

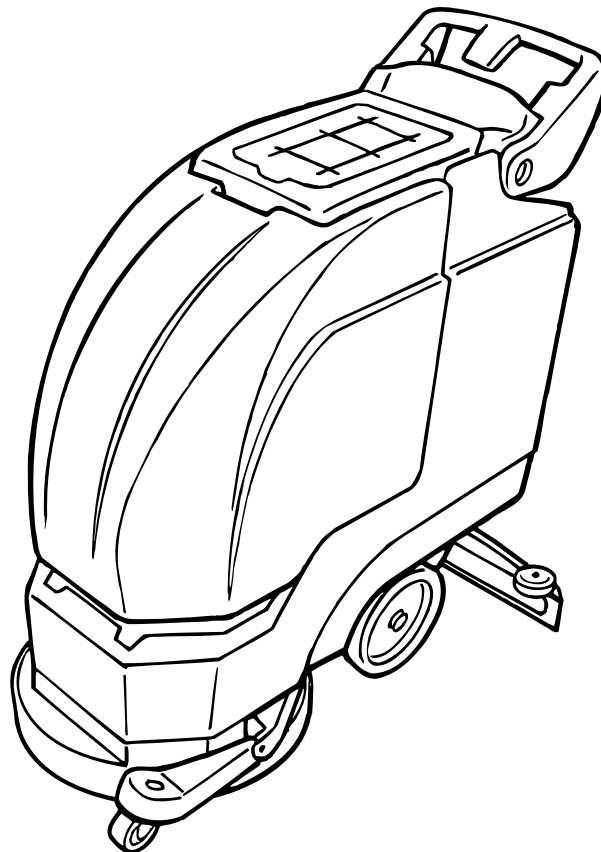


5100

Automatic Electric Scrubber

Model No.:
609454 – 230V
609677 – 240V EMC

Operator and Parts Manual



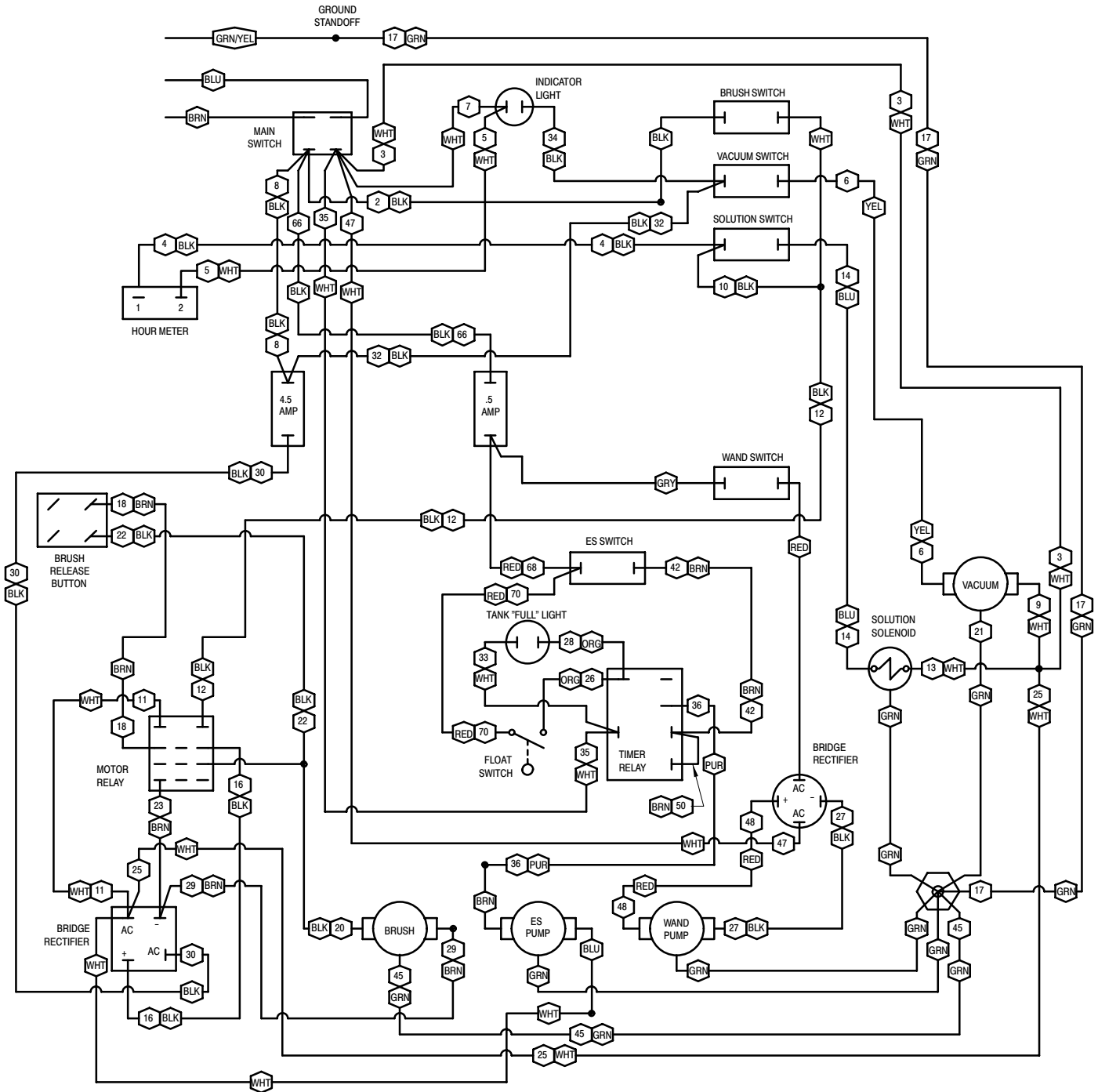
TENNANT COMPANY
Commercial Products
12875 RANSOM STREET
HOLLAND MI 49424 U.S.A.

FAX: 1-800-678-4240
CUSTOMER SERVICE: 1-800-982-7658

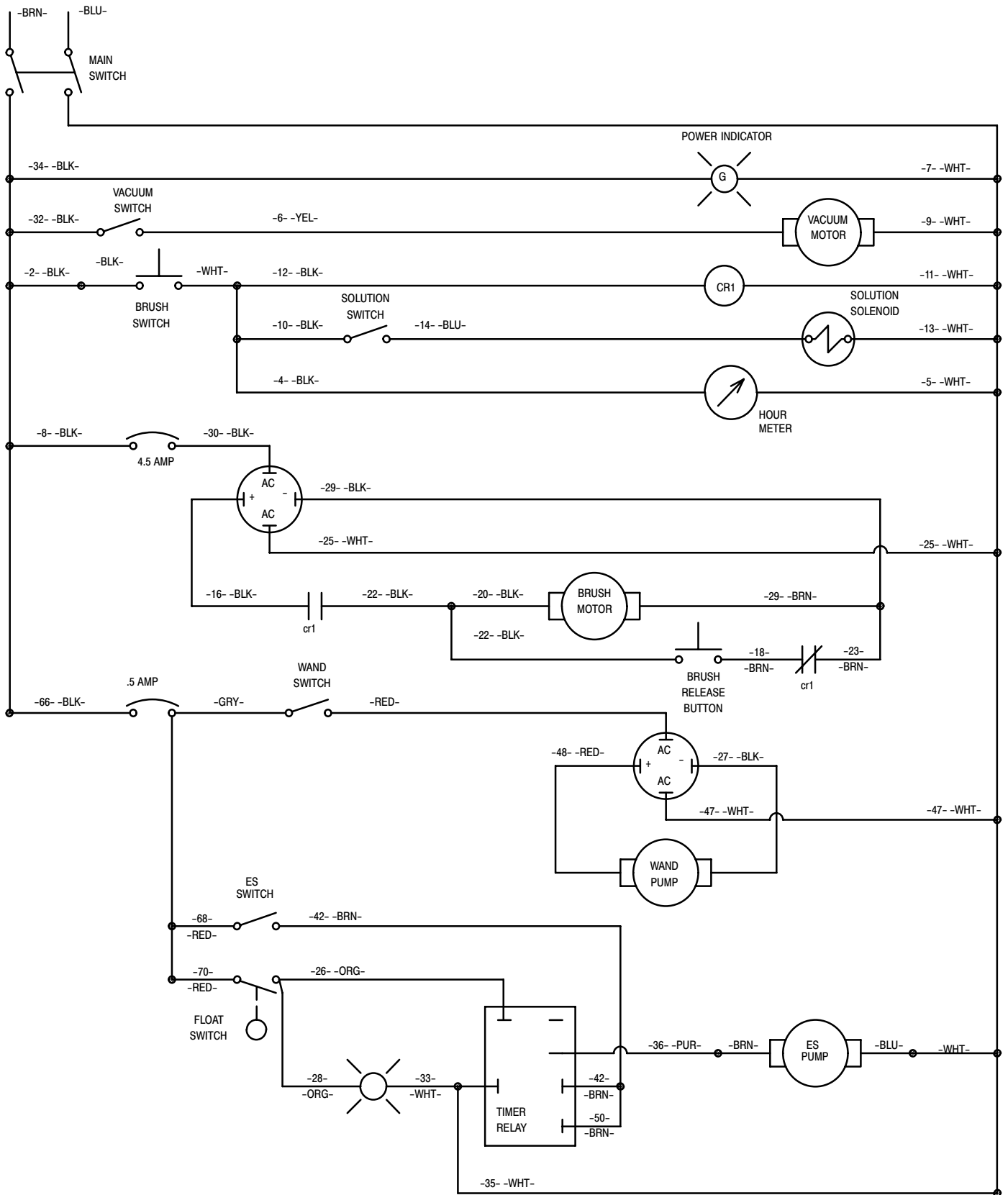
609637
Rev. 00 (01-00)

ELECTRICAL DIAGRAM

WIRING DIAGRAM - 230V/240V

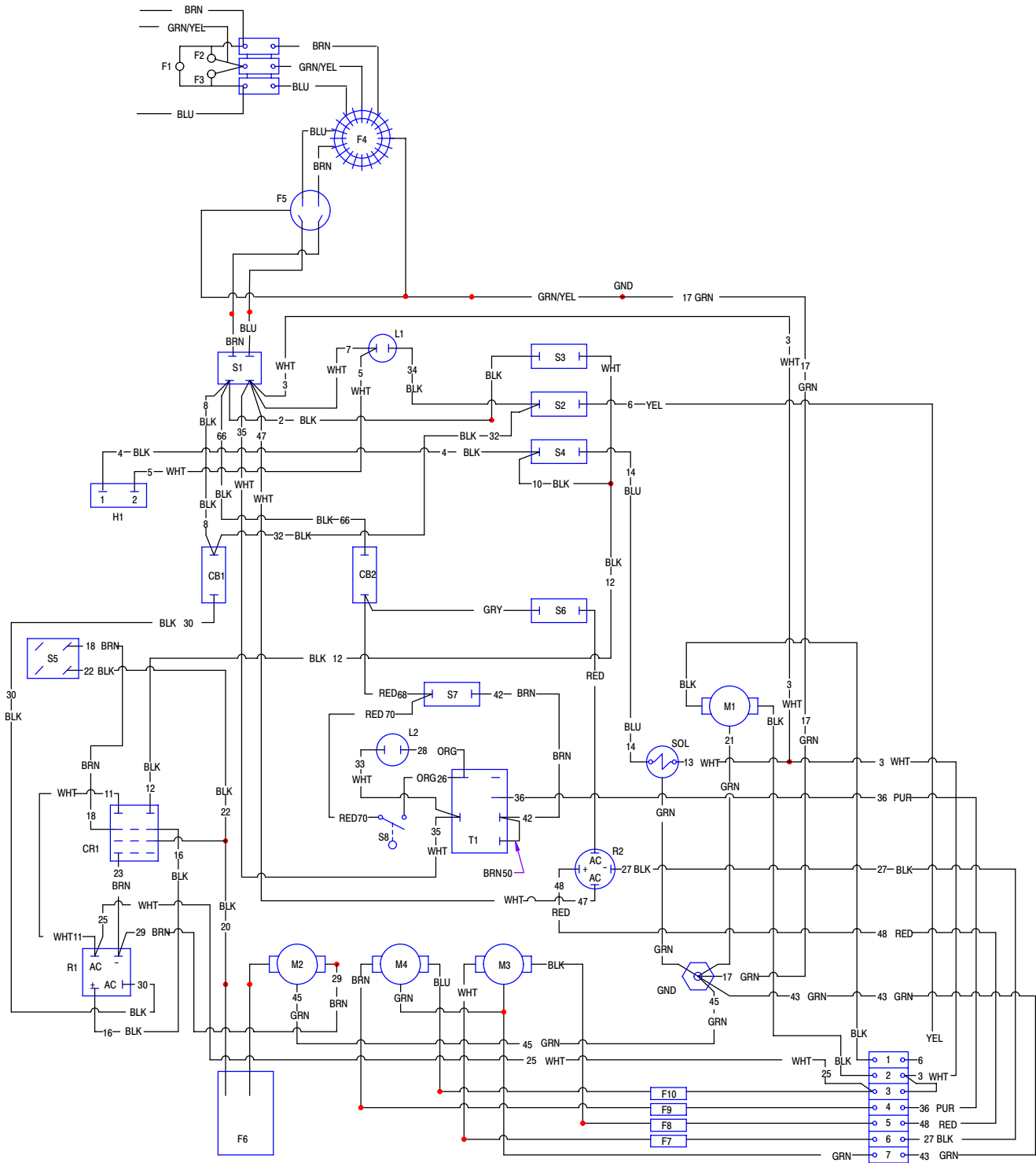


LADDER DIAGRAM - 230V



ELECTRICAL DIAGRAM

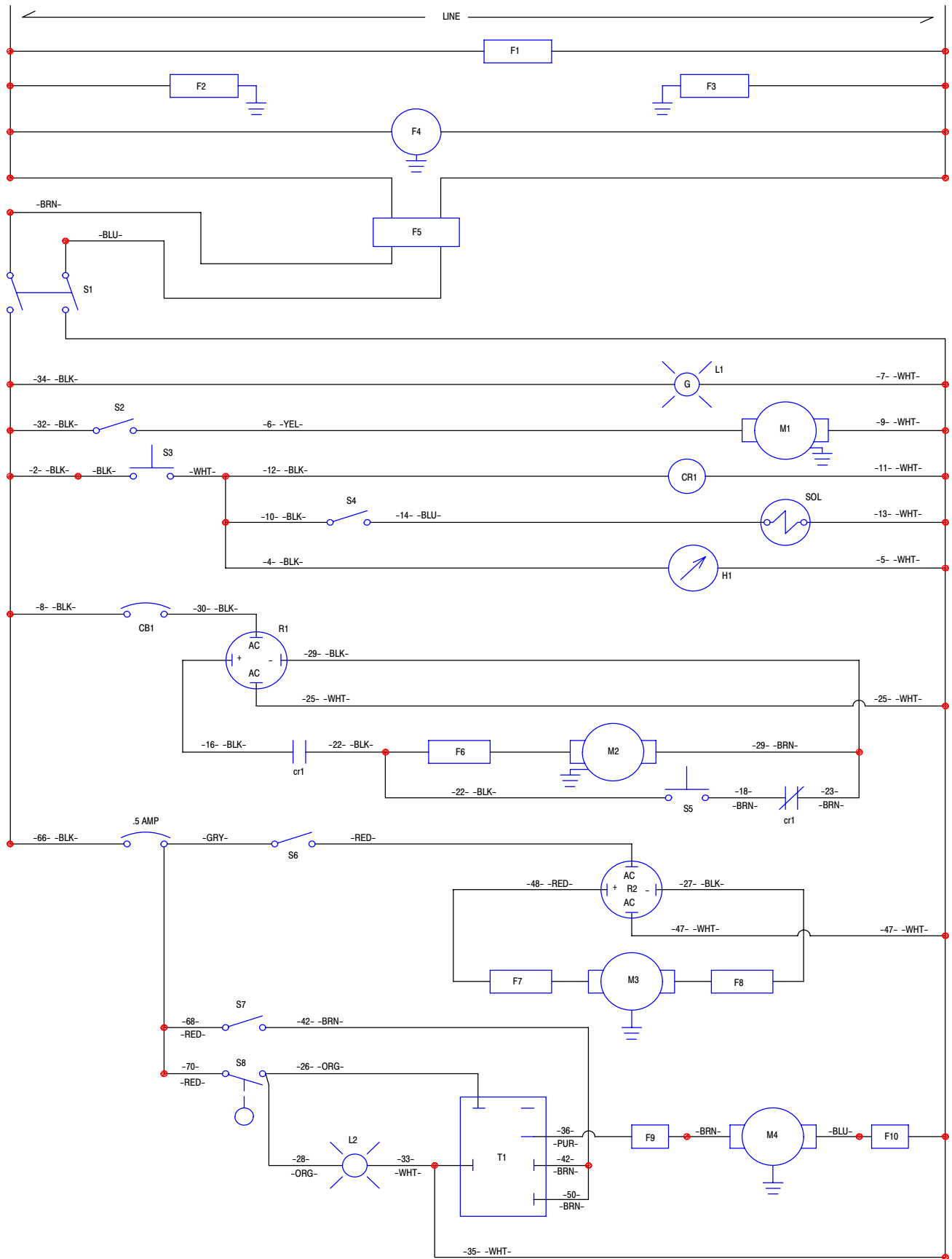
WIRING DIAGRAM – 240V EMC MODEL



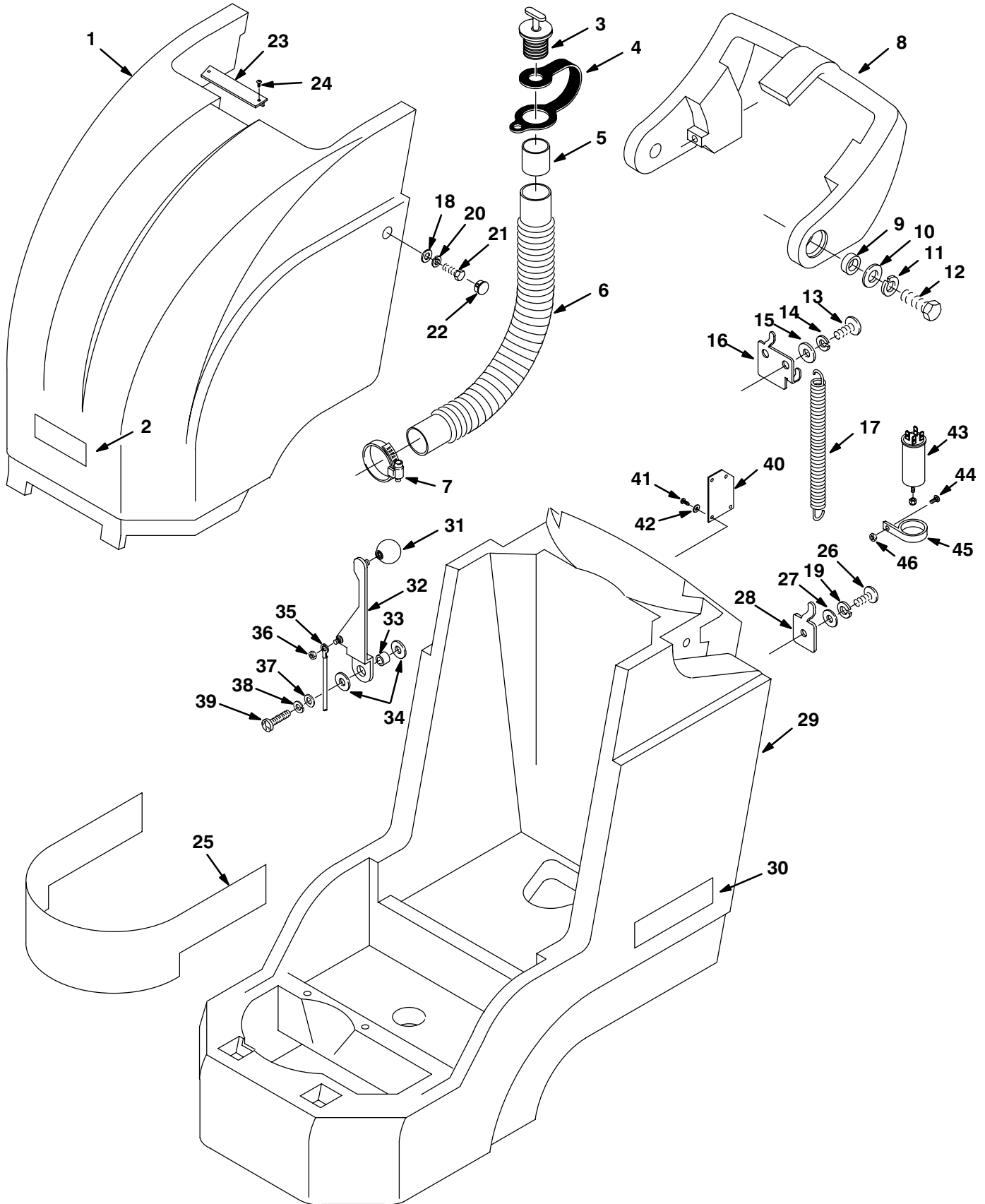
REF LEGEND

RED= Red	CR1 = Contactor Coil	M3= Motor, Wand	S8= Switch, Float
BLK= Black	cr1= Contactor Relay	M4= Motor, Recycle	Sol= Valve, Solenoid
GRN= Green	CB1 = Circuit Bkr. Main 4.5A	S1= Switch, Main	T1= Relay, Timer
WHT= White	CB2 = Breaker, Circuit .5A	S2= Switch, Vacuum	V1= Voltmeter
ORG= Orange	H1= Hourmeter	S3= Switch, Brush	F1-10= Filter
BLU= Blue	L1= Light, Indicator	S4= Switch, Solution	GND= Ground
BRN= Brown	L2= Light, Full Tank	S5= Switch, Brush Release	R1= Bridge Rectifier
PUR= Purple	M1= Motor, Vacuum	S6= Switch, Wand	R2= Rectifier, Bridge
YEL= Yellow	M2= Motor, Brush	S7= Switch, Recycle	

LADDER DIAGRAM – 240V EMC MODEL



SOLUTION TANK GROUP



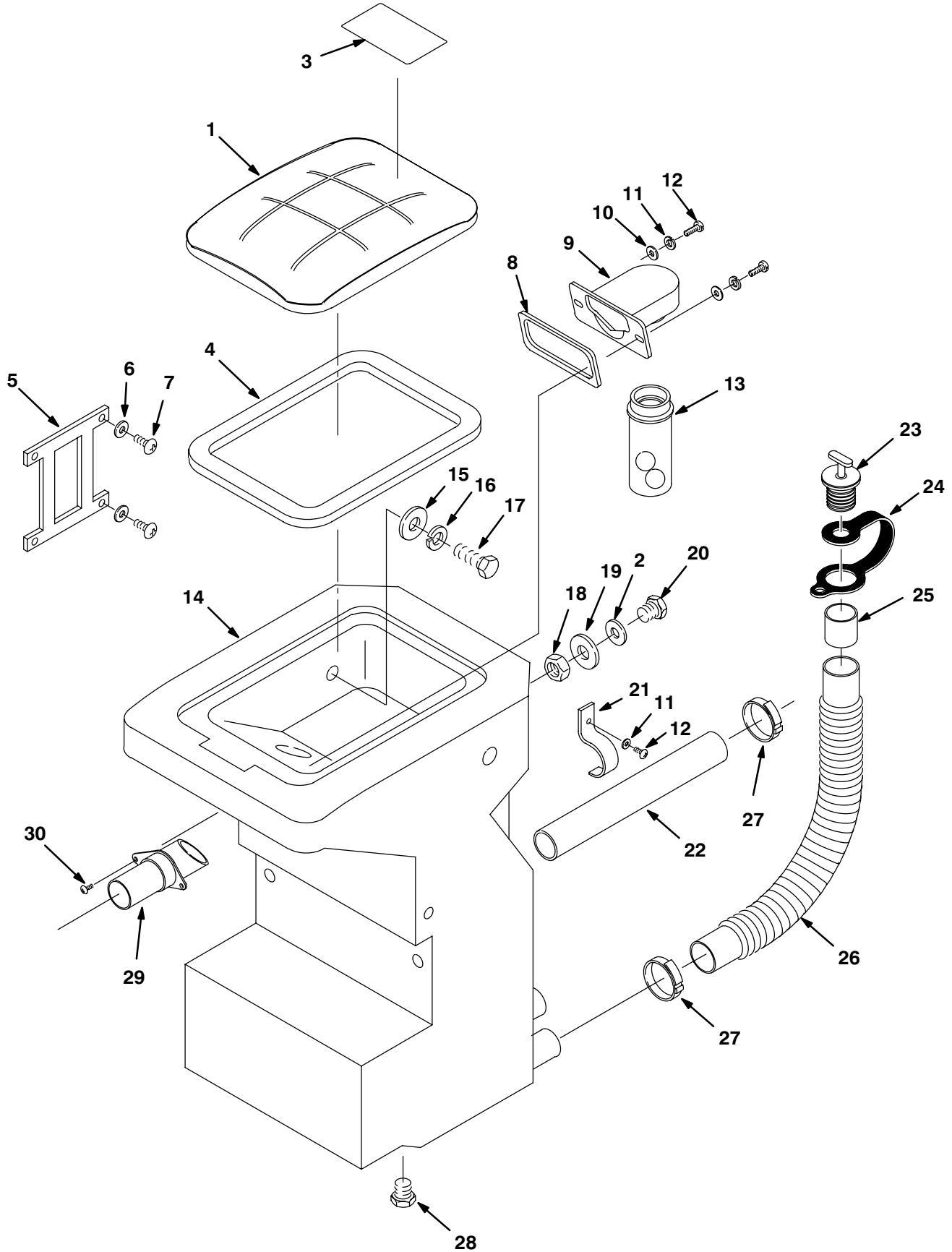
SOLUTION TANK GROUP

REF	PART #	DESCRIPTION	QTY.
1	609205	COVER, BATTERY, TEAL	1
2	120192	DECAL, TENNANT LOGO	1
3	621324	PLUG, EXPANSION	1
4	578441	●STRAP, DRAIN HOSE	1
5	630394	●SLEEVE	1
6	601459	●HOSE, DRAIN	1
7	140307	CLAMP	1
8	609207	HANDLE, TEAL	1
9	601434	SPACER	2
10	140045	WASHER, FLAT	2
11	140024	WASHER, LOCK	2
12	601435	SCREW, M12X30MM	2
13	140275	SCREW, M8x1.25x16MM	2
14	140015	WASHER, LOCK	2
15	140027	WASHER, FLAT	2
16	601496	CLIP, HOSE-SPRING	1
17	140423	SPRING	1
18	140027	WASHER, FLAT	2
19	140016	WASHER, LOCK	1
20	200 370 019	WASHER, LOCK	2
21	602 069 000	SCREW, M8X1.25X50	2
22	130175	PLUG, DOME	2
23	603165	PLATE, COVER	1
24	140340	SCREW, #10X5/8	2

REF	PART #	DESCRIPTION	QTY.
25	604707	SHIELD, BRUSH MOTOR	1
26	578187000	SCREW, M06X12MM	1
27	140000	WASHER, FLAT	1
28	601460	CLIP, DRAIN HOSE	1
29	609201	TANK, SOLUTION, TEAL	1
30	609066	DECAL, 5100	2
31	601425	KNOB, SQ. LEVER	1
32	601426	LEVER, SQUEEGEE	1
33	601427	SPACER	1
34	601437	WASHER, NYLON	2
35	601428	CABLE, SQUEEGEE	1
36	601476	NUT	1
37	140055	WASHER, FLAT	1
38	140015	WASHER, LOCK	1
39	630425	SCREW, M8X20MM	1
40	606350	SEAL, POWER CORD (EMC MODEL)	1
41	140825	SCREW, #6X1/2 (EMC MODEL)	4
42	140041	WASHER, FENDER (EMC MODEL)	4
43	600383	FILTER, RFI (EMC MODEL)	4
44	140823	SCREW, 10-24X5/8 (EMC MODEL)	4
45	600749	CLAMP (EMC MODEL)	4
46	140552	NUT, NYLOCK (EMC MODEL)	4

● RECOMMENDED STOCK ITEMS

RECOVERY TANK GROUP



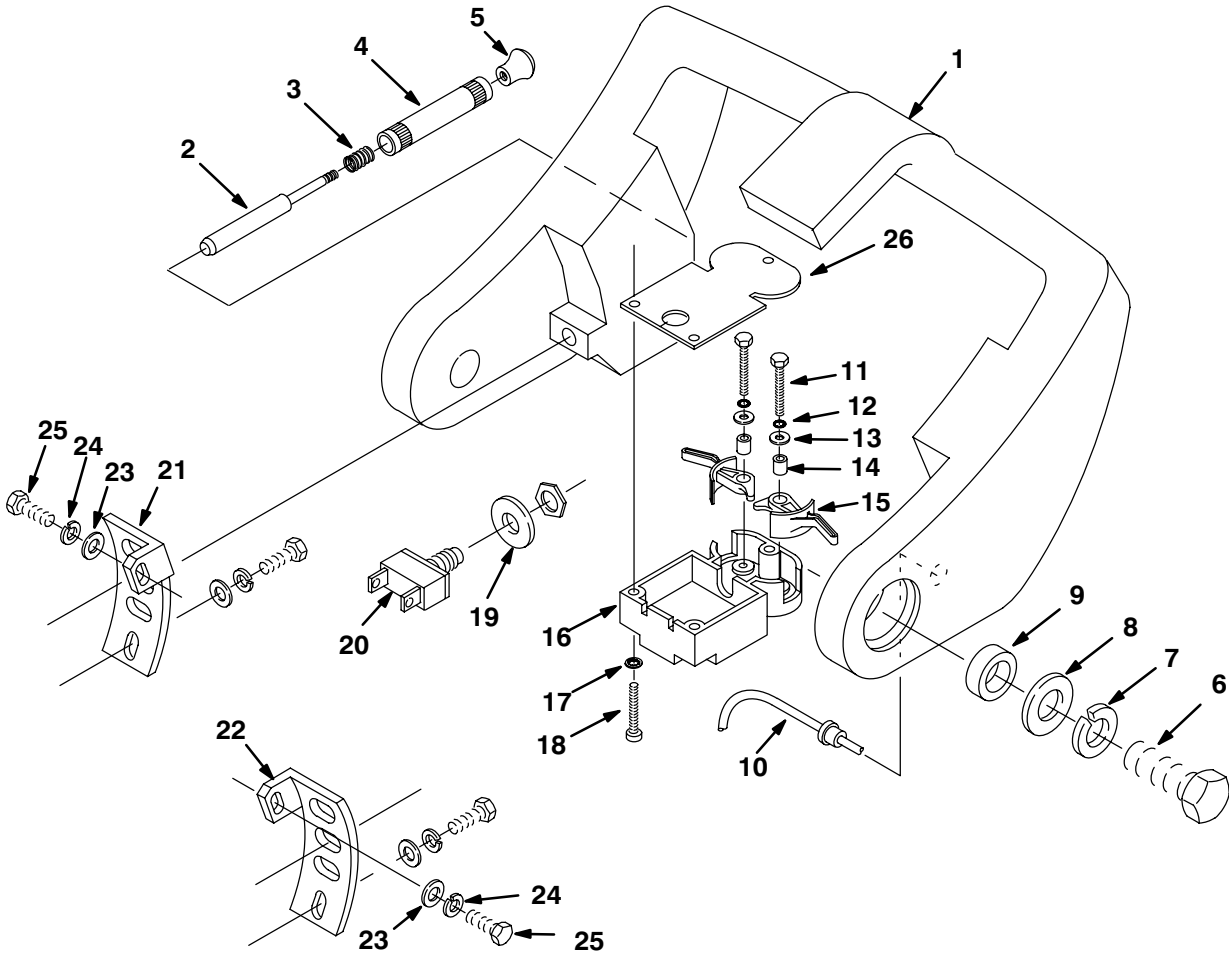
RECOVERY TANK GROUP

REF	PART #	DESCRIPTION	QTY.
1	630055	●COVER, TANK	1
2	601437	WASHER, NYLON	1
3	630420	DECAL, FLAMM. MAT'L	1
4	630367	●GASKET, REC. TANK	1
5	630056	STRAP, TANK COVER	1
6	630390	WASHER, FLAT	4
7	3701.6	SCREW, #6X3/8	4
8	630255	GASKET, FLOAT MOUNT	1
9	630053	MOUNT, FLOAT CAGE	1
10	140000	WASHER, FLAT	2
11	140016	WASHER, LOCK	3
12	600385	SCREW, M06X1.0x20MM	3
13	630052	●FLOAT CAGE W/BALL	1
14	609203	TANK, RECOVERY, TEAL	1
15	140027	WASHER, FLAT	2

REF	PART #	DESCRIPTION	QTY.
16	140015	WASHER, LOCK	2
17	200607491	SCREW, M08X25MM	2
18	603418	NUT	1
19	14194	WASHER, RUBBER	1
20	603417	SCREW, 5/8-11X1	1
21	601462	CLAMP	1
22	240177	TUBE, BASE INLET	1
23	621324	PLUG, EXPANSION	1
24	578441	STRAP, DRAIN HOSE	1
25	630394	SLEEVE, DRAIN HOSE	1
26	601459	HOSE, DRAIN 1 1/2X15"	1
27	140307	CLAMP	2
28	630147	PLUG, 3/4 NPT	1
29	160485	●ADAPTER, HOSE	1
30	200070382	SCREW, M05X10MM	2

● RECOMMENDED STOCK ITEMS

CONTROL HANDLE GROUP



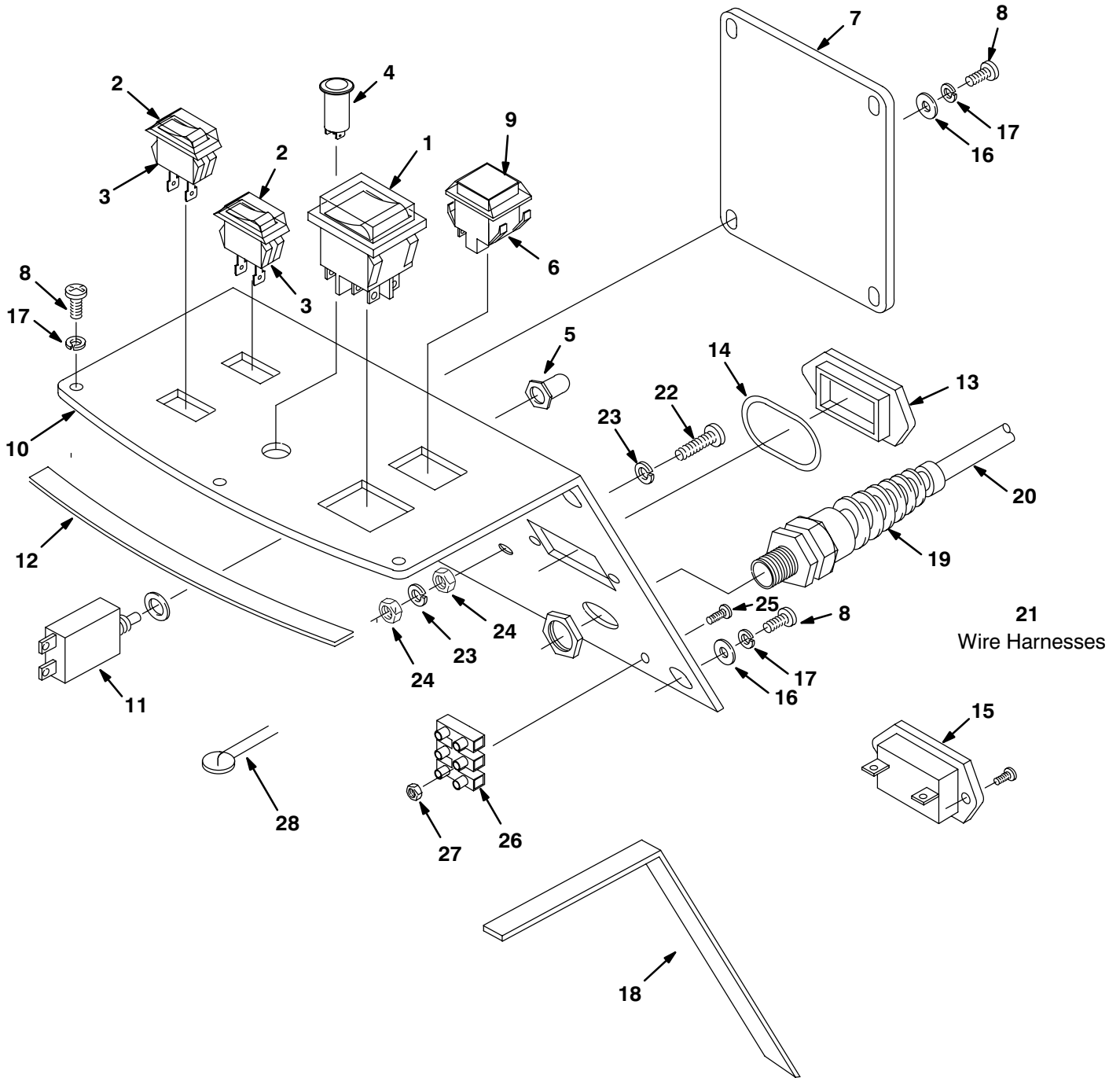
CONTROL HANDLE GROUP

REF	PART #	DESCRIPTION	QTY.
1	609207	HANDLE, TEAL	1
2	601422	PIN, HANDLE LATCH	2
3	601470	SPRING	2
4	601421	TUBE, HANDLE LATCH	2
5	601424	KNOB	2
6	601435	SCREW, M12X30MM	2
7	140024	WASHER, LOCK	2
8	140045	WASHER, FLAT	2
9	601434	SPACER	2
10	601436	CORD, 18/2 SVTX24 3/8	1
11	069764190	SCREW, M03X16MM	2
12	200662012	WASHER, LOCK	2
13	578186000	WASHER, FLAT	2

REF	PART #	DESCRIPTION	QTY.
15	578002000	ARM, TRIGGER	2
16	601429	CONSOLE, TRIGGER	1
17	140061	WASHER, LOCK	3
18	578193000	SCREW, M04X25MM	3
19	578430	WASHER, FLAT	1
20	130712	●SWITCH, PULSE	1
21	601423	BRACKET, LATCH RIGHT	1
22	601465	BRACKET, LATCH LEFT	1
23	140027	WASHER, FLAT	4
24	140015	WASHER, LOCK	4
25	630425	SCREW, M8X20MM	4
26	606349	GASKET, TRIGGER (EMC MODEL)	1

● RECOMMENDED STOCK ITEMS

CONTROL CONSOLE GROUP



CONTROL CONSOLE GROUP

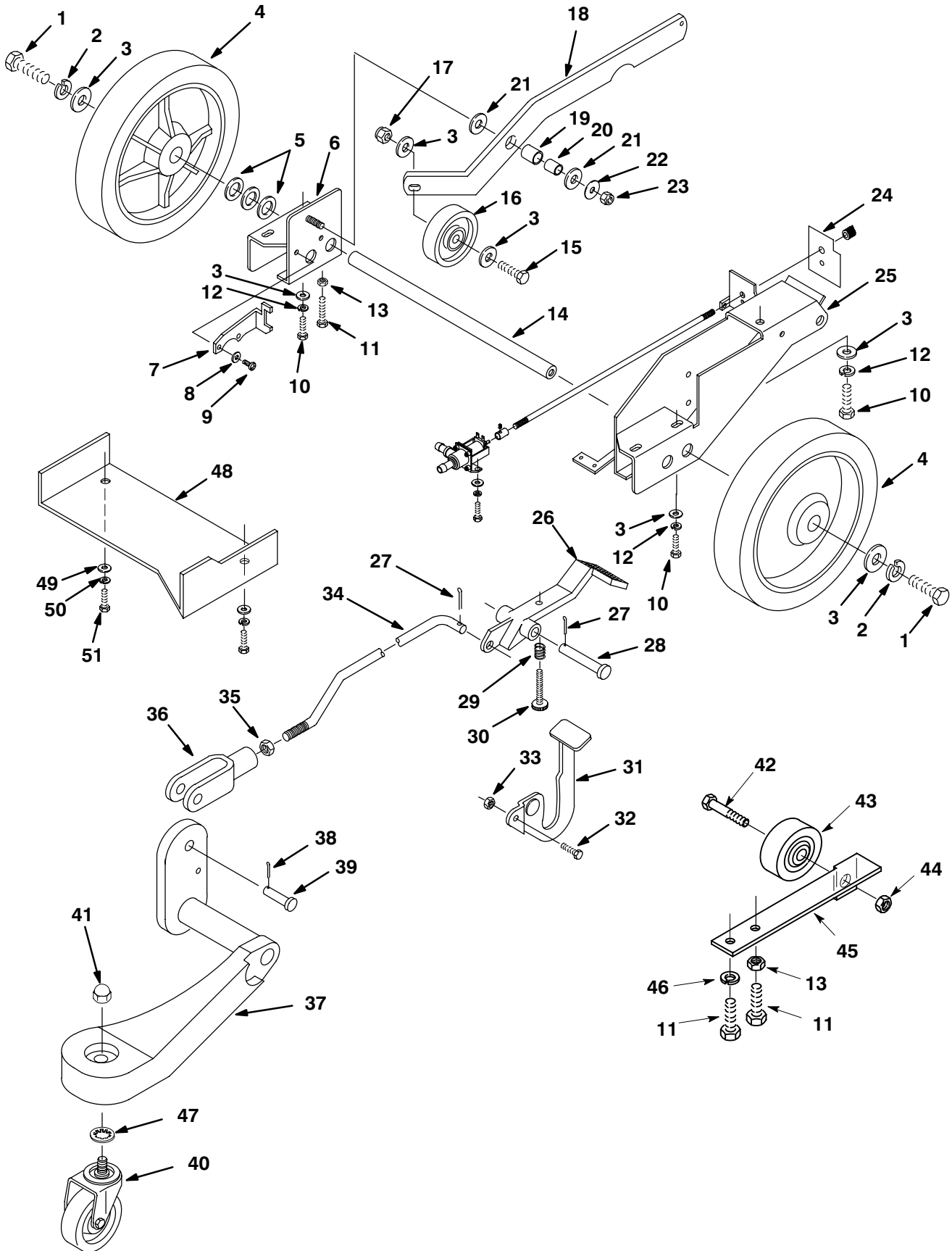
REF	PART #	DESCRIPTION	QTY.
1	602670	●SWITCH, DPST	1
2	578720	BOOT, ROCKER SWITCH	2
3	578 005 000	●SWITCH, ROCKER	2
4	130691	●LIGHT, GRN INDICATOR	1
5	578734	BOOT, CIRCUIT BREAKER	1
6	603410	●SWITCH, MOMENTARY GREEN	1
7	601415	PANEL	1
8	578141000	SCREW, M5X10MM	9
9	130765	BOOT, PUSH BUTTON	1
10	601492	PANEL, CONSOLE	1
11	582510	●BREAKER, CIRCUIT 4.5AMP	1
12	601497	GASKET, 7.25"	2
13	222519	PLUG, HOUR METER	1
14	603224	O-RING	1
15	604745	●METER, HOUR (OPTIONAL)	1
16	140011	WASHER, FLAT	6

REF	PART #	DESCRIPTION	QTY.
17	140018	WASHER, LOCK	9
18	601498	GASKET, 8"	2
19	130167	CORD GRIP	1
20	600396	CORD, POWER 75'/23M	1
N/S	130125	TERMINAL RING, POWER CORD	1
N/S	281004001	TERMINAL, POWER CORD	2
21	604702	HARNESS, WIRE	1
22	578302000	SCREW	1
23	200655016	WASHER, LOCK	2
24	140297	NUT, HEX	2
25	140946	SCREW, 6-32X1 (EMC MODEL)	1
26	130005	STRIP, TERMINAL 25A (EMC MODEL)	1
27	140534	NUT, 6-32 (EMC MODEL)	1
28	606344	VARISTOR S14K 275 (EMC MODEL)	3

● RECOMMENDED STOCK ITEMS

PARTS LIST

WHEEL GROUP



WHEEL GROUP

REF	PART #	DESCRIPTION	QTY.
1	140201	SCREW, 3/8-16X3/4	2
2	140017	WASHER, LOCK	2
3	140028	WASHER, FLAT	9
▽4	25656	●WHEEL	2
▲	103071	●BEARING,WHEEL	2
5	140047	WASHER	3
6	601447	MOUNT, AXLE	1
7	601474	BRACKET, FILTER	1
8	140016	WASHER, LOCK	2
9	578321000	SCREW, M6X16MM	2
10	140276	SCREW, M10X1.5X16MM	5
11	200607491	SCREW, M8X1.25X25MM	3
12	140333	WASHER, LOCK	5
13	200101017	NUT	2
14	601448	AXLE	1
15	140256	SCREW, 3/8-16X2 1/2	1
16	601469	●WHEEL	1
17	140515	NUT	1
18	601458	MOUNT, WHEEL BRUSH	1
19	630188	BEARING	1
20	630189	SLEEVE, BEARING	1
21	630447	WASHER, NYLON	2
22	140055	WASHER, FLAT	1
23	200160017	NUT, LOCK	1
24	601491	DECAL, SOL. CONTROL	1
25	601446	MOUNT, AXLE PEDAL	1
26	601444	PEDAL HEAD LIFT	1

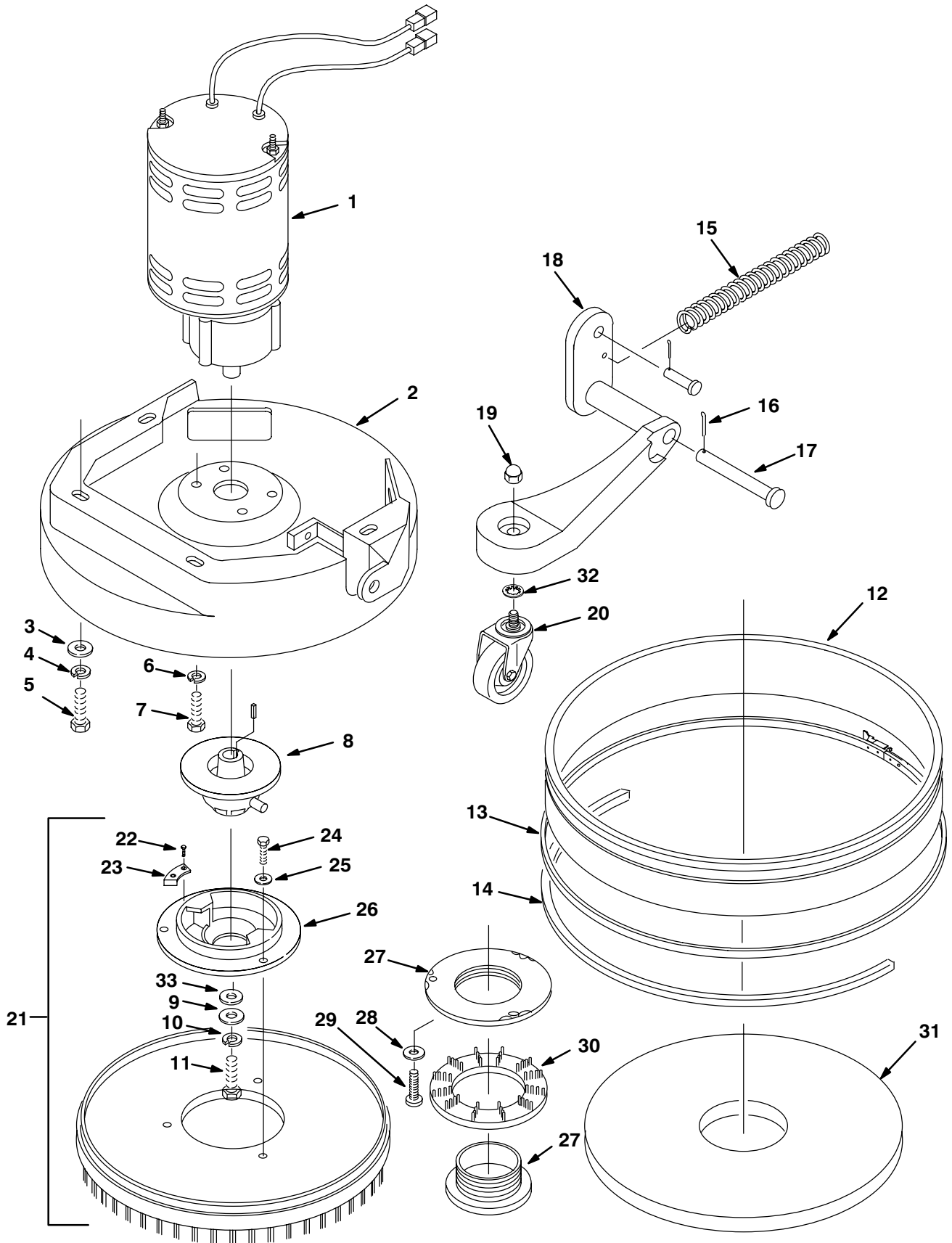
REF	PART #	DESCRIPTION	QTY.
27	140630	PIN, COTTER	2
28	601471	PIN, CLEVIS	1
29	578140000	SPRING	1
30	603145	KNOB	1
31	601445	PEDAL, LATCH RELEASE	1
32	140275	SCREW, M8X1.25X16MM	1
33	200160017	NUT	1
34	601442	ROD, CASTER MOUNT	1
35	578242000	NUT	1
36	578085000	YOKE, ADJUSTMENT	1
37	601441	MOUNT, CASTER	1
38	612254000	PIN, HAIRPIN	1
39	140608	PIN, CLEVIS	1
40	601443	●CASTER, SWIVEL	1
41	3058	NUT	1
42	630478	SCREW, SHOULDER	1
43	630477	WHEEL, 2"	1
44	601108000	NUT, LOCK	1
45	604323	BRACKET, STOP	1
46	140015	WASHER, LOCK	1
47	140029	WASHER, INT. TOOTH	1
48	606351	PLATE, SPLASH (EMC MODEL)	1
49	140027	WASHER, 5/16 FLAT (EMC MODEL)	2
50	140015	WASHER, 5/16 LOCK (EMC MODEL)	2
51	140275	SCREW, M8X1.25X16 (EMC MODEL)	2

● RECOMMENDED STOCK ITEMS

▽ ASSEMBLY

▲ INCLUDED IN ASSEMBLY

PAD DRIVER GROUP



PAD DRIVER GROUP

REF	PART #	DESCRIPTION	QTY.
▽1	603151	●MOTOR, BRUSH 230V .6HP	1
▲	190311	●CARBON BRUSH	4
▲	630609	GEARBOX	1
▲	140632	KEY	1
2	601440	HEAD CASTING	1
3	140028	WASHER, FLAT	4
4	140333	WASHER, LOCK	4
5	140276	SCREW, M10X1.5X16MM	4
6	140017	WASHER, LOCK	4
7	140202	SCREW, 3/8-16X1	4
8	601449	HUB, BRUSH DRIVE	1
9	140027	WASHER, FLAT	1
10	140015	WASHER, LOCK	1
11	140219	SCREW, 5/16-18X1	1
12	601493	●SKIRT, SPLASH GUARD	1
13	601495	ASM., SKIRT BAND	1
14	603147	BUMPER, EXTRUSION	2.5'
15	603148	SPRING	1
16	612254000	PIN, HAIRPIN	1
17	069764083	PIN, CLEVIS	1

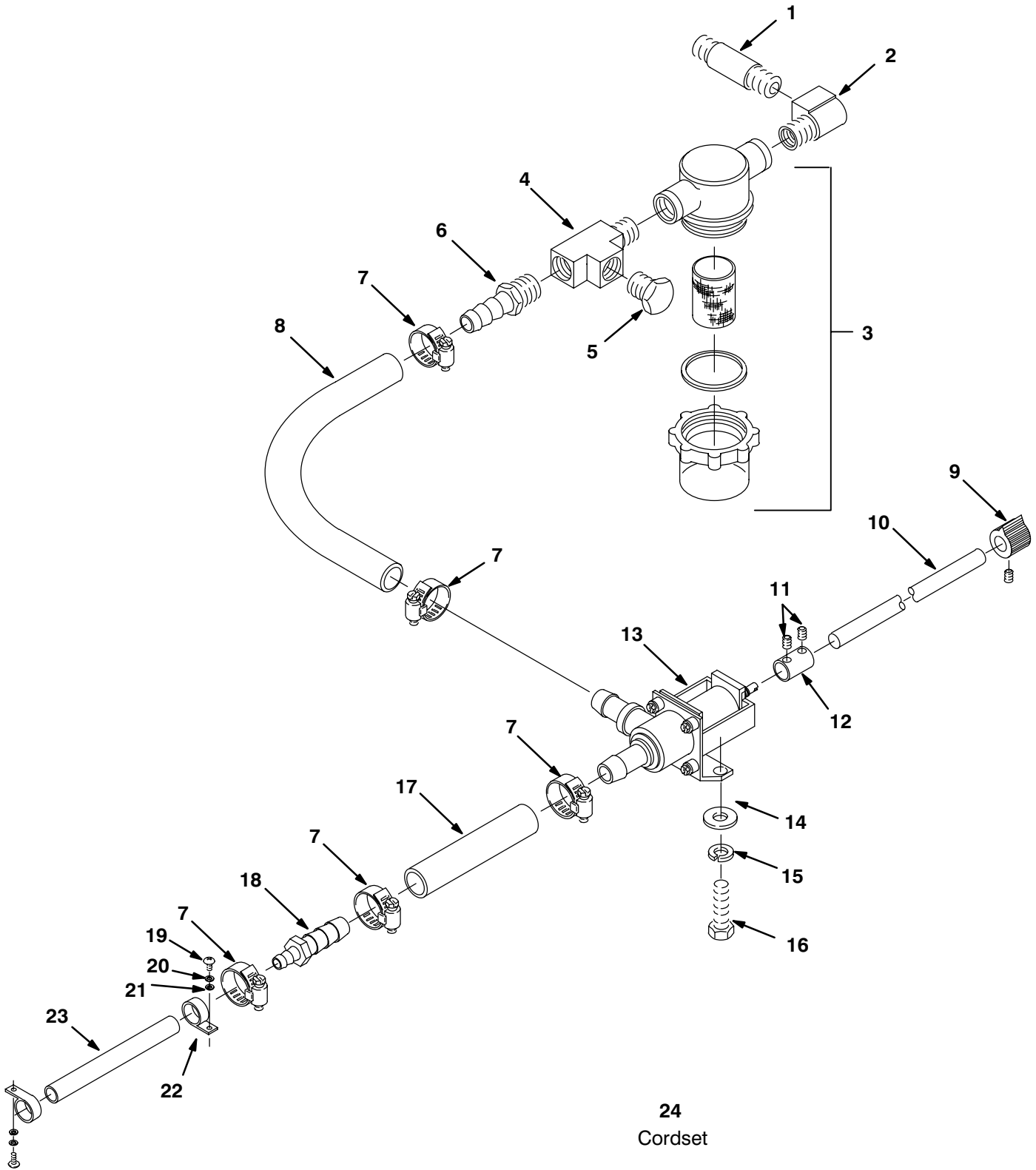
REF	PART #	DESCRIPTION	QTY.
18	601441	MOUNT, CASTER	1
19	3058	NUT	1
20	601443	CASTER, SWIVEL	1
▽21	370000	ASM., BRUSH 17"NYLON (OPTIONAL)	1
	370002	ASM., BRUSH 17" GRIT (OPTIONAL)	1
	370007	ASM., BRUSH 17" POLY (OPTIONAL)	1
	370003	ASM., PAD DRIVER 17" (OPTIONAL)	1
▲22	603439	SCREW, #6X5/16	4
▲23	603438	PLATE, WEAR	2
▲24	578580	SCREW, M06X35MM	3
▲25	140000	WASHER, FLAT	3
▲26	601453	●PLATE, CLUTCH	1
▲27	630473	●CENTERLOCK	1
▲28	140007	WASHER, FLAT	3
▲29	200070351	SCREW, M4X025MM	3
▲30	630472	RETAINER, BRUSH PAD	1
31	NA	PAD	1
32	140029	WASHER, INT. TOOTH	1
33	140028	WASHER, FLAT	1

● RECOMMENDED STOCK ITEMS

▽ ASSEMBLY

▲ INCLUDED IN ASSEMBLY

PLUMBING GROUP



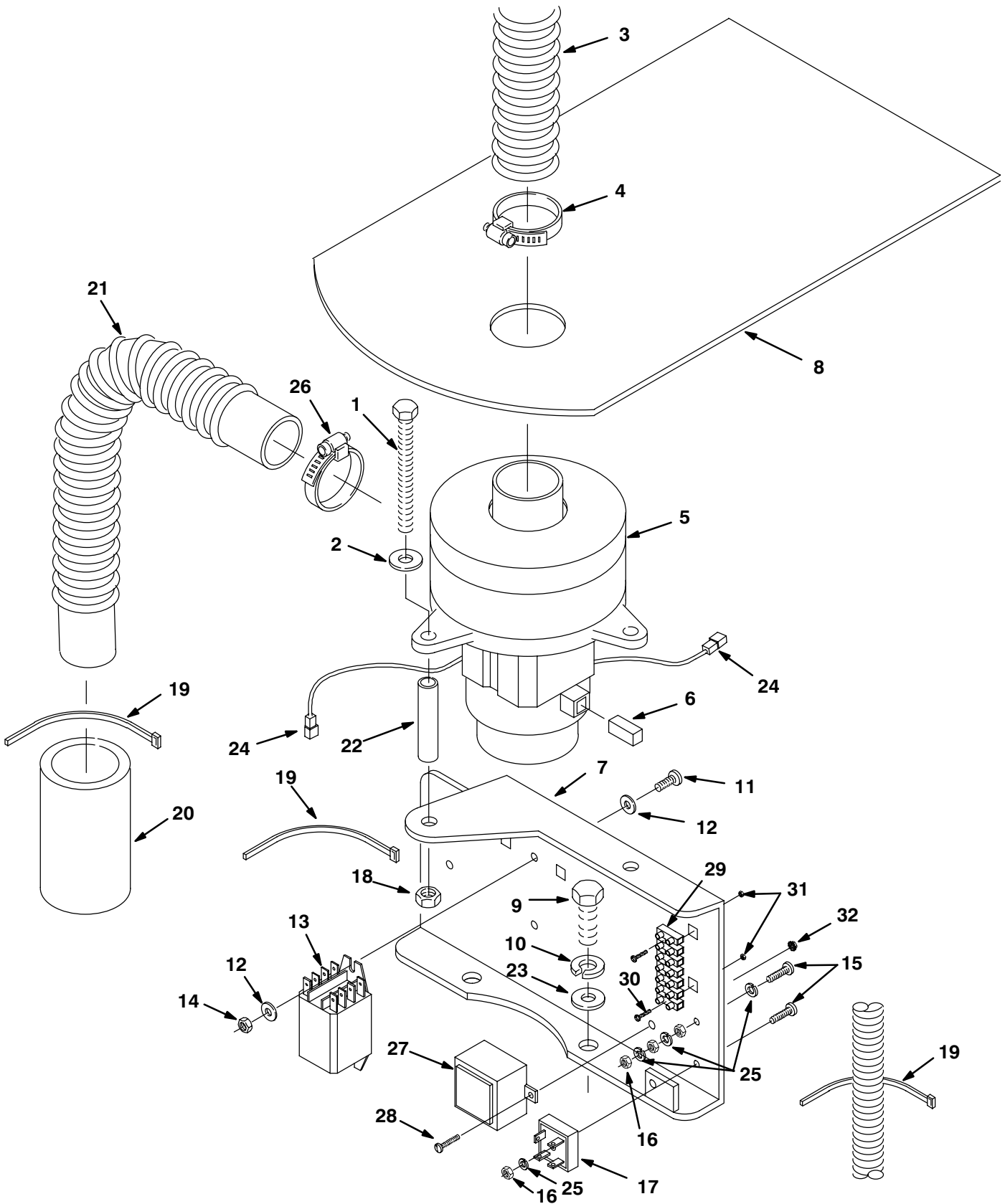
PLUMBING GROUP

REF	PART #	DESCRIPTION	QTY.
1	601489	FITTING, NIPPLE	1
2	150420	ELBOW, STREET 3/8 90°	1
3	601475	●SCREEN, FILTER	1
4	601483	TEE, STREET 3/8 NPT	1
5	630146	PLUG, 3/8 NPT	1
6	14884	HOSE BARB	1
7	140310	CLAMP	5
8	14894	TUBING, VINYL	.67'
9	626121	KNOB, WATER VALVE	1
10	601473	ROD, WATER VALVE	1
11	069762095	SCREW, SET 10-24X.25	2
12	601472	COUPLING	1

REF	PART #	DESCRIPTION	QTY.
13	582505	●VALVE, SOLENOID 240VAC	1
14	140000	WASHER, FLAT	2
15	140016	WASHER, LOCK	2
16	140272	SCREW, M6X1.0X16MM	2
17	14894	TUBING, VINYL	.25'
18	630164	FITTING, STREET	1
19	579259	SCREW, M04X12MM	2
20	140023	WASHER, LOCK	2
21	200301014	WASHER, FLAT	2
22	140328	CLAMP	2
23	578095000	HOSE	.1M
24	604708	CORDSET, SOLENIOD VALVE	1

● RECOMMENDED STOCK ITEMS

VACUUM MOTOR GROUP



VACUUM MOTOR GROUP

REF	PART #	DESCRIPTION	QTY.
1	630432	SCREW, M06X50MM	2
2	140000	WASHER, FLAT	2
3	160426	●HOSE, VAC 1.5X15"	1
4	140307	CLAMP	1
∇5	601480	●MOTOR, VAC 230V 2-STG	1
▲6	190158	●CARBON BRUSH 2/PK	1
7	601463	BRACKET, VAC MOTOR	1
8	604710	SHEILD, VAC MOTOR	1
9	140272	SCREW, M6X1.0X16MM	2
10	140016	WASHER, LOCK	2
11	579259	SCREW, M4X.7X12	2
12	578 186 000	WASHER, FLAT	4
13	604709	●RELAY, 25A 250VAC	1
14	140288	NUT, NYLOCK M4	2
15	578 302 000	SCREW, M5X20	2
16	140297	NUT, M5X.8 HEX	4
17	130304	●RECTIFIER, BRIDGE 600V 15AMP	1
18	140284	NUT	2

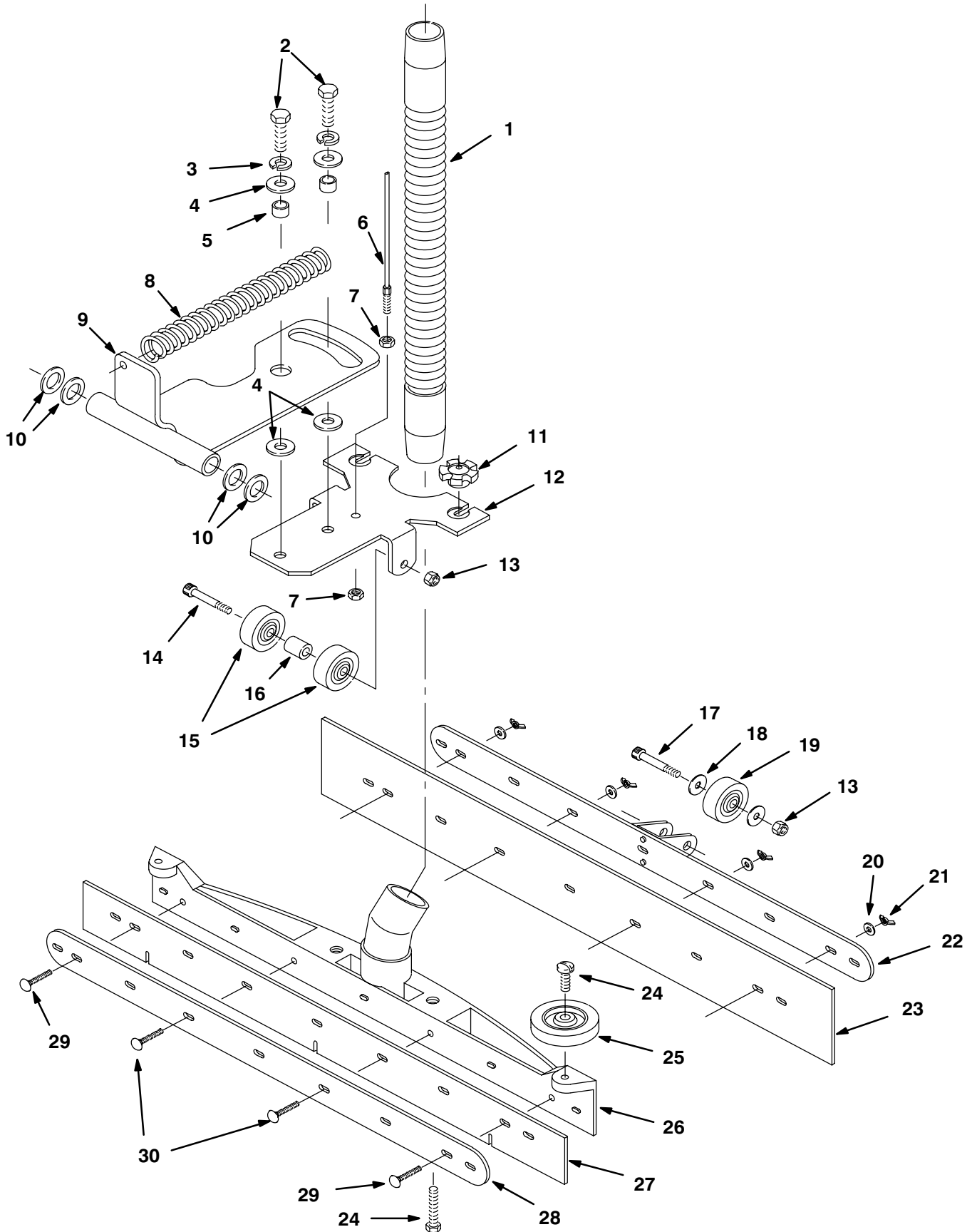
REF	PART #	DESCRIPTION	QTY.
19	130041	WIRE TIE	3
20	600009	MUFFLER, VAC EXHAUST	1
21	160459	●HOSE, VAC 1.5X16"	1
22	019 686 096	SPACER	2
23	140000	WASHER, FLAT	2
24	130133	TERMINAL, MALE	2
25	200 655 016	WASHER, LOCK	4
26	140308	CLAMP	1
27	606345	THYRISTOR (EMC MODEL)	1
28	200 630 262	SCREW, M3X.5X10 (EMC MODEL)	2
29	578 013 000	TERMINAL BLOCK (EMC MODEL)	1
30	140879	SCREW, 6-32X3/4 (EMC MODEL)	2
31	140534	NUT, 6-32 (EMC MODEL)	2
32	579211	NUT, M3 HEXLOCK (EMC MODEL)	2

● RECOMMENDED STOCK ITEMS

∇ ASSEMBLY

▲ INCLUDED IN ASSEMBLY

SQUEEGEE GROUP



SQUEEGEE GROUP

REF	PART #	DESCRIPTION	QTY.
1	160617	●HOSE, VAC W/CUFF	1
2	140237	SCREW, 1/2-13X1	2
3	140024	WASHER, LOCK	2
4	140045	WASHER, FLAT	4
5	140139	BUSHING	2
6	601428	CABLE, SQUEEGEE	1
7	601476	NUT	2
8	603149	SPRING	1
9	603163	BRACKET, SQ. PIVOT	1
10	140047	WASHER, FLAT	4
11	27257	●KNOB	2
12	601451	BRACKET, SQ. MOUNT	1
13	601108000	NUT	2
14	603144	SCREW, 3/8X3	1
15	630477	WHEEL	2
16	603368	SPACER	1
17	600187	SCREW, 3/8X1 1/4	1
18	140028	WASHER, FLAT	2

REF	PART #	DESCRIPTION	QTY.
19	630477	●WHEEL	1
20	140000	WASHER, FLAT	4
21	140536	NUT, WING	4
22	601457	STRIP, REAR RETAINER	1
23	601455	●BLADE, SQ. REAR	1
	601486	●BLADE, SQ. LINATEX (OPTIONAL)	1
	601488	●BLADE, SQ. URETHANE (OPTIONAL)	1
24	140799	SCREW, 5/16-18X1 1/2	4
25	630450	WHEEL	2
26	601450	CASTING, SQUEEGEE	1
27	601454	●BLADE, SQ. FRONT	1
	601485	●BLADE, SQ. LINATEX (OPTIONAL)	1
	601487	●BLADE, SQ. URETHANE (OPTIONAL)	1
28	601456	STRIP, FRONT RETAINER	1
29	612184000	SCREW, .25-20X1.5	2
30	612186000	SCREW, .25-20X2.5	2

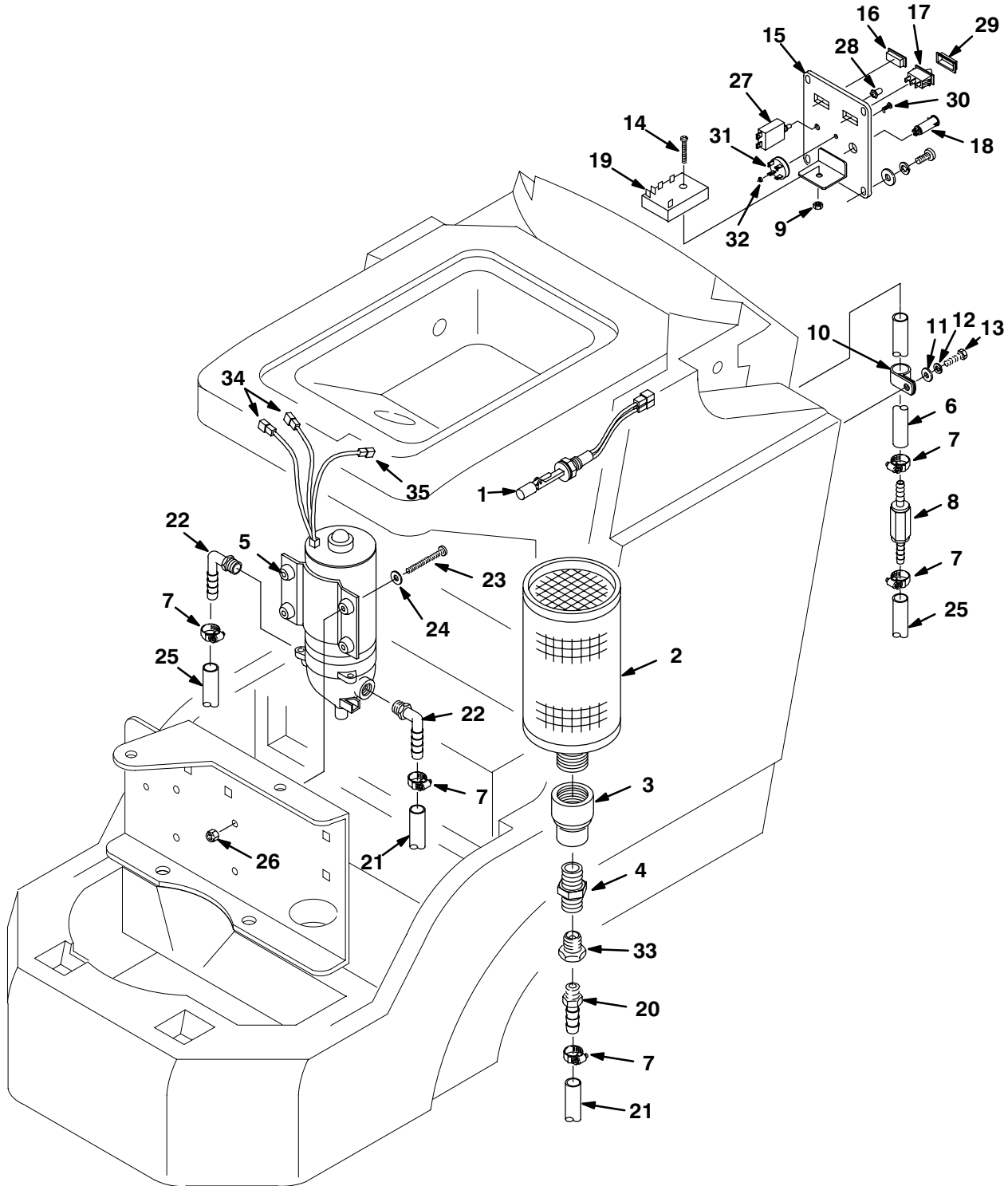
● RECOMMENDED STOCK ITEMS

OPTIONAL KITS

REF	PART #	DESCRIPTION	QTY.
	603169	●KIT, ES™ (EXTENDED SCRUB)	1
	603170	●KIT, WAND PUMP	1

REF	PART #	DESCRIPTION	QTY.
	603168	●KIT, ES™ & WAND PUMP	1
	603330	●KIT, HOUR METER	1

ES™ KIT



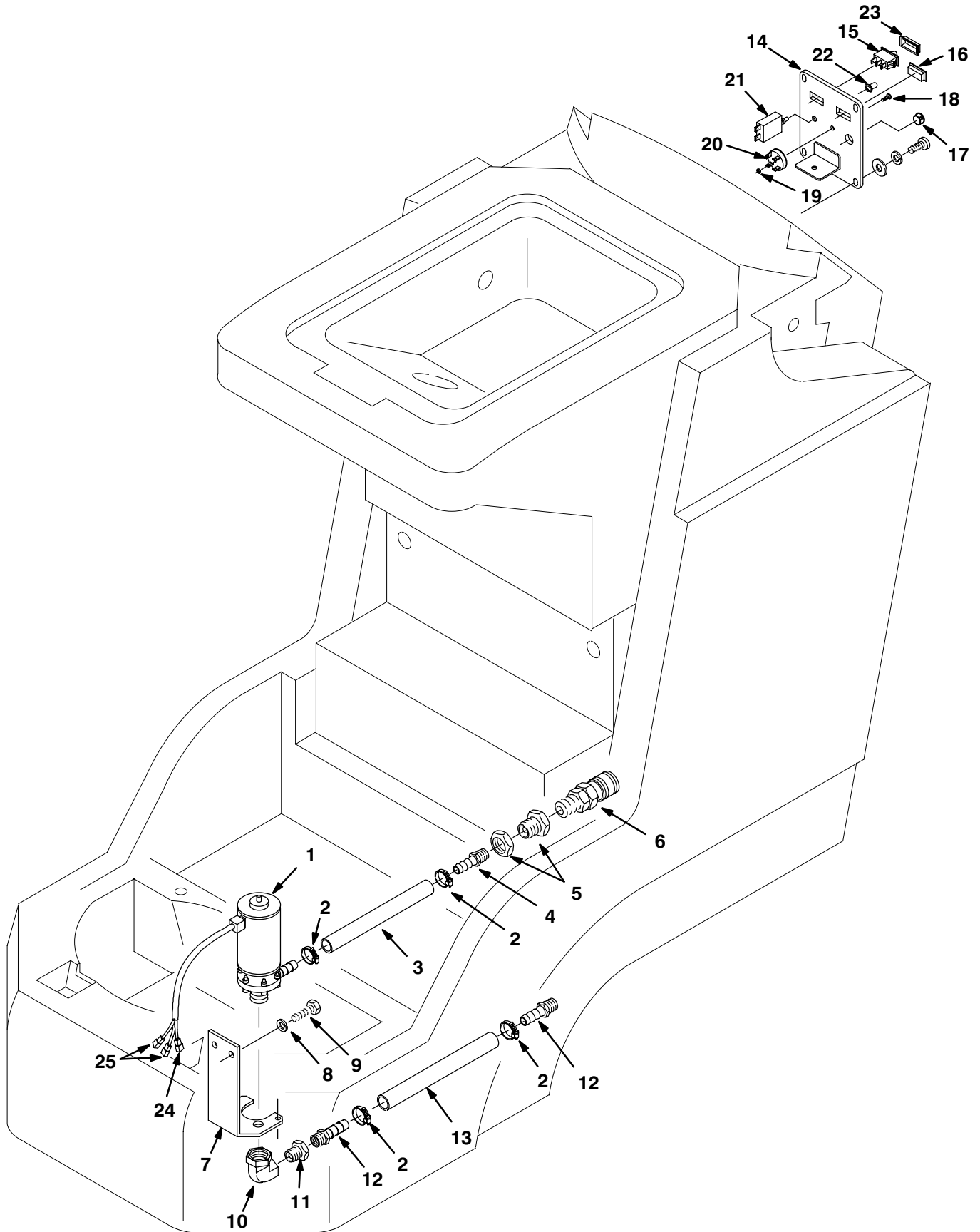
ES™ KIT

REF	PART #	DESCRIPTION	QTY.
	603169	●KIT, ES™	1
1	603166	●SWITCH, LIQUID LEVEL	1
2	578445	●FILTER, SCREEN	1
3	601484	FITTING, REDUCER	1
4	630385	FITTING, NIPPLE	1
5	180109	●PUMP, 100PSI 230V	1
6	25160	TUBING	1.46'
7	140310	CLAMP	5
8	210044	●VALVE, CHECK	1
9	140283	NUT	1
10	140316	CLAMP	1
11	140000	WASHER, FLAT	1
12	140016	WASHER, LOCK	1
13	578321000	SCREW, M6X16MM	1
14	578008000	SCREW, M05X3.3	1
15	601416	PANEL, ACCESSORY	1
16	582150	PLUG, ACCESSORY	1
17	578 005 000	●SWITCH, ROCKER	1
18	130691	LIGHT, INDICATOR	1

REF	PART #	DESCRIPTION	QTY.
19	582508	●RELAY, TIMER 230VAC	1
20	150538	FITTING, HOSE BARB	1
21	25160	TUBING	1.63'
22	150412	FITTING, ELBOW	2
23	140293	SCREW, M5X.8X30	4
24	140012	WASHER, FLAT	4
25	25160	TUBING	3.34'
26	140283	NUT, NYLOCK	4
27	582514	●CIRCUIT BREAKER, 1/2AMP	1
28	578734	BOOT, CIRCUIT BREAKER	1
29	578720	BOOT, ROCKER SWITCH	1
30	200 070 266	SCREW, M3X.5X16	1
31	130288	●RECTIFIER, BRIDGE	1
32	579211	NUT, M3 HEXLOCK	1
33	630252	FITTING, 3/4MX3/8F BUSHING	1
34	130133	TERMINAL, MALE DISCONNECT	2
35	130142	CONNECTOR, BUTT	1

● RECOMMENDED STOCK ITEMS

WAND PUMP KIT



WAND PUMP KIT

REF	PART #	DESCRIPTION	QTY.
	603170	●KIT, WAND PUMP	1
1	582506	●PUMP, 230V	1
2	140310	CLAMP	4
3	25160	TUBING	.66'
4	150516	HOSE BARB	1
5	150300	CONNECTOR, ANCHOR	1
6	575520000	QUICK CONNECTOR	1
7	601479	BRACKET, WAND PUMP	1
8	140016	WASHER, LOCK	2
9	200031433	SCREW, M6X12MM	2
10	630251	FITTING, ELBOW 90°	1
11	630252	FITTING, BUSHING	1
12	150538	HOSE BARB	2

REF	PART #	DESCRIPTION	QTY.
13	25160	TUBING	2'
14	601416	PANEL, ACCESS.	1
15	578 005 000	●SWITCH, ROCKER	1
16	582150	PLUG, ACCESSORY	1
17	069764626	PLUG, HOLE	1
18	200 070 266	SCREW, M3X.5X16	1
19	579211	NUT, M3 HEXLOCK	1
20	130288	●RECTIFIER, BRIDGE	1
21	582514	●CIRCUIT BREAKER, 1/2AMP	1
22	578734	BOOT, CIRCUIT BREAKER	1
23	578720	BOOT, ROCKER SWITCH	1
24	130125	RING, TERMINAL	1
25	130133	TERMINAL, MALE DISCONNECT	2