

**Model**  
**SSPL660LTA**  
**PREVOST**  
**WHEEL CHAIR LIFT**

**OWNER'S MANUAL**  
©1996

**STEWART & STEVENSON POWER INC.**  
**5170 E. 58th PLACE**  
**COMMERCE CITY, CO. 80022**

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# **POWERLIFT™ WHEELCHAIR LIFT AND POWER UNITS**

## **WARRANTY**

Stewart & Stevenson Power, Inc., hereafter referred to as Manufacturer, warrants and agrees to repair or replace any part of a PowerLift™ Wheelchair Lift or Power Unit that fails or malfunctions as a result of a defect in material or workmanship during the first two (2) years of service. Written notice of any claimed defect must be received by Manufacturer within thirty (30) days after such defect is first discovered and the defective product must be returned to Manufacturer, freight prepaid, within the warranty period. Manufacturer's obligation under this warranty is limited to the repair or replacement, using new or rebuilt components at Manufacturer's option, of any defective component; reimbursement of reasonable labor charges incurred to remove, replace, and ship any product found by Manufacturer to be defective; and replacement of fluids, filters, and other consumable items not reusable as a result of a defect.

This warranty does not apply to any product or component that has been subjected to misuse, accident, improper installation or inadequate maintenance or to any part or component that is normally consumed or replaced in the operation of a product. Manufacturer shall have no obligations hereunder for any product that has been repaired, altered or disassembled by a person other than Manufacturer or its authorized agents .

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. NO PERSON IS AUTHORIZED TO MAKE OR ACCEPT ANY OTHER WARRANTY BINDING ON MANUFACTURER AND MANUFACTURER SPECIFICALLY REJECTS ANY EXPRESS WARRANTY CONTAINED IN PURCHASE ORDERS, SPECIFICATIONS OR OTHER DOCUMENTS RELATING TO THE SALE OF PRODUCTS. IN NO EVENT SHALL MANUFACTURER HAVE ANY LIABILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES UNDER THIS WARRANTY.

### **In the event of any failure or malfunction:**

- 1) Do not disassemble or otherwise attempt to repair any PowerLift™ products. Contact Manufacturer for the name and address of the nearest authorized repair facility. Have available all serial numbers, model numbers, date of first use and other information relating to such PowerLift™ products.
- 2) Return the PowerLift™ products to the location authorized by Manufacturer freight prepaid. You will be reimbursed for reasonable labor costs incurred, surface transportation costs and consumable materials that are not reusable if a warranted defect is found.
- 3) You will be invoiced for diagnostic labor and surface transportation for return if no warranted defect is found and for all charges incurred for expedited transportation services, field service or overtime repairs performed at your request.

**STEWART & STEVENSON POWER, INC.  
5170 E. 58th PLACE, COMMERCE CITY. COLORADO 80022**

**C O N T E N T S**

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**SSPL 660 LTA**

**WARNINGS & PRECAUTIONS**

**Read this Owner's Manual completely before operating the equipment.**

**Maintenance and operation is only to be done by qualified personnel.**

**REPAIRS ARE ONLY TO BE DONE BY AN AUTHORIZED FACILITY  
AS EXPLAINED IN THE WARRANTY.**

**Do not operate lift near curious bystanders.**

**Never operate the equipment with an empty hydraulic oil reservoir.**

**Never mix different brands or weights of hydraulic oil.**

**When unloading passengers using the manual override  
described on page 5 release lever slowly.**

**Do not lift or lower a passenger if the barrier is not  
raised and locked in upright position.**

**(Lift should not operate if barrier is not raised and locked in position).**

**Do not remove shipping link until hydraulic cylinder is pressurized. Serious  
injury may result if the hydraulic cylinder is not pressurized before removing the  
shipping link. See diagram on page 3.**

**Do not fill reservoir when lift is not fully extended.**

**Disconnect power before any repairs are performed.**

**Load electric wheelchairs with their power off.**

**Operating pressure 1500 psi.**

**MAXIMUM LIFTING WEIGHT 750 LB.**

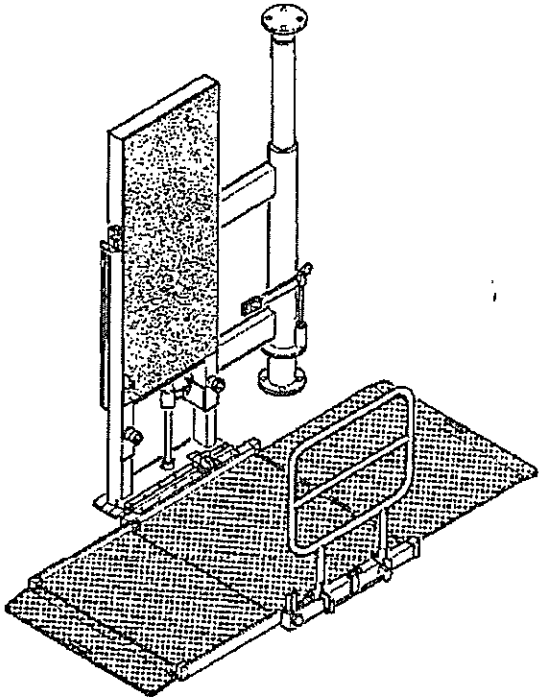


**INTRODUCTION**

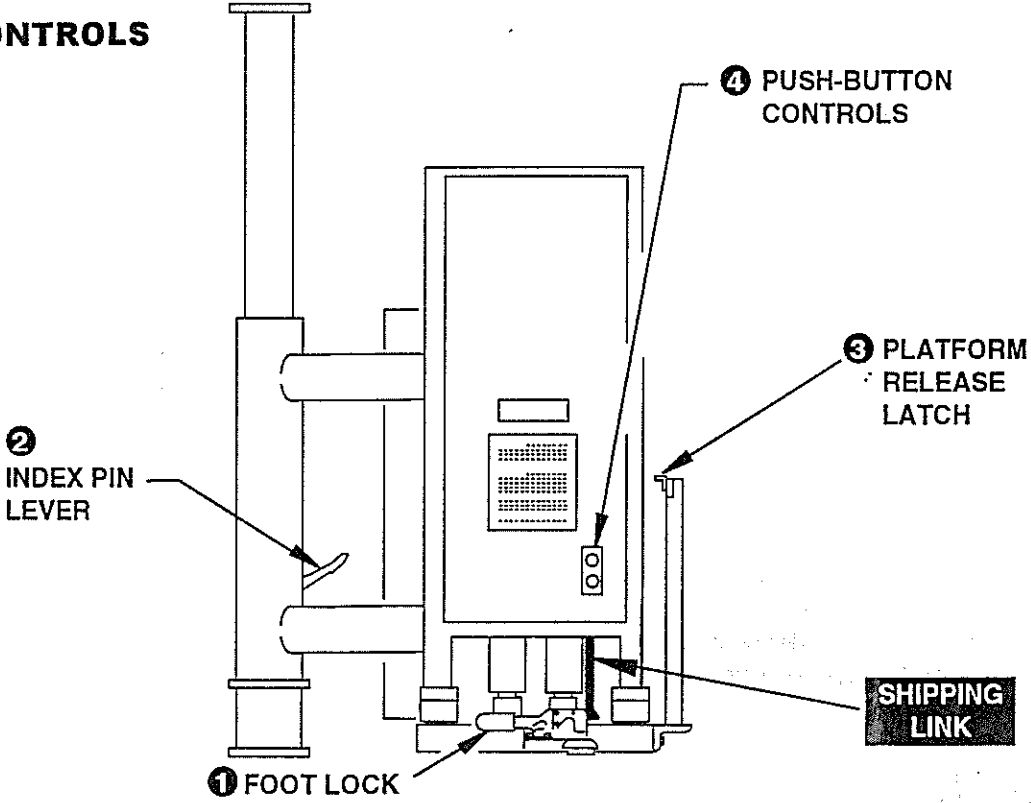
The SSPL660LTA Wheelchair Lift is a compact, easy to use unit which stows in the doorway of the bus. The lift travels from the pavement to the bus entrance. Its maximum lifting weight is 750 lb. The lift has an operating pressure of 1500 psi.

The only approved use of the SSPL660LTA is to provide bus access to the physically challenged; any other use is prohibited. The rider on the lift can sit in a wheelchair or stand. A rider who stands must be able to grasp the hand rail for the amount of time required to operate the lift. Only trained personnel should operate the lift.

The lift is normally operated with the switches located on the side panel. The power box houses the hydraulic power unit, reservoir, and manual override controls. When there is an electrical failure the lift is operated manually using the hand pump in the main control box (See page 5). All maintenance and repairs are to be done by an authorized facility as described in the warranty.



**CONTROLS**



# SSPL 660 LTA

## START-UP

If the lift has never been used before, or if for some reason the hydraulic tank is empty, an authorized facility will need to perform start-up procedures.

- 1) With the lift fully extended and in the down position fill the reservoir. Fluid added to the reservoir when it is retracted will overflow from the reservoir. Use clean, new Automatic Transmission Fluid (ATF) and a clean funnel equipped with a fine wire mesh screen. Most pump failures are caused by contaminated fluid.
- 2) After the power unit is filled with oil and the proper electrical connections are made the motor may be started. Insure that all air is bled from the system at this time.

## WARNING

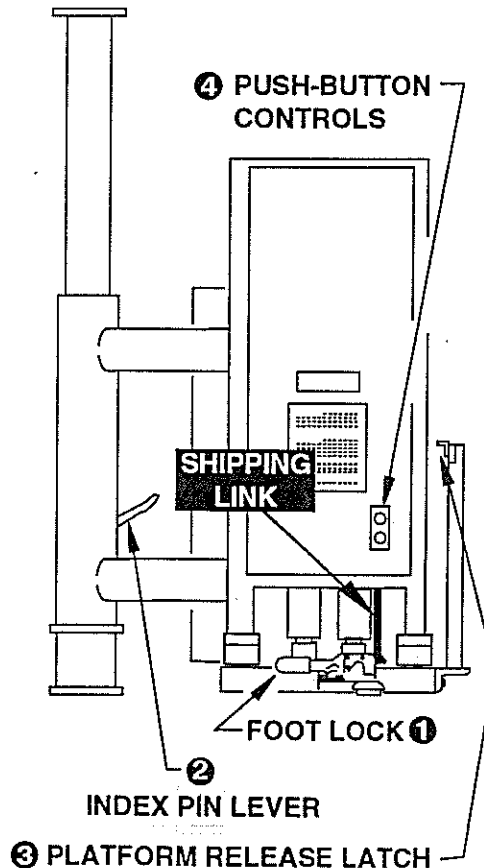
**DO NOT REMOVE SHIPPING LINK UNTIL HYDRAULIC CYLINDER IS PRESSURIZED. SERIOUS INJURY MAY RESULT IF THE HYDRAULIC CYLINDER IS NOT PRESSURIZED BEFORE REMOVING THE SHIPPING LINK.**

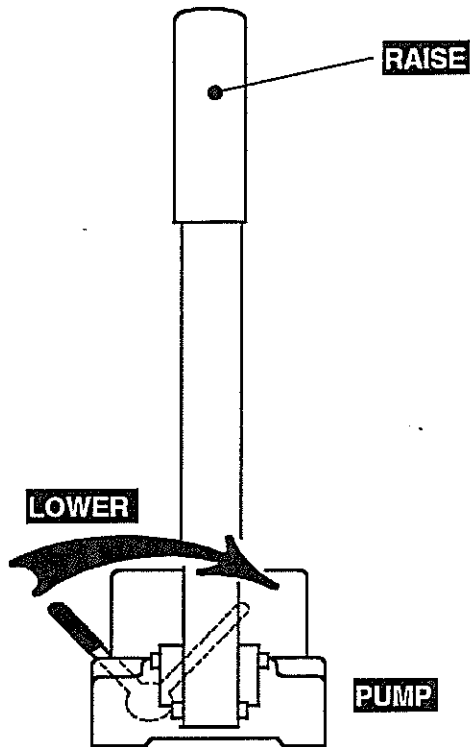
## NORMAL OPERATION

- 1) Release foot lock on wheelchair lift by pulling back on lever #1.
- 2) Disengage column index pin by pulling down on column lever #2. Rotate lift outside of bus until index pin engages.
- 3) Push Lower button on the controls #4.
- 4) When lift is fully extended release latch and allow platform to unfold.
- 5) Raise the guardrail to the locking position, unfold the front platform.
- 6) Passenger must always be loaded facing outward from the vehicle with the wheelchair centered on the main platform and the wheelchair brake set. Electric wheelchairs must be loaded with their power off.
- 7) Raise the front barrier into the upright and locked position. When raising or lowering the lift the barrier must be in the upright and locked position or the lift will not operate.
- 8) Raise or lower the lift by using the push button controls #4.

## STOWING THE LIFT

- 1) Bring the lift to a comfortable position using the controls #4.
- 2) Fold in the platforms.
  - Fold down rear platform first.
  - Next fold the barrier down onto the front platform.
  - Third fold the front platform down on top of the rear platform.
- 3) Disengage guardrail lock and fold the guardrail down.
- 4) Raise the platform assembly and firmly lock platform into place.
- 5) Using the controls #4, raise the lift until it stops.
- 6) Disengage column index pin by pulling down on column lever, then swing lift in until index pin engages #2.
- 7) Set foot lock on wheelchair lift by pushing downward on the lever#1.



**SSPL 660 LTA****MANUAL OPERATION:**

The SSPL660LTA Wheel Chair Lift is equipped with two hand pumps for manual operation in case of an electrical failure or other malfunction. The pump for the lift was installed in one of the luggage bays; the pump for the platform is item 71 on page 12.

- 1) Manually deploy lift as described in operating instructions (page 3).
- 2) To lower lift, open the lowering valve on the bottom of the hand pump, turn the lever ***SLOWLY*** to lower the lift.
- 3) When the lift is lowered and the passenger has exited, close the valve at the hand pump by moving the lever back to the standard "Raise" position.
- 4) Raise the lift by pumping the hand pump until the lift reaches stowing height.

Stow lift and lock into position as described in stowing instructions (page 3). The small handle on the pump must be returned to the closed position when normal operation is restored.

**SSPL 660 LTA****MAINTENANCE**

All maintenance and repairs are done by an approved facility as described in the warranty.

**Filter**

The power unit is equipped with an inlet screen filter. The inlet filter should never require maintenance as long as the oil remains clean; however the filter should be inspected every 500 lift hours or any time oil contamination is suspected.

- To gain access to the filter it is first necessary to drain the reservoir.
- Remove the screws which attach the reservoir to the motor adapter.
- Unscrew the filter from the pipe nipple leading to the pump; being careful not to collapse the filter.
- Wash the filter with a suitable solvent.
- Blow dry with compressed air from the inside out.
- When re-assembling; take special care not to over-tighten the reservoir screws.

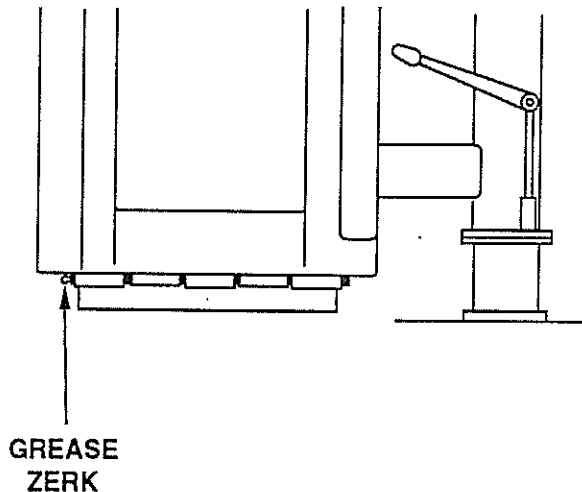
**LUBRICATION**

- Grease platform hinge at the lubrication point shown every 500 lift hours. Wipe all off excess grease from fitting.
- Check hydraulic fluid in reservoir every 50 lift hours. With the lift fully extended and down the level should be 1/2 inch from the top of the reservoir.
- Only add hydraulic fluid if the lift is fully extended and down. Fluid added to the reservoir when it is retracted will overflow from the reservoir
- Use clean, new Automatic Transmission Fluid (ATF) and a clean funnel equipped with a fine wire mesh screen. Most pump failures are caused by contaminated fluid. **DO NOT OVERFILL.**
- Check fluid level in auxiliary reservoir (located in base of lift) every 50 hours. Platform must be down before filling.

**VISUAL INSPECTION**

The SSPL660LTA Wheel Chair Lift is a compact unit. Most problems can be caught early if the operator visually inspects the unit during use and maintenance personnel inspect the unit whenever performing routine maintenance on the vehicle. The following items should routinely be inspected:

- 1) Rollers. Look under the main roller caps and inspect the main rollers for excessive wear or flat spots while operating the lift. Also inspect the inner frame tube for galling while operating the lift.
- 2) Hydraulic cylinders. Look for leaking seals. Install a new seal kit as soon as leaks are detected.
- 3) Power unit. Look for leaks on the Power Unit and at connections. Test the operation of the hand pump. Replace or tighten faulty components.
- 4) Hoses and fittings. Look for leaks or damage. Replace as needed.
- 5) Hardware. Check for loose or missing fasteners. Tighten or replace as needed.
- 6) Non-skid surfaces. Check non-skid surfaces for excessive wear. Replace as needed.

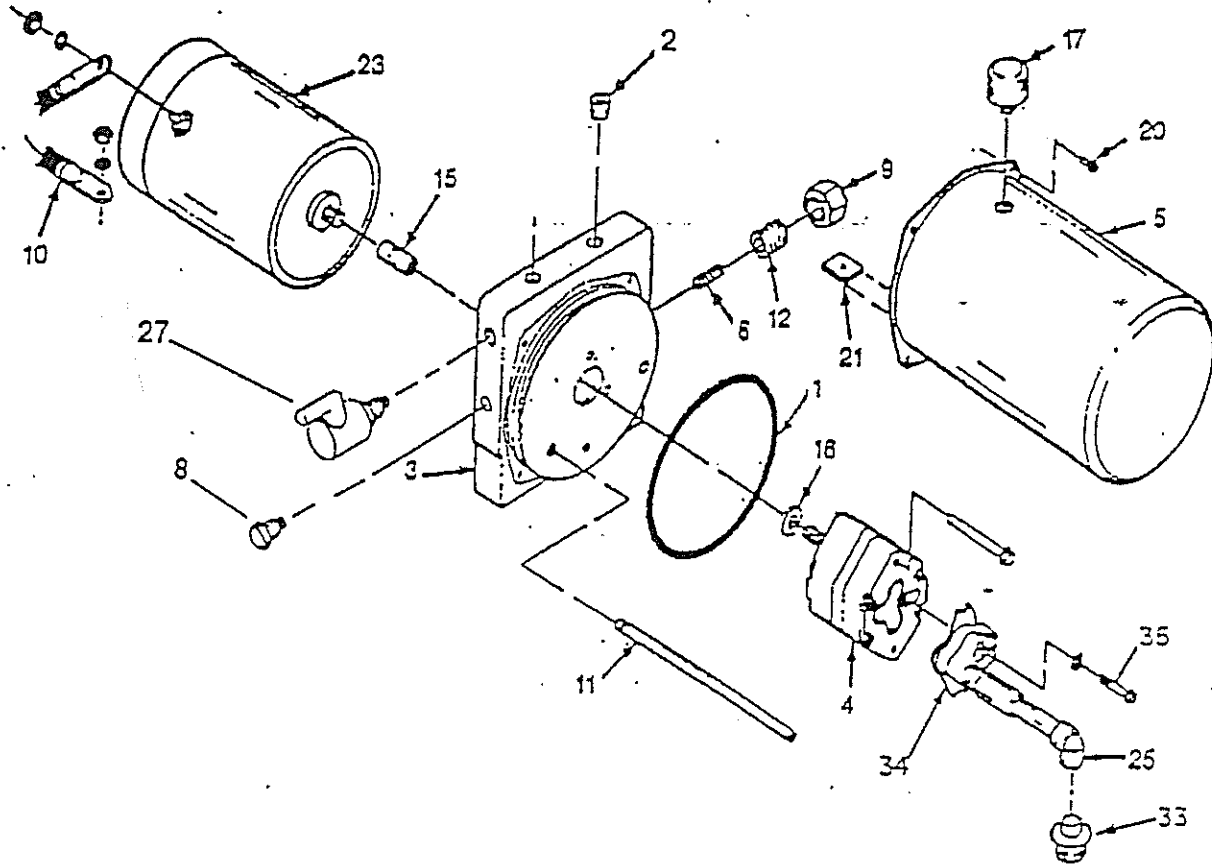




<b>TROUBLE SHOOTING CHART</b>		
<b>NO POWER</b>	Faulty Connection	Check wire connections. Repair if necessary.
	Faulty Fuse	Inspect fuses. Replace if necessary.
	Faulty Switch	Test switches. Replace if necessary.
	Faulty Circuit Breaker	Test breaker. Replace if necessary. Determine the cause of failure and repair.
<b>LIFT RAISES SLOWLY AND DOES NOT STAY UP</b>	Lowering Valve Not Closing	Clean or replace lowering valve.
	Faulty Relief Valve	Clean or replace relief valve.
<b>LIFT DOES NOT RAISE OR LOWER</b>	Platform	Platform must be unfolded and the outer barrier in the raised position.
	Faulty Limit Switch	Test limit switch #96 page 12. Replace if necessary.
	Faulty Control Switch	Test RAISE and LOWER switches. Replace if necessary.
	Low Hydraulic Oil	Check for leaks. Repair if necessary. Fill oil reservoir.
<b>LIFT DOES NOT LOWER OR LOWERS VERY SLOWLY</b>	Cold Weather	Lift lowers by gravity and in cold weather will lower very slowly.
	Faulty Connection	Check wire connections. Repair if necessary.
	Faulty Control Switch	Test LOWER switch. Replace if necessary.
	Faulty Solenoid	Test lowering solenoid. Replace if necessary.
<b>HYDRAULIC RESERVOIR OVERFLOWS</b>	Reservoir Filled With Lift In Wrong Position	Lift must be fully extended and down when filled. Drain the reservoir and refill following the instructions on page 6.

# SSPL 660 LTA

## POWER UNIT ASSEMBLY DRAWING 24 VOLT POWER UNIT ASM B13065



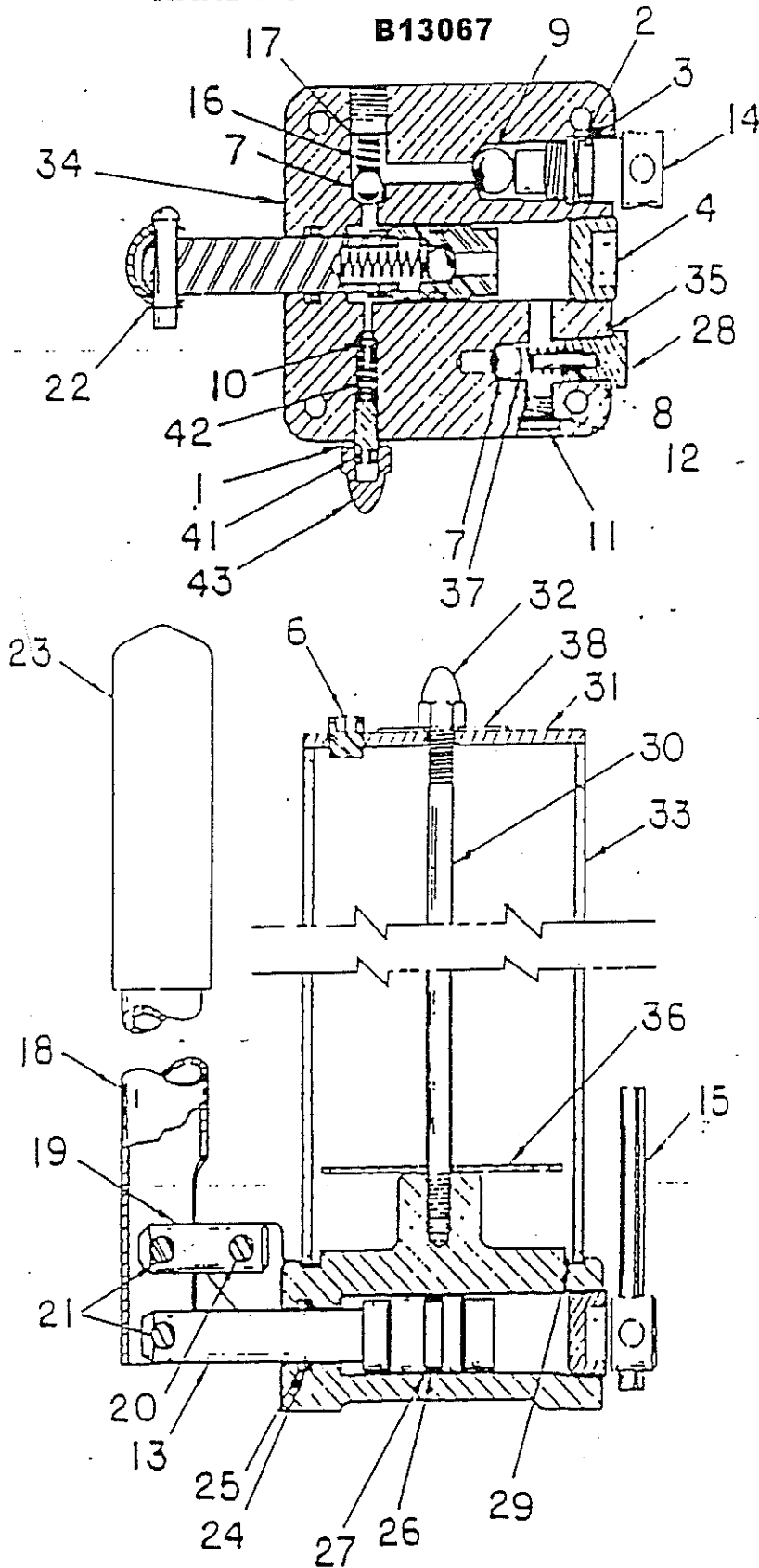
**POWER UNIT PARTS LIST  
24 VOLT POWER UNIT ASM B13065**

KEY	PART NO.	DESCRIPTION	QTY
1	G1-1047-27	O-RING	1
2	G4-1002-02	PLUG, 3/8 PLASTIC	1
3	N2-0004-00	END HEAD	1
4	PN-1.2	PUMP ASM	1
5	R1-6080-15	RESERVOIR	1
6	S1-1001-00	SPRING & BALL ASM	1
7	S1-1000-00	SPRING & BALL ASM	1
8		VALVE, CHECK	1
9	S3-1015-07	RELIEF CAP ASM	1
10	1967-AB	CORD SET	1
11	T2-1006-75	TUBE	1
12	W5-1020-95	SCREW, ADJUSTABLE	1
15	1118-AA	COUPLING SAE	1
16	1205-AA	SEAL, SHAFT	1
17	1214-AA	BREATHER, PLASTIC	1
19	1456-AA	PLUG, -PUMBING	1
20	1534-AA	SCREW, 10-32 HHMS	4
21	1536-AA	MAGNET, PLUMBING	1
22	H2-1013-03	ADAPTER, MOTOR	1
23	1792-AC	MOTOR, 24VDC	1
25	S7-4000-01	PLUMBING ASM, PVC	1
27		SOLENOID VALVE ASM, 24VDC	1
33	1611-AA	FILTER, 149 MICRON	1
34	2130-AC	COVER, SUCTION	1
35	2141-AA	SCREW M6 SELF TAPPING	2

# SSPL 660 LTA

## HAND PUMP ASSEMBLY DRAWING

B13067



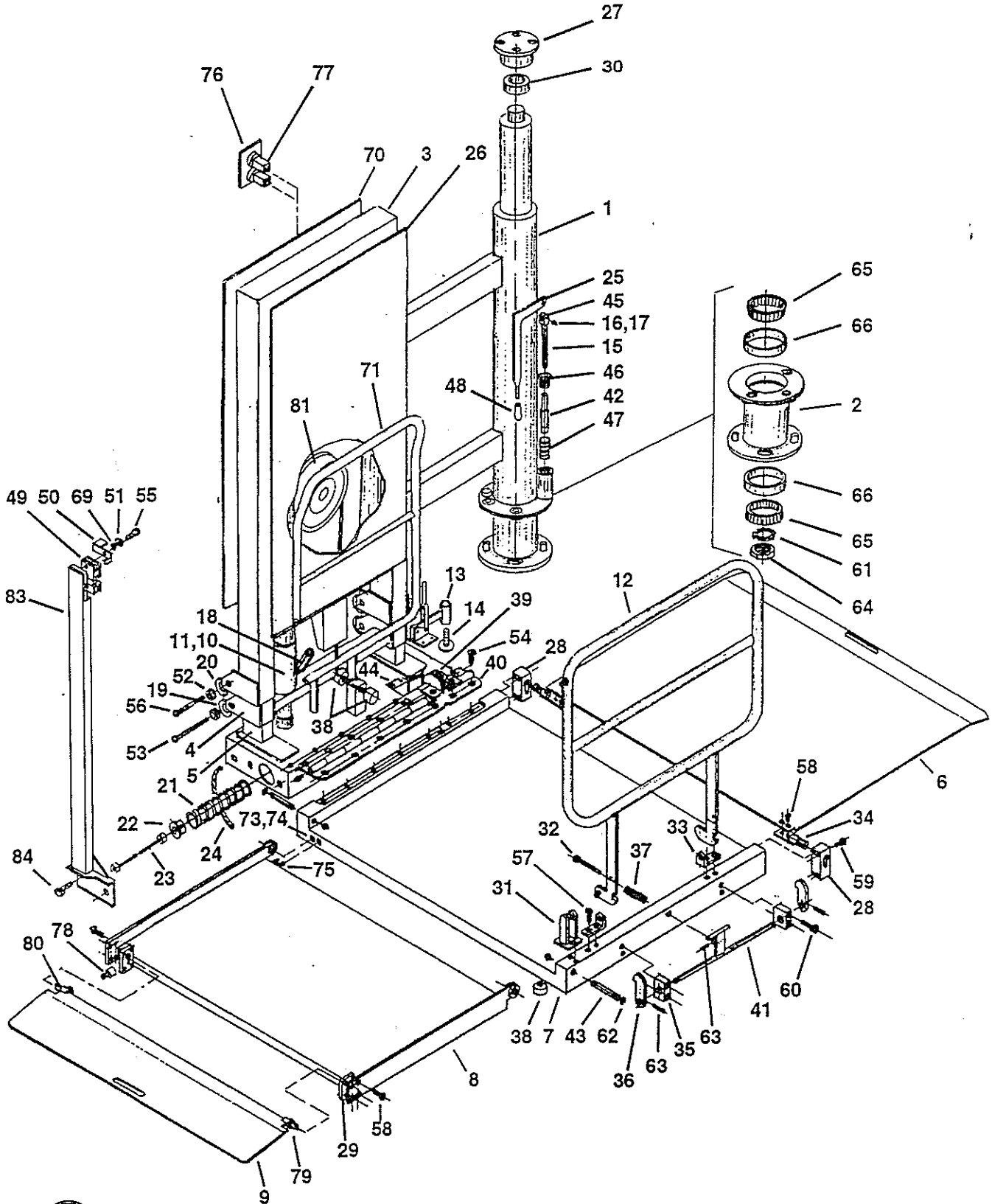
**SSPL 660 LTA****HAND PUMP PARTS LIST  
B13067**

KEY	PART NO.	DESCRIPTION	QTY
1	AP52	WASHER	1
2	AP55	O-RING	1
3	AP58	BACK-UP	1
4	B502	PLUG, 3/4 NPT PIPE	1
5	B508	SPRING, PISTON	1
6	B5019	PLUG, 1/4 NPT PIPE	1
7	B5033	BALL, 3/8	1
8	B5058	PIN, ROLL	1
9	B5067	BALL, 1/2	1
10	DC7548B	POPPET	1
11	DC7580	PLUG, 5/16-18	1
12	DC7583	O-RING	1
13	HP2	PISTON ASM, ITEMS: 5, 7, 39 & 40	1
14	HP3	VALVE, RELEASE	1
15	HP4	PIN, 5/16 X 4.0 ROLL	1
16	HP8	SPRING, CHECK	1
17	HP9	SNAP RING	1
18	HP10	HANDLE	1
19	HP11	LINKAGE, HANDLE	1
20	HP13A	RIVET	1
21	HP14A	RIVET	2
22	HP15A	WASHER, LOCK	3
23	HP17A	GRIP, HANDLE	1
24	HP18	O-RING	1
25	HP19	BACK-UP	1
26	HP20A	O-RING	1
27	HP21	BACK-UP	1
28	HP22	PLUG, 1/2-20	1
29	HP27A	GASKET	1
30	HP28-2	TIE ROD	1
31	HP29	LID	1
32	HP30	NUT, 5/16-18 ACORN	1
33	HP35-2	TANK	1
34	HP61	CASTING	1
35	HP62	WASHER	1
36	HP63	BAFFLE	1
37	HP64	SPRING, INLET	1
38	HP67B	NAMEPLATE (HP61)	1
39	HP68	PISTON	1
40	HP69	SHAFT, PISTON	1
41	HP74	SET SCREW, 5/16-24	1
42	SF331	SPRING	1
43	SF387	NUT, 5/16-24 ACORN	1



# SSPL 660 LTA

## MAIN ASSEMBLY



**SSPL 660 LTA****MAIN ASSEMBLY**

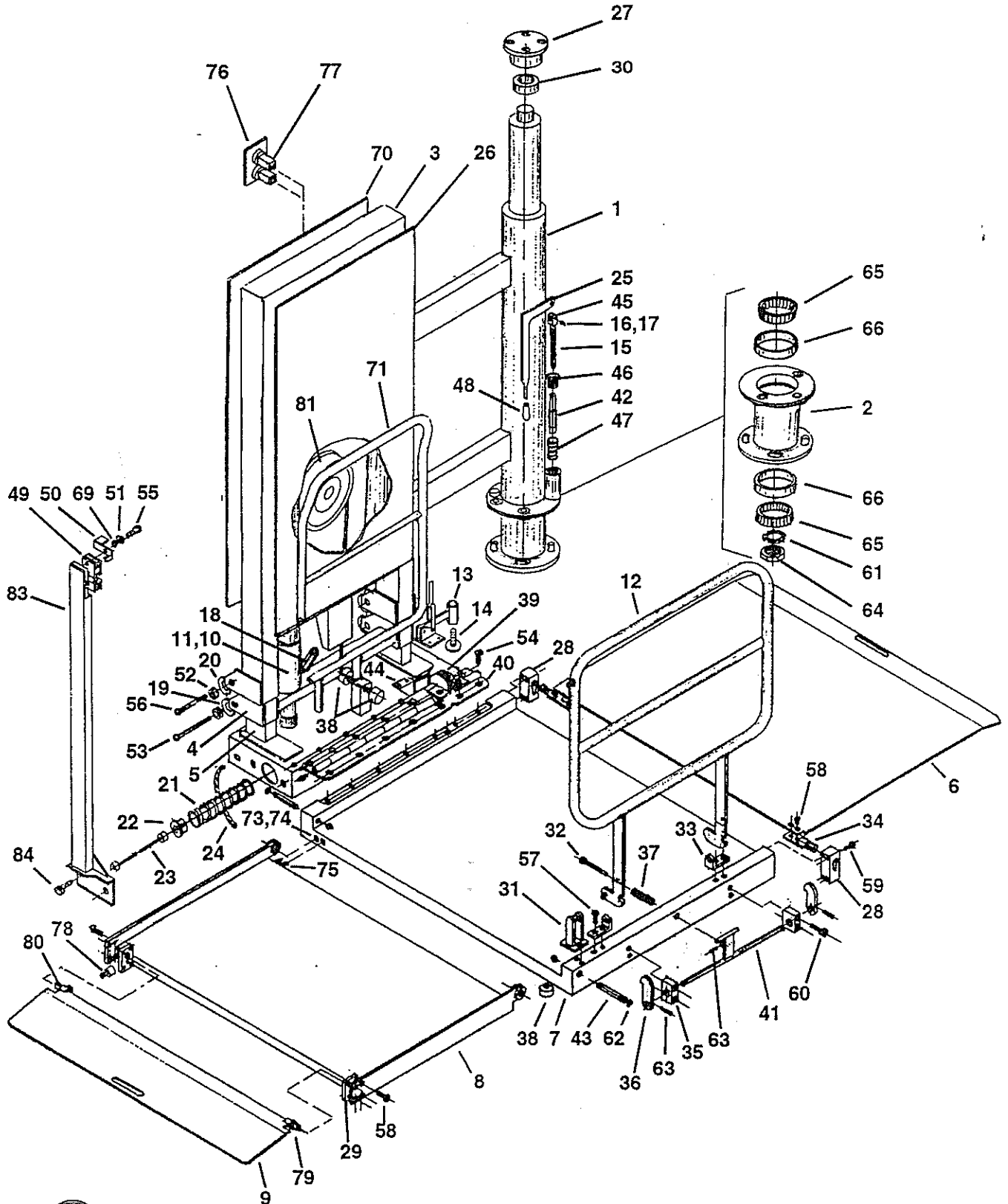
KEY	PART NO.	DESCRIPTION	QTY
	C14936B	LIFT ASSEMBLY COMPLETE	1
1	D14935	ROTATING COLUMN	1
2	D14948A	COLUMN BASE	1
3	D14954A	OUTER FRAME	1
4	D14956A	SECONDARY FRAME	1
5	D14957A	PRIMARY FRAME	1
6	C12776	REAR PLATFORM	1
7	C13927	MAIN PLATFORM	1
8	D13920	FRONT PLATFORM	1
9	C13614B	BARRIER	1
10	D14059	CYLINDER	2
11	B13731	SEAL KIT	1
12	C13276B	HAND RAIL	1
13	B12953	CLAMP	1
14	B12959	CLAMP PAD	1
15	B12932	ROD	1
16	B12976	CLEVIS	1
17		PIN	1
18	B12963M	FLOW VALVE	1
19	B12683	ROLLER	2
20	B13431	ROLLER	1
21	B13543	SPRING	1
22	B12746	CABLE COLLAR	1
23	B13113	CABLE	1
24		CORD PROTECTOR	1
25	B15414	HANDLE	1
26	B13269	COVER	1
27	B12942	ROTATING CAP	1
28	B12786	LOCK BLOCK, REAR	2
29	B13149	LOCK BLOCK, FRONT	2
30	B12982	BEARING	1
31	B12788	LATCH	1
32	B12832	PIN	1
33	B12756	BRACKET	1
34	B12948	PIVOT PIN	2
35	B12825	PIVOT BLOCK	2
36	B12831	LATCH	2
37	B12967	SPRING	1
38	B12968	BUMPER	6
39	B12750	PULLEY CABLE	1
40	B12763	HINGE	1
41	B12828	BELL CRANK	1
42	B12675	INDEX PIN	1
43	B13148	PIN	2
44	B12969	CABLE COVER	1
45	B12976	CLEVIS	1
46	B12913	SPRING CAP	1
47	B12977	SPRING	1
48	B13044	HANDLE	1
49	B13046	LATCH	1

(CONTINUED ON PAGE 15)



# SSPL 660 LTA

## MAIN ASSEMBLY





**MAIN ASSEMBLY**

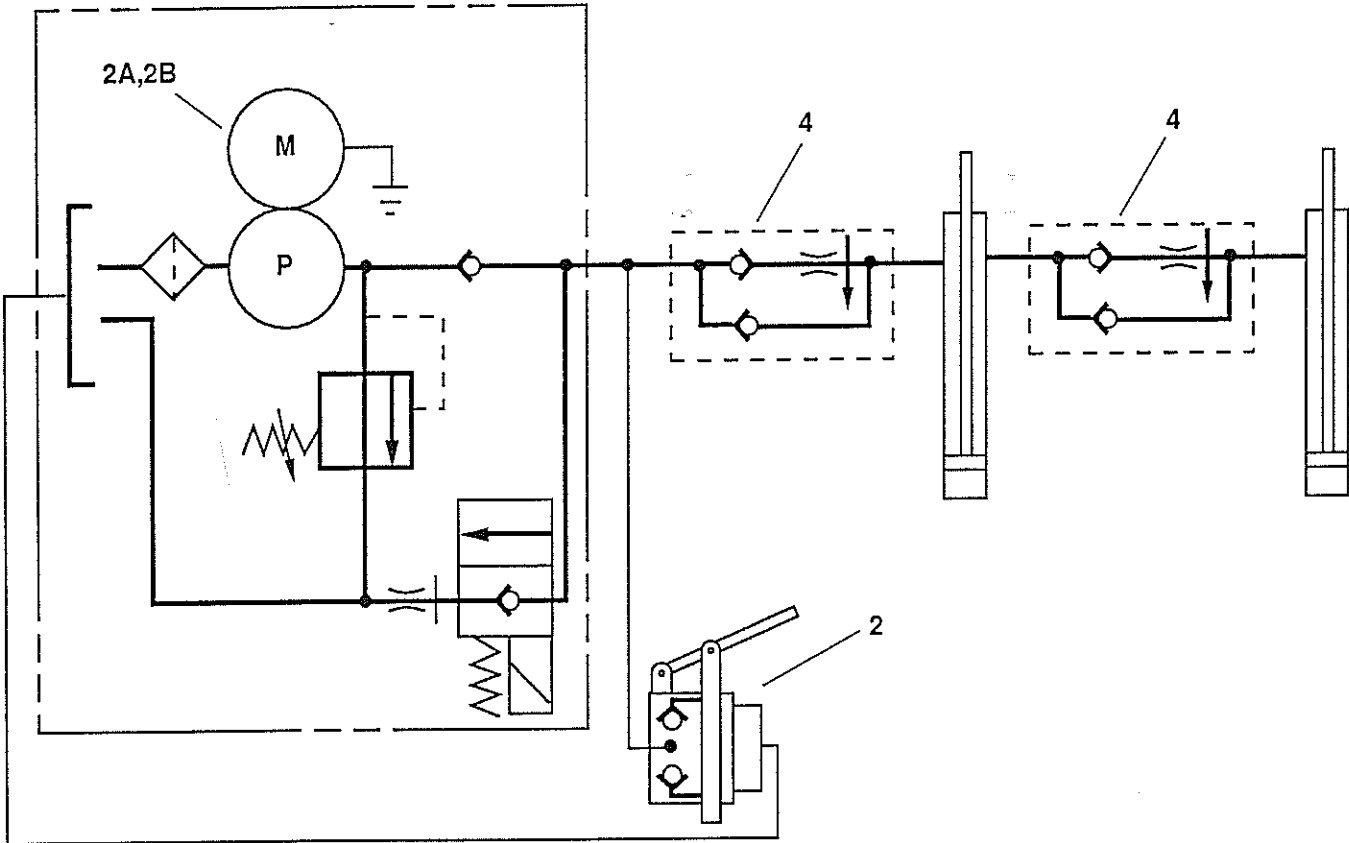
(CONTINUED FROM PAGE 13)

KEY	PART NO.	DESCRIPTION	QTY
50	B13038	LEVER	1
51	B13159	WASHER, 5/16	1
52	B12981	BEARING	4
53	B13164	BOLT, 3/8-16 x 3	2
54	B13160	SCREW, 3/16-16 x 1 FHMS	14
55	B13165	BOLT, 5/16-18 x 1 1/4	1
56	B13161	BOLT, 3/8-16X3 1/2	1
57	B13166	SCREW, FLAT HEAD 1/4-20 x 1	4
58	B13167	SCREW, FLAT HEAD 1/4-20 x 5/8	12
59	B13168	SCREW, SOCKET HEAD 1/4-20 x 3/4	8
60	B13169	SCREW, SOCKET HEAD 1/4-20 x 1	4
61	B12985	WASHER, LOCK	1
62	B13061	SNAP RING	2
63	B13170	ROLL PIN 1/8 x 3/4	3
65	B12983	BEARING CONE	2
66	B12984	BEARING CUP	2
67	B13060	GROMMET	2
68			
69	B12946	SPACER	1
	B13270	ANTI SKID	1
	C13896	INSTRUCTION PLATE	1
	B13172	IDENTIFICATION PLATE	1
	B13173	NAME PLATE, POWERLIFT	1
	A13155	LABEL, LATCH RELEASE	1
70	B13545	COVER WITH CUT-OUT	1
71	B13619	INNER HAND RAIL (WELDED PART OF ITEM 4)	1
72	B14396	CABLE	1
73	B13474	SWITCH, UPPER	1
74	B14101	SPRING	1
75	B13473	SWITCH LOWER	3
76	B14311	SWITCH PLATE	2
77	800T-A2D	SWITCH	2
78	P6-24000	SWITCH	1
79	B13614	PIN	1
80	B14538B	PIN	1
81	B14403A	REEL	1
82		BOLT, 3/8-16 x 3/4	2
83	C15411A	POST, SSPL	1
84		BOLT	1



# SSPL 660 LTA

## LIFT HYDRAULIC DIAGRAMS

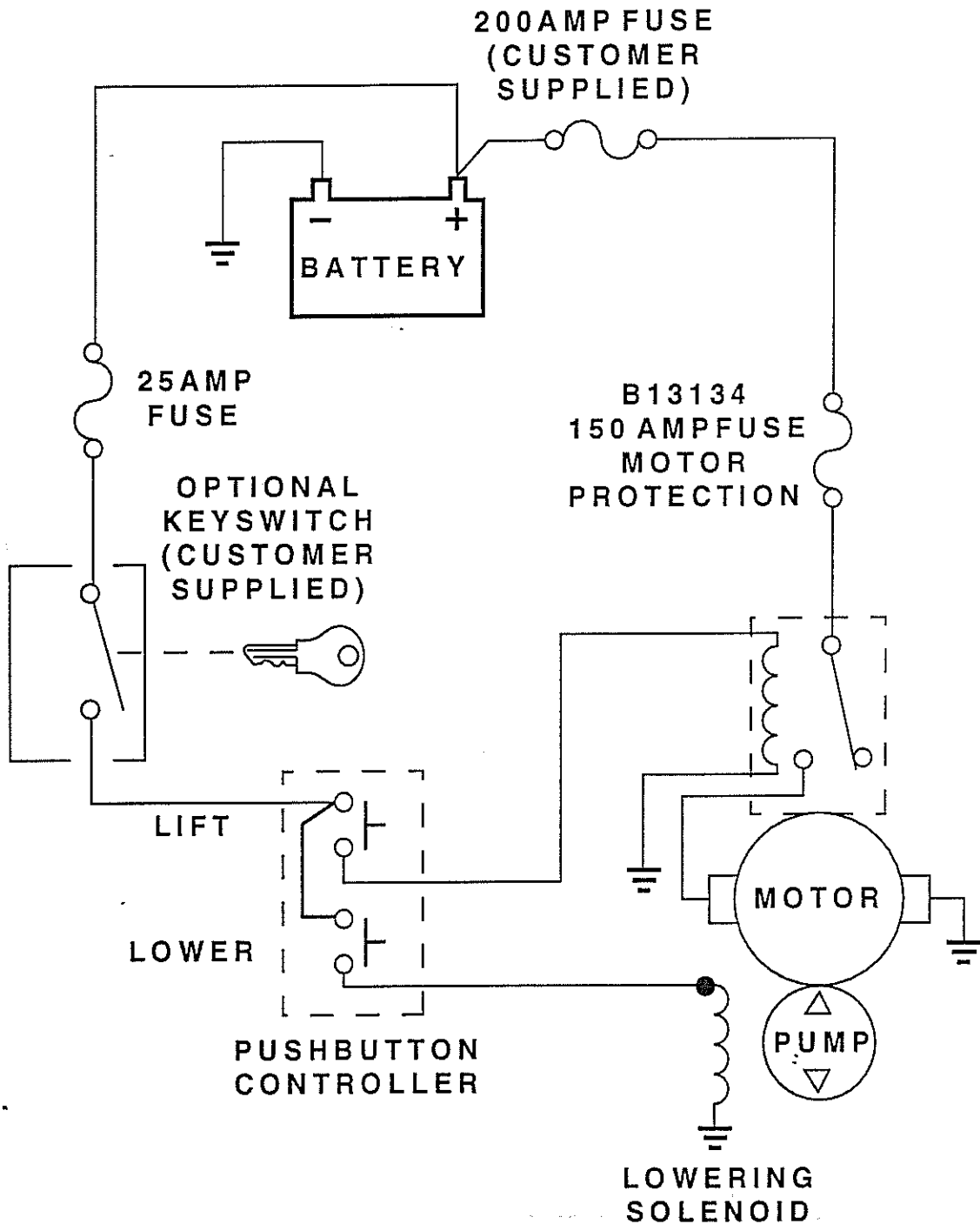


KEY	PART NO.	DESCRIPTION	QTY
1	B13907	HAND PUMP ASSEMBLY	1
2A	B13066	POWER UNIT, 12V ASSEMBLY	1
2B	B13065	POWER UNIT, 24V ASSEMBLY	1
3*	04R1	HOSE, 1/4" DIA. (MINIMUM)*	A/R
4	B12963	FLOW VALVE	2



# SSPL 660 LTA

## ELECTRICAL DIAGRAM



**NOTE:**  
 IN ADDITION TO THE BASIC SYSTEM SHOWN ABOVE;  
 BRAKE INTERLOCKS, WARNING LIGHTS, KEY SWITCHES,  
 AND OTHER ACCESSORIES MAY BE ADDED BY THE CUSTOMER.  
 CONTACT THE MANUFACTURER FOR MORE INFORMATION.







**SSPL 660 LTA**

NOTES:

A large section of the page consisting of horizontal lines, intended for handwritten notes.

