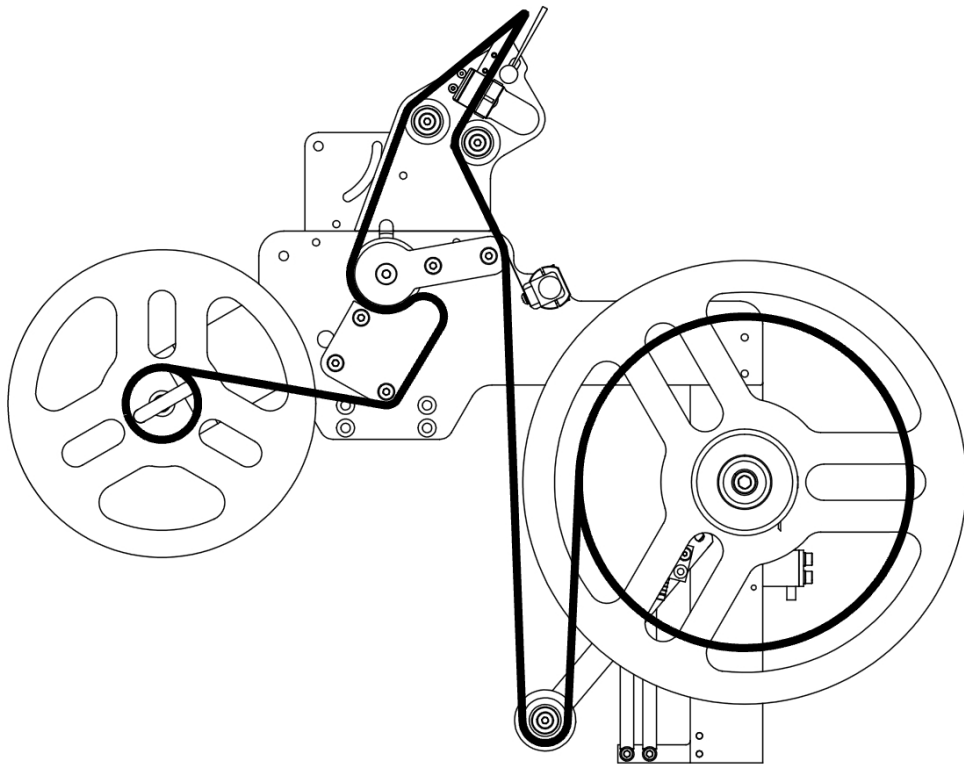




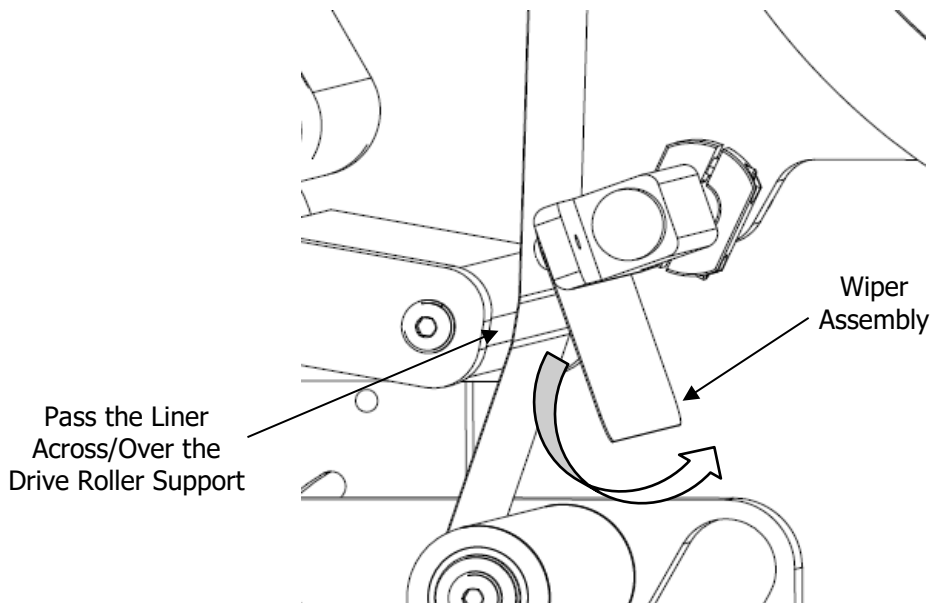
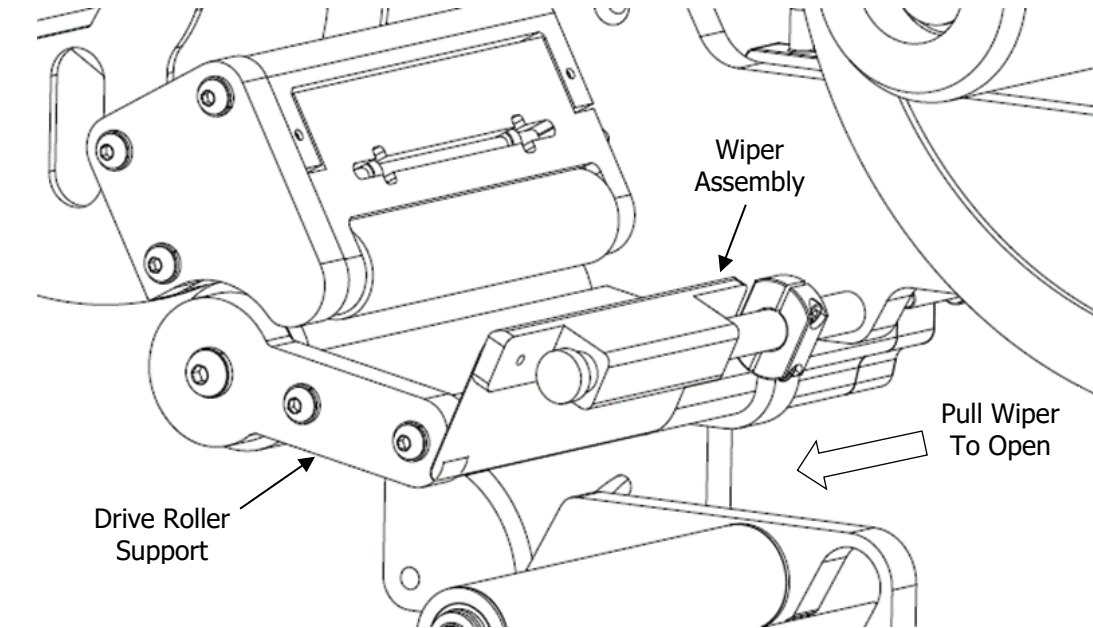


OPERATING INSTRUCTIONS

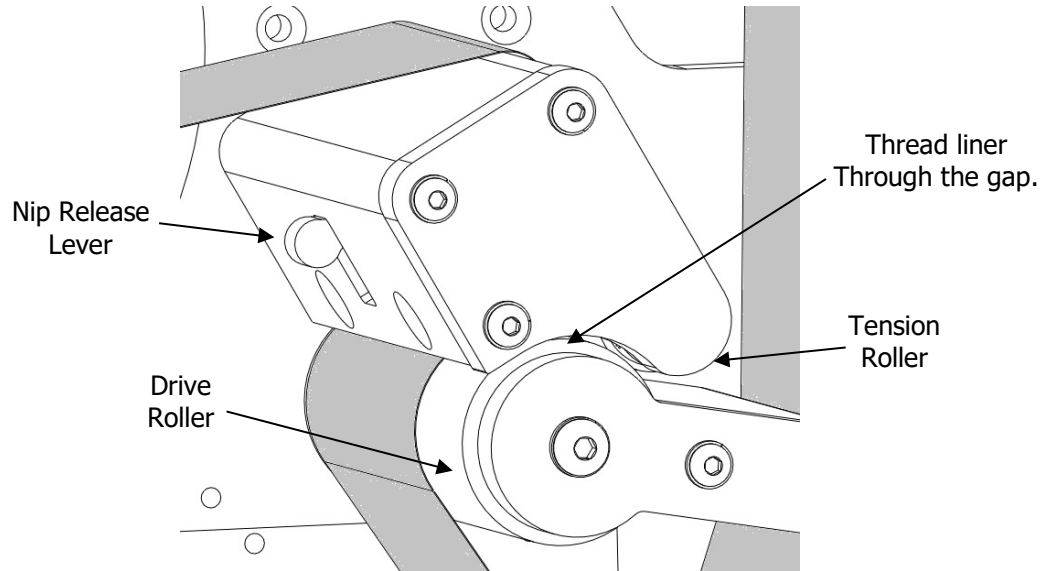
1. Press the E-Stop located at the front of the system.
2. Place a roll of labels onto the bottom labeler's Supply Spool and thread the M-Series labeler as shown on the threading diagram included in the drawings section of this manual. The diagram below is a generic example for reference. A generic threading diagram is also accessible in the HMI.



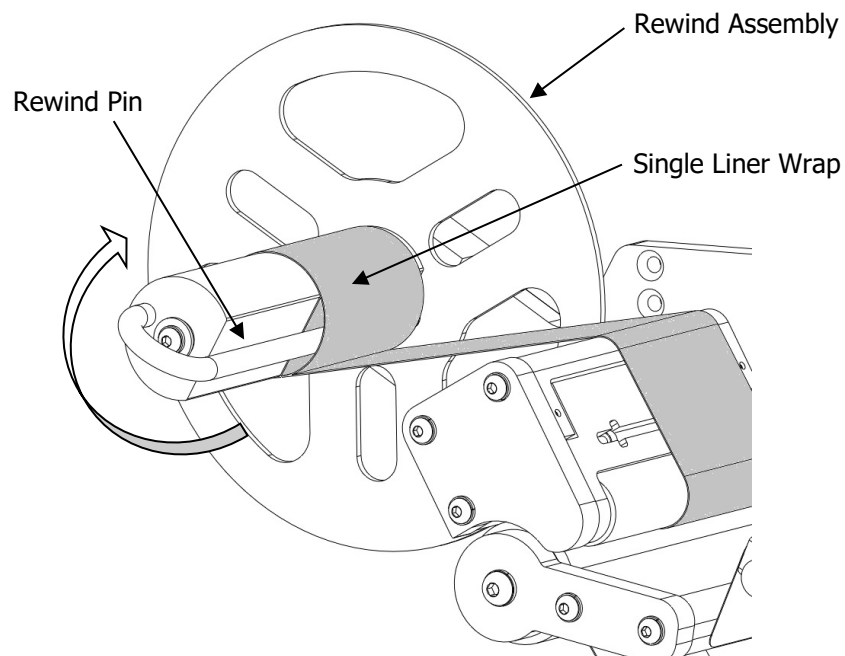
3. Open the wiper to release tension by pulling it away from the main plate of the labeler and pivoting the blade out of the way of the drive roller support. Feed labels across the drive roller support and push the label liner back until it is flush with the supply disc.



4. After threading the liner through the peeler bar assembly open the Nip Release lever by pulling it downwards towards the drive roller and thread the liner between the drive roller and the tension roller. Push the liner towards the rear of the roller so the liner path is not skewed.

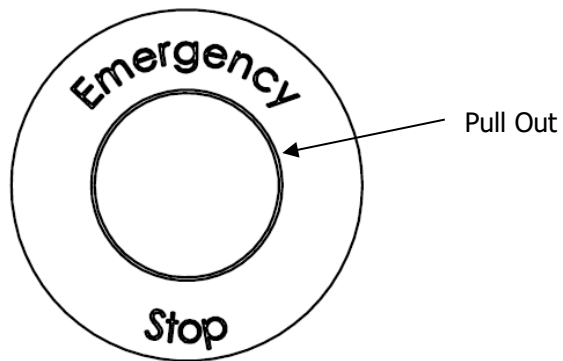


5. Once the liner is to the Rewind Assembly, remove the Rewind Pin and wrap the web one turn. Place the Rewind Pin over the wrap of the liner.

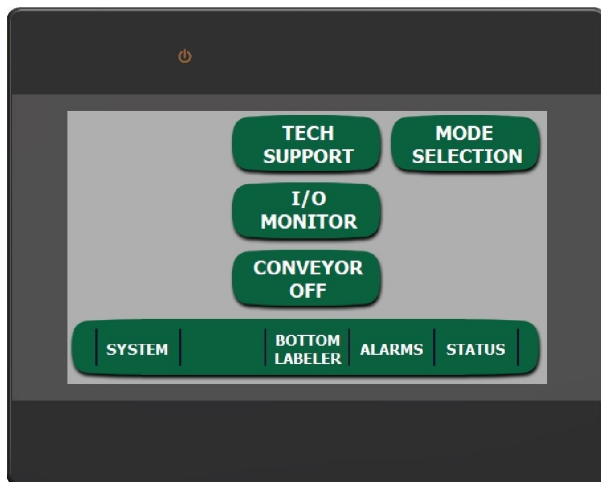


6. Manually turn the Rewind Spindle until 2 full wraps are wound onto the rewind. Once the liner is wrapped around the Rewind Spindle, close the Nip Release Lever.

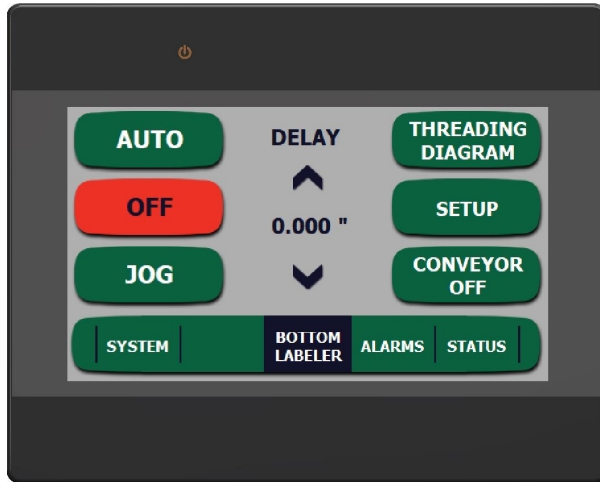
7. Pull the E-Stop out that was previously pressed in.



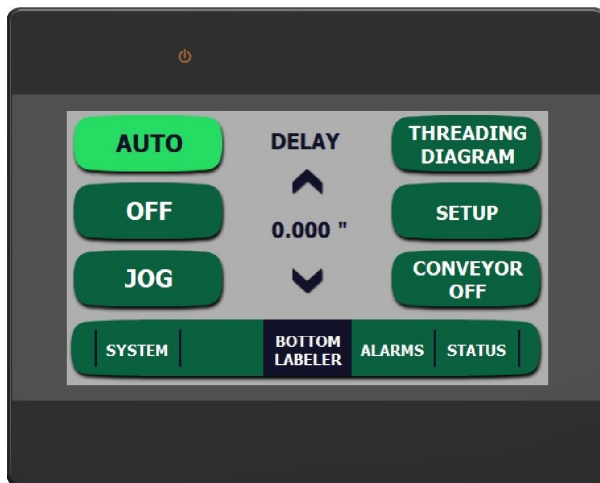
8. Wait for the HMI Screen to fully power up. The HMI Screen will boot to the SYSTEM screen.



9. Momentarily press the BOTTOM LABELER menu button to enter the bottom labeler controls. Momentarily press the JOG button. This will index one label. If label length calibration is needed, hold jog for three seconds and a total of 4 labels will dispense.



10. Momentarily press the Auto Button for the labeler. This will place the M-Series labelers into Automatic Mode.



11. Turn the conveyor ON by pressing the CONVEYOR button. The M-Series bottom labeler will apply a label at every product signal.



CLEANING AND SANITATION

It is recommended that the entire 9240 system be wiped down with a plant approved, liquid food grade cleaning agent using a cloth and then wiped dry with a clean cloth. This should be done any time production is stopped and the labeler is idle and E-stop is pressed, or at minimum once per day.

The 9240 system was designed to work within a normal food-packaging environment. If the labeler is operated in a dusty area, be sure to wipe the machine off as much as possible. Cover the machine and remove power if equipment above or around it is being cleaned, especially if water is being used in the process. Clean the labeler after surrounding equipment has been sanitized.

It is critical that the drive roller assembly and the tension roller assembly of each labeler be kept clean. If these components are allowed to become contaminated, application issues may arise. In addition, this can cause increase wear on the Drive Roller, leading to early replacement.

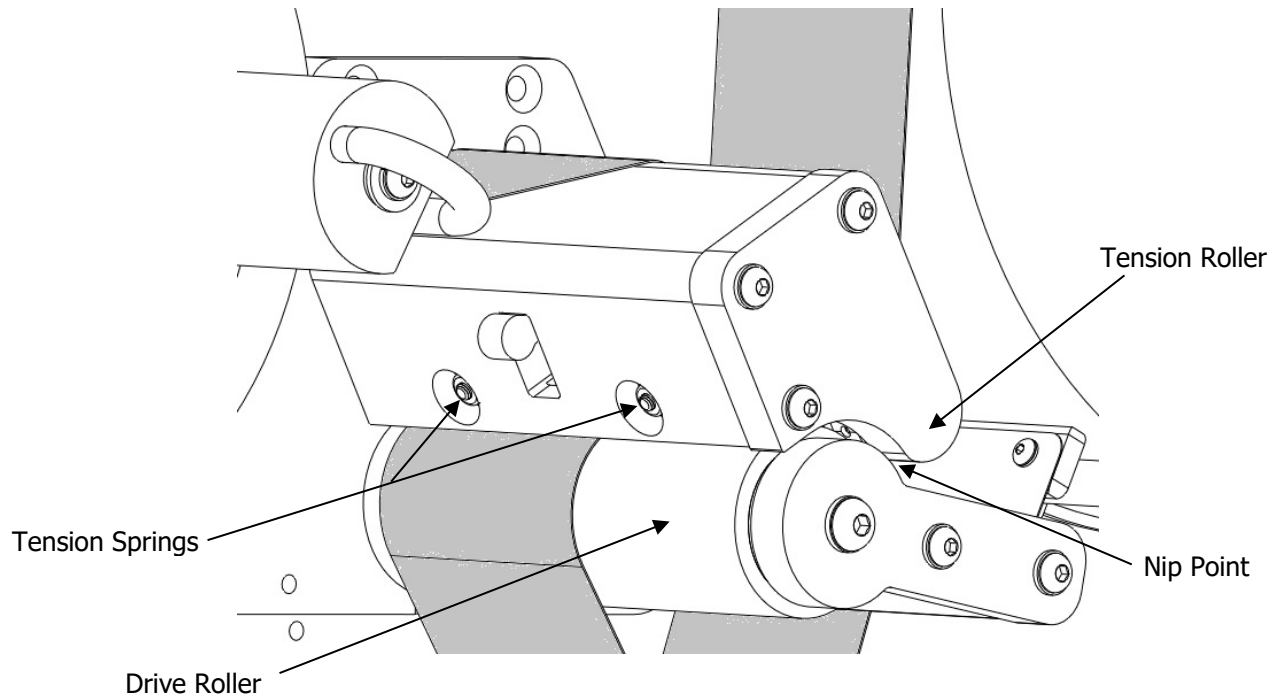


CAUTION: DO NOT wet down this machine. Damage to the unit and/or personal injury may occur. If washdown is necessary, cover the entire 9240 system.

SECTION 3: MECHANICAL SETUP

TENSION ROLLER ADJUSTMENT

The Tension Roller is held against the Drive Roller with spring force. The Tension Roller is pulled using two adjustable compression springs. The Tension Springs are pre-set at the factory for optimum results. The standard adjustment for tension leaves approximately 1/8" of rod extending past the top of the nut. The Tension Springs can be adjusted to grip the label liner tighter, if the liner is slipping in the Nip Point.

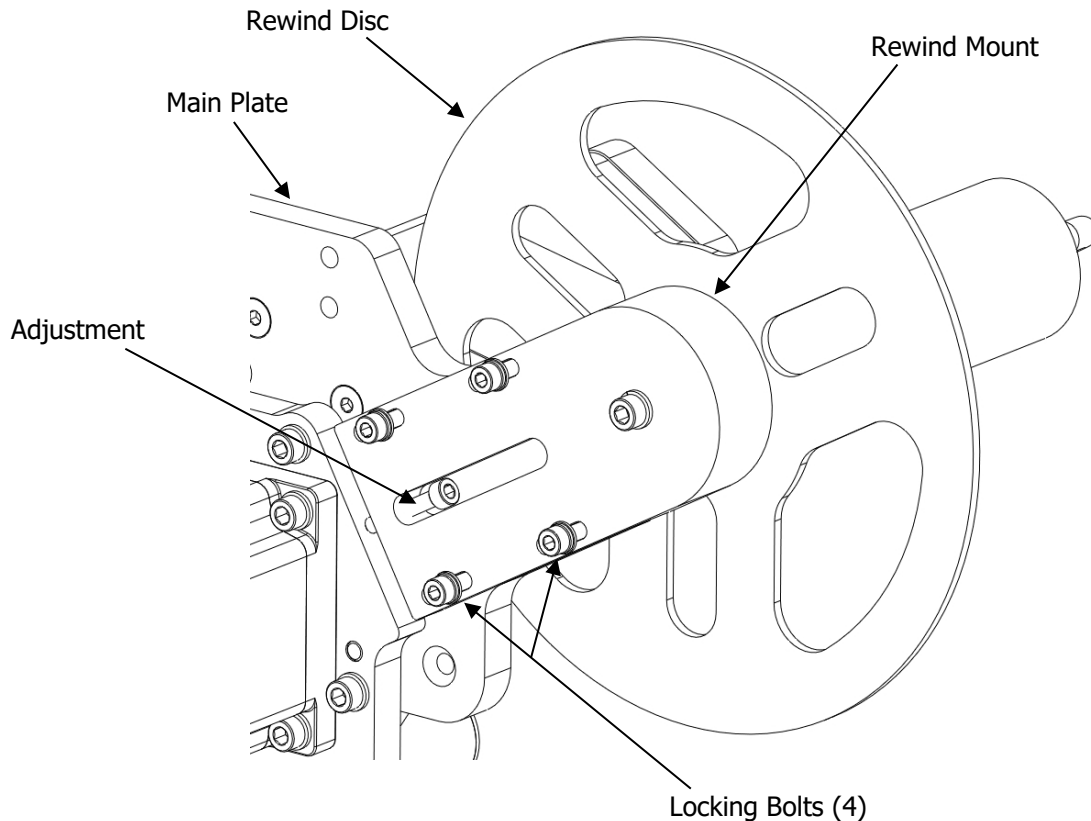


Caution: Only make the tension adjustment with the Tension Roller in the CLOSED position

1. Power down the 9240 system. Lock Out and Tag Out the unit.
2. Start by adjusting the inner Tension Spring first. Turn the locknut clockwise to increase the tension, counter-clockwise to decrease the tension.
3. Measure the amount of Connecting Shaft protruding from the nut.
4. Adjust the outer Tension Spring to match the inner Tension Spring.
5. Test the M-Series labeler by pressing the Jog Button. Repeat the adjustment as necessary.

REWIND BELT TENSION ADJUSTMENT

The Rewind Assembly is driven off of the Stepper Motor using a textured, reinforced urethane belt. The Rewind Drive Belt is designed for long life, with minimal adjustments necessary. The belt is pre-tensioned from the factory for optimum results. As the belt wears, it may be necessary to increase the tension on the Rewind Belt to maintain the performance of the Rewind Assembly system. The Rewind Belt is located between the Labeler Main Plate and the Support Plate. It is enclosed to help protect the Rewind Belt.

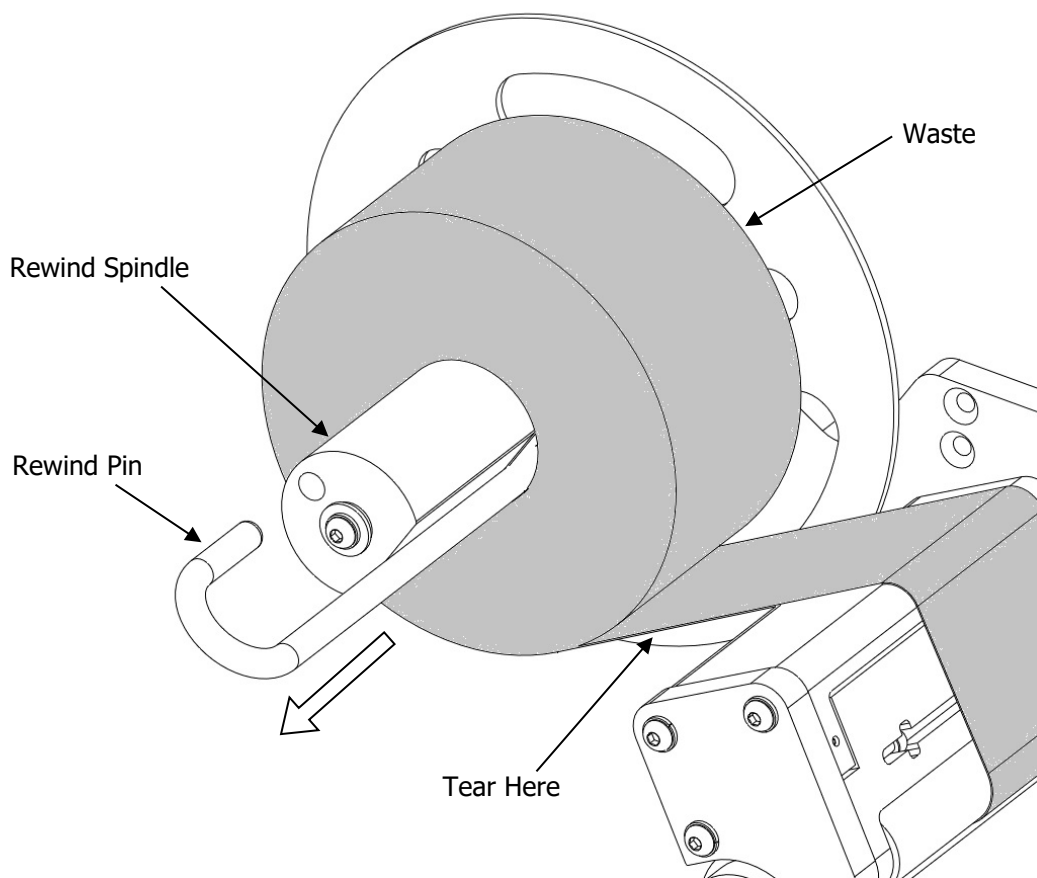


1. Power down the M-Series labeler. Lock Out and Tag Out the Unit.
2. To tension the Rewind Belt, First slightly loosen the (4) Locking Bolts.
3. Turn the Adjustment Bolt clockwise increase the Belt tension, counter clockwise to decrease the tension.
4. Tighten the Locking Bolts. Test the M-Series labeler using the Jog Button.
5. Re-Adjust the Rewind Belt Tension if necessary.

Caution: When adjusting the tension on the Rewind Belt, make sure to tension the belt correctly. Too much tension can cause the Stepper Motor to miss steps, wear the belt prematurely, or make it hard to pull the rewind pin out; too little can cause the waste to not be rewound correctly. This could slack the liner, pulling it back into the nip drive or even not rewind the waste at all.

WASTE REMOVAL

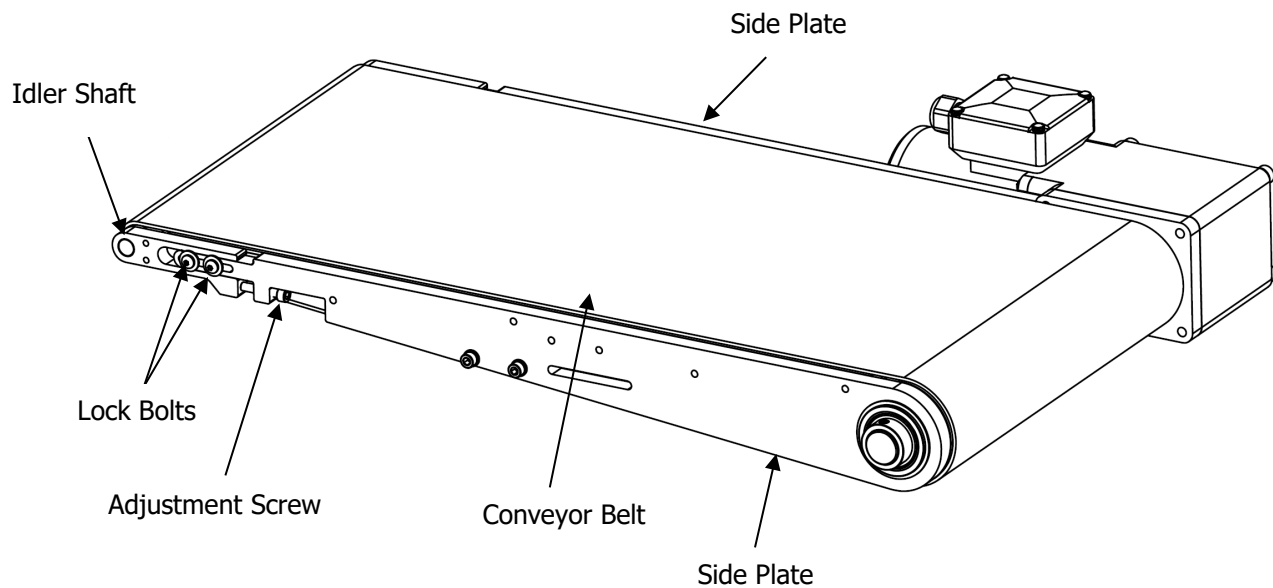
Once the Rewind Assembly is full of waste, the waste needs to be removed. This should happen at least at every label supply change. To remove the waste, first take the M-Series labeler out of Auto. Next, safely power down the M-Series labeler. Next, tear the waste liner at the Rewind Spindle. Remove the Rewind Pin by pulling it towards you. Pull the waste off of the Rewind Spindle and recycle or discard. Reattach the liner to the rewind following the instructions earlier in the manual.



INFEED/OUTFEED SLIM CONVEYOR ADJUSTMENT

The conveyor belt is preset and tensioned at the factory for optimum results. When the belt wears, it is possible that the conveyor belt will need to be re-tensioned. The conveyor belt needs to be re-tensioned as the belt stretches; excessive belt sag on the bottom of the conveyor and a slipping belt are both symptoms of a belt that needs tensioned. This procedure is a quick adjustment that is done at the tail (non-motor side) of the conveyor.

NOTE: The belt for the Slim Conveyor has an integrated urethane rib in the center to help with tracking the belt correctly.



CAUTION! Tensioning the belt should only be done when the conveyor is turned off.

On the opposite end of the motor, the idler shaft is able to move in and out. Tightening the Adjustment Screw on each end equally will bring Idler Shaft farther from the motor. This effectively increases the tension of the conveyor belt.

To tension the conveyor belt, slightly loosen all the Lock Bolts. Turn the Adjustment Screw clockwise. Only turn the screw **one half** a revolution at a time. Alternate between sides until the conveyor belt is tensioned. When the belt appears tensioned correctly, start the conveyor and allow it to run under observation. The belt when correctly tensioned should sag $\frac{1}{2}$ to one inch in the center of the conveyor and track near the center of the conveyor. If necessary, re-tension the belt. Once tensioning is completed, check belt tracking and adjust as necessary. Tighten Lock Bolts and observe belt tracking.

Even though the Slim Conveyor has an integrated rib in the center to help with tracking the belt to center, the belt will still need to be tracked evenly on both sides. If not, excessive wear of the inner rib may occur.

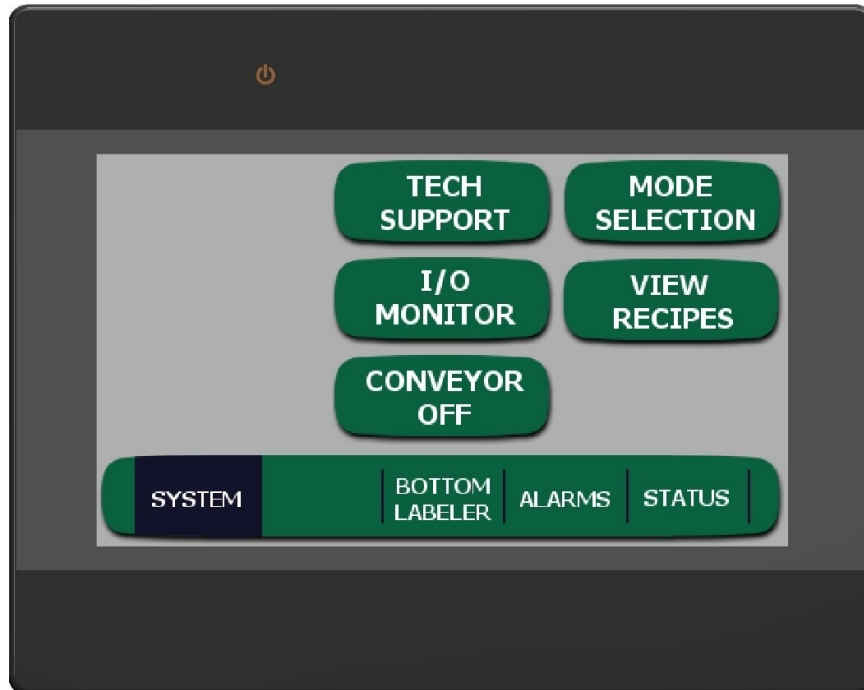
To track the belt to the center, slightly loosen all the Lock Bolts on the side to be tracked. Turn the adjustment screw clockwise **one quarter** of a turn at a time. This adjustment must be done while the conveyor is running. Be extremely cautious when making adjustments. Turn the screw that the belt is tracking nearest. Only make small, fine adjustments. Allow the conveyor to run after making each adjustment; the belt takes some time to track to a new position. Alternate the adjustment between turning the close screw clockwise and the far screw counter-clockwise. Repeat this procedure until the belt is tracking straight. Tighten the Lock Bolts and observe belt tracking.

SECTION 4: SCREEN DESCRIPTIONS

SYSTEM SCREEN

This is the Home Screen that is shown to control the 9240 system in Encoder Mode. Descriptions of the functions are shown below.

NOTE: *When the screen is left idle for an extended period of time, the HMI Screen will go into Standby Mode. The screen will appear to be off where the Status LED will be on; pressing the HMI Screen will "Wake Up" the HMI.*



TECH SUPPORT – This button brings up the contact information for technical support.

I/O MONITOR – Pressing this button brings up the I/O monitoring screen. The purpose of this screen is to show the state of each input and output of the PLC. This can be used for troubleshooting the top and bottom labeler. T stands for Top and B stands for Bottom labeler.

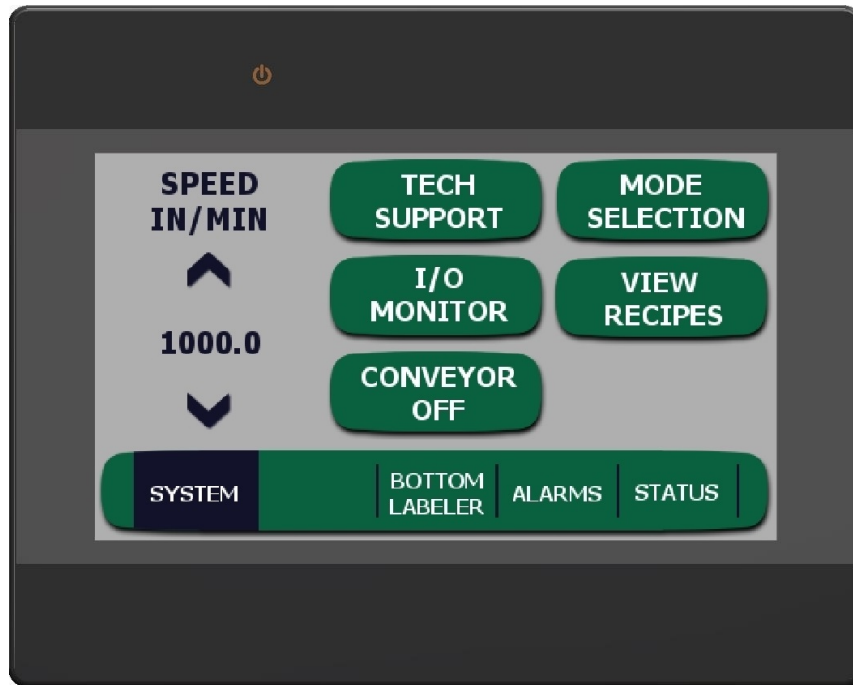
CONVEYOR OFF/ON – Pressing the CONVEYOR button will toggle the conveyor ON or OFF.

VIEW RECIPES – Pressing this button will bring up the screen to create, edit and enable recipes. See RECIPES section for more details on the option.

MODE SELECTION – This button directs to a screen that allows for control for different system configurations. See MODE SELECTION section for more details of the option.

This is the Home Screen that is shown to control the 9240 system in Set Speed Mode. Descriptions of the functions are shown below.

NOTE: When the screen is left idle for an extended period of time, the HMI Screen will go into Standby Mode. The screen will appear to be off where the Status LED will be on; pressing the HMI Screen will "Wake Up" the HMI.



SPEED IN/MIN – This is the speed control for the label dispense. Pressing the arrows changes the values up or down. Press the numbers to pop up a keypad for entering values quickly.

TECH SUPPORT – This button brings up the contact information for technical support.

I/O MONITOR – Pressing this button brings up the I/O monitoring screen. The purpose of this screen is to show the state of each input and output of the PLC. This can be used for troubleshooting the top and bottom labeler. T stands for Top and B stands for Bottom labeler.

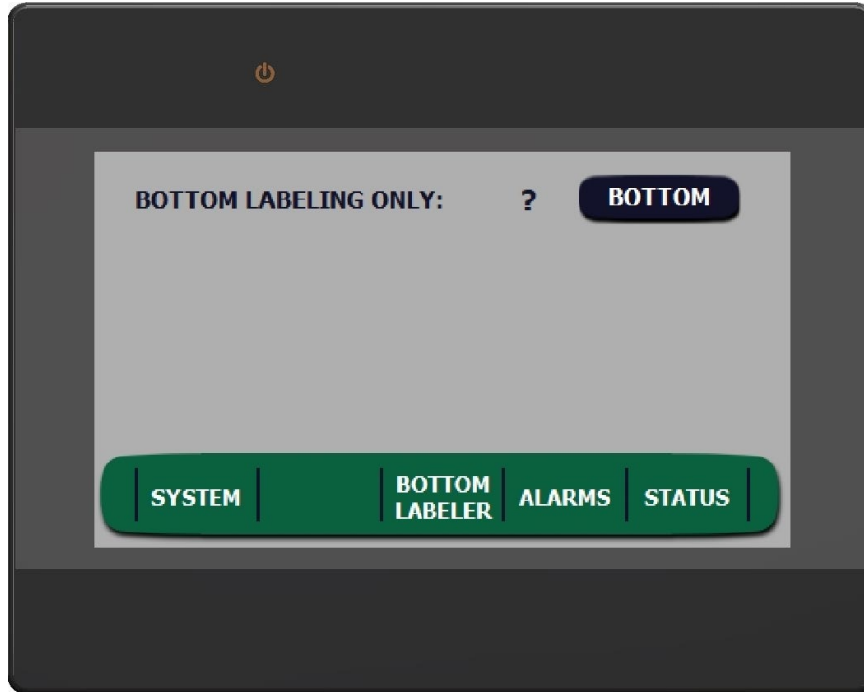
CONVEYOR OFF/ON – Pressing the CONVEYOR button will toggle the conveyor ON or OFF.

VIEW RECIPES – Pressing this button will bring up the screen to create, edit and enable recipes. See RECIPES section for more details on the option.

MODE SELECTION – This button directs to a screen that allows for control for different system configurations. See MODE SELECTION section for more details of the option.

MODE SELECTION

This is the screen that is shown when MODE SELECTION is pressed. Descriptions of the functions are shown below.



NOTE: Pressing the ? will bring up a description of each selection. Selections may be locked out. Contact maintenance to make any changes if this is the case.

BOTTOM LABELING ONLY – When selected, bottom only mode will only allow labeling for the bottom labeler and have the dispense speed match with the encoder. Access to the top labeler will not be possible. Pressing YES changes the mode and removes both labelers from auto. Cancel will not change the current selected mode.

BOTTOM LABELER

This is the screen that is shown when TOP LABELER is pressed. Descriptions of the functions are shown below.



AUTO – Pressing the AUTO button puts the bottom labeler into automatic operation mode. For every product signal, the bottom labeler will apply one label. Pressing the AUTO button again will return the bottom labeler to OFF mode. When in AUTO mode, the button will be green.

OFF – Pressing the OFF button puts the bottom labeler into OFF mode. When in OFF mode, the button will be red.

JOG – Pressing the JOG button will have the bottom labeler index a single label.

NOTE: *Every time a new size label is installed, the label length needs to be calibrated. Hold JOG for three seconds to initialize calibration mode. A complete calibration cycle will take four labels.*

DELAY – Delay is the amount of delay between when the labeler receives the product signal and when it starts to apply the label. The distance is measured with the encoder or high speed timer depending on mode, and is set in inches or in time depending on the mode. See the Delay Section for more details.

THREADING DIAGRAM –This button brings up a sample threading diagram for the bottom labeler.

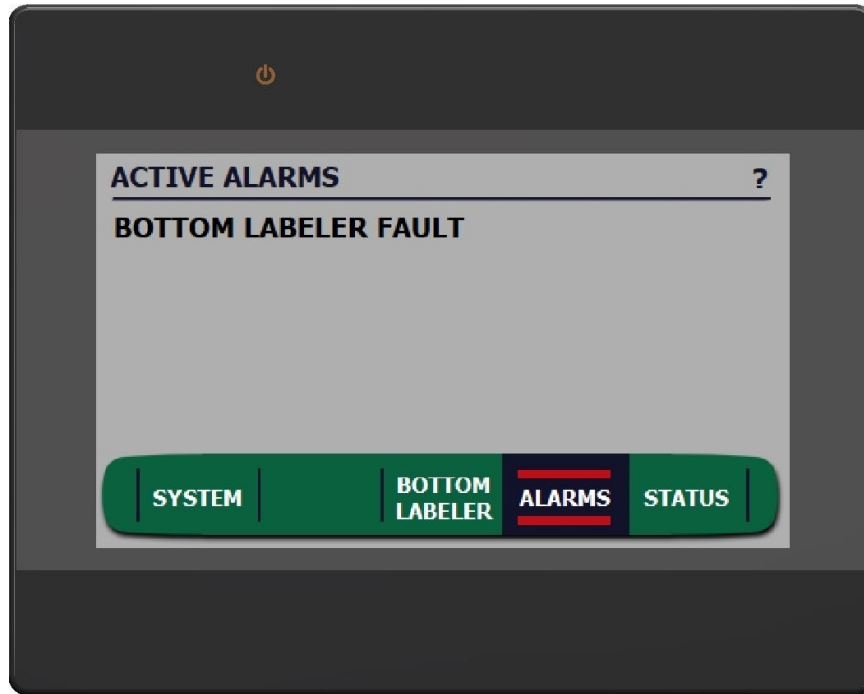
SETUP –This button brings up the settings for the top labeler only and some settings are password protected. See SETUP Section for more details.

CONVEYOR OFF/ON – Pressing the CONVEYOR button will toggle the conveyor ON or OFF.

NOTE: *E-Stop will remove power from Clamshell Labeler and turn OFF the conveyor. When power is turned back on the conveyor will not automatically restart.*

ALARMS

This is the screen that is shown when ALARMS is pressed. Descriptions of the functions are shown below.



ACTIVE ALARMS – This screen shows all the active alarms and the most current active alarm at the top of the list. When an alarm is present, two red bars will show above and below the ALARMS tab. When the alarm is cleared, the fault will disappear from the list. Press the listed alarm for information about the alarm. Yellow bars will show above and below the ALARMS tab when a low label, low ribbon, or low encoder occur and if the options are enabled.

NOTE: *Pressing the ? shows a description of how the alarms screen functions.*

STATUS

This is the screen that is shown when STATUS is pressed. Descriptions of the functions are shown below.



PRODUCT COUNTER – This is a user-resettable counter. This counts the number of applications that the particular labeler has made since the last reset. This feature is often used for counting production runs, or for maintenance life of components on the individual top or bottom labeler.

LIFETIME COUNTER – This is a non-resettable counter. This counts the number of applications that the particular labeler has made over the life of the system. This feature is often used for maintenance life of components on the individual top or bottom labeler, or for recording preventive maintenance occurrences.

RESET – Pressing and holding the Reset button will reset the displayed Product Counter. Use with caution as the counter reset cannot be undone.

LINE SPEED – Displays the measured line speed of the connected encoder. Displays value in feet per minute.

RATE – Displays the calculated M-Series labeler application rate. This calculation samples the value over three seconds and displays the value in products per minute.

RECIPES

Recipes provide a way to save multiple HMI settings into one data location. This data location can be named by the user and saved to a list, which can later be recalled and enabled at any point. The user can store up to 100 recipes if needed. Recipes will contain saved delays, taught label lengths, operator setting and technician level settings. To store recipes, follow the steps below.

Create a New Recipe

1. Press the VIEW RECIPE button in the SYSTEMS tab.
2. Press the CREATE NEW button.



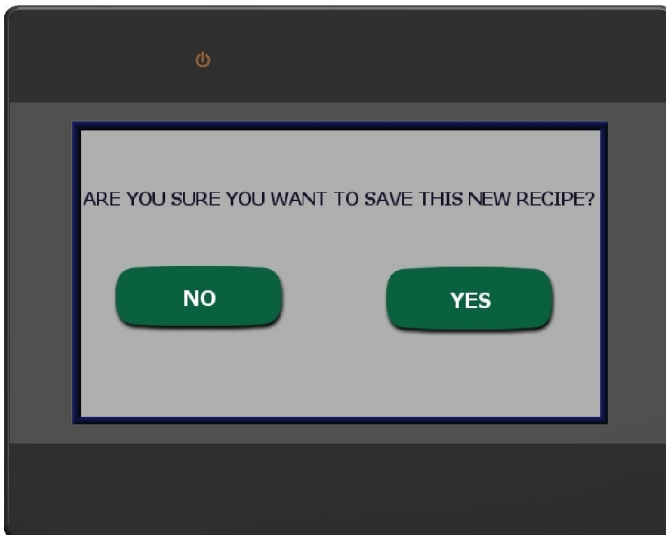
3. Press the square white space to pop up a keypad.



4. Type in the recipe name and hit ENTER. This name will be displayed in the list once saved.

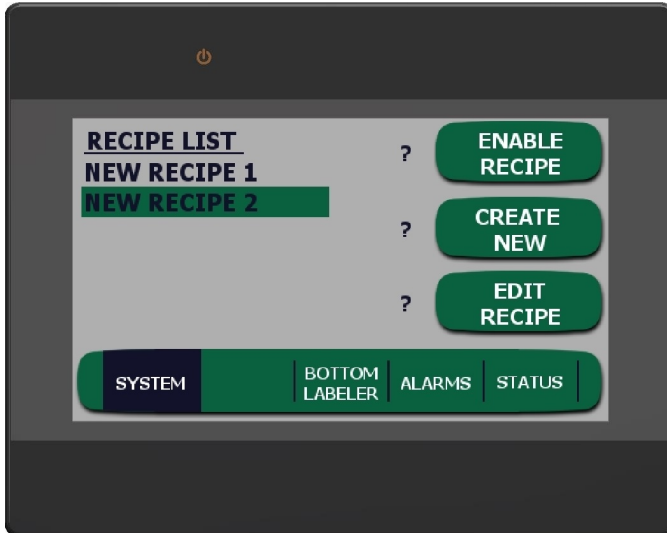


5. Press the SAVE NEW RECIPE and select YES. This will create a new name in the recipe list.

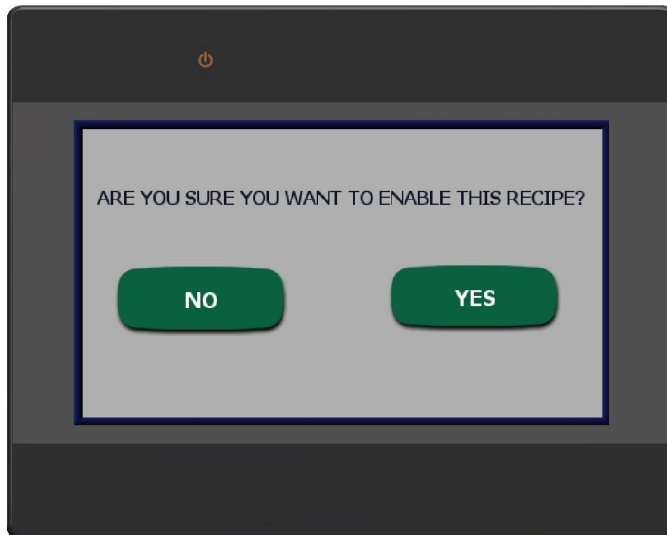


ENABLE PREVIOUSLY SAVED RECIPE

1. Highlight the wanted recipe name in the list by pressing the name.



2. Press the ENABLE RECIPE button and then press YES. All the settings will be loaded accordingly.



EDIT PREVIOUSLY SAVED RECIPE SETTINGS

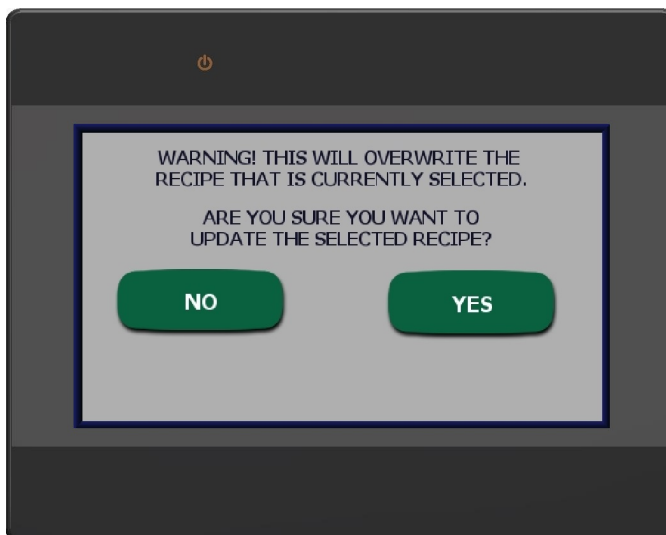
CAUTION! UPDATE RECIPE will overwrite previously saved settings in the highlighted recipe name to the current settings. DELETE RECIPE will permanently delete the highlighted recipe and all its settings. Use care when using the editing options.

UPDATE RECIPE

1. Press the EDIT RECIPE button to open the editing screen.
2. Select the recipe in the highlighted list that needs updating.
3. If a change of name is required, press in the white square box. A keypad will open, and the name can be changed. Remember, the settings will still be overwritten to the current settings.
4. Press UPDATE RECIPE.



5. Select YES to overwrite the previously saved settings to the current settings and save them in the highlighted recipe.

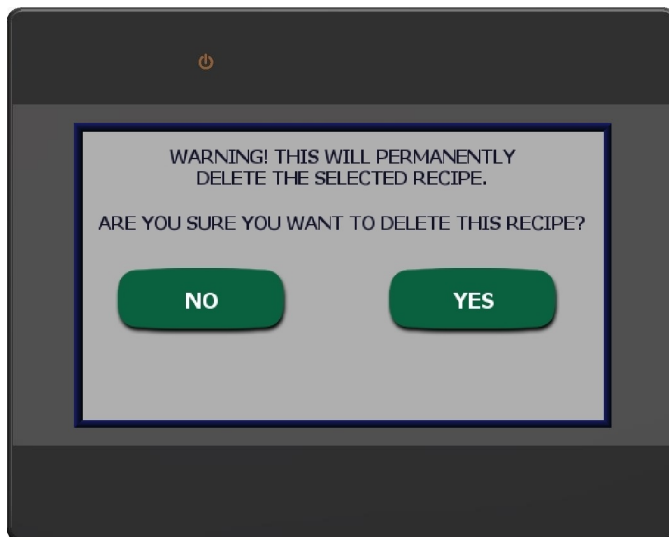


DELETE RECIPE

1. Press the EDIT RECIPE button to open the editing screen.
2. Select the recipe in the highlighted list that needs deleted.
3. Press DELETE RECIPE.



4. Select YES to delete the selected recipe.



DELAY

Product Delay is used to change the position of the applied label, relative to the product signal. The product delay is adjustable from 0.000" to 9.999". The Product Delay is calculated differently, depending on the mode that the labeler is operating in.

If the 9240 system is using an encoder the product delay is measured using the encoder. The amount of delay in inches is calculated into encoder pulses. After those numbers of pulses have occurred, the labeler will begin to apply. When operating in this mode, the delay is the most accurate.



If the labeler is operating in Set-Speed mode (set by the HMI), the delay is calculated in the PLC Program. The amount of delay is based off of time that is set by the user. The program uses an Ultra-High-Speed Timer to delay the start of the label application process. This method is extremely accurate; however it will not recognize a line stoppage.

The product delay can be adjusted in two different ways. You can press the up or down button to increase or decrease the amount of delay required. In addition, if the up or down button is held, the numbers will change faster. Using the buttons is useful when making small adjustments.

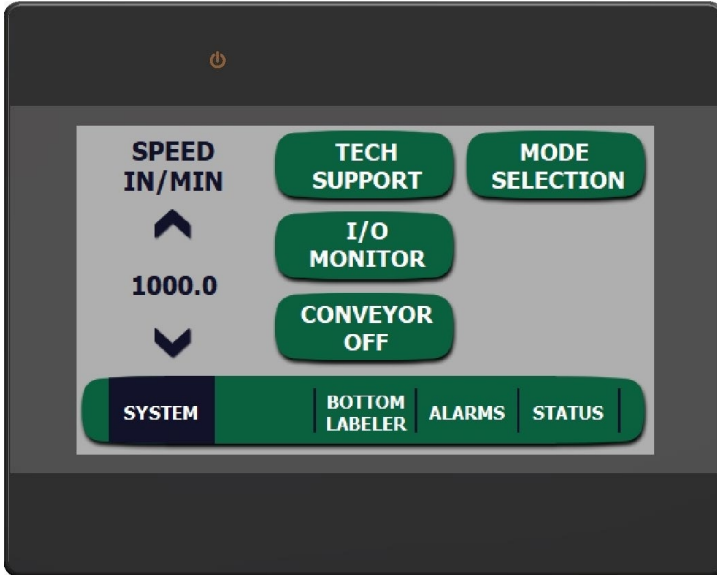


The second method for adjusting the delay is to touch the number display. When this is pressed, a number entry Pop-Up is displayed. Using the numbers, you can enter any delay desired. Once the delay is entered, pressing ENTER will return to the labeler home screen; Pressing ESC will exit to the labeler home screen without making any changes. Using this method is good for making large adjustment, or adjusting to a specific, known delay.

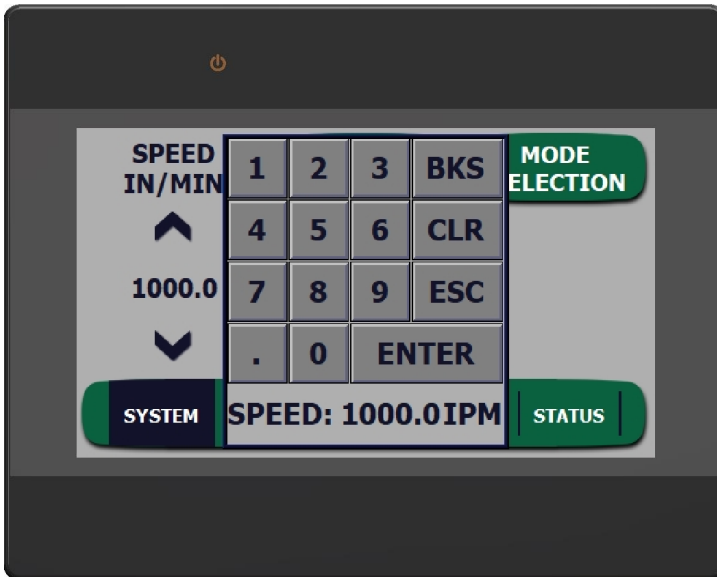
TIP: In encoder mode, you can set the Product Delay quickly and accurately. Apply a label using the M-Series labeler set a 0.000" of Product Delay. Measure the distance in the dispense direction between where the label was applied and the desired location. This measured value is the Product Delay, enter the value as measured.

SET SPEED MODE OPTION

This option is selected in the Technician level settings. This is used to manually set the speed that the labeler dispenses a label at. This is used when an encoder is not intended to be used. Depending on the drive motor, the speed has different maximums. The standard M-Series labeler with the stepper motor drive can be adjusted from 300 IPM to 1200 IPM (Inches per Minute).



The Set Speed can be adjusted in two different ways. You can press the Up or Down button to increase or decrease the Speed. In addition, if the Up or Down Speed button is held, the numbers will change faster. Using the buttons is useful when making small adjustments.



The second method for adjusting the SPEED is to touch the number display. When this is pressed, a number entry Pop-Up is displayed. Using the numbers, you can enter any speed value desired. Once the speed value is entered, pressing ENTER will return to the labeler home screen; Pressing ESC will exit the labeler home screen without making any changes. Using this method is good for making large adjustment, or adjusting to a specific, known set speed.

E-STOP FUNCTION

E-STOP IS PRESSED!

E-STOP IS PRESSED ON EQUIPMENT.
CHECK ALL LOCATIONS AND PULL
E-STOP TO ALLOW FULL FUNCTION
OF LABELING SYSTEM.

WARNING! E-STOP DOES NOT
REMOVE HIGH/LOW VOLTAGE FROM
ELECTRICAL ENCLOSURE. LOCK OUT
AND TAG OUT WHEN ACCESSING
ENCLOSURE.

E-STOP FUNCTION – The E-Stop is wired to a safety relay that will drop power to the conveyor inverter and the stepper drives when any of E-Stops are pressed. 24 VDC will still be ON inside the control panel. 120 VAC will still be ON at certain terminals inside the control panel as well. Pull the E-Stops out to power up the drives and allow full function of the labeling system. The conveyor or stepper drives will not allow movement after an E-Stop pull.

WARNING: E-Stop press does not remove High/Low Voltage from the electrical enclosure. Lock out and tag out when accessing the electrical enclosure!

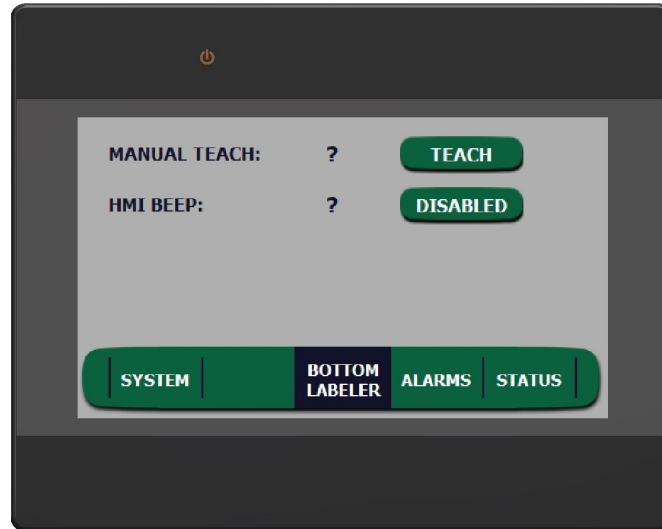
SETUP SCREENS

This is the screen that is shown when the SETUP button is pressed from the BOTTOM LABELER screen. OPERATOR user security level is not password protected and if OK is pressed, the HMI will be directed to the first page of settings. More advanced settings are password protected under the TECHNICIAN level. Contact EPI or your closest labeling representative to acquire the password. Press the asterisks to pop up the password keypad and input the password. Descriptions of all the screens are below.



OPERATOR SETTINGS

This is the screen that is shown when OK is pressed under the OPERATOR user security level. From this screen, you can access and change setups and features. Descriptions of the functions are shown below.



WHEN MANUAL TEACH IS PRESSED THE LABELER WILL DISPENSE 3 LABELS TO SELF CALIBRATE TO THE NEW LABEL LENGTH AND DISPENSE A FINAL 4TH LABEL. PRESSING JOG ON THE MAIN SCREEN FOR 3 SECONDS WILL INITIATE THE SAME SEQUENCE. THIS DOES NOT CALIBRATE THE PHYSICAL LABEL SENSOR. SEE MANUAL FOR THOSE CALIBRATION INSTRUCTIONS.

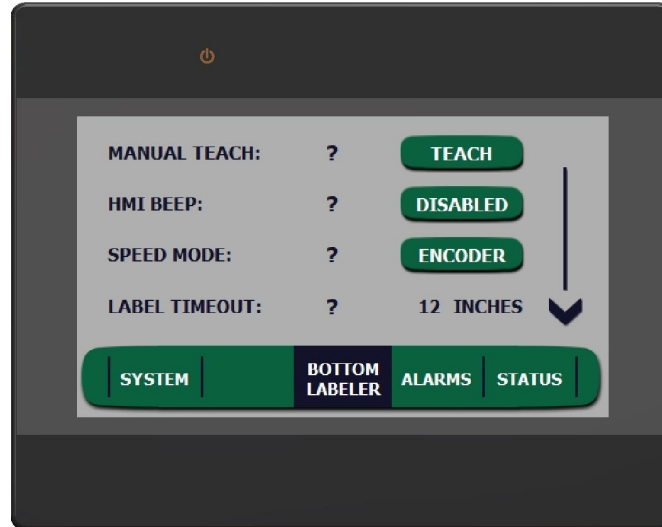
MANUAL TEACH – The purpose of this button is explained in the pop-up screen for the labeler.

WHEN ENABLED, ANY HMI BUTTON PRESS WILL EMIT A BEEPING SOUND. WHEN DISABLED, ANY HMI BUTTON PRESS WILL BE SILENT.

HMI BEEP – The purpose of this button is explained in the pop-up screen.

TECHNICIAN SETTINGS

NOTE: Technician settings are password protected. Contact EPI or your closest labeling representative to acquire the password.

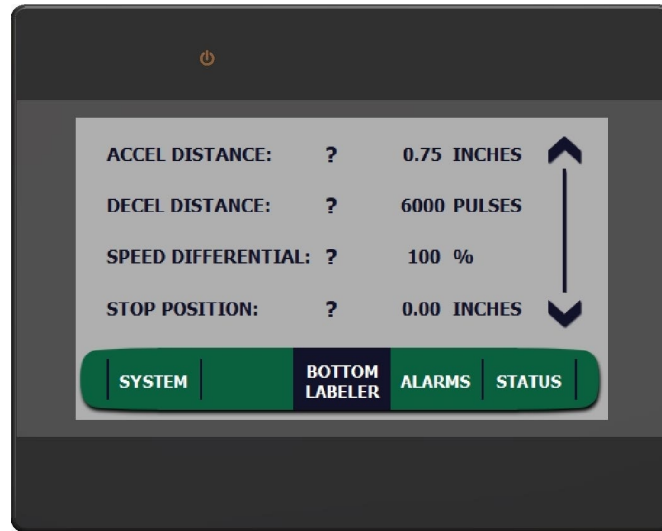


PRESS BUTTON TO CHANGE BETWEEN ENCODER AND SET SPEED MODE. ENCODER MODE DISPENSES A LABEL MATCHING THE SPEED OF AN ENCODER THAT IS SUPPLIED. SET SPEED MODE DISPENSES A LABEL TO A SPEED SET ON THE HMI. SPEED CONTROL WILL BE AVAILABLE ON THE SYSTEM SCREEN WHEN IN SET SPEED MODE.

SPEED MODE – The purpose of this button is explained in the pop-up screen.

IF A LABEL GAP IS NOT SENSED WITHIN THIS SET DISTANCE THEN AN ERROR WILL OCCUR. SET TO 3 TIMES THE LABEL LENGTH. PRESS NUMBERS TO CHANGE THE VALUE AND PRESS ENTER TO MAKE CHANGE PERMANENT.

LABELER TIMEOUT – The purpose of this value is explained in the pop-up screen for the labeler.



THIS IS THE AMOUNT OF LABEL DISPENSE THAT WILL OCCUR BEFORE THE LABEL REACHES THE TARGET SPEED. RANGE IS FROM 0.10 TO 3.00 INCHES. FACTORY SETTING IS 0.75 INCHES. PRESS NUMBERS TO CHANGE THE VALUE AND PRESS ENTER TO MAKE CHANGE PERMANENT.

CAUTION: IF SET TOO LOW IT COULD CAUSE THE DRIVE MOTOR TO STALL! INCREASE DISTANCE IN SMALL INCREMENTS IF STALLING.

ACCELERATION DISTANCE – The purpose of this value is explained in the pop-up screen. This setting is for both labelers.

NOTE: Setting this value too low could cause the drive motor to stall! Increase distance in small increments if stalling.

DECEL PULSES IS USED TO CHANGE THE DECEL PROFILE OF THE LABEL STOP. THE LOWER THE VALUE THE SMOOTHER THE STOP WILL BE. IF MULTIPLE LABELS ARE DISPENSING, CHANGE TO A HIGHER VALUE AND TEST AGAIN. SHORTER LABELS WILL REQUIRE A HIGHER VALUE AND LONGER LABELS WILL REQUIRE A LOWER VALUE. PRESS NUMBERS TO CHANGE THE VALUE AND PRESS ENTER TO MAKE CHANGE PERMANENT.

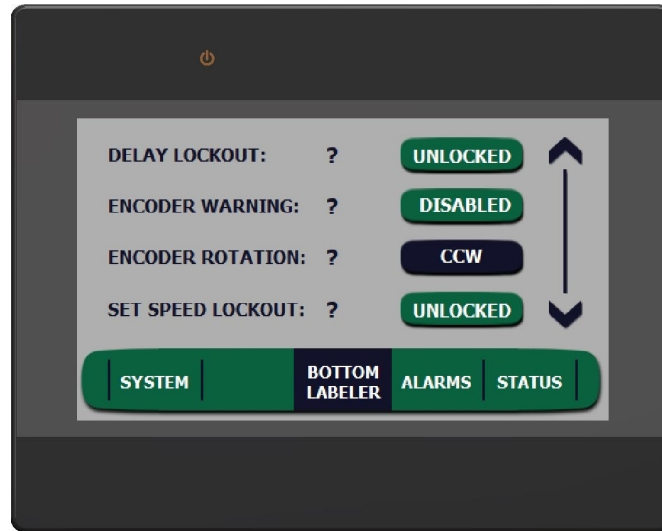
DECEL PULSES – The purpose of this value is explained in the pop-up screen for the labeler.

THIS IS ONLY USED WHEN ENCODER IS BEING USED. AT 100% THE LABEL DISPENSE SPEED WILL MATCH THE SPEED OF THE ENCODER. THIS ADJUSTMENT CAN BE USED TO UNDERSPEED OR OVERSPEED THE LABEL RELATIVE TO THE PRODUCT. PRESS NUMBERS TO CHANGE THE VALUE AND PRESS ENTER TO MAKE CHANGE PERMANENT.

SPEED DIFFERENTIAL – The purpose of this value is explained in the pop-up screen for the labeler. This can help with difficult products and help to prevent wrinkles.

AT ZERO, THE LABEL WILL STOP FLUSH WITH THE PEELER BAR. TO ADVANCE THE LABEL FORWARD INCREASE THE INCH VALUE. TO RETRACT LABEL DECREASE THE INCH VALUE. PRESS NUMBERS TO CHANGE THE VALUE AND PRESS ENTER TO MAKE CHANGE PERMANENT.

STOP POSITION – The purpose of this value is explained in the pop-up screen for the labeler.



WHEN LOCKED, THE OPERATOR WILL NOT BE ABLE TO ACCESS THE DELAY CONTROLS ON THE MAIN SCREEN. WHEN UNLOCKED, ACCESS IS ALLOWED.

DELAY LOCKOUT – The purpose of this button is explained in the pop-up screen.

WHEN ENABLED, THIS WILL DISPLAY A WARNING THAT THE ENCODER HAS STOPPED THIS ALLOWS THE OPERATOR TO MECHANICALLY CHECK THE ENCODER OR CHECK THE PLC INPUTS FOR PROPER OPERATION.

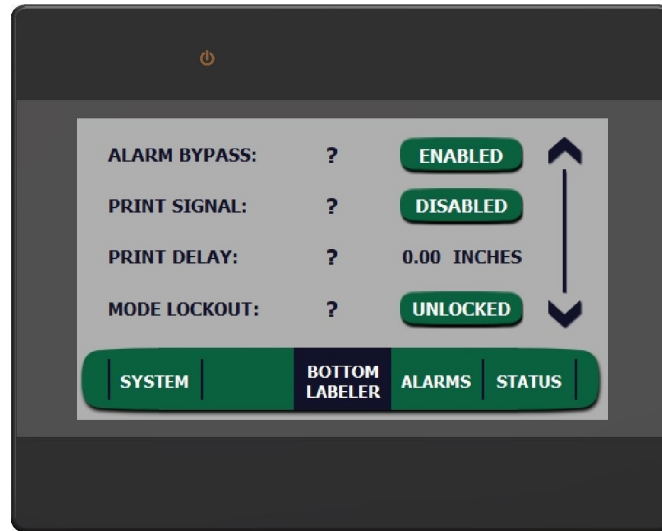
ENCODER WARNING – The purpose of this button is explained in the pop-up screen.

SET THE ENCODER DIRECTION WHEN USING MATCH SPEED. DIRECTION IS DETERMINED WHEN LOOKING AT THE FRONT OF THE ENCODER WHEEL.

ENCODER ROTATION – The purpose of this button is explained in the pop-up screen.

WHEN LOCKED, THE OPERATOR WILL NOT BE ABLE TO ACCESS THE SPEED ADJUSTMENT ON THE SYSTEM SCREEN. WHEN UNLOCKED, ACCESS IS ALLOWED.

SET SPEED LOCKOUT – The purpose of this button is explained in the pop-up screen.



ONLY USED WHEN ALARM PACKAGE IS PURCHASED. WHEN DISABLED, ALARM LOGIC FOR THIS LABELER WILL BE IGNORED. THIS CAN ALLOW ONE LABELER TO RUN WHILE THE OTHER IS OFFLINE AND CONTINUE TO USE ALARM LOGIC.

ALARM BYPASS – The purpose of this button is explained in the pop-up screen for the labeler.

WHEN ENABLED, THE PRINT START SIGNAL WILL BE OUTPUT FROM THE PLC TO THE PRINTER. THIS SIGNAL WILL OCCUR DURING OR AFTER THE APPLY CYLCE DEPENDING ON ADVANCED SETTINGS. DISABLED WILL TURN OFF THE PRINT SIGNAL.

PRINT SIGNAL – The purpose of this button is explained in the pop-up screen for the labeler.

NOTE: *This button is only applicable when a printer package has been purchased and installed!*

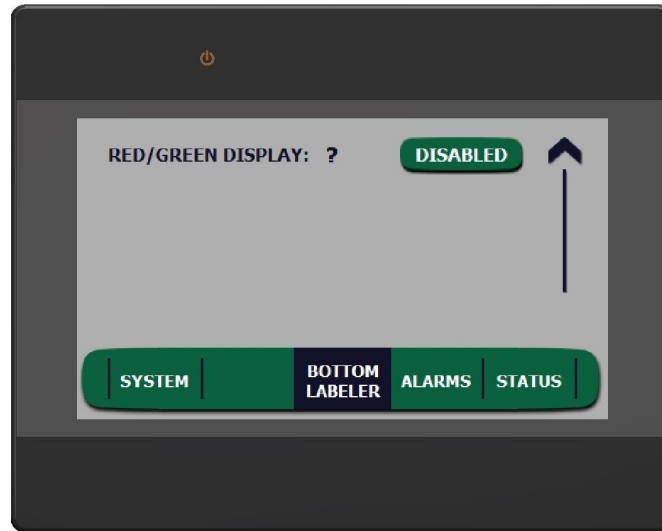
IF PRINTING DURING THE DISPENSE, THE DELAY WILL MOVE THE PRINT ON THE LABEL BY INCREASING OR DECREASING THE VALUE. PRESS NUMBERS TO CHANGE THE VALUE AND PRESS ENTER TO MAKE CHANGE PERMANENT. IF PRINTING AFTER LABEL HAS STOPPED, THIS VALUE WILL NOT AFFECT PRINT SEQUENCE.

PRINT DELAY – The purpose of this button is explained in the pop-up screen for the labeler.

NOTE: This button is only applicable when a printer package has been purchased and installed!

MODE LOCKOUT IS USED TO LOCKOUT ACCESS TO CHANGING THE MODES UNDER THE MODE SELECTION BUTTON IN THE SYSTEM SCREEN.

MODE LOCKOUT – The purpose of this button is explained in the pop-up screen.



GREEN/RED DISPLAY WILL TURN THE BACK-SCREEN GREEN IF IN AUTO AND NO ALARMS. IT WILL TURN RED IF ALARMS OCCUR. DISABLED WILL REMAIN GRAY IN ANY ALARM STATE.

RED/GREEN DISPLAY – The purpose of this button is explained in the pop-up screen.

SECTION 5: CONTROLS SETUP

LABEL SENSOR SETUP

The Label Sensor on your unit may not look identical to the unit pictured below. The setup for each unit is similar to the following instructions.

SETTING UP THE SENSOR FOR LABEL AND LINER

To teach the sensor to the labels, first place the label liner in the Web Gap. Then push the Autoset button. This is the most accurate way to setup the Label Sensor for the sensing of the individual labels. An alternative way to setup the sensor is to first remove a label. Then place the liner only in the sensor. Last, press the Autoset.

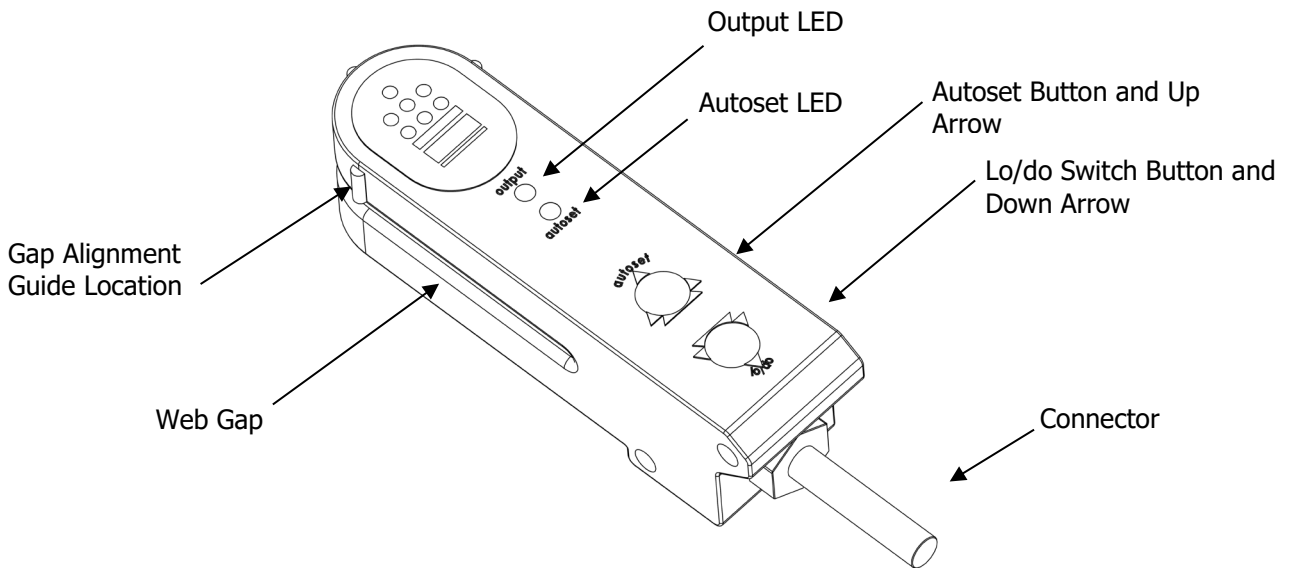
NOTE: On rare occasions, when the light is unable to penetrate the backing materials, both the red and green led indicators will blink three times. When this indication occurs, the sensor will be unable to detect the presence of the labels.

UP/DOWN ADJUSTMENTS

If the sensor is not being repeatable, the sensor has the ability to adjust the autoset value incrementally. Momentarily press the Up Arrow to make the sensor less sensitive or Down Arrow to make the sensor more sensitive. Dispense a label after each adjustment to test for proper operation.

INVERTING THE OUTPUT

The M-Series labeler requires the Label Sensor to output a signal on the gap (Red LED On), and not output the signal on the label (Red LED Off). This can be verified with the Red LED on the Label Sensor. If the Label Sensor operates in the opposite logic, the output must be inverted. This is done by pressing the lo/do button for 2 seconds.



ULTRASONIC CLEAR LABEL SENSOR SETUP

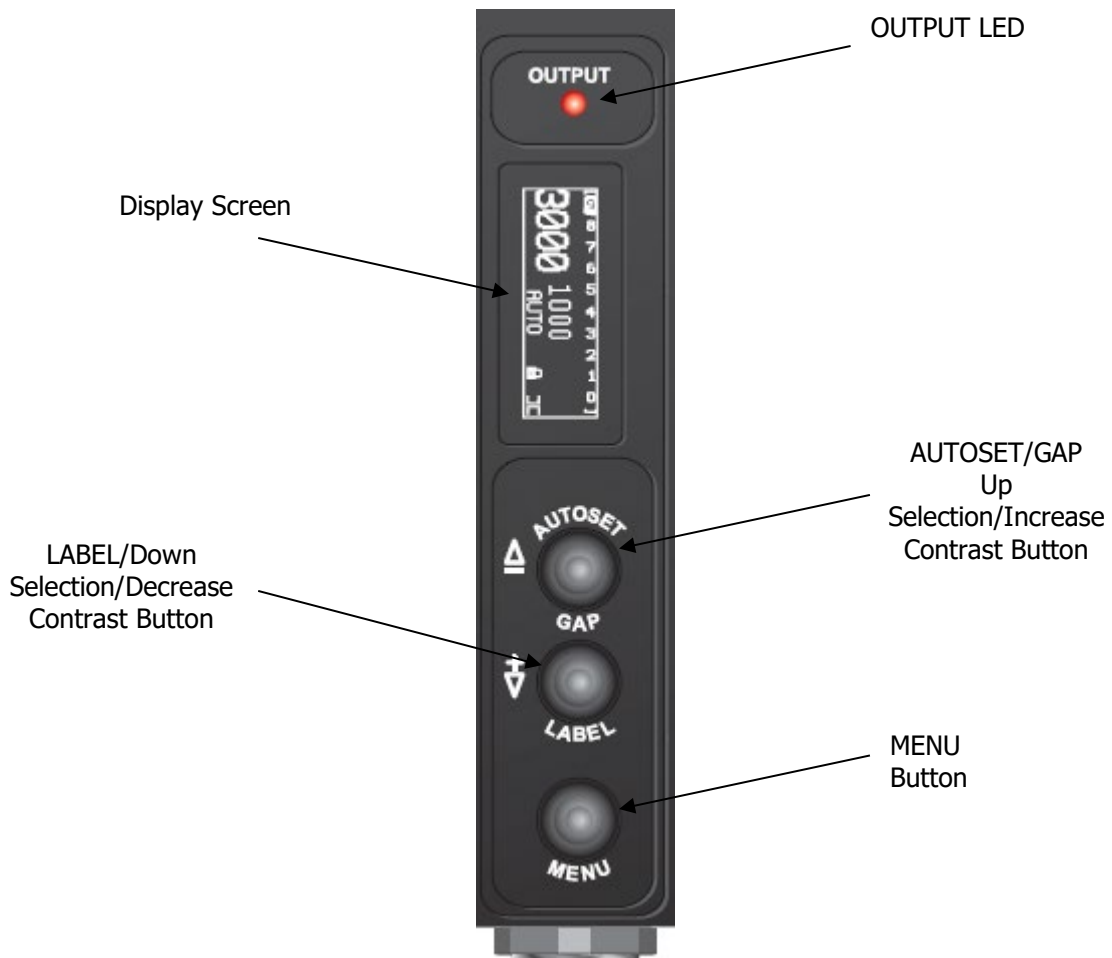
These adjustments will be made to the Tri-Tronics Label Sensor for clear labels. Follow the setup procedures below for proper setup of the Label Sensor.

SETTING UP THE SENSOR FOR LABEL AND LINER

To teach the sensor to the liner, first pull off a few labels and place the liner only into the gap of the sensor. Press and hold the AUTOSET/GAP button for two seconds. "Gap Set" will be displayed when complete. If false triggering is occurring after this setup, place the label and the liner in the gap, push and hold LABEL for two seconds. "Label Set" will be displayed when complete. Always perform the Gap AutoSet first when calibrating the sensor.

INVERTING THE OUTPUT

The M-Series labeler requires the Label Sensor to output a signal on the gap, and not output the signal on the label. This can be verified with the Red OUTPUT LED on the Label Sensor. If the Label Sensor operates in the opposite logic, the output must be inverted. This is done by pressing the MENU button until the "Output Mode" is displayed. Press either the GAP or LABEL button to select the "GAP" option.



TRI- TRONICS CLEAR OBJECT SENSOR SETUP

These adjustments will be made to the Tri-Tronics (RetroSmart). Follow the setup procedures below for proper setup of the clear object sensor.

AutoSet Adjustment Procedure

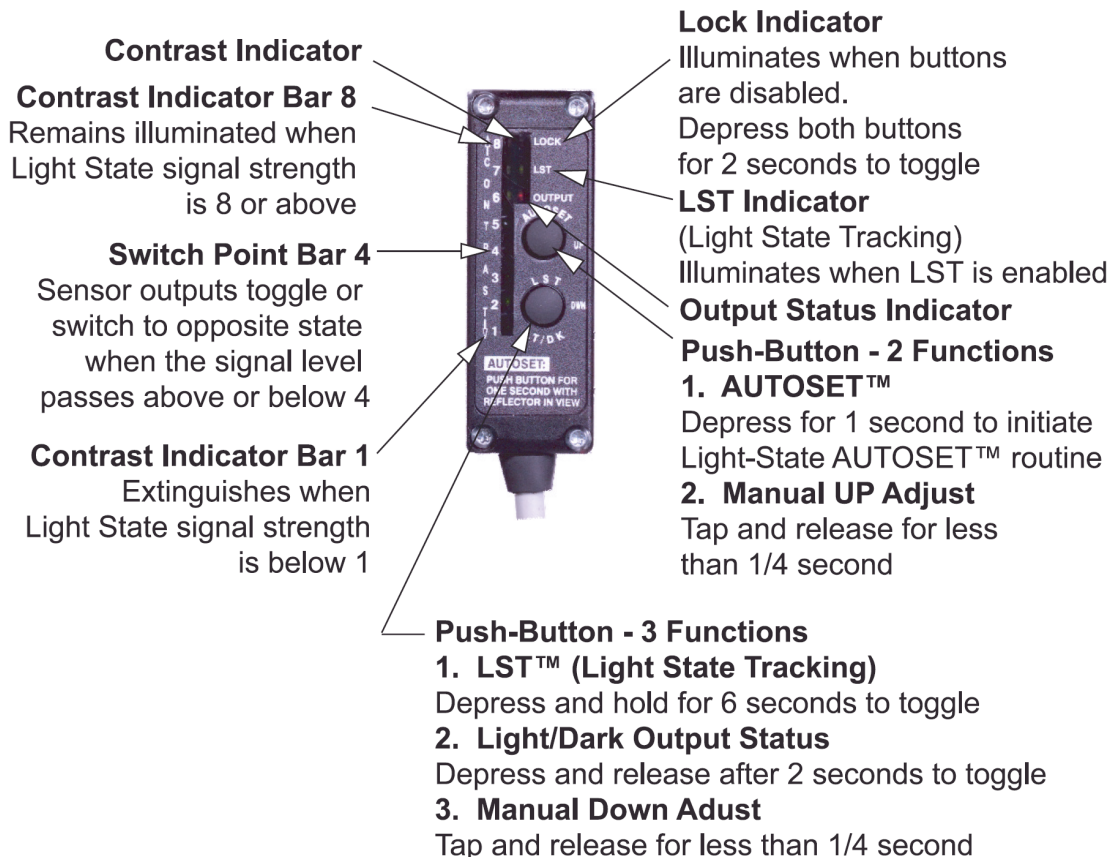
1. Align sensor light beam with reflector.
2. Press and hold AutoSet button for one second.
3. Release AutoSet button when bar 8 LED flashes.
4. Bar 8 illuminates constant when setup is complete.

Manual Adjustment Procedure

1. Tapping (approximately 1/4 second press and release) the "UP" button will increase the sensitivity.
2. Tapping (approximately 1/4 second press and release) the "DOWN" button will decrease the sensitivity.

Locking/Unlocking Sensor Adjustment Procedure

1. Press and hold both buttons simultaneously.
2. Wait two seconds until lock indicator toggles to the opposite state.
3. Release the buttons.



BANNER QX4 LASER SENSOR STANDARD SETUP

These adjustments will be made to the Banner QX4 Laser Sensor. Follow the setup procedures below for proper setup of the laser sensor.

Setup for BGS mode (most applications)

1. Press and hold (-) for 2 seconds, release when "tch" is displayed.
2. Press (SELECT), the current mode will be displayed.
3. Use (+) or (-) to scroll through options until "bGS" is displayed.
4. Press (SELECT), "tch" is displayed.
5. Use (+) or (-) to scroll through options until "End" is displayed.
6. Press (SELECT), sensor returns to run mode.
7. Verify the amber BGS light is illuminated on the display.

Teaching the Sensor (BGS mode)

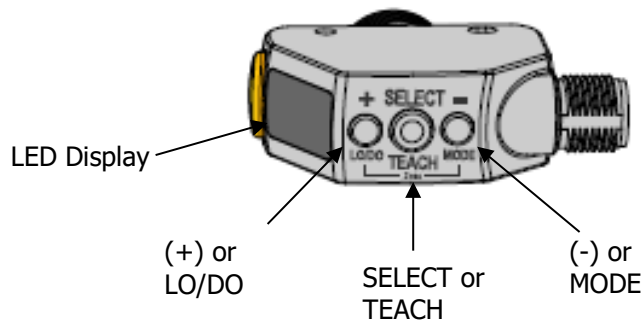
1. Verify no target is present (ie: red laser dot is on the conveyor belt).
2. Press and hold (SELECT) for 2 seconds, release when display toggles "Set" and "oFF".
3. Press (SELECT) again, the distance to the red dot will be displayed in mm. Sensor returns to run mode. (The switch point is automatically adjusted to approximately 3 mm less than the taught distance)

Setting the switch point

Adjustment of the switch point may be needed if false triggering is occurring. It may need to come further up from the standard 3mm that it automatically teaches to.

1. While in run mode use the (+) and (-) buttons to adjust the switch point. All settings are in mm from the face of the sensor.
2. Sensor will automatically return back to run mode when left for a few seconds.

NOTE: Output should be off when no product is present and turn on when product is present. If incorrect then change the LO/DO operation by holding LO/DO for 3 seconds. Press (+) or (-) and press select to choose correct option.



NOTE: Refer to the manufacture's user manual for further instructions on default reset, locking out the sensor or other detection options.

BANNER QX4 LASER SENSOR CLEAR SETUP

These adjustments will be made to the Banner QX4 Laser Sensor for clear objects. Follow the setup procedures below for proper setup of the laser sensor.

Setup for DUAL mode (clear object applications)

1. Press and hold (-) for 2 seconds, release when "tch" is displayed.
2. Press (SELECT), the current mode will be displayed.
3. Use (+) or (-) to scroll through options until "duAL" is displayed.
4. Press (SELECT), "tch" is displayed.
5. Use (+) or (-) to scroll through options until "End" is displayed.
6. Press (SELECT), sensor returns to run mode.
7. Verify the amber DUAL light is illuminated on the display.

Teaching the Sensor (DUAL mode)

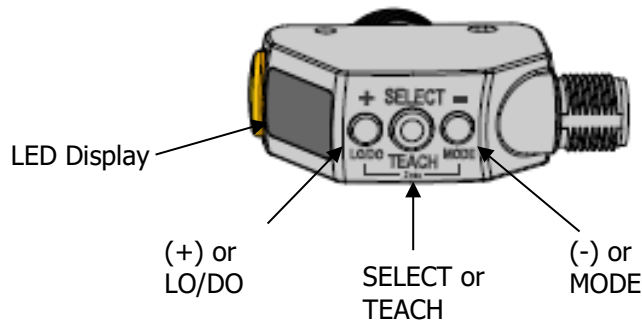
1. Verify no target is present (ie: red laser dot is on the conveyor belt).
2. Press and hold (SELECT) for 2 seconds, release when display toggles "SEt" and "oFF".
3. Press (SELECT) again, the intensity/height value to the red dot will be displayed. Sensor returns to run mode. (The switch point is automatically adjusted.)

Setting the switch point

Adjustment of the switch point may be needed if false triggering is occurring. It may need to come further up from the standard that it automatically teaches to.

1. While in run mode use the (+) and (-) buttons to adjust the switch point.
2. Sensor will automatically return back to run mode when left for a few seconds.

NOTE: Output should be off when no product is present and turn on when product is present. If incorrect then change the LO/DO operation by holding LO/DO for 3 seconds. Press (+) or (-) and press select to choose correct option.



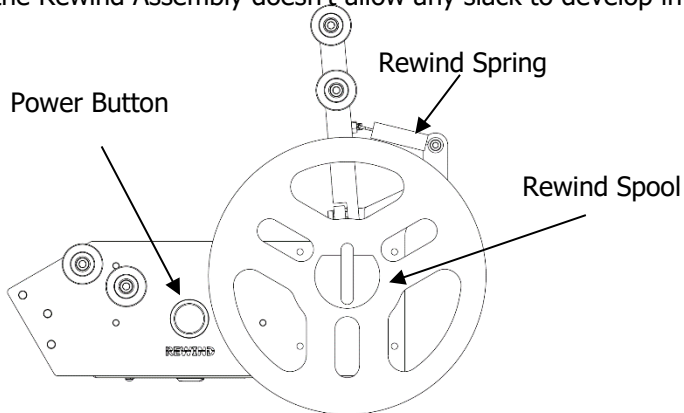
NOTE: Refer to the manufacture's user manual for further instructions on default reset, locking out the sensor or other detection options.

POWERED REWIND TORQUE ADJUSTMENT

The Power Rewind is a purchased option and uses an electric stall motor (Torque Motor) to turn the Rewind Spool to wind up the label liner waste. The Power Rewind is set up at factory but may need adjustment after testing in the field for a length of time.

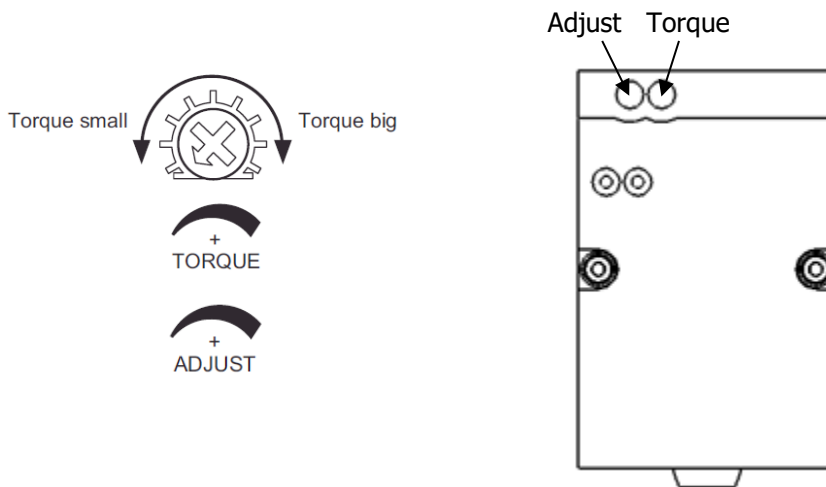
CAUTION: The Torque Motor Power adjustment must be done while the labeler is powered. Use proper Personal Protective Equipment and caution when working on live circuits!

1. Open the Control Box on the back plate of the Power Rewind.
2. Looking from the bottom, locate the Torque Motor Controller. Using a small Phillips screwdriver, adjust the "Torque" potentiometer (Clockwise will increase the torque). Set the torque at the minimum value where the Rewind Assembly doesn't allow any slack to develop in the label path.



WARNING: Too much torque will overpower the spring, too little can cause the liner to not wind up correctly. Verify the labeler while making adjustments!

NOTE: The "Adjust" potentiometer is used to fine tune the Torque output of the Torque Motor. Use this potentiometer to make minor adjustments.



NOTE: If either adjustment potentiometer is set at the Minimum or Maximum of the range, the torque output may be unstable. Start adjustments at a 50% value or less.

-
3. Test the Torque setting by Jogging the labeler. Verify that the waste is rewound smoothly.
 4. Close the Control Box Cover.

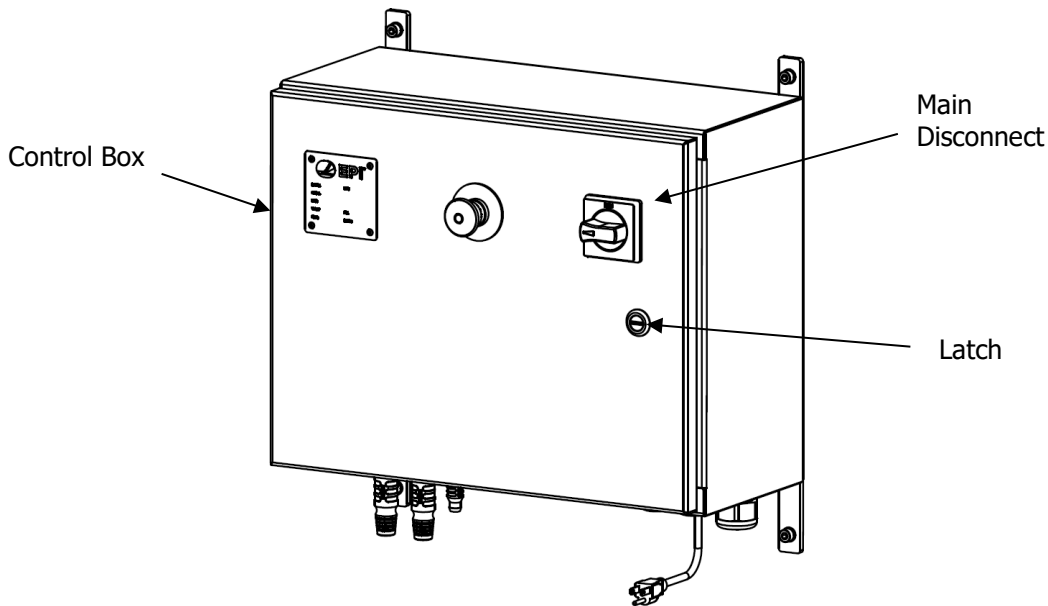
CONVEYOR SPEED ADJUSTMENT

The conveyor speed is controlled by a three-phase inverter and is adjustable from 30-100 feet per minute. This control allows for easy integration into the upstream conveyor in the production environment.

CAUTION: The conveyor speed adjustment must be done while the labeler is powered. Use proper Personal Protective Equipment and caution when working around live circuits!

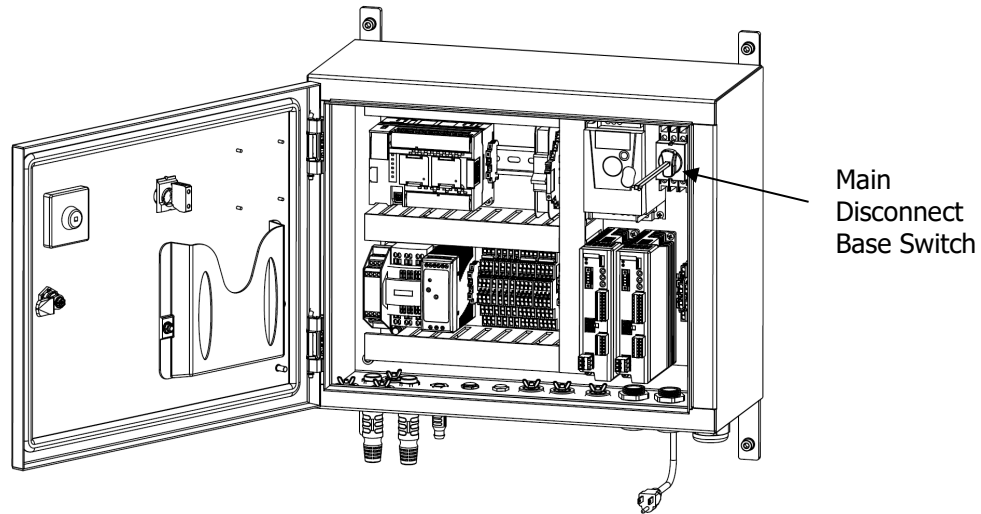
SPEED ADJUSTMENT

1. Turn OFF power to the Control Box by turning the Main Disconnect to the OFF position.



2. Open the Control Box by turning the Latch.

3. With the door open, turn the Main Disconnect Base Switch to the ON position. This will power everything on. Once powered, turn the conveyor ON from the HMI.



4. The display reading is in Hz. Press the Inverter Speed Button twice to display the percentage of that value from 0-100%.



NOTE: Depending on the EPI model, check the STATUS tab to see the actual speed of the conveyor

5. Rotate the Inverter Speed Button clockwise to increase the speed or counter-clockwise to decrease the speed.
6. Press the ESC button three times to exit out of the speed control setting.
7. Turn the Main Disconnect Base Switch to the OFF position and close the Control Box door.
8. Turn the ON power to the Control Box by turning the Main Disconnect to the ON position.

PLC INPUT/OUTPUT DEFINITIONS

The standard 9240 uses an integrated PLC (Omron CP1). An optional Allen-Bradley Micro850 PLC is available; the definitions are on the next page for this option. This PLC interprets inputs from the product sensor and controls the application of the label.

INPUTS: (Omron CP1L)

#	Name	Source	Type	Description
0.00	Encoder A	Encoder	NPN	Momentary Signal for encoder A input
0.01	Encoder B	Encoder	NPN	Momentary Signal for encoder B input
0.02	N/A	N/A	NPN	Not used in this application
0.03	Printer Error*	Bottom Printer*	NPN	Maintained Signal when printer has an error*
0.04	N/A	N/A	NPN	Not used in this application
0.05	Label Stop	Label Sensor	NPN	Momentary signal to start stop sequence (Bottom)
0.06	Go Signal	Product Sensor	NPN	Momentary signal to initiate application cycle
0.07	N/A	N/A	NPN	Not used in this application
0.08	N/A	N/A	NPN	Not used in this application
0.09	Low Labels*	Sensor*	NPN	Maintained when labels run off of sensor (Bottom)*
0.10	N/A	N/A	N/A	Not used in this application
1.05	E-Stop	Safety Contactor	NPN	Maintained when E-stops are not pressed in

OUTPUTS: (Omron CP1L)

#	Name	Destination	Type	Description
100.00	N/A	N/A	NPN	Not used in this application
100.01	N/A	N/A	NPN	Not used in this application
100.02	Go Pulse	Stepper Driver	NPN	Signals the Stepper Motor to turn (Bottom)
100.03	Current Off	Stepper Driver	NPN	Maintained ON when HMI screen is set to OFF and screen has not been pressed for 5 seconds (Bottom)
100.04	N/A	N/A	NPN	Not used in this application
100.05	Print Start*	Printer*	NPN	Momentary Signal to initiate a printer (Bottom)*
100.06	Yellow Light*	Light Tower*	NPN	Flashing when low label condition occurs*
100.07	Green Light*	Light Tower*	NPN	Maintained ON when in AUTO and no alarms are present*
101.00	Red Light*	Light Tower*	NPN	Flashing when error occurs*
101.01	Conveyor Start	Inverter	NPN	Maintained ON when conveyor is turned on
101.02	Alarm*	Mechanical Relay*	NPN	Maintained ON when printer has any errors or labeler is not in auto*
101.03	N/A	N/A	NPN	Not used in this application

NOTE: Destinations noted with an asterisk (*) may not be for every application. Some applications may be custom and are to be noted at the end of this manual.

INPUTS: (Allen-Bradley Micro850)

#	Name	Source	Type	Description
A2 (plug-in A-)	Encoder A	Encoder	NPN	Momentary Signal for encoder A input
A3 (plug-in B-)	Encoder B	Encoder	NPN	Momentary Signal for encoder B input
I-00	Go Signal	Product Sensor	NPN	Momentary signal to initiate application cycle
I-01	N/A	N/A	NPN	Not used in this application
I-02	N/A	N/A	N/A	Not used in this application
I-03	N/A	N/A	NPN	Not used in this application
I-04	N/A	N/A	NPN	Not used in this application
I-05	Printer Error*	Bottom Printer*	NPN	Maintained Signal when printer has an error*
I-06	N/A	N/A	N/A	Not used in this application
I-07	Label Stop	Label Sensor	NPN	Momentary signal to start stop sequence (Bottom)
I-08	N/A	N/A	NPN	Not used in this application
I-09	Low Labels*	Sensor*	NPN	Maintained when labels run off of sensor (Bottom)*

OUTPUTS: (Allen-Bradley Micro850)

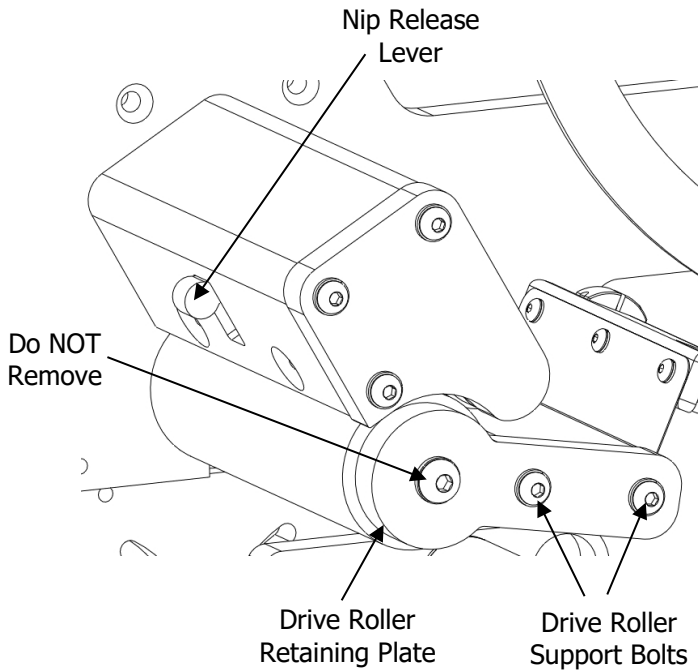
#	Name	Destination	Type	Description
O-00	N/A	N/A	NPN	Not used in this application
O-01	Go Pulse	Stepper Driver	NPN	Signals the Stepper Motor to turn (Bottom)
O-02	N/A	N/A	NPN	Not used in this application
O-03	N/A	N/A	N/A	Not used in this application
O-04	N/A	N/A	N/A	Not used in this application
O-05	Current Off	Stepper Driver	NPN	Maintained ON when HMI screen is set to OFF and screen has not been pressed for 5 seconds. (Bottom)
O-06	N/A	N/A	NPN	Not used in this application
O-07	Print Start	Printer*	NPN	Momentary Signal to initiate a printer (Bottom)
O-08	Alarm	Mechanical Relay*	NPN	Maintained ON when printer has any errors or labeler is not in auto
O-09	Conveyor Start	Inverter	NPN	Maintained ON when conveyor is turned on.
O-100 (plug-in 1 B5)	Yellow Light	Light Tower*	NPN	Flashing when low label condition occurs
O-101 (plug-in 1 B6)	Green Light	Light Tower*	NPN	Maintained ON when in AUTO and no alarms are present.
O-101 (plug-in 1 A5)	Red Light	Light Tower*	NPN	Flashing when printer error occurs

NOTE: Destinations noted with an asterisk (*) may not be for every application. Some applications may be custom and are to be noted at the end of this manual.

SECTION 6: WEAR PARTS REPLACEMENT

DRIVE ROLLER REPLACEMENT

The Drive Roller drives the labels through the M-Series labeler. The Drive Roller is a red colored ground urethane cast on an aluminum core. The roller is designed for long life, however the roller does wear and will eventually need replaced. When the Drive Roller wears, the liner can slip. This causes labels to be misapplied or not applied at all. In addition, a worn Drive Roller can cause tracking issues. Follow the steps below to replace the Drive Roller



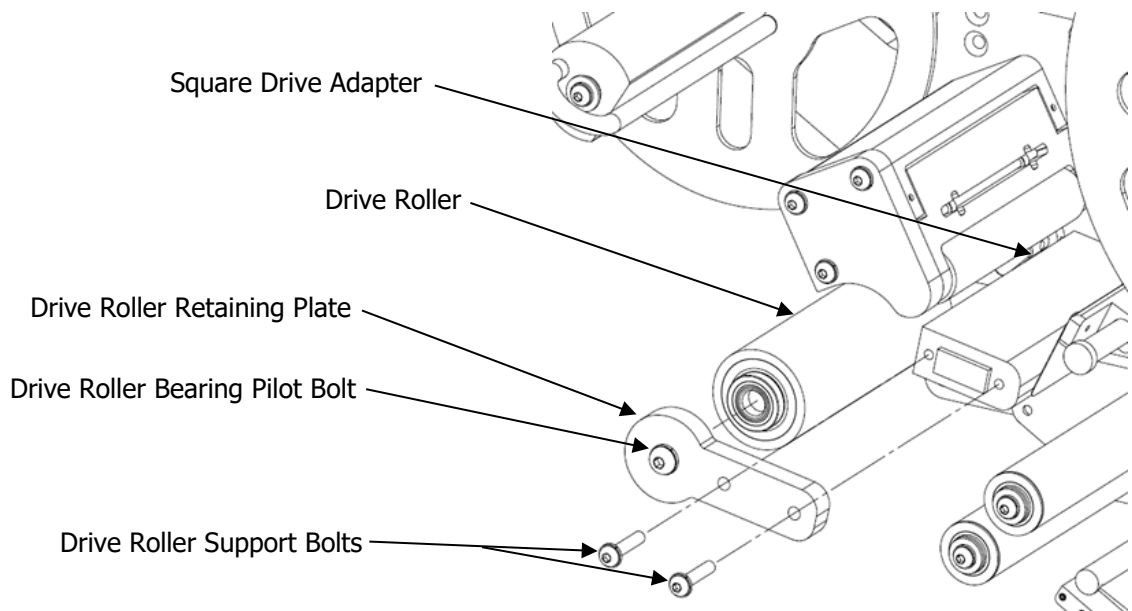
1. Power down the M-Series labeler. Lock Out and Tag Out the Unit.
2. Open the Nip Release Lever.
3. Remove the Drive Roller Support Bolts.

DO NOT REMOVE THE DRIVE ROLLER BEARING PILOT BOLT!

4. Pull on the Drive Roller Retaining Plate to remove. If necessary, lightly tap with a rubber mallet.
5. Grab the Drive Roller and pull it off of the Square Drive Adapter. Wiggle the Drive Roller side-to-side to loosen.
6. Install the New Drive Roller.

DO NOT USE ANY TOOLS TO INSTALL THE ROLLER! STEPPER MOTOR CAN BE DAMAGED!

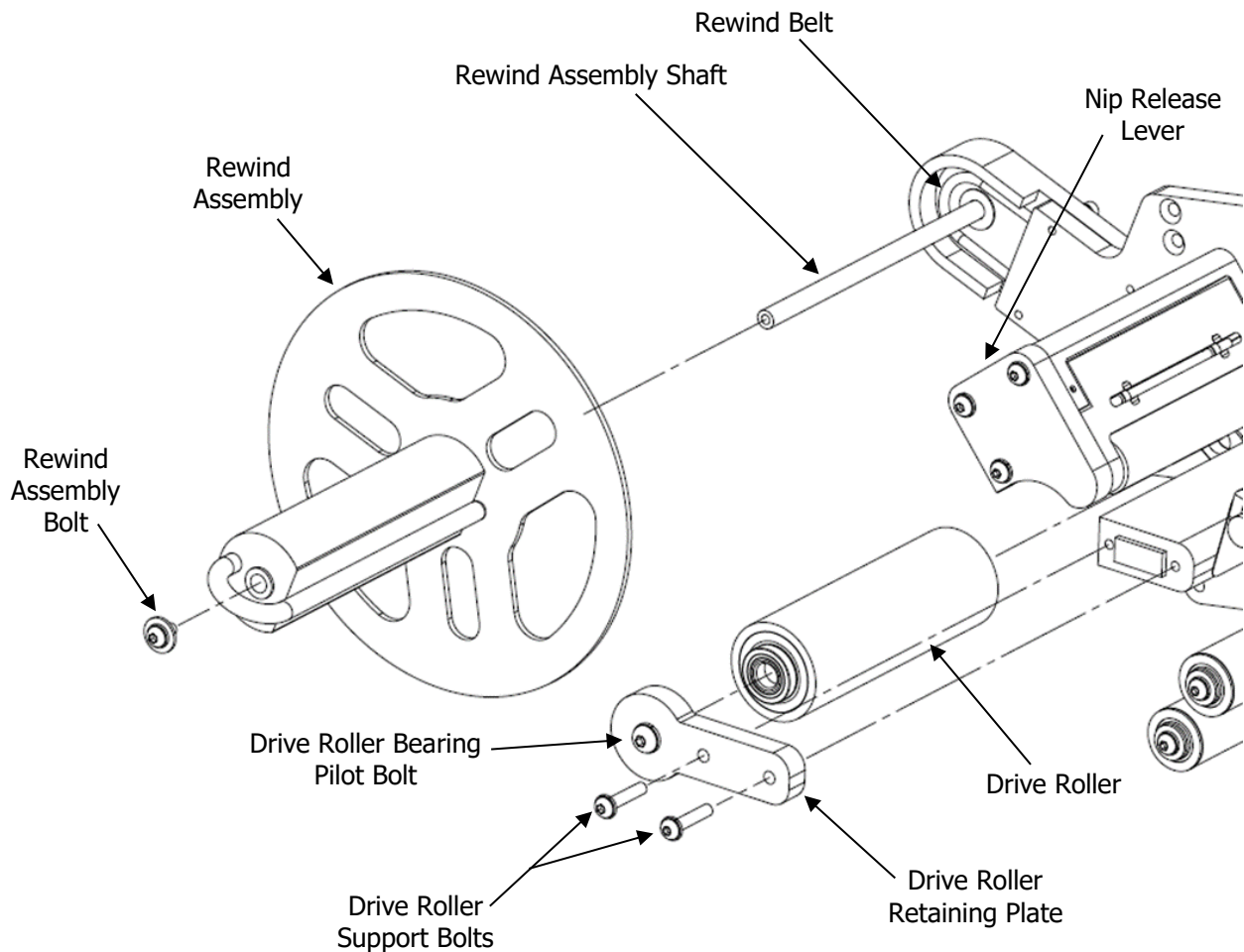
7. Install the Drive Roller Retaining Plate and hardware following the steps above.



REWIND BELT REPLACEMENT

The Rewind Belt drives the Rewind Assembly on the M-Series labeler. The Rewind Assembly takes up the label liner once the labels are separated from the liner, and they exit the Drive Roller. The Rewind belt is a reinforced, endless textured urethane belt. The Rewind Belt is designed for long life; however the belt does wear over time. A worn drive belt can reduce the efficiency of the Rewind Assembly. When the Rewind Assembly is not functioning correctly the liner can get loose, and possibly get caught. Follow the steps below to replace the Rewind Belt.

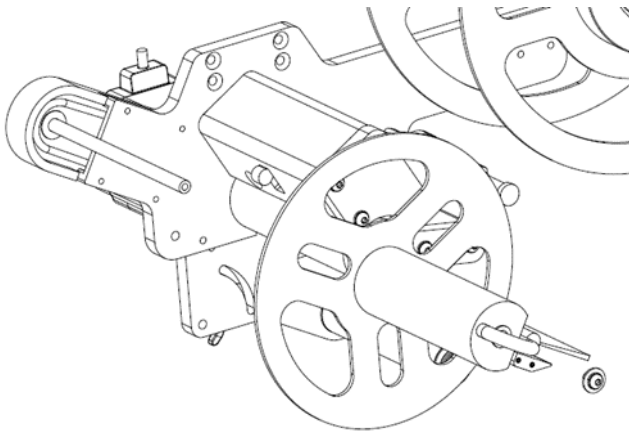
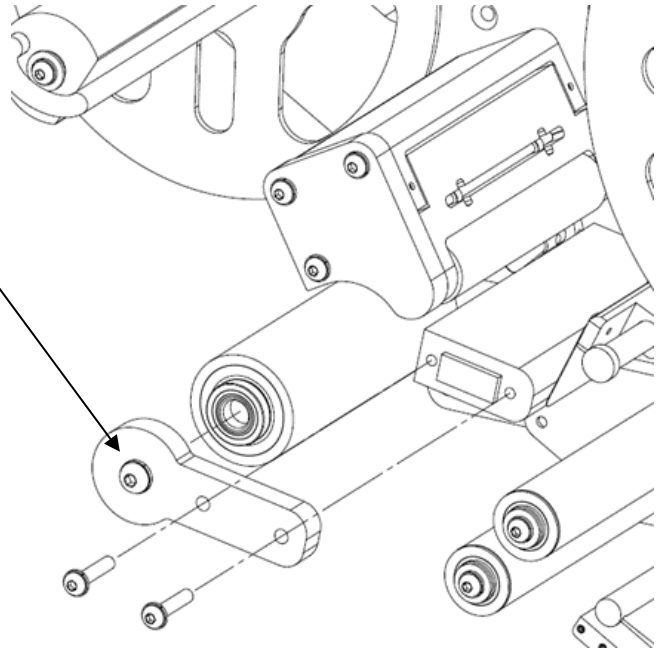
Some 9240 systems are equipped with Powered Rewind Assemblies. These units have different procedures for adjustment, and may not use a Rewind Belt. See the corresponding section in the manual for setup and operation of these Powered Rewind Assemblies.



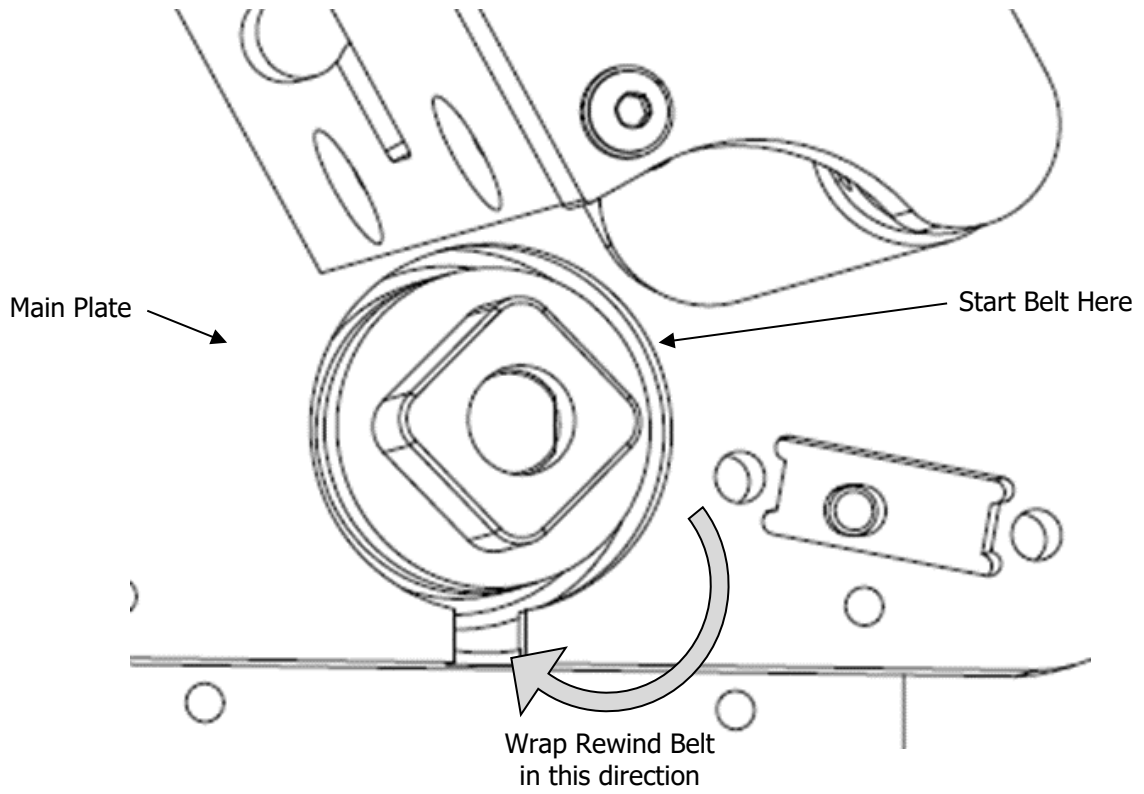
1. Power down the M-Series labeler. Lock Out and Tag Out the Unit.
2. Open the Nip Release Lever.
3. Remove the Drive Roller Standoff Bolt.
4. Remove the Standoff Roller Shaft Bolt.

DO NOT REMOVE THE DRIVE ROLLER BEARING PILOT BOLT!

5. Pull on the Drive Roller Retaining Plate to remove. If necessary, lightly tap with a rubber mallet.
6. Grab the Drive Roller and pull it off of the Square Drive Adapter. Wiggle the Drive Roller side-to-side to loosen.

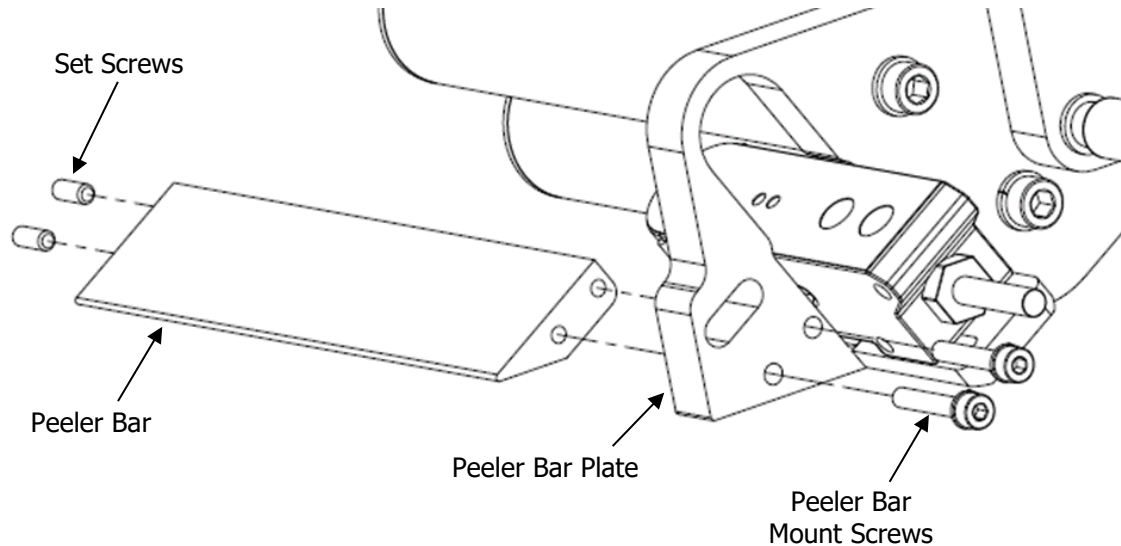


7. Remove the Rewind Assembly Bolt.
8. Pull and spin the Rewind Assembly. Pop the Rewind Belt off of the Rewind Assembly drive.
9. Cut the Rewind Belt and remove.
10. Place a new Rewind Belt over the Rewind Shaft. Push the end between the Support Plate and Main Plate.
11. Start by pushing the Rewind Belt into the drive groove at the top of the Square Drive Adapter.
12. Advance pushing into the groove around the diameter. Turn the shaft if necessary.
13. Once the belt is completely on, reinstall the Rewind Assembly. Make sure the belt fits into the rewind groove.
14. Reinstall the components following the steps above.
15. If necessary, tension the Rewind Belt.



PEELER BAR REPLACEMENT

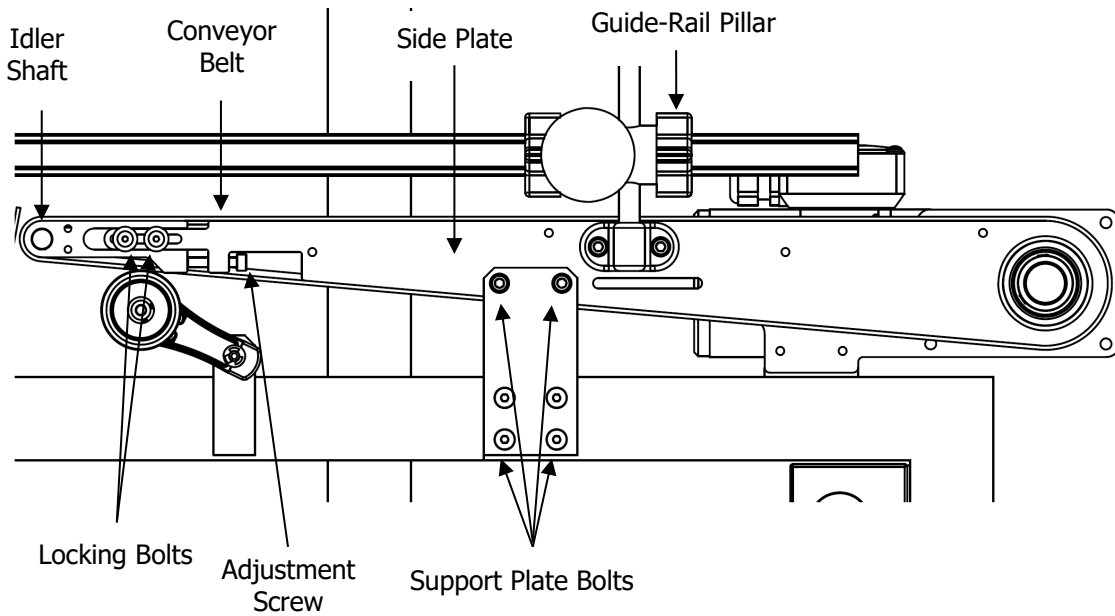
The Peeler Bar physically separates the labels from the liner. The Peeler Bar is Mil-Spec Hard Anodized Aluminum, and has an extremely long life. If the Peeler Bar is damaged (often from improper cleaning), it can cause the liner to tear, labels not to be fully separated from the liner, and other issues. If the Peeler bar is damaged, follow the replacement procedures below.



1. Power down the M-Series labeler. Lock Out and Tag Out the unit.
2. Remove the two Set Screws on the free side of the old Peeler Bar.
3. Remove the Peeler Bar Mounting Screws.
4. Remove the old Peeler Bar.
5. Install the new Peeler Bar following the steps above.

INFEED/OUTFEED SLIM CONVEYOR BELT REPLACEMENT

The Conveyor Belt conveys the product to be labeled. The Conveyor Belt has extremely long life but can be damaged if proper alignment or tension are not maintained. If the Conveyor Belt is damaged, follow the replacement procedures below.



On both sides of the conveyor, there are four total Locking Bolts. Slightly loosen all Locking Bolts. On the rear of the conveyor, there are two Adjustment Screws. Loosening the screws will bring that side of the Idler Shaft Roller closer to the motor. The Idler Shaft moves on the side being loosened. This effectively decreases the tension of the conveyor belt on the screw side. Decrease the tension entirely before attempting to remove belt.

Remove any Guide-Rail Pillars or any other obstructions that may prevent the belt from being removed. Then support the entire conveyor with a block or two between the Side Plate and the stainless steel frame. Remove the six Support Plate Bolts. Lift the conveyor up and remove the old belt.

The new belt may then be installed. Re-install the Support Plate Bolts and the Guide-Rail Pillars. The conveyor will then need the tension adjusted and tracked in properly as described in the Mechanical Setup section.

SECTION 7: TROUBLESHOOTING

TROUBLESHOOTING GUIDE

This section of the manual will present the common troubleshooting issues possible during the normal operation of a labeler. Most problems occur due to lack of cleaning. Inspect label path for adhesive buildup and/or jams before proceeding with the trouble-shooting guide.

<u>Problem</u>	<u>Possible Cause</u>	<u>Solution</u>
Label Liner Breaks	Poor Label Die Cut	Replace Labels and Notify Vendor
	Improper Threading	See Threading Diagram
	Dirty Peeler Bar	Clean Peeler Bar
	Damaged Peeler Bar	Replace Peeler Bar
	Poor Label Tracking	Correct
	Bent or Loose Rollers	Retighten or Replace Rollers
Poor Label Tracking	Loose or Bent Rollers	Tighten and/or Replace Rollers
	Improper threading	See Threading Diagram
	Dirty Peeler Bar	Clean Peeler Bar
	Dirty Drive Roller	Clean Drive Roller
	Worn or Damaged Peeler Bar	Replace Peeler Bar
	Worn or Damaged Drive Roller	Replace Drive Roller
	Imbalanced Tension Roller	Balance Tension Roller
	Bent or Loose Rollers	Retighten or replace Rollers
Multiple Label Dispense	Improper Liner Splice	Advance Splice Through Machine by Hand
	Improper Threading	See Threading Diagram
	Defective Label Sensor	Clean, Calibrate Label Sensor
	Calibration in Progress	Wait for Calibration to Finish
	Improper Calibration	Recalibrate M-Series Labeler
	Defective PLC	Replace PLC
	Label Timeout	Re-Set to proper value

<u>Problem</u>	<u>Possible Cause</u>	<u>Solution</u>
Erratic Label Feed	Defective Label Sensor	Clean, Calibrate Label Sensor
	Nip Open	Close Nip Release Lever
	Liner Tension	Adjust Label Unwind Tension
	Improper Calibration	Recalibrate M-Series Labeler
	Dirty Peeler Bar	Clean Peeler Bar
	Defective PLC	Replace PLC
	Dirty Drive Roller	Clean Drive Roller
	Worn or Damaged Drive Roller	Replace Drive Roller
	Imbalanced Tension Roller	Balance Tension Roller
	Rewind Belt Tension	Re-tension Rewind Belt
	Label Timeout	Reset to Proper Value
	Electrical Interference	Move Source, Properly Ground
No Power	Machine not Plugged In	Correct
	No Main Power	Correct
	Circuit Breaker Tripped	Reset Circuit Breaker
	Power Switch Failure	Replace Switch
Circuit Breaker Tripped	Improper Voltage	Supply Correct Voltage
	Jammed Label	Clean Labels Throughout System
	Faulty Power Supply	Replace Power Supply
	Faulty Motor Driver	Replace Motor Driver
Labels not Straight	Peeler Bar not Adjusted	Refer to Peeler Bar Setup
	Peeler Bar not Square	Square Peeler Bar to Product
	Speed Mismatch	Set/Match Speed to Product
	Speed Differential	Correct Speed Differential
	Label Finishing	Add Label Finishing Equipment

Problem	Possible Cause	Solution
No Auto Label Feed	No Signal	Confirm Product Signal
	Encoder Slipping	Confirm Encoder Signal
	Product Delay Set	Zero Product Delay and Retry
	Disconnected Cable	Check Cable Connections
	Product not Moving	Retry on Moving Product
	PLC Error	Power System Down
	Drive Motor Error	Power System Down
	Defective Drive Motor and/or Driver	Replace Drive Motor and/or Driver
	Defective PLC	Replace PLC
	Defective HMI	Replace HMI
Conveyor Will Not Turn On	Defective Inverter	Replace Inverter
	Inverter Overheated	Cool Off/Check Current Overload Setting
	Inverter Relay Damaged	Check/Install New Relay
	PLC Output 101.01 Damaged	Replace PLC
No Jog Label Feed	Product Delay Set	Zero Product Delay and Retry
	Encoder Slipping	Confirm Encoder Signal
	Disconnected Cable	Check Cable Connections
	Product not Moving	Retry on Moving Product
	PLC Error	Power System Down
	Drive Motor Error	Power System Down
	Defective Drive Motor and/or Driver	Replace Drive Motor and/or Driver
	Defective PLC	Replace PLC
	Defective HMI	Replace HMI

LIGHT TOWER ERROR SIGNALS

The optional three color light tower visually communicates the status of the 9240 system to the operator. The High-Output LED communicates the status of the unit based on the color. Green means that the unit is operational, yellow means that the unit needs attention, and red means that the unit is not running.

STANDARD LIGHT TOWER	
<u>Light Color</u>	<u>Status</u>
Green	Ready
Solid Yellow	Low Labels
Flash Yellow	Low Encoder Speed
Flash Red	Labeler Error
Off	HMI in Off Position/Labeler Off

SECTION 8: RECOMMENDED SPARE PARTS

SPARE PARTS LIST

Listed below is a list of the Recommended Spare Parts for the 9240 system. These listed parts are recommended to have on hand at each facility where each labeling system is installed.

INCLUDES:

<u>Quantity</u>	<u>Part Name</u>	<u>Part Number</u>
1	Assembly, Drive Roller	3092503
1	Bearing, Drive Roller, SS	3088941
1	Label Sensor, Standard	3092512
1	Label Sensor, Clear	3092533
1	Rewind Belt, 12" Supply	3088916
1	Rewind Belt, 16" Supply	3089161
1	Belt, Conveyor, Urethane, 12" (Other Conveyor belt widths available)	3092171
1	Bearing, ER16, 1.0 ID X 2.047 OD	3088960
1	Bearing, Conveyor, Nose	3092388
1*	Right Angle Gearmotor, IP65	3092174
2	Bearing, Tension Roller	3092501
2	Bearing, Roller	3092628
1	HMI, Touchscreen, Slim	3092552
1	Assy, Retro Reflective Sensor	3092411

** Gearmotor selection is linked to the EPI serial number. Please have this available when ordering spare parts.*