FORMAX®

FD 2094 / FD 2084
AutoSeal®

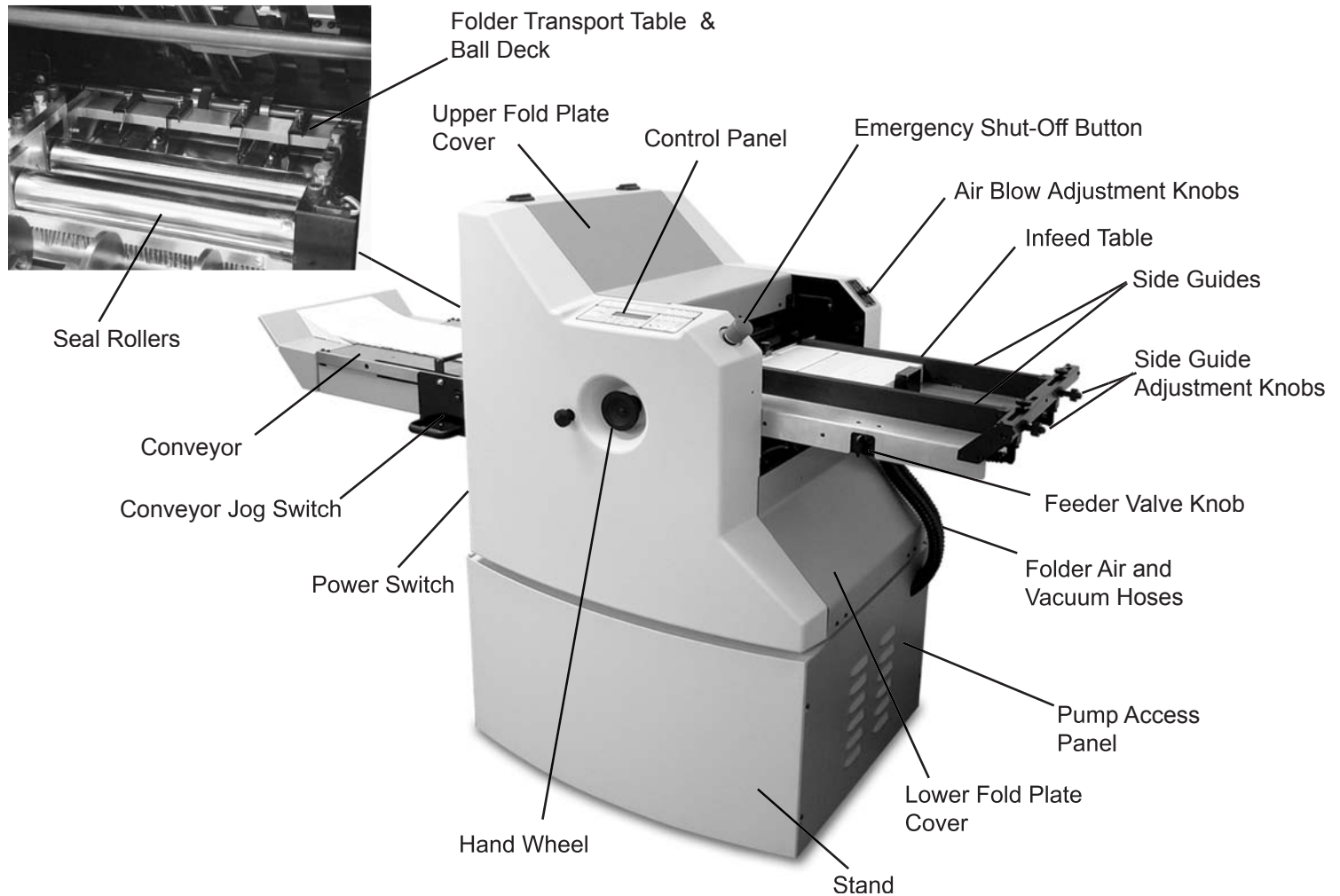OPERATOR MANUAL
FIRST EDITION

TABLE OF CONTENTS

2094 DESCRIPTION

Folder Transport Table & Ball Deck

Upper Fold Plate Cover

Control Panel

Emergency Shut-Off Button

Air Blow Adjustment Knobs

Infeed Table

Side Guides

Side Guide Adjustment Knobs

Seal Rollers

Conveyor

Conveyor Jog Switch

Feeder Valve Knob

Power Switch

Folder Air and Vacuum Hoses

Hand Wheel

Pump Access Panel

Lower Fold Plate Cover

Stand

FUNCTION

The 2094 folds and seals pressure sensitive forms with pre-applied glue lines into mail ready pieces. Numerous folds using several different paper sizes can be processed to meet your needs. For configurations and paper sizes see specifications.

SPECIFICATIONS

Dimensions	76" L x 27" W x 51" H (193 L x 69 W x 130 H cm)
Paper thickness	Up to 65# cover stock
Fold styles	Half, Letter "C", Accordion "Z", Double Parallel, Gate, Engineering & custom folds
Paper loading capacity	Up to 500 sheets (20# paper)
Processing speed	Up to 27,600 sheets per hour (8.5" x 11"), up to 41,000 sheets per hour (3" x 5")
Duty cycle	Up to 400,000 per month
Paper size	3" - 12" W x 5" - 20" L (76 - 300 W x 127 - 508 L mm)
Weight	Approx. 950 lbs.
Power	125V, 60Hz, 30 Amp (NEMA L5-30R Receptacle required)

2084 DESCRIPTION

PRESSURE SEALER

Emergency Shut-Off Button

Upper Fold Plate Cover

BURSTER

Burster Control Panels

BURSTER TRANSPORT TABLE

Control Panel

Safety Cover

Conveyor

Conveyor Jog Switch

Power Switch

Hand Wheel

Stand

Lower Fold Plate Cover

Pump Access Panel
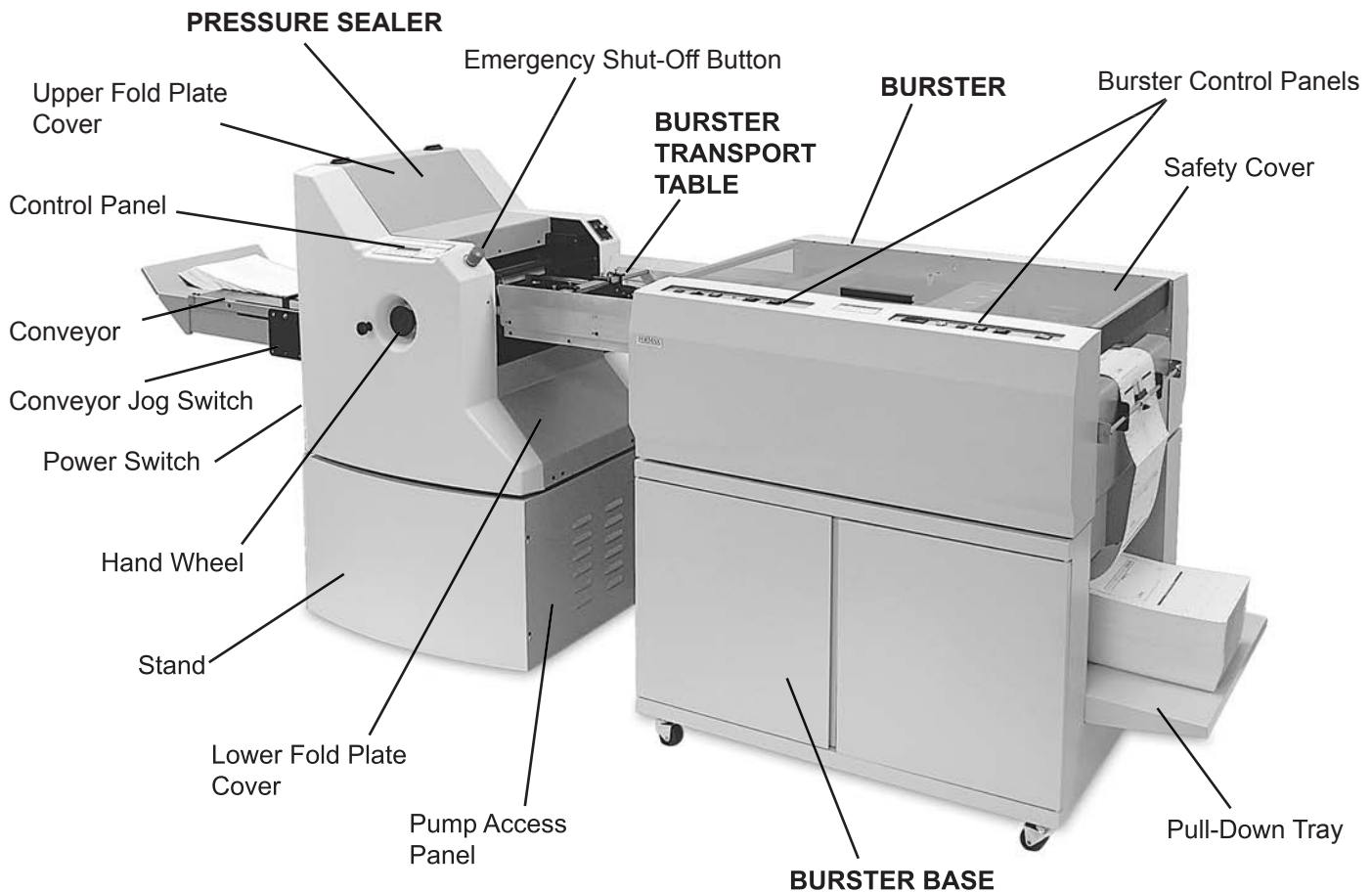
BURSTER BASE

Pull-Down Tray

FUNCTION

The 2084 separates, folds, and seals continuous pressure sensitive forms with pre-applied glue lines into mail ready pieces. Numerous folds using several different paper sizes can be processed to meet your needs. For configurations and paper sizes see specifications. Options include an imprinter and various slitting features.

SPECIFICATIONS

Dimensions	146" L x 41" W x 56" H (Sealer, Burster, Transport Table)
Paper thickness	20-110# index
Fold Styles	Half, Letter "C", Accordion "Z", Double Parallel, Gate, Engineering & custom folds
Processing speed	Up to 27,600 sheets per hour (8.5" x 11"), up to 41,000 sheets per hour (3" x 5")
Duty Cycle	Up to 400,000 per month
Paper Size	3" - 12" W x 5" - 20" L (76 - 300 W x 127 - 508 L mm)
Weight	Approx. 1,403 lbs.
Power	125V, 60Hz, 30 Amp (NEMA L5-30R Receptacle required)

ASSEMBLY
UNPACKING & INSPECTION

The 2094 is shipped in two cartons - Folder/Sealer (Fig. 1a)
Feed Table and Accessories (Fig. 1b)

The 2084 is shipped in four cartons - Folder/Sealer (Fig. 1a)
Transfer Table and Accessories (Fig. 1b)
Burster (Fig. 2a)
Burster Base (Fig. 2b)

NOTE: Immediately upon unpacking, carefully inspect each unit for shipping damage. If any damage is found, be sure to contact the delivery freight carrier to file a damage claim. Save all packaging material for the claims adjuster to inspect.

WARNING
Do not plug the power cord into an AC outlet until the 2094/2084 is fully assembled, adjusted and ready to use. Unplug the 2094/2084 any time assembly is required.

Fig. 1a

Fig. 1b

Fig. 2a

Fig. 2b

BURSTER ASSEMBLY - 2084

UNPACKING AND SET-UP

1. Remove bands which hold cardboard box to wooden pallet. Remove top of box.

2. Remove (4) carriage bolts: (2) on infeed end of burster and (2) outfeed end (Fig. 3a & 3b). Hint: Leave carriage bolts in place on center burster support.

3. Remove (4) foam blocks.

4. With Allen wrench supplied, remove four retaining bolts which hold machine to the board immediately below it. NOTE: Center burster support is not fastened to burster.

5. Add burster feet to burster. (Fig. 4)

6. Remove burster base from its carton.

7. Set burster on base. NOTE: Burster will line up evenly on all sides of the base.
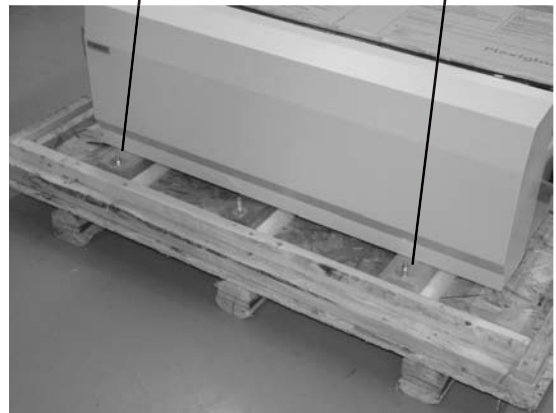
Front view

Fig. 3a

Remove   Remove
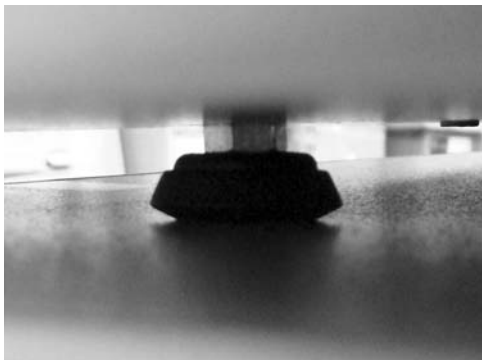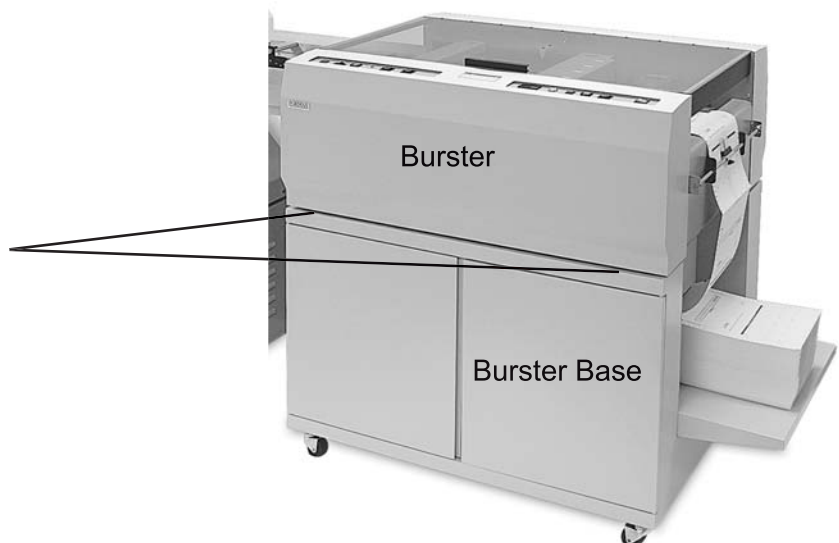
Rear view

Fig. 3b

Fig. 4

Burster

Burster Base

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Once the unit and its components have been carefully removed from the packaging begin by attaching the Output Conveyor, next install Fold Plates and then the Feed Table (2094) or Transfer Table & Burster (2084).

OUTPUT CONVEYOR INSTALLATION

1. Insert the output conveyor with the drive wheel toward the seal rollers.

2. Slide the output conveyor over both sets of locating pins. The first notch in the front part of the output table should rest on the pins (Fig. 5a).

3. Drop the rear notch down on the rear dowel pins (Fig. 5b).

4. Plug the output conveyor into the table receptacle on the input/output power assembly. (Fig. 6)

NOTE: Do not operate machine without output conveyor in place.
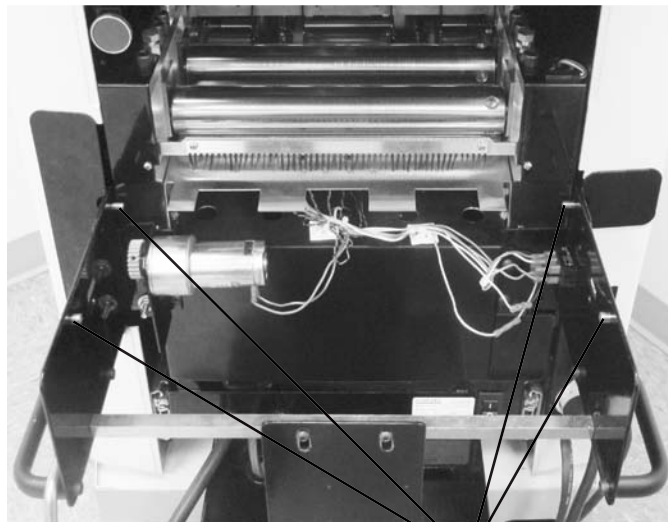

Fig. 5b

Fig. 6

Conveyor connector

Fig. 5a

Conveyor locating pins

FOLD PLATE INSTALLATION

WARNING: Unplug the AC power cord when installing or removing fold plates.

The fold plates are interchangeable. Each fold plate has an open end which faces toward the fold rolls.

1. To install the fold plates, pivot the fold plate hold-downs (Fig. 7) out of the way and slide the fold plate in position so the slots in the leading edge of the fold plate engage the two locating pins in the side frames. The center notches should seat on the second set of locating pins.

2. Pivot the fold plate hold-downs back into position to secure the fold plates.

3. Turn the hand wheel (Fig. 10) to be sure that the fold plates are properly installed and not rubbing on the fold rolls.

4. Plug the fold plate connectors into the side frame. (Fig. 8a & 8b)

NOTE: Do not operate machine without fold plates in place.
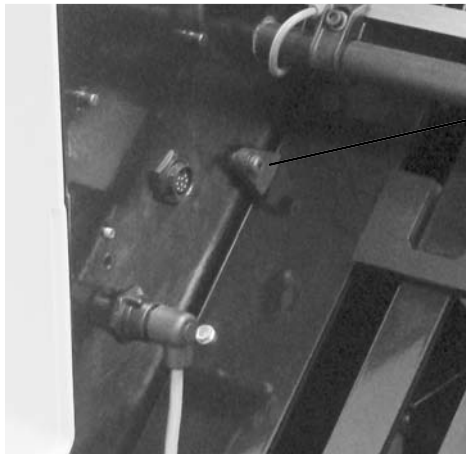
Upper Fold Plate

Fig. 8a

Fold plate connectors

Fold Plate Locks

Fold plate hold down

Fig. 7

Bottom Fold Plate

Fig. 8b

FEED TABLE ASSEMBLY INSTALLATION - 2094
(NOTE: For 2084, skip this process and go to page 8.)

1. Insert the feed table with the feed wheel toward the fold rolls.

2. Slide the paper feed table over both sets of locating pins. The first notch in the front part of the feed table should rest on the pins (Fig. 9a).

3. Drop the rear notch down on the upper dowel pins (Fig. 9b).

4. Rotate the hand wheel to check that the gears are properly meshed (Fig. 10).

5. Connect the feed table hoses. Push the fittings into the holes in the manifold block (Fig. 11).

6. Plug the feed table into the side of the frame. (Fig. 12)

NOTE: Do not operate machine without feed table in place.
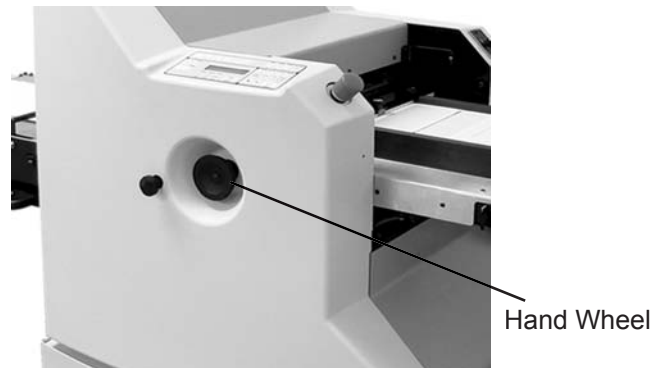
Hand Wheel

Fig. 10

USE OF THE HAND WHEEL: The hand wheel is used to help clear jams and for setup. To use the hand wheel, shut off the folder, pull out the hand wheel and turn it in either direction.

Feed Table Hoses

Air

Vacuum
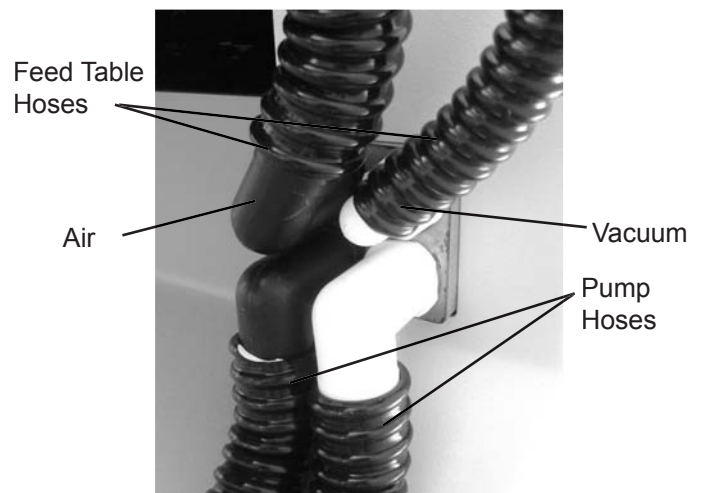
Pump Hoses

Fig. 11

PUMP HOSE CONNECTIONS: Two sets of hoses are included with your 2094, two (2) for the feed table and two (2) for the pump.

Locating Pins

Locating Pins

Fig. 9a

Fig. 9b

Feed Table Connector
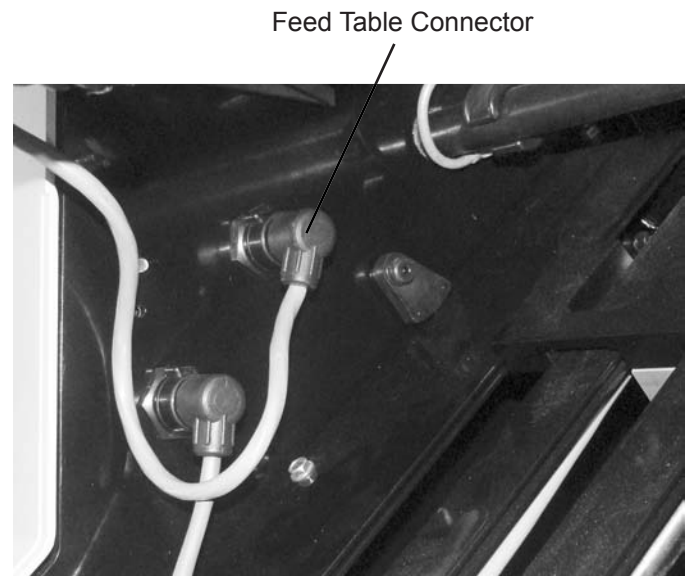
Fig. 12

TRANSFER TABLE ASSEMBLY INSTALLATION - 2084

1. Install the transfer table for the 2084. Insert the table between the folder side frames (Fig. 13) and set the notches on to the locating pins (Fig. 9a).

Fig. 13

3. Plug burster power cable & interlock cable into folder (Fig. 15). Remove lower fold plate to access the receptacles.

Fig. 15   Power cord   Interlock cord

2. Align the outfeed of the burster with the transfer table and push the burster forward until the mounting holes of the transfer table and the burster line up. Slide mounting pins into holes to lock the table in place (Fig. 14).

Fig. 14   Locating mounting pins

4. Place ball deck onto the burster transfer table (Fig. 16).

Fig. 16

CONTROL PANELS

Folder Control Panel

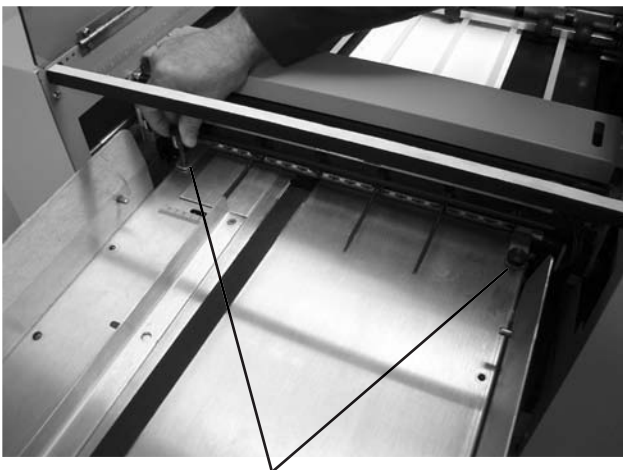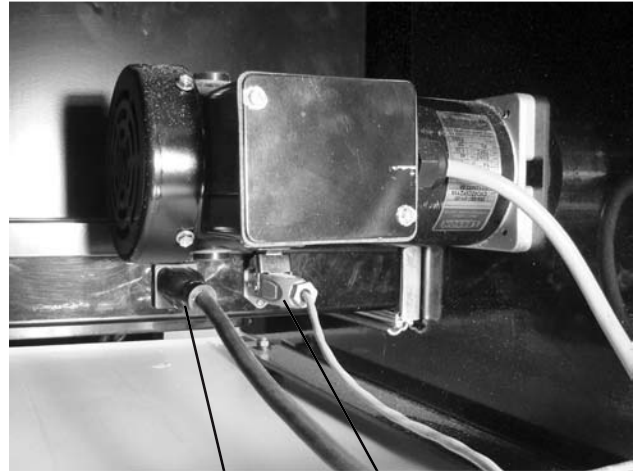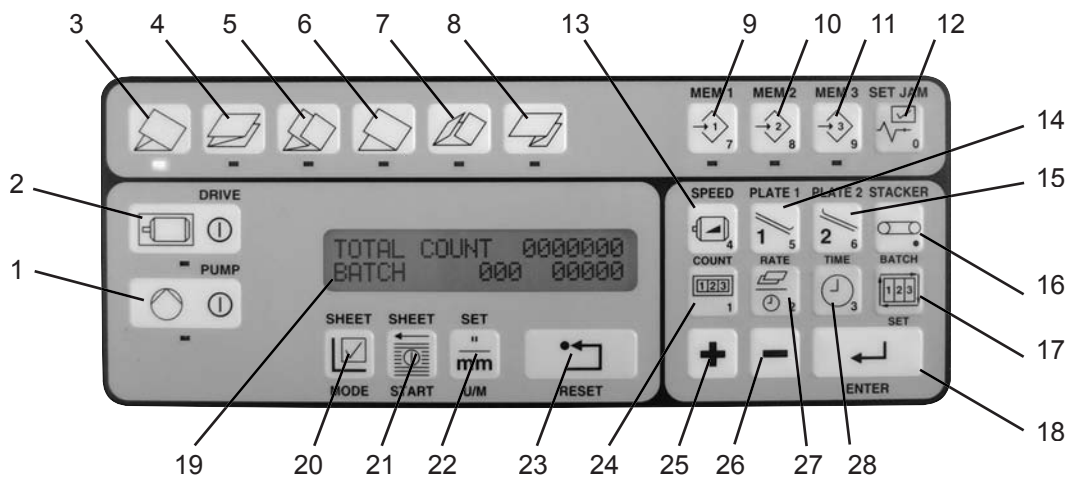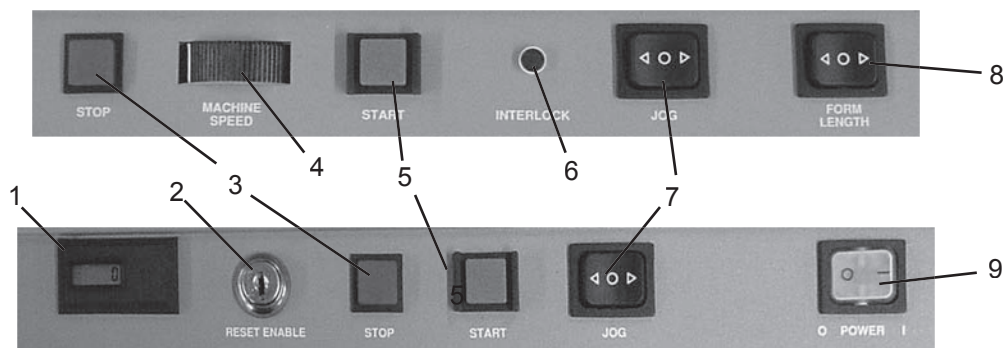| No.	NAME
1	PUMP START/STOP (2094 Only)
2	FOLDER DRIVE START/STOP
3	LETTER FOLD SELECT
4	Z-FOLD SELECT
5	DOUBLE HALF-FOLD SELECT
6	HALF-FOLD SELECT
7	GATE FOLD SELECT
8	ENGINEERING FOLD SELECT
9	MEMORY #1 SET

No.	NAME
10	MEMORY #2 SET
11	MEMORY #3 SET
12	SHEET JAM SELECT
13	SPEED ADJUST
14	UPPER FOLD PLATE ADJUST
15	LOWER FOLD PLATE ADJUST
16	STACKER ADJUST
17	BATCH COUNT SET
18	DATA ENTER
19	LCD ALPHANUMERIC DISPLAY

No.	NAME
20	SHEET MODE SELECT (2094 Only)
21	SHEET FEED (2094 Only)
22	INCHES/METRIC UNIT SET
23	FUNCTION RESET
24	COUNT SELECT
25	INCREMENT
26	DECREMENT
27	RATE SELECT
28	TIME SELECT

Burster control panel (2084)

No.	NAME	FUNCTION
1	Counter	Counts number of forms processed
2	Counter Reset Key	Resets the counter
3	Stop Button	Press to stop the burster at infeed or outfeed
4	Speed Control Dial	Select the speed to run the burster
5	Start Button	Press to start the burster at infeed and outfeed
6	Interlock	Indicates cover open, jam grill in up position, folder not running
7	Jog Switch	Advances forms forward or backward at infeed and outfeed
8	Form Length	Sets the length of the form to be burst apart
9	Power	Turns Burster on and off

OPERATION - 2094

MAIN POWER/RESET SWITCH

The main power/reset switch (Fig. 17) will completely shut off all power to the operating system. This will stop everything immediately.
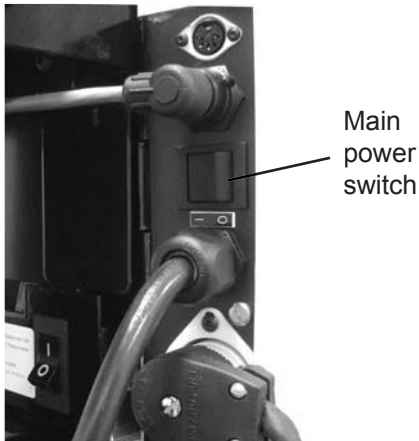
Main power switch

Fig. 17

FEED TABLE SIDE GUIDE ADJUSTMENT

In order for your machine to fold squarely, it must be fed into the rollers square. On the paper feed table there are two guides which keep the stack of paper properly aligned for feeding into the folder. (Fig. 18). Adjust these guides to correspond with the different widths of paper being processed.

1. To adjust the paper feed guides, loosen the two side guide locking knobs on each guide.

2. Slide the guides from side to side until the inside edge of each guide is aligned with the number corresponding to the width of the paper being folded. Example: For a 10cm wide sheet, move the side guides until the inside edges align with the "10" on the feed table.

3. An additional check is to lay a sheet of paper on the feeder, close to but not touching the side guides. Push the sheet down into the nip of the fold rolls.

4. Next, loosen the adjusting knobs and align the guide so it's parallel to the edge of the paper. When one side is square, the other side can be moved into position.

5. Tighten the locking knobs to secure the paper guides in position.

NOTE: When loading an actual job, you may have to move these guides slightly to accommodate variations in sheet size. To feed properly, the paper must slide freely between these guides.

Side guide locking knobs

Side guides

Side guide adjustment knob

Fig. 18
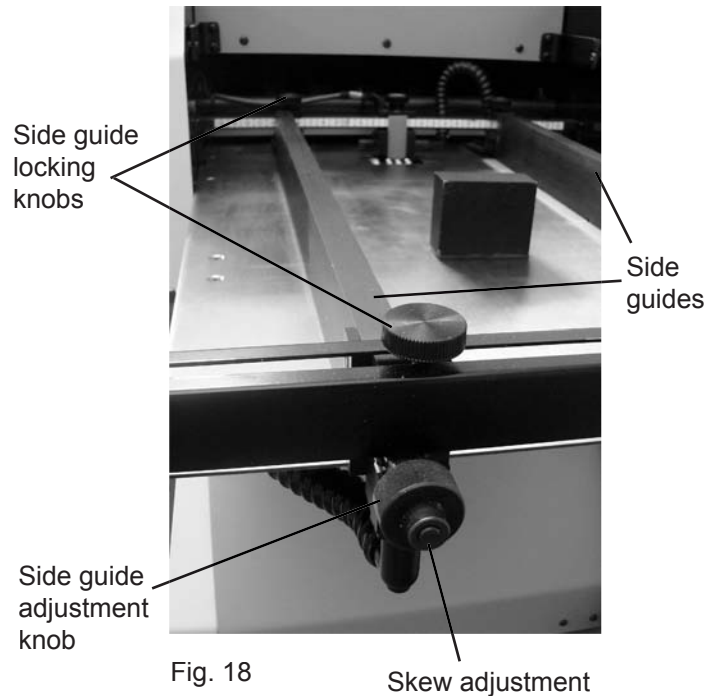
Skew adjustment

VACUUM FEED SHEET SEPARATOR

The sheet separator will have to be adjusted for the weight of paper you are folding. 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.

GAP ADJUSTMENT

1. With the machine running, insert two sheets of paper between the tab and the sucker wheel. (Fig. 19)

2. Turn the gap knob counterclockwise until there is a slight drag on the paper.

3. Remove the paper. The correct gap is now set.

Gap knob

Fig. 19

Sucker wheel
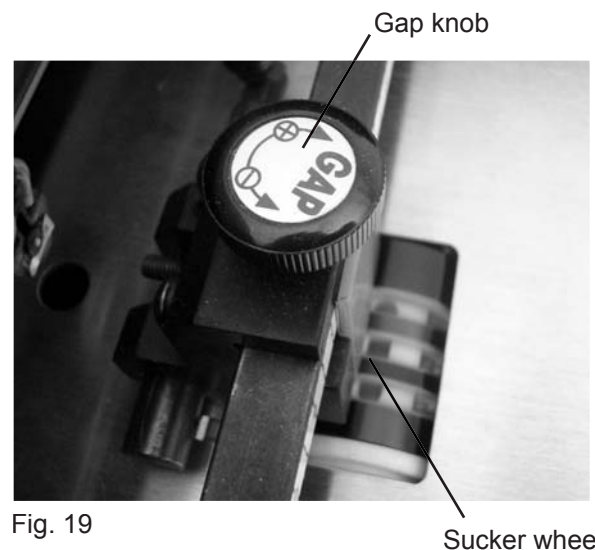
AIR BLOW ADJUSTMENT

1. Turn the air blow adjustment on the vacuum/air control panel fully clockwise to the (-) position (Fig. 20a). Adjust the air blow to float the sheet stack using the air blow adjustment, this is to separate the bottom 4 or 5 sheets.

2. The feeder valve knob may be used to balance the air between the left and right side of the feed table. Turn the knob to the right to obtain more blow on the right side and front of the feed table. Turn the knob to the left to obtain more blow on the left side and lessen the front blow.

3. With the folder and pump running, press the "SHEET START" button. Gradually increase the vacuum setting until the sheet is pulled from the feeder.

Blow   Vacuum

Fig. 20a

Feeder valve knob

Fig. 20b

Feeding Paper

NOTE: Set folds with standard copy paper so that the folds line up with the perfs on the pressure seal forms.

1. Load a stack of paper onto the feed table. The stack should be no higher than the side guides, 2" (51 mm). Position the backstop up against the paper stack.

2. Turn on the air/vacuum pump. The air should float the bottom of the stack approximately 1/16 to 1/8" (16 to 32mm). Air blast can be controlled by adjusting the feeder valve knob (Fig. 20b).

CHECK SQUARENESS OF FOLD

Examine the folded sheets on the stacker to be sure you are getting an even and square fold. A skew adjustment is located on each plate to adjust for a square fold on paper that is not cut square. (Fig. 21)
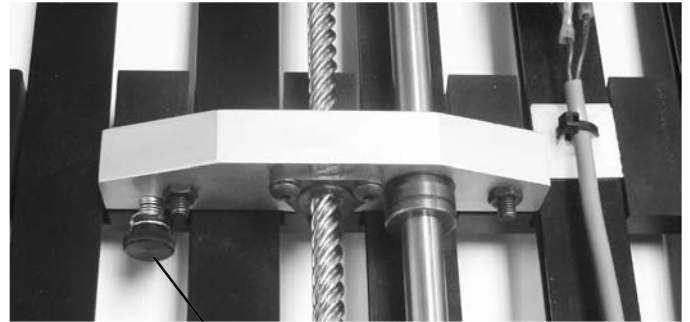

Fig. 21

Fold plate skew adjustment

SETUP WITH OPTIONAL SLITTER

1. Set the fold setting on folder. Select from one of the standard preset folds or set a custom fold if needed.

2. If the slitting alignment mark is not preprinted, manually fold the form, determine where the slit should be and mark it for aligning the slitter blades.

3. Using the hand wheel, manually feed the marked form through the folder into the output wheels of the folder just before the slitting blades (Fig. 22a).
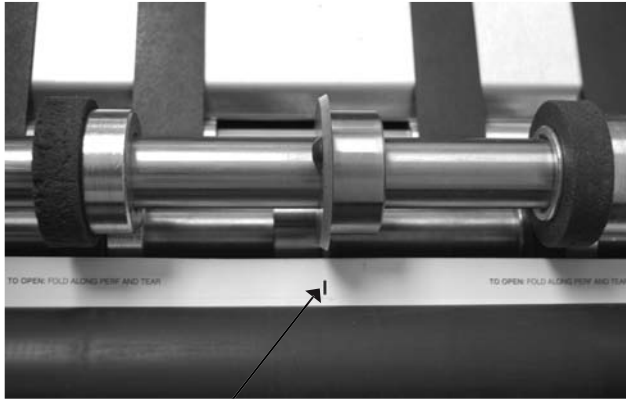
Fig. 22a   Slitting alignment mark

4. Loosen top and bottom blades of the slitter with an Allen wrench. Align the center of the slitter with the slitting alignment mark on the form (the center of slitter is where the top and bottom slitting blades meet) and tighten into position.

5. Manually finish feeding the form and remove.

6. Run a few test sheets to check alignment and adjust if needed. When the alignment is set begin operation.

Center of slitting blade assembly

OUTPUT CONVEYOR STACKER ADJUSTMENT

The output stacker has a variable speed control dial that can be used to adjust the shingle spacing or the space between each form in the stack.

To decrease the space and tighten the shingle, decrease the speed. To increase the space and loosen the shingle increase the speed of the conveyor.

Conveyor speed control

Tight shingle

Loose shingle

12

OPERATION - 2084

Edge Slitters   Wedger   Slitter Adjustment Screw   Alignment Mark

8-Pin Tractor, OP   Center Paper Guide   8-Pin Tractor, Dr

Fig. 22b

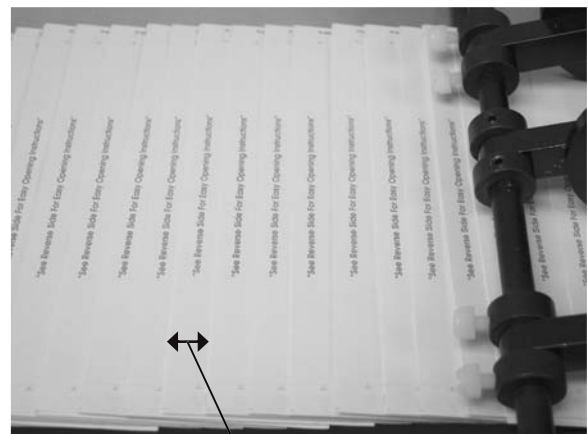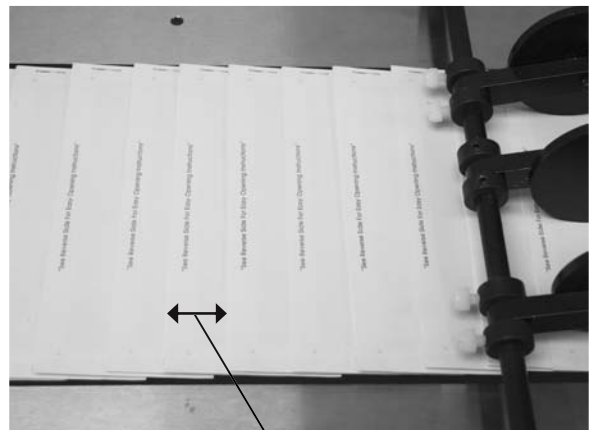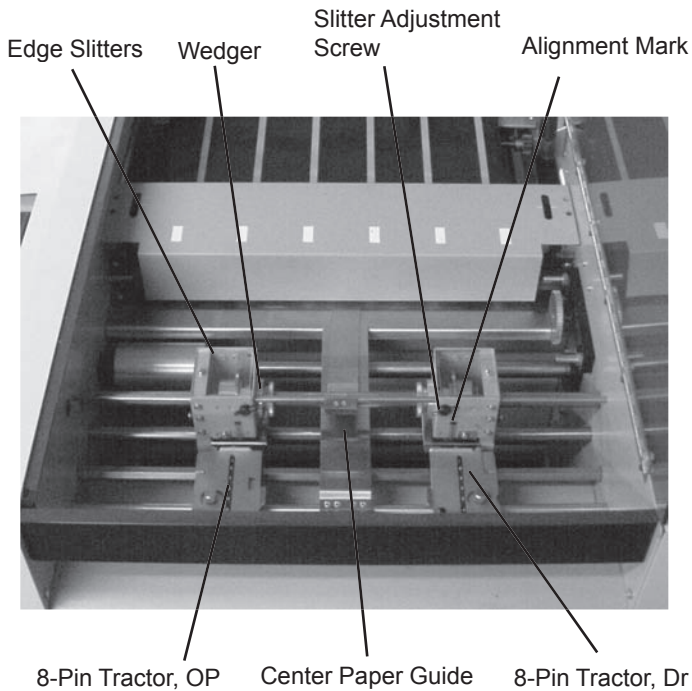## Form Set-up Procedure

1. Turn on the machine. Measure form length.

2. Press the form length switch on the burster to align the alignment mark with the form length on form length scale. (Fig. 23)
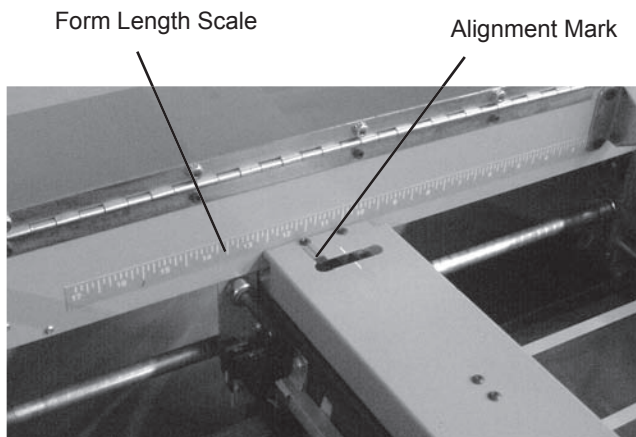
Form Length Scale   Alignment Mark

Fig. 23

3. Place form stack on pull down tray on right side of the burster.

4. Center leading edge of form at infeed end of the burster.

5. Position tractors to proper form width by releasing thumbscrews on top of tractors and sliding tractors to proper width. Raise tractor gates.

6. Lay margin holes of form over feed pins. (Fig. 24)
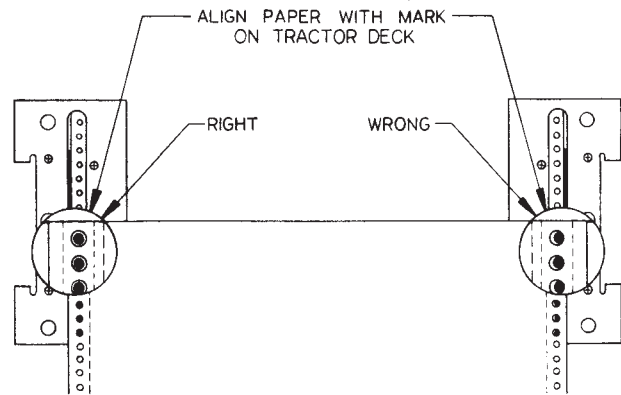
NOTE: Do not stretch form too tightly between pins; pins should be centered in margin holes.

Fig. 24

7. Close tractor gates and lock tractors by tightening thumbscrews.

8. If using edge slitters, position alignment mark where you wish to slit. (Fig. 22b)

9. If slitting, be sure that slitter blades are engaged. This is accomplished by rotating wedger in a counterclockwise direction as far as they will go without force. (Fig. 22b)

10. Lock edge slitters in place by tightening thumbscrews clockwise. (Fig. 22b)

NOTE: If you do not want to slit, push edge slitters away from form and tighten thumbscrews.

11. By pressing jog switch in forward position, advance form through feed rollers until snap rollers grab the form.

12. If necessary, adjust form length so the form starts to burst when perforation is just under tear points.

NOTE: Tear points can be moved to position them at any location along tear bar. Tear points should be set between perforations that run vertically the length of the form. (Fig. 25)

Edge trimmed forms. Use 1 or 2 tear points.
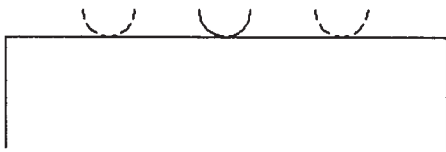
Center and edge-slit forms. Use 2 tear points.

Use center or 3 tear points. Trim intact. No slitting.
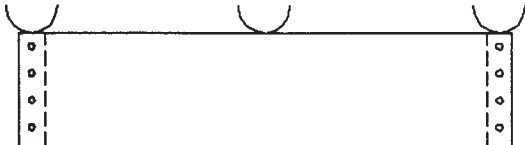
Center perforation or slit with trim left intact. Use 2 or 4 tear points.
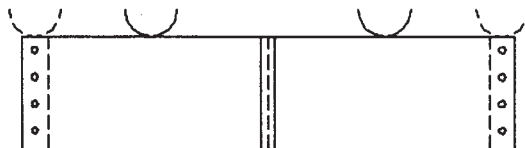
Fig. 25

13. 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 (turned over) and replace making sure that square end of bar locks into brackets. (Fig. 26, shown in HIGH position)
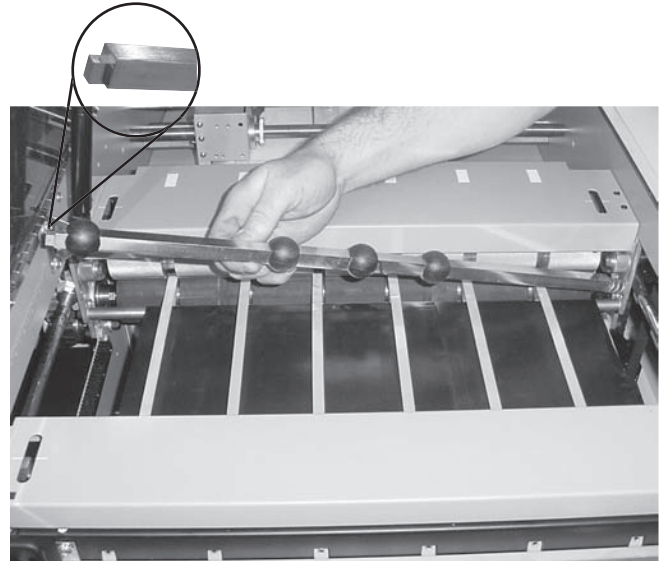
Fig. 26

Burster Operating Hints

1. To stop the machine, push on either one of two stop buttons. Opening safety cover or lifting jam detection grill will also stop machine.

2. To restart 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 1/2" ahead or behind actual form size setting, and/or put tear bar in low position.

Form Set-Up Procedures With Optional Imprinter

NOTE: It is recommended that numbered forms or checks fed into imprinter should be last form first, right side up.

1. Center leading edge of form at infeed end of machine so that outer edges of form extend equally beyond guide straps on each side. If you find that edges come within about 1/4" of guide straps, offset form in either direction to avoid this condition.

2. If form length is 3 1/2", 7", 10 1/2" or 14", rollers must be timed. Time rollers by activating jog switch until timing marks on the rollers are vertical and in view in cutouts in feed and snap roller covers.

3. Position tractors by releasing and sliding to proper form width. Raise tractor gates. Place forms on feed pins as shown in Fig. 24. Close tractor gates and secure in position.

4. Loosen thumbscrew on ink roller unit and slide unit away from signature area on form.

5. Loosen setscrews on plate cylinder. If setscrews are not in view, rotate free wheeling cylinder until they are in view. Horizontally align plate cylinder with signature area on form. Tighten setscrews.

6. Loosen setscrews on imprint cylinder. (If setscrews are not in view, use jog switch to bring them into view.)

7. With no signature saddles on imprint cylinder, move forms forward so signature area is centered over plate cylinder shaft.

8. Center signature cylinder over signature area (NOTE: Setscrews should be facing you.) and center signature plate locator pins directly over imprint area on form. Tighten setscrews.

9. Advance forms forward so that next horizontal perforation aligns at top edge of plastic tractor or alignment mark on metal tractor.

10. Move timing collar so that mark on collar aligns with mark on side frame. Tighten setscrews.

11. Remove forms from tractors. Install signature patches on imprint cylinder.

12. Move ink roller directly over signature patch on imprint cylinder. Jog forward, if necessary, so that imprint cylinder turns to a point where signature patch should touch ink roller. Adjust ink roll thumbscrews so ink roll turns when signature patch makes contact. For darker impression, turn adjustment thumbscrews clockwise.

NOTE: The signature saddle has been factory adjusted to fit a .092 thick signature patch. If adjustment is required to lower or raise the height of signature saddle for a different signature patch thickness, release imprinter side plates from their locked positions. Pull back latch finger to release plates. Loosen side setscrews to free top setscrew Turn top setscrew in at half-turn increments until required height is reached. Tighten side setscrews and slide imprinter module back into position.

Normal Loading

NOTE: Imprinter must be timed each time you load a different form into Burster for imprinting.

1. Jog machine forward until timing collar mark is aligned with side panel mark.

2. Place forms to leading edge to timing mark.

3. Advance (jog) forms forward through imprint area. Stop leading edge of form in front of slitters.

4. Move slitters to trim proper amount of trim and engage slitter blades by turning wedgers counterclockwise. Lock down slitters.

5. Advance forms through slitters and check for proper slitting. Advance on through to Tear Bar.

6. Set up tear bar as before. (Fig. 26)

7. Close Safety covers. Machine is now ready to burst and imprint. Press the Start Button and adjust machine speed to speed desired.

JOB SETUP & PROGRAMMING

WARNING: When adjusting fold lengths on the fold plates using the keypad, the plates will move automatically. Be sure to keep hands away from fold plates when adjusting fold lengths. It is recommended that all guards be closed when adjusting fold lengths.

IMPORTANT NOTE:
The operator control panel contains a numerical keypad, which is <u>automatically</u> activated when a function requires numerical data. The operator panel is color coded to show this relationship. Numerical data is required for:

 • Sheet Length
 • Batch Size

Two pieces of information are required to set up a job, assuming that initialization has previously been accomplished; sheet length and fold type. Either order may be used. Select the fold type first or the sheet length first.

POWERING UP THE FOLDER

When power is supplied, the system will first test all LEDs, memory and LCD display characters for 3 seconds.

|IIIIIIIIIIIIIIIIIIIIIIIII|
|IIIIIIIIIIIIIIIIIIIIIIIII|

After the self diagnostic phase, the display will show the version number for 3 seconds.

814MF
VERSION ****

If there are no error messages the display will go to the jam detector screen if one of the jam detectors is disabled.

FEEDER JAM DISABLED

If none are disabled or after pressing enter, the display will go to the initialization screen. The initialization screen will remain for 10 seconds. If the "+" button is not pressed during this time no initialization will occur.

INITIALIZATION
(+) YES   (-) NO
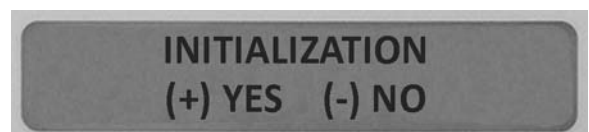
The display will go to the count screen. If there is any question about folding accuracy, reinitialize the system. LEDs in the memory, or the fold type buttons will light to indicate the last setting.

TOTAL COUNT ######
BATCH   ###   #####
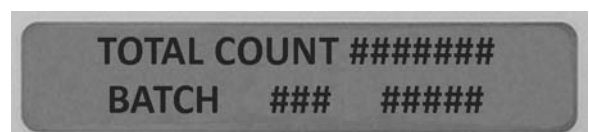
SETUP FOR A STANDARD FOLD

Note: See page 30 to help determine fold type

Method 1: CHOOSING FOLD TYPE FIRST

1. To set up for a new fold, press a fold type button. For example, to set a "Z" fold, press the "Z" fold button. The display will show the last job sheet length.

2. If the sheet length is not correct, you will have 5 seconds to begin keying in the new sheet length and press the "ENTER" button (see below). If the sheet length is correct, you may immediately press the "ENTER" button, then proceed.

SELECT FOLD

SHEET LENGTH   ##.##

3. When the "ENTER" button is pressed, the fold plates and stacker will move to their new position. While the motors are running, a PLEASE WAIT message will be displayed.
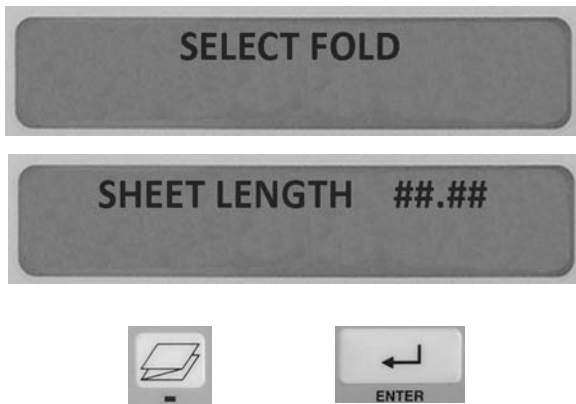
PLEASE WAIT

4. When the motors have stopped, one of two screens will be displayed. If the sheet length data was changed, the single sheet mode screen is displayed.

If the sheet length data was not changed, the count screen will be displayed.

SINGLE SHEET MODE

TOTAL COUNT #######
BATCH   ###   #####
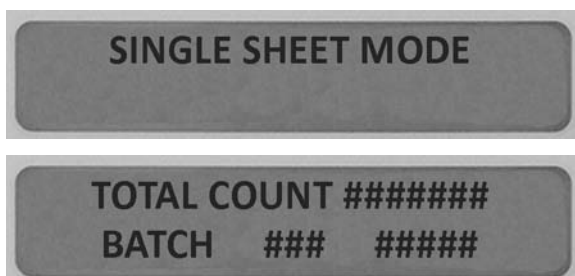
5. To adjust fold settings, press "PLATE 1" button to adjust top fold plate and/or "PLATE 2" button to adjust the bottom fold plate. Use the "+" or "-" keys to adjust settings up or down, then press "ENTER."

To save, see "Saving Non-Standard Folds into Memory" on page 17.
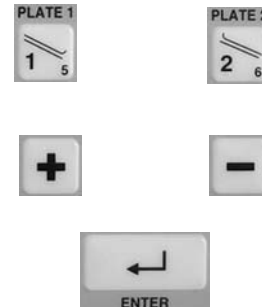
Method 2: ENTERING SHEET LENGTH FIRST

1. Setup a new job by pressing the "SHEET MODE" button. The Sheet Length screen will be displayed showing the last set sheet length.
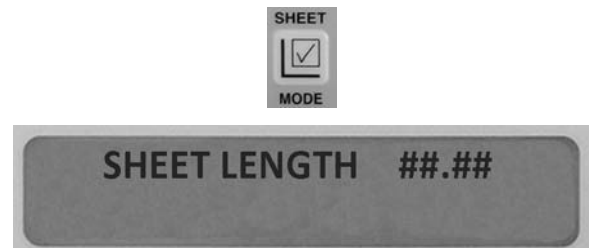
SHEET LENGTH   ##.##

You have the following two options: A) Enter a new sheet length, or B) do nothing.

NOTE: Pressing the enter button will accept the new data and eliminate any waiting time before moving to the next function.

A) ENTERING A NEW SHEET LENGTH:

1. After 5 seconds the data will be accepted and the last fold type indicator will start flashing. Select the desired fold type by pressing the appropriate "FOLD TYPE" button.

2. After 5 seconds the selection will be accepted and the fold plate stops will move to their new position. During this period the "PLEASE WAIT" screen will be displayed.

PLEASE WAIT

3. When the folder has completed its movement, the single sheet mode screen will be displayed. At this point, each time the "SHEET START" button is depressed a single sheet will be folded and delivered. Any adjustments to fold lengths or slitter shaft accessories may be made at this time.

SINGLE SHEET MODE

4. Press the "SHEET MODE" button to return to the production mode. The count screen will be displayed.

5. Accept the displayed sheet length by pressing the "ENTER" button. This will activate the single sheet mode.

B) DO NOTHING:

After 5 seconds, the count screen will be displayed.

TOTAL COUNT ######
BATCH   ###   #####

SETTING A CUSTOM FOLD

The 2094/2084 has 3 memory locations that can be used to store custom fold settings. These will store the plate settings, the stacker wheel location, and the speed setting for a fold.

SAVING A NON-STANDARD FOLD INTO MEMORY

1. Set up the fold as you normally would.

2. Once the speed and folds are set the way you want, press a "MEMORY SET" button. Recall will appear in the display.

3. Press the (-) button to get to the STORAGE screen.

4. Press the "ENTER" button to store the fold in the memory location selected.

RECALL
(N) -   (Y) ENTER

STORAGE
(N) -   (Y) ENTER
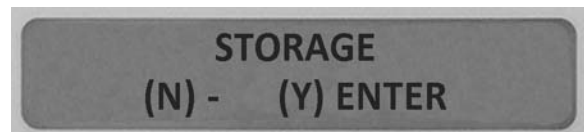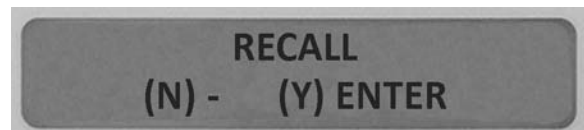
RECALL A FOLD SAVED TO MEMORY:

1. Press the "MEMORY SET" button that corresponds to the memory location you wish to recall. RECALL will appear.

2. Press the ENTER button.

RECALL
(N) -   (Y) ENTER

18
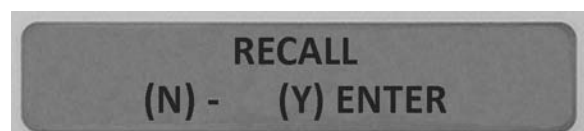
STARTING PRODUCTION:

After the sheet length and the fold type have been selected:

1. Start the main drive (press "DRIVE")

2. Start the pneumatic pump (press "PUMP").

3. Start sheet (press "SHEET START")

NOTES: If the wrong "FOLD TYPE" button is pressed, you can either press the "RESET" button instead of the "ENTER" button or press the correct "FOLD TYPE" button, then the "ENTER" button.

After every new set up the machine speed will always be reset to 60%.

The fold type status LED, when lit constantly, indicates that the fold plates are set for this type of fold. Any time the folder is running and a change is made that causes the fold plate stops to move, the main drive will stop.

COUNTER OPERATION

During normal operation, the display should show the total count (maximum count 9,999,999), current batch size (3 digits) and the total number of completed batches (5 digits). This display is known as the count screen.

RESETTING THE TOTAL COUNT

To reset the total count press the "RESET" button, then press the "COUNT" button. This also resets the batch counter, (# of batches & # in the batch).
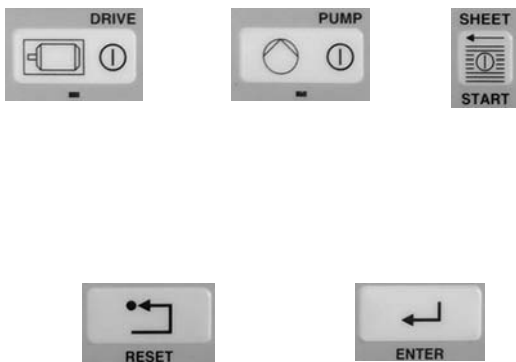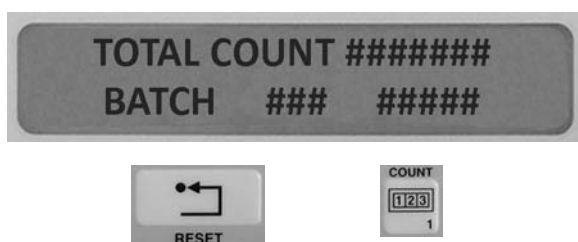

PROGRAMMING THE BATCH COUNTER

Program the batch counter by pressing the "BATCH SET" button. The set batch screen will be displayed.
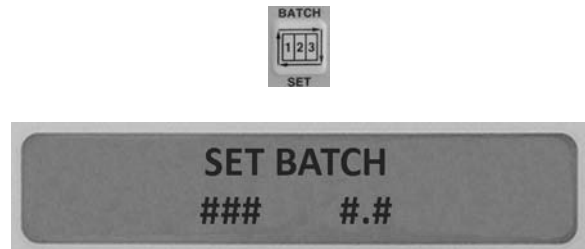
1. Using the numerical buttons (◯) enter the desired batch size; one, two or three digits (maximum setting is 999).

2. Using the "+" and "-" buttons, enter the desired feed interrupt time (0.3 to 9.9 seconds). This gives the separation.

3. When stop is displayed, pressing the "SHEET START" button will feed a batch and stop.

4. Press the "SHEET START" button to process the next batch.
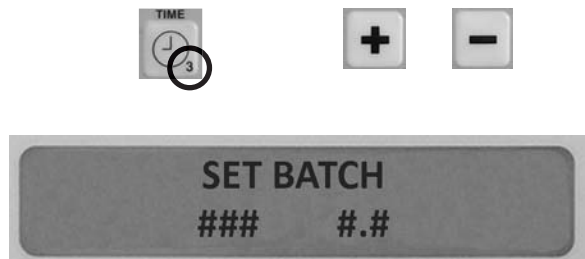
RESETTING THE BATCH COUNTER

To reset the batch counters press the "RESET" button, then press the "BATCH SET" button. This will reset the batch count and the total batches. The Total Count will not be reset.
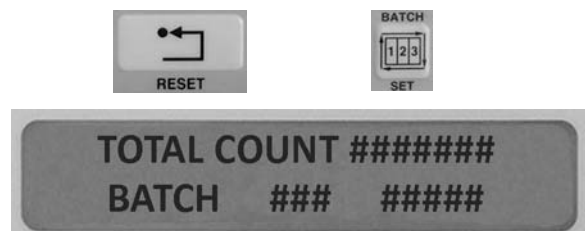
RATE

The "RATE" button is used to display the average pieces per hour, both current and average since the last total counter reset.

Pressing the "RATE" button will change the display to the rate screen consisting of two lines. The top line is the current rate. It will have a 5 digit display, and will refresh every 6 seconds. The second line will show the average pieces per hour since the last total counter reset. This line will also have a 5 digit display, and refresh every 30 seconds.

CURRENT RATE   #####
AVERAGE RATE   #####

The display will stay in this mode until another mode button is pressed. The "ENTER" and "RESET" buttons will have no effect in this mode.

NOTE: Every time the total count is reset the average rate per hour will also be reset.

NOTE: If a button is not pressed within 2 minutes, the machine will return to operating mode.

RUN TIME

The "TIME" button will display the time since the last total count reset and the total hours that the main drive has been on, the customer can not reset this meter. Both hour meters will increment only when the folder is running. The pump operation or the main power will have no effect on these meters.

NOTE: Every time the total count is reset the job run time should also be reset.

JOB RUN TIME   ####
TOTAL HOURS   #####

Pressing the "TIME" button will change the display to the time mode.

In this mode the first line of the display will show job run time and have a 4-digit capability to show the number of hours since last reset. The second line will show total hours and have a 6-digit capability to show the total hours on the machine.

The "COUNT" button can be used to go back into the count screen from the rate screen.

TOTAL COUNT #######
BATCH   ###   #####
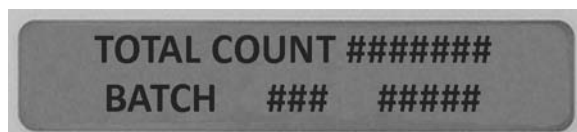
NOTE: If a button is not pressed within 2 minutes, the machine will return to operating mode.

START/STOP BUTTON - DRIVE MOTOR

In the normal operating mode pressing the DRIVE button will activate the main drive motor and the LED below the button will light. Pressing the DRIVE button again will deactivate the main drive motor and turn off the LED.

START/STOP BUTTON - PUMP

In the normal operating mode pressing the PUMP button will activate the pump motor, and the LED below the button will light. Pressing the PUMP button again will deactivate the pump motor and turn off the LED.

SPEED

The speed of the machine can be changed by pressing the SPEED button while the main drive motor is running or stopped.

Use the "+" and "-" buttons, to adjust the speed. The "+" button will increase the speed gradually, as long as the button is pressed.

Once the folder reaches its maximum speed a message will be displayed until the ENTER button is pressed.

The "-" button will decrease the speed gradually, as long as the button is pressed.

Once the folder reaches its minimum speed a message will be displayed until the ENTER button is pressed.

Full speed range travel of the motor takes 10 seconds.

Press the ENTER button to return to normal operation.

FOLD PLATES

The fold plates can be set at any time from the operating mode by pressing the PLATE button that corresponds to the fold plate which needs to be adjusted.

1. To adjust the number 2 fold plate, press the PLATE 2 button.

2. Use the "+" and "-" buttons to move the stop into position. Once either button is pressed the display will change to display the actual location of the plate stop.

Pressing the "+" button once will increment the plate stop 0.25 mm. Holding it for more than 2 seconds will increment the plate stop continuously at slow speed. Holding the "+" button for more than 5 seconds will increment the plate stop continuously at high speed until you release the button or the plate stop hits the home position switch.

Pressing the "-" button once will decrement the plate stop position 0.25 mm. Holding it for more than 2 seconds will decrement the plate stop position at slow speed. Holding the "-" button for more than 5 seconds will decrement the plate stop position at high speed until you release the button, or the plate stop hits the deflect position switch.

3. Press the ENTER button to return to normal operation.

CHANGING DIMENSION SETTINGS

To change dimensions from English to Metric, press the SET U/M button. Now all the dimensions will be in metric. The setting will remain until this procedure is repeated.

STACKER WHEELS

The stacker wheels can be set at any time from the operating mode by pressing the "STACKER" button.

1. To adjust the stacker wheels, press the "STACKER" button during operation.

2. Use the "+" and "-" buttons to move the stacker wheels into position.

Pressing the "+" button will increment the stacker wheels continuously at slow speed. Holding the "+" button down for more than 2 seconds will increment the stacker wheels continuously at high speed until you release the button, or the stacker wheels reach their outer limit. The system will track the stacker wheel location and if they reach the stop, the drive will be disabled and a message will be displayed for 5 seconds after the "+" is released.

DELIVERY   100.00mm
CHANGE WITH +/-

STACKER WHEELS
AT MAXIMUM LIMIT

Pressing the "-" button will decrement the stacker wheels position at slow speed. Holding the "-" button down for more than 2 seconds will decrement the stacker wheels position at high speed until you release the button or the stacker wheels hit the home position. Once the stacker wheels have reached the home switch the drive is disabled and a message will be displayed for 5 seconds after the "-" is released.

After the stacker wheels are in position press the "ENTER" button. This will return you to the operating mode.

STACKER WHEELS
AT MINIMUM LIMIT

PAPER JAMS

In the event of a paper jam, the machine will shut off and display will indicate where the jam occurred.

Any time a jam indication is showing in the display you can press the STACKER button and the stacker wheels will move to the end of the table to make it easier to clear any jammed paper.

Try to determine the cause of the jam and correct it before pressing the RESET button. Pressing the RESET button will clear the jam message, return the stacker wheels to their original position and re-enable the drive.

FEEDER JAM

DELIVERY JAM

CLEARED. PRESS RESET
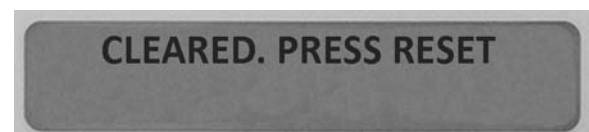
SHUTTING OFF JAM DETECTORS

NOTE: For optimal function, it is recommended to keep the jam detectors on.

1. To enter jam detector mode, press the SET JAM button:

2. Use the "+" button to toggle between enable and disable of the specific jam detector. Use "-" button to make no change.

Display shows:

> **FEEDER JAM ENABLED**
> **DISABLE? (+) YES (-) NO**

OR

> **FEEDER JAM DISABLED**
> **ENABLE? (+) YES (-) NO**

When the "+" or "-" button is pressed, display shows:

> **EXIT JAM ENABLED**
> **DISABLE? (+) YES (-) NO**

OR

> **EXIT JAM DISABLED**
> **ENABLE? (+) YES (-) NO**

When the "+" or "-" button is pressed, display shows:

> **TOTAL COUNT ######**
> **BATCH   ###   #####**

General Cleaning

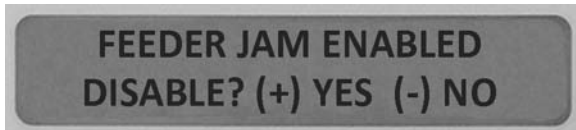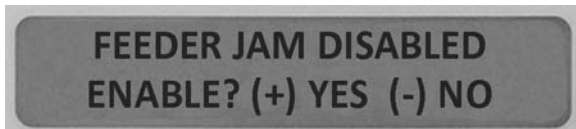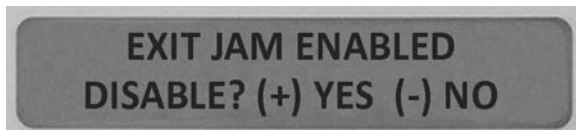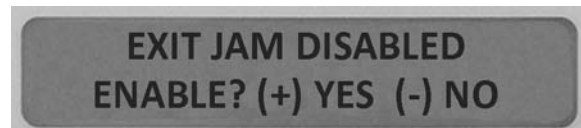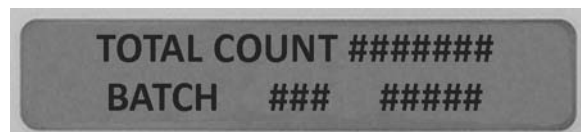Take a few minutes at the end of each day to wipe off accumulations of paper dust. Cover your machine when not in use.   These practices will keep your machine clean and in tip-top operating condition.

Fold Roller Cleaning

Keep fold rollers clean. Most folding problems are the result of material accumulations on the fold rollers. Although designed to minimize accumulations, over a period of time, ink and dust buildup will prevent the rollers from gripping the stock evenly.   Rollers must be cleaned on a regular basis to maintain optimum folding performance.

Disconnect the power, remove the fold plates and clean rollers with Formax-approved cleaner designed for the type of rollers your machine is equipped with. Turn the rollers with the hand wheel (never attempt to clean rollers with the machine running). Check rollers periodically for wear. During normal use, fold rollers will gradually wear. Worn rollers will be evident by increased setup times, increased spoilage, inaccurate folding and inability to control the sheet. If one or more of these conditions are noted, contact your authorized Formax folder dealer to inquire about inspection and/ or possible roller replacement.

Sealer Roller Cleaning

Keep sealer rollers clean. Sealing problems may occur if printer toner builds up on the steel rollers. Disconnect the power, lift the sealer safety cover and wipe the rollers down with Formax-approved lint free cloth and roller cleaner.

Cleaning Filters

The filters on the pump should be checked periodically and cleaned as needed. The filters can be reached by unscrewing the filter jars.

Photo Eyes

Occasionally wipe off both photo eyes with a dry cloth.

Cleaning Fold Stop Guides

The fold stop guides should be cleaned once a week with a dry cloth to keep the plate moving properly.

DISPLAY MESSAGES

The following are other display messages that may appear

KEYBOARD MISSING	HOME NOT REACHED PRESS RESET
BAD KEYBOARD	OUT OF RANGE
PUMP THERMAL CONTACT OR PUMP DISCONNECTED	PAPER SIZE INCORRECT PRESS RESET
PUMP OVERLOAD PRESS RESET	NO PAPER
FOLDER OVERLOAD PRESS RESET	OUT OF PAPER
NO TACH. CHECK MOTOR, BELTS, ENCODER	INSTALL DELIVERY OR PRESS RESET
JAM 2nd STATION	INSTALL PLATE NO. 1 OR PRESS RESET
START SHEET	INSTALL PLATE NO. 2 OR PRESS RESET
CHANGE +/-	PAN 1 STOP 100.00mm CHANGE WITH +/-
PLATE NO.	

LANGUAGE SELECTION

Switch location, on the electronic board, for language and voltage selection settings.

Settings Switch

```
D7    D8    D9    D10   D11   D12
O     O     O     O     O     O
R     Y     R     Y     R     Y

RO D6                          Y O D13
G● D5
G● D4

F1

              R OD3   SWI   Y O D14        VR2
F2            R OD2         Y O D15   VR1
F3            R ODI               Y O D16  VR3
F4
F5                               RO D17
```

```
F1      .5A  TYPE MDL
F2,F3   5A   TYPE MDA
F4,F5   20A  TYPE MDA

D1      AC MTR RUNNING (PUMP)
D2      AC MTR OVERCURRENT (PUMP)
D3      DC MOTOR RUNNING
D4      5 Vdc SUPPLY
D5      14 Vdc SUPPLY
D6      BATCH ON
D7      PAN 1 STEP (MTR. ON)
D8      PAN 1 LIMIT (PAN AT HOME POS.)
D9      PAN 2 STEP (MTR. ON)
D10     PAN 2 LIMIT (PAN AT HOME POS.)
D11     DELIVERY STEP (MTR. ON)
D12     DELIVERY LIMIT (PAN AT HOME POS.)
D13     TACHOMETER (PULSE INPUT)
D14     MANUAL OVERRIDE ENGAGED
D15     FEED SENSOR (UPPER JAM)
D16     DELIVERY SENSOR (LOWER JAM/COUNT)
D17     PILE INTERRUPT

VR1     FACTORY SETTING-AC MTR OVERLOAD
VR2     FEED SENSOR-FULL CW
VR3     DELIVERY SENSOR-FULL CW
```

SWI SWITCH SETTINGS

SW	1	2	3	4	FUNCTION
	I	I	X	X	LANGUAGE-ENGLISH
	0	I	X	X	LANGUAGE-GERMANY
	0	0	X	X	LANGUAGE-SPANISH
	I	0	X	X	LANGUAGE-FRENCH
	X	X	I	X	115 VOLT PROGRAM
	X	X	0	X	220 VOLT PROGRAM
	X	X	X	0	MICROPROCESSOR CONTROL
	X	X	X	I	MANUAL OVERRIDE
					FOLDER RUNS WITHOUT PROGRAM

```
SW LEGEND    0   SWITCH OFF
             I   SWITCH ON
             X   DON'T CARE
```

LED LEGEND

```
O   OFF
●   INITIALLY ON
G   GREEN
R   RED
Y   YELLOW
```
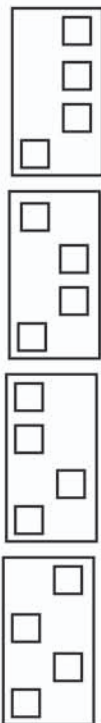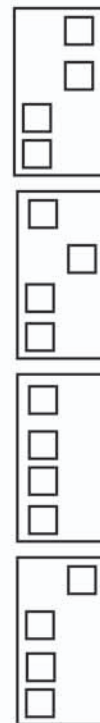
115 VOLTS

ENGLISH

GERMAN

SPANISH

FRENCH

220 VOLTS

ENGLISH

GERMAN

SPANISH
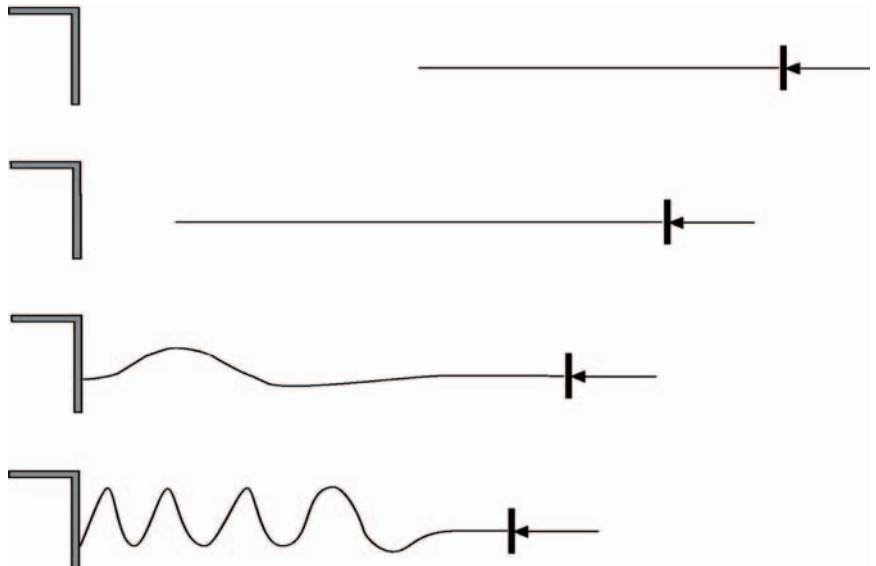
FRENCH

BASIC THEORY OF BUCKLE FOLDING

If a sheet of paper is laid on a flat surface and driven into a stationary object, a buckle or series of buckles will form along the surface of the sheet.

If the sheet of paper is pushed into a narrow channel before butting up against the stationary object, the buckles that form within the channel will be of a much smaller size than free-forming buckles. At the end of the channel, however, larger buckles will again start to form.
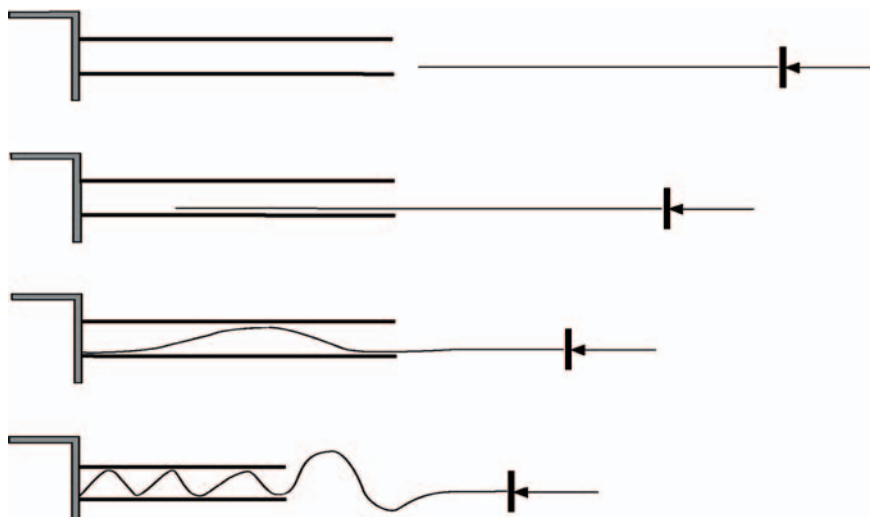
If the channel is angled to produce a downward pressure, and two folding rollers, spinning as indicated, are placed close to the end of the channel, the larger buckles that start forming there will always be formed downward and be pulled into the rollers, compressing into a fold.
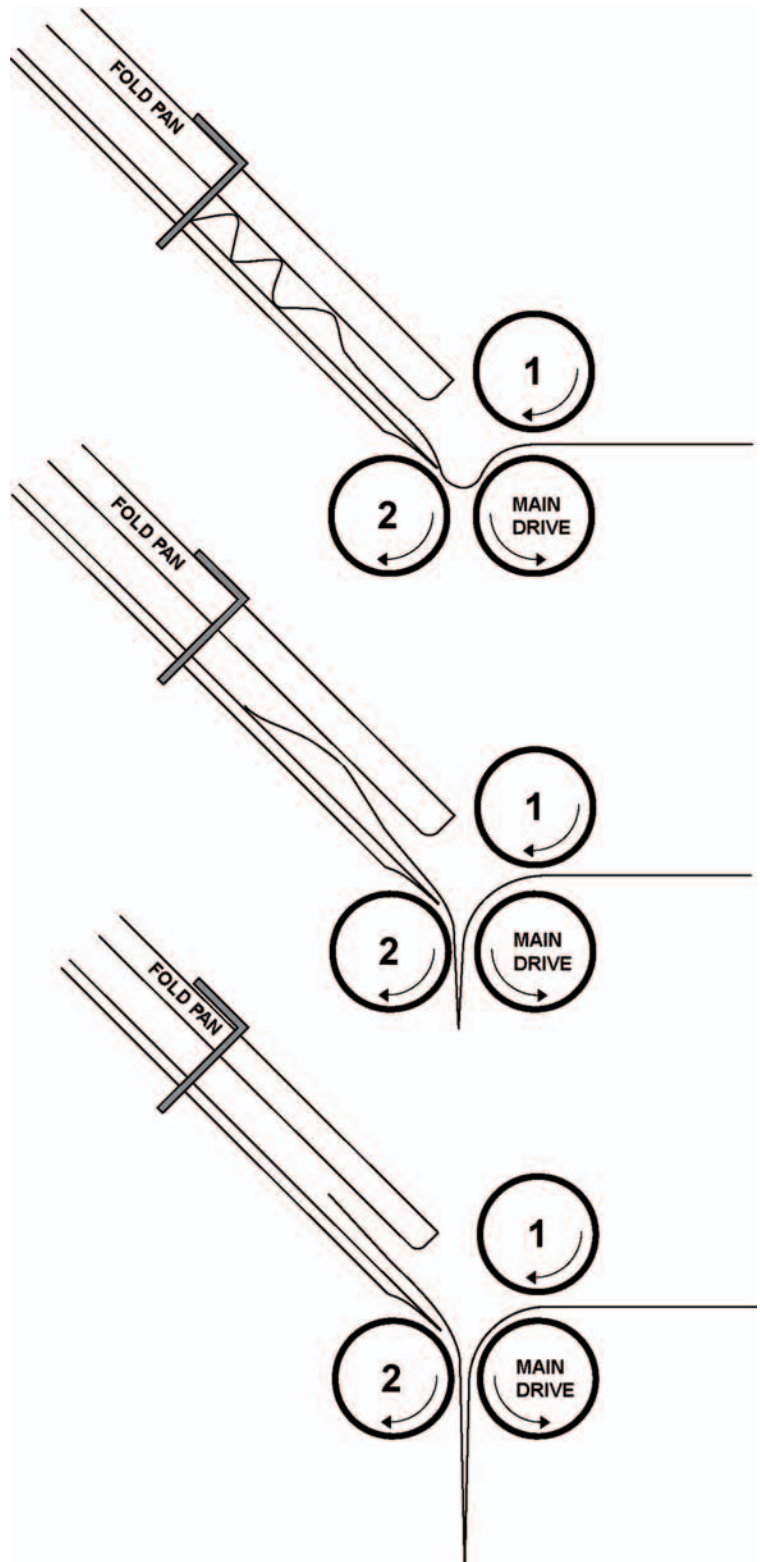
On a buckle folder, the sheet is laid flat on a feed table and then enters the fold plate assembly where it comes to a stop against the stationary sheet stop. A series of buckles then forms throughout the sheet. The buckles within the fold plate are kept very small by the narrow channel design.

The buckles at the end of the fold plate, however, will be larger. The fold plates and fold rollers are configured such that the large buckle will always form downward, where it can be grabbed by the fold rollers and compressed into a fold.

In the diagram below, fold plate #1 is angled upwards. Because of this and the configuration of the fold rollers, sheets fed into the #1 plate will always be folded up (i.e. so that the "up" surface of the sheet is folded into contact with itself).

Likewise, because fold plate #2 is angled down, sheets fed into it will be down-folds; the "down" surface of the sheet will be folded into contact with itself. This diagram shows the plate #2 deflector in position. In this case, the sheet does not enter plate #2, and produces a single fold.
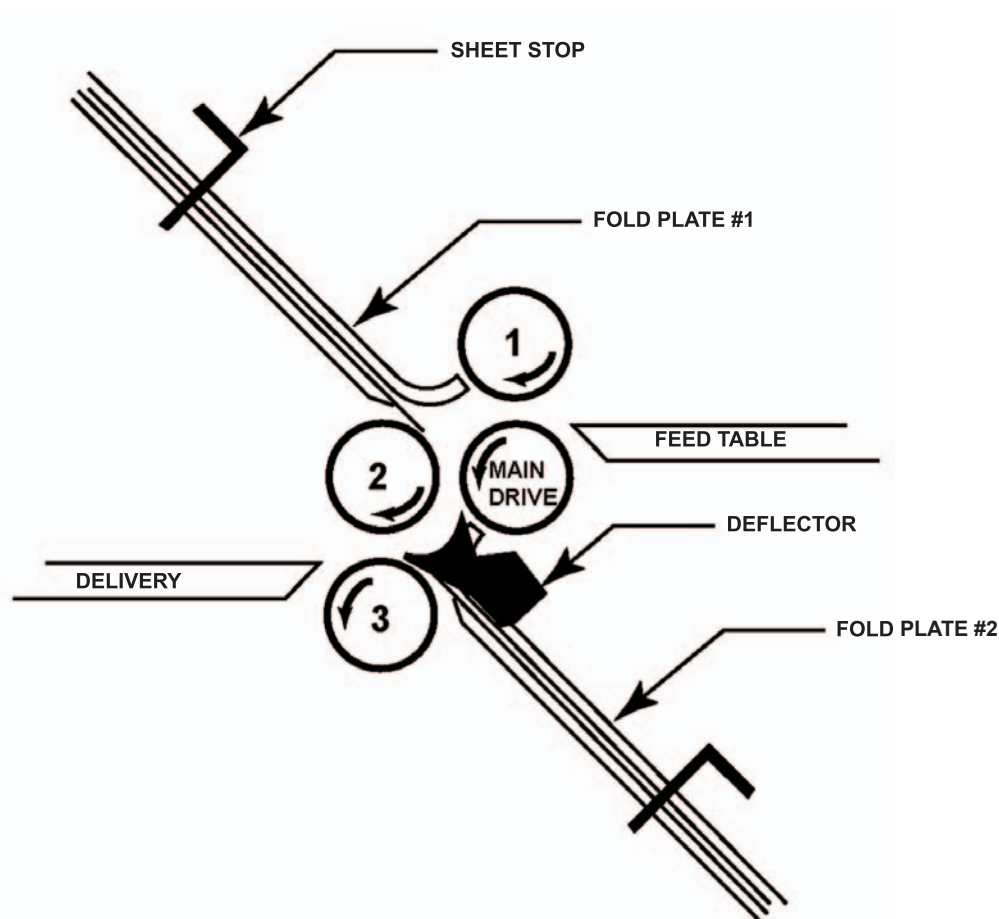
Fault Detectors

Burster (2084) - The burster is equipped with an outfeed jam detector grill (Fig. 27). This device senses jams between the burster and the transfer table and stops the burster until the jam is removed and the machine is restarted.

Burster Jam Grill

Fig. 27

Sealer - A photo-eye sensor is located on the eight ball transfer deck before entering the sealer unit. This device senses jams and immediately stops the sealer, burster (2084) and folder until the jam is removed and the machine is restarted (Fig. 28).

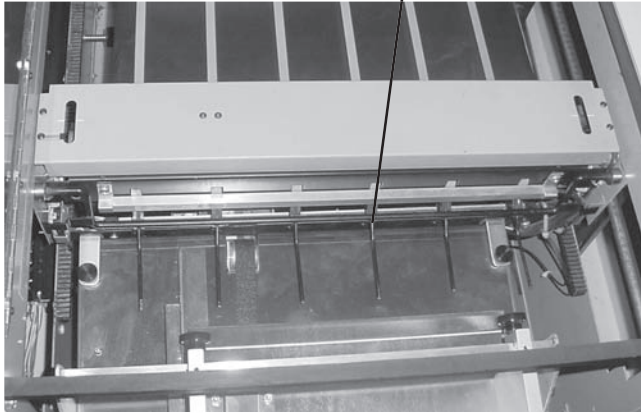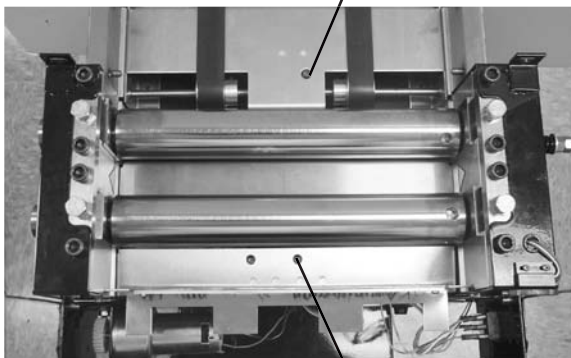Eight-ball transfer deck

Fig. 28   Sealer Photo-eye

Safety Covers

The 2084 burster is equipped with a plexi safety cover (Fig. 29), and will not run unless this cover is in closed position.

Burster Safety Cover

Fig. 29

JAM CLEARING & FAULT INDICATOR RESET

JAM OCCURS IN A FOLD TABLE

1. Unplug and remove the fold table and remove paper. Use the hand wheel to assist in advancing the paper through the rollers.

2. Reinstall and plug in fold table.

3 Press the reset button on the control panel to clear the fault signal.

JAM OCCURS BETWEEN THE METAL SEALING ROLLERS

1. Remove any remaining forms from the feed table.

2. Lift the rear cover of the folder to access the metal sealing rollers.

2. Remove the transport table ball deck (Fig. 30).

3. Using the jam-clearing tool, apply the tool to the holes in either upper metal rollers (Fig. 30) and turn clockwise until the paper jam is clear.

Caution: Do not turn counter-clockwise and/or force the form(s) to exit the machine or the rollers may be damaged.

4. Remove the jammed form.

5. Reinstall Ball Deck

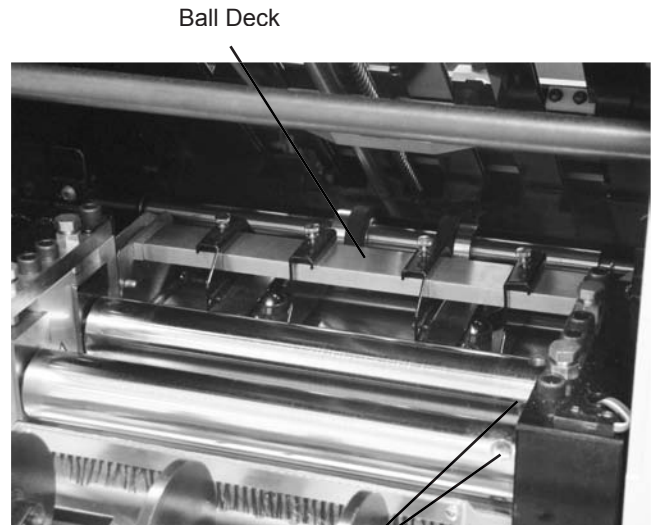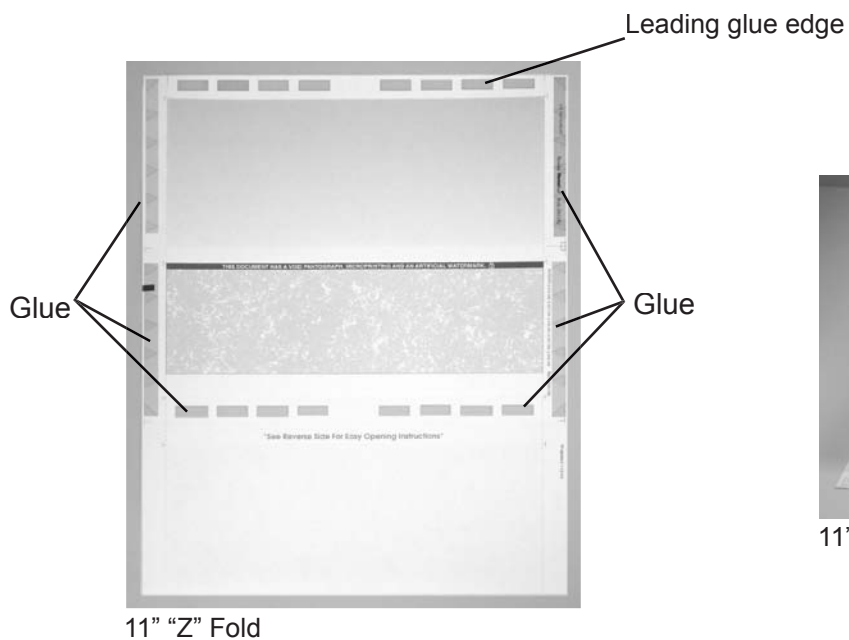6. Press the reset button on the control panel to clear the fault signal.

Ball Deck

Fig. 30

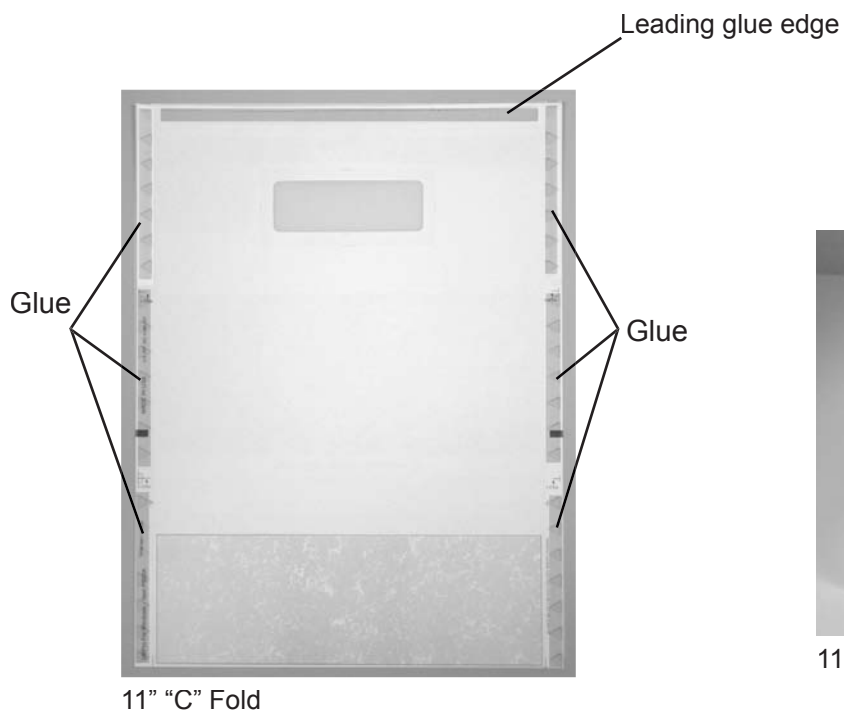Jam clearing tool holes

DETERMINING FOLD TYPE

Two Standard Folds 11" "Z" & 11" "C"
Refer to Operator Manual for custom fold setup.

Leading glue edge

Glue

Glue

11" "Z" Fold

11" "Z" Fold

Leading glue edge

Glue

Glue

11" "C" Fold

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TROUBLESHOOTING

TROUBLE	POSSIBLE CAUSE	REMEDY
Machine not running	Is the power on?	Make sure the power to the folder, sealer, conveyor and burster are in the on position. Check to make sure the wall outlet has power
	Machine not plugged in	Make sure all the plugs are plugged in properly
	Safety covers are raised/open	Make sure the safety covers for the folder and sealer are lowered.
	No power even with machine turned on, plugged in and wall power is on?	Call Service
Double feeding forms	Feeder is not set properly	See Gap Adjustment, pg 10.
	Paper is stuck together	Separate sheets from each other.
	Using paper other than specified	Paper other than specified may cause mechanical trouble.
Sealer jams	Double feeding	Turn power off, insert jam clearing bar into sealer roller and turn counter-clockwise until jam is cleared.
Folder Jams	Double feeding	Turn power off, turn hand wheel counter clockwise and clear jam.
	Paper stuck in fold plate	Turn power off, remove fold plate and clear paper.
Metal rollers dirty	Toner is on metal rollers of sealer	Unplug machine and clean with approved cleaner.
Paper fold gets out of place	Paper stops have moved	Rotate the fine adjustment knobs to correct movement, pg 10.
	Folding roller is dirty	Clean with approved cleaner.
Paper jam occurs often	Folding roller is dirty	Clean with approved cleaner.
	Is inside of machine dirty?	Clean inside of machine.
	Are conveyor 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 Creasing	Form is not exiting the folder straight	Check that the forms are being fed squarely.
		Check that the eight ball track is sitting properly.
		Check to see if the fold rollers are clean.
	Form is not entering the sealer straight	Check that the eight ball track is sitting properly.
	Creasing continues	Call service.
Documents are wrinkled or crunched	Fold plates are not inserted correctly	Remove and reinstall fold plates. Be sure they're properly positioned.
	Piece of paper or other material is stuck in the fold plate	Remove object from the fold plate.
Forms in burster creep to one side.	Infeed guides not set properly	Reset Guides, page 12
	Roller tension not uniform across roller.	Check and adjust roller tension, Call Service
Burster stalls or tears forms	Tear bar in high position	Put bar in low position pg. 14
	Burster not running fast enough	Increase burster speed
	Incorrect form length setting	Reset paper length pg. 13
	Tear points not adjusted properly across face of form	Adjust tear points pg. 13
	Tough form perforations	Adjust tear points pgs. 13 - 14
Burster rollers don't rotate / machine runs.	Slipped belt Broken drive belt Loose pulley	Call Service
Won't burst properly.	Incorrect roller tension.	Check and adjust roller tension Call Service
	Carriage not properly positioned.	Reset carriage position
	Tear point not set correctly.	Adjust tear points pgs. 13 - 14
	Tear bar not set correctly.	Adjust tear bar position pg. 14
Poor slitting.	Slitter blades not making contact with one another.	Adjust slitter blade position, pg. 12
	Worn blades.	Replace blade, Call service

Forms pull out of burster tractors.	Roller timing is off	Call service.
	Incorrect form length setting	Reset form length pg. 13
	Incorrect feed roller tension	Check and adjust roller tension, Call Service
	Tractor drive pulley bound up	Check for paper jam and clear, Call service.
	Tractors binding internally	Call service.
	Tractor pins not centered in margin holes	Adjust tractors pg. 13
	Dull slitter blades	Replace blade, Call service
	Tractor timing is off	Call service.
Large variations in trim accuracy	Paper not centered to slitter feed	Realign paper
	Margin slitter setscrew not tightened down	Tighten setscrew
Snap roller carriage will NOT move	Defective switch or motor	Call Service
	Broken carriage drive chain	Call Service
	Loose setscrew on carriage advance shaft or on motor	Tighten setscrew, Call service
	Obstruction on rack	Remove obstruction
	Obstruction at the pivot arm	Remove obstruction
Loop forming between the slitter and the infeed roller.	Obstruction between the infeed and snap rollers	Remove obstruction
	Broken flow strap	Call Service
	Bent infeed finger	Call Service
	Tear bar in low position	Put bar in high position pg. 14
	Too many tear points	Adjust tear points pgs. 13 - 14
	Need Anti-tenting bracket	Call Service