

FORMAX[®]

FD 4400

High-Volume

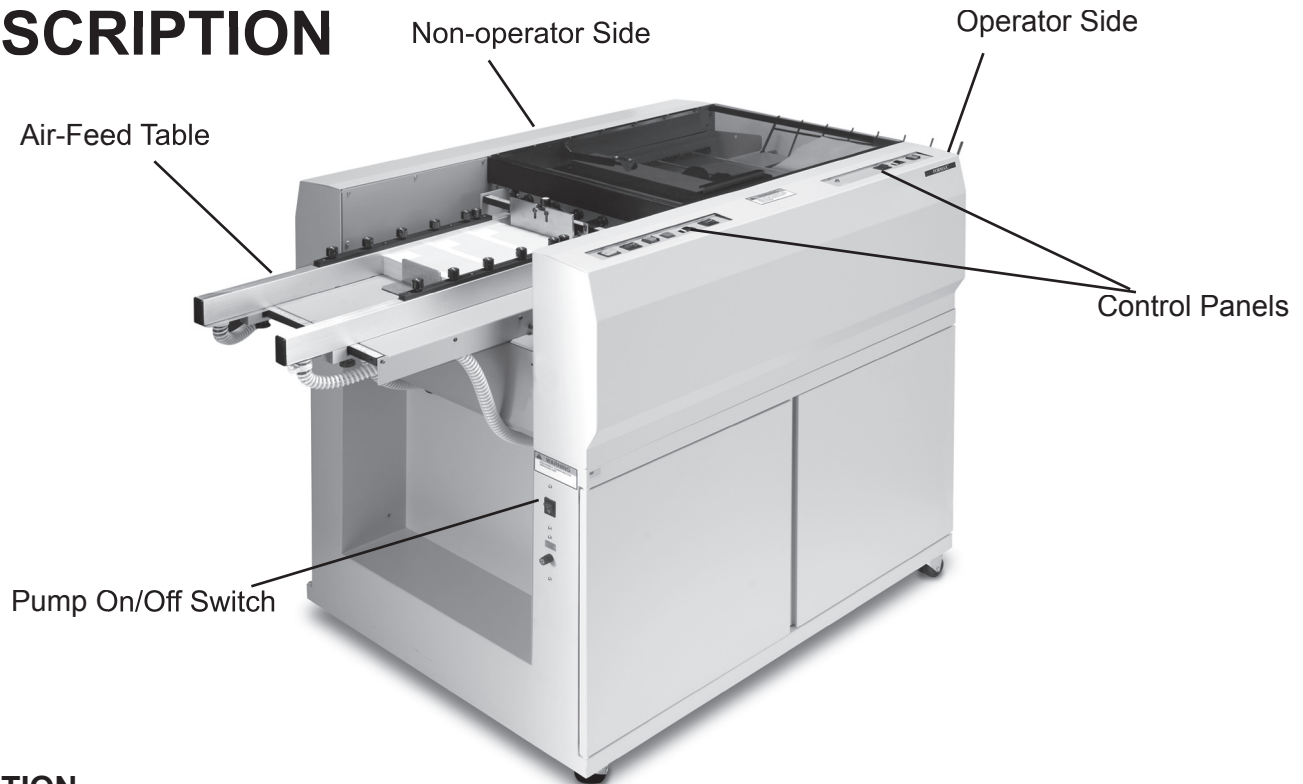
Cut-Sheet Burster

OPERATOR MANUAL
FIRST EDITION

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DESCRIPTION



FUNCTION

CUT-SHEET BURSTER

The FD 4400 High-Volume Cut-Sheet Burster is specifically designed to process Check21 IRD's and other documents printed on perforated cut sheets. This machine sets the benchmark as the only high volume cut-sheet burster capable of processing up to 30,000 forms per hour and up to one million (input) per month. A bottom-feed air system is utilized to allow operators to continually load forms to maximize efficiency and throughput.

CONVEYOR SEQUENCE STACKER W/ PHOTOEYE

The Conveyor Sequence Stacker w/ photoeye allows continuous runs of forms without stopping the burster to unload stacker. Conveyor belts carry forms from the burster output onto a catch grill where they are partially stacked for removal.

POWER DROP STACKER

The optional Power Drop Stacker collects forms in one neat stack without need for operator intervention at outfeed end of the machine during processing of each box of forms. The power drop stacker has automatic shut-off, which can be pre-set.

SPECIFICATIONS

Processing speed:	Variable, up to 30,000/hour (11")
Feed table capacity:	Up to 500 sheets of 20# paper
Monthly duty cycle	Up to 1,666,667 forms per month (input)
Paper size:	Min: 4" W x 5.5" L - Max:14" W x 20" L
Power requirements:	110 V 50/60 Hz 20 Amp dedicated line required
Dimensions:	42" H x 33" W x 64.5" - 72" L
Weight:	Approx. 500 lbs.

INSTALLATION

Do not destroy shipping cartons or materials until machine has been inspected for damage, missing parts, and proper operation.

Burster Unpack and Assembly

CAUTION: Lifting should not be attempted by less than four people.

1. Remove bands which hold cardboard box to wooden pallet. Remove cardboard box.
2. Remove burster top supports.
3. Remove (4) carriage bolts: (2) on infeed end of burster and (2) outfeed end. NOTE: Leave carriage bolts in place on center burster support.
4. Remove (4) foam blocks.
5. With allen wrench supplied, unfasten four retaining bolts which hold machine to the board immediately below it. NOTE: Center burster support is not fastened to burster.
6. Attach burster feet to burster. (Fig. 1)
7. Remove burster cabinet from its carton. Note the Location of holes on top of cabinet.
8. Set burster on cabinet, lining up holes in table with holes in burster frame. (Fig.2)
NOTE: Burster will line up evenly on all sides of the table.
9. Add 1/4-20 x 1 1/2 locating screws (included), to underside of table, screwing up into burster frame.

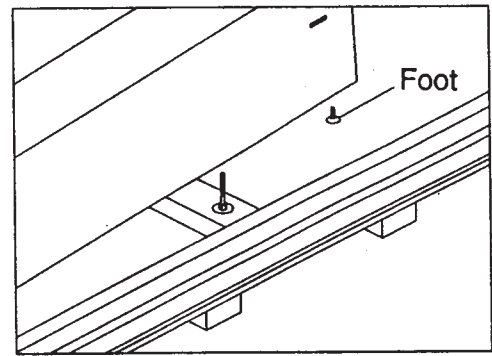


Fig. 1

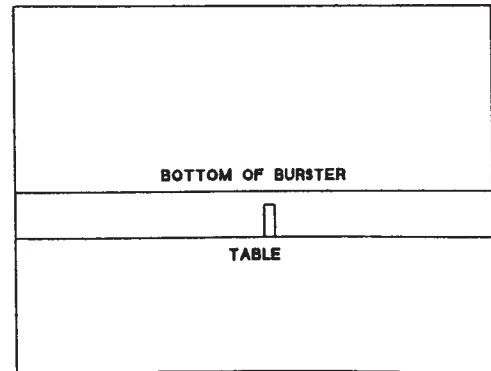


Fig 2

Pump Installation

CAUTION: two people should unpack and install pump.

1. Unpackage and mount pump to the floor of the base. Orient the pump so that the blower is at the rear and the vacuum is toward the front of the base. Position the pump to the right side of the base aligning it with the mounting holes in the floor and fans as shown in Fig. 3. Insert mounting bolts and secure.

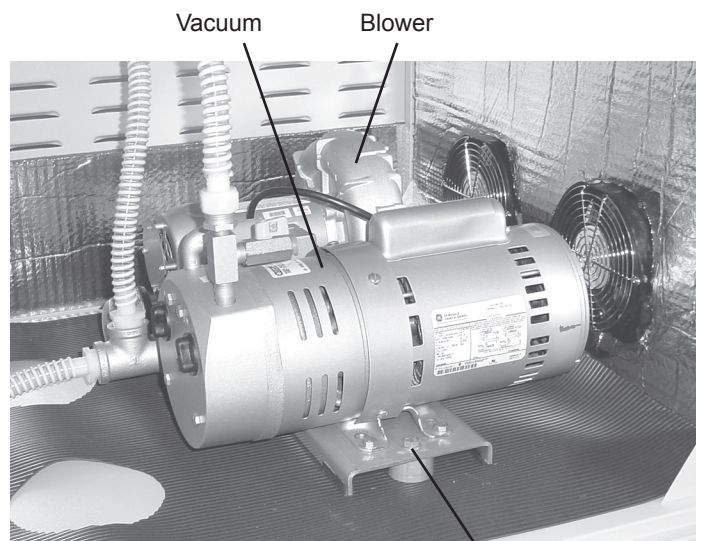


Fig 3

Mounting Bolts

2. Connect the blower hoses (Fig 4) and feed thru the holes located on the infeed side of the base (holes are to the left if you are looking at the operator side of the burster).

3. Connect the vacuum hose (Fig 4) and feed up between the infeed of the burster and feed table support braces on the infeed side of the base (holes are to the left if you are looking at the operator side of the burster).

2. Attach vacuum hose to the feed table, then set table into place (Fig 6).

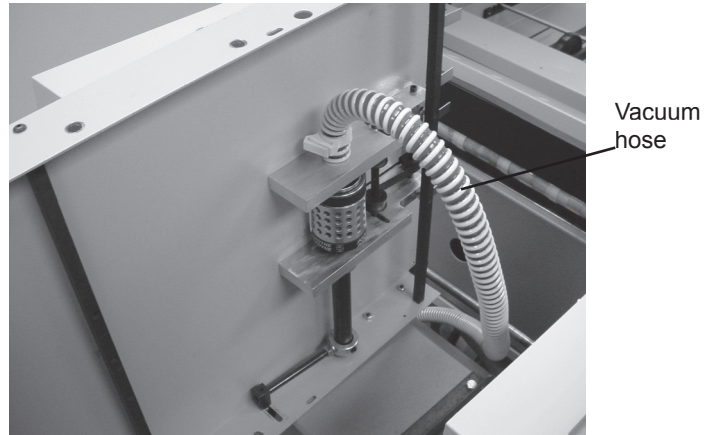


Fig 6

3. Guide the metal fingers under the blind roller and slide the table into position (Fig 7).

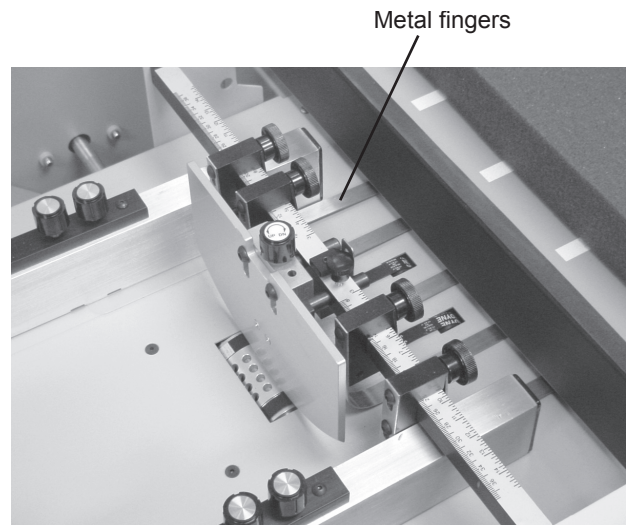


Fig 7

Air Feed Table Installation

1. Remove four Phillips head screws from infeed cover (Fig 5) and tilt cover back.



Fig 5

4. Reset the table on infeed cover and align the holes on the side of the table with the brackets mounted on the cover (Fig 8).

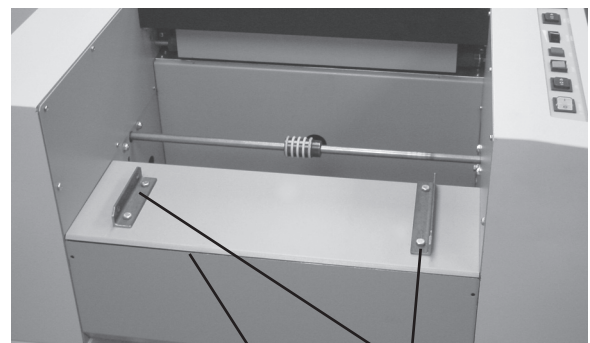


Fig 8

Rear cross brace Brackets

5. Secure table into place. First, insert screws into inner holes (Fig 9); do not tighten at this time. Next, insert allen screws through table wall into rear brackets (Fig 10). Now tighten down all the screws.

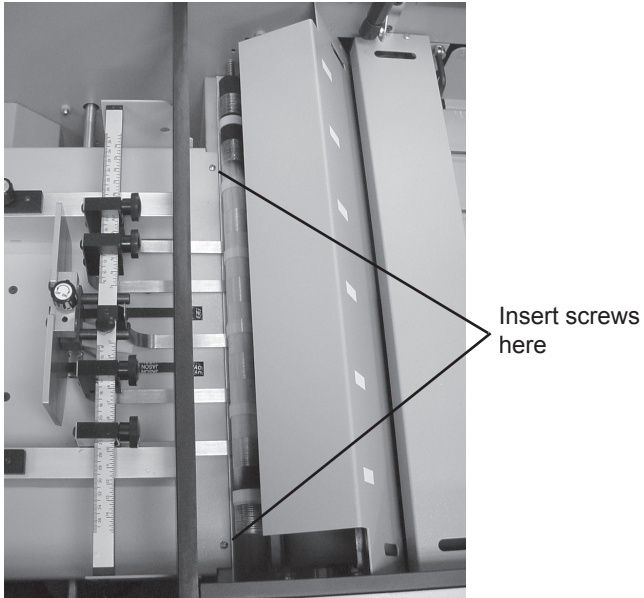


Fig 9

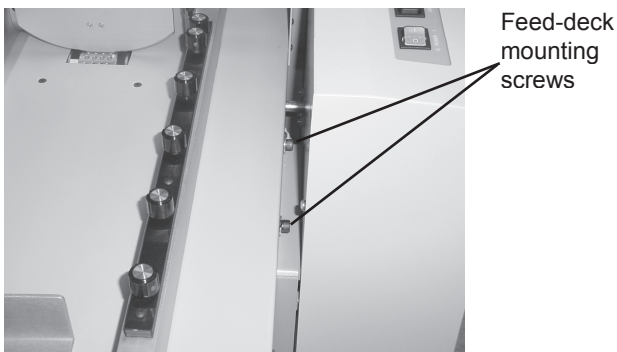


Fig 10

6. Attach the left and right blower hoses to the appropriate ends of the pile guides on the feed table (Fig 11).

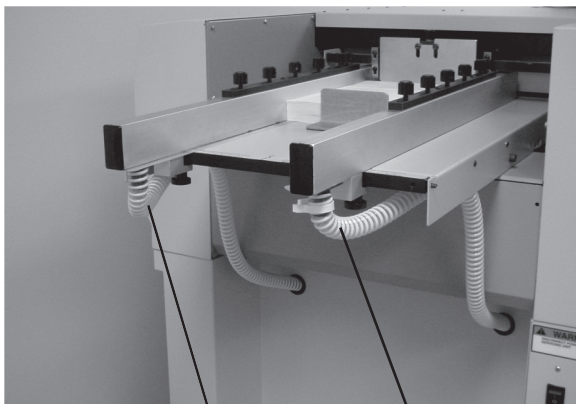


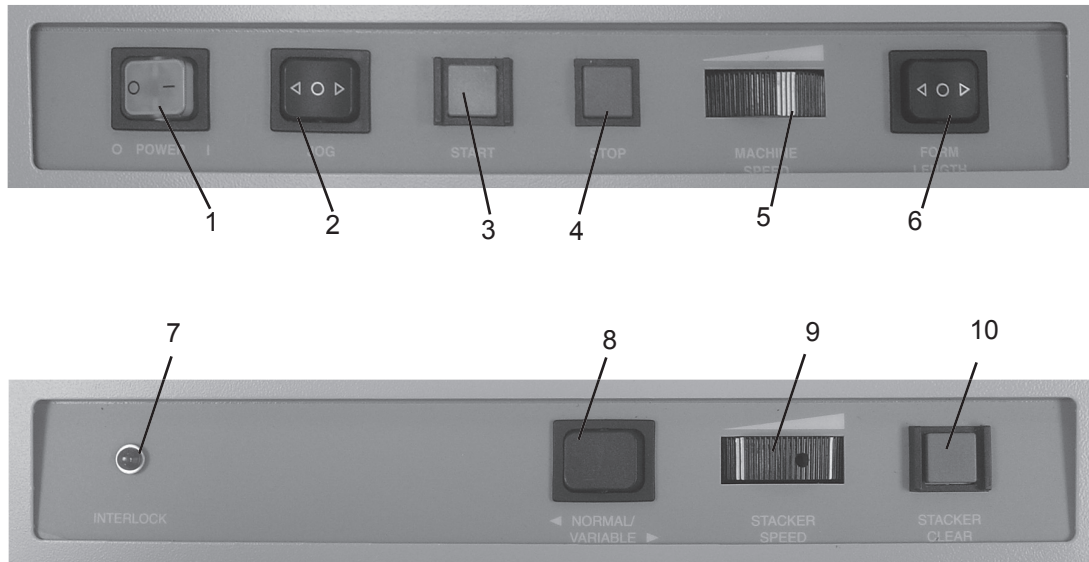
Fig 11

Left blower hose

Right blower hose

OPERATION

Controls



No.	NAME	FUNCTION
1	Power	Turns burster on and off
2	Jog Switch	Advances forms forward or backward at infeed and outfeed
3	Start Button	Press to start the burster at infeed and outfeed
4	Stop Button	Press to stop the burster at infeed or outfeed
5	Machine Speed Control	Select the speed to run the burster
6	Form Length	Sets the length of the form to be burst
7	Interlock	Indicates cover open, jam, grill in up position, folder not running
8	Normal/Variable	Stacker run mode
9	Stacker Speed Control	Select the speed of the stacker in "Normal" mode
10	Stacker Clear	Press to stack forms on conveyor when burster stops
11	On/Off	Power switch for Pump/Blower



Burst Length Set-up Procedure

1. Turn on the machine. Measure burst length.
2. Press the form length switch on the burster to align the alignment mark with the burst length on burst length scale. (Remove the magnetic backed accoustical foam to access the alignment mark.) (Fig. 12).

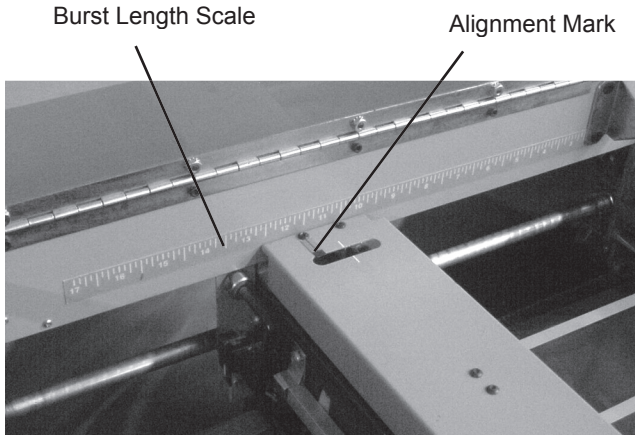
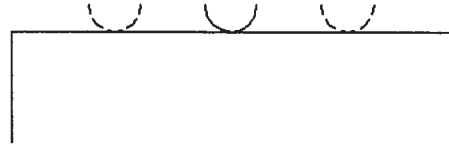


Fig 12

3. By pressing jog switch in forward position, advance form through feed rollers until snap rollers grab the form.
4. If necessary, adjust form length so that form starts to burst when perforation is just under tear points.

NOTE: Tear points can be moved to allow operator to position them at any location along tear bar. Tear points should be set between perforations that run vertically along the length of the form. (Illust. 1)

Edge trimmed forms. Use 1 or 2 tear points.



Center and edge-slit forms. Use 2 tear points.



Illust. 1

5. The tear bar is adjustable to accommodate characteristics of various forms. To adjust height bar must be pushed to compress spring and lift out. Rotate 180 degrees (turn over) and replace, making sure that the square end of bar locks into brackets. (Fig. 13, shown in HIGH position)

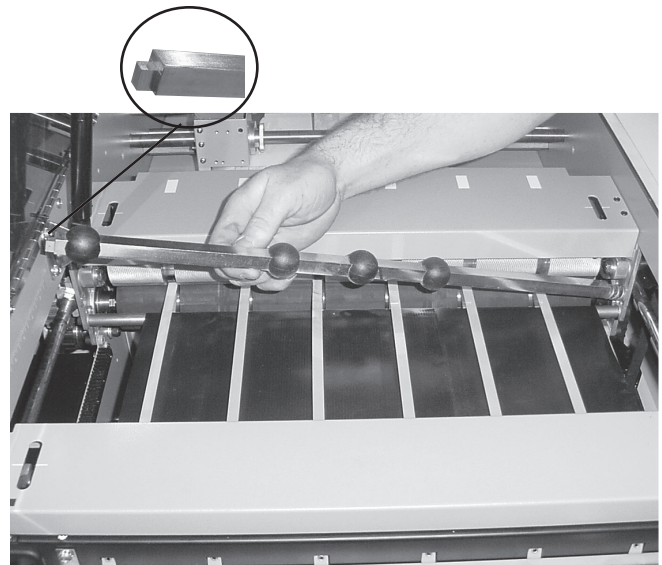


Fig 13

6. Adjust the outfeed conveyor stacker wheels for the appropriate form length.

Squaring Feed Table

In order for your machine to burst properly the forms must be fed into the rollers square. The feed table is adjusted at the factory and should only require periodic checks. The unique feed table adjustment feature allows for quick and easy adjustment if needed.

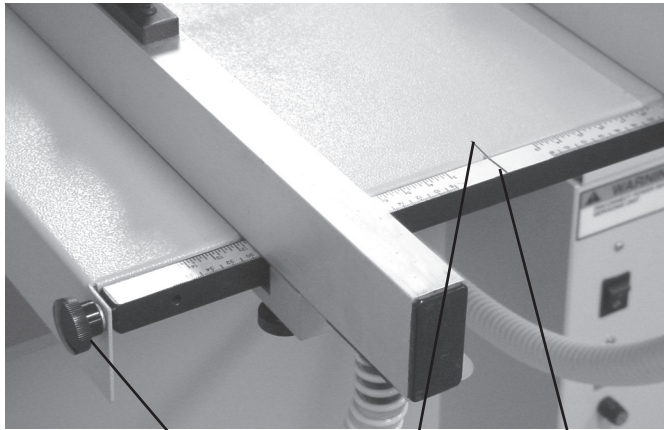


Fig 14 Feed Table Squaring Screw Table Center Mark Scale Center Line

1. Adjust the feed table squaring screw and align the center line of the scale with the center mark on the feeder table (Fig 14).

Front Guide Adjusting Knobs

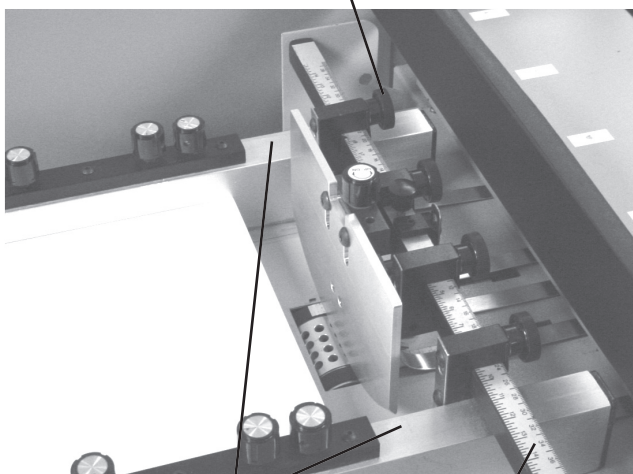


Fig 15 Side Guides Scale

2. Loosely position the feed table side guides to the scales on the feed table, (Fig 14 & 15). Read the front scale at the inside edge of the side guide clamp block. The rear scale will line up with the inside edge of the side guide. The scales are set up to center the paper on the sucker wheel. Initially set each guide 1/4" (6.4mm) wide. Do not tighten the lock knobs.

3. Raise the sheet separator counter clockwise (ccw) so it is away from the sucker wheel (Fig 16). Place a sheet of the paper to be folded on the feed table. Slide the sheet forward into the rollers. The sheet must contact the rollers evenly and not touch the side guides. Turn Burster and blower on and press the jog button to feed in approx. 1/2" (12.7mm) of the form into the rollers.

4. Position the operator side guide so it is just touching the sheet but not pushing it. The side guide must be even to the sheet from end to end. Tighten the front lock knobs then the rear knobs, (Fig 14 & 15).

5. Repeat step 4 on the non operator side guide.

6. The paper will now feed square into the rollers. Now that the side guides are square, the feed table squaring screw, (Fig 14), can be adjusted for fine tuning the overall squareness.

Vacuum Feed Sheet Separator

The sheet separator will need adjusting for the weight of paper you are bursting. Ideal adjustment will feed only one sheet without marking the paper or feeding doubles. Use the following procedure to get started. (Fine tune these adjustments according to the condition of the paper and the environmental conditions of your particular work area.)

Adjustment Procedure

1. Raise the separator (ccw) (Fig. 16) to avoid marking the sucker wheel. **NOTE:** Do not make separator adjustments while the burster is running.

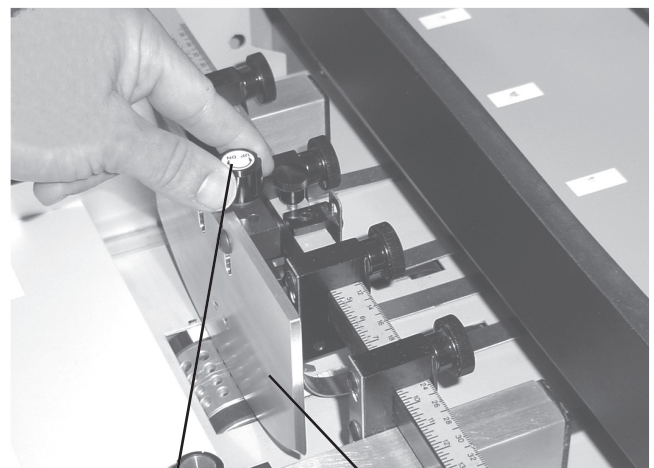


Fig 16 Separator Guide Adjusting Knob Separator Guide Plate

2. Turn the sucker wheel until the separator tip is positioned over a solid portion of it, i.e. between the rows of holes.

3. Place a single piece of paper under the tip of the separator plate. Lower the separator clockwise (cw) until there is a slight drag on the paper as it is pulled from the separator.

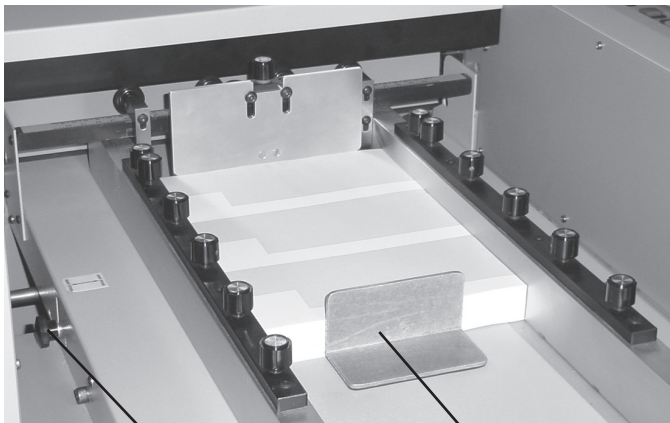
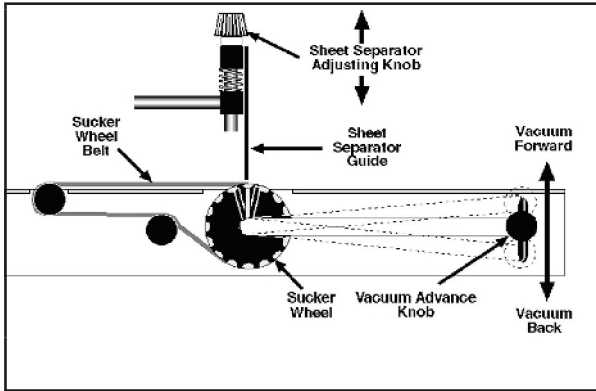
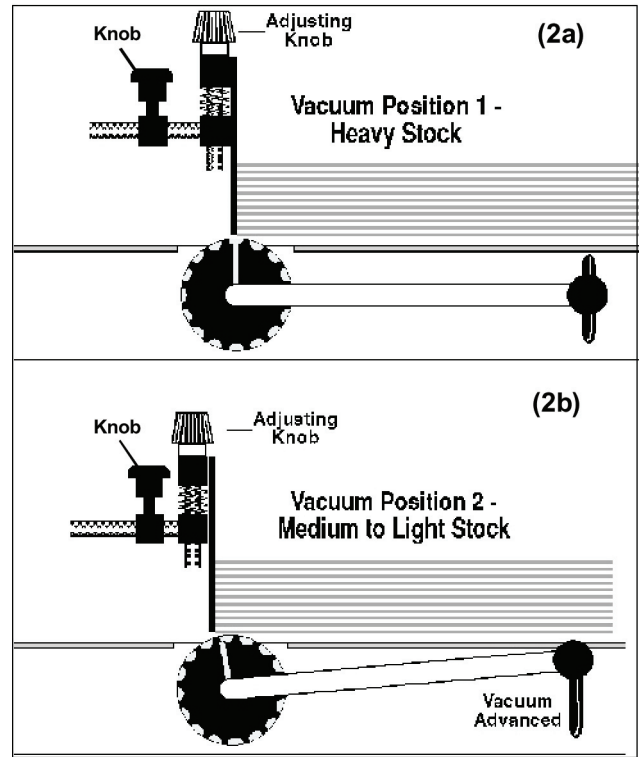


Fig 17 Vacuum Advance Backstop

4. The vacuum advance knob is located on the side of the feed table (Fig. 17). Adjusting the knob will position where the vacuum contacts the stack of paper. Raising the knob will move the vacuum away from the lift and toward the rollers (light papers). Lowering the knob will move the vacuum contact toward the lift and away from the rollers (heavy papers).

Horizontal Separator Adjustment

1. Raise the separator (ccw) to avoid marking the sucker wheel.
2. Loosen knob (Illust. 2).
3. As a starting reference, turn the hand wheel until a set of sucker wheel holes is at the 12 o'clock position.
4. Adjust separator assembly so that the plate is 1/16" forward of the 12 o'clock position, measure from the feed side of the plate.
5. Tighten knob (Illust. 2).



(ill. 2)

Feeding Paper

1. Load a stack of paper onto the feed table. The stack should be no higher than the side guides, 2" (51mm). Position the backstop up against the lift.
2. Turn on the air/vacuum pump. The air should float the bottom of the paper stack approximately 1/16 to 1/8" (1.6 to 3.2mm). Air blast can be controlled by adjusting the knobs located on the side/pile guides (Fig. 18).

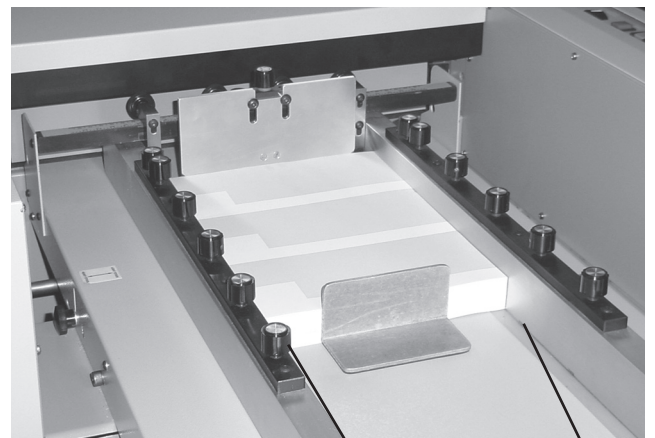


Fig 18 Air Blast Control Knobs Air Blast Openings

Separator Guide Lock
Set Screw

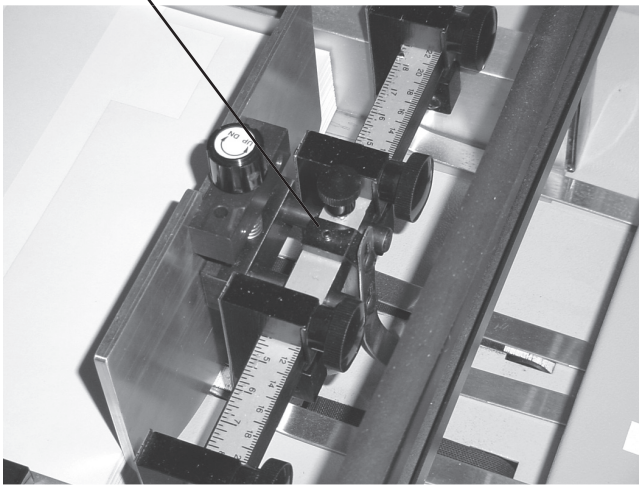


Fig 19

3. Turn the speed control to $\frac{1}{2}$ or full speed. Place your thumb on the back of the stack to keep paper from feeding. Press the power button, the sucker wheel will start to turn. Reduce the pressure of your thumb to feed only 3 to 4 sheets. Press your thumb down to stop the feeding again. Press the power button to stop the sucker from turning. If the paper did not feed, adjust the position of the vacuum advance, bleeder valve, or sheet separator.

Bleeder Valve (Vacuum Adjustment)

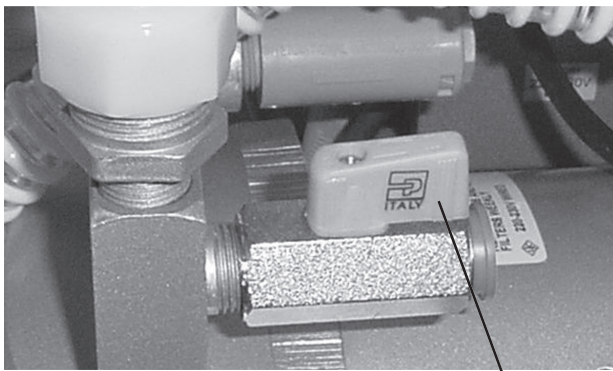


Fig 20

Open Position

There is a bleeder valve on the vacuum pump, (Fig 20), which allows for vacuum adjustment from completely off to completely on. General settings for the bleeder valve are half open for 20# stock, and closed for 80# and heavier stock. If your machine is feeding doubles, this can be opened slightly to "relieve" some of the vacuum and stop the double feeding.

OPERATING Tips

1. To stop the machine just push on either one of two stop buttons. Opening safety cover or lifting jam detection grill will also stop machine.
2. To restart the machine start button must be pressed. CAUTION: Machine will restart at same speed that it was running at unless speed control thumbwheel is turned down.
3. Some paper has a natural curve. Sometimes this curve tends to catch air and sail. If this occurs, try running them upside down.
4. Perforations vary in strength. If forms are bursting hard, tearing, or breaking behind tear bar, vary form length setting up to $\frac{1}{2}$ " ahead or behind actual form size setting, and/or put tear bar in low position.
5. Stacker wheel should not stop the form until form clears snap rollers.

TROUBLESHOOTING

Feeding, bursting, and stacking problems are usually due to improper adjustment of machine to forms or due to a non-standard or defective form.

Most problems fall into one of three categories: Electrical, Mechanical, or Form Flow. Electrical troubles are USUALLY obvious because machine will not run or respond in a normal manner to its controls.

Mechanical problems are usually accompanied by noise, slippage, tearing, or binds. If a form flow problem is present, jamming, mis-stacking, or intermittent form damage will occur. Problem should be diagnosed to one of three categories, before proceeding to pinpoint problem. Best approach is a logical elimination of possible malfunctions.

TROUBLE	POSSIBLE CAUSE	REMEDY
Machine not running	Is the power on?	Make sure the power to the burster and blower are in the on position. Check to make sure the wall outlet has power.
	Is the machine plugged in?	Make sure all the plugs are plugged in properly.
	Are the safety covers lowered?	Make sure the safety covers for the burster are lowered.
	No power even with machine turned on, plugged in, wall power is on and above steps have been taken.	Call for service.
Double feeding forms	Is the feeder set properly?	See pages 7,8 & 9.
	Is paper stuck together?	Separate paper from each other.
	Using paper other than specified?	Paper other than specified may cause mechanical trouble.
Paper jam occurs often	Is inside of machine dirty?	Clean inside of machine.
	Are outfeed stacker nip rollers in proper positions?	Set rollers to proper position.
	Is paper curled?	Let paper sit curl side down with weight on top to eliminate curl.
	If paper jamming continues.	Call for service.
Forms creep to one side	Infeed guides not set properly.	Reset guides.
	Roller tension not uniform across roller.	Check and adjust roller tension, call for service.

<p>Burster stalls or tears forms</p>	<p>Tear bar in high position.</p> <p>Burster not running fast enough.</p> <p>Incorrect form length setting.</p> <p>Tear points not adjusted properly across face of form.</p> <p>Tough form perforations.</p>	<p>Put bar in low position, see page 6.</p> <p>Increase burster speed, see page 5.</p> <p>Reset paper length, see page 6.</p> <p>Adjust tear points, see page 6.</p> <p>Adjust tear points, see page 6.</p>
<p>Burster rollers don't rotate / machine runs</p>	<p>Slipped belt, broken drive belt, loose pulley.</p>	<p>Call for service.</p>
<p>Won't burst properly.</p>	<p>Incorrect roller tension.</p> <p>Carriage not properly positioned.</p> <p>Tear point not set correctly.</p> <p>Tear bar not set correctly.</p>	<p>Check and adjust roller tension, call for service.</p> <p>Reset carriage position.</p> <p>Adjust tear points, see page 6.</p> <p>Adjust tear bar position, see page 6.</p>
<p>Snap roller carriage will NOT move</p>	<p>Defective switch or motor.</p> <p>Broken carriage drive chain.</p> <p>Loose setscrew on carriage advance shaft or on motor.</p> <p>Obstruction on rack.</p> <p>Obstruction at the pivot arm.</p>	<p>Call for service.</p> <p>Call for service.</p> <p>Tighten setscrew, call for service.</p> <p>Remove obstruction.</p> <p>Remove obstruction.</p>
<p>Improper stacking</p>	<p>Stacker wheels positioned too close or too far from outfeed.</p> <p>Stacker wheels not directly over belts.</p> <p>Stacker wheels binding on axle.</p> <p>Edge of form not under roller.</p> <p>Stacker grill not adjusted properly.</p> <p>Static.</p>	<p>Move rollers in or out until positioned correctly.</p> <p>Adjust wheels left or right so they are aligned over the belts.</p>
<p>Stacker does not run but Burster does.</p>	<p>Broken belt</p> <p>Loose stacker drive gear/broken drive pin.</p> <p>Faulty stacker motor.</p> <p>Faulty stacker motor speed control .</p> <p>Faulty stacker switch.</p>	<p>Call for service.</p> <p>Call for service.</p> <p>Call for service.</p> <p>Call for service.</p> <p>Call for service.</p>

