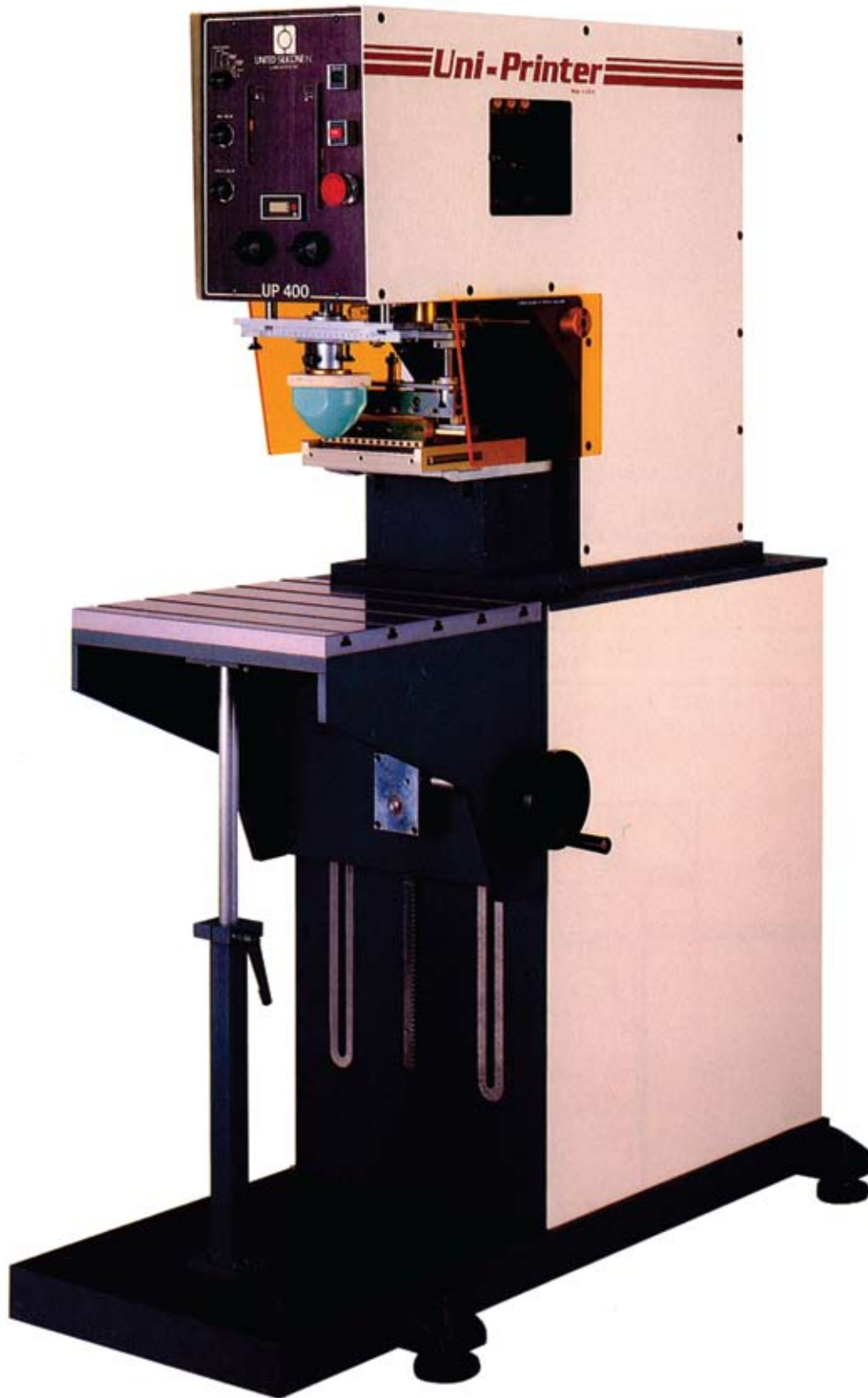


UNITED SILICONE UP 400 OPERATION AND PARTS MANUAL



Reprinted by
AFM Engineering, Inc.
1313 E. Borchard Ave.
Santa Ana, CA 92705

Page 1

Phone: 714.547.0194
Fax: 714.542.2728
Email info@afmeng.com
Web Site afmeng.com

NOTE

Your Uni-printer has been thoroughly tested and carefully crated, prior to shipping, at the factory. After uncrating the machine, check that there are no loose parts and all screws are tight before operating.

Table of Contents

Warranty	pg. 4
Safety	pg. 5
Machine Specifications	pg. 6
General Description	pg. 7
Control Panel Description	pg. 8
Test Procedure	pg. 9
Set-up and-Operating instruction Trouble Shooting	pg. 10
Part List	pg. 11
Maintenance	pg. 12
Ordering Spare or Repair Parts	pg. 16

List of Illustrations

Fig. #1	Control Panel	pg. 18
Fig. #2	Inkwell Assembly	pg. 19
Fig. #3	Doctor Blade Holder Assembly	pg. 20
Fig. #4	Pad Holder Assembly	pg. 21
Fig. #5	General Assembly	pg. 22
Fig. #6	Doctor Blade Assembly	pg. 23
Fig. #7	Pad Assembly	pg. 24
Fig. #8	Magnetic Limit Switch Location	pg. 25

Warranty

The Seller warrants that each machine manufactured by it shall be free from defects in material and workmanship. The Seller's sole obligation under this warranty shall be limited to making good, FOB Lancaster, any part of its product which under normal and proper use and maintenance proves defective in material and workmanship within six months after delivery to Buyer, provided that notice of any such defects and satisfactory proof thereof is promptly given by the Buyer to the Seller, and thereafter, such part is returned to the Seller, with transportation charges prepaid, and the Seller's examination proves such part to have been defective.

This warranty does not apply in respect to damage to any product or accessory or attachment thereof, caused by overloading, or other misuse, neglect or accident, nor does this warranty apply to any product, or accessory or attachment thereof, which have been repaired or altered by other than the Seller or his authorized representative in any way, which in the sole judgement of the Seller affects the performance, stability, or purpose for which it was manufactured.

Safety

It is the responsibility of the user to establish safe operating conditions for each piece of equipment. A regular schedule of safety maintenance should be established at the time each piece of equipment is placed into operation. Each operator should be instructed in the proper and safe operation of the equipment. All plant personnel in any way connected with the set-up, use, operation or maintenance, should be conversant and familiar with the controls and operating conditions of the equipment.

Maintenance should be performed only by authorized personnel, thoroughly familiar with the function of all safety devices.

Under no circumstances should work guards, electrical or mechanical safety devices, be removed or so modified as to make them inoperative. Removal of any guards, electrical or mechanical safety devices, or the overriding of any of these items, will automatically null and void any product warranty on any United Silicone machine.

This United Silicone product is equipped with safety features to cover all normal operations for which the machine is intended. The addition of special tooling, feeders, ejectors, etc may require the installation of other electrical systems or devices.

3.0 Machine Specifications

CYCLE CAPACITY	APPROX. 400CYCLES/HOUR
DRIVE	ELECTRO-PNEUMATIC
AIR SUPPLY	80 PSI
AIR CONSUMPTION	7 CFM
INPUT VOLTAGE	110/230 V., 50/60 Hz
CONTROL VOLTAGE	24 V. DC- 0.4 Amps
WEIGHT	UP 400-T - 300 lbs. UP 400-P - 530 lbs.
CLICHE SIZE	4" x 6" 4" x 8" 4" x 10"
PRINTING AREA	3" dia. or 3" x 4" 3" dia. or 2-1/2" x 6" 3" dia. or 2" x 8"

4.0 General Description

Your uni-printer is electro-pneumatically operated and is designed for easy set-up and quick change over.

Important elements of the uni-printer are:

- A) Inkwell - Designed for quick change of the cliché (engraved plate) and easy cleaning of the ink reservoir.
- B) Doctor Blade & Flood Bar - X-Y-Z axis adjustment and quick change and cleaning.
- C) Pad - Positive locking holder secures pad, X-Y axis adjustment and quick change of the pad are incorporated

5.0 Control Panel Description

5.01 START BUTTON: Starts the cycle of the machine.

5.02 STOP BUTTON. Stops the machine after completion of cycle.

5.03 EMERGENCY STOP BUTTON: Stops all machine functions immediately and lights up. To reset, button must be pulled all the way out.

5.04 STROKE to PART SWITCH. Adjusts the travel of the pad to the part. 5.05 COUNTER. Counts the number of complete cycles.

5.06 STROKE to CLICHE SWITCH. Adjusts the travel of the pad to the cliché. 5.07 CYCLE DELAY KNOB. Adjusts the dwell time between cycles.

5.08 PAD DELAY KNOB: Adjusts the dwell time of the pad to part stroke. 5.09 CYCLE SELECTOR SWITCH: Selects the operation mode.

Pos. 0	Depress Start	a) Doctor blade lowers. b) Inkwell extends. c) Doctor blade raises.
Pos. 1	Depress Stop: Depress Start:	a) Inkwell retracts. a) Doctor blade lowers. b) Inkwell extends. c) Doctor blade raises. d) Pad lowers and raises. e) Inkwell retracts.
Pos. 2	Depress Start:	a) Doctor blade lowers and raises. b) Inkwell extends and retracts repeatedly.
Pos. 3	Depress Stop: Depress Start:	a) Doctor blade raises and inkwell retracts. a) Doctor blade lowers. b) inkwell extends. c) Doctor blade raises. d) Inkwell retracts. e) Pad lowers to part and raises.
Pos. 4	Depress Start:	a) Single print operation is repeated.
Pos. 5	Depress Start: Depress Stop:	a) Machine executes full cycle continuously. a) Machine completes full cycle and stops

6.0 Test Procedure

- A) Raise the splash guard, then raise the doctor blade assembly completely up by turning thumb nuts (fig.). Remove the inkwell from the inkwell slide plate, by removing the 1/4-20 screw from under the inkwell slide plate(fig. 2).
- B) Remove the doctor blade holder (fig. 3) from the doctor blade swivel bar 'TT slot (fig. 6).
- C) Set all knobs on the control panel to zero.
- D) Plug in the electrical and pneumatic connections and lower the splash guard.
- E) Turn the main switch, located on the side of the machine, to the 'ON' position and check the air pressure (60 PSI).
- F) Pull out the emergency stop button and set the selector dial to position #2.
- G) Push the start button and observe the operation.

7.0 Test Procedure

- A) Slide the cliché into the opening a on the inkwell and secure in place by tightening the #10-32 set screws in front of the inkwell (2-places) (fig. #2).
- Tighten the #10-32 set screws under the inkwell (5-places) (fig. #2).
- B) Place assembled inkwell into the slot B' on the inkwell slide plate and secure by tightening the 1/4-20 cap screw (fig. #2).
- C) Slide the doctor blade holder assembly (fig. #3) into the T' slot on the doctor blade swivel bar (fig. #6) and secure in place by tightening the #10-32 cap screw on the front of the swivel bar.
- D) Select an appropriate silicone pad for the job and fasten it to the pad holder with the two #10-32 flat head wood screws (fig. #4).
- E) Fill the inkwell with pre-mixed ink.
- F) Adjust the height of the doctor blade by turning the knurled thumb nuts (fig. 6) to 3/16" above the cliché.

Turn the selector dial to Pos. #0 and push the start button.

*** Observe the blade wiping the cliché ***

Lower the doctor blade by turning the knurled thumb nuts one-half turn at a time.

Repeat the above steps until the wiping of the cliché is satisfactory.

- G) *** Length of the pad stroke should only be enough to pick up and release the image ***
Turn the selector dial to Pos. #2

Push the start button and observe. If the pad is not picking up the ink, increase the stroke length an appropriate amount by adjusting the stroke to cliché dial and repeat.

Push the start button and observe. If the pad is not releasing the ink on the part, increase the stroke length an appropriate amount by adjusting the stroke to part dial and repeat.

- H) To increase or decrease the speed of the pad and inkwell cylinders, open the access door on the side of the machine and adjust the flow-control valves (fig. #5).

8.0 Trouble Shooting

Possible Failure	Check
1) Machine does not operate.	a) Main switch b) Splash guard c) Emergency switch d) Fuse
2) Silicone pad remains on the cliché.	a) Stroke to cliché adjusting dial (excessive stroke length) b) Magnetic limit switch, MS-1 & MS-2 c) Pad solenoid valve
3) Inkwell does not retract.	a) Magnetic limit switch, MS-1 b) Inkwell solenoid valve
4) Silicone pad remains on the part.	a) Stroke to part adjusting dial. b) Magnetic limit switch, MS-3 c) Pad solenoid valve
5) Silicone pad will not lower to the	a) Magnetic limit switch, MS-5
6) Silicone pad will not lower to the part.	a) Magnetic limit switch, MS-4
7) Uni-printer performs only one cycle	a) Magnetic limit switch, MS-4 on automatic mode.

9.0 Part List

ITEM	PART NUMBER	QTY	DESCRIPTION
1			
2			
3			
4			
5	UP400-D-002	1	Main Frame Assembly
6	UP400-D-004	1	Doctor Blade Assembly
7	UP400-D-003	1	Pad Assembly
8	UP400-C-074	1	Electrical Control Box Assembly
9	UP400-C-010	1	Inkwell Slide Plate
10	UP400-D-085	1	Inkwell Assembly
11	UP400-D-065	1	Valve Bracket Assembly
12	UP400-C-067	1-ea.	Splash Guard -
13	UP400-A-016	2	Guard Support
14	UP400-B-034-1	1	Splash Guard Shaft
15	UP400-B-029	2	Doctor blade Bushing Housing
16	UP400-B-025	2	Pad Bushing Housing
17	UP400-B-034-3	2	Pad Shaft
18	UP400-A-062	2	Proximity Switch Adjusting Rod
19	UP400-A-061	2	Proximity Switch Guide Rod
20	UP400-B-046	2	Pad Stroke Gear Housing
21	UP400-A-049	2	Indicator
22	UP400-A-055	1	Proximity Switch Holder
23	UP400-A-056	1	Proximity Switch Holder
24	UP400-B-034-2	2	Doctor Blade Shaft
25	UP400-B-028	1	Doctor Blade Guide Bar
26	UP400-A-035	1	Inkwell Cylinder Bracket
27	UP400-A-043	1	Inkwell cylinder coupling
28	UP400-A-039	4	Inkwell Cylinder Bushing Housing
29	UP400-B-034-4	2	Inkwell Cylinder Shaft
30	UP400-A-014D	1	Spacer
31	UP400-B-047	1	Pad Stroke Upper Plate
32	UP400-A-069	2	Inkwell Cylinder Cover

9.0 Part List Cont

ITEM	PART NUMBER	QTY.	DESCRIPTION
33			
34	UP400-A-048	2	Shaft Handle
35	GAL-1/4	2	Throttle Relief valve - Festo Corp.
36	UP400-A-079	2	Pad Adjusting Driven Gear
37	UP400-A-078	2	Pad Adjusting Drive Gear
38	CF-314-SB	2	Bearing - McGill Mfg. Co.
39	CCYR-1-S	2	Bearing - McGill Mfg. Co.
40	LC-080J-4MW	2	Compression Spring - Lee Spring Co.
41	A101824	4	Ball Bushing - Thomson Ind.
42	A-81420	4	Ball Bushing - Thomson Ind.
43	A-122026	4	Ball Bushing - Thomson Ind.
44	DNN-50-140-PPV-A	1	Inkwell Cylinder - Festo Corp.
45	DNN-50-224-PPV-A	1	Pad Cylinder - Festo Corp.
46	DNN-40-40-PPV	1	Doctor Blade Cylinder - Festo Corp.
47	P2H-200-M3CA	1	Filter/Reg./Lub. - Norgren Co.
48	TI-1-8200/E-NA	1	Rotary Switch - Klockner, Moeller
49			
50	713C-12-P1-501JB_	3	Solenoid Valve - Mac valves Inc,
51	RFC-1/4-PK	4	Flow Control Valve - Hairline
52	BZ-2RQ18-A2	1	Limit Switch - Micro Switch
53	3/8-16 UNC	3	Threaded Clamping Collar - Holo Chrome
54	GE 15T7C	1	Bulb - G.E.
55	UP400-C-021	1	Doctor Blade Swivel Bar
56	UP400-B-023	1	Doctor blade Holder
57	UP400-A-017	2	Rod End
58	UP400-B-022	1	Doctor Blade Swivel Guide
59	UP400-A-013	1	Clevis
60	UP400-A-020	4	Knurled Thumb Nut
61	UP400-A-018	1	Clevis Pin
62	UP400-A-026	2	Nut
63	UP400-B-024	1	Flood Bar
64	UP400A-036	1	Flood Bar Holder

9.0 Part List Cont

ITEM	PART NUMBER	QTY.	DESCRIPTION
65	UP400-A-036	2	Flood Bar Pin
66	UP400-B-027	1	Doctor Blade Clamp
67	0.2 mm x 25 mm	1	Doctor Blade
68	UP400-A-215	1	Bolt
69	NTA-815	4	Needle Roller Bearing - Torrington
70	TRA-815	8	Thrust Washer - Torrington
71	LC-067G-6	1	Compression Spring - Lee Spring Co.
72	SME-1	3	Magnetic Switch - Festo Corp.
72.1	SMT0-1NS-K	2	Proximity Switch - Festo Corp.
73	UP400-B-040	2	Flood Bar Bushing Housing
74	UP400-C-031	1	Pad Guide Plate
75	UP400-C-033	1	Pad Slide (Y-Axis)
76	UP400-B-030	1	Pad Slide Bar
77	UP400-A-038	1	Pad Holder Housing
78	UP400-A-037	1	Pad Holder
79	UP400-B-064	1	Mounting Bar
80			
81	AGC-2	2	Fuse
82			
83			
84			
CONTROL PANEL			
1	800MS-QA24GA19	1	Start Button - Allen Bradley
2	800MS-B6A20	1	Stop Button - Allen Bradley
3	800T-FX6D4	1	Emergency Stop Button - Allen Bradley
4	KN-1255BS-1/4	1	Stroke Adjust Knob - Alco
5	CUB II	1	Counter - Red Lion
6	KN-1255BS-1/4	1	Stroke Adjust Knob - Alco
7	53C3-2	1	Potentiometer - Clarostat
	KPN-900B-1/4	1	Knob - Alco
8	53C3-1	1	Potentiometer - Clarostat
	KF'N-900B-1/4	1	Knob - Alco
9	CKA-304-15-NZQ	1	Selector Switch - Klockner Moeller

10.0 Maintenance

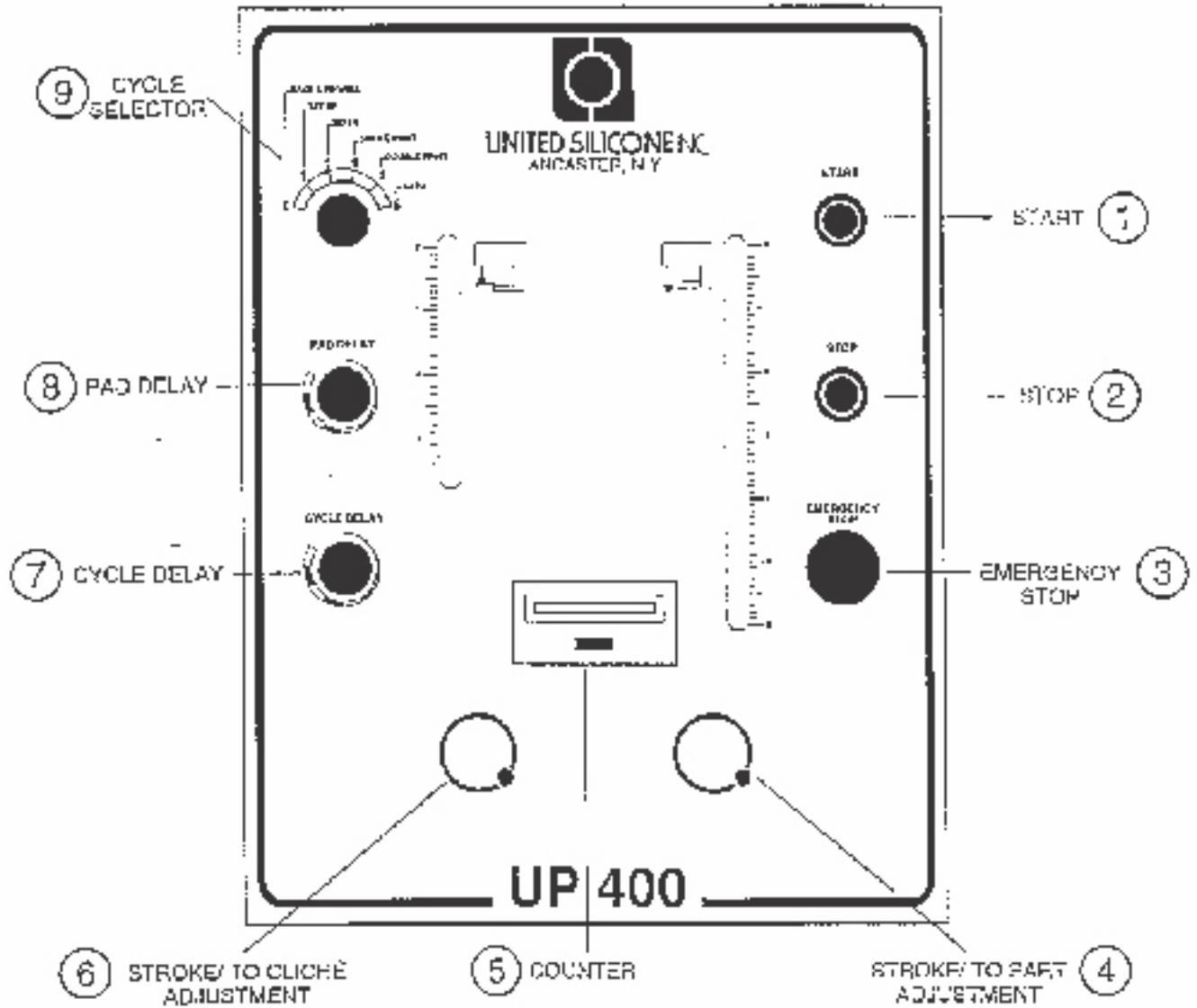
- 10.01 Grease should be applied periodically to the pad, doctor blade and inkwell guide shafts. Check for wear on shafts and that there are no loose screws.
- 10.02 Maintain oil level in the lubricator with Shell Tellus 68, Mobil DTE 26 or equivalent. Set rate of lubrication by turning knob. Muffler surface should be oily but not excessive.
- 10.03 Drain air filter daily.

Note: proper maintenance will insure smooth operation and longevity of your Uni-Printer

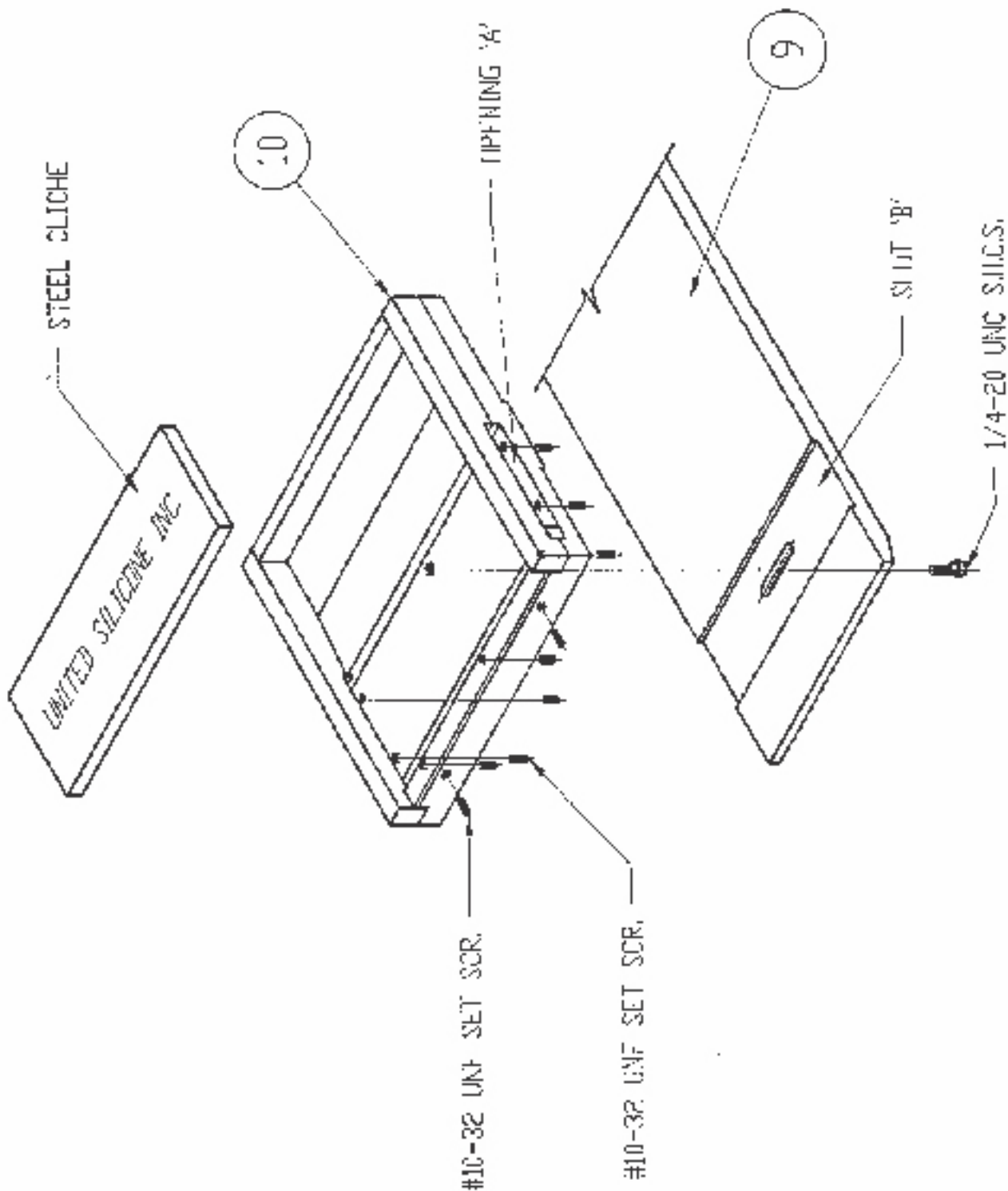
Improvements

United Silicone Inc. is constantly striving to improve its equipment. Changes in design will be made whenever the manufacturer believes the performance or operation of the equipment will be improved, with no obligation to incorporate any such improvement in any equipment, which has been shipped or is in service.

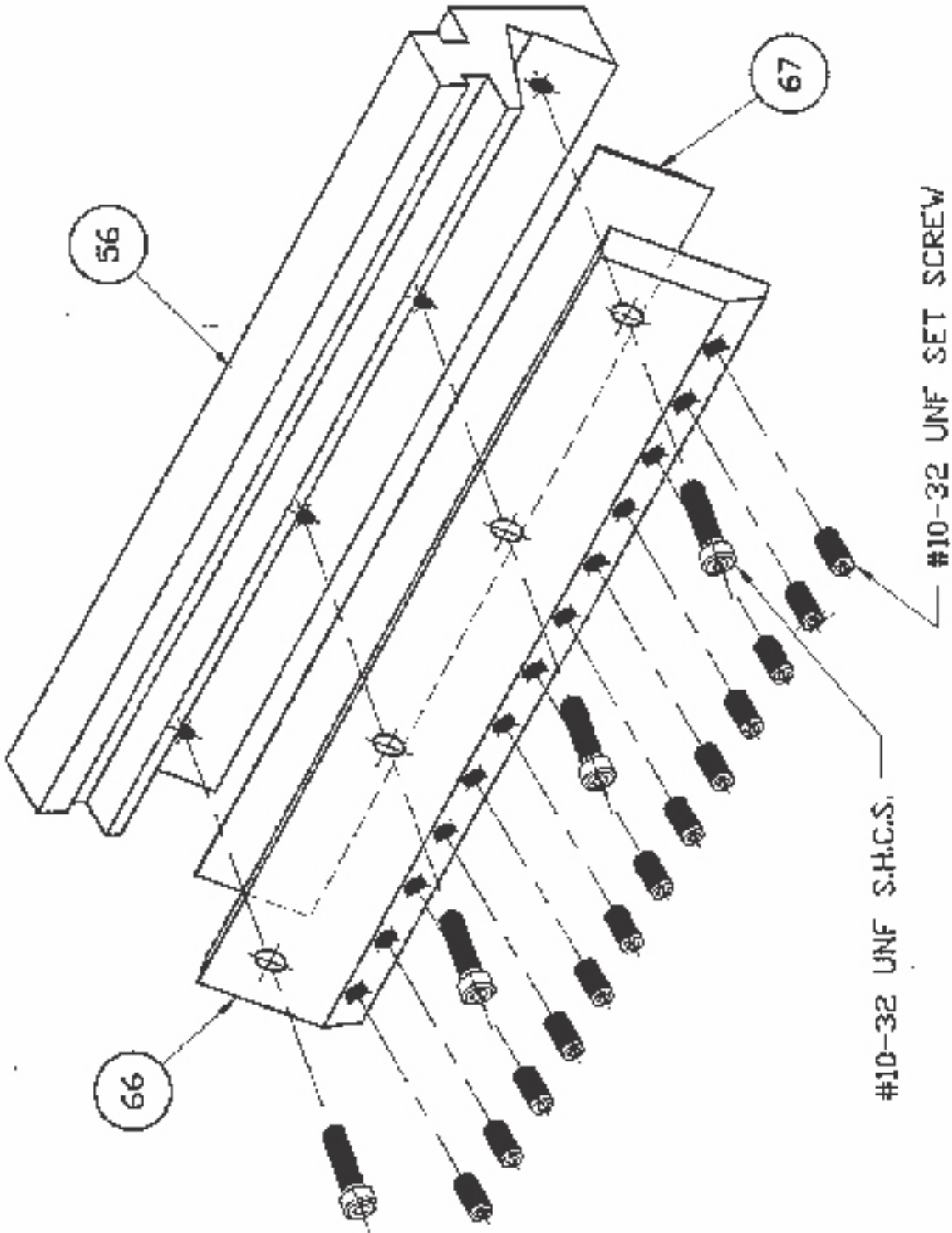
CONTROL PANEL



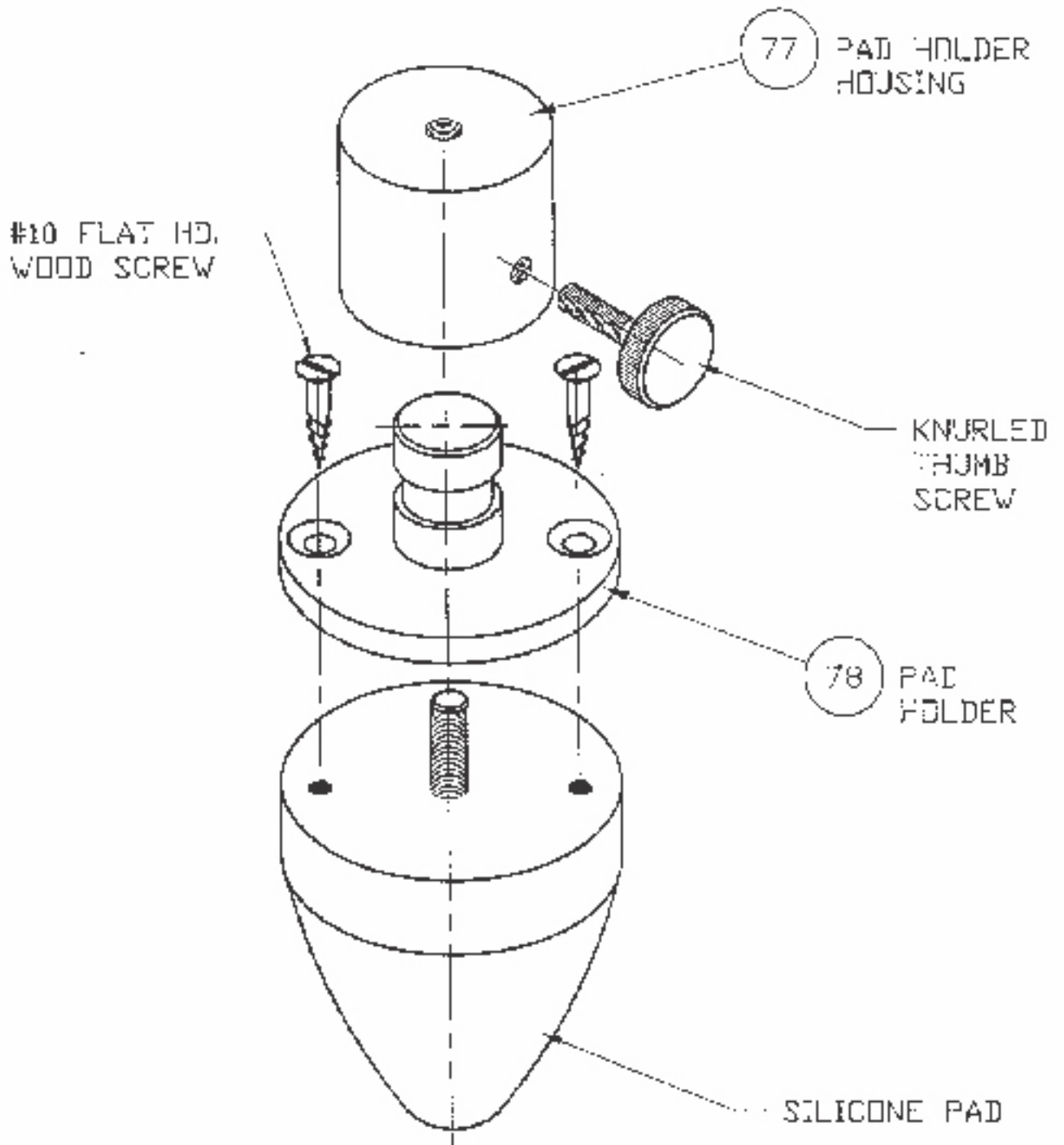
- Fig.2 -
INKWELL ASSEMBLY



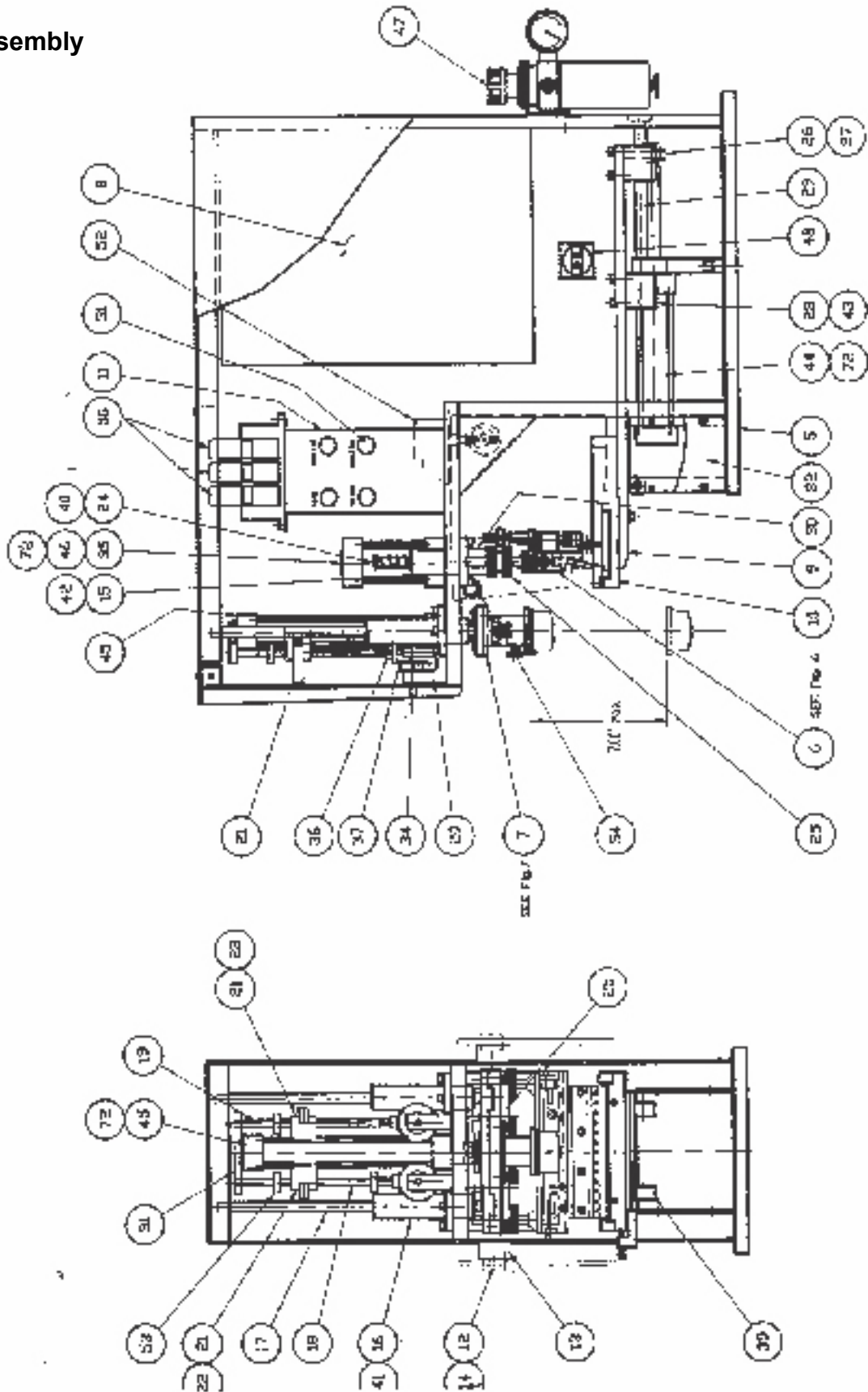
- Fig. 3 -
Doctor Blade Holder Assembly



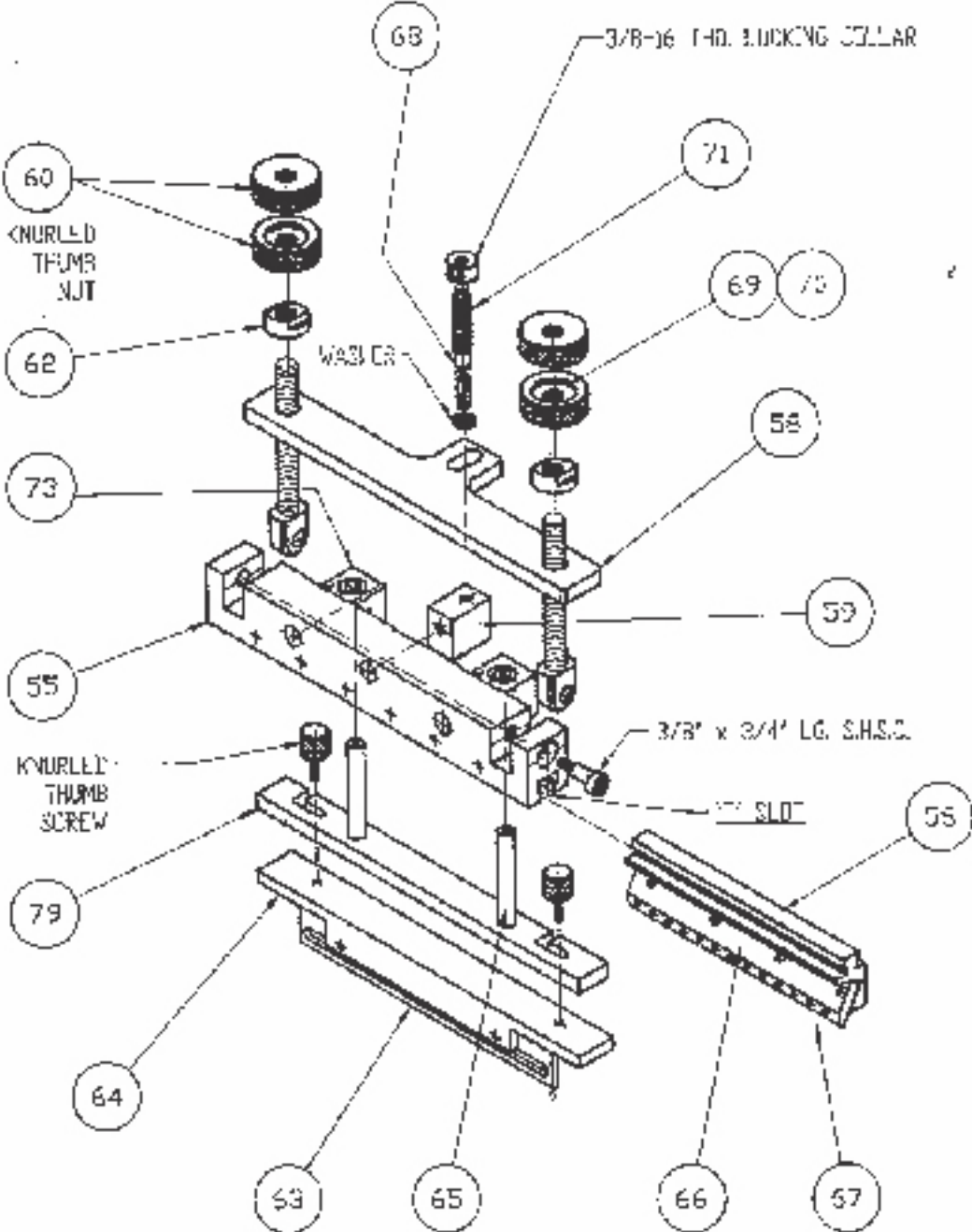
- Fig. 4 -
Pad Holder Assembly



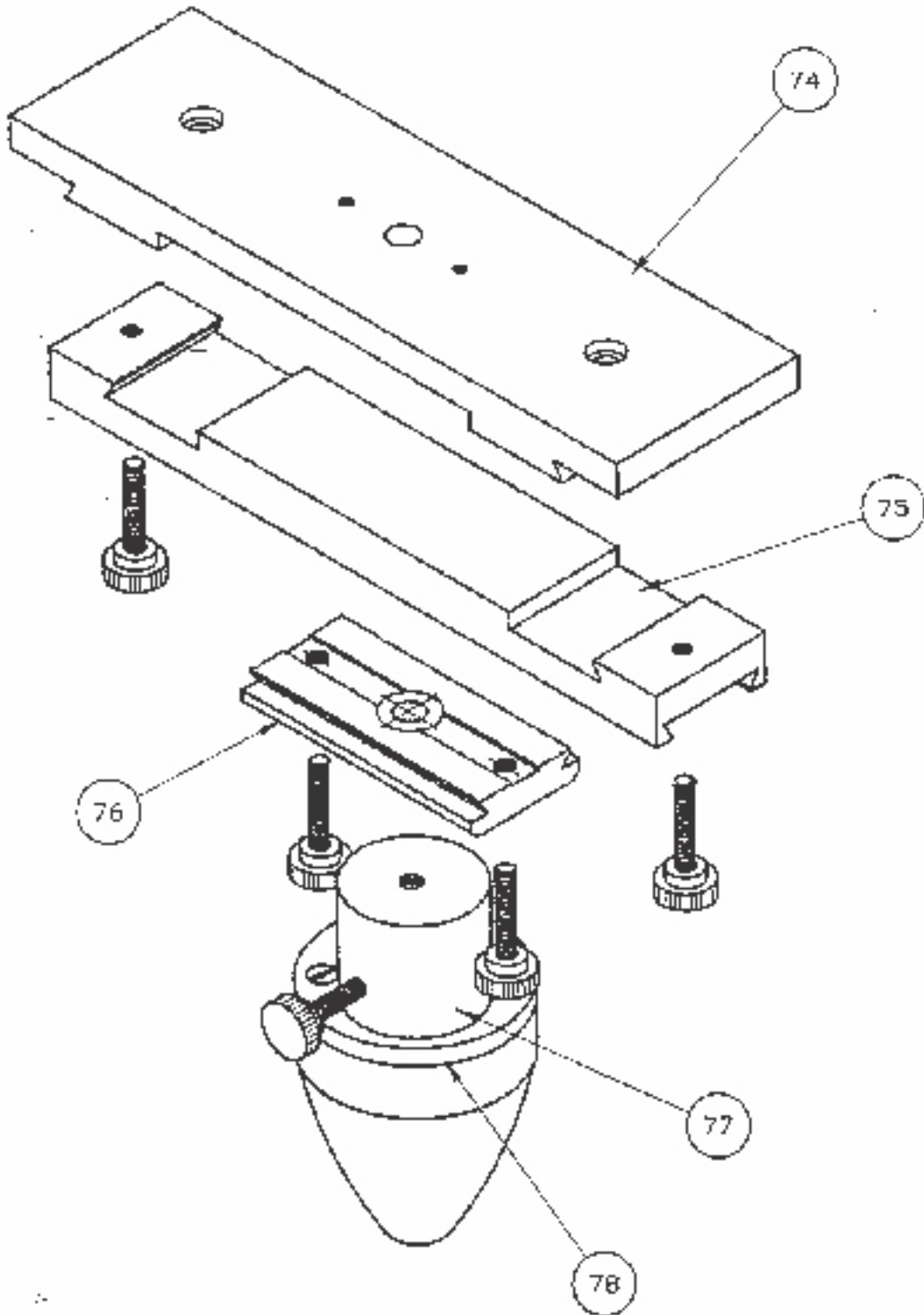
- Fig 5 -
General Assembly



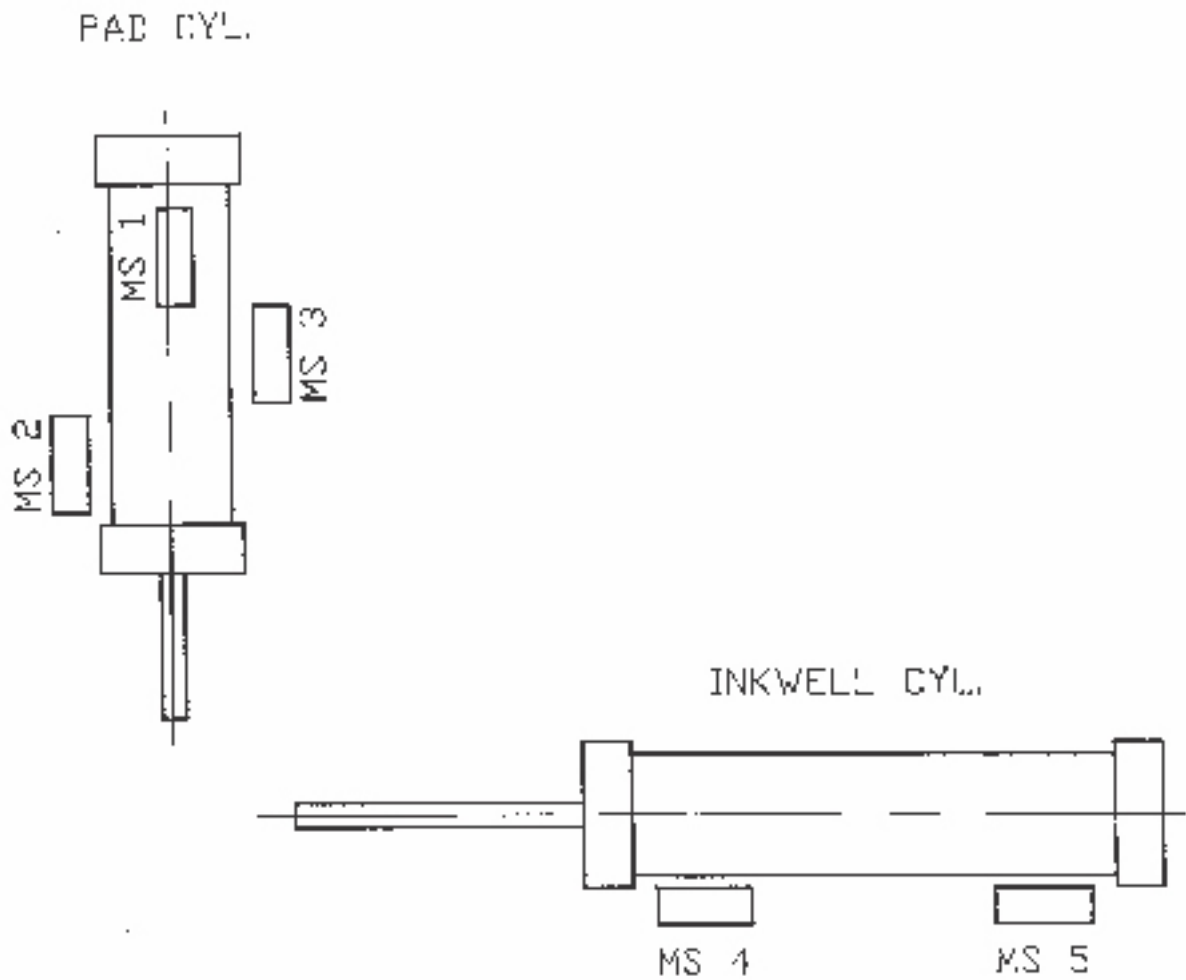
- Fig. 6 - Doctor Blade Assembly



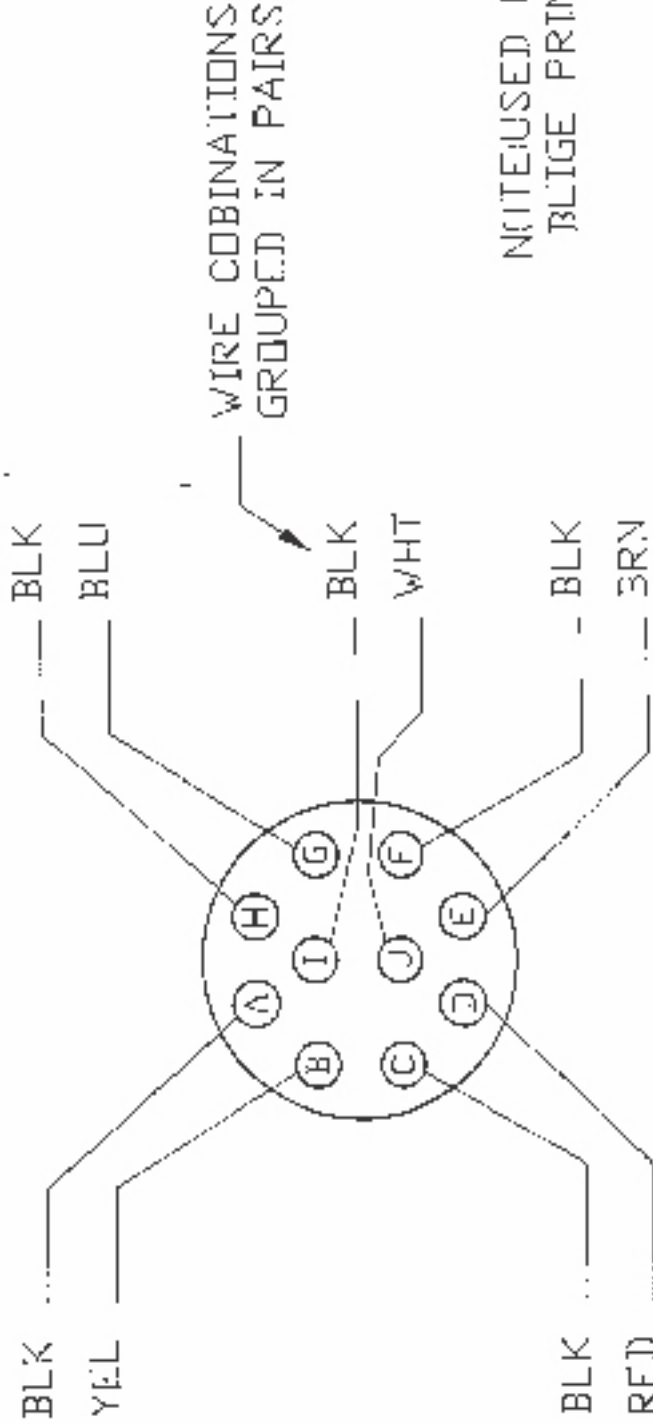
- Fig. 7 -
Pad Assembly



**- Fig. 8 -
Magnetic Limit Switch Location**



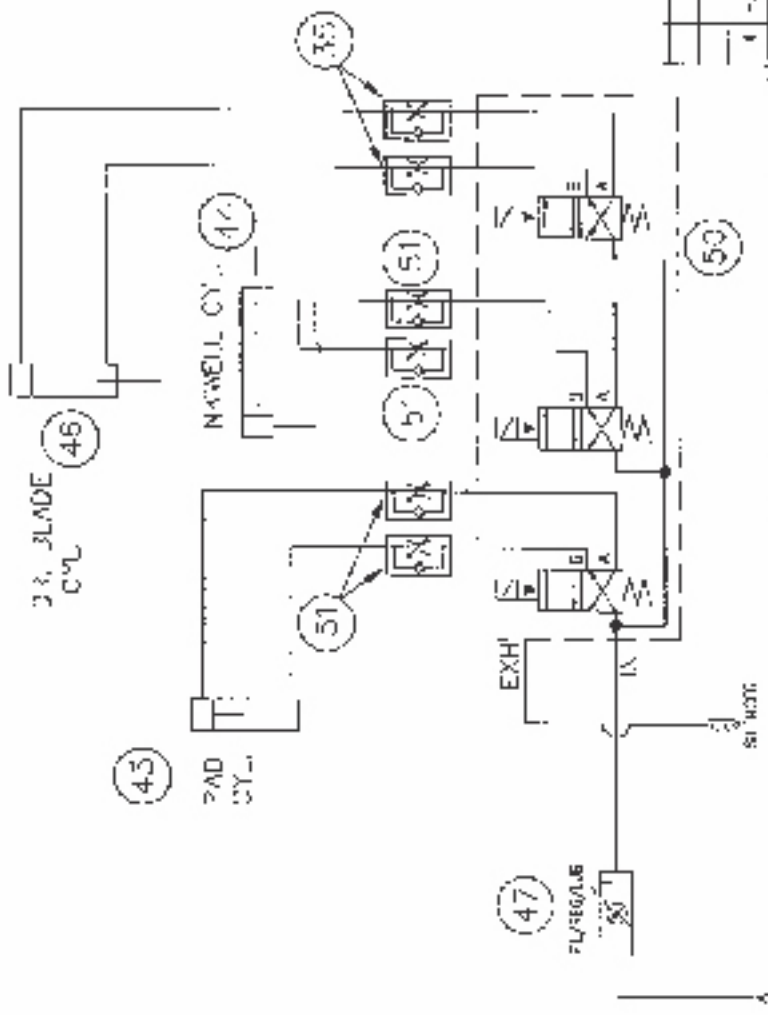
THE DATA CONTAINED HEREIN IS PROPRIETARY AND CONFIDENTIAL. REPRODUCTION, PUBLICATION OR DISTRIBUTION OF ANY PART REQUIRES WRITTEN CONSENT OF UNITED SILKONE INC. THIS DATA IS THE PROPERTY OF UNITED SILKONE INC. AND ITS POSSESSION CONFERES NO LICENSE TO USE OR TO DISCLOSE IT TO OTHERS FOR ANY PURPOSE WHATSOEVER. ALL RIGHTS RESERVED.



NOTE: USED IN ALL
BLIGE PRINTERS

REV	DATE	BY	DESCRIPTION	ITEM
-4	2	-3		
			REMOVE ALL RUN-INS AND BREAK ALL SHARP CORNERS	
			TOLERANCE UNLESS OTHERWISE SPECIFIED	
			3 DECIMAL ± .006	
			2 DECIMAL ± .010	
			FRACTIONAL ± .125	
			WEED (MESH) ± .125	
			ALL ANGLES UNLESS OTHERWISE SPECIFIED	
			UNION SQUARE	
			DATE	
			5-17-89	
			APPROV. BY	
			DV	
			DATE	
			5-17-89	
			UNITED SILKONE INCORPORATED	
			LANCASTER NEW YORK	
			UNITED SILKONE INCORPORATED	
			AMPHENOL MULTI-PIN	
			AUX. RECEPTACLE	
			DRWG. NO.	
			UP 40G-A-119	
			SHT	OF

THE AIR CONDITIONING SYSTEM IS THE PROPERTY OF UNITED STATES AIR FORCE. IT IS TO BE KEPT IN THE POSSESSION OF THE AIR FORCE. IT IS TO BE KEPT IN THE POSSESSION OF THE AIR FORCE. IT IS TO BE KEPT IN THE POSSESSION OF THE AIR FORCE.



4	1/2-1/4-1/8	F AIRLINE FLOW CONTROL	51
5	1/2-1/4-1/8	MAG SERIES 700 4-WAY 50	
		-501UB	
		VALVES 24 VDC	
1	1/2-1/4-1/8	MORGREN F/N/L	47
1	1/2-1/4-1/8	FESTO CYLINDER	48
		-PPV-A	
1	1/2-1/4-1/8	FESTO CYLINDER	45
		-PPV-A	
1	1/2-1/4-1/8	FESTO CYLINDER	44
		-PPV-A	
2	1/2-1/4-1/8	FESTO THROTTLE VALVE	35
		1/2-1/4-1/8	

UNITED SILCO INC.

PNEUMATIC DIAGRAM

MAGFL. LP400 PAD PS VICE

DATE: 7-11-50

BY: J. H. HARRIS

UP-400 B 200

REV. NO.	DATE	BY
1	7-11-50	J. H. HARRIS
2		
3		
4		

APPROVED FOR RELEASE BY NSA/CSS

THIS SET
HULL NO.