

# **OPERATING MANUAL**



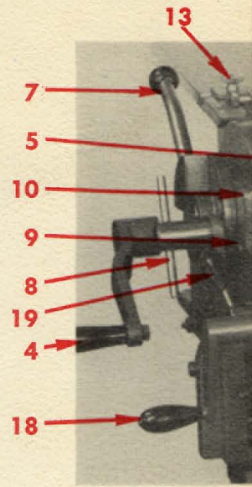
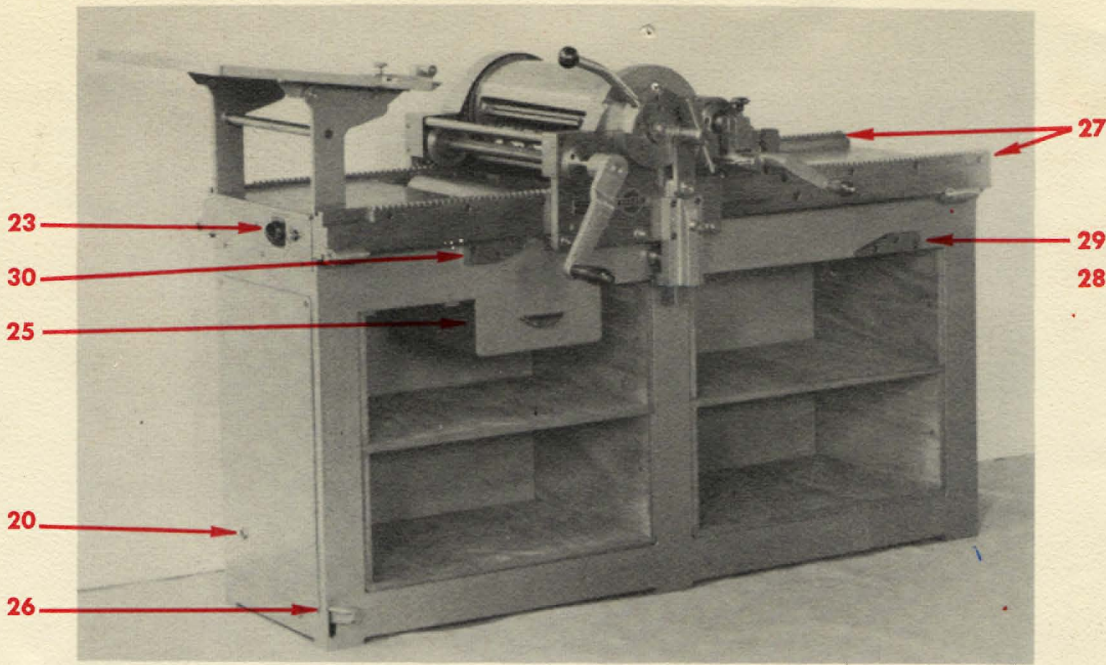
## **AD-1 and PI-1 REPRODUCTION PROOF PRESSES**

Distributed By

**The E. G. LINDNER COMPANY, Ltd.**

612 East 12th Street, Los Angeles 15, Calif.

# ASBERN AD-1



1. Gripper Bar Lock Screws
2. Gripper Bar
3. Feed Board
4. Cylinder Carriage Crank
5. Impression Cylinder
6. Draw Sheet Tension Bar
7. Cylinder Impression Adjust
8. Cylinder Impression Adjust
9. Cylinder Impression Adjust

## GENERAL INFORMATION

The Asbern proof presses are sturdily constructed precision machines which will give many years of satisfactory service with a minimum of maintenance. There are a few necessary steps which must be taken, however, if the clear, sharp reproduction proofs which these presses are capable of producing are to be achieved.

**Lubrication**—Care should be taken that a good grade of oil and grease is used periodically on all lubrication points.

**Daily Maintenance**—To assure perfect proofs the cylinder and bed bearers and the type bed of the press must be kept clean. These should be checked before operating the press at the beginning of the shift and after every washup. Rollers should be checked for correct setting daily to maintain proper ink coverage. Draw and hanger sheets must be changed when any wear or roughness is detected.

## DRAW SHEET AND CYLINDER PACKING

Many combinations of draw sheets and cylinder packing are in use on reproduction proof presses. Each has its own merits. The one important constant on the Asbern presses is that the thickness of the combination used must be .050 of an inch.

Supplied with the press is a rubber blanket approximately .024" thick. This should be placed on the cylinder first. Then hanger sheets and a draw sheet should follow to a total of .050". Draw and hanger sheets may be secured from the E. G. Lindner Co., or from your local paper house.

To install the combination, loosen the two Allen screws (1)\* on the gripper bar (2) and insert the end of the blanket and the hanger and draw sheets in the opening. Align sheets parallel to the feed board (3) and tighten Allen screws (1). Slowly turn cylinder carriage crank (4) with right hand while smoothing the draw sheet and combination

against cylinder with left hand. When cylinder gap is reached insert tail of draw sheet through slot in tension bar (6) and carefully turn the bar counter clockwise to take up the slack in the draw sheet. When draw sheet is taut, finish tightening using the pin wrench supplied in the holes in the far side of the tension bar. When proper tension has been reached, insert the dog into the ratchet on the near end of the bar. Draw sheet should be smooth and straight against cylinder.

\*The PI-1 is equipped with four hex-head screws on the gripper bar. Use T-handle socket wrench supplied.

## CYLINDER ADJUSTMENT

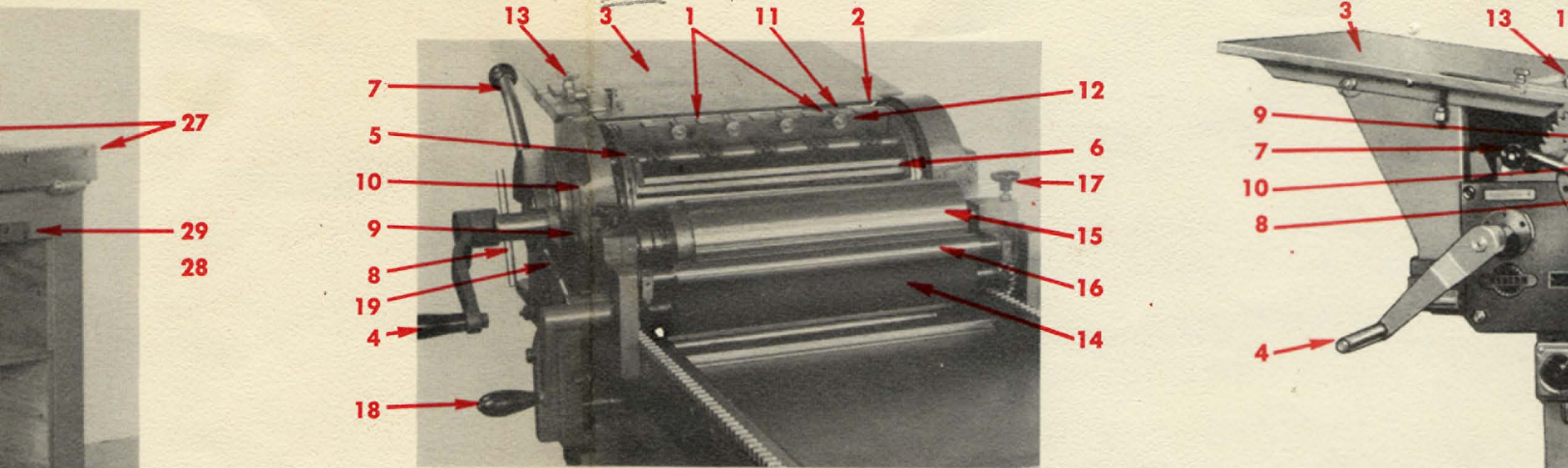
All Asbern presses are equipped with the patented impression tension adjustment for changing cylinder pressure. Unit consists of lever (7), locking screw (8), indicator (9) and scale (10). To change cylinder pressure for changes in weight of form, height of form, or thickness of paper, loosen locking screw (8) and, using scale (10) and indicator (9), raise or lower lever (7) desired amount. One degree on the scale indicates a change of .0013 in cylinder pressure.

For initial starting of the press it is recommended that the cylinder be set at the 20 degree mark and checked for printing impression. Then, as needed, cylinder should be lowered by 2° increments to the required impression. Care should be taken to assure that the locking screw (8) is tightened after lock change.

## SHEET GUIDE ADJUSTMENTS

Precise sheet control for close register work is possible on this press through use of the feed table side guide (13) with its special adjusting knob, and adjustable sheet stops on the cylinder grippers (11). Knurled knobs (12) are used

## AD-1 SECTION



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3. Feed Board
4. Cylinder Carriage Crank
5. Impression Cylinder
6. Draw Sheet Tension Bar
7. Cylinder Impression Adjustment Lever
8. Cylinder Impression Adjustment Locking Screw
9. Cylinder Impression Adjustment Indicator

10. Cylinder Impression Adjustment Scale
11. Cylinder Sheet Grippers
12. Sheet Stop Adjusting Knobs
13. Feed Board Sheet Guide
14. Form Rollers (2)
15. Steel Oscillating Drum
16. Steel Distribution Rollers (2)
17. AD-1 Inking Unit Lift Knobs, Adjustment Screws
18. AD-1 Ink Distributor Hand Crank

19. AD-1 Roller Separating Lever
20. Power Inking "On-Off" Indicator Light
21. Power Inking Drive Cylinder
22. Automatic Wash-Up Release Cams
23. Power Inking Switch
24. Power Inking Drive Cylinder Tension Slide
25. AD-1 Residue Drawer
26. Gripper Actuating Foot Pedal
27. Gear Racks

with left hand. When cylinder gap is tail of draw sheet through slot in tension fully turn the bar counter clockwise to take the draw sheet. When draw sheet is taut, using the pin wrench supplied in the holes of the tension bar. When proper tension has insert the dog into the ratchet on the near Draw sheet should be smooth and straight

equipped with four hex-head screws on the T-handle socket wrench supplied.

### CYLINDER ADJUSTMENT

presses are equipped with the patented on adjustment for changing cylinder pressures of lever (7), locking screw (8), indicator (10). To change cylinder pressure for changes in form, height of form, or thickness of paper, turn lever (7) and, using scale (10) and indicator (9) to desired amount. One degree on lever (7) changes a change of .0013 in cylinder pressure.

Starting of the press it is recommended that the cylinder be set at the 20 degree mark and checked for proper impression. Then, as needed, cylinder should be adjusted in increments to the required impression. Care should be taken to assure that the locking screw (8) is properly locked to prevent change.

### FEED GUIDE ADJUSTMENTS

Control for close register work is possible through use of the feed table side guide (13) and adjustable sheet stops (11). Knurled knobs (12) are used

to adjust sheet stops. To facilitate positioning of form on bed of press and sheet on feed board, presses are equipped with identical scales on bed and feed board.

### INKING UNITS

The inking system of the AD-1 and the PI-1 each consist of two rubber form rollers (14), one steel oscillating drum (15), and two steel distribution rollers (16). Since the two inking systems use different methods for adjusting and separating the rollers they will be treated separately.

#### AD-1 Inking Unit

To adjust the form rollers (14), first remove the steel oscillating drum (15) and the steel distributing rollers (16) from the inking unit. These may be removed as a unit by lifting on the two knobs (17) on either side of the unit. Set the form rollers using the adjusting screws beneath each roller shaft end so that they leave a mark  $\frac{1}{8}$ " wide on the gauge supplied with the press. Care should be taken so that the impression is the same on each roller and at both ends of the rollers. When the form rollers are set, replace the drum unit and, using the adjusting screws (17), set the oscillator so that it lightly touches the form rollers. Again, care should be taken to ensure equal pressure the entire length of the drum. When proper adjustment has been achieved, lock the adjusting screws in place with the lock nuts provided. The two steel distribution rollers (16) are automatically adjusted with the drum.

When inking the unit put ink on the drum with the cylinder carriage at the feed position. To keep from scratching the drum it is recommended that either a plastic or a wooden ink knife be used. To distribute ink turn the crank (18) if the unit is not equipped with power. When power equipped merely turn on the switch (23).

To raise and separate rollers turn lever (19) to right.

Adjustment of the rollers is the same as on the PI-1. The oscillating drum is moved individually by turning the knobs at either end. The drum can rest at top or bottom of the oscillating drum. When laying the plates on the oscillating drum, swing the plates so that the form rollers (14) are used to lock the plates from the operation.

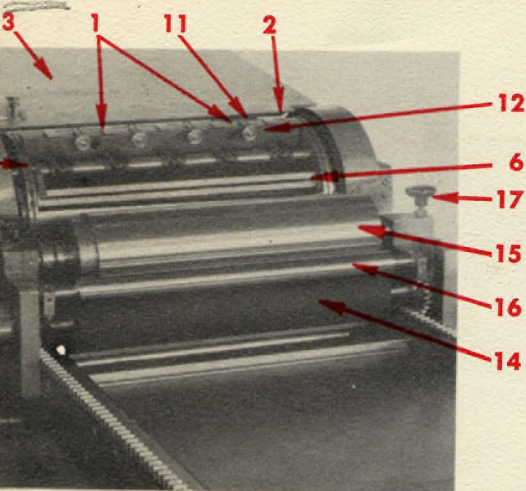
With the oscillating drum lifted, lock the drum with the T-handle. The shafts of the rollers will be in the carriage directly beneath the drum. The distance between the rollers will be the same as the distance between the oscillating drum and the rollers. Set the drum so that the form rollers are evenly across its width. Bring them into position.

The steel distribution rollers are in position. No adjustment of the inking unit is now necessary.

To separate rollers and tilt the distribution rollers away. The form rollers are in the "away" position.

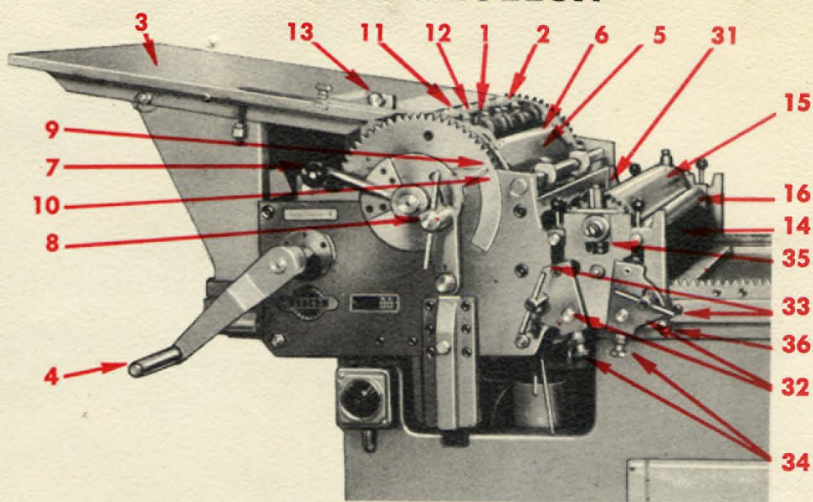
**Caution:** With the rollers in the "away" position, a form on the press should be moved away from the rollers.

## AD-1 SECTION



- 10. Cylinder Impression Adjustment Scale
- 11. Cylinder Sheet Grippers
- 12. Sheet Stop Adjusting Knobs
- 13. Feed Board Sheet Guide
- 14. Form Rollers (2)
- 15. Steel Oscillating Drum
- 16. Steel Distribution Rollers (2)
- 17. AD-1 Inking Unit Lift Knobs, Adjustment Screws
- 18. AD-1 Ink Distributor Hand Crank

## PI-1 SECTION



- 19. AD-1 Roller Separating Lever
- 20. Power Inking "On-Off" Indicator Light
- 21. Power Inking Drive Cylinder
- 22. Automatic Wash-Up Release Cams
- 23. Power Inking Switch
- 24. Power Inking Drive Cylinder Tension Slides
- 25. AD-1 Residue Drawer
- 26. Gripper Actuating Foot Pedal
- 27. Gear Racks
- 28. Cylinder Impression Slide
- 29. Cylinder Impression Release Wedge
- 30. Cylinder Impression Return Wedge
- 31. PI-1 Steel Oscillating Drum Retainers
- 32. PI-1 Form Roller Swing Carriages
- 33. PI-1 Form Roller Swing Carriage Locking Screws
- 34. PI-1 Form Roller Adjusting Knobs
- 35. PI-1 Steel Oscillating Drum Adjusting Knobs
- 36. PI-1 Form Roller Lateral Adjusting Knobs

to adjust sheet stops. To facilitate positioning of form on bed of press and sheet on feed board, presses are equipped with identical scales on bed and feed board.

### INKING UNITS

The inking system of the AD-1 and the PI-1 each consist of two rubber form rollers (14), one steel oscillating drum (15), and two steel distribution rollers (16). Since the two inking systems use different methods for adjusting and separating the rollers they will be treated separately.

#### AD-1 Inking Unit

To adjust the form rollers (14), first remove the steel oscillating drum (15) and the steel distributing rollers (16) from the inking unit. These may be removed as a unit by lifting on the two knobs (17) on either side of the unit. Set the form rollers using the adjusting screws beneath each roller shaft end so that they leave a mark  $\frac{1}{8}$ " wide on the gauge supplied with the press. Care should be taken so that the impression is the same on each roller and at both ends of the rollers. When the form rollers are set, replace the drum unit and, using the adjusting screws (17), set the oscillator so that it lightly touches the form rollers. Again, care should be taken to ensure equal pressure the entire length of the drum. When proper adjustment has been achieved, lock the adjusting screws in place with the lock nuts provided. The two steel distribution rollers (16) are automatically adjusted with the drum.

When inking the unit put ink on the drum with the cylinder carriage at the feed position. To keep from scratching the drum it is recommended that either a plastic or a wooden ink knife be used. To distribute ink turn the crank (18) if the unit is not equipped with power. When power equipped merely turn on the switch (23).

To raise and separate rollers turn lever (19) to right.

#### PI-1 Inking Unit

Adjustment of the rollers on the PI-1 is basically the same as on the AD-1. The only differences are that the oscillating drum and steel distribution roller must be removed individually. Lift steel distribution rollers (16) by the knobs at either end and tilt the carriers so that rollers can rest at top of slot away from form rollers. To remove oscillating drum (15) loosen the screws in plates (31), swing the plates away and lift out. Care should be taken when laying the drum down so that it will not roll. The form rollers (14) ride in swing carriages (32) which are used to lock them in the inking position and to separate them from the oscillating drum when the press is not in operation.

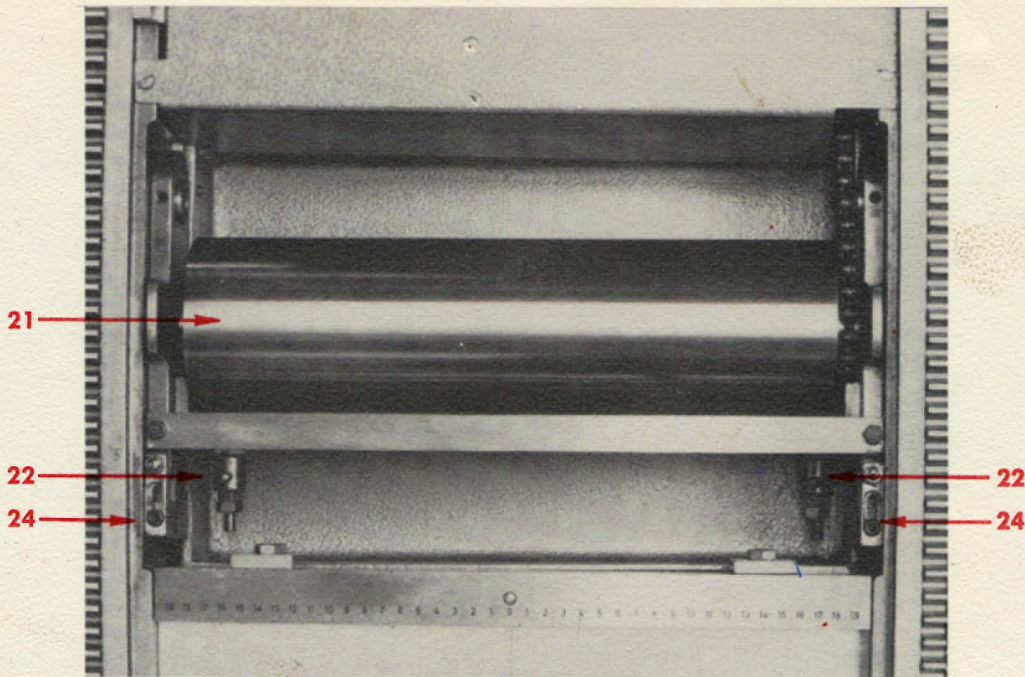
With the oscillating drum removed and the distribution rollers lifted, lock the form rollers in the inking position with the T-handle lock nuts (33) and adjust the height of the rollers with the adjusting knobs (34) on the swing carriage directly below the roller carriers. Setting should be the same as for the AD-1— $\frac{1}{8}$ " on the gauge. Replace the oscillating drum, and using the adjusting knobs (35), set the drum so that it lightly touches both form rollers. If form rollers are not parallel or do not touch the oscillator evenly across its entire length use adjusting knobs (36) to bring them into alignment.

The steel distribution rollers may now be lowered into position. No adjustment is necessary on these rollers. The inking unit is now ready for operation.

To separate rollers when press is not in use, merely lift and tilt the distribution rollers and move the form rollers away. The form rollers should always be locked lightly in the "away" position.

*Caution:* With the rollers in the "away" position and with a form on the press, the cylinder carriage should *not* be moved away from the rest position.

## AD-1 SECTION



### POWER INKING AND WASH-UP

The motor and drive of the power inking unit is below the feed table and to the left of the feed position of the cylinder. The drive roller (21) is just below the left form roller. From operating side of the press the drive roller should turn in a counter clockwise direction. With cylinder carriage moved away from feed position, turn with switch (23) to make sure that drive roller is turning in proper direction. With power turned on the rollers will automatically begin to turn when the cylinder carriage is returned to the feed position.

To use the wash-up unit, turn both cams (22)\* upward so that the blade is pressed against the drive cylinder (21). Return cylinder carriage to feed position and lower rollers by turning lever (19) to left. Turn on motor and carefully pour cleaning fluid on one half of oscillating roller. When first half is clean, repeat on second half. When rollers are clean the cams (22) should be returned to the down position. To clean the blade turn the two spring-loaded slides (24) inward and lift the drive roller (21). Ink and cleaning fluid from the wash-up is collected in the drawer (25) just below the drive cylinder. Placing rags in the drawer before washing up makes it easier to clean up residue.

\*On the PI-1 the blade is released by turning a knob in the center of the press instead of at the sides. The trap for residue is somewhat different on the PI-1, also.

### OPERATION

When all adjustments have been made on the press brush type form and lock and plane on bed of press, lower rollers and move cylinder carriage away from feed position. As carriage moves away from wedge (30), press down on lever (7) raising the cylinder "off" impression and proceed to ink form. When form is inked, return carriage to feed position and cylinder will automatically go "on" impression. Raise grippers using foot pedal (26) and insert sheet. Release grippers and run cylinder carriage across the form by turning crank. (4).

Two gripper opening cams are supplied with the press. One is located on the near side of the press and opens the grippers automatically just before the cylinder carriage reaches the end of its travel. This release is used for long sheets. The other release cam is located just inside the gear rack on the far side of the press and is used with shorter sheets. This cam should be removed when long sheets are being used. When grippers release, remove printed sheet and continue travel of cylinder carriage to end of bed. Cylinder will automatically go "off" impression as elevator slide (28) is raised by wedge (29). Return cylinder carriage to feed position.

## SPECIFICATIONS

<b>AD-1</b>	Sheet Size . . . . .	15¼"x19½"	<b>PI-1</b> Sheet Size . . . . .	20½"x24½"	
	Bed Size . . . . .	15¼"x23¼"		Bed Size . . . . .	20⅝"x27"
	Overall Width . . . . .	31½"		Overall Width . . . . .	39½"
	Overall Length . . . . .	68⅞"		Overall Length . . . . .	86½"
	Overall Height . . . . .	42½"		Overall Height . . . . .	47¼"
	Bed Height . . . . .	29⅞"		Bed Height . . . . .	31½"
	Net Weight . . . . .	992.07 lbs.		Net Weight . . . . .	1452 lbs.
	Floor Space Required . . . . .	14.91 sq. ft.		Floor Space Required . . . . .	23.69 sq. ft.