

## OWNER'S MANUAL

# W452 PTO PUMP AND RESERVOIR KIT FOR 8-1/2 and 10 FOOT BACKHOES FOR TRACTORS WITH 540 RPM PTO SHAFT

### GENERAL DESCRIPTION

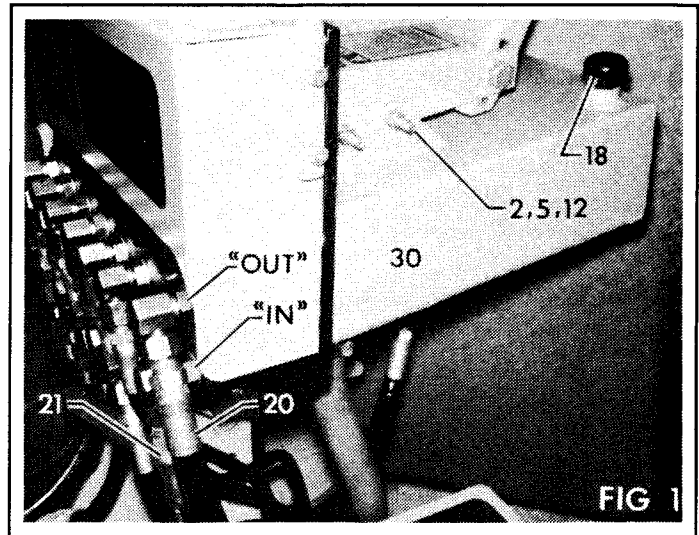
The W452 PTO Pump Kit consists of those parts required to power the 8-1/2 or 10 foot Backhoe from the tractor's PTO shaft. It includes the PTO pump and adapter, reservoir, filtration system, hydraulic hoses, and fittings. In addition it includes a pump torque arm which attaches to the tractor's lower link and keeps the pump from turning with the PTO shaft.

**NOTE** — *The speed of backhoe operation increases as PTO speed increases. Operate from 540 RPM PTO only.*

### ASSEMBLY

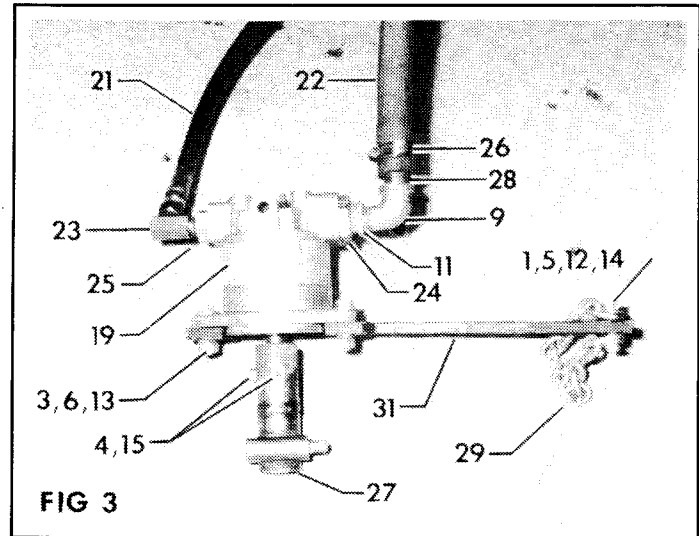
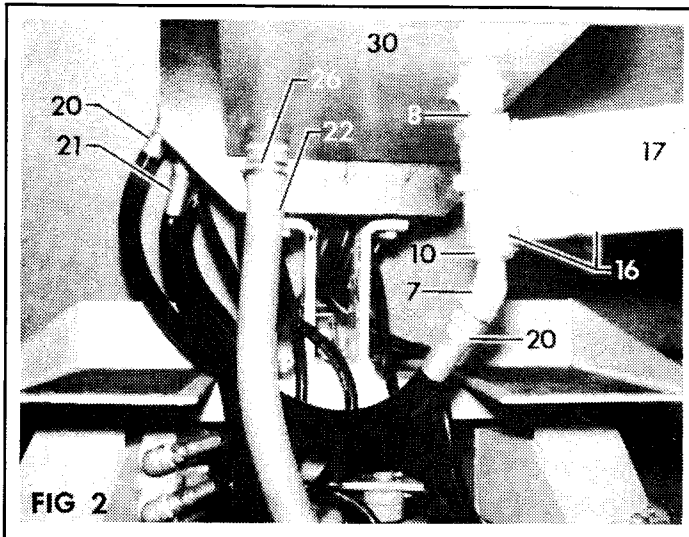
**NOTE** — *When installing hoses and fittings always use thread sealant in permanent connections. Do not use thread sealant in union ends of adapters. Do not overtighten fittings, they can split or expand causing leakage.*

**IMPORTANT** — *Tighten all hardware to the torque requirements specified in the Torque Chart, Page 3, of this manual.*



1. Assemble reservoir (30) to backhoe using 3/8 NC x 6" bolts, nuts, and lockwashers (2, 5, 12) as shown in Fig. 1.

2. Assemble suction hose (22) to reservoir (30) using hose clamp (26), as shown in Fig. 2.



3. Assemble filter base and element (16) to reservoir (30), using close nipple (8), as shown in Fig. 2.

**NOTE** — Change filter element (17) every time oil is changed.

4. Assemble torque arm (31) to pump (19), using hardware provided (3, 6, 13), as shown in Fig. 3. Torque arm may have to be readjusted later.

5. Slide PTO adapter (27) onto pump shaft allowing 1/8 inch between adapter and pump face and secure with two setscrews and nuts (4, 15), as shown in Fig. 3.

6. Assemble suction hose (22) to pump (19) using pipe adapter (24), pipe bushing (11), street elbow (9), hose nipple (28), and hose clamp (26), as shown in Fig. 3.

7. Assemble 1-9/16 ID x 18" hose sleeve (33), from bag of parts on basic backhoe, on hose (21) which attaches to backhoe valve "IN" port. Connect pressure line between valve "IN" port fitting and pump using pipe adapter (25), adapter union (23), and hose (21), as shown in Fig. 1 and 3. Position hose sleeve to cover adapter union on control valve and secure with plastic tie (32).

**CAUTION** — Hose sleeve is installed to help protect the backhoe operator from escaping fluid under pressure. If it becomes damaged or lost, replace hose sleeve and plastic tie immediately.

8. Assemble return line (20) between filter base (16) and valve "OUT" port fitting, using street

elbow (7), and pipe bushing (10), as shown in Fig. 1 and 2.

**IMPORTANT** — If hoses are hooked up incorrectly, serious damage to the backhoe valve will result.

9. Fill reservoir with recommended fluid to correct level, referring to Service Section in the Backhoe Manual. Attach breather filters (18, 34), to top of reservoir.

10. Mount the backhoe to the tractor at this time following the procedure in the Attaching Kit Manual.

11. Slide complete pump assembly onto the PTO shaft and secure with lock pin on PTO adapter. Be sure kinks do not develop in any of the lines. Suction hose can be shortened to prevent this problem.

**CAUTION** — Do not remove the tractor PTO guard.




12. Attach torque arm (31) to tractor's lower link using hook-up chain (29), and hardware (1, 5, 12, 14) provided, as shown in Fig. 3. Torque arm (31) may be adjusted on pump (19) for proper fit-up to lower link if necessary.

**IMPORTANT** — When mounting backhoe on the adapter, do not let the swing cylinders interfere with the backhoe pump, or the hydraulic lines become tangled in any part of the adapter during installation.

# PARTS LIST

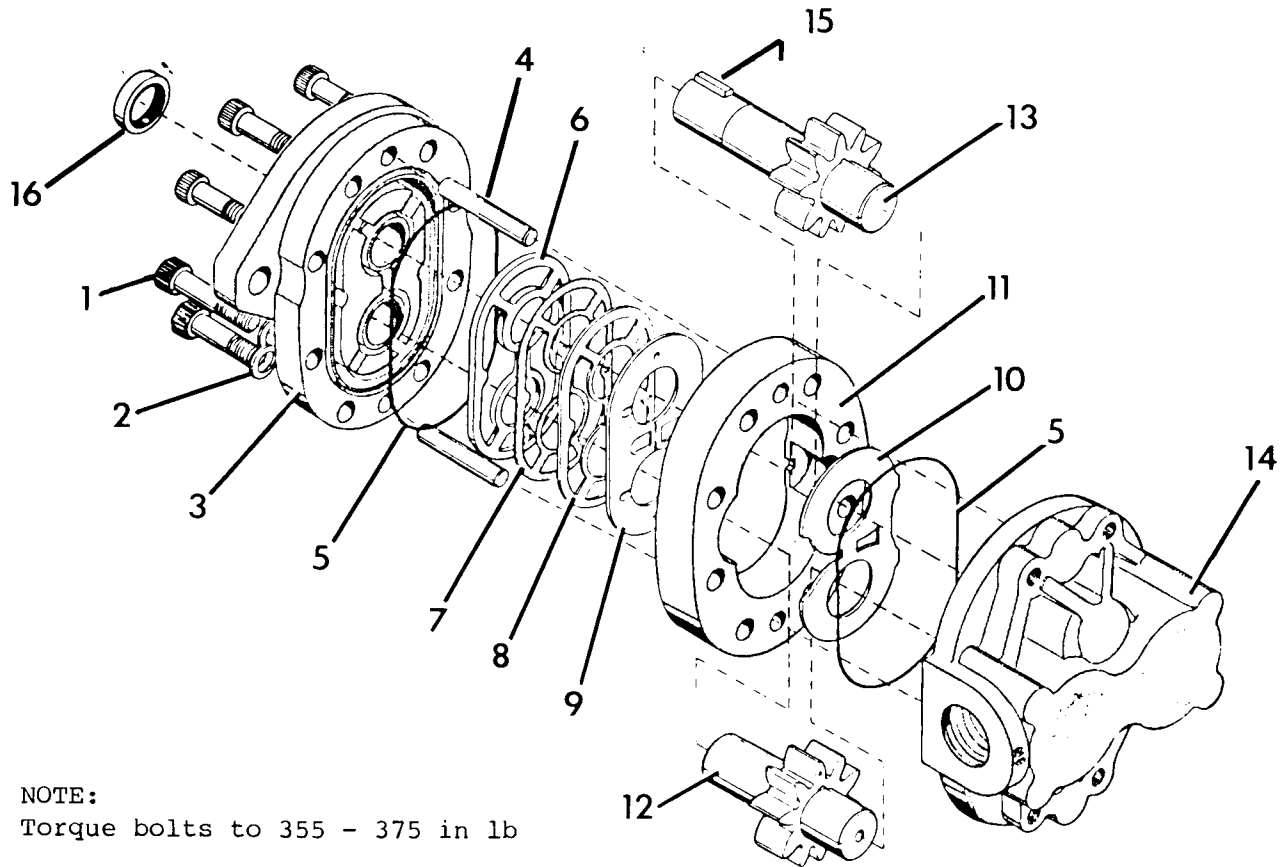
Index	Description	Part No.	Index	Description	Part No.
1	Bolt, 3/8 NC x 2-1/2	6882	19	Hydraulic Pump,	
2	Bolt, 3/8 NC x 6"	6907		(see page 4 for breakdown)	10686
3	Bolt, 1/2 NF x 1-3/4, Gr. 5	7034	20	Hydraulic Hose, 1/2 NPT x 29"	10979
4	Nut, 5/16 NC	7431	21	Hydraulic Hose, 1/2 NPT x 38"	10986
5	Nut, 3/8 NC	7451	22	Suction Hose, 1" ID x 36"	11026
6	Nut, 1/2 NF	7511	23	Adapter Union, 1/2 NPT M-F x 90°	11129
7	Street Elbow, 1/2 NPT x 45°	7918	24	Pipe Adapter, 1-5/8 - 12 M x 1" NPT F	11216
8	Close Nipple, 3/4 NPT	7948	25	Pipe Adapter, 1-1/16 - 12 M x 1/2 NPT F	11227
9	Street Elbow, 3/4 NPT x 90°	7975	26	Hose Clamp	14150
10	Pipe Bushing, 3/4 NPT M x 1/2 NPT F	7987	27	PTO Adapter	15093
11	Pipe Bushing, 1" NPT M x 3/4 NPT F	8015	28	Hose Nipple	780833
12	Lockwasher, 3/8	8079	29	Hook-Up Chain	851834
13	Lockwasher, 1/2	8101	30	Reservoir Weldment	856700
14	Flat Washer, 3/8	8156	31	Torque Arm Weldment	858135
15	Setscrew, 5/16 NC x 3/4 cup point	8327	32	Plastic Tie	14121*
16	Filter Base and Element	10375	33	Hose Sleeve, 1-9/16 ID x 18"	14127*
17	Filter Element Only	10376	34	Breather, 1/2 NPT	10366
18	Breather, 3/4 NPT	10385			

\*Located in basic backhoe loose components bag.

<b>TORQUE VALUES</b>			
Common bolts and nuts.		Tightening Torque $\pm$ 20%	
SIZE	GRADE 2 	GRADE 5 	GRADE 8 
1/4-20 NC	70 in lb	115 in lb	165 in lb
1/4-28 NF	85 in lb	140 in lb	200 in lb
5/16-18 NC	150 in lb	250 in lb	350 in lb
5/16-24 NF	165 in lb	270 in lb	30 ft lb
3/8-16 NC	260 in lb	35 ft lb	50 ft lb
3/8-24 NF	300 in lb	40 ft lb	60 ft lb
7/16-14 NC	35 ft lb	55 ft lb	80 ft lb
7/16-20 NF	45 ft lb	75 ft lb	105 ft lb
1/2-13 NC	50 ft lb	80 ft lb	115 ft lb
1/2-20 NF	70 ft lb	105 ft lb	165 ft lb
9/16-12 NC	75 ft lb	125 ft lb	175 ft lb
9/16-18 NF	100 ft lb	165 ft lb	230 ft lb
5/8-11 NC	110 ft lb	180 ft lb	260 ft lb
5/8-18 NF	140 ft lb	230 ft lb	330 ft lb
3/4-10 NC	150 ft lb	245 ft lb	350 ft lb
3/4-16 NF	200 ft lb	325 ft lb	470 ft lb

**NOTE - See tractor instruction manual or your tractor dealer for tightening of metric bolts.**

# Parker Pump No. 10686



NOTE:  
Torque bolts to 355 - 375 in lb

## Parts List

Index	Part No.	Description	Quantity Per Pump
1	*	Socket Head Screw.....	8
2	*	Washer.....	8
3	*	Front Cover.....	1
4	*	Dowel Pin.....	2
5	**	O-Ring.....	2
6	**	V-Seal.....	1
7	**	Gasket.....	1
8	**	Heat Shield.....	1
9	**	Wear Plate.....	1
10	**	Thrust Plate.....	1
11	*	Center Section.....	1
12	*	Driven Shaft.....	1
13	*	Drive Shaft.....	1
14	*	Rear Cover.....	1
15	8906	Woodruff Key, ASA 808.....	1
16	10688	Shaft Seal.....	1
	10687	Pump Seal Kit, consisting of: #5 O-Ring (2), #6 V-Seal (1), #7 Gasket (1), #8 Heat Shield (1), #9 Wear Plate (1), #10 Thrust Plate (1), and #16 Shaft Seal (1).....	1

\* Not available as a separate repair part.  
\*\* Not available as a separate repair part,  
order Pump Seal Kit.