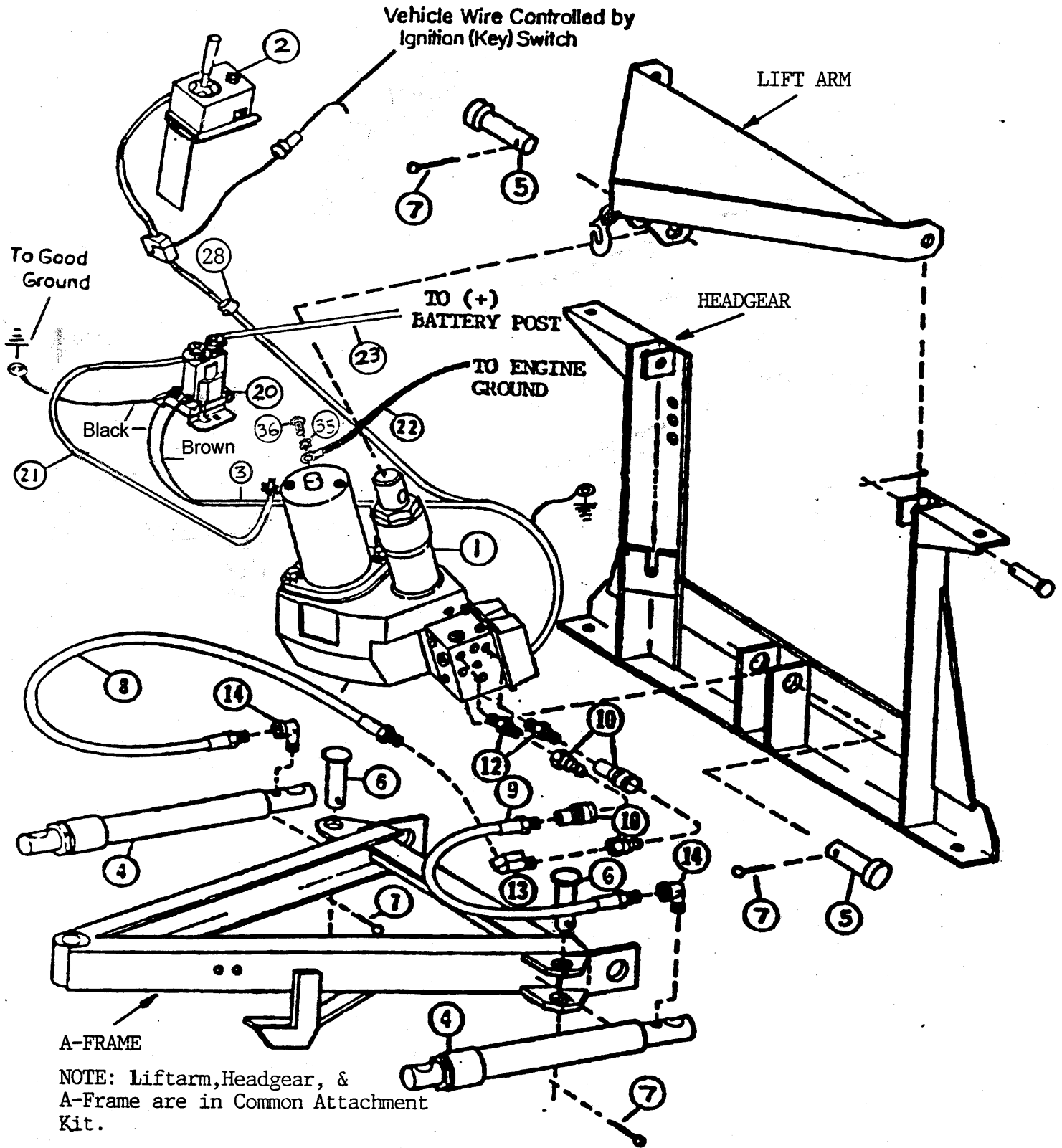
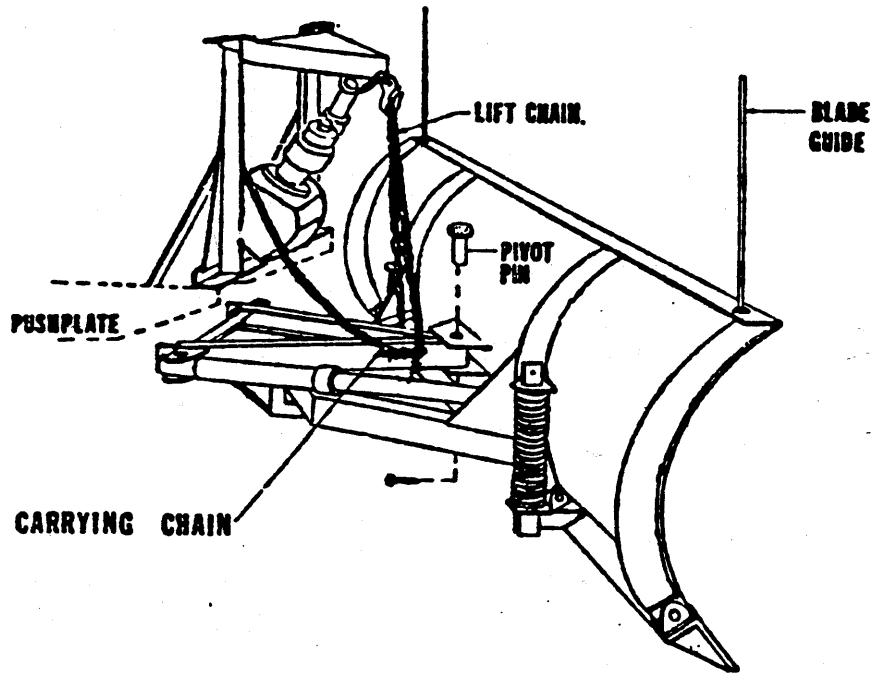
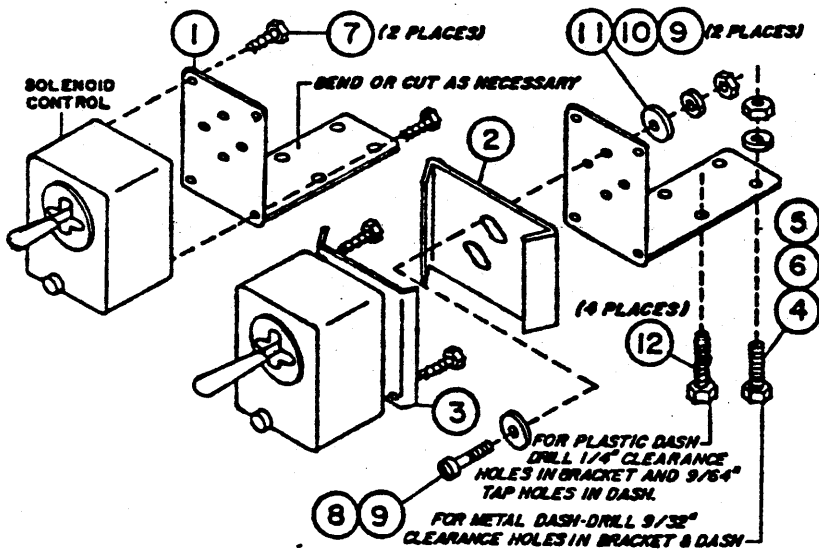


SOLENOID ELECTRIC HYDRAULIC PAK

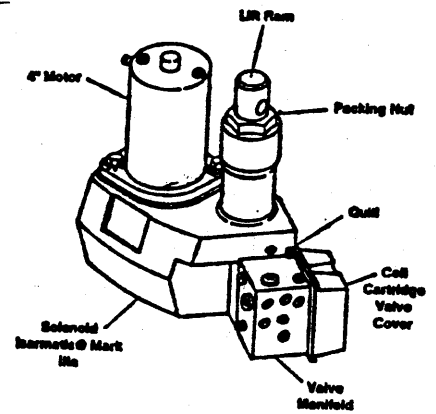




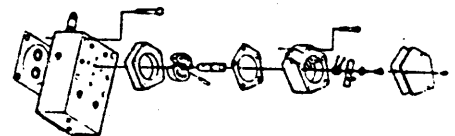
TYPICAL DASH MOUNT



LIFT VALVE & GENERAL



ANGLE VALVE



## Parts List

Ref #	Part #	Qty	Description	Ref #	Part #	Qty	Description
1A	7616	1	Sol Isarmatic - 6" 2500 psi	20	8722	1	Solenoid
1B	7923	1	Sol Isarmatic - 10" 4000 psi	21	5797	1	60" Cable (red)
2	7736	1	Solenoid Control	22	5798	1	60" Ground cable (Black)
3	7648	1	Control Harness	23	5799	1	22" Cable (red)
4A	20116	2	10" Angle Cylinder Assembly	26	90672	2	5/16 - 24 Jam Nut
4B	20117	2	12" Angle Cylinder Assembly	27	3666	6	Tie Wraps
5	**6814	2	Clevis Pin	28	3042	1	Grommet
6	**6816	4	Anchor Pin	29	90657	2	#10 Lock Washer
7	*90601	6	1/4 x 1-1/2 Cotter Pin	30	90673	2	#10-32 Nut
8	*376	1	32" HP Hose, 1/4P to 1/4P	31	90461	2	1/4 x 3/4 (NC) Cap Screw
9	*3074	1	22" HP Hose, 1/4P to 1/4P	32	90311	2	1/4 Flat Washer
10	21096	2	Disconnect Assembly	33	90350	2	1/4 (NC) Lock Nut
11	*1588	2	Dust Plug	34	*90360	2	5/16 Lock Washer
12	5804	2	1/4" Hex Nipple	35	90692	1	5/16 Ex Tooth Lock Washer
13	*765	1	1/4" Brass Bar Street Ell	36	90691	1	5/16-18 x 1/2 Cap Screw
14	*2780	2	1/4" Brass Bar Street Ell (forged)	37	*5703	1	#16 Wire, 8' Long
16	21306	1	.187 Insulated Receptacle	38	*5793	5	#16 Barrel Connector
17	21307	1	.250 Insulated Receptacle	39	*7714	1	Dash Bracket Bag (not shown)
18	21308	1	Fuse Tap; .250 Tab				
19	21309	1	Fuse Tap; .187 Tab				

A=7725; B=7740 \* Part of 8730 Bolt Bag; \*\* Part of 6660 Bolt Bag

## INSTALLATION INSTRUCTIONS

**Note: Attachments, including the headgear and lift arm, must be installed on the vehicle before beginning the hydraulics installation.**

## 1. Hydraulics Assembly

- A. Hold Solenoid Electric Hydraulic Pak (SEHP) (1) in vise by base lug. Remove angle port plugs and install two 1/4" pipe nipples (12) and two dust plugs (11). Install two disconnect halves (10) with female half in rear port. Remove plastic solenoid cover from rear of valve.
- B. Install SEHP to vehicle between headgear base and attaching ears on bottom lift arm. Connect to headgear and lift arm with clevis pins (5) and cotter pins (7).
- C. Using bench vise to hold, attach a 1/4" brass bar street ell (13) to 32" HP hose (8). Attach male half of disconnect assembly (10) to brass ell. Place 22" HP hose (9) in bench vise and attach female half of disconnect hose assembly (10) directly to hose.
- D. Using bench vise to hold angle cylinders (4), remove closures from ports. Screw brass forged street ell (14) into ports.

**FOR 7725:** When tight, ells (14) should point **slightly inboard** to protect angle hoses from pinching between angle cylinders and headgear while stacking snow.

**FOR 7740:** When tight, ells (14) should point **slightly upward** to protect angle hoses from pinching between angle cylinders and headgear while stacking snow.

Attach 32" HP Hose with male disconnect half to ell in passenger's side cylinder. Attach hose with female disconnect half to driver's side cylinder. Install cylinders to A-frame and blade on their respective sides with anchor pins (6) secured with cotter pins (7).

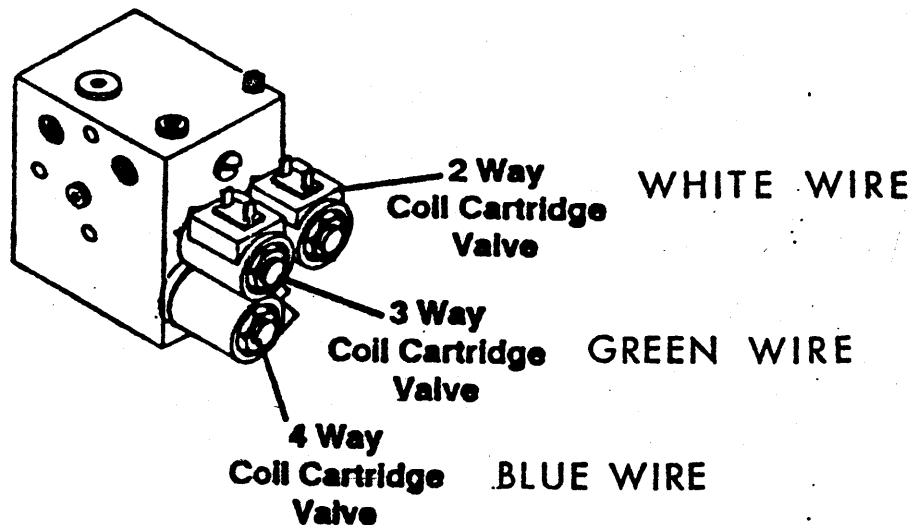
**2. Solenoid Control and Harness Installation**

- A. Using drilling guide from peculiar dash bracket bag, choose the two most convenient 5/8" diameter holes suggested. Be sure both sides of firewall are clear of wires or any other obstructions before drilling.
- B. Dash bracket instructions, for installing the SEHP control (2), are in the Solenoid Electric Hydraulic Pak dash bracket bag (39).
- C. Place grommet (28) around control harness (3) and insert through hole drilled in firewall. Route main harness through radiator web to SEHP. Connect smaller harness to primary (small terminals) side of solenoid with two #10 lock washers (29) and nuts (30).

**Note: Solenoid placement on some vehicles may require lengthening the brown and black wires leading to the primary (small) posts. Cut these wires 1" from the ends of protective covering and add the necessary length of 16 Ga. wire (37) provided using four barrel connectors (38).**

Each half of the harness has a 5/16" ring terminal. Connect this to a good ground using an existing fastener. (See illustration of harness and solenoids with color codes for control harness connections.)

**Note: Each solenoid has one black ground.**



**3. Electrical Connections**

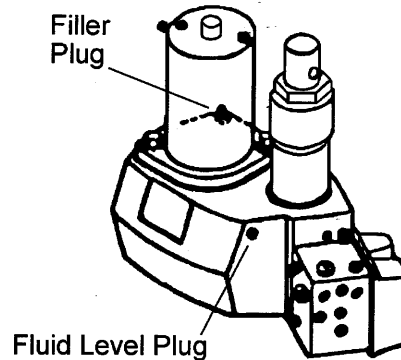
- A. Mount motor relay (20) with terminals up or horizontal within 18" of primary battery in an area protected from road splash. Using relay plate as a guide, drill two 9/32" holes and attach relay with two 1/4 x 3/4 cap screws (31), flat washers (32) and lock nuts (33).

**Note: Route battery cables to avoid sharp edges or moving parts. Attach 22" red battery cable (23) to large motor relay terminal with one 5/16-24 jam nut (26) and lock washer (34) and the "positive" terminal of battery. Connect red 60" #4 cable (21) to the other large terminal on solenoid with one 5/16-24 jam nut (26) and lock washer (34). Route the other end of this cable through grille to SEHP motor terminal. Connect black 60" #6 ground cable (22) to SEHP ground connection (threaded hole on side of SEHP) with a 5/16 x 1/2 cap screw (36) and a lock washer (35). Route the other end through the grille and connect it to engine ground or other convenient ground location.**

- B. Connect control power lead (red wire from fuse holder) to a switched accessory line (line with power applied only when the ignition switch is in the ON position). Fuse taps (18 & 19) and insulated receptacles (16 & 17) are supplied in the bolt bag.
- C. Check all fittings, cap screws and nuts for tightness. Secure all wires with nylon tie wraps (27).

**4. Filling Hydraulic Unit**

1. Push lift arm down leaving 1-1/2" of the rod exposed.
2. Remove filler plug behind motor.
3. Fill unit with FISHER® High Performance Hydraulic Fluid (recommended for superior cold-weather performance) or automatic transmission fluid (ATF) through filler plug hole. The unit is full when fluid reaches the bottom of the threads.
4. Turn ignition (key) switch to on or accessory position.
5. Turn the control switch on.



6. 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.
7. Refill oil unit with fluid. Remove filler plug (behind motor) and fluid level plug on driver's side front corner of reservoir. Fill reservoir through filler plug hole until fluid runs out right front corner hole. Replace both plugs.

Alternate method—systems without fluid level plug: Refill unit through fill plug opening.

8. Move control lever as indicated on label to control the plow. Raise and lower plow several times to remove air. Recheck fluid level per Step 7.

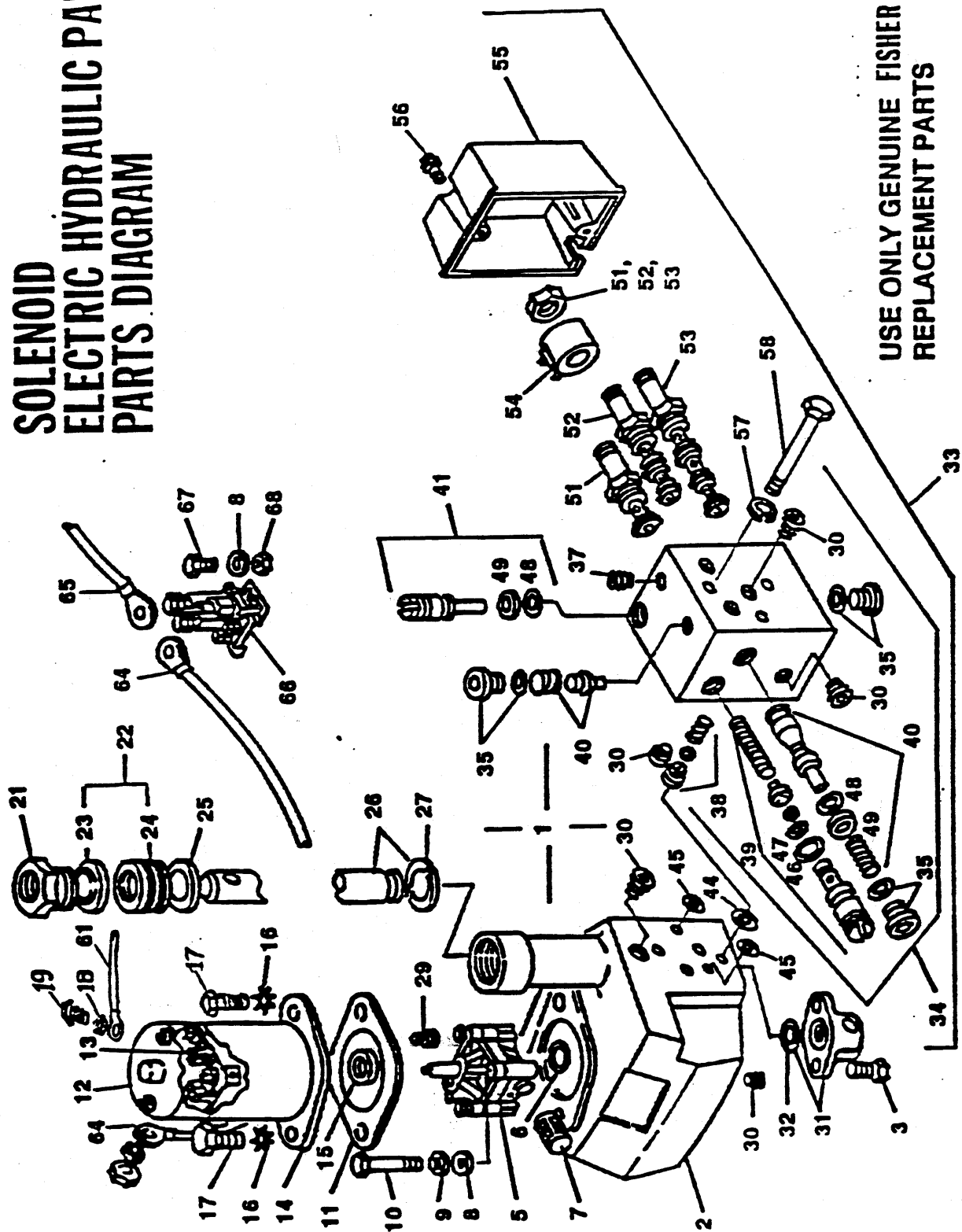
**Capacity: Solenoid EHP reservoir = 1-3/4 quarts**  
**Equipped with Angle cylinders = 2-3/8 quarts**

9. Adjust headlights with blade raised off the ground.
10. Use cable ties to secure wiring harness to headgear.
11. Consult owner's manual for proper operating procedures, inspection and routine service, and service parts information.

## SOLENOID ELECTRIC HYDRAULIC PAK PARTS LIST

ITEM	PART #	QTY	DESCRIPTION	ITEM	PART #	QTY	DESCRIPTION
1	7616	1	Solenoid EHP 6"-2500 PSI	35	7625	3	3/8-24 HX SO O-Ring Boss Plug
	7923	1	Solenoid EHP 10"-4000 PSI	37	7627	1	Plug 1/4 NPTF HX SO
2	7617	1	Service Housing Kit 1-1/2 x 6" SOL	38	7628	1	Inlet Check Valve Kit
	7920	1	Service Housing Kit 1-1/2 x 10" SOL	39	7629	1	Cushion Valve Repair Kit-Set
3	90649	2	5/16-18 x 1-1/4 HXW TRTS TY TR-3	40	7630	1	Poppet Check Valve Kit
5	7049	1	Pump Kit Die Cast	41	7631	1	Quill Assembly
6	5821	1	O-Ring-115		7632	1	Back-up/O-Ring Kit-Sol
7	7053	1	Suction Filter	44	3719	1	O-Ring-013
8	90311	2	1/4 Plain Washer ZP	45	5827	2	O-Ring-012
9	90625	2	5/16 Washer-Belleville	46	7085	2	O-Ring-010
10	90073	2	5/16-18 x 2-1/4 HX CS G5 ZP	47	5833	2	O-Ring-008
11	5822	1	Gasket	48	2605	2	O-Ring-006
12	A5819	1	Motor Assembly 4-1/2"	49	7633	2	Back up Ring-006 Parbak split
13	7619	1	Brush Kit	51	7634	1	Cartridge 20 w/Jam Nut
14	6577	1	Flange w/Bearing & Seal		7635	1	Seal Kit-Cartridge 20
15	6578	1	Oil Seal	52	7636	1	Cartridge 30-w/Jam Nut
16	90651	3	7/16 EX Tooth LK Washer ZP	53	7637	1	Cartridge 40-w/Jam Nut
17	90174	2	7/16-14 x 1-1/4 HX CS G5		7638	2	Seal Kit-Cartridge 30,33,40
18	90692	1	5/16 Ex Tooth Lock Washer	54	7639	3	Coil w/Spade Terminals
19	90691	1	5/15 -18 x 1/2 Cap Screw	55	7649	1	Cover Assembly
21	5763	1	Packing Nut 1-1/2"	56	90650	2	#8-18 x 1/2 SL HXW TFTS TY B ZP
22		1	Packing Set w/ Wiper 1-1/2"	57	90359	3	1/4 SP LK Washer
23	341	1	Wiper Ring 1-1/2"	58	90652	3	1/4-20 x 3-1/4 HX CS G5 ZP
24	339	1	Packing Set 1-1/2"	60			
25	338	1	Washer	61	5798	1	Ground Cable (6 ga., 60") Black
26	5509	1	Rod Assembly 1-1/2 x 6"	62			
	336	1	Rod Assembly 1-1/2 x 10"	63			
27	8332	1	1-1/2" Cyl Retainer Ring	64	5797	1	Battery Cable (4 ga., 60") Red
28	7087	1	Barrel 1.5x 10 EHP (10" only)	65	5799	1	Battery Cable (4 ga., 22") Red
	7088	1	O-Ring-226 (10" only)	66	5794	1	Solenoid
29	7621	1	Plug 3/8 NPTF SQ	67	90461	2	1/4-20 x 3/4 HX CS G5 ZP
30	7622	2	Plug 1/8 NPTF HX SO	68	90250	2	1/4-20 PT HX LK Nut TI ZP
31	5824	1	Base Lug				
32	5823	1	O-Ring-216				
33	7623	1	Valve Manifold Assy Sol-2500				
	7921	1	Valve Manifold Assy Sol-4000				
34	7624	1	Manifold Assy Sol-2500 (w/o cartridges)				
	7922	1	Manifold Assy Sol-4000				

# SOLENOID ELECTRIC HYDRAULIC PAK PARTS DIAGRAM



**SOLENOID ELECTRIC HYDRAULIC PAK PARTS LIST**

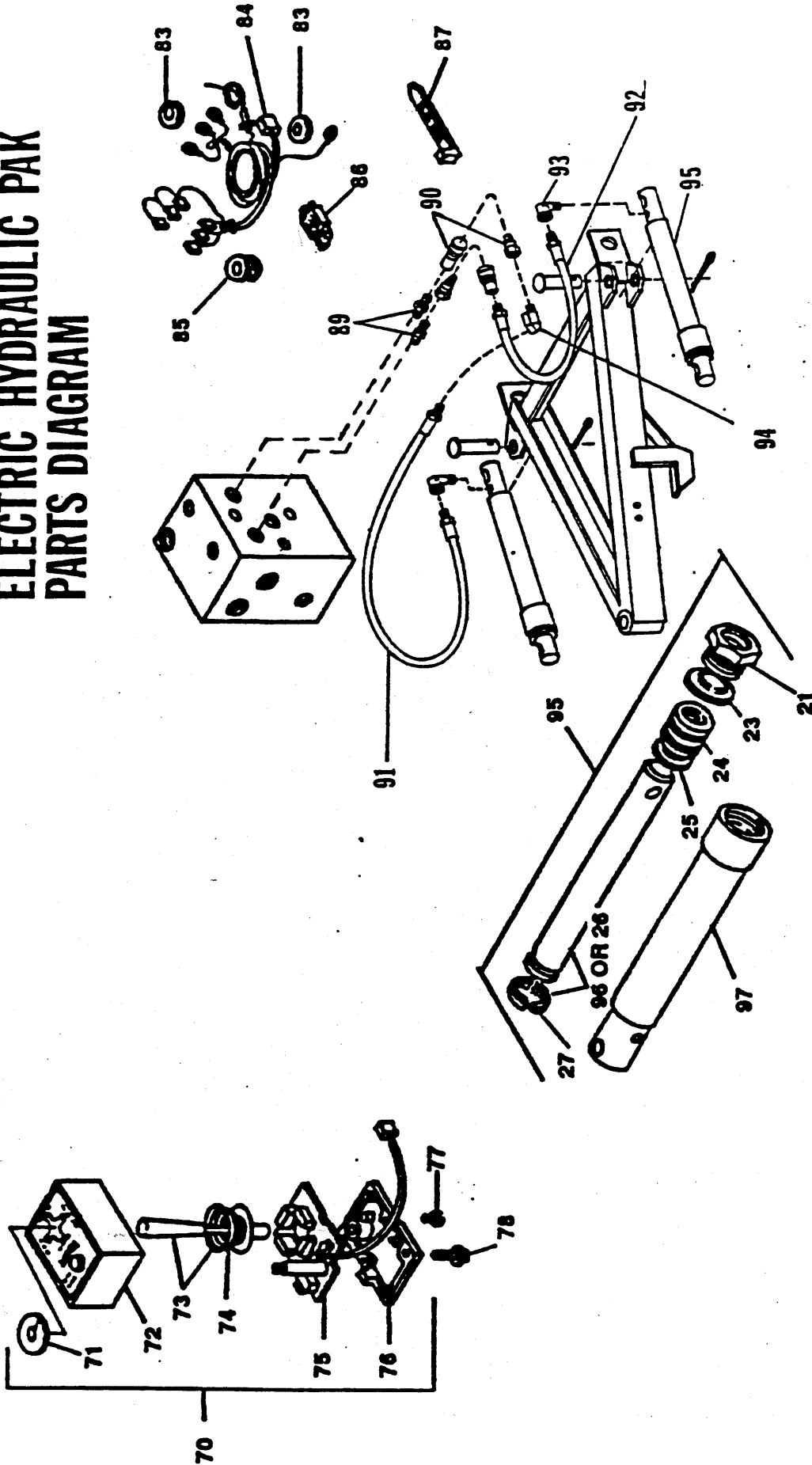
ITEM	PART #	QTY	DESCRIPTION	ITEM	PART #	QTY	DESCRIPTION
70	7736	1	Solenoid Control	92	3074	1	22" HP Hose, 1/4P to 1.4P
71	7641	1	Shield	93	2780	1	1/4" Brass Bar Street Ell (forged)
72	7642	1	Body w/ Label, Lens and Spring	94	765	1	1/4" Brass Bar Street Ell
73	7643	1	Lever, Spring & Actuator Kit	95	A318	2	1-1/2" x 10" Cylinder Assembly
74	7644	1	Spring - Conical	96	336	2	Rod Assembly - 1-1/2" x 10"
75	7645	1	PC Board Assy (Large Plug)	97	5758	2	Barrel - 1-1/2" x 10"
76	7646	1	Base				
77	90653	2	#6-19 x 3/8 SL HXW TFTG Hi-Lo	21	5763	2	Packing Nut
78	5800	2	#8-18 x 5/8 SL HXW THFS BPO	23	341	2	Wiper - 1-1/2"
79	7718	1	Control Bracket (not shown)	24	339	2	Packing Set - 1-1/2"
83	90656	2	#10 Plain Washer Ty B Nar ZP	25	338	2	Washer
84	7648	1	Control Harness (10 amp fuse)	26			
85	3042	2	Rubber Grommet	27	5764	2	1-1/2" Cylinder Retainer Ring
86	4302	1	In-Line connector - insulated				
87	3666	1	Nylon Tie				
89	5804	2	1/4" Hex Nipple				

**ABBREVIATIONS**

ASSY	Assembly	NAR	Narrow	SPL	Special
BP	Black Phosphate	NPTF	National Pipe Thread (Fluid)	SQ	Square
BPO	Black Phosphate & Oil	NYIS	Nylon Insert	STD	Standard
BRG	Bearing	PC	Printed Circuit	TCTS	Thread Cutting Tapping Screw
BZP	Black Zinc Plate	PN	Pan	TFTS	Thread Forming Tapping Screw
CS	Cap Screw	PR	Prestlite	TRTS	Thread Rolling Tapping Screw
EX	External	PSI	Pounds per Square Inch	TY	Type
G	Grade	PT	Prevailing Torque	W/	With
HD	Heavy Duty	SL	Slotted	W/O	Without
HX	Hex	SO	Socket Head	ZP	Zinc
HXW	Hex Washer	SOL	Solenoid		
LK	Lock	SP	Spring		



**SOLENOID  
ELECTRIC HYDRAULIC PAK  
PARTS DIAGRAM**



**USE ONLY GENUINE FISHER REPLACEMENT PARTS**

**General**

Scratching, denting or marring machined surfaces can make parts unserviceable. Cleanliness is essential when servicing the unit.

The following recommendations are intended as a general guide for regular care and maintenance. Operating under adverse conditions or sustained loads requires more frequent servicing.

**Checklist**

1. Check oil level with unit on vehicle and ram extended 1-1/2". If low, fill to the bottom of the threads in the reservoir fill hole, located at rear of housing.
2. Drain and flush the hydraulic reservoir at the end of each plowing season. Use the drain plug located in the bottom front of the reservoir.
3. If rams are leaking excessively, tighten packing nuts. Do not tighten more than 1/4 turn after you feel the nut contact the packing. If leak continues, replace packing and wiper ring in nut. Over-tightening affects the cylinder operation and packing life.
4. Check 3-way and 4 -way valves for excessive oil leaks. Replace O-rings if they are damaged.
5. Periodically clean and tighten all electrical connections.
6. At beginning of plowing season, inspect and test battery. Recharge or replace, if necessary. Suggested MINIMUM vehicle electrical system: 70 amp hr./550 CCA Battery, 55 amp Alternator.
7. The pump filter inlet screen should be cleaned whenever the pump is removed. If the screen is damaged, replace it.
8. During periods of inactivity, leave the EHP lift ram collapsed. This will prevent damage to the surface of the plunger. Also, coat the exposed surfaces of the angling cylinders with grease to prevent rust or corrosion.

**Note: Be sure to fill reservoir through fill hole. Never fill through the motor/pump opening. Filling through motor/pump hole can cause overfilling and damage entire unit.**

**Use FISHER® High Performance Hydraulic Fluid (recommended for superior cold-weather performance) or automatic transmission fluid.**

**Capacity of the system is summarized in the following chart. Note that the system holds less if angling cylinders and hoses have not been drained.**

CYLINDER STROKE		CAPACITIES	
Lift	Angle	EHP Reservoir Only	Total (w/Hoses & Cyl)
6"	10"	1-1/2 Qt	2-1/8 Qt
10"	12"	1-1/2 Qt	2-1/4 Qt
6"	16"	1-1/2 Qt	2-3/4 Qt