



# ASTRO

## ENVELOPE FEEDER

### AMC-2000-17

### FOR

## HEIDELBERG

## PRINTMASTER

**INSTALLATION AND OPERATING INSTRUCTIONS**

# INTRODUCTION

Thank you for purchasing the Astro Envelope Feeder. It is fast, efficient, reliable, and is designed to give you many years of trouble free service. Top load bottom vacuum feed provides continuous printing of various sized envelopes, cards, and tags. Uniquely designed conveyor board with its synchronized side guides and push guide provides accurate registration for secondary color operations.

The photoelectric sensor is the key element in the synchronization of the envelope feeder to the duplicator and is designed to give many years of virtually trouble-free operation.

The optional auxiliary installation kit provides compatibility to additional presses or duplicators of the same type.

To double your production needs, and optional dual stream feed kit is available for feeding different size envelopes simultaneously.

Numerous built-in features of the Astro Envelope Feeder combine with state-of-the art technology make this unit superior for a customer such as you.

## SPECIFICATIONS\*

<b>VOLTAGE REQUIREMENTS:</b>	115 VAC – 60 Hz – 10 A
<b>OPTIONAL AVAILABILITY:</b>	220 VAC – 50 Hz - 5 A
<b>ENVELOPE DIMENSIONS:</b>	3" x 5" Minimum 11" x 16-1/4" Maximum
<b>MAXIMUM FEEDING SPEED:</b>	Controlled by Operator
<b>MACHINE DIMENSIONS:</b>	Width – 20" Length – 64" Height – 42" Weight – 150 lbs.
<b>AVAILABLE OPTIONS:</b>	Conveyor Delivery

\* The manufacturer reserves the right to change specifications without written notice.

## SAFETY PRECAUTIONS

**THIS EQUIPMENT PRESENTS NO PROBLEM WHEN USED PROPERLY, HOWEVER, CERTAIN SAFETY RULES SHOULD BE OBSERVED WHEN OPERATING THE FEEDER.**

**READ THIS MANUAL CAREFULLY AND FOLLOW THE RECOMMENDED PROCEDURES.**

1. KEEP HANDS, HAIR, AND CLOTHING CLEAR OF ROLLERS, TAPES AND OTHER MOVING PARTS.
2. ALWAYS TURN OFF THE MACHINE BEFORE MAKING ADJUSTMENTS OR CLEANING THE MACHINE.
3. DISCONNECT THE POWER CORD WHEN MAKING ANY MACHINE ADJUSTMENTS OR PERFORMING ANY MAINTENANCE NOT COVERED IN THIS MANUAL.

### CAUTION

**THIS EQUIPMENT MUST BE CONNECTED TO A PROPERLY GROUNDED OUTLET. FAILURE TO DO SO CREATES A POTENTIAL DANGER OF ELECTRICAL SHOCK.**

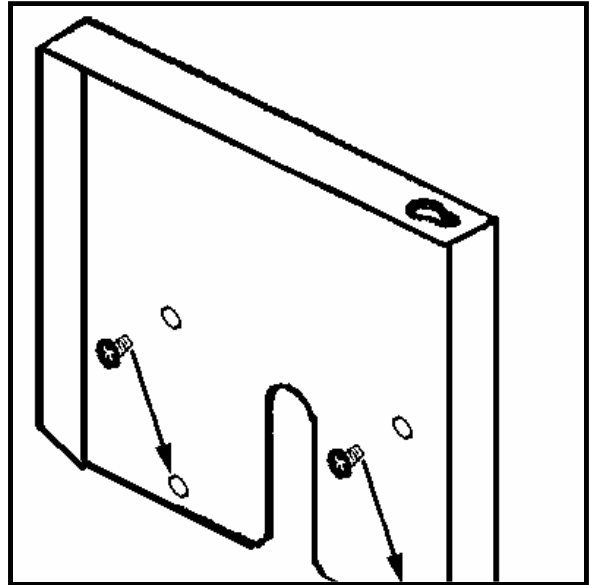
## PARTS LIST

The following parts are included with this machine. Please check and identify all parts with those listed below:

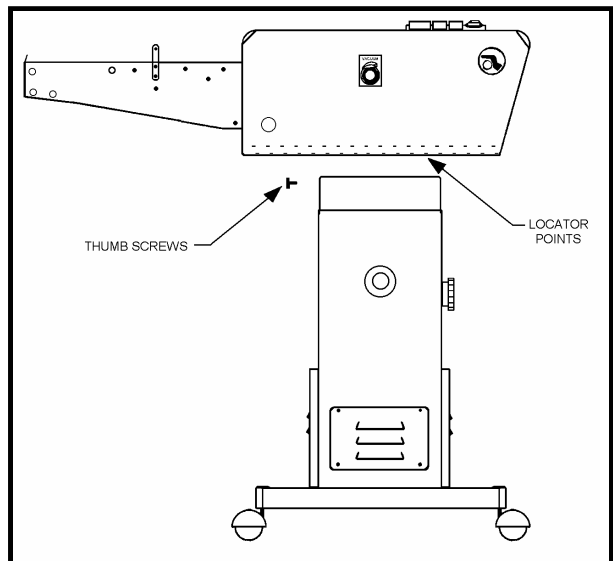
A.	ENVELOPE FEEDER	84-000-117
B.	STAND WITH PUMP ASSEMBLY	(See Pages 14 & 15)
C.	FRONT ENVELOPE GUIDE R/H	84-108-15
D.	FRONT ENVELOPE GUIDE L/H	84-108-14
E.	CENTER ENVELOPE GUIDE	71-140-13
F.	REAR ENVELOPE GUIDE	84-108-20
G.	SUPPORT PADS (2)	123-0208
H.	SHEET SEPARATOR (4)	71-109-05
I.	SPRING	71-120-02
J.	SUCTION CUP (4)	71-134-15
K.	ALLEN WRENCH – 1/16"	123-0057
L.	ALLEN WRENCH – 3/32"	123-0058
M.	FUSE, 2 AMP (FAST BLO)	123-0285
N.	FUSE, 10 AMP (SLO BLO)	123-0090
O.	SUCTION FOOT CAP (4)	123-0415
P.	WHEEL CASTERS (4)	(2) 123-0517, (2) 123-0521
Q.	THUMBSCREW (2)	84-261-08
R.	INSERTS (2)	84-262-11
S.	LOCKTITE, #24205, 0.5 ML (1)	123-1779

# UNPACKING INSTRUCTIONS

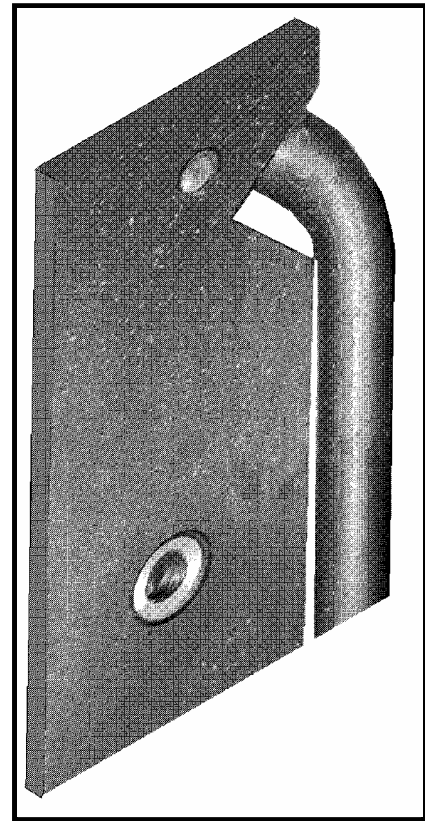
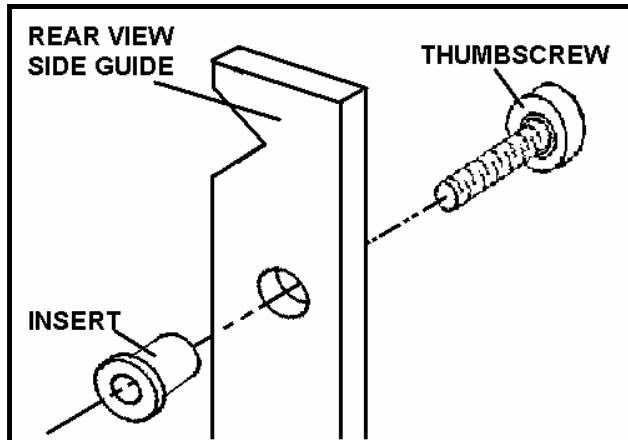
1. Unpack the stand and the feeder from their boxes. Check the contents of the box with the Parts List on Page 1.
2. Remove the two screws that mount the Side Plates R/H and L/H to the stand base. Reposition the Side Plates using the two lower holes so that the plates are raised from their packing position. This is an important step as the feeder can not be leveled to the press unless this is done.



3. Install the four casters to the base of the stand.
4. Place the feeder on top of the stand by locating the two mating points on the bottom of the feeder.
5. Match the two mating points with the corresponding holes on the top of the stand and slide into the slots.
6. Locate the two thumbscrew holes at the front of the stand.
7. Install the two (2)  $\frac{1}{4}$ -20 x  $\frac{1}{2}$  thumbscrews provided in the accessory kit.
8. Secure the feeder by tightening the thumbscrews into the threaded holes.



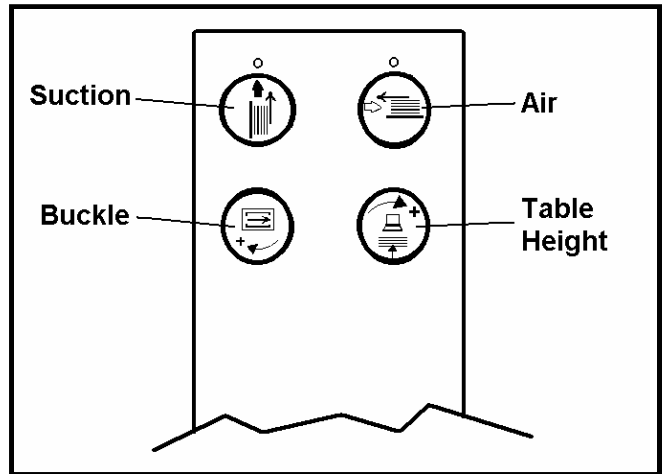
9. Apply a small amount of Lock-tite to the mounting insert. Install the insert from the rear of the side guide support on the press. Screw the thumbscrew into the insert from the front side of the side guide and tighten the screw until the insert is pulled into the hole and is flush with the surface of the side guide face. Repeat for the opposite side.



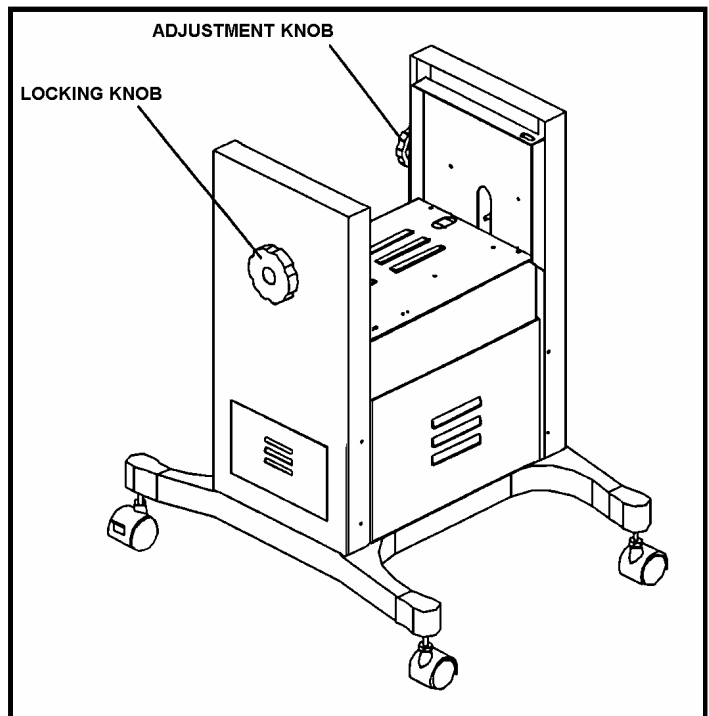
# INSTALLATION INSTRUCTIONS

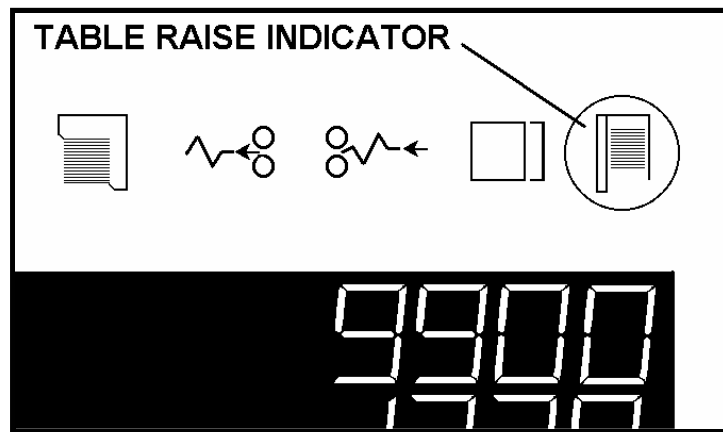
The Envelope Feeder runs in the manual mode when attached to Heidelberg Printmaster. Follow the instructions below to install the feeder to the press:

1. Open the side guides on the Printmaster to there maximum open position.
2. Bring the paper tray on the Printmaster all the way down.
3. Adjust the table height adjustment knob on the duplicator by turning it fully clockwise and then 2 ½ full turns counterclockwise.
4. Adjust the duplicator buckle control knob clockwise to full buckle.
5. Adjust the suction control knob to maximum.
6. Set the air control knob to # 3 on the dial.



7. Lower the sucker tubes to their lowest position.
8. Roll the Envelope Feeder up to the side guides and align the wings on the feeder with the holes in the side guides on the press.
9. Use the two thumb screws to attach the feeder to the side guides. Do not tighten at this time but position the feeder flush against the side guides on the press.
10. Adjust the height of the feeder until the front red plastic plate just touches the sucker tubes when they are at their lowest position. Loosen the two **Locking Knobs** on either side of the stand by turning them counterclockwise. Then turn the **Adjustment Knob** clockwise to raise the height of the stand, or counterclockwise to lower it.
11. Tighten the locking knobs after the height is adjusted.
12. Run the Printmaster without feeding envelopes. Adjust the bail bar height if the *RED* table raise indicator warning light on the Printmaster control panel is **ON** until the light goes **OFF** and the paper tray is not moving up. When properly adjusted the paper bail bar on the press will contact the top of the envelope feeder.





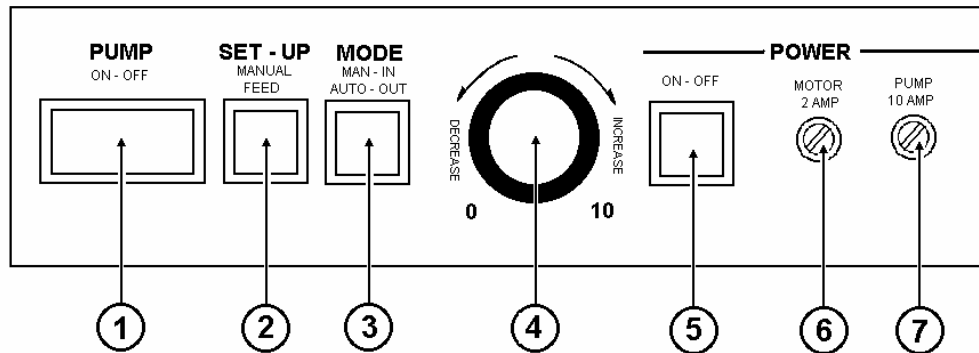
## WARNING

**THIS IS A CRITICAL ADJUSTMENT. ALLOWING THE PAPER TRAY TO GO UP WILL DAMAGE THE ENVELOPE FEEDER AND THE DUPLICATOR!**

13. Tighten the two thumb screws that attach the envelope feeder to the press.
14. Place the envelope feeder in the manual mode using the **MODE** switch on the control panel.  
Adjust the envelope feeder to the lowest possible speed that allows the feeder to keep up with the duplicator. This will reduce wear and tear on the feeder and prevent envelopes from jumping over the front apron.

# CONTROLS

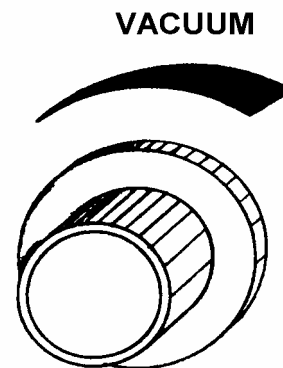
## CONTROL PANEL



1. PUMP – Turns the feeder pump ON and OFF.
2. SET-UP – Feeder will make a full cycle bringing one envelope to the press. Mode switch #5 must be on manual; pump switch #7 must be ON and drive motor running.
3. MODE SWITCH – When in depressed position activates the speed control #4. When in released position, activates the pulse generator and synchronizes the feeder with the press.  
**NOTE: The envelope feeder runs only in the manual mode on the Printmaster.**
4. FEEDER SPEED CONTROL – While the Feeder is on MANUAL MODE it enables the operator to adjust the speed of the drive motor during set up.
5. POWER SWITCH – Turns Feeder ON and OFF.
6. FUSE – Drive Motor – 2 AMPS
7. FUSE – Pump – 10 AMPS

## VACUUM BLEED VALVE

The vacuum bleed valve is located on the feeder left side frame. Turning it clockwise increases amount of vacuum going into the suction feet. Turning it counterclockwise decreases vacuum.

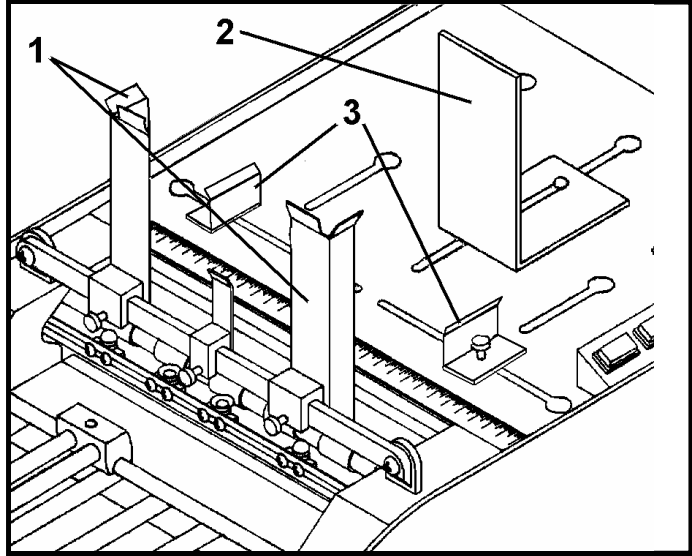




# OPERATING INSTRUCTIONS

1. Adjust the envelope feeder stand to the height of the press front feed plate.
2. Hook the front feed plate on the envelope feeder over the bar on the feeder of the press and tighten the clamp screw assembly securely.
3. Plug the pulse generator into the connector provided on the envelope feeder. Plug the pump into the receptacle provided on the envelope feeder.
4. Plug the envelope feeder into the wall receptacle.

5. Attach the front envelope guides [1] approximately in the middle of the feeder as shown.
6. Place an envelope in the guides.
7. Attach the rear envelope guide [2] using the slot in the feeder floor nearest the rear end of the envelope, then adjust the anti skewing guides [3] to the sides of the envelope.
8. Adjust the envelope guides so that there is no more than 1/16" (1.6 mm) clearance in all direction.

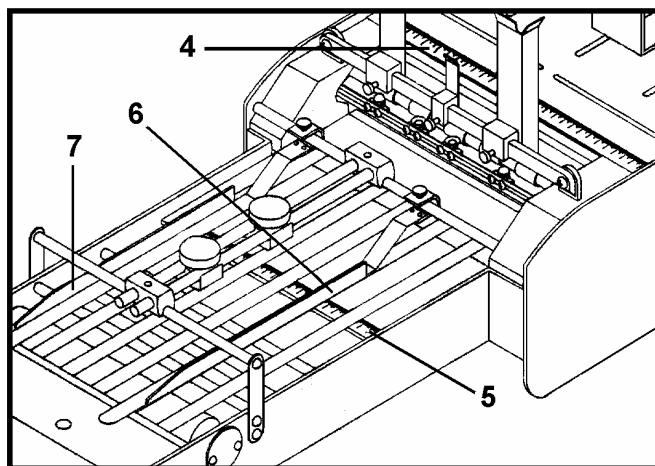


**NOTE: EXCESSIVE CLEARANCE WILL RESULT IN MISFEEDING AND IMPROPER PERFORMANCE.**

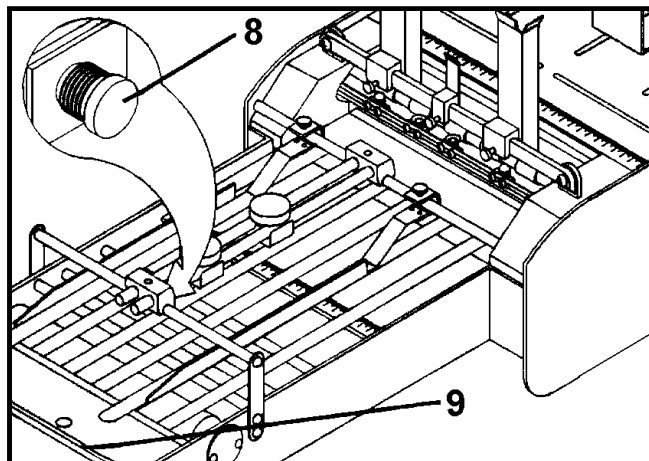
9. Position the suction cups in an evenly distributed fashion with the outside cups approximately 3/4" (2 cm) from the ends of the envelope.

**NOTE: THE SIZE OF THE ENVELOPE DETERMINES HOW MANY SUCTION CUPS SHOULD BE USED.**

10. Place the suction foot vacuum caps (P/N: 123-415) on suction feet not used.
11. Using the scale on the feeder, [4], and the scale on the conveyor, [5], roughly adjust the stop guide, [6] and the push guide, [7] so that the envelope coming down will clear them.
12. Place a small stack of envelopes in the guides.



13. Using the adjusting thumbscrew [8], make sure the right edge of the push guide is perpendicular to the front stop plate [9] for accurate squareness.
14. Turn the feeder **ON**, set the mode switch to **MANUAL** and turn the speed control clockwise so that the tapes on the conveyor are moving slowly.
15. Turn the vacuum switch **ON**.



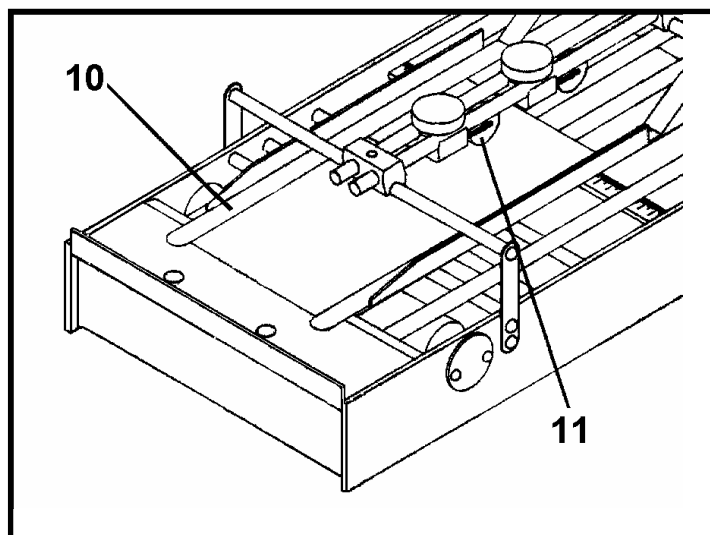
16. Press the **SET-UP** switch momentarily. This will activate the suction cup bar and bring down an envelope. When the envelope moves down the conveyor to the duplicator, make sure it clears the push guide and does not touch the springs on the stop guide.
17. Turn the **VACUUM** switch **OFF** and press the **SET-UP** switch once again. This will activate the jogging mechanism. Adjust the jogger guide so the envelope just touches the springs on the stop guide.

**NOTE: TOO MUCH JOG CAN AFFECT THE REGISTRATION.**

18. Adjust the conveyor tapes by moving the tape guides located under the conveyor portion of the feeder while tapes are running slowly.

**EXAMPLE: For No. 10 envelopes, use three (3) tapes. One over the stop guides approx. 3/8" (1 cm) from the springs, one over the push guide approx. 1/4" (6 mm) from the right edge and one tape under the skid wheel. For wider envelopes use additional tapes as needed.**

19. Adjust the retainer straps [10] over the stop and push guide tapes.
20. When the envelope is against the front stop plate, position the front skid wheel [11] so it is lightly touching the trailing edge of the envelope.
21. Turn the press pump **ON**.
22. Turn **OFF** the press blowers and turn the press vacuum knob to full.
23. Using the press, hand wheel, pass the envelope through the press.

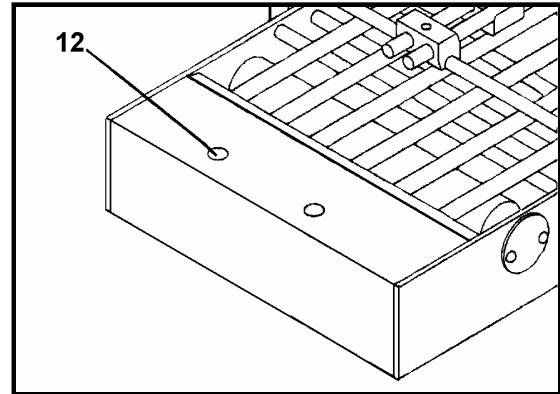


**NOTE: MAKE SURE THE ENVELOPE GOES INTO GRIPPERS FIRMLY. ADJUST THE BUCKLE CONTROL ON THE PRESS IF NECESSARY.**

24. Set the Printmaster on the lowest speed.
25. Check that the **MODE** switch is in the **MANUAL** position.
26. Turn the feeder vacuum **ON**.

27. Press the **SET UP** switch momentarily. This will bring down the envelope.

28. Turn the press vacuum **ON**. The feeder is equipped with a photoelectric sensor [12], which synchronizes the feeder with the press and prevents jam-ups. In case the press does not pick up an envelope, the feeder will not send another envelope. This acts as a built in jam detector. The feeder will remain neutral as long as there is an envelope over the photoelectric sensor. To start feeding again turn **OFF** the feeder vacuum, and the drive motor. Correct the problem on the press and/or the feeder. Follow steps 26 – 28 to start feeding again.



**NOTE: MAKE SURE THE FEEDER IS SET UP SO THAT THE ENVELOPES ARE FED OVER THE PHOTOSENSOR. ALSO, MAKE SURE THERE ARE NO FOREIGN OBJECTS e.g. (LINT, PAPER) COVERING THE PHOTOSENSOR. IT IS ESSENTIAL TO THE OPERATION OF THE FEEDER THAT THE PHOTOSENSOR “SEES” AN ENVELOPE.**

**TO START AND STOP FEEDING, USE THE DUPLICATOR PUMP SWITCH. DO NOT USE THE FEEDER POWER SWITCH FOR THIS PURPOSE. THE POWER SWITCH ON THE FEEDER SHOULD BE TURNED “ON” WHEN THE JOB IS STARTED AND REMAINS ON UNTIL THE JOB IS COMPLETED.**

The speed of the press can be changed while the feeder is feeding envelopes. The electronic circuitry of the envelope feeder is designed to respond automatically to the operational commands of the press.

### **CAUTION**

**ANY SPEED CHANGES TO THE PRESS SHOULD BE DONE GRADUALLY. RAPID CHANGE OF THE SPEED WILL AFFECT REGISTRATION AND MAY CAUSE MISFEEDING.**

### **OPERATING HINTS**

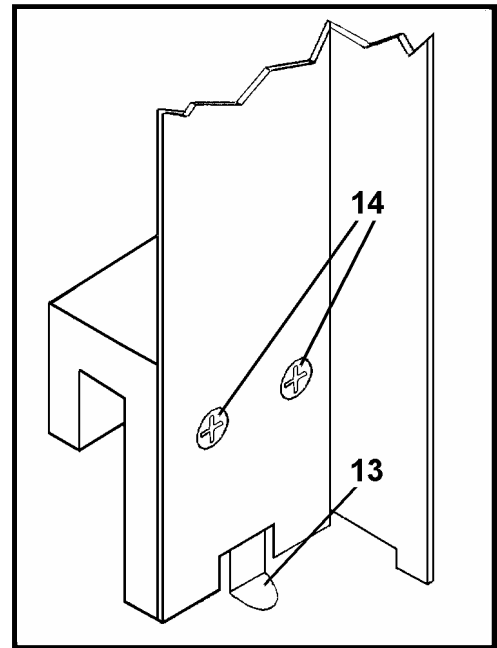
- A. Do not bend envelopes when setting side guides. Front and rear guides must be snug against the envelopes.
- B. Form envelopes as required to maintain flatness to the suction cups to improve feeding consistency.

- C. Be sure the bottom envelop in a stack of envelopes or tag stock, rests on the sheet separators.
- D. The front side guides contain adjustable sheet separator clips.

The clips project  $\frac{3}{32}$ " (2.4 mm) beyond the face of the guides. Adjustment is seldom required.

1. Misfeeding may occur if the clips extend too far under the envelopes. First increase vacuum and test run; then, if required, move clip [13] to the front using set screw behind them.
2. Double feeding may occur if the clips are not under the envelopes far enough. First decrease vacuum and test run; then, if required, move clips to the front.

The vertical position of the clips is also adjustable. Loosen two screws [14] and position the bottom of the clip flush with the bottom of the guide.



# LUBRICATION INSTRUCTIONS

## WARNING

**MACHINE MUST BE UNPLUGGED FROM ITS POWER RECEPTACLE WHILE PERFORMING LUBRICATION, MAINTENANCE, OR CLEANING PROCEDURES.**

## CAUTION

**CARE SHOULD BE TAKEN TO KEEP LUBRICANTS FROM ELECTRICAL TERMINALS, SWITCHES, AS WELL AS ROLLERS, BELTS AND RUBBER PARTS.**

When lubricating, pay particular attention to oil holes and all sliding parts.

**NOTE: RESIDUE OF PAPER, DUST, INK, AND OTHER FOREIGN MATERIALS SHOULD ALWAYS BE REMOVED FROM GEARS, WORKING LEVERS, SHAFTS, AND MECHANISMS BEFORE NEW LUBRICANTS ARE APPLIED. THIS WILL PREVENT UNDUE WEAR CAUSED BY ABRASIVE ACTION FROM THIS RESIDUE MATERIAL. AREAS AROUND OR ADJACENT TO LUBRICATED PARTS AND SURFACES SHOULD ALSO BE FREE OF DUST AND FOREIGN MATERIAL.**

## LUBRICATION INTERVALS

Regular lubrication of oil ports (indicated by red) should be performed every 30 days on machines that operate 30-40 hours per week.

## LUBRICANTS

OIL: S.A.E. #20 non-detergent engine oil, or equivalent.

GREASE: Commercial lithium grease.

## GENERAL LUBRICATION

1. CAMS AND GEARS – Should be cleaned and lightly oiled.
2. SPRINGS AND SPRING LEVERS – Should be greased lightly.

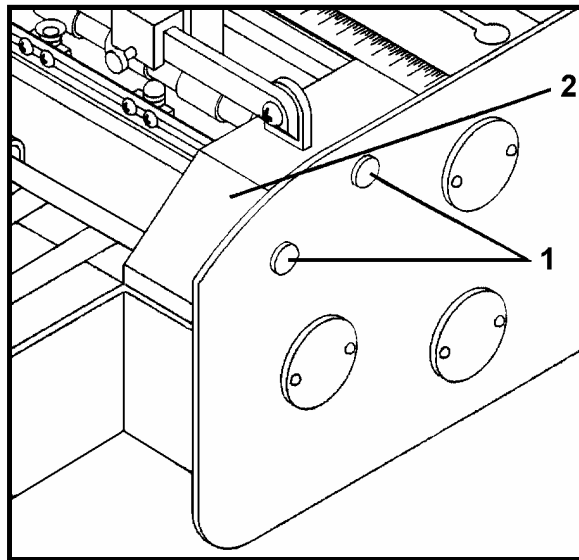
**NOTE: BEFORE GREASING SPRINGS AND SPRING LEVERS, THE EXISTING LUBRICANT MUST BE REMOVED. WHEN APPLYING NEW GREASE, USE IT SPARINGLY ONLY AT THE HOOK ENDS OF THE SPRING, NOT ON THE BODY.**

3. CHAIN AND SPROCKETS – Should be lubricated by using a commercial lithium grease.

**NOTE: IN ORDER TO GAIN ACCESS TO MOST LUBRICATING POINTS, THE FRONT COVER ASSEMBLY MUST BE REMOVED.**

## FRONT COVER ASSEMBLY REMOVAL

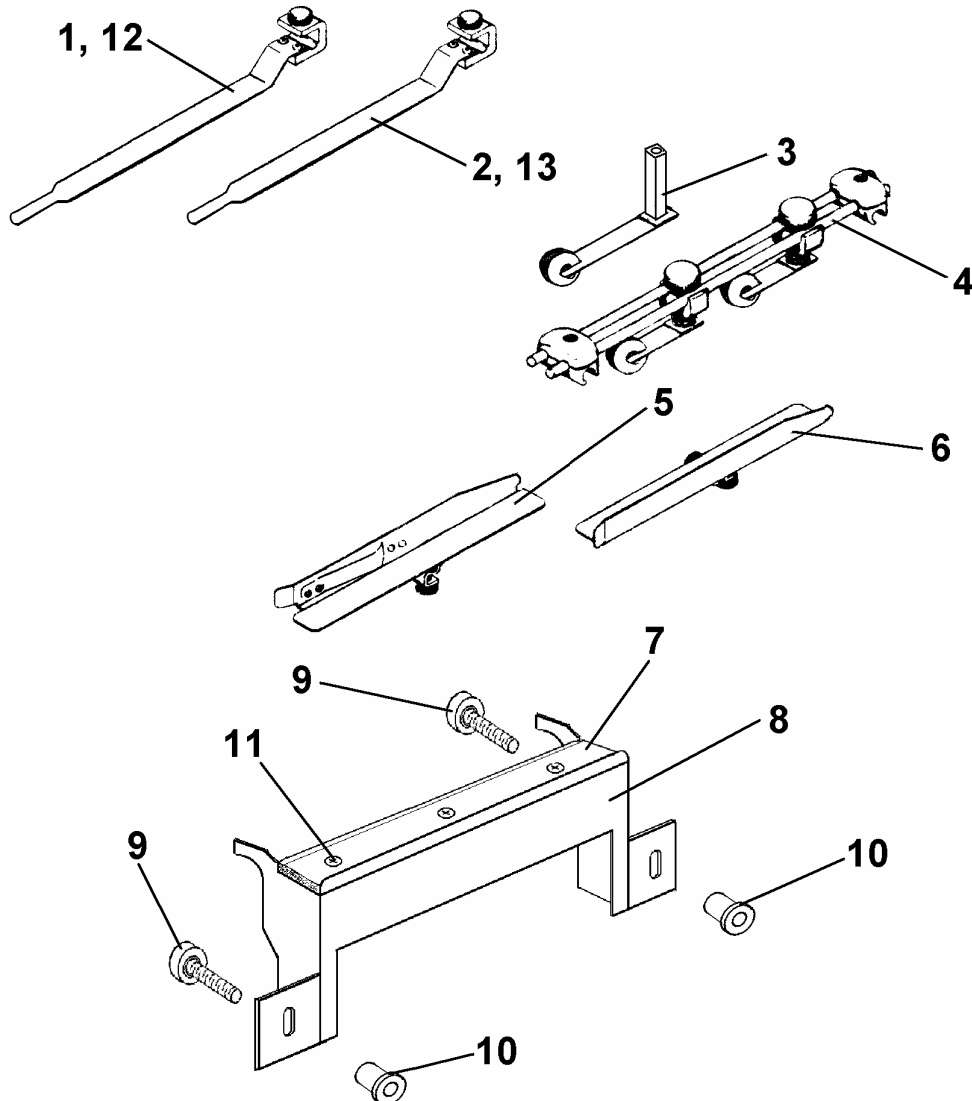
1. Turn the feeder power switch **ON**.
2. Set the **MODE** switch to **MANUAL**.
3. Turn the speed control knob **COUNTERCLOCKWISE** so that the conveyor tapes move slowly.
4. Depress the **SET UP** switch momentarily.
5. Wait until the upper pull out roller touches the lower pull out roller and turn the power **OFF**.
6. Unplug the feeder.
7. Unscrew the 4 thumbscrews (2 on each side of the feeder) [1].
8. Remove the front cover assembly [2].



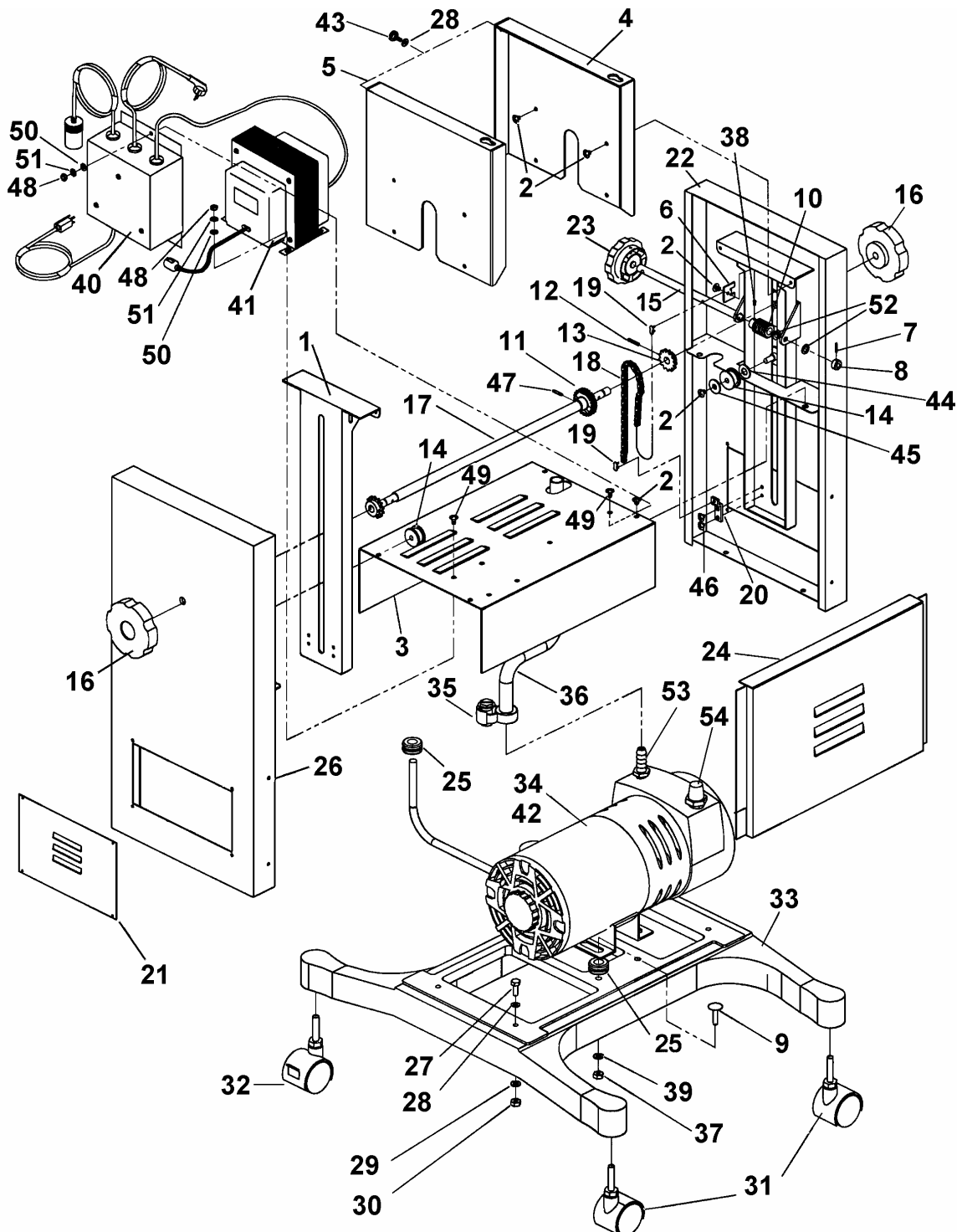
# PARTS CATALOG

## REPLACEMENT PARTS FOR HEIDELBERG PRINTMASTER

KEY	PART NUMBER	DESCRIPTION	QTY
1.	84-262-106	PAPER RETAINER STRAP ASSEMBLY (HEAVY)	2
2.	84-262-116	PAPER RETAINER STRAP ASSEMBLY (LIGHT)	2
3.	86-125-46	SKID ROLLER ASSEMBLY (LONG)	2
4.	71-130-02	SKID WHEEL ASSEMBLY	2
5.	84-261-38	SIDE GUIDE ASSEMBLY L/H	1
6.	84-261-41	SIDE GUIDE ASSEMBLY R/H	1
7.	84-261-10	PAD, FRONT FEED PLATE	1
8.	84-262-26	FRONT FEED PLATE ASSEMBLY	1
9.	84-262-08	THUMBSCREW	2
10.	84-262-11	INSERT	2
11.	123-0446	SCREW, 8-32 X 5/16	3
12.	84-261-107	PAPER RETAINER STRAP (HEAVY) QM	2
13.	84-261-117	PAPER RETAINER STRAP (LIGHT) QM	2
	84-261-20	FRAME, CONVEYOR R/H (NOT SHOWN)	1
	84-261-12	FRAME, CONVEYOR L/H (NOT SHOWN)	1



# STAND WITH PUMP





## GROUP 2

KEY #	PART #	DESCRIPTION	QTY.
1.	156-102-18	ELEVATOR BRACKET (STANDARD)	2
1.	156-103-18	ELEVATOR BRACKET (LONG)	2
2.	123-0017	SCREW, 10-32X1/4 PHLPS TRUSS	32
3.	156-103-05	PANEL – BASE – PUMP COVER	1
4.	156-103-07	SIDE PLATE R/H	1
5.	156-103-06	SIDE PLATE L/H	1
6.	156-103-25	ELEVATOR BRACKET SUPPORT	2
7.	123-0695	SPRING PIN, 3/32 X 1/2	1
8.	156-103-27	COLLAR	1
9.	123-0841	CARRIAGE BOLT, 5/16 – 18 X 1	4
10.	156-103-12	HELIX ANGLE WORM	2
11.	156-103-11	WORM GEAR 20 TEETH	1
12.	123-0018	ROLL PIN 1/8 X 3/4 – BLACK	3
13.	156-103-08	SPROCKET 25B13	2
14.	156-103-09	IDLER PULLEY	2
15.	156-103-21	WORM SHAFT	1
16.	123-0135	KNOB	2
17.	156-103-20	DRIVE SHAFT	1
18.	156-103-26	CHAIN, TRANSMISSION ROLLER	2
19.	123-0200	CONNECTING LINK, CHAIN	4
20.	156-103-23	ELEVATOR BRACKET SUPPORT	2
21.	86-103-04	COVER, SIDE PANEL	2
22.	156-103-03	SIDE PANEL L/H	2
23.	123-0293	KNOB, HEIGHT ADJUSTMENT	1
24.	86-103-06	PUMP COVER, STAND	2
25.	123-0707	RUBBER GROMMET 1/2ID X 3/4OD	1
26.	156-103-04	SIDE PANEL R/H	1
27.	123-0143	SCREW, HEX 1/4-20 X 5/8	4
28.	123-0063	WASHER, 1/4 PLAIN-MOTOR & PUMP	8
29.	123-0064	WASHER, LOCK 1/4	8
30.	123-0054	NUT, HEX 1/4-20	8
31.	123-0517	CASTER, NON LOCKING	2
32.	123-0521	CASTER, LOCKING	2
33.	86-103-31	BASE WELDMENT	1
34.	84-103-07	VACUUM PUMP ASSEMBLY, 115 V	1
35.	123-0131	CLAMP, HOSE	1
36.	84-106-41	HOSE, PUMP	1
37.	123-0051	NUT, 5/16-18 HEX	4
38.	123-0757	SCREW, SET 6-23 X 1/4 STD CUP PT	4
39.	123-0855	WASHER, 5/16 LOCKING	4
* 40.	84-140-78	RELAY BOX 220V / 50 Hz	1
* 41.	123-0436	TRANSFORMER, 220V / 50 Hz	1
* 42.	84-103-10	VACUUM PUMP, 220V / 50 Hz	1
43.	56-108-22	THUMBSCREW	1
44.	123-0096	WASHER, PLASTIC 3/8 X 3/4 X 1/16	2
45.	123-0311	WASHER, 9/32 X 3/4 X 1/16 PLASTIC	2
46.	123-0701	SCREW, 10-32 X 3/16 PH TRUSS HD	4
47.	123-0034	ROLL PIN, 1/8 X 5/8	1
*48.	123-0050	NUT, 10-32 X 5/16 HEX ZINC	6
*49.	123-0024	SCREW, 10-32 X 3/8 PH TRUSS HD MS ZINC	6
*50.	123-0237	WASHER, STAR #10 EXTERNAL	6
*51.	123-0262	WASHER #10 3/16 X 3/8 X .032	6
52.	123-0312	WASHER, 5/16 X 1/2 X .030 PLASTIC	2
53.	123-0145	FITTING	1
54.	AK840A	FILTER/MUFFLER	1
**	K247	SERVICE KIT, OLD STYLE PUMP	
**	K478	SERVICE KIT, NEW STYLE PUMP	
**	AK524	FELT, NEW STYLE PUMP ONLY	

\* 220V/0HZ ONLY

\*\*PARTS NOT SHOWN



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Elk Grove Village, Illinois 60007  
08/10/2004  
**Part Number: 500-AMC2000-17**