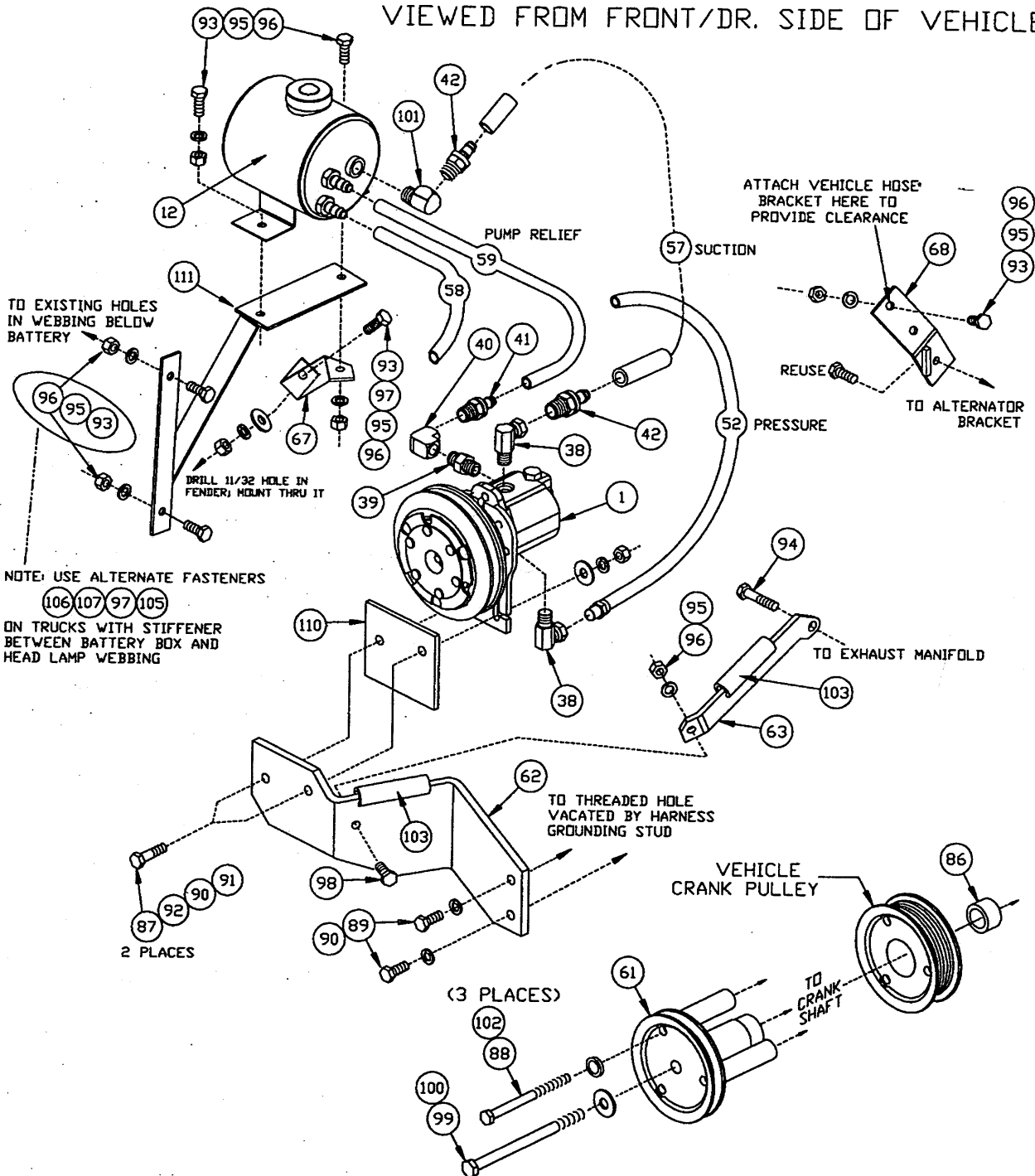
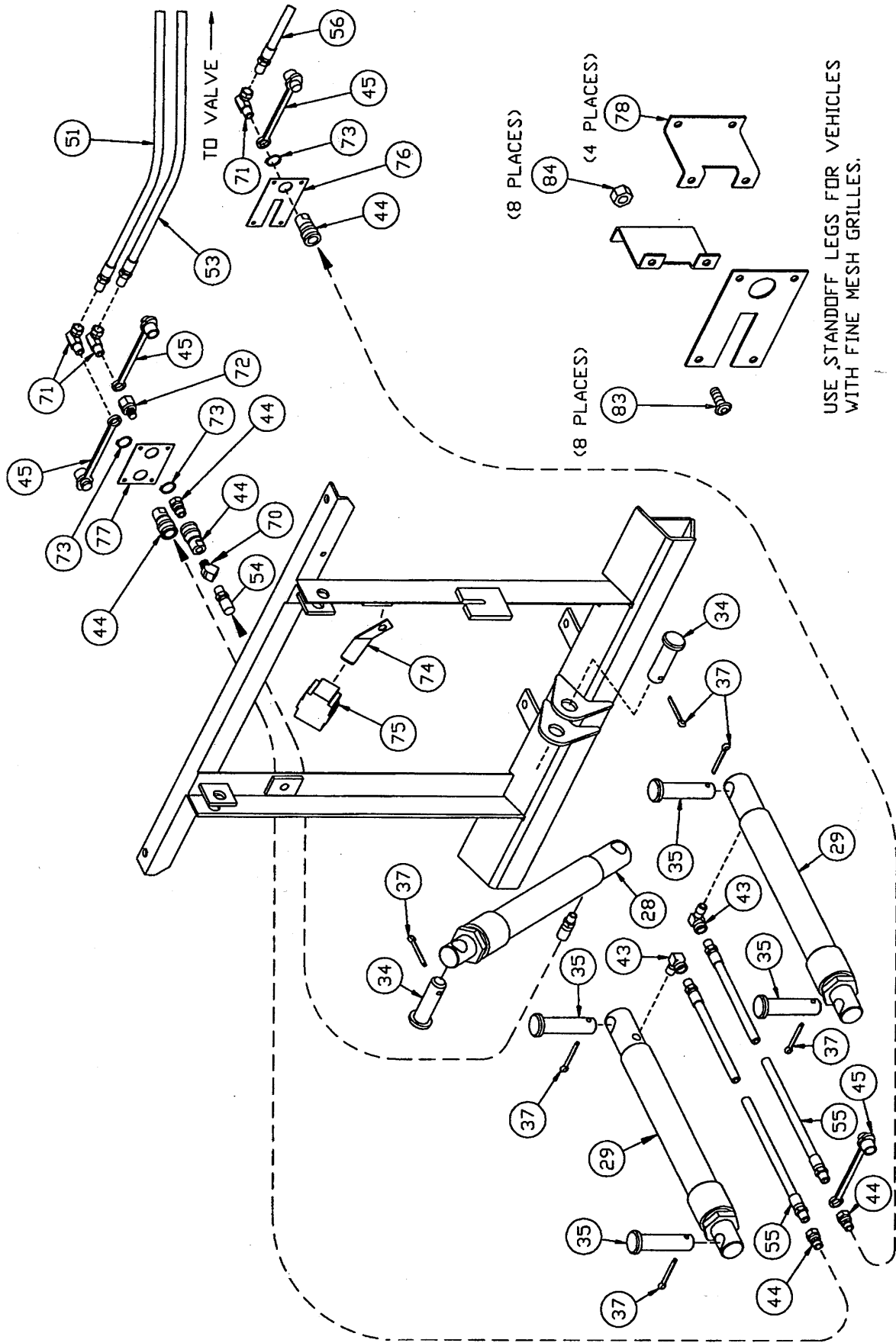
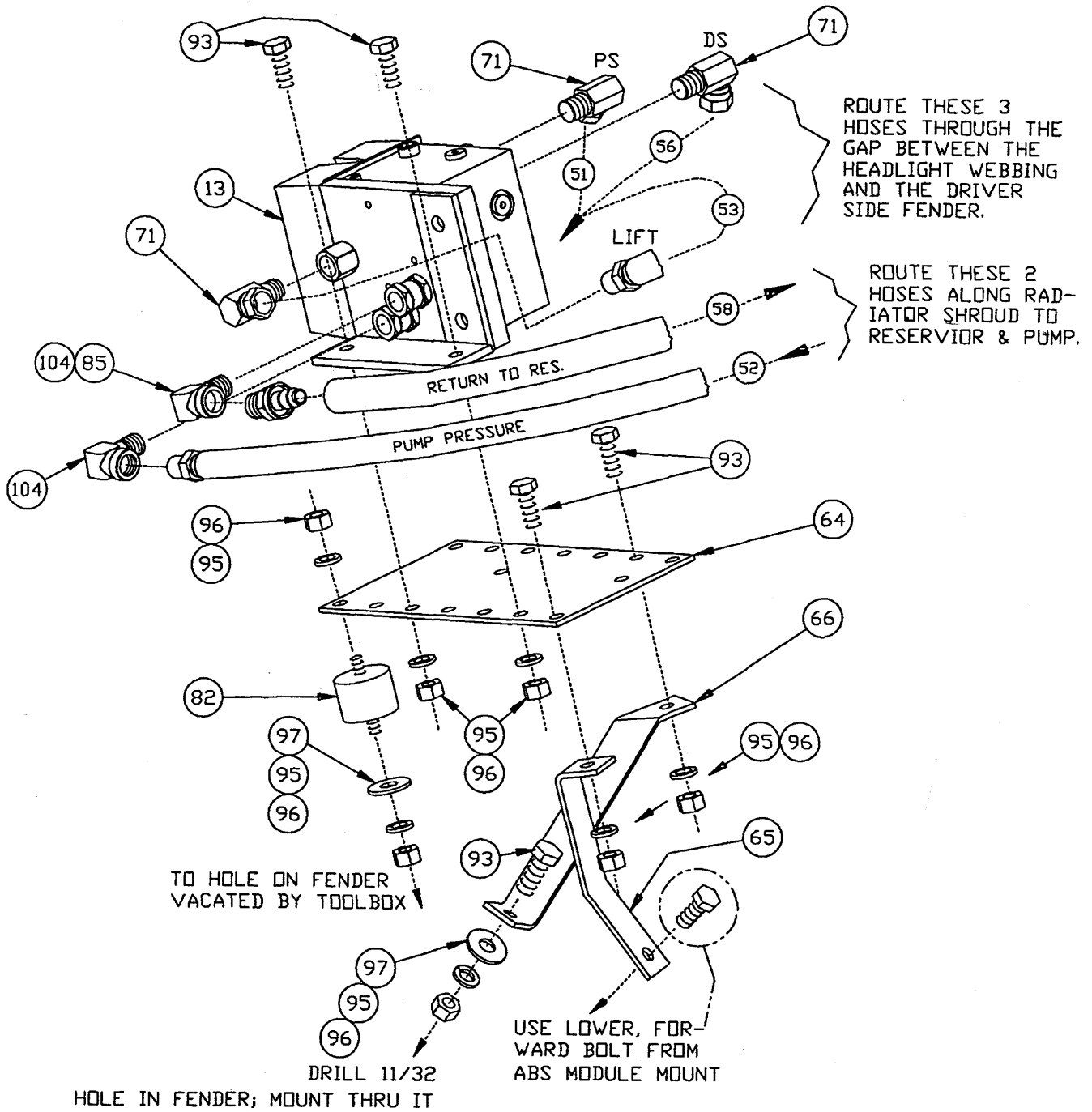


**PUMP/CLUTCH & RESERVOIR INSTALLATION:  
VIEWED FROM FRONT/DR. SIDE OF VEHICLE**



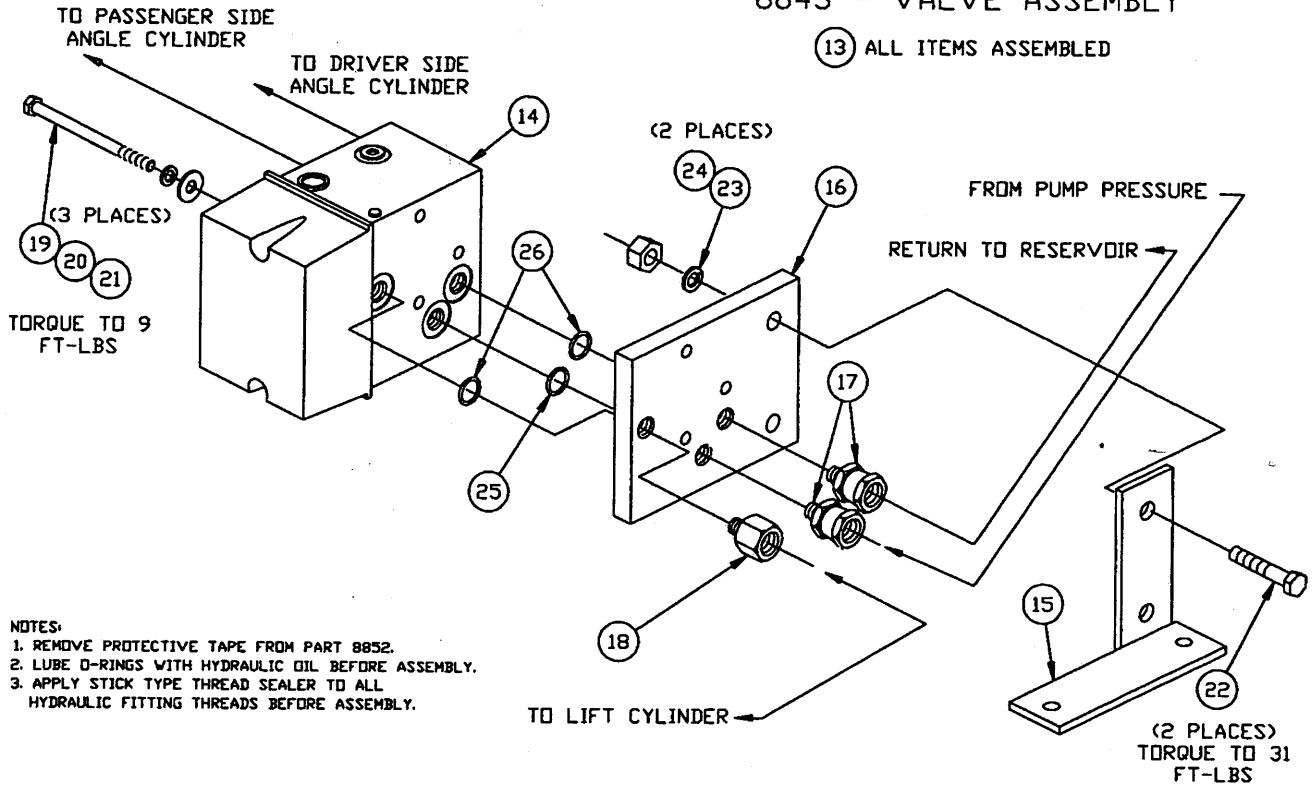


VALVE INSTALLATION: AS VIEWED FROM BEHIND



8843 - VALVE ASSEMBLY

13 ALL ITEMS ASSEMBLED



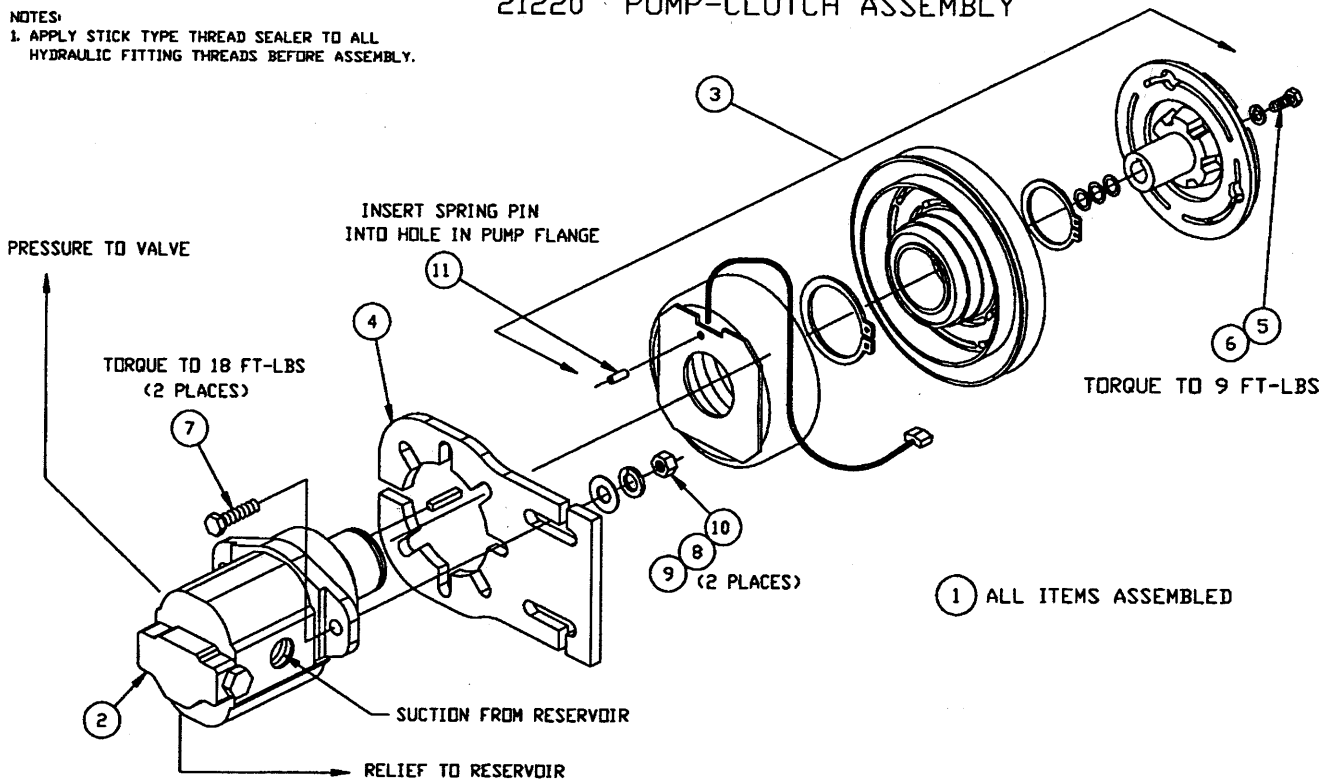
NOTES:

1. REMOVE PROTECTIVE TAPE FROM PART 8852.
2. LUBE O-RINGS WITH HYDRAULIC OIL BEFORE ASSEMBLY.
3. APPLY STICK TYPE THREAD SEALER TO ALL HYDRAULIC FITTING THREADS BEFORE ASSEMBLY.

21220 PUMP-CLUTCH ASSEMBLY

NOTES:

1. APPLY STICK TYPE THREAD SEALER TO ALL HYDRAULIC FITTING THREADS BEFORE ASSEMBLY.






**Parts List**  
**Electric Clutch Common Hydraulic Kit – 8840-40B**

Assy	Ref # Comp	Qty	Part #	Description
1		1	21220	Pump-Clutch Assembly
	2	1	21221	Pump Assembly
	3	1	21222	Electric Clutch
	4	1	21219	Pump Plate
	5	1	90461	1/4 x 3/4 (NC) Gr.5 Cap Screw
	6	1	90359	1/4 Lock Washer
	7	2	90048	5/16 x 1-1/4 (NC) Gr.5 Cap Screw
	8	2	90360	5/16 Lock Washer
	9	2	90313	5/16 Plain Washer
	10	2	90332	5/16 Hex Nut (NC)
	11	1	90707	5/32 x 1/2 Spring Pin
12		1	8389	Oil Reservoir
13		1	8843	Valve Assembly--Elec Clutch/Sol
	14	1	7921	Valve Manifold Assy Sol - 4000
	15	1	8851	Valve Bracket
	16	1	8852	Mounting Plate - Valve
	17	2	8849	1/8 Nptm to 1/4 Nptf Swivel Adapter
	18	1	8848	1/8 Nptm to 1/4 Nptf Reducing Adapt
	19	3	90696	1/4 x 3-1/2 (NC) Gr. 5 Cap Screw
	20	3	90359	1/4 Lock Washer
	21	3	90311	1/4 Plain Washer
	22	2	90111	3/8 x 1-1/2 (NC) Gr. 5 Cap Screw
	23	2	90361	3/8 Lock Washer
	24	2	90334	3/8 (NC) Nut
	25	1	3719	O-Ring - 013
	26	2	5827	O-Ring - 012
27		1	7714	Dash Bracket Bag (not shown)
28		1	20116	10" Lift Cylinder Assy - XL
29		2	20117	12" Angle Cylinder Assy - XL
30		1	8764	Filter Kit
31		1	20040	Control Harness--clutch & sol valve
32		1	8292	Solenoid Control
33		1	21295	Bolt Bag for 8840-40B
	34	2	6814	Clevis Pin - 1 OD x 3-5/16
	35	4	6816	Anchor Pin - 1 OD x 4
	36	1	21296	Bolt Bag - Part of 21295
	37	6	90601	1/4 x 1-1/2 Cotter Pin
	38	2	21270	3/4-16 O-ring to 3/8 Npt swivel elbow
	39	1	5804	1/4" Hex Male Pipe Nipple
	40	1	2318	1/4 Npt x 90° Union Elbow
	41	1	8850	Quill - 1/4 Nptf to 3/8 ID Hose
	42	2	8391	Quill - 3/8 Nptm to 1/2 ID Hose
	43	2	2780	1/4 Npt x 90 degree Street Elbow
	44	3	A1587	Hose Disconnect Assembly
	45	4	1588	Dust Plug - Closure/Male
	46	1	3042	Grommet - Rubber, Split (not shown)
	47	1	4477	Grommet - Split Hose (not shown)
	48	1	8329K	Dielectric Grease Tube (not shown)
	49	1	4302	3M 560 in-line Connector
	50	1	4303	Female Connector (not shown)
	51	1	5048	Male Connector (not shown)

**Parts List**  
**Electric Clutch Peculiar Hydraulic Kit – 7551B**

Ref #	Assy	Comp	Qty	Part #	Description
	51		1	6066	66" HP Hose, 1/4P to 1/4P
	52		1	4440	78" HP Hose, 1/4P to 3/8P
	53		1	20164	72" HP Hose, 1/4P to 1/4P
	54		1	3074	22" HP Hose, 1/4P to 1/4P
	55		2	4424	36" HP Hose, 1/4P to 1/4P
	56		1	21061	46" HP Hose, 1/4P to 1/4P
	57		1	21324	1/2" x 26" LP Hose
	58		1	2549	3/8" x 48" LP Hose
	59		1	1683	3/8" x 36" LP Hose
	60		1	489	47" V-Belt (not shown)
	61		1	21045**	Drive Sheave
	62		1	21040	Pump Bracket
	63		1	21039	Pump Bracket Brace
	64		1	8871	Valve Plate - Sol valve
	65		1	21037	Valve Plate Brace
	66		1	21038	Valve Plate Brace
	67		1	21033	Brace - Reservoir
	68		1	21034	Stand-off Brace
	69		1	21070	Bolt Bag for 7551B
		70	1	8476	1/4 x 45 Deg Street Elbow
		71	6	319	1/4 Npt x 90 deg Swvl Adpt Union
		72	1	4486	Bulkhead Adapter
		73	3	4485	7/8" Snap Ring - Extrnl Bowed
		74	1	8741	Bracket - Cable Boot
		75	1	8284	Cable Boot
		76	1	8688	QD/Electric Grille Plate (short)
		77	1	8686	2 QD Grille Plate (short)
		78	4	8687	Stand off Leg
		79	6	8324	Tie Wrap--3/16 x 14 (not shwn)
		80	8	3666	Tie Wrap - 3/16 x 8 (not shown)
		81	1	8992	3" Fitting Protector (not shown)
		82	1	5529	Shock Mount
		83	8	90687	1/4 x 1/2 (NC) Button Head Socket Cap Screw
		84	8	90350	1/4 (NC) Locknut
		85	1	8850	Quill - 1/4 Nptf to 3/8 ID Hose
		86	1	20057**	Bushing .750
		87	2	90124	3/8 x 2 (NC) Gr.5 Cap Screw
		88	3	91166	3/8 x 4-1/2 (NF) Gr.5 Cap Scrw
		89	2	90103	3/8 x 1 (NC) Gr.5 Cap Screw
		90	4	90361	3/8 Lock Washer
		91	2	90334	3/8 (NC) Nut
		92	2	90315	3/8 Plain Washer
		93	12	90042	5/16 x 1 (NC) Gr.5 Cap Screw
		94	1	91167	3/8 x 2-1/4 (NC) Gr.5 Cap Scrw
		95	14	90360	5/16 Lock Washer
		96	14	90332	5/16 (NC) Nut
		97	5	90313	5/16 Plain Washer
		98	1	90048	5/16 x 1-1/4 (NC) Gr. 5 Cap Screw
		99	1	91165	7/16 x 6 (NF) Gr.5 Cap Screw
		100	1	90317	7/16 Plain Washer
		101	1	3979	3/8 Npt x 90 Deg Street Elbow
		102	3	4268	5/8" Spacer Washer

NC FASTENER TORQUE (FT-LB)			
DIAMETER- THREADS	GRADE		
			
PER INCH	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

**Parts List**  
**Electric Clutch Peculiar Hydraulic Kit – 7751B**

Ref #		Qty	Part #	Description
Assy	Comp			
	103	2	21080	Split Hose Grommet (1/2 x 3)
	104	2	2780	1/4 Npt x 90 Deg Street Elbow
	105	2	90379	M8 x 1.25 x 30 Cap Screw Gr. 8.8
	106	2	90423	M8 x 1.25 Nut
	107	2	90428	M8 Lock washer
	110	1	21323	Pump Bracket Spacer
	111	1	21032	Reservoir Bracket

**\*\* Order PN 21081 for Drive Sheave w/Bushing for Service**

## Installation Instructions

**Note: The 20850 Fish-Stik™/Clutch Relay Kit is required for installations that will use the 9400 Fish-Stik™ Hand-Held Control.**

### 1. Cylinder and Cylinder Hose Assembly

- A. Attach the female half of the disconnect (44) and a 1/4" NPT 45 degree elbow (70) to the 22" HP hose (54). Using a bench vise to hold lift cylinder (28), remove the closure from the port and screw the other end of the hose directly into the port. Place the lift cylinder, with hose pointing towards passenger side, into the ears on the lift arm and upper gear. Secure with clevis pins (34) and cotter pins (37).
- B. Attach a male quick disconnect half (44) to one end of a 36" HP hose (55). Place a dust cover (45) on the end of the other 36" HP hose (55) and put another male quick disconnect half (44) on this hose.
- C. Using a bench vise to hold the angle cylinders (29), remove the closures from the ports. Screw the brass forged street ells (43) into ports. The ells should point forward toward the live end of cylinder and slightly upward as they will be installed on the A-frame. The driver side cylinder uses the 36" HP hose with the dust cover and male disconnect half. The passenger side cylinder uses the 36" HP hose with the male disconnect half and **no dust cover**. This male half will be plugged into the raise cylinder female half for plow storage. Install the cylinders into their respective sides so that ells are between the cylinders and A-frame. Secure cylinders with anchor pins (35) and cotter pins (37) 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. Remove the top half of the fan shroud, fan and clutch from the water pump shaft (right hand thread). Loosen the serpentine belt. Remove and discard the three cap screws holding the vehicle crank pulley to the harmonic balancer. If the vehicle is equipped with a fourth cap screw in the center of the vehicle pulley, remove and discard it. Check the vehicle crank pulley for any burrs around the mounting holes. Remove.

**Caution: Before inserting bushing, check center of crankshaft for rust or any foreign material and remove.**

- B. Install the drive sheave bushing (86) into center of crank shaft. Reinstall the vehicle sheave. Place the drive sheave (61) center hub through the vehicle sheave and bushing. Place a 7/16 x 6 (NF) Gr. 5 cap screw (99) and flat washer (100) into the center of the sheave, and three 3/8 x 4-1/2 (NF) Gr. 5 cap screws (88) with spacer washers (102) through sheave spacers. **Tighten 7/16 x 6 cap screw (torque to 50 ft-lbs) before tightening the three 3/8 x 4-1/2 cap screws (torque to 31 ft-lbs)**

NF FASTENER TORQUE (FT-LB)			
DIAMETER- THREADS	GRADE		
			
PER INCH	G2	G5	G8
1/4 - 28	6	10	14
5/16 - 24	12	19	27
3/8 - 24	23	35	50
7/16 - 20	38	55	80
1/2 - 20	55	85	120
9/16 - 18	80	120	170
5/8 - 18	110	170	240
3/4 - 16	200	300	420
7/8 - 14	180	470	670
1 - 12	270	700	980

### 3. Pump - Clutch Assembly , Pump Bracket, and Vehicle Hose Standoff Bracket

- A. Remove battery ground and vehicle harness ground from the ground stud at the base of the engine beside the mechanical fuel pump port. Discard the ground stud. Remove the front passenger side exhaust manifold bolt and discard. Position the pump bracket (62) against the block where the grounding stud was removed. Attach the pump bracket to the block using two 3/8 x 1 (NC) cap screws (89), and 3/8 lock washers (90). One goes in the threaded hole vacated by the grounding stud, and one in the threaded hole directly above it. Reinstall the battery ground and the vehicle harness ground to the bottom bolt. **Do not tighten at this time.** Attach the rounded end of the pump bracket brace (63) to the exhaust manifold replacing the previously removed bolt with a 3/8 x 2-1/4 (NC) cap screw (94). Attach the bent end of the pump bracket brace (63) to the pump bracket with a 5/16 x 1-1/4" cap screw (98), lock washer (95) and nut (96). **Tighten all fasteners.** Place a 1/2" split hose grommet (103) over the angled part of the pump bracket. Place another 1/2" split hose grommet (103) over the pump bracket brace.
- B. Remove and save the bolt holding the vehicle hose bracket below the alternator. Attach the standoff brace (68) to the alternator bracket reusing the bolt previously removed. The bracket will point up and slightly forward. Attach the vehicle hose bracket previously removed to the standoff brace (68) by inserting a 5/16 x 1 cap screw (93) through the hole in the center of the vehicle hose bracket and through the outer hole in the standoff brace. Fasten with a 5/16 lock washer (95) and nut (96). The vehicle hose bracket will run parallel with the standoff brace.
- C. The pump clutch assembly (1) should be rotated in the pump plate (4) so the pressure 'out' port is pointing toward the mounting slots in the pump plate. Looking down on the pump-clutch assembly with the suction 'in' port up and using the pump shaft as a 12:00 reference, position both the pressure port and suction port 90° swivel fittings (38) to 6:00. Lock the fittings in their proper orientation with the jam nuts. Attach a 1/2" quill (42) into the suction fitting. Install the 1/4" pipe nipple (39) into the relief port on the end plate of the pump. Screw the 1/4" brass elbow (40) onto the nipple and aim it away from the back of the pump. Install 1/4"-3/8" ID hose quill (41) into elbow. Screw the 3/8" end of the 78" HP hose (52) into the elbow on the pump's pressure port.
- D. Route the loose end of the HP hose between the vehicle's A/C and heater hoses and the pump bracket. Loop it back toward the front of the vehicle over the A/C and heater hoses. Mount the pump, with the pump bracket spacer (110) between the pump plate and the pump bracket, to the back side of pump bracket with two 3/8 x 2 (NC) cap screws (87), flat washers (92), lock washers (90), and nuts (91). Install the 47" V-belt (60) over the drive sheave and clutch sheave. Tighten the belt. Allow maximum clearance around the pump assembly and belt. Tighten the pump mounting bolts.
- E. Install the 36" x 3/8" LP hose (59) onto the pump's relief quill. Install the 26" x 1/2" LP hose (57) onto the pump's suction quill. Route these hoses up and around along with the pump's HP hose.

### 4. Solenoid Control and Harness Installation

**Note:** Use dielectric grease (48) to prevent corrosion on all under hood electrical connections. Fill receptacles and lightly coat ring terminals and blades before assembly.

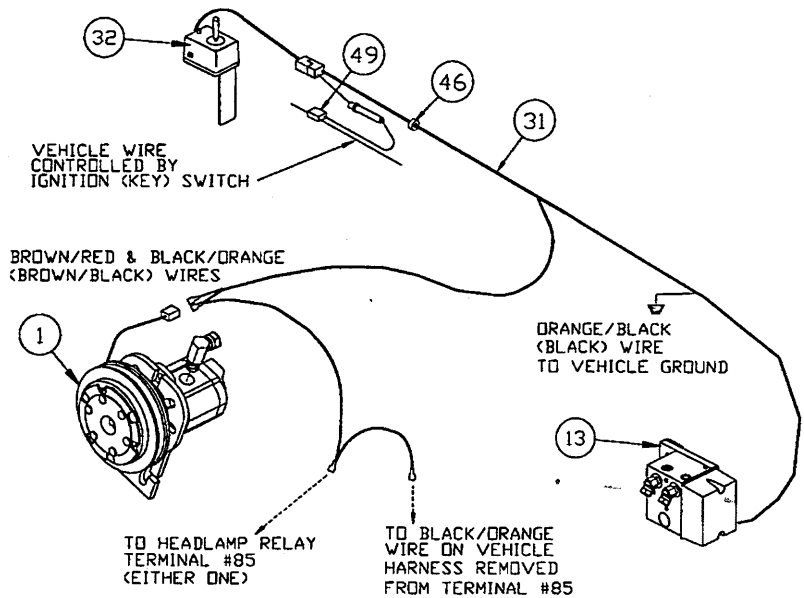
- A. Check both sides of fire wall for wires and hot or moving engine parts. Then, on the driver side, drill a 5/8" hole in the fire wall for the control harness (31).
- B. Install the solenoid control (32) and dash bracket as per the instructions found in the Dash Bracket Bag (27) located in the common hydraulic bolt bag.

**Warning!** Disconnect battery before installing, removing or replacing electrical components.

- C. Remove negative battery cable from battery.



- D. Insert control harness (31) through hole drilled in fire wall. Attach connector to plug on solenoid control. Connect the red wire from the fuse holder to a circuit which is on only when the ignition key is on. Use in-line connector (49). Route the main portion of harness (white, green, blue and black wires) to the valve. Place a grommet (46) around control harness where it passes through fire wall. Remove plastic cover from valve and install solenoid wires according to instructions inside cover. With the harness strain relief in place inside the cover, install the cover. Attach orange/black (black) wire with ring terminal exiting loom near valve to a good vehicle ground. Route portion of harness with brown/red and black/orange wires with female spade terminals to electric clutch.

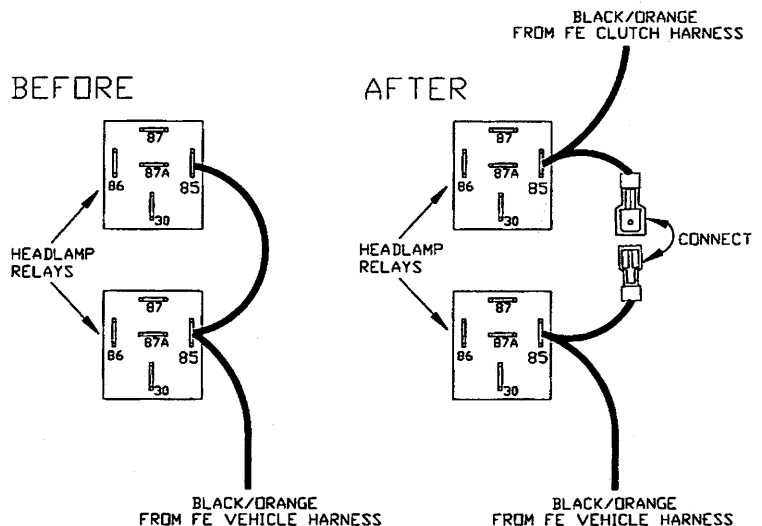


**Note: Install the 20850 Fish-Stik™/Clutch Relay Kit at this time, if necessary.**

Attach female spade terminals to clutch plug (brown/red to black with white stripe and black/orange to black). Fasten other black/orange wire with female spade connector to head lamp relay and male spade connector to black/orange ground wire from vehicle harness (see Diagram 1).

**Note: The relay & vehicle harness are found in peculiar light kit.**

- E. Install plow headlamps as per the light kit instructions. Stretch the rectangular opening of the plug cover strap (from light kit) over grille connector ends of the long battery cable (from hydraulics box) and vehicle harness (from light kit). Place the plug cover over the mold on the harness.
- F. Reconnect negative battery cable to battery terminal.



## 5. Valve Assembly and Valve Plate

- A. Remove the plastic tool box on the driver side fender.
- B. Attach the valve plate braces (65 & 66) and shock mount (82) to the valve plate, as per the illustration, using 5/16 x 1 cap screws (93), lock washers (95) and nuts (96). **Do not tighten at this time.** Remove and save the lower, forward bolt from the ABS module mount. Temporarily attach the valve plate assembly to the vehicle by attaching the brace (65) to the ABS mount with the previously removed bolt, and by attaching the shock mount to the fender through the hole used by the tool box fastener. Mark the fender where the valve brace (66) will be attached. Remove the assembly. Drill a 11/32" hole in the fender. Attach the valve assembly (13) to the valve plate (64) with two 5/16 x 1 cap screws (93), lock washers (95), and nuts (96) as per the illustration.

DIAGRAM 1

Attach the valve assembly to the vehicle. Use a 5/16 flat washer (97), lock washer (95), and nut (96) on the bottom side of the shock mount, and a 5/16 x 1 cap screw (93), flat washer (97), lock washer (95), and nut (96) for valve brace (66). Install the brace (65) into the lower, forward hole in the ABS module mount using the vehicle fastener. When properly installed, the valve should be mounted at roughly a 30 degree angle above horizontal.

- C. As per the illustration, install two 1/4 x 90 degree swivel fittings (71) into the angle cylinder ports on the valve and one 1/4 x 90 degree swivel fitting (71) into the lift port. The angle port swivels will point slightly down and toward the fender. The lift fitting will point toward the engine. Install a 1/4" street 90 degree elbow (104) into the return port swivel connector and a 1/4 x 3/8 hose quill (85) into the elbow. **Do not tighten the swivel at this time.** Install a 1/4" 90 degree street elbow (104) into the pressure port swivel connector. These fittings will point toward the engine.

## 6. Remote Reservoir Installation

**Caution: Reservoir fill cap must be vertical to engine.**

- A. Attach the remote reservoir bracket (111) to the battery box using the two existing holes in the webbing below the battery. The bracket will need to be placed behind the transmission oil cooler line. Attach the bracket with two 5/16 x 1 cap screws (93), lock washers (95), and nuts (96).

On some vehicles the holes under the battery, which are used to mount the remote reservoir, are already being utilized to hold a stiffener between the battery box and the head lamp webbing. In this case remove the battery and battery box with the stiffener attached. Replace the two fasteners holding the stiffener to the battery box with two M8 X 1.25 X 30 cap screws (105) and a 5/16" flat washer (97) under the head of the fastener. These fasteners will be used as the mounting "studs" for the reservoir mounting bracket. Reinstall the battery box and battery. Install the remote reservoir bracket (111) to the two "studs" with M8 nuts (106) and M8 lock washers (107). **Note: Be sure to isolate and secure the transmission oil lines from the reservoir bracket to eliminate rubbing.**

Temporarily attach the remote reservoir (12) and remote reservoir brace (67) to the remote reservoir bracket (111) with two 5/16 x 1 cap screws (93), lock washers (95), and nuts (96). Position the reservoir so there is no contact with any vehicle equipment. The positive battery connections may need to be repositioned to eliminate any rubbing on the reservoir. Locate a fastening point between the battery and the air filter box for the reservoir brace (67) and mark the fender. Drill a 11/32" hole as marked and fasten the brace to the fender with a 5/16 x 1 cap screw (93), flat washer (97), lock washer (95) and nut (96). **Tighten all fasteners.** Screw a 3/8" street elbow (101) into the threaded port of the reservoir and screw a 3/8" x 1/2" quill (42) into the elbow. Point the elbow and quill back toward the fire wall.

- B. Tighten the serpentine belt. Replace the fan/clutch assembly and the top half of the radiator shroud at this time.

## 7. Hydraulic Hose Installation

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

**Note: Bends in all hoses must have sufficient radius to prevent crimping. A crimped hose may cause overheating of the hydraulic system, hose failure and possible engine fire.**

- A. Route the loose end of the pump's 78" high pressure hose (52) over the top of the radiator shroud and screw it into the pressure fitting on the valve. Install one end of the 48" low pressure hose (58) to the return quill on the reservoir. Run the low pressure hose on top of the radiator shroud, along next to the high pressure hose, and attach the other end to the quill in the return port on the valve. Route the loose end of the 1/2" suction hose over the vehicle's AC lines and heater hoses and install it on to the 1/2" quill (42) already screwed into the reservoir. Run the relief hose along with the suction hose and install it into the relief quill on the reservoir. At this time secure the hoses around the pump and reservoir with plastic ties (59) to ensure no contact with any moving engine parts. **Make sure that the pump suction hose and the relief hose are fastened away from the exhaust manifold and any other hot engine parts. To ensure safe clearance from the exhaust manifold, it may be necessary to cut the LP hose to a slightly shorter length.**

- B. Remove the vehicle's grille. Route the three working cylinder hoses (angle right, angle left and lift) through the gap between the headlight webbing and the driver side fender. Screw the 66" passenger side angle hose (51) into the passenger side angle port 90 degree fitting. Route this hose to the passenger side of the vehicle and out through the grille, low and about 14" from the center. Route the 72" lift cylinder hose (53) with the angle cylinder hose just installed. Screw it into the 90 degree fitting on the valve with the hose running around the engine side of the valve. Route the 46" driver side angle hose (56) from the driver side angle port on the valve out through the grille, low and about 14" to the driver side of center. Run the head lamp connector (with dust cover) along with this angle cylinder hose. Vehicles with heavy duty cooling and air conditioning may need the 3" fitting protector (81) on the hoses rubbing the edge of the coil between the radiator and the grille. Place the fitting protector around all three hoses and secure with tie wraps (80).

**Note: Some GMC models with fine mesh grilles may have to use stand off legs (78) fastened with four 1/4 x 1/2 socket head cap screws (83) and locknuts (84) on each grille plate (76 and 77).**

- C. Attach the female half of a quick disconnect (QD) (44) to one hole in the two QD grille plate (77) with a snap ring (73). Attach the bulk head adapter (72) to the other hole in this grille plate with another snap ring (73). If the vehicle does not need the above mentioned stand off legs on the grille plates, install a 1/4 x 90 degree swivel fitting (71), with dust plug (45), into the female QD. Install a 1/4 x 90 degree swivel fitting (71), with dust plug (45), into the bulk head adapter. Attach to grille plate with a snap ring (73). Install a male QD half (44) to the bulk head adapter (72). Attach the passenger side angle cylinder hose to the female QD and the lift cylinder hose to the bulk head adapter. Attach the grille plate assembly to the grille with plastic ties (80). The female QD should be placed toward the outside of the vehicle.
- D. Attach a female QD half (44) to the QD/Electric grille plate (76) with a snap ring (73). If the vehicle does not need the stand off legs on the grille plates, put a dust plug (45) on the end of a 90 degree swivel fitting (71) and screw it into the female QD. Screw the driver side angle cylinder hose (56) into the 90 degree fitting. Slide the head lamp connector into the slot on this grille plate. Attach the grille plate assembly to the grille with plastic ties. The QD should be placed to the outside of the vehicle. Reinstall the grille.
- E. Install cable boot bracket (74) on driver side headgear brace, between brace and fasteners. Insert cable boot (75) on over bracket.
- F. Align all the fittings on the valve and make sure they are tight.
- G. Install the in-line oil filter (30) as per the instructions located in the common hydraulic kit.

## 8. OPERATIONS

- A. Check all fittings and fasteners for tightness. Secure hoses with nylon tie wraps (80).
- B. Attach the hose disconnects, push lift arm all the way down, and fill reservoir with FISHER® High Performance Hydraulic Fluid (recommended for superior cold-weather performance) or type "A" automatic transmission fluid. Start engine. Lift and angle blade several times. **If blade angles opposite from control lever position, reverse the two angle hoses at the valve.** Raise front end of vehicle until plow is clear of ground with lift cylinder fully retracted. Check reservoir oil level. Angle blade (with lift cylinder retracted) to remove air from system. Recheck 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 turn off the engine and then turn the key to the "on" position (the red LED light will be lit). Move the control to the four plowing positions. Activate lower/float before removing or installing the plow.