

Parts List

Ref#	Qty		Part #	Description	Ref#	Qty		Part #	Description
	A4468	7515				A4468	7515		
1	1		A2311	Pump tank assembly	60	3		*8127	1/4 x 45° Swivel
2	1		A4466	Control Valve Assembly	61	8		*90687	1/4" x 1/2 (NC) Button Head Socket Swivel
3	2		4483	Clevis - VM	62	8		*90350	1/4 (NC) Lock Nut
4	2		4494	10-32 Square Nut - VM	65	1		*8741	Bracket - Cable Boot
5	2		4491	Clevis Pin - 3/16" x 1	66	1		*8284	Cable Boot
6	2		4493	3/16" Push Nut Zp	67	1		*8992	3" Fitting Protector
7	1		8764	Filter Kit	68	1		*8476	1/4 NPT x 45 Deg Street Elbow
8		1	4419	SLC Head - Belt Drive	71	1		*5529	Shock Mount
9		2	A4488	40" SLC Cable	72	1		5704	Caution Label - Cab
10	1		20116	1-1/2" x 10" Cylinder Assy - XL	73	2		3042	Grommet - Rubber, Split
11	2		20117	1-1/2" x 12" Cylinder Assy - XL	74	1		4477	Grommet - Split Hose
12	2		6814	Clevis Pin - 1 x 3-5/16	75	3	4	*3666	Hose Tie, nylon 3/16 x 8
13	4		6816	Anchor Pin - 1 x 4	76	4		*90048	5/16 x 1-1/4 (NC) Gr. 5 Cap Screw
15	6		90601	1/4" x 1-1/2" Cotter Pin	77	1	1	*90054	5/16 x 1-1/2 (NC) Gr. 5 Cap Screw
16		1	2707	26" Hp Hose, 1/4P to 3/8P	78	4		90042	5/16 x 1 (NC) Gr. 5 Cap Screw
17		1	4471	26" Lp Hose	79	6	5	*90360	5/16 Sp Lk Washer
18		1	1664	54" Hp Hose, 9/16 O-R to 1/4P	80	7	4	*90332	5/16 (NC) Nut
19		2	5254	78" Hp Hose, 9/16 O-R to 1/4P	81	4	4	90313	5/16 Flat Washer
20		1	3074	22" Hp Hose, 1/4P to 1/4P	82		5	*90429	M10 Lock Washer
21		2	4424	36" Hp Hose, 1/4P to 1/4P	83		1	*90631	M10 x 1.5 x 20 Gr. 10.9 Cap Scrw
22		1	*6007	1/4" Fan Spacer (6.2L Diesel)	84	1		90614	1/4 x 1-1/4 (NC) Gr. 5 Cap Screw
23		1	1118	Fan Belt, 56"	85	1		90359	1/4 Sp Lk Washer
24		1	6589	Drive Sheave	86	1		90330	1/4 (NC) Nut
25		1	3696	Pump Sheave	87		4	*5939	M8 x 1.25 x 50 Stud Gr. 10.9
26		1	7206	Pump Bracket	88		4	*90579	M10 x 1.5 x 90 Gr.10.9 Nyl CS
27		1	*8244	1/4" Fan Spacer (6.5L Turbo Dsl)	90		1	*90580	3/8 x 5-1/2 (NC) Gr. 8 Cap Screw
28		1	7203	Rear Pump Bracket	91		1	*90334	3/8 Nut (NC)
29		1	5594	Valve Plate	92		2	*90315	3/8 Flat Washer
30		1	5975	Valve Plate Brace	94		1	*90361	3/8" Sp Lk Washer
35		1	5467	Saddle Bracket					
36		1	7207	Rear Saddle Bracket					
42	3		21096	Hose Disconnect Assembly					
43	2	2	*1588	Dust Plug - Closure/Male					
44		1	*4486	Adapter - Bulkhead 1/4" Npt					
45		3	*4485	Snap Ring - 7/8" external					
47	2		2315	9/16-18 w/O-ring x 3/8 swivel					
50		1	*765	1/4" Brass Bar Street Ell					
51	2		2780	1/4 Npt x 90° Street Elbow					
52		1	*2318	1/4" 90 Degree Elbow					
55	2		1658	Quill - 3/8 Nptm to 3/8 ID Hose					
56		1	*8688	QD/Electric Plate -Short					
57		1	*8686	2 QD Plate- Short					
58		4	*8687	Standoff Leg					
59		4	*8324	Tie Wrap (long)					

DIAMETER- THREADS PER INCH	GRADE		
	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

\* Part of 8751 Bolt Bag

## 1. Cylinder and Cylinder Hose Assembly

- A. Attach female half of disconnect (42) and a 1/4" NPT 45° street ell (68) to 22" HP hose (20). Using bench vise to hold lift cylinder (10), remove closure from port and screw the other end of the hose directly into this port. Place lift cylinder with hose pointing to passenger side into ears on lift arm and upper gear. Secure with clevis pins (12) and cotter pins (15).
- B. Attach a male half of quick disconnect (42) to one of a 36" HP hose (21). Place a dust cover (43) on the end of the other 36" HP hose (21) and put another male half of a disconnect (42) on this hose.
- C. Using bench vise to hold angle cylinders (11), remove closures from ports. Screw brass forged street ells (51) into ports. Ells should point forward toward live end of cylinder and slightly upward as they will be installed on the A-frame. The driver's side cylinder uses the 36" Hp hose with the dust cover, and male disconnect half. The passenger side uses the 36" hose with the male disconnect half and no dust cover. Install cylinders to their respective sides so that ells are between the cylinders and A-frame. Secure cylinders with anchor pins (13) at both ends with cotter pins (15) in each anchor.

## 2. Control Head and Control Cables

**Note: Dash Bracket, Hardware, Drilling Guide and Mounting instructions will be found in the peculiar attachments box.**

- A. Drill two 5/8" holes in firewall for control cables and wiring harness using drilling guide for 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 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° swivel adapter unions (47) into "in" and "out" ports. Screw quill (55) into installed adapter in "out" port.
- B. Mount valve to valve plate (29) using two 1/4 x 1-3/4 cap screws, lock washers and nuts from valve bag. Install a rubber shock mount (71) into the forward most driver's side hole. Fasten with one 5/16 lock washer (79) and nut (80). 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 clevises (3) to cables using square nut (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.
- C. Locate valve plate, with valve and cables attached, on top of driver's side inner fenderwell so that valve is near level and cables run in as smooth a path as possible (be sure swivel adapter does not rub against windshield water bottle). Using the aft driver's side hole and shock mount as a guide, mark and drill two 11/32" holes through the fenderwell. Fasten aft hole of valve plate to the fenderwell with one 5/16 x 1 cap screw (78), flat washer (81), lock washer (79) and nut (80). Fasten shock mount using one 5/16 flat washer (81) lock washer (79) and nut (80). Attach 90° bent end of valve plate brace (30) to valve plate as shown in illustration with a 5/16 x 1 cap screw (78) lock washer (79) and nut (80). Using hole in other end of brace as a guide, drill another 11/32" hole through the fenderwell and fasten with a 5/16 x 1 cap screw (78), flat washer (81), lock washer (79) and nut (80).

- D. With valve plate fastened to inner fender, readjust 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

**Note: Apply a removable loosening prevention compound (such as "Lock-tite") to all drive sheave fasteners prior to installation.**

- A. Remove top section of fan shroud, loosen serpentine belt from idler pulley, and remove fan. Save fasteners. Remove and discard cap screws holding vehicle crank pulley to crankshaft. Position drive sheave (24) over holes in crank pulley and fasten drive sheave and crank pulley to crankshaft using four M10 x 1.5 x 90 Gr. 10.9 Nylock cap screws (88) and four M10 lock washers (82). Torque these fasteners to 51 ft-lbs, while making sure lock washers seat properly on sheave.
- B. Remove and discard the four studs from the water pump shaft flange. Install the four longer 8MM studs (87) to the holes in the water pump shaft flange that the original studs were removed from. Replace water pump sheave onto studs and add 1/4" fan spacer (22) for 6.2L diesel or (27) for 6.5L Turbo diesel and fan. Fasten with original nuts torqued to 18 ft-lbs. **Do not reattach fan shroud until 1-7/8" hole is drilled; see Section 6.**

#### 5. Pump Tank and Pump Bracket

**Caution: Pump tank fill must be vertical to engine.**

- A. To assure adequate clearance between the top radiator hose and sheave on Fisher pump, the top radiator hose must be shortened by 1". Drain coolant below radiator hose. Remove radiator end of top radiator hose and trim 1" from end. Replace hose and refill radiator.
- B. Remove idler pulley unit. Remove two nuts from power steering bracket located behind idler pulley (save nuts). Install pump bracket (26) onto studs and fasten, but do not fully tighten, with previously removed nuts. Install one M10 x 1.5 x 20 Gr. 10.9 cap screw (83) with a M10 lock washer (82) through lower pump bracket bar into top threaded hole in front of power steering pump. Remove the lower alternator mounting bolt and replace it with a 3/8 x 5-1/2 Gr. 8 cap screw (90), flat washer (92) and 3/8" nut (NC) (91). Also remove and save the nut from the back of the power steering pump bracket. Place the rear pump bracket (28) on over the new alternator cap screw and the power steering bracket fastener. Add a 3/8 lock washer (94) to the alternator cap screw and reinstall the 3/8" nut. Reinstall the power steering bracket nut.
- C. Holding pump tank (1) in bench vise, screw 1/4" 90 ° elbow (52) onto pressure port and quill (55) into return port. Install pump sheave (25) onto pump shaft using lock nut 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 1-1/2 Gr. 5 cap screw (77), lock washer (79) and nut (80). Attach saddle bracket with pump to pump bracket using two 5/16 x 1-1/4 Gr. 5 cap screws (76), flat washers (81), lock washers (79) and nuts (80). Install the rear saddle bracket (36) on over rear of pump and secure strap with one 5/16 x 1-1/2 Gr. 5 cap screw (77) lock washer (79) and nut (80). Fasten the rear saddle bracket to the rear pump bracket with two 5/16 x 1-1/4 Gr. 5 cap screws (76), flat washers (81), lock washers (79) and nuts (80). The top saddle bracket cap screw also secures the front pump bracket arm to the rear pump bracket. Use 5/16 flat washer (81) between pump bracket arm and rear pump bracket if needed to improve fit.
- D. Tighten all fasteners except for saddle brackets. Install 56" V-belt (23) on over installed drive and pump sheaves. Align sheaves and tighten 1-1/4" saddle bracket fasteners. Adjust for proper tension by pivoting saddle brackets on top bolts and tighten. Check belt for proper tension. Fasten vehicle power steering hose clear of pump belt with tie wraps, do not fasten to vehicle brake line. Reinstall idler pulley and serpentine belt. Double check all fasteners.
- E. Reinstall fan shroud using original fasteners.

## 6. Hydraulic Hose Installation

- A. Attach 26" HP hose (16) to 1/4" 90° elbow on pump tank and push 26" LP hose (17) onto 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**

Push LP hose onto quill and screw HP hose into 90° swivel adapter. Drill hose routing hole through fan shroud or core support depending on vehicle model as per illustrations below. Install the O-ring end of the 54" angle hose (18) to the CYL 'A' port of the valve. Pass it out through the fan shroud or core support and through the grille low and about 14" off center to the driver's side. Attach a female half of a QD (42) to the QD/electric grille plate (56) with a snap ring (45). Put a dust plug (43) on the end of a 45° swivel fitting (60) and attach it to the QD. Attach the 54" hose to 45° swivel. Route the head lamp connector (with dust cover) from previously installed light kit vehicle harness to the QD/electric plate and slide connector into the slot provided. The grille plate should be oriented with head lamp connector to the inside of vehicle. Attach grille plate to grille with two long tie wraps (59).

- B. Attach one 78" HP hose (19) to the CYL 'B' port of the valve and the other 78" HP hose (19) to the raise port of the valve. Route these hoses out through the fan shroud or core support and through the grille low and about 14" off center to the passenger side. Vehicles with heavy duty cooling and air conditioning will need the 3" fitting protector (67) on hoses rubbing edge of coils between radiator and grille. Place fitting protector around all three hoses and secure with tie wrap (75). Attach female half of a QD (42) to one hole of the 2 QD grille plate (57) with a snap ring (45). Attach the bulkhead adapter (44) with a snap ring (45) to the other hole in the 2 QD/grille plate. Attach male half of a QD (42) to the front of bulkhead adapter. Put dust plugs (43) on the ends of two 45° swivel fittings (60) and attach them to the female QD and bulkhead adapter on the back of the 2 QD/grille plate.

**Note: Some GMC models with a fine mesh grille may have to use two standoff legs (58) fastened with four 1/4-20 x 1/2 button head socket screws (61) and lock nuts (62) on each grille plate. Trucks using standoff legs will use grille plate/fitting configuration as described above except that the three 45° swivel fittings will not will be used.**

Attach the 78" HP hose from the raise port of the valve to the male disconnect. Attach the 78" Hp hose from the Cyl "B" port to the female disconnect. Place the 'angle' female disconnect on grille plate towards the outside of vehicle and attach grille plate to grille with two long tie wraps (59).

- C. Install cable boot bracket (65) on driver's side headgear brace, between brace and fasteners. Insert cable boot (66) on over bracket.
- D. Install the in-line oil filter (7) as per instructions located in the common hydraulics kit.

## 7. Operations

- A. Check all fittings and fasteners for tightness. Secure hoses with nylon tie wraps (75). Place caution label (72) on dash beside control head.
- B. Fill reservoir with FISHER® High Performance Hydraulic Fluid (recommended for superior cold-weather performance) or type "A" automatic transmission fluid. Start the engine, lift and angle the blade. **If the blade angles opposite from the control lever position, reverse the two Hp hose connections on valve.** Raise the front end of the vehicle until the plow is clear of the ground with the lift cylinder fully retracted. Check the reservoir oil level. Angle the blade (with the lift cylinder retracted) to remove air from the system. Recheck the reservoir oil level.

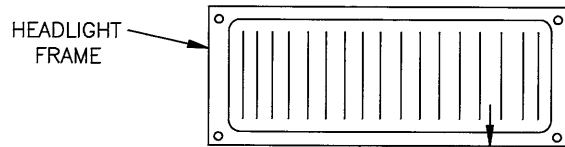
**Note: The installer must inform the end user of the proper procedure for removing any residual hydraulic pressure that may be trapped in the raise or angle hoses. The plow will be much easier to install or remove if the proper procedures are followed.**

Before coupling or uncoupling the hydraulic disconnects you must first turn off the ignition. Move the control to all four plowing positions and return the control to lower. You may then remove or install the plow.

HOLE DRILLING INSTRUCTIONS FOR HOSE  
ROUTING TO FRONT OF VEHICLE

FOR VEHICLES WITH HEAVY DUTY RADIATORS  
AND AIR CONDITIONING

FRONT VIEW OF HEADLIGHT/RADIATOR WEB

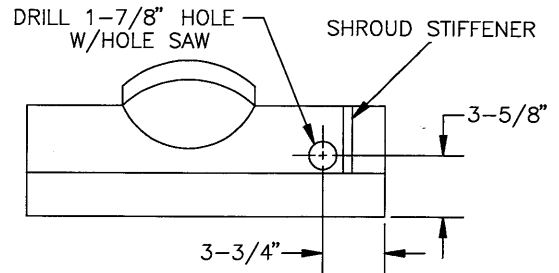


DRILL A 1-7/8" HOLE 2" BELOW  
THE HEADLIGHT FRAME, ABOVE THE  
HORN AND AS CLOSE TO BULKHEAD  
STIFFENER AS POSSIBLE.

DRIVER'S SIDE →

FOR VEHICLES WITHOUT HEAVY DUTY RADIATORS  
AND AIR CONDITIONING

TOP VIEW OF SHROUD



DRIVER'S SIDE →