

FORMAX[®]

FD 540
Burster

OPERATOR MANUAL
FIRST EDITION

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DESCRIPTION

FUNCTION

The 920 Burster bursts (breaks apart) single and multi-part continuous forms and feeds them sequentially onto the stacker. The optional Slitter enables the operator to remove the trim at the same speed the forms are being burst.

The Sequence Stacker allows continuous runs of forms without stopping the Burster to unload the Stacker. Web belts carry the forms from the Burster output onto a slanted grill where they are partially jogged for removal.

MOUNTING BURSTER TO THE TABLE

This Burster is mounted to the table

1. FD540-60 with one hole into surface of table. Install "J" bolt in hole provided. Install washer and wingnut loosely from underside of top surface.

Place Burster on table with infeed end of machine over large hole in table top. The Burster should fit flush with table on all sides. Push "J" bolt up and turn so that "J" bolt hooks over edge of lip on Burster frame. Tighten wingnut on "J" Bolt.

MODEL NUMBER

FD 544	BURSTER 115V 50/60 Hz 3 Amps
FD 545	BURSTER 230V 50/60 Hz 2 Amps
FD 546	BURSTER/SLITTER 115V 50/60 Hz 3 Amps
FD 547	BURSTER/SLITTERS 230V 50/60 Hz 1 Amp
FD 546-40	BURSTERS/SLITTERS/IMPRINTER 115V 50/60 Hz 3 Amps
FD 546-50	BURSTER/SLITTERS/TRACTORS 115v 50/60 Hz 3 Amps

ACCESSORIES

Anti-Tenting Bracket	395-0015
Center Slitter	FD 540-77
Power Stacker	FD 540-80
Table	FD 540-60
Static Elim. (Dual wand)	FD 540-38
Static Elim. (Single wand)	FD 540-88
14" Form Length Adapter	FD 540-14
Extra Wide Margin Slitters	FD540-40-Left FD540-42-Right
Rolling Tear Bar Assy.	395-0054

FORM SPECIFICATIONS

Variable Speed:	0-200 ft/min (0-60 m/min)
Weight:	10-125 lbs.
Length:	2 3/4"-12" (7-30.5 cm)
Width:	15 7/8" (40.3 cm)
Max Slitting:	15 7/8" (40.3 cm)
Max Nonslitting:	14 7/8" (37.8 cm)
Min Slitting:	3 1/8" after slitting (7.9 cm)
Multiple Parts:	1-4 part (100 lbs total, no copy exceeding 60 lbs tag stock.) Permanent fastening of one or both margins recommended.

DIMENSION	BURSTER	SLITTER	OVERALL
HEIGHT	10 7/8" (27.6 cm)	10 7/8" (27.6 cm)	10 7/8" (27.6 cm)
WIDTH	24" (61 cm)	21 3/4" (55.3 cm)	24" (61 cm)
LENGTH	46" (3.6 cm)	7 7/8" (136.9 cm)	53 7/8" (117 cm)
WEIGHT	90 lbs (41 kg)	15 lbs (6.8 kg)	105 lbs (7.6 kg)

INSTALLATION

UNPACKING

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

1. Remove the bands and open the outer carton,
2. Remove the four corner blocks and open the inner carton.
3. Lift out the cardboard tray which contains the Sequence Stacker and accessories.
4. The Burster can now be lifted up onto a table. Caution: The lifting should not be attempted by less than two people.

ASSEMBLY

Tools Required: Medium Phillips Screwdriver Allen Wrench (Supplied)

1. Remove the contents of the accessory box and compare them against the photograph below. (Fig. 1)

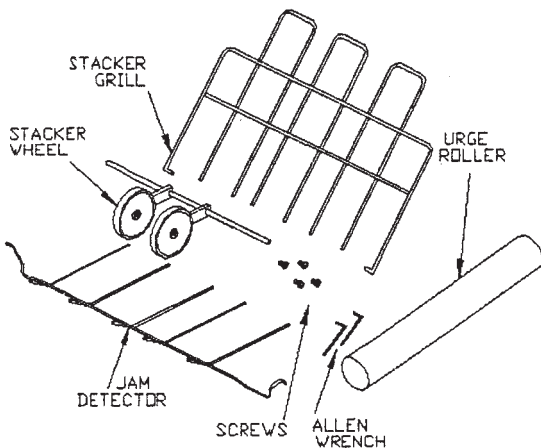


FIG 1

2. Butt the Stacker up against the Burster to mesh the drive gear. Align the holes in the Stacker Chassis with the threaded inserts in the Burster. (Fig. 2)
3. Insert all four screws (two (2) on underside of stacker tray) without tightening them. Once they are all in, tighten with a medium Phillips screwdriver. (Fig.2)

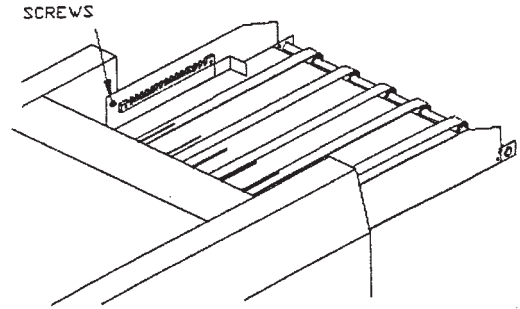


FIG 2

4. To install the Jam Detector, insert one end of it into the hole in the Burster. Then flex the piece just enough to where the other end will slip in to the hole in the other side of the Burster. The Jam Detector will now come to rest on the Jam Detection Switch and the support on the other side. (Fig. 3)

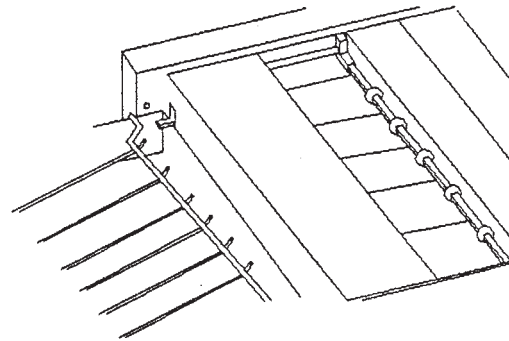


FIG 3

5. Slip the Stacker Grill into the holes. The Stacker Grill should be slanted away from the Burster. (Large forward holes) (Fig. 4)

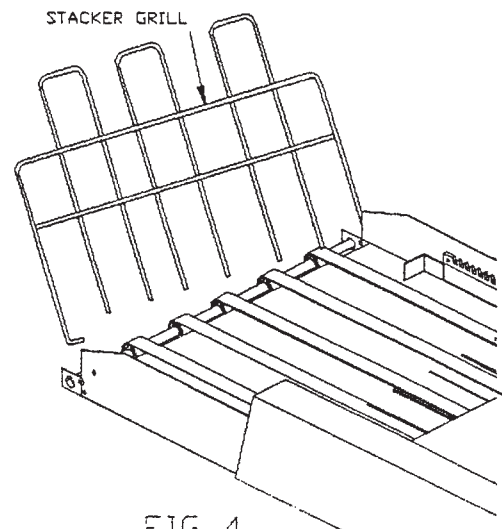


FIG 4

6. Place the stacker wheel assembly on the stacker wheel adjustment rack. (Fig. 5)

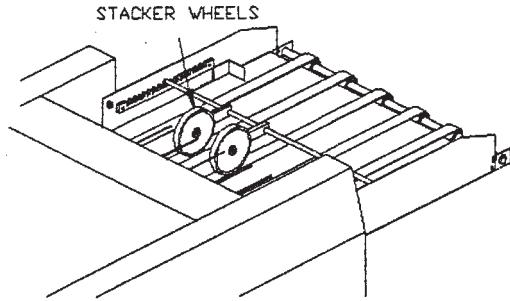


FIG 5

7. Place urge roller on stacker tray so that it rests on the stacker grill. (Fig.6)

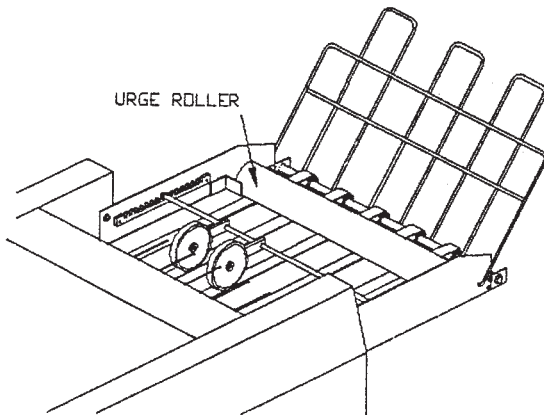


FIG 6

ASSEMBLY INSTRUCTIONS FOR INFEED BRUSH ASSEMBLY

FOR FD546-40 AND FD546-50 ONLY

Tools Required:

Medium Phillips Screwdriver

Parts Required:

- 1 - Infeed Brush Assembly
(Packed with Burster)
- 4 - 6-32 Phillips Pan Head Screws
(Packed in Accessory Box)

1. Unpack the infeed brush assembly and inspect for damage.
2. Place the infeed brush assembly, with the bar on top to the infeed end of the burster.
3. Align the holes in the infeed brush assembly with the threaded holes in the burster side frames.
4. Insert all four screws without tightening them, once they are all in, tighten them with a medium phillips screwdriver.

OPERATION

GENERAL

This section describes the controls, features, and normal operating procedures for the FD 540 Series Burster. This section also identifies and describes the control devices of the machines. Familiarity with these devices is very important in order to operate this machine properly.

SAFETY

The machine has built-in safety devices to protect the operator, but these devices do not replace good operative practices.

- Do not touch any moving parts while the machine is on.
- Keep fingers, long hair, jewelry and loose clothing away from any moving parts.
- Refer servicing to qualified personnel.

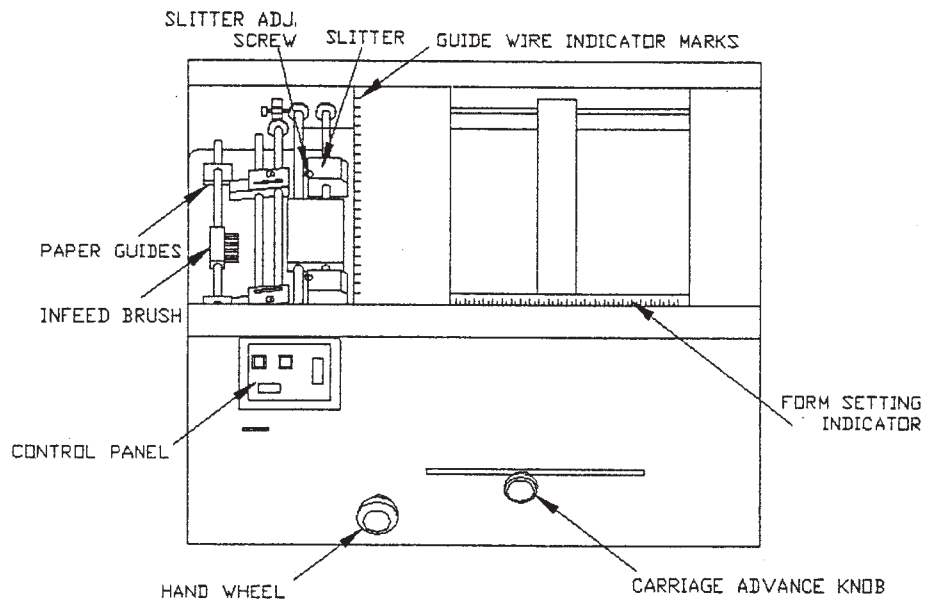


ILLUSTRATION 1

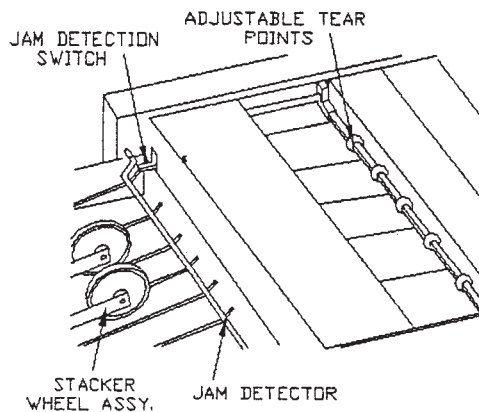


ILLUSTRATION 2

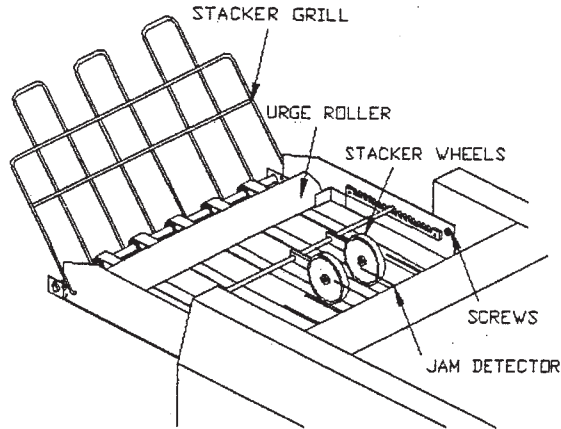
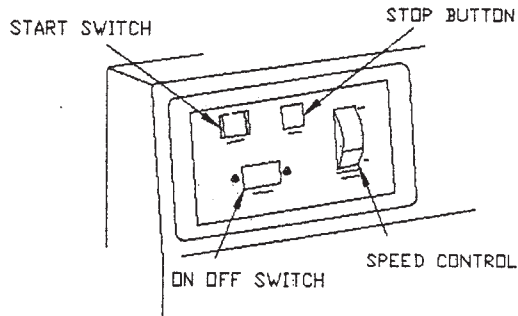


ILLUSTRATION 3



CONTROL/FEATURE	FUNCTION
On/Off Switch	Controls power to the Burster. Provides protection for the operator and the machine against accidental grounds or shorts. Indicator lights lets operator know that the power is on.
Speed Control	Varies burster speed.
Start Switch	Starts Burster.
Stop Button	Stops Burster.
Paper Guides	Restrict side to side movement of form while it is entering the burster.
Infeed Guide Brush	Holds forms in place as they are fed over Infeed Table,
Blade Indicator Marks	Indicate where Slitter Blades are positioned.
Slitter Adjustment Screws	Provide locking positioning of Slitter Boxes.
Handwheel	Enables operator positioning of form.
Carriage Adjustment Knob	Allow the operator to adjust the position of the Rollers for proper form length and bursting.

CONTROL/FEATURE

FUNCTION

Guide Wire Indicator Marks

Indicates where the Guide wires are within the machine

Form Setting Indicator

Enables the operator to quickly adjust the machine to the proper form length.

Form Length Scale

Form length can be measured in order to set the carriage adjustment.

Adjustable Tear Points

Applies pressure at the perforation to begin the burst.

Safety Cover Interlock Switch

Cuts power to the speed control when safety cover is opened. Machine will not run with the cover open.

Jam Detection Switch

Cuts power to the motor instantaneously in the event of a paper jam.

Stacker Wheel Assembly

Controls forms coming out of the Burster in the Stacker.

Stacker Wheel Form Length Scale

Form length can be measured in order to set the Stacker Wheel Assembly.

Urge Roller Assembly

Controls the vertical stacking of the forms on the Stacker Grill.

Stacker Grill

Provides a surface for the forms to vertically stack.

FORM SET-UP PROCEDURE

1. Without table, machine should be positioned on an ordinary table with the Slitter Unit overhanging the edge. This will allow the paper edge trim to be directed into any type of basket placed under the Slitter Unit.

2. Measure the form length with the form length scale on the Infeed Cover. (See top photo in Operation, General section for location of Form Length Scale.)

3. Set the machine for the length of the form by pulling Carriage Adjustment Knob outward- and rotate it so that the Alignment Mark on the Feed Roller Cover aligns with the corresponding form length of the Form Setting Indicator. Push the knob back in. (Fig. 8)

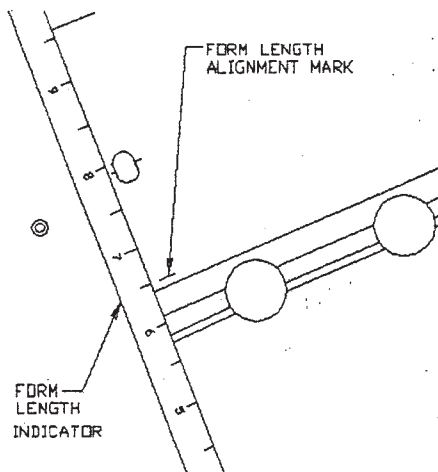


FIG 8

4. Push the paper guides apart.

5. Thread the form under the infeed rod, over the paper table and under the infeed brush.

6. Lightly press the infeed brush so that it rests lightly on the form. (Fig. 9)

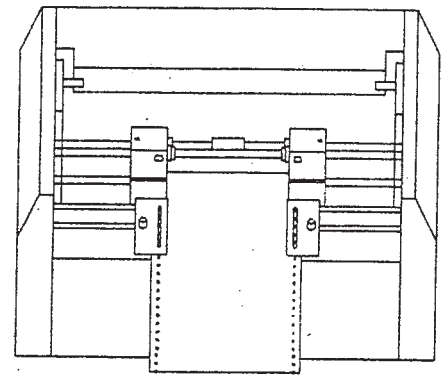


FIG 9

7. Center the leading edge of the form at the infeed end of the machine so that the outer edges of the form extend equally beyond the Guide Wires Indicators on each side. If you find that the edges come within about 1/4" of the Guide Wires, offset the form in either direction to avoid this. (Fig. 9)

8. Push the paper guides so that they are approximately 1/16" from the edge of form.

NOTE: For Models with slitters or tractors see Fig. 14.

9. Using the Handwheel, guide the form thru until the Snap Roller grabs the form. (Fig. 10)

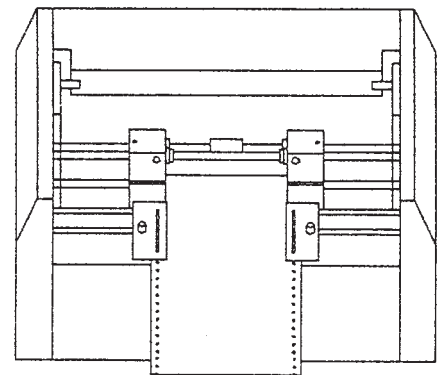


FIG 10

10. If necessary, readjust the position of the Feed Roller Carriage so that the form starts to burst when the perforation is just under the Tear Bar.

11. Close safety cover. Machine is now ready to Burst. Press start button and readjust machine speed to the fastest, yet smoothest Burst.

NOTE: The Tear Points can be moved to allow the operator to position them at any location along the Tear Bar. The Tear Points should be set between the perforations that run the length of the form. (Fig. 11) The Tear Bar height is adjustable to accommodate the characteristics of various forms. To adjust the height, the tear bar must be pushed to compress the spring and lifted out. Then rotate 180 degrees (turned over) and replace making sure that the square end of the bar locks in the brackets. Lower position is normal operation, #2313-up. (Fig. 12)

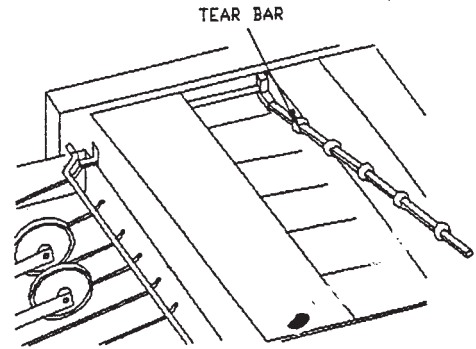
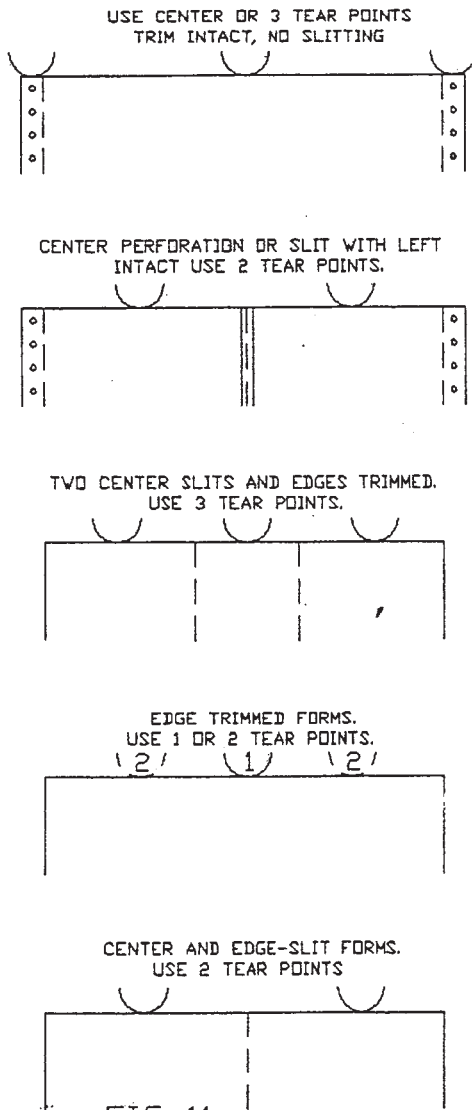


FIG 12



SET-UP PROCEDURES FOR MODELS WITH SLITTERS

FOLLOW FORM SET-UP PROCEDURES 1 THRU 9 AND PROCEED AS FOLLOWS.

1. Noting the Blade Indicator Marks on the Upper Guide table so the Edge Slitters, position each Edge Slitter in from of the corner edges of the form to trim edges as desired. (Fig. 13)

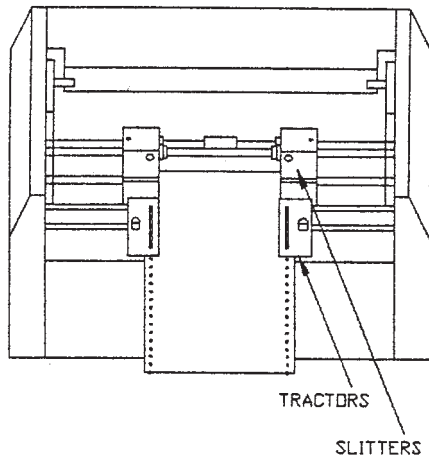


FIG 13

2. Lock the Edge Slitters in place by tightening the Thumb screws clockwise.

3. While rotating the Burster Handwheel clockwise, slowly push the form through the Edge Slitters.

NOTE: To thread paper you do not wish to slit, push the Edge Slitters apart and out of the way. To use Center Slitter, position Slitters where cut is desired, tighten thumbscrew and set screws.

4. Continue with steps 10 thru 11 in the Forms Set-Up Procedures Section.

SET-UP PROCEDURES FOR MODELS WITH SLITTERS AND TRACTORS

FOLLOW FORM SET-UP PROCEDURES 1 THRU 8 AND PROCEED AND FOLLOWS.

1. Unlock Tractors and open Tractor Gates.

2. Place the form on the Feed Pins. (Fig. 14)

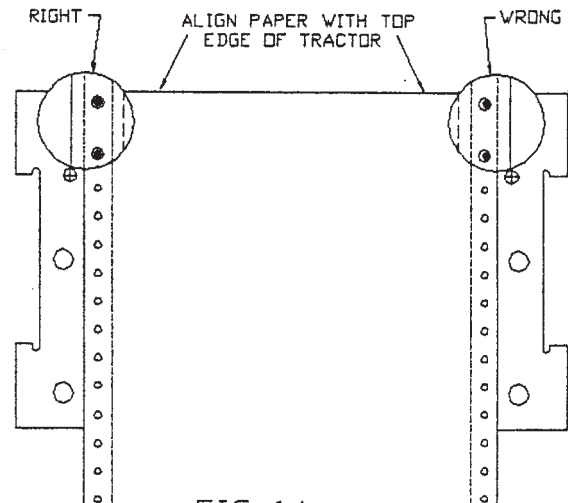


FIG 14

NOTE: Do not stretch the form too tightly between the pins; the pins should be entered in the margin holes.

3. Close Tractor Gates and lock by pushing the lever forward

4. Continue with steps 9 through 11 in the Forms Set-up Procedures section.

BURSTER WITH IMPRINTER FEATURE

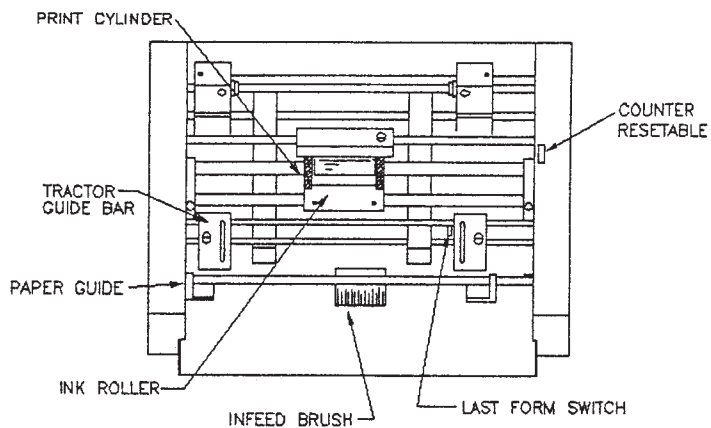


ILLUSTRATION 4

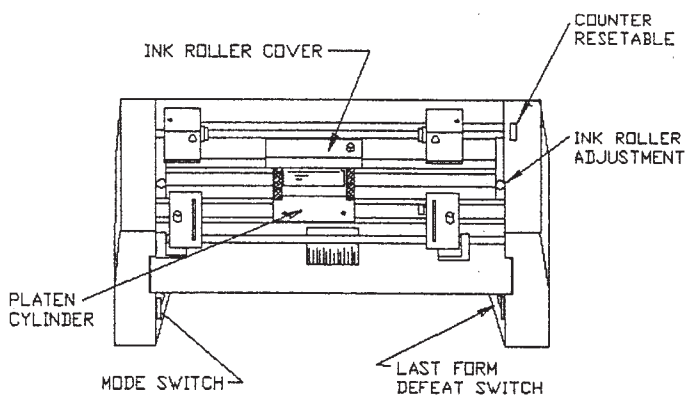


ILLUSTRATION 5

IMPRINTER, SLITTERS AND TRACTORS SET-UP PROCEDURES

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

1. Slide Paper Guides to either side of the Guide Bar.
2. Thread the form under the Guide Bar,
3. Position the Tractors to the proper form width by lifting the Levers on the side on the Tractors. Raise the Tractor Gates and sliding the tractors to the proper width. Place the form on the Feed Pins as shown in Fig. 14. Close the Tractor gates and secure their position by pushing the Locking Levers down.

NOTE: Do not stretch the form to tightly between the pins; the pins should be centered in the margin holes. Align top of first form with top of Tractor.

4. Draw a horizontal line through the desired Signature area on the last form.
5. Loosen the Setscrews on the Ink Roller (If the Setscrews are not in plain view, use the Handwheel to bring them into view). Slide the Ink Roller well away from the Signature area on the Check.
6. Loosen Setscrews on Platen Cylinder (if the Setscrews are not in plain view, use the Handwheel to bring them into plain view). Horizontally align the Platen Cylinder with the Signature area on the Check. Tighten Set Screws. (Fig. 15)

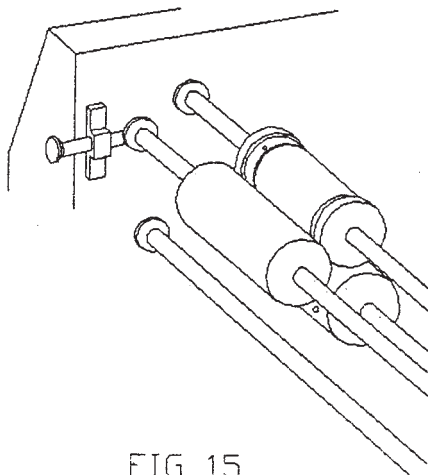


FIG 15

7. Loosen Setscrews in Imprint Cylinder (if the Setscrews are not in plain view, use the Handwheel to bring them into plain view).

8. Install the Signature Saddle into Print Cylinder by rotating the Knurled Sleeve until both cutouts are aligned with the pins. Drop in Signature Saddle and rotate Sleeve to lock position. Slide Print Cylinder to Signature area. (Fig. 16)

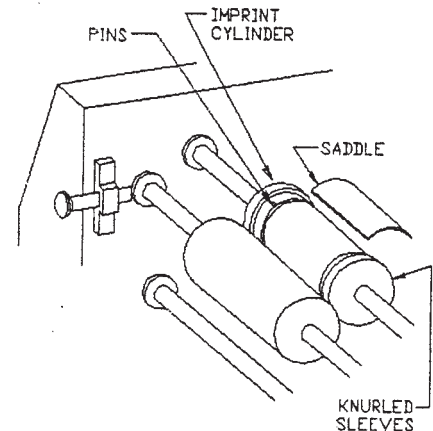


FIG 16

NOTE: If using 3 1/2"; Check use two (2) Saddles, If using 7" Check use one (1) Saddle.

9. With the Print Cylinder Setscrews toward you; using the Handwheel, align the Signature Saddle with the horizontal line on the Check. (Fig. 17). Tighten Setscrews.

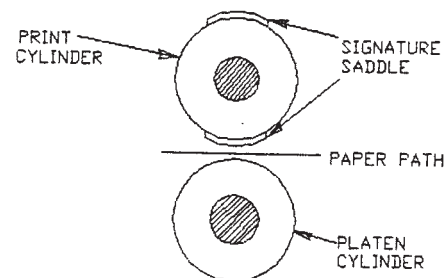


FIG 17

10. Turn Handwheel until Signature is printed on second check.

11. Located at the right end of the Imprint Cylinder shaft is the timing collar. Loosen setscrew and align timing mark on Collar with arrow on right side of machine. This will be your timing mark.

12. Position Ink Roller in front of Signature Saddle and tighten set screws.

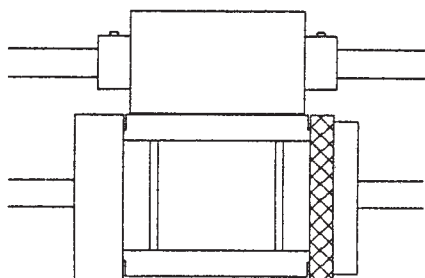


FIG 18

13. Adjust the tension of the Ink Roller so that it lightly touches Signature Saddle, by rotating Ink Roller Adjustment Thumbscrews uniformly. (Fig. 19)

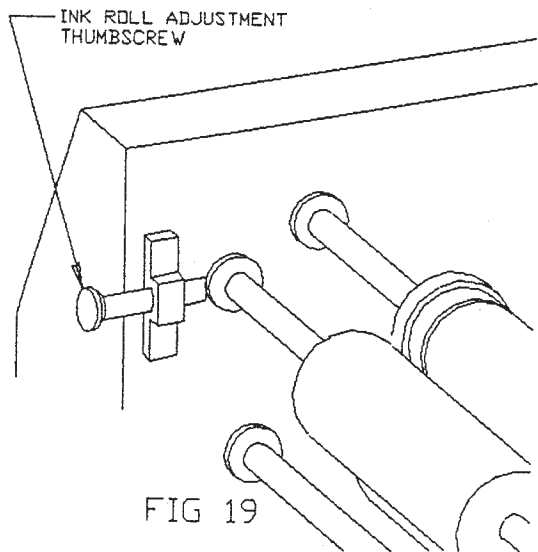


FIG 19

14. To load checks after burster has been set up;

A. With handwheel, turn forward until timing mark of collar (step 11) aligns with arrow on side of machine.

B. Place forms on tractors so leading edge is at top of tractors.

C., Rotate forms forward until they enter into the burster, set speed and turn on.

OPERATING HINTS

1. Some paper has a natural curve. Sometimes this curve tends to catch air and sail. If this occurs try running them upside down.

2. Perforations vary in strength. If the forms are bursting hard, tearing or breaking behind the tear bar, vary the Carriage Adjusting Knob setting up to 1/2" ahead or behind the actual form size setting.

3. Multiple part forms with hard-glued edge can be burst by positioning the tear point over the glued edge.

4. The Stacker Wheels should not stop the form until it clears the Snap Rollers.

5. Carbonized forms will generally stack better when ran with the coated side up.

7" FORMS IMPRINTING SET-UP

1. 7" Forms Imprinting Set Up is the same as for 3-1/2" forms, except that one saddle is used instead of two.

2. Set the form length adjustment to "7" w/imprint".

3. Reposition the tear bar to the "7" w/imprint setting".

4. To assure that the Burster rollers are timed, rotate the forms advance handwheel until the "timing marks" appear simultaneously through the slots in each roller cover. (See Fig. 20).

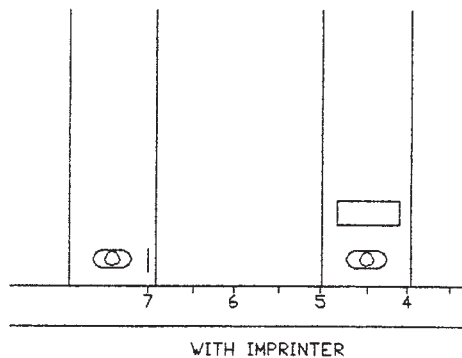


FIG 20

TROUBLESHOOTING

Feeding, Bursting, and Stacking problems are usually due to improper adjustment of the machine to the forms or due to non-standard or defective forms. Refer to the table below for typical problems.

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

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

SYMPTOM	PROBABLE CAUSE
Burster will not run.	Line plug loose or pulled out' Last Form Switch Activated. (No Forms in Tractors). Switch off. Safety cover not completely closed. Jam detector not activating Jam Detection Switch.
Forms creep to one side.	Infeed guides not set properly. Tension not uniform across the roller. Edge of form not under roller.
Burster stalls tears forms.	Tear point too high Burster not running fast enough. Feed Roller carriage not positioned properly. Tough Form perforations.
Improper Stacking	Stacker wheels too close to outfeed of Burster. Stacker wheels too far away from outfeed of Burster. Wheels not directly over belts. Wheels not spinning freely. Edge of form not under roller. Stacker Grill not properly adjusted.
Poor Slitting	Slitter Blades improperly adjusted. Worn Blades.
Edge Slitters difficult to slide.	Foreign material on Shafts (dirt, dust, grease). Burrs, marks on Shafts. Material buildup in Slitter Hubs.
Stacker does not run but Burster does.	Loose setscrew Broken belt.
Rollers do not rotate while motor is running.	Broken Drive belt. Loose Setscrews; on sprocket. Broken chain.
Feed Roller Carriage will not advance.	Loose Setscrew on Handwheel. Obstruction on rack. Pin missing to drive gear.
Not Bursting properly	Carriage not properly positioned. Incorrect roller tension.

SYMPTOM

PROBABLE CAUSE

Large variation in trim accuracy.

Upper/Lower Side Guides too loose/tight.
Paper pack not centered to Slitter
Infeed. Brush Tension too tight.

Form pull out to tractors.

Incorrect Burster roller timing.
Incorrect Tear Bar setting.
Insufficient Feed roller tension.

Uneven Inking.

Ink Roll not adjusted uniformly.
Ink Roll dried up, or not turning freely.
Signature patch worn or installed improperly.

Uneven Signature Position.

Forms not in Tractors.
Print Cylinder timing incorrect.
Incorrect form size,
Signature patch position(s) incorrect.
Check roller timing-imprint position.
Set infeed tension higher.
Clean rollers.

Incorrect Counting.

Code Mode Switch in wrong position.
Counter not cleared to zero.

