

ATLAS FOLDER PRESSMAN'S MANUAL

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WebPress
Revolutionary™

parts@webpressllc.com

Phone: (253) 620-4747 | www.webpressllc.com | Fax: (253) 722-0378

P. O. Box 2274 | Tacoma, WA | 98401
701 East "D" Street | Tacoma, WA | 98421

Note: Improvements in design and manufacture are incorporated as soon as experience demonstrates their value; all illustrations and procedures may not apply to all presses.

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Safety

It is essential that this section be read, understood and reviewed by every person who will be in the pressroom while the press is operating.

Safety Instructions

Stand clear when warning bell sounds.

Do not operate or assist unless you are trained and authorized.

All guards must be kept in proper position.

All safety devices must be kept in proper position.

All Safety devices must be operational.

Put controls on “SAFE” to clean, lubricate, or adjust.

Cut main power before doing any electrical maintenance.

PRESSROOM SAFETY GUIDELINES

General

Operation of printing or rotating equipment of any nature can present hazards to the operator and to others in the area of the operating equipment.

Hazards can be decreased by proper training, proper operating practices, staying alert at all times and paying strict attention to what is happening on the equipment and to what others in the area are doing.

Specific safety reminders for operating the equipment are given below and throughout the contents of this manual. These reminders supplement any oral or written instructions which the equipment operator may have received prior to operating or servicing the equipment.

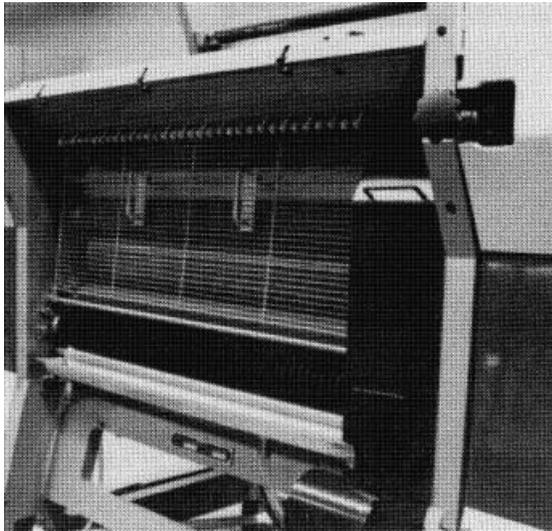
We strongly suggest that these safety reminders be part of your daily routine during operation of the equipment and that they be reviewed periodically, especially with new personal.

It is not only the management of the firm but also you yourself who holds the responsibility to maintain a regular program of safety checks and instructions.

The safety program should be especially concerned with equipment operating practices and specifically designed to minimize hazards of injury to personnel and of damage to the equipment.

Safety Devices

1. Use the **RED STOP /SAFE** push button to stop the press as quickly as possible in the event of direct or potential hazard to personnel, broken equipment on the press, web break, or other unusual or threatening circumstances. When the **RED STOP /SAFE** push button is pushed in, the press is in “**Safe**” condition and cannot be started until the **RED STOP / SAFE** push button is pulled out.
2. **ALWAYS put the press on SAFE when making adjustments or doing maintenance work. Always disconnect the main power switch before doing any electrical maintenance work.** The **RED STOP / SAFE** push button should always be pushed **IN** at the folder push button station and the push button station closest to the area where the network is being done, even though a **SAFE** may already be **IN** at another area. **ALWAYS disengage** the unit clutch when working around rollers, cylinders, gears, and other mechanisms which can be rotated.
3. Do **NOT** bypass built-in safety devices and interlocks. All safety devices, whether mechanical or electrical should be functioning at all times. Check these devices periodically.



4. **DO NOT** open guards and covers when machinery is operating. **DO NOT** operate machinery if guards or covers have been removed or are open.

Press

1. **DO NOT** touch any moving part of the press. Make sure press is stopped and on **SAFE** and the appropriate clutch is **disengaged** before touching any operating part.
2. **DO NOT** oil or grease machinery when in operation.
3. Stand clear of the press when you hear the **RUN** bell; be sure others are also clear of the machinery.
4. In a twin-press room be sure to stand clear of either press when warning bell or buzzer sounds.

5. Clean up paper dust, spilled ink, oil or grease, and other wastes which may accumulate on or around the press.
6. **DO NOT** leave tools, cloths, oil cans, grease guns or other materials in the aisles, on press frames, housings, or platforms.
7. Keep steps and platforms free of tools, dust, ink, and grease to assure safe footing. **DO NOT** place papers or roll headers on platforms.

Rollstand

1. **DO NOT** use hoist unless trained in safe operation.
2. **DO NOT** operate if all guards are not in place and functional.
3. **DO NOT** lift roll unless it is centered and balanced beneath the yoke.
4. When lifting one roll over another, be sure to lift high enough to completely clear the lower roll.
5. Keep hands clear of rollshaft when maneuvering into place on the rollstand.
6. Insure shaft is properly seated on its supporting rollers at both ends before fully lowering hoist. If either end of the rollshaft hangs up and then drops, personal injury and machine damage can occur.

Unit

1. Remove all tools immediately after they have been used, and before starting the press.
2. Do **NOT** operate if all guards are not in place and functional.
3. Avoid standing in the aisles between units while the press is running.
4. Do **NOT** attempt to clean blankets or to clean cylinders while the press is moving.
5. Do **NOT** attempt to wipe inking rollers or drums while the press is moving. Use sponges rather than rags to avoid the chance of damage or catching a finger. Roller nips can pinch severely even when the unit is rotated manually.
6. Do **NOT** attempt to oil or grease levers, cams, gears, shafts, bearings, or mechanisms while the press is moving.

Folder

1. Remove all tools and loose parts after maintenance procedures have been completed.
2. Do **NOT** operate if all guards are not in place and functional.
3. Do **NOT** attempt to lubricate while the press is operating.
4. Do **NOT** attempt to web the folder while the press is operating.
5. Knives and pins are sharp and can cause injury; keep your hands well clear of them.

Caution: ALWAYS be aware of where your hands are in relation to operating parts of the press.

STAY ALERT AT ALL TIMES.

Personnel

1. Dress for the occasion and the job you do.
2. Do **NOT** wear long, loose, torn, or ill-fitting clothing.
3. Dress in short-sleeved shirts and tight-fitting clothing.
4. Wear properly fitting safety shoes with oil-proof, skid-proof soles. Shoes made for service station workers are appropriate.
5. Wear safety glasses when using tools, grinders, etc.
6. Remove all jewelry from clothes, neck, ears, wrists, and fingers prior to working on the press, and see that your co-workers do also.
7. Know where each fire exit is and where the firefighting equipment is located. **Take time to read the instructions for operation; IT COULD SAVE YOUR LIFE.**
8. At all times conduct yourself in a proper manner around moving equipment. Treat it with respect and avoid needless injury.



Troubleshooting

Web Travel

Problem:

Probable Cause:

Loose Web:

Web runs loosely between unit and folder.

1. Not enough tension on the roll.
 2. Ink too tacky.
 3. Blankets over-packed.
 4. Lint build-up on blankets.
 5. Nipping rollers set too loose.
 6. Trolleys set incorrectly.
-

Web Breaks

1. Too much dampener solution during roll-up.
 2. Web tension incorrectly set.
 3. Faults in paper.
-

Folder

Poor Tabloid Slit

1. Dull or nicked knife.
 2. Knife incorrectly assembled.
 3. Bearing worn out
 4. Slitter dropped without paper running.
 5. Slitter Set to tight (common when running light products after heavy production.
-

Problem:**Probable Cause:**

Enlarged or Torn Pin Holes

1. Missing, dull, bent or broken pins.
2. Knife set too close to pins.
3. Insufficient nip roll pressure.
4. Excessive gain strips on pin cylinder.
5. Excessive tension on single web.

Poor Cutoff

1. Worn cutting rubber.
2. Dull or broken cutting knives.
3. Weak or broken cushion springs.
4. Insufficient nip roll pressure.
5. Excessive or insufficient gain strips on pin cylinder.

Uneven First Fold

1. Roll sidelay incorrectly centered.
2. Insufficient tension causing web wander.

Uneven Quarter-Fold

1. Quarter-fold incorrectly centered.
2. Stop bar incorrectly adjusted.

Web Tearing at R.T.F. Trolleys

1. Trolleys too tight.
2. Tension on roll too high.

Web Tearing at Back of Former or at Nipping Rollers

1. Nipping rollers too tight.
2. Rollers point of former incorrectly set.
3. Excessive tension on roll.
4. One or more blankets improperly packed creating underfeed.

Problem:**Probable Cause:**

Signature Dropped By Jaw

1. Insufficient jaw tension.
2. Broken or bent tucker blade.
3. Broken jaw blades.
4. Improper jaw cam timing.
5. Improper tucker-to-jaw timing.

Web Wrinkling at First Fold

1. Preforms incorrectly set.
2. Insufficient tension on roll.

Web Baggy On Pin Cylinder Drum

1. Insufficient gain strips on pin cylinder.
2. Insufficient nip roll pressure.
3. Insufficient tension on roll.

Register Fluctuation on Quarter-Fold, Jamming

1. Loose tapes, tapes set incorrectly or spliced backward.
2. Quarter-fold chopper incorrectly timed.
3. Quarter-fold chopper blade set at angle to top plates.
4. Nip roll tension incorrect.
5. Inconsistent delivery from jaw cylinder.
6. Incorrect tension on quarter-fold main drive belt.

Problem:**Probable Cause:**

Poor Quarter-Fold Delivery

-
1. Quarter-fold creels incorrectly timed.
 2. Delivery table height incorrectly set.
 3. Quarter-fold creel stops incorrectly set.
 4. Insufficient tension on quarter-fold creel belt.
 5. Quarter-fold chopper incorrectly timed.
 6. Insufficient tension on quarter-fold main drive belt.
 7. Insufficient tension on tapes.

Poor Half-Fold Delivery

-
1. Delivery table height incorrectly set.
 2. Insufficient tension on tapes.
 3. Inconsistent delivery from jaw cylinder
 4. Insufficient tension on half-fold creel belt.
 5. Half-fold creel incorrectly timed.



Controls

Press Drive Controls

General Information

A ready mode exists when the power unit is ready to receive a command to operate. This means that all drive status devices are in the **SAFE** or normal position, and that all the **RED STOP/SAFE** push button switches are ready for operation.

The operator control that starts the press moving is the **INCH** push button. Once the command is received an alarm bell rings for four seconds as a warning that the press is about to move. The move is then settled, the drive enabled, and the press begins to move. Press operations will continue in the selected mode as long as the operator permits.

When the **RED STOP/SAFE** push button is depressed, the drive is shut off, the motor stops, and the alarm cycle is automatically reset. Once the **RED STOP/SAFE** push button is pulled out, the system is again in the ready mode.

Description of Functions

The controls mentioned in the following descriptions are located at an operator's control box. This box is mounted at an operator's station on the folder. In addition to the

standard controls noted above, auxiliary push-button stations incorporating stop, inch, or slow down functions may be located elsewhere on the press.

Push Buttons

STOP- Depressing the **RED STOP/SAFE** push button shuts off the drive, begins dynamic braking and stops the press – regardless of operating speed. The stop has priority over all other control functions.

A safety alarm signal automatically resets during the dynamic braking period. The four second alarm is sounded before the press can be run.

INCH- With the control system in the ready mode, depressing the **INCH** push button sounds the four second alarm before the press moves. After the alarm has sounded, the press will operate at inch speed while the **INCH** push button remains depressed. Once the **INCH** push button is released, the press will come to a halt. Succeeding inching may be done immediately without having the alarm sound. However, if an inch is not repeated within four seconds, another four second alarm cycle will occur before the press operates.

Inching can occur only when the drive has not been placed in the run mode. If while inching the **RUN** push button is depressed, the run mode will have priority and take over.

RUN – With the press in the inch mode, momentarily depressing the **RUN** push button while simultaneously pressing the **INCH** push button establishes a continuous run mode. The press will accelerate to the speed selected at the speed adjust potentiometer.

SLOWDOWN-(Optional) The slowdown feature permits the press to be brought to a slow speed by a remote operator station located at the rollstand. The **SLOWDOWN** push button causes

the drive control to electronically disconnect the speed adjust potentiometer from the power

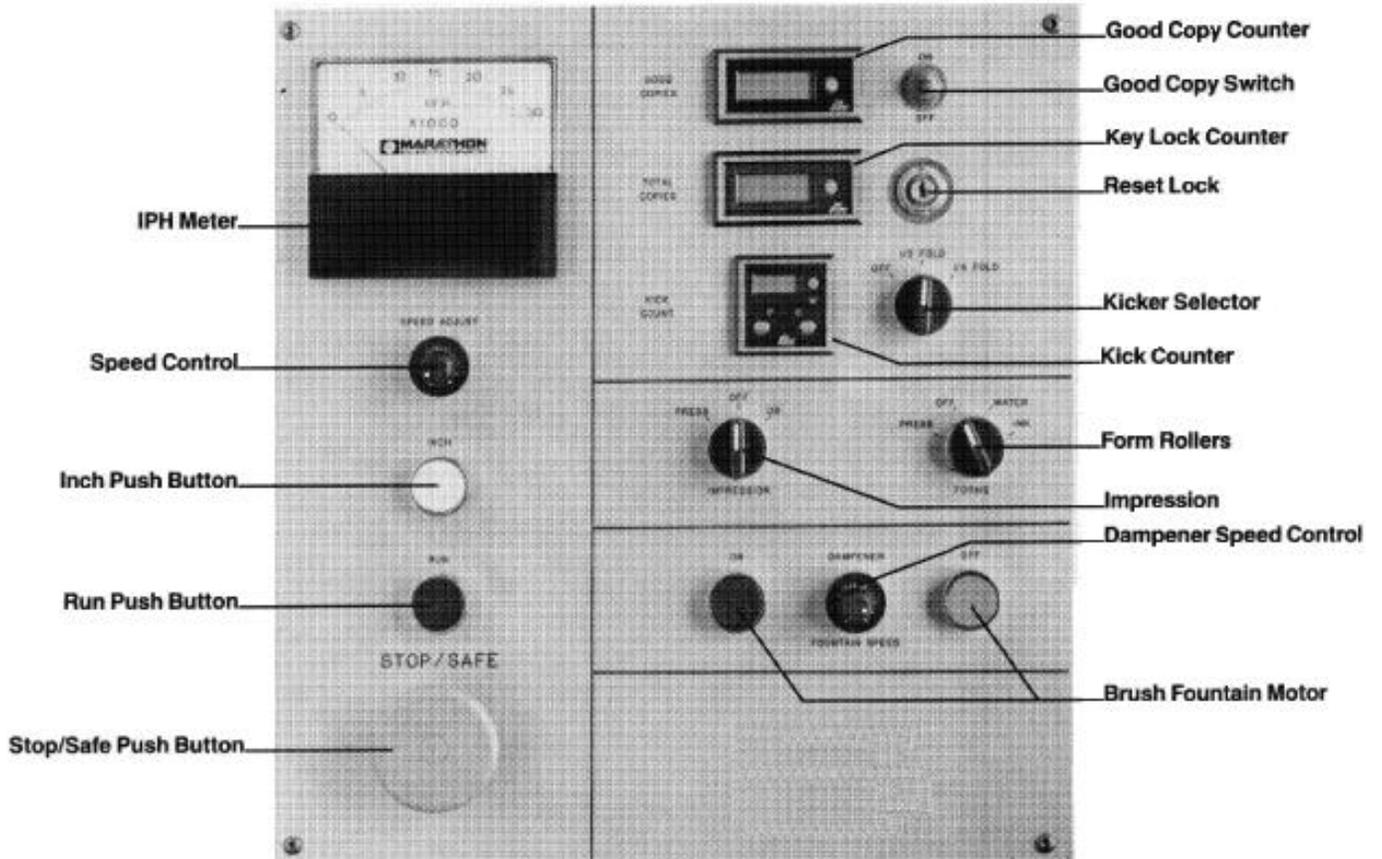
unit. The press will slow to a pre-adjusted value and then continue to operate at this speed until the **RED STOP / SAFE** push button is released. To resume normal operation, the power unit must be stopped and restarted.

Operator Adjustable Controls

Speed Adjust Potentiometer – This operator accessible speed adjustment is used for varying press speed in the run box. It is located on the operator control box. **CLOCKWISE** rotations of the adjustments result in **increasing** press speed, up to a maximum of 30,000 impressions per hour.

Control Panel ~ Press Operator's Station

Control Panel



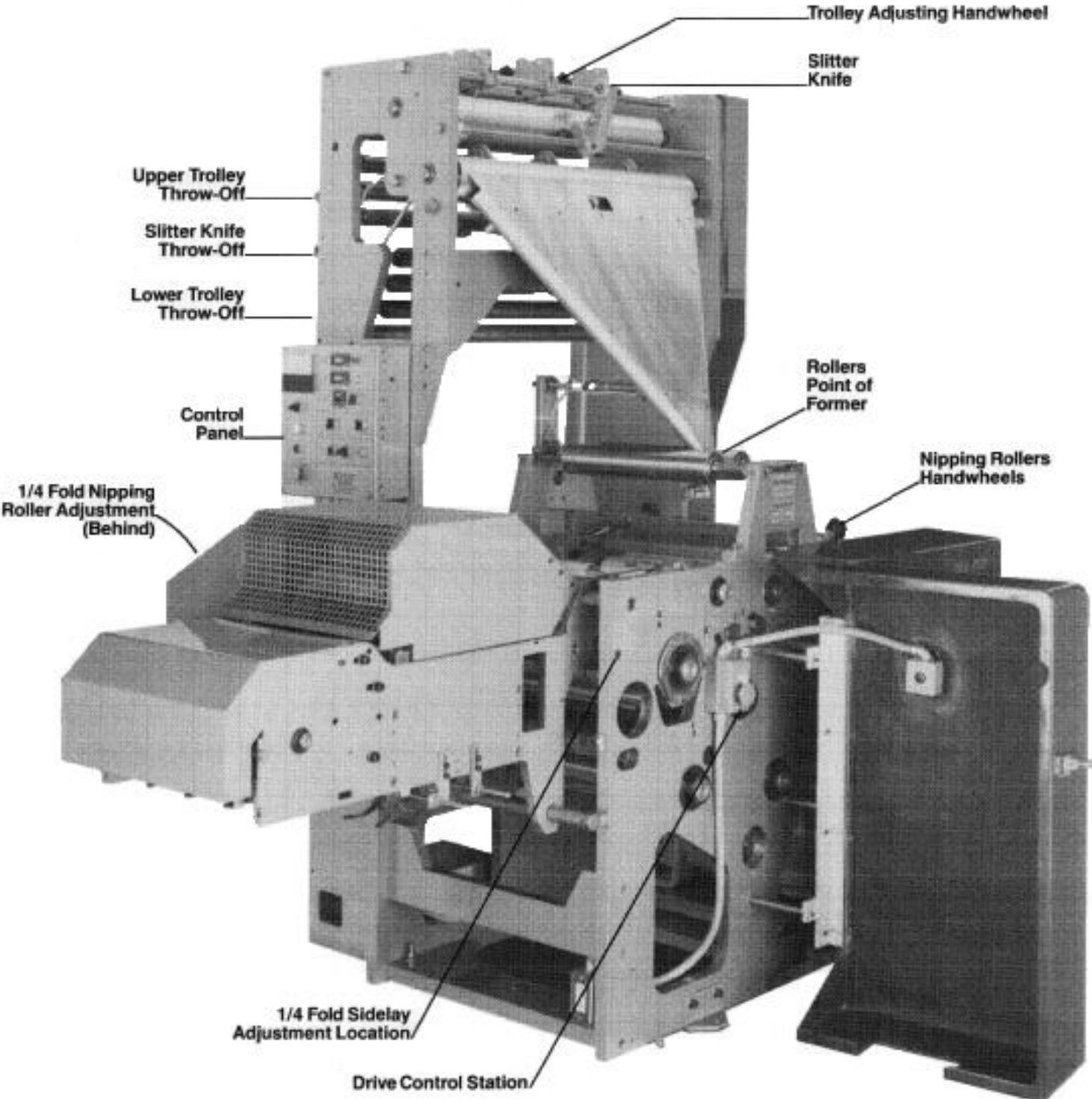
Press Operator's Station

Use the **RED STOP / SAFE** push button to stop the press as quickly as possible in the event of direct or potential hazard to personnel, broken equipment on the press, web break, or other unusual or threatening circumstance. In non-emergency situations, decelerate the press to threading speed with the speed control knob or, if so equipped, the **SLOWDOWN** push button, before depressing the **RED STOP / SAFE** push button.

Controls for the entire press are located at an operator's station at the folder. The function of each control is listed below.

CONTROL	COLOR	LOCATION	FUNCTION
Stop/Safe Push button	RED	Control console, folder unit, rollstand	Push in to stop press; Pull out to run press
Inch Push Button	GRAY	Control console, folder, Quadra-Color	Starts and runs press at creep speed when held in
Run Push Button	BLACK	Control console	Starts press when pushed in conjunction with Inch push button
Speed Control	BLACK	Control console	Controls press speed: clockwise to increase, counterclockwise to decrease
Good Copy Counter		Control console	Switch: On/Off To reset: move thumbwheel upwards
Key Lock Counter		Control console	Runs continuously with folder to reset: turn key one full turn clockwise
Kicker Counter	BLACK	Control console	Set batch size
Kicker Selector	BLACK	Control console	Select one-half or quarter fold
Brush/Fountain Motor On/Off	BLACK/RED	Control console	Push to start/stop dampener system
Dampener Speed Controls	BLACK	Control console	Controls dampener feed to all units: clockwise to increase, counterclockwise to decrease
Slowdown Push Button (optional)	YELLOW	Rollstand	Automatically slows press to creep speed when pushed
Impression On /Off (optional)	BLACK/RED	Control console	Plate/blanket, blanket/blanket impression
Form Roll (Ink/Water) (Optional)	BLACK	Control console	Clockwise to engage ink & water forms; counterclockwise to disengage forms

Folder Controls



Folder Controls

Roller Top of Former (R.T.F.) Trolley Throw-Off

Engages the trolleys on the R.T.F. **ON** or **OFF** contact with the webs. Two R.T.F.'s are provided, each having independent trolleys and throw-off handles. To engage trolley, move handle to left beyond dentent.

R.T.F. Trolley Adjusting Handwheel

Adjusts trolley pressure against the webs on the R.T.F. Turning the handwheel **clockwise** **decreases** the pressure. Pressure is set to a firm pull on sheets equal to the number of webs run.

Slitter Knife Throw-Off

Engages / disengages the slitter knife. Move handle up above stop for **ON** position (only when web is moving).

Slitter Knife

The slitter knife is mounted at the top of the former board and may be engaged independently of the trolley wheels. It is provided with a sidelay adjusting screw in addition to a pressure adjusting handwheel. **Clockwise** rotation of the pressure setting handwheel **decreases** slitter pressure. The slitter should be engaged only when the folder is webbed and the press is running.

CAUTION: Be careful when working near the slitter blade, it is sharp and can cause injury.

Pre-Form or Rollers Point of Former (R.P.F.)

Are adjustable by unlocking the jam nuts on the roller shafts.

The front spacing of rollers is gauged by setting the gap between each roller and the former nose to the thickness of the number of webs being run plus one web thickness. If four webs are run, the gap should give a snug pull on 5 thickness of paper. The rear spacing of the roller is set to

provide even tension on the rear edges of The Webs. This setting is particularly important when running tabloid products and when running twinned presses.

Nipping Roller Handwheels

Adjusts the gap between the nipping rollers for product thickness. The handwheel toward the nose of the folder controls the folded edge of the web, while the handwheel on the read of the folder controls the open edge of the web. Turning the handwheel **clockwise** **decreases** the gap.

Nipping Roller Setting

The nip rollers are equipped with two sets of knurled steel treads, which are set to run in the margins. Initial pressure settings of the treads should result in a slight indentation of the knurl pattern in the product.

Care should be taken to avoid running with excessive nip pressure which can result in cracking of the web over the former nose. This setting is particularly important when running twinned presses.

Nipping Roller Spacing

CAUTION: Put the press on SAFE and disengage folder clutch.

To adjust the nipping rollers for product length, loosen the 3/8" -16 setscrews in the rear hubs and spacers, slide on support shaft to desired width and lock the setscrews.

Knife Cylinder

The angular relationship of the knife cylinder and pin cylinder is adjustable and determines the distance of the pin holes from the leading edge of the product. This distance will be determined by the strength of the weakest paper being run.

Initially, the knife is timed to penetrate the cutting rubber centrally. However, if untrimmed newspaper-type products are to be run, retarding the knife by approximately 1/8", thereby moving the pins further from the edge of the sheet, will provide added security in avoidance of pin tear out.

Pin-Folding Cylinder

The folding cylinder is twice the plate cylinder diameter and carries two pin and two tucker blade assemblies.

The pin assembly consists of a mounting bar, which is secured in the cylinder and holds the pins and the cutting rubber.

The tucker blade assembly consists of a mounting bar secured in the cylinder retaining a one-piece tucker blade by a clamp bar.

Jaw Cylinder

The jaw cylinder is the same diameter as the plate cylinder and is equipped with a single cam-operated jaw station. The jaw cylinder is driven by and co-acts with the pin-folding cylinder. After cutoff, the severed web is transported by the pins until the pin-folding cylinder tucker blade engages with the jaw. The jaw then closes and takes over control of the sheets.

The leading edge is lifted off the pins by stripper shoes, while the trailing edge is severed at the opposite knife station.

Quarter-Fold Sidelay

The entire quarter-fold table assembly is moved toward or away from the nose of the former to allow centering of the quarter-fold seam in products with different web widths. The correct adjustment should be approximated during make ready, then trimmed during the first slow running period to place the fold line exactly where required.

Note: Adjustment should be made only when folder is running.

Quarter-Fold Nipping Roller Handwheels

Located at rear of quarter-fold table. They are used to adjust the gap between the quarter-fold nipping rollers for product thickness by moving the far side roller. Left-hand handwheel controls the inner end of the roller, and the right-hand the outer end of the roller. Turning the handwheels **clockwise tightens** the nipping rollers.

1. Set the quarter-fold nip roller pressure by adjusting the hand knobs on the rear side of the quarter-fold table for an even pull on strips of paper (numbering one sheet less than the final product), inserted at each end of the nip rollers.
2. Final settings can be made on the run.

**Note: a) Signatures tending to hang up indicates pressure too light.
b) Excessive creasing or set-off indicates pressure too heavy.**

Take care to adjust pressure evenly on each end of the nip rollers to avoid cocking or jamming the products.

Water Injector

If the folder is fitted with a water injector system for quarter-fold seam softening, the spray can be applied to the sheet by operation of the on/off toggle switch, located on the rear folder frame beneath the former. The amount of spray is determined by adjustment of the spray knob located near the on / off switch. Turning **clockwise decreases** the amount of water coverage.

Atlas Folder

Double Parallel to Half Fold

- 1) Remove jaw cylinder brush assembly
- 2) Remove 1st jaw tucker blade assembly and replace with a filler bar.
- 3) Install jaw cylinder stripper assembly and tighten strippers.
- 4) Disengage 1st jaw cam follower arm from double parallel cam (Gear side cam). Lift slightly off cam and retighten. Turn folder over by hand to make sure double parallel cam follower never touches cam. Also check cam follower arm to make sure it is not too high or it will hit the jaw cylinder stripper bar.
- 5) Engage tapes from half fold to quarter fold (Around aluminum idlers on input shaft, under roller core idler).

Half Fold to Double Parallel

- 1) Disengage top tapes and tie up out of way.
 - 2) Remove 1st jaw stripper assembly.
 - 3) Remove 1st jaw filler bar and replace with tucker blade assembly.
 - 4) Turn over machine by hand and check timing between 1st and 2nd jaw cylinders.
 - 5) Engage cam follower arm on 1st jaw – GEAR SIDE – then turn over by hand and check timing of double parallel.
 - 6) Remove quarter-fold creel and shaft if in the way.
 - 7) Disengage quarter-fold if desired.
 - 8) Install brush assembly on 1st jaw cylinder
-

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Makeready

Webbing

1. Put the press on **SAFE** and lift the rollstand throw-off handle to disengage the brake.
2. Throw the blanket cylinders **OFF** impression.
3. Start with the roll position furthest from the folder (if all webs will be used) and unit nearest to the folder. Tear a taper in the head end of the web and lead it into the unit (which is best achieved by attaching adhesive tape to the paper and cylinder until it is through the nips) and around the compensator. Tape to a roller, then repeat for the other units.
4. Lead all the webs individually around the gathering rollers and then over the former and engage the roller top of former trolleys. **Do not engage slitter.**
5. Tighten the tension control handwheels so that there is a slight drag on the web.
6. Slowly throw **ON** the rollstand handle to activate the dancer and the brake.
7. Throw all webbed units **ON** impression.
8. Inch the press with the folder engaged, and lead the webs down the former, between the rollers point of former and down to the nipping rollers. If the webs do not feed neatly between the nipping rollers, let some slack run, then **STOP THE PRESS** and insert the webs between the nipping rollers, pulling taut from below.
Caution: Keep your fingers away from the rollers.
9. Continue inching the press until the webs are pulled down between the nipping rollers and two to three feet below, and one of the tucking blades is the accessible portion of the folding cylinder.

10. Stop the press and put on **SAFE**.
11. Tuck webs through the space between pin cylinder and knife cylinder, keeping web tight with a steady pull from operating side of folder, so that the rotation of the folding cylinder will trap the webs in the nip between folding and cutting cylinders. **KEEP HANDS CLEAR.**
12. Inch the press until the folded product is delivered.
13. Adjust the quarter-fold nip rollers using handwheels adjacent to the quarter-fold gear guards. The initial setting should allow the folded product to just be pulled out of the nips. (The amount of pull should approximate that used when setting form rollers with film strips.) Excess pressure will be indicated by knurl pattern or excessive wrinkles. Inadequate pressure will result in head to tail collision of the next product, usually resulting in a jam.
14. Stop the press on the mark (jaw vertical) and put on **SAFE**.

Fold Changeover Procedure

1. Remove the quarter-fold stop bar complete with retarder fingers.
2. Disconnect the chopper arm link by loosening the screw in the swing blade and pivoting it clear of the slot in the pin. The pin then may be extracted and the link with bearing removed from the eccentric.
3. Lock the chopper arm in its upper position with the locating pin, mounted on the gear box.
4. Lock the locating pin in position with the setscrew fitted in the pin housing bracket.

Web Travel Troubleshooting

Problem:

Probable Cause:

Loose Web:

Web runs loosely between unit and folder.

1. Not enough tension on the roll.
 2. Ink too tacky.
 3. Blankets over-packed.
 4. Lint build-up on blankets.
 5. Nipping rollers set too loose.
 6. Trolleys set incorrectly.
-

Web Breaks

1. Too much dampener solution during roll-up.
 2. Web tension incorrectly set.
 3. Faults in paper.
-

Folder

Poor Tabloid Slit

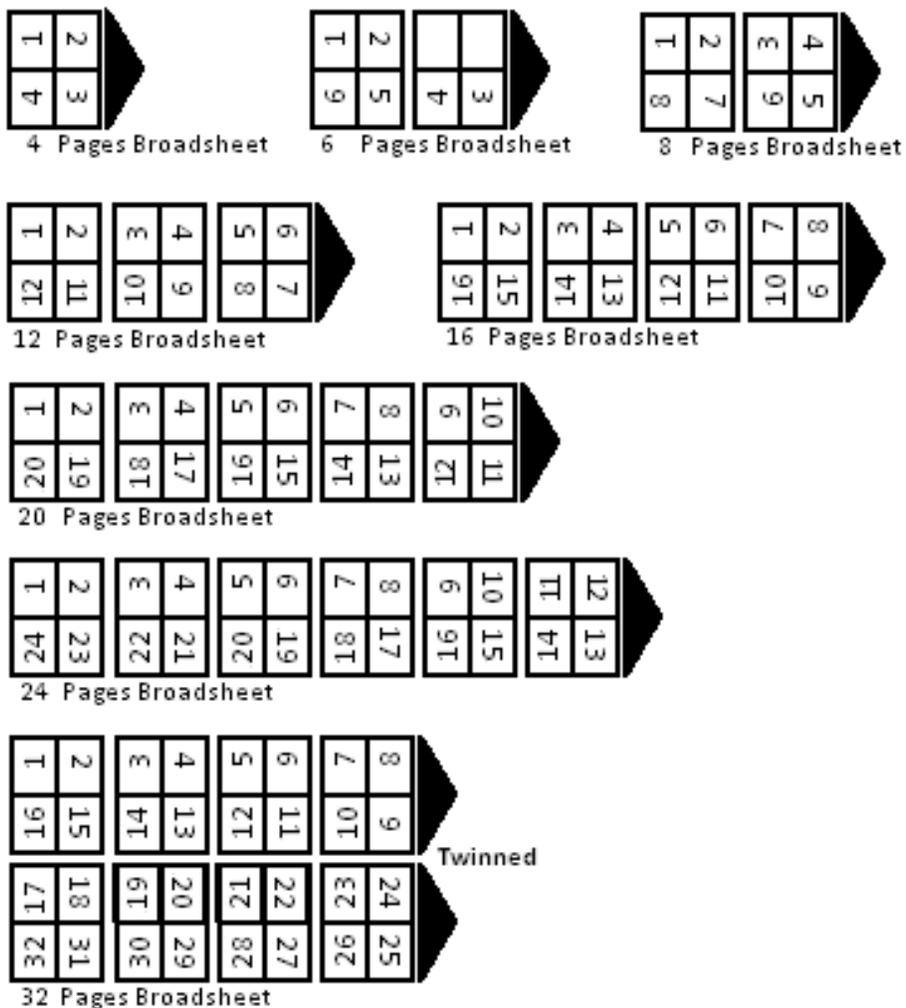
1. Dull or nicked knife.
 2. Knife incorrectly assembled.
 3. Bearing worn out
 4. Slitter dropped without paper running.
 5. Slitter Set to tight (common when running light products after heavy production.
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Imposition

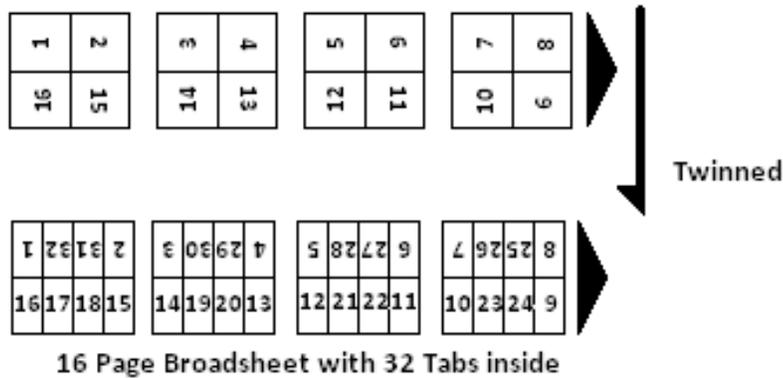
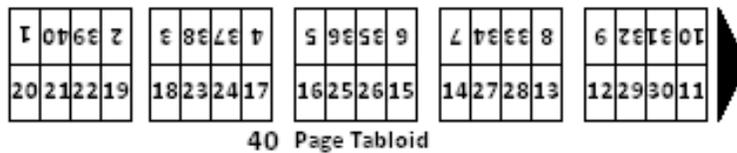
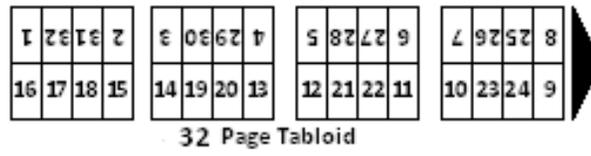
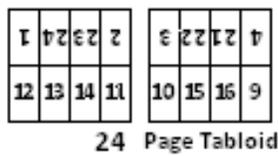
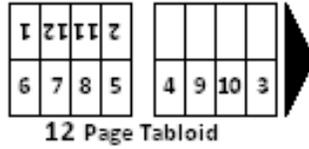
Page Locations

1. For a standard broadsheet run, two pages are placed on each plate. The heads of the pages are located at the trail edge of the plate.
2. For a tabloid run, four pages are placed on each plate. The head of each tabloid page is located at the center of the plate.
3. For a quarter-fold magazine-size product, pages are located on the plate so that all heads face the center of the plate.

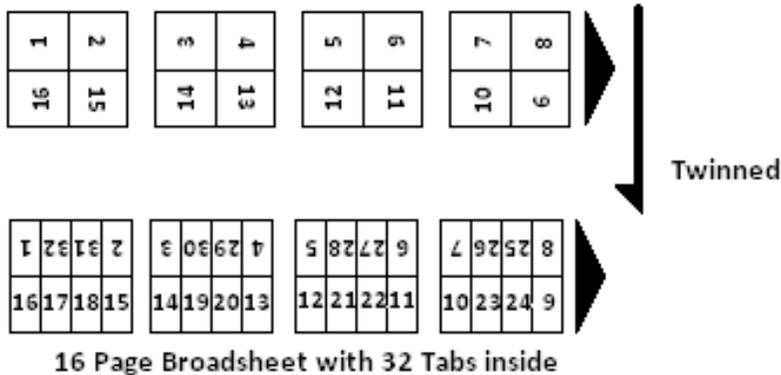
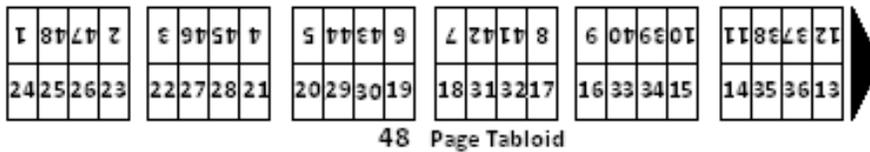
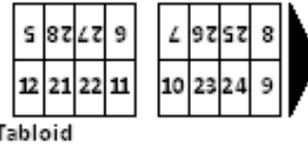
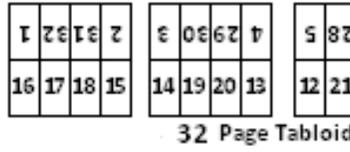
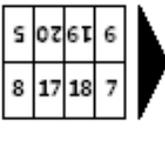
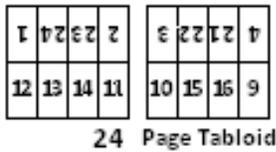
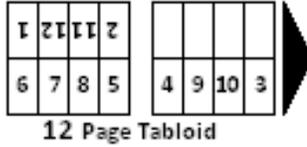
Broadsheet Page Locations



Tabloid Page Locations



Tabloid Page Locations



Magazine (8 1/2 x 11) Page Locations

51	2	3	41
10	7	6	11
6	8	5	21
16	1	4	13

16 Page Magazine

18	2	7	92
18	15	10	23
41	91	6	42
32	1	8	25

32 Page Magazine

62	4	5	82
20	13	12	21
61	41	11	22
30	3	6	27

44	2	11	86
26	23	14	35
52	42	41	96
48	1	12	37

54	4	6	04
28	21	16	33
42	22	51	46
46	3	10	39

48 Page Magazine

44	9	7	24
30	19	18	31
62	02	41	26
44	5	8	41

49	2	51	05
34	31	18	47
44	26	41	84
64	1	16	49

19	4	41	25
36	29	20	45
56	06	61	94
62	3	14	51

65	9	11	45
38	27	22	43
46	82	12	44
60	5	12	53

45	8	6	95
40	25	24	41
66	92	42	24
58	7	10	55

64 Page Magazine

Double Digest Page Locations

Top of Web		Bottom of Web		Folder
1	8	8	1	
4	5	4	5	

8 Page Double Digest

2	11	2	11	2	11	2	11	1	12	1
5	8	5	8	7	9	7	9	4	9	4

12 Page Double Digest

2	15	2	15	16	1	16	1
7	01	7	01	6	8	6	8

16 Page Double Digest

Double Parallel Page Locations

9	3	2	7	8	1	4	5
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8 Pages, 2-up

10	7	2	15	1	16	8	9
11	9	4	11	4	5	21	

16 Pages, 2-up

18	15	2	31	32	1	16	17
42	6	8	52	92	7	01	42

32 Pages, 2-up

20	13	4	29	30	3	14	19
12	21	5	82	27	21	9	11



Folder Maintenance

Folder Lubrication

Note: Frequent addition of small quantities of lubrication is best; over-lubricating at long intervals will severely shorten the life of the affected parts.

1. Before applying grease, all fittings should be wiped clean to prevent dirt from entering the bearings.
2. Web Press Corporation relies upon reputable lubricant manufacturers to suggest proper and tested products which will suit the requirements of your press. Except where

abnormal conditions are encountered, the lubricants listed (or their equivalent), should be used.

3. Lubrication intervals are based on a single shift, daily operation or 50,000 impressions per day. If your press is equipped with an operating hour meter, consider daily as 6 hours, weekly at 30 hours, monthly at 120 hours, and 4 times per year as 350 hours of operation.

Interval	Part Description	Fittings	Lubricant	Method.
Weekly	Folding Cyl. Bearings	2	Chevron NLGI2	Grease Gun
Weekly	Nipping Roller Bearings	4	Chevron NLGI2	Grease Gun
Weekly	Input Pinion Shaft Bearings	2	Chevron NLGI2	Grease Gun
Weekly	Jaw Cylinder Bearings	2	Chevron NLGI2	Grease Gun
Weekly	Jaw Cylinder Mechanism	2	Chevron NLGI2	Grease Gun
Weekly	¼ Fold Fly Bearings	2	Chevron NLGI2	Grease Gun
Weekly	½ Fold Fly Bearings	2	Chevron NLGI2	Grease Gun
Weekly	Knife Bar Bearings	1	Chevron NLGI2	Grease Gun
Weekly	¼ Fold Tension Pulley Bearings	2	Chevron NLGI2	Grease Gun
Weekly	¼ Fold Support Shaft Bearings	2	Chevron NLGI2	Grease Gun
Weekly	Jaw Cylinder Idler Pulley Bearings	2	Chevron NLGI2	Grease Gun
Weekly	Folder Drive Idler Pulley Bearings	1	Chevron NLGI2	Grease Guns
Weekly	R.T.F. Idler Pulley Bearings	1	Chevron NLGI2	Apply to Gears
Weekly	Main Drive Gears		Lubriplate L0152	Apply to gears
Monthly	Main Drive Shift Bearings	2	Chevron NLGI2	Grease Gun
Monthly	¼ Fold Timing Pulley Cam	1	Chevron NLGI2	Grease Gun
Monthly	Drive clutch	1	Chevron NLGI2	Grease Gun
Monthly	Jaw Cam and Follower		Lubriplate L0152	Apply to surfaces
4 Times Per Year	¼ Fold Sidelay Screw		Chevron NLGI2	Apply to threads
4 Times Per Year	Nip. Roller ¼ fold adjusting screws		Lubriplate L0152	Apply to threads
When Necessary	Gear Boxes		Mobilube HD90 or Mobilgear 630	Fill Housing 6 .oz

Maintenance Procedures

Folder Overview

The following descriptions are given for general guidance, intended to provide a starting point from which settings may be optimized for a particular range of paper types and products.

Replace A Slitter Knife

Caution: Slitter knife is sharp and can cause injury.

1. Replace the slitter knife when it becomes dull or chipped and will not slit properly.
2. Handle with care, the slitter knife is sharp.
3. Put press on **SAFE**; disengage folder clutch.
4. To remove the knife, disengage the slitter and unlock and remove the jam nuts holding the spindle and knife. Remove from slitter lever.
5. Replace with new slitter knife and bearing.
6. Reverse procedure to reinstall knife.
7. Set the slitter knife to ride against the body of the anvil bearing – **not** in the groove.

Replacing The R.T.F. Trolley Wheels

1. Replace the wheels when the surfaces become worn, shipped, tapered or cut.
2. Put press on **SAFE**; disengage folder clutch.
3. To remove the wheels, disengage the trolleys; loosen setscrews in the bearing. Remove bearing and replace.
4. Reverse procedure to re-install wheels.

Former Setting

The former is set when the press is installed. It rarely, if ever, needs to be adjusted.

This setting is critical to web alignment and web control.

Do **NOT** attempt to reset the former unless it is absolutely necessary, and then only after calling Web Press service department.

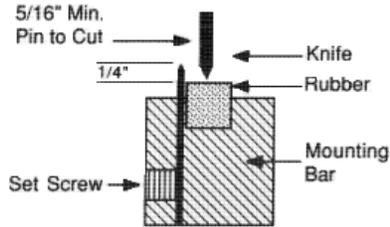
Replacing Pins and Cutting Rubbers

Check the cutting rubber and replace when it becomes worn. The expected life of the cutting rubber should be in the order of 1,000,000 cuts or 2,000,000 copies, although this figure could vary with different stocks and number of webs run. In addition to failing to cut, some of the symptoms of a worn-out cutting rubber are badly worn corners of the slit created by the knife, excess build-up of paper dust within the slot, and dropped signatures due to imperfect cutting.

1. Put press on **SAFE**; disengage folder clutch.
2. Rotate folder with handwheel until pin/rubber bar is accessible.
3. Remove the pin bar assembly by loosening and removing the two securing screws at each end.

Caution: Pins are sharp and can cause injury.

4. Using a screwdriver or similar tool, pry out the cutting rubber from the slot.



5. Unlock the setscrew securing the pin to the bar and remove the damaged pin.
6. Install the new pin and set to a ¼" height above the cutting rubber. Check all pins to make sure that they protrude equally above the cutting rubber face.
7. Lock the setscrews after setting the height of the pin, and replace the mounting bar.

Note: Check the pins daily. ALWAYS check their condition after a folder jam, and replace immediately when found to be broken or damaged.

Note: ALWAYS check condition of strippers after a folder jam to insure none are bent or moved so as to risk catching on a cylinder and causing serious damage.

Replacing Tucker Blades

1. Put press on **SAFE**; disengage folder clutch.
2. Remove the tucker blade assembly by loosening and removing the two securing screws at each end.
3. To replace the blade, unlock the socket head setscrews holding the clamp bar to the blade. Slide out the blade.
4. When replacing with a new blade, make sure it seats against the two lower locating dowels.

5. Lock the socket head setscrews and replace the assembly back in the cylinder.
Replace the tucker blades when they become worn, chipped or broken.

Note: Always check the blades for straightness, nicks or burrs whenever the condition of the pins is in doubt.

Fold Lap Setting

If a substantial bindery lap is required for gathering or to maximize trim size, the tucking blade may be suitably shimmed to extend the distance from the pins to the half-fold line, and the jaw cylinder appropriately retimed. If a smaller lap is sufficient, it can be obtained by changing the knife cylinder timing.

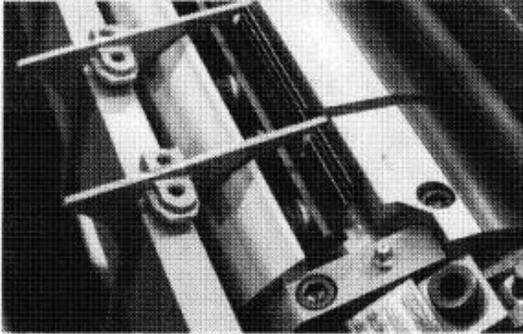
The adjustment for lap is made by shimming the tucker blade bar. The adjustment changes the distance from the pins to the fold. The thickness of the shim is half the amount that is desired to move the lap.

1. Rotate folder to a position at which one tucker assembly is at approximately 3:00 when viewed from the operating side of the folder.
2. Remove tucker bar assemble and insert or remove shims. The shims are positioned between the mounting bar and the tucker preloading plate; the lap is increased by adding shims.
3. Rotate folder to bring the second tucker blade to the 3:00 position. The shimming procedure is then repeated.
4. Take care when folder is rotated again, as the jaw is no longer synchronized. Damage to the tucker blade may occur if the jaw is not retimed to the blade.

Replacing Jaw Blades

Replacing jaw blades requires a 7/16" open-end wrench and a 6" machinist's scale.

1. Put press on **SAFE**; disengage folder clutch.
2. Rotate folder until jaws are fully open and bolts are accessible.

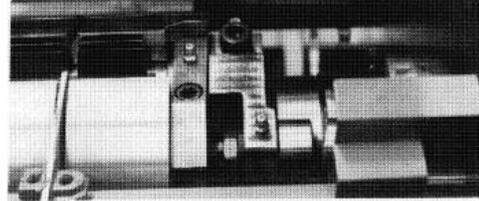


3. Loosen the bolts that clamp the damaged blade and remove.
4. Insert the new jaw blade and use the 6" scale to line up the top edge of the new blade flush with the solid stationary jaw and tighten bolts securing blade.
5. Repeat procedure if additional blades are to be replaced.

Setting Jaw Tension

1. Put press on **SAFE**; disengage folder clutch.
2. To **increase tension**, rotate jaw cylinder until jaw has just begun to open. Loosen clamping bolt on cam follower bracket and rotate jaw bar to solid jaw and lock clamping bolt. Repeat until desired tension is achieved.
3. To **decrease tension**, rotate jaw cylinder until jaw has begun to open, then reverse 1/2". Loosen clamping bolt on cam follower bracket, and then retighten. Repeat until desired tension is achieved.
4. Insert number of webs into open jaw and rotate backwards until jaw closes. Check for correct tension.

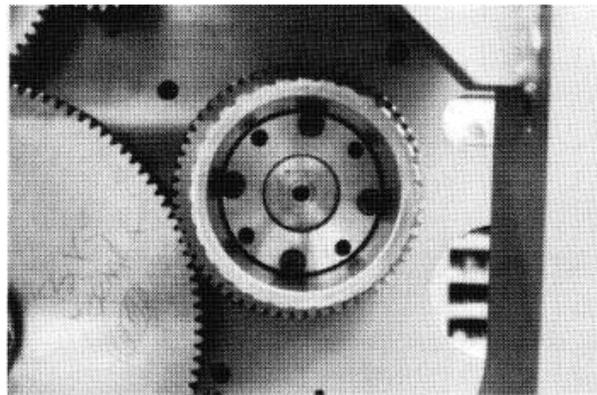
Note: Be sure the cam follower is seated on the cam and 1/16" clearance is maintained between cam and cam follower lever.



Setting Jaw Cylinder Timing

The tucking blade is centered in the factory and normally needs no adjustment. If adjustment becomes necessary, follow the procedure outlines below:

1. Locate tucker blade at proper location in the jaw by first loosening the four 3/8" – 16 screws inside hub on gear end of the jaw cylinder.
2. After loosening bolts, tap on end of the cylinder with a aluminum drift until cylinder is free.
3. Rotate to desired location and tighten four bolts.



Note: Fixed jaw should be timed to provide a gap to the tucker blade that approximates the thickness of paper that it is required to fold. This measurement is made when tucker blade and fixed jaw are parallel.

Jaw Cam Adjustment

The timing of the closing of the moving jaw is determined by the position of the jaw cam which is mounted in the inner face of the operating-side frame.

The cam is clamped in position by the bearing cap on the outside of the operating-side frame.

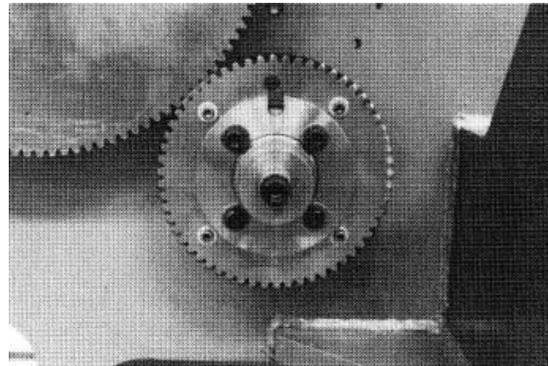
The cam should be timed such that the jaw has enough grip on the folded signature to retain control at the moment the tucked blade disengages from the jaws.

Timing of jaw opening for release of product to quarter-fold delivery is correctly set when the jaw segments just start to open at the point when the jaw reaches the ends of the striping fingers. Timing of jaw closing is correctly set when the jaw segments start to close when the tucker blade and fixed jaw are parallel to each other.

1. If adjustments are necessary, unlock the four locking bolts on the operator end of the cylinder.
2. Insert pin punch in hole of cam on inside of frame, and rotate to desired location.
3. Tighten locking screws; note change in log.

Knife Cylinder Timing

1. Insert timing tool (part no. 1614110) in appropriate place and unlock four locking bolts.
2. To alter pin-to-cut distance, rotate timing tool:
 - a) **Clockwise** to cut closer to pins,
 - b) **Counterclockwise** to cut further from pins.
3. Tighten locking screws and remove timing tool.

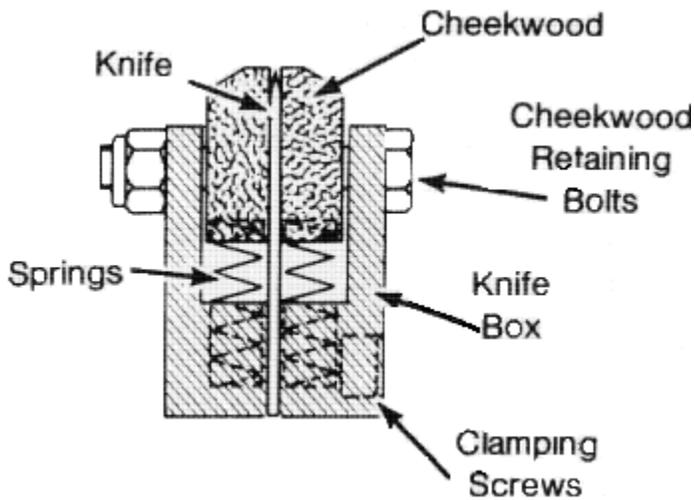


Knife

The male knife box is mounted on a cylinder which is driven at the plate cylinder speed. The knife cylinder gear is fitted with an anti-backlash ring which is set providing .003" backlash so that the main load of the knife coming to the cutting position is carried on the wider-face main gear.

The ring is locked in position by the main locking plate which clamps both gears to their hub.

Small screws hold the anti-backlash ring to the main gear to avoid loss or disturbance of backlash adjustment when the lock plate is loosened to re-time the knife-to-pin relationship.

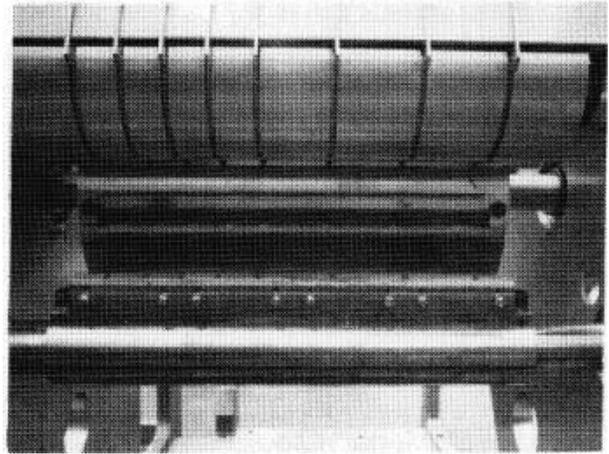


Replacing Knives

Caution: Be careful! Knives are sharp and can cause injury.

1. Put press on **SAFE**; disengage folder clutch.
2. Loosen the jacking screws on one side of the box only, remove the screws holding the knife box to the knife cylinder and remove the box.
3. Unlock the 8 Nylock nuts, plus the 4 bolts holding the segments together; remove the hex head bolts.

4. Remove the cheekwoods, springs, and knife.



5. Inspect the knife for dullness or broken teeth and replace if necessary.
6. Reset new knives flush to bottom of box.
7. Reset the knife in the cheekwoods so that it is just possible to feel the teeth when lightly touching the tops of the cheekwoods.
8. Replace and lock all screws and nuts when re-installing; note in log. Adjustment for parallelism to jaw cylinder is obtained by loosening the two 1/2" -13 bolts at each end and adjusting the jacking screws on each side.

Note: If it should become necessary to replace any of the cheekwood retaining bolts, be certain the proper bolt is used. It is a 1/4" - 20 hex head bolt, 1 5/8" long, with a shoulder length of 1 1/4".

Pin Stripper Adjustment

The timing of the pin strippers is adjusted by a pair of screws on the inside of each half-fold side frame. The screws fit into slots in the stripper bar mounting plates. The strippers should be set to a position at which the leading edge of the product is forced off the pins after the tucker overlaps the jaw and is in control of the product. Excessive pin tearing indicates the strippers require advancing. Lack of fold accuracy suggests this product is releasing from the pins too early and the strippers require retarding. After retiming strippers, the folder should be rotated with the handwheel to check that the locating collars on the stripper mounting bars clear the pins. Readjust within side clearance of mounting slots is necessary.

Half-Fold Delivery

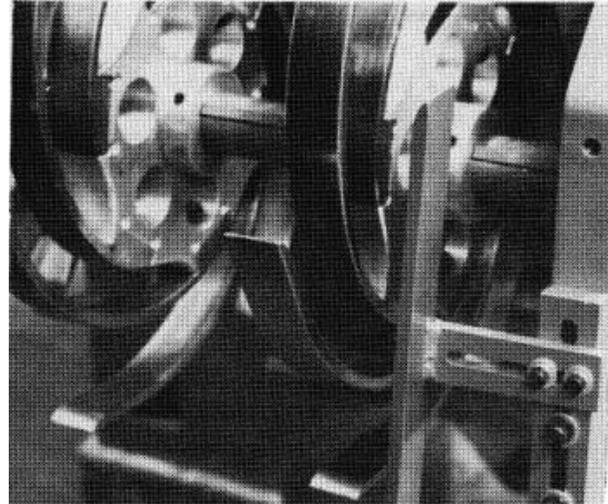
The folded tabloid or broadsheets signatures are carried in the jaws and released at approx top dead center, then stripped out of the jaws to be guided into the upper pair of running tapes.

Half-Fold Delivery Fly

To tighten the timing belt on the half-fold delivery creel, unlock hex head bolt on creel pulley shaft, move down in slotted hole. To adjust timing of creel, loosen two set screws on gear hub on creel shaft, and rotate creel assembly so the leading edge of the signature is $\frac{1}{4}$ " behind the tips of the creel arms. Side guides are provided. These guides should be set wider at the tops than the bottom. The

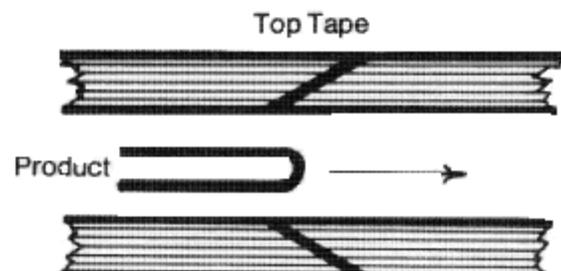
Note : To maintain accurate control of the signatures, it is important that the taper of the splice (on the side of the tape contacting the signature) is trailing.

lower ends of the guides should be close to the delivery table. The gear side guide requires adjustment for change of web width.



Splicing Tapes

The folder is equipped with "Habasit®" tapes with $\frac{1}{2}$ cemented splice. To prepare the tape for splicing, clean opposing tapes with a non petroleum-base solution. Install on folder and apply "Habasit" cement to both tapes. Obtain a heat-set type iron, such as supplied in the "Habasit" P-40 kit, and heat glued tapers at 100° C (212° F) for 10-15 minutes.



Tape Specifications

Standard Half / Quarter-Folder:

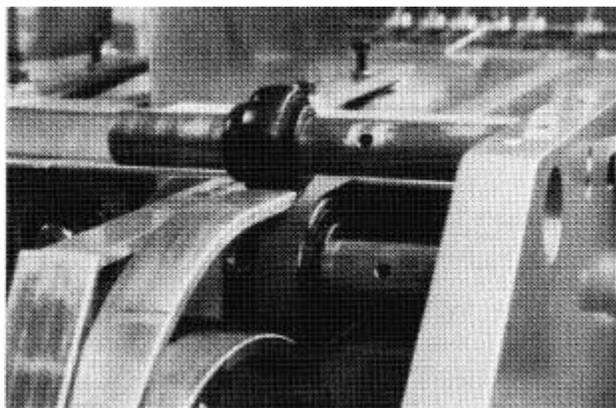
Top Tapes: $\frac{3}{4}$ " wide and 54" long –light green shiny side contacts paper.

Bottom Drive-Side Tapes: $\frac{3}{4}$ " wide x 54" long–dark green side contacts paper.

Bottom Operating-Side Tapers: $\frac{3}{4}$ " wide x 55 $\frac{1}{2}$ " long–dark green side contacts paper.

Upper Delivery Tapes

To adjust tension on the delivery tapes, unlock $\frac{3}{8}$ " socket head screws securing the tape pulleys and eccentric stud. Lightly tension the belt by pulling on the stud. To adjust the height of the upper tapes, tighten the socket head screws until snug, then turn the stud eccentric to set the desired height. Lock the button head screws.



Lower Delivery Tapes

Unlock the four $\frac{5}{32}$ " setscrews holding the pulley blocks and pull to tighten the tapes. Relock the setscrews.

Quarter-Folder

For the quarter-folding mode, a stop bar (located by 2 screws) is fitted at the downstream end of the chopper platform. The underside of the bar has slots to clear the tapes,

and a central slot at the upstream face of the bar to clear the chopper blade.

To assist in minimizing bounce of the product, two retarder fingers are mounted on the stop bar. A pressure adjustment is provided for the leaf scenes that caught the product. It should be set to the minimum adjustment which will eliminate bounce.

The holes in the bar are slotted to enable the stop to be adjusted in order to produce a square fold. After initial judgment, Scribe lines on the surface of the chopper tale to aid accurate setting dinner accurate setting during subsequent changeovers

Setting Quarter-Fold Chopper Timing

1. Thread folder with quarter-fold engaged. Center slots in quarter-fold stop bar.
2. Inch folder so that signature is approximately $\frac{5}{8}$ " to $\frac{3}{4}$ " from making contact with stop bar.

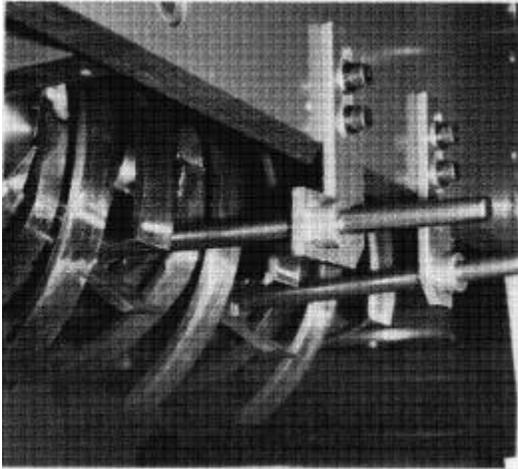
Note: Chopper blade should be touching signature-if not, retime chopper as follows:

3. Loosen idler pulley and slide up. Rotate drive pulley on gear box clockwise, slipping inside belt until blade is touching paper. Reset idler pulley and tighten.

Note: Insufficient belt tension will cause jams in quarter-fold.

Quarter-Fold Creel Timing

1. Loosen taper bushing located at back of quarter-fold on creel shaft. Rotate creel with paper 1" through nip rolls so blade has passed by the folded edge by approximately $\frac{1}{2}$ ".
2. Tighten taper bushing before operating machine.



Delivery Table

The creel lays the signatures on the delivery table in shingle formation. The amount of shingling is determined by the speed setting of the variable-speed motor driving the belts.

The table can be adjusted for height by unlocking the setscrews on the telescoping legs and setting the height best suited to the product being run.

Tape Specifications: “Dixylon” 1 ½” wide x 12’ long (see splicing instructions.)

Delivery Stops

The delivery stops were designed to produce uniform delivery of half – and quarter-folded products. By adjusting the stops provided, the pressman can achieve the desired delivery.

Setting: Loosen and slide stop into position – depending on delivery requirements.

Belt Tension

1. Gear or timing belts should be installed with a snug fit, neither drum tight nor slack. The belt’s positive grip eliminates the need for high initial tension. A properly installed belt will deliver long life, quiet operation, and minimum wear of the belt and associated parts.
2. When torque is unusually high, a loose belt, on starting, may “jump teeth.” In such a case, belt tension should be increased gradually until satisfactory operation is obtained.

Belt Handling

1. On installation, the belt should never be forced or pried over the pulley flange. Reduction of center distance or idler tension usually permits the belt to slide onto the pulley easily, otherwise one or both pulleys should be removed.
2. To assure smooth operation and prevent premature failure, belts in storage should be protected against sharp bending or creasing. They should not be subjected to extreme heat, low temperature or high humidity.

Drive Belt Specifications

The specifications following are correct for most models. Be sure to check the size noted on your belt before ordering replacements.

1. Main Drive

The belt between the drive motor and drive shaft at the folder. Belt tension is set by adjusting the motor mounting plate.

Belt Size: 630 XH 300

2. Slave or Helper Drive

The belt between the auxiliary drive motor and drive shaft usually located at the Quadra-Color unit.

Belt tension is set by adjusting the motor mounting plate

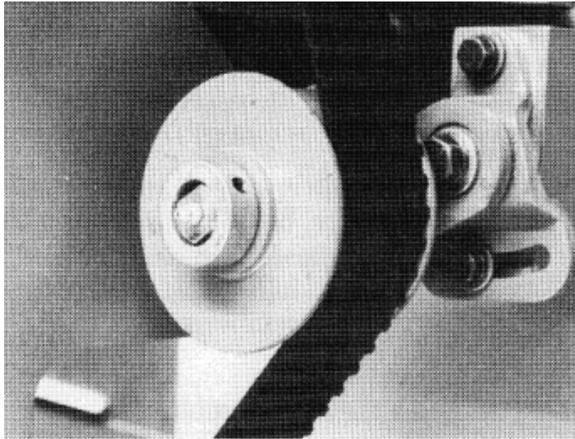
Belt Size: 630 XH 300

3. Folder Drive

The belt between the pin-folding cylinder and R.T.F. gear box, driven by the clutch pulley on the main drive shaft.

Belt tension is set by adjusting the motor mounting plate.

Belt size: 1250 H 200



4. Quarter-Folder

The quarter-folder drive belt drives the lower delivery tapes, the quarter-fold nip rollers and the quarter-fold arm. The drive is taken from the jaw cylinder pulley.

Belt tension is set by adjusting its idler back pulley.

Belt Size: 570 H 100

Double Parallel Folder: 1400 H 100

5. Quarter-Fold Delivery Creel

The belt is located at the back of the quarter-folder. It is driven by the gear box. The creel assembly is mounted with pillow block bearings.

Adjust tension by loosening bolts and setting desired tension on belt. Moving bearings down increases belt tension.

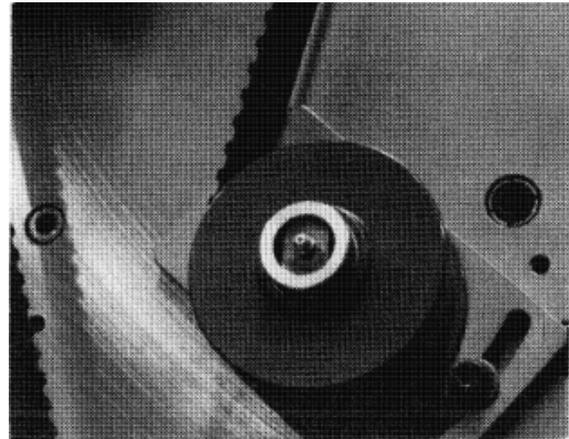
Belt Size: 570 H 100

6. R.T.F.

A gear box driven off the folder drive drives the R.T.F.

Belt tension is set by adjusting its pulley bracket.

Belt size: 1250 H 200



7. Half-Fold Delivery Creel

The belt is driven from the quarter-fold creel.

Belt tension is set by adjusting the pillow block bearings to which the half-fold creel is mounted.

Belt Size: 480 X 050

8. Angle Bars

Tension on the belt between top folder gearbox and gearbox pulley on angle bar assembly is set by adjusting the idler pulley bracket.

Belt Size: 390 L 100

Tension on the upper belt is set by adjusting the idler pulley bracket.

Belt Size: 480 L 100