

MODEL 9000/9500 HO-PAC

OPERATING AND MAINTENANCE INSTRUCTIONS

P/N 102332

1. **GENERAL:** Your Model 9000/9500 Ho-Pac is made up of the following major sub-assemblies:
 - A. **Top Mounting Bracket** which connects to the excavator, supports the hydraulic hoses, and supports the upper end of the springs.
 - B. **"Live Frame"** made up of the base plate (Item 1), and the vibration generator (which includes such items as the eccentric (Item 8), bearings (Item 30), and hydraulic motor (Item 15). In operation, the "Live Frame" vibrates.
 - C. **Suspension System** made up of the springs (Item 36), whose purpose it is to suspend and stabilize the "Live Frame" and also to isolate the vibration from the "Live Frame" to the excavator.

Installation kits are required to effect the marriage between the Ho-Pac and excavator and these kits are available for most models. Kits include all parts required for the mechanical and hydraulic hook up. Extra kits can be purchased so that one Ho-Pac may be used on several excavators.

2. **BEARINGS & LUBRICATION:** Bearing replacement, when required, should be done in the following manner. Remove bearing housing assembly from the main housing (Item 9) using, if necessary, back out screws in the tapped holes provided in the bearing housing (Item 7). Removal of the worn bearing can be accomplished by pushing a bar against the inner ring of the bearing (Item 30) from the back side of the bearing housing. The bar should be 2-7/16" diameter and have square cut ends.

The replacement bearing, which will have a press fit in the housing, should be forced in by pushing on the outer ring only.

Use only Allied supplied bearings. They have been specifically selected to do the job.

Under normal operating conditions bearings should be relubricated with a hand gun every 20 running hours. The preferred grease is: Texaco Molytex #2. The following greases have also been suggested as suitable for this application: Standard Oil - Rykon #2, Shell Oil - Cyprina #3, Gulf Oil - Gulf Crown #2, Mobile Oil - Mobilux #2.

3. **FASTENERS:** Adherence to the fundamental rules related to Ho-Pac fastener concept will contribute to long life of the machine. The concept has been proven by experience, and compromises could shorten life drastically.

Very simply the concept is the use of highly preloaded fasteners which will keep the joined surfaces together without slippage and without need for retorquing for an unlimited period of time. The rules are as follows:

- A. Use only Allied fasteners. Cap screws, nuts, and washers have been specifically selected to do the job.
- B. Limit the number of reuses of fasteners to two or three times especially those which screw into tapped holes.
- C. **IMPORTANT** - Tighten fasteners exactly as described. First clean mating surfaces, then draw the surfaces up **SNUG TIGHT** by exerting medium effort with wrench of normal length. Preload the fastener by turning screw head or nut 1/3 turn or 2 flats as shown in Figure 2; this will usually require a "cheater bar."

Check tightness of fasteners occasionally. Check carefully during the first day's use, especially at the outset.

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Fig. 1 - Model 9000/9500 HO-PAC Parts List

ITEM NO.	9000 PART NO.	9500 PART NO.	DESCRIPTION	9000 QUANTITY	9500 QUANTITY	9000 WGT. EA.	9500 WGT. EA.
1	719001	719001	Base Plate	1	1	479	479
2	719002	719002	Cap Screw 7/8" X 3-3/4"	6	6	1	1
3	719003	719003	Flat Washer 7/8"	12	12	+	+
4	719011	719011	Hex Head Cap Screw 5/8" X 2-1/4"	6	6	+	+
5	719015	719015	Flat Washer 5/8"	14	14	+	+
6	719010	719010	Plate Cover	1	1	17	17
7	719008	719008	Housing, Bearing	2	2	17	17
8	719006	719006	Eccentric	1	1	54	54
9	719005	719505	Housing	1	1	248	300
10	719009	719009	Plate, Adaptor	1	1	17	17
11	719013	719013	Hex Head Cap Screw 5/8" X 3"	4	4	+	+
12	719014	719014	Hex Head Cap Screw, 3/8" X 2-1/2"	4	4	+	+
13	719026	719026	Flat Washer, 13/16 OD X 13/32 ID	4	4	+	+
14	719012	719012	Manifold	1	1	3 1/2	3 1/2
15	719017	719017	Motor, Hydraulic	1	1	44	44
16	719018	719018	Hex Head Cap Screw, 5/8" X 1-3/4"	2	2	+	+
17	719021	719521	Washer, Hardened 1"	24	24	+	+
18	719004	719004	Heavy Hex Nut, 7/8"	6	6	+	+
19	719039	719039	Adaptor, Straight	1	1	+	+
20	719037	719037	90 ° Elbow Adaptor	1	1	+	+
21	719031	719031	Hose Assembly, 3/4" X 54"	2	2	5	5
22	719029	719029	Q.D. Plug, 3/4"	2	2	+	+
23	719194	719194	Dust Cap for Part No. 719029	2	2	1	1
24	798197	798197	Grease Fitting	2	2	+	+
25	719027	719027	"O" Ring	4	4	+	+
26	719016	719016	Nut, Heavy Hex, 5/8"	2	2	+	+
27	563802	563802	Cotter Pin, 1/4" X 3-1/2"	4	4	+	+
28	719043	719043	Thrust Washer, 2-3/4 X 5/8	4	4	+	+
29	719025	719025	Boom Pin 2" OD X 16-1/4	2	2	15	15
30	719007	719007	Bearing	2	2	7	7
31	719024	719524	Top Mounting Bracket	1	1	202	202
32	719042	719542	Name Plate	2	2	+	+
33	617034	617034	Drive Screws	8	8	+	+
34	718544	718544	Rubber Strip for Hose Clamp	1	1	+	+
35	719028	719028	Hose Clamp	1	1	+	+
36	719019	719249	Coil Spring	6	6	18	18
37	719020	719520	Hex Head Bolt	12	12	+	+
38	719022	719522	Flat Washer	12	12	+	+
39	563618	563618	Pipe Plug	1	1		
40	719023	719523	Heavy Hex Nut	12	12		

*All weights approximate.

+Indicates weights of 1 lb. or less.

MODEL 9000 AND 9500 HO-PAC

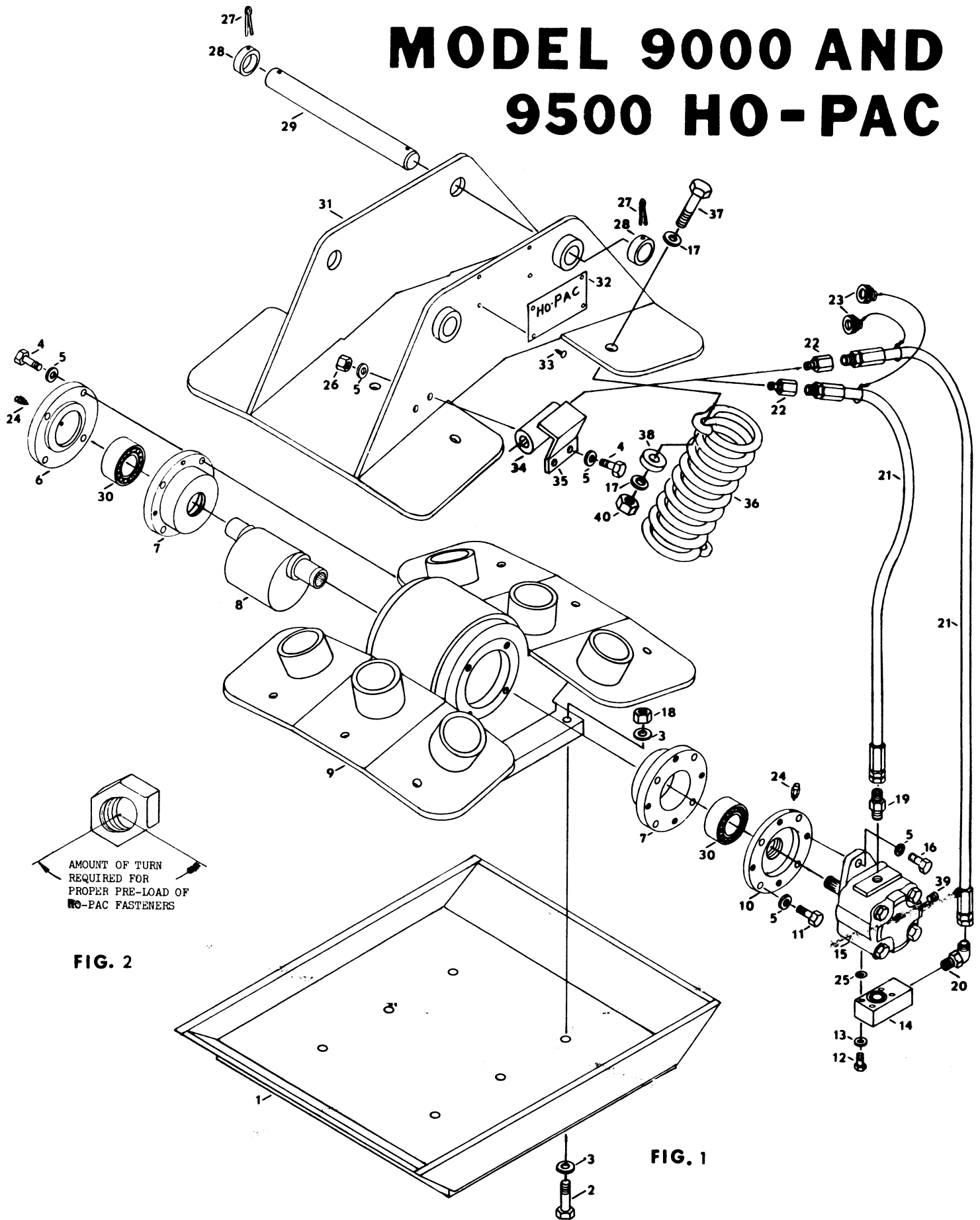


FIG. 2

FIG. 1

4. **INSTALLATION AND OPERATION:** Excavators with hydraulic capacities of 33 GPM (at rated pressure) are adequate for simultaneous Ho-Pac and backhoe operation.

Hydraulic pressure developed during Ho-Pac operation is simply that which is encountered by the working resistance. In other words when the running Ho-Pac is hanging in mid-air, the pressure will be around 500 PSI, and when compacting, the pressure will rise to some point between this value and relief setting. Pressure relief valves should be set no higher than 2500 PSI.

Full instructions are furnished with each kit and those specifics must be followed. In general, this is what must be done:

- A. Break the pressure line at a point just before the backhoe valve bank. At this point the flow divider valve is interposed, with the upstream line just broken connecting to the "P" (pressure) port of the flow divider valve and the downstream line (that going to backhoe valve bank) connecting to the "EF" (excess flow) port.
- B. A line then connects the "CF" (controlled flow) port of the flow divider valve and either of the main ports of the Ho-Pac motor (the motor is reversible and it does not matter which port is pressurized and which port is made return).
- C. The following then "go to tank" (connect to the low pressure side of the system): return line from Ho-Pac motor, line from relief valve (when supplied) of the flow divider (the "R" port), bleed line from flow divider (this port is unmarked but is that one which is drilled directly above and towards the rotary spool of the valve), and motor drain line (coming from side port of motor).

5. **ADDITIONAL OPERATING HINTS:**

- A. **Do not** try to operate the Ho-Pac without the base plate (Item 1).
- B. **Do** keep the hoses in a "loop" (between motor and top mounting bracket).
- C. **Do** use only genuine Allied parts as replacement items.
- D. **Do** make use of the nylon ties provided with the kit to effect a clean installation. Additional quantities can be purchased from your distributor.
- E. The hydraulic system will run cooler if you run the engine no faster than necessary for reasonable speed of backhoe operation (while Ho-Pac is running).
- F. The flow divider is a variable speed control device. With the handle full on, the Ho-Pac will run at the maximum rated speed, and this will be the best setting for some applications. Experience has shown that, on occasion, more production is achieved by operating at a speed less than maximum.
- G. Keep return line and motor drain line restrictions to a minimum and maintain a clean filter. Follow manufacturer's recommendation concerning hydraulic system maintenance.
- H. Down pressure is generally useful, as is vibration, in compaction or sheet driving.
- I. Best motor life is achieved by running it half the time clockwise and half the time counter-clockwise. Reversal is achieved by crossing main lines at the quick disconnects.