Patent Pending

Operation, Maintenance, & Parts Manual

Serial Number: ER1420K4844AA

RENNCO **PACKAGING MACHINES AND SYSTEMS**
P.O. BOX 116, 23721 M-60 WEST, HOMER, MICHIGAN 49245

Toll Free Parts / Service: 800-701-1343
Toll Free Parts Fax: 888-390-8930
Phone: 517-568-4121
Fax: 517-568-4798
www.rennco.com
Parts Website: rennco.parts.com

© Copyright 2004 by RENNCO INC. All Rights Reserved
Duplication of any material in this manual is strictly forbidden without the written permission of RENNCO INC.

How to Use this Manual

All personnel who operate, set up, repair, maintain, or train others on the operation of the machinery must read and understand the information that is included in this manual.

This manual has been laid out and written in an easy to follow format and is broken down into three different areas:

1. **Operation:** The information provided allows an operator to become familiar with the Packager learning the components and there function as well as how to operate the packager.

2. **Maintenance:** The information provided gives qualified maintenance personnel information on set up, maintenance, and troubleshooting to optimize the performance of the packager

3. **Parts:** The information provided gives an in depth parts section with exploded views and highlighted recommended spare parts for easy identification of items to keep in stock to reduce down time.

To find Particular Information:

Go to the Table of Contents. A Numerical Item Number is given followed by a Short Description and the Chapter Number - Page Number. To find the Numerical Item Number find the Chapter - Page number (referencing the bottom center of each page). After turning to that page find the Numerical Item Number. The List of Figures works the same way.

At the top of the manual pages you will find the model of the packager for identification. In the lower corner of the manual pages you will find a revision level and a date. If there are no Revisions it will read Rev.0 and the Date the manual was created.

Throughout manual you will find the following Symbols placed next to information that anyone in contact with the packager should know and follow:

This Symbol draws Attention to **Warnings** that must be followed to avoid serious injury or death.

This Symbol draws Attention to **Cautions** that must be followed to avoid damage to the equipment.

This Symbol draws Attention to **Important Safety Information** that must be followed.

NOTE: This draws attention to very useful information for a particular task or function.

Table of Contents

Chapter-Page Number

List of Figures

1 Introduction

1.1 *Equipment Serial Numbers*

MACHINE	MODEL NUMBER	SERIAL NUMBER
Packager	E-PAC	**ER1420K4844AA**

ELECTRIC CIRCUIT DRAWING – **C001378**
PLC PROGRAM NAME – **XYC011_4844**
SHIP DATE – **04/18/07**

1.2 *Contact Information*

Your Rennco Packaging System has been designed and tested to obtain the best results for your particular product and application. Its performance depends on proper use and care. Please take the time to read through and understand the information in this manual before setting up or operating the equipment.

As with all machinery having moving parts, it is important to pay attention to all information in this manual, and warning and caution labels on the machinery.

If you experience difficulties in operating the packager, turn to the troubleshooting procedures section. If necessary, contact Rennco's Customer Services Department.

Technical Support

Our technical staff is trained to provide answers to all your questions quickly and completely. From mechanical adjustments to electrical controls and PLC programming to recommended maintenance, we are here to help. We can be reached at 800-701-1343.

Call 517-449-8901 after 5 pm ET time to speak with a service technician.

RENNCO **PACKAGING MACHINES AND SYSTEMS**
P.O. BOX 116, 23721 M-60 WEST, HOMER, MICHIGAN 49245

Toll Free Parts / Service: 800-701-1343
Toll Free Parts Fax: 888-390-8930
Phone: 517-568-4121
Fax: 517-568-4798
www.rennco.com
Parts Website: rennco.parts.com

1.3 *About Rennco*

Rennco, Incorporated, located in Homer, Michigan, was established in 1969. Rennco introduced to the packaging machinery market a new, simplified, cost-effective sealer for a wide variety of products that are packaged in centerfolded polyethylene, polyolefin, and PVC films. At the heart of every packaging machine is Rennco's uniquely designed constantly heated, coated seal bar which provides a smokeless, odorless, low maintenance sealing system. Rennco now markets and sells its packaging machinery and systems through domestic and international distribution programs and works directly with manufacturers of food service disposable products.

The Rennco line of vertical L-Bar sealer machinery includes equipment capable of packaging products in polyethylene, polyolefin, and PVC films in bag sizes ranging from 2" x 2" to 24" x 65". Rennco offers a broad range of machinery from semiautomatic, hand-loaded sealers to systems with specially designed product handling, counting, accumulating, and feeding devices for complete automation.

In addition, Rennco is a Distributor for Hugo Beck, one of the worlds leading manufacturers of horizontal form, fill and seal machinery. This cooperative agreement between Rennco and Hugo Beck offers North America flexible packaging machine customers a new and exciting product offering.

Rennco continuously incorporates the latest technology in designing and manufacturing its complete line of packaging machinery and systems. Whether using a standard sealer for a hand-loaded application or integrating a system to totally automate your packaging line, Rennco is committed to providing you with state of the art, quality equipment.

Since 1969, the Rennco Team has partnered with customers to solve packaging problems. Rennco is dedicated to providing on-going excellence in its packaging machines and in the way it does business.

1.4 *Mission Statement*

Our mission is to build high quality, technologically advanced, reliable equipment and provide the flexible service that supports it. We operate on the premises that our customer is our partner and their success is ours. We believe that providing equipment alone is not enough. To ensure the reliability of our equipment, accurate, comprehensive and timely documentation and effective training is KEY to its ongoing efficiency.

1.5 *Warranty*

Equipment Manufactured by Others: Seller makes no warranty to Customer with respect to equipment manufactured by others and resold by Seller hereunder. Instead, such equipment will carry only the manufacturer's warranty.

Rennco Products: The basic warranty of Seller's equipment is for a period of twelve months, exclusive of purchased components, which is covered by their manufacturer's warranty. Sealing blades and other wear items such as Teflon tape and various rubber items are not covered in this warranty. Seller warrants each part of its own manufacture to be free of defects in material and/or workmanship, for a period of 12 months to the original Customer. Each part found to be defective shall be replaced free of charge, and does not include shipping or freight. Labor incurred in removing or installing the defective parts is not covered by this warranty.

The above warranty does not extend to goods damaged after date of shipment from Seller's plant where the damage is not directly due to a defect in material or workmanship. Nor does it apply to goods altered or repaired by anyone other than Seller's authorized employees.

The above warranty does not extend to failure or damage due to negligence (other than that of Seller), accident, abuse, improper installation (other than installation made by Seller), improper operation; use under abnormal conditions of temperature, moisture, dirt or corrosion, or use with abrasive or corrosive materials.

Seller will either examine the Products at their site, or issue shipping instructions for return to Seller (transportation cost pre paid by customer). Any Products which Seller determines not be defective as a result of faulty workmanship or material shall be held subject to Customer's disposition instructions upon payment by Customer of the transportation and other charges, if any, advanced or to be advanced by Seller thereon.

Limitations. THE WARRANTIES SET FORTH IN THE FOREGOING PROVISIONS OF THIS SECTION ARE LIMITED TO THEIR PRECISE TERMS AND PROVIDE EXCLUSIVE REMEDIES, EXPRESSLY IN LIEU OF ALL OTHER REMEDIES INCLUDING CLAIMS OF SPECIAL OR CONSEQUENTIAL DAMAGES. SELLER MAKES OR ASSUMES NO OTHER WARRANTIES OR GUARANTEES WHATSOEVER, WHETHER EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS, AND NEITHER CUSTOMER NOR ANY OTHER PERSON IS AUTHORIZED TO ASSUME FOR SELLER ANY OBLIGATION OR LIABILITY NOT STRICTLY IN ACCORDANCE WITH THE FOREGOING OR TO REPRESENT THAT SELLER MAKES ANY OTHER WARRANTIES OR GUARANTEES.

2 Receiving Your New Rennco Packager

2.1 *Inspection*

Your Rennco Packaging System has received a thorough inspection before shipment. At time of delivery, please inspect all containers for any concealed damage or shortage. If damage is evident, note this on all freight bills and have the delivery driver sign them. File a claim with the carrier as they are responsible for any damage that occurs in shipment. For Rennco's records, and so that we may assist you, please notify us as soon as possible.

2.2 *Uncrating*

With care remove the protective materials used for shipping and handling. Remove all items from shipping container (spare parts, operation manual, etc.).

2.2.1 Remove Moving Parts Restrains

During shipping moving parts are restrained, such as the jaws, etc. Check to see that all moving parts are free and operational.

2.3 *Installation*

Refer to the operation manual electric specifications, schematic drawings, and information. The customer is responsible to provide properly sized electrical service with disconnect to the unit.

2.3.1 Connect the Incoming Electrical Power

From the electrical panel you will find an electrical fitting to suit your packaging system. Plug the Packager into an outlet.

3 Standard Specifications

3.1 *Mechanical*

Machine Dimensions	**80”w x 46”d x 62”h (203cm x 117cm x 157cm)**
Load Height	**35” (89cm)**
Standard Vertical Seal	**14” (36cm)**
Standard Horizontal Seal	**20” (51cm)**
Approx. Weight	**615 LBS (278kg)**

3.2 *Electrical*

Standard Electrical Requirements	**110 v, 60HZ, 1ph, 10amps**

3.3 *Film*

Centerfold film roll requirements
Low to medium slip film
12” (305mm) maximum roll diameter
The film roll width should include the package width plus 1 1/2” (38mm) for trim tail.
‘A’ wind film is recommended, however, ‘B’ wind film can be used.
Polyethylene films in low density, high density, or linear low-density types can be sealed. The film should be made with virgin resins and contain 0% to 2% ‘EVA’.
Your Rennco representative can recommend where to purchase packaging films in your area.

4 Safety Information

4.1 *Who Should Read This Manual*

All personnel who operate, set up, repair, maintain, or train others on the operation of the machinery must read the safety related information that is included in this manual.

4.2 *Safe Operating Procedures*

Specific safe operating procedures are given in many different areas of the manual. These are highlighted by the use of this symbol. It is the responsibility of the end user of this product to properly train their employees on the safe operation of the equipment. This manual should be used in that training.

4.3 *Safe Operating Techniques*

Loose Clothing

Loose fitting clothing can get caught in moving machine parts and can cause injury. For this reason, always wear snug fitting clothing and do not wear long sleeves or neckties while working on equipment.

4.4 *Warnings*

FAILURE TO OBSERVE CAN CAUSE SEVERE PERSONAL INJURY

- Do not operate the equipment with guarding removed.
- Do not bypass or otherwise defeat the safety features on the equipment.
- Do not bypass or cut the ground lug from any electrical connection. The customer is responsible for providing a grounded electrical service.
- Do not place any part of the body near moving machine parts. Have hands in full view at all times.
- Do not allow a person to operate the machinery while another is near moving machine parts.

Specific areas of concern on the packager are:

- The opening between the two halves of the moving jaw
- The linkage arms that move the jaw open and closed
- The internal moving parts of the jaw
- The film feed mechanism
- Areas where moving machine parts contact or come close to contacting other machine parts
- The trim wind-up spinning spool

Always disconnect electrical power sources when servicing the machine.

4.5 *General Cautions*

FAILURE TO OBSERVE CAN DAMAGE THE MACHINE

- Refer to the maintenance schedule for necessary lubrication.
- Continual jamming of product in the jaw area can lead to misalignment.
- Programmable Control inputs are 24 volt DC, outputs are 24 volt DC also. Improperly made connections will damage the PLC. Do not make direct connection between inputs and outputs.
- Do not adjust the output voltage of the Back Up Heater above what is shown on its label. Damage to the back up rubber and related parts will result.

4.6 *Safety Labels*

OBSERVE WARNING LABELS THAT DESCRIBE POTENTIAL HAZARDS.

Figure 4-1 Typical Safety Labels

4.7 *Emergency Stop Button*

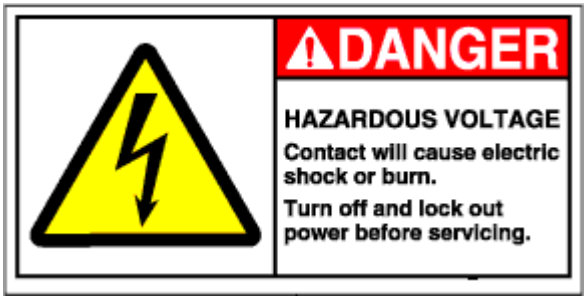
Figure 4-2 E-Stop

An Emergency stop pushbutton is located on the Operator Pushbutton Station. Emergency stops (E-Stops) have a red mushroom shaped pushbutton head. When pressed electric power is removed from the system.

<u>If an E-stop condition takes place or a fault:</u>

1. Reset the system by pulling out the Red E-Stop
2. Press the Green System Reset button.(This will cause the Packager to home the servo seal assembly)
3. Press the Green System Reset button again to reset the packager to run mode.

4.8 *Electrical Lockout*



Remove Power from machinery. Follow this procedure to avoid personal injury during servicing of machinery.

1. Press E-Stop Pushbutton.
2. Turn off Main Disconnect (located on the Main Electrical Enclosure) and Lockout according to your company's Lockout Tagout procedures.

Reapplying Power to Machinery. Follow this procedure to avoid personal injury.

1. Clear all product from Machinery.
2. Return Electrical Power according to your company's Lockout Tagout procedures.
3. Close all Guards and check E-Stop Pushbuttons.

4.9 *Light Curtains*

Figure 4-3 Light Curtains

The Light Curtains are the primary safety device and are located at the infeed of the Packager. They will keep the packager from operating if the jaws are open and they sense anything between them.

If a fault takes place:

1. Press the Green System Reset button.(This will cause the Packager to home the servo seal assembly)
2. Press the Green System Reset button again to reset the packager to run mode.

NOTE: If the light curtain continues to malfunction refer to the OEM (Original Equipment Manufacturer) Manual for the light curtains contained in the OEM section of this manual.

4.10 *Hinged Safety Doors and Guards*

Figure 4-4 Hinged Safety Doors andGuards

The Guards are located all around the packager and are used for safety to keep you away from moving parts. They can be accessed for maintenance.

On the left hand side of the packaging machine there is a hinged door fitted with an emergency safety switch that will E-Stop the Packager when the door is opened. The door must be closed and latched before the system can be re-started.

4.11 *Fixed Safety Guard Panels*

Fixed safety panels are used to cover areas that rarely require access. They are attached to the machinery with fasteners that require a tool to remove them. Because there is no safety interlock switch, the system can operate with the panels removed. For this reason, the system electric supply should be turned off before a fixed panel is removed.

4.12 *Jaw Safety Features*

Warning!:

- Personal injury can result if the safety feature is not adjusted properly and hands or fingers are caught between the moving jaws when they close.
- The operation of the jaw safety should be checked at the beginning of each work day or shift change.
- Never assume the safety feature is operating properly without checking it first.
- Never place hands or fingers between the jaws even if the safety is adjusted and working properly.

The seal safety is designed to open the jaws on something thicker than about 3/16" (5mm). Items smaller than this may not actuate the seal safety feature.

4.12.1 Jaw proximity switch

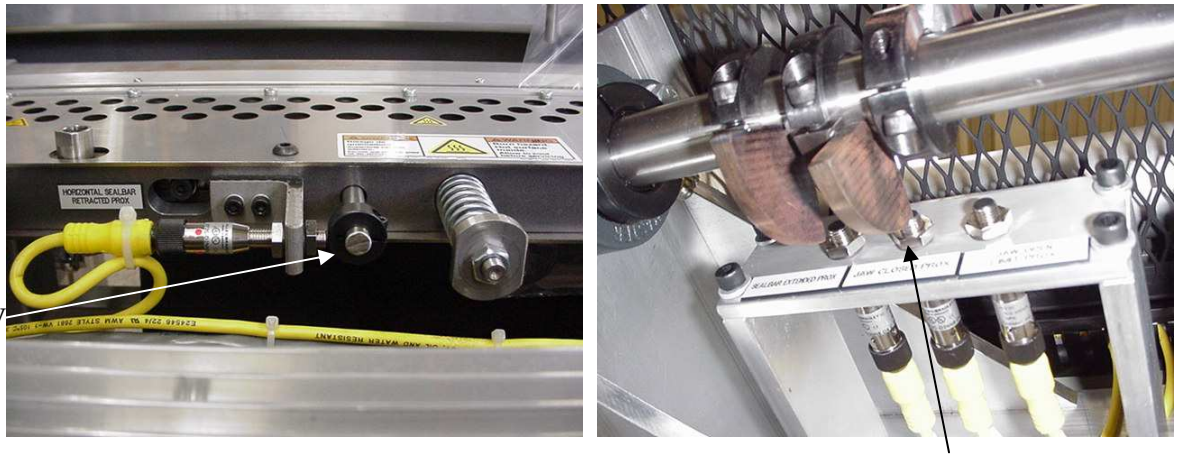


Figure 4-5 Proximity Switch Location

To adjust the actuation of the switch:

1. Holding the jaws closed. Loosen the allen head bolt on the collar and slide the collar in or out so the proximity will just pick up the edge of the collar. The collar determines the size of the object that will make the package fault when placed between the seal assembly, so it is important to get the collar to be picked up by the proximity switch with the smallest possible tolerance.
2. Tighten the allen head screw in the collar locking it in place.
3. The adjustment is correct if the LED light is sensing the collar until the seal assembly is fully closed and the seal bar starts to move toward the heated seal assembly side.
4. The seal assembly closed sensor allows the packager to start closing activating the seal assembly blade to back up rubber process. If the cam is not sensed by the proximity switch the packager will fault. (Adjust the cam to the sensor when the seal assembly is closed by rotating it on the shaft until the proximity switch senses the cam edge.)
5. To test the jaw safety, insert a 1/4" (10mm) diameter stiff hose between the jaws when they are closing. The seal safety should cause the jaws to open immediately.

4.13 *Safety Interlock Switches*

Figure 4-6 Safety Interlock Switches

The Safety Switches located at the access doors are used to remove power from the system if an access door is opened while the packager is running.

5 Mechanical Components

5.1 *Frame*

Figure 5-1 Frame

The Frame is the main support structure for all other assemblies to be attached to.

5.2 *Film Unwind Carriage*

Figure 5-2 Film Unwind Carriage

The Film Unwind Carriage is located on the right hand side of the packager. It is where the film unrolls in synch with the Film Feed Drive Motor.

5.3 *Film Feed Roller*

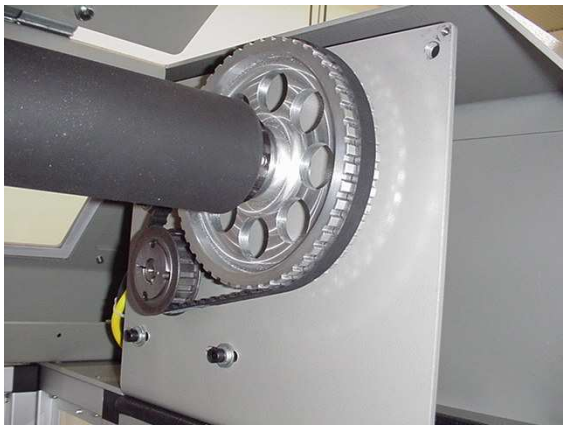


Figure 5-3 Film Feed Roller

The Film Feed Roller is located just below the top of the machine frame. The rotation of the roller pulls film from the film roll. The vertical bag dimension is controlled by how much film is fed through the seal assembly by the film feed roller.

5.4 *Film Guide and Spreaders*

Figure 5-4 Film Guide and Spreader Bars

The film guide bar helps to track the centerfolded end of the film. The film spreader bars are used to separate the film webs, providing an area for the product to be loaded.

5.5 *Seal Assemblies*

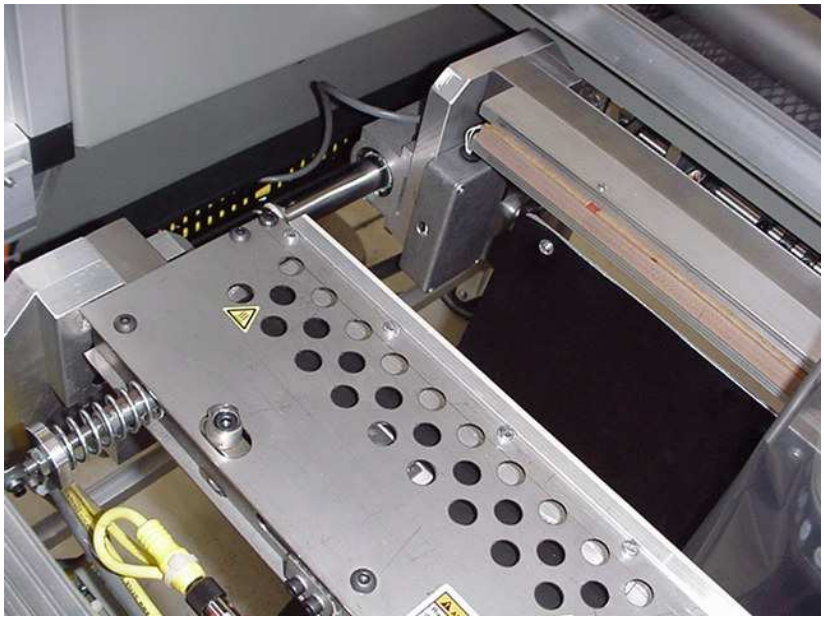


Figure 5-5 Seal Jaw Assembly

The seal assemblies are used to seal and cut the film, separating the packages. The seal assemblies close on the film 'gripping' it prior to the seal bars advancing. The back up seal assembly has a resilient, heated back up rubber strip that the seal bars press against to make the seal.

5.6 *Main Servo Drive*

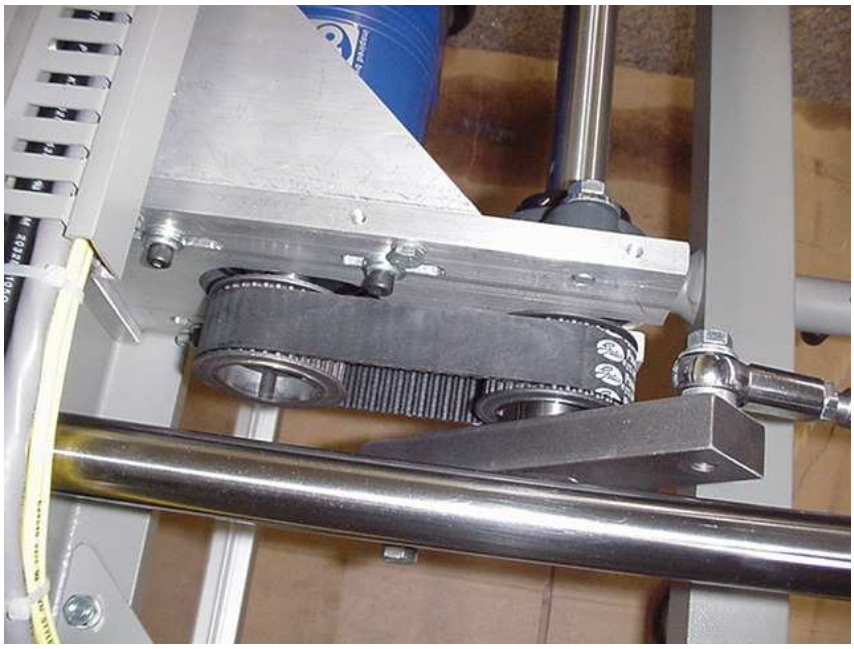


Figure 5-6 Main Servo Drive

The main drive servo drive system is located inside the packager frame in the back right hand side and is used to open and close the seal assemblies.

5.7 *Trim Wind Up Unit*

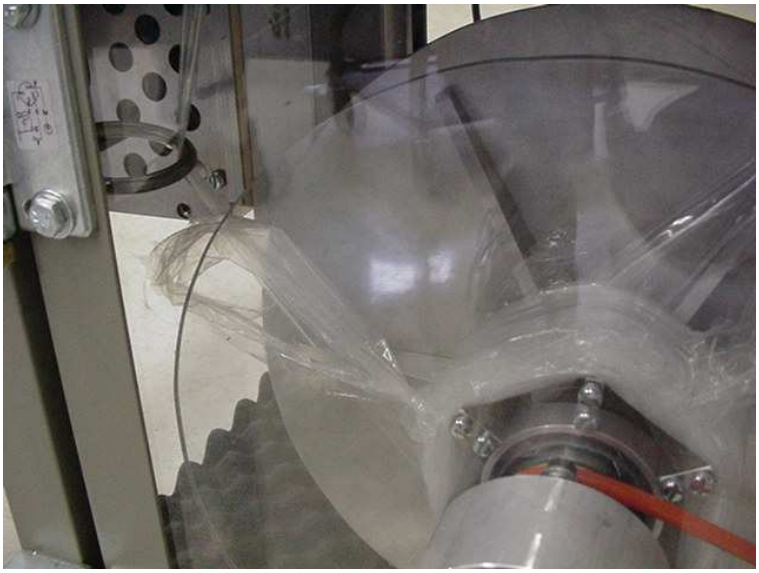


Figure 5-7 Trim Wind Up Unit

The trim wind up unit is located on the front of the packager underneath the infeed area and is used to take up the scrap tail. It has adjustable torque control. The trim unit puts tension on the trim tail which helps pull and guide the film over the film spreaders and through the sealing area.

5.8 *Exit Conveyor*

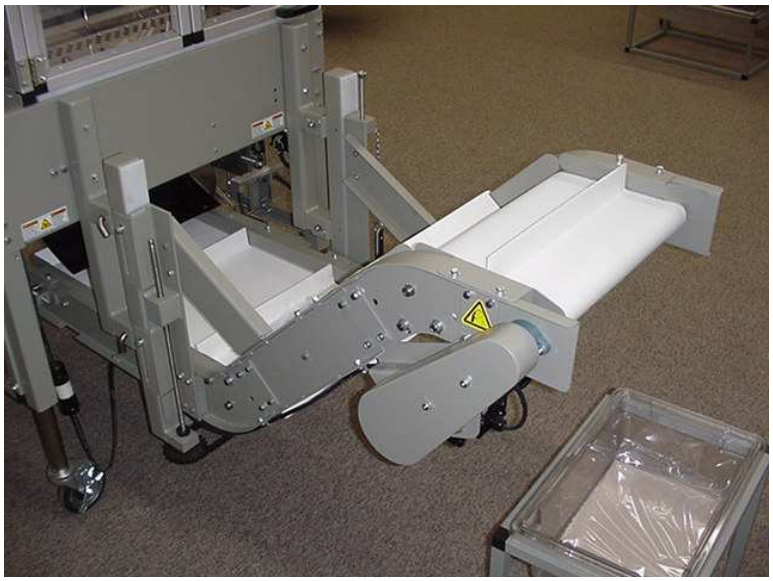


Figure 5-8 Exit Conveyor

The exit conveyor removes the packaged product from under the packager.

6 Main Electrical Components

6.1 *Operator Interface*

Figure 6-1 Operator Interface

The operator interface panel screen is located directly above the infeed of the packager where machine functions and adjustments are made.

6.2 *Main Electrical Enclosure*

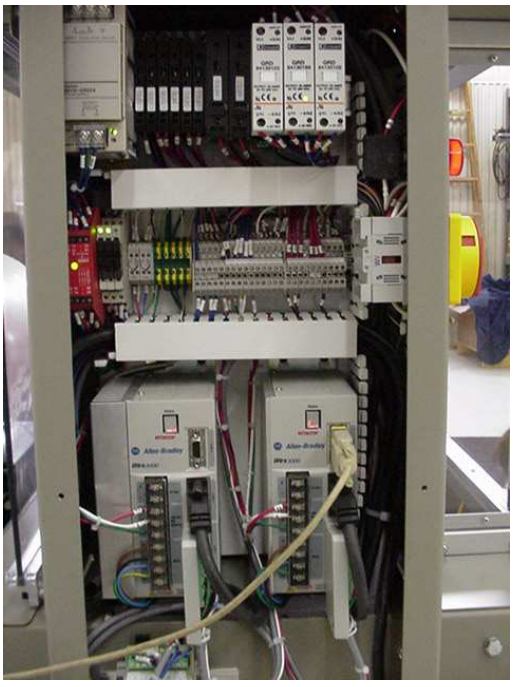


Figure 6-2 Main Electrical Enclosure

The Main Electrical Enclosure is on the back of the packager and houses the PLC, motor controllers, relays, and other equipment.

6.2.1 Programmable Logic Controller (PLC)

Figure 6-3 PLC

The PLC accepts inputs from various sensors (switches, sensors, etc.), contains the logic program that sets the cycle sequence, and drives output terminals that supply signals to actuators (motors, etc.). It is coupled with the operator interface panel screen.

6.2.2 Film Feed Servo Motor Controller

Figure 6-4 Film Feed Servo Motor Controller

The film feed servo motor controller is located in the main electrical enclosure and powers the film feed motor and the seal assembly motor.

6.2.3 Trim Wind Up Speed and Tension Controls

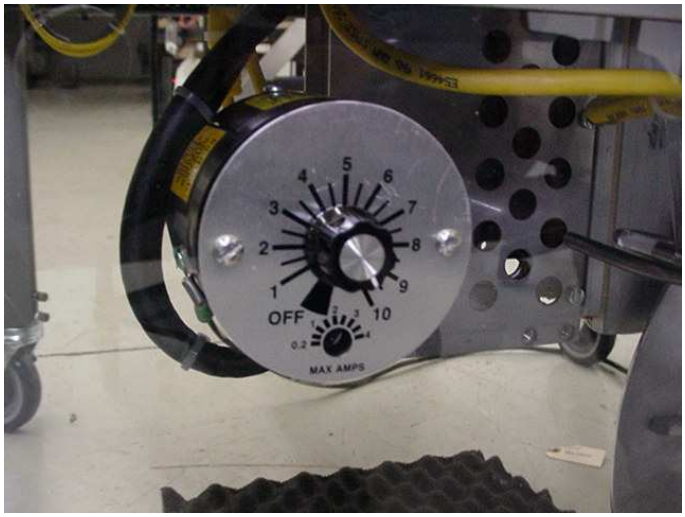


Figure 6-5 Trim Wind Up Speed and Tension Controls

Adjusts the speed of the Trim Wind up Unit as it winds film onto the spool.

6.3 *Drive Motors*

6.3.1 Film Feed Motor

Figure 6-6 Film Feed Servo Motor

The Film Feed Drive Motor is located alongside the film feed roller at the top rear of the machine, and controls the amount of film being fed.

7 Initial Adjustments

Initial Conditions:

- Machine is plugged in
- Heaters have reached their operating temperatures
- Packager seal assembly is ready to operate
- All guards are in position
- Servo Film Feed Motor switch turned "ON"
- Trim Wind-up Motor switch turned "ON"
- Film Unwind Motor switch turned "ON"
- Operator Interface is displaying the Message screen without any alarm messages to act upon.

7.1 *Mechanical*

The following information details the adjustments needed in initially setting up the Rennco Packager. Not all the adjustments may need adjusting, but they should be checked to verify that they are set correctly.

7.1.1 Packager

Packager Heights – Set the height of the packager with the leg extensions by loosening the leg extensions fasteners and raising the packager to the desired height and then tightening the leg extensions fasteners.

Film Spreaders - Adjust the width of the spreader opening by using the film spreader dial to be wide enough to fit the product to be packaged without having an excessive amount of film drape. Set the extension of the vertical guide to be approximately 1" from the centerfold edge of the film.

Film Registration Electric Eye (Optional) - Adjust the position of the film registration eye so the film feeding stops with the film in the correct sealing position. Moving the gap probe up or down makes this adjustment vertically on its mounting bar. Also, adjust its alignment with the registration mark so that the mark passes through the sensing portion of the eye as the film advances.

NOTE: Change the film eye offset distance approx. 2” longer than the bag size that you plan on producing.

Discharge Chute – Position to cause the product to fall onto the conveyor bed without preventing the flow of stacks out the end of the conveyor.

7.1.2 Discharge Conveyor (Optional)

Conveyor Heights - Set the discharge conveyor bed height to provide minimum dropping distances under the packager by adjusting the height.

8 Operation Information

8.1 *Sequence of Operation*

1. Product is loaded to the packager

When product passes the light curtains and is transferred completely into the film, the cycle sequence can begin. When the light curtains become unblocked the packager will automatically cycle.

2. Packager Jaw Opens

Packager jaws open after each product is delivered. After the products per bag count is reached, the packager jaw opens dropping the previous bag to the discharge conveyor and initiating the film advance.

3. Film Advances/Packager Jaw Closes

The packager film advances after the "Film Feed Delay" timer has timed out. The product moves into the sealing position. After the film has advanced the preset amount, the jaw closes.

4. Initial drape

A small amount of film is fed to relax the webs of film to minimize drag when the next product is loaded.

5. Seal Bars Advance

When the jaw closes the grippers hold the film in place. Then the seal bars are pulled into the gripped film to make the seal against the backup rubber. A timer controls the time the seal bars stay extended.

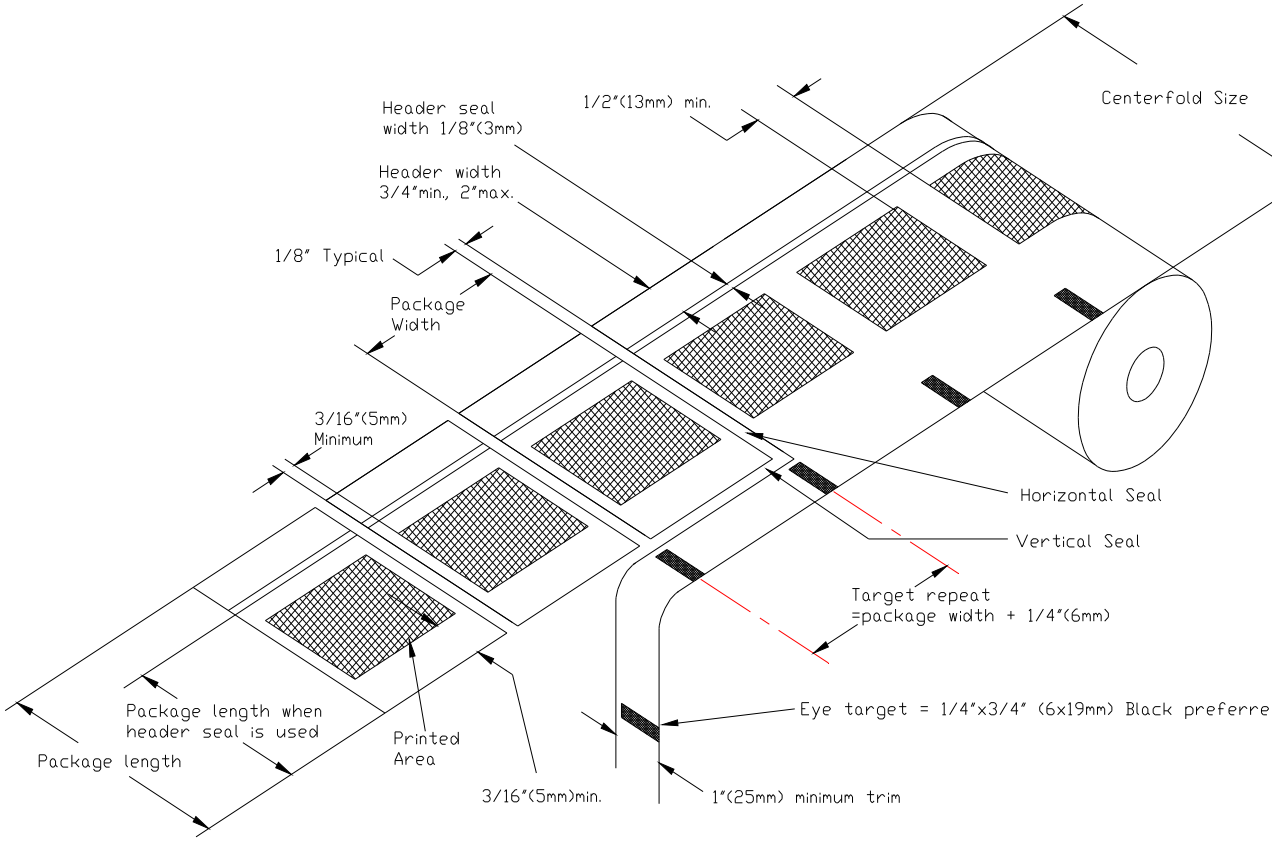
The cycle repeats

8.2 *Basic Packager Operation*

8.2.1 Film Basics

Film web dimensions and printing information

The following diagram shows the relationship of printed area location relative to package dimensions, and header seal dimensions when used.



8.2.2 Loading Film

To prepare the machine, first load the roll of film onto the packager as shown below. Position the stationary arbor in such a way that when the film roll is in position, there is 1" (25mm) to 1 1/2" (38mm) of trim tail.

NOTE: Be sure that the stationary arbor on each side is not preventing the film roll from turning as this will cause inconsistent bag length and film feed faults.

Figure 8-1 Loaded Film Roll

8.2.3 Threading Film

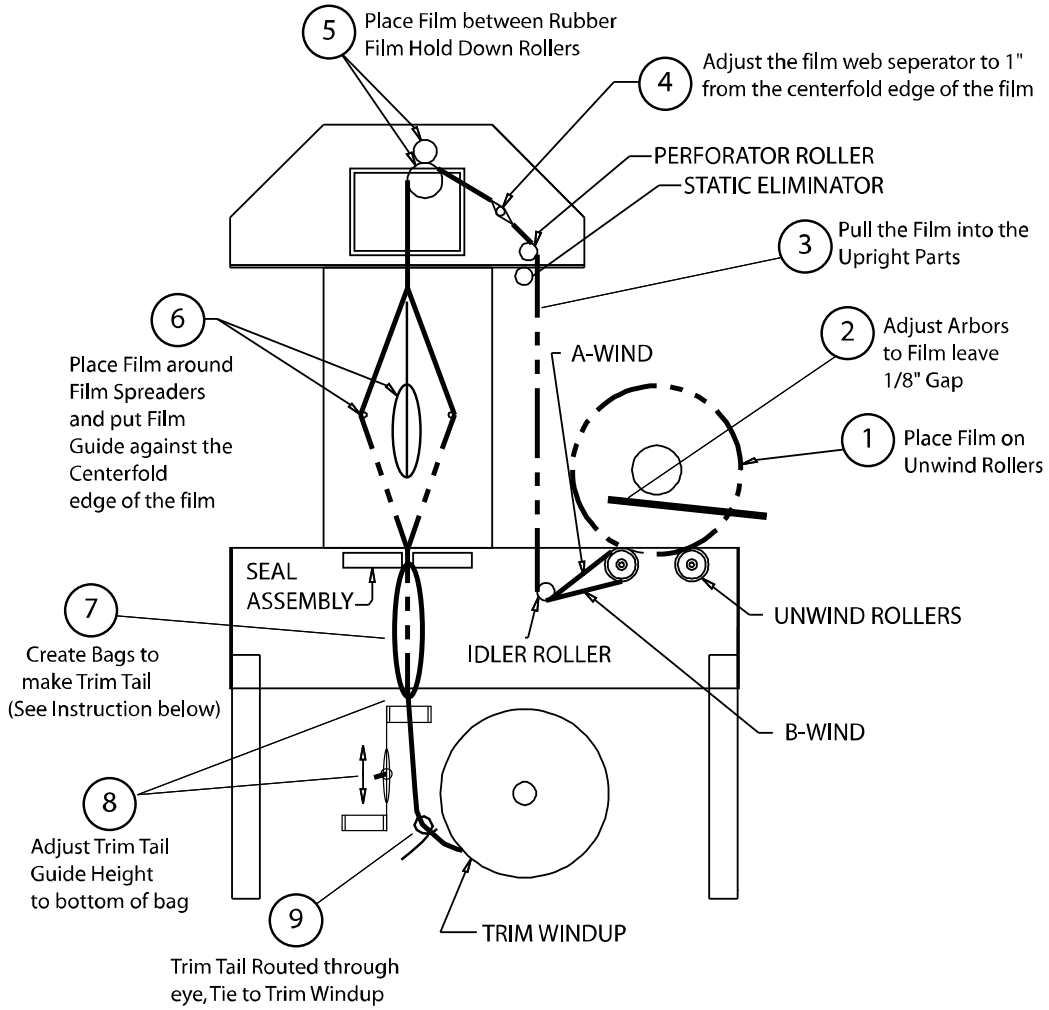


Figure 8-2 Film Threading

Preparing the Packager for Operation

1. Thread the film through the packager following the film threading diagram & pull the film down to the bottom of the vertical seal assembly
2. Pull out the Jaw Lock Open
3. Press Close / Safety Reset (Yellow)
4. Press System Reset (Green)
5. Cycle the Packager using the light curtain
6. Open the Trim Windup Door and Remove the Bag from the Seal Assembly area, Close door.
7. Press System Reset
8. Continue to make bags by cycling the Packager with the light curtains until a trim tail is generated long enough to route over the Trim Tail Guide, through the Trim Tail Eye and Tie it to the Trim Windup, Spool.
9. Open the Trim Windup Door , Tie the Trim Tail and Close the Door
10. Press System Reset
11. Press Yes on the Touchscreen to manually cycle the Sealbar
12. The Packager is now ready for production.

8.2.4 Adjust the Film Web Separator

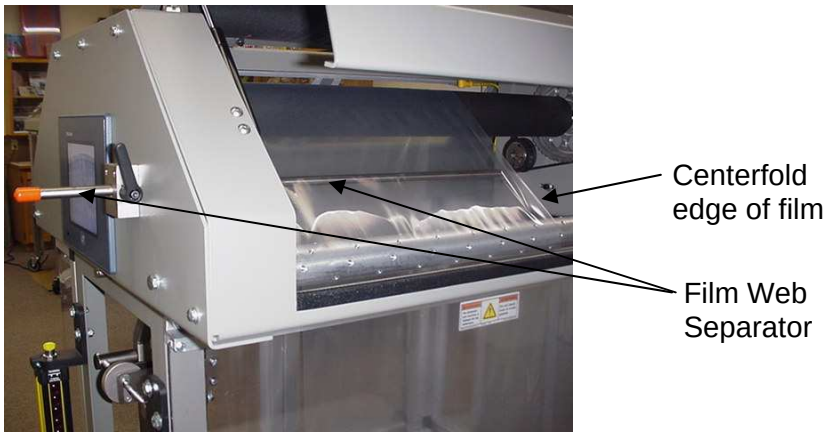


Figure 8-3 Film Web Separator

This film web separator initially opens the film and helps reduce the static buildup that could make the film stick together making it difficult to load the product. To adjust the film web separator simply loosen the handle and place between the film and adjust it horizontally until it is aligned with the centerfold of the film then tighten the handle. This setting will vary depending on the width of the film roll that is loaded.

8.2.5 Film Guide and Spreaders

Figure 8-4 Film Guide and Spreader Adjustment

This film guide is adjusted horizontally to the centerfold of the film and the spreaders are adjusted to open the film so product can be loaded in the film. Adjusting and securing the film guide and spreaders is done by using the handles and the roller mechanism.

8.2.6 Product Guide

Figure 8-5 Product Guide

The product guide is used to keep product in place on top of the seal assembly

8.2.7 Light Product Removal Assist

Figure 8-6 Light Product Removal Assist

This product knockoff is a device to help remove lightweight products from the seal assembly.

8.2.8 Seal Assembly Product Guide

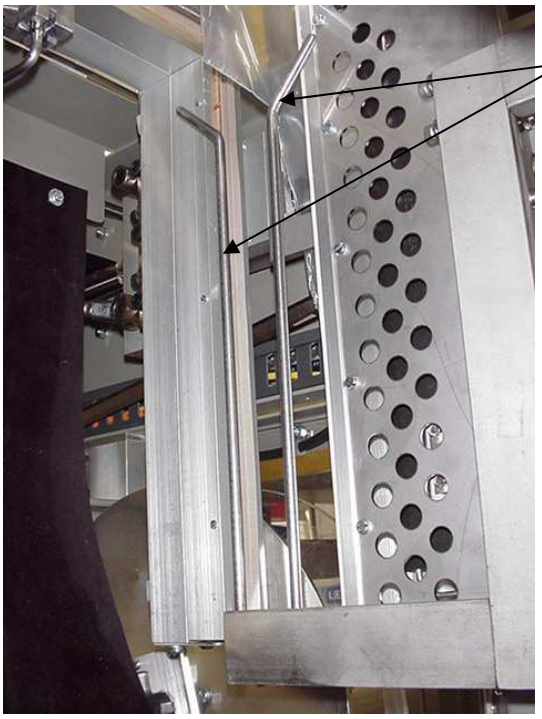


Figure 8-7 Seal Assembly Product Guide

The seal assembly product guide is used to keep packaged items from reentering the seal assembly when being discharged.

8.2.9 To make the first bags

1. Press the *system reset* pushbutton.
2. Press the *black* jaw *lock open pushbutton* to open the jaws. The film will advance.
3. Pull out the *black* jaw *lock open pushbutton.*
4. Press the *yellow jaw close button* to close the jaws and make a seal.
5. Repeat the procedure, manually advancing the film and making seals, until the trim tail is long enough to route through the guides to reach the wind up unit.

Do not reach around or under closed safety doors as personal injury may result.

8.2.10 Tie the Trim Tail

Figure 8-8 Trim Tail Routing

1. Turn the Trim Wind Up Unit off.
2. Make several empty bags to get a Trim Tail long enough
3. Thread it over the trim guide, through the Trim Guide Eye Bolt, under the Trim Wind Roller and to the Trim Wind Up Unit Spool. Tie off the end of the Trim Tail on the Spool and rotate the spool till the Tail has pulled tight.
4. Turn the Trim Wind Up on.

8.2.11 To adjust the Trim Wind Up Unit

Figure 8-9 Trim Windup Tension Adjustment

This trim wind-up was designed, so that no matter what level of scrap is on the trim spool, the tension on the trim web remains constant. When the spool is full, more torque is required to get the same tension on the trim web, as when the trim spool is empty. Use the adjustment knob to adjust the tension.

8.2.12 To Adjust the Bag Size

If the initial bag length is too large or small, adjust the film feed distance through the operator interface screen. Place a product in the film above the jaw and press the *black jaw lock open pushbutton*. The film will advance and the product will go below the jaw. Determine if there is enough bag size so that when the jaws close, the product will not be caught in the jaws. Adjust the bag length larger or smaller if necessary.

8.2.13 Adjust the Trim Windup Guide to the Bag

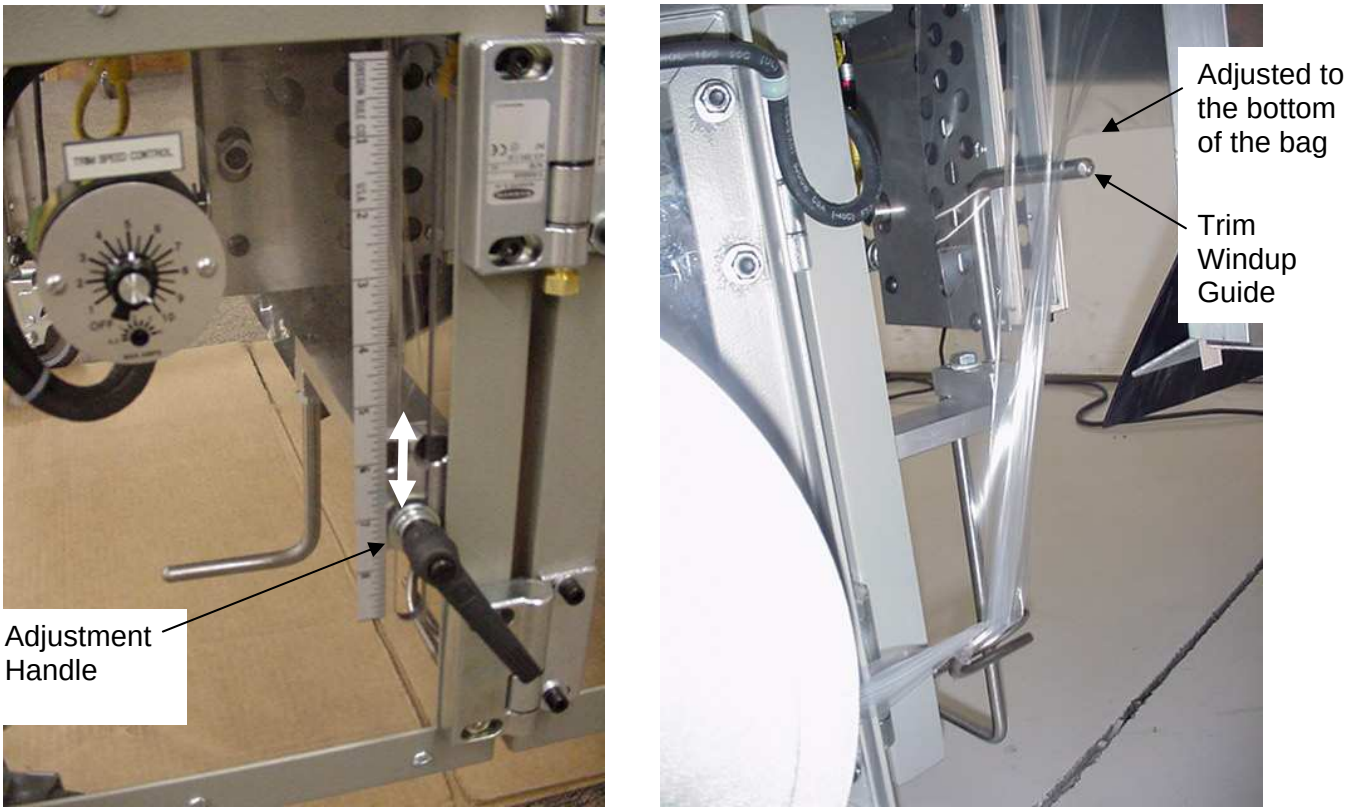


Figure 8-10 Trim Windup Guide

After the bag size is adjusted the trim windup guide must also be adjusted to the Bag. When the bag length is set, determine where the bottom of the bag is and as a general rule place the trim windup guide at the bottom of the bag. A scale is provided to record the distance set for each product that is run. Take note of the measurement on the scale and record the setting for future reference. There are two trim windup guides attached to the adjustment block. If you are running a longer bag the short one is used, if you are running a smaller bag use the longer one. Simply change them by loosening the adjustment block handle and rotating it so the opposite end is next to the seal assembly and then tighten the handle.

8.2.14 Load the Product

The following guidelines will help to describe most product handling situations.

- Do not attempt to make a bag that is too tight on the product. 1/2" (12mm) is used up in the sealing process in both horizontal and vertical directions. Load the product an ample distance away from the vertical jaw. If the product is loaded too close to the vertical seal, it may be caught between the jaws and damaged, or it may stress the film and weaken the seal. It is necessary to provide a centerfold film size that is wide enough for the product length, to ensure that the product can be kept away from the vertical. The vertical bag feed length must be adequate for the product size. If the bag feed is too short, the product may be caught in the horizontal jaw, or the film may be stressed giving a weak seal. If the product is extremely small it may not be possible to make a bag that is tight on the product. The minimum bag size for most packagers is about 2" (50mm) square.
- Do not spread the film wider than necessary to insert the product. Excessive film spreading may cause the product to load too close to the vertical jaw. If you must spread the film wide, you may have to use a wider centerfold size to have enough room for the product.
- Proper location and adjustment of the film guide bar is important in providing the correct bag shape.
- It may be necessary to orient the product when inserting it in the film for best results.
- Generally, if the product is heavier on one end, try loading that end toward the vertical. This will help the product fall away from the vertical when the bag is released below the jaw.
- If the product is circular or spherical, or if it is a group of loose pieces, it may roll or slide toward the vertical. It may have to be loaded further away from the vertical seal by using a wider centerfold size. The packager height can be lifted slightly on the infeed side.
- If one end of the product is larger in size, you may have to experiment to determine if that end should be toward or away from the vertical.
- Product that is contaminated with powder or liquids may affect the seal quality.

8.2.15 Cycling the Packager

Figure 8-11 Cycling the Packager

The packager cycle is initiated by loading the product through the light curtains and placing it onto the seal jaw assembly.

8.2.16 Light Curtain Fault

1. Press the Green System Reset button and then wait about 5 sec for the seal assembly to home.(This will cause the Packager to home the servo seal assembly)
2. Press the Green System Reset button again to reset the packager to run mode.

The packager is now ready for operation again.

8.2.17 Film Registration Electric Eye (Optional)

Figure 8-12 Film Registration Electric Eye

After making the initial bags and setting the film advance manually adjust the film registration sensor.

Place the film between the film container rods. Move the sensor mounts in the slotted horizontal adjustment brackets to ensure the sensor lens is centered on the registration mark.

The film feed distance must be set at the operator interface panel to be ½" greater than the distance between the registration marks. This is to ensure that the bag length is being controlled by the registration marks

8.3 *Electrical Controls*

Figure 8-13 Pushbuttons

Black Button –Jaw Lock Open- Locks the Jaws Open - Pressing this pushbutton opens the jaws of the packager.

Yellow button –Jaw Close/ Safety Reset- Closes the jaws - Closes the jaws of the packager.

Green Button - System Reset - Resets the system when it is not ready to operate. This pushbutton will reset the entire system.

Red Button -E-Stop - Turns off power to motors and other moving items. The EMERGENCY STOP pushbuttons maintain their position and must be twisted CW or pulled out prior to resetting the system.

<u>If a E-stop condition takes place or a fault, reset the system by pulling out the e-stop and pressing the System Reset. This will cause the Packager to home the seal assembly. Press the system reset button again to reset the packager to run mode.</u>

9 Operator Interface Touchscreen

9.1 *Operator Interface*

Figure 9-1 Operator Interface Enclosure

The operator interface houses the PLC that controls the functions of the packager and has a touchscreen that serves as the human to machine interface. The touchscreens are described in detail in this chapter to familiarize the operator with the packager controls and their functions.

NOTE: The Factory Default Settings are depicted on the Screens depicted in this Chapter

9.2 *Alarm and Warning Messages*

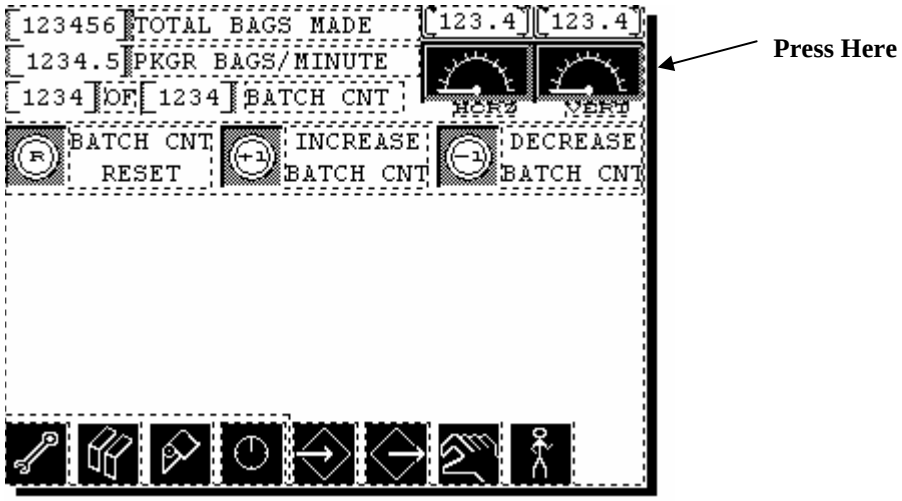


Figure 9-2 Alarm and Warning Message Screen

The main screen is the default screen and is displayed when the system is running. Provides access to the various touchscreens that contain settings that can be changed to optimize the packagers performance based on the product that is being packaged. This screen also displays alarms and warnings. If the packager stops, look to this display for related messages.

SCREEN SELECTOR ARROWS and ICONS- Located at the bottom of each screen moves between the different touchscreens.

TOTAL BAGS MADE

Displays the total amount of bags produced

PKGR BAGS/ MINUTE

Displays how many bags are produced in a one minute time frame

HORZ

Displays the temperature of the horizontal seal assembly. Touching the heater will take you to the heater setting screen.

VERT

Displays the temperature of the vertical seal assembly. Touching the heater will take you to the heater setting screen.

BATCH COUNT

To reset the batch count, press R the reset button. To increase or decrease the number of items in the batch count, press the +1 or -1 buttons.

9.3 *Enter Password*

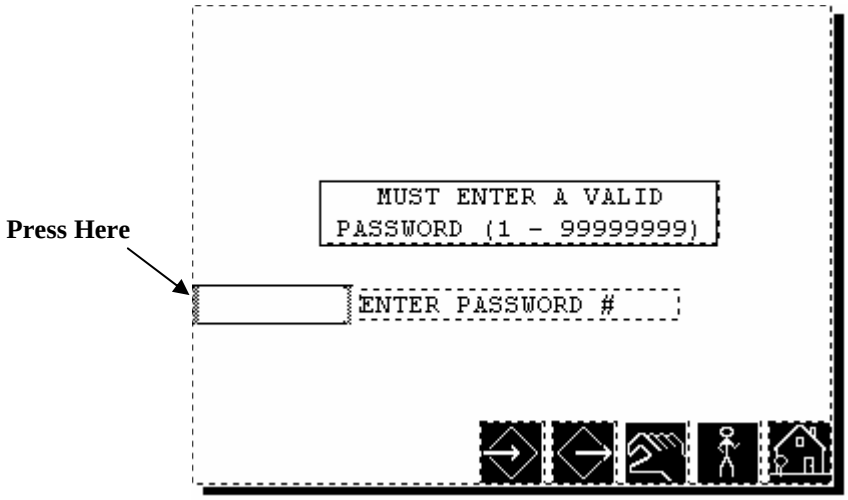


Figure 9-3 Enter Password Screen

ENTER PASSWORD #

When the correct password is entered the maintenance screen can be accessed to change the settings an operator typically would not need to run production. There is a default password of “1” that will be established upon initial shipment. When changing the password please remember to retain a note of the new password. In case of a lost password, contact Rennco Inc. to obtain the password.

9.4 *Changing Settings*

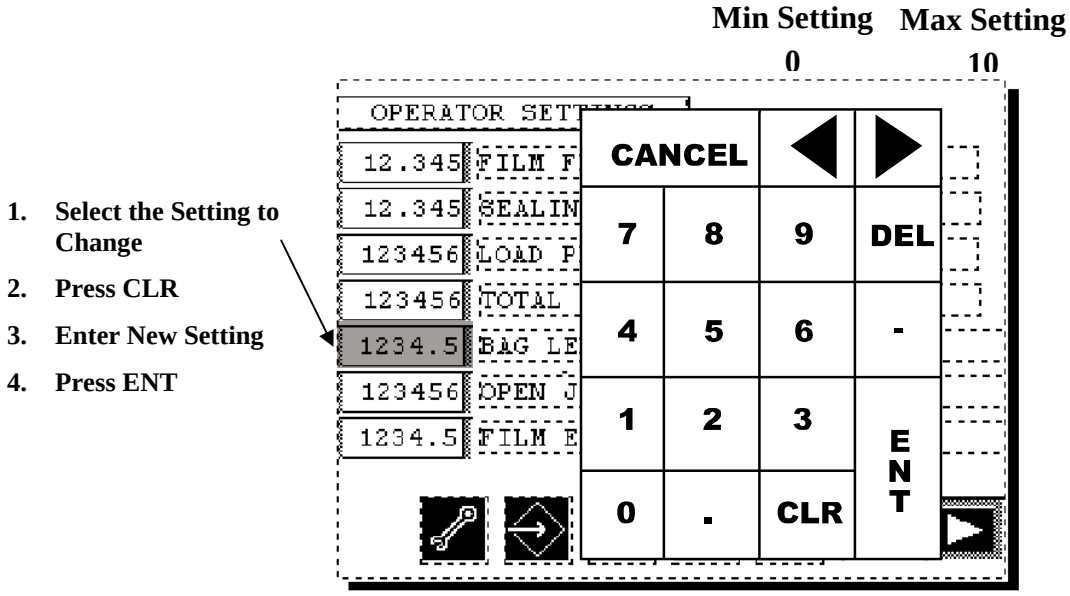


Figure 9-4 Change Settings Screen

CANCEL

Cancels the operation of changing a setting

ARROWS

Move the cursor back and forth over the setting that is highlighted to change it

DEL

Deletes the current single digit setting so another one can be entered

CLR

Clears all the of the current setting

ENT

Enters the new setting

NUMBERS

The numbers are entered per each setting selected in . (points), - (negative), or numerically depending on each individual setting that is being changed

MIN SETTING

Displays the lowest possible setting allowed

MAX SETTING

Displays the highest possible setting allowed

9.5 *Heater Settings*

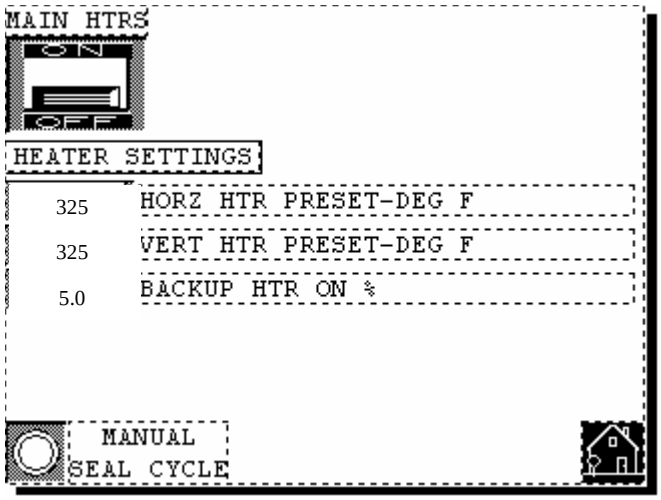


Figure 9-5 Alarm and Warning Message Screen

MAIN HEATERS

Turns the main heater on or off

HORZ HTR PRESET

Sets the temperature of the horizontal seal assembly

VERT HTR PRESET

Set the temperature of the vertical seal assembly

BACKUP HEATER ON %

Sets the temperature of the backup heater

9.6 *Control*

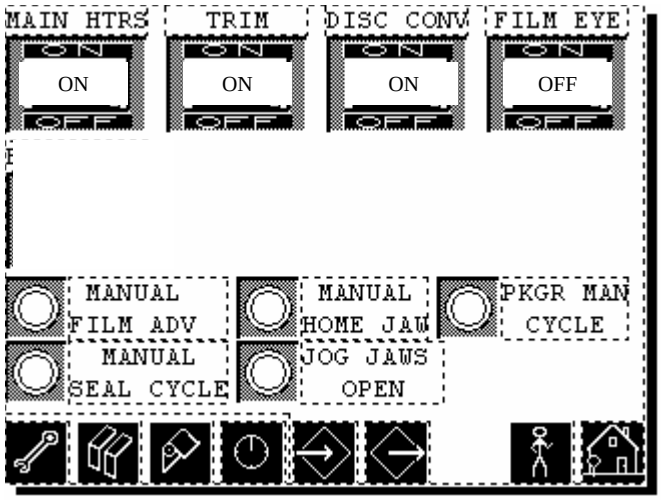


Figure 9-6 Control Screen

HEATERS

Turns the heaters in the seal assemblies that make the seal on and off

TRIM

Turns the trim wind up that gathers the trim tail on and off

DISC. CONV

Turns the discharge conveyor on and off

FILM EYE

Turns the film registration eye on and off

MANUAL FILM ADV

Feeds film through the locked open seal assembly as long as the button is held down

MANUAL HOME JAW

Resets the seal assembly to the start position (Closed)

PKGR MAN CYCLE

Forces the packager to make one complete cycle without breaking the light curtain

MANUAL SEAL CYCLE

Forces the seal assembly to close making the packager blade contact the back-up rubber (used to create a seal)

JOG JAWS OPEN

Opens the seal assembly as long as the button is held down until it reaches the fully extended position

9.7 *Operator Settings*

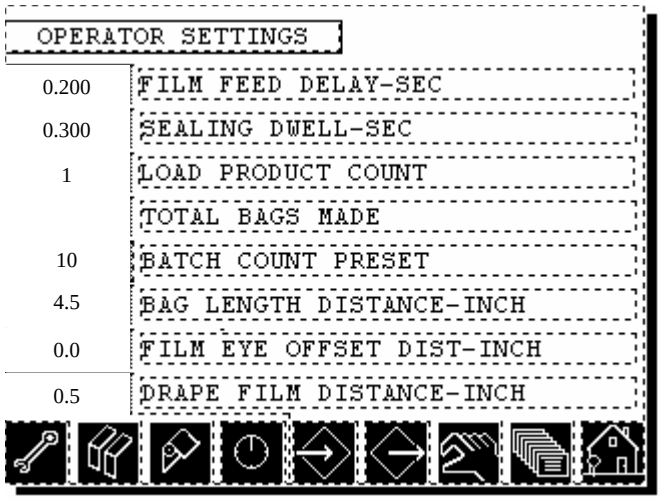


Figure 9-7 Operator Settings Screen

FILM FEED DELAY- SEC

Sets the amount of time it will take before the film feed will start to feed film

SEALING DWELL - SEC

Sets the amount of time that the seal assembly blade will remain extended and in contact with the back up rubber (Thinner mil material will take less dwell and thicker mil material will take longer)

LOAD PRODUCT COUNT

Turns the indexing discharge conveyor on and off

TOTAL BAGS MADE

Displays the number of bags made

BATCH COUNT PRESET

Sets the number of bags to be made in the specified production run

BAG LENGTH DISTANCE - INCH

Sets the vertical dimension of the bag being made (the horizontal bag length is determined by the width of the film roll)

FILM EYE OFFSET DIST - INCH

Sets the distance from the signal of the film registration eye that the film will continue to be fed to align any printed fill to be centered to the finished bag

DRAPE FILM DISTANCE - INCH

Sets the amount of film to be fed to create a drape that the product is fed into

9.8 *Basic Settings*

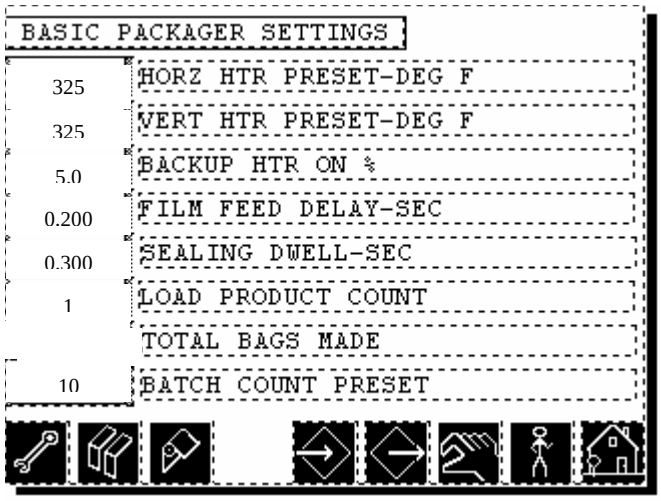


Figure 9-8 Basic Settings Screen

HORZ HTR PRESET – DEG F

Sets the temperature in degrees Fahrenheit of the horizontal seal assembly

VERT HTR PRESET – DEG F

Sets the temperature in degrees Fahrenheit of the vertical seal assembly

BACKUP HTR ON %

Sets the percentage that the back-up heater will function at. The lower the percent the cooler. The higher the percent the hotter.

FILM FEED DELAY - SEC

Sets the amount of time that the film feed will wait before starting to feed film into the seal assembly area.

SEALING DWELL - SEC

Sets the amount of time that the seal assembly will remain in the extended position to make a seal

LOAD PRODUCT COUNT

Sets the number of times that the light curtains may be passed through before a sealing cycle is initiated. Used to load multiple product into one bag

TOTAL BAGS MADE

Displays the number of bags the packager has made

BATCH COUNT PRESET

Sets the number of bags to be made in the specified production run

9.9 *Film Setup Screen*

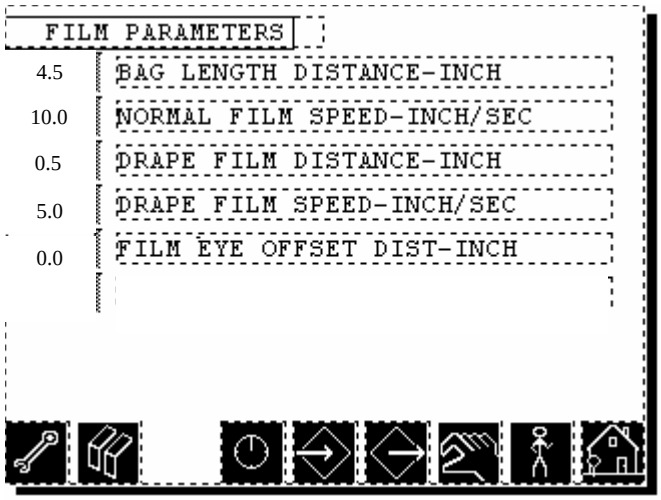


Figure 9-9 Film & Jaw Setup Screen

FILM PARAMETERS

BAG LENGTH DISTANCE - INCH

Sets the vertical bag length that the product will be sealed into

NORMAL FILM SPEED –INCH/ SEC

Sets the speed that the film will be fed into the seal assembly area

FILM EYE OFFSET DIST - INCH

Sets the distance that the film registration eye is offset to get the print centered to the bag

DRAPE FILM DISTANCE - INCH

Sets the amount of film to be fed to create a drape that the product is fed into

DRAPE FILM SPEED

Sets the amount of film to be fed to create a drape that the product is fed into

FILM EYE OFFSET

Sets the amount of film to be fed to create a bag until the registration eye sees the mark again. Typically this setting is set approx. 2” greater than the bag size being made.

TRIM WINDUP SPEED (Stainless Steel E-Pac only)

Sets the speed of the trim windup

9.10 *Jaw Setup Screen*

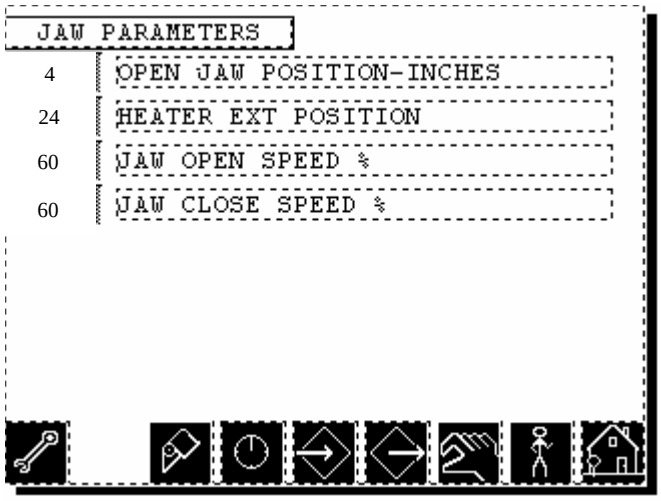


Figure 9-10 Film & Jaw Setup Screen

OPEN JAW POSITION - INCHES

Sets the position that the seal assembly will move until it is “open”. This is used to increase speed of the packager on smaller products and increase seal assembly to accept larger products.

HEATER EXT POSITION

Sets movement of the drive motor that extends the drive linkage, pulling the seal assemblies together. When the seal assemblies are together (Film Gripping Position) and the sealbar is flush against the backup rubber the setting is correct.

JAW OPEN SPEED %

Sets the speed the seal assembly will open at

JAW CLOSED SPEED %

Sets the speed the seal assembly will close at

9.11 *Configure*

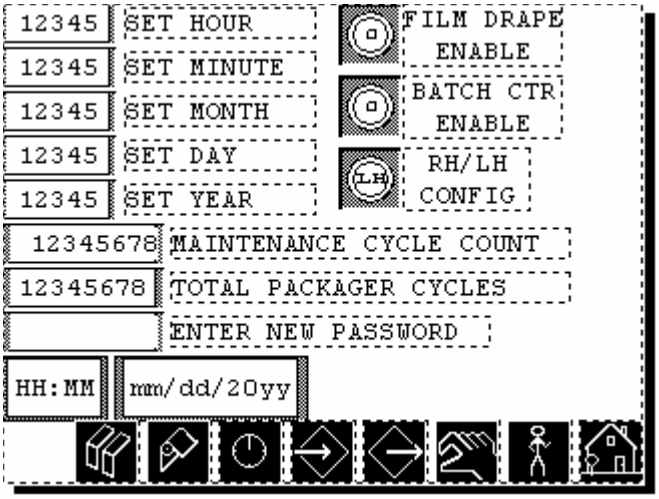


Figure 9-11 Configure Screen

SET HOUR

Sets the hour on the clock

SET MINUTE

Sets the minutes on the clock

SET MONTH

Sets the month of the year

SET DAY

Sets the day of the year

SET YEAR

Sets the year

FILM DRAPE

Toggles the film drape on or off

BATCH CTR ENABLE

Toggles the batch counter on or off

RH/LH CONFIG

Sets the configuration of the packager to left or right hand (Will cause the motors to turn in the opposite direction)

9.12 *Recipe*

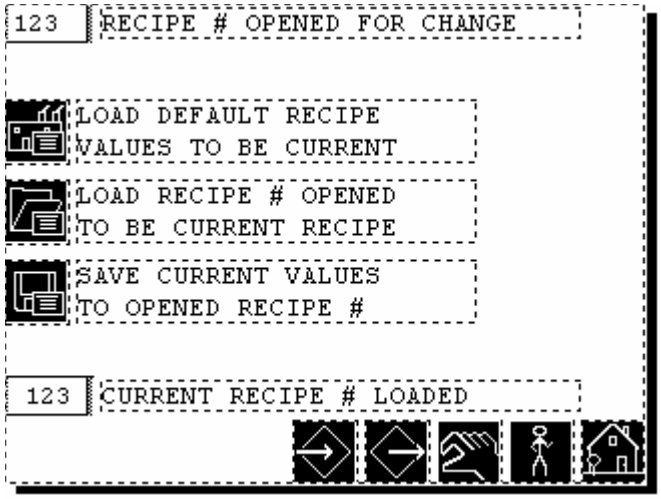


Figure 9-12 Sealbar Cycle Screen

RECIPE OPENED FOR CHANGE

Displays the recipe number from 1-10 that will receive the changes that are made when it is saved over.

NOTE: When creating a new recipe the number that you are saving 1-10 needs to be displayed in the recipe # opened for change box

LOAD DEFAULT RECIPE VALUES TO BE CURRENT

Will reset the settings to the default values that were set at the factory when the packager shipped

1: Press load default recipe

2: Press E-Stop

3: Press yes

4: Load defaults

LOAD RECIPE # OPENED TO BE CURRENT RECIPE

Sets the recipe # displayed in the recipe # opened for change to be the current values

SAVE CURRENT VALUES TO OPENED RECIPE #

Will write over the currently displayed recipe # in the recipe # opened for change box

9.13 *Recipe Messages*

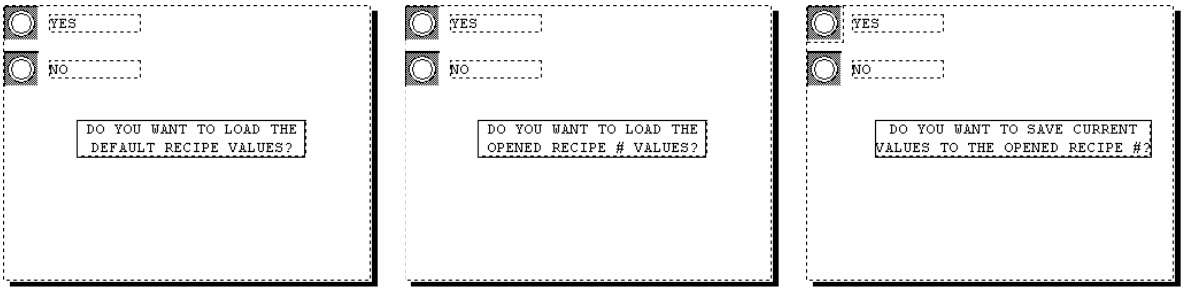


Figure 9-13 Recipe Message Screens

DO YOU WANT TO LOAD THE DEFAULT RECIPE VALUES?

Will set in place the factory defaults

DO YOU WANT TO LOAD THE OPENED RECIPE # VALUES?

Will set in place the recipe # 1-10 in the displayed recipe # box

DO YOU WANT TO SAVE CURRENT VALUES TO THE OPENED RECIPE?

Will save the new values to the recipe # 1-10 in the displayed recipe # box

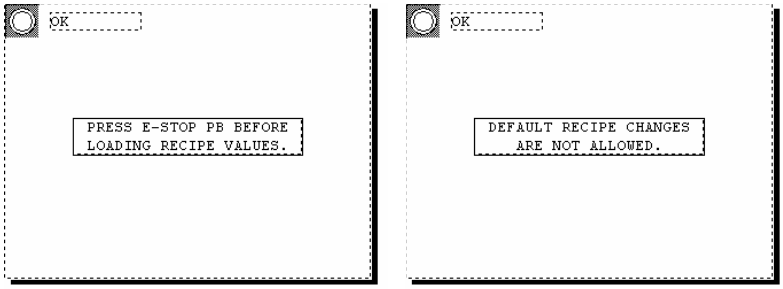


Figure 9-14 Recipe Message Screens

PRESS THE E-STOP BEFORE LOADING RECIPE VALUES

The E-Stop must be pressed to allow the factory default settings to be applied

DEFAULT RECIPE CHANGES ARE NOT ALLOWED

The factory default settings (Displayed as recipe 0) can not be modified

9.14 *Batch Counter*

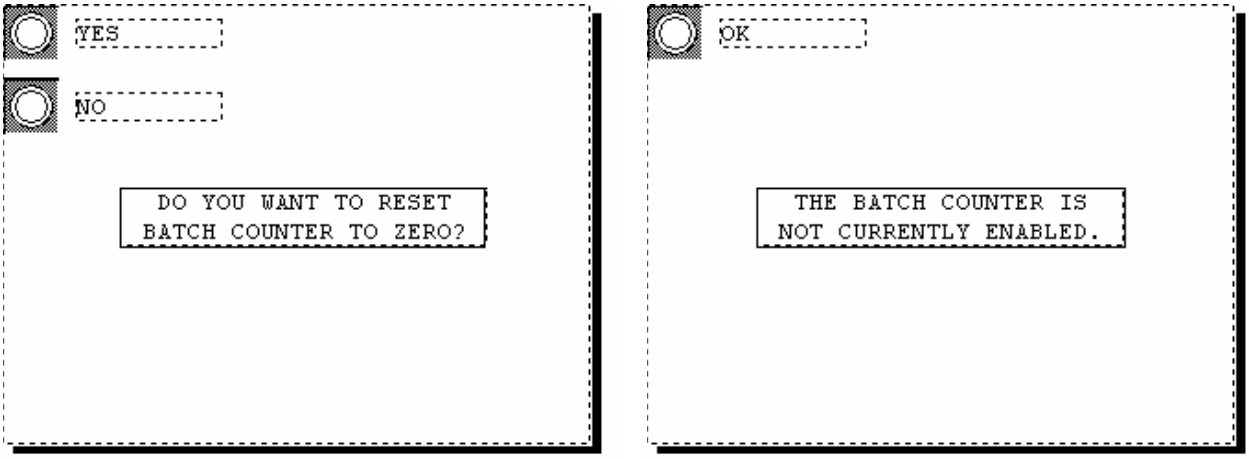


Figure 9-15 Batch Counter Screens

DO YOU WANT TO RESET THE BATCH COUNTER TO ZERO?

Resets the batch counter over to 0

BATCH BCOUNTER ENABLE/ DISABLE

Turns the batch counter on and off

NOTE: After the batch count is reached the screen will display the message that the batch count is complete. Say Yes to the Reset message if another production batch is desired. Press the jaw close, safety reset, then press the system reset and the packager will stop again after the batch count number is reached.

9.15 *Input Screens*

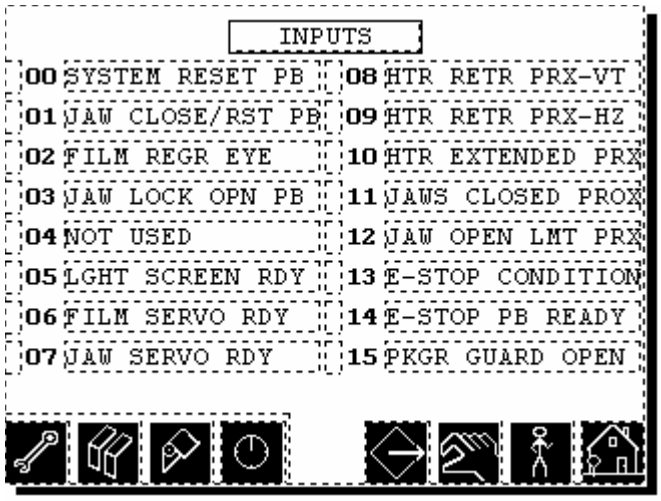


Figure 9-16 Inputs Screen

This screen indicates the PLC input addresses that are being used and the corresponding devices wired to those inputs.

9.16 *Output Screens*

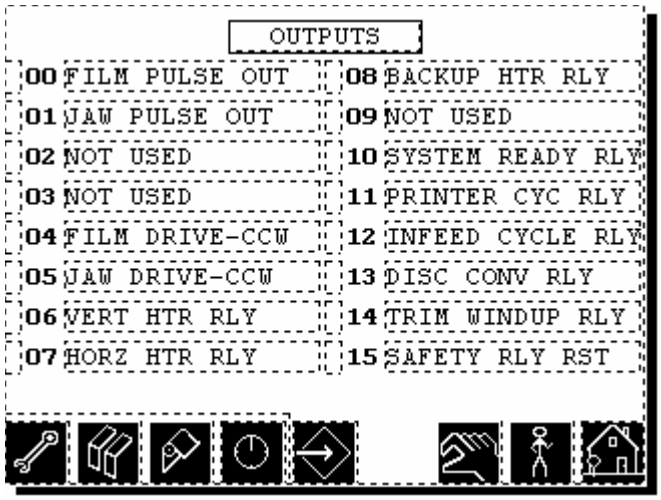


Figure 9-17 Outputs Screen

This screen indicates the PLC output addresses that are being used and the corresponding devices wired to those outputs.

9.17 *Alarm List/ Corrective Action*

General:

If a E-stop condition takes place or a fault, reset the system by pulling out the e-stop and pressing the System Reset. This will cause the Packager to home the seal assembly. Press the system reset button again to reset the packager to run mode.

Message	Cause	Corrective Action
FILM FEED SERVO NOT RDY / RESET	The hold down roller has been raised	Close the film feed roller cover on the top of the packager
JAW DRIVE SERVO NOT RDY / RESET	The Sealbar has been extended manually thru the control screen.	On the touchscreen press manually home jaws. On the operator control Box -pull out the black jaw lock open button, push the yellow Jaw close button, push the green system reset button twice
E-STOP CONDITION / RESET	An E-Stop Pushbutton is or has been pressed.	Check all Guards are in place, on the operator control box pull out the E-Stop Button and press Reset
E-STOP PB ACTUATED	An E-Stop Pushbutton is or has been pressed.	Check all Guards are in place, on the operator control box pull out the E-Stop Button and press Reset
JAW DRIVE HOMING IN PROCESS	Indicates that the jaws are homing	Press the system reset after jaws are homed
JAW SERVO NOT HOMED / RESET	The jaws are not homed	Press home jaws through the touchscreen
PKGR NOT READY / PRESS RESET	Fault has taken place	Press the system reset and wait for the jaws to home then press reset again
JAW LOCKED OPEN / PRESS JAW CLOSE	Jaw lock open button still actuated	Press the yellow jaw lock closed pushbutton
JAM IN PKGR JAWS / CLR & RST	Something has been caught between the seal assemblies	Press the jaw lock open Remove the object / reset the packager
JAW OPEN LIMIT FAULT / RESET	Jaws where opened past the limit	Check jaw opening setting and reset
TRIM WINDUP TURNED OFF	Trim windup is off	Turn on the trim windup
JAW LOCK OPEN PB ACTUATED	The jaw lock open push button is activated	Pull out the black jaw lock open button/ Reset
HEATER RETRACTED	The seal assemblies have not closed enough to extend	Press the system reset after jaws are homed

	sealbar	
PROX FAULT	The seal assembly did not meet the prox switch to properly function	Remove any obstruction from the seal assembly/ Reset
HEATERS ARE WARMING UP TO TEMPERATURE	There has not been enough time for the heaters to reach there operating temperature	Allow the heaters more time to heat up
PKGR GUARD OPEN / WAS OPENED / PRESS RST	A guard door was/is open	Check that all doors are securely in place
PKGR READY FOR NORMAL OPERATION	There are no alarms to act upon	Packager is ready for production
SERVO DRIVES NOT READY TO RESET	The servo drive has not reset	Reset the packager
INSPECT JAW DRIVE BELT / PRESS RESET	The jaw belt maintenance timer has reached it's time	Inspect, replace jaw drive belt if needed
BATCH COUNT IS COMPLETE	The input amount of the batch count has been reached	Enter a new batch count or disable the batch count function

10 Trouble Shooting

10.1.1 Symmetrical Film Spreading

Figure 10-1 Symmetrical Film Spreading

- The Film must be spread equally on both sides of the Centerline of the Seal Assembly. This applies to anything that is mounted between the webs of film, Automatic Feeders, Spreaders, ect..
- Equal, symmetrical film spreading allows the edges of the film to line up for proper trim shape.

10.1.2 Film Position

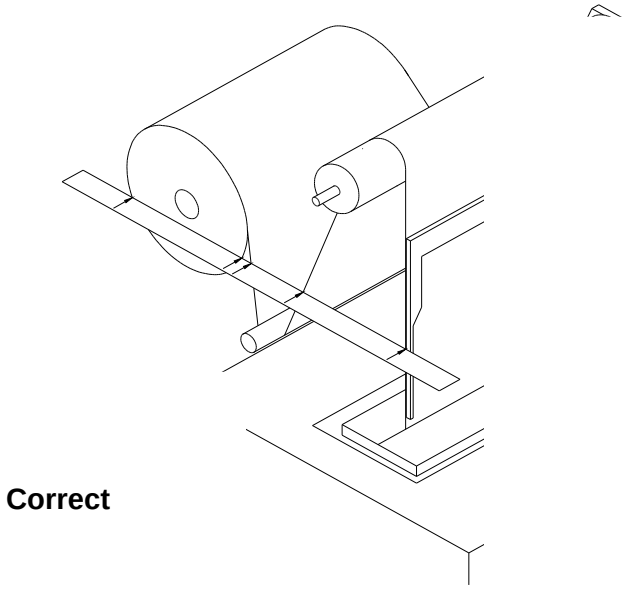


Figure 10-2 Correct Film Position

If the film roll is properly positioned from front to back, the centerfold edge of the film would contact a straight edge at the points shown. Typically a visual alignment is used looking through the machine.

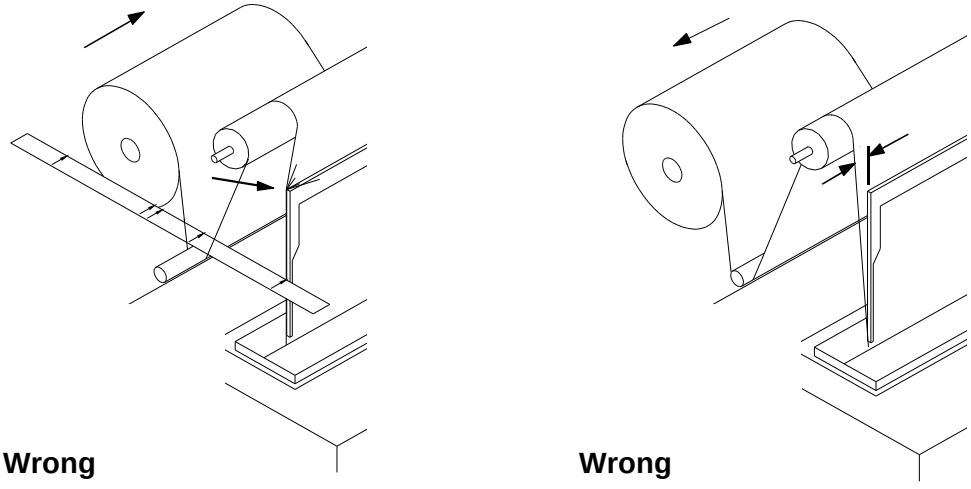


Figure 10-3 Incorrect Film Position

If the film roll is moved too far toward the front of the machine, the film will bunch up on the top corner of the film guide bar, and the centerfold edges will not line up.

If the film roll is moved too far toward the rear of the machine, the bag shape may be distorted or the trim width may be affected.

10.2 *Bag Shape*

10.2.1 Triangular Tab Left on Bag

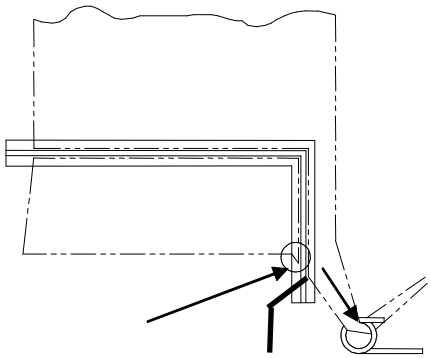


Figure 10-4 Triangle Tab on Bag

Bulky products cause the bag to be pushed away from the vertical jaw. This draws the corner of the previous seal away from the vertical seal bar. The result is a triangular shaped tab that is left on the bag.

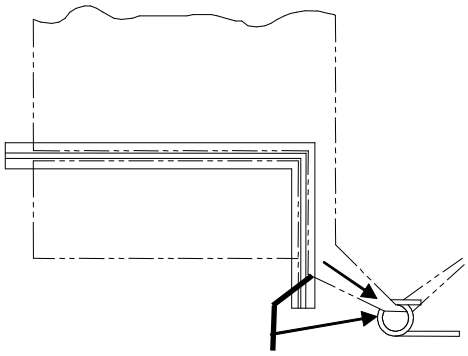


Figure 10-5 Eye Guide Location

The solution is to adjust the location of the trim guide eye upward and outward to pull more sideways. It may also be necessary to increase the trim spool tension.

10.3 *Seal Quality Problems*

10.3.1 Bag Will Not Cut Off in Certain Areas

- **Seal blade has surface damage or has film build up**. Clean the Blade -Never use abrasives to clean the blade only a soft cloth or Replace the Blade. Packaging film will build up immediately in areas where the Teflon coating is damaged, and will weaken the seal.

- **Back up rubber is damaged or not straight**. Check the rubber surface with a straight edge. If gaps are observed, the blade will not develop cut off pressure in these areas, and the bag will not cut off.

  Remove the rubber and pull out the heating element. Straighten the heating element and replace the rubber. Press it in with a steel bar in order to maintain straightness.

  Check condition of the 'H' channel and foam rubber. If the 'H' channel is not straight, replace it. If the foam rubber is hardened or deteriorated, replace it.

- **Seal bar temperature incorrect**

  Polyethylene film- Seal bar temp (at the control screen) should be about 350 to 400 degrees F (175-205C) or slightly higher depending on film thickness. Build up will occur if the temp is too high.

- **Back up rubber temperature incorrect**

  Polyethylene film- The back up rubber is always heated in polyethylene film applications. The temperature setting should be set at approximately 5% to achieve 120-150 degrees F (49-66C). The temperature is right if it is uncomfortable to hold your hand against the surface for more than a few seconds.

- **The packaging *process* has changed**. Has the cycle speed of the machine been changed? Have changes been made to seal bar temperatures? Has the heater dwell timing been changed?

  Is the bag size too tight? The seal can be forced open by putting too small a bag around the product.

- **Wrinkles are being formed in the seal area.** When the jaws close on wrinkled film, a hole may form at the wrinkle because the two webs of film are not laying flat against each other. Wrinkles are often caused by how the film is spread or the shape of the product. Wrinkles can be minimized by not spreading the film more than necessary. Adjusting the trim spool tension and direction may help. Minimize the tension and position the trim eyebolt to pull more downward than outward. Some wrinkles may be unavoidable.

  Rennco packagers do not make a 'hermetic' or airtight seal.

- **The bag size is too tight on the product.** If the vertical bag dimension is too small, the product may force the horizontal seal open giving the impression of a weak seal.

10.3.2 Bag Will Not Cut Off Along Entire Length

- **Seal bar is not in proper alignment with back up rubber.** The seal blade should be centered on the back up rubber surface and contact equally well along both horizontal and vertical surfaces.

- **Rubber grippers are not in alignment with back up jaw.** The grippers should grip the film equally well along all four back up jaw surfaces (top and bottom horizontal, and inside and outside vertical).

  Test the grip by pushing on the film with the side of your hand alongside the closed jaws. It should be difficult to pull the film from between the jaws. Test all along the full length of the horizontal and vertical jaws.

- **Back up heater is not working.** Check to see that voltage is present at the heater terminal block. If voltage is not present, check the fuse and voltage controller. If voltage is present, remove the heater from the circuit and test for continuity through the heater. If resistance is infinite, replace the heater.

- **Packaging film quality is affecting the seals.** If the machine is functioning properly, you may have poor quality polyethylene film. Has you film vendor changed the formulation or are you using a new vendor? Is the film made from 'virgin resins'?

  Shrink films deteriorate with exposure to sunlight and high temperatures.

- **Seal bar temperature incorrect.** Adjust the Seal blade temperature at the operator interface panel.

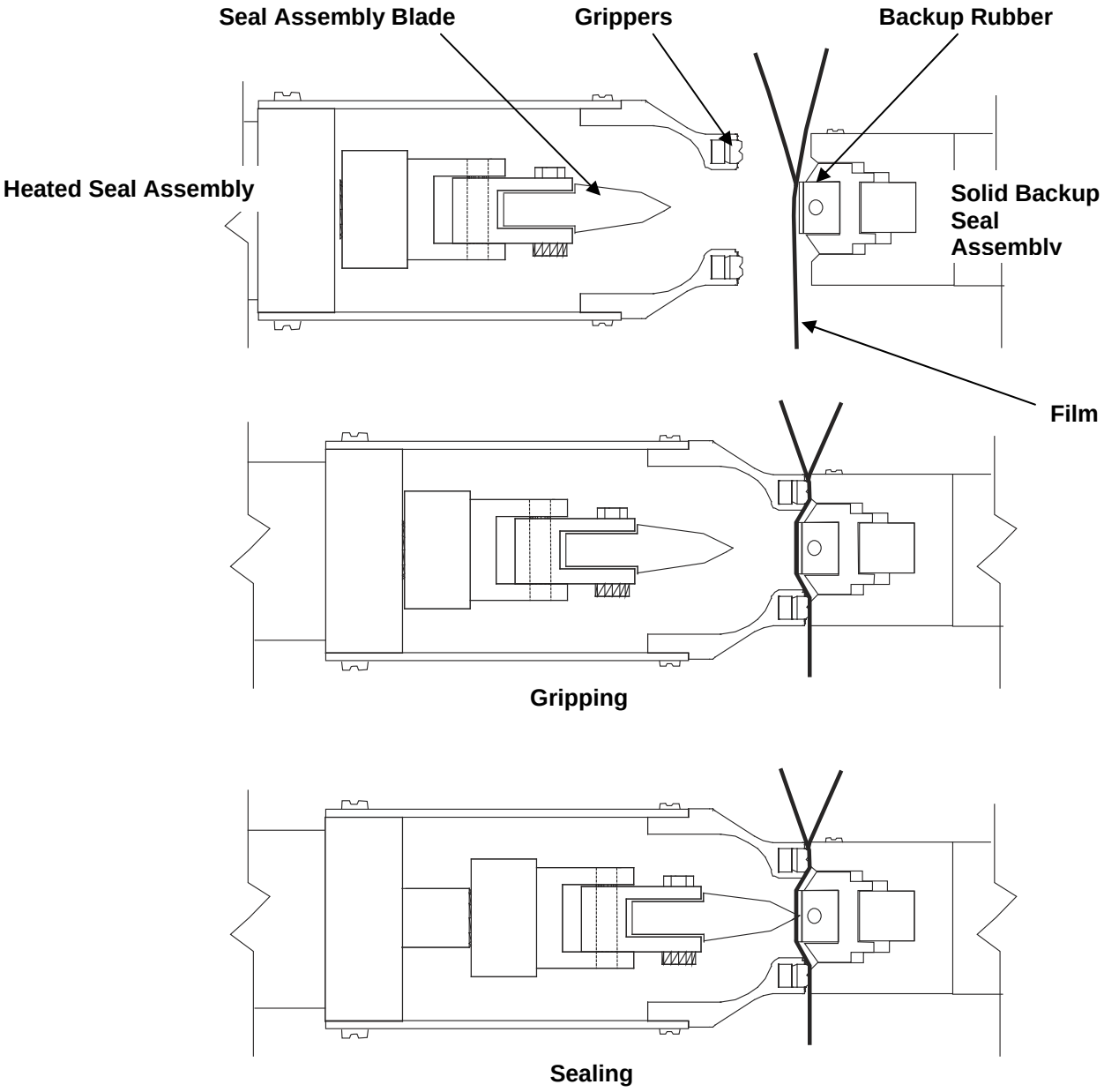
10.3.3 No Heat at Seal Blade

- **Blown fuse.** Check and replace if necessary.

11 Maintenance

11.1 *Seal Assembly Functionality*

The Seal Assembly grips the film and holds onto it while the seal assembly heated blade is drawn into the backup rubber creating a seal and cutting the film.



11.2 *Seal Assembly Gripper Alignment/Removal*

WARNING: Turn electric supply off.

To adjust the Seal Assembly Gripper alignment, first remove the rubber grippers. Close the seal assemblies by hand and observe any gaps between the extrusion edges and the back up seal assembly surfaces. Check all 4 plates (Only one shown for reference).

Then loosen the screws that hold the plate with the most gap and adjust it forward to meet its back up seal assembly surface. Repeat for each plate that has a gap. Adjust one plate at a time.

All plates must meet the back up seal assembly surfaces at the same time.

Figure 11-1 Seal Assembly Gripper Alignment/Removal

Removing the Seal Assembly Grippers:

1. Loosen and Remove the Pan Head Screws
2. Remove the Seal Assembly Gripper Cover/Replace
3. Replace and Tighten the Pan Head Screws

Aligning the Seal Assembly Grippers:

1. Loosen the Pan Head Screws
2. Loosen the Cam Bolts and Adjust the Cam. Tighten the Cam
3. Tighten the Pan Head Screws

NOTE: Be sure to keep the Corners aligned where the Vertical and Horizontal Seal Assemblies meet.

11.3 *Adjusting the Solid Seal Assembly*

WARNING: Turn electric supply off.

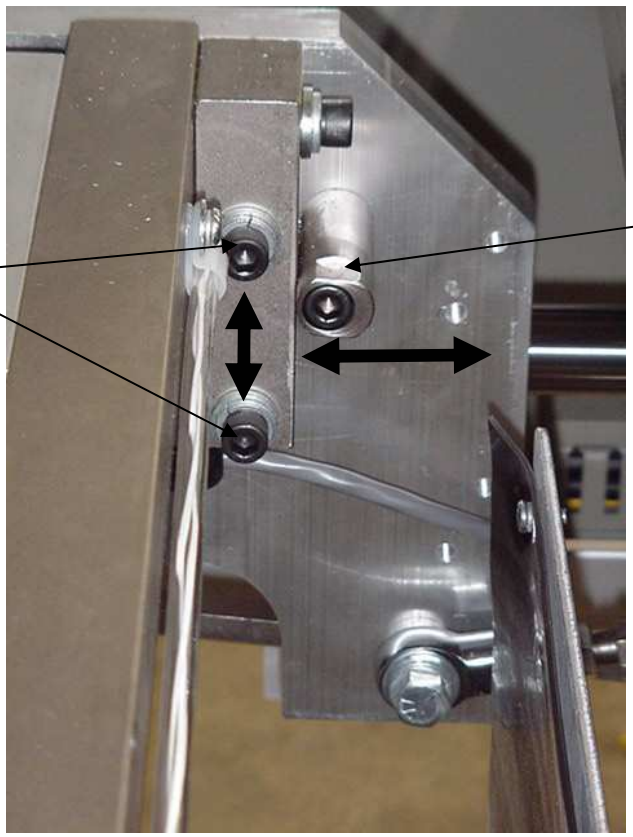


Figure11-2 Seal Assembly Gripper Alignment/Removal

Adjusting the Solid Seal Assembly Height:

1. Loosen the Allen Head Bolts on each side
2. Adjust the Solid Seal Assembly height
3. Tighten the Allen Head Bolts on each side

Aligning the Solid Seal Assembly Vertical Position:

1. Loosen the Allen Head Bolt
2. Adjust the Cam
3. Tighten the Allen Head Bolt

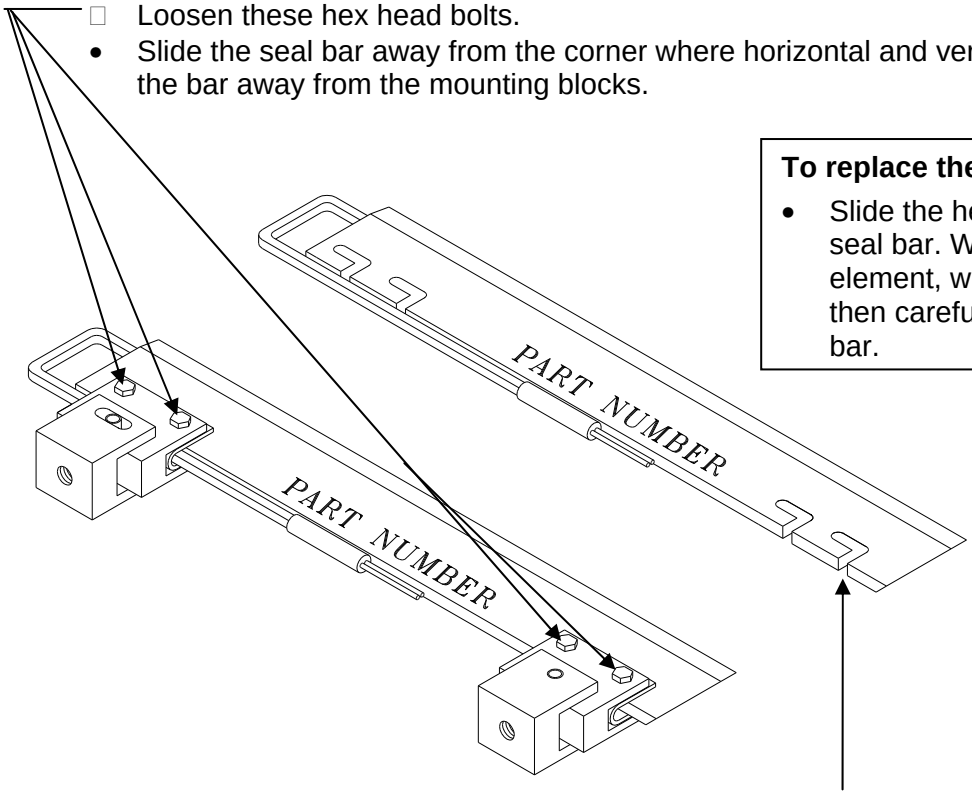
NOTE: Solid Seal Assembly typically does not need adjusting

11.4 *Sealbar Replacement*

NOTE: Seal Assembly Gripper Cover must be removed first.

To remove the seal bar-

- Disconnect heating element wiring, taking care to tag the leads for reassembly.
- Loosen these hex head bolts.
- Slide the seal bar away from the corner where horizontal and vertical meet. Then pull the bar away from the mounting blocks.



To replace the heating element-

- Slide the heating element from the seal bar. When inserting the new element, wipe it to remove grit then carefully insert into the seal bar.

To insert the seal bar-

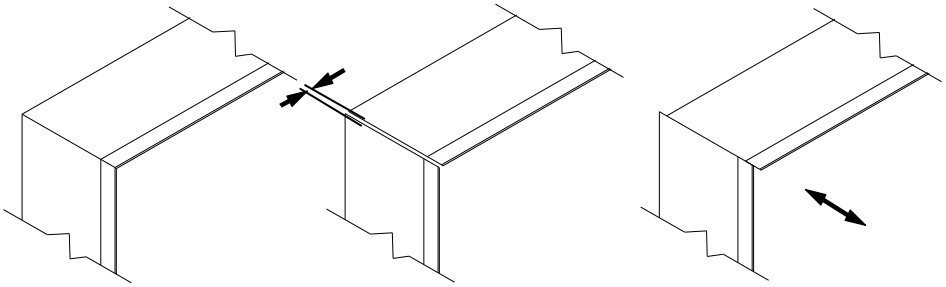
Line up the slot opening with the hex head screws and push the seal bar onto the screws.

Slide the seal bar toward the corner where horizontal and vertical meet, then retighten the screws.

Make certain that-

The seal bars meet tightly in the corner.

The seal edges of both bars are in alignment and that one seal bar doesn't set forward of the other.

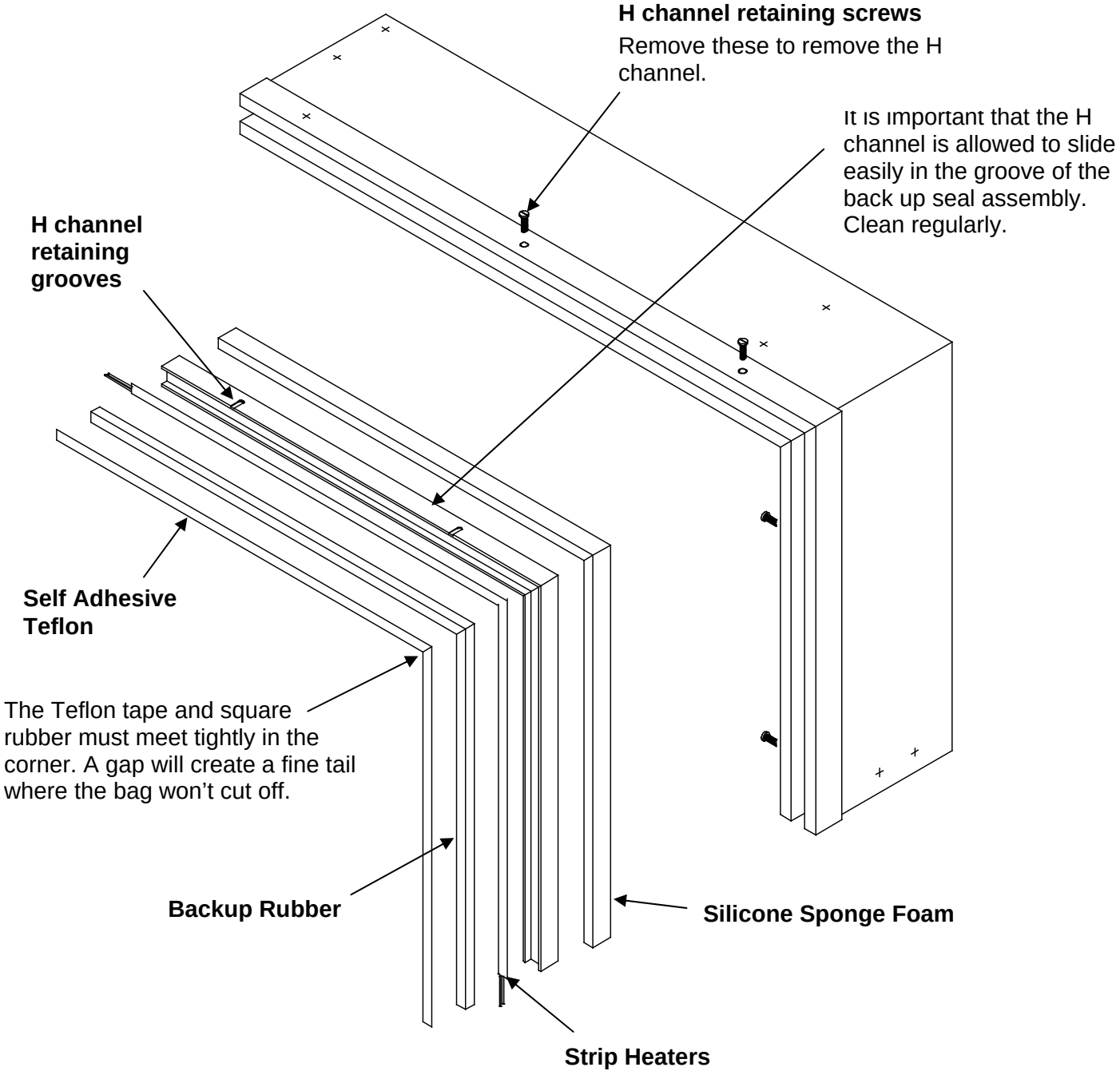


WRONG **WRONG**

11.5 *Backup Rubber Assembly*

The most important aspect to properly cutting off the bag is to ensure that the back up rubber is straight.

Use a straight edge to check the sealing surface. The bag will not cut off in the areas where there is a gap between the rubber and the straight edge because proper seal bar pressure won't be achieved. Remove the heater from the rubber and straighten it if necessary. Take care to install the rubber in such a way as to not bend the heater.



11.6 *Main Drive Belt*

The Main Drive Belt tension will need adjusting and the belt will need to be replaced periodically.

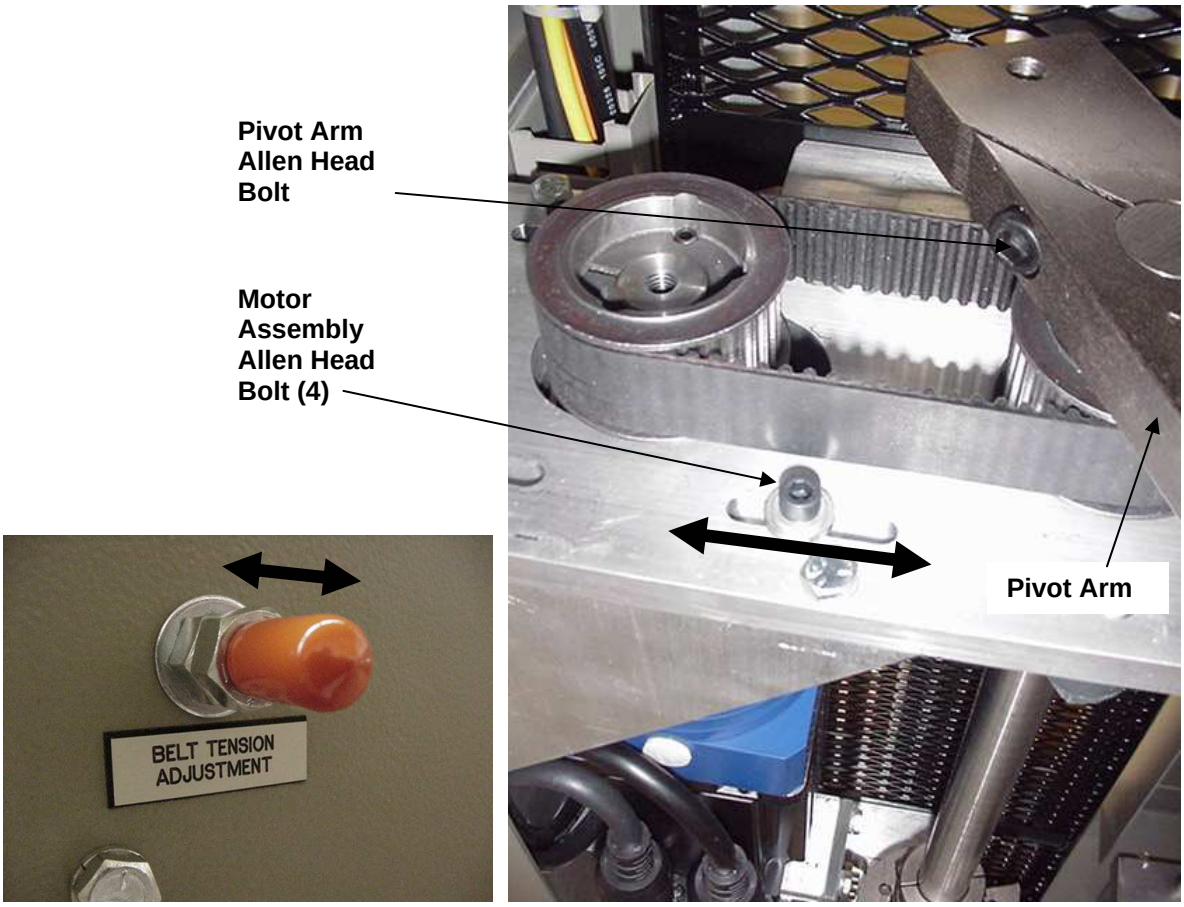


Figure 11-3 Main Drive Belt

Replacing the Drive Main Belt:

1. Loosen Belt Tension Adjustor on the side of the machine
2. Loosen and Remove the Allen Head Bolt that holds the keyed pivot Arm to the Shaft
3. Slide Pivot Arm off
4. Loosen the Allen Head Bolts that hold the motor in position
5. Loosen the nuts on the belt tension adjuster
6. Move the motor assembly forward and place new belt over pulleys
7. Turn Belt Tension Adjustment according to the label next to the belt tensioner.
8. Secure the motor assembly by tightening the Allen Head Bolts
9. Replace the Pivot Arm and Allen Head Bolt

11.7 *Film Feed Drive Belt*

The Film Feed Belt tension will need adjusting and the belt will need to be replaced periodically.

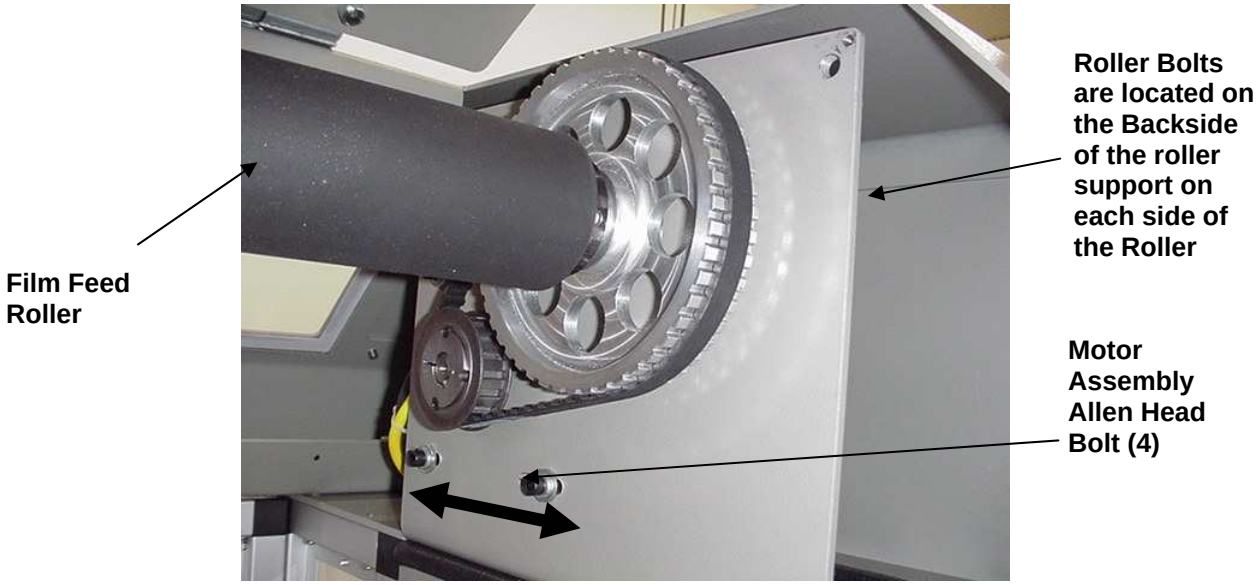


Figure 11-4 Film Feed Drive Belt

Replacing the Film Feed Drive Belt:

1. Unbolt and Remove the Film Feed Roller
2. Loosen the Allen Head Bolts that hold the motor in position
3. Move the motor assembly forward and place new belt over pulleys
4. Slide the Motor Assembly back until the Belt is tight
5. Secure the motor assembly by tightening the Allen Head Bolts
6. Bolt on the Film Feed Roller

12 Preventative Maintenance

12.1.1 Daily

• Check jaw safety function is operating properly.
• Make certain all guards are in place.
• Wipe seal bar surfaces to remove any build up.
• See that the film guide bar is set properly.
• Check seal quality and strength.
• Clean film feed rubber roller with denatured alcohol.

12.1.2 Weekly

• Remove jaw top cover plate and clean the jaw.
• Check to see that heater cable connection is tight.
• Clean trim wind up unit
• Check the jaw grip pressure.

12.1.3 Monthly

• Check the silicone gripper material for damage.
• Check for loose fasteners.
• Check drive belts for wear
• Check trim windup belt for wear

12.1.4 Semi-Annually

• Check jaw alignments.
• Check condition of trim unit.

12.1.5 Annually

• Replace jaw drive linkage needle bearings.
• Replace jaw drive bearings.

12.2 *Lubrication*

12.2.1 Weekly

• Jaw linear carrier block linear ball bushings	Light weight grease

12.2.2 Monthly

• Transfer Shaft Bearings	Light weight grease.

13 How to Use the Parts Section

13.1 *Before Ordering Parts*

When requesting information on parts or general assistance, it is important to give the model number and serial number of the equipment.

This information can be obtained from the first page of this manual or from the serial number nameplate mounted on the front upright plate of the packager, or the side panels of optional equipment.

The part number of SF model packager seal bars is located on the seal bar itself.

A 'Seal Assembly Replacement Parts List Label' is located directly above the serial number nameplate. It gives quick reference ordering information for consumable parts and wear parts used specifically in the seal assembly.

13.2 *For Parts Ordering*

RENNCO **PACKAGING MACHINES AND SYSTEMS**

P.O. BOX 116, 23721 M-60 WEST, HOMER, MICHIGAN 49245

Toll Free Parts / Service: 800-701-1343

Toll Free Parts Fax: 888-390-8930

Phone: 517-568-4121

Fax: 517-568-4798

www.rennco.com

Parts Website: rennco.parts.com

13.3 *RENNCO Returned Goods Authorization (RGA) policy*

When returning parts to Rennco for any reason:

- Call Rennco parts department at 800-701-1343 and request an RGA number.
- Parts must be returned in their original packaging, must arrive undamaged, with all component parts intact, and within 6 months of original shipment.
- Parts returned after 6 months must be inspected before credit can be issued. In this case credit can be issued only if manufactured parts are current design and if purchased parts are current stock.
- If parts are special order, credit will be issued only if parts can be returned to our vendor. A 25% restocking charge applies.
- Mark the shipping container with the RGA number, and the shipment must include a copy of the original invoice and packing slip and a description of why the parts are being returned.

If you have questions, or we can be of assistance in any way, please feel free to contact us.

14 Recommended Spare Parts List

1) The recommendations are based on the part being a wear part, the number of parts used on the system, and the long-term likelihood of a part being wear item.

2) The parts in the recommended spare parts list are the parts that should be kept in stock for quick repairs. Keeping these parts in stock will help ensure that the machine remains productive.

NOTE: The same part number may be listed by several different sub-assemblies. It is not necessary to order a part for each sub-assembly.

3) Almost all of the parts listed are stocked by Rennco and can be shipped on the same day that they are ordered.

4) All prices are subject to change without notice.

14.1 *EPAC Packager*

Frame			
BOM	**Part #**	**Description**	**Qty**
M0028836	P0005191	BANNER HINGE SWITCH SI-HG80DQDR REAR	1
M0028836	P0005817	BANNER MICRO QD CABLE 5M 90 DEGREE	1
Film Feed			
BOM	**Part #**	**Description**	**Qty**
M0028873	P0000437	GEAR BELT 240L050	1
M0028873	P0005715	A-B SERVO MOTOR MPL-A320	1
Seal Jaw Assembly			
BOM	**Part #**	**Description**	**Qty**
M0029151	P0005643	SPRING .48 OD X .50 LG X .063 W DIA	2
M0029151	P0005731	SPRING .847 OD X .100 WIRE DIA	5
M0029151	1431AA	SILICONE GRIPPER MATL	0
M0029151	P0005732	A-B PROX SWITCH MICRO QD NPN	2
M0029151	P0003615	CABLE STRAIGHT A-B MICRO 4-PIN 10m	2
Trim Wind-Up			
BOM	**Part #**	**Description**	**Qty**
M0029247	P0005191	BANNER HINGE SWITCH SI-HG80DQDR REAR	1
M0029247	P0005433	BODINE GEARMOTOR	1
M0029247	M0029252	DRIVE BELT	1
M0029247	P0005817	BANNER MICRO QD CABLE 5M 90 DEGREE	1
"Z" Discharge Conveyor			
BOM	**Part #**	**Description**	**Qty**
M0030765	P0005651	MOTOR GEAR DAYTON AC	1
M0030765	P0004639	BELT 30" L 300H100	1
M0030765	P0003686	RELAY 24vdc DIN MECH CONTACT	1
M0030765	P0000028	FUSE CERAMIC 3A	1

Sealing Parts			
BOM	**Part #**	**Description**	**Qty**
M0032668	M0029830E	20" HORIZONTAL CUTTING RULE	1
M0032668	M0029831E	14" VERTICAL CUTTING RULE	1
M0032668	M0029834E	20" HORIZONTAL MUSHROOM INSERT	1
M0032668	M0029835E	14" VERTICAL MUSHROOM INSERT	1
M0032668	M0029838E	20" HORIZONTAL POLY SEAL BAR INSERT	1
M0032668	M0029839E	14" VERTICAL POLY SEAL BAR INSERT	1
M0032668	M0031729P26	1/4"DIA X 14" CABLE HTR 120V 475W	1
M0032668	M0031729P28	1/4"DIA X 20" CABLE HEATER 120V 475W	1
M0032668	R32611AA	RUBBER BACK UP FOAM ORANGE	0
M0032668	M0026377	TEFLON TAPE 5/8 X 36 YD ROLL ACRYLIC	0
M0032668	M0026385P7	.04x.45x21.625 FLAT BU HEATER	1
M0032668	M0026385P5	.04X.45x15.25 FLAT BU HEATER	1
Electrics			
BOM	**Part #**	**Description**	**Qty**
M0033065	P0000027	FUSE CERAMIC 5A	2
M0033065	P0000028	FUSE CERAMIC 3A	1
M0033065	P0000157	FUSE TIME DELAY 10 AMP	1
M0033065	P0000189	FUSE CERAMIC 2A	2
M0033065	P0000567	FUSE CERAMIC 1 AMP	1
M0033065	P0001413	FUSE 3A	1
M0033065	P0003686	RELAY 24vdc DIN MECH CONTACT	2
M0033065	P0005195	FUSE TIME DELAY 3 AMP	1
M0033065	P0005394	WEIDMULLER RELAY	1
M0033065	P0005754	AB ULTRA 3000 SERVO DRIVE 2KW	1
M0033065	P0005755	AB ULTRA 3000 S	1
Guarding			
BOM	**Part #**	**Description**	**Qty**
M0033893	P0006078	A-B GUARD SWITCH 2NC	1
M0033893	P0004195	90 DEGREE AB CORDSET 4 PIN	1
Servo Linkage Jaw Drive			
BOM	**Part #**	**Description**	**Qty**
M0036972	P0005715	A-B SERVO MOTOR MPL-A320	1
M0036972	P0005732	A-B PROX SWITCH MICRO QD NPN	2
M0036972	P0003615	CABLE STRAIGHT A-B MICRO 4-PIN 10m	2

15 Circuit Specifications and Data Sheets

Electric Circuits and Program

Special Assembly Drawings

Original Equipment Manufacturer Manuals

MISCELLANEOUS PLC, CONTROLS, POWER SUPPLY AND SENSOR MANUALS