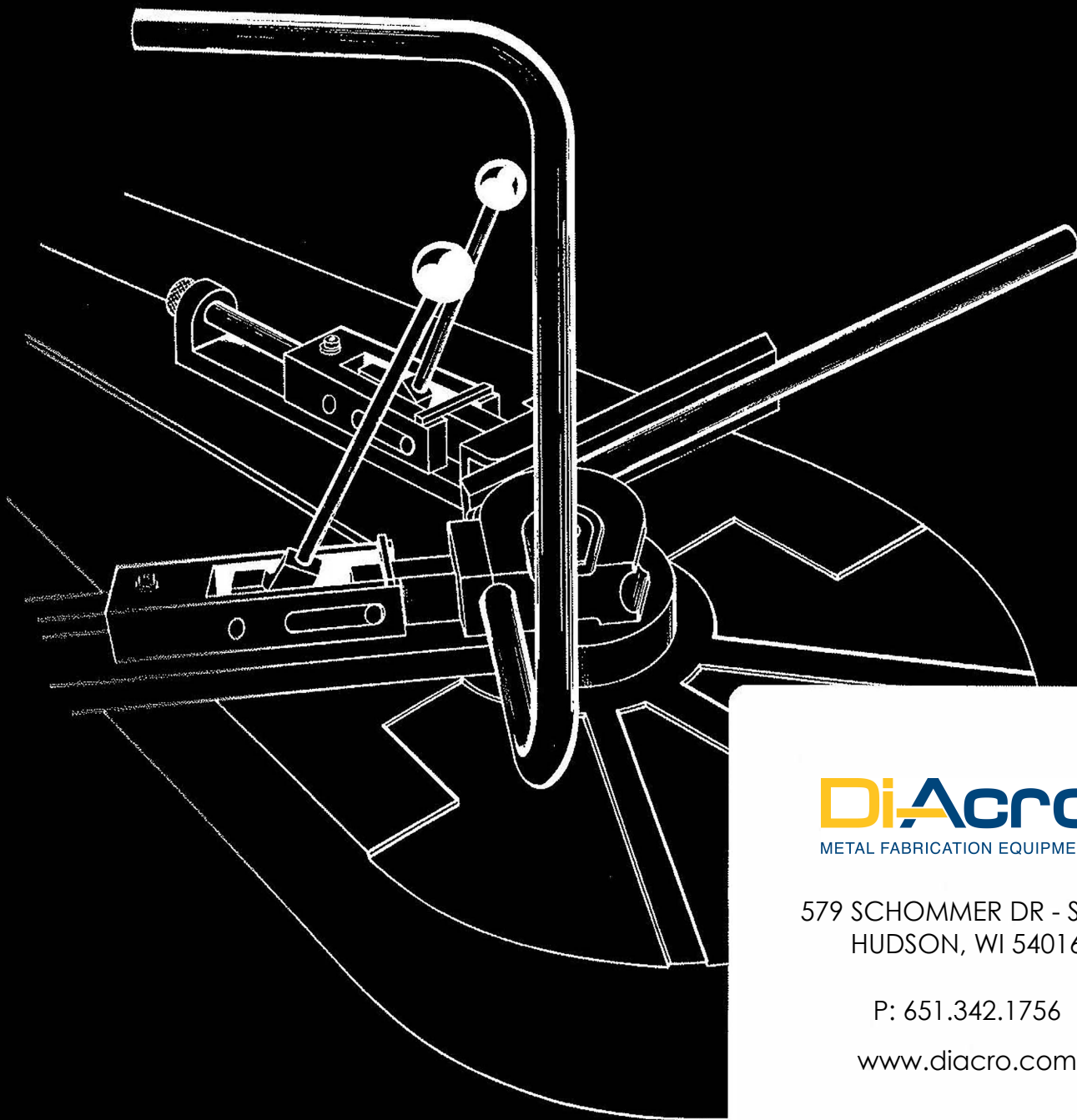


**Di-Acro<sup>®</sup>**

# **POWER BENDER NO. 6 & 8**

**Operator's Manual and Parts List**



**Di-Acro<sup>®</sup>**  
METAL FABRICATION EQUIPMENT

579 SCHOMMER DR - STE C  
HUDSON, WI 54016

P: 651.342.1756

[www.diacro.com](http://www.diacro.com)

## OBSOLETE MACHINE

## MANUAL DISCLAIMER

**DI-ACRO** by supplying this manual is not liable for any indirect, incidental, or consequential damages or injuries sustained or incurred in connection with using the information in any way contained herein.

**DI-ACRO** accepts no responsibility or liability resulting from attempts to use this information.

**DI-ACRO** does not vouch for or warrant the accuracy, completeness or usefulness of any information contained herein.

This instruction manual serves two purposes:

1) It outlines essential information for installation, operation and maintenance of Power Benders No. 6 and 8; 2) It gives a complete parts breakdown identified by number, should replacements be required.

It is recommended that the operator become familiar with the bender's instructions and operating details. It is also recommended that the foreman or supervisor familiarize himself with the operating details of the machine to insure its continued efficient service.

The Di-Acro Power Benders are designed to accommodate two different types of tooling. The No. 6 is designed to handle smaller round bars up to 5/8 diameter and tubing and Schedule 40 pipe up to 3/4 IPS when supplied with the 3 1/2" cylinder. The No. 8 bender will handle round bar up to 1" diameter and tubing and Schedule 40 pipe up to 1 1/4 IPS, when supplied with the 4" cylinder.

**MODEL:**  
**MACHINE NO.**  
**DELIVERED TO:**  
**PRICE: \$25.00**

### CAUTION

**ALWAYS READ AND UNDERSTAND THIS INSTRUCTION MANUAL BEFORE OPERATING THE NO. 6 OR NO. 8 BENDER.**

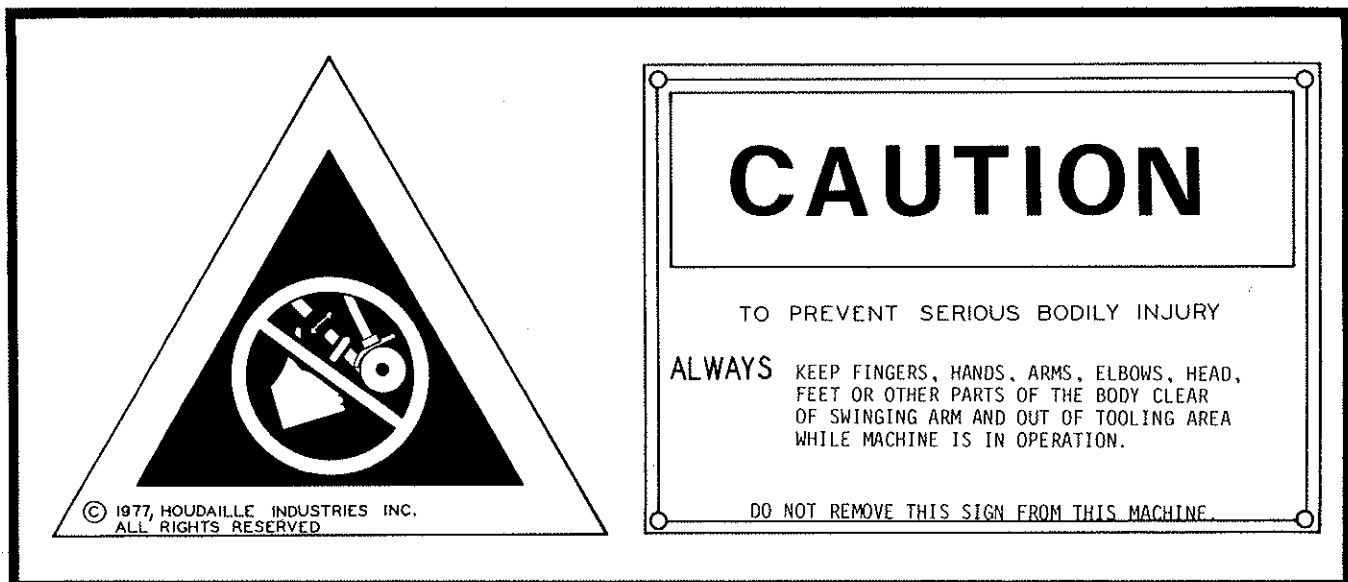
**ALWAYS MAKE CERTAIN THAT OTHER INDIVIDUALS ARE NOT IN THE WORKING AREA OF THIS MACHINE BEFORE OPERATING.**

**ALWAYS KEEP FINGERS, HANDS, ARMS, ELBOWS, HEAD, FEET OR OTHER PARTS OF THE BODY CLEAR OF SWINGING ARM AND OUT OF TOOLING AREA WHILE MACHINE IS IN OPERATION.**

**ALWAYS MAKE CERTAIN POWER IS OFF WHEN INSTALLING OR CHANGING TOOLING.**

**ALWAYS MAKE CERTAIN POWER IS DISCONNECTED WHEN SERVICING THE MACHINE.**

**NEVER ALLOW UNTRAINED PERSONNEL TO OPERATE THIS MACHINE.**



## TABLE OF CONTENTS

Specifications .....	3
Installation .....	4
Lubrication .....	4
Control Description .....	5-6
Set Up & Run No. 6 .....	7
Set Up & Run No. 8 .....	8

**FOR ORDERING REPLACEMENT PARTS, REFER TO PARTS LIST SECTION ON PAGE 9.**

## SPECIFICATIONS

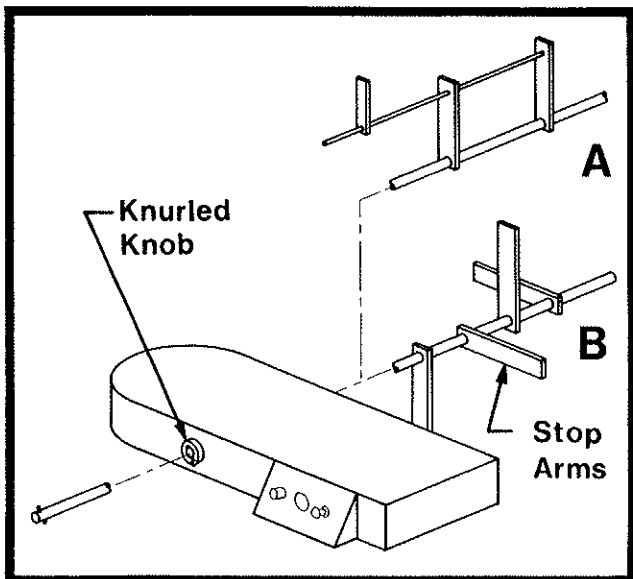
	No. 6	No. 8
Capacity (Material)	5/8 Round Steel	1"
1/4 R	1/4 x 2 Flat (Easy Way)	3/8 x 4 (Easy Way)
1 R	1/4 x 1 Flat (Hard Way)	3/8 x 1 (Hard Way)
	1 1/4 OD Tube	1 1/2 OD Tube
	3/4 IPS	1 1/4 IPS*
		*Requires 4" Bore Cyl.
Radius Capacity	9 Inches	24 Inches
Degree of Bend	280	360
Hydraulic Pressure	1000 PSI	1000 PSI
Max. 90 Bend Per Min.	26	26
Motor	3 HP	3 HP
Cylinder (Opt.)	3 1/2-4	3 1/2-4
Floor Space	18 x 54	18 x 54
Shipping Wt.	1,150	1,150
Spindle Torque (3 1/2" Cyl.)	2670 ft./lbs.	2670 ft./lbs.
(4" Cyl.)	3487 ft./lbs.	3487 ft./lbs.

### Installation

During shipment, the bender may have accumulated a coating of dust or grit. Remove all dirt and rust preventative with cleaning solvent.

**WARNING:** To prevent serious bodily injury fasten machine to floor through mounting holes provided in base of machine.

When shipped, the gauge group for the Di-Acro No. 6 and No. 8 benders are removed for packing reasons. Install one of the two gauge groups as illustrated below.



**NOTE:** Install gauge group "A" for short, or single length bends. Install gauge group "B" for longer, or multiple length bends.

**NOTE:** It is suggested that all four stop arms be placed at right angles to each other even if only one or two are used. This will balance them so that the knurled knob can be easily turned to position the stops.

Connect electrically to a three phase power supply making certain transformer and motor are connected properly for supply used (208, 230 or 460).

Pull "Start" pushbutton and check pump rotation. Proper rotation is shown by directional arrow on shroud located at the shaft end of the pump. To change pump rotation, interchange two supply lines.

Check pump reservoir and fill to within 1½" of filler top.

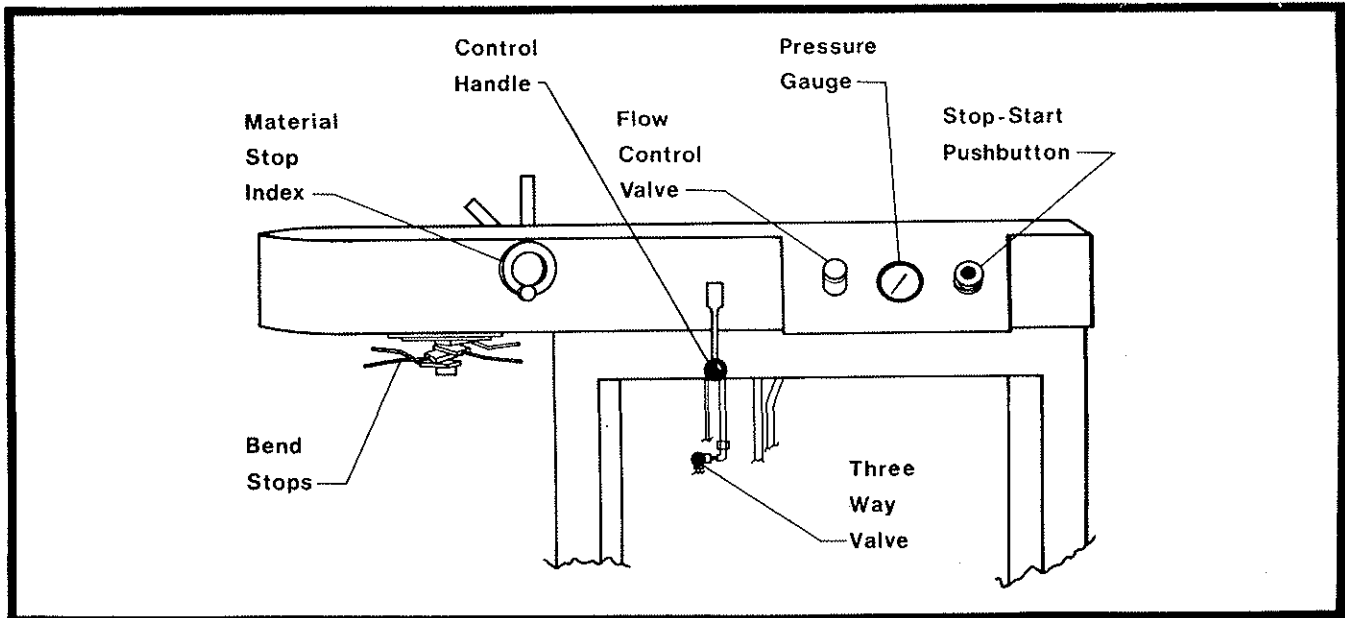
### Lubrication

Fill pump with anti-wear hydraulic oil. A viscosity between 120 and 250 SUS should be maintained.

Manufacturer	Fluid Name
Atlantic	Hytherm FX
Champion	Hydol Medium
Chevron	Chevron EP 15
Cities Service	Pace Makir XD-30
Continental	Conoco Super 31
Gulf	Harmony 54 AW
Houghton	Hydro-Drive HP-300
Humble	Nuto H54
Mobil	DTE-26
Pure	Pur 0 Pole AW-300
Shell	Tellus 933
Sinclair	Duro AW-31
Std. Oil of Ohio	Industron FF-53
Sun	Sunvis 831 WR
Sunray DX	Diamond Roza H
Texaco	Rando HDC
Tower	Hydroil AW-5
Withrow	Withrolube 657

If none of the above are available, automotive oil SAE-20-20W, type SC, SD, or SE is an acceptable substitute where there is little or no water contamination. Detergent dispersant additives in these oils hold water in a tight emulsion and prevent separation of water, even after long standing periods.

A minimum of lubrication is required on the No. 6 and No. 8 Benders. A single grease fitting on the rack cam requires lubrication every 500 hours of operation or every 3 months. The same schedule applies to the miscellaneous linkages on the control and gauges. Use NLG I No. 2 grease on the grease fittings, and a No. 30 machine oil on the linkages.



### Start-Stop Pushbutton

Pulling button starts pump motor and lights lamp. Pushing button stops motor and shuts off lamp.

### Control Handle

Moving control handle to the left or right operates valve, directing oil to bending cylinder. Angle of bend stops return handle to neutral position. Handle may also be moved manually to the neutral position.

NOTE: Holding control handle in offset position enables operator to by pass angle of bend stops. To make use of a bend stop which is third in a sequence, operator must hold control handle in offset position until the first two stops are by passed.

Immediately after by passing the second bend stop, operator should release the control handle leaving it at its detent position. The third bend stop will then return the control handle to its neutral position.

CAUTION: When angle of bend stops are not to be by passed, move control handle to detent position and release.

Direction of bend rotation is indicated by "Forward-Reverse" legend plates. These legend plates may be removed and reversed if clockwise bending is desired.

NOTE: The Di-Acro No. 6 and No. 8 benders are set up to bend in the counter-clockwise direction when shipped. The bending direction of either machine can be

reversed, but a decrease in machine load capacity will result. Therefore it is not recommended that the bending direction be reversed unless absolutely necessary. If clockwise bending is necessary, see page 7 for changing bender No. 6, see page 8 for changing bender No. 8.

### Flow Control Valve

This valve controls bending speed by bleeding a portion of the pump fluid volume to its holding tank. Operating speed can be controlled in bending direction only as return to starting position is always at full speed. To change bending speed control to other direction, see 3-way valve.

### Pressure Gauge

Indicates the pressure used while bending. To check the maximum set system pressure, hold the control lever until bending spindle reaches the end of its travel. Continue holding the lever, the Relief Valve will open and the pressure gauge will indicate system pressure. If no pressure is indicated, see 3-way valve. To adjust system pressure, see Relief Valve.

### Three-Way Valve

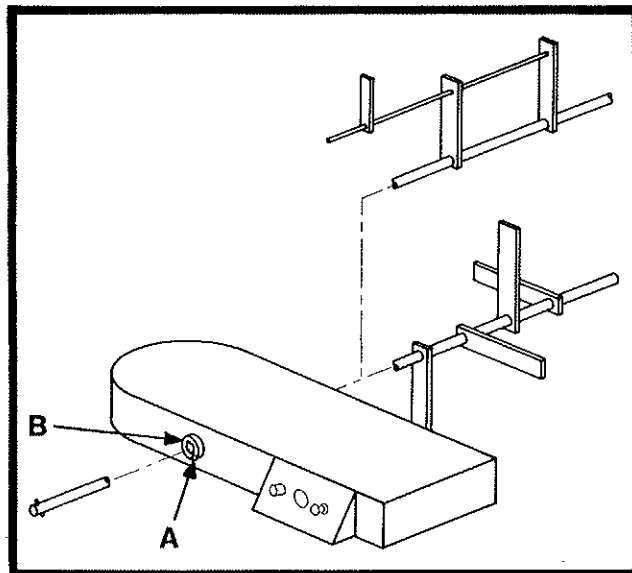
This push-pull valve allows the flow control valve to regulate the bending speed in either a clockwise, or counter-clockwise direction:

To control bending speed in clockwise direction, push on valve handle. To control bending speed in counter-clockwise direction, pull on valve handle.

**NOTE:** If bending speed is adjustable when traveling in return direction instead of bending direction, or if pressure gauge indicates no pressure during bending cycle, but shows pressure during return, change position of three-way valve.

### Relief Valve

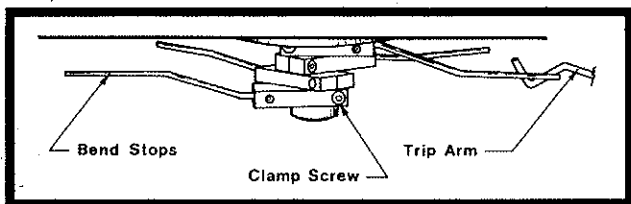
The relief valve, located at the back of the pump, is used to limit system pressure. System pressure is usually set at 1,000 PSI, but can be set up to 1,500 PSI. To check pressure, see Pressure Gauge section. To adjust pressure, loosen lock nut and turn screw in to increase pressure, out to decrease pressure.



To set more than one stop, pull Knob "A" and rotate Index Knob "B" 90°. Pin connected to knob "A" will locate stop rod in place. Adjust another stop to a desired length.

### Bend Stops (Qty. of 4)

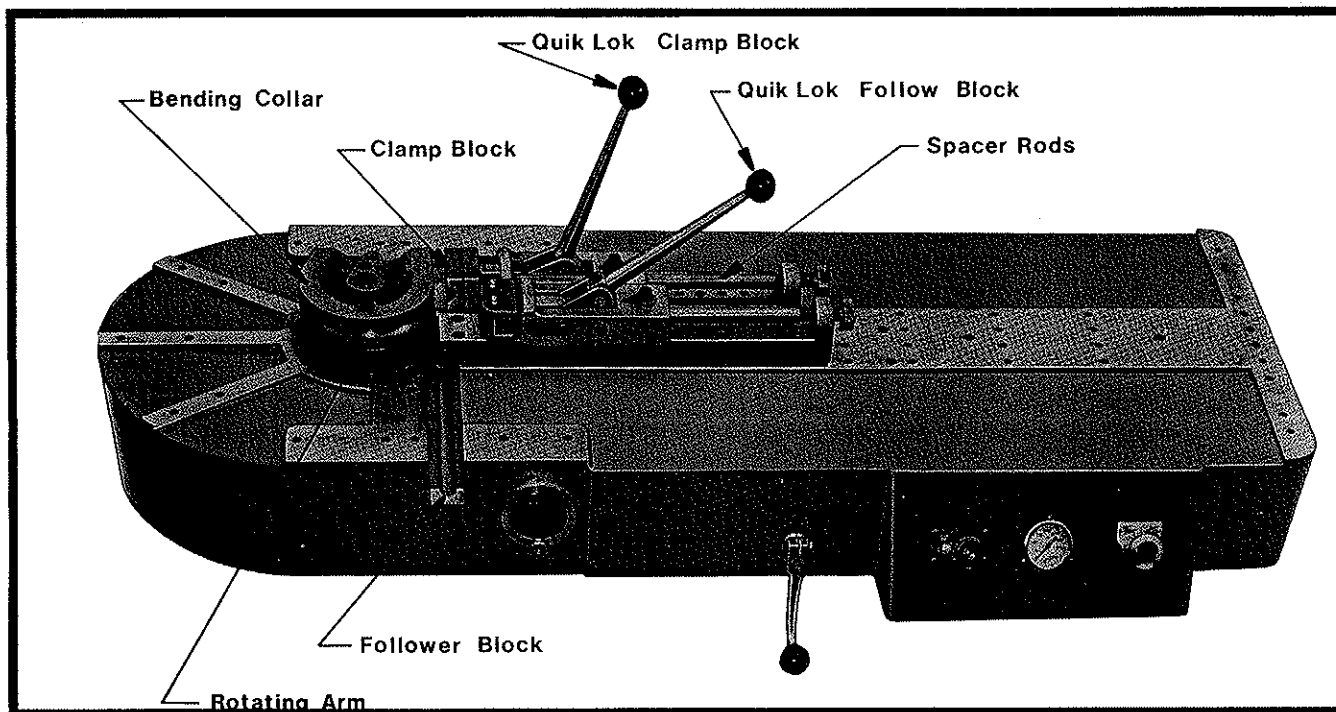
These stops are used to achieve a desired angle of bend and are located as shown below.



To set stops, loosen clamp screw and adjust stops to activate trip arm when desired angle is achieved. In order to make a bend beyond a stop, it is necessary to hold the control lever until that bend stop bypasses the trip arm.

### Material Stops Index (Qty. of 4)

These stops are used to gauge leg length of a part so that duplicate parts can be formed. (To adjust, loosen the socket head cap screw which clamps the stop to the stop rod, and slide stop to desired position. Retighten screw.)



### Set Up No. 6 Bender

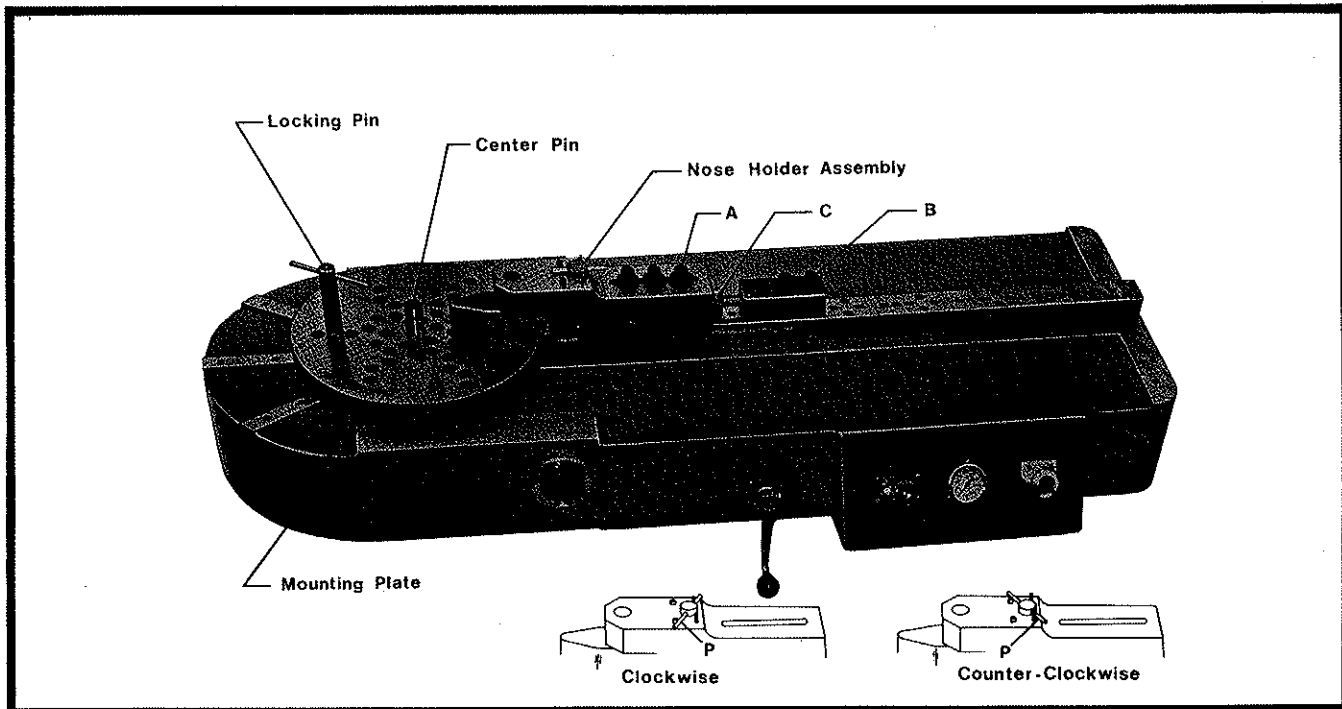
NOTE: This example set up is of forming in the counter-clockwise direction.

1. Install desired bending collar.
2. Install proper clamp block.
3. Adjust quik-lok slide which controls clamp block.
  - A. Bolt to rotating arm at position where material can be held firmly between bending collar and clamp block.
  - B. Add spacer rods as necessary to assure firm pressure between clamp block and bending collar.
4. Adjust quik-lok slide which controls follow-block. (excessive pressure not necessary)
5. Clamp material with clamp block.
6. Clamp material with follow block.
7. Pull power pushbutton.
8. Actuate control lever to forward position and test bend part.

NOTE: After desired angle has been achieved, bend stops and material stop indexes can be adjusted in order to duplicate parts. Adjust these gauging systems as described previously in this manual.

### To Set Up for Clockwise Bending:

1. Remove quik-lok slide which controls clamp block from rotating arm.
  2. Remove quik-lok slide which controls follow block from table.
  3. Remove rotating arm, flip over and refasten to spindle.
  4. Fasten quik-lok which controls clamp block to rotating arm.
  5. Fasten quik-lok which controls follow block to table.
  6. Push three-way valve in.
- Bend control is now in clockwise direction.



### Setup No. 8 Bender

NOTE: This example setup is of forming in the counter-clockwise direction.

1. Install desired center pin or radius collar.
2. Determine location of locking pin. Allow a material thickness between locking pin and center pin or radius collar. Mounting plate should be located so that the locking pin will be adjacent to the forming nose on the side opposite the instrument panel when the cylinder rod is all the way back in the cylinder. This positioning is a must when forming 360 bends. However, if the required bend is less than 360°, the mounting plate may often be located so the locking pin is adjacent to the forming nose without regard to position of cylinder rod.

When it becomes necessary to change position of mounting plate, remove the six mounting screws in the top of the plate which mount it to the spur pinion gear. Position mounting plate in desired position and replace bolts.

3. Rotate locking pin in a counter-clockwise direction and lock material against center pin.

4. Adjust nose holder assembly.
  - A. Tighten bolts "B" securely.
  - B. Finger tighten bolts "A".
  - C. Adjust nose holder support screw "C" until nose comes in contact with material.
  - D. Tighten bolts "A" securely.
5. Pull power pushbutton.
6. Pull control lever to forward position and test bend part.

NOTE: After desired angle has been achieved, bend stops and material stop indexes can be adjusted in order to duplicate parts. Adjust these gauging systems as described previously in this manual.

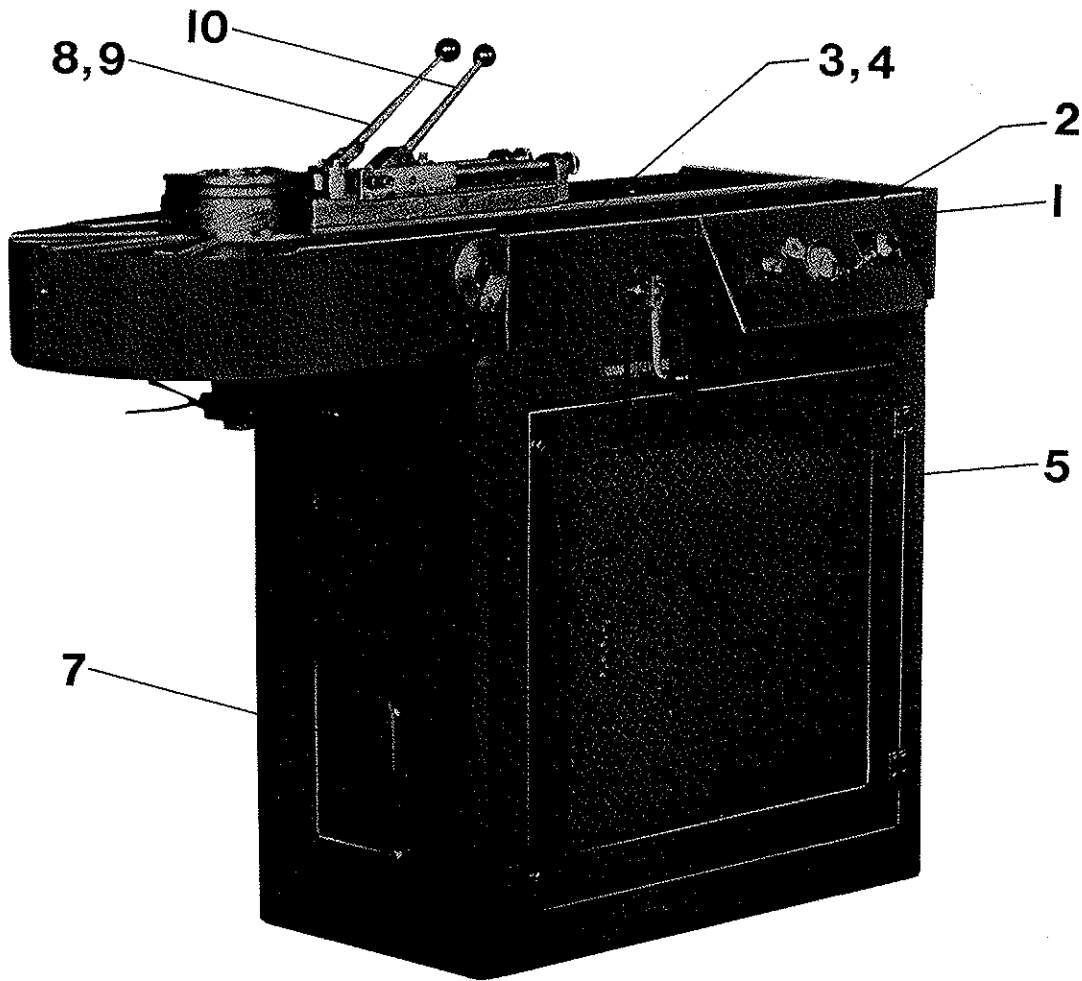
### To Set Up for Clockwise Bending:

1. Change position of pin "P" to position shown in clockwise illustration above.

2. Push three-way valve in.

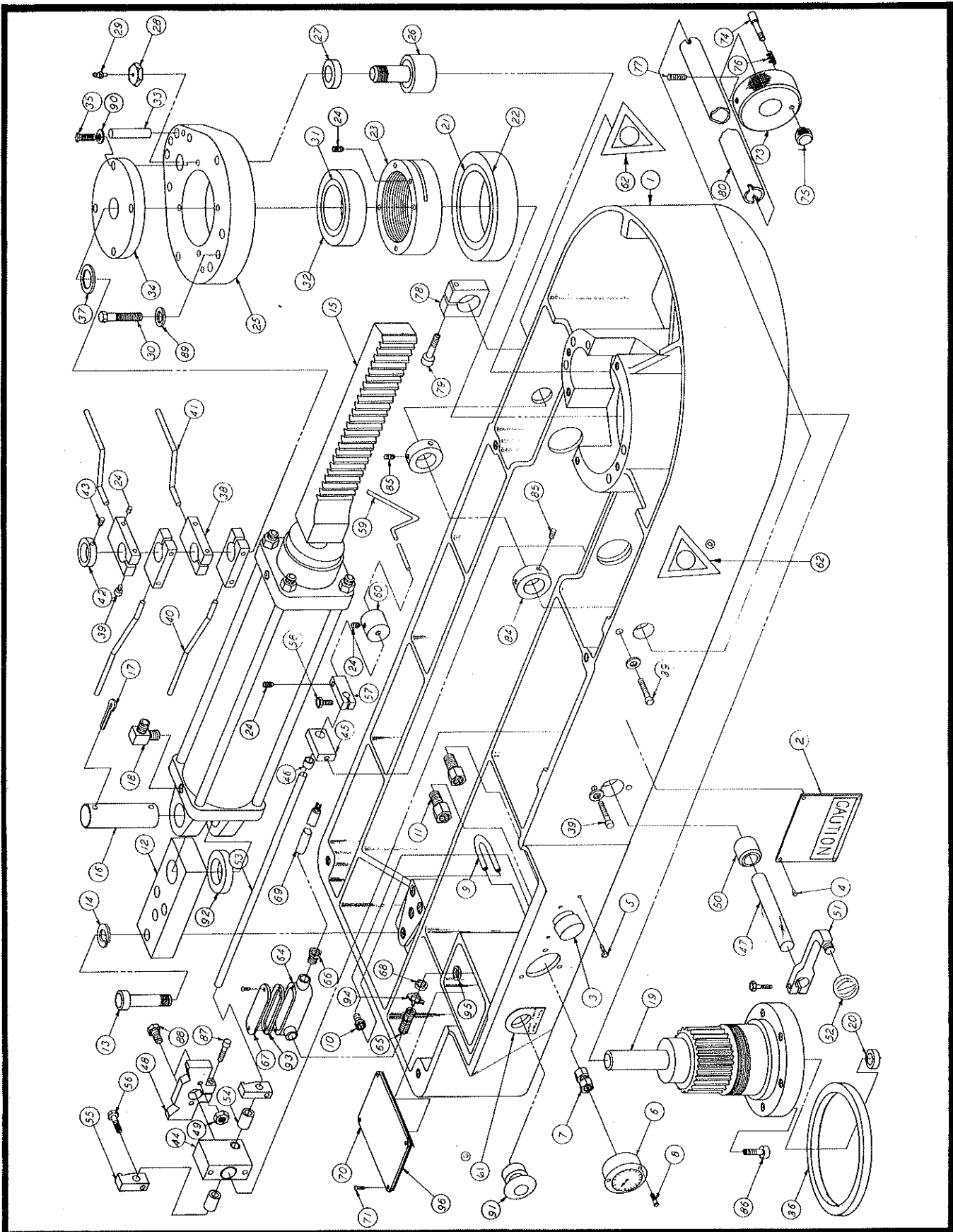
Bend control is now in clockwise direction.

\*Required bending pressure can be reduced by backing off nose holder.



NOTE: NO. 6 BENDER IS PICTURED ABOVE.

Item No.	Description	Page No.
1	Table Assembly .....	10-12
2	Flow Control Valve Assembly .....	13
3	Cylinder Assembly .....	14
4	Cylinder Assembly 4" .....	15
5	Base Assembly .....	16-18
6	Control Block Assembly .....	19
7	Power Pack .....	20-21
8	Quik Lok .....	22-23
9	Hanger Assembly .....	24
10	Pressure Roller Assembly .....	25
11	No. 8 Mounting Plate .....	26-27
12	Nose Holder Assembly .....	28
13	Gage Group .....	29
14	Hydraulic Diagram .....	30
15	Floor Plan .....	31
16	Electrical Diagram .....	32

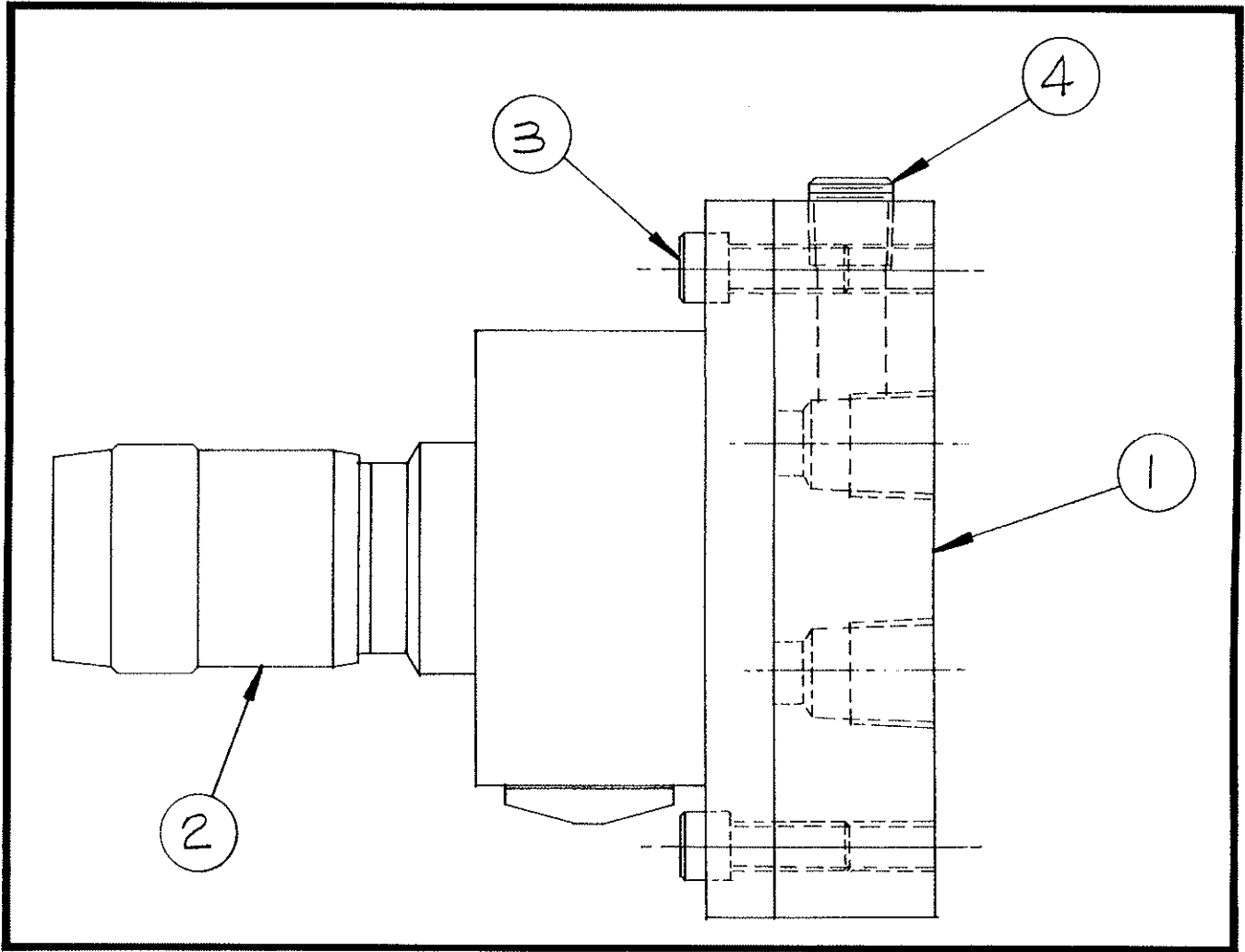


3 1/2" Cylinder - 150-0000602 & 150-0000604 - 4" Cylinder

ITEM NO.	PART NUMBER	DESCRIPTION	QUANTITY USED ON ASSEMBLY	REFER TO PAGE
1	150-1105055	TABLE.....	1	
2	156-6503001	WARNING PLATE.....	1	
3	150-3703701	VALVE SUB ASSY.....	1	13
4	29A-XXXOX0108C	DRIVE SCREW.....	12	
5	20B-XX10F0102	BUT HD SOC CAP SCR.....	4	
6	3708001	PRESSURE GAGE.....	1	
7	3705006	FEMALE CONNECTOR.....	1	
8	22B-XX06C0308P	FILL HD MACH SCR.....	3	
9	151-3704016	GAGE LINE.....	1	
10	3705025	MALE CONN 1/4.....	1	
11	3705005	MALE CONN 1/2.....	1	
12	151-1110008	CYL MOUNT.....(150-0000602).....	1	
	151-1110009	CYL MOUNT "4"..(150-0000604).....	1	
13	20A-0508C2104	SOC HD CAP SCR.....	4	
14	4902018	LOCK WASHER 5/8.....	4	
15	152-3711703	CYLINDER ASSY..(150-0000602).....	1	14
	150-3711704	CYLINDER ASSY "A"(150-0000604).....	1	15
16	151-1203010	CYL PIN.....(150-0000602 ONLY).....	1	
17	4601003	COTTER 3/16 x 2 1/2..(150-0000602 ONLY).....	2	
18	3705007	MALE EL 1/2.....	2	
19	150-3901088	PINION ASSY.....	1	
	150-3901093	SPUR PINION.....	1	
	150-1211098	PINION SHAFT.....	1	
20	150-1203089	LOCATING BUSHING.....	1	
21	3101003	CONE.....	1	
22	3101004	CUP.....	1	
23	150-4705090	LOCK RING.....	1	
24	23A-0104C0308	SOCKET SET SCREW.....	7	
25	150-1106081	GEAR CASE COVER.....	1	
26	3103011	CAM FOLLOWER RC 32.....	1	
27	150-1108083	CAM FOLLOWER SPACER.....	1	
28	150-4704006	NUT.....	1	
29	6901002	GREASE FITTING.....	1	
30	21A-0308C2000	HEX HD CAP SCR.....	6	
31	3101001	CONE.....	1	
32	3101002	CUP.....	1	
33	1203112	DOWEL PIN 1/2 x 2-1/4.....	4	
34	150-1110082	TAKE UP CAP.....	1	
35	20B-0516C0708	BUT HD SOC CAP SCR.....	4	
36	3710056	OIL SEAL 55683.....	1	
37	3107107	THRUST BRG 1" I.D.....	1	
38	150-1301086	TRIP CLAMP.....	4	
39	20A-0516C1104	SOC HD CAP SCR.....	3	
40	150-1301084	TRIP ARM.....	2	
41	150-1301085	TRIP ARM.....	2	
42	150-1301087	COLLAR.....	1	
43	23A-0104C0104	SOCKET SET SCREW.....	1	
44	150-1301703	CONTROL BLK ASSY.....	1	19
45	151-1301006	BEARING MOUNT.....	1	

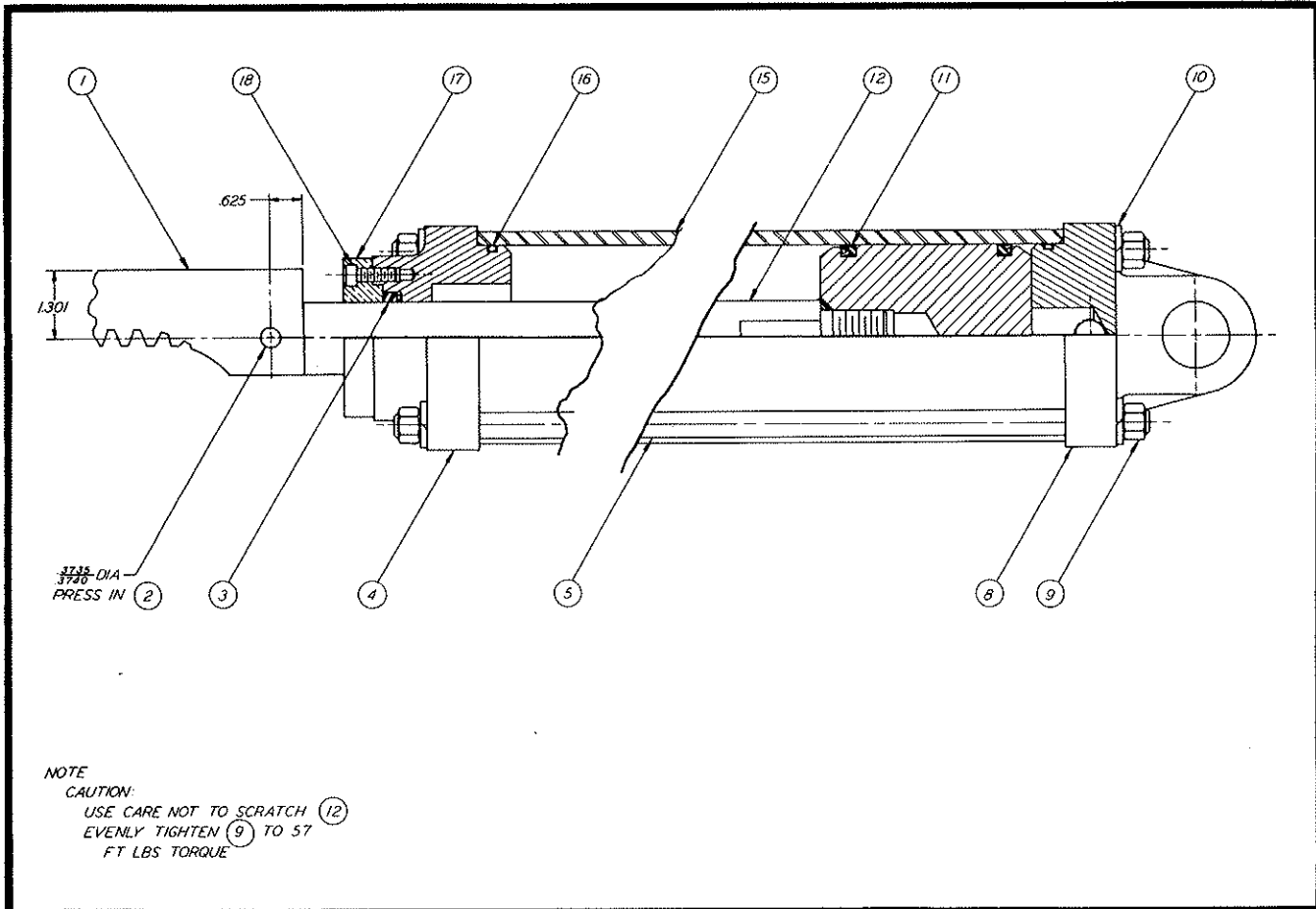
3 1/2" Cylinder - 150-0000602 & 150-0000604 - 4" Cylinder

ITEM NO.	PART NUMBER	DESCRIPTION	QUANTITY USED ON ASSEMBLY	REFER TO PAGE
46	3104108	BEARING.....	1	
47	150-1301092	CONTROL SHAFT.....	1	
48	150-1301095	CAM.....	1	
49	31X-516C	JAM NUT.....	2	
50	150-1301093	COLLAR.....	1	
51	150-1301091	CONTROL HANDLE.....	1	
52	1208106	KNOB.....	1	
53	151-1301004	CONTROL ROD.....	1	
54	150-1301080	SPACER.....	2	
55	151-1301003	TRIP DOG.....	2	
56	21A-0516C0304H	HEX HD CAP SCR.....	2	
57	151-1301062	TRIP ARM CLAMP.....	1	
58	21A-0104C1000	HEX HD CAP SCR.....	1	
59	151-1301063	TRIP ARM.....	1	
60	151-1301064	WEIGHT.....	1	
61	6503121	LEGEND PLATE.....	1	
62	156-6503002	SAFETY SIGN.....	1	
63	158-6503001	SAFETY SIGN.....	1	
64	3315105	ELECTROLET OL-1.....	1	
65	3705194	NIPPLE 1/2 x 1-1/2.....	1	
66	3315079	ST CONNECTOR 1/2.....	1	
67	3315043	COVER.....	1	
68	3315073	BUSHING.....	1	
69	3316928	WIRE RED 14 AWG.....	12	
70	150-1109056	COVER.....	1	
71	22A-XX10F0104	RD HD MACH SCR.....	4	
73	150-1208056	INDEX KNOB.....	1	
74	151-1203072	PIN.....	1	
75	151-1203073	KNOB.....	1	
76	151-5102068	SPRING.....	1	
77	23A-0104C1000	SOCKET SET SCREW.....	2	
78	150-1304001	CLAMP.....	1	
79	20A-0516C2000	SOC HD CAP SCR.....	1	
80	151-1420071	STOP ROD SUPPORT.....	1	
84	151-1420077	STOP ROD SUPPORT.....	2	
85	23A-0516C0104	SOC SET SCR.....	4	
86	20A-0516C1102	SOC HD CAP SCR.....	6	
87	20A-0516C1000	SOC HD CAP SCR.....	1	
88	4701139	H H CAP SCR.....	2	
89	4902008	LOCK WASHER 5/8.....	6	
90	4902004	LOCK WASHER 5/16.....	3	
91	3303040	PUSH BUTTON SWITCH.....	1	
92	150-1108001	SPACER..... (150-0000604 ONLY)....	2	
93	3315155	GASKET 1/2.....	1	
94	3315205	LOCK NUT 1/2.....	1	
95	3315101	SEAL RING 1/2.....	1	
96	3710901	GASKET 1/16 x 3/4.....	2	



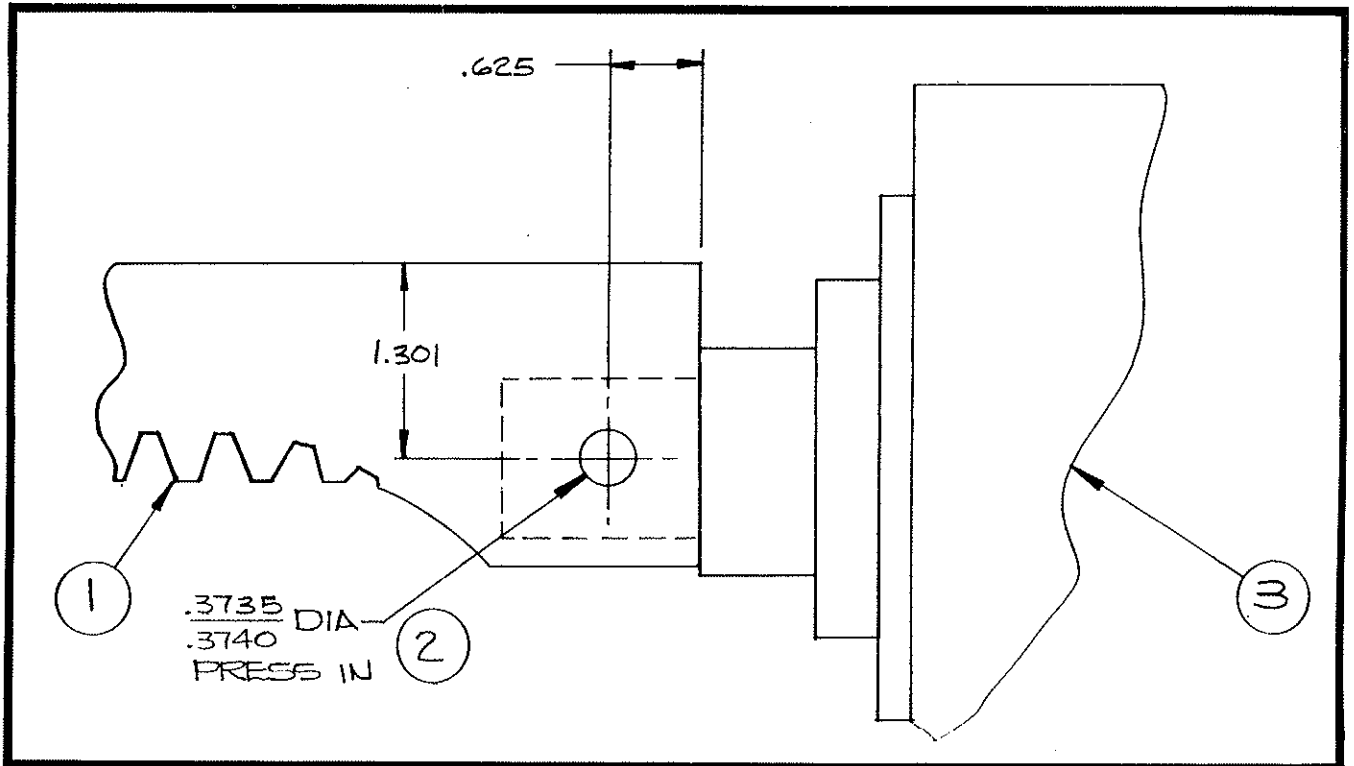
150-3703701

ITEM NO.	PART NUMBER	DESCRIPTION	QUANTITY USED ON ASSEMBLY	REFER TO PAGE
1	151-3703023	SUB PLATE .....	1	
2	3703116	FLOW CONTROL VALVE .....	1PP	
3	20A-0516C0304	SOC HD CAP SCR .....	4PP	
4	3705079	PLUG 1/4 NPTF .....	1PP	



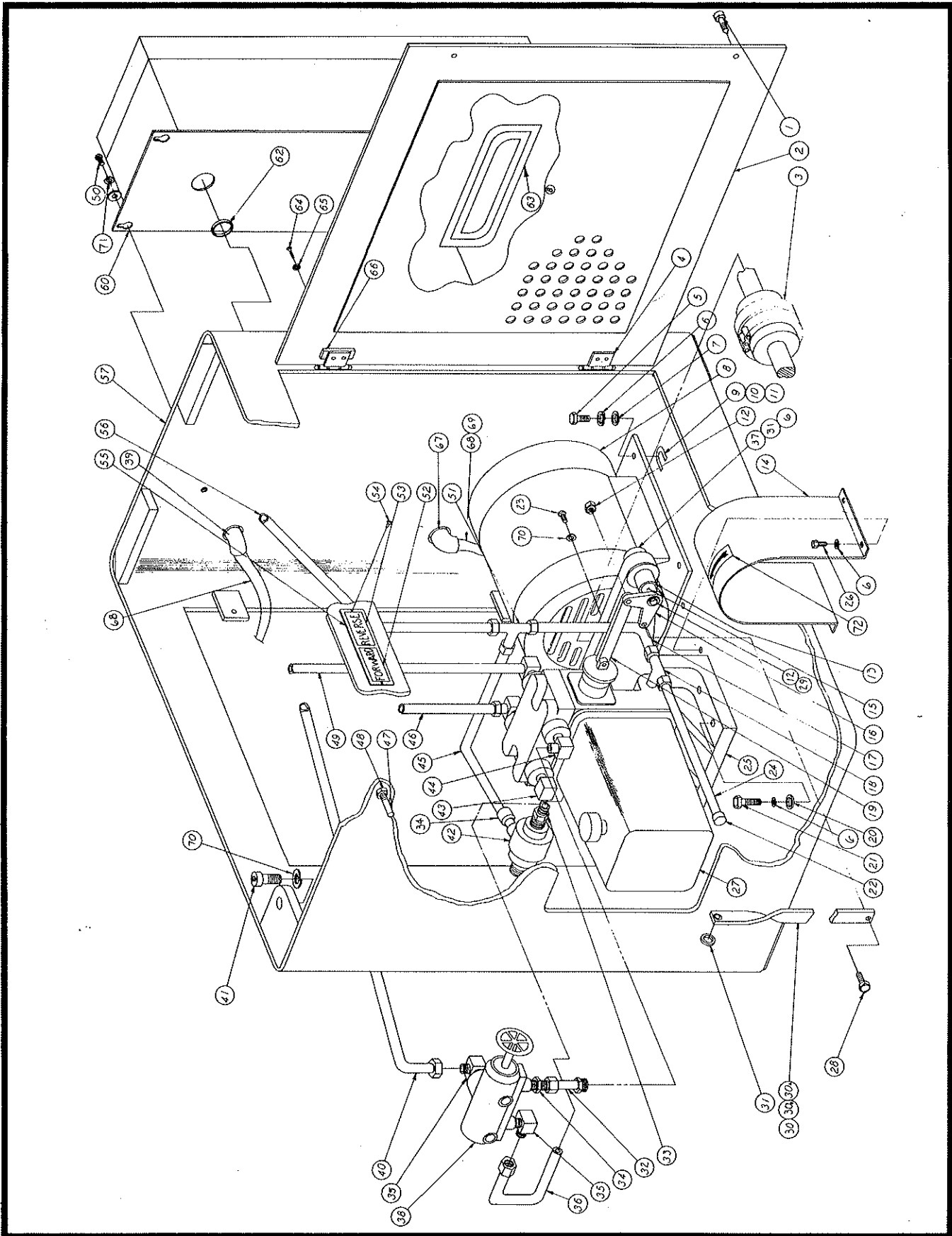
152-3711703

ITEM NO.	PART NUMBER	DESCRIPTION	QUANTITY USED ON ASSEMBLY	REFER TO PAGE
1	150-1216079	RACK.....	1	
2	1203194	PIN.....	1	
3	3710069	POLY-PAK SEAL.....	1	
4	152-3711121	CYLINDER HEAD.....	1	
5	152-3711009	TIE ROD.....	4	
8	152-3711001	CYLINDER CLEVIS.....	1	
9	30X-0102C	HEX HD NUT.....	8	
10	4902007	LK WASH.....	8	
11	3710068	POLY-PAK SEAL.....	2	
12	152-3711704	PISTON ROD ASSY.....	1	
	152-3711120	PISTON.....	1	
	152-3711119	ROD.....	1	
	1203146	SPRING PIN 1/8 x 3/4.....	1	
15	152-3711003	TUBE.....	1	
16	3710003	O RINGS.....	2	
17	152-3711005	ROD CAP.....	1	
18	20A-0104C0304	SOC HD CAP SCR.....	6	



150-3711704

ITEM NO.	PART NUMBER	DESCRIPTION	QUANTITY USED ON ASSEMBLY	REFER TO PAGE
1	150-1216079	RACK .....	1	
2	1203194	DOWEL PIN .....	1	
3	150-3711001	CYLINDER 4 INCH .....	1	

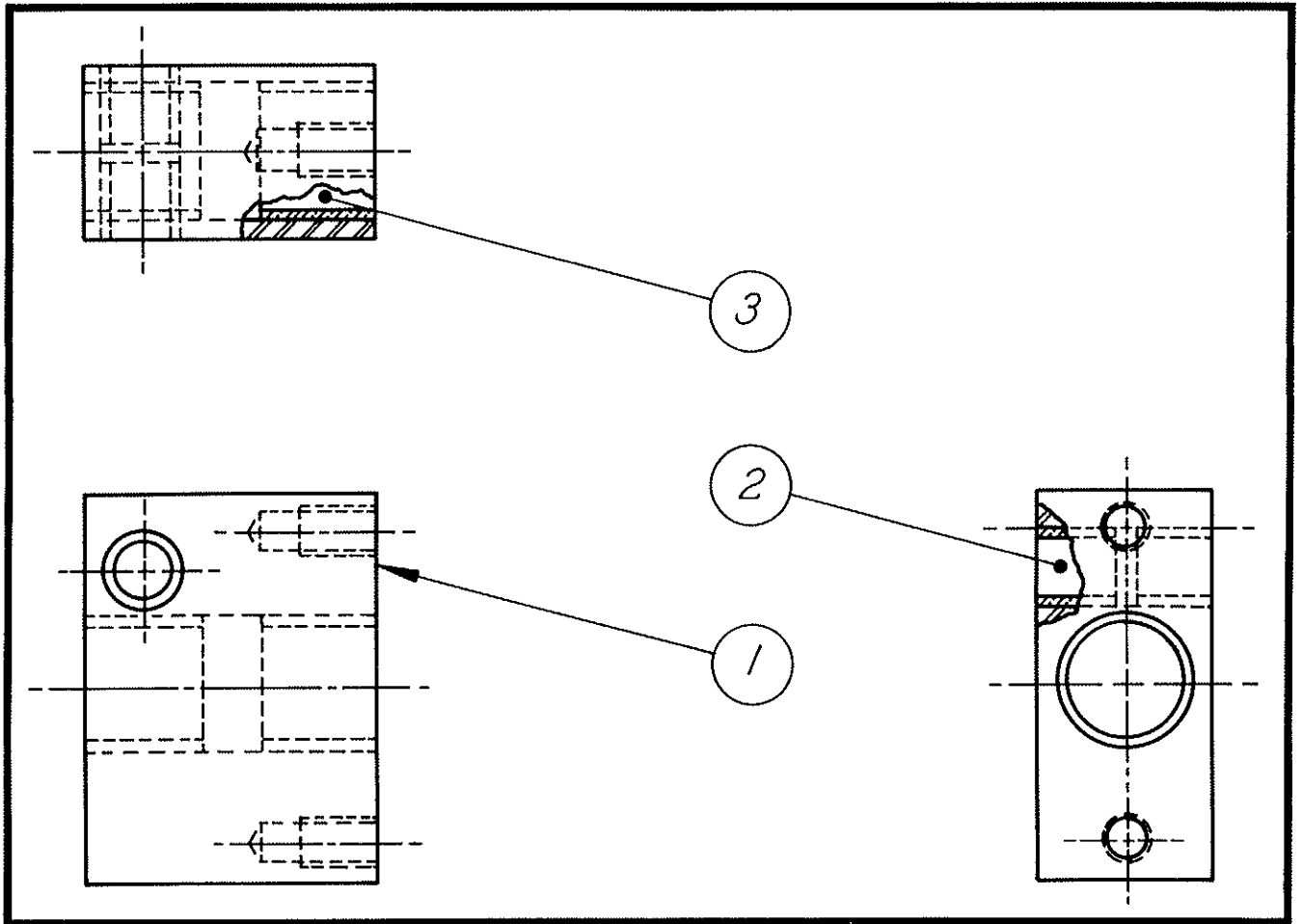


230 Volt - 150-0000603 & 150-0000605 - 208 Volt

ITEM NO.	PART NUMBER	DESCRIPTION	QUANTITY USED ON ASSEMBLY	REFER TO PAGE
1	4701148	PANEL SCREW .....	4	
2	150-1109157	DOOR .....	2	
3	1210101	FLEXIBLE COUPLING .....	1	
4	4501001	BUTT HINGE 1-1/2 .....	4	
5	21A-0516C1000	HEX HD CAP SCR .....	4	
6	4902004	LOCKWASHER 5/16 .....	3	
7	4901108	FLAT WASHER 5/16 .....	4	
8	3301065	MOTOR 3HP 230 (150-0000603 only).	1	
	3301089	MOTOR 3HP 1200 RPM 208 (150-0000605 only) .....	1	
9	150-5703062	SHIM .....	2	
10	150-5703063	SEE 150-5703062 (SHIM) .....	1	
11	150-5703064	SEE 150-5703062 (SHIM) .....	1	
12	32X-0104C	LOCK NUT BI-WAY .....	4	
13	151-1301002	CONT BELLCRANK SPACER .....	1	
14	150-1106082	GUARD .....	1	
15	150-1301099	CONTROL BELLCRANK BEARING .....	1	
16	150-1301098	CONTROL BELLCRANK .....	1	
17	151-3704015	RETURN LINE .....	1	
18	3705008	MALE BRANCH TEE 1/2 .....	1	
19	151-1301000	CONTROL BELCRANK LINK .....	1	
20	4901157	FLAT WASHER 5/16 .....	4	
21	21A-0516C1104	HEX HD CAP SCR .....	4	
22	3705016	PIPE CAP 1/4 .....	1	
23	21A-0102C1304	HEX HD CAP SCR .....	4	
24	150-3704063	DRAIN TUBE .....	1	
25	150-1110061	PUMP MOUNT .....	1	
26	21A-0516C0102	HEX HD CAP SCR .....	4	
27	3702001	POWER PACK .....	1	
28	150-4701005	HEX HD CAP SCR .....	3	
29	4901102	FLAT WASHER 1/4 .....	1	
30	150-1301701	SHORT LINK ASSY .....	1	
A	150-1301096	LINK .....	1	
B	3104110	BEARING .....	1	
31	4901109	FLAT WASHER 5/16 .....	1	
32	3705323	TUBE PIPE NIPPLE .....	1	
33	3705261	RED NIPPLE 1/2 x 3/8 .....	1	
34	3705115	MALE CONN 1/2 .....	2	
35	3705072	MALE ELL 1/2 .....	2	
36	151-3704019	VALVE LINE .....	1	
37	21A-0516C0304	HEX HD CAP SCR.....	1	
38	3703103	SELECTOR VALVE .....	1	
39	3315080	ST ELL INS 90D x 1/2 .....	2	
40	151-3704017	FLOW CONTROL INTAKE .....	1	
41	20A-0102C1104	SOC HD CAP SCR .....	4	
42	3703102	RELIEF VALVE .....	1	
43	3705007	MALE ELL 1/2 3/8 .....	3	
44	3705011	ST ELL 3/8 .....	1	
45	151-3704014	RELIEF LINE .....	1	

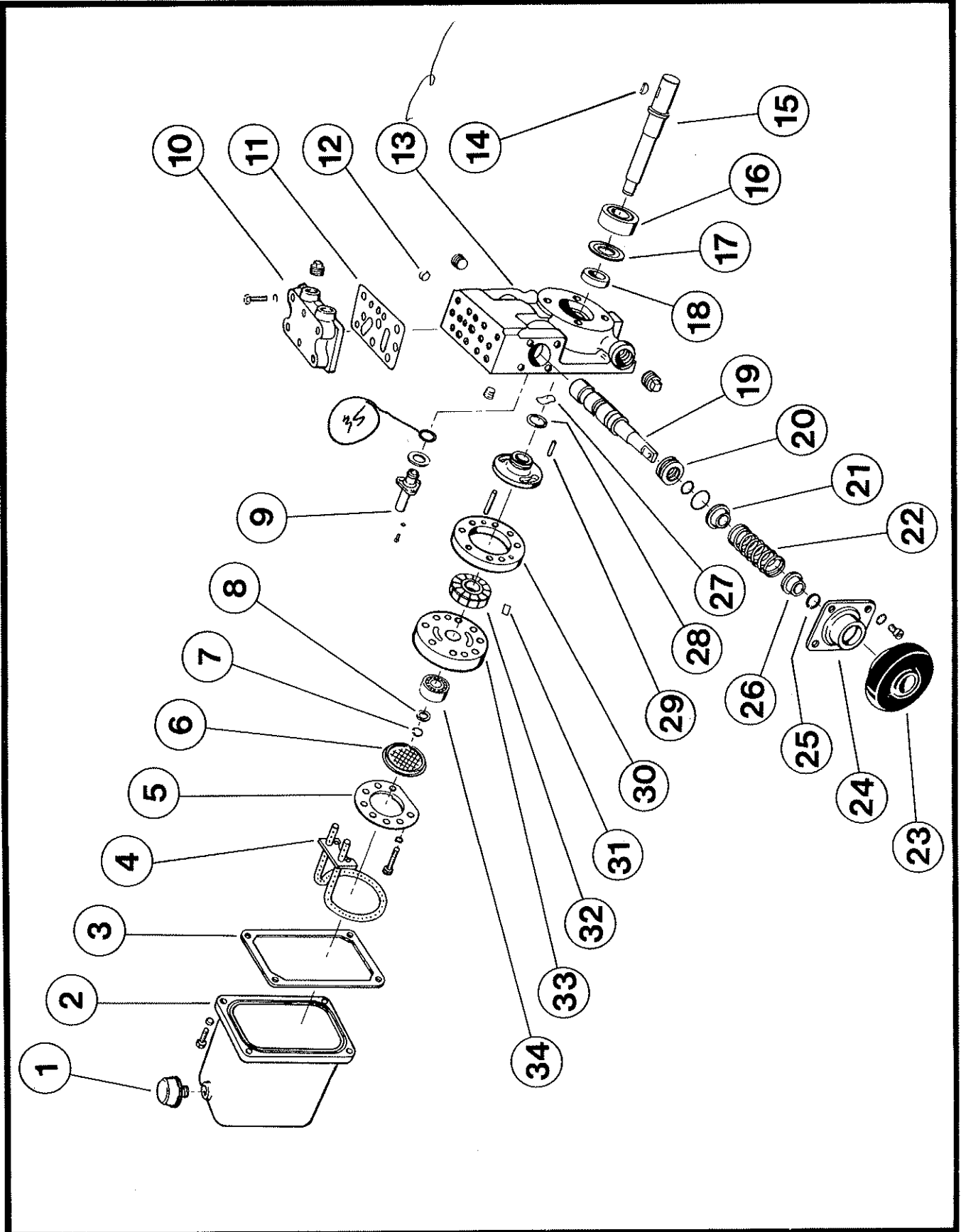
230 Volt — 150-0000603 & 150-0000605 — 208 Volt

ITEM NO.	PART NUMBER	DESCRIPTION	QUANTITY USED ON ASSEMBLY	REFER TO PAGE
46	151-3704012	CYLINDER LINE FRONT .....	1	
47	151-1301065	TRIP ARM SUPPORT .....	1	
48	31X-0516C	JAM NUT .....	1	
49	151-3704013	CYLINDER LINE REAR .....	1	
50	22D-0104C0516	TRUSS HD MACH SCR .....	4	
51	3705009	TEE UNION 1/2 .....	1	
52	150-6503102	FORWARD PLATE .....	1	
53	150-6503103	REVERSE PLATE .....	1	
54	29A-XXX0X0108C	DRIVE SCREW .....	2	
55	6999102	NAMEPLATE HOLDER .....	2	
56	151-3704018	FLOW CONTROL RETURN .....	1	
57	150-1101060	BASE WLDMT .....	1	
58	3320012	TERMINAL B-87 (NOT SHOWN) .....	4	
60	150-3307704	ENCLOSURE ASSY (150-0000603 only)	1	
	150-3307703	ENCLOSURE ASSY (150-0000605 only)	1	
61	3315033	RED WASHER 3/4 - 1/2 (NOT SHOWN).	1	
62	3315101	SEAL RING 1/2 .....	2	
63	068-6502001	NAME PLATE .....	1	
64	22A-XX10F0104	RD HD MACH SCR .....	16	
65	4902017	LOCK WASHER #10 .....	16	
66	150-1110223	BACK UP BLOCK .....	4	
67	3315079	ST CONN 1/2 .....	2	
68	3314907	ST CONDUIT 1/2 .....	3	
69	3316905	WIRE 14 AWG BLACK .....	9	
70	4902007	LOCKWASHER 1/2 .....	8	
71	4902005	LOCKWASHER 1/4 .....	4	
72	032-6503018	ARROW PLATE .....	1	



150-1301703

ITEM NO.	PART NUMBER	DESCRIPTION	QUANTITY USED ON ASSEMBLY	REFER TO PAGE
1	150-1301094	CONT SFT BRG .....	1	
2	3104108	BEARING .....	2	
3	3104111	BEARING .....	2	



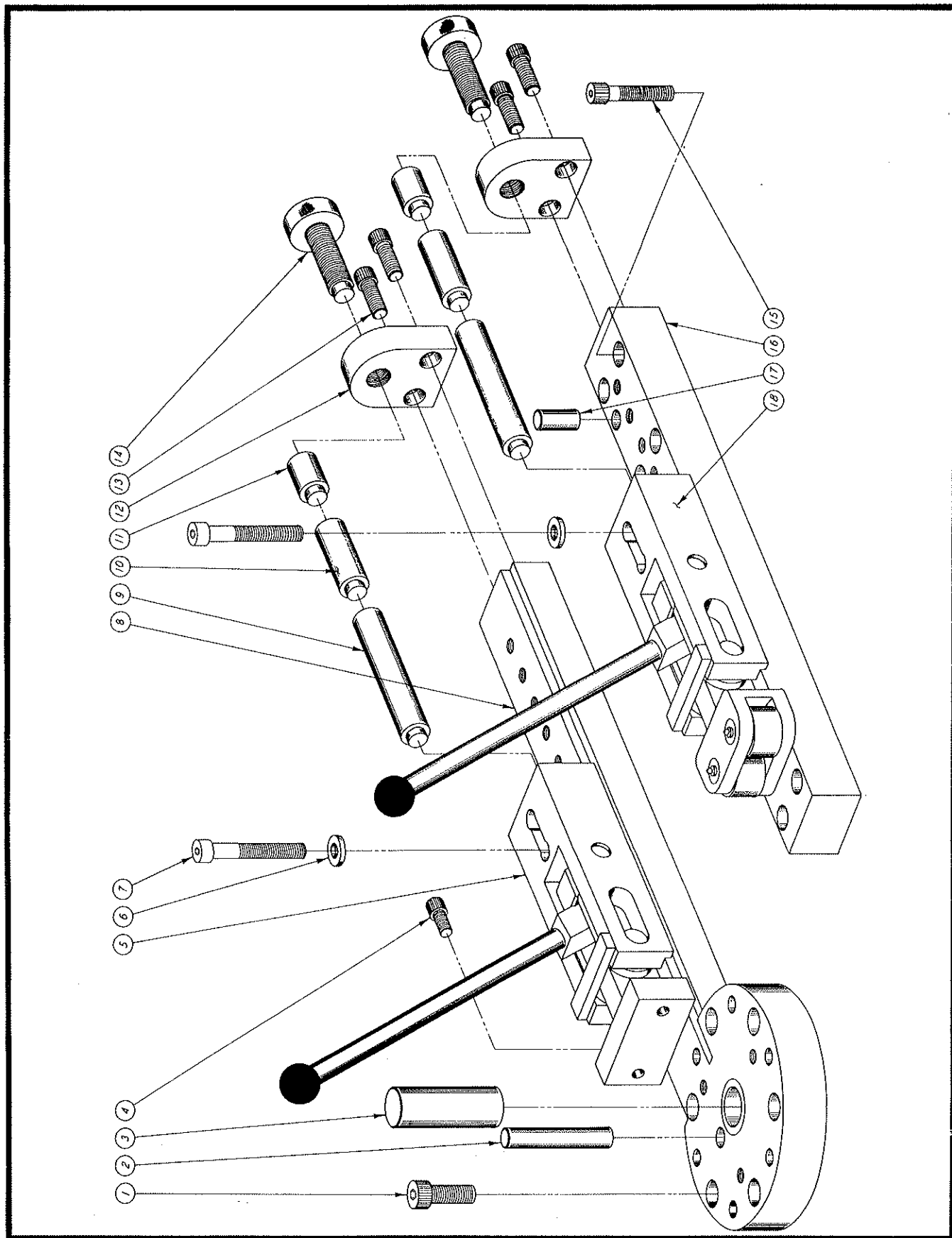
ITEM NO.	PART NUMBER	DESCRIPTION	QUANTITY USED ON ASSEMBLY	REFER TO PAGE
1	3702101	AIR FILTER .....	1	
2	3702104	TANK .....	1	
3	3702105	GASKET .....	1	
4	3702106	OIL RETURN TUBE .....	1	
5	3702110	BAFFLE PLATE .....	1	
6	3702111	RETAINER - SCREEN .....	1	
7	3702112	SNAP RING .....	1	
8	3702113	SPACER .....	VAR.	
9	3702135	RELIEF VALVE .....	1	
10	3702145	COVER .....	1	
11	3702143	GASKET .....	1	
12	3702139	PLUG .....	1	
13	<del>3702138</del>	<del>BODY</del> <i>N/A</i> .....	1	
14	3702167	KEY .....	1	
15	3702166	SHAFT .....	1	
16	3702165	BEARING .....	1	
17	3702164	RETAINER .....	1	
18	3702163	SEAL .....	1	
19	3702153	SPOOL .....	1	
20	3702154	SEAL .....	1	
21	3702155	BUSHING .....	1	
22	3702156	SPRING .....	1	
23	3702162	BOOT .....	1	
24	3702159	COVER .....	1	
25	3702158	SNAP RING .....	1	
26	3702157	BUSHING .....	1	
27	3702127	WAVE WASHER .....	1	
28	3702126	"O" RING .....	1	
29	3702125	PIN .....	1	
30	3702121	RING .....	1	
31	3702117	VANE KIT .....	1	
32	3702116	ROTOR .....	1	
33	3702115	PUMP HEAD .....	1	
34	3702114	BEARING .....	1	

35

277644

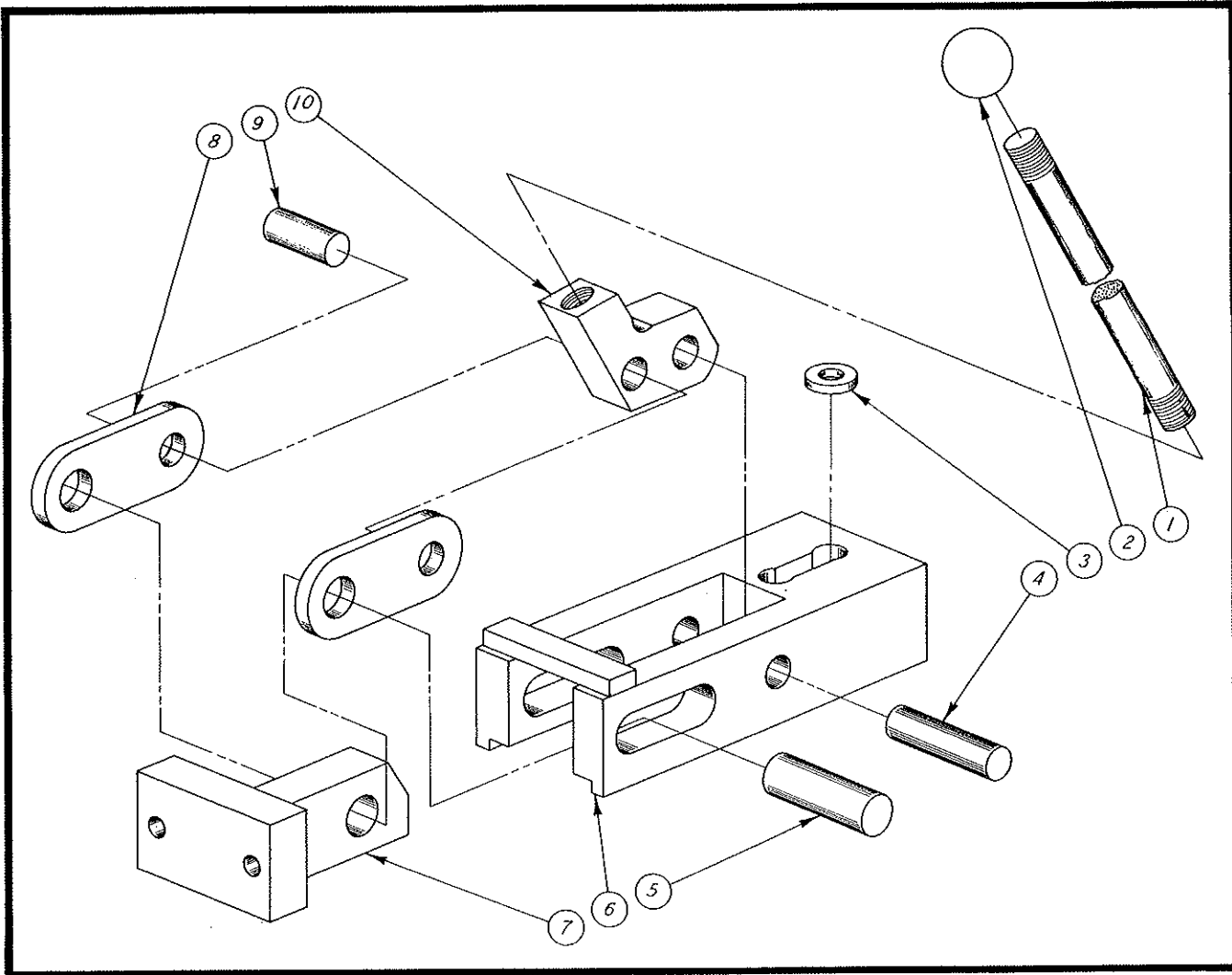
Rel Valve O Ring

1



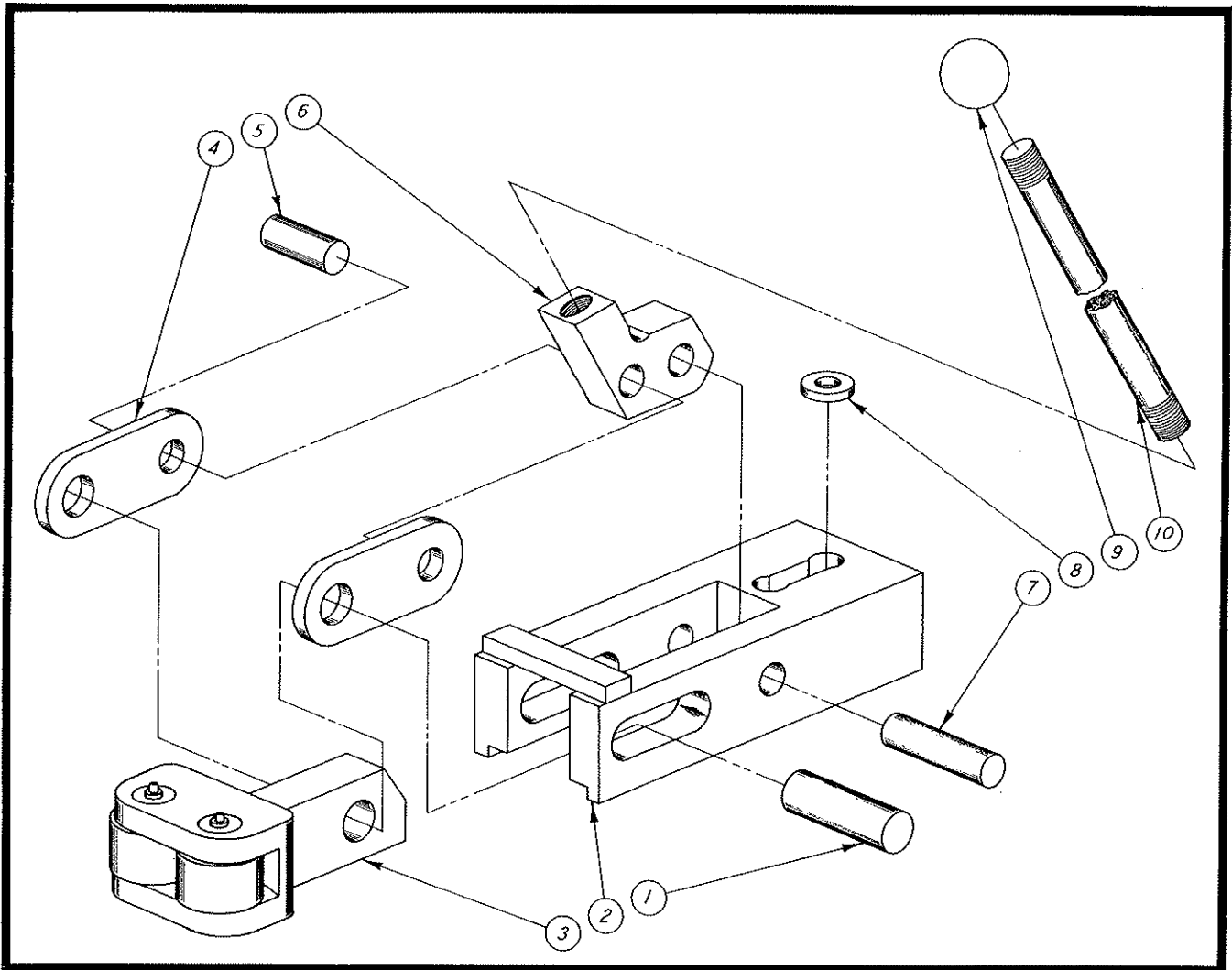
156-0000601

ITEM NO.	PART NUMBER	DESCRIPTION	QUANTITY USED ON ASSEMBLY	REFER TO PAGE
1	20A-0716C1104	SOC HD CAP SCR.....	6	24
2	156-1203027	HOLDING PIN.....	1	
3	130-016RP	1/2 RADIUS PIN.....	1	
4	20A-0516C0508	SOC HD CAP SCR.....	2	
5	156-1113713	HANGER ASSY COMP N.....	1	
6	4901101	FLAT WASHER 3/8.....	4	
7	20A-0308C2102	SOC HD CAP SCR.....	4	
8	156-1113716	ROTATING ARM ASSY.....	1	
	156-1113018	ROTATING ARM.....	1	
	156-3110020	BUSHING.....	1	
9	156-1113014	SPACER ROD C.....	2	
10	156-1113013	SPACER RID B.....	2	
11	156-1113012	SPACER ROD A.....	2	
12	156-1113017	SCREW SUPPORT.....	2	
13	20A-0308C1000	SOC HD CAP SCR.....	4	
14	156-1113015	BACK UP SCREW.....	2	
15	20A-0308C1304	SOC HD CAP SCR.....	12	
16	156-1113002	SLIDE.....	1	
17	1203196	DOWEL 1/2 x 1.....	3	
18	156-1113714	HANGER ASSY COMP ROLLER.....	1	25
19	150-6102701	WRENCH 5/16 HEX (NOT SHOWN).....	1	
20	150-6102702	WRENCH 3/8 HEX (NOT SHOWN).....	1	
21	150-6102703	WRENCH 3/16 HEX (NOT SHOWN).....	1	



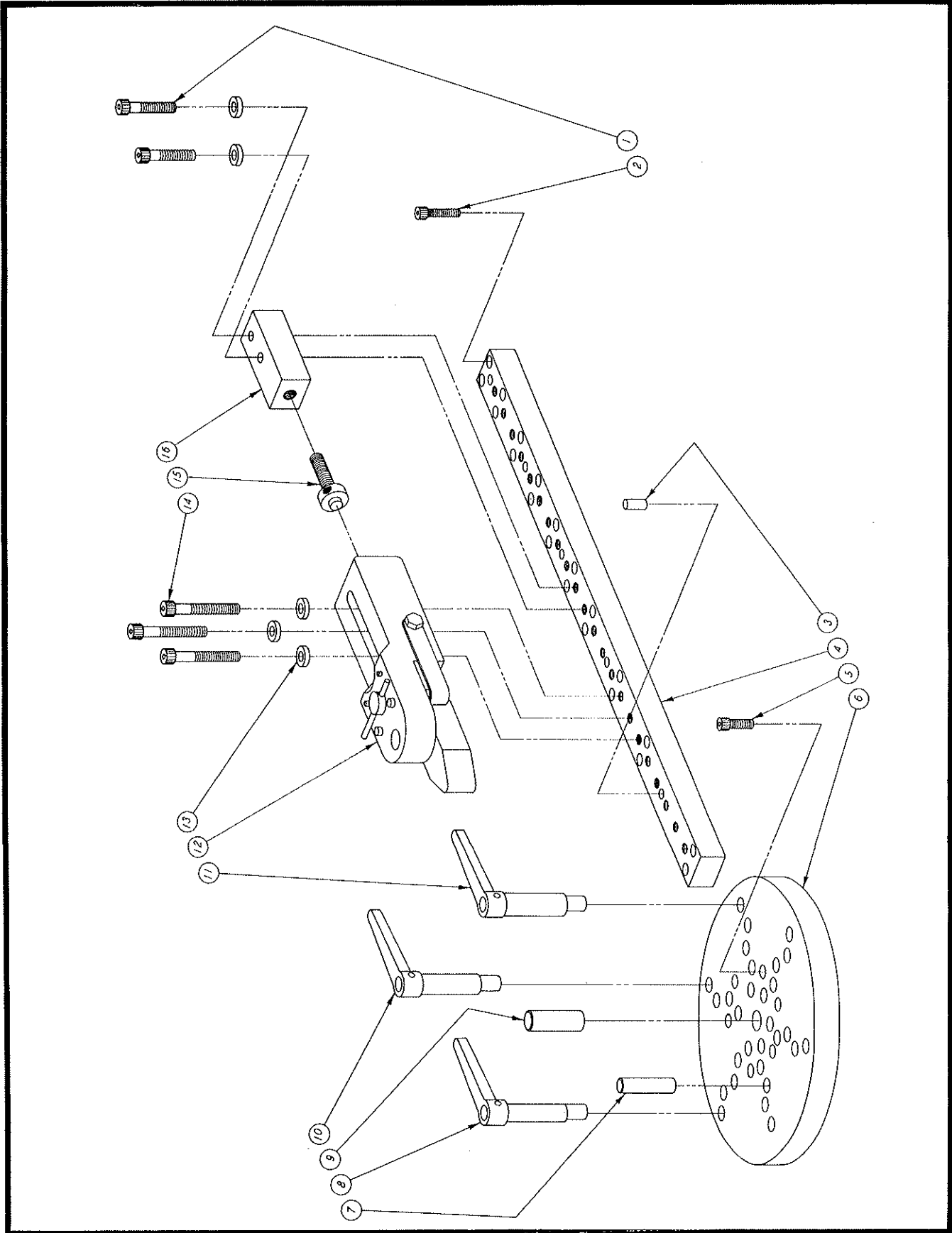
156-1113713

ITEM NO.	PART NUMBER	DESCRIPTION	QUANTITY USED ON ASSEMBLY	REFER TO REFER
1	126-1113008	HANDLE ROD.....	1	
2	1208107	PLASTIC KNOB.....	1	
3	4901101	FLAT WASHER 3/8.....	1	
4	1203169	DOWEL PIN 1/2 x 2.....	1	
5	1203113	DOWEL PIN 5/8 x 2.....	1	
6	156-1113021	HANDER WLDMT.....	1	
7	156-1113006	NOSE WLDMT.....	1	
8	156-1113-09	LINK.....	2	
9	156-1203010	PIN.....	1	
10	126-1113007	HANDLE BLOCK.....	1	



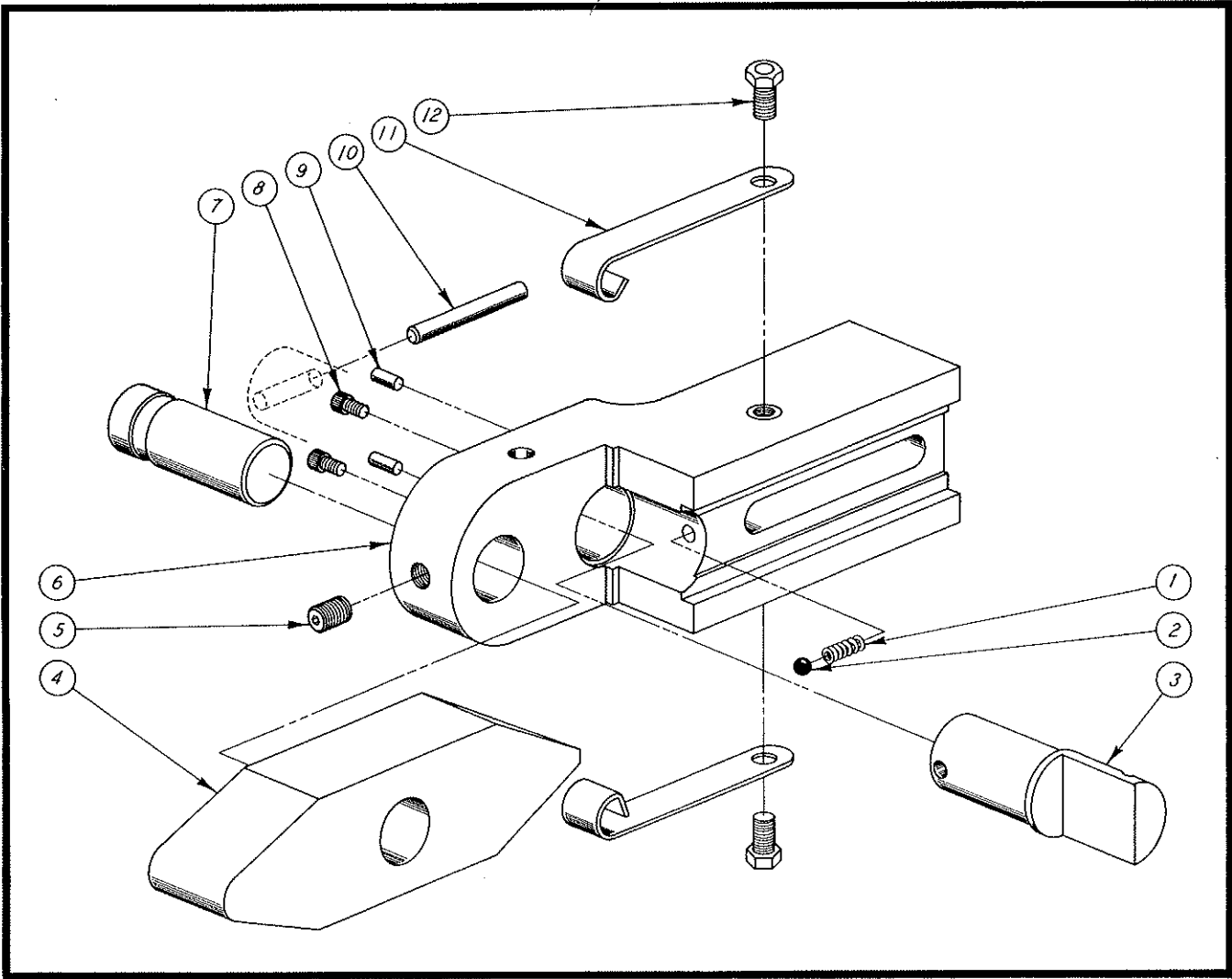
156-1113714

ITEM NO.	PART NUMBER	DESCRIPTION	QUANTITY USED ON ASSEMBLY	REFER TO PAGE
1	1203113	DOWEL PIN 5/8 x 2.....	1	
2	156-1113021	HANGER WLDMT.....	1	
3	156-1113715	ROLLER ASSY.....	1	
	156-1113016	ROLLER HOLDER.....	1	
	156-1113005	ROLLER.....	2	
	156-1203019	ROLLER PIN.....	2	
	6901002	DRIVE FTG 3/16.....	2	
4	156-1113009	LINK.....	2	
5	156-1203010	PIN.....	1	
6	156-1113007	HANDLE BLOCK.....	1	
7	1203169	DOWEL PIN.....	1	
8	4901101	FLAT WASHER.....	1	
9	1208107	PLASTIC KNOB.....	1	
10	126-1113008	HANDLE ROD.....	1	



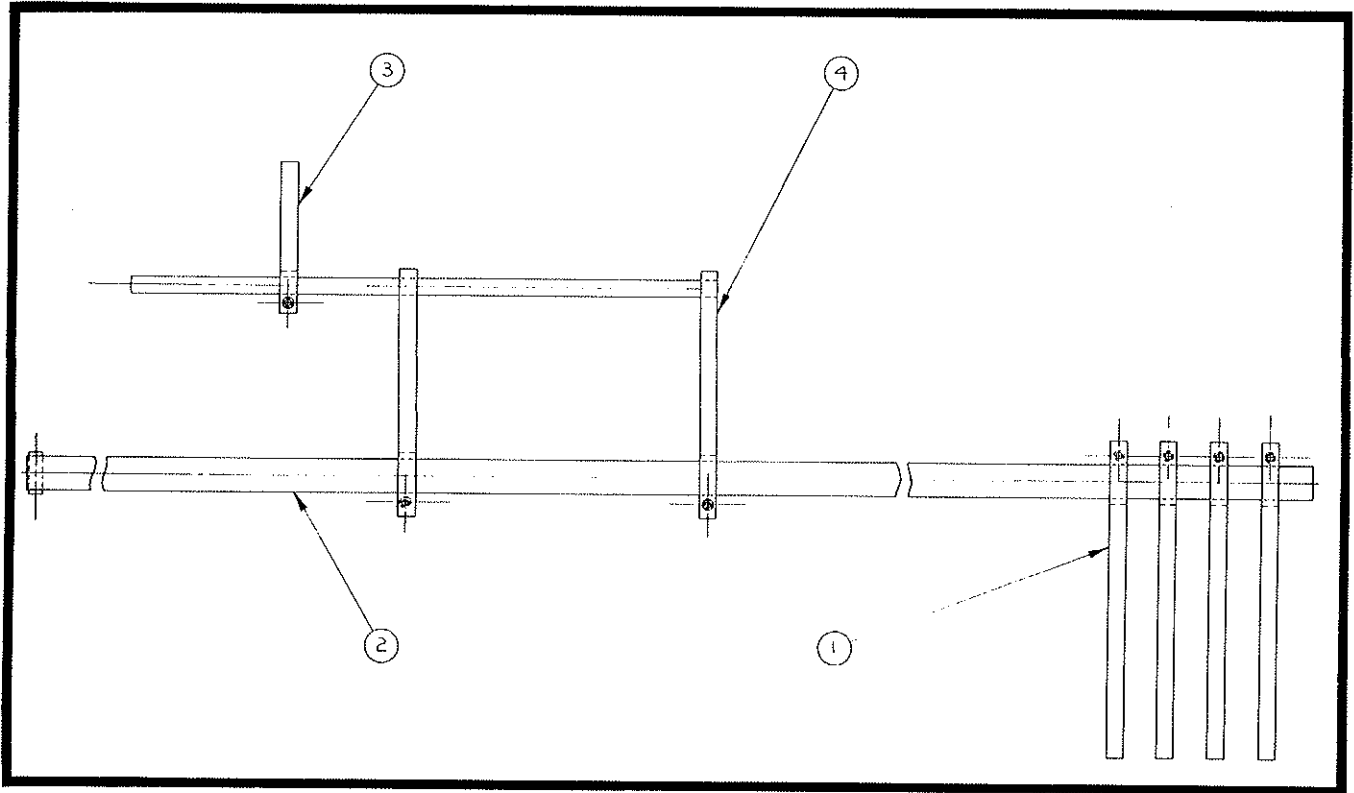
158-0000804

ITEM NO.	PART NUMBER	DESCRIPTION	QUANTITY USED ON ASSEMBLY	REFER TO PAGE
1	20A-0102C2102	SOC HD CAP SCR .....	2	
2	20A-0308C1304	SOC HD CAP SCR .....	16	
3	1203196	DOWEL PIN 1/2 x 1 .....	4	
4	158-1217033	NOSE HOLDER SLIDE .....	1	
5	20A-0716C1104	SOC HD CAP SCR .....	6	
6	158-1105011	MOUNTING PLATE .....	1	
7	158-1203027	PIN .....	1	
8	158-1113701	LOCKING PIN SMALL .....	1	
9	130-016RP	1/2 RADIUS PIN .....	1	
10	158-1113702	LOCKING PIN MEDIUM .....	1	
11	158-1113703	LOCKING PIN LARGE .....	1	
12	158-1217715	NOSE HOLDER ASSY .....	1	28
13	4901104	FLAT WASHER 1/2 .....	5	
14	20A-0102C3102	SOC HD CAP SCR .....	3	
15	158-1217017	NOSE HLDR SPT SCREW .....	1	
16	158-1217016	NOSE HOLDER SUPPORT .....	1	
17	150-6102701	WRENCH 5/16 HEX .....	1	
18	150-6102702	WRENCH 3/8 HEX .....	1	
19	150-6102703	T HANDLE 3/16 HEX .....	1	



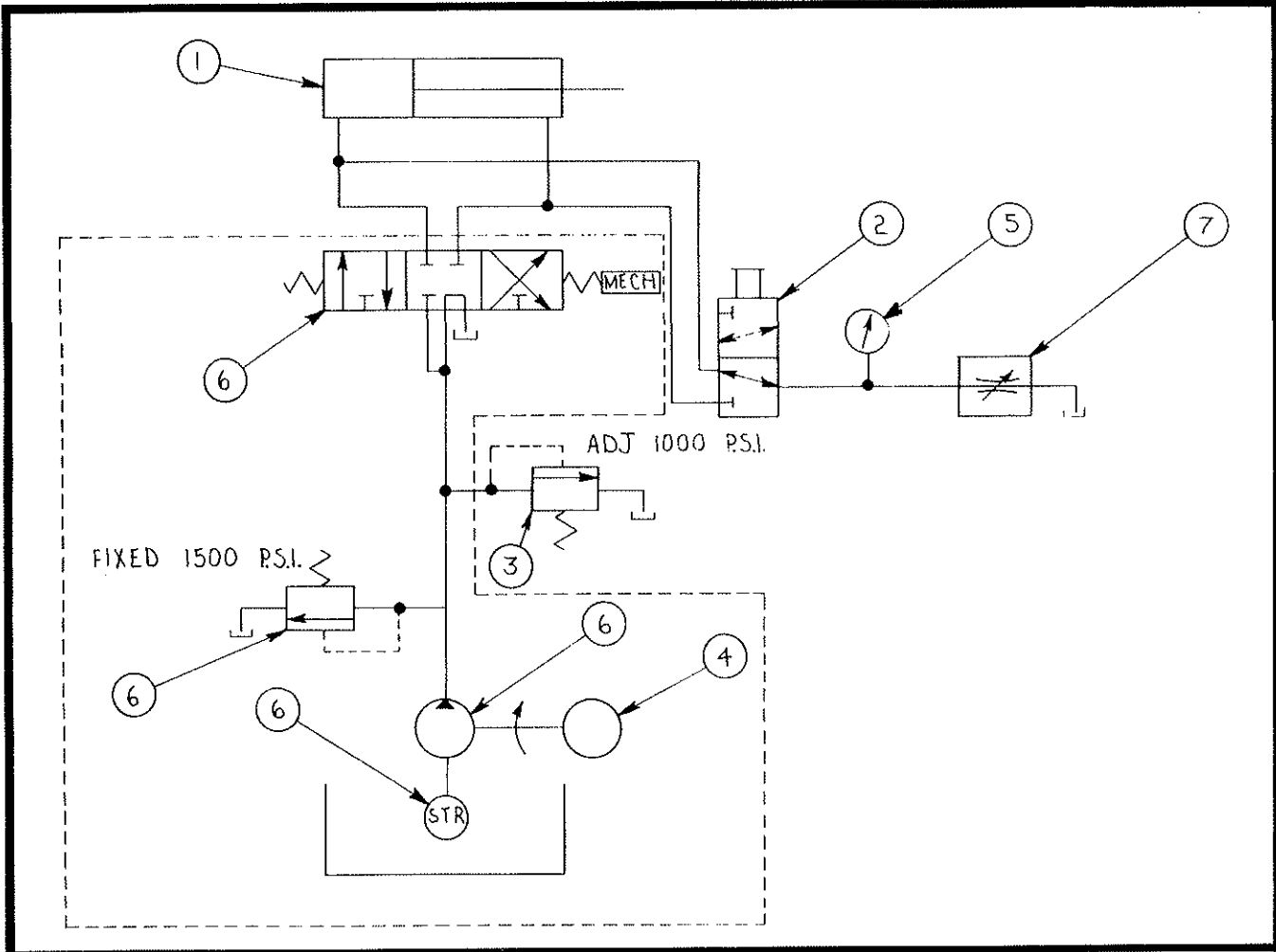
158-1217715

ITEM NO.	PART NUMBER	DESCRIPTION	QUANTITY USED ON ASSEMBLY	REFER TO PAGE
1	210-5102048	SPRING.....	1	
2	6999003	STEEL BALL 1/4.....	1	
3	158-1217024	TRIGGER.....	1	
4	158-1217013	FORMING NOSE.....	1	
5	23A-0308C0102	SOCKET SET SCR.....	1	
6	158-1217015	NOSE HOLDER.....	1	
7	158-1217012	NOSE PIN.....	1	
8	20A-0104C0104	SOC HD CAP SCR.....	2	
9	3103012	NEEDLE ROLLER.....	2	
10	1203114	SPR PIN 1/4 x 3.....	1	
11	158-5104014	NOSE SPRING.....	2	
12	21A-0516C0102	HEX HD CAP SCR.....	2	



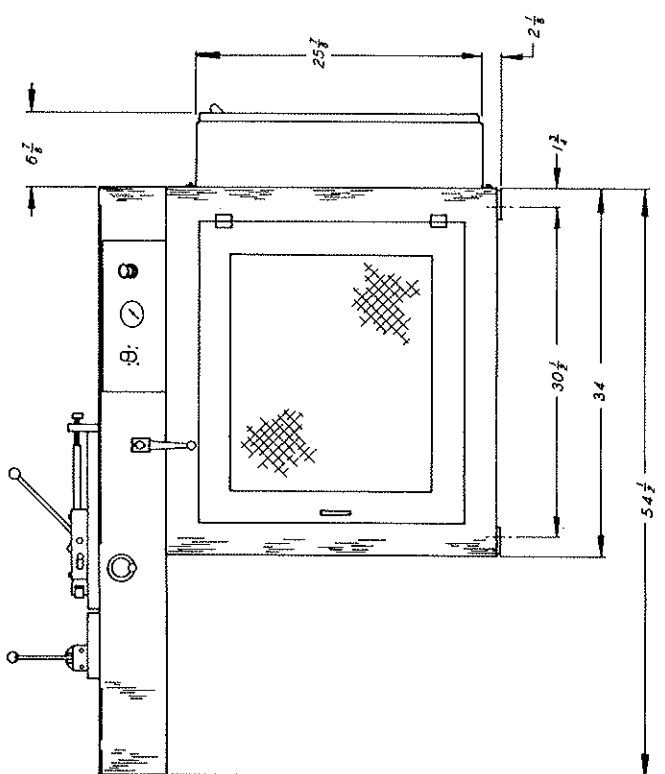
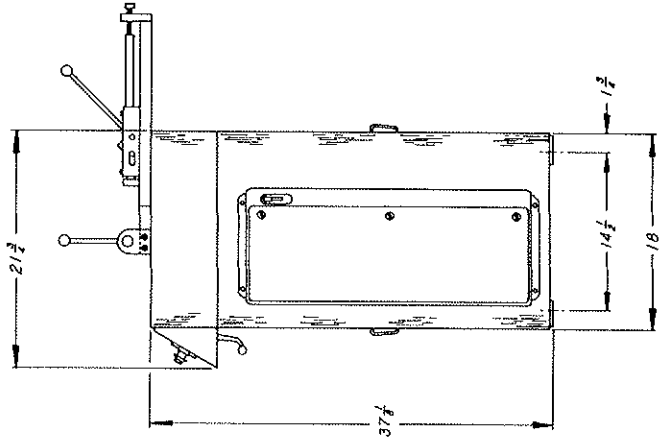
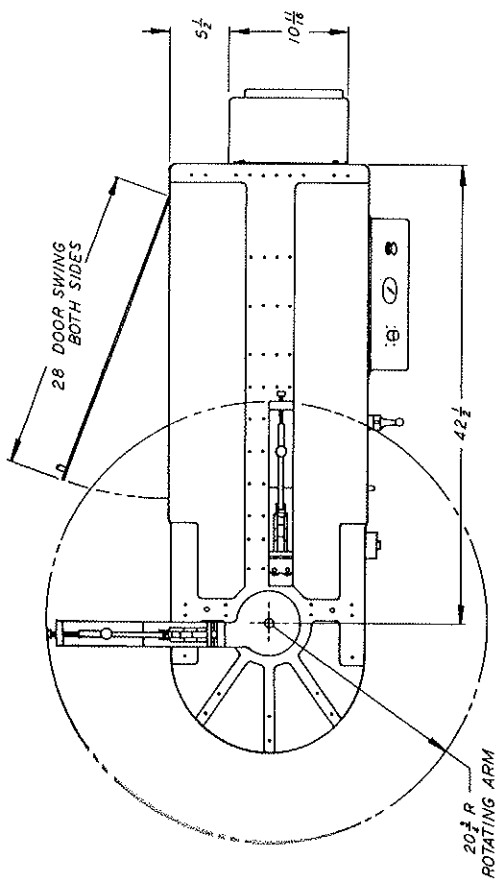
150-1420601

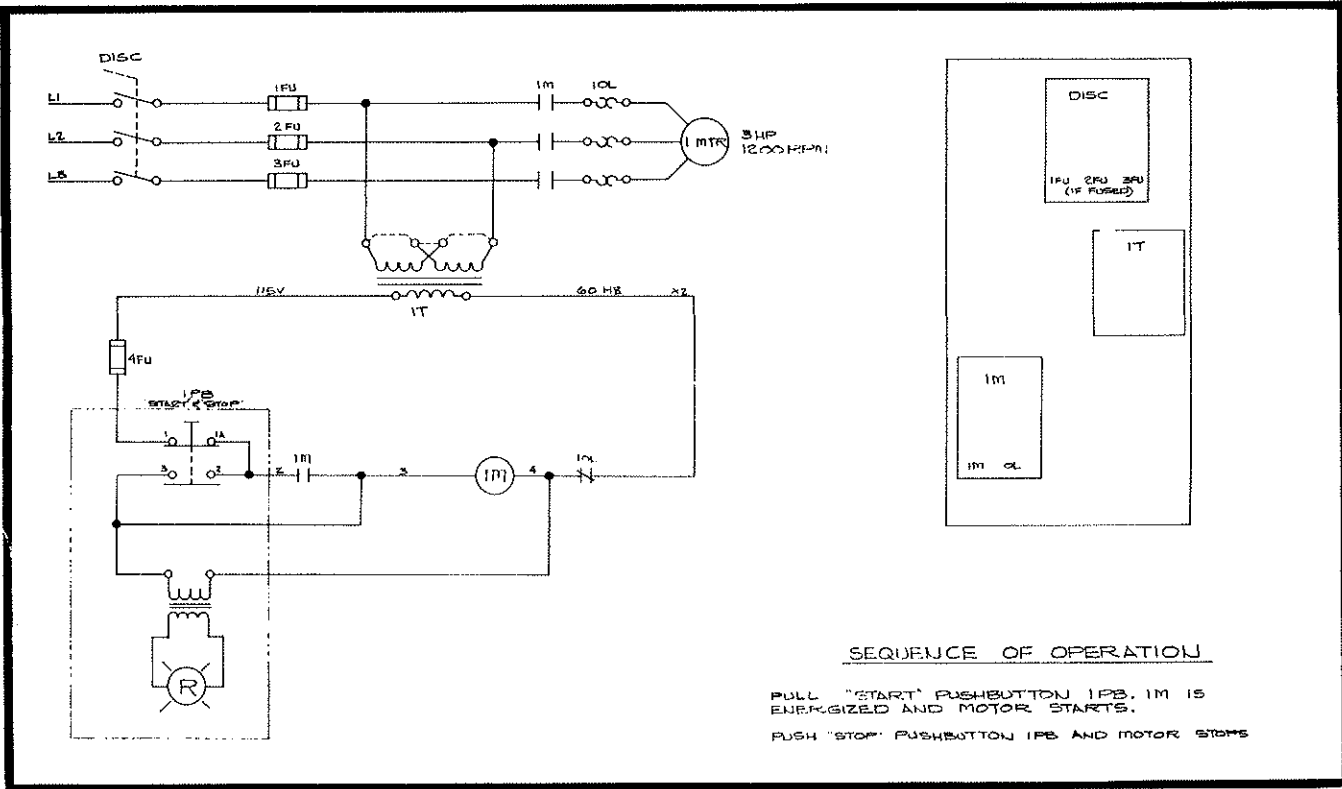
ITEM NO.	PART NUMBER	DESCRIPTION	QUANTITY USED ON ASSEMBLY	REFER TO PAGE
1	151-1420074	MAT. STOP ARM.....	4	
2	151-1420067	MAT. STOP ROD ASSY.....	1	
3	151-1420076	MAT. STOP BRACKET ARM.....	1	
4	151-1420075	MAT. STOP BRACKET ASSY.....	1	



150-9400001

ITEM NO.	PART NUMBER	DESCRIPTION	QUANTITY USED ON ASSEMBLY	REFER TO PAGE
1	150-3711001	CYLINDER.....	1	
2	3703103	SELECTOR VALVE.....	1	
3	3703102	RELIEF VALVE.....	1	
4	3301065	MOTOR, ELECT.....	1	
5	3708001	PRESSURE GAUGE.....	1	
6	3702001	POWER PACK.....	1	
7	3703116	FLOW CONTROL VALVE.....	1	





208,380 or 575V	1T	3311043	TRANS MICRON IMP #BX150MTRBW13-XK	1
	10L	3323017	HTR ELE H-26 (460)	3
	10L	3323010	HTR ELE H-32 (230)	3
230 or 460 V	1M	3304013	STARTER-FURNAS-14CF32AA	1
	1T	3311041	TRANS MICRON IMP B050BTZ13	1
	1&2 PB	3303040	PUSHBUTTON SWITCH-FURNAS-51JKPRLDUJU	1
	1MTR	3301065	MOTOR-FRAME 215, F1 ASSY	1
	SYM	PART NO.	DESCRIPTION	QTY.