



INSTRUCTIONS AND PARTS LIST FOR Model 5-200 Elec-Draulic I Presses

WARNING LABELS



To the left is the safety Alert symbol. When you see these safety alert symbols on your press, be alert to the potential for personal injury.

Follow recommended precautions and safe operating practices.

SETTING UP THE PRESS FOR OPERATION

For shipping convenience some of the parts are not assembled. Assemble these parts in the following order:

1. Bolt the base angles to uprights using four bolts and nuts, which are provided. Make sure base angles are against stops on uprights.
NOTE: The press should set on a level floor with the base angles touching the floor at all points. Use shims where necessary.
2. Motor starter box is mounted on left upright. Have electrician connect power to motor starter. Pump can rotate in either direction.
3. **Oil Requirements:** Fill reservoir thru street elbow at back of press with Mobil DTE oil No. 24 or equivalent. **NOTE: Oil level may be checked (with ram up) by removing the 1/8" NPT pipe plug on the right side of reservoir near the front. Replace plug before operating the press.**

Model 5-200 uses 20 quarts

4. Prime pump by removing the plug in the top of the pump opposite the intake line and allow the oil levels in the reservoir and pump to equalize. Fill pump with additional oil (if required), replace plug making sure seal is tight, and start motor.
5. Attach nose piece to ram by inserting shank into ram and tightening the set screw.



CAUTION! Place the hoist crank on the lift drum shaft. Turn the hoist crank to relieve the pressure on the table pins. Keeping tension on the hoist crank, remove the table pins one at a time. After removing the table pins, turn the crank running the table channels from top to bottom. Check to make sure the cable is tracking correctly. The cable should be on each of the two upper pulleys and should track back and forth on the cable drum. Always place table pins under the table channels before releasing the hoist crank when positioning the table channels for cable tracking, servicing, or set-up for desired work opening. If a tracking problem exists, contact the Dake factory for instructions. Be sure all table pins are fully inserted in place before applying pressure. Always remove or release pressure on the cable before pressure is applied.

SAFEGUARDING THE POINT OF OPERATION

ANSI B11.2 – Hydraulic Power Presses Safety Requirements for Construction, Care and Use

It is important that Dake press users have a clear understanding of their responsibility involving the care and use of their Dake hydraulic press, including point-of-operation safe guards. Dake strongly recommends that Dake press users obtain a copy of the current American National Standard Institute (ANSI) B11.2 standard, for a more complete understanding of their responsibilities.

ANSI B11.2 states the following, relative to point of operation safeguarding:

“Normally, only the employer (press user) can determine the requirements of the press productions system components, including the dies and methods for feeding. There fore, the employer is ultimately responsible to designate and provide the point-of-operation safeguarding system”.

The standard also discusses additional responsibilities of the employer. Some of the key responsibilities are:

- The employer is responsible for the safety, use and care of the hydraulic power press production system.
- The employer is responsible to consider the sources of hazards for all tacks to be implemented on the hydraulic power press production system.
- The employer is required to eliminate or control identified hazards in the scope of their work activity.
- The employer is responsible for the training of personnel, caring for, inspecting, maintaining and operating hydraulic press production systems to ensure their competence.
- The employer is responsible to provide and ensure that point-of-operation safeguarding is used, checked, maintained and where applicable, adjusted on ever production operation performed on a press production system.

A complete and current copy of the ANSI B11.2 standard can be obtained by contacting the following:

American National Standards Institute
1430 Broadway
New York, NY 10018

AMT – The Association for Manufacturing Technology
7901 Westpark Drive
McLean, VA 22102

OPERATIONS



WARNING: DO NOT OVERSTROKE THE RAM. Overstroking will cause premature seal failure.
Model 5-200 has a 16-inch stroke.

The press has been completely tested at the factory and after setting up according to instructions above, the press is ready for operation. However, it is necessary for the operator to acquaint themselves with the controls.

1. Three screws (item 100) are used to lock the workhead in the desired position along head channels.

2. The handcrank (item 19) is provided to raise or lower the table channels to the proper work height. When desired height is obtained insert the table pins. Models 5-025 and 5-050 use 2 pins on each side (4 total) and Models 5-075 and 5-150 use 3 pins on each side (6 total).



CAUTION: *Be sure ALL table pins are in place and in as far as they can go before pressure is applied. Be sure to slack off on the cable before pressure is applied.*

3. The handle on the left side of the workhead (item 67) opens and closes the ball valve, which releases pressure on the ram. This valve should be kept firmly closed and open only when it is desired to return the ram to its up position.
4. The two table plates (items 6) and two V-blocks (item 7) are used for supporting the work in process.
5. The control handle (items 86 & 91) on the right side of the panel regulates the speed of ram travel. The handle will return to the off position when released. It is not necessary to stop motor after each operation.
6. The relief valve (item 79) has been set at factory to open at maximum tonnage of press. The valve can be adjusted by removing hex nut located on top of the valve block at the right front of reservoir and turning the adjusting screw to the left for a lower setting.



WARNING: Never exceed rated tonnage of press

MAINTENANCE



CAUTION: *When disconnecting any parts of this machine be extremely careful that all parts are clean to prevent entrance of dirt in the hydraulic system.*

1. If press loses pressure:
 - a. Check all tubing joints for leaks and tighten the tube nuts.
 - b. Leakage past release valve (Item 67). Drain the reservoir, and remove packing nut (Item 75), valve rod (Item No 64), and ball valve (Item No 63). Clean out valve seat and reseat ball valve using brass rod as a drift striking sharply with a hammer. Reassemble valve rod, packing and packing nut. Refill reservoir with appropriate oil amount.
 - c. Leakage past eductor inlet check ball (Item No. 60). Drain reservoir, remove large pipe plug (Item No. 62), valve seat (Item No. 61), and check ball (Item No. 60). Clean and inspect seat. Reseat ball on seat or replace seat with a new one if necessary. Reassemble with ball above the seat tightening plugs securely.
 - d. Worn cup leather (Serial No < 192522) or T-ring seal (Serial No > 192523). If none of the previous conditions seem to have been the cause of the trouble, the cup leather or T-ring seal may be worn out or damaged. To inspect this it is necessary to drain the oil and remove the workhead from the press frame. Remove tube assembly (Item No. 123). Set 2 4x4 blocks on the table then raise table channels with the block up to the bottom of the reservoir applying pressure to the reservoir. Remove roller brackets from the reservoir and lower workhead using the table.



WARNING: *Be sure that stroke indicator rod support (item 52) is installed in the side of the piston. If not, Insert ½"-13 stud or capscrew in tapped hole in piston. This will hold the piston down under spring pressure.* Next remove nuts from cylinder flange and lift cylinder off piston. The piston leather or T-ring seal can now be inspected and replaced if necessary. Press may be reassembled in reverse order being careful not to damage the lip of the leather cup or T-ring seal as it enters the cylinder.

2. If press will not develop rated tonnage.
 - a. Dirt under valve balls. Refer to MAINTENANCE 1 – c above.
 - b. Worn cup leather. Refer to MAINTENANCE 1 – d above.
 - c. Relief valve not set properly. This valve is located on the top side near the right end of the control block at the front of the reservoir. The valve is set at the factory to bypass oil from the pump back to the reservoir when the press reaches its rated capacity. The load on the spring (Item 75), which governs the pressure at which the valve will bypass oil, is adjusted by turning

the screw (Item 79) in to increase pressure or out to decrease pressure. Replace seal (Item 74) and cap nut (Item 78). **NOTE: We advise that the relief valve not be tampered with after it is set at the capacity of the press.**

3. If nothing happens when press is operated.
 - a. If motor does not run, the electrical circuit should be investigated.
 - b. Release valve open. Be sure to have release valve firmly closed when using press.
 - c. If the ram will come down only a fraction of its rated stroke, check the oil level in the reservoir with the ram at the top of its stroke. It should be visible in the sight window at the side of the reservoir.
 - d. Eductor nozzle plugged. If motor labors and ram does not move when pump control knob is turned, the orifice in the eductor nozzle (item 73) may be plugged. Drain reservoir, remove tube assembly (Item 123), eductor bushing (item 70), eductor body (item 72), and eductor nozzle (Item 73). Clean out orifice with a 1/32" drill. Replace parts being sure not to install item 72 backwards. See parts drawing. Check O-ring and back-up washer (items 71A & 71B) to be sure it has not been damaged.
4. If press is operating slow.
 - a. Improper oil. It is essential that the recommended oil (Mobil DTE 24 or equivalent) be used. Heavier oils cause a marked reduction in the ram speed. **NOTE: DO NOT USE HYDRAULIC JACK OIL!**
 - b. Release valve not closed properly. Release valve must be firmly closed when using the press.
 - c. The seal on the piston rod for the 50-101 pump is worn. A worn seal will pull air into the pump causing the pump to slowly lose its prime. To test, place grease around the control rod where it goes in and out of the seal (Item 129). Then replace seal part number 26573.
 - d. The piston rod for the 50-101 pump is bent or rusted. Contact factory for rebuilding your pump.



CAUTION: Adjustments to pump are not necessary and the pump should not be tampered with because expensive repairs may result.



WARNING! High pressure fluid is present in operational hydraulic systems. Fluids under high pressure are dangerous and can cause serious injury or death. Do not make modifications, repairs or adjustments to any hydraulic system unless you are competent or working under competent supervision. If in doubt, consult a qualified technician or engineer.

WARNING LABELS



To the left is the safety Alert symbol. When you see these safety alert symbols on your press, be alert to the potential for personal injury.

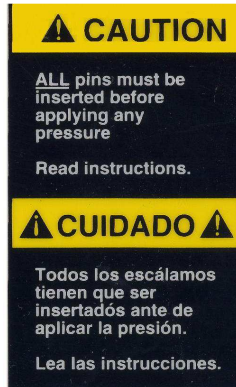
Follow recommended precautions and safe operating practices.

Carefully read all safety messages in these instructions and on your press safety signs.

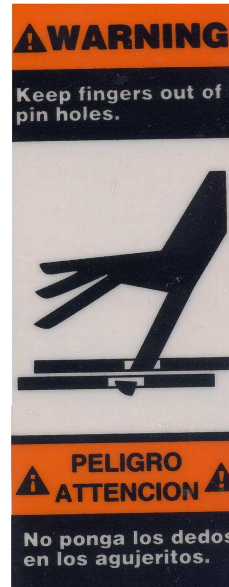
Keep safety labels in good condition. Replace missing or damaged safety labels. **This machine is intended to be operated by one person.** This person should be conscious of the press ram movement not only for himself but also for persons in the immediate area of the machine.



Label 300168



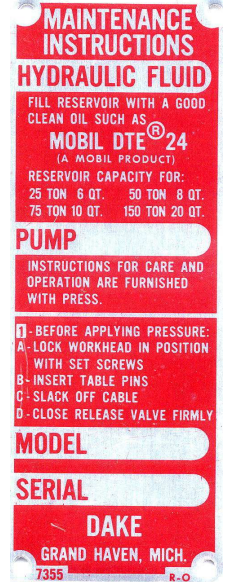
Label 84487



Label 84399

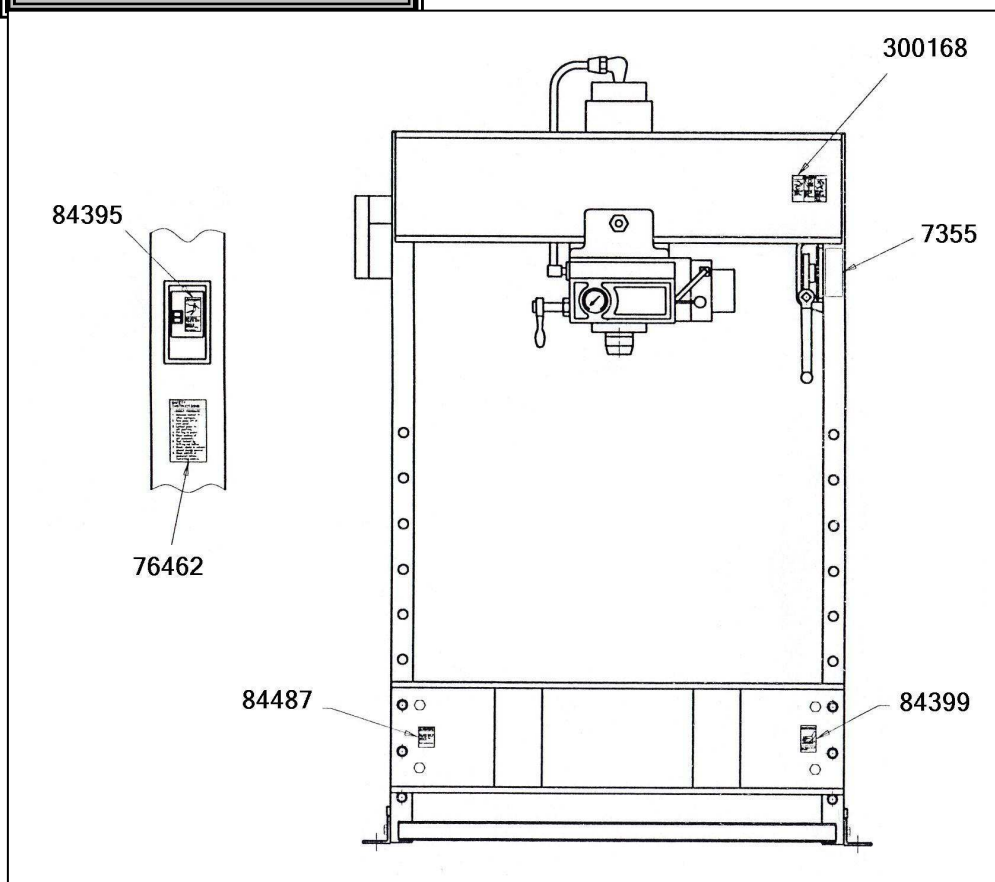


Label 84395



Label 7355

Label Placement View



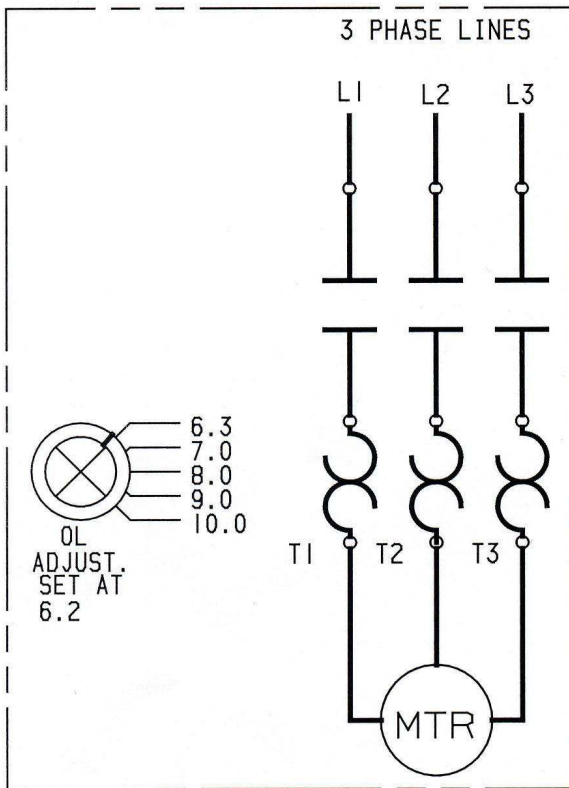
SAFETY INSTRUCTIONS

LOCKOUT PROCEDURE

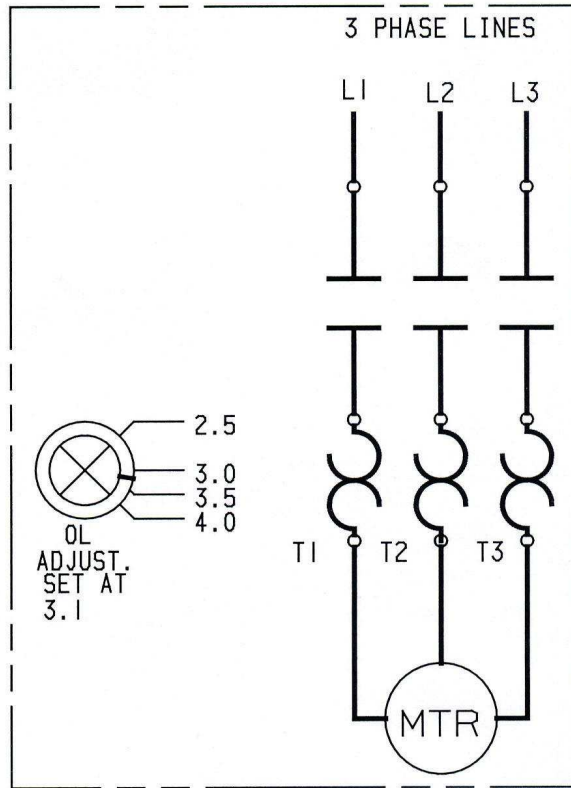
1. Announce lockout to other employees.
2. Turn power off at main panel.
3. Lockout power in off position.
4. Put key in pocket.
5. Clear machine of all personnel.
6. Test lockout by hitting run button.
7. Block, chain or release stored energy sources.
8. Clear machine of personnel before restarting machine.

Label 76462

Electrical Diagram

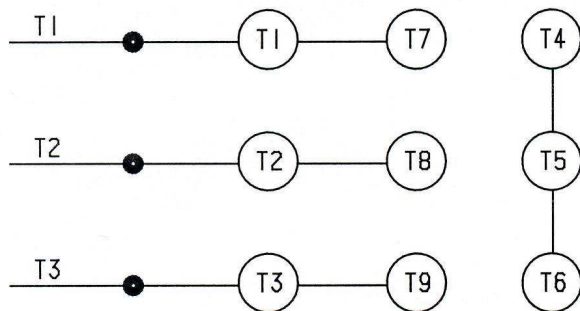


230 VOLTS
FOR 2 HP MOTOR DPN IS 75675
FOR 3 HP MOTOR DPN IS 75675

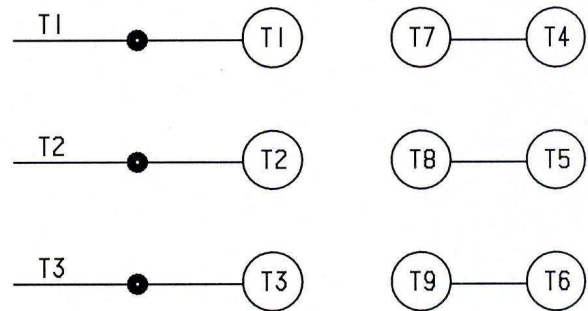


460 VOLTS
FOR 2 HP MOTOR DPN IS 75674
FOR 3 HP MOTOR DPN IS 76846

SET STARTER OVERLOAD SETTING TO MATCH THE MOTOR NAMEPLATE VALUE FOR THE MOTOR THAT IS BEING USED. DRAWING SHOWS VALUES FOR 2 HP MOTOR.



230V MOTOR CONNECTION



460V MOTOR CONNECTION

FOR WORKHEAD DETAIL
SEE FIGURE 2

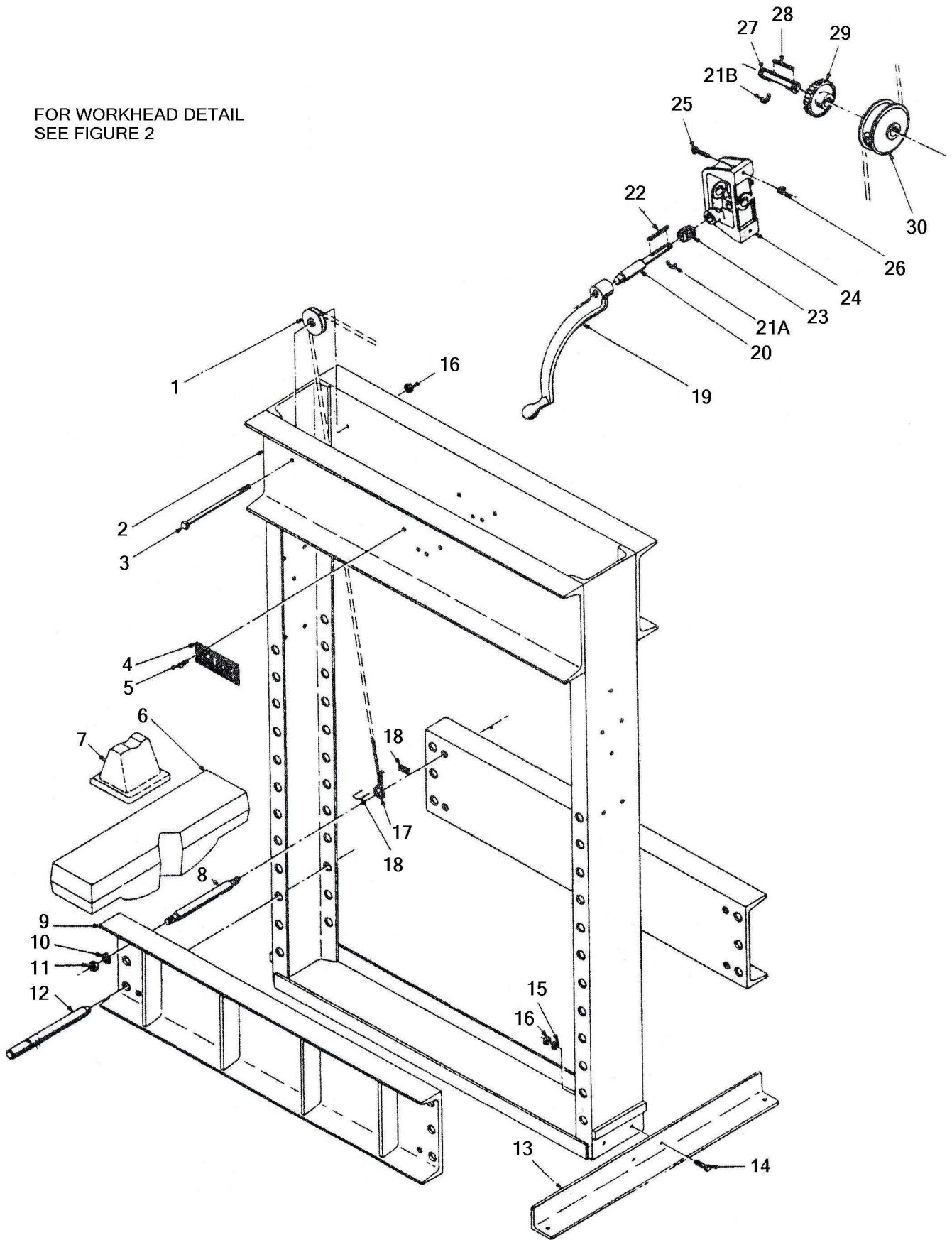


FIGURE 1

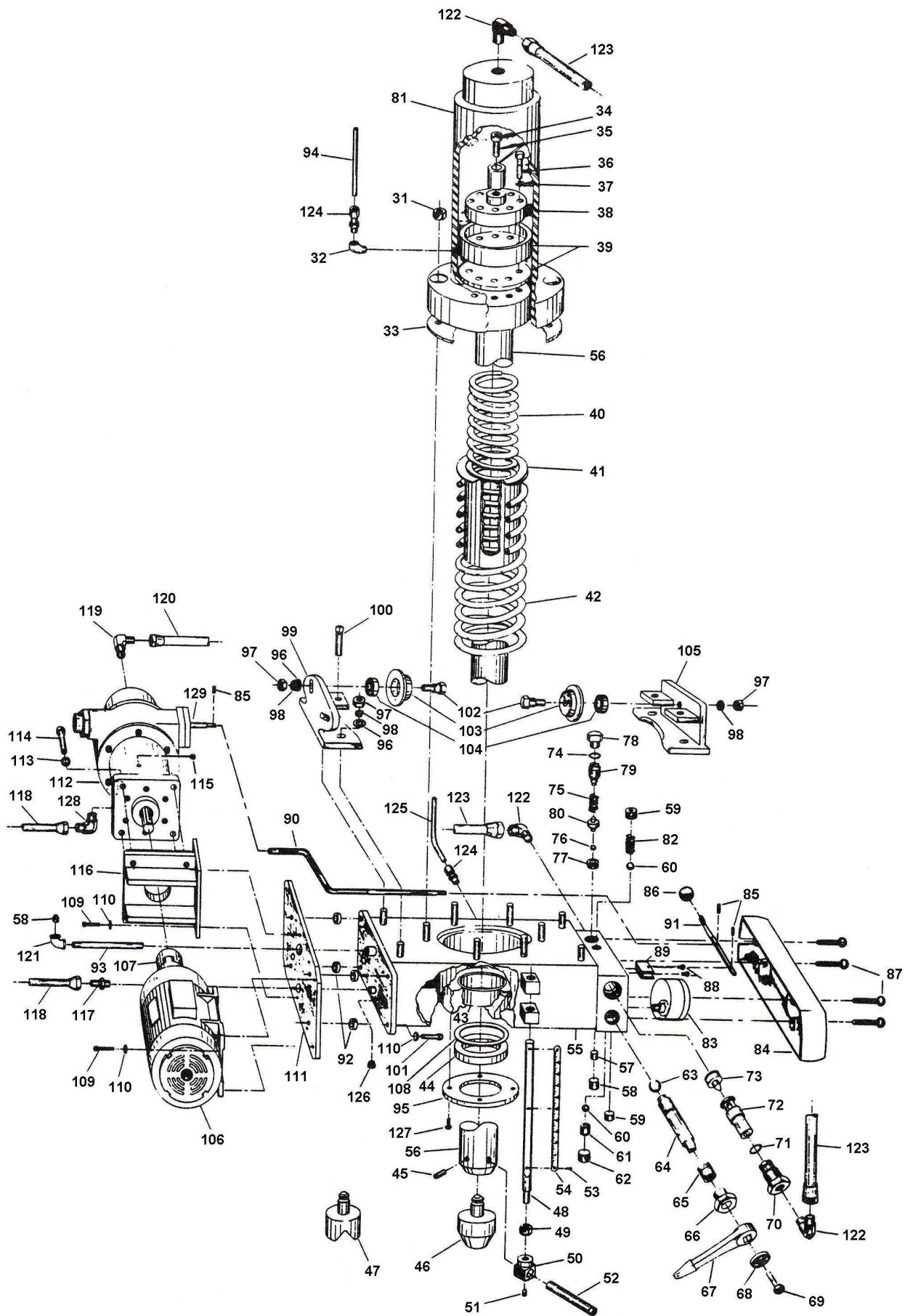
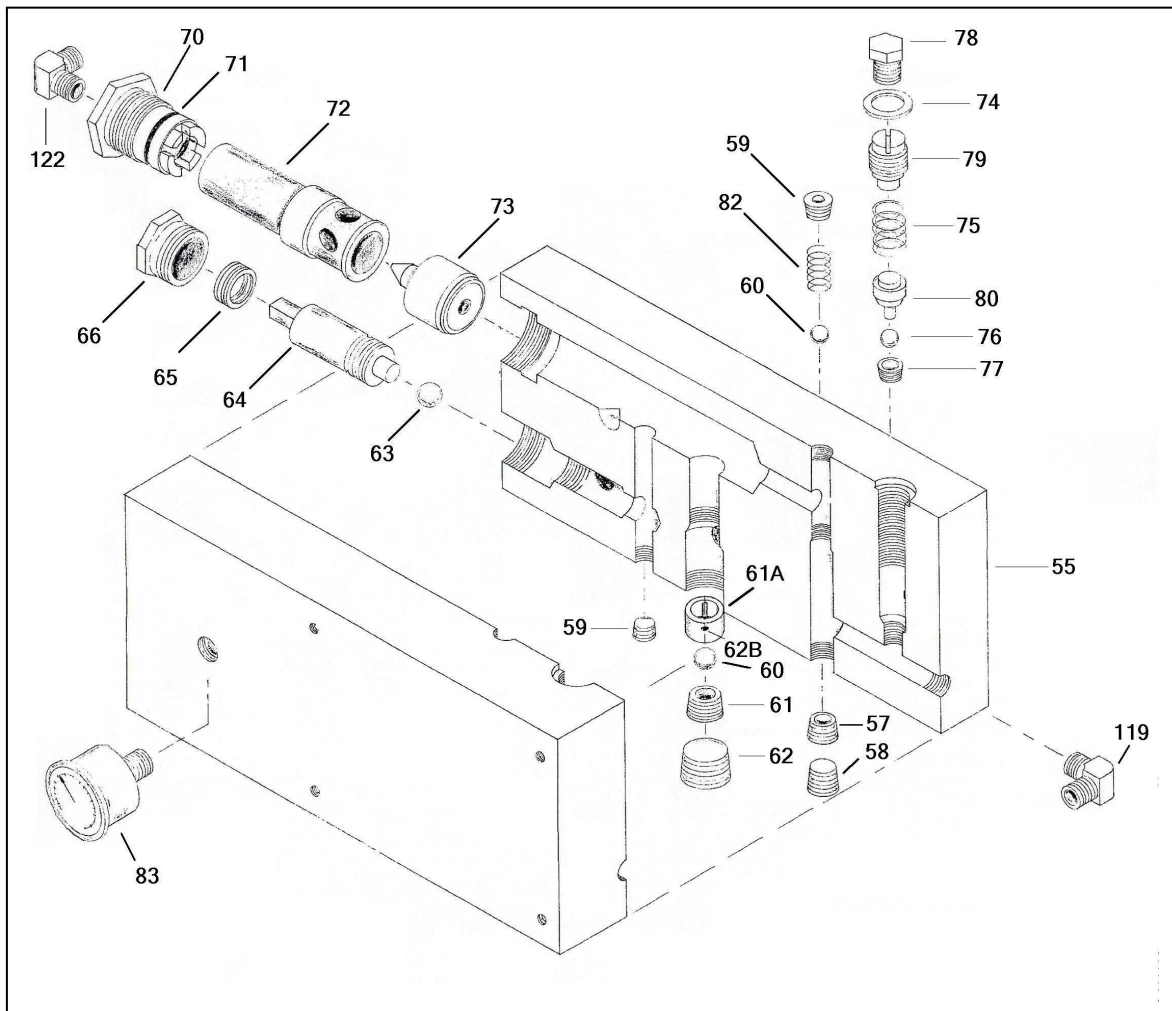


FIGURE 2



Eductor Block Exploded View

Item	Part Name	Model 5-200	Qty
1	Pulley	1639	2
2	Frame	16205	1
3	Hex head cap screw	43720	2
4	Name plate	81003	1
5	6-32 x ½" Self tapping screw (current models glued)	43876	4
6	Table plate	16610	2
7	V-block	125H-128F	2
8	Table spacer assembly (8, 10 & 11)	2086	4
9	Table channel	2097	2
10	Lockwasher	43650	4
11	Hex nut	43917	4
12	Table pins	7842	6
13	Base angle		2
14	Hex cap screw	43365	4
15	Lockwasher	43648	4
16	Hex ½-13 Heavy	43917	4
17	Cable	45933	21
18	Cable clamp	1607	4
19	Hand crank assembly	701653	1
20	Worm shaft	16628	1
21	Retaining ring	43983	2
22	Worm key	1602	1
23	Worm	1600	1
24	Hoist frame	1595	1
25	Hex cap screw		3
26	Hex nut		4
27	Drum shaft	1597	1
28	Drum key	1601	1
29	Worm gear	1599	1
30	Cable drum	1596	1
Complete Table Hoist Assembly (Items 20, 21A, 21B, 22, 23, 24, 27, 28, 29,30)		703432	1
31	½" hex nuts		4-6
32	¼ x 1/8 NPT elbow		1
33	Cylinder Gasket	9778	1
34	½"-13 x 1-½" SHCS Serial No < 192522	-	8
35	Piston Bumper Serial No < 192522	-	1
36	Hex head cap screw Serial No < 192522		8
37	Lockwasher Serial No < 192522		8
38	Supporting ring Serial No < 192522	16183	1
39	Leather Cup Serial No < 192522	1538	1
40	Ram spring (Small)	4196	1
41	Spring spacer	4201	1
42	Ram spring (Large)	4195	1
43	Piston bushing Serial No < 192522		1
	Wear Ring Serial No > 192523		1
44	Oil seal	1477	1
45	5/16" set screw		1
46	Nose piece assembly with shank	701709	1
47	"V" nose piece assembly with shank	701713	1

Item	Part Name	Model 5-200	Qty
48	Stroke indicator rod	4264	1
49	½"-13 hex jam nut	43940	1
50	Special nut	2259	1
51	¼"-20 x ¼" Set Screw		1
52	Support stud	4266	1
53	No. 2 x 3/16" Drive Screw (new style glued on)		3
54	Scale	4265	1
55	Reservoir assembly	715273	1
56	Piston assembly Serial No. < 192522	716083	1
57	Check valve seat	1300	1
58	½" N.P.T.F. socket head pipe plug	596	1
59	3/8" N.P.T.F. socket head pipe plug	588	2
60	½" ball valve	586	2
61	Intake valve seat	1301	1
61A	Valve guide	10752	1
61B	Spring pin	44333	1
62	1" N.P.T.F. socket head pipe plug	44282	1
63	Ball valve ¾" dia.		1
64	Release valve rod	2257	1
65	Valve rod packing	1937	8
66	Packing nut	1931	1
67	Valve handle	2230A	1
68	Handle washer	348	1
69	3/8"-16 x ½" hex cap screw		1
70	Eductor bushing		1
71a	O-ring	916	1
71b	Back-up washer	11223	1
72	Eductor body	2241	1
73	Eductor nozzle	1287	1
74	O-ring	3965	1
75	Relief valve spring	893	1
76	Ball valve ¼" dia.	918	1
77	Relief valve seat	891	1
78	Valve cap nut	2236	1
79	Relief valve adjusting screw	2237	1
80	Ball retainer	892	1
81	Cylinder	16181	1
82	Check valve spring	579	1
83	Gauge	71274	1
84A	Control panel - Old Style 3-1/2" hole	27618	1
	Control panel - New Style 4" hole	80744	1
84B	Label for panel	27620	1
85	Spring pins 1/8" dia. x 9/16"	28524	3
86	Control handle ball	27879	1
87	No. 10-24 x 3" Flat head slotted screw	300248	4
88	No. 10-24 x 3/8" soc. head cap screw.	43396	2
89	Control handle mounting bracket	27622	1
90	Control rod	27670	1
91	Control handle	27433	1

Item	Part Name	Model 5-150	Qty
92	Neoprene washer	2248	4
93	¾" pipe nipple x 8"	44205	1
94	Vent tube	6038	1
95	Retaining plate	6474	1
96	5/8" flat washers	49927	7
97	5/8"-11 hex nut	43917	6
98	5/8" lockwasher	43648	4
99	Rear roller bracket	16189	1
100	¾"-10 x 3" Soc set screw	43616	3
101	3/8"-16 x 1" hex cap screw	43328	4
102	Roller screw	1297A	3
103	Flanged roller	2244	3
104	Bearing	6023	3
105	Front roller bracket	16202	1
106	Motor – 2 HP, 220/440 volt 3-phase	32422	1
106A	Bolts, motor mounting (5/16-18 x ½")	43313	4
107A	Coupling (with Spider)		1
107B	Spider only		1
108	Gasket	6519	1
109	3/8"-16x1" hex cap screw	43328	8
110	3/8" lockwasher	43645	8
111	Pump and motor base	27678	1
112	Pump	950101	1
113	½" lockwasher	43647	4
114	½"-12x1-½" hex head cap screw		4
115	1/8" Allen pipe plug	589	1
116	Pump support	27629	1
116A	Bolts, pump support (5/16-18 x ¾")	43315	4
117	Tube fitting	1251	1
118	Tube assembly		1
119	Tube elbow	1252	2
120	Tube assembly		1
121	¾"-90 degree pipe elbow	44110	1
122	Tube elbow		2
123	Tube assembly		1
124	Tube fitting		1
125	Tube	6038	1
126	¼" Allen pipe plug	1567	1
127	#10-24x ½" Rd Head Machine Screw	43881	6
128	Tube elbow	17999	1
129	3/8" Wiper seal – on 50-101 pump	26573	1

Cylinder Repair Kit (Includes items 33, 39, 44, 60, 63, 65, 71A, 71B, 74, 76 & 108)

Complete Workhead assembly

Specify Voltage (Includes all items in figure 2)

905200



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technicalservice@dakecorp.com



INSTRUCTIONS AND PARTS LIST FOR

Models 50-101

$\frac{3}{4}$ GPM Hydraulic Pump

Variable volume – stem control

I. DESCRIPTION

This unit is a five-piston axial type piston pump designed for heavy-duty industrial application up to 6000 psi continuous and 8000 psi intermittent. The pump should be coupled directly to the driving source and can be rotated in either direction.

II. TYPICAL VARIABLE VOLUME CONTROLS

- A. Stem control – with control stem out (spring return), output delivery is zero gpm – pushing in on control stem increases pump delivery from zero to maximum gpm.
- B. Knob control – With control knob adjusted out (counter-clockwise rotation), output delivery is zero gpm – turning control knob clockwise increases pump delivery from zero to maximum gpm.
- C. Pressure compensated – Circuit operating pressure is controlled by setting of compensator valve mounted on pump. Turning adjusting knob clockwise increases circuit pressure, counter-clockwise decreases circuit pressure. Output delivery of pump at zero circuit pressure is maximum gpm – when circuit pressure reaches the setting of compensator valve, pump output automatically decreases to supply the exact flow rate required by the system.

III. INSTALLATION

- A. Rotation – Pump shaft rotation can be in either direction.
- B. Shaft alignment and pump mounting – The alignment of the pump and motor is critical, having a direct relation to pump bearing and shaft seal life as well as coupling life. A flexible coupling should always be used.
- C. Fluid connections – Pressure and intake line piping should correspond to port sizes to keep fluid velocities in an acceptable range. Do not bush down to smaller sizes.
- D. Safety valves – The high-pressure line must have a relief valve close to the high-pressure outlet to prevent damage to pump. In a circuit using the pressure compensated pump, the relief valve should be set several hundred psi above compensator pressure to minimize transient pressures due to compensator overtravel.
- E. Filtration – Cleanliness of fluid and components is of extreme importance in high-pressure hydraulic circuits. A suction strainer of 140 microns or less and twice pump capacity should be used in the pump inlet line.

IV. MAINTENANCE

- A. Minor repairs – Minor repairs are considered those that do not involve total disassembly of pump. External leaks around the pump, for example, can usually be eliminated by tightening screws and/or fittings around the leakage area. Replacement of leaking shaft or o-ring seals is a minor repair that can be done in the field. The Dake service manual should be consulted for the necessary part numbers.
- B. Major repairs – Major field repairs can be accomplished in an emergency. However, it is recommended that the Dake factory be contacted for necessary parts and assistance. Dake pumps are built to give long-term dependable service. If they should eventually require overhaul, factory rebuilding is recommended when possible since disassembly and assembly can damage many parts. This minimizes replacements, with net savings to the user.

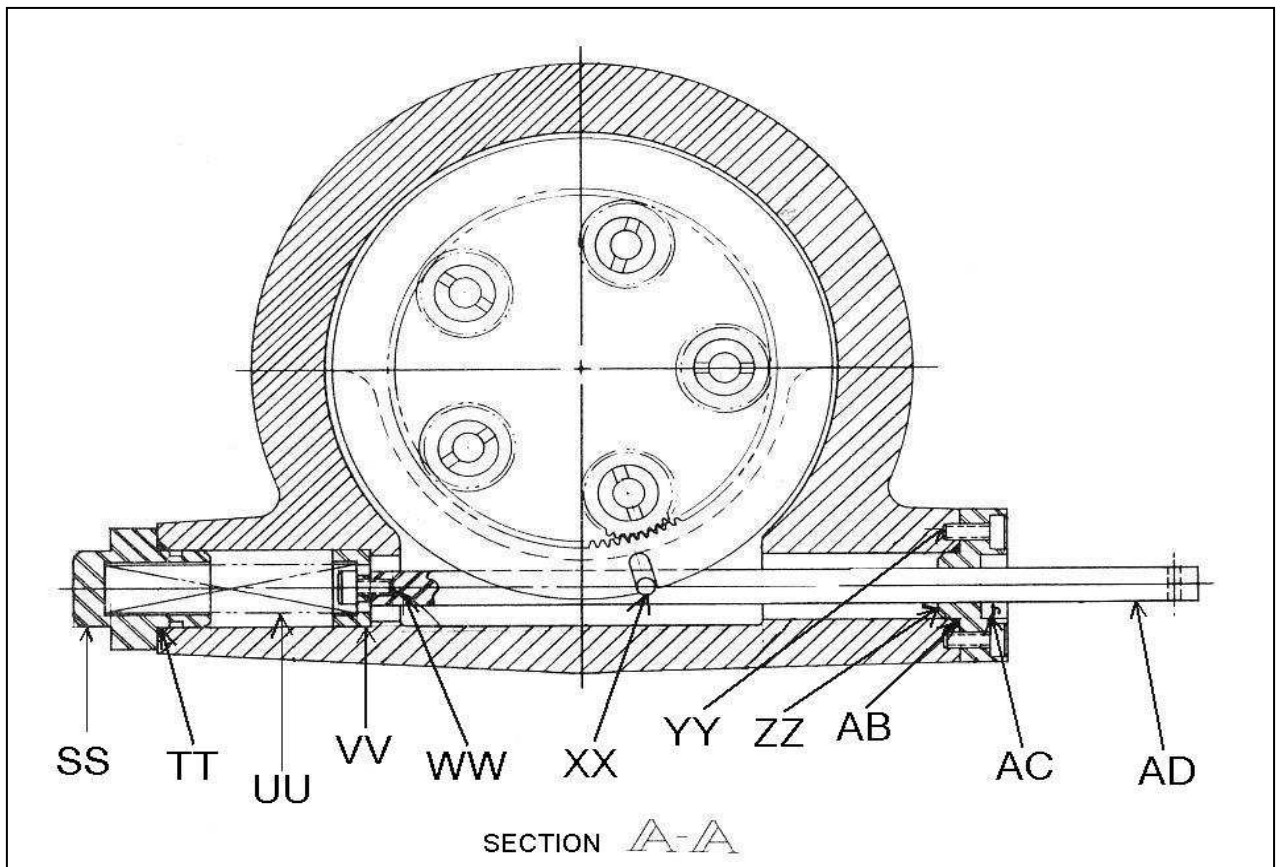
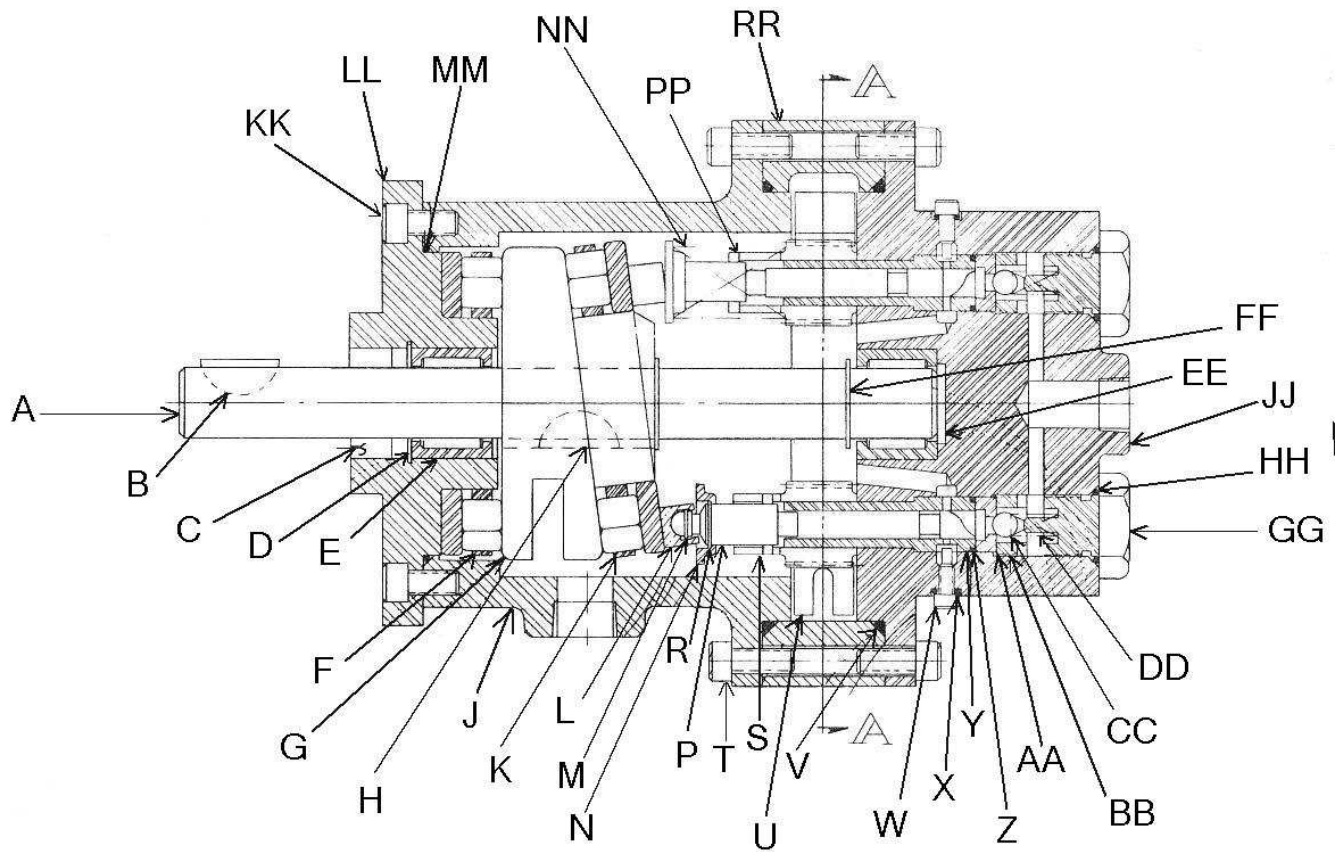
Trained Dake personnel with complete rebuilding and testing facilities permit rapid overhaul and testing, resulting in minimum downtime for the customer, as well as the added advantage of complete factory testing after repair.

TROUBLE SHOOTING CHART

TROUBLE	POSSIBLE CAUSE	REMEDY
Inadequate or no flow from pump.	<ol style="list-style-type: none"> 1. Inlet line above fluid level. 2. Air in suction. 3. Pump not primed. 4. Broken drive shaft or coupling. Loose coupling. 5. Oil viscosity too high. 6. Dirty or clogged oil suction filter. 7. Broken piston return spring item NN or check valve spring item DD. 	<ol style="list-style-type: none"> 1. Check fluid level and provide adequate fluid to fill entire system. 2. Check for loose inlet line connections. 3. Fill pump cast with Mobil DTE 24 oil or equivalent and run until pump picks up prime. 4. Replace broken parts and tighten setscrews in coupling. 5. Use proper viscosity fluid for operating temperature conditions. 6. Clean filter and check at least once a month. 7. Replace broken parts and reassemble.
Pump will not build pressure.	<ol style="list-style-type: none"> 1. Loose check valve seat retainer items BB. 2. System relief valve stuck open. 	<ol style="list-style-type: none"> 1. Retighten loose parts. Use locktight when retightening. 2. Check valve for contamination.
Pump is running hot.	<ol style="list-style-type: none"> 1. System relief valve constantly spilling. 2. Duty cycle excessive at high pressure. 	<ol style="list-style-type: none"> 1. Check relief valve setting and work cycle. 2. Install oil cooler on fluid reservoir.
Noisy pump or system.	<ol style="list-style-type: none"> 1. Air in system. 2. Pump cavitating. 3. Coupling misalignment. 4. Broken piston return spring item NN. 5. Loose piston shoe item L. 	<ol style="list-style-type: none"> 1. Bleed all circuit trapped areas. 2. Check for restriction in pump inlet or loose fittings in inlet line. 3. Realign couplings. 4. Replace broken parts and reassemble. 5. Replace with new parts items L and M.
Pump will not prime or loses prime.	<ol style="list-style-type: none"> 1. Loose cylinder locking screws items W. 2. Worn or damaged shaft seals items C or AC. 3. Faulty o-ring items V, MM, TT or AB. 4. Air in suction. 	<ol style="list-style-type: none"> 1. Tighten screws. 2. Replace with new parts. 3. Replace with new parts. 4. Check for loose fittings and tighten.



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ITEM	QTY	DESCRIPTION	MAT'L	PART NUMBERS 50-101
A	1	Pump Shaft	HRS	25110
B	1	Key	CRS	300449
C	2	Oil Seal	STD	26184
D	1	Retaining Ring - Truarc	STD	27468
E	2	McGill Roller Brg. MR-14	STD	26186
F	1	Rollway Thrust Brg. T618	STD	26185
G	1	Wobble Plate	HRS	25200
H	1	Woodruff 608 Key	STD	300449
J	1	Pump Body	C.I.	25109
K	1	Rollway Thrust Brg. T619	STD	26187
L	5	Piston Shoe	Bronze SAE64	25117A
M	5	National Retaining Ring	XSO-117	26188
N	5	Spring Retainer	CRS	25116A
P	5	Piston	HRS	25114
R	5	National Retaining Ring	XSO-122	27751
S	5	Piston Rotating Gear	CRS C1141	25115
T	12	5/16-18 x 3/4 Soc. Hd. Cap Scr.	STD	43433
U	1	Control Gear	CRS C1141	25120
V	2	O-ring 5-3/8 ID x 5-5/8 OD	STD	26183
W	5	Cylinder Locking Scr.		25121
X	5	Metalic Seal	Copper	26629
Y	5	Cylinder	HRS	25113
Z	5	O-ring 9/16 ID 11/16 OD	STD	26564
AA	5	Valve Seat	CRS	25122A
BB	5	Seat Retainer	CRS	25123A
CC	5	Check Valve Ball	STD	1222
DD	5	Check Valve Spring	Spring Steel	25126
EE	1	Thrust Washer	Fibre	27439
FF	2	Truarc Retaining Ring	STD	27437
GG	5	Pump End Cap	CRS	25124
HH	5	O-ring 3/4 ID x 15/16 OD	STD	3966
JJ	1	Pump Head	HRS	25111
KK	6	5/16-18 x 5/8 Soc. Hd. Cap Scr.	STD	43432
LL	1	Flange Casting	CI	27424
MM	1	O-ring 3-3/4 ID x 3-15/16 OD	STD	27438
NN	5	Piston Spring	Spring Steel	25119
PP	5	1/8 Spiral Spring Pin x 7/8	STD	28688
RR	1	Center Body Casting	CI	26181
SS	1	Control End Cap	CRS	27440
TT	1	O-ring 7/8 ID x 1-1/8 OD	STD	3965
UU	1	Spring	Music Wire	27441
VV	1	Control Rod End Spacer	CRS	25132
WW	1	10-24 x 3/8 Soc. Hd. Cap Scr.	STD	43397
XX	1	Control Pin	CRS	25131
YY	4	1/4-20 x 1/2 Soc. Hd. Cap Scr.	STD	43412
ZZ	1	End Cap	HRS	25129
AB	1	O-ring 3/4 ID x 15/16 OD	STD	3966
AC	1	Oil Seal	STD	26573
AD	1	Control Rod	CRS	25912
	1	Label		26190
	2	Drive Screws for Label		43573
	5	Pipe Plug – 1/16 NPTF		44276
PUMP REPAIR KIT – Includes items B, C, Z, V, HH, MM, TT, AC & AD				712740



**724 Robbins Road
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**Phone 616-842-7110
800-937-3253
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800-846-3253**

When ordering parts
Specify:

1. Quantity
2. Description
3. Part Number
4. Model Number