ARPAC®

OUR INTEGRATION — YOUR SUCCESS

Operation and Maintenance Manual

Model: XLR8

January 2014

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Record of Revisions

Revision History

REV	Date	Reason for Change
A	5-25-2010	Original

Table i-1. Revision History

List of Affected Pages

Page Number	Rev Level	Page Number	Rev Level	Page Number	Rev Level
All	A				

Table i-2. List of Affected Pages

Warranty Information

ARPAC warrants the Products of its manufacture to be free from defects in material or workmanship for a period of one year from date of shipment from ARPAC's factory, provided that:

1. Such equipment is given normal and proper usage.
2. It is still owned by the original buyer.
3. The Products have been operated in accordance with generally approved practice and in accordance with ARPAC's specifications and instructions.
4. No repairs, alterations, or replacements have been made by others without ARPAC's prior written approval.
5. Genuine ARPAC repair components are used during the warranty period.

ARPAC's liability under this warranty or in connection with any other claim relating to the Products shall be limited to the repair or, at ARPAC's option, the replacement of any Products, parts or components thereof which are returned to ARPAC freight prepaid and which are defective in material or workmanship.

The Buyer shall notify ARPAC immediately of any defective parts and ARPAC shall thereupon correct the defect or defects. If such correction requires the replacement of a defective part or parts, ARPAC will supply same F.O.B. its factory.

If warranty parts are required, ARPAC will, at its discretion, repair or replace any defective parts with a charge to a valid purchase order number. Defective parts, with a valid Return Material Authorization number obtained from ARPAC's service department, must be returned to ARPAC within thirty (30) days of warranty part shipment, freight prepaid, to receive a credit to this purchase order number. Failure to do so will result in zero credit being applied to the original P.O. or may void this warranty. All returned parts are subject to factory inspection. ARPAC reserves the right to determine the cause of failure and the subsequent inclusion of the replacement part under this warranty. Defective parts that have been disassembled or damaged during removal or otherwise tampered with will not be covered under this warranty.

Damage caused during transport is the responsibility of the carrier and is not covered under this warranty. All damages detected upon receipt of equipment should be reported immediately to the carrier and ARPAC should be notified.

ARPAC shall in no event be held liable for any direct, indirect, incidental or consequential damage, losses, expenses or delay caused by defective parts and will not accept any charges for work performed by Buyer in making adjustments or repairs to the Products unless such work has been authorized in writing by ARPAC. Except as stated herein, ARPAC makes no other warranty, expressed or implied, nor does it assume or authorize anyone else to assume for it, any other obligation relating to our products or any products.

Any Product or component not of ARPAC's own manufacture is not covered by this warranty and is sold to Buyer only with such warranty, if any, as is provided by such manufacturer, to the extent ARPAC and its assigns are able or entitled to enforce such warranty. Such items are not warranted by ARPAC in any way.

When components are sold to be assembled in combination of Buyer's design, the warranty shall be limited to each separate component and shall not apply to any combinations or components.

EXCEPT AS EXPRESSLY STATED ABOVE, ARPAC MAKES NO WARRANTY, EXPRESS OR IMPLIED, WHETHER OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OR USE OR OTHERWISE, ON THE PRODUCTS, OR ANY PARTS OR LABOR FURNISHED DURING THE SALE, DELIVERY OR SERVICING OF THE PRODUCTS.

ARPAC factory trained, qualified technical services personnel are available for start-up and instructional assistance. If the customer does not utilize ARPAC personnel for this function, ARPAC is only liable for replacement of defective parts, not for labor or expenses necessary to adjust any problems during the start-up period.

ARPAC personnel are available for ARPAC equipment training, either on-site/ hands on or in classroom environment, supported by visual aids and literature, to be contracted for by a separate purchase order.

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Notes

Safety Information

2

2.1 Introduction

Every effort has been made by ARPAC to provide you with a safe machine. This section describes the safety precautions that should be taken when working with, on or around the equipment. It is essential that machine operators and maintenance personnel follow the safety information below.

2.2 Personnel Instructions

Warning

Make sure that you wear safety goggles and other personal protective equipment according to your company's safety standards when operating this machine. You may get injured if you do not.

Warning

Make sure that all power is disconnected from machine and machine has cooled to room temperature before servicing it. You may get severely injured if you do not.

Warning

Only use non-flammable, non-aerosol cleaning solvents to clean heat tunnel area. Also make sure that machine has cooled to room temperature before cleaning it. You may get severely injured or burned if you do not.

Warning

If machine stops with product in it, immediately push product out with a stick, board, etc. Product may catch fire or explode if you do not. Do not try to push product out with your hands. You may get injured or burned if you do.

2.3 Interfacing Equipment

Observe all applicable codes when interfacing this equipment to other equipment. Specific attention must be paid to any PINCH POINTS that may be created and the prevention of an UNINTENDED RESTART of the equipment when the electrical interlocks shut it down.

2.4 Statement of Liability

While this machine has been designed for safe operation, improper operation or carelessness may result in serious injury or damage to equipment. The manufacturer or its agents and representatives assume no responsibility for the following:

1. Injury or danger from improper use of the machine.
2. Problems or hazards resulting from failure to maintain the equipment as specified in this manual.
3. Equipment which has been tampered with or modified. Arpac is not liable for any damage or injury arising from failure to follow the instructions and procedures provided within the manuals or associated informational material, or from user failure to use caution when installing, operating, adjusting, or servicing this machine. Arpac is not liable for damage or injury arising from the use of this product for any other use than that intended by the manufacturer.

2.5 Safety Conventions Used in this Manual

Specific safety information is listed in this manual in the form of WARNING and CAUTION statements. Pay close attention to these statements - they contain important information on avoiding potential hazards to you or the equipment.

2.5.1 Warning Statements

- are used to indicate hazards or unsafe practices which COULD result in severe personal injury or death.
- appear in **bold** type.
- have a triangular symbol with an exclamation point above the text.
- are preceded by the word **Warning**.
- are always found before the step or piece of information to which they refer to.
- look like the following example:

Warning

Make sure that all power is disconnected from machine according to Section 2.7 and machine has cooled to room temperature before servicing it. You may get severely injured if you do not.

2.5.2 Caution Statements

- are used to indicate hazards or unsafe practices which could result in minor personal injury or product or property damage.
- appear in **bold** type.
- have a triangular symbol with an exclamation point above the text.
- are preceded by the word **Caution.**
- are always found before the step or piece of information to which they refer to.
- look like the following example:

Caution

Remove shipping bolts before operating machine. Machine may get damaged if you do not.

2.6 Safety Labels

The labels shown below are placed at various locations around the machine. They are self explanatory.

Figure 2-1. Machine Safety Labels

2.7 Lockout/Tagout Procedure

Before servicing the machine, make sure that it's power is locked out and tagged as follows:

1. Notify all affected employees that machine is going to be locked out.
2. Turn the main disconnect switch (1 in Figure 2-2).

Figure 2-2. Main Disconnect Switch

3 Place padlock (1 in Figure 2-3) though switch and lock it.

4 Place tag (2) on switch that includes the name of the person who locked machine out.

5 After completing maintenance, remove lock and tag and notify all affected employees that machine is back in service.

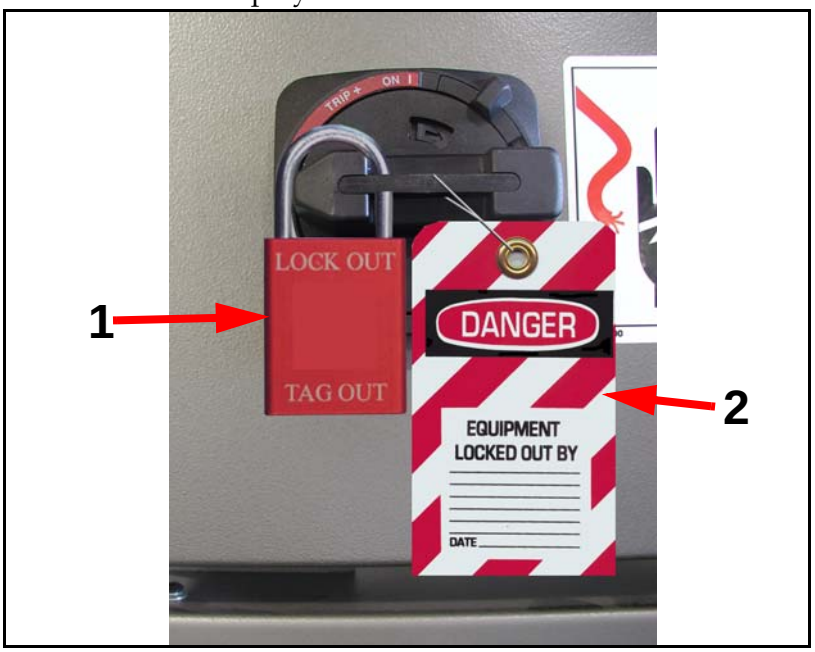


Figure 2-3. Lock & Tag

6 Press main air valve (1 in Figure 2-4.) down to turn it off.

7 Place padlock (2) though main air valve and lock it.

8 Place tag (3) on switch that includes the name of the person who locked machine out.

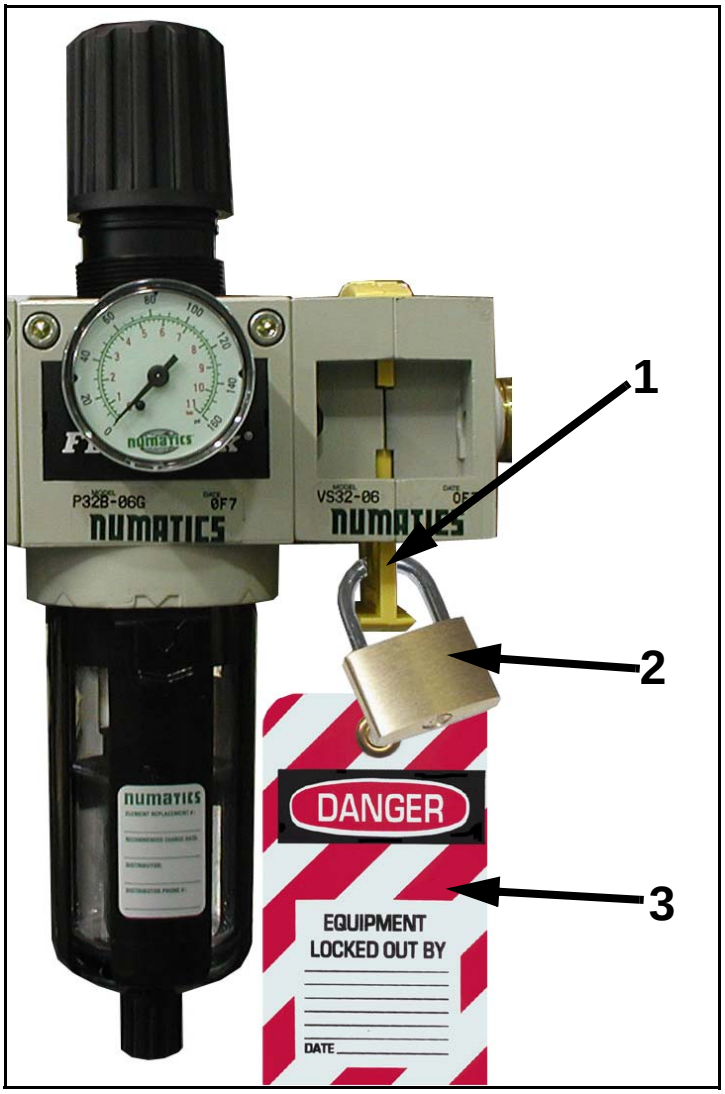


Figure 2-4. Pneumatic Lock & Tag (Typical)

2.8 EMERGENCY STOP Buttons

There are several EMERGENCY STOP buttons located on the machine. Pressing any of these buttons will immediately stop the machine and drop all electrical power to the machine except the machine's internal controls.

The machine cannot be restarted until all EMERGENCY BUTTONS are pulled up and the CYCLE STOP RESET button on the main control panel has been pressed.

Figure 2-5. Typical EMERGENCY STOP Button and Button Locations

2.9 Guard Door Switches

Each guard door on the machine is equipped with a safety interlock switch. When a guard door is open, all moving components on the machine will immediately stop. Power to the heating elements and seal bars, however, will remain on and those components will remain hot.

The machine cannot be restarted until all guard doors are closed and the CYCLE STOP RESET button on the main control panel has been pressed.

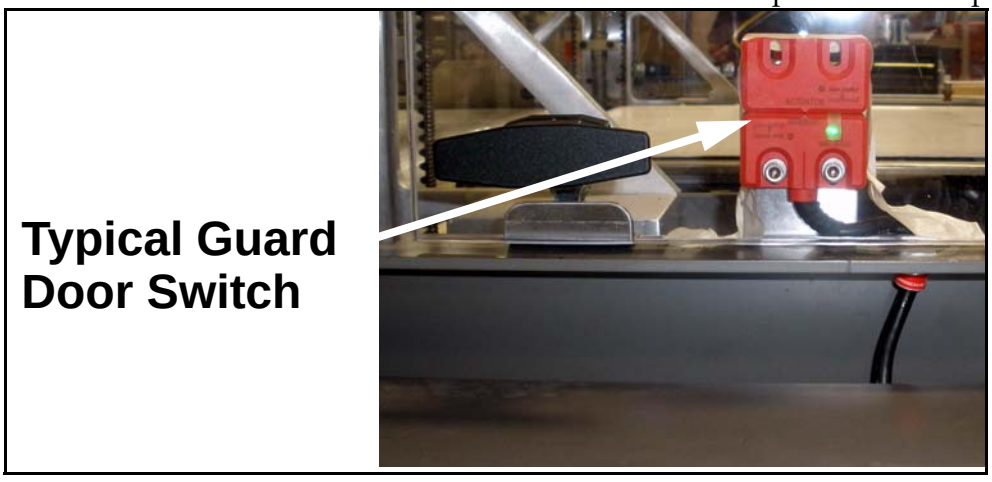


Figure 2-6. Typical Guard Door Switch

Introduction

3

3.1 Introduction

This manual provides installation, operation and service information for the XLR8 side seal horizontal shrink wrapper. This manual also includes a spare parts list for the machine.

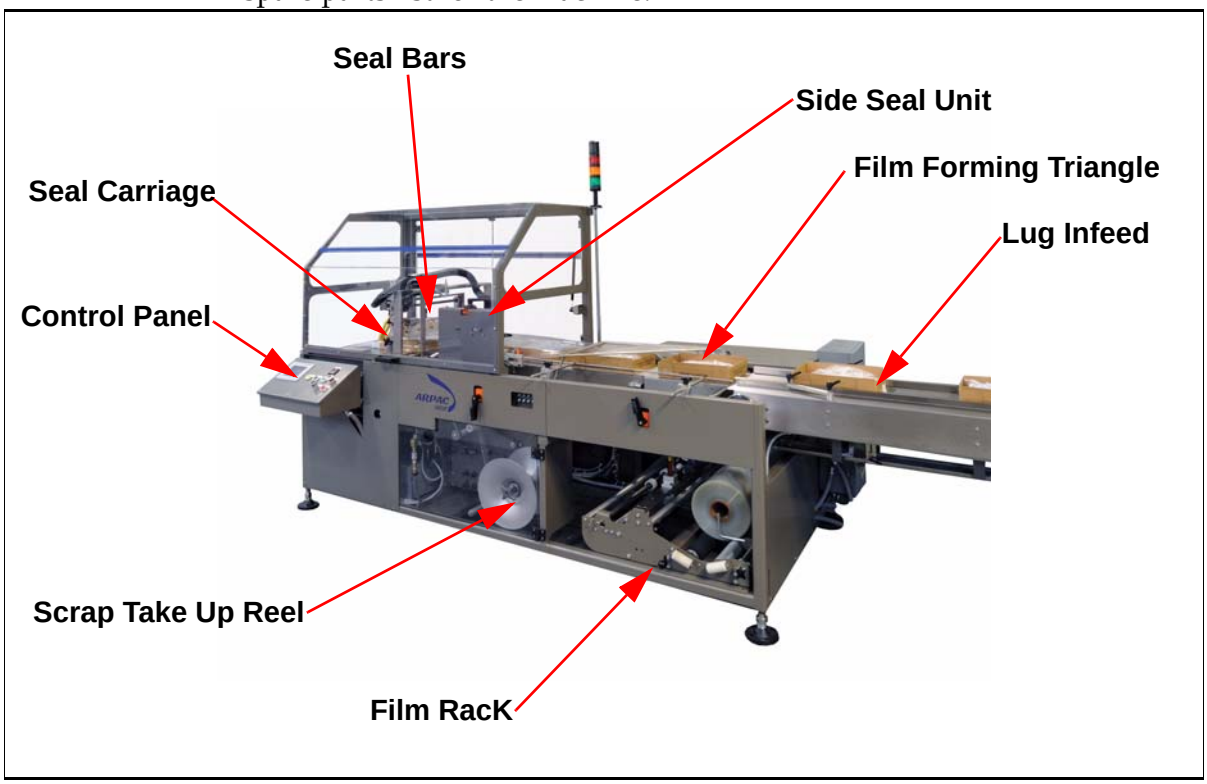


Figure 3-1. XLR8 Side Seal Horizontal Shrink Wrapper

3.2 Machine Features

The XLR8 side seal horizontal shrink wrapper is one of the most versatile, servo-driven packaging machines on the market today. It is capable of wrapping up to 100 packages per minute in clear or print registered film. This continuous motion XLR8 film folding system eliminates the need for multiple forming heads with its adjustable film former. Unlike conventional film inverters, the XLR8 film path ensures equal transfer of grouped products onto the film without skewing the product configuration making it ideal for multipacks and irregular shaped products.

Multi-axis servo-driven operation offers precise electronic control for immediate and accurate sealing action, ensuring strong, consistent seals. The seal opening height is electronically programmed to vary with product height, maximizing output speeds for smaller products. The servo pouch length adjustment enables "on-the-fly" bag length changes without changing the flight spacing.

All adjustments are made from the operator side of the machine and product changeovers can be completed quickly and easily.

The XLR8 uses single wound film which is less costly than centerfolded rolls and increases uptime efficiency. A unique side sealing mechanism ensures strong attractive trim seals using polyolefin, PVC, Shrink Box or polyethylene shrink film. The XLR8's cross-seal system uses a hot knife seal and cut-off, with a precision temperature control that maintains accurate heat settings.

An independently driven scrap removal system compacts excess film. A side loading film cradle allows easy roll loading and reduces film changeover time. Located beneath the film forming table, the film requires no additional floor space. Compact in design, the XLR8 is easily integrated into any existing production environment.

Figure 3-2. Products

3.2.1 Features

- Heavy-duty rugged construction for high durability and around-the clock operation.
- Laser cut and CNC machined components for maximum precision and strength
- Steel-It paint provides a scratch resistant surface and prevents corrosion
- Horizontal/vertical cross seal
- Allen-Bradley® programmable logic controller
- ARPACs operator interface with color touchscreen, message display and self-diagnostics
- Guards and control box doors are electrically interlocked
- 6′ flighted infeed with safety torque limiter
- Adjustable film forming head
- Continuous motion seal head for smooth product transitions
- 8″ seal bar opening
- Slide out film rack with needle wheel air evacuation assembly
- Missing product detection
- NEMA 12 main electrical cabinet and controls
- Rapid hand wheel changeover
- Evenly wound trim removal system compacts film trim for easy disposal
- Relaxed film tension at cross seal
- Central point lubrication simplifies preventive maintenance
- Low film alert warns that a film changeover will soon be necessary

3.2.2 Applications

The TS37's unique side seal process keeps package graphics distortion-free with neatly formed trim seals created extremely close to the product. The TS37 is perfect for artwork, mailers, compact discs and low-profile stacks of paper products such as napkins and greeting cards. This flexible system is also ideal for tall products such as bottles when utilizing the vertical sealing system, and optional film support former.

- Bottles
- Mailers
- Cosmetics
- Games
- Spray cans
- Paper products
- Food products
- Pharmaceutical
- Multipacks
- Linens
- Toys
- Hardware
- Software

3.2.3 Options

- Belted infeed
- Seal jaw bridge
- Extended flighted infeed
- Random & infinite length infeeds
- Stainless steel construction
- Low pressure roller infeed with automatic speed zone control
- Application specific infeeds
- Print registered film capability
- Pneumatic hole punch system
- Easy open film perforation system
- 460V, 3Ph, 15A

3.3 Dimensions

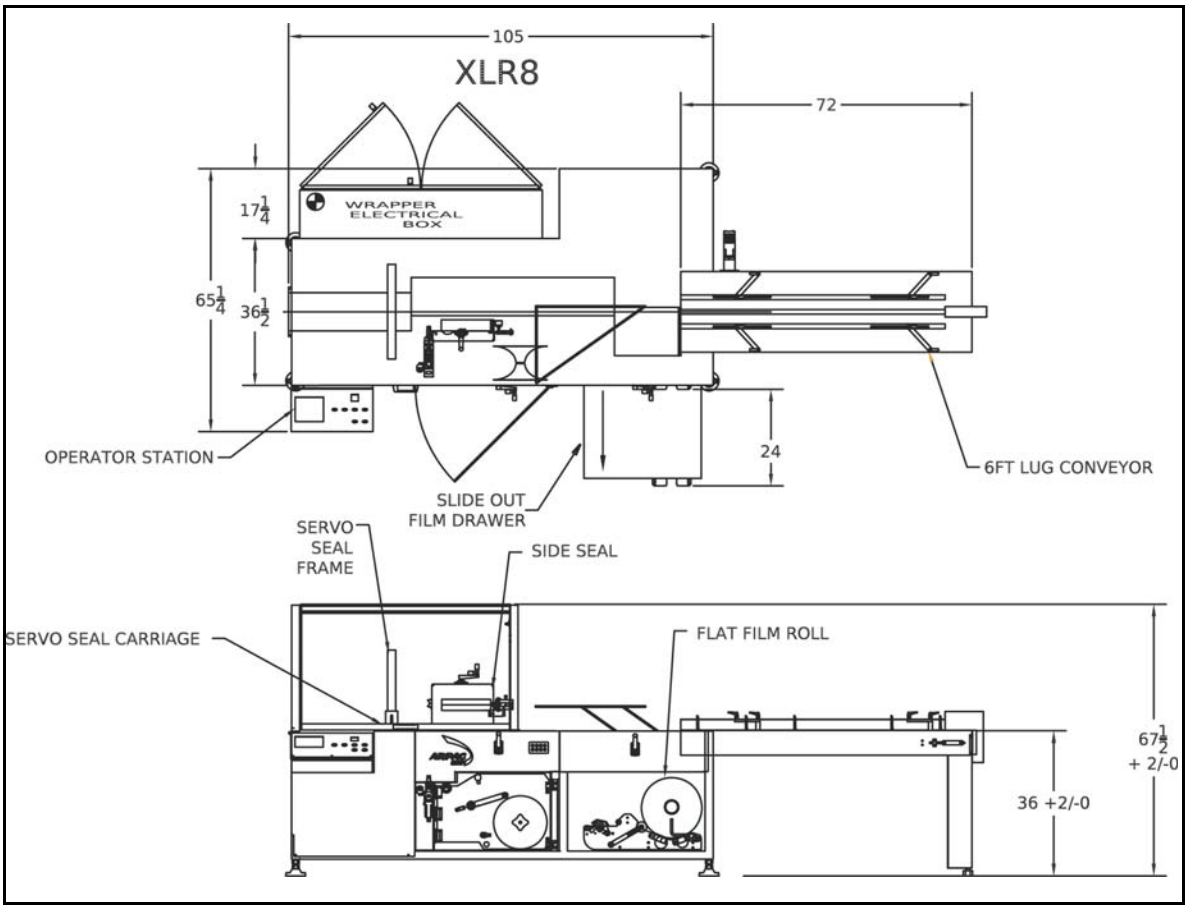


Figure 3-3. Dimensions

3.4 Specifications

Specifications	
Power Requirements:	Electrical: 230V, 1Ph, 22A Pneumatic: 80 psi, 5 SCFM
Film	Max. film width: 39” single-wound Max film roll diameter: 14”
Product Size: Seal Bar (vertical)	Width: 2” - 7.5” Length: 3 1/2” - 60” Height 2” - 12”
Product Size: Seal Bar (horizontal)	Width: 2” - 16” Length: 3 1/2” - 60” Height: 1/4” - 7.5”
Speed	Output speed: up to 80 packages per minute (based on product specs) Output speed: up to 90 linear feet per minute
Relative Humidity Limits	
Atmospheric Limits	
Weight	
Certifications:	UL
No user serviceable parts	

Table 3-1: Specifications

NOTE: Specifications and product sizes may vary, depending upon the application. Max. package dimensions cannot occur together.

3.5 Abbreviations

%	Percent
° C	Degree Celsius
cm	Centimeter
° F	Degree Fahrenheit
Kg	Kilogram
Lb	Pound
M	Meter
max.	Maximum
min.	Minimum
mm	Millimeter
UL	Underwriters Laboratories

3.6 Mechanical Sub-Assemblies

This section gives a brief overview of the equipment and its functions under normal production conditions.

3.6.1 Film Feed System

The film feed system consists of the following major components:

3.6.1.1 Film Rack

This machine has an inline-mounted telescoping cradle type film rack capable of holding one 10″roll of film. This assembly is located under the film forming area of the wrapper. Its purpose is to hold the film roll in place without interfering with the unwinding of the film.

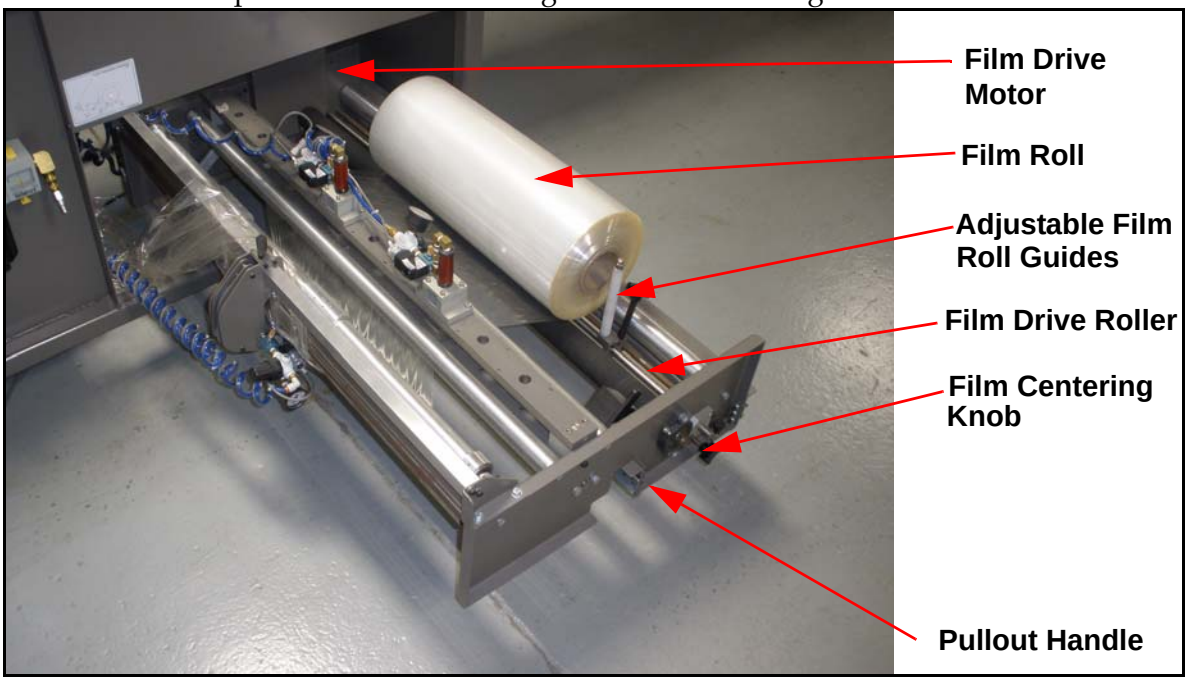


Figure 3-4. Film Rack

The film is placed into the cradle, which consists of the rubber lagged drive roller and a plated idler roller. The film is then threaded through the dancer bar, a series of guide rollers and then through the perforator roller.

Two adjustable film roll guides hold the film roll in place. These are used to center the roll of film before placing the machine into the cycle mode.

An adjustable centering knob located on the outside of the film rack allows for approximately 2″ of additional film centering adjustment. If the film begins to track to one side or the other while the machine is in the cycle mode, use the adjustable centering handle to re-center it.

Warning

Film rolls are very heavy. Keep your clothes and body parts clear of the film rack film journals while loading rolls of film. Refer to your company handbook for proper lifting procedures.

3.6.1.2 Film Feed

The film feed consists of a lagged roller, an electric drive motor and a potentiometer. It is located on the film cradle assembly under the film former. The purpose of the film feed is to move the film from the film roll and feed it to the dancer bar assembly.

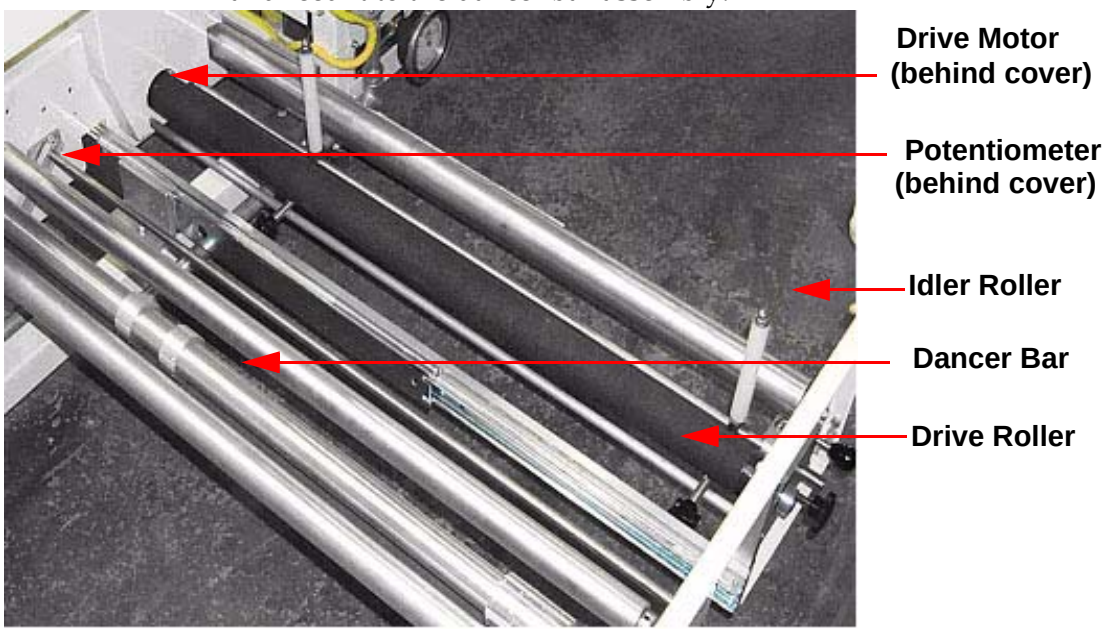


Figure 3-5. Film Feed

A roll of film is placed on the film cradle and threaded through the film feed system. Notice that one of the film cradle rollers has rubber lagging and does not turn freely. This is the film feed drive roller. A potentiometer connected to the dancer bar, controls the speed of the film feed drive motor. As product travels through the film former, it puts a demand on the film, causing the dancer arm to pivot upward. This action rotates the potentiometer which turns on the film feed drive motor and causes film to be fed to the dancer bar. When enough film has been fed, the dancer bar pivots downward thus changing the potentiometer setting and slowing down or stopping the film feed rollers. This process continues while the machine is in the cycle mode.

NOTE: This process happens so quickly that it appears the dancer bar is not moving and the drive motor is running at a constant speed.

3.6.1.3 Perforator

The perforator is a mechanical device located on the film rack. It consists of a series of pinwheels mounted to the upper pinch roller. The perforator wheels have pins facing outward held against a lower rubber-coated pinch roller. The perforator assembly makes a pattern of small pinholes in the film for air to escape during the shrink wrapping process.

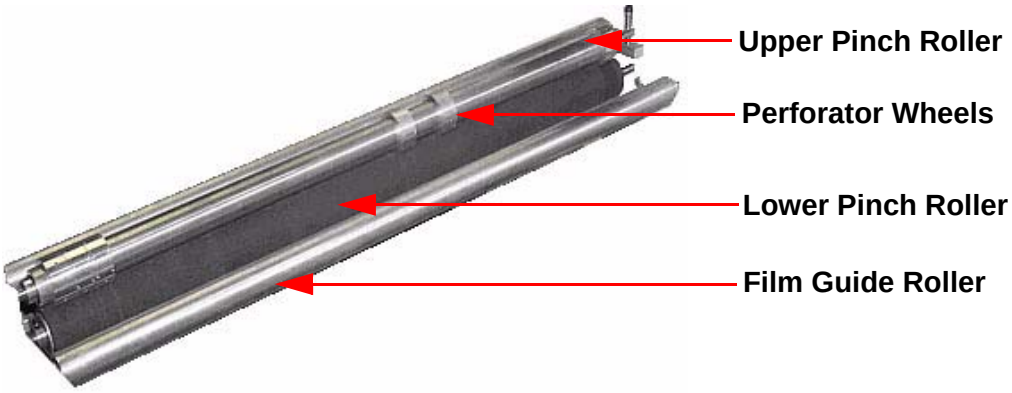


Figure 3-6. Perforator

The film is threaded from the dancer bar and through the perforator pinch rollers. When film is required the rollers rotate, and the perforator pins poke holes in the film. The holes allow any trapped air to escape after the product has been sealed and run through the tunnel. This in turn allows the film to shrink tightly around the products.

NOTE: This assembly was designed to perforate film up to 125-gauge polyolefin or PVC. If an application requires thicker film, then it is recommended that you pre-perforated film. This unit does not reliably perforate polyethylene film thicker than 1 mil.

3.6.1.4 Hole Punch (optional)

The hold punch is a solenoid-controlled pneumatic device located on the film rack. The film hole punch is used to punch 1/8" holes in the film that allow for air to escape during the shrink wrapping of the products. The hole punch mechanism consists of a metal punch (stamp), mounted to an air cylinder.

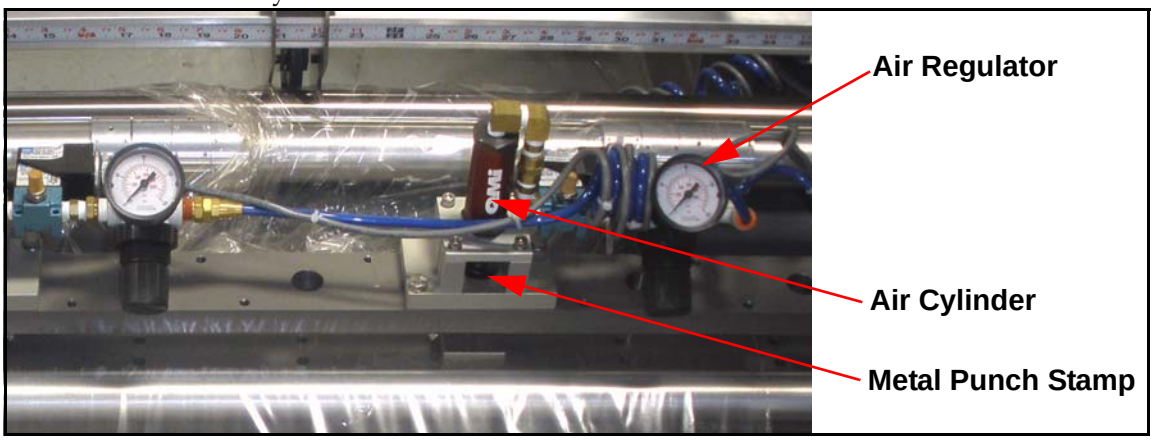


Figure 3-7. Hole Punch (optional)

The film is fed through the hole punch assembly between the upper and lower hole punch blocks. The hole punch mechanism runs when the infeed conveyor runs. As the infeed conveyor pushes product through the film-forming plow, a demand is put on the film which pulls the film through the hole punch assembly. As film passes through, the air cylinders drive the stamps through the film, piercing it with 1/8" hold. When the infeed conveyor stops, there is no demand for film, and the hole punch stops. A flow control valve controls the force used to punch the holes in the film.

3.6.1.5 Dancer Bar

The dancer bar is located in the film rack just after the film feed rollers. This assembly provides the necessary tension to encase the product in film by creating a reservoir of film under constant light tension.

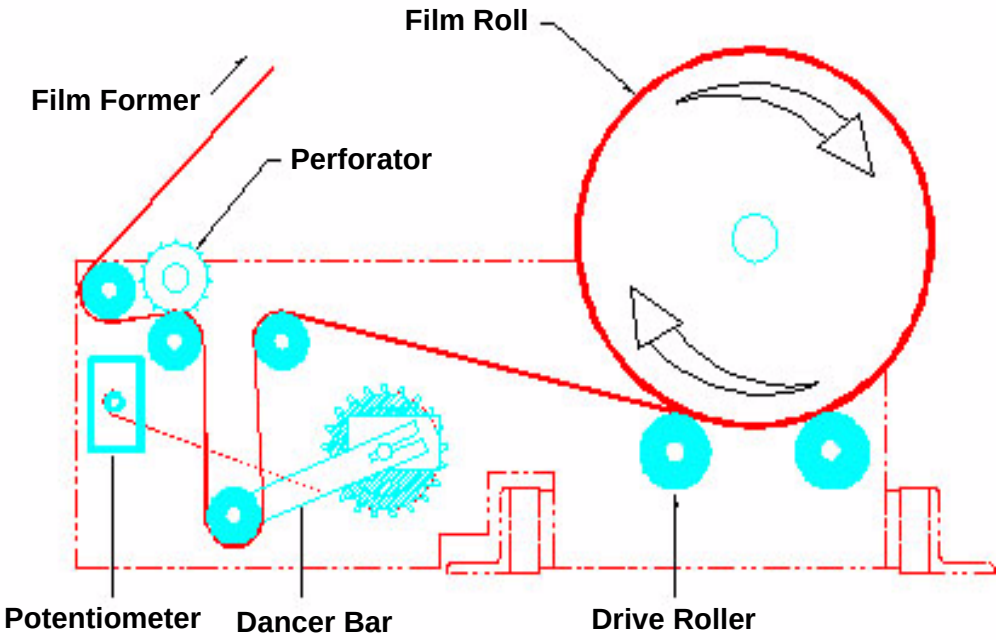


Figure 3-8. Dancer Bar

A roll of film is placed on the film cradle and threaded through the film feed system. The film feed drive roller has rubber lagging. A potentiometer connected to the dancer bar, controls the speed of the film feed drive motor. As product travels through the film former, it puts a demand on the film, causing the dancer arm to pivot upward. This action rotates the potentiometer which turns on the film feed drive motor and causes film to be fed to the dancer bar. When enough film has been fed, the dancer bar pivots downward thus changing the potentiometer setting and slowing down or stopping the film feed rollers. This process continues while the machine is in the cycle mode.

NOTE: This process happens so quickly that it appears the dancer bar is not moving and the drive motor is running at a constant speed.

3.6.2 Film Former

The film former is a metal device used to change the direction of the film. This type of film former is called an inverting head and consists of a forming triangle, a folding rod, a forming table and a product guide. It is located after the infeed lug conveyor above the film rack. The film former wraps the film around each product with a seal running the length of one side of the product. This method eliminates the need for a dual film feed system.

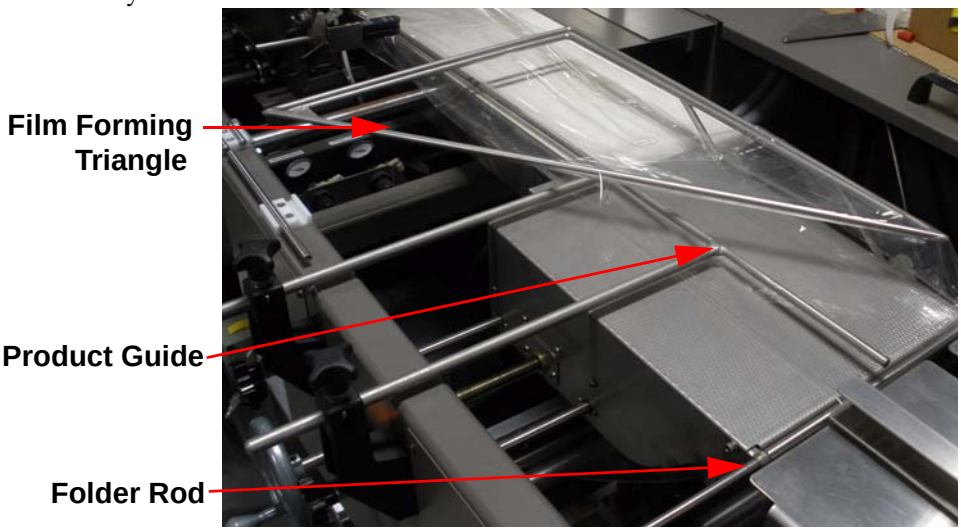


Figure 3-9. Film Former

The infeed lug conveyor pushes products onto the film-forming table and through the film former where the products are encased in film. The forming table supports the product as it moves into the sleeve of film. The film-forming triangle works in conjunction with the film-forming rod to fold the film.

The product guide is mounted to the wrapper frame near the forming table on the operator side of the machine. It guides the products through the film former and the trim seal unit.

3.6.3 Print Registration (optional)

The print registration system uses two photo eyes to accurately monitor the film for exact placement of film on top of the products. This assembly incorporates the servo-driven infeed lug conveyor, a film registration photo eye mounted on an adjustable platform near the trim seal unit, a control unit, and a lug detect photo eye mounted underneath the infeed lug conveyor.

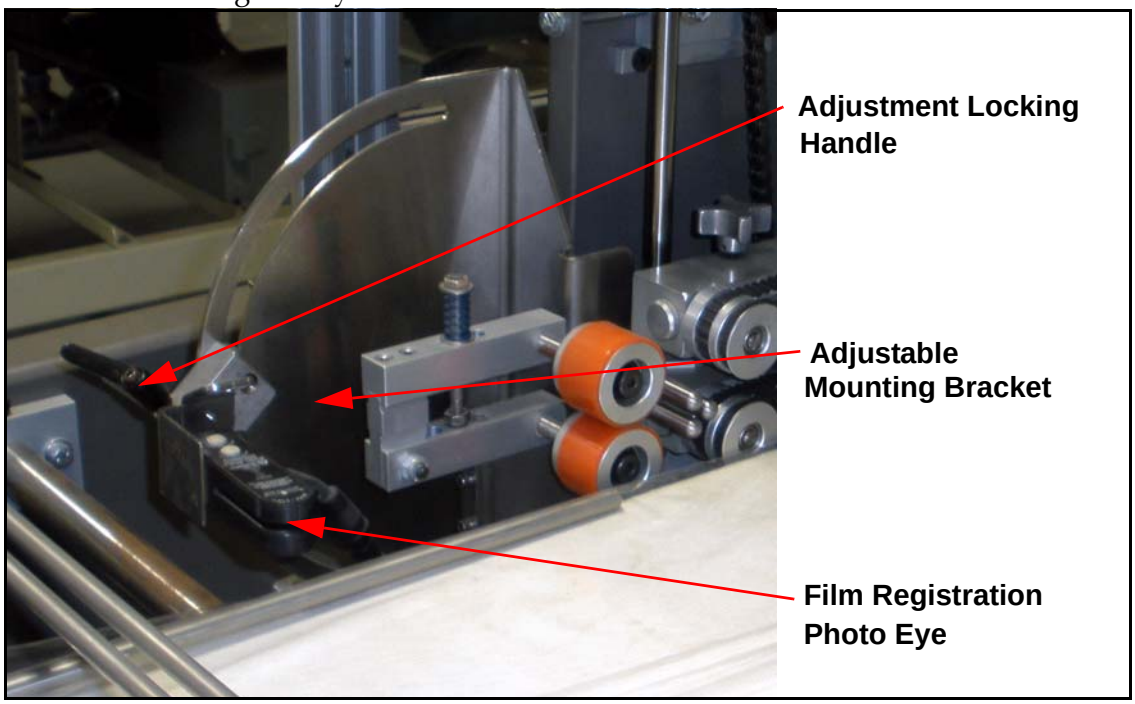


Figure 3-10. Print Registration (optional)

Products are placed in front of the lugs and are carried to the film former assembly. As products exit the conveyor, the lugs pivot on the chain and are carried under the metal table where they ascend again behind incoming products at the front of the machine to begin the cycle again.

The film registration photo eye is to be positioned so that the film registration mark on the film passes directly under it. The adjustable bracket allows the film registration photo eye to be adjusted for different width films and different size products.

Figure 3-11. Lug Detect Photo Eye

A film registration mark passes the photo eye. The photo eye senses the mark and sends a signal to the infeed lug conveyor servo. The servo records the position of the film registration mark. This signal and a signal from the infeed lug conveyor are used to adjust the speed of the infeed lug conveyor for proper positioning of the product inside the film.

The operating sequence for printed film is as follows:

a. The film registration mark passes under the eye, and the eye sends the signal to the servo. The servo records the position of the film.

b. The lug on the lug conveyor passes the lug position photo eye and sends a signal to the servo. The servo records the position of the lug, which is the position of the product.

c. The servo calculates the difference between the film and lug positions.

d. The servo increases or decreases the speed of the lug conveyor by the calculated amount. This allows for the proper placement of the film on the products.

e. This process is repeated each time a film registration mark is detected.

3.6.4 Trim Seal Unit

The trim seal unit is a mechanical device that fuses the top and bottom halves of the film for the length of the product and trims the side of the film as the product passes by on the trim seal conveyor. This assembly is driven off the main drive and is located just after the film former and before the seal frame.

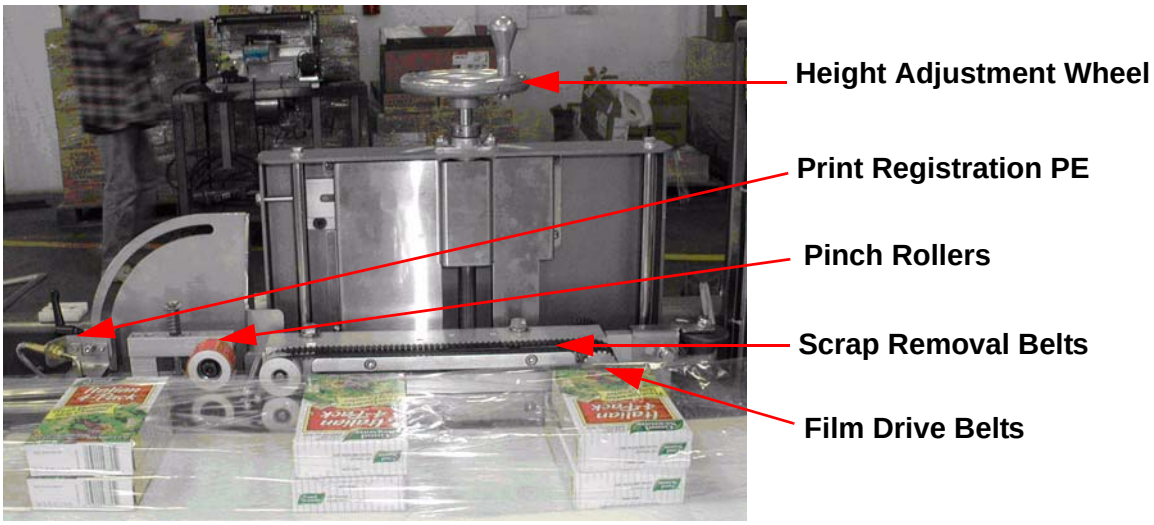


Figure 3-12. Trim Seal Unit

The film is threaded between the pinch rollers, through the guide rods, and into the timing belts. When the machine cycles the upper and lower timing belts pull the film (with the product encased) through the trim seal unit. There is a thermal sealing/cutting wire located in the lower timing belt assembly. This wire seals and cuts the film as it is pulled through.

The upper and lower timing belt assemblies work together and accurately drive the film across the thermal wire. After passing the thermal wire, the film scrap is driven with the scrap removal timing belt and is taken up by the scrap removal system. The sealed film wrapped around the product is driven by the film drive timing belt as the product moves forward.

There is a specific amount of tension between the upper and lower trim timing belts. If too much tension is applied or if the timing belts are not interconnected properly, damage will occur.

The thermal assembly is equipped with a height adjustment. It should be adjusted so that the film seal line is equal to half of the height of the products being run.

Warning

Do not put your hands or body parts in or around the trim seal assembly while the machine is in the cycle mode.

The trim seal conveyor belt is driven by a one-way bearing located on the drive shaft. It is important to disengage this before adjusting the center of the trim seal unit. To disengage this bearing, move the trim seal conveyor belt forward (or in the direction of the product flow) at least one foot. Never adjust the hand wheels while the machine is in the cycle mode.

3.6.5 Scrap Removal System

The scrap removal system removes the scrap film from the trim seal unit. It is located on the operator side of the wrapper below the trim seal assembly.

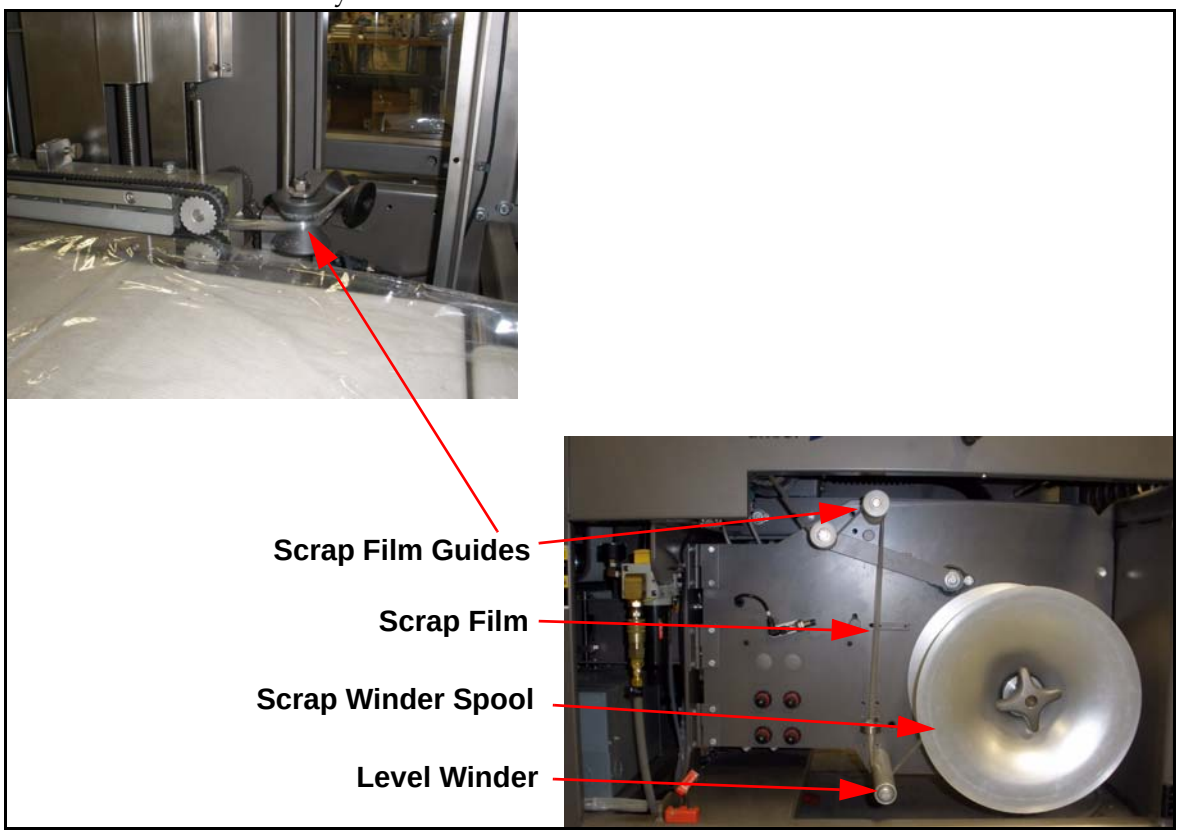


Figure 3-13. Scrap Removal System

The scrap film moves around two guides and through the level winder ring. An air cylinder moves this ring back and forth across an idle roller and the width of the scrap film reel to evenly distribute the scrap on the spool.

3.6.6 Seal Assembly

The seal assembly consists of the main parts of the machine required to seal the products in the film. This assembly is one of the most important assemblies on the machine. It is in this area that the product is sealed in the film.

The seal bars cut and fuse the film before and after each product, creating a film sleeve around the product. The cutting of the film must be complete and accurate. If the film is not cut completely, excessive film will be pulled into the tunnel and could create a possible major problem.

The film sleeve itself must not be too large or too small. If it is too large the tunnel will not be able to shrink it properly. This will cause the film to have wrinkles and not hold the product securely. If it is too small one or both of the seals will open in the tunnel and again the product will not be held securely.

3.6.6.1 Seal Carriage

The seal carriage is the mechanical assembly that the seal frame is mounted on. It is located in the center of the wrapper. The function of the seal carriage is to move the seal frame back and forth while the machine is in cycle. This allows the product to be sealed in film without slowing down or stopping. The motion of the seal carriage is controlled by a servo motor system.

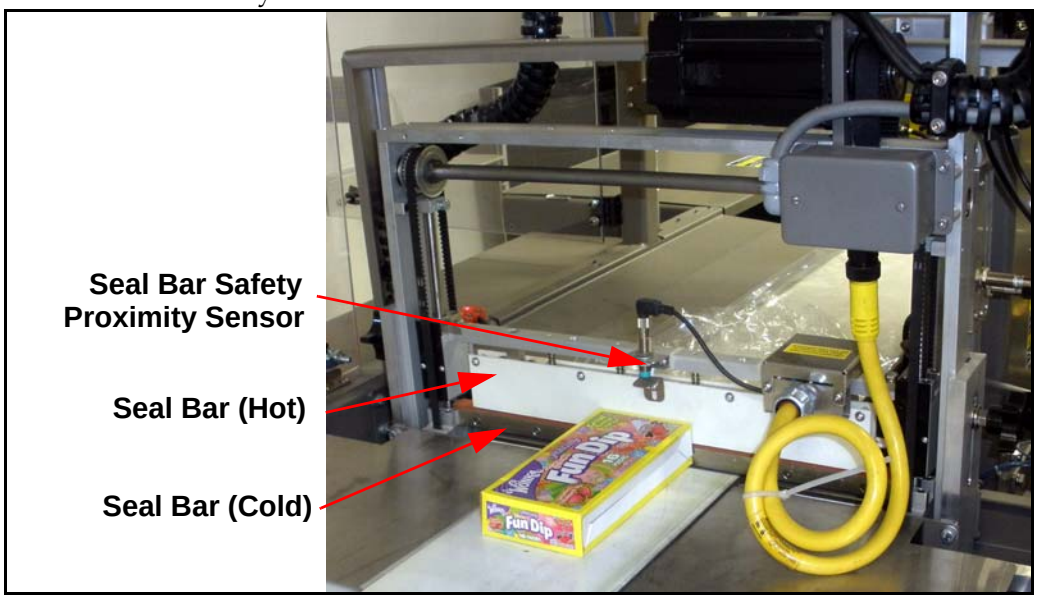


Figure 3-14. Seal Carriage

3.6.6.2 Seal Frame

The seal frame, also referred to as the seal head, is the mechanical assembly in which the seal bars are mounted. This assembly opens and closes the seal bars, sealing both ends of the plastic sleeve that has been formed around the product by the film former. An air cylinder operates the seal frame. An electric solenoid valve controls this air cylinder. Flow controls are used to control the speed of the seal bars as they open and close.

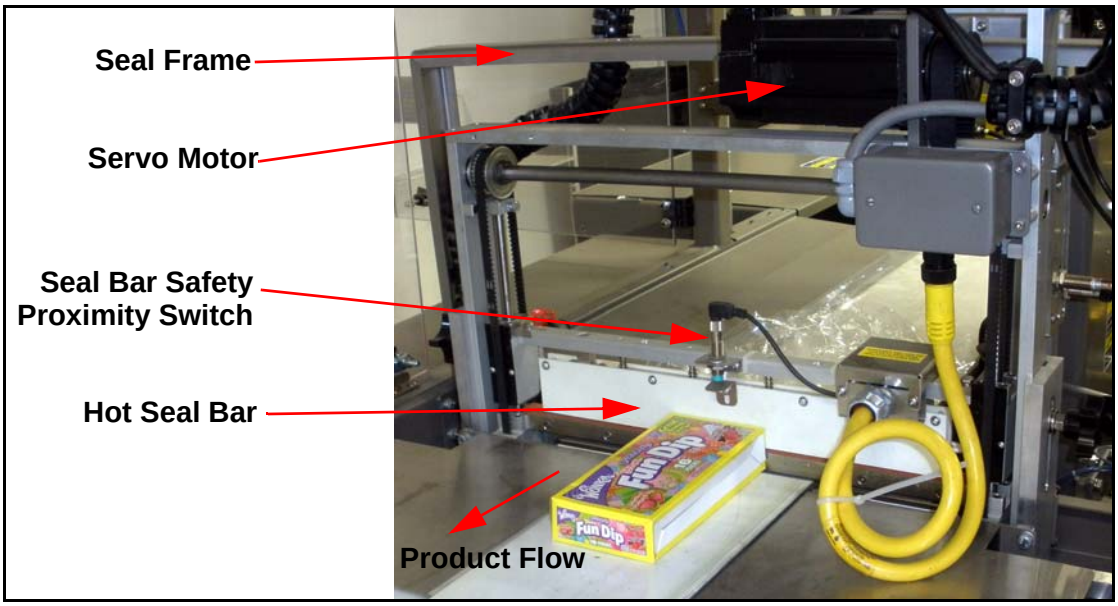


Figure 3-15. Seal Frame

The film-encased product exits the trim seal unit and passes in front of the seal carriage where the product before the seal bar photo eye becomes unblocked and the seal carriage starts moving forward. A signal is sent to the machine controller to start the seal dwell timer. The seal dwell timer times out, and the seal bars close, sealing and cutting the film simultaneously. This seals one product in the film and prepares the next section of the film for the next product.

Both the upper and lower seal carriers are guided by bushing blocks with double ball bearings at the ends of each carrier. The seal bars are driven by a servo motor.

A "seal bar safety" proximity switch mounted to the front of the seal bar works in conjunction with the "seal bars closed" proximity switches to detect the position of the seal bars. If the "seal bar safety" proximity switch is tripped before the "seal bar closed" proximity switch, the machine will stop its cycle and display an error message on the operator interface. This typically occurs when something blocks the seal bars as they are closing.

Warning

The seal frame can be hazardous to your body parts. There are hot and moving parts above and below the machine deck, when this device is activated.

Do not override any of the machine safety devices, while sealing film. Stay clear of this assembly when the machine is turned on.

3.6.6.3 Seal Bars

There are two seal bars in each machine. One is called the hot bar and the other is called the cold bar. The seal bars are mounted to carrier bars in the seal frame. The purpose of this assembly is to seal and cut the film before and after each product.

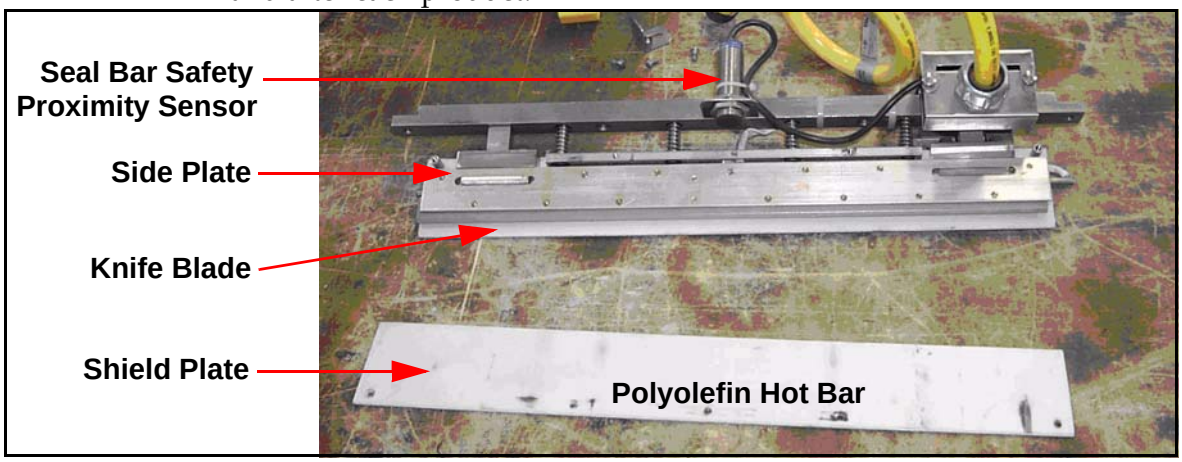


Figure 3-16. Seal Bars

The polyolefin hot bar is constructed with a solid tool steel bar with a machined knife-edge, two side plates, two shield plates, and a singular tubular heating element. This type of seal bar uses a combination of heat, pressure and dwell time to seal and cut the film. The knife does not need to be very sharp.

A panel-mounted temperature control device connected to a thermocouple located within the seal bar accurately controls the temperature of the heated surfaces. Both the actual and setpoint temperatures are displayed on this unit.

A “seal bar safety” proximity switch mounted to the front of the seal bar works in conjunction with the “seal bars closed” proximity switches to detect the position of the seal bars. If something blocks the seal bars while they are closing, the machine will stop its cycle and display an error message on the operator interface.

3.6.7 Infeed Servo Lug Conveyor

The infeed lug conveyor is an independently servo-driven chain, lug conveyor, and an encoder. Two metal plates are mounted to the sides of the machine frame and form a table. The opening between the two plates is the conveyor centerline. A series of lugs, made from a plastic-like material called Delrin, are attached to the infeed drive chain and used to carry product from the start of the machine to the film former assembly. The side guides and lugs are adjustable to accommodate a variety of product sizes.

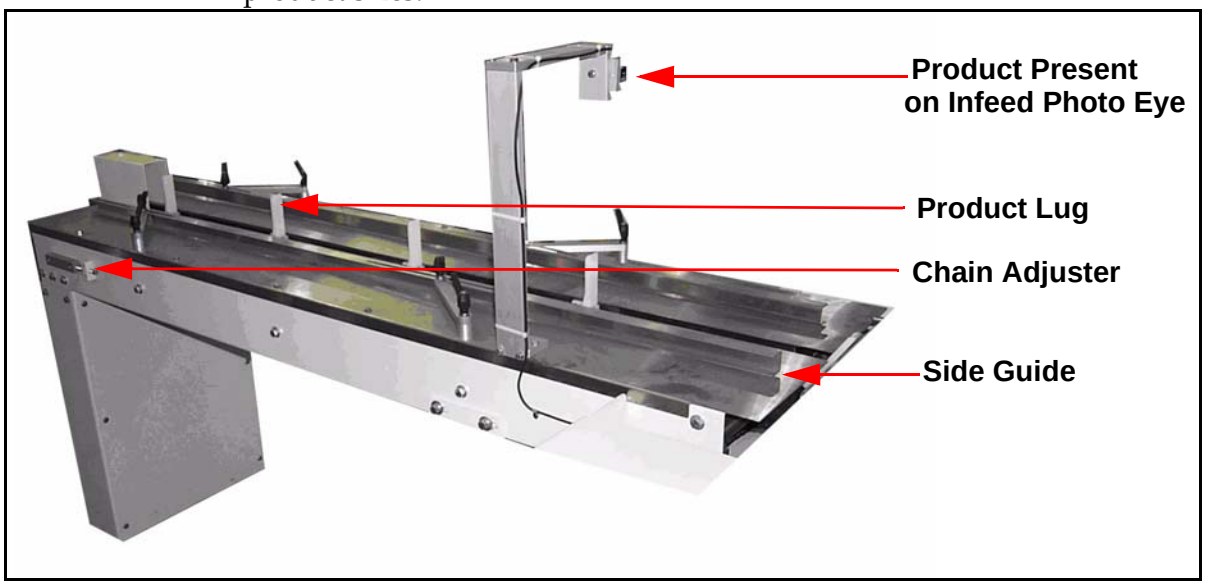


Figure 3-17. Infeed Servo Lug Conveyor

Products are placed in front of the lugs and are carried to the film former assembly. As products exit the conveyor, the lugs pivot on the chain and are carried under the metal table where they ascend again behind incoming products at the front of the machine to begin the cycle again.

An encoder, mounted to the wrapper, monitors the speed of the wrapper's main drive and enables the servo motor to match the speed of the infeed lug conveyor.

A "product present on infeed" photo eye mounted above the centerline of the infeed lug conveyor starts and stops the infeed. Products pass under the photo eye and block the beam of light. When this photo eye becomes unblocked, a timer is started. If another product blocks the photo eye before the timer times out, the conveyor continues to run. If the photo eye remains unblocked after the timer times out, it will signal the computer controller to stop the conveyor and display an error message on the operator interface. To restart the conveyor, place a product in the empty space. The conveyor will automatically start again after a preset amount of time.

Warning

If is important for everyone working around this assembly to understand that the machine is still in cycle and will move without warning.

Do not override any of the machine safety devices, such as manually blocking the “product on infeed” photo eye. Stay clear of this assembly when the machine is turned on.

3.6.8 Trim Seal Conveyor

The trim seal conveyor is a silicone belted conveyor driven by the main drive. It is located just after the film former assembly and before the seal conveyor. The purpose of this conveyor is to transfer the products from the film former assembly through the side seal trim unit and through the seal frame.

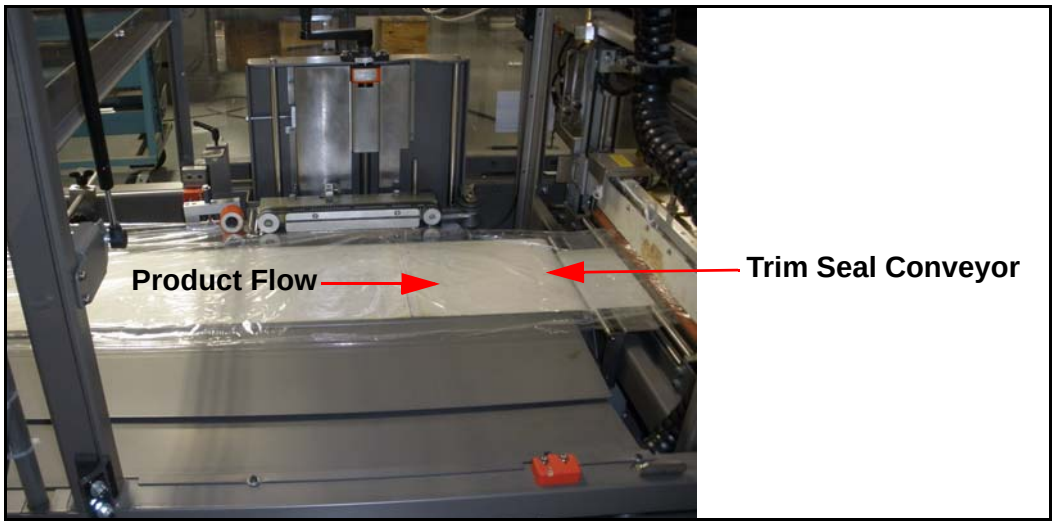


Figure 3-18. Trim Seal Conveyor

Products travel through the film former assembly and onto the trim seal conveyor. This conveyor starts when the machine is placed into the cycle mode. The film is pulled by the trim seal unit, which puts a demand on the film feed system. As the products are carried past the trim seal unit, the side of the film is fused, and the excess film is wound onto the scrap spool by the scrap removal system.

The position of this conveyor can be adjusted to center the product to the seal frame and accommodate a variety of product sizes.

3.6.9 Seal Conveyor

The seal conveyor is a silicone belted conveyor located just after the seal frame. This conveyor transfers the product from the seal conveyor, through the seal frame, and onto the upstream conveyor.

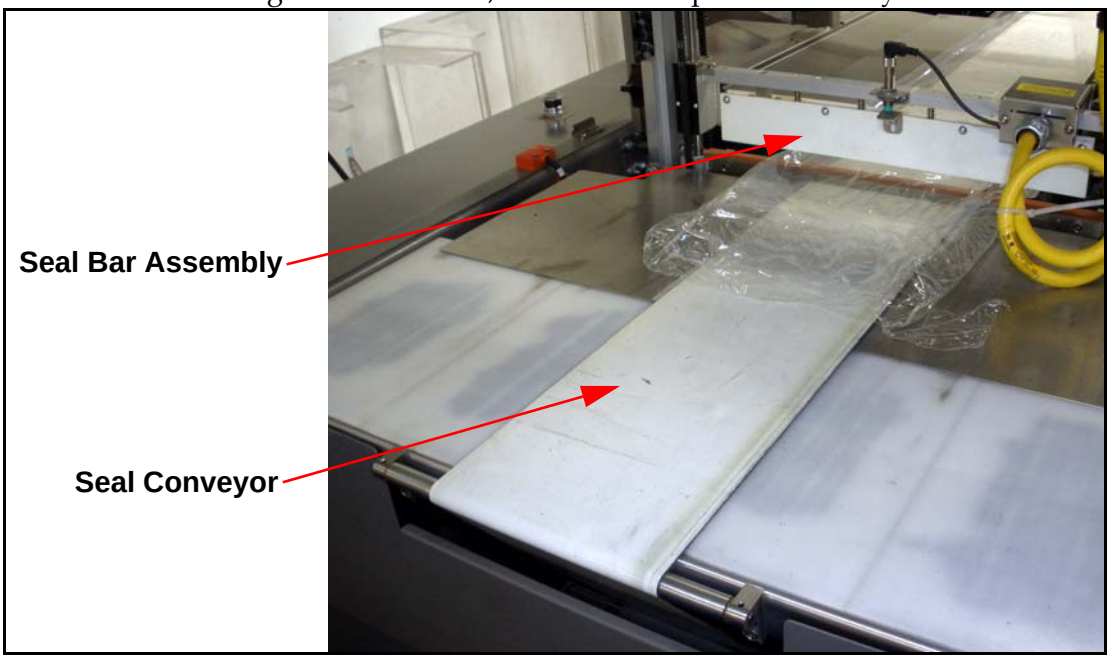


Figure 3-19. Seal Conveyor

The seal conveyor starts when the machine is placed into the cycle mode. Products travel from the trim seal conveyor and pass through the seal frame onto the seal conveyor. The seal assembly moves forward as the products move forward on the seal conveyor. The seal frame seals the products in the film sleeve while they are on this conveyor. After the products have been sealed, they are transferred to a shrink tunnel, the customer's upstream equipment or transfer conveyor.

The speed of the seal conveyor can be adjusted by moving the speed adjust handwheel located on the lower, right side of the conveyor. As the products move through this assembly they are in a film sleeve. The film sleeve must be relaxed, or bunched, between the products just before the seal bars close. This action ensures that there is enough film to completely fuse and cut the film. If the film is not bunched properly, it will not seal properly in the shrink tunnel. For more bunching of the film, rotate the variable sheath dial clockwise. For less bunching, rotate the dial counterclockwise.

3.6.10 Bridge Assembly

The bridge assembly is an optional feature that allows small packages to be run through the machine. This assembly is a pneumatic device that is used to carry small products across the gap in the seal area that is needed for the seal bars to close. The bridge is a metal plate the width of the seal conveyor attached to an air cylinder that moves back and forth.

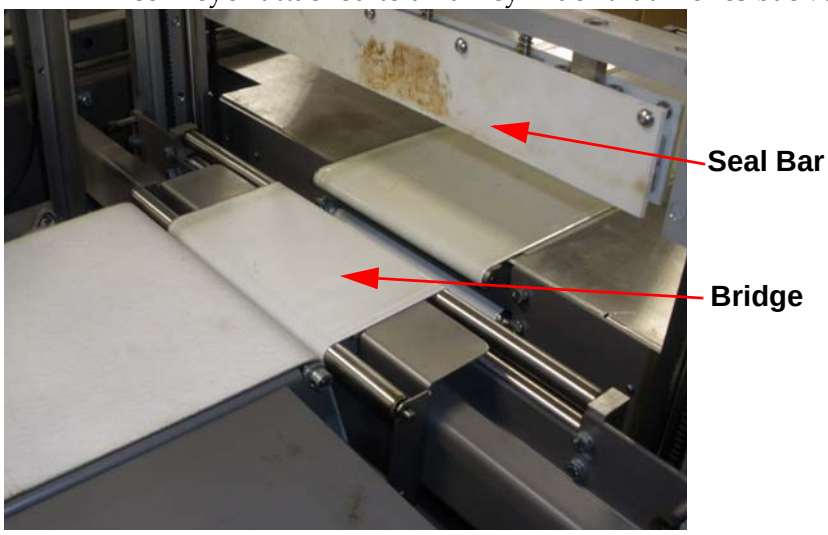


Figure 3-20. Bridge Assembly

Products pass through the seal frame and trip the "product present at seal bar" photo eye. When this photo eye becomes unblocked, a seal dwell timer starts. After a pre-determined amount of time, the bridge assembly air cylinder then retracts to open the seal gap, allowing the seal bars to close and reopen. Without this assembly small packages would get jammed in the seal bar gap. The bridge allows the machine to run packages that are shorter in length than this gap.

Installation

4

4.1 Machine Installation Instructions

The machine is installed by an Arpac service technician.

Operation

5

5.1 Introduction

This chapter describes the following:

- What the controls of the machine do.
- How to set the controls and operate the machine.

5.2 Main Disconnect Switch Description

The main disconnect switch (1 in Figure 5-1) turns off all power to the machine.

The switch also acts as the main load circuit breaker for the machine. The switch will cock back to its "TRIP" position when it is overloaded. In this condition, the switch must be turned all the way off before it can be turned on again.

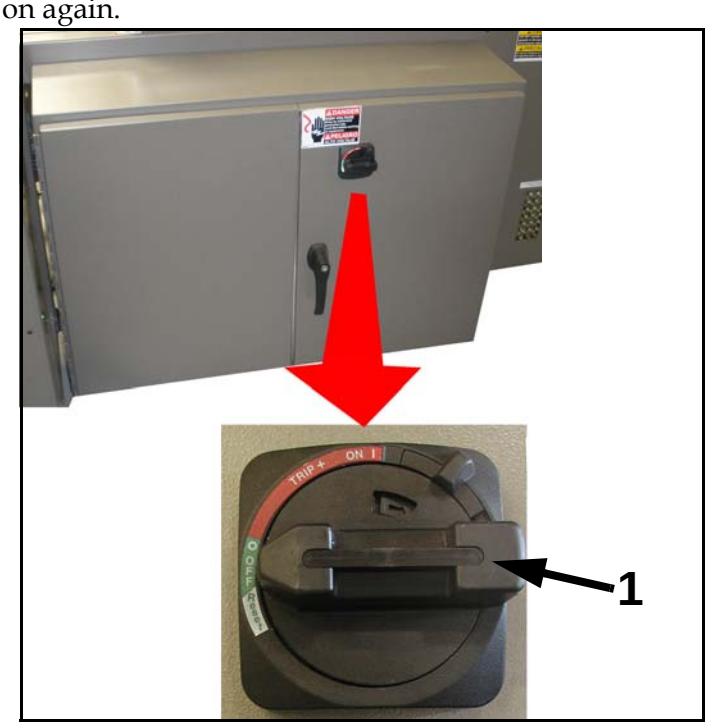


Figure 5-1. Main Disconnect Switch

5.3 Main Control Panel Description

Figure 5-2 below shows the main control panel of the machine. The paragraphs that follow describe each control.

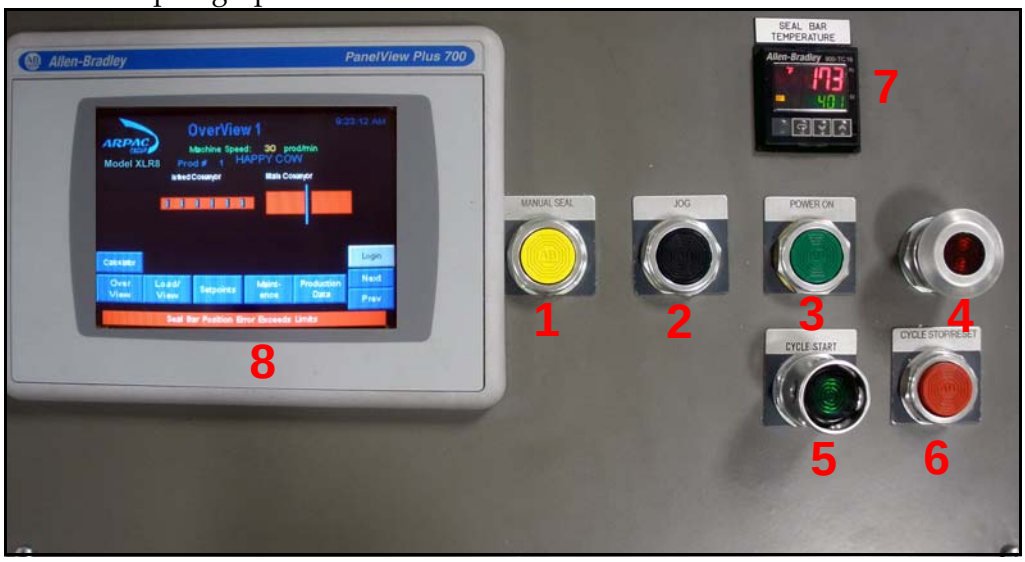


Figure 5-2. Wrapper Main Control Panel

1 **MANUAL SEAL Button** - Pressing and releasing this button will make the machine's seal bars close and open once. It is used for loading new film into the machine. This button can only be used when the machine is not in cycle.

2 **JOG Button** - Pressing and holding this button will jog the machine's conveyors without advancing any film. The machine will stop when the button is released. This button can only be used when the machine is not in cycle.

3 **POWER ON -** Pressing this button turns the machine on.

4 **EMERGENCY STOP Push-Pull Button** - Pressing this button will immediately shut down the machine. The button must be pulled out before restarting the machine.

5 **CYCLE START Button** - Pressing this button will start the normal production cycling of the machine.

6 **CYCLE STOP RESET Button** - Pressing this button stops the machine after it has completed a full cycle. Pressing this button will also clear error messages on the machine's interface after the problem that caused the message has been resolved.

5.3 Wrapper Main Control Panel Description (cont.)

7 **Seal Bar Temperature Controller** - This control sets and displays the current temperature of the seal bar and trim seal conveyor. It also displays coded digital messages when it experiences an internal fault. A detailed description of how to use this control is covered in section "5.8 Setting Up the Temperature Controllers" on page 5-7.

8 **Operator Interface** - This touch screen panel is used to change various settings of the machine. It also displays error messages when the machine experiences a fault or jam. Its use is covered more thoroughly in Section "5.9 Using the Operator Interface" on page 5-8.

5.4 Stack Light Description (Optional)

The stack light shows the status of the machine and warns the operator of problems.

- Alarm Siren will sound when machine begins to start.

- Solid Red indicates an emergency stop push-pull button is tripped.
- Flashing Red indicates a fault or alarm situation.
- Solid Amber indicates the film is getting low.
- Flashing Amber indicates the machine is in the override or interlock mode.
- Solid Green indicates the machine is in the cycle mode.
- Flashing Green indicates the machine is going into or coming out of the cycle mode. Also indicates that machine is in standby mode because it received an outside signal from an upstream or downstream sensor to stop.

Figure 5-3. Light Stack

5.5 Operating the Machine

Operate the machine as follows:

Warning

Make sure all personnel are cleared away from machine before turning the machine on. Injury may result if you do not.

Warning

Press the EMERGENCY STOP button to stop the machine if a hazard appears to personnel or the machine. Refer to Section 5.5 for information on recovering from an EMERGENCY STOP.

1. Make sure the machine is connected to its power source.
2. Make sure machine is loaded with film.
3. Turn on the main disconnect switch on both the wrapper and the tunnel.
4. Make sure main air valve is turned on and air regulator is set to 80 psi.
5. Pull out all **EMERGENCY STOP** buttons.
6. Press the **POWER ON** button.
7. Make sure that proper recipe for product has been selected. Refer to Section "5.10 Managing Recipes" on page 5-34.
8. Wait for the seal bar and side seal unit to heat up - it will take 10-20 minutes. When the seal bar and side seal unit are within operating range of the set temperature, the ALARM 1 indicator in the temperature controller will turn off. Normal cycling of the machine can then be started.

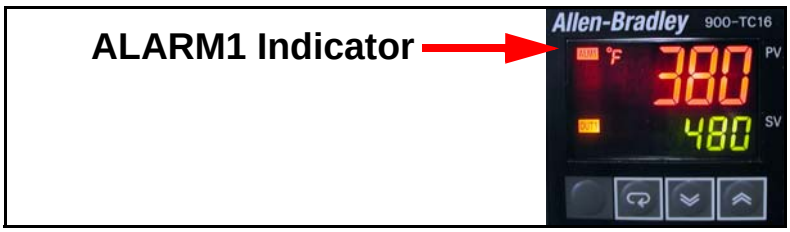


Figure 5-4. Temperature Controller Alarm Indicator

9. Press the **CYCLE STOP/RESET** button.
10. Press the **CYCLE START** button.

5.6 Recovering from an Emergency Stop

After pressing the **EMERGENCY STOP** button, do the following to reset the machine:

1. Remove all product from machine.
2. Remove or resolve the cause of the emergency stop action.
3. Pull all the **EMERGENCY STOP** buttons up.
4. Press the **CYCLE STOP/RESET** button.
5. Press the **POWER ON** button on.
6. Press the **CYCLE START** button.

5.7 Purging the Machine of Product

The machine has a purge feature that makes the machine stop accepting incoming product while completely finishing the product current in the machine. Do the following to use this feature.

1 Cycle stop the machine.

2 Press the **OVERVIEW** button on the interface.

3 Press the **NEXT** button on the interface.

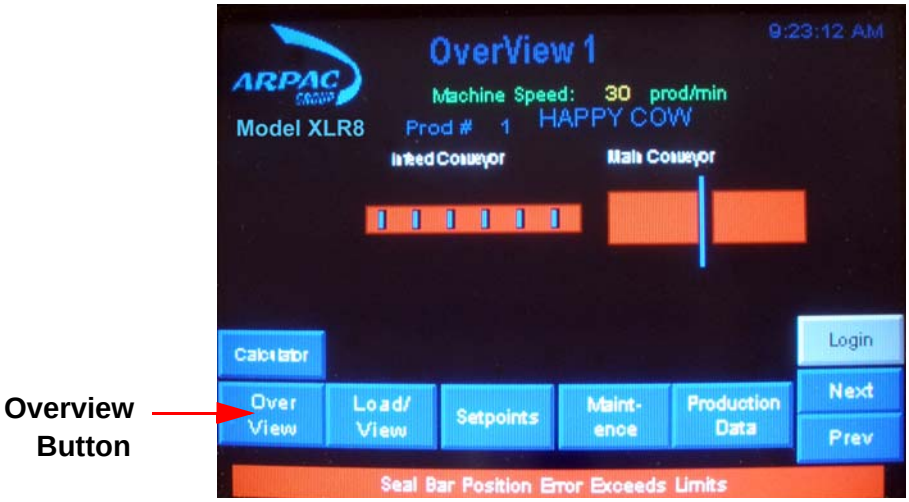


Figure 5-5. Overview 1 Menu

4 Press the **PURGE MODE DISABLED** button on the interface.

5 Press the **CYCLE START** button.

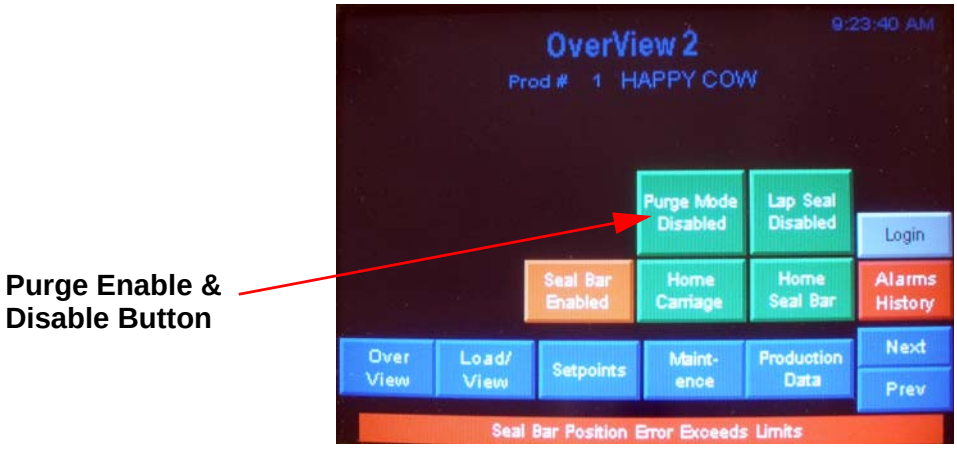


Figure 5-6. Overview 2 Menu

6 After all product has been purged from machine, press **CYCLE STOP** button.

7 Press the **PURGE MODE ENABLED** button on the interface. This will return the machine to normal operation mode.

5.8 Setting Up the Temperature Controllers

1 The following steps refer to the temperature controller buttons shown in the figure below.

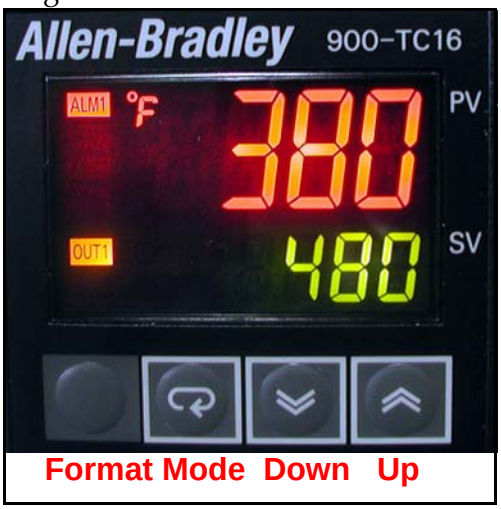


Figure 5-7. Alarm Buttons

2 Press Up and Down buttons to set operational temperatures.

3 Press Mode button twice so that alarm display appears as shown below.

4 Press Up and Down buttons to set temperature tolerance. This is the tolerance window around the operational setting for when an alarm will not appear. Then press the Mode button to return to operation menu.

Figure 5-8. Alarm Display

5.9 Using the Operator Interface

The Operator Interface allows the operator to monitor and change the operation of the machine.

5.9.1 Security Levels:

There are three different security levels associated with the interface. Each progressive level offers a deeper level of access to controlling and monitoring the machine. The levels are as follows:

1. **Basic:** This level is available to all users and is active when the machine is first turned on. This level does not allow anyone to change anything. But it does allow the operator to view basic machine messages.
2. **Operator:** This level is available to trained operators of the machine. It allows the operator to load different recipes for different products into the machine and to change setpoints in the machine's operation. The operator must login to the machine and enter a password to gain access to this level.
3. **Maintenance:** This level is available to trained maintenance technicians. It allows access to all functions of the machine. The technician must login to the machine and enter a password to gain access to this level.

5.9.2 Logging Into Machine

In order to login into the machine, you must first have a four digit numerical password to access the operator or maintenance levels. Each level has a different password. If you do not know the password, you can get it from your supervisor or by calling Arpac. The password was set when the machine was built and it cannot be changed.

To login to the machine:

Caution

Do not use anything but your fingers to operate the interface's touch screen. Using pens or pencils to contact the touch screen can easily damage it and it is very expensive to replace.

1 Turn the machine on. A bootup screen will appear for a moment and then the OverView 1 menu shown below will appear. If the machine was already on but the screen is blank, touch it to activate it.

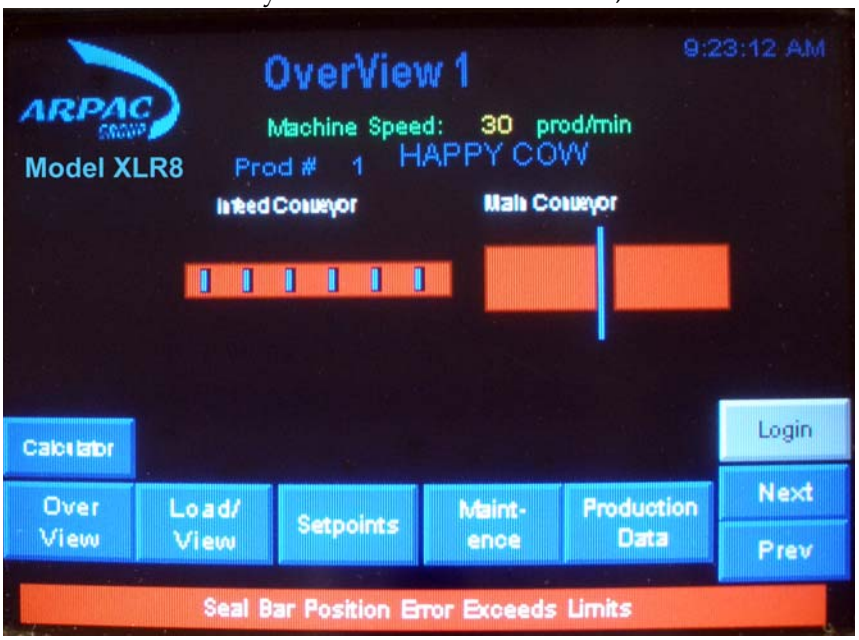


Figure 5-9. OverView 1 Menu

5.9.2 Logging Into Machine (cont.)

2 Press the Login button on the bottom of the OverView 1 menu. The Login menu shown below will appear.

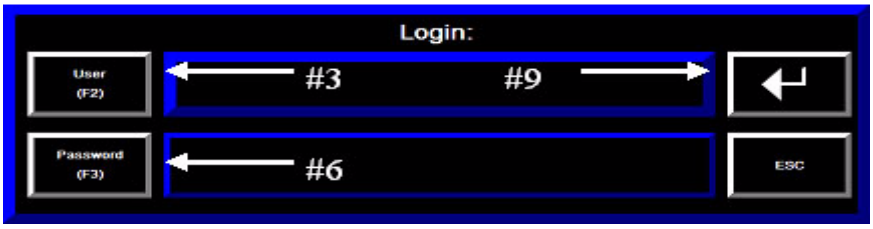


Figure 5-10. Login Menu

3 Press the User button. A second menu will appear as shown below.

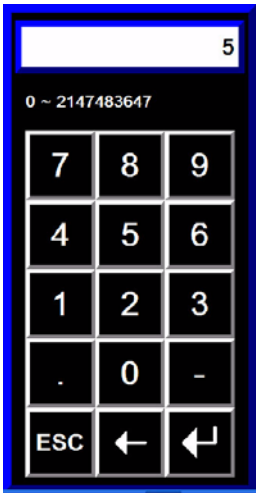


Figure 5-11. Login Keypad

4 If you want to login to the operator level, press the “o” button on the second screen. If you want to login to the maintenance level, press the “m” button.

5 Press the return key “↵“ on the second screen.

6 Press the Password button.

7 Enter the four-digit password on the second menu.

8 Press the return key “↵“ on the second menu.

9 Press the return key “↵“ on the first menu.

10 You are now logged in.

5.9.3 Operator Interface Menu Group Descriptions

OverView Menu Group

The OverView menu group is made of the two menus shown below.

The sections on the next page describe the various functions of each menu.

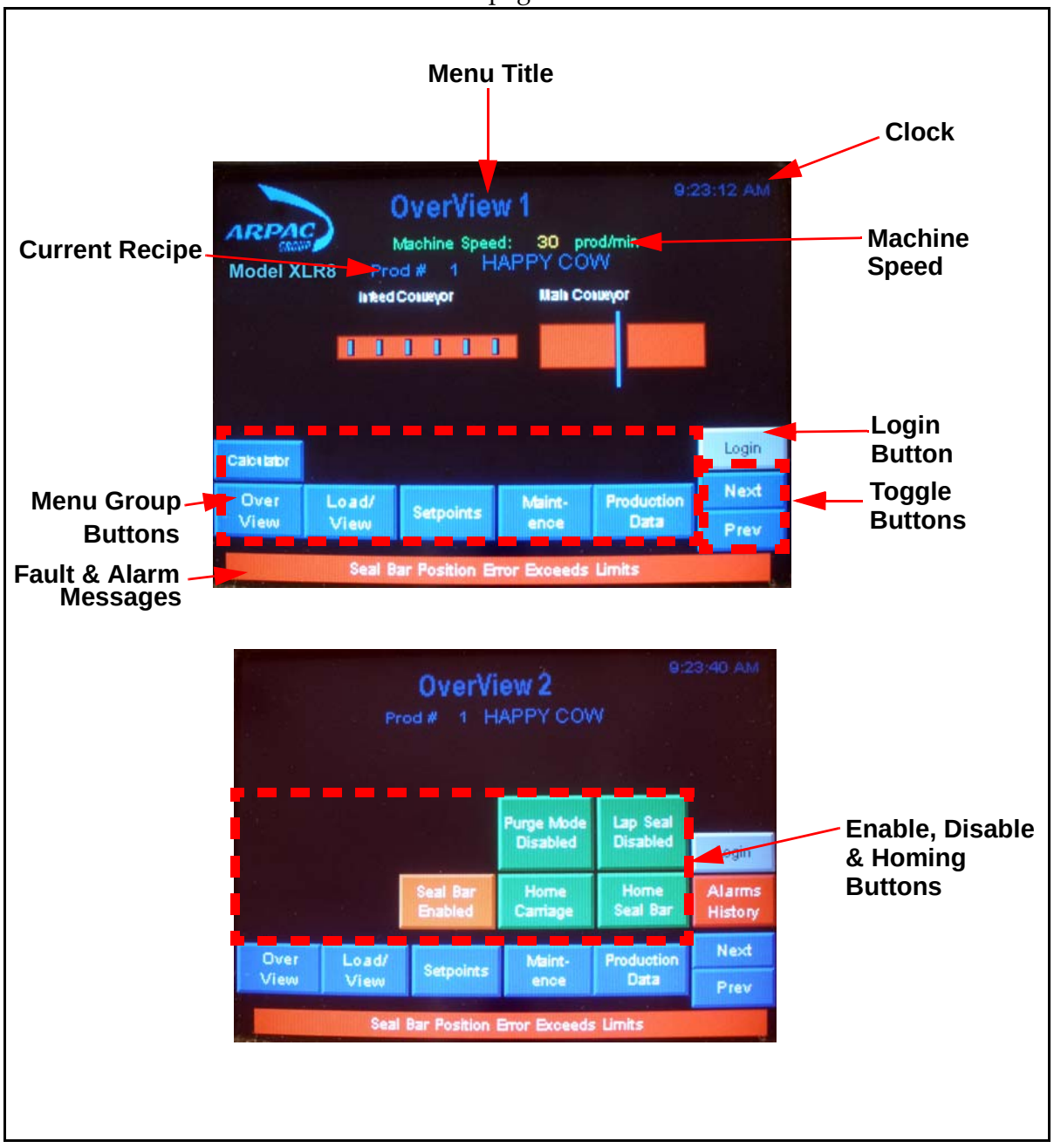


Figure 5-12. OverView Menus

5.9.3 Operator Interface Menu Group Descriptions (Cont.)

Menu Title: Is the title of the menu currently displayed.

Clock: Shows the current time.

Machine Speed: Shows the current operating rate of the machine or the rate when the machine was last stopped.

Login Button: Pressing the button makes the login menu appear and allows you to login to the machine.

Toggle Buttons: When a menu group has more than one menu, the toggle buttons allow you to toggle between menus in the group.

Menu Group Buttons: Pressing these buttons makes various menu groups appear. Each of these menus will be described in sections that follow.

Fault & Alarm Messages: Displays fault and alarm messages such as "Low Film" or "Emergency Stop".

Current Recipe: Shows the current recipe being used by the machine. A recipe is a set of parameters (height, length, width, etc.) that is specific to the type of product being run. These parameters are recorded and saved in a named file (recipe) so that they can be easily loaded into the machine when the product is run in the future.

Enable, Disable & Homing Buttons: Pressing these buttons will enable or disable various functions of the machine. Pressing the homing buttons will make the servo motors go to their home position. This may be required after the machine loses power or when the servo motors get jammed.

Pop-Up Screens

Keypad

- When an action requires the entry of numeric data by an operator, a pop-up keypad is displayed over the current screen.

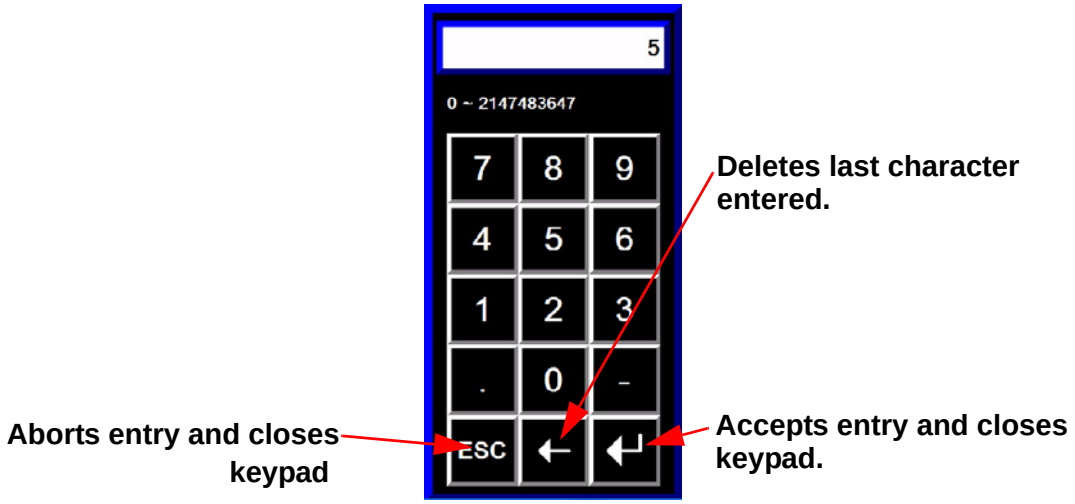


Figure 5-13. Numerical Keypad

Pop-Up Screens (cont.)

Keyboard

- Similarly, when an action requires the entry of string (i.e. text) data by an operator, a pop-up keyboard is displayed on top of the current screen.

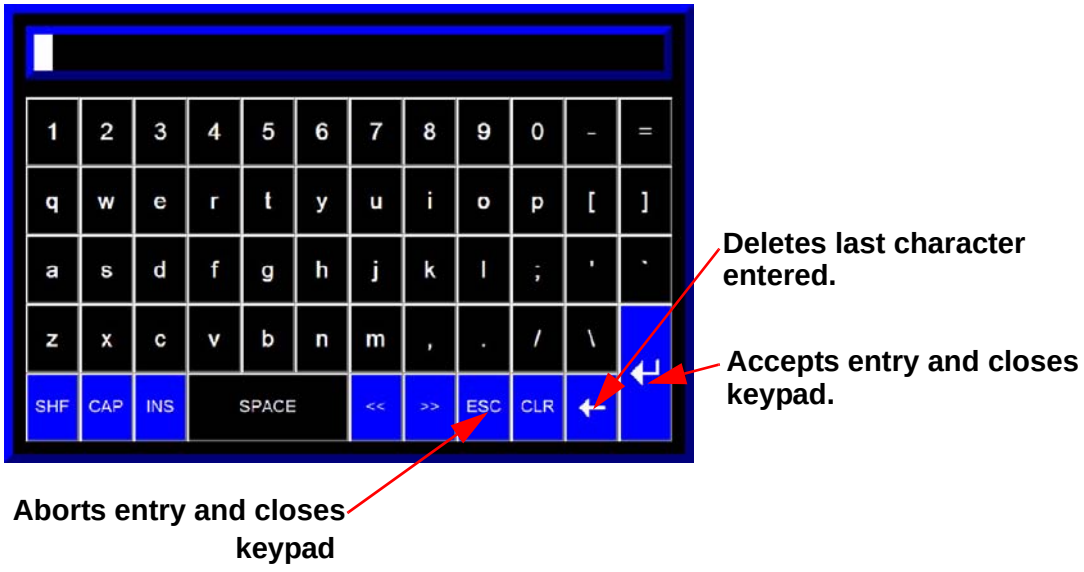


Figure 5-14. Numerical Keypad

Password Protection

- If an operator attempts to access a display under an account without sufficient security level access, the following graphic banner appears at the top of the display.

Figure 5-15. Password Banner

5.9.4 Load/View Menu Group

Pressing the LOAD/VIEW button will make the LOAD/VIEW menu appear. The Load/View menu group is comprised of two menus.

The first menu is used to change the Current Recipe. The Next Recipe can be selected with the Up/Down Arrows or by pressing the New Product # numeric keypad.

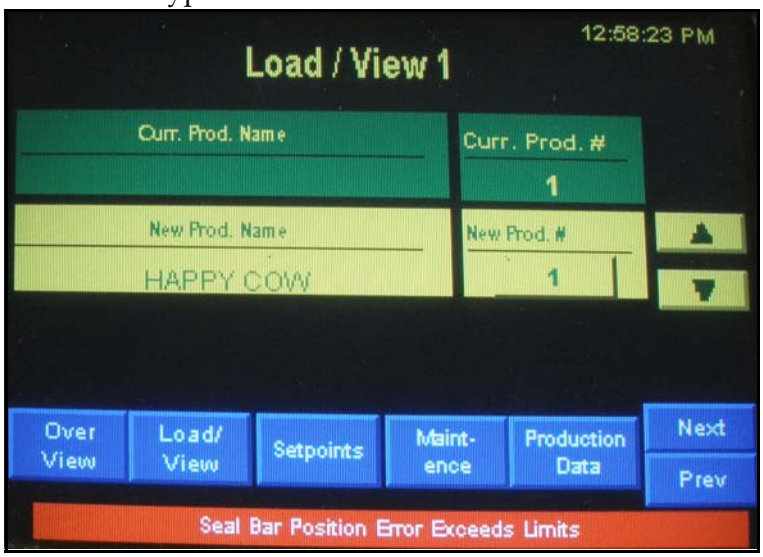


Figure 5-16. LOAD/VIEW 1 Menu

The second display allows an operator to rename a recipe by pressing the corresponding Product Name string (i.e. text) display and allows an operator to copy the name of one recipe to another.

Figure 5-17. LOAD/VIEW 2 Menu

5.9.5 Product Calculator Menu

Pressing the CALCULATOR button will make the CALCULATOR menu appear. This feature allows the operator to calculate various operational settings based on the size and spacing of the product.

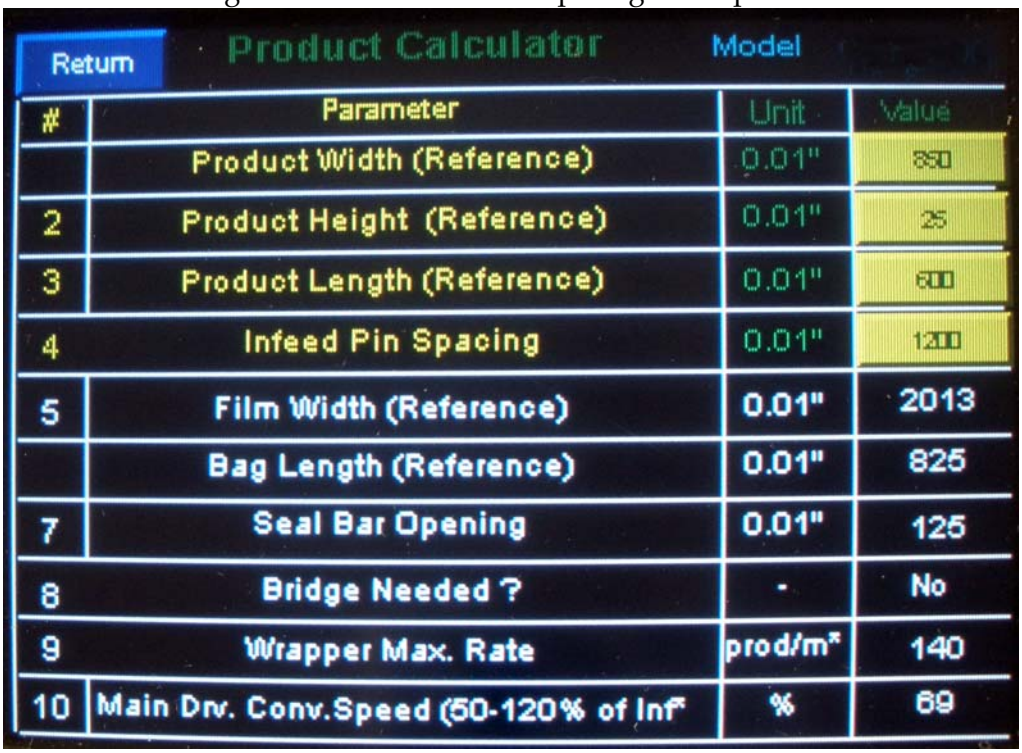


Figure 5-18. Product Calculator Menu

5.9.6 Setpoints Menu Group

The Setpoint menu consists of up to eight (8) displays. Each display is used to view and/or change five (5) parameters, in consecutive order, of the current recipe.

The following paragraphs describe each parameter.

1. **Wrapper Rate:** This sets the production rate of the machine in products per minute.
2. **Infeed Pin Spacing or Reserved:** This is the center-to-center distance between the pins on the infeed conveyor if the machine is equipped with a lug infeed conveyor.
3. **Seal Bar Dwell:** This sets the dwell time for how long the seal bar will press against the film during the sealing process.
4. **Seal Position After Adjustment:** This adjusts the position of the seal relative to the trailing edge of the product.
5. **Seal Conv. Speed (50-120% of Main):** This sets the seal conveyor's speed relative to the speed of the infeed conveyor. Adjusting this will change the spacing between the products as they move through the machine.

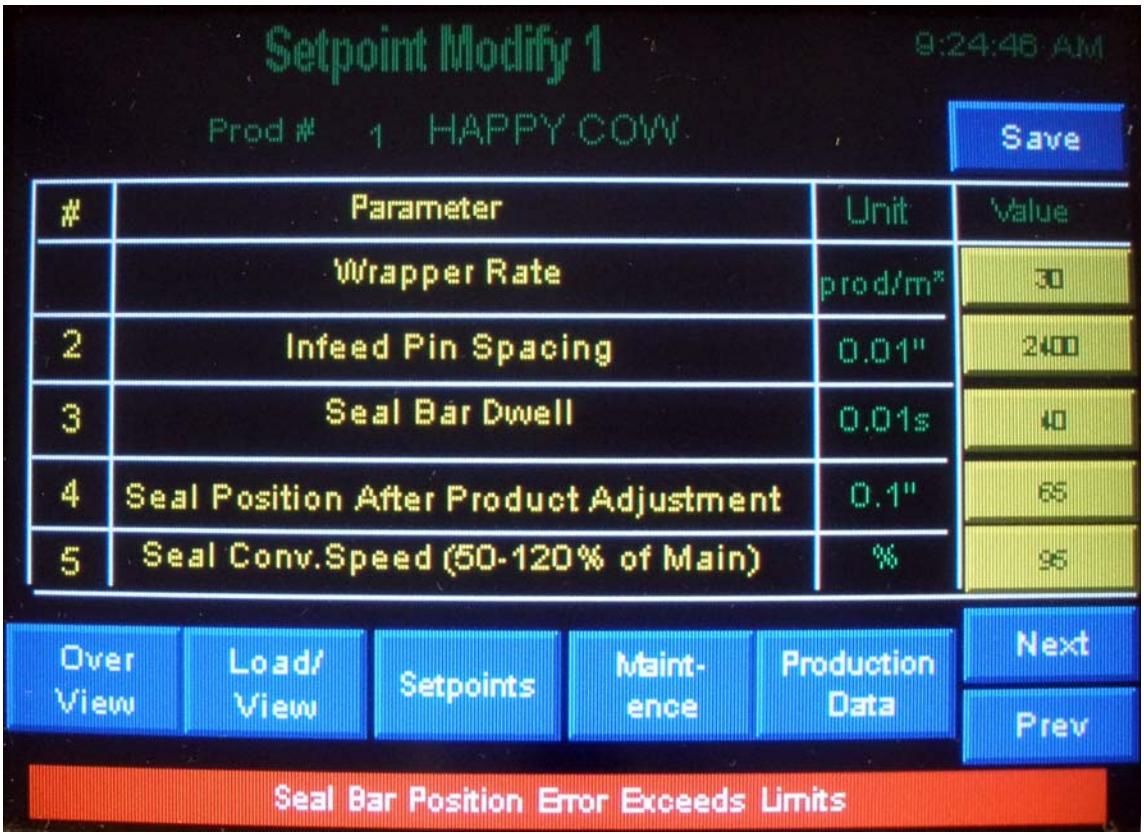


Figure 5-19. Setpoint Modify 1 Menu

6 **Infeed Stopping Position:** This sets the position where the infeed conveyor will stop after the CYCLE STOP/RESET button is pressed.

7 **Retract Bridge B4 Seal Bar, 0=Disable:** This sets the distance the bridge will retract away from the seal bar.

8 **Extend Bridge After Seal Bar:** This sets the distance the bridge will extend past from the seal bar.

9 **Hole Punch Off=0 Intervals = 1 Registr. = 2:** Setting this to 0 will turn the hole punch off. Setting it to 1 will make the hole punch activate at set intervals. Setting it to 2 will make the hole punch activate when a registration mark is detected.

10 **Main Drv. Conv. Speed (50-120% of Infeed):** This sets the speed of the main drive conveyor relative to the infeed conveyor. This setting is based on product size and is calculated by the CALCULATOR menu.

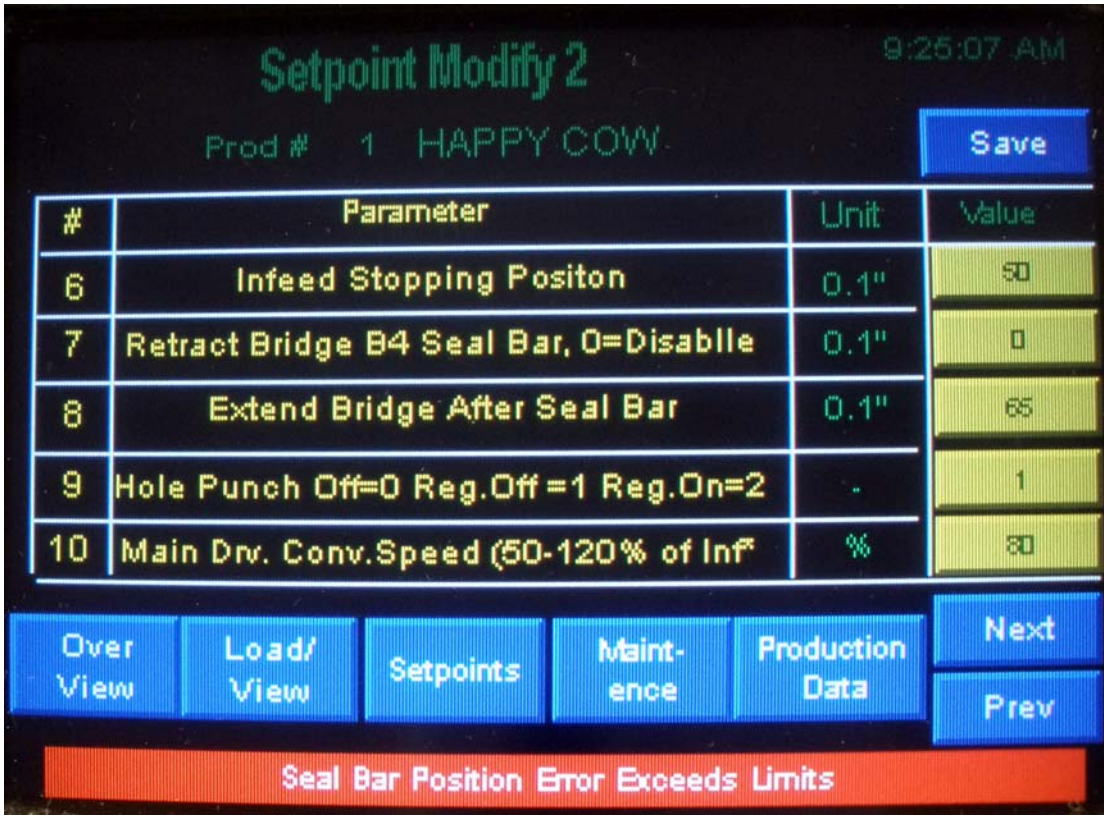


Figure 5-20. Setpoint Modify 2 Menu

5.9.6 Setpoints Menu Group (cont.)

11 **Side or Bottom Seal Heat:** This sets the side or bottom seal heat temperature as a percentage of the cross seal temperature.

12 **Hole Punch Dwell:** This sets the amount of time the film punch will dwell in its down position.

13 **Hole Punch Dist from Edge:** This sets the distance between the registration mark on the product film panel and the first hole punched in the panel. See Figure 5-22.

14 **Static Lap Seal 1 = Enable 0 = Disable:** This turns the optional lap sela feature on or off.

15 **Hole Punch Offset.:** This feature is for film with registration marks. It sets the distance between the first hole punched after the registration mark and any following holes on the film panel before another registration mark is reached. See Figure 5-22.

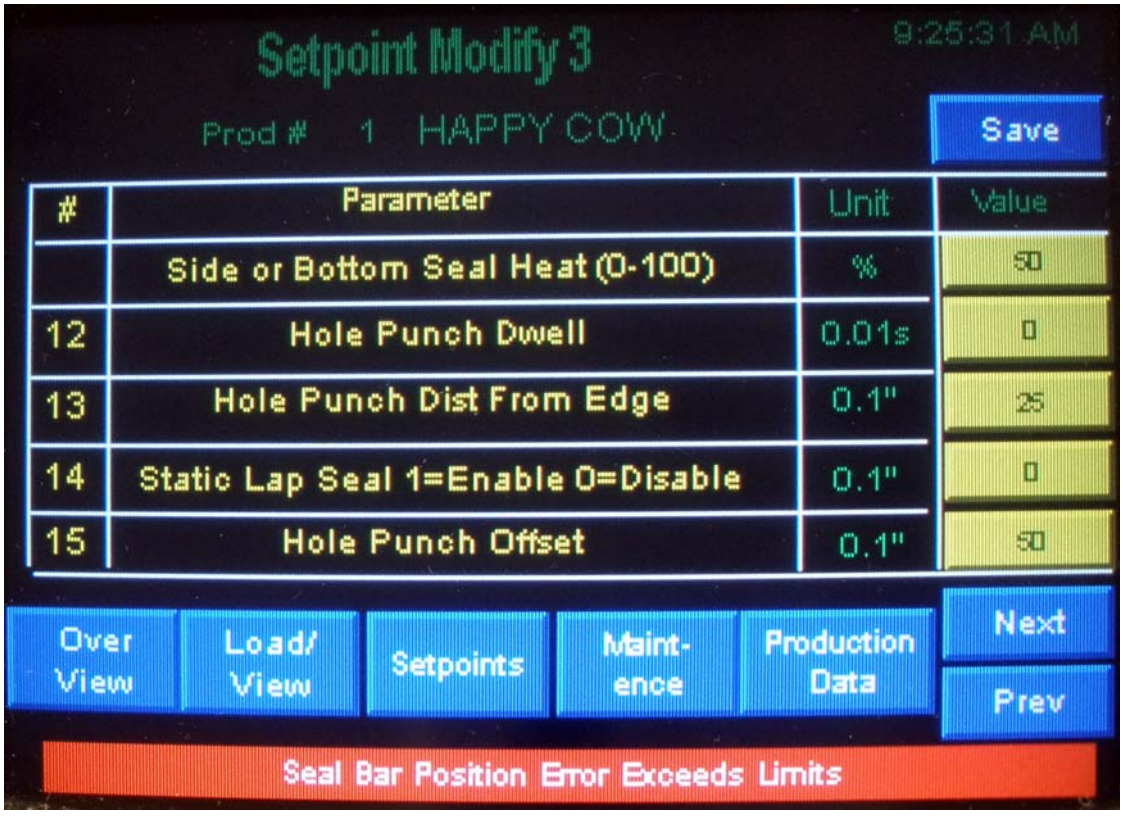


Figure 5-21. Setpoint Modify 3 Menu

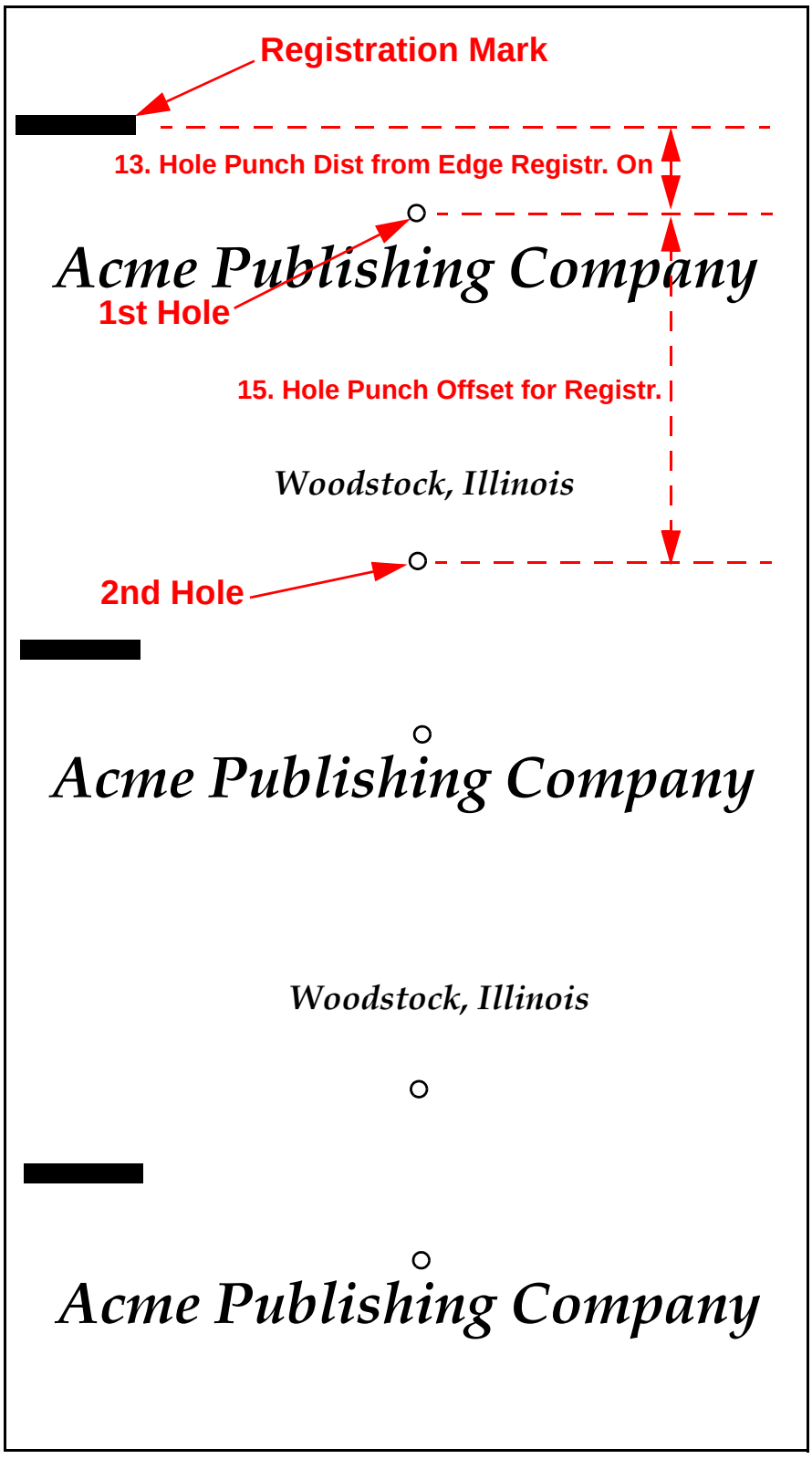


Figure 5-22. Hole Punch Spacing on Panels with Registration Marks

16 **Registr. Opt 0=Disabled 1=Enabled:** This enables or disables the registration option feature.

17 **Registr. Opt Film Repeat Length:** This sets the distance between the registration marks on the film.

18 **Registr. Opt Registr. Position Adjust:** This is used to adjust the position of the printed film on the product.

19 **Detect Prod at Downstr Pusher #1:** This sets the amount of time the machine will wait to detect product at downstream pusher before issuing a fault message.

20 **Downstream Pusher#1 Dwell:** This sets the dwell time for the downstream pusher.

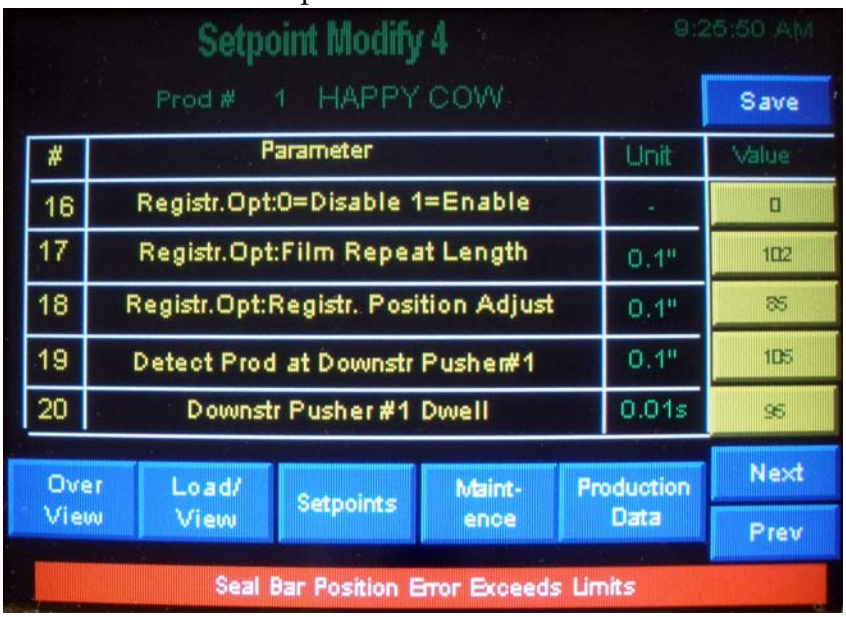


Figure 5-23. Setpoint Modify 4 Menu

5.9.6 Setpoints Menu Group (cont.)

21 **Seal Bar PE 0=Vert 1=Horiz:** This sets whether a vertical or horizontal photo eye is being used at the seal bar to detect product presence.

22 **Spare:** Not used.

23 **Spare:** Not used.

24 **Spare:** Not used.

25 **Spare:** Not used.

Figure 5-24. Setpoint Modify 5 Menu

26 **Seal Bar Opening (Distance Between Jaws/2):** This sets the maximum distance the seals bars will open away from the seal point. The distance is equal to the total distance between the jaws divided by two.

27 **Seal Bar Open Speed in Manual:** This sets the speed at which the seal bars will open in manual mode (When the **MANUAL SEAL** button is pressed.

28 **Seal Bar Close Speed in Manual:** This sets the speed at which the seal bars will close in manual mode (When the **MANUAL SEAL** button is pressed.

29 **Product Counter After Low Film:** This sets the number of times the machine will cycle after issuing a low film message. The machine will stop and issue another message when the set number of cycles has been reached.

30 **Splicing Bar Dwell:** Not used.

Figure 5-25. Setpoint Modify 6 Menu

31 **Product Width (Ref Only):** This records the product width for mechanical setup reference.

32 **Product Height (Ref Only):** This records the product height for mechanical setup reference.

33 **Product Length (Ref Only):** This records the product length for mechanical setup reference.

34 **Film Width (Ref Only):** This records the film width for mechanical setup reference.

35 **Bag Length (Ref Only):** This records the desired length of the bag around the product for mechanical setup reference.

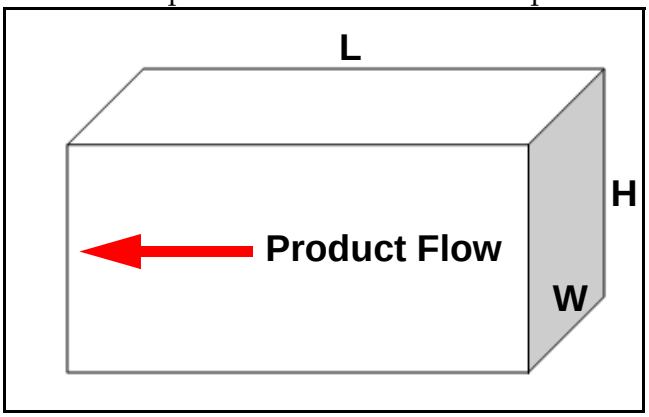


Figure 5-26. Product Orientation

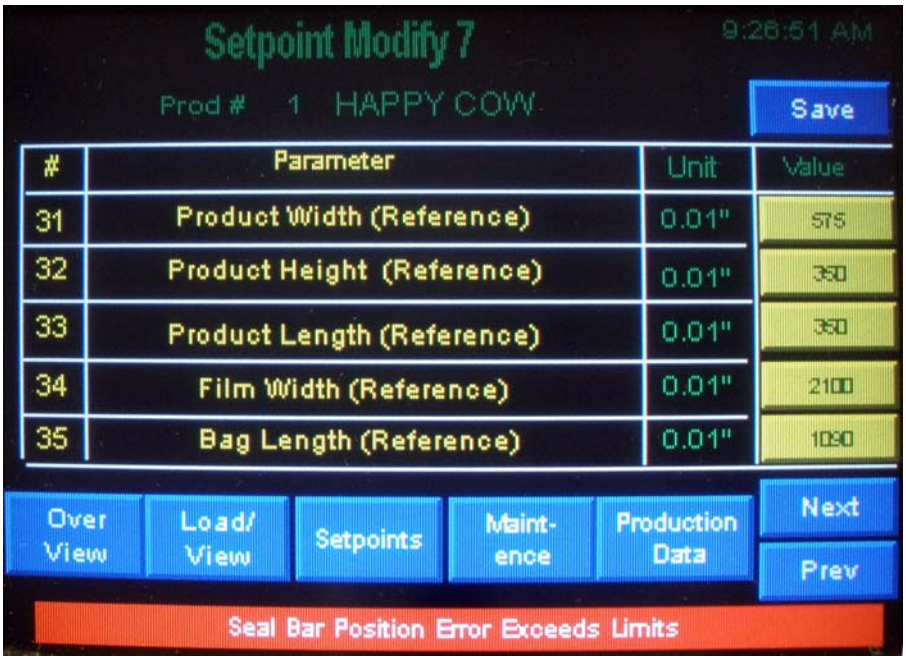


Figure 5-27. Setpoint Modify 7 Menu

5.9.6 Setpoints Menu Group (cont.)

36 **Film Forming Conveyor Width:** This records the film forming conveyor width for mechanical setup reference.

37 **Side Seal Height:** This records the side seal height - which should be set to the midpoint of the height of the product. This is for mechanical setup reference

38 **Side Seal Conveyor Width:** This records the side seal conveyor width for mechanical setup reference.

39 **Seal Line Position:** This records the height of the cross seal line - which should be set to the midpoint of the height of the product. This is for mechanical setup reference.

40 **Film Roll Position:** This records the lateral position of the film roll for mechanical setup reference.

Figure 5-28. Setpoint Modify 8 Menu

5.9.7 Maintenance and Alarm History Menus

The Maintenance menu group consists of 7 menus. They are used to control various maintenance functions of the machine and are only accessible by using the maintenance password. Each menu is described in the sections that follow.

The Maintenance 1 menu has the following features:

Infeed Speed PPM: Shows the infeed pace of the machine in parts per minute when the machine is running or when it was last stopped.

Machine Total Hours: Shows the total number of operational hours (with the machine cycling - not just turned on) since the machine was built.

Machine Hours Since Reset: Shows the total number of hours the machine has cycled since it was last reset. This feature is useful for monitoring hours for periodic maintenance.

Demo Mode Enable/Disabled: This button turns the demo mode on (enabled) or off (disabled). When the demo mode is on, the machine will cycle without processing product or film.

Interlocks Enabled/Disabled: Pressing this button turns the override interlocks feature on or off. When the override interlock feature is on, the machine can be run with the guard doors open.

Warning

Use extreme caution when operating the machine when the Interlocks feature is disabled. You can be seriously injured if you do not. Also, NEVER let the machine be run in normal production mode with the interlocks feature disabled. Operating personnel may get seriously injured if you do.

Reset Machine Hours: Pressing this button resets the **Machine Hours Since Reset** display to zero.

Jog in Prod Speed Enabled/Disabled: Pressing this button enables or disables the Jog in Prod Speed. When enabled, the machine will jog (move in manual mode) at production speed when the JOG button is pressed and held. When the feature is disabled, the machine will jog at a much reduced speed when the JOG button is pressed.

Config. Mode: This button is to be used ***only*** by Arpac service technicians to set internal software functions of the machine. Do not press it. If you do, you will not harm the machine but you will have to turn the machine's main disconnect switch off and restart the machine to reset it.

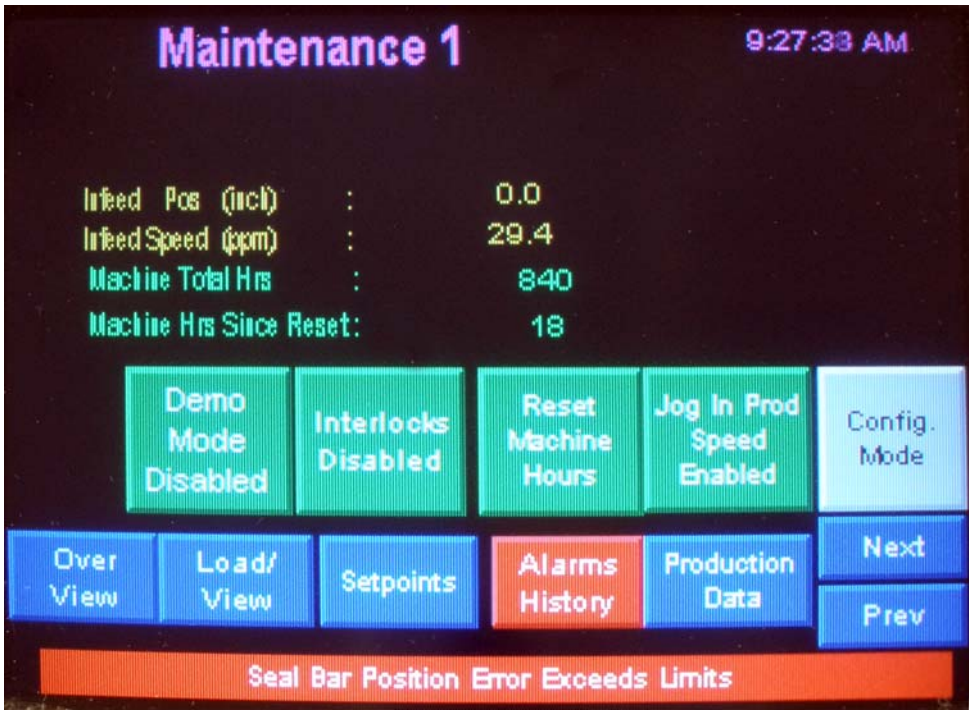


Figure 5-29. Maintenance 1 Menu

Pressing the NEXT button will lead you to the Maintenance 2 menu. This menu is used ***only*** by service technicians to set internal software functions of the machine. This menu is used with a laptop computer interfaced to the machine.

Figure 5-30. Maintenance 2 Menu

5.9.7 Maintenance and Alarm History Menus (cont.)

The Maintenance 3 menu has the following features:

41 **Spare:** Not used.

42 **Spare:** Not used.

43 **Spare:** Not used.

44 **Delay to Return Carriage:** This sets the time delay for the carriage to return after completing a cross seal. While the carriage is delayed, the up and down motion of the seal bars continues on. This feature gives the seal bars more time to open up before moving back over the product. This can be very important when handling tall, narrow products.

45 **Delay to Detect S/Seal Heat Ready:** If the machine stops for lack of product, the side seal cutting hot wire will turn off automatically in order to extend its life. When product becomes available again, the wire will need a few seconds to heat up again before processing product. This feature sets the amount of time the wire will get to heat up before restarting cycle process.

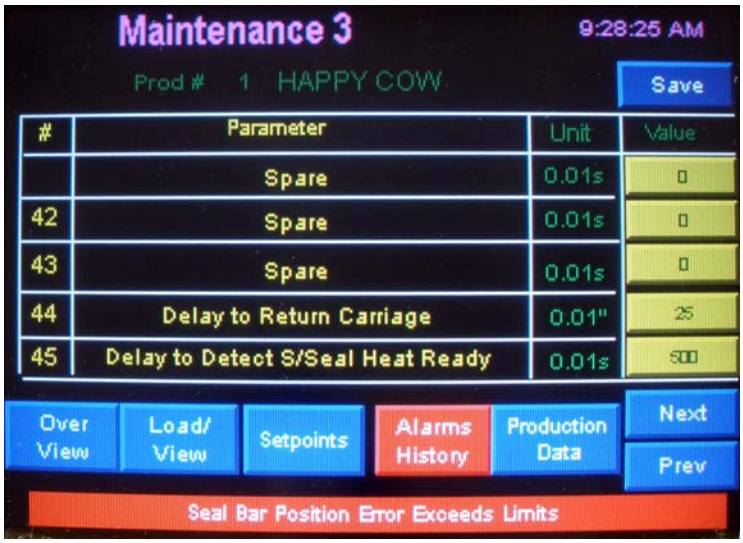


Figure 5-31. Maintenance 3 Menu

The Maintenance 4 menu has the following features:

46 **S/Seal Time Out:** This sets the amount of time that the side seal will wait for product before it issues a fault message.

47 **Delay to Start Seal Bar From Seal Bar PE:** This sets the amount of time the cross seal will wait before it engages after the product is detected by seal bar photo eye. This affects the position of the trailing cross seal on the product.

48 **Delay to Start Seal Bar From Lug PE:** This sets the amount of time the cross seal will wait before it engages after the product is detected by lug photo eye. This affects the position of the leading cross seal on the product.

49 **Servo Infeed Max Corrections:** This sets the maximum distance that the infeed will attempt to correct the product's position if the product is detected out of position.

50 **Seal Bar Compression % of Nominal:** This is used to increase or decrease the amount of pressure the cross seal bars apply.

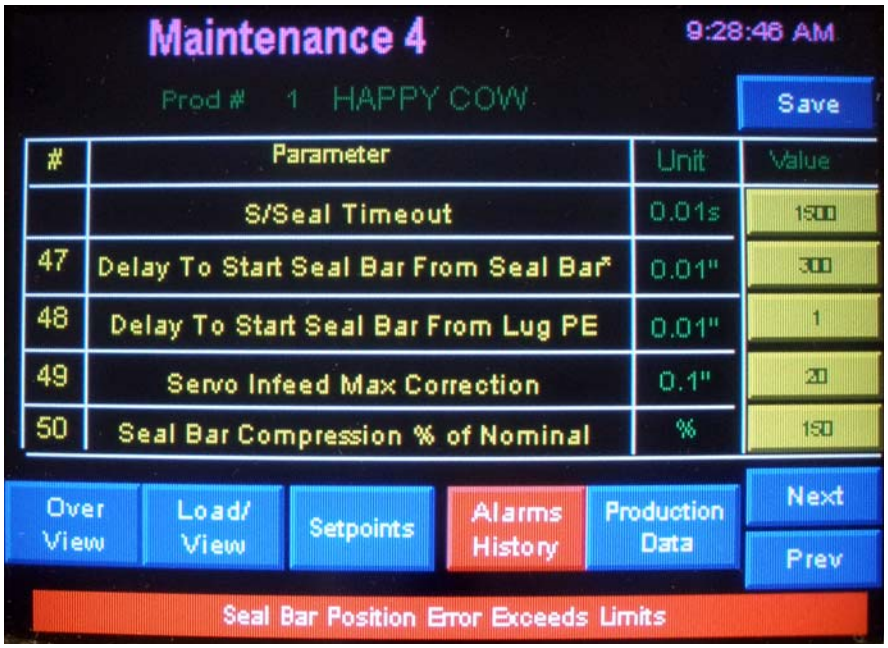


Figure 5-32. Maintenance 4 Menu

5.9.7 Maintenance and Alarm History Menus (cont.)

The Maintenance 5 menu has the following features:

Seal Bar Servo Diagnostic: This displays fault messages associated with the seal bar servo motor system. The display and servo motor drive can be reset by pressing the Reset Servo button.

Carriage Servo Diagnostic: This displays fault messages associated with the carriage servo motor system. The display and servo motor drive can be reset by pressing the Reset Servo button.

Figure 5-33. Maintenance 5 Menu

The Maintenance 6 menu has the following features:

Infeed Servo Diagnostic: This displays fault messages associated with the infeed motor system. The display and servo motor drive can be reset by pressing the Reset Servo button.

Figure 5-34. Maintenance 6 Menu

Alarm History: Pressing the ALARMS HISTORY button will make the ALARMS HISTORY menu appear. This displays the fault message history of the machine since the last time the fault message history memory has been cleared. The memory can be cleared by pressing the Clear Alarm History button. The display also shows the time when the fault message occurred and when the operator acknowledged the fault message. The operator can acknowledge the fault message by pressing the Ack Alarm button. The operator can also acknowledge all fault messages by pressing the Ack All button. A fault message DOES NOT have to be acknowledged to restart the machine after the machine has stopped due to a fault condition.

Figure 5-35. Alarm History Menu

5.9.8 Production Data Menus

The Production Data menu group consists of 2 menus. They are used to monitor production data. Each menu is described in the sections that follow.

The Production Data 1 menu has the following features:

Run Time (In Cycle): This shows the number of minutes the machine has been in cycle (producing product) on a per shift and per day basis. The total tally from the previous day is also shown.

Idle Time (No Prod.): This shows the number of minutes the machine has been idle (not producing product) on a per shift and per day basis. The total tally from the previous day is also shown.

Product Count: This shows the number products the machine has produced on a per shift and per day basis. The total tally from the previous day is also shown.

Values can be reset by pressing the Reset Current Shift or Reset All buttons.

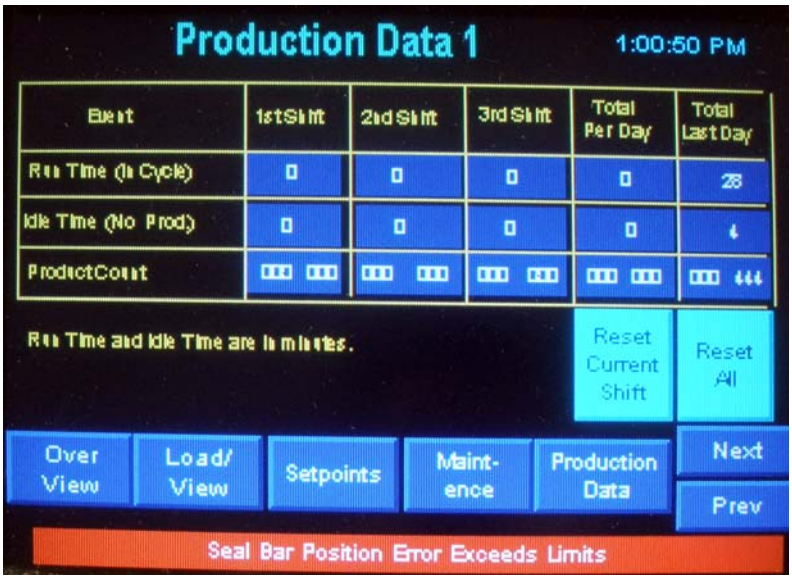


Figure 5-36. Production 1 Data Menu

The Production Data 2 Menu:

This shows the start and stop times of the three daily shifts. The times are shown in 24-hour format. The start and stop times can be changed by pressing the number values and reentering new time in the pop-up menu that appears.

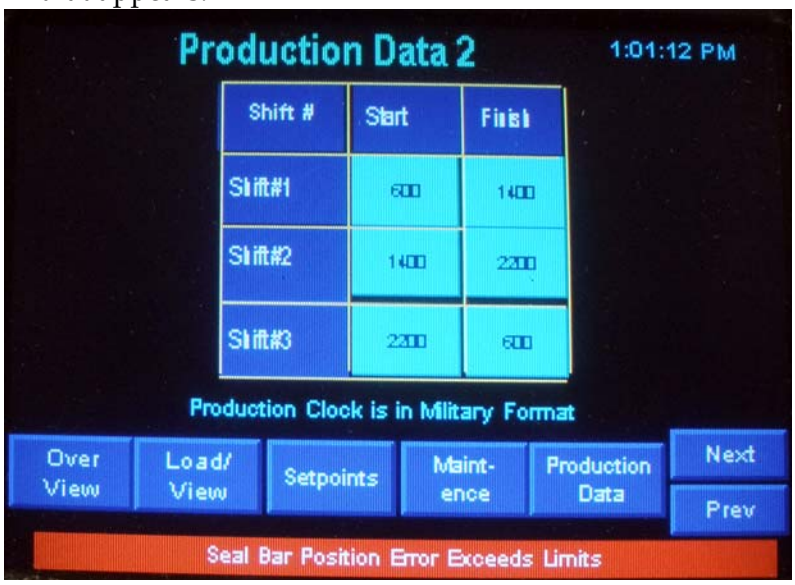


Figure 5-37. Production Data 2 Menu

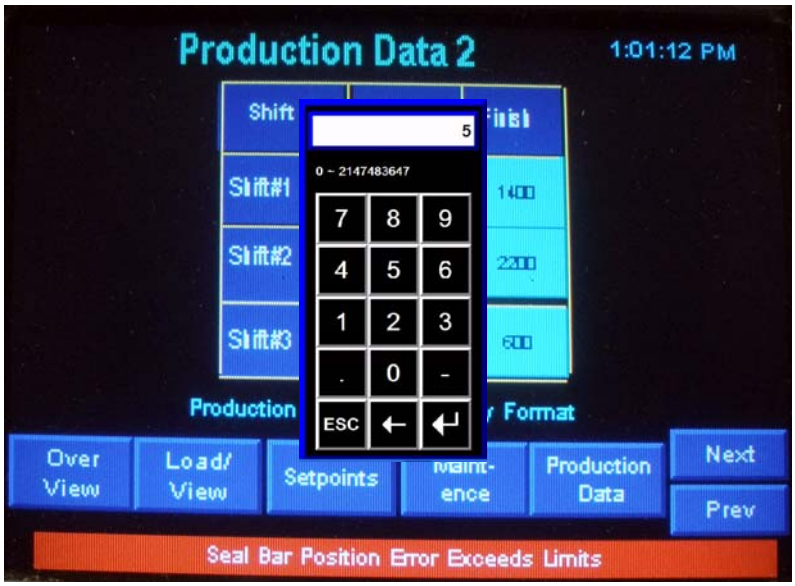


Figure 5-38. Changing Start and Stop Times

5.10 Managing Recipes

Recipes are data files that hold data about a specific type of product. This data instructs the machine on how to process the product. If the machine is first designed to run 10 different kinds of products, then the machine will have 10 different recipes - one for each product.

5.10.1 Loading a Recipe

When running a specific of product, the recipe for that product must be loaded into the machine's computer. This can be done as follows:

1 After logging in as an operator, press the Load/View button (1 in Figure 5-39).

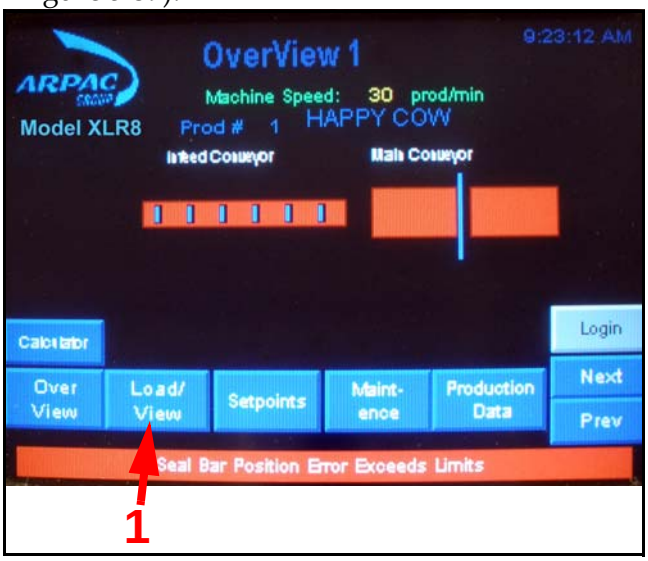


Figure 5-39. Load/View Button

2 Press the up or down buttons (2 in Figure 5-40) until the desired recipe name and number (3) appears.

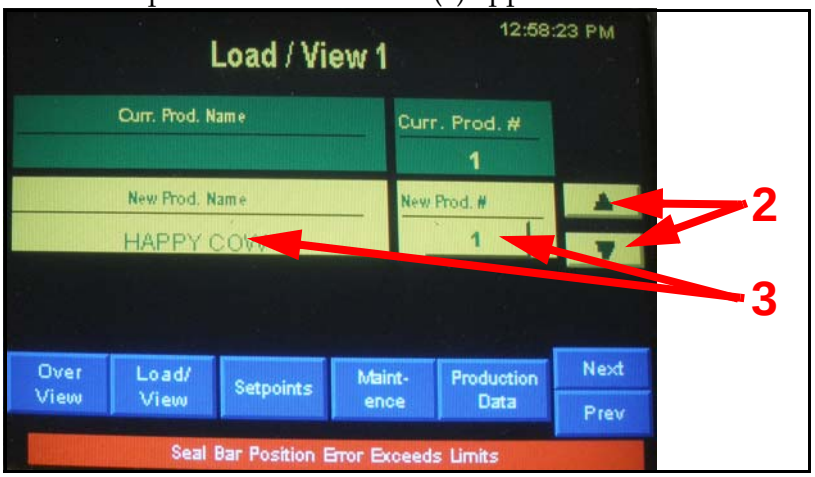


Figure 5-40. Load/View 1 Menu

3 Press Load button (4 in Figure 5-41) to load new recipe.

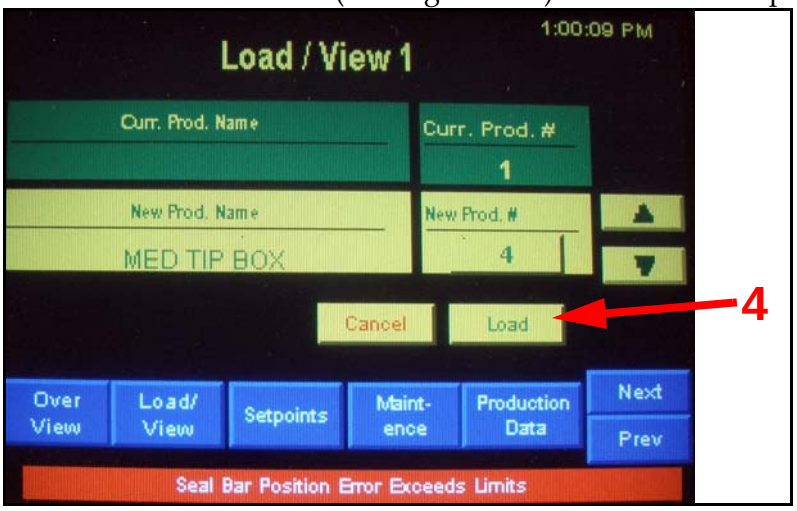


Figure 5-41. Load Button

4 After loading new recipe, it will appear in Curr. Prod. Name and Curr. Prod. # as shown below. Procedure is complete.

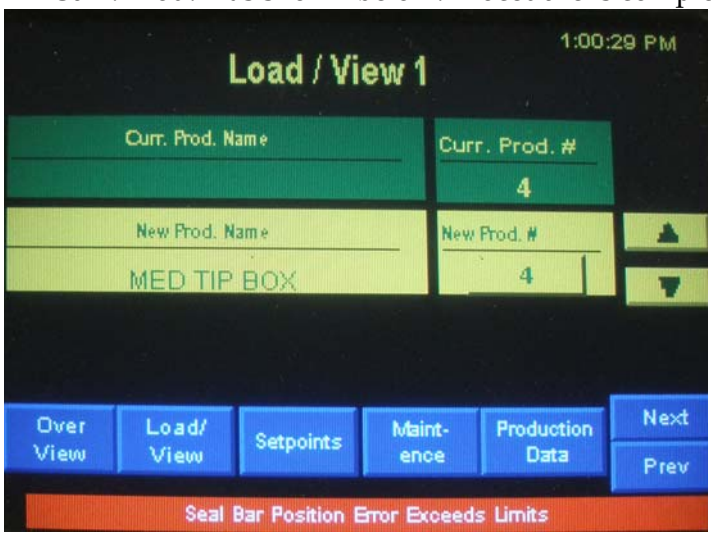


Figure 5-42. New Recipe Loaded

5.10.2 Copying a Recipe

New types of products require new recipes. But sometimes products are very similar. In such cases, the easiest way to create a new recipe is to copy a recipe from a similar product and make the required changes to the copied file. The procedure below describes how to copy a file.

1 After logging in as an operator, press the Load/View button (1 in Figure 5-43).

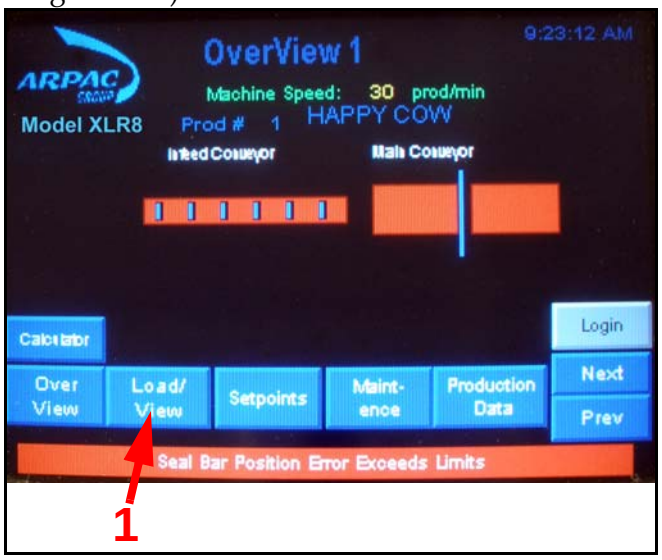


Figure 5-43. Load/View Button

2 Press the next button (2 in Figure 5-44). The second Load/View menu will appear.

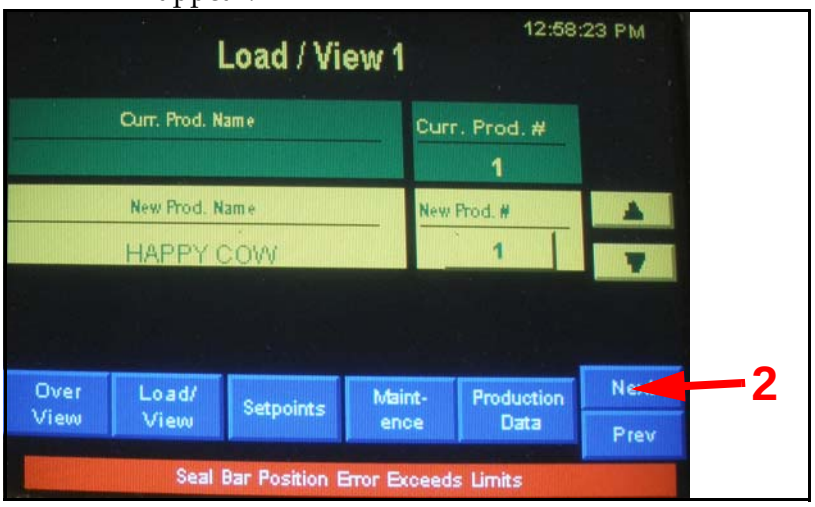


Figure 5-44. Load/View 1 Menu

3 Press number button (3 in Figure 5-45) of recipe that you want to copy. For this example, the number will be 4.

4 Press the Copy From button (4).

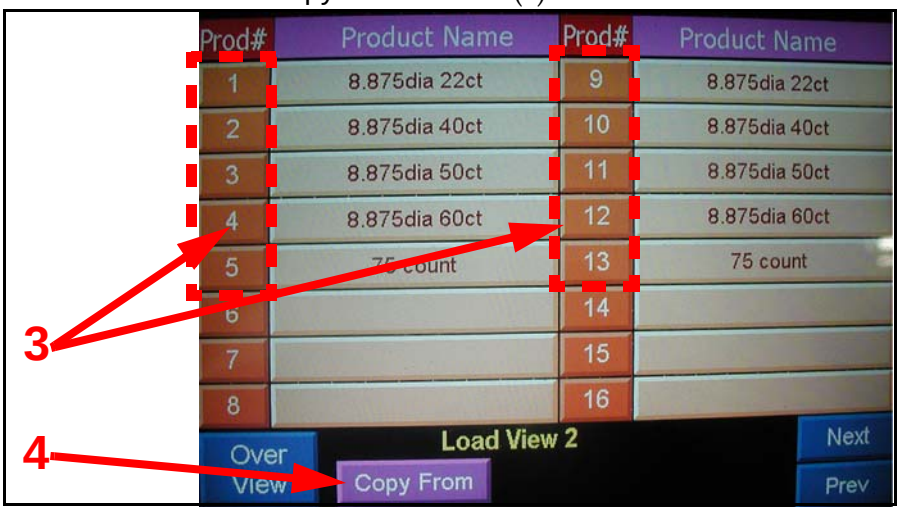


Figure 5-45. Product Number Buttons

5 Press number button (5 in Figure 5-46) of blank recipe that you want to copy recipe into. For this example, the number will be 14.

6 Press the Copy To button (6) and go to the next step on the next page.

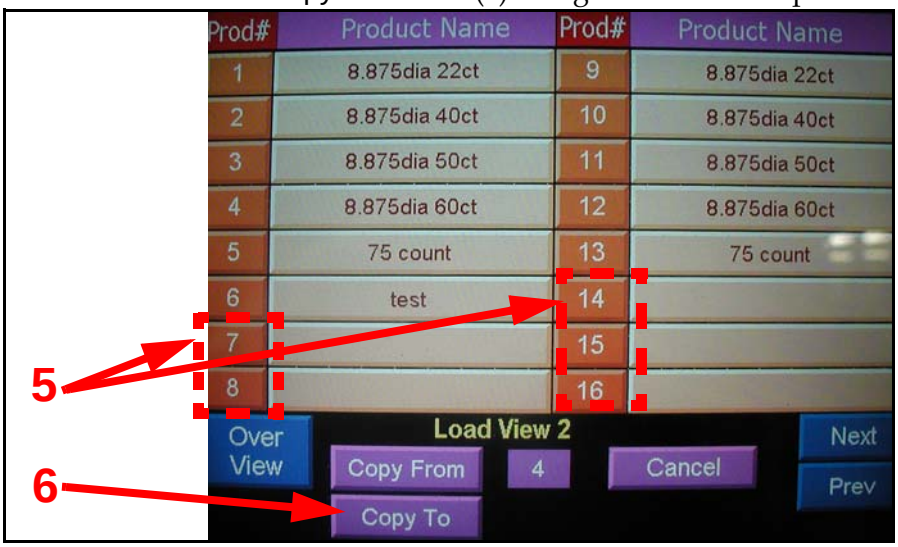


Figure 5-46. Copy To Button

5.10.2 Copying a Recipe (Cont.)

7 Press the OK To Copy button (7 in Figure 5-46).

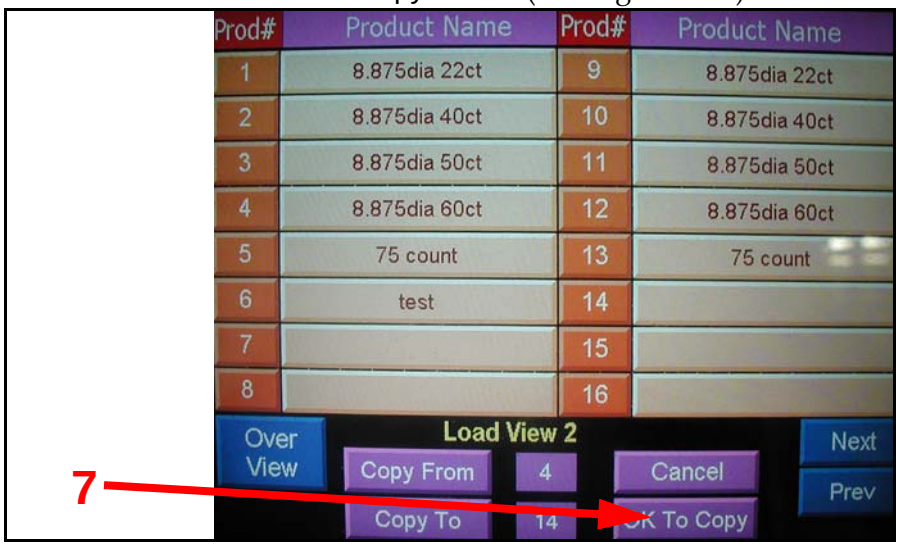


Figure 5-47. OK To Copy

8 After pressing the OK To Copy button, the selected recipe will be copied into the selected blank position. In this example, file 4 was copied to blank position 14 as shown below.

9 Press the title button (8 in Figure 5-48) of the copied file. This will open a separate pop-up menu that will allow you to rename the newly copied file.

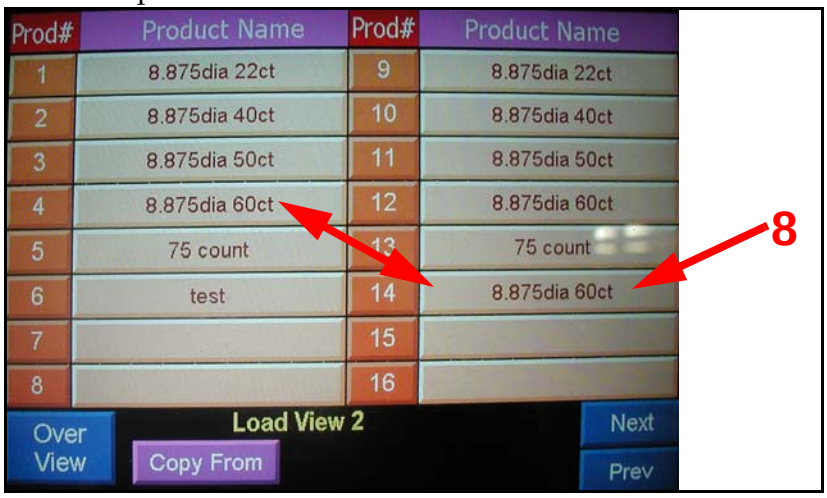


Figure 5-48. Copied File

10 Type in the copied file's new name and press the return "↵" key. Procedure is complete.

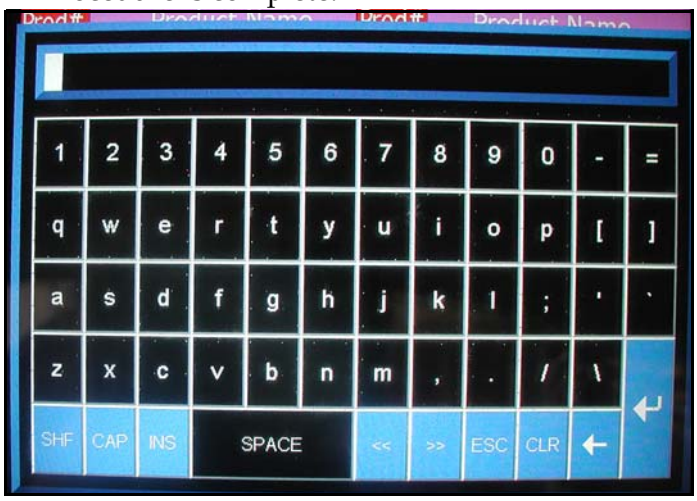


Figure 5-49. Copied File

5.11 Replacing Empty Film Roll and Threading Film

This section describes how to replace an empty film roll with the same size film roll and thread the film into the machine.

Tools & Materials Required:

- Masking Tape
- Utility Knife

Warning

Make sure EMERGENCY STOP button on wrapper portion of machine is pressed in before doing this procedure. You may get seriously injured if you do not.

1. Press EMERGENCY STOP button on wrapper portion of machine to disable machine.
2. Pull back and open film rack cover (1 in Figure 5-50).

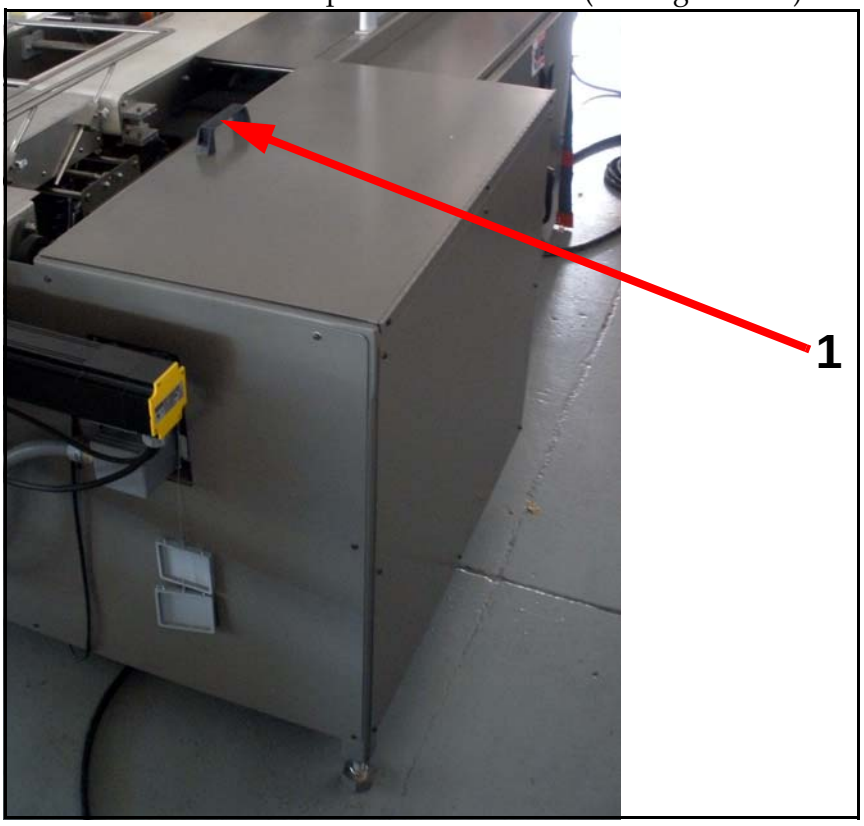


Figure 5-50. Film Rack Cover

3 Slice film at position of red dashed line shown below. Remove all loose film from machine.

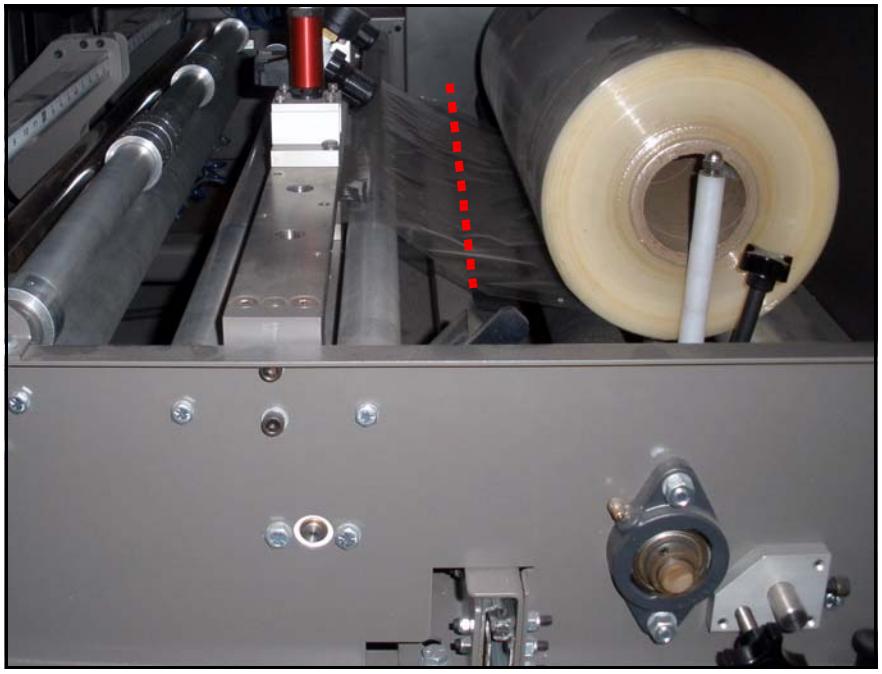


Figure 5-51. Cutting Film

4 Pull up knob (1 in Figure 5-52)and slide film rack (2) out.

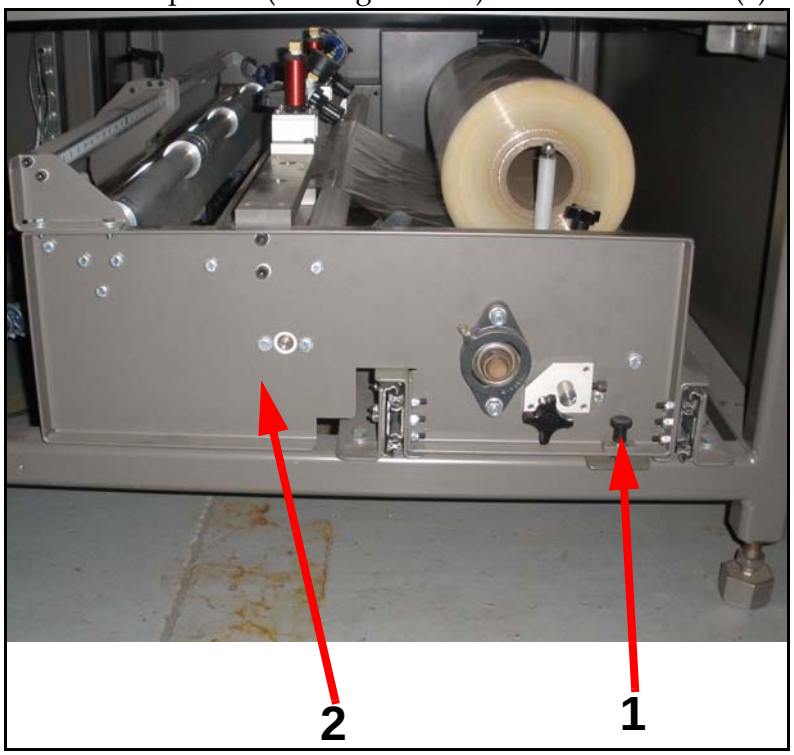


Figure 5-52. Sliding Rack Out

5 Remove empty film roll spool and insert new film roll. Make sure film roll is oriented so that it unreels from:
The Top - If print is on inside of film.
The Bottom - If print is on outside of film.
See Figure 5-54.

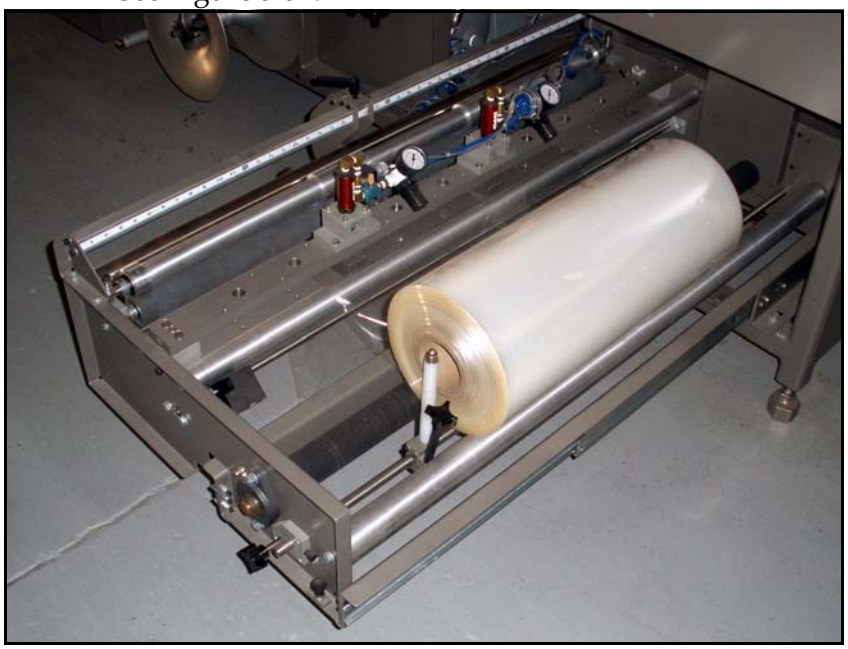


Figure 5-53. Inserting New Film Roll

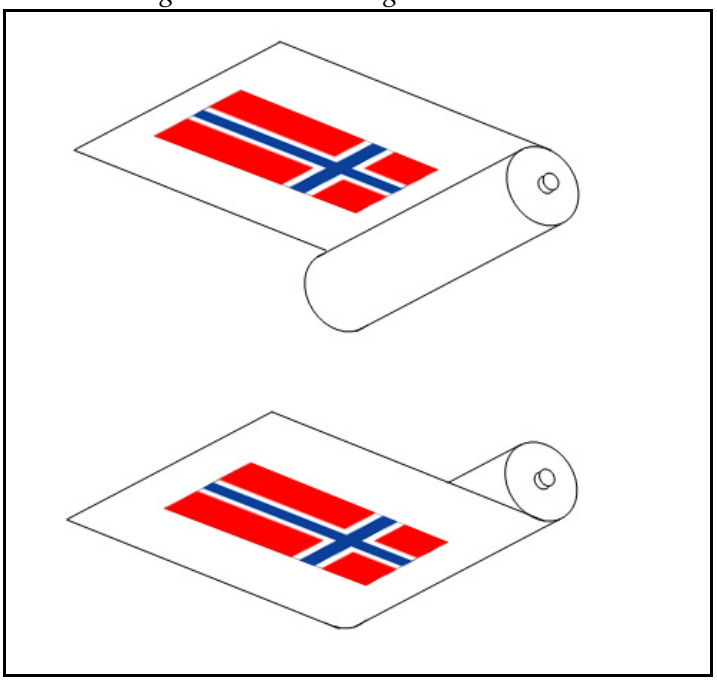


Figure 5-54. Orientation Relative to Print Surface

6 Thread film through rack as shown below.

7 Slide rack back into machine.

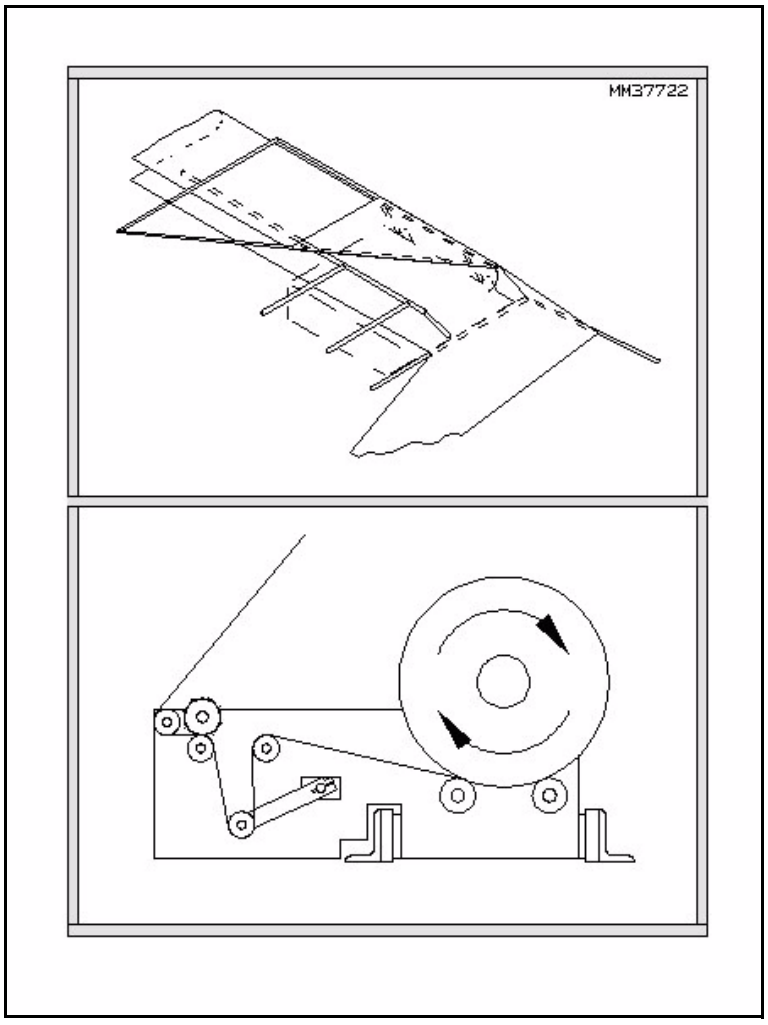


Figure 5-55. Threading Film Rack

8 Thread film through upper roller and plow as shown below.

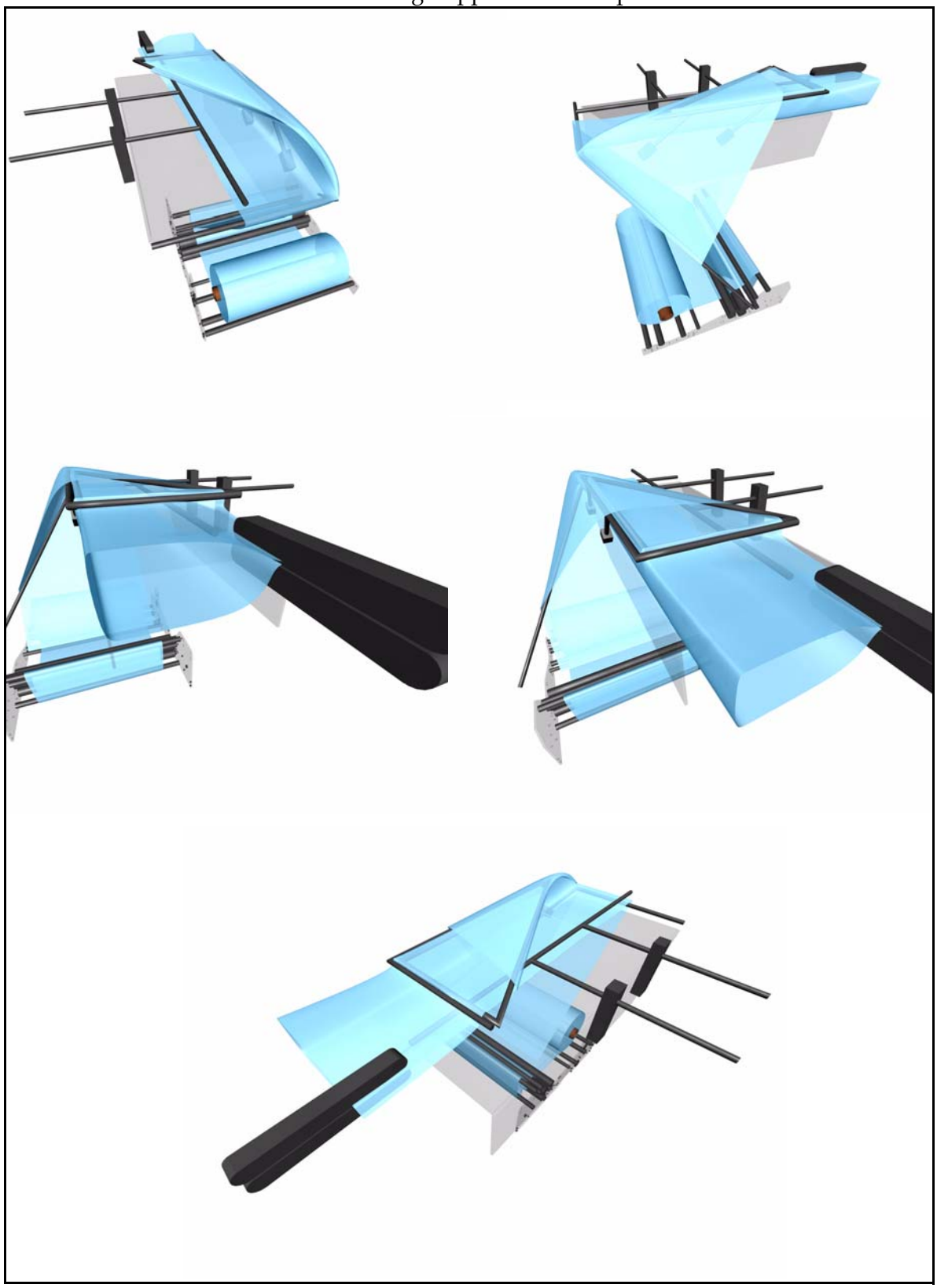


Figure 5-56. Plow Threading

9 Thread leading edge of film through pinch rollers (1 in Figure 5-57), and first side seal rollers (2).

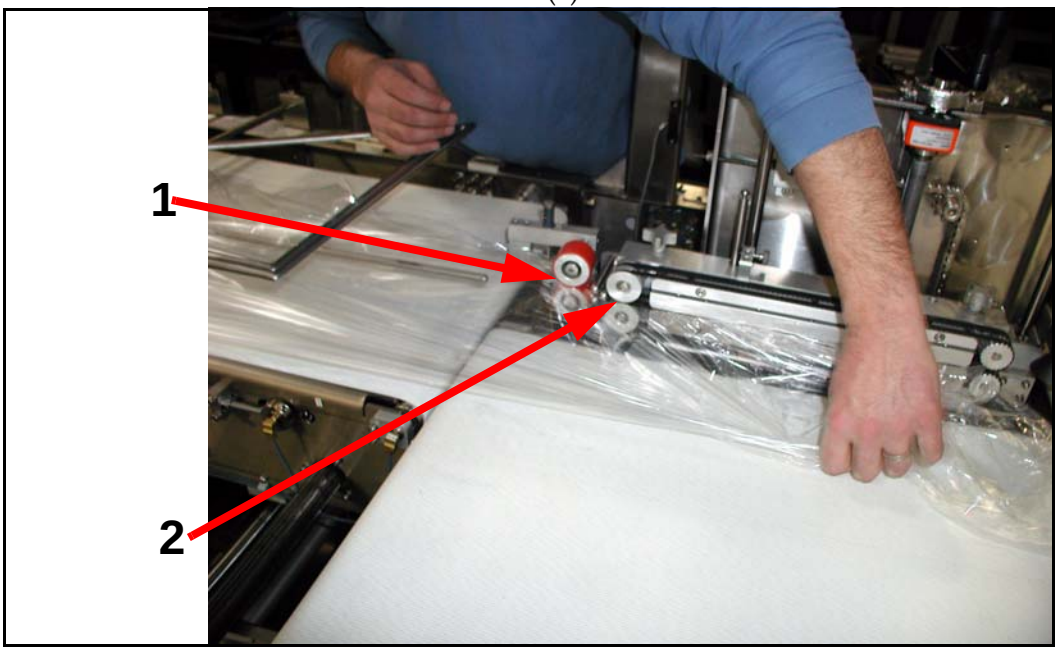


Figure 5-57. Leading Edge Threading

10 Close all guard doors.

11 Pull out all EMERGENCY STOP buttons.

12 Press CYCLE STOP/RESET button.

13 Press JOG button until film advances past seal bar as shown below.

14 Press MANUAL SEAL button to seal film.

15 Press EMERGENCY STOP button.

16 Open guard and remove scrap film.

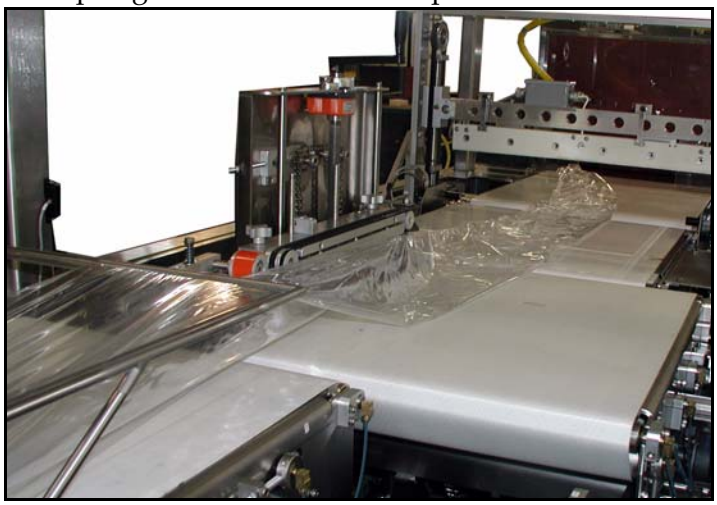


Figure 5-58. Jogging Film

17 Remove take up reel knob (1 in Figure Figure 5-59) and cover (2).

18 Remove scrap film (3) from reel. Replace cover and knob.

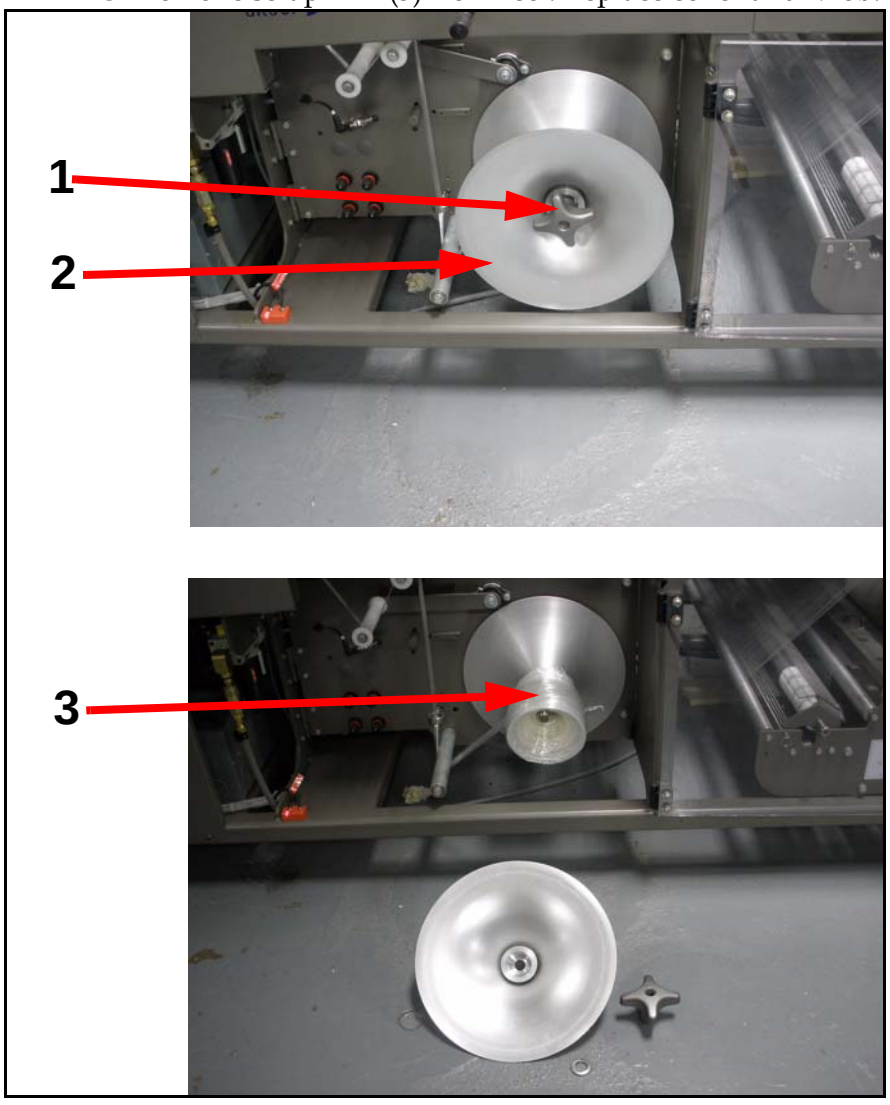


Figure 5-59. Take Up Reel

19 Feed scrap film over rollers (1), through ring (2) and down to take-up reel (3). Tape film to reel with masking tape or tie it to reel's hub.

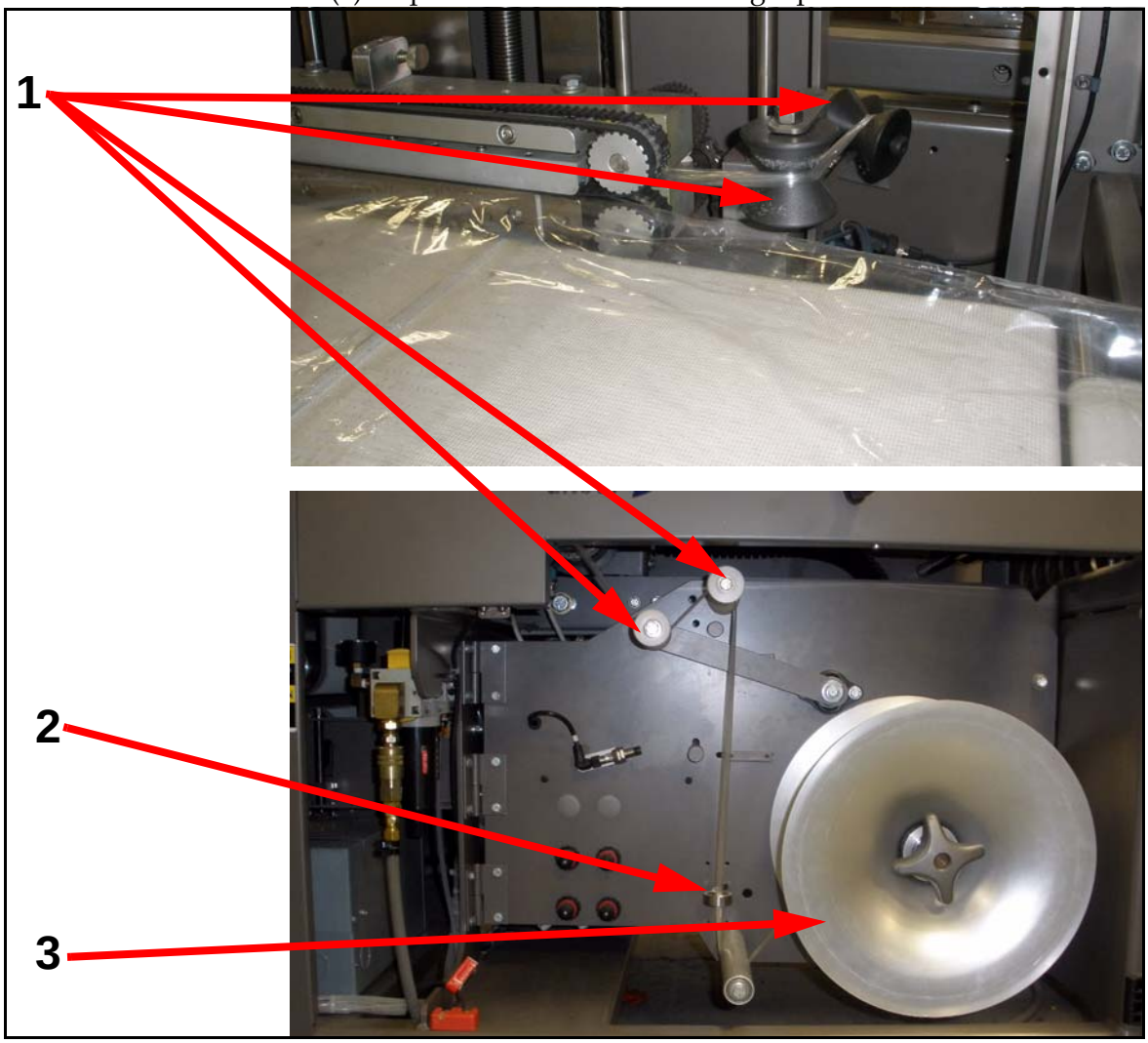


Figure 5-60. Scrap Film

20 Close all guard doors.

21 Pull out all EMERGENCY STOP buttons.

22 Press CYCLE STOP/RESET button.

23 Press CYCLE START button.

24 Press CYCLE STOP/RESET button after first seal is made.

25 Remove first sealed product - it will have a long bag and be a reject.

26 Restart production.

Periodic Maintenance

6

6.1 Introduction

This chapter covers the periodic maintenance procedures for the machine.

Warning

The following procedures should only be done after the machine has been turned off, allowed to cool down and the air pressure has been released. Always follow Lockout/Tagout procedures. Always wear safety glasses and all required personal protective equipment.

6.2 Preventive Maintenance Schedule

Refer to the schedule below for information on when to perform periodic maintenance on the machine.

Note: Due to varying operating conditions, the procedures listed below may have to be performed at greater or lesser intervals. You may have to adjust intervals according to your machine's performance.

	When To Do It:				
What To Do:	**Daily**	**Weekly**	**Monthly**	**Every 6 Months***	**Refer to Section:**
Perform Walk Around Safety Inspection	X				6.3
Clean External Surfaces	X				6.4
Check EMERGENCY STOP Button For Proper Operation	X				6.5
Drain Air Filter Bowl	X				6.6
Clean Seal Bar	X				6.7
Inspect Film Feed Drive Rollers		X			6.8
Inspect Conveyor Belts		X			6.9
Clean Photo Eyes		X			6.10
Grease Seal Carriage Bushings			X		6.11
Grease Zerk Fittings			X		6.12
Lubricate Conveyor Drive Chains			X		6.13
Replace Air Filter Element				X	6.14
Change Oil in Conveyor Gearbox*			X	X	6.15

Table 6-1: Preventive Maintenance Schedule

***Change oil in gearbox after first 500 hours of operation and then every six months afterwards.**

6.3 Walk Around Safety Inspection

Tools Required:

- None

Warning

Turn off machine's main disconnect switch before servicing machine. You can get severely injured if you do not.

At the beginning of each day, do a daily safety inspection of the machine and its surrounding area. Pick up any trash or obstacles around the machine. Wipe up any grease or spills.

Figure 6-1. Inspecting the Machine

6.4 Cleaning External Surfaces

Tools & Materials Required:

- cleaning wipes
- warm, soapy water

Warning

Turn off machine's main disconnect switch before servicing machine. You can get severely injured if you do not.

Use cleaning wipes and warm soapy water to clean external surfaces of the machine.

6.5 Check Emergency Stop Button

With the machine cycling, press the **EMERGENCY STOP** button. The machine should stop immediately. Pull button back up and press CYCLE STOP/RESET button to reset.

Figure 6-2. EMERGENCY STOP Button

6.6 Draining Air Filter Bowl

Tools Required:

- Cleaning Wipes

1. Make sure that air is connected to machine and machine is turned on but not running.
2. Turn drain plug (1 in Figure 6-3) 1/4 turn and let water drain out.
3. Turn drain plug back 1/4 turn to stop air flow.
4. Wipe up expelled water.

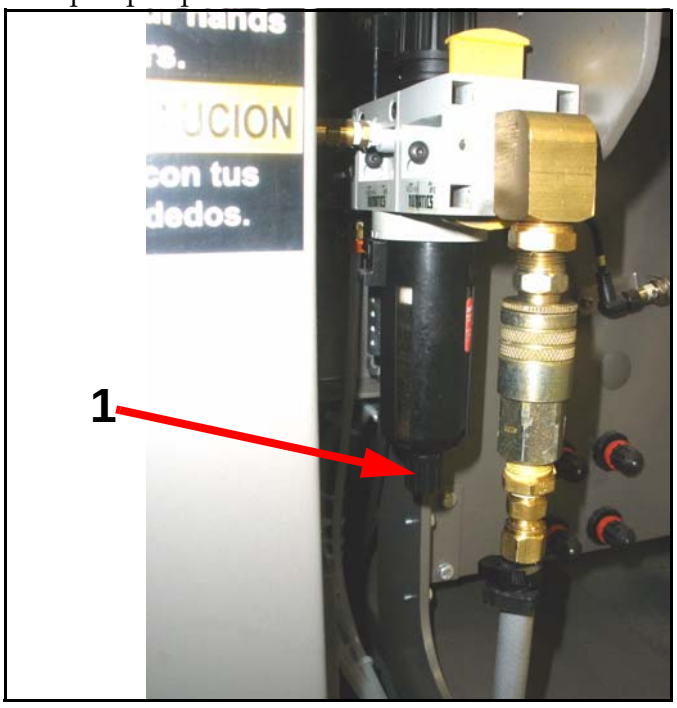


Figure 6-3. Air Filter Drain Plug

6.7 Cleaning Seal Bars

Tools & Materials Required:

- Cleaning Wipes
- Warm, Soapy Water

Warning

Turn off machine's main disconnect switch before servicing machine. Also, let seal bars cool to room temperature. You can get severely injured if you do not.

1. Turn off machine's main disconnect switch.
2. Manually move seal bars (1 in Figure 6-4) to position shown.
3. Clean seal bars with cleaning wipes and warm soapy water. Thoroughly dry seal bars.
4. Turn main disconnect switch back on.

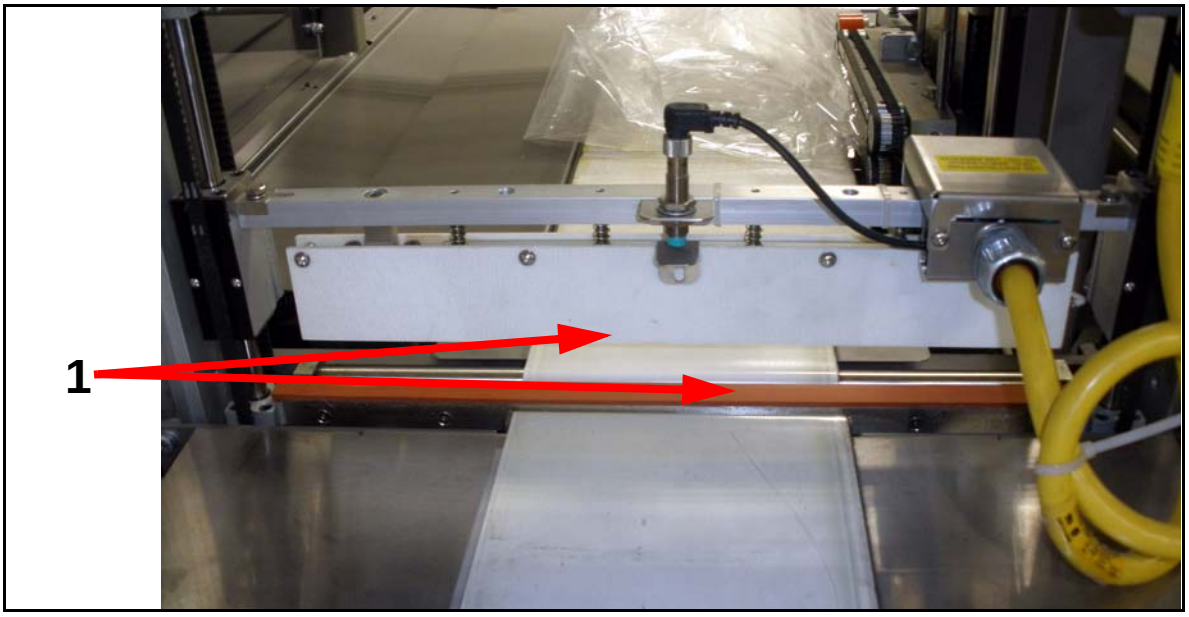


Figure 6-4. Seal Bars

6.8 Inspecting Film Feed Drive Roller

Tools & Materials Required:

- Cleaning Wipes
- Fine Wire Brush
- Warm, Soapy Water

Warning

Turn off machine's main disconnect switch before servicing machine. You can get severely injured if you do not.

1. Turn off machine's main disconnect switch.
2. Inspect drive roller (1 in Figure 6-5). Remove any dirt, objects or melted film.
3. Turn main disconnect switch back on.

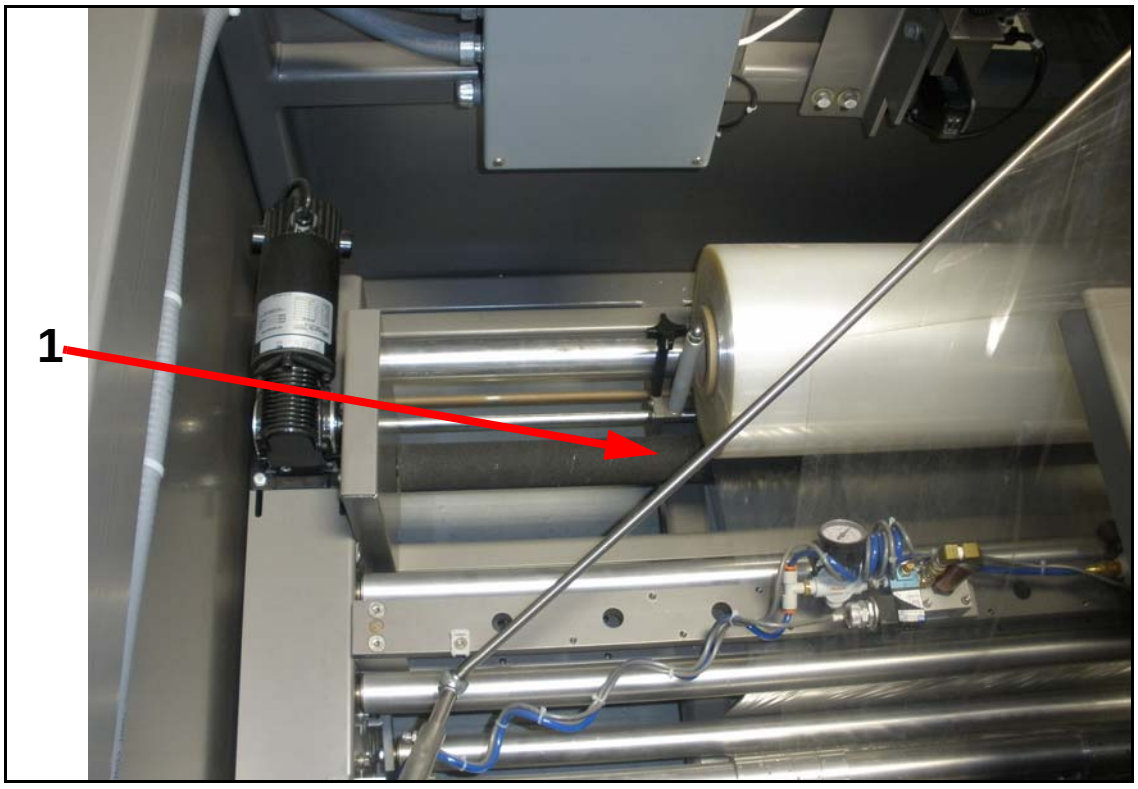


Figure 6-5. Drive Roller

6.9 Inspecting Conveyor Belts

Tools & Materials Required:

- Cleaning Wipes
- Fine Wire Brush
- Warm, Soapy Water

Warning

Turn off machine's main disconnect switch before servicing machine. You can get severely injured if you do not.

1. Turn off machine's main disconnect switch.
2. Inspect conveyor belts (1 in Figure 6-6). Remove any dirt, objects or melted film.
3. Turn main disconnect switch back on.

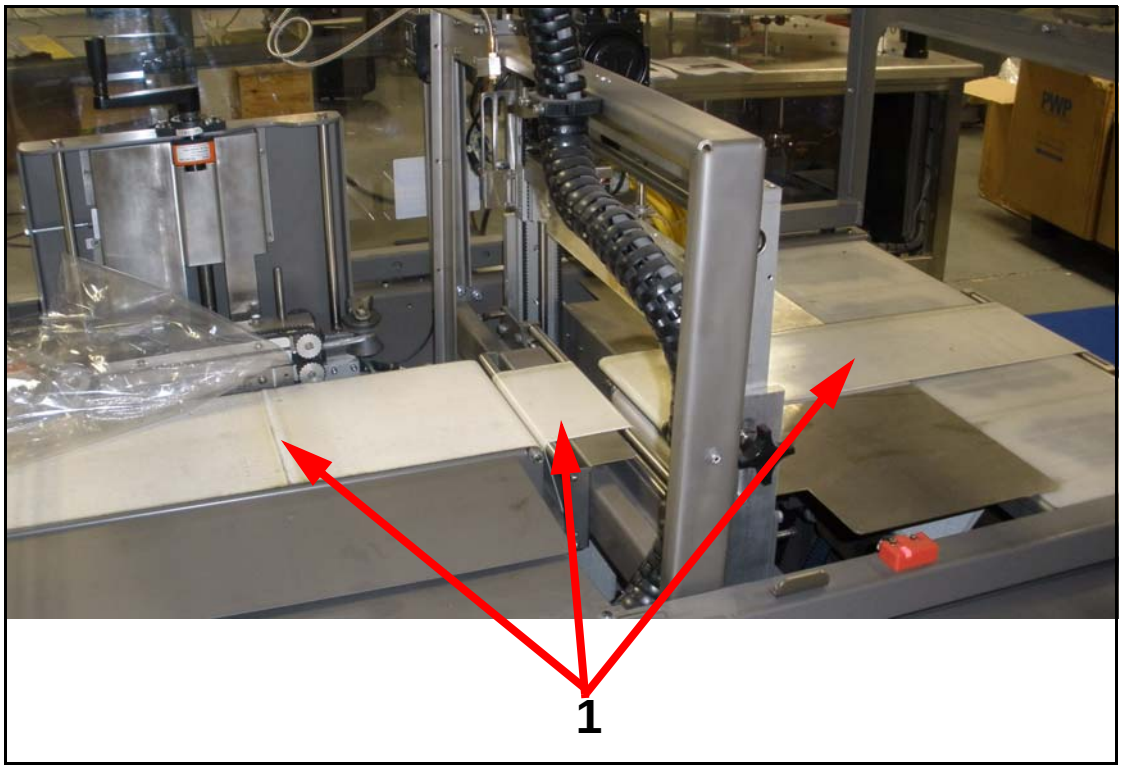


Figure 6-6. Conveyor Belts

6.10 Cleaning Photo Eye

Tools & Materials Required:

- Cleaning Wipes
- Window Cleaning Solution

Warning

Turn off machine's main disconnect switch before servicing machine. You can get severely injured if you do not.

1. Turn off machine's main disconnect switch.
2. Spray a small amount of window cleaning solution to the face of photo eye (1 in Figure 6-7).
3. Dry photoeye with cleaning wipe.
4. Turn main disconnect switch back on.

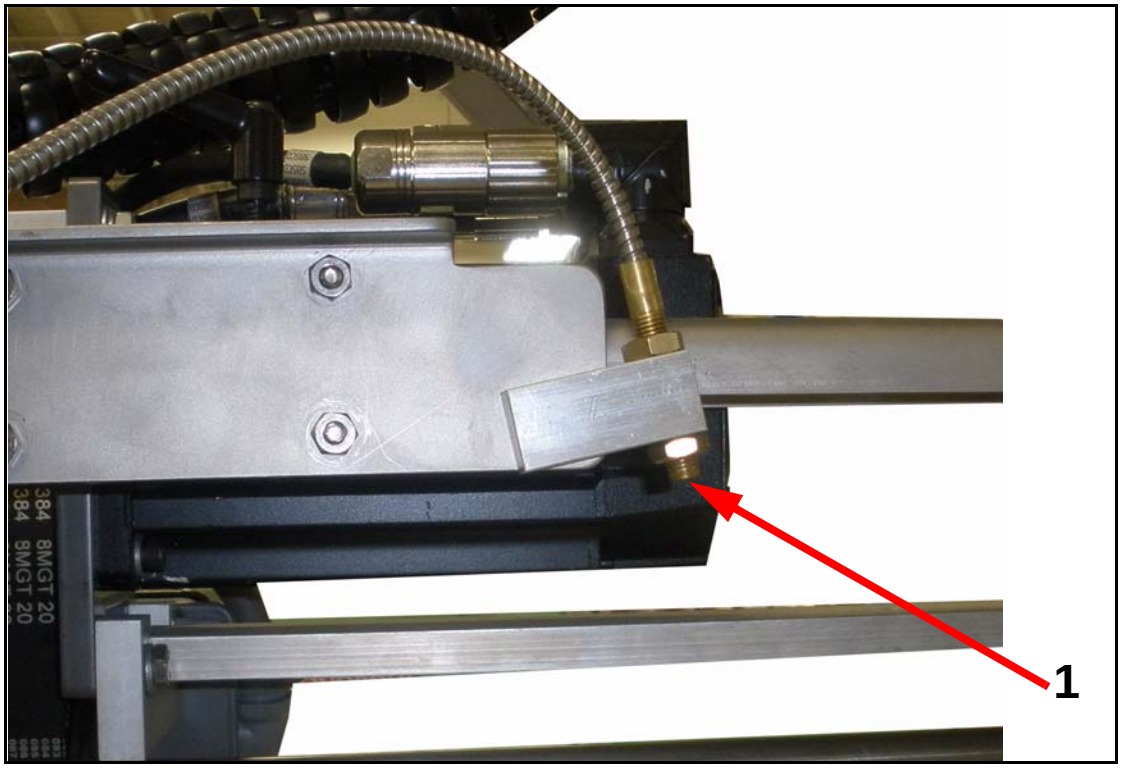


Figure 6-7. Photo Eye

6.11 Greasing Seal Carriage Bushings

Tools & Materials Required:

- Clean Rag
- No. 2 General Purpose Lithium Grease
- Standard Size Grease Gun with Standard Nozzle

Warning

Turn off machine's main disconnect switch before servicing machine. You can get severely injured if you do not.

1. Turn off machine's main disconnect switch.
2. Apply one pump of grease to each fitting (1 in Figure 6-8).
3. Wipe up excess grease.
4. Close guard doors.
5. Turn main disconnect switch back on.

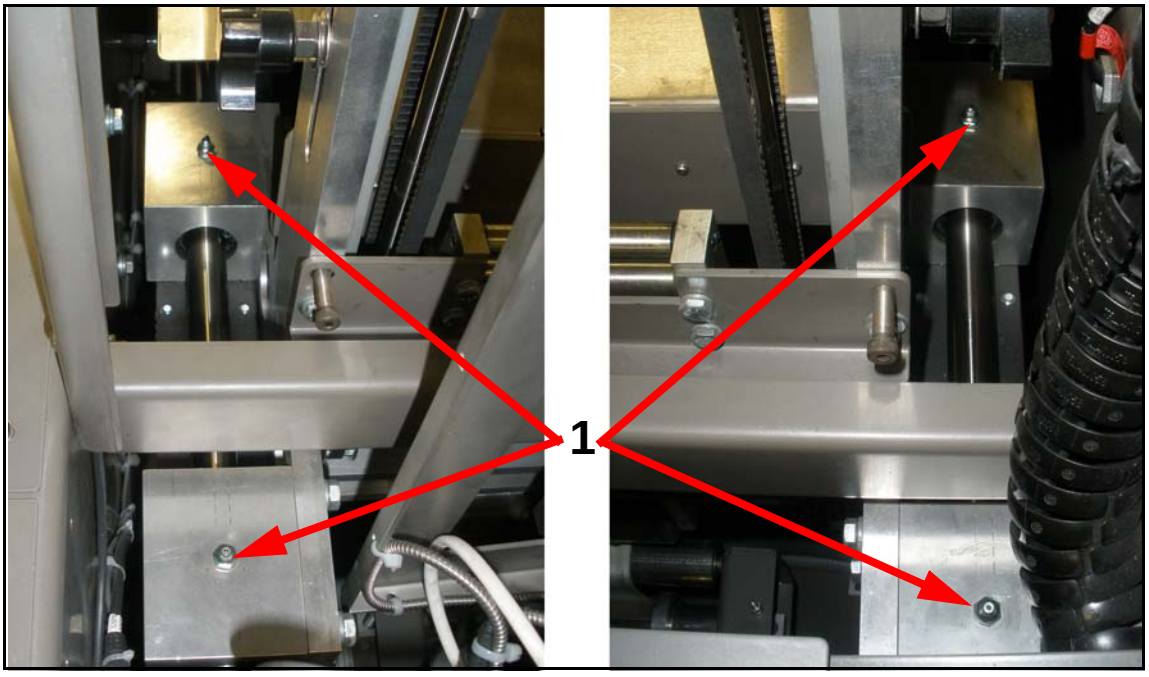


Figure 6-8. Seal Bar Bushings' Grease Fittings

6.12 Greasing Zerk Fittings

Tools & Materials Required:

- Clean Rag
- No. 2 General Purpose Lithium Grease
- Standard Size Grease Gun with Standard Nozzle

Warning

Turn off machine's main disconnect switch before servicing machine. You can get severely injured if you do not.

1. Turn off machine's main disconnect switch.
2. Apply one pump of grease to each fitting on grease manifolds (1 in Figure 6-9). Read label next to manifold for special instructions
3. Apply one pump of grease to fitting (1 in Figure 6-10) on film rack.
4. Wipe up excess grease.
5. Turn main disconnect switch back on.

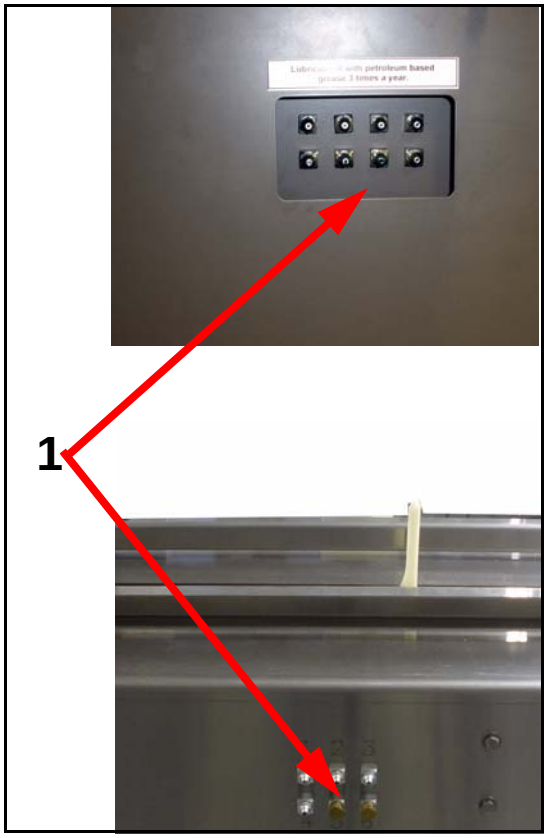


Figure 6-9. Zerk Fitting Manifolds

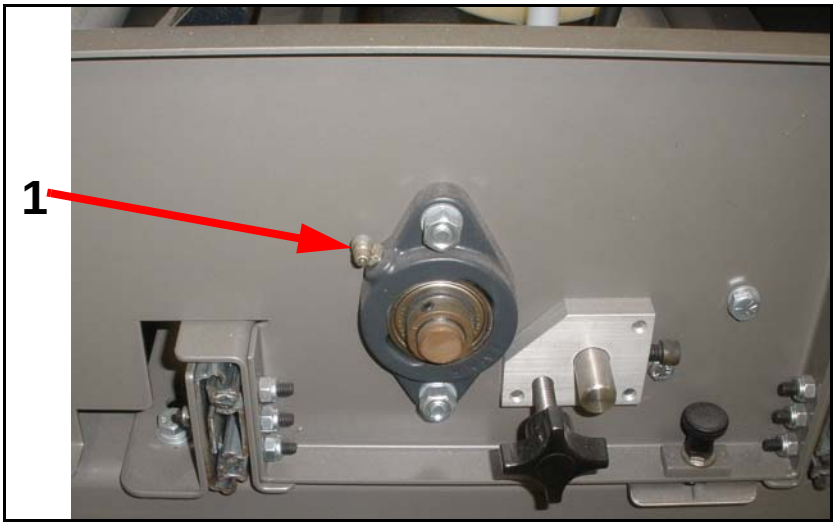


Figure 6-10. Film Rack Zerk Fitting

6.13 Lubricating Conveyor Drive Chains

Tools & Materials Required:

- Clean Rag
- SAE 30 Motor Oil
- Small Paint Brush

Warning

Turn off machine's main disconnect switch before servicing machine. You can get severely injured if you do not.

1. Lightly but thoroughly apply oil to chains (1 in Figure 6-11) with brush.
2. Wipe up excess or spilled oil.
3. Turn main disconnect switch back on.

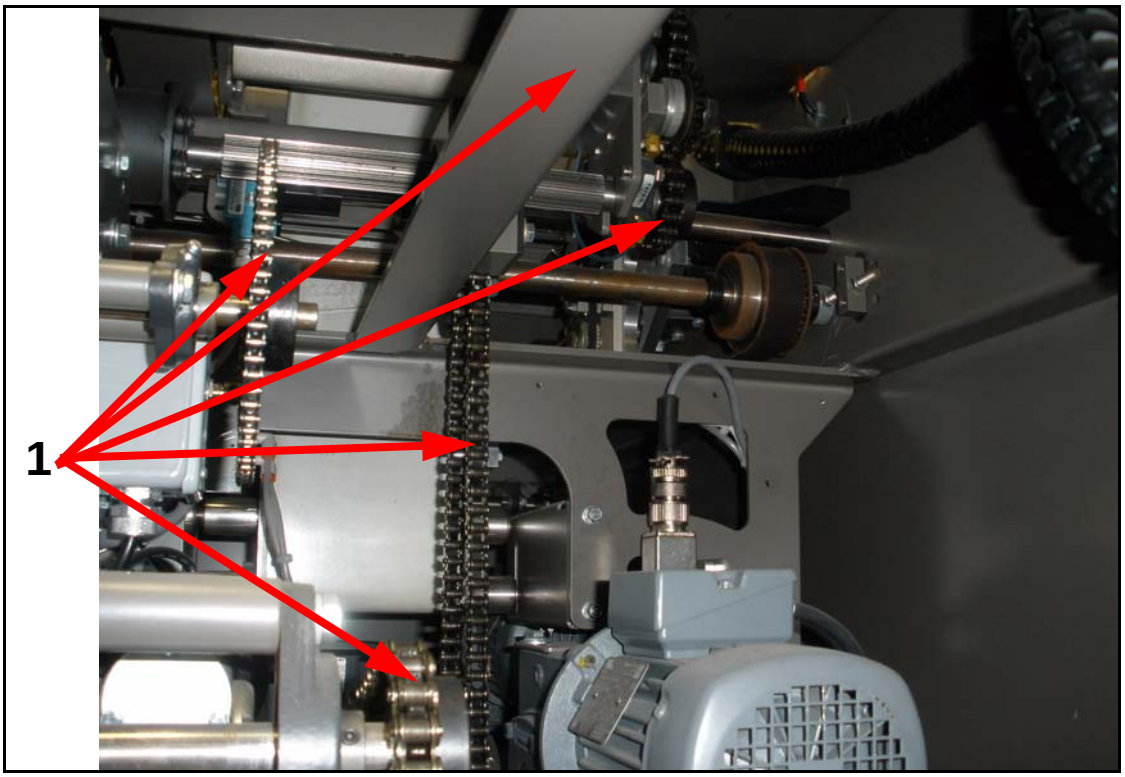


Figure 6-11. Typical Conveyor Chains

6.14 Replacing Air Filter Element

Tools Required: None

Part Required:

- Numatics EKF32B 5 Micron Filter Element

Warning

Turn off main air valve before adding oil to lubricator. You may get seriously injured if you do not.

1 Turn off main air valve (1 in Figure 6-12) by pressing it all the way down.

Figure 6-12. Main Air Valve Shutoff Valve

2 Press down on tab (1 in Figure 6-13).

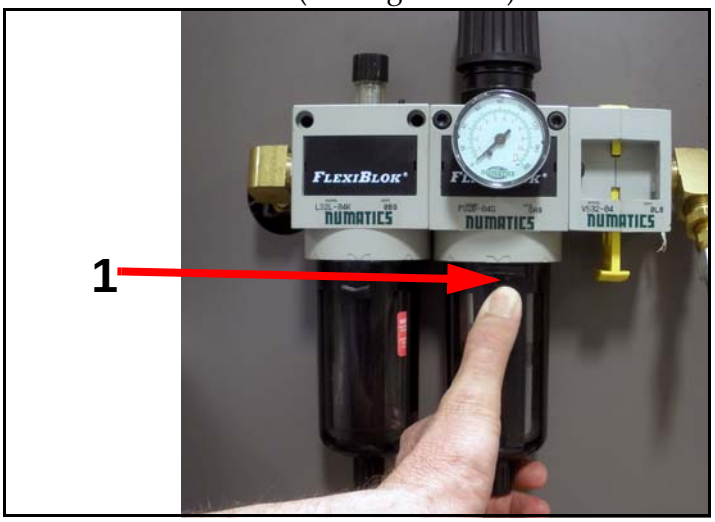


Figure 6-13. Tab (Typical)

3 While still pressing on tab, turn bowl so that tab aligns with mark (1 in Figure 6-14).

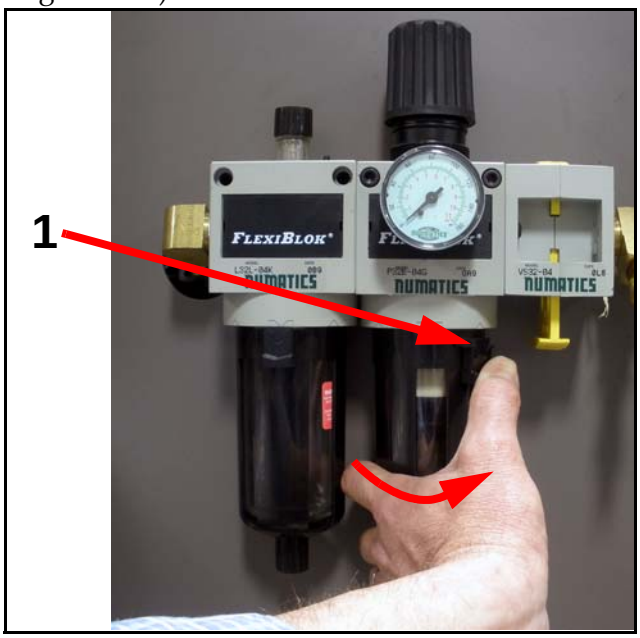


Figure 6-14. Turning Bowl (Typical)

4 Pull bowl off of filter body.

Figure 6-15. Removing Bowl (Typical)

5 Unscrew baffle (1 in Figure 6-16) and pull filter element (2) off of filter body.

6 Reverse step to reassmble.

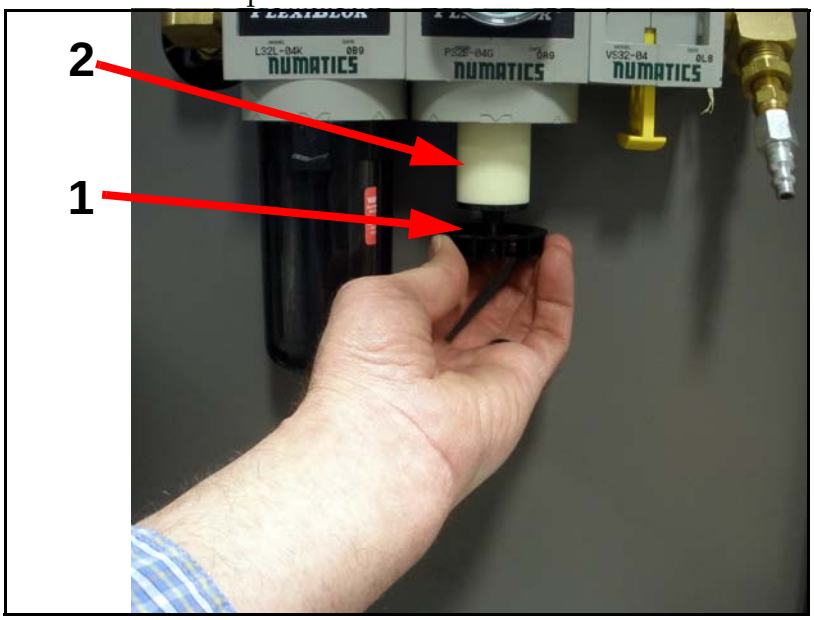


Figure 6-16. Removing Filter Element (Typical)

6.15 Changing Oil in Conveyor Gearbox

Tools & Materials Required:

- 1/4" Hex Wrench
- Gearbox Oil (Mobil SHC 634 or Equivalent)
- Clean Rag
- Container for Waste Oil (1 Quart [1 L] Min.)
- Pump Type Oil Can

Warning

Turn off machine's main disconnect switch before servicing machine. You can get severely injured if you do not.

1. Place container under drain plug (1 in Figure 6-17).
2. Remove drain plug (1) and let oil drain out.
3. Screw drain plug back in.

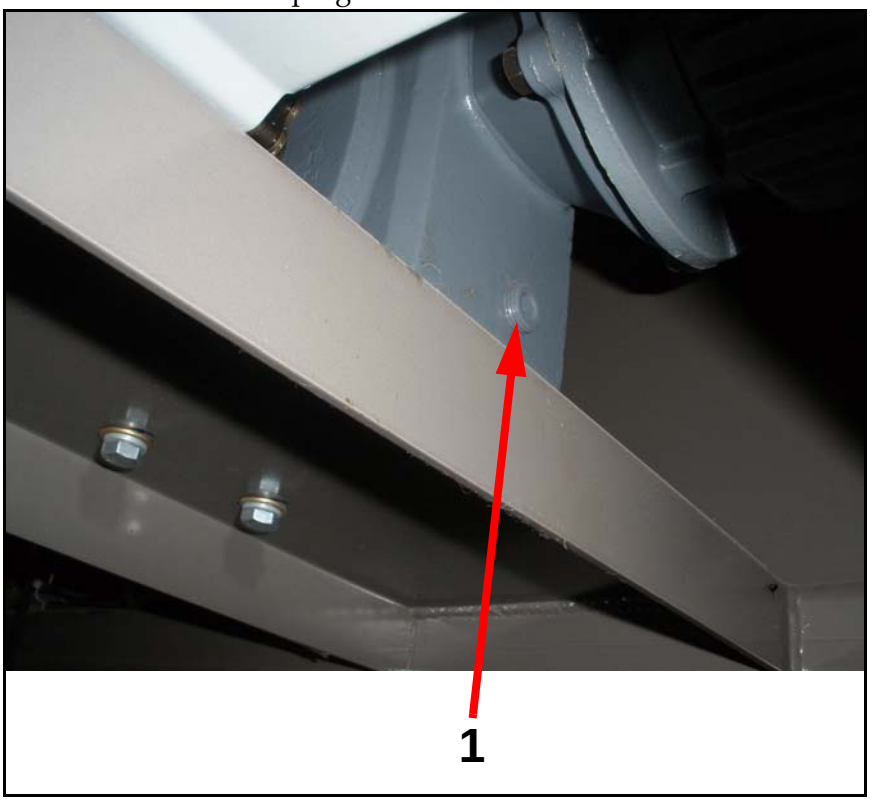


Figure 6-17. Gearbox Drain Plug

4 Remove fill plug (1 in Figure 6-18).

5 Fill gear box up with oil can until oil level is up to fill plug hole.

6 Screw fill plug back in.

7 Reattach cover.

8 Turn main disconnect switch back on.

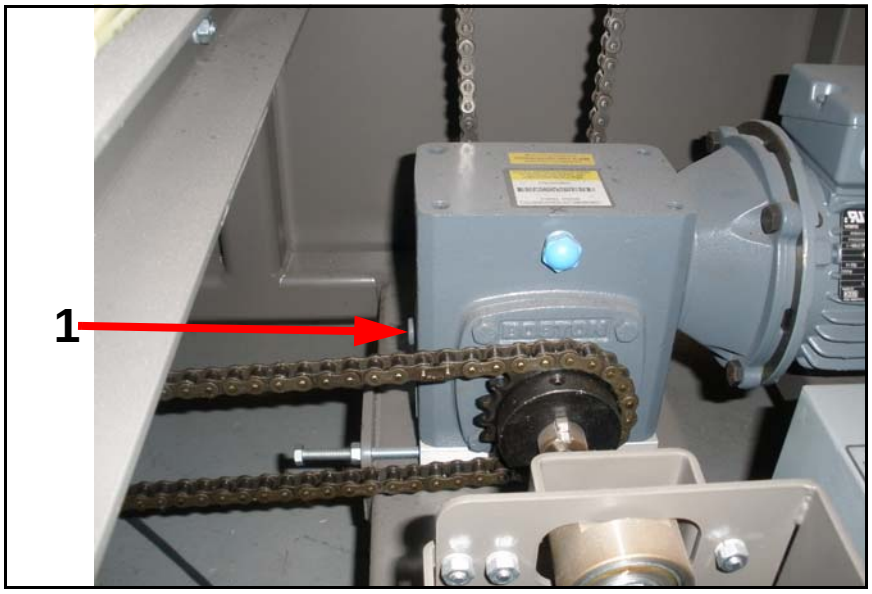


Figure 6-18. Gear Box Fill Plug

Maintenance & Testing

7

7.1 Introduction

This chapter covers various maintenance and testing procedures for the machine.

7.2 Product Changeover

This procedure describes the necessary machine adjustments for changing the types of products being run.

Warning

Make sure EMERGENCY STOP button on wrapper portion of machine is pressed in before doing this procedure. You may get seriously injured if you do not.

1 Loosen infeed guide handles (1 in Figure 7-1).

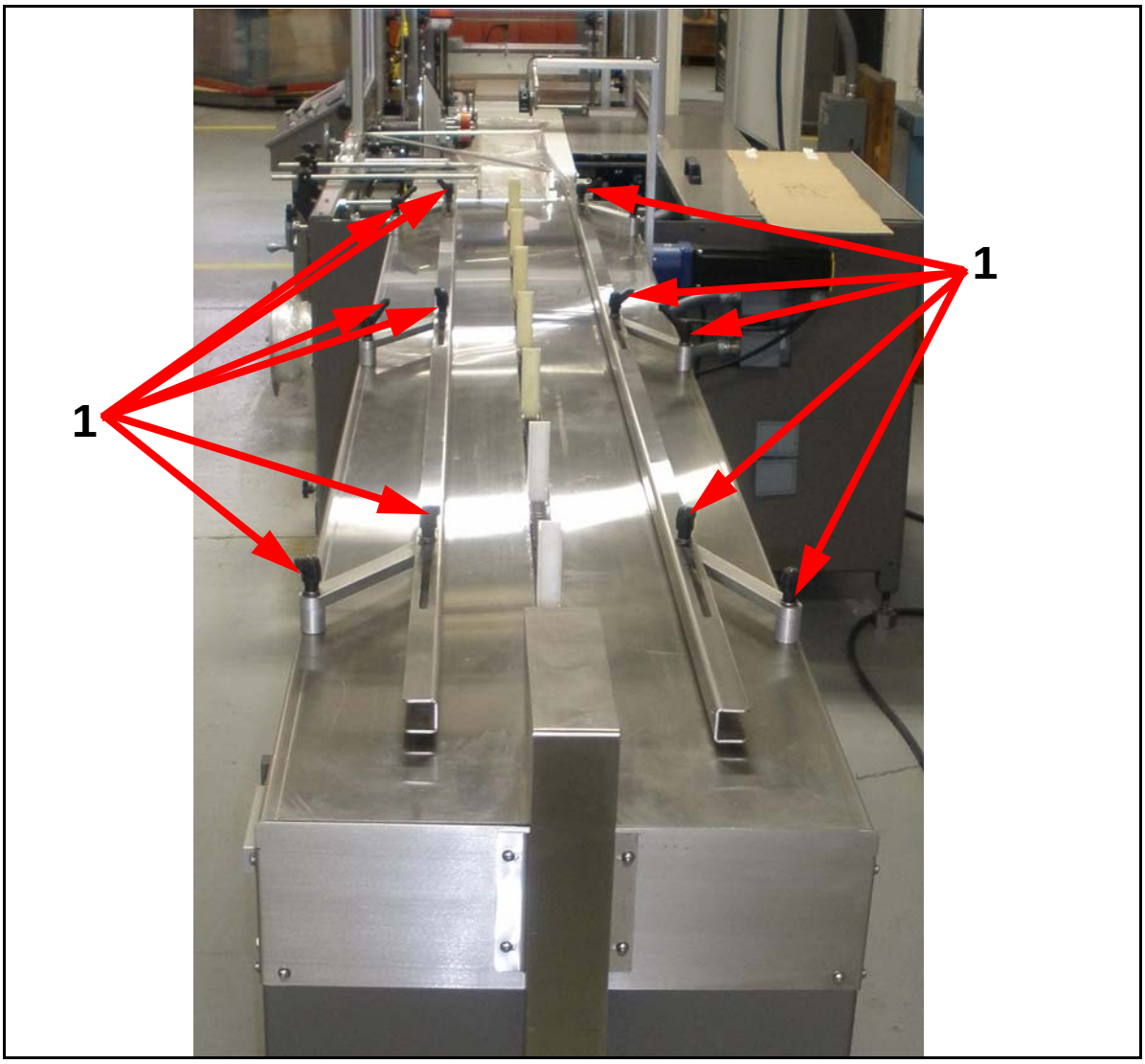


Figure 7-1. Infeed Guide Handles

2 Place products (1 in Figure 7-2) on the beginning, middle and end of the infeed lug conveyor so that it is centered on drive chain (2).

3 Adjust guides (3) so that there is about 1/4" gap between the guides and the product.

4 Tighten all handles.

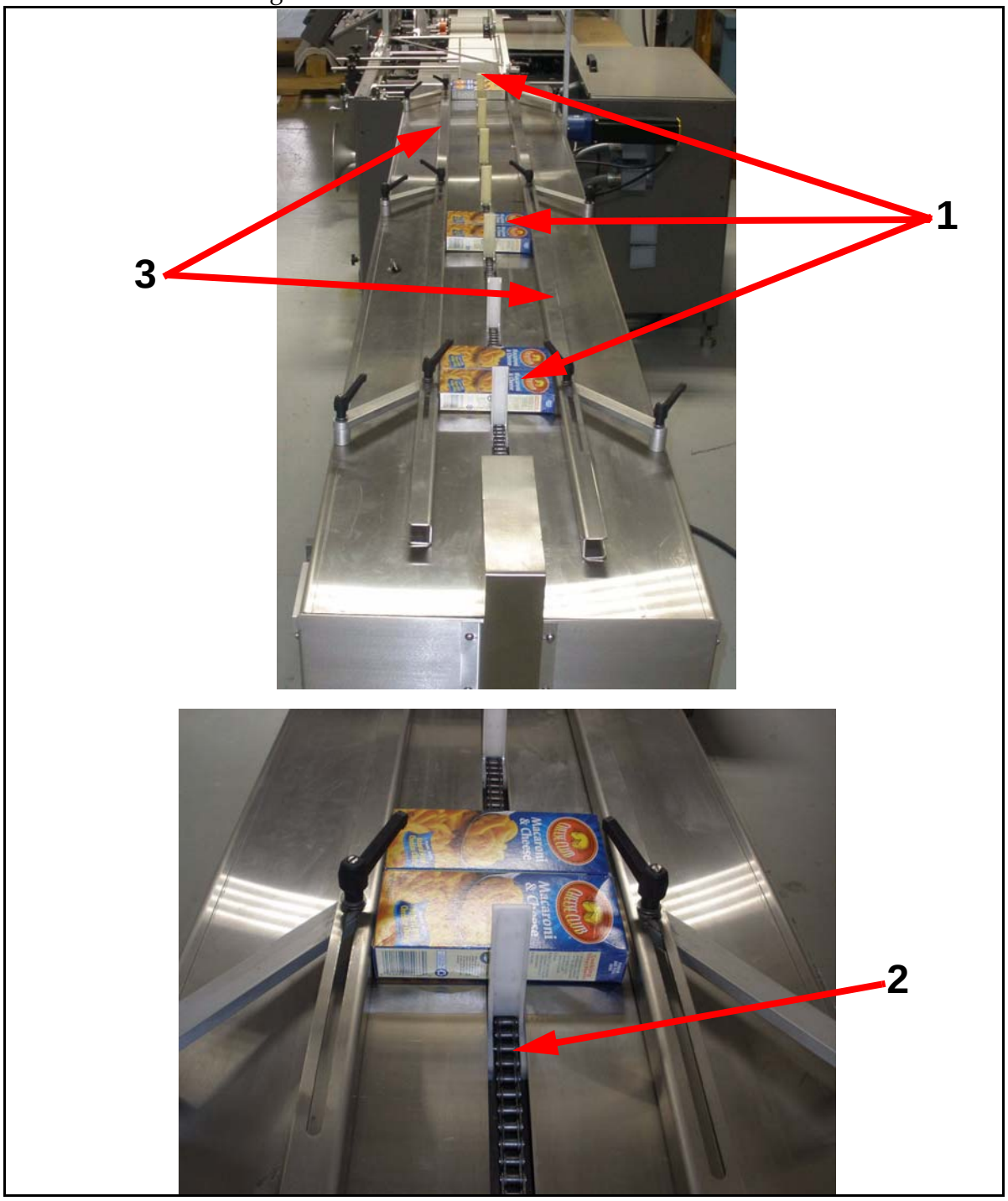


Figure 7-2. Product on Infeed Lug Conveyor

5 Turn infeed crank (1 in Figure 7-3) until infeed guide is aligned with triangle as shown in Figure 7-4.

Figure 7-3. Infeed Alignment Crank

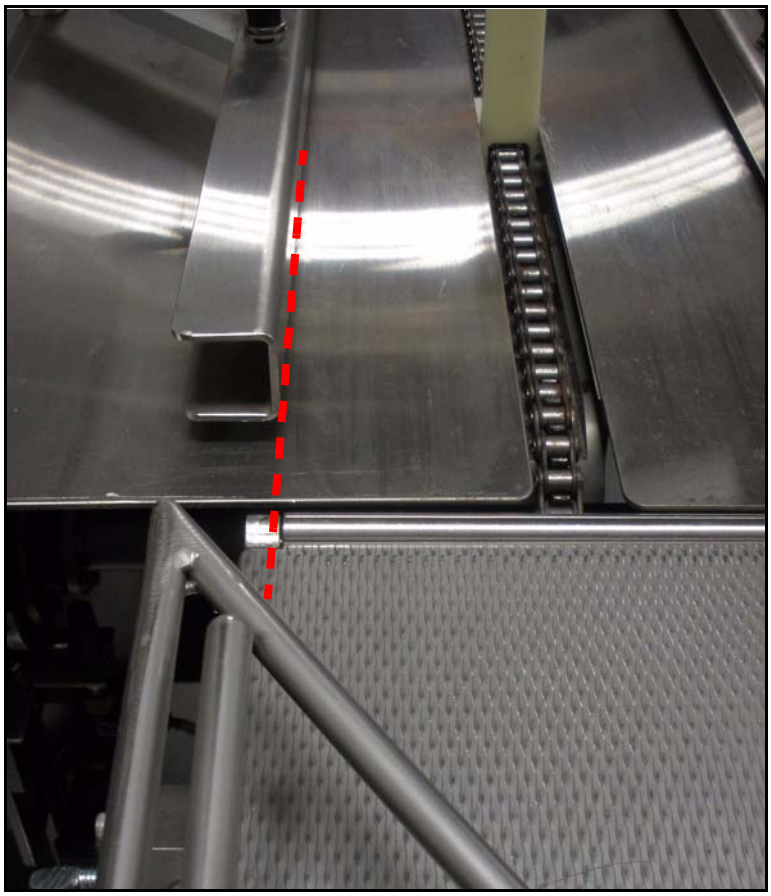


Figure 7-4. Left Infeed Alignment

6 Loosen triangle rod clamp screws (1 in Figure 7-5).

7 Raise or lower triangle (2) so that it is about 1/4”-1/2” above product and retighten clamp screws. If necessary, swap out rods (3) to accommodate different height products. Do not let rod ends (4) obstruct path of film (5).
Different length rods (6) are mounted on side of machine.

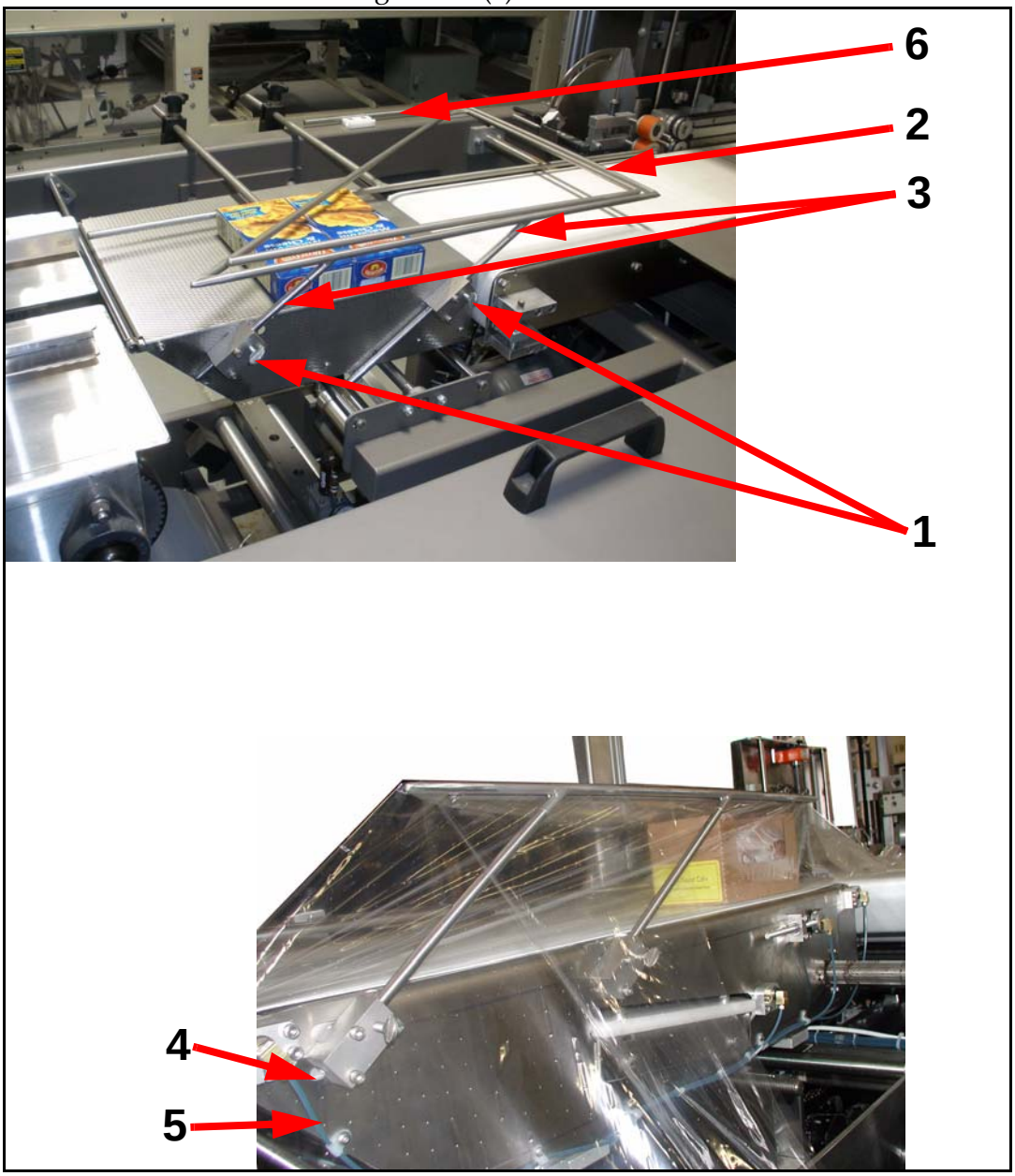


Figure 7-5. Triangle Height Adjustment

8 Loosen clamp knobs (1 in Figure 7-5) on right side guide.

9 Slide guide (2) up to product but leave a 1/4″ gap between guide and product.

10 Retighten clamp knobs.

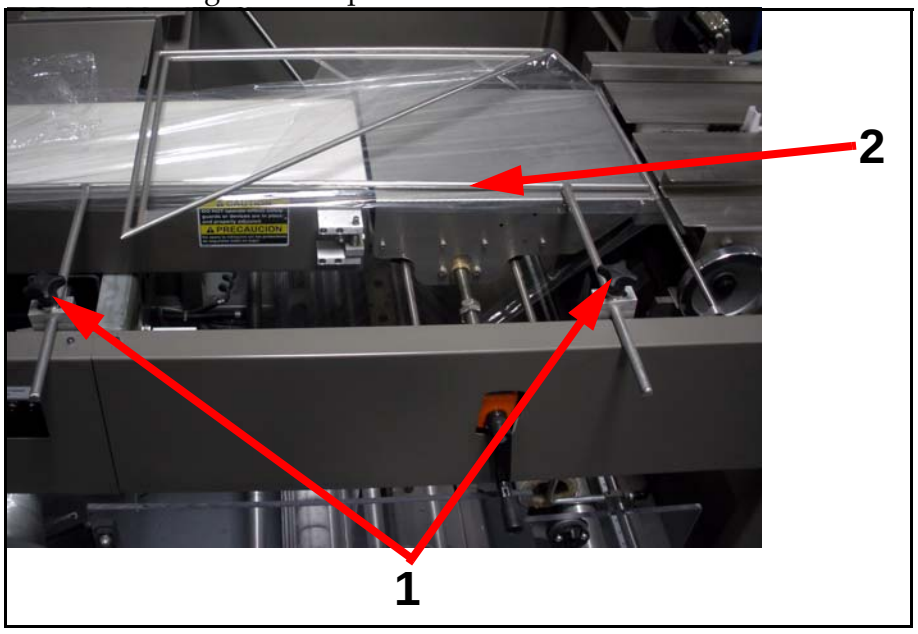


Figure 7-6. Right Side Guide Adjustment

11 Turn side seal conveyor crank (1 in Figure 7-7) until side seal pinch rollers (1 in Figure 7-8) are approximately 3/4″ away from side guide bar (2 in Figure 7-8).

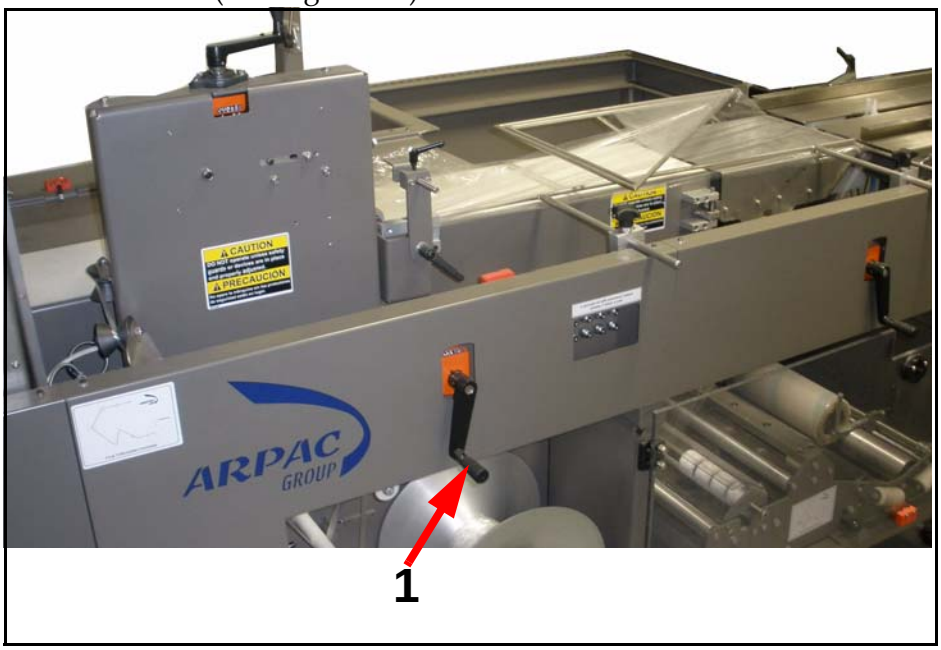


Figure 7-7. Side Seal Crank Conveyor

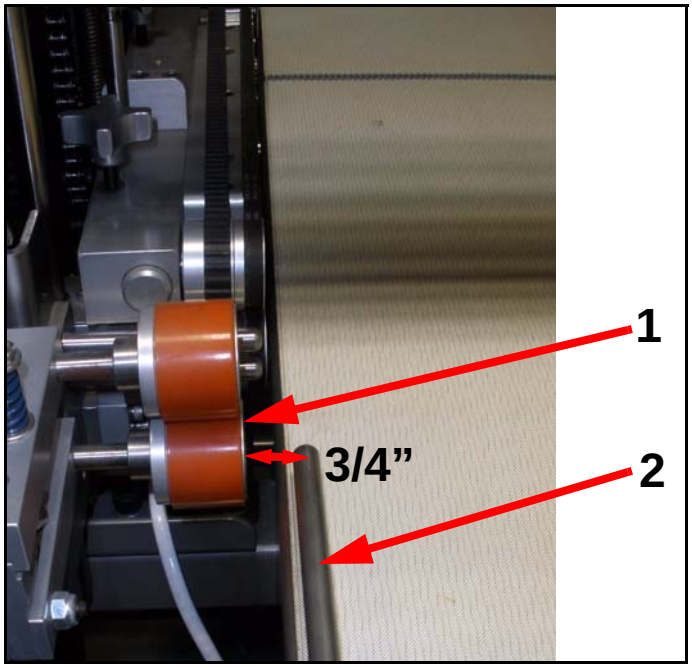


Figure 7-8. Side Seal Pinch Rollers

12 Turn side seal height crank (1 in Figure 7-9) until side seal seam line (2) is at approximately half the height of the product.

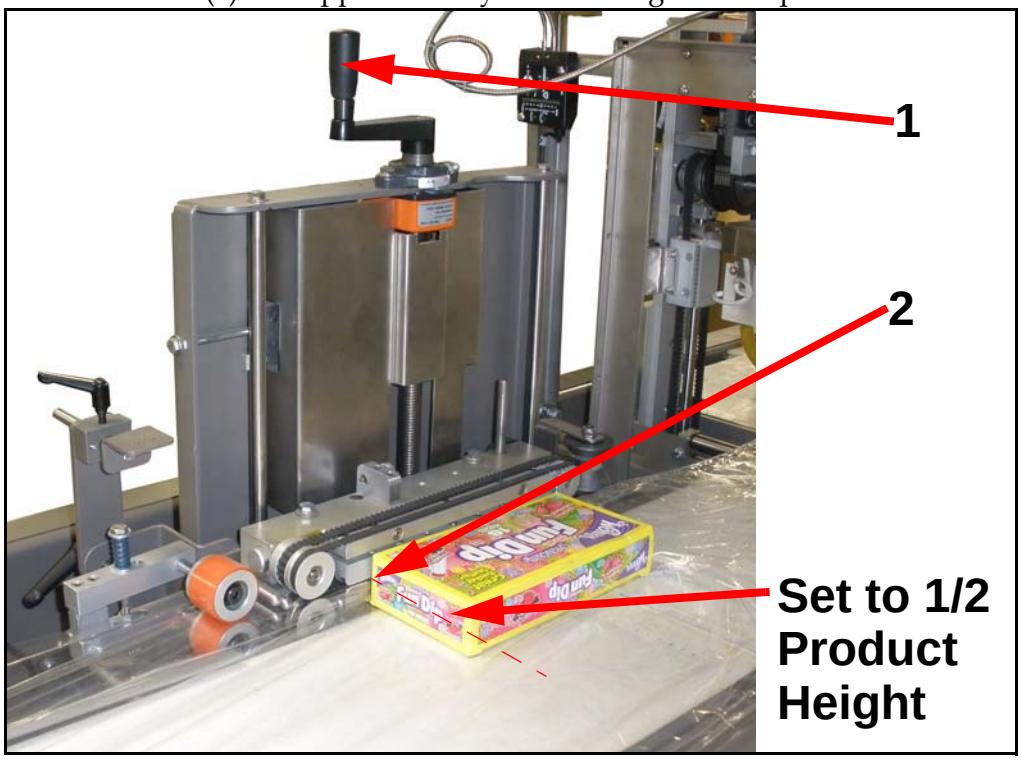


Figure 7-9. Side Seal Height Crank

13 Manually close seal bars all the way.

14 Loosen seal frame clamps (1 in Figure 7-10) on both sides of machine.

15 Manually move entire seal bar assembly up or down so that seal line is half way up product height as shown in Figure 7-10 and then retighten clamps. If assembly cannot be moved to desired position, completely remove clamps and move assembly until second clamp holes appears in clamp slots and reinsert clamps.

16 Retighten seal frame clamps.

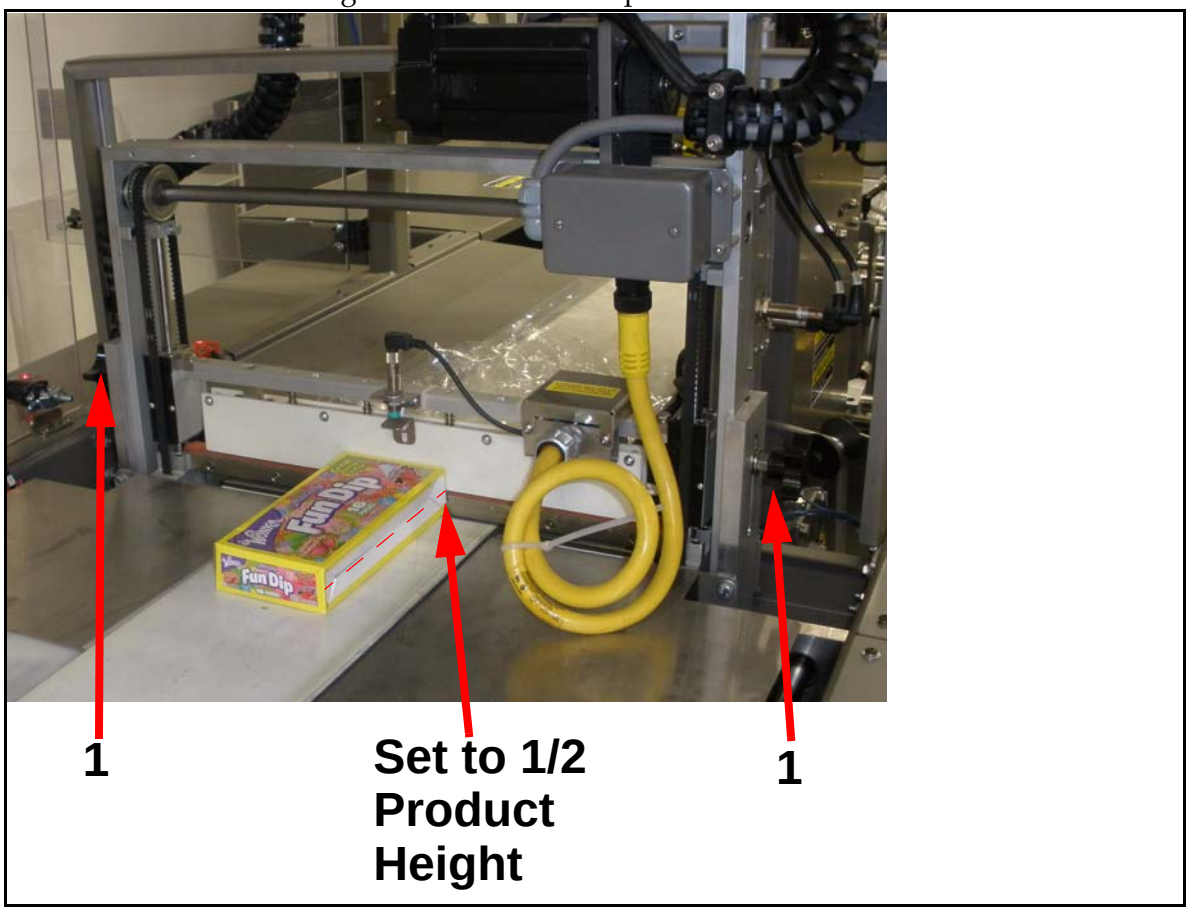


Figure 7-10. Seal Bar Height Adjustment

17 Load new recipe into machine's interface according to Section "5.10 Managing Recipes" on page 5-34.

18 Cycle start main wrapper machine.

Procedure complete.

7.3 Film Change Over

7.3.1 Determining Film Width

Use the formula below to determine the film width required:

Film Width = [(product height + product width) x 2] + (4″)

For example, when the product is 3″ high and 9″ wide, the film width would be determined as follows: Film Width = [(3 + 9) x 2] + 4

Film Width = [12 x 2] + 4

Film Width = 24 + 4

Film Width = 28″

NOTE: The 4 inches is added to allow enough film to feed and track through the trim seal unit. This figure can vary depending on the height of the product.

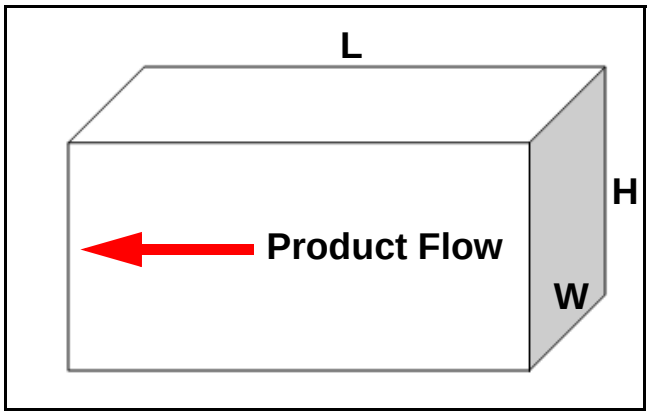


Figure 7-11. Product Orientation

7.3.2 Film Width Adjustment

When loading different size film, loosen clamp knobs (1 in Figure 7-12) to reposition pins (2).

The position of the film roll can be finely tuned by turning knob (3).

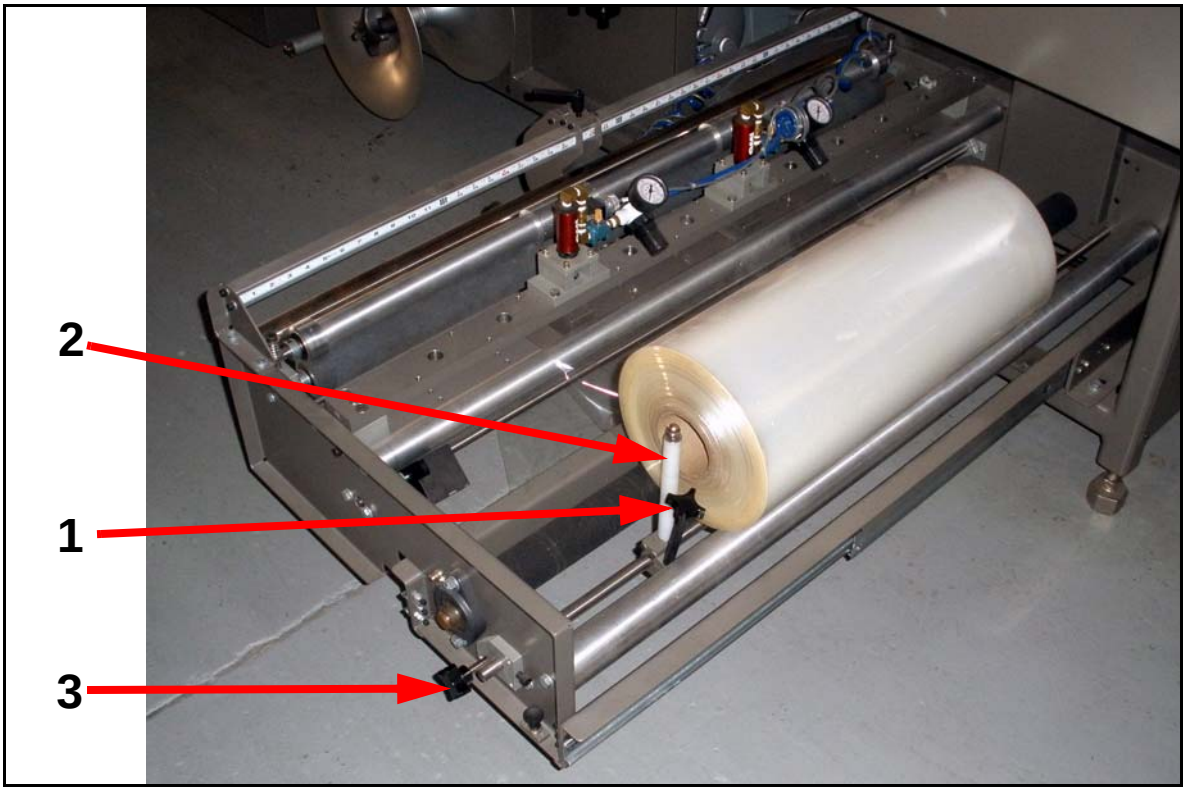


Figure 7-12. Film Positioning

7.4 Product Recipe Table

The table below lists the recipes stored in the machine's interface and which recipe represents which product.

Recipe #	Recipe Name	Production Rate
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

Table 7-1: Product Recipe Table

7.5 Setpoint Values For Each Recipe

The table below lists the set point values stored in the interface for each recipe. You can refer to this when a recipe is accidently changed or erased.

Setpoint #	Set Point Parameter	Value Setting For Each Recipe Continued on Next Page				
		1	2	3	4	5
1	Wrapper Rate (10-80)					
2	Infeed Pin Spacing					
3	Seal Bar Dwell					
4	Seal Position After Product Adjustment					
5	Seal Conv. Speed (50-120% of Main)					
6	Infeed Stopping Position					
7	Retract Bridge B4 Seal Bar 0=Disabled					
8	Extend Bridge After Seal Bar					
9	Hole Punch Off=0 Intervals=1 Registr.=2					
10	Main Drv. Con. Speed (50-120% of Infeed)					
11	Side Seal Heat (0-100%)					
12	Hole Punch Dwell					
13	Hole Punch Dist From Edge					
14	Static Lap Seal 1=Enable 0=Dis-able					
15	Hole Punch Offset					
16	Regis. Opt: 0=Disable 1=Enable					
17	Regis. Opt: Repeat Length					
18	Regis. Opt: Registr. Position Adjust					
19	Detect Prod at Downstream Pusher #1					
20	Downstream Pusher #1 Dwell					
21	Seak Bar PE 0=Vert 1=Horiz					
22	Spare					
23	Spare					
24	Spare					
25	Spare					
26	Seal Bar Opening (Dist Between Jaws/2)					
27	Seal Bar Open Speed in Manual					

Table 7-2: Setpoint Values for Recipes

.

Setpoint #	Set Point Parameter	Value Setting For Each Recipe Continued on Next Table				
		1	2	3	4	5
28	Seal Bar Close Speed in Manual					
29	Product Counter After Low Film					
30	Splicing Bar Dwell					
31	Product Width (Reference)					
32	Product Height (Reference)					
33	Product Length (Reference)					
34	Film Width (Reference)					
35	Bag Length (Reference)					
36	Forming Conveyor Width (Side Seal)					
37	Side Seal Height (Side Seal)					
38	Side Seal Conveyor Width (Side Seal					
39	Seal Line Position					
40	Film Roll Position					
41	Spare					
42	Spare					
43	Spare					
44	Delay to Return Carriage					
45	Delay to Detect Side S/Seal Ready					
46	S/Seal Timeout					
47	Delay to Start Seal Bar from Seal Bar PE					
48	Delay to Start Seal Bar from Lug PE					
49	Servo Infeed Max. Correction					
50	Seal Bar Compression % of Nominal					

Table 7-3: Setpoint Values for Recipes (Part 2)

7.6 Resetting Servos and Handling Servo Error Messages

When a servo fault message appears on the machine's display, do the following to reset servos:

1. Log into the machine on a maintenance level.
2. Go to the Maintenance 5 or Maintenance 6 screen.
3. Press the Reset Servo button.
4. Press the CYCLE/STOP RESET button.
5. Restart machine.
6. If error occurs again, cross reference servo fault error message to troubleshooting portion of servo manual. The manual is on the CD in Chapter 12 of this manual.

Figure 7-13. Maintenance 5 Menu

7.7 Determine Lug Spacing

Correct lug spacing is critical for high-speed applications. On a 6′ conveyor there is 12′ or (144″) of chain. The lugs are attached at equally spaced intervals to the hollow-pin, link-type infeed chain with 1/2″ link spacing. Factory preset lug spacing is set at 12″, but can be adjusted to accommodate a variety of product sizes. To achieve the maximum efficiency, the speed of the infeed lug conveyor and the main conveyor should be as close as possible.

The amount of free space distance between the leading edge of the product and the back side of the lug in front of the product should be no less than 2-1/2. A recommended amount of space is between 2-1/2″ and 4″ for optional performance.

Depending on the application and the current setup of the machine, it may be possible to operate the equipment without changing the lug spacing, provided that the product fits between the lugs. In this situation, adjustments can be made to change the speed of the infeed lug conveyor and main conveyor to adjust the product spacing and film bag size.

The standard factory preset lug spacing of 12″ is appropriate for products that are 9-1/2″ or less in length. Products that are longer than 9-1/2″ may require a different lug spacing configuration.

To determine the suggested lug spacing for a 6-foot long conveyor (144″), use the Lug Spacing Chart below. Longer conveyors use the same spacing but require more lugs.

Product Size	Suggested Lug Spacing	Number of Lugs Required
1-1/2” or less	4”	36
1-1/2” to 2”	4-1/2”	32
2” to 3-1/2”	6”	24
3-1/2” to 5-1/2”	8”	18
5-1/2” to 6-1/2”	9”	16
6-1/2” to 9-1/2”	12”	12
9-1/2” to 13-1/2”	16”	9
13-1/2” to 15-1/2”	18”	8
15-1/2” to 21-1/2”	24”	6
21-1/2” to 33-1/2”	36”	4

Table 7-4: Lug Spacing Chart

7.7.1 Changing Lug Spacing

Lug spacing adjustments are performed under the infeed lug conveyor. The infeed lug conveyor is a hollow-pin, chain type with 1/2″ spacing. The lugs are attached to the pin conveyor using lug pins. To change the infeed lug configuration, do the following:

1. Turn off the main power to the machine.
2. Determine and mark the starting lug.
3. Measure the required distance backward from the starting lug pin, and place a lug in that location. The example used is of a 12″ long product. See "Lug Spacing Chart" on page 7-15.

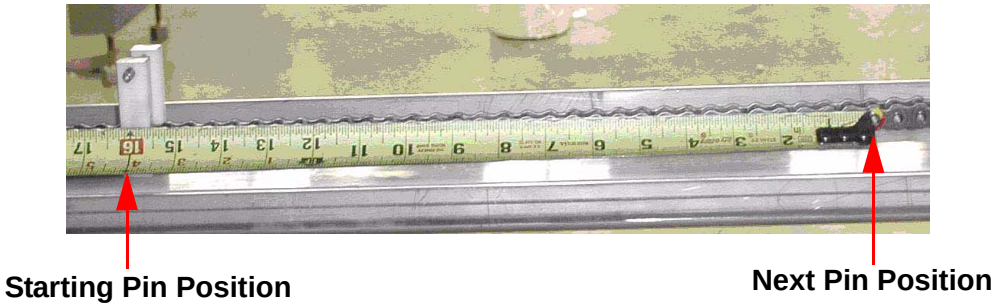


Figure 7-14. Starting Pin Position

4. To place a lug in position, hold the lug in the chain, push and hold the lug pin head as you place the pin through the lug and chain. Release the head of the lug pin to lock the pin in place.
5. Remove any lugs that are currently attached to the chain within this space. To remove the lug, push and hold the head of the lug pin and pull the pin out. Remove the lug and replace the pin in the lug.
6. Manually move the chain and continue measuring, placing lugs and removing lugs until all the lugs are in place.
7. When the last lug is in place, measure the distance from the last lug to the starting lug. This distance should be equal to the spacing between the outer lugs around the chain.
8. Input the infeed pin spacing setting using the Operator Interface.

7.8 Corrective Maintenance

Warning

Prior to performing any of the following procedures, shut down the machine and disconnect electrical and pneumatic power. Follow your company's lockout-tagout procedures.

7.8.1 Trim Seal Rebuilding

The side seal unit should be cleaned and inspected for film build up and wear daily. Please refer to the sub-assembly drawing while performing this procedure. To rebuild the side seal unit, do the following:

NOTE: The wire is standard with the seal unit. A seal ribbon may also be used and can be interchanged for the purposes of this procedure.

Use the assembly drawings in Chapter 11 during this procedure.

Lower Module

1. Using the vertical lift hand wheel, raise the side seal unit to a comfortable working height.
2. Using a 9/16" box end wrench, remove the two 3/8-16 hex head bolts and hardened flat washers. Remove the upper unit, and set it aside.
3. Using a 5/16" wrench, remove the 6-32 hex nuts and flat washers from the wire posts, and set them aside.
4. Using a 3/16" Allen key, remove the two 1/4-20 x 1-1/2 socket head cap screws holding the lower unit, and set them aside.
5. Release the belt tension by pushing the belt take-up pulleys inward, and remove the belts.

Warning

Take caution working with the wire. This wire is very fragile. Be very careful not to break the wire.

6. Inspect the belts. Clean or replace as required.
7. Clean the channel underneath the wire using a brass wire brush. One is supplied with the machine.

Lower Module

8 Using a flat-blade screwdriver, remove the idler axle bolt (8), and inspect for it wear. Replace if needed.

NOTE: Do not lose the Pulleys (9 & 10).

9 Slide out the belt take-up, and remove the spring (17). Clean out the channel of any film build-up.

NOTE: Take note of any film buildup on the raised edge of the wire assembly. Excessive buildup indicates that the wire assembly may be too high at the discharge end.

10 Loosen the 10/32 x 1/4" socket head set screw holding the wire holder (14). Loosen the 8/32 x 1/4" socket head set screw that locks the front post holder (11). Compress the spring to allow for removal of the wire. Remove the wire with the front post holder (3).

11 Slide out wire post holder (14), and remove the spring.

12 Clean the channel underneath the wire using a brass wire brush.

13 Inspect the white wire holder (14) for scorching or damage, and replace as needed.

14 Inspect the drive shaft (6) and the bearings (21), and replace if needed.

15 Check the condition of your drive gears (13), and replace as needed.

16 Insert the new wire holder (14) into the wire post holder (4) until it sticks out 1/16". Snug the 10-32 x 1/4" socket head set screw so the holder does not slide in the post holder.

17 Place spring (18) into pocket in (11), and install (4) as shown.

18 Slide front post holder (3) onto the sharpened post of the sealing wire (15) 1/2" from the wire.

19 Using the 6-32 x 3/16" socket head set screw, tighten at 90 degrees or right angles to the wire element.

Lower Module

20 Insert the other end of the wire into the wire holder (14) about half way.

21 Compress the spring so the other end can be inserted. Push the assembly into the slot so it is all the way in the groove at this time. Start the 8-32 x 1/4" socket head set screw into (11) for locking the front post holder.

22 Apply a small amount of bearing mount on pulley idler axle (8), and insert from the thin side of the seal belt pulley assembly (10).

23 Apply another small amount of bearing mount to the exposed axle and slide on the trim belt pulley (9) thin side first.

24 Place spring (17) into pocket in (1), and insert the idler roller take-up (7) short end first. Compress the take-up spring to allow the axle with high strength loc-tite on the threads to be secured.

25 Install double gear belt (19) over the trim belt pulley (9) compress take-up and slip the belt over the drive pulley. Install 1/4" timing belt (2) over the seal belt pulley (10) compress the take-up and slip the belt over the drive pulley.

26 Adjust the wire (15) so the end at the seal belt pulleys is 1/8" lower than the top of the belts, and the other end, the height of the wire above the belts. Tighten the set screw to hold the front post holder (3) in place. Using a 3/16 Allen key, reinstall the two 1/4-20 x 1 1/2" socket head cap screw that hold the lower unit to the side seal carrier.

27 Reinstall the four 6/32 nuts and flat washers on the wire posts.

Upper Module

1. Release the belt tension by pushing the belt take-up (7) inward. Remove the belts.
2. Inspect belts. Clean or replace as necessary.
3. Using a flat-head screwdriver, remove the idler axle bolt (8). Inspect the blot for wear and tear. Replace if needed.

NOTE: Do not lose the pulleys (9 & 10).

4. Slide out the belt take-up and remove the spring (17). Clean out the channel of any film build-up.
5. Apply a small amount of bearing mount on pulley idler axle (8) insert from the thin side of the seal belt pulley assembly (10).
6. Apply another small amount of bearing mount to the exposed axle and slide on the trim belt pulley (9) thin side first.
7. Place spring (17) into pocket in (1) and insert the idler roller take-up (7) short end first. Compress the take-up spring to allow the axle with high strength loc-tite on the threads to be secured.
8. Remove top bar (3) from the upper bar (2) using a 3/16" Allen key to remove the two 1/4-29 x 3/4" socket head cap screws.
9. Back out, almost entirely, the four 10-32 x 3/8" socket head set screws and the four 1/4-20 x 3/8" socket head set screws in the upper bar (2). Remove the five special 6-32 x 7/16" stainless steel socket head cap screws in the upper bar (2). The two belt plates (11 & 12) will spring loose.
10. Clean the shoes and the channels they ride in of any film build-up with a brass wire brush.
11. Inspect the drive shaft (6) and the bearings (14), and replace if needed.
12. Check the condition of your drive gears (13), and replace as needed.
13. Turn the upper bar (2) over, and insert four springs (18) into the pockets in the 1/4" channel. Place the 1/4" belt plate (12) over the springs matching the pockets so the plate will be flush at both ends of the bar.
14. Press the plate straight down compressing the springs into the spring pockets. Holding the plate in place, turn the assembly over and start the screws using the three special 6-32 x 7/16" stainless steel socket head cap screws. Tighten the screws.

NOTE: The screws should be flush with the top of the plate guide slot.

15 Turn the upper bar (2) over and insert four springs (18) into the pockets in the 3/8" channel.

16 Place the 3/8" belt plate (11) over the springs matching the pockets so the plate will be flush at both ends of the bar. Press the plate straight down compressing the springs into the spring pockets.

17 Holding the plate in place, turn the assembly over and start screwing the two special 6-32 x 7/16" stainless steel socket head cap screws. Tighten the screws watching the belt plate to make the plate flush with the top of the plate guide slot.

NOTE: The screws should be flush. They cannot protrude past the plate surface.

18 Back out the three 5/16- 18 x 7/8"socket head set screws until they are flush with the surface of the upper bar (3).

19 Using the two 1/4-20 x 3/4" socket head cap screws, attach (3) to (2) insert set up tool between the parts.

20 Back the three 5/16 set screws out 1 turn, and snug the two 1/4-20 bolts. Snug the three 5/16 set screws until the stop.

NOTE: The screws should be flush. They cannot protrude past the plate surface.

21 Loosen the 1/4" bolts, and remove the set up tool. Tighten the screws.

NOTE: Do not over-tighten. The bars may bend if the screws are over tightened.

22 Attach (3) to (1) using the two 1/4-20 x 1 1/4" socket head cap screws with high tension loc-tite.

23 Install double gear belt (19) over the trim belt pulley (9). Compress the take-up, and slip the belt over the drive pulley.

24 Install 1/4" timing belt (2) over the seal belt pulley (1). Compress the take-up, and slip the belt over the drive pulley.

25 Use the two 3/8 -16 x 2" hex head bolts with hardened flat washers to attach this assembly to the lower trim seal assembly.

26 While tightening, adjust the vertical adjustment hand wheel as to allow the belts to rotate, allowing the drive gears to seal properly. Continue doing this until completely tight.

27 Apply a light amount of general purpose grease to the drive gears (13). Do not over grease.

28 Replace safety guard, if required, and reconnect Amphenol connector.

7.8.2 Trim Seal Inspection

1. Perform either the *Initial Startup* or the *Quick Startup* procedure, depending on the operating mode of the machine. (Refer to Chapter 5.)
2. Set the wrapper main drive speed to a slow pace using the operator interface touch screen.
3. Press and hold the **jog** push button to observe the side seal unit operating for several cycles.
   - If there is too much torque, the torque limiter will trip. Loosen the two 3/8 -16 hex bolts, and realign the upper and lower units. Press the **jog** push button to reset the torque limiter. Finally, tighten the two 3/8-16 hex bolts.
   - If the torque limiter does not trip, stop the machine, and thread the film.
4. Press the **cycle start** push button. Return all settings to their typical production conditions to produce a running side seal.

7.8.3 Dancer Bar Counterweights

Film tension is set by the counterweights on the dancer arms. The tension should always be set close to the minimum, but not too tight. The dancer bar must have enough tension on it to pull the film down. This will allow the dancer to respond quickly to the film that is being fed by the film feed rollers.

1. Loosen the bolts that hold in both counterweights using a 7/16" wrench.
2. Slide the counterweight to the desired position. Moving the counterweight towards the pivot point of the dancer arm will increase film tension. Moving the counterweight away from the pivot point will decrease film tension.

NOTE: Increased film tension will not result in a tighten wrap on the product, but may cause weak seals and broken film webs.

3. Retighten the bolts that hold in both counterweights.

7.8.4 Dancer Bar Film Feed Potentiometer

The dancer bar film feed potentiometer must be adjusted so that when the dancer bar is in its lowest position, the film feed motor stops, and when it is in its highest position, the film feed motor runs at or near its maximum speed. To adjust the film feed potentiometer, do the following:

1. Remove the belt off the dancer bar film feed potentiometer.
2. Allow the dancer bar to go to the lowest point.
3. Turn the potentiometer until the motor stops.
4. Replace the belt.

7.8.5 Polyolefin Hot Seal Bar Disassembly

Warning

Apply lockout-Tagout devices before performing the following procedure. The hot seal bar should be cool when performing this procedure to avoid bodily injury.

1. Disconnect the electrical connection using channel lock pliers.
2. Hold the seal bar in place, and remove the (2) mounting bolts.

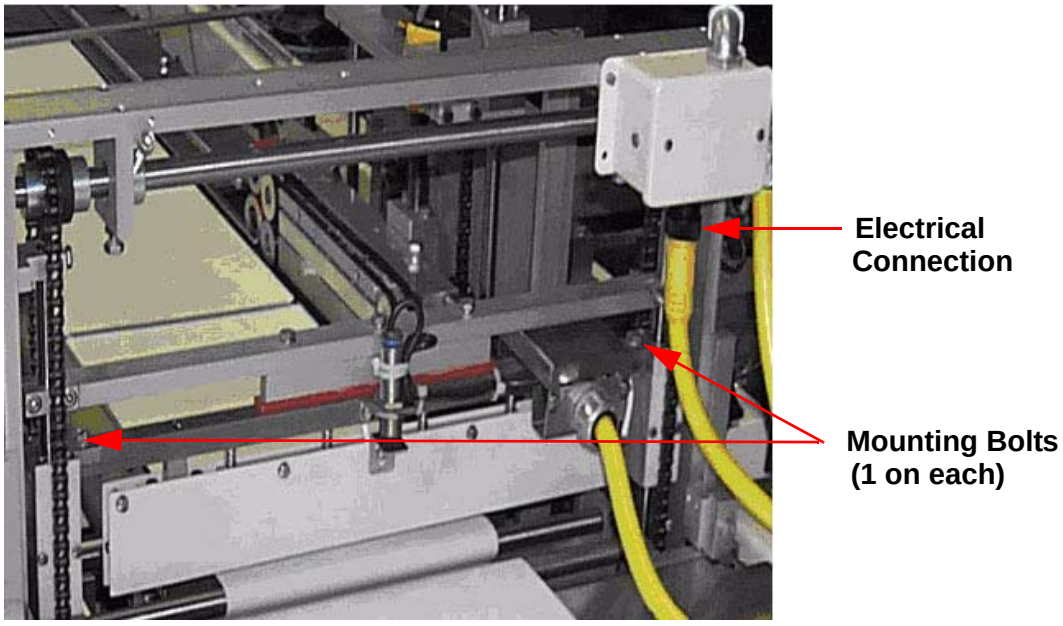


Figure 7-15. Polyolefin Hot Seal Bar Disassembly

3 Remove the shield plates and screws using an allen wrench.

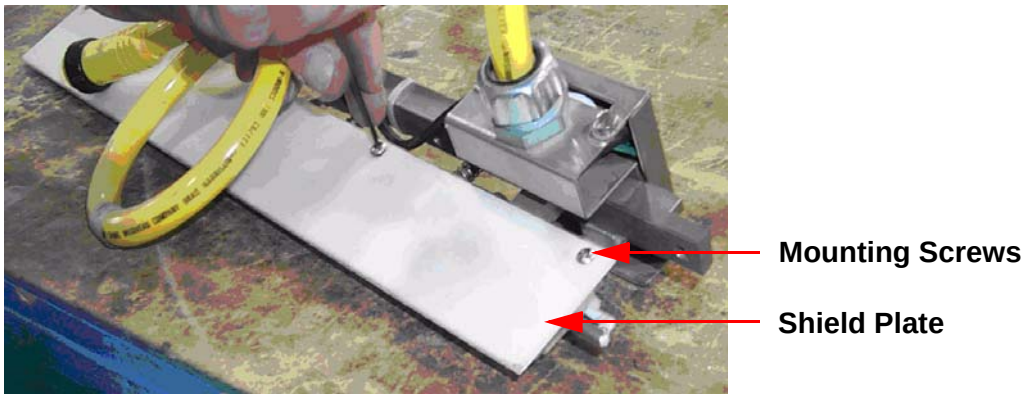


Figure 7-16. Poly Hot Seal Bar Disassembly (continued)

4 Remove the (6) 10-32 screws from both shield plates using an allen wrench, and then remove the shield plates.

5 Remove the (8) bottom 8-32 screws holding the seal bar halves together.

6 Loosen the (8) top 8-32 screws holding the seal bar halves using an allen wrench, and loosen the screw holding the themocouple wire using a flathead screwdriver.

NOTE: Loosen the screws just enough to open the seal bar halves so the knife can slide out.

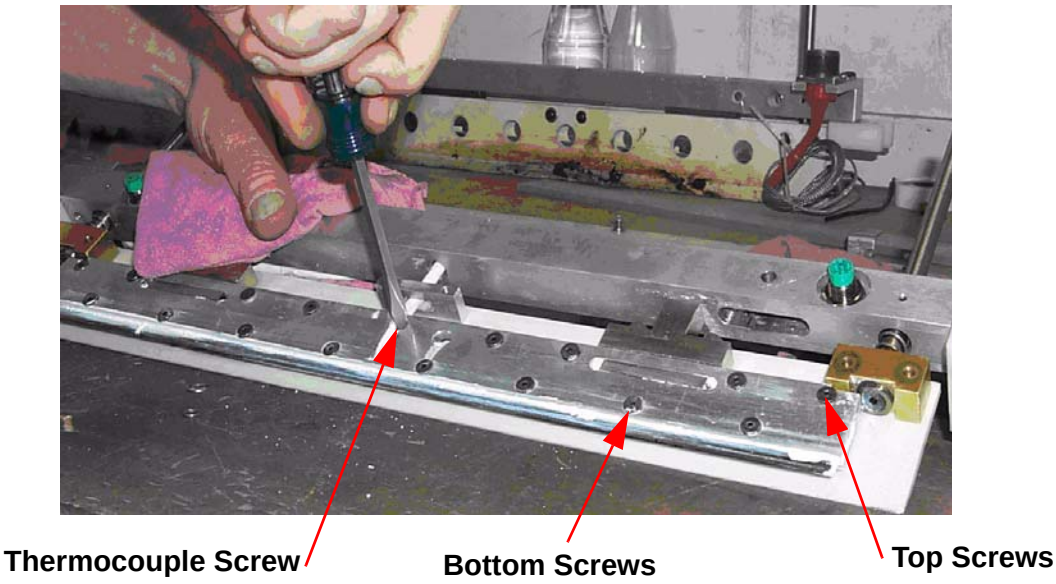


Figure 7-17. Polyolefin Hot Seal Bar Disassembly (continued)

7 Remove the knife blade using a small flathead screwdriver to push it from between the seal bar halves.

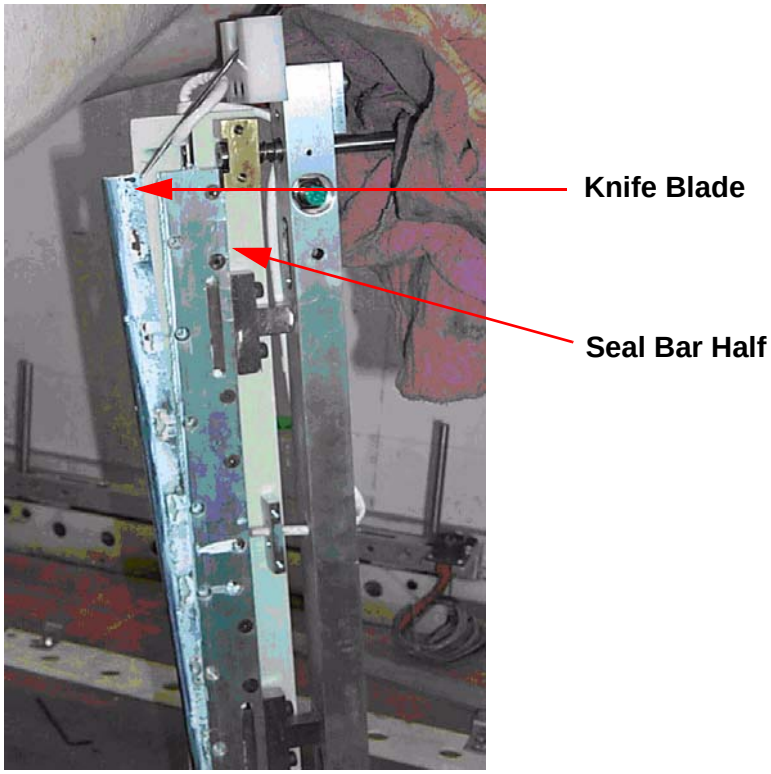


Figure 7-18. Polyolefin Hot Seal Bar Disassembly (continued)

7.8.6 Polyolefin Hot Seal Bar Reassembly

1. Inspect the condition of the heat-conducting grease on the knife. If the grease is crusty and dry, wipe off any excess, and re-grease the knife.
2. Slide the knife between the seal bar halves, pushing it in as far as it will go and making sure to align the knife evenly between the seal bar halves.

NOTE: When replacing the screws avoid over tightening the screws. This could cause irreparable damage to the seal bar assembly.

Figure 7-19. Polyolefin Hot Seal Bar Reassembly

3. Holding the knife blade in place, replace the bottom 8-32 screws using an allen wrench.
4. Tighten the top 8-32 screws using an allen wrench and the screw holding the thermocouple wire using a standard screwdriver.

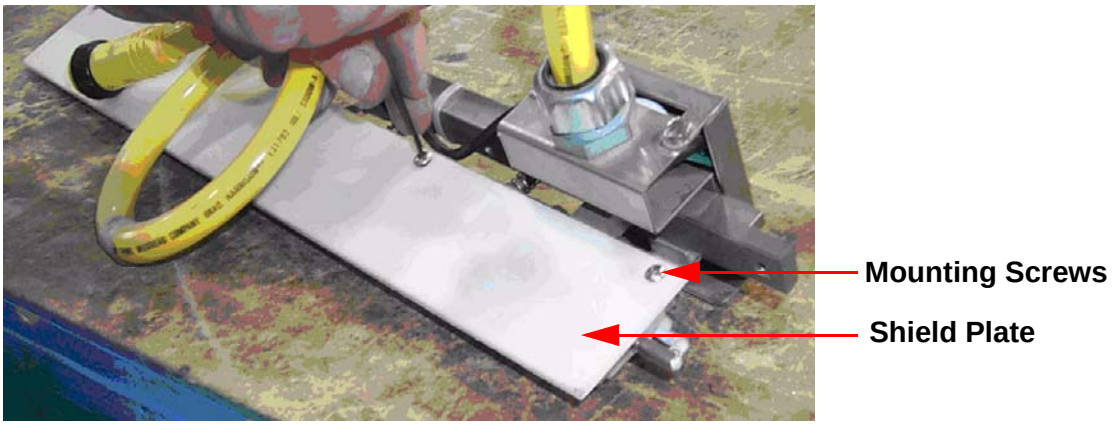


Figure 7-20. Polyolefin Hot Seal Bar Reassembly

5 Replace the shield plates and screws using an allen wrench.

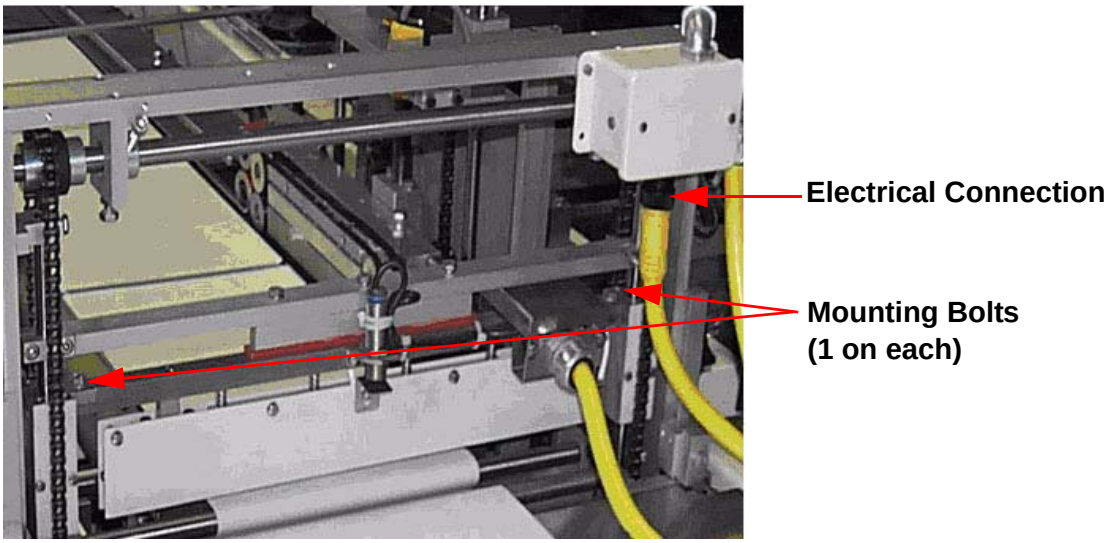


Figure 7-21. Polyolefin Hot Seal Bar Reassembly

6 Holding the seal bar in place, replace the mounting bolts.

7 Reconnect the electrical connection.

7.8.7 Cold Seal Bar Rebuilding

Warning

Apply Lock/Tagout devices before performing the following procedure. The hot seal bar should be cool when performing this procedure to avoid bodily injury.

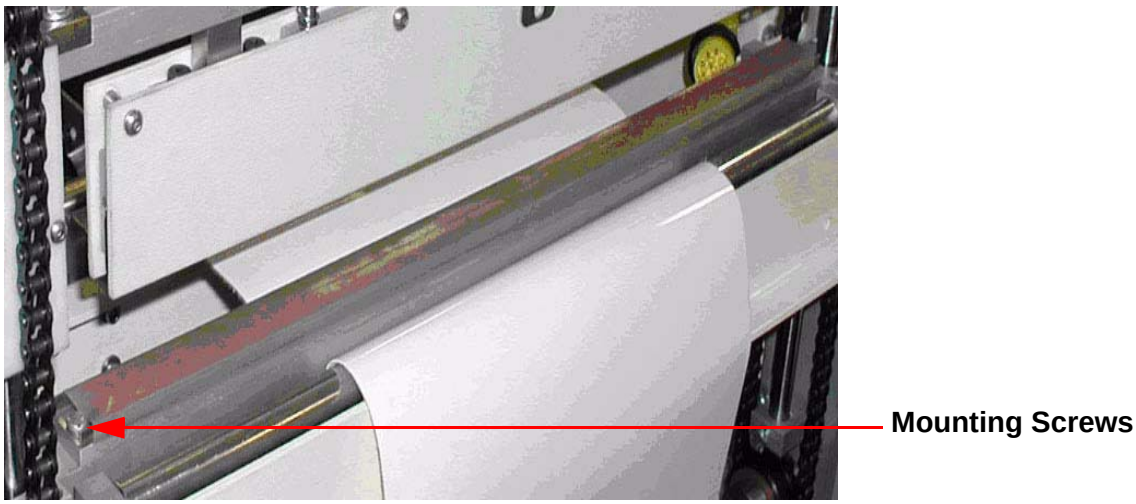


Figure 7-22. Cold Seal ar Rebuilding

1. Manually push the upper seal bar carrier until the cold bar is exposed above the deck of the machine.
2. If replacing the entire assembly, remove the two mounting screws using a screwdriver.
3. Pull the cold bar assembly from the machine.
4. Remove the Teflon tape and silicone pad.
5. Clean the surface of the seal bar carrier.
6. Replace the silicone pad.
7. Peal the backing from the Teflon tape and drape it over the silicone strip on both sides of the seal bar carrier.
8. If necessary, the assembly can be rebuilt in the machine.

Troubleshooting

8

8.1 Introduction

This chapter is divided into two sections.

The first section is an index of fault messages that appear on the machine's display. This index is cross referenced to a group of troubleshooting charts that will guide you through how to resolve fault message issues.

The second section is an index of generic machine problems not indicated by fault messages. This index is cross referenced to a second group of troubleshooting charts that will guide you through how to resolve the problem.

8.2 Fault Message Troubleshooting Index & Charts

Use the following troubleshooting index and troubleshooting charts as an aid in solving your problems associated with fault messages that appear on the machine's display.

Table 8-1: Troubleshooting Index

Fault Message	Possible Cause	Remedy
Carriage Position Error Exceeds Limits	Indicates that seal carriage is blocked by an obstruction.	Check for and remove obstruction.
	Proximity switches faulty.	If carriage is not blocked, check mounting and operation of proximity switches 428 & 431 PRX.
	Servo drive faulty.	Refer to Section "7.6 Resetting Servos and Handling Servo Error Messages" on page 7-14 for more information on servo drive faults.
Carriage Servo Drive Not Ready	Servo drive is just starting up.	Waits 30 seconds. Then press CYCLE STOP/ RESET button and restart machine.
	Servo drive faulty.	Refer to Section "7.6 Resetting Servos and Handling Servo Error Messages" on page 7-14 for more information on servo drive faults.
Carriage Servo Must Be Homed	Carriage servo has lost track of its position.	Reset servo according to Section "7.6 Resetting Servos and Handling Servo Error Messages" on page 7-14.
	Proximity switch faulty.	If carriage cannot be homed, check mounting and operation of proximity switch 425 PRX.
Carriage Servo Overtraveled	Servo attempted to move carriage farther than physically possible because of incorrect recipe parameters.	Reduce Seal Position After Product Adjustment parameter on Setpoint Modify 1 screen.

Continued on next page...

Fault Message	Possible Cause	Remedy
Carriage Servo Overtraveled (Cont.)	Proximity switches faulty.	If carriage is not blocked, check mounting and operation of proximity switches 428 & 431 PRX.
	Servo drive faulty.	Refer to Section "7.6 Resetting Servos and Handling Servo Error Messages" on page 7-14 for more information on servo drive faults.
E-Stop Engaged	Emergency Stop button is pressed in.	Pull button out, press Cycle/Stop Reset button on main control panel and restart machine.
Infeed Lug Servo Drive Not Ready	Servo drive is just starting up.	Waits 30 seconds. Then press CYCLE STOP/ RESET button and restart machine.
	Servo drive faulty.	Refer to Section "7.6 Resetting Servos and Handling Servo Error Messages" on page 7-14 for more information on servo drive faults.
Infeed Lug Servo Position Exceeds Limits	Indicates that infeed conveyor is blocked by an obstruction.	Check for and remove obstruction.
	Servo drive faulty.	Refer to Section "7.6 Resetting Servos and Handling Servo Error Messages" on page 7-14 for more information on servo drive faults.
Main Drive Not Ready	Servo drive is just starting up.	Waits 30 seconds. Then press CYCLE STOP/ RESET button and restart machine.

Continued on next page...

Fault Message	Possible Cause	Remedy
Main Drive Not Ready (Cont.)	Servo drive faulty.	Refer to Section "7.6 Resetting Servos and Handling Servo Error Messages" on page 7-14 for more information on servo drive faults.
Missing Product at Seal Bar	Indicates that product has jammed or fallen off machine before reaching seal bar PE. Photo eye faulty.	Check for and remove jammed product. If there is not an obstruction, make sure photo eye at seal bar is clean, mounted properly and working correctly.
Product Jammed on Infeed	Infeed conveyor is jammed.	Check for and remove obstruction. If there is not an obstruction, make sure photo eye 637PE under conveyor is mounted properly and working correctly.
Scrap Broken	Indicates that scrap film has broken from take up reel.	Reattach film to reel.
Seal Bar Needs To Be Homed	Seal bar servo has lost track of its position.	Reset servo according to Section "7.6 Resetting Servos and Handling Servo Error Messages" on page 7-14..
Seal Bar Overtraveled	Indicates that seal bar is blocked by an obstruction. Servo drive faulty.	Check for and remove obstruction. Refer to Section "7.6 Resetting Servos and Handling Servo Error Messages" on page 7-14 for more information on servo drive faults for more information on servo drive faults.

Fault Message	Possible Cause	Remedy
Seal Bar Position Error Exceeds Limits	Servo attempted to move cross seal bars farther than physically possible because of incorrect recipe parameters.	Refer to Section "5.9.6 Setpoints Menu Group" on page 5-17 for information on setting up recipes.
	Proximity switches faulty.	If carriage is not blocked, check mounting and operation of proximity switches on seal bar.
	Servo drive faulty.	Refer to Section "7.6 Resetting Servos and Handling Servo Error Messages" on page 7-14 for more information on servo drive faults.
Seal Bar Safety Tripped	Indicates that vertical motion of seal bar is blocked by obstruction.	Check for and remove obstruction.
	Proximity switches are faulty.	Check proximity switches on seal bar for proper operation.
Seal Bar Servo Not Ready	Servo drive is just starting up.	Waits 30 seconds. Then press CYCLE STOP/ RESET button and restart machine.
	Servo drive faulty.	Refer to Section "7.6 Resetting Servos and Handling Servo Error Messages" on page 7-14 for more information on servo drive faults.
Seal Bar Temperature Too Low	Seal bars have not had enough time to warm up.	Wait 10-20 minutes for seal bars to warm up.
	Seal bar circuit breakers are blown.	Make sure that circuit breakers for seal bar are turned on.
	Seal bar heater element is bad.	Test for short and open circuits on cross seal and trim seal heater elements. Replace as necessary.
		Continud on next page...

Fault Message	Possible Cause	Remedy
Seal Bar Temperature Too Low (Cont.)	Seal bar thermocouple is bad. Allen-Bradley Temperature Controller is faulty.	Test for an open circuit across thermocouple 1T/C. Replace if open. Refer to Allen-Bradley Temperature Controller documentation included on the CD in Chapter 12 of this manual for further guidance.
Wrapper Door	Indicates that one or more of guard doors on wrapper are open.	Make sure that all guard doors are closed. If doors are closed but message still occurs, checking mounting and operation of door switches.

8.3 General Troubleshooting Index & Charts

Use the following troubleshooting index and troubleshooting charts as an aid in solving general problems with the machine not indicated by fault messages.

Table 8-2: Troubleshooting Index

Problem	Possible Cause	Remedy
Machine Will Not Turn On	**EMERGENCY STOP** button is pressed in.	Pull out all **EMERGENCY STOP** buttons.
	Main disconnect switch is turned off.	Turn main disconnect switches on.
	Outside power source breaker is turned off.	Make sure outside power source is turned on.
	Internal circuit breaker(s) is blown.	Check and, if necessary, reset internal breakers.
Weak Seal Line	Dirty seal bars.	Clean seal bars.
	Defective cold bar.	Inspect cold bar seal pad. Pads that are too hard or too cold require replacement.
	Film not relaxed.	Adjust product spacing and/or speed of conveyors.
	Temperature too low.	Increase seal bar temperature according to Section "5.10 Setting Up the Temperature Controllers" on page 5-10.
	Temperature to high.	Decrease seal bar temperature according to Section "5.10 Setting Up the Temperature Controllers" on page 5-10.
	Incorrect air pressure.	Check and, if necessary, adjust air pressure. Air pressure should be 80 psi minimum.
		Check airflow adjustment on seal bar cylinder.
	Hot bar knife improperly installed.	Check if knife is sharp and properly installed.
	Film in not properly threaded.	Make sure film is threaded according to Section XXX.
		Continued...

Problem	Possible Cause	Remedy
Weak Seal Line (Cont.)	Seal bars are not centered on product when closed.	Make sure that seal bars are centered on product according to Section.
	Heat shields improperly installed.	Check that shields are in proper position and move freely.
Film Builds Up On Seal Bar	Dirty seal bars.	Clean seal bars according to Section XXXXX.
	Temperature too high.	Decrease seal bar temperature according to Section "5.10 Setting Up the Temperature Controllers" on page 5-10.
	Defective cold bar.	Inspect cold bar seal pad. Pads that are too hard or too cold require replacement.
Seal On Back Of Product Opens	Too much air is trapped within the sealed product.	Make sure that film perforators are positioned correctly.
		Considered using pre-punched or perforated film.
	Seal bars are not centered on product when closed.	Make sure that seal bars are centered on product according to Section.
	Seal bars are closing to close to back of product.	Increase Delay to Start Seal Bar From Seal Bar PE on Maintenance 4 menu.
	Seal bar faulty.	Inspect and, if necessary, replace seal bars according to Section XXXX.
	Defective film.	Make sure proper type of film is being used and that film is not defective.
		Continued...

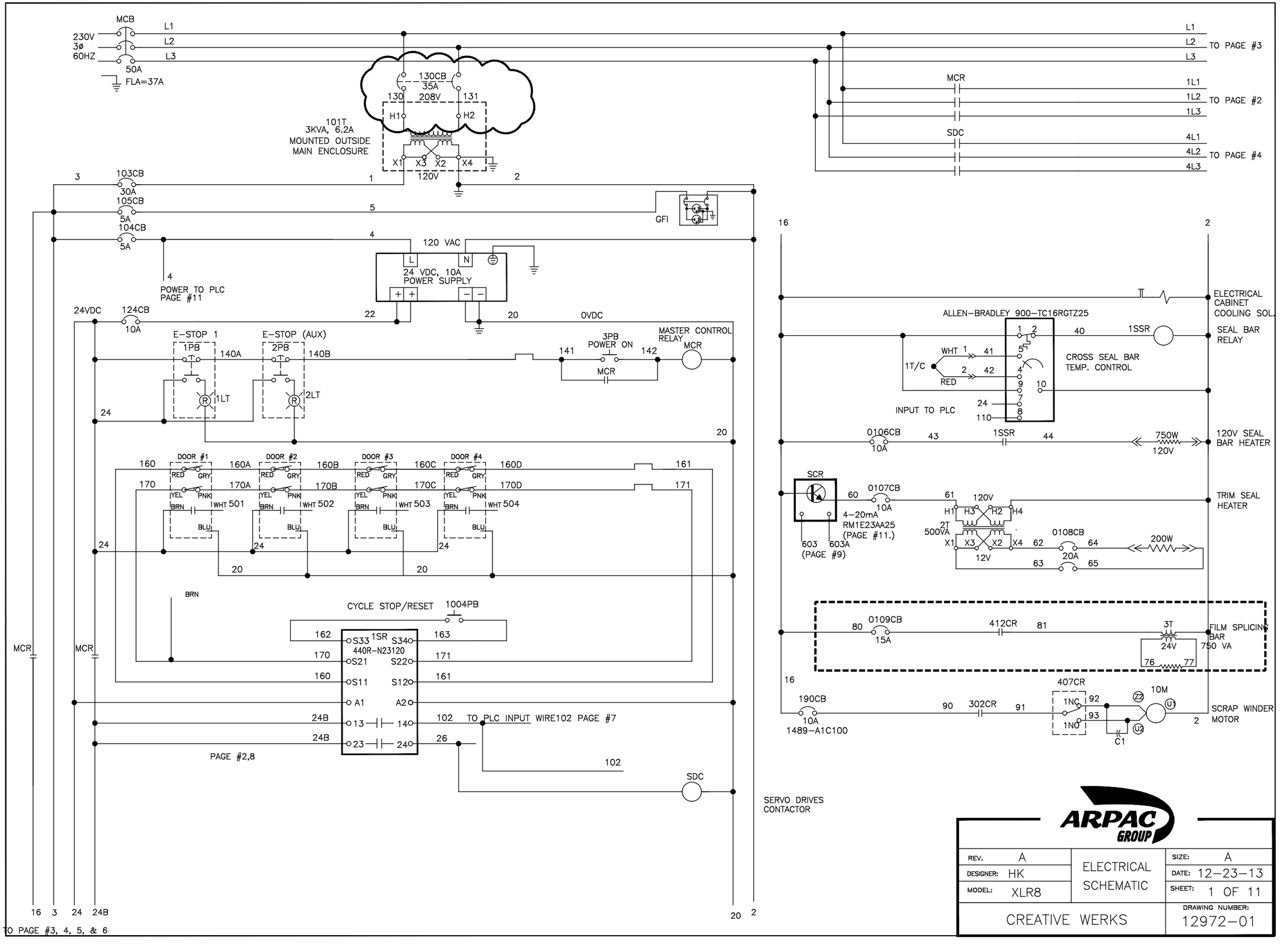
Problem	Possible Cause	Remedy
Seal On Back Of Product Opens (Cont.)	Incorrect air pressure.	Check and, if necessary, adjust air pressure. Air pressure should be 80 psi minimum. Check airflow adjustment on seal bar cylinder.
Film Does Not Cut Completely	Incorrect air pressure. Knife blade is dull.	Check and, if necessary, adjust air pressure. Air pressure should be 80 psi minimum. Check airflow adjustment on seal bar cylinder. Sharpen or replace blade.
Film Tracking Problems	Film not centered in film former. Film is not threaded correctly.	Make sure that film is centered in former. Make sure film is threaded according to Section "5.11 Replacing Empty Film Roll and Threading Film" on page 5-40.

Electrical Schematics

9

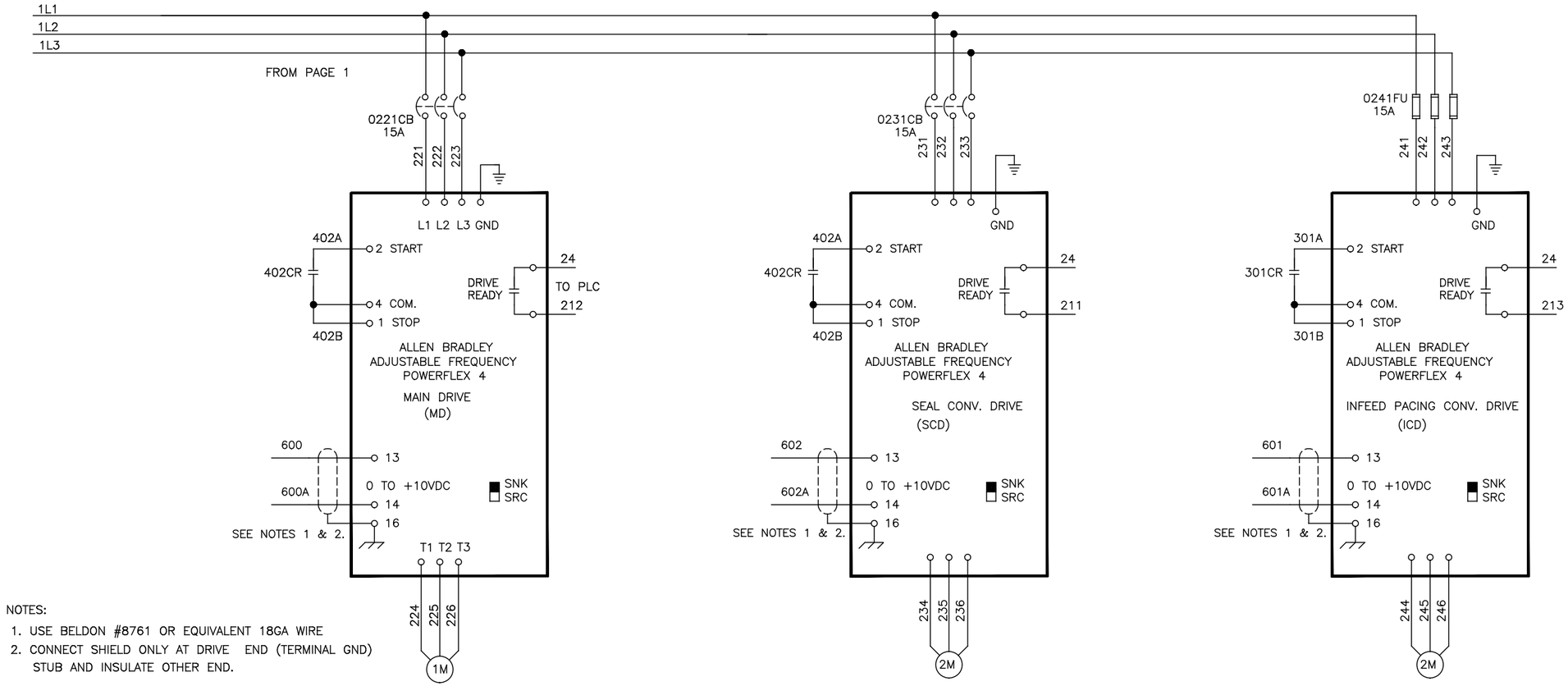
9.1 Electrical Schematics

This chapter contains the electrical schematics for the XLR8 Shrink Wrapper.



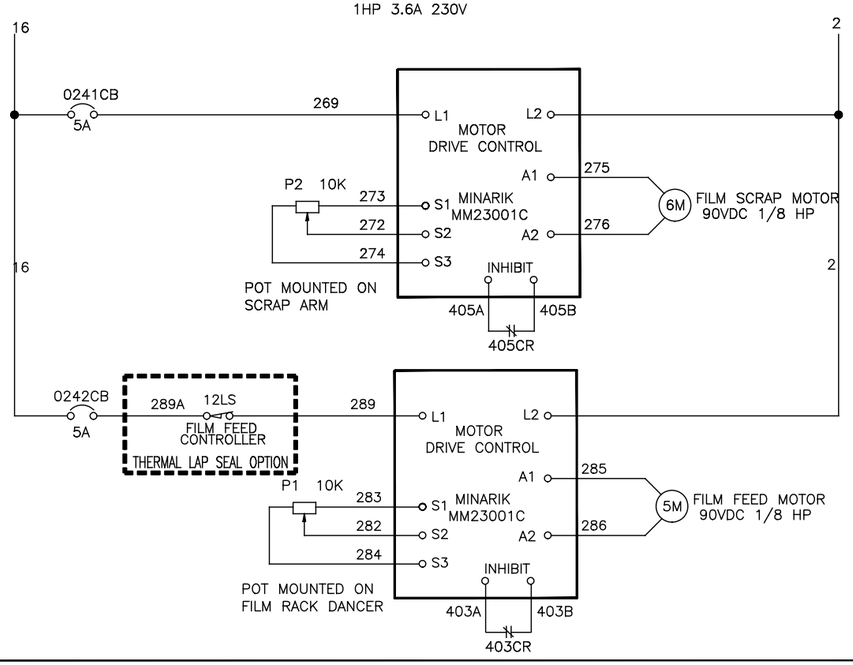
ARPAC GROUP

REV. A	ELECTRICAL SCHEMATIC	SIZE: A	
DESIGNER: HK		DATE: 12–23–13	
MODEL: XLR8		SHEET: 1 OF 11	
CREATIVE WERKS		DRAWING NUMBER: 12972–01	



NOTES:

1. USE BELDON #8761 OR EQUIVALENT 18GA WIRE
2. CONNECT SHIELD ONLY AT DRIVE END (TERMINAL GND) STUB AND INSULATE OTHER END.



POWER FLEX 4 DRIVE SET UP (PRESET)
(DIFFERENT THAN DEFAULT)

DISPLAY	PARAMETER DESCRIPTIONS	SETTING
P031	RATED VOLTAGE	230
P033	MOTOR OL CURRENT	3.4 *
P036	START SOURCE	2
P038	SPEED REFERENCE	2
P039	ACCELERATION TIME	2
P040	DECELERATION TIME	2
P035	MAX. FREQUENCY	110
A92	AUTO RESTART TRIES	4
A94	START AT POWER UP	1

*** SET TO THE MAXIMUM ALLOWABLE MOTOR CURRENT**

ARPAC GROUP

REV. A	ELECTRICAL SCHEMATIC	SIZE: A
DESIGNER: HK		DATE: 12–09–13
MODEL: XLR8		SHEET: 2 OF 11
CREATIVE WERKS		DRAWING NUMBER: 12972–02

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REV. A	ELECTRICAL SCHEMATIC	SIZE: A	
DESIGNER: HK		DATE: 12-09-13	
MODEL: XLR8		SHEET: 3 OF 11	
CREATIVE WERKS		DRAWING NUMBER: 12972-03	

FROM PAGE #1
230 VAC

4L1
4L2
4L3
GRN

GRN

0401FU
20A

481 482 483

FROM PAGE #1
110VAC
4 2

<TO CHASSIS

GROUND>

I/O CONNECTOR

444	24VDC POWER SUUPLY	44
404CR 443	HARDWARE ENABLE INPUT	43
440	HOME SWITCH INPUT	40
439	COMMON	39
438	24VDC POWER SYPPLY	38
437	POSITIVE OVERTRAVELED LIMIT SWITCH INPUT	37
429	NEGATIVE OVERTRAVELED LIMIT SWITCH INPUT	29
428	COMMON	28
427	24VDC POWER SYPPLY	27
426	HIGH SPEED REGISTRATION 1 INPUT	26
423	HIGH SPEED REGISTRATION 2 INPUT	23
422	COMMON	22

L1 L2 L3 GRN CTRL1 CTRL2
CONTROL

NODE ADDRESS
BAUND RATE

ALLEN BRADLEY
KINETIX 2000
2093-AC05-MP1
INTEGRATED AXIS MODULE
INFEEDLUG SERVO CONTROLLER AND DRIVE

RX 539 FROM PAGE#5

TX 439 TO PAGE #10

OPTIONAL
FILM REGISTRATION
BLU BRN
RECEIVER
426PE
BLK

PRODUCT DETECT
BLU BRN
RECEIVER
423PE
WHT (NO)

42EF-P2MPB-F4

AUXILARY FEEDBACK CONNECTOR
AF

MOTOR FEEDBACK CONNECTOR
MF

MOTOR CONNECTOR
U V W GND

2090-XXNFMF-S09

2090-XXNPMF-16S09
A BROWN
B BLACK
C BLUE
D GRN/YEL
484 485 486

U V W GND

ENCODER

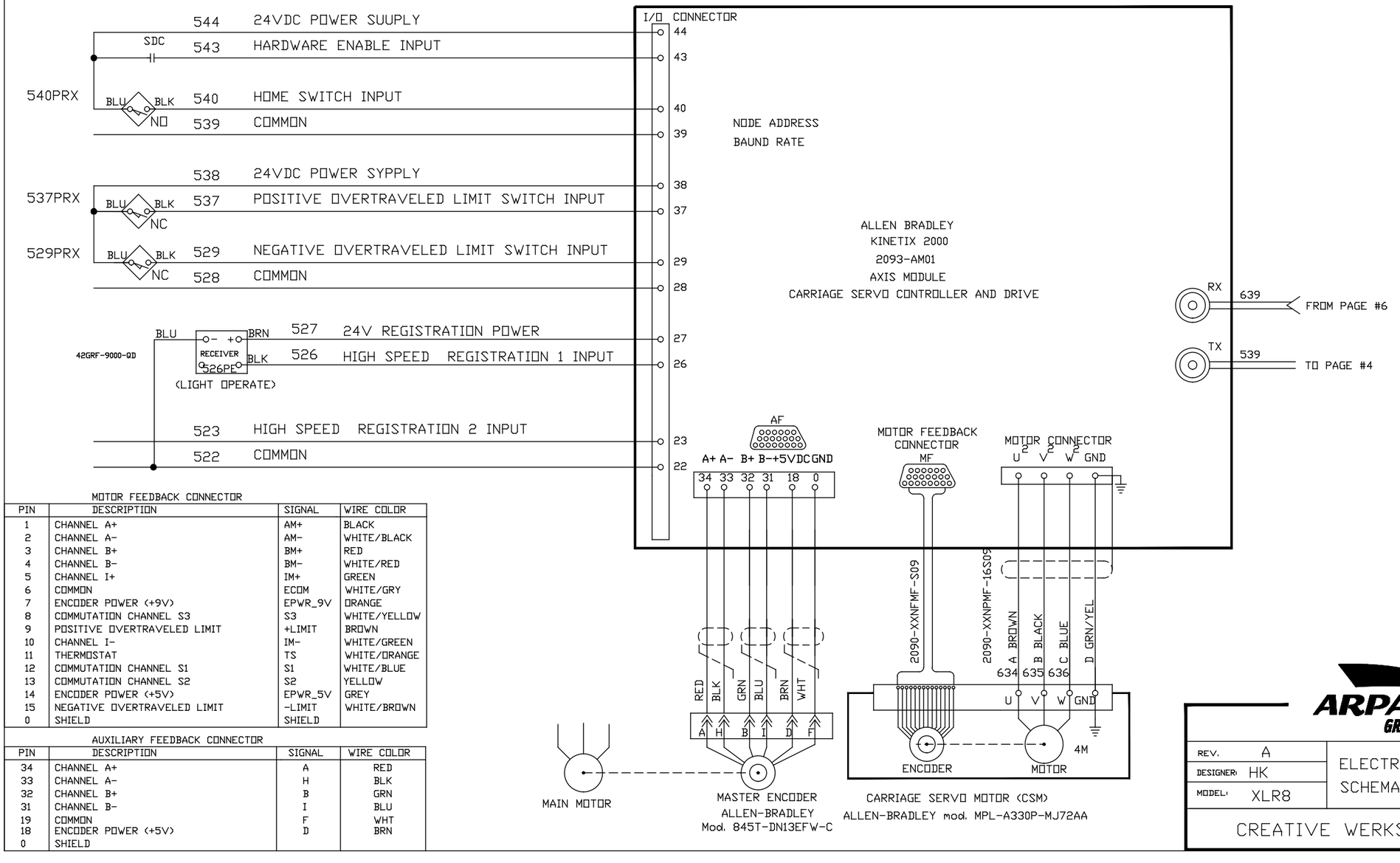
3M

MOTOR

INFEED SERVO MOTOR (ISM)
ALLEN-BRADLEY mod. MPL-A230P-VJ42AA

ARPAC GROUP

REV. A			SIZE: A
DESIGNER: HK	ELECTRICAL SCHEMATIC		DATE: 12-26-13
MODEL: XLR8			SHEET: 4 OF 11
CREATIVE WERKS			DRAWING NUMBER: 12972-04



MOTOR FEEDBACK CONNECTOR

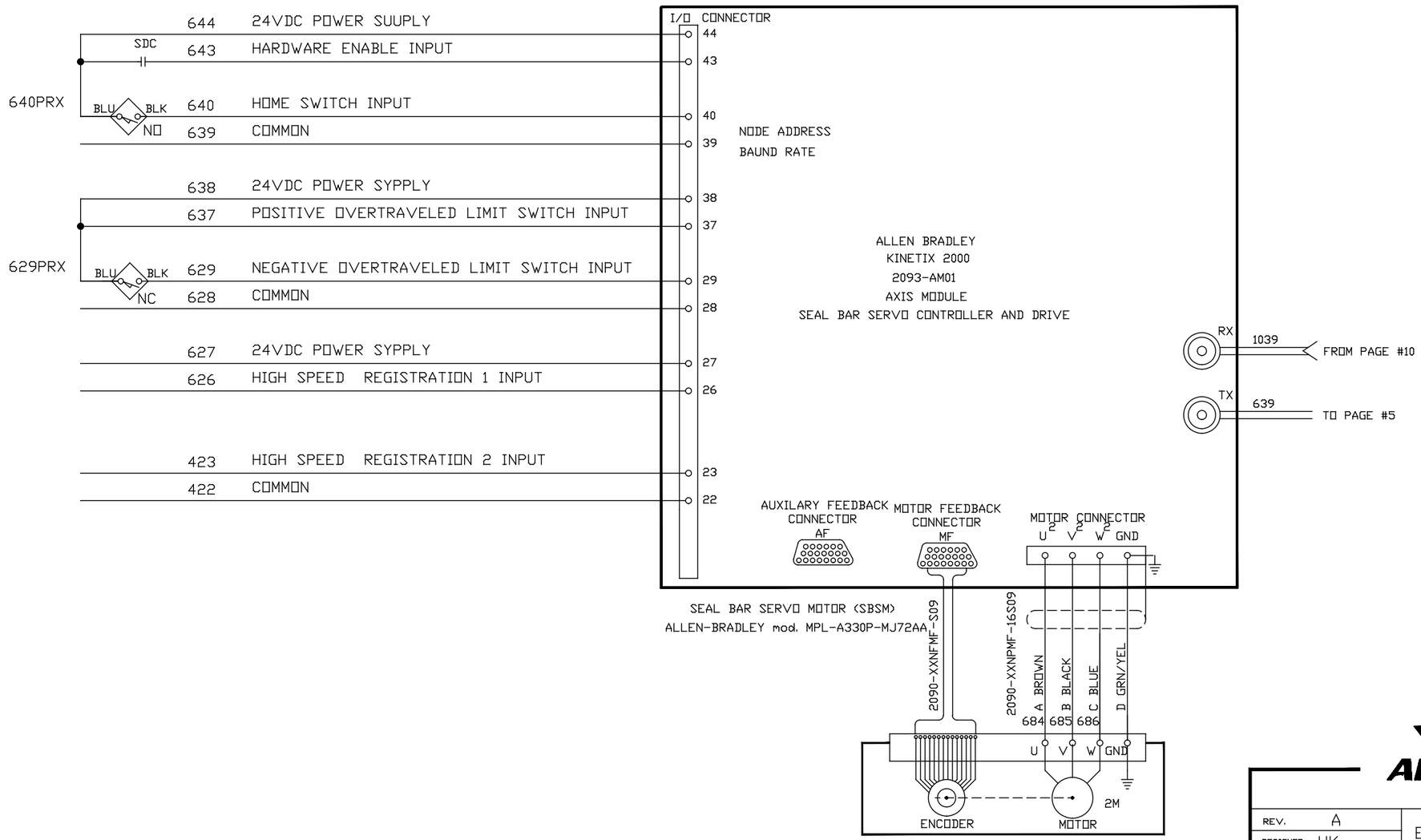
PIN	DESCRIPTION	SIGNAL	WIRE COLOR
1	CHANNEL A+	AM+	BLACK
2	CHANNEL A-	AM-	WHITE/BLACK
3	CHANNEL B+	BM+	RED
4	CHANNEL B-	BM-	WHITE/RED
5	CHANNEL I+	IM+	GREEN
6	COMMON	ECOM	WHITE/GRY
7	ENCODER POWER (+9V)	EPWR_9V	ORANGE
8	COMMUTATION CHANNEL S3	S3	WHITE/YELLOW
9	POSITIVE OVERTRAVELED LIMIT	+LIMIT	BROWN
10	CHANNEL I-	IM-	WHITE/GREEN
11	THERMOSTAT	TS	WHITE/ORANGE
12	COMMUTATION CHANNEL S1	S1	WHITE/BLUE
13	COMMUTATION CHANNEL S2	S2	YELLOW
14	ENCODER POWER (+5V)	EPWR_5V	GREY
15	NEGATIVE OVERTRAVELED LIMIT	-LIMIT	WHITE/BROWN
0	SHIELD	SHIELD	

AUXILIARY FEEDBACK CONNECTOR

PIN	DESCRIPTION	SIGNAL	WIRE COLOR
34	CHANNEL A+	A	RED
33	CHANNEL A-	H	BLK
32	CHANNEL B+	B	GRN
31	CHANNEL B-	I	BLU
19	COMMON	F	WHT
18	ENCODER POWER (+5V)	D	BRN
0	SHIELD		

ARPAC GROUP

REV. A	ELECTRICAL SCHEMATIC	SIZE: A	
DESIGNER: HK		DATE: 12-09-13	
MODEL: XLR8		SHEET: 5 OF 11	
CREATIVE WERKS		DRAWING NUMBER: 12972-05	



ARPAC GROUP

REV. A	ELECTRICAL SCHEMATIC	SIZE: A	
DESIGNER: HK		DATE: 12-09-13	
MODEL: XLR8		SHEET: 6 OF 11	
CREATIVE WERKS		DRAWING NUMBER: 12972-06	

INPUT MODULE #2

INPUT MODULE #1

24

1769-IQ16

TERM	ADDRESS
IN0	01/00
IN1	01/01
IN2	01/02
IN3	01/03
IN4	01/04
IN5	01/05
IN6	01/06
IN7	01/07
IN8	01/08
IN9	01/09
IN10	01/10
IN11	01/11
IN12	01/12
IN13	01/13
IN14	01/14
IN15	01/15
DC COM1	
DC COM2	

WRAPPER MASTER CONTROL RELAY — MCR — 100

SPARE — 101

WRAPPER DOOR RELAY — 1SR — 102

WRAPPER CYCLE START (MAIN PANEL) — 103PB — 103

WRAPPER CYCLE START (AUX) — 103APB

WRAPPER CYCLE STOP (MAIN PANEL) — 104PB — 104

104APB — WRAPPER CYCLE STOP (AUX.)

BLUE SEAL BAR MANUAL CLOSE (MAIN PANEL) — 105PB — 105

SEAL BAR MANUAL CLOSE (AUX.) — 105APB

JOG (MAIN PANEL) — 106PB — 106

JOG (AUX.) — 106APB

RESERVED — 107

SPARE — 108

SPARE — 109

SEAL BAR LOW TEMPERATURE — 7 8 — 110

SPARE — 111

RESERVED — 112

INFEED CONVEYOR TORQUE LIMITER — 113LS — 113

TRIM SEAL TORQUE LIMITER — 114LS — 114

SPARE — 115

0VDC — 20 — DC COM1

+24VDC — DC COM2

24

INPUT MODULE #2

24

20 0VDC

PRODUCT MIN. ACCUM. BRN — 42EF-P2MPB-F4 RECEIVER 200PE — BLU / WHT — 200

RESERVED — 201

SEAL BAR CLEAR — 202LPRX BLU / BLK — 202

LOW FILM ALARM — 20 42BT-B1LBSN-A2 0VDC BRN — RECEIVER 203PE — BLU / WHT — 203

MIN ACCUM. NOMINAL SPEED

RESERVED — 204

MAX. ACCUM MAX SPEEED

RESERVED — 205

OPTIONAL

SPLICE BAR CLOSE — 206LS — 206

SPLICE BAR START — 207PB — 207

RESERVED — 208

RESERVED — 209

DOWNSTREAM INTERLOCK (JUMP IF NOT USED) — 1 3 — 210

SEAL CONVEYOR DRIVE READY — 1 3 — 211

MAIN CONVEYOR DRIVE READY — 1 3 — 212

INFEED CONVEYOR DRIVE READY — 1 3 — 213

0VDC 20 — 42SMU-7110-QD BRN / BLU — EMITER 214PE

SEAL BAR CLEAR BEFORE SEAL BAR

42SMR-7111-QD BRN / BLU — RECEIVER 214PE — BLK — 214

0VDC 20 — 42SMU-7110-QD BRN / BLU — EMITER 215PE

SEAL BAR CLEAR AFTER SEAL BAR

42SMR-7111-QD BRN / BLU — RECEIVER 215PE — BLK — 215

+24VDC

24

0VDC — 20

SET FOR DARK OPERATE
DIAL SETTING AT "1"

ARPAC GROUP

REV. A	ELECTRICAL SCHEMATIC	SIZE: A
DESIGNER: HK		DATE: 12-26-13
MODEL: XLR8		SHEET: 7 OF 11
CREATIVE WERKS		DRAWING NUMBER: 12972-07

OUTPUT MODULE #3

1769-OW16

ADDRESS	TERMINAL

VAC1 — 820A — 820CB — 5A FROM PAGE #1 — 26 — 20

03/00	OUT0	300	SPARE
03/01	OUT1	301	301CR — START INFEED PACING CONVEYOR DRIVE
03/02	OUT2	302	302CR — SCRAP LEVER WINDER RELAY
03/03	OUT3	303	SPARE
03/04	OUT4	304	304SV — PERFORATOR SOL. VLV.
03/05	OUT5	305	SPARE
03/06	OUT6	306	306SV — BRIDGE SOL.VLV.
03/07	OUT7	307	SPARE

VAC2 — 821 — 821CB — 5A — 26 — 20

03/08	OUT8	308	SPARE
03/09	OUT9	309	SPARE
03/10	OUT10	310	SPARE
03/11	OUT11	311	SPARE
03/12	OUT12	312	SPARE
03/13	OUT13	313	SPARE
03/14	OUT14	314	SPARE
03/15	OUT15	315	SPARE

OUTPUT MODULE #4

1769-OW16

ADDRESS	TERMINAL

VAC1 — 822 — 822CB — 5A FROM PAGE #1 — 26 — 20

04/00	OUT0	400	SPARE
04/01	OUT1	401	SPARE
04/02	OUT2	402	402CR — START MAIN /SEAL CONVEYOR CONVEYOR DRIVE
04/03	OUT3	403	403CR — FILM FEED MOTOR RELAY
04/04	OUT4	404	404CR — INFEED DRIVE ENABLED RELAY
04/05	OUT5	405	405CR — FILM SCRAP MOTOR RELAY
04/06	OUT6	406	SPARE
04/07	OUT7	407	407CR — FWD/REV RELAY

VAC2 — 823 — 823CB — 5A — 24 — FROM PAGE #1 — 20

04/08	OUT8	408	408ALT (G) — CYCLE ON GREEN STACK LIGHT 408LT (G) — CYCLE ON GREEN PILOT LIGHT
04/09	OUT9	409	409LT (R) — CONDITION RED STACK LIGHT
04/10	OUT10	410	RESERVED
04/11	OUT11	411	RESERVED
04/12	OUT12	412	RESERVED
04/13	OUT13	413	413CR (413A / 413B) — UPSTREAM INTERLOCK
04/14	OUT14	414	SPARE
04/15	OUT15	415	SPARE

ARPAC GROUP

REV. A	ELECTRICAL SCHEMATIC	SIZE: A	
DESIGNER: HK		DATE: 12-09-13	
MODEL: XLR8		SHEET: 8 OF 11	
CREATIVE WERKS		DRAWING NUMBER: 12972-08	

24

INPUT MODULE #5

1769-IB16

TERM	ADDRESS		
IN0	05/00	500	RESERVED
IN1	05/01	501	FROM PAGE#1 DOOR #1
IN2	05/02	502	FROM PAGE#1 DOOR #2
IN3	05/03	503	FROM PAGE#1 DOOR #3
IN4	05/04	504	FROM PAGE#1 DOOR #4
IN5	05/05	505	RESERVED
IN6	05/06	506	RESERVED
IN7	05/07	507	RESERVED
IN8	05/08	508	RESERVED
IN9	05/09	509	SCRAP LEVER HOME — 509PRX — BLU / BLK
IN10	05/10	510	RESERVED
IN11	05/11	511	E-STOP #1 (PAGE#1) RESERVED
IN12	05/12	512	E-STOP #2 (PAGE#1) RESERVED
IN13	05/13	513	SPARE
IN14	05/14	514	RESERVED
IN15	05/15	515	SCRAP BROKEN — BLU / BLK
DC COM1			
DC COM2		20	□VDC

+24VDC

24

□UTPUT MODULE #6

1769-□F4VI

□:6.0
- VOUT0+ — 600 BLK — TO MAIN DRIVE (SEE PG. #2)
- VOUT0- — 600A CLR

□:6.1
- VOUT1+ — 601 BLK — TO INFEED DRIVE RESERVED
- VOUT1- — 601A CLR

□:6.2
- VOUT2+ — 602 BLK — TO SEAL CONV. DRIVE (SEE PG. #2)
- VOUT2- — 602A CLR

TRIM SEAL □R HOT AIR □PTION

□:6.3
- VOUT3+ — 603 BLK — (+) (SEE PG. #1) TO TRIM SEAL □R HOT AIR LAP SEAL HEAT LEVEL CNTRL SCR ANAL□G INPUT (4-20mA)
- VOUT3- — 603A CLR — (−)

□UTPUT MODULE #7

1769-□B8

ADDRESS	TERMINAL		
07/00	□UT0	700	SPARE
07/01	□UT1	701	SPARE
07/02	□UT2	702	SPARE
07/03	□UT3	703	SPARE
07/04	□UT4	704	SPARE
07/05	□UT5	705	SPARE
07/06	□UT6	706	SPARE
07/07	□UT7	707	SPARE
DC COM	9	20	

+VDC1 — 700A — 1001CB 5A — 24B FROM PAGE #1

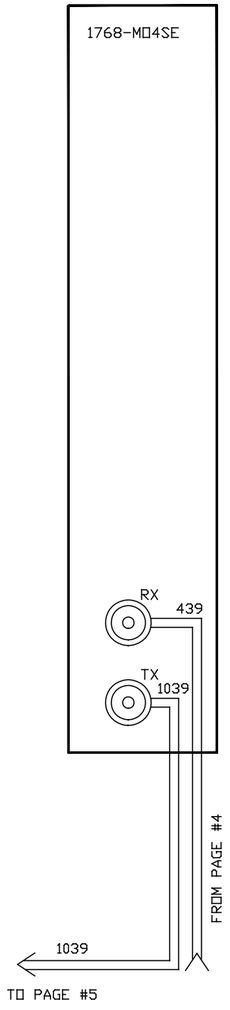
+VDC2 — 704A — 1002CB 5A — 24B FROM PAGE #1

20

ARPAC GROUP

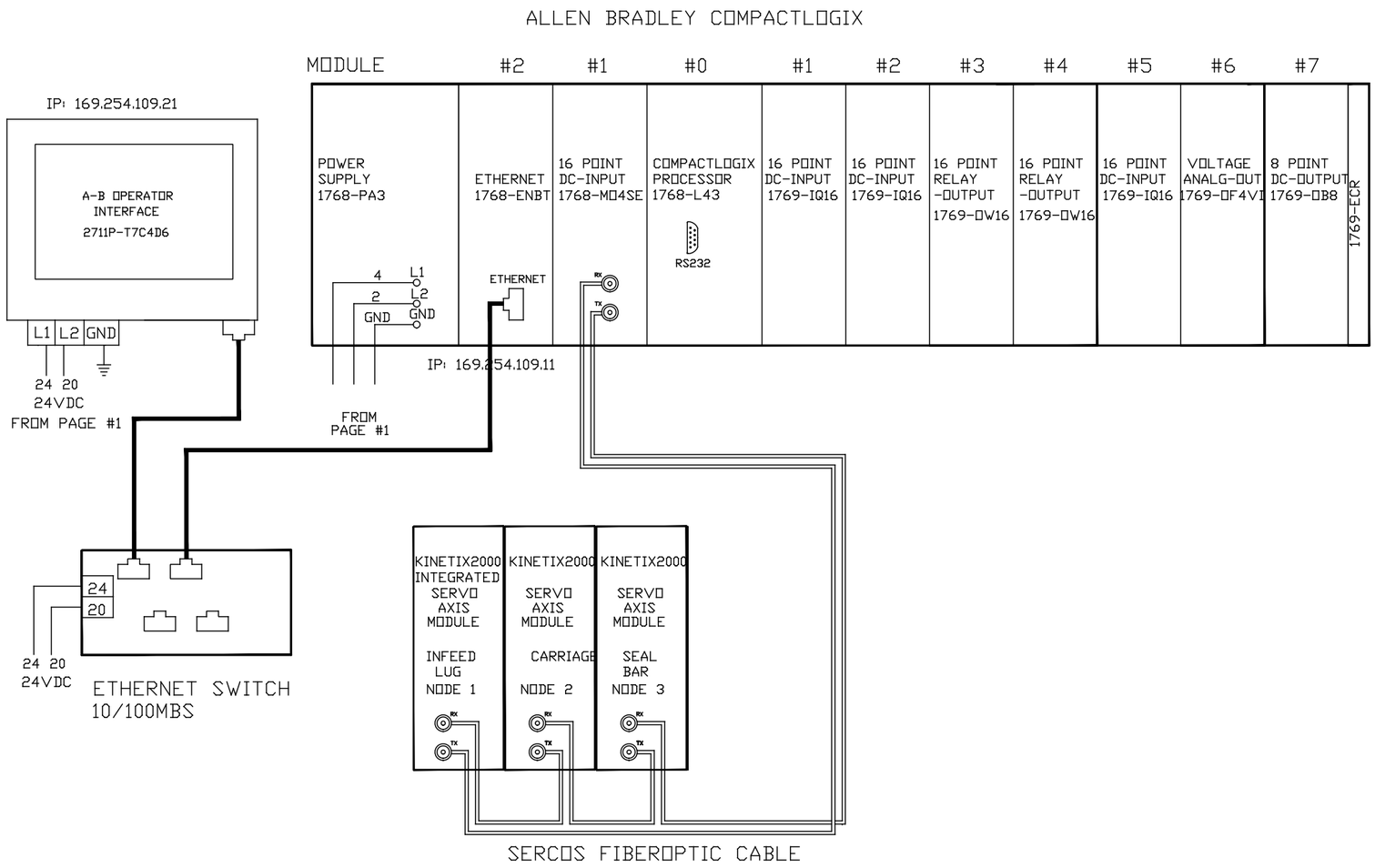
REV. A	ELECTRICAL SCHEMATIC	SIZE: A
DESIGNER: HK		DATE: 12-09-13
MODEL: XLR8		SHEET: 9 □F 11
CREATIVE WERKS		DRAWING NUMBER: 12972-09

SERCOS MODULE #1



ARPAC GROUP

REV. A	ELECTRICAL SCHEMATIC	SIZE: A
DESIGNER: HK		DATE: 12-09-13
MODEL: XLR8		SHEET: 10 OF 11
CREATIVE WERKS		DRAWING NUMBER: 12972-10



CABLE CONNECTIONS

SEAL BAR TO JUNC. BOX 8 WIRE CABLE (BRAD HARRISON 43009)		
--	ORANGE	SPARE
--	GREEN	GROUND
44	BLACK	HEATING ELEMENT(LIVE)
41	WHITE	TERMOCOUPLE
24	RED/BLK	SEAL BAR SAFETY PRX (24VDC)
202	BLUE	SEAL BAR SAFETY PRX SIGNAL (TO PLC)
42	RED	TERMOCOUPLE
2	WHT/BLK	HEATING ELEMENT NEUTRAL

JUNC. BOX TO OPER. STATION 10 WIRE CABLE (BRAD HARRISON 47209)		
109	ORANGE	SEAL BAR CLOSED PRX (TO PLC)
202	BLUE	SEAL BAR SAFETY PRX SIGNAL (TO PLC)
24	RED/BLK	SEAL BAR SAFETY AND OVERIDE PRX (24VDC)
--	ORG/BLK	SPARE
108	GRN/BLK	SEAL BAR OPEN PRX (TO PLC)
44	BLACK	HEATING ELEMENT (LIVE)
41	WHITE	TERMOCOUPLE
42	RED	TERMOCOUPLE
2	WHT/BLK	HEATING ELEMENT NEUTRAL
--	GREEN	GROUND

A-B TEMPERATURE CONTROLLER SET UP (DIFFERENT THAN DEFAULT)

INITIAL SETTING GROUP

DISPLAY	PARAMETER DESCRIPTIONS	SETTING
CN-t	INPUT TYPE	7
d-U	C/F SELECTION	F
SL-H	SET POINT UPPER LIMIT	500
SL-L	SET POINT LOWER LIMIT	0
ALt1	ALARM 1 TYPE	3
ALt2	ALARM 2 TYPE	0

HOLD ◯ DOWN FOR AT LEAST 1 SECOND

OPERATION LEVEL

DISPLAY	PARAMETER DESCRIPTIONS	SETTING
	TEMPERATURE SETTING	400*
AL-1	ALARM VALUE	40**

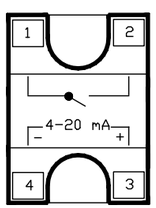
* VARY FOR TUNNEL, SEAL BAR
** 40 FOR TUNNEL, 25 FOR SEAL BAR

HOLD ◯ AND ⟲ KEYS DOWN FOR AT LEAST 1 SECOND

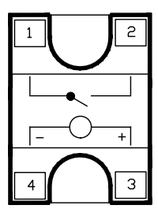
HOLD ◯ AND ⟲ KEYS DOWN FOR AT LEAST 3 SECONDS

PROTECT GROUP

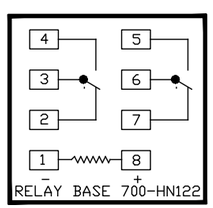
DISPLAY	PARAMETER DESCRIPTIONS	SETTING
oAPt	OPERATION/ADJUSTMENT	1
iCPt	INITIAL/COMMUNICATION	2



SOLID STATE RELAY (TYPICAL) CARLO GAVAZZ1 RM1E23AA25



SOLID STATE RELAY (TYPICAL) CARLO GAVAZZ1 RM1A23A50



RELAY BASE DIAGRAM (TYPICAL)

ARPAC GROUP

REV. A	ELECTRICAL SCHEMATIC	SIZE: A
DESIGNER: HK		DATE: 12-09-13
MODEL: XLR8		SHEET: 11 OF 11
CREATIVE WERKS		DRAWING NUMBER: 12972-11

Service Information

10

10.1 Introduction

This section contains an overview of ARPAC®'s field service policies.

10.2 Field Service Policy

10.2.1 Objective

To furnish our customer with prompt, competent, and complete service so they can operate at optimum efficiency.

10.2.2 Service Personnel

ARPAC®'s field technicians are experienced in the servicing of ARPAC® equipment, are qualified to instruct customer's personnel in correct operation and maintenance procedures of ARPAC® equipment. ARPAC® Field Service Technicians are fully supported by factory and all Engineering Departments.

10.2.3 Training

The ARPAC® Group is pleased to provide free lifetime access to ARPAC® University's regularly scheduled technical training courses for customers purchasing a packaging machine from ARPAC® or its distributors.

These technical training courses will focus on theory of operation, machine setup and operation, preventive maintenance and long-term care. Many specific machine courses are available on ARPAC® bundler, horizontal, corrugated, and stretch wrapping machines. These regularly scheduled 1 day or 2 day courses are held approximately every 12 weeks at the ARPAC® University and Demo Room located near O'Hare airport in Chicago. Class demand will influence the frequency of these class offerings.

For further information or a current technical training calendar and agenda, contact ARPAC®'s training department at 847-678-9034 ext 4088.

Custom machine specific training courses can be developed for delivery at your location or at ARPAC®. For further information and a quotation, contact ARPAC®'s training department.

10.2.4 ARPAC Commitment

- Be readily available to communicate with the customer(s).
- Service Technicians available for supervision and instruction of personnel at prevailing rates and expenses.
- Upon arrival of the ARPAC® Service Technician, he should be able to commence immediately, minimize "downtime" of your production facilities and commence training of your personnel.

10.2.5 Scheduling Service

At least 10-days advance notice is required for scheduling personnel. Emergencies will be handled as quickly as possible. If assistance is required during installation or operation of the system or if you need information pertaining to system-related problems not covered by this manual, please contact ARPAC® Service Dept. (telephone (847) 678-9034.

10.3 Installation Policy

10.3.1 Objective

To furnish our customer with prompt, competent, and complete service so they can operate at optimum efficiency. Failure to use factory trained personnel for initial machine start-up may void the warranty.

10.3.2 Service Personnel

ARPAC®'s field technicians are experienced in the servicing of ARPAC® equipment, and are qualified to instruct customer's personnel in the correct operation and maintenance procedures of ARPAC® equipment. ARPAC® Field Service Technicians are fully supported by factory and all Engineering Departments.

10.3.4 Training

ARPAC® personnel are available for ARPAC® equipment training, either on site hands-on, or in a classroom environment supported by visual aids and literature to be administered under separate purchase order.

The ARPAC® Group is also pleased to provide free lifetime access to ARPAC® University's regularly scheduled technical training courses for customers purchasing a packaging machine from ARPAC® or its distributors.

These technical training courses will focus on theory of operation, machine setup and operation, preventive maintenance and long-term care. Many specific machine courses are available on ARPAC® bundler, horizontal, corrugated, and stretch wrapping machines.

These regularly scheduled 1 day or 2 day courses are held approximately every 12 weeks at the ARPAC® University and Demo Room located near O'Hare airport in Chicago. Class demand will influence the frequency of these class offerings.

For further information or a current technical training calendar and agenda, contact ARPAC®'s training department at 847-678-9034 ext 4088.

Custom machine specific training courses can be developed for delivery at your location or at ARPAC®. For further information and a quotation, contact ARPAC®'s training department.

10.3.5 ARPAC® Commitment

- To furnish equipment per quotation.
- Be readily available to communicate with the customer(s) to facilitate start-up.
- Service Technicians available for start-up supervision and instruction of personnel at prevailing rates and expenses.
- Upon arrival of the ARPAC® Service Technician, he should be able to commence immediately, minimize "downtime" of your production facilities and commence training of your personnel.

10.3.6 Customer On-Site Preparation

- Unload, unpack, and inspect the equipment for any freight damage (apparent or hidden). If there is any damage, the Bill of Lading will need to be signed, noting the damage. You will then need to file all the necessary freight claims with the appropriate carrier. All shipments are freight collect and you are responsible for any damages in transit.
- Remove all interfering equipment and clear area where equipment is to be installed.
- Assemble/erect subject equipment.
- Lag system to floor.

- Furnish all electrical wiring and connections per system requirements.
- Furnish any air and/or gas lines and connections if required.
- Integrate with any existing up and/or down stream equipment.
- Provide qualified technicians, operators, and maintenance personnel to start-up system.

10.3.7 Scheduling Service

If assistance is required during installation or operation of the system or if you need information pertaining to system-related problems not covered by this manual, please contact ARPAC® Service Dept. (telephone (847) 678-9034).

10.3.8 Aftermarket Contact Information

Contact information for parts and service is listed below. Please have your machine's model number and serial number ready when calling. Also have a Purchase Order number when calling.

ARPAC® Parts Contact Information
Phone: (847) 678-9034
Fax: (847) 678-2109
parts@arpac.com
Hours of operation Monday through Friday,
7:30 AM to 6:00 PM (Central Time)

ARPAC®Service Contact Information
Phone (847) 678-9034
Fax: (866) 365-4131
Hours of Operation Monday through Friday,
8:00 AM to 5:30 PM (Central Time)
After Hour Emergency Service: (847) 678-9034

Illustrated Parts List

11

11.1 Ordering Parts

For your convenience, replacement parts and accessories can be ordered from ARPAC® by fax 24 hours a day. Please have the following information available to ensure quick, easy, and accurate service.

- Your name and telephone number
- Your P.O. (Purchase Order) number
- Your preferred method of delivery

11.1.1 Replacement Parts Policy & Contact Information

Should a replacement part be needed, ARPAC®'s return material authorization policy must be adhered to. ARPAC® will not distribute equipment or parts without a purchase order from an authorized ARPAC® distributor. This procedure includes warranty and non-warranty replacement parts. A return authorization will be issued at that time, and credit will not be issued until the suspect part has been received and inspected. Call ARPAC® sales for the distributor in your area at (847) 678-9034.

ARPAC®Service Contact Information
Phone (847) 678-9034
Fax: (866) 365-4131
Hours of Operation Monday through Friday,
8:00 AM to 5:30 PM (Central Time)
After Hour Emergency Service: (847) 678-9034

11.2 How to Use This Parts List

11.2.1 General Part Numbers

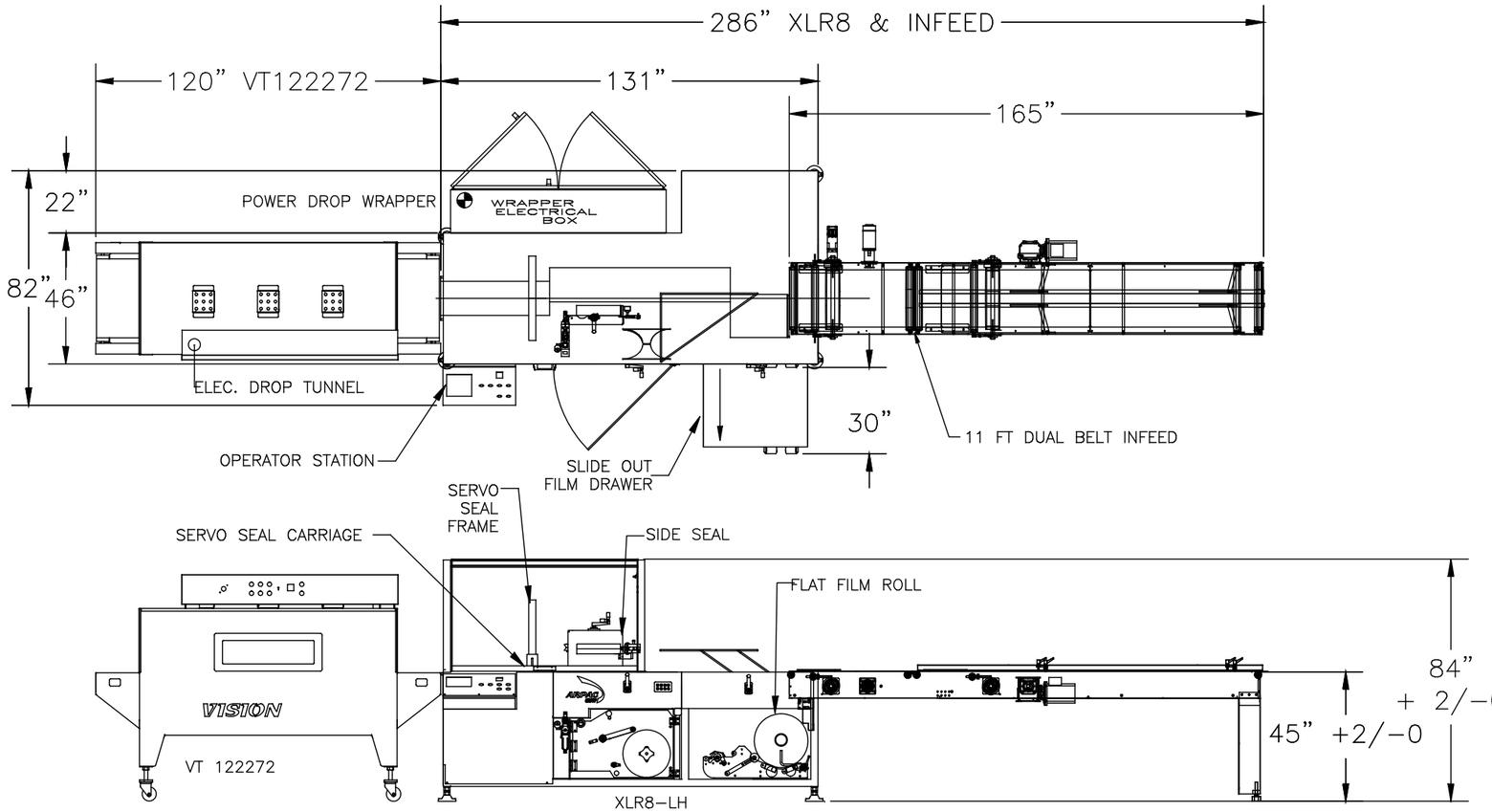
This chapter contains all part numbers necessary to order XLR8 Horizontal Shrink Wrapper replacement parts and assemblies.

This illustrated parts breakdown is presented in disassembled order. Detail parts are shown below their respective upper level assemblies whenever possible.

The parts lists follow the illustration for a particular assembly and represent components of that assembly. The number listed in the quantity column is the number of the specific part required to complete the assembly and may not reflect the quantity needed for the entire system.

The lists are divided into four columns. The item/index numbers refer to the identification number located on the drawing. The part number is the Arpac part number, used to identify the part for ordering. The part description column lists each part name, and the quantity column lists the quantity of that part used in that particular assembly.

Illustrations are shown before the parts list for each assembly.



OTHER:
FILM–75 GAUGE OLEFIN
DUAL–BELT INFEED, SERVO PACING
2" PRODUCT GUIDES
FILM PRINT REGISTRATION
PRODUCT ARRIVAL: RANDOMLY PACED

GENERAL NOTES

XLR8 / 11' INFEED :
ELEC: 230 VAC, 60 HZ 3 PH
52 FULL LOAD AMPS
CONTROL: LH
COLOR: BLACK/SILVER

VT122272 :
ELEC: 230 VAC, 60 HZ 3 PH,
67 FULL LOAD AMPS
CONTROL: LH
COLOR: BLACK/SILVER

Approved By: _____
Signature: _____
Date: _____
RETURN TO:
ARPAC CORPORATION
Fax: 847–671–7006

ARPAC
9511 WEST RIVER ST.
SCHILLER PARK, IL 60176

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONAL TOLERANCES:
FRACTIONS ± 1/64
TWO (2) DECIMALS ± 0.010
THREE (3) DECIMALS ± 0.005
ANGLES ± 0.5°

DRAWN: 12/12/2013	BY: EM	SCALE: NONE	SIZE: A
RELEASED: 12/11/13	FILENAME: S12972-13744	APPROVED BY: GM	

DESCRIPTION: XLR8-LH/11' 2-BELT INFEED/VT122272

CREATIVE WERKS

DRAWING NUMBER: S12972-13744

Date: 12/17/2013 Time: 9:59:25AM

Arpac BOM

Parent Number: 12972

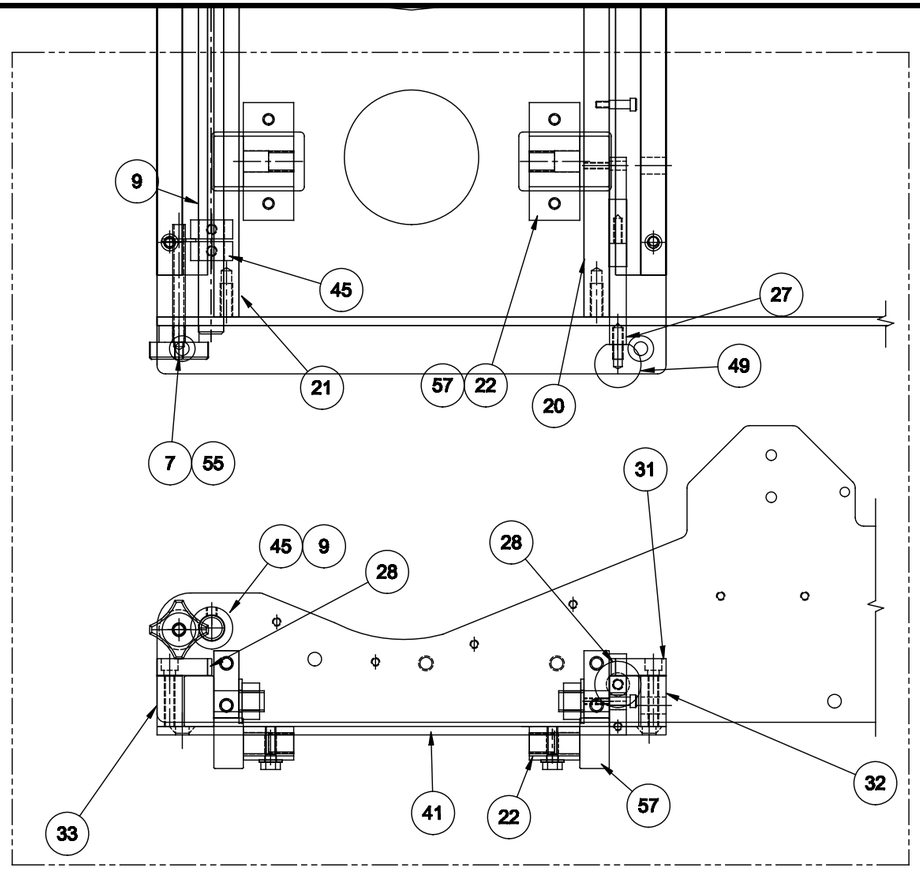
Description: ASSY, FINAL, XLR8, 12972 MACH, LH CONTROL, RH ELEC BOX, 36" ELEV

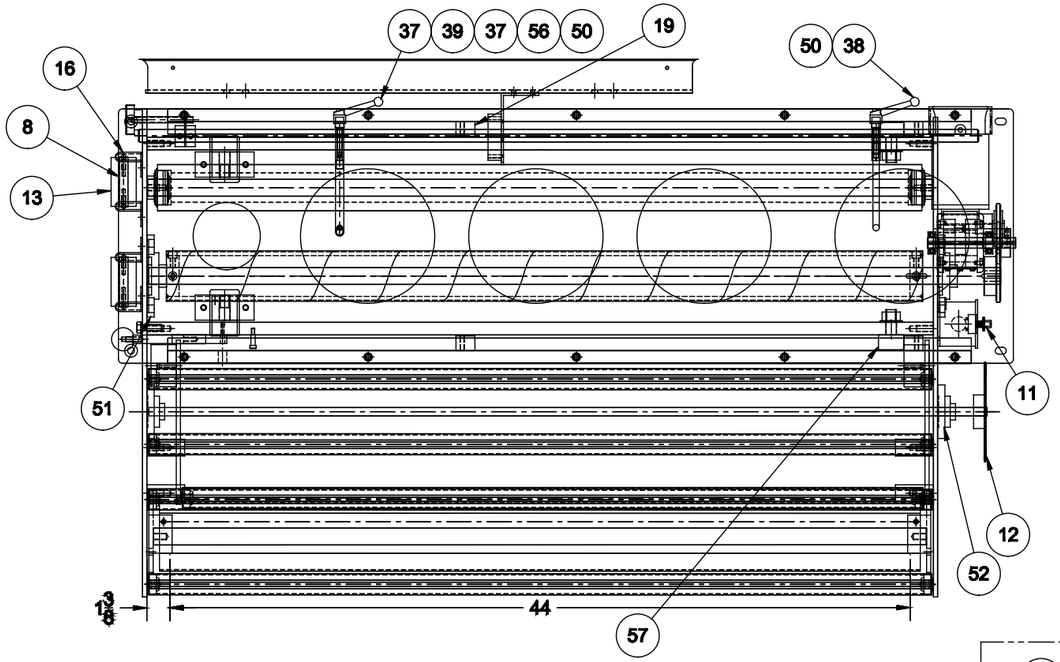
Model: XLR8

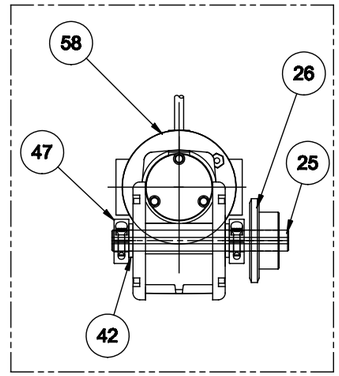
Assembly Part Number: 12972

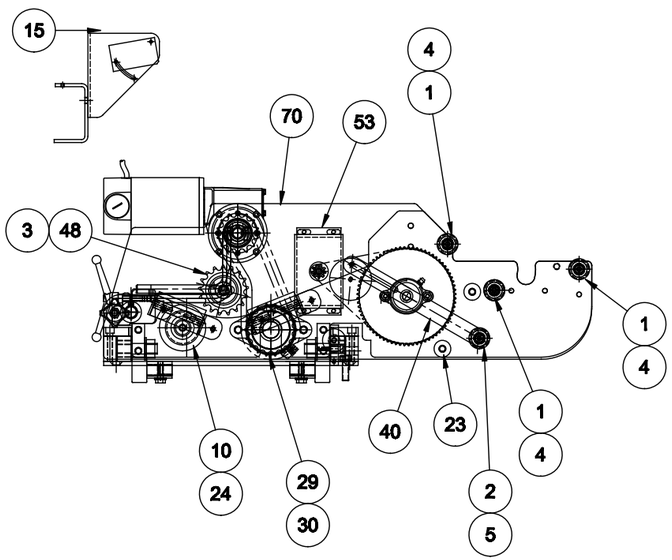
Description: ASSY, FINAL, XLR8, 12972 MACH, LH CONTROL, RH ELEC BO

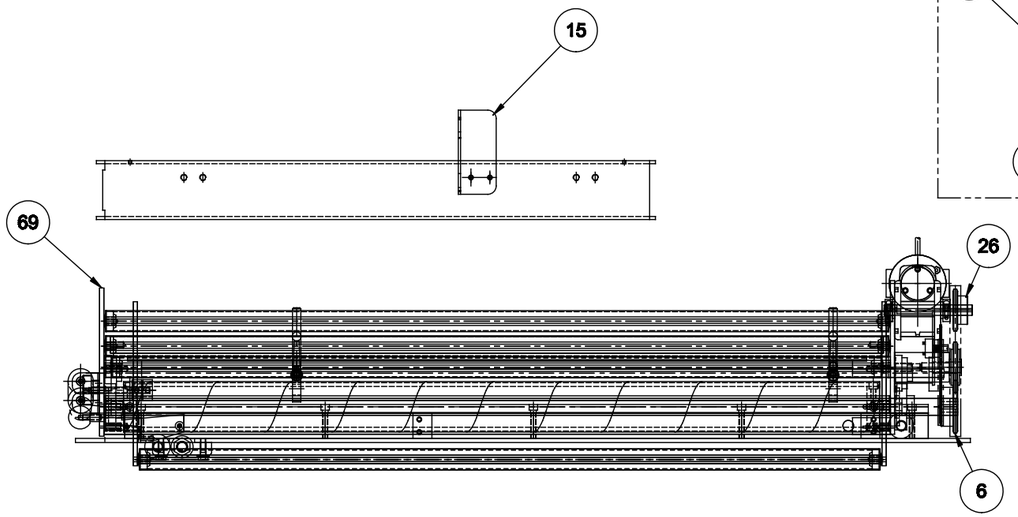
Item	Qty	Arpac Part	Description
1	1.00	280102	ASSY, FILM RACK, CRS
2	1.00	261473A	ASSY, DRIVE, CARRIAGE, CRS
3	1.00	261417A	ASSY, CARRIER, LWR, SEAL HEAD, CORE CORE ASSY - REQ ADD'L SUB-ASSY
5	1.00	261457A	ASSY, DISCHARGE *NOTE*BELT IN SEAL CRG, OR BRIDG SUB ASY
6	1.00	261658-001C	ASSY, FINAL, TRIMSEAL, LH
7	1.00	202366	ASSY, ROD, FILM "FINGER" STD
8	1.00	261689-001B	ASSY, CONV, SIDESEAL, LH
12	1.00	261433	ASSY, DRV, DISCH
16	1.00	261637-001A	ASSY, REWIND, FILM, CORE, LH
18	1.00	255744B	ASSY, GENERAL
26	1.00	269429	ASSY, REWIND, FILM, ELEC, FINAL
36	1.00	282031	ASSY, FRM, LH, XLR8
37	1.00	242319	ASSY, SUPPORT, FORMER, FILM, 16" LG, SS
39	1.00	270286A	ASSY, FORMER, FILM, ADJ, LH
42	1.00	262064A	*REPLACE W/300054* ASSY, SEAL HEAD, 8 1/8", SERVO
44	1.00	292777	ASSY, COVERS, LWR, LH, XLR8, CRS, NEW LOGO
52	1.00	274014	ASSY, WHEEL, NEEDLE
58	1.00	202365	ASSY, MISER WHEEL, TS-37 OPTION
62	1.00	269430	ASSY, CANOPY, XLR8
71	1.00	261429	ASSY, PHOTOEYE, LH
72	1.00	261737	ASSY, GUIDE, SIDESEAL
73	1.00	266740	ASSY, GUIDE, PROFILE, LOW, XLR8, W/MISER WHEELS
74	1.00	282264	ASSY, SEALBAR, POLYETHYLENE, XLR8
75	1.00	194027	ASSY, GUIDES, CONV, 72", "Z", 1-1/4",
76	1.00	290232	ASSY, CONV, INF, LUG, 72, SERVO, AB, MP230, 230V
77	1.00	194179	ASSY, SUB, CRG, SEAL HEAD, 9-1/2" STD, NO BRIDGE - USE WITH CORE AS
78	1.00	12972-ELEC-A	ASSY, ELEC, #12972, XLR8, 230V











RIGHT HAND ASSEMBLY SHOWN
LEFT HAND ASSEMBLY OPPOSITE

ARPAC	9511 WEST RIVER ST. SCHILLER PARK, IL 60176				
UNLESS OTHERWISE SPECIFIED ALL DIMENSIONAL TOLERANCES:	FRACTIONS ± 1/64 TWO (2) DECIMALS ± 0.010 THREE (3) DECIMALS ± 0.005 ANGLES ± 0.5°				
DRAWN: 7-21-11	BY: MRO	SCALE: 1/4"=1"	SIZE: D		
RELEASED: 7-21-11	FILENAME: 280102	APPROVED BY: MRO			
DESCRIPTION: ASSY, FILM RACK					
		DRAWING NUMBER: 280102			

Arpac BOM

Parent Number: 12972

Description: ASSY, FINAL, XLR8, 12972 MACH, LH CONTROL, RH ELEC BOX, 36" ELEV

Model: XLR8

Assembly Part Number: 280102

Description: ASSY, FILM RACK, CRS

Quantity: 1.00

Item	Qty	Arpac Part	Description
1	3.00	101811-301	SHAFT, RLR, HEX, 7/16, TAPPED, 1/4-20, 46.750 LG
2	1.00	101811-302	SHAFT, RLR, HEX, 7/16, TAPPED, 1/4-20, 44.250 LG
3	1.00	104659	SPACER, SPKT, IDL, 3.250 LG
4	3.00	114582-086	RLR, IDL, AL, 1.250, 7/16 HEX BORE, 46.438 LG
5	1.00	114582-087	RLR, IDL, AL, 1.250, 7/16 HEX BORE, 43.906 LG
6	1.00	183803-001	SPKT, 40B18, MOD, 1.000 BORE
7	1.00	142146	ROD, 3/8-16, S.S. TS-37, 3 1/2 LG
8	2.00	143418-184	SHAFT, 1/2, TAPPED, CRS, 3.062, 1/4-20
9	1.00	143685-064	SHAFT, 3/4, 49.938 LG, SS
10	1.00	144124-163	SHAFT, 1.000, TAPPED, 3/8-16, 46.750 LG CRS
11	1.00	144187-001	SPKT, 25B9, MOD, 0.250 BORE, W/ 10-32 SET SCREW, FOR POTENTIOMETER
12	1.00	144189-001	SPKT, 25B72, MOD, 0.500 BORE, 1/8 KWY & 10-32 SET SCREW, SS <P5164
13	2.00	167314	FILM LOADING ROLLER
14	2.00	216556	COUNTERWEIGHT, DANCER
15	1.00	220226	BKT, MTG, EYE
16	4.00	233088-001	BKT, MTG, RLR, RH
19	4.00	239356	STOP, FOLLOWER, CAM, CRS
20	1.00	249016-004	RAIL, FILM RACK, DWNSTRM, CRS, 46.75 LG
21	1.00	249019-004	RAIL, FILM RACK, UPSTRM, CRS, 46.75 LG
22	2.00	249023	BLK, FOLLOWER, CAM
23	4.00	249025	STOP, DANCER, CRS
24	1.00	249027-002	RLR, PINCH, IDL, 2.75 DIA, 45.000LG
25	1.00	249036-002	SHAFT, MTR, CRS, 5.250 LG
26	1.00	249048	SPKT, 40B14, MOD, 0.625 BORE
27	1.00	249052	PLT, LATCH, CRS
28	2.00	249706	GUIDE, SLIDE
29	1.00	255765-001	ASSY, RLR, DRV, AL, 2.875, FEED, FILM, 1.000 BORE, 44.938 LG
30	1.00	255766-001	SHAFT, DRV, FEED, FILM, 50.625 LG
31	2.00	261696	BAR, COVER, TRACK, CRS
32	1.00	261695	BAR, SIDE, TRACK, DWNSTRM, CRS
33	1.00	261694	BAR, SIDE, TRACK, UPSTRM, CRS
37	1.00	255774	BKT, MTG, GUIDE, PULL-OUT
38	1.00	255777	WLDMT, BKT, GUIDE
39	1.00	255778	ROD, GUIDE, PULL-OUT
40	1.00	261693	WLDMT, DANCER, CRS
41	1.00	261698	PLT, BASE, FILMRACK, CRS
42	2.00	800449	WSHR, OILITE, 0.628 X 1.000 X 1/8 THK
43	1.88	800462	CHAIN, RLR, #40, RLR RVT,
44	1.00	800502	LINK, CONN, #40,
45	2.00	800562	COLLAR, SHAFT, SET SCREW, 3/4 STL
47	2.00	800596	COLLAR, SHAFT, CLAMP, 2-PIECE, 5/8
48	1.00	800906	SPKT, 40BB17H, IDLER, 5/8 ID,
49	1.00	802661	HDL, 1-3/8 BALL, BLACK 5/16-18 FEM
50	2.00	806459	HDL, ADJ, ZINC, 2-1/2 LG 5/16-18 X 1.18 STUD

Arpac BOM

Parent Number: 12972

Description: ASSY, FINAL, XLR8, 12972 MACH, LH CONTROL, RH ELEC BOX, 36" ELEV

Model: XLR8

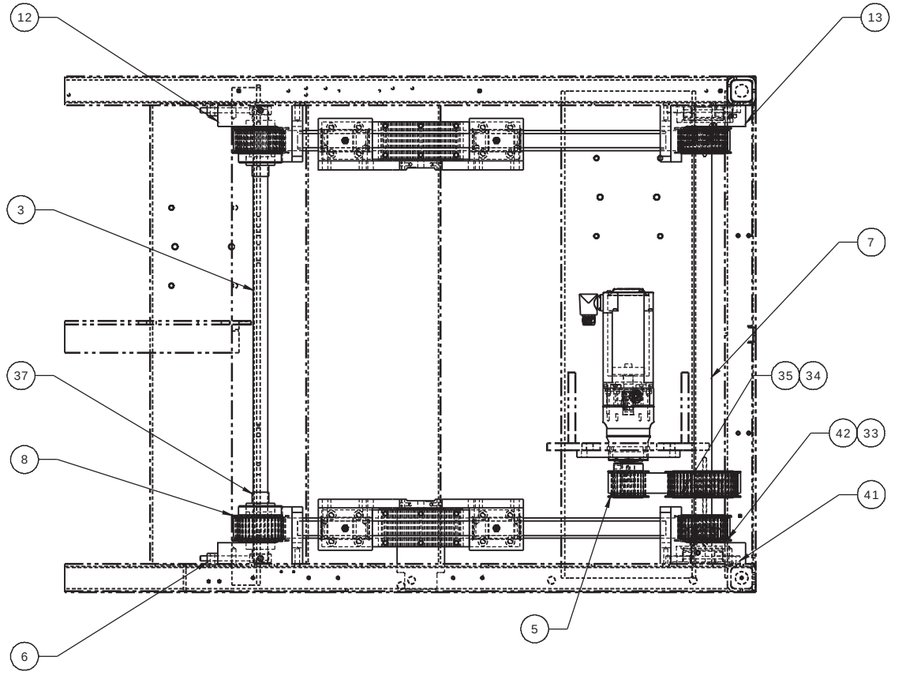
Assembly Part Number: 280102

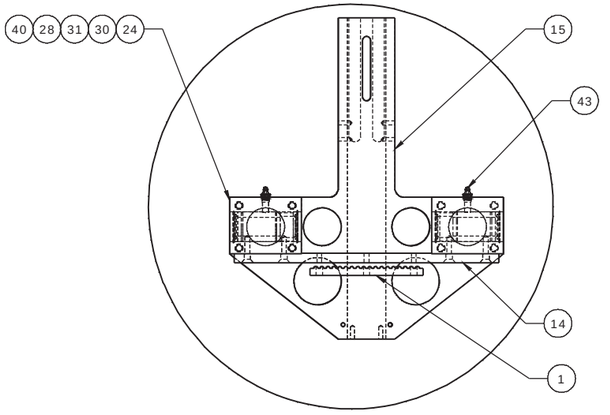
Description: ASSY, FILM RACK, CRS

Quantity: 1.00

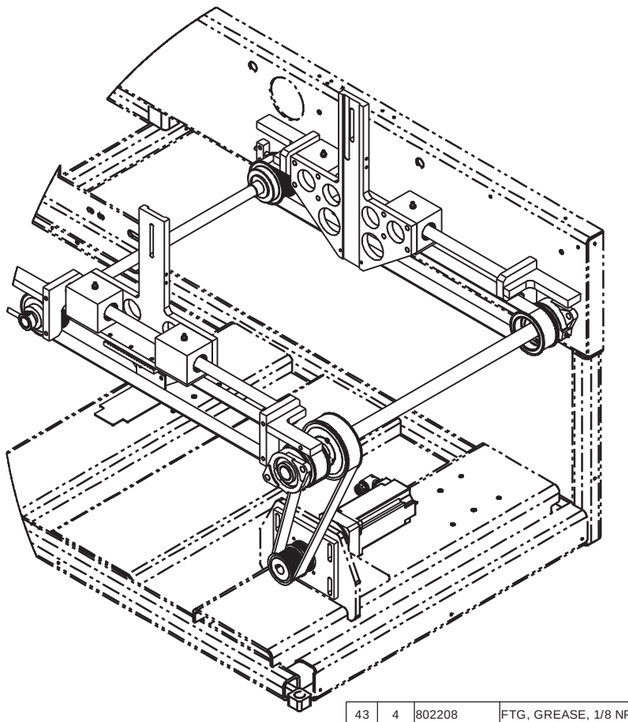
Item	Qty	Arpac Part	Description
51	2.00	802760	*, BRG, FLG, 1 ID, 2-BOLT, SEE COMMENTS
52	2.00	802796	*, BRG, FLG, 1/2 ID, 2-BOLT MALLEABLE, SEE COMMENTS
53	1.00	804040-001	ENCLOSURE, 4-1/8 X 2-5/8 X 2-3/16 W/ COVER
54	2.00	810132	WSHR, OILITE, 1.003 X 1.504 X 1/8 THK,
55	1.00	811914	KNOB, 4 PRONG, 3/8-16, BR INS
56	1.00	813239	PLUNGER, BALL, 1/4-20 TH'D, .531 LG
57	4.00	823586	FOLLOWER, CAM, 1-1/2 OD, 5/8-18 STUD
58	1.00	826153	MOTOR, GEAR, 1/4 HP, 130VDC, 250 RPM, 5/8 HOLLOW SHAFT
59	1.00	826531	RULE, ADHESIVE, METAL, 1/2W X 12FT, LEFT-RIGHT
68	2.00	191350-043	PLT, NUT, 1/4 X 1/2 X 2 1/4, 10-32, 1.75 CENTERS
69	1.00	255779	PLT, SIDE, OUTSIDE, FILMRACK
70	1.00	255780	PLT, SIDE, INSIDE, FILMRACK
72	1.00	264099-001	COVER, CHAIN, FILMRACK, LH
73	1.00	812630	LINK, CONN, #25,
74	1.00	817318	CHAIN, RLR, #25

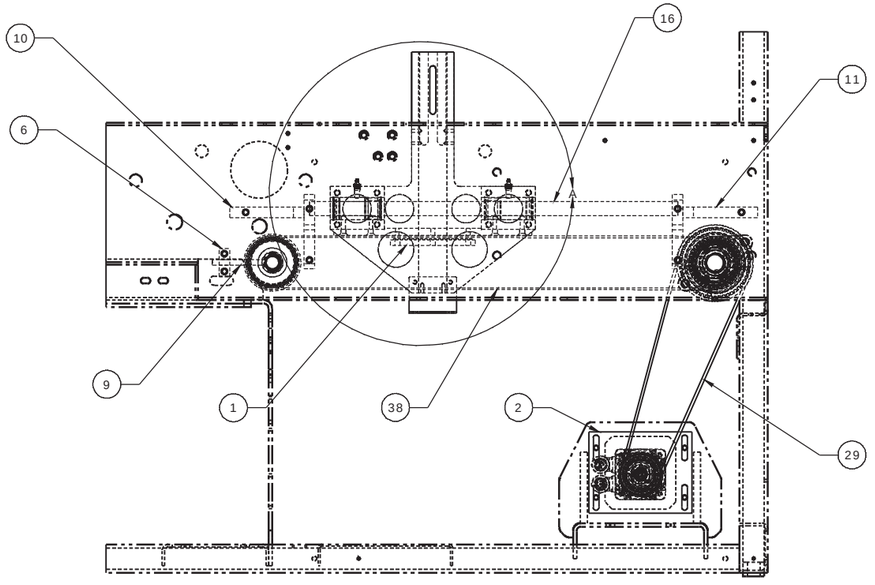
REVISIONS			
RV	DATE	BY	DESCRIPTION
A	9-22-12	MRO	ITEM 41 WAS 802780

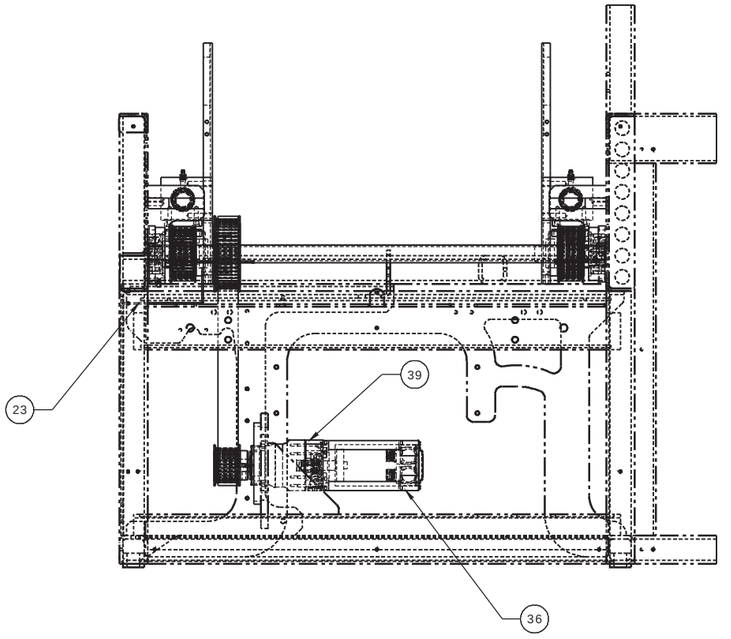




DETAIL A
SCALE 1 : 4







ITM	QTY	PART NUM	DESCRIPTION
43	4	802208	FTG, GREASE, 1/8 NPT, STRAIGHT,
42	2	816793	PULLEY, TIMING, 36T, 8MM P, 36MM W, 1610 BUSHING REQUIRED
41	2	839307	BRG, FLG, 1-1/4 ID, 2-BOLT STANDARD-DUTY
40	4	101996-008	SPACER, BUSH, 1" SHAFT
39	1	839154	GEAR REDUCER, 10:1 RATIO, TO USE W/MTS ALLEN-BRADLEY SERVO MTR MPL-A330P-MJ72AA
38	13	825881	BELTING, TIMING, 8MM P, 36MM W UOM=FEET
37	4	823370	BRG, CART, 1 X 2.0472 X 1-47/64 LG WITH SNAP RING
36	1	819882	MOTOR, SERVO, 37 IN-LB, 5000 RPM BRAKE/KEYED/SINGLE-TURN ABSOL. HIGH RES.
35	1	821800	PULLEY, TIMING, 50T, 8MM P, 36MM W, #2012 TAPER-LOCK BUSHING REQUIRED
33	2	808752	BUSH, TAPER, 1-1/4 BORE X 1 LG
32			
31	8	802926	RING, SEAL, 1 X 1.567 X 0.187 THK
30	4	802970	BUSH, BALL, 1 X 1-9/16 X 2-1/4 LG, ALIGNMENT COMPENSATING
29	1	821752-001	BELT, TIMING, 8MM P, 36MM W, 1120MM LG
28	8	800335-023	RING, SNAP, INTERNAL, 1-9/16 BORE,
24	4	261612	BLK, BUSH, 1.000
23	1	261611	BKT, PROX, CARRIAGE
16	2	141737-026	THOMSON SHAFT, 1.000
15	2	261614	PLT, SIDE, CARRIAGE
14	2	239401	PLT, MTG, BUSH
13	1	261610	WLDMT, BKT, MTG, CARRIAGE, RH
12	1	261610-001	WLDMT, BKT, MTG, CARRIAGE, LH
11	1	261609-001	WLDMT, BKT, MTG, CARRIAGE, LH
10	1	261609	WLDMT, BKT, MTG, CARRIAGE, RH
9	2	237826	WLDMT, SCREW, TAKE UP, 1"
8	2	234009	PB8MX-362-36-52 MM BORE
7	1	233697-002	SHAFT, 1.250 DIA
6	2	233696	BLOCK, TAKE-UP
5	1	224446-002	PULLEY, TIMING, 25T, 8T, 36W, 32MM BORE
3	1	144309-045	SHAFT, 1" DIA
2	1	262111	PLT, MTG, GEAR REDUCER
1	2	118283	CLAMP, BELT

BILL OF MATERIALS

ARPAC
9511 WEST RIVER ST.
SCHILLER PARK, IL 60176

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONAL TOLERANCES:
FRACTIONS ± 1/64
TWO (2) DECIMALS ± 0.010
THREE (3) DECIMALS ± 0.005
ANGLES ± 0.5°

DRAWN: 7/20/2009	BY: MRO	SCALE: 0.1875:1	SIZE: D
RELEASED: 7/20/2009	FILENAME: 261473	APPROVED BY: MRO	

DESCRIPTION: ASSY, DRIVE, CARRIAGE

DRAWING NUMBER: 261473

Arpac BOM

Parent Number: 12972

Description: ASSY, FINAL, XLR8, 12972 MACH, LH CONTROL, RH ELEC BOX, 36" ELEV

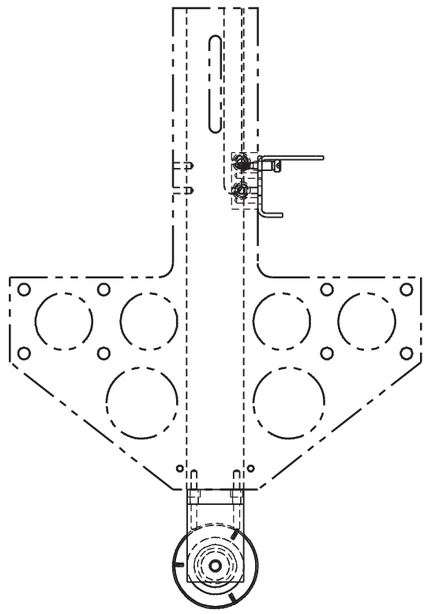
Model: XLR8

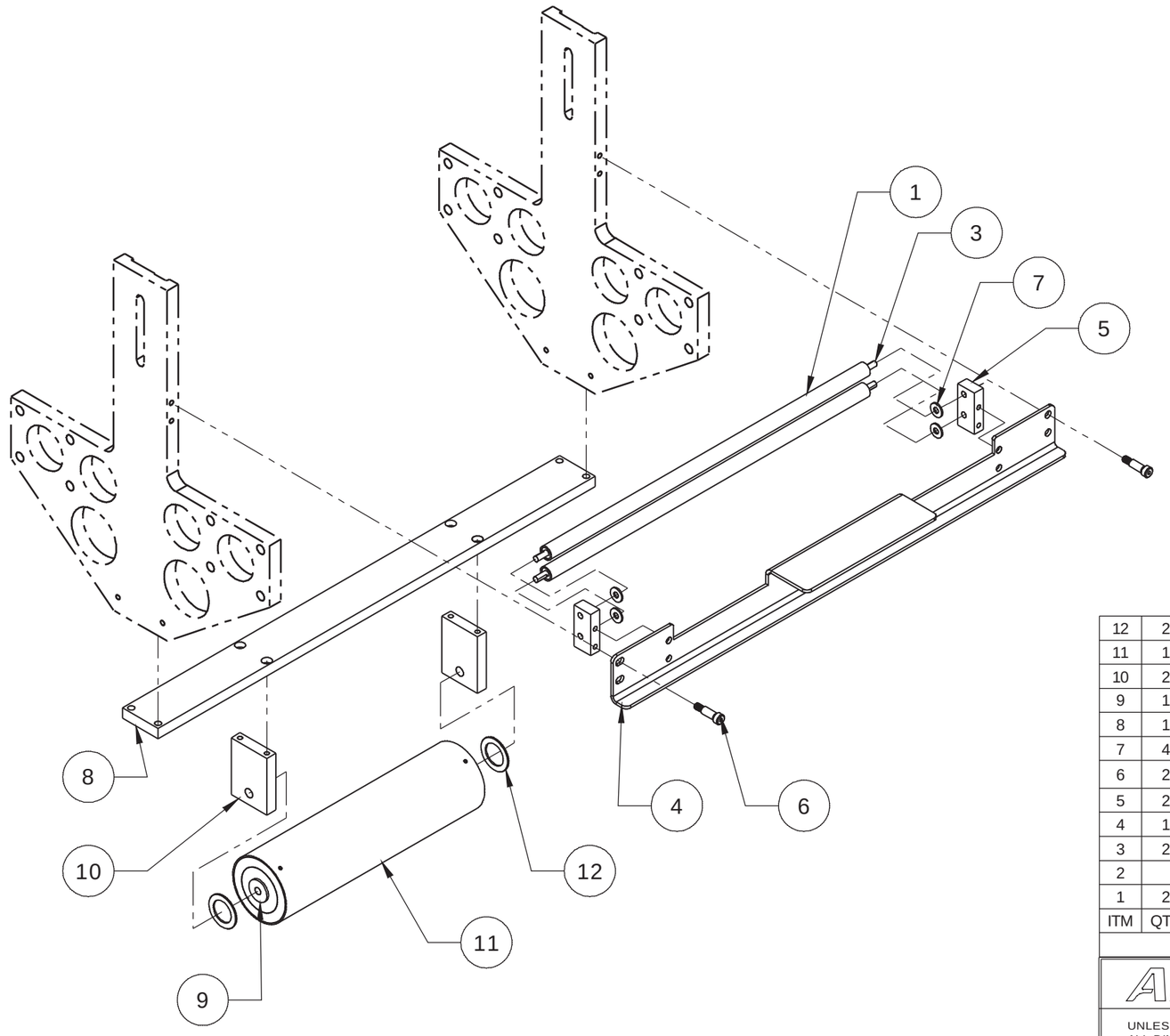
Assembly Part Number: 261473A

Description: ASSY, DRIVE, CARRIAGE, CRS

Quantity: 1.00

Item	Qty	Arpac Part	Description
1	2.00	118283-001	CLAMP, BELT, ANODIZED FOR 8MM PITCH POLY CHAIN (GATES)
2	1.00	262111	PLATE, MTG, GEAR REDUCER ALPHA SP075
3	1.00	144309-045	SHAFT, 1.000, CRS, 32.250 LG
5	1.00	224446-002	PULLEY, TIMING, 25T, 8MM P, 36MM W, 22 MM BORE, 6 MM KEY
6	2.00	233696	BLOCK, TAKE-UP
7	1.00	233697-002	SHAFT, 1.250 DIA, 32.250 LG
8	2.00	234009	PB8MX-362-36 - 52 MM BORE
9	2.00	237826	WLDMT, SCREW, TAKE-UP, 1" 3/8-16 THREAD
10	1.00	261609	WLDMT, BKT, MTG, CARRIAGE, RH, UPSTRM
11	1.00	261609-001	WLDMT, BKT, MTG, CARRIAGE, LH, DWNSTRM
12	1.00	261610-001	WLDMT, BKT, MTG, CARRIAGE, LH, UPSTRM
13	1.00	261610	WLDMT, BKT, MTG, CARRIAGE, LH, DWNSTRM, SS
14	2.00	239401	PLT, MTG, BUSH
15	2.00	261614	PLT, SIDE, CARRIAGE
16	2.00	141737-026	CRS SHAFT THOMSON 1, 26.00 LG
23	1.00	261611	BKT, PROX, CARRIAGE
24	4.00	261612-001	BLK, BUSH, 1.000, ANODIZE
28	8.00	800335-023	RING, SNAP, INTERNAL, 1-9/16 BORE,
29	1.00	821752-001	BELT, TIMING, 8MM P, 36MM W, 1120MM LG,
30	2.00	802780	BRG, FLG, 1-1/4 ID, 2-BOLT STANDARD-DUTY
31	4.00	802970	BUSH, BALL, 1 X 1-9/16 X 2-1/4 LG, ALIGNMENT COMPENSATING
32	8.00	802926	RING, SEAL, 1 X 1.567 X 0.187 THK,
34	2.00	808752	BUSH, TAPER, 1-1/4 BORE X 1 LG
35	1.00	810670	BUSH, TAPER, 1-1/4" I.D.
36	2.00	816793	PULLEY, TIMING, 36T, 8MM P, 36MM W, 1610 BUSHING REQUIRED,
37	1.00	821800	PULLEY, TIMING, 50T, 8MM P, 36MM W, #2012 TAPER-LOCK BUSHING REQUIR
38	1.00	819882-003	MOTOR, SERVO, 37 IN-LB, 5000 RPM, 230VAC NO BRAKE/KEYED/MULTI-TURN
39	4.00	823370	BRG, CART, 1 X 2.0472 X 1-47/64 LG WITH SNAP RING
40	13.00	825881	BELTING, TIMING, 8MM P, 36MM W UOM=FEET
41	1.00	839154	GEAR REDUCER, 10:1 RATIO, TO USE W/MTS ALLEN-BRADLEY SERVO MTR MPL-
42	4.00	101996-008	SPACER, BUSH, 1" SHAFT, 0.69 LG





12	2	803981	WSHR, OILITE, 1.003 X 1.504 X 1/16 THK
11	1	142184	RLR, IDLER
10	2	142183-001	BKT, MTG, SHAFT TS-37N, DISCHARGE
9	1	104631-003	SHAFT, 1.000, TAPPED, 3/8-16
8	1	119977-001	BAR, CROSS, LOWER
7	4	815213	WSHR, OILITE, 0.255 X 0.625 X 1/16 THK
6	2	800322-004	FSNR, BOLT, SHLDR, 5/16 DIA X 3/4 LG, 1/4-20 TH'D
5	2	191443-001	BLK, MTG, SHAFT
4	1	232313	BKT, RLR, MTG, INFEED
3	2	119973	SHAFT, RLR, IDLER
2			
1	2	119972-013	RLR, 5/8 OD, S.S
ITM	QTY	PART NUM	DESCRIPTION

BILL OF MATERIALS

ARPAC
9511 WEST RIVER ST.
SCHILLER PARK, IL 60176

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONAL TOLERANCES:
FRACTIONS ± 1/64
TWO (2) DECIMALS ± 0.010
THREE (3) DECIMALS ± 0.005
ANGLES ± 0.5°

DRAWN: 05/11/2009	BY: MRO	SCALE: 0.1875:1	SIZE: B
RELEASED: 05/11/2009	FILENAME: 261417	APPROVED BY: MRO	

DESCRIPTION: ASSY, CARRIER, LWR, SEAL HEAD, CORE CORE ASSY

DRAWING NUMBER: 261417

CR VERSION-SS/ANODIZED	202013	STAINLESS	261417-100
STD VERSION	104631-003	STEEL	261417
NOTE	ITEM9	MATERIAL	PART NUMBER

FINISH- SEE TABLE

Arpac BOM

Parent Number: 12972

Description: ASSY, FINAL, XLR8, 12972 MACH, LH CONTROL, RH ELEC BOX, 36" ELEV

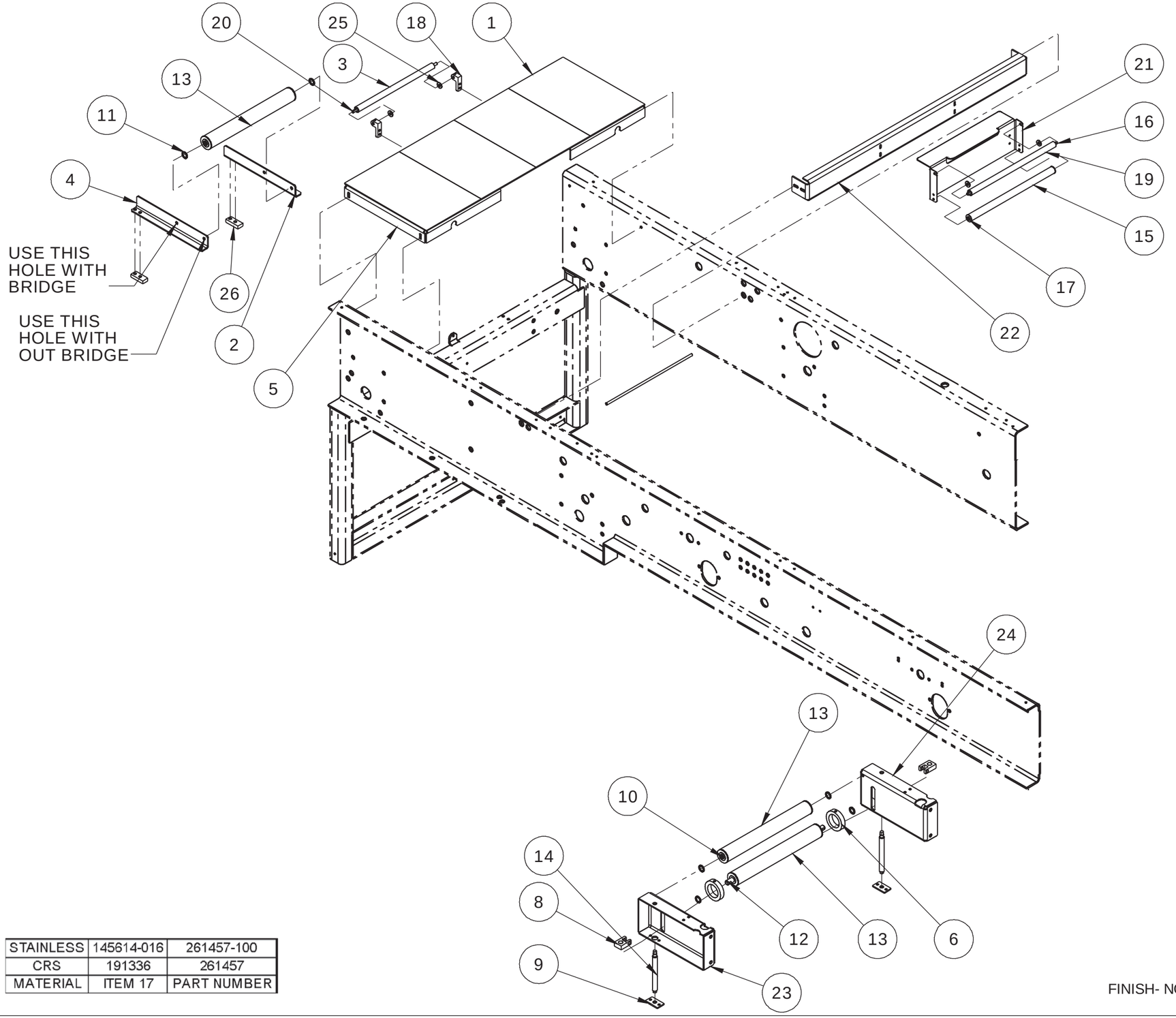
Model: XLR8

Assembly Part Number: 261417A

Description: ASSY, CARRIER, LWR, SEAL HEAD, CORE CORE ASSY -

Quantity: 1.00

Item	Qty	Arpac Part	Description
1	2.00	119972-013	RLR, 5/8 OD, S.S., 17.859 LG
3	2.00	119973	SHAFT, RLR, IDLER, TS-37
4	1.00	119977	BAR, CROSS, LOWER TS37, CLR ANOD
5	1.00	232313	BKT, MTG, RLR, INFEED INFEED SIDE, LONGER TONGUE
6	2.00	191443	BLK, SHAFT, MTG, CLR ANOD
7	2.00	800322-004	FSNR, BOLT, SHLDR, 5/16 DIA X 3/4 LG, 1/4-20 TH'D
8	4.00	815213	WSHR, OILITE, 0.255 X 0.625 X 1/16 THK,
9	1.00	104631-003	SHAFT, 1.000, TAPPED, 3/8-16, 11.312 LG
10	2.00	142183	BKT, MTG, SHAFT TS37, CLR ANOD
11	1.00	142184-000B	ASSY, RLR, IDLER, 11.125 LG
12	2.00	803981	WSHR, OILITE, 1.003 X 1.504 X 1/16 THK



ITM	QTY	PART NUM	DESCRIPTION
26	2	263075-XXX	SPACER
25	4	815213	WSHR, OILITE, 0.255 X 0.625 X 1/16 THK
24	1	261461-XXX	FRAME, SIDE, TAKE UP
23	1	261461-XXX	FRAME, SIDE, TAKE UP
22	1	261462-XXX	BAR, CROSS, BKT, RLR
21	1	191334	BKT, RLR
20	1	142178-XXX	SHAFT, RLR, DISCHARGE
19	1	119972-015	RLR, 5/8 OD, S.S
18	2	251456	BLK, RLR
17	1	191336	SHAFT, RLR
16	1	191335-XXX	SHAFT, RLR, DISCHARGE
15	1	191332	RLR, IDL, AL, 0.750
14	2	191366	SCREW, ADJUSTMENT
13	3	188603-004	RLR, IDL, SS, 1.500, 1/2 BORE
12	1	142111-001	SHAFT, TAKEUP, BELT
11	6	800446	WSHR, OILITE, 0.507 X 0.750 X 1/16 THK
10	2	142104-203	SHAFT, 0.500, TAPPED, 1/4-20, SS
9	2	191367-XXX	PLT, CAP, TAKE UP
8	2	142096-XXX	NUT, TAKE UP
7	-	-	-
6	2	143446-001	COLLAR, GUIDE, FILM
5	1	261460	PLT, DISCH
4	1	261459-XXX	BKT, RLR, IDL, LH
3	1	119972-004	RLR, 5/8 OD, S.S
2	1	261459-XXX	BKT, RLR, IDL, RH
1	4	816524	TAPE, SLIT, NOLU-D 1/8TH X 8W

BILL OF MATERIALS

STAINLESS	145614-016	261457-100
CRS	191336	261457
MATERIAL	ITEM 17	PART NUMBER

FINISH- NONE

ARPAC
9511 WEST RIVER ST.
SCHILLER PARK, IL 60176

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONAL TOLERANCES:
FRACTIONS ± 1/64
TWO (2) DECIMALS ± 0.010
THREE (3) DECIMALS ± 0.005
ANGLES ± 0.5°

DRAWN: 07/13/2009	BY: MRO	SCALE 0.09375:1	SIZE: B
RELEASED: 07/13/2009	FILENAME: 261457	APPROVED BY: MRO	

DESCRIPTION: ASSY, DISCHARGE *NOTE*BELT IN SEAL CRG, OR BRID

DRAWING NUMBER: 261457

Arpac BOM

Parent Number: 12972

Description: ASSY, FINAL, XLR8, 12972 MACH, LH CONTROL, RH ELEC BOX, 36" ELEV

Model: XLR8

Assembly Part Number: 261457A

Description: ASSY, DISCHARGE *NOTE*BELT IN SEAL CRG, OR BRID

Quantity: 1.00

Item	Qty	Arpac Part	Description
1	4.00	816524	TAPE, SLIT, NOLU-D 1/8TH X 8W
2	1.00	261459	BKT, RLR, IDL, RH
3	1.00	119972-004	RLR, 5/8 OD, S.S., 11.109 LG
4	1.00	261459-001	BKT, RLR, IDL, LH
5	1.00	261460	PLT, DSCH
6	2.00	143446-001	COLLAR, GUIDE, FILM PLATED
8	2.00	142096	NUT, TAKEUP, ANODIZED
9	2.00	191367	PLT, CAP, TAKE UP
10	2.00	142104-203	SHAFT, 0.500, TAPPED, 1/4-20, SS, 12 11/16 LG
11	6.00	800446	WSHR, OILITE, 0.507 X 0.750 X 1/16 THK,
12	1.00	142111-001	SHAFT, TAKEUP, BELT "A" = 14.250
13	3.00	188603-004	RLR, IDL, SS, 1.500, 1/2 BORE "A" DIM 12 1/4, 12 1/2 OVERALL LG
14	2.00	191366	SCREW, ADJUSTMENT
15	1.00	191332	RLR, IDL, AL, .750 "A"= 12 9/32 - ANODIZED
16	1.00	191335	SHAFT, RLR, 1/4 OD, A = 13
17	1.00	191336	SHAFT, RLR, 1/4 OD, TAPPED 12 1/2 LG
18	2.00	251456	BLK, MTG, RLR
19	1.00	119972-015	RLR, 5/8 OD, S.S. 12.3125 LG
20	1.00	142178	SHAFT, RLR, DISCHARGE, TS-37, 12 1/4 LG
21	1.00	191334	BKT, RLR
22	1.00	261462	BAR, CROSS, BKT, RLR
23	1.00	261461	FRAME, SIDE, TAKE UP LH
24	1.00	261461-001	FRAME, SIDE, TAKE UP RH
25	4.00	815213	WSHR, OILITE, 0.255 X 0.625 X 1/16 THK,
26	2.00	263075	SPACER

Arpac BOM

Parent Number: 12972

Description: ASSY, FINAL, XLR8, 12972 MACH, LH CONTROL, RH ELEC BOX, 36" ELEV

Model: XLR8

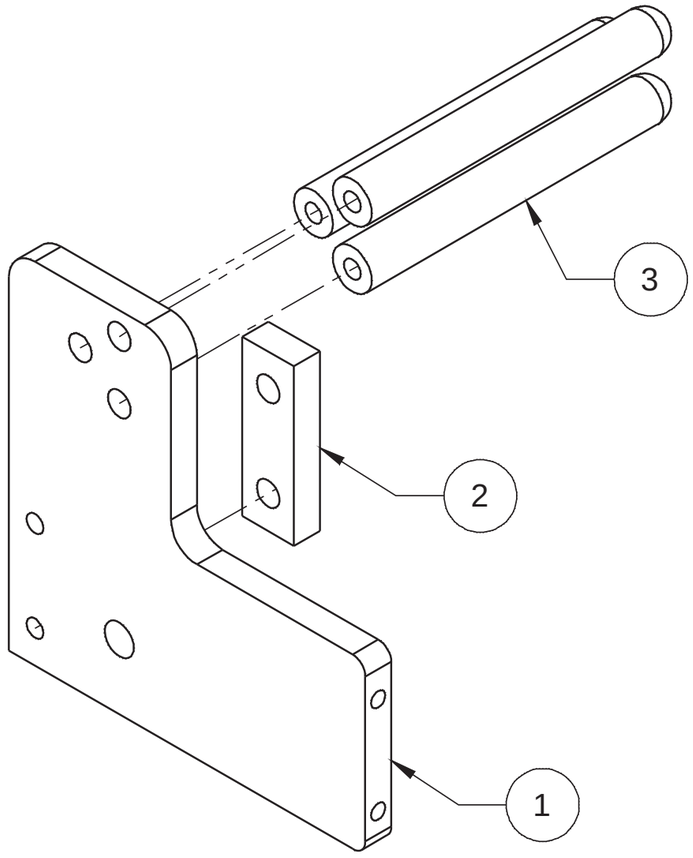
Assembly Part Number: 261658-001C

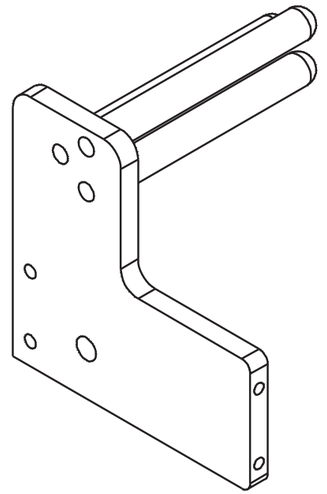
Description: ASSY, FINAL, TRIMSEAL, LH

Quantity: 1.00

Item	Qty	Arpac Part	Description
1	1.00	281940	ASSY, TRIMSEAL, LOWER, TS37, LH, W/LOCATING PINS
2	1.00	119914-000D	ASSY, TRIMSEAL, UPPER, TS-37, L.H. STD
3	1.00	261654-001A	ASSY, DRV, SEAL, TRIM, CRS, LH
4	1.00	172071	TOOL, ADJ, SPACE,
5	3.00	137828-000B	ASSY, WIRE, HOT, 18 GA, TS37
6	1.00	816065	BRUSHES,HAND SCRATCH BRASS GRAINGER < 5 PCS/PKG > < G.L EOM EQUALS

Part Number: 202366 Description: ASSY, ROD, FILM "FINGER" STD Qty: 1





ITM	QTY	PART NUM	DESCRIPTION
3	3	171786	FILM GUIDE ROD
2	1	202364	SPACER, MTG, FINGER/MISER
1	1	202362-XXX	PLATE, MTG, FINGER/MISER

BILL OF MATERIALS

ARPAC
9511 WEST RIVER ST.
SCHILLER PARK, IL 60176

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONAL TOLERANCES:
FRACTIONS ± 1/64
TWO (2) DECIMALS ± 0.010
THREE (3) DECIMALS ± 0.005
ANGLES ± 0.5°

DRAWN: 1/15/2001	BY: DCC	SCALE: 0.75:1	SIZE: A
RELEASED: 1/15/2001	FILENAME: 202366	APPROVED BY: DCC	

DESCRIPTION: ASSY, ROD, FILM

DRAWING NUMBER: 202366

202366-001
202366
PART NUM

Arpac BOM

Parent Number: 12972

Description: ASSY, FINAL, XLR8, 12972 MACH, LH CONTROL, RH ELEC BOX, 36" ELEV

Model: XLR8

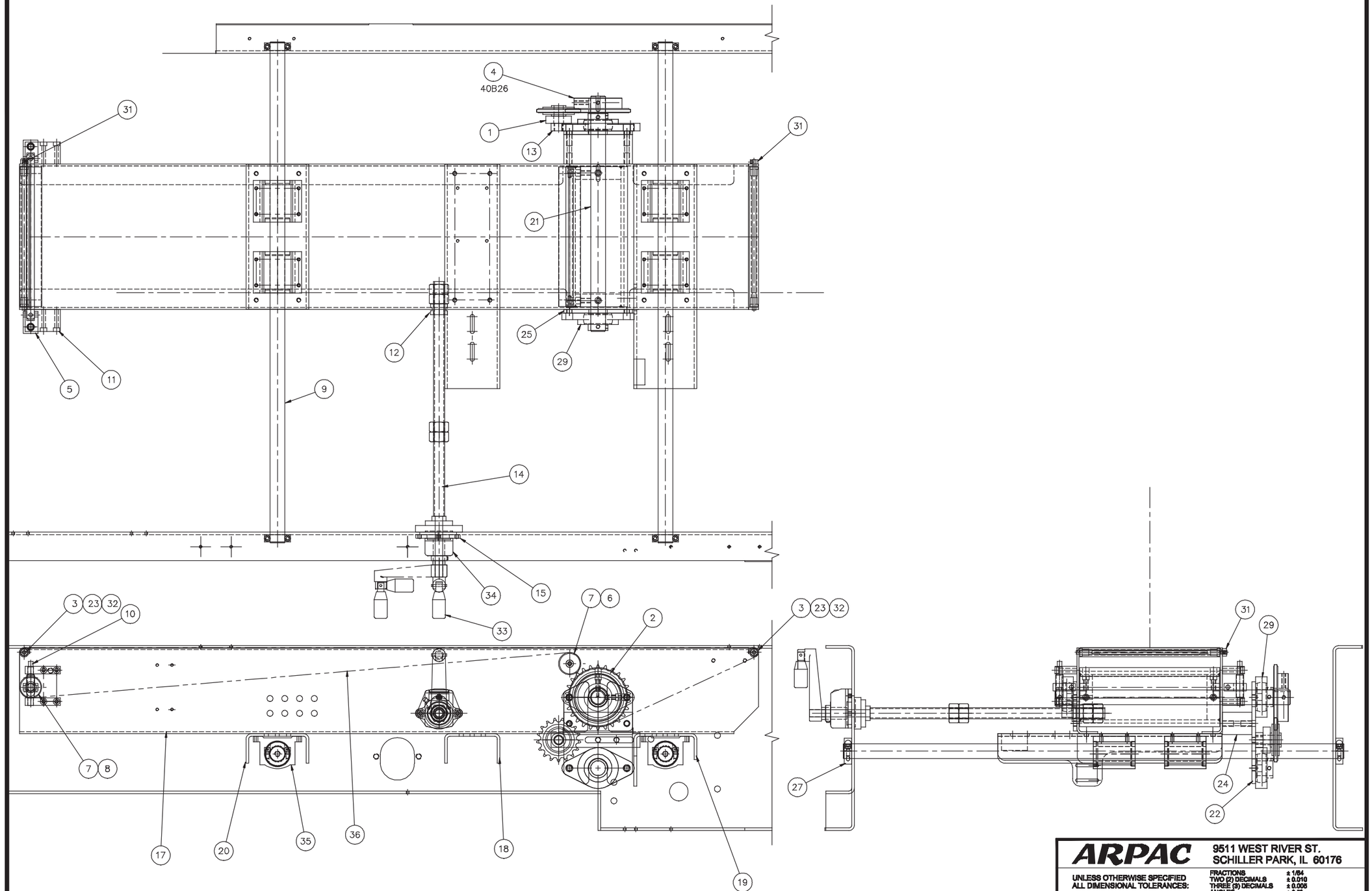
Assembly Part Number: 202366

Description: ASSY, ROD, FILM "FINGER" STD

Quantity: 1.00

Item	Qty	Arpac Part	Description
1	1.00	202362	PLT, MTG, FINGER/MISER
2	1.00	202364	SPACER, MTG, FINGER/MISER
3	3.00	171786	ROD, GUIDE, FILM 3" LG
4	11.50	902911	SS FLAT 1/4 X 1/2, 303
5	9.00	900321	SS SHAFT G&P 3/8, 303 BEARING SHAFT QUALITY, (0.3745/0.3735),
6	11.60	903573	SS PLT 1/4, 304

Part Number: 261689-001B Description: ASSY, CONV, SIDESEAL, LH Qty: 1



PART NUMBERS:
·261689: RH, AS SHOWN
·261689-001: LH, OPPOSITE

ARPAC	9511 WEST RIVER ST. SCHILLER PARK, IL 60176		
UNLESS OTHERWISE SPECIFIED ALL DIMENSIONAL TOLERANCES:	FRACTIONS ± 1/64 TWO (2) DECIMALS ± 0.010 THREE (3) DECIMALS ± 0.005 ANGLES ± 0.5°		
DRAWN: 7-20-09	BY: MRO	SCALE: 1/4"=1"	SIZE: C
RELEASED: 7-20-09	FILENAME: 261689	APPROVED BY: MRO	
DESCRIPTION: ASSY, CONV, SIDESEAL			
		DRAWING NUMBER: 261689	

Arpac BOM

Parent Number: 12972

Description: ASSY, FINAL, XLR8, 12972 MACH, LH CONTROL, RH ELEC BOX, 36" ELEV

Model: XLR8

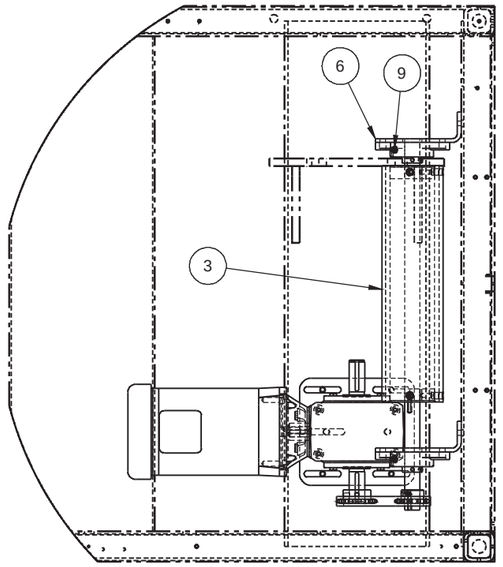
Assembly Part Number: 261689-001B

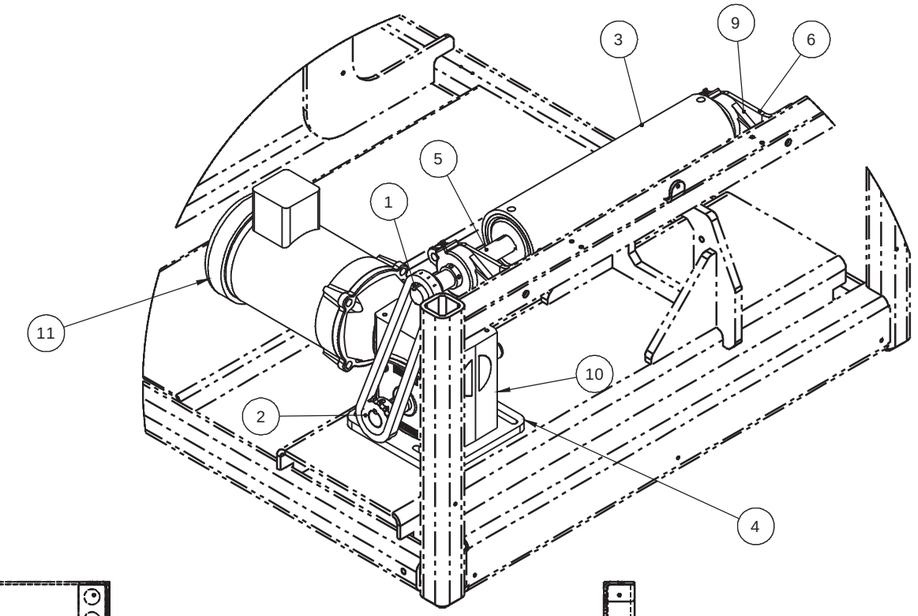
Description: ASSY, CONV, SIDESEAL, LH

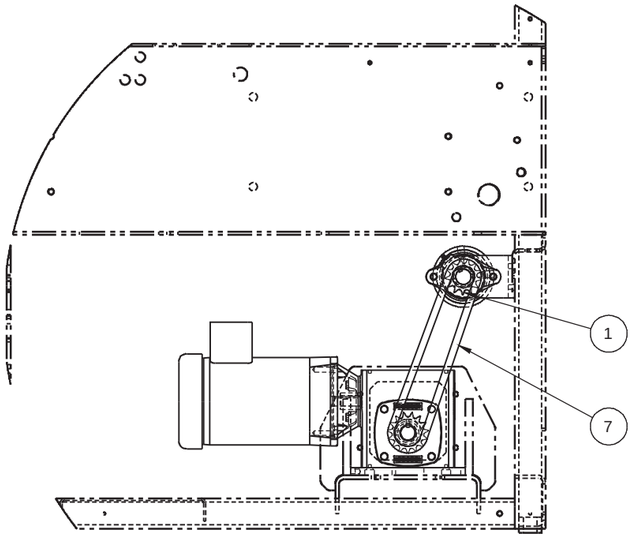
Quantity: 1.00

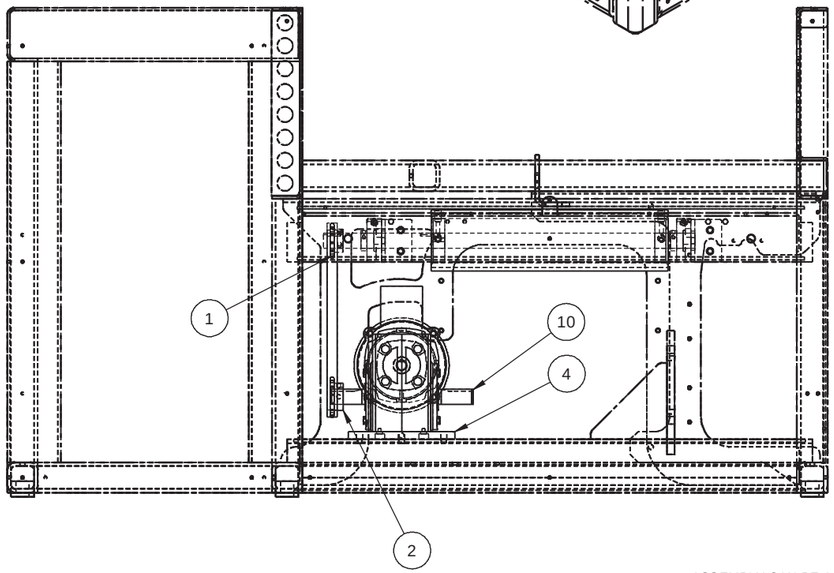
Item	Qty	Arpac Part	Description
1	1.00	101835-103	SPACER, SPKT, IDL, 0.375 LG, NO THREADS, ANODIZED
2	1.00	110954-023	RLR, DRV, AL, FLAT, 4.000, COATED, RUBBER, 9.500LG, C=0, X=0
3	2.00	119972-022	RLR, 5/8 OD, S.S. 9.422 LG
4	1.00	124817	SPKT, 40B26, MOD, 1.000 BORE
5	2.00	142096	NUT, TAKEUP, ANODIZED
6	1.00	142104-153	SHAFT, 0.500, TAPPED, 1/4-20, SS, 9 9/16 LG
7	2.00	142106	RLR, IDLER, 9.375 LG
8	1.00	142111-013	SHAFT, TAKEUP, BELT, "A"= 11.203
9	2.00	187626-003	SS SHAFT THOMSON 1.000 33.938 LG
10	2.00	191375	SCREW, TAKE UP, BELT
11	4.00	191506-100	BKT, SHAFT, ADJ, ANODIZED TS-37NE
12	1.00	246758-001	NUT, 5/32 SLOT
13	1.00	255737	BAR, ADJ, TAKEUP
14	1.00	257234-002	SCREW, ADJ, 20.000LG
15	1.00	261692	SPACER, COUNTER
17	1.00	261680-001	FRM, CONV, SEAL, SIDE, LH
18	1.00	261683	CHANNEL, MTG, TRIMSEAL, UPSTRM
19	1.00	261684-001	CHANNEL, MTG, TRIMSEAL, DWNSTRM, LH
20	1.00	261685	CHANNEL, SUPT, CONV
21	1.00	261686	SHAFT, DRV, CONV, SIDESEAL
22	1.00	261687	PLT, MTG, BRG, F/TAKEUP
23	2.00	261688	SHAFT, IDL, 1/4
24	1.00	261690-001	SPACER, PLT, MTG, BRG, ANODIZED
25	1.00	261691	PLT, MTG, BRG
26	4.00	800446	WSHR, OILITE, 0.507 X 0.750 X 1/16 THK,
27	4.00	800568	COLLAR, SHAFT, CLAMP, 2-PIECE, 1 ID x 1 3/4 OD
28	1.00	800906	SPKT, 40BB17H, IDLER, 5/8 ID,
29	3.00	802760	*, BRG, FLG, 1 ID, 2-BOLT, SEE COMMENTS
30	1.00	802796	*, BRG, FLG, 1/2 ID, 2-BOLT MALLEABLE, SEE COMMENTS
31	2.00	803667	COLLAR, SHAFT, SET SCREW, 1/4
32	4.00	815213	WSHR, OILITE, 0.255 X 0.625 X 1/16 THK,
33	1.00	825703	HDL, CRANK, W/FOLD AWAY HDL, 1/2 BORE 3.94 LG ARM, ALUM, BLACK
34	1.00	836931	COUNTER, POSITION, 1/2 ID, CW, 100 COUNT PER TURN, 00.000 DECIMAL P
35	4.00	837143	BUSH, PL, PILLOW BLK, 1 ID, 2 13/16 LG, DRYLIN R CLOSED, SELF-ALIGN
36	1.00	839217	BELT, 9 1/2 W X 109 LG, KNIFE EDGE WHITE PLASTIC SPIRAL LACE 58825
37	1.00	264034-001	BKT, SUPT, CONV, SIDESEAL, LH

REVISIONS			
RV	DATE	BY	DESCRIPTION
A	9-19-12	MRO	ITM1 WAS 120054,ITM2 WAS 118047, ITM9 WAS 802760, ITM11 WAS 810613









ITM	QTY	PART NUM	DESCRIPTION
11	1	803181	MOTOR, 1 HP, 208-230/460V, 60HZ, 3PH FB56C FRM, TEFC, C-FACE
10	1	806061	GEARBOX, WORM, 15:1, 56C FACE, QUILL TYPE
9	2	827116	BRG, FLG, 1 ID, 2 BOLT
8	1	800502	LINK, CONN, #40
7	1	800462	CHAIN, RLR, #40, RLR RVT
6	2	261456	BKT, MTG, BRG
5	1	261451	SHAFT, DRV, DISCH
4	1	234370	PLT, MTG, TAKE-UP, GEARBOX
3	1	110954-022	RLR, DRV, AL, TAPERED, 4.00, COATED, RUBBER
2	1	826499	SPKT, 40BS15, 1 BORE, W/KWY & SS
1	1	845619	SPKT, 40BS13, 1 BORE, W/KWY & SS

BILL OF MATERIALS

ASSEMBLY CAN BE ASSEMBLED FOR
RIGHT HAND OR LEFT HAND MACHINE.
LEFT HAND SHOWN

ARPAC
9511 WEST RIVER ST.
SCHILLER PARK, IL 60176

UNLESS OTHERWISE SPECIFIED
ALL DIMENSIONAL TOLERANCES:

FRACTIONS	± 1/64
TWO (2) DECIMALS	± 0.010
THREE (3) DECIMALS	± 0.005
ANGLES	± 0.5°

DRAWN: 7/20/2009	BY: MRO	SCALE: 5:32	SIZE: C
RELEASED: 7/20/2009	FILENAME: 261433	APPROVED BY: MRO	

DESCRIPTION: ASSY, DRV, DISCH

DRAWING NUMBER: 261433

Arpac BOM

Parent Number: 12972

Description: ASSY, FINAL, XLR8, 12972 MACH, LH CONTROL, RH ELEC BOX, 36" ELEV

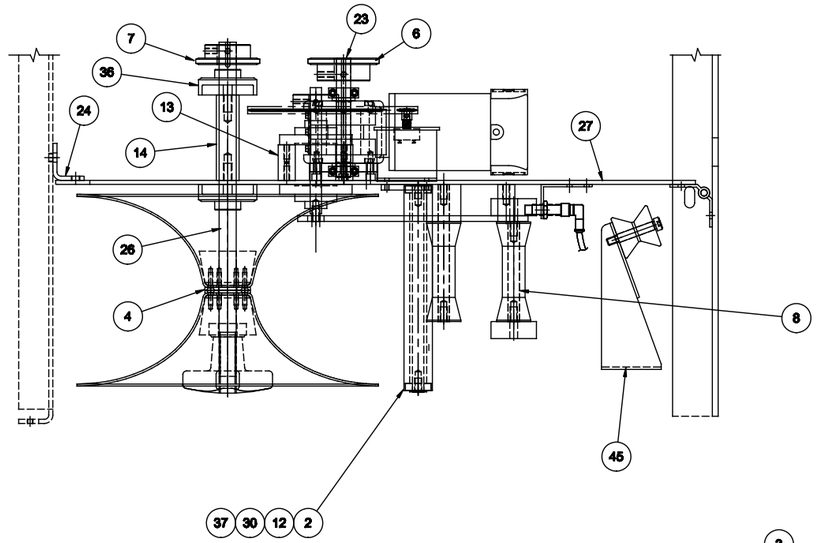
Model: XLR8

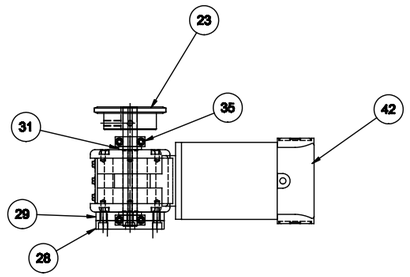
Assembly Part Number: 261433

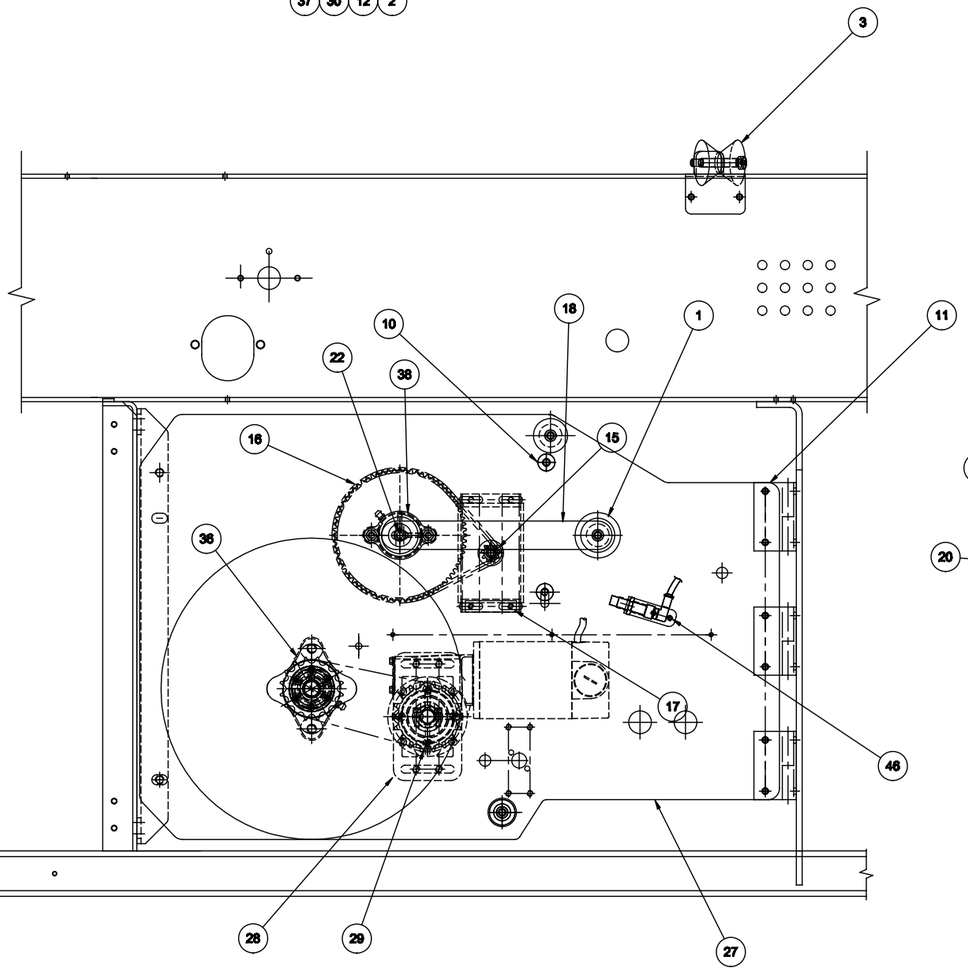
Description: ASSY, DRV, DISCH

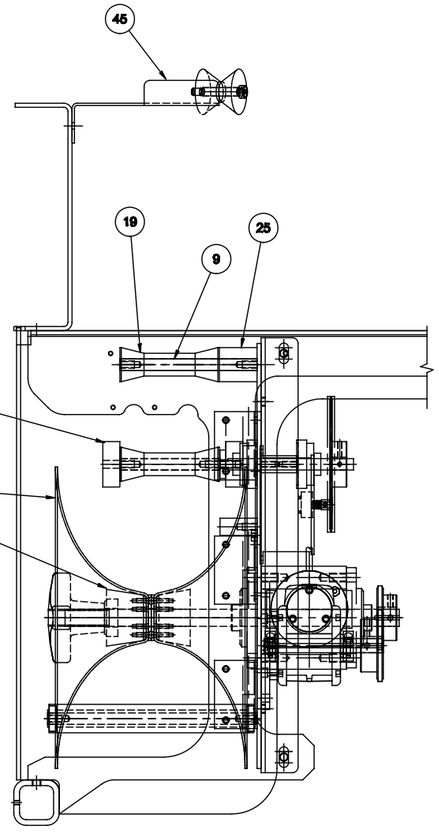
Quantity: 1.00

Item	Qty	Arpac Part	Description
1	1.00	120054	SPKT, 40B13, MOD, 1.000 BORE,
2	1.00	118047-000A	SPKT, 40B15, MOD, 1.000 BORE
3	1.00	110954-022	RLR, DRV, AL, FLAT, 4.000, COATED, RUBBER, 15.500LG, C=0, X=0
4	1.00	234370	TAKE-UP PLATE
5	1.00	261451	SHAFT, DRV, DISCH
6	2.00	261456	BKT, MTG, BRG
7	2.42	800462	CHAIN, RLR, #40, RLR RVT,
8	1.00	800502	LINK, CONN, #40,
9	2.00	802760	*, BRG, FLG, 1 ID, 2-BOLT, SEE COMMENTS
10	1.00	806061	*, GEARBOX, WORM, 15:1, 56C FACE, QUILL TYPE, SEE COMMENTS
11	1.00	810613	MOTOR, 1 HP, 208-230/460V, 56C, 1750 RPM INVERTER DUTY, HIGH TORQUE









PART NUMBERS:
261637: RH, AS SHOWN
261637-001: LH, OPPOSITE

ARPAC	9511 WEST RIVER ST. SCHILLER PARK, IL 60176		
UNLESS OTHERWISE SPECIFIED ALL DIMENSIONAL TOLERANCES:	FRACTIONS ± 1/64 TWO (2) DECIMALS ± 0.010 THREE (3) DECIMALS ± 0.005 ANGLES ± 0.5°		
DRAWN: 5-17-10	BY: MRO	SCALE: 1/4"=1"	SIZE: C
RELEASED: 5-17-10	FILENAME: 261637	APPROVED BY: MRO	
DESCRIPTION: ASSY, REMOVAL, SCRAP			
		DRAWING NUMBER: 261637	

Arpac BOM

Parent Number: 12972

Description: ASSY, FINAL, XLR8, 12972 MACH, LH CONTROL, RH ELEC BOX, 36" ELEV

Model: XLR8

Assembly Part Number: 261637-001A

Description: ASSY, REWIND, FILM, CORE, LH

Quantity: 1.00

Item	Qty	Arpac Part	Description
1	2.00	107580	WEIGHT, DANCER, CRS
2	1.00	119899	RLR, SCRAP TS-37N
3	1.00	119902	SPOOL, SCRAP, TS-37
4	2.00	119903	HUB, MTG, SCRAP DISK, TS-37N
6	1.00	127120	SPKT, 40B18, MOD, 0.625 BORE
7	1.00	127640	SPKT, 40B16, MOD, 0.750 BORE
8	1.00	127865-003	SHAFT, RLR, SCRAP "A"= 6.781
9	1.00	127865-004	SHAFT, RLR, SCRAP "A"= 8.406
10	2.00	127867-002	STOP, ARM, DANCER, 1.625 LG, CRS
11	3.00	127872-002	HINGE, LIFT-OFF, LH, CRS
12	1.00	143418-272	SHAFT, 1/2, TAPPED, CRS, 9.141, 5/16-18
13	2.00	143478-162	SHAFT, 3/4, TAPPED, 1.563, CRS, 1/4-20
14	2.00	144124-159	SHAFT, 1.000, TAPPED, 3/8-16, 3.750 LG CRS
15	1.00	144187-001	SPKT, 25B9, MOD, 0.250 BORE, W/ 10-32 SET SCREW, FOR POTENTIOMETER
16	1.00	144189-001	SPKT, 25B72, MOD, 0.500 BORE, 1/8 KWY & 10-32 SET SCREW, SS <P5164
17	2.00	191350-043	PLT, NUT, 1/4 X 1/2 X 2 1/4, 10-32, 1.75 CENTERS
18	1.00	202106	ARM, DANCER, CRS
19	2.00	202110-001	SPOOL, WIND, SCRAP, 6.750 LG
20	2.00	215538	DISK, SCRAP, ELLIPTICAL SEE NOTE WHEN USED AS 176701 REPLACEMENT
21	1.00	230170	MTG, DISK, OUTER, TAPERED TS37
22	1.00	247338	SHAFT, DANCER
23	1.00	249036-002	SHAFT, MTR, CRS, 5.250 LG
24	1.00	261638	BKT, STOP, SCRAP
25	1.00	250222	SPACER, RLR
26	1.00	253899	WLDMT, SHAFT, DISK, SCRAP, CRS
27	1.00	261636	PLT, MTG, SCRAP
28	1.00	255715	PLT, ADJ, MTR, SCRAP
29	1.00	255716	SPACER, MTR, SCRAP
30	2.00	800446	WSHR, OILITE, 0.507 X 0.750 X 1/16 THK,
31	2.00	800449	WSHR, OILITE, 0.628 X 1.000 X 1/8 THK
32	1.00	800460	CHAIN, RLR, #25 RLR RVT,
33	2.00	800462	CHAIN, RLR, #40, RLR RVT,
34	1.58	800502	LINK, CONN, #40,
35	2.00	800596	COLLAR, SHAFT, CLAMP, 2-PIECE, 5/8
36	2.00	802744	*, BRG, FLG, 3/4 ID, 2-BOLT, 3.53 MTG HOLES, SEE COMMENTS
37	2.00	802786	BRG, CART, 1/2 X 1-1/8 X 5/16 LG, SHIELDED, PRESS FIT ID & OD
38	2.00	802796	*, BRG, FLG, 1/2 ID, 2-BOLT MALLEABLE, SEE COMMENTS
39	1.00	804040-001	ENCLOSURE, 4-1/8 X 2-5/8 X 2-3/16 W/ COVER
40	1.00	810412	KNOB, IRON, 4 PRONG, 3/4-10 TAP THROUGH BORE
41	1.00	812630	LINK, CONN, #25,
42	1.00	826153	MOTOR, GEAR, 1/4 HP, 130VDC, 250 RPM, 5/8 HOLLOW SHAFT
45	1.00	271076	BKT, RLR, VERT
46	1.00	204126	BRKT, MTG, PROX
47	1.00	270911	COVER, SPKT, TRIM

Arpac BOM

Parent Number: 12972

Description: ASSY, FINAL, XLR8, 12972 MACH, LH CONTROL, RH ELEC BOX, 36" ELEV

Model: XLR8

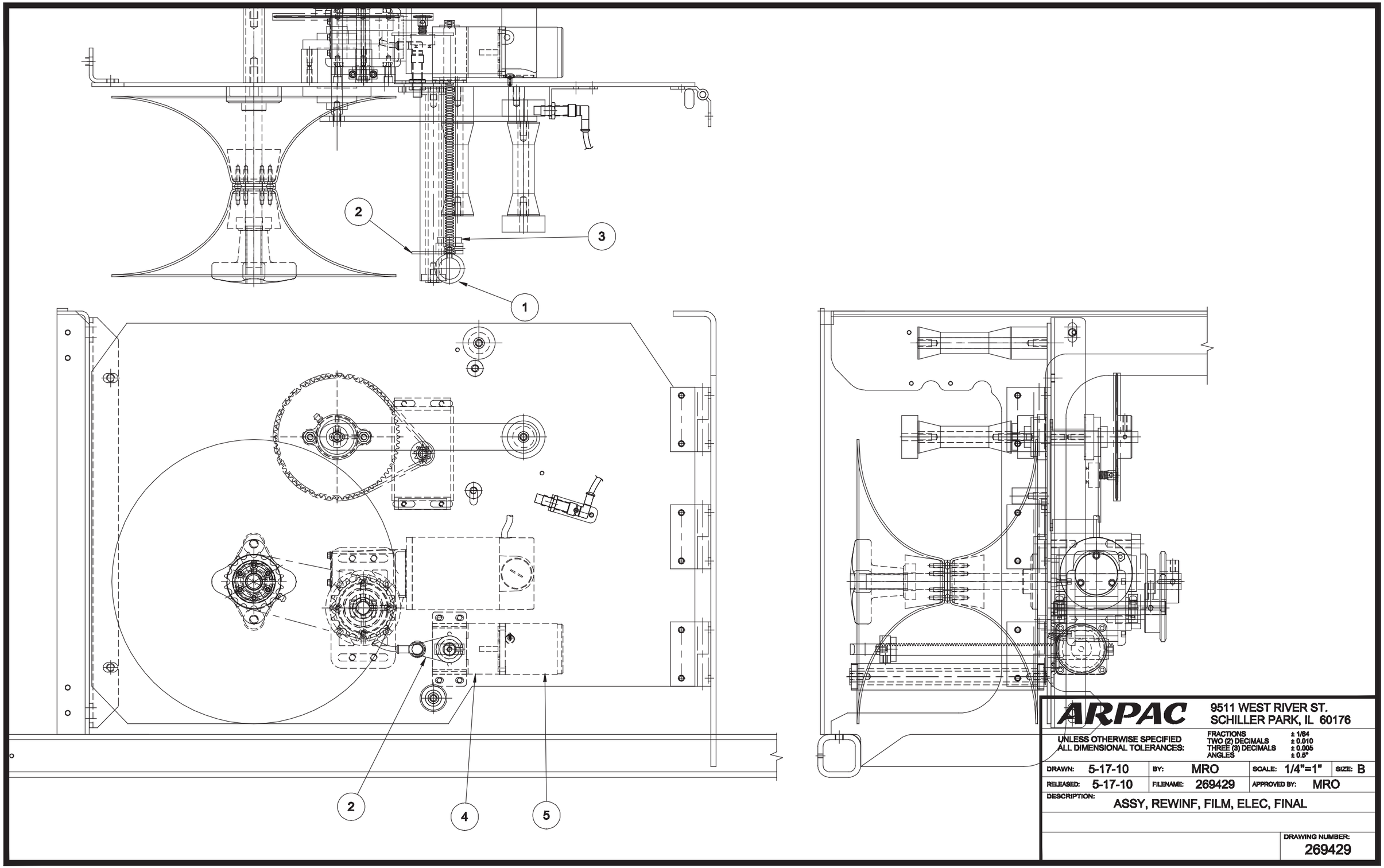
Assembly Part Number: 255744B

Description: ASSY, GENERAL

Quantity: 1.00

Item	Qty	Arpac Part	Description
1	10.00	827721	PAINT, TEXTURE, SILVER/GREY, DARK, UL APPROVED, TGIC POLYESTER, COA
2	1.00	999999-002	1407 GENERAL NON-BOM CCCC, FSXX, MMSS, PPCN

Part Number: 269429 Description: ASSY, REWIND, FILM, ELEC, FINAL Qty: 1



ARPAC
9511 WEST RIVER ST.
SCHILLER PARK, IL 60176

UNLESS OTHERWISE SPECIFIED
ALL DIMENSIONAL TOLERANCES:
FRACTIONS ± 1/64
TWO (2) DECIMALS ± 0.010
THREE (3) DECIMALS ± 0.005
ANGLES ± 0.5°

DRAWN:	5-17-10	BY:	MRO	SCALE: 1/4"=1"	SIZE: B
RELEASED:	5-17-10	FILENAME:	269429	APPROVED BY:	MRO

DESCRIPTION: ASSY, REWINF, FILM, ELEC, FINAL

DRAWING NUMBER: 269429

Arpac BOM

Parent Number: 12972

Description: ASSY, FINAL, XLR8, 12972 MACH, LH CONTROL, RH ELEC BOX, 36" ELEV

Model: XLR8

Assembly Part Number: 269429

Description: ASSY, REWIND, FILM, ELEC, FINAL

Quantity: 1.00

Item	Qty	Arpac Part	Description
1	1.00	119907-001	GUIDE, SCRAP, M8 TAP
2	1.00	255828	WLDMT, FLAG, PROX
3	1.00	816415	CUSHION ADJUSTABLE .5 ID,
4	1.00	837369	GEARHEAD, LINEAR, RACK & PINION
5	1.00	837576	MOTOR, 1/125 HP, 110/115 VAC, INDUCTION

Arpac BOM

Parent Number: 12972

Description: ASSY, FINAL, XLR8, 12972 MACH, LH CONTROL, RH ELEC BOX, 36" ELEV

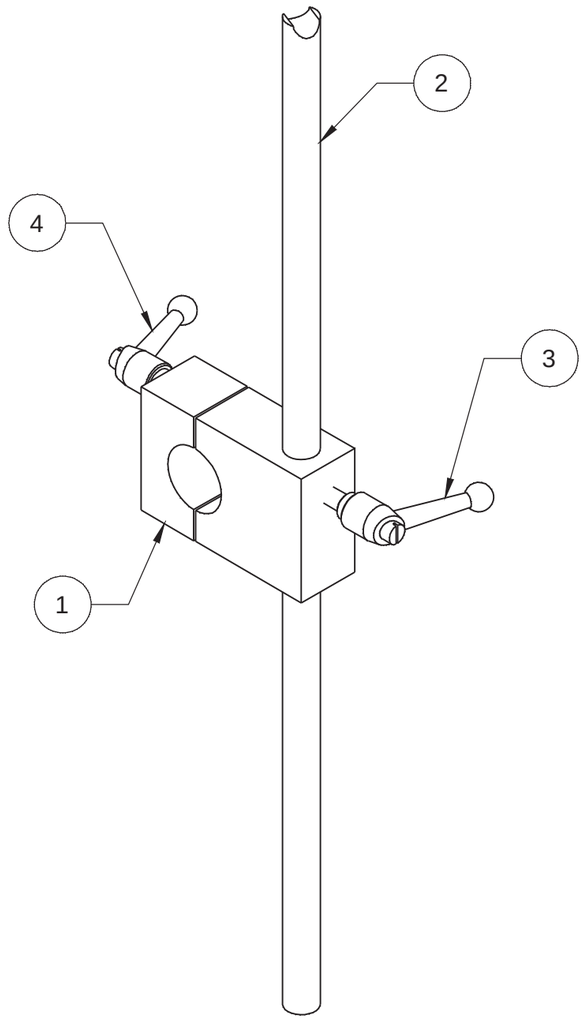
Model: XLR8

Assembly Part Number: 282031

Description: ASSY, FRM, LH, XLR8

Quantity: 1.00

Item	Qty	Arpac Part	Description
1	1.00	282030	WLDMT, FRM, MAIN, LH, XLR8
2	4.00	255772-001	SPACER, MTG, BOX, CONTROL, 2.375LG
3	3.00	255772	SPACER, MTG, BOX, CONTROL, 1.828 LG
4	4.00	827619	LEVELER, ARTICULATING, 20000 # CAP, 1-8 STEM, 7.88 HIGH, CRS 4" BAS



ITM	QTY	PART NUM	DESCRIPTION
4	1	821863	HDL, ADJ, SS, 1.57 LG 1/4-20 X 1.57 STUD
3	1	808979	HDL, ADJ, SS, 1.57 LG 1/4-20 X .59 STUD
2	1	138241	ROD, SUPPORT, FORMER
1	1	144935-002	CONV. ROD BLOCK (PLATED)

BILL OF MATERIALS

ARPAC
9511 WEST RIVER ST.
SCHILLER PARK, IL 60176

UNLESS OTHERWISE SPECIFIED
ALL DIMENSIONAL TOLERANCES:

FRACTIONS	± 1/64
TWO (2) DECIMALS	± 0.010
THREE (3) DECIMALS	± 0.005
ANGLES	± 0.5°

DRAWN: 09/08/2011	BY: TS	SCALE: 1:2	SIZE: B
RELEASED: 09/08/2011	FILENAME: 242319	APPROVED BY: TS	

DESCRIPTION: ASSY, SUPPORT, FORMER, FILM, 16" LG

DRAWING NUMBER: 242319

Arpac BOM

Parent Number: 12972

Description: ASSY, FINAL, XLR8, 12972 MACH, LH CONTROL, RH ELEC BOX, 36" ELEV

Model: XLR8

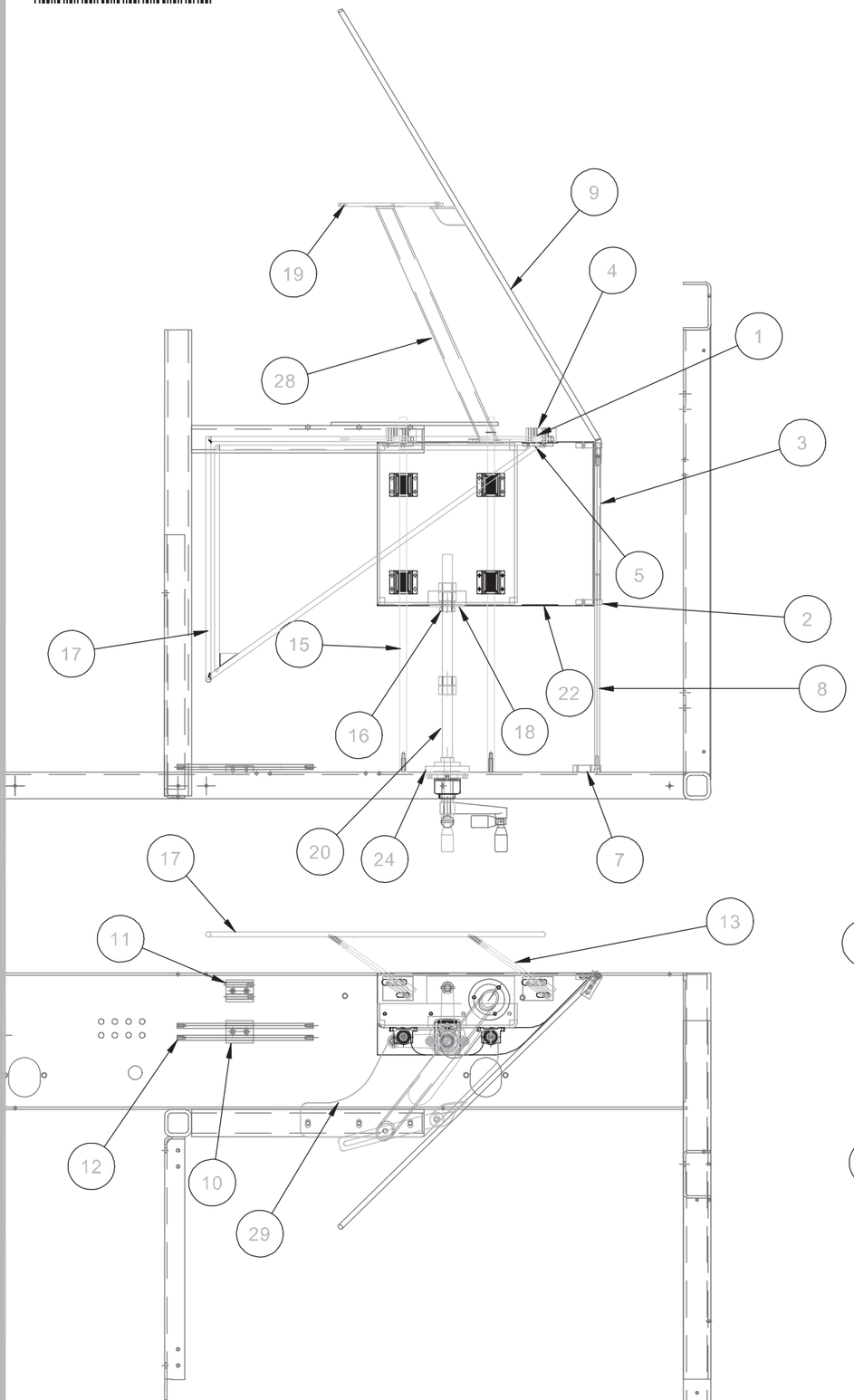
Assembly Part Number: 242319

Description: ASSY, SUPPORT, FORMER, FILM, 16" LG, SS

Quantity: 1.00

Item	Qty	Arpac Part	Description
1	1.00	144935-002	CONV. ROD BLOCK (PLATED),
2	1.00	138241	ROD, SUPPORT, FORMER,
3	1.00	808979	HDL, ADJ, SS, 1.57 LG 1/4-20 X .59 STUD
4	1.00	821863	HDL, ADJ, SS, 1.57 LG 1/4-20 X 1.57 STUD
5	3.25	900140	AL FLAT 1 X 2, 6061-T6511
6	16.25	900322	SS SHAFT G&P 1/2, 303 BEARING SHAFT QUALITY (0.4995/0.4985)

Part Number: 270286A Description: ASSY, FORMER, FILM, ADJ, LH Qty: 1



ARPAC
9511 WEST RIVER ST.
SCHILLER PARK, IL 60176

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONAL TOLERANCES:			
	FRACTIONS	± 1/64	
	TWO (2) DECIMALS	± 0.010	
	THREE (3) DECIMALS	± 0.005	
	ANGLES	± 0.5°	
DRAWN: 8-9-11	BY: MRO	SCALE: 3/32"=1"	SIZE: B
RELEASED: 8-9-11	FILENAME: 270286	APPROVED BY: MRO	

DESCRIPTION:
ASSY, FORMER, FILM, ADJ,

DRAWING NUMBER:
270286

Arpac BOM

Parent Number: 12972

Description: ASSY, FINAL, XLR8, 12972 MACH, LH CONTROL, RH ELEC BOX, 36" ELEV

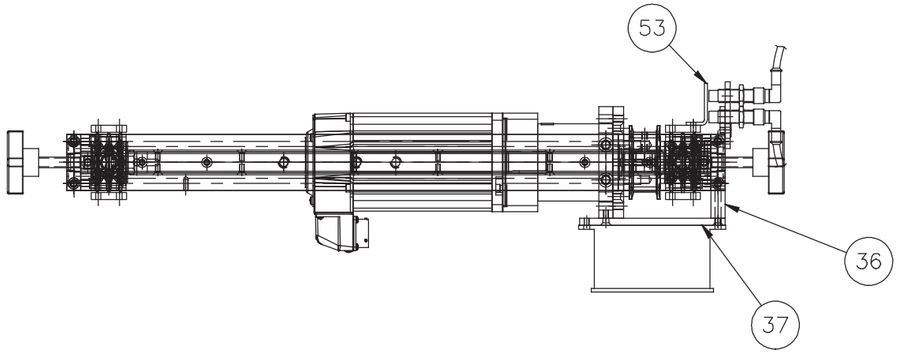
Model: XLR8

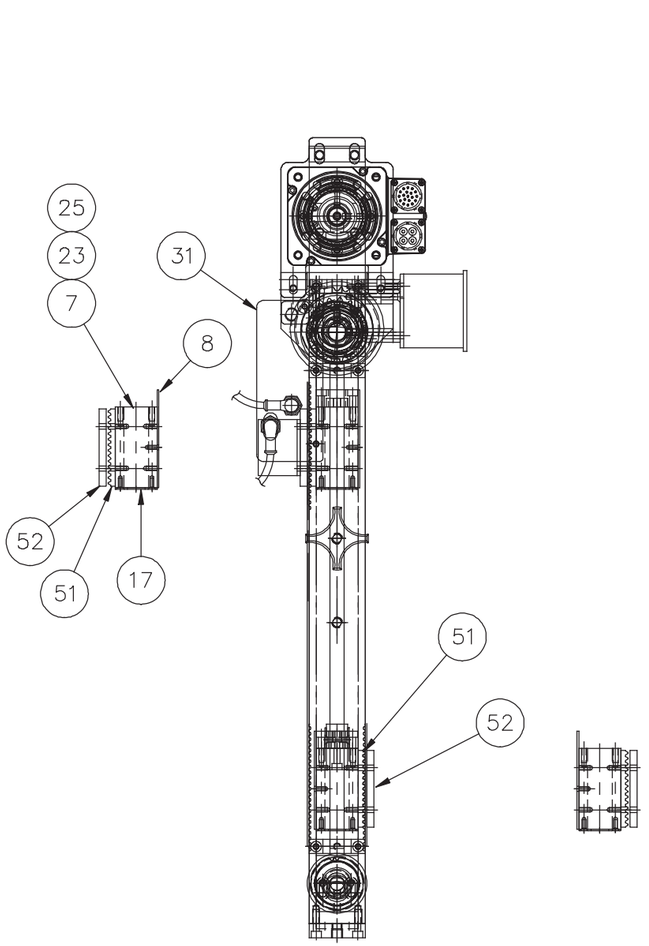
Assembly Part Number: 270286A

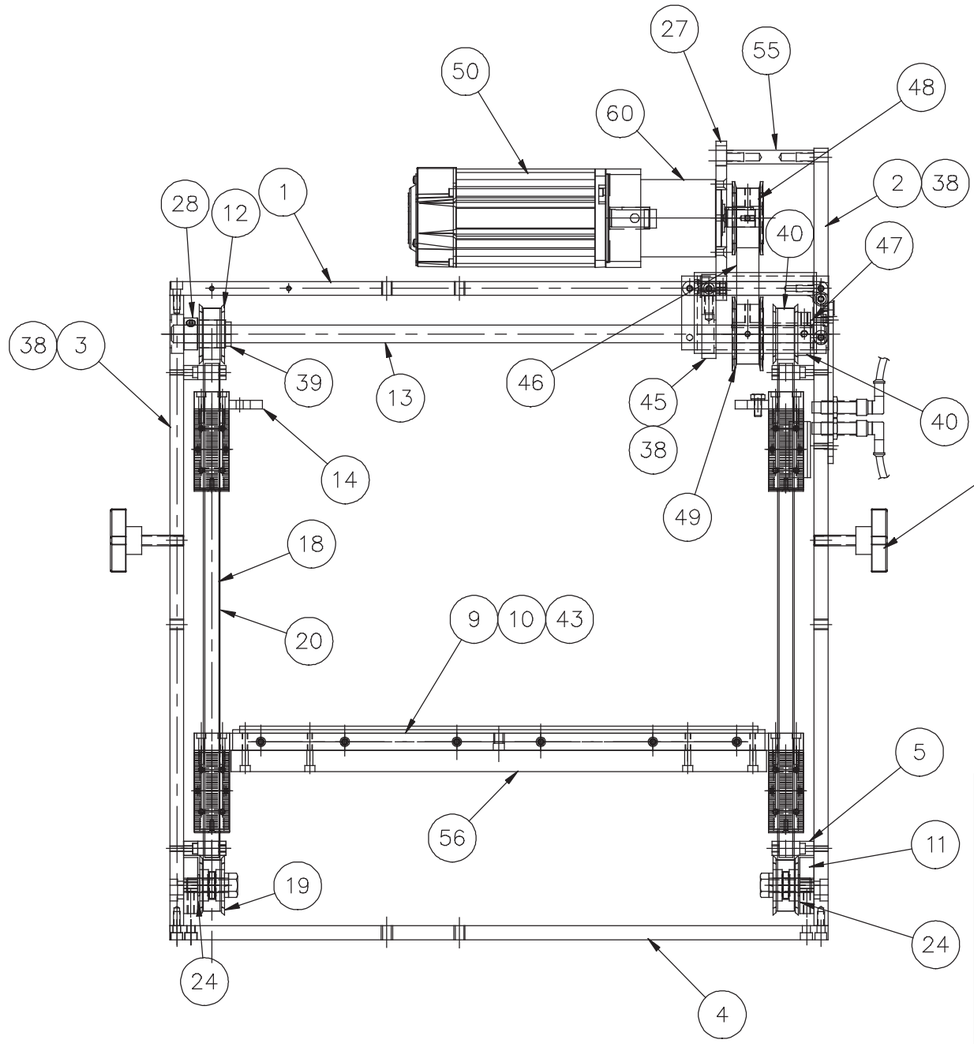
Description: ASSY, FORMER, FILM, ADJ, LH

Quantity: 1.00

Item	Qty	Arpac Part	Description
1	2.00	119867	SPCR, BRASS, TS-37
2	2.00	120015	PIVOT, ROD, FILM FORM, TS-37
3	1.00	120022	RLR, NOSE TS-37N
4	2.00	120023	BLK, GUIDE, FORMING, TS-37
5	2.00	120024	BLK, NUT, TS-37
7	1.00	120026	BKT, MTG, SLIDE ROD TS-37N
8	1.00	120027-002	ROD, SLIDE, 14"
9	1.00	270284	WLDMT, ROD, FILM
10	2.00	120029	HLDR, ROD TS-37
11	2.00	120037	ROD, LOW PROD, 2" LONG TS37, 1 TAP
12	2.00	120038	ROD, 4 1/4 - 6 5/16, 10" LONG, TS37, 2 TAPS
13	2.00	120039	ROD, 0-3", 6" LONG, 1 TAP
14	1.00	172075	FORMING ANGLE VERIFER
15	2.00	191478-005	SHAFT, 0.500, TAPPED, 1/4-20, 26 LG SS THOMPSON SHAFT, TAPPED ONE E
16	1.00	246758	NUT, 7/32 SLOT
17	1.00	250089	WLDMT, FORMER, SUPPORT, FILM TS37, LH
18	1.00	253853	PLT, KEEPER, NUT
19	1.00	255684	ARM, ADJ, ROD
20	1.00	257234-002	SCREW, ADJ, 20.000LG
21	1.00	261692	SPACER, COUNTER
22	1.00	263088	TABLE, FORMING TS37, AS SHOWN, LH MACHINE
24	1.00	802796	*, BRG, FLG, 1/2 ID, 2-BOLT MALLEABLE, SEE COMMENTS
26	1.00	825703	HDL, CRANK, W/FOLD AWAY HDL, 1/2 BORE 3.94 LG ARM, ALUM, BLACK
27	1.00	836931-001	COUNTER, POSITION, 1/2 ID, CCW, 100 COUNT PER TURN, 00.000 DECIMAL
28	1.00	270277	WLDMT, SUPT, FILM
29	1.00	262128	PLT, SUPPORT, SHAFT, TABLE
30	1.00	263089	PAN, SUPT, TABLE, FILM, LH
31	4.00	839178	BUSH, PL, PILLOW BLK, 1/2 ID, 1-11/16 LG, DRYLIN R CLOSED, STD







ARPAC	9511 WEST RIVER ST. SCHILLER PARK, IL 60176		
UNLESS OTHERWISE SPECIFIED ALL DIMENSIONAL TOLERANCES:	FRACTIONS ± 1/64 TWO (2) DECIMALS ± 0.010 THREE (3) DECIMALS ± 0.005 ANGLES ± 0.5°		
DRAWN: 4-28-11	BY: MRO	SCALE: 3/16"=1"	SIZE: B
RELEASED: 4-28-11	FILENAME: 262064	APPROVED BY: MRO	
DESCRIPTION: ASSY, SEAL HEAD, 8 1/8", SERVO			
		DRAWING NUMBER: 262064	

Arpac BOM

Parent Number: 12972

Description: ASSY, FINAL, XLR8, 12972 MACH, LH CONTROL, RH ELEC BOX, 36" ELEV

Model: XLR8

Assembly Part Number: 262064A

Description: *REPLACE W/300054* ASSY, SEAL HEAD, 8 1/8", SER

Quantity: 1.00

Item	Qty	Arpac Part	Description
1	1.00	262085	BAR, CROSS, TOP
2	1.00	262084	FRAME, SEAL, SIDE
3	1.00	262083	FRAME, SEAL, SIDE, RH
4	1.00	262079	BAR, CROSS, BOTTOM
5	4.00	119993	BLK, PILLOW, THOMSON, TS-37
7	4.00	119995	BLK, THOMSON, SEAL BAR,
8	4.00	119996	BLK, WEAR, CHAIN, TS-37
9	1.00	180200	CARRIER, SEAL BAR, LOWER, TS-37, 8 1/8" OPENING OPTION
10	2.00	180109	LOWER CARRIER SIDEGUARD,
11	2.00	262092	BLK, TAKE UP
12	1.00	262096	PULLEY, TIMING, 30T, 5MM P, 15MM W, MOD, 1" BORE FOR TRANTORQUE
13	1.00	262087	SHAFT, TOP, HEAD, SEAL, 23.375 LG, CRS
14	2.00	180181	BLK, MTG, CARRIER, USE FOR 8 1/8" OPENING OPTION
17	4.00	120006	PLT, RETAINING, BRG, TS-37
18	2.00	120007-282	SHAFT, THOMSON, 0.500, SOLID, CRS, 17 5/8 LG
19	2.00	262089	ASSY, PULLEY, TIMING, 30T, 5MM P, 15MM W, IDLER
20	7.60	839169	BELTING, TIMING, 5MM P, 15MM W, 5MR GT2
23	8.00	810541	BUSH, BALL, 1/2 X 7/8 X 1-1/4 LG, SUPER SMART
24	2.00	800446	WSHR, OILITE, 0.507 X 0.750 X 1/16 THK,
25	8.00	802924	RING, SEAL, 1/2 X 0.879 X 0.125 THK,
27	1.00	272213	PLT, MTG, SERVO, CRS
28	1.00	800560	COLLAR, SHAFT, SET SCREW, 5/8,
29	2.00	819408	KNOB, BLACK, PLASTIC, 4 PRONG, 3/8-16 X 1.500 LG STEEL STUD
30	2.00	173356	ROD, FILM, 19" LG, 1 TAP
32	1.00	264001	PLT, MTG, PROX
36	2.00	144820-024	SPACER, AL, 7/32 ID X 1/2 OD X 1 LG, HD COAT ANODIZE
37	1.00	262086	BKT, BOX, JUNCTION, LH MACH, CRS
38	3.00	812497	BRG, CART, 5/8 X 1-3/8 X 7/16 LG,
39	1.00	802939	BUSH, TRANTORQUE, 5/8 X 1 X 1-1/8, MINI, 5/8 LG EXPANDING OD
40	1.00	262097	PULLEY, TIMING, 30T, 5MM P, 15MM W, MOD, 5/8 BORE
43	0.01	814516	TAPE, TEFLON COATED FIBERGLASS 2" X 18, YD W/ACRYLIC ADHESIVE 3 MIL
44	2.00	810162	RULE, ADHESIVE, MYLAR, 1/2W X 1/2FT, LEFT TO RIGHT
45	1.00	273624	SERVO TAP BLOCK, W/BRG
46	1.00	839168	BELT, TIMING, 8MM P, 20MM W, 384MM LG, POWER GRIP GT2
47	1.00	800449	WSHR, OILITE, 0.628 X 1.000 X 1/8 THK
48	1.00	262059	PULLEY, TIMING, 22T, 8MM P, 21MM W, MOD, 16MM BORE
49	1.00	262059-001	PULLEY, TIMING, 22T, 8MM P, 21MM W, MOD, 5/8 BORE
50	1.00	819882-003	MOTOR, SERVO, 37 IN-LB, 5000 RPM, 230VAC NO BRAKE/KEYED/MULTI-TURN
51	4.00	263076-001	PLT, RACK, CLAMP, BELT, ANODIZE
52	4.00	262093	PLT, CLAMP, BELT, TIMING
53	1.00	264000	FLAG, BAR, SEAL
55	1.00	262090	BAR, SPACER, MTG, MTR
56	1.00	274015	BAR, STIFFNER, BAR, COLD
57	10.00	839887	CHAIN, ENERGY, LIGHT, TRIFLEX R

Arpac BOM

Parent Number: 12972

Description: ASSY, FINAL, XLR8, 12972 MACH, LH CONTROL, RH ELEC BOX, 36" ELEV

Model: XLR8

Assembly Part Number: 262064A

Description: *REPLACE W/300054* ASSY, SEAL HEAD, 8 1/8", SER

Quantity: 1.00

Item	Qty	Arpac Part	Description
58	4.00	839888	BKT, MTG, CHAIN, ENERGY
59	1.00	839889	BKT, MTG, CHAIN, ENERGY, W/STRAIN RELIEF
60	1.00	840233	GEAR REDUCER, 5:1 RATIO, USE WITH AB MOTOR MPL-A330P-MJ72AA
61	111.13	900096	AL FLAT 1/2 X 2, 6061-T6511
62	11.50	900151	AL FLAT 1-1/4 X 1-1/2, 6061-T6511
63	17.50	903822	PL ACETAL CO-POLYMER SHEET 1/16 THK, WHITE/NATURAL (MOST COMMON SHE
64	43.50	900114	AL FLAT 5/8 X 1-1/2, 6061-T6511
65	14.25	903581	SS SHEET 16GA, 304, 2B FINISH
66	4.00	900496	CRS FLAT 1/2 X 1-1/2, 1018,
67	23.63	900590	CRS SHAFT G&P 5/8, 12L14
68	5.00	900925	SS FLAT 5/8 X 1-1/2, 304
69	3.75	903581	SS SHEET 16GA, 304, 2B FINISH
70	35.25	900768	CRS SHAFT THOMSON 1/2, CLASS L, 0.4995/0.4990 DIA TOLERANCE, (CERT
71	0.27	900179	AL RND 1, 6061-T6511
72	38.00	900321	SS SHAFT G&P 3/8, 303 BEARING SHAFT QUALITY, (0.3745/0.3735),
73	13.66	903576	SS SHEET 10GA, 304, #4 FINISH LASER VINYL
74	4.00	900098	AL FLAT 1/2 X 3, 6061-T6511
75	22.00	900054	AL FLAT 1/4 X 1-1/4, 6061-T6511
76	4.50	903571	SS SHEET 12GA, 304, #2B FINISH
77	19.13	900528	CRS SQ 3/4, 1018

Arpac BOM

Parent Number: 12972

Description: ASSY, FINAL, XLR8, 12972 MACH, LH CONTROL, RH ELEC BOX, 36" ELEV

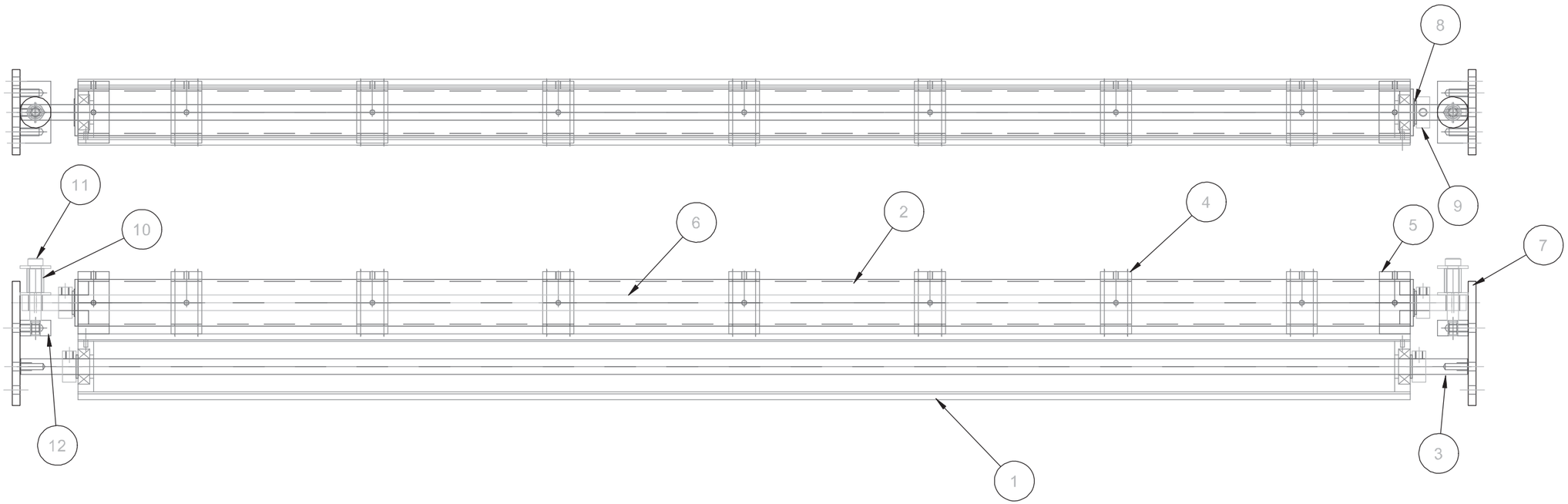
Model: XLR8

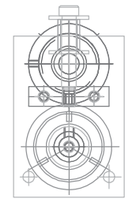
Assembly Part Number: 292777

Description: ASSY, COVERS, LWR, LH, XLR8, CRS, NEW LOGO

Quantity: 1.00

Item	Qty	Arpac Part	Description
2	1.00	255801	GUARD, SIDE, FILMRACK
3	1.00	261981-002	GUARD, END, LH
4	1.00	261982-002	GUARD, UPR, RH
5	1.00	261983-002	GUARD, END, LH
6	1.00	261984-002	GUARD, SIDE, OPERATOR, LH
7	1.00	261985-002	GUARD, SIDE, FILMRACK, LH
8	1.00	261986-002	GUARD, SIDE, SCRAP, LH
9	1.00	261987	GUARD, END, RACK, FILM
10	1.00	261988-002	GUARD, RH, RACK, FILM
11	1.00	263822	DOOR, FILM RACK, CRS
12	1.00	263831	DOOR, LEXAN, TRIM
14	1.00	264010-001	COVER, STATION, OPERATOR, BEHIND, LH
15	1.00	264100	COVER, TRIMSEAL CONV
16	1.00	264101-001	COVER, TRIMSEAL CONV, BOTTOM, LH
17	2.00	801356	HINGE, STANDARD DUTY, 1.94 X 2.71, BLACK, PLAS
18	1.00	807466	HDL BLACK REINFORCED PLASTIC BLIND HOLE BRASS INSERT 5/16-18
19	1.00	826444	LATCH, PULL-TO-OPEN, WALL THK 9/32-15/32
20	1.00	290292	PLT, BACKING,, SS, 2.5" HI LOGO
21	1.00	290292-001	PLT, BACKING,, SS, 4" HI LOGO





ARPAC	9511 WEST RIVER ST. SCHILLER PARK, IL 60176		
UNLESS OTHERWISE SPECIFIED ALL DIMENSIONAL TOLERANCES:	FRACTIONS ± 1/64 TWO (2) DECIMALS ± 0.010 THREE (3) DECIMALS ± 0.005 ANGLES ± 0.5°		
DRAWN: 6-11-11	BY: MRO	SCALE: 1/4"=1"	SIZE: B
RELEASED: 6-11-11	FILENAME: 274014	APPROVED BY: MRO	
DESCRIPTION: ASSY, WHEEL, NEEDLE			
		DRAWING NUMBER: 274014	

Arpac BOM

Parent Number: 12972

Description: ASSY, FINAL, XLR8, 12972 MACH, LH CONTROL, RH ELEC BOX, 36" ELEV

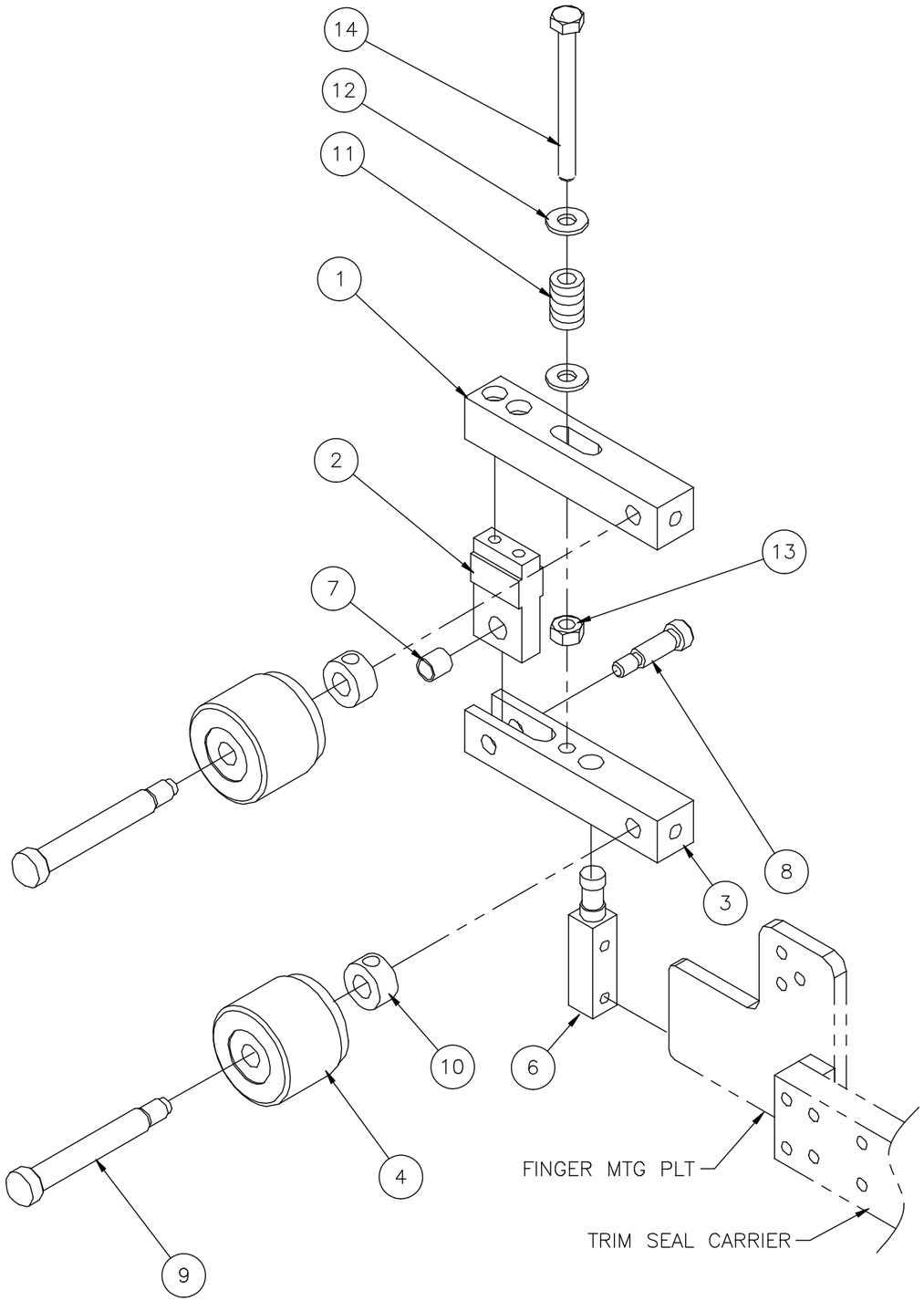
Model: XLR8

Assembly Part Number: 274014

Description: ASSY, WHEEL, NEEDLE

Quantity: 1.00

Item	Qty	Arpac Part	Description
1	1.00	136664-000D	ASSY, RLR, NEEDLE, RUBBER TS-37N
2	1.00	142136-688A	RLR, IDL, AL, 1.500, 43-1/4 LG "A" DIM 43, 43 1/4 OVERALL LG
3	1.00	142137-748	SHFT, G&P, CRS, 1/2" DIA, 1/4-20 TAP "A" = 46 3/4
4	7.00	142139	WHEEL, NEEDLE, 2" OD, 1" LG, 1.5 ID 1/16 LG NEEDLES
5	2.00	142140	SPACER, WHEEL, NEEDLE, TS-37
6	1.00	142148	SHAFT, WHEEL, PERF TS-37N
7	2.00	273785-001	PLT, MTG, WHEEL, NEEDLE, ANODIZE
8	4.00	800446	WSHR, OILITE, 0.507 X 0.750 X 1/16 THK,
9	4.00	800561	COLLAR, SHAFT, SET SCREW, 1/2,
10	2.00	810696	SPRING, COMP, 0.540 OD X 1" LG, 0.067 DIA MUSIC WIRE
11	1.00	800323-012	FSNR, BOLT, SHLDR, 3/8 DIA X 1-3/4 LG,
12	2.00	142147	BLK, MTG, PERF, CLEAR ANODIZE, TS-37



ITM	QTY	PART NUM	DESCRIPTION
13	1	.	NUT, JAM, HEX, 1/4–20
12	2	.	WHSR, FLT, 1/4 SS
11	1	812201	SPR, DIE, 9/32 X 1/2 X 1
10	2	807557	CLR, CLMP, 3/8 B, SET SCRW, SS
9	2	800323.017	BLT, SHLDR, 3/8 X 2 1/4
8	1	800322.004	BLT, SHLDR, 5/16 X 3/4
7	1	810397	BSG, OIL, 5/16 X 3/8 X 3/8
6	1	202363	POST, MTG, MISER WHEEL
5	1	.	SCR, 1/4–20 X 2 3/4 LG
4	2	119982	ASS'Y, WHEEL
3	1	119981	ARM, PIVOT
2	1	119980	BLK, PIVOT
1	1	119979	BAR, TOP

BILL OF MATERIAL

Great Lakes Corporation CHICAGO, IL

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONAL TOLERANCES:
FRACTIONS ± 1/64
TWO (2) DECIMALS ± 0.010
THREE (3) DECIMALS ± 0.005
ANGLES ± 0.5'

DRAWN: 5–15–00	BY: DCC	SCALE: 1/2"=1"	SIZE: B
RELEASED: 5–15–00	FILENAME: 202365	APPROVED BY: DCC	

DESCRIPTION:
ASSY, MISER WHEEL
TS–37N

DRAWING NUMBER:
202365

Arpac BOM

Parent Number: 12972

Description: ASSY, FINAL, XLR8, 12972 MACH, LH CONTROL, RH ELEC BOX, 36" ELEV

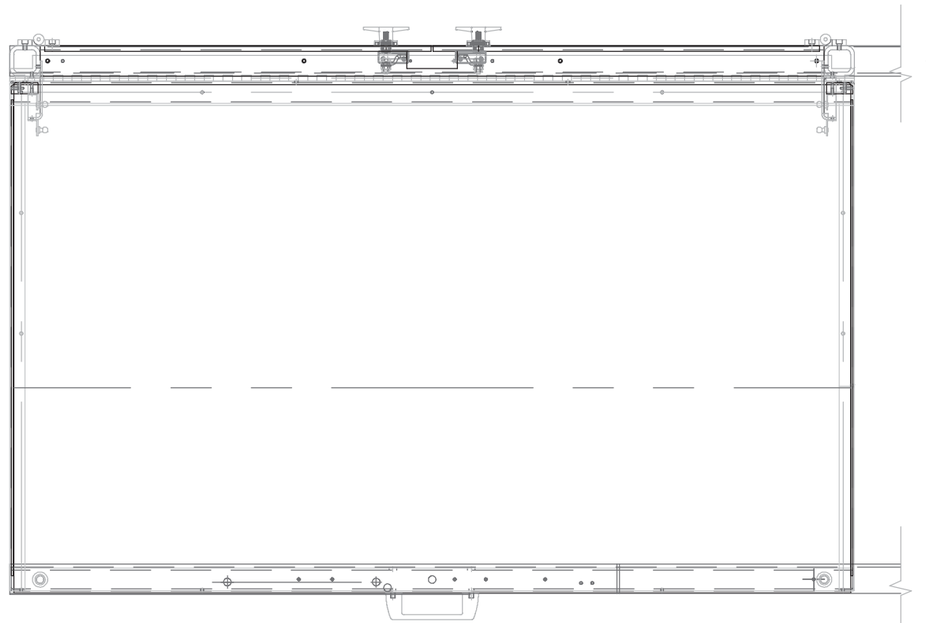
Model: XLR8

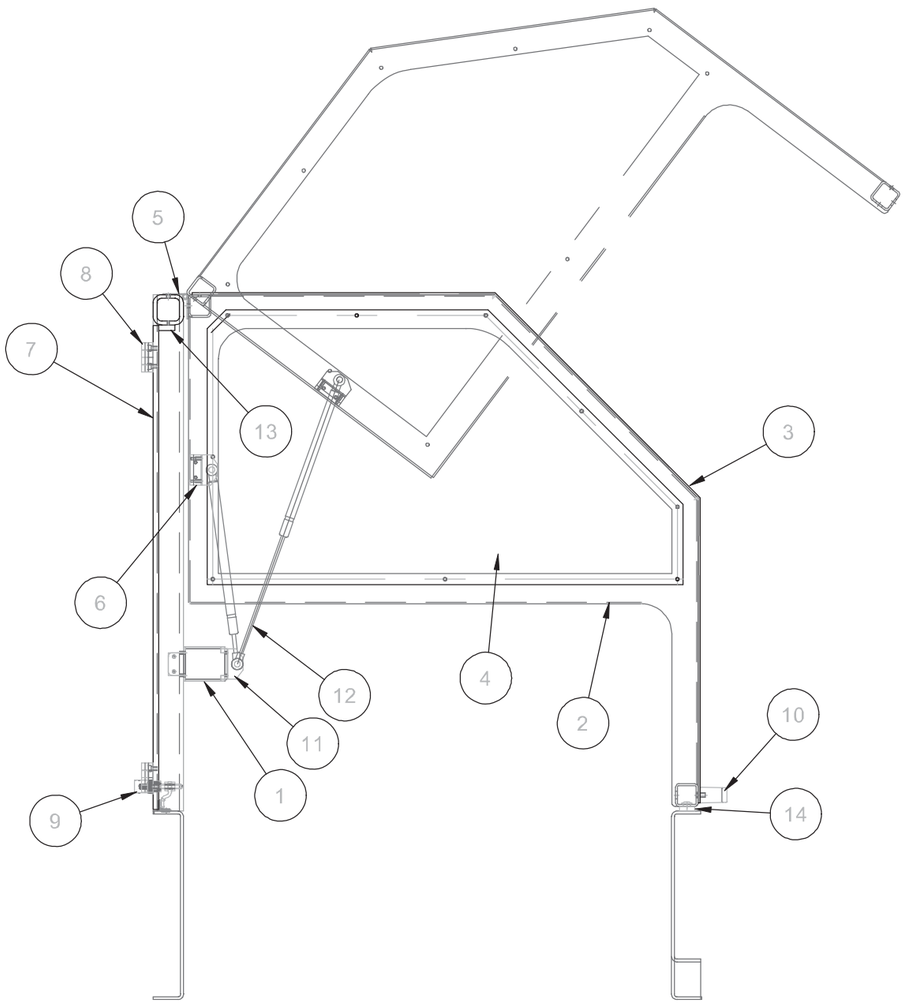
Assembly Part Number: 202365

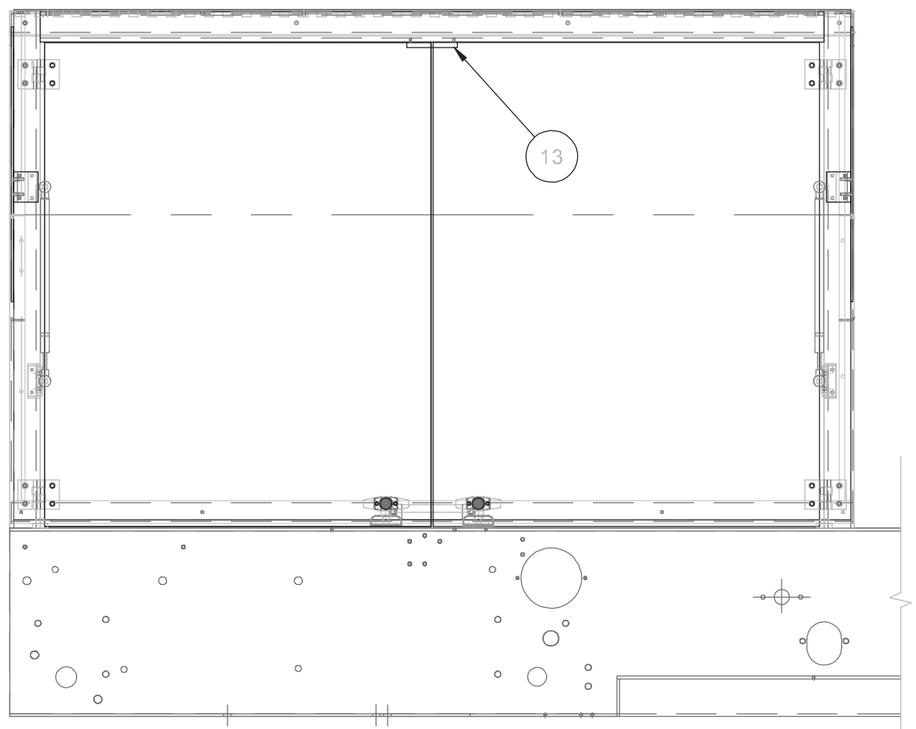
Description: ASSY, MISER WHEEL, TS-37 OPTION

Quantity: 1.00

Item	Qty	Arpac Part	Description
1	1.00	119979	BAR, TOP, TS-37
2	1.00	119980	BLK, PIVOT, CLEAR ANODIZE, TS-37
3	1.00	119981	ARM, PIVOT, TS-37
4	2.00	119982	ASSY, WHEEL, TS-37
6	1.00	202363	POST, MTG, MISER WHEEL,
7	1.00	810397	BUSH, OILITE, 0.3135 X 0.3770 X 3/8 LG,
8	1.00	800322-004	FSNR, BOLT, SHLDR, 5/16 DIA X 3/4 LG, 1/4-20 TH'D
9	2.00	800323-017	FSNR, BOLT, SHLDR, 3/8 DIA X 2-1/4 LG,
10	2.00	807557	COLLAR, SHAFT, SET SCREW, 3/8, SS,
11	1.00	812201	SPRING, COMP, DIE, 1/2 X 9/32 X 1, MED-HI PRESSURE







ARPAC
9511 WEST RIVER ST.
SCHILLER PARK, IL 60176

UNLESS OTHERWISE SPECIFIED
ALL DIMENSIONAL TOLERANCES:

FRACTIONS	± 1/64
TWO (2) DECIMALS	± 0.010
THREE (3) DECIMALS	± 0.005
ANGLES	± 0.5°

DRAWN:	8-10-11	BY:	MRO	SCALE: 3/32"=1"	SIZE: B
RELEASED:	8-10-11	FILENAME:	269430	APPROVED BY:	MRO

DESCRIPTION:
ASSY, CANOPY

DRAWING NUMBER:
269430

Arpac BOM

Parent Number: 12972

Description: ASSY, FINAL, XLR8, 12972 MACH, LH CONTROL, RH ELEC BOX, 36" ELEV

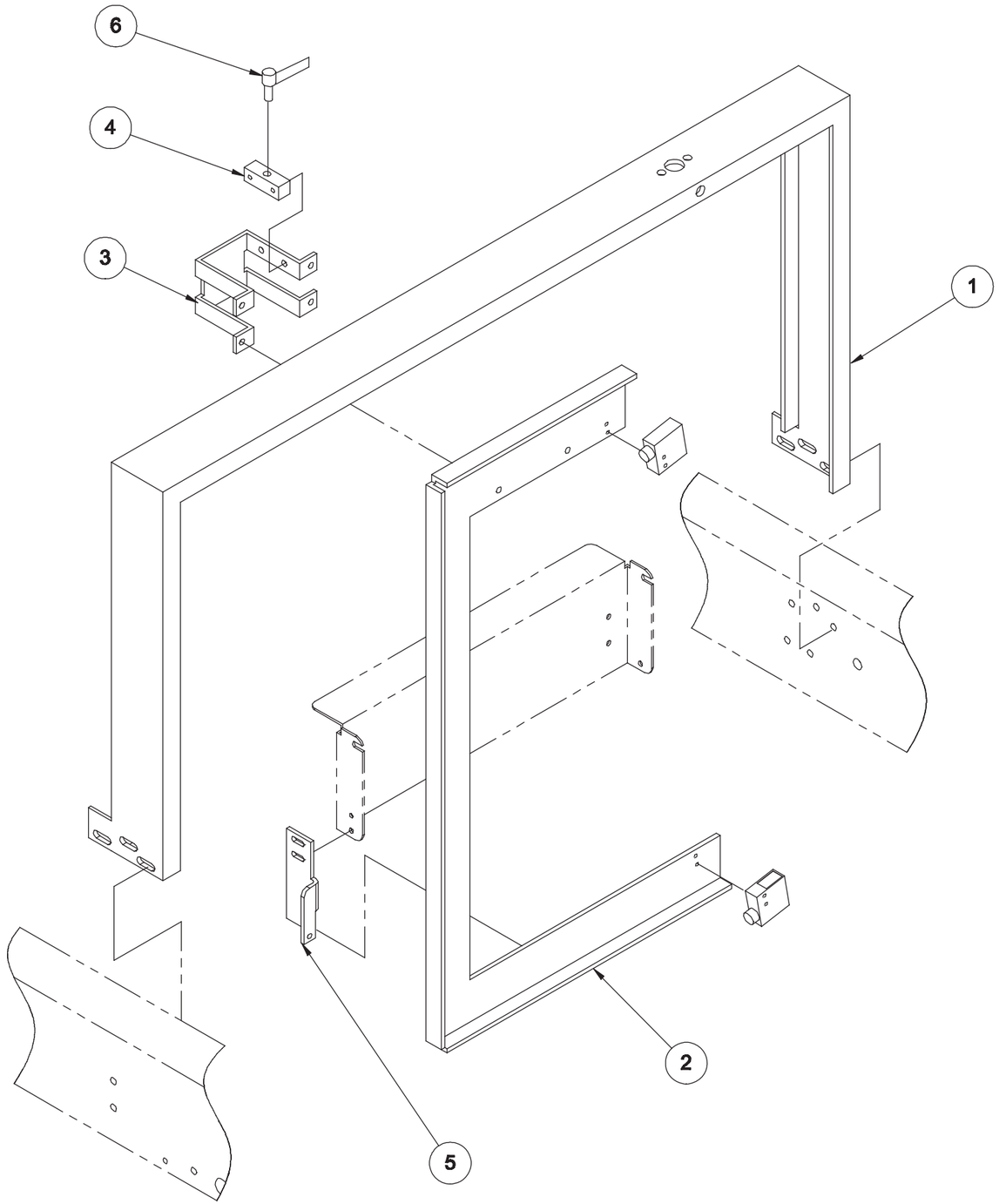
Model: XLR8

Assembly Part Number: 269430

Description: ASSY, CANOPY, XLR8

Quantity: 1.00

Item	Qty	Arpac Part	Description
1	2.00	263891	WLDMT, BKT, MTG, LWR, SPRING, GAS
2	1.00	263905	WLDMT, CANOPY
3	1.00	263921	LEXAN, CANOPY
4	2.00	263922	LEXAN, CANOPY, SIDE
5	1.00	264032	HINGE, CANOPY
6	2.00	264084-001	BLK, MTG, PIVOT, ANODIZE
7	2.00	269431	LEXAN, DOOR, UPR
8	4.00	801356	HINGE, STANDARD DUTY, 1.94 X 2.71, BLACK, PLAS
9	2.00	802653	LATCH, VISE-ACTION
10	1.00	807466	HDL BLACK REINFORCED PLASTIC BLIND HOLE BRASS INSERT 5/16-18
11	4.00	819413	BRKT, MTG., SPRING, GAS,90 DEG
12	2.00	823663	SPRING, GAS, 80 LBS, 8" STROKE
13	1.00	839304	CATCH, MAGNETIC
14	3.00	837038	BUMPER, RUBBER, 1 O.D, 5/16 SPACE, 1/2 HOLE, 1 PKG - 50



ITM	QTY	PART NUM	DESCRIPTION
6	1	802676	HDL, ADJ, 1/4-20
5	1	191344	STABILIZER, EYE
4	1	191340	BLK, CLAMP, EYE
3	1	191339	BKT, EYE, MTG, VERT.
2	1	236431	BKT, EYE, VERT
1	1	261430	BKT, MTG, HOLDER, EYE

BILL OF MATERIAL

Great Lakes Corporation CHICAGO, IL

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONAL TOLERANCES:
FRACTIONS ± 1/64
TWO (2) DECIMALS ± 0.010
THREE (3) DECIMALS ± 0.005
ANGLES ± 0.5°

DRAWN:	5-11-09	BY: MRO	SCALE:	1/4"=1"	SIZE: B
RELEASED:	5-11-09	FILENAME: 261429	APPROVED BY:	MRO	

DESCRIPTION: ASSY, PHOTOEYE

DRAWING NUMBER: 261429

Arpac BOM

Parent Number: 12972

Description: ASSY, FINAL, XLR8, 12972 MACH, LH CONTROL, RH ELEC BOX, 36" ELEV

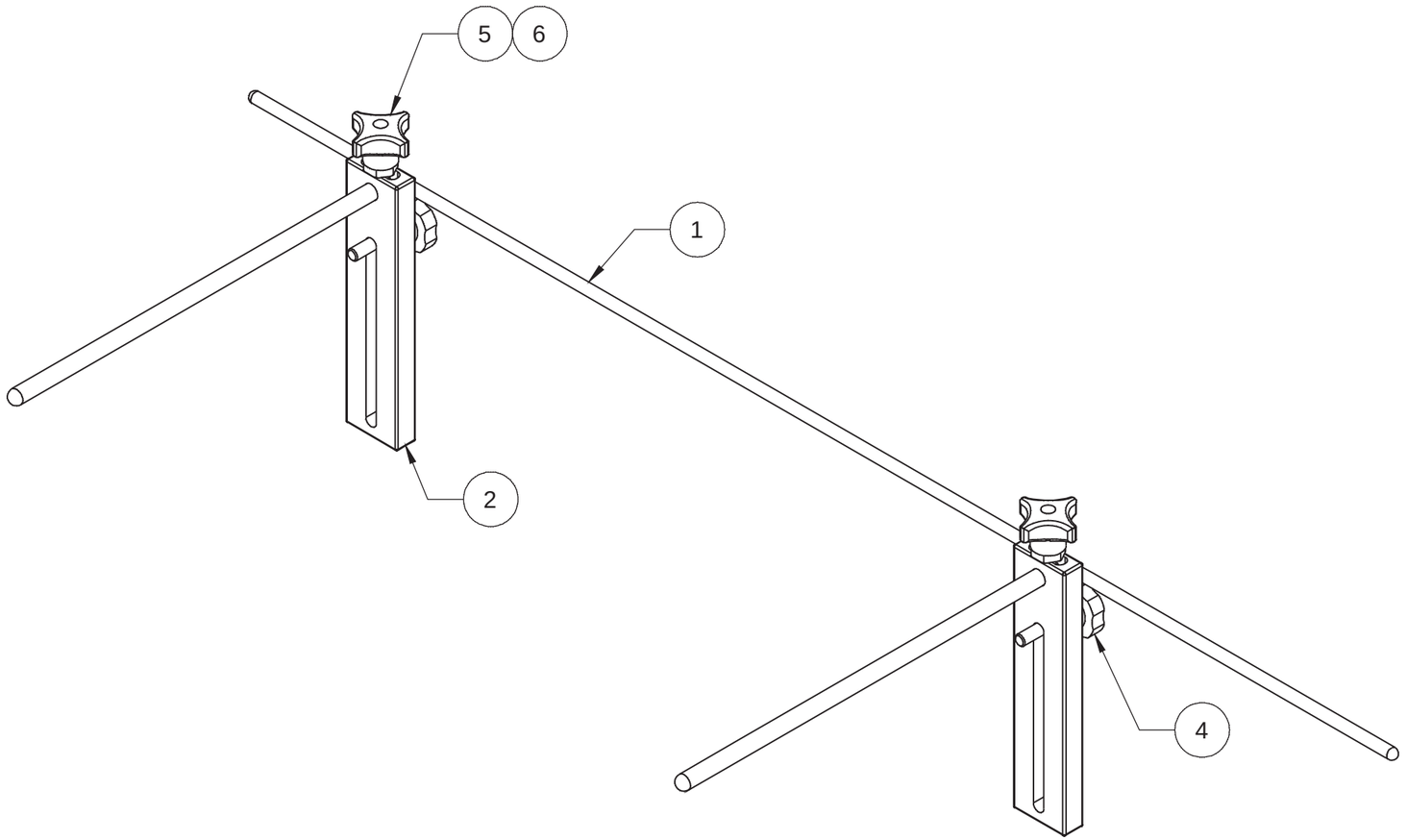
Model: XLR8

Assembly Part Number: 261429

Description: ASSY, PHOTOEYE, LH

Quantity: 1.00

Item	Qty	Arpac Part	Description
1	1.00	261430	BKT, MTG, HOLDER, EYE, LH
2	1.00	236431	BKT, EYE, VERT, LH MACH
3	1.00	191339	BKT, EYE, MTG, VERT
4	1.00	191340	BLK, CLAMP, EYE
5	1.00	191344	STABILIZER, EYE
6	1.00	802676	HDL, ADJ, ZINC, 1.77 LG 1/4-20 X 1.18 STUD
7	2.00	262112	BLK, MTG, SENSOR



ITM	QTY	PART NUM	DESCRIPTION
6	2	826441	EYELET ONLY, M10 THRD, FOR 1/2 ROD
5	2	837000	KNOB, FEMALE, M10 THRD, POLYMAIDE
4	2	802662	KNOB, BLACK, PLASTIC, 1.750 DIA 3/8 X 1-1/2 SS STUD
2	2	252938	POST, GUIDE
1	1	269436	WLDMT, GUIDE, SIDE

BILL OF MATERIALS

ARPAC
9511 WEST RIVER ST.
SCHILLER PARK, IL 60176

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONAL TOLERANCES:
FRACTIONS ± 1/64
TWO (2) DECIMALS ± 0.010
THREE (3) DECIMALS ± 0.005
ANGLES ± 0.5°

DRAWN: 11/07/2011	BY: MRO	SCALE: 1:4	SIZE: B
RELEASED: 11/07/2011	FILENAME: 261737	APPROVED BY: MRO	

DESCRIPTION: ASSY, GUIDE, SIDESEAL

DRAWING NUMBER: 261737

Arpac BOM

Parent Number: 12972

Description: ASSY, FINAL, XLR8, 12972 MACH, LH CONTROL, RH ELEC BOX, 36" ELEV

Model: XLR8

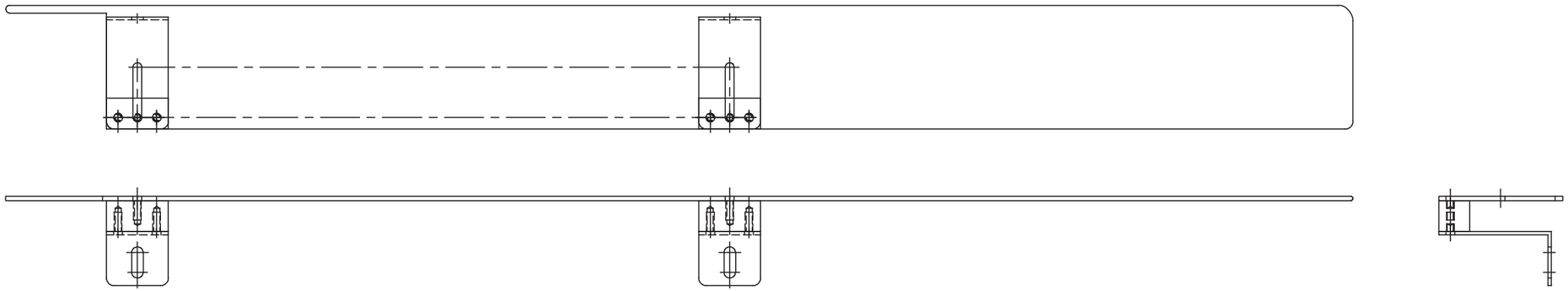
Assembly Part Number: 261737

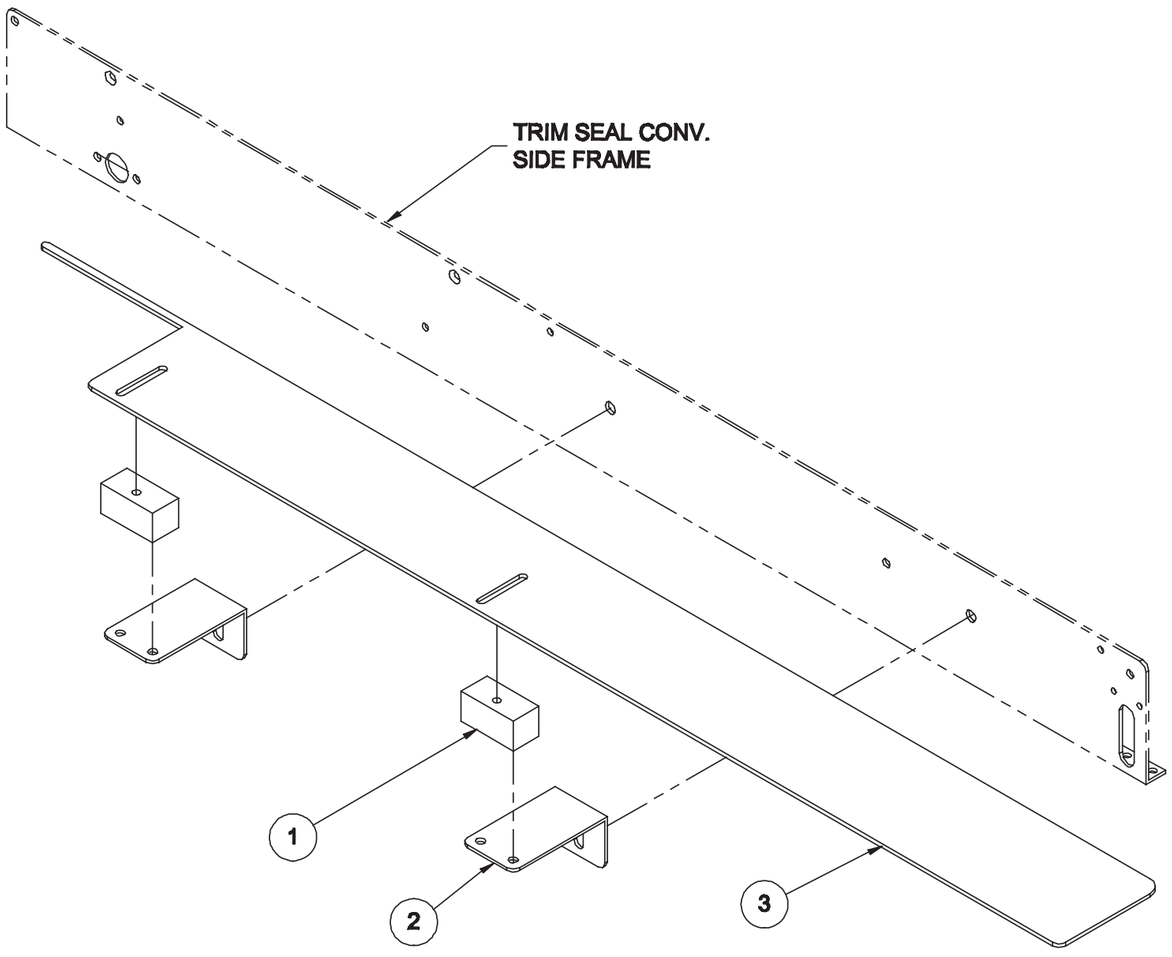
Description: ASSY, GUIDE, SIDESEAL

Quantity: 1.00

Item	Qty	Arpac Part	Description
1	1.00	269436	WLDMT, GUIDE, SIDE
2	2.00	252938-001	POST, GUIDE, ANODIZED
4	2.00	802662	KNOB, BLACK, PLASTIC, 1.750 DIA 3/8 X 1-1/2 SS STUD
5	2.00	837000	KNOB, FEMALE, M10 THRD, POLYMAIDE
6	2.00	826441	EYELET ONLY, M10 THRD, FOR 1/2 ROD

Part Number: 266740 Description: ASSY, GUIDE, PROFILE, LOW, XLR8, W/MISER WHEELS Qty: 1





ITM	QTY	PART NUM	DESCRIPTION
3	1	266739	GUIDE, PROD, LOW
2	2	144479-001	SPACER
1	2	172656	BKT

BILL OF MATERIAL

Great Lakes Corporation CHICAGO, IL

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONAL TOLERANCES:
FRACTIONS ± 1/64
TWO (2) DECIMALS ± 0.010
THREE (3) DECIMALS ± 0.005
ANGLES ± 0.5°

DRAWN:	12-21-09	BY:	MRO	SCALE: 1/4"=1"	SIZE: A
RELEASED:	12-21-09	FILENAME:	266740	APPROVED BY:	MRO

DESCRIPTION:
ASS'Y, GUIDE, LOW PROFILE
XLR8 OPTION

DRAWING NUMBER:
266740

Arpac BOM

Parent Number: 12972

Description: ASSY, FINAL, XLR8, 12972 MACH, LH CONTROL, RH ELEC BOX, 36" ELEV

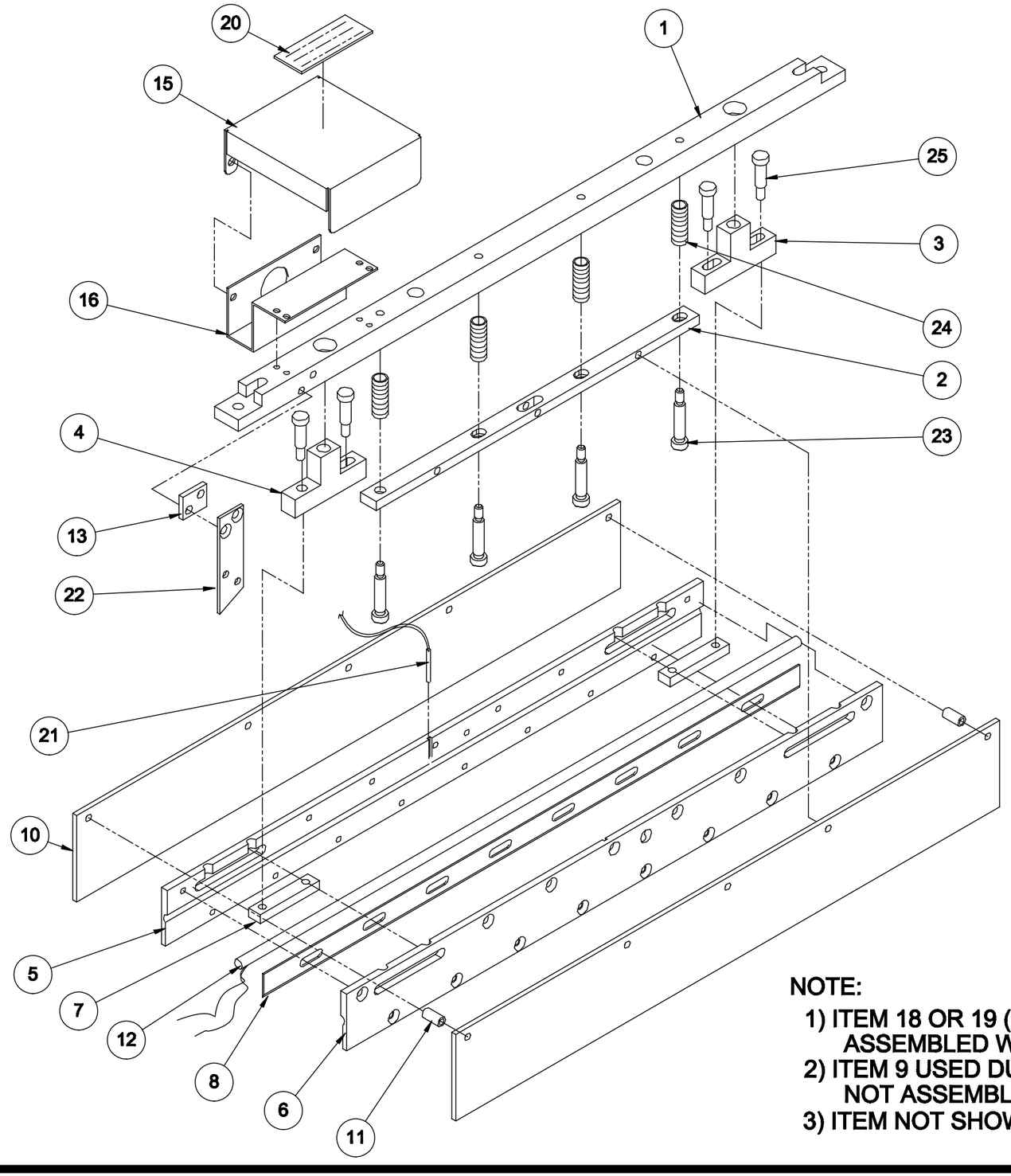
Model: XLR8

Assembly Part Number: 266740

Description: ASSY, GUIDE, PROFILE, LOW, XLR8, W/MISER WHEELS

Quantity: 1.00

Item	Qty	Arpac Part	Description
1	2.00	172656	BRACKET,
2	2.00	144479-001	SPACER,
3	1.00	266739	GUIDE, LOW PROD W/MISER WHEELS
4	2.00	800275-007	FSNR, WASHER, FLAT, 1/4, SS,
5	2.00	800275-011	FSNR, WASHER, FLAT, 5/16, SS,
6	6.00	800278-004	FSNR, HHCS, 1/4-20 X 5/8, SS,
7	2.00	800280-007	FSNR, HHCS, 5/16-18 X 3/4, SS,
8	6.00	800292-008	FSNR, WASHER, LOCK, SPLIT, 1/4, SS,
9	2.00	800292-011	FSNR, WASHER, LOCK, SPLIT, 5/16, SS,



	ITM	QTY	PART NUM	DESCRIPTION
3).	32	1	804003-139	CABLE, SENSOR QD, 16FT
3).	31	1	804011-089	CONDUIT, LOCKNUT, 0.5",
3).	30	1	804006-130	PROXIMITY SENSOR, DC 2-WIRE
3).	29	1	804994-239	3FT 8-WIRE MALE CABLE
3).	28	1	804995-178	5/8" CORD GRIP, STRAIGHT
3).	27	13	804010-112	CONNECTOR, TERMINAL, FORK
3).	26	1	804996-042	MINATURE TERMINAL BLOCK 6 PULL,
	25	4	182145-XXX	FSNR, BOLT, SHLDR, 1/4 X 3/4 MOD
	24	4	810727	SPRING, COMP, .36 OD X 1 1/4
	23	4	800321-XXX	BOLT, SHLDR, 1/4 X 1
	22	1	142170	SUPPORT, ELEMENT, WIRE
	21	1	142169	ASS'Y, THERMOCOUPLE
	20	1	142168	PLT, NAME, WARNING
1)., 3).	19	1	142167.001	PAD, SEAL, SILICONE RUBBER
1)., 3).	18	1	142166.001	PAD, SEAL, FELT
3).	17	1	282087	ACTIVATOR, SWITCH, SAFETY
	16	1	142164	BOX, JUNCTION
	15	1	142163	COVER, BLOCK, TERMINAL
3).	14	1	282086	BKT, MTG, SAFETY SWITCH
	13	1	142161-XXX	SPACER, SUPPORT, ELEMENT WIRE
	12	1	142160	HEATER, CARTRIDGE
	11	2	142159	SPACER, GUARD, PRESSURE
	10	2	282104	SHIELD, SEAL BAR, EXTENDED
2)., 3).	9	1	142157.002	MOULDING, PROTECTIVE
	8	1	180994	BLADE, SEAL BAR, POLYETHELENE
	7	2	142155	PLT, NUT, SEAL BAR
	6	1	180993	EXTRUSION, SEAL BAR, RH
	5	1	180992	EXTRUSION, SEAL BAR, LH
	4	1	142152	POST, SEAL BAR, LH
	3	1	142151	POST, SEAL BAR, RH
	2	1	142150	MNT, GUARD, PRESSURE
	1	1	192766	CARRIER, SEAL BAR

BILL OF MATERIAL

NOTE:

1) ITEM 18 OR 19 (NOT SHOWN) TO BE ASSEMBLED WITH CARRIER BAR
2) ITEM 9 USED DURING MFG PROCESS, NOT ASSEMBLED ON FINAL ASS'Y.
3) ITEM NOT SHOWN.

Great Lakes Corporation CHICAGO, IL

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONAL TOLERANCES:
FRACTIONS ± 1/64
TWO (2) DECIMALS ± 0.010
THREE (3) DECIMALS ± 0.005
ANGLES ± 0.5°

DRAWN:	11-30-11	BY:	MRO	SCALE: 3/8"=1"	SIZE: B
RELEASED:	11-30-11	FILENAME:	282264	APPROVED BY:	MRO

DESCRIPTION:
ASS'Y, SEAL BAR, POLYETHELENE
XLR8

DRAWING NUMBER:
282264

Arpac BOM

Parent Number: 12972

Description: ASSY, FINAL, XLR8, 12972 MACH, LH CONTROL, RH ELEC BOX, 36" ELEV

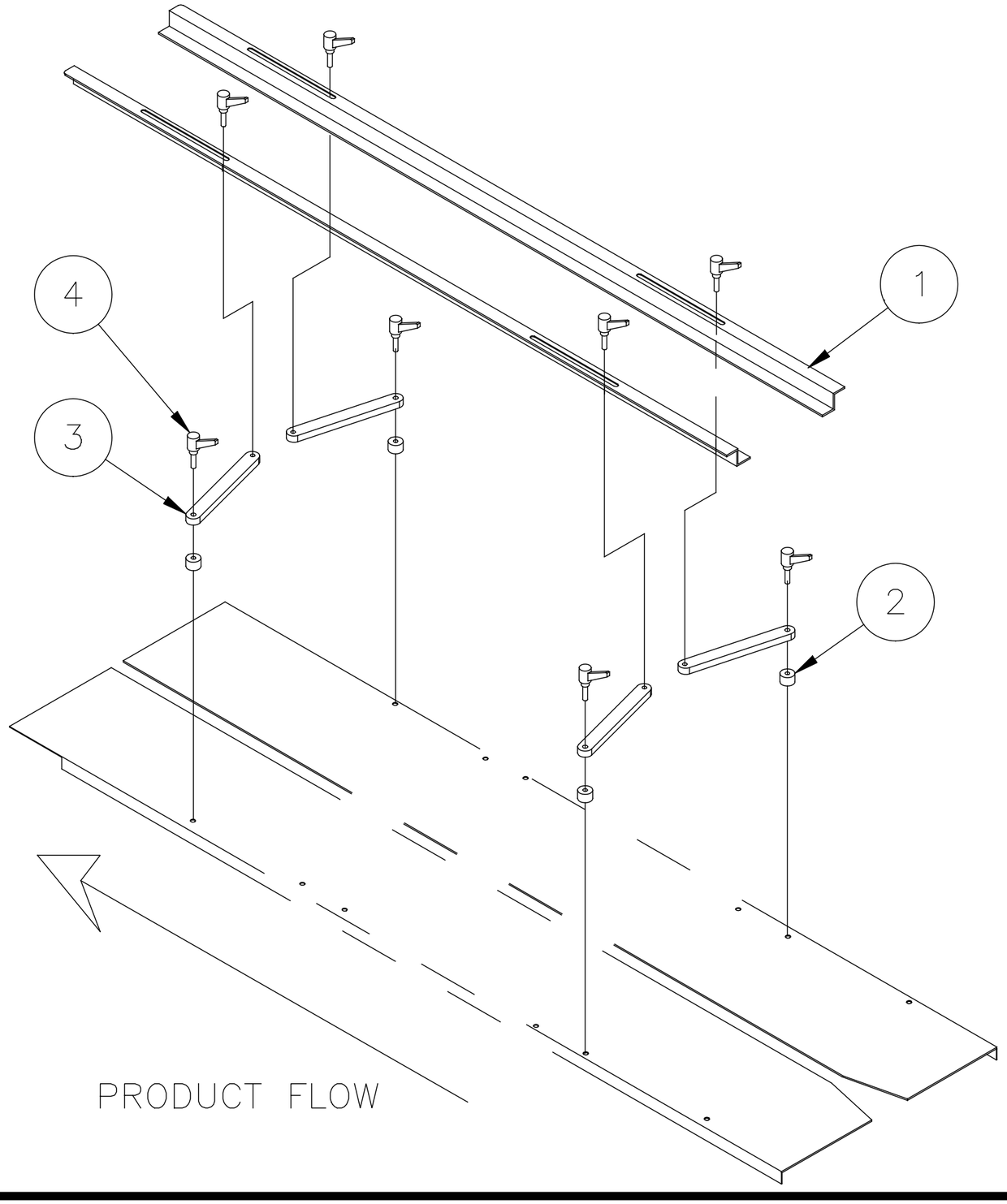
Model: XLR8

Assembly Part Number: 282264

Description: ASSY, SEALBAR, POLYETHYLENE, XLR8

Quantity: 1.00

Item	Qty	Arpac Part	Description
1	1.00	192766	CARRIER, SEAL BAR,
2	1.00	142150	MNT, GUARD, PRESSURE, TS-37
3	1.00	142151	POST, SEAL BAR, RH, TS-37
4	1.00	142152	POST, SEAL BAR, LH, TS-37
5	1.00	180992	EXTRUSION, SEAL BAR, POLYETHELENE, LH, TS-37, LEFT HALF
6	1.00	180993	EXTRUSION, SEAL BAR, POLYETHELENE, RH, TS-37, RIGHT HALF
7	2.00	142155	PLT, NUT, SEAL BAR,
8	1.00	180994-000A	N379 POLYETHLENE BLADE 17"LG,
10	2.00	282104	SHIELD,SEAL BAR,EXTENDED
11	2.00	142159	SPACER, GUARD, PRESSURE,
12	1.00	142160-000A	HEATER, CARTRIDGE, 1/4 DIA, A=17.50, 120VAC, 700W, 10" LEADS, B=17.
13	1.00	142161	SPACER, SUPPORT, ELEMENT WIRE,
14	1.00	282086	BKT,PROX,HORIZ MT
15	1.00	142163	COVER, BLOCK, TERMINAL,
16	1.00	142164	BOX, JUNCTION,
17	1.00	282087	BKT, FLAG P ROX, HORIZ MT
18	1.00	142166-001	PAD, SEAL, FELT, 3/4 WD, "A" = 18.50, W/O GROOVE
19	1.00	142167-001	PAD, SEAL, SILICONE RUBBER, "A"= 18 1/2
20	1.00	142168	PLT, NAME, WARNING,
21	1.00	142169	ASSY, THERMOCOUPLE, TS37, 7/8 LG
22	1.00	142170	SUPPORT, ELEMENT, WIRE,
23	4.00	800321-009	FSNR, BOLT, SHLDR, 1/4 DIA X 1 LG,
24	4.00	810727	SPRING, COMP, 0.360 OD X 1 1/4 LG, 0.032 DIA MUSIC WIRE, GROUND END
25	4.00	182145	FSNR, BOLT, SHLDR, 1/4 X 3/4, MOD,
26	1.00	804996-042	MINATURE TERMINAL BLOCK 6 PULL,
27	13.00	804010-112	CONNECTOR, TERMINAL, FORK, VINYL INSULAT, 16-14 GA
28	1.00	804995-178	5/8" CORD GRIP, STRAIGHT, USE SEALING RING FOR NEMA 12
29	1.00	804994-239	3FT 8-WIRE MALE CABLE ALSO ORDER, HWA1788 IF REPLACIN G P6880&P6050
30	1.00	804006-001	USE PN 804006-130; PROXIMITY SENSOR, DC 2-WIRE 4.0MM NO QD,
31	1.00	804011-089	CONDUIT, LOCKNUT, 0.5",
32	1.00	804003-139	CABLE, QD, 5M 90-DEGREE MICRO 4-PIN BLK PVC
33	43.13	903842	PL G-7 SHEET 1/8 THK
34	5.09	903578	SS SHEET 12GA, 304, #4 FINISH LASER VINYL



PRODUCT FLOW

PART #	GUIDE HEIGHT	ITEM 1 (GUIDE)	ITEM 2 (SPACER)
194027	1 1/4	194028	144124.083
194027.001	1 1/2	194028.001	144124.095
194027.002	1 3/4	194028.002	144124.082
194027.003	2	194028.003	144124.062
194027.004	2 1/4	194028.004	144124.069
194027.005	2 1/2	194028.005	144124.079
194027.006	2 3/4	194028.006	144124.102
194027.007	3	194028.007	144124.098
194027.008	3 1/4	194028.008	144124.103
194027.009	3 1/2	194028.009	144124.104
194027.010	3 3/4	194028.010	144124.105
194027.011	4	194028.011	144124.055
194027.012	4 1/4	194028.012	144124.106
194027.013	4 1/2	194028.013	144124.107
194027.014	4 3/4	194028.014	144124.108
194027.015	5	194028.015	144124.109

ITM	QTY	PART NUM	DESCRIPTION
4	8	810475	HDL, ADJ, 5/16–18 X 1.18 STD
3	4	168608	ARM, GUIDE, PIVOT
2	4	SEE TABLE	SPACER
1	2	SEE TABLE	GUIDE, SIDE

BILL OF MATERIAL

Great Lakes Corporation CHICAGO, IL

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONAL TOLERANCES:
FRACTIONS ± 1/64
TWO (2) DECIMALS ± 0.010
THREE (3) DECIMALS ± 0.005
ANGLES ± 0.5°

DRAWN: 8/25/01	BY: DCC	SCALE: N/A	SIZE: B
RELEASED: 8/25/01	FILENAME: 194027	APPROVED BY: DCC	

DESCRIPTION: ASSY, GUIDE, 72", "Z"

TS–37N – INFEED

DRAWING NUMBER: 194027

Arpac BOM

Parent Number: 12972

Description: ASSY, FINAL, XLR8, 12972 MACH, LH CONTROL, RH ELEC BOX, 36" ELEV

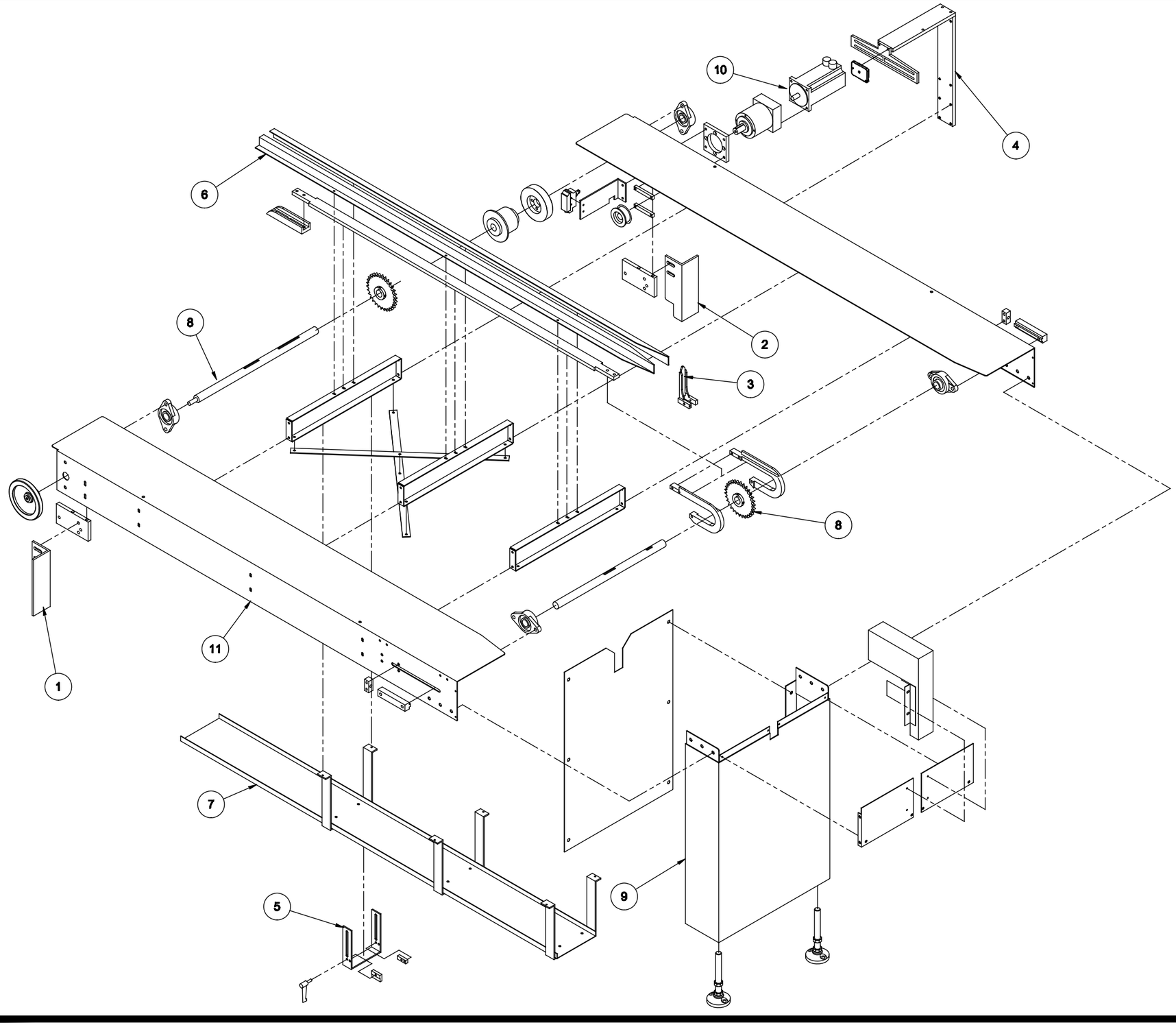
Model: XLR8

Assembly Part Number: 194027

Description: ASSY, GUIDES, CONV, 72", "Z", 1-1/4",

Quantity: 1.00

Item	Qty	Arpac Part	Description
1	2.00	194028	GUIDE, PROD, 72", "Z", TS-37NE INFEED, 1-1/4
2	4.00	144124-083	SHAFT, 1.000, TAPPED, 5/16-18, 0.676 LG, ALUM, CLR ANOD
3	4.00	168608	ARM, GUIDE, PLATED, "A" = 7 13/16
4	8.00	810475	HDL, ADJ, SS, 2.16 LG, PLAS, 5/16-18 X 1.18 LG STUD



ARPAC	9511 WEST RIVER ST. SCHILLER PARK, IL 60176		
UNLESS OTHERWISE SPECIFIED ALL DIMENSIONAL TOLERANCES:	FRACTIONS TWO (2) DECIMALS THREE (3) DECIMALS ANGLES	± 1/64 ± 0.010 ± 0.005 ± 0.5°	
DRAWN: 09/05/2012	BY: MO	SCALE: 3/32"=1"	SIZE: B
RELEASED: 9-5-12	FILENAME: 290232	APPROVED BY: MRO	
DESCRIPTION: ASSY, CONV, INF, LUG, 72", SERVO, AB, 230V			
		DRAWING NUMBER: 290232	

Arpac BOM

Parent Number: 12972

Description: ASSY, FINAL, XLR8, 12972 MACH, LH CONTROL, RH ELEC BOX, 36" ELEV

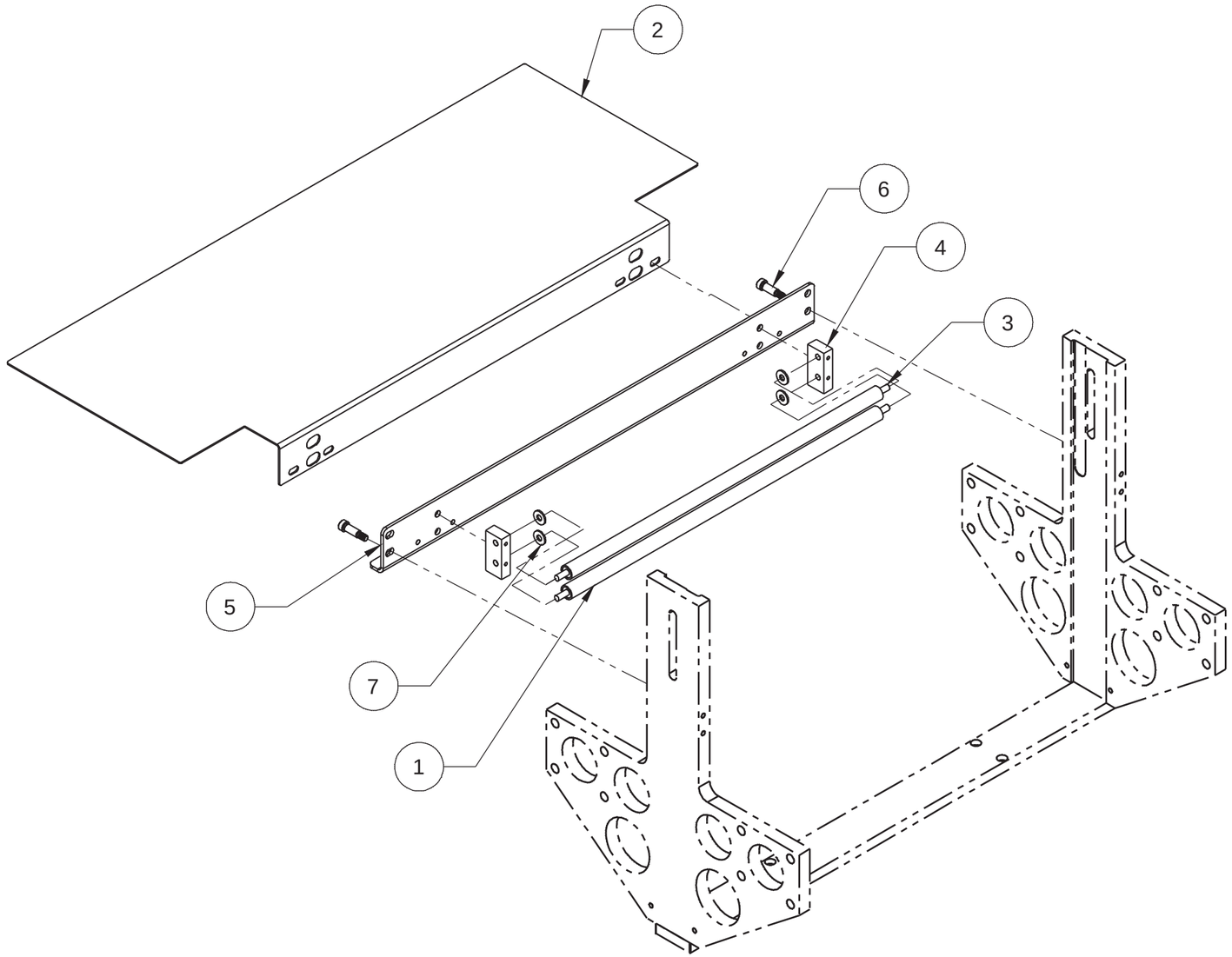
Model: XLR8

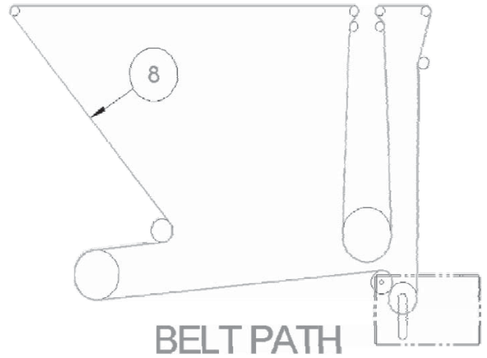
Assembly Part Number: 290232

Description: ASSY, CONV, INF, LUG, 72, SERVO, AB, MP230, 230

Quantity: 1.00

Item	Qty	Arpac Part	Description
1	1.00	142226	ANG, MTG, INFEED, L.H.
2	1.00	142226-001	ANG, MTG, INFEED, R.H.
3	18.00	173409-000A	ASSY, LUG, TS37, HC37, LUG HEIGHT = 3 1/2
4	1.00	215405-000C	ASSY, MTG, EYE, INFEED
5	1.00	240319	ASSY, SUB, DETECT, LUG, 5" WIDE
6	1.00	286084	ASSY, GUIDES, LUG, 72", STD
7	1.00	257605	ASSY, TROUGH, LUG, 72", ONLY
8	1.00	261729A	ASSY, INFEED, LUG, PARTS, COMMON, W/WHEEL, CRS, BLUE TORQUE LIMITER
9	1.00	279861	ASSY, LEG, UPSTRM, ELEV, 36", 3/4-10 FEET
10	1.00	261731	ASSY, SUB, MOTOR, INF, SERVO, AB, MP230, 230V
11	1.00	286083	ASSY, CORE, CONV, LUG, 72", LH
12	12.00	800466	CHAIN, RLR, #40, HOLLOW PIN,
13	1.00	191433	BKT, SWITCH,





ITM	QTY	PART NUM	DESCRIPTION
8	1	SEE TABLE	SEE TABLE
7	4	815213	WSHR, OILITE, 0.255 X 0.625 X 1/16 THK
6	2	800322-004	FSNR, BOLT, SHLDR, 5/16 DIA X 3/4 LG, 1/4-20 TH'D
5	1	188632	BKT, MTG, RLR, DISC
4	2	191443	BLK, MTG, SHAFT
3	2	119973	SHAFT, RLR, IDLER
2	1	188648	PLT, SLIDE
1	2	119972-013	RLR, 5/8 OD, S.S

BILL OF MATERIALS

ARPAC
9511 WEST RIVER ST.
SCHILLER PARK, IL 60176

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONAL TOLERANCES:
FRACTIONS ± 1/64
TWO (2) DECIMALS ± 0.010
THREE (3) DECIMALS ± 0.005
ANGLES ± 0.5°

DRAWN: 12/01/2002	BY: DCC	SCALE: 0.1875:1	SIZE: B
RELEASED: 01/21/2002	FILENAME: 194179	APPROVED BY: DCC	

DESCRIPTION: ASSY, SUB, CRG, SEAL HEAD, 9-1/2" STD, NO BRIDG

DRAWING NUMBER: 194179

PART NUM	ITEM 8	DESCRIPTION
194179-004	816839-001	BELT, 9-1/2 X 138 ID KNIFE EDGE PLASTIC SPIRAL LACE
194179-003	823325	BELT, 9-1/2 X 70.75 ID SKIVED PREPARED AND GLUE KIT(BELT PATH NOT AS SHOWN)
194179-002	822904-001	BELT,9-1/2W X 138 ID URETHENE ALLIG LACE POLYTEK POLYESTER (1 PLY)
194179-001	819509	BELT, 11 X 138 ID SKIVED PREPARED *FOR BELT AND GLUE USE 251828
194179	816839	BELT, 9-1/2 X 138 ID SKIVED PREPARED

Arpac BOM

Parent Number: 12972

Description: ASSY, FINAL, XLR8, 12972 MACH, LH CONTROL, RH ELEC BOX, 36" ELEV

Model: XLR8

Assembly Part Number: 194179

Description: ASSY, SUB, CRG, SEAL HEAD, 9-1/2" STD, NO BRIDG

Quantity: 1.00

Item	Qty	Arpac Part	Description
1	2.00	119972-013	RLR, 5/8 OD, S.S., 17.859 LG
2	1.00	188648	PLT, SLIDE,
3	2.00	119973	SHAFT, RLR, IDLER, TS-37
4	2.00	191443	BLK, SHAFT, MTG, CLR ANOD
5	1.00	188632	BKT, MTG, RLR, DSCHG, DISCHARGE SIDE
6	2.00	800322-004	FSNR, BOLT, SHLDR, 5/16 DIA X 3/4 LG, 1/4-20 TH'D
7	4.00	815213	WSHR, OILITE, 0.255 X 0.625 X 1/16 THK,
8	1.00	816839	BELT, 9-1/2 X 138 ID SKIVED PREPARED,

Arpac BOM

Parent Number: 12972

Description: ASSY, FINAL, XLR8, 12972 MACH, LH CONTROL, RH ELEC BOX, 36" ELEV

Model: XLR8

Assembly Part Number: 12972-ELEC-A

Description: ASSY, ELEC, #12972, XLR8, 230V

Quantity: 1.00

Item	Qty	Arpac Part	Description
1	1.00	123456-508B	ELEC, ASSY, HORIZONTALS, SIDE SEAL, TRIM
2	1.00	804005-298	PLC, COMPACTLOGIX, CPU 2MB RS-232
3	1.00	804005-299	PLC, COMPACTLOGIX, POWER SUPPLY, 120/240VAC, 90W
4	1.00	804005-300	PLC, COMPACTLOGIX, COMMUNICATION ETHERNET
5	1.00	804005-302	PLC, COMPACTLOGIX, SERVO 4 AXIS SERCOS
6	3.00	804005-266	PLC, COMPACTLOGIX, DIGITAL 16IN 24VDC SINK/SOURCE
7	2.00	804005-276	PLC, COMPACTLOGIX, DIGITAL, 16OUT RELAY
8	1.00	804005-301	PLC, COMPACTLOGIX, DIGITAL 8OUT 24VDC SOURCE
9	1.00	804005-401	PLC, COMPACTLOGIX, ANALOG 4OUT VOLTAGE 16BIT -10…10V D
10	7.00	804993-133	PLC, IFM BASE, DIGITAL, 20PT, 2-LEVEL, NARROW
11	1.00	804005-271	PLC, COMPACTLOGIX, ACCESSORY END CAP RIGHT
12	3.00	804005-303	PLC, COMPACTLOGIX, ACCESSORY, IFM CBL 0.1M 1769-IQ16 AND -IQ16F I
13	1.00	804005-304	PLC, COMPACTLOGIX, ACCESSORY, IFM CBL 0.1M 1769-OB8 OUTPUTS TO I
14	2.00	804005-305	PLC, COMPACTLOGIX, ACCESSORY, IFM CBL 0.1M 1769-OA16 & -OW16 OUTP
15	1.00	804018-089	OBSOLETE, USE 804018-176; OPERATOR INTERFACE, PANELVIEW PLUS 600,
16	1.00	804005-556	GRACEPORT, ETHERNET (CAT 5E) 5-PORT SWITCH, DUPLEX GFCI OUTLET, UL
17	6.00	804008-116	RELAY, DIODE FOR 700-HP 6-24VDC, W/T LED SURGE SUPPR. USE W/T 8040
18	6.00	804008-103	RELAY, SOCKET, 8 BLADE FOR 2 POLE RELAY, USE W/T 700-HP,FOR LED US
19	6.00	804008-105	RELAY, 2 POLE, 8A, 24VDC, DPDT, PIN STYLE RELAY, SOCKET REQ.8040
20	1.00	804000-439	CIRCUIT BREAKER, 2P 30A 240V TRIP=05-10 IR=10KA UL489
21	1.00	804036-072	FUSE HOLDER 30A 3 POLE CC CLASS 600V WITH BLOWN FUSE INDICATOR
23	3.00	804015-062	FUSE, 20A 600V FAST-ACTING CLASS-CC
24	1.00	804000-296	CIRCUIT BREAKER, ROTARY OPER MECHANISM, H-FRAME BLK HANDLE 12" DEPT
25	1.00	804000-365	CIRCUIT BREAKER, 3P 50A 480V H-FRAME TRIP(THM/MAG)=NOMIN/0500A IR=
26	2.00	804000-304	CIRCUIT BREAKER, 3P 15A 277V TRIP=10-20 IR=10KA UL489
27	1.00	804000-331	CIRCUIT BREAKER, 1P 30A 240V TRIP=05-10 IR=10KA UL489
28	3.00	804000-327	CIRCUIT BREAKER, 1P 10A 277V TRIP=05-10 IR=10KA UL489
29	4.00	804000-325	CIRCUIT BREAKER, 1P 5A 277V TRIP=05-10 IR=10KA UL489
30	6.00	804000-490	CIRCUIT BREAKER, 1P 5A 277V TRIP=05-10 IR=10KA UL1077 SUPPLEMENTA
31	1.00	804002-091	OBSOLETE, USE *****804002-117******CONTACTOR, IEC 4P 37A COIL=24V
32	1.00	804002-059	OBSOLETE, USE PN 804002-114; CONTACTOR, IEC 3P 30A COIL= 24VDC 1
33	1.00	804035-016	CONTACT, AUX. 4NO, TOP MOUNTED FOR IEC CONTACTORS 100-C ALL
34	1.00	804035-002	CONTACT, AUX. 2NO, TOP MOUNTED, FOR IEC CONTACTORS 100-C ALL
35	2.00	804004-098	PUSH BUTTON, 30MM MUSHROOM RED ILL 24V PUSH-PULL 1NO/1NCLB NEMA
36	1.00	804004-009	PUSH BUTTON, 30MM FLUSH GRN MOMENTARY 1NO/1NC NEMA4
37	1.00	804004-080	PUSH BUTTON, 30MM GUARDED GRN ILL 24V MOMENTARY 1NO/1NC NEMA4
38	1.00	804004-008	PUSH BUTTON, 30MM EXTENDED RED MOMENTARY 1NO/1NC NEMA4
39	1.00	804004-013	PUSH BUTTON, 30MM FLUSH YEL MOMENTARY 1NO/1NC NEMA4
40	1.00	804004-010	PUSH BUTTON, 30MM FLUSH BLK MOMENTARY 1NO/1NC NEMA4
41	4.00	804035-015	PUSHBUTTON, CONTACT BLOCK FOR 800T/H, SHALLOW, 1NO/1NC
42	4.00	804027-001	LEGEND PLATE, BLANK STANDARD GRAY
43	1.00	804027-003	LEGEND PLATE, BLANK STANDARD RED
44	2.00	804027-031	LEGEND PLATE, YELLOW CIRCLE, NO TEXT, NEMA4X
45	1.00	804995-077	SWITCH, LIMIT, COMPACT SERIES, SIDE ROLLER PLUNGER, NEMA1

Arpac BOM

Parent Number: 12972

Description: ASSY, FINAL, XLR8, 12972 MACH, LH CONTROL, RH ELEC BOX, 36" ELEV

Model: XLR8

Assembly Part Number: 12972-ELEC-A

Description: ASSY, ELEC, #12972, XLR8, 230V

Quantity: 1.00

Item	Qty	Arpac Part	Description
46	1.00	804993-147	POWER SUPPLY 24VDC 10.0AMP
47	2.00	804012-216	DRIVE, AC, 1.00HP 230V 3PH 4.5A POWERFLEX 4 DRIVE
48	2.00	804012-009	DRIVE, DC, 0.50/1.00HP 115/230V 5.0A (W/HEATSINK 1.0/2.0HP, 10.0A)
49	2.00	804012-011	DRIVE, TWO TERMINAL CONNECTOR FOR INHIBIT CIRCUIT
50	1.00	804012-112	DRIVE, DC, HEAT SINK FOR MMRG30U DRIVE
51	2.00	804030-020	RESISTOR, 10.0K 2.00W, POTENTIOMETER, NOT LOCKABLE
52	1.00	804020-004	SUPPRESSOR, SURGE AC (R-C-V) 600 VAC 3 PHASE
53	2.00	804012-536	DRIVE, SERVO, AMPLIFIER 6.0A 230V KINETIX 2000 AXIS MODULE W/T
54	1.00	804012-537	DRIVE, SERVO, AMPLIFIER 9.67A 230V KINETIX 2000 INTEG AXIS MOD
55	1.00	804012-538	DRIVE, SERVO, POWER RAIL IAM+5 MODULES 230V KINETIX 2000
56	2.00	804012-172	DRIVE, SERVO, SERCOS CABLE 0.3M ENCLOSURE ONLY, FIBER, PLASTIC
57	2.00	804012-179	DRIVE, SERVO, SERCOS CABLE 3.0M ENCLOSURE ONLY, FIBER, PLASTIC
58	3.00	804012-360	OBSOLETE, USE 804012-415; DRIVE, SERVO, MOTOR FDBACK CBL, 9M, FLY
59	1.00	804012-542	DRIVE, SERVO,4 PACK OF KINETIX 2000 SHIELD CLAMPS
60	3.00	804012-543	DRIVE, SERVO, 15PIN, 44PIN, DSUB, FOR FEEDEBACK AND I/O CONNECT KIT
61	3.00	804012-534	OBSOLETE, USE 804012-637 [COMMENTS]; DRIVE, SERVO, MOTOR PWR CBL,
62	7.00	804006-130	PROXIMITY SENSOR, DC 2-WIRE 4.0MM NO QD 12MM UNSHIELDED SHORT-BARRE
63	3.00	804006-119	PROXIMITY SENSOR, DC 2-WIRE 4.0MM NC QD 12MM UNSHIELDED
64	1.00	804006-025	PROXIMITY SENSOR, DC 3-WIRE 1.5MM NO QD 8MM PNP SHIELDED (TORQUE-LI
65	11.00	804003-139	CABLE, QD, 5M 90-DEGREE MICRO 4-PIN BLK PVC
68	2.00	804007-115	PHOTO SENSOR, BACKGROUND DC NPN/PNP RANGE=2M W/2M-CABLE NEMA1
69	2.00	804007-032	PHOTO SENSOR, RETRO-FIBER DC NPN/PNP QD INFRA-RED
70	2.00	804007-040	PHOTO SENSOR, FIBER-OPTIC-CABLE 60IN SS STRAIGHT STRAIGHT-TIP TH
71	2.00	804007-041	PHOTO SENSOR, ACCESSORY, LONG-RANGE-LENS (USE WITH A-B FIBER OPTIC
72	1.00	804007-149	PHOTO SENSOR, REGISTRATION SLOT SENSOR
75	1.00	804007-135	PHOTO SENSOR, RETRO-POLAR DC PNP QD RANGE=3M W/6IN-PIGTAIL NEM
76	10.00	804003-135	CABLE, QD, 5M STRAIGHT MICRO 4-PIN BLK PVC
77	1.00	804008-023	RELAY, SOLID-STATE 1PST COIL=24+VAC 50A INPUT=24-265VAC OUTPUT=230
78	1.00	804013-009	ENCODER, OPTICAL,1024 PULSES PER REV 5 VDC, P/OUT 3/8 IN SHAFT WITH
79	1.00	804023-037	TEMPERATURE CONTROLLER, 1/16 DIN, TC/mV/RTD, 100-240VAC, 1 RLY ALAR
80	4.00	804025-225	SWITCH, MAGNETICALLY CODED, 2 N.C. SOLID-STATE RELAYS, W/ LED INDIC
81	4.00	804003-204	CABLE, QD, 5M STRAIGHT MICRO 8-PIN YEL PVC
82	1.00	804008-139	RELAY, SAFETY MINOTAUR MSR126.1R 24V IN=2NC OUT=2NO MONITORED MAN
83	1.00	804024-004	TRANSFORMER, 1PH 3.0KVA 240/480|120/240 NEMA3R ENCAPSULATED
84	1.00	225164	BKT, MTG, LIGHT, STACK GUARD MOUNTED
85	1.00	804017-030	LIGHT STACK, 70MM BASE NEMA4X BLK-HOUSING W/CAP (1/2" NPT C
86	1.00	804017-038	LIGHT STACK, 70MM GRN 24V NEMA4X BLK-HOUSING STEADY-LED
87	1.00	804017-039	LIGHT STACK, 70MM RED 24V NEMA4X BLK-HOUSING STEADY-LED
88	1.00	804017-044	LIGHT STACK, 70MM SOUND 24V NEMA12 BLK-HOUSING SINGLE-TONE
89	1.00	804014-474	ENCLOSURE, 30X 60X 12 NEMA12 2DR
90	1.00	804014-497	ENCLOSURE, 30X 60 SUBPANEL
93	1.00	194185	ENCLOSURE, 12X 20X 09 NEMA12 CONSL WITH-CUTOUTS-FOR-HC37/TS33
94	1.00	804994-246	CABLE, 10C, 16 AWG, 6 FT, UL STOOW, MINI MALE (STRAIGHT) TO FLYING
95	1.00	804010-110	CONNECTOR, 10P FEMALE MINI-CHANGE RECEPTACLE, 7A 600V 16AWG, 12IN F

Arpac BOM

Parent Number: 12972

Description: ASSY, FINAL, XLR8, 12972 MACH, LH CONTROL, RH ELEC BOX, 36" ELEV

Model: XLR8

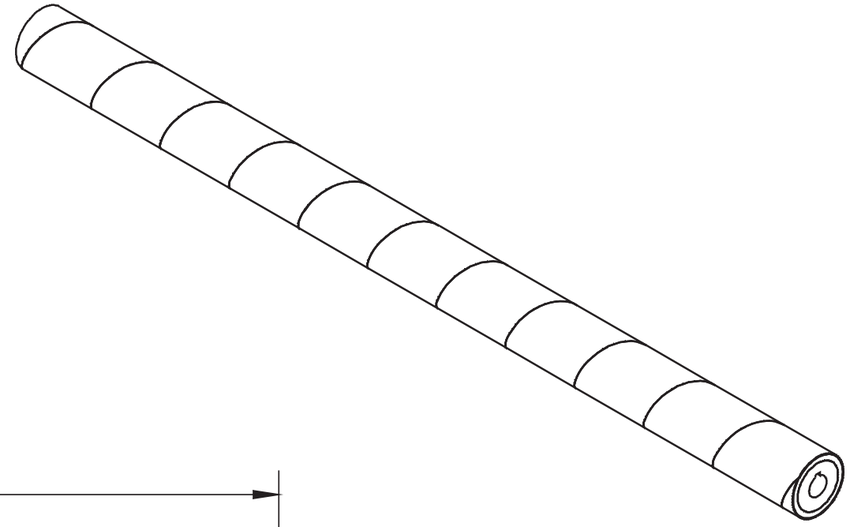
Assembly Part Number: 12972-ELEC-A

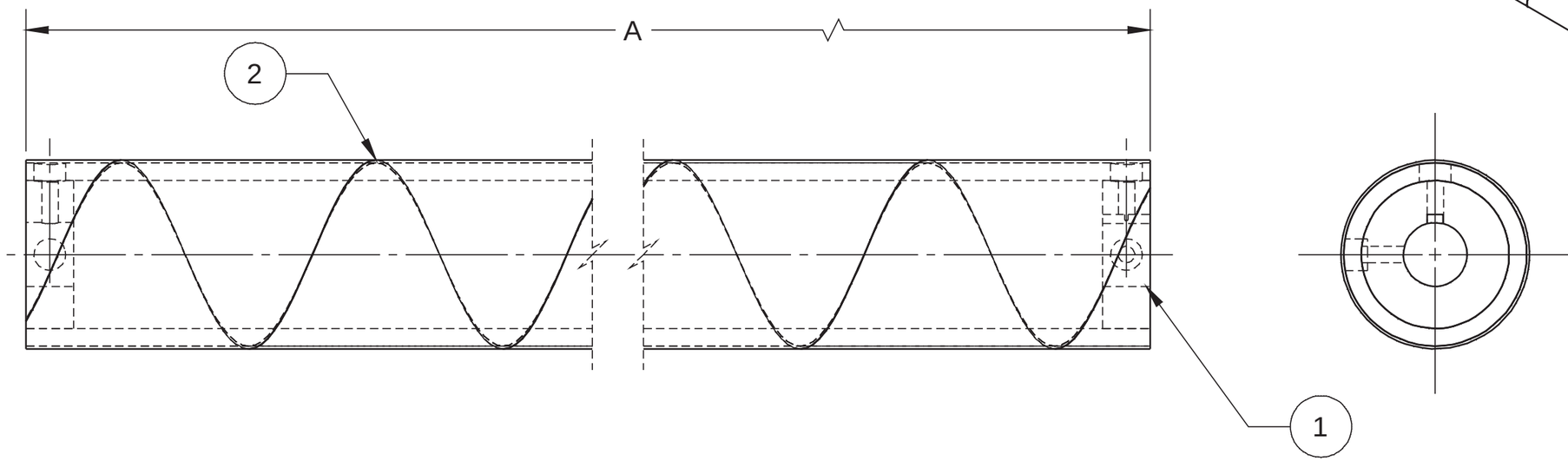
Description: ASSY, ELEC, #12972, XLR8, 230V

Quantity: 1.00

Item	Qty	Arpac Part	Description
96	1.00	804996-514	CONNECTOR, 8P FEMALE MINI-CHANGE RECEPTACLE, 7A 600V 16AWG, 12IN F
97	1.00	804996-582	CABLE, 8C, 16 AWG, 12 FT, UL STOOW MINI FEMALE (STRAIGHT) TO FLYING
98	1.00	804994-910	CONNECTOR, STRAIN RELIEF, 90DEG, 0.620-0.750
100	4.00	804010-337	CONNECTOR, 8P MALE DC MICRO (M12) PLUG, 2A 60V, FIELD TERMINAL CHA
101	1.00	999999-003	WIRING MAT'L PER MACHINE TYPICAL NORMAL USAGE
102	2.00	804007-003	OBSOLETE, FOR SPO USE 804007-325; PHOTO SENSOR, RECIEVER DC
103	2.00	804007-001	PHOTO SENSOR, TRANSMITTER DC QD RANGE=30FT W/6IN-PIGTAIL
104	1.00	804012-216	DRIVE, AC, 1.00HP 230V 3PH 4.5A POWERFLEX 4 DRIVE
105	1.00	804036-072	FUSE HOLDER 30A 3 POLE CC CLASS 600V WITH BLOWN FUSE INDICATOR
106	3.00	804015-061	FUSE, 15A 600V FAST-ACTING CLASS-CC
107	1.00	804008-103	RELAY, SOCKET, 8 BLADE FOR 2 POLE RELAY, USE W/T 700-HP,FOR LED US
108	1.00	804008-105	RELAY, 2 POLE, 8A, 24VDC, DPDT, PIN STYLE RELAY, SOCKET REQ.8040
109	1.00	804008-116	RELAY, DIODE FOR 700-HP 6-24VDC, W/T LED SURGE SUPPR. USE W/T 8040
110	2.00	804007-135	PHOTO SENSOR, RETRO-POLAR DC PNP QD RANGE=3M W/6IN-PIGTAIL NEM
111	2.00	804003-135	CABLE, QD, 5M STRAIGHT MICRO 4-PIN BLK PVC

Part Number: 255765-001 Description: ASSY, RLR, DRV, AL, 2.875, FEED, FILM, 1.000 BORE, 44.938 LG Qty: 1





2	1	803372	LAG, RUBBER, BLACK, 4 W X 60 FT, (1 ROLL)
1	1	119486-001	RLR, AL, 2.875 O.D, 1.000 BORE
ITM	QTY	PART NUM	DESCRIPTION

BILL OF MATERIALS

CLEAR ANODIZED (ITEM 1)	44 15/16	255765-100
NONE	44 15/16	255765-001
NONE	61	255765
FINISH	A	PART NUMBER

FINISH- SEE TABLE

ARPAC
9511 WEST RIVER ST.
SCHILLER PARK, IL 60176

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONAL TOLERANCES:
FRACTIONS ± 1/64
TWO (2) DECIMALS ± 0.010
THREE (3) DECIMALS ± 0.005
ANGLES ± 0.5°

DRAWN: 08/11/2008	BY: MRO	SCALE: 0.375:1	SIZE: A
RELEASED: 08/11/2008	FILENAME: 255765	APPROVED BY: MRO	

DESCRIPTION: ASSY, RLR, DRV, AL, 2.875, FEED, FILM

DRAWING NUMBER: 255765

Arpac BOM

Parent Number: 12972

Description: ASSY, FINAL, XLR8, 12972 MACH, LH CONTROL, RH ELEC BOX, 36" ELEV

Model: XLR8

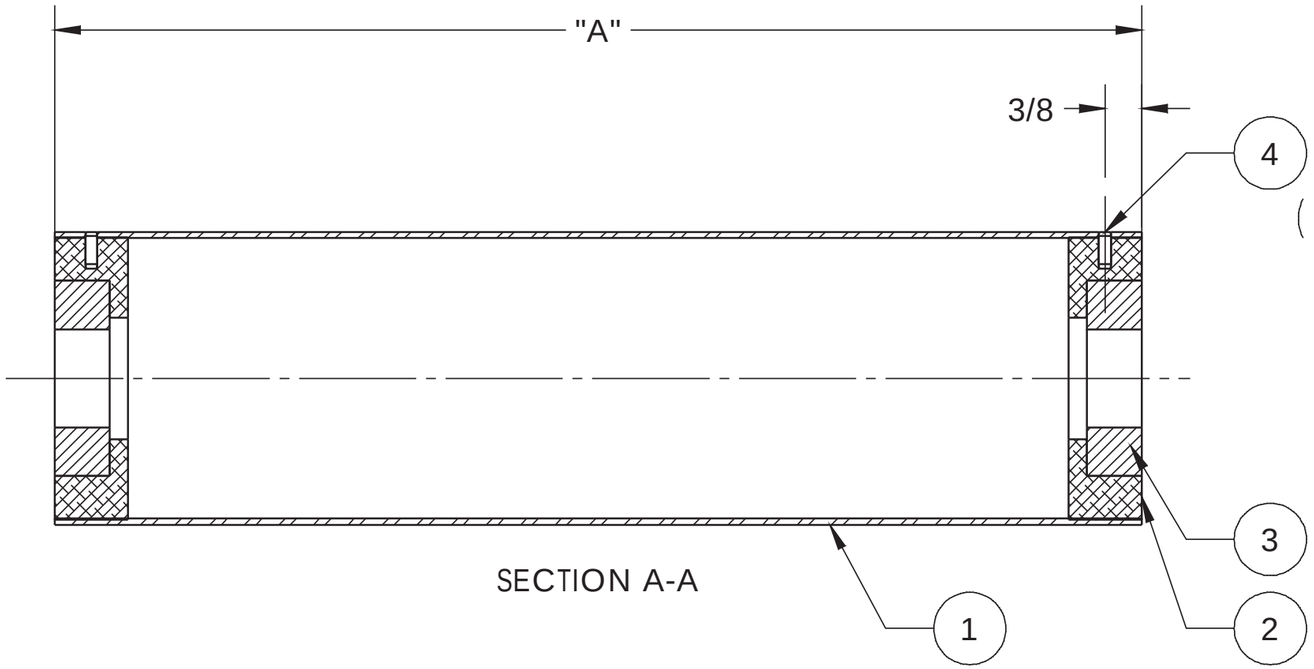
Assembly Part Number: 255765-001

Description: ASSY, RLR, DRV, AL, 2.875, FEED, FILM, 1.

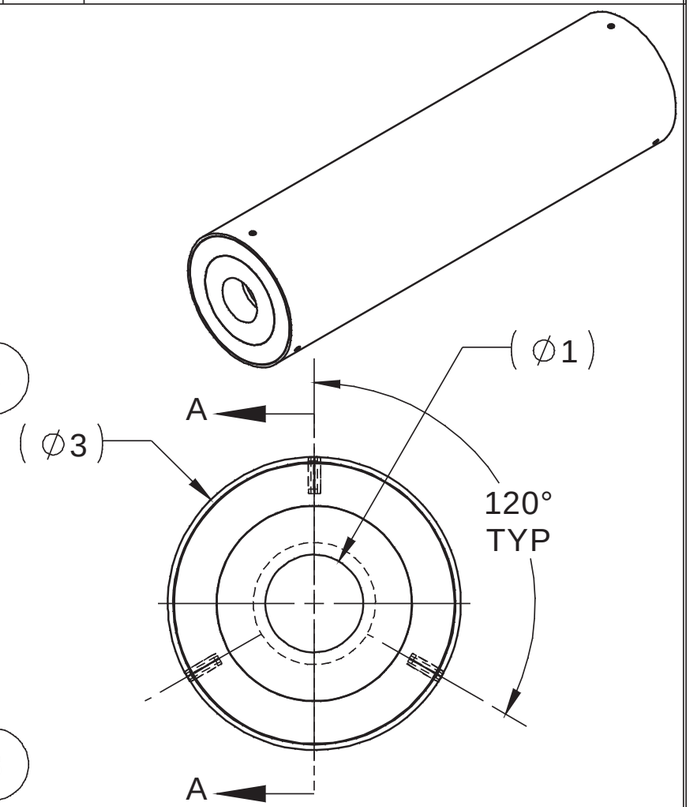
Quantity: 1.00

Item	Qty	Arpac Part	Description
1	1.00	119486-002	RLR, DRV, AL, 2.875, FEED, FILM, 1.000 BORE, 44.938LG
2	0.20	803372	LAG, RUBBER, BLACK, 4 W X 60 FT, (1 ROLL)

REVISIONS			
RV	DATE	BY	DESCRIPTION
A	03/22/2001	DCC	WAS 3 1/4 AL
B	10/21/2005	DCC	ADDED ROLL PINS



SECTION A-A



ANODIZED	142186-100	11 1/8	142184-100
NONE	142186	14 1/8	142184-003
NONE	142186	28	142184-002
NONE	142186	12 5/8	142184-001
NONE	142186	11 1/8	142184
FINISH	**ITEM 1**	**"A" DIM**	**PART NUMBER**

FINISH- SEE TABLE

ITM	QTY	PART NUM	DESCRIPTION
4	6	800316-010	PIN, ROLL, 1/8 DIA X 3/8 LG, SS
3	2	813654	BRG, CART, 1 X 2 X 9/16
2	2	142186-XXX	INSERT, RLR
1	1	902466	SS TBG WELDED 3 OD X 2.870 ID X 16GA (0.065) WALL, 304/304L

BILL OF MATERIALS

ARPAC
9511 WEST RIVER ST.
SCHILLER PARK, IL 60176

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONAL TOLERANCES:
FRACTIONS ± 1/64
TWO (2) DECIMALS ± 0.010
THREE (3) DECIMALS ± 0.005
ANGLES ± 0.5°

DRAWN: 07/12/2000	BY: DCC	SCALE: 0.5:1	SIZE: A
RELEASED: 07/12/2000	FILENAME: 142184	APPROVED BY: DCC	

DESCRIPTION: RLR, IDLER

DRAWING NUMBER: 142184

Arpac BOM

Parent Number: 12972

Description: ASSY, FINAL, XLR8, 12972 MACH, LH CONTROL, RH ELEC BOX, 36" ELEV

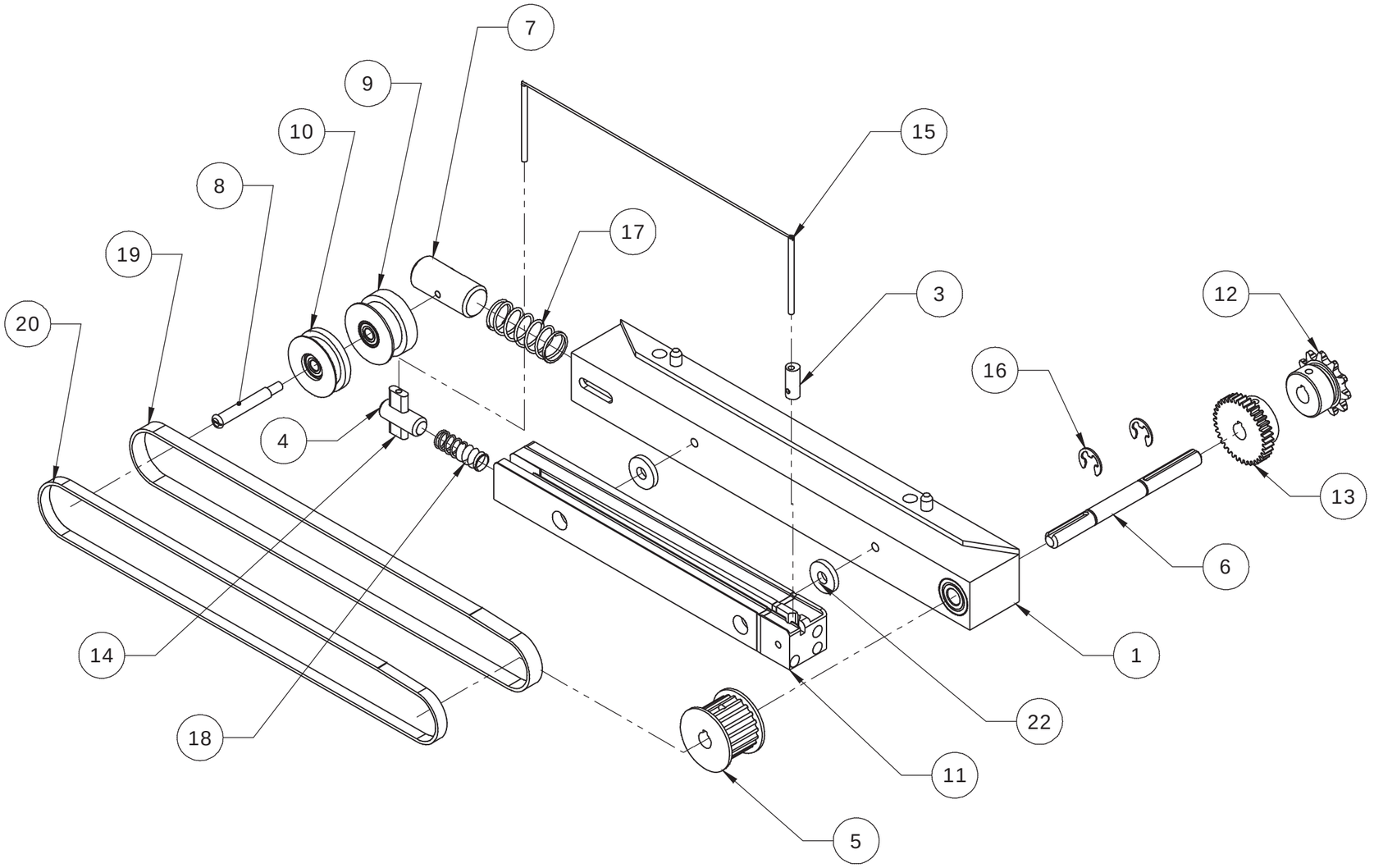
Model: XLR8

Assembly Part Number: 142184-000B

Description: ASSY, RLR, IDLER, 11.125 LG

Quantity: 1.00

Item	Qty	Arpac Part	Description
2	2.00	142186	INSERT, RLR
3	2.00	813654	BRG, CART, 1 X 2 X 9/16 LG, PRESS FIT ID & OD
4	6.00	800316-015	PIN, ROLL, 1/8 DIA X 3/8 LG
5	11.38	902466	SS TBG WELDED 3 OD X 2.870 ID X 16GA (0.065) WALL, 304/304L
6	2.50	900906	AL RND 3, 6061-T6511



ITM	QTY	PART NUM	DESCRIPTION
22	2	144825-011	SPACER
21			
20	1	809969	BELT, TIMING, .275W +0/-.015,
19	1	809974	DOUBLE GEARBELT, .390W +0/-.010,
18	1	809972	SPRING, COMP, 0.420 OD, X 1 1/4, SS,
17	1	809970	SPRING, COMP, 0.720 OD X 1-3/4L, MUSIC,
16	2	800253-001	RING, SNAP, E-STYLE, 3/8 SHFT DIA,
15	1	137828	ASSY, HOT WIRE
14	1	137827	RIBBON HOLDER LOWER BAR
13	1	119937	SIDE SEAL DRIVE GEAR
12	1	119936	SPKT, 35B11, MOD, 0.375 BORE
11	1	119935	ASSY, BAR, SEAL, LOWER
10	1	119930	ASSY, PULLEY, BELT, SEAL
9	1	119927	ASSY, PULLEY, BELT, TRIM
8	1	119926	AXLE, PUL, IDL
7	1	119925	IDLER ROLLER TAKE UP LOWER & UPPER BAR
6	1	119921	SHAFT, DRIVE, BAR, LOWER
5	1	119920	PULLEY, TIMING, DRIVE
4	1	119918	RIBBON TENSION BUSHING LOWER BAR
3	1	119917	HLDR, POST, RIBBON, FRONT
2			
1	1	281936	BAR, LOWER, MTG, SIDE SEAL, LH

BILL OF MATERIALS

PART NUMBER	DESCRIPTION
281940	LH, AS SHOWN
281940-001	RH, OPPOSITE

FINISH- NONE

ARPAC
9511 WEST RIVER ST.
SCHILLER PARK, IL 60176

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONAL TOLERANCES:
FRACTIONS ± 1/64
TWO (2) DECIMALS ± 0.010
THREE (3) DECIMALS ± 0.005
ANGLES ± 0.5°

DRAWN: 10/24/2011	BY: MRO	SCALE: 0.375:1	SIZE: B
RELEASED: 10/24/2011	FILENAME: 281940	APPROVED BY: MRO	

DESCRIPTION: ASSY, TRIMSEAL, LOWER

DRAWING NUMBER: 281940

Arpac BOM

Parent Number: 12972

Description: ASSY, FINAL, XLR8, 12972 MACH, LH CONTROL, RH ELEC BOX, 36" ELEV

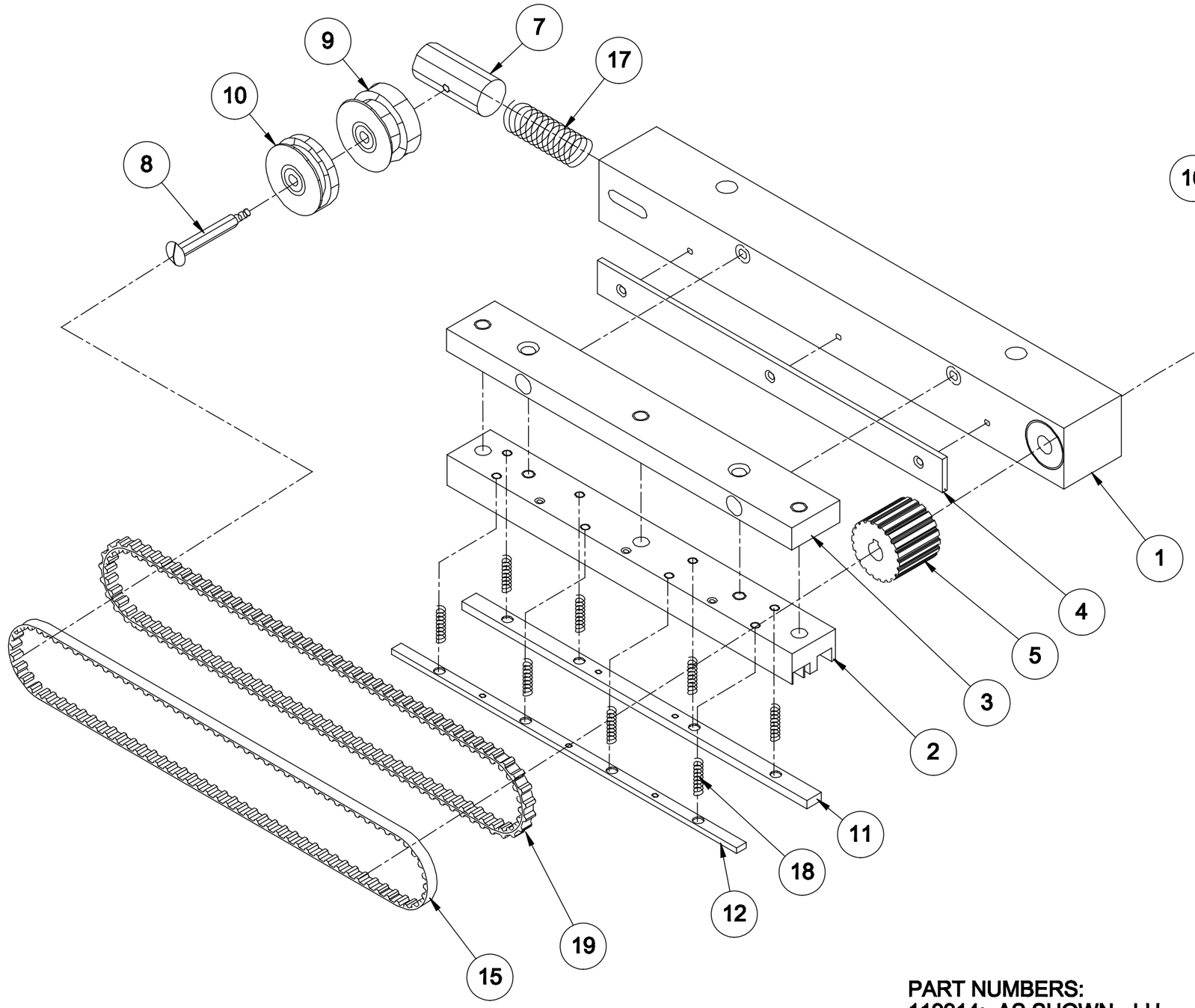
Model: XLR8

Assembly Part Number: 281940

Description: ASSY, TRIMSEAL, LOWER, TS37, LH, W/LOCATI

Quantity: 1.00

Item	Qty	Arpac Part	Description
1	1.00	281936	BAR, LOWER, MTG, SIDE SEAL, TS37, LH, W/LOCATING PINS
3	1.00	119917	HLDR, POST, RIBBON, FRONT, TS-37
4	1.00	119918	BSG, TENSION, RIBBON, LOWER, TS-37
5	1.00	119920	PULLEY, TIMING, TS-37
6	1.00	119921	SHAFT, DRIVE, BAR, LOWER, TS-37
7	1.00	119925	TAKEUP, RLR, IDLER, TS-37
8	1.00	119926	AXLE, PUL, IDL, TS-37
9	1.00	119927	ASSY, PULLEY, BELT, TRIM, TS-37, TRIMSEAL
10	1.00	119930	ASSY, PULLEY, BELT, SEAL, TS-37
11	1.00	119935	ASSY, BAR, SEAL, LOWER, L.H., TS-37, STD, (COMPLETE LWR BAR ASSY)
12	1.00	119936	SPKT, 35B11, MOD, 0.375 BORE, SPECIAL, MARTIN ONLY, .125W KWY & SS
13	1.00	119937	GEAR, SPUR, TS-37
14	1.00	137827	HLDR, RIBBON, BAR, LOWER, TS-37
15	1.00	137828-000B	ASSY, WIRE, HOT, 18 GA, TS37
16	2.00	800253-001	RING, SNAP, E-STYLE, 3/8 SHFT DIA,
17	1.00	809970	SPRING, COMP, 0.720 OD X 1-3/4L, MUSIC,
18	1.00	809972	SPRING, COMP, 0.420 OD, X 1 1/4, SS,
19	1.00	809974	DOUBLE GEARBELT, .390W +0/-.010,
20	1.00	809969	BELT, TIMING, .275W +0/-.015,
22	2.00	144825-011	SPCR, 9/32 ID, 3/4 OD, .125 LG, ALUMINUM
23	12.13	900156	AL SQ 1-1/2, 6061-T6511
24	45.00	plating	PLATING FOR PARTS



ITM	QTY	PART NUM	DESCRIPTION
20	8	800327-020	FSNR, SHCS, 6-32 X 9/16, SS,
19	1	809974	DOUBLE GEARBELT, .390 W
18	8	809973	SPRING, .180 X 9/16 , S.S.
17	1	809970	SPRING, .720 DIA X 1 3/4 LG
16	2	800253.001	RING, SNAP, "E", 3/8 SHAFT
15	1	809969	TIMING BELT,.275W
14	-	-	-
13	1	119943	GEAR, DRIVE, SIDE SEAL
12	1	119945	PLT, BLT, 1/4
11	1	119944	PLT, BLT
10	1	119930	ASSY, PUL, BLT, SEAL
9	1	119927	ASSY, PUL, BLT, TRIM
8	1	119926	AXLE, PUL, IDLER
7	1	119925	TAKEUP, RLR, IDLER
6	1	119942	SHAFT, DRIVE, UPPER
5	1	119920	PUL, TIMING, DRIVE
4	1	119939	SPACER, BAR, UPPER
3	1	119940.XXX	BAR, SEAL, UPPER
2	1	119941.XXX	BAR, UPPER
1	1	119938.XXX	BAR, MTG, TOP

BILL OF MATERIAL

Great Lakes Corporation CHICAGO, IL

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONAL TOLERANCES:
FRACTIONS ± 1/64
TWO (2) DECIMALS ± 0.010
THREE (3) DECIMALS ± 0.005
ANGLES ± 0.5°

DRAWN: 4-26-00	BY: DRV	SCALE: N/A	SIZE: B
RELEASED: 4-26-00	FILENAME: 119914	APPROVED BY:	

DESCRIPTION: ASSY, TRIMSEAL, UPPER

TS-37

DRAWING NUMBER: 119914

PART NUMBERS:
119914: AS SHOWN - LH
119914.001: OPPOSITE - RH

REF GLC#: 27655, HWA 1298

Arpac BOM

Parent Number: 12972

Description: ASSY, FINAL, XLR8, 12972 MACH, LH CONTROL, RH ELEC BOX, 36" ELEV

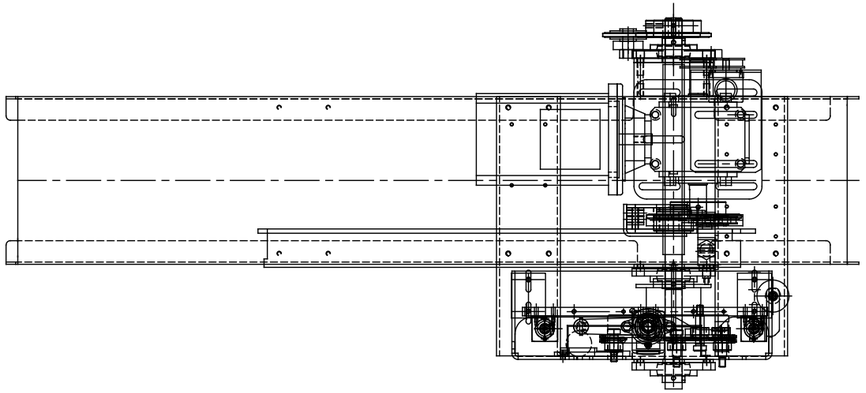
Model: XLR8

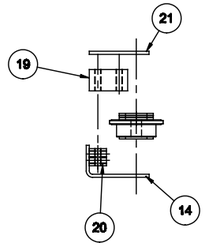
Assembly Part Number: 119914-000D

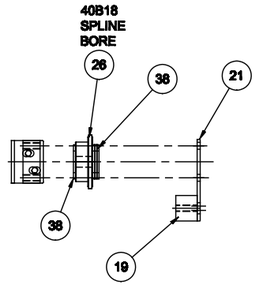
Description: ASSY, TRIMSEAL, UPPER, TS-37, L.H. STD

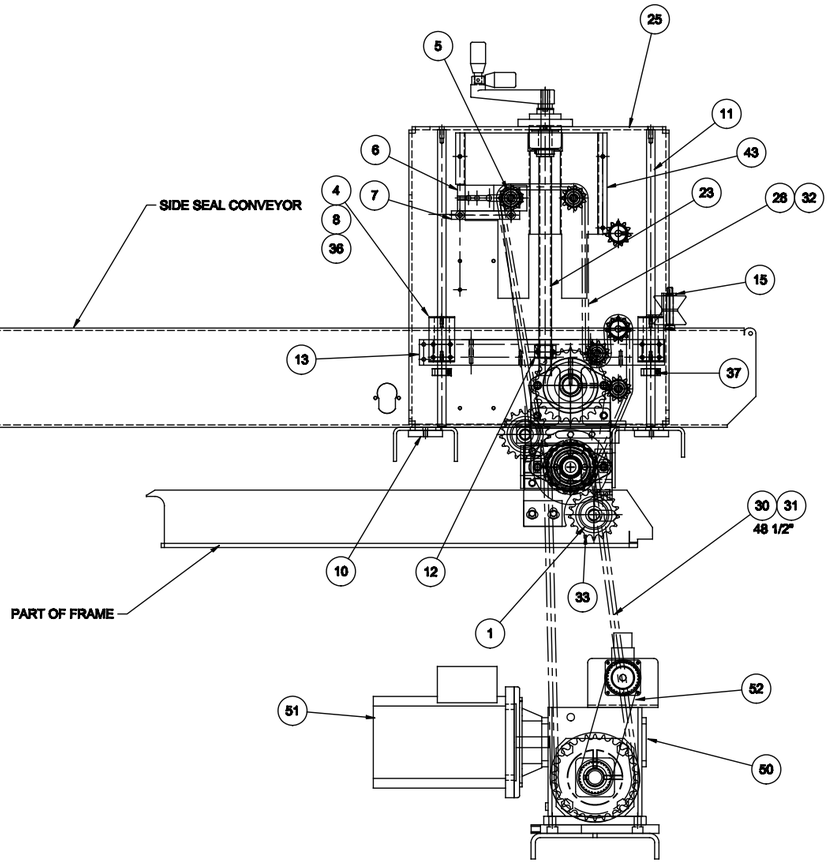
Quantity: 1.00

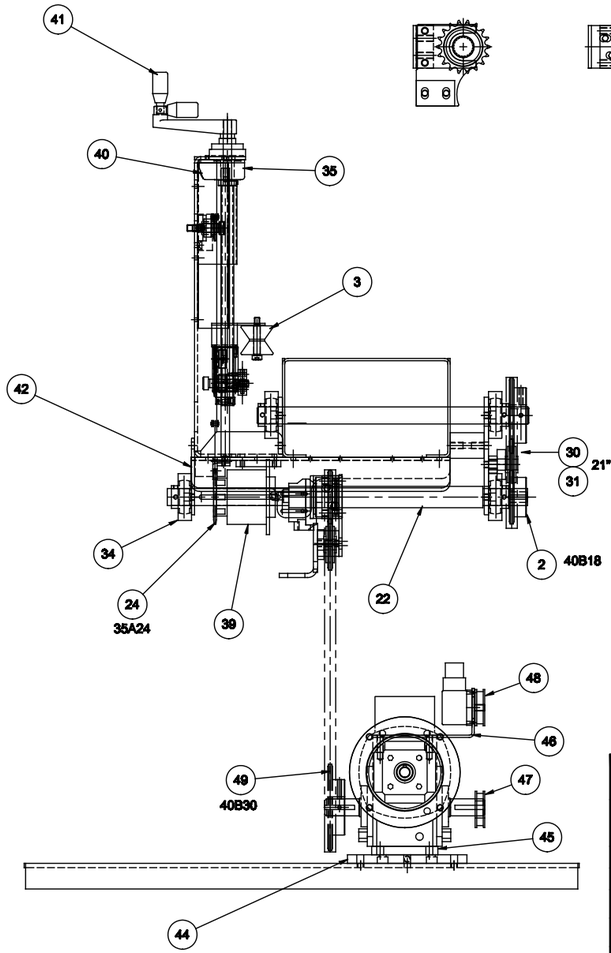
Item	Qty	Arpac Part	Description
1	1.00	119938-000A	BAR, TOP, MTG, TS-37, L.H. STD
2	1.00	119941	BAR, UPPER, TS-37, L.H. STD
3	1.00	119940	BAR, UPPER, SEAL, TS-37, L.H. STD
4	1.00	119939	SPCR, BAR, UPPER, TS-37
5	1.00	119920	PULLEY, TIMING, TS-37
6	1.00	119942	SHAFT, DRIVE, UPPER, TS-37
7	1.00	119925	TAKEUP, RLR, IDLER, TS-37
8	1.00	119926	AXLE, PUL, IDL, TS-37
9	1.00	119927	ASSY, PULLEY, BELT, TRIM, TS-37, TRIMSEAL
10	1.00	119930	ASSY, PULLEY, BELT, SEAL, TS-37
11	1.00	119944	PLT, BLT, TS-37
12	1.00	119945	PLT, BLT, 1/4 W, TS-37
13	1.00	119943	GEAR, DRIVE, TS-37
15	1.00	809969	BELT, TIMING, .275W +0/-.015,
16	2.00	800253-001	RING, SNAP, E-STYLE, 3/8 SHFT DIA,
17	1.00	809970	SPRING, COMP, 0.720 OD X 1-3/4L, MUSIC,
18	8.00	809973	SPRING, COMP, 0.180 OD X 9/16 LG, 0.020 SS WIRE
19	1.00	809974	DOUBLE GEARBELT, .390W +0/-.010,
20	8.00	800327-020	FSNR, SHCS, 6-32 X 9/16, SS,











PART NUMBERS:
261654: RH, AS SHOWN
261654-001: LH, OPPOSITE

ARPAC	9511 WEST RIVER ST. SCHILLER PARK, IL 60176		
UNLESS OTHERWISE SPECIFIED ALL DIMENSIONAL TOLERANCES:	FRACTIONS ± 1/64 TWO (2) DECIMALS ± 0.010 THREE (3) DECIMALS ± 0.005 ANGLES ± 0.5°		
DRAWN: 7-20-09	BY: MRO	SCALE: 3/16"=1"	SIZE: C
RELEASED: 7-20-09	FILENAME: 261654	APPROVED BY: MRO	
DESCRIPTION: ASSY, DRV, SEAL, TRIM			
		DRAWING NUMBER: 261654	

Arpac BOM

Parent Number: 12972

Description: ASSY, FINAL, XLR8, 12972 MACH, LH CONTROL, RH ELEC BOX, 36" ELEV

Model: XLR8

Assembly Part Number: 261654-001A

Description: ASSY, DRV, SEAL, TRIM, CRS, LH

Quantity: 1.00

Item	Qty	Arpac Part	Description
1	1.00	101835-103	SPACER, SPKT, IDL, 0.375 LG, NO THREADS, ANODIZED
2	1.00	183803-001	SPKT, 40B18, MOD, 1.000 BORE
3	1.00	119902	SPOOL, SCRAP, TS-37
4	4.00	119954	PLT, CAP, BRG, TS-37
5	4.00	119959	SPKT, 35B11, MOD, 0.750 BORE, IDL, IDLER SPKT ASSY
6	1.00	119960	PLT, MTG, SPKT, TAKEUP, ANODIZED
7	1.00	119961	BAR, ALNMT, TAKEUP, ANODIZED
8	2.00	138166	BLOCK, BUSHING, THOMSON, ANODIZED
10	2.00	191350-047	PLT, NUT, 3/8 X 2 X 2 5/8, 1/4-20
11	2.00	191478-003	SHAFT, 0.500, TAPPED, 1/4-20, 17 3/8 LG SS THOMPSON SHAFT, TAPPED O
12	1.00	246714	BLK, NUT
13	1.00	261652-001	CARRIER, SEAL, SHORT, EASY OPEN, ANODIZE
14	1.00	255720	BKT, GUIDE, SPKT, FIXED
15	1.00	250143-001	BKT, MTG, SPOOL, SCRAP, LH
19	1.00	255717	SPACER, SPKT, FIXED, LWR
20	1.00	255718	SPACER, SPKT, FIXED, UPR, CRS
21	1.00	263090	PLT, GUIDE, SPKT, FIXED
22	1.00	261655	SHAFT, SPLINE
23	1.00	246716	SHAFT, ADJ, VERT
24	1.00	255748	SPKT, 35A24, MOD, 1 1/8 BORE
25	1.00	255749-002	PLT, MTG, TRIMSEAL, LH, CRS
26	1.00	255823	SPKT, 40B18, MOD, SPECIAL, 1.255 SPLINE
28	4.13	800459	CHAIN, RLR, #35, RLR RVT, (HANAGATA-G9000408)
30	5.88	800462	CHAIN, RLR, #40, RLR RVT,
31	2.00	800502	LINK, CONN, #40,
32	1.00	800515	LINK, CONN, #35,
33	1.00	800906	SPKT, 40BB17H, IDLER, 5/8 ID,
34	1.00	802760	*, BRG, FLG, 1 ID, 2-BOLT, SEE COMMENTS
35	1.00	802796	*, BRG, FLG, 1/2 ID, 2-BOLT MALLEABLE, SEE COMMENTS
36	4.00	802959	BUSH, FRELON, 1/2 X 7/8 X 1-1/4 LG SIMPLICITY
37	4.00	808304	COLLAR, SHAFT, CLAMP, 1-PIECE, 1/2,
38	4.00	811322	WSHR, OILITE, 1.265O X 2.000 X 1/8 THK
39	1.00	811731	LIMITER TORQUE 1"BORE STANDARD C&F HUBS, OILITE BUSH,ACT.DISC. ALLE
40	1.00	836931-001	COUNTER, POSITION, 1/2 ID, CCW, 100 COUNT PER TURN, 00.000 DECIMAL
41	1.00	825703	HDL, CRANK, W/FOLD AWAY HDL, 1/2 BORE 3.94 LG ARM, ALUM, BLACK
42	1.00	255721	PLT, MTG, BRG, CRS
43	1.00	243063-002	GUARD, DRIVE, TRIMSEAL, LH
44	1.00	234370	TAKE-UP PLATE
45	1.00	254132-001	SPACER, GB, 1/2
46	1.00	255705	BKT, ENCODER, CRS
47	1.00	102151-001	PUL, DRV, ENCDR 1" BORE FOR F721
48	1.00	102152	PUL, DRVN, ENCDR, 3/8 BORE,
49	1.00	157010	SPKT, 40B30, MOD, 1.000 BORE,
50	1.00	806061	*, GEARBOX, WORM, 15:1, 56C FACE, QUILL TYPE, SEE COMMENTS

Arpac BOM

Parent Number: 12972

Description: ASSY, FINAL, XLR8, 12972 MACH, LH CONTROL, RH ELEC BOX, 36" ELEV

Model: XLR8

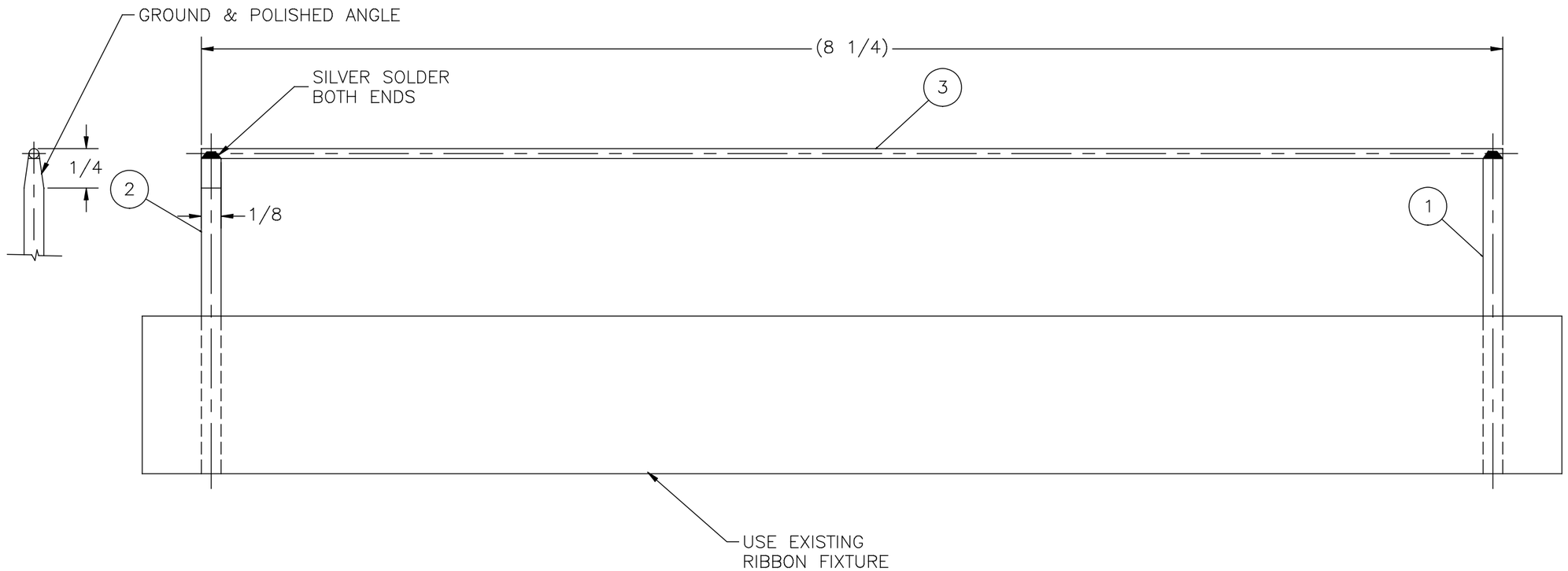
Assembly Part Number: 261654-001A

Description: ASSY, DRV, SEAL, TRIM, CRS, LH

Quantity: 1.00

Item	Qty	Arpac Part	Description
51	1.00	810613	MOTOR, 1 HP, 208-230/460V, 56C, 1750 RPM INVERTER DUTY, HIGH TORQUE
52	1.00	809813	BELT, TIMING, 1/5 P, 3/8 W, 18" LG,

REVISIONS			
RV	DATE	BY	DESCRIPTION
A	1–16–04	MRO	ADDED GROUND & POLISHED ANGLE



REF: GLC P/N: MM22828
DWG: 27832

ITM	QTY	PART NUM	DESCRIPTION
3	1	119934	WIRE, HOT
2	1	119933	POST, RIBBON, B
1	1	119932	POST, RIBBON, A

BILL OF MATERIAL

Great Lakes Corporation CHICAGO, IL

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONAL TOLERANCES:
FRACTIONS ± 1/64
TWO (2) DECIMALS ± 0.010
THREE (3) DECIMALS ± 0.005
ANGLES ± 0.5°

DRAWN: 4–27–00	BY: DCC	SCALE: N/A	SIZE: A
RELEASED: 4–27–00	FILENAME: 137828	APPROVED BY: DCC	

DESCRIPTION:
ASSY, HOT WIRE
TS–37, TRIMSEAL

DRAWING NUMBER:
137828

Arpac BOM

Parent Number: 12972

Description: ASSY, FINAL, XLR8, 12972 MACH, LH CONTROL, RH ELEC BOX, 36" ELEV

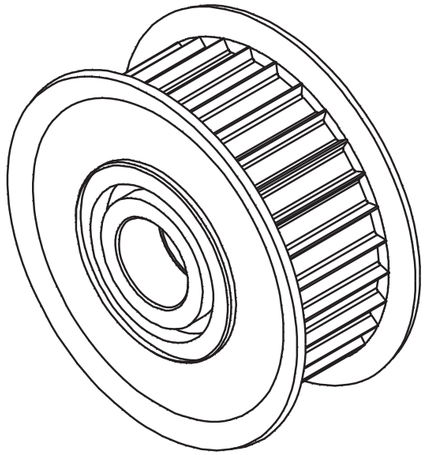
Model: XLR8

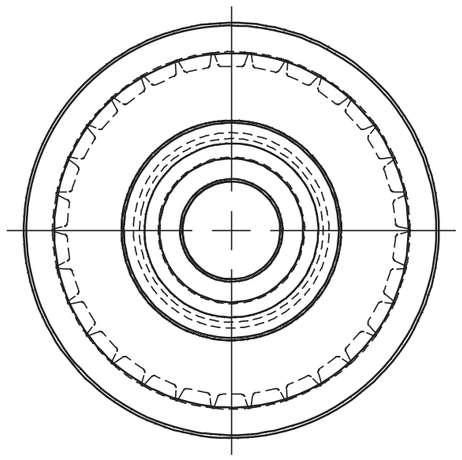
Assembly Part Number: 137828-000B

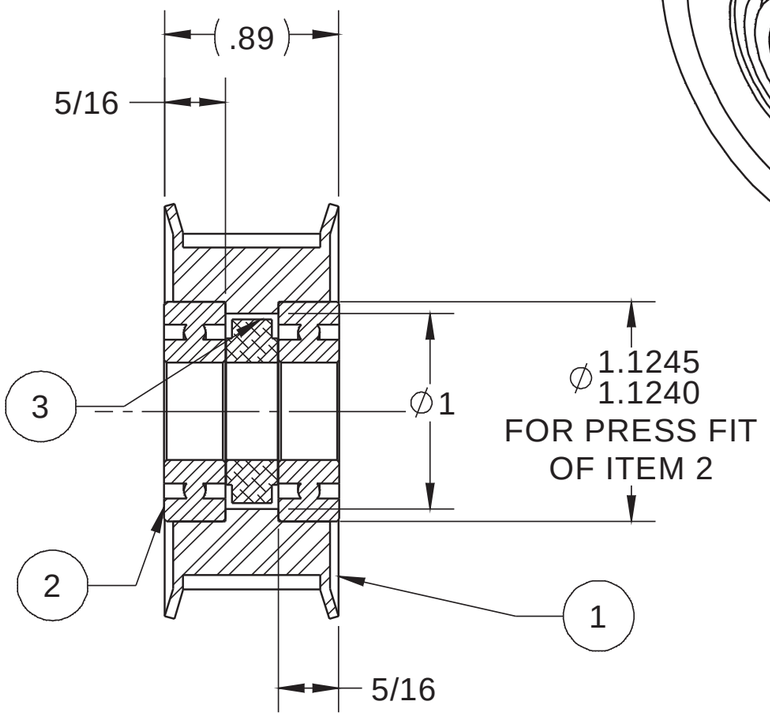
Description: ASSY, WIRE, HOT, 18 GA, TS37

Quantity: 3.00

Item	Qty	Arpac Part	Description
1	1.00	119932	POST, RIBBON, A, TS-37
2	1.00	119933	POST, RIBBON, B, TS-37
3	0.02	810429	WIRE, HOT, 18 GA NICHROME TYPE C







ITM	QTY	PART NUM	DESCRIPTION
3	1	194048-001	SPCR, BRG
2	2	802786	BRG, CART, 1/2 X 1-1/8 X 5/16 LG, SHIELDED, PRESS FIT ID & OD
1	1	822671	PULLEY, TIMING, 30T, 5MM P, 15MM W STEEL

BILL OF MATERIALS

ARPAC
9511 WEST RIVER ST.
SCHILLER PARK, IL 60176

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONAL TOLERANCES:
FRACTIONS ± 1/64
TWO (2) DECIMALS ± 0.010
THREE (3) DECIMALS ± 0.005
ANGLES ± 0.5°

DRAWN: 8/11/2009	BY: MRO	SCALE: 1:1	SIZE: A
RELEASED: 8/11/2009	FILENAME: 262089	APPROVED BY: MRO	

DESCRIPTION: ASSY, PULLEY, IDLER

DRAWING NUMBER: 262089

FINISH- NONE

Arpac BOM

Parent Number: 12972

Description: ASSY, FINAL, XLR8, 12972 MACH, LH CONTROL, RH ELEC BOX, 36" ELEV

Model: XLR8

Assembly Part Number: 262089

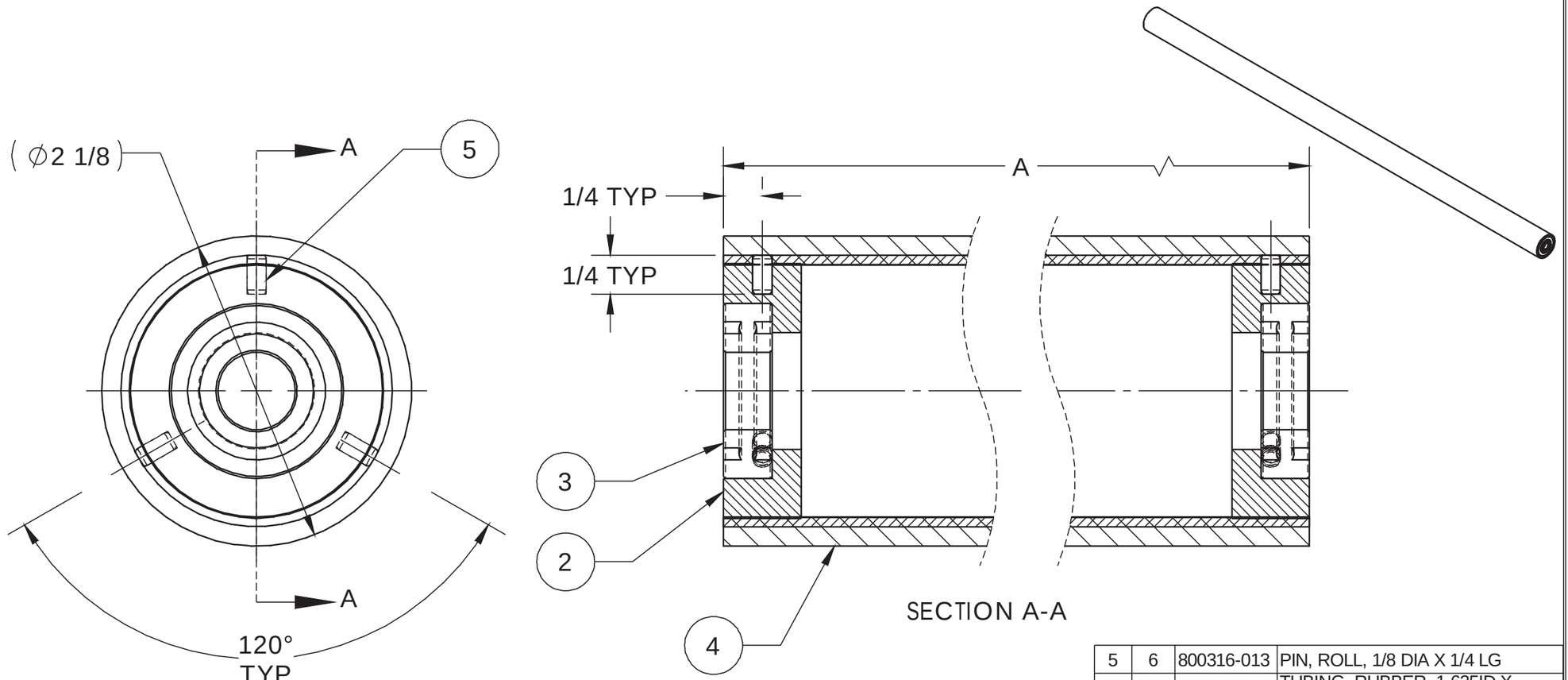
Description: ASSY, PULLEY, TIMING, 30T, 5MM P, 15MM W,

Quantity: 2.00

Item	Qty	Arpac Part	Description
1	1.00	822671	PULLEY, TIMING, 30T, 5MM P, 15MM W STEEL
2	2.00	802786	BRG, CART, 1/2 X 1-1/8 X 5/16 LG, SHIELDED, PRESS FIT ID & OD
3	1.00	194048-001	SPCR, BRG, 0.265 LG
4	0.27	900179	AL RND 1, 6061-T6511

Part Number: 136664-000D Description: ASSY, RLR, NEEDLE, RUBBER TS-37N Qty: 1

REVISIONS			
RV	DATE	BY	DESCRIPTION
A	10/21/2005	DCC	ADDED ROLL PINS



SECTION A-A

ITM	QTY	PART NUM	DESCRIPTION
5	6	800316-013	PIN, ROLL, 1/8 DIA X 1/4 LG
4	1	810654	TUBING, RUBBER, 1.625ID X 0.187W X 48"LG, 40 DUR, BLACK, MANDREL BUILD, GROUND OD
3	2	802786	BRG, CART, 1/2 X 1-1/8 X 5/16 LG, SHIELDED, PRESS FIT ID & OD
2	2	142138	INSERT, RLR, NEEDLE
1	1	901924	AL TBG MECH 1-3/4 OD X 1.620 ID X 16GA (0.065) WALL, 6061-T6

BILL OF MATERIALS

58.50	136664-009
43 15/16	136664-008
44	136664-007
38 15/16	136664-006
42.00	136664-005
41.00	136664-004
31.00	136664-003
25.50	136664-002
22.50	136664-001
43.00	136664
A	PART NUMBER

FINISH- NONE

NOTES:

PRESSFIT ITEM 3 INTO ITEM 1
PRESSFIT ITEM 1 INTO ITEM 5
INSTALL ITEM 2 OVER ITEM 5 WITH AIR

ARPAC
9511 WEST RIVER ST.
SCHILLER PARK, IL 60176

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONAL TOLERANCES:
FRACTIONS ± 1/64
TWO (2) DECIMALS ± 0.010
THREE (3) DECIMALS ± 0.005
ANGLES ± 0.5°

DRAWN: 8/24/2005	BY: DN	SCALE: 1:1	SIZE: A
RELEASED: 8/24/2005	FILENAME: 136664	APPROVED BY: DN	

DESCRIPTION: RLR, NEEDLE, RUBBER

DRAWING NUMBER: 136664

Arpac BOM

Parent Number: 12972

Description: ASSY, FINAL, XLR8, 12972 MACH, LH CONTROL, RH ELEC BOX, 36" ELEV

Model: XLR8

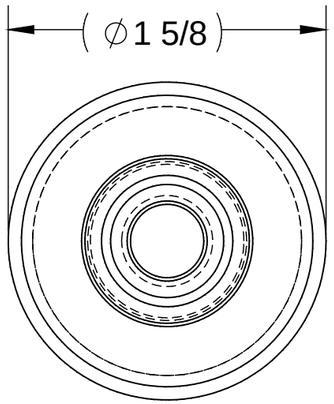
Assembly Part Number: 136664-000D

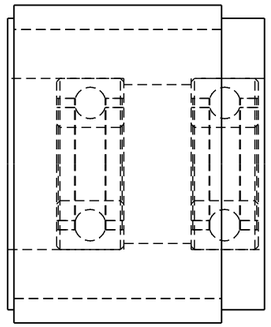
Description: ASSY, RLR, NEEDLE, RUBBER TS-37N

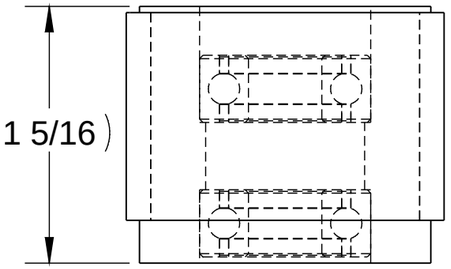
Quantity: 1.00

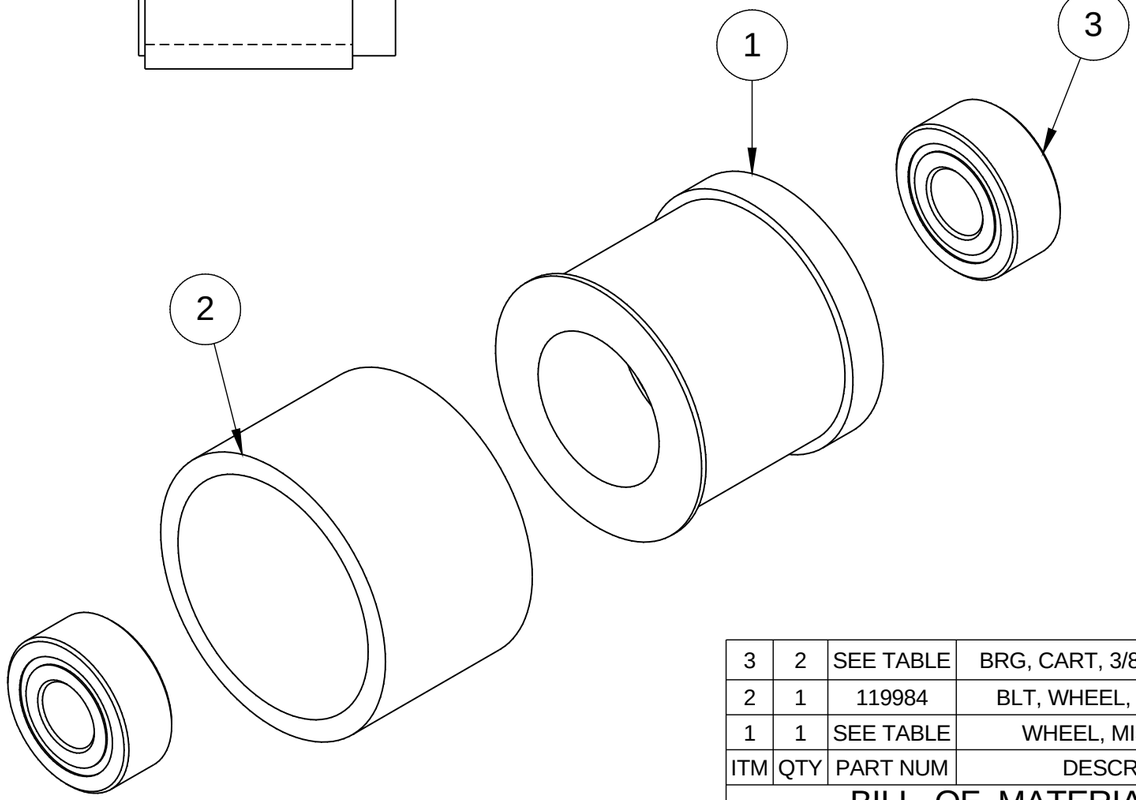
Item	Qty	Arpac Part	Description
1	2.00	142138	INSERT, RLR, NEEDLE TS-37
2	1.00	810654	TUBING, RUBBER, 1.625ID X 0.187W X 48"LG, 40 DUR, BLACK, MANDREL BU
3	2.00	802786	BRG, CART, 1/2 X 1-1/8 X 5/16 LG, SHIELDED, PRESS FIT ID & OD
4	6.00	800316-013	PIN, ROLL, 1/8 DIA X 1/4 LG
5	43.25	901924	AL TBG STRUCTURAL 1-3/4 OD X 1.620 ID X 16GA (0.065) WALL, 6061-T6
6	1.50	900181	AL RND 1-3/4, 6061-T6511

REVISIONS			
RV	DATE	BY	DESCRIPTION
A	3/7/13	MLB	ADD TABLE & -001 CONFIG FOR SS WHEEL









ITM	QTY	PART NUM	DESCRIPTION
3	2	SEE TABLE	BRG, CART, 3/8 X 7/8, SEALED
2	1	119984	BLT, WHEEL, MISER, TS-37
1	1	SEE TABLE	WHEEL, MISER, TS-37

BILL OF MATERIALS

P/N	DESC	ITEM 1	ITEM 3
119982	ASSY, WHEEL	119983	810434
119982-001	ASSY, WHEEL, SS	119983-001	825458

ARPAC
9511 WEST RIVER ST.
SCHILLER PARK, IL 60176

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FRACTIONS ± 1/64
TWO (2) DECIMALS ± 0.010
THREE (3) DECIMALS ± 0.005
ANGLES ± 0.5°

DRAWN: 9/6/2012	BY: mbenezra	SCALE: 1:1	SIZE: A
RELEASED: 3/14/2013	FILENAME: 119982		

DESCRIPTION: ASSY, WHEEL, TS-37

DRAWING NUMBER: 119982

Arpac BOM

Parent Number: 12972

Description: ASSY, FINAL, XLR8, 12972 MACH, LH CONTROL, RH ELEC BOX, 36" ELEV

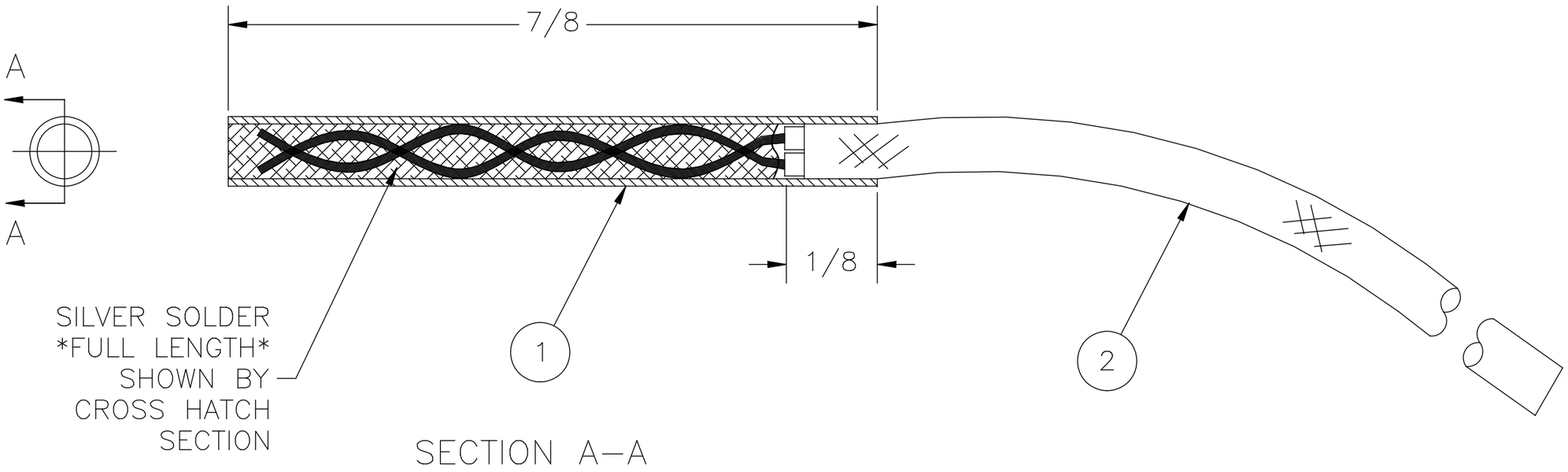
Model: XLR8

Assembly Part Number: 119982

Description: ASSY, WHEEL, TS-37

Quantity: 2.00

Item	Qty	Arpac Part	Description
1	1.00	119983	WHEEL, MISER, TS-37
2	1.00	119984	BLT, WHEEL, MISER, TS-37



SECTION A–A

REF GLC P/N: MM33466
DWG: 36444

ITM	QTY	PART NUM	DESCRIPTION
2	22"	810723	24 GA SOLID THERMOCOUPLE WIRE
1	1	179420	3/32 OD X .010 WALL S.S. TUBING

BILL OF MATERIAL

Great Lakes Corporation CHICAGO, IL

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONAL TOLERANCES:
FRACTIONS ± 1/64
TWO (2) DECIMALS ± 0.010
THREE (3) DECIMALS ± 0.005
ANGLES ± 0.5°

DRAWN: 7–5–00	BY: DCC	SCALE: N/A	SIZE: A
RELEASED: 7–5–00	FILENAME: 142169	APPROVED BY: DCC	

DESCRIPTION:
ASS'Y, THERMOCOUPLE
TS–37

DRAWING NUMBER:
142169

Arpac BOM

Parent Number: 12972

Description: ASSY, FINAL, XLR8, 12972 MACH, LH CONTROL, RH ELEC BOX, 36" ELEV

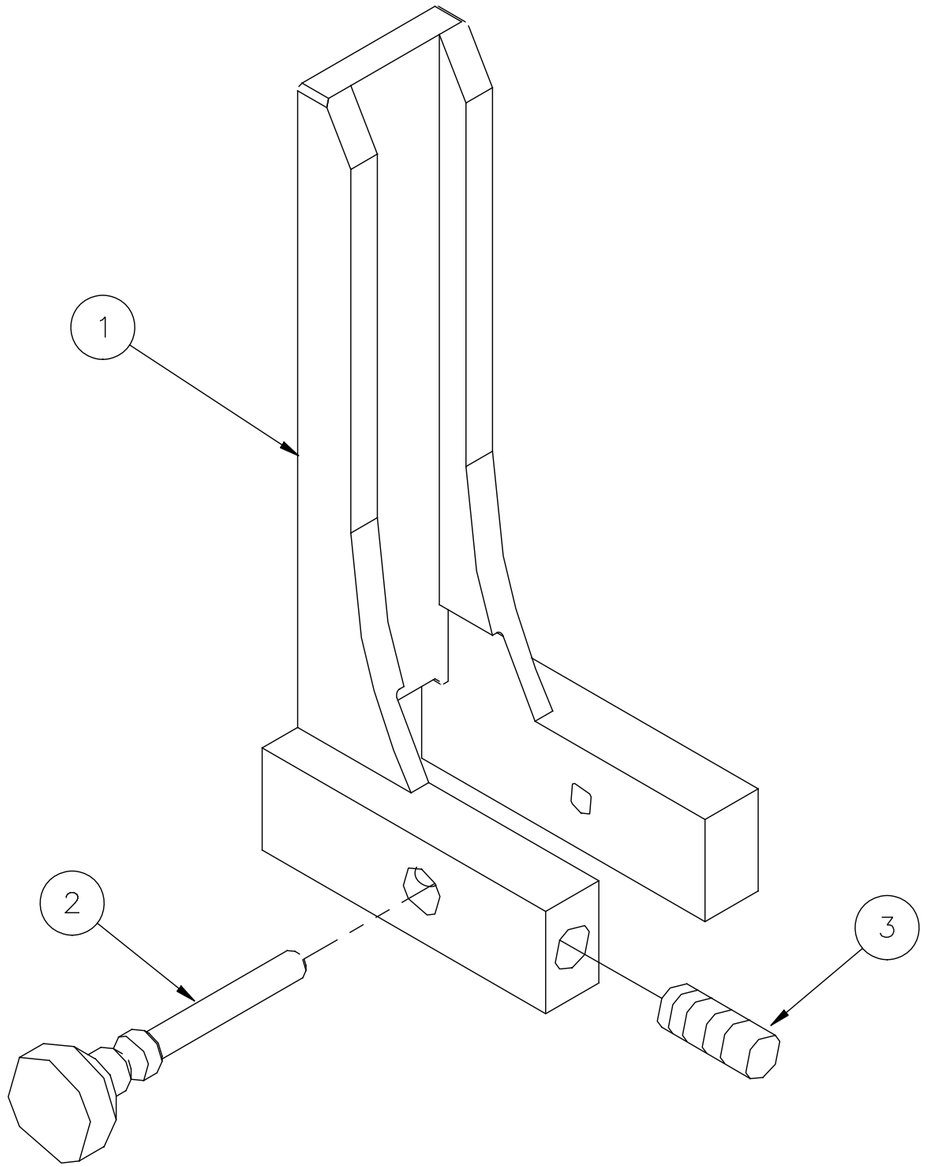
Model: XLR8

Assembly Part Number: 142169

Description: ASSY, THERMOCOUPLE, TS37, 7/8 LG

Quantity: 1.00

Item	Qty	Arpac Part	Description
1	1.83	810723	WIRE, THERMOCOUPLE, 24 GA SOLID
2	1.00	179420	THERMOCOUPLE TUBING, 7/8 LG



NOTE:
LUG HEIGHT REFERS TO HEIGHT ABOVE INFEED TOP PLATE ON TS37 TYPE INFEEDS

LUG HEIGHT SEE NOTE	LUG P/N	PART NUMBER
3 1/2	173408	173409
2	173408.001	173409.001
1 1/4	173408.002	173409.002
1/4	173408.003	173409.003
3 1/8	173408.004	173409.004
1	173408.005	173409.005
4 1/4	173408.006	173409.006
2 1/2	173408.007	173409.007
1 3/4	173408.008	173409.008
3	173408.009	173409.009
–	173408.009	173409.010
–	173408.009	173409.011
–	173408.009	173409.012
–	173408.009	173409.013

ITM	QTY	PART NUM	DESCRIPTION
1	1	173408.XXX	LUG, INFEED, MOD
2	1	147056	PIN, PUSHER, W/HEAD
3	1	811928	PLUNGER, SPRING, 1/4–20

BILL OF MATERIAL

Great Lakes Corporation CHICAGO, IL

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FRACTIONS ± 1/64
TWO (2) DECIMALS ± 0.010
THREE (3) DECIMALS ± 0.005
ANGLES ± 0.5°

DRAWN: 9–15–00	BY: DCC	SCALE: FULL	SIZE: A
RELEASED: 9–15–00	FILENAME: 173409	APPROVED BY: DCC	

DESCRIPTION: ASS'Y, LUG

DRAWING NUMBER: 173409

Arpac BOM

Parent Number: 12972

Description: ASSY, FINAL, XLR8, 12972 MACH, LH CONTROL, RH ELEC BOX, 36" ELEV

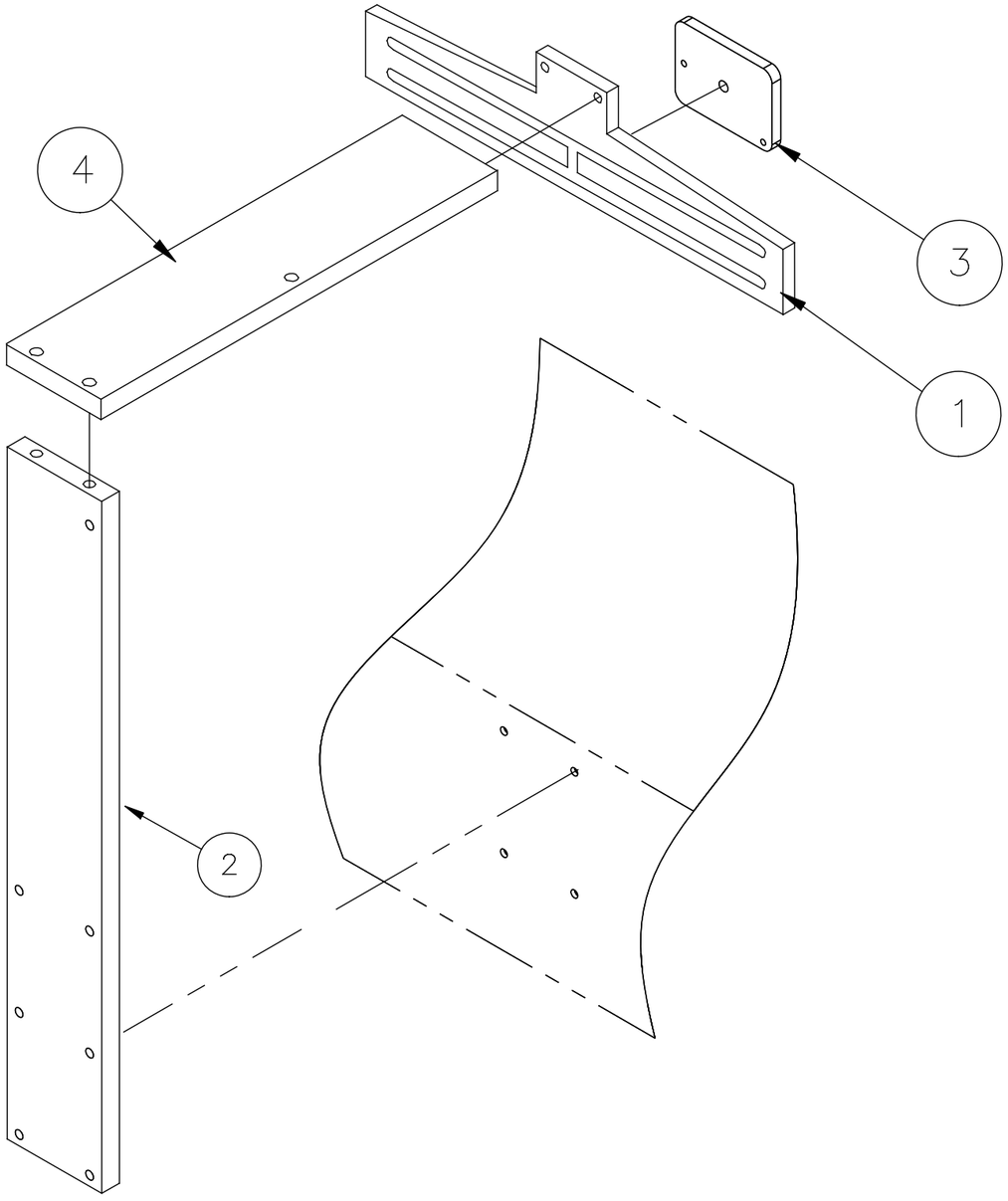
Model: XLR8

Assembly Part Number: 173409-000A

Description: ASSY, LUG, TS37, HC37, LUG HEIGHT = 3 1/2

Quantity: 18.00

Item	Qty	Arpac Part	Description
901	1.00	147056	PIN, PUSHER, W/HEAD,
902	1.00	173408-000A	LUG, INFEED, MOD, "A" = 4 1/2
903	1.00	811928	PLUNGER-STBY SPRNG1/4-20X17/32,



ITM	QTY	PART NUM	DESCRIPTION
4	1	225171	BAR, CROSS, EYE
3	1	215404	PLT, PIVOT, EYE
2	1	225170	POST, EYE
1	1	236620	PLT, MTG, EYE

BILL OF MATERIAL

Great Lakes Corporation CHICAGO, IL

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONAL TOLERANCES:
FRACTIONS ± 1/64
TWO (2) DECIMALS ± 0.010
THREE (3) DECIMALS ± 0.005
ANGLES ± 0.5°

DRAWN: 1–15–03	BY: DCC	SCALE: 1/4"=1"	SIZE: A
RELEASED: 1–15–03	FILENAME: 215405	APPROVED BY: DCC	

DESCRIPTION: ASSY, MTG, EYE, INFEED

DRAWING NUMBER: 215405

Arpac BOM

Parent Number: 12972

Description: ASSY, FINAL, XLR8, 12972 MACH, LH CONTROL, RH ELEC BOX, 36" ELEV

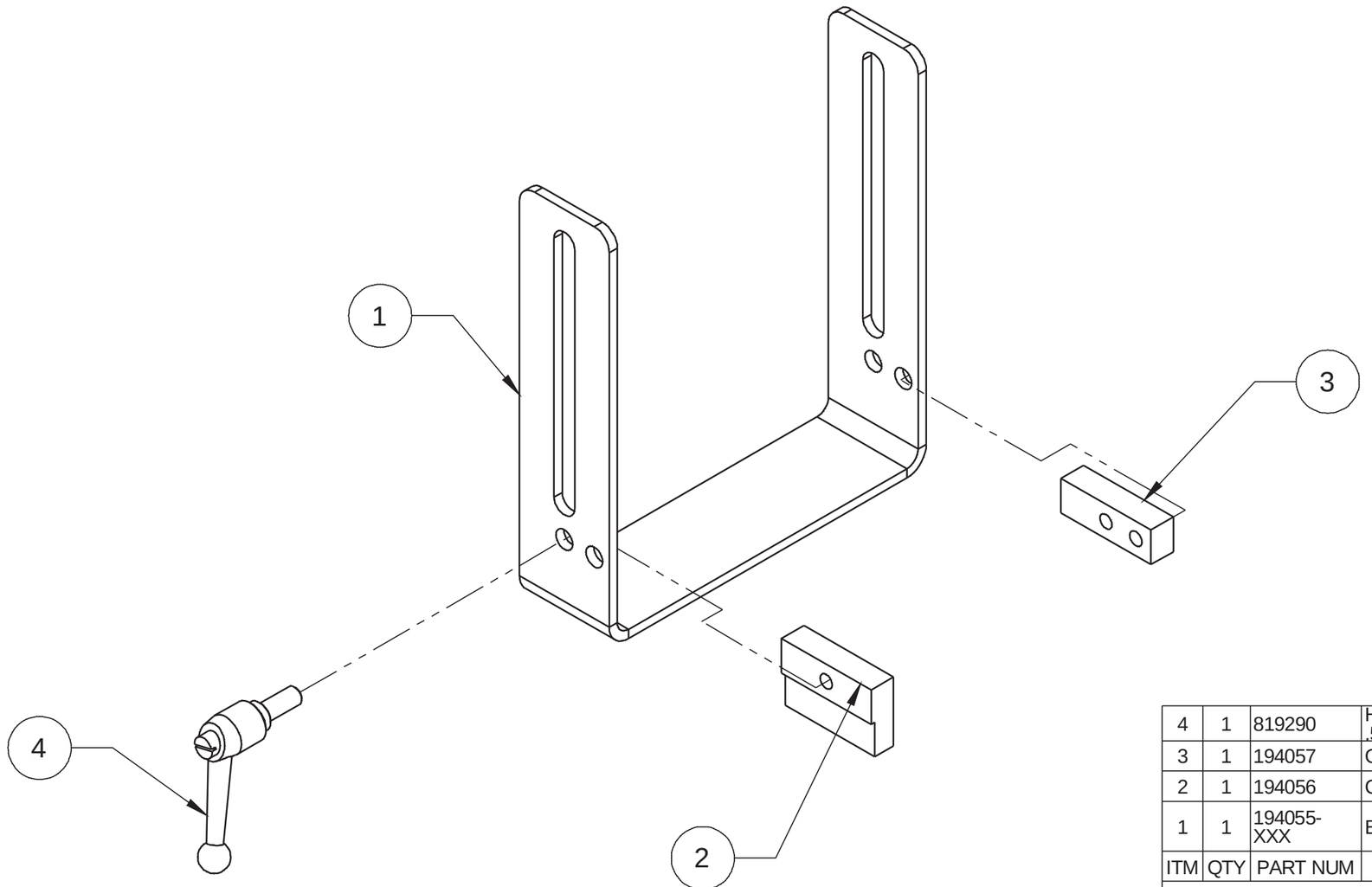
Model: XLR8

Assembly Part Number: 215405-000C

Description: ASSY, MTG, EYE, INFEED

Quantity: 1.00

Item	Qty	Arpac Part	Description
1	1.00	236620	PLT, MTG, EYE, ADJUSTABLE, SS
2	1.00	225170	POST, EYE,
3	1.00	215404	PLT, PIVOT, MTG, EYE, SS
4	1.00	225171	BAR, CROSS, EYE



4	1	819290	HDL, ADJ, ZINC, 1-1/2 LG 1/4-20 X .59 STUD
3	1	194057	GUIDE, BKT, PHOTOEYE
2	1	194056	CLAMP, BKT, PHOTOEYE
1	1	194055-XXX	BKT, PHOTOEYE
ITM	QTY	PART NUM	DESCRIPTION

BILL OF MATERIALS

4	1	808979	HDL, ADJ, SS, 1.57 LG 1/4-20 X .59 STUD
3	1	194057	GUIDE, BKT, PHOTOEYE
2	1	194056	CLAMP, BKT, PHOTOEYE
1	1	194055-XXX	BKT, PHOTOEYE
ITM	QTY.	PART NUM	DESCRIPTION

BILL OF MATERIALS

7"	CRS	240319-002
5"	SS	240319-001
5"	CRS	240319
WIDTH	MATERIAL	PART NUMBER

ARPAC 9511 WEST RIVER ST. SCHILLER PARK, IL 60176

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONAL TOLERANCES:
FRACTIONS ± 1/64
TWO (2) DECIMALS ± 0.010
THREE (3) DECIMALS ± 0.005
ANGLES ± 0.5°

DRAWN: 7/14/2006	BY: MRO	SCALE: 1:2	SIZE: A
RELEASED: 7/14/2006	FILENAME: 240319	APPROVED BY: MRO	

DESCRIPTION: ASSY, SUB, DETECT, LUG

DRAWING NUMBER: 240319

Arpac BOM

Parent Number: 12972

Description: ASSY, FINAL, XLR8, 12972 MACH, LH CONTROL, RH ELEC BOX, 36" ELEV

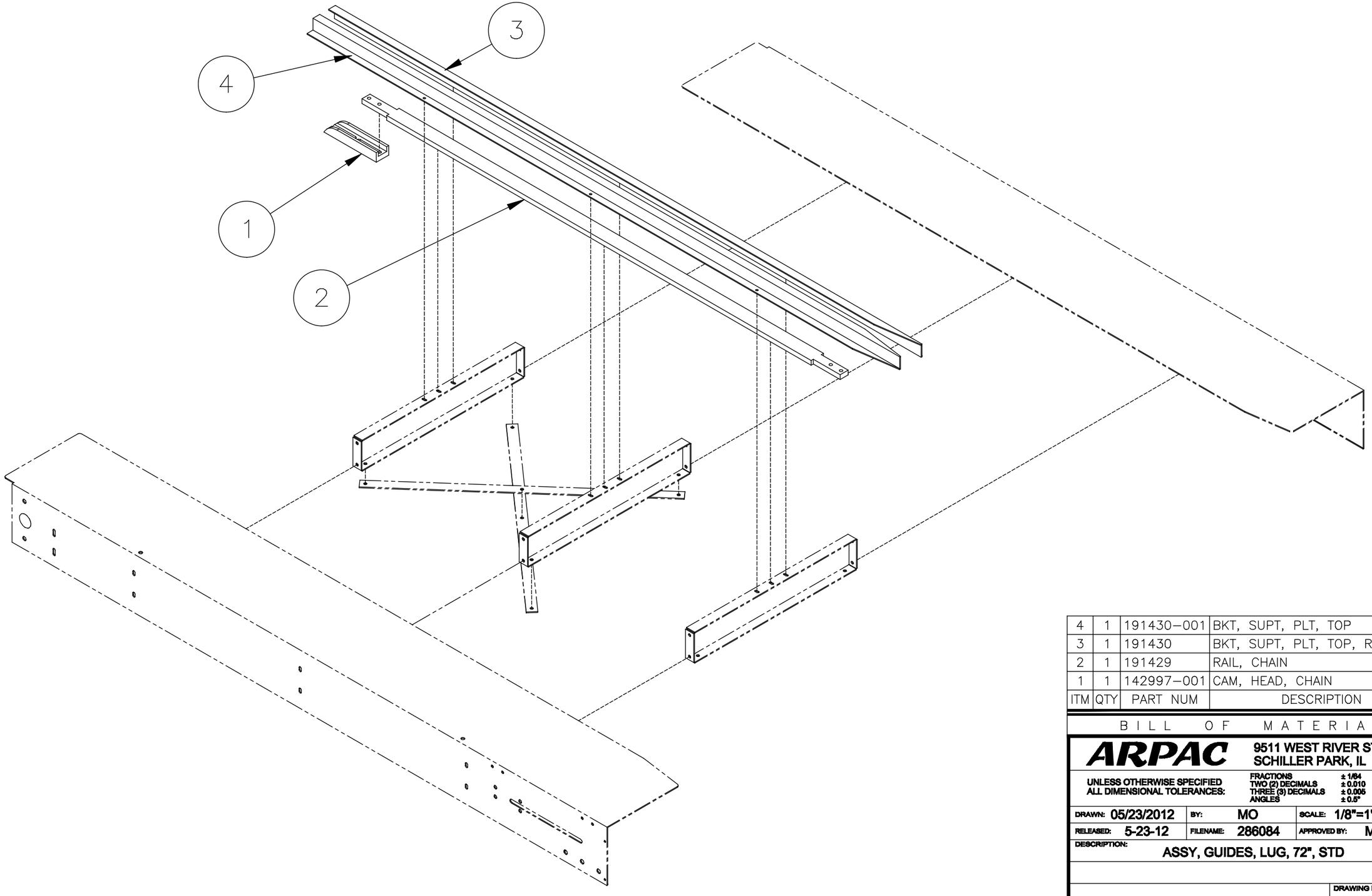
Model: XLR8

Assembly Part Number: 240319

Description: ASSY, SUB, DETECT, LUG, 5" WIDE

Quantity: 1.00

Item	Qty	Arpac Part	Description
1	1.00	194055	BKT, PHOTOEYE 5" WIDE
2	1.00	194056	CLAMP, BKT, PHOTOEYE
3	1.00	194057	GUIDE, BKT, PHOTOEYE
4	1.00	819290	HDL, ADJ, ZINC, 1-1/2 LG 1/4-20 X .59 STUD



ITM	QTY	PART NUM	DESCRIPTION
4	1	191430–001	BKT, SUPT, PLT, TOP
3	1	191430	BKT, SUPT, PLT, TOP, RH
2	1	191429	RAIL, CHAIN
1	1	142997–001	CAM, HEAD, CHAIN

BILL OF MATERIAL

ARPAC
9511 WEST RIVER ST.
SCHILLER PARK, IL 60176

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONAL TOLERANCES:
FRACTIONS ± 1/64
TWO (2) DECIMALS ± 0.010
THREE (3) DECIMALS ± 0.005
ANGLES ± 0.5°

DRAWN: 05/23/2012	BY: MO	SCALE: 1/8"=1"	SIZE: B
RELEASED: 5-23-12	FILENAME: 286084	APPROVED BY: MRO	

DESCRIPTION:
ASSY, GUIDES, LUG, 72", STD

DRAWING NUMBER:
286084

Arpac BOM

Parent Number: 12972

Description: ASSY, FINAL, XLR8, 12972 MACH, LH CONTROL, RH ELEC BOX, 36" ELEV

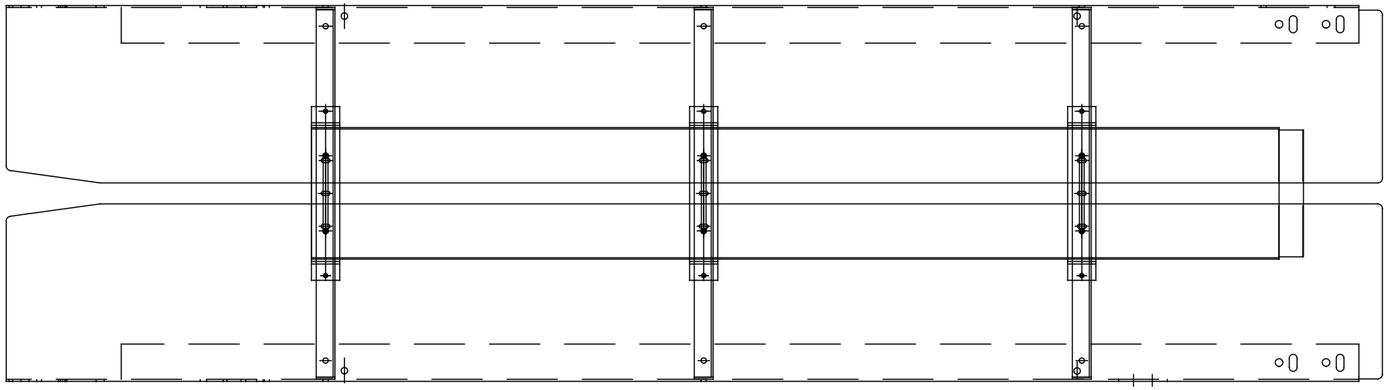
Model: XLR8

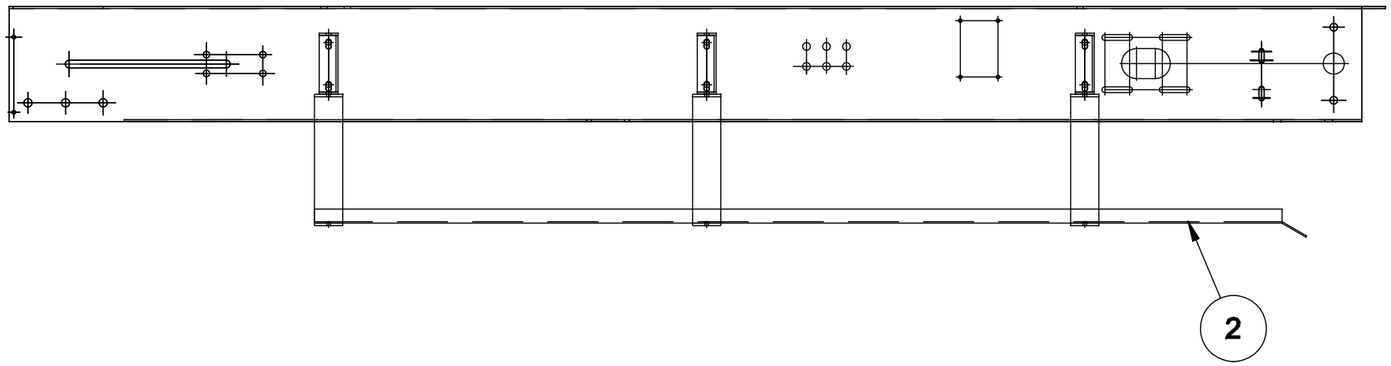
Assembly Part Number: 286084

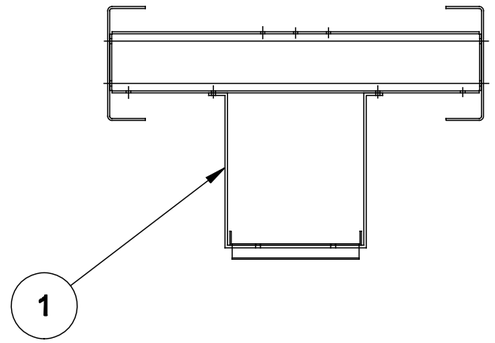
Description: ASSY, GUIDES, LUG, 72", STD

Quantity: 1.00

Item	Qty	Arpac Part	Description
1	1.00	142997-001	CAM, CHAIN, HEAD, HARD ANODIZE
2	1.00	191429	RAIL, CHAIN, TS-37NE
3	3.00	191430	BKT, SUPPORT, PLT, TOP, RH, TS-37NE INFEED
4	2.00	191430-001	BKT, SUPPORT, PLT, TOP, LH, TS-37NE INFEED







ITM	QTY	PART NUM	DESCRIPTION
2	1	214679	TRACK, CHAIN, 6', SERVO TS37NE
1	3	194092-002	BKT, PAN, LUG, CRS , 7" H

BILL OF MATERIAL

ARPAC

9511 WEST RIVER ST.
SCHILLER PARK, IL 60176

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONAL TOLERANCES:

FRACTIONS	± 1/64
TWO (2) DECIMALS	± 0.010
THREE (3) DECIMALS	± 0.005
ANGLES	± 0.5°

DRAWN:	6-21-10	BY:	MRO	SCALE: 3/32"=1"	SIZE: A
RELEASED:	6-21-10	FILENAME:	257605	APPROVED BY:	MRO

DESCRIPTION:
ASSY, TROUGH, LUG, 72", ONLY

DRAWING NUMBER:
257605

Arpac BOM

Parent Number: 12972

Description: ASSY, FINAL, XLR8, 12972 MACH, LH CONTROL, RH ELEC BOX, 36" ELEV

Model: XLR8

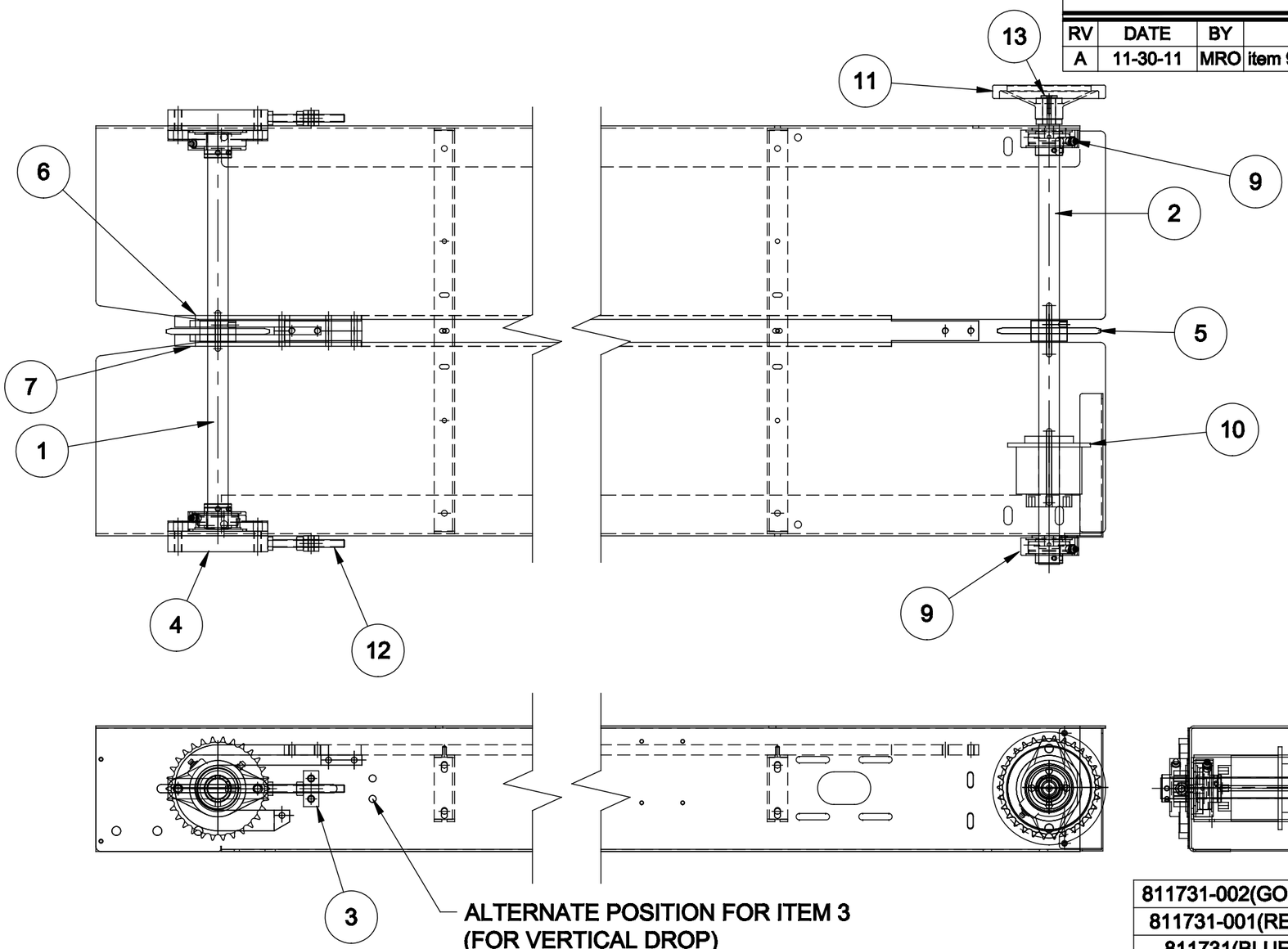
Assembly Part Number: 257605

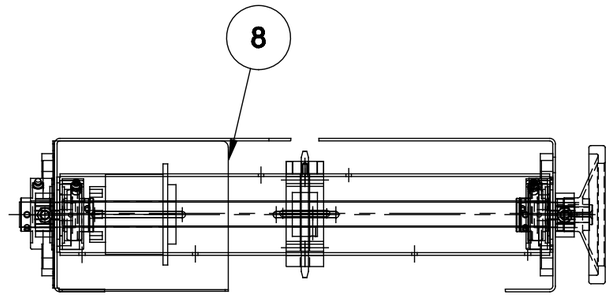
Description: ASSY, TROUGH, LUG, 72", ONLY

Quantity: 1.00

Item	Qty	Arpac Part	Description
1	3.00	194092-002	BKT, PAN, LUG, CRS , 7" H
2	1.00	214679	TRACK, CHAIN, 6', SERVO TS37NE

REVISIONS			
RV	DATE	BY	DESCRIPTION
A	11-30-11	MRO	item 9 was 802760





ITEM 10	PART NUMBER
811731(BLUE)	261729
811731-001(RED)	261729-001
811731-002(GOLD)	261729-002

BILL OF MATERIAL

ITM	QTY	PART NUM	DESCRIPTION
13	1	809370	FSNR, WASHER, C'SINK, 4MM
12	2	800282.041	FSNR, HHCS, 3/8-16 X 3-1/2, FULL THREAD
11	1	809078	HD.WH, SAFETY, W/CPLG, 5/8 B., 5 1/2OD
10	1	811731-XXX	LIMITER TORQUE 1"BORE STANDARD
9	4	827116	BRG, FLG, 1 ID, 2-BOLT
8	1	251927-001	GUARD, LIMITER, TORQUE

BILL OF MATERIAL

ITM	QTY	PART NUM	DESCRIPTION
7	1	172435	CAM, TAIL, CHAIN, RH
6	1	144461.001	CAM, TAIL, CHAIN, LH
5	2	146858	SPKT, 40A30, MOD, 1.000 BORE, SPECIAL
4	2	168603	BLK, TAKEUP,PLATED
3	2	144134.002	BLK, TAKEUP
2	1	261730	SHAFT, DRIVE, CONV, W/HANDLE, CRS
1	1	142233	SHAFT, IDLER

ARPAC
9511 WEST RIVER ST.
SCHILLER PARK, IL 60176

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FRACTIONS ± 1/64
TWO (2) DECIMALS ± 0.010
THREE (3) DECIMALS ± 0.005
ANGLES ± 0.5°

DRAWN: 5-26-09	BY: MRO	SCALE: 1/8"=1"	SIZE: A
RELEASED: 5-26-09	FILENAME: 261729	APPROVED BY: MRO	

DESCRIPTION:
ASSY, INFEED, LUG, PARTS, COMMON
W/WHEEL, CRS

DRAWING NUMBER:
261729

Arpac BOM

Parent Number: 12972

Description: ASSY, FINAL, XLR8, 12972 MACH, LH CONTROL, RH ELEC BOX, 36" ELEV

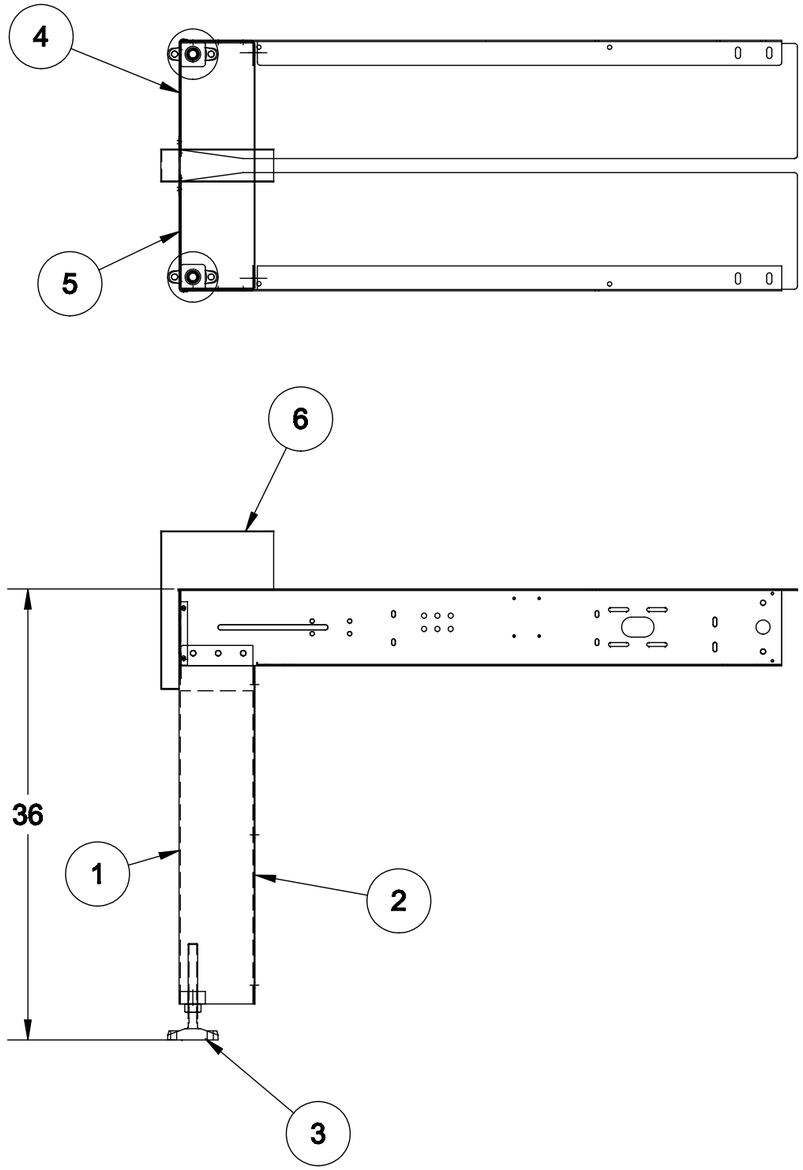
Model: XLR8

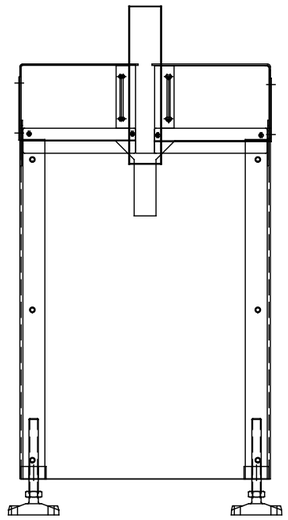
Assembly Part Number: 261729A

Description: ASSY, INFEED, LUG, PARTS, COMMON, W/WHEEL

Quantity: 1.00

Item	Qty	Arpac Part	Description
1	1.00	142233	SHAFT, IDLER, TS-37N, INFEED
2	1.00	261730	SHAFT, DRIVE, CONV, W/HANDLE, CRS
3	2.00	144134-002A	BLK, TAKEUP, CRS
4	2.00	168603	BLK, TAKEUP, PLATED
5	2.00	146858-000A	SPKT, 40A30, MOD, 1.000 BORE, SPECIAL,
6	1.00	144461-001	CAM, TAIL, CHAIN, LH
7	1.00	172435	CAM, TAIL, CHAIN, RH, PLATED
8	1.00	251927-001	GUARD, LIMITER, TORQUE, OPPOSITE
9	4.00	827116	BRG, FLG, 1 ID, 2-BOLT
10	1.00	811731	LIMITER TORQUE 1"BORE STANDARD C&F HUBS, OILITE BUSH,ACT.DISC. ALLE
11	1.00	809078	HD.WH, SAFETY, W/CPLG, 5/8 B., 5 1/2OD
12	2.00	800282-041	FSNR, HHCS, 3/8-16 X 3-1/2, FULL THREAD
13	1.00	809370	FSNR, WASHER, C'SINK, 4MM, TYPE GN184





ITM	QTY	PART NUM	DESCRIPTION
6	1	194114.001	WLDMT, COVER, LUG, STAINLESS
5	1	169546.001	COVER, END, S.S. OPPOSITE HAND
4	1	169546	COVER, END, S.S.
3	2	827618	FOOT, LEVELING, CRS BASE, 3/4-10, 6 LG, W/ 2 LAG BOLT, W/ HEAVY LIP ON BASE, 3" PAD
2	1	279863	COVER, LEG, CONV
1	1	279859	WLDMT, LEG, CONV, INFEED

BILL OF MATERIAL

ARPAC
9511 WEST RIVER ST.
SCHILLER PARK, IL 60176

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONAL TOLERANCES:
FRACTIONS ± 1/64
TWO (2) DECIMALS ± 0.010
THREE (3) DECIMALS ± 0.005
ANGLES ± 0.5°

DRAWN:	6-30-11	BY:	MRO	SCALE: 1/16"=1"	SIZE: A
RELEASED:	6-30-11	FILENAME:	279861	APPROVED BY:	MRO

DESCRIPTION:
ASSY, LEG, UPSTRM, ELEV, 36"
3/4-10 FEET

DRAWING NUMBER:
279861

Arpac BOM

Parent Number: 12972

Description: ASSY, FINAL, XLR8, 12972 MACH, LH CONTROL, RH ELEC BOX, 36" ELEV

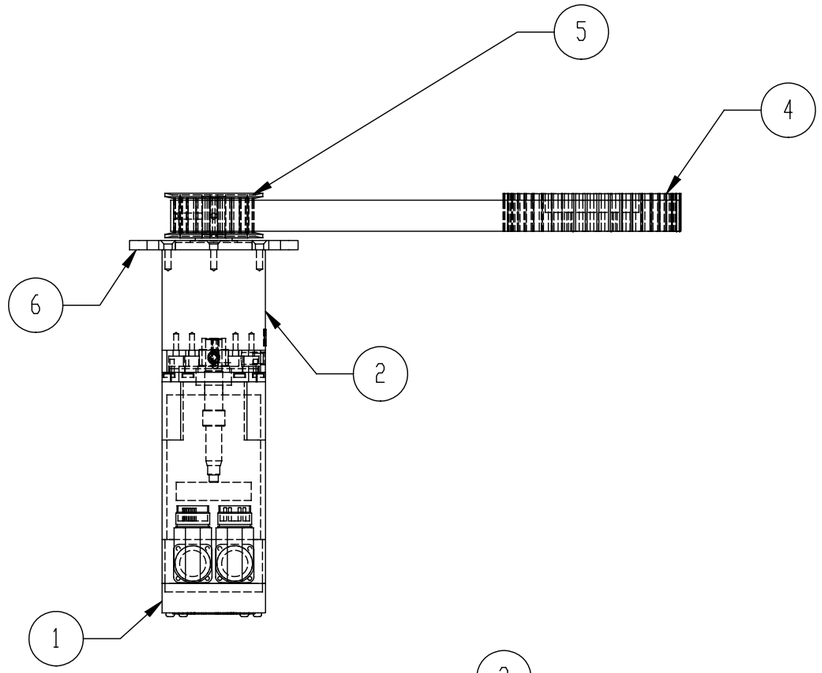
Model: XLR8

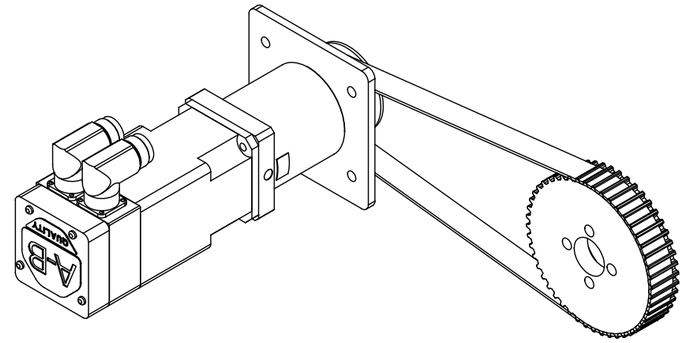
Assembly Part Number: 279861

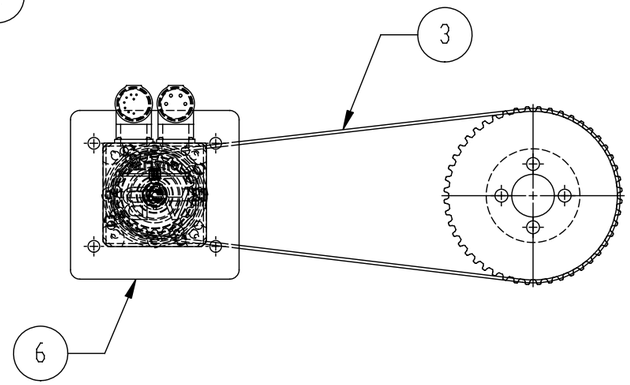
Description: ASSY, LEG, UPSTRM, ELEV, 36", 3/4-10 FEET

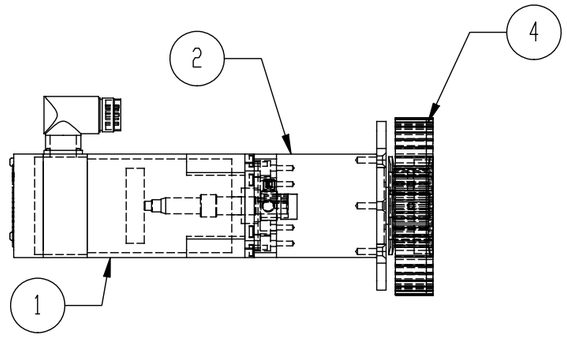
Quantity: 1.00

Item	Qty	Arpac Part	Description
1	1.00	279859	WLDMT, LEG, CONV, INFEED, CRS, 27" TALL, F/3/4-10 FEET
2	1.00	279863	COVER, LEG, CONV, CRS, 27" TALL LEG
3	2.00	827618	LEVELER, ARTICULATING, 7400 # CAP, 3/4-10 STEM, 7.5 HIGH CRS 3" BAS
4	1.00	169546	COVER, END, S.S.,
5	1.00	169546-001	COVER, END, S.S., OPPOSITE HAND
6	1.00	194114-001	WLDMT, COVER, LUG, STAINLESS, 2-1/2 W
7	2.00	292046	LOGO, BACKING









ITM	QTY	PART NUM	DESCRIPTION
7	2	191350-001	PLT, NUT
6	1	262058	PLT, ADAPTER, SERVO, LP070
5	1	262059	PULLEY, TIMING, 22T, 8MM P, 21W
4	1	194054	PULLEY, TMG, CLUTCH, NO FINISH
3	1	819268	BELT, TIMING, 8MM P, 21MM W, 800MM LG, 100 T, POLYCHAIN GT2
2	1	839153	GEAR REDUCER, 10:1 RATIO, TO USE W/MTS ALLEN-BRADLEY SERVO MTR MPL-A230P-VJ42AA
1	1	819882-004	MOTOR, SERVO, 18.6 IN-LB, 5000 RPM NO BRAKE/KEYED/MULTI-TURN ABSOL. HIGH RES. CONNECTOR OPTION 7 230VAC

BILL OF MATERIALS

ARPAC
9511 WEST RIVER ST.
SCHILLER PARK, IL 60176

UNLESS OTHERWISE SPECIFIED
ALL DIMENSIONAL TOLERANCES:

FRACTIONS	± 1/64
TWO (2) DECIMALS	± 0.010
THREE (3) DECIMALS	± 0.005
ANGLES	± 0.5°

DRAWN:	08/30/2011	BY:	TS	SCALE: 1:4	SIZE: B
RELEASED:		FILENAME:	261731	APPROVED BY:	

DESCRIPTION:
ASSY, SUB, MOTOR, INF, SERVO, AB, 230V

DRAWING NUMBER:
261731

FINISH- NONE

Arpac BOM

Parent Number: 12972

Description: ASSY, FINAL, XLR8, 12972 MACH, LH CONTROL, RH ELEC BOX, 36" ELEV

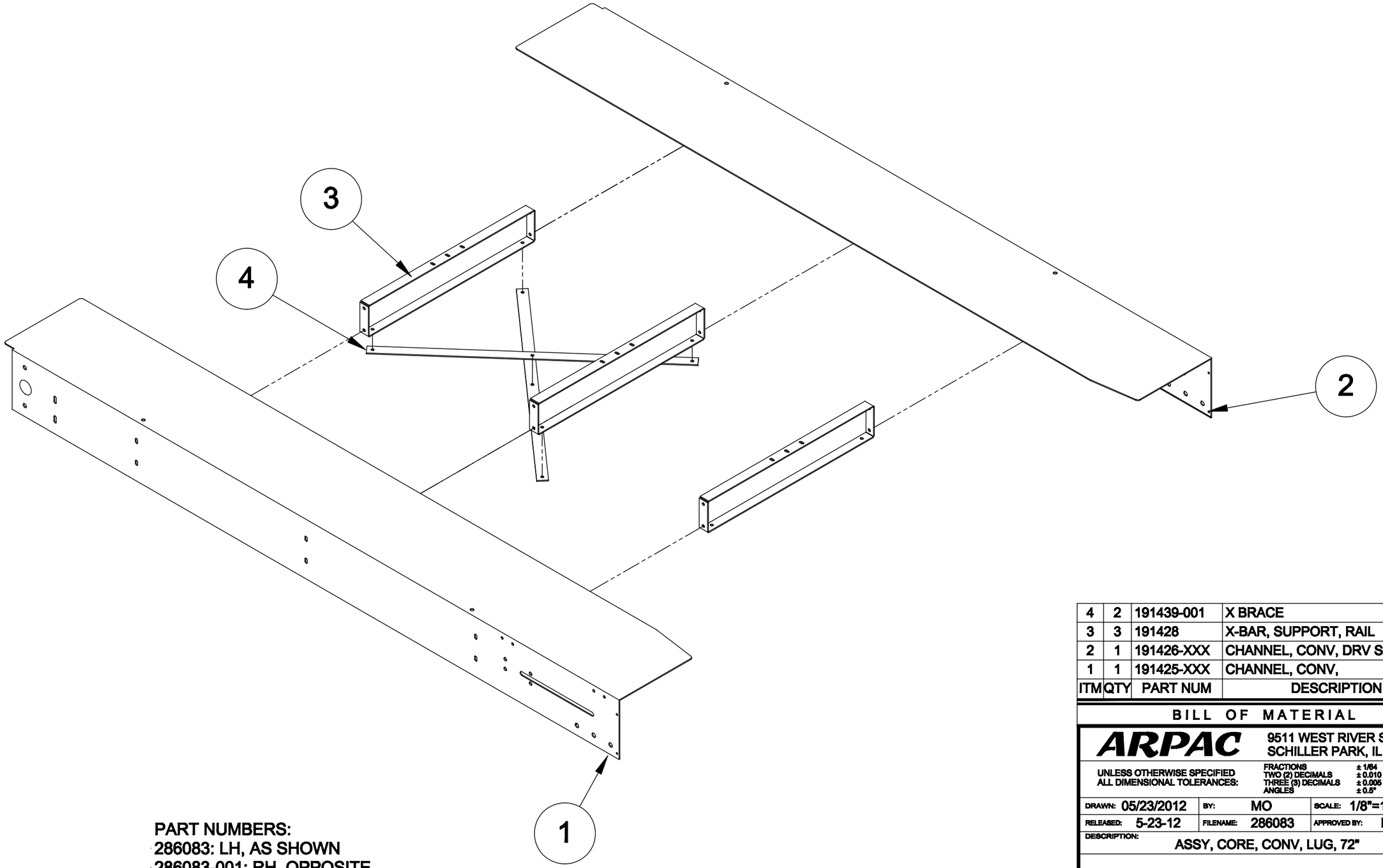
Model: XLR8

Assembly Part Number: 261731

Description: ASSY, SUB, MOTOR, INF, SERVO, AB, MP230,

Quantity: 1.00

Item	Qty	Arpac Part	Description
1	1.00	819882-004	MOTOR, SERVO, 18.6 IN-LB, 5000 RPM NO BRAKE/KEYED/MULTI-TURN ABSO
2	1.00	839153	GEAR REDUCER, 10:1 RATIO, TO USE W/MTS ALLEN-BRADLEY SERVO MTR MPL-
3	1.00	819268	BELT, TIMING, 8MM P, 21MM W, 800MM LG, 100 T, POLYCHAIN GT2
4	1.00	194054-000A	PULLEY, TIMING, 48T, 8MM P, 1 W, MOD ALUM CLUTCH PULLEY 1" LG
5	1.00	262059	PULLEY, TIMING, 22T, 8MM P, 21MM W, MOD, 16MM BORE
6	1.00	262058	PLT, ADAPTER, SERVO, LP070
7	2.00	191350-001	PLT, NUT, 3/8 X 1/2 X 3 1/4, 1/4-20,



PART NUMBERS:
286083: LH, AS SHOWN
286083-001: RH, OPPOSITE

ITM	QTY	PART NUM	DESCRIPTION
4	2	191439-001	X BRACE
3	3	191428	X-BAR, SUPPORT, RAIL
2	1	191426-XXX	CHANNEL, CONV, DRV SIDE
1	1	191425-XXX	CHANNEL, CONV,

BILL OF MATERIAL

ARPAC
9511 WEST RIVER ST.
SCHILLER PARK, IL 60176

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONAL TOLERANCES:
FRACTIONS ± 1/64
TWO (2) DECIMALS ± 0.010
THREE (3) DECIMALS ± 0.005
ANGLES ± 0.5°

DRAWN: 05/23/2012	BY: MO	SCALE: 1/8"=1"	SIZE: B
RELEASED: 5-23-12	FILENAME: 286083	APPROVED BY: MRO	

DESCRIPTION:
ASSY, CORE, CONV, LUG, 72"

DRAWING NUMBER:
286083

Arpac BOM

Parent Number: 12972

Description: ASSY, FINAL, XLR8, 12972 MACH, LH CONTROL, RH ELEC BOX, 36" ELEV

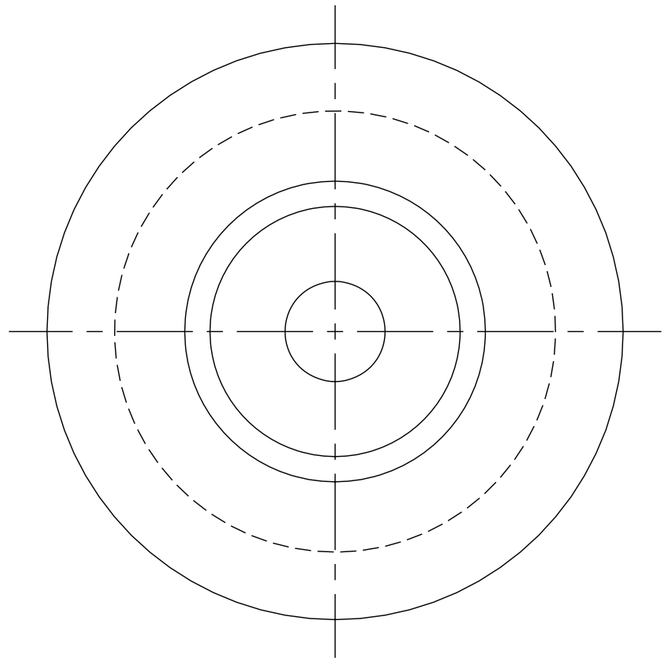
Model: XLR8

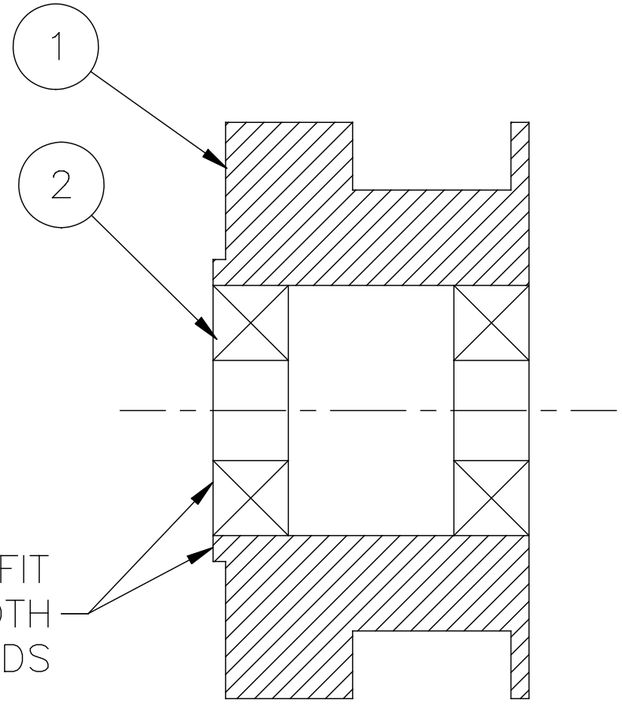
Assembly Part Number: 286083

Description: ASSY, CORE, CONV, LUG, 72", LH

Quantity: 1.00

Item	Qty	Arpac Part	Description
1	1.00	191425	CHANNEL, CONV, LH, 72"
2	1.00	191426	CHANNEL, CONV, RH, 72", DRV SIDE
3	3.00	191428	XBAR, SUPPORT,RAIL,
4	2.00	191439-001	X-BRACE, TS37NE INFEED, "A"=26 7/8





REF GLC # MM22031
DWG: 26948

ITM	QTY	PART NUM	DESCRIPTION
2	2	810422	BRG, CART, 1/4 X 5/8 X .196
1	1	119928	PULLEY , IDLER

BILL OF MATERIAL

Great Lakes Corporation CHICAGO, IL

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONAL TOLERANCES:
FRACTIONS ± 1/64
TWO (2) DECIMALS ± 0.010
THREE (3) DECIMALS ± 0.005
ANGLES ± 0.5°

DRAWN: 4–27–00	BY: DCC	SCALE: 1.5"=1"	SIZE: A
RELEASED: 4–27–00	FILENAME: 119927	APPROVED BY: DCC	

DESCRIPTION:
ASSY, PULLEY, BELT, TRIM
TS–37 – TRIMSEAL

DRAWING NUMBER:
119927

Arpac BOM

Parent Number: 12972

Description: ASSY, FINAL, XLR8, 12972 MACH, LH CONTROL, RH ELEC BOX, 36" ELEV

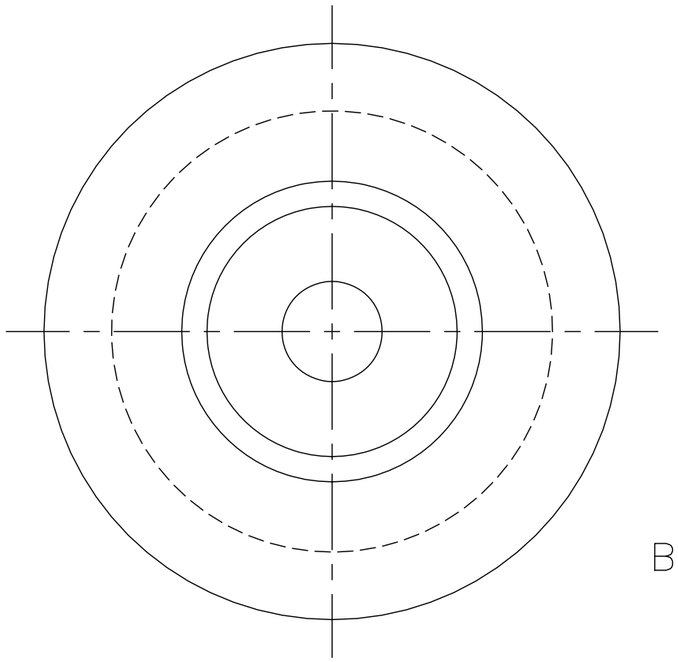
Model: XLR8

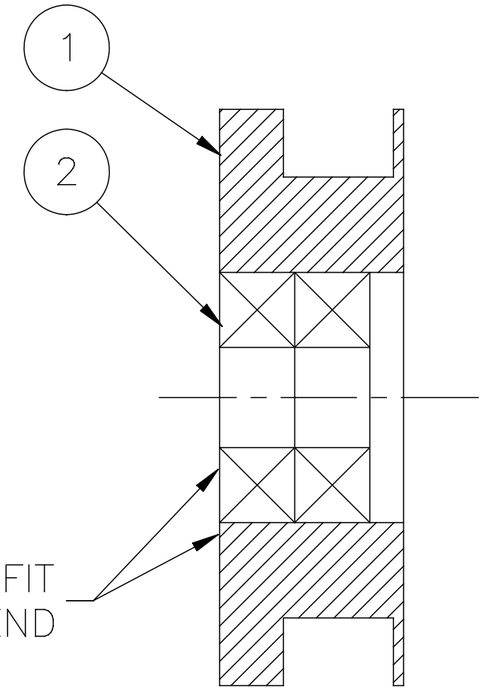
Assembly Part Number: 119927

Description: ASSY, PULLEY, BELT, TRIM, TS-37, TRIMSEAL

Quantity: 1.00

Item	Qty	Arpac Part	Description
1	1.00	119928	PULLEY, IDLER, TS-37, USE IN MM22031
2	2.00	810422	BRG, CART, 1/4 X 5/8 X .196 LG, SHIELDED, PRESS FIT ID & OD





REF GLC P/N: 22029
DWG: 26946

ITM	QTY	PART NUM	DESCRIPTION
2	2	810422	BRG, CART, 1/4 X 5/8 X .196
1	1	119929	PULLEY , IDLER

BILL OF MATERIAL

Great Lakes Corporation CHICAGO, IL

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONAL TOLERANCES:
FRACTIONS ± 1/64
TWO (2) DECIMALS ± 0.010
THREE (3) DECIMALS ± 0.005
ANGLES ± 0.5°

DRAWN: 4–27–00	BY: DCC	SCALE: 1.5"=1"	SIZE: A
RELEASED: 4–27–00	FILENAME: 119930	APPROVED BY: DCC	

DESCRIPTION:
ASSY, PULLEY, BELT, SEAL
TS–37 – TRIMSEAL

DRAWING NUMBER:
119930

Arpac BOM

Parent Number: 12972

Description: ASSY, FINAL, XLR8, 12972 MACH, LH CONTROL, RH ELEC BOX, 36" ELEV

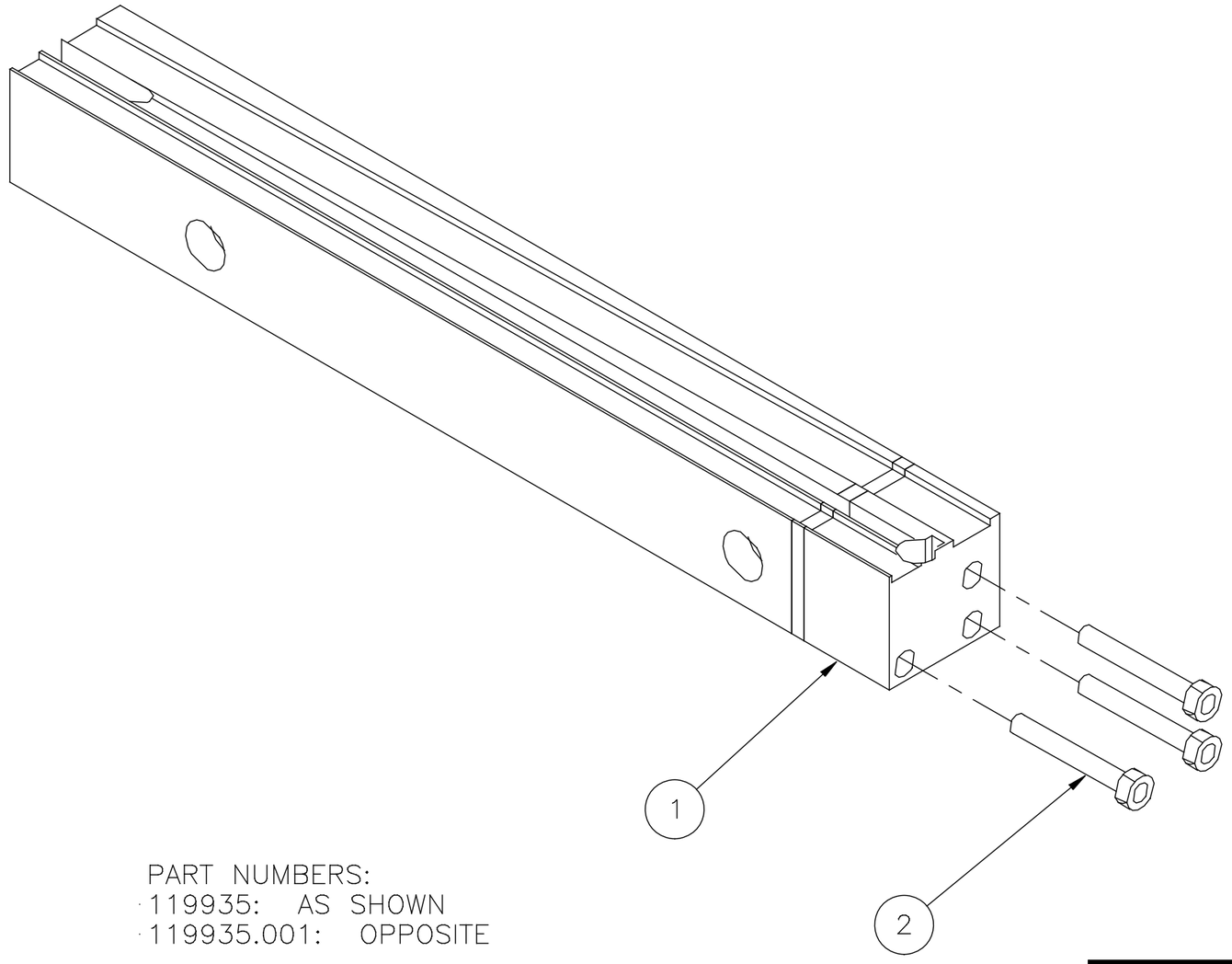
Model: XLR8

Assembly Part Number: 119930

Description: ASSY, PULLEY, BELT, SEAL, TS-37

Quantity: 1.00

Item	Qty	Arpac Part	Description
1	1.00	119929	PULLEY, BELT, SEAL, TS-37, USED IN MM22029
2	2.00	810422	BRG, CART, 1/4 X 5/8 X .196 LG, SHIELDED, PRESS FIT ID & OD



PART NUMBERS:
- 119935: AS SHOWN
- 119935.001: OPPOSITE

NOTE– THIS DRAWING REPLACES GREAT LAKES DRAWING NUMBER 27149 WHICH SHOWS GREAT LAKES PART NUMBER MM22254.

ITM	QTY	PART NUM	DESCRIPTION
2	3	815991	FSNR, SCREW, SPECIAL, NYLON
1	1	219928.XXX	ASSY, SUB, BAR, SEAL, LWR

BILL OF MATERIAL

Great Lakes Corporation CHICAGO, IL

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONAL TOLERANCES:
FRACTIONS ± 1/64
TWO (2) DECIMALS ± 0.010
THREE (3) DECIMALS ± 0.005
ANGLES ± 0.5°

DRAWN: 3-6-03	BY: DCC	SCALE: 3/4"=1"	SIZE: A
RELEASED: 3-6-03	FILENAME: 119935	APPROVED BY: DCC	

DESCRIPTION: ASSY, BAR, SEAL, LOWER

DRAWING NUMBER: 119935

Arpac BOM

Parent Number: 12972

Description: ASSY, FINAL, XLR8, 12972 MACH, LH CONTROL, RH ELEC BOX, 36" ELEV

Model: XLR8

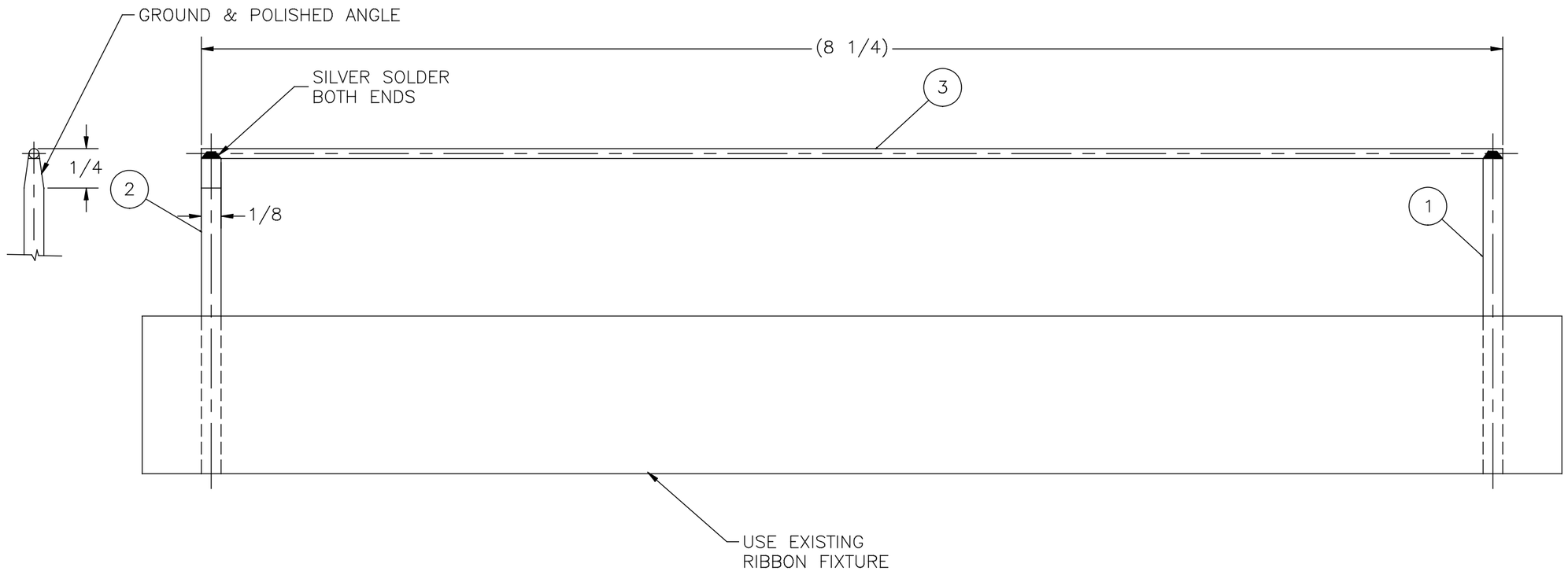
Assembly Part Number: 119935

Description: ASSY, BAR, SEAL, LOWER, L.H., TS-37, STD,

Quantity: 1.00

Item	Qty	Arpac Part	Description
1	1.00	219928	ASSY, SUB, BAR, SEAL, LWR, L.H., TS-37, AS SHOWN
2	3.00	815991	FSNR, SCREW, SPECIAL, NYLON, METAL CORE,
3	1.50	902750	PL TEFLON FLAT 1/8 X 1
4	8.25	902760	SS FLAT 1 X 1-1/4, 303
5	1.38	902884	SS SQ 1, 303

REVISIONS			
RV	DATE	BY	DESCRIPTION
A	1–16–04	MRO	ADDED GROUND & POLISHED ANGLE



REF: GLC P/N: MM22828
DWG: 27832

ITM	QTY	PART NUM	DESCRIPTION
3	1	119934	WIRE, HOT
2	1	119933	POST, RIBBON, B
1	1	119932	POST, RIBBON, A

BILL OF MATERIAL

Great Lakes Corporation CHICAGO, IL

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONAL TOLERANCES:
FRACTIONS ± 1/64
TWO (2) DECIMALS ± 0.010
THREE (3) DECIMALS ± 0.005
ANGLES ± 0.5°

DRAWN: 4–27–00	BY: DCC	SCALE: N/A	SIZE: A
RELEASED: 4–27–00	FILENAME: 137828	APPROVED BY: DCC	

DESCRIPTION:
ASSY, HOT WIRE
TS–37, TRIMSEAL

DRAWING NUMBER:
137828

Arpac BOM

Parent Number: 12972

Description: ASSY, FINAL, XLR8, 12972 MACH, LH CONTROL, RH ELEC BOX, 36" ELEV

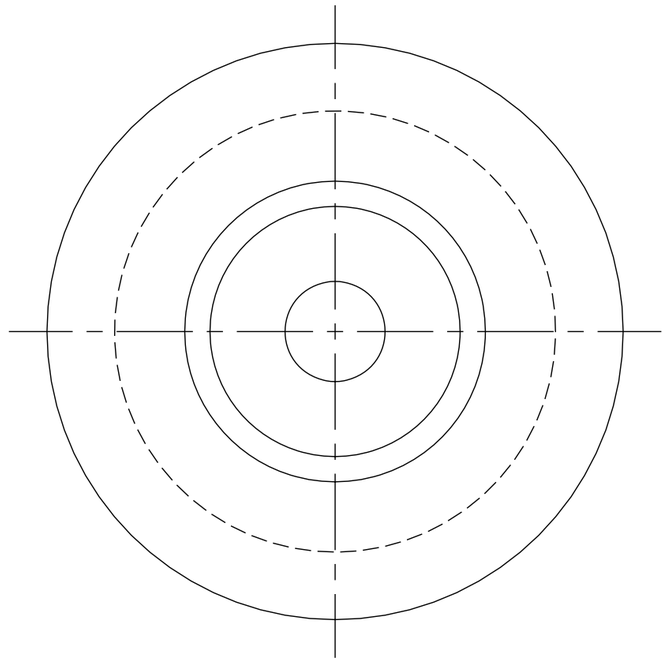
Model: XLR8

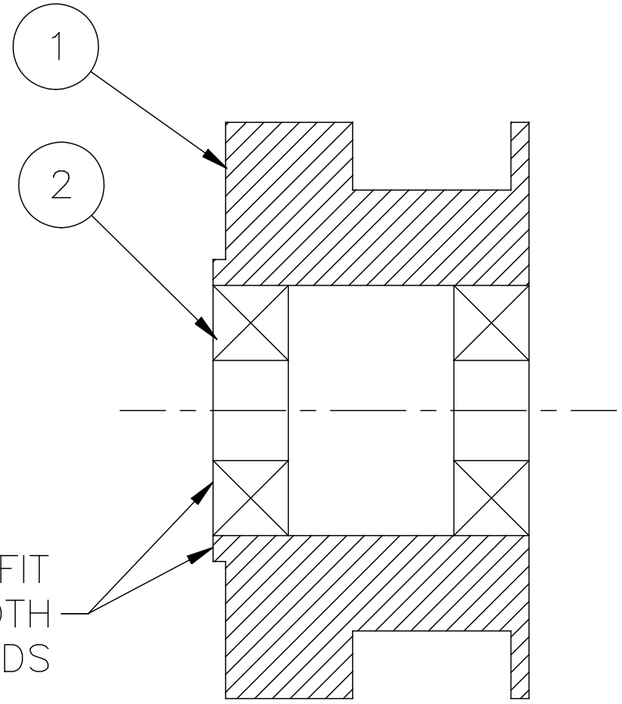
Assembly Part Number: 137828-000B

Description: ASSY, WIRE, HOT, 18 GA, TS37

Quantity: 1.00

Item	Qty	Arpac Part	Description
1	1.00	119932	POST, RIBBON, A, TS-37
2	1.00	119933	POST, RIBBON, B, TS-37
3	0.02	810429	WIRE, HOT, 18 GA NICHROME TYPE C





REF GLC # MM22031
DWG: 26948

ITM	QTY	PART NUM	DESCRIPTION
2	2	810422	BRG, CART, 1/4 X 5/8 X .196
1	1	119928	PULLEY , IDLER

BILL OF MATERIAL

Great Lakes Corporation CHICAGO, IL

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONAL TOLERANCES:
FRACTIONS ± 1/64
TWO (2) DECIMALS ± 0.010
THREE (3) DECIMALS ± 0.005
ANGLES ± 0.5°

DRAWN: 4–27–00	BY: DCC	SCALE: 1.5"=1"	SIZE: A
RELEASED: 4–27–00	FILENAME: 119927	APPROVED BY: DCC	

DESCRIPTION:
ASSY, PULLEY, BELT, TRIM
TS–37 – TRIMSEAL

DRAWING NUMBER:
119927

Arpac BOM

Parent Number: 12972

Description: ASSY, FINAL, XLR8, 12972 MACH, LH CONTROL, RH ELEC BOX, 36" ELEV

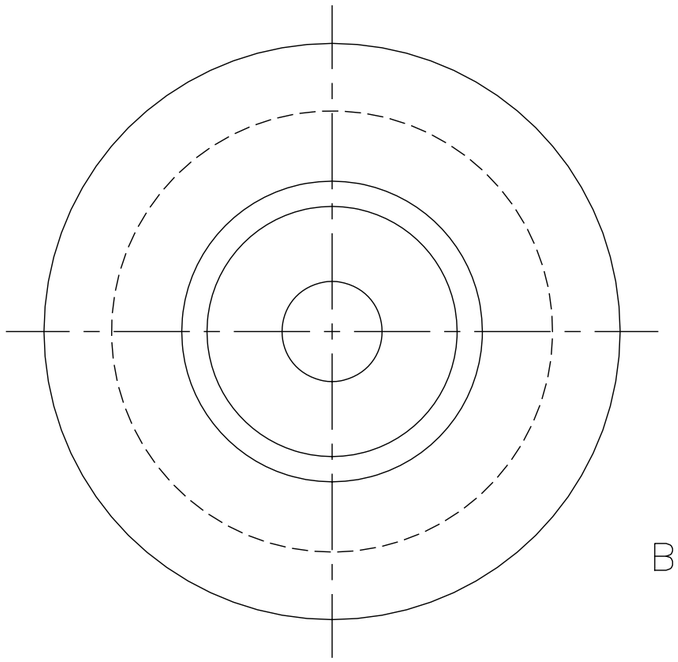
Model: XLR8

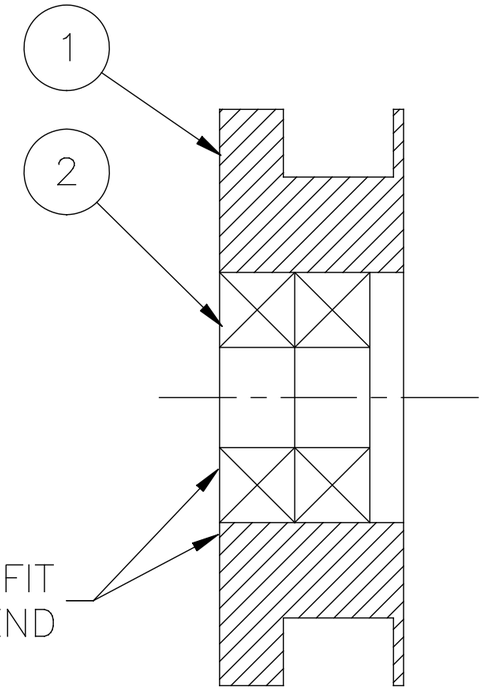
Assembly Part Number: 119927

Description: ASSY, PULLEY, BELT, TRIM, TS-37, TRIMSEAL

Quantity: 1.00

Item	Qty	Arpac Part	Description
1	1.00	119928	PULLEY, IDLER, TS-37, USE IN MM22031
2	2.00	810422	BRG, CART, 1/4 X 5/8 X .196 LG, SHIELDED, PRESS FIT ID & OD





REF GLC P/N: 22029
DWG: 26946

ITM	QTY	PART NUM	DESCRIPTION
2	2	810422	BRG, CART, 1/4 X 5/8 X .196
1	1	119929	PULLEY , IDLER

BILL OF MATERIAL

Great Lakes Corporation CHICAGO, IL

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONAL TOLERANCES:
FRACTIONS ± 1/64
TWO (2) DECIMALS ± 0.010
THREE (3) DECIMALS ± 0.005
ANGLES ± 0.5°

DRAWN: 4–27–00	BY: DCC	SCALE: 1.5"=1"	SIZE: A
RELEASED: 4–27–00	FILENAME: 119930	APPROVED BY: DCC	

DESCRIPTION:
ASSY, PULLEY, BELT, SEAL
TS–37 – TRIMSEAL

DRAWING NUMBER:
119930

Arpac BOM

Parent Number: 12972

Description: ASSY, FINAL, XLR8, 12972 MACH, LH CONTROL, RH ELEC BOX, 36" ELEV

Model: XLR8

Assembly Part Number: 119930

Description: ASSY, PULLEY, BELT, SEAL, TS-37

Quantity: 1.00

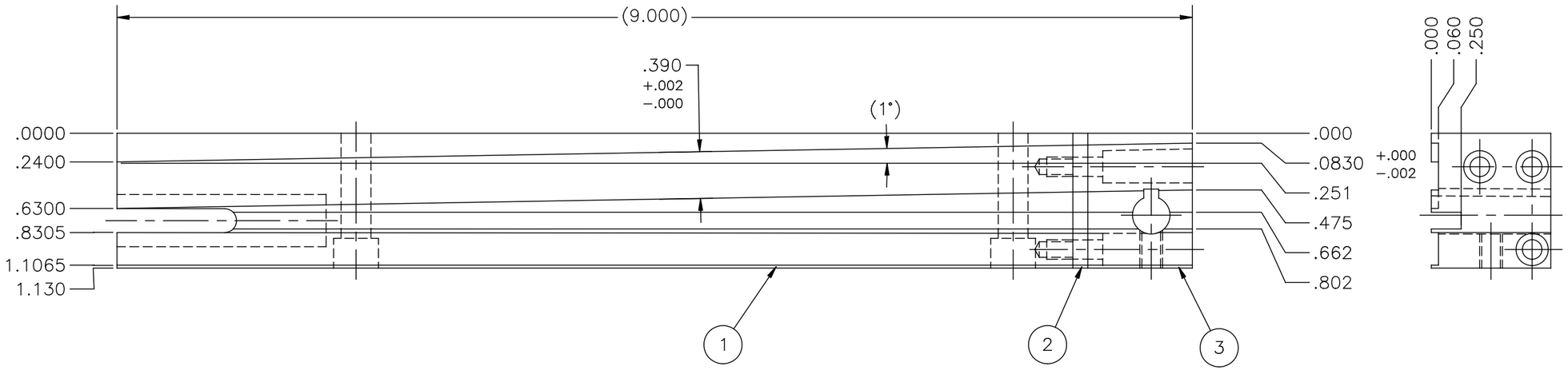
Item	Qty	Arpac Part	Description
1	1.00	119929	PULLEY, BELT, SEAL, TS-37, USED IN MM22029
2	2.00	810422	BRG, CART, 1/4 X 5/8 X .196 LG, SHIELDED, PRESS FIT ID & OD

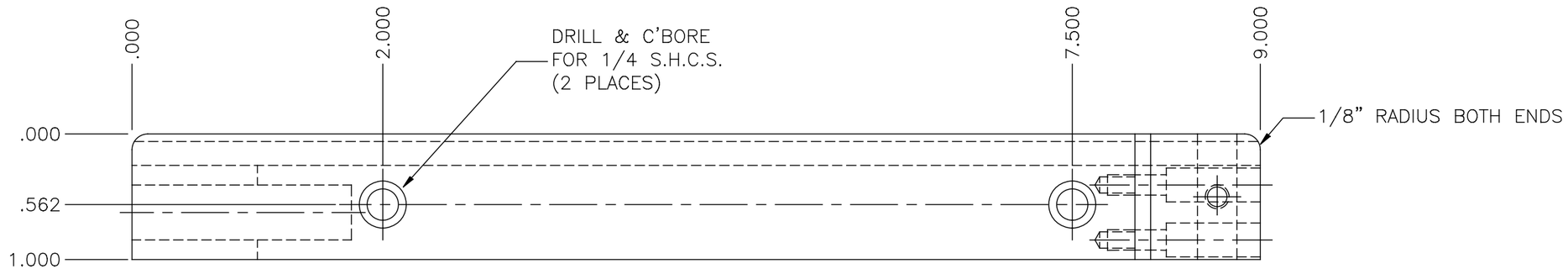
Arpac BOM

Parent Number: 12972

Description: ASSY, FINAL, XLR8, 12972 MACH, LH CONTROL, RH ELEC BOX, 36" ELEV

Model: XLR8





NOTE: ALL MILLED TRACKS MUST BE DEBURRED, AND REMOVE ANY INTERIOR TRACK WALL THAT IS NOT RIGID.

PART NUMBERS:
· 219928: AS SHOWN
· 219928.001: OPPOSITE

ITM	QTY	PART NUM	DESCRIPTION
3	1	119931.XXX	BAR, LOWER, BLK, TENSION
2	1	119919	SPACER
1	1	119911.XXX	BAR, SEAL, LOWER

BILL OF MATERIAL

Great Lakes Corporation CHICAGO, IL

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FRACTIONS ± 1/64
TWO (2) DECIMALS ± 0.010
THREE (3) DECIMALS ± 0.005
ANGLES ± 0.5°

DRAWN: 4−28−00	BY: DCC	SCALE: FULL	SIZE: B
RELEASED: 4−28−00	FILENAME: 219928	APPROVED BY: DCC	

DESCRIPTION: ASSY, SUB, BAR, SEAL, LWR

TRIMSEAL

DRAWING NUMBER: 219928

Arpac BOM

Parent Number: 12972

Description: ASSY, FINAL, XLR8, 12972 MACH, LH CONTROL, RH ELEC BOX, 36" ELEV

Model: XLR8

Assembly Part Number: 219928

Description: ASSY, SUB, BAR, SEAL, LWR, L.H., TS-37, A

Quantity: 1.00

Item	Qty	Arpac Part	Description
1	1.00	119911	BAR, LOWER, SEAL- SELL ONLY AS COMPLETE, ASSY 119935, TS-37, L.H. ST
2	1.00	119919	SPACER - FOR ORIGINAL MANUFACTURING IN MACHINING TOGETHER WITH THE A
3	1.00	119931	BAR, LOWER, BLK, TENSION, - SELL ONLY AS, COMPLETE ASSY 119935, TS-3
4	8.88	902760	SS FLAT 1 X 1-1/4, 303
5	1.11	902750	PL TEFLON FLAT 1/8 X 1
6	3.00	815991	FSNR, SCREW, SPECIAL, NYLON, METAL CORE,

O.E.M. Information

12

12.1 O.E.M. Vendor Information

The CD on the next page contains original equipment manufacturer information for the machine. This information includes service and operation instructions for such items as the machine's temperature controller, motor drives, sensors, etc. The information is organized in alphabetical order according to each vendor's brand name.

Notes

Notes

Notes

Distributor Information

This product was manufactured by:

Arpac L.P.
9511 West River Street
Schiller Park, IL 60176 U.S.A.

(847) 678-9034

www.arpac.com

And is distributed by: