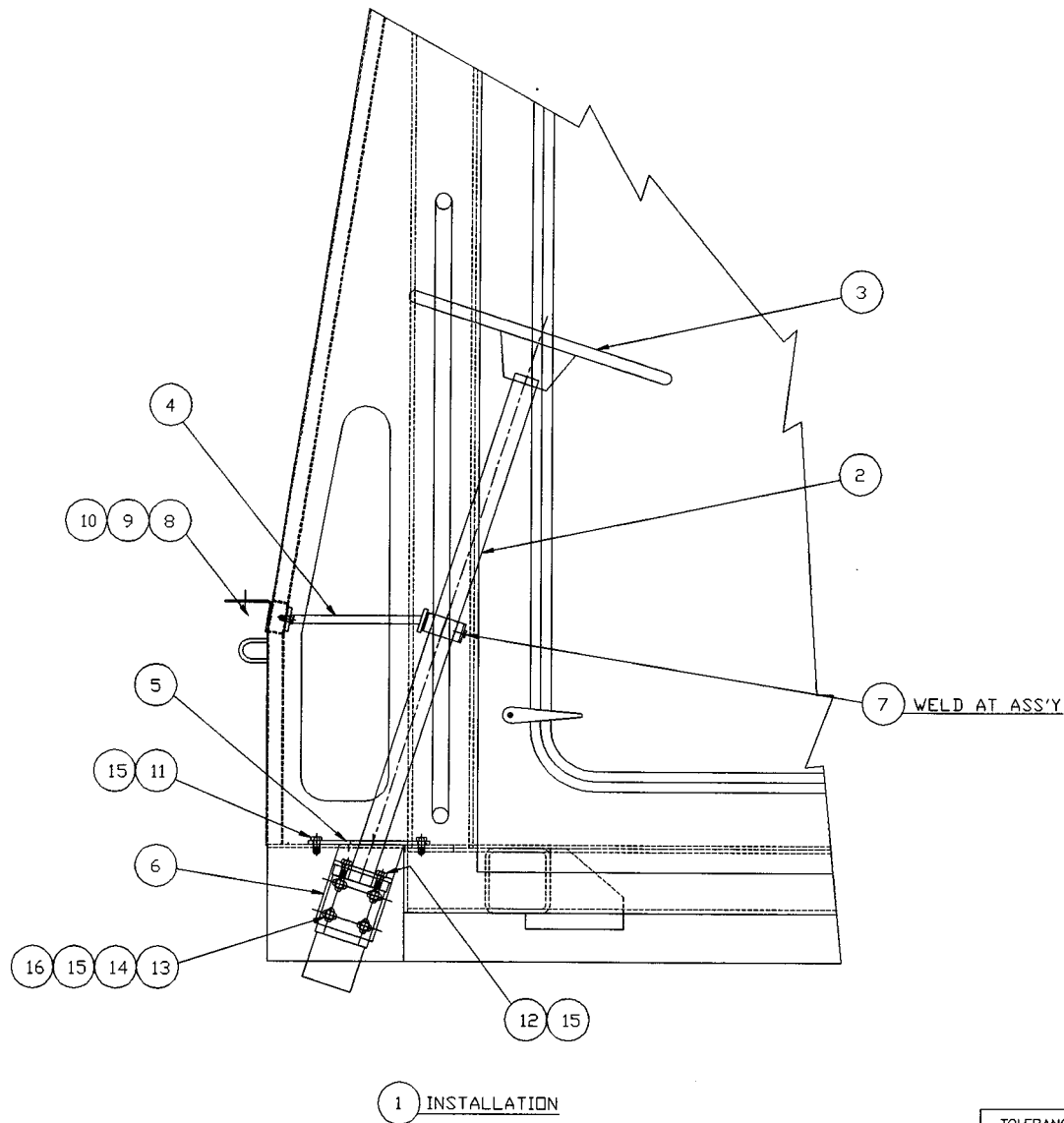




SECTION E

STEERING
SYSTEM



TOLERANCES

UNLESS OTHERWISE SPECIFIED

FRACTIONS +/-

3 PLACE DECIMALS +/-

2 PLACE DECIMALS +/-

1 PLACE DECIMALS +/-

ANGLES

SEE SWINGMASTER SPECIFICATION

G-1 FOR TOLERANCES NOT SPECIFIED

DIMENSIONS ARE IN INCHES

DO NOT SCALE DRAWING

SCALE: 1=6

SWINGMASTER CORPORATION

11415 MELROSE AVENUE

FRANKLIN PARK, ILLINOIS 60131

STEERING COLUMN INSTALLATION

DRAWN BY: J.K.

DATE: 7-24-98

DRAWING NO.

C-217

MACHINE	SECTION	5
-----	-----	-----
MODEL SL180 SWINGLOADER	STEERING SYSTEM	
-----	-----	-----

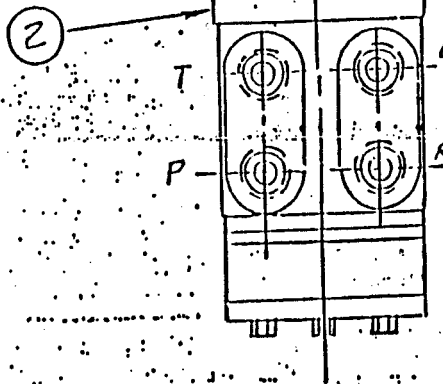
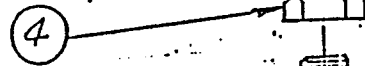
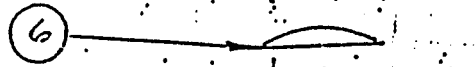
ASSEMBLY
NUMBER

DESCRIPTION

1803529

STEERING COLUMN INSTALLATION

ITEM NO.	PART NUMBER	DESCRIPTION	QTY. USED
002	1801194	ORBITROL ASSEMBLY	1.00
003	1800239	STEERING WHEEL	1.00
004	1806222	STEERING COLUMN BRACE WLDM'T	1.00
005	1803531	STEERING COLUMN MOUNTING BRACKET	1.00
006	1803532	STEERING GEAR MOUNTING BRACKET	1.00
007	1800230	HOSE CLAMP - 1-1/2"	1.00
008	1800443	H.H.C.S. 5/16-18 X 1" LONG	2.00
009	1800074	5/16" LOCK WASHER	2.00
010	1800550	5/16" FLAT WASHER	2.00
011	1800452	H.H.C.S. 3/8-16 X 1" LONG	4.00
012	1800454	H.H.C.S. 3/8-16 X 1 1/4" LONG	2.00
013	1800457	H.H.C.S. 3/8-16 X 1 1/2" LONG	4.00
014	1800514	HEX NUT 3/8-16	4.00
015	1800568	3/8" LOCK WASHER	10.00
016	1800552	3/8" FLAT WASHER	8.00

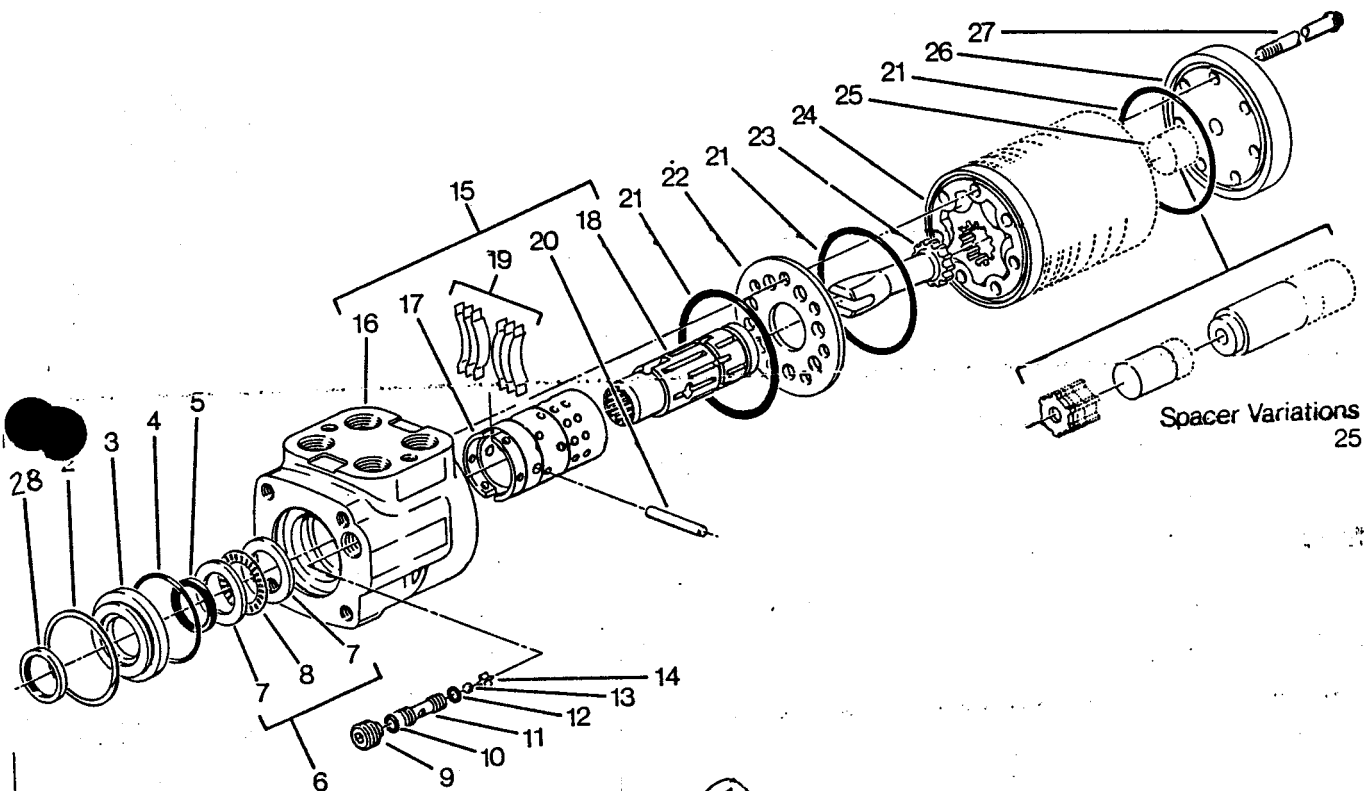


① ASS'Y

MACHINE	SECTION	5
-----	-----	-----
MODEL 361 SWINGLOADER	STEERING SYSTEM	
-----	-----	-----

ASSEMBLY NUMBER	DESCRIPTION
-----	-----
1801194	ORBITROL ASSEMBLY
-----	-----

ITEM NO.	PART NUMBER	DESCRIPTION	QTY. USED
-----	-----	-----	-----
2	1800233	ORBITROL VALVE	1.00
3	1800234	STEERING COLUMN	1.00
4	1800235	NUT (STEERING WHEEL)	1.00
6	1800237	STEERING WHEEL CAP	1.00
-----	-----	-----	-----



① ASSEMBLY

MACHINE

SECTION

5

MODEL 361 SWINGLOADER

STEERING SYSTEM

ASSEMBLY
NUMBER

DESCRIPTION

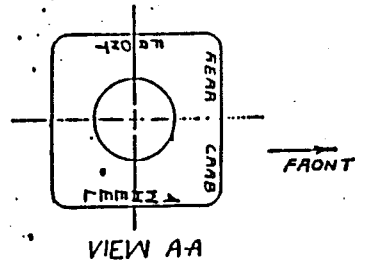
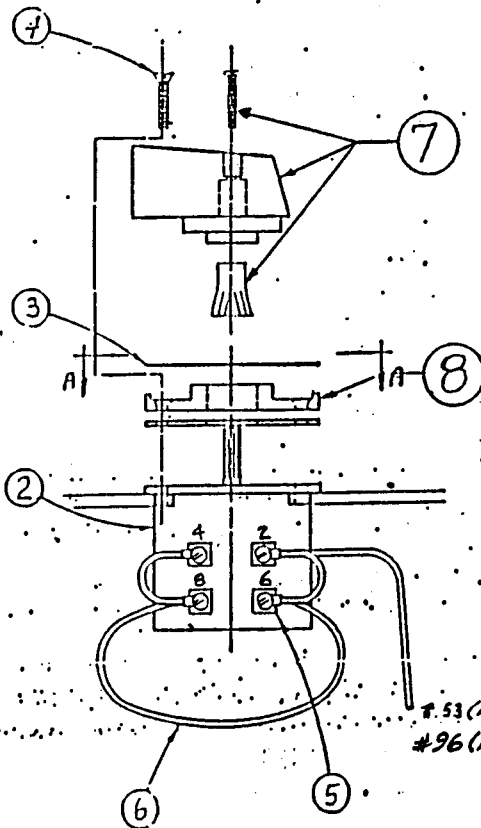
1800233

ORBITROL VALVE ASSEMBLY

ITEM NO.	PART NUMBER	DESCRIPTION	QTY. USED
2	8700646	RETAINING RING	1
3	8700647	SEAL GLAND BUSHING	1
4	8700648	SEAL	1
5	8700649	QUAD RING SEAL	1
6	8700650	NEEDLE BEARING KIT - INCLUDES ITEMS 7,8	1
7	8700651	BEARING RACE	2
8	8700652	NEEDLE THRUST BEARING	1
9	8700653	SET SCREW	1
10	8700654	SEAL	1
11	8700655	CHECK BALL SEAT	1
12	8700656	SEAL	1
13	8700657	CHECK BALL	1
14	8700658	CHECK BALL RETAINER	1
15	8700659	CONTROL PARTS ASSY - INCLUDES ITEMS 16-20	1
16		HOUSING	1
17		CONTROL SLEEVE	1
18		CONTROL SPOOL	1
19	8700660	CENTERING SPRING	6
20	8700661	CENTERING PIN	1
21	8700662	SEAL	3
22	8700663	SPACER PLATE	1
23	8700664	DRIVE	1
24	8700665	GEROTOR	1
25	8700666	SPACER	1
26	8700667	END CAP	1
27	8700668	CAP SCREW	7
28	8700669	SEAL	1
	8700670	SEAL KIT - INCLUDES ITEMS 4,5,10,12,21,28	1

TERM NO.	WIRE NO.		TO	
	MODEL 181	MODEL 361	MODEL 181	MODEL 361
2, 4, 6, 8,	53	96	CIRC. BRKR #3	CIRC. BRKR. #30
1	8	8	SOL #1	SOL #1
3	9	7	SOL #2	SOL #2
5	10	6	SOL #3	SOL #3
7	11	5	SOL #4	SOL #4

STEERING
SELECTOR
VALVE.



#53 (MODEL 181)
#96 (MODEL 361)

① ASSY.

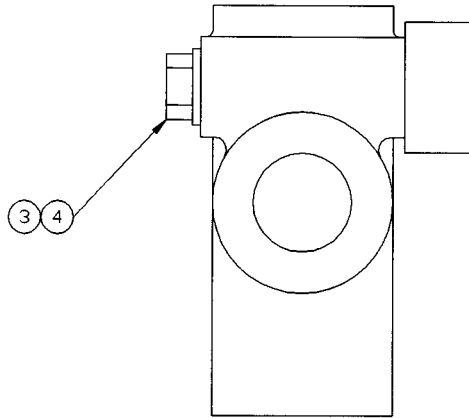
MACHINE	SECTION	5
MODEL SL180 SWINGLOADER	STEERING SYSTEM	

ASSEMBLY NUMBER	DESCRIPTION
1801192	STEERING SELECTOR SWITCH INSTALLATION

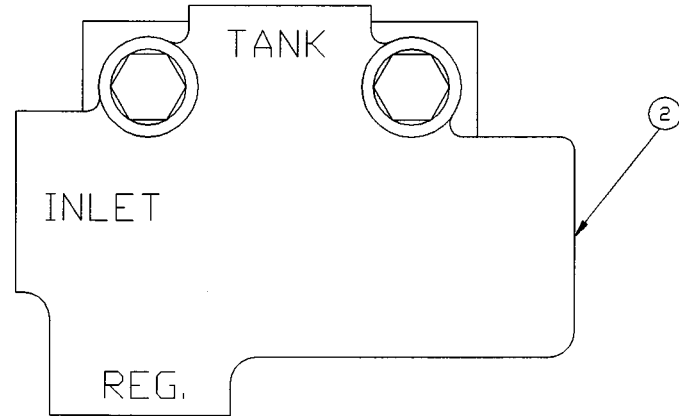
ITEM NO.	PART NUMBER	DESCRIPTION	QTY. USED
002	1800245	4-POLE, ROTARY SWITCH	1.00
003	1801376	STEERING MODES SWITCH LABEL	1.00
004	1800846	FLAT HEAD MACHINE SCREW #6-32 X 1/2 LG	4.00
005	1801204	14 GAGE #6 ELECTRICAL RING TERMINAL	4.00
006	1801086	BULK 14 GA.WIRE/(FT)	1.00
007	8701368	KNOB	1.00
008	8701369	ESCUTCHEON PLATE	1.00

ALL PORTS 7/8-14 S.A.E. O-RING BOSS (-10)

⑤ WELD IN PLACE AT ASSEMBLY
LOCATE INSIDE OF FENDER.



① INSTALLATION



TOLERANCES

UNLESS OTHERWISE SPECIFIED
FRACTIONS +/-
3 PLACE DECIMALS +/-
2 PLACE DECIMALS +/-
1 PLACE DECIMALS +/-
ANGLES

SEE SWINGMASTER SPECIFICATION
G-1 FOR TOLERANCES NOT SPECIFIED

DIMENSIONS ARE IN INCHES
DO NOT SCALE DRAWING
SCALE:

SWINGMASTER CORPORATION

11415 MELROSE AVENUE
FRANKLIN PARK, ILLINOIS 60131

STEERING RELIEF VALVE INSTALLATION

SL180-15

DRAWN BY: J.K.

DATE: 7-16-98

DRAWING NO.

H-414

MACHINE	SECTION	5
MODEL SL180 SWINGLOADER	STEERING SYSTEM	

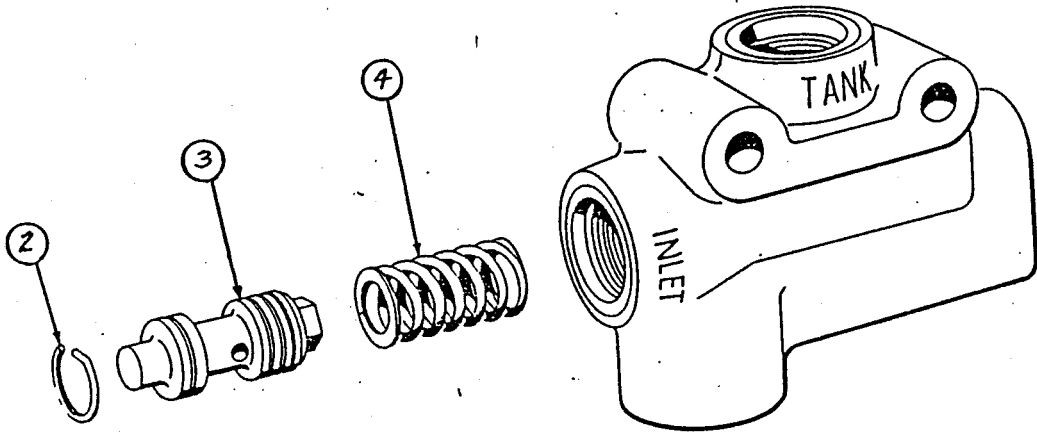
ASSEMBLY
NUMBER

DESCRIPTION

1805773

STEERING RELIEF VALVE INSTALLATION

ITEM NO.	PART NUMBER	DESCRIPTION	QTY. USED
002	1802474	STEERING RELIEF VALVE - 2500 PSI	1.00
003	1800447	H.H.C.S. 5/16-18 X 2" LONG	2.00
004	1800074	5/16" LOCK WASHER	2.00
005	1803667	BAR	1.00



① ASSEMBLY

SWINGMASTER CORPORATION**PARTS BOOK**

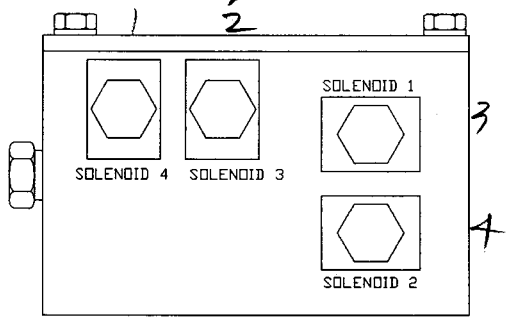
MACHINE**SECTION****5**-----
MODEL 361 SWINGLOADER

STEERING SYSTEM
-----**ASSEMBLY
NUMBER**
-----**DESCRIPTION**
-----**1802474**
-----**STEERING RELIEF VALVE**

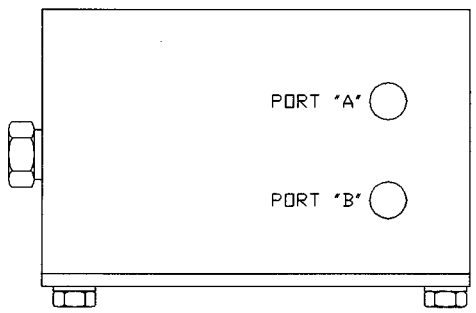
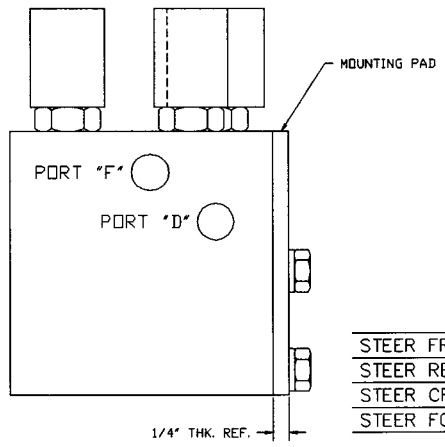
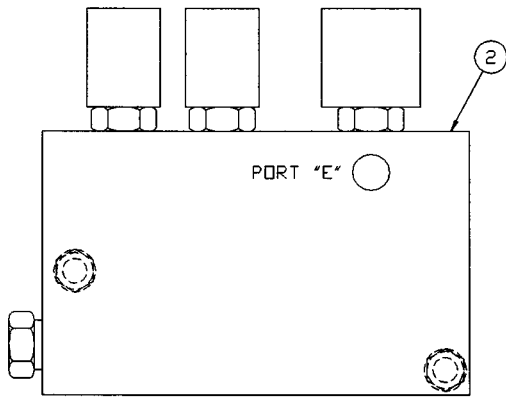
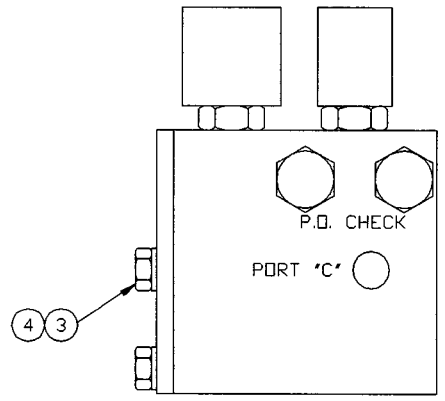
ITEM NO.	PART NUMBER	DESCRIPTION	QTY. USED
2	8701149	SNAP RING	1
3	8702308	CONTROL VALVE SUB ASSEMBLY	1
4	8701151	SPRING	1

*from New Vendor
(POWER SYSTEM)*

PORT	FUNCTION
A	PRESSURE IN - RIGHT TURN
B	PRESSURE IN - LEFT TURN
C	PRESSURE OUT - FRONT LEFT TURN
D	PRESSURE OUT - FRONT RIGHT TURN
E	PRESSURE OUT - REAR LEFT TURN
F	PRESSURE OUT - REAR RIGHT TURN



ALL PORTS 9/16-18 S.A.E. O-RING BOSS (-6)



ELECTRICAL FUNCTIONS

	SOL(1)	SOL(2)	SOL(3)	SOL(4)
STEER FRONT	0	0	0	0
STEER REAR	X	X	0	0
STEER CRAB	0	0	0	X
STEER FOUR	0	0	X	0

X = ENERGIZED
0 = DEENERGIZED

1 INSTALLATION

TOLERANCES
UNLESS OTHERWISE SPECIFIED
FRACTIONS +/-
3 PLACE DECIMALS +/-
2 PLACE DECIMALS +/-
1 PLACE DECIMALS +/-
ANGLES
SEE SWINGMASTER SPECIFICATION
G-1 FOR TOLERANCES NOT SPECIFIED
DIMENSIONS ARE IN INCHES
DO NOT SCALE DRAWING
SCALE: 1=2

SWINGMASTER CORPORATION

11415 MELROSE AVENUE
FRANKLIN PARK, ILLINOIS 60131

STEERING SELECTOR VALVE INSTALLATION

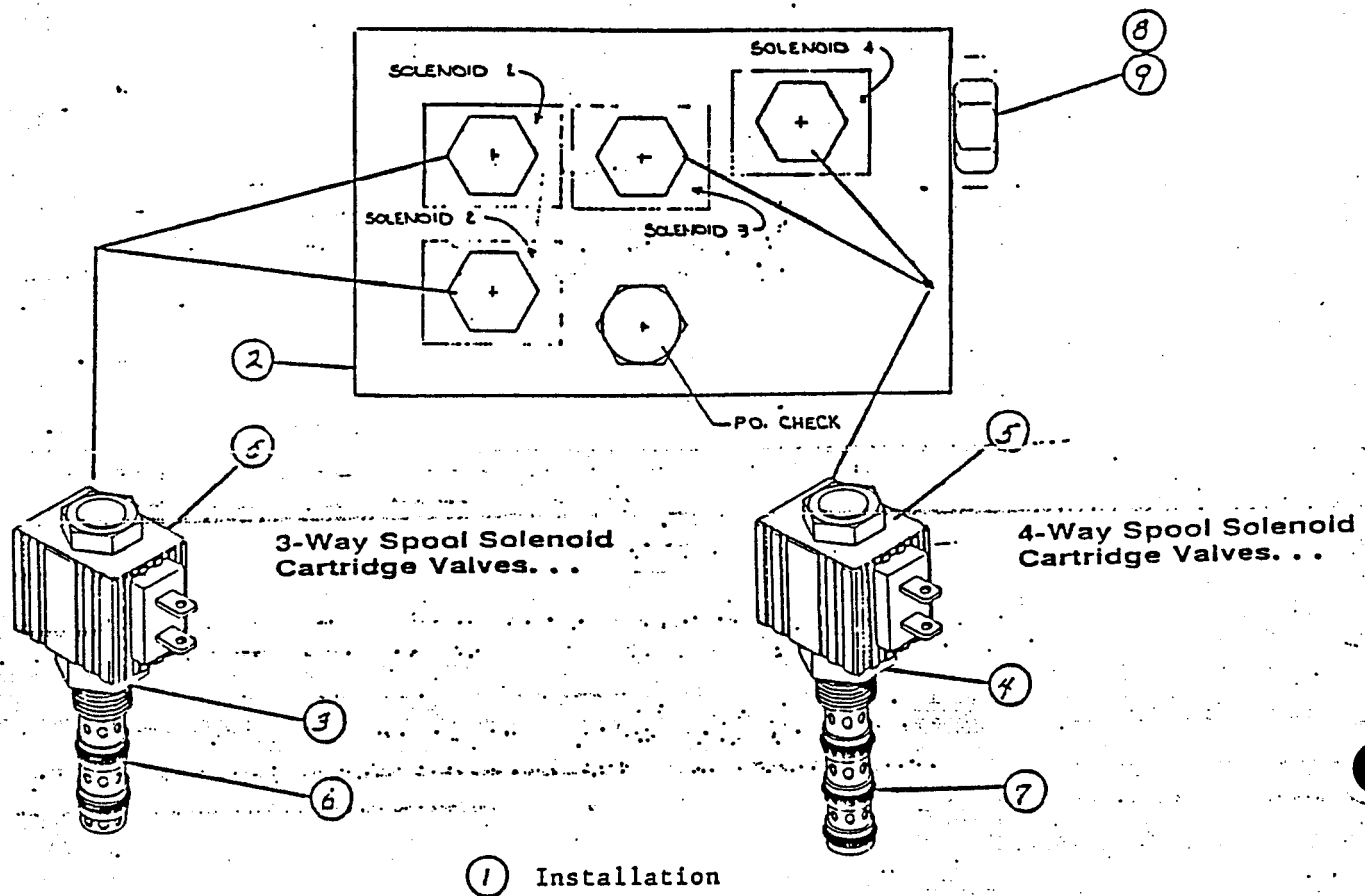
DRAWN BY: j.k.
DATE: 7-20-98

DRAWING NO.
H-184

MACHINE	SECTION	5
-----	-----	-----
MODEL SL180 SWINGLOADER	STEERING SYSTEM	
-----	-----	-----

ASSEMBLY NUMBER	DESCRIPTION
-----	-----
1802475	STEERING SELECTOR VALVE INSTALLATION
-----	-----

ITEM NO.	PART NUMBER	DESCRIPTION	QTY. USED
-----	-----	-----	-----
002	1800248	STEERING SELECTOR VALVE	1.00
003	1800454	H.H.C.S. 3/8-16 X 1 1/4" LONG	2.00
004	1800568	3/8" LOCK WASHER	2.00
-----	-----	-----	-----



MACHINE

SECTION

5

MODEL 361 SWINGLOADER

STEERING SYSTEM

SERIAL NUMBERS

88361L0001 TO 89361L0003 AND

90361L0006 TO CURRENT

ASSEMBLY
NUMBER

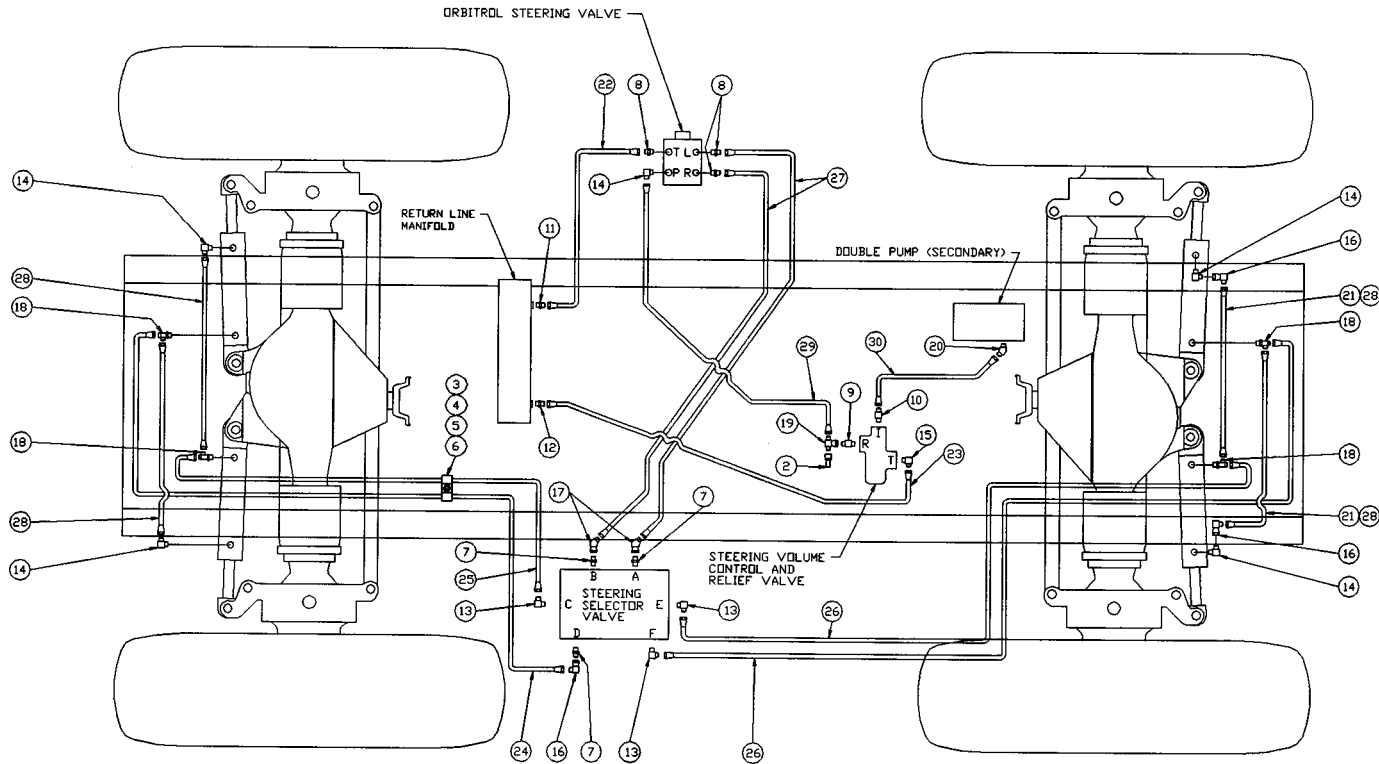
DESCRIPTION

1800248

STEERING SELECTOR VALVE ASSEMBLY

ITEM NO.	PART NUMBER	DESCRIPTION	QTY. USED
2	8700898	ALUMINUM BLOCK	1
3	8700899	3 WAY SPOOL CARTRIDGE VALVE WITHOUT COIL	2
4	8700900	4 WAY SPOOL CARTRIDGE VALVE WITHOUT COIL	2
5	8700901	COIL	4
6	8700902	SEAL KIT FOR ITEM 3	2
7	8700903	SEAL KIT FOR ITEM 4	2
8	8700904	CHECK VALVE	1
9	8700905	SEAL KIT FOR ITEM 8	1

← FRONT OF MACHINE



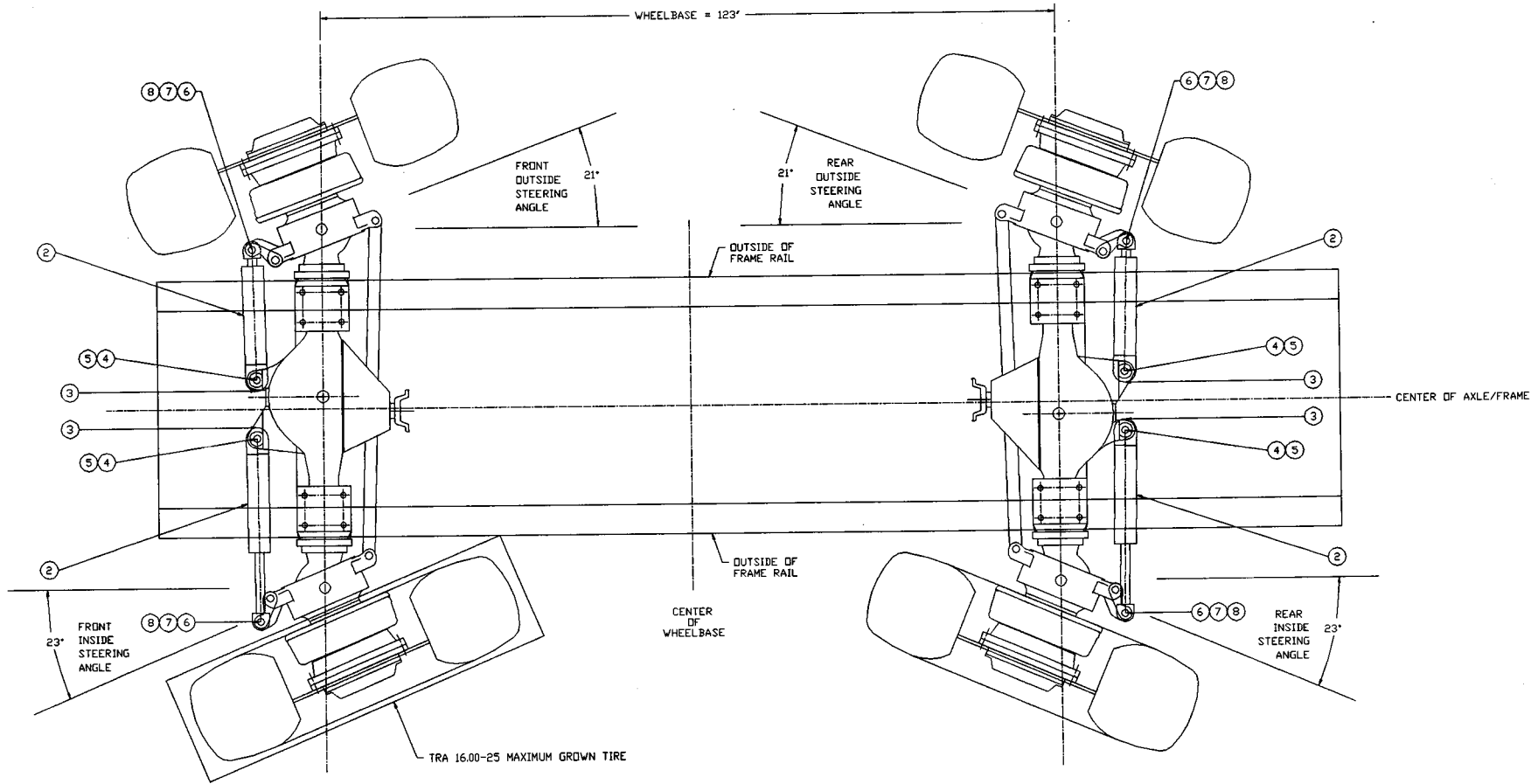
① INSTALLATION

<p>TOLERANCES</p> <p>UNLESS OTHERWISE SPECIFIED</p> <p>FRACTIONS +/-</p> <p>3 PLACE DECIMALS +/-</p> <p>2 PLACE DECIMALS +/-</p> <p>1 PLACE DECIMALS +/-</p> <p>ANGLES</p>	<p>SWINGMASTER CORPORATION</p> <p>11415 MELROSE AVENUE FRANKLIN PARK, ILLINOIS 60131</p>	
	<p>STEERING CONTROL HYDRAULIC LINES & FITTINGS</p>	
<p>SEE SWINGMASTER SPECIFICATION</p> <p>G-1 FOR TOLERANCES NOT SPECIFIED</p>	<p>MODEL RTC-15 & SL180</p>	
<p>DIMENSIONS ARE IN INCHES</p> <p>DO NOT SCALE DRAWING</p> <p>SCALE: 1=9</p>	<p>DRAWN BY: J.K.</p> <p>DATE: 7-24-98</p>	<p>DRAWING NO.</p> <p>D-469</p>

MACHINE	SECTION	5
MODEL SL180 SWINGLOADER	STEERING SYSTEM	

ASSEMBLY NUMBER	DESCRIPTION
1803811	STEERING HYDRAULIC LINES & FITTINGS

ITEM NO.	PART NUMBER	DESCRIPTION	QTY. USED
002	1800264	TEST PORT - 3/4"-16	1.00
003	1800451	H.H.C.S. 3/8-16 X 3/4" LONG	1.00
004	1800514	HEX NUT 3/8-16	1.00
005	1800568	3/8" LOCK WASHER	1.00
006	1800743	1 1/16" DIAMETER CLAMP	2.00
007	1800763	STRAIGHT MALE 3/8 O-RING TO 1/2 TUBE	3.00
008	1800765	STRAIGHT MALE 1/2 O-RING TO 1/2 TUBE	3.00
009	1800767	STRAIGHT MALE 5/8 O-RING TO 1/2 TUBE	1.00
010	1800768	STRAIGHT MALE 5/8 O-RING TO 3/4 TUBE	1.00
011	1800773	STRAIGHT MALE 1 O-RING TO 1/2 TUBE	1.00
012	1801831	STRAIGHT MALE 1 O-RING TO 5/8 TUBE	1.00
013	1800795	90 DEG MALE ELBOW 3/8 O-RING TO 1/2 TUBE	3.00
014	1800796	90 DEG MALE ELBOW 1/2 O-RING TO 1/2 TUBE	5.00
015	1800798	90 DEG MALE ELBOW 5/8 O-RING TO 5/8 TUBE	1.00
016	1800853	90 DEG TUBE ELBOW 1/2 M TO 1/2 F SWIVEL	3.00
017	1800855	45 DEG TUBE ELBOW 1/2 M TO 1/2 F SWIVEL	2.00
018	1802493	MALE RUN TEE 1/2 O-RING TO 1/2 TUBE	4.00
019	1800883	1/2 TUBE BRANCH TEE M-M-F-SWIVEL	1.00
020	1802331	45 DEG MALE ELBOW 3/4 TUBE TO 3/4 O-RING	1.00
021	1802495	PROTECTIVE SLEEVE - 3/4" I.D. / (FT)	4.00
022	1801157	HOSE ASSEMBLY 1503 - 8	1.00
023	1803805	HOSE ASSEMBLY 1503-10	1.00
024	1802499	HOSE ASSEMBLY 2781-8	1.00
025	1803806	HOSE ASSEMBLY 2781-8	1.00
026	1803807	HOSE ASSEMBLY 2781-8	2.00
027	1803808	HOSE ASSEMBLY 2781-8	2.00
028	1802502	HOSE ASSEMBLY 2781-8	4.00
029	1803809	HOSE ASSEMBLY 2781-8	1.00
030	1803810	HOSE ASSEMBLY 2781-12	1.00



① INSTALLATION

DRAWING SHOWN WITH
16.00-25 TIRE
2 1/16" DISH WHEEL

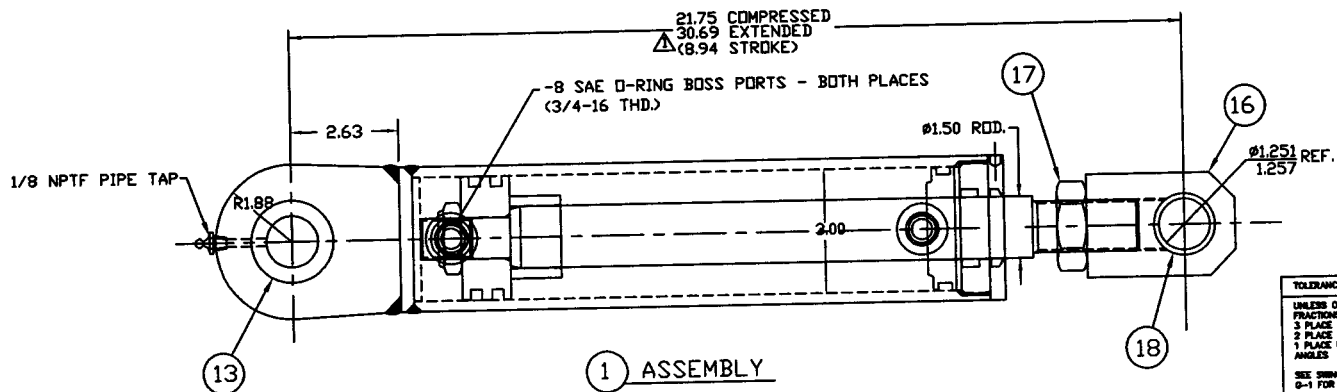
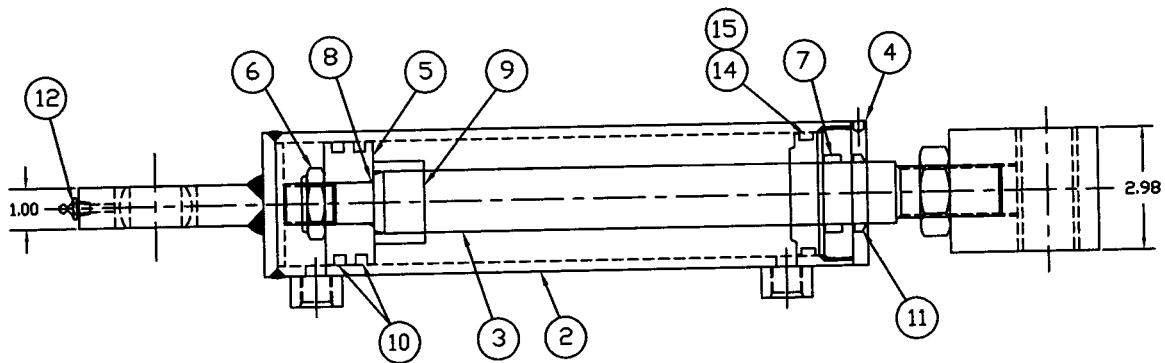
TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS +/- 3 PLACE DECIMALS +/- 2 PLACE DECIMALS +/- 1 PLACE DECIMALS +/- ANGLES	SWINGMASTER CORPORATION	
	11415 MELROSE AVENUE FRANKLIN PARK, ILLINOIS 60131	
SEE SWINGMASTER SPECIFICATION G-1 FOR TOLERANCES NOT SPECIFIED	STEERING CYLINDER INSTALLATION	
DIMENSIONS ARE IN INCHES DO NOT SCALE DRAWING SCALE: 1=9	DRAWN BY: J.K. DATE: 7-24-98	DRAWING NO. D-335

REVISION	DATE
1	10-10-90

MACHINE	SECTION	5
-----	-----	-----
MODEL SL180 SWINGLOADER	STEERING SYSTEM	
-----	-----	-----

ASSEMBLY NUMBER	DESCRIPTION
-----	-----
1803284	STEERING CYLINDER INSTALLATION
-----	-----

ITEM NO.	PART NUMBER	DESCRIPTION	QTY. USED
-----	-----	-----	-----
002	1801988	STEERING CYLINDER - 10.00" STROKE	4.00
003	1800059	65 DEG 1/8" PIPE-M GREASE FITTING	4.00
004	1801989	PIN	4.00
005	1801990	COTTER PIN 1/4" DIA. X 1 3/4" LONG	4.00
006	1800005	PIN	4.00
007	1800007	COTTER PIN 1/4 X 2" LONG	4.00
008	1800663	STRAIGHT 1/8" MALE-PIPE GREASE FITTING	4.00
-----	-----	-----	-----



WORKING PRESSURE = 2500 PSI
PRIME PAINT

① ASSEMBLY

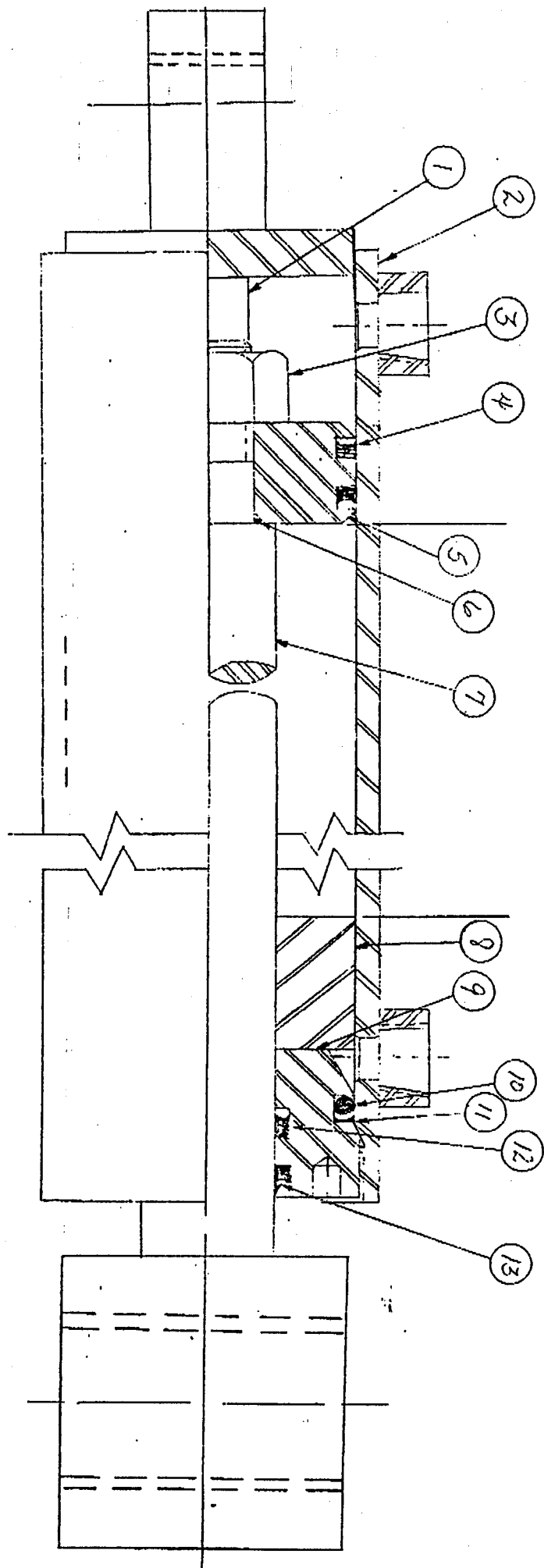
<p>TOLERANCES</p> <p>UNLESS OTHERWISE SPECIFIED</p> <p>FRACTIONS +/-</p> <p>3 PLACE DECIMALS +/-</p> <p>2 PLACE DECIMALS +/-</p> <p>1 PLACE DECIMALS +/-</p> <p>ANGLES</p> <p>SEE SWINGMASTER SPECIFICATION</p> <p>0-1 FOR TOLERANCES NOT SPECIFIED</p> <p>DIMENSIONS ARE IN INCHES</p> <p>DO NOT SCALE DRAWING</p> <p>SCALE: 2-3</p>	SWINGMASTER CORPORATION	
	11416 MELROSE AVENUE FRANKLIN PARK, ILLINOIS 60151	
	STEERING CYLINDER	
	MODEL 361 & SL180	
DRAWN BY: J.J.K.	DRAWING NO.	
DATE: 10-18-05	D-169	

△	10-23-05	B/M ADDED.	2005005	J.J.K.
REV	DATE	DESCRIPTION	ENG. NO.	BY

MACHINE	SECTION	5
MODEL SL180 SWINGLOADER	STEERING SYSTEM	

ASSEMBLY NUMBER	DESCRIPTION
1801988	STEERING CYLINDER

ITEM NO.	PART NUMBER	DESCRIPTION	QTY USED
2	1806835	CASE WELDMENT	1
3	1806836	CYLINDER ROD	1
4	1806837	CAP	1
5	1806838	PISTON	1
6	1806839	LOCKNUT	1
7	1806610	ROD SEAL	1
8	1806604	"O" RING	1
9	1806840	SPACER	1
10	1806611	PISTON SEAL	2
11	1806612	WIPER	1
12	1800663	STRAIGHT 1/8" MALE-PIPE GREASE FITTING	1
13	1806176	SPHERICAL BUSHING	1
14	1806608	"O" RING	1
15	1806613	BACK-UP RING	1
16	8700708	ROD END L2-6576	1
17	1805222	JAM NUT 1-1/4 - 12	1
18	1800098	BRONZE BUSHING - 1-1/4" ID x 3" LONG	1



MACHINE

SECTION

5

MODEL 361 SWINGLOADER

STEERING SYSTEM

ASSEMBLY
NUMBER

DESCRIPTION

1801988

STEERING CYLINDER - 10" STROKE

1802905

STEERING CYLINDER - 6.19" STROKE

ITEM NO.	PART NUMBER	DESCRIPTION	QTY. USED
1	8703297	STUD - USED ON 1802905 ONLY	1
2		TUBE ASSEMBLY	1
3	8703296	STOP NUT 1-14	1
4	8703287	POLYSEAL	2
5	8703288	PISTON	1
6	8703289	O-RING	1
7	8703290	ROD ASSEMBLY	1
8	8703298	SPACER - USED ON 1802905 ONLY	1
9	8703291	PACKING GLAND	1
10	8703292	O-RING	1
11	8703293	PARBACK	1
12	8703294	POLYSEAL	1
13	8703295	ROD WIPER	1
	8703605	SEAL KIT	1