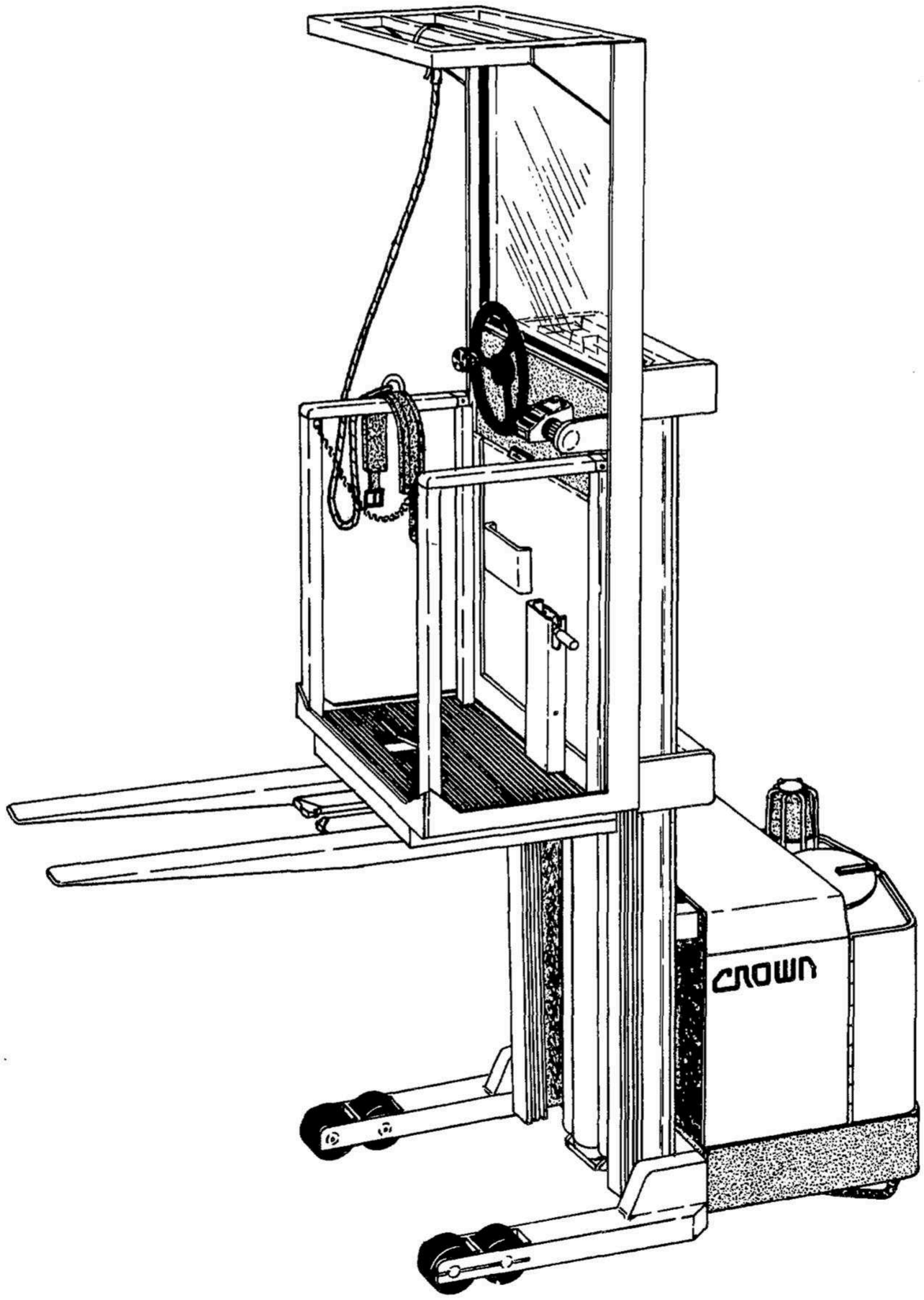
Model No. _____

Serial No. _____

Series SP36

Service & Parts Manual



PF-2868 Rev. 09/86

Re-Printed in U.S.A.

MidWestTech | Crown SP36 Series Order Picker Service Manual & Parts Catalog | Publication PF-2868

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This manual is intended for the service mechanic who is seeking information about maintenance and service replacement parts. It contains a section on trouble shooting which will enable a qualified mechanic to locate and solve problems which may occur.

OPERATOR INSTRUCTIONS

This manual does not contain operation instructions. Operator Instructions in tag or booklet form are sent with each truck. Additional copies can be ordered if required. These booklets are for you and your personnel to insure years of safe, trouble-free operation of your Crown Lift Truck. For stockpicker operator instructions, refer to Crown publication, "You and Your Crown Stockpicker" (PF-7568).

DRIVER TRAINING

Crown has available a complete series of Driver Training programs, in two parts concerning basic safety rules and operating characteristics of your stockpicker. To obtain this informative information ask your Crown Dealer about "Its up to You" and "You and Your Stockpicker'.

SERVICE TRAINING

Complete Service Training is available to the lift truck mechanic covering all Crown Lift Trucks, SCR systems, wire guidance, hydraulic and electrical systems. To obtain more information concerning service training contact your Crown Dealer.

When ordering replacement parts from this manual, always specify, along with the part number, the model and serial number of the truck. This information will further enable us to give correct, fast and efficient service.

For Series SP capacities, technical information and dimensional specifications, please refer to the following sales literature:

SP Literature	SF-4285
SP36 Specifications	SF-4286
SP42 Specifications	SF-4287
30SP48 Specifications	SF-4288
15SP48 Specifications	SF-4289

Copies of publications can be obtained from your Crown dealer or by writing to:

Crown Controls Corporation
40-44 S. Washington Street
New Bremen, OH 45869

An index for this manual is located on the following pages. The manual is arranged according to major sections. The first part of the page number, found at the bottom of each page, denotes the section in which a particular form will be located. These sections are indicated by a black bar at the right hand edge of the page. The higher the number of the section, the farther down the page it is located. The front of the manual covers the written maintenance. The back covers the replacement parts. The sectional descriptions are as follows:

MAINTENANCE

SECTION	DESCRIPTION
M1	Lubrication and Adjustments
M2	Hydraulics
M3	Drive Unit
M4	Electrical
M5	Brake
M6	Steering
M7	Mast and Main Frame
M8	Cylinder
M9	Platform
M10	Glossary

REPLACEMENT PARTS

SECTION	DESCRIPTION
1	Basic Chassis or Power Unit
2	Hydraulic System and Components
3	Drive Unit and Components
4	Electrical Components
5	Brake Assemblies and Brake Systems
6	Steering System and Components
7	Main Frame and Mast Assemblies
8	Cylinders
9	Platform Assembly
10	Accessories

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All Crown lift trucks are given a model number. This number is used as a brief description of the truck. The following chart gives a model number and shows how it was formed.

MODEL NUMBER SYSTEM

30 SP 48 TL - 5 - 6 - 2

*** CAPACITY**
Pound Rated (x 100)
Ex. 30 x 100 = 3000 lbs.

SERIES DESIGNATION
SP - Stockpicker

POWER UNIT WIDTH
36 - 36" Wide Power Unit
42 - 42" Wide Power Unit
48 - 48" Wide Power Unit

MODEL DESIGNATION
TL - Limited Free Lift
TT - Triple Telescopic

COLLAPSED HEIGHT/LIFT HEIGHT

SPTL

DASH	IN.. (MM)/IN. (MM)
2	83 (2135)/126 (3200)
3	95 (2415)/150 (3815
4	107 (2720)/170 (4325)
5	119 (3025)/192 (4875)
6	131 (3330)/210 (5340)

SPTT

DASH	IN. (MM)/IN. (MM)
2	83 (2135)/180 (4575)
3	95 (2415)/210 (5340)
4	107 (2720)/240 (6100)
5	119 (3025)/270 (6860)
6	131 (3330)/300 (7620)
7	143 (3635)/330 (8380)
8	155 (3940)/360 (9140)

FORK LENGTH

DASH	IN.	MM
1	30	900
2	36	
4	48	
5	54	
6	60	
7	72	
8	84	
9		1150
10		1600
11		1800
12		2000

INSIDE STRADDLE WIDTH (SP48 Only)

DASH	IN.	MM
4	38	970
5	40	1020
6	42	1070
7	44	1120
8	46	1170
9	48	1220
10	50	1270

EXAMPLE: A truck having the model number 30SP48TL-5-6-2 is a 3000 lb. capacity stockpicker with a 48 in. wide power unit, telescopic limited free lift, 119 in. collapsed height, 192 in. lift height, 42 in. inside straddle width and 36 in. fork length.

* Actual rated capacity may vary, depending upon special equipment or modifications. Consult serial number plate to obtain rated capacity of your truck.

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TROUBLESHOOTING CHART

The following charts contain symptoms which may occur with components to be checked. Whenever a component is checked, the associated wiring should also be checked for continuity.

Before proceeding, visually check for loose wiring, signs of overheating of components, etc.

⚠ WARNING

Remove rings, watches and other jewelry before working on an energized circuit. Serious burns can result from contact with truck battery voltage. Whenever "live" circuit tests must be made chock load wheels, raise drive wheel clear of floor and position hardwood blocks under truck frame.

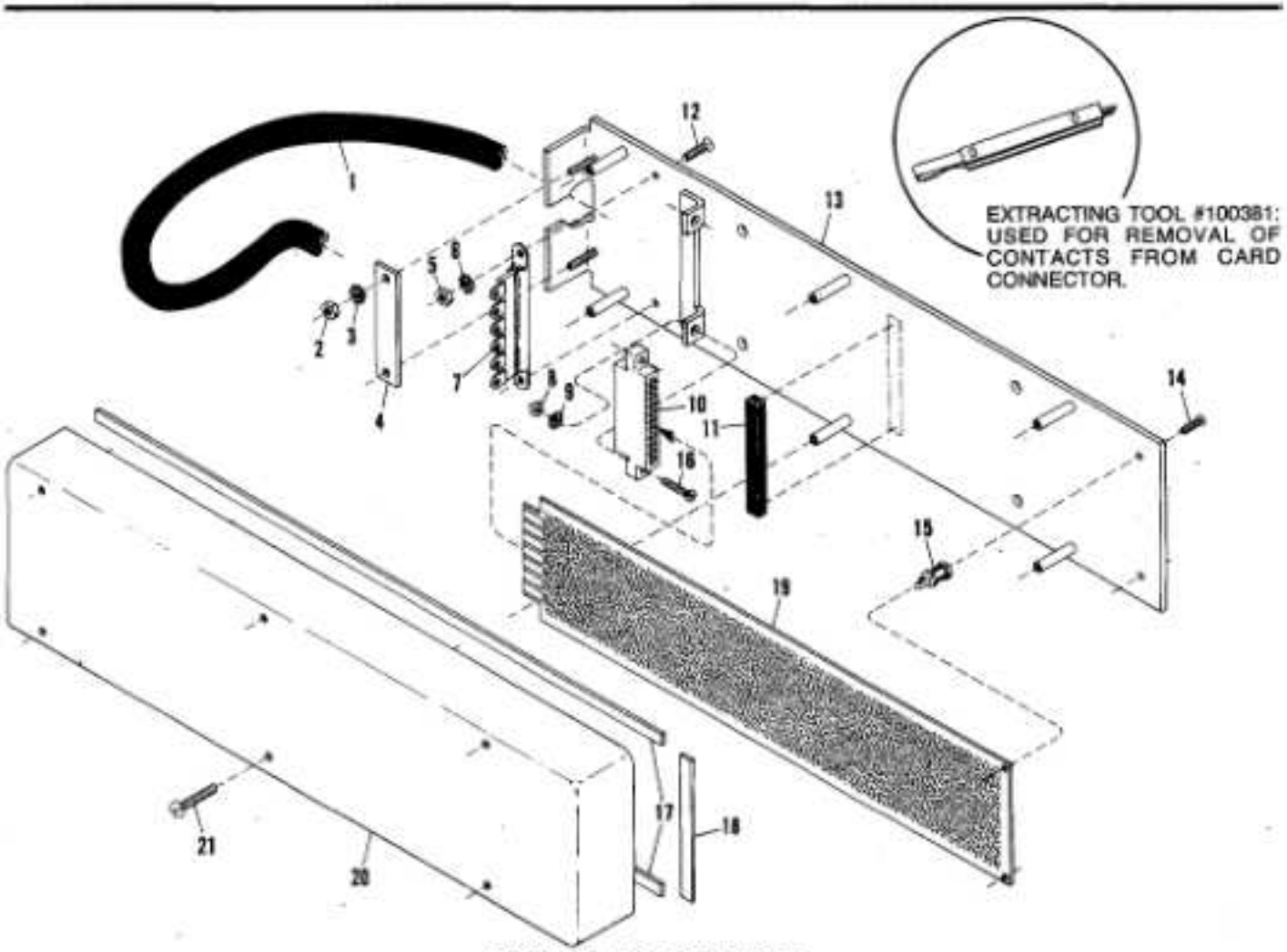
A check for leakage from battery positive connector to frame and battery negative connector to frame should be made part of normal maintenance. With the battery disconnected, check resistance on R x 1000 ohm scale from truck frame to battery connector positive terminal; a reading of less than 20,000 ohms can cause misleading symptoms. Repeat this check to battery negative terminal. A resistance reading of less than 20,000 ohms from either terminal to truck frame should be corrected before proceeding. Refer to Troubleshooting Procedures section for individual component testing.

Symptom	Probable Cause
1. No Power - No Functions Operate	a. "Blown" control fuse. b. Battery connector open. c. Keyswitch open. d. Emergency disconnect switch (EDS) open. e. Emergency disconnect contactor not operating. f. K2 relay not operating.
2. Keyswitch must be held in "START" position for functions to operate.	a. Contact of relay K2 not closing. b. Emergency disconnect switch (EDS) open.
3. No Traction.	a. Traction circuit power fuse (FU-1) open. b. Tow switch (EMS-1) in "Tow" position. c. Relay K1 not operating (flashing light will not operate if K1 does not operate). d. Brake switch not operating. e. Brake relay (K3) not operating. f. Gate switches (GTS-3, GTS-4) open. g. Traction cutout switches open. h. Relay K4 not operating (wire guide trucks only). i. Refer to SCR section for more checks.
4. No Raise/Lower functions operate.	a. Gate switches (GTS-1, GTS-2) open.
5. No raise functions operate.	a. Power circuit fuse blown (FU-2). b. Raise switch (RAS) not operating. c. Pump contactor not operating. d. Lift interrupt controller operating (optional).
6. No lower functions operate.	a. Lower switch (LOS) not operating. b. Lower solenoid (SV1) not operating. c. Chain slack switch (CHS) open.

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SENSOR AMP ASSEMBLY

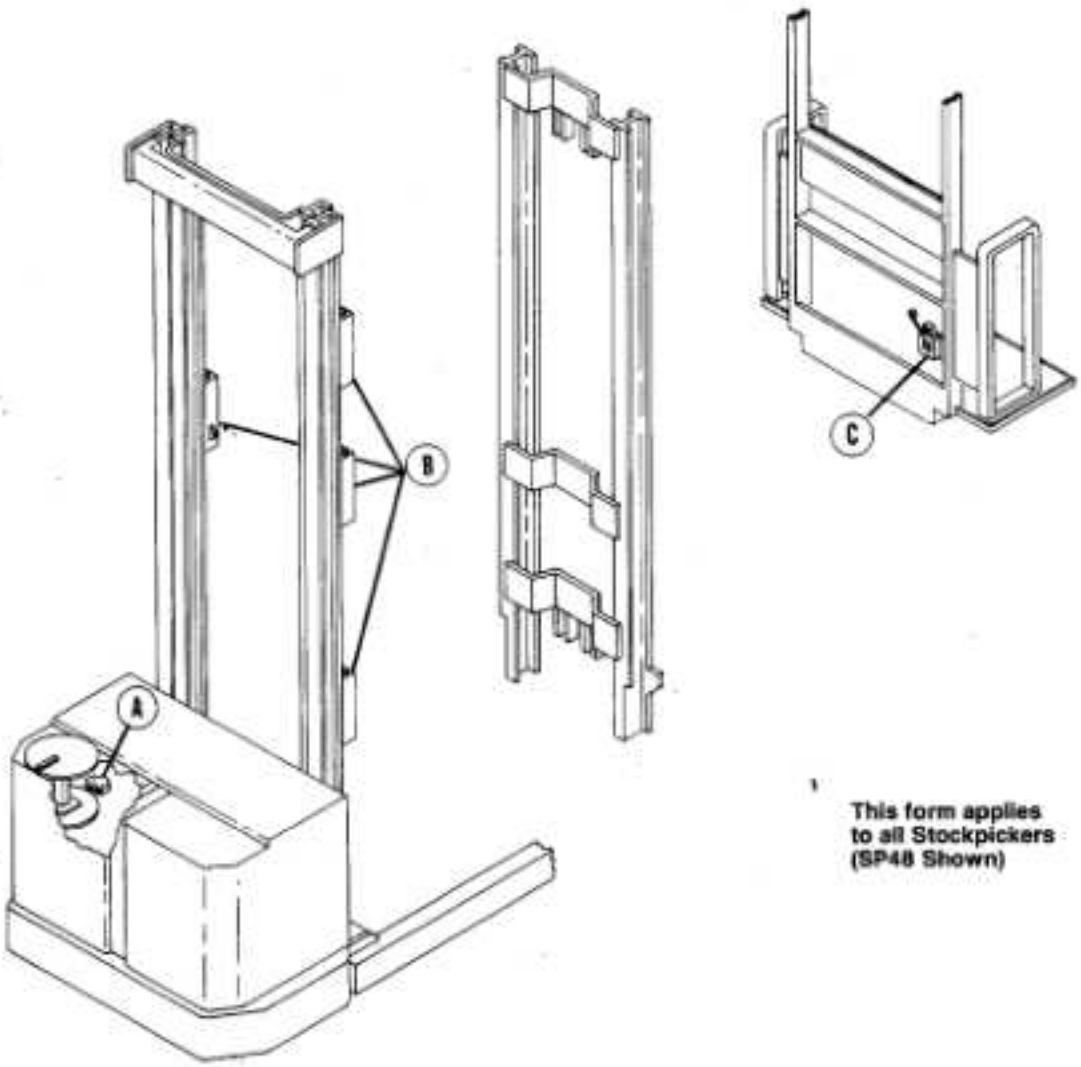
Index	Part No.	Part Name	No. Req.
1	104596	Harness, Wiring (Includes 1 thru 18 [SP36])	1
	105551	Harness, Wiring (Fr./Corr.) (Includes 1 thru 18 [SP36])	1
	104594	Harness, Wiring (Includes 1 thru 18 [SP42])	1
	105552	Harness, Wiring (Fr./Corr.) (Includes 1 thru 18 [SP42])	1
	104598	Harness, Wiring (Includes 1 thru 18 [SP48])	1
	105553	Harness, Wiring (Fr./Corr.) (Includes 1 thru 18 [SP48])	1
2	60021-3	Nut	2
3	60005-3	Lockwasher	2
4		Clamp, Harness	1
5	60021-3	Nut	2
6	60005-3	Lockwasher	2
7		Board, Terminal	1
8	60021-23	Nut	2
9	60005-3	Lockwasher	2
10	100934	Connector, Card	1
	100935	Contact	AR
	100381	Tool, Extracting	1
11		Spacer	1
12	60012-17	Screw	2
13		Plate, Mounting	1
14	60012-17	Screw	2
15	100992	Standoff	2
16	60011-11	Screw	2
17		Gasket, Rubber	2
18		Gasket, Rubber	1
19	100319	Card, Sensor Amp (6.25 Khz. [Std])	1
	101754	Card, Sensor Amp (5.2 Khz. [Opt.])	1
	104656	Card, Sensor Amp (7.0 Khz. [Opt.])	1
20	100993	Cover	1
	103037	Cover (Fr./Corr.)	1
	62033-4	Resistor (Fr./Corr.)	3
	103043	Thermostat (Fr./Corr.)	1
		Connector (Fr./Corr.) (Male)	1
		Connector (Fr./Corr.) (Female)	1
	62036-3	Pin (Fr./Corr.) (Male)	2
	62036-4	Socket (Fr./Corr.) (Female)	2
21	60012-22	Screw	6
22	103036	Bracket, Mounting (Fr./Corr.) (Not Shown)	1
	60015-4	Screw	2
	60005-7	Lockwasher	2
23	103038	Fuse, Wire Guide (Fr./Corr.) (Not Shown)	1

Always Specify Model & Serial Number

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This form applies to all Stockpickers (SP48 Shown)

Model No.	Lift Height	Location & Switch Number		
		A	B	C
30SP36TL	126" (3200 mm)			92459
	150" (3815 mm)			92459
	170" (4325 mm)		82615 (1)	92459
	192" (4875 mm)		82615 (1)	92459
	210" (5340 mm)		82615 (1)	92459
30SP36TT	180" (4375 mm)		82615 (2)	92459
	192" (4875 mm)		82615 (2)	92459
30SP42TL	192" (4875 mm)	73624	82615 (3)	92459
	210" (5340 mm)	73624	82615 (3)	92459
30SP42TT	180" (4575 mm)	73624	82615 (2)	92459
	210" (5340 mm)	73624	82615 (3)	92459
	240" (6100 mm)	73624	82615 (3)	92459
30SP48TT & 15SP48TT	210" (5340 mm)	73624	82615 (2)	92459
	240" (6100 mm)	73624	82615 (2)	92459
	270" (6860 mm)	73624	82615 (2)	92459
	300" (7620 mm)	73624	82615 (3)	92459
	330" (8380 mm)	73624	82615 (3)	92459
	360" (9140 mm)	73624	82615 (3)	92459

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