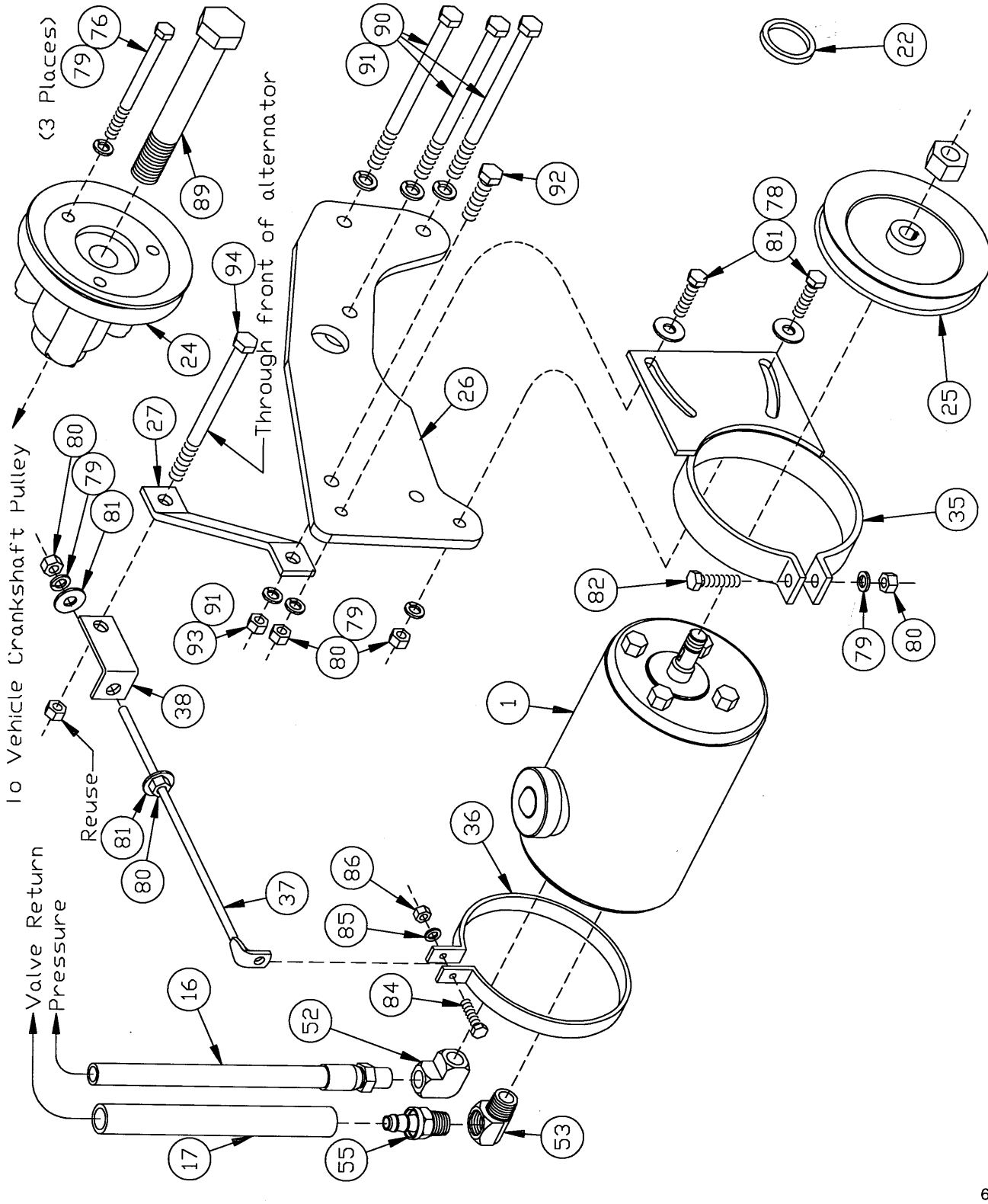
Minute Mount SYSTEM

DODGE
V8 5.2L & 5.9L
w-w/o AC, w-w/o ABS
w-w/o Single air pump

1994-96

7535
Belt Drive Hydraulics



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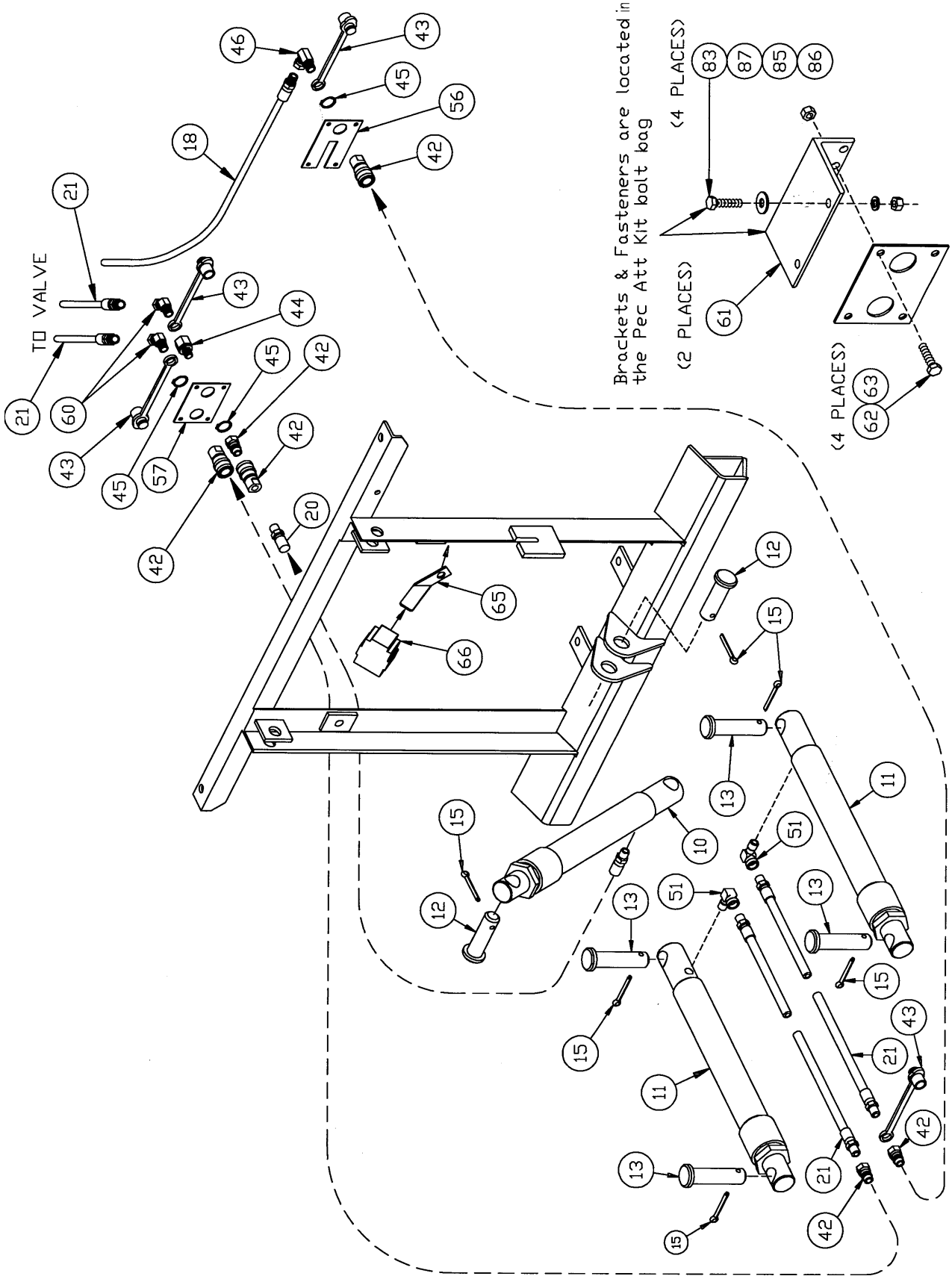
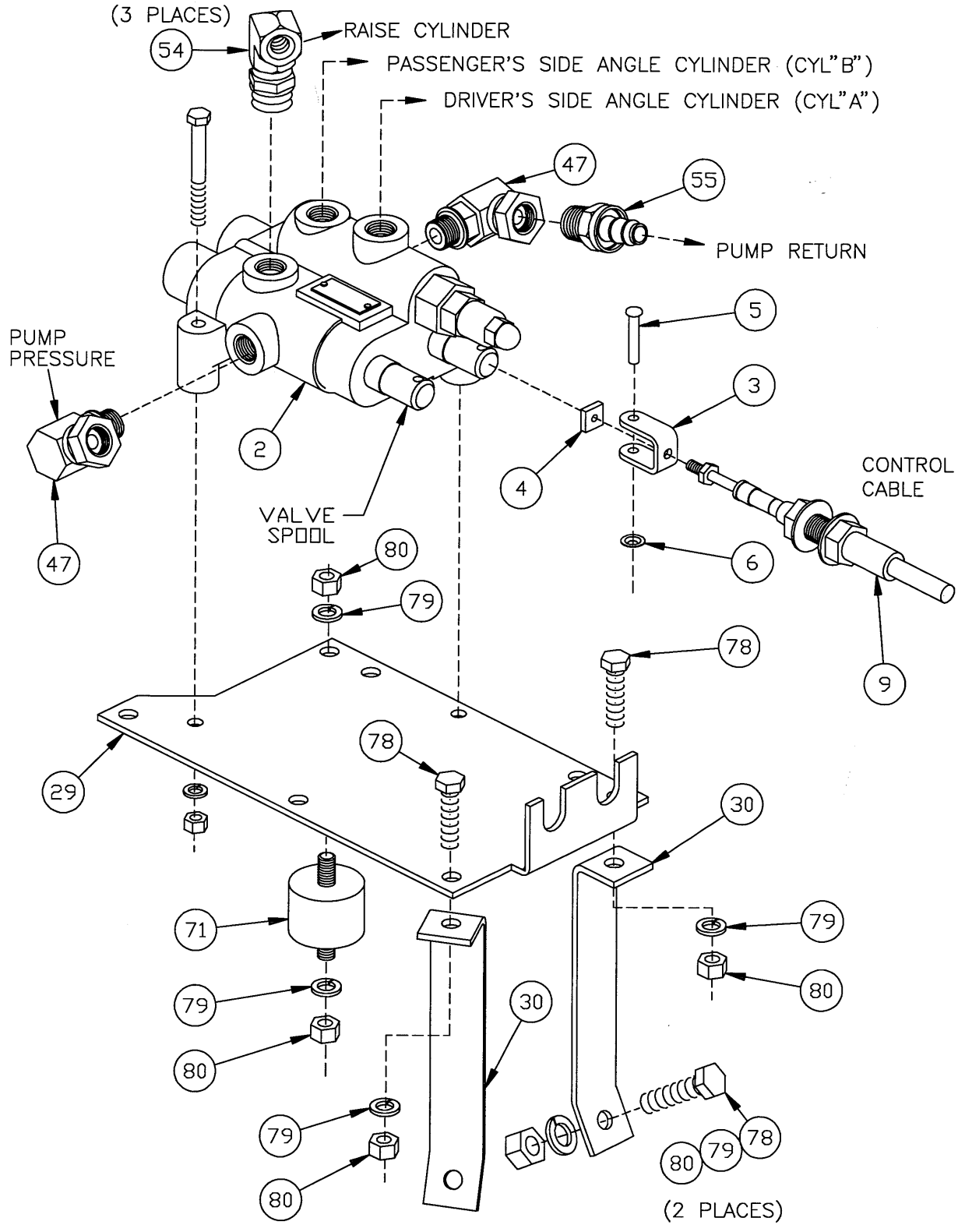

TO VALVE
Brackets & Fasteners are located in the Pec Att Kit bolt bag
(4 PLACES)
(2 PLACES)
(4 PLACES)


(3 PLACES)
54
RAISE CYLINDER
PASSENGER'S SIDE ANGLE CYLINDER (CYL"B")
DRIVER'S SIDE ANGLE CYLINDER (CYL"A")
47
55
PUMP RETURN
PUMP PRESSURE
5
3
2
4
CONTROL CABLE
VALVE SPOOL
47
80
79
6
78
9
78
29
30
71
79
80
30
79
80
79
80
80
79
78
(2 PLACES)

Hydraulics Parts List

Ref #	Qty In Kit A4468-40	7535	Part #	Description * Part of 9052 Bolt Bag
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	A4490	90" Control Cable, SLC
10	1		20116	1-1/2" x 10" Cylinder Assy - XL
11	2		20117	1-1/2" x 12" Cylinder Assy - XL
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	2707	26" HP Hose, 1/4P to 1/4P
17		1	2706	15" LP Hose
18		1	5192	60" HP Hose, 1/4P to 1/4P
19				
20		1	3074	22" HP Hose, 1/4P to 1/4P
21		4	4424	36" HP Hose, 1/4p to 1/4p
22		1	*5588	3/16" Fan Spacer
23		1	20496	58" x 3/8" Ind Grade V-Belt
24		1	8911	Drive Sheave
25		1	3696	Pump Sheave
26		1	9050	Pump Bracket
27		1	8638	Pump Bracket Brace
28				
29		1	5329	Valve Plate
30		2	8054	Valve Plate Brace
31				
35		1	5495	Saddle Bracket
36	1		2036	Rear Tank Strap
37	1		2116	Universal Brace Rod
38		1	*2115	Universal Brace Tab
41				
42	3		21096	Disconnect Assembly
43	2	2	*1588	Dust Plug
44		1	*4486	Adapter - Bulkhead 1/4" NPT
45		3	*4485	7/8" Snap Ring
46	1		319	1/4" x 90 Swivel Adapter
47	2		2315	9/16" - 18 w/o-Ring x 3/8" F Pl
48				
49				
50				
51	2		2780	1/4" NPT x 90 Deg. Elbow FRGD
52		1	*2318	1/4" Brass Bar Ell. (F/F)
53		1	*3979	3/8" Brass Bar Street ELL
54		3	*20316	9/16 O-ring to 1/4 NPT 90° Elbow
55	2		1658	Quill - 3/8" NPTM to 3/8" ID Hose
56		1	*8688	QD/Electric Grille Plate (Short)
57		1	*8686	2 QD Grille Plate (short)
58				
59			**8324	Hose Tie - 3/16" x 14"
60		3	*8127	1/4" x 45 degree Swivel
61			**8914	Grille Bracket
62			**90615	1/4" x 1/2" (NC) Gr. 5 Cap Screw
63			**90350	1/4" Lock Nut
64				
65		1	*8741	Bracket - Cable Boot
66		1	*8284	Cable Boot
71		1	*5529	Shock Mount
72		1	5704	Caution Label, Cab
73	2		3042	Grommet - Rubber, Split
74	1		4477	Grommet - Split Hose
75	3	5	*3666	Hose Tie, Nylon - 3/16" x 8"
76		3	*90666	5/16" x 3 1/2" (NC) Gr. 5 Cap
77	1		90054	5/16" x 1-1/2" (NC) Gr. 5 Cap
78	4	2	*90042	5/16" x 1 (NC) Gr. 5 Cap Screw
79	6	7	*90360	5/16" Lock Washer
80	7	4	*90332	5/16" (NC) Nut
81	4		90313	5/16" Flat Washer
82		1	*90067	5/16" x 2 (NC) Gr. 5 Cap Screw
83			**90461	1/4 x 3/4 (NC) Gr. 5 Cap Screw
84	1		90614	1/4" x 1-1/4" (nc) Gr. 5 Cap Screw
85	1		**90359	1/4" Lock Washer
86	1		**90330	1/4" (NC) Nut
87			**90311	1/4" Flat Washer
89		1	*90534	3/4" x 4-1/2" (NF) Gr. 5 Cap
90		3	*90570	3/8" x 5" (NC) Gr. 5 Cap Screw
91		4	*90361	3/8" Lock Washer
92		1	*90103	3/8" x 1" (NC) Gr. 5 Cap Screw
93		1	*90334	3/8" (NC) Nut
94		1	*90160	3/8 x 4-1/2(NC) Gr. 5 Cap Screw
95				
96				
97				
98				
99				
100				

A4468-40 uses 5425 Bolt Bag

** located in the Pec Att Kit

NC FASTENER TORQUE (FT-LB)

DIAMETER-THREADS PER INCH	GRADE G2	G5	G8
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
3/4 - 10	150	250	370
7/8 - 9	150	378	591
1 - 8	220	583	893

1. Cylinder and Cylinder Hose Assembly

A. Attach female half of disconnect (42) to the 22" Hp hose (20). Using bench vise to hold lift cylinder (10), remove closure from port and screw the other end of the hose directly into this port. Place the lift cylinder with hose pointing towards passenger side into ears on lift arm and upper gear. Secure with the clevis pins (12) and cotter pins (15).

B. Attach a male quick disconnect half (42) to one end of a 36" Hp hose (21). Place a dust cover (43) and male quick disconnect half (42) on the end of another 36" HP hose (21).

C. Using bench vise to hold angle cylinders (11), remove closures from ports. Screw brass forged street ells (51) into ports. Ells should point forward toward live end of cylinder and slightly upward as they will be installed on the A-frame. The driver's side cylinder uses the 36" Hp hose with the dust cover and male disconnect half. The passenger's side cylinder uses the 36" hose with the male disconnect half and **no dust cover**. Install cylinders to their respective sides so that ells are between the cylinders and A-frame. Secure cylinders with anchor pins (13) and cotter pins (15) at each end.

2. Drive Sheave Installation

Note: Apply a *removable* loosening prevention compound (such as "Lock-tite") to all drive sheave fasteners prior to installation.

A. **For 5.9L V8 only:** Remove fan from water pump and install 3/16" fan spacer (22) and reinstall fan.

B. Remove and discard 3/4" cap screw and washer from center of crankshaft pulley. Remove and discard every other 5/16" cap screw from inside of crankshaft pulley. (total of three cap screws)

C. Install drive sheave (24) with a 3/4 x 4-1/2" (NF) grade 5 cap screw (89) through center hole into center of crankshaft pulley. Install three 5/16 x 3-1/2" (NC) grade 5 cap screws (76) with 5/16 lock washers (79) through remaining holes in drive sheave and crankshaft pulley. Snug up the 3/4 x 4-1/2" cap screw first then snug up the three 5/16 fasteners and torque them to 18 foot pounds. Lastly, torque the 3/4 x 4-1/2" cap screw to 100 foot pounds on V8 engines.

3. Pump Tank and Pump Bracket

Caution: Pump tank fill must be vertical to engine.

A. Remove the two water pump bolts between the idler tensioner pulley and fan. Remove and discard bolt beside lower alternator bolt. Place pump bracket (26) behind serpentine belt and install three 3/8 x 5 (NC) Gr. 5 cap screws (90) with lockwashers (91), and "lock-tite" on threads. **Do not tighten fasteners at this time.** Remove lower alternator bolt and save nut. Install a 3/8 x 4-1/2 cap screw (94) through front of alternator. Install pump bracket brace (27) and universal brace tab (38) to back of alternator with previously removed nut. Install a 3/8 x 1 (NC) Gr. 5 cap screw (92) with lock washer (91) and nut (93) through pump bracket and brace.

B. Holding pump tank (1) in bench vise, place a 1/4" brass bar ell (52) onto the 1/4" pipe nipple of pump tank and a brass bar street ell (53) with quill (55) in the other threaded hole in pump tank. Install the pump sheave (25) onto the pump shaft using the lock nut and key supplied with the pump. Remove pump from vise and install saddle bracket (35) on over front of pump. Secure with a 5/16" x 2" cap screw (82), lock washer (79), and nut (80). Attach the saddle bracket and pump to the pump bracket using two 5/16" x 1" cap screws (78), flat washers (81), lock washers (79), and nuts (80).

C. Install a 58" V-belt (23) on over drive and pump sheaves. Using the top fastener as a pivot, align sheaves and tighten fasteners. Adjust for the proper tension. 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) and flat washer (81) onto universal brace rod and insert brace rod through universal brace tab. Connect brace rod to tank strap with one 1/4 x 1-1/4 cap screw (84), lock washer (85), and nut (86). Fasten the other end of brace rod to brace tab with a 5/16" flat washer (81), 5/16" lock washer (79), and nut (80). Use the brace rod to adjust the alignment of the drive and pump sheaves. Check belt for proper tension.

4. Control Head and Control Cables

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

A. Remove 2" rubber plug from engine side of fire wall beside brake master cylinder. Vehicles with standard transmission will have to have two 5/8" holes drilled as per Dash bracket instructions.

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 the cable centers in the beginning of the lower slot. Snap cable ends onto ball studs and 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 hole created when rubber plug was removed from fire wall. Attach control head to dash bracket as per dash bracket instructions. Cut hole in previously removed rubber plug to accommodate the control cables and reinstall. **For standard transmission:** install rubber grommets (73) around cables where they pass through the fire wall.

5. Valve and 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. Install three 9/16" O-ring to 1/4" NPT 90° elbows (54) in lift and angle ports. When tight, elbows should point between cables and "in" port of valve.

B. Mount valve to valve plate (29) using two 1/4 x 1-3/4 cap screws, lock washers, and nuts located in the valve bag. Install valve plate braces (30) and shock mount (71) (see illustration) with 5/16 x 1 cap screws (78), lock washers (79), and nuts (80). Tighten shock mount but do not fully tighten braces at this time. Connect control cables to valve plate before fastening valve plate to vehicle. Begin by reinstalling jam nuts and washers on cables. Place control cables in respective slots of valve plate bulkhead with one nut and 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 and spools and 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 passenger's side fender well. Be sure valve is straight with no kinks in cables. Using shock mount and holes in braces as guides, drill three 11/32" holes through fender and liner. Attach shock mount and braces to fender with two 5/16 x 1 cap screws (78) and three 5/16 lock washers (79) and nuts (80). Tighten all fasteners. Cut split hose grommet (74) into 2" sections and place on cables to prevent chaffing of hoses. Secure with tie wraps (75).

D. With valve plate fastened to inner fender, re-adjust control cables so that control head lever is centered between both angle and 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.

6. Hydraulic Hose Installation

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.

A. Attach 26" Hp hose (16) to the 1/4" brass bar ell on pump tank and push one end of the 15" LP hose (17) onto quill on pump tank. Route these hoses to the control valve. 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) and attach to quill.

B. Attach 60" HP hose (18) to Cyl. "A" port of valve. Attach a 36" HP hose (21) to Cyl. "B" port of valve and another 36" HP hose (21) to the lift port. Route hoses together through the side of the radiator and bumper.

C. **Regular duty vehicles with bumper "Sight Shield" provided with Laramie SLT package:** Attach a female quick disconnect half (42) to the QD/Electric grille plate (56) with a snap ring (45). Install a dust plug (43) and 1/4 x 90 degree swivel adapter (46) to disconnect. Place a grille bracket (61) on back of grille plate as shown on illustration, and attach with two 1/4 x 1/2 cap screws (62) and lock nuts (63). Place grille plate and bracket into large hole in driver's side of bumper. Using holes in grille plate as guides, drill two 1/4" holes on both sides of grille plate in line with grille plate holes. (Total of 4 holes). Fasten bottom of grille plate to drilled holes with two tie wraps (75) and top bracket to top plastic bumper liner with two long tie wraps (59). Attach 60" hose to disconnect and slide head light connector (with dust plug) into the slot provided in grille plate.

Note: Grille brackets, fasteners, and tie wraps are located in the peculiar attachment kit bolt bag.
Install a female quick disconnect half (42) to one hole in 2 QD plate (57) with a snap ring (45) and a bulkhead adapter (44) to other hole with another snap ring (45). Install male quick disconnect half (42) to bulkhead adapter and two 1/4 x 45 degree swivel adapters (60) with dust covers (43) to disconnects on back side of grille plate. Attach grille bracket (61) to grille plate as shown on illustration with two 1/4 x 1/2 cap screws (62) and lock nuts (63). Attach to large hole in passenger's side of bumper in the same manner as driver's side grille plate placing female disconnect to outside of vehicle. Connect lift hose to swivel with male disconnect half and angle hose to female disconnect half.

Regular and heavy duty vehicles without bumper "Sight Shield":

Same as vehicles regular duty vehicles with "sight shield" except: position grille brackets outwards in large bumper openings against bumper brackets and using holes in grille brackets as guides, drill four 9/32" holes up through upper lip of bumper in opening. Attach grille brackets to bumper with four 1/4 x 3/4 cap screws (83) with flat washers (87) down through bumper and bracket and fasten with four lock washers (85), and nuts (86).

Heavy duty vehicles with bumper "Sight Shield":

Either remove "Sight Shield" or cut as needed to install grille brackets the same as vehicles without "Sight Shield" or don't use grille plates and brackets and simply install disconnects and dust plugs to ends of lift and angle hoses and store inside bumper when not in use.

D. Install the cable boot bracket (65) on the driver's side headgear brace, between the brace and fasteners. Insert the cable boot (66) on over the bracket.

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

7. 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 FISHER® High Performance Hydraulic Fluid (recommended for superior cold weather performance) or type "A" automatic transmission fluid. Start the Engine, lift and angle the blade. **If the blade angles opposite from the control lever position, reverse the two Hp angle hoses. 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.