

FORMAX[®]

670 Series
Bursters

OPERATOR MANUAL
SECOND EDITION

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DESCRIPTION

FUNCTION

BURSTER

Moore 676/680 Burster bursts (breaks apart) single and multi-part continuous forms and feeds them sequentially onto the stacker.

SEQUENCE STACKER

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

SLITTER/TRIM CHOPPER

Slitter/trim chopper operates like the slitter unit but also chops trim into short pieces, 4 to 5 inches long. The advantage in using the trim chopper is that it compacts trim in the wastebasket.

MODEL NUMBERS

FD 676 Burster/Tractor Feed/Slitters/Base
FD 680 Burster/Imprinter/Tractor Feed/Slitters/
Base

OPTIONAL ACCESSORIES

FD680-06	Imprint Module (8")	FD680-07	Imprint Module (8-1/2")
FD630-22	Tri-Color Ink Roller	FD680-08	Imprint Module (10")
FD630-31	Violet Ink Roller	FD680-09	Imprint Module (11")
FD630-32	Green Ink Roller	FD680-10	Imprint Module (12")
FD630-33	Red Ink Roller	FD680-11	Imprint Module (14")
FD670-10	Power on-off Key Lock	FD680-14	Imprint Module (10-1/2")
FD670-18	Last Form Switch	FD680-15	Imprint Module (7-1/4")
FD670-19	Last Form Timed Out	FD680-21	Signature Saddle (6")
FD670-24	Photo Cell Counter	FD680-22	Signature Saddle (6-1/2")
FD670-40	Extra Wide Slitter L.	FD680-23	Signature Saddle (6-2/3")
FD670-42	Extra Wide Slitter R.	FD680-24	Signature Saddle (7")
FD670-44	Vertical Folder	FD680-25	Signature Saddle (7-11/32")
FD670-70	Margin Trim Chopper	FD680-26	Signature Saddle (8")
FD670-77	Center Slitter	FD680-27	Signature Saddle (8-1/2")
FD670-80	Power Slacker (17")	FD680-28	Signature Saddle (10")
FD670-87	Stacker Control Wheel Assy.	FD680-29	Signature Saddle (11")
FD670-88	Infeed Static Eliminator	FD680-30	Signature Saddle (12")
FD680-01	Imprint Module (6")	FD680-31	Signature Saddle (14")
FD680-02	Imprint Module (6-1/2")		
FD680-03	Imprint Module (6-2/3")		
FD680-04	Imprint Module (7")		
FD680-05	Imprint Module (7-1/3")		

SLITTER

Slitter enables the operator to remove trim at same speed forms are being burst.

IMPRINTER

Imprinter unit enables operator to print signatures at same speed forms are being burst.

POWER DROP STACKER

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, presettable, shutoff.

BURSTER TABLE

Burster table has casters which allows freedom of movement. Enclosed in the table is a wastebasket to catch trim while slitting.

CENTER SLITTER

Makes a mid-form cut in forms as they are burst.

SPECIFICATIONS

FORM SPECIFICATIONS

Variable Speed	30-500 ft/mm (4.6-154 m/mm)
Capacity	1-8 pan forms
Maximum Depth	17 inches (43 cm)
Minimum depth	2 3/4 inches (7cm)
Maximum Width Before Slitting	19 1/4 inches (49cm)
Maximum Width After Slitting	17 inches (43cm)
Form Types	Carbon or Carbonless
Form Weights	10 lb. to 140 lb.

Size-Model	FD 676/680
Height	43"(109cm)
Width	31 "(79cm)
Length	56" to 68 1/4"
Actual	142cm to 173cm
Weight	330 lbs(149kg)

INSTALLATION

UNPACKING AND SET-UP

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

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. Hint: 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. Add burster feet to burster. (Fig. 1)
 7. Remove burster table from its carton.
NOTE: Location of holes on top of table.
 8. Set burster on table, lining up holes in table with holes in burster frame. (Fig.2)
- NOTE: Burster will line up evenly on all sides of the table.

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

9. Add 1/4-20 x 1 1/2 locating screws, (included), to underside of table, screwing up into burster frame.

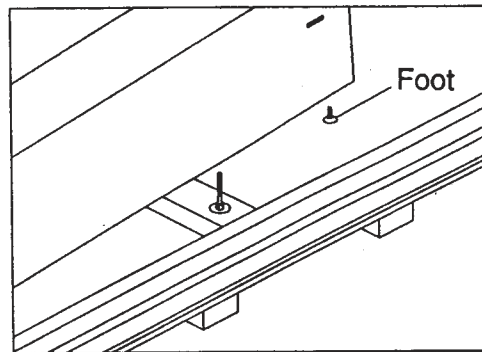


Fig. 1

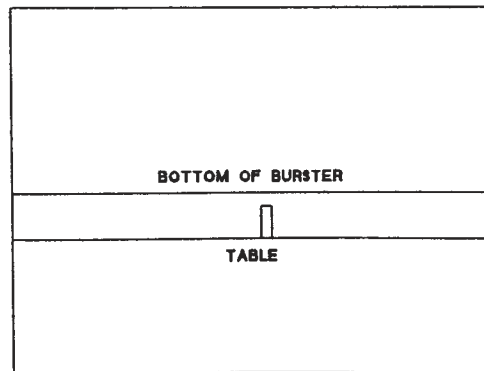


Fig 2

OPERATION

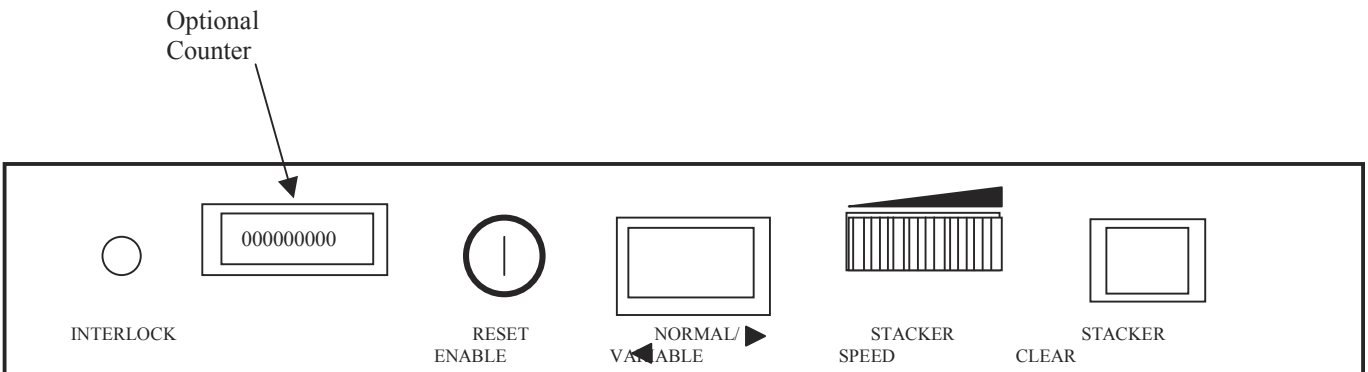
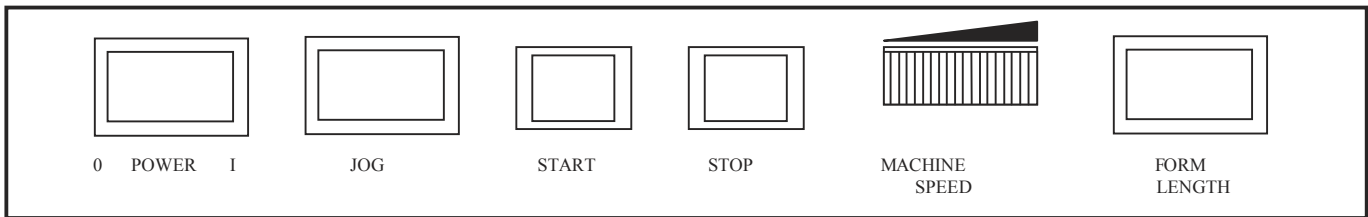
GENERAL

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

SAFETY

This section describes built-in safety devices to protect operator, but these devices do not replace good operator practices.

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



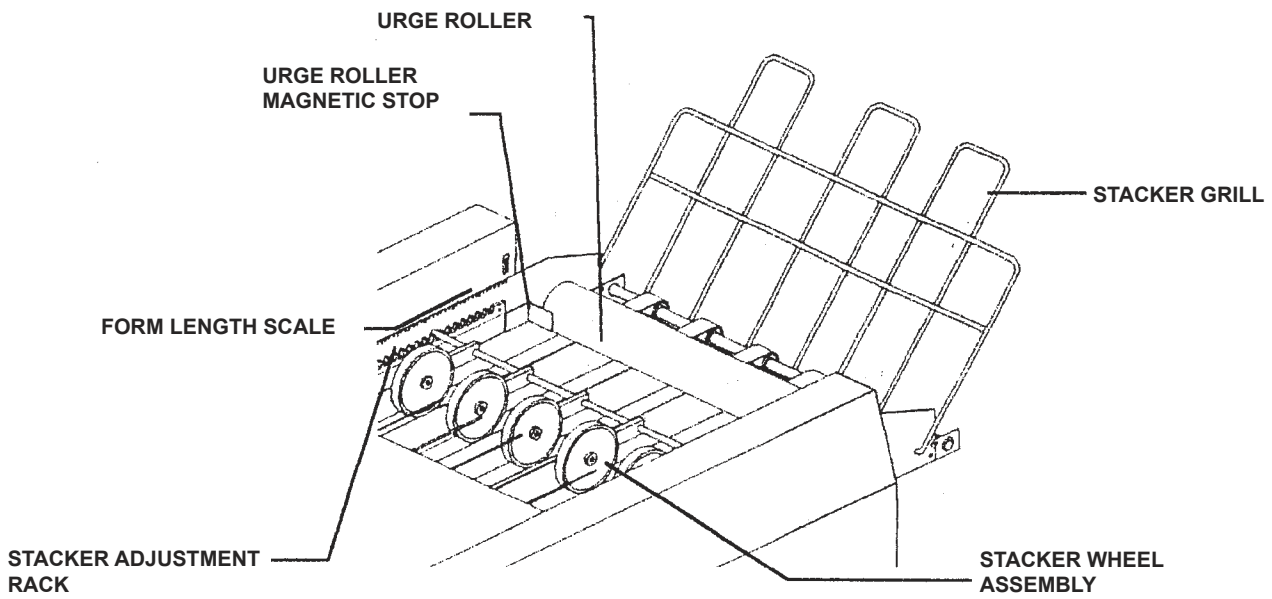
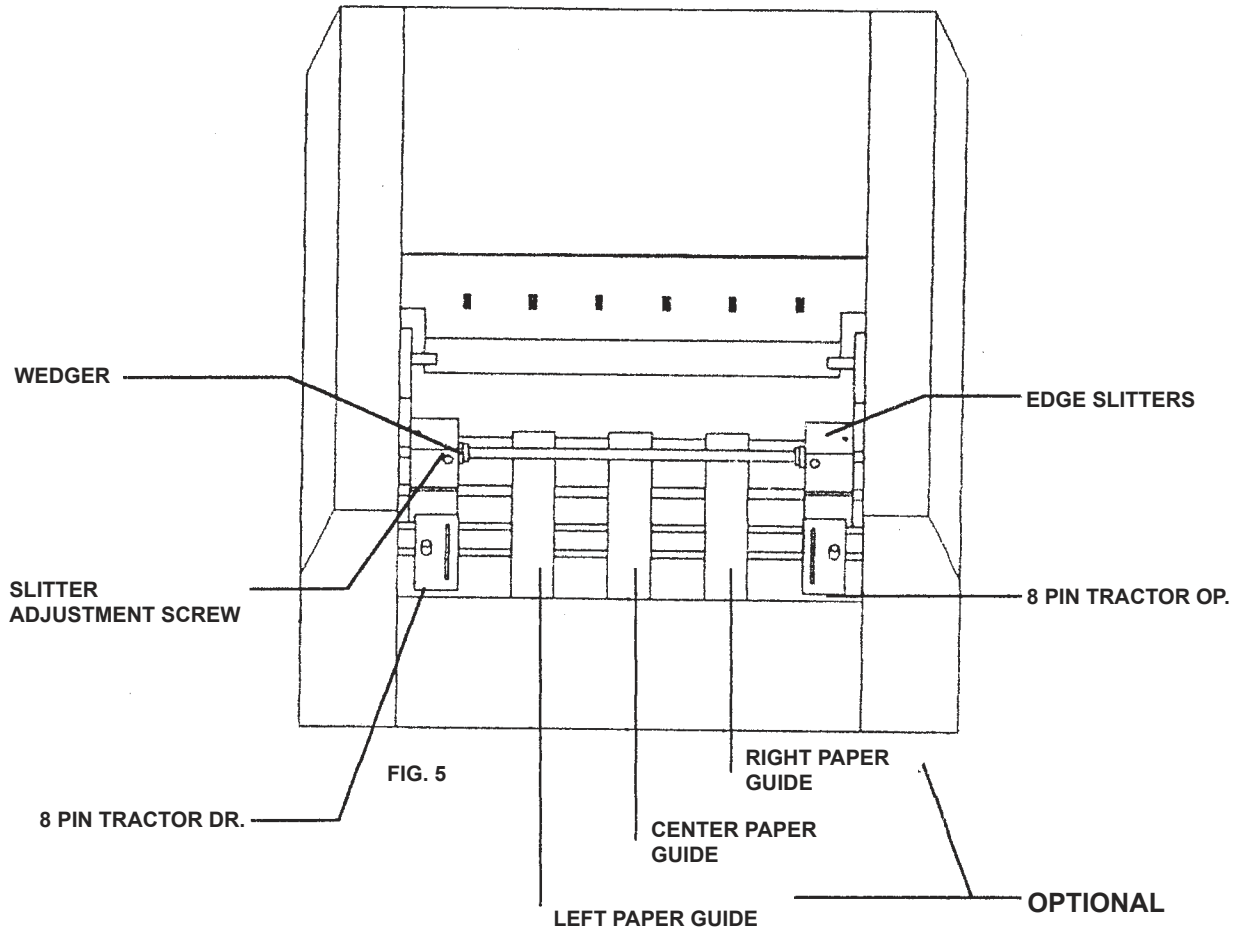


FIG. 6

CONTROLS AND FEATURES

Refer to Figures on previous page for locations of controls and indicators below.

CONTROL / FEATURE

FUNCTION

On/Off Switch	Controls power to Burster. Indicator light lets operator know that power is on.
Start Button	Starts Burster
Stop Button	Stops Burster
Machine Speed Thumb Wheel	Varies Burster Speed
Paper Guides	Prevents side to side movement of form while it is entering Burster during friction feeding.
Jog Switch	Enables operator to advance or retract forms during initial loading.
Interlock Light	Lets operator know that jam has occurred at outfeed end of Burster or that safety covers are not properly closed.
Stacker Clear Button	Clears Stacker at a fast speed.
Stacker Speed Thumb Wheel	Varies Stacker speed in variable position.
Stacker Switch	Sets mode of Stacker, either normal or variable.
Stacker Wheel Indicator	Aids the operator in setting Stacker wheels for proper form length.
Urge Roller	Assists vertical stacking of forms on Stacker grill.
Stacker Grill	Provides a surface for forms to vertically stack.
Jam Detector Grill	Guides forms onto stacker belts. In event of a jam, it activates jam detection switch.
Stacker Wheel Assembly	Guides forms out of Burster onto stacker belts. Keeps forms properly aligned.
Stacker Adjustment Rack	Holds stacker wheel assembly and enables stacker wheel assembly to be adjusted.
Form Length Scale	Indicator mark to set form length.
Form Length Switch	To set form length.
Last Form Switch (Optional)	Shuts Machine off after last form leaves the tractor.
Last Form Defeat Switch	Defeats last form switch option,(located on the side frame just above the right side tractor).

FORM SET-UP PROCEDURE WITH AND WITHOUT TRACTORS

1. Turn on machine. Measure form length using form length scale on sequence stacker. (Fig. 6)
- 2- Press form length switch to align alignment mark with form length on form length scale. (Fig. 4)
3. Place form stack on pull down tray on front of table.
4. If friction feeding use left, right and center paper guides. If feeding with tractors, use center paper guide only. (Fig. 7)

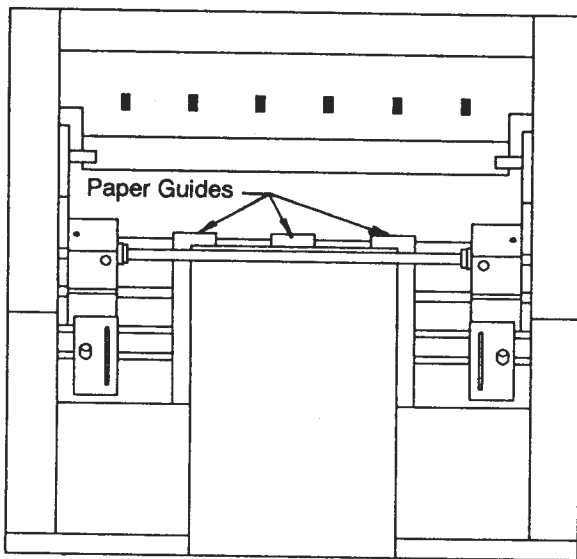


Fig. 7

5. Center leading edge of form at i nfeed end of machine so that outer edges of form extend equally beyond guide straps on each side. If you find that the edges come within 1/4" of the guide straps, offset form in either direction to avoid this condition. (Fig. 5)

NOTE: For friction feeding omit steps 6-10.

6. Position tractors to proper form width by releasing thumbscrews on top of tractors and sliding tractors to proper width. Raise tractor gates
7. Lay margin holes of form over feed pins. (Fig. 8)

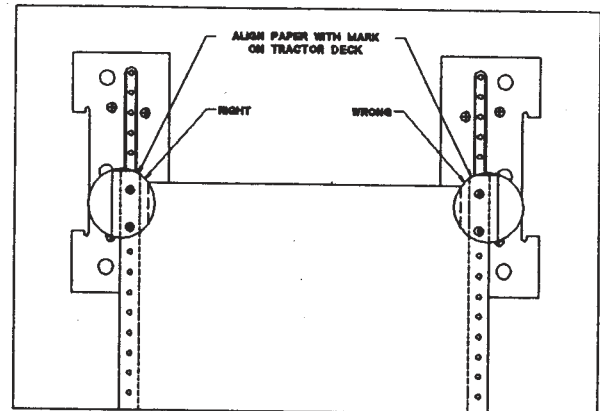


Fig. 8

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

8. Close tractor gates and lock tractors by tightening thumbscrews.
 9. If using edge slitters, position alignment mark where you wish to slit. (Fig. 5)
 10. If slitting, be sure that slitter blades are engaged. This is accomplished by rotating wedge in a counterclockwise direction as far as they will go without force. (Fig. 5)
 11. Lock edge slitters in place by tightening thumbscrews clockwise. (Fig. 5)
- NOTE: If you do not want to slit, push edge slitters away from form and tighten thumbscrews.
12. By pressing jog switch in forward position, advance form through feed rollers until snap rollers grab the form.
 13. 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 the length of the form. (Fig. 10)

14. 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 replaced making sure that square end of bar locks into brackets. (Fig. 9, shown in HIGH position)

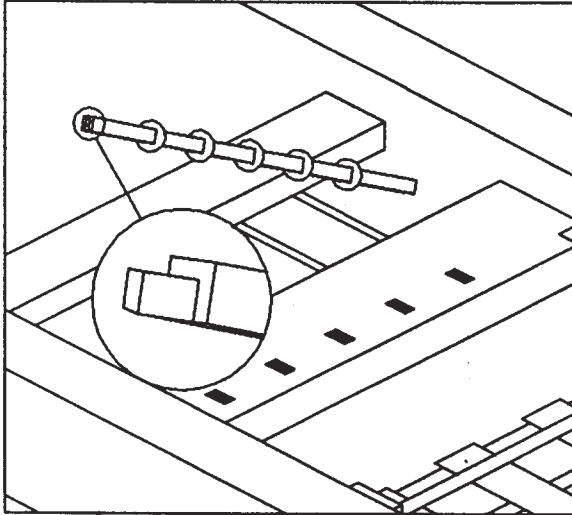


Fig. 9

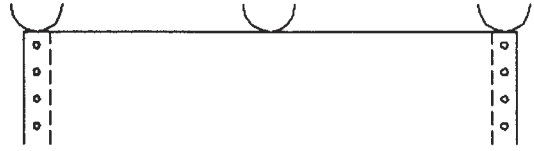
15. Set stacker wheel assembly so that stacker wheels come to rest on proper form length indicated on sequence stacker. (Fig. 6)

NOTE: When running forms at high speed, move stacker wheels one notch further toward stacker grill on stacker wheel adjustment rack. This will avoid jams at jam grill.

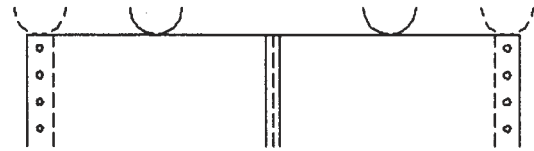
16. Jog first form into sequence stacker to make sure that sequence stacker wheels are just ahead of leading edge of form.

17. Close safety covers. Machine is now ready to burst. Press start button and adjust machine to desired speed.

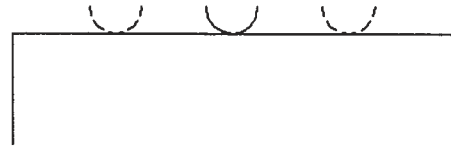
Use center or 3 tear points. Trim intact. No slitting.



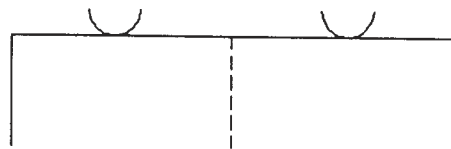
Center perforation or slit with trim left intact. Use 2 or 4 tear points.



Edge trimmed forms. Use 1 or 2 tear points.



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



Two center slits and edges trimmed. Use 3 tear points.

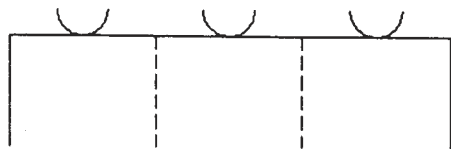


Fig. 10

IMPRINTER MODULE

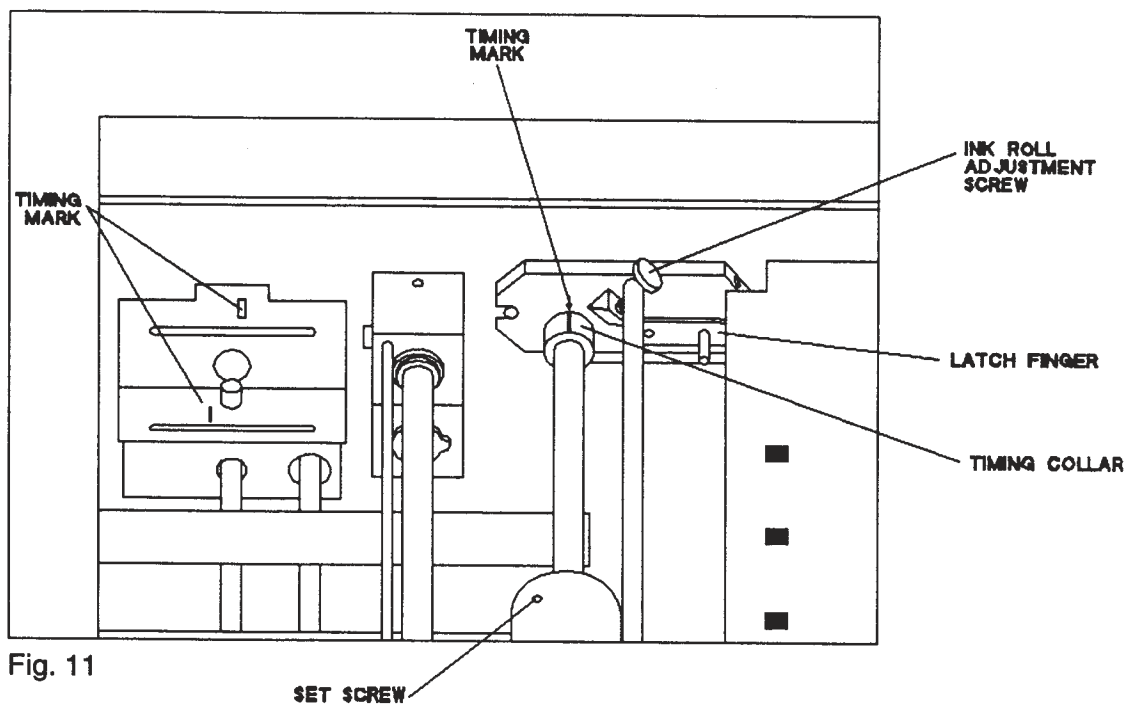


Fig. 11

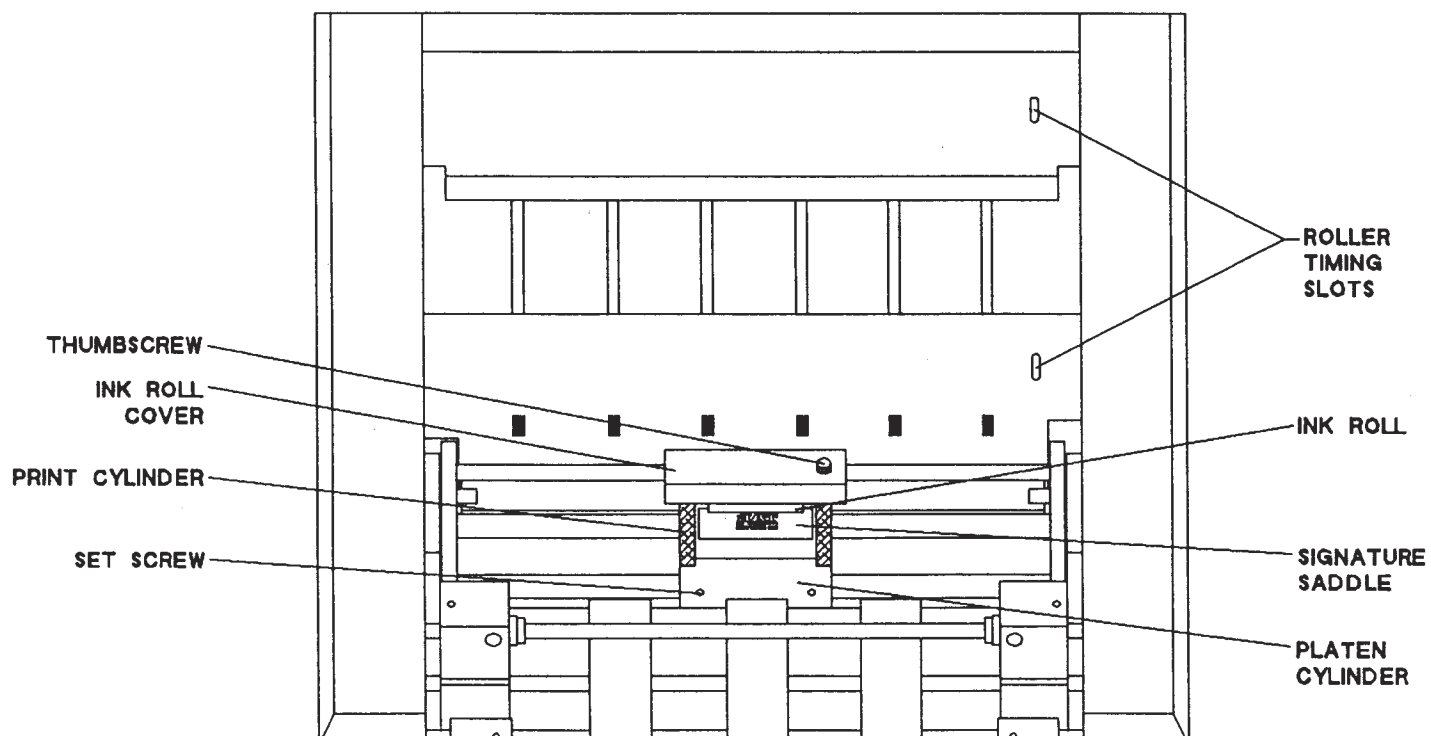


Fig. 12

FORM SET-UP PROCEDURES WITH 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. 8). Close tractor gates and secure in position.

4. Loosen thumbscrews on ink roller unit and slide unit away from signature area on form. (Fig. 12)

5. Loosen setscrew 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. (Fig. 12)

6. Loosen setscrews on imprint cylinder. (if setscrews are not in view, use jog switch to bring them into view. Fig. 11)

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. (Fig. 11)

10. Move timing collar so that mark on collar aligns with mark on side frame. Tighten setscrews. (Fig. 11)

11. Remove forms from tractors. Install signature patches on imprint cylinder. (Fig. 12)

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. (Fig. 19)

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. (Fig. 11)

11. 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. (Fig. 11)

2. Place forms to leading edge of plastic tractors. On metal tractors place forms 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 slit 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. 9)

7. Set up Stacker Wheel Assembly as before. (Fig. 6)

8. Jog first form into Sequence Stacker to make sure that stacker wheels are just ahead of leading edge of form. Put urge roller in place.

9. Close Safety covers. Machine is now ready to burst and imprint. Press start Button and adjust machine speed to speed desired.

OPERATING HINTS

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 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.

5. Multiple part forms with hard glued edging can be burst by positioning tear bar over glued edge.

6. Stacker wheel should not stop the form until form clears snap rollers.

7. Carbonized forms will generally stack better when run with coated side up.

TROUBLESHOOTING

Feeding, bursting, and stacking problems are usually due to improper adjustment of machine to forms of 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.

SYMPTOM

Burster will not run. Power light on.

PROBLEM CAUSE

Safety cover not closed.
Jam detection grill not activating switch.
Last form switch activated (no forms in tractors).
Faulty interlock switch.
Faulty run switch.
Faulty stop switch.
Faulty last form switch.
Faulty jam detection switch.
Faulty cover switch.
Faulty brake resistor.
Faulty speed control.
Faulty motor brush(s) (worn out or stuck).
Faulty motor.
Loose wire.
Faulty mechanical crimp on quick disconnect.
Faulty power-on/power-off key lock.

Burster will not run. No power light

Line plug loose or pulled out.
Blown fuse.
Defective power cord.
No line voltage.
Defective on-off switch.

Forms creep to one side.

Infeed guides not set properly.
Roller tension not uniform across roller.

Burster stalls or tears forms.

Tear bar in high position.
Burster not running fast enough.
Incorrect form length setting.
Tear points not adjusted properly across face of form.
Tough form perforations.

Improper stacking.

Stacker wheels positioned to close or to far from.
Outfeed.
Stacker wheels not directly over belts.
Stacker wheels binding on axle.
Edge of form not under roller.
Stacker grill not adjusted property.
Static.
Sequence stacker at wrong speed. In variable.
Sequence stacker not running.

Poor slitting.

Slitter blades not making contact with one another.
Worn blades.

Edge slitters difficult to slide.

Foreign material on shaft.
Burr on shaft.
Blade Slitter Assy. dirty.

Poor cuts on trim chopper.

Roller tension not correctly set.
Worn blade.

SYMPTOM

Stacker does not run but Burster does.

Rollers don't rotate/machine runs.

Won't burst properly.

Forms pull out of tractors.

Uneven inking.

Signature position moves.

Large variations in trim accuracy.

Snap roller carriage will NOT move.

Loop forming between the slitter and the infeed roller.

PROBABLE CAUSE

Broken belt
Loose stacker drive gear/tbroken drive pin.
Faulty stacker motor.
Faulty stacker motor speed control
Faulty stacker switch.

Broken drive belt, Loose pulley.

Incorrect roller tension.
Carriage not properly positioned.
Tear point not set correctly.
Tear bar not set correctly.

Roller timing off.
Incorrect form length setting.
Incorrect feed roller tension.
Tractor drive pulley bound up.
Tractors binding internally.
Tractor pins not centered in margin holes.
Dull slitter blades.
Tractor timing is off.

Ink roller not adjusted properly.
Ink roller needs replacing.
Signature patch not installed properly.
Patch worn out.
Ink roll not spinning freely.

Incorrect check length for print cylinder.
Form not in tractors.
Print cylinder loose.
Print cylinder timing incorrect.
Signature patch not positioned correctly.

Paper not centered to slitter feed.
Margin slitter setscrew not tightened down.

Defective switch or motor.
Broken carriage drive chain.
Loose setscrew on carriage advance shaft or on motor.
Obstruction on rack.
Obstruction at the pivot arm.

Obstruction between the infeed and snap rollers.
Broken flow strap.
Bent infeed finger.
Tear bar in low position.
Too many tear points.
Need Anti-tenting bracket.

VERTICAL FOLDER SET-UP

FUNCTION

Vertical folder provides means for folding two-wide forms side-to-side prior to their entry into burster.

SET-UP PROCEDURE

1. Place forms on floor at infeed end of burster.
2. Thread forms through folding bale. (Fig. 13) If you are going to imprint, arrange forms so that side to be imprinted is facing down.
3. Folding bale should line up with infeed guides so edge of the form is in a straight line. (Fig. 13)
4. Position the infeed brush to the side of the forms opposite tractor being used. (Fig. 13)
5. Center perforation of forms in a straight line from floor to infeed brush.

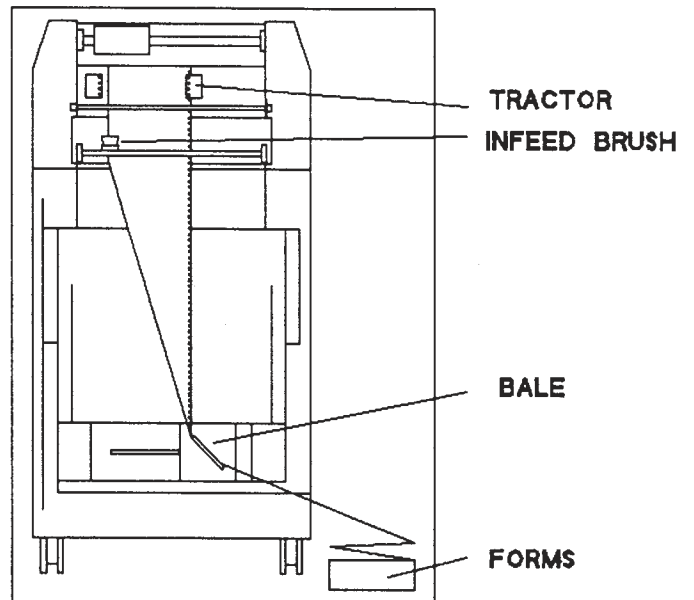


Fig. 13

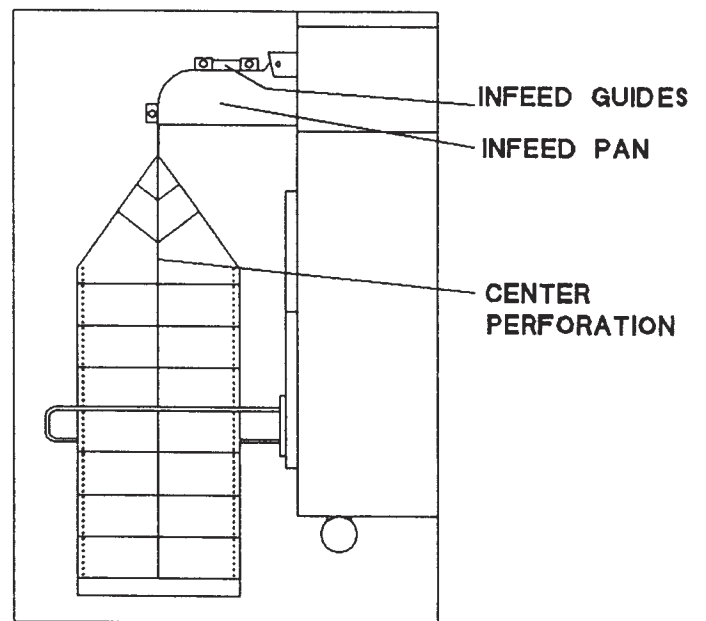


Fig. 14

MERGER-BURSTER SET-UP

FUNCTION

FD589 Merger/Burster
Center slits continuous forms and allows forms to be merged into burster for slitting, imprinting, bursting and stacking.

SET-UP PROCEDURE

1. Set forms in tractor. (see page 6, Fig. 8)
2. Adjust center slitter to the middle of the forms. (Fig. 15)
3. Jog forward and guide forms through paper guides to second set of tractors. Allowing forms to merge together. (Fig. 16)
4. Adjust slitters to location that forms are to be trimmed and proceed with form set-up procedure starting on page 6.

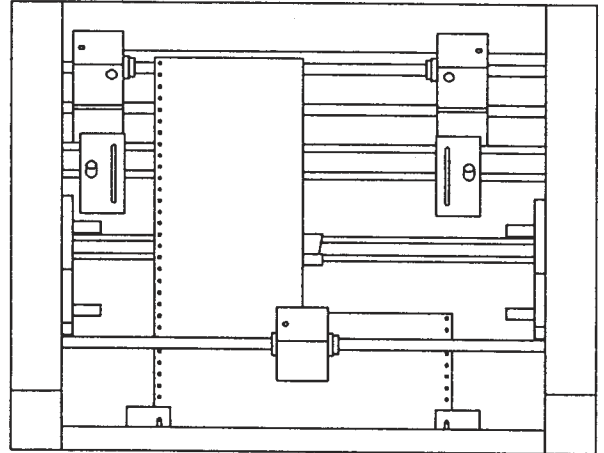


Fig. 15

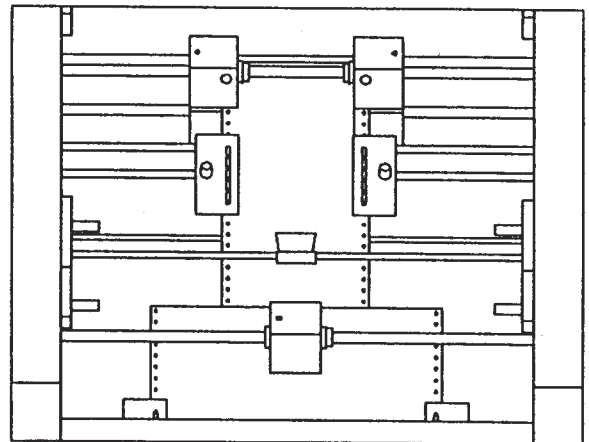


Fig. 16

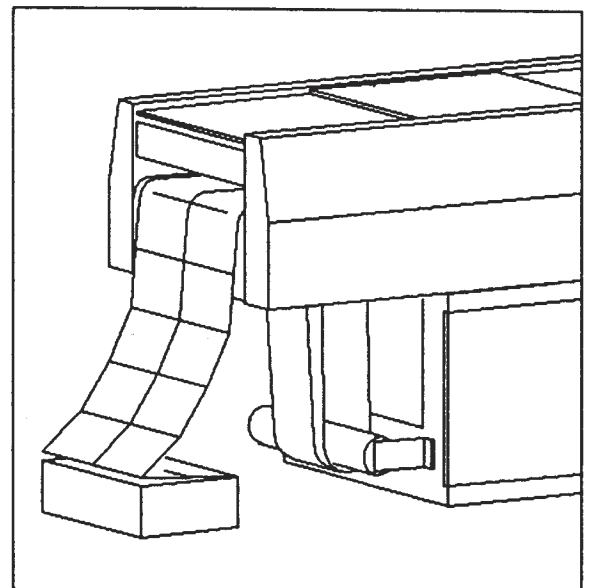


Fig. 17