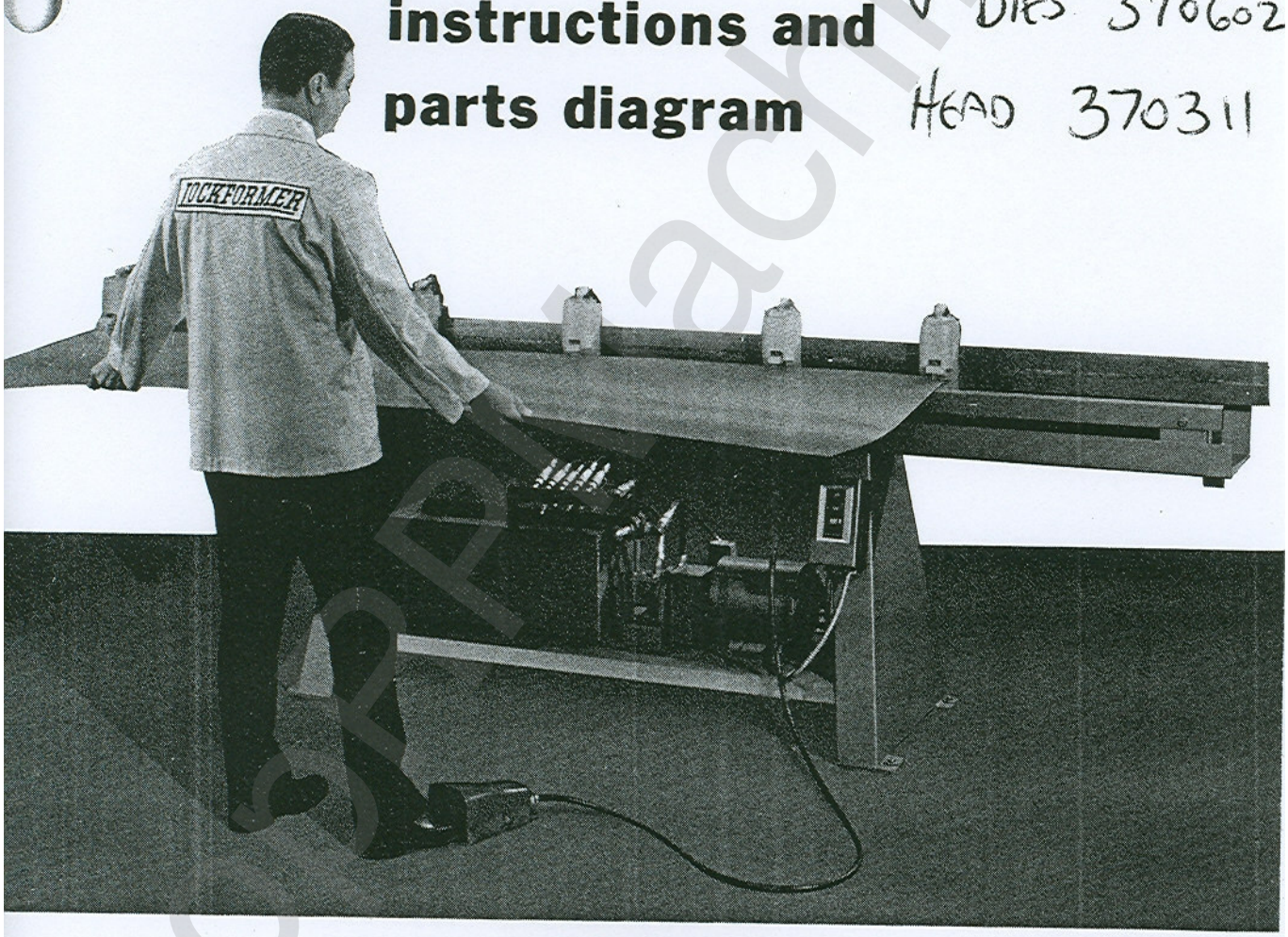
LOCKFORMER

Speednotch

instructions and parts diagram

V DIES 370602
HEAD 370311



THE LOCKFORMER COMPANY

711 W. OGDEN AVENUE • LISLE, ILLINOIS 60532

Lockformer Speednotch Installation and Operating Instructions...

INSTALLATION

PRELIMINARY: After uncrating, locate unit, with or without base skid, to area of operation. Unbind foot switch cord and cylinder hoses and remove gauge pin bag.

ELECTRICALS: Remove manual starter box cover and wire unit as per diagram illustrated on inside of cover. Normal electrics 220 volt, 60 cycle, 3 phase with overload protection in starter box. Motor furnished - 3 H.P. x 1800 RPM. IMPORTANT: When starting unit check to see whether motor and pump rotation conforms to direction of arrows on motor and pump body. CAUTION: Jog unit until proper rotation is achieved. Severe damage to pump will result if run backward to rotation shown.

OPERATING INSTRUCTIONS

CAPACITY: 16 gauge or lighter galvanized or cold rolled steel.

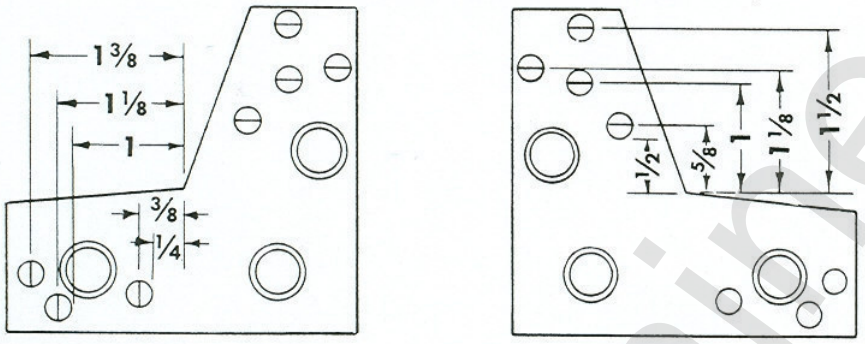
OPERATION: Loosen left hand notching head and slide to zero mark on Back Scale, clamp into position. Move Vee notching heads to required spacing by locating left side of heads to required measurement from zero on scale.

EXAMPLE: 4" x 12" DUCT in 22 gauge material - one piece construction.

PROCEDURE: (1) Left forming head set at zero. NOTE width of notch required for 5/16" Pittsburgh Lock is 1", therefore, a full pin is required in hole indicated as 1" on width of notch sketch. Using standard S Cleats and Drive Cleats would require a minimum depth of notch to be 1", therefore, a half pin is required in hole indicated as 1" on depth of notch sketch. (See Sketch No. 1)

NOTCH SET UP

○ FULL PIN ⊖ HALF PIN



LEFT **RIGHT**

GAUGE SETTINGS WIDTH OF NOTCH

GAUGE SETTINGS DEPTH OF NOTCH

SKETCH NO. 1

(2) Move first Vee notch head to either 4" or 12" on tape and secure.

(3) Move second Vee notch head to 16" and secure. (NOTE: 4" + 12" =16")

(4) Move third Vee notch head to 20" or 28" dependent on setting of first Vee notching head. (NOTE: 4 + 12 + 4 = 20 or 12 + 4 + 12 = 28")

(5) Move right hand notching head to required notch depth of 1/4" for right angle flange. NOTE: Place gauge pin into hole for gauging setup piece. Pin may be removed for easier gauging on similar size sheets. Place back gauge pin into proper hole 1" for depth of notch.

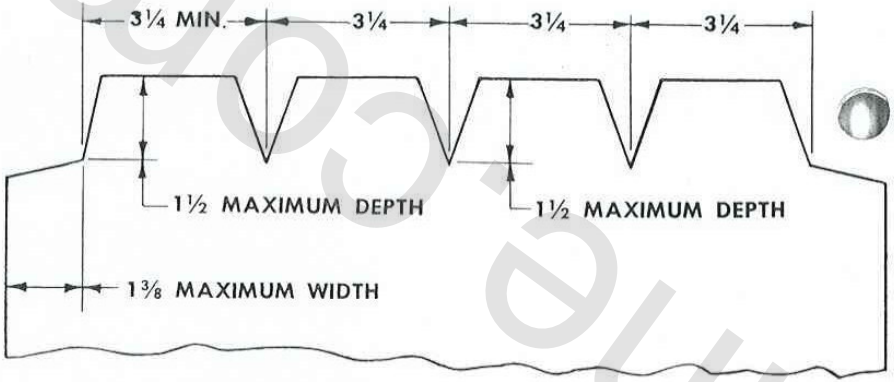
Place proper width of material 33-1/4"(for 22 gauge 4" x 12" one piece duct using 5/16" Pittsburgh Lock and 1/4" 90° Flange) onto gauge support table and square duct to gauge pins. Activate notching heads by depressing foot switch until notching is completed. Release foot switch and remove completely notched duct sheet.

CAUTION: Release foot switch immediately after cutting is completed. If foot switch is kept depressed oil pressure will be at maximum setting of relief valve and will cause unnecessary heating of oil and possible damage to pump.

Notching heads will notch the equivelant of 16 ga. material (.062), therefore, more than one thickness of lighter gauge materials can be notched in one operation, provided combined thickness does not exceed .062".

NOTE: When two piece duct construction is manufactured, the notching heads that are not required can be quickly deactivated by removing the notching head hose by drawing back on the quick disconnect coupling at the manifold. This makes heads not required inoperative.

NOTCHING DIAGRAM FOR TYPICAL SQUARE DUCT



NOTCHING HEADS

1—LEFT HAND 115° CORNER NOTCH
3—40° VEE NOTCH
1—RIGHT HAND 115° CORNER NOTCH

OIL: The oil used in the reservoir is a commercial hydraulic oil having a viscosity of 150 SSU at 100° F. On initial fill 7 U.S. gallons Socony Vacuum D.T.E. Light is delivered in the reservoir. An acceptable substitute for above hydraulic oil is Type A automatic transmission fluid, available at auto service stations. For proper maintenance of the hydraulic system, the oil should be kept clean and free of dirt or other foreign matter. The system should be changed after approximately one year's operation. This is accomplished by removing drain plug at bottom of reservoir. Replace and fill with clean filtered oil. A ruler inserted to bottom of reservoir will indicate 7" when proper oil level is reached.

DIE CARE AND MAINTENANCE: Punch and dies are manufactured of high carbon high chrome tool steel for maximum cutting service. When die cutting surfaces become worn it will be necessary to resharpen.

Lower dies are held in position by socket-head cap screws and may be easily removed. To remove punch, disconnect hose from manifold and remove head from back gauge bar by removing assembly parts #109 & #110, place unit in vise and remove lower bottom cap (#107) and spring #105. Place pin into assembly hole in piston (Part #102). Using a 15/16" socket and extension wrench remove 5/8 hexagon nut #127. Slide parts #126 lock washer, #104 guide washer and punch #116 from piston rod. NOTE: It may become necessary to push piston farther into cylinder body #100 in order to clear punch from the piston rod.

NOTE: When punch and dies are to be sharpened in the field, grind flat top surface of die and lower cutting surface of punch. You will note punch has rake angle. This rake angle must be maintained.

A LIGHT OIL SHOULD BE APPLIED OCCASIONALLY TO CUTTING SURFACE OF PUNCH AND DIE TO PROLONG DIE LIFE.

REASSEMBLE AS FOLLOWS: Place punch, backing washer, lock washer and nut into assembly and tighten securely with pin in piston assembly hole to keep piston from turning when tightening. Pull piston to lowest position and assemble die to cylinder body, nesting die to punch for proper alignment and clearance.

NOTE: A slight clearance, not to exceed 0.003", should be set between punch and die on VEE-NOTCH by placing a 0.003" to 0.0025" spacer shim on both sides of cutting edge of dies. Tighten the socket-head cap screw #129. For CORNER NOTCH punch and dies, the clearance should be 0.005".

(FOLLOW SAME PROCEDURE AS ABOVE FOR REASSEMBLY.)

After the above has been completed, replace spring and lower bottom cap, tighten and reassemble to machine.

PARTS LIST AND DESCRIPTION OF HEAD AND DIE ASSEMBLY

PLEASE USE **NEW** NUMBER WHEN ORDERING PARTS

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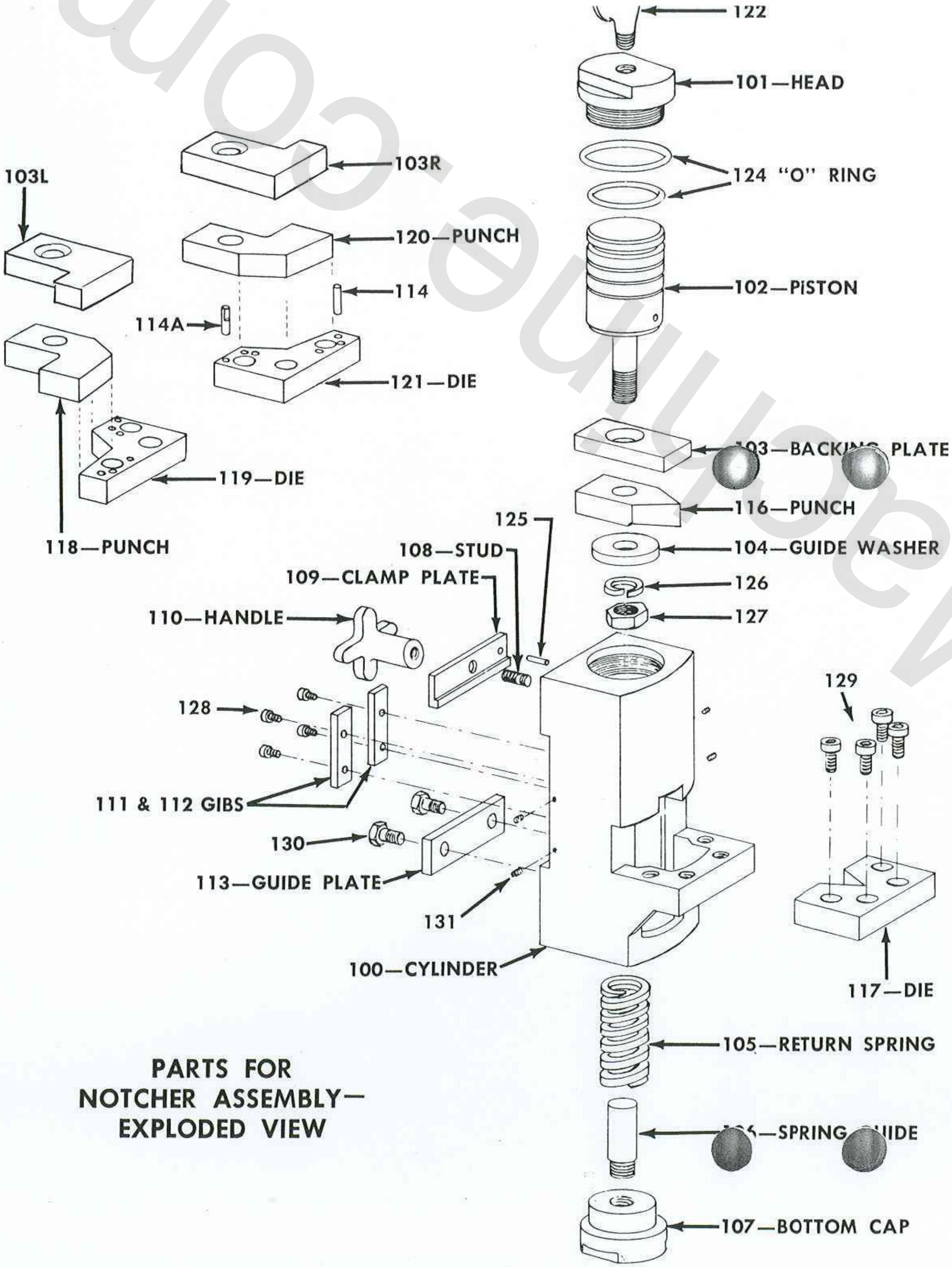
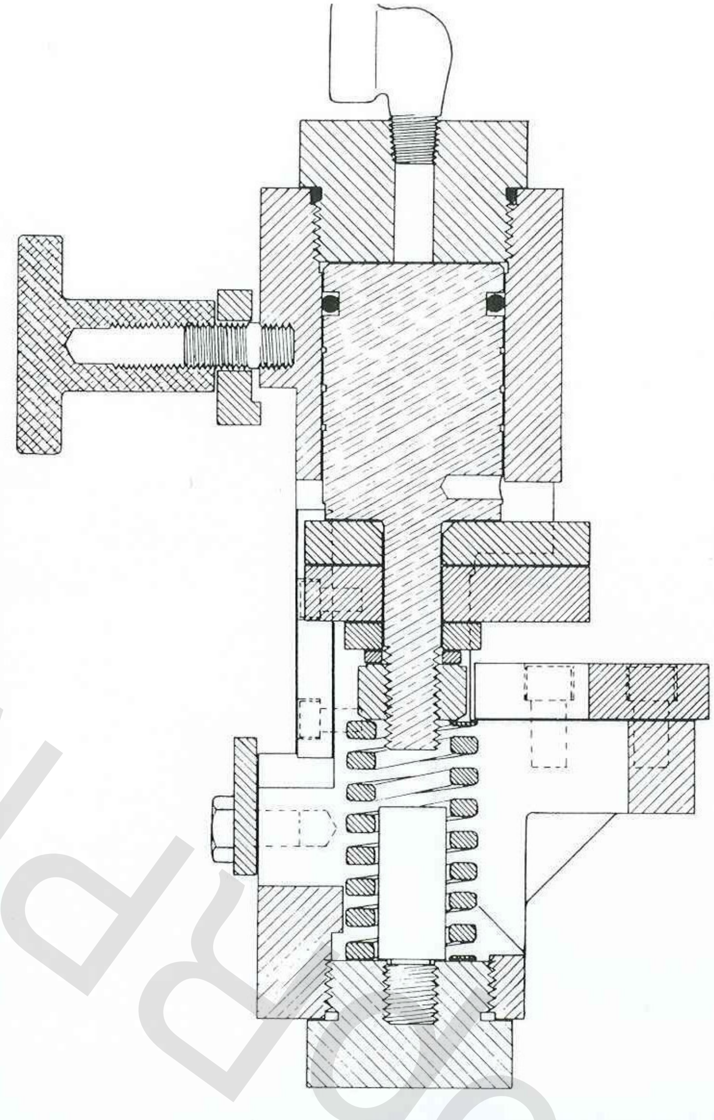
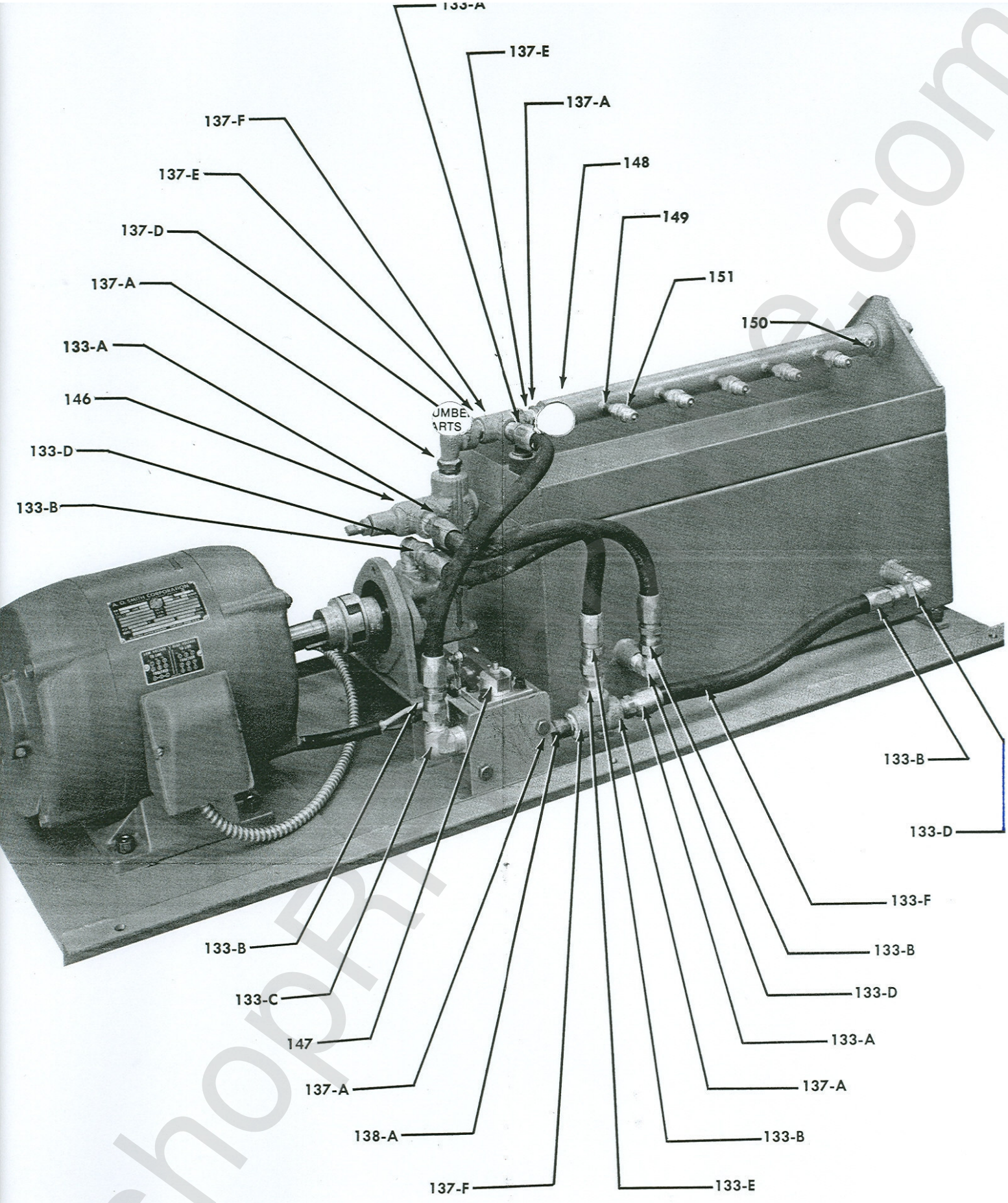
New Part No.	Old Part No.	Description	Pieces Per Unit	New Part No.	Old Part No.	Description	Pieces Per Unit
40452	100	Cylinder	5	22303	118	Punch Left	1
15127	101	Head	5	22304	119	Die Left	1
15121	102	Piston	5	22305	120	Punch Right	1
21750	103	Bkg. Plate	3	22306	121	Die Right	1
21751	103-L	Bkg. Plate Lft.	1	65176	122	1/4 Street Elbow	5
21752	103-R	Bkg. Plate Rt.	1	65645	124	O Rg.	10
14626	104	Guide Washer	5	62714	125	3/16 x 1 Roll Pin	5
71002	105	Comp. Spring	5	62365	126	5/8 Lock Washer	5
14516	106	Spring Guide	5	61203	127	5/8-11 HN Fin. 15/16	5
15130	107	Bottom Cap	5	60301	128	1/4-28 x 3/8 SHCS	20
14845	108	Stud	5	60401	129	3/8-16 x 3/4 SHCS	18
40490	109	Cyl. Clamp 8849	5	60001	130	104-28 x 1/2 HHCS	10
40460	110	Handle 88460	5	60609	131	1/4-28 x 5/16 SSS	20
21577	111	Gib Left	5				
21576	112	Gib Right	5				
21509	113	Guide Plate	5				

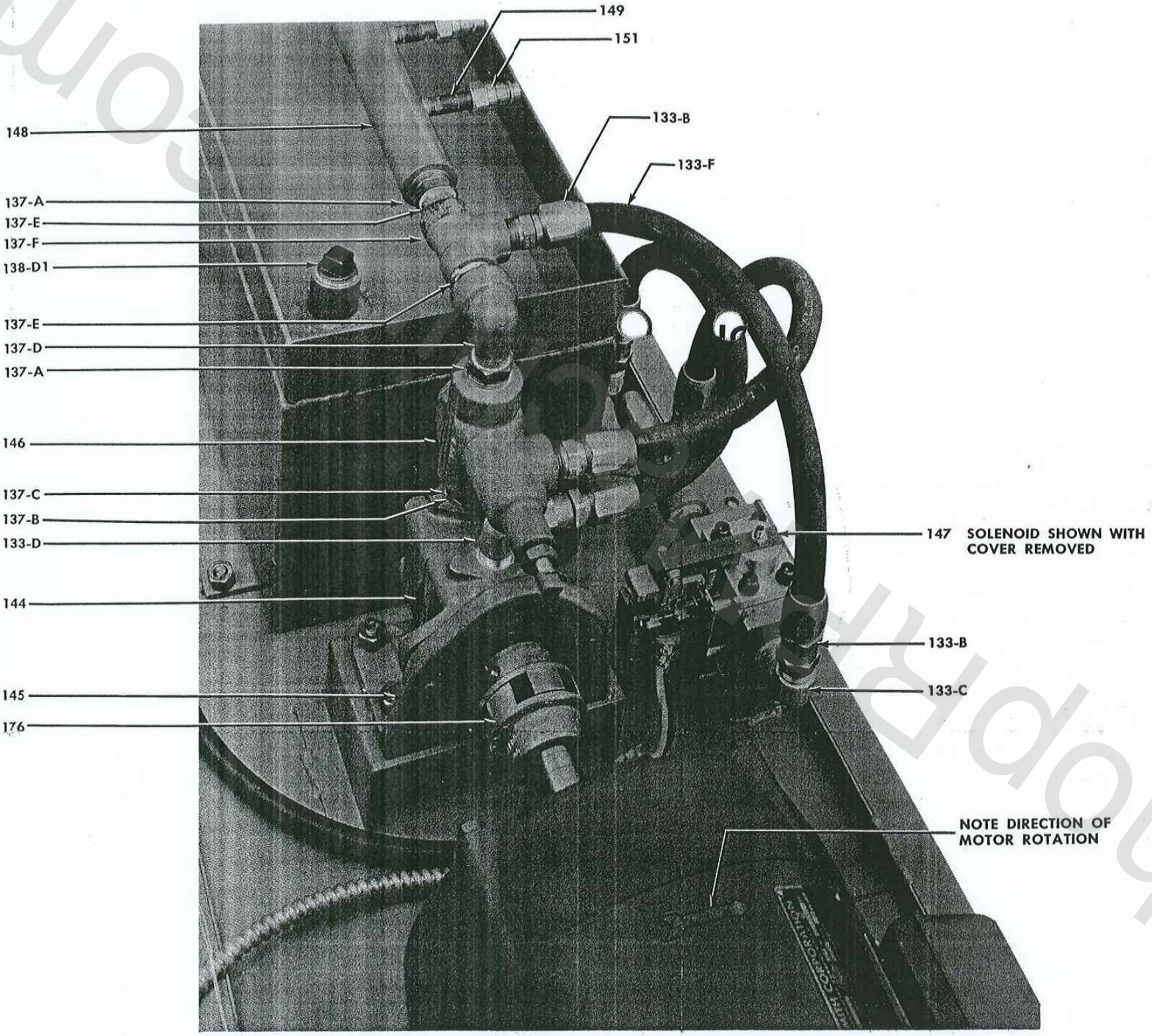


PARTS FOR NOTCHER ASSEMBLY— EXPLODED VIEW



NOTCHER ASSEMBLY— SECTIONAL VIEW


133-A
137-E
137-A
137-F
148
137-E
149
137-D
151
137-A
150
133-A
146
133-D
133-B
133-B
133-D
133-F
133-B
133-D
133-A
137-A
133-B
133-E
137-F
138-A
137-A
147
133-C
133-B


149
151
148
133-B
133-F
137-A
137-E
137-F
138-D1
137-E
137-D
137-A
146
137-C
137-B
133-D
144
145
176
147 SOLENOID SHOWN WITH COVER REMOVED
133-B
133-C
NOTE DIRECTION OF MOTOR ROTATION

PARTS LIST AND DESCRIPTI

PLEASE USE **NEW** NUMBER
WHEN ORDERING PARTS

New Part No.	Old Part No.	Description	Pieces Per Unit
66603	133	Start Adaptor	1
66622	133-D	90 El. Adaptor	4
65716	134	Hose	2
65715	135	Hose	1
65714	136	Hose	1
65122	137-A	3/4 x 1/2 Hex. Bushing	1
65028	137-B1	3/8 x 3-3/4 Npl.	1
65112	137-C1	1/2 x 3/8 Hex. Bushing	1
65181	137-D	1/2 Street Elbow	1
65041	137-E	1/2 Close Hvy. Npl.	3
45010	138-D1	Vent Pipe Plug	1
80070	139	3 HP 3 60 18 182	1
80102	140	Motor Control	1
80503	140-A	12-2 x 8 Cord	1
80502	140-B	Cord 12-2 37	1
80328	141	N28 Heater Element	2
80421	142	BX Cable 12-3 44	1
80483	142-A	BX Connector	5
80485	142-B	BX Elbow Connector	1
80208	143	Foot Switch	1
65404	144	Hyd. Pump Rt. M[illegible]	1
65500	146-1	Rlf. Valve	1
65535	147-AB	Slnd. Valve	1
65532	147-BV	Valve Sub Plate	1
15167	148	Manifold	1

PLEASE USE **NEW** NUMBER
WHEN ORDERING PARTS

New Part No.	Old Part No.	Description	Pieces Per Unit
	149	See Box	
65212	150	1/4 Npt. SHPP	1
	151	See Box	
65717	152	Hose	5
	153-A	See Box	
	153-B	See Box	
54408	155	Tank Weldment	1
60650	155-G	5/16-18 x 5/16 SSS	1
50024	156	Stand Assembly	1
	156-E	See Box	
56534	156-G	Wk. Guide Assembly	1
62029	159	3/8 x 1/16 Washer	34
60097	161-B	3/8-16 x 1-3/4 HHCS	4
60094	162	3/8-16 x 1/4 HHCS	16
61120	163	3/8-16 HN Hvy. SF	34
62363	164	3/8 Lock Washer Med.	34
60576	165	10-24 x 1/2 RHMS	3
62360	167	3/16 Lock Washer	3
85158	170	Speednotch Name Plate	1
60951	171	3/8 x 2-1/2 Lag Screw	
62081	171-A	5/8 x 3/16 Washer	
60795	172	4 x 3/16 Drive Screw TP-U	4
70802	176	G300 Coupling	1
65220	178	1/2 Npt. SHPP	2
14516		Spring Guide	5

N LOCKFORMER SPEEDNOTCH

PLEASE USE **NEW** NUMBER
WHEN ORDERING PARTS

New Part No.	Old Part No.	Description	Pieces Per Unit
15127		Cyl. Head	5
15130		Bottom Cap	5
40452		Cyl. Body 88450	5
55409		Hyd. Base	1
60091		3/8-16 x 1 HHCS	14
60300		1/4-20 x 3/8 SHCS	5
60303		1/4-20 x 3/4 SHCS	60
60306		1/4-20 x 1-1/2 SHCS	4
60575		10-24 x 3/8 RHMS	4
60797		4 x 1/4 Drive Screw TP-U	4
61040		10-24 HN	7
65275		1/2 x 1/2 x 1/2 Tee	2
70822		Quick Disconnect Coupling	5
80554		Wire Nut	1
80601		Rg. Tng. Terminal	5
80607		Insulating Cap	2
80608		Wire Joint	2
85164		Lockformer Logo	1

16 GAUGE SPEEDNOTCH SERIAL NO. VG 2042 & FOLLOWING

65001	1/4 x 1 Hvy. Npl.	5
65303	1/4 x Npt. Swivel Adap.	5
65572	Shut Off Valve	5

16 GAUGE SPEEDNOTCH SERIAL NO. VG 2041 & BELOW

65003	149	1/4 x 2 Hvy. Npl.	5
70820	151	Quick Disconnect	5
70790	153A	Sash Chain	5
65751	153B	Hose Clamp	10
56533	156E	Punch Gauge Bar Assy.	1

Manufactured by
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