

# MODEL 8500 HO-PAC

## OPERATING AND MAINTENANCE INSTRUCTIONS

1. **GENERAL:** Your Model 8500 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 9), bearings (Item 16), and hydraulic motor (Item 12). In operation, the "Live Frame" vibrates.
  - C. **Suspension System** made up of the springs (Item 30), 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 10) using, if necessary, back out screws in the tapped holes provided in the bearing housing (Item 8). Removal of the worn bearing can be accomplished by pushing a bar against the inner ring of the bearing (Item 16) from the back side of the bearing housing. The bar should be 1-3/4" 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. 2 - MODEL 8500 HO-PAC PARTS LIST  
SERIAL NO. 4601 & UP**

ITEM NO.	PART NO.	8500 HO-PAC DESCRIPTION	QUANTITY	WEIGHT
1	708501	Base Plate	1	275
2	708516	Hex Head Cap Screw, 7/8" X 3 1/2"	4	+
3	719003	Flat Washer, Hardened	12	+
4	719004	Hex Nut, 7/8"	4	+
5	708511	Hex Head Cap Screw, 1/2" X 2 1/2"	8	+
6	708512	Flat Washer, Hardened, 1/2"	8	+
7	708510	Cover Plate	1	9
8	708508	Bearing, Housing	2	14
9	708503	Eccentric	1	34
10	708502	Housing	1	150
11	708509	Adaptor Plate	1	8
12	708517	Hydraulic Motor	1	18
13	708514	Flat Washer, Hardened, 7/16"	2	+
14	708513	Hex Head Cap Screw, 7/16" X 1 1/4"	2	+
15	798197	Grease Fitting	2	+
16	708507	Roller Bearing	2	3
17	656535	90° Elbow, with "O" Ring 1"	1	+
18	708519	90° Elbow, with "O" Ring 3/4"	1	+
19	708630	Hose Assembly 3/4" X 9' - L.P.	1	9
20	708627	Hose Assembly 3/4" X 9' - H.P.	1	6
21	719034	Q. D. Socket	1	2
22	719029	Q. D. Plug	1	2
23	563629	Cotter Pin 1/4" X 3"	2	+
24	617062	Boom Pin (1 1/2" X 14")	2	15
25	708524	Top Mounting Bracket	1	150
26	708518	Name Plate	2	+
27	563632	Drive Screws	8	+
28	708028	Hose Clamp	1	1
29	708544	Rubber Strip for Clamp	1	+
30	719019	Coil Spring	4	17 1/2
31	719022	Flat Washer (for Spring Mount)	8	+
32	719021	Flat Washer, 3/4"	16	+
33	719020	Hex Head Cap Screw, 3/4" X 10"	8	+
34	719023	Hex Nut, 3/4"	8	+
35	617104	Klik Pin	2	+

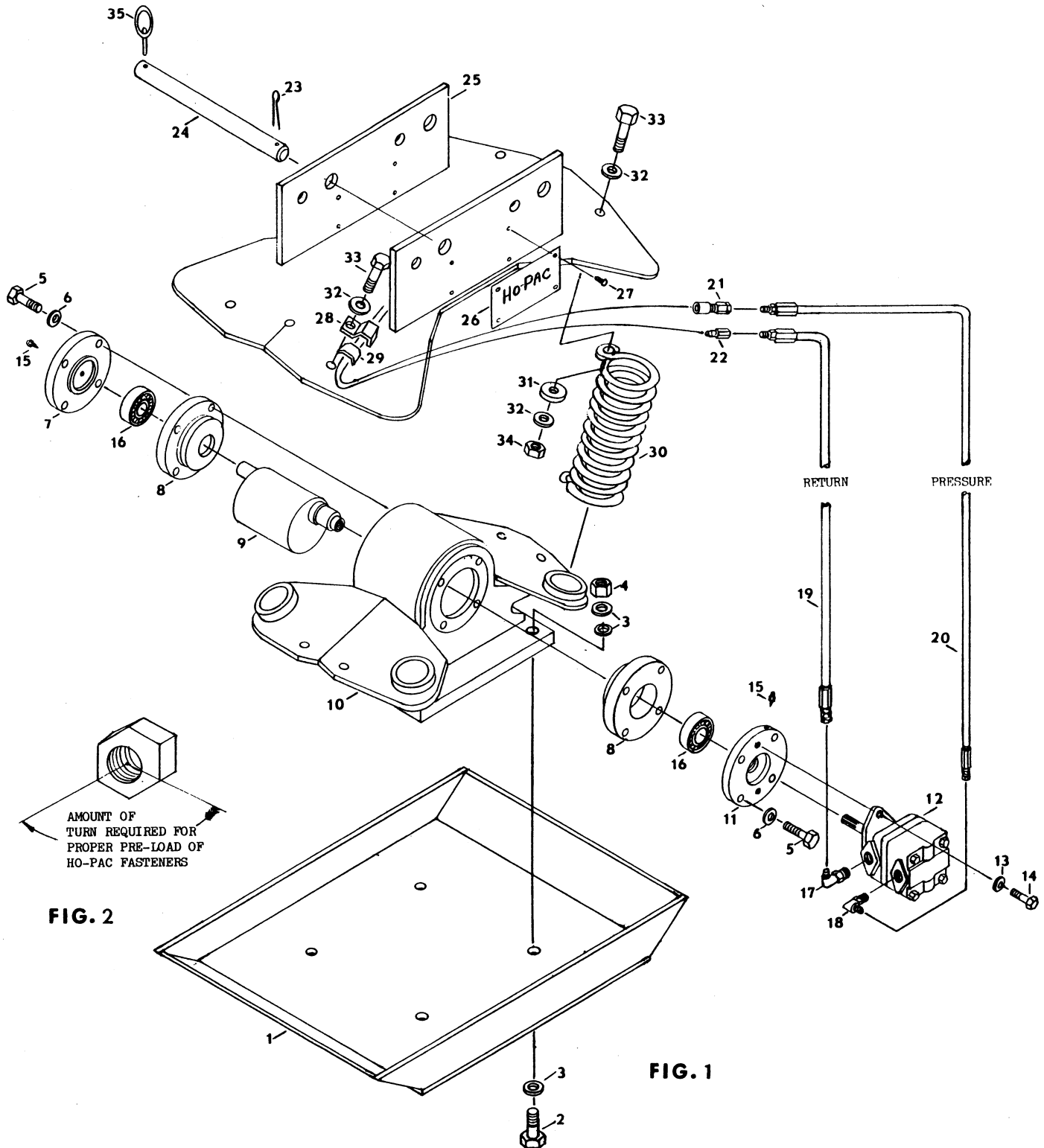
\*All weights approximate.

+Indicates weights of 1 lb. or less.

**SERIAL NO. BELOW 4601  
SAME AS ABOVE EXCEPT**

19	708530	Hose Assembly - 25'	1	20
20	708527	Hose Assembly - 25'	1	15

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4. **INSTALLATION AND OPERATION:** Excavators with hydraulic capacities of 16 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 the pressure port of the Ho-Pac motor (this is on the outboard side of the motor).
- C. The following then "go to tank" (connect to the low pressure side of the system): return line from Ho-Pac motor (from the inboard motor port), line from relief valve (when supplied) of the flow divider (the "R" port), and 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).

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 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.