

TORNADO® INDUSTRIES
7401 W. LAWRENCE AVENUE
CHICAGO, IL 60706
(708) 867-5100 FAX (708) 867-6968
www.tornadovac.com



TORNADO®

20" FLOORKEEPER "EZ" BRUSH DRIVE
(SERIES B)



CATALOG NO.
99105, 99105A & 99105B

ILLUSTRATED PARTS

L2621CB 03/00 FOR COMMERCIAL USE ONLY
©2000 Tornado® Industries, Inc. All rights reserved.

NOTES

This illustrated parts book covers:

MODEL	20"	20"	20"
CAT. NO.	99105	99105A	99105B
VOLTS	12V	12V	24V
SERIES	B	B	B

All specifications are subject to change without notice.

TABLE OF CONTENTS

Chassis Assembly.....	4
Brush Motor & Cover Assembly.....	6
Brush Lift Assembly	8
Solution Tank Assembly	10
Recovery Tank Assembly	12
Squeegee Assembly.....	14
Control/Instrument System	16
Rear Access Panel w/Relays.....	18
Control Wiring	20
Maintenance Parts	22

Tornado® Standard Warranty Program*

10 Years: All plastic tanks and rotationally-molded bodies

2 Years: Parts and Labor on all Tornado and Tornado/Karcher cleaning equipment **

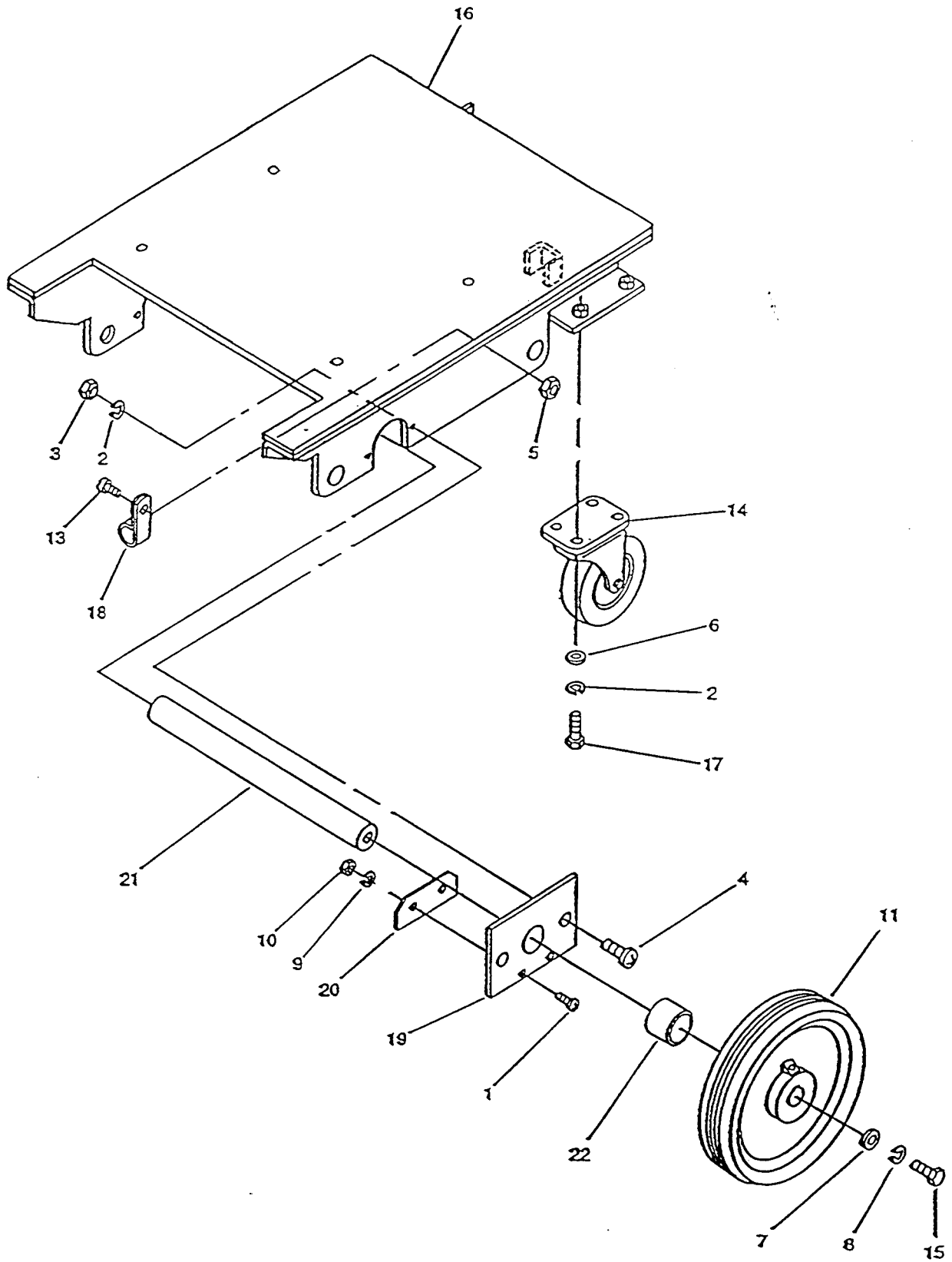
1 Year: Warranty on batteries, one full year, not pro-rated.

Warranties do not cover components subject to normal wear or abuse and misuse, and have other limitations not specified here. For full details, contact your Authorized Tornado Distributor, Service Center, or the Tornado Technical Service Department.

* Effective January 1st, 2000. Terms subject to change without notice.

** Windshear™ Blower-Dryer, Insulation Blowers, CW 50, CW 100, and Duo Upright Carpetkeepers™ are warranted for 1 (one) year for parts and labor.

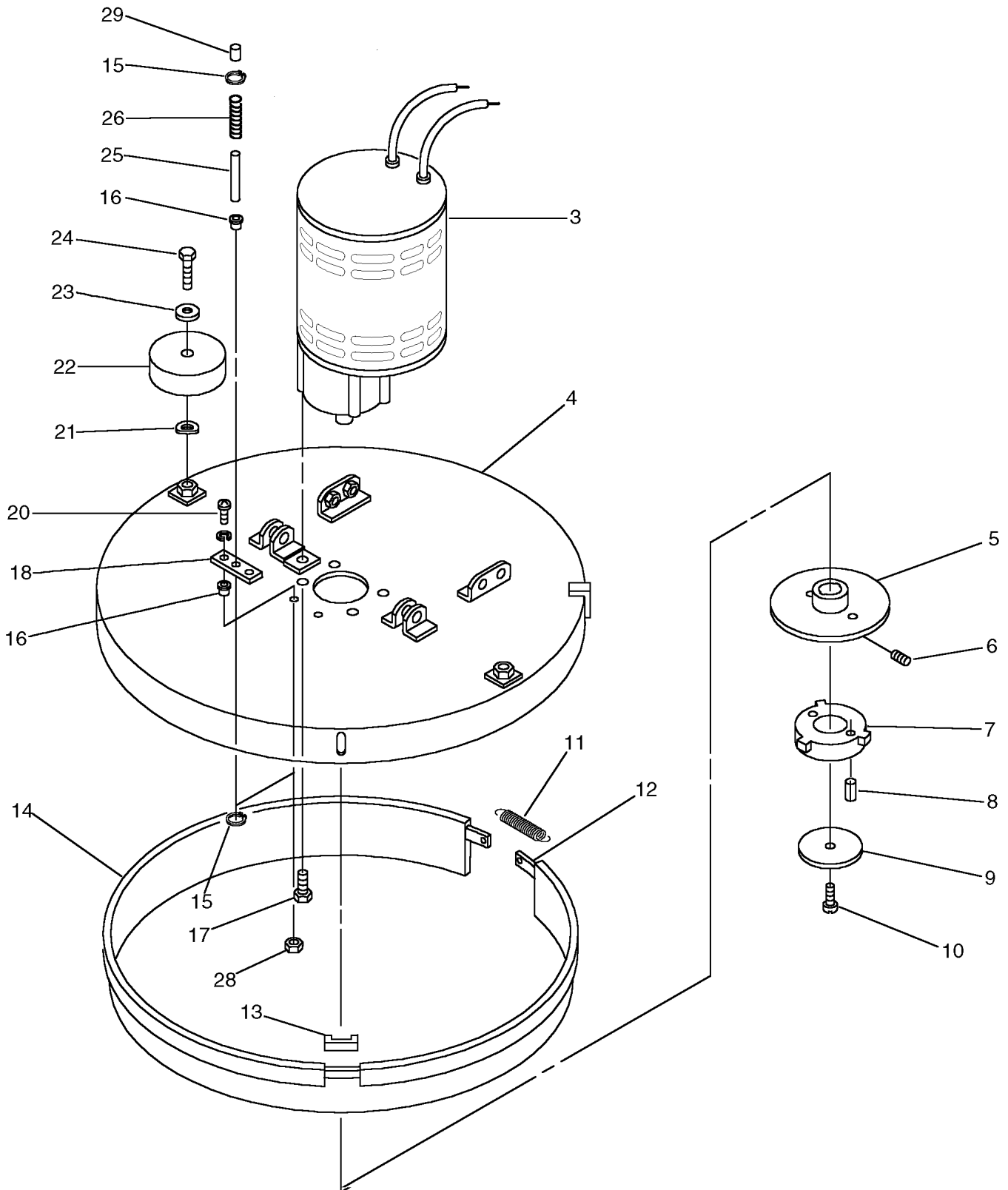
CHASSIS ASSEMBLY



CHASSIS ASSEMBLY

Item No.	Qty.	Part No.	Description
1	4	00086	Screw 1/4-20 X 1/4"
2	12	01577	Lockwasher 5/16"
3	4	01589	Lock Nut 5/16-18
4	4	02109	Screw 5/16-18 x 3/4"
5	4	10892	#8 - 1/2" Lock Screw
7	8	03301	Washer, Plain 5/16"
8	2	03321	Washer, Plain 3/8"
9	2	03536	Lockwasher 3/8"
10	4	01574	Lockwasher, 1/4" (H/S)
11	4	15274	Wheel
13	4	18309	5/8" Dia. Cable Clamp
14	2	18079	Caster
15	2	18104	Screw
16	1	19408	Chassis Frame
17	8	18111	Screw
18	6	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

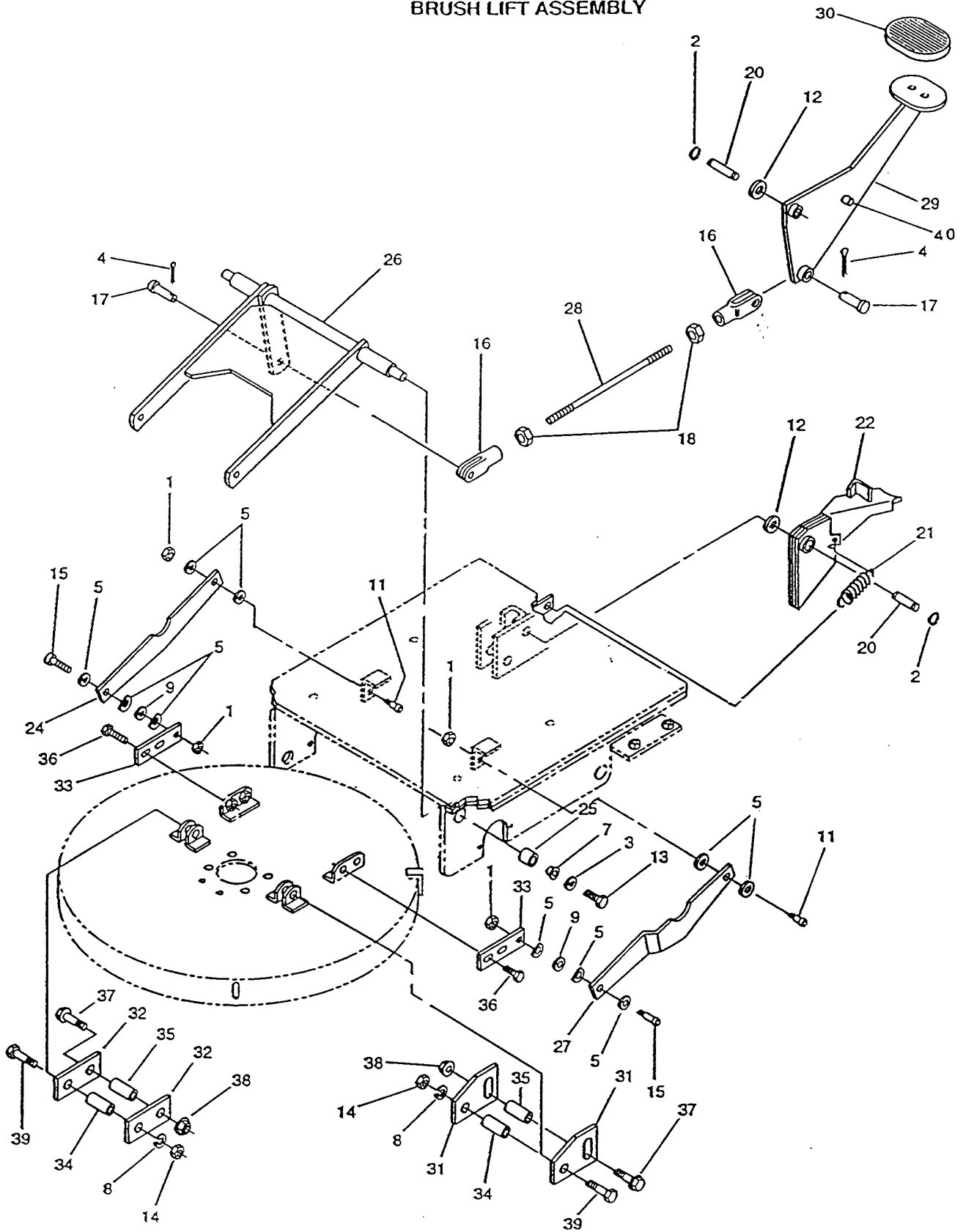


BRUSH MOTOR & COVER ASSEMBLY

Item No.	Qty.	Part No.	Description
3	1	18076	Motor, 1 HP
4	1	18148	Brush Cover, 20" (Model 99105, 99125 & 99126 Only)
*4	1	18149	Brush Cover, 24" (Model 99130 Only)
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" (Model 99105, 99125 & 99126 Only)
*12	1	18160	Bumper Strap, 24" (Model 99130 Only)
13	2	17733	Keeper
14	1	18161	Bumper, Brush Cover 20" (Model 99105, 99125 & 99126 Only)
*14	1	16162	Bumper, Brush Cover 24" (Model 99130 Only)
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
28	2	02956	Nut
29	1	18593	Cap

*Not Shown

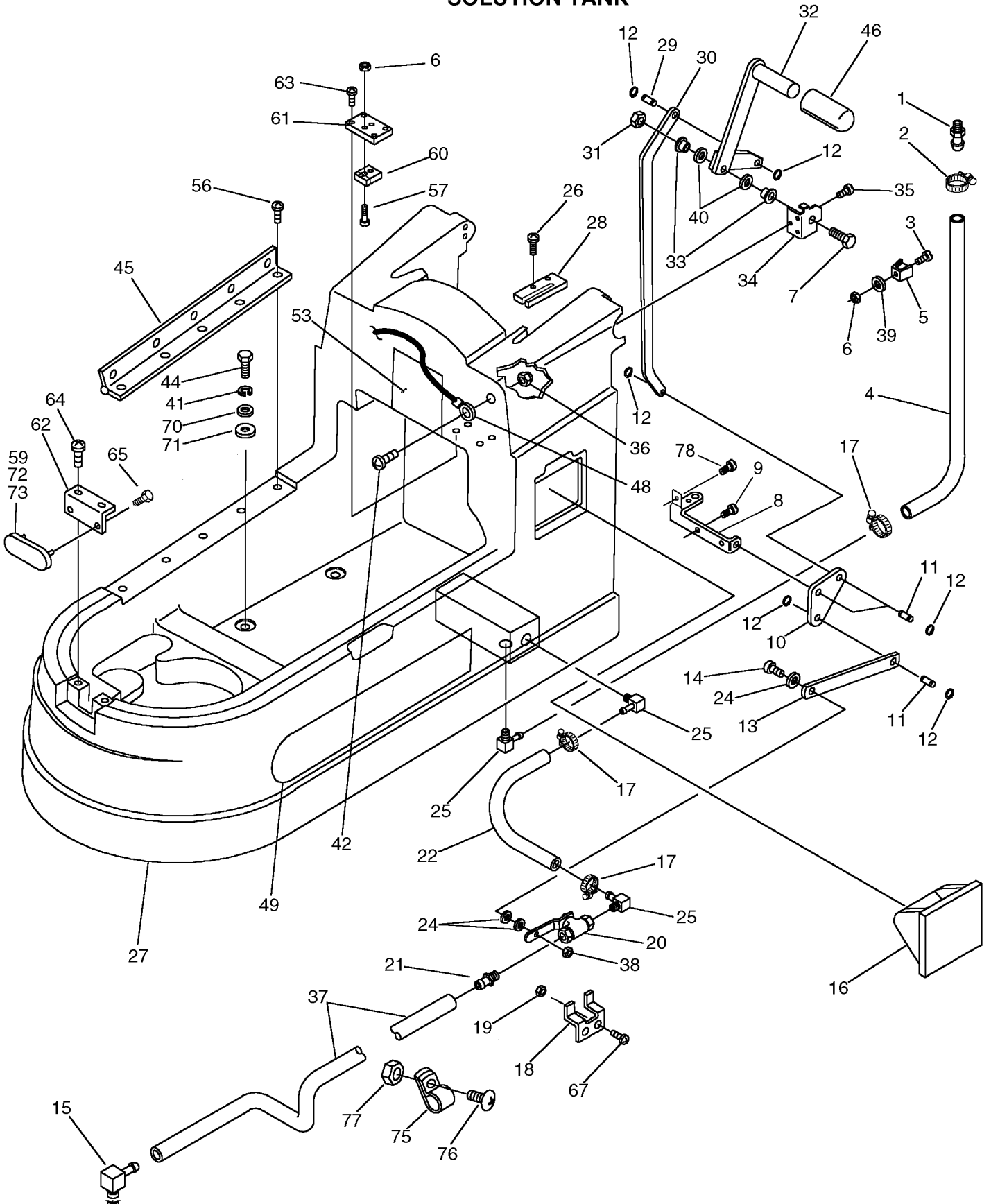
BRUSH LIFT ASSEMBLY



BRUSH LIFT ASSEMBLY

Item No.	Qty.	Part No.	Description
1	4	01589	Lock Nut 5/16-18
2	4	02663	Retaining Ring
3	2	03321	Washer
4	2	03395	Cotter Pin
5	11	03736	Washer – Flat 3/8"
7	2	03955	Bushing
8	2	06387	Lock Washer 1/2"
9	2	07132	Washer, Wave
11	2	15677	Screw-Socket Hd. Shoulder 3/8D X 3/8 (ZP)
12	4	16581	Washer-Plain 1/2" ID (ZP)
13	2	16671	Screw
14	2	16673	Nut-Finished Hex 1/2-13 (SS)
15	2	15677	Screw, Shoulder
16	2	18081	Clevis
17	2	18083	Clevis Pin
18	2	18093	Nut
20	2	18122	Pin
21	1	18952	Spring, Extension
22	1	18758	Weldment, Brush Lift Latch
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	19076	Weldment-Brush Lift
30	1	19006	Pad, Motor Lift Pedal
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	Screw 5/6-18 x 1/2"
37	2	18873	Screw 3/8-16 x 1-1/4"
38	2	18874	Locknut 3/8-16
39	2	18875	Screw 1/2-13 x 1-1/2"
40	1	19078	Pin-Spring

SOLUTION TANK

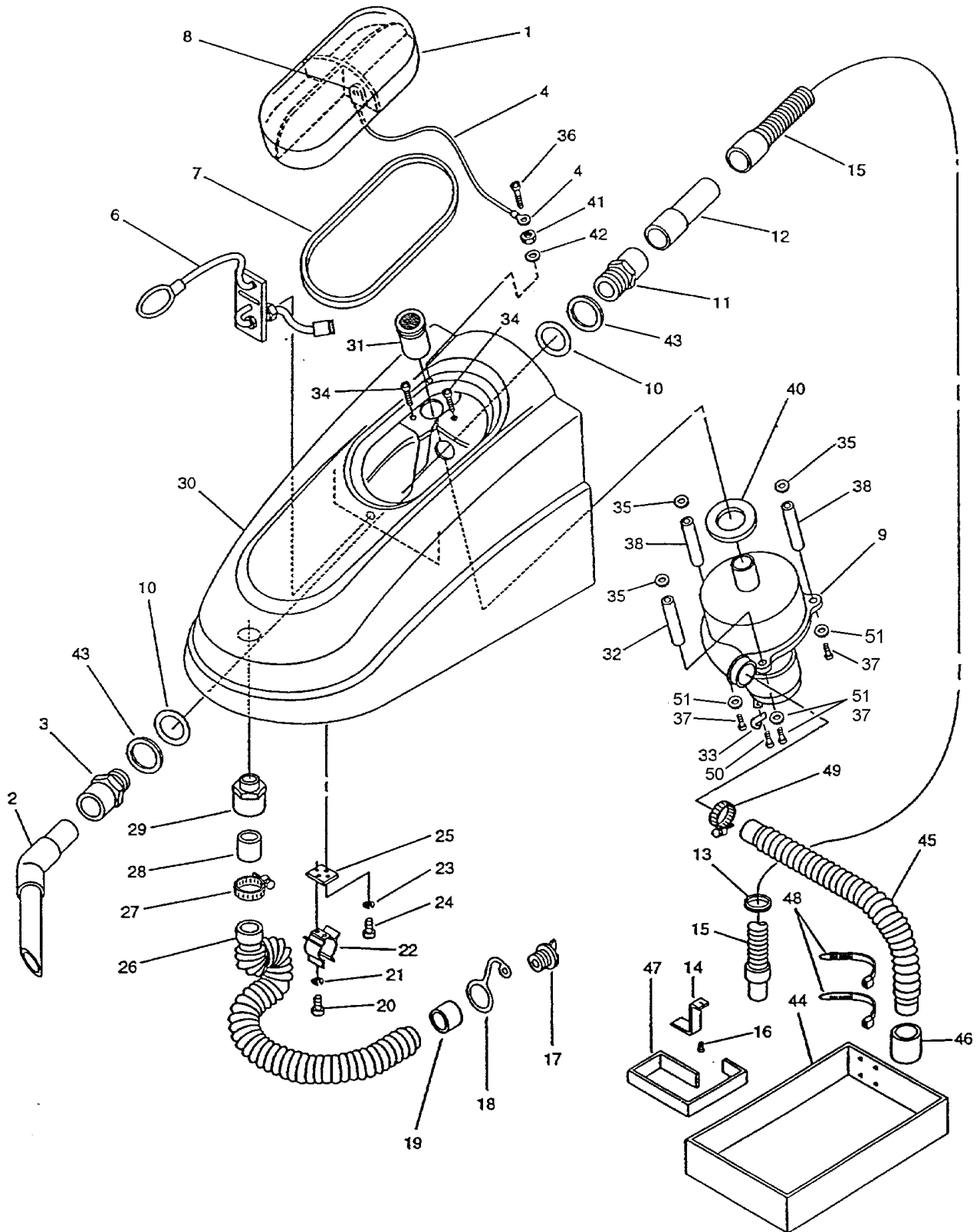


SOLUTION TANK ASSEMBLY

No.	Qty	Part No.	Description	No.	Qty	Part No.	Description
1	1	18343	Fitting	59	2	17376	Nut (Included with Item #72)
2	1	18384	Clamp	60	1	18237	Charger Connector
3	1	01734	Screw	61	1	18239	Connector Mtg. Plate
4	1	18434	Sight Tube	62	1	18240	Light Mtg. Bracket (Included with Item #72)
5	1	18230	Clip, Sight Tube	63	4	18253	Screw
6	3	02958	Nut	64	2	18309	Screw
7	1	03320	Screw	65	2	18336	Screw (Included with Item #72)
8	1	18652	Solution Control Bracket	67	2	05427	Screw
9	2	04442	Screw	*68	1	18849	Decal-Wiring Diagram
10	1	18328	Plate, Solution Control	70	4	18642	1/4" Flat Washer
11	3	18261	Pin	71	4	03321	Washer-Plain .391 ID (ZP)
12	8	18316	Retaining Ring	72	1	18859	Warning Light Assembly Kit (Includes items 59, 62 & 65)
13	1	18329	Bar, Lower Link	73	2	15639	Bulb (For Warning Light P/N 18859)
14	1	15677	Screw, Shoulder	75	2	18717	5/8" Dia. Cable Clamp
15	1	18486	Fitting	76	2	18309	Screw #10-24
16	1	18457	Fill Door	77	2	10892	Nut, #10-24
17	3	07626	Clamp	78	1	19945	Screw-Truss Head 1/4"-20 x 5/8"
18	1	18684	Bracket Sol. Valve Clamp				
19	2	07533	Nut				
20	1	18236	Valve, Solution Release				
21	1	18485	Fitting				
22	1	18347	Solution Tube				
24	2	03736	Washer				
25	3	18332	Fitting				
26	2	18253	Screw				
27	1	18207	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" (Model 99105, 99125 & 99126 Only)				
*37	1	18433	Solution Tube - 24" (Model 99130 Only)				
38	1	01589	Nut				
39	1	01246	Washer				
40	2	16581	Washer				
41	4	01577	Washer				
42	2	18339	Screw				
44	4	16031	Screw				
45	1	18229	Hinge				
46	1	18251	Grip				
*47	1	18308	Access Panel				
48	1	18359	Stop Cable				
49	1	30816	DECAL-TORNADO W/ LOGO				
53	1	18377	Decal, Battery Maintenance				
*54	1	18381	Decal, C.B. Identification				
*55	1	15734	Decal, Level Gauge				
56	10	06192	Screw				
57	2	14544	Screw				
*58	1	30812	Decal Tornado				

*Not Shown

RECOVERY TANK w/VAC MOTOR

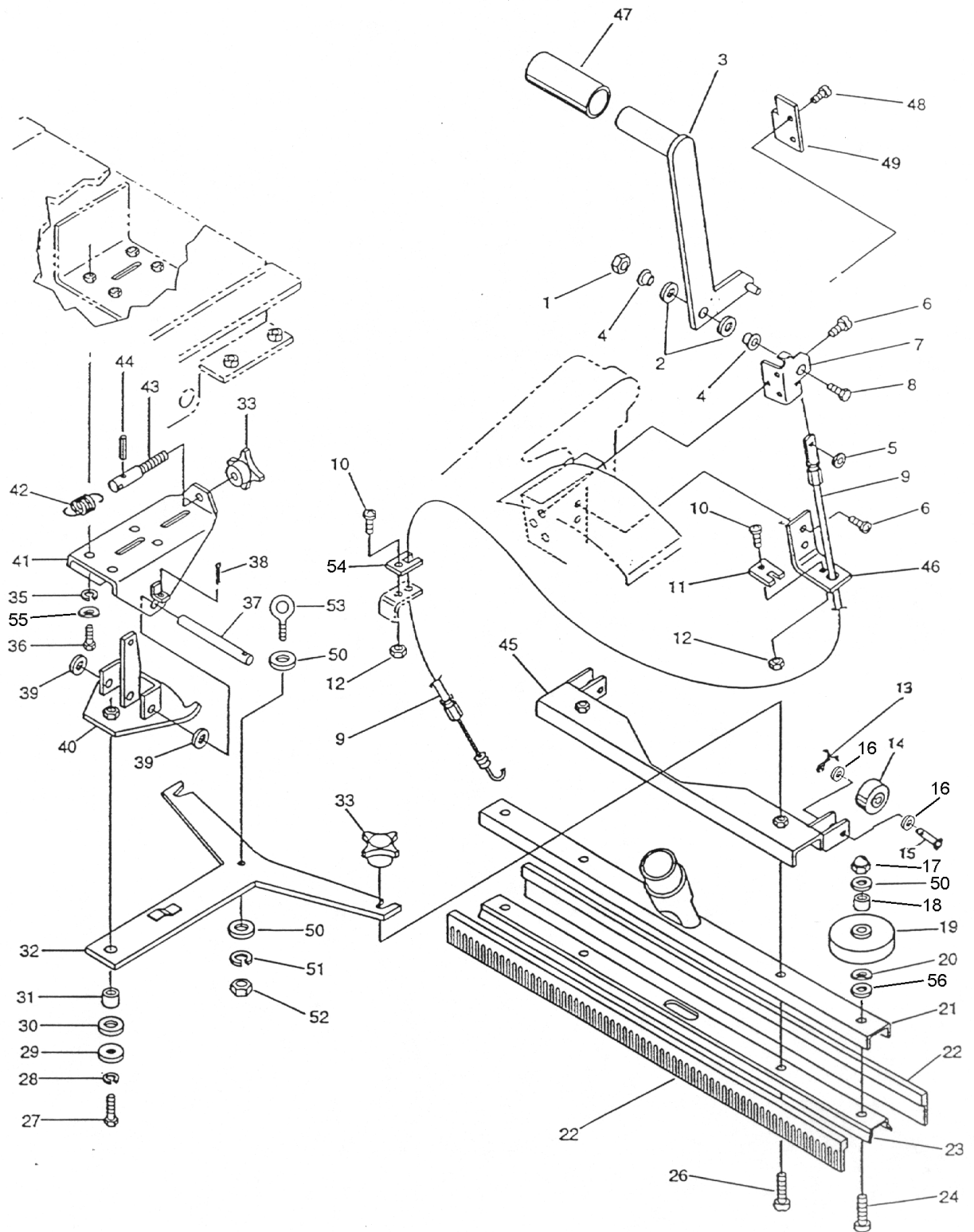


RECOVERY TANK w/VAC MOTOR ASSEMBLY

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	Assembly-Vac. Motor
10	2	05781	Gasket
11	1	15096	Fitting, Female Adapter
12	1	18259	Sleeve, Hose
13	1	18477	Grommet-Rear Panel
14	1	18241	Bracket Hose Support
15	1	18747	Hose, 1 1/2"
16	2	18253	Screw-T.F.PLT60, Pan Head #8-16 X 3/4"
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	19286	Hose, 1 1/2"
27	1	16091	Clamp, Hose
28	1	18401	Sleeve
29	1	18052	Fitting, Male Adapter
30	1	18740	Tank, Recovery
31	1	19398	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	15183	Screw-Hex.Head Cap 1/4"-20 x 1-1/4"(SS)
37	3	18333	Screw-Phil.Pan 1/4-20 x 1.00 (ZP)
38	2	18349	Spacer
40	1	18847	Gasket
41	1	17508	Nut
42	1	18885	Washer
43	2	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
50	1	04651	Screw-TCT(F) Pan Hd. #10-24 x 1/2"
51	3	00851	Washer-Plain 1/4"
*52	2	98799	Battery (99105A & 99125A)
*53	4	99506	Battery (99105B, 99125B & 99130)
*54	1	99510	Battery Charger (99105A & B, 99125A & B, 99130)
*55	1	18692	Bracket - Tray (99105A & 99125A)
*56	2	30725	Cable (99105B, 99125B & 99130)

*Not Shown

SQUEEGEE ASSEMBLY

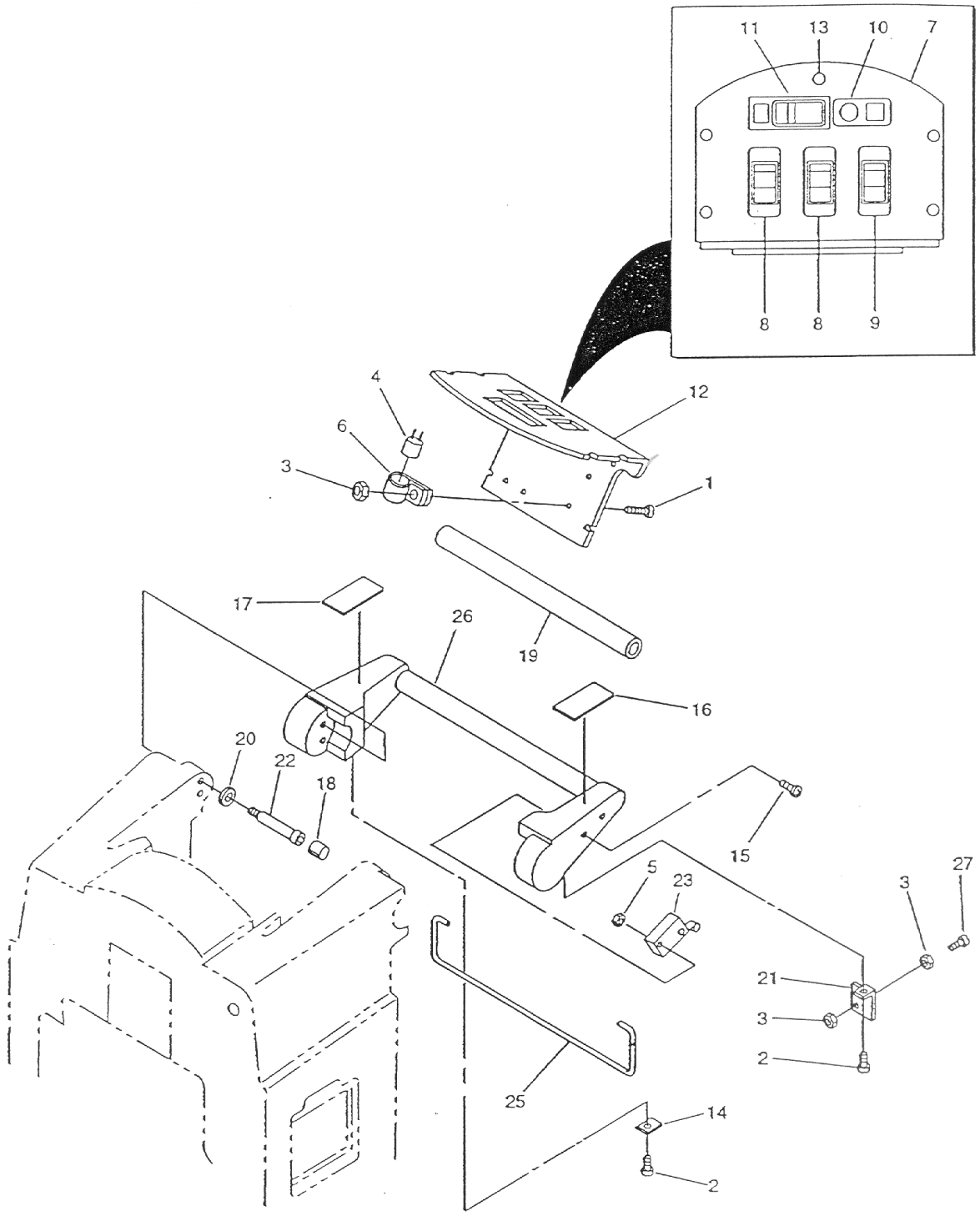


SQUEEGEE ASSEMBLY

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	19910	Cable Assy-Squeegee
10	2	03660	Screw
11	1	18651	Plate, Control Cable Clasp
12	2	10894	Nut
13	2	30227	Pin - Cotter (Ext. Prong)
14	2	18400	Wheel
15	2	30226	Pin-Clevis .320 DIA / 1-1/4"LG
16	4	00696	Washer-Plain #10 ID (ZP)
17	2	17130	Nut Acorn
18	2	17400	Spacer
19	2	11053	Rub Wheel
20	2	07132	Washer, Wave
21	1	18136	Channel, Outer - 20"
22	1	18709	Squeegee Blade Set - 20"
23	1	18663	Squeegee Blade Retainer - 20"
24	2	18680	Screw-Flat Hd. Cap
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	4	01577	Lockwasher
36	4	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	4	14142	1/4" Flat Washer
51	1	01574	1/4" Lock Washer
52	1	01497	1/4" - 20 Nut
53	1	18695	Eye Bolt
54	1	19796	Plate-Control Cable Clasp
55	4	03301	Washer-Plain 5/16" ID (ZP)
56	2	00851	Washer-Plain 1/4"

*Not Shown

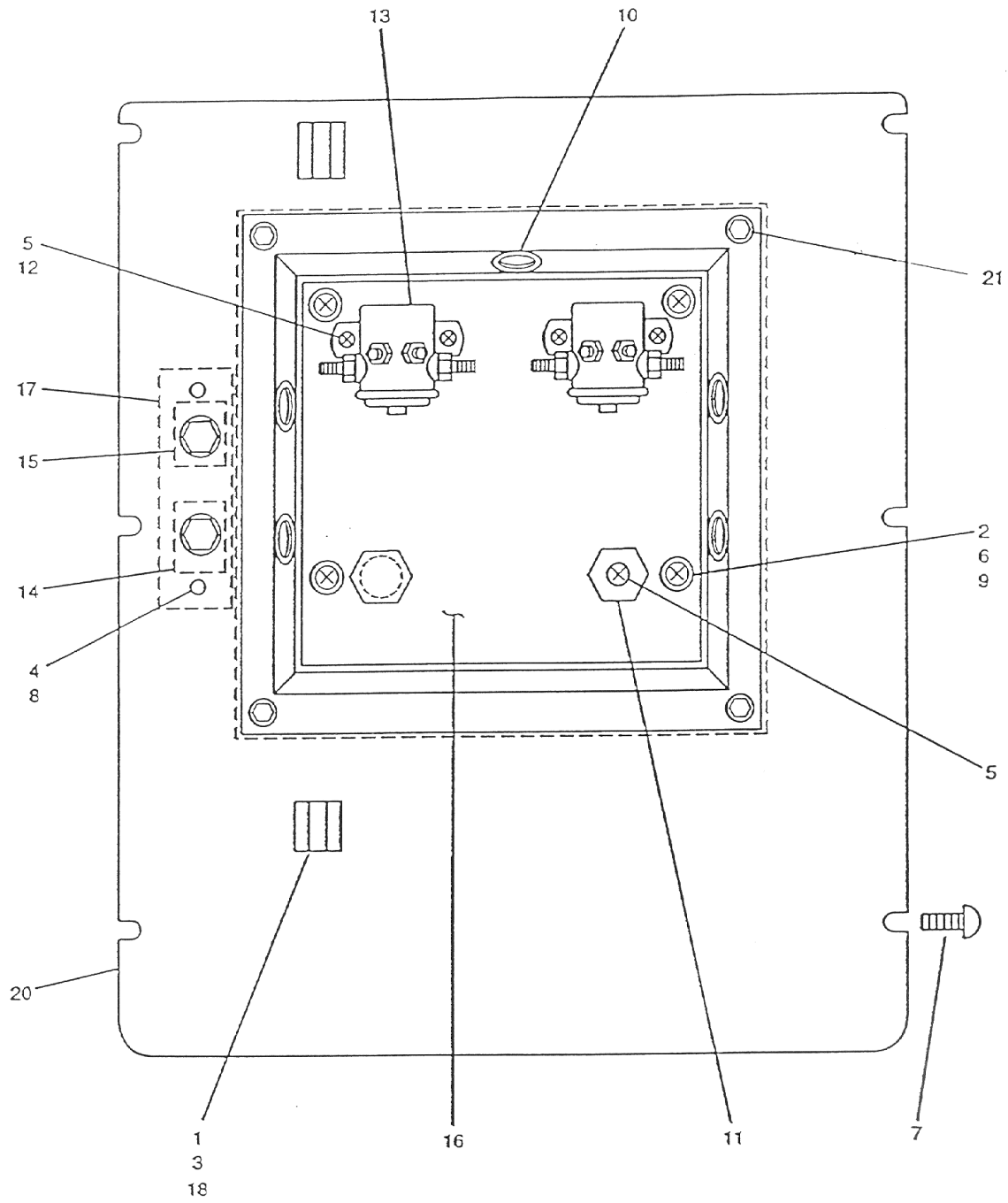
CONTROL / INSTRUMENT SYSTEM



CONTROL/INSTRUMENT SYSTEM

Item No.	Qty.	Part No.	Description
1	1	16075	Screw-Phil. Pan Hd. #8-32 X 1/2 (ZP)
2	2	02071	Screw
3	3	02956	Locknut
4	1	14827	Flasher Relay
5	2	15560	Nut-Lock Hex (KEPS) # 4-40
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	Screw
14	1	18266	Plate, Speed Control Bar Ret.
15	2	18323	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 Handles-top
22	4	18756	Screw-Shoulder Socket Hd. 5/16D X 1-1/2 (PLAIN)
23	1	18818	Switch-Push Button S.P.D.T. (10 A)
25	1	18895	Brush Actuation Lever (Speed Control)
26	1	18896	Handle-Control
27	1	18897	Screw-Phil Flat Hd. #8-32 X 1-1/4 (ZP)

REAR ACCESS PANEL w/RELAYS



REAR ACCESS PANEL w/RELAYS

Item No.	Qty.	Part No.	Description
1	2	00128	Screw
2	4	01574	Lockwasher
3	2	02956	Nut
4	2	03660	Screw
5	8	04442	Screw
6	4	05427	Screw
7	8	06192	Screw
8	2	10894	Locknut
9	4	14142	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
20	1	18889	Panel, Rear Sol. Tank
21	4	19329	Pin-Retaining Access Panel
	1	18308	Cover, Panel
	1	18230	Clip, Upper

CONTROL WIRING

Item No.	Qty.	Part No.	Description
*1	3	10428	Clip-Lead Retainer (Self Adhs)
2	1	15458	Rectifier Assembly
4	4	19405	Terminal-Q.D. Male 12-10 GA. Ful. Ins.
5	1	18980	Cable-Batt. 6 GA x 12" Black
6	1	18981	Cable-Batt. 6 GA x 12" Red
7	1	18841	Wiring Harness-Instrument Panel
8	1	19010	Wiring Harness-Relay Panel
9	1	19404	Wiring Harness-Main
10	1	18888	Lead-10 GA x 3" Red
11	1	18908	Wiring Harness-Safety Switch
12	1	19273	Assy-Battery Charger Connector
14	1	30725	Cable-Battery Jumper 6 GA x 10" Black

*Not Shown

MAINTENANCE PARTS

Item No.	Qty.	Part No.	Description
1	1	03276	Hydrometer
2	1	18555	Grease 930-2 (14-1/2 oz. Cartridge)
3	1	18554	Grease SOG (11 oz. Cartridge)
5	2	98799	12 Volt Battery (Wet)
6	1	18709	20" Squeegee Blade Replacement (Set of 2)
7	1	18710	24" Squeegee Blade Replacement (Set of 2)
8	1	*99506	6 Volt Battery (Wet)
9	1	*99505	6 Volt Battery (Dry)
10	1	10994	Clutch Plate
11	1	90599	Pad Retainer

*Optional

ACCESSORIES

Item No.	Qty.	Part No.	Description
1	1	99262	20" Pad Holder (99105)
2	1	99260	20" Firm Poly Scrub Brush
3	1	99263	20" Grit Brush
4	1	90676	1-1/2" Wet Attachment Set
5	1	99510	20 Amp, 24 V Battery Charger (99105)
6	1	99526	20 Amp, 24V World Charge 100-240V