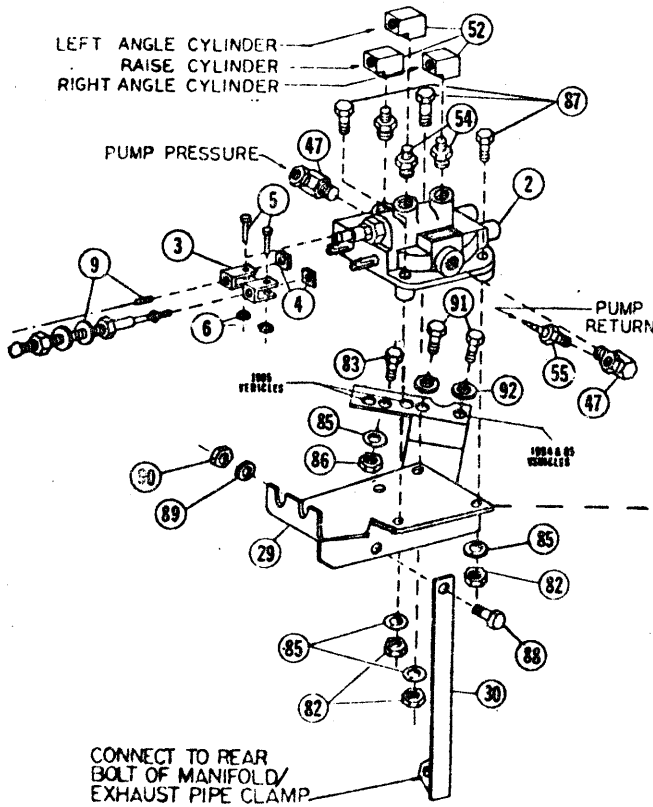
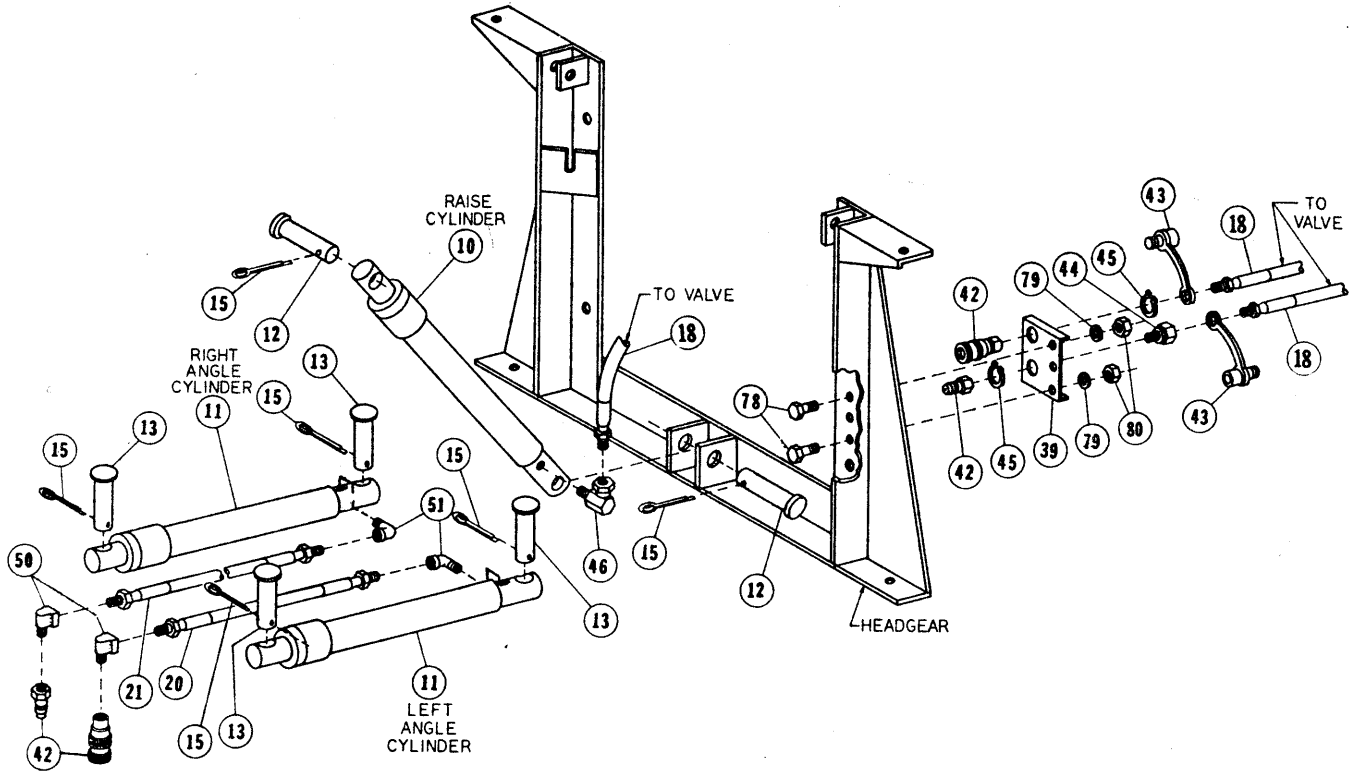


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* NOTE:
ON 1983 VEHICLES
VACUUM VALVE IS
LOCATED ELSEWHERE.



SERIES
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


HYDRAULICS PARTS LIST

HPS4562 REV F
A5092-25

REF#	QTY IN KIT A5092-25 HPS4562	PART#	DESCRIPTION * PART OF 6918 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			
8		4419	SINGLE LEVER CONTROL HEAD
9		5461	67" CONTROL CABLE, SLC
10	1	A5096	6" LIFT CYLINDER ASSEMBLY
11	2	A318	10" ANGLE CYLINDER ASSEMBLY
12	2	6814	CLEVIS PIN
13	4	6816	ANCHOR PIN
14			
15	6	90601	1/4 X 1-1/2 COTTER PIN
16		2504	60" H.P. HOSE, 3/8P TO 1/4P
17		2519	66" L.P. HOSE
18		5193	54" H.P. HOSE, 1/4P TO 1/4P
19			
20		3074	22" H.P. HOSE, 1/4P TO 1/4P
21		376	32" H.P. HOSE, 1/4P TO 1/4P
22			
23		724	FAN BELT 4L 380
24			
25		3696	PUMP SHEAVE
26		6080	PUMP BRACKET
27			
28			
29		5477	VALVE PLATE
30		5476	VALVE PLATE BRACE
31		5975	VALVE PLATE BRACE (FOR TURBO)
32			
33			
34		5883	SUPPORT BRACKET
35		5495	SADDLE BRACKET
36	1	2036	REAR TANK STRAP
37	1	2116	UNIVERSAL BRACE ROD
38		* 5375	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 SWVL ADPT
48			
49			

REF# QTY IN KIT A5092-25 HPS4562 PART# DESCRIPTION * PART OF 6918 BOLT BAG

50		2	* 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 (F/F)
53		1	* 3979	3/8 BRASS BAR STREET ELL (M/F)
54		3	* 3058	ADAPTER (9/16 O-RING TO 1/4P)
55	2		1658	QUILL

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

72		1	5704	SAFETY DECAL
73	2		3042	GROMMET
74	1		4477	SPLIT HOSE GROMMET
75	3		3666	TIE WRAPS
76				
77	1	3	* 90054	5/16 X 1-1/2 (NC) GR. 5 CAPSCREW
78	3		90042	5/16 X 1 (NC) GR.5 CAPSCREW
79	6	3	* 90360	5/16 LOCKWASHER
80	7	1	* 90332	5/16 (NC) NUT
81	4	2	* 90313	5/16 FLATWASHER
82	2	1	* 90331	1/4 (NF) NUT
83		2	* 90461	1/4 X 3/4 (NC) GR.5 CAPSCREW
84	1		90614	1/4 X 1-1/4 (NC) GR.5 CAPSCREW
85	3	3	* 90359	1/4 LOCKWASHER
86	1	2	* 90330	1/4 (NC) NUT
87	2	1	* 90022	1/4 X 1-1/4 (NF) GR.5 CAPSCREW
88		1	* 90103	3/8 X 1 (NC) GR.5 CAPSCREW
89		1	* 90361	3/8 LOCKWASHER
90		1	* 90334	3/8 (NC) NUT
91		2	* 90377	8M X 20 X 1.25 GR 8.8 CAPSCREW
92		2	* 90428	8M LOCKWASHER
93		3	* 90386	M10 X 25 X 1.25 GR 8.8 CAPSCREW
94		4	* 90429	M10 LOCKWASHER
95		1	* 90389	M10 X 30 X 1.25 GR 8.8 CAPSCREW
96				
97				
98				
99				
100				

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 CYL 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 22" H.P. HOSE (20), INSTALL BRASS BAR STREET ELL(50) AND FEMALE HALF OF HOSE DISCONNECT ASSEMBLY (42) ON SAME HOSE END. THEN, HOLDING 32" H.P. HOSE (21), INSTALL BRASS BAR STREET ELL(50) AND MALE HALF OF HOSE DISCONNECT ASSEMBLY(42) ON SAME HOSE END.
- C.** USING BENCH VISE TO HOLD ANGLE CYLINDERS (11), REMOVE CLOSURES FROM PORTS. SCREW BRASS FORGED STREET ELLS (51) INTO PORTS SO THAT ELLS ARE PARALLEL WITH CYLINDER AND POINT TOWARD LIVE END. INSTALL 22" H.P. HOSE WITH FEMALE DISCONNECT HALF TO DRIVER SIDE ANGLE CYLINDER STREET ELL. INSTALL OTHER H.P. HOSE WITH MALE DISCONNECT HALF TO PASS. SIDE ANGLE CYLINDER STREET ELL. INSTALL ANGLE CYLINDERS TO "A" FRAME ON THEIR RESPECTIVE SIDES SO ELLS ARE ON TOP SIDE OF CYLINDERS. 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 NUTS AND WASHERS FROM VALVE END OF THE CABLES. ROUTE CABLES OUT THROUGH FIREWALL UP TO THE IGNITION COIL AREA. ATTACH CONTROL HEAD TO DASH BRACKET AS PER DASH BRACKET INSTRUCTIONS. PUT RUBBER GROMMETS (73) AROUND CABLES WHERE THEY PASS THRU 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 THREE 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 TOWARD CABLE END OF VALVE.

NOTE: VALVE PLATE WILL BE MOUNTED ON DRIVER'S SIDE REAR OF AIR CLEANER INTAKE DUCTS TO TOP OF VALVE COVER.

- B. 1981-83 VEHICLES:** REMOVE AND DISCARD HEATER HOSE BRACE FROM POWER BRAKE BOOSTER. TIGHTEN NUT.
- C. 1981-82 VEHICLES:** LOOSEN LOCKNUT FROM THROTTLE CABLE. REMOVE AND SAVE NUT FROM FRONT OF VACUUM CONTROL VALVE. REMOVE AND DISCARD CAPSCREW FROM VACUUM CONTROL VALVE. INSTALL VALVE PLATE (29) ON TOP OF THROTTLE CABLE BRACKET USING ONE M8 X 20 X 1.25 CAPSCREW (91), LOCKWASHER (92) AND PREVIOUSLY REMOVED NUT.
- 1983 VEHICLES:** REMOVE AND DISCARD TWO CAPSCREWS FROM THROTTLE CABLE BRACKET. INSTALL VALVE PLATE (29) ON TOP OF THROTTLE CABLE BRACKET USING TWO M8 X 20 X 1.25 CAPSCREWS (91) AND LOCKWASHERS (92).
- 1984-87 W/O EFI:** REMOVE THROTTLE CABLE BRACKET AND SPARK PLUG CLIP FROM VALVE COVER AND DISCARD REMOVED CAPSCREWS. PLACE VALVE PLATE (29) ON VALVE COVER WITH THROTTLE CABLE BRACKET ON TOP AND FASTEN WITH TWO M8 X 20MM X 1.25MM CAPSCREWS (91) AND LOCKWASHERS (92).
- 1985-1989 W/EFI:** REMOVE ELECTRONIC VACUUM VALVE AND BRACKET FROM THE VALVE COVER. GRIND OFF LOCATING EAR OF VACUUM VALVE BRACKET. REPLACE VACUUM VALVE AND BRACKET ON TOP OF VALVE PLATE AFTER VALVE PLATE HAS BEEN INSTALLED.
- D. 1984-1989:** FASTEN SPARK PLUG CABLE CLIP TO HOLE PROVIDED IN VALVE PLATE USING A 1/4 X 3/4 CAPSCREW (83), LOCKWASHER (85) AND NUT (86). REMOVE NUT FROM OUTBOARD SIDE OF EXHAUST MANIFOLD/EXHAUST PIPE FLANGE AND INSTALL VALVE PLATE BRACE (30). ATTACH TOP END OF BRACE TO VALVE PLATE STIFFENER USING ONE 3/8 X 1 CAPSCREW (88), LOCKWASHER (89) AND NUT (90). REUSE ORIGINAL NUT TO SECURE LOWER END OF BRACE. TIGHTEN ALL BOLTS AND NUTS. REPLACE THROTTLE CABLE AND SECURE.
- 87-89 W/ EFI, W/TURBO:** FASTEN SPARK PLUG CABLE/SOLENOID VALVE BRACKET TO HOLE PROVIDED IN VALVE PLATE USING A 1/4 X 3/4 CAPSCREW (83), LOCKWASHER (85) AND NUT (86). REMOVE NUT FROM THE STUD HOLDING THE HEAT SHIELD TO THE EXHAUST MANIFOLD. PLACE END OF VALVE PLATE BRACE (31) (WITH LEAST AMOUNT OF BEND) OVER THE STUD AND FASTEN WITH PREVIOUSLY REMOVED NUT. ATTACH OTHER END OF BRACE TO THE BOTTOM OF THE VALVE PLATE USING A 1/4 X 1-1/4 (NF) CAPSCREW, LOCKWASHER AND NUT. (THIS FASTENER ALSO FASTENS VALVE TO VALVE PLATE.) TIGHTEN ALL BOLTS AND NUTS. REPLACE THROTTLE CABLE AND SECURE.
- E.** REINSTALL VACUUM VALVE (81-82) TO THIRD HOLE USING A 1/4 X 3/4 CAPSCREW (83), LOCKWASHER (85) AND NUT (86). BEND DOWN TO HOLD #4 SPARK PLUG WIRE UNDER VALVE PLATE.
- F.** REMOVE AND SAVE NUT FROM OUTBOARD SIDE OF EXHAUST MANIFOLD/EXHAUST PIPE FLANGE. INSTALL VALVE PLATE BRACE (30) REUSING NUT. INSTALL TOP END OF BRACE TO VALVE PLATE STIFFENER USING ONE 3/8 X 1 CAPSCREW (88), LOCKWASHER (89) AND NUT (90). TIGHTEN ALL BOLTS AND NUTS. REPLACE THROTTLE CABLE AND SECURE.
- G.** MOUNT VALVE TO VALVE PLATE WITH THREE 1/4 X 1-1/4 (NF) CAPSCREWS, LOCKWASHERS AND NUTS FOUND IN VALVE BAG. CONNECT CONTROL CABLES TO VALVE PLATE AND VALVE. 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 EITHER 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 PIN. ADJUST CABLES SO THAT CONTROL LEVER IS CENTERED IN CONTROL HEAD.

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. PUMP TANK AND PUMP BRACKET

- A. 1981-89:** IF TRUCK IS EQUIPPED WITH POWER STEERING, LOOSEN BELT AND REMOVE TO ALLOW INSTALLATION OF FISHER PUMP BELT.
1985-89 W/EFI, W/TURBO: REMOVE THE PIPE BRACE RUNNING FROM THE INTAKE MANIFOLD TO THE **FRONT SIDE** OF THE MOTOR MOUNT. STRAIGHTEN OUT THE BEND IN THE LOWER END OF THE PIPE BRACE AND THEN REATTACH THE BRACE TO THE **BACK SIDE** OF THE MOTOR MOUNT AND INTAKE MANIFOLD.
- B.** INSTALL PUMP BRACKET (26) TO THE FOUR TAPPED HOLES ON THE PASS. SIDE OF ENGINE BLOCK. FASTEN WITH THREE M10 X 25 X 1.25 CAPSCREWS (93) AND LOCKWASHERS (94) TO THE FORWARD TWO HOLES AND LOWER REAR HOLE. ALIGN BRACE TAB (38) WITH THE REMAINING HOLE IN PUMP BRACKET AND BLOCK. FASTEN WITH ONE M10 X 30 X 1.25 CAPSCREW (95) AND LOCKWASHER (94).
- C.** HOLDING PUMP TANK (1) IN BENCH VISE, REMOVE PORT CLOSURES AND INSTALL 3/8" STREET ELL (53) AND QUILL (55) INTO 3/8" FEMALE RETURN PORT AND 1/4" ELL (52) ONTO 1/4" PRESSURE PORT. ELLS SHOULD POINT UP WHEN TIGHT. INSTALL PUMP SHEAVE (25) ONTO PUMP SHAFT USING KEY AND NUT SUPPLIED WITH PUMP ASSEMBLY. INSTALL PUMP WITH FITTINGS AND SHEAVE INTO SUPPORT BRACKET (34) AND SADDLE BRACKET (35) USING TWO 5/16 X 1-1/2 GR.5 CAPSCREWS (77), LOCKWASHERS (79) AND NUTS (80). SLIDE SUPPORT BRACKET ONTO PUMP FIRST WITH FACE OF BRACKET FORWARD. PUMP BRACKET WILL SANDWICH BETWEEN SUPPORT BRACKET AND SADDLE BRACKET.
- D.** INSTALL SUPPORT BRACKET, SADDLE BRACKET AND PUMP TANK ONTO PUMP BRACKET USING TWO 5/16 X 1-1/2 CAPSCREWS (77), (4) 5/16 FLATWASHERS (81), (4) 5/16 LOCKWASHERS (79) AND TWO 5/16 NUTS (80). IF NECESSARY, MOVE BATTERY TO THE RIGHT AS FAR AS POSSIBLE TO PREVENT INTERFERENCE. IF VEHICLE IS EQUIPPED WITH POWER STEERING, ALIGN PUMP SHEAVE WITH CENTER GROOVE OF CRANKSHAFT PULLEY. INSTALL 4L 380 BELT (23) AROUND CRANKSHAFT PULLEY AND FISHER PUMP. REINSTALL POWER STEERING BELT AND TIGHTEN. IF VEHICLE DOES NOT HAVE POWER STEERING, ALIGN PUMP SHEAVE WITH FORWARD GROOVE OF CRANKSHAFT PULLEY AND INSTALL BELT.
- E.** ADJUST BELT TO PROPER TENSION BY PIVOTING SADDLE AND SUPPORT BRACKETS ON TOP BOLT. INSTALL REAR TANK STRAP (36) ON OVER REAR OF PUMP TANK. CUT UNIVERSAL BRACE ROD (37) TO A LENGTH OF 4-3/4" FROM BEND AND INSTALL ONE 5/16 NUT (80) AND FLATWASHER (81). INSERT BRACE ROD THROUGH PREVIOUSLY INSTALLED UNIVERSAL BRACE TAB. CONNECT BRACE ROD TO TANK STRAP WITH ONE 1/4 X 1-1/4 (NC) CAPSCREW (84), LOCKWASHER (85) AND NUT (86). FASTEN OTHER END OF BRACE ROD TO BRACE TAB WITH A 5/16 FLATWASHER (81), 5/16 LOCKWASHER (79) AND NUT (80).

USE BRACE ROD TO ADJUST ALIGNMENT OF DRIVE AND PUMP SHEAVES. CHECK BELT FOR PROPER TENSION.

5. HYDRAULIC HOSE INSTALLATION

A. ATTACH ONE END OF 60" H.P. HOSE (16) TO THE 1/4" BRASS BAR ELL ON PUMP TANK AND PUSH ONE END OF 66" L.P. 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 54" H.P. HOSE (18) TO BRASS ELL IN LIFT CYLINDER PORT OF VALVE (SPOOL #1). INSTALL TWO 54" H.P. HOSES TO BRASS ELLS IN ANGLE PORTS OF VALVE (SPOOL #2). REMOVE GRILL AND DRILL A 1-7/8" HOLE DIRECTLY UNDER SMALL SLOT THAT POWER STEERING HOSES PASS THROUGH. INSTALL SPLIT HOSE GROMMET (74) AROUND HOLE.

NOTE: DO NOT REINSTALL GRILL UNTIL AFTER LIGHT HARNESS HAS BEEN INSTALLED.

ROUTE 54" HOSES OUT THROUGH THIS HOLE. ROUTE HOSES THROUGH GRILL AFTER GRILL HAS BEEN REINSTALLED. ATTACH 54" HOSE TO PREVIOUSLY INSTALLED 90 DEGREE SWIVEL ADAPTOR ON LIFT CYLINDER.

6. 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.

7. OPERATIONS

A. CHECK ALL FITTINGS AND FASTENERS FOR TIGHTNESS. SECURE HOSES WITH NYLON TIE WRAPS(75). PUT 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 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.