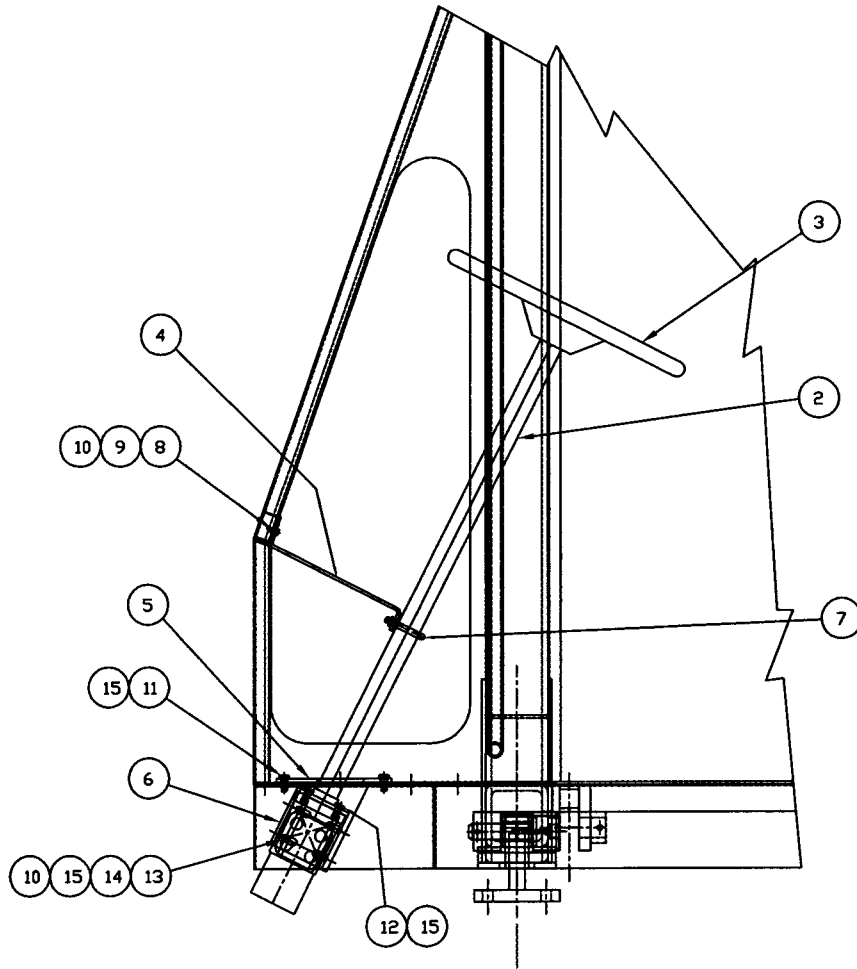




## STEERING SYSTEM



1 INSTALLATION

<p><b>TOLERANCES</b></p> <p>UNLESS OTHERWISE SPECIFIED          FRACTIONS +/-          3 PLACE DECIMALS +/-          2 PLACE DECIMALS +/-          1 PLACE DECIMALS +/-          ANGLES</p> <p>SEE SWINGMASTER SPECIFICATION          G-1 FOR TOLERANCES NOT SPECIFIED</p> <p>DIMENSIONS ARE IN INCHES          DO NOT SCALE DRAWING          SCALE: 1=6</p>	<p><b>SWINGMASTER CORPORATION</b></p> <p>11415 MELROSE AVENUE          FRANKLIN PARK, ILLINOIS 60131</p> <p>STEERING COLUMN INSTALLATION</p> <p>MODEL 181T</p> <p>DRAWN BY: J.K.      DRAWING NO.          DATE: 2-10-00      C-398</p>
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MACHINE

SECTION

5

MODEL 181 SWINGLOADER

STEERING SYSTEM

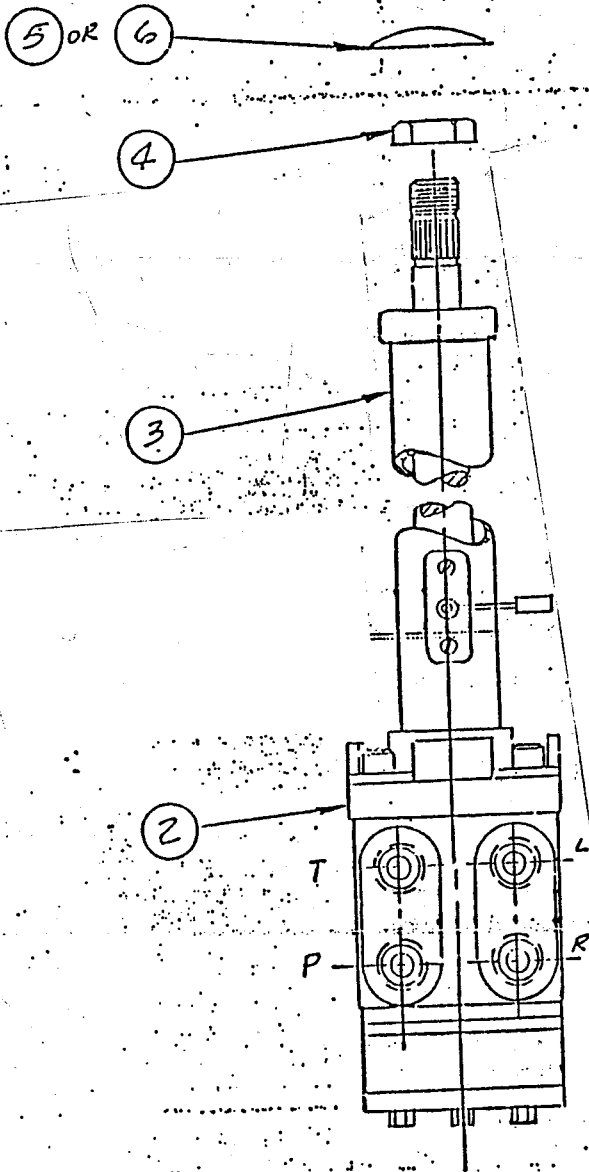
ASSEMBLY  
NUMBER

DESCRIPTION

1806180

STEERING COLUMN INSTALLATION

ITEM NO.	PART NUMBER	DESCRIPTION	QTY USED
002	1801194	ORBITROL ASSEMBLY	1
003	1800239	STEERING WHEEL	1
004	1806181	STEERING COLUMN SUPPORT	1
005	1806182	STEERING COLUMN MTG. BRKT. WELDMENT	1
006	1806183	STEERING GEAR MOUNTING BRACKET	1
007	1800678	1 5/8" MUFFLER CLAMP	1
008	1801471	H.H.C.S. 1/4-20 X 7/8" LONG	2
009	1800567	1/4" LOCK WASHER	2
010	1800552	3/8" FLAT WASHER	8
011	1800452	H.H.C.S. 3/8-16 X 1" LONG	4
012	1800454	H.H.C.S. 3/8-16 X 1 1/4" LONG	2
013	1800457	H.H.C.S. 3/8-16 X 1 1/2" LONG	4
014	1800514	HEX NUT 3/8-16	4
015	1800568	3/8" LOCK WASHER	10



1 ASS'Y

SWINGMASTER CORPORATION

PARTS BOOK

MACHINE

SECTION

5

MODEL 181 SWINGLOADER

STEERING SYSTEM

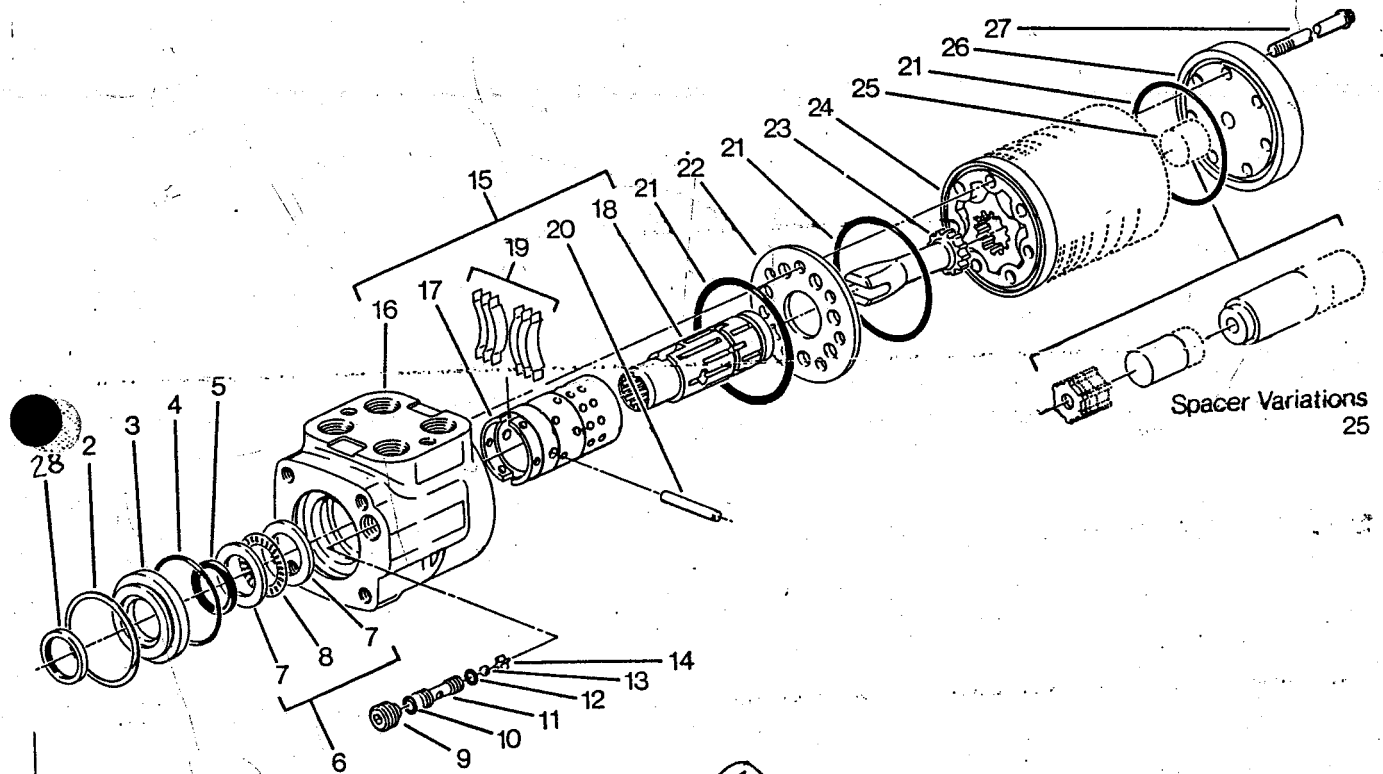
ASSEMBLY  
NUMBER

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
5	1800236	HORN BUTTON	0.00
6	1800237	STEERING WHEEL CAP	1.00



① ASSEMBLY

SWINGMASTER CORPORATION

PARTS BOOK

MACHINE

SECTION

5

MODEL 181 SWINGLOADER

STEERING SYSTEM

ASSEMBLY  
NUMBER

DESCRIPTION

1800233

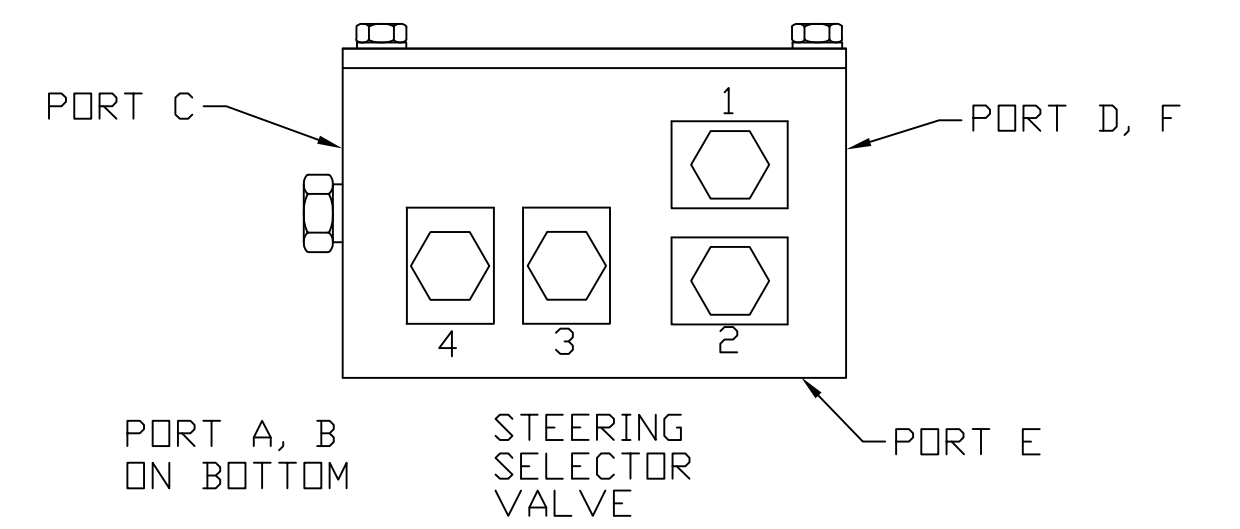
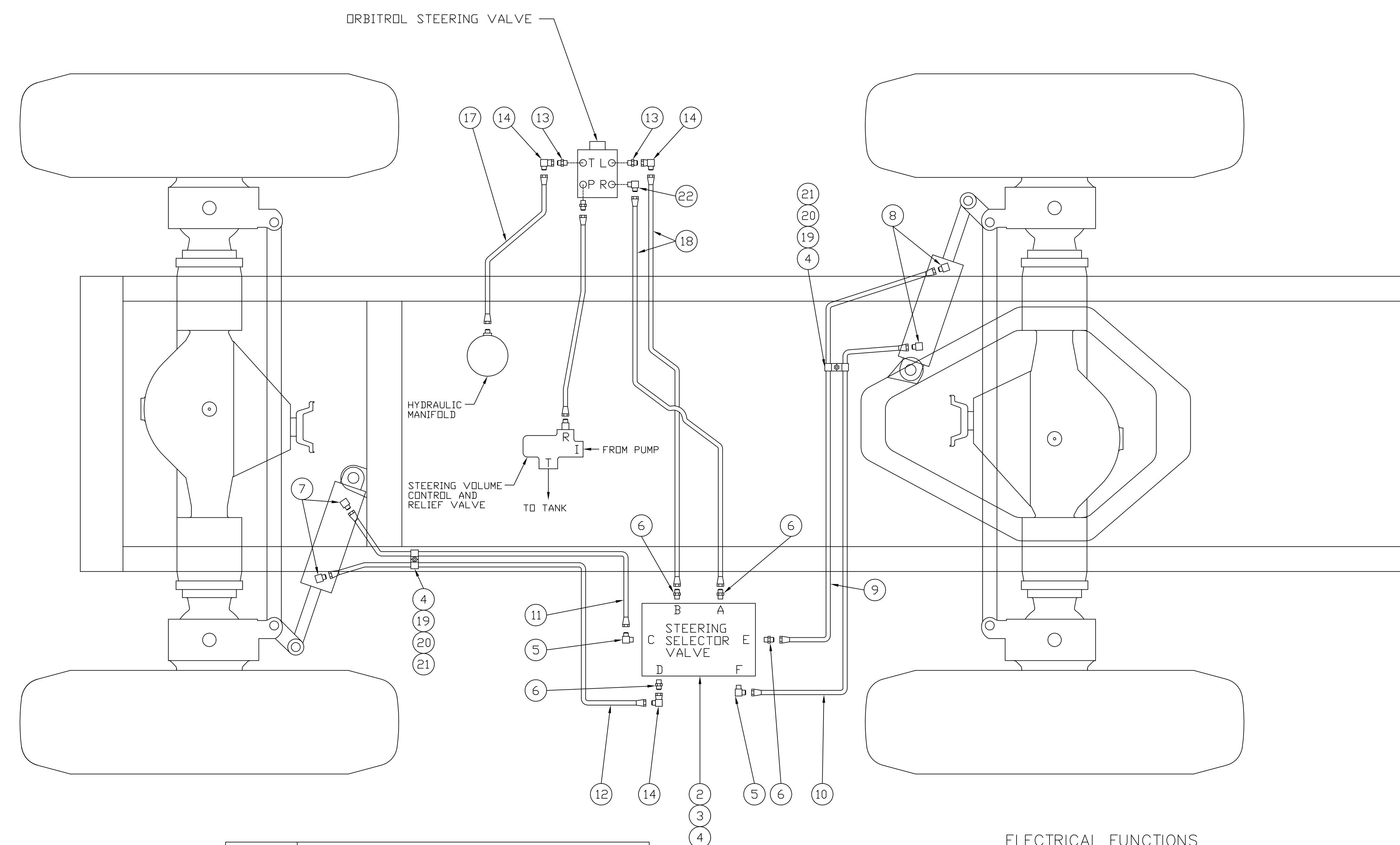
ORBITROL VALVE ASSEMBLY

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

← FRONT OF MACHINE

1 INSTALLATION

ITEM	PART NO	DESCRIPTION	QTY
4	D-75	STEERING SYSTEM LINES & FITTINGS	1
4	P-299-2	STEERING SELECTOR VALVE	1
4	G-67-32	H.H.C.S. 3/8-16X3/4"LG	2
4	G-72-11	LOCKWASHER 3/8	4
5	G-129-8	O-RING ELBOW -6-8	2
6	G-127-10	O-RING CONN -6-8	4
7	G-129-11	O-RING ELBOW -8-8	2
8	G-247-8-8	45° O-RING ELBOW -8-8	2
9	G8-281-2	HOSE ASS'Y 1503-8	1
10	G8-281-3	HOSE ASS'Y 1503-8	1
11	G8-281-4	HOSE ASS'Y 1503-8	1
12	G8-281-5	HOSE ASS'Y 1503-8	1
13	G-127-15	O-RING CONN. -8-8	2
14	G-151-8-8S	SWIVEL ELBOW	3
15			
16			
17	G8-284-2	HOSE ASS'Y 1503-8	1
18	G8-284-3	HOSE ASS'Y 1503-8	2
19	G-70-3	HEX NUT 3/8-16	2
20	G-124-3	CLAMP	4
21	G-71-11	FLATWASHER 3/8	2
22	G-129-11	90° MALE ELBOW -8-8	1



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

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

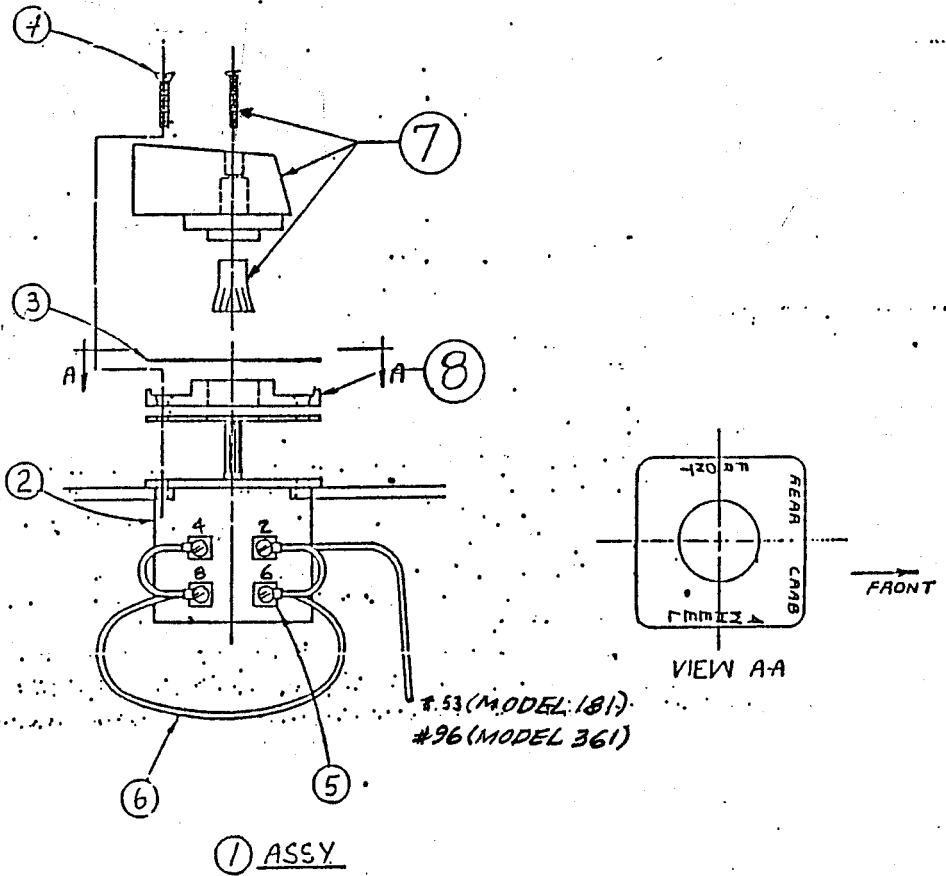
REV	DATE	DESCRIPTION	BY
4	7/23/18	D-75-1 REMOVED (OBSOLETE), ITEM 2 WAS P-31-1, ITEM 3 WAS G-67-34, UPDATED ELECTRICAL CONNECTION AND VALVE CALLOUT	KP
3	8/13/91		

<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 G-1 FOR TOLERANCES NOT SPECIFIED</p> <p>DIMENSIONS ARE IN INCHES</p> <p>DO NOT SCALE DRAWING</p> <p>SCALE: 1=9</p>	<p><b>SWINGMASTER CORPORATION</b></p> <p>11415 MELROSE AVENUE FRANKLIN PARK, ILLINOIS 60131</p>	
	<p>STEERING SYSTEM LINES &amp; FITTINGS</p>	
	<p>MODEL 181</p> <p>DRAWN BY: J.K.</p> <p>DATE: 11-18-86</p>	<p>DRAWING NO.</p> <p><b>D-75</b></p>



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	11	5	SOL #3	SOL #3
7	10	6	SOL #4	SOL #4

*STEERING  
SELECTOR  
VALVE.*



SWINGMASTER CORPORATION

PARTS BOOK

MACHINE

SECTION

5

MODEL 181 SWINGLOADER

STEERING SYSTEM

ASSEMBLY  
NUMBER

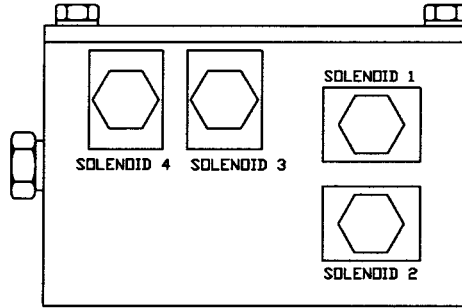
DESCRIPTION

1801192

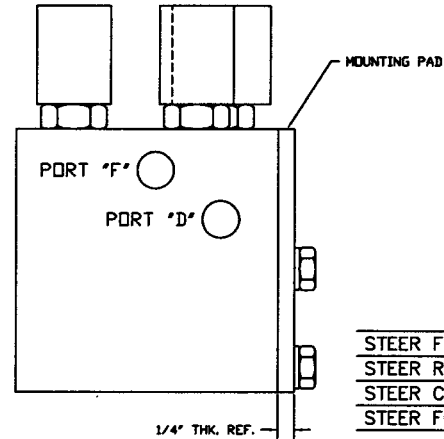
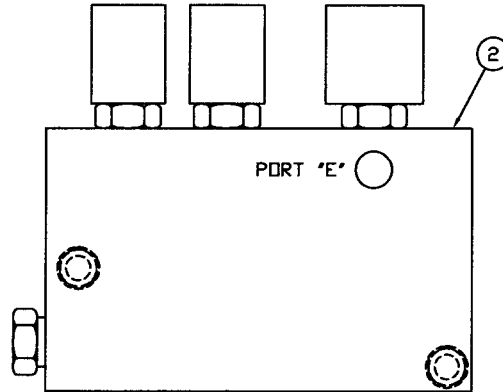
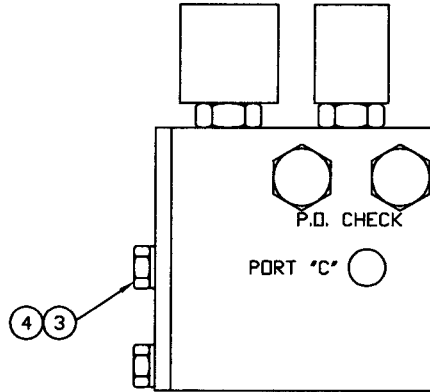
STEERING SELECTOR SWITCH INSTALLATION

ITEM NO.	PART NUMBER	DESCRIPTION	QTY. USED
2	1800245	4-POLE, ROTARY SWITCH	1
3	1801376	STEERING MODES SWITCH LABEL	1
4	1800846	FLAT HEAD MACHINE SCREW #6-32 X 1/2" LG	4
5	1801204	14 GAGE #6 ELECTRICAL RING TERMINAL	4
6	1801086	BULK 14 GAGE WIRE/(FT)	1
7	8701368	KNOB ASSEMBLY	1
8	8701369	ESCUTCHEON PLATE	1

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)

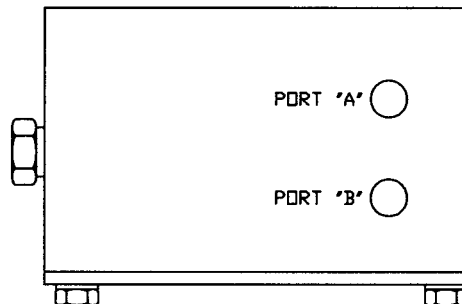


ELECTRICAL FUNCTIONS

	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

<b>SWINGMASTER CORPORATION</b>	
11415 MELROSE AVENUE FRANKLIN PARK, ILLINOIS 60131	
STEERING SELECTOR VALVE INSTALLATION	
DRAWN BY: jk.	DRAWING NO.
DATE: 7-20-98	H-184

MACHINE

SECTION

5

MODEL 181 SWINGLOADER

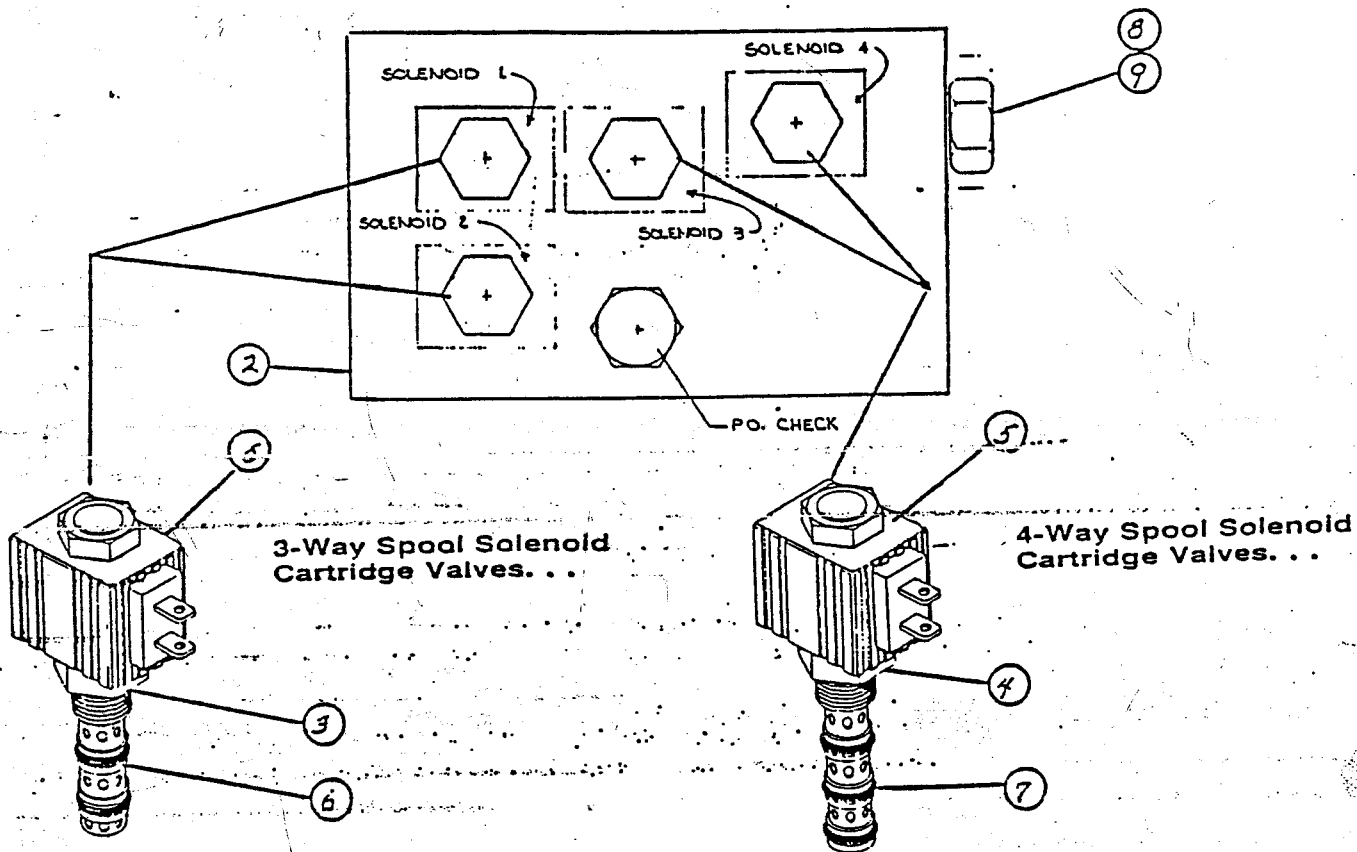
STEERING SYSTEM

ASSEMBLY  
NUMBER

DESCRIPTION

1802475 STEERING SELECTOR VALVE INSTALLATION

ITEM NO.	PART NUMBER	DESCRIPTION	QTY USED
002	1800248	STEERING SELECTOR VALVE	1
003	1800454	H.H.C.S. 3/8-16 X 1 1/4" LONG	2
004	1800568	3/8" LOCK WASHER	2



SWINGMASTER CORPORATION

PARTS BOOK

MACHINE

SECTION

5

-----  
 MODEL 181 SWINGLOADER  
 FOR SERIAL NUMBERS  
 87181L0001 TO 89181L0051  
 -----

-----  
 STEERING SYSTEM  
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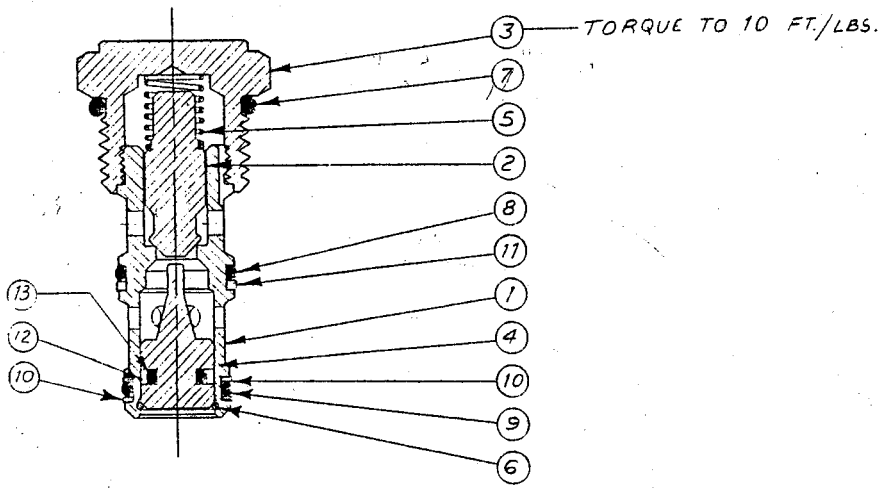
ASSEMBLY  
 NUMBER

DESCRIPTION

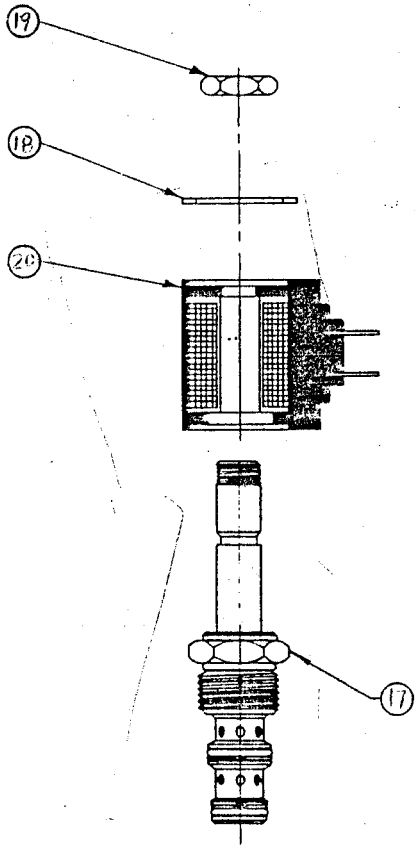
1800248

STEERING SELECTOR VALVE ASSEMBLY

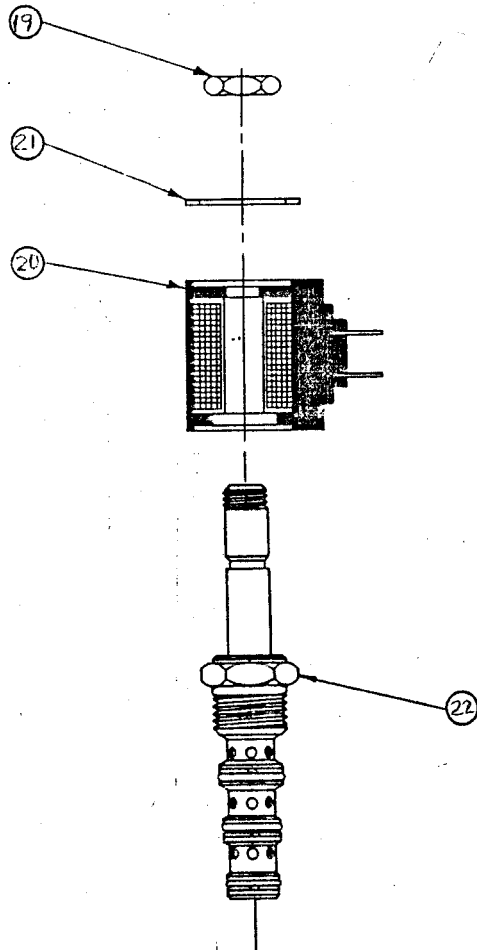
ITEM NO.	PART NUMBER	DESCRIPTION	QTY. USED
2	8700898	ALUMINUM BLOCK	1
3	8700899	3 WAY SPOOL CARTRIDGE VALVE WITHOUT COIL	2
4	8700900	4 WAY SPOOL CARTRIDGE VALVE WITHOUT COIL	2
5	8700901	COIL	4
6	8700902	SEAL KIT FOR ITEM 3	2
7	8700903	SEAL KIT FOR ITEM 4	2
8	8700904	CHECK VALVE	2
9	8700905	SEAL KIT FOR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



14 ASSEMBLY



15 ASSEMBLY



23 ASSEMBLY

SWINGMASTER CORPORATION

PARTS BOOK

MACHINE

SECTION

5

MODEL 181 SWINGLOADER  
FOR SERIAL NUMBERS  
89181L0052 TO CURRENT

STEERING SYSTEM

ASSEMBLY  
NUMBER

DESCRIPTION

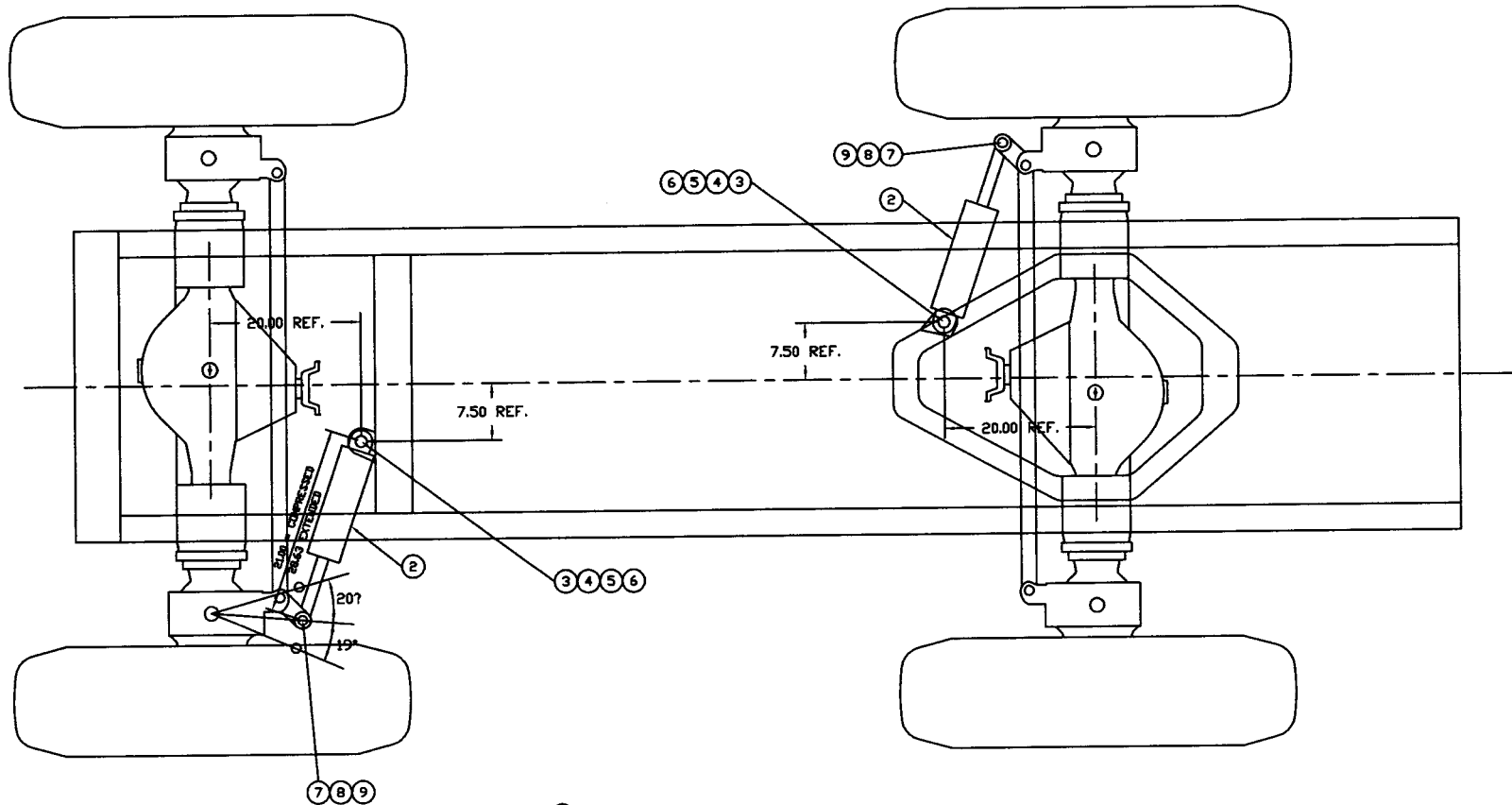
1803618

STEERING SELECTOR VALVE ASSEMBLY

ITEM NO.	PART NUMBER	DESCRIPTION	QTY. USED
1	8703260	CAGE	1
2	8703261	POPPET	1
3	8703262	RETAINER	1
4	8703263	PISTON	1
5	8703264	SPRING	1
6	8703265	SPRING RING	1
7	8703266	O-RING	1
8	8703267	O-RING	1
9	8703268	O-RING	1
10	8703269	BACK-UP WASHER	2
11	8703270	BACK-UP WASHER	1
12	8703271	GLYD RING	1
13	8703272	O-RING	1
14	8703253	CHECK VALVE - INCLUDES ITEMS 1-13	2
15	8703251	3 WAY SOLENOID VALVE - INCLUDES 17-20	2
16	8703254	SEAL KIT FOR ITEM 14 & ITEM 15	3
17	8703273	VALVE ASSEMBLY	2
18	8703256	PLATE	2
19	8703257	NUT	4
20	8703255	COIL	4
21	8703258	PLATE	2
22	8703274	VALVE ASSEMBLY	2
23	8703252	4 WAY SOLENOID VALVE - INCLUDES 19-22	2
24	8703259	SEAL KIT FOR ITEM 16	2
	8703250	ALUMINUM BLOCK - NOT SHOWN	1



FRONT OF MACHINE



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=12	

SWINGMASTER CORPORATION	
11415 MELROSE AVENUE FRANKLIN PARK, ILLINOIS 60131	
STEERING CYLINDER INSTALLATION	
MODEL 181	
DRAWN BY: J.K.	DRAWING NO.
DATE: 11-14-86	C-37

②	4-6-10	DI-62 WAS D-62	201002	J.K.
③	12-9-86	D-62 WAS C-36.	B60011	J.K.
REV	DATE	DESCRIPTION	ENG. NO.	BY

SWINGMASTER CORPORATION

PARTS BOOK

MACHINE

SECTION

5

MODEL 181 SWINGLOADER

STEERING SYSTEM

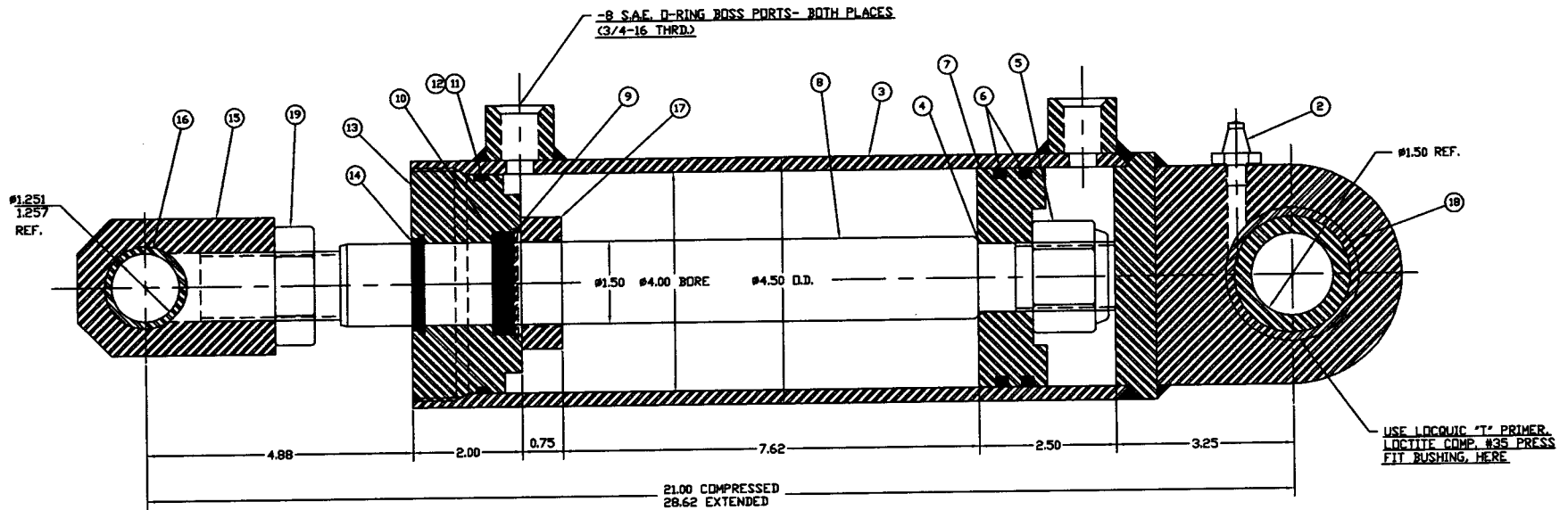
ASSEMBLY  
NUMBER

DESCRIPTION

1801191

STEERING CYLINDER INSTALLATION

ITEM NO.	PART NUMBER	DESCRIPTION	QTY USED
2	1806957	STEERING CYLINDER ASSEMBLY	2
3	1800597	1 1/2" DIA X 3 1/4" LONG PIN	2
4	1801202	H.H.C.S. 5/16-18 X 2-3/4" LONG	2
5	1800074	5/16" LOCK WASHER	2
6	1800512	HEX NUT 5/16-18	2
7	1800005	PIN	2
8	1800007	COTTER PIN 1/4 X 2" LONG	2
9	1800663	STRAIGHT 1/8" MALE-PIPE GREASE FITTING	2



① ASSEMBLY

<b>TOLERANCES</b> UNLESS OTHERWISE SPECIFIED FRACTIONS ±/ 3 PLACE DECIMALS ±/ 2 PLACE DECIMALS ±/ 1 PLACE DECIMALS ±/ ANGLES	<b>SWINGMASTER CORPORATION</b> 11415 MELROSE AVENUE FRANKLIN PARK, ILLINOIS 60151	
	<b>STEERING CYL. ASS'Y</b>	
SEE SWINGMASTER SPECIFICATION 0-1 FOR TOLERANCES NOT SPECIFIED DIMENSIONS ARE IN INCHES DO NOT SCALE DRAWING SCALE 1/1	MODEL 181 DRAWN BY: R.H. DATE: 8-27-97	DRAWING NO. <b>D1-62</b>

SWINGMASTER CORPORATION

PARTS BOOK

MACHINE

SECTION

5

MODEL 181 SWINGLOADER

STEERING SYSTEM

ASSEMBLY  
NUMBER

DESCRIPTION

1806957 STEERING CYLINDER ASSEMBLY

ITEM NO.	PART NUMBER	DESCRIPTION	QTY USED
2	1800663	STRAIGHT 1/8" MALE-PIPE GREASE FITTING	1
3	1805714	STEERING CYL. WELDMENT	1
4	1805715	O-RING	1
5	1805700	ESNA NUT	1
6	1805716	SEAL	2
7	1806958	PISTON	1
8	1806959	STEERING CYL. ROD	1
9	1805719	RETAINING RING	1
10	1805720	SEAL	1
11	1805720	SEAL	1
12	1805722	BACKING RING	1
13	1805723	CAP	1
14	1805712	WIPER	1
15	8700708	ROD END L2-6576	1
16	8700710	BUSHING	1
17	1805726	SPACER	1
18	1803626	SPHERICAL ROD BUSHING	1
19	1805222	JAM NUT 1-1/4 - 12	1