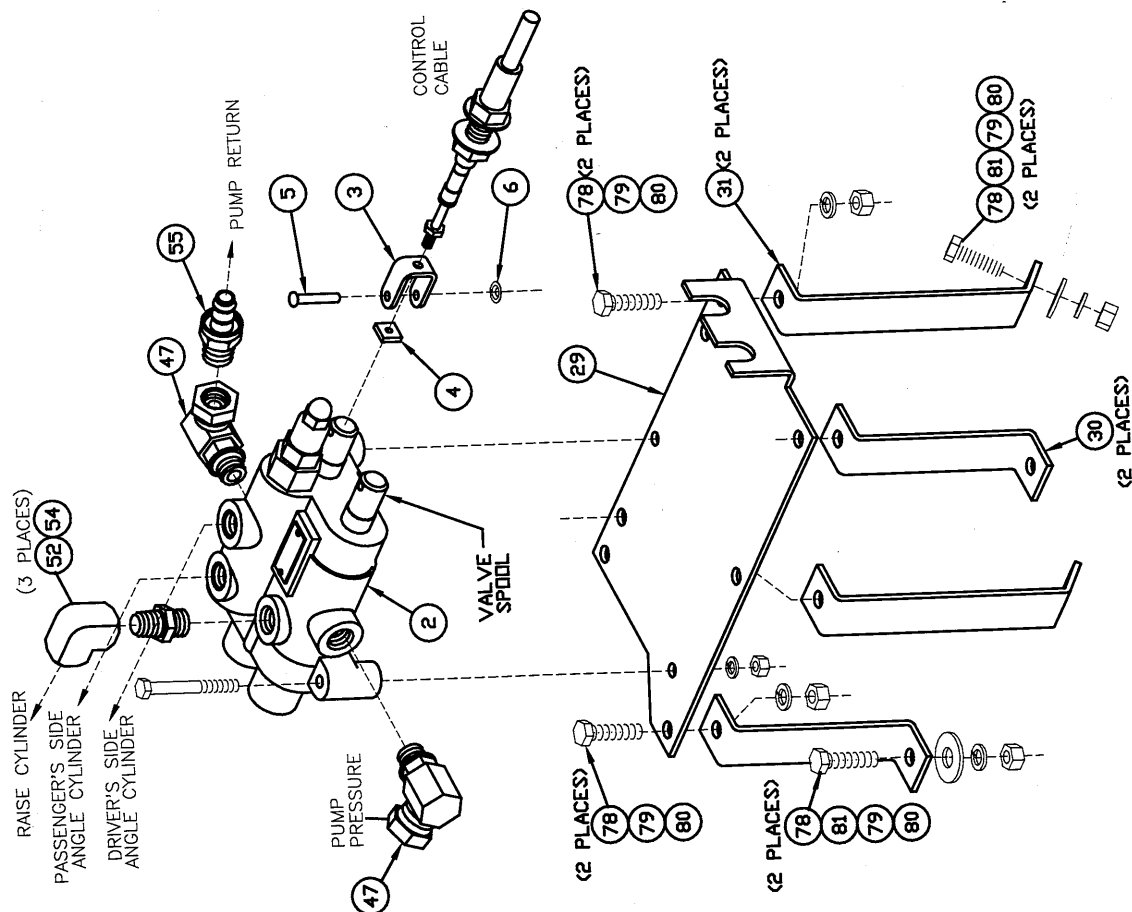
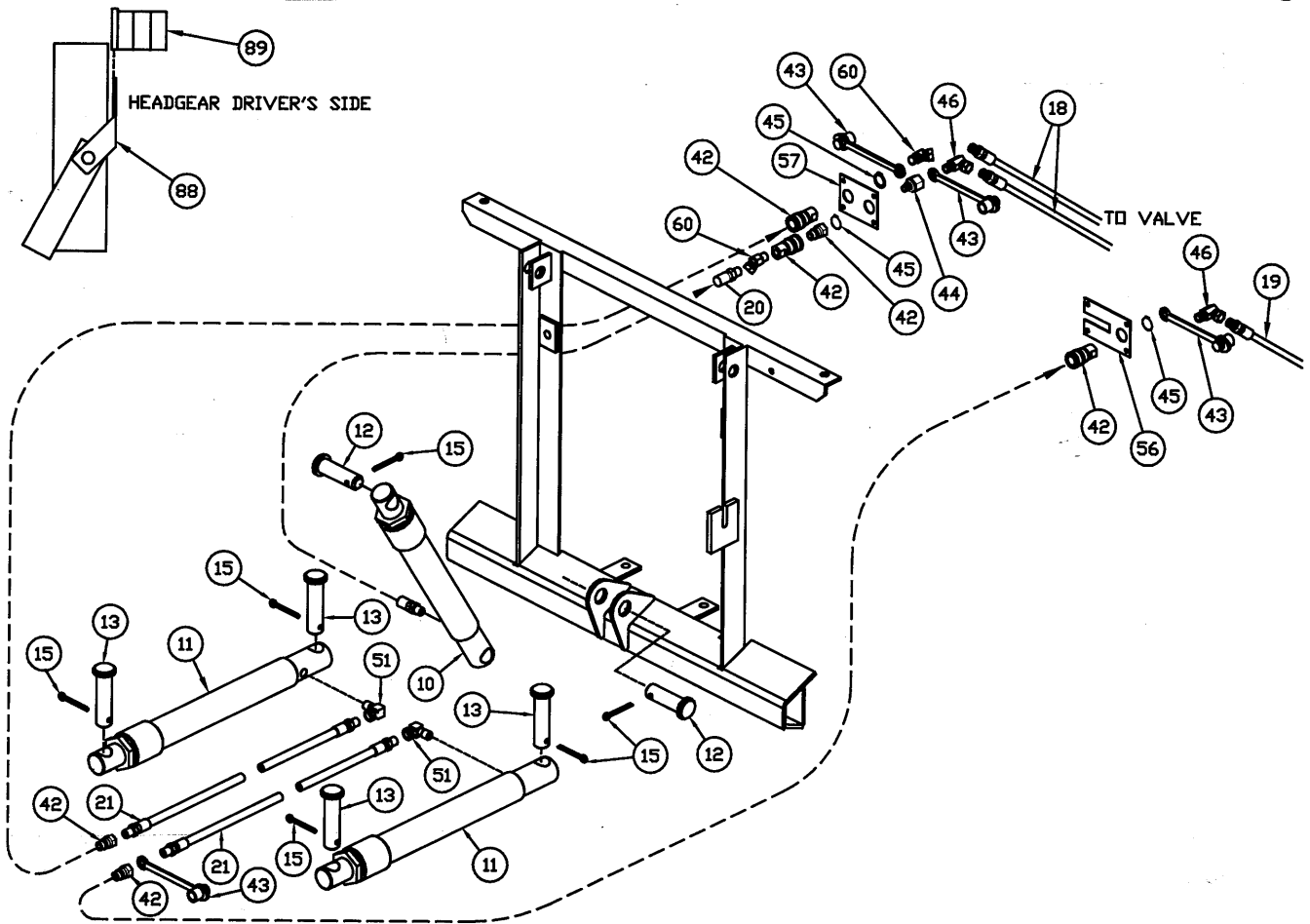


6481



Ref #	Qty	In Kit	Part #	Description	Ref #	Qty	In Kit	Part #	Description
# A4468-40 7521					# A4468-40 7521				
1	1		A2311	Pump assembly	51	2		2780	1/4" Brass Bar Ell. (F/F)
2	1		A4466	Control Valve Assembly	52		4	2318	1/4" NPT x 90 Deg. Elbow FRGD
3	2		4483	Clevis	53		1	3979	3/8" Brass Bar Ell.
4	2		4494	10-32 Square Nut	54		3	3058	9/16" "O" Ring to 1/4" St. Adaptor
5	2		4491	Clevis Pin 3/16 x 1"	55	2		1658	Quill - 3/8" NPTM to 3/8" ID Hose
6	2		4493	3/16" Push Nut Zp	56		1	8688	QD/Electric Grille Plate (Short)
7	1		8764	Filter Kit (at end of instructions)	57		1	8686	2 QD Grille Plate (Short)
8		1	4419	Single Lever Control	58				
9		2	A4949	30" Control Cable, SLC	59		4	8324	Hose Tie - 3/16" x 14"
10	1		A318	1-1/2" x 10" Cylinder Assembly	60		2	8127	1/4" x 45 degree Swivel
11	2		A3660	1-1/2" x 12" Cylinder Assembly	61				
12	2		6814	Clevis Pin - 1 x 3-5/16	62		1	8064	Valve Cover - Cummins 3902605
13	4		6816	Anchor Pin - 1 x 4	63		1	8065	Valve Cvr Gskt - Cum'ns 3902666
14					64		1	8066	Cover - Cummins 3903463
15	6		90601	1/4" x 1-1/2" Cotter Pin	65		1	8067	Cover O-Ring - Cum'ns 3903475
16		1	4934	18" H.P. Hose 1/4p to 3/8p	66			8089	Conversion Kit - Oil Fill
17		1	2706	15" 3/8" L.P. Hose	67				
18		2	8632	78" H.P. Hose 1/4p to 1/4p	68				
19		1	5215	48" H.P. Hose, 1/4p to 1/4p	69				
20		1	3074	22" H.P. Hose 1/4p to 1/4p	70				
21		2	4424	36" H.P. Hose 1/4p to 1/4p	71				
22					72		1	5704	Caution Label
23		1	363	Fan Belt, 50"	73	2		3042	Grommet - Rubber, split
24		1	8076	Drive Sheave	74	1		4477	Grommet - Split Hose
25		1	3696	Pump Sheave	75	3	3	3666	Hose Tie, Nylon - 3/16" x 8"
26		1	8075	Pump Bracket	76		2	90048	5/16" x 1 1/4" (nc) Gr. 5 Capscrew
27					77	1		90054	5/16" x 1-1/2" (nc) Gr. 5 Capscrew
28					78	4	6	90042	5/16" x 1 (nc) Gr. 5 Capscrew
29		1	5329	Valve Plate	79	6	7	90360	5/16" Lockwasher
30		2	9078	Brace - Valve Plate	80	7	6	90332	5/16" (nc) Nut
31		2	9079	Brace - Valve Plate	81	4	4	90313	5/16" Flatwasher
32					82				
33					83		1	90067	5/16" x 2" (nc) Gr. 5 Capscrew
34					84	1		90614	1/4" x 1 1/4" (nc) Gr. 5 Capscrew
35		1	5467	Saddle Bracket	85	1		90359	1/4" Lockwasher
36	1		2036	Rear Tank Strap	86	1		90330	1/4" (nc) Nut
37	1		2116	Universal Brace Rod	87				
38		1	2115	Universal Brace Tab	88		1	8741	Bracket - Cable Boot
39					89		1	8284	Cable Boot
40					90		6	90372	M6 x 1.0 x 20 Gr, 8.8 Capscrew
41					91		4	90387	M10 x 1.5 x 25 Gr. 8.8 Capscrew
42	2	1	A1587	Disconnect Assembly	92		1	90669	M12 x 1.75 x 40 Gr. 8.8 Capscrew
43	2	2	1588	Dust Plug	93		6	90427	M6 Lockwasher
44		1	4486	Adaptor- Bulkhead 1/4" NPT	94		4	90429	M10 Lockwasher
45		3	4485	7/8" Snap Ring	95		1	90430	M12 Lockwasher
46	1	1	319	1/4" x 90 Swivel Adaptor	96				
47	2		2315	9/16" - 18 w/o Ringx3/8" FPISWV	97				
48					98				
49					99				
50					100				

Kit A4468-40 uses bolt bag 5425
 7521 uses bolt bag 9080
 Instructions - 6481

1. Cylinder & Cylinder Hose Assembly

A. Attach female half of disconnect (42) and a 1/4" NPT 45 degree swivel (60) to the 22" Hp hose (20). Using bench vise to hold lift cylinder (10), remove closure from port & screw the other end of the hose directly into this port. Place the lift cylinder with hose pointing towards passenger side into ears on lift arm & upper gear. Secure with the clevis pins (12) & cotter pins (15).

B. Attach a male quick disconnect half (42) to one end of a 36" Hp hose (21). Place a dust cover (43) & male quick disconnect half (42) on the end of another 36" HP hose (21).

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 & 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 & male disconnect half. The passenger's side cylinder 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 & A-frame. Secure cylinders with anchor pins (13) & cotter pins (15) at each end.

2. Control Head & Control Cables

Note: Dash bracket, hardware, drilling guide and mounting instructions will be found in the peculiar attaching box.

A. Drill two 5/8" holes in the firewall for the control cables using drilling guide as a reference only. **Be sure both sides of the firewall are clear of obstructions before drilling.** Drill 1/2" hole in the underside of the dash as shown in the dash illustration.

B. Install the dash bracket as per dash bracket instructions.

C. Loosen the "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 & tighten jam nuts to secure cables to control head. Remove nuts and washers from the valve end of the cables. Route the cables from dash through hole in the firewall to the top of the driver's side fender well. Attach control head to dash bracket as per dash bracket instructions. Install rubber grommets (73) around cables where they pass through the fire wall.

3. Valve & Valve Plate

A. Using a bench vise to hold control valve assembly (2), remove closures from valve ports. Screw the 90 degree swivel adapter unions (47) into the "in" and "out" ports. Screw Quill (55) into installed adapter in the "out" port.

Note: The valve fittings are installed as described to insure proper installation. First indication of incorrect installation is failure of plow to lift, although the plow will angle.

Install three 9/16" O-rings to 1/4" pipe adapters (54) in lift & angle ports. Install one 1/4" brass bar ell (52) to each adapter. 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 (29) using two 1/4 x 1-1/4 capscrews, lock washers, & nuts located in the 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 that they are exactly in line with valve spool centers. Attach cable clevises (3) to cables using square nuts (4). Slip cable clevises over spools. Install clevis pins (5) through clevis & spools & secure with pushnuts (6). Temporarily adjust cables so that control lever is near being centered in the control head.

C. Locate valve plate with cables attached, on top of driver's side inner fender well, straddling wiring and solenoids, so that valve is near level & cables run in as smooth a path as possible with no kinks. Make sure the braces do not rub against any wiring or against solenoids. Using the holes in the braces (30 & 31) as guides, mark & drill two 11/32" holes through the fender well. Attach the braces to the fender well with four 5/16 x 1" capscrews (78), flatwashers (81), lockwashers (79), and nuts (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 the cable clevis does not allow enough adjustment, reposition the cable at the valve plate bulkhead. After checking to see that the valve spools are in the centered position, tighten cable clevis nuts.

CAUTION: The valve spools must be free and self centering when the cables and the control head are attached. Failure to center the spools will restrict the fluid flow through the 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 the end with the slot. Drill a 1 1/32" hole just before the bend. Reinstall the brace while sliding battery over in the battery box as far as possible. **Tighten.**

B. Remove the fan shroud, fan, & the fan pulley. Return fan pulley to Fisher Engineering for a \$10.00 credit. Discard the fasteners from the pulley. Remove the oil fill neck from the front of the engine. Plug hole with the cover (64) and gasket (65). **Tighten.** Remove the plate above the valve covers. Remove the front valve cover & replace with a new valve cover (62) and gasket (63), reuse the existing oil filler cap. A clearance hole for the filler cap must be cut to reinstall the plate.

NOTE: Apply a loosening resistance compound, such as Loctite, on all capscrews before installing drive sheave.

Install the drive sheave (24) with six M6 x 1.00 x 20 Gr. 8.8 capscrews (90), and M6 lockwashers (93). Torque these fasteners to 7 foot pounds. Reinstall the fan shroud & the fan.

5. Pump Tank & Pump Bracket

A. Remove front accelerator spring on driver's side of engine. Remove the bolt below the spring on the front part of the power steering unit. Place the pump bracket (26) under the radiator hose and drivers side of valve cover. Attach the pump bracket with four M10 x 1.5 x 25 capscrews (91) and lockwashers (94). Install an M12 x 1.75 x 40 capscrew (92) with a lockwasher (95) to previously removed fastener from the front of the power steering unit. **Tighten all fasteners.** Reinstall the accelerator spring thru the hole in the pump bracket.

B. Holding the pump tank (1) in a bench vise, screw 3/8" brass bar street ell (53) and quill (55) into the return port of the pump. Install a 1/4" NPT x 90 degree union elbow (52) into the pressure port. Install the pump sheave (25) on to the pump shaft using lock nut and key supplied with pump. Remove the pump from vise and install saddle bracket (35) on over the front of pump. Secure with a 5/16" x 2" capscrew (83), lockwasher (79), and nut (80). Place the saddle bracket (35) on the front face of the pump bracket and attach with two 5/16 x 1 1/4" capscrews (76), flatwashers (81), lockwashers (79), and nuts (80).

C. Install a 50" V-belt (23) on over drive & pump sheaves. Using the top fastener as a pivot, align sheaves & tighten fasteners. Adjust for the proper tension. Remove the bolt under the fuel line behind the pump bracket bolt. Install universal brace tab (38) & reinstall bolt. Bend tab down so that it will be 1/4" from the 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) & flat washer (81) onto universal brace rod & insert brace rod through universal brace tab. Connect brace rod to tank strap with one 1/4 x 1-1/4 capscrew (84), lock washer (85), & nut (86). Secure the other end of brace rod to brace tab with a 5/16" flatwasher (81), 5/16" lockwasher (79), & nut (80). Use the brace rod to adjust the alignment of the drive & pump sheaves. Check belt for proper tension. Use tie wraps (75) to keep the battery ground cable away from the pump sheave.

6. Hydraulic Hose Installation

A. Attach 1/4" end of the 18" Hp hose (16) to the 1/4" brass bar ell on the rear of the pump tank & push one end of the 15" LP hose (17) onto quill on pump tank (**hoses must be pushed onto quills all the way**). Route the Hp hose in front of the valve plate to the "in" port adaptor on the valve. Route the LP hose so there are no kinks to the quill on the out port of the valve. If the LP hose is too long, cut to proper length and fasten onto quill.

CAUTION: Keep hoses away from hot or moving engine components. Failure to do so may cause hoses to burst resulting in a possible engine fire.

B. Install the split hose grommet (74) in the hole on driver's side bulkhead between the headlight and radiator. Remove the grille. Take a 78" HP hose (18) and attach it to the front angle port on the valve (passenger side). Install the 48" HP hose (19) to the rear angle port on the valve. Install the other 78" HP hose (18) to the lift port of the valve. Route the hoses along the battery and out through the hole with the split Rubber Grommet.

7. Disconnect Assembly

A. Using the two hole quick disconnect plate (57), install the bulkhead adaptor (44) through one hole in the plate and fasten with a snap ring (45). Attach one 1/4" x 90 degree swivel (46) on the back of the adaptor. Install a male disconnect (42) on the front. In the other hole install a female disconnect (42) and fasten with a snap ring (45). Attach a 1/4 x 45 degree swivel (60) to the rear of the female disconnect. Place the plate and fittings against and through the third slot from the bottom of the grille and as far out board as possible. Place dust plugs (43) on both 78" hoses and attach the lift hose (18) to the female disconnect, and angle hose (18) the male disconnect.

B. Using the quick disconnect plate (56), install a male disconnect (42) through the hole and fasten with a snap ring (45). Next install a 1/4" x 90 degree swivel (46) to the back of the disconnect. Pass the electric plug out through the third slot from the bottom of the grille as far outboard as possible on the driver's side, and set it into the slotted side of the plate. Place the plate into the grille and install the dustplug (43) over the hose fittings and install the 48" hose (19) to the 1/4" x 90 degree swivel (46). Reinstall the grille. Place the plates (56 & 57) tight against the grille and tie them to the grill with four tie wraps (long) (59). Take the hoses along the battery and tie them down so they are not rubbing the battery or engine.

C. Install the cable boot bracket (88) on the driver's side headgear brace, between the brace and fasteners. Insert the cable boot (89) on over the bracket.

D. Install in line oil filter as per filter kit (7) instructions at the end of this document.

8. Operations

A. Check all fittings and fasteners for tightness. Secure hoses with nylon tie wraps (75). Place the caution label (72) on the dash beside the control head.

B. Fill reservoir with type "A" automatic transmission fluid. Start the Engine, lift and angle the blade.

NOTE: If the blade angles opposite from the control lever position, reverse the two Hp angle hoses.

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.