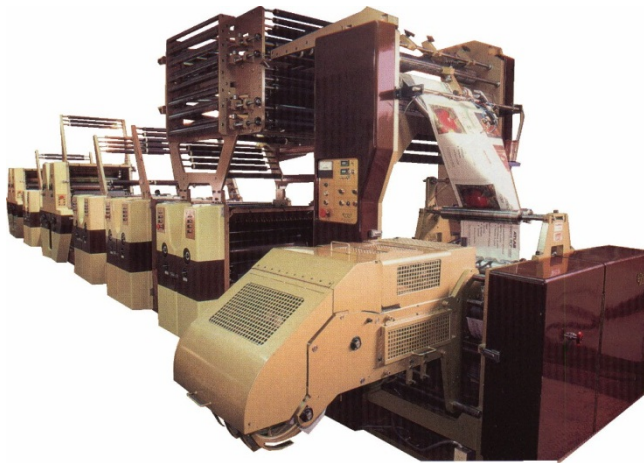


# ATLAS PRESSMAN'S MANUAL

May 2019 Revision

Perfectors, Quadra Color Units, Roll Stands, Folders



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*Revolutionary™*

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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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# WebPress

*Revolutionary™*

## 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.



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# 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.

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# SAFETY

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## 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.

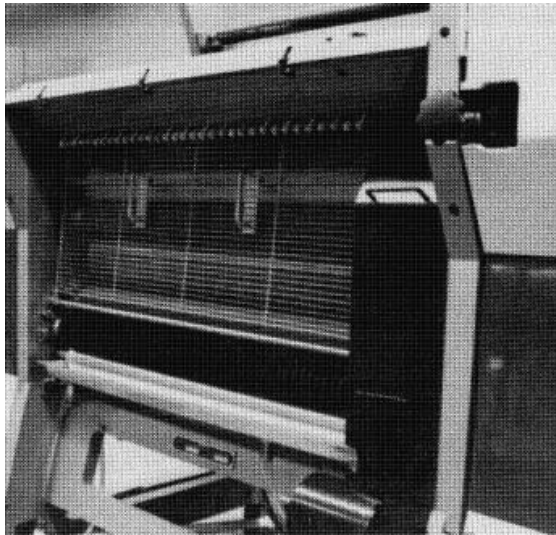
It is not only the management of the firm but also you yourself who holds the responsibility to maintain a regular program of safety checks and instructions.

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.

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## 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



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# Troubleshooting

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The following headings describe most of the common printing problems that are likely to be encountered.

Below each heading are probable causes of the problem. By locating the correct heading and checking each probable cause, a pressman will be able to handle most printing problems.

## Printing Unit

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### Problem:

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#### Blinding:

Parts of image not printing.

#### Catch-Up:

Radial band of ink in non-printed areas.

#### Fill-Up:

Type or halftone screens plugging with ink.

### Probable Cause:

---

1. Weak or worn image on plate.
  2. Ink dried on plate.
  3. Dampener solution too acid.
  4. Plate or blanket over-packed.
  5. Form roller settings too heavy.
- 

1. Not enough dampener solution.
  2. Dirty or dry dampener solution.
  3. Areas of dampener form rollers not touching the plate or ink form set too tightly on one end.
- 

1. Too much ink.
  2. Greasy or dirty ink.
  3. Form roller setting too heavy.
  4. Plate and blanket over-packed.
  5. Not enough dampener solution.
  6. Worn plate (check plate surface for scratches, burnishing).
-

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**Problem:****Probable Cause:**

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**Graininess:**

Grainy, gray or weak printing.

- 
1. Not enough ink.
  2. Not enough impression.
  3. Glazed blankets.
  4. Weak or worn image on plate.
  5. Weak ink.
  6. Form roller setting too light.
- 

**Picking and Hickies:**

White spots in solid areas and black spots in white areas on printed page.

- 
1. Ink too stiff or tacky, pulling particles of paper from web.
  2. Excess lint on paper stock.
  3. Foreign particles in ink.
  4. Dirty inking or dampener rollers.
  5. Dirty blankets.
  6. Tacky blanket surface (replace with new blankets).
- 

**Scumming:**

Area of non-printed surface taking ink.

- 
1. Dampener setting too low or insufficient solution in fountain.
  2. Dirty dampener rollers.
  3. Incorrect pH dampener solution.
  4. Too much ink.
  5. Form rollers incorrectly set, causing bouncing and skidding.
  6. Incorrectly developed plate.
-

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**Problem:****Probable Cause:**

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**Slurring:**

Bands of blurred image appearing across the web.

1. Improper dampener solution.
2. Ink dried on plate, or ink too stiff.
3. Blanket under or over-packed.
4. Form rollers incorrectly set
5. Roller sockets or bearings worn.
6. Loose blanket.
7. Web guiding roller not turning freely.
8. Insufficient tension or unit-to-unit color lead.

**Streaking:**

Streaks appearing across the web.

1. Ink form or dampener form rollers set too lightly.
2. Hardened or glazed form rollers, use Varn "Revital" or equivalent to renew surface.
3. Poor balance between ink and dampener solution.

**Stripping:**

Uneven printed image, rollers refusing to take ink.

1. Inking rollers glazed.
2. Dampener solution too strong and emulsifying ink.
3. Improper ink formulation.
4. Incorrect roller setting.

**Tinting:**

Light tint or wash appearing over the entire sheet.

1. Too much dampener solution.
  2. Greasy ink.
  3. Thin ink.
  4. Incorrect pH dampener solution.
  5. Improperly coated or developed plates.
-

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# Web Travel

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## Problem:

---

## Probable Cause:

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### 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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**Problem:****Probable Cause:**

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**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.

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**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.

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**Uneven First Fold**

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

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**Uneven Quarter-Fold**

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

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**Web Tearing at R.T.F. Trolleys**

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

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**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.
-

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**Problem:****Probable Cause:**

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**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.

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**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.

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**Problem:****Probable Cause:**

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**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.



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# **WebPress** *Revolutionary*<sup>™</sup>

## Controls



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# Press Drive Controls

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## 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 mode is then selected, 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.

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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

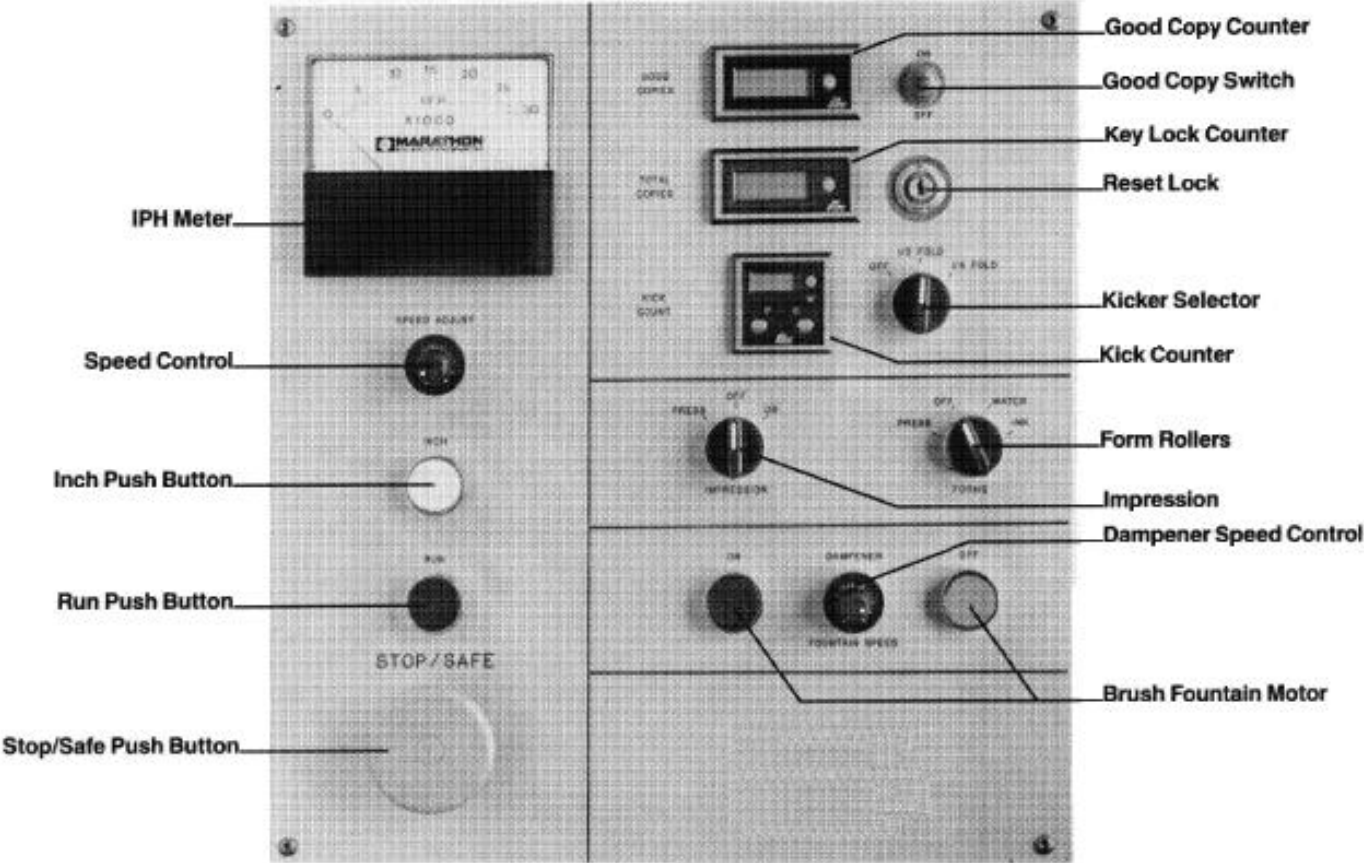
the drive control to electronically disconnect the speed adjust potentiometer from the power unit. The press will slow to a pre-adjusted value and then continue to operate at this speed until the **RED STOP / SAFE** push button is released. To resume normal operation, the power unit must be stopped and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

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.

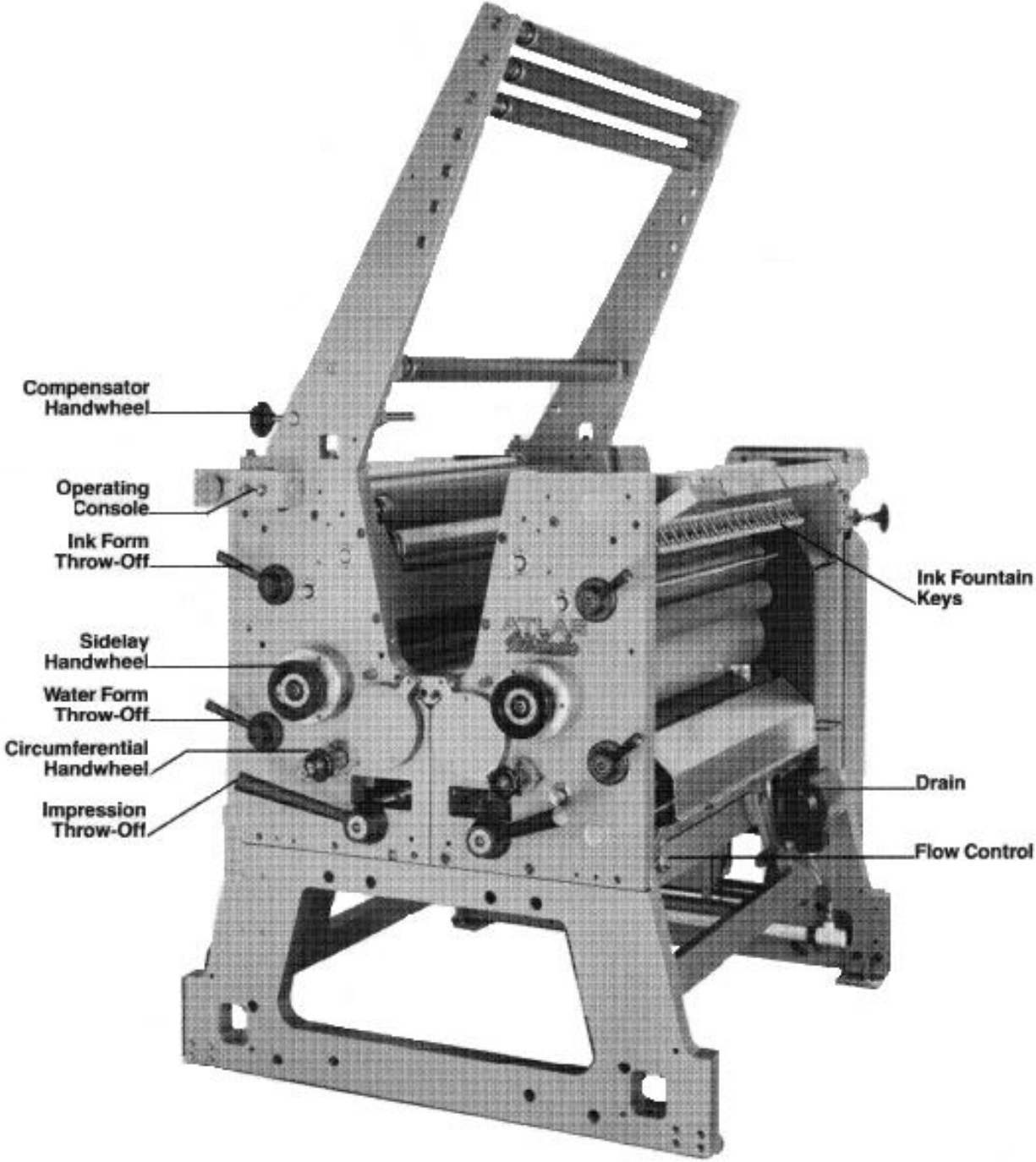
Controls for the entire press are located at an operator's station at the folder. The function of each control is listed below.

<b>CONTROL</b>	<b>COLOR</b>	<b>LOCATION</b>	<b>FUNCTION</b>
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: <b>clockwise to increase, counterclockwise to decrease</b>
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 <b>clockwise</b>
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: <b>clockwise to increase, counterclockwise to decrease</b>
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	<b>Clockwise</b> to engage ink & water forms; <b>counterclockwise</b> to disengage forms

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# Unit Operating Side

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# Unit Operating Side Controls

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## Compensator Handwheel

Registers page cutoff when running directly from unit to the folder. Turning the handwheel **clockwise increases** the top margin of the page.

When running from one unit to another, the handwheel provides additional circumferential color register.

## Operating Console

The stop/safe pushbutton and dampener feed controls are located in a convenient station mounted on the unit.

## Ink Fountain Keys

Move the fountain blade to control the ink flow. Turning the keys clockwise reduces the ink flow.

**Note: Never turn tight to roller or the blade will score the roller.**

## Ink Form Throw-Off

The handle is turned down to put the ink form rollers in contact with the plate (**ON**) and up to lift it from the plate (**OFF**).

## Water Form Throw-Off

The handle is turned down to put the water form roller in contact with the plate (**ON**) and up to lift it from the plate (**OFF**).

## Water Feed Control

A speed control/shutoff for the dampener fountain pan rollers is located in the unit operating console.

The speed control is used to adjust the amount of solution fed to the oscillator and plate. **Clockwise** rotation **increases** dampener feed.

**Counterclockwise** rotation **decreases** speed of fountain roll and turns off brush in furthest counterclockwise position.

## Impression Throw-Off

The handle is moved down to put the blanket and plate cylinders in contact (**ON** impression) and up to move them apart (**OFF** impression).

## Running Sidelay Register Handwheel

There is one handwheel for each plate cylinder. Turning the handwheel moves the image on the web transversely up to 1/8" in either direction from the center. **Clockwise** rotation moves image **toward** operating side. Total maximum rotation is approximately 4 turns.

## Running Circumferential Register Handwheel

One handwheel is provided for each plate cylinder, located directly below the sidelay handwheel. Turning the handwheel moves the image on the web up to 1/10" in either direction from center to or from the pins (approx. 6 3/4 turns). **Clockwise** rotation of the handwheel will move the image **away** from the folder pins.

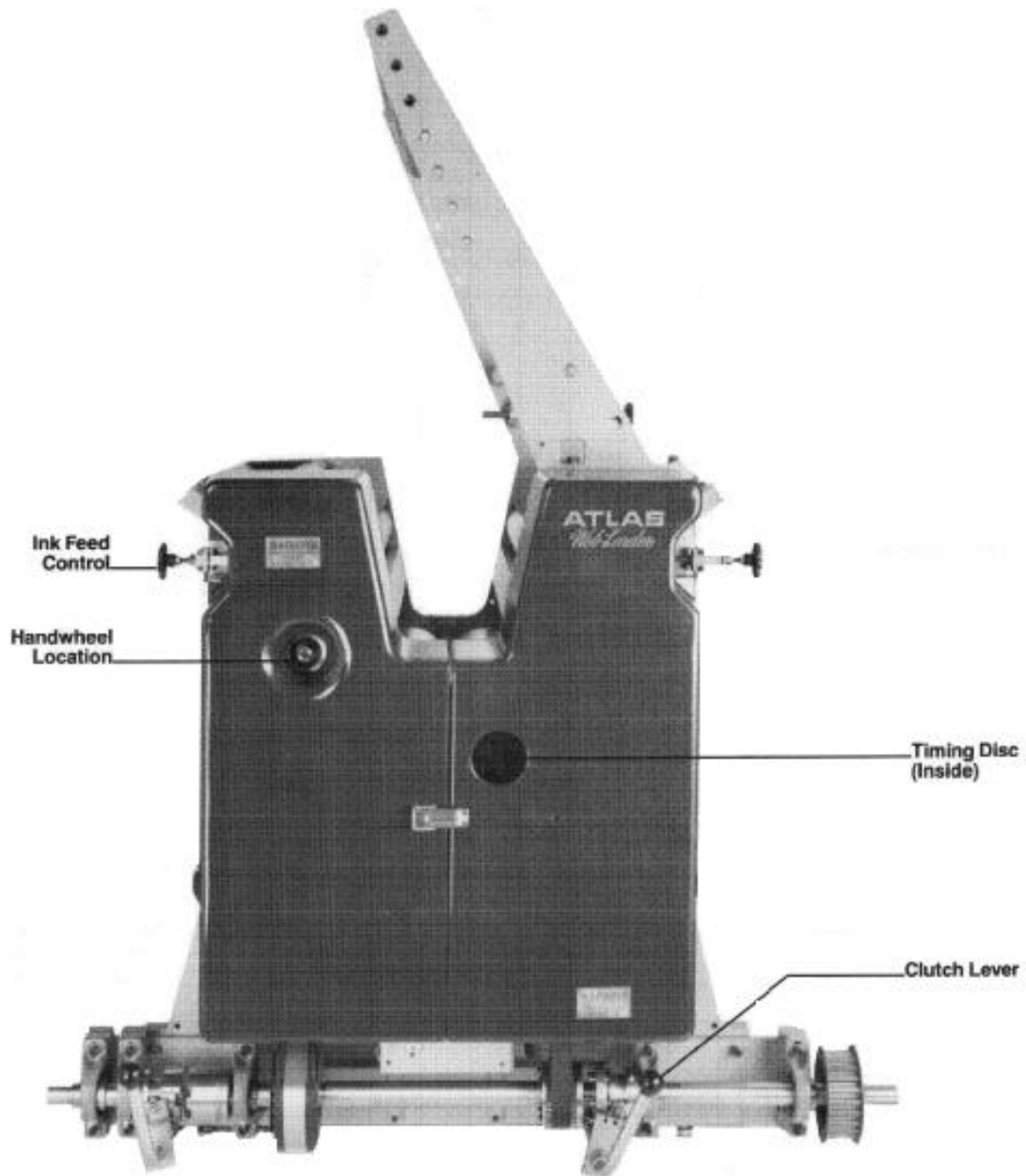
## Pneumatic Throw-Off (Optional)

Impression and form roll throw-off are controlled at the operator station when the selector switch on the unit is set to "Folder" designation. These throw-offs also can be engaged independently at each unit if desired.

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# Unit Drive Side

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# Unit Drive Side Controls

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## Ink Feed Control

One hand knob is provided on the drive side of each roller for **ON/OFF** and fine adjustment of ink feed across the entire foundation.

Press side thumb button in side housing and pull out hand knob to engage supply. Fine adjustment to feed can be further obtained by turning the hand knob. **Clockwise** rotation **decreases** ink feed. Push in hand knob to disengage supply.

## Unit Timing

A timing disc is fastened at the end of the blanket cylinder on the gear side of the unit. On the face of the eccentric surrounding the disc is

a timing mark. The unit clutch can be engaged only when the timing mark is coincident with one of the numbered lines on the disc.

## Drive Clutch

Push in and move lever to the left to engage drive shaft to unit. (Push in and move to the right to engage a Quadra-Color unit.)

## Drive-Side Handwheel

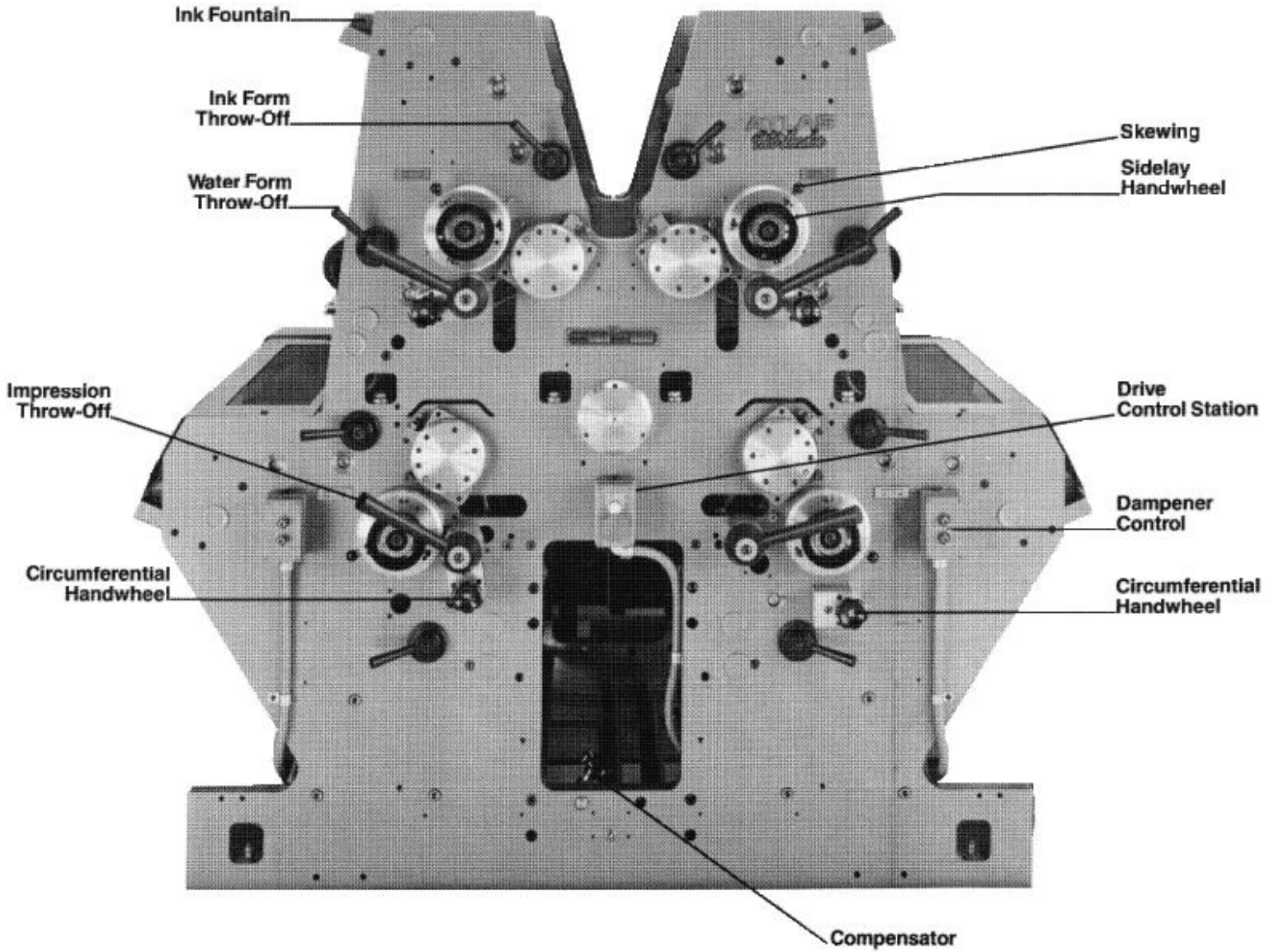
Provides a means for manual rotation of unit for independent changing, gumming, or cleaning plates and blankets, etc.

**Caution: Do not install or operate handwheel with drive clutch engaged.**

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# Quadra Color

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# Quadra-Color Controls

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## Operating-Side Controls

### Impression Throw-Off

One lever is provided below each cylinder. Moving the lever down will throw on both blanket and plate cylinder impression.

### Water and Ink Form Throw-Off

Moving the handles down engages the form rollers with the plate cylinders.

### Running Circumferential Register Handwheel

One handwheel is provided for each plate cylinder, located on a boss adjacent to the side-lay handwheel. Turning the handwheel moves the image on the web up to 1/10" to or from the pins (approximately 3/4 turn).

**Clockwise** rotation of the handwheel will move the image **away** from the folder pins.

**NOTE: The page two quad in a back-to-back set rotates counterclockwise; hence the circumferential control operates in the opposite sense from the page one unit.**

### Running Sidelay Register Handwheel

One handwheel is provided for each plate cylinder, located on the large boss at the end of the plate cylinder. Turning the handwheel moves the image sideways up to 1/8" in either direction from center.

**Clockwise** rotation moves the image **toward** the operating side.

## Skewing

One hub is provided for each plate cylinder, located behind the sidelay handwheel.

Adjustment for skewing the plate cylinder is obtained by loosening three hex head screws on the hub face and rotating the hub by the hand knobs provided. Retighten the three hex head screws on completing the adjustment.

**Clockwise** rotation of the hub will move the image at the operating side **toward** the lead edge and folder pins.

**NOTE: A skewing adjustment is usually made only at the time of installation to insure squareness. Altering this adjustment will change the form roller and plate-to-blanket settings on the operating side. Maximum adjustment equals .024" or .012" each side of center.**

## Drive Side Controls

### Drive Clutch

Push in and move to right to engage drive shaft to Quadra-Color unit.

### Drive-Side Handwheel

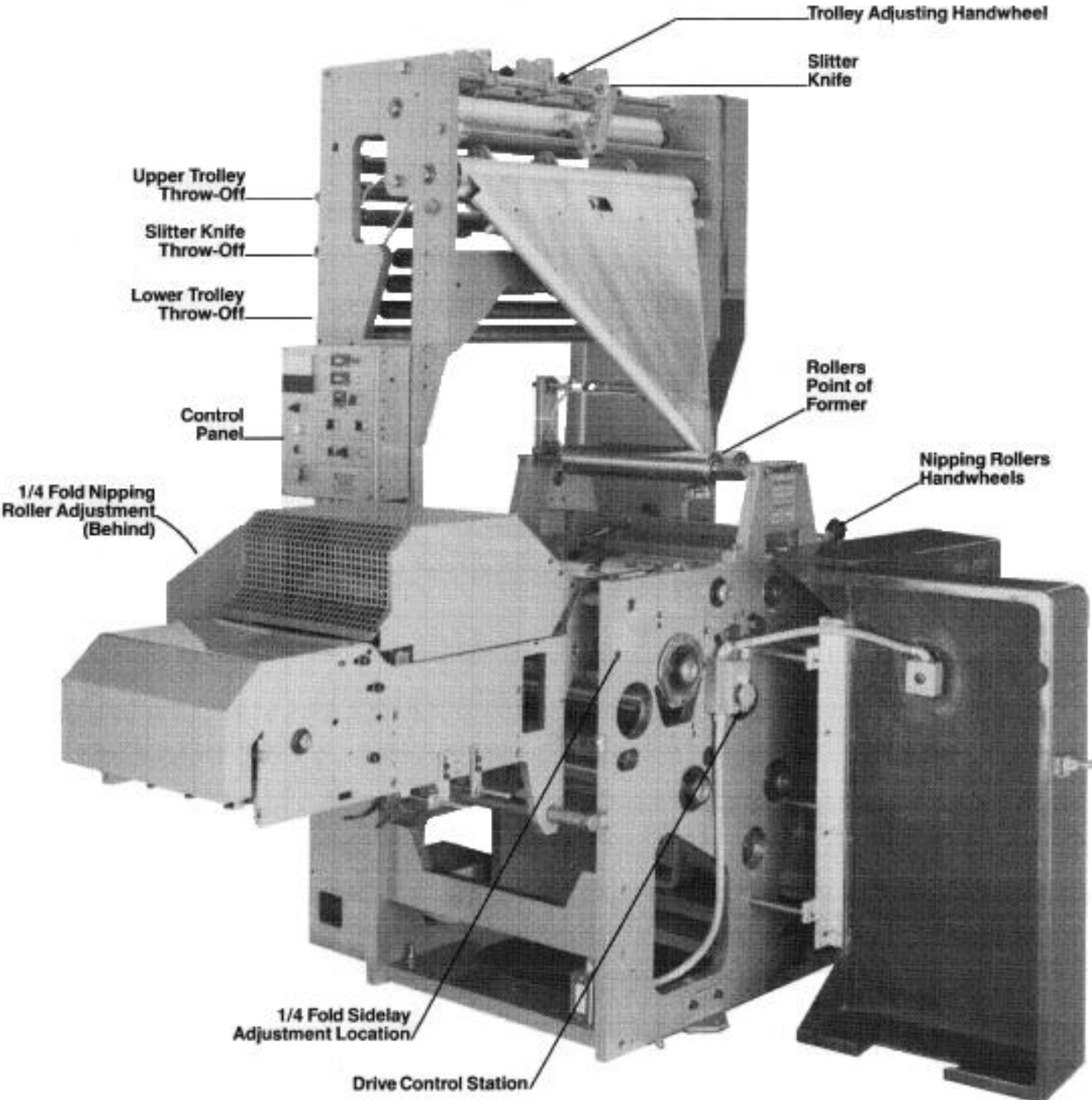
**CAUTION: Do not install or operate handwheel with drive clutch engaged.**

### Unit timing

A timing disk is fastened at the end of the lower right-hand blanket cylinder on the gear side of the unit. On the face of the eccentric surrounding the disk is a timing mark. The unit clutch can be engaged only when the timing mark is coincident with one of the numbered lines on the disk.



# Folder



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# Folder Controls

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## **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 detent.

## **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 thicknesses 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 rear 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.

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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.

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# Atlas Folder

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## Double Parallel to Half Fold

- 1) Remove jaw cylinder brush assembly
- 2) Remove 1<sup>st</sup> jaw tucker blade assembly and replace with a filler bar.
- 3) Install jaw cylinder stripper assembly and tighten strippers.
- 4) Disengage 1<sup>st</sup> 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).

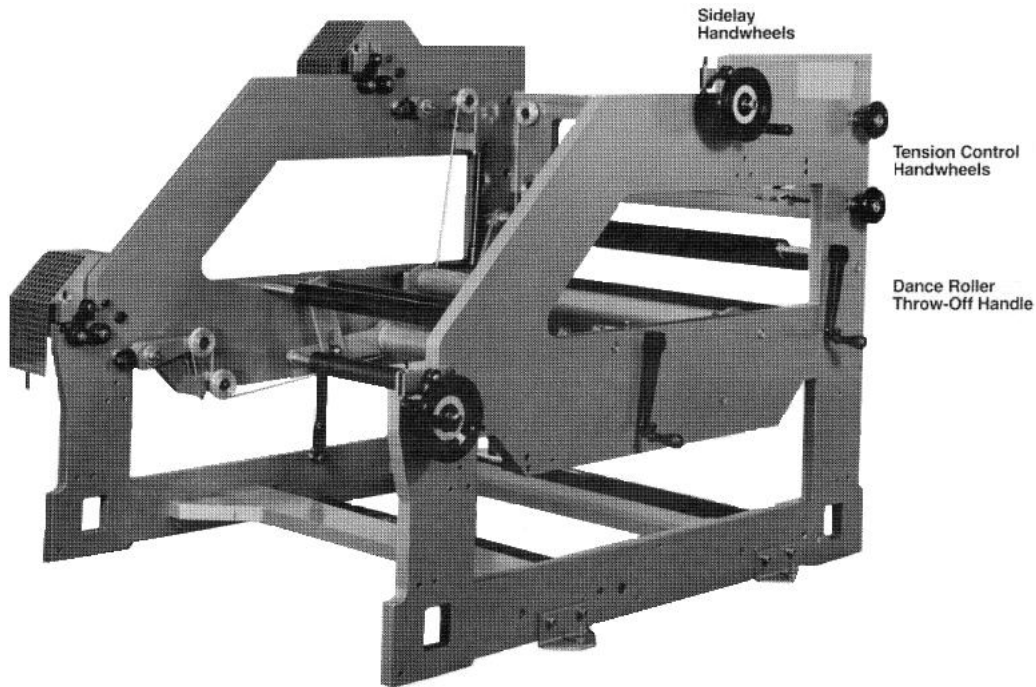
## Half Fold to Double Parallel

- 1) Disengage top tapes and tie up out of way.
- 2) Remove 1<sup>st</sup> jaw stripper assembly.
- 3) Remove 1<sup>st</sup> jaw filler bar and replace with tucker blade assembly.
- 4) Turn over machine by hand and check timing between 1<sup>st</sup> and 2<sup>nd</sup> jaw cylinders.
- 5) Engage cam follower arm on 1<sup>st</sup> 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 1<sup>st</sup> jaw cylinder

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# Rollstand Controls

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## General Information

Proper web tension is essential to maintenance of color and cutoff register, proper tracking of webs through the press, and uniform folding. For any given tension setting, the amount of brake being applied is dictated by the position of the dancer roll. When the dancer is all the way down, the maximum amount of brake is being applied. When the dancer is in its uppermost position, no brake is being applied. The tension control handwheel found on the operator side controls the amount of resistance the web must overcome to raise the dancer and diminish the amount of brake being applied.

## Rollstand Sidelay Handwheel

Controls the sidelay position of paper roll and press web approximately  $\pm \frac{1}{2}$ ". Clockwise rotation of the handwheel moves the roll toward the drive side.

## Dancer Roller Throw Off Handle

Lifting the handle releases the brake for paper roll changes and press web-up. Moving the handle to the down position engages the dancer roller and brake for tension control during a run.

## Tension Control Handwheel

Regulates the amount of tension applied to the web through the dancer roller and disc brake assembly. Clockwise rotation increases web tension.





Makeready





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# Preparation

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## Disengaging a Unit

1. Stop the press with unit timing marks aligned by observing that the folder jaw cylinder is in the vertical position; release lever.  
Put the press on **SAFE**.
2. Push in shift lever of drive clutch and move to the right until it latches into the "out" position.

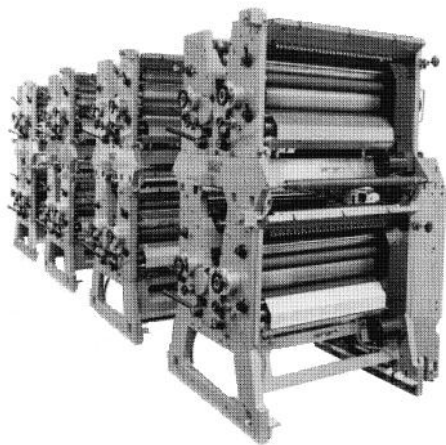
## Engaging a Unit

1. If timing marks are misaligned, use driveside handwheel to rotate unit until timing marks are aligned.
2. Push in shift lever of drive clutch and move to the left as far as it will go; release lever. Be sure clutch dogs are fully engaged and lever is latched. It may be necessary to rotate handwheel slightly to secure engagement.

## Remove Handwheel!

## Stacked Units

The upper unit is engaged by use of a clutch on the vertical drive. Push in the shift lever and move up as far as it will go. To disengage, push in and move down as far as it will go.



## Silencing Printing Couples on Web Leader Perfecting Units

When neither printing couple (neither side of a unit) is to print during a particular run, the entire unit should be silenced by disengaging the unit drive disconnect clutch.

When one printing couple (one side of the unit) is to print during a particular run and the other printing couple is to be silenced (not printing), good pressmanship requires that the following steps be taken:

1. The ink form rollers should be thrown **OFF**.
2. The ink fountain should be shut off using the ink feed control shutoff.
3. A lubricant must be applied to the rollers in the non-printing inking arrangement for long runs. Use a material which is compatible with your ink.
4. The water form roller should be thrown **OFF**.

Best printing results will be obtained by using a clean dummy plate on the non-printing plate cylinder rather than running without a plate on the cylinder.

## Running Narrow Web

Apply lubricant such as Anchor® roller lube to the ends of the rollers where ink is not normally transferred to the plate. This helps to eliminate ink accumulation and resultant pick-out of the roller ends when consistently running webs narrower than the capacity of the press equipment. Your ink supplier can provide a proper lubricant that is compatible with oils used in his ink and will not affect printing quality.

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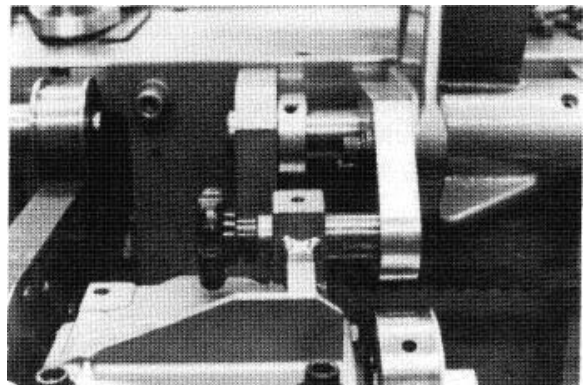
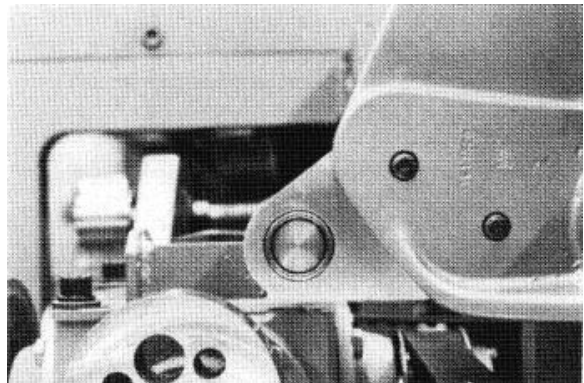
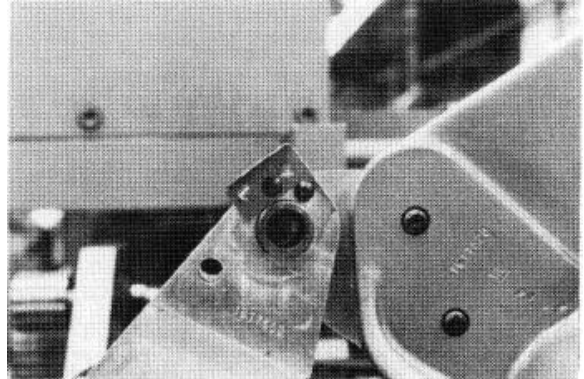
## Loading The Rollstand

1. Insert the shaft into the paper core.  
**Caution: ALWAYS insert shaft from correct side of roll to insure proper direction of unwind for the rollstand position being loaded.**
2. Insert the expanding chuck on the shaft and in the operating-side paper core. Lock the chuck setscrew. Rotate in direction opposite to unwind rotation using wrench to insure gripping of core.  
**Caution: Do NOT lift roll unless it is centered and balanced beneath the yoke. When lifting one roll over another, be sure to lift high enough to completely clear the lower roll.**  
**Keep hands clear of rollshaft when maneuvering into place on the rollstand. 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.**
3. Using the hoist, lift the paper roll into position on the rollstand so that the shaft gear engages the brake gear.
4. Measure distance from edge of roll to inside of frames to insure that the width being used is correctly centered.
5. If the roll is incorrectly positioned, turn the sidelay handwheel until the roll is centrally located. If the change needed is beyond the range of the sidelay adjustment, the chucks were not correctly located and must be shifted on the shaft.

## 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.

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# Roll Splicing

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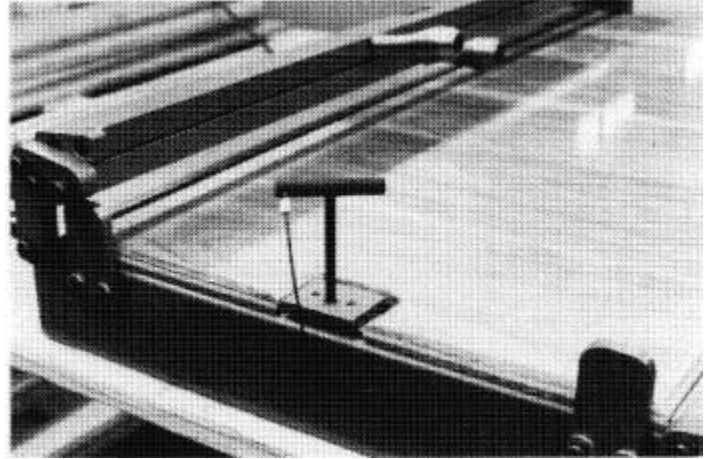
1. Throw **OFF** the rollstand handle to disengage the brake.
2. Remove the core of the expired roll from the rollstand and mount the new roll, tearing a straight edge on the paper after removing any damaged wraps.
3. Bring the trailing end of the web still in the press back over the top of the new roll, tearing a straight edge in it long enough to overlap the leading edge of the new roll. Apply splicing tape or glue to the trailing edge.

**Note: DO NOT overlap splicing tape. More than one thickness will damage the blankets when the splice passes between the cylinders.**

4. Tape or glue the end of the new web onto the old web.
5. Throw **ON** impression.
6. Slowly engage the rollstand handle to activate the brake.
7. Run the press at slow speed until the splice passes through the unit.

## Bending Plates

1. Line up scribe lines on image side of plate with scribe lines on bender – with edge of plate against the side guide. If plate bender is installed with register pins, locate plate over holes and insert pins.
2. Bend and punch lead and trail edges by moving bending bars down as far as they will go, then returning to vertical.



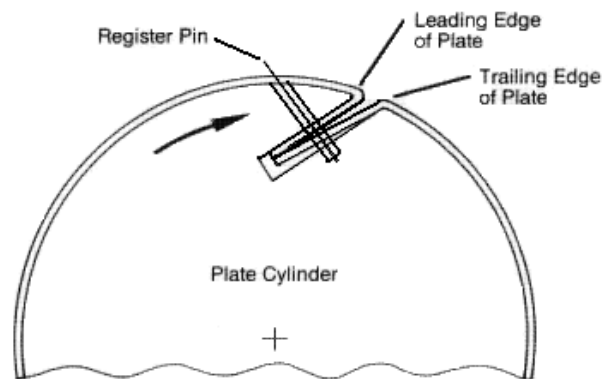
## Dampener Feed

1. Mix solution according to supplier's instructions and check for proper pH.
2. Check fountains to be sure overflow fittings are clear, then start pump.
3. The dampener feed for each fountain is adjusted by the valve on the supply side, positioned on the underside of the fountain pan.
4. Open the valve to allow a slight excess of solution to overflow the drain back to the circulators, making sure loose bits of paper and lint do not clog the outlet.
5. Water stops are provided to keep water from entering the ink train when half webs or narrow-width webs are to be run. The water stops mount on the lip of the water pan and are secured with thumbscrews.

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## Installing a Plate

1. Put press on **SAFE**; declutch unit.
2. Rotate handwheel **counterclockwise** until lockup slot is near the top of the plating area, about 3" below the first ink form roller.
3. Insert the leading edge of the plate into the slot, starting with a corner. Urge the edge of the plate into the slot, being sure the register notch goes astride the register pin in the center of the cylinder. Check that the plate is hooked on the nose properly.



4. Rotate the handwheel **counterclockwise** while maintaining hand tension on the plate until lockup slot is again accessible.
5. Throw the ink form **ON**.
6. Insert one corner of the trailing edge of the plate into the cylinder slot and carefully slide into slot with thumb pressure across the cylinder face to the opposite side, seating register notch on the cylinder pin.
7. Throw ink form **OFF** and urge plate down until snug. Repeat for other plate cylinder.
8. Rotate handwheel to line up timing marks on unit and engage clutch.

### **Caution:**

**Remove handwheel immediately after engaging clutch.**

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# Direct Printing

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## Terminology

When printing “direct lithography,” one unit can be used to print two colors across the entire width of one side of a web.

The web passes between the blanket cylinders in the normal manner, then wraps one of the blanket cylinders to pass between it and the adjacent plate cylinder.

Only one of the blanket cylinders prints on the web; the other non-printing blanket cylinder acts as a support for the web as it is printed directly by the plate.

## Burning a Reverse Image

Because the web is printed directly from the plate, it is necessary that the image on the direct printing plate be reversed to produce a right-reading print.

To produce a reversed image of coarse line work, an ordinary negative may be flopped without a significant amount of image fuzziness (which can result when the emulsion side of the negative is not adjacent to the plate).

For fine line works and halftones, two methods of reversing the image are recommended.

## Method 1

Reverse the film in the camera before exposure, so that the emulsion faces away from the copy board.

## Method 2

Use a duplicating film to produce a negative from a negative, or a positive from a positive in one step. Exposure, and development of this film is not critical, it maintains a high degree of fidelity.

### Registering Direct Printing Plates

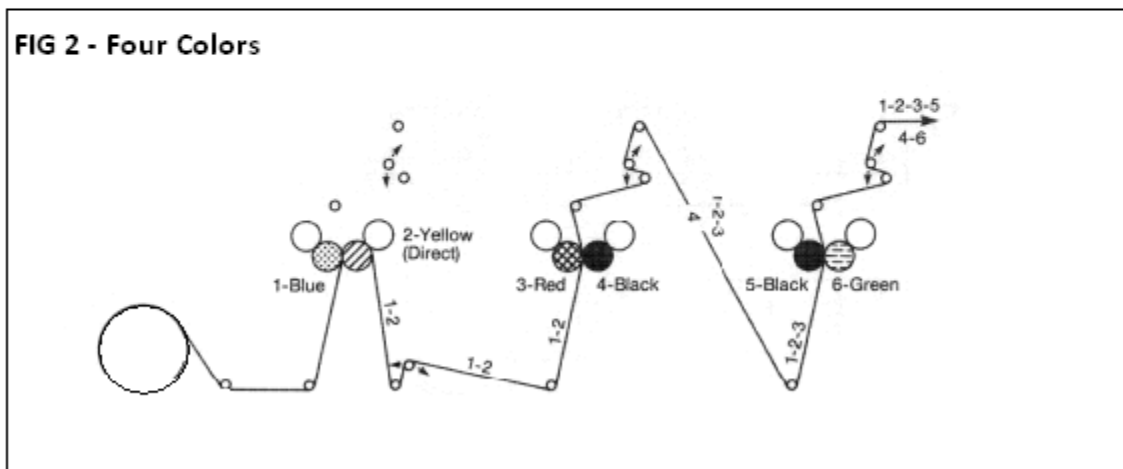
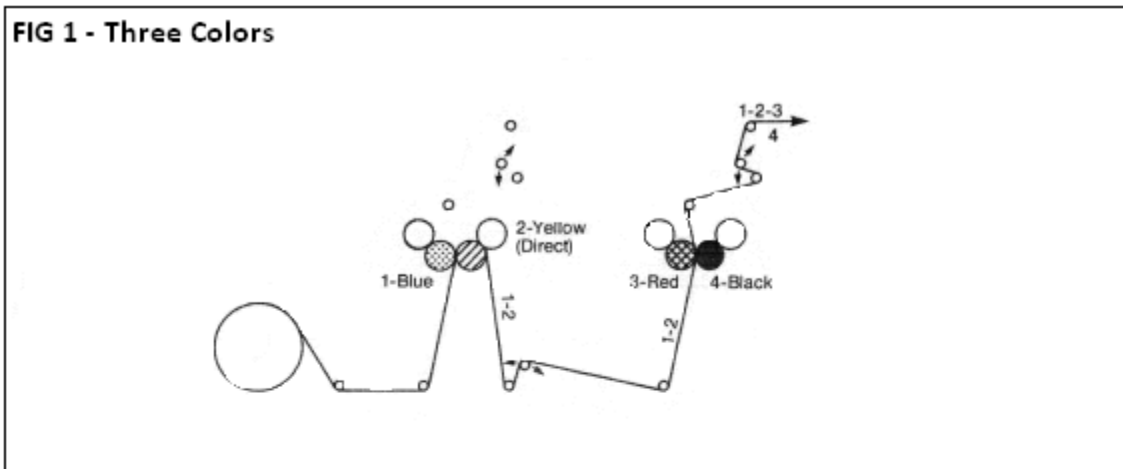
Running side-register handwheels are provided for both plate cylinders on a unit, permitting side register changes across the web up to  $\pm 1/8''$ . To supplement the standard side and circumferential running plate registers and to avoid the necessity for retiming, an optional direct litho-compensator may be purchased to fit in the lower unit base frame (usually fitted to unit closest to the rollstand) to increase color-to-color register range between the direct printed image from the first unit and the offset image from the second unit.

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## Direct Printing Web Leads

Suggested web leads for direct printing are illustrated as follows:

FIG 1 shows a lead for printing three colors, and FIG 2 shows leads for printing four colors on one side of the web.



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# Web Travel

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## Problem:

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## Probable Cause:

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### 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.
-

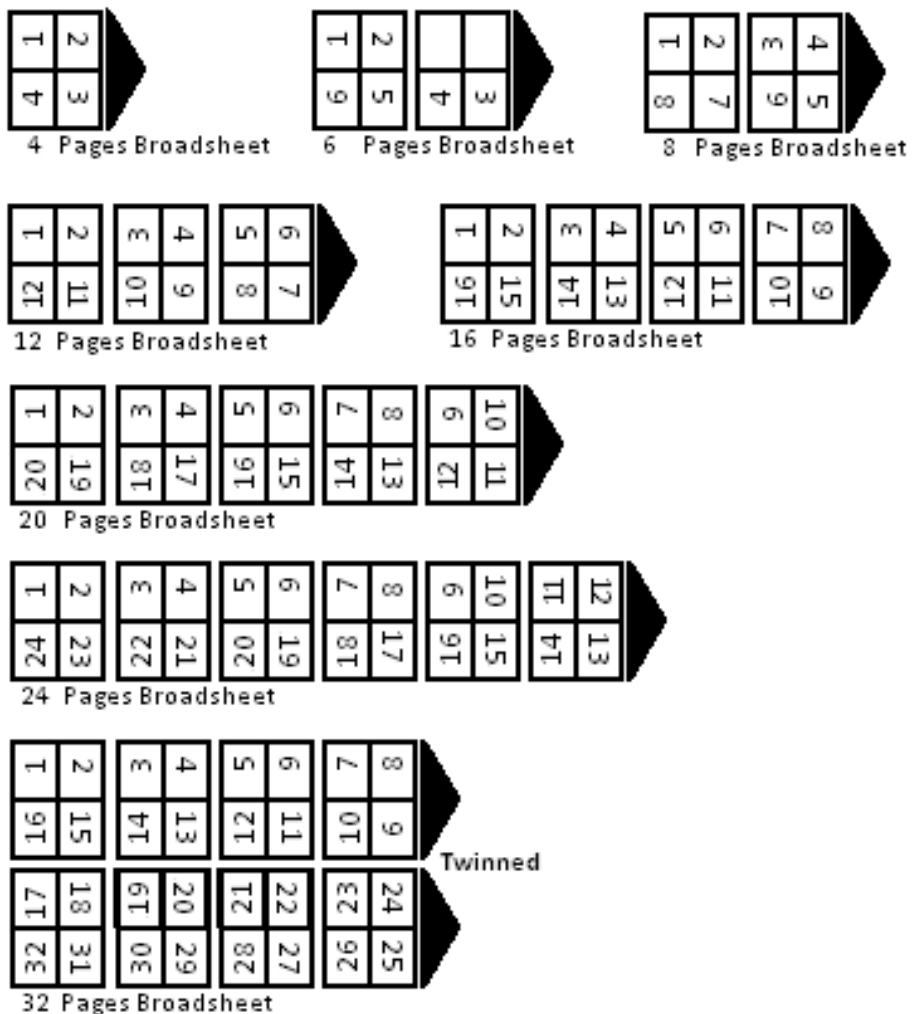


# Imposition

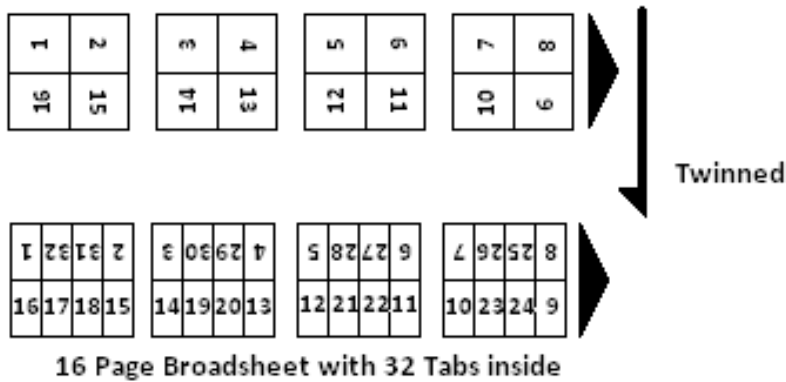
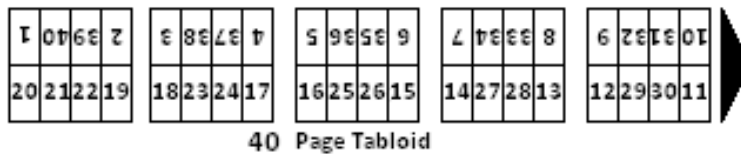
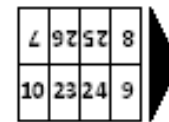
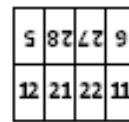
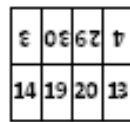
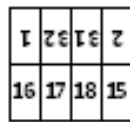
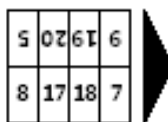
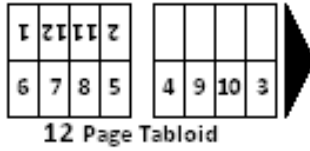
## Page Locations

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.

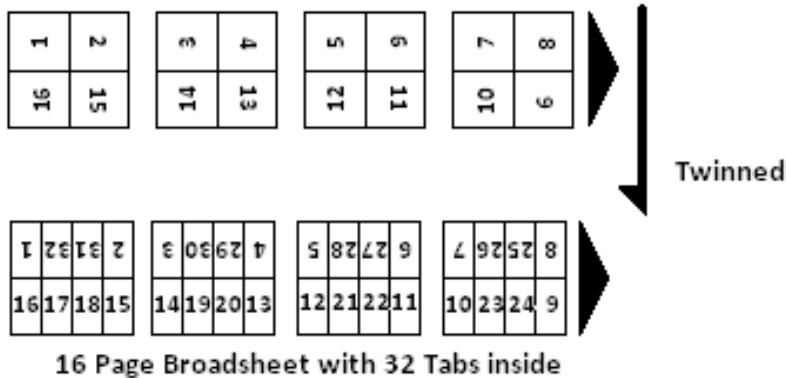
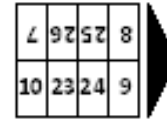
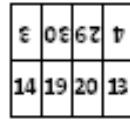
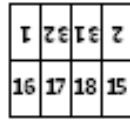
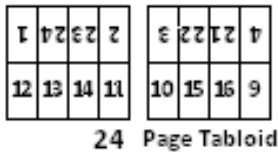
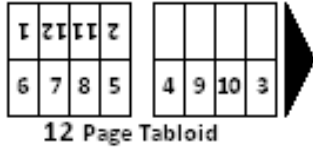
### Broadsheet Page Locations



# 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	
1	8	8	1
2	7	7	2
3	6	6	3
4	5	5	4

8 Page Double Digest

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

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	2	11	22



Running



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# Running The Press

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## Setup

1. Engage the units required for the run; disengage those not required.
2. Fill the ink and dampener fountains at units in use.
3. Install dampener stops if and where necessary.
4. Web the press.
5. Adjust the folder for product width.
6. Center cylinder side register, plate the press.

## Ink Feed

1. Before starting a run, fill all ink fountains to be used. Agitate any old ink remaining.
2. Install fountain dividers as appropriate for narrow or half webs.
3. When running half-width rolls, shut off ink flow on the unused portion of the unit by turning in the fountain screws until the ink flow is at a minimum **without scraping the blade on the roller**. Absence of pickup roller pattern on the fountain roller ink film indicates a shut-off condition.
4. Apply roller compound or other suitable lubricant to prevent swelling and premature wear of any inking roller that will not be fed ink.

## Initial Start-Up

1. Throw **OFF** water and ink form rollers.
2. Disengage dampener feed.
3. Wipe the plates with a damp sponge to remove gum.
4. Start the press; run at 2,000 i.p.h.
5. Engage the water and ink feeds – with maximum water feed.
6. Throw **ON** the water form rollers to moisten plate; then throw **ON** the ink form rollers. Adjust water solution valve for even flow.
7. Examine the running webs and make preliminary adjustment to ink, dampener, register and tensions.
8. Check the product for page positions and cutoff, correcting as necessary.
9. Run the press up to speed and make fine adjustments as required.

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## During The Run

1. Make constant checks of the product.
2. Make adjustments to ink and dampener feeds as required.
3. Keep ink and dampener fountains full.
4. Keep the ink worked at all times.
5. Do not allow contaminants to enter fountain solution.

## To Stop

1. Shut off dampener brush motors, shut off dampener fountain motors.
2. On each unit, throw **OFF** the ink and dampener form rollers – in that order.
3. Slow down and **STOP THE PRESS** on the mark, put on **SAFE**.
4. Throw **OFF** impression.

**Caution: Disengage any units to be worked on.**

## To Start

1. Throw **ON** impression.
2. Throw **ON** the dampener form rollers.
3. Start the press and run it up to speed.
4. Start the dampener system.
5. Throw **ON** the ink form rollers.

## At The End of Each Day

1. Slow down the press.
2. Shut off dampener brush motors, shut off dampener fountain motors.
3. On each unit, throw **OFF** the ink and dampener form rollers – in that order.
4. Disengage ink feed.
5. Let the press run for a few impressions to clear any surplus ink off the blankets.
6. **STOP THE PRESS** on the mark; put on **SAFE**.
7. Throw the units **OFF** impression.
8. Turn **OFF** dampener pump.
9. Wash and gum the plates that are to be reused.



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# Cleanup

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**Note:** If the plates are left on the cylinder for more than two days, solution accumulated beneath the plate may damage the cylinder surface.

1. Attach the wash-up device to the dead shaft of the rubber ink transfer rollers, above the copper vibrator drum.
2. Start the press at slow speed and apply solvent to the vibrator drum.
3. When the rollers are dry **STOP THE PRESS** and remove the wash-up device.
4. Wash all blankets used for the run.
5. Remove the plates from the press and wipe the cylinders with lightly oiled cloth.
6. Wipe drive side plate cylinder journals clean.
7. Wipe down the entire press.
8. Wipe out fountain trays. Remove all objects and tools and put them in their proper place.

**Caution:** Do not leave tools, wash-up devices, or cleaning materials on the press.

## Removing a Plate

1. Put press on **SAFE**; declutch unit.
2. Install handwheel.
3. Rotate handwheel **counterclockwise** to obtain access to plate cylinder slot.
4. Using plate remover provided, remove trailing edge and lift out of slot. After long periods, gum may clog slot and prevent easy removal; clear slot with a metal shim or similar tool.
5. Turn **clockwise** to remove plate.

**Caution:** Remove handwheel immediately after use.





## Perfecting Unit Maintenance



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# Maintenance Interval Guide

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## Service At:

### 50,000 copies

1. Wash blankets
2. Wash web guide rollers

### 200,000 copies

1. Grease unit and folder gears; check auto lube unit
2. Grease roll shaft gears

### 300,000 copies

1. Grease All Equipment
2. Clean former

## Weekly

1. Drain and clean water system
2. Wash up ink train
3. Grease drive lines
4. Check dampener covers and replace as necessary
5. Wipe press clean

## Monthly

1. Clean Velcro covered rolls
2. Check oil level in all gear boxes
3. Clean out ink fountains
4. Check brake pads, reset as required

Set up weekly schedule to thoroughly check roller settings, pressure settings, blanket heights, blanket tightness, bolts and screws, lubrication, etc. Set this schedule to cover all equipment each month. A typical schedule follows:

## Weekly Schedule – Perfecting Units, Folder and Rollstand

### Week 1, 3, 5, ETC. Perfecting Units

#### Units – Check:

1. Blanket height with gauge
2. Pressure settings
3. Roller settings
4. Blanket tightness and condition
5. Grease fittings
6. Bolts and setscrews
7. Clutch handle assembly
8. Drive belt tightness and condition
9. Clean pipe rollers
10. Clean blankets

### Week 3, 4, 6, Etc. Folder and Rollstands

#### Folder – Check:

1. Belts for tightness and condition
2. Clean tapes
3. Clean R.T.F. rolls
4. Clean pipe rollers
5. Clutch assembly
6. Gear boxes
7. Bolts and setscrews
8. Clean cylinders and drums
9. Trolley wheels
10. Slitter

#### Rollstands – Check:

1. Bolts and setscrews
2. Set brakes if needed
3. Clean pipe rollers
4. Oil level in hoist

# Specifications

## Web Atlas Presses

Many runs that are not possible on competitive presses are commonplace on Web Atlas installations. One of the major features that makes these unique runs possible is that the size of the plate and blanket cylinders, as well as their center to center distances, can be easily changed by the slight amounts necessary to balance web tensions on complicated web leads. The Web Atlas cylinder sizes and impression settings are adjustable, not locked-in by bearers or other design limitations. The following table will be filled by Web's installer after he tests and balances out the most complicated web leads your production requirements and press configuration anticipate. Subsequent changes, if any, should be noted in the table for easy reference.

**A Special Word of Caution** – any operating adjustment inherently involves the possibility of incorrect adjustment and consequent poor performance. Experience has shown that the most usual cause of web tension problems is the failure of pressman to understand **IT IS ESSENTIAL THESE SETTINGS BE CHECKED AND MAINTAINED**. If you experience any web tension problems, check these settings first. Metal-to-metal settings (clearances between cylinders) are made without plates or blankets installed. Note and follow the specific instructions elsewhere in the manual.

### Perfecting Units

Metal-to-Metal Settings:

Plate cylinder to blanket cylinder	.075"
Blanket cylinder to blanket cylinder	.135"
Blanket height on cylinder	.072"

### Quadra-Color Units

Metal-to-Metal Settings:

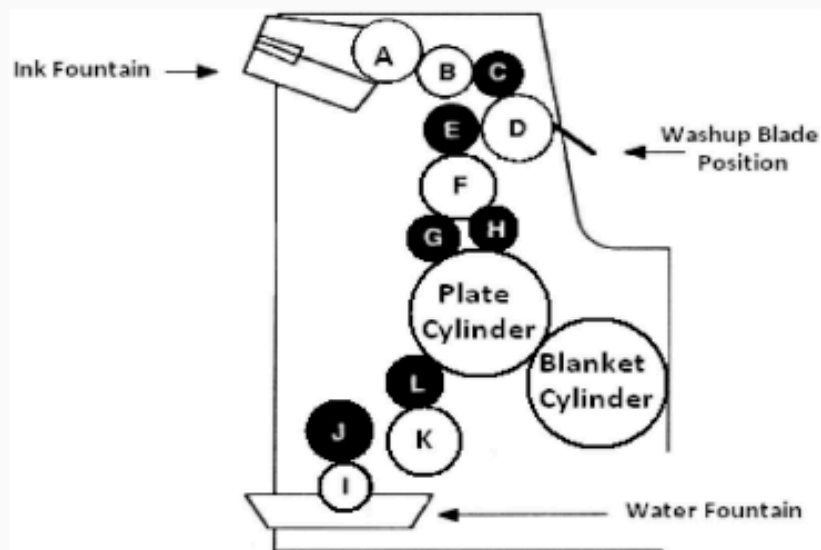
Plate cylinder to blanket cylinder	.075"
Blanket cylinder to drum	.135"
Blanket height on cylinder	.073"

**Note: Blanket height is measured with a reliable blanket height gauge after installation and short run-in blanket. Combined thickness of blanket (usually .065"), and packing (usually .008" for perfecting units, .010" for Quadra-Color units) will be about .002" more than height gauged after run-in due to the normal pull-down of compressible blankets.**

Unit No. _____ P/B _____ B/B _____ Hgt _____	Unit No. _____ P/B _____ B/B _____ Hgt _____	Unit No. _____ P/B _____ B/B _____ Hgt _____	Unit No. _____ P/B _____ B/B _____ Hgt _____	Unit No. _____ P/B _____ B/B _____ Hgt _____	Unit No. _____ P/B _____ B/B _____ Hgt _____
Unit No. _____ P/B _____ B/B _____ Hgt _____	Unit No. _____ P/B _____ B/B _____ Hgt _____	Unit No. _____ P/B _____ B/B _____ Hgt _____	Unit No. _____ P/B _____ B/B _____ Hgt _____	Unit No. _____ P/B _____ B/B _____ Hgt _____	Unit No. _____ P/B _____ B/B _____ Hgt _____

# Roller Specifications

Roller	Type	Part #	Diameter	Surface Material *durometer	Set To	Correct Setting and Method
A	Ink Fountain	2514210	4"	Steel	Blade	Snug steady pull with .002" feeler gauge
B	Ink Feed pick-up	514250	3"	Steel	Roller A	Snug steady pull with .003" feeler gauge
C	Ink Transfer	514310	2 -3/4"	Rubber *30-35	Roller B & Osc D	1/4" flat - steady pull on slip sheets or ink stripe observation
D	Ink Oscillator	1514170	4 -3/8"	Copper / Rilsan		No adjustment required (1 pin)
E	Ink Transfer	514370	3"	Rubber *30-35	Osc. D & Osc. F	1/4" flat - steady pull on slip sheets or ink stripe observation
F	Ink Oscillator	3514170	4 -3/8"	Copper / Rilsan		No adjustment required (2 pin)
G	Ink Form	514310	2 -3/4"	Rubber *30-35	Osc. F & Plate Cylinder	1/4" flat - ink stripe observation
H	Ink Form	514640	2 -7/8"	Rubber *30-35	Osc. F & Plate Cylinder	1/4" flat - ink stripe observation
I	Dampener Fountain	1822040	3"	Stainless Steel		No adjustment required
J	Dampener Feed	822200	2 -3/4"	Brush	Roller I	Light uniform contact (Approx 1/8" spread of brush)
K	Dampener Oscillator	3515170	4 -3/8"	Stainless Steel		No adjustment required
L	Dampener Form	515280	2 -7/8"	Rubber *20-25	Osc K & Plate Cylinder	1/4" flat - snug, steady pull on slip sheets



# 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	Grease Fittings	Lubricant	Method
Daily	Brake Gear & roll Shaft Gear		Lubriplate L0152	Apply to gear teeth <b>Caution: Keep grease off disc pads</b>
Daily	Roll Shafts & Cam Followers		Lubriplate L0152	Apply to surfaces
Weekly	Plate & Blanket cylinder gears		Lubriplate L0152	Apply to gear teeth
Weekly	Plate Cylinder Gear Hubs	2	Chevron NLGI2	Grease Gun
Weekly	Blanket Cylinder sleeves	8	Chevron NLGI2	Grease Gun
Weekly	Plate Cylinder Bearings	4	Chevron NLGI2	Grease Gun
Weekly	Water Fountain Shafts	4	Chevron NLGI2	Grease Gun
Weekly	Water oscillator Gear		Lubriplate L0152	Apply to gear teeth
Weekly	Water oscillator Bushings	4	Chevron NLGI2	Grease Gun
Weekly	Main Drive Gear		Lubriplate L0152	Apply to gear teeth
Weekly	Oscillator Drive Shaft and Gears (Between Frames on Drive Side)	2	Chevron NLGI2	Grease Gun
Weekly	Ink oscillator Gears		Lubriplate L0152	Apply to gear teeth
Weekly	Upper ink OSC bushings	4	Chevron NLGI2	Grease Gun
Weekly	Lower Ink OSC Bushings	4	Chevron NLGI2	Grease Gun
Weekly	Ink Fin. Drive Clutch	2	Chevron NLGI2	Grease Gun
Weekly	Main Drive Clutch	1	Chevron NLGI2	Grease Gun
Weekly	Brake Disc Bushing	1	Chevron NLGI2	Grease Gun
Monthly	Water oscillator Drive Pin		Chevron NLGI2	Apply to surfaces
Monthly	Ink oscillator Drive Pin		Chevron NLGI2	Apply to surfaces
Monthly	Drive Shaft Bearings	3	Chevron NLGI2	Grease Gun
4-Times Per year	Plate Cylinder Sidelay Arm		Chevron NLGI2	Apply to surfaces and hub
4-Times Per year	Water Form Throw-Off Cam		Lubriplate L0152	Apply to surfaces
4-Times Per year	Roll Stand Side Lay Screw		Chevron NLGI2	Apply to threads
4-Times Per year	Water Ink Feed Sides		Chevron NLGI2	Apply to surfaces
4-Times Per year	Ink Form Throw-Off Cam		Lubriplate L0152	Apply to surfaces



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# Maintenance Procedures

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## Maintenance Records

A log of all press maintenance should be kept. It should be used to record blanket packings, roller settings, press lubrication, or any other area that may have required special attention. The log should include the specific settings used each time packing or metal-to-metal settings are changed so that reference is available in case of problems.

**Caution: Never work on press unless it is on safe.**

## General

1. Clean around the press.
2. Wipe side frames and clean platforms.
3. Place tools in their proper place.
4. **Weekly:** Check supplies used for the pressroom, such as sponges, rags, gum, and washes; obtain supplies before inventory is depleted.

## Plate Cylinders (After each run)

1. Remove plates; wipe cylinders dry.
2. Coat cylinder surface with a light film of oil.
3. Once a week, thoroughly clean plate cylinder drive-side journals by moving the cylinders to the extremes with the sidelay control and removing any accumulation of ink or other foreign matter from the journal. Coat the journals with a light film of grease or oil. If dried ink is allowed to build up, register controls will become sluggish or bound.

4. While cleaning the journals, insure that a film of grease remains in the groove in the gear in which the register shoes ride. Premature or severe wear of the shoes can cause print and gear wear problems. When the bronze shoes are worn to the point of looseness in the gear groove, replace both front and back shoes.

## Blanket Cylinders (After each run)

1. Wash blankets.
2. Check the blanket surface for smashed, nicks, and signs of excessive tackiness or wear.
3. Replace the blankets not producing a good quality print; note in maintenance log.
4. Clean the cylinder before installing a new blanket or changing packing thickness.
5. Check the packing for creep. Replace packing when creep occurs; note in log.
6. **Weekly:** Check blanket tightness and tighten when necessary.
7. **Weekly:** Wash blankets with a glaze remover solution.

## Rollers

1. Check condition and setting of brush dampener rollers. Replace when necessary; note in log.
2. **Weekly:** Check roller settings; reset when necessary; note in log.
3. Clean rollers with a wash recommended by the roller manufacturer.

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4. **Monthly:** Check condition of bearings and sockets.
  5. Check for out-of-round, pitted, hard or cracked rollers; replace when necessary.
  6. When a roller is glazed but not cracked and feels lively, recondition the roller per the manufacturer's instructions.
  7. If the roller is not deeply pockmarked, regrinding may restore the roller. Rubber covered rollers may be reground 1/8" below the original diameter.

#### Dampener Fountain

1. **Before each run:** Remove any debris
2. **Weekly:** Drain and clean by loosening pivot shaft screws and swinging down as far as it will go, wiping thoroughly with a clean wiper.

#### Water Circulator

1. **Weekly:** Remove the pump and screen filter. Clean thoroughly, washing out the tank and fittings with hot water and the cleaning materials recommended by the supplier of your fountain chemicals. It is important to remove all

accumulated ink, algae, lint, and other contaminants.

2. **Monthly:** Drain and clean plumbing on the press, flushing with hot water and appropriate chemical cleaners as above. Cleaning of a long line may be made easier by using threaded caps at the ends of the horizontal runs, allowing connection of a hose for pressure flushing.

#### Wash-Up Device

1. Clean after each use.
2. **Monthly:** Check condition of blade; replace when badly worn.

#### Paper Lead Rollers and Former

1. **Before each run:** Clean dirty lead rollers and former.
2. **Monthly:** To clean rollers covered with special tape or material: brush lightly with stiff nylon brush to remove dried ink, lint, or other matter, which may mark the web or, if built up sufficiently, interfere with proper web travel.

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# Ink System

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## Roller Flat Measurement

Observation and measurement of roller flats are the most reliable method of checking roller settings and roller surface conditions. The width of flat and end-to-end uniformity are accurately reflected by the ink stripe on the plate or oscillator drum. It is important to avoid settings flats lighter than specified. Set forms and transfers to stripe widths given in specifications section: note in log.

To make a visible stripe to indicate form roller-to-plate flats using a plate which will not be reused:

1. Put press on **SAFE**; disengage clutch.
2. Rotate unit with handwheel to uniformly ink up the rollers.
3. Throw the ink form rollers **ON** and **OFF** the plate.
4. Rotate the unit until the strippers on the plate are visible. They should be  $\frac{1}{4}$ " wide and uniform end-to-end.

**Note: Be sure to observe the ink stripe for only the roller being set.**

If the plate mounted is to be reused, thoroughly gum the plate and protect the surface by using the proof sheet procedure as follows:

1. Throw ink forms **OFF** and ink up the press.
2. Insert a proof sheet between the form roller being set and the plate in the cylinder.  
**Note: Be sure form roller does not fall into plate gutter when setting flats.**
3. Move the form roller throw-off **ON** impression, then **OFF** again.
4. Remove the proof sheet and check the width of the stripe.

A quick check of the settings between rollers and oscillators can be made by placing a  $\frac{3}{4}$ " wide strip of scrap film at each end of the nip between transfer or form rollers and the adjacent oscillator drum, rotating the unit with the handwheel to pull the strips into the nip approximately 1". Check for uniform, snug and steady drag against these strips when they are withdrawn from the nip. Care must be taken to pull tangentially to avoid a false reading which can arise if the strip is allowed to wrap around one of the rolls.

Alternatively, the slip sheet procedure outlined below can be used to eliminate variations in drag caused by differences in ink film thickness or tack.

1. Make 2 slip sheets out of paper about 16" long x 3" wide, folded in half to make 8" x 3" V's. Cut another 2 pieces about 9" long 2" wide.
2. Insert the narrow pieces into the folded V's and roll the package into the nip of the rollers to be set. Adjust the rollers until the snug, steady, continuous pull on the inside narrow slip sheet is the same at both roller ends.

To make a visible stripe for accurate indication of form and transfer roller-to-oscillator flats:

1. Put press on **SAFE**; disengage the clutch.
2. With form rollers thrown **OFF**, rotate unit with handwheel to uniformly ink up the rollers.
3. Stop rotation for a few seconds, then quickly rotate to bring stripe into view. It should be  $\frac{1}{4}$ " wide and uniform end-to-end.

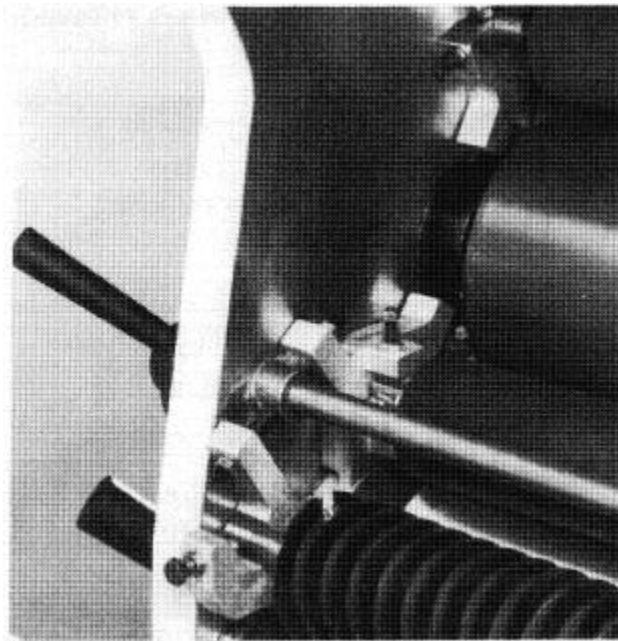
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# Flat Adjustments

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## 1. Form to Oscillator (First)

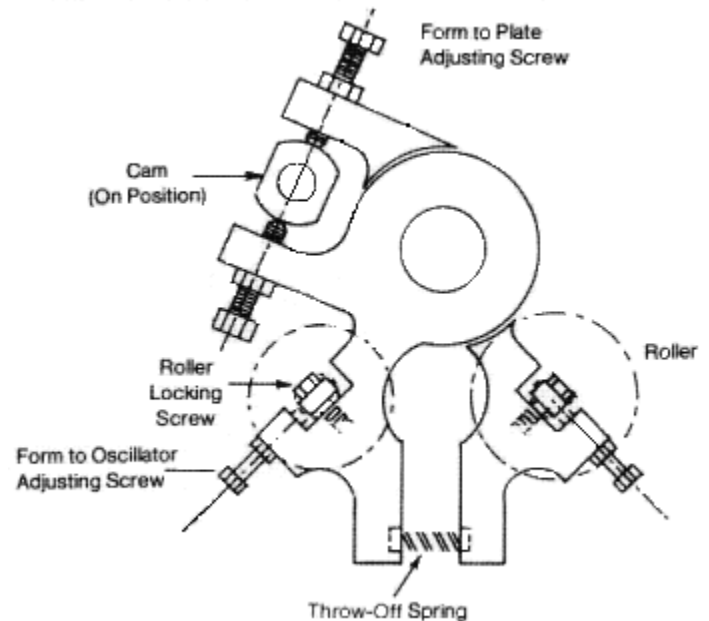
- a) Check the width of the ink stripe on printer.
- b) Loosen the roller locking screw.
- c) Turn the roller adjusting screw **in to increase the flat and out to decrease it.**
- d) Tighten the roller locking screw and check the setting for the correct stripe width.



## 2. Form to Plate (Second)

- a) Check width of the ink stripe on the roller.
- b) Loosen the locknut on the socket adjusting screw.

- c) Turn the socket adjusting screw **in to increase the flat and out to decrease it.**
- d) Tighten the locknut and check the setting for the correct stripe width of 1/4'.



## 3. Transfer to Oscillators

- a) Check width of ink stripe on the oscillator.
- b) Turn the roller lock adjusting screw **in to increase flat and out to decrease flat** on each roller as necessary.
- c) Check the settings to the copper vibrator "D" for the correct stripe width of 1/4". Stripe will be the same on the ink pick up roller "B" and lower vibrator "F".

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## Ink Pick-Up Roller

The knurled and ground ink feed pick-up roller is mounted in pivoting arms which are held in position by jacking and clamp screws.

If misalignment to the fountain is evidenced by: (a) uneven inking across the web; (b) tendency for ink fountain roller to be driven by pick-up roller; or (c) excessive opening of fountain keys, reset as follows:

1. Put press on **SAFE**; disengage clutch.
2. Loosen the clamp screws, then lightly clamp to steady pivot arms.
3. Insert .003" feeler gauges about 2" from each end of the pickup / fountain roller nip. Loosen lock nuts on jacking screws and alternately loosen and tighten the appropriate screws until a loose fit to the gauge is obtained across the entire length of the roller nip.
4. Retighten the clamp block screws.
5. Tighten jacking screws and their lock nuts.
6. Recheck the gap setting across the entire length of the roller nip.

## Ink Feed Slide

The bronze stop lever pivots on an eccentric pin through the slide housing. If the stop is too tight (jamming) or loose (slide works full out), it can be adjusted by loosening the socket head locking screw in the side of the housing and rotating the pin with a screwdriver inserted in its slotted end (top of housing on left halves, bottom on right halves).

## Setting Oscillators

1. Put the press on **SAFE**; disengage clutch.
2. Remove drive-side housing covers.

3. Install handwheel and rotate the unit until main oscillator shaft is in the extreme outward throw position for both the lower ink and water oscillators (at this point the oscillator shaft arms are in the extreme outward stroke).
4. Check operating side-frame to make sure oscillator shafts are flush with outside surface of frame.  
If not, loosen oscillator arm by loosening clamping cap screw and move arm until shaft is flush with the operating-side frame. Tighten arm cap screw.
5. Check clearance between drive side of oscillator and inside of drive-side frame. Clearance between water oscillator bearing and oscillator gear bushing is 3/8"; clearance between ink oscillator bearing and oscillator gear bushing is 1/8".
6. Rotate handwheel and set upper ink oscillator in extreme outward position.
7. Check operating-side frame to make sure oscillator shaft is flush with frame.
8. Correct position of upper ink oscillator should be 3 3/4" from drive-side inside frame to face of copper roller.
9. Repeat for each printing couple.
10. Install drive-side housing covers.
11. Remove handwheel.

**Note: Periodically check oscillator drive pin bushings for signs of wear. If worn to 2/3 or less of original thickness, replace by removing oscillator shaft and drum, inserting new bushings, re-lubricating, and reassembling. Detailed instructions will accompany the replacement bushings when shipped.**

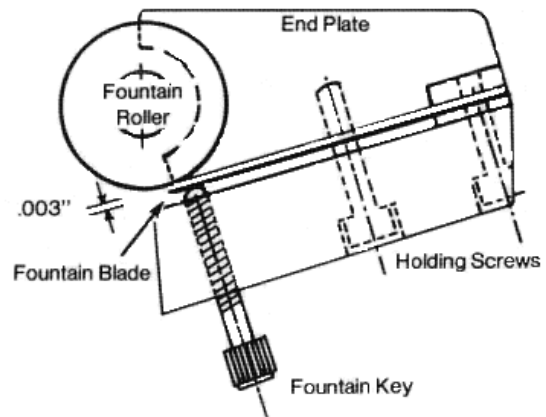
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# Cleaning the Ink Fountain

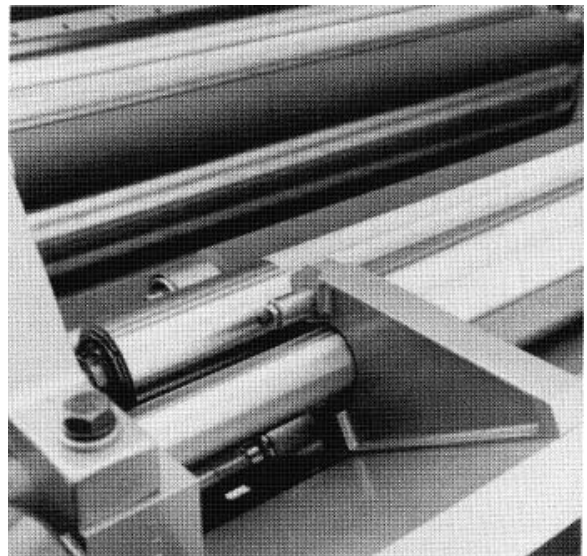
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Periodically, the ink fountain should be disassembled and cleaned.

1. Put the press on **SAFE**, disengage unit, and remove ink from fountain.
2. Loosen the first three keys at each end of the fountain to facilitate removal of fountain blade.
3. Loosen the 3 cap screws holding the fountain blade to the cross brace, and remove the blade.
4. Remove the end seals.
5. Removing and replacing the fountain blade is easier if the two end-holding screws are re-threaded into the top of the blade handle and used as handles.
6. Clean all parts thoroughly, including the cross brace and fountain roller.
7. Apply a thin film of grease to the ends of the fountain blades to ease installation of the fountain blade.
8. Install end plate seals.
9. Insert fountain blade into slots in end seals and slide into place, bringing blade retaining cap screws finger-tight.
10. Check that the rear face of the fountain blade is flush with the rear face of the cross brace before tightening the 3 cap screws.
11. Adjust the ink keys until a gap can just be seen between the blade and roller.  
Alternately, insert .003" feeler gauge between fountain roller and blade and adjust keys until snug, steady pull can be obtained. Repeat for each key across the roller surface working from the center outward to each end.



12. Some fountains are fitted with stop collars on the ink keys which may occasionally need to be reset. To set collar, turn key **clockwise** until ink blade contacts the ink fountain roll across length of the roll. Then turn **counterclockwise** ¼ turn. Rotate ink fountain roll and make final setting to allow only a light film of ink to stay on the fountain roll. Turn locking collar **clockwise** until snug against ink fountain block, and lock set collar in position.
13. Some fountains are equipped with a retarding brake on one end plate. The brake plunger bears on the end of the fountain roller to prevent over-running when using certain inks.



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# Roller Care

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Life of a roller is dependent on the care it is given. The better care a roller receives, the longer it will last.

1. Wash up the ink train weekly or as required.
2. Mount the wash-up device so that the blade scrapes the ink from the vibrator drum.
3. Use the type and amount of wash-up solution recommended by your roller supplier and / or your ink supplier.

**Note: Some types of blanket washes contain detergents to help clean gum and lint off the blankets. These washes, if used as a general roller washes, can penetrate the rollers and cause emulsification problems. Unless enough roller wash is used, a mixture of wash and ink will remain on the rollers and dry, causing pick-out of the rollers.**

- Clean the roller ends thoroughly a) at least once a day, and b) whenever you wash the rollers. The ends of the rollers are often neglected; they need particular care because ink build-up occurs in this area and causes swelling, splitting, and premature failure. Bits of dried ink from the ends can also be a cause of hickies in the print.
4. If ink is accidentally left on the rollers and allowed to dry, remove the rollers and apply generous amounts of roller wash to all affected surfaces, allowing to soak for a short time. After soaking, rub the ink off the rollers with a soft wool rag. Repeat if necessary until the roller is clean. If rollers are glazed, use a recommended restoring compound.

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# Dampening System

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## Brush Dampener Water Fountain

The water fountain rollers are motor driven. Their speed is controlled by a potentiometer located at the folder, and by a speed control unit. The rollers can be shut off at each unit when that unit is not in use.



## Brush Roller

The brush rollers are driven at a fixed speed and are turned on and off by a master switch at the folder and by switches at each unit. They should be off when a unit is not in use.

When the brush roller is properly set, the fountain roller should penetrate into the bristles just enough to “flick” solution from the fountain roller onto the oscillator roller. This setting may change due to eventual brush wear. Need for adjustment due to long-term wear of the bristles will be evidenced by uneven dampening or “dry spots”.

Set the brush roller to the fountain roller by loosening jam nut and turning setscrew. Turn the setscrew **clockwise** to move the brush to the fountain. Set no tighter than necessary to insure uniform feed across the width of the fountain roller.



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# Plate & Blanket Cylinders

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## Blanket Care

Your blanket supplier can give complete details on blanket care and cleaning solutions to use.

Caution: Do not wash blanket until the unit is disengaged.

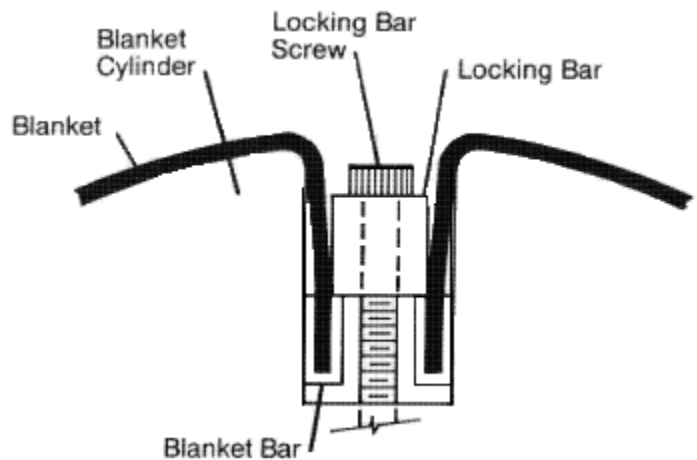
1. A new blanket should be scrubbed with blanket wash before it is used.
2. Wash the blankets whenever the press is to be left standing for any length of time.
3. Sponge the blanket with water to remove the gum and lint.
4. Wash the blanket with a sponge or clean rag, keeping the wash solution as much as possible away from the edges to prevent seepage under the blanket.

**Note: If packing becomes wet, blanket and packing should be removed and the cylinder wiped dry. Replace with new packing, applying grease to edges of blanket before replacing on press.**

5. After the entire blanket has been washed clean, wipe dry with a clean rag. Do **NOT** let solution dry on the blanket.
6. Before each run, check all blanket surfaces after they have been washed clean for smashes, nicks, wear, and signs of excess tackiness. Replace the blanket if any of these problems are found.

## Blanket and Packing Installation – Perfecting Unit

1. In all cases, always measure the blanket and packing thickness with a blanket micrometer before installing. The correct thickness of the blanket plus packaging is noted on the specification page.



2. Use manila packing 35" x 24"; plastic is not recommended.
3. Apply a thin strip of spray adhesive (approximately 1" wide) to leading edge of the manila sheet to provide adhesion to cylinder until blanket is fitted.
4. Put press on SAFE; disengage unit.
5. Align manila packing 1/8" back of leading edge slot, feathering sheets 1/32" each to make smooth ramp.
6. Rotate cylinder with handwheel one revolution.  
Make sure that packing is laid evenly without wrinkles or bubbles.

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7. Trim trailing edge of packing 1/8" away from blanket slot.
  8. Apply a strip of grease all around edges of the blanket to seal against fountain solution intrusion. Failure to seal edges can cause premature blanket failure and cylinder wear.
  9. Insert leading-edge blanket bar in the cylinder slot and retain with one of the locking bar screws.

**Caution: Ensure bar screw is below cylinder surface.**

10. Hand rotate the cylinder, ensuring that the blanket is centered and wrapped snugly and evenly around cylinder without disturbing the packing.
11. Apply a thin strip of grease to trailing edge of blanket cylinder slot, remove

- locking bar screw, and place both ends of blanket bars evenly in the cylinder slot.
12. Fit the locking bar in the slot and insert the screws.
13. Tighten the screws uniformly, first until the heads of all screws are below the surface of the cylinder, then until blanket is snug to the cylinder, and finally torque screws to **35** in. lb.
14. Confirm blanket and packing thickness on cylinder by measuring with a packing gauge such as a Colite gauge; note readings in log.
15. Pull up the blanket by retorquing the screws after about 3,000 impressions. Tighten them again after about 10,000 impressions. Check all screws weekly thereafter.

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# Cylinder Pressures

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## Plate-To-Blanket

**Note: The blanket cylinders are mounted in eccentric sleeves. The eccentrics, when rotated, move the cylinders toward or away from each other. Adjustable stops located in the ear of the eccentrics limit the rotational movement.**

1. When making cylinder pressure settings, start first with the plate-to-blanket impressions.
2. Put press on **SAFE**; disengage clutch.
3. Remove plates and blankets from cylinders, and wipe cylinders clean.
4. Throw cylinders **ON** impression.
5. Loosen jam nuts and back off stop screws from frame stop pins adjacent to eccentric sleeves.
6. Locate the four impression links on the inside of both frames, connected via turnbuckles to sleeve, and link to impression shaft. Note and check that the impression link setscrews are tight. They are factory set and should normally never need adjustment.
7. Loosen jam nuts on turnbuckles. Correct feeler gauge thickness are noted on the specification sheet.
8. Insert correct feeler gauge between plate and blanket cylinder bodies – alternately on operator and drive sides – while adjusting turnbuckle to obtain a good firm pull on the feeler gauge.
9. Tighten the jam nuts on the turnbuckles.

10. Adjust eccentric sleeve stop screws to contact stop pins in frames (finger-tight). Tighten stop screws an additional 1/8 turn and lock jam nuts.
11. Check impression setting with proper feeler gauge size noted on the specification page.

**Note: Pull on gauge will be slightly lighter.**

Check setting with feeler gauge set .001" larger. It should not fit between cylinder bodies.

12. Throw impression OFF and then ON again. The correct gauge should now have a light, snug feel between plate and blanket cylinders.

**Note: Throwing the impression ON or OFF should be achieved with medium pressure, when moving the handle down or up to over-center or off-center positions.**

If difficulty is experienced in the above procedure, repeat steps 7 through 11 until satisfactory settings are achieved; note settings in log.

13. Repeat procedure for each printing couple.

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# Blanket-To-Blanket

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1. Loosen bolts in “V” tie bracket (right side only); both operator and drive side.

**Note: Right and left are as viewed from operator’s side.**

2. Loosen hold-down bolts on right side of unit (folder side of unit); both operator and drive side. **NEVER** loosen left side.
3. Check to make sure the hold-down bolts and the jam nuts on the jackscrews of the right-hand side of the unit are right on both operator and drive sides.
4. Rotate unit to bring blanket cylinder gaps up to 1:30 and 10:30 positions.
5. Throw the impression ON.
6. Loosen jam nut on the jackscrew (side nearest folder) and use large setscrews

to adjust cylinders closer or further apart. Retighten jam nuts when gap is correct.

**Note: The correct thickness of feeler gauge is noted on the specifications page.**

7. Tighten hold-down bolts in base frame.
8. Tighten bolts in “V” bracket.
9. Recheck metal-to-metal settings. If setting are incorrect, repeat steps 1 through 8 until satisfactory settings are achieved.
10. Recheck jackscrew jam nuts to make sure they are securely locked down.
11. Recheck all unit tie bolts.

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# Other

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## 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 either belt or associated parts.
2. When torque is unusually high, a belt may "jump" a tooth on starting. In such a case, belt tension should be increased gradually until satisfactory operation is attained.

## 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.

## Belt Tension – Perfecting Unit

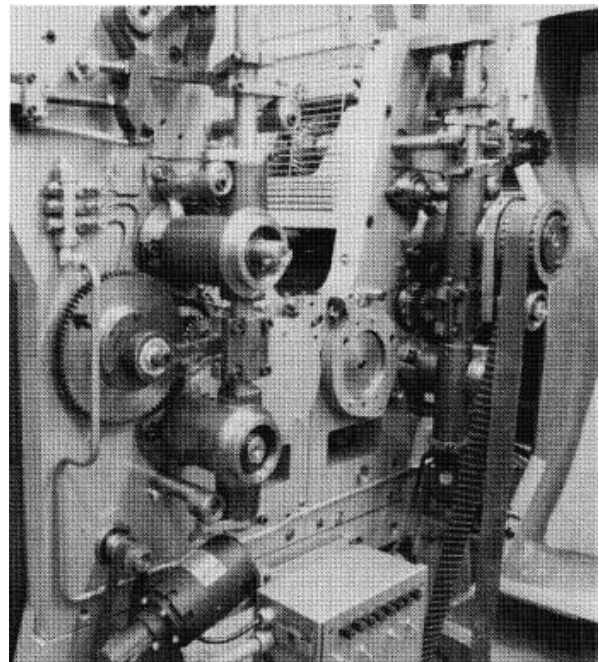
The unit is driven by a belt between the main drive shaft and the unit pinion drive.

Belt tension is set by adjusting the pillow block bearings that mount the drive shaft. Correct tension is indicated by squeezing the two sections of the belt together at a point 12" above the drive line. If this can be done with moderate effort, the tension is adequate.

Special care must be taken to ensure the drive shaft remains level after adjusting.

Belt Size: 850 H 150

**Note: Driveline must be level. Use 6" machinists level when adjusting belt tension.**



## Brush Dampener – Perfecting Unit

Brushes are motor driven with timing belts. Belt tension is set by adjusting the motor mount bracket.

Belt Size: Brush 420 L 075

On some models, the water fountain rollers are motor driven by V-Belts.

Tension is set by adjusting the motor mount bracket.

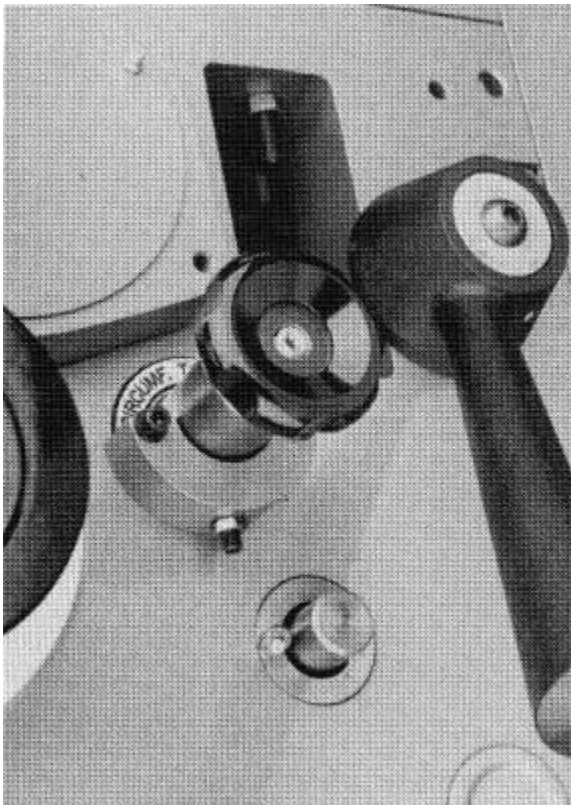
V-B Sizes, Fountain: 4 L 540

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## Circumferential Fork Adjustment

To prevent creeping of circumferential adjustment while the press is running, a slight drag must be set against the adjustment shaft. This preload should be set so that the shaft is snug but can be turned throughout its range without binding.

1. Put press on **SAFE**; disengage clutch on unit.
2. To adjust drag, loosen lock nuts on setscrew, loosen or tighten setscrew until correct drag is applied. Tighten locknut.



## Setting Ink Fountain Drive

1. Put press on **SAFE**; disengage clutch.
2. Remove drive-side guard.

**Caution: Timing differential between printing couples is 180°. Using handwheel, rotate unit so that mechanical motion shaft (as viewed from the top) is turned counterclockwise as far as possible.**

3. Loosen cap screw on pivot arm located on mechanical motion shaft.
4. Position pivot arm up against oscillator drive pivot arm.
5. Slide ink fountain push rod through rod end leaving 1/8" clearance between the jam nut on rod end and cam follower on push rod.
6. Tighten cap screw on pivot arm.

**Note: Ink fountain pivot arm must be correctly aligned with push rod to avoid binding the spacer between them.**

7. Install guards and remove handwheel after engaging unit.



## Quadra-Color Maintenance





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# Maintenance Procedures

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**Note: Most of the maintenance information given for the perfecting unit is applicable to the Quadra-Color unit. Only those procedures which are unique to the Quadra-Color unit are covered below.**

## Cylinder Pressure Settings

1. Put press on **SAFE**; disengage clutch.
2. Remove plates and blankets from cylinders and wipe cylinders clean.
3. The blanket-to-common impression cylinder pressure is the first setting to be made.
4. Throw all four blanket cylinders **ON** impression.
5. Starting with the lower deck, throw **OFF** impression to obtain access to the turnbuckle and jam nuts through the opening in the frame.
6. Loosen jam nuts and back off stop screws from frame stop pins adjacent to eccentric sleeves.
7. Throw blanket cylinder **ON** impression.
8. Insert correct feeler gauge between blanket cylinder and impression cylinder bodies.  
Note: The correct thickness of feeler gauge us noted on the specifications page.
9. To **increase** pressure, **lengthen** turnbuckle until the feeler gauge cannot be withdrawn.
10. Lock jam nuts on turnbuckle.
11. Adjust eccentric sleeve stop screws to contact stop pins in frames (finger-tight).
12. Tighten stop screws sufficiently to release feeler gauge, then lock jam nuts. No more

than one –quarter turn should be necessary to release feeler gauge to a good, snug pull.

13. Check setting with feeler set .001” larger. It should **not** fit between cylinder bodies.
14. Repeat steps 6 though 13 on remaining printing couples until satisfactory settings are achieved; note settings in log.

**Note: Both lower decks must be set before moving to upper decks.**

## Plate-to-Blanket Impression Setting

After impression-to-blanket cylinder settings have been achieved, proceed to check and set plate-to-blanket pressures.

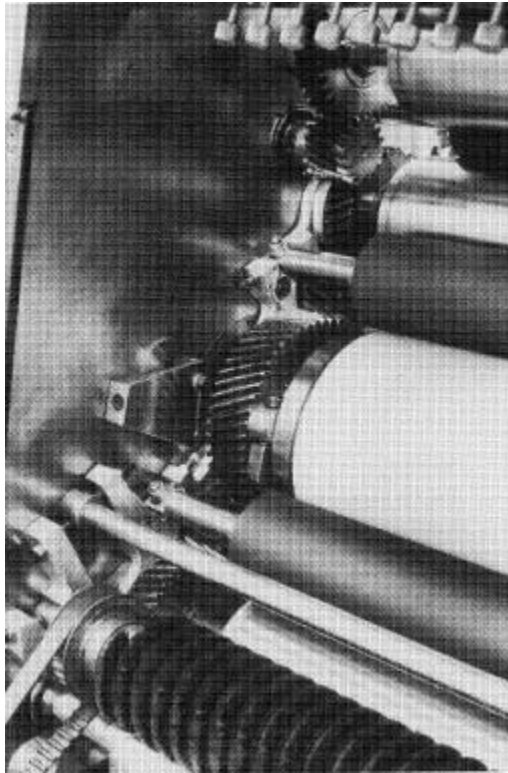
The plate-to-blanket cylinder settings are obtained by adjustment of the plate cylinder eccentrics.

These eccentrics are located in position with “T” –shaped flat, slotted brackets on the inside of the frames.

The brackets are pivoted and held by socket head screws to the frame.

The slot in the bracket co-acts with a pin located in the face of the eccentric.

1. Release locking screw.
2. Insert proper feeler gauge between plate and blanket cylinder bodies.
3. Adjust “T” bracket **down to increase pressure**, until a light, snug pull is obtained on feeler gauge.



4. Tighten locking screw.
5. Check setting with feeler gauge set .001' larger. It should **not** fit between cylinder bodies.
6. Repeat procedure until all plate-to-blanket cylinder settings have been satisfactorily achieved; note settings in log.
7. Install properly packed blankets.

### Drive Belt Specifications

The unit is driven by a belt between the main drive shaft and the Quadra-Color gearbox.

Belt tension is set by adjusting the pillow block bearings that mount the drive shaft. Special

care must be taken to insure the drive shaft remains level after adjusting.

Belt size: 700 H 200

**Note: Driveline must be level. Use 6" machinists level when adjusting belt tension.**

### Optional Brush Dampener - Quadra-Color

The brushes are motor driven with timing belts.

Belt size:           Deck 1 – 270 L 075  
                          Deck 2 – 210 L 075  
                          Deck 3 – 210 L 075  
                          Deck 4 – 270 L 075

On some models, the water fountain rollers are motor driven with V-Belts.

V-Belt Sizes:       Deck 1 – 4 L 300  
                          Deck 2 – 4 L 380  
                          Deck 3 – 4 L 540  
                          Deck 4 – 4 L 340

Timing Belt Size:       630 H 100

### Slave or Helper Drive

The helper motor drives through a belt to the drive shaft, usually located at the Quadra-Color unit.

Belt tension is set by adjusting the motor mounting plate.

Belt Size:           630 XH 300



## 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

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# Maintenance Procedures

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## 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.

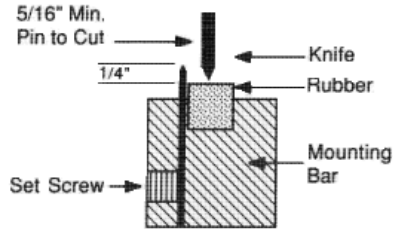
## Replacing Pins and Cutting Rubbers

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  $\frac{1}{4}$ " 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.

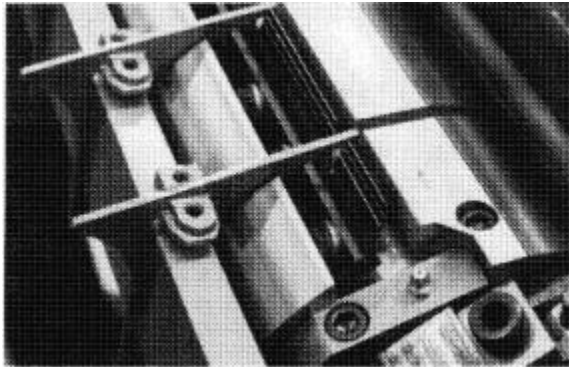
1. Rotate folder to a position at which one tucker assembly is at approximately 3:00 when viewed from the operating side of the folder.
2. Remove tucker bar assembly and insert or remove shims. The shims are positioned between the mounting bar and the tucker preloading plate; the lap is increased by 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.

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## 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.

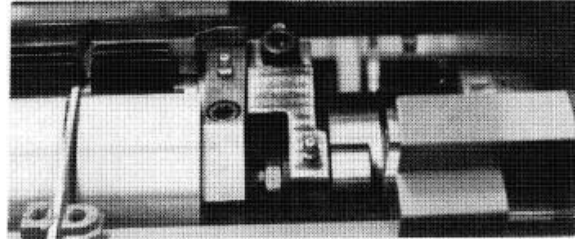


3. Loosen the bolts that clamp the damaged blade and remove.
4. Insert the new jaw blade and use the 6" scale to line up the top edge of the new blade flush with the solid stationary jaw and tighten bolts securing blade.
5. Repeat procedure if additional blades are to be replaced.

## 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.

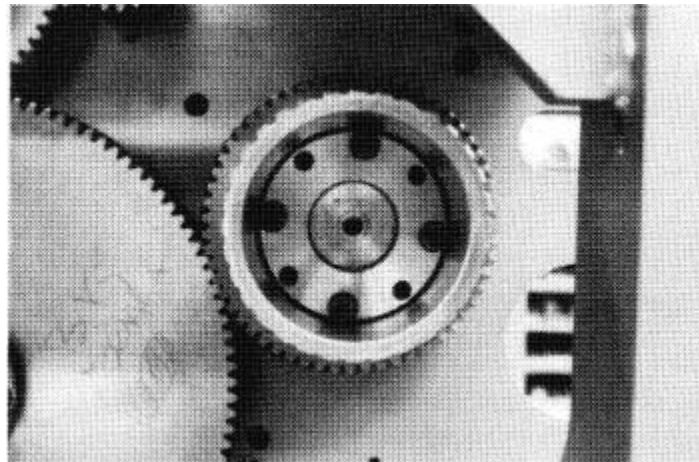
**Note:** Be sure the cam follower is seated on the cam and 1/16" clearance is maintained between cam and cam follower lever.



## 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 an 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.



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## 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.

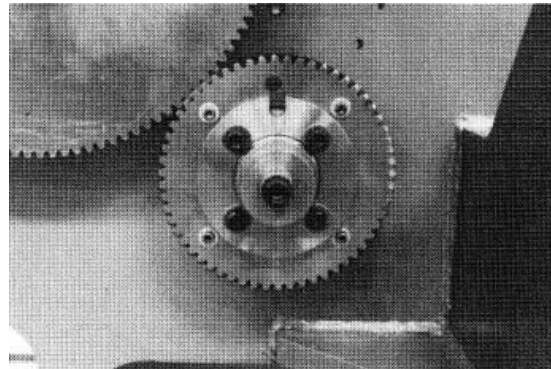
The cam should be timed such that the jaw has enough grip on the folded signature to retain control at the moment the tucked blade disengages from the jaws.

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.



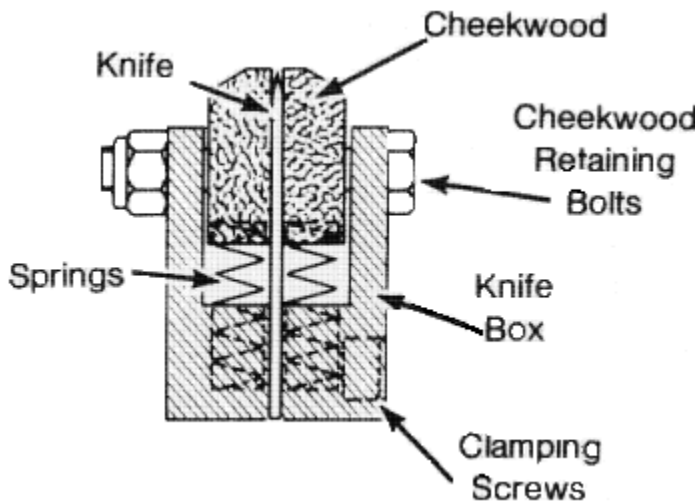
## Knife

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.

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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.

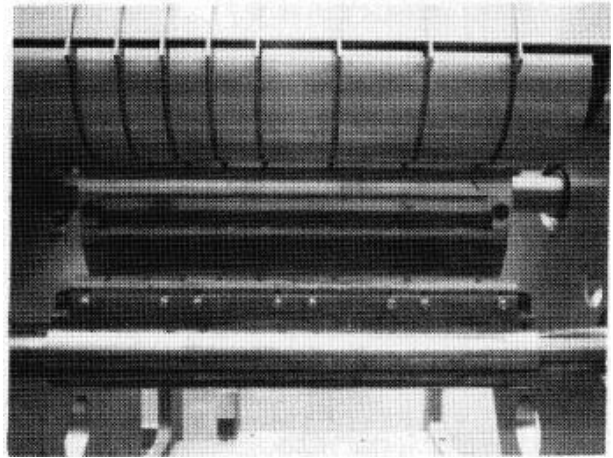


### Replacing Knives

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".**

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## Pin Stripper Adjustment

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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

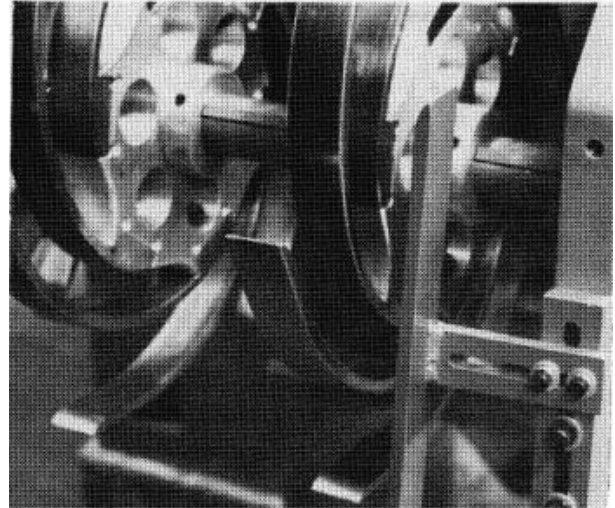
The folded tabloid or broadsheets signatures are carried in the jaws and released at approx top dead center, then stripped out of the jaws to be guided into the upper pair of running tapes.

### 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

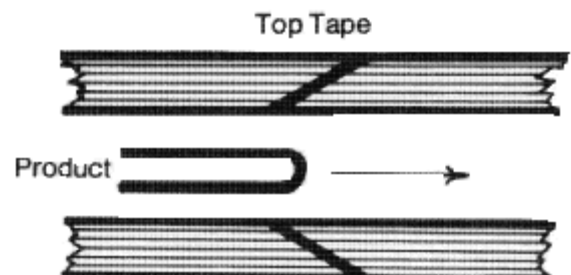
**Note :** To maintain accurate control of the signatures, it is important that the taper of the splice (on the side of the tape contacting the signature) is trailing.

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  $100^{\circ}$  C ( $212^{\circ}$  F) for 10-15 minutes.



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## Tape Specifications

### Standard Half / Quarter-Folder:

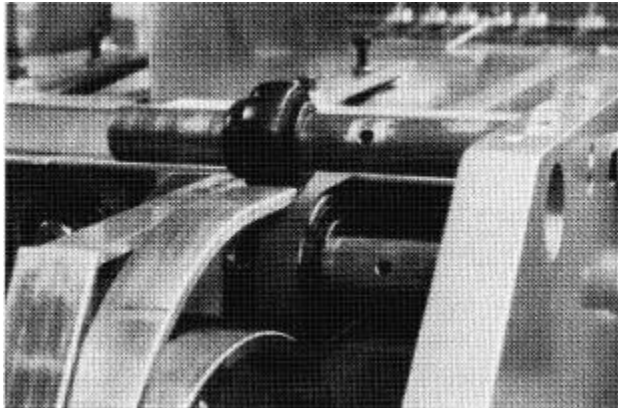
**Top Tapes:**  $\frac{3}{4}$ " wide and 54" long –light green shiny side contacts paper.

**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.

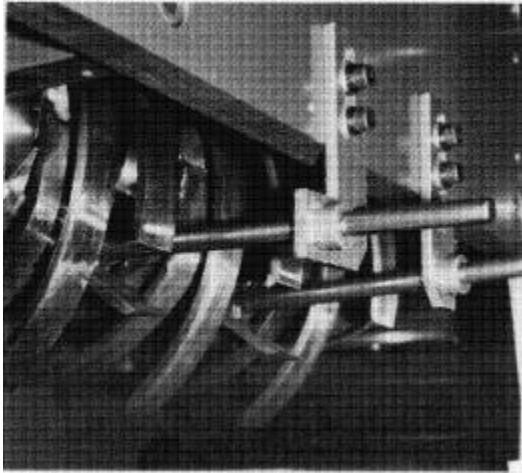
**Note: Chopper blade should be touching signature-if not, retime chopper as follows:**

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

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## 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

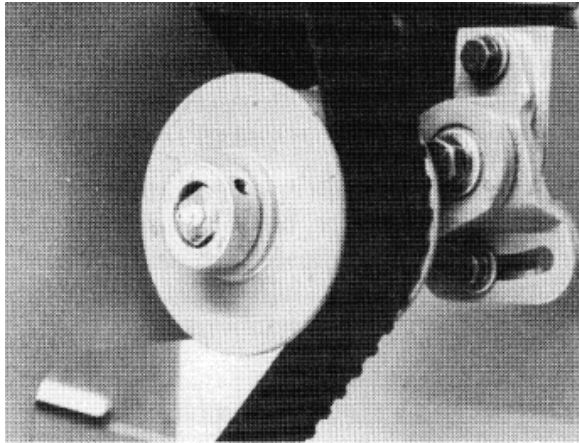
Belt Size: 630 XH 300

## 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.

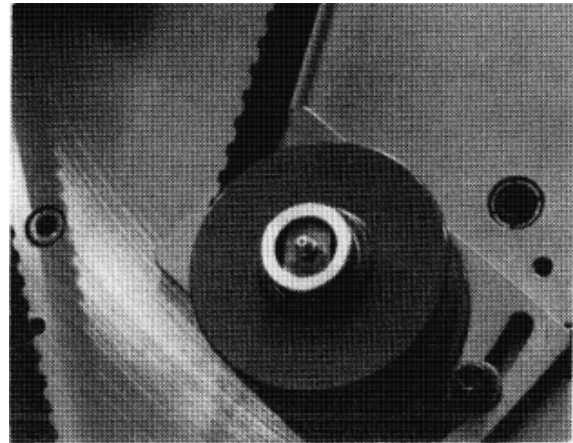
Belt Size: 570 H 100

## 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



## RollStand Maintenance





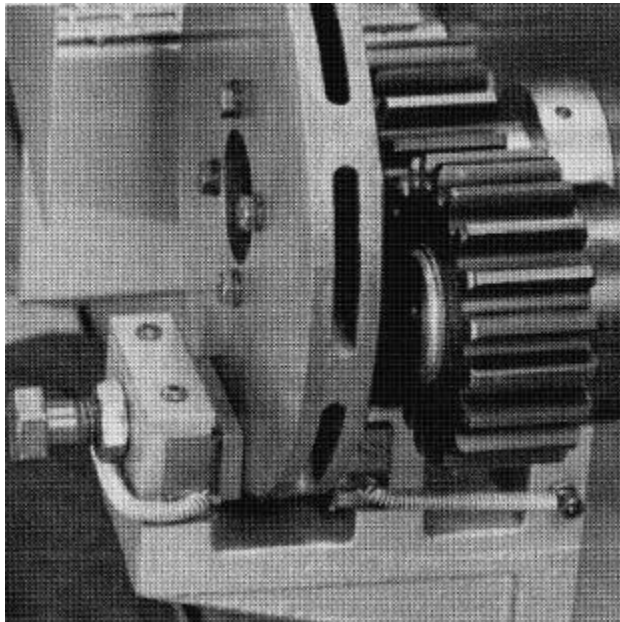
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# Maintenance Procedures

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## Brake Shoe Wear Adjustment

A weekly inspection of the brake system should be made to insure optimum rollstand performance. With the rollstand loaded and the dancer in the OFF position, the brake pads should be adjusted to lightly contact the disc. The disc should now be free to rotate with no side movements between the brake pads.



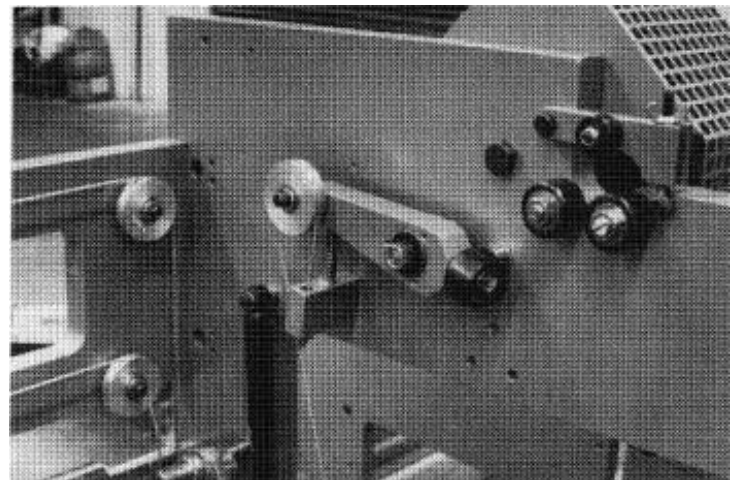
## Replacing Brake Pads

1. Remove guard from brake mechanism.
2. Loosen wear take-up bolt.
3. Remove outer pad retaining plate and remove worn brake pad.
4. Slide disc away from inner brake pad.
5. Remove pad retaining spring and lift out worn brake pad.

6. Install new pads and reassemble via reverse procedure.

## Gear Backlash

Due to the wide load range required to maintain reasonably constant web tensions, the rollstand is capable of transmitting very large loads in a very short time. To get the best performance from the system, lubricate frequently and maintain minimum backlash between the rollshaft gears and the brake disc gears.



1. Checking: Check setting with brake in OFF position, rotating shaft to insure minimal clearance without binding.
2. Setting: Loosen mounting bolt holding brake disc gear stud; rotate stud to obtain minimal backlash; and re-tighten stud mounting bolt.

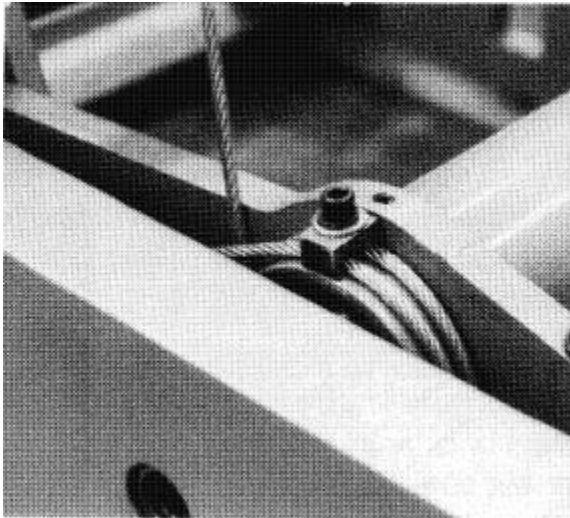
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## Pad-To-Disc Clearance

1. **Checking:** With brake in **OFF** position, pads should be touching disc but not causing a drag. With brake in **ON** position, a full roll should be very difficult to rotate.
2. **Setting:** With brake **OFF**, tighten adjusting screw behind outer pad, removing any excessive clearance.

## Cable Adjustment

**Note:** Before making any adjustments to the cables, check that cable clips holding cables to dancer tube are secure so as to prevent any cable slippage.



1. **Checking:** With brake **ON**, the cable between the dancer and brake should be taut and the cable between the dancer and operator adjusting knob should be loose when the knob is set for minimum tension.
2. **Setting:** With brake **ON**, adjust cable between dancer and operator knob obtaining a slack cable when knob is turned counterclockwise (until bottomed out against adjustment stud). Using nuts on brake end of cable tighten cable between brake and dancer. The proper tightness is obtained when throw-off cam follower on dancer is touching the bottom of slot in throw-off link, but can be turned with fingers.