

## OPERATING INSTRUCTIONS

1. Before beginning operation, make sure that no punches have become "stuck" in their dies during shipment. Separate "stuck" dies by prying them apart with a screwdriver.
2. Make sure the hand wheel rotates freely
3. Rotate the cam lever, located at the front of the machine's base, until it points upward, releasing the pressure between the upper and lower feed wheels. Your machine is now ready to insert the stencil board.

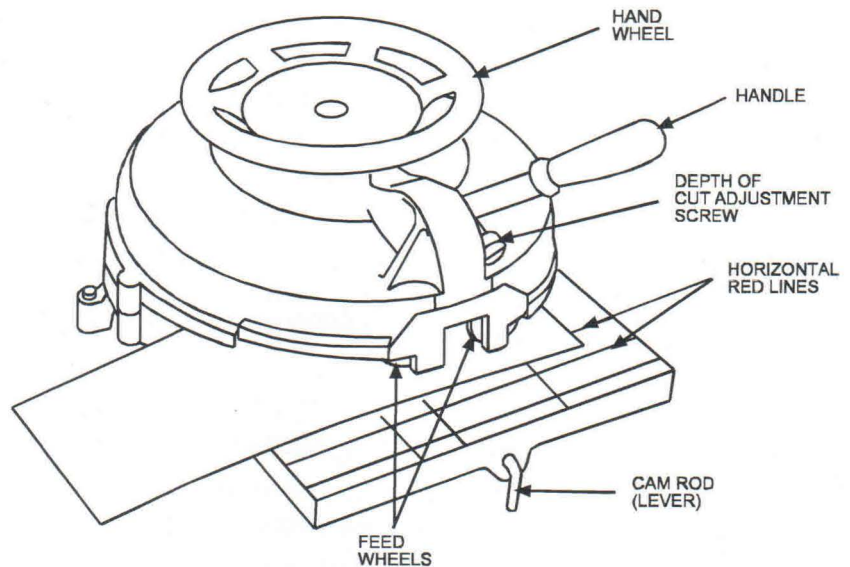


Figure 1 Stencil Cutting Machine

4. Insert the stencil board between the upper feed wheels and base with the left hand edge of the board aligned with the white line on the base. Align the edge of the board nearest the operator with one of the red horizontal lines in the base.  
Note: Normally, multiple line cut stencils require that the red line nearest the operator represents the first line to be cut.
5. Rotate the cam lever downward to secure the stencil board between upper and lower feed wheels to secure the stencil board .
6. Rotate the hand wheel until the pointer points to the desired character. Cut by pulling the handle with a firm, quick motion. Return the handle to its full upward position before continuing to the next character.
7. To use the spacing character, pull the handle approximately halfway down until a definite clicking sound is heard.
8. To cut successive lines repeat steps 2, 3, 4, and 5 while advancing the stencil to the next horizontal red line on the base to produce a new line of text.

## PROBLEMS AND CORRECTIONS

### CHARACTER DOES NOT CUT

1. Adjust the stop screw on the hood to lengthen the stroke of the handle. This will provide a deeper penetration of punch into die.



CAUTION: MAKE THIS ADJUSTMENT IN SMALL INCREMENTS BECAUSE EXCESSIVE PENETRATION MAY CAUSE OTHER PUNCHES TO "STICK" IN THEIR DIES. DIFFICULTY IN OPERATING THE MACHINE AND PREMATURE FAILURE MAY RESULT.

2. Inspect punch and die for paper segments. Remove any obstructions with the cleaning hook provided.
3. If the actions above fail to correct the problem, contact the nearest Diagraph sales office for assistance.

### IMPROPER SPACING

1. Inspect the knurled upper feed rollers for paper clogs and clean with a wire brush.
2. Check to see that the upper and lower feed rollers rotate freely.
3. If characters are spaced too close together, it may be necessary to readjust the mounting of the upper feed assembly.
  - a. Release pressure between the upper and lower feed rollers.
  - b. Loosen the two screws which secure the upper feed casting to the hood.
  - c. Push the upper feed roller toward the operator's left, then tighten the mounting screws.
4. If characters are spaced too far apart, repeat step 3 and reposition the upper feed assembly toward the operator's right.
5. If the above suggestions fail, contact the nearest Diagraph sales office for assistance.

### STENCIL BOARD NOT FEEDING STRAIGHT

If this occurs when replacing the lower feed roller or when the machine is out of adjustment, refer to the "Lower Feed Adjustment" section.

## MAINTENANCE

1. To ensure the maximum life of punches and dies and to minimize maintenance and repairs, use only the stencil board specifically formulated and processed by Diagraph.



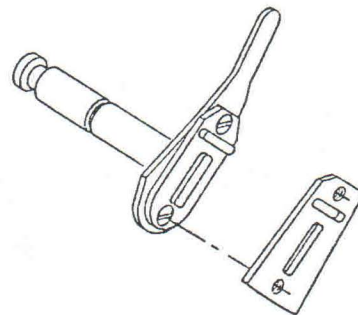
**CAUTION: DO NOT ATTEMPT TO CUT METAL. THIS WILL PERMANENTLY DAMAGE THE MACHINE.**

2. Periodically examine the punches and dies for particles of clogged stencil board and remove with the cleaning hook.
3. Routinely lubricate all moving parts with a lightweight grade of machine oil.

## PUNCH AND DIE REPLACEMENT

Replacement of a punch and die should be performed by Diagraph personnel. Improper procedures during installation can result in damaged components. If customer installation is necessary, follow the steps below:

1. Turn the machine upside down, letting it rest on the hand wheel with the base table facing you.
2. Rotate the machine until the damaged character aligns with the cutout portion in the base.



**Figure 1 Punch and Die Assembly**

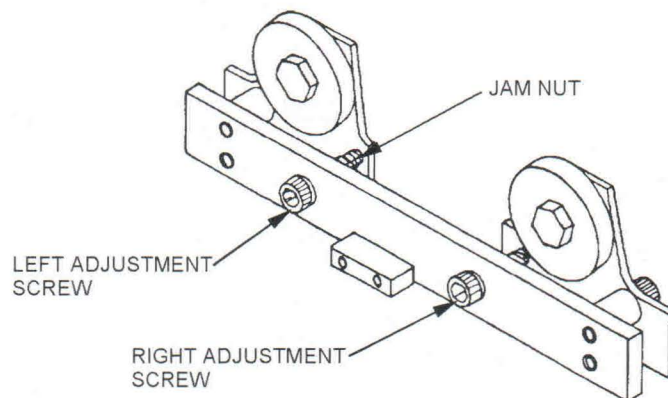
3. With a screwdriver, remove the two screws securing the die and slide die out, being careful not to drop the screws or die into the machine.
4. Insert the screwdriver through holes in the die carrier and remove the two screws securing the punch, being careful not to drop the screw or punch into the machine.
5. Note the positioning of the color coded markings on the new punch and die and separate them by carefully prying apart.

6. Place punch screws into new punch and carefully slide punch into its mounting position with the color code facing outward from the center of the machine. Tighten the screws inserted through the holes in the die carrier.
7. Carefully place die on punch and make certain the color coded markings are aligned. Apply very slight pressure to start the die mating with the punch.
8. Raise the punch until the die is against the die carrier. Insert the die mounting screws and washers and tighten screws alternately, a little at a time.

## LOWER FEED ADJUSTMENT

### ADJUSTMENT OF RIGHT HAND ROLLER

1. Disengage pressure between upper and lower feed rollers.
2. Loosen jam nut just enough to allow movement of screws.
3. After making a stencil, turn right adjustment screw clockwise. The stencil board will move towards the operator.
4. Turn left adjustment screw counterclockwise. The stencil board will move towards the operator.
5. Once stencil board is in line, hold adjustment screw in place and tighten jam nut.

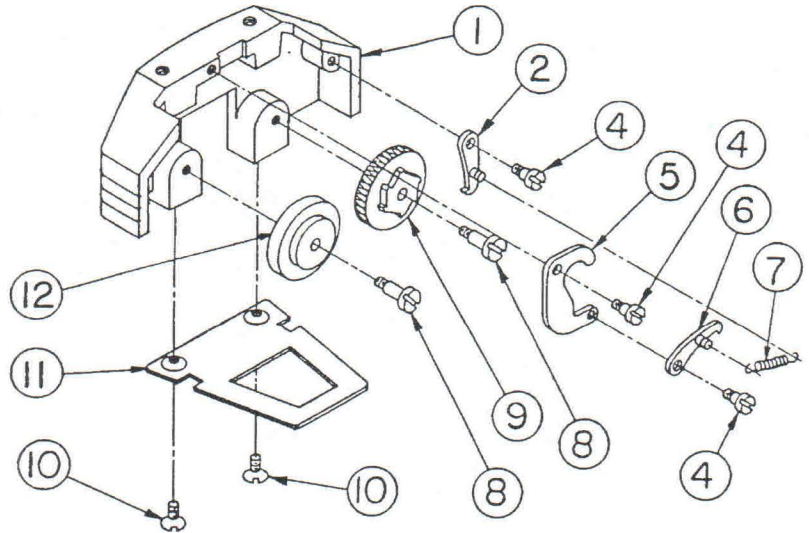


**Figure 2 Roller Adjustment**



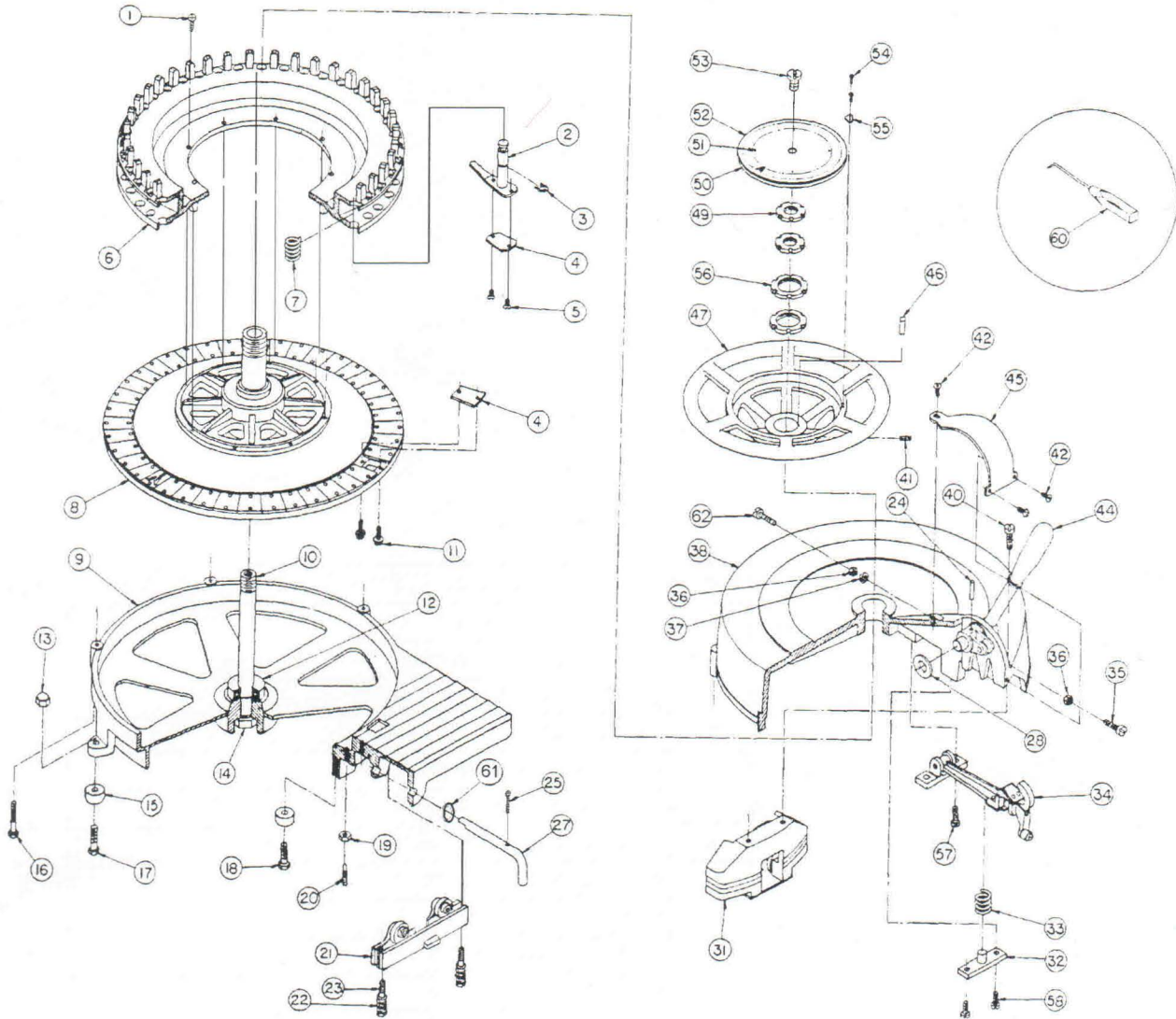
**CAUTION: ADJUST ONE ROLLER AT A TIME. START WITH RIGHT ROLLER, GENTLY TURN ADJUSTMENT SCREW 1/8-1/4 OF A TURN.**

## UPPER FEED ASSEMBLY



Ref. #	Stock #	Description	Req'd
1	0108-005	Bracket, Feed	1
2	0101-826	Retainer Assembly, 1/8"	1
	0102-826	Retainer Assembly, 1/4"	
	0103-826	Retainer Assembly, 3/8"	
	0104-826	Retainer Assembly, 1/2"	
	0107-826	Retainer Assembly, 3/4" & 1"	
4	0109-048	Screw, Shoulder Cam	3
5	0101-022	Feed Cam, 1/8"	1
	0102-022	Feed Cam, 1/4"	
	0103-022	Feed Cam, 3/8"	
	0104-022	Feed Cam, 1/2"	
	0107-054	Feed Cam, 3/4" & 1"	
6	0101-826	Retainer Assembly, 1/8"	1
	0102-824	Feed Pawl Assembly, 1/4"	
	0109-824	Feed Pawl Assembly, 3/8" through 1"	
7	0109-025	Spring, Pawl	1
8	0109-054	Screw, Shoulder	2
9	0101-841	Feed Wheel Assembly, 1/8"	1
	0102-841	Feed Wheel Assembly, 1/4"	
	0103-841	Feed Wheel Assembly, 3/8"	
	0104-841	Feed Wheel Assembly, 1/2"	
	0107-841	Feed Wheel Assembly, 3/4" & 1"	
10	5191-707	Screw, 10-32 x 1/2 Flat Hd.	2
11	0102-036	Stripper Plate, 1/8" through 1/4"	1
	0105-036	Stripper Plate, 3/8" through 1"	
12	0109-041	Idler Wheel	1

# HOUSED MODEL PARTS



## HOUSED MODEL PARTS LIST

Ref. #	Stock #	Description	Req'd
1	5132-007	Screw, 1/4-20 x 1/2 Fil. Hd. Sl.	4
2	0101-835	Punch Plate & Shank Assy., 1/8" Machine	40
	0108-835	Punch Plate & Shank Assy., 1/4" through 3/4" Machine	
	0105-835	Punch Plate & Shank Assy., 1" Machine	
3	0109-033	Clip, Spring	40
4		Punch & Die (see page 9)	
5	0109-046	Screw Punch, 10-32 x 1/4 Fl. Hd.	80
6	0109-003	Punch Disc	1
7	0109-020	Spring, Punch	40
8	0109-002	Die Disc, 1/8" through 3/4" Machine	1
	0105-002	Die Disc, 1" Machine	
9	0101-053	Base, 1/8" Machine	1
	0102-053	Base, 1/4" Machine	
	0103-053	Base, 3/8" Machine	
	0104-053	Base, 1/2" Machine	
	0107-053	Base, 3/4" Machine	
	0105-053	Base, 1" Machine	
10	0109-220	Spindle	1
11	0109-045	Screw, Die 1/8" through 3/4" Machine	80
	0105-049	Screw, Die 1" Machine	
12	0109-089	Ball Bearing	1
13	5306-011	Nut, Cap 5/16-18	2
14	5305-021	Nut, Jam 3/4-10	1
15	0109-159	Feet, Rubber	3
16	5072-217	Screw, 5/16-18 X 2 Hex Hd.	4
17	5072-214	Screw, 5/16-18 x 1-1/4 Hex Hd.	2
18	5242-210	Screw, 5/16-18 x 3/4 But. Hd.	1
19	5305-012	Nut, Jam 5/16-18	1
20	0109-044	Screw, Thrust 1/8" through 3/4" Machine	1
		Screw, Thrust 1" Machine	2
21*	0109-801	Lower Feed, Adjustable	1
22	0109-214	Spring, Lower Feed	2
23	5250-009	Screw, Shoulder 5/16 Dia. x 1-1/2	2
24	5315-901	Roll Pin, 3/16 Dia. x 1-1/8	2
25	5315-618	Cotter Pin, 3/32 Dia. x 1	1
27	0109-072	Rod, Cam	1
28	0109-174	Shim	2
31	0101-805	Upper Feed Assembly, 1/8" Machine	1
	0102-805	Upper Feed Assembly, 1/4" Machine	
	0103-805	Upper Feed Assembly, 3/8" Machine	
	0104-805	Upper Feed Assembly, 1/2" Machine	
	0107-805	Upper Feed Assembly, 3/4" & 1" Machine	

## HOUSED MODEL PARTS LIST (CONTINUED)

Ref. #	Stock #	Description	Req'd
32	0109-015	Plate, Spring	1
33	0109-244	Spring, Handle Return	1
34	0109-867	Lever, Yoke Assy, Standard	1
35	5132-012	Screw, 1/4-20 x 1 Fil. Hd. Sl.	1
36	5305-010	Nut, Jam 1/4-20	2
37	5310-305	Washer, Spring 1/4	1
38	0109-004	Hood	1
40	5082-011	Screw, 1/4-20 x 7/8 Soc. Hd.	2
41	5022-007	Set Screw, 1/4-20 x 1/2 Knl. Cp. Pt.	1
42	5121-703	Screw, 10-32 x 1/4 Rd. Hd.	3
44	0109-871	Handle Assembly (Includes Items 24 & 28)	1
45	0109-173	Plate, Cover	1
46	0109-079	Key, Hand Wheel	1
47	0109-865	Hand Wheel Assembly (Includes Items 41, 54 & 55)	1
49	0109-085	Nut, Spindle Upper	2
50	0109-009	Disc Dial	1
51	0109-071	Screw, Drive	4
52	0109-010	Dial, Etched	1
53	0109-053	Screw, Dial	1
54	0109-171	Screw, Indicator Drive	2
55	0109-034	Indicator	1
56	0109-086	Nut, Spindle Lower	2
57	5132-010	Screw, 1/4-20 x 3/4 Fil Hd. Sl.	2
58	5122-007	Screw, 1/4-20 x 1/2 Rd. Hd	2
60	0167-000	Cleaning Hook 1/8", & 1/4" Machine	1
	0109-223	Cleaning Hook 3/8", 1/2", 3/4" & 1 " Machine	
61	5321-008	Ring, Retaining 3/8"	1
62	5132-014	Screw, 1/4-20 x 1-1/4 Fil. Hd. Sl.	1

\*Machines with old style non-adjustable lower feed must order the new lower feed conversion kit #0109-802.



## PUNCH & DIE ASSEMBLY NUMBERS

(For special punches & dies contact customer service)

Character	1/8"	1/4"	3/8"	1/2"	3/4"	1"
A	0101-200	0102-200	0103-200	0104-200	0107-200	0105-200
B	0101-201	0102-201	0103-201	0104-201	0107-201	0105-201
C	0101-202	0102-202	0103-202	0104-202	0107-202	0105-202
D	0101-203	0102-203	0103-203	0104-203	0107-203	0105-203
E	0101-204	0102-204	0103-204	0104-204	0107-204	0105-204
F	0101-205	0102-205	0103-205	0104-205	0207-205	0105-205
G	0101-206	0102-206	0103-206	0104-206	0107-206	0105-206
H	0101-207	0102-207	0103-207	0104-207	0107-207	0105-207
I	0101-208	0102-208	0103-208	0104-208	0107-208	0105-208
J	0101-209	0102-209	0103-208	0104-209	0107-209	0105-209
K	0101-210	0102-210	0103-210	0104-210	0107-210	0105-210
L	0101-211	0102-211	0103-211	0104-211	0107-211	0105-211
M	0101-212	0102-212	0103-212	0104-212	0107-212	0105-212
N	0101-213	0102-213	0103-213	0104-213	0107-213	0105-213
O	0101-214	0102-214	0103-214	0104-214	0107-214	0105-214
P	0101-215	0102-215	0103-215	0104-215	0107-215	0105-215
Q	0101-216	0102-216	0103-216	0104-216	0107-216	0105-216
R	0101-217	0102-217	0103-217	0104-217	0107-217	0105-217
S	0101-218	0102-218	0103-218	0104-218	0107-218	0105-218
T	0101-219	0102-219	0103-219	0104-219	0107-219	0105-219
U	0101-220	0102-220	0103-220	0104-220	0107-220	0105-220
V	0101-221	0102-221	0103-221	0104-221	0107-221	0105-221
W	0101-222	0102-222	0103-222	0104-222	0107-222	0105-222
X	0101-223	0102-223	0103-223	0104-223	0107-223	0105-223
Y	0101-224	0102-224	0103-224	0104-224	0107-224	0105-224
Z	0101-225	0102-225	0103-225	0104-225	0107-225	0105-225
&	0101-226	0102-226	0103-226	0104-226	0107-226	0105-226
-	0101-227	0102-227	0103-227	0104-227	0107-227	0105-227
.	0101-228	0102-228	0103-228	0104-228	0107-228	0105-228
/	0101-229	0102-229	0103-229	0104-229	0107-229	0105-229
2	0101-230	0102-230	0103-230	0104-230	0107-230	0105-230
3	0101-231	0102-231	0103-231	0104-231	0107-231	0105-231
4	0101-232	0102-232	0103-232	0104-232	0107-232	0105-232
5	0101-233	0102-233	0103-233	0104-233	0107-233	0105-233
6	0101-234	0102-234	0103-234	0104-234	0107-234	0105-234
7	0101-235	0102-235	0103-235	0104-235	0107-235	0105-235
8	0101-236	0102-236	0103-236	0104-236	0107-236	0105-236
9	0101-237	0102-237	0103-237	0104-237	0107-237	0105-237
'	0101-238	0102-238	0103-238	0104-238	0107-238	0105-238
'	0101-239	0102-239	0103-239	0104-239	0107-239	0105-239

*Punch & Die screws not included with Punch & Die Assemblies.*

## Diagraph Stencil Board

Diagraph Stencil Board is made from the finest raw stock, processed under special formula with double-boiled linseed oil and cured in our own plant. The use of Diagraph oiled stencil board extends the life of Diagraph cutters by lubricating the punches and dies. Diagraph stencil board resists absorption of ink and can be used over and over again. All stencil board is cut long grain to provide rigidity for ease of use. Diagraph stencil board conforms to government specifications UU-S-625A in Type II Grade 1.

### Dispens-A-Pak No. 25 (23 lbs. net)

Dispens-A-Pak is easy to handle and store. The package protects the board and serves as its own dispenser.

### Parcel-Pak No. 50 (47 lbs. net)

To expedite handling and shipping by UPS, this carton of Diagraph Stencil Board has been designed so the total weight of the carton and contents does not exceed 50 lbs.

### Standard-Pak (100 lbs. net)

To accommodate large standard sized sheets. All stencil board cut long grain only.

### Standard Full Size Sheets Packed 100 lbs. Per Package Only.

Sheet Size		Packed in Parcel Packs	
Inches	Millimeters	Approx. Pieces Per Pound	Approx. Pieces Per Kilo
4 x 16	101.6 x 406.4	25	55
4 x 20	101.6 x 508	20	44
5 x 16	127 x 406.4	20	44
5 x 20	127 x 508	16	35.2
6 x 16	152.4 x 406.4	18	39.6
6 x 18	152.4 x 457.2	16	35.2
6 x 20	152.4 x 508	14	30.8
6.5 x 16	165.1 x 406.4	15	33
6.5 x 20	165.1 x 508	12	26.4
6.5 x 24	164.1 x 609.6	10	22
7 x 20	177.8 x 508	10	22
7 x 24	177.8 x 609.6	9	19.8