

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

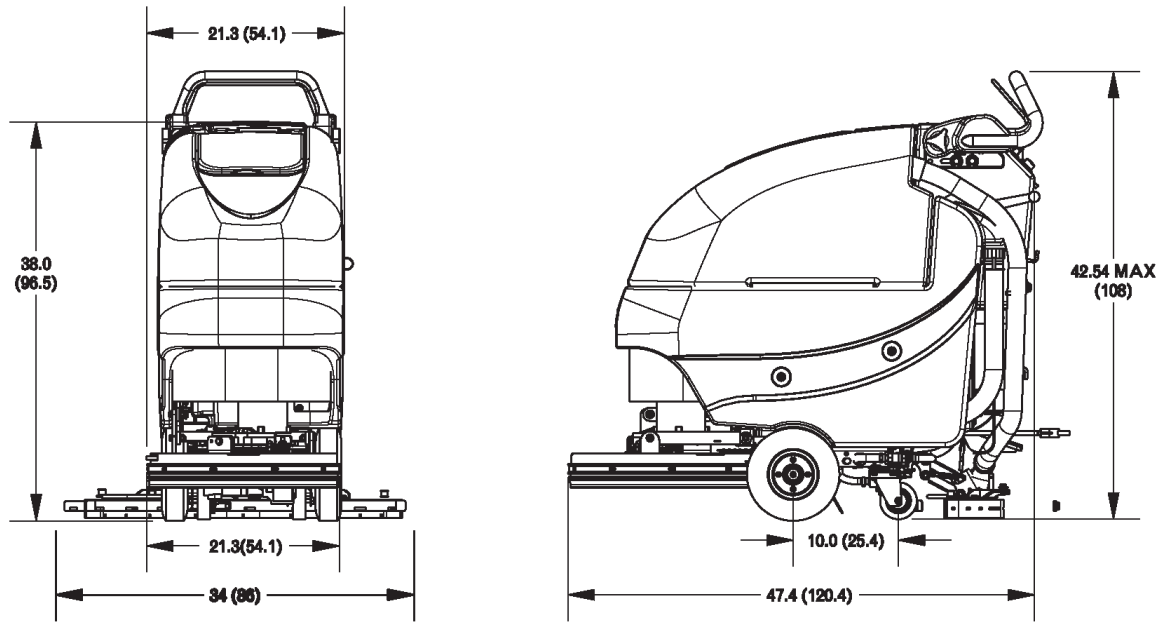
Technical Specifications



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

Model No. **E20DTDQPG-FC**

Current (Max)	40 amps
Battery Capacity (Lead Acid)	140Ah @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)
Productivity	27,280 ft ² /hr (2,534 m ²)
Working speed	3.1 mph (5 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	372 lbs (169 kg)
Weight without batteries	238 lbs (108 kg)
Dimensions (LxWxH)	47.4 x 21.3 x 42.3 (120.4 x 54.1 107.4 cm)
Drive Motor Power	1/5 HP (150W)



For Safety When Servicing or Maintaining Machine

in (cm)

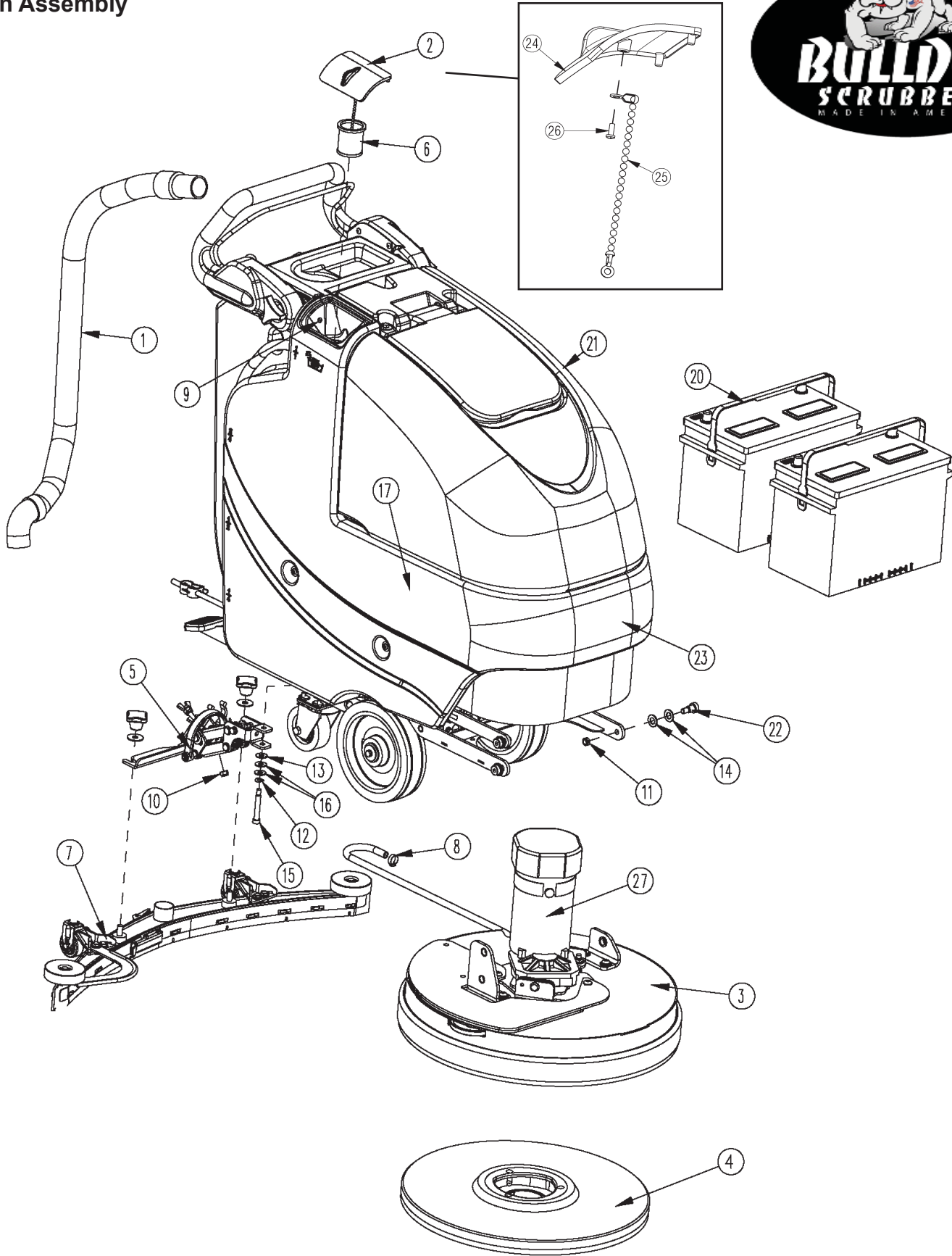
- Stop on level surface.
- Disconnect the power to the machine by pulling the red Battery Connector located under the recovery tank near the batteries.
- Avoid moving parts. Do not wear loose jackets, shirts, or sleeves when working on machine.
- Avoid contact with battery acid. Battery acid can cause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

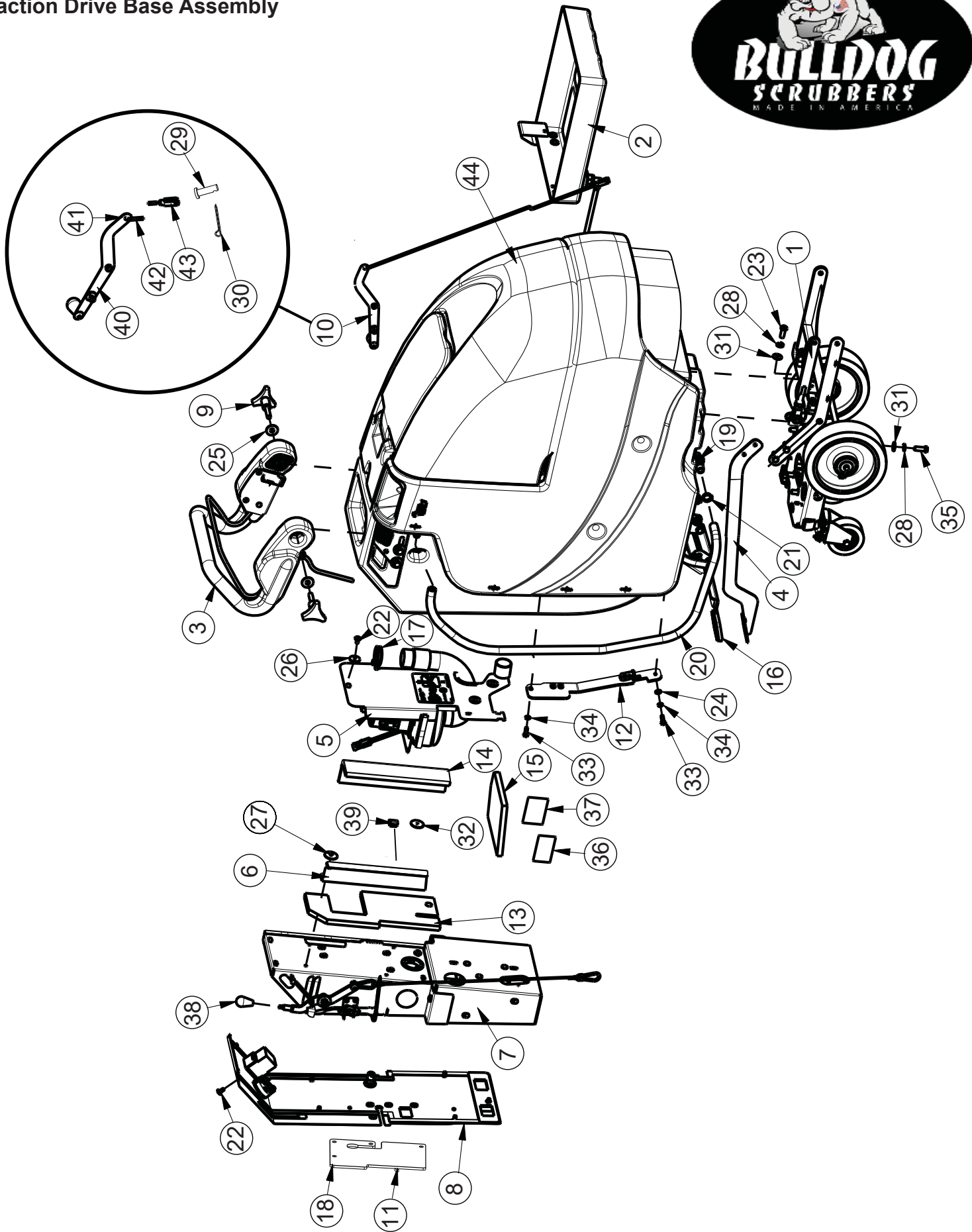




BILL OF MATERIAL - E20DTDQPG-FC			
ITEM	PART NO.	QTY	DESCRIPTION
1	172010	1	HOSE, CLEAR VAC W/ 45 CUFF
2	172018	1	SOLUTION TANK LID ASSY
3	172100TD	1	BRUSH DECK ASSY 20"
4	172520-1	1	BRUSH, 20" NYLON
5	172150	1	SQUEEGEE LIFT MECH ASSY
6	172159	1	FILTER, FILL PORT
7	172534	1	SQUEEGEE ASSY, 34" (860MM) 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	715920FC2	2	DECAL (NOT SHOWN)
18	740164-1	1	JUMPER CABLE ASSY, RED 4G 12"
19	747649	1	CABLE ASSY, BATTERY
20	956157	2	BATTERY, 12V 140AH
20G	956100	2	GEL BATTERY 12V 95AH
21	172001TDFC	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, FC CONTACT INFO

BRUSH OPTIONS		
ITEM	PART NO.	DESCRIPTION
4.1	762394	PAD RETAINER, FIXED - NOT SHOWN
4.2	762370	PAD RETAINER, REMOVEABLE - NOT SHOWN
4.3	172520-1	BRUSH, 20" NYLON
4.4	172520-3	BRUSH-DISC, 20" NYLO-GRIT 80GR, GREEN
4.5	172520-6	DISC BRUSH 20", SCRUB GRIT 2, 120GR RED

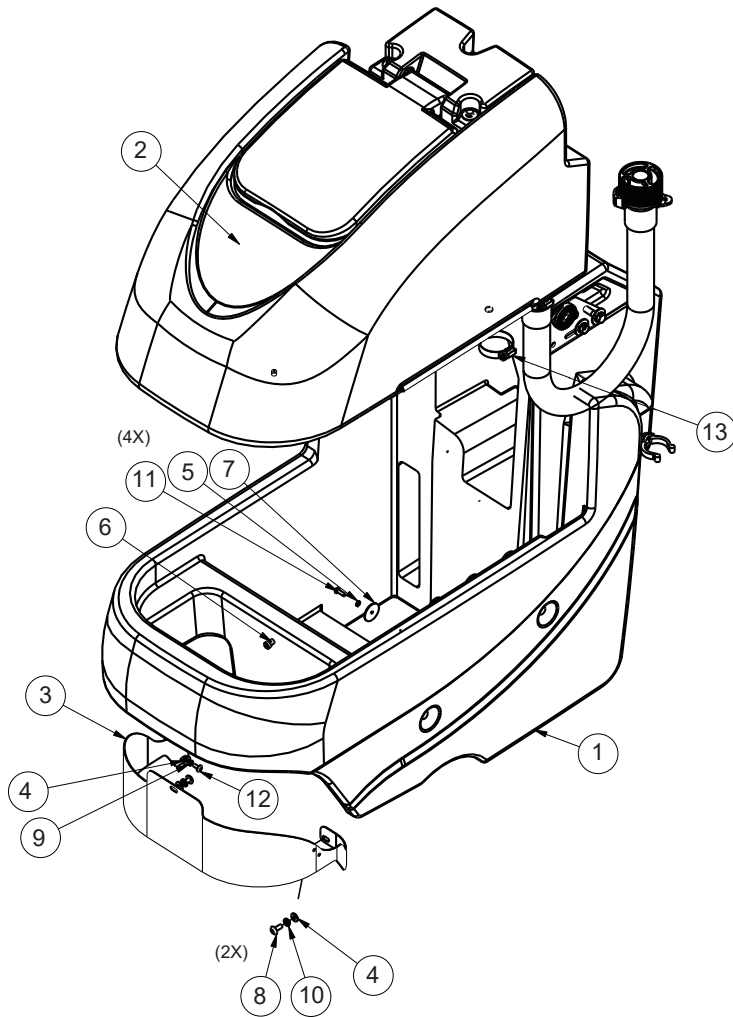
Traction Drive Base Assembly



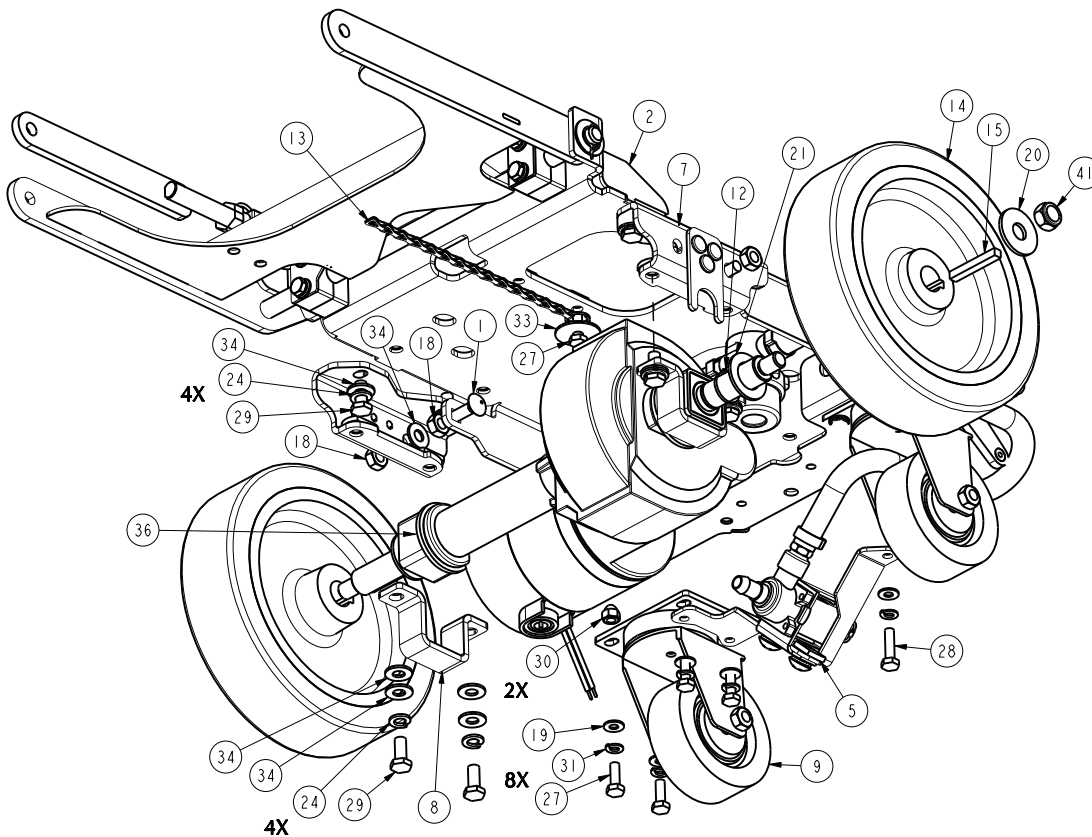
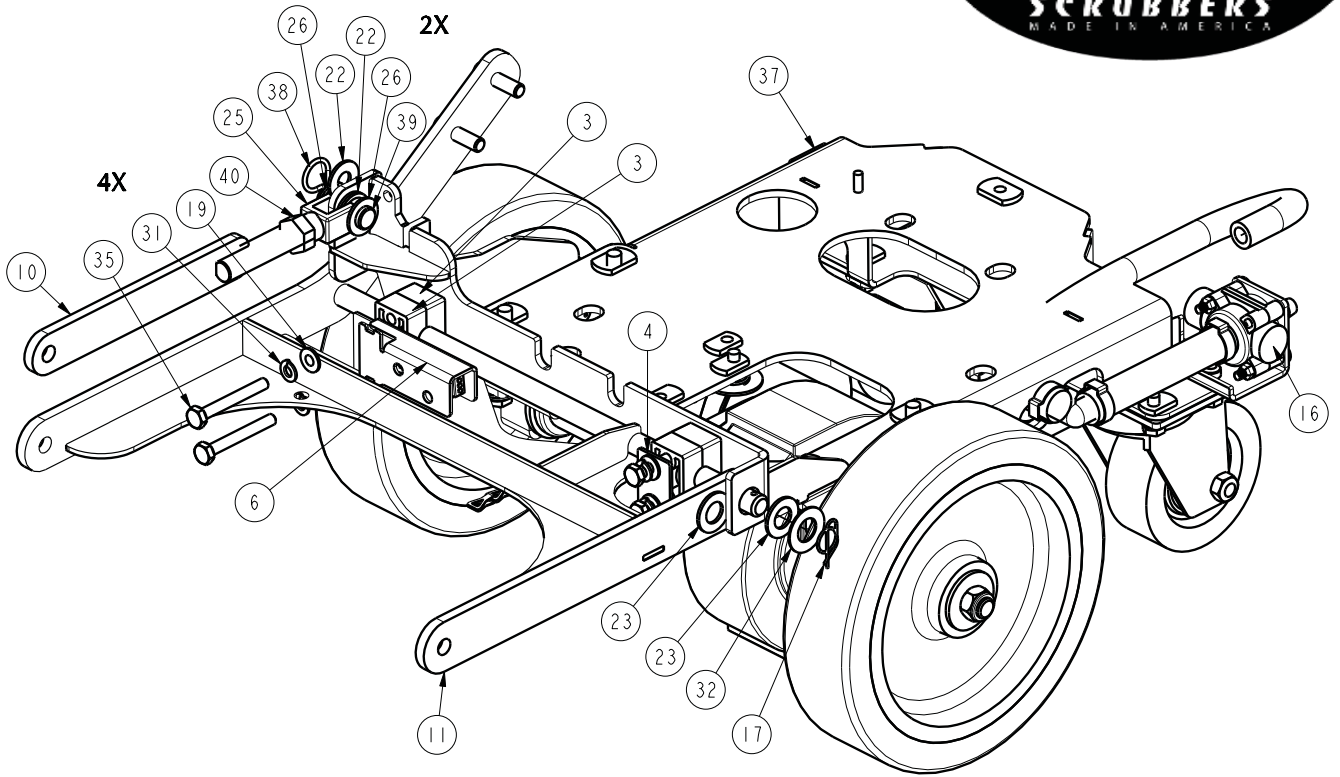
Traction Drive Base Assembly BOM



BILL OF MATERIAL - 172001TDFC							
ITEM	PART NO	QTY	DESCRIPTION	ITEM	PART NO	QTY	DESCRIPTION
1	172009	1	TD CHASSIS ASSY, ES1720	23	710985	2	SCR-SC 3/8-16 X .62 ST PL
2	172012	1	BATTERY TRAY ASSY	24	711504	2	WSR-FLAT 1/4 ID SS
3	172015	1	E1720 TD HANDLE ASSY	25	711507	2	WSR-FLAT .37 X 1.12 X .06
4	172032	1	LIFT PEDAL WMT	26	711519	3	WSR- FLAT .25 X 1.01 X .06
5	172050	1	VAC MOTOR ASSY	27	711543	1	WSR-HELICAL #10
6	172055	1	BKT, VAC AREA INSIDE COVER	28	711546	6	WSR-HELICAL 3/8
7	172075-120	1	ELEC BOX TD ASSY 120V	29	711803	1	COTTER PIN-HAIR
7A	172075-230	1	ELEC BOX TD ASSY 230V	30	712117	1	CLEVIS PIN
8	172079FC	1	TD ELEC BOX COVER ASSY	31	712301	6	WSR-FLAT .37 X .87 X .06
9	172085	2	KNOB, 3/8-16 STUD, 3 LOBE	32	712312	2	WSR-FLAT .187 X 1.25
10	172112	1	SOL CONTROL ASSY	33	712562	2	BOLT-HH 1/4-20X3/4 SS
11	172129	1	BKT, PWR CORD MOUNT	34	712758	2	WSR-HELICAL 1/4 SS
12	172166	1	TD LIFT PEDAL BKT ASSY	35	713042	4	BLT-HH 3/8-16 X 1 #5
13	172184	1	FOAM COVER, REAR 1	36	715029	1	DECAL-NAME PLATE SERIAL
14	172185	1	FOAM COVER, REAR 2	37	715047	1	DECAL-CLEAR LAMINATE 2X3
15	172187	1	FOAM COVER, FRONT 2	38	760592	1	KNOB, OVAL TAPERED
16	210142	1	PEDAL PAD	39	809443	1	CLIP-WIRE & CORD
17	3303255	1	CLAMP-HOSE 1.75 DIA NOMINAL	40	172115	1	SOL CNTRL LEVER ASSY
18	293080	1	STRAIN RELIEF-HEYCO 1207	41	172122	1	NUT, PUSH-ON WSR CAP, 3/16
19	342440	1	FITTING, TEE 3/4MPT 1/2 BARB PP	42	172069	1	ROD, SOL. CTRL, ES1720
20	430156	1	HOSE, 1/2 X 42 CLEAR	43	172062	1	YOKE, 3/16 CLEVIS, 10-32, LONG
21	450093	2	CRIMP CLAMP 3/4" STEPLESS	44	172001FC	1	ES1720 BASE ASSY
22	710178	10	SCR-MC 1/4-20 X .50 TRUSS STPL				



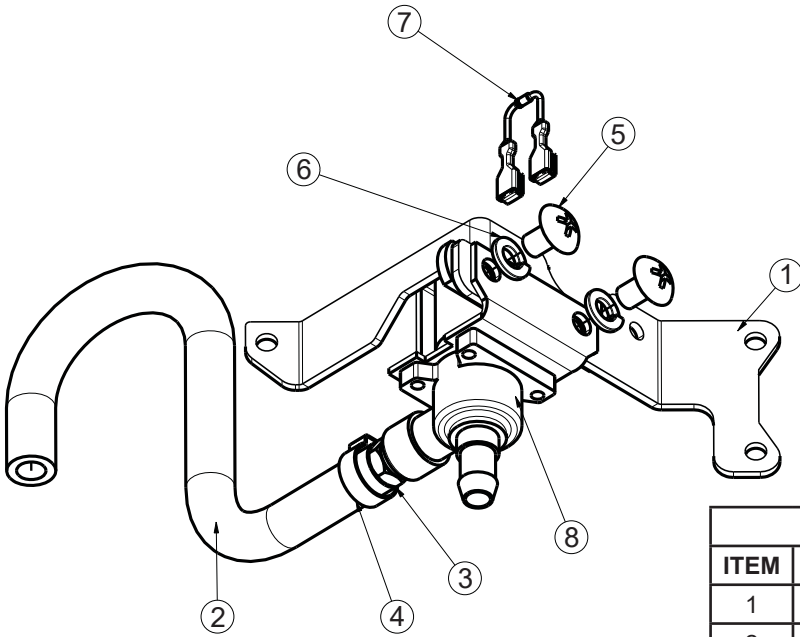
BILL OF MATERIAL - 172001FC			
ITEM	PART NO.	QTY	DESCRIPTION
1	172013FC	1	SOL TANK ASSY
2	172014FC	1	REC TANK ASSY
3	172144FC	1	PANEL, FRONT
4	711504	3	WSR-FLAT 1/4 ID SS
5	711543	4	WSR-HELICAL #10
6	712041	1	BLT- SHLDR 1/4-20 X .44 X .37
7	712312	4	WSR-FLAT .187 X 1.25
8	712565	2	SCR-MC 1/4-20X.63 SS 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	3303255	1	CLAMP-HOSE 1.75 DIA NOMINAL
14	172407	1	PLUG, FRONT PANEL (NOT SHOWN)
15	172408	1	PLUG, FRONT PANEL (NOT SHOWN)





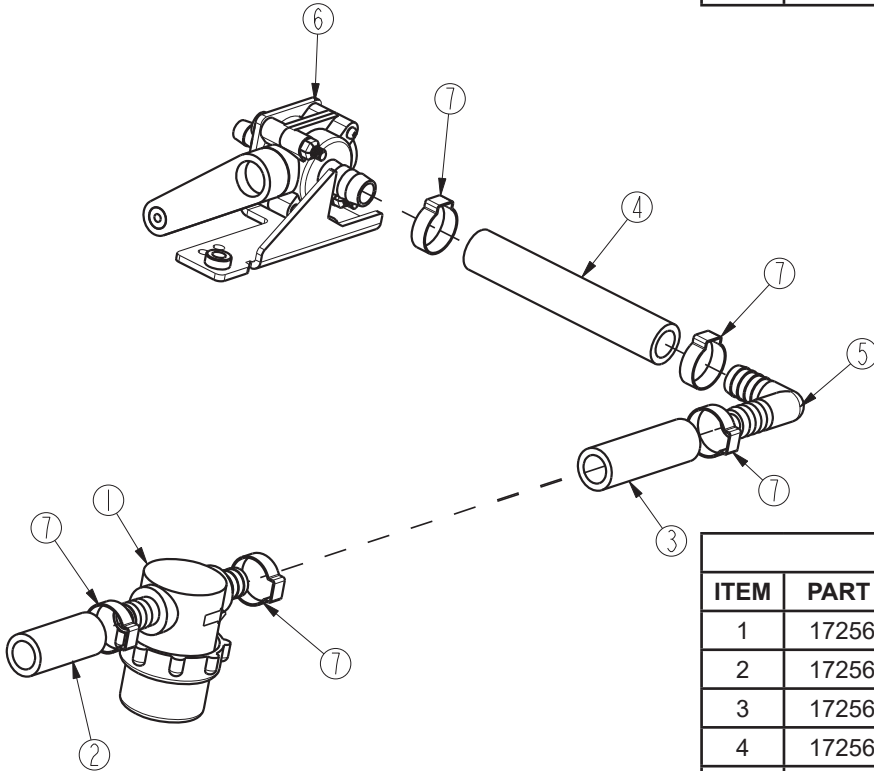
BILL OF MATERIAL - 172009			
ITEM	PART NO.	QTY	DESCRIPTION
1	70-516-16	2	BLT-CARR 5/16-18 X 1 ZP
2	172020	1	E1720 MAIN FRAME WMT
3	172038	4	BEARING BLOCK
4	172039	1	BEARING BLOCK PLATE
5	172104	1	SOLENOID MOUNT ASSY
6	172110	1	DECK SWITCH ASSY
7	172113	2	BKT, TRANSAXLE MOUNT BASE
8	172114	2	BKT, TRANSAXLE MOUNT
9	172167	2	CASTER, 3 1/2" PU WHEEL
10	172368	1	UPPER LIFT ARM
11	172370	1	DISC DECK LIFT WMT, E1720
12	172425	2	RING-RET EXT .75/20mm HD
13	172516	1	DRAG CHAIN, SS, 8" W/ RING
14	172518	2	WHEEL, 8X2 PU GROOVED
15	172519	2	KEY-SQUARE 6MM X 45MM
16	172571	1	ASSY-SOLUTION VALVE E1720
17	600578	1	RING-RUE .50 ZP
18	711383	4	NUT-HEX 5/16-18 ZP REVERSE LOC
19	711504	12	WASHER-FLAT 1/4 SS
20	711510	2	WASHER-FLAT 1/2 X 1.37 X .10 ZP
21	711512	2	WASHER-FLAT 3/4 X 1.37 X .08 ZP
22	711569	3	WASHER-FLAT .390 X .880 X .062 NYL
23	711592	2	WASHER-FLAT 1/2 X .90 X .064 NYLON
24	712140	8	WASHER-LOCK 5/16 SPLIT SS
25	712265	1	CLEVIS-YOKE, 1/2-20 WITH .375 PIN
26	712301	2	WASHER-FLAT 3/8 X .87 X .06 ZP
27	712562	8	SCR-HH 1/4-20 X .75, 18-8 SS
28	712564	1	SCR-HH 1/4-20 X 1.00 SS
29	712575	8	SCR-HH 5/16-18 X .75 18-8 SS
30	712591	2	NUT-ACORN 1/4-20 SS
31	712758	12	WASHER-LOCK 1/4 SPLIT SS
32	712760	1	WASHER-FLAT .56 X 1.06 X .04 SS
33	712761	1	WASHER-FENDER 1/4 X 1.25 X .059 SS
34	712772	14	WASHER-FLAT .344 X .75 X .06 SS
35	713007	4	SCR-HH 1/4-20 X 2.00 ZP GR 5
36	747606	1	TRANSAXLE, E1720 24V
37	809444	1	CLIP-CORD
38	833374	1	PIN-HAIRPIN COTTER 3/8
39	833833	1	PIN-CLEVIS 3/8 X 1.25
40	3400449	1	NUT-JAM 1/2-20 ZP
41	12040077	2	NUT-NYLOC M12 X 1.75 ZD CLASS 8

Solution Valve Assembly

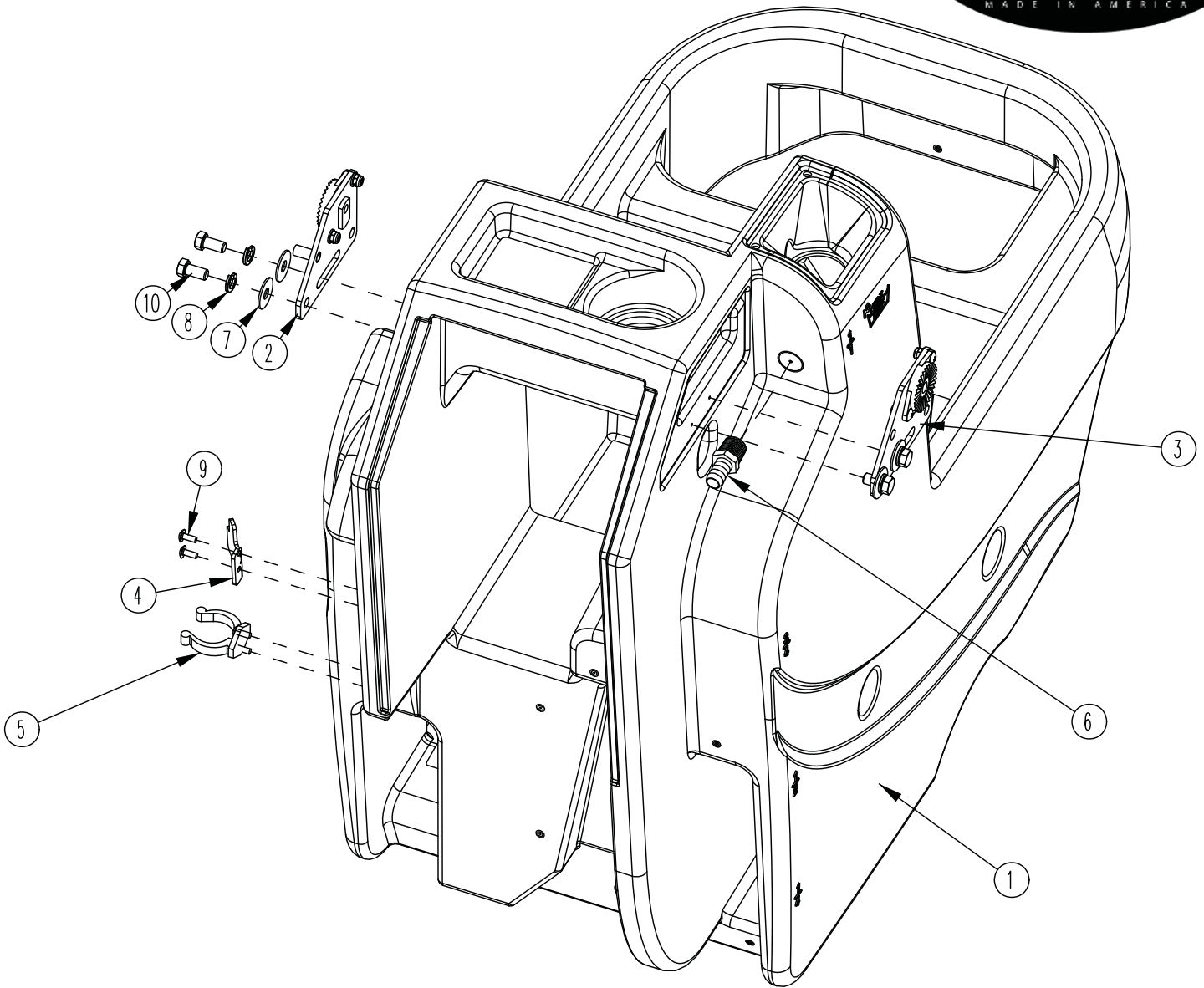


BILL OF MATERIAL - 172104			
ITEM	PART #	QTY	DESCRIPTION
1	172105	1	BKT, SOLENOID MOUNT
2	281637	1	HOSE-WIRE REINF 3/8 X 11"
3	320264	1	FTG-ADAPTER 1/4 MPT X 1/4 HB BRASS
4	450076	1	CLAMP-HOSE 5/8 (.590-.791) SS
5	710195	2	SCR-PHMS 5/16-18 X .50 ZP
6	711545	2	WASHER-LOCK 5/16 SPLIT ZP
7	740482	1	DIODE ASY, 1N4007 W/PIGGY
8	740493	1	VALVE-WATER 24VDC

Solution Valve Assembly

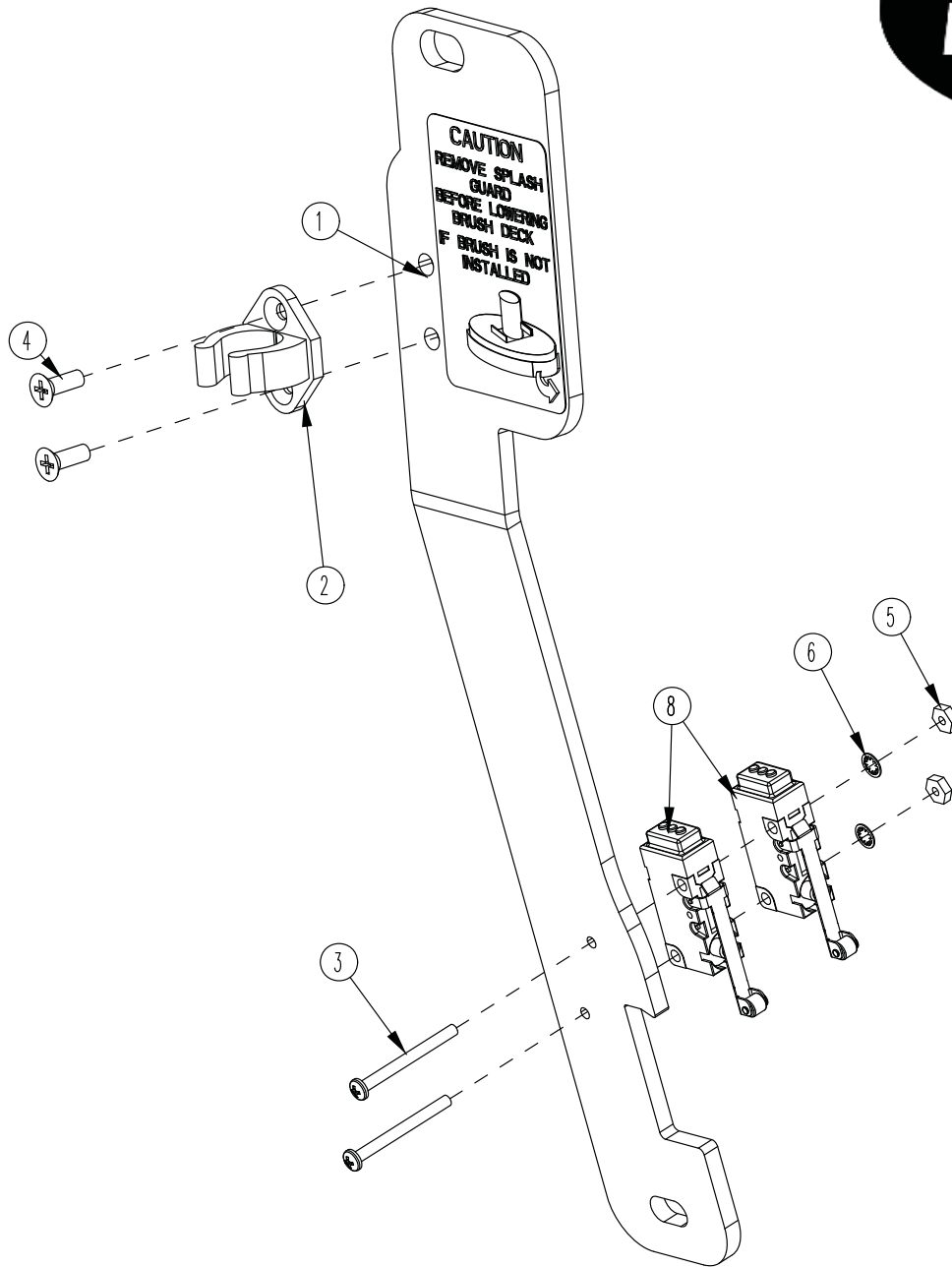


BILL OF MATERIAL - 172571			
ITEM	PART #	QTY	DESCRIPTION
1	172564	1	FILTER-SOLUTION E1720
2	172566	1	HOSE- 1/2ID X 1.75" NYLOBRAID
3	172567	1	HOSE-1/2"ID X 2.375" NYLOBRAID
4	172568	1	HOSE-WIRE REINF 1/2"ID X 4.25"
5	172569	1	FTG-ELBOW 90 1/2 HB X 1/2 HB NYLON
6	172579	1	SOLUTION CNTRL VALVE, WITH BRKT
7	383347	5	CLAMP-CRIMP 1/2 HOSE

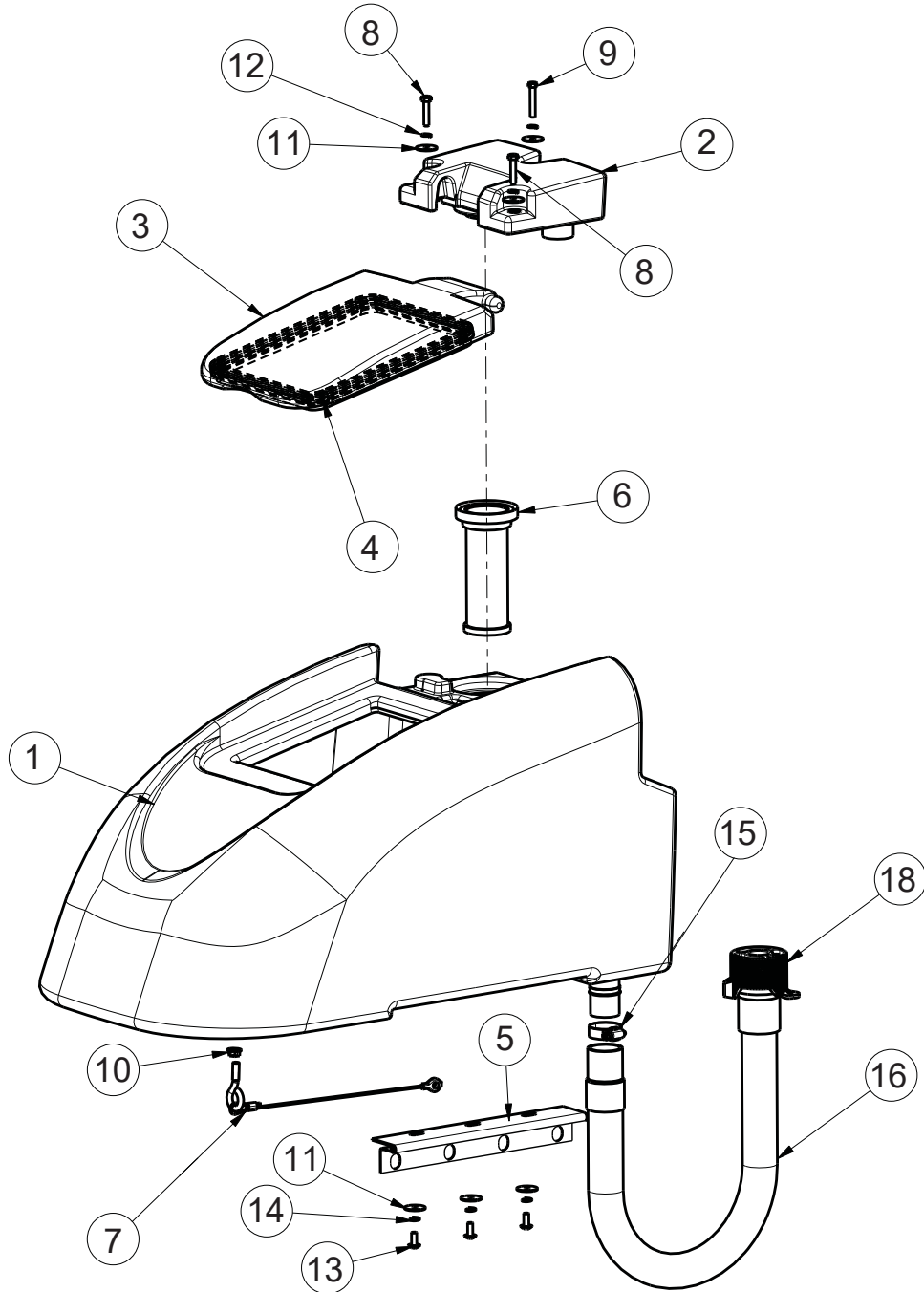


BILL OF MATERIAL - 172013FC			
ITEM	PART NO.	QTY	DESCRIPTION
1	172003FC	1	SOLUTION TANK
2	172080	1	HANDLE MOUNT ASSY, LEFT
3	172082	1	HANDLE MOUNT ASSY, RIGHT
4	172341	1	HOOK, DRAIN HOSE WITH TWIST VALVE
5	260579	1	TOOL CLIP, 1.5" HOSE
6	342438	1	FITTING, 1/2 MPT 1/2 HB BRASS
7	711507	4	WSR-FLAT .37 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



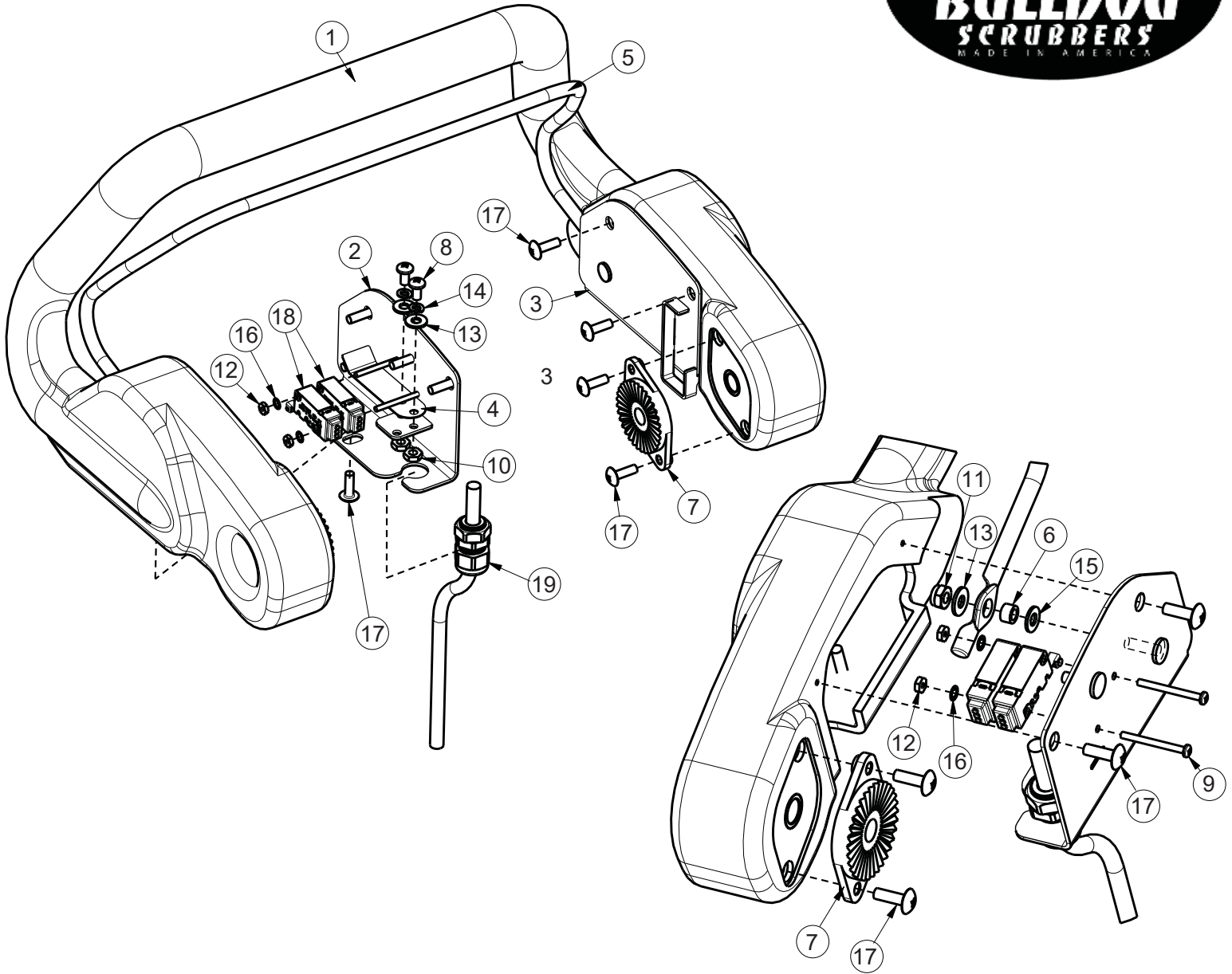
BILL OF MATERIAL - 172166			
ITEM	PART NO.	QTY	DESCRIPTION
1	172036	1	BKT, PEDAL STOP
2	172065	1	CLIP, FOR 1/2" ID HOSE
3	710495	2	SCR-MC 4-40 X 1.25 STL Z
4	710530	2	SCR-MC FL HD 8-32 X .50 BRS
5	711428	2	NUT-HEX 4-40
6	712326	2	WSR-INT LOCK #4
7	715685	1	DECAL, REMOVE SPLASH GUARD
8	747603-2	2	SWITCH ASY, MICRO ROLLER W/PACK/CONDUIT





BILL OF MATERIAL - 172014FC			
ITEM	PART NO.	QTY	DESCRIPTION
1	172004FC	1	RECOVERY TANK
2	172005FC	1	VACUUM MANIFOLD
3	172007FC	1	LID
4	172017	1	GASKET, ES1720 LID
5	172049	1	HINGE, RECOVERY TANK
6	172132	1	FLOAT, SCREENED
7	172394	1	CABLE, REC TANK 12.0
8	711210	2	SCR-HH 1/4-20 X 1.25 ZP GR 5 FULL THRD
9	711212	1	SCR-HH 1/4-20 X 1.50 ZP GR 5
10	711379	1	NUT-FLANGED WIZZ 5/16-18 ZP
11	711519	6	WASHER-FLAT 1/4 X 1.00 X .06 ZP
12	711544	3	WASHER-LOCK 1/4 SPLIT ZP
13	712565	3	SCR-THMS 1/4-20 X .62 SS
14	712758	3	WASHER-LOCK 1/4 SPLIT SS
15	3303255	1	CLAMP-HOSE 1.75 DIA NOMINAL
16	97090096	1	DRAIN HOSE ASSY, RECOVERY TANK
17	15282072	1	REPLACEMENT O-RING (NOT SHOWN)
18	90304528	1	CAP

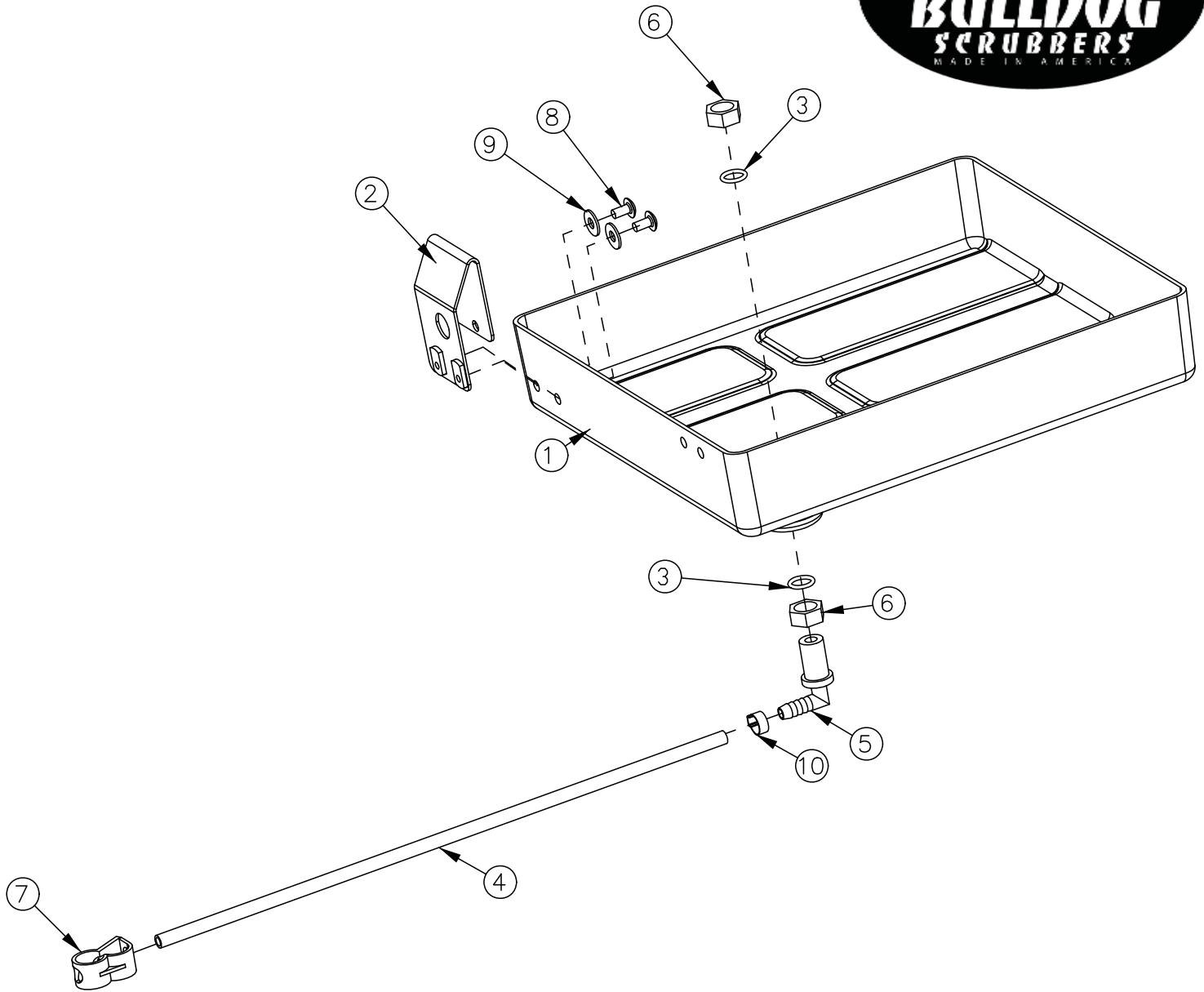
Handle Assembly



BILL OF MATERIAL - 172015

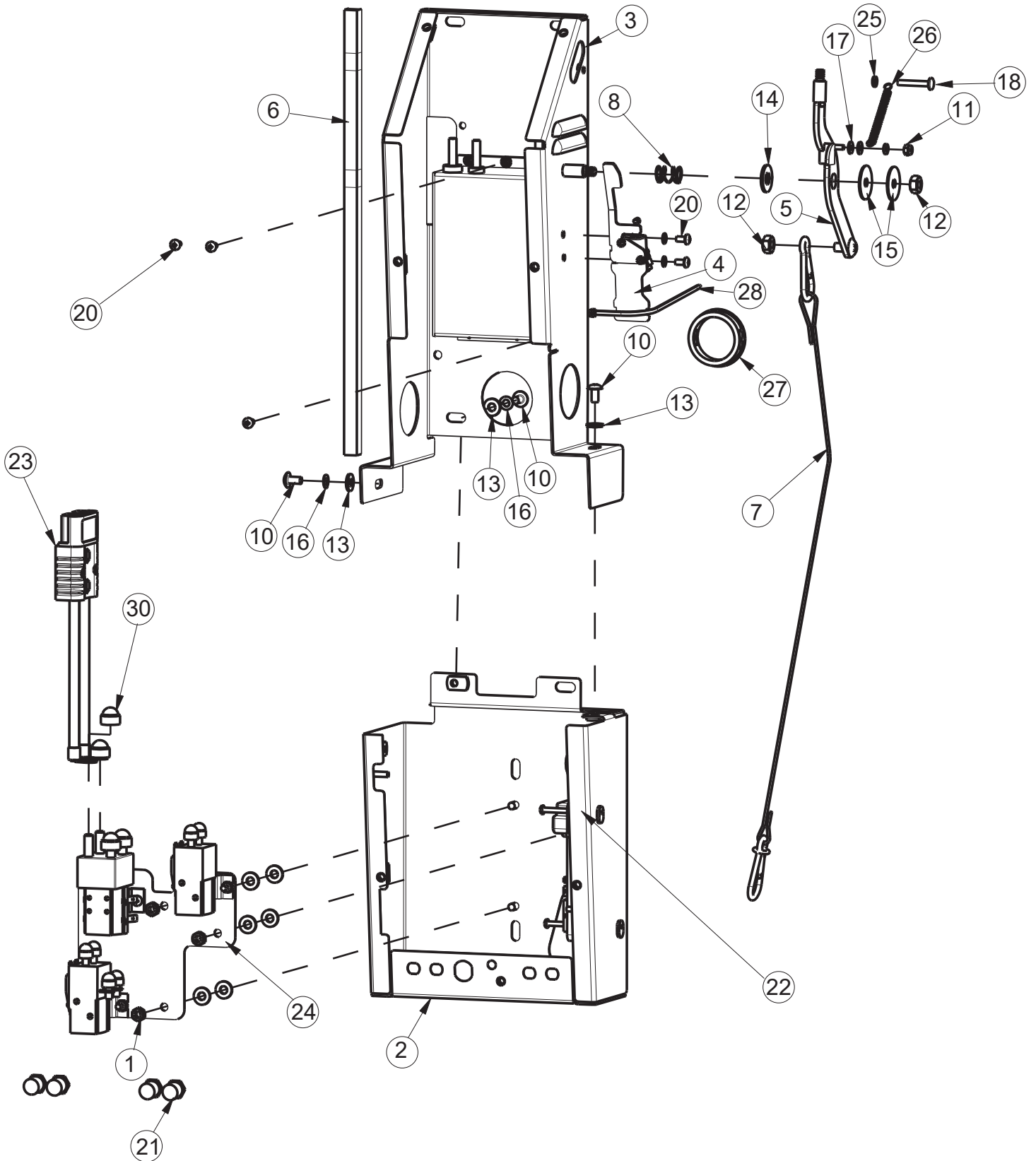
ITEM	PART #	QTY	DESCRIPTION	ITEM	PART #	QTY	DESCRIPTION
1	172006	1	HANDLE	11	711350	2	NUT-NYLOC 10-32 ZP
2	172053	1	BAIL PLAT E WM T RH	12	711428	2	NUT-HEX 4-40 ZP
3	172054	1	BAIL PLAT E WM T LH	13	711503	6	WASHER-FLAT #10 X .50 ZP
4	172057	2	LEAF SPRING	14	711543	4	WASHER-LOCK #10 SPLIT ZP
5	172059	1	BAIL, HANDLE	15	712320	2	WASHER-FLAT 20 X .45 X .048 NYLON
6	172074	2	SPACER, 5/16OD X 17GA, ALU	16	712326	2	WASHER-INT LOCK #4 SS
7	270143	2	HANDLE PIVOT JAW	17	712830	10	SCR-THMS 10-24 X .62 ZP
8	710353	4	SCR-M C RD HD 10-32 X .37 ST	18	747603-3	2	SWITCH ASY
9	710495	2	SCR-M C 4-40 X 1.25 ST L Z	19	747715-1	1	CABLE ASY, 5 COND 18G TD
10	711310	4	NUT-HEX 10-32 ZP				

Battery Tray Assembly



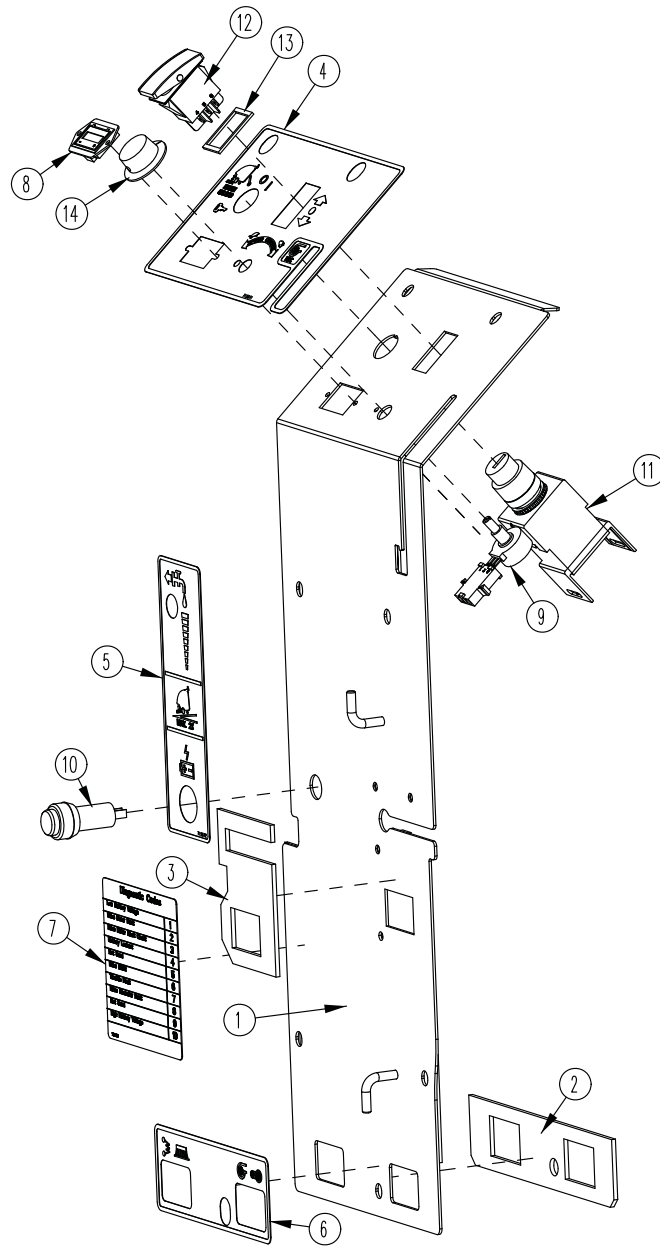
BILL OF MATERIAL - 172012

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 .31x.75x.06ST
10	828490	1	CRIMP CLAMP 140R



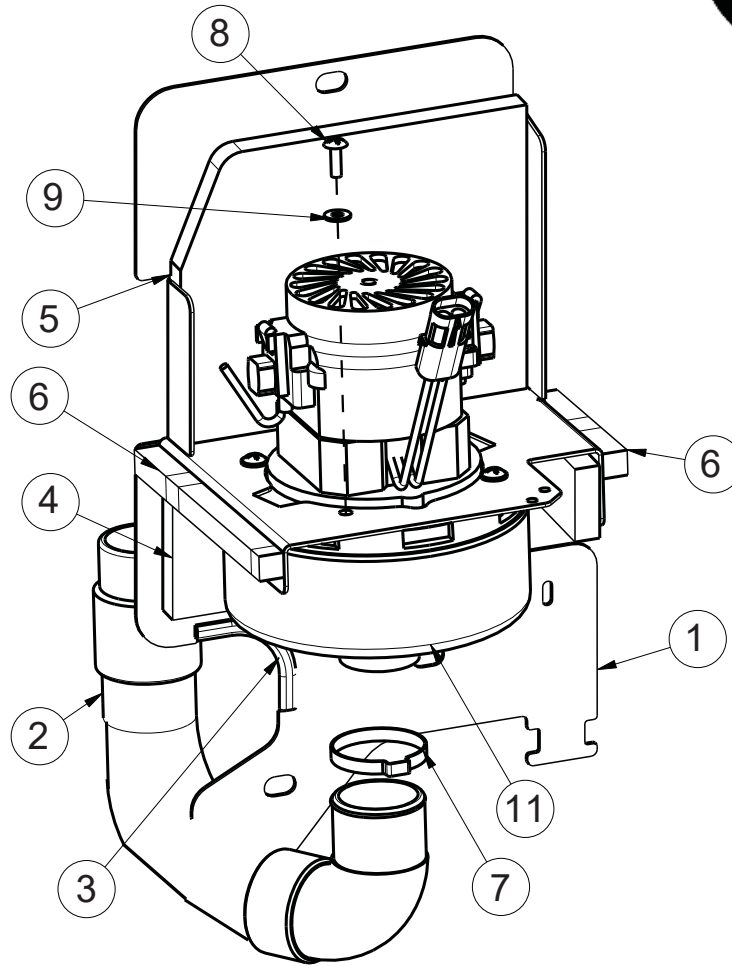


BILL OF MATERIAL - 172075 - 120/230-C			
ITEM	PART NO.	QTY	DESCRIPTION
1	369-416	3	NUT-HEX 1/4-20 ZP DOUBLE SERRATED
2	172077	1	ELEC BOX BOTTOM WMT
3	172088	1	ELEC BOX TOP WMT
4	172141	1	VAC SWITCH ASSY
5	172152	1	WELDMENT-VAC LEVER
6	172188	1	FOAM TAPE, 1/2" SQ X 16.5"
7	172381	1	SQUEEGEE CABLE ASSY
8	670093	1	SPRING-COMP .502 X .6 X 1 ZINC
9	710035	2	SCR-PHMS 8-32 X 1.125 ZP
10	710178	3	SCR-THMS 1/4-20 X .50 ZP
11	711372	1	NUT-NYLOC 8-32 ZP
12	711383	2	NUT-HEX 5/16-18 ZP REVERSE LOC
13	711505	9	WASHER-FLAT 1/4 ZP
14	711508	1	WASHER-FLAT 3/8 X 1.00 X .08 ZP
15	711516	2	WASHER-FLAT 5/16 X 1.25 X .05 ZP
16	711544	2	WASHER-LOCK 1/4 SPLIT ZP
17	712320	2	WASHER-FLAT 20 X .45 X .048 NYLON
18	712533	1	SCR-PHMS 10-24 X 1.25 SS
19	712770	5	WASHER-INT TOOTH LOCK #10 SS
20	712810	5	SCR-RHMS 10-24 X .37 ZP
21	742748	4	CIRCUIT BREAKER-BOOT
22	747608	1	I-DRIVE, 24V 70A PM CONTROL (SEE NOTES)
23	747637	1	WIRE ASY, MACHINE-BATTERY E1720
24	747670	1	ELECTRICAL PANEL ASY, E1720TD
25	760134	2	MOUNT RING
26	762084	1	SPRING-EXT .25OD X 2" F.L. MUSIC
27	762400	1	BUSH -HEYCO 1-5/8 X 2-1/8 X 29/64 2400 B
28	828062	1	CABLE TIE LARGE
29	957761	1	CHARGER, SIGNET HBF300-24 NEMA 5-15 PLUG
29CE	957760	1	CHARGER, SIGNET HBF300-24 IEC 60320 C14
30	15592033	2	CAP, SAFETY NUT COVER M8



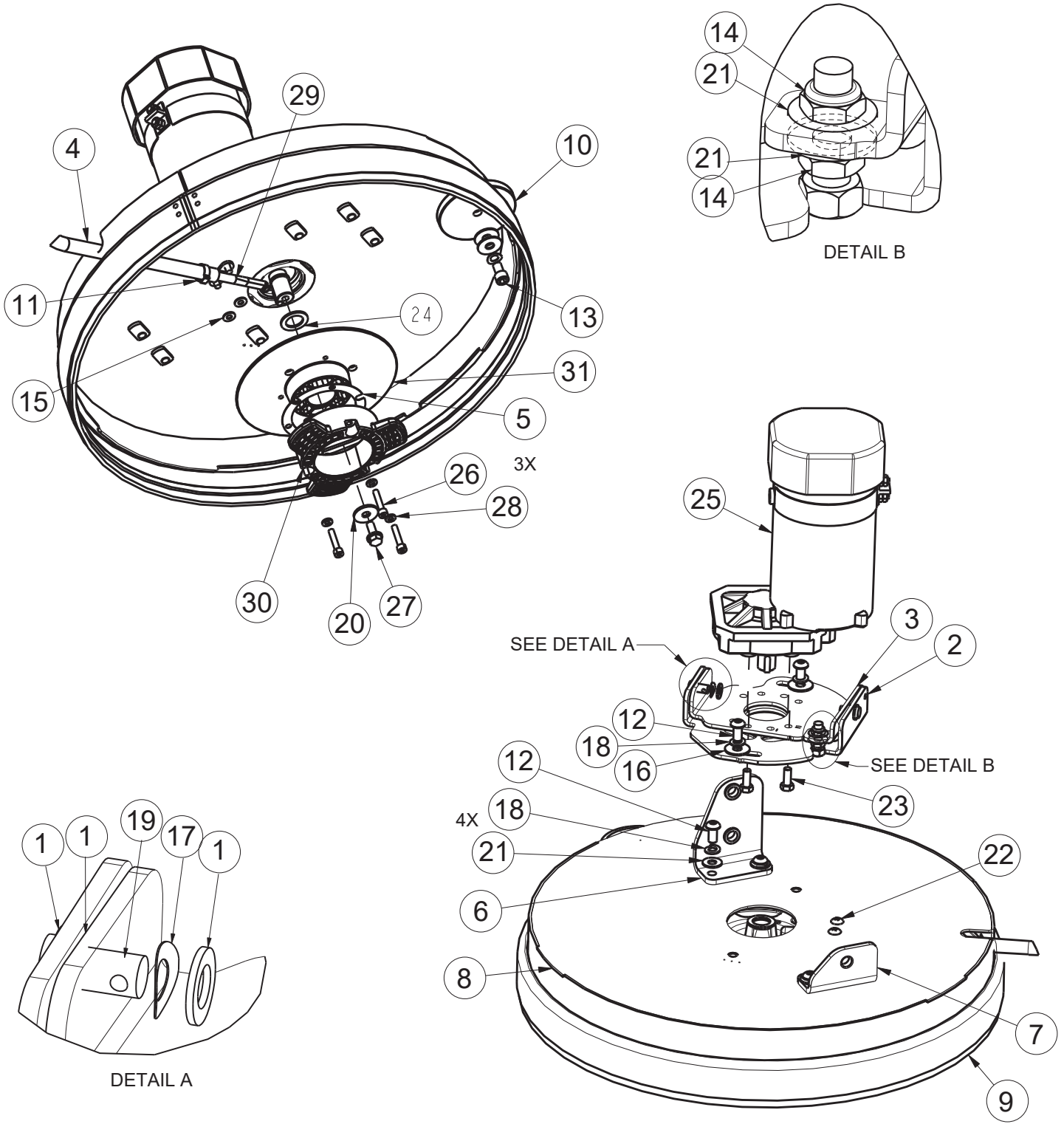
BILL OF MATERIAL - 172079FC

ITEM	PART #	QTY	DESCRIPTION	ITEM	PART #	QTY	DESCRIPTION
1	172182	1	TD COVER WMT	8	747011	1	GAUGE-BATT. TRUCHARGE PGDT 36VDC
2	172193	1	GASKET, CB OUTLINE	9	747026	1	POTENTIOMETER ASSY, SPEED CONTROL 5K
3	172194	1	GASKET, CHARGER CORD PLATE	10	747614	1	INDICATOR, BATTERY CHARGE STATUS
4	715671FC	1	DECAL, DASHBOARD TD	11	747617-2	1	KEYSWITCH + HARNESS ASY
5	715672	1	DECAL, CHARGE STATUS, SOL. CTRL	12	748201	1	SWITCH, DPDT ON/OFF/ON
6	715674	1	DECAL, TD CIRCUIT BREAKERS	13	748209	1	GASKET-FOR 2 POLE RKR SWITCHES
7	715699	1	DECAL, DIAG. CODES, NARROW	14	809874	1	KNOB-SPEED CONTROL



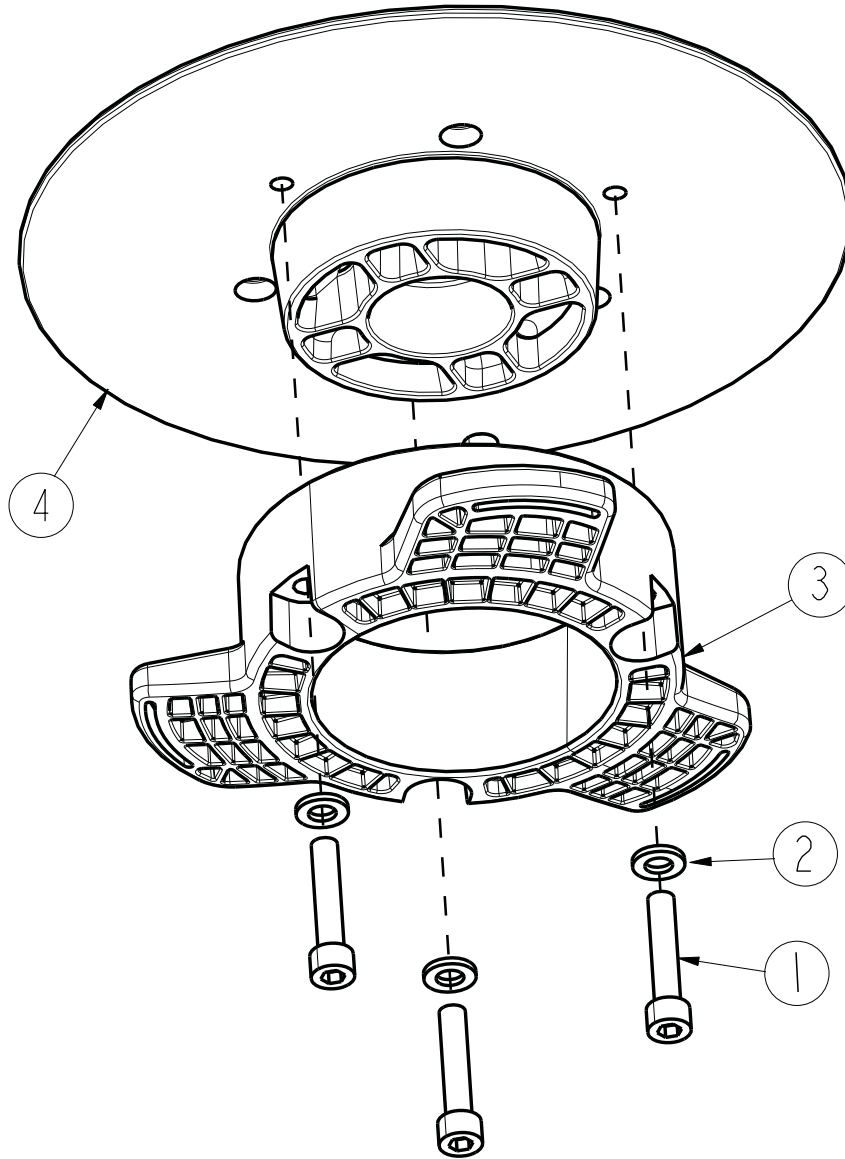
BILL OF MATERIAL - 172050

ITEM	PART NO.	QTY	DESCRIPTION
1	172045	1	VAC MOUNT WMT
2	172048	1	HOSE, STRETCH 13", 90 CUFF
3	172124	1	EDGE TRIM, .063 X 3.0, BLACK
4	172186	1	FOAM COVER FRONT 1, 1/2 THICK
5	172187	1	FOAM COVER FRONT 2, 1/2" THICK
6	172188	.5	FOAM TAPE, 1/2" SQ X 16.5"
7	450095	1	CLAMP-CRIMP 1.75" OD
8	711160	4	SCR-HI/LO 10 X .625 BLACK ZINC
9	711503	4	WASHER-FLAT #10 X .50 ZP
10	715967	1	DECAL - WARNING, DO NOT PICK UP (NOT SHOWN)
11	747607-1	1	VAC MOTOR ASY, 24V PERIF BYPASS



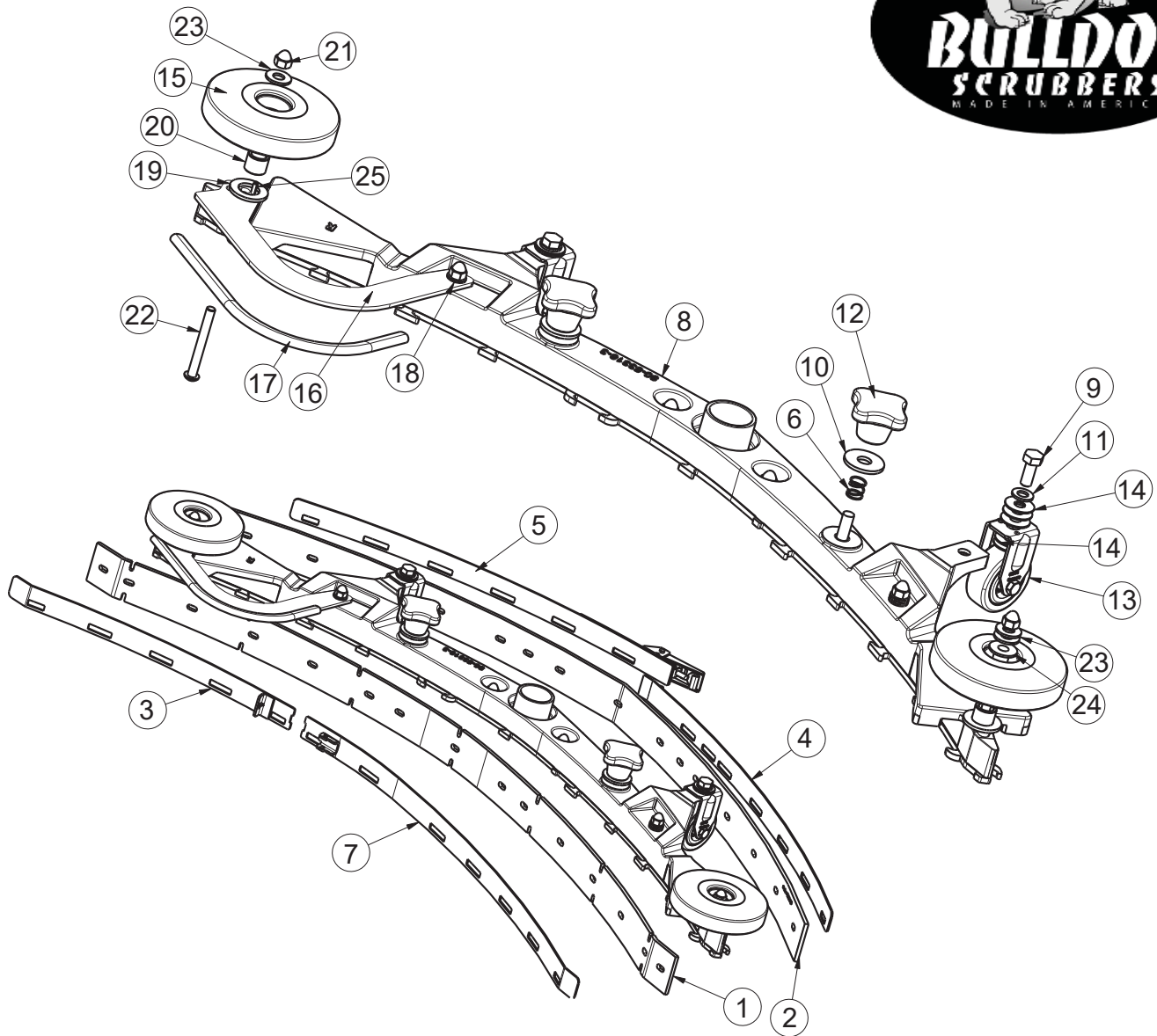


BILL OF MATERIAL - 172100TD			
ITEM	PART NO.	QTY	DESCRIPTION
1	81-166-A	6	SPECIAL WASHER
2	172040	1	DECK ANGLE ADJUST WMT
3	172044	1	PLATE, MOTOR MOUNT
4	172198	1	HOSE-NYLO REINF 3/8 X 22.5"
6	172296	1	BKT, DECK MOUNT RT
7	172297	1	BKT, DECK MOUNT LEFT
8	172375	1	DECK COVER WMT, 20"
9	172384	1	FLOATING BRUSH DECK SKIRT
10	210153	1	ROLLER WHEEL
11	450076	1	CLAMP-HOSE 5/8 (.590-.791) SS
12	710990	6	SCR-BHSCS 3/8-24 X .75 ZP
13	710991	1	SCR-HH 3/8-24 X .62 ZP GR 5
14	711375	2	NUT-NYLOC 3/8-16 ZP
15	711504	2	WASHER-FLAT 1/4 SS
16	711507	4	WASHER-FLAT 3/8 X 1.12 X .06
17	711523	3	WASHER-WAVE .37 X .68 X .08
18	711546	6	WASHER-LOCK 3/8 SPLIT ZP
19	711679	2	PIN-CLEVIS 3/8 X .750 ZP
20	711855	1	WASHER-FENDER 3/8 X 1.12 X .10 ZP HARD
21	712301	6	WASHER-FLAT 3/8 X .87 X .06 ZP
22	712565	2	SCR-THMS 1/4-20 X .62 SS
23	717024	4	SCR-HH M8-1.25 X 20 ZP GRADE 8.8
24	717025	1	WASHER-FLAT 13/16 X 1.25 X .08 ZP
25	747600	1	MOTOR, 24VDC PM 600W
26	11127000	3	SCR-SHCS M6X30 SS, ISO4762
27	11717203	1	BLT-HH FLG M8X1.25X20 PRECOTE, ZD 10.9
28	12310256	3	WSR-FLT 6.4X12X1.6, SS DIN125
29	90311663	1	FITTING, WATER NOZZLE W/ MOUNT HOLES
30	90541814	1	DRIVE HUB, PLASTIC, 3-LOBE
31	172096MCH	1	HUB BASE MACHINED



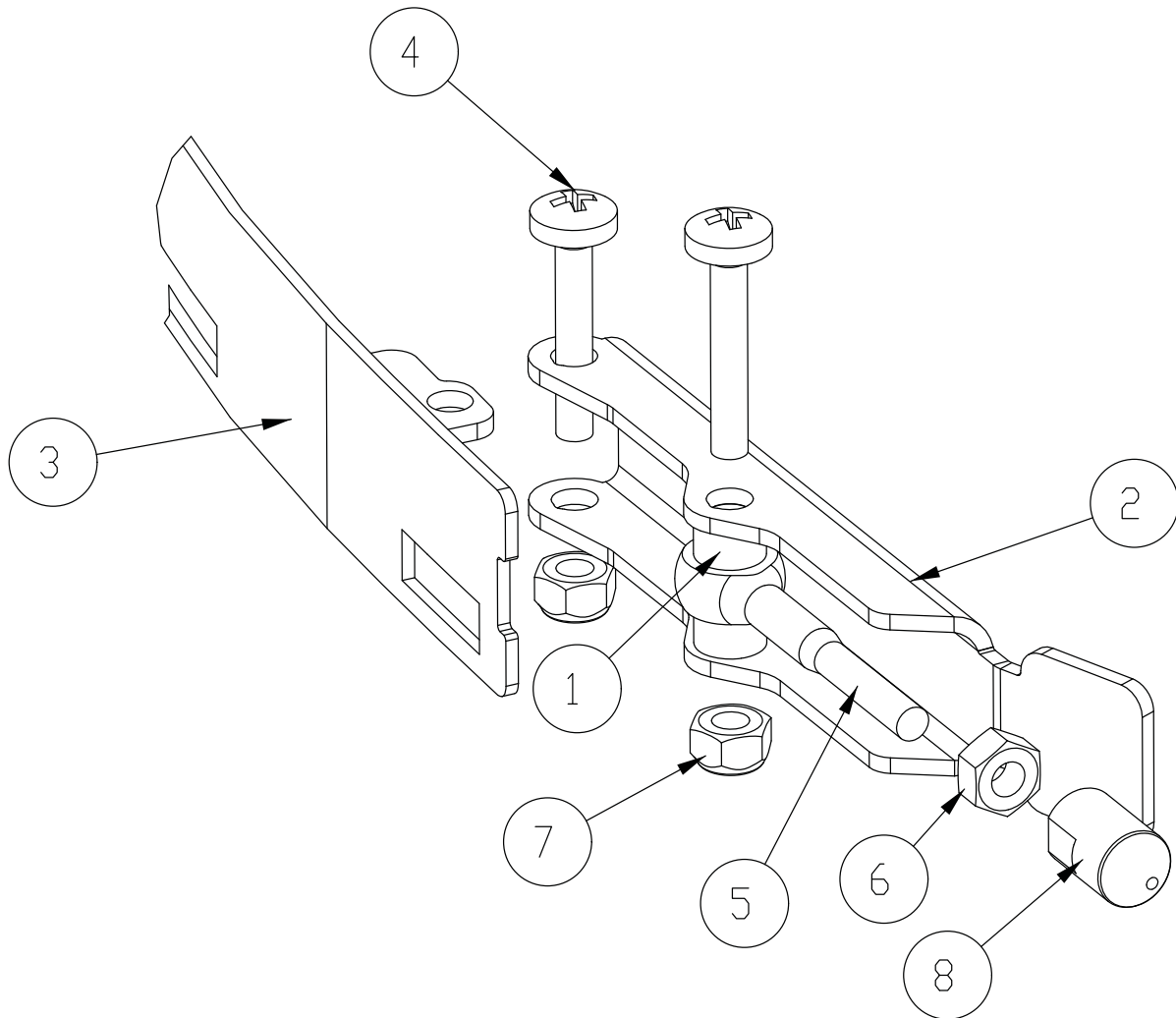
BILL OF MATERIAL - 172510			
ITEM	PART NO.	QTY	DESCRIPTION
1	11127000	3	SCR-SHCS M6X30 SS, ISO4762
2	12310256	3	WSR-FLT 6.4X12X1.6, SS DIN125
3	90541814	1	DRIVE HUB, PLASTIC 3 LOBE
4	172096MCH	1	BASE, DRIVE HUB WITH KEYWAY

Rear Squeegee Assembly (Curved)



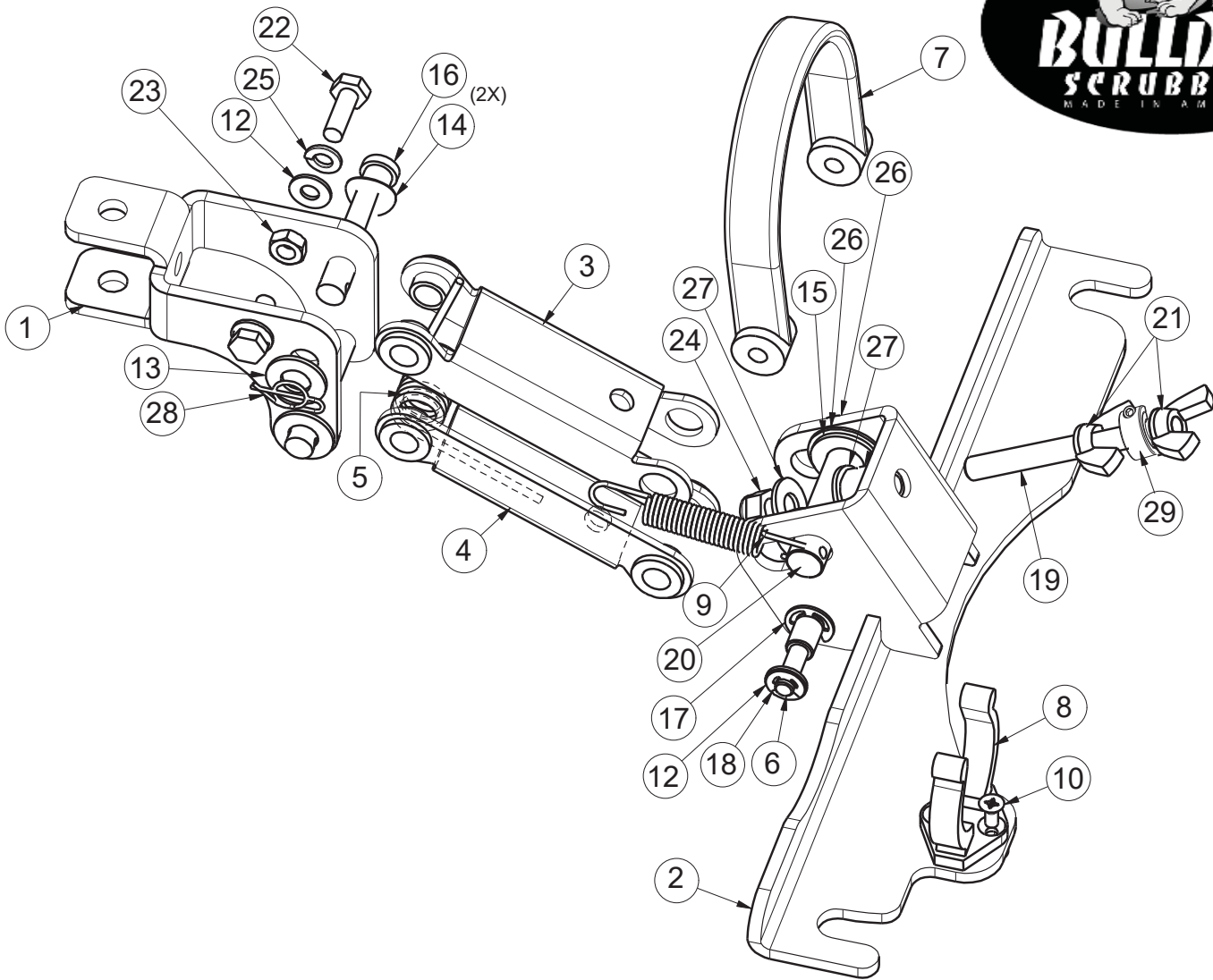
BILL OF MATERIAL - 172534

ITEM	PART #	QTY	DESCRIPTION	ITEM	PART #	QTY	DESCRIPTION
1	172162	1	SQUEEGEE BLADE, FRNT 34" (860) 4MM	14	90531112	10	WASHER-FLAT 8.3 x 22 x 1.00mm STAINLESS
2	172163	1	SQUEEGEE BLADE, REAR 34" (860), 4MM	15	90548397	2	ROLLER - PLASTIC, 100mm DIA. (4")
3	172241	1	STRAP WMT, FRONT RT - 34" (860) SQG	16	172271	1	BUMPER, 34" SQG
4	172245	1	STRAP WMT, REAR LEFT - 34" (860) SQG	17	172274	1	EDGE TRIM, 5/16 X 10" BLACK
5	172246	1	WELD-STRAP 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	STRAP W/ LATCH, FRONT LEFT, 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				



BILL OF MATERIAL - 172440			
ITEM	PART NO.	QTY	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

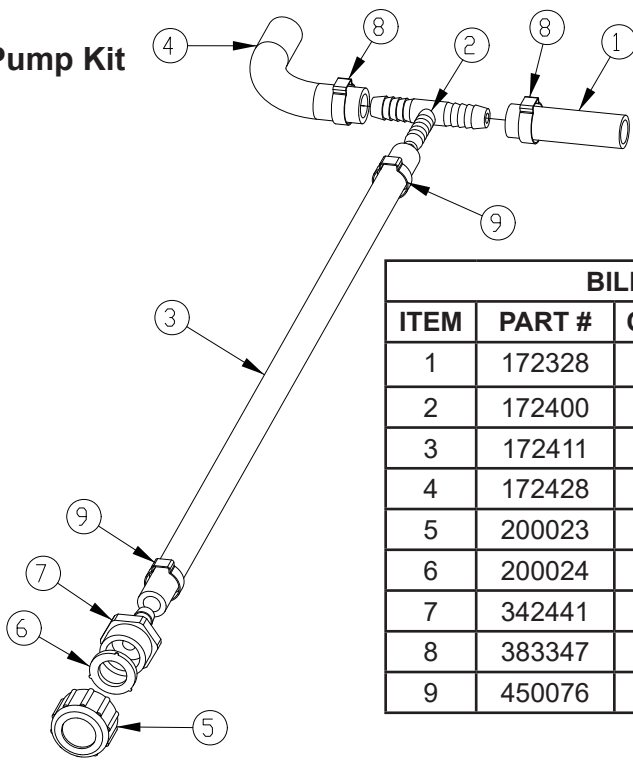
Squeegee Mechanism Assembly



BILL OF MATERIAL - 172150

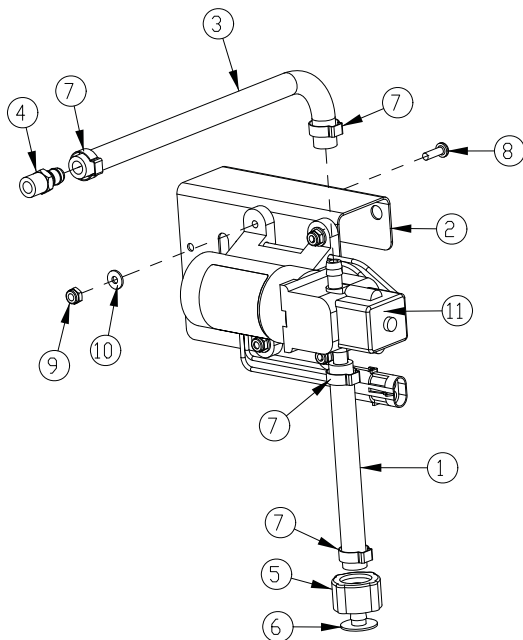
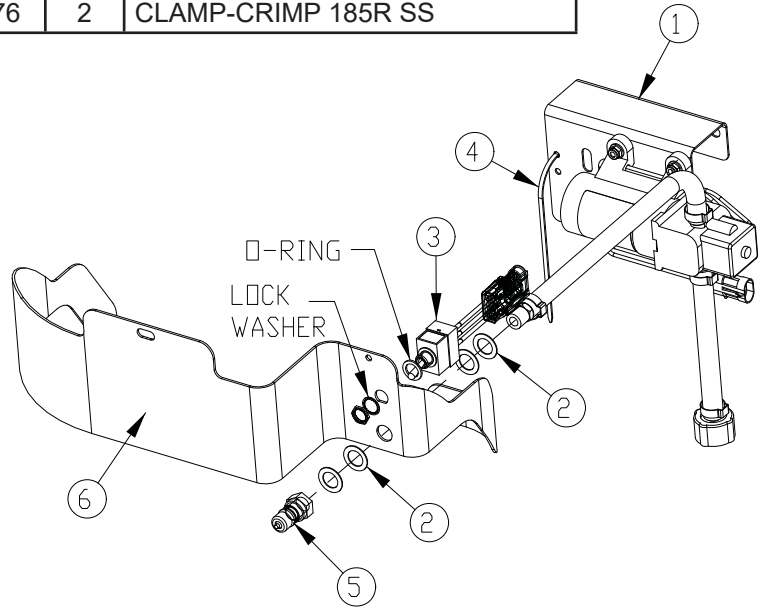
ITEM	PART #	QTY	DESCRIPTION	ITEM	PART #	QTY	DESCRIPTION
1	172134	1	BKT, MAIN SQUEEGEE HINGE	16	711717	2	RETAINING RING- E TYPE .37
2	172155	1	SQUEEGEE MOUNT WMT	17	711720	2	.250 DIA RETAINING RING- E TYPE
3	172196	1	SQ TOP LINK W/ BUSHING	18	712147	1	ROD-THD 5/16-18 X 3.5 SS
4	172197	1	SQ BOT LINK W/ BUSH	19	712148	1	CLEVIS PIN, 1/2 x 2.25 W/ HOLE
5	172261	1	TORSION SPRING	20	712157	2	NUT- WING 5/16-18 SS
6	172352	1	PIN, 3/8 X 3.0, SQG STRAP	21	712562	2	BOLT-HH 1/4-20X3/4 SS
7	172357	1	STRAP, 9" PU, BLACK	22	712665	2	NUT-HEX 1/4-20 SS
8	260579	1	TOOL CLIP, 1.5" HOSE	23	712680	1	NUT-HEX 5/16-18 SS
9	430051	1	RETURN SPRING-3.00"	24	712683	2	NUT, HEX 5/16-18 NYLOC SS
10	710530	2	SCR-MC FL HD 8-32 X .50 BRS	25	712758	2	WSR-HELICAL 1/4 SS
11	711504	4	WSR-FLAT 1/4 ID SS	26	712760	3	WSR-FLAT .56X1.06X.04 SS
12	711515	2	WSR-FLAT .406 X .812 X .0625	27	712772	2	WSR-FLAT .344 x .75 x .06 SS
13	711523	2	WSR-WAVE .37X .68 X .08	28	3400125	1	PIN-COTTER 3/8 RUE RING
14	711592	2	WSR-FLAT .506 X .9 X .064 NYL	29	713528	1	COLLAR-THREADED CLAMP 5/16-18X5/16-BK OX
15	711678	2	CLEVIS PIN 3/8 X 2-1/4				

Optional Pump Kit



BILL OF MATERIAL - 172405			
ITEM	PART #	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			
ITEM	PART #	QTY	DESCRIPTION
1	172402	1	OAWPUMP ASSY
2	711594	4	WSR-FLAT .56 X.88 X.03
3	748146	1	SWITCH ASY,
4	828062-B	4	CABLE TIELARGE-BLACK
5	828370	1	MALE COUPLER
6	172144FC	1	FRONT PANEL, FOROAW,
7	342444	1	WSR-FILTER (NOT SHOWN)
8	712070	1	BLT (NOT SHOWN)



BILL OF MATERIAL - 172402			
ITEM	PART #	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 3/8 HOSE w/CONNECTOR

Wiring Diagrams

1

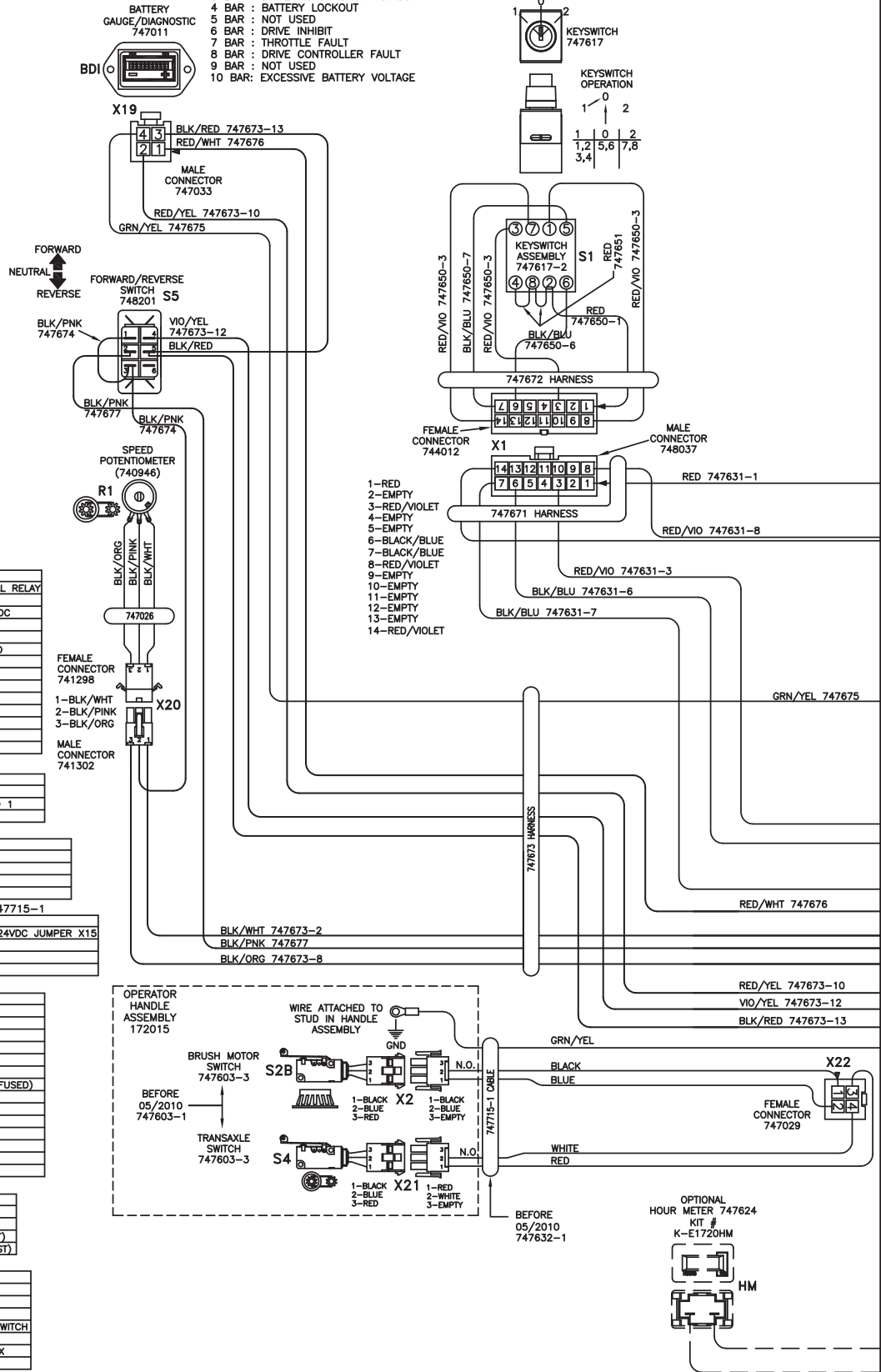
PAGE LAYOUT



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

715678: DIAGNOSTIC CODE DECAL
 DIAGNOSTIC CODES: BATTERY GAUGE: 747011
 1 BAR : CHARGE BATTERIES
 2 BAR : DRIVE MOTOR CONNECTION
 3 BAR : DRIVE MOTOR SHORT CIRCUIT
 4 BAR : BATTERY LOCKOUT
 5 BAR : NOT USED
 6 BAR : DRIVE INHIBIT
 7 BAR : THROTTLE FAULT
 8 BAR : DRIVE CONTROLLER FAULT
 9 BAR : NOT USED
 10 BAR: EXCESSIVE BATTERY VOLTAGE

ELECTRICAL
 BOX COVER
 ASSEMBLY
 172079



X1: MAIN KEYSWITCH ASSEMBLY: 747617-1

PIN #	COLOR	WHERE TO/FROM
1	RED	X13: BATTERY CHARGER INTERNAL RELAY
2	-	-
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

X20: SPEED POTENTIOMETER: 747026

PIN #	COLOR	WHERE TO/FROM
1	BLACK/WHITE	X23: I-DRIVE P:2
2	BLACK/PINK	FORWARD/REVERSE SWITCH 3 TO 1
3	BLACK/ORANGE	X23: I-DRIVE P:8

X22: OPERATOR HANDLE CABLE: 747715-1

PIN #	COLOR	WHERE FROM/TO
1	BLUE	X22.1 TO S2B:X2.B
2	BLACK	X22.2
3	RED	X22.3 TO S4:X21.A
4	WHITE	X22.4 TO S4:X21.B

X22: CONNECTOR TO OPERATOR HANDLE CABLE: 747715-1

PIN #	COLOR	WHERE FROM/TO
1	RED/VIOLET	X22.1 TO X10 JUMPER K2:COIL.24VDC JUMPER X15
2	RED/VIOLET	X22.2 TO X11 TO S2A:X7.A
3	BLACK/PINK	X22.3 TO A1:X23.1
4	BLACK/PINK	X22.4 TO S5.2

X23: I-DRIVE HARNESS: 747673

PIN #	COLOR	WHERE TO/FROM
1	BLACK/PINK	X22: P:3
2	BLACK/WHITE	X20: SPEED POT P:1
3	EMPTY	-
4	EMPTY	-
5	RED/WHITE	JUMPER TO P:7 (ON/OFF)
6	BROWN/GREEN	JUMPER TO P:14 (INHIBIT 1)
7	RED/WHITE	JUMPER TO P:5 (24VDC IDRIVE FUSED)
8	BLACK/ORANGE	X20: SPEED POT P:3
9	EMPTY	-
10	RED/YELLOW	X19: BATTERY GAUGE P:2
11	EMPTY	-
12	VIOLET/YELLOW	FORWARD/REVERSE SWITCH 4
13	BLACK/RED	JUMPER TO FOR/REV SWITCH 5
14	BROWN/GREEN	JUMPER TO P:6 (INHIBIT 2)

BATTERY CHARGER: 957761 or 957760

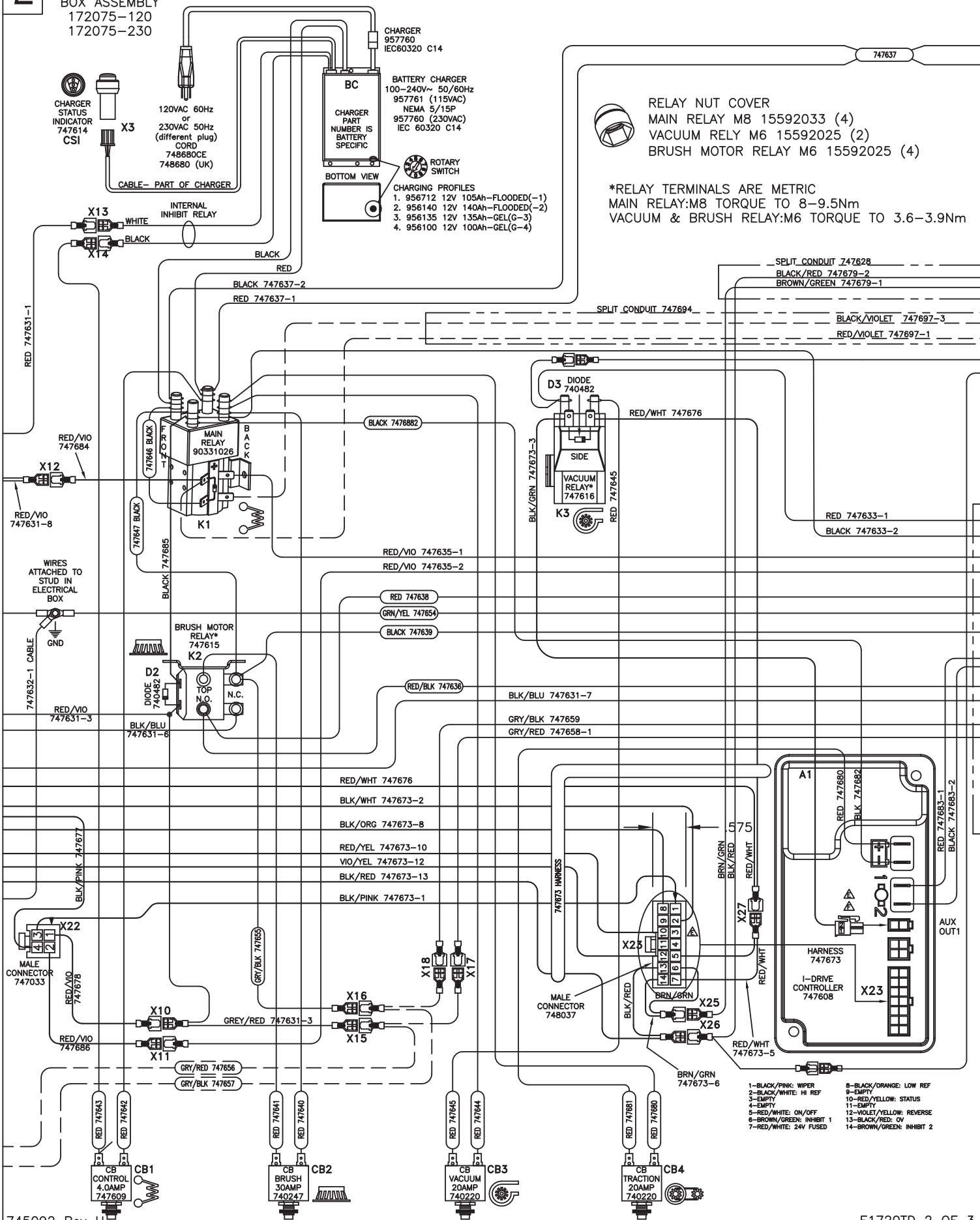
PIN #	COLOR	WHERE TO/FROM
X13	RED	X13: KEYSWITCH P:1
X14	BLACK	X14: CONTROL CB 4.0A
14GA	RED	MAIN RELAY + (REAR LEFT POST)
14GA	BLACK	MAIN RELAY - (FRONT LEFT POST)

OTHER WIRE COLORS

PIN #	COLOR	BATTERY 24VDC: +	BATTERY OVDC: -	GROUND	BRUSH UNLOAD CIRCUIT	BRUSH UNLOAD CIRCUIT/MICRO SWITCH	24VDC AFTER MAIN KEYSWITCH	OPTIONAL POWER 24VDC: 3A MAX	OPTIONAL POWER OVDC: 3A MAX
1	RED								
2	BLACK								
3	GREEN/YELLOW								
4	BLACK/BLUE								
5	RED/BLACK								
6	RED/VIOLET								
7	GREY/RED								
8	GREY/BLACK								

2

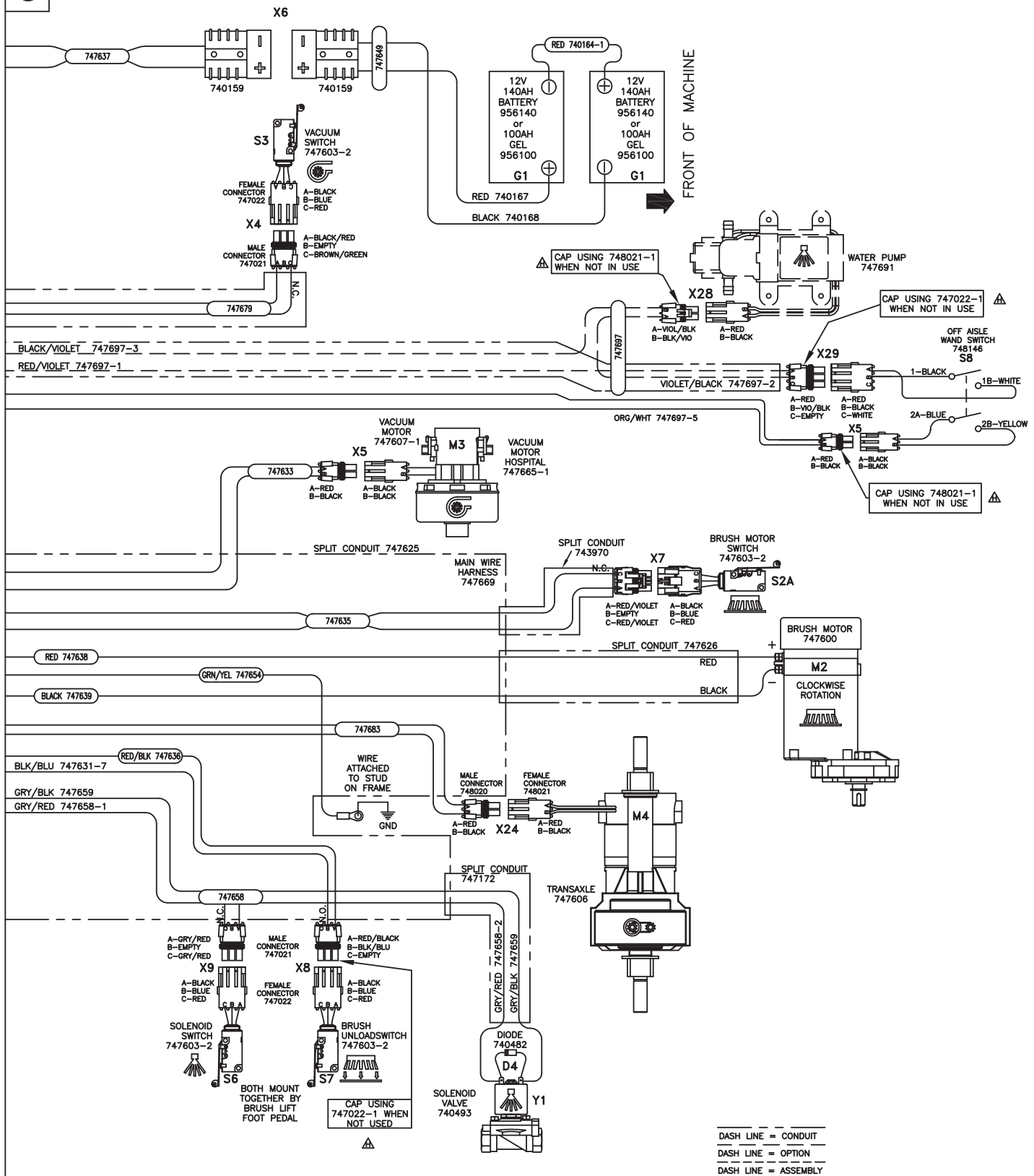
ELECTRICAL BOX ASSEMBLY
172075-120
172075-230



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

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

- 1-BLACK/PINK: WIPER
- 2-BLACK/WHITE: HI REF
- 3-EMPTY
- 4-EMPTY
- 5-RED/WHITE: ON/OFF
- 6-BROWN/GREEN: INHIBIT 1
- 7-RED/WHITE: 24V FUSED
- 8-BLACK/ORANGE: LOW REF
- 9-EMPTY
- 10-RED/YELLOW: STATUS
- 11-EMPTY
- 12-VIOLET/YELLOW: REVERSE
- 13-BLACK/RED: OV
- 14-BROWN/GREEN: INHIBIT 2



E1720TD PART REFERENCE LIST
Schematic 745092

Last Updated 01/05/10

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
M4	TRANSAXLE	747606
Y1	SOLENOID VALVE, WATER	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
CB4	CIRCUIT BREAKER 20A, TRANSAXLE	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
S4	SWITCH, TRANSAXLE (handle)	748603-1
S5	SWITCH, DIRECTION	748201
S6	SWITCH, BRUSH UNLOAD	748603-2
S7	SWITCH, SOLENOID	747603-2
S8 (optional)	SWITCH, PUMP- OFF AISLE WAND (KIT K-1720P)	747693-1
A1	CONTROLLER, I-DRIVE	747608
CSI	CHARGER STATUS INDICATOR	747614
HM (optional)	HOUR METER (KIT K-E1720HM)	747624
BC (model specific)	BATTERY CHARGER 115VAC (battery type specific)	957761 (-2 or G-4)
BC (model specific)	BATTERY CHARGER 230VAC (battery type specific)	957760 (-2 or G-4)
G1	BATTERY, 12V 140AH (2 REQUIRED)	956140
G1 (optional)	BATTERY, GEL 12V 100AH (2 REQUIRED)	956100
D1	DIODE, MAIN RELAY	Part of K1
D2	DIODE ASM, BRUSH MOTOR RELAY	740482
D3	DIODE ASM, VACUUM MOTOR RELAY	740482
D4	DIODE ASM, SOLENOID VALVE	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 (S6)	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)	OPTIONAL HOUR METER (HM) WIRE-747656	740366	741165
X18 (optional)	OPTIONAL HOUR METER (HM) WIRE-747657	740366	741165
X19	BATTERY GAUGE (BDI)	Part of BDI	747033
X20	SPEED POT ASSEMBLY (R1)	741298	741302
X21	SWITCH, TRANSAXLE (S4)	747022	747021
X22	OPERATOR HANDLE CABLE: 747632-1	747029	747033
X23	I-DRIVE HARNESS: 747673	Part of A1	748037
X24	TRANSAXLE (M4)	748021	748020
X25	I-DRIVE (A1) TO VACUUM SWITCH (S3)	740366-1	741165
X26	I-DRIVE (A1) TO VACUUM SWITCH (S3)	741093	740698
X27	I-DRIVE (A1) TO VACUUM RELAY-CONTACT	741093	741165
X28 (optional)	SWITCH, TOGGLE WATER PUMP (S8)	747022	747021
X29 (optional)	PUMP, OFF AISLE WAND (M1)	748021	748020