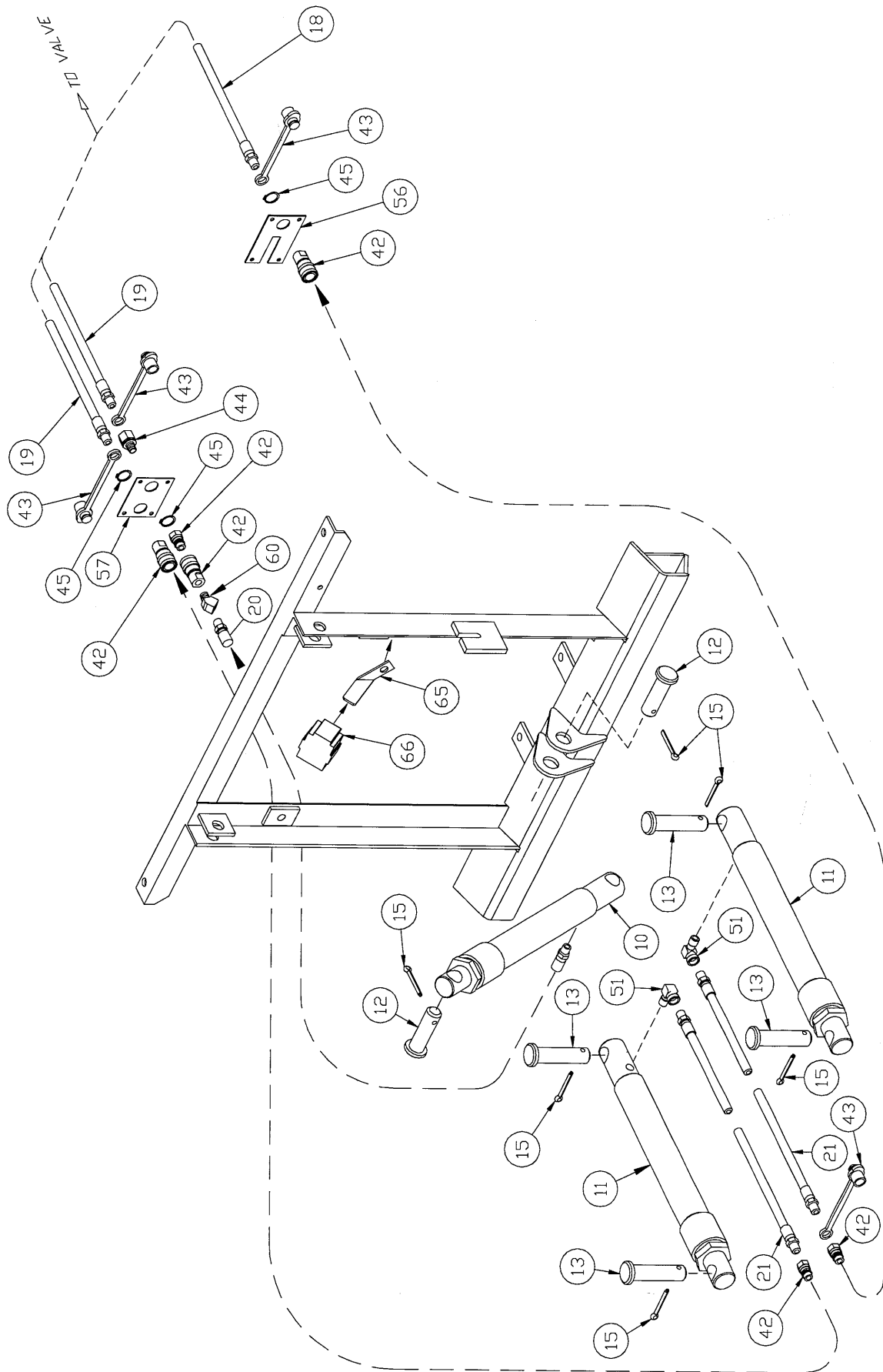
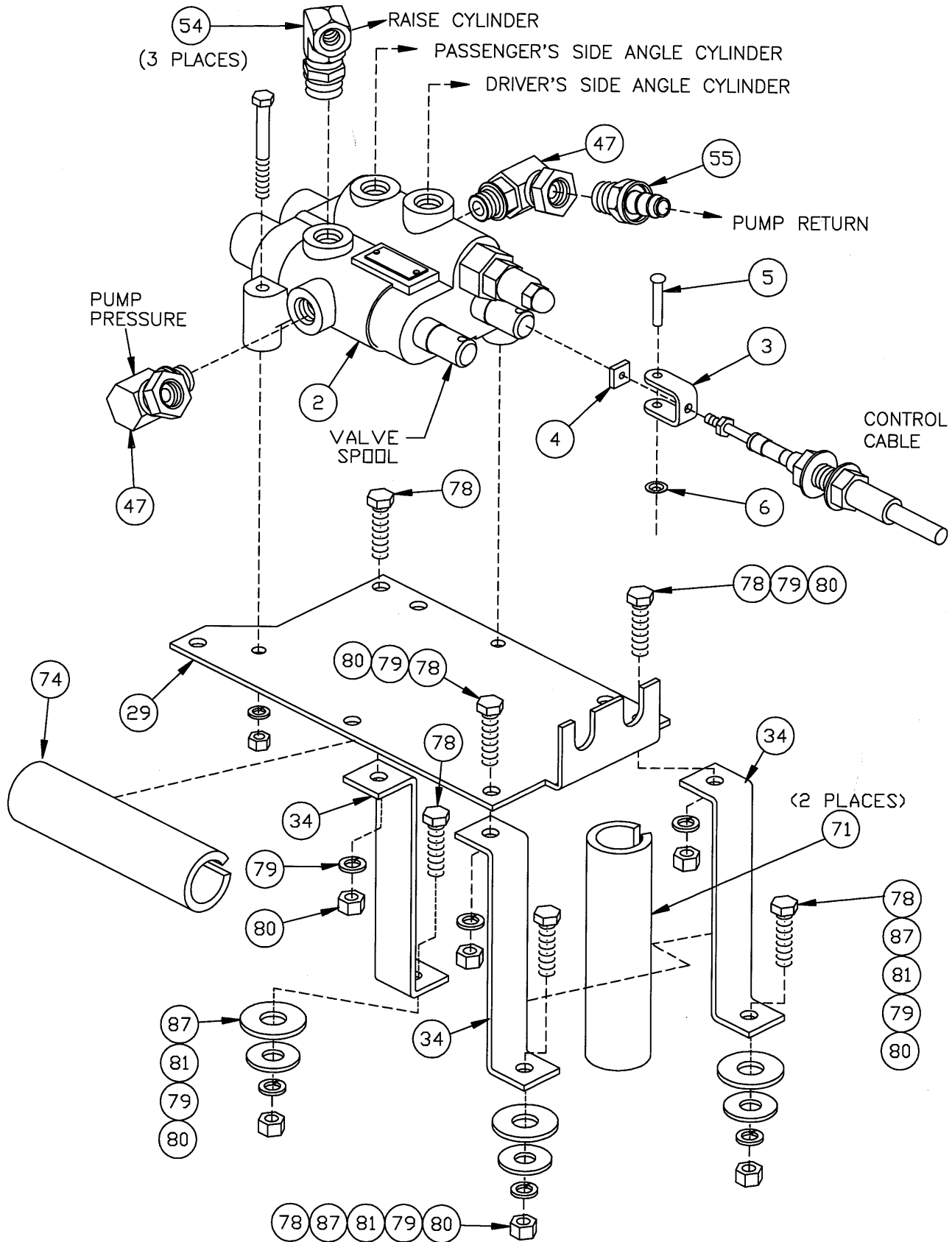


CAUTION - READ INSTRUCTIONS "DRIVE SHEAVE INSTALLATION" AND "LOCTITE" NOTE.





Parts List

| Ref# | Qty | | Part # | Description | Ref# | Qty | | Part # | Description |
|------|------|------|----------|------------------------------------|------|------|------|---------|-----------------------------------|
| | 8500 | 7532 | | | | 8500 | 7532 | | |
| | -40 | | | | | -40 | | | |
| 1 | 1 | | 8356 | Pump assembly | 55 | 2 | | 1658 | Quill - 3/8 Nptm to 3/8 ID Hose |
| 2 | 1 | | A4466-40 | Control Valve Assembly | 56 | 1 | | *8599 | QD/Electric Grille Plate 8 (Lng) |
| 3 | 2 | | 4483 | Clevis - VM | 57 | 1 | | *8600 | 2 QD Grille Plate (Long) |
| 4 | 2 | | 4494 | 10-32 Square Nut - VM | 58 | 1 | | *DC5297 | 1/2 x 2 Steel Pipe Nipple |
| 5 | 2 | | 4491 | 1" Clevis Pin | 59 | 2 | | *8391 | Quill - 3/8" NPTM to 1/2" ID Hose |
| 6 | 2 | | 4493 | 3/16" Push Nut Zp | 60 | 1 | | *8476 | 1/4" x 45 Deg Street Elbow |
| 7 | 1 | | 8389 | Oil Reservoir | 61 | 8 | | *8324 | Hose Tie - 3/16" x 14" |
| 8 | | 1 | 4419 | SLC Head - Belt Drive | 62 | 1 | | *8741 | Bracket - Cable Boot |
| 9 | | 2 | A4490 | 90" SLC Cable | 63 | 1 | | *8284 | Cable Boot |
| 10 | 1 | | 20116 | 1-1/2" x 10" Cylinder Assy - XL | 71 | 2 | | *6595 | 3/4" Split Hose Grommet |
| 11 | 2 | | 20117 | 1-1/2" x 12" Cylinder Assy - XL | 72 | 1 | | 5704 | Caution label |
| 12 | 2 | | 6814 | Clevis Pin - 1 x 3-5/16 | 73 | 2 | | 3042 | Grommet - Rubber, Split |
| 13 | 4 | | 6816 | Anchor Pin - 1 x 4 | 74 | 1 | | 4477 | Grommet - Split Hose |
| 14 | 1 | | 8764 | Filter Kit | 75 | 3 | 8 | *3666 | Hose Tie, nylon 3/16 x 8 |
| 15 | 6 | | 90601 | 1/4" x 1-1/2" Cotter Pin | 76 | | 2 | *90048 | 5/16" x 1-1/4" (NC) Gr5 Cap Scrw |
| 16 | | 1 | 2707 | Hose - 26" Hp 3/8P - 1/4P | 77 | 1 | | 90054 | 5/16" x 1-1/2" (NC) Gr5 Cap Scrw |
| 18 | | 1 | 6066 | Hose - 66" Hp 1/4P - 1/4P | 78 | 4 | 4 | *90042 | 5/16" x 1" (NC) Gr. 5 Cap Screw |
| 19 | | 2 | 375 | Hose - 42" Hp 1/4P - 1/4P | 79 | 6 | 2 | *90360 | 5/16" Sp Lk Washer |
| 20 | | 1 | 3074 | Hose - 22" Hp 1/4P - 1/4P | 80 | 7 | 3 | *90332 | 5/16" (NC) Nut |
| 21 | | 2 | 4424 | 36" HP Hose 1/4P - 1/4P | 81 | 4 | 1 | *90313 | 5/16" Flat Washer |
| 22 | | 2 | 8451 | 3/8" Hose 16" Lp | 84 | 1 | | 90614 | 1/4" x 1-1/4" (NC) Gr. 5 Cap Scrw |
| 23 | | 1 | 8394 | 45" V-Belt 3-V Series (not shown) | 87 | | 5 | *4433 | 1/2" Special Washer |
| 24 | | 1 | 8371 | Drive Sheave | 92 | | 9 | *90361 | 3/8" Sp Lk Washer |
| 25 | | 1 | 3696 | Pump Sheave | 93 | | 4 | *90106 | 3/8" x 1-1/4" (NC) Gr5 Cap Screw |
| 26 | | 1 | 8381 | Pump Bracket | 94 | | 4 | *90680 | 3/8" x 2-3/4" (NC) Gr8 Cap Screw |
| 27 | | 1 | 8380 | Pump Plate | 95 | | 4 | *90638 | 3/8" x 5/8" (NC) NY Gr5 Cap Scrw |
| 29 | | 1 | 5329 | Valve Plate | 96 | | 1 | *90170 | 3/8" x 6" (NC) Gr5 Cap Screw |
| 30 | | 2 | *8454 | 4" Hose Protector | 97 | | 6 | *90315 | 3/8" Plain Washer |
| 31 | | 1 | *8453 | Flex Guard Conduit - 10" | | | | | |
| 32 | | 1 | 8393 | 1/2" Hose 19" LP | | | | | |
| 34 | | 3 | 7966 | Brace | | | | | |
| 42 | | 3 | 21096 | Hose Disconnect Assembly | | | | | |
| 43 | | 2 | *1588 | Dust Plug - Closure/Male | | | | | |
| 44 | | 1 | *4486 | Adapter - Bulkhead 1/4" Npt | | | | | |
| 45 | | 3 | *4485 | Snap Ring - 7/8" Extrnl Bowed | | | | | |
| 46 | | 1 | 319 | 1/4" Npt x 90 deg Swivel adt Union | | | | | |
| 47 | | 2 | 2315 | 9/16 w/O-Ring x 3/8 F Pi Swivel | | | | | |
| 51 | | 2 | 2780 | 1/4 Npt x 90 Deg Street Elbow Frgd | | | | | |
| 52 | | 1 | *2318 | 1/4 Npt x 90 Deg Union Elbow | | | | | |
| 53 | | 1 | *3979 | 3/8 Npt x 90 Deg Street Elbow | | | | | |
| 54 | | 3 | *20316 | 9/16 O-Ring to 1/4 Npt 90° Elbow | | | | | |

| NC FASTENER TORQUE (FT-LB) | | | |
|----------------------------|-------|-----|-----|
| DIAMETER-THREADS | GRADE | | |
| | G2 | G5 | G8 |
| PER INCH | | | |
| 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 |

8500-40 uses Bolt bag 5425 * Part of 8937

1. Cylinder and Cylinder Hose Assembly

- A. Attach the female half of the disconnect (42) and 1/4" x 45 degree. street elbow (60) to the 22" Hp hose (20). Using a bench vise to hold the lift cylinder (10), remove the closure from the port and screw the other end of the hose directly into this port. Place the lift cylinder with the hose pointing to the passenger side into the ears on the lift arm and the upper gear. Secure with the clevis pins (12) and cotter pins (15).
- B. Attach the male half of the quick disconnect (42) to one end of a 36" Hp hose (21). On the other 36" Hp hose (21), attach a male disconnect half (42) and a dust plug (43) to one end.
- C. Using a bench vise to hold the angle cylinders (11), remove the closures from the ports and fasten brass forged street ells (51) into the ports. Point them forward toward the live end of the cylinder and slightly upward as they will be installed on the A-frame. The driver's side cylinder uses the 36" Hp hose (21) with the dust plug and male disconnect half. The passenger's side uses the 36" hose (21) with the male disconnect half and **no dust cover**. Install the cylinders to their respective sides so that the brass Ells are between the cylinders and the A-frame. Secure the cylinders with the anchor pins (13) and cotter pins (15) at both ends.

2. Control Head and Control Cables

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

- A. Drill two 5/8" holes in the firewall for the control cables using the drilling guide as a reference only. Be sure both sides of the firewall are clear of obstructions before drilling.
- B. Install the dash bracket as per dash bracket instructions.
- C. Loosen the "jam nuts" on the control head of the cables (9) and install them into the slots in the control head (8) (raise the cable centers in the beginning of the lower slot). Snap the cable ends onto the ball studs and tighten the jam nuts to secure the cable to the control head. Remove the nuts and the washers from the valve end of the cables. Route the cables out through the firewall and up to the top of the driver's side fender well. Attach the control head to the dash bracket as per the dash bracket instructions. Install the rubber grommets (73) around the cables where they pass through the fire wall.

3. Valve and Valve Plate

- A. Using a bench vise to hold the control valve assembly (2) remove the closures from the valve ports. Screw the 90 degree swivel adapter unions (47) into the "in" and "out" ports. Screw the Quill (55) into the installed adapter in the "out" port.
- B. Install three 9/16" O-ring to 1/4" NPT 90° elbows (54) in the lift and angle ports. Tighten so that the open ends will point towards the exposed valve spools. This will allow for adjustments when installing the hoses.
- C. Mount the valve to the valve plate (29) using two 1/4" x 1 1/4" cap screws, lock washers, and nuts from the valve bag. Install the cap screws from the bottom of the valve plate, with lock washers and nuts on top of the valve. Attach the two braces (34) to the two holes in the "cable attaching end" of the valve plate. Fasten with two 5/16" x 1" cap screws (78), lock washers (79), and nuts (80). Attach the rear left brace (34) to the hole in the rear of the valve plate on the "out" side with one 5/16" x 1" cap screw (78), lock washer (79), and nut (80). Position the valve plate 2" from the battery and 3-1/2" from the inner fender wall. Place the alternator wiring and the heater hose with the "T" between the two front valve plate braces. Position the valve plate to prevent chafing of any vehicle parts. Using the holes in the valve plate braces as guides, drill three 11/32" holes through the inner fender. Attach the valve plate braces to the inner fender with three 5/16" x 1" cap screws Gr. 5 (NC) (78), 1/2" flat washers (87), 5/16" flat washers (81), lock washers (79), and nuts (80). Attach the split hose (74) to the end of the valve plate and the two split hoses (71) to the inside of both the front braces.

- D. Install the control cables to the valve plate by reinstalling the jam nuts and washers on the cables. Place the control cables in respective slots of the valve plate bulkhead with one nut and one washer on each side of the bulkhead. Center the cables in the slots so that they are exactly in line with the valve spool centers. Attach the cable clevis (3) to the cables using the square nuts (4). Slip the cable clevises over the spools. Install the clevis pin (5) through the clevis and spools and secure with a push nut (6). Adjust the cables so that the control lever is centered between both the angle and the 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. Use three nylon ties (75) to run cables along air intake hoses.

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 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

4. Drive Sheave Installation

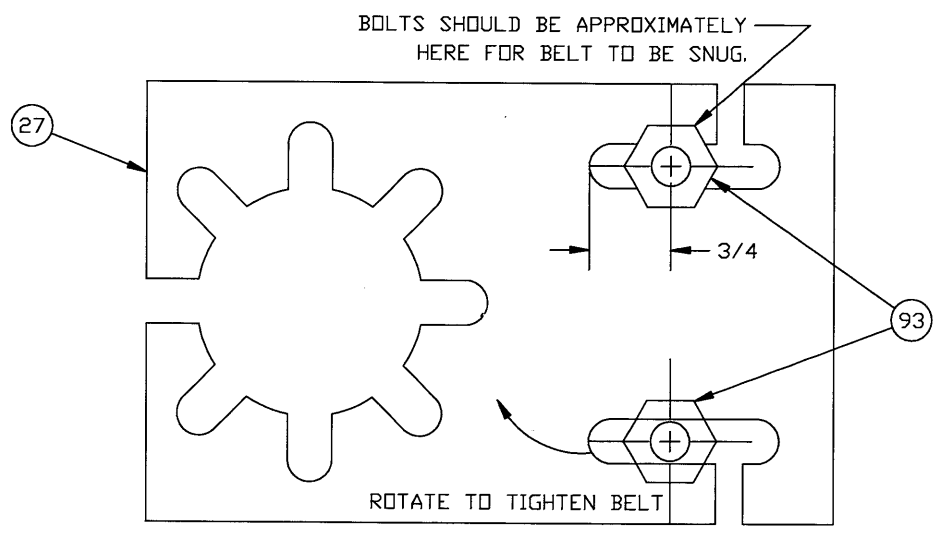
NOTE: Apply a removable loosening prevention compound (such as "Lock-tite") to all drive sheave fasteners prior to installation.

- A. Remove the serpentine belt from the vehicle. Remove the four 3/8" cap screws from the crankshaft pulley. Install the drive sheave (24) over the vehicle sheave washer and into the center of the crankshaft pulley. **Make certain that the machined pilot of the drive sheave seats fully into the crankshaft pulley.** Fasten the drive sheave to the crankshaft with four 3/8" x 2-3/4" (NC) Gr. 8 cap screws (94) and lock washers (92). Torque these fasteners to 46 foot pounds.

DO NOT COMPLETE INSTALLATION OF THIS KIT UNLESS THERE IS AT LEAST 3/16 INCH CLEARANCE OF DRIVE SHEAVE TO EACH BLADE FAN.

5. Pump and Pump Bracket

- A. Remove the first cap screw under the alternator pulley. Position the pump bracket (26) behind the serpentine belt. Attach the pump bracket to the motor using a 3/8" x 6" (NC) Gr. 5 cap screw (96) and a 3/8" lock washer (92) in the place of the previously removed fastener and using two 3/8" x 1-1/4" (NC) Gr. 5 cap screws (93) with lock washers (92) into the two threaded holes on the front of the water pump.
- B. Place the pump (1) in a vise with the relief quill pointing up. Install a 3/8" x 16" low pressure hose (22) onto the quill. Install a 3/8" NPT x 90 degree street elbow (53) to the rear of the pump. Align the open end of the elbow with the relief quill. Install a 1/2" quill (59) into the elbow and attach a 1/2" x 19" low pressure hose (32) to the quill. Install a 1/4" x 2" threaded nipple (58) and a 1/4" NPT x 90 degree union elbow (52) into the remaining port on the back of the pump. Tighten the fitting to align with the relief quill. Install a 26" Hp hose (16) into the elbow. Attach the pump plate (27) to the pump so that the plate is 90 degrees from the hoses so the hoses will point up when attached to the pump bracket (see the illustration).



Use four 3/8" x 5/8" (NC) nylon patched Gr. 5 cap screws (95) with flat washers (97) to attach the pump to the plate. Install the pump sheave (25) onto the pump shaft using the lock nut and key supplied with the pump.

- C. Attach the pump plate (27) to the previously installed pump bracket (26) with two 3/8" x 1-1/4" (NC) Gr. 5 cap screws (93), lock washers (92), and flat washers (97). **Do not fully tighten at this time.** Install a 45" V-belt (23) over the drive and pump sheaves. Tighten the belt and then the pump plate fasteners.

6. Oil Reservoir and Hydraulic Hose Installation

Caution: Reservoir fill must be vertical to engine.

- A. Install a 1/2" quill (59) into the oil reservoir (7). Position the oil reservoir, to avoid chafing, next to the valve plate with the quills toward the engine. Using the holes in the reservoir as guides, drill two 11/32" holes through the fender. Attach the reservoir to the fender with two 5/16" x 1-1/4" (NC) Gr. 5 cap screws (76), 1/2" special washers (87), 5/16" flat washers (81), and nuts (80).
- B. Place the hoses from the pump behind the alternator wiring. Attach 3/8" Lp hose (22) to the lower quill on the oil reservoir and the 1/2" Lp hose (32) to the 1/2" quill. Place the 3/8" Hp hose (22) up between the control cables and attach to the "in" port of the valve. Wrap the Hp hose with a tie wrap (75) where it passes by the control cables and attach it to the "in" port of the valve. Wrap the Hp hose where it passes by the control cables with 4" hose protector (30) secured with two tie wraps (75). Place a second hose protector (30) around the heater hose as it passes by the valve plate secured with two tie wraps (75). Place 10" piece of flex guard conduit (31) on the red battery wire running under valve plate.
- C. Install a 3/8" x 16" Lp hose (22) to the remaining quill on the oil reservoir and to the "out" quill on the valve. **NOTE:**

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

Do not shorten this hose. Bends in all hoses must have sufficient radius to prevent crimping.

7. Hydraulic Hose Installation

- A. Install the 66" Hp hose (18) to the brass elbow in the angle port closest to the cables on the valve (Cyl. A). Pass this hose by the battery and out through the core support near the radiator. Pass the hose out through the grille, low and about 14" off the center toward the driver's side. Attach a female QD half to the long QD/electric grille plate (56) with a snap ring (45). Pass the 66" hose through a rubber dust plug (43) and attach it to the female disconnect half (42). Put a dust plug on the plug of the vehicle harness and slide it into the slot of the grille plate. Attach the grille plate to the grille with 4 long tie wraps (61).
- B. Attach a 42" Hp hose to the raise port elbow (54) on the valve and one 42" Hp hose (19) to the angle port elbow (54) farthest from the cables (Cyl. B) on the valve. Pass these hoses out through the core support by the radiator, low and about 14" off the center toward the passenger's side of the grille. Attach a bulkhead adapter (44) to one hole of the long 2 QD grille plate (57) with a snap ring (45). Attach a male half of a QD (42) to this adapter. Secure a female QD half (42) to the other hole in the grille plate with a snap ring (45). Slide a rubber dust plug (43) over the end of the raise hose and attach this to the male disconnect on the inboard side of the grille plate. Slide a dust plug (43) over the angle hose and attach it to the female QD half (42) on the outboard side of the plate. Slide the plate back to the grille and attach it with 4 long tie wraps (61). Using tie wraps (75), tie the hoses together and keep the hoses away from the battery cables.
- C. 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.
- D. Install in line oil filter as per filter kit (14) instructions located in the common hydraulics kit.

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 the 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. **NOTE: If the blade angles opposite from the control lever position, reverse the two Hp 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 hose 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.