


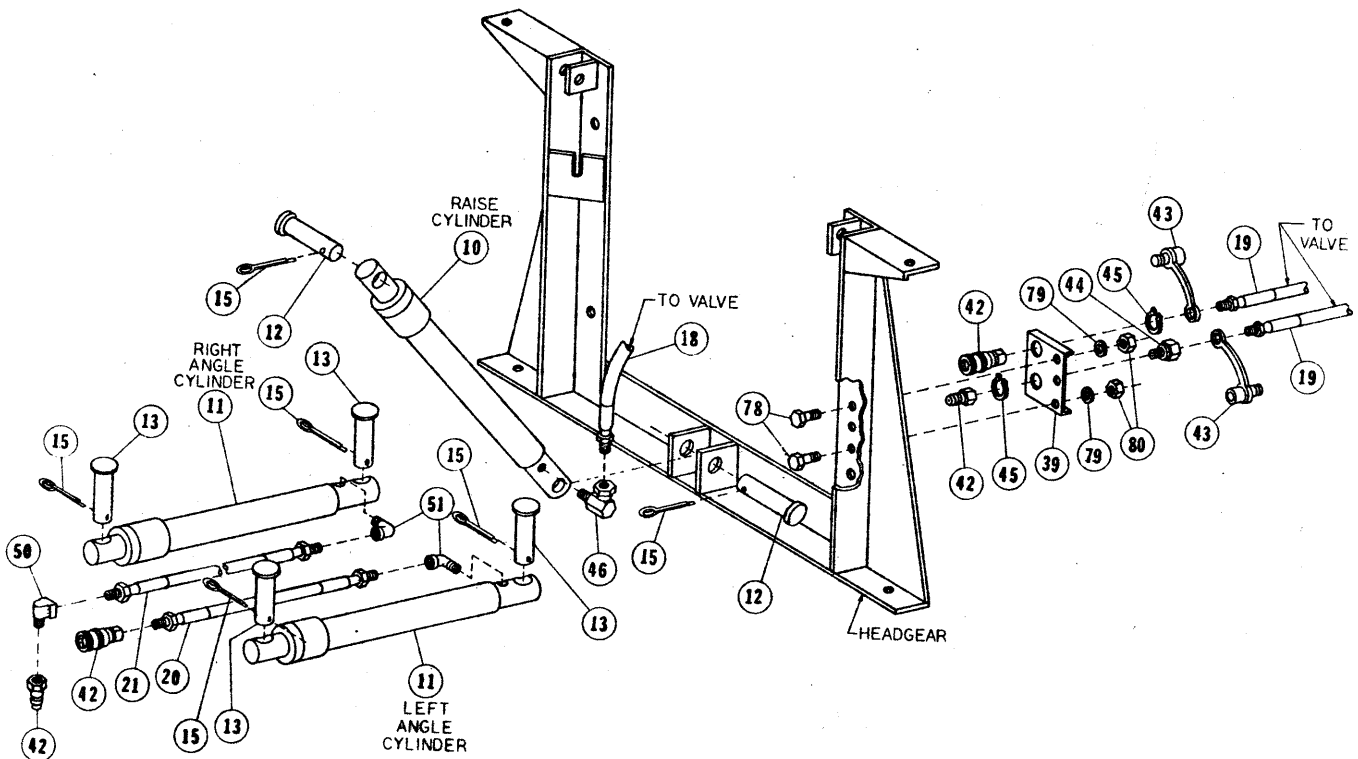
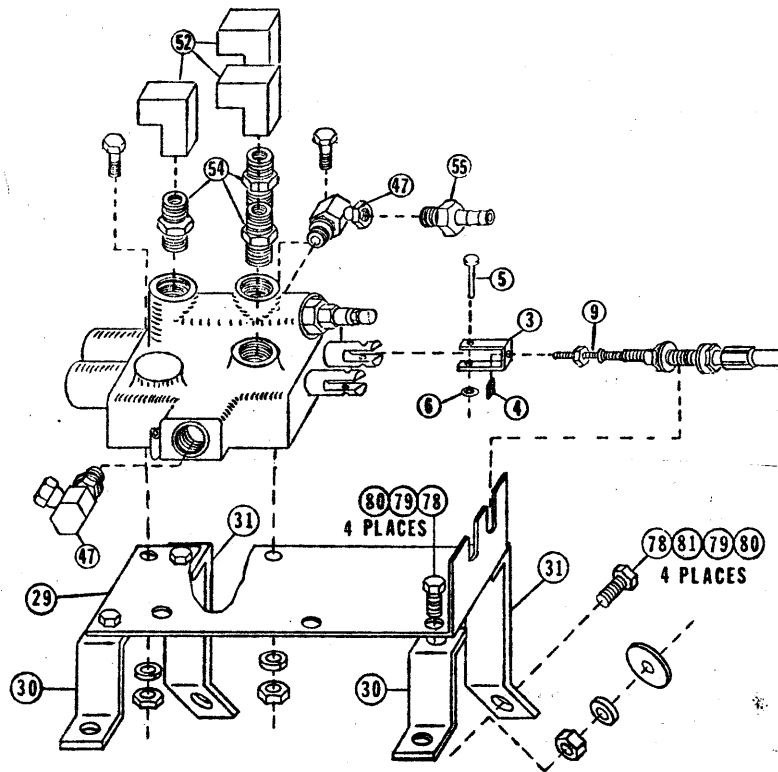


6395

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	533	893



HYDRAULICS PARTS LIST

7507
A4468-40

REF#	QTY IN KIT		PART#	DESCRIPTION
	A4468-40	7507		
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 <u>CYLINDER ASSEMBLY</u>
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	4934	18" H.P. HOSE, 1/4P TO 3/8P
17		1	2706	15" L.P. HOSE
18		1	6066	66" H.P. HOSE, 1/4P TO 1/4P
19		2	5192	60" H.P. HOSE, 1/4P 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				
23		1	363	FAN BELT, 50"
24		1	8076	DRIVE SHEAVE
25		1	3696	PUMP SHEAVE
26		1	8075	PUMP BRACKET
27				
28				
29		1	5329	VALVE PLATE
30		2	9078	VALVE PLATE BRACE
31		2	9079	VALVE PLATE BRACE
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
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				

REF#	QTY IN KIT		PART#	DESCRIPTION
	A4468-40	7507		* PART OF 8077 BOLT BAG
49				
50		1	* 765	1/4" BRASS BAR STREET ELL
51	2		2780	1/4" BRASS BAR STREET ELL (FORGED)
52		4	* 2318	1/4" NPT X 90 DEGREE UNION ELBOW
53		1	* 3979	3/8" NPT X 90 DEGREE STREET ELBOW
54		3	* 3058	1/4P TO 9/16 O-RING ADAPTOR
55	2		1658	QUILL
56				
57				
58				
59				
60				
61				
62		1	8064	VALVE COVER -CUMMINS # 3902605
63		1	8065	VALVE COVER GSKT-CUMMINS # 3902666
64		1	8066	COVER -CUMMINS # 3903463
65		1	8067	COVER O-RING -CUMMINS # 3903475
66			8089	CONVERSION KIT - OIL FILL (NOT SHOWN)
67				
68				
69				
70				
71				
72		1	5704	SAFETY DECAL
73	2		3042	GROMMET
74	1		4477	SPLIT HOSE GROMMET
75	3	2	* 3666	TIE WRAPS - 3/16 X 8
76		2	* 90048	5/16 X 1-1/4 (NC) GR.5 CAPSCREW
77	1		90054	5/16 X 1-1/2 (NC) GR. 5 CAPSCREW
78	4	6	* 90042	5/16 X 1 (NC) GR.5 CAPSCREW
79	6	13	* 90360	5/16 LOCKWASHER
80	7	8	* 90332	5/16 (NC) NUT
81	4	4	* 90313	5/16 FLATWASHER
82		6	* 90372	M6 X 1.00 X 20 GR.8.8 CAPSCREW
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		6	90427	M6 LOCKWASHER
88				
89		4	* 90387	M10 X 1/50 X 25 GR.8.8 CAPSCREW
90		4	* 90429	M10 LOCKWASHER
91		1	* 90669	M12 X 1.75 X 40 GR.8.8 CAPSCREW
92		1	* 90430	M12 LOCKWASHER
93				
94				

NOTE: REQUIRES AHD (HEAVY DUTY) SNOW PREP PACKAGE.

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 FIRE WALL FOR CONTROL CABLES AND 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 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 FIRE WALL 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 FIRE WALL.

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.

INSTALL THREE 9/16 O-RING TO 1/4" PIPE ADAPTORS (54) IN LIFT & ANGLE PORTS. INSTALL ONE 1/4" NPT X 90 DEGREE UNION ELBOW (52) TO EACH ADAPTOR. WHEN TIGHT, ELLS SHOULD POINT AWAY FROM CABLE END OF VALVE.

B. ATTACH VALVE PLATE BRACES (30 & 31) TO VALVE PLATE (29) WITH ONE 5/16 X 1 CAPSCREW (78), LOCKWASHER (79), & NUT (80) FOR EACH BRACE. MOUNT VALVE TO VALVE PLATE USING TWO 1/4 X 1-1/4 CAPSCREWS, LOCKWASHERS & NUTS FROM VALVE BAG. 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 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, & SECURE WITH PUSH NUT (6). 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 SOLENOIDS. BE SURE THAT VALVE IS STRAIGHT, LEVEL, & CABLES RUN AS STRAIGHT AS POSSIBLE WITH NO SHARP KINKS. MAKE SURE BRACES DO NOT RUB AGAINST ANY WIRING OR AGAINST SOLENOIDS. 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) & 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 & 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 BRACE HOLDING BATTERY TO FENDER. CUT OFF 3/4" OF END WITH SLOT. DRILL A 11/32" HOLE JUST BEFORE THE BEND. REINSTALL BRACE WHILE SLIDING BATTERY OVER IN BATTERY BOX AS FAR AS POSSIBLE. TIGHTEN.

B. REMOVE FAN SHROUD, FAN, & FAN PULLEY. RETURN FAN PULLEY TO FISHER ENGINEERING FOR A \$10.00 CREDIT. DISCARD FASTENERS FROM PULLEY. REMOVE OIL FILL NECK FROM FRONT OF ENGINE. PLUG HOLE WITH COVER (64) AND GASKET (65). TIGHTEN. REMOVE PLATE ABOVE VALVE COVERS. REMOVE FRONT VALVE COVER & REPLACE WITH NEW VALVE COVER (62) AND GASKET (63), REUSE

EXISTING OIL FILLER CAP. A CLEARANCE HOLE FOR THE FILLER CAP MUST BE CUT TO REINSTALL PLATE.

C. APPLY "LOCTITE" ON FASTENERS & INSTALL DRIVE SHEAVE (24) WITH SIX M6 X 1.00 X 20 GRADE 8.8 CAPSCREWS (82), AND M6 LOCKWASHER (87). TORQUE THESE FASTENERS TO 7 FOOT POUNDS. REINSTALL FAN SHROUD & FAN.

5. PUMP TANK AND PUMP BRACKET

A. REMOVE FRONT ACCELERATOR SPRING ON DRIVER'S SIDE OF ENGINE. REMOVE BOLT BELOW SPRING ON FRONT PART OF POWER STEERING UNIT. PLACE PUMP BRACKET (26) UNDER RADIATOR HOSE & DRIVER'S SIDE OF VALVE COVER. ATTACH PUMP BRACKET WITH FOUR M10 X 1.50 X 25 CAPSCREWS (89) & LOCKWASHERS (90). INSTALL A M12 X 1.75 X 40 CAPSCREW (91) WITH LOCKWASHER (92) TO PREVIOUSLY REMOVED M12 FASTENER FROM FRONT OF POWER STEERING UNIT. TIGHTEN ALL FASTENERS. REINSTALL ACCELERATOR SPRING THRU HOLE IN PUMP BRACKET.

B. HOLDING PUMP TANK (1) IN BENCH VISE, SCREW 3/8" BRASS BAR STREET ELL (53) & QUILL (55) INTO RETURN PORT OF PUMP. INSTALL 1/4" NPT X 90 DEGREE UNION ELBOW (52) ONTO PRESSURE PORT. 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). PLACE SADDLE BRACKET ON FRONT FACE OF PUMP BRACKET & ATTACH WITH TWO 5/16 X 1-1/4 CAPSCREWS (76), FLATWASHERS (81), LOCKWASHERS (79) & NUTS (NC) (80).

C. INSTALL 50" 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 BOLT UNDER FUEL LINE BEHIND PUMP BRACKET BOLT. INSTALL UNIVERSAL BRACE TAB (38) & REINSTALL BOLT. BEND TAB DOWN SO THAT IT WILL BE 1/4" FROM FUEL LINE. 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. USE A TIE WRAP (75) TO KEEP BATTERY GROUND CABLE AWAY FROM PUMP SHEAVE.

6. HYDRAULIC HOSE INSTALLATION

A. ATTACH 1/4" END OF THE 18" H.P. HOSE (16) TO THE 1/4" BRASS BAR ELBOW ON REAR OF PUMP TANK & PUSH ONE END OF THE 15" LP HOSE (17) ONTO THE QUILL ON PUMP TANK. ROUTE H.P. HOSE IN FRONT OF VALVE PLATE TO "IN" PORT ADAPTOR ON VALVE. PUSH L.P. HOSE ONTO QUILL ON VALVE. L.P. HOSE WILL HAVE TO BE CUT TO CORRECT LENGTH.

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.

INSTALL 66" H.P. HOSE (18) TO LIFT CYLINDER PORT OF VALVE (SPOOL #1). INSTALL TWO 60" HOSES (19) TO ANGLE PORTS OF VALVE (SPOOL #2). REMOVE GRILL. DRILL A 1-7/8" HOLE 3" LEFT OF PARKING LIGHT HOLE & 2" BELOW BATTERY BOX BOLT IN PANEL BEHIND GRILL. INSTALL SPLIT HOSE GROMMET (74) AROUND HOLE & REINSTALL GRILL. ROUTE HOSES THRU HOLE & GRILL. ATTACH 66" 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) ON ENDS OF HOSES ROUTED TO FRONT OF VEHICLE IN PREVIOUS STEP. CONNECT 60" RIGHT ANGLE HOSE TO (SPOOL #2 CYL. B) TO BACK OF FEMALE DISCONNECT INSTALLED IN TOP HOLE OF DISCONNECT BRACKET. CONNECT 60' LEFT ANGLE HOSE (SPOOL #2 CYL. A) TO BOTTOM (MALE) DISCONNECT. TIGHTEN BY HOLDING HOSES & ROTATING DISCONNECT HALVES IN THE BRACKET. TIE HOSES TOGETHER WITH TIE WRAPS (75).

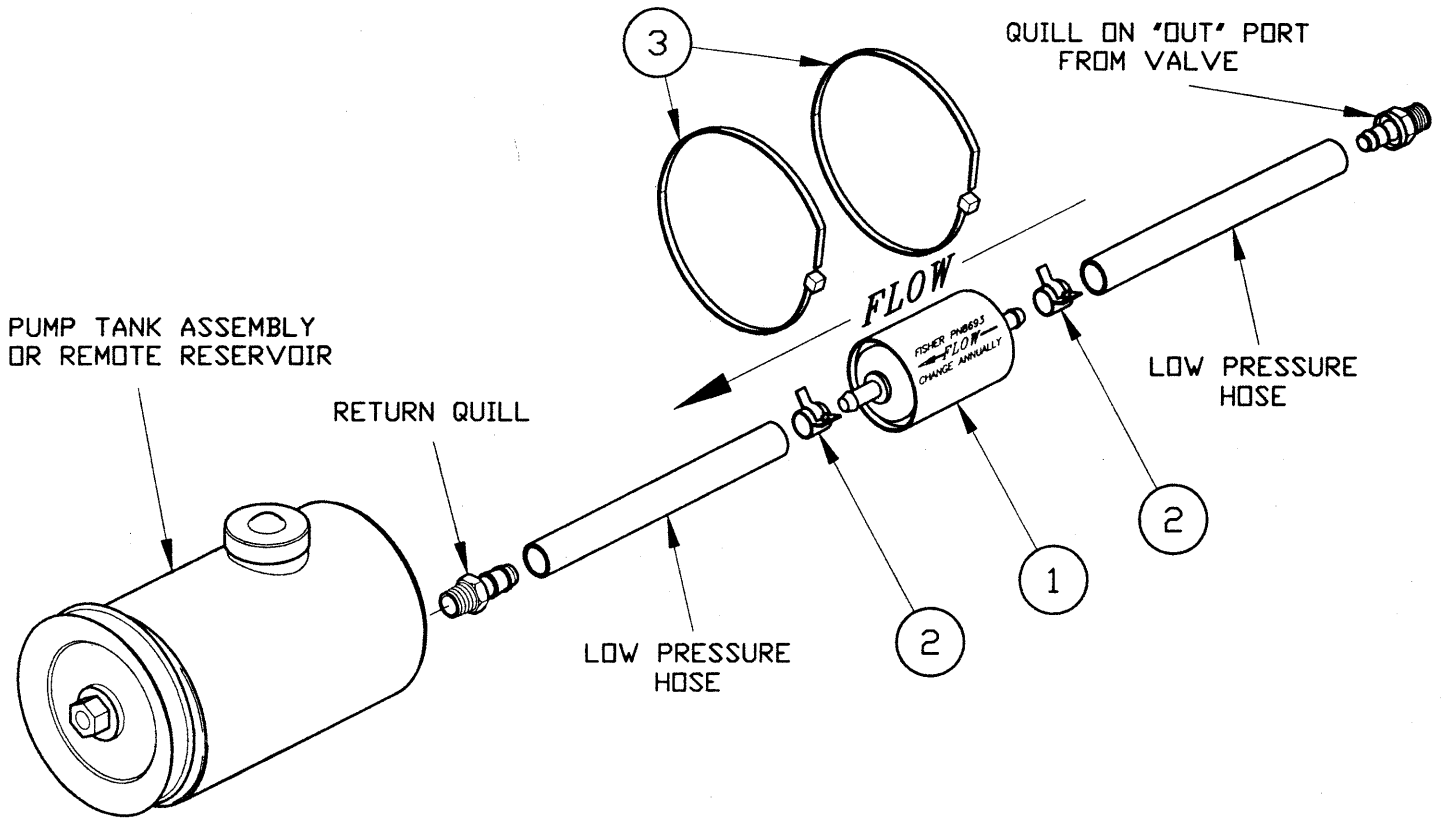
8. OPERATIONS

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.