GBC 5031TS Roll Laminator - 1711718

Instruction Manual

Provided by

MyBinding.com®

When Image Matters.

Call Us at 1-800-944-4573

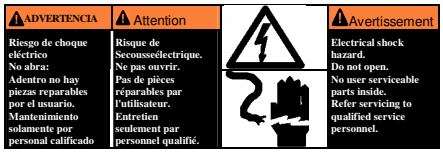
5031TS
OPERATION MANUAL

TABLE OF CONTENTS

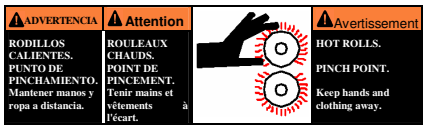
IMPORTANT SAFETY INSTRUCTIONS

YOUR SAFETY AS WELL AS THE SAFETY OF OTHERS IS IMPORTANT TO GBC. IN THIS INSTRUCTION MANUAL AND ON THE PRODUCT, YOU WILL FIND IMPORTANT SAFETY MESSAGES REGARDING THE PRODUCT. READ THESE MESSAGES CAREFULLY. READ ALL OF THE INSTRUCTIONS AND SAVE THESE INSTRUCTIONS FOR LATER USE.

THE SAFETY ALERT SYMBOL PRECEDES EACH SAFETY MESSAGE IN THIS INSTRUCTION MANUAL. THE SYMBOL INDICATES A POTENTIAL PERSONAL SAFETY HAZARD TO YOU OR OTHERS. THE FOLLOWING WARNINGS ARE FOUND UPON THIS PRODUCT.



THIS SAFETY MESSAGE MEANS THAT YOU COULD BE SERIOUSLY HURT OR KILLED IF YOU OPEN THE PRODUCT AND EXPOSE YOURSELF TO HAZARDOUS VOLTAGE.



THIS SAFETY MESSAGE MEANS THAT YOU COULD BE BURNED AND YOUR FINGERS COULD BE TRAPPED AND CRUSHED IN THE HOT ROLLERS. CLOTHING, JEWELRY AND LONG HAIR COULD BE CAUGHT IN THE ROLLERS AND PULL YOU INTO THEM.

THIS SAFETY MESSAGE MEANS THAT YOU COULD CUT YOURSELF IF YOU ARE NOT CAREFUL.

WARNING: THIS SAFETY ALERT SYMBOL PRECEDES EACH SAFETY MESSAGE IN THIS INSTRUCTION MANUAL. THE SYMBOL INDICATES A POTENTAL PERSONAL SAFETY HAZARD TO YOU OR OTHERS.

WARNING: DO NOT ATTEMPT TO SERVICE OR REPAIR 5031TS LAMINATOR.

WARNING: DO NOT CONNECT THE LAMINATOR TO AN ELECTRICAL SUPPLY OR ATTEMPT TO OPERATE THE LAMINATOR UNTIL YOU HAVE COMPLETELY READ THESE INSTRUCTIONS. MAINTAIN THESE INSTRUCTIONS IN A CONVENIENT LOCATION FOR FUTURE REFERENCE.

IMPORTANT SAFEGUARDS

WARNING: TO GUARD AGAINST INJURY THE FOLLOWING SAFETY PRECAUTIONS MUST BE OBSERVED IN INSTALLATION AND USE OF THE LAMINATOR.

General:

Keep hands, long hair, loose clothing, and articles such as necklaces or ties away from the front of the heat and pull rollers to avoid entanglement and entrapment.

The heat rollers can reach temperatures over 300°F (150°C). Avoid contact with the heat rollers during operation or shortly after power has been removed from the laminator.

Keep hands and fingers away from the path of the sharp film cutter blade located at the film exit.

Do not use the laminator for other than its intended purpose.

Avoid moving the Laminator on uneven floor surfaces. Never tilt the laminator.

Do not defeat or remove electrical and mechanical safety equipment such as interlocks, shields and guards.

Do not insert objects unsuitable for laminating or expose the equipment to liquids.

Electrical:

The Laminator should be connected only to a source of power as indicated in these instructions and on the serial plate located on the rear of the laminator. Contact an electrician should the attachment plug provided with the Laminator not match the receptacles at your location.

WARNING: THE RECEPTACLE MUST BE LOCATED NEAR THE EQUIPMENT AND EASILY ACCESSIBLE.

Do not operate the Laminator with a damaged power supply cord or attachment plug, upon occurrence of a malfunction, or after the laminator has been damaged. Contact GBC's Technical Service Department or your dealer/distributor for assistance.

Service:

Perform only the routine maintenance procedures referred to in these instructions

WARNING: DO NOT ATTEMPT TO SERVICE OR REPAIR THE LAMINATOR

Disconnect the plug from the receptacle and contact GBC's Technical Department or your dealer/distributor when one or more of the following has occurred.

- The power supply cord or attachment plug is damaged.
- Liquid has been spilled into the laminator.
- The laminator is malfunctioning after being mishandled.
- The laminator does not operate as described in these instructions.

WARRANTY

Limited 90- Day Warranty

GBC warrants to the original purchaser for a period of ninety days on labor and one year on parts after installation that this laminator is free from defects in workmanship and material under normal use and service. GBC's obligation under this limited warranty is limited to replacement or repair, at GBC's option, of any part found defective by GBC without charge for material or labor.

THIS LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED. WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY EXCLUDED. ANY REPRESENTATIONS OR PROMISES INCONSISTENT WITH, OR IN ADDITION TO, THIS LIMITED WARRANTY ARE UNAUTHORIZED AND SHALL NOT BE BINDING UPON GBC. IN NO EVENT SHALL GBC BE LIABLE FOR ANY SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, WHETHER OR NOT FORESEEABLE.

This limited warranty shall be void if the laminator has been misused; mishandled; damaged by negligence, by accident, during shipment, or due to exposure to extreme conditions; repaired, altered, moved, or installed by anyone other than GBC or its authorized agents; or if incompatible film was used. GBC's obligation under this limited warranty does not include routine maintenance, cleaning, adjustment, normal cosmetic or mechanical wear, or freight charges.

Without limiting the generality of the previous paragraph, GBC's obligation under this limited warranty does not include:

1. Damage caused to the rollers by knives, razors, or other sharp tools: by any foreign objects falling into the working area of the laminator; or by cleaning the laminator with solutions or materials that harm its surfaces;
2. Damage caused by adhesives; nor
3. Damage caused by lifting, tilting or attempting to position the laminator other than rolling it on its castors across even surfaces.

FOR EUROPEAN UNION RESIDENTS ONLY: This guarantee does not affect the legal rights which consumers have under applicable national legislation governing the sale of consumer goods.

SPECIFICATIONS

Heat Type	Teflon coated heat shoes
Heat Source	Two infrared heaters per shoe

SILICONE RUBBER HEAT ROLLERS

Heat Source	One infrared heater per roller
Heat Control	Independent upper and lower heat controllers for the heat shoes
Display Panel	LCD panel with upper and lower temperature display, speed setting, READY and WAIT indicators
Film Gauge	1.5 mil through 10 mil film
Maximum Speed	Variable speed control up to 35 feet per minute
Power Requirement	220V, 30 Amp, NEMA 6-30 receptacle *Standard Power Supply Two Wire Service Plus Ground Voltage 230 VAC +/- 10%
Film Widths	Maximum 31"
Film Lengths	3000' rolls of 1.5 mil, 3" core 2000' rolls of 3.0 mil, 3" core 1000' rolls of 5.0 mil, 3" core 500' rolls of 10 mil, 3" core

CONTROL PANELS

FEEDER CONTROL PANEL

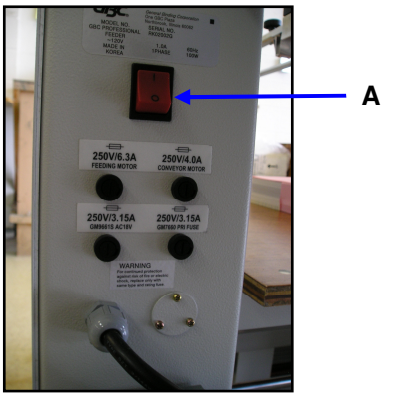


Figure 1

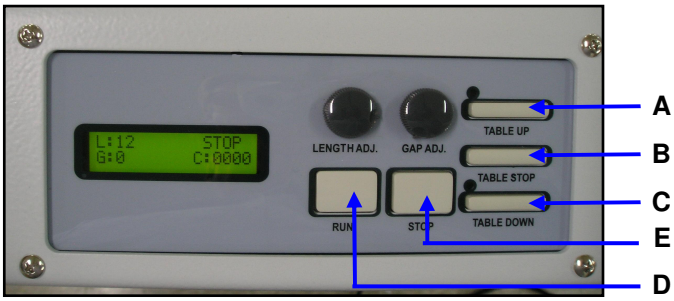


Figure 2

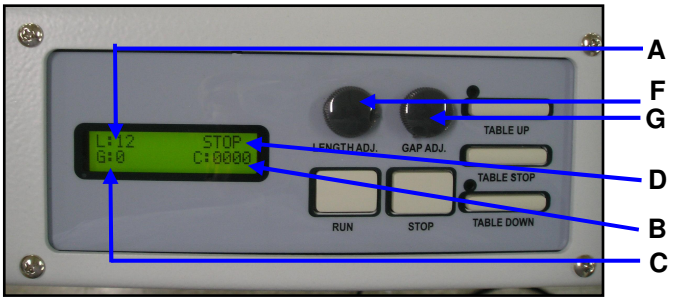


Figure 3

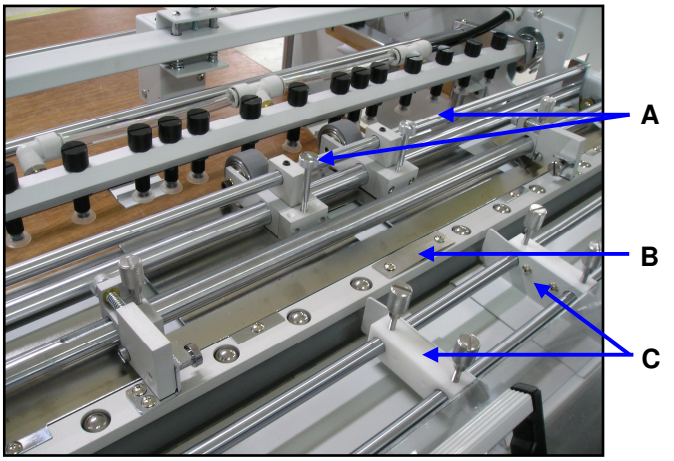


Figure 4

FEEDER ON/OFF SWITCH (Figure 1)

A. Turns the Feeder ON/OFF

A. TABLE UP
Raises the table up for feeding. If the table is down, it will happen automatically rise up to the Pile Height switch when RUN is pressed.

B. TABLE STOP
Stops the table motor.

C. TABLE DOWN
Lowers the feed table for loading. The table will not go down if the feeder or laminator are in the RUN mode.

D. RUN
Starts the feeder motor.

E. STOP
Stops the feeder motor. Press and hold to reset the counter

F. LENGTH ADJ.
Sets the length of the sheet.

G. GAP ADJ.
Sets the gap in between the sheets.

LED DISPLAY (Figure 3)

A. Displays the selected sheet length
B. Displays the number of sheets fed
C. Displays the selected gap. At “0” there is an automatic 1” gap.
D. **RUN/STOP:** Displays the operating mode.

A. Main In-Feed Tire Adjustment Screws
Adjusts the in-feed tire pressure. Adjusting these knobs controls the skew of the paper from left to right. Only adjust one at a time.

B. Ball Bearing Rack
Drives the paper into the laminator. Heavier sheets require additional ball bearings or switching to the secondary feed tires.
SEE: Dual Feed Delivery System.

C. Paper guides:
Help direct the sheets into the laminator.

FEEDER CONTROLS

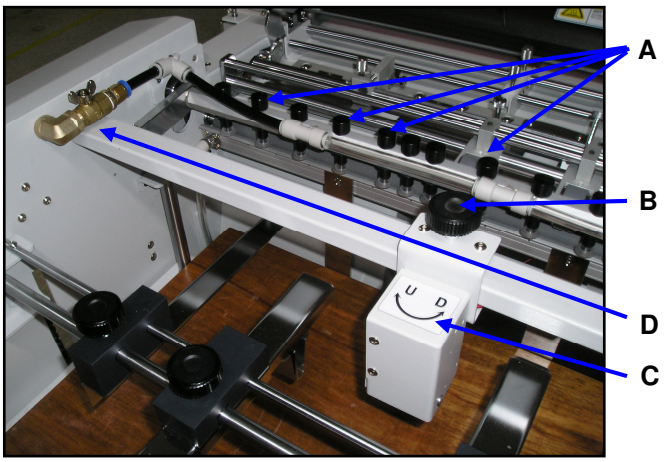


Figure 5

A. Pick-up Heads
Can be opened or closed depending upon the width of the sheet. Pick-up heads that are not in use should be closed to prevent loss of vacuum to the other heads.

B. Pile Height Knob
Controls the height of the stack. This is used for different weights of sheets.

C. Pile Height Switch Box
The Pile Height Switch Box contains the switch that activates the Feed Table Motor raising the table up when the feeder is in the RUN mode.

D. Vacuum Valve
Controls the amount of vacuum on the feeder tube.

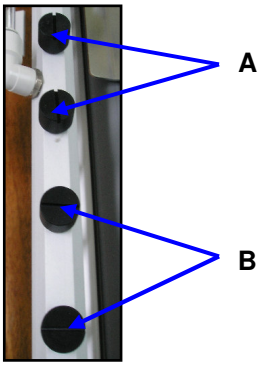


Figure 6

(Figure 6)

A. Open when horizontal to the vacuum bar.

B. Closed when vertical to the vacuum bar.

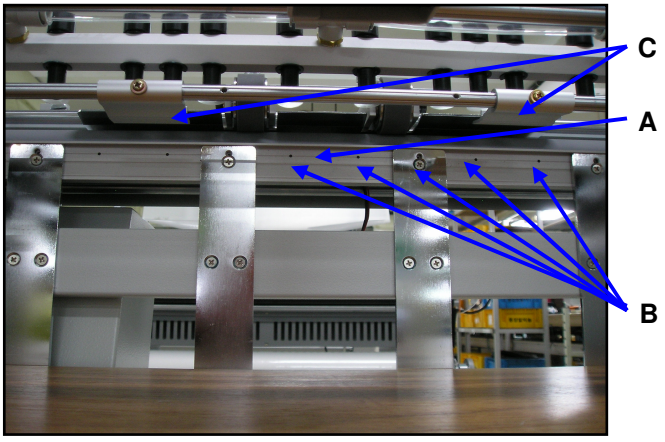


Figure 7

A. Separator Bar
Separates the top sheet from the stack. Sheets should be underneath the lip but not touching it. The starting point is to bring the stack of sheets to mid way of the air blast holes. If the pickup heads on the vacuum bar are having problems picking up the sheets, the height of the pile will have to be adjusted. Generally, heavier stocks will be set lower than the holes, but will be dependent upon the type of stock and ink coverage. The direction of the paper grain is also important for how well sheet separation and delivery work. Heavier sheets with the grain being run in the same direction as the web, may have more miss-feeds. Try rotating the stack 90 degrees.

B. Air Blast Holes
Fan the top few sheets, assisting in the sheet separation process.

C. Sheet Separator Plates
Push down on the sheet being fed causing separation from the sheet directly under it.

FEEDER CONTROLS (Contd.)

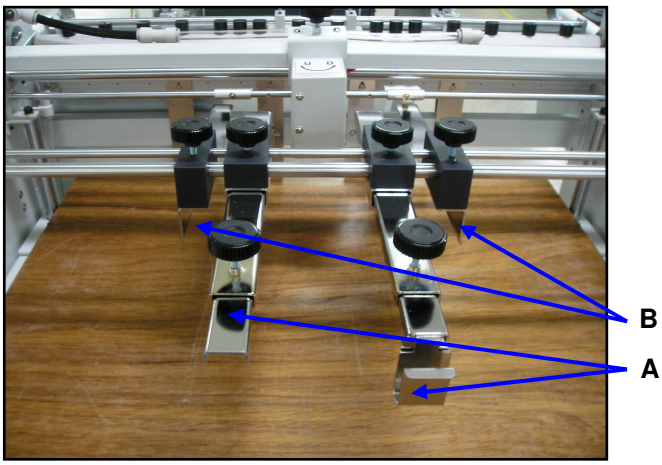


Figure 8

A. Rear Guides:
Reversible for longer sheets.

B. Side Guides:
These are adjusted to keep the sheets from floating. They should be snug to the sheets, but not too tight or they will prevent the sheets from feeding properly.

Warning: Do not stack anything on the Feed Table other than the sheets intended to be laminated. Make sure the sheets are directly under the Pile Height box before turning on the laminator.

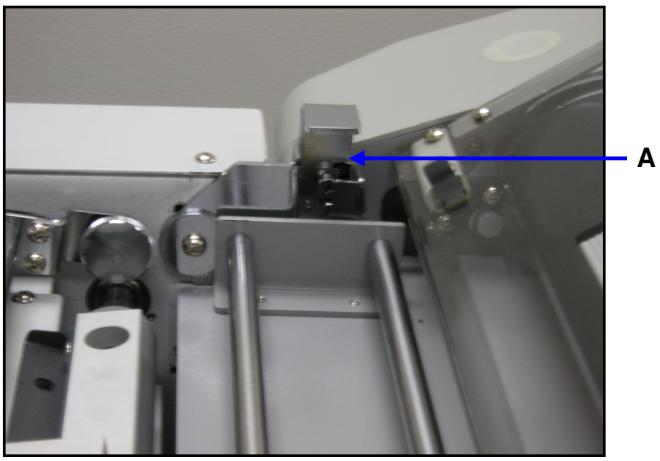


Figure 9

SWING-OUT FEEDER

A. Left Feeder Latch (Figure 9)

Both latches MUST be disengaged before swinging out the feeder.

A. Right Feeder Latch (Figure 10)

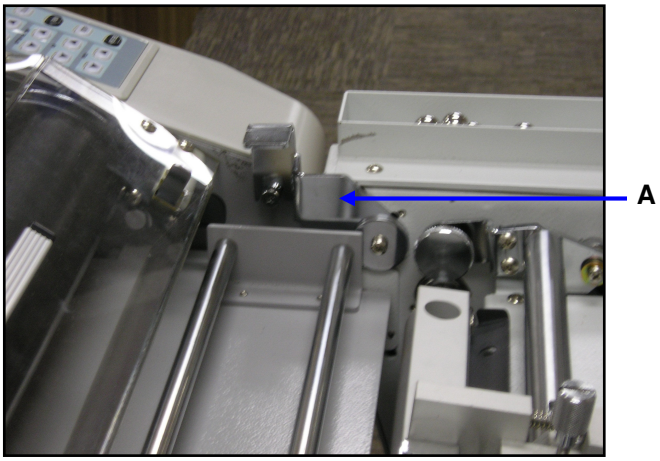


Figure 10

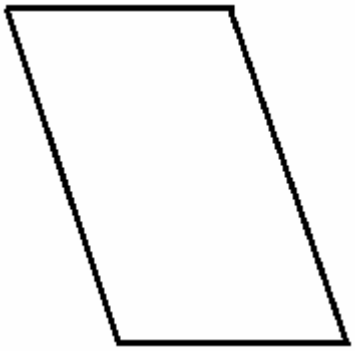
Swing out feeder to load bottom film roll.

SKEW ADJUSTMENT

Skew is defined as the direction in which the paper is traveling through the web and can vary from right to left. The direction of the paper can be controlled with feed tire pressure. Usually, the direction is controlled by which ever feed tire has the most downward pressure on the feed roller. It is recommended to adjust only one feed tire at a time. Making adjustments to both feed tires at the same time will cause you to spend more time attempting to control the skew.

If the sheets are going through like this:

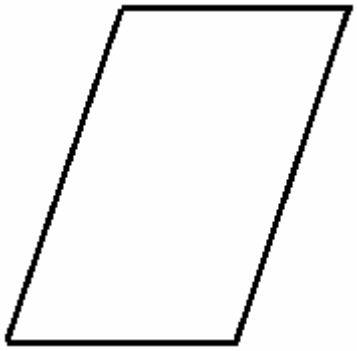
To straighten, release pressure on the left in-feed tire.



+ Pressure - Pressure

If the sheets are going through like this:

To straighten, add pressure on the left in-feed tire.



- Pressure + Pressure

.

LAMINATOR CONTROL PANEL

GBC 5031TS Functional Parts Definition

Figure 11

LAMINATOR ON/OFF SWITCH (Figure 11)

A. Turns the Laminator ON/OFF

POWER SWITCH:
Located on the back of the machine-applies power to the laminator. The LCD display panel will illuminate when position marked "I" is pushed. The off position, marked "O", removes power from the laminator**.**

2. CONTROL PANEL: Located front, right side of the laminator

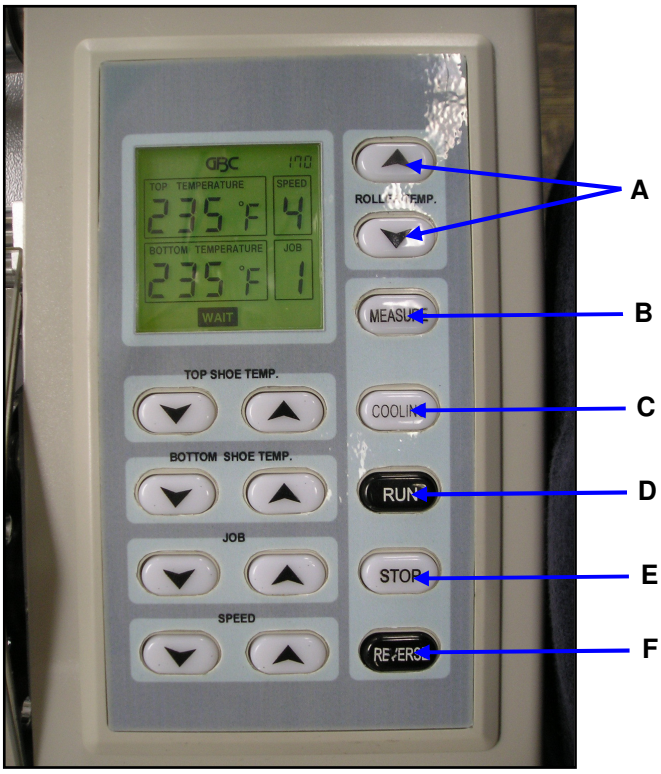


Figure 12

A. Nip Roller Up/Down:
Nip Roller Up/Down Heat Control Buttons

B. Measure:
Measures running temperature

C. Cooling:
Turns the cooling fans ON/OFF. Fans will automatically shut off when STOP is pressed

D. Run:
Turns the drive motor ON

E. Stop:
Turns the drive motor OFF

F. Reverse:
Places the drive motor in reverse. Press and hold to reverse the motor.

LAMINATOR CONTROL PANEL (Contd.)

3. FUNCTIONAL ARROWS: (Figure 13)

G. Top Shoe Temperature:
Adjusts the temperature UP/DOWN for the Top Heat Shoe

H. Bottom Shoe Temperature:
Adjusts the temperature UP/DOWN for Bottom Heat Shoe

I. Job:
Selects the preset jobs settings Operator programmable

J. Speed:
Adjusts the speed of the drive motor

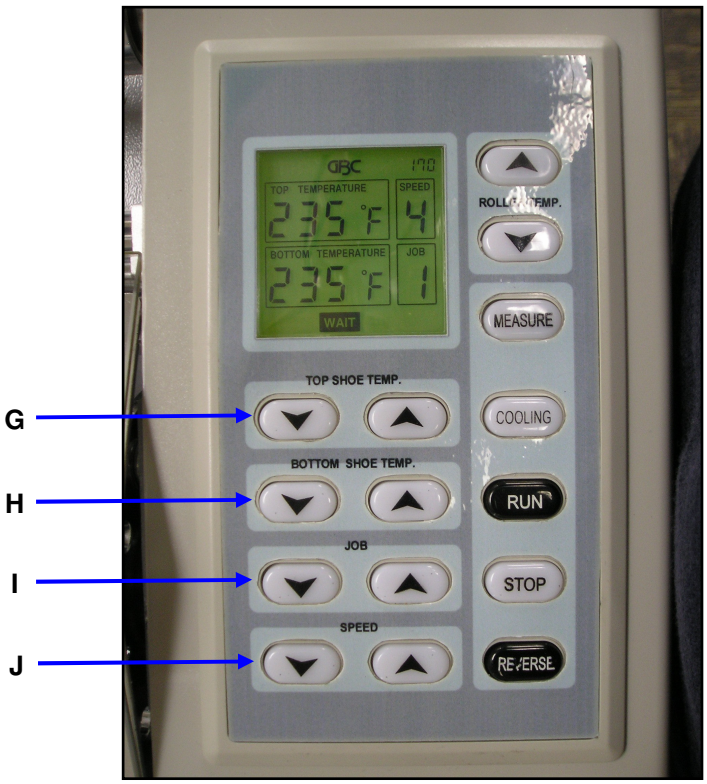


Figure 13

4. LED DISPLAY (Figure 14)

A. Displays the temperature of the Nip Rollers
B. Displays the temperature of the top Heat Shoe
C. Displays the temperature of the Bottom Heat Shoe
D. Displays the set speed of the drive motor.
E. Displays the selected preset job.

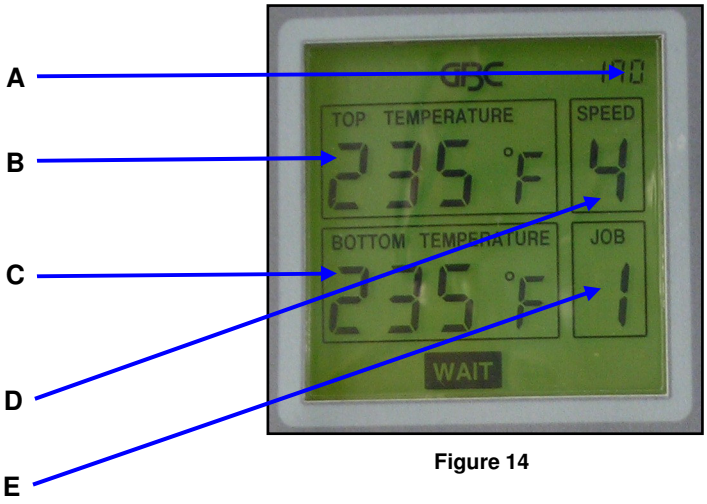


Figure 14

LAMINATOR CONTROLS

A. Top Brake (Figure 15)

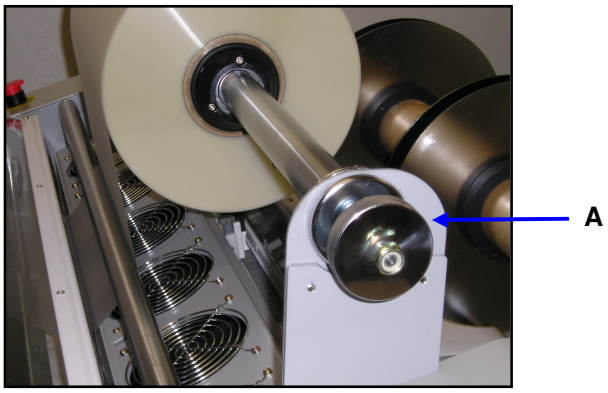


Figure 15

B. Bottom Brake (Figure 16)

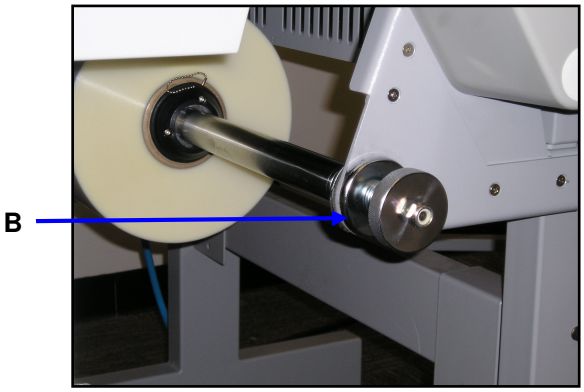


Figure 16

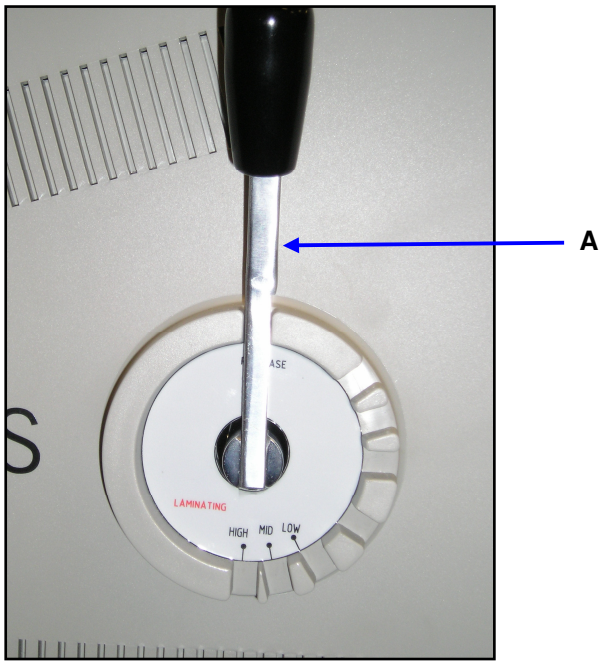


Figure 17

A. Roller Pressure Handle (Figure 17)
Engages the nip and pull roller pressure simultaneously.

Located on the right-hand side of the laminator. Adjusts the amount of the roller pressure needed for various laminating thicknesses.

There are three thickness settings:

a. Heavy material up to 1/6" (1mm), including film.
b. 1.5 – 3.0 mil film (38 – 75 mic)
c. 5 mil film (125 mic)
d. 10 mil film (250 mic)

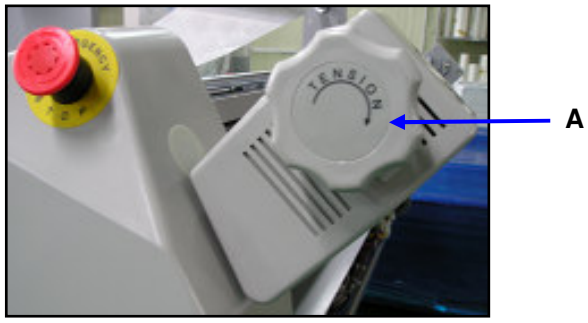


Figure 18

A. Scrap Rewind Clutch (Figure 18)
Adjusts the tension on the Scrap rewind shaft. Tighten only enough to make the shaft rotate. Too tight a tension will make emptying difficult.

Note:

- Clockwise rotation increases the break tension
- Counterclockwise rotation decreases the brake tension
- Always use the least amount of tension possible to flatten out the film
- Adjustments should be made at the selected speed for the job

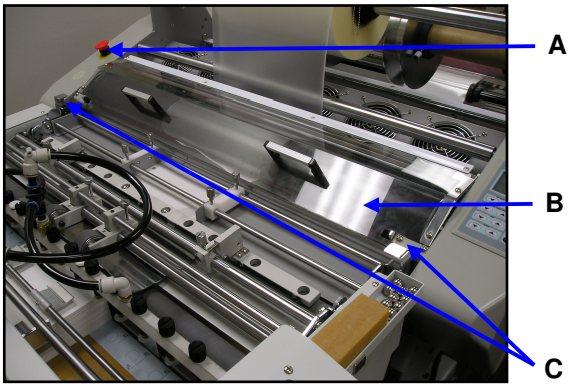


Figure 19

A. Emergency Stop Switch (Figure 19)
Press to engage, rotate in the direction of the arrows to disengage.

B. Safety Shield
Located at the front of the machine – prevents inadvertent contact with the top heat shoe.

C. Left and Right Safety Latches

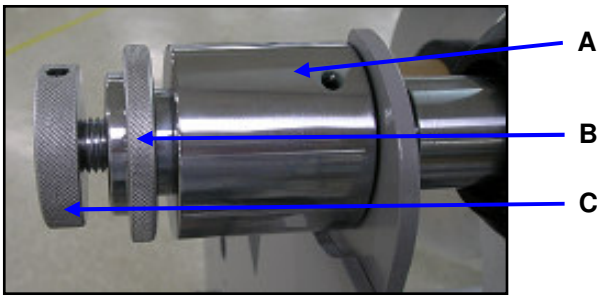


Figure 20

(Figure 20)
A. Lateral Film Adjuster

B. Adjustment Knob

C. Locking Knob

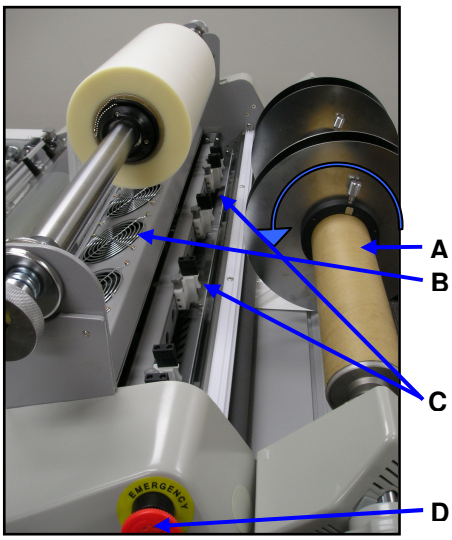


Figure 21

A. Scrap Rewind Tube and Guides:
(Figure 21)
Rewinds the scrap film from the side slitting operation.

B. Cooling Fans:
Cools the web before it exits the laminator.

C. Side Slitters
Push down to engage, pull up to disengage. Can be adjusted while the laminator is running.

D. Emergency STOP Button
Press to engage. Twist in the direction of the arrows to disengage.

CUTTER CONTROL PANEL

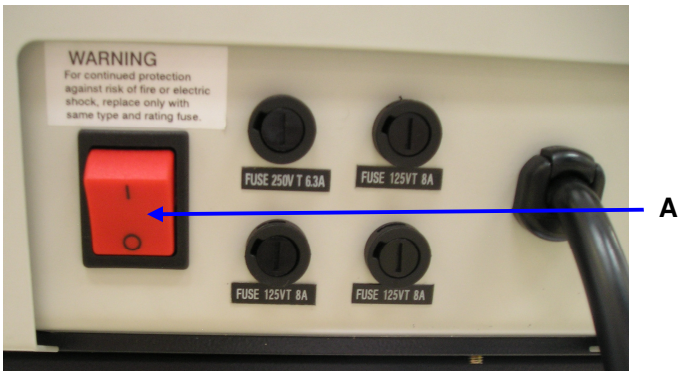


Figure 22

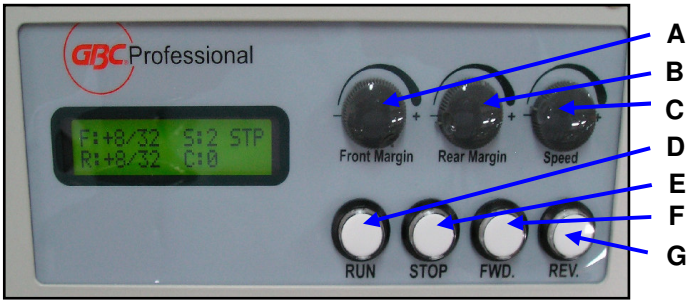


Figure 23

CUTTER ON/OFF SWITCH (Figure 22)

A. Turns the Cutter ON/OFF

A. Front Margin
Sets the front margin. Press and hold to go to Sheeting Mode.

B. Rear Margin
Sets the rear margin. Press and hold for manual cut.

C. Speed
Sets the speed of the feed rollers.

D. RUN
Starts the feed motor.

E. STOP
Stops the feed motor. Press and hold to clear the counter.

F. FWD.
Press and hold to manually advancement of the feed motor.

G. REV.
Press and hold to manually reverse the feed motor.

LED DISPLAY (Figure 24)

A. **RUN/STP:** Displays the selected mode

B. Displays the selected speed

C. Displays the selected front margin

D. Displays the selected rear margin

E. Displays the number of sheets cut

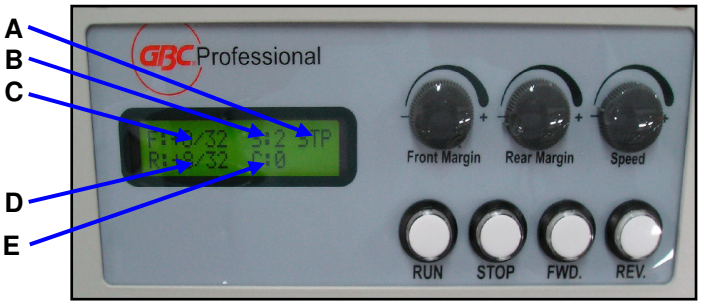


Figure 24

CUTTER CONTROLS

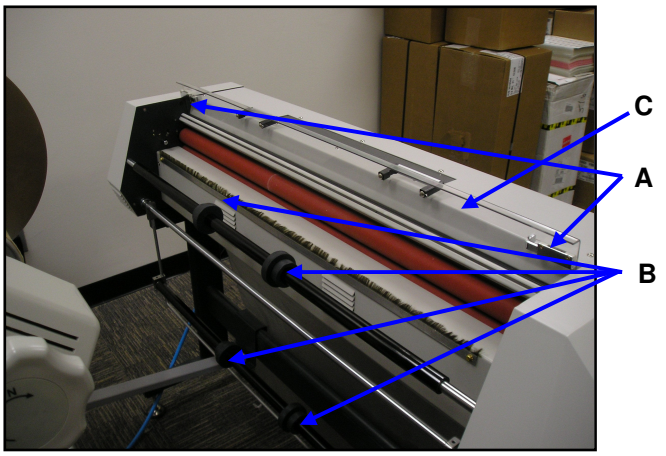


Figure 25

SAFETY SHIELD (Figure 25)

Located front and center of the machine - prevents inadvertent contact with the feed rollers.

A. Safety Shield Latches

B. Adjustable Web Guides
May be used to “steer” the web int the cutter area for straight cuts.

C. Safety Shield

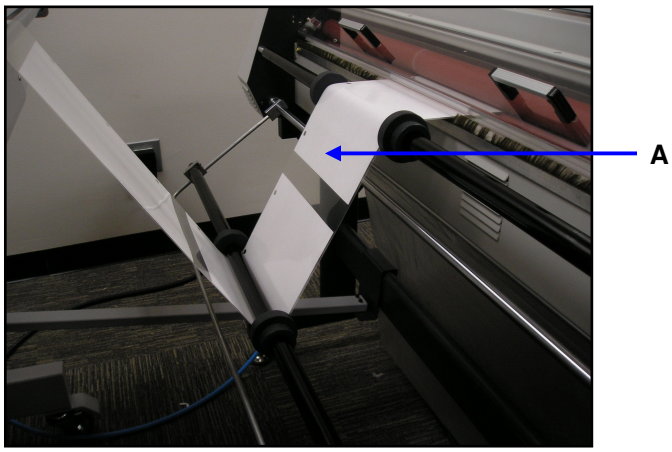


Figure 26

A. Web path (Figure 26)
Laminating film loaded onto the machine.

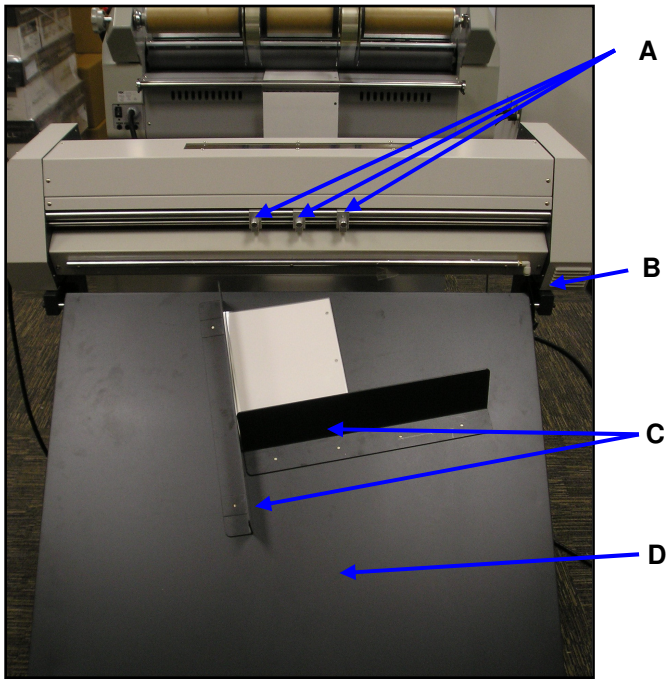


Figure 27

STACKER TRAY (Figure 27)

A. Adjustable Output Roller Guides:
Used to keep the sheets straight for trailing cut.

B. Air Blast Tube
Used to float the sheets onto the stacker tray

C. Adjustable Magnetic Paper Guides

D. Stacker Tray

START UP SEQUENCE

1. Select the preferred temperature and set the speed to 1 on the laminator.
2. Load sheets on the feeder.
3. Wait for the laminator to come to **READY**.
4. Thread film through the laminator.
5. Select the proper sheet length for the feeder.
6. Press **RUN** on the feeder.
7. Turn on the air pump.
8. Pressurize the rollers on the laminator.
9. On the laminator, press **RUN** and then **COOLING**.
10. After the web is moving through the laminator, engage the slitters and adjust to the desired side margins.
11. Cut two or three sheets out of the web and check for curl. If the sheets curl up, the top brake is set higher than the bottom brake. If they curl down, the bottom brake is set higher than the top. Adjust the brakes accordingly to ensure a flat output.
12. Thread the web through the cutter by either raising the safety shield and pushing the web through the rollers or by pressing and holding the **FWD** button while guiding the web into the rollers.
13. Select the desired front and rear margins on the cutter.
14. Increase the speeds of the laminator and cutter to the desired settings.
15. After the system comes up to speed, check a few more sheets for curl as break tension will change when the speed is changed.

DUAL FEED DELIVERY SYSTEM

The 5031TS comes with a dual feed delivery system that enables the unit to feed paper stocks up to 24 pt. cover stock. Following are the steps to change from the ball bearing rack, for light weight sheets, to the positive drive feed tire for heavier stocks.

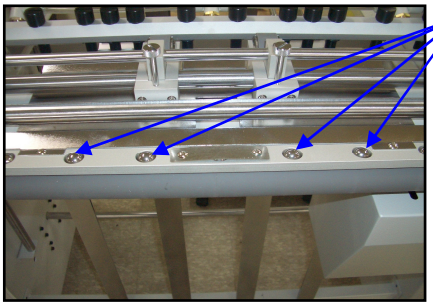


Figure 28

1. Disengage the locking latches of the feeder from the laminator.
2. Swing out the feeder for easy access to the feed roller assembly
3. Use the supplied magnet to remove the steel ball bearings, (Fig. 28) and place them in the tray, (Fig. 29).

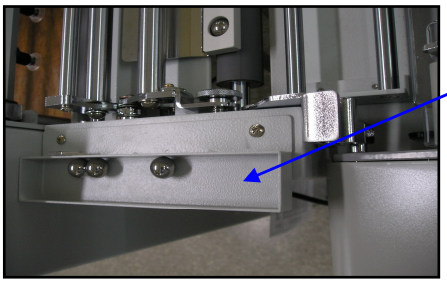


Figure 29

DUAL FEED DELIVERY SYSTEM (Contd.)

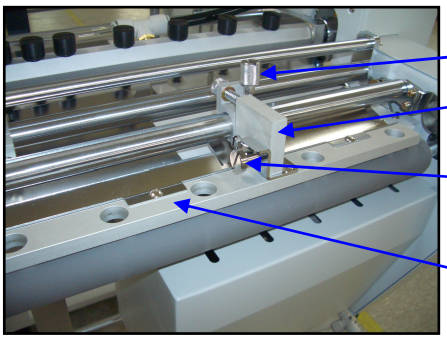


Figure 30

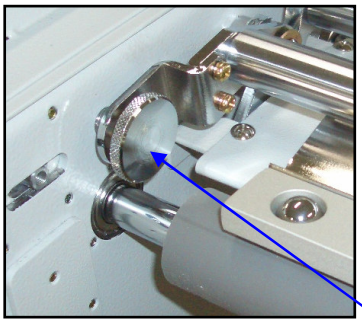


Figure 31a

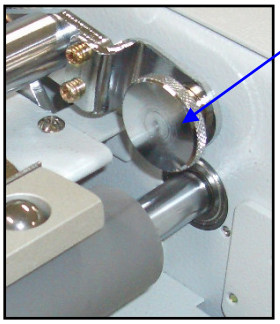


Figure 31b

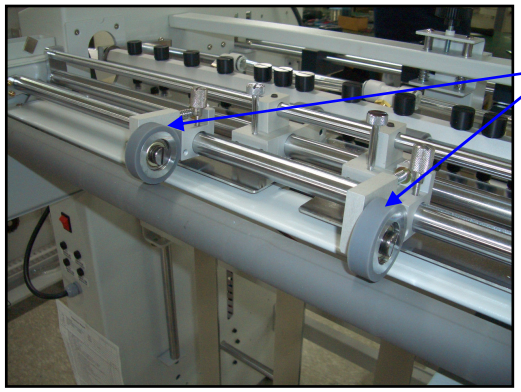


Figure 32

4. Remove the two thumbscrews that hold the rack to the feed arms, (Fig. 30).
5. Loosen the two knobs, on each side of the frame that hold the feed arm assembly up (Fig. 31a & 31b). They do not have to be completely removed.
6. Loosen the thumbscrew on the right side feed arm and slide it to the center of the bar, (Fig 30).
7. Attach the feed tire to the feed arm using one of the thumbscrews from the rack, (Fig. 32). If necessary, install two secondary feed tires
8. Reposition the feeder.

The pressure of the secondary feed tire can me adjusted using the thumbscrew on the feed arm that has the spring on it.

Note: Feed Tires need to be attached to the inside of the feed arms

JOB MEMORY RECALL

The 5031TS laminators come with a unique feature called, “Job Memory Recall”, which allows the operator to pre-program and automatically recall nine (9) different heat and speed settings. JOB allows the laminator to be programmed automatically, recalling repeat jobs for frequently used heat and speed settings. When a temperature or speed setting is changed in a pre-selected JOB number, it will automatically be stored in that number until a new setting is selected. The job numbers and their respective heat/speed setting are displayed in the LCD readout. To program a setting:

1. Select a job number by pressing JOB  until the desired number is displayed on the Control Panel.
2. Select the desired temperature for the Top and Bottom heat shoes, using the  buttons for the both shoes.
3. Select the desired temperature for the nip rollers, using the buttons  for the rollers.
4. Select the speed of the motor by pressing SPEED up/down arrows. 
5. The heat and speed settings will be retained in memory when the laminator is turned off. The JOB button will automatically recall the settings every time that particular job number is selected.

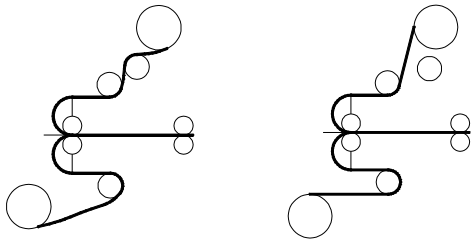
You may change the settings of the job number at any given time by repeating the above steps

FEED TABLE REMOVAL

To remove the Feed Table, follow these steps:

1. Remove the safety shield.
2. Lift the table up and then pull back about two inches.
3. Push the table down and pull out, away from the laminator.

FILM LOADING AND THREADING



Poly-In **Poly-Out**

The top and bottom rolls of laminating film must be of the same width and be present simultaneously. A small amount of adhesive will “squeeze out” during lamination, where the top and bottom rollers meet at both sides of the film web. Hardened adhesive deposits can damage the nip rollers. To avoid any damage, preheat the rollers before cleaning them.

Adhesive will deposit on the rollers if:

- Only one roll is used.
- Rolls with different widths are loaded together.
- Either roll is loaded adhesive side against the shoe and nip roller.
- One or both rolls of film are allowed to run completely off its core.

Before we start discussing loading/threading films, you need to be knowledgeable on a few terms.

A. Poly-In films: **(Poly-In Films always unroll from the bottom)**

The adhesive side of the film is rolled on the inside of the roll.

B. Poly-Out films: **(Poly-Out films always unroll from the top)**

The adhesive side of the film is rolled on the outside of the roll.

Where most laminators use either Poly-In OR Poly-Out the 5031TS laminators are capable of using both “Poly-In” and “Poly-Out” films. The dull side of the film is the “adhesive” side – the shiny side of clear film must contact the heat shoes, with the adhesive side facing away from the shoe. Use extreme caution when loading de-lustered (matte) film, as both sides appear dull. If necessary, place a small piece of film near the outer edge of the heat shoe to determine the side that is coated with adhesive.

ALWAYS change the top **AND** bottom rolls of the film at the same time. Near the end of each roll of GBC laminating film is a label stating, **"Warning-End of Roll".** The appearance of this label on either the top or bottom roll requires that new rolls of film be installed as soon as the item presently being laminated completely exits the rear of the laminator. Do not introduce any additional items into the laminator when the warning label is visible. In fact, when a roll of film starts getting close to the end, it is a good idea to periodically check under the Feed Table to determine if the bottom roll will run out of the film first. All GBC film supply rolls have at least as much film lengths as the roll indicates (250', 500', 1000', etc), however they all have "overage", and the bottom roll could have less footage than the top.

USING A FILM THREADING CARD

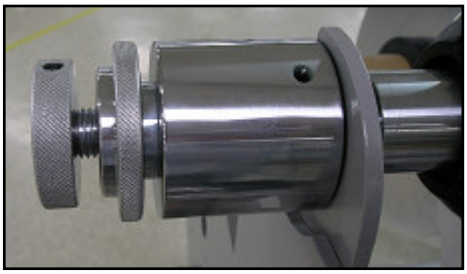


Figure 33

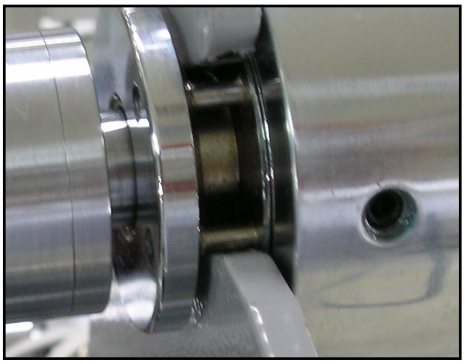


Figure 34

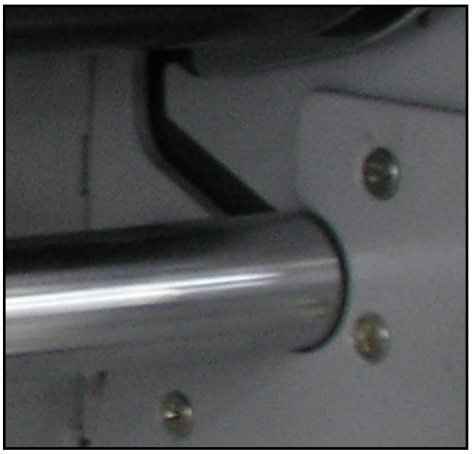


Figure 35

This method is used when the film web has been removed from the unit to either clean the rollers or clear a jam, (wrap-up).

CAUTION: The following procedure is performed while the laminator is hot. Use extreme caution and avoid any contact with the Heat Shoes. Do not allow remaining film to pass through the laminator if there is any exposed liquefied or tacky adhesive. Liquefied or tacky adhesive will deposit on the heat rollers if the following procedure is not observed.

Refer to the diagram for threading directions of Poly-In and Poly-Out films.

1. Remove the safety shield and feed tray.
2. Cut the existing top and bottom film webs between the supply rolls and the heat shoes.
3. Gap the rollers by rotating the Roller Pressure Handle to the GAP position, located on the right side of the machine
4. Grab hold of the web, (top and bottom films), and pull the web completely out the front of the unit, making certain no exposed adhesive contacts the Heat Shoes.
5. Remove the bottom film supply shaft by pulling the Lateral Film Adjuster (Fig. 33) from its cradle and sliding the film shaft to the left until it clears the hex-shaped brake hub.
6. Remove the "O" rings from the core adaptors of the film supply shaft and slide the shaft out of the core.

Take a new film supply roll…

7. Slide the film shaft into the core of the roll of film ensuring the film will unroll from the bottom for Poly-In film and from the top for Poly-Out film.
8. Install the bottom film supply shaft by inserting the right end of the shaft into the brake hub and the Lateral Adjuster into its cradle. Make sure the two pins of the Lateral Adjuster are facing out of the cradle. (Fig. 34)
9. Release the brake tension and unroll approximately 2 feet of film. Lower the bottom idler bar (Fig. 35) and thread the leading edge of film under and around the bar (Fig.36). Slide the idler bar back into place and drape the film over the bottom roll of film.

USING A FILM THREADING CARD (Contd.)

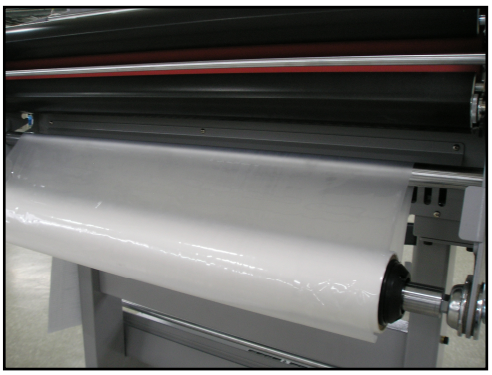


Figure 36

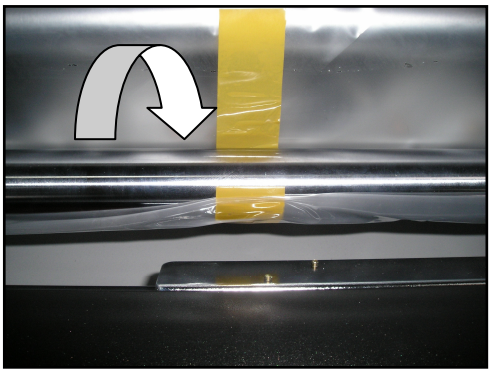


Figure 37

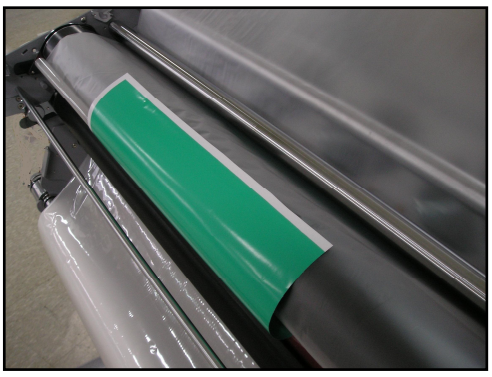


Figure 38

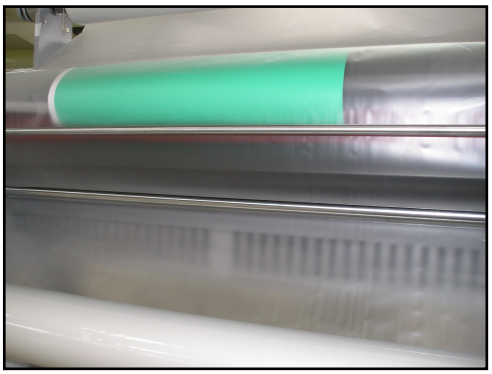
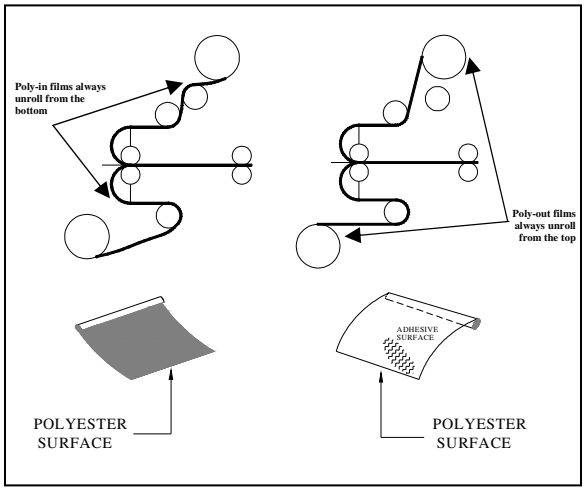


Figure 39

10. Remove the top film supply shaft from the laminator, and repeat steps 6 and 7 from above, again making sure that the film will be rolling off in the correct manner, depending on which type of film you are using.
11. Install the top film supply shaft by inserting the right end of the shaft into the brake hub and the Lateral Adjuster into its cradle. Make sure the two pins of the Lateral Adjuster are facing out of the cradle. (Fig. 34)
12. Release the brake tension and unroll approximately 2 feet of film. Tape the leading edge of the film to the idler bar and rotate it to thread the film around the idler bar and (Fig. 37) Drape the film over the top heat shoe.
13. Slide a sheet of paper, which is long enough to reach the pull rollers, into the nip rollers so that the paper is sticking out the front.
14. Tack the sheet of paper to the top piece of film (Fig 38).
15. Bring the bottom piece of film up and tack it to the top piece of film (Fig 39).
16. Replace the feed tray and safety shield; close the rollers using the pressure handle and press **RUN**.
17. Observe the film being pulled through the laminator to assure that the upper and lower films are advancing concurrently. Any separation between the films will require stopping the motor immediately, and correcting the situation.
18. Adjust the top and bottom brakes to eliminate rivers and wrinkles in the films as they pass over the heat shoes.
19. Press **STOP** once the newly-threaded film web has completely exited the laminator.

USING THE "TRACKING" METHOD

CAUTION: The following procedure is performed while the laminator is hot. Use extreme caution. Avoid contact with the heat shoes. The following describes a method for loading film whereby the existing film present on the Heat Shoes may be used in place of the threading card to draw the new film through the laminator. The adhesive of the existing film must be tacky or liquefied. Leading edges of the new film will be overlapped onto the tacky adhesive of the old film. The existing film and the new film will be pulled "together" through the laminator. Refer to the diagram for threading directions of Poly-In and Poly-Out films



Do not allow the adhesive side of the film to contact the Heat shoes, Nip Rollers or Pull Rollers. Liquefied or tacky adhesive deposited on Heat rollers will require the rollers to be cleaned (See section titled, "Caring for the GBC 5031TS Series Laminator").

1. Preheat the laminator. Remove the Safety Shield and Feed Table.
2. Cut the existing top and bottom film webs between the supply rolls and the heat shoes.
3. Remove the top and bottom film supply shafts by pulling the Lateral Film Adjusters from their cradles and sliding the film shafts to the left until they clear the hex-shaped brake hubs.
4. To load new film onto the film supply shafts, repeat steps 6 and 7 in the previous section USING A FILM THREADING CARD.
5. To install the film shafts, repeat steps 8 and 9 for the bottom film and 10 and 11 for the top film from the previous section USING A FILM THREADING CARD.
6. Tack the new rolls of film to the existing film already webbed through the laminator.
7. Replace the feed tray and safety shield; close the rollers using the pressure handle and press RUN.
8. Observe the film being pulled through the laminator to assure that the remaining existing film and the new film are advancing concurrently. Any separation between the films will require stopping the motor immediately, and correcting the situation.
9. Adjust the top and bottom brakes to eliminate rivers and wrinkles in the films as they pass over the heat shoes.
10. Press "Stop" once the newly-threaded film web has completely exited the laminator.

FILM ALIGNMENT PROCEDURE:

It is highly recommended that you line up the edges of the new film before threading the laminator.

1. Center the bottom roll of film to the sheet being fed from the feeder.
2. Adjust the core adaptors by loosening the set screws on their outer edges.
3. Bring the top roll of film down by unwinding several feet of film.
4. Align the edges of the top film roll to that of the bottom film roll.

For fine tuning the edges, the film supply shafts of the GBC 5031TS laminators come with Lateral Film Adjustment Knobs – see diagram (Fig. 28). Loosen the locking collar and rotate the adjustment knob in either direction to achieve the desired travel of the web. The unit has adjustment capabilities on both upper and lower film shafts.

FILM TENSION ADJUSTMENT:

Proper film tension, known as brake tension, is the minimum amount required to eliminate wrinkles or curl in the finished item. Tension adjustments are necessary if the film is curling up or down or if there are a lot of rivers and wrinkles in the finished product.

The best way to test for film curl is to thoroughly trim a test product, and place it on a flat surface. You will easily be able to see if the film is curling.

FILM CHARACHTERISTICS

- The film should be taut. A properly adjusted roll of film should not require excessive force to turn by hand. Film tension should be enough to introduce a minor amount of drag as the film unrolls.
- You should see the rivers and wrinkles disappear as the film travels over the heat shoes.
- Insufficient tension causes wrinkles.
- Too much tension causes stretching (necking).
- Uneven tension between the top and bottom rolls creates curl.
  - Too much upper tension (as the product is fed into the rollers) creates upward curl.
  - Too much lower tension (as the product is fed into the rollers) causes downward curl.

The 5031TS laminators are equipped with external tension knobs (see illustration) located on the right side of the film supply shafts. Turning the knobs clockwise increases the tension, while turning them counterclockwise decreases the tension.

Laminate some test samples and trim to the edge of the product to check for tension. Adjust further if necessary.

Tips on Film Tension:

1. Generally, 5 and 10 mil films require more tension.
2. As the film roll becomes smaller, the tension increases because the weight of the film roll lessens, so the tension should be decreased as the roll becomes smaller.
3. Film tension should be checked occasionally to assure that the adjustment is correct.
4. The tension will change whenever the speed is adjusted up or down. When making speed adjustments, check for proper tension by placing a laminated sheet on a flat surface and check for curl.

CLEARING A FILM JAM (WRAP-UP):

Film jams (wrap-ups) may occur if the film is loaded backwards or if the area at which film exits the equipment is blocked. The film web, when jammed, wraps around the nip or pulls rollers. To clear a jam, it may be necessary to rotate the rollers in the reverse direction. When pressed, Reverse will cause the rollers to reverse. To clear jams follow these procedures…

1. Press STOP immediately.
2. Swing out the feeder and remove the safety shield and feed table
3. Cut the top and bottom film webs
4. Grasp the loose ends of the web and pull straight out while holding down REVERSE.
5. Once the jam has cleared the nip rollers, release REVERSE.
6. Re-thread the film following the directions in the section **USING A FILM THREADING CARD.**

LOADING PAPER ON THE FEED TABLE

Make sure the laminator and feeder are in the STOP mode. The feeder TABLE UP/ TABLE DOWN controls will not operate manually if the either unit is in RUN.

1. Press TABLE DOWN to lower the feeder table.
2. Remove the rear stops and place out of your way.
3. Slide the side guides to the sides, out of your way.
4. Slide a sheet of paper from the job to be run up to the front of the feeder on the table.

5. Align the sheet to the suction cup holes on the table so that the sheet is centered as much as possible, utilizing the maximum amount of suckers.
6. Fan the sheets in small segments about one to two inches thick and stack them on top of the sheet used to align the suction cups.
7. Use blocks of wood to tamp the edges side to side to keep straight.
8. Use blocks of wood to tamp the back edge of sheets to keep straight against the front paper stops.
9. Keep adding sheets to the stack alternating fanning and tamping until the feeder stack is full.
10. Press TABLE UP to raise the table for running.
11. Adjust the height of the stack so that the top is about half way up the air blast holes. Use the Pile Height Adjustment Knob to make this adjustment.
12. Slide sides guides against the stack so that they just touch. Note: Do not pinch the sheets as this will cause miss-feeds.
13. Insert the rear stops and slide them forward until they just touch the stack. Note: Do not pinch the sheets.
14. Check for alignment with the suctions cups and make adjustments if necessary. Note: Do not allow any of the suction cups to hang off the edge of the sheet as this will create a loss of vacuum causing miss-feeds.

⚠ **WARNING:** Do not stack anything on the Feed Table other than the sheets intended to be laminated. Make sure the sheets are directly under the Pile Height box before turning on the laminator.

TIPS ON PAPER GRAIN AND FEEDER PERFORMANCE

DETECTING GRAIN DIRECTION

The direction in which the sheets are fed is very important for the performance of the feeder. The direction of the paper grain can enhance or hinder its performance. Paper comes as either Long Grain where the grain runs in the longest direction of the sheet, or Short Grain where the grain runs in the shortest direction of the sheet.

There are several basic ways to determine the direction of the grain:

1. Fold the sheet in both directions. The cleaner or less cracked fold shows the direction of the grain.
2. Tear the sheet in both directions. The cleaner, straighter tear shows the direction of the grain.
3. Moisten the sheet with tap water. The sheet will roll up into a tube and the direction of the tube shows the grain direction.

FEEDER PERFORMANCE:

1. Thinner sheets such as 20 lb. bond, generally feed better when the paper grain is in the direction of the web path, perpendicular to the nip rollers.
2. Thicker sheets such as 8 pt. cover stock, feed better when the paper grain is run side-to-side, parallel to the nip rollers.
3. If the suction cups are lifting the sheets off the stack but dropping them before they clear the Separator Bar, the paper grain is probably running in the same direction as the web path. The strength of the paper grain is too strong for the suction cups to lift it over the separator bar. Turn the stack 90 degrees and feed it in the opposite direction.
4. If the suction cups come up and the sheets are curl under the separator causing the sheets to fold under when they enter the feed tires, the sheets are too weak. In this case the grain direction is running perpendicular to the web direction. Turn the stack 90 degrees and feed it that way.
5. If the sheets just buckle or don't move at all when the suction cups try to lift them, the pile height is set too high and the sheets are being pinched under the separator bar. Press STOP then TABLE DOWN and lower the table about one inch. Adjust the PILE HEIGHT knob down and press TABLE UP. Restart the system and check the feeder operation.
6. If the suction cups do not touch the top of the stack, adjust the Pile Height Knob up.

THE ART OF LAMINATION

- Do not attempt to laminate abrasive or sharp metal objects such as staples, paper clips and glitter, as they may damage the nip or pull rollers.
- Do not force items into the nip rollers. An item that is not easily drawn into the laminator by the nip rollers is probably too thick to laminate.
- Wrinkles will result if any attempt is made to reposition an item once it has been grasped by the nip rollers.
- Do not stop the laminator before an item has completely exited the pull rollers. Even a momentary stop will cause track marks (heat or pressure line) on the laminated item.
- Do not attempt to laminate adhesives marked, “Flammable”.

NOTE: Good, consistent lamination is a result of combining…

- Proper heat
- Proper tension
- Proper dwell time – Dwell time is controlled by the speed of the motor, and is defined as the amount of time the film is in contact with the heat shoes.

- As a general rule, the thicker the film, the slower the speed for quality lamination. Thicker films extract more heat from the heat shoes at a quicker rate. Setting the speed control at slower settings gives the film longer dwell time, thus allowing proper lamination of thick films.

Conversely, thinner films extract less heat from the Heat Shoes, allowing for faster speeds.

The WAIT LCD may illuminate if the speed is set too fast for the film being used. Either lower the speed setting or press STOP and wait until READY illuminates.

- The 5031TS Lamination Guide, which follows at the end of this section, provides general guidelines for suggested heat and speed settings to use with certain material and laminating film combinations. This is only a “general” reference guide. Different settings may be suitable as the warm-up time, lamination time and materials change.

LAMINATION HEAT AND SPEED GUIDE CHART

NAP II	Film Gage	Heat Shoe	Nip Roller	Max. Speed Setting
Start Up Temperature	1.7 mil	275	250	9
Running Temperature		250	180	
Start Up Temperature	3 mil	250	200	7
Running Temperature		225	130	
Start Up Temperature	5 mil	235	200	5
Running Temperature		225	130	
Start Up Temperature	10 mil	235	180	4
Running Temperature		225	120	

NAP I	Film Gage	Heat Shoe	Nip Roller	Max. Speed Setting
Start Up Temperature	1.5 mil	300	250	9
Running Temperature		285	225	
Start Up Temperature	3 mil	275	250	7
Running Temperature		260	215	
Start Up Temperature	5 mil	250	250	4
Running Temperature		235	200	

Hi -Tac	Film Gage	Heat Shoe	Nip Roller	Max. Speed Setting
Start Up Temperature	All	275	250	3-4
Running Temperature		250	210	

CARING FOR THE GBC 5031TS SERIES LAMINATOR

The only operator maintenance required is to periodically clean and heat shoes, nip rollers and pull rollers; and proper alignment of the film rolls will reduce the amount of “squeeze out” that must be cleaned. GBC offers Cleaning Kits to help keep your rollers clean.

CAUTIONS:

- This procedure is performed while the laminator is hot. Use extreme caution.
- DO NOT apply any cleaning fluids or solvents to the heat shoes or rollers. Some solvents and fluids could ignite on the heat shoes.
- Never clean rollers with sharp or pointed objects.
- Hardened adhesive deposits on the rollers can cause damage to the rollers.

TO CLEAN THE SHOES AND ROLLERS:

1. Remove the film from the laminator following the procedure outlined in steps 1 through 4 of the section on **Film Loading and Threading**, method using film threading card.
2. Set the temperature of the top and bottom heat shoes at 32 degrees.
3. Set the temperature of the nip rollers at 200 degrees.
4. Wipe the heat shoes with a clean, lint-free cloth. Exercise caution, remember, do not use abrasive objects to clean the shoes or rollers. Furniture polish may be used to clean the shoes while they are cold.
5. Let the laminator heat up until the display for the nip rollers reads 200 when the measure button is pressed.
6. Raise the upper heat shoe and lower the bottom heat shoe.
7. Rub the top and bottom Nip Rollers with a 3M™ Scotch-Brite™ pad until all of the adhesive is removed. Use a tack cloth to remove any adhesive balls remaining on the rollers.
8. The top nip roller spins freely when the pressure handle is in the gapped position. Press REVERSE to rotate the bottom nip roller to an unclean portion.
9. Repeat steps 7 and 8 until the entire surface of both rollers are clean.
10. Follow the procedure in the section on film loading and threading using the threading card to reload the laminator.

NOTE: Never use metal scouring pads to clean the rollers.

TROUBLESHOOTING

FEEDER

PROBLEM	CAUSE	SOLUTION
Will Not turn on.	No Power	Check the power cord at the wall.
	E-STOP is engaged.	Disengage E_STOP
Motor(s) not turning	Blown fuse(s).	Replace fuses(s)
Pick-up heads not lifting the sheets	Main Vacuum valve not open	Open valve
	Flow adjustment on the air pump not open enough.	Check adjustment on the air pump
	Air Pump varies are clogged	Clean the air pump
	Pick-up heads are closed	Open pick-up heads
	Losing vacuum in the system	Check the hoses and connections.
Pick-up heads are dropping the sheets before they clear the separator bar.	Pile height may not be set correctly	Adjust pile height switch
	Paper grain of the sheets is causing the pick-up heads to drop the sheet at the separator bar.	Adjust the pile height switch or turn the sheets 90 degrees.
Pick-up heads dropping the sheets before they reach the feed tires	Side guide and/or rear stops are too tight against the stack	Loosen the side guides and/or rear stops
	Vacuum regulator may be out of time.	Have a qualified technician check the vacuum timing.
Inconsistent gap between the sheets	Sheets slipping on the feed rollers.	Adjust the feed tire pressure
		Clean the feed rollers and feed tires
		Switch from ball bearing rack to secondary feed tire(s)
Sheets bunching up as they are being pulled into the laminator	Too much in-feed pressure	Reduce the number of ball bearing
		Reduce the pressure on the secondary in-feed tire(s)

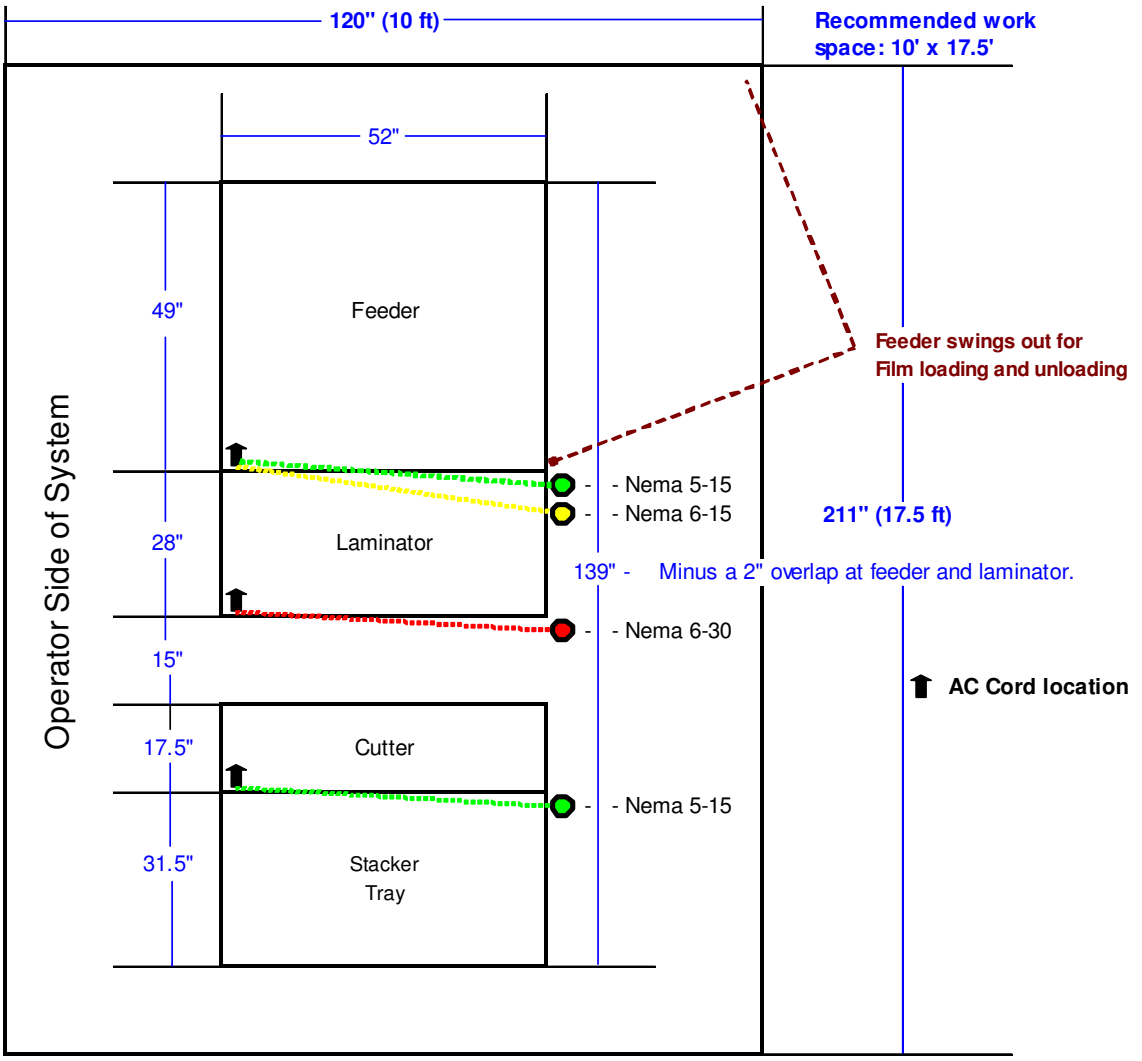
LAMINATOR

PROBLEM	CAUSE	SOLUTION
Will not turn on	No Power	Check the power cord at the wall
Motor not turning	Blown fuse(s)	Replace fuse(s)
	E-STOP is engaged	Disengage E-STOP
	Safety Shield not latched	Check right and left safety shield latches
	Top Heat Shoe not closed	Check the position of the Top Heat Shoe
Rewind Tube not rotating	Clutch is too loose	Tighten the rewind clutch
No heat	Heat set too low	Check heat settings on the Control Panel
	Open TCO	Have a qualified technician check the unit
	Burned out heater	Have a qualified technician check the unit

CUTTER

PROBLEM	CAUSE	SOLUTION
Will not turn on	No Power	Check the power cord at the wall
Motor(s) not turning	Safety Shield not latched	Check the Safety Shield latches
	Blown fuse(s)	Replace fuse(s)
Rear cut is angled	Output roller guides not lined up properly	Adjust the Output Roller Guides
Not cutting	Sheet sensor not working	Have a qualified technician check the unit
Finished margins don't match settings	In-feed Rollers are dirty	Clean in-feed rollers
	Calibration is off	Have a qualified technician check the unit.

SPACE AND POWER REQUIREMENTS FOR THE 5031TS SYSTEM



Machine	Power Requirements	Wire and Plug
Feeder	115 VAC 2 Amp	Wired with 69" cord, NEMA 5-15 plug
Laminator	220 VAC 30 Amp	Wired with 65" cord, NEMA 6-30 plug - Single Phase (see below)
Cutter	115 VAC 2.2 Amp	Wired with 69" cord, NEMA 5-15 plug
Air Unit	220 VAC 9.6 Amp	Does not come with wire, plug, or switch. Suggest mounting switchbox between AC source and Air Unit. Mount on feeder under feeder on/off switch. 220vac Single Phase.
Air Unit	Suggest NEMA 6-15P	

Note: **Drops or poles recommended, outlets should be no higher than 24" above floor**

Notes:

NEMA 6-30P

NEMA 6-15P