SERVICE MANUAL

Model PP982-LP and PP982-HP

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INSTRUCTIONS FOR OPERATION AND REPAIR OF THE
PREFERRED PACK PP-982 HP AND LP SERIES

IMPORTANT - PLEASE READ THIS CAREFULLY

The development of a good safety program, that is rigidly enforced, is absolutely imperative when involved in the operation of industrial equipment. Our machinery is well designed and includes extremely important safety features. The part you the user play through proper installation and maintenance procedures is of far greater significance than our designs. Only properly trained individuals following rigidly enforced safety rules, as recommended by A.N.S.I. and O.S.H.A., should be allowed to operate these machines.

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<u>IMPORTANT WARRANTY NOTICES</u>

OPERATING AND MAINTENANCE MANUAL

The operating and maintenance manual has been carefully prepared to provide the user with all the information needed to properly install, operate, and maintain your EXCEL Packaging equipment.

Please read this manual carefully and refer to it for information on the care and use of your EXCEL Packaging equipment. It is recommended that additional copies be ordered for use by production, maintenance, and supervisory personnel. Although the design of this equipment incorporates safeguards to protect personnel, care should be used in operating, adjusting, and servicing.

Attention is directed to the warranty which accompanies all your EXCEL Packaging equipment. The terms and conditions of this warranty apply only to unmodified units. Any unauthorized modifications to the equipment automatically voids this warranty.

EXCEL PACKAGING
WARRANTY

EXCEL Packaging, Inc. warrants each new product manufactured to be free from defects in material and workmanship for a period of 3 years from date of shipment by EXCEL Packaging.

Not covered by this warranty is normal wear of components such as, but not limited to; belts, chains, fuses, bulbs, rollers etc. or misuse or abuse of the machine or any components thereof. As well, parts returned without the prescribed paperwork will not be covered by this warranty. Labor to remove or repair any component is also not covered by this warranty. Damage in transport is the responsibility of the carrier and is not covered under our warranty.

This warranty is not transferable with any subsequent resale.

Defective parts under warranty must be returned to EXCEL Packaging freight prepaid. EXCEL's sole obligation and purchaser's sole remedy in the event of a warranty dispute shall be, at EXCEL's option , to repair or replace the part in question. Labor incurred in removing or installing the defective part is not covered by this warranty. Prior to returning any parts for any reason, contact EXCEL Packaging for a Return Authorization Number. This number must accompany all returns.

This warranty shall not apply if equipment has been tampered with, misused, improperly installed, altered, or has received damage due to abuse, carelessness, accident or failure to follow recommended regular maintenance procedures or has been serviced by someone other than a duly authorized factory representative without the express written consent of EXCEL Packaging, Inc.

This warranty is in lieu of all other warranties, expressed or implied, including but not limited to warranties of merchantability and fitness for a particular purpose, non-infringement or any other matter.

EXCEL Packaging shall have no liability to any person for direct, indirect, incidental or consequential damages or delay resulting from any defect negligence, or tort and customer hereby waives for itself any and all claims for punitive damages and all claims of negligence of strict liability or both. In no event shall our liability exceed the purchase price of the product which was actually paid.

EXCEL Packaging reserves the right to make changes, additions, or improvements to our products with no obligation to make such changes in any previously shipped product covered by this warranty.

EXCEL Packaging shall not be held liable for any damages arising out of or in connection with the operation of the equipment should customer or its agent fail to maintain equipment in safe operating condition. This warranty shall become unenforceable if and to the extent the customer or its agents remove, disconnect, or otherwise render useless any safety device and or parts designed or affixed by us or fails to maintain and service equipment in a manner as advised.

EXCEL Packaging provides a 3 year warranty on parts, excluding shipping or freight costs for replacement parts. All warranty parts are shipped F.O.B. Rancho Cucamonga, California.

WARRANTY EXCEPTIONS

The following parts are an exception to the general warranty list on page 9. Each part listed below shall carry a 30-day warranty unless designated otherwise.

PP-982

1.   Fuses

WARNINGS

Every effort has been taken to ensure your safety while operating this machine; however, there still remain certain risks. Do not allow this machine to be operated before informing all personnel of the following warnings.

WARNING........

Do not tamper with the electrical wiring. Only use a licensed electrician for maintenance. Always disconnect the electrical power before attempting any maintenance to all electrical and/or moving parts.

WARNING........

In order to prevent injury to personnel and/or machinery DO NOT INCREASE SETTINGS OR RATINGS ON EITHER ELECTRICAL OR MECHANICAL OVERLOAD SAFETY DEVICES.

WARNING........

KEEP HANDS AWAY FROM MOVING CONVEYORS AND ASSEMBLIES. Conveyor belts that have become worn or frayed are capable of being hazardous. They should be replaced promptly.

WARNING........

NEVER OPERATE THIS OR ANY MOVING EQUIPMENT WITHOUT ALL COVERS AND GUARDS IN PLACE. The internal mechanism of most packaging machinery contains numerous shear, pinch, and inrunning nip points, many of which are capable of causing severe injury and/or permanent disfigurement.

WARNING........

To minimize the potential for personnel injury, always be sure that machine operators and others working on the machinery are properly trained in the correct usage of the equipment and properly instructed regarding the safety procedures for operation.

WARNING........

ANY MODIFICATIONS TO EITHER THE ELECTRICAL CIRCUITRY OR THE MECHANICAL ASSEMBLIES OF THE MACHINERY WILL VOID ANY WARRANTIES ASSOCIATED WITH THIS EQUIPMENT. Such modifications may introduce hazards that would not otherwise be associated with this machinery. EXCEL Packaging will not be responsible for any consequences resulting from such unauthorized modifications.

WARNING........

It is important that the machine operator turn off the Main Power Switch when he/she has finished operating the unit.

General Safety Regulations

Before using the machine or carrying out maintenance operations read the following instructions very carefully:

Before
    1.   Read the instructions about how to set up the machine
    2.   Check all the safety guards on the machine and immediately replace any worn or broken parts with original spares.
    3.   Make sure that no tools or other objects have been left lying on the machine and that the machine itself is perfectly clean.
    4.   Read the maintenance and spare parts very carefully.
    5.   Read all the labels and plates applied to the machine.

During
    1.   Do not wear clothing that could get tangled up in the moving parts of the machine.
    2.   Do not put the hands or any kind of object inside the field of operation of the machine
    3.   Do not load the machine with boxes heavier than those recommended by the manufacturer.

After
    1.   Always stop the electric motor by pressing the red button on the switch
    2.   Switch off the electric power.

Description

The PREFERRED PACK model PP-982 is a versatile, reliable and economical pallet stretch wrapping machine designed to accommodate a large variety of pallet sizes. Using modern technology the model PP-982 will apply stretch film to a pallet load. This inexpensive system offers a high degree of protection for any pallet load.

Operation

The operation of the model PP-982 pallet wrapper comprises 4 easy steps

1. Operator places pallet load on revolving turntable by means of forklift or pallet jack (if optional ramp is used)
2. Operator attaches stretch film to turntable base
3. Press "start" cycle for automatic operation
4. Cut film from pallet load at completion of work cycle.

Specifications

Roll Dimensions

The machine is capable of using different types of stretch film with the following dimensions:

- A: Internal diameter of roll 3" (76.2mm)
- B: External diameter of roll 12" (300mm)
- C: Height of roll: 20"
- D: Thickness of film: STD 80gauge
    *Other film thickness may be used
- E: Weight of roll: 40lbs max

In order to obtain the best results while using your machine we recommend using a good quality stretch film.

Pallet Dimensions

The model PP-982 can generally wrap pallets with the overall dimensions listed below

Maximum Length: 48" (1,200mm)
Maximum Width: 48" (1,200mm)
Maximum Height: 85" (2,150mm)

Pallet Weight

Maximum recommended pallet weight load is 4,000lbs (1,800kg)

Technical Data

Machine Weight	1,450lbs (660kg)
Shipping Weight-Approximate	1,625lbs (738kg)
Crated Dimensions	124"L x 69" W x 35" H (3,150mm) x (1,750mm) x (890mm)
Power Requirements	110volt/15amp
Recommended Operating Temperatures	Min 40 f / Max 104 f +5 / +40 c
Turntable Rotation Speed	12RPM

UNPACKING

THOROUGHLY INSPECT EQUIPMENT UPON ARRIVAL.

If goods are received short or in a damaged condition, it is important that you notify the carrier's driver **before he leaves your company** and **insist** on a notation of the loss or damage across the face of the freight bill. Unless this is done, no claim can be enforced against the transportation company.

If concealed loss or damage is discovered, notify the carrier at once and insist on an inspection. This is absolutely necessary! A concealed damage report must be made no later than five (5) days from the date the shipment was delivered. Unless you do this, the carrier will not consider any claim for loss or damage. The carrier's agent will then make an inspection and grant a concealed damage notation. If you give the transportation company a clear receipt for the goods that have been damaged or lost in transit, you do so at your own risk and expense.

All claims must be filed within 5 Days of delivery date or carrier will not accept them.

EXCEL Packaging is willing to assist in every possible manner to collect claims for loss or damage; however, this does not hold EXCEL Packaging responsible for collection on claims or replacement of material.

Unpacking

* Picture shown with
optional ramp

      Your Preferred Pack Model PP-982 is enclosed in a wooden crate for protection. If you machine does not arrive in good condition, write on shipping paperwork that concealed damage may have occurred. You must write on bill of lading that concealed damage may have occurred. **If you do not – The Freight companies will not pay any damage claims filed due to clear signed bill of lading.**

Remove stretch film protective wrap and remove pallet wrapper from crate.
* Pallet Wrapper is fork lift portable and has fork channel at base of frame. You may use these channels to remove the Pallet Wrapper with fork lift.

Installation & Set Up

Cut nylon straps holding mast down.

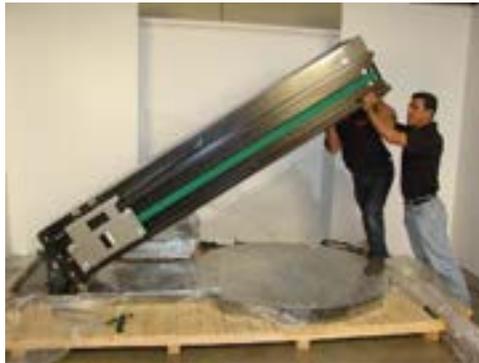Cut nylon straps that hold pre-stretch unit in place.

Remove protective plastic stretch film from tower.

*Tower is very heavy- Do not attempt to lift alone. Using two to three people lift tower upward.

Push tower upward into up right position.

*Very Important
Take special care you do not pinch cables underneath tower when installing

Remove bag with bolts and lock key for control panel.

Use the 6 bolts provided to mount tower to base using 3 bolts on each side.

Installing Film Rack

Remove plastic covering from Base and turntable.
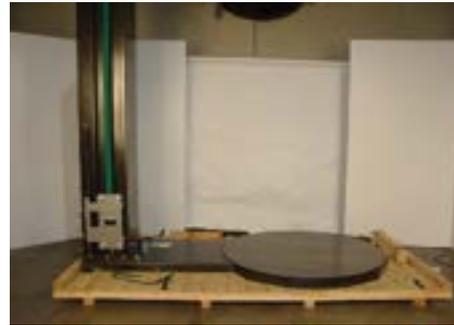
Your machine should look like this.

Remove plastic from pre-stretch Assembly

Remove 4 nuts and washers from pre-stretch mounting plate.

* Note-The film carriage unit is extremely heavy. Use two people to lift into position.
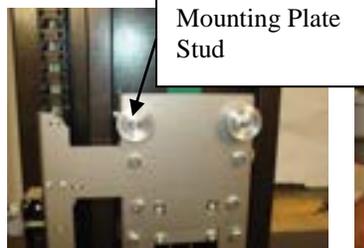
Using the small hole line up with threaded stud on mounting plate.
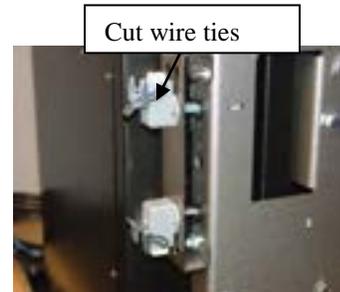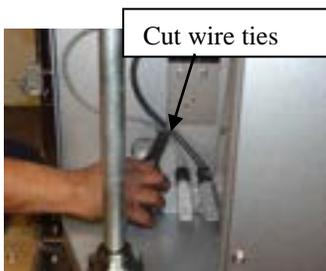
1. Cut wire tie connecting cables
2. Use quick disconnects to attach cables
3. Lock into position

Remove Pallet Wrapper from Base

1. Remove the 2 bolts from
   Holding plate near tower base
   On both sides of machine

2. Remove 2 bolts from
   holding plate at opposite
   end of machine near
   turntable

Using forklift from rear of machine place forks in upper half of channel frame.

Raise forks to lift frame
from base

Insert 2X4 underneath
frame to raise up
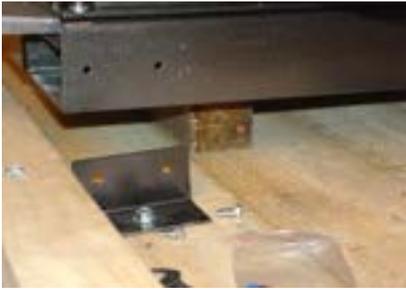
Remove forks from top channel.

Insert forks into lower channel (one with larger opening) push forks into channel as far as possible. Lift machine off pallet and place on floor in desired position.

Installation of optional loading ramp

Use forklift to bring ramp next to turntable base. Lift ramp using slot handles on each side. Metal pin ramp fits into hole on base frame of pallet wrapper-simply drop into position-ramp can be mounted from all three sides.

Installation of film roll

Remove roll lock bearing and place roll of 20" stretch film over shaft

The PP-982 uses a simple single roller mechanical brake stretch device to help elongate and stretch the film.

Film Threading:

Thread film through rollers as shown in photos above

Plug Machine In

Machine comes complete with power cord and 110volt plug.

***Make sure to use a dedicated line-** Do not run any other equipment on same power line.

Before plugging in machine make sure main power switch is in off position.

Plug into regular 110 volt power outlet.
Make sure the voltage supplied to the machine is 110 volt.

Front Control Panel

Main power switch

Power indicator light

Pause button

Tension Control

Touch screen

Start

Stop

Emergency Stop
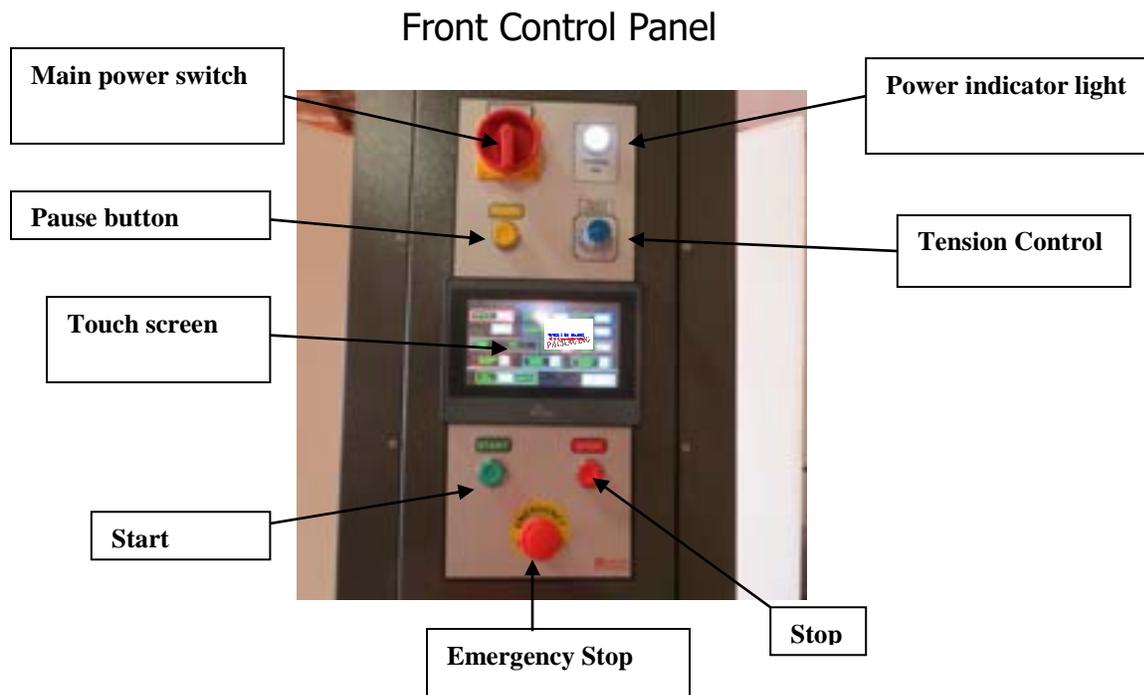
Main Power Switch-Turns power to machine ON or OFF

Pause Button- Allows operator to pause the pre-stretch head during the wrap cycle to reinforce a specific area of the pallet load making it more secure

Touch Screen- Main screen from which all functions are preformed

Start Button- Initiates machine cycle start

Emergency Stop Button- Immediately stops all machine functions

Stop Button-Will stop when cycle is complete

Tension Control-Allows operator to either apply the film very lightly to the pallet load when the tension control is set at 2-3 on the dial or you can apply the film very tightly to the pallet load when the tension control is set at 4-6 on the dial. (This setting does not affect the pre-tretch set at 225%)

Power Indicator Light-When lit shows there is power to the machine

Turning on Machine

Off position   **On** position

Turn power switch to **ON** position

Select Language

This is the first screen you will see when the machine is turned on.

By pressing the select language icon you will have the option to select from different languages (depending on what was pre-programmed into machine)
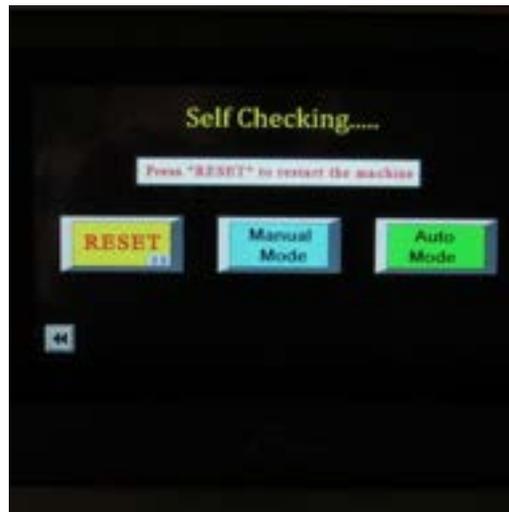
Once the language is selected the machine will self check – If all functions are working it will PASS-Press RESET if failed or press Manual Mode or Automatic Mode to continue.

For the purpose of this example press **"Automatic Mode"** to start. (Or you can wait 5 seconds and it will automatically go to the automatic mode screen)

Touch Pad Control Panel- Automatic Mode
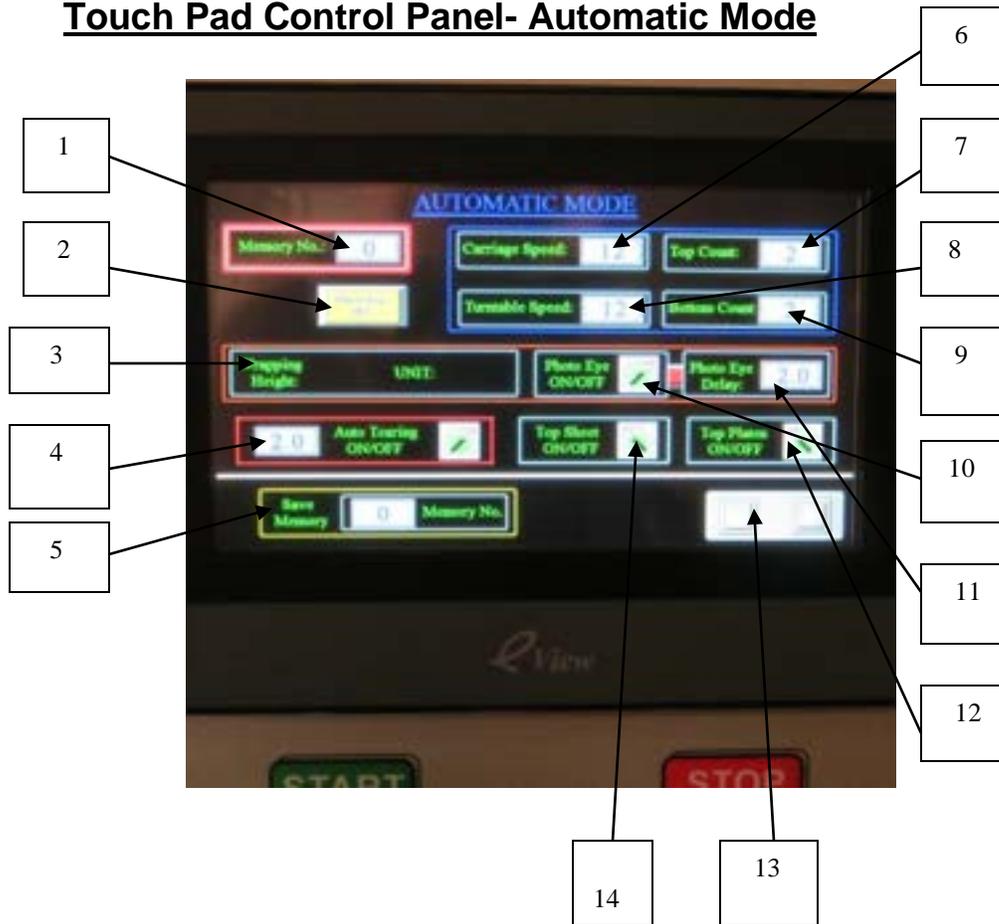
1. **Memory Number**-Select program memory number that was set for a specific wrap cycle.
2. **Photo Eye Off**- "Indicator only" shows if the photo eye is on or off.
3. **Wrapping Height (unit)** – When photo eye is in off mode operator can set wrap height manually (refer to manual mode page)
4. **Auto Tearing (Insta-Cut)-** Optional Feature located on film carriage)- If available on your machine when activated a small devise designed to tear the film at the end of the wrap cycle will cut the film eliminating the need for the operator to manually do this function. (touch icon to turn on or off)
5. **Save Memory**-Allows operator to save settings in a specific program memory location.

6. **Carriage Speed-** Sets the speed of the film carriage traveling up or down. This speed determines the amount of film overlap that is created on the pallet load.
7. **Top Count-** Is the number of wrap the machine will go around a pallet load at the top of the pallet.
8. **Turntable Speed-** Speed at which the turntable will spin 0-12 RPM
9. **Bottom Count-** Number of time the machine will wrap the bottom of the pallet load.
10 **Photo Eye On/Off**- Allows operator to manually turn photo eye on or off by touching icon switch.
11 **Photo Eye Delay**- **Increasing the photo eye delay-** allows more film to be overlapped over the top of the pallet load. **Decreasing the photo eye delay**-Will reduce the film overlap on the pallet load.
12 **Top Platen On/Off**- **(Optional Item)**-If available on your machine this feature is a top platen that will come down and make contact with the top of the pallet load to help secure and stabilize the load when turning at high RPM.
13 **Forward and Back Arrows**-For scrolling to different screens forward or backward from Automatic mode screen to Manual mode screen.
14 **Top Sheet- On/Off** –Allows the pallet wrap cycle to be stopped near the top of the wrap cycle when turned on allowing the operator time to apply a top sheet to the pallet load (usually polyethylene) to protect the load from the elements, the operator simply hits the start button to complete the cycle..

Manual Mode Screen
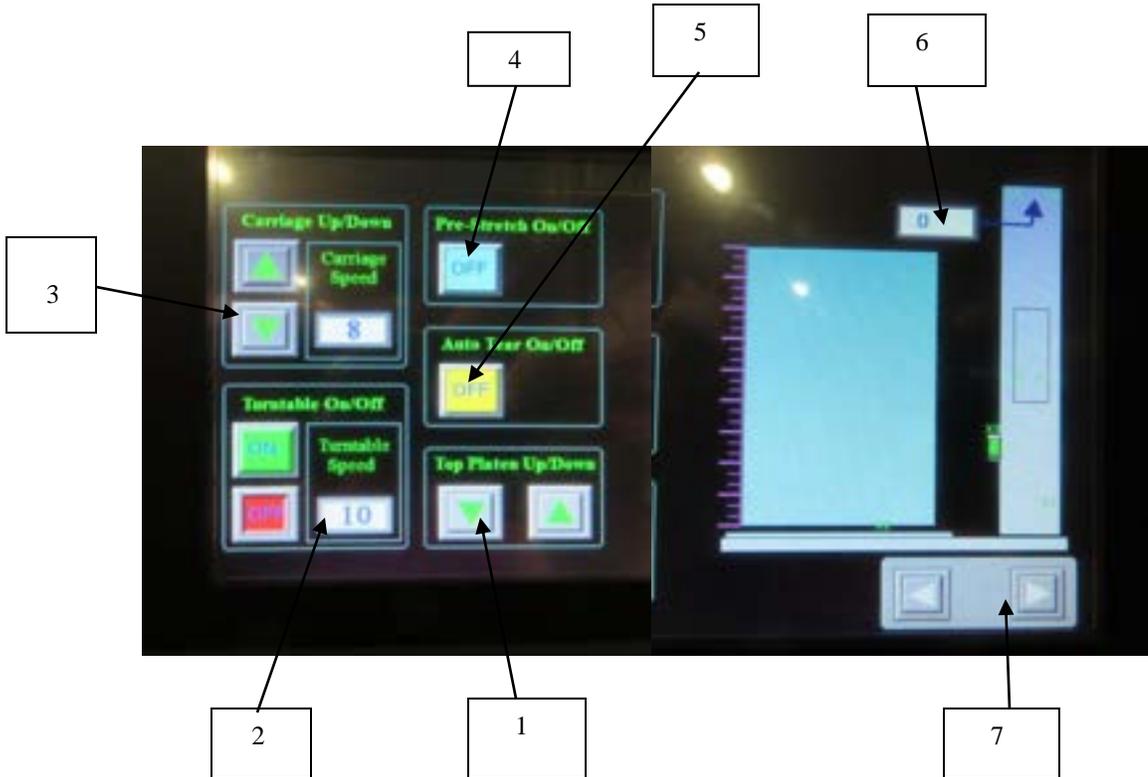
1. **Top Platen Up/Down-**(Optional Item) You can manually move the top platen hold down to stabilize your pallet load.
2. **Turntable On/Off-** You can manually turn on or off the turntable**.**
   Turntable Speed-You can manually adjust the speed at which the turntable will turn**.**
3. **Carriage Up/Down-** You can manually activate the film carriage to move up or down by pressing the up or down (0-10) arrows**.**
   Carriage Speed- You can manually set the carriage seed at which you prefer the film carriage to move up and down the mast (0-10)
4. **Pre-Stretch On/Off-** Allows operator to disengage the pre-stretch

5. <u>**Auto Tear (Insta-Cut)**</u> (Optional Feature)-When pressed in the **ON** position the ball pin will extend and cut the film.
6. <u>**Manual Height Setting**</u>-When film carriage is activated and moving upward the height setting or position of the film carriage will be displayed on this screen in a numerical number.
7. <u>**Forward or Back Arrows-**</u> Allows operator to go from manual mode screen to automatic mode screen.

Sequence of Operation-To Set Up Program

Setting Machine Parameters

Turn main power switch to **"ON"** position

Machine model and serial # will be displayed (after 5 seconds this screen will disappear and the self checking screen will appear)

After 5 seconds the self checking screen will automatically advance to the Automatic Mode screen seen below.

The first thing we need to do when setting up a new program is set the **Top** and **Bottom** wrap counts (see below)

Step 1: Set **Top** and **Bottom** wrap count (1-12)

Since we are going to start with program #1 set the top and bottom wrap counts at 1

Top count – This is the number of revolutions the turntable will spin once the film carriage reaches the load height.
Minimum setting is 0 / Maximum setting is 12

Bottom count – This is the number of revolutions the turntable will spin once the film carriage reaches the bottom position.
Minimum setting is 0 / Maximum setting is 12

Press the number shown in the box and a numerical keypad will appear. Select the number of Top wraps you want and press the number 1on the keypad and then press enter to save. Do the same thing for the bottom wrap count, now both are set at 1 wrap on the bottom and 1 wrap on the top.
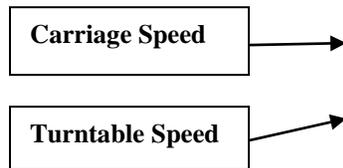
Step 2: Set the **Carriage Speed** and **Turntable Speed**

Carriage Speed- This is the speed at which the film carriage moves up and down the mast. For most applications you will want to run the film carriage slower than the turntable speed on order to get a god overlap of the film, if the carriage speed is equal to or higher than the turntable speed you will not get any overlap of film on the pallet load. Minimum setting is 0 / Maximum setting is 12
(recommended factory setting is 8 for most applications)
Note: If you desire to wrap the pallet loads rapidly and are not to concerned with how much film you are apply to the load or how

secure the load is you can set the turntable speed to 12 and the film carriage speed to 12 and wrap the pallet load as quickly as possible.

Turntable Speed- This is the speed in RPM(revolutions per minute) that the turntable will rotate. This is set the same way and manner as you set the carriage speed.
Minimum setting is 0 / Maximum setting is 12 RPM.
(Recommended factory setting is 10 for most applications)
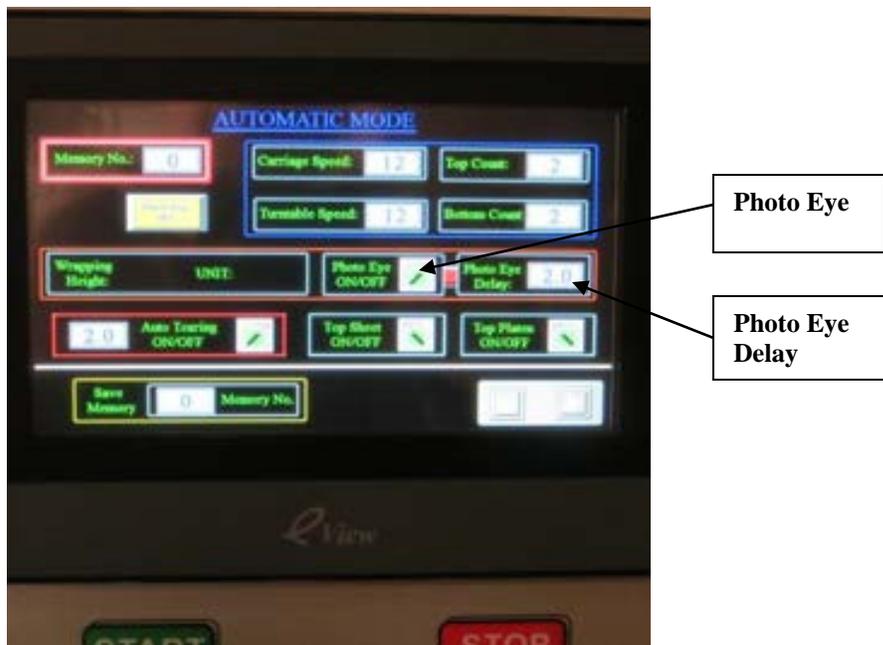
Step 3: Set Photo Eye and Photo Eye Delay or Photo Eye OFF

Photo Eye-Press the icon switch on the screen to the **ON** position. The photo eye will now be active and will seek the height of the pallet load for wrapping.

Photo Eye Delay- The photo eye delay is numerical timed value used to determine how much time the film carriage will continue to rise after the photo eye sees the top of the pallet load. (Example: If the photo eye delay is set on 0.0 the film carriage will not wrap to the top of the pallet load, but if the photo eye delay is set at 2.0 the film

carriage will most likely wrap 2-3 inches above the pallet load height giving an overlap of film on the top of the pallet load for added wrap security.) The photo eye delay is an adjustment that will need to be tried at differing setting until you reach the desired setting for your specific pallet load.

Factory recommended setting for most pallet loads is 2.0

Photo Eye Off: An example of when you might want to turn the photo eye off and actually set the wrap height would be if you are wrapping a pallet of tires that are black and the photo eye does not want to read or see the black tires, or you are using a black stretch film for a high value pallet load and the customer does not want the contents of the pallet seen, once the turntable spins around once and covers the pallet the photo will get a false reading seeing the black surface of the film and will stop. Follow these simple steps below to turn the photo eye off and use the manual height setting to solve this problem.
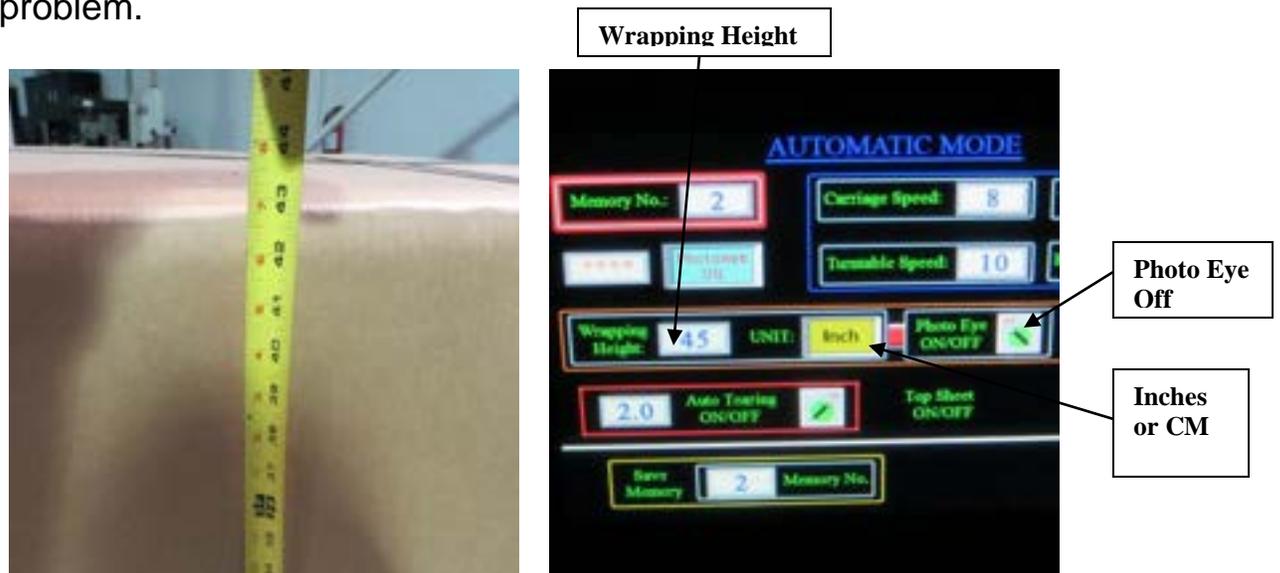
Step One: Determine what the height of the pallet load you want to wrap is, in this case our pallet load is 43" tall from the top of the turntable to the top of the box we want to wrap.

Step Two: Turn the photo eye icon switch **OFF** and insert the pallet height in the box that says "wrapping height" in this case we wanted a

little overlap on the top of the box so we entered 45". Make sure you have the box check for inches and not "CM" Centimeters.

If this will be a pallet load that you will be doing often you can go ahead and save these setting in any memory location you choose.

Press the "Start" button and the machine will wrap this pallet load as if the photo eye was seeing the pallet load but will go to the height you have set in the wrapping height setting.
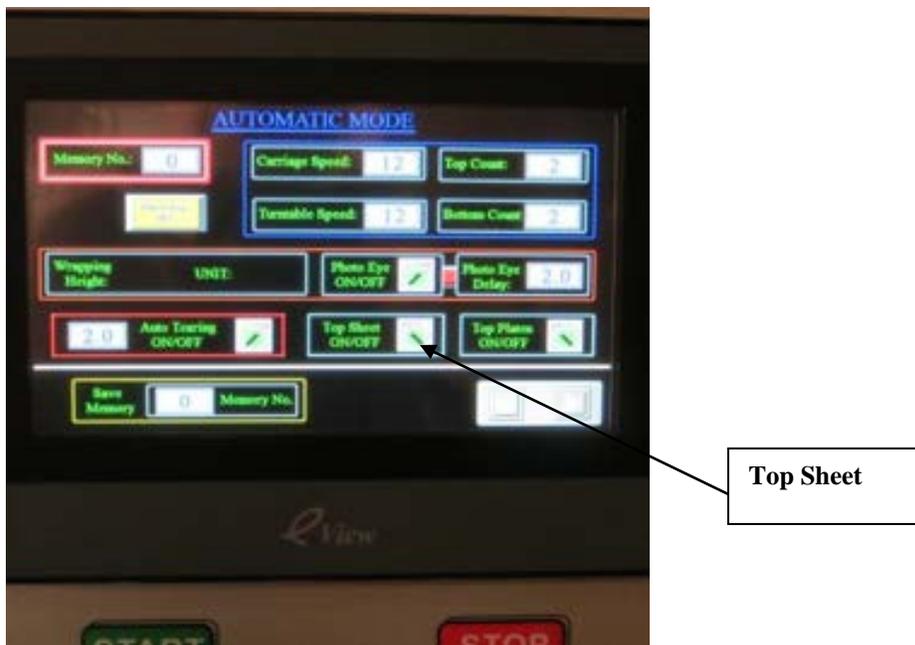
Top Sheet

Step 4: Set the Top Sheet On/OFF

By pressing the top sheet icon on the touch screen you can turn ON or OFF the top sheet application. When activated (ON) the pallet wrapper will run through it's normal wrap cycle going to the top of the load and stopping shortly after it starts to head downward and then stop allowing time for the operator to place a top sheet (usually a polyethylene sheet dispensed from a roll) and place this over the top of the pallet load for added protection from the elements, the wrap cycle will resume once the operator hits the Start button again the machine will now complete its wrap cycle.

Step 5: "Optional Item"-Top Platen ON/OFF

Top Platen

PP-983 with Top Platen

Step 5: Using the touch screen icon to turn the top platen ON or OFF. When **ON** the top platen will move downward until it touches the top of the pallet load with the disc helping to secure the top of the pallet load prior to the turntable spinning thus helping to stabilize an uneven or unstable pallet load. This is also very good if you have a light weight unstable load that you would like to wrap at a high rate of speed with the turntable set at 12 the top platen will secure this pallet load at higher speed wrapping.

Step 6: "Optional Item"- Auto Tearing / Insta-Cut

Insta-Cut / Auto Tearing
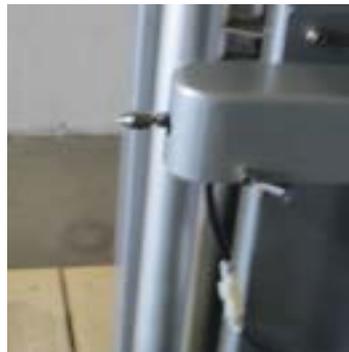
The Insta-Cut / Auto Tearing **"Optional"** feature will automatically tear the film at the end of the wrap cycle.

Pivot Bolt

Slotted screw to adjust the depth of the ball peen

You can see the pivot bolt in the center, and on the right side you can see the 2 slots for adjustment of the insta-cut ball peen by sliding this forward to can increase the stroke of the ball peen pushing the ball peen deeper into the film to insure a good cut.

Tension Control
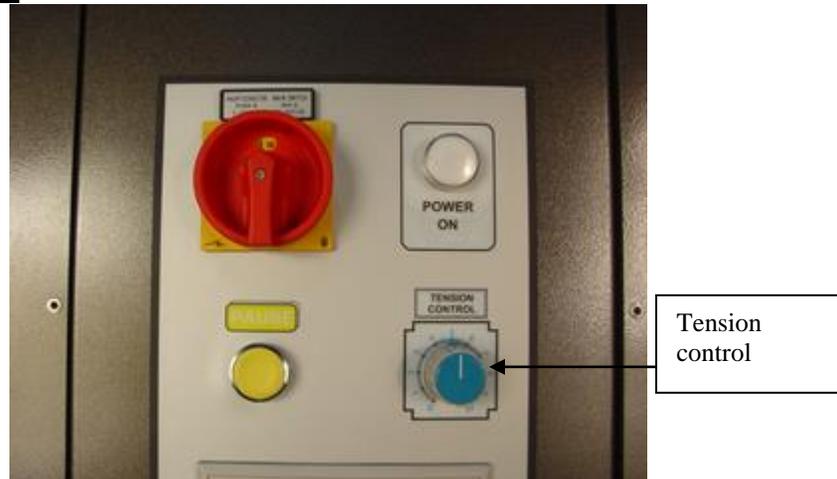
Tension control

Your model PP-982 comes with a mechanical brake stretch system that will typically give you up to 150% stretch.

The tension control knob does not change the % of stretch. This knob controls the amount of **"force to load"** that is applied to the pallet load.

Example: If the stretch tension knob is set at 2 on dial the film will
          Be applied very loose onto the pallet. If the dial is set at
          Maximum 10 on the dial, the film may break or it will
          Possibly crush the corner of corrugated boxes. The amount
          Of stretch always stays the same at 150%
          * The normal operating range is from 4 to 8
You will need to find a happy medium for your particular application based on your load weight, type of load, strength of corrugated used etc.

Machine Pause

Pause Key – Allows you to pause the film carriage to reinforce a certain area of your pallet. Key must be pressed to work. Once released film carriage will travel again.

This completes the set up of your first program, if you are satisfied with the settings and machine function then you need to save these settings in program #1

Press the number 1 then press ENTER to save in this memory location

Your first program is now saved in memory location #1

You have 12 memory locations you can set up for different pallet loads.

We recommend setting program #2 using 2 top wrap counts and 2 bottom wrap counts. Then set up program 3 using 3 top wrap counts and 3 bottom wrap counts. These 3 programs will satisfy 85% of users applications.

Lets say for example you have a pallet load that is very heady and you want to make sure it is secure to the pallet you may want to use 5 wraps on the bottom and 5 wraps on top, we recommend you put this in program 5 as it will be very easy to remember which memory location does what.

Getting Started

Turn power switch to "on" position

Place pallet load onto turntable and try to center pallet load evenly on turntable base.

Pull several feet of film and attach to turntable base as shown.

Touch the program memory setting at the top left corner of the touch screen and the key pad will appear, select the program memory that you have previously set up and you would now like to use, for this example we will choose program location 2, we press enter on the keypad and we are now in program #2 which is 2 wraps on the bottom and 2 wrap on the top. (see below)
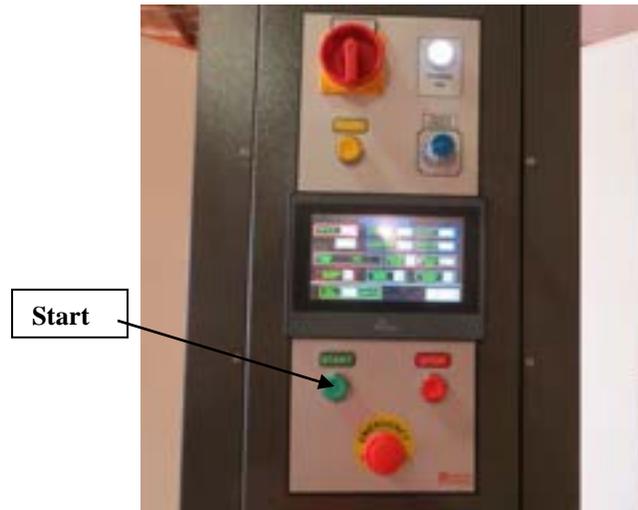
Start

Press the **start** button. The machine will automatically wrap the pallet load. Remember the machine will wrap depending on which program memory you have pre-set it for.

Once the cycle is complete, tear the stretch film and press excess film against pallet load to attach.

Remove pallet load via fork lift or pallet jack (if you have ramp).

Remember you may   Pause   the cycle at any time by pressing and holding down the   Pause   button to reinforce a specific area of your pallet load for added strength.

Trouble Shooting-Machine Will Not Start

1. A.Check to make sure machine is plugged into 110 volt service.
    B.Check for voltage present on incoming line.
    C.Check power cord end plug for loose connection.

Power switch on

Emergency Stop Switch

2. Make sure the power switch is turned to **"ON"** position.
3. Make sure the emergency stop switch is not engaged. **Twist turn to disengage.**

Make sure you have machine in **"auto"** mode-when in **"MANUAL"** mode machine must be operated manually.
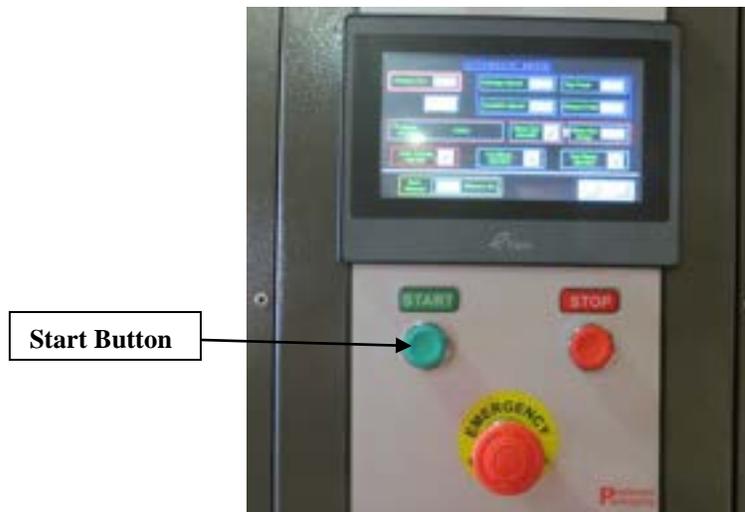
| Start Button |

You must press the | Start | button to activate machine cycle.

Power Light

Display

Make sure power light is on and display is on.

Use key provided with machine to unlock front control panel to open and check fuses.
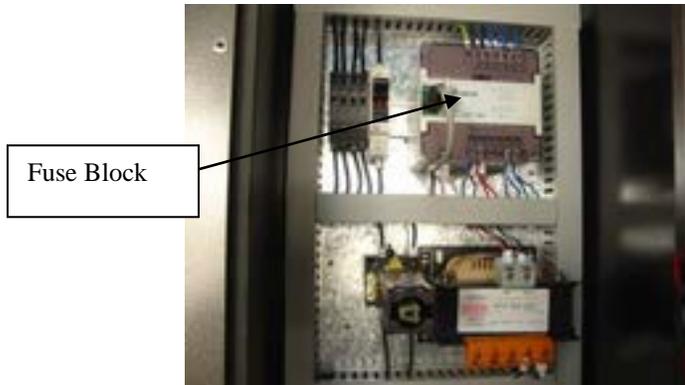
Fuse Block

Open fuses in fuse block – check for continuity. Replace if bad.

Machine in Emergency Stop Mode

Turn emergency switch on front control panel **"Counter Clock Wise"** to disengage.

Turntable will not turn
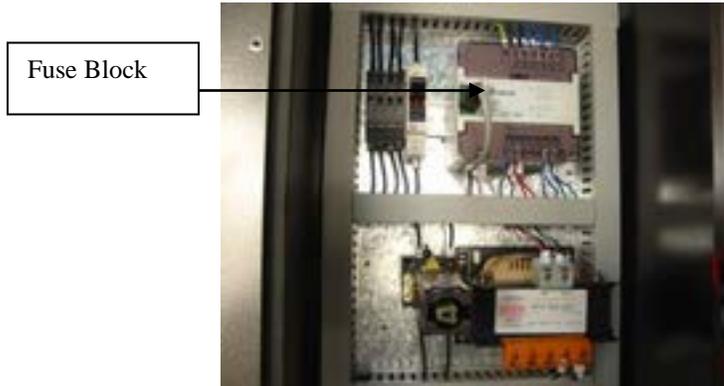
Check fuse- Replace if required.

Remove Back Panel- Check connections to motor. Test motor and please if necessary.

Film Carriage Will Not Rise

Remove the 7 bolts holding turntable top plate and slide off-**lifting not required.**

Switch Plate

Micro Switch

Check micro switch to see if it has come loose- switch must touch plate on sprocket on each revolution. If switch is not hitting plate it will not count revolutions required to start film carriage movement.

Film Carriage Will Not Rise

Remove top cover on tower mast

Check motor-replace if required

<u>Maintenance</u>

1. No special preventative maintenance operations are required, but it is a good habit to check regularly the condition of the main machine parts, carriage belt, turntable drive chain, etc.
2. Always replace worn out parts with original spare parts to prevent inefficiency and potential damage to machine.
3. All maintenance operations should be carried out by personnel in charge of mechanical maintenance.

Check Drive Chain Tension

Remove the 6 bolts holding cover on base

Adjustable
Sprocket

Check chain tension- sprocket's mounted in slotted channel which can be moved to increase chain tension.

Remove back panel

Motor mounts are slotted and allow greater adjustment of chain tension.

Lubrication of Chain
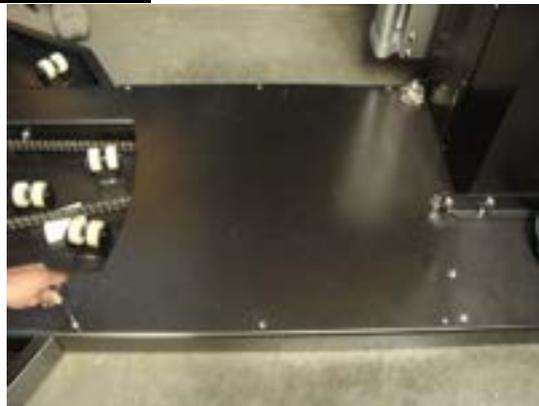
Remove top panel to expose chain

Use heavy weight chain lube or grease-use liberally.

Replacement of Load Bearing Rollers

Remove 7 bolts holding turntable top plate.
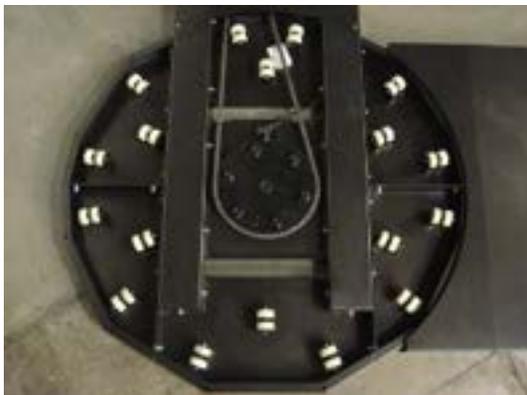
Dual rollers can be easily removed and replaced. Simply lift out and replace with new set.

Adjustment of Photo Eye
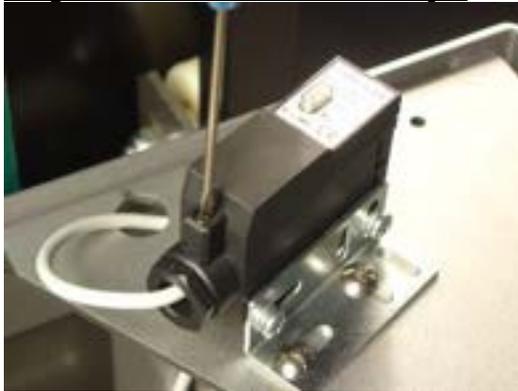
Remove top cover
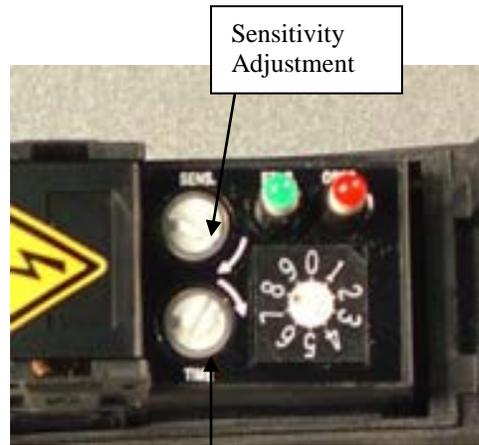
Sensitivity
Adjustment

Time Delay
Adjustment

Adjusts time delay allows you to
set how much extra film over
top of pallet.

Adjustment of photo eye
sensitivity.

PP982 Turntable Base
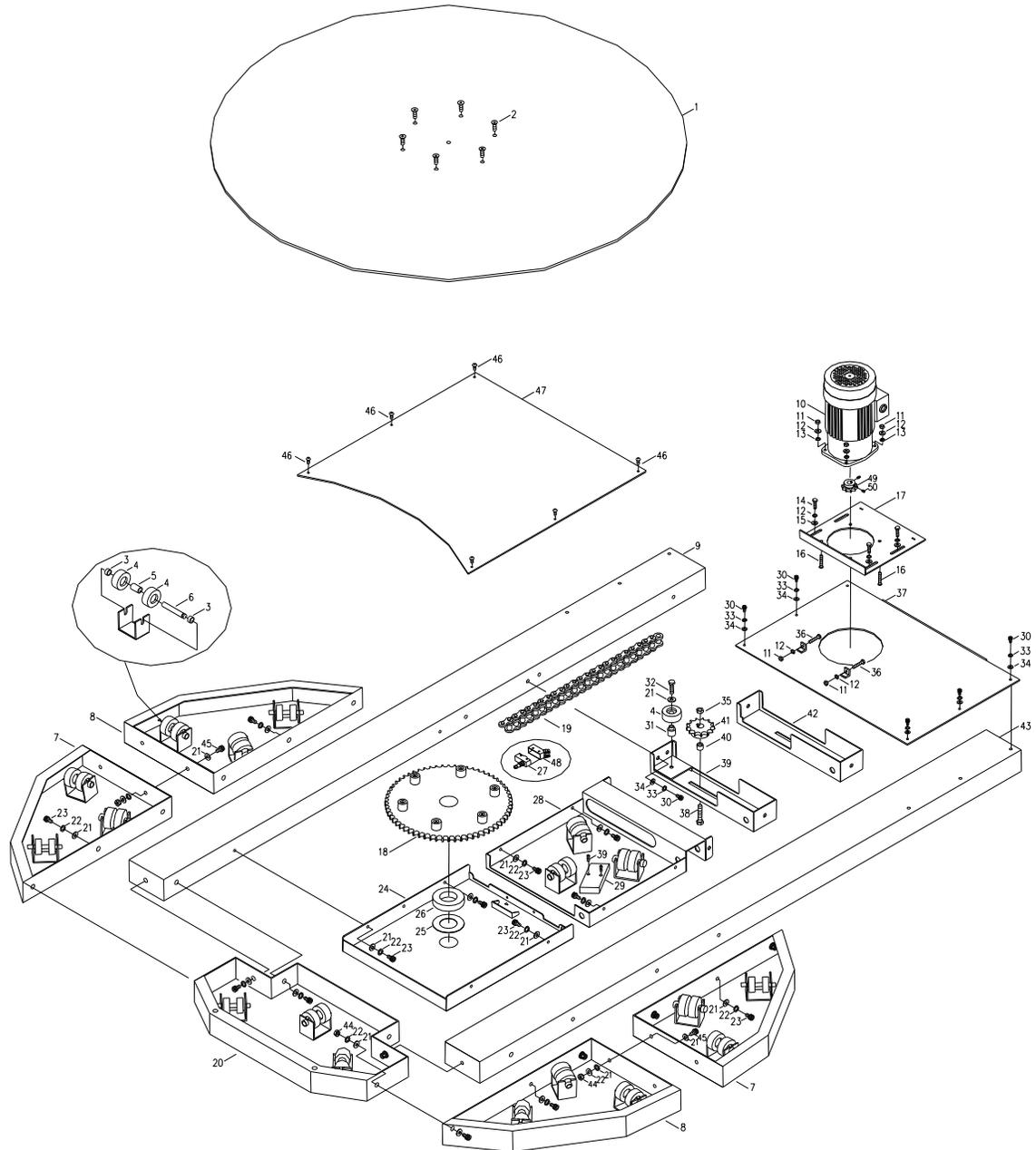
Pos	Part #	Qty	Description
1	B20001	1	Turntable
2	S04-1025	6	Flat socket head screw, M10x25
3	B10042	36	Collar, short
4	B10043	36	Support roller
5	B10044	18	Collar, long
6	B10041	18	Shaft
7	B20002	2	Turntable base A
8	B20003	2	Turntable base B
9	B20004	1	Support tube LH
10	E63200	1	Turntable motor, 220V/ 50~60Hz, 3Ph.
	E63201		Turntable motor, 240V/ 50Hz, 3Ph.
11	S12-0806	6	Hexagon nut, M8
12	S16-0800	10	Spring washer, M8
13	S15-0801	4	Plain washer, M8 (small)
14	S01-0820	4	Hexagon bolt, M8x20
15	S15-0802	4	Plain washer, M8
16	S04-0825	4	Flat socket head screw, M8x25
17	B20005	1	Motor seat
18	B20006	1	Turntable sprocket
19	B20007	1	Chain
20	B20008	1	Turntable base C
21	S15-1002	33	Plain washer, M10
22	S16-1000	33	Spring washer, M10
23	S02-1016	27	Hex socket bolt, M10x16
24	B20009	1	Turntable base D
25	B10039	1	Washer
26	S50-6211	1	Ball bearing 6211zz
27	E28500	1	Limit switch
28	B20010	1	Turntable base E
29	B20011	1	Plastic board
30	S02-0612	8	Hex socket bolt, M6x12
31	B20012	1	Roller seat
32	S01-1040	1	Hexagon bolt, M10x40
33	S16-0600	8	Spring washer, M6
34	S15-0602	8	Plain washer, M6
35	S12-1206	1	Hexagon nut, M12

Turntable Base Parts list– P1

Pos.	Part #	Qty	Description
36	S01-0840	2	Hexagon bolt, M8x40
37	B20013	1	Turntable base F
38	S01-1250	1	Hexagon bolt, M12x50
39	B20014	1	Turntable base G
40	B20015	1	Spacer
41	B20016	1	Tension sprocket
42	B20017	1	Turntable base H
43	B20018	1	Support tube RH
44	S12-1005	6	Hexagon nut, M10
45	S02-1025	6	Hex socket bolt, M10x25
46	S08-0612	6	Truss head machine screw, M6x12
47	B20019	1	Turntable base I
48	E28300	1	Limit switch protection cover
49	B20020	1	Motor sprocket
50	S09-0810	2	Hex socket set screw, M8x10
	B20021	1	Load ramp (Option)

Turntable Base Parts list– P2

PP982 Mast Assembly

Pos.	Part #	Qty	Description
1	S01-1050	8	Hexagon bolt, M10x50
2	S15-1002	8	Plain washer, M10
3	B10043	8	Support roller
4	B20012	8	Roller seat
5	B20023	1	Carriage plate
6	E82300	1	4P Quick connector
7	B20024	2	Spring hook
8	E29000	3	Limit switch
9	E82400	1	9P Quick connector
10	B20025	1	Quick connector plate
11	B20026	2	Safety clip seat
12	B20027	2	Safety clip
13	B20028	2	Spring
14	S01-1020	2	Hexagon bolt, M10x20
15	S12-1008	10	Hexagon nut, M10
16	B20029	1	Cable channel
17	B20030	1	Carriage guide plate
18	S08-0510	5	Truss head machine screw, M5x10
19	B20031	1	Upper limit switch trigger plate
20	B20032	1	LH tower
21	S16-0600	2	Spring washer, M6
22	S15-0602	4	Plain washer, M6
23	S02-0616	2	Hex socket bolt, M6x16
24	S12-0605	2	Hexagon nut, M6
25	S15-0802	2	Plain washer, M8
26	S12-0806	2	Hexagon nut, M8
27	S02-1025	8	Hex socket bolt, M10x25
28	B20033	1	LH tower mounting bracket
29	S02-1016	4	Hex socket bolt, M10x16
30	S16-1000	12	Spring washer, M10
31	S12-1006	8	Hexagon nut, M10
32	B20034	1	RH tower mounting bracket
33	B20035	2	Tower hinge angle plate
34	B20036	1	Carriage belt wheel LH plate
35	B20037	1	Carriage belt wheel
36	B20038	1	Carriage belt wheel RH plate

Mast Assembly Parts list– P1

Pos.	Part #	Qty	Description
37	S01-0670	2	Hexagon bolt, M6x70
38	B20039	1	Shaft
39	B20040	2	Spacer
40	S50-6902	2	Ball bearing 6902zz
41	B20041	1	Active roller
42	B20042	1	Top cover plate
43	B20043	1	Active roller bracket
44	S08-1016	2	Truss head machine screw, M10x16
45	B20044	2	Spacer
46	S08-1030	2	Truss head machine screw, M10x30
47	S50-FC204	1	Ball bearing FC204
48	B20045	1	Motor bracket
49	S21-060690	1	Round end key, 6x6x90
50	S21-060650	1	Round end key, 6x6x50
51	B20046	1	Motor shaft
52	E63300	1	Carriage gear motor, 220V/ 50-60Hz, 3 Ph.
53	B20047	1	Carriage motor group mounting plate
54	B20048	1	RH tower
55	S02-0612	2	Hex socket bolt, M6x12
56	S08-0314	4	Truss head machine screw, M3x14
57	S15-0301	4	Plain washer, M3
58	S16-0300	4	Spring washer, M3
59	S12-0303	4	Hexagon nut, M3
60	S01-1040	4	Hexagon bolt, M10x40
61	B20049	1	Carriage belt
62	B20050	1	Carriage belt stopper
63	E84200	1	Counting photo-couple
64	S05-0315	2	Phillips pan head screw, M3x15

Mast Assembly Parts list– P2

PP982 Film Head

Pos.	Part #	Qty	Description
1	E84100	1	Photo-cell
2	B20141	1	Photo-cell mounting plate
3	S08-0612	2	Truss head machine screw, M6x12
4	S15-0401	3	Plain washer, M4
5	S16-0400	5	Spring washer, M4
6	S05-0430	2	Phillips pan head screw, M4x30
7	B20142	1	Top cover
8	S05-0410	2	Phillips pan head screw, M4x10
9	E82501	1	6 pin terminal connector
10	S50-6903	4	Ball bearing, 6903zz
11	B20143	2	Roller
12	B20144	2	Roller shaft
13	B20145	1	Rubber roller
14	S50-6004	4	Ball bearing, 6004zz
15	S15-0601	1	Plain washer, M6
16	S04-0616	1	Flat socket head screw, M6x16
17	S15-0801	4	Plain washer, M8
18	S16-0800	4	Spring washer, M8
19	S02-0820	1	Hex socket bolt, M8x20
20	B20146	1	Head base
21	S02-0406	4	Hex socket bolt, M4x6
22	E87100	1	Magnetic brake
23	S02-0412	4	Hex socket bolt, M4x12
24	E80000	1	Cable clamper
25	E80020	2	Cable protection rubber
26	B20147	1	Upper mounting bracket
27	B20056	4	Washer
28	S24-1500	4	External circlip, S15
29	B20073	1	Lock knob
30	B20074	1	Lock ring
31	S23-5500	1	Internal circlip, S55
32	S50-6006	1	Ball bearing, 6006zz
33	S24-2500	4	External circlip, R25
34	B20075	1	Upper film holder
35	B20076	1	Film shaft
36	B20077	1	Bottom film holder

Film Head Parts list– P1

Pos.	Part #	Qty	Description
37	B20078	1	Copper bush
38	S15-1002	4	Plain washer, M10
39	S16-1000	4	Spring washer, M10
40	S12-1006	4	Hexagon nut, M10
41	S15-2003	1	Plain washer, M20
42	S12-2010	1	Hexagon nut, M20

Film Head Parts list– P2

Spare Parts List

Item #	Part #	Description	Qty.	Price
1	E29000	Limit switch	1	
2		Chain lube	1	
3	E28500	Micro switch turntable	1	
4	B10043	Turntable support rollers	2	
5	E39300	Fuse 12A	2	
6	E39100	Fuse 8A	2	
7	E38800	Fuse 5A	2	
8	E38500	Fuse 2A	2	
Total Cost				$Call

PP-982 2P Wiring Diagram

Notes