



Electronic Service Manuals

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Serving the Cleaning Industry Since 1922

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Parts Manual
X17 ECO EXTRACTOR

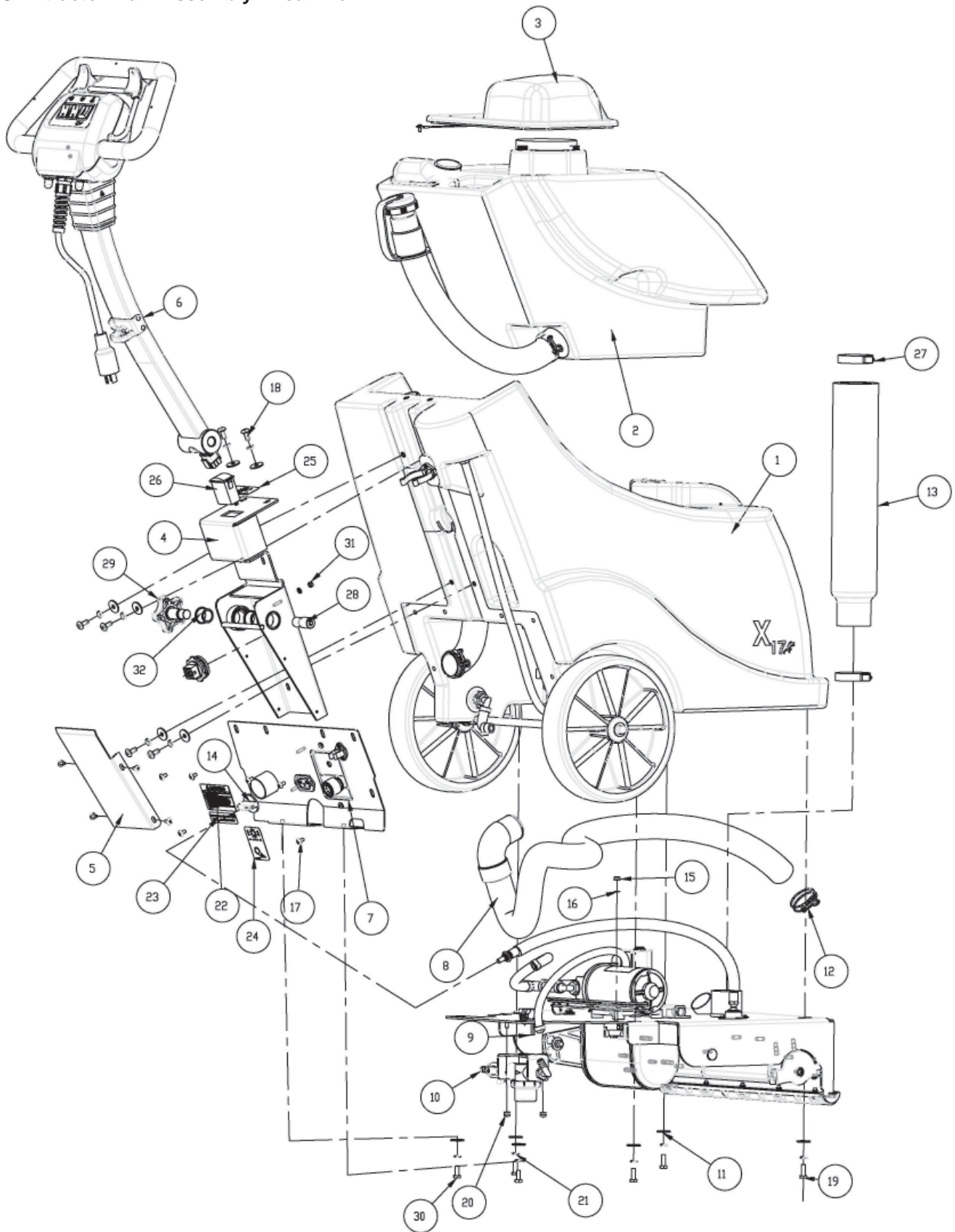
For Safety When Servicing or Maintaining Machine

- Stop on level surface.
- Disconnect the power to the machine.
- Avoid moving parts. Do not wear loose jackets, shirts, or sleeves when working on machine.
- When working around machine use protective clothing and safety glasses. Remove metal jewelry.
- Do not clean machine with a pressure washer.
- Authorized personnel must perform repairs and maintenance. Use Minuteman supplied replacement parts.

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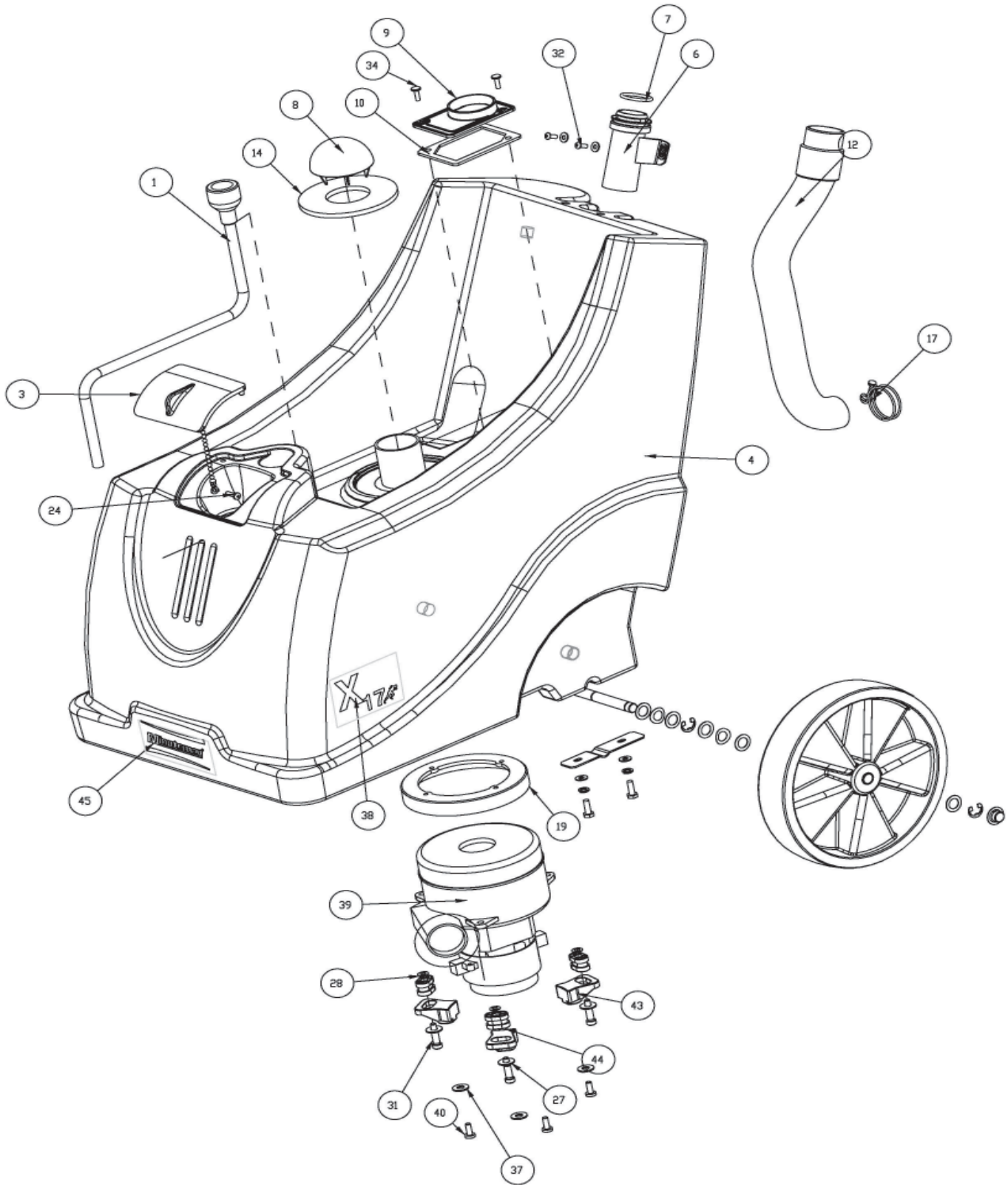
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X17 ECO Extractor Main Assembly I Rear View

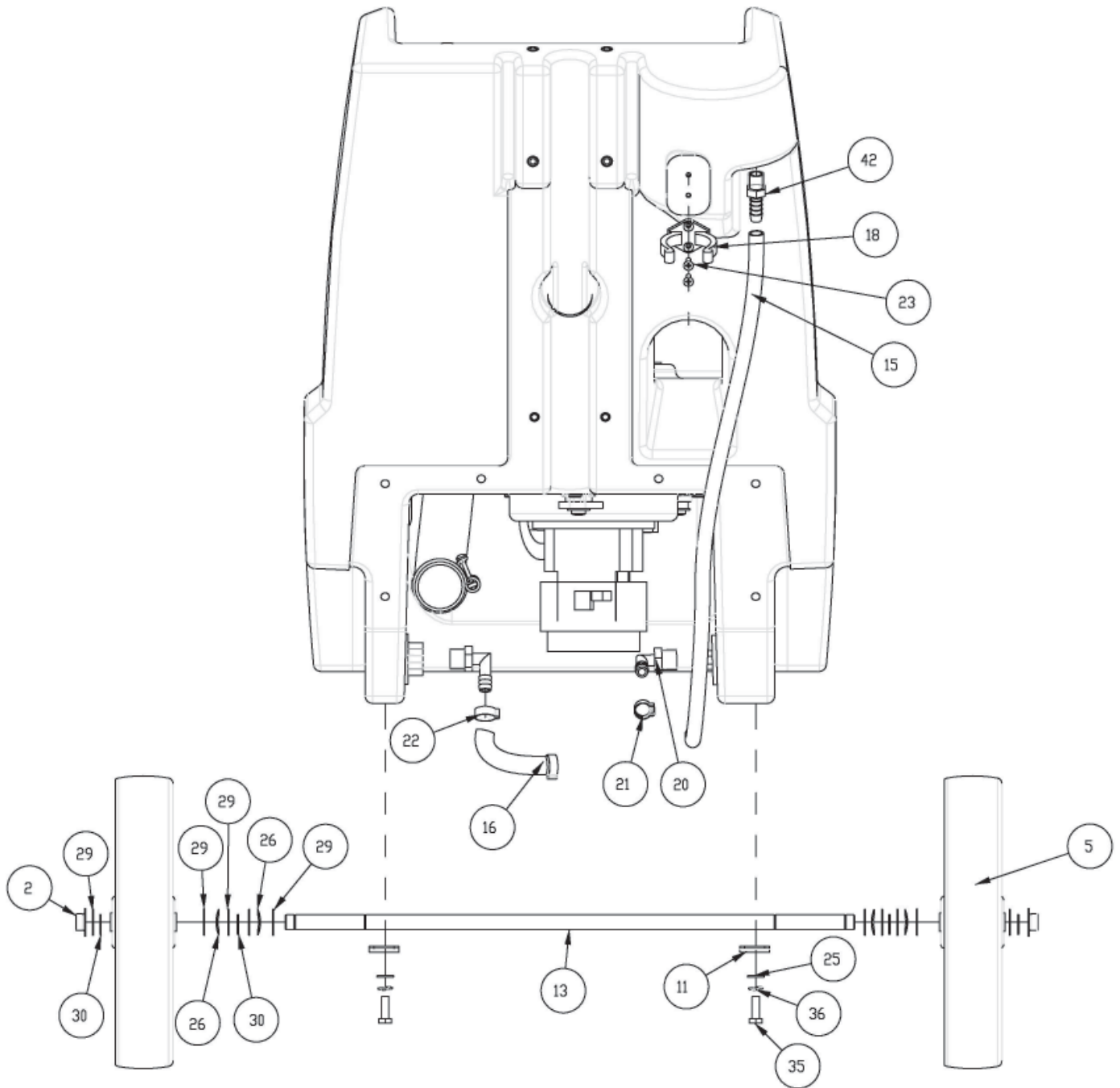


BILL OF MATERIAL - X17115			
ITEM	PART NO.	REQ'D	DESCRIPTION
1	173010	1	ASSY-SOLUTION TANK
2	173020	1	RECOVERY TANK ASSY, X17
3	173027	1	Recovery Dome Lid Assembly
4	173035	1	HANDLE BRACKET WELDMENT
5	173036	1	REAR PANEL COVER
6	173038	1	X17-ECO HANDLE ASSEMBLY
7	173043	1	BACK PANEL ASSEMBLY
8	173044	1	HOSE, CLEAR VAC
9	173050	1	CHASSIS SUB-ASSEMBLY EX17-ECO
10	173058	1	VALVE-FILTER ASSEMBLY, EX-17
11	173080	12	WSR-FLT .266 X .875 X .07 SS
12	260203	1	CLAMP-HOSE 102120 MURRAY
13	320836	1	MUFFLER, VAC MOTOR
14	452029	1	KNOB-BLK W/1/4 BRASS INSERT
15	711350	1	NUT-NYLOC 10-32
16	711553	2	WSR-INT LOCK #10
17	712540	10	SCR-MC 10-24 X .37 SS TH
18	712559	6	SCR-TR 1/4-20 X .62 TORX TR HD SEMS SS
19	712562	4	BLT-HH 1/4-20 X .75 SS
20	712638	2	NUT HEX 10-24 SS NYLOC
21	712758	12	WSR-HELICAL 1/4 SS
22	715061	1	DECAL-WARNING GENERAL
23	715340	1	DECAL-RECEPT 120V
24	715725	1	DECAL, BRUSH PRESSURE & AUX EQ, X17
25	715726	1	DECAL, AMPERMETER, X17
26	748610	1	PRESSURE GAUGE, AMPERMETER X17
27	760859	2	CLAMP-HOSE
28	931045	1	PIN-HEX SOC HEAD
29	931753	1	KNOB-HANDLE
30	11038072	2	BLT-HH M6 X 1.0 X 16 STL ZINC DICH 8.8 DIN 933
31	12040036	1	NUT-NYLOC M5 X 0.8 STL ZINC DICH CL6 DIN 985
32	553130054	2	BUSH LH-PILLAR HANDLE
33	748613	1	CORD, 14/3 SJTW 50' PANTONE 430

Solution Tank Assembly Front View



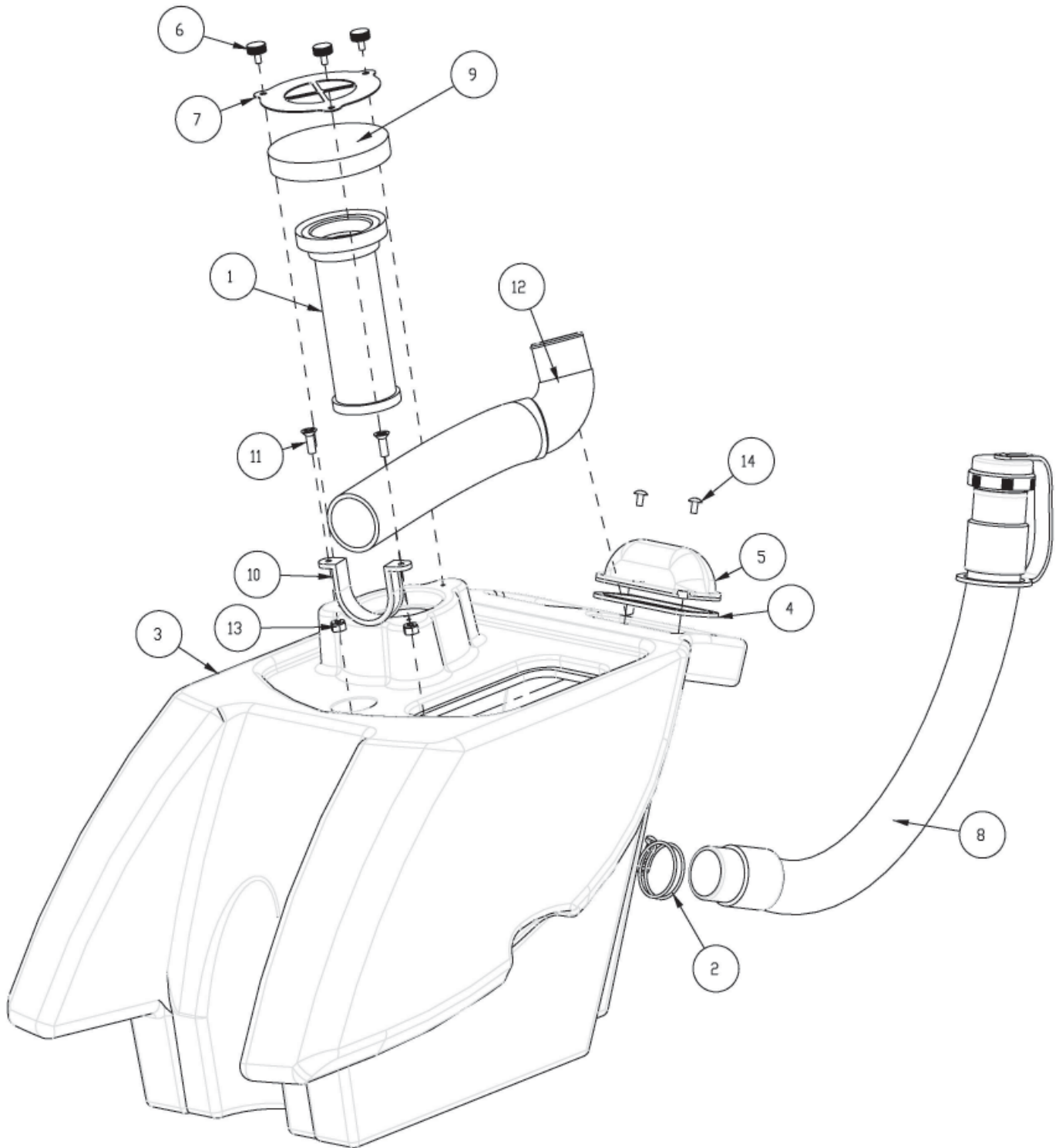
Solution Tank Assembly Rear View



Solution Tank Assembly BOM

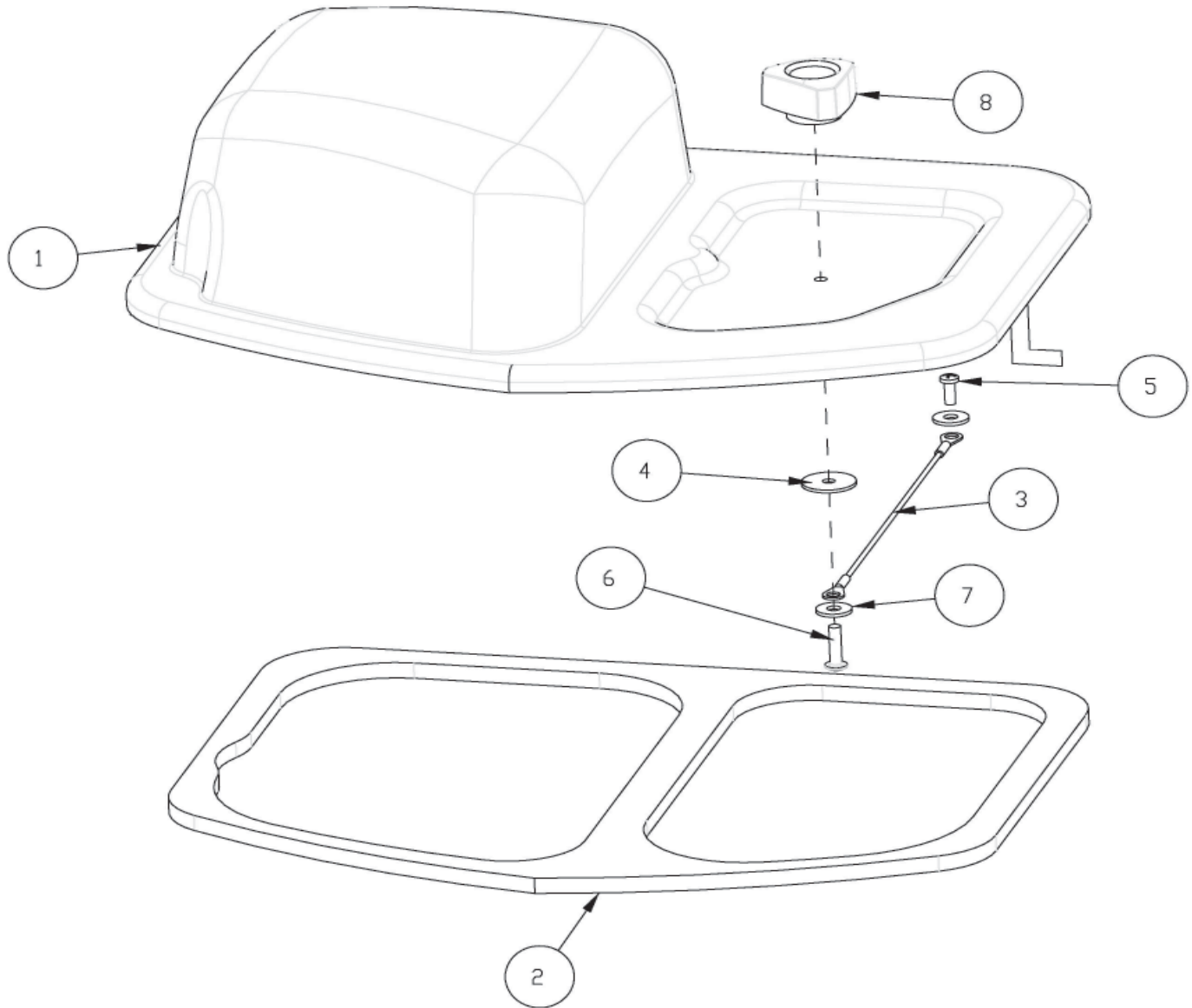
BILL OF MATERIAL - 173010			
ITEM	PART NO.	REQ'D	DESCRIPTION
1	121082	1	FAUCET FILL HOSE ASSY
2	130032	2	CAP, RETAINER
3	172018	1	SOL TANK LID ASSY, ES1720
4	173001	1	SOLUTION TANK, X17
5	173005	2	WHEEL, MAG 10 X 2, 1/2 BORE
6	173011	1	RECOVERY INLET ASSY
7	173012	1	O-RING, 1.234 ID x 1.512 OD
8	173013	1	AIR INLET UMBRELLA
9	173014	1	HOSE CONDUIT
10	173015	1	GASKET- HOSE CONDUIT
11	173019	2	AXLE BRACKET
12	173046	1	HOSE, RECOVERY
13	173105	1	AXLE, WHEEL X17
14	173106	1	GASKET
15	173152	1	HOSE 3/8 X 22 CLEAR
16	173157	1	HOSE, IN-LINE VALVE 3/8 x 4
17	260203	1	CLAMP-HOSE 102120 MURRAY
18	260579	1	CLIP-TOOL 1.5 INCH HOSE
19	290017	1	MOLDED VAC MOTOR GASKET
20	450040	2	FITTING-90 3/8MPT X 3/8 BARB NYLON
21	450092	1	CLAMP-CRIMP 145 STEPLESS
22	452037	2	CLAMP-CRIMP 170R SS
23	710530	2	SCR-MC FH 8-32 X .50 BRS
24	711118	1	SCR-ST-A 10 X .75 SS
25	711504	4	WSR-FLT 1/4 SS
26	711524	4	WSR-WAVE .52 X .87 X .01
27	711575	3	WSR-FLT .31 X .75 X .06 STL
28	711577	3	WSR-FLT .260 X .50 X .020
29	711594	10	WSR-FLT .56 X .88 X .03 NICKEL
30	711713	4	RET RING-E EXT .50
31	712070	3	BLT-SHOULDER 5/16 X 3/4 X 1/4-20
32	712150	2	SC-BHCS-10-24 X .50 SS
34	712536	2	SCR-MC 10-24 X .62 SS TR HD
35	712562	4	BLT-HH 1/4-20 X .75 SS
36	712758	4	WSR-HELICAL 1/4 SS
37	712772	3	WSR-FLT .344 X .75 X .06 SS
38	715724	2	DECAL, X17
39	740089-1	1	VAC MOTOR ASY, 115V X17
40	817306	3	SCREW-CR PAN HEAD M6 X 16-SA
41	828062-B	1	CABLE TIE-LARGE (BLACK)
42	828952	1	FITTING PP 1/4MPT 3/8BARB
43	553530122	3	CLAMP-VM WITH INSERT SQ M6
44	553530123	3	GROMMET VM
45	715914W	1	DECAL, MINUTEMAN W/SWOOSHES, WHITE

Recovery Tank Assembly



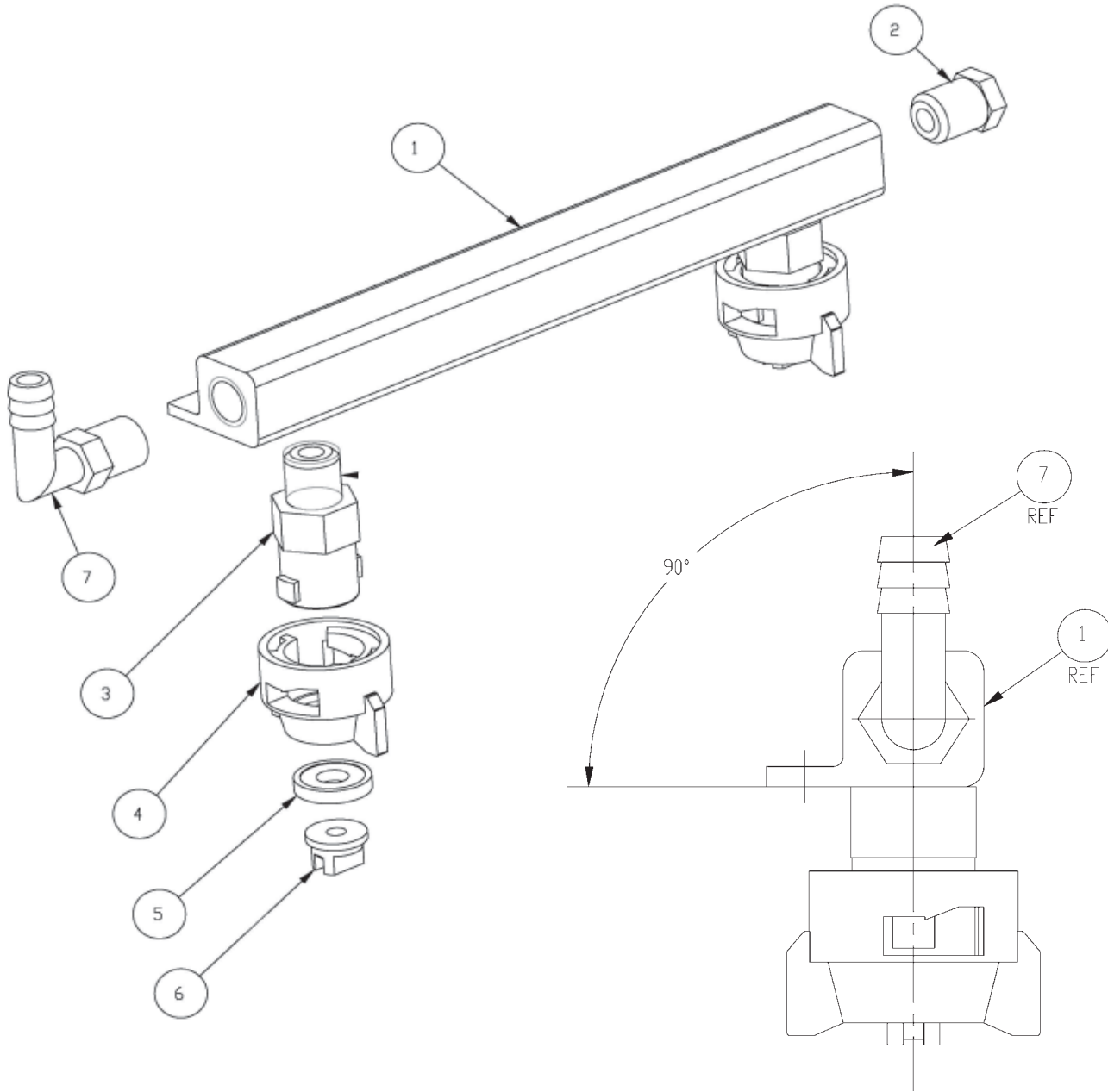
BILL OF MATERIAL - 173020			
ITEM	PART NO.	REQ'D	DESCRIPTION
1	172132	1	FLOAT, SCREENED
2	172329	1	CLAMP-HOSE 1.56" 102122 MURRAY
3	173002	1	RECOVERY TANK, X17
4	173025	1	GASKET-RECOVERY WINDOW
5	173026	1	RECOVERY WINDOW EX17
6	173030	3	SCREW THUMB, 10-24x3/8" SS
7	173031	1	RETAINER, SCREENED FLOAT
8	173063	1	HOSE, DUMP
9	173071	1	FILTER, SCREENED FLOAT
10	173099	1	STRAP, PLASTIC TWO-HOLE
11	173100	2	SCR FL HD 1/4-20 x 3/4 SS
12	173104	1	HOSE, RECOVERY 12.5"
13	712667	2	NUT-NYLOC 1/4-20 SS
14	712816	2	SCR-MC 10-24 X .37 ZINC

Recovery Dome Lid Assembly



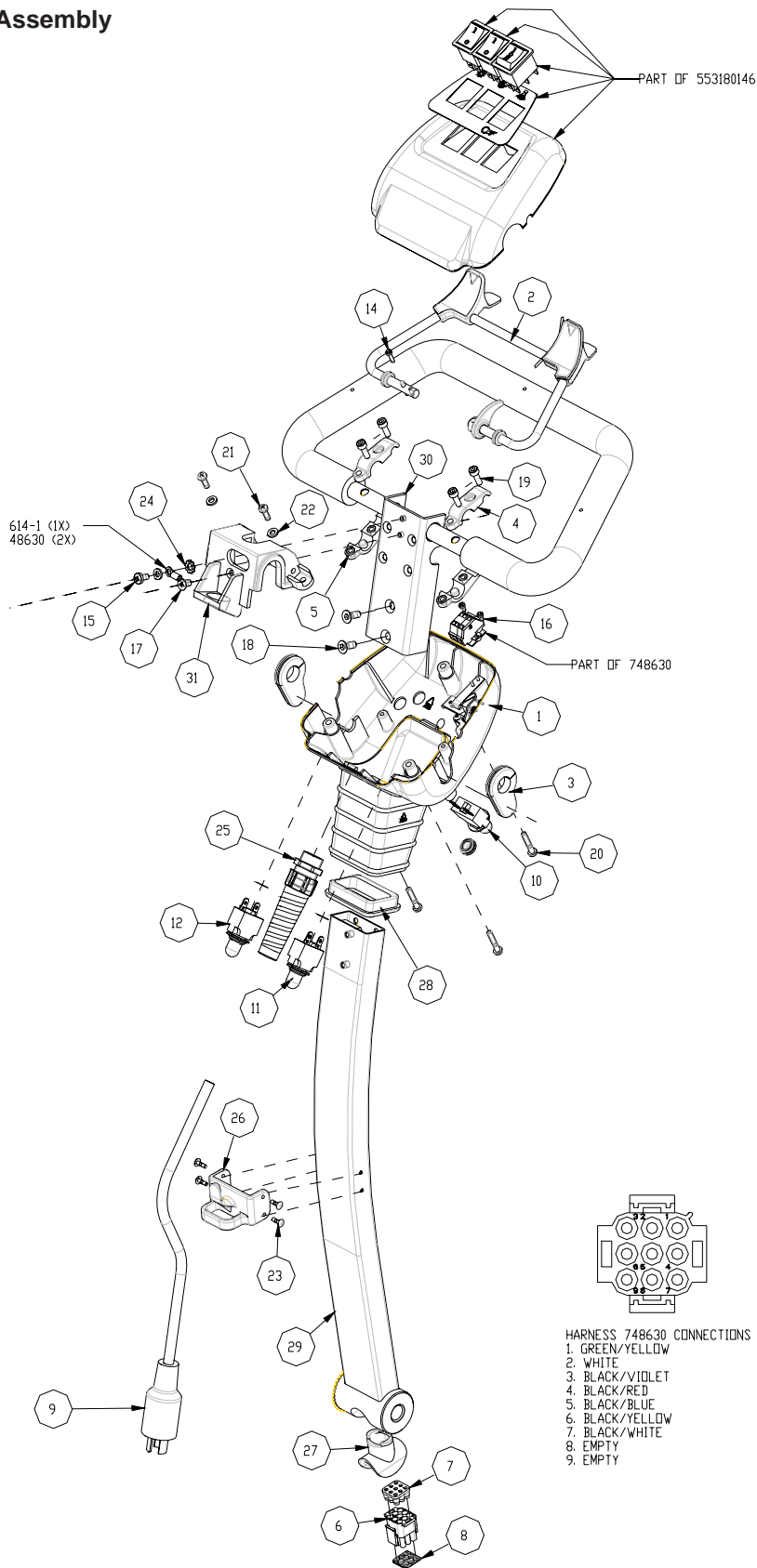
BILL OF MATERIAL - 173027			
ITEM	PART NO.	REQ'D	DESCRIPTION
1	173003	1	LID-RECOVERY DOME EX17
2	173028	1	GASKET-RECOVERY DOME LID
3	173072	1	LANYARD, NYLON COATED 6"
4	173079	1	WSR-FLT .172 x .75 x .047 SS
5	712145	1	SCR-ST HI/LO #6 X.37 SS
6	712516	1	SC-BHCS 8-32 X.62 SS
7	712764	2	WSR-FLT #10 SS
8	833211	1	KNOB, CONTROL, 8-32 INSERT ZINC BRASS

Spray Bar Assembly, X17



BILL OF MATERIAL - 173033			
ITEM	PART NO.	REQ'D	DESCRIPTION
1	173041	1	SPRAY BAR
2	829619	1	PLUG-HEX HEAD PIPE 1/4 B
3	833140	2	CONNECTOR-BODY INLET
4	833141	2	CAP
5	833142	2	GASKET-CAP
6	833144	2	SPRAY NOZZLE, BRASS, UNIJET P/N TPU-95-05
7	833325	1	FITTING NYLON 90 1/4MPT 3/8HOS

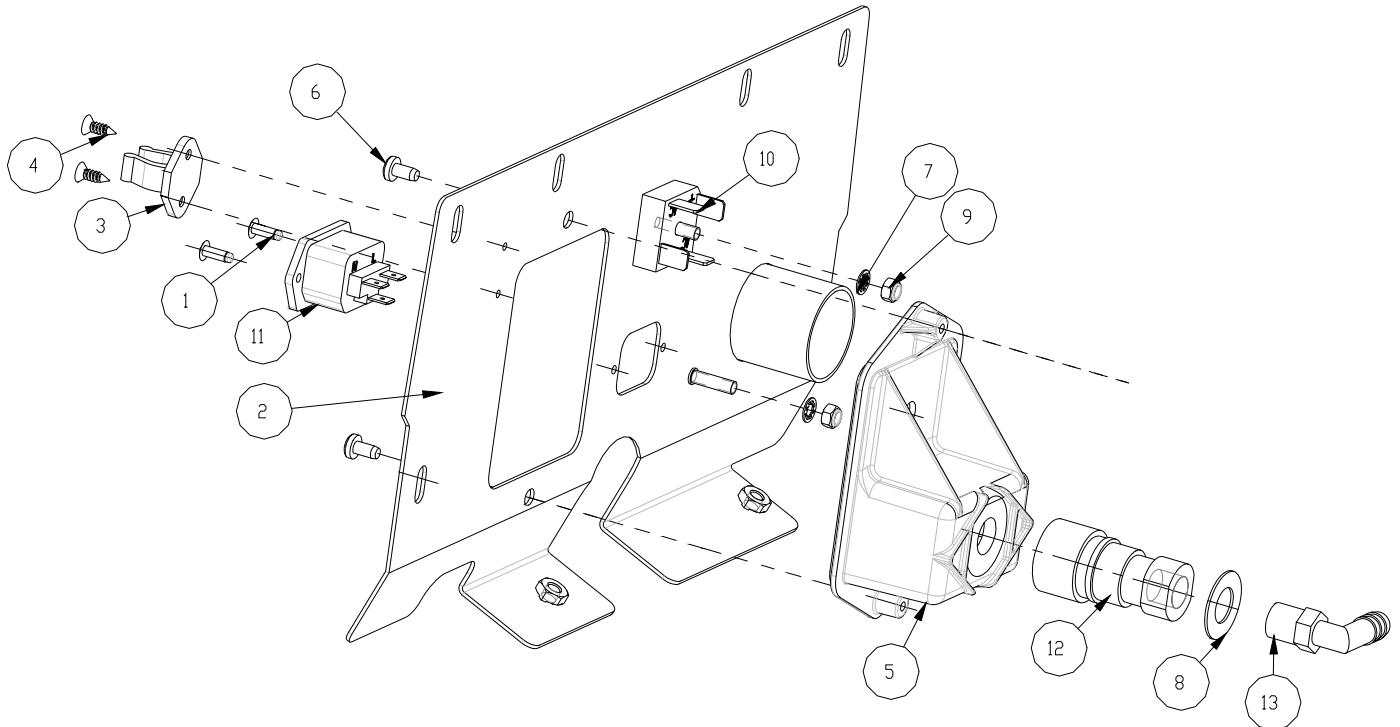
X17 ECO Handle Assembly



X17 ECO Handle Assembly BOM

BILL OF MATERIAL - 173038			
ITEM	PART NO.	REQ'D	DESCRIPTION
1	173135	1	SWITCH COVER ASSEMBLY, BOTTOM
2	173137	1	MOMENTARY SWITCH HANDLE ASSEMBLY
3	931194	2	GROMMET-SWITCH COVER
4	173162	2	TOP BRACKET-MOMENTARY SWITCH, EX17 HANDLE
5	173163	2	BOTTOM BRACKET-MOMENTARY SWITCH ASSLY, EX17 HANDLE
6	748605	1	CONNECTOR, 9P MALE (PLUG) MATE N LOK
7	748608	1	SEAL, 9P WIRES MATE N LOK
8	748609	1	SEAL, 9P INTERFACE MATE N LOK
9	748614-1	1	CORD, PIGTAIL ASSEMBLY X17
10	748620	1	CIRCUIT BREAKER, 12A SMALL
11	748621	1	CIRCUIT BREAKER, 4A SMALL
12	748622	1	CIRCUIT BREAKER, 3A SMALL
13	748630	1	WIRE HARNESS, HANDLE ASSEMBLY X17
14	817004	1	SCR, CR PAN HEAD M3X12 SS
15	817203	1	SCR-CR PH-ST
16	818001	2	CR-PAN-HEAD SCREW -SS304-M3X6
17	829203	1	SCR-HEX SOC CSK HEAD-SS
18	829306	2	SCR-HEX SOC CSK HEAD-SS
19	831206	4	SCR, HEX SOC HD CAP M5X16
20	837208	3	SCR-CR PH SELF TAP
21	837210	2	SCREW-CRPH SELF TAPPING
22	855004	4	RIVET-MULTIGRIP BLIND ALUMINIUM
23	866050	1	WSR-EXTERNAL TOOTH-ST
24	872004	1	CABLE GLAND W/SPIRAL BS GAURD PG 16
25	925080	3	WSR-5.2X10X1.6, PORT A SCRUB
26	931177	1	RETAINER-CABLE
27	931182	1	CABLE-BOOT
28	931199	1	PLUG-HANDLE COVER
29	3180016	1	HANDLE-(WELDMENT)
30	3180029	1	STEERING ASSY
31	553180149	1	BRACKET CHANNEL X17
33	173111	1	SWITCH COVER- TOP EX17
34	748611-1	1	SWITCH ASY, MICROSWITCH W/QC
35	173134	1	SPRING, SWITCH
36	715722	1	DECAL, DASHBOARD
37	748602	2	SWITCH, DPST ON-OFF IP55
38	748603	1	SWITCH, DPDT ON-OFF-ON IP55
39	748614	1	CORD, PIGTAIL 14/3 SJTW PANTONE 430

Back Panel Assembly

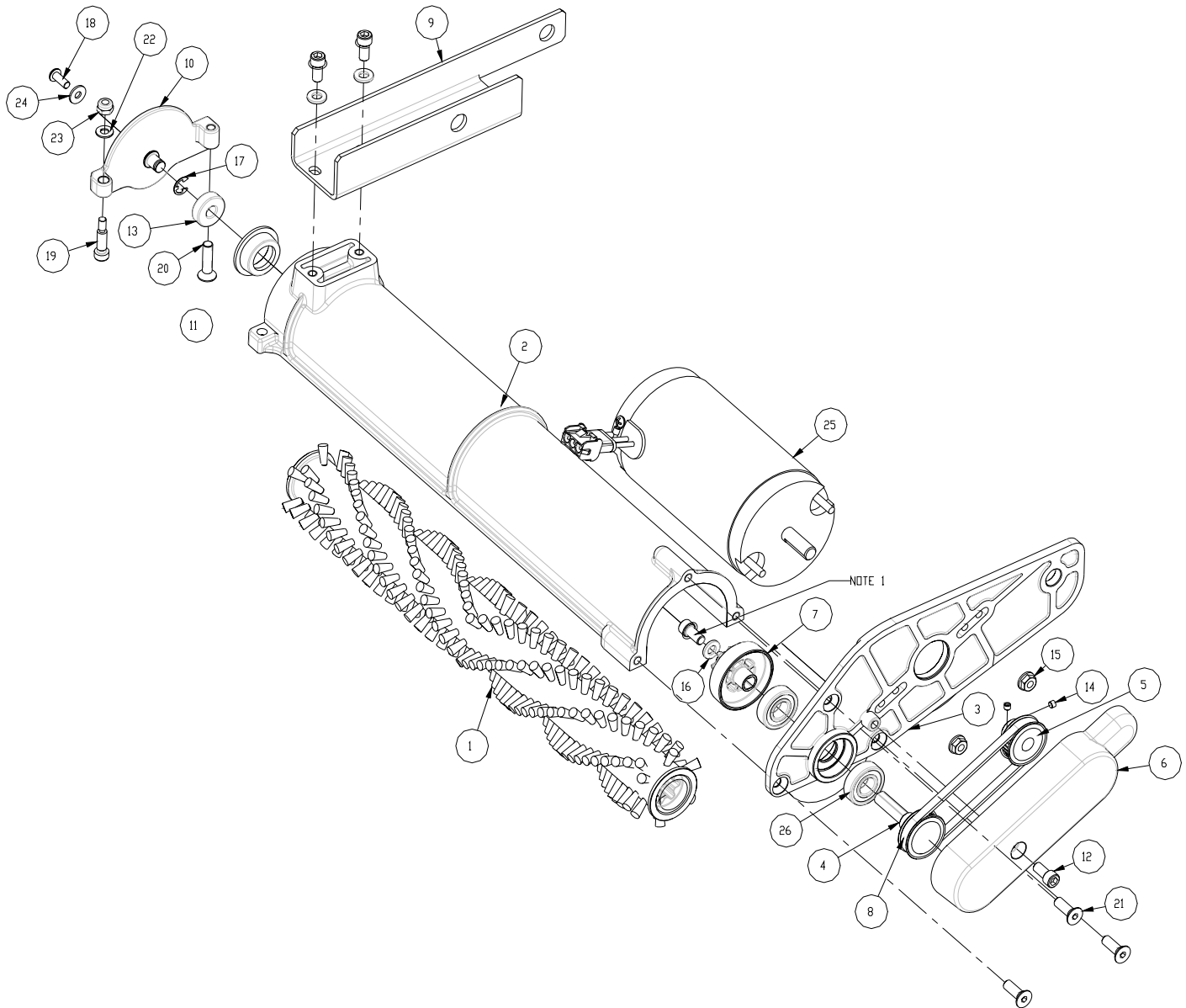


BILL OF MATERIAL - 173043			
ITEM	PART NO.	REQ'D	DESCRIPTION
1	410-4419AA	2	RIVET-POP
2	173034	1	BACK PANEL WELDMENT
3	173048	1	CLIP, 1/2 - 3/8 IN HOSE
4	173098	2	SCR-ST FL HD 8 X 1/2" STL ZINC
5	173107	1	AUX-CONTROL PANEL
6	711124	2	SCR-ST-B 10 X .37 NI
7	711553	2	WSR-INT LOCK #10
8	712760	1	WSR-FLT .56 X 1.06 X .04 SS
9	717017	2	NUT-NYLOC M5 X .08
10	740202	1	RECTIFIER-BRIDGE 50A 600V IMP
11	741038	1	RECEPTACLE-10A 250VAC IEC 320
12	828370	1	COUPLER-FEMALE BH2-60
13	833325	1	FITTING NYLON 90 1/4MPT 3/8HOS

Chassis Sub-Assembly X17-ECO BOM

BILL OF MATERIAL - 173050			
ITEM	PART NO.	REQ'D	DESCRIPTION
1	82-54-A	1	CLAMP-P .75 DIA MS21333-114
2	7545-10	1	FLANGED BEARING ASY
3	173004	1	MAINFRAME WELDMENT, EX17
4	173018	6	SPACER, FRONT PLATE
5	173033	1	SPRAYBAR ASSEMBLY, EX17
6	173052	1	BRUSH HEAD ASSEMBLY, ECO
8	173070	1	GASKET, VACUUM SHOE
9	173076	1	PUMP ASY, 115V 50PSI EX17-ECO
10	173078	2	WSR FLT 1/2 x 3/4 x .09 SS
11	173086	1	VACUUM SHOE
12	173096	1	SCR, CARRIAGE 5/16-18 X 1-1/4 SS
13	173097	1	SCR, CARRIAGE 5/16-18 X 1-3/4 SS
14	173108	1	BUSH, SIDE ARM
15	173109	1	BUSH, SIDE BRACKET
16	173113	1	BRACKET, SOLENOID
17	173120	1	PLATE, FRONT SQUEEGEE
18	173146	1	GASKET, FRONT PLATE NEOPRENE X17
19	173147	1	HOSE 3/8 x 7 WIRELOC
20	173148	1	HOSE, 3/8 ID x 5.5 IN, WIRELOC
21	173149	1	HOSE 3/8 x 4.50 WIRELOC
22	173150	1	HOSE 3/8 x 12 WIRELOC
23	173151	1	HOSE 3/8 x 14 WIRELOC
24	220327	1	GROMMET 1.25 X 1 X .125
25	241726	1	NYLON SINGLE-BARBED TEE, 3/8"
26	452010	1	CABLE-FLEXIBLE ASSY
27	452037	10	CLAMP-CRIMP 170R SS
28	710353	2	SCR-MC 10-32 X .37 ZINC
29	711124	7	SCR-ST-B 10 X .37 NI
30	711383	1	NUT-HEX CTR LOC 5/16-18
31	711503	5	WSR-FLT #10 (SPECIAL FLAT WASHER)
32	711524	1	WSR-WAVE .52 X .87 X .01
33	711553	2	WSR-INT LOCK #10
34	711594	3	WSR-FLT .56 X .88 X .03 NICKEL
35	711713	1	RET RING-E EXT .50
36	712301	2	WSR-FLT .37 X .87 X .06 (WIDE) PL SPECIAL
37	712532	4	SCR-MC 10-24 X 1.00 SS
38	712536	10	SCR-MC 10-24 X .62 SS TR HD
39	712559	6	SCR-TR 1/4-20 X .62 TORX TR HD SEMS SS
40	712638	5	NUT HEX 10-24 SS NYLOC
41	712683	2	NUT-NYLOC 5/16-18 SS
42	712770	10	WSR-INT TOOTH LOCK #10
43	740492-1	1	VALVE ASY, SOLENOID X17
44	748650	1	WIRE HARNESS, BASE ASY X17
45	833325	2	FITTING NYLON 90 1/4MPT 3/8HOS
46	836004	2	SCR-CR PH SELF TAP-SS
47	762257PLT	1	NUT ADJ RH ZINC DICROMATE

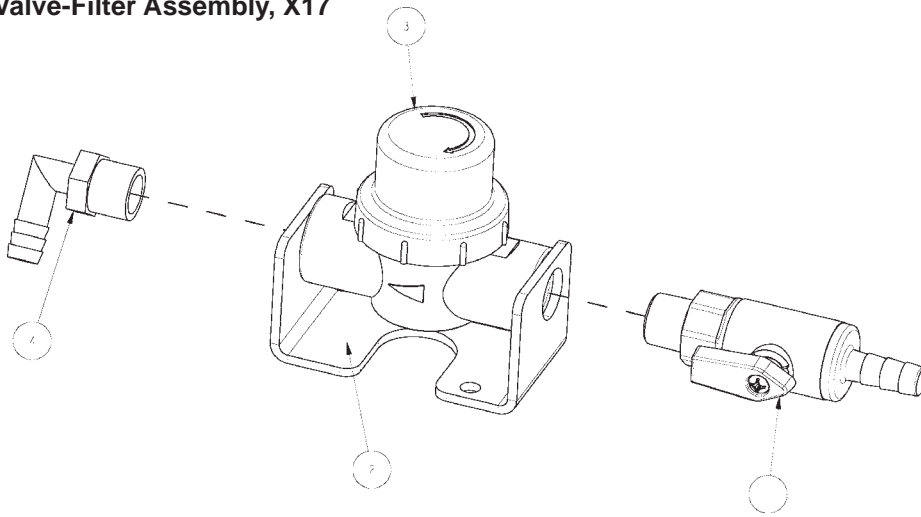
Brush Head Assembly ECO



Brush Head Assembly ECO BOM

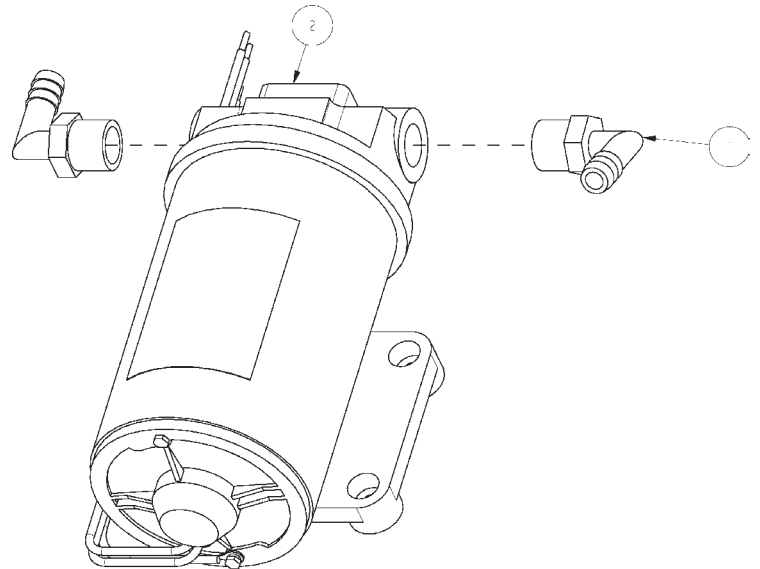
BILL OF MATERIAL - 173052			
ITEM	PART NO.	REQ'D	DESCRIPTION
1	173055	1	BRUSH EX17
2	173056	1	BRUSH BASE
3	173060	1	BRACKET-MOTOR
4	173062	1	SPROCKET 30
5	173065	1	DRIVE SPROCKET
6	173066	1	COVER-BELT
7	173067	1	DRIVE PULLEY
8	173068	1	BELT
9	173075	1	LIFT BRACKET
10	173094	1	BRUSH SIDE COVER
11	173095	1	IDLE PULLEY
12	173145	4	SCR-SHCS 1/4-20 X 0.5 SS
13	350164	1	BEARING-DBL SHIELDED 8MM X 22MM
14	711001	2	SCR-SOCKET HEX HEAD 8-32 X .12
15	711427	2	NUT-FLANGED WIZZ 10-32
16	711566	3	WSR-FLT .259 X .50 X .07
17	711721	1	RET RING-E TYPE .312
18	712150	1	SC-BHCS-10-24 X .50 SS
19	712151	1	SCR-HH-SHOULDER-1/4 x 10-24 X .50 SS
20	712153	1	SC-SHCS-1/4-20 X 1.00 SS
21	712154	3	SC-SHCS-1/4-20 X 0.75 SS
22	712320	1	WSR .20 X .45 X .048 NYL
23	712638	1	NUT HEX 10-24 SS NYLOC
24	712764	1	WSR-FLT #10 SS
25	831238-1	1	MOTOR ASY, 1/6HP 120VDC X17
26	875009	2	BEARING 12MM X 28MM DOUBLE SHIELDED
27	173115	2	O-RING 20mm x 1.5mm

Valve-Filter Assembly, X17



BILL OF MATERIAL - 173058

ITEM	PART NO.	REQ'D.	DESCRIPTION
1	173155	1	BRACKET, FILTER
2	173158	1	IN-LINE FILTER ASSEMBLY, 3/8 FNPT
3	173154	1	VALVE, BALL, 3/8 BARB x 3/8 MNPT
4	450040	1	ELBOW PLT 3/8MPTX3/8BARB



BILL OF MATERIAL - 173076

ITEM	PART NO.	REQ'D.	DESCRIPTION
1	450040	2	ELBOW PLT 3/8MPTX3/8BARB
2	730	1	SEAL-THREADED L567-47/LH150
3	829757-1	1	PUMP ASY, 115V 50PSI X17

X17-ECO Electrical Schematic Reference Numbers

Reference #	Description	Part Number
S1	SWITCH, BRUSH MOTOR	748602
S2	SWITCH, VACUUM MOTOR	748602
S3	SWITCH, PUMP/SOLENOID & AUXILARY	748603
S4	SWITCH, MICRO MOMENTARY PUMP	748611-1
CB1	CIRCUIT BREAKER, 3A BRUSH MOTOR	748622
CB2	CIRCUIT BREAKER, 12A VACUUM MOTOR	748620
CB3	CIRCUIT BREAKER, 4A PUMP/SOLENOID & AUXILARY	748621
M1	MOTOR, BRUSH	831238-1
M2	MOTOR, VACUUM	740089-1
M3	PUMP, WATER 50 PSI	829757-1
M3	OPTIONAL: PUMP, WATER 100 PSI	833067-1
Y1	SOLENOID, WATER	740492-1
PG1	GAUGE, BRUSH PRESSURE	748610
BR1	RECTIFIER, BRUSH MOTOR	740202
AUX	RECEPTACLE, AUXILARY POWER	741038
X1	TERMINAL BLOCK, HANDLE ASSEMBLY	748616
X2	CONNECTOR, 9 PIN BULKHEAD (FEMALE)	748604
X2	CONNECTOR, 9 PIN PLUG (MALE)	748605
X2	SEAL, WIRES 9 PIN	748608
X2	SEAL, INTERFACE 9 PIN	748609
X3	TERMINAL BLOCK, BASE ASSEMBLY	748615
X4 & X5	CONNECTOR, 3 PIN CAP (FEMALE)	748631
X4 & X5	CONNECTOR, 3 PIN PLUG (MALE)	748632
X4 & X5	SEAL, WIRES 3P	748633
X4 & X5	SEAL, INTERFACE 3 PIN	748634
X6 & X7	CONNECTOR, 2 PIN CAP (FEMALE)	748624
X6 & X7	CONNECTOR, 2 PIN PLUG (MALE)	748625
X6 & X7	SEAL, WIRES 2 PIN	748626
X6 & X7	SEAL, INTERFACE 2 PIN	748627

Minuteman International Made Simple Commercial Limited Warranty

Minuteman International, Inc. warrants to the original purchaser/user that the product is free from defects in workmanship and materials under normal use. Minuteman 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, such as belts, cords, switches, hoses, rubber parts, electrical motor components or adjustments. Parts manufactured by Minuteman are covered by and subject to the warranties and/or guarantees of their manufacturers. Please contact Minuteman for procedures in warranty claims against these manufacturers.

Special warning to purchaser -- Use of replacement filters and/or prefilters not manufactured by Minuteman 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 or its original manufacturer, whichever the case may be.

Minuteman disclaims any implied warranty, including the warranty of merchantability and the warranty of fitness for a particular purpose. Minuteman 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. Minuteman is not responsible for costs or repairs performed by persons other than those specifically authorized by Minuteman. 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.

Cord Electric Group..... Three years parts, two years labor, ninety days travel (Not to exceed two hours)

Exceptions..... Port-A-Scrub, one year parts, six months labor
MPV 13, one year parts
V-14, one year parts, one year labor
MPV 14 and 18, two years parts, one year labor
RapidAir blower, one year parts, one year labor
Explosion-Proof Vacuum, one year parts, one year labor
X12 and X12H, one year parts, one year labor
TRS 14, one year parts, one year labor

Battery Operated Group..... Three years parts, two years labor, ninety days travel
(Not to exceed two hours)

Exceptions..... Sweepers, one year parts, one year labor, ninety days travel
(Not to exceed two hours)

Internal Combustion Group....One year parts, one year labor, ninety day travel
(Not to exceed two hours)

Battery Chargers.....One year replacement

Replacement Parts.....Ninety days

Batteries.....0-3 months replacement, 4-12 months pro-rate

Polypropylene Plastic Tanks... Ten years, no additional labor