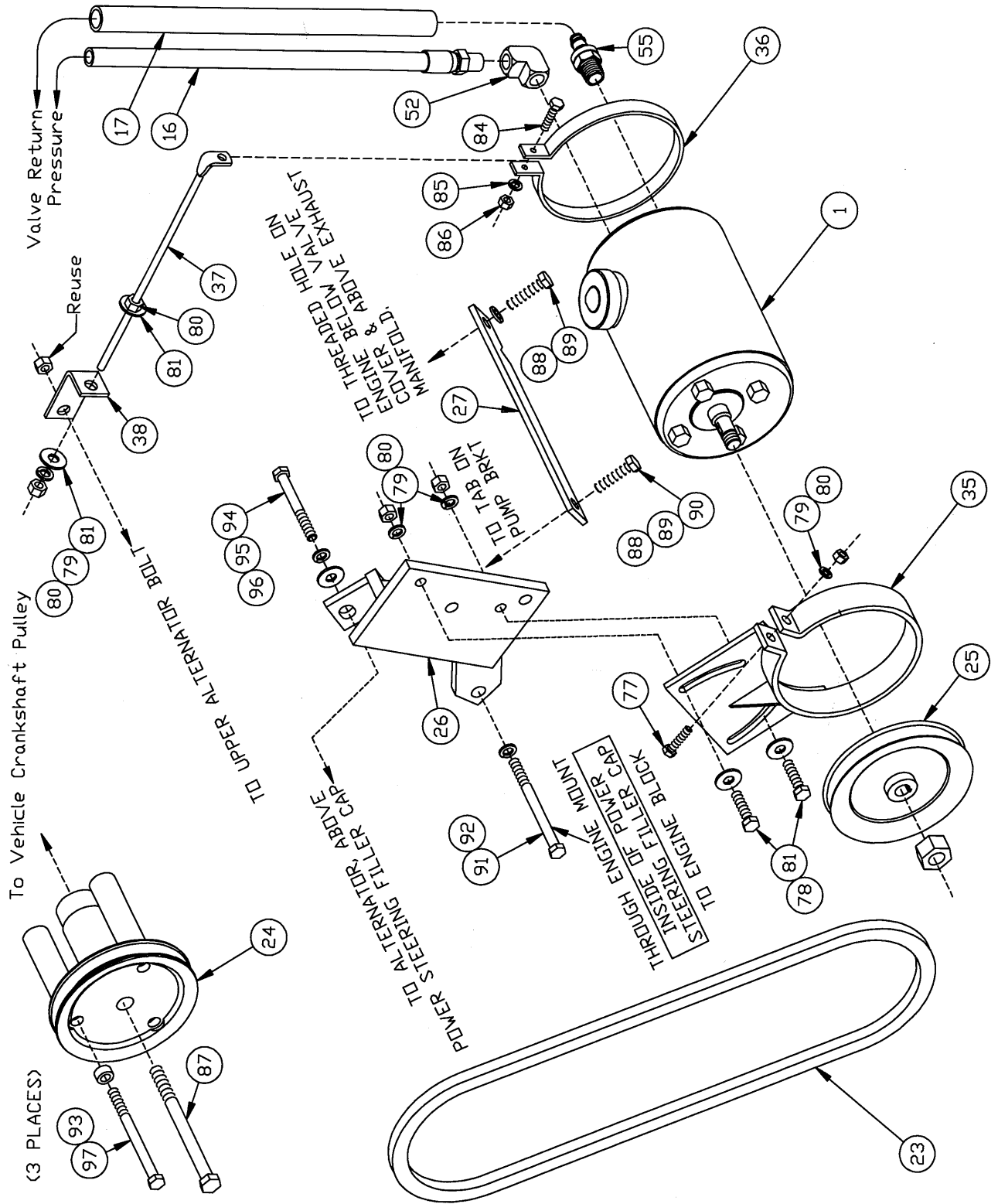
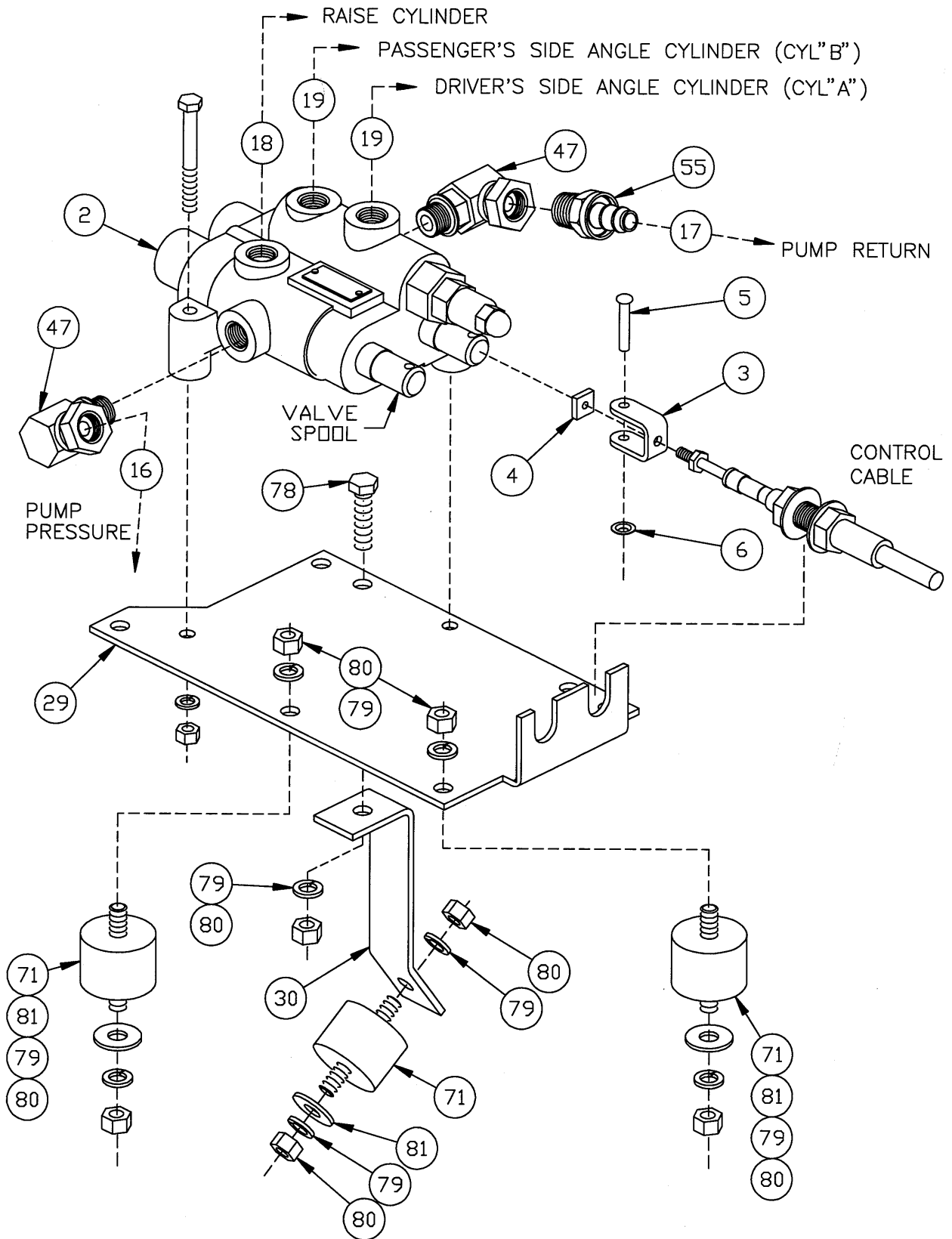


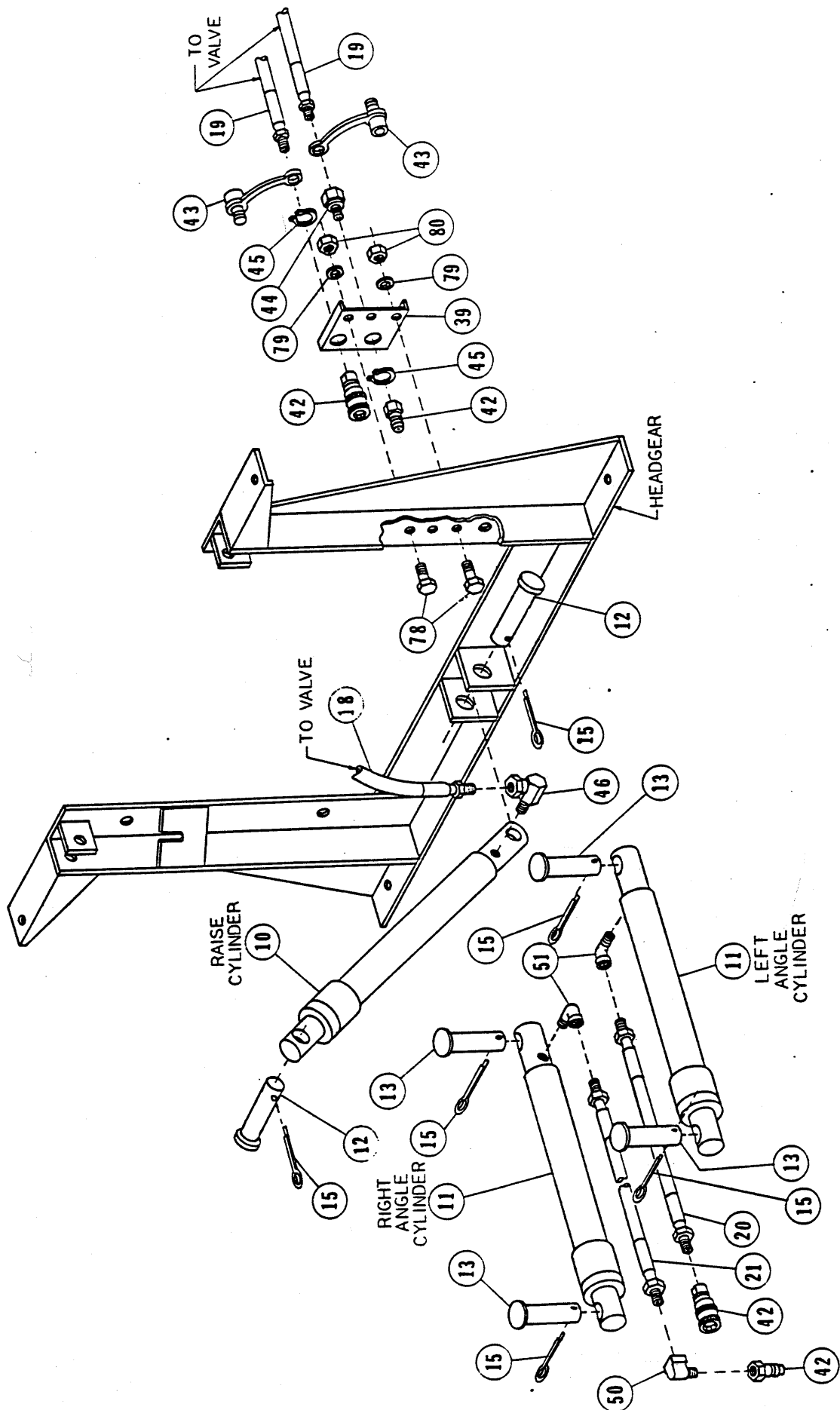
Chev/GMC V8 - 7.4L
W-W/O AC, W/O ABS
W/O Dual Batteries

1994
HYDRAULIC BELT DRIVE
INSTRUCTIONS

7533










Hydraulics Parts List

Ref #	Qty	In Kit	PN	Description
		A4468-40 7533		
1	1		A2311	Pump Assembly
2	1		A4466	Control Valve Assembly
3	2		4483	Clevis
4	2		4494	10-32 Square Nut
5	2		4491	Clevis Pin - 3/16 x 1
6	2		4493	3/16" Push Nut Zp
7	1		8764	Filter Kit
8		1	4419	Single Lever Control
9		2	6027	45" Control Cable, SLC
10	1		A318	1-1/2" x 10" Cylinder Assembly
11	2		A3660	1-1/2" x 12" Cylinder Assembly
12	2		6814	Clevis Pin - 1 x 3-5/16
13	4		6816	Anchor Pin - 1 x 4
14				
15	6		90601	1/4" x 1-1/2" Cotter Pin
16		1	21214	26" HP Hose, 3/8p to 1/4p Flat Crimp
17		1	4471	26" LP Hose
18		1	1665	60" HP Hose, 9/16 o-ring to 1/4P
19		2	1664	54" HP Hose, 9/16 o-ring to 1/4P
20		1	376	32" HP Hose, 1/4p to 1/4p
21		1	4424	36" HP Hose, 1/4p to 1/4p
22				
23		1	1022	Fan Belt, 55"
24		1	8968	Drive Sheave
25		1	3696	Pump Sheave
26		1	8972	Pump Bracket
27		1	8971	Pump Bracket Brace
28				
29		1	5329	Valve Plate
30		1	5975	Valve Plate Brace
31				
32				
33				
34				
35		1	5467	Saddle Bracket
36	1		2036	Rear Tank Strap
37	1		2116	Universal Brace Rod
38		1	2115	Universal Brace Tab
39		1	4467	Disconnect Mounting Plate
42	2		A1587	Disconnect Assembly
43	2		1588	Dust Plug
44		1	4486	Adaptor - Bulkhead 1/4" NPT
45		2	4485	7/8" Snap Ring
46	1		319	1/4" x 90 Swivel Adaptor
47	2		2315	9/16" - 18 w/o-Ring x 3/8" F PI SWV
48				

Ref #	Qty In Kit		PN	Description
	A4468-40	7533		
49				
50		1	765	1/4" Brass Bar Street Ell
51	2		2780	1/4" NPT x 90 Deg. Elbow FRGD
52		1	2318	1/4" Brass Bar Ell. (F/F)
53				
54				
55	2		1658	Quill - 3/8" NPTM to 3/8" ID Hose
56				
57				
58				
59				
60				
61				
62				
63				
71		3	5529	Shock Mount
72		1	5704	Caution Label
73	2		3042	Grommet - Rubber, Split
74	1		4477	Grommet - Split Hose
75	3	2	3666	Hose Tie, Nylon - 3/16" x 8"
76				
77	1		90054	5/16" x 1 1/2" (nc) Gr. 5 Capscrew
78	4	1	90042	5/16" x 1 (nc) Gr. 5 Capscrew
79	6	7	90360	5/16" Lockwasher
80	7	7	90332	5/16" (nc) Nut
81	4	3	90313	5/16" Flatwasher
82				
83				
84	1		90614	1/4" x 1 1/4" (nc) Gr. 5 Capscrew
85	1		90359	1/4" Lockwasher
86	1		90330	1/4" (nc) Nut
87		1	90705	1/2 x 5 1/2" (NF) Gr. 8 Capscrew
88		2	90103	3/8 x 1" (nc) Gr.5 Capscrew
89		2	90361	3/8" Lockwasher
90		1	90334	3/8" (nc) Nut
91		1	90199	7/16 x 5" (nc) Gr. 5 Capscrew
92		1	90362	7/16 Lockwasher
93		3	4268	Spacer Washer
94		1	90632	M10 x 1.5 x 80 Gr. 10.9 Capscrew
95		1	90429	M10 Lockwasher
96		1	90420	M10 Flatwasher
97		3	90704	3/8 x 5 1/2" (NF) Gr. 8 Capscrew

DIAMETER- THREADS PER INCH	GRADE		
			
1/4 - 20	6	9	13
5/16 - 18	11	18	28
3/8 - 16	19	31	46
7/16 - 14	30	50	75
1/2 - 13	45	75	115
9/16 - 12	66	110	165
5/8 - 11	93	150	225
9/16 - 12	150	250	370
7/8 - 9	150	378	591
1 - 8	220	583	893

A4468-40 uses 5425 Bolt Bag
7533 uses 8976 Bolt bag

1. Cylinder & Cylinder Hose Assembly

A. Using bench vise to hold lift cylinder (10), remove closure from port. Screw 90 degree swivel adapter (46) into port. Place lift cylinder with installed adapter between ears on underside of lift arm & lower headgear ears. Attach cylinder to ears using clevis pins (12) & cotter pins (15).

B. Using bench vise to hold 32" HP hose (20), install female half of hose disconnect assembly (42) directly to hose. Then, holding 36" HP hose (21), install brass bar street ell (50) & male half of hose disconnect assembly (42) on the same hose end.

C. Using bench vise to hold angle cylinders (11), remove closures from ports. Screw brass forged street ells (51) into ports. Ells should be parallel with cylinder & point forward toward live end. Install 32" HP hose with female disconnect half to driver's side angle cylinder street ell. Install other HP hose with male disconnect half to passenger's side angle street ells. Install cylinders to their respective sides so that ells are between the cylinders & A-frame. Secure cylinders with anchor pins (13) & cotter pins (15) at each end.

2. Control Head & Control Cables

Note: Dash bracket, hardware, drilling guide and mounting instructions will be found in the peculiar attaching box.

A. Drill three 5/8" holes in fire wall for control cables & wiring harness using drilling guide as a reference only. **Be sure both sides of fire wall are clear of obstructions before drilling.** Drill 1/2" hole in underside of dash as shown in dash illustration.

B. Install the dash bracket as per dash bracket instructions.

C. Loosen the "jam nuts" on control head end of cables (9) and install into slots in control head (8) Raise cable centers in beginning of lower slot. Snap cable ends onto ball studs & tighten jam nuts to secure cables to control head. Remove nuts and washers from the valve end of the cables. Route the cables from dash through the fire wall up to the top of the driver's side fender well. Attach control head to dash bracket as per dash bracket instructions. Install rubber grommets (73) around cables where they pass through the fire wall.

3. Valve & Valve Plate

A. Using a bench vise to hold control valve assembly (2), remove closures from valve ports. Screw the 90 degree swivel adapter unions (47) into the "in" and "out" ports. Screw Quill (55) into installed adapter in the "out" port.

Note: The valve fittings are installed as described to insure proper installation. First indication of incorrect installation is failure of plow to lift, although the plow will angle.

B. Mount valve to valve plate (29) using two 1/4 x 1-3/4 capscrews, lock washers, & nuts located in the valve bag. Install a rubber shock mount (71) into the center & rearmost holes on the driver's side

of the valve plate. Fasten each with one 5/16 lockwasher (79) & nut (80). Connect control cables to valve plate before fastening valve plate to vehicle. Begin by reinstalling jam nuts & washers on cables. Place control cables in respective slots of valve plate bulkhead with one nut & washer on each side of bulkhead. Center cables in slots so that they are exactly in line with valve spool centers. Attach cable clevises (3) to cables using square nuts (4). Slip cable clevises over spools. Install clevis pins (5) through clevis & spools & secure with pushnuts (6). Temporarily adjust cables so that control lever is near being centered in the control head.

C. Locate valve plate with cables attached, on top of driver's side inner fender well so that valve is near level & cables run in as smooth a path as possible while clearing brake control box. Be sure swivel adapter does not rub against windshield water bottle. Using the two previously installed shock mounts as guides, mark & drill two 11/32" holes through the fender well. Fasten each shock mount to the fender well with one 5/16 flat washer (81), lockwasher (79), & nut (80). Attach 90 degree bent end of valve plate brace (30) to valve plate as shown in the illustration with a 5/16 x 1 capscrew (78), lockwasher (79), & nut (80). Attach a rubber shock mount (71) to hole in other end of valve plate brace with a 5/16 lockwasher (79) & nut (80). Using the shock mount as a guide, mark & drill one 11/32" hole through the fender well. Fasten the shock mount to the fender well with a 5/16 flat washer (81), lockwasher (79), & nut (80).

D. With valve plate fastened to inner fender, re-adjust control cables so that control head lever is centered between both angle & raise/lower positions. If the cable clevis does not allow enough adjustment, reposition the cable at the valve plate bulkhead. After checking to see that the valve spools are in the centered position, tighten cable clevis nuts.

CAUTION: The valve spools must be free and self centering when the cables and the control head are attached. Failure to center the spools will restrict the fluid flow through the valve. This may cause hydraulic fluid to overheat resulting in pump damage and/or hydraulic hose failure. Hose failures can cause engine fires. When adjusted, the control lever must be in the neutral position to allow enough spool travel each way for proper valve actuation.

4. Drive Sheave Installation

A. Remove fan shroud & loosen serpentine belt. Remove & discard the four bolts holding crank pulley onto crankshaft.

B. Position drive sheave (24) in crank pulley & fasten to crankshaft with three 3/8 x 5-1/2 (NF) grade 8 capscrews (97) & three spacer washers (93). Install a 1/2 x 5-1/2 (NF) grade 8 capscrew (87) into center of drive sheave. Alternately tighten the three 3/8" capscrews to assure proper installation & torque these fasteners to 75 foot pounds. Torque center fastener to 115 foot pounds. Reinstall serpentine belt & fan shroud.

5. Pump Tank & Pump Bracket

Caution: Pump tank fill must be vertical to engine.

A. Remove & discard alternator bolt above power steering filler cap on driver's side. Remove bolt on engine mount inside of power steering filler cap. Position pump bracket (26) to vacated bolt holes & install a 7/16 x 5 capscrew (91) with lockwasher (92) through pump bracket & engine mount and a M10 x 1.5 x 80 capscrew (94), flat washer (96), & lockwasher (95) through slotted hole in pump

bracket & rear of alternator. Do not fully tighten these fasteners at this time. Place pump bracket brace (27) over hole on engine below valve cover and above exhaust manifold & fasten with a 3/8 x 1 capscrew (88), lockwasher (89), & nut (90). Fasten other end of brace to tab on pump bracket with a 3/8 x 1 capscrew (88), lockwasher (89), & nut (90). Tighten all fasteners.

B. Holding pump tank (1) in bench vise, place a 1/4" brass bar ell (52) (pointed slightly inboard) onto the 1/4" pipe nipple of pump tank & a quill (55) in the other threaded hole in pump tank. Install the pump sheave (25) onto the pump shaft using the locknut & key supplied with the pump. Remove pump from vise & install saddle bracket (35) on over front of pump. Secure with a 5/16" x 1-1/2" capscrew (77), lockwasher (79), and nut (80). Attach the saddle bracket and pump to the pump bracket using two 5/16" x 1" capscrews (78), flatwashers (81), lock washers (79), & nuts (80).

C. Install a 55" V-belt (23) on over drive & pump sheaves. Using the top fastener as a pivot, align sheaves & tighten fasteners. Adjust for the proper tension. Remove nut on back of upper alternator bolt. Install universal brace tab (38) & reinstall nut. Install rear tank strap (36) on over rear of pump tank. Align universal brace rod (37) to universal brace tab. Cut shorter if required. Install one 5/16 nut (80) & flat washer (81) onto universal brace rod & insert brace rod through universal brace tab. Connect brace rod to tank strap with one 1/4 x 1-1/4 capscrew (84), lock washer (85), & nut (86). Fasten the other end of brace rod to brace tab with a 5/16" flatwasher (81), 5/16" lockwasher (79), & nut (80). Use the brace rod to adjust the alignment of the drive & pump sheaves. Check belt for proper tension. Fasten vehicle power steering hose clear of pump belt with tie wraps (75). Tighten serpentine belt.

6. Hydraulic Hose Installation

A. Attach 26" Hp hose (16) to the 1/4" brass bar ell on pump tank & push one end of the 26" LP hose (17) onto quill on pump tank. Route these hoses to the control valve.

CAUTION: Keep hoses away from hot or moving engine components. Failure to do so may cause hoses to burst resulting in a possible engine fire.

Fasten HP hose into 90 degree swivel on "in" port side of valve. Check length of LP hose to quill on valve (cut if necessary) & attach to quill.

B. Attach 9/16 o-ring end of 54" HP hoses (19) to Cylinder. "A" & Cylinder. "B" ports of valve. Attach 9/16 o-ring" end of the 60" HP hose (18) to the lift port. Drill a 1-7/8" hole through middle of radiator web on driver's side, approximately 9-1/2" below top of radiator.

Note: Vehicles with heavy duty radiators will have to be drilled on driver's side top of radiator shroud between radiator & grille.

Cut a 3" wide section out of the grille in line with location where disconnect bracket will be located. Install split hose grommet (74) around hole. Route 54" & 90" hoses out through this hole & through grille near center of vehicle. Attach 60" hose to previously installed 90 degree swivel adapter on lift cylinder.

C. Install in line oil filter as per filter kit (7) instructions located in the common hydraulics kit.

7. Disconnect Assembly

A. With disconnect mounting plate (39) held in bench vise, install disconnect halves as shown in illustration. Bulkhead adapter (44) & male disconnect half (42) go to bottom hole. Female disconnect half (42) goes to top hole. Secure both with 7/8" snap rings (45). Attach mounting plate to back of driver's side headgear post with two 5/16 x 1 capscrews (78), lockwashers (79), & nuts (80). Install dust plugs (43) over ends of hoses routed to front of vehicle in the previous step. Connect 54" right angle hose (from cylinder "B" on valve) to back of female disconnect installed in top hole of disconnect bracket & 54" left angle hose (from cylinder "A" on valve) to bottom male disconnect. Tighten by holding hoses & rotating the disconnect halves in the bracket.

8. Operations

A. Check all fittings and fasteners for tightness. Secure hoses with nylon tie wraps (75). Place the caution label (72) on the dash beside the control head.

B. Fill reservoir with type "A" automatic transmission fluid. Start the Engine, lift and angle the blade.

NOTE: If the blade angles opposite from the control lever position, reverse the two Hp angle hoses on the back of the disconnect bracket.

Raise the front end of the vehicle until the plow is clear of the ground with the lift cylinder fully retracted. Check the reservoir oil level. Angle the blade (with the lift cylinder retracted) to remove air from the system. Recheck the reservoir oil level.

Note: The installer must inform the end user of the proper procedure for removing any residual hydraulic pressure that may be trapped in the raise or angle hoses. The plow will be much easier to install or remove if the proper procedures are followed.

Before coupling or uncoupling the hydraulic disconnects you must first turn off the ignition. Move the control to all four plowing positions and return the control to lower. You may then remove or install the plow.