

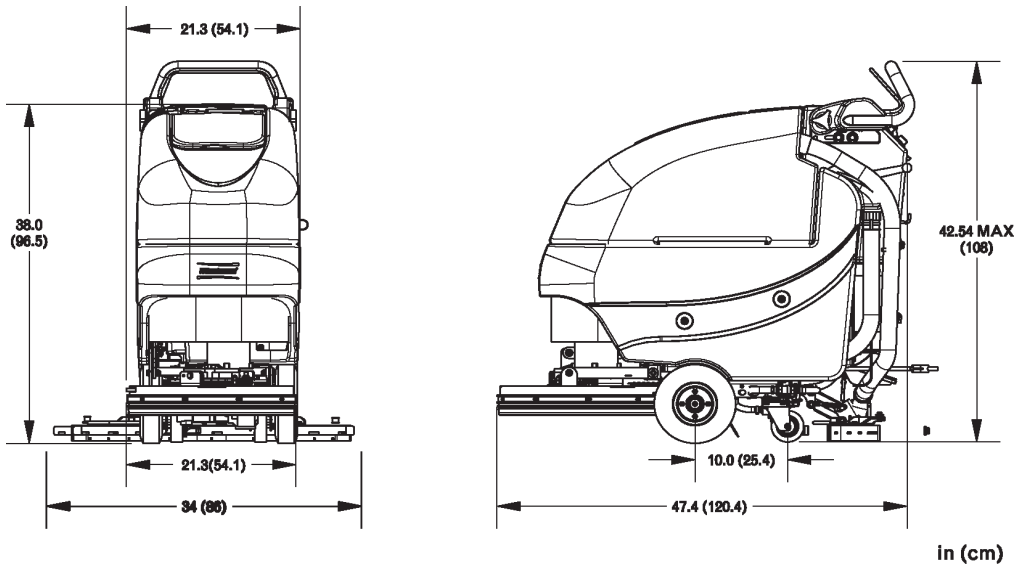
PHOENIX 20 FLOOR SCRUBBER BRUSH DRIVE



Technical Specifications

Model Phoenix 20 Floor Scrubber Brush Drive
Model No. 3336604QP / PHX20BD / PHX20BDQP / PHX20BDQP6

Current (Max)	32 amps
Battery Capacity (Lead Acid)	105Ah @20 hr
Battery Capacity (Gel)	95Ah @20 hr
Sound Level	69 dBA
Cleaning path width	20 in (51 cm)
Squeegee width	34 in (86 cm)
Theoretical productivity (Brush Drive)	15,000 ft ² /hr (1,394 m ²)
Working speed (Brush Drive)	1.7 mph (2.7 km per hr)
Transport speed	3 mph (4.8 km per hr)
Rated voltage	24 volts
Vacuum flow	65 cfm (110 m3/hr)
Vacuum waterlift	45 inches (112mbar)
Vacuum power	.60 HP (450 W)
Brush type	Disc
Brush motor(s) power	3/4 HP (560W)
Number of brushes	1
Brush RPM	180 RPM
Aqua-Stop equipped	Coming Soon
Solution capacity	12 Gal (45 liters)
Recovery capacity	13 Gal (49 liters)
Working Grade	2%
Weight with batteries	313 lbs (142 kg)
Weight without batteries	203lbs (92 kg)
Dimensions (LxWxH)	47.4 x 21.3 x 42.3 (120.4 x 54.1 107.4 cm)



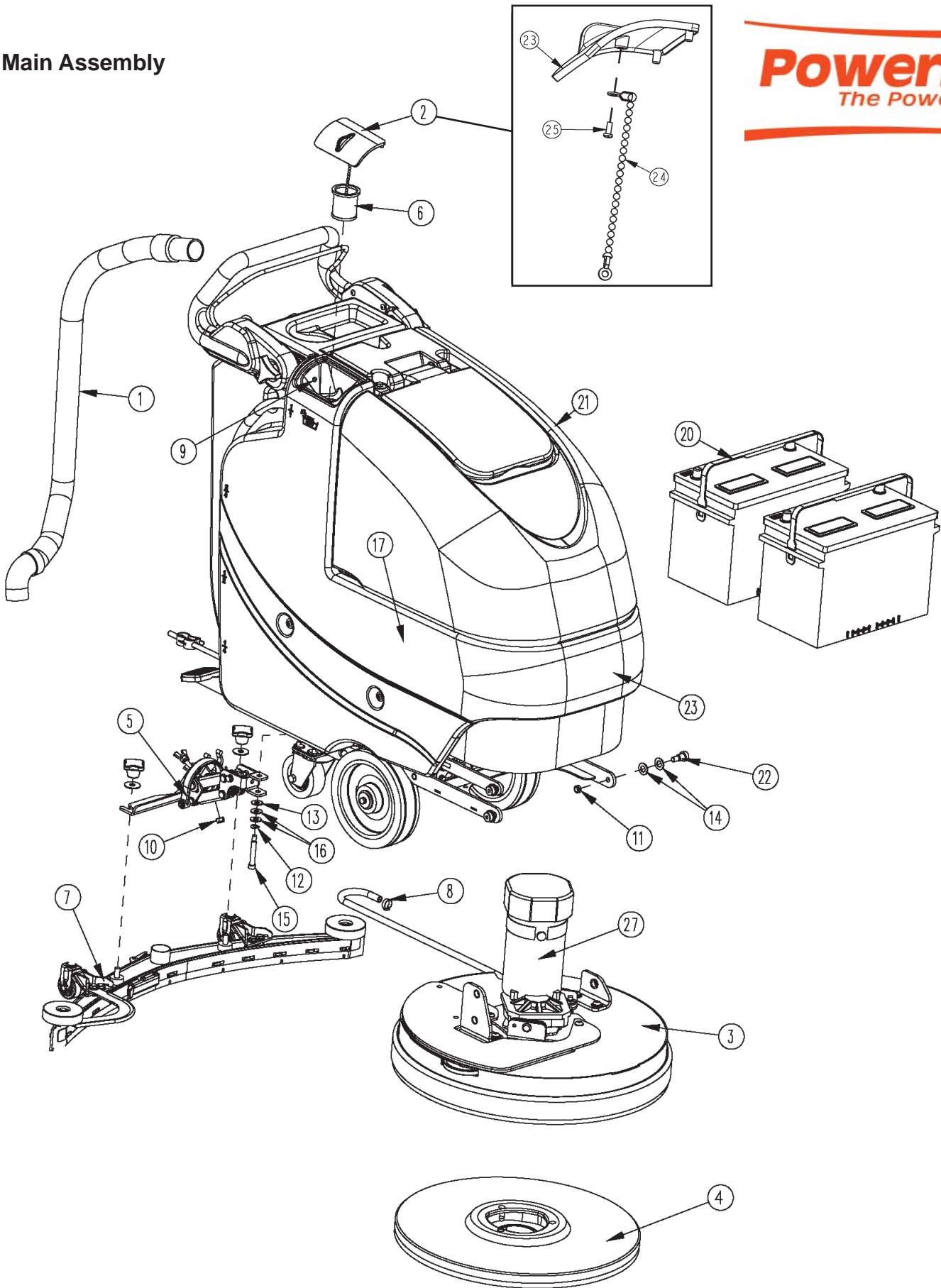
For Safety When Servicing or Maintaining Machine

- Stop on level surface.
- Disconnect the power to the machine by pulling the red Battery Connector located under the recovery tank near the batteries.
- Avoid moving parts. Do not wear loose jackets, shirts, or sleeves when working on machine.
- Avoid contact with battery acid. Battery acid can cause burns. When working on or around batteries, wear protective clothing and safety glasses. Remove metal jewelry. Do not lay tools or metal objects on top of batteries.
- Do not clean machine with a pressure washer.
- Authorized personnel must perform repairs and maintenance. Use PowerBoss supplied replacement parts.

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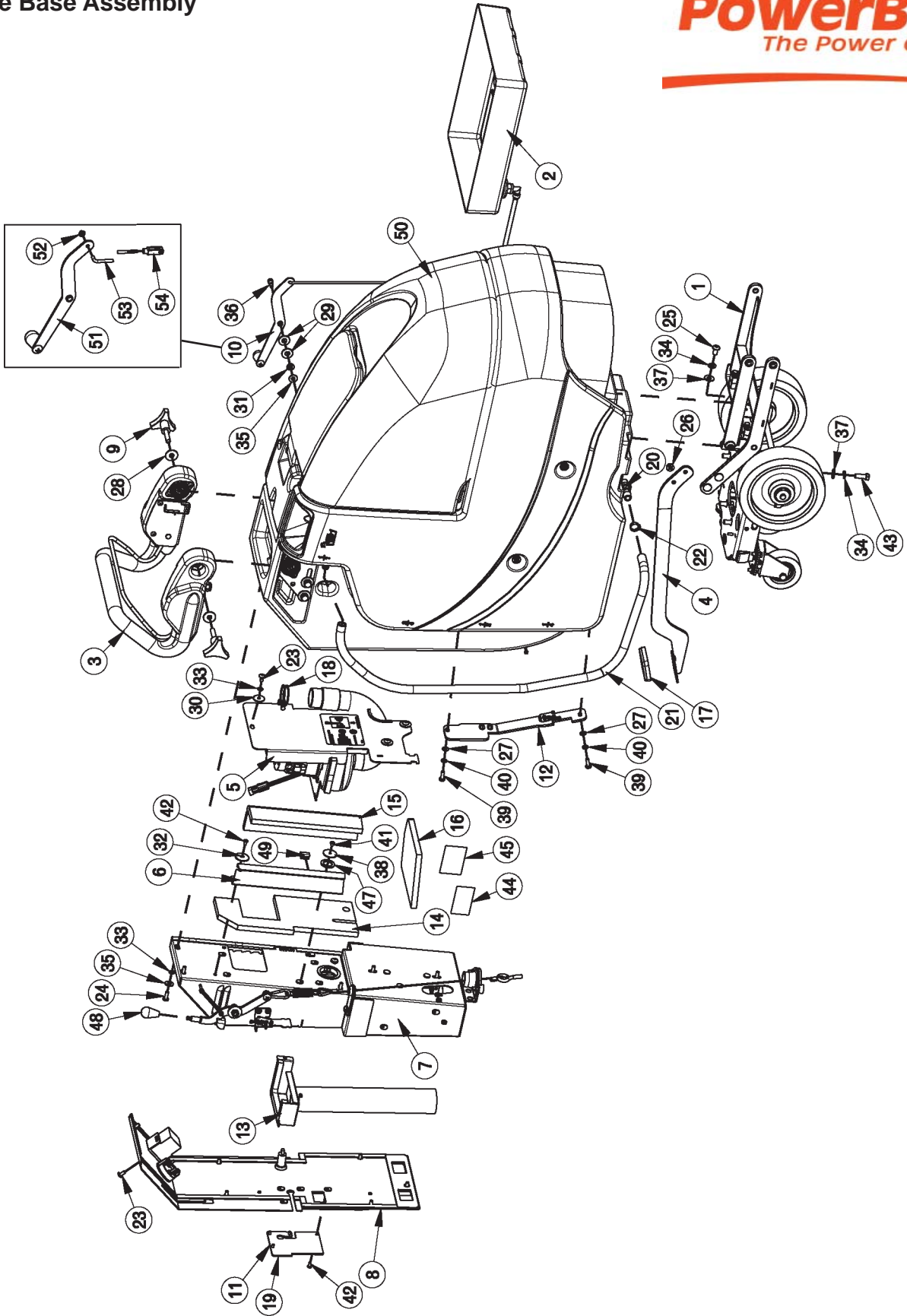
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Main Assembly



BILL OF MATERIAL - PHX20BDQP			
ITEM	PART NO.	REQ'D	DESCRIPTION
1	172010	1	HOSE, CLEAR VAC W/ 45 CUFF
2	172018	1	SOLUTION TANK LID ASSY
3	172100	1	BRUSH DECK ASSY 20"
4	172520-3	1	BRUSH-DISC, 20" NYLO-GRIT 80GR, GREEN
5	172150	1	SQUEEGEE LIFT MECH ASSY
6	172159	1	FILTER, FILL PORT
7	172534-1	1	SQUEEGEE, 34" (860)
8	450076	1	CLAMP-CRIMP 185R SS
9	711118	1	SCR-ST-A 10 X .75 SS
10	711374	1	NUT-NYLOC 5/16-18
11	711375	3	NUT-NYLOC 3/8-16 X 1/2 NUT
12	711523	1	WSR-WAVE .37X .68 X .08
13	711569	1	WSR-FLT .390 X .880 X .062 NYL
14	711592	6	WSR-FLAT .506 X .9 X .064 NYL
15	712143	1	BLT-SHLD 3/8 X 2.0, 5/16-18
16	712301	2	WSR-FLAT .37 X .87 X .06
17	715688	2	DECAL, PHOENIX
18	740164-1	1	JUMPER CABLE ASSY, RED 4G 12"
19	747649	1	CABLE ASSY, BATTERY
20	956712	2	BATTERY, 12V 115AH
20G	956100	2	GEL BATTERY 12V 100AH
21	FOR REF	1	BRUSH DRV MAIN ASSY-120V CHARGER
22	712099PLT	3	BLT- SHLDR 1/2 X 1/2 ZINC PLT
23	3334902	1	DECAL, POWERBOSS
24	172008	1	SOLUTION TANK LID
25	172123	1	CHAIN, BEADED SS W/EYELETS
26	712145	1	SCR-MC 6-32 X .37 PPH SS

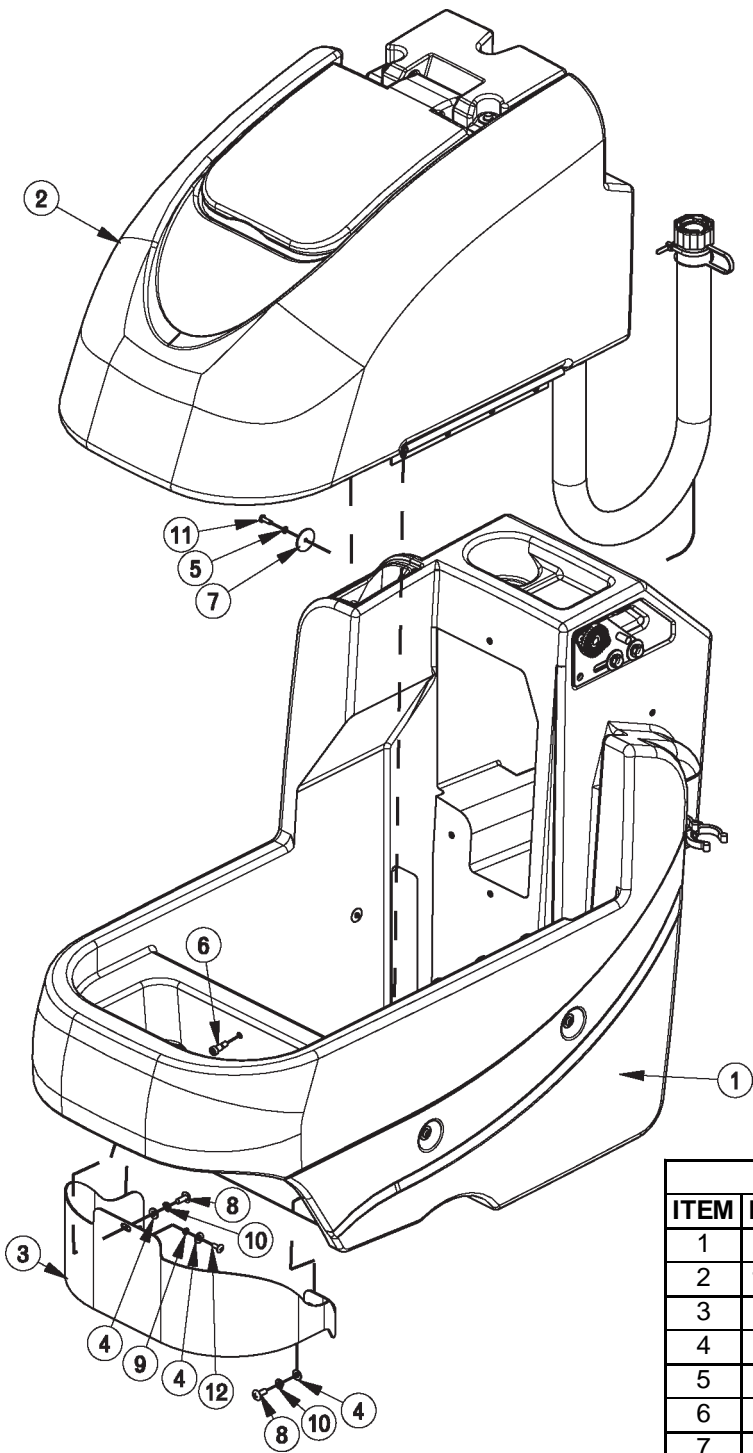
OPTIONAL BRUSHES		
ITEM	PART NO.	DESCRIPTION
4.1	762394	PAD RETAINER, FIXED
4.2	762370	PAD RETAINER, REMOVEABLE
4.3	172520-1	BRUSH, 20" NYLON
4.4	172520-2	PAD DRIVER, 20"
4.5	172520-3	BRUSH-DISC, 20" NYLO-GRIT 80GR, GREEN
4.6	172520-6	DISC BRUSH 20", SCRUB GRIT 2, 120GR RED





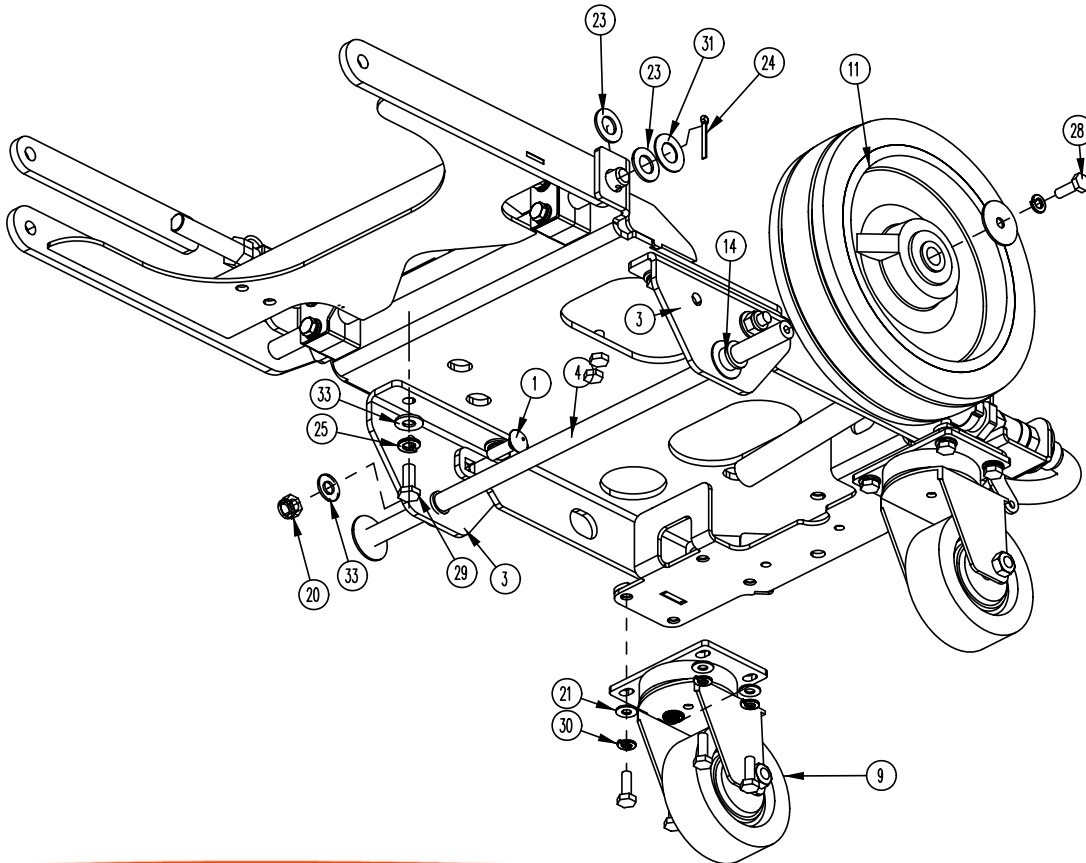
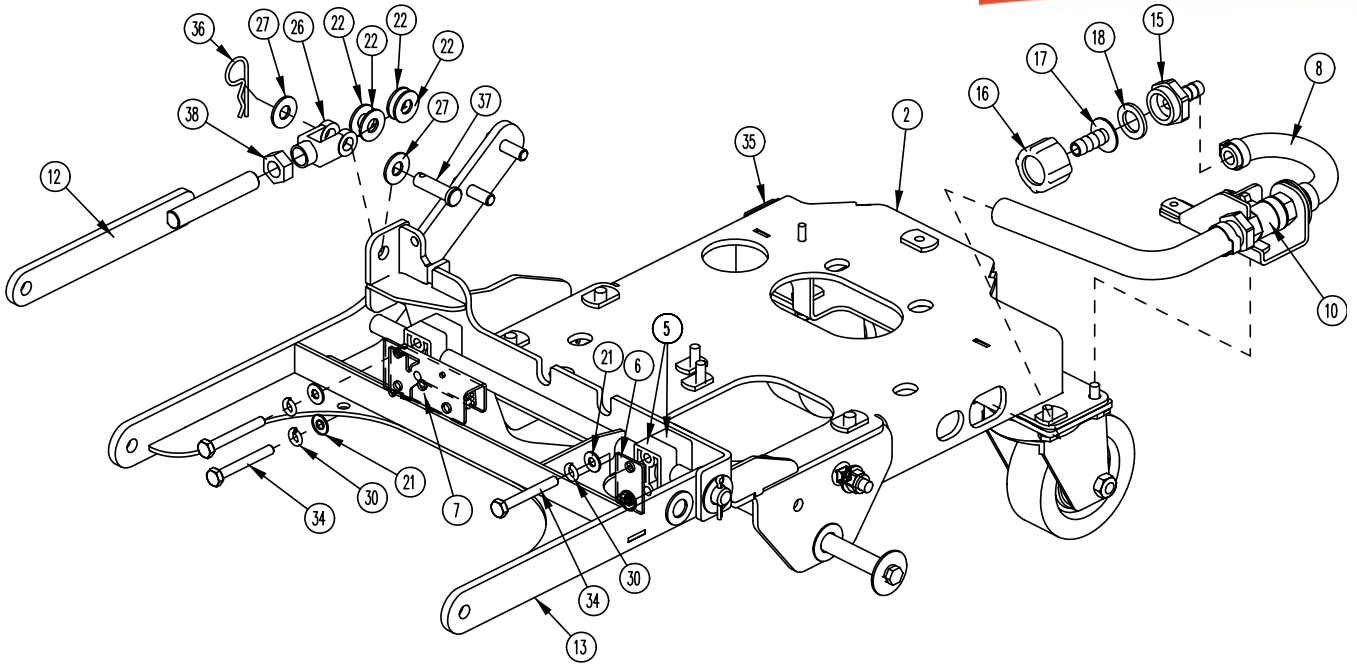
BILL OF MATERIAL - 172001BD-120							
ITEM	PART NO.	REQ'D	DESCRIPTION	ITEM	PART NO.	REQ'D	DESCRIPTION
1	172002-1	1	BD CHASSIS ASSY	28	711507	2	WSR-FLAT .37 X 1.12 X .06
2	172012	1	BATTERY TRAY ASSY	29	711508	2	WSR-FLAT .44X 1.0X.08
3	172016	1	BD HANDLE ASSY	30	711519	3	WSR- FLAT .25 X 1.01 X .06
4	172032	1	LIFT PEDAL WMT	31	711523	1	WSR-WAVE .37X .68 X .08
5	172050	1	VAC MOTOR ASSY	32	711543	1	WSR-HELICAL #10
6	172055	1	BKT, VAC AREA INSIDE COVER	33	711544	9	WSR-HELICAL 1/4
7	172070-120	1	ELEC BOX BD ASSY 120V	34	711546	6	WSR-HELICAL 3/8
8	172073	1	BD ELEC BOX COVER ASSY	35	711575	6	WSR-FLT .31x.75x.06ST
9	172085	2	KNOB, 3/8-16 STUD, 3 LOBE	36	712041	1	BLT- SHLDR 1/4-20 X .44 X .37
10	172112	1	SOL CONTROL ASSY	37	712301	6	WSR-FLAT .37 X .87 X .06
11	172129	1	BKT, PWR CORD MOUNT	38	712312	2	WSR-FLAT .187 X 1.25
12	172157	1	LIFT PEDAL STOP ASSY	39	712562	2	BOLT-HH 1/4-20X3/4 SS
13	172179	1	CHARGER INLET ASSEMBLY	40	712758	2	WSR-HELICAL 1/4 SS
14	172184	1	FOAM COVER, REAR 1	41	712800	1	SCR-MC 10-24 X .25 ST PL
15	172185	1	FOAM COVER, REAR 2	42	712810	5	SCR-MC 10-24 X .37 ST PL
16	172187	1	FOAM COVER, FRONT 2	43	713042	4	BLT-HH 3/8-16 X 1 #5
17	210142	1	PEDAL PAD	44	715029	1	DECAL-NAME PLATE SERIAL
18	260203	1	WIRE GRIP HOSE CLAMP	45	715047	1	DECAL-CLEAR LAMINATE 2X3
19	293080	1	STRAIN RELIEF-HEYCO 1207	46	715950	1	LABEL, PATENT NUMBERS
20	342440	1	FITTING, TEE 3/4MPT 1/2BARB PP	47	717025	1	WSR-FLAT 13/16ID X 1.25 X .08
21	430156	1	HOSE, 1/2 X 42 CLEAR	48	760592	1	KNOB, OVAL TAPERED
22	450093	2	CRIMP CLAMP 3/4" STEPLESS	49	809443	1	CLIP-WIRE & CORD
23	710178	10	SCR-MC 1/4-20 X .50 TRUSS STPL	50	172001BASE	1	BASE ASSY
24	710380	5	SCR-MC RD HD 1/4-20 X .75 STL PL	51	172115	1	SOL CNTRL LEVER ASSY
25	710985	2	SCR-SC 3/8-16 X .62 ST PL	52	172122	1	NUT, PUSH-ON WSR CAP, 3/16
26	711379	2	NUT, FLANGED WIZZ 5/16-18	53	172069	1	ROD, SOL. CTRL
27	711504	2	WSR-FLAT 1/4 ID SS	54	172062	1	YOKE, 3/16 CLEVIS, 10-32, LONG

Base Assembly



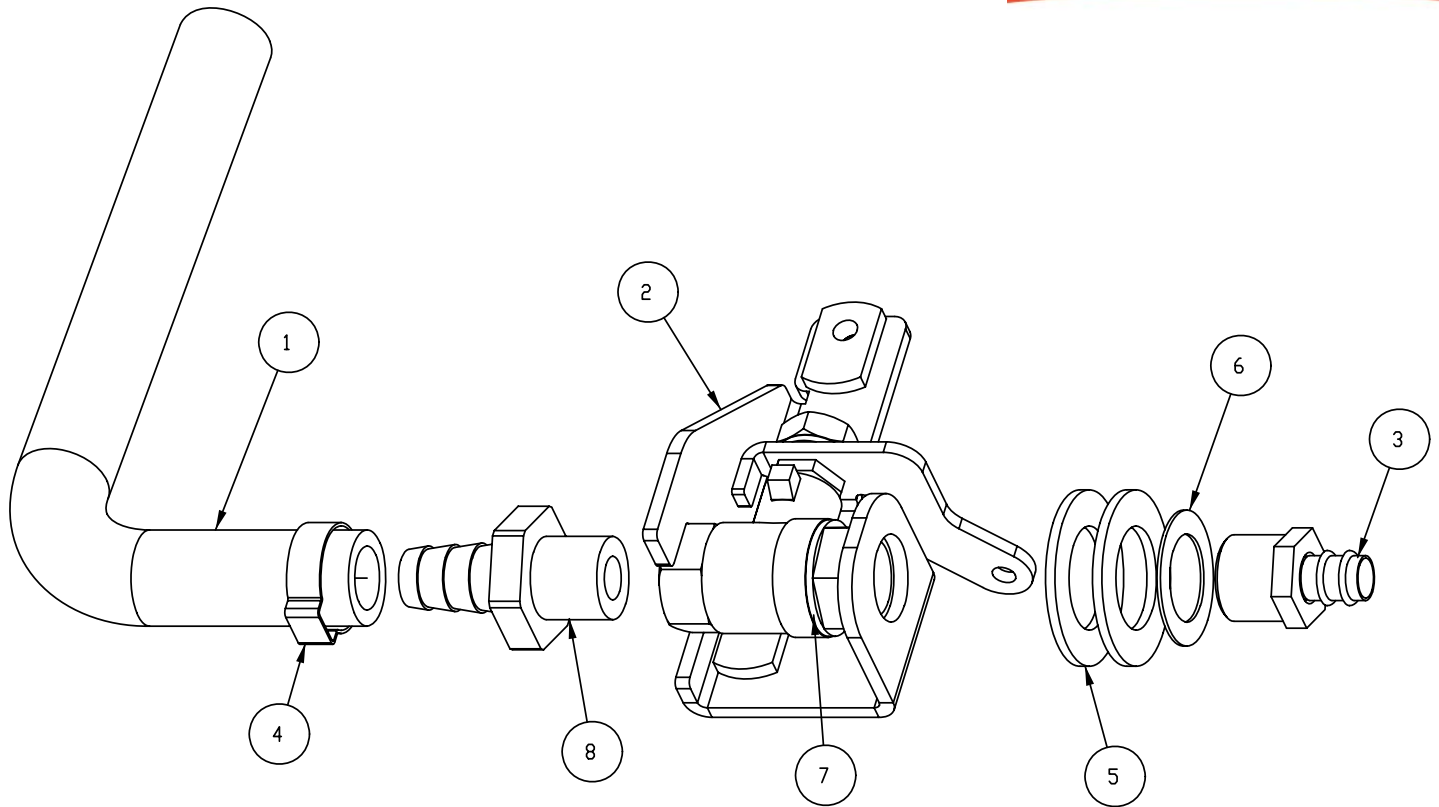
BILL OF MATERIAL - 172001BASE

ITEM	PART NO.	REQ'D	DESCRIPTION
1	172013	1	SOL TANK ASSY
2	172014HR	1	REC TANK ASSY
3	172144	1	PANEL, FRONT
4	711504	3	WSR-FLAT 1/4 ID SS
5	711543	4	WSR-HELICAL #10
6	712041	1	BLT- SHLDR 1/4-20 X .44 X .37
7	712312	4	WSR-FLAT .187 X 1.25
8	712565	2	SCR-MC 1/4-20X.63 SS TR HD
9	712757	1	WSR - HELICAL #10 SS
10	712758	2	WSR-HELICAL 1/4 SS
11	712812	4	SCR-MC 10-24 X .62 PPH ST PL
12	712822	1	SCR-MC TR HD 10-24 X .50 SS

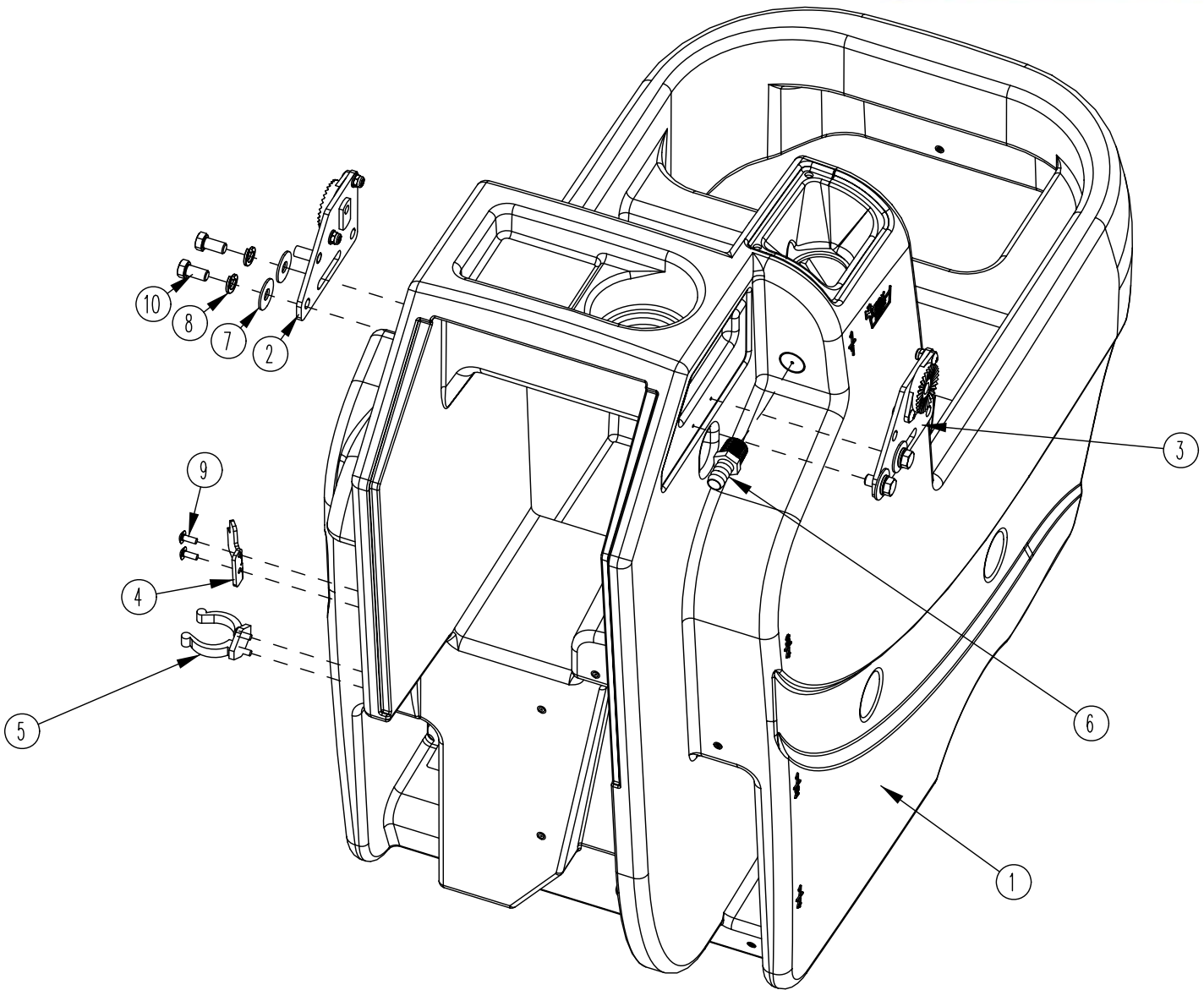


Chassis Assembly BOM

BILL OF MATERIAL - 172002-1			
ITEM	PART NO.	REQ'D	DESCRIPTION
1	70-516-16	2	BLT-CAR 5/16-18 X 1.00 ZP
2	172020	1	MAIN FRAME WMT
3	172024	2	WHEEL BRACKET
4	172035	1	WHEEL ROD
5	172038	4	BEARING BLOCK
6	172039	1	BEARING BLOCK PLATE
7	172110	1	DECK SWITCH ASSY
8	172164	1	HOSE-WIRE REINF 3/8 X 5.5"
9	172167	2	CASTER, 3-1/2 POLYURETHANE
10	172264	1	SOLUTION VALVE ASSY
11	172265	2	WHEEL, 8 X 2 X .5, 75A
12	172368	1	UPPER LIFT ARM
13	172370	1	DISC DECK LIFT WMT
14	260041	2	OILITE FLANGE BUSHING
15	342441	1	FITTING, MGHT X 3/8HB PP
16	342442	1	FITTING, FGHT NUT PP
17	342443	1	FITTING 3/8HB INSERT PP
18	342444	1	WSR-FILTER, GARDEN HOSE SIZE
19	450076	2	CLAMP-CRIMP 185R SS
20	711374	2	NUT-NYLOC 5/16-18
21	711504	12	WSR-FLAT 1/4 ID SS
22	711569	4	WSR-FLT .390 X .880 X .062 NYL
23	711592	2	WSR-FLAT .506 X .9 X .064 NYL
24	711809	1	COTTER PIN, 1/8 X 1.0
25	712140	4	WSR-HELICAL 5/16 SS
26	712265	1	CLEVIS-YOKE, 1/2-20 W/ .375 PIN
27	712301	2	WSR-FLAT .37 X .87 X .06
28	712562	12	BOLT-HH 1/4-20X3/4 SS
29	712575	4	BLT-HH 5/16-18 X .75 SS
30	712758	14	WSR-HELICAL 1/4 SS
31	712760	3	WSR-FLAT .56X1.06X.04 SS
32	712761	2	WSR-FLAT .28 X 1.25 X .059SS
33	712772	6	WSR-FLAT .344 x .75 x .06 SS
34	713007	4	BLT-HH 1/4-20 X 2 #5
35	809444	1	CLIP-CORD
36	833374	1	PIN, HAIRPIN COTTER 3/8
37	833833	1	PIN-CLEVIS 3/8 X 1.25
38	3400449	1	NUT-HEX JAM 1/2-20 ZP

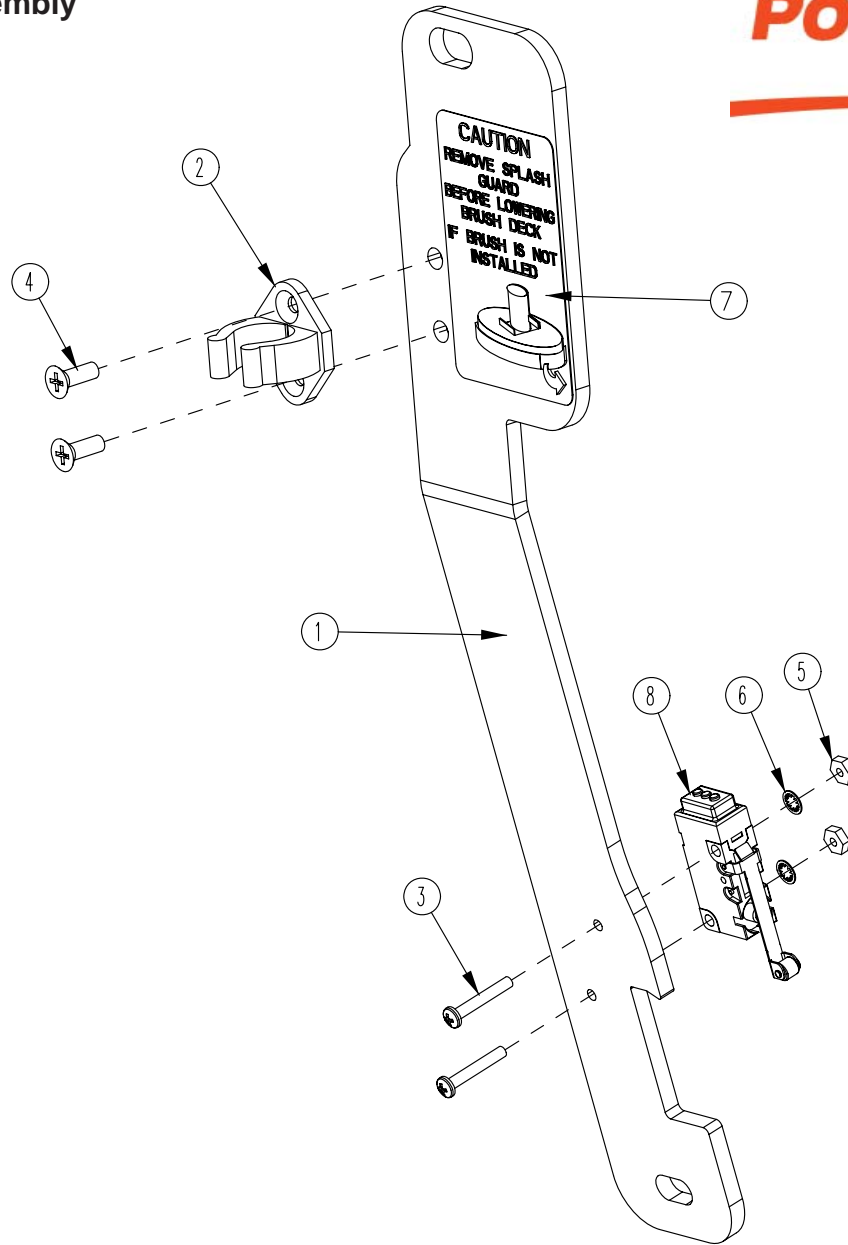


BILL OF MATERIAL - 172264			
ITEM	PART NO.	REQ'D	DESCRIPTION
1	172158	1	HOSE, 1/2"ID X 7.5" NYLOBRAID
2	172263	1	BKT , SOL VALVE MOUNT
3	320265	1	FITTING DUBL 3/8HBx3/8MPT
4	383347	1	CRIMP CLAMP 1/2 HOSE SS 185R
5	711512	2	WSR-FLAT .75X1.37X.08
6	711513	1	WSR-FLAT .69 X 1.06 X .03 SS
7	809415	1	VALVE, 3/8 FPT, 45 OPEN/CLOSE
8	827008	1	FITTING, 3/8 MPT 1/2 HOSE



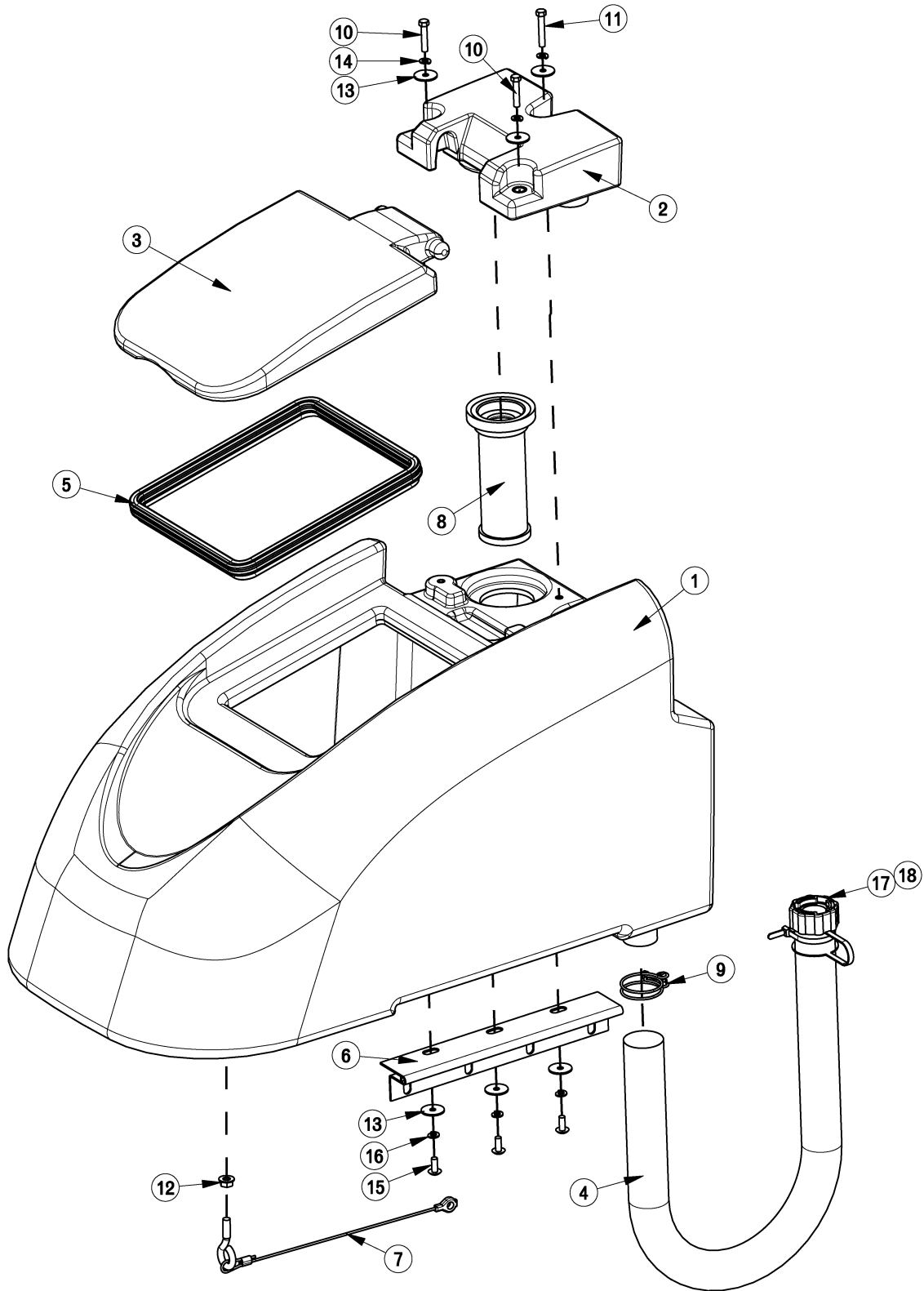
BILL OF MATERIAL - 172013

ITEM	PART NO.	REQ'D	DESCRIPTION
1	172003	1	SOLUTION TANK
2	172080	1	HANDLE MOUNT ASSY, LEFT
3	172082	1	HANDLE MOUNT ASSY, RIGHT
4	172341	1	HOOK, DRAIN HOSE WITH TWIST VALVE
5	260579	1	TOOL CLIP, 1.5" HOSE
6	342438	1	FITTING, 1/2 MPT 1/2 HB BRASS
7	711507	4	WSR-FLAT .37 X 1.12 X .06
8	711546	4	WSR-HELICAL 3/8
9	712822	4	SCR-MC TR HD 10-24 X .50 SS
10	713041	4	BLT-HH 3/8-16 X 3/4 #5



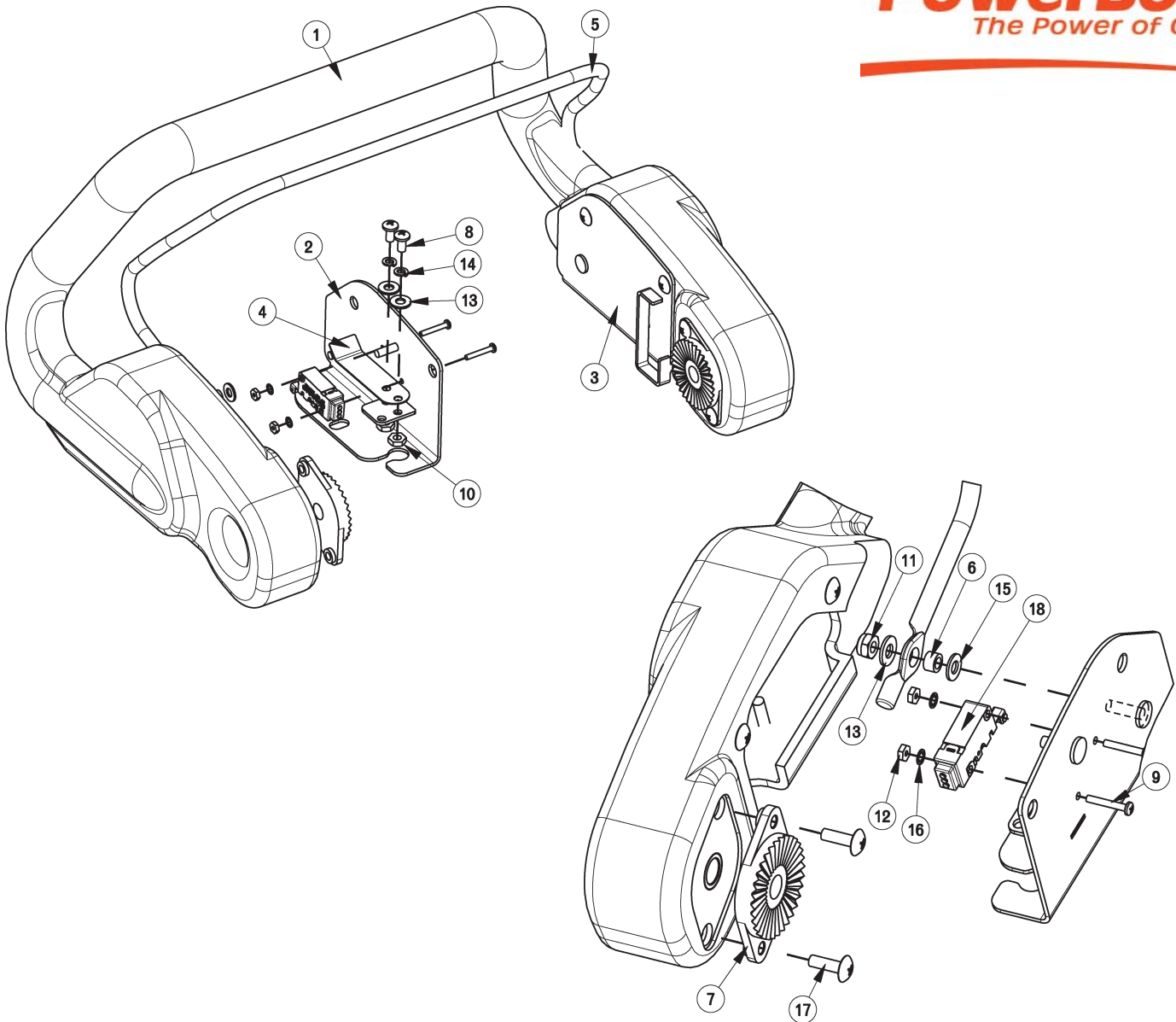
BILL OF MATERIAL - 172157

ITEM	PART NO.	REQ'D	DESCRIPTION
1	172036	1	BKT, PEDAL STOP
2	172065	1	CLIP, FOR 1/2" ID HOSE
3	710493	2	SCR-MC 4-40 X .75 PAN HD
4	710530	2	SCR-MC FL HD 8-32 X .50 BRS
5	711428	2	NUT-HEX 4-40
6	712326	2	WSR-INT LOCK #4
7	715685	1	DECAL, REMOVE SPLASH GUARD
8	747603-2	1	SWIT CH ASY, MICRO ROLLER W/PACK/CONDUIT

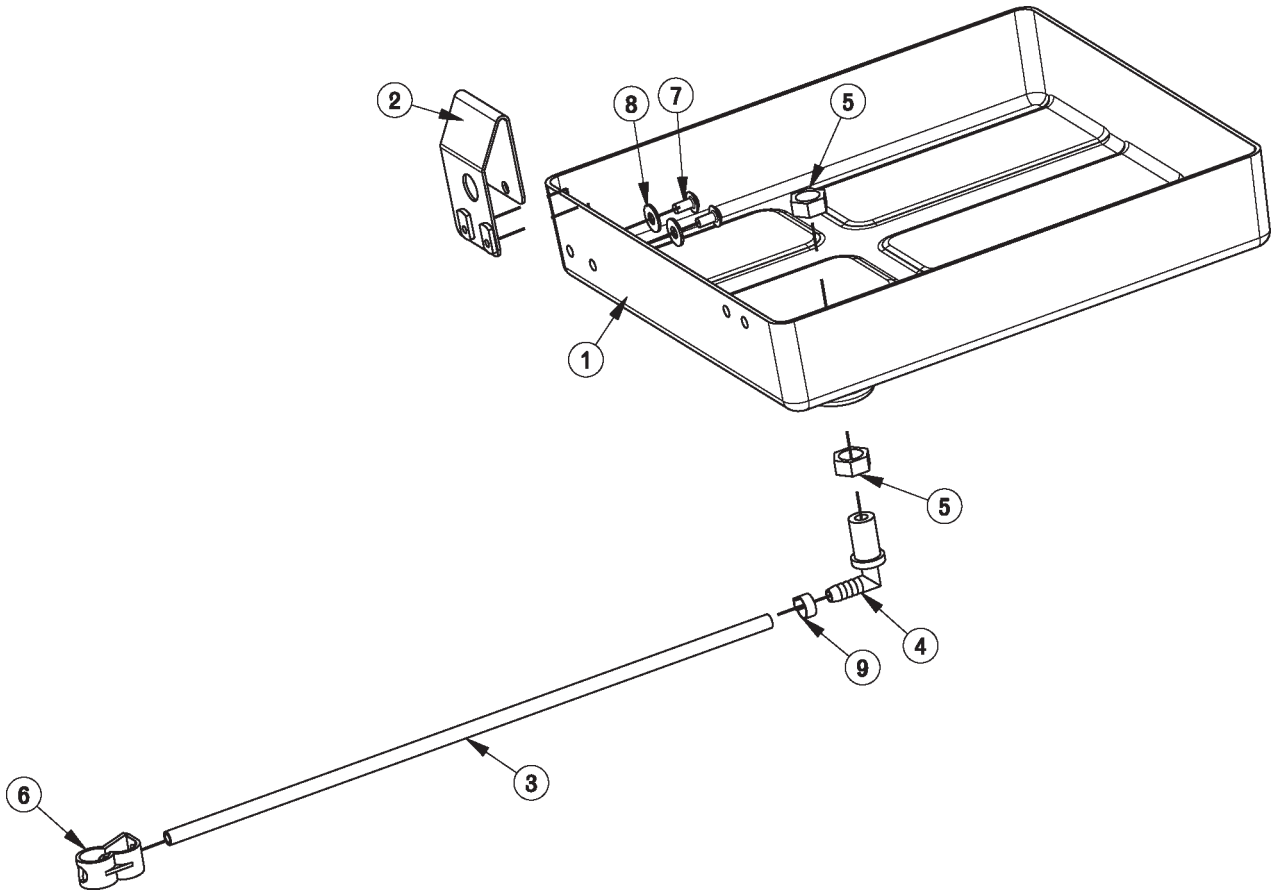




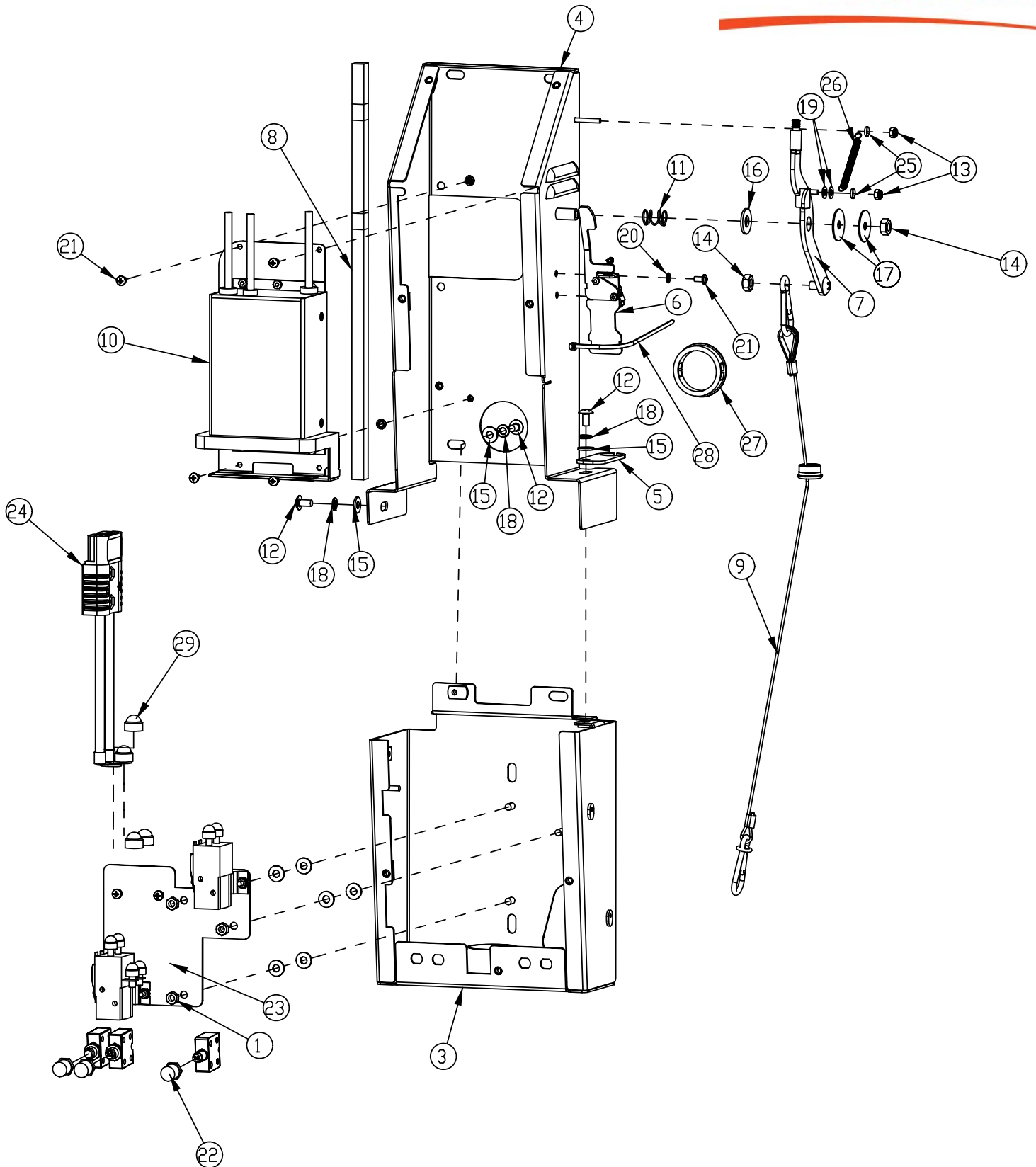
BILL OF MATERIAL - 172014HR			
ITEM	PART NO.	REQ'D	DESCRIPTION
1	172004HR	1	RECOVERY TANK
2	172005HR	1	VACUUM MANIFOLD
3	172007	1	LID
4	97090096	1	DRAIN HOSE ASSY, RECOVERY TANK
5	172017	1	GASKET, LID
6	172049	1	HINGE, RECOVERY TANK
7	172394	1	REC TANK CABLE ASSY 11.625
8	172132	1	SCREENED FLOAT
9	172329	1	CLAMP-HOSE 1.56" 102122 MURRAY
10	711210	2	BLT-HH 1/4-20 X 1.25 STPL
11	711212	1	BLT-HH 1/4-20 X 1.50 STPL
12	711379	1	NUT, FLANGED WIZZ 5/16-18
13	711519	6	WSR- FLAT .25 X 1.01 X .06
14	711544	3	WSR-HELICAL 1/4
15	712565	3	SCR-MC 1/4-20X63 SS TR HD
16	712758	3	WSR-HELICAL 1/4 SS
17	15282072	1	REPLACEMENT O-RING (NOT SHOWN)
18	90304528	1	REPLACEMENT CAP



BILL OF MATERIAL - 172016			
ITEM	PART NO.	REQ'D	DESCRIPTION
1	172006	1	HANDLE
2	172053	1	BAIL PLATE WMT RH
3	172054	1	BAIL PLATE WMT LH
4	172057	2	LEAF SPRING
5	172059	1	BAIL, HANDLE
6	172074	2	SPACER, 5/16OD X 17GA, ALUM
7	270143	2	HANDLE PIVOT JAW
8	710353	4	SCR-MC RD HD 10-32 X .37 STL
9	710493	2	SCR-MC 4-40 X .75 PAN HD
10	711310	4	NUT, HEX 10-32 ST PL
11	711350	2	NUT-NYLOC 10-32
12	711428	2	NUT-HEX 4-40
13	711503	6	WSR, FLAT#10
14	711543	4	WSR-HELICAL #10
15	712320	2	WSR-NYLON .22 X .45 X .04
16	712326	2	WSR-INT LOCK #4
17	712830	10	SCR-MC 10-24 X .62 STLZ TR HD
18	747603-1	1	SWITCH ASY, MICRO ROLLER W/PACK/CONDUIT
19	747632	1	CABLE ASY, 5 COND 18G CONSOLE

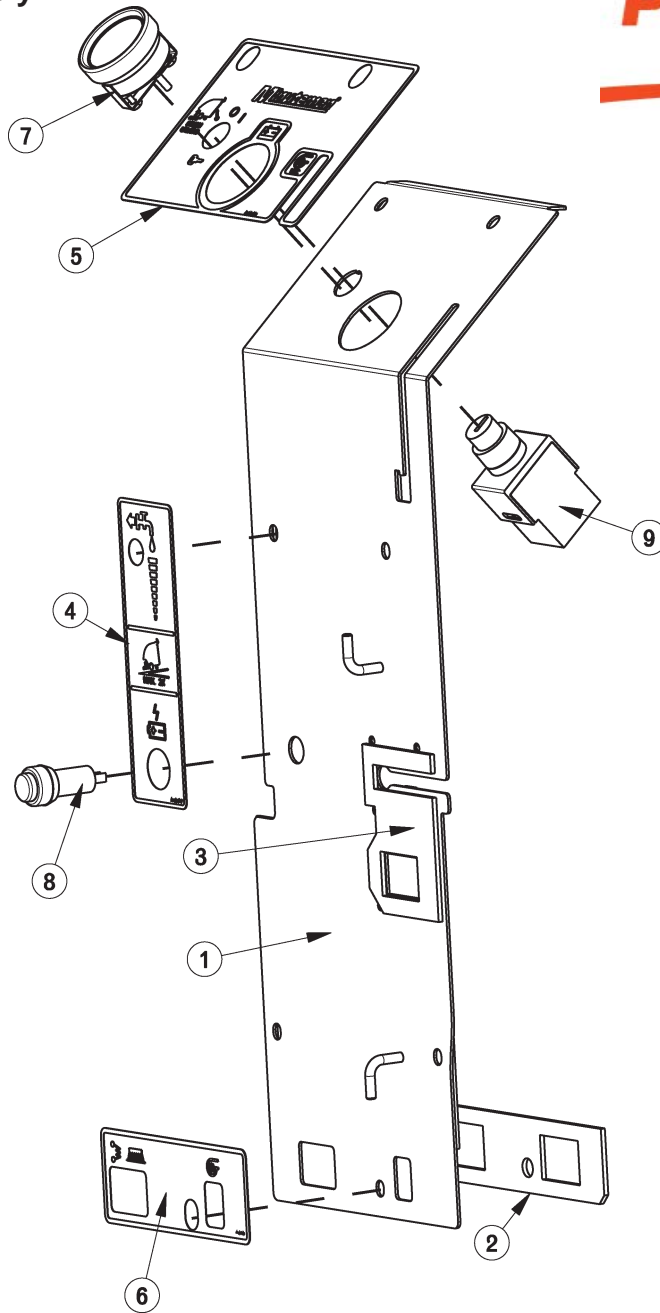


BILL OF MATERIAL - 172012			
ITEM	PART NO.	REQ'D	DESCRIPTION
1	172116	1	BATTERY BOX
2	172213	1	BKT, SPACER FOR BATTERIES
3	260224	1	18" HOSE
4	320271	1	NOZZLE BODY-ELBOW
5	320272	2	NOZZLE BODY LOCKNUT
6	320273	1	HOSE SHUT-OFF CLAMP
7	710178	2	SCR-MC 1/4-20 X .50 TRUSS STPL
8	711575	2	WSR-FLT .31x.75x.06ST
9	828490	1	CRIMP CLAMP 140R

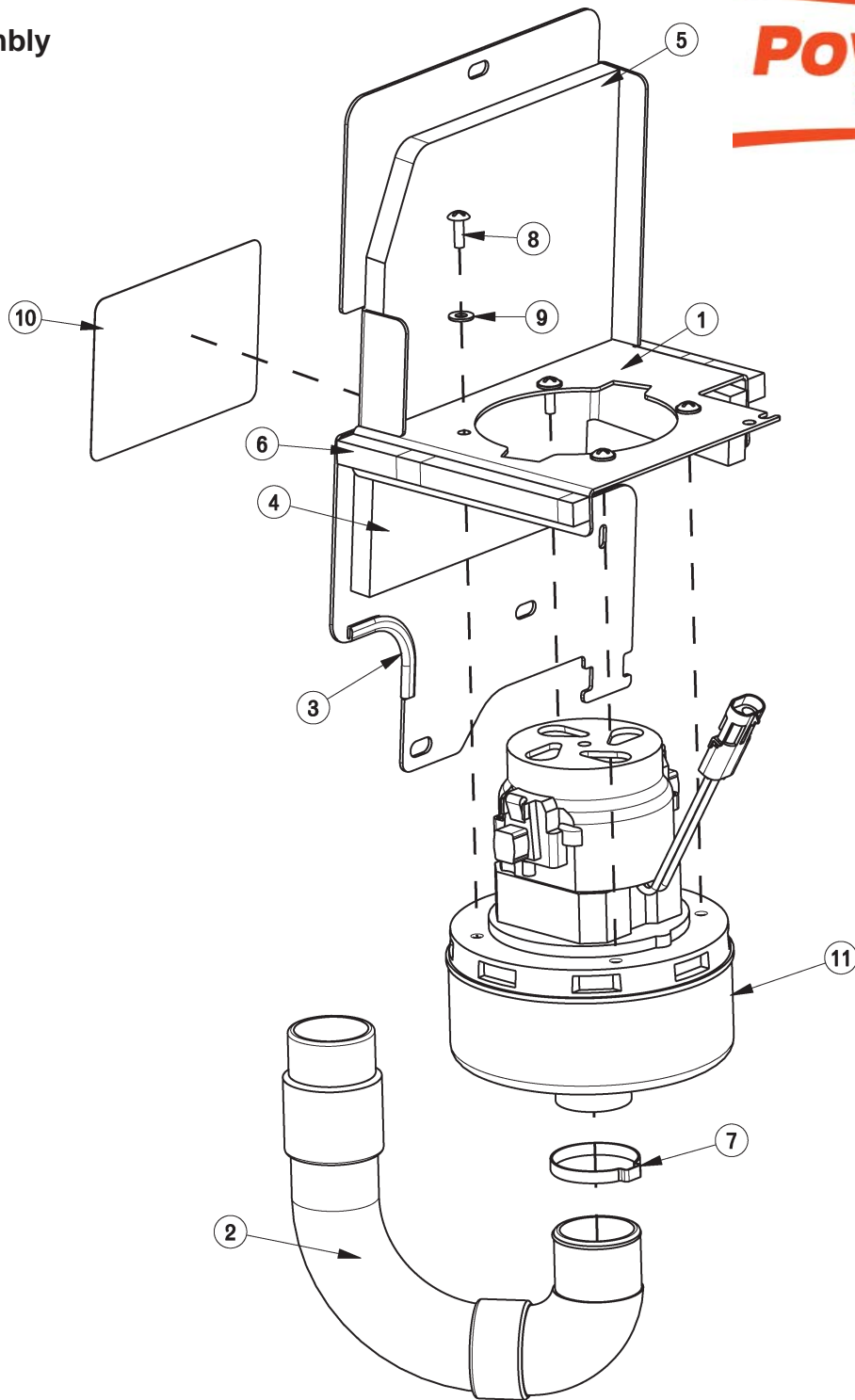




BILL OF MATERIAL - 172070-120				
ITEM	PART NO.	REQ'D	DESCRIPTION	NOTES
1	369-416	3	NUT-HEX 1/4-20 NYLOC SERATED	
2	000719	1	PACER-ISL 90	USED UNTIL 09/09
3	172077	1	ELEC BOX-BOT HALF WMT	
4	172088	1	ELEC BOX-TOP HALF WMT	
5	172107	1	BKT, UPPER BUSHING MOUNT	USED UNTIL 05/10
6	172141	1	VAC SWITCH ASSY	
7	172152	1	VAC LEVER WMT	
8	172188	1	FOAM TAPE, 1/2" SQ X 16.5"	
9	172381	1	CABLE ASSY, SQUEEGEE LIFT	USED AFTER 09/09
	172149	1	CABLE ASSY, SQUEEGEE LIFT	USED UNTIL 09/09
10	172385	1	E1720 120V CHARGER ASSEMBLY	USED AFTER 10/09
	957745	1	E1720 120V CHARGER ASSEMBLY	USED UNTIL 10/09
11	670093	1	SPRING, COMPRESSION	
12	710178	3	SCR-MC 1/4-20 X .50 TRUSS STPL	
13	711372	2	NUT-NYLOC 8-32 STL ZINC	
14	711383	2	NUT-HEX CLR LOC 5/16-18	
15	711505	9	1/4 FLAT WASHER, STEEL	
16	711508	1	WSR-FLAT .44X 1.0X.08	
17	711516	2	WSR- FLAT .31 X 1.25 X .05	
18	711544	3	WSR-HELICAL 1/4	
19	712320	2	WSR-NYLON .22 X .45 X .04	
20	712770	6	WSR INT LOCK #10A SS	
21	712810	6	SCR-MC 10-24 X .37 ST PL	
22	742748	3	CIRCUIT BREAKER BOOT	
23	747630	1	ELEC PANEL ASSY, E1720BD	
24	747637	1	WIRE ASY, MACHINE-BATTERY E1720	
25	760134	2	MOUNT RING	USED AFTER 05/09
26	762084	1	SPRING-EXT .25OD X 2" F.L. MUSIC	
27	762400	1	HEYCO BUSHING 2.00"	
28	828062	1	CABLE TIE LARGE	
29	15592033	2	CAP, SAFETY NUT COVER M8	
NS	172128	1	BKT, LOWER HOUSING MOUNT	USED UNTIL 09/09
NS	90508391	1	BUSHING, CABLE GUIDE, HAKO	USED UNTIL 09/09
NS	172330	1	PIPE, 3/4 X 3.0" SCHD 40 PVC	USED UNTIL 09/09
				NS = NOT SHOWN

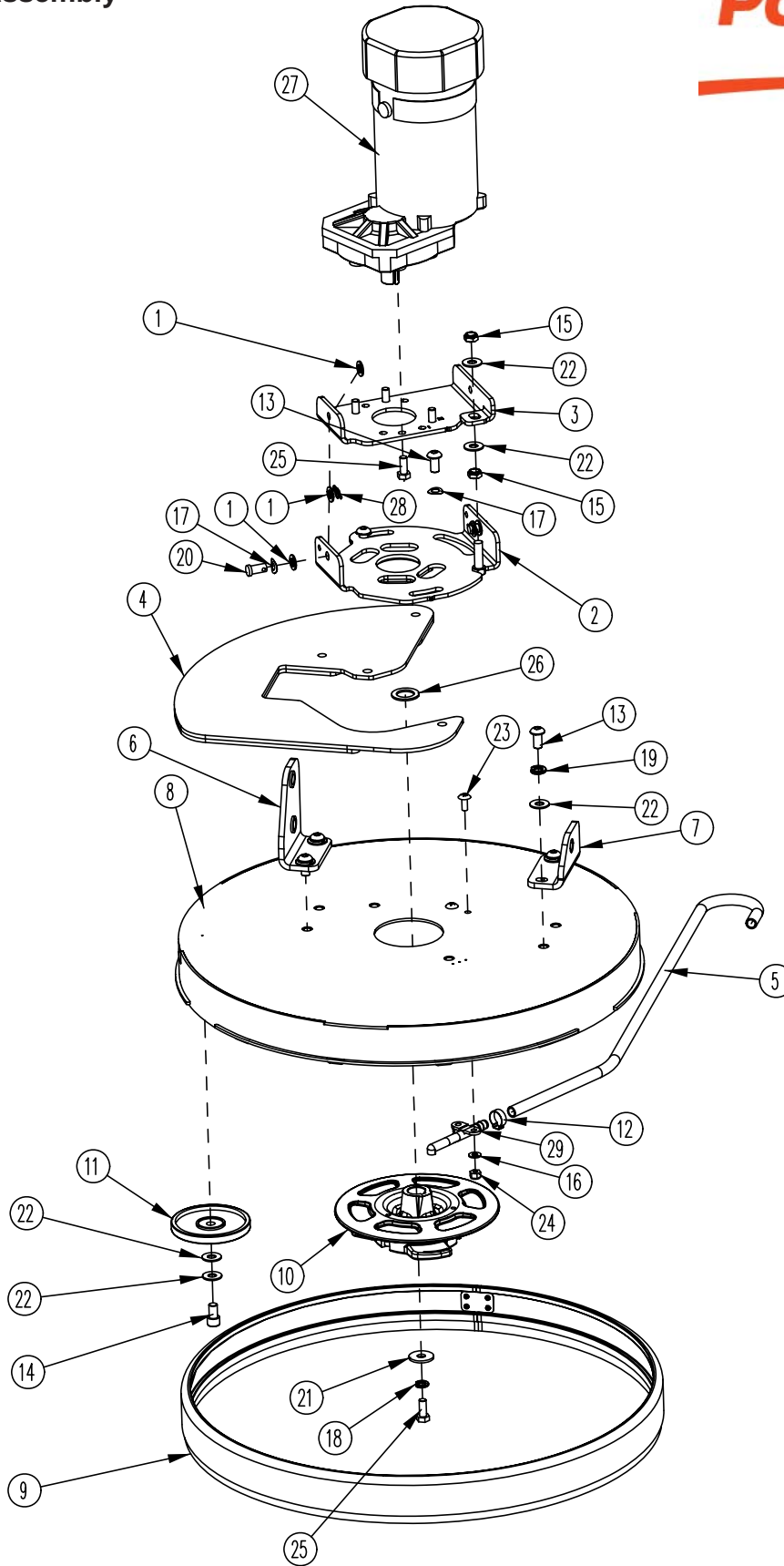


BILL OF MATERIAL - 172073			
ITEM	PART NO.	REQ'D	DESCRIPTION
1	172181	1	ELEC BOX, COVER, WMT
2	172193	1	GASKET, CB OUTLINE
3	172194	1	GASKET, CHARGER CORD PLATE
4	715672	1	DECAL, BD ELEC BOX
5	715673	1	DECAL, BD DASHBOARD
6	715675	1	DECAL, BD CIRC BKRS
7	740216	1	VOLT METER
8	747614	1	CHARGE STATUS INDICATOR
9	747617-1	1	KEYSWITCH ASY, KEYSWITCH + WIR

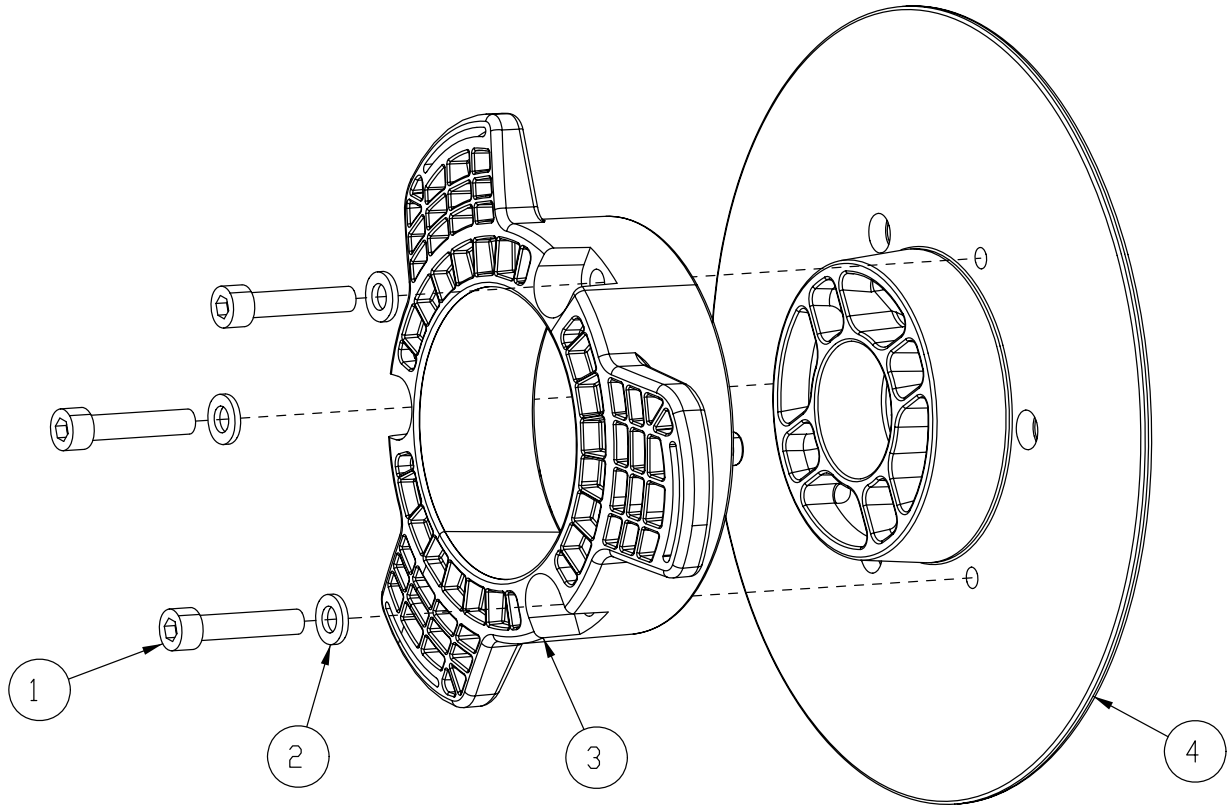


BILL OF MATERIAL - 172050

ITEM	PART NO.	REQ'D	DESCRIPTION	ITEM	PART NO.	REQ'D	DESCRIPTION
1	172045	1	VAC MOUNT WMT	7	450095	1	CRIMP CLAMP, 1.75"
2	172048	1	HOSE, STRETCH 13"	8	711160	4	#10 X 5/8 HI-LO
3	172124	1	EDGE TRIM, .063 X 3.0, BLACK	9	711503	4	WSR, FLAT#10
4	172186	1	FOAM COVER, FRONT 1	10	715676	1	DECAL, BATT CABLE ROUTE
5	172187	1	FOAM COVER, FRONT 2	11	747607-1	1	VAC MOTOR ASY
6	172188	2	FOAM TAPE, 1/2" SQ X 16.5"				



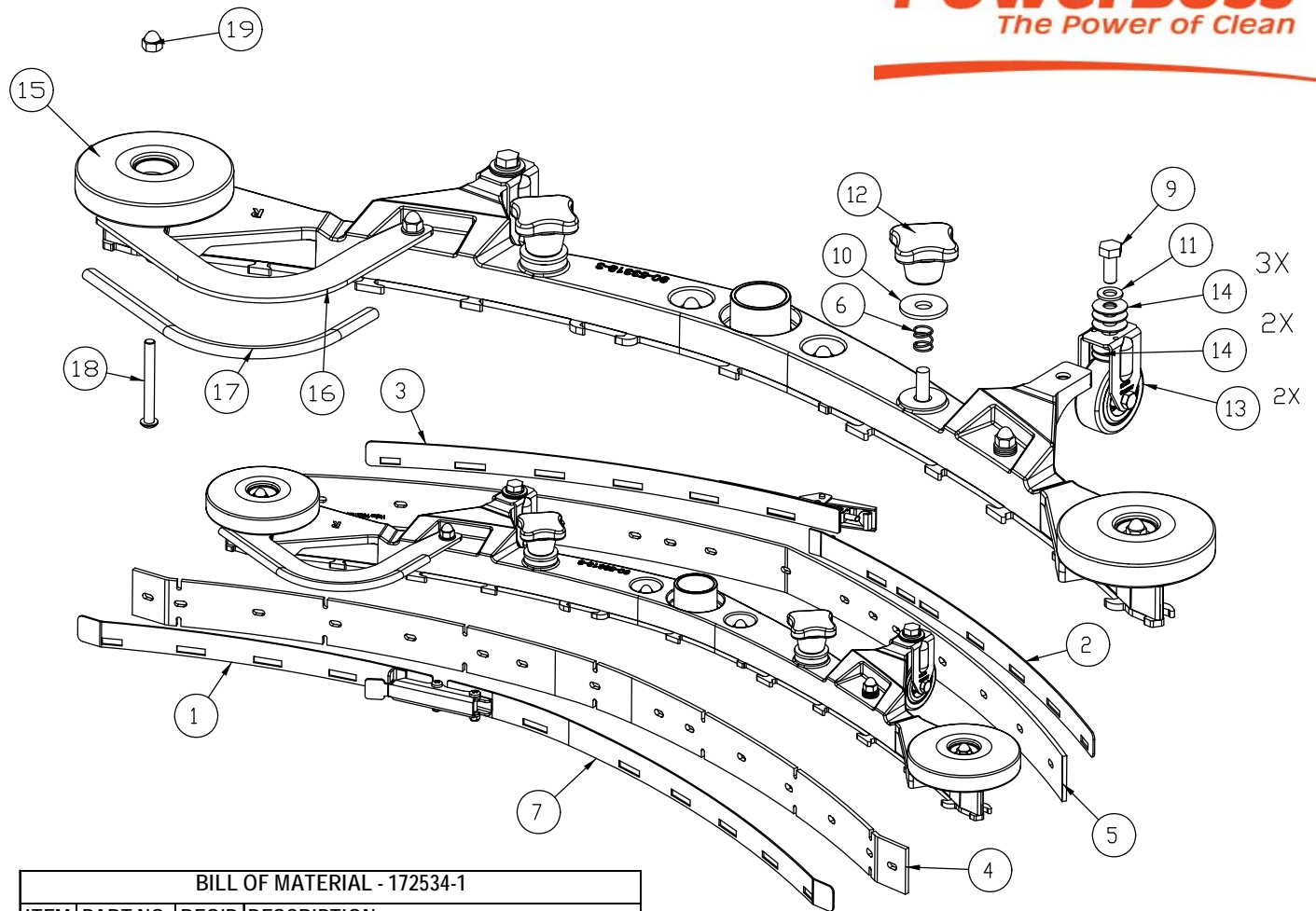
BILL OF MATERIAL - 172100				
ITEM	PART NO.	REQ'D	DESCRIPTION	NOTES
1	81-166-A	6	SPECIAL WASHER	USED AFTER 06/09
2	172040	1	DECK ANGLE ADJUST WMT	
3	172044	1	PLATE, MOTOR MOUNT	
4	172208	1	E20 BRUSH DECK PLATE	USED AFTER 04/08
5	172216	1	HOSE-WIRE REINF 3/8 X 29"	USED BETWEEN 12/07-12/09
	200581	1	HOSE-WIRE REINF 3/8 X 23"	USED BETWEEN 12/09 - 04/10
	172198	1	HOSE-NYLO REINF 3/8 X 22.5"	USED AFTER 04/10
6	172296	1	BKT, DECK MOUNT RH	USED AFTER 11/09
7	172297	1	BKT, DECK MOUNT LH	USED AFTER 11/09
8	172375	1	DECK COVER WMT 20"	USED AFTER 11/09
	172101	1	DECK COVER WMT 20"	USED UNTIL 11/09
9	172384	1	E20 FLOATING BRUSH DECK SKIRT	USED AFTER 12/09
10	172510	1	HUB ASSEMBLY, DISC DECK	USED AFTER 07/09
	172095	1	BRUSH HUB ASSY	USED UNTIL 07/09
11	210153	1	ROLLER WHEEL	
12	450076	1	CLAMP-CRIMP 185R SS	
13	710990	6	SCR-SC 3/8-24 X .75 BHEAD ST PL	
14	710991	1	SCR-SC 3/8-24 X 5/8 ST PL	
15	711375	2	NUT-NYLOC 3/8-16 X 1/2 NUT	
16	711504	2	WSR-FLAT 1/4 ID SS	
17	711523	4	WSR-WAVE .37X .68 X .08	
18	711545	1	WSR-HELICAL 5/16	
19	711546	4	WSR-HELICAL 3/8	
20	711679	2	CLEVIS PIN 3/8 X 3/4	
21	711855	1	WSR-FLT .37X1.12X.10 STL Z HARD	
22	712301	8	WSR-FLAT .37 X .87 X .06	
23	712565	2	SCR-MC 1/4-20X.63 SS TR HD	
24	712667	2	NUT, HEX 1/4-20 NYLOC SS	
25	717024	5	BOLT-HH M8X1.25 X 20	
26	717025	1	WSR-FLAT 13/16ID X 1.25 X .08	
27	747600	1	MOTOR, OFFSET PM GEAR, 550W	
28	3400125	2	PIN-COTTER 3/8 RUE RING	
29	90311663	1	HAKO SOL FEED NOZZLE	



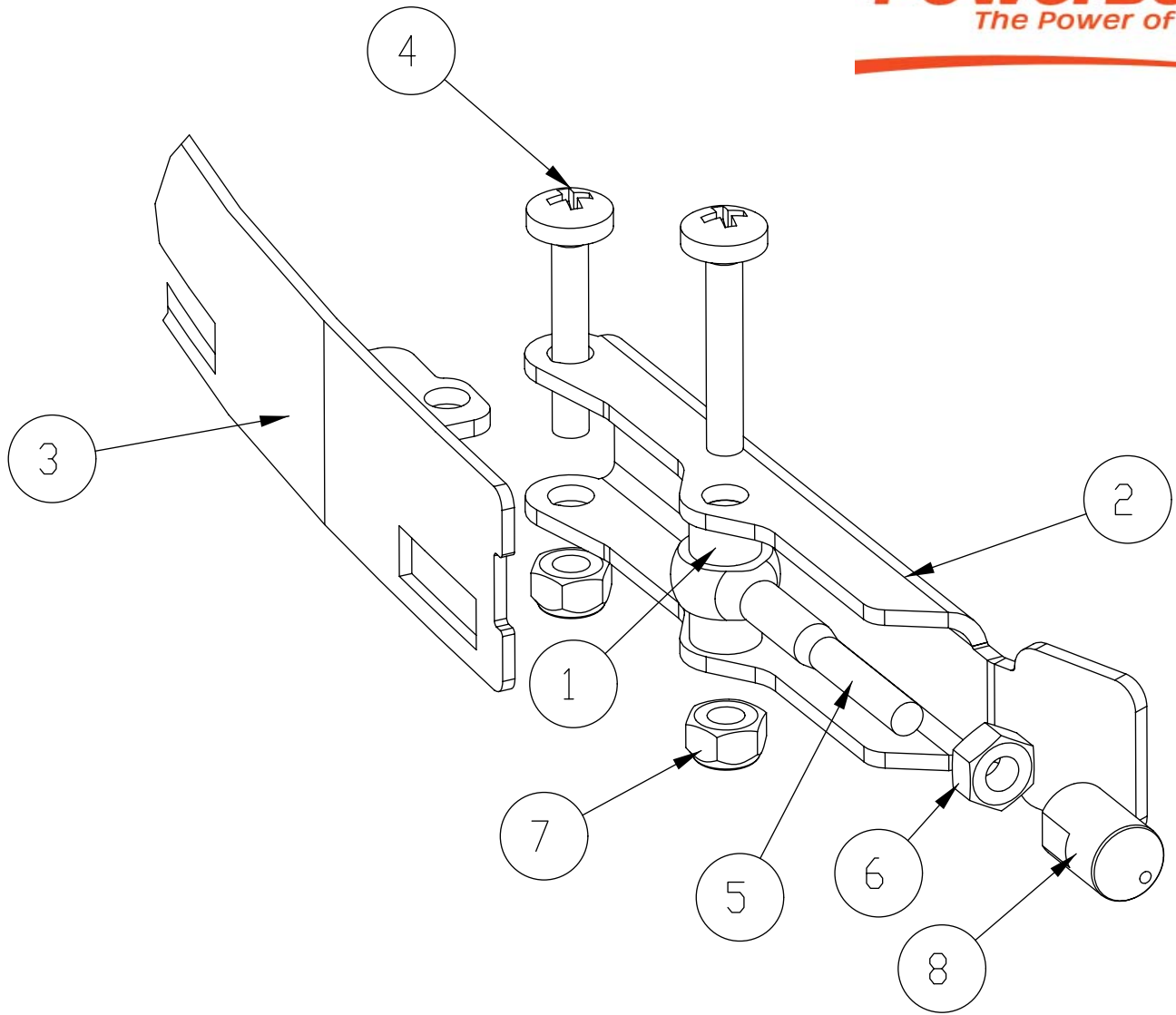
BILL OF MATERIAL - 172510

ITEM	PART NO.	REQ'D	DESCRIPTION
1	11127000	3	SCR-SHCS M6X30 SS, ISO4762
2	12310256	3	WSR-FLT 6.4X12X1.6, SS DIN125
3	90541814	1	DRIVE HUB, PLASTIC 3 LOBE
4	172096MCH	1	BASE, DRIVE HUB WITH KEYWAY

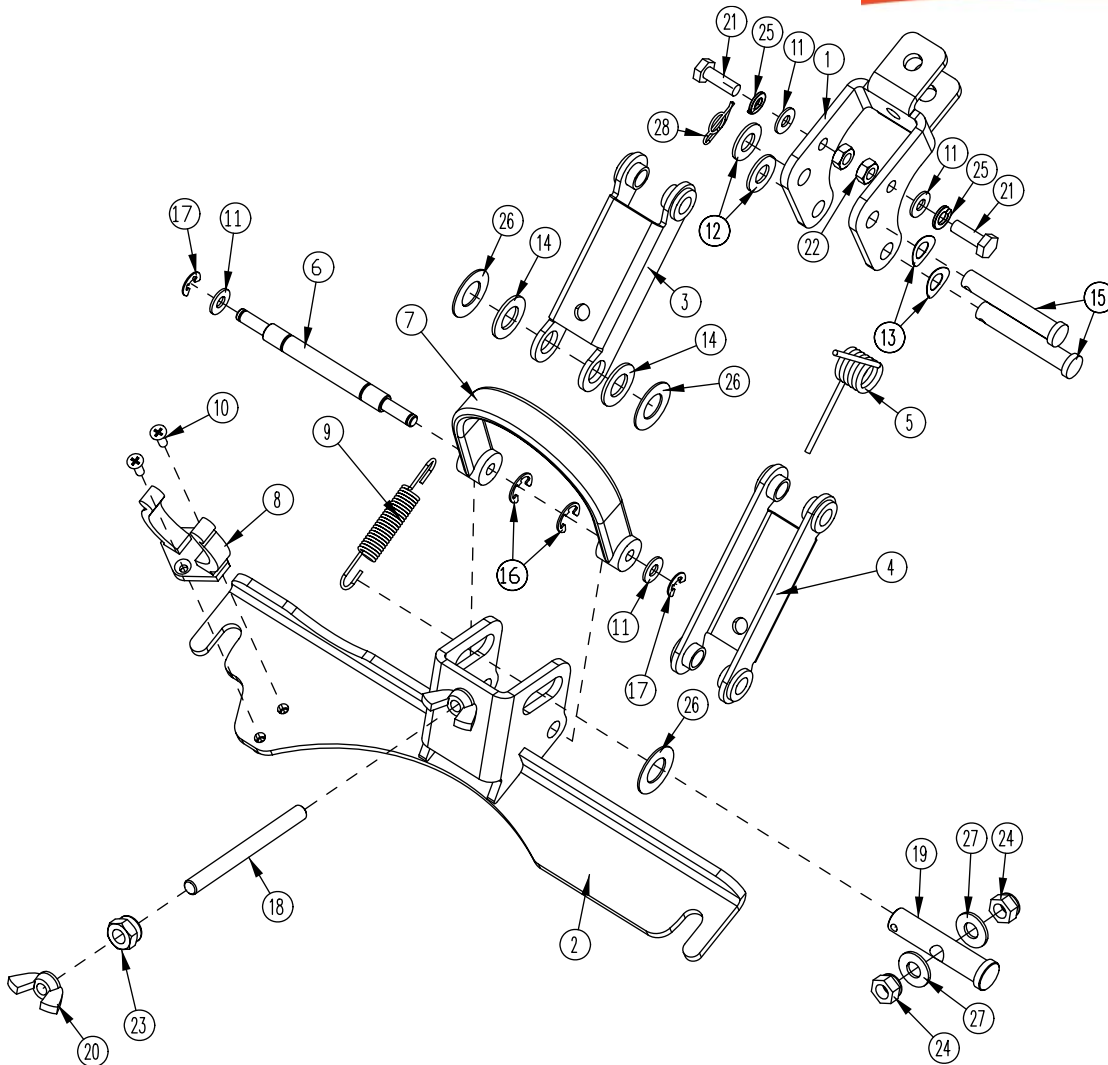
Rear Squeegee Assembly



BILL OF MATERIAL - 172534-1			
ITEM	PART NO.	REQ'D	DESCRIPTION
1	172241	1	STRAP WMT , FRONT
2	172245	1	STRAP WMT , REAR
3	172246	1	STRAP WMT , REAR
4	172272	1	FRNT SQG BLADE 34" , 1/8 PU
5	172273	1	REAR SQG BLADE 34" , 1/8 PU
6	172429	2	SPRING , COMPRESSION
7	172440	1	TENSION BAND ASM , FRONT LEFT 34"
8	172535	1	SQG BASE ASSEMBLY 34"
9	717030	2	BOLT -HH M8X1.25 X 20 SS
10	717040	2	WSR-FLT 10.5 X 30 X 2.5 SS
11	12310264	2	WSR-FLT M8.4X16X1.6 SS
12	17133026	2	KNOB , M10 STAR HANDLE
13	90513094	2	FIXED CASTOR
14	90531112	10	WSR-FLT 8.3 X 22 X 1MM SS
15	90548397	2	ROLLER - PLASTIC , 100mm DIA (4") , BLACK
16	172271	1	BUMPER , 34" SQG
17	172274	1	EDGE TRIM , 5/16 X 10" BLACK
18	712592	2	SCR-MC BHCS , 1/4-20 X 2.25 SS
19	712591	6	NUT , ACORN 1/4-20 SS



BILL OF MATERIAL - 172440			
ITEM	PART NO.	REQ'D	DESCRIPTION
1	172074	2	SPACER, 5/16OD X 17GA, ALUM
2	172234	1	LEVER, 90535758
3	172240	1	STRAP WMT, FRONT LEFT
4	11175494	2	SCR-MC M5 X 25 SS DIN7985
5	11518313	1	BLT-EYE M5 X 40 SS
6	12022430	1	NUT - HEX, M5, SS DIN934
7	12040283	2	NUT - HEX, M5 NYLON LOCK, SS DIN985
8	90513631	1	PIN, THD 90513631

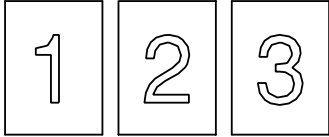


BILL OF MATERIAL - 172150

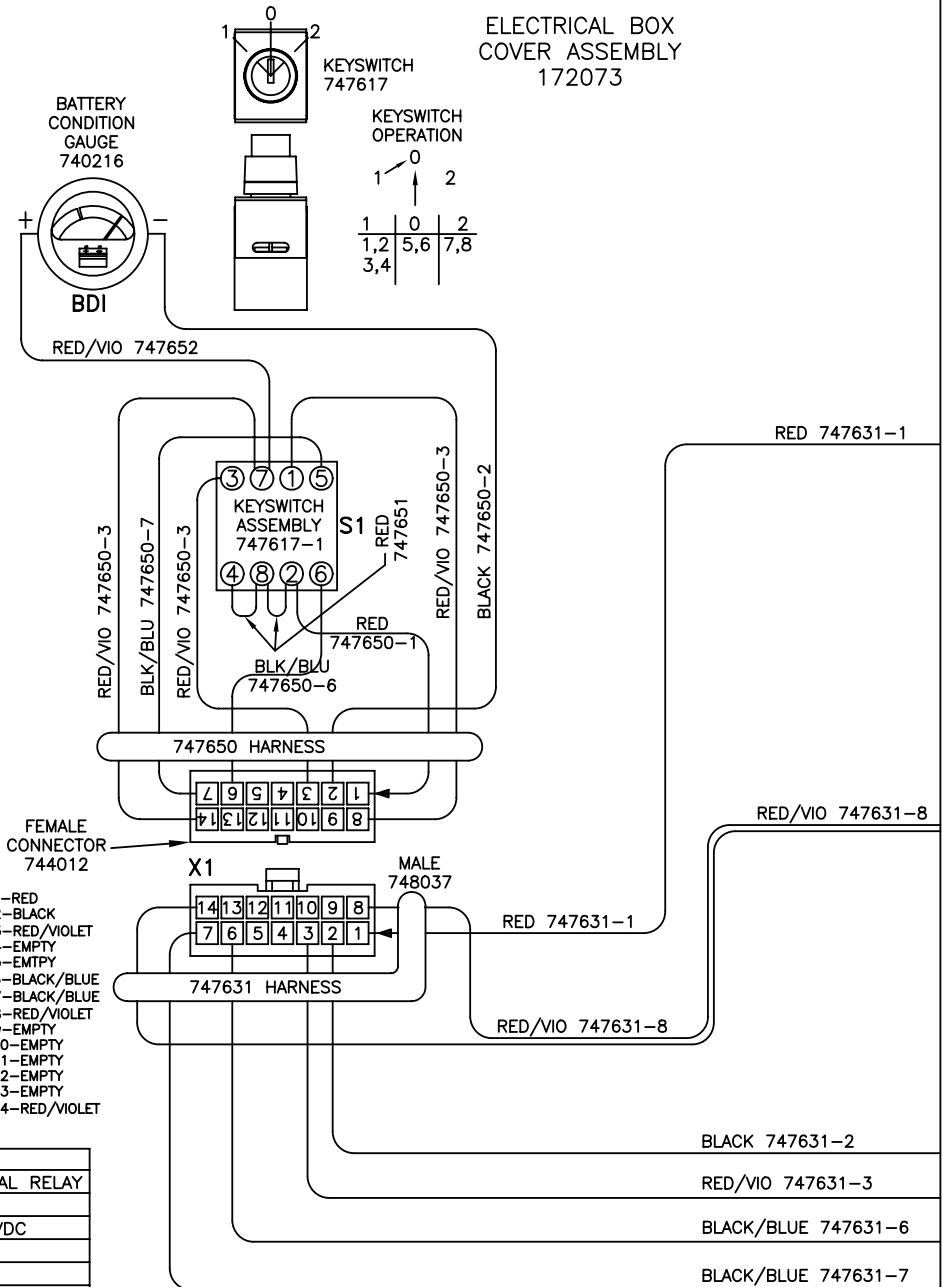
ITEM	PART NO.	REQ'D	DESCRIPTION	ITEM	PART NO.	REQ'D	DESCRIPTION
1	172134	1	BKT, MAIN SQUEEGEE HINGE	15	711678	2	CLEVIS PIN 3/8 X 2-1/4
2	172155	1	SQUEEGEE MOUNT WMT	16	711717	2	RETAINING RING- E TYPE .37
3	172196	1	SQ TOP LINK W/ BUSHING	17	711720	2	.250 DIA RETAINING RING- E TYPE
4	172197	1	SQ BOT LINK W/ BUSH	18	712147	1	ROD-THD 5/16-18 X 3.5 SS
5	172261	1	TORSION SPRING	19	712148	1	CLEVIS PIN, 1/2 x 2.25 W/ HOLE
6	172352	1	PIN, 3/8 X 3.0, SQG STRAP	20	712157	2	NUT- WING 5/16-18 SS
7	172357	1	STRAP, 9" PU, BLACK	21	712562	2	BOLT-HH 1/4-20X3/4 SS
8	260579	1	TOOL CLIP, 1.5" HOSE	22	712665	2	NUT-HEX 1/4-20 SS
9	430051	1	RETURN SPRING-3.00"	23	712680	1	NUT-HEX 5/16-18 SS
10	710530	2	SCR-MC FL HD 8-32 X .50 BRS	24	712683	2	NUT, HEX 5/16-18 NYLOC SS
11	711504	4	WSR-FLAT 1/4 ID SS	25	712758	2	WSR-HELICAL 1/4 SS
12	711515	2	WSR-FLAT .406 X .812 X .0625	26	712760	3	WSR-FLAT .56X1.06X.04 SS
13	711523	2	WSR-WAVE .37X .68 X .08	27	712772	2	WSR-FLAT .344 x .75 x .06 SS
14	711592	2	WSR-FLAT .506 X .9 X .064 NYL	28	3400125	1	PIN-COTTER 3/8 RUE RING

1 Wiring Diagrams

PAGE LAYOUT



PAGES GO TOGETHER AS SHOWN TO SEE THE ENTIRE SCHEMATIC AS ONE.



- 1-RED
- 2-BLACK
- 3-RED/VIOLET
- 4-EMPTY
- 5-EMPTY
- 6-BLACK/BLUE
- 7-BLACK/BLUE
- 8-RED/VIOLET
- 9-EMPTY
- 10-EMPTY
- 11-EMPTY
- 12-EMPTY
- 13-EMPTY
- 14-RED/VIOLET

X1:MAIN KEYSWITCH ASSEMBLY: 747617-1

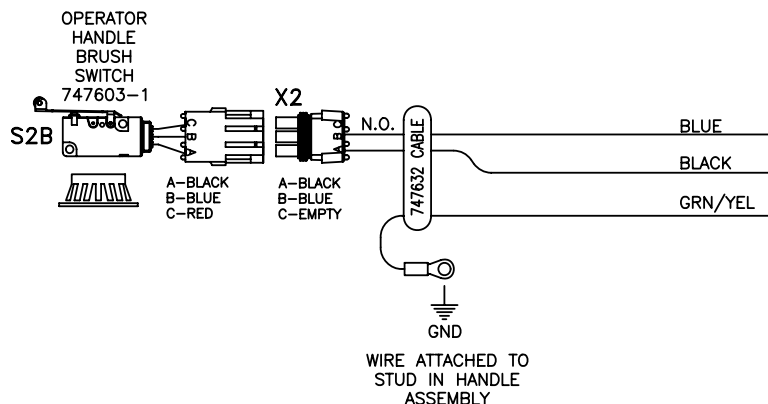
PIN #	COLOR	WHERE TO/FROM
1	RED	X13: BATTERY CHARGER INTERNAL RELAY
2	BLACK	RELAY COILS: 0V
3	RED/VIOLET	BRUSH MOTOR RELAY COIL: 24VDC
4	-	-
5	-	-
6	BLACK/BLUE	BRUSH RELAY NORMALLY CLOSED
7	BLACK/BLUE	BRUSH UNLOAD SWITCH P:B
8	RED/VIOLET	X12: MAIN RELAY COIL: 24VDC
9	-	-
10	-	-
11	-	-
12	-	-
13	-	-
14	RED/VIOLET	X12: MAIN RELAY COIL: 24VDC

BATTERY CHARGER: 957745 or 957753

	COLOR	WHERE TO/FROM
X13	RED	X13: KEYSWITCH P:1
X14	BLACK	X14: CONTROL CB 4.0A
14GA	RED	MAIN RELAY + (REAR LEFT POST)
14GA	BLACK	MAIN RELAY - (FRONT LEFT POST)

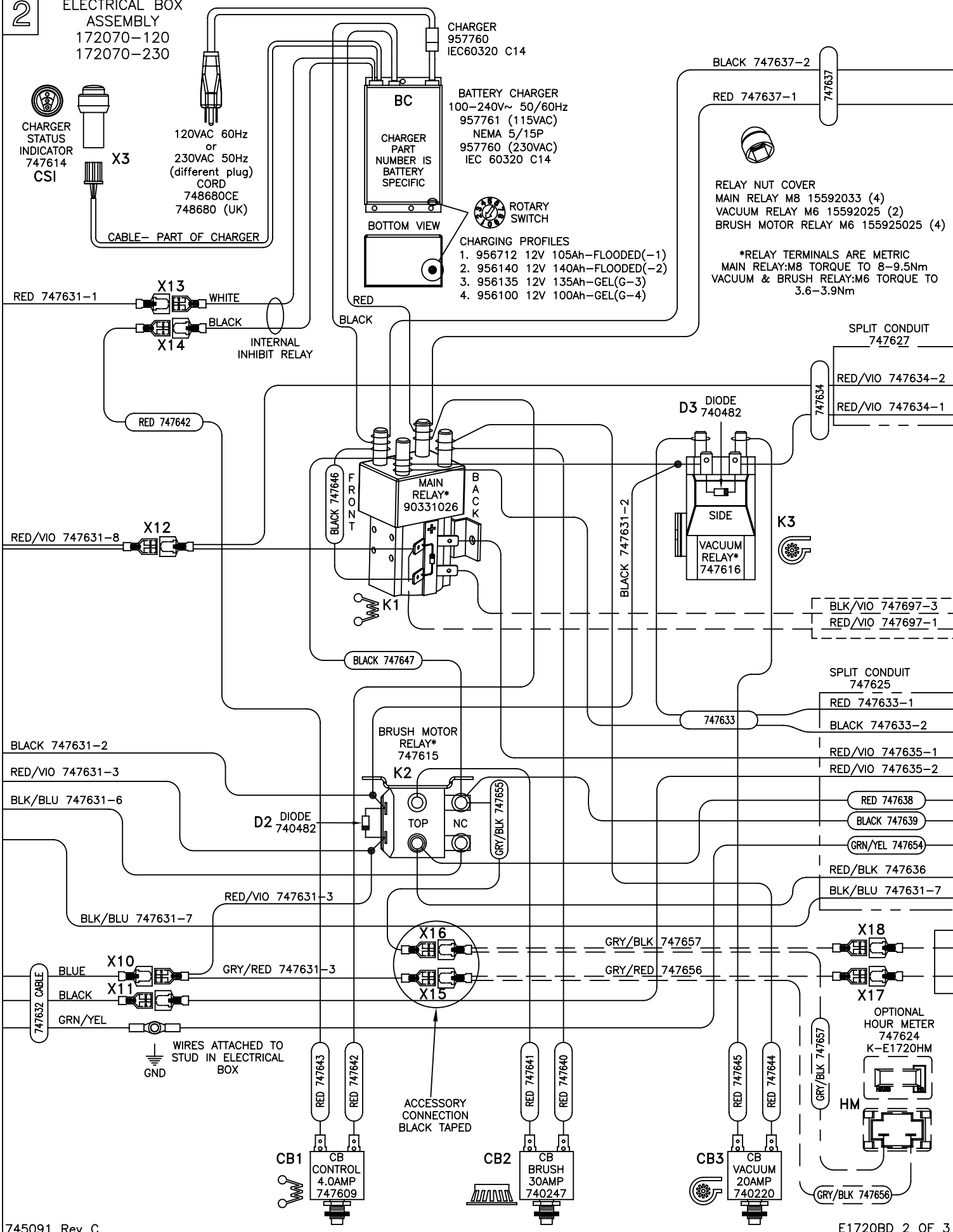
OTHER WIRE COLORS

-	RED	BATTERY 24VDC: +
-	BLACK	BATTERY 0VDC: -
-	GREEN/YELLOW	GROUND
-	BLACK/BLUE	BRUSH UNLOAD CIRCUIT
-	RED/BLACK	BRUSH UNLOAD CIRCUIT:MICRO SWITCH
-	RED/VIOLET	24VDC AFTER MAIN KEYSWITCH
X15	GREY/RED	OPTIONAL POWER 24VDC: 3A MAX
X16	GREY/BLACK	OPTIONAL POWER 0VDC: 3A MAX



2

ELECTRICAL BOX ASSEMBLY
172070-120
172070-230



CHARGER
957760
IEC60320 C14

BATTERY CHARGER
100-240V~ 50/60Hz
957761 (115VAC)
NEMA 5/15P
957760 (230VAC)
IEC 60320 C14

ROTARY SWITCH

- CHARGING PROFILES
1. 956712 12V 105Ah-FLOODED(-1)
 2. 956140 12V 140Ah-FLOODED(-2)
 3. 956135 12V 135Ah-GEL(G-3)
 4. 956100 12V 100Ah-GEL(G-4)

BLACK 747637-2
RED 747637-1
747637

RELAY NUT COVER
MAIN RELAY M8 15592033 (4)
VACUUM RELAY M6 15592025 (2)
BRUSH MOTOR RELAY M6 155925025 (4)

*RELAY TERMINALS ARE METRIC
MAIN RELAY:M8 TORQUE TO 8-9.5Nm
VACUUM & BRUSH RELAY:M6 TORQUE TO 3.6-3.9Nm

SPLIT CONDUIT
747627

RED/VIO 747634-2
RED/VIO 747634-1
747634

D3 DIODE
740482
SIDE
VACUUM RELAY*
747616
K3

BLK/VIO 747697-3
RED/VIO 747697-1

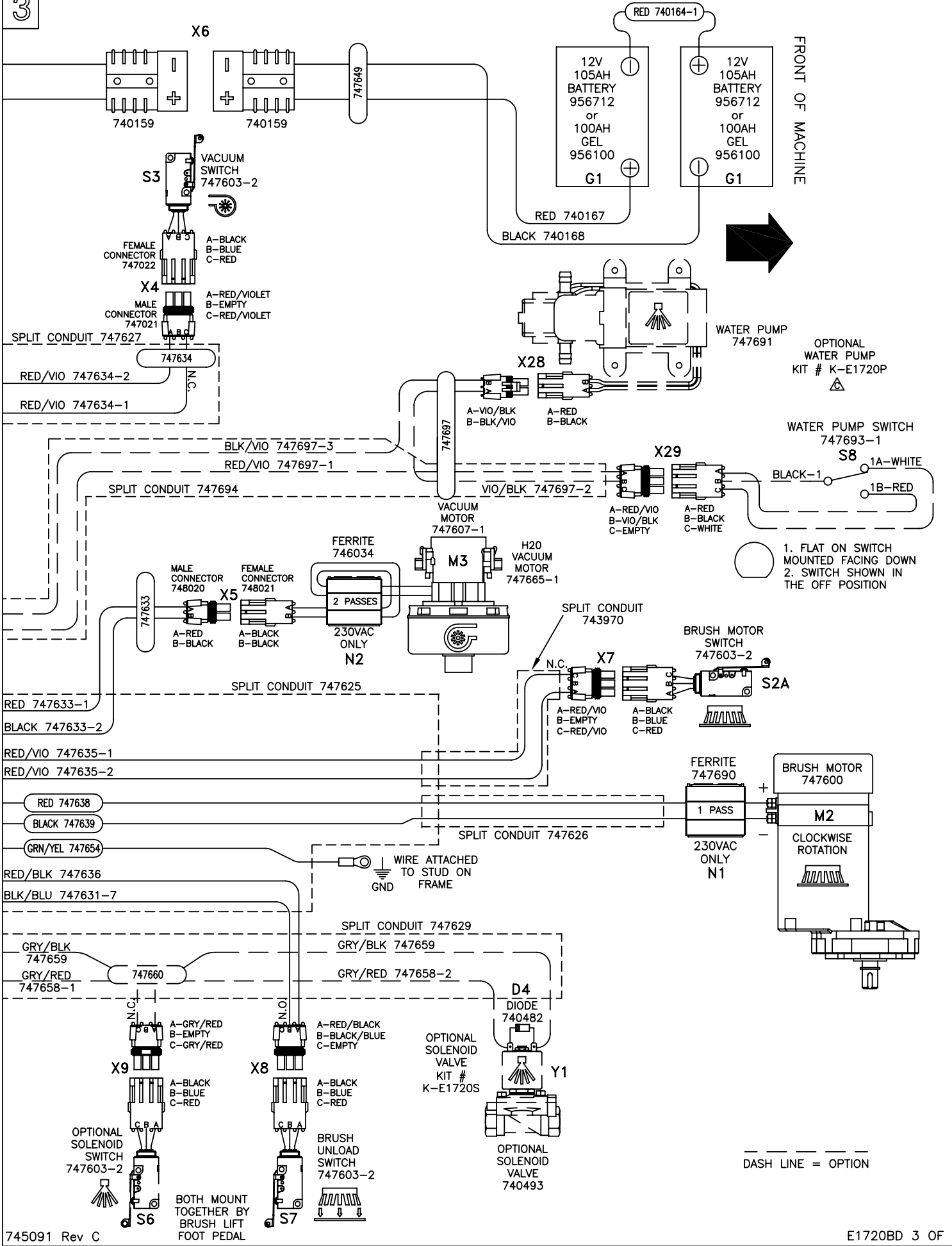
SPLIT CONDUIT
747625

RED 747633-1
BLACK 747633-2
RED/VIO 747635-1
RED/VIO 747635-2

RED 747638
BLACK 747639
GRN/YEL 747654
RED/BLK 747636
BLK/BLU 747631-7

X18
X17
OPTIONAL HOUR METER
747624
K-E1720HM

HM
GRY/BLK 747657
GRY/BLK 747656



- 1. FLAT ON SWITCH MOUNTED FACING DOWN
- 2. SWITCH SHOWN IN THE OFF POSITION

DASH LINE = OPTION

E1720BD PART REFERENCE LIST
Schematic 745091

REFERENCE #	COMPONENT NAME	PART NUMBER
M1 (optional)	PUMP, WATER (KIT K-E1720P)	748691
M2	MOTOR, BRUSH	748692
M3	MOTOR, VACUUM ASSEMBLY	747607-1
M3 (model specific)	MOTOR, VACUUM ASSEMBLY (H2O only)	747665-1
Y1 (optional)	SOLENOID VALVE, WATER (KIT K-E1720S)	740493
K1	RELAY, MAIN	90331026
K2	RELAY, BRUSH MOTOR	747615
K3	RELAY, VACUUM	747616
CB1	CIRCUIT BREAKER 4.0A, CONTROL	747609
CB2	CIRCUIT BREAKER 30A, BRUSH MOTOR	740247
CB3	CIRCUIT BREAKER 20A, VACUUM MOTOR	740220
S1	KEYSWITCH	747617
S2A	SWITCH, BRUSH MOTOR (at motor)	747603-2
S2B	SWITCH, BRUSH MOTOR (handle)	748603-1
S3	SWITCH, VACUUM MOTOR	748603-2
S6	SWITCH, BRUSH UNLOAD	748603-2
S7 (optional)	SWITCH, SOLENOID (KIT K-1720S)	747603-2
S8 (optional)	SWITCH, PUMP- OFF AISLE WAND (KIT K-1720P)	747693-1
CSI	CHARGER STATUS INDICATOR	747614
HM (optional)	HOUR METER (KIT K-E1720HM)	747624
BC (model specific)	BATTERY CHARGER 115VAC (battery type specific)	957761 (-1 or G-4)
BC (model specific)	BATTERY CHARGER 230VAC (battery type specific)	957760 (-1 or G-4)
G1	BATTERY, 12V 105AH (2 REQUIRED)	956712
G1 (optional)	BATTERY, GEL 12V 100AH (2 REQUIRED)	956100
N1	FERRITE, BRUSH MOTOR	747690
N2	FERRITE, VACUUM MOTOR	746034
D1	DIODE, MAIN RELAY	Part of K1
D2	DIODE ASM, BRUSH MOTOR RELAY	740482
D3	DIODE ASM, VACUUM MOTOR RELAY	740482
D4 (optional)	DIODE ASM, SOLENOID VALVE (KIT K-E1720S)	740482

REFERENCE #	CONNECTOR FUNCTION	PART # -female	PART # -male
X1	KEYSWITCH (S1)	744012	748037
X2	SWITCH, BRUSH MOTOR (S2B)	747022	747021
X3	CHARGER STATUS INDICATOR (CSI)	Part of CSI	Part of BC
X4	SWITCH, VACUUM (S3)	747022	747021
X5	MOTOR, VACUUM (M3)	748021	748020
X6	BATTERY CONNECTOR	740159	740159
X7	SWITCH, BRUSH MOTOR (S2A)	747022	747021
X8	SWITCH, BRUSH UNLOAD (S4)	747022	747021
X9	SOLENOID VALVE, WATER (Y1)	747022	747021
X10	OPERATOR HANDLE CABLE	741093	740697
X11	OPERATOR HANDLE CABLE	740366	740697
X12	KEYSWITCH (S1)- MAIN RELAY COIL (K1)	741093	741165
X13	BATTERY CHARGER (BC)- INTERNAL RELAY	740366	740697
X14	BATTERY CHARGER (BC)-INTERNAL RELAY	740366	740697
X15	SOLENOID (Y1) /HOUR METER CONNECTION (HM)	740366	741165
X16	SOLENOID (Y1) /HOUR METER CONNECTION (HM)	740366	741165
X17	OPTIONAL HOUR METER (HM) WIRE-747656	740366	741165
X18	OPTIONAL HOUR METER (HM) WIRE-747657	740366	741165
X28 (optional)	SWITCH, TOGGLE WATER PUMP (S8)	747022	747021
X29 (optional)	PUMP, OFF AISLE WAND (M1)	748021	748020

Revision F
Effective November 1, 2008
PowerBoss Made Simple Industrial Limited Warranty

Minuteman International owner of PowerBoss warrants to the original purchaser/user that the product is free from defects in workmanship and materials under normal use. PowerBoss will, at its option, repair or replace without charge, parts that fail under normal use and service when operated and maintained in accordance with the applicable operation and instruction manuals. All warranty claims must be submitted through and approved by factory authorized repair stations.

This warranty does not apply to normal wear, or to items whose life is dependent on their use and care. Parts not manufactured by PowerBoss are covered by and subject to the warranties and/or guarantees of their manufacturers. Please contact Minuteman International for procedures in warranty claims against these manufacture.

Special warning to purchaser – Use of replacement parts not manufactured by PowerBoss or its designated licensees, will void all warranties expressed or implied. A potential health hazard exists without original equipment replacement.

All warranted items become the sole property of Minuteman International or PowerBoss or its original manufacturer, whichever the case may be.

PowerBoss disclaims any implied warranty, including the warranty of merchantability and the warranty of fitness for a particular purpose. PowerBoss assumes no responsibility for any special, incidental or consequential damages.

This limited warranty is applicable only in the U.S.A. and Canada, and is extended only to the original user/purchaser of this product. Customers outside the U.S.A. and Canada should contact their local distributor for export warranty policies. PowerBoss is not responsible for costs or repairs performed by persons other than those specifically authorized by PowerBoss. This warranty does not apply to damage from transportation, alterations by unauthorized persons, misuse or abuse of the equipment, use of non-compatible chemicals, or damage to property, or loss of income due to malfunctions of the product. If a difficulty develops with this machine, you should contact the dealer from whom it was purchased.

This warranty gives you specific legal rights, and you may have other rights, which vary from state to state. Some states do not allow the exclusion or limitation of special, incidental or consequential damages, or limitations on how long an implied warranty lasts, so the above exclusions and limitations may not apply to you.

	Travel*	Labor	Parts	Engine	Extended Warranty	Costs
Walk behinds						
Battery sweepers	Ninety days	One year	One year	N/A	2 years Parts + Labor (or 2000 Hours)	2%
IC sweepers	Ninety days	One year	One year	Through manufacturer	2 years Parts + Labor (or 2000 Hours)	2%
Battery scrubbers	Ninety days	Two years	Three years	N/A	3 Years Parts + Labor (or 3000 Hours)	2%
Riders						
Battery scrubbers	Ninety days	Two years	Three years/2000 hrs	N/A	3 Years Parts + Labor (or 3000 Hours)	2%
IC sweeper/scrubbers	Ninety days	Six months	Two years/2000 hrs	Two years/3000 hrs**	2 years Parts + Labor (or 2000 Hours)	3%
IC sweepers	Ninety days	Six months	Four years/3000 hrs	Five years/3000 hrs**	4 Years Parts + 2 Years Labor (or 4000 Hours)	3%
Exceptions						
Apex series sweeper	Ninety days	One year	One year/1000 hrs	One year/1000 hrs**	2 years Parts + Labor (or 2000 Hours)	3%
6X sweeper	Ninety days	Six months	Two years/2000 hrs	Two years/2000 hours**	2 years Parts + Labor (or 2000 Hours)	3%

Tank Bladders Eight years/ no additional labor
Polypropylene plastic tanks Ten years/ no additional labor
Batteries 0-3 months full replacement, 4-12 prorated credit
Charges One-year replacement
Replacement parts Ninety days

*Two-hour cap

**Through engine manufacture. See section 3 of warranty manual for engine warranty exceptions

***Base upon dealer's certification status

Extended Warranty MUST be signed up within 30 days of delivery to End User (Dealer has 1 Year from Receiving Machine to Sign up extended Warranty)

Extended Warranty Cost is based on Invoice Price multiplied by the Percentage listed in the Extended Warranty Column

All above labor and travel reimbursed at 65 or 75% of the published shop rate.