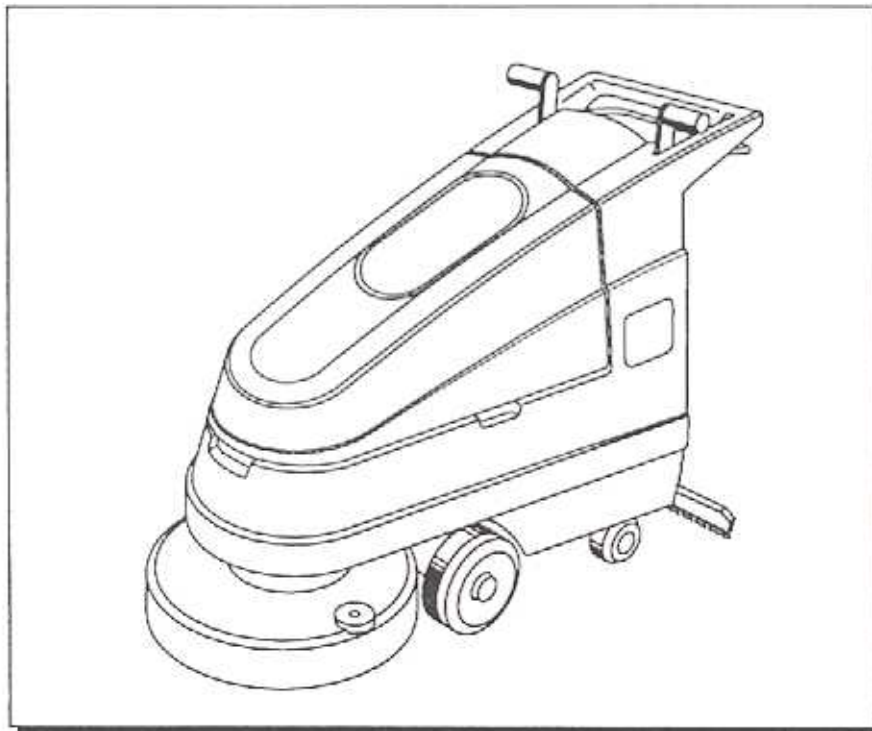


BREUER/TORNADO[®] CORP.
7401 W. LAWRENCE AVENUE
CHICAGO, IL 60656-3489
(708) 867-5100 FAX (708) 867-6968



20" FLOORKEEPER "EZ" BRUSH DRIVE
SERIES A



CATALOG NO.
99105

ILLUSTRATED PARTS

NOTES

This illustrated parts book covers:

MODEL	20"
CAT. NO.	99105
SERIES	A

All specifications are subject to change without notice.

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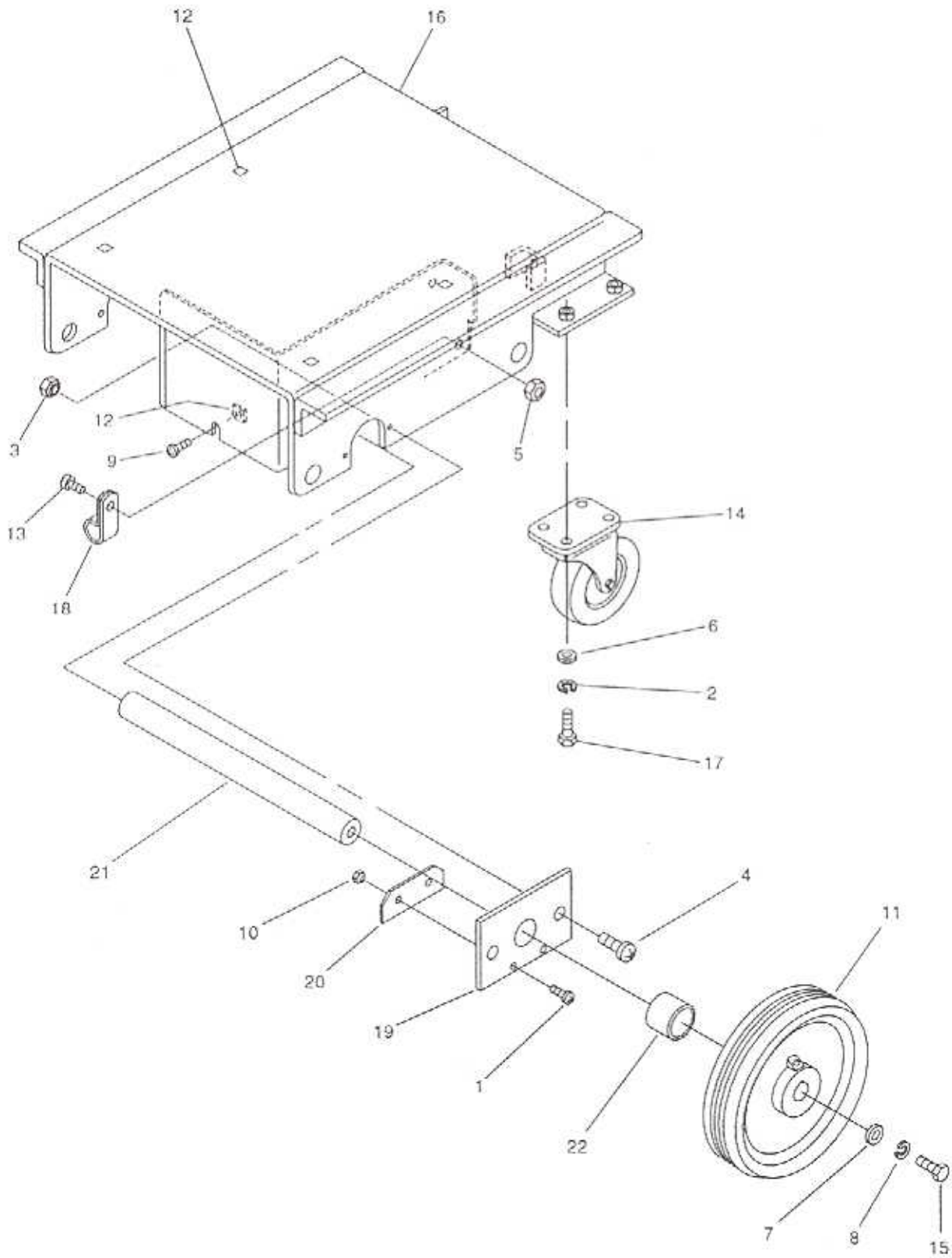
WARRANTY

Your Tornado[®] Machine has been thoroughly tested and inspected and is warranted to be free of defects on material and workmanship. Refer below for base warranty. This warranty does not cover normal wear items such as power cords, wheels, and switches. Other items may apply or not apply based on your specific Tornado[®] machine. If such defects occur, this warranty is voided if service is attempted by non Authorized Tornado[®] Service Depots.

The Floorkeepers are warranted as follows:

- 5 years on tanks and plastic external components
- 2 years on motors and powerheads
- 1 year on all other components
- 1 year on labor

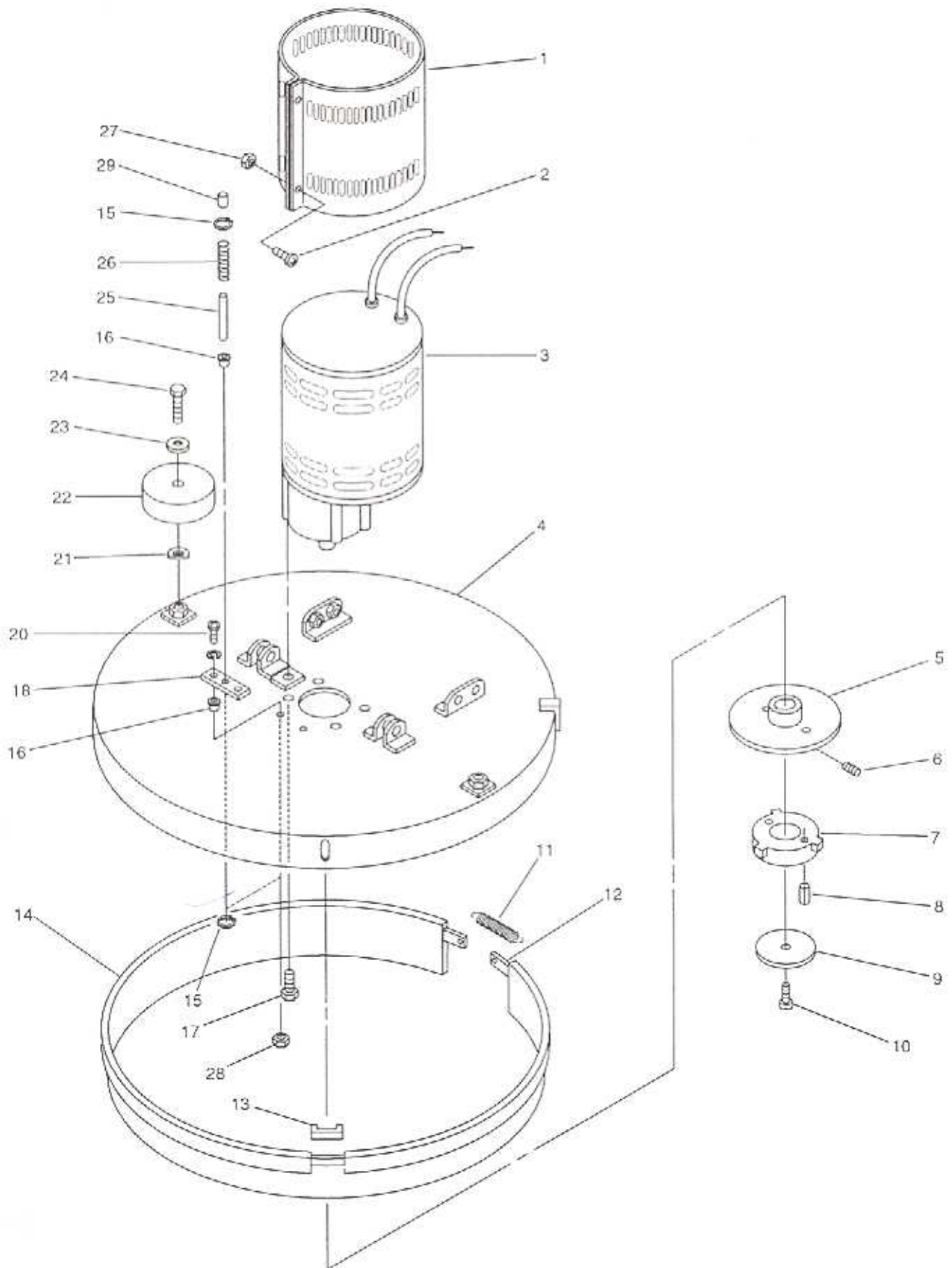
CHASSIS ASSEMBLY



CHASSIS ASSEMBLY

Item No.	Qty.	Part No.	Description
1	4	00086	1/4-20 x 1/2" Screw
2	8	01577	5/16" Lockwasher
3	4	01589	5/16-18 Lock Nut
4	4	02109	5/16-18 x 3/4" Screw
5	4	02956	#8-32 Lock Nut
6	8	03301	5/16" Washer
7	2	03321	3/8" Washer
8	2	03536	3/8" Lockwasher
9	1	04442	1/4-20 x 1/2" Screw
10	4	07533	1/4-20 Lock Nut
11	2	15274	Wheel
12	5	15545	Retainer Nut
13	4	16075	#8-32 x 1/2" Screw
14	2	18079	Caster
15	2	18104	3/8-16 x 3/4" Screw
16	1	18105	Chassis Frame
17	8	18111	5/16-18 x 5/8" Screw
18	4	18717	Cable Clamp
19	2	18827	Axle Adapter Plate
20	2	18828	Axle Locking Plate
21	1	18829	Axle
22	2	18834	Spacer

BRUSH MOTOR & COVER



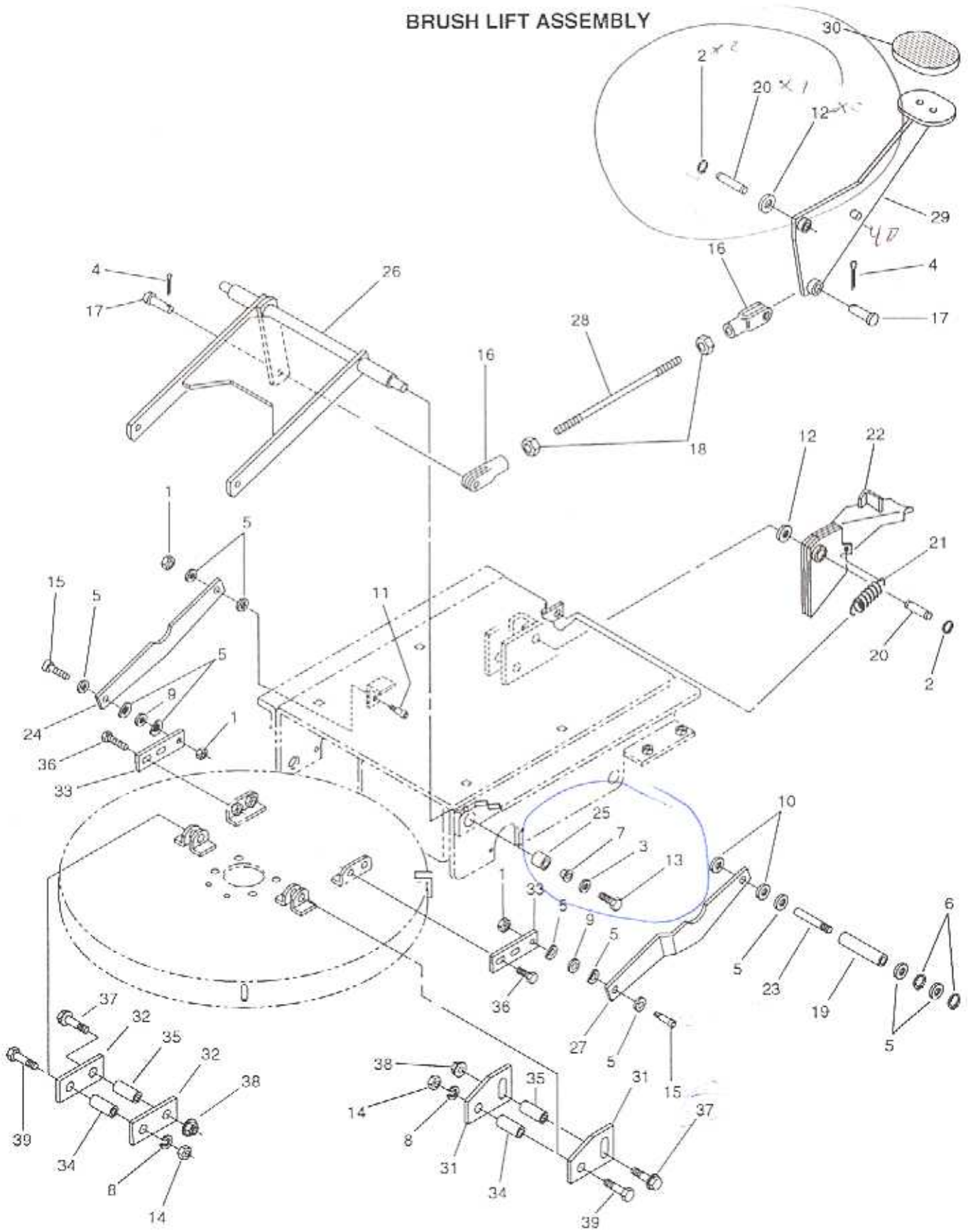
BRUSH MOTOR & COVER ASSEMBLY

Item No.	Qty.	Part No.	Description
1	1	17110	Guard, Motor
2	2	16583	Screw
3	1	18076	Motor, 1 HP
4	1	18148	Brush Cover, 20"
5	1	18388	Plate, Brush Retainer
6	1	14241	Set Screw
7	1	18389	Plate, Brush Retainer
8	2	18390	Pin
9	1	18640	Plate, Clutch Retaining
10	1	18391	Screw
11	1	16472	Spring
12	1	18159	Bumper Strap, 20"
13	2	17733	Keeper
14	1	18161	Bumper, Brush Cover 20"
15	2	03947	Retaining Ring
16	2	16347	Bearing, Flanged
17	4	16671	Screw
18	1	18558	Plate, Bearing Retaining
20	2	00600	Screw
21	2	07132	Washer, Wave
22	2	03264	Wheel
23	2	03736	Washer
24	2	18130	Screw
25	1	18165	Pin
26	1	06838	Spring, Compression
27	2	10894	Nut
28	2	02956	Nut
29	1	18385	Cap

18763 PLASTIC CLUTCH PLATE

10994 ~~PLASTIC~~ METAL CLUTCH PLATE

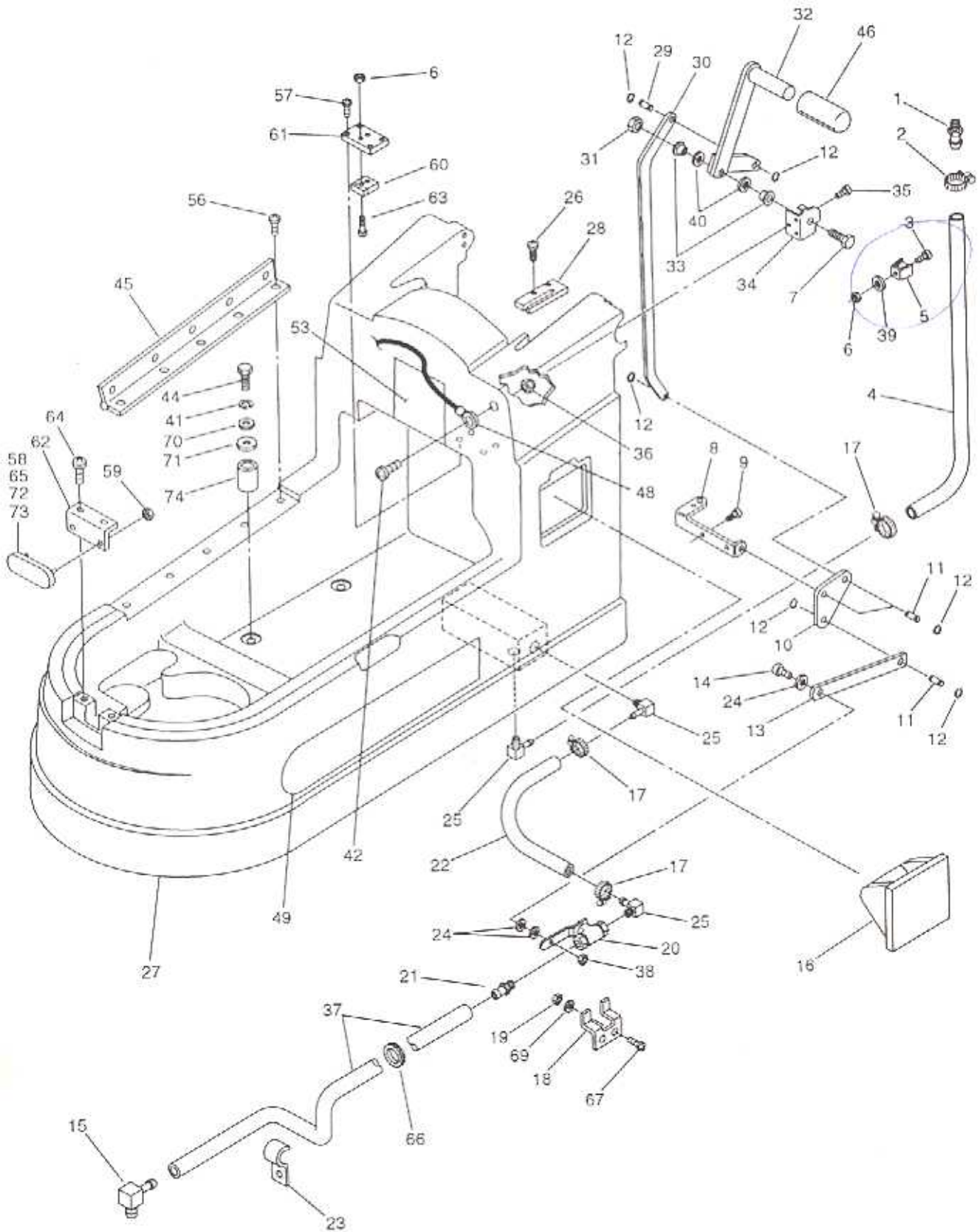
BRUSH LIFT ASSEMBLY



BRUSH LIFT ASSEMBLY

Item No.	Qty.	Part No.	Description
1	3	01589	5/16-18 Lock Nut
2	4	02663	Retaining Ring
3	2	03321	3/8" Flat Washer
4	2	03395	Cotter Pin
5	11	03736	3/8" Flat Washer
6	2	03947	Retaining Ring
7	2	03955	Bushing
8	2	06387	1/2" Lock-Washer
9	2	07132	3/8" Washer, Wave
10	2	12554	1/2" Flat Washer, Nylon
11	1	15677	Screw, Shoulder
12	4	16581	1/2" Flat Washer
13	2	16671	3/16-16 x 5/8" Screw
14	2	16673	1/2-13 Nut
15	2	17575	3/8-16 x 3/4" Screw
16	2	18081	Clevis
17	2	18083	Clevis Pin
18	2	18093	3/8-24 Nut
19	1	18107	Spacer
20	2	18122	Pin
21	1	18126	Spring 1 9 7 5 2
22	1	18758	Weldment, Brush Lift Latch
23	1	18165	Pin
24	1	18166	Arm, Right Hand
25	2	18179	Bearing
26	1	18184	Weldment, Brush Lift
27	1	18185	Arm, Left Hand
28	1	18191	Lift Rod
29	1	18196	Weldment, Brush Lift Pedal 1 9 0 7 #
30	1	18203	Pedal Mat 1 9 0 0 #
31	2	18835	Brush Lift Adjustment Plate
32	2	18836	Brush Lift Mounting Plate
33	2	18837	Brush Deck Level Adjust. Plate
34	2	18843	Spacer - 1/2" Dia.
35	2	18844	Spacer - 3/8" Dia.
36	4	18872	5/6 - 18 x 1/2" Screw
37	2	18873	3/8 - 16 x 1-1/4" Screw
38	2	18874	3/8 - 16 Fig. Lock Nut
39	2	18875	1/2 - 13 x 1-1/2" Screw
40	1	4 9 0 7 8	Spring

SOLUTION TANK ASSEMBLY



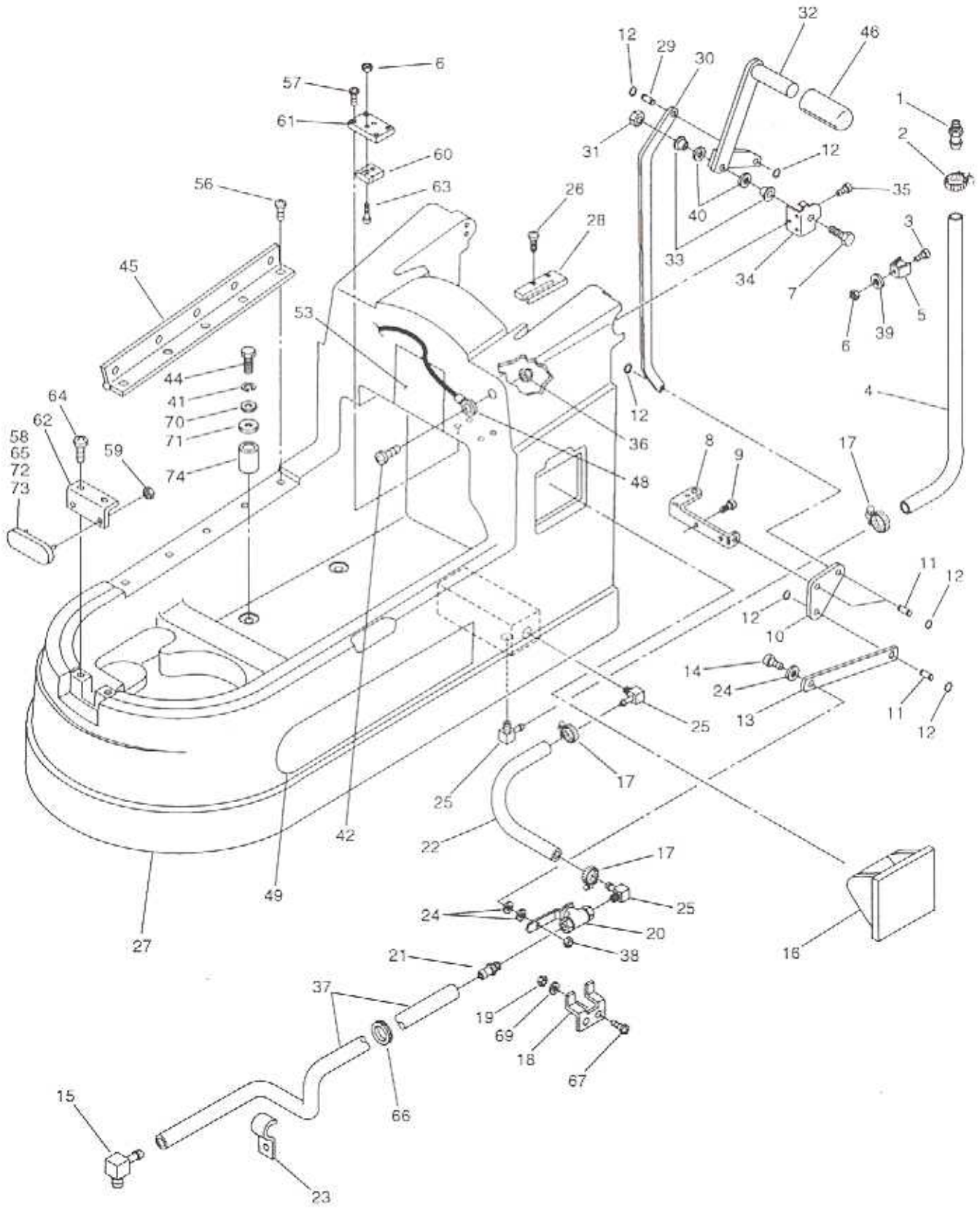
SOLUTION TANK ASSEMBLY

Item No.	Qty.	Part No.	Description
1	1	18343	Fitting
2	1	18384	Clamp
3	1	01734	Screw
4	1	18434	Sight Tube
5	1	18230	Clip, Sight Tube
6	3	02958	Nut
7	1	03320	Screw
8	1	18652	Solution Control Bracket
9	2	04442	Screw
10	1	18328	Plate, Solution Control
11	3	18261	Pin
12	8	18316	Retaining Ring
13	1	18329	Bar, Lower Link
14	1	15677	Screw, Shoulder
15	1	18486	Fitting
16	1	18457	Fill Door
17	3	07626	Clamp
18	1	18684	Bracket Sol. Valve Clamp
19	1	16129	Nut
20	1	18236	Valve, Solution Release
21	1	18485	Fitting
22	1	18347	Solution Tube
23	1	16356	Clamp
24	3	03736	Washer
25	3	18332	Fitting ✓
26	2	18253	Screw
27	1	18455	Solution Tank
28	1	18466	Plate, Control Handle Stop
29	1	18262	Pin
30	1	18330	Bar, Upper Link
31	1	03868	Nut
32	1	18319	Weldment Sol. Control Handle
33	2	16347	Bearing, Flange
34	1	18249	Bracket, Handle Pivot
35	3	16136	Screw
36	2	10894	Locknut
37	1	18431	Solution Tube - 20*
38	1	01589	Nut
39	1	01246	Washer
40	2	16581	Washer
41	4	01574	Washer
42	2	18339	Screw
44	4	18641	Screw
45	1	18229	Hinge
46	1	18251	Grip
*47	1	18308	Access Panel
48	1	18359	Stop Cable
49	1	18787	Decal, *Tornado* LH-20*
51	1	18788	Decal, *Tornado* RH-20*
53	1	18377	Decal, Battery Maintenance
*54	1	18381	Decal, C.B. Identification
*55	1	15734	Decal, Level Gauge
56	4	06192	Screw
57	2	14544	Screw

(Continued)

*Not Shown

SOLUTION TANK ASSEMBLY

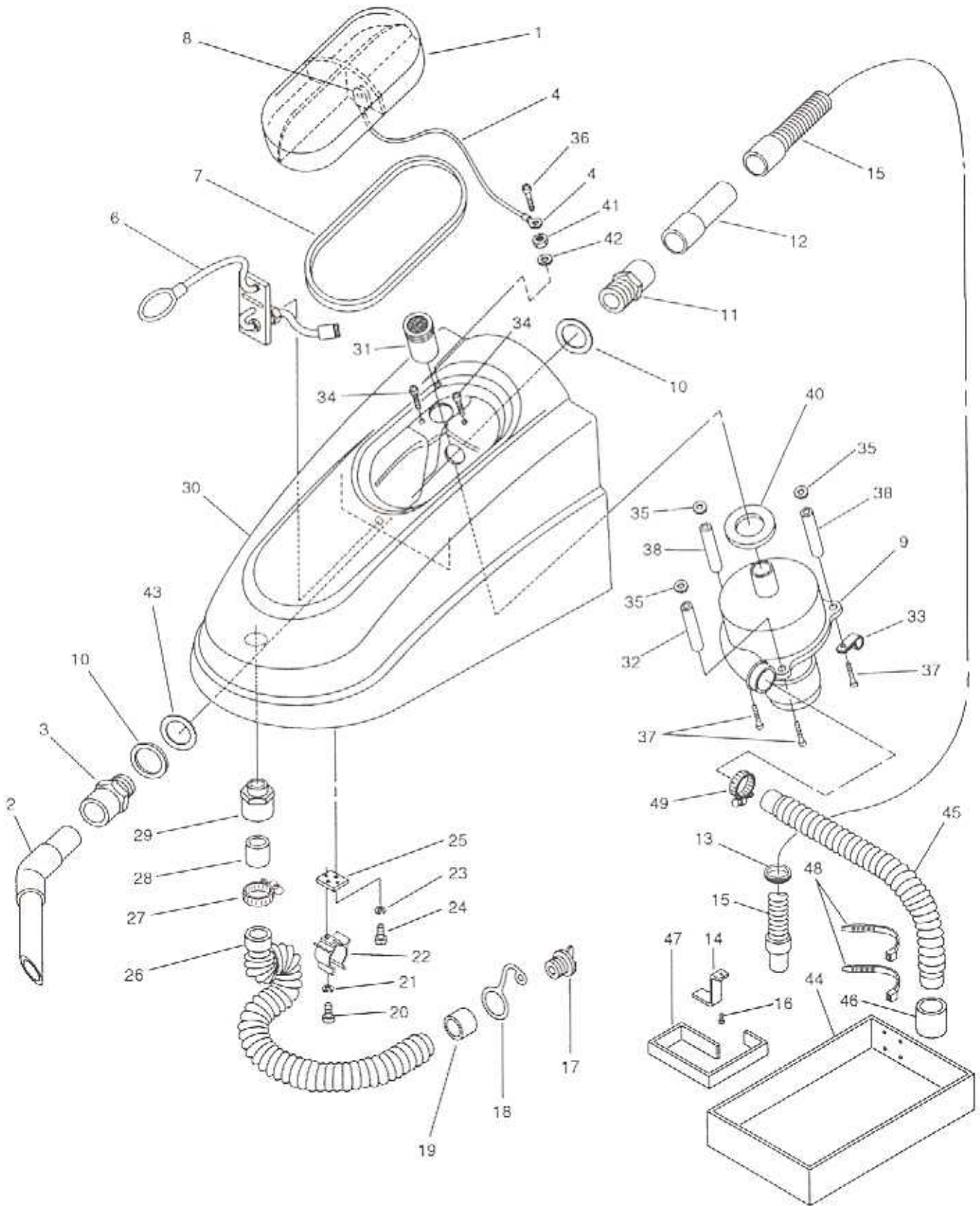


SOLUTION TANK ASSEMBLY (Continued)

Item No.	Qty.	Part No.	Description
58			
59	2	17376	Nut
60	1	18237	Charger Connector
61	1	18239	Connector Mtg. Plate
62	1	18240	Light Mtg. Bracket
63	4	18253	Screw
64	2	18309	Screw
65	2	18336	Screw
66	1	15330	Grommet
67	2	05427	Screw
*68	1	18850	Decal-Wiring Diagram
69	6	14142	Washer
70	4	18642	1/4" Flat Washer
71	4	18644	1/4" Rubber Washer
72	1	18859	Warning Light Assembly (Includes items 58,59,62 & 65)
73	2	15639	Bulb (For Warning Light P/N 18859)
74	4	18898	Spacer

*Not Shown

RECOVERY TANK w/VAC MOTOR

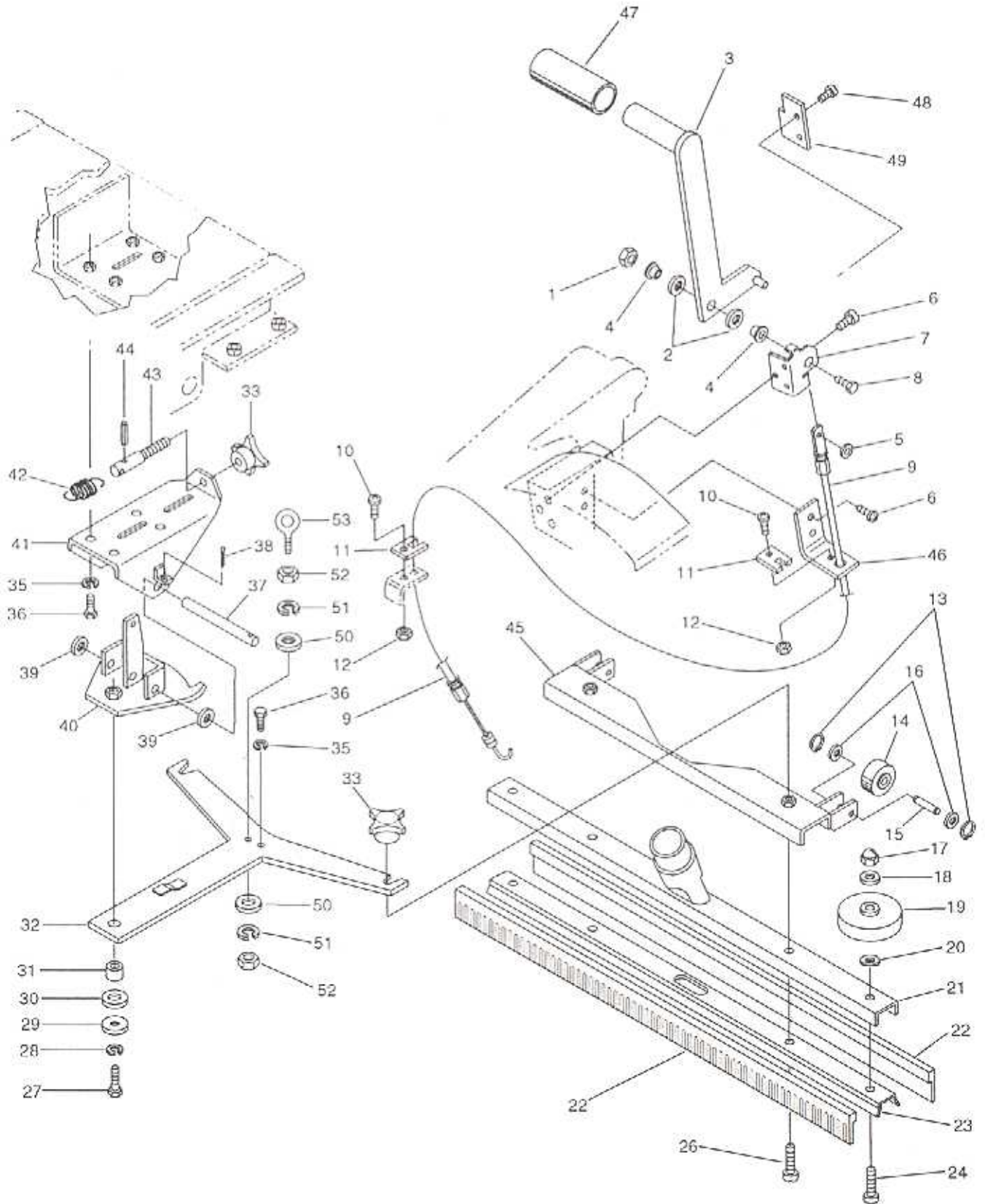


RECOVERY TANK w/VAC MOTOR ASSEMBLY

Item No.	Qty.	Part No.	Description
1	1	18741	Access Cover, Recovery Tank
2	1	18799	Deflector, Intake
3	1	15088	Adaptor Fitting
4	1	18789	Cover Retaining Cable
6	1	18887	Float Assembly
7	1	18742	Gasket
8	1	18790	Cable Clasp
9	1	18866	Vac Motor Assembly
10	2	05781	Gasket
11	1	15096	Fitting, Female Adapter
12	1	18259	Sleeve, Hose
13	1	18477	Grommet
14	1	18241	Bracket Hose Support
15	1	18747	Hose, 1 1/2"
16	2	16136	Screw
17	1	18226	Plug
18	1	18358	Strap, Hose Plug Retainer
19	1	18357	Sleeve, Recovery Drain
20	6	01734	Screw
21	6	01246	Lockwasher
22	3	18671	Clip, Drain Hose
23	6	01905	Lockwasher
24	6	01993	Screw
25	3	18439	Plate
26	1	18334	Hose, 1 1/2"
27	1	16091	Clamp, Hose
28	1	18401	Sleeve
29	1	18052	Fitting, Male Adapter
30	1	18899	Tank, Recovery
31	1	18791	Vac Motor Intake Screen
32	1	18846	Housing, Vac Filter Spacer
33	1	17392	Filter Cover Assembly Cable Clamp
34	2	18342	Screw
35	3	14142	Washer
36	1	17177	Screw
37	3	18333	Screw
38	2	18349	Spacer
40	1	18847	Gasket
41	1	17508	Nut
42	1	18885	Washer
43	1	18886	Washer
44	1	18688	Battery Tray
45	1	18687	Vac. Motor Exhaust Hose
46	1	18686	Muffler
47	1	18692	Battery Spacing Bracket (12V Only)
48	2	18706	Tie Wrap
49	1	14858	Hose Clamp

19286

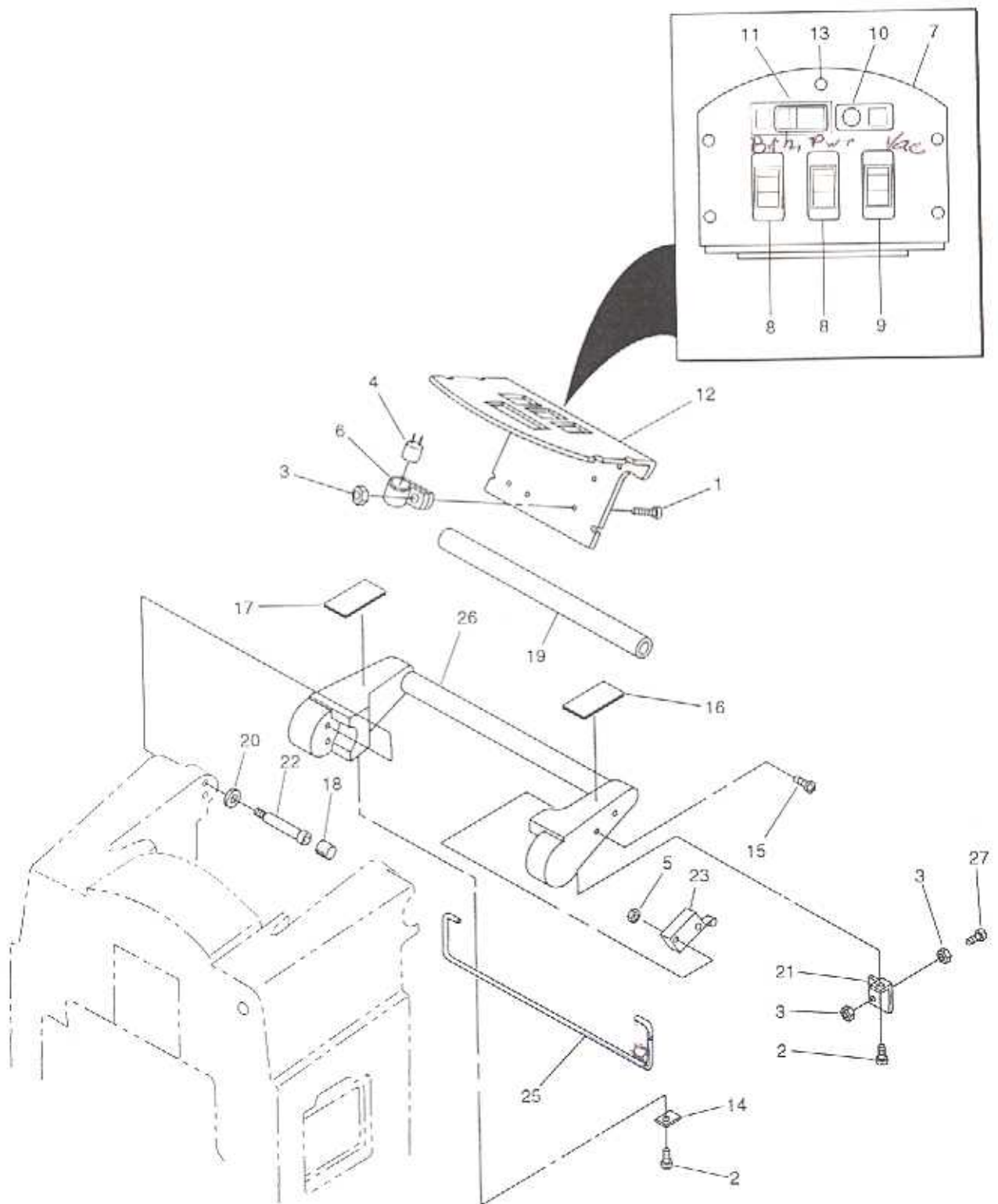
SQUEEGEE ASSEMBLY



SQUEEGEE ASSEMBLY

Item No.	Qty.	Part No.	Description
1	1	03868	Nut
2	2	16581	Washer
3	1	18314	Handle, Squeegee Control
4	2	16347	Bearing, Flanged
5	1	18655	Push Nut
6	5	16136	Screw
7	1	18249	Bracket, Handle Pivot
8	1	03320	Screw
9	1	18656	Cable Assy-Squeegee
10	2	03660	Screw
11	2	18651	Plate, Control Cable Clasp
12	2	10894	Nut
13	4	18373	Retaining Ring
14	2	18400	Wheel
15	2	18393	Shaft, Wheel
16	4	00696	Washer
17	2	17130	Nut, Acom
18	2	17400	Spacer
19	2	03264	Rub Wheel
20	2	07132	Washer, Wave
21	1	18136	Channel, Outer
22	1	18709	Squeegee Blade Set
23	1	18663	Squeegee Blade Retainer
24	2	18679	Screw (Flat Head)
26	2	18681	Screw
27	1	03320	Screw
28	1	16586	Lockwasher
29	1	03914	Washer
30	1	18145	Bearing
31	1	18146	Pivot
32	1	18141	Weldment, Towing Arm
33	3	18119	Knob
35	5	01577	Lockwasher
36	5	18111	Screw
37	1	18142	Shaft, Pivot
38	1	16254	Cotter Pin
39	2	16347	Bearing
40	1	18114	Weldment, Pivot Frame
41	1	18144	Weldment, Pivot Frame
42	1	18568	Spring
43	1	18138	Spring Adjuster
44	1	18176	Pin
45	1	18206	Weldment, Wheel Support
46	1	18650	Bracket, Control Cable
47	1	18251	Grip
48	3	18253	Screw
49	1	18548	Lever Stop Bracket
50	2	14142	1/4" Flat Washer
51	2	01574	1/4" Lock Washer
52	2	01497	1/4" - 20 Nut
53	1	18695	Eye Bolt

CONTROL / INSTRUMENT SYSTEM



CONTROL/INSTRUMENT SYSTEM

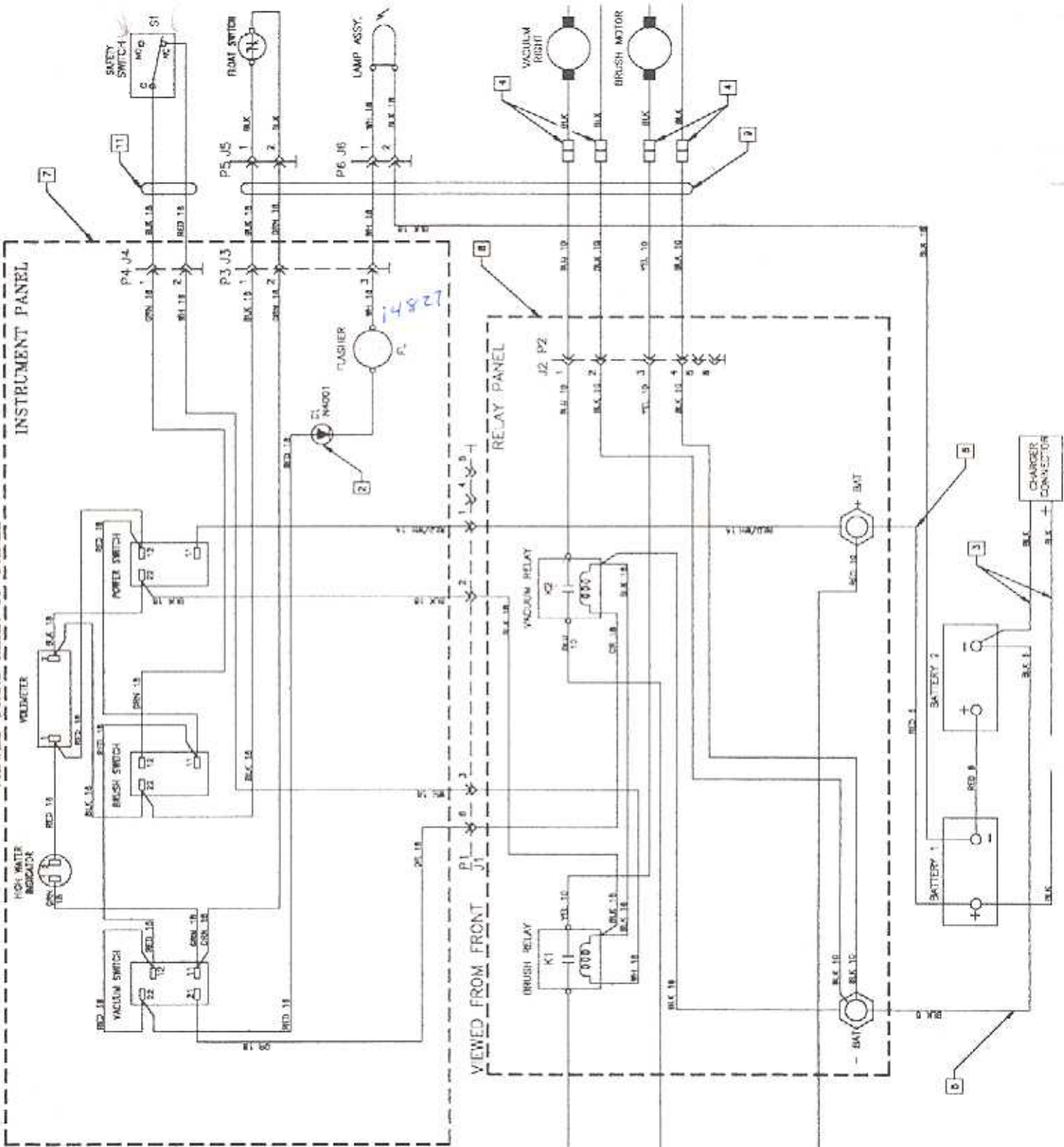
Item No.	Qty.	Part No.	Description
1	1	00600	#8-32 x 3/4" Screw
2	2	02071	#8-32 x 3/8" Screw
3	3	02956	#8-32 Lock Nut
4	4	14827	Flasher Relay
5	2	15560	#4-40 Lock Nut
6	1	15913	Clamp - Cable 1-1/8" Dia.
7	1	18212	Panel, Instrument
8	2	18216	Switch
9	1	18217	Switch
10	1	18218	Indicator Light, Red
11	1	18221	Gauge, Battery Condition
12	1	18250	Bracket-Control Panel Support
13	9	18253	#8 x 3/4" Screw
14	1	18266	Plate, Speed Control Bar Ret.
15	2	18323	#4-40 x 5/8" Screw
16	1	18364	Decal, Solution Control
17	1	18376	Decal, Squeegee Control
18	4	18385	Screw Cap
19	1	18402	Grip
20	4	18660	5/16" Flat Washer
21	1	18675	Bracket, Dead Man Handiestop
22	4	18756	Screw, Shoulder
23	1	18818	Switch
24			
25	1	18895	Speed Control Handle
26	1	18896	Handle
27	1	18897	#8-32 x 1-1/4" Screw

REAR ACCESS PANEL w/RELAYS

Item No.	Qty.	Part No.	Description
1	2	00128	#8-32 x 1/2" Screw
2	4	01574	1/4" Lockwasher
3	2	02956	#8-32 Lock Nut
4	2	03660	#10-24 x 7/16" Screw
5	8	04442	1/4-20 x 1/2" Lock Screw
6	4	05427	1/4-20 x 5/8" Screw
7	9	06192	1/4-20 x 5/8" Screw
8	2	10894	#10-24 Lock Nut
9	4	14142	1/4" Flat Washer
10	4	15330	Grommet
11	2	15345	Insulator Bushing
12	4	15545	Retainer Nut
13	2	18213	Relay
14	1	18219	Circuit Breaker, 25A
15	1	18220	Circuit Breaker, 45A
16	1	18255	Relay Mtg. Plate
17	1	18355	Plate, Cir. Brk. Mtg.
18	1	18468	Clip, Sight Tube

VIEWED FROM REAR OF PANEL

INSTRUMENT PANEL



CONTROL WIRING

Item No.	Qty.	Part No.	Description
1	3	10428	Lead Retaining Clip
2	1	15458	Rectifier Assembly
3	2	18305	Lead, 12 GA Red x 5"
4	4	18366	Terminal, Butt Splice
5	1	18446	Lead, 6 GA Black x 12"
6	1	18447	Lead, 6 GA Red x 12"
7	1	18841	Wiring Harness-Instrument Panel -
8	1	18842	Wiring Harness-Relay Panel → 19010
9	1	18860	Wiring Harness-Main → 19404
10	1	18888	Lead-10 GA x 3" Red
11	1	18908	Wiring Harness- Safety Switch
12	1	16217	Lead-, 6 GA Black x 13"

*Not Shown