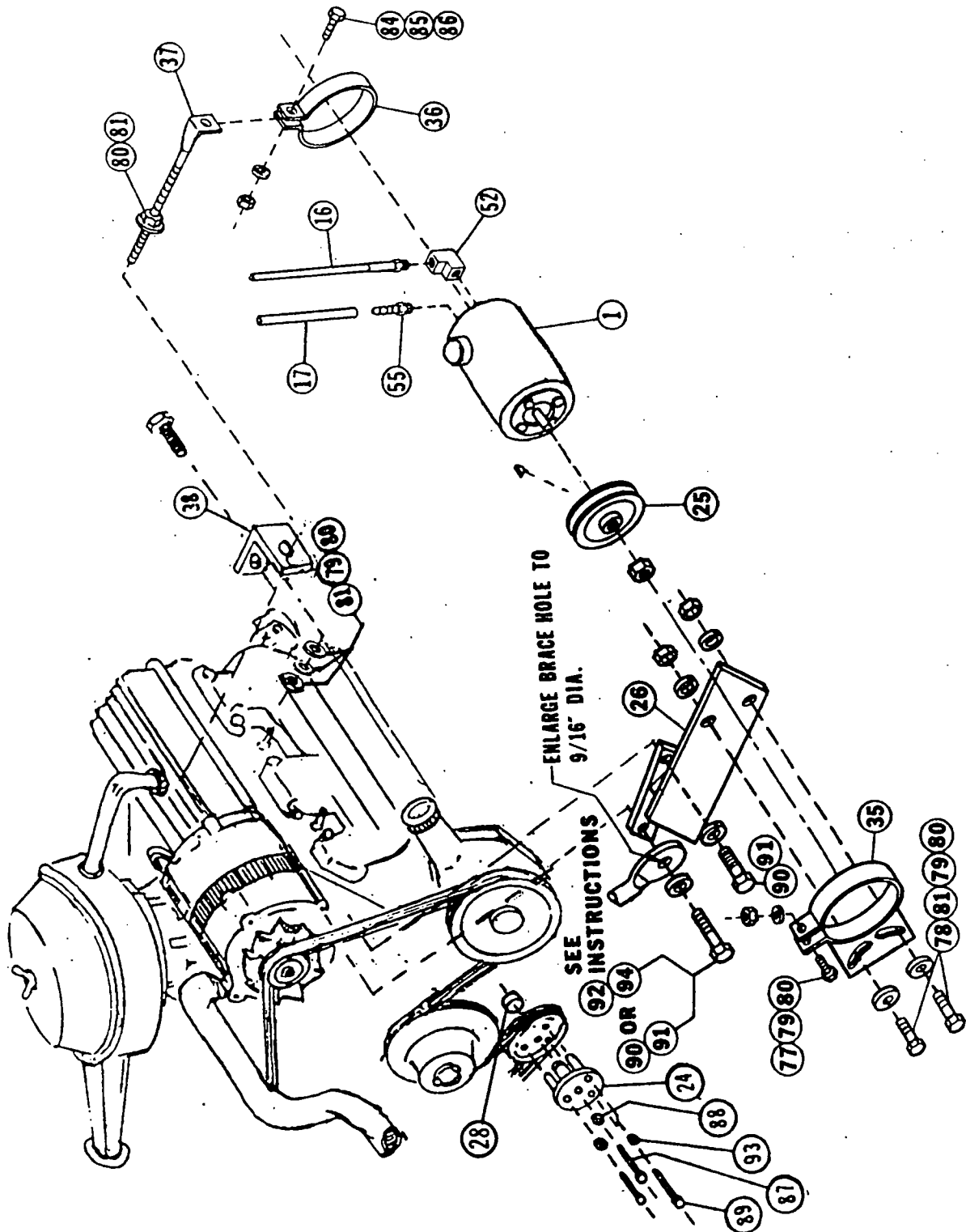


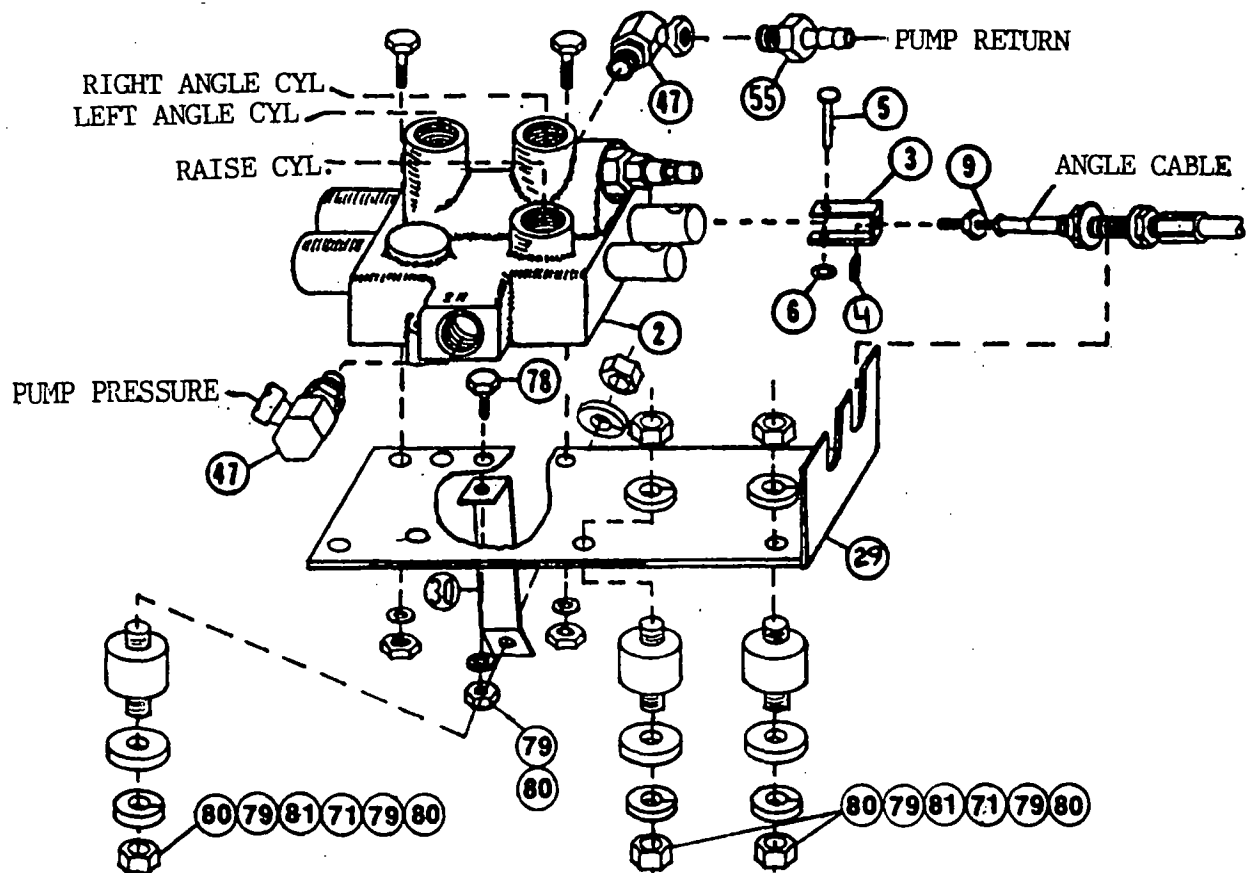
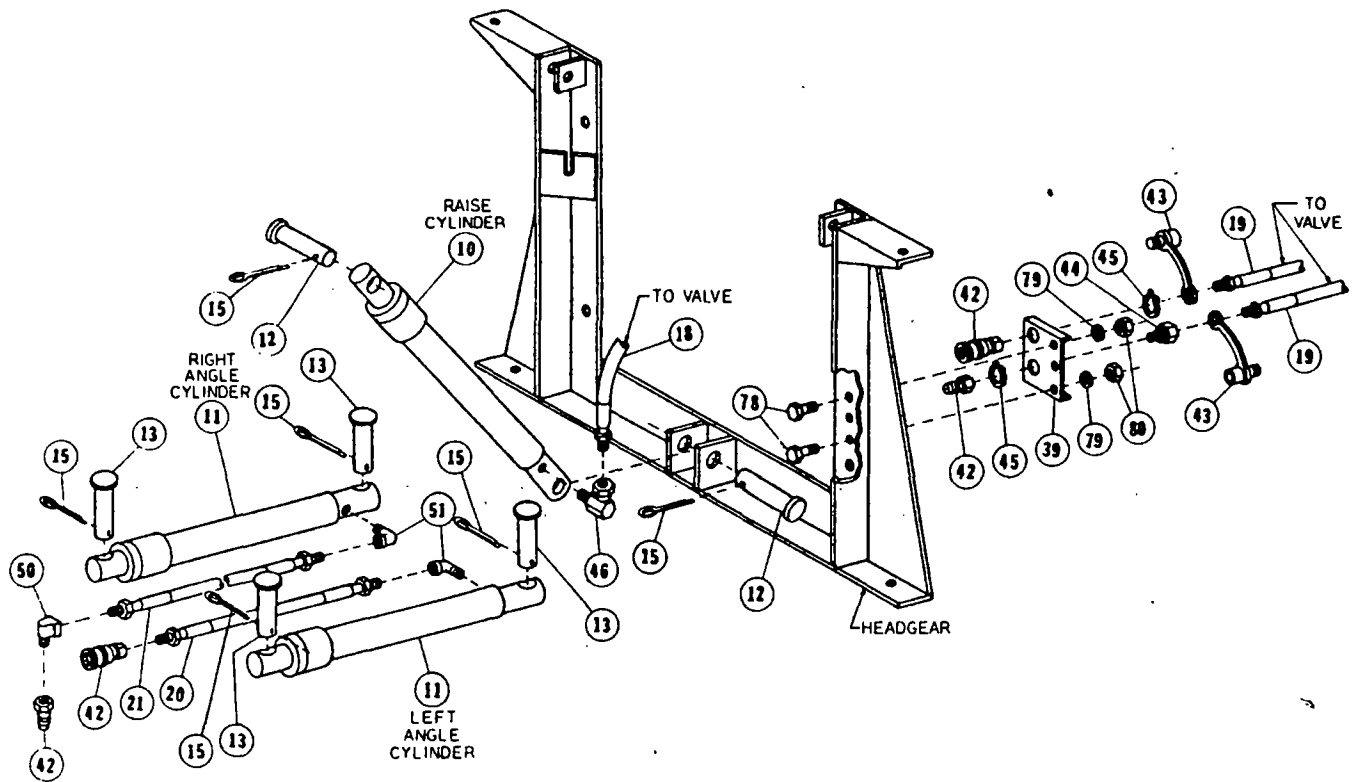
CHEV/GMC V6 4.3L
V8-305 w/o AC
V8- 350 w-w/o AC

1988 -1989

Peculiar Hydraulics
Belt Drive, SLC
Underhood Valve




HPS4587
Rev C





Hydraulics Parts List

Ref.	Qty	In	Kit	Part	Description	Ref.	Qty	In	Kit	Part	Description
# A4468-40 4587	#				* Part of 6873 Bolt Bag	# A4468-40 4587	#				* Part of 6873 Bolt Bag
1	1			A2311	Pump tank assembly	50	1			* 765	1/4 Npt x 90 Deg Street Elbow
2	1			A4466	Control Valve Assembly	51	2			2780	1/4 Npt x 90 Deg Street Elbow Frgd
3	2			4483	Clevis - VM	52	1			* 2318	1/4 Npt x 90 Deg Union Elbow
4	2			4494	10-32 Square Nut - VM	53					
5	2			4491	Clevis Pin - 3/16" x 1	54					
6	2			4493	3/16" Push Nut Zp	55	2			1658	Quill - 3/8 Nptm to 3/8 ID Hose
7	1			8764	Filter Kit	56					
8		1		4419	SLC Head - Belt Drive	57					
9		2		6027	45" Control Cable, SLC	58					
10	1			A318	1-1/2" x 10" Cylinder Assembly	59					
11	2			A3660	1-1/2" x 12" Cylinder Assembly	60					
12	2			6814	Clevis Pin - 1 x 3-5/16	61					
13	4			6816	Anchor Pin - 1 x 4	62					
14						63					
15	6			90601	1/4" x 1-1/2" Cotter Pin	64					
16		1		2707	26" HP Hose - 1/4P - 3/8P	65					
17		1		4471	26" LP Hose	66					
18		1		1665	54" HP Hose 1/4p to 9/16 O-ring	67					
19		2		1664	60" HP Hose, 1/4P to 9/16 O-ring	68					
20		1		376	32" HP Hose, 1/4P to 1/4P	69					
21		2		4424	36" HP Hose, 1/4P to 1/4P	70					
22						71		3		*5529	Shock Mount
23		1		418	52" V-belt 4L 520	72		1		5704	Caution Label - Cab
24		1		20056	Drive Sheave	73	2			3042	Grommet - Rubber, Split
25		1		3696	Pump Sheave	74	1			4477	Grommet - Split Hose
26		1		6073	Pump Bracket	75	3	1		*3666	Hose Tie, nylon 3/16 x 8
27						76					
28		1		*20057	Drive Sheave Bushing .750	77	1			90054	5/16 x 1-1/2 (NC) Gr. 5 Cap Screw
29		1		5329	Valve Plate	78	4	1		*90042	5/16 x 1 (NC) Gr. 5 Cap Screw
30		1		5795	Valve Plate Brace	79	6	6		* 90360	5/16 Sp Lk Washer
31						80	7	6		*90332	5/16 (NC) Nut
32						81	4	3		*90313	5/16 Plain Washer
33						82					
34						83					
35		1		4921	Saddle Bracket	84	1			90614	1/4 x 1-1/4 (NC) Gr. 5 Cap Screw
36	1			2036	Rear Tank Strap	85	1			90359	1/4 Sp Lk Washer
37	1			2116	Universal Brace Rod	86	1			90330	1/4 (NC) Nut
38				*2115	Universal Brace Tab	87		1		*90202	7/16 x 5-1/4 (NF) Gr. 5 Cap Screw
39		1		4467	Disconnect Mounting Plate	88		1		*90317	7/16 Plain Washer ZP
40						89		3		*90154	3/8" x 4" (NC) Gr. 5 Cap Screw
41						90		2		*90111	3/8-16 x 1-1/2 HX ZP Gr. 5 Cap
42	2			A1587	Hose Disconnect Assembly	91		2		*90361	3/8 SP LK Washer
43	2			1588	Dust Plug - Closure/Male	92		1		*90436	3/8-16 x 1-3/4 HX Gr.5 NY IS ZP CS
44		1		* 4486	Adapter - Bulkhead 1/4" Npt	93		3		* 4268	5/8" Spacer Washer
45		2		* 4485	Snap Ring - 7/8" External Bowed	94		1		*90315	3/8" Flat Washer
46	1			319	1/4" x 90 Swivel Adapter	95					
47	2			2315	9/16-18 w/O-Ring x 3/8 F Pi Swivel	96					
48						97					
49						98					

FASTENER TORQUE (FT-LB)			
DIAMETER- THREADS PER INCH	GRADE		
			
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
9/16 - 12	150	250	370
7/8 - 9	150	378	591
1 - 8	220	583	893

1. Cylinder & Cylinder Hose Assembly

- A. Using bench vise to hold lift cylinder (10), remove closure from port. Screw 90 degree swivel adapter (46) into port. Place lift cylinder with installed adapter 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" HP hose (20), install female half of hose disconnect assembly (42) directly to hose. Then, holding 36" HP hose (21), install brass bar street ell (50) and male half of hose disconnect assembly (42) on the same hose end.
- C. Using a 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" HP hose with female disconnect half to driver's side angle cylinder street ell. Install other HP 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 & Control Cables

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

- A. Drill three 5/8" holes in the firewall for the control cables and wiring harness 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 underside of dash as shown in 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 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 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 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: Valve fittings are installed as described to insure proper installation. First indication of incorrect installation is failure to plow to lift although plow will angle.

- B. Mount valve to valve plate (29) using two 1/4" x 1-3/4" cap screws, lock washers and nuts located in the valve bag. Install a rubber shock mount (71) into the center and rearmost holes on the driver's side of the valve plate. Fasten each 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 clevis (3) to cables using square nuts (4). Slip cable clevises over spools. Install clevis pin (5) through clevis and spool and secure with push nut (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 fender well 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 washer bottle). Using the two previously installed shock mounts as guides, mark and drill two 11/32" holes through the fender well. Fasten each shock mount to the fender well with one 5/16 flat washer (81), lock washer (79) and nut (80). Attach 90 degree 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). Attach a rubber shock mount (71) to hole in other end of brace with a 5/16 lock washer (79) and nut (80). Using the shock mount as a guide, drill another 11/32" hole through the fender well and fasten shock mount to the fender well with a 5/16" 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

Caution: Before inserting bushing, check center of crankshaft for rust or any foreign material and remove.

- A. Remove fan shroud and serpentine belt. Remove and discard the three cap screws holding vehicle crank pulley to vibration damper. Remove and discard cap screw and flat washer holding vibration damper to crankshaft, if vehicle is so equipped. Check vehicle crank pulley and remove any burrs around the holes that the cap screws were removed from.
- B. Install drive sheave bushing (28) into center of crank shaft, reinstall vehicle sheave. Place the drive sheave (24) center hub through the vehicle sheave and bushing. Place a 7/16 x 5-1/4 (NF) Gr. 5 cap screw (87) and flat washer (88) in center of sheave, plus three 3/8 x 4 (NF) Gr. 5 cap screws (89) with spacer washers (93) through sheave spacers.

6. Hydraulic Hose Installation

- A. Attach 26" HP hose (16) to 1/4" brass bar ell 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 fire.

Push LP hose onto quill and screw HP hose into 90 degree swivel adapter. Install 9/16 O-ring end of 60" HP hose (18) to lift cylinder port of valve (Spool #1). Install 9/16 O-ring end of two 54" hoses (19) to angle ports of valve (Spool #2). Drill a 1-7/8" hole through middle of radiator web on driver's side, approximately 9-1/2" below top of radiator. Cut a 3" wide section out of the grill in line with location where the disconnected bracket will be located. 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 adapter on lift cylinder.

- B. Install the in-line oil filter (7) as per instructions located in the common hydraulics kit.

7. Disconnect Assembly

- A. With disconnect mounting plate (39) held in bench vise, install disconnect halves as shown in illustration. Bulkhead adapter (44) and male disconnect half (42) go in bottom hole. Female disconnect half (42) goes in the top hole. Secure both with 7/8" snap rings (45). Attach mounting plate to back of driver's side headgear post with two 5/16 x 1 cap screws (78), lock washers (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 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. **If the blade angles opposite from the control lever position, reverse the two Hp hose connections on the back of the disconnect bracket.** 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.