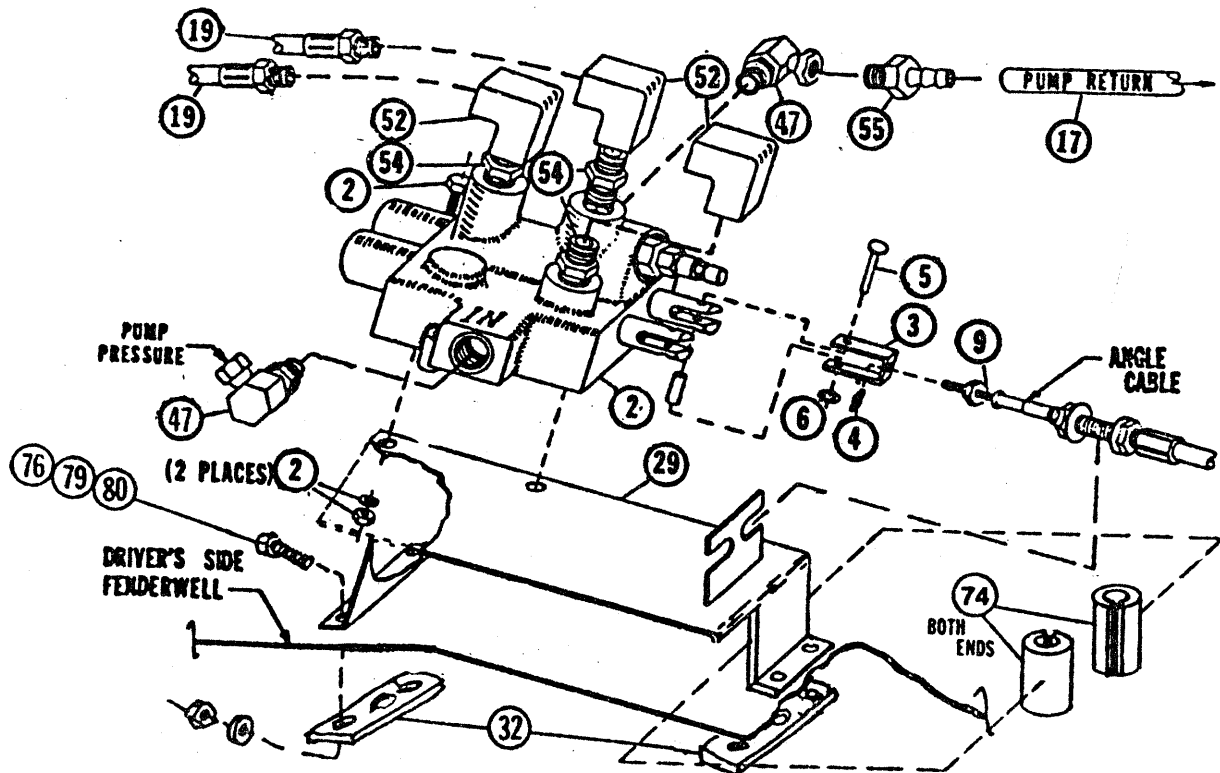
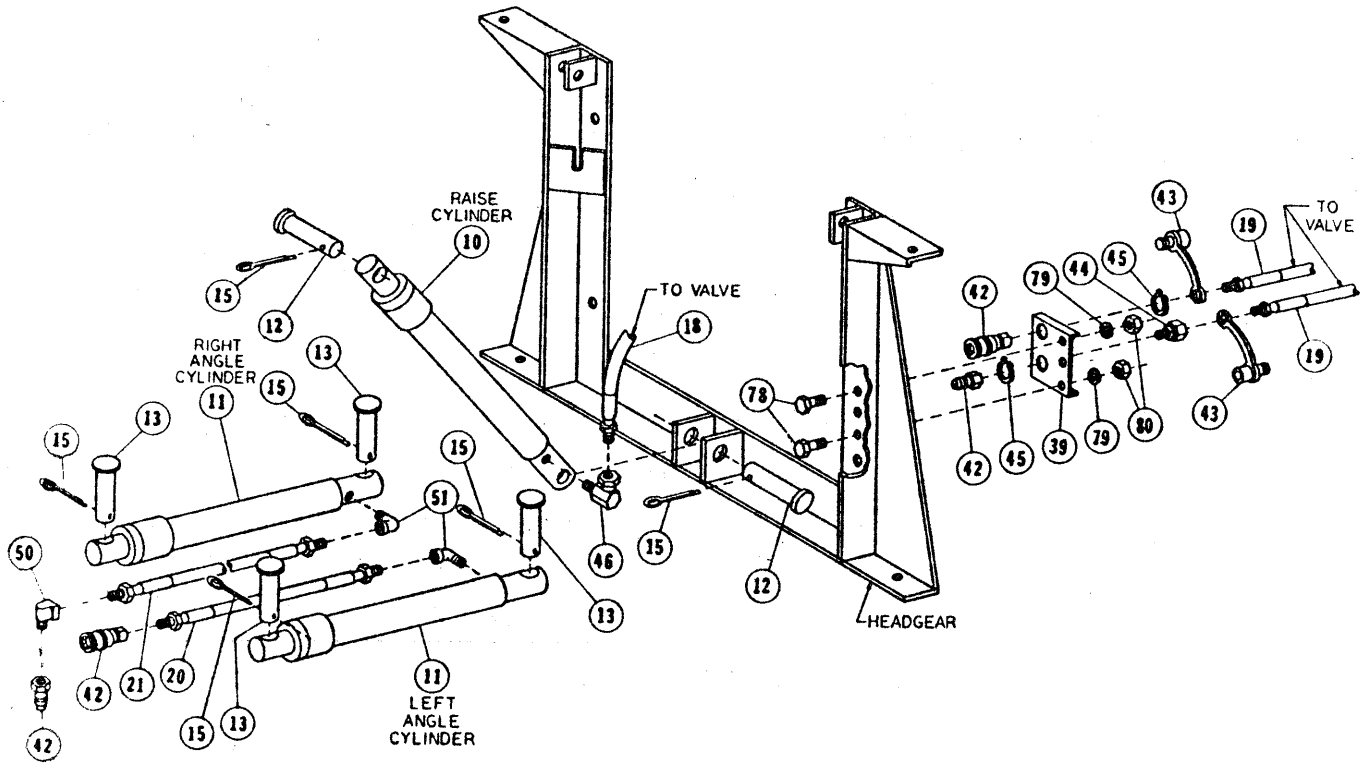


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


HYDRAULICS PARTS LIST

HPS4591 REV E
A4468

REF#	QTY IN KIT	PART#	DESCRIPTION
	A4468-40	HPS4591	* PART OF 6896 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 - 3/16 X 1
6	2	4493	3/16 PUSH NUT
7	1	8764	FILTER KIT (AT END OF INSTRUCT.)
8		4419	SINGLE LEVER CONTROL HEAD
9		4949	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		5223	32" H.P. HOSE, 1/4P TO 3/8P
17		5653	28" L.P. HOSE
18		5192	60" H.P. HOSE, 1/4P TO 1/4P
19		5193	54" H.P. HOSE, 1/4P TO 1/4P
20		376	32" H.P. HOSE, 1/4P TO 1/4P
21		4424	36" H.P. HOSE, 1/4P TO 1/4P
22		5026	* FAN SPACER, 1/4"
23		1022	FAN BELT, 55" (NOT SHOWN)
24		5786	DRIVE SHEAVE
25		3696	PUMP SHEAVE
26		6513	PUMP BRACKET
27		6511	PUMP BRACKET BRACE
28		7093	E.E.C. BRACKET
29		5178	VALVE PLATE
30		6514	FENDER BRACKET
31		6507	HOSE SUPPORT BRACKET
32		6031	BACKING PLATE
33		6154	AIR INTAKE BRACKET
34			
35		4921	SADDLE BRACKET-UNIV
36	1	2036	REAR TANK STRAP
37	1	2116	UNIVERSAL BRACE ROD
38		2115	* UNIVERSAL BRACE TAB
39		4467	DISCONNECT MOUNTING PLATE
40			
41			
42	2	A1587	DISCONNECT ASSEMBLY
43	2	1588	DUST PLUG
44		4486	* BULKHEAD ADAPTER
45		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			
49			

REF# QTY IN KIT PART# DESCRIPTION
 A4468-40 HPS4591 * PART OF 6896 BOLT BAG

50		1	765	* 1/4" BRASS BAR STREET ELL
51	2		2780	1/4" BRASS BAR STREET ELL (FORGED)
52		4	2318	* 1/4" BRASS BAR ELL
53		1	3979	* 3/8" BRASS BAR STREET ELL
54		3	3058	* 9/16 O.R. TO 1/4P ADAPTER
55	2		1658	QUILL
56				
57				
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71		1	6595	* 3/4" SPLIT HOSE GROMMET
72		1	5704	SAFETY DECAL
73	2		3042	GROMMET
74	1	2	4477	* 3/8" SPLIT HOSE GROMMET
75	3	4	3666	* TIE WRAPS 3/16 X 8
76		5	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	1	90042	5/16 X 1 (NC) GR.5 CAPSCREW
79	6	9	90360	* 5/16 LOCKWASHER
80	7	5	90332	* 5/16 (NC) NUT
81	4	1	90313	* 5/16 FLATWASHER
83				
84	1		90614	1/4 X 1-1/4 (NC) GR.5 CAPSCREW
85	1	4	90359	* 1/4 LOCKWASHER
86	1	4	90330	* 1/4 (NC) NUT
87		1	4433	* 1/2 SPECIAL WASHER
88		1	90612	* 1/4 X 1 (NC) GR.5 CAPSCREW
89		4	90461	* 1/4 X 3/4 (NC) GR.5 CAPSCREW
90				
91		1	90361	* 3/8 LOCKWASHER
92		1	90334	* 3/8 NUT (NC)
93		1	90106	* 3/8 X 1-1/4 (NC) GR.5 CAPSCREW
94				
95		4	90051	* 5/16 X 1-1/4 (NF) GR. 5 CAPSCREW
96		4	90156	* 3/8 X 4-1/4 (NC) GR. 5 CAPSCREW
97		4	4268	* SPACER WASHER
98		1	90628	* 7/16 X 7-1/2 (NC) GR.5 CAPSCREW
99		1	90362	* 7/16 LOCKWASHER

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 DRIVERS 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.

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 FENDERWELL. 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.

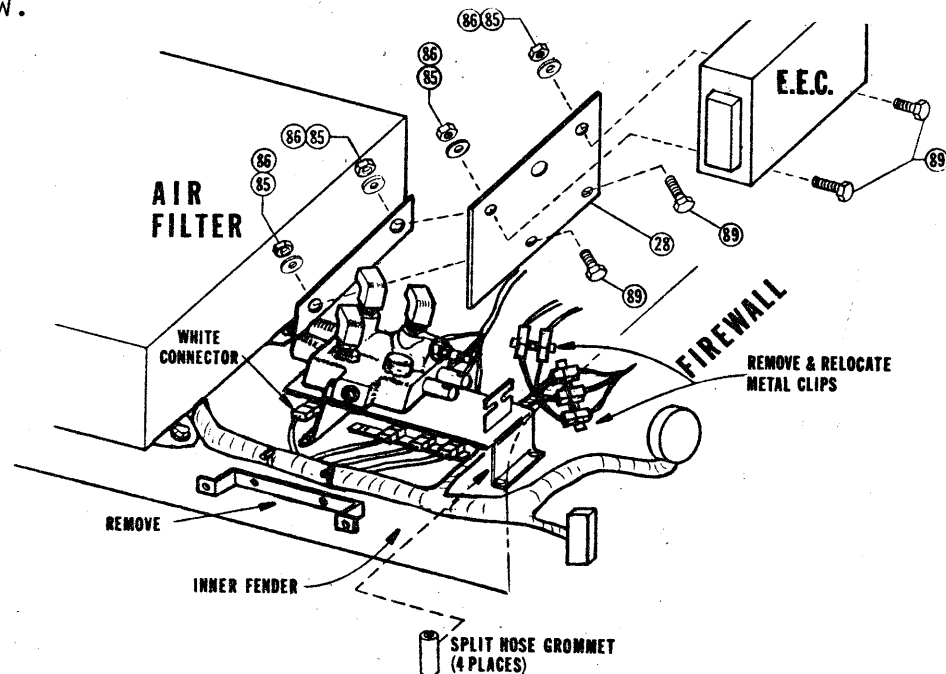
NOTE: VALVE FITTINGS ARE INSTALLED AS DESCRIBED TO INSURE PROPER INSTALLATION. FIRST INDICATION OF INCORRECT INSTALLATION IS FAILURE OF PLOW TO LIFT ALTHOUGH PLOW WILL ANGLE.

INSTALL (3) 9/16 O-RING TO 1/4" PIPE ADAPTORS (54) IN LIFT AND ANGLE PORTS. INSTALL ONE 1/4" BRASS BAR ELL (52) TO EACH ADAPTOR. **WHEN TIGHT, ELLS SHOULD POINT AWAY FROM CABLE END OF VALVE.**

NOTE: IF VEHICLE IS EQUIPPED WITH CRUISE CONTROL, TEMPORARILY REMOVE UNIT FROM FENDERWELL. WHEN VALVE INSTALLATION IS COMPLETE, RETURN CRUISE CONTROL UNIT TO ITS ORIGINAL LOCATION.

B. 1988 VEHICLES: LOCATE AND REMOVE E.E.C. TEST WIRING AND LARGER BOX BESIDE IT FROM BRACKET BEHIND AIR CLEANER. THESE PARTS WILL BE REATTACHED LATER.

1989 VEHICLES: FIND THE LARGE WIRING HARNESS LOCATED ON THE DRIVER'S SIDE INNER FENDER AFT OF THE AIR CLEANER. UNFASTEN HARNESS FROM SUPPORT BRACKET AND REMOVE BRACKET. REMOVE E.E.C. (ELECTRONIC ENGINE CONTROL) BAR FROM BRACKET. REAM EXISTING HOLES ON BRACKET (28) TO 9/32". INSTALL E.E.C. BRACKET (28) TO BACK OF ORIGINAL BRACKET MAKING SURE THAT THE TOP THREE HOLES ARE LOCATED TOWARDS THE DRIVERS SIDE FENDERWELL. FASTEN BRACKET WITH TWO 1/4 X 3/4 CAPSCREWS (89), LOCKWASHERS (85), AND NUTS (86). ATTACH E.E.C. BAR TO TOP HOLES OF E.E.C. BRACKET USING TWO 1/4 X 3/4 CAPSCREWS (89), LOCKWASHERS (85), AND NUTS (86). REMOVE FORWARD MOST WHITE WIRE CONNECTOR FROM ROW OF CONNECTORS ATTACHED TO METAL CLIPS. THIS CONNECTOR SHOULD BE PLACED FORWARD OF VALVE PLATE WHEN INSTALLED. DISCONNECT THE TWO AFT ELECTRICAL CONNECTOR MOUNTING STRIPS FROM INNER FENDER NEAR FIREWALL. THE CLIPS WILL BE REPOSITIONED AND/OR REATTACHED LATER. SEE ILLUSTRATION BELOW.



C. MOUNT VALVE TO VALVE PLATE (29) 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 PUSHNUT (6) ON CLEVIS PIN. TEMPORARILY ADJUST CABLES SO THAT CONTROL LEVER IS SOMEWHERE NEAR CENTERED IN CONTROL HEAD.

- D. **NOTE:** BEFORE INSTALLING VALVE PLATE, CUT TWO PIECES OF 3/8" SPLIT HOSE GROMMET (74) IN HALF AND INSTALL ON ALL FOUR EDGES OF VALVE PLATE TO PROTECT VEHICLE WIRING FROM CHAFFING.

CAUTION! USE EXTREME CARE IN DRILLING ALL HOLES. MAKE SURE NO WIRING OR ASSEMBLIES ARE DAMAGED.

ALIGN VALVE PLATE ON PLASTIC INNER FENDER SO THAT CABLES RUN IN AS STRAIGHT AND SMOOTH A PATH AS POSSIBLE AND WITH ADEQUATE CLEARANCE OF ALL VEHICLE WIRING OR OTHER COMPONENTS. USING THE MOUNTING HOLES IN VALVE PLATE AS GUIDES, DRILL (4) 11/32" HOLES THROUGH INNER FENDER. FASTEN VALVE PLATE TO INNER FENDER WITH (4) 5/16 X 1-1/4 CAPSCREWS (76), (2) BACKING PLATES (32), LOCKWASHERS (79) AND NUTS (80).

E. **1988 VEHICLES:** ENLARGE HOLE IN E.E.C. BRACKET TO 9/32" DIAMETER AND FASTEN TO LARGER BOX WITH A 1/4 X 1 (NC) CAPSCREW (88), LOCKWASHER (85), AND NUT (86). RELOCATE THIS ASSEMBLY TO INNER HOLE IN BRACKET THAT THEY WERE ORIGINALLY ATTACHED TO AND REFASTEN WITH PREVIOUSLY REMOVED SHEET METAL SCREW.

1989 VEHICLES: POSITION PREVIOUSLY REMOVED ELECTRICAL CONNECTOR MOUNTING STRIPS TO PREVENT ANY POSSIBLE CHAFFING AND REATTACH TO EXISTING FENDER HOLES OR DRILL NEW 9/32" HOLES AS NECESSARY.

F. 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 SERPENTINE BELT. REMOVE FOUR 3/8 CAPSCREWS FROM CRANK SHAFT PULLY. INSTALL DRIVE SHEAVE (24) INTO CENTER OF CRANKSHAFT PULLEY BEING CERTAIN MACHINED PILOT OF DRIVE SHEAVE SEATS FULLY INTO CRANKSHAFT PULLEY. FASTEN DRIVE SHEAVE TO CRANKSHAFT WITH FOUR 3/8 X 4-1/4" CAPSCREWS (96) AND SPACER WASHERS (97) TORQUED TO 31 FT. LBS.

B. REMOVE AND DISCARD FOUR CAPSCREWS HOLDING FAN TO WATER PUMP SHAFT FLANGE. PLACE FAN SPACER (22) BETWEEN FAN AND PULLEY, REINSTALL FAN AND SECURE WITH FOUR 5/16 X 1-1/4 (NF) GR.5 CAPSCREWS (95) AND LOCKWASHERS (79) TORQUED TO 18 FT. LBS.

5. PUMP TANK AND PUMP BRACKET

A. REMOVE THE TWO CAPSCREWS HOLDING THE CATALYST FILTER CONTAINER TO THE DRIVER'S SIDE FENDERWELL. REMOVE FLEXIBLE PLASTIC PIPE FROM MOLDED PLASTIC AIR INTAKE DUCT. LIFT AND PLACE CONTAINER UP OUT OF THE WAY.

B. REMOVE AND SAVE NUT FROM STUD ON BRACKET HOLDING IDLER PEDESTAL (OR AIR CONDITIONER) AND POWER STEERING PUMP. ALSO REMOVE OUTER BOLT FROM BRACKET. POSITION PUMP BRACKET (26) BEHIND SERPENTINE BELT AND PLACE PROPER HOLE IN TAB ON END OF PUMP BRACKET OVER STUD SO THAT THE 15/32 HOLE WITH THE PIPE SPACER LINES UP WITH THE HOLE FROM WHICH THE BOLT WAS REMOVED. FASTEN TAB WITH PREVIOUSLY REMOVED NUT. INSTALL 7/16 X 7-1/2 CAPSCREW (98) AND 7/16 LOCKWASHER (99) IN HOLE IN PUMP BRACKET WITH PIPE SPACER. PLACE CROPPED END OF PUMP BRACKET BRACE (27) ONTO FRONT EXHAUST MANIFOLD STUD AND FASTEN WITH A 3/8 LOCKWASHER (91) AND NUT (92). ON SOME MODELS CAPSCREW MAY HAVE TO BE REMOVED. REPLACE WITH ONE 3/8 X 1-1/4 CAPSCREW (NC) GR.5 ZP AND LOCKWASHER. PLACE OPPOSITE END OF BRACE ON PUMP BRACKET TAB AND FASTEN WITH ONE 5/16 X 1 NC GR.5 CAPSCREW (78) LOCKWASHER (79) AND NUT (80). TIGHTEN ALL FASTENERS. REMOVE REAR BOLT ON IDLER PULLEY BRACKET OR AIR CONDITIONER (IF EQUIPPED) AND INSTALL UNIVERSAL BRACE TAB (38) REINSTALL BOLT AND REINSTALL SERPENTINE BELT AT THIS TIME.

C. FOR VEHICLES WITH 5.8L ENGINE.

NOTE: PLASTIC INNER FENDERWELL MUST BE PULLED OUTWARD TO PROVIDE CLEARANCE FOR FISHER HYDRAULIC PUMP.

PLACE FENDER BRACKET (30) IN DRIVER'S SIDE FENDERWELL AROUND COIL SPRING BRACKET (F-150 MODELS) OR SHOCK MOUNT BRACKET (F-250, F-350 MODELS). POSITION BRACKET WHERE, WITH INNER FENDER ATTACHED TO IT, ADEQUATE CLEARANCE WILL RESULT. USING HOLE IN BRACKET AS GUIDE, DRILL A 11/32" HOLE THRU INNER FENDER. INSTALL A 5/16 X 1 CAPSCREW (78) FLATWASHER (81) AND 1/2 SPECIAL WASHER (87) OUT THRU INSIDE OF FENDER AND FASTEN TO BRACKET WITH A 5/16 LOCKWASHER (79) AND NUT (80). SEE ILLUSTRATION AT END OF INSTRUCTIONS.

D. HOLDING PUMP TANK (1) IN BENCH VISE, SCREW A 3/8" BRASS BAR STREET ELL (53) INTO RETURN PORT ON PUMP TANK AND SCREW QUILL (55) INTO ELL. INSTALL A 1/4" BRASS BAR ELL (52) ONTO PRESSURE PORT. BOTH FITTINGS SHOULD FACE UPWARD. INSTALL PUMP SHEAVE (25) ONTO SHAFT USING LOCKNUT AND KEY SUPPLIED WITH PUMP. REMOVE PUMP FROM VISE AND INSTALL SADDLE BRACKET (35) ON OVER FRONT OF PUMP. SECURE WITH A 5/16 X 1 CAPSCREW (78), FLATWASHER (81), LOCKWASHER (79) AND NUT (80). DO NOT FULLY TIGHTEN. FASTEN THE HOSE SUPPORT BRACKET (31) ON THE **BACK SIDE** OF PUMP BRACKET WITH THE LOWER SADDLE BRACKET HARDWARE [ONE 5/16 X 1-1/4 (NC) GR.5 CAPSCREW (76), FLATWASHER (81), LOCKWASHER (79), AND NUT (80)]. DO NOT FULLY TIGHTEN. USE THE UPPER HOLE IN THE HOSE SUPPORT BRACKET ON

5.0L ENGINES AND THE LOWER HOLE ON 5.8L ENGINES. INSTALL 3/4" SPLIT HOSE GROMMET (71) ONTO POWER STEERING HOSE BENEATH THE HOSE SUPPORT BRACKET. SECURE POWER STEERING HOSE AND SPLIT HOSE GROMMET TO HOSE SUPPORT BRACKET WITH TWO TIE WRAPS (75). INSTALL 55" V-BELT (23) ON OVER INSTALLED DRIVE AND PUMP SHEAVES. POSITION THE POWER STEERING HOSE AND SUPPORT BRACKET TO MINIMIZE HOSE TWIST AND MAXIMIZE HOSE BEND RADIUS. TIGHTEN V-BELT AND SADDLE BRACKET FASTENERS. ADJUST FOR PROPER BELT TENSION BY PIVOTING SADDLE BRACKET ON TOP BOLT.

NOTE: THERE SHOULD BE A MINIMUM OF 1/2" CLEARANCE BETWEEN HOSE SUPPORT BRACKET AND DRIVE SHEAVE V-BELT. BEND BRACKET TO INCREASE CLEARANCE IF NECESSARY.

E. ALIGN SHEAVES & TIGHTEN 1-1/2" SADDLE BRACKET FASTENER. INSTALL REAR TANK STRAP (36) ON REAR OF PUMP TANK. CHECK LENGTH OF UNIVERSAL BRACE ROD (37) & CUT TO LENGTH NEEDED. INSTALL ONE 5/16 NUT (80) & FLATWASHER (81) ONTO BRACE ROD & INSERT BRACE ROD THROUGH PREVIOUSLY INSTALLED UNIVERSAL BRACE TAB. BEND TAB AS NEEDED. CONNECT BRACE ROD TO TANK STRAP WITH ONE 1/4 X 1-1/4 CAPSCREW (84), LOCKWASHER (85) & NUT (86). FASTEN OTHER END OF BRACE ROD TO BRACE TAB WITH A 5/16 FLATWASHER (81), LOCKWASHER (79) & NUT (80). USE BRACE ROD TO ADJUST ALIGNMENT OF DRIVE AND PUMP SHEAVES. CHECK BELT FOR PROPER TENSION.

F. LOOSEN TWO BRASS COLORED NUTS ON COOLANT RESERVOIR & CATALYST FILTER CONTAINER BRACE. WITH LONG LEG OF AIR INTAKE BRACKET (33) TOWARDS FIREWALL, SLIDE TOP SLOT OF BRACKET BETWEEN CATALYST BRACE & TAB ON RESERVOIR. ROTATE BRACKET COUNTER CLOCKWISE & SLIDE LOWER SLOT ONTO REMAINING FASTENER. TIGHTEN FASTENERS. REINSTALL CATALYST FILTER CONTAINER. CONTAINER SHOULD BE RESTING ON TOP OF AIR INTAKE BRACKET.

6. HYDRAULIC HOSE INSTALLATION

A. ATTACH ONE END OF 32" H.P. HOSE (16) TO THE 1/4" BRASS ELL ON PUMP TANK AND PUSH ONE END OF 28" LP HOSE (17) ONTO THE QUILL ON PUMP TANK. ROUTE THESE HOSES TO THE CONTROL VALVE.

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 SCREW H.P. HOSE INTO 90 DEGREE SWIVEL ADAPTOR. INSTALL 60" H.P. HOSE (18) TO BRASS ELL IN LIFT CYLINDER PORT OF VALVE (SPOOL #1). INSTALL TWO 54" HOSES (19) TO BRASS ELLS IN ANGLE PORTS OF VALVE (SPOOL #2). ON VEHICLES WITHOUT AIR CONDITIONING, HOSES MAY BE ROUTED OUT BETWEEN RADIATOR AND RADIATOR WEB THEN THROUGH THE GRILL NEAR THE CENTER OF VEHICLE. IF VEHICLE IS EQUIPPED WITH AIR CONDITIONING, A 1-7/8" HOLE MUST BE DRILLED THROUGH RADIATOR WEB ON DRIVERS SIDE ABOVE THE FRESH AIR INTAKE DUCT. INSTALL SPLIT HOSE GROMMET (74) AROUND HOLE. ROUTE 60" AND 54" HOSES OUT THROUGH THIS HOLE AND 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 FOUND AT 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.

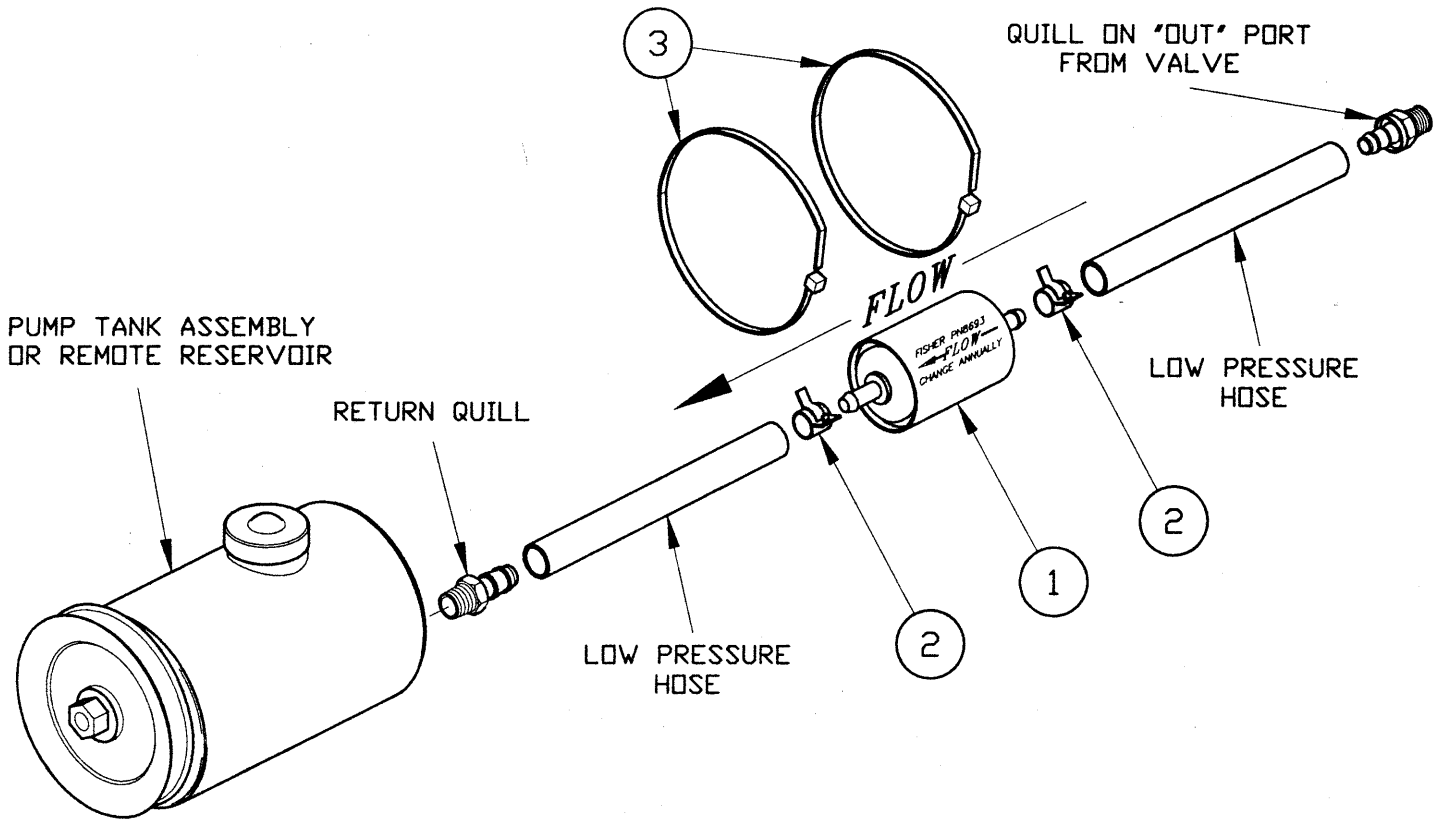
8. OPERATIONS

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.