



E29926-00 - 26" w/Wet Batteries  
E29927-00 - 26" w/AGM Batteries  
E29931-00 - 32" w/Wet Batteries  
E29932-00 - 32" w/AGM Batteries



# **STEALTH™ DRS RIDER SERIES**

**26" and 32"  
Automatic Rider  
Scrubbers**



**Parts and  
Maintenance  
Catalog**

# TABLE OF CONTENTS

INTRODUCTION .....	3
DIAGRAMS AND PARTS LISTINGS.....	4 - 37
ELECTRICAL DIAGRAM AND PARTS LISTING .....	38 - 39
PROGRAMMING CONSOLE CONFIGURATIONS AND SETTINGS .....	40
ALARM TABLE .....	41
CHANGING PARAMETERS .....	42
POTENTIOMETER SETTINGS .....	43
I-DRIVE CONTROL CARD.....	44
HOUR METER/BATTERY DISCHARGE INDICATOR .....	45
WARRANTY .....	48

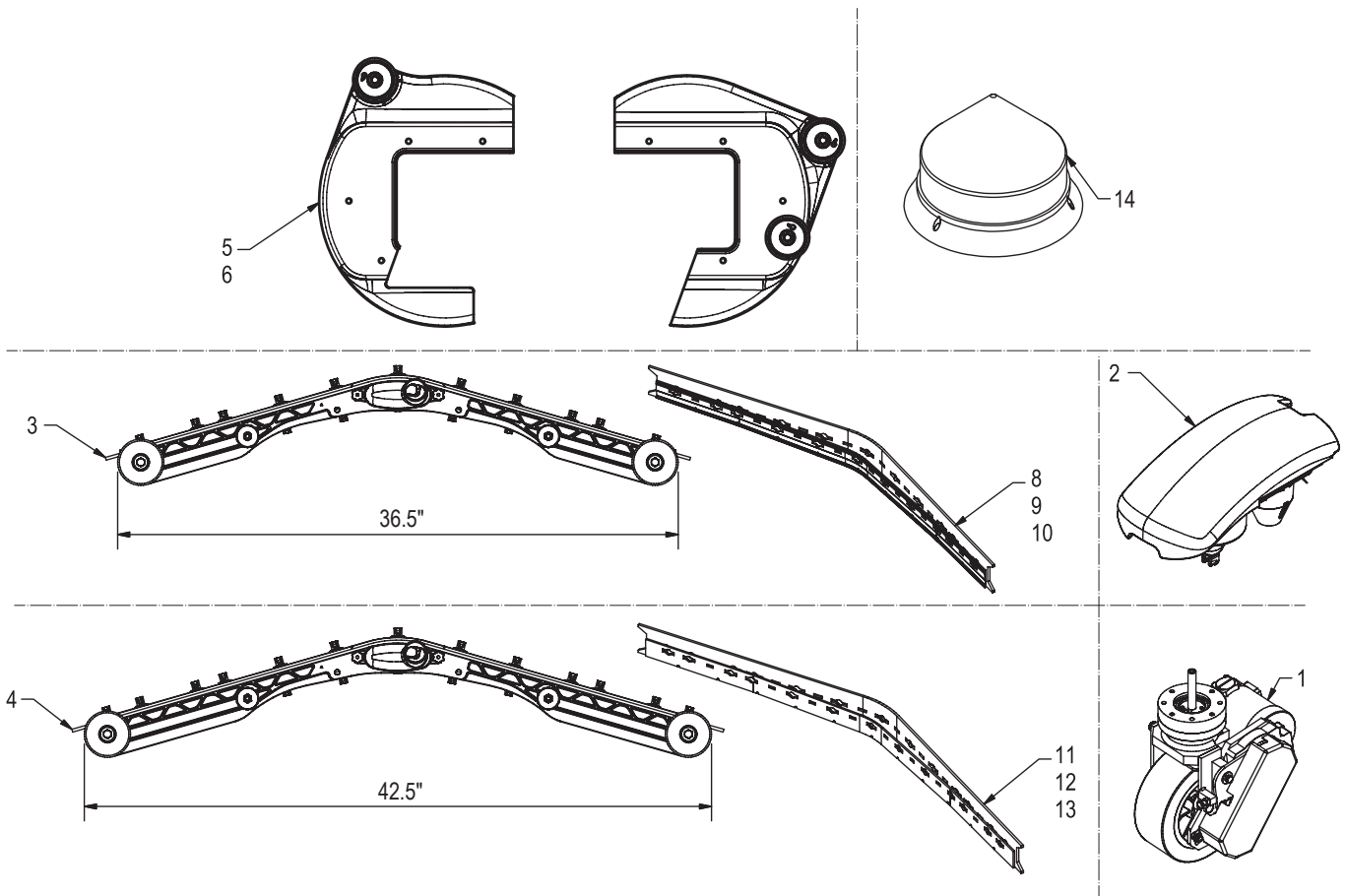
# INTRODUCTION

This catalog is intended to serve as a guide for the ordering of spare parts and is designed to facilitate the rapid identification and location of parts.

To simplify ordering and delivery of spare parts, the following information should be provided when placing an order:

1. Item number and part name.
2. Quantity of parts required.
3. The distributor account number that is purchasing the part.
4. The address for which the parts should be delivered.
5. Specific shipping requirements for the order. If no shipping requirements are specified, the preferred vendor carrier and method will be selected.

# STEALTH™ DRS ACCESSORIES AND ASSEMBLIES DIAGRAM

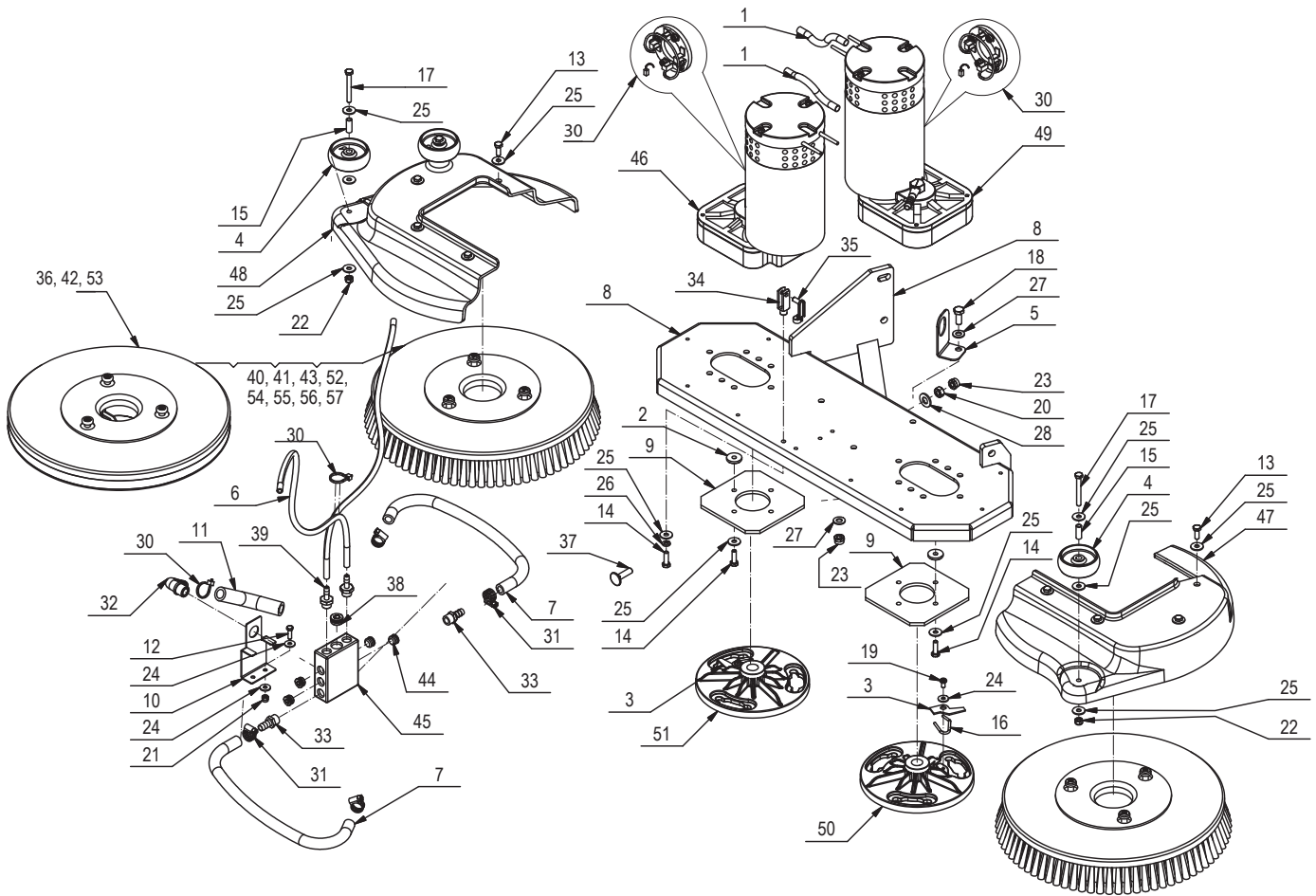


# STEALTH™ DRS ACCESSORIES AND ASSEMBLIES PARTS LISTING

Item#	Part #	Description
1	E22250	Traction Motor ASM
2	E22096	Vacuum Assembly Complete
3	E22099	Squeegee Assembly, Complete 36.5"
4	E89549	Squeegee Assembly, Complete 42.5"
5	E22095	Brush Skirt, 26" Complete Set
6	E89550	Brush Skirt, 32" Complete Set
8	E88951	Squeegee Blade Kit Shore 33 - 36.5 Inch ASM

Item#	Part #	Description
9	E22261	Squeegee Blade Kit Poly - 36.5 Inch ASM
10	E22262	Squeegee Blade Kit Latex - 36.5 Inch ASM
11	E88953	Squeegee Blade Kit Shore 33 - 42.5 Inch ASM
12	E22264	Squeegee Blade Kit Poly - 42.5 Inch ASM
13	E22265	Squeegee Blade Kit Latex - 42.5 Inch ASM
14	E22097	Strobe Light Assembly

# BRUSH DECK ASSEMBLY DIAGRAM

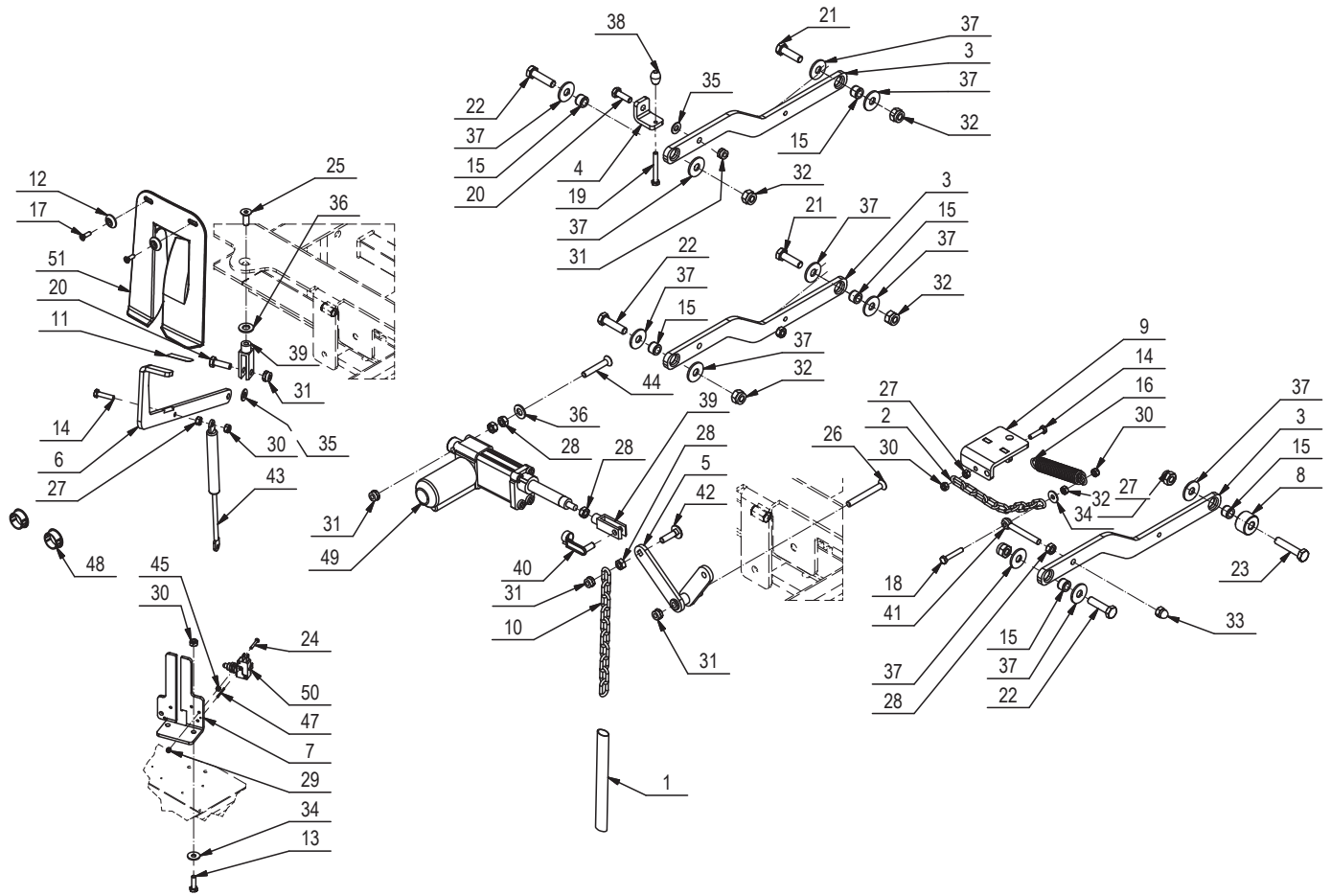


# BRUSH DECK ASSEMBLY PARTS LISTING

Item#	Part #	Description
1	E22200	Sheath 5 x 300
2	E22202	Spacer, 22D x 6.5d x 4S AVP
3	E81957	Pad driver retainer clip
4	E82388	Wheel, Plastic OD=2 1/4" x W=3/4"
5	E20457	Bracket
6	E22210	Tubing 8D x 5d x 500L
7	E22212	Tubing 10x410D
8	E22231	Brush Base
9	E22232	Motor Mount Bracket
10	E22233	Manifold Mounting Bracket
11	E22247	Tubing 13 ID x 20 OD x 120 L
12	E83836	Hex Bolt M5x16 Zinc
13	E83547	M6x16 Bolt, Zinc Hex Head
14	E82772	Hex Bolt M6x20 Zinc
15	E82396	Spacer
16	E81953	Wire Spring Clip 75mm Custom
17	E86159	Hex Bolt M6x50 Zinc
18	E81917	Hex Bolt M8x20 Zinc
19	E83899	Pan Hd Phil Machine Screw M5x10 SS
20	E83656	Hex Nut, M8x6.5 Zinc
21	E82256	Nyloc Hex Nut, M5x7 Zinc
22	E83550	NyLoc Hex Nut, M6 Zinc
23	E81709	Nyloc Hex Nut, M8 Zinc
24	E20121	Flat Washer M5x15x1.5 Zinc
25	E82798	Flat Washer, M6x18x1.5 Zinc
26	E82774	Lock Washer, M6 Zinc
27	E81874	Flat Washer M8x17x1.6 Zinc
28	E82773	Flat Washer M10x21x2 Zinc

Item#	Part #	Description
30	E83529	Carbon Motor Brush
31	E85762	Hose Clamp
32	E86275	Barbed Elbow, 3/8"
33	E20481	Fitting, Hose Barb 1/4" x 10mm
34	E86154	Fork
35	E81907	Pin
36	E82367	Center Lock
37	E22306	Carriage Bolt M8x30 Zinc
38	E20627	Plug, 3/8" Male
39	E81552	Fitting, Brass, 1/4" x 7mm
40	E82850	Brush, Medium Duty 13" 0.6mm
41	E82851	Brush, Heavy Duty 13" 0.9mm
42	E81668	Pad Driver, 13"
43	E82852	Brush, Tynex 13" 1.0mm
44	E20581	Plug, 1/4" Male"
45	E20631	Manifold
46	E88245	Motor, Geared 24V 400W 140 RPM
47	E22337	Base Cover Left, 13" Brush"
48	E22338	Base Cover Right, 13" Brush
49	E22341	Motor, Geared 24V 400W 140 RPM
50	E22387	Brush, Flange 128D"
51	E22388	Brush, Flange 128D"
52	E81681	Brush, General Purpose 13" 0.3mm
53	E22091	Pad Driver, 16"
54	E89557	Brush, Medium Duty 16" 0.6mm
55	E22092	Brush, Heavy Duty 16" 0.9mm
56	E22093	Brush, General Purpose 16" 0.3mm
57	E22094	Brush, Tynex 16" 1.0mm

# BRUSH DECK CARRIAGE ASSEMBLY DIAGRAM

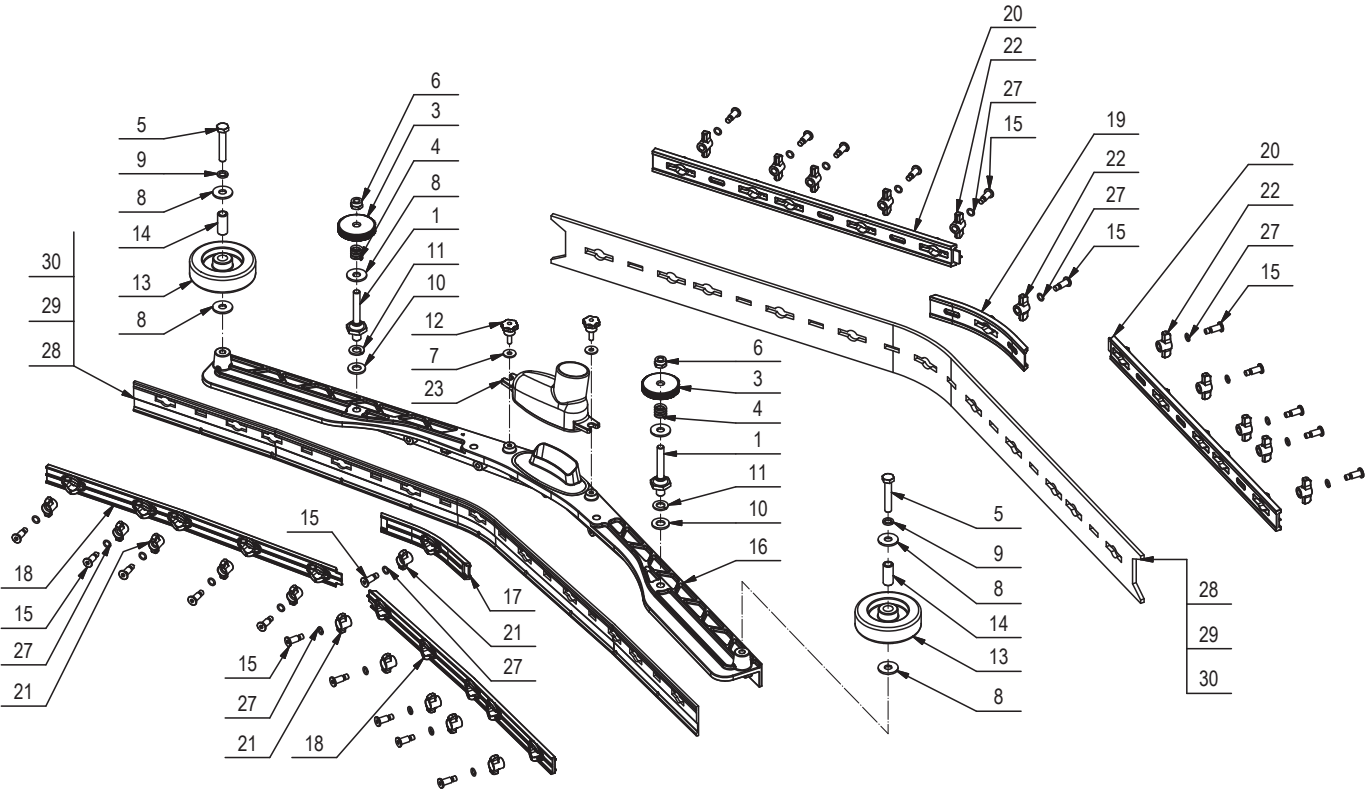




# BRUSH DECK CARRIAGE ASSEMBLY PARTS LISTING

Item#	Part #	Description	Item#	Part #	Description
1	E22201	Sheath	27	E83852	Hex Nut, M6x5
2	E22205	Chain	28	E83656	Hex Nut, M8x6.5 Zinc
3	E22220	Support Arm	29	E81673	Hex Nyloc Nut, M3 Zinc
4	E22222	Bracket	30	E83550	NyLoc Hex Nut, M6 Zinc
5	E22223	Lever Arm	31	E81709	Nyloc Hex Nut, M8 Zinc
6	E22230	Foot Lever	32	E81339	Nut, Locking M10
7	E22241	Bracket	33	E22295	Dome Hex Nut, M8 Zinc
8	E22243	Spacer	34	E82798	Flat Washer, M6x18x1.5 Zinc
9	E22244	Bracket	35	E81874	Flat Washer M8x17x1.6 Zinc
10	E22246	Chain	36	E82773	Flat Washer M10x21x2 Zinc
11	E22270	Anti-Slip Tape	37	E81020	Washer, 11x30x2.5
12	E83850	Flat Washer M5x20 SS	38	E22300	Rubber Cap
13	E82772	Hex Bolt M6x20 Zinc	39	E81651	Clevis
14	E20090	Hex Bolt M6x25 Zinc	40	E83931	Clevis Pin
15	E22287	Bushing	41	E88336	Tie Rod Media
16	E22288	Spring, 20x2.8x109mm Zinc Tension	42	E22306	Carriage Bolt M8x30 Zinc
17	E83839	Oval Hd Phil Machine Screw M5x16 Zinc	43	E20130	Cylinder, Head Pressure
18	E83834	Hex Bolt M6x35 Zinc	44	E20350	Flat Hd Soc Machine Screw M8x50 Zinc
19	E86159	Hex Bolt M6x50 Zinc	45	E20365	Hex Nut, M3x2.5 Zinc
20	E83833	Hex Bolt M8x25 Zinc	46	E83476	Rivet, M6.4x10 Nylon
21	E82455	Hex Bolt M10x35 Zinc	47	E22318	Spring Pin 2mm OD x 22mm LG
22	E20100	Hex Bolt M10x40 Zinc	48	E22319	Plastic Cap
23	E22289	Hex Bolt M10x50 Zinc	49	E20534	Actuator Assembly
24	E20242	Pan Hd Phil Machine Screw M3x20 Zinc	50	E88232	Micro Switch
25	E83826	Screw, M8x22	51	E22379	Plastic Cover
26	E83846	Flat Hd Soc Machine Screw M8x70 Zinc			

# DRS26BT SQUEEGEE ASSEMBLY - 36.5" DIAGRAM

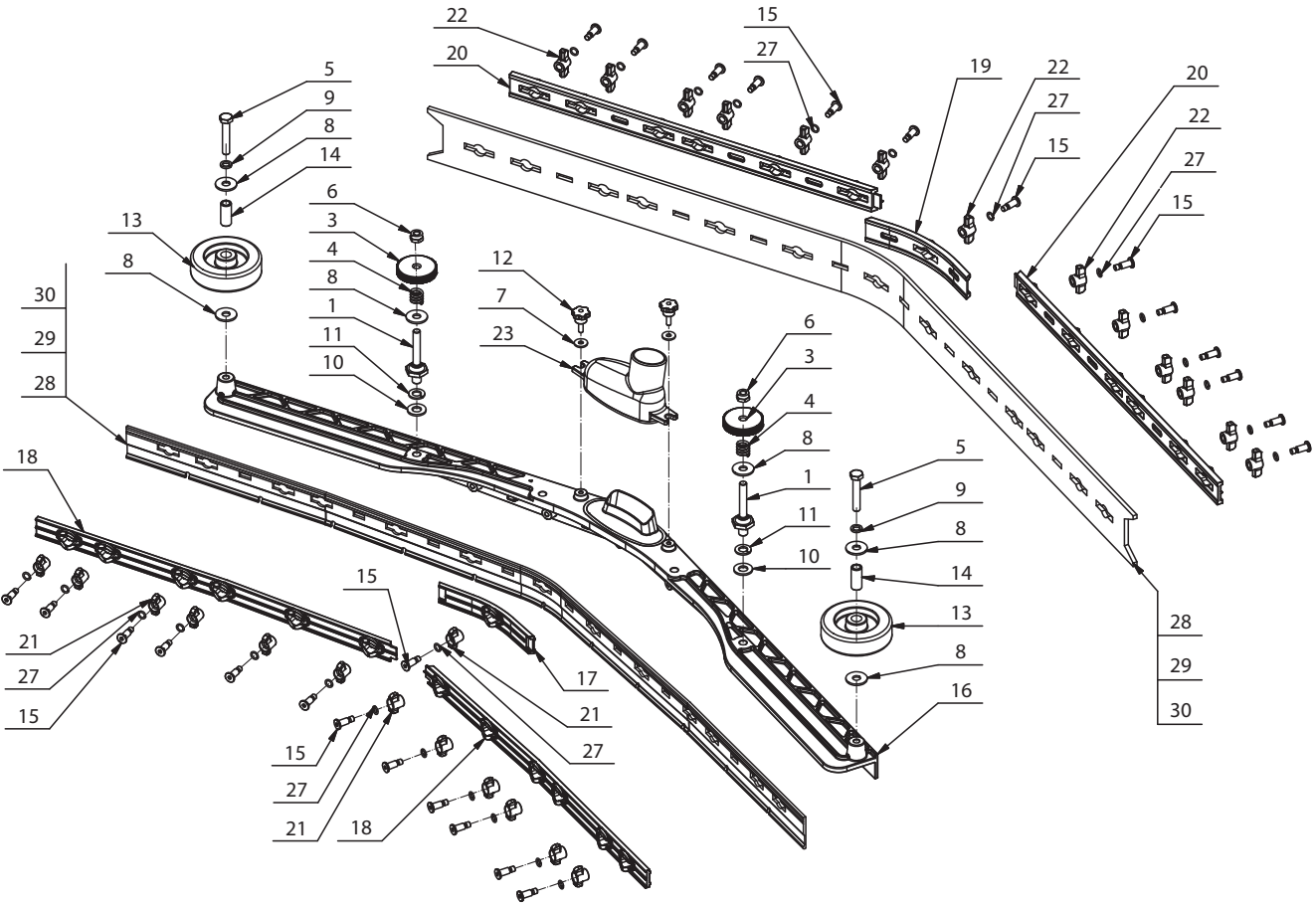


## DRS26BT SQUEEGEE ASSEMBLY - 36.5" PARTS LISTING

Item#	Part #	Description
1	E22255	Stud Bolt
3	E22274	Hand Knob
4	E83402	Spring, 15mm O.D. x 11mm I.D. x 16mm L
5	E20287	Hex Bolt M8x45 SS
6	E81342	Nyloc Hex Jam Nut, M8 SS
7	E20122	Flat Washer M5 x 15 x 1.5 SS
8	E86164	Flat Washer M9x24x2.5 SS
9	E20252	Lock Washer M8x13x2.2 SS
10	E86255	Flat Washer M10x21x2 SS
11	E20128	Lock Washer M10 SS
12	E22320	Thumb Knob
13	E88280	Wheel 80 OD x 23 W
14	E88442	Bushing, Steel, 12mm OD, 8mm ID, 28mm L

Item#	Part #	Description
15	E22346	Custom Cap Screw
16	E22350	Squeegee Body 36.5 Inch ASM
17	E22352	Center Front Squeegee Blade Clamp
18	E22353	Outer Front Squeegee Blade Clamp 36.5 Inch ASM
19	E22355	Center Rear Squeegee Blade Clamp
20	E22356	Outer Rear Squeegee Blade Clamp 36.5 Inch ASM
21	E22358	Wing Nut Knob
22	E22359	Wing Nut Knob
23	E22360	Squeegee Shoe Adaptor
27	E22385	O-Ring 7mm
28	E88951	Squeegee Blade Kit Shore 33 - 36.5 Inch ASM
29	E22261	Squeegee Blade Kit Poly - 36.5 Inch ASM
30	E22262	Squeegee Blade Kit Latex - 36.5 Inch ASM

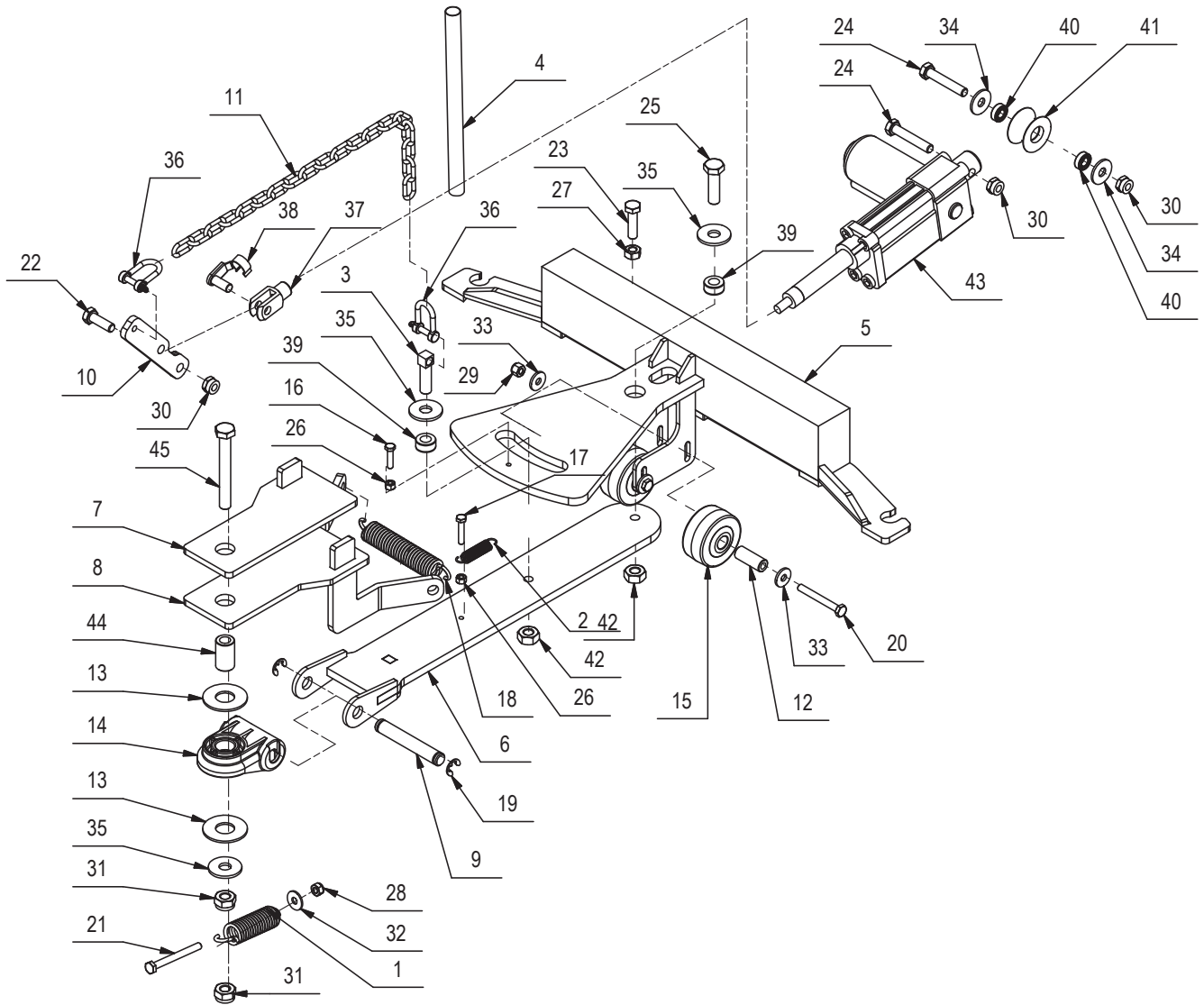
# DRS32BT SQUEEGEE ASSEMBLY - 42.5" DIAGRAM



## DRS32BT SQUEEGEE ASSEMBLY - 42.5" PARTS LISTING

<b>Item#</b>	<b>Part #</b>	<b>Description</b>	<b>Item#</b>	<b>Part #</b>	<b>Description</b>
1	E22255	Stud Bolt	15	E22346	Custom Cap Screw
3	E22274	Hand Knob	16	E22351	Squeegee Body 42.5 Inch ASM
4	E83402	Spring, 15mm O.D. x 11mm I.D. x 16mm L	17	E22352	Center Front Squeegee Blade Clamp
5	E20287	Hex Bolt M8x45 SS	18	E22354	Outer Front Squeegee Blade Clamp 42.5 Inch ASM
6	E81342	Nyloc Hex Jam Nut, M8 SS	19	E22355	Center Rear Squeegee Blade Clamp
7	E20122	Flat Washer M5 x 15 x 1.5 SS	20	E22357	Outer Rear Squeegee Blade Clamp 42.5 Inch ASM
8	E86164	Flat Washer M9x24x2.5 SS	21	E22358	Wing Nut Knob
9	E20252	Lock Washer M8x13x2.2 SS	22	E22359	Wing Nut Knob
10	E86255	Flat Washer M10x21x2 SS	23	E22360	Squeegee Shoe Adaptor
11	E20128	Lock Washer M10 SS	27	E22385	O-Ring 7mm
12	E22320	Thumb Knob	28	E88953	Squeegee Blade Kit Shore 33 - 42.5 Inch ASM
13	E88280	Wheel 80 OD x 23 W	29	E22264	Squeegee Blade Kit Poly - 42.5 Inch ASM
14	E88442	Bushing, Steel, 12mm OD, 8mm ID, 28mm L	30	E22265	Squeegee Blade Kit Latex - 42.5 Inch ASM

# SQUEEGEE CARRIAGE ASSEMBLY DIAGRAM

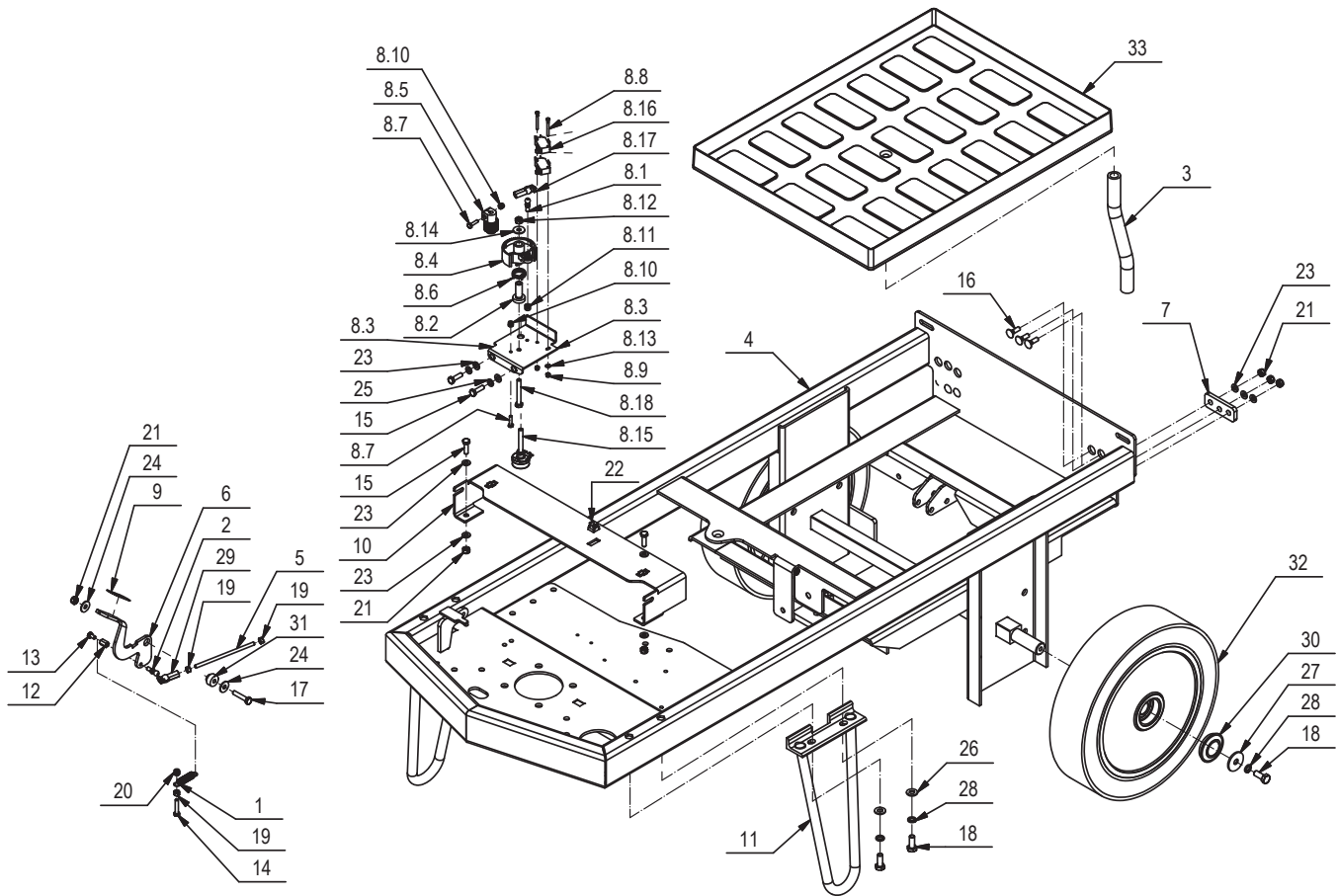


# SQUEEGEE CARRIAGE ASSEMBLY PARTS LISTING

Item#	Part #	Description
1	E82279	Spring, 20x3x48mm Custom Extension
2	E88194	Spring
3	E22203	Custom Eye Bolt M10
4	E22211	Sheath
5	E22215	Squeegee Support Bracket
6	E22216	Squeegee Pivot Linkage Arm
7	E22217	Pivot Bracket
8	E22218	Squeegee Centering Bracket
9	E22219	Pivot Pin M12 OD x 78 LG
10	E22224	Lever Arm
11	E22245	Chain
12	E22282	Bushing M12 OD x 6.25 ID x 30.5 LG
13	E20337	Flat Washer M17x40x2 Delrin
14	E85776	Pivot Connector
15	E82428	Wheel 52 OD x 28 W
16	E83881	Hex Bolt M5x20 Zinc
17	E20086	Hex Bolt M5x25 Zinc
18	E22288	Spring, 20x2.8x109mm Zinc Tension
19	E85498	E Style Circlip
20	E83933	Hex Bolt M6x50 SS
21	E88025	Bolt, M6 x 60 CM 70 HS
22	E83833	Hex Bolt M8x25 Zinc
23	E83802	Hex Bolt M8x30 Zinc

Item#	Part #	Description
24	E83827	Hex Bolt M8x45 Zinc
25	E82455	Hex Bolt M10x35 Zinc
26	E83535	Hex Nut, M5x5 Zinc
27	E83656	Hex Nut, M8x6.5 Zinc
28	E83550	NyLoc Hex Nut, M6 Zinc
29	E83550	NyLoc Hex Nut, M6 Zinc
30	E81709	Nyloc Hex Nut, M8 Zinc
31	E83381	Nyloc Hex Nut, M10 Zinc
32	E82798	Flat Washer, M6x18x1.5 Zinc
33	E83799	Flat Washer M6.6x18x2 SS
34	E83404	Flat Washer M9x24x2.5 Zinc
35	E81020	Washer, 11x30X2.5
36	E86147	Split Pin
37	E86672	Fork for AS24/28
38	E81410	Pin, Clamping M8 Brass
39	E22305	Bushing
40	E83389	Bearing, 688 ZZ
41	E83396	Roller BPS26
42	E22316	Hex Nut, M10 Zinc
43	E20534	Actuator Assembly
44	E22335	Bushing
45	E22339	Hex Bolt M10x80 Zinc

# CHASSIS ASSEMBLY DIAGRAM

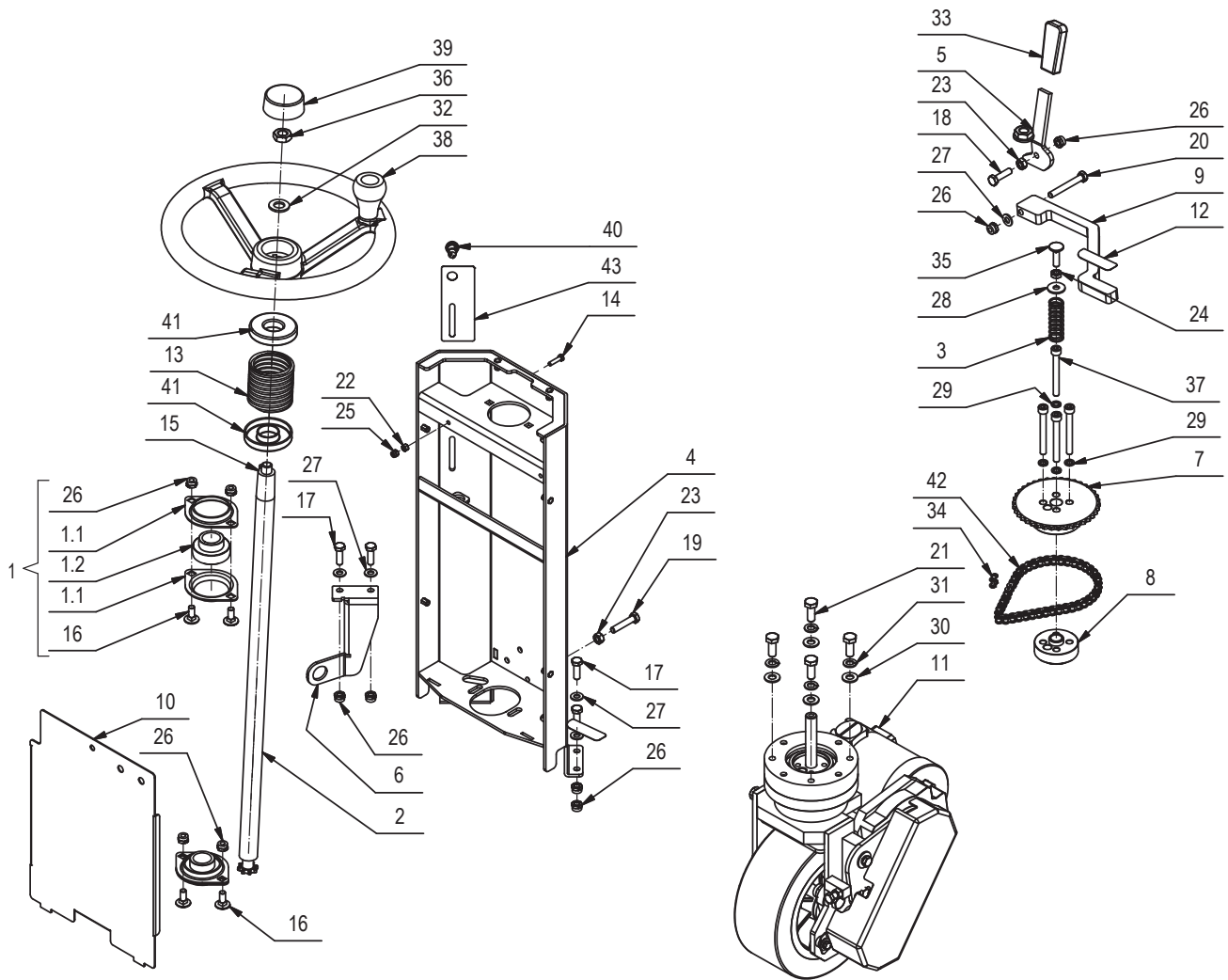




# CHASSIS ASSEMBLY PARTS LISTING

Item#	Part #	Description	Item#	Part #	Description
1	E88194	Spring	9	E22258	Anti-Slip Tape
2	E20330	Ball Stud M10x22.5	10	E22267	Floor Support Bracket
3	E22206	Tubing, PVC, M20 OD x M13 ID x 220 LG	11	E22271	Anti-Roll Bar
4	E22214	Frame	12	E22272	Spacer
5	E22225	Connecting Rod M5 x 102 LG Zinc	13	E81437	Hex Bolt M5x8 Zinc
6	E22228	Pedal, Accelerator	14	E20086	Hex Bolt M5x25 Zinc
7	E22248	Spacer Plate	15	E82772	Hex Bolt M6x20 Zinc
8	E22281	Potentiometer	16	E20356	Carriage Bolt M6x20 Zinc
8.1	E20330	Ball Stud M10x22.5	17	E83974	Hex Bolt M6x30 Zinc
8.2	E20574	Bushing	18	E81917	Hex Bolt M8x20 Zinc
8.3	E22213	Bracket	19	E83535	Hex Nut, M5x5 Zinc
8.4	E81763	Cam	20	E82256	Nyloc Hex Nut, M5x7 Zinc
8.5	E20076	Pinion Gear	21	E83550	NyLoc Hex Nut, M6 Zinc
8.6	E88204	Spring	22	E20250	Cage Nut M5
8.7	E20341	Hex Bolt M4x16 Zinc	23	E82761	Flat Washer M6x12x1.6 Zinc
8.8	E20243	Pan Hd Phil Machine Screw M3x30 Zinc	24	E82798	Flat Washer, M6x18x1.5 Zinc
8.9	E81673	Hex Nyloc Nut, M3 Zinc	25	E82774	Lock Washer, M6 Zinc
8.10	E83867	Nyloc Hex Nut, M4x6 Zinc	26	E81874	Flat Washer M8x17x1.6 Zinc
8.11	E20705	Nyloc Hex Nut, M5 Zinc	27	E81918	Flat Washer M9x32x2.5 Zinc
8.12	E83550	NyLoc Hex Nut, M6 Zinc	28	E83704	Lock Washer M8x13x2.2 Zinc
8.13	E82090	Flat Washer M3x8x1 Zinc	29	E81625	Shank, M5x32 Female Threaded Nylon
8.14	E82798	Flat Washer, M6x18x1.5 Zinc	30	E81971	Wheel Cap
8.15	E82824	Potentiometer	31	E22336	Bushing
8.16	E82270	Micro Switch	32	E22342	Wheel 300 OD x 70 W
8.17	E81625	Shank, M5x32 Female Threaded Nylon	33	E22364	Battery Support Base
8.18	E20360	Hex Bolt M6x45 Zinc			

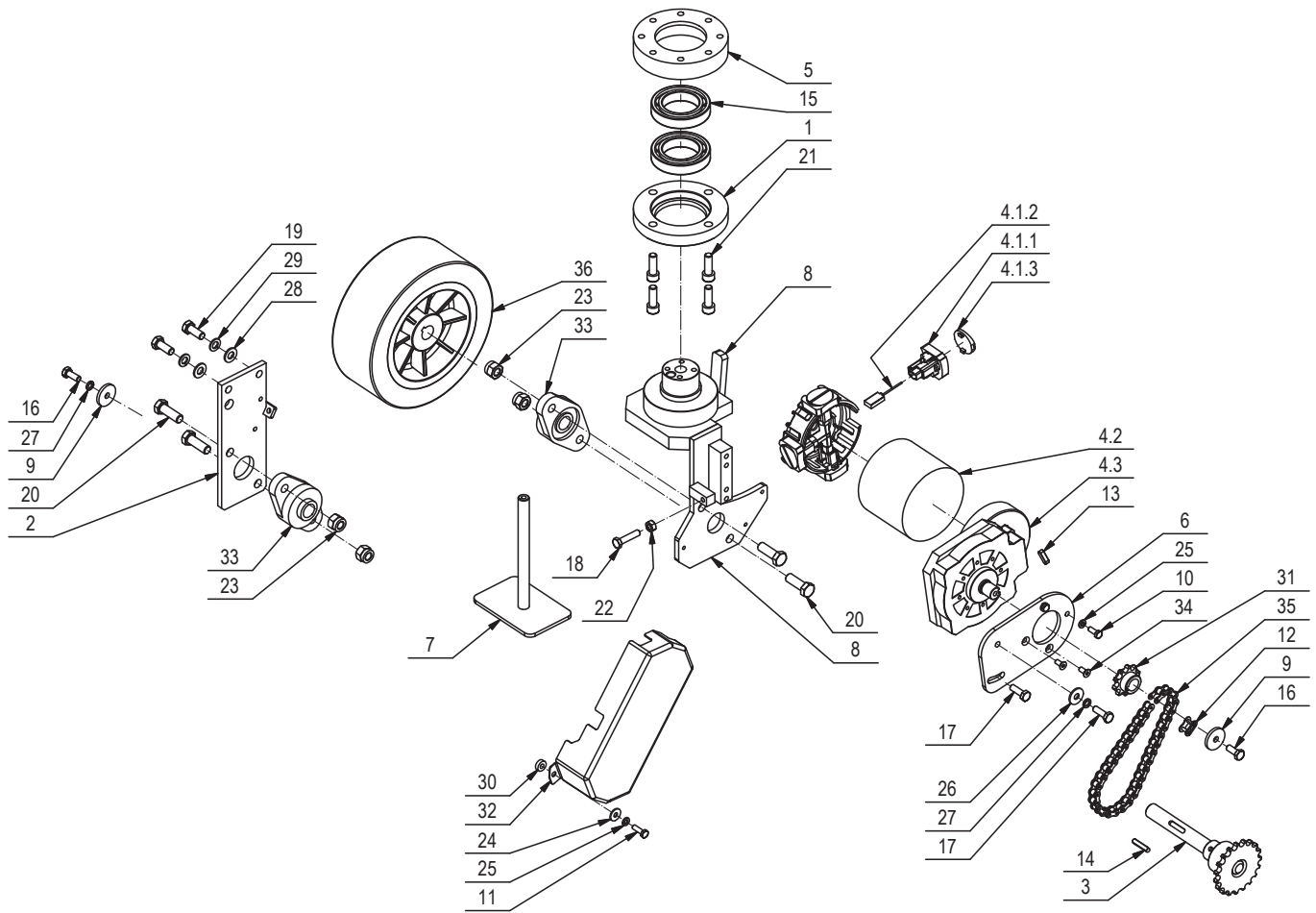
# STEERING AND DRIVE ASSEMBLY DIAGRAM



# STEERING AND DRIVE ASSEMBLY PARTS LISTING

Item#	Part #	Description	Item#	Part #	Description
1	E22204	Bearing ASM	22	E83535	Hex Nut, M5x5 Zinc
1.1	E22309	Bearing Flange	23	E83656	Hex Nut, M8x6.5 Zinc
1.2	E22310	Bearing	24	E82808	Hex Jam Nut, M8X5 Zinc
2	E22207	Steering Shaft	25	E82256	Nyloc Hex Nut, M5x7 Zinc
3	E22209	Spring 20mm OD x 60mm LG, Compression	26	E81709	Nyloc Hex Nut, M8 Zinc
4	E22221	Steering Column	27	E81874	Flat Washer M8x17x1.6 Zinc
5	E22227	Parking Brake Lever	28	E83404	Flat Washer M9x24x2.5 Zinc
6	E22229	Bracket	29	E83704	Lock Washer M8x13x2.2 Zinc
7	E22234	Sprocket	30	E82773	Flat Washer M10x21x2 Zinc
8	E22235	Spacer	31	E83948	Lock Washer M10x18x2.2 Zinc
9	E22239	Brake Pedal	32	E22296	Flat Washer M15x28x2.5 Zinc
10	E22242	Panel	33	E20423	Brake Handle Grip
11	E22250	Traction Motor ASM	34	E82492	Master Chain Link
12	E22259	Anti-Slip Tape	35	E22306	Carriage Bolt M8x30 Zinc
13	E22269	Bellows	36	E22317	Hex Jam Nut, M14 Zinc
14	E83881	Hex Bolt M5x20 Zinc	37	E22322	Soc Hd Cap Screw M8x70 Zinc
15	E83700	Shaft Key 5x5x20mm	38	E22325	Steering Wheel
16	E88239	Carriage Bolt M8x20 Zinc	39	E22326	Steering Wheel Cap
17	E83833	Hex Bolt M8x25 Zinc	40	E22329	Horn Push Button
18	E83802	Hex Bolt M8x30 Zinc	41	E22333	Bellows Collar
19	E83830	Hex Bolt M8x40 Zinc	42	E22344	Chain
20	E83703	Hex Bolt M8x60 Zinc	43	E22370	Decal, Solution Flow - Horn
21	E20240	Hex Bolt M10x25 Zinc			

# TRACTION DRIVE ASSEMBLY DIAGRAM

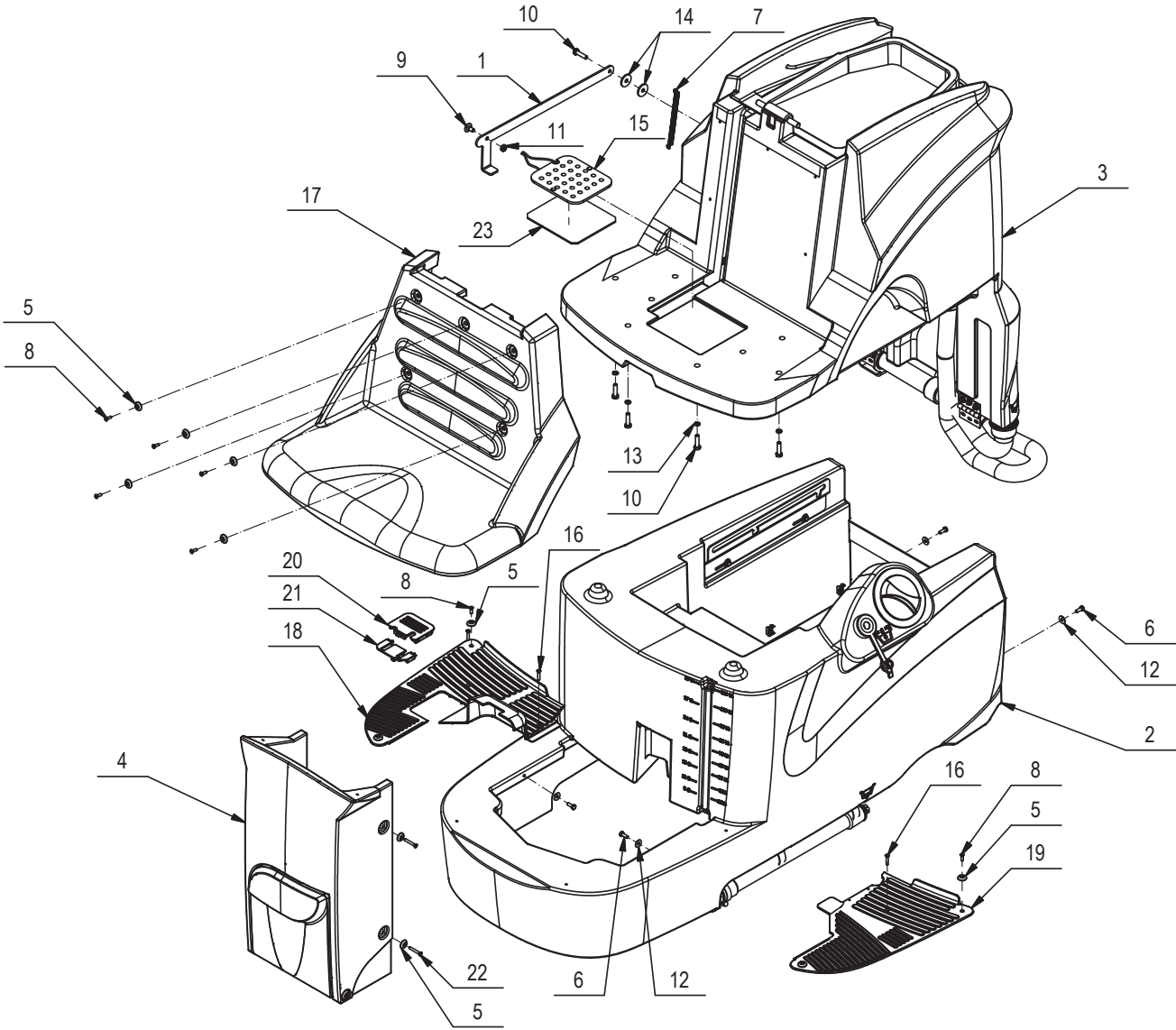


# TRACTION DRIVE ASSEMBLY PARTS LISTING

Item#	Part #	Description
1	E20636	Bearing Retainer
2	E20578	Bracket
3	E20024	Traction Drive Sprocket Axle
4	E88189	Traction Motor 24VDC 400W ASM
4.1	E88190	Carbon Brush Holder ASM
4.1.1	E20163	Carbon Brush Holder
4.1.2	E81973	Carbon Brush
4.1.3	E20164	Carbon Brush Holder Cap
4.2	E20165	Traction Motor 24VDC 400W
4.3	E20166	Traction Motor Gear Box
5	E22208	Bearing Hub
6	E20045	Motor Mount Plate
7	E22226	Brake Shoe
8	E22249	Traction Motor Support Bracket
9	E81915	Flat Washer M8.2x32x4 Zinc
10	E83547	M6x16 Bolt, Zinc Hex Head
11	E82772	Hex Bolt M6x20 Zinc
12	E83424	Master Chain Link
13	E81694	Shaft Key
14	E20233	Shaft Key
15	E88020	Bearing

Item#	Part #	Description
16	E81917	Hex Bolt M8x20 Zinc
17	E83833	Hex Bolt M8x25 Zinc
18	E83801	Hex Bolt M8x35 Zinc
19	E20240	Hex Bolt M10x25 Zinc
20	E81735	Hex Bolt M12x35 Zinc
21	E20289	Soc Hd Cap Screw M10x30 Zinc
22	E83656	Hex Nut, M8x6.5 Zinc
23	E20249	Nyloc Hex Nut, M12x15 Zinc
24	E82798	Flat Washer, M6x18x1.5 Zinc
25	E82774	Lock Washer, M6 Zinc
26	E83404	Flat Washer M9x24x2.5 Zinc
27	E83704	Lock Washer M8x13x2.2 Zinc
28	E82773	Flat Washer M10x21x2 Zinc
29	E83948	Lock Washer M10x18x2.2 Zinc
30	E20524	Standoff
31	E20131	Sprocket
32	E22308	Chain Guard
33	E88191	Flange Bearing
34	E22315	Flat Hd Soc Machine Screw M6x14 Zinc
35	E22323	Chain
36	E22343	Wheel 220 OD x 80 W

# TANK ASSEMBLIES DIAGRAM

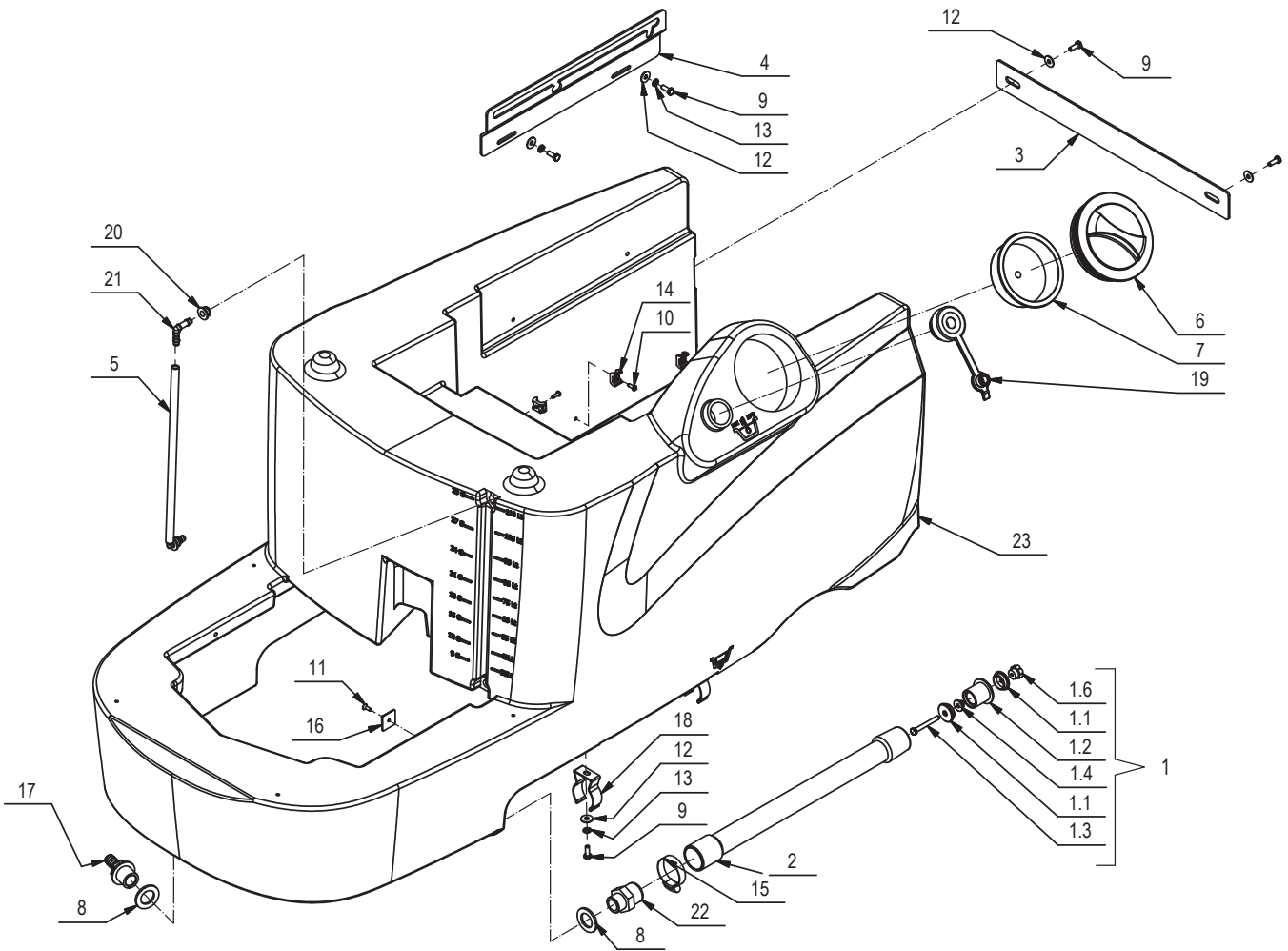


# TANK ASSEMBLIES PARTS LISTING

Item#	Part #	Description
1	E22268	Lift Brace
2	E22276	Solution Tank - Gray
3	E22277	Recovery Tank - Red
4	E22278	Steering Column Cover - Red
5	E83850	Flat Washer M5x20 SS
6	E83547	M6x16 Bolt, Zinc Hex Head
7	E82691	Spring
8	E83839	Oval Hd Phil Machine Screw M5x16 Zinc
9	E20235	Carriage Bolt M8x16 Zinc
10	E83802	Hex Bolt M8x30 Zinc
11	E82808	Hex Jam Nut, M8X5 Zinc
12	E82798	Flat Washer, M6x18x1.5 Zinc

Item#	Part #	Description
13	E83704	Lock Washer M8x13x2.2 Zinc
14	E83832	Flat Washer M8.5x30x3 Nylon
15	E83165	Safety Switch
16	E22314	Flat Hd Phil Machine Screw M5x25 Zinc
17	E22349	Seat
18	E22375	Foot Plate - Right
19	E22376	Foot Plate - Left
20	E22377	Bezel - Rear, Accelerator Pedal
21	E22378	Bezel - Front, Accelerator Pedal
22	E22390	Oval Hd Phil Machine Screw M5x35 Zinc
23	E22391	Pad

# SOLUTION TANK ASSEMBLY DIAGRAM



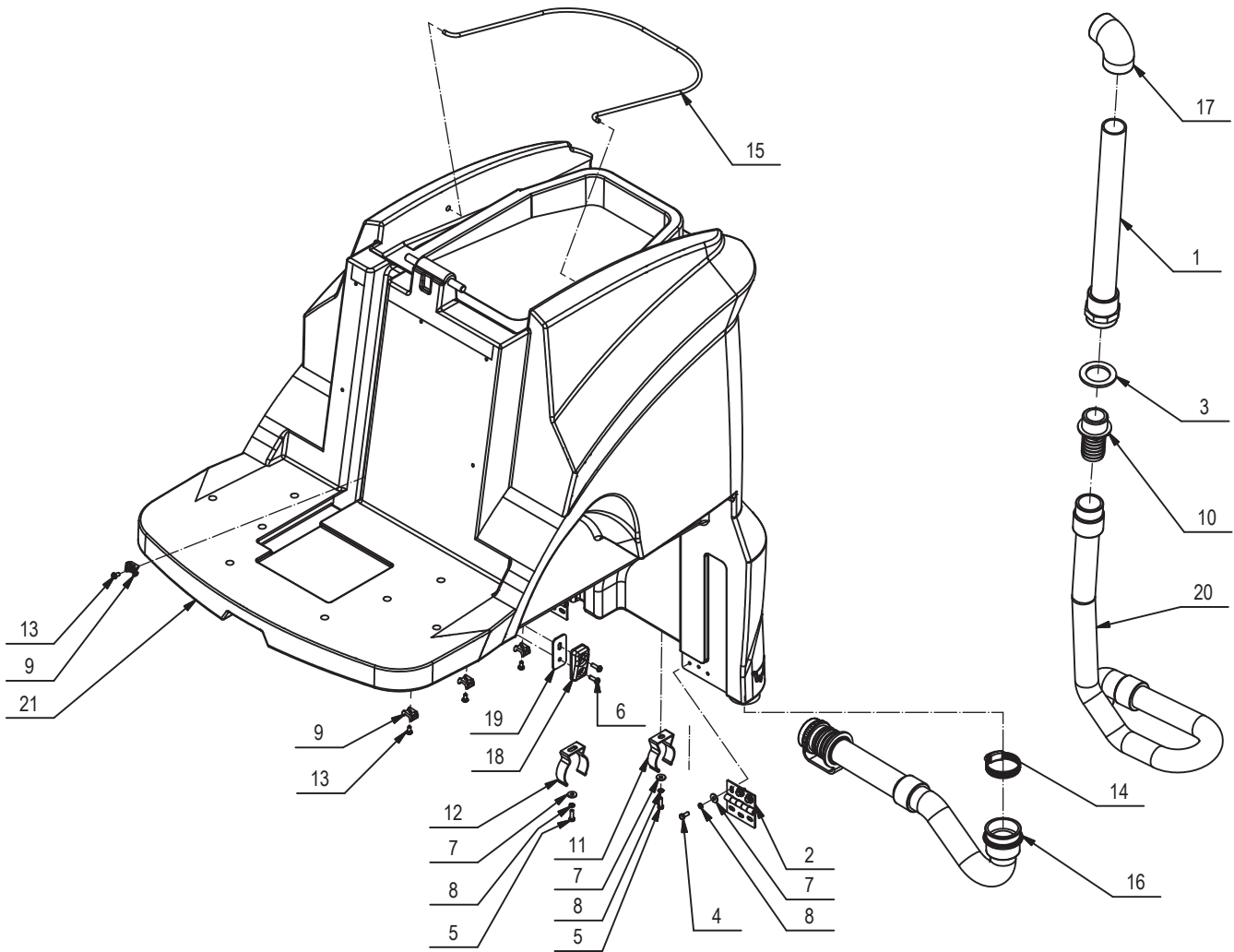


# SOLUTION TANK ASSEMBLY PARTS LISTING

Item#	Part #	Description
1	E12648	Swell Plug ASM
1.1	E22283	Flanged Washer
1.2	E22284	Swell Plug Body
1.3	E83933	Hex Bolt M6x50 SS
1.4	E81352	Hex Nut, M6x6 SS
1.5	E83799	Flat Washer M6.6x18x2 SS
1.6	E22302	Knob, M6
2	E82709	Drain Hose
3	E22251	Strap
4	E22252	Lift Brace Bracket
5	E22254	Tubing, PVC, M12 OD x M8 ID x 326 LG
6	E82429	Cap
7	E82612	Filter
8	E22286	Seal
9	E83547	M6x16 Bolt, Zinc Hex Head

Item#	Part #	Description
10	E83838	Screw, Flat Hd M4x15 Zinc
11	E83796	Screw, Pan Hd Phil Self Tap M4.2x16 Zinc
12	E82798	Flat Washer, M6x18x1.5 Zinc
13	E82774	Lock Washer, M6 Zinc
14	E22299	Cable Tie Holder
15	E83966	Hose Clamp
16	E81619	Cable Tie Holder
17	E22303	Fitting, Threaded Hose Barb
18	E81786	Hose Clip
19	E20185	Cap
20	E88717	Grommet, Push-In, M13 x M8
21	E22328	Fitting, Barbed Elbow
22	E22383	Fitting, Threaded Hose Barb
23	E22276	Solution Tank Assembly - Gray

# RECOVERY TANK ASSEMBLY DIAGRAM

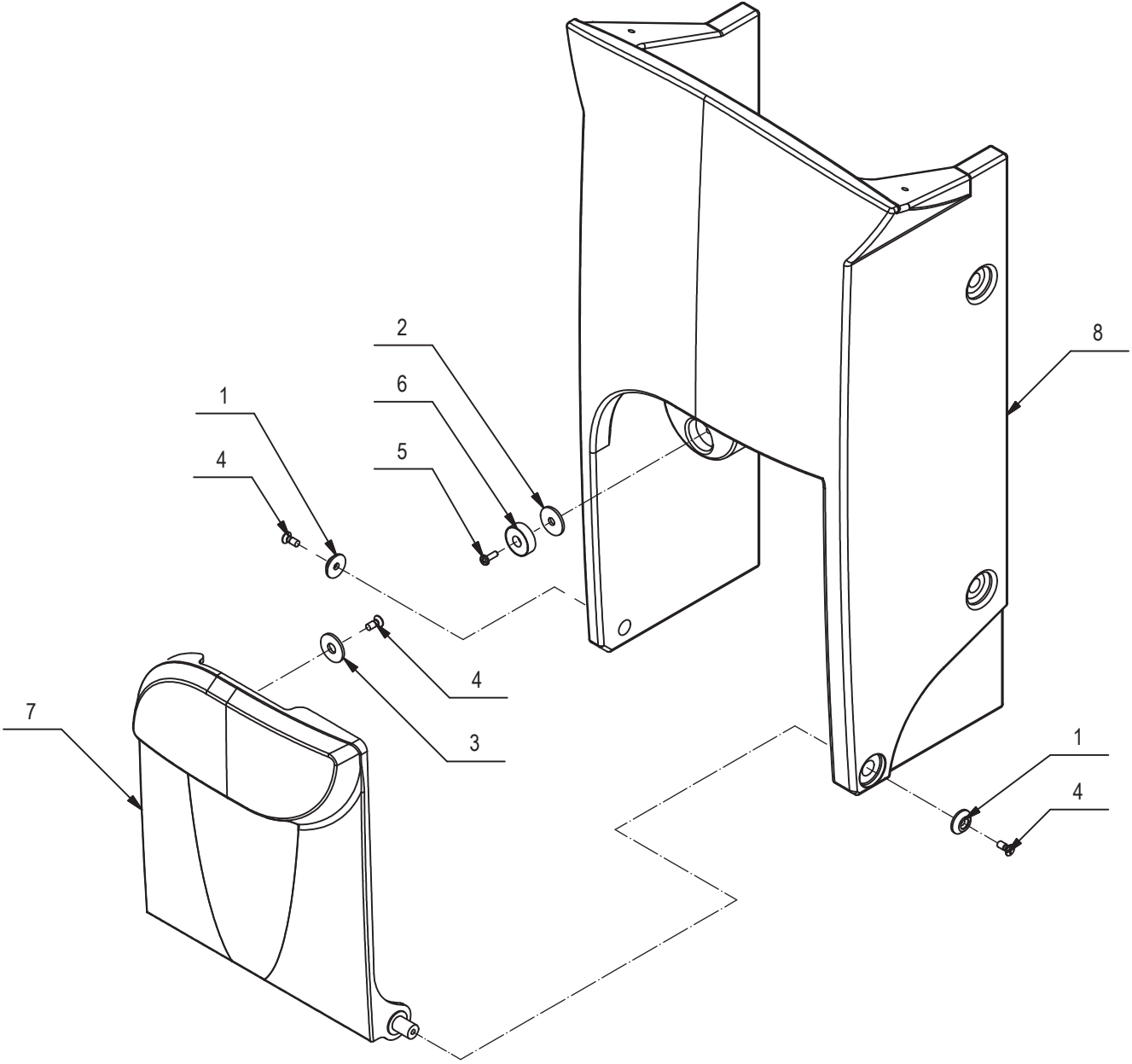


# RECOVERY TANK ASSEMBLY PARTS LISTING

<b>Item#</b>	<b>Part #</b>	<b>Description</b>
1	E22266	Stand Pipe
2	E83697	Hinge CRS/DRS
3	E85764	Gasket
4	E83665	Hex Bolt M5x12 Zinc
5	E83836	Hex Bolt M5x16 Zinc
6	E22292	Pan Hd Phil Machine Screw M5x16 Zinc
7	E20121	Flat Washer M5x15x1.5 Zinc
8	E20123	Lock Washer M5x1.6 Zinc
9	E22299	Cable Tie Holder
10	E85763	Connector
11	E81786	Hose Clip

<b>Item#</b>	<b>Part #</b>	<b>Description</b>
12	E87296	Drain Hose Clip
13	E20613	Pan Hd Phil Machine Screw M5x10 Zinc
14	E82695	Hose Clamp
15	E22347	Brace, Hoop
16	E22369	Drain Hose ASM
17	E22372	Fitting, Elbow
18	E22373	Guide
19	E22384	Shim Plate
20	E22389	Vacuum Hose
21	E22277	Recovery Tank Assembly - Red

# STEERING COLUMN HOUSING ASSEMBLY DIAGRAM

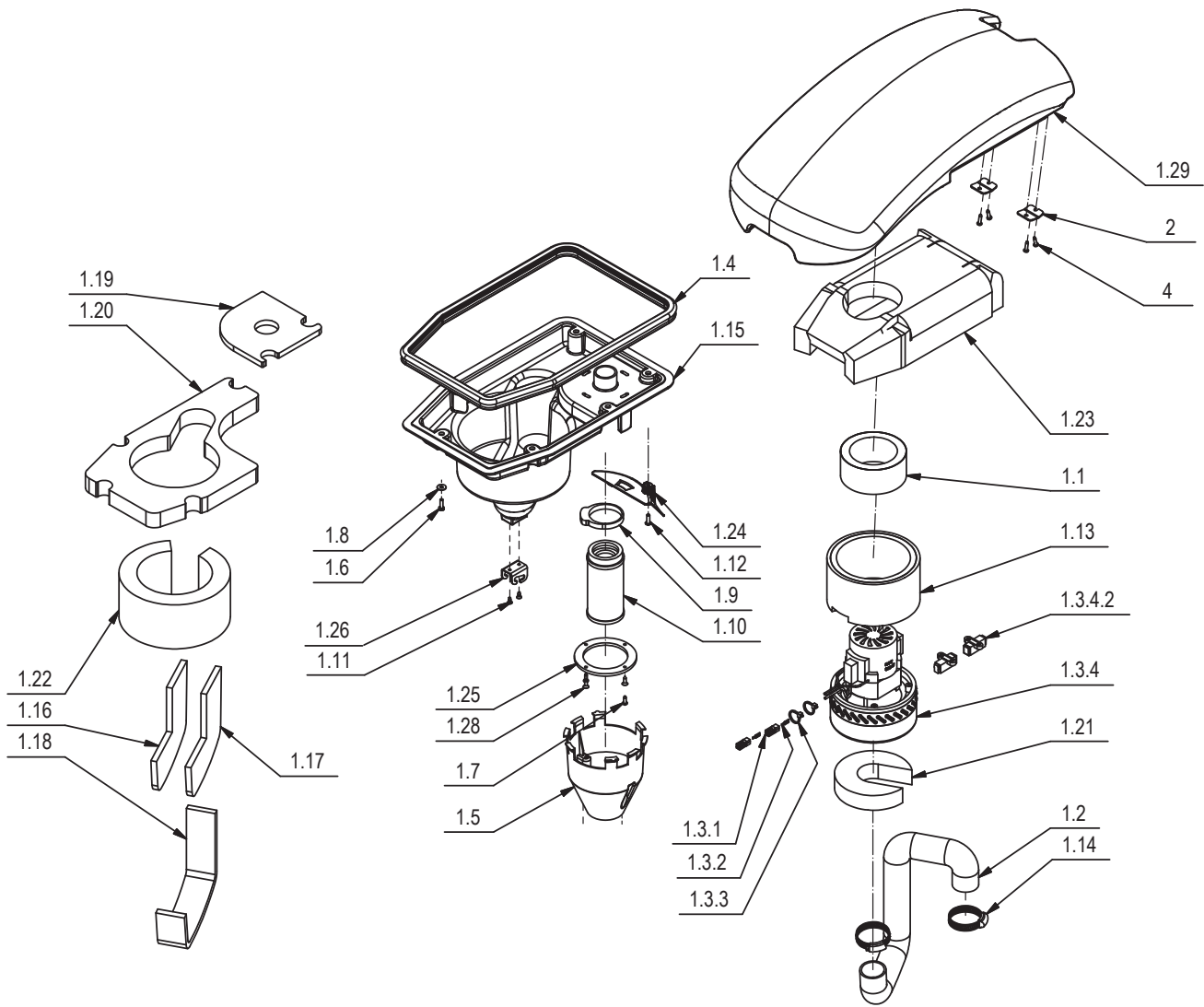


# STEERING COLUMN HOUSING ASSEMBLY PARTS LISTING

<b>Item#</b>	<b>Part #</b>	<b>Description</b>
1	E83850	Flat Washer M5x20 SS
2	E83278	Flat Washer M6.5x24x2 Zinc
3	E83404	Flat Washer M9x24x2.5 Zinc
4	E20468	Flat Hd Phil Machine Screw M5x12 Zinc

<b>Item#</b>	<b>Part #</b>	<b>Description</b>
5	E22013	Pan Hd Phil Machine Screw M4x12 SS
6	E20307	Magnet
7	E22348	Door
8	E22278	Steering Column Cover Assembly - Red

# VACUUM ASSEMBLY DIAGRAM

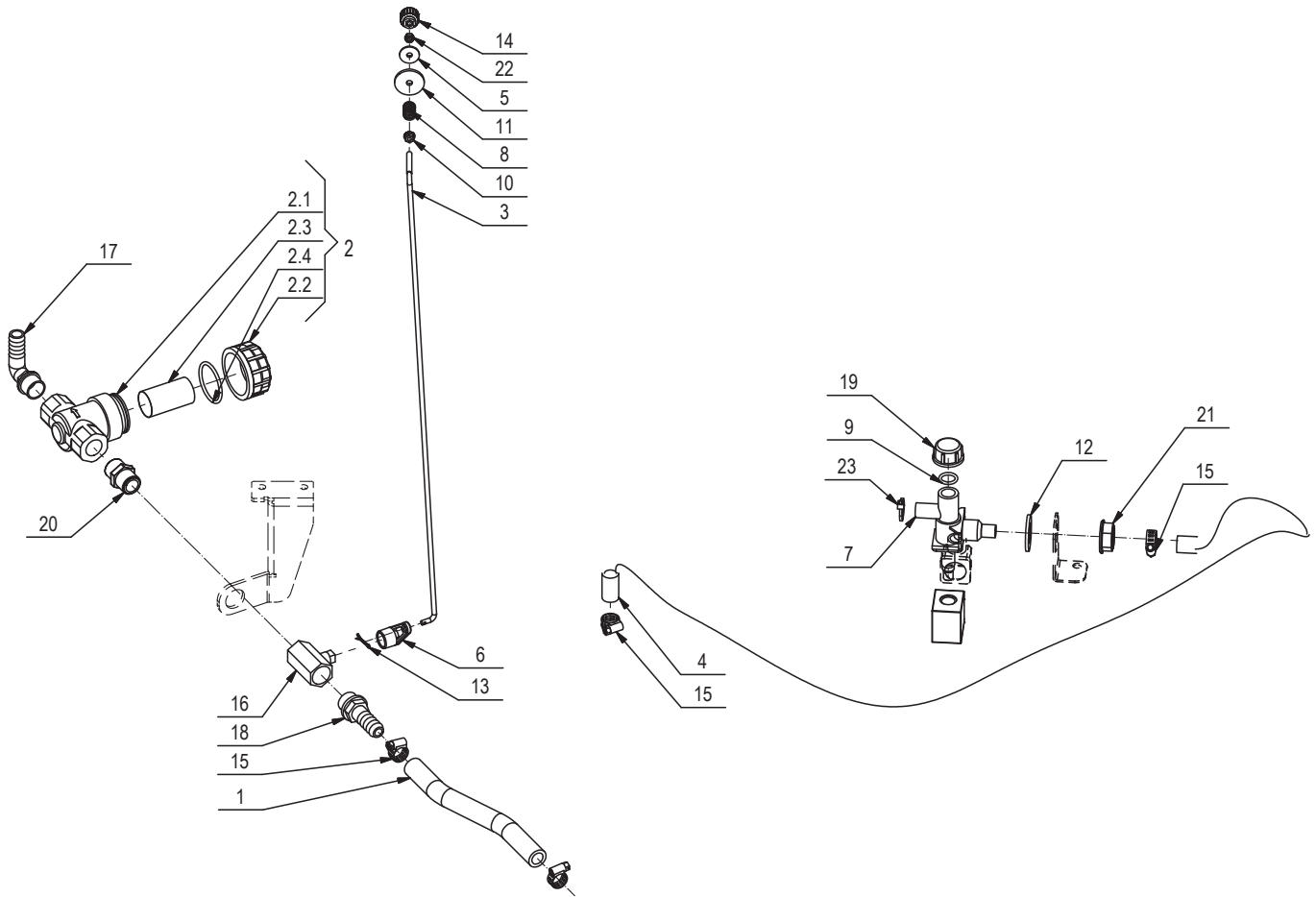


# VACUUM ASSEMBLY PARTS LISTING

Item#	Part #	Description
1.1	E20440	Sound Deadening Foam
1.2	E88290	Hose, Vacuum 1-1/2" x 22-1/4"
1.3.1	E83897	Connector, Electrical Housing 30A
1.3.2	E83883	Lug, Electrical 30A
1.3.3	E83935	Wire Tie
1.3.4	E88291	Vacuum Motor 24VDC 310W
1.3.4.2	E22324	Carbon Brush - Vacuum Motor
1.4	E22273	Gasket
1.5	E81006	Vacuum Splash Guard
1.6	E20084	Hex Bolt M5x16 SS
1.7	E20106	Screw, Pan Hd Phil Self Tap M4.2x13 SS
1.8	E20122	Flat Washer M5 x 15 x 1.5 SS
1.9	E81710	Hose Clamp
1.10	E88292	Filter, Cage
1.11	E22076	Oval Hd Phil Machine Screw M4x10 SS
1.12	E20298	Soc Button Head Screw M5x16 SS
1.13	E20652	Sound Deadening Foam
1.14	E82695	Hose Clamp

Item#	Part #	Description
1.15	E20384	Vacuum Motor Cover
1.16	E20266	Sound Deadening Foam
1.17	E20178	Sound Deadening Foam
1.18	E20179	Sound Deadening Foam
1.19	E20180	Sound Deadening Foam
1.20	E20181	Sound Deadening Foam
1.21	E20182	Sound Deadening Foam
1.22	E20183	Sound Deadening Foam
1.23	E20184	Sound Deadening Foam
1.24	E20191	Deflector
1.25	E20305	Mounting Ring
1.26	E22075	Hook, Vac Lid Bale
1.28	E22381	Screw, Pan Hd Phil Self Tap M4.2x16 SS
1.29	E22395	Recovery Tank Cover
2	E20265	Plate
3	E22331	Cable Kit - Vacuum
4	E22382	Screw, Pan Hd Phil Self Tap M4.2x16 SS

# SOLUTION FLOW ASSEMBLY DIAGRAM



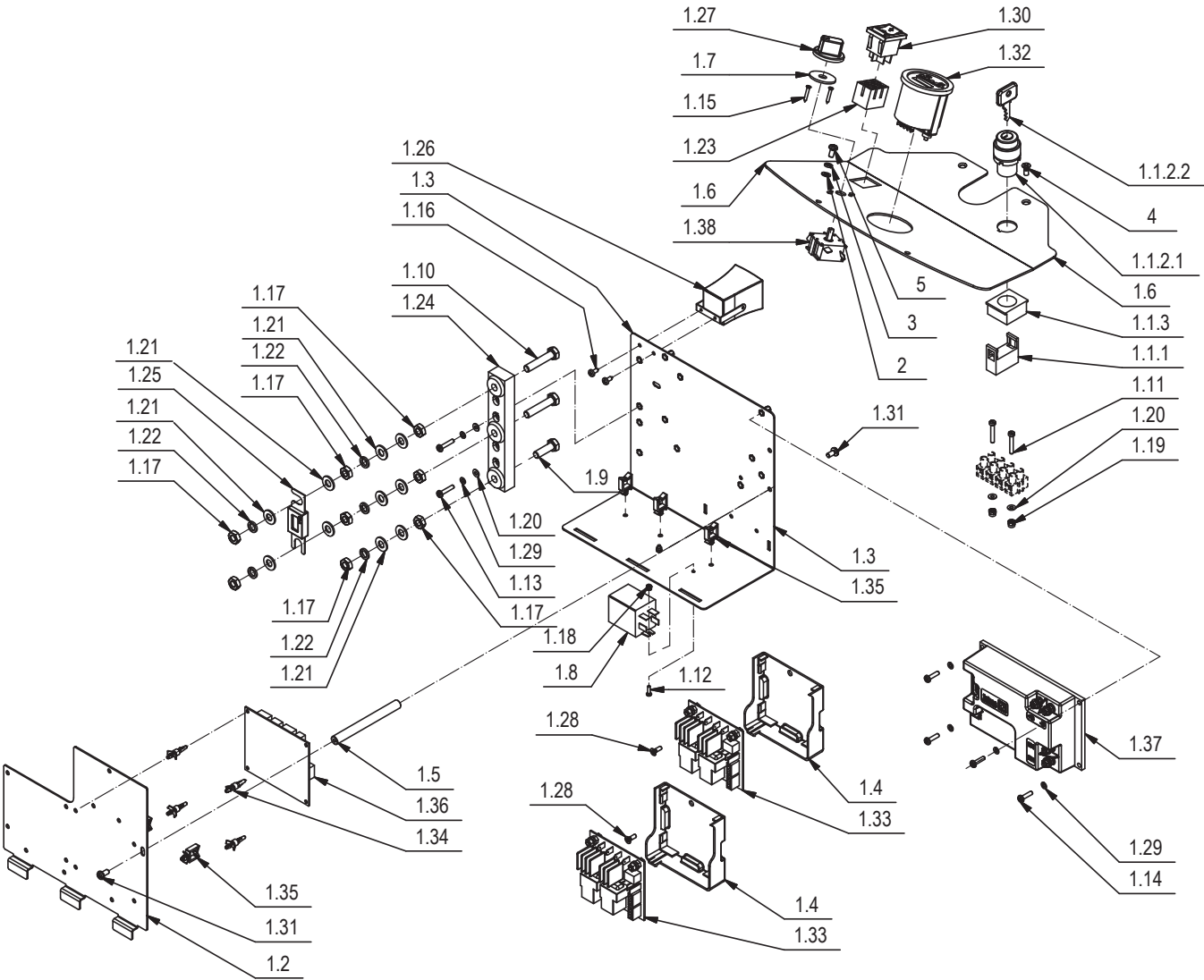


# SOLUTION FLOW ASSEMBLY PARTS LISTING

Item#	Part #	Description
1	E22206	Tubing, PVC, M20 OD x M13 ID x 220 LG
2	E88207	Filter Assembly, Inline Double Female 1/2" NPT
2.1	E20512	Filter, Body
2.2	E20144	Cap
2.3	E88218	Filter Cartridge
2.4	E20145	O-Ring
3	E22253	Connecting Rod
4	E81348	Hose
5	E83850	Flat Washer M5x20 SS
6	E82705	Valve Lever
7	E82322	Solenoid Valve, 24v 10w 3-Port Nylon
8	E82309	Spring, 11.8x1.2x15mm Zinc Compression
9	E83617	O-Ring, 14x2.5mm Buna-N
10	E88010	Hex Nut, M5

Item#	Part #	Description
11	E83798	Flat Washer M6x30x3 PVC Black
12	E20253	Flat Washer M21x60x3 Nylon
13	E83605	Split pin
14	E22301	Knob, Solution Flow Control
15	E85762	Hose Clamp
16	E82366	Valve
17	E81454	Barbed Elbow
18	E88400	Fitting
19	E83616	Cap, 1/2" NPT Nylon
20	E22304	Fitting, Threaded Nipple
21	E20433	Ring Nut 1/2"
22	E22321	Hex Nut, M5x4 Zinc
23	E83935	Wire Tie

# ELECTRIC COMPONENTS ASSEMBLY DIAGRAM

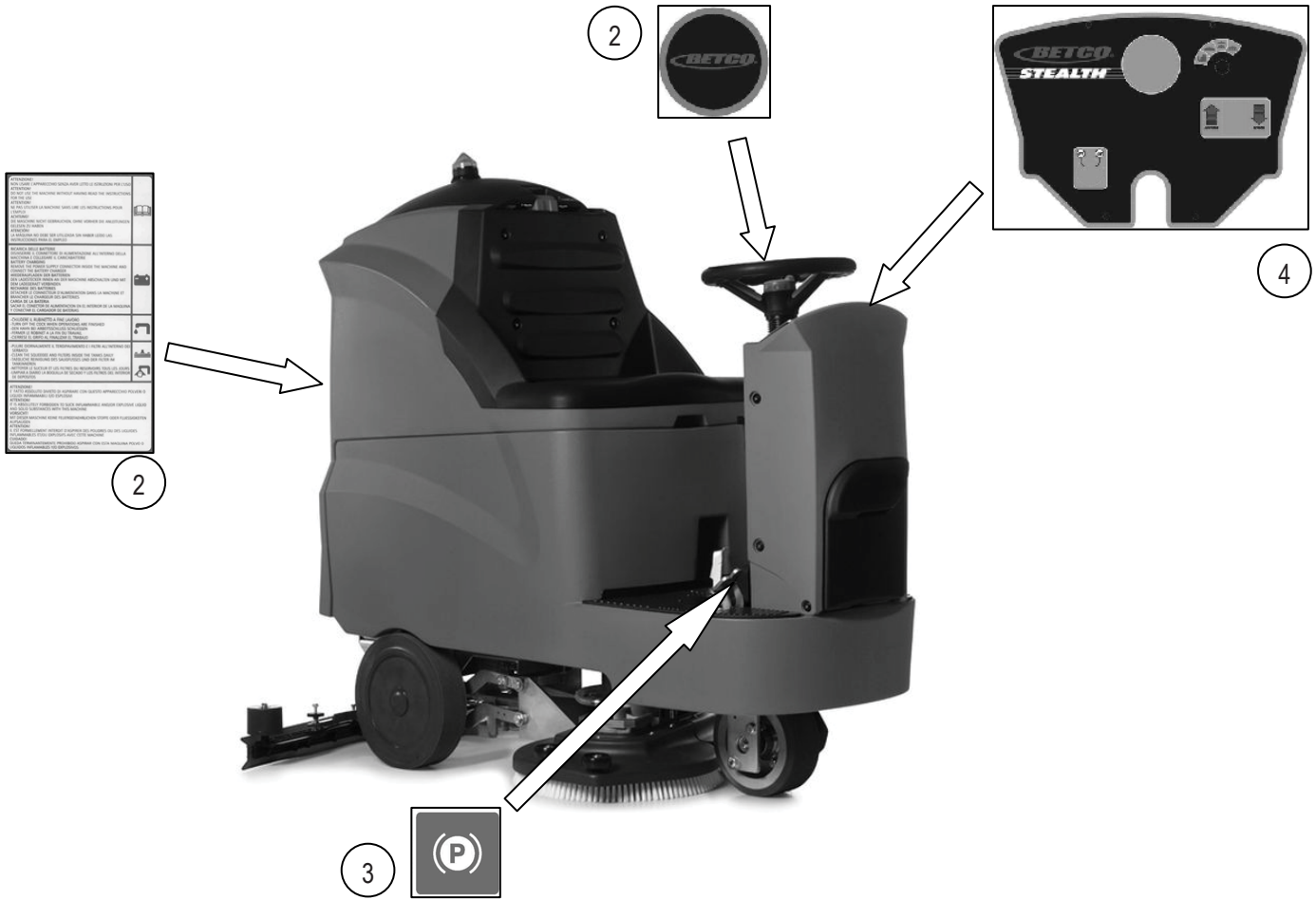


# ELECTRIC COMPONENTS ASSEMBLY PARTS LISTING

Item#	Part #	Description
1.1	E82351	Key Switch Assembly w/Keys
1.1.1	E83173	Contact, Key Switch
1.1.2	E83316	Key Switch
1.1.2.1	E83316	Key Switch
1.1.2.2	E83315	Switch Key
1.1.3	E81358	Switch Flange
1.2	E22236	Electrical Panel
1.3	E22237	Electrical Panel
1.4	E22077	Support, Circuit Board
1.5	E22240	Standoff
1.6	E22279	Instrument Panel
1.7	E22285	Foam Gasket
1.8	E83160	Relay 24VDC 30A
1.9	E20096	Hex Bolt M8x25 SS
1.10	E20097	Hex Bolt M8x40 SS
1.11	E22290	Cheese Hd Slot Machine Screw M4x25 SS
1.12	E20244	Pan Hd Phil Machine Screw M3x10 Zinc
1.13	E22291	Pan Hd Phil Machine Screw M4x20 SS
1.14	E20392	Pan Hd Phil Machine Screw M4x16 Zinc
1.15	E22293	Screw, Pan Hd Phil Self Tap M2.9x19 SS
1.16	E22294	Screw, Pan Hd Phil Self Tap M3.9x10 SS
1.17	E83672	Hex Jam Nut, M8x5 SS
1.18	E81673	Hex Nyloc Nut, M3 Zinc
1.19	E83867	Nyloc Hex Nut, M4x6 Zinc

Item#	Part #	Description
1.20	E20292	Flat Washer M4x9x0.8 Zinc
1.21	E20124	Flat Washer M8x17x1.6 SS
1.22	E20252	Lock Washer M8x13x2.2 SS
1.23	E22297	Electrical Socket
1.24	E22298	Fuse Block
1.25	E83170	Fuse, 80 Amp
1.26	E83177	Horn 24 VDC
1.27	E81463	Knob .6X35
1.28	E22313	Flat Hd Phil Machine Screw M4x12 Zinc
1.29	E20475	Lock Washer M4 Zinc
1.30	E82797	Switch
1.31	E20613	Pan Hd Phil Machine Screw M5x10 Zinc
1.32	E88293	Battery Discharge Indicator, Hour Meter
1.33	E88266	Relay Card
1.34	E22330	Panel Standoff
1.35	E22340	Cable Fastener
1.36	E22345	I-Drive Control Card
1.37	E22380	Traction Control Card
1.38	E22386	Selector Switch
2	E83879	Flat Washer M5x11x1 Zinc
3	E20123	Lock Washer M5x1.6 Zinc
4	E20468	Flat Hd Phil Machine Screw M5x12 Zinc
5	E20613	Pan Hd Phil Machine Screw M5x10 Zinc
6	E22374	Electrical Harness

# DECAL DIAGRAM

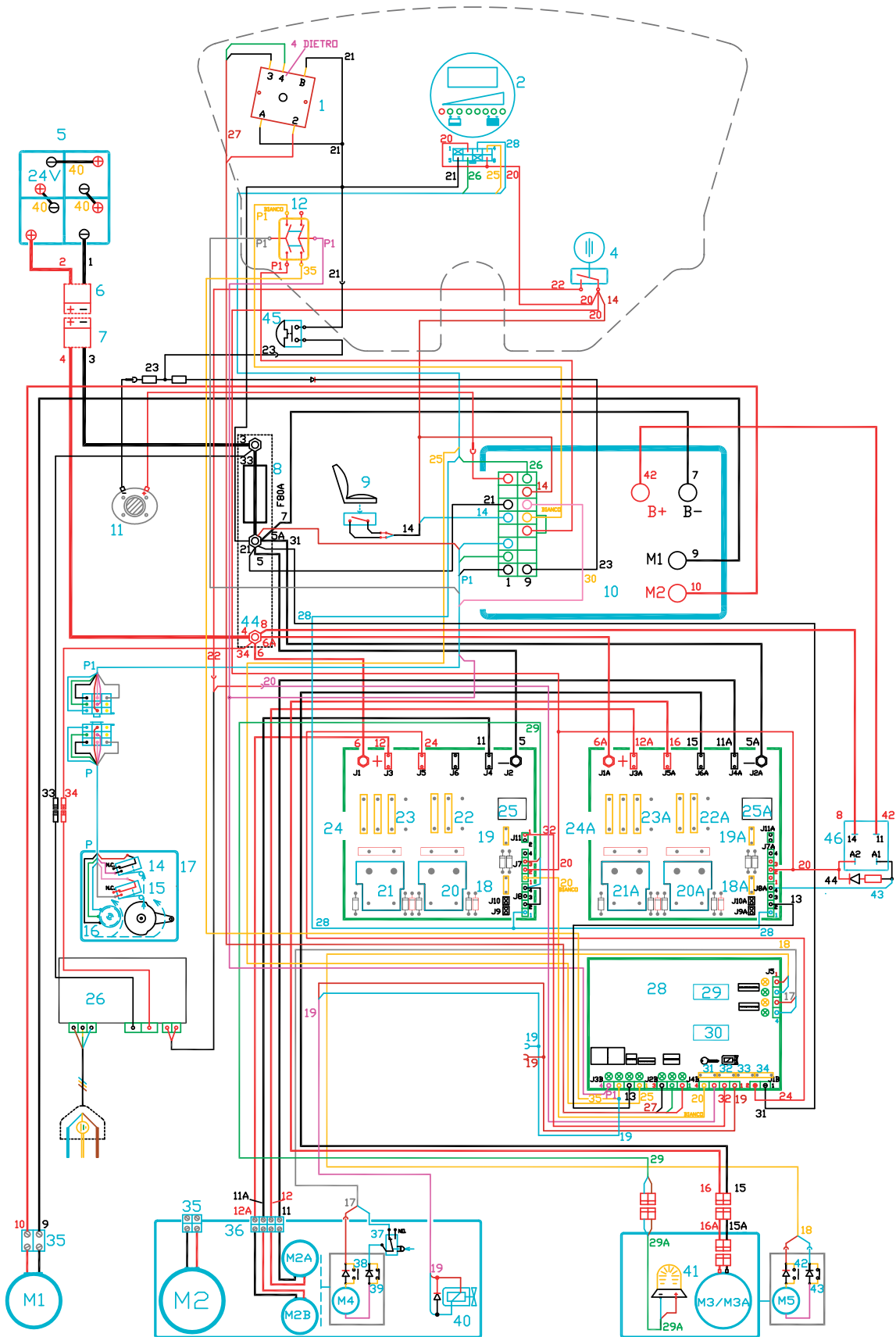


# DECAL PARTS LISTING

<b>Item#</b>	<b>Part #</b>	<b>Description</b>
1	E22307	Decal, Rear
2	E22332	Decal, Steering Wheel

<b>Item#</b>	<b>Part #</b>	<b>Description</b>
3	E22371	Decal, Parking Brake
4	E22396	Decal, Instrument Panel

# ELECTRICAL DIAGRAM



# ELECTRICAL PARTS LISTING

Item#	Description	Item#	Description
1	4 Position Switch	28	Control Card
2	Hour Meter/Battery Discharge Indicator	2 9	Relay - Squeegee Lift
4	Kew Switch	30	Relay - Brush Deck Lift
5	Batteries	31	Fuse - General
6	Anderson Connector Red 175A	32	Fuse - Solenoid Valve
7	Anderson Connector Red 175A	33	Fuse - Squeegee Actuator
8	Fuse, 80A	34	Fuse - Brush Actuator
9	Safety Switch - Operator Seat	35	Terminal
10	Chopper Card	36	Terminal
11	Backup Alarm	37	Microswitch - Stop Actuator Brush Base
12	Switch - Forward/Reverse	38	Microswitch - Maximum Base Up
14	Microswitch - Brush Drive	39	Microswitch - Maximum Pressure Base Down
15	Microswitch - Traction Drive	40	Solenoid Valve
16	Potentiometer	41	Safety Strobe Light - Optional
17	Forward Pedal	42	Microswitch - Squeegee Up
18-18A	Fuse, 80A	43	Microswitch - Squeegee Down
19-19A	Fuse, 80A	44	Fuse Box
20	Relay - General	45	Push Button - Horn
20A	Relay - Vacuum Motor	46	Relay
21-21A	Relay - Brush Motor	M1	Traction Motor
22	Fuse - General	M2A-M2B	Brush Motor
22A	Fuse - Vacuum Motor	M3	Vacuum Motor
23-23A	Fuse - Brush Motor	M4	Actuator - Brush Deck
24-24A	Check Card	M5	Actuator - Squeegee
25-25A	Relay		

# PROGRAMMING CONSOLE CONFIGURATIONS AND SETTINGS

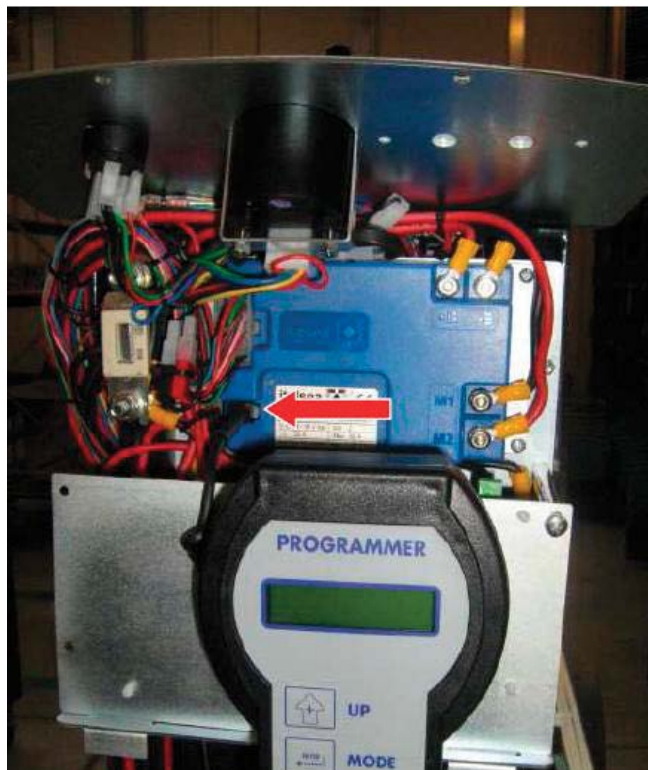
The programming controller allows the technician to:

1. Program the chopper card to ensure the correct behavior of the machine.
2. Test the electrical components and circuit relative to the traction drive system.
3. Read the alarms to easily identify the error codes.

The correct sequence to connect the programming controller is:

1. TURN OFF the machine by turning the main key switch.
2. Connect the controller to the chopper card using the connector on the controller.
3. Turn on the machine and operate the controller.
4. When finished, TURN OFF the machine by turning the main key switch.
5. Disconnect the controller from the machine.

**WARNING:** Connecting or disconnecting a controller in the wrong sequence may damage the card or the controller.





## ALARM TABLE

Message	Alarm	What to do
<b>ALARM A1 FW Switch ON</b>	Forward micro-switch on in turning on.	Put the potentiometer in idle position and verify that the forward micro-switch is open.
<b>ALARM A2 BW Switch ON</b>	Backward micro-switch on in turning on.	Let the pedal stay in idle position and open the backward micro-switch.
<b>ALARM A3 Pot. FAULT</b>	Potentiometer error	Check the potentiometer harness.
<b>ALARM A4 Ref OUT Neutral</b>	Potentiometer not correctly positioned	Put the potentiometer in the idle position or if it already is in the right position, make the potentiometer programming.
<b>ALARM A5 Over temperature</b>	Thermal protection	Wait for 5 minutes and then verify the traction motor absorption rate.
<b>ALARM A6 POWER STAGE</b>	Damaged power stage	Replace the chopper card.
<b>ALARM A7 OVERCURRENT</b>	Overcurrent	Check the motor cables: If connections are regular and repeat the alarm, replace the chopper card.
<b>ALARM A8 POWER FUSE/RELAY</b>	Power fuse or internal contactor damaged	Check the fuse on the + battery and wiring, replace the chopper card if it persists (General relay damaged).
<b>ALARM A9 UNDERVOLTAGE</b>	Undervoltage	Check the batteries for poor voltage.
<b>ALARM A10 OVERVOLTAGE</b>	Overvoltage	Battery voltage greater than 45V: check battery status
<b>ALARM A11 Overload Current</b>	Current protection	Check the motor current and possibly trim the electronic current control
<b>ALARM A12 DISABLE ON</b>	Disabling active	Check the status of the disabled.
<b>ALARM A13 KEY-OFF</b>	Turn off sequence active	Check the wiring on the ignition power key.
<b>ALARM A14 EEPROM FAIL</b>	E <sup>2</sup> prom data reading failed	Check the settings: if the alarm is repeated, replace the chopper card.

# CHANGING PARAMETERS

Follow these instructions to change the parameter list:

1. Connect the programming controller to the machine as previously described.
2. Press the “MODE” button.
3. The first parameter description will appear. Pressing the “UP” or “DOWN” arrow will scroll through the parameter list.
4. Once on the parameter that needs to be changed, press the “MODE” button to enter into the parameter setting. While changing a parameter, the description will be blinking.
5. Change the value using the “UP” or “DOWN” arrows. Once the desired value is reached, press the “MODE” button to confirm the changes.

<b>PARAMETERS:</b>		
<b>PARAMETER</b>	<b>DEFAULT</b>	<b>MMG</b>
RESET TO DEFAULT	<b>DISABLE</b>	<b>DISABLE</b>
ACCELERATION RAMP	3	<b>3</b>
REVERSE RAMP	1,5	<b>1,5</b>
NEUTRAL RAMP	1	<b>1</b>
FORWARD SPEED	100	<b>100</b>
BACKWARD SPEED	60	<b>60</b>
MINIMUM SPEED	0	<b>0</b>
BATTERY VOLTAGE	24	<b>24</b>
SPEED REFERENCE	single-ended	<b>single-ended</b>
REF. DEADBAND	0,2	<b>50mV</b>
BRAKE DELAY	2	<b>0,5</b>
MULTIMODE SPEED	50	<b>50</b>
MULTIMODE CURRENT	25	<b>45</b>
BW SAFETY TIME	0	<b>0</b>
BW SAFETY SPEED	0	<b>0</b>
LOW BATTERY	19	<b>19</b>
TIMEOUT RUN AWAIT	0	<b>60</b>
RUN-AWAY	0	<b>14</b>
CURRENT LIMIT	45	<b>90</b>
RATED CURRENT	15	<b>25</b>
OVERLOAD TIME	60	<b>60</b>
5-J1 HW CONFIG	N.C. switch	<b>N.O. switch</b>
6-J1 HW CONFIG	N.O. switch	<b>N.C. switch</b>
11-J1 HW CONFIG	N.O. switch	<b>N.O. switch</b>
ENABLE ALARM 1	ENABLE	<b>ENABLE</b>
ENABLE ALARM 2	ENABLE	<b>ENABLE</b>
ENABLE ALARM 3	ENABLE	<b>ENABLE</b>
ENABLE ALARM 4	ENABLE	<b>ENABLE</b>
ENABLE ALARM 12	ENABLE	<b>DISABLE</b>
PASSWORD	0	<b>0</b>

# POTENTIOMETER SETTINGS

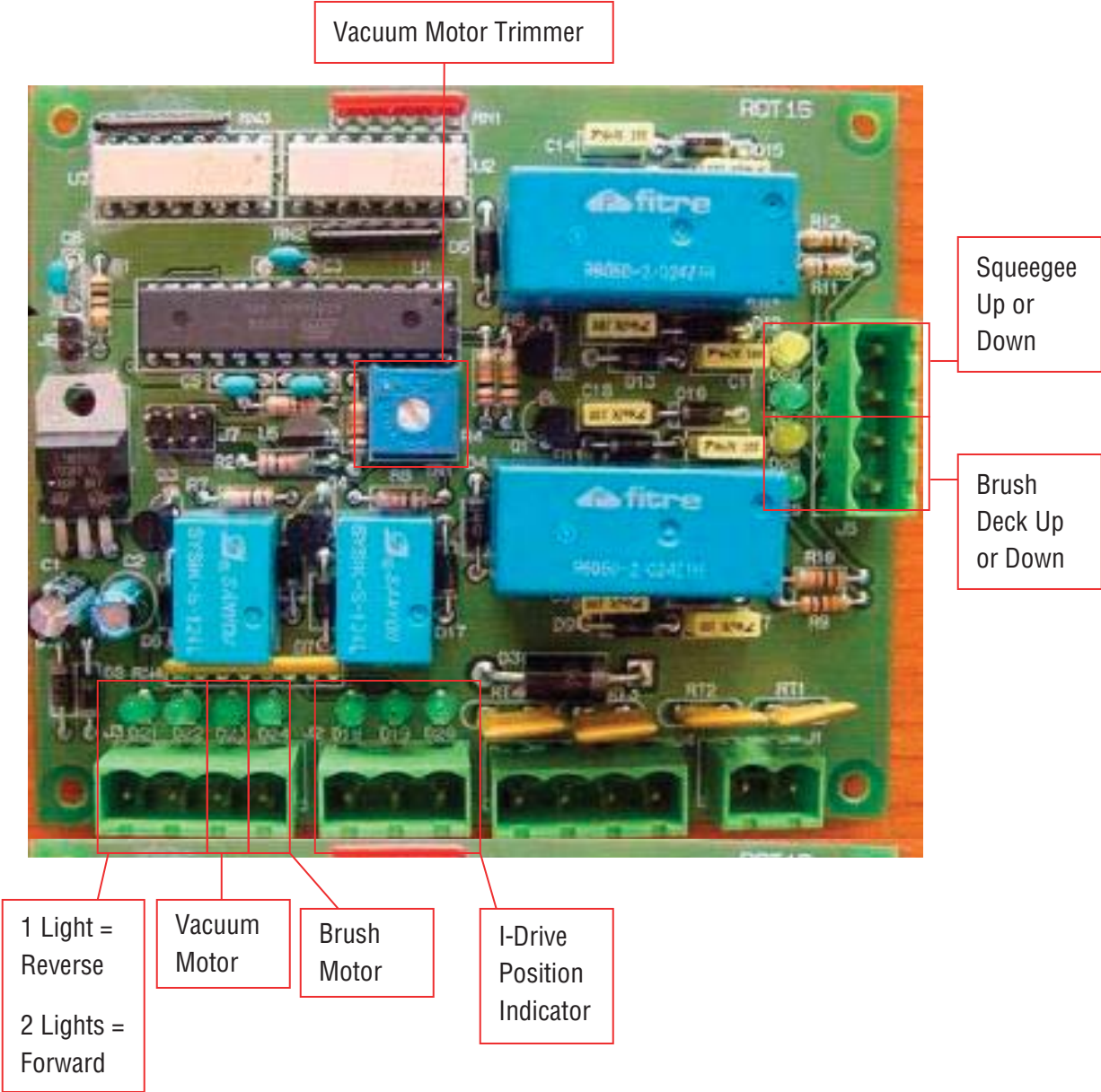
1. Ensure the machine is TURNED OFF.
2. Connect the controller to the traction card.
3. Turn on the machine.
4. Enter into the parameter list by pressing the “MODE” button on the controller.
5. Scroll down the list using the “DOWN” arrow until the parameter titled “Speed Reference” appears.
6. Press the “MODE” button to enter into the parameter and change the setting as described below:

<b>SPEED REFERENCE single-ended</b>	Select the “single-ended” option and confirm with “MODE”
<b>CALIBRATION Stop pos = 0.6 V</b>	Put the pedal in the idle condition and confirm its value using the “MODE” button.
<b>CALIBRATION Max pos = 2.7 V</b>	Press completely the potentiometer and confirm the value using the “MODE” button.

7. Turn off the machine.
8. Disconnect the programming consoler.
9. Turn on the machine and perform a functional test to verify the adjustment.

# I-DRIVE CONTROL CARD

The Intelligent-Drive control card is described below:



## HOUR METER/BATTERY DISCHARGE INDICATOR

When first turning on the machine, the following sequence of events should occur with the hour meter and battery discharge indicator:

1. One LED light corresponding to the settings should light up.
2. All of the LED's should then light up next.
3. The LED's that correspond to the correct charge of the battery should remain lit.
4. To check for the proper settings, turn on the machine and see which LED turns on first. If using wet cell batteries, the first yellow LED on the left side should light first.



5. If using AGM or GEL batteries, the fourth yellow light from the left side should light first.







# BETCO US WARRANTY POLICY

## 10 year coverage

Subject to the conditions stated below, Betco warrants parts and labor on rotationally molded polyethylene tanks/ housings and injection molded vacuum head assemblies to be free from defects in materials and workmanship for a period of ten years to the original purchaser.

## 3 Year Coverage

Subject to the conditions stated below, Betco warrants parts and labor on all other Betco components to be free from defects in materials and workmanship for a period of three years to the original purchaser.

## 1 Year Coverage

Subject to the conditions stated below, Betco offers a limited warranty on parts and labor on the following equipment: parts and accessories to be free from defects in materials and workmanship for a period of one year to the original purchaser.

- HF14 Upright Vacuum: #E88820-00
- Bac Pac Lite Vacuum: #85903-00
- FiberPRO® Floor Dryer: #85507-00
- WORKMAN™ Series Vacuums: #85024-00, #85025-00, #83012-00, #85027-00
- CV100T Vacuum: #85023-00
- All Tools and Accessories
- All Battery Chargers
- All Batteries are pro-rated for 1 year

### **Allowable Travel Time Warranty Reimbursement:**

Eligible equipment: All battery and propane powered equipment products. Warranty period: 90 days from date of sale to the original purchaser. A maximum 60 mile round trip at 44 cents per mile will be allowed for warranty consideration.

### **Propane Machine Warranty:**

Honda engines are warranted by Honda for a period of 2 years against manufacturer defects. Kawasaki engines are warranted by Kawasaki for a period of 2 years against manufacturer defects. All other components (except wear items)\* are warranted by Betco for a period of 3 years.

**\*Wear Items exempt from Warranty consideration include but may not be limited to: power cords, transport wheels, vacuum bags, belts, squeegee blades, pad drivers, clutch plates, handle grips, filters, screens, throttle cables, brushes and carbon brushes.**

Subject to the conditions and exceptions stated in this warranty, Betco warrants the Betco products to be free from defects in material and workmanship, under normal use and service, for the periods listed under the warranty policy to the original purchaser. At any time during the warranty period, Betco will furnish replacement parts for the Betco parts to the original purchaser. Such parts will be furnished and charged including transportation costs, to the original owner through any Betco authorized Service Distributor. If the original part is returned within the warranty policy period from date of delivery for inspection by Betco and is found to be defective the owner will be credited for the cost of replacement parts plus shipping and handling. Replacement parts that have become defective through wear or abuse are not included in this warranty.

This warranty does not apply to damage or defect caused by accident, misuse, negligence, fire, or to any Betco product which has been serviced or repaired by other than an authorized Betco Service Distributor or Betco factory personnel. This warranty is void if products are used for any purpose other than that which was intended. There are no other warranties expressed or implied. In no event shall Betco be liable for incidental or consequential damages or any damage to person or property. (Please note some states do not allow the exclusion or limitations for incidental and consequential damages)

