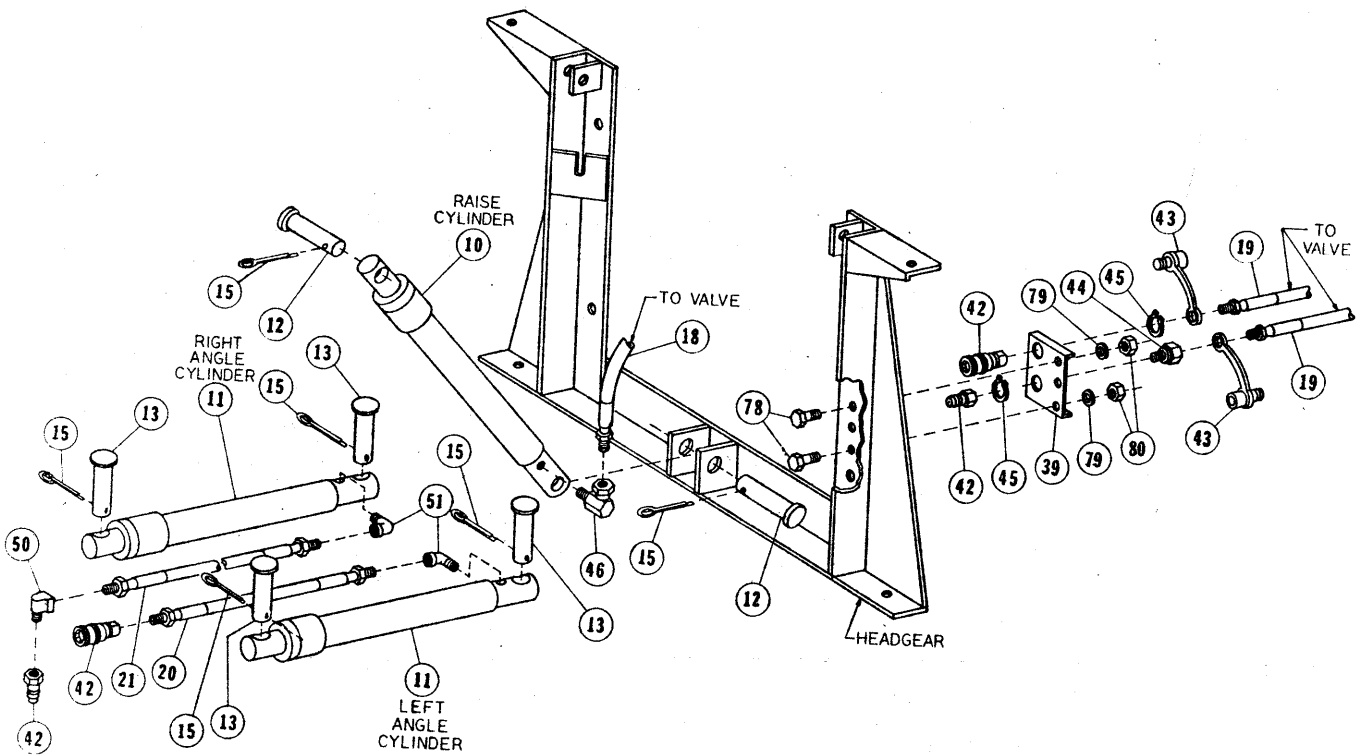
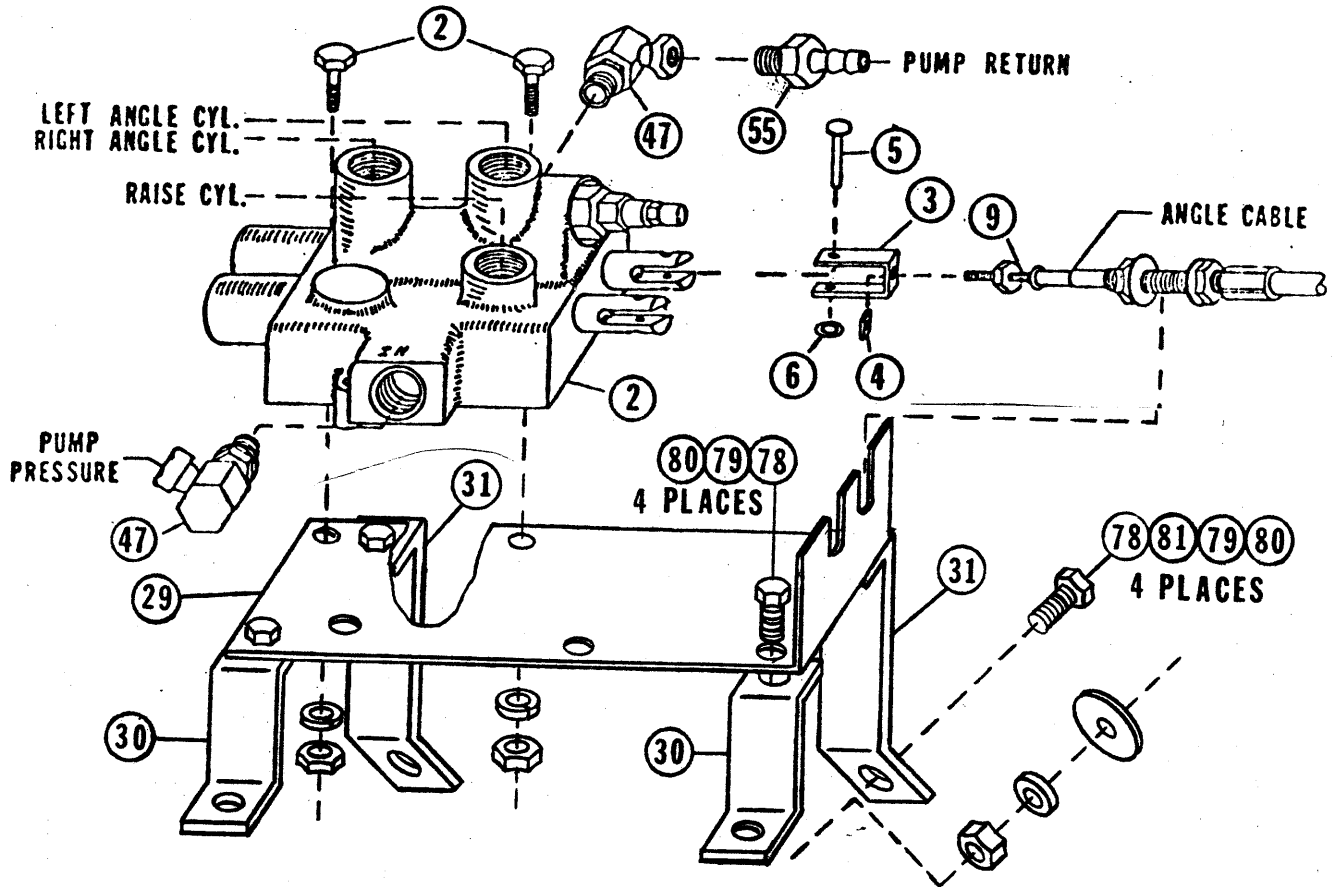


6394



HYDRAULICS PARTS LIST

7505
A4468-40

REF#	QUAN	IN KIT	PART#	DESCRIPTION
	A4468-40	7505		* PART OF 8039 BOLT BAG
1	1		A2311	PUMP TANK ASSEMBLY
2	1		A4466	CONTROL VALVE ASSEMBLY
3	2		4483	CLEVIS
4	2		4494	10-32 SQUARE NUT
5	2		4491	CLEVIS PIN
6	2		4493	3/16 PUSH NUT
7	1		8764	FILTER KIT (AT END OF INSTRUCT.)
8		1	4419	SINGLE LEVER CONTROL HEAD
9		2	A4949	30" CONTROL CABLE, SLC
10	1		A318	10" LIFT CYLINDER ASSEMBLY
11	2		A3660	12" ANGLE 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	2516	72" H.P. HOSE, 1/4P TO 3/8P
17		1	2515	72" L.P. HOSE
18		1	1665	60" H.P. HOSE, 9/16 O-RING TO 1/4P
19		2	1664	54" H.P. HOSE, 9/16 O-RING TO 1/4P
20		1	376	32" H.P. HOSE, 1/4P TO 1/4P
21		1	4424	36" H.P. HOSE, 1/4P TO 1/4P
22		1	* 5588	3/16 FAN SPACER
23		1	358	FAN BELT, 51"
24		1	8040	DRIVE SHEAVE
25		1	3696	PUMP SHEAVE
26		1	8041	PUMP BRACKET
27		1	8042	PUMP BRKT BRACE - UPPER
28		1	8043	PUMP BRKT BRACE - LOWER
29		1	5329	VALVE PLATE
30		2	8552	VALVE PLATE BRACE
31		2	8054	VALVE PLATE BRACE
32				
33				
34				
35		1	5495	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
40				
41				
42	2		A1587	DISCONNECT ASSEMBLY
43	2		1588	DUST PLUG
44		1	* 4486	BULKHEAD ADAPTER
45		2	* 4485	7/8" SNAP RING
46	1		319	1/4" X 90 SWIVEL ADAPTER
47	2		2315	9/16 O.R. TO 3/8P X 90 SWL.ADPT.
48		2	* 8011	NYLON MOUNTING TIE WRAPS W/ HOLE

REF#	QTY IN KIT		PART#	DESCRIPTION
	A4468-40	7505		
49		2	* 90659	#12 X 3/4 PHIL PAN HEAD SHEET MS
50		1	* 765	1/4" BRASS BAR STREET ELL
51	2		2780	1/4" BRASS BAR STREET ELL (FORGED)
52				
53		1	* 1659	ADAPTOR UNION, 1/4 NPT BOTH ENDS
54				
55	2		1658	QUILL
56				
57				
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71				
72		1	5704	SAFETY DECAL
73	2		3042	GROMMET
74	1		4477	SPLIT HOSE GROMMET
75	3		3666	TIE WRAPS - 3/16 X 8
76		3	* 90666	5/16 X 3-1/2 (NC) GR.5 CAPSCREW
77	1		90054	5/16 X 1-1/2 (NC) GR. 5 CAPSCREW
78	4	10	* 90042	5/16 X 1 (NC) GR.5 CAPSCREW
79	6	13	* 90360	5/16 LOCKWASHER
80	7	10	* 90332	5/16 (NC) NUT
81	4	4	* 90313	5/16 FLATWASHER
82				
83		1	* 90067	5/16 X 2 (NC) GR.5 CAPSCREW
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				
88		1	* 90361	3/8 LOCKWASHER
89				
90				
91		1	* 90534	3/4 X 4-1/2 (NF) GR.5 CAPSCREW
92				
93		1	* 90570	3/8 X 5 (NC) GR.5 CAPSCREW
94				

FASTENER TORQUE (FT-LB)			
DIAMETER- THREADS PER INCH	GRADE DESIGNATION		
	GRADE 2	GRADE 5	GRADE 8
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. USING BENCH VISE TO HOLD LIFT CYLINDER (10), REMOVE CLOSURE FROM PORT. SCREW 90 DEGREE SWIVEL ADAPTOR (46) INTO PORT. PLACE LIFT CYLINDER WITH INSTALLED ADAPTOR BETWEEN EARS ON UNDERSIDE OF LIFT ARM AND LOWER HEADGEAR EARS. ATTACH CYLINDER TO EARS USING CLEVIS PINS (12) AND COTTER PINS (15).

B. USING BENCH VISE TO HOLD 32" H.P. HOSE (20), INSTALL FEMALE HALF OF HOSE DISCONNECT ASSEMBLY (42) DIRECTLY TO HOSE. THEN, HOLDING 36" H.P. HOSE (21), INSTALL BRASS BAR STREET ELL (50) AND 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 AND SCREW BRASS FORGED STREET ELLS (51) INTO PORTS SO THAT ELLS ARE PARALLEL WITH CYLINDER AND POINT TOWARD LIVE END. INSTALL 32" H.P. HOSE WITH FEMALE DISCONNECT HALF TO DRIVER'S SIDE ANGLE CYLINDER STREET ELL. INSTALL OTHER H.P. HOSE WITH MALE DISCONNECT HALF TO PASSENGER SIDE ANGLE CYLINDER STREET ELLS. INSTALL ANGLE CYLINDERS TO A-FRAME ON THEIR RESPECTIVE SIDES SO THAT ELLS ARE BETWEEN CYLINDERS AND A-FRAME. SECURE CYLINDERS WITH ANCHOR PINS (13) AT PORT END AND RAM END. SECURE ANCHOR PINS WITH COTTER PINS (15).

2. CONTROL HEAD AND CONTROL CABLES

NOTE: DASH BRACKET, HARDWARE, DRILLING GUIDE AND MOUNTING INSTRUCTIONS WILL BE FOUND IN PECULIAR ATTACHING BOX.

A. DRILL THREE 5/8" HOLES IN FIREWALL FOR CONTROL CABLES AND WIRING HARNESS USING DRILLING GUIDE AS A REFERENCE ONLY. BE SURE BOTH SIDES OF FIREWALL ARE CLEAR OF OBSTRUCTIONS BEFORE DRILLING. DRILL 1/2" HOLE IN UNDERSIDE OF DASH AS SHOWN IN DASH ILLUSTRATION.

B. INSTALL DASH BRACKET AS PER DASH BRACKET INSTRUCTIONS.

C. LOOSEN 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 AND TIGHTEN JAM NUTS TO SECURE CABLES TO CONTROL HEAD. REMOVE THE NUTS AND WASHERS FROM THE VALVE END OF THE CABLES. ROUTE THE CABLES OUT THROUGH THE FIREWALL UP TO THE TOP OF THE DRIVER SIDE FENDER WELL. ATTACH CONTROL HEAD TO DASH BRACKET AS PER DASH BRACKET INSTRUCTIONS. INSTALL RUBBER GROMMETS (73) AROUND CABLES WHERE THEY PASS THROUGH FIREWALL.

3. VALVE AND VALVE PLATE

A. USING BENCH VISE TO HOLD CONTROL VALVE ASSEMBLY (2) REMOVE CLOSURES FROM VALVE PORTS. SCREW 90 DEGREE SWIVEL ADAPTOR UNIONS (47) INTO "IN" AND "OUT" PORTS. SCREW QUILL (55) INTO INSTALLED ADAPTOR IN "OUT" PORT.

NOTE: VALVE FITTINGS ARE INSTALLED AS DESCRIBED TO INSURE PROPER INSTALLATION. FIRST INDICATION OF INCORRECT INSTALLATION IS FAILURE OF PLOW TO LIFT ALTHOUGH PLOW WILL ANGLE.

B. ATTACH VALVE PLATE BRACES (30 & 31) TO VALVE PLATE (29) AS SHOWN ON ILLUSTRATION WITH 5/16 X 1 CAPSCREW (78), LOCKWASHER (79), AND NUT (80). MOUNT VALVE TO VALVE PLATE USING TWO 1/4 X 1-1/4 CAPSCREWS, LOCKWASHERS AND NUTS FROM VALVE BAG. 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 ONE WASHER ON EACH SIDE OF BULKHEAD. CENTER CABLES IN SLOTS SO THAT THEY ARE EXACTLY IN LINE WITH VALVE SPOOL CENTERS. ATTACH CABLE CLEVIS (3) TO CABLES USING SQUARE NUTS (4). SLIP CABLE CLEVISES OVER SPOOLS. INSTALL CLEVIS PIN (5) THROUGH CLEVIS AND SPOOL, AND SECURE WITH PUSH NUT (6) ON CLEVIS PIN. TEMPORARILY ADJUST CABLES SO THAT CONTROL LEVER IS SOMEWHERE NEAR CENTERED IN CONTROL HEAD.

C. LOCATE VALVE PLATE WITH CABLES ATTACHED, ON TOP OF FENDER WELL STRADDLING WIRING AND CONNECTOR. BE SURE THAT VALVE IS STRAIGHT AND LEVEL, AND CABLES RUN AS STRAIGHT AS POSSIBLE WITH NO SHARP KINKS. MAKE SURE BRACES DO NOT RUB AGAINST ANY WIRING. USING HOLES IN BRACES AS A GUIDE, DRILL FOUR 11/32" HOLES IN FENDER WELL. ATTACH BRACES WITH FOUR 5/16 X 1 CAPSCREWS GR.5 (NC) (78), FLATWASHERS (81), LOCKWASHERS (79) AND NUTS (NC) (80). TIGHTEN.

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 CABLE CLEVIS DOES NOT ALLOW ENOUGH ADJUSTMENT, REPOSITION CABLE AT VALVE PLATE BULKHEAD. AFTER CHECKING TO SEE THAT THE VALVE SPOOLS ARE IN THE CENTERED POSITION, TIGHTEN CABLE CLEVIS NUTS.

CAUTION: VALVE SPOOLS MUST BE FREE AND SELF CENTERING WHEN CABLES AND CONTROL HEAD ARE ATTACHED. FAILURE TO CENTER SPOOLS WILL RESTRICT FLUID FLOW THROUGH 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 FROM WATER PUMP AND INSTALL 3/16" FAN SPACER (22) AND REINSTALL FAN.

B. REMOVE AND DISCARD 3/4" CAPSCREW AND WASHER FROM CENTER OF CRANKSHAFT PULLEY. REMOVE AND DISCARD EVERY OTHER 5/16" CAPSCREW FROM INSIDE OF CRANKSHAFT PULLEY. (TOTAL OF THREE 5/16" CAPSCREWS.)

C. APPLY "LOCTITE" ON ALL CAPSCREWS BEFORE INSTALLING DRIVE SHEAVE.

D. INSTALL DRIVE SHEAVE (24) WITH ONE 3/4 X 4-1/2 (NF) GR.5 CAPSCREW (91) THROUGH CENTER HOLE ONTO CENTER OF CRANKSHAFT PULLEY. INSTALL THREE 5/16 X 3-1/2 (NC) GR.5 CAPSCREWS (76) WITH 5/16 LOCKWASHERS (79) THROUGH REMAINING HOLES IN DRIVE SHEAVE AND CRANKSHAFT PULLEY. SNUG-UP THE 3/4 X 4-1/2 CAPSCREW FIRST AND THEN SNUG-UP THE THREE 5/16 X 3-1/2

CAPSCREWS AND TORQUE THEM TO 18 FOOT POUNDS. LASTLY, TORQUE THE 3/4 X 4-1/2 CAPSCREW TO 100 FOOT POUNDS ON V8 ENGINES.

5. PUMP TANK AND PUMP BRACKET

A. REMOVE 3/8 BOLT UNDER COIL. INSTALL LOWER PUMP BRACKET BRACE (28) AND REINSTALL FASTENER. (DO NOT TIGHTEN FASTENERS AT THIS TIME.) INSTALL 5/16 X 1 CAPSCREW (78) OUT THROUGH SECOND HOLE FROM TOP HOLE BEFORE INSTALLING PUMP BRACKET (26). REMOVE TOP BOLT FROM TOP OF COIL. INSTALL TOP PUMP BRACKET BRACE (27) AND REINSTALL BOLT. INSTALL 5/16 X 1 CAPSCREWS (78) THROUGH PUMP BRACKET AND BRACES, BOTH TOP AND LOWER AND FASTEN WITH 5/16 LOCK WASHERS (79) AND NUTS (80). REMOVE THE TWO 3/8 BOLTS BELOW ALTERNATOR AND DISCARD TOP BOLT AND SAVE LOWER BOLT. REMOVE SERPENTINE BELT FROM IDLER PULLEY TO ALLOW PUMP BRACKET TO LINE UP WITH HOLES. REATTACH BELT. REINSTALL LOWER BOLT ON PUMP BRACKET ON TOP HOLE INSTALL 3/8 X 5 CAPSCREW (NC) GR.5 (93) WITH LOCKWASHER (88). TIGHTEN ALL FASTENERS EXCEPT CAPSCREW FOR SADDLE BRACKET.

B. HOLDING PUMP TANK (1) IN BENCH VISE, SCREW STRAIGHT SWIVEL ADAPTOR (53) ONTO PRESSURE PORT OF PUMP AND QUILL (55) INTO RETURN PORT OF PUMP. INSTALL PUMP SHEAVE (25) ONTO PUMP SHAFT USING LOCKNUT AND KEY SUPPLIES WITH PUMP. REMOVE PUMP FROM VISE AND INSTALL SADDLE BRACKET (35) ON OVER FRONT OF PUMP. SECURE WITH A 5/16 X 2 GR.5 CAPSCREW (83), LOCKWASHER (79) AND NUT (80). ATTACH SADDLE BRACKET TO PREVIOUSLY INSTALLED 5/16 CAPSCREW, FASTEN WITH 5/16 FLATWASHER (81), LOCKWASHER (79) AND NUT (NC) (80). INSTALL ONE 5/16 X 1 CAPSCREW (NC) GR.5 (78) WITH FLATWASHER (81) THROUGH LOWER SLOT IN SADDLE BRACKET. FASTEN WITH LOCKWASHER (79) AND NUT (80).

C. INSTALL 51" V-BELT (23) ON OVER DRIVE SHEAVE AND PUMP SHEAVE. USING THE TOP FASTENER AS A PIVOT, ALIGN SHEAVES AND TIGHTEN FASTENERS. ADJUST FOR PROPER TENSION. REMOVE NUT ON BACK OF LOWER ALTERNATOR BOLT. INSTALL UNIVERSAL BRACE TAB (38) AND 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) AND FLATWASHER (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 CAPSCREW (84), LOCKWASHER (85), AND NUT (86). SECURE OTHER END OF BRACE ROD WITH ONE 5/16 FLATWASHER (81), LOCKWASHER (79), AND NUT (80). USE BRACE ROD TO ADJUST ALIGNMENT OF DRIVE AND PUMP SHEAVES. CHECK BELT FOR PROPER TENSION.

6. HYDRAULIC HOSE INSTALLATION

A. ATTACH 1/4" END OF THE 72" H.P. HOSE (16) TO THE 1/4" SWIVEL ADAPTOR ON THE PUMP TANK AND PUSH ONE END OF THE 72" LP HOSE (17) ONTO THE QUILL ON PUMP TANK. ROUTE THESE HOSES TO THE CONTROL VALVE VIA FIREWALL.

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.

PUSH L.P. HOSE ONTO QUILL AND ATTACH 3/8 H.P. HOSE INTO 90 DEGREE SWIVEL ADAPTOR. REMOVE SHEET METAL SCREW ABOVE WINDSHIELD WIPER MOTOR AND ONE ABOVE HEATER ON FIREWALL. INSTALL TWO NYLON MOUNTING TIE WRAPS (48) AND SCREWS (49). TIE HOSES UP WITH TIES. INSTALL 60" H.P. HOSE (18) TO LIFT CYLINDER PORT OF VALVE (SPOOL #1). INSTALL TWO 54" HOSES (19) TO ANGLE PORTS OF VALVE (SPOOL #2). ROUTE THE 60" AND 54" HOSES OUT THROUGH GRILL NEAR CENTER OF VEHICLE. ATTACH 60" HOSE TO PREVIOUSLY INSTALLED 90 DEGREE SWIVEL ADAPTOR ON LIFT CYLINDER.

INSTALL INLINE OIL FILTER AS PER FILTER KIT (7) INSTRUCTIONS AT THE END OF THIS DOCUMENT.

7. DISCONNECT ASSEMBLY

A. WITH DISCONNECT MOUNTING PLATE (39) HELD IN BENCH VISE, INSTALL DISCONNECT HALVES AS SHOWN IN ILLUSTRATION. BULKHEAD ADAPTOR (44) AND MALE DISCONNECT HALF (42) GO IN BOTTOM HOLE. FEMALE DISCONNECT HALF (42) GOES IN TOP HOLE. SECURE BOTH WITH 7/8" SNAP RINGS (45). ATTACH MOUNTING PLATE TO BACK OF DRIVERS SIDE HEADGEAR POST WITH TWO 5/16 X 1 CAPSCREWS (78), LOCKWASHERS (79) AND NUTS (80). INSTALL DUST PLUGS (43) OVER ENDS OF HOSES ROUTED TO FRONT OF VEHICLE IN THE PREVIOUS STEP. CONNECT 54" RIGHT ANGLE HOSE (SPOOL #2, CYL. B) TO BACK OF FEMALE DISCONNECT INSTALLED IN TOP HOLE OF DISCONNECT BRACKET. CONNECT 54" LEFT ANGLE HOSE (SPOOL #2, CYL. A) TO BOTTOM (MALE) DISCONNECT. TIGHTEN BY HOLDING HOSES AND ROTATING THE DISCONNECT HALVES IN THE BRACKET.

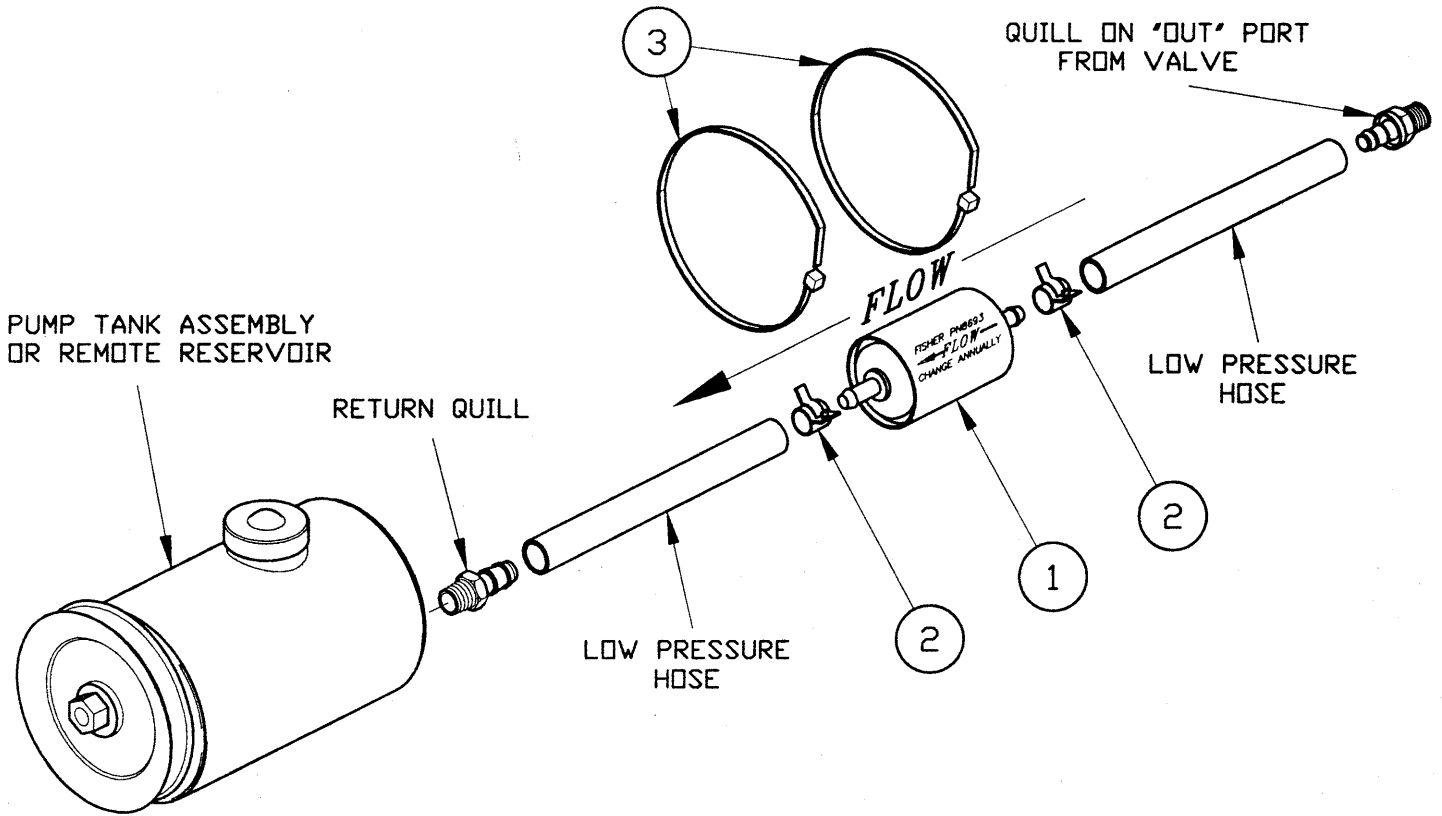
8. OPERATIONS

A. CHECK ALL FITTINGS AND FASTENERS FOR TIGHTNESS. SECURE HOSES WITH NYLON TIE WRAPS (75). PLACE SAFETY DECAL (72) ON DASH BESIDE CONTROL HEAD.

B. FILL RESERVOIR WITH TYPE "A" AUTOMATIC TRANSMISSION FLUID. START ENGINE, LIFT AND ANGLE BLADE.

NOTE: IF BLADE ANGLES OPPOSITE FROM CONTROL LEVER POSITION, REVERSE THE TWO H.P. HOSE CONNECTIONS ON THE BACK OF THE DISCONNECT BRACKET.

RAISE FRONT END OF VEHICLE UNTIL PLOW IS CLEAR OF GROUND WITH THE LIFT CYLINDER FULLY RETRACTED. CHECK RESERVOIR OIL LEVEL. ANGLE BLADE (WITH LIFT CYLINDER RETRACTED) TO REMOVE AIR FROM SYSTEM. RECHECK RESERVOIR OIL LEVEL.



REF#	PART#	QUANTITY	DESCRIPTION
1	8693	1	FILTER, INLINE - HYDRAULIC OIL
2	8765	2	CLAMP - HOSE, 12MM SPRING BAND
3	8324	2	CABLE TIE - 3/16 X 14"

FILTER INSTALLATION INSTRUCTIONS

After installing low pressure hose from valve to oil reservoir as per peculiar hydraulic instructions, locate a place in the line that the filter can be placed without chaffing on any chassis parts. Cut low pressure hose in a location where ends will be long enough to prevent any crimping of hose. Place clamps (2) on ends of each hose, install filter (1), and place clamps to securely attach hoses to filter. Use two cable ties (3) to secure filter & low pressure hose in engine compartment to prevent movement. If attaching filter to metal or other hard object, use rubber as an insulator to reduce vibration and chaffing.

REPLACE FILTER ANNUALLY.