

**Parts Manual
Bulldog 20" Brush Drive
Walk Behind Scrubber**

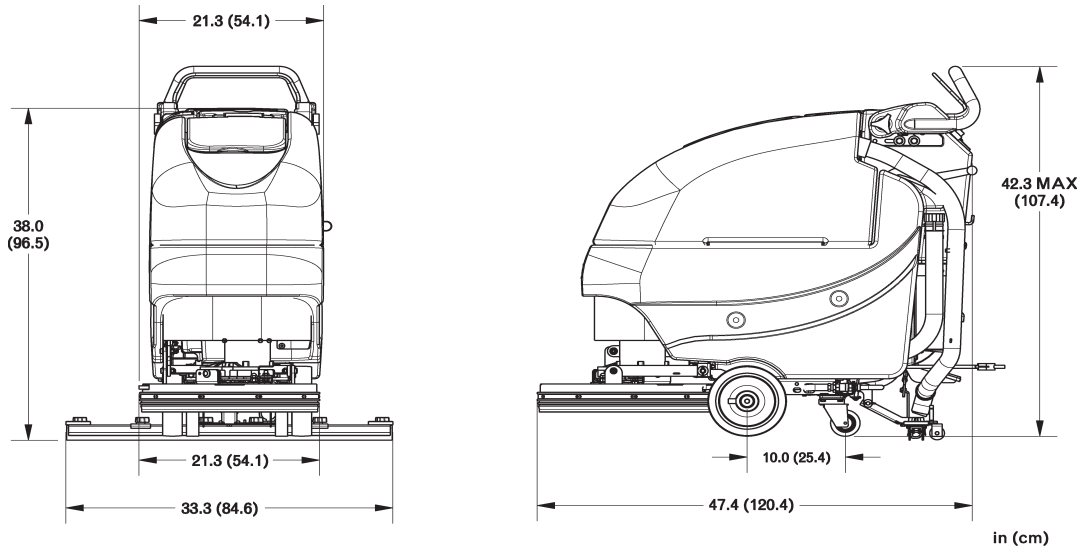
Technical Specifications



Model **Bulldog 20" Brush Drive Walk Behind Scrubber**

Model No. E20BDQP-FC / E20BDQPG-FC

Current (Max)	32 amps
Battery Capacity (Lead Acid)	115Ah @20 hr
Battery Capacity (Gel)	100Ah @20 hr
Sound Level	69 dBA
Cleaning path width	20 in (51 cm)
Squeegee width	34 in (86 cm)
Theoretical productivity	15,000 ft ² /hr (1,394 m ²)
Working speed	1.7 mph (2.7 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

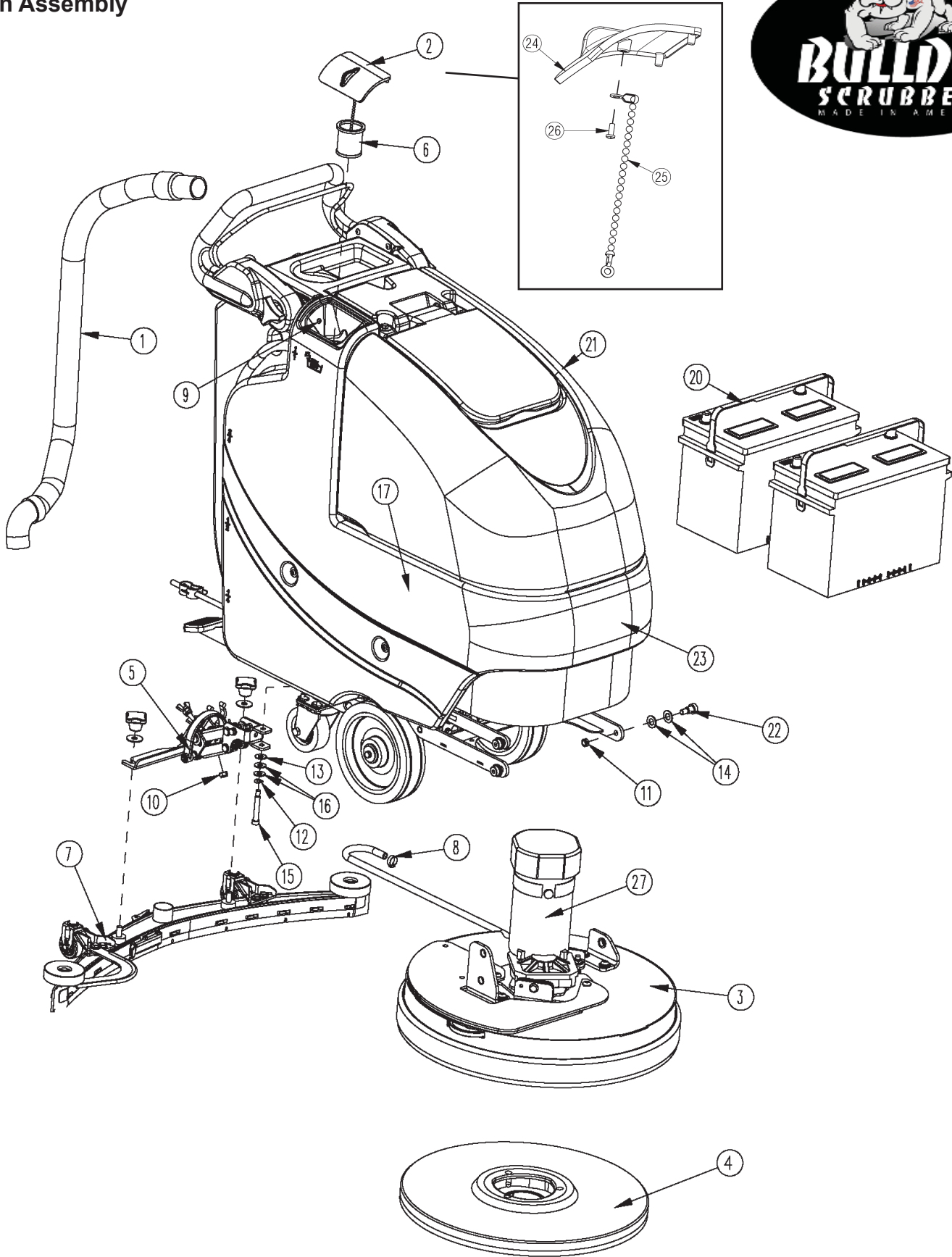
- Stop on level surface.
- Disconnect the power to the machine by pulling the red Battery Connector located under the recovery tank near the batteries.
- Avoid moving parts. Do not wear loose jackets, shirts, or sleeves when working on machine.
- Avoid contact with battery acid. Battery acid can cause 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 Manufacturer supplied replacement parts.



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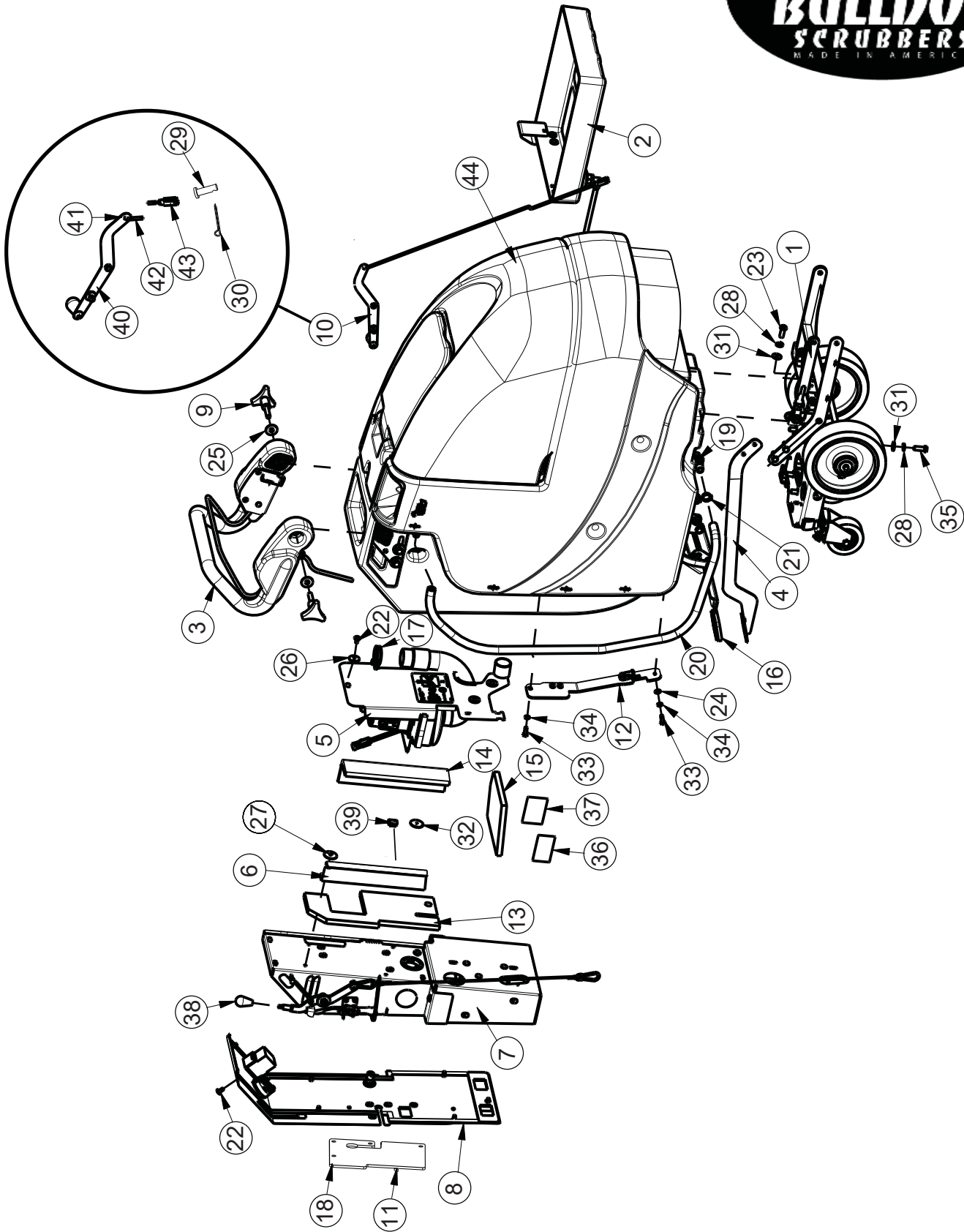
Main Assembly





BILL OF MATERIAL			
ITEM	PART NO.	QTY	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	172520-1	1	BRUSH, 20" NYLON
5	172150	1	SQUEEGEE LIFT MECH ASSY
6	172159	1	FILTER, FILL PORT
7	172230	1	SQUEEGEE ASSY, 34" (860MM) CURVED
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	715920FC1	2	DECAL (NOT SHOWN)
18	740164-1	1	JUMPER CABLE ASSY, RED 4G 12"
19	747649	1	CABLE ASSY, BATTERY
20	956712	2	BATTERY, 12V 115AH
20G	956157	2	GEL BATTERY 12V 100AH
21	172001BDFC	1	BRUSH DRIVE BASE ASSY
22	712099PLT	3	BLT- SHLDR 1/2 X 1/2 ZINC PLT
23	715914FC	1	DECAL (NOT SHOWN)
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
27	715938	1	DECAL, FCE CONTACT INFO

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

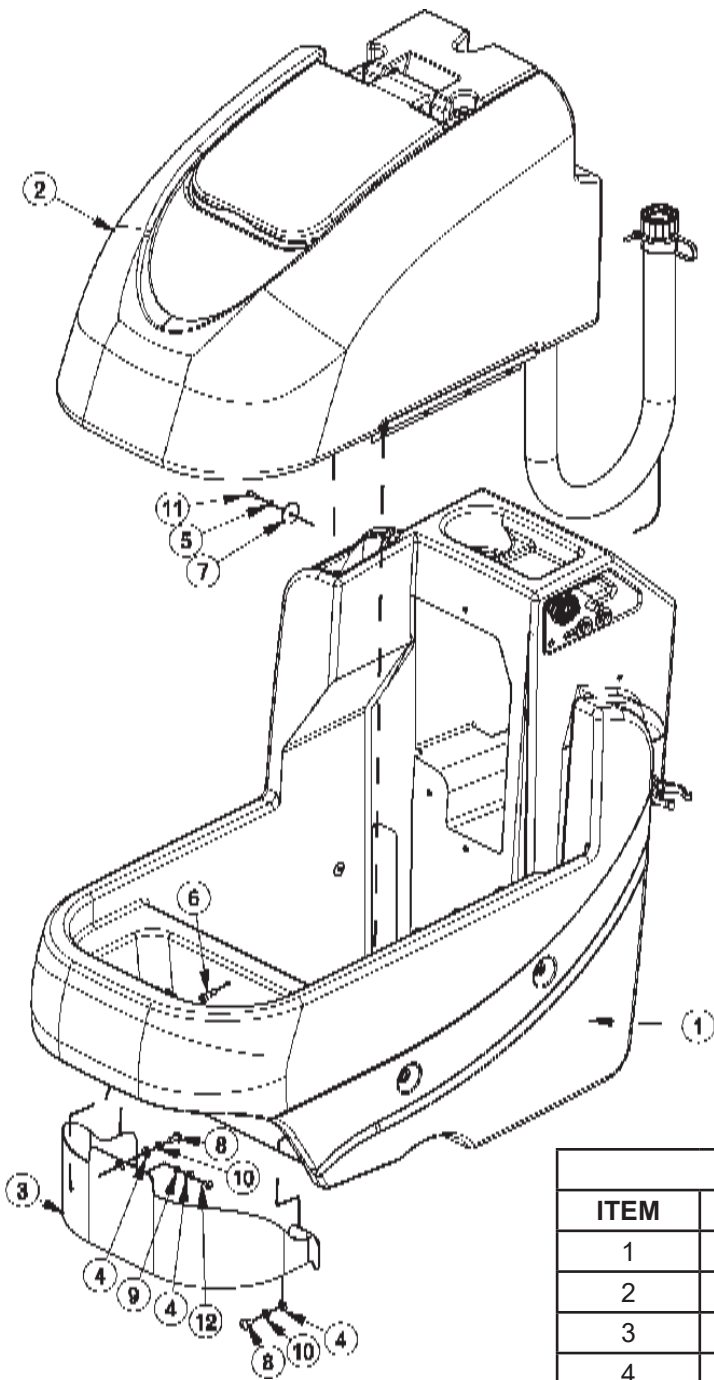


Brush Drive Base Assembly BOM

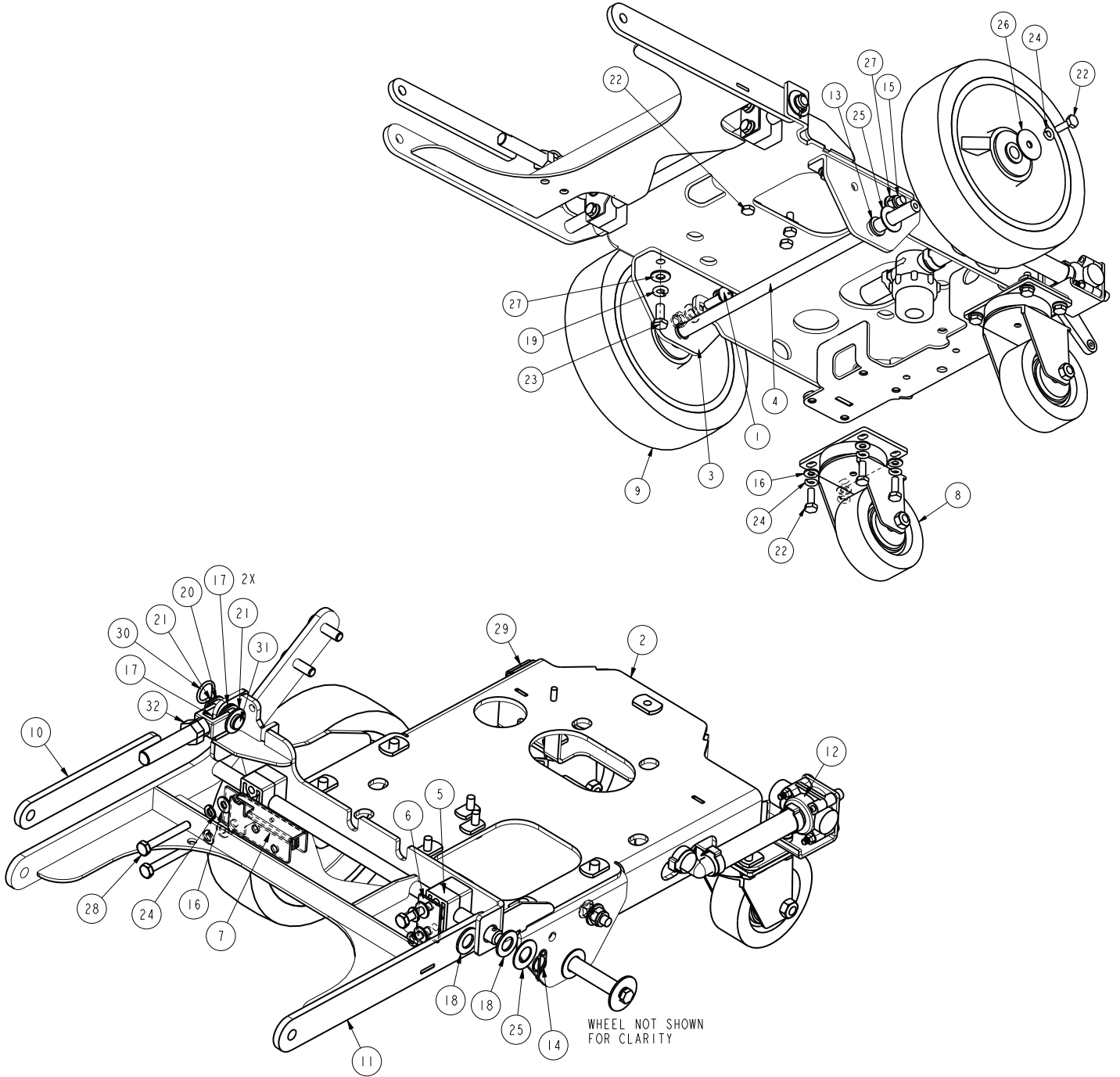


BILL OF MATERIAL - 172001BDFC							
ITEM	PART NO.	QTY	DESCRIPTION	ITEM	PART NO.	QTY	DESCRIPTION
1	172002	1	BD CHASSIS ASSY	23	710985	2	SCR-BHSCS 3/8-16 X .625 ZP
2	172012	1	BATTERY TRAY ASSY	24	711504	1	WASHER-FLAT 1/4 SS
3	172016	1	BD HANDLE ASSY	25	711507	2	WASHER-FLAT 3/8 X 1.12 X .06
4	172032	1	LIFT PEDAL WMT	26	711519	3	WASHER-FLAT 1/4 X 1.00 X .06 ZP
5	172050	1	VAC MOTOR ASSY	27	711543	2	WASHER-LOCK #10 SPLIT ZP
6	172055	1	BKT, VAC AREA INSIDE COVER	28	711546	6	WASHER-LOCK 3/8 SPLIT ZP
7	172070-120	1	ELEC BOXBD ASSY 120V	29	711803	1	PIN-COTTER .06 X .75
8	172073FC	1	BD ELEC BOXCOVER ASSY	30	712117	1	PIN-CLEVIS 3/16 X .593
9	172085	2	KNOB, 3/8-16 STUD, 3LOBE	31	712301	8	WASHER-FLAT 3/8 X .87 X .06 ZP
10	172112	1	SOL CONTROL ASSY	32	712312	2	WASHER-BALANCING .187 X 1.25
11	172129	1	BKT, PWR CORD MOUNT, 5/8 HOLE	33	712562	2	SCR-HH 1/4-20 X .75, 18-8 SS
12	172157	1	LIFT PEDAL STOP ASSY	34	712758	2	WASHER-LOCK 1/4 SPLIT SS
13	172184	1	FOAM COVER W/ ADHESIVE	35	713042	4	SCR-HH 3/8-16 X 1.00 ZP GR 5
14	172185	1	FOAM COVER REAR 2, 1/2" THICK	36	715029	1	DECAL-NAME PLATE MODEL ID
15	172187	1	FOAM COVER FRONT 2, 1/2" THICK	37	715047	1	DECAL-CLEAR LAMINATE 2X3
16	210142	1	PEDAL PAD	38	760592	1	KNOB-OVAL TAPERED
17	3303255	1	CLAMP-HOSE 1.75 DIA NOMINAL	39	809443	1	CLIP-WIRE & CORD
18	293080	1	STRAIN RELIEF	40	172115	1	SOLUTION CTRL LEVER ASSY
19	342440	1	FTG-TEE 3/4 MPT X 1/2 HB NYLON	41	172122	1	NUT, PUSH-ON WSR CAP, 3/16
20	430156	1	HOSE, CLEAR 1/2 ID X 39.75"	42	172069	1	SOLUTION CONTROL ROD
21	450093	1	CLAMP-CRIMP 3/4" OD STEPLESS	43	172062	1	YOKE, 3/16 CLEVIS X 10-32 THD
22	710178	10	SCR-THMS 1/4-20 X .50 ZP	44	172001FC	1	BASE ASSY

Base Assembly



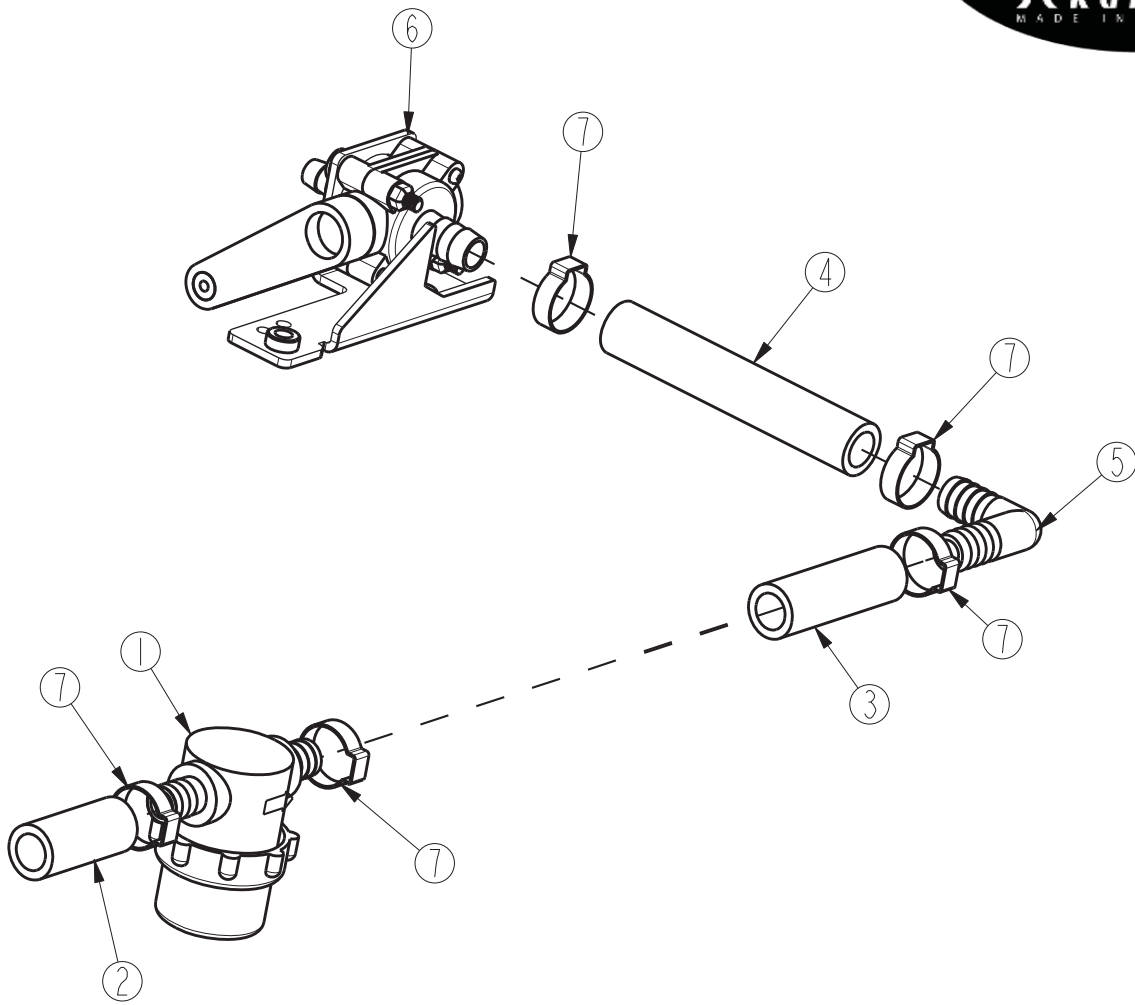
172001FC			
ITEM	PART NO.	QTY	DESCRIPTION
1	172013FC	1	SOL TANK ASSY
2	172014FC	1	REC TANK ASSY
3	172144FC	1	PANEL, FRONT
4	711504	3	WSR-FLAT 1/4 ID SS
5	711543	4	WSR-HELICAL #10
6	712041	1	BLT- SHLDR 1/4-20 X .44 X .37
7	712312	4	WSR-FLAT .187 X 1.25
8	712565	2	SCR-MC 1/4-20X.63 SS TR HD
9	712757	1	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
13	172407	1	PLUG, FRONT PANEL (NOT SHOWN)
14	172408	1	PLUG, FRONT PANEL (NOT SHOWN)



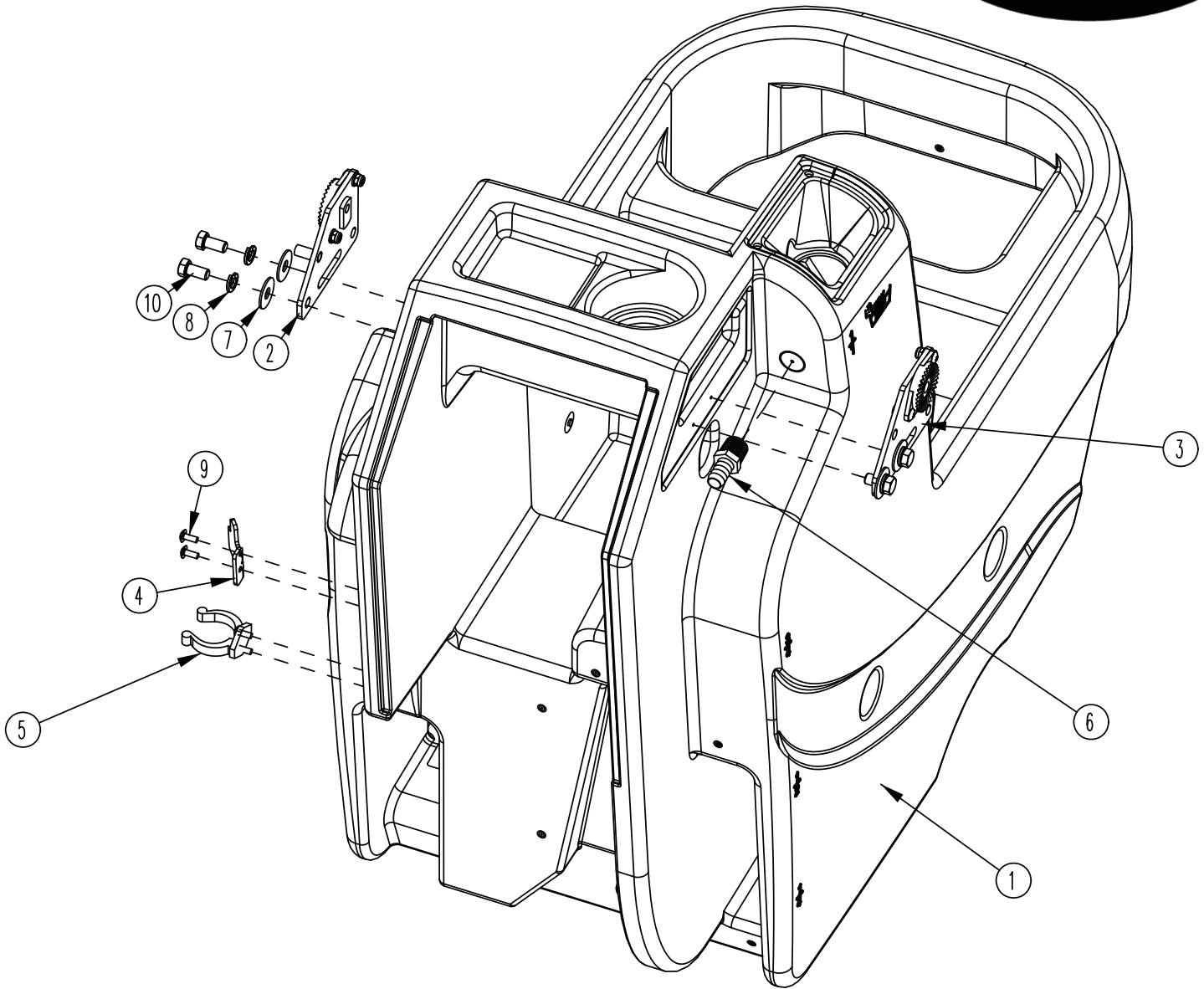


BILL OF MATERIAL - 172002			
ITEM	PART NO.	QTY	DESCRIPTION
1	70-516-16	2	BLT-CARR 5/16-18 X 1 ZP
2	172020	1	MAIN FRAME WMT, 20BD
3	172024	2	BKT, WHEEL, 20BD
4	172035	1	ROD, .5" 20BD AXLE
5	172038	4	BEARING BLOCK
6	172039	1	BEARING BLOCK PLATE
7	172110	1	DECK SWITCH ASSY
8	172167	2	CASTER, 3 1/2" PU WHEEL
9	172265	2	WHEEL, 8X2X.5ID, 75A W/ GROOVES
10	172368	1	UPPER LIFT ARM
11	172370	1	DISC DECK LIFT WMT, 20BD
12	172571	1	ASSY-SOLUTION VALVE 20BD
13	260041	2	BUSHING-FLG .502 X .627 X .375 OILITE
14	600578	1	RING-RUE .50 ZP
15	711374	2	NUT-NYLOC 5/16-18 ZP
16	711504	12	WASHER-FLAT 1/4 SS
17	711569	3	WASHER-FLAT .390 X .880 X .062 NYL
18	711592	2	WASHER-FLAT 1/2 X .90 X .064 NYLON
19	10 08 49	4	WASHER-LOCK 5/16 SPLIT SS
20	712265	1	CLEVIS-YOKE, 1/2-20 WITH .375 PIN
21	712301	2	WASHER-FLAT 3/8 X .87 X .06 ZP
22	712562	13	SCR-HH 1/4-20 X .75, 18-8 SS
23	712575	4	SCR-HH 5/16-18 X .75 18-8 SS
24	712758	14	WASHER-LOCK 1/4 SPLIT SS
25	712760	3	WASHER-FLAT .56 X 1.06 X .04 SS
26	712761	2	WASHER-FENDER 1/4 X 1.25 X .059 SS
27	712772	6	WASHER-FLAT .344 X .75 X .06 SS
28	713007	4	SCR-HH 1/4-20 X 2.00 ZP GR 5
29	809444	1	CLIP-CORD
30	833374	1	PIN-HAIRPIN COTTER 3/8
31	833833	1	PIN-CLEVIS 3/8 X 1.25
32	3400449	1	NUT-JAM 1/2-20 ZP

Solution Valve Assembly



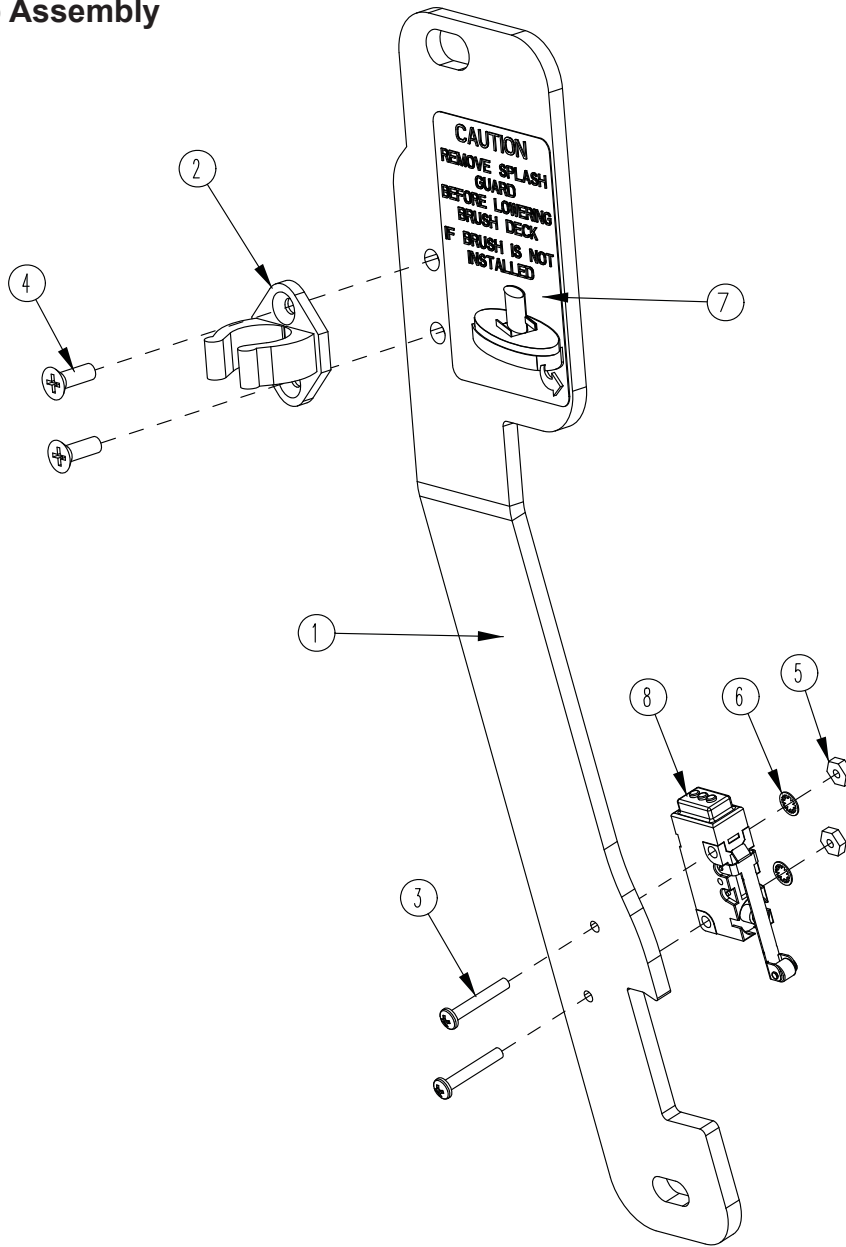
BILL OF MATERIAL - 172571			
ITEM	PART NO.	QTY	DESCRIPTION
1	172564	1	FILTER-SOLUTION E1720
2	172566	1	HOSE- 1/2ID X 1.75" NYLOBRAID
3	172567	1	HOSE-1/2"ID X 2.375" NYLOBRAID
4	172568	1	HOSE-WIRE REINF 1/2"ID X 4.25"
5	172569	1	FTG-ELBOW 90 1/2 HB X 1/2 HB NYLON
6	172579	1	SOLUTION CNTRL VALVE, WITH BRKT
7	383347	5	CLAMP-CRIMP 1/2 HOSE



BILL OF MATERIAL - 172013FC

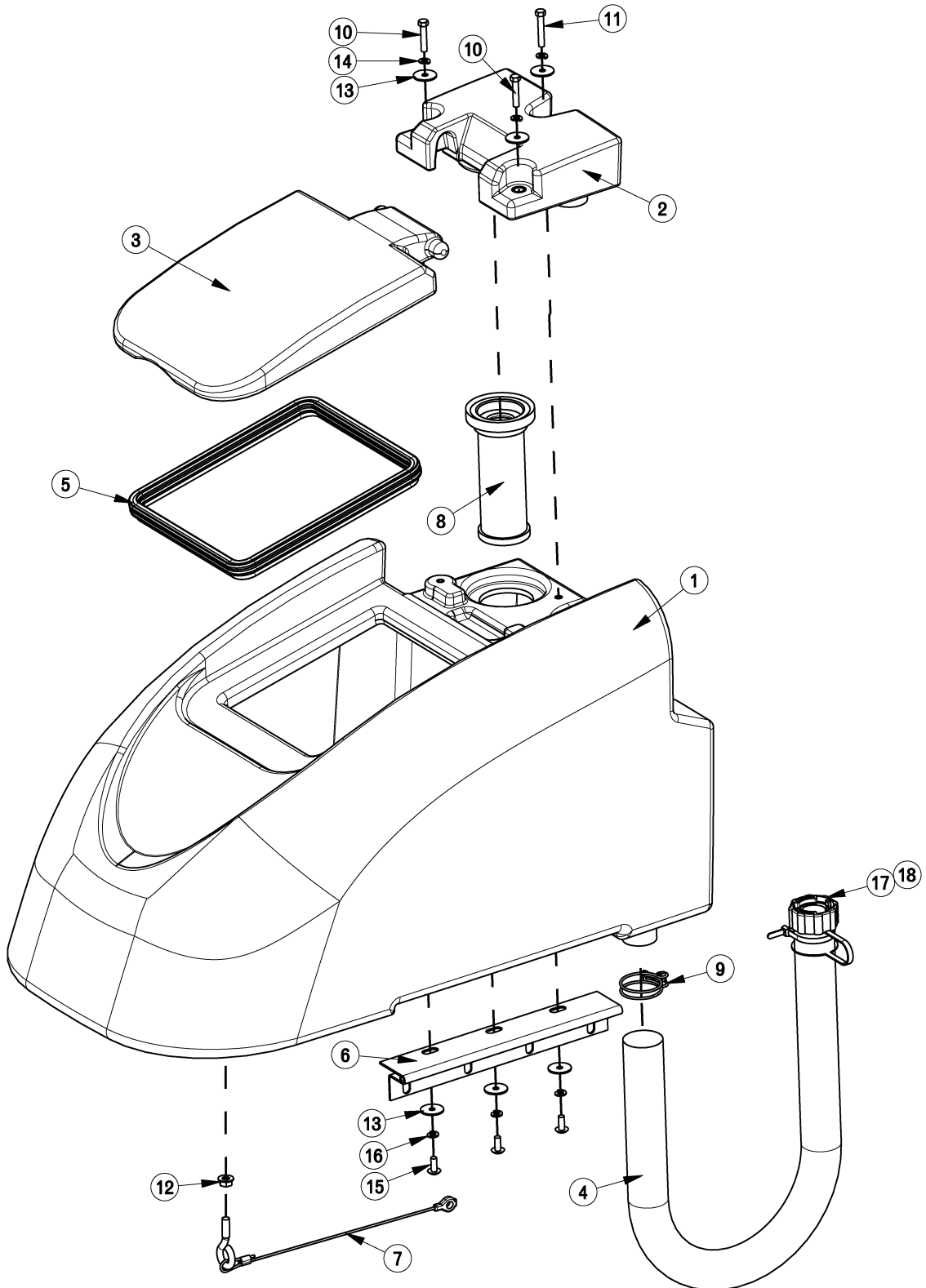
ITEM	PART NO.	QTY	DESCRIPTION
1	172003FC	1	SOLUTION TANK
2	172080	1	HANDLE MOUNT ASSY, LEFT
3	172082	1	HANDLE MOUNT ASSY, RIGHT
4	172341	1	HOOK, DRAIN HOSE WITH TWIST VALVE
5	260579	1	TOOL CLIP, 1.5" HOSE
6	342438	1	FITTING, 1/2 MPT 1/2 HB BRASS
7	711507	4	WSR-FLAT .37 X 1.12 X .06
8	711546	4	WSR-HELICAL 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

Lift Pedal Stop Assembly



BILL OF MATERIAL - 172157

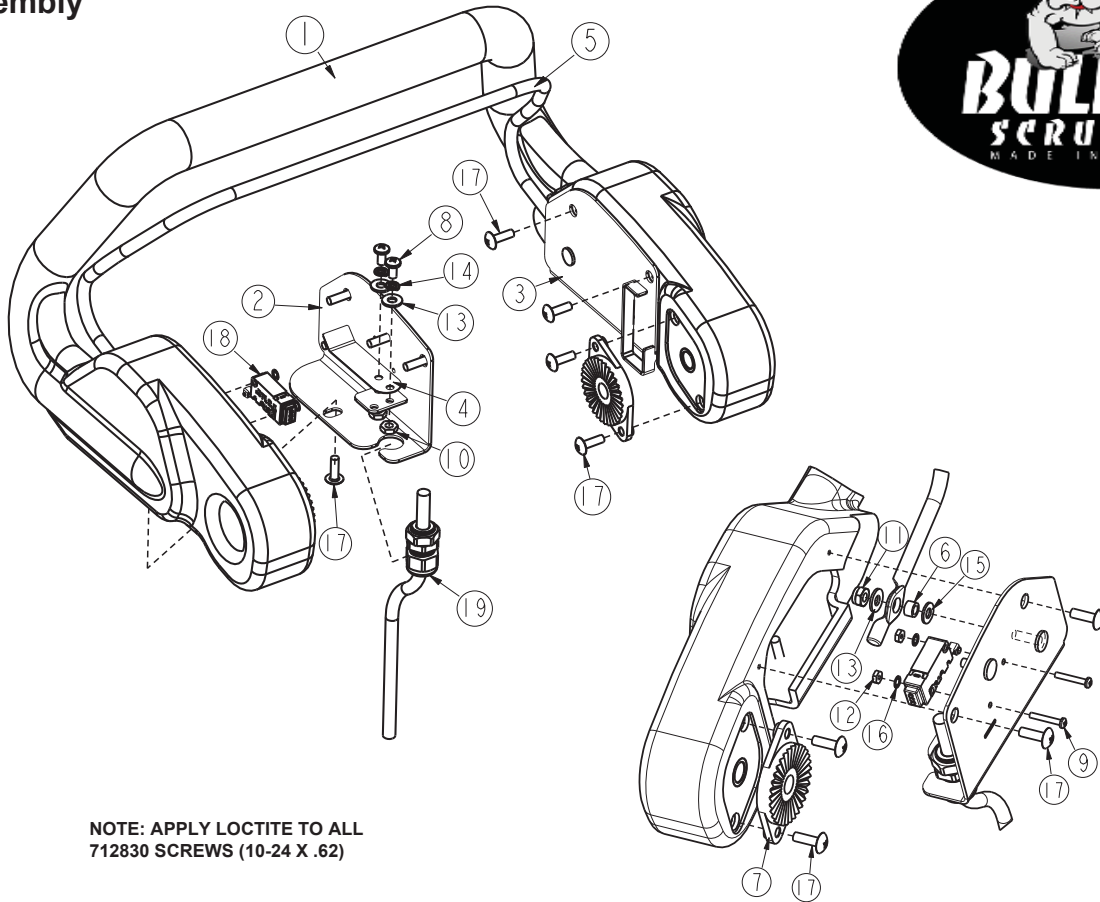
ITEM	PART NO.	QTY	DESCRIPTION
1	172036	1	BKT, PEDAL STOP
2	172065	1	CLIP, FOR 1/2" ID HOSE
3	710493	2	SCR-MC 4-40 X .75 PAN HD
4	710530	2	SCR-MC FL HD 8-32 X .50 BRS
5	711428	2	NUT-HEX 4-40
6	712326	2	WSR-INT LOCK #4
7	715685	1	DECAL, REMOVE SPLASH GUARD
8	747603-2	1	SWITCH ASY, MICRO ROLLER W/PACK/CONDUIT





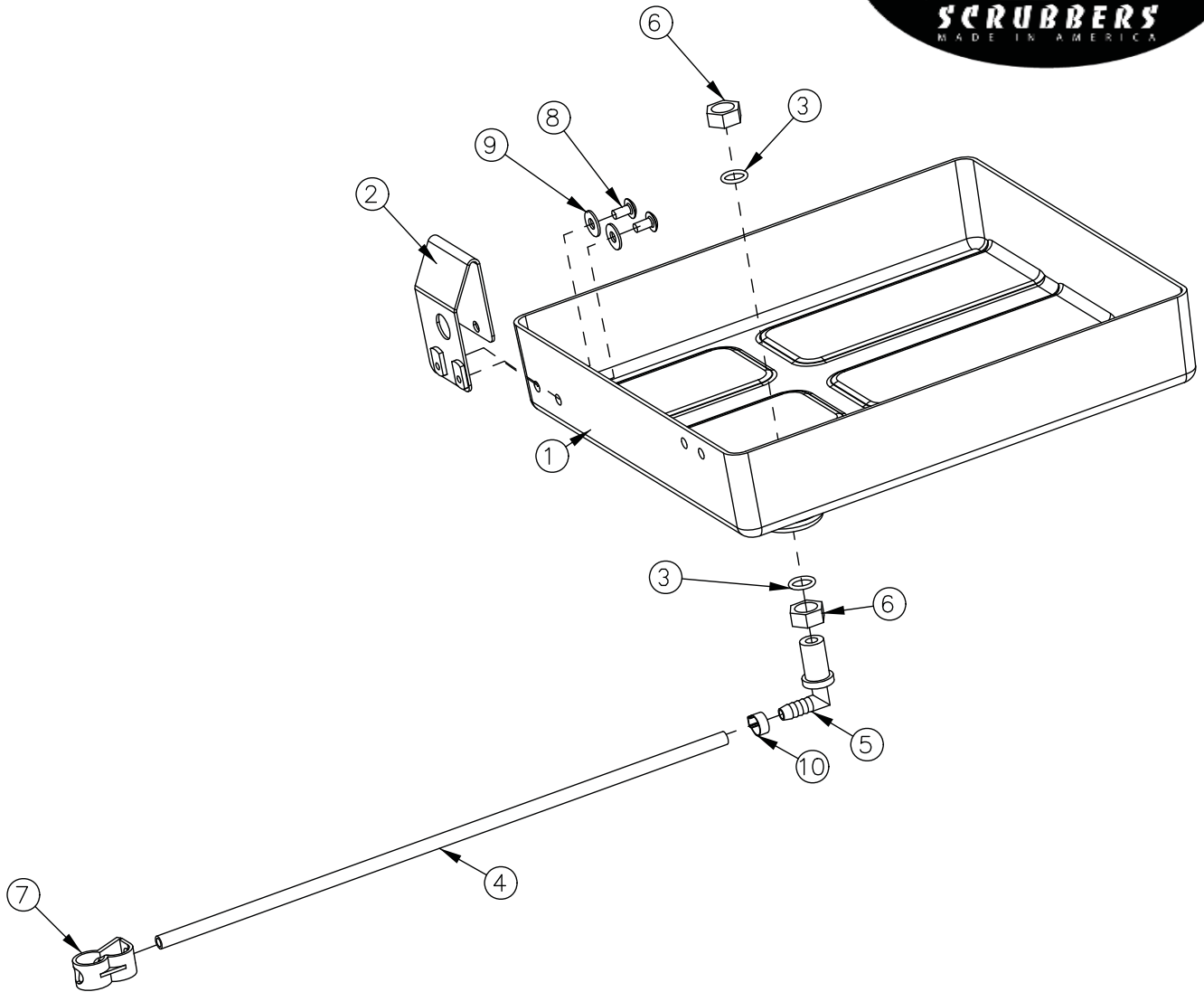
BILL OF MATERIAL - 172014			
ITEM	PART NO.	QTY	DESCRIPTION
1	172004FC	1	RECOVERY TANK
2	172005FC	1	VACUUM MANIFOLD
3	172007FC	1	LID
4	97090096	1	DRAIN HOSE ASSY, RECOVERY TANK
5	172017	1	GASKET, LID
6	172049	1	HINGE, RECOVERY TANK
7	172394	1	REC TANK CABLE ASSY 11.625
8	172132	1	SCREENED FLOAT
9	3303255	1	CLAMP-HOSE 1.75 DIA NOMINAL
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 1/4-20X.63 SS TR HD
16	712758	3	WSR-HELICAL 1/4 SS
17	15282072	1	REPLACEMENT O-RING (NOT SHOWN)
18	90304528	1	REPLACEMENT CAP

Handle Assembly

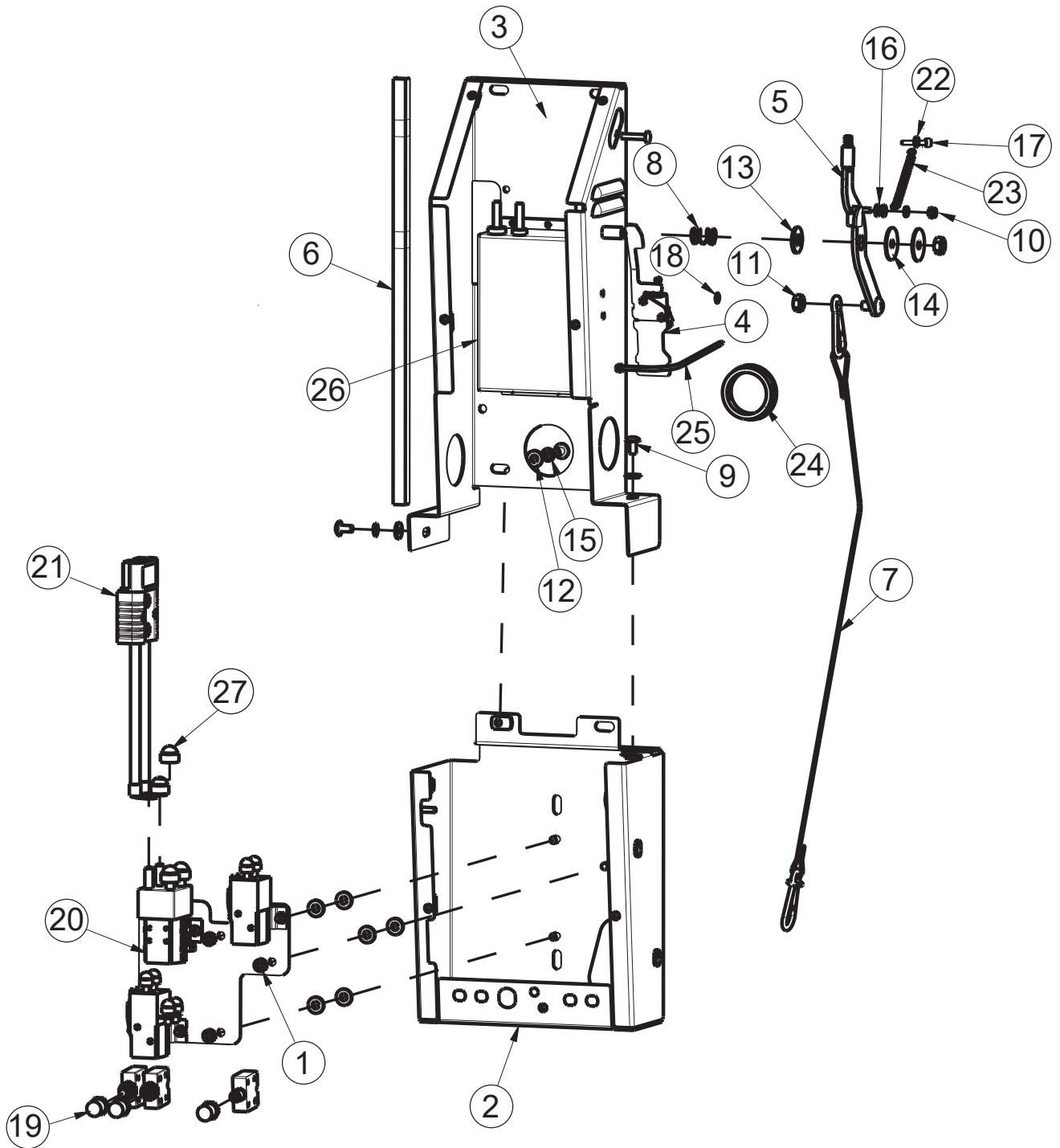


NOTE: APPLY LOCTITE TO ALL
712830 SCREWS (10-24 X .62)

BILL OF MATERIAL - 172016			
ITEM	PART NO.	QTY	DESCRIPTION
1	172006	1	HANDLE, ES1720
2	172053	1	BAIL PLATE WMT RH
3	172054	1	BAIL PLATE WMT LH
4	172057	2	LEAF SPRING, ES1720
5	172059	1	ES1720 BAIL, HANDLE
6	172074	2	SPACER, 5/16OD X 17GA, ALUM
7	270143	2	HANDLE PIVOT JAW
8	710353	4	SCR-PHMS 10-32 X .37 ZP
9	710493	2	SCR-RHMS 4-40 X .75 ZP
10	711310	4	NUT-HEX 10-32 ZP
11	711350	2	NUT-NYLOC 10-32 ZP
12	711428	2	NUT-HEX 4-40 ZP
13	711503	6	WASHER-FLAT #10 X .50 ZP
14	711543	4	WASHER-LOCK #10 SPLIT ZP
15	712320	2	WASHER-FLAT 20 X .45 X .048 NYLON
16	712326	2	WASHER-INT LOCK #4 SS
17	712830	10	SCR-THMS 10-24 X .62 ZP
18	747603-3	1	SWITCH ASY, MICRO ROLLER W/PACK
19	747715	1	ABLE ASY, 5 COND 18G CONSOLE



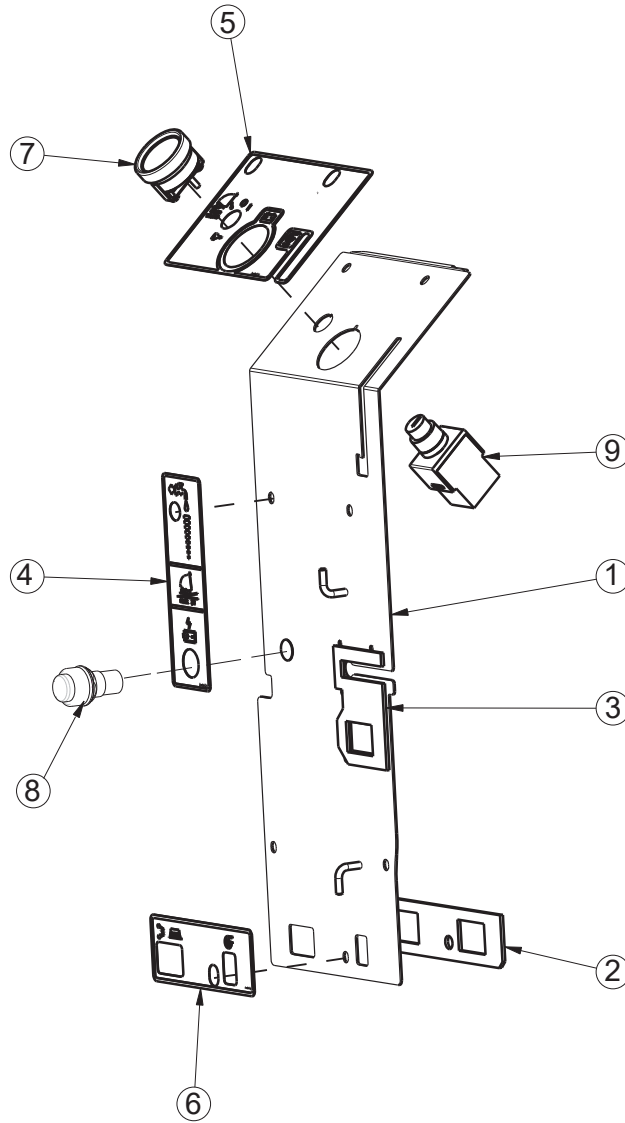
BILL OF MATERIAL - 172012			
ITEM	PART NO.	QTY	DESCRIPTION
1	172116	1	BATTERY BOX
2	172213	1	BKT, SPACER FOR BATTERIES
3	210414	2	O RING 2-113
4	260224	1	18" HOSE
5	320271	1	NOZZLE BODY-ELBOW
6	320272	2	NOZZLE BODY LOCKNUT
7	320273	1	HOSE SHUT-OFF CLAMP
8	710178	2	SCR-MC 1/4-20 X .50 TRUSS STPL
9	711575	2	WSR-FLT .31 x .75 x .06ST
10	828490	1	CRIMP CLAMP 140R





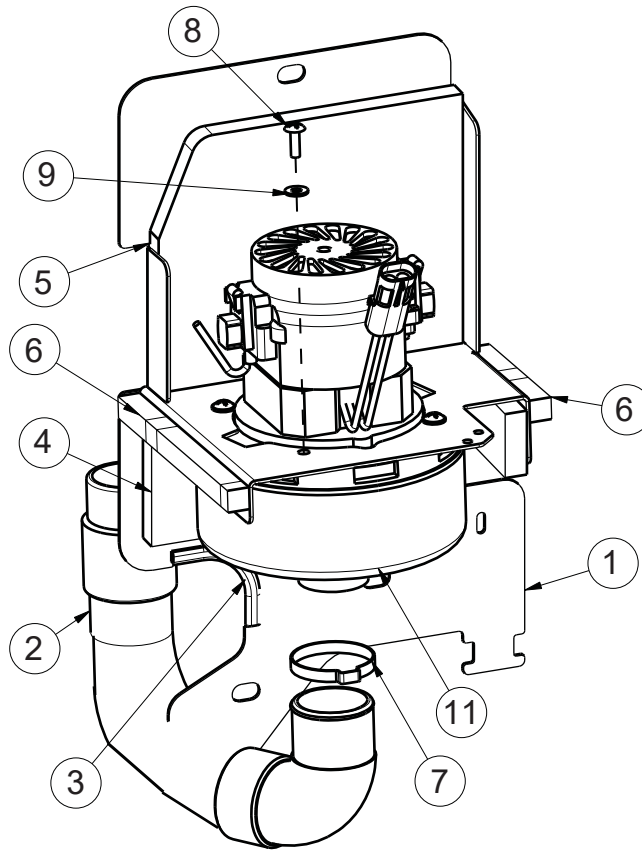
BILL OF MATERIAL - 172070 - 120			
ITEM	PART NO.	QTY	DESCRIPTION
1	369-416	3	NUT-HEX 1/4-20 ZP DOUBLE SERRATED
2	172077	1	ELEC BOX BOTTOM WMT
3	172088	1	ELEC BOX TOP WMT
4	172141	1	VAC SWITCH ASSY
5	172152	1	WELDMENT-VAC LEVER
6	172188	1	FOAM TAPE, 1/2" SQ X 16.5"
7	172381	1	SQUEEGEE CABLE ASSY
8	670093	1	SPRING-COMP .502 X .6 X 1 ZINC
9	710178	3	SCR-THMS 1/4-20 X .50 ZP
10	711372	1	NUT-NYLOC 8-32 ZP
11	711383	2	NUT-HEX 5/16-18 ZP REVERSE LOC
12	711505	9	WASHER-FLAT 1/4 ZP
13	711508	1	WASHER-FLAT 3/8 X 1.00 X .08 ZP
14	711516	2	WASHER-FLAT 5/16 X 1.25 X .05 ZP
15	711544	2	WASHER-LOCK 1/4 SPLIT ZP
16	712320	2	WASHER-FLAT 20 X .45 X .048 NYLON
17	712533	1	SCR-PHMS 10-24 X 1.25 SS
18	712770	2	WASHER-INT TOOTH LOCK #10 SS
19	742748	3	CIRCUIT BREAKER-BOOT
20	747630	1	ELECTRICAL PANEL ASY, E1720BD
21	747637	1	WIRE ASY, MACHINE-BATTERY E1720
22	760134	2	MOUNT RING
23	762084	1	SPRING-EXT .25OD X 2" F.L. MUSIC
24	762400	1	BUSH -HEYCO 1-5/8 X 2-1/8 X 29/64 2400 B
25	828062	1	CABLE TIE LARGE
26	957761	1	CHARGER, SIGNET HBF300-24 NEMA 5-15 PLUG
27	15592033	2	CAP, SAFETY NUT COVER M8

Electrical Box Cover Assembly



BILL OF MATERIAL - 172073FC

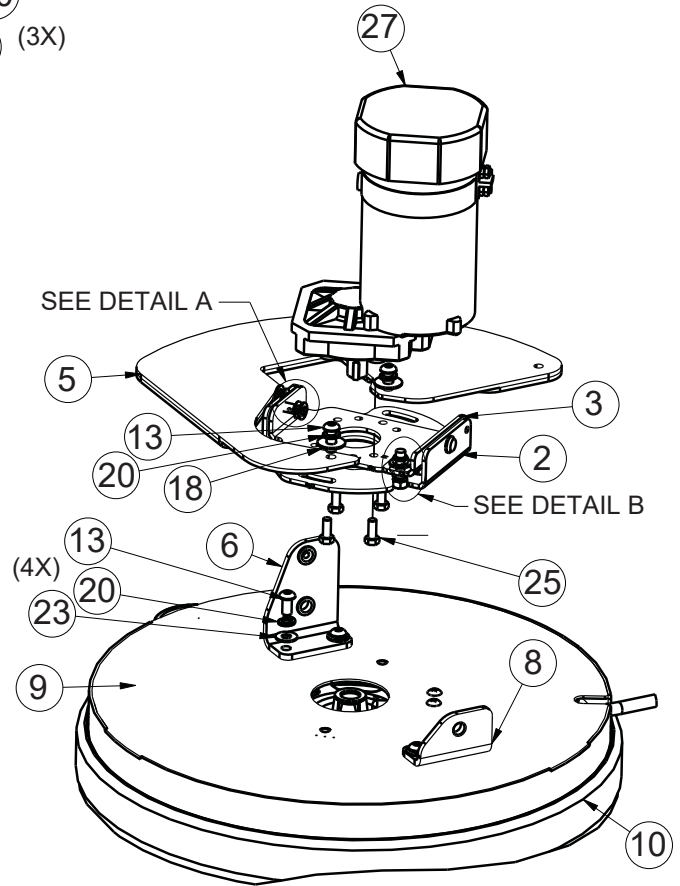
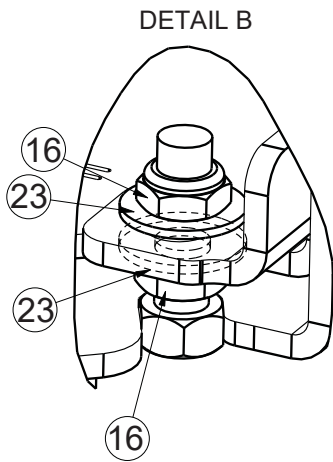
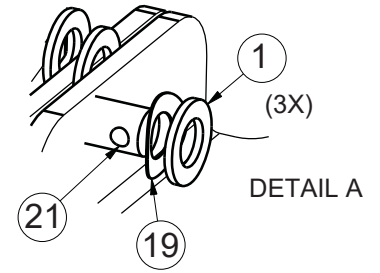
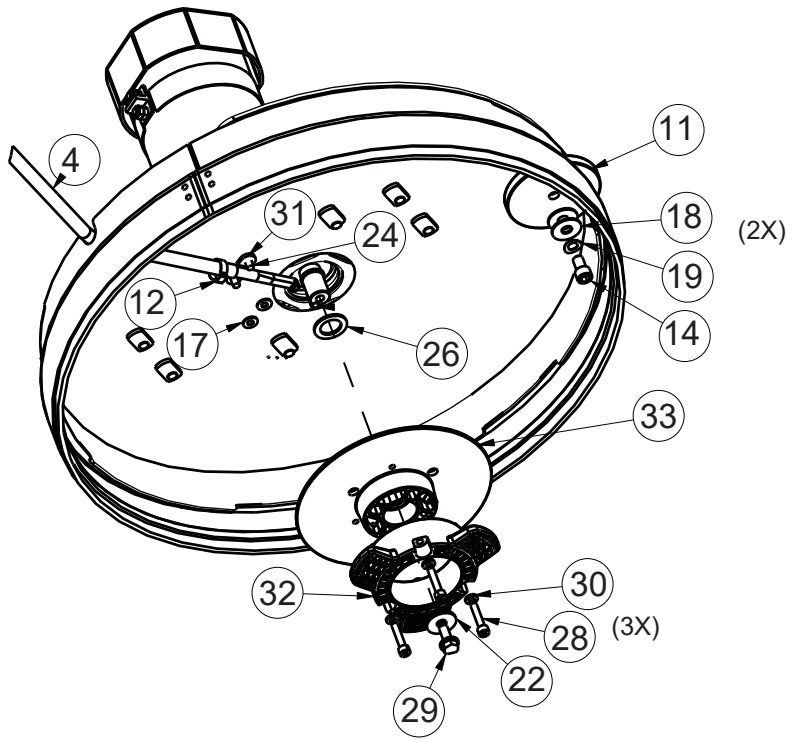
ITEM	PART NO.	QTY	DESCRIPTION
1	172181	1	ELEC BOX, COVER, WMT
2	172193	1	GASKET, CB OUTLINE
3	172194	1	GASKET, CHARGER CORD PLATE
4	715672	1	DECAL, BD20 ELEC BOX
5	715673FC	1	DECAL, BD20 BD DASHBOARD
6	715675	1	DECAL, BD CIRC BKRS
7	740216	1	VOLT METER
8	747614	1	CHARGE STATUS INDICATOR
9	747617-1	1	KEYSWITCH ASY, KEYSWITCH + WIR



BILL OF MATERIAL - 172050

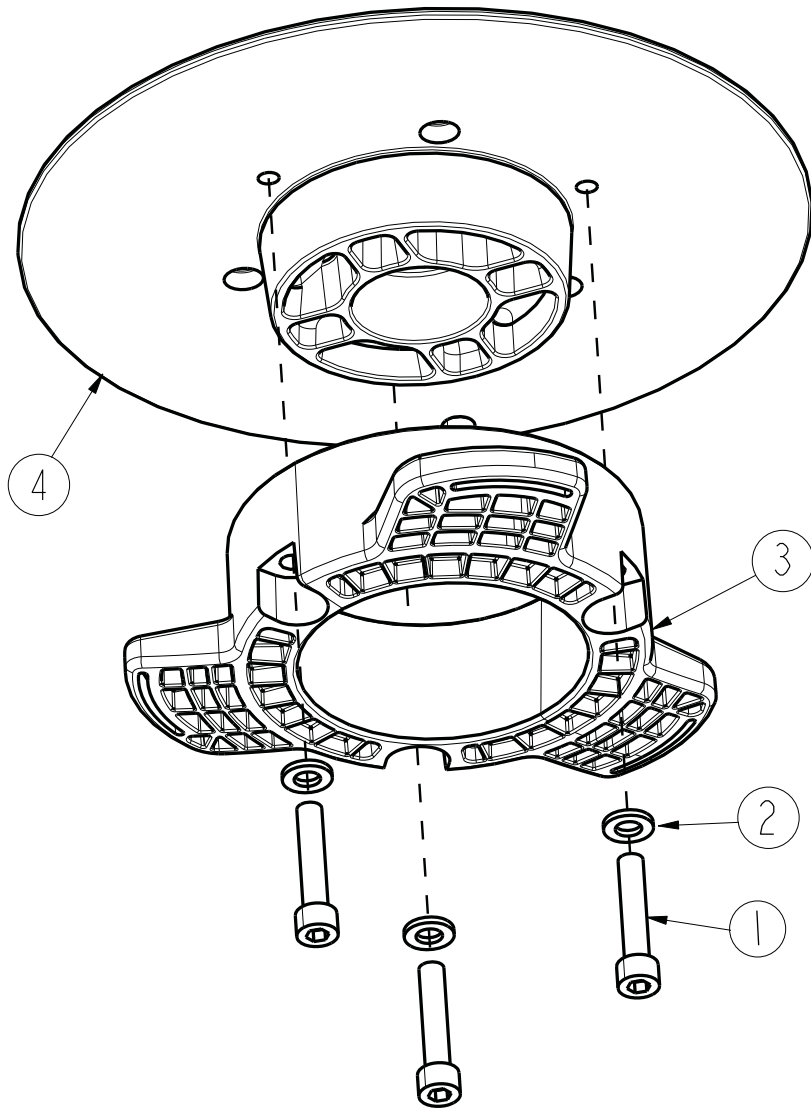
ITEM	PART NO.	QTY	DESCRIPTION
1	172045	1	VAC MOUNT WMT
2	172048	1	HOSE, STRETCH 13"
3	172124	1	EDGE TRIM, .063 X 3.0, BLACK
4	172186	1	FOAM COVER, FRONT 1
5	172187	1	FOAM COVER, FRONT 2
6	172188	2	FOAM TAPE, 1/2" SQ X 16.5"
7	450095	1	CRIMP CLAMP, 1.75"
8	711160	4	#10 X 5/8 HI-LO
9	711503	4	WSR, FLAT#10
10	715967	1	DECAL - WARNING, DO NOT PICK UP FLAM (NOT SHOWN)
11	747607-1	1	VAC MOTOR ASY

20" Brush Deck Assembly



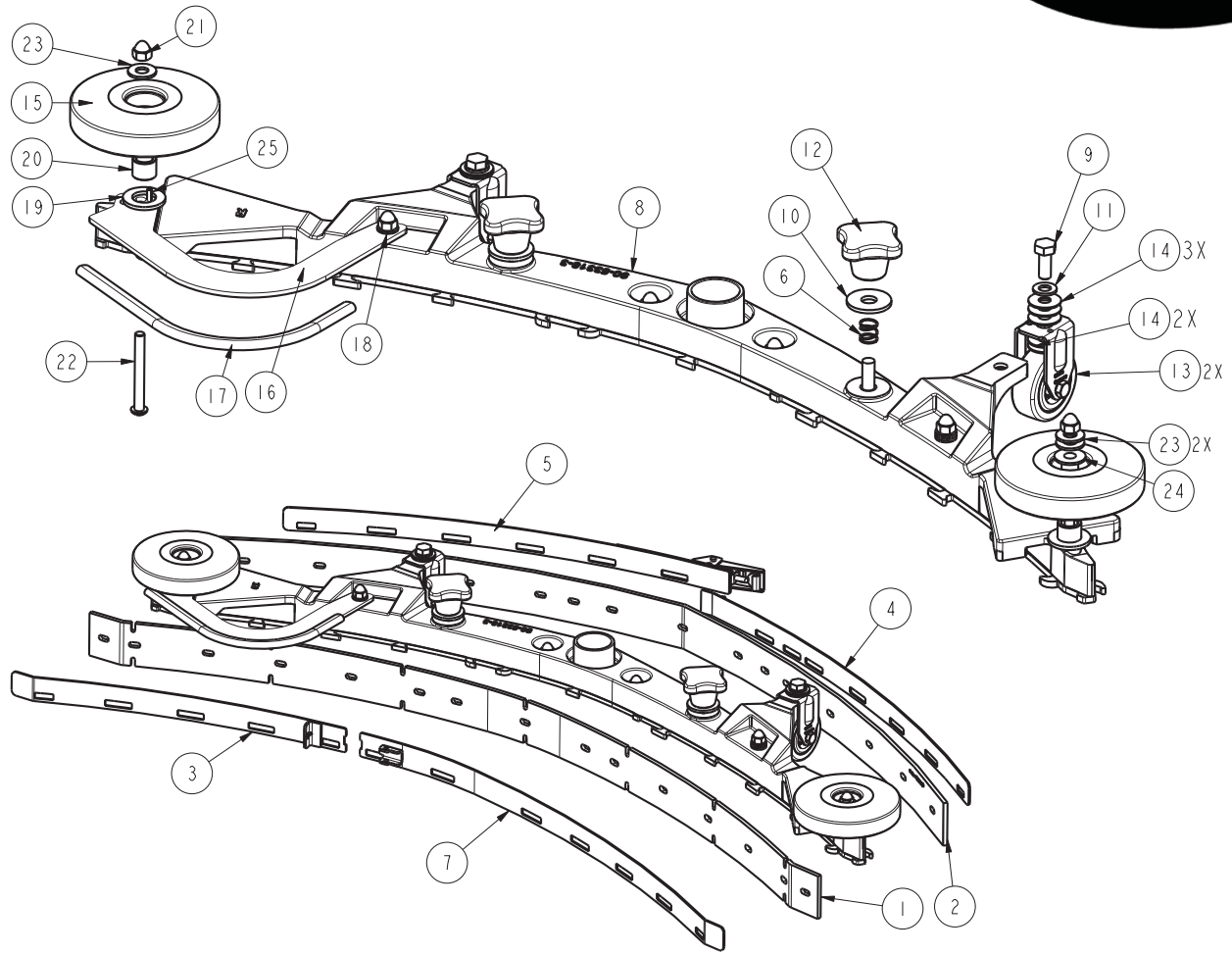


BILL OF MATERIAL - 172100			
ITEM	PART NO.	QTY	DESCRIPTION
1	81-166-A	6	WASHER-FLAT .390 X .687 ZP
2	172040	1	WELDMENT-DECK ANGLE ADJUST
3	172044	1	PLATE MOTOR MOUNT
4	241097	1	HOSE-WIRE REINF 3/8 X 31"
5	172208	1	E20 BRUSH DECK PLATE
6	172296	1	BKT, E1720 DECK MOUNT RT
8	172297	1	BKT, E1720 DECK MOUNT LEFT
9	172375	1	DECK COVER WMT, 20"
10	172384	1	E20 FLOATING BRUSH DECK SKIRT
11	210153	1	ROLLER WHEEL
12	450076	1	CLAMP-HOSE 5/8 (.590-.791) SS
13	710990	6	SCR-BHSCS 3/8-24 X .75 ZP
14	710991	1	SCR-HH 3/8-24 X .62 ZP GR 5
16	711375	2	NUT-NYLOC 3/8-16 ZP
17	711504	2	WASHER-FLAT 1/4 SS
18	711507	4	WASHER-FLAT 3/8 X 1.12 X .06
19	711523	3	WASHER-WAVE .37 X .68 X .08
20	711546	6	WASHER-LOCK 3/8 SPLIT ZP
21	711679	2	PIN-CLEVIS 3/8 X .750 ZP
22	711855	1	WASHER-FENDER 3/8 X 1.12 X .10 ZP HARD
23	712301	6	WASHER-FLAT 3/8 X .87 X .06 ZP
24	712565	2	SCR-THMS 1/4-20 X .62 SS
25	717024	4	SCR-HH M8-1.25 X 20 ZP GRADE 8.8
26	717025	1	WASHER-FLAT 13/16 X 1.25 X .08 ZP
27	747600	1	MOTOR, 24VDC PM 600W
28	11127000	3	SCR-SHCS M6X30 SS, ISO4762
29	11717203	1	BLT-HH FLG M8X1.25X20 PRECOTE, ZD 10.9
30	12310256	3	WSR-FLT 6.4X12X1.6, SS DIN125
31	90311663	1	FITTING, WATER NOZZLE W/ MOUNT HOLES
32	90541814	1	DRIVE HUB, PLASTIC, 3-LOBE
33	172096MCH	1	HUB BASE MACHINED



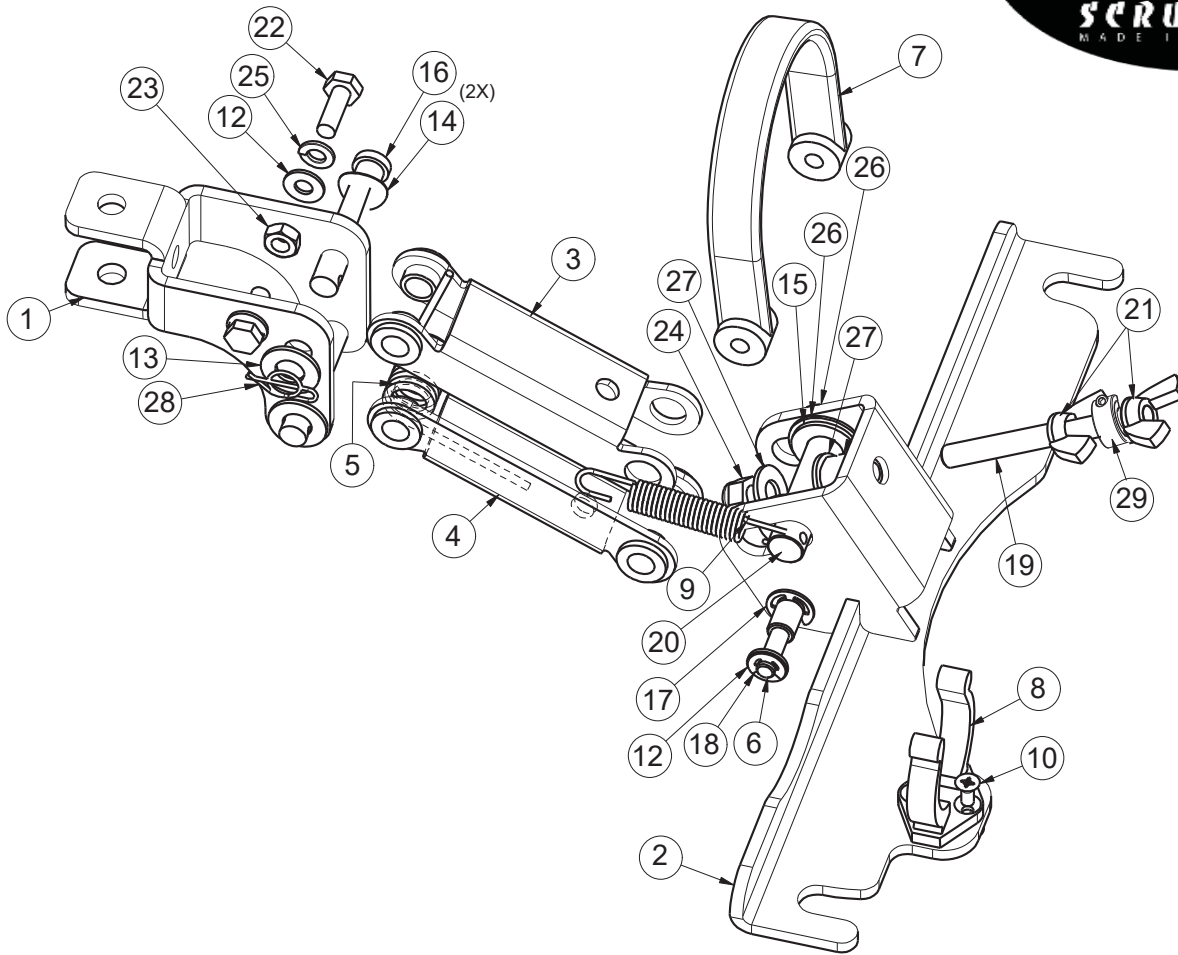
BILL OF MATERIAL - 172510			
ITEM	PART NO.	QTY	DESCRIPTION
1	11127000	3	SCR-SHCS M6X30 SS, ISO4762
2	12310256	3	WSR-FLT 6.4X12X1.6, SS DIN125
3	90541814	1	DRIVE HUB, PLASTIC 3 LOBE
4	172096MCH	1	BASE, DRIVE HUB WITH KEYWAY

Rear Squeegee Assembly (Curved)



BILL OF MATERIAL - 172534							
ITEM	PART NO.	QTY	DESCRIPTION	ITEM	PART NO.	QTY	DESCRIPTION
1	172162	1	SQG BLADE, FRONT 34" (860) 4MM PU	14	90531112	10	WSR-FLT 8.3 x 22 x 1.00mm STAINLESS
2	172163	1	SQG BLADE, REAR 34" (860), 4MM PU	15	90548397	2	ROLLER - PLASTIC, 100mm DIA. (4")
3	172241	1	STRP WMT, FRONT RT - 34" (860) SQG	16	172271	1	BUMPER, 34" SQG
4	172245	1	STRP WMT, REAR LFT - 34" (860) SQG	17	172274	1	EDGE TRIM, 5/16 X 10" BLACK
5	172246	1	WELD-STRP REAR RT - 34" (860) SQG	18	711504	5	WASHER-FLAT 1/4 SS
6	172429	2	SPRING, COMP .4 ID X .5FL SS	19	711527	2	WASHER-FLAT .63 X 1.12 X .09
7	172440	1	STRP W/ LATCH, FRONT LFT, 34" SQG	20	430322	2	BUSHING-.435 X .625 X .50 ZINC
8	172535	1	34" SQUEEGEE BASE ASM	21	712591	6	NUT-ACORN 1/4-20 SS
9	717030	2	SCR-HH M8-1.25 X 20 SS	22	712592	2	SCR-BHSCS 1/4-20 X 2.25 SS
10	717040	2	WASHER-FLAT M10.5 X 30 X 2.5 SS	23	712772	3	WASHER-FLAT .344 X .75 X .06 SS
11	12310264	2	WSR-FLT M8.4 X 16 X 1.6 A2 SS	24	840202	1	BUSHING-FLG .31 X .435 X .325 NYL
12	17133026	2	STAR HANDLE, M10, BLACK	25	3400727	1	PIN-ROLL 1/8 X .50 ZINC
13	90513094	2	FIXED CASTER				

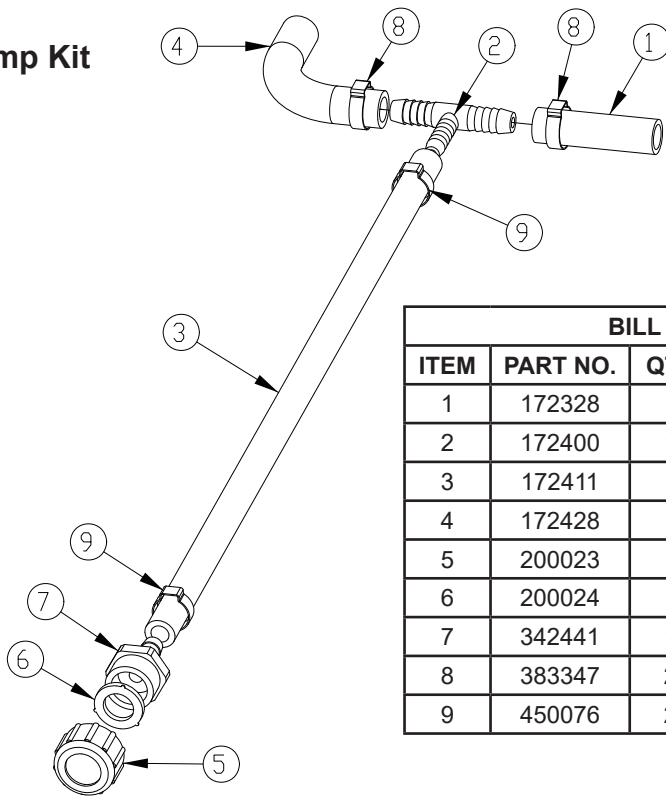
Squeegee Mechanism Assembly



BILL OF MATERIAL - 172150

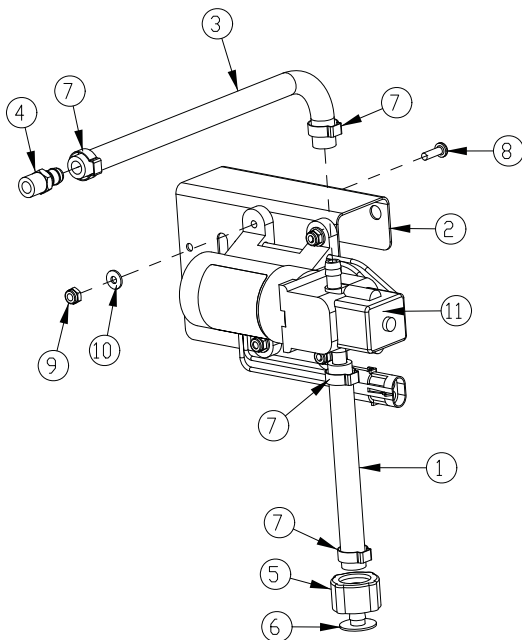
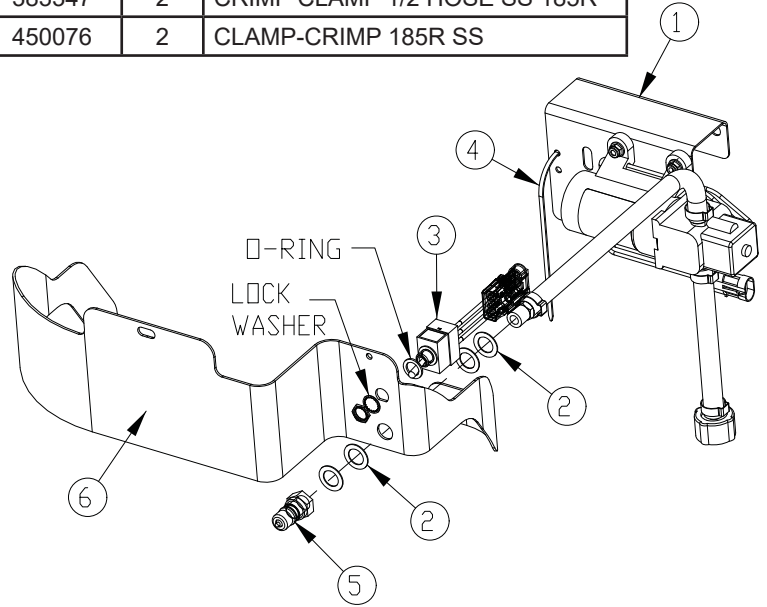
ITEM	PART NO.	QTY	DESCRIPTION	ITEM	PART NO.	QTY	DESCRIPTION
1	172134	1	BKT, SQG HINGE	16	711678	2	PIN-CLEVIS 3/8 X 2 1/4 ZP
2	172155	1	SQUEEGEE MOUNT WMT	17	711717	2	RET RING-E EXT .37
3	172196	1	UPPER SQG LINK	18	711720	2	RET RING-E EXT .25
4	172197	1	LOWER SQG LINK	19	712147	1	ROD-THD 5/16-18 X 3.25 SS
5	172261	1	SPRING, TORSION 1720 SQG	20	712148	1	PIN-CLEVIS 1/2 X 2.25 WITH HOLE
6	172352	1	PIN, 3/8 X 3.0, SQG STRAP	21	712157	2	NUT-WING 5/16-18 SS
7	172357	1	STRAP, 9" PU, BLACK	22	712562	2	SCR-HH 1/4-20 X .75, 18-8 SS
8	260579	1	CLIP-TOOL 1.5 INCH HOSE	23	712665	2	NUT-HEX 1/4-20 SS
9	430051	1	SPRING-RETURN .313 X .438 X 2.93 SS	24	712683	1	NUT-NYLOC 5/16-18 SS
10	710528	2	SCR-FHMS 8-32 X .37 BRASS	25	712758	2	WASHER-LOCK 1/4 SPLIT SS
11	711420	1	NUT-JAM 5/16-18 ZP	26	712760	3	WASHER-FLAT .56 X 1.06 X .04 SS
12	711504	4	WASHER-FLAT 1/4 SS	27	712772	2	WASHER-FLAT .344 X .75 X .06 SS
13	712767	2	WASHER-FLAT .406 X .75 X .035 SS	28	3400125	1	RING-RUE 3/8
14	711523	2	WASHER-WAVE .37 X .68 X .08	29	713528	1	COLLAR-THREADED CLAMP 5/16-18X5/16-BK OX
15	711592	2	WASHER-FLAT 1/2 X .90 X .064 NYLON				

Optional Pump Kit



BILL OF MATERIAL - 172405			
ITEM	PART NO.	QTY	DESCRIPTION
1	172328	1	HOSE-NYLO REINF 1/2ID X 2.5"
2	172400	1	FITTING-TEE 1/2X1/2X3/8HB PP
3	172411	1	HOSE-WIRE REINF 3/8 X 18"
4	172428	1	HOSE-WIRE REINF 1/2 X 5.5."
5	200023	1	GARDEN HOSE CAP
6	200024	1	BLACK VINYL WASHER
7	342441	1	FITTING, MGHT X 3/8HB PP
8	383347	2	CRIMP CLAMP 1/2 HOSE SS 185R
9	450076	2	CLAMP-CRIMP 185R SS

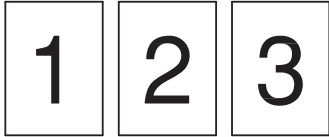
BILL OF MATERIAL - K-E1720P			
	PART NO.	QTY	DESCRIPTION
1	172402	1	OAWPUMP ASSY
2	711594	4	WSR-FLAT .56 X.88 X.03
3	748146	1	SWITCH ASY, TOGGLE ON-ON SPDT W/ 3P
4	828062-B	4	CABLE TIELARGE-BLACK
5	828370	1	MALE COUPLER
6	172144FC	1	FRONT PANEL, FOROAW, E1720
7	342444	1	WSR-FILTER (NOT SHOWN)
8	712070	1	BLT (NOT SHOWN)



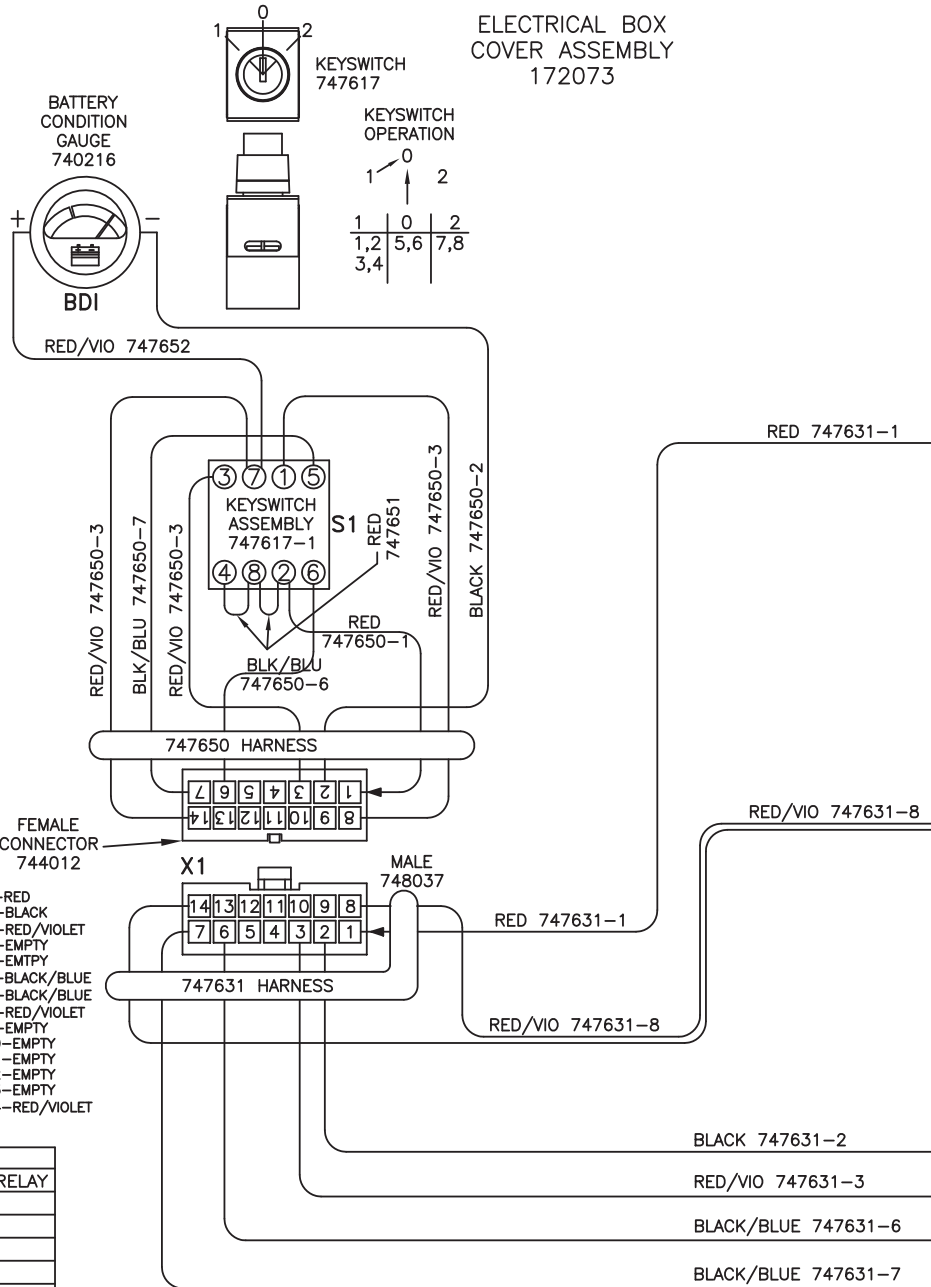
BILL OF MATERIAL - 172402			
ITEM	PART NO.	QTY	DESCRIPTION
1	172164	1	HOSE-WIRE REINF 3/8 X 5.5"
2	172401-1	1	PUMP BKT ASM
3	320253	1	HOSE-WIRE REINF 3/8 X 14"
4	320264	1	FITTING BRASS - 3/8 DBL BARB X 1/4MPT
5	342442	1	FITTING, FGHT NUT PP
6	342443	1	FITTING 3/8HB INSERT PP
7	450076	4	CLAMP-CRIMP 185R SS
8	710356	4	SCR-MC 10-32X.62 STPL
9	711350	4	NUT-NYLOC 10-32
10	712764	4	WSR #10 SS
11	747691	1	PUMP, 24VDC 35PSI 3/8HOSE w/CONNECTOR

1 Wiring Diagrams

PAGE LAYOUT



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



X1:MAIN KEYSWITCH ASSEMBLY: 747617-1

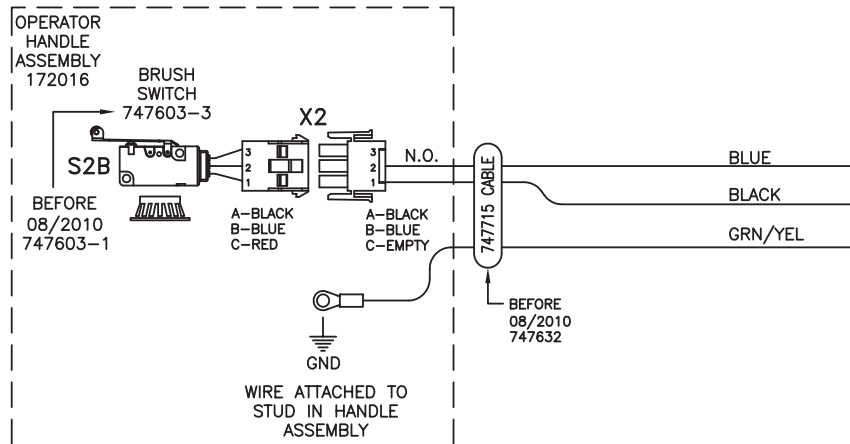
PIN #	COLOR	WHERE TO/FROM
1	RED	X13: BATTERY CHARGER INTERNAL RELAY
2	BLACK	RELAY COILS: 0V
3	RED/VIOLET	BRUSH MOTOR RELAY COIL: 24VDC
4	-	-
5	-	-
6	BLACK/BLUE	BRUSH RELAY NORMALLY CLOSED
7	BLACK/BLUE	BRUSH UNLOAD SWITCH P:B
8	RED/VIOLET	X12: MAIN RELAY COIL: 24VDC
9	-	-
10	-	-
11	-	-
12	-	-
13	-	-
14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

BATTERY CHARGER: 957761 or 957760

	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)

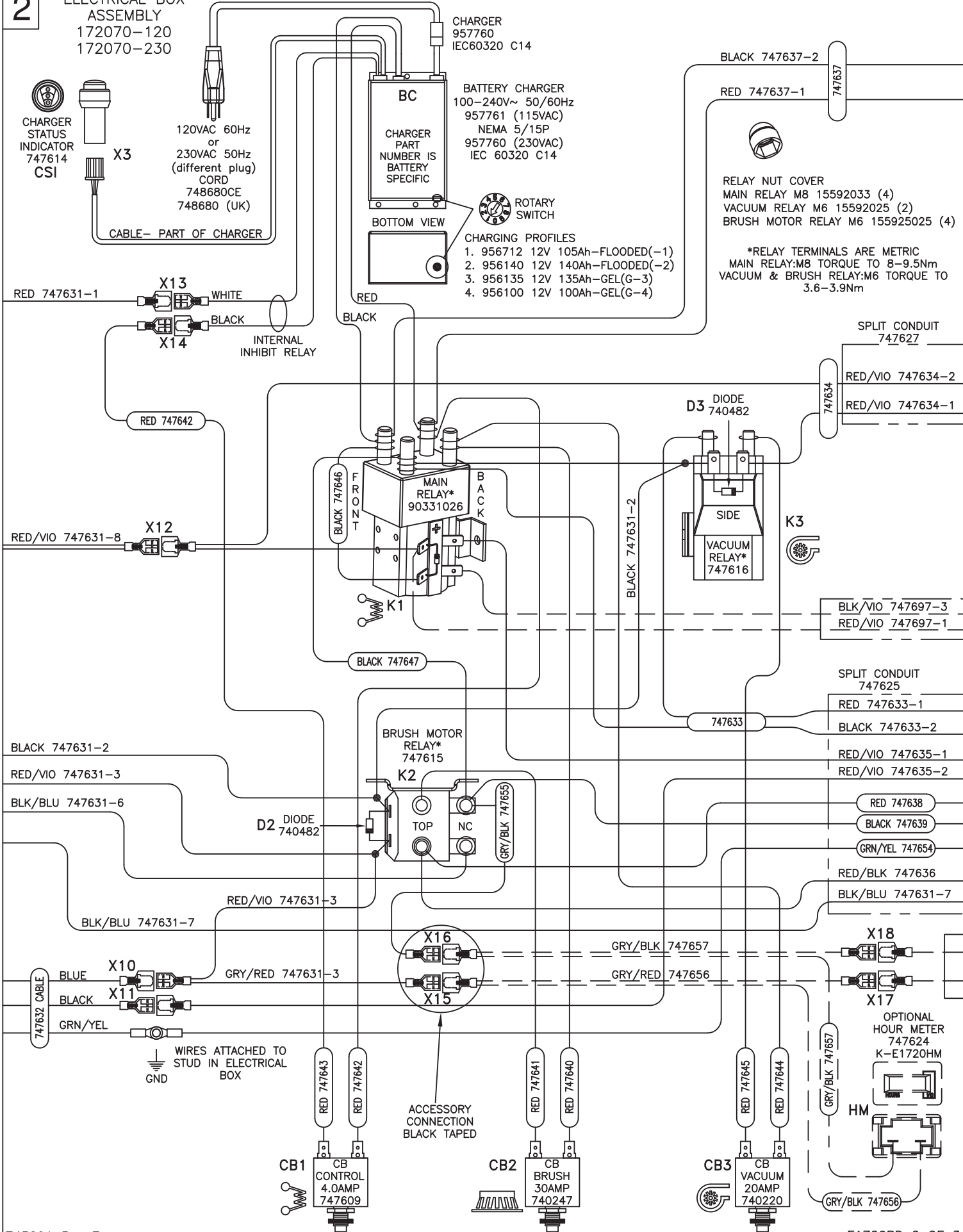
OTHER WIRE COLORS

-	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

CHARGER PART NUMBER IS BATTERY SPECIFIC

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

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

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

SPLIT CONDUIT
747625

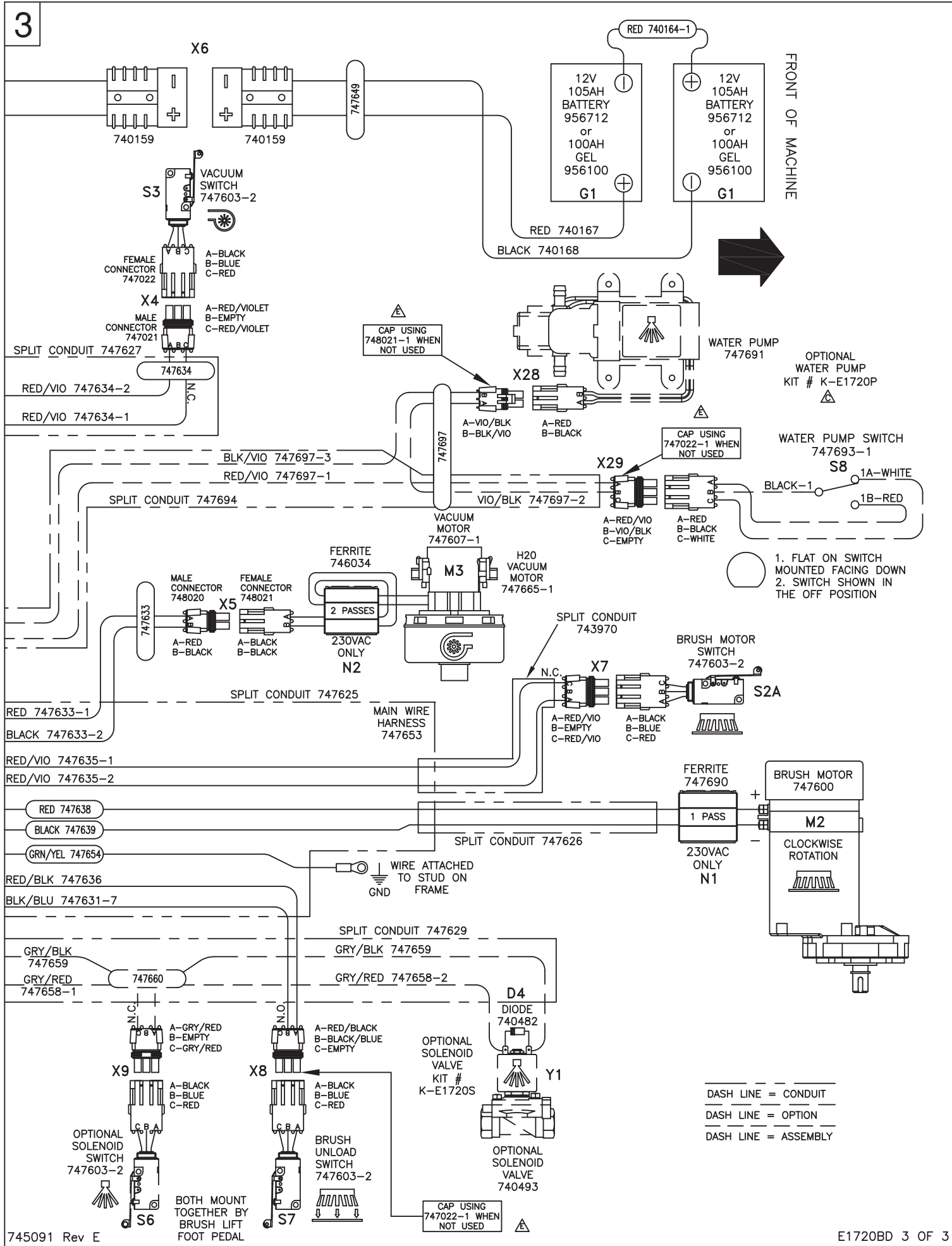
RED 747633-1
BLACK 747633-2
RED/VIO 747635-1
RED/VIO 747635-2

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



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 (H20 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