



# OWNER'S MANUAL

IMPORTANT: READ OWNER'S MANUAL CAREFULLY



**MODEL**

**Ultron 18BA**

8050905  
REV.01(07-2018)

**SSS**® **TRIPLE S**  
**NATIONWIDE**  
**SANITARY SOLUTIONS**  
**1 - 8 0 0 - 3 2 3 - 2 2 5 1**  
**[www.triple-s.com](http://www.triple-s.com)**

FOR YOUR CONVENIENCE, RECORD THE FOLLOWING  
IMPORTANT INFORMATION

MODEL: \_\_\_\_\_

SERIAL NUMBER: \_\_\_\_\_

DATE PURCHASED: \_\_\_\_\_

PURCHASED FROM: \_\_\_\_\_



**READ OPERATOR MANUAL CAREFULLY!**

## HOW TO ORDER PARTS

Please contact your local Triple S distributor, [www.triple-s.com](http://www.triple-s.com). Having the following information available will be helpful:

- Machine model name
- Serial number from serial plate
- Part # and quantity (do not order by page number)



### **PROTECT THE ENVIRONMENT**

Please dispose of packaging materials, old machine components such as batteries, hazardous fluids, including antifreeze and oil, in an environmentally safe way according to local waste disposal regulations.



Always remember to recycle.

**Specifications and parts are subject to change without notice.**

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## SAFETY PRECAUTIONS

This machine is intended for commercial use. It is designed exclusively to scrub hard floors in an indoor environment and is not constructed for any other use. Only use recommended accessories.

**All operators shall read, understand and exercise the following safety precautions:**

### 1. Do not operate machine:

- Unless trained and authorized.
- Unless you have read and understand the operators manual.
- In flammable or explosive areas.
- If not in proper operating condition.
- In outdoors areas.

### 2. Before starting machine:

- Make sure all safety devices are in place and operate properly.

### 3. When using machine:

- Go slow on inclines and slippery surfaces.
- Follow all safety guidelines.
- Be very careful when using the machine in reverse.
- Reduce speed when turning.
- Report and fix any damage to machine prior to operating it.
- Never allow children to play on or around.
- Do not operate on inclines that exceed 5% (3°).


### 4. Before leaving or servicing machine:


- Stop on level surface.
- Turn off machine.

### 5. When servicing machine:


- Read operators manual thoroughly prior to operating or servicing this machine.
- Use manufacturer supplied or approved replacement parts.
- Secure machine with wheel blocks prior to jacking the machine up.
- Use approved jack or hoist to safely elevate the machine.
- Disconnect batteries prior to working on machine.
- Wear gloves when handling batteries or battery cables.

- Avoid any contact with battery acid.
- Avoid moving parts. Do not wear loose fitting clothing while servicing machine.

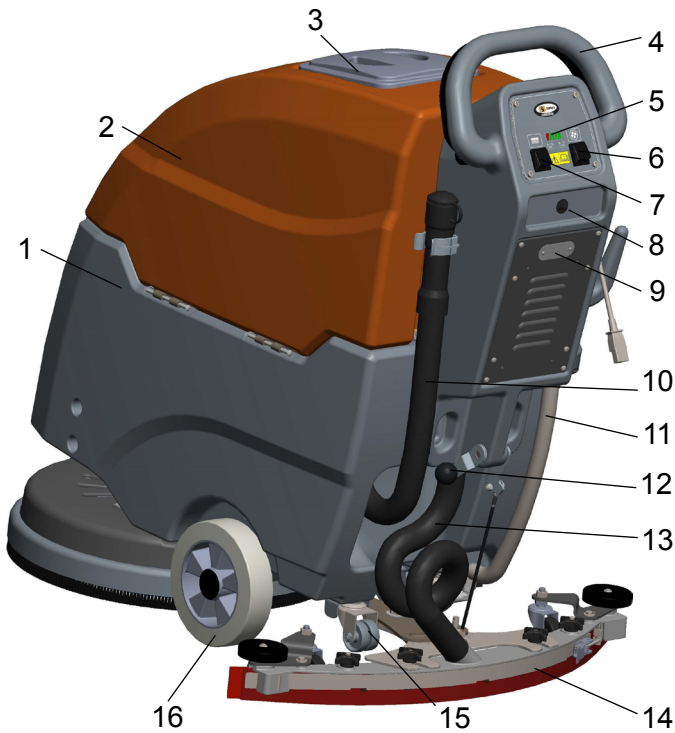
 **WARNING: Batteries emit hydrogen gas. Explosion or fire can result from hydrogen gas. Keep sparks and open flames away! Keep battery compartment open when charging.**

 **WARNING: Flammable materials can cause an explosion or fire. Do not use flammable materials in tanks.**

 **WARNING: Flammable materials or reactive metals can cause explosion or fire. Do not pick up.**

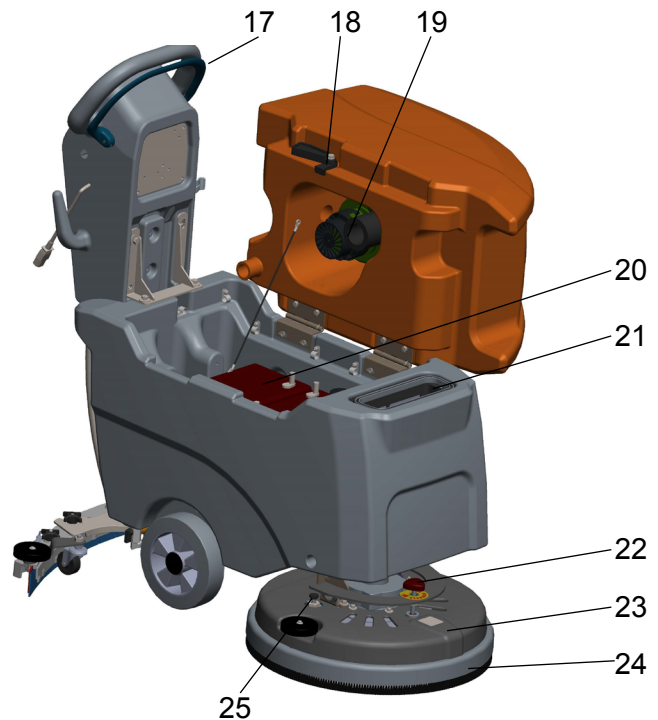
 **WARNING: Repairs are to be completed by a Triple S Dealer. Any repairs completed by unauthorized persons will void the warranty.**

**MACHINE COMPONENTS**



1. Solution tank
2. Recovery tank
3. Clear cover, Recovery tank
4. Control handle bar
5. Battery meter
6. Vacuum motor switch
7. Brush motor switch
8. Circuit breaker
9. Clear cover, Battery charger
10. Drain hose
11. Clear tube, solution tank sight gauge
12. Squeegee lift lever
13. Vacuum hose
14. Squeegee assembly
15. Rear parking wheel
16. 8-inch wheels

17. Control trigger
18. Recovery tank support stand
19. Vacuum motor
20. Batteries
21. Solution tank fill-port
22. Pressure adjusting handle
23. Scrub head
24. Splash Guard
25. Motor hub lock pin



## MACHINE SET UP & INSTALLATION

### UNCRATING MACHINE

Be sure and check packing carton for any damage. Immediately report any damage to carrier. Check the contents of package to ensure that the following items are included:

- Machine
- Requires 2-12V Batteries
- Squeegee assembly
- Battery Charger
- Pad Driver or Brush

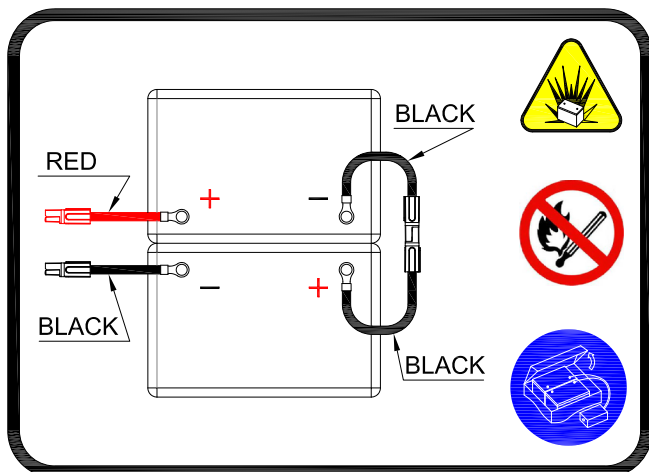
### INSTALLING BATTERIES

The batteries are already in the machine upon delivery; However you will need to connect the cables to the battery posts.

**⚠ WARNING: Batteries emit hydrogen gas. Explosion or fire can result from hydrogen gas. Keep sparks and open flames away! Keep battery compartment open when charging.**

1. Turn off the machine.
2. Lift the Recovery tank (see machine components, P5 item #2) to access the battery compartment.
3. Carefully place the two batteries into the compartment as shown in figure below.  
**DO NOT DROP BATTERIES INTO COMPARTMENT!**
4. Connect battery cables to posts as shown in drawing below.

**RED to POSITIVE and BLACK to NEGATIVE.**



## MACHINE SET UP

### PRE-OPERATION CHECKS

1. Sweep or dust mop the surface to be cleaned.
2. Check battery meter to make sure batteries are fully charged. (See BATTERY CHARGING).
3. Check that squeegee is properly installed.
4. Check that brush / pad is properly installed.

### INSTALLING PAD DRIVER OR BRUSH

1. Ensure that the machine is turned off.
2. Lift the Squeegee lift lever (see machine components, P5 item #12) to the upward position.
3. Lift the Scrub head (see machine components, P5 item # 23) by pushing down the Control handle bar (see machine components, item 4), while the Rear parking wheel (see machine components, P5 item #15 ) will touch the floor.
4. If using a Pad Driver, first attach the appropriate pad to the pad driver surface.
5. Turn the brush motor hub until the slot with the spring clip is visible through the scrub head window.
6. Mount the pad driver or brush to the brush motor hub by lining up the three studs with the three holes in the brush motor hub. Once in the holes, rotate the driver toward the spring clip to lock the pad driver into place.  
If necessary, press down on the Motor hub lock pin (see machine componts, P5 item # 25) to lock motor hub in place.

### MOUNTING THE SQUEEGEE ASSEMBLY

1. Lift the Squeegee lift lever to the upward position.
2. Mount the Squeegee assembly (see machine components, P5 item #14) to the squeegee pivot bracket. Make sure the knobs are completely seated into the slots before securing knobs.
3. Connect the vacuum hose to the squeegee assembly. Loop the hose by using the hose clip provided.
4. Check the squeegee blades for proper adjustment.

## FILLING THE SOLUTION TANK

The machine is equipped with a Solution fill-port (see machine components, P5 item #21) at the front of the Solution tank, you can fill the solution tank by using a hose or a bucket.

Fill the solution tank to the "10-Gal" level on the Solution tank sight gauge (see machine components, P5 item #11). When using the bucket, stop filling when the level reaches the bottom edge of the fill-port.

**NOTE:** When filling the solution tank with a bucket, make sure that the bucket is clean. Do not use the same bucket for filling and draining the machine.

**! WARNING:** Do not put any flammable materials into solution tank. This can cause an explosion or a fire. Only use recommended cleaning chemicals. Contact your Triple S Dealer for recommendations on proper chemicals.

## MACHINE OPERATION

**! WARNING:** Do not operate machine unless you have read and understand this manual.

1. Lower the Squeegee assembly to the floor by lowering the Squeegee lift lever.
2. Lower the Scrub head to the floor by lifting the Control handle bar, while the Rear parking wheel will not touch the floor.
3. Turn on the Brush motor switch (see machine components, P5 item #7), check the Battery meter (see machine components, P5 item #5), if the battery meter is in the red, DO NOT continue to operate the machine and recharge the batteries immediately.
4. Turn on the Vacuum motor switch (see machine components, P5 item #6), and then the vacuum motor will start work.
5. Pull the Control trigger (see machine components, P5 item #17) backwards to start scrubbing by moving the machine forward.  
**NOTE: The Brush motor will not work and the solution will not flow until the control trigger is pulled.**
6. To stop scrubbing, release the Control trigger, lift the Squeegee assembly and turn off the Vacuum motor switch, and then turn off the Brush motor switch, lift the Scrub head.

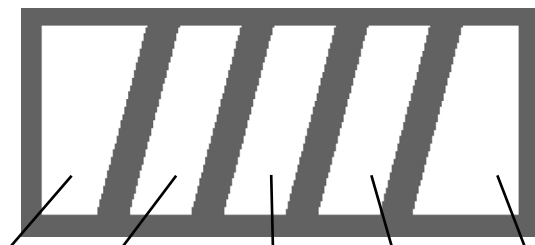
## MACHINE OPERATION

**! WARNING:** Fire or Explosion Hazard. Do Not Pick Up Flammable Materials or Reactive Metals.

1. Go slow on inclines and slippery surfaces. Do not operate the machine on inclines that exceed 5% (3°).
2. Do not keep the machine in the same position with pad / brush spinning, keep the machine moving to prevent damage to floor finish.
3. If the squeegee assembly leaves streaks on the floor, raise the squeegee off the floor and wipe the blades down with a damp cloth. Pre-sweep the area to prevent leaving streaks on the floor.
4. Pour a recommended defoamer into the recovery tank if excessive foam appears.

**! WARNING:** Do not allow foam to enter the float shut-off screen, vacuum motor damage will result. Foam will not activate the float shut-off screen.

5. Occasionally check the Battery meter, the indicator displays the level of the batteries. When meter is in the red, stop scrubbing and recharge the batteries.



Red Yellow 2 Yellow 1 Green 2 Green 1

All green lights on: 100% level.

Yellow lights on, green lights off : 50% level.

Red light on, other lights off: 20% level, the machine should be stopped and the batteries should be recharged.

Red light flash: the batteries have already been discharged deeply.

6. When the solution tank runs empty, turn off the Brush motor switch and lift the brush head. Keep the squeegee down and continue to vacuum until all the dirty water is picked up.


**NOTE:** See **TANK DRAINING** section to learn how to drain recovery and solution tanks.

## TANK DRAINING

1. Turn off the machine.
2. With the squeegee and scrub head in their "up" position, transport machine to approved area for draining tank(s).

### DRAINING THE RECOVERY TANK

Any time scrubbing is completed, or when refilling solution tank, the recovery tank should be drained and cleaned.

 **WARNING: If the recovery tank is not drained when the solution tank has been refilled, foam or water may enter the float shut-off screen and cause damage to the vacuum motor.**


1. While holding the drain hose (see machine components, P5 item #10) upward, remove the cap and lower hose to drain.
2. Open the recovery tank cover and rinse out the tank. Use a rag to remove any excess dirt. Clean the float shut-off screen and debris tray located in the recovery tank .

### DRAINING THE SOLUTION TANK

Any time scrubbing operation is completed, the solution tank should be drained and cleaned.

1. Pull the solution clear tube (see machine components, P5 item #11) off the hose fitting, this will allow the solution to flow freely into a bucket or floor drain.
2. Remove the cover of the filter assembly to drain the solution tank, check the filter screen and clean up it if necessary.
3. Rinse the solution tank with clean water after every use. This will help prevent chemical buildup and clogging of the solution lines.
4. After rinsing out the tank, securely reconnect the tank level hose to the hose fitting, replace the filter assembly cover and be sure the filter screen and the "O" ring is in the correct position.

## BATTERY CHARGING

 **WARNING: Fire or Explosion Hazard. Batteries Emit Hydrogen Gas. Keep Sparks and Open Flame Away. Keep Battery Compartment Propped Open When Charging.**

1. Transport the machine to a well ventilated area.
2. Turn the machine off.
3. If charging wet, lead acid, batteries check the fluid level before charging.
4. Prop up the recovery tank onto the support stand (see machine components, P5 item #18) for ventilation.
5. Connect the charger's AC power supply cord to a properly grounded receptacle.
6. The charger will automatically begin to charge, you can watch the charging status on the window (machine components, P5 item #9), once the charging cycle begins, the indicator lights will progress from red, yellow to green. When the green indicator light comes on, the charging cycle is done. Unplug the charger cord.

**NOTE: The machine will not operate when charging.**



## PREVENTATIVE MAINTENANCE

**! WARNING:** Before performing any maintenance on the machine, be sure that the power is turned off, or the batteries are disconnected!

**! WARNING:** Repairs are to be completed by a Triple S Dealer only. Any repairs completed by unauthorized persons will void the warranty.

### DAILY MAINTENANCE

1. Remove pad driver/ brush and clean with approved cleaner.
2. Drain recovery and solution tanks completely and rinse out with clean water. Visually check the recovery tank for debris and clean out as necessary.
3. Raise the squeegee assembly off floor and wipe it down with a damp towel. Be sure to store the squeegee in the up position.
4. Remove the float shut-off assembly and rinse it out with clean water.
5. Clean machine with an approved cleaner and a damp towel.
6. Recharge the batteries.
7. Check the condition of the squeegee blade wiping edge, rotate blade if worn.

### MONTHLY MAINTENANCE

1. Clean the battery tops to prevent corrosion.
2. Check for loose battery cable connections.
3. Inspect and clean the recovery tank cover seal. Replace it if damaged.
4. Lubricate all grease points and pivot points with silicon spray and approved grease.
5. Check the machine for loose nuts and bolts.
6. Check the machine for leaks.

### MOTOR MAINTENANCE

1. Contact your Triple S Dealer for any motor maintenance.
2. Motor should have the brushes checked every 250 hours. Brushes should be replaced when they are worn to a length of 10 mm or less.

### BATTERY MAINTENANCE

**! WARNING:** Batteries emit hydrogen gas and an explosion or fire can result. Keep sparks and fire away from batteries at all times.

**! WARNING:** Whenever servicing batteries, be sure to wear protective gloves. Avoid contact with battery acid at all times.

**NOTE:** For the best machine performance, keep batteries properly charged at all times. Do not let them sit in a discharged condition.

1. Always follow the battery charging directions as outlined in the BATTERY CHARGING section of this manual.
2. Keep battery tops and terminals free from corrosion. A strong solution of baking soda and water is the best way to keep the batteries corrosion free. DO NOT ALLOW THE BAKING SODA / WATER SOLUTION TO ENTER THE BATTERY CELLS.
3. Use a wire brush with the baking soda solution to properly clean the battery posts and connections.
4. Check battery connections for wear and loose terminals. Replace if necessary.

### MACHINE STORAGE

1. Always store the machine indoors.
2. Always store the machine in a dry area.
3. Always store the machine in its upright position.
4. Always store the machine with the pad driver/ brush raised off the floor.
5. Always store the machine with the squeegee assembly raised off the floor.
6. If storing in an area which may reach freezing temperatures, be sure to drain all fluids from the machine prior to storage. Any damage caused by freezing temperatures will not be covered by the warranty.
7. Drain the recovery tank.
8. Drain the solution tank of all fluid.

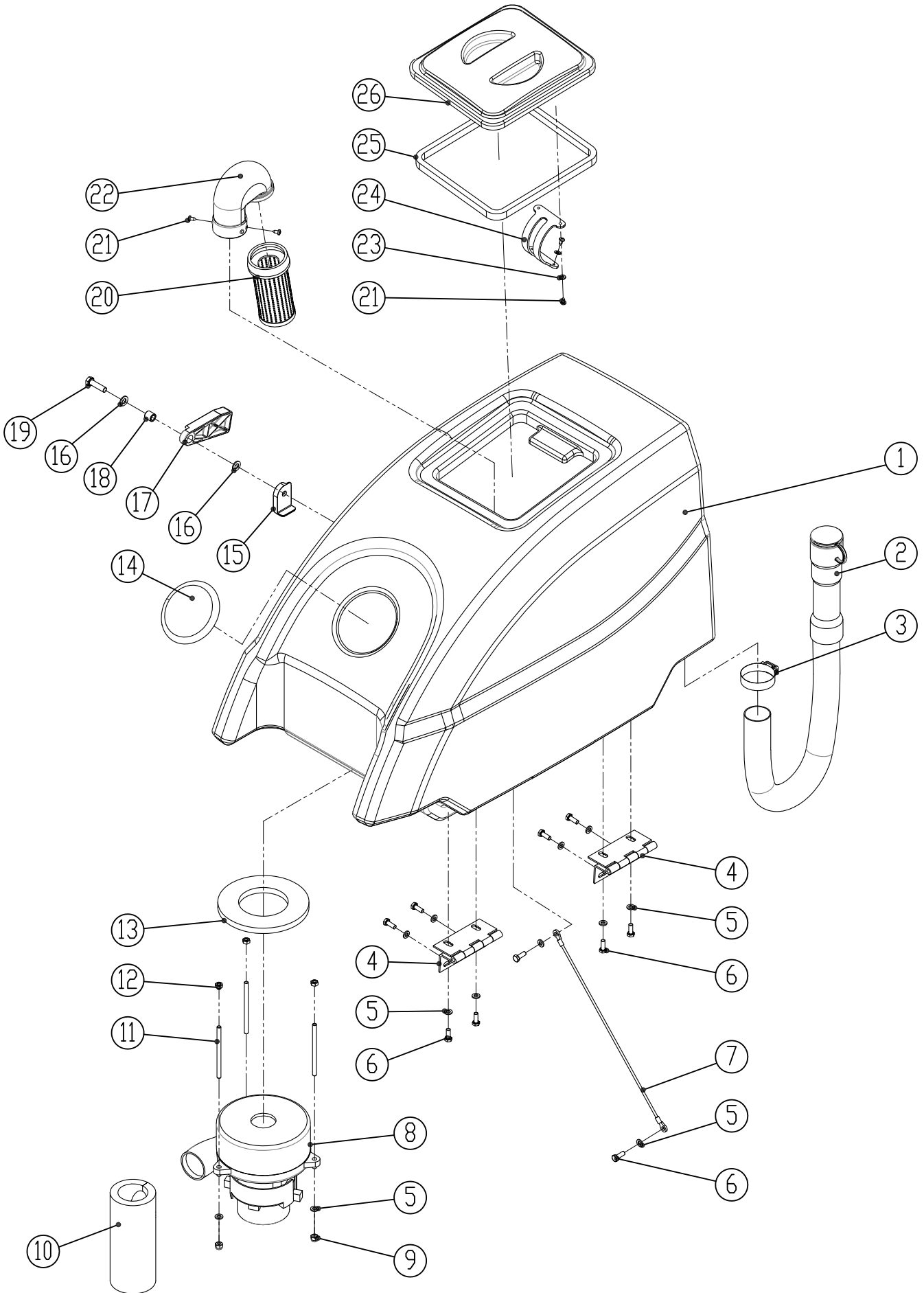
**BASIC TROUBLESHOOTING**

<b>PROBLEM</b>	<b>CAUSE</b>	<b>SOLUTION</b>
Machine will not operate	Batteries need to be charged	Charge batteries
	Bad batteries	Replace batteries
	Loose battery cable	Tighten loose cable
Brush motor will not operate	Control handle trigger not pulled	Pull control handle trigger
	Tripped brush motor circuit breaker	Reset brush circuit breaker button
	Bad brush motor switch	Replace brush motor switch
	Bad brush motor solenoid	Replace brush motor solenoid
	Faulty brush motor or wiring	Contact Triple S Dealer
	Worn motor carbon brushes	Contact Triple S Dealer
Vacuum motor will not operate	Bad vacuum motor switch	Replace vacuum motor switch
	Bad vacuum motor relay	Replace vacuum motor relay
	Faulty vacuum motor or wiring	Contact Triple S Dealer
	Worn motor carbon brushes	Contact Triple S Dealer
Little or no solution flow	Ball valve is shut-off	Turn on the ball valve
	Clogged solution tank filter or solution hose	Clean solution tank filter or flush out solution hose
	Clogged solution solenoid valve	Remove valve and clean
Poor water pick up	Recovery tank is full	Drain recovery tank
	Loose drain hose cap	Tighten cap
	Clogged float shut-off screen located in recovery tank	Clean screen
	Clogged squeegee assembly	Clean squeegee assembly
	Worn squeegee blades	Replace or rotate squeegee blades
	Incorrect squeegee blade deflection	Adjust squeegee blade height
	Loose vacuum hose connections	Secure hose connections
	Clogged vacuum hose	Remove clogged debris
	Damaged vacuum hose	Replace vacuum hose
	Recovery tank lid not in place	Properly position cover
	Damaged recovery tank cover seal	Replace seal
	Faulty vacuum motor	Contact Triple S Dealer
	Low battery charge	Recharge batteries
Short run time	Low battery charge	Fully recharge batteries
	Defective batteries	Replace batteries
	Batteries need maintenance	See BATTERY MAINTENANCE
	Faulty battery charger	Repair or replace battery charger

**TECHNICAL SPECIFICATIONS**

<b>Model</b>	<b>Ultron 18BA</b>
Voltage	24VDC
Recovery tank capacity	13 gal / 50 L
Solution tank capacity	10 gal / 40 L
Cleaning path width	18 in / 450 mm
Squeegee width	30 in / 762 mm
Drive system	Brush Assisted
Pad/Brush pressure	55 lbs / 25 Kg
Brush motor	0.75 hp / 0.55 Kw
Brush speed	180 RPM
Vacuum motor	0.68 hp / 0.5 Kw
Water lift	45 in H <sub>2</sub> O / 1143 mm H <sub>2</sub> O
Batteries	2-12, 85AH @ 20 hr
Weight without batteries	145 lbs / 65 Kg
Weight with batteries	265 lbs / 120 Kg
Decibel rating at operator's ear, indoors	68dB(A)
Grade level, max	5% (3°)
Dimensions L × W × H	43.4 × 20.5 × 42.5 in / 1152 × 520 × 1080mm

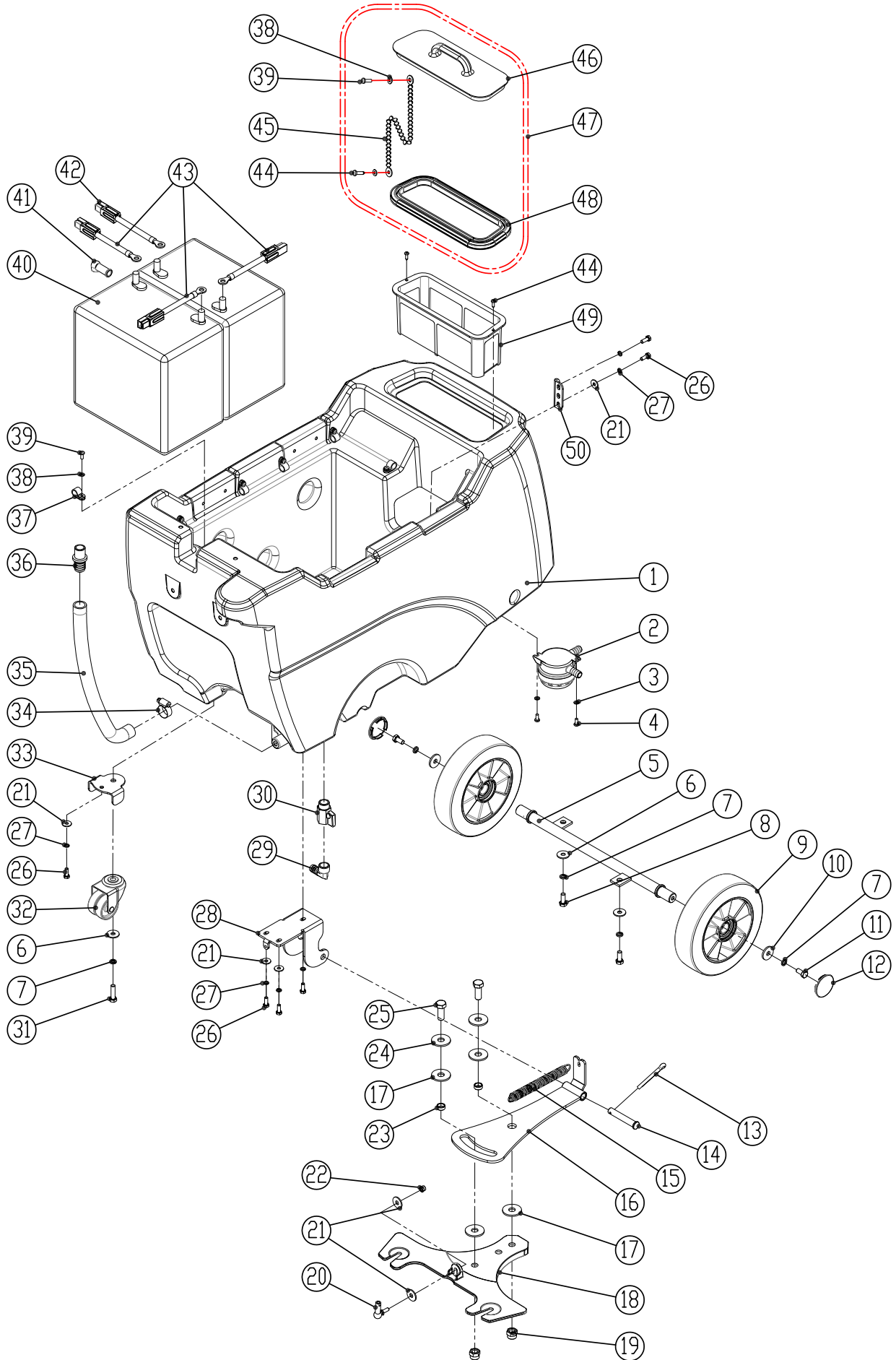
RECOVERY TANK GROUP



**RECOVERY TANK GROUP**

<b>DIA NO.</b>	<b>PART NUMBER</b>	<b>DESCRIPTION</b>	<b>NO. REQ'D</b>
1	8050201-OR	RECOVERY TANK	1
2	8131010	DRAIN HOSE	1
3	1962050	CLAMP	1
4	8111300	HINGE ASSEMBLY	2
5	1421612	FLAT WASHER M6×DIA12×1.6	12
6	1021616	HEX HEAD BOLT M6×16	10
7	8131020	CABLE	1
8	8132050	VACUUM MOTOR, 24VDC, 2-STAGE, KIT	1
9	1123608	LOCK NUT, M6	3
10	8011007	MUFFLER	1
11	8112006	STUD, M6×92	3
12	1121605	NUT, M6	3
13	8112005	GASKET, VACUUM MOTOR	1
14	8050112	LOGO, TRIPLE S	1
15	8111008	BRACKET	1
16	1421824	FLAT WASHER M8×DIA24×2.0	2
17	8111007	RECOVERY TANK SUPPORT	1
18	8115404	SLEEVE, P/M	1
19	1021830	HEX HEAD BOLT M8×30	1
20	8111015	FLOAT, SHUT-OFF	1
21	1321210	SCREW, SELF-TAPPING, ST4×10	6
22	2320220	ELBOW	1
23	1421409	FLAT WASHER M4×DIA9×0.8	4
24	2320217	RUBBER HINGE	1
25	2320218	GASKET	1
26	2320216	COVER, CLEAR	1

**SOLUTION TANK GROUP**



**SOLUTION TANK GROUP**

<b>DIA NO.</b>	<b>PART NUMBER</b>	<b>DESCRIPTION</b>	<b>NO. REQ'D</b>
1	8050101	SOLUTION TANK	1
2	8119100	FILTER ASSEMBLY	1
3	1421409	FLAT WASHER M4×DIA9×0.8	2
4	1221412	PAN HEAD SCREW M4×12	2
5	8016010	WHEEL SHAFT	1
6	1421824	FLAT WASHER M8×DIA24×2.0	3
7	1422821	LOCK WASHER, M8	5
8	1021820	HEX BOLT, M8×20	2
9	8115200	WHEEL, 8 INCH	2
10	1421828	FLAT WASHER M8×DIA28×2.0	3
11	1021816	HEX BOLT, M8×16	2
12	8115206	WHEEL CAP	2
13	1645324	COTTER PIN	1
14	8037015	PIN DIA12×70	1
15	8115004	SPRING	1
16	8037010	BRACKET, SQUEEGEE	1
17	8135001	PLASTIC WASHER, M8×DIA30×1.5	4
18	8115001	SQUEEGEE SUPPORT	1
19	1123115	LOCK NUT, M12	2
20	8114511	JOINT BEARING	1
21	1421618	FLAT WASHER M6×DIA18×1.6	8
22	1123608	LOCK NUT, M6	1
23	8115405	SLEEVEE, P/M	2
24	1421132	FLAT WASHER M12×DIA32×2.0	2
25	1021230	HEX BOLT, M12×30	2
26	1021616	HEX BOLT, M6×16	6
27	1422616	LOCK WASHER, M6	6
28	8037020	BRACKET, SQUEEGEE	1
29	8119007	ELBOW, G1/2	1
30	8119005	BALL VALVE, G1/2	1
31	1021830	HEX BOLT, M8×30	1
32	8013016	2 INCH CASTER	1
33	8034012	BRACKET, CASTER	1
34	1962025	CLAMP, 16-25MM	1

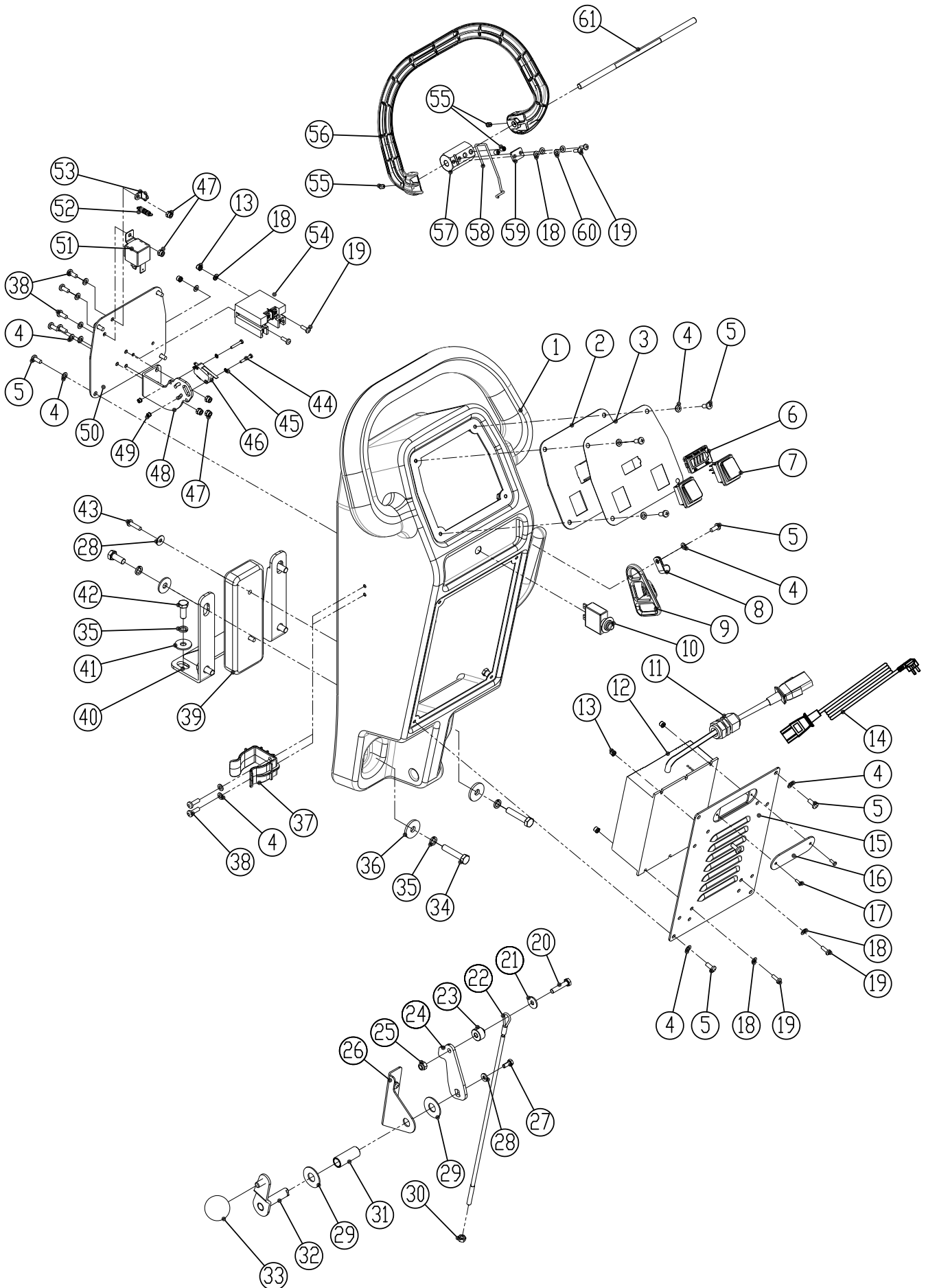
## PARTS LIST

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### SOLUTION TANK GROUP

<b>DIA NO.</b>	<b>PART NUMBER</b>	<b>DESCRIPTION</b>	<b>NO. REQ'D</b>
35	8050105	CLEAR TUBING	1
36	8050130	CONNECTOR	1
37	8113009	NYLON, CLAMP	7
38	1421510	FLAT WASHER M5×DIA10×1	10
39	1221512	PAN HEAD SCREW M5×12	8
40	8013010	BATTERY, DISCOVER EV24A-A OR TROJAN 24TMX	2
41	8114751	JACKET, BATTERY TERMINAL, BLACK	4
42	8050476	BATTERY CONNECT CABLE, RED	1
43	8050475	BATTERY CONNECT CABLE, BLACK	3
44	1321310	SCREW, SELF-TAPPING, ST4.8×9.5	3
45	8050153	CHAIN	1
46	8050156	LID, SOLUTION TANK FILL PORT	1
47	8050150-BK	LID, KIT	1
48	8050152	SEAL	1
49	6210107	FILTER	1
50	8013002	BRACKET	1



**CONTROL CONSOLE GROUP**

## PARTS LIST

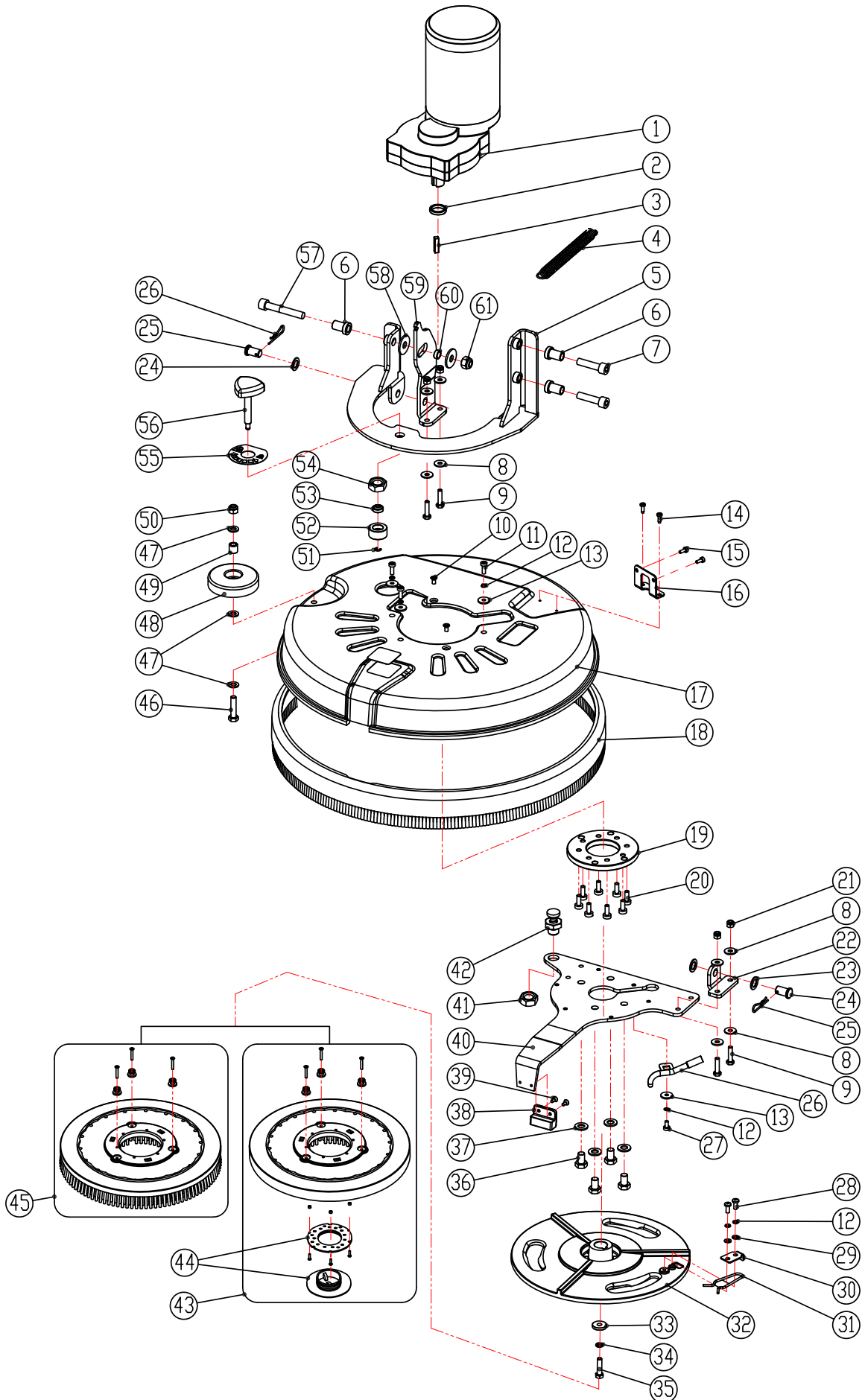
### CONTROL CONSOLE GROUP

DIA NO.	PART NUMBER	DESCRIPTION	NO. REQ'D
1	8050401	CONTROL CONSOLE HOUSING	1
2	8050420	PLATE, CONTROL PANEL	1
3	8050431	DECAL, CONTROL PANEL	1
4	1421510	FLAT WASHER M5×DIA10×1.0	16
5	1221512	PAN HEAD SCREW M5×12	9
6	8014063	BATTERY CAPACITY METER	1
7	8014006	ROCKER SWITCH	2
8	8014041	CLAMP	1
9	8014043	BUFFER	1
10	8114703	CIRCUIT BREAKER, 35A	1
11	2320403	CABLE GLAND	1
12	8014066	ON BOARD BATTERY CHARGER, KIT	1
13	1123406	LOCK NUT, M4	6
14	8112030	POWER CORD, BATTERY CHARGER	1
15	8134060	PLATE, BATTERY CHARGER	1
16	8134061	CLEAR COVER	1
17	1221306	PAN HEAD SCREW M3×6	2
18	1421409	FLAT WASHER M4×DIA9×0.8	6
19	1221412	PAN HEAD SCREW M4×12	6
20	1021630	HEX HEAD BOLT M6×30, SS	1
21	1421618	FLAT WASHER M6×DIA18×1.6	1
22	8050410	CABLE, SQUEEGEE LIFT	1
23	8014101	LIFTING ROPE SPACER	1
24	8034011	BAFFLE	1
25	1123608	LOCK NUT M6	1
26	8134501	BRACKET	1
27	1021512	HEX HEAD BOLT M5×12,SS	1
28	1421515	FLAT WASHER M5×DIA15×1.0	3
29	1421132	FLAT WASHER M12×DIA32×1.5	2
30	1121605	HEX NUT M6	1
31	8134081	SLEEVE	1
32	8134080	SQUEEGEE LIFTING HANDLE	1
33	8113104	BALL KNOB M8	1
34	1021840	HEX HEAD BOLT M8×40, SS	2

**CONTROL CONSOLE GROUP**

<b>DIA NO.</b>	<b>PART NUMBER</b>	<b>DESCRIPTION</b>	<b>NO. REQ'D</b>
35	1422821	LOCK WASHER M8	8
36	1421828	FLAT WASHER M8×DIA28×3	2
37	6210111	CLAMP, DRAIN HOSE	1
38	1221516	PH SCREW M5×16	7
39	8034013	WEIGHT	1
40	8114030	BRACKET, CONTROL CONSOLE	1
41	1421824	FLAT WASHER M8×DIA24×2	6
42	1021820	HEX BOLT M8×20	6
43	1221520	PH SCREW M5×20	2
44	1021320	SCREW M3×20	2
45	1434300	LOCK WASHER, TOOTH, M3	2
46	8114712	MICRO SWITCH	1
47	1123507	LOCK NUT M5	5
48	8014061	BRACKET, MICRO SWITCH	1
49	1123305	LOCK NUT M3	2
50	8014062	BRACKET, REAR PANEL	1
51	8114707	RELAY	1
52	8014035	SPRING	1
53	8014034	BRACKET, SPRING	1
54	8210421	RELAY	1
55	1534608	SET SCREW M6×8	4
56	8024022	TRIGGER	1
57	8014031	BUSHING, HEX	1
58	8014032	SPRING ROD	1
59	8014033	PLATE	1
60	1422411	LOCK WASHER, M4	2
61	8114101	SHAFT	1

**SCRUB HEAD GROUP**



**SCRUB HEAD GROUP**

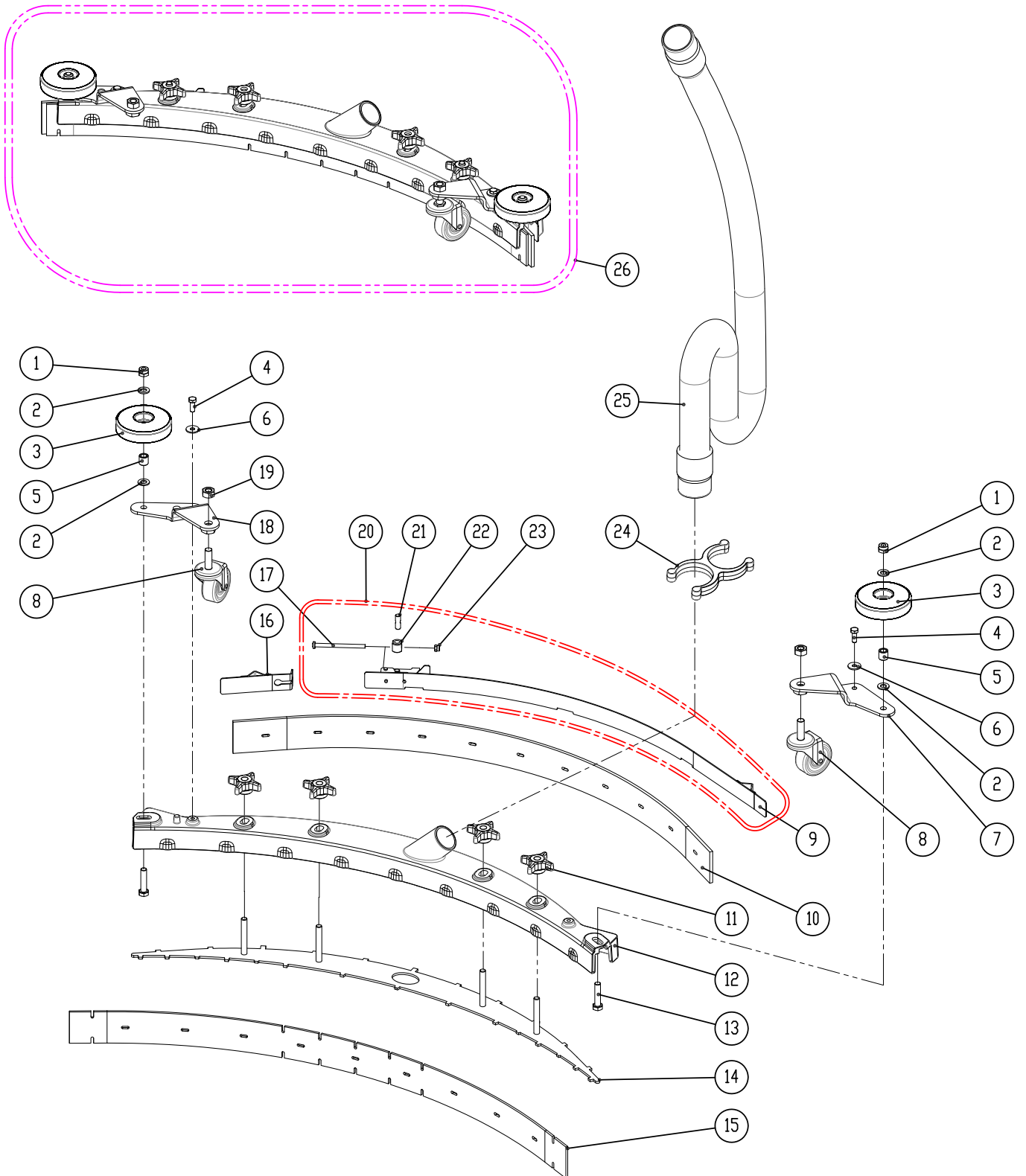
<b>DIA NO.</b>	<b>PART NUMBER</b>	<b>DESCRIPTION</b>	<b>NO. REQ'D</b>
1	8015200	BRUSH MOTOR, 24VDC 3/4HP, KIT	1
2	8015003	SPACER	1
3	1656432	KEY	1
4	8115004	SPRING	1
5	8015010	BRACKET, SCRUB HEAD	1
6	8015007	BUSHING	3
7	1511040	SOCKET SCREW, DIA10×40	2
8	1421618	FLAT WASHER M6×DIA18×1.6	8
9	1021625	HEX HEAD BOLT, M6×25	4
10	1222510	SH SCREW, M5×10	2
11	1221516	PAN HEAD SCREW M5×16	3
12	1422513	LOCK WASHER, M5	6
13	1421518	FLAT WASHER M5×DIA18× 2.0	4
14	1321213	SELF-TAPPING SCREW, ST4.2×13	2
15	1221410	PAN HEAD SCREW, M4×10	2
16	8015103	BRACKET, SOLENOID VALVE	1
17	8015005	COVER, SCRUB HEAD	1
18	8015090	SPLASH GUARD, SCRUB HEAD	1
19	8015087	SPACER	1
20	1221616	PAN HEAD SCREW, M6×16	8
21	1123608	LOCK NUT M6	4
22	8015001	BRACKET	1
23	8015116	NYLON WASHER DIA12.5× 20×1.5	4
24	1644220	PIN DIA12×20	2
25	1646240	COTTER PIN 2×40	2
26	8015060	INLET	1
27	1221510	PAN HEAD SCREW M5×10	1
28	1221512	PAN HEAD SCREW M5×12	2
29	1421510	FLAT WASHER M5×DIA10×1.0	2
30	8116002	PLATE, BRUSH CLAMP	1
31	8116003	SPRING CLIP	1
32	8116008	HUB, DRIVE, 3-LUG	1
33	8116010	FLAT WASHER DIA8.5×DIA25.4×4.5	1
34	1422821	LOCK WASHER, M8	1

## PARTS LIST

### SCRUB HEAD GROUP

<b>DIA NO.</b>	<b>PART NUMBER</b>	<b>DESCRIPTION</b>	<b>NO. REQ'D</b>
35	1023815	HEX BOLT, 5/16-18×1.5" UNC	1
36	1011016	HEX BOLT, M10×16	4
37	1421020	FLAT WASHER M10×DIA20×2.0	4
38	8015108	SUPPORT	1
39	1212410	SH SCREW M4×10	2
40	8015041	BRACKET, BRUSH MOTOR	1
41	1111215	HEX NUT, M16	1
42	8015050	BRUSH PLUNGER	1
43	9040017	PAD HOLDER, 17 INCH	1
44	9000001	BIG MOUTH	1
45	9050018	BRUSH, 18 INCH	1
46	1021835	HEX HEAD BOLT, M8×35	1
47	1421824	FLAT WASHER, M8×DIA24×2.0	3
48	8116078	WHEEL, BUMPER	1
49	8115404	SLEEVEE, P/M	1
50	1123810	LOCK NUT, M8	1
51	1439005	RING, DIA5	1
52	8015105	HOUSING, BEARING	1
53	8015104	JOINT BEARING	1
54	1111008	HEX NUT, M10	1
55	8015106	DECAL	1
56	8015020	HANDLE, ADJUSTING	1
57	1511065	SOCKET BOLT M10×65	1
58	8015115	NYLON WASHER, DIA10.5×DIA30×2.5	2
59	8015002	BRACKET	1
60	8015121	SPACER	1
61	1113012	LOCK NUT M10	1

**SQUEEGEE GROUP**

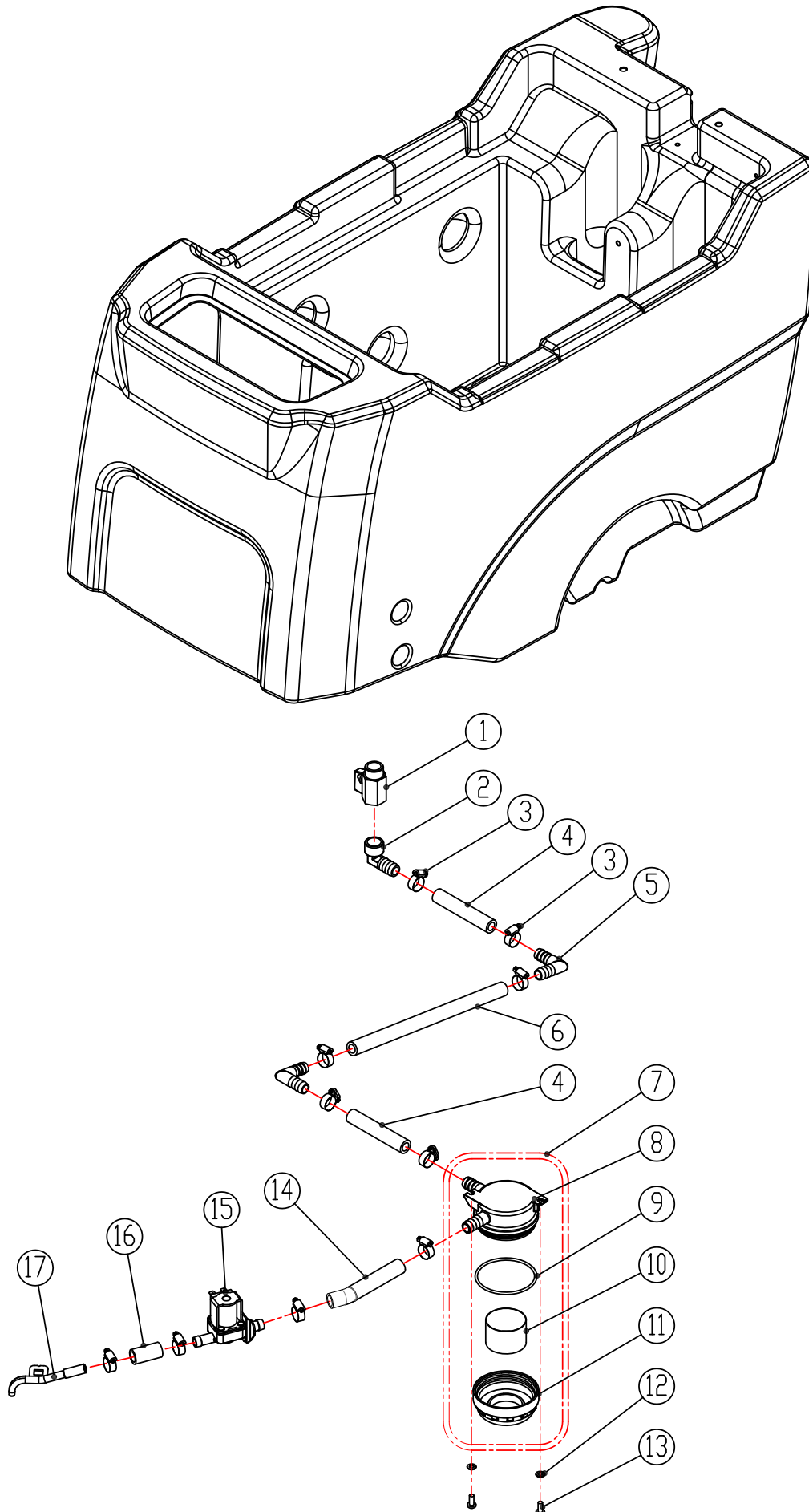


## PARTS LIST

### SQUEEGEE GROUP

DIA NO.	PART NUMBER	DESCRIPTION	NO. REQ'D
1	1123810	LOCK NUT M8	2
2	1421824	FLAT WASHER M8×DIA24×2.0	4
3	8116078	PROTECTIVE WHEEL	2
4	1021616	HEX BOLT M6×16	2
5	8115404	BEARING, JOURNAL	2
6	1421612	FLAT WASHER M6×DIA12×1.6	2
7	8118300	RIGHT BRACKET	1
8	8118400	CASTER, 2 INCH	2
9	8118600	CLAMP ASSEMBLY, SQUEEGEE	1
10	8118022	SQUEEGEE BLADE, REAR, LINATEX	1
	8118002	SQUEEGEE BLADE, REAR, PU (OPTIONAL)	1
11	8118003	STAR KNOB M8	4
12	8118004	SQUEEGEE HOUSING	1
13	1021835	HEX BOLT M8×35	2
14	8118005	RETAINER, SQUEEGEE	1
15	8118021	SQUEEGEE BLADE, FRONT, LINATEX	1
	8118001	SQUEEGEE BLADE, FRONT, PU (OPTIONAL)	1
16	8118610	SHORT CLAMP ASSEMBLY	1
17	1221575	SCREW M5×75	1
18	8118200	LEFT BRACKET	1
19	1121008	HEX NUT M10	2
20	8118600A	CLAMP ASSEMBLY	1
21	8118624	SPACER	1
22	8118623	SHAFT	1
23	1123507	LOCK NUT M5	1
24	8118109	HOLDER VACUUM HOSE	1
25	8118006	VACUUM HOSE	1
26	8118000-BK	SQUEEGEE ASSEMBLY, LINATEX	1



SOLUTION FLOW GROUP

## PARTS LIST

### SOLUTION FLOW GROUP

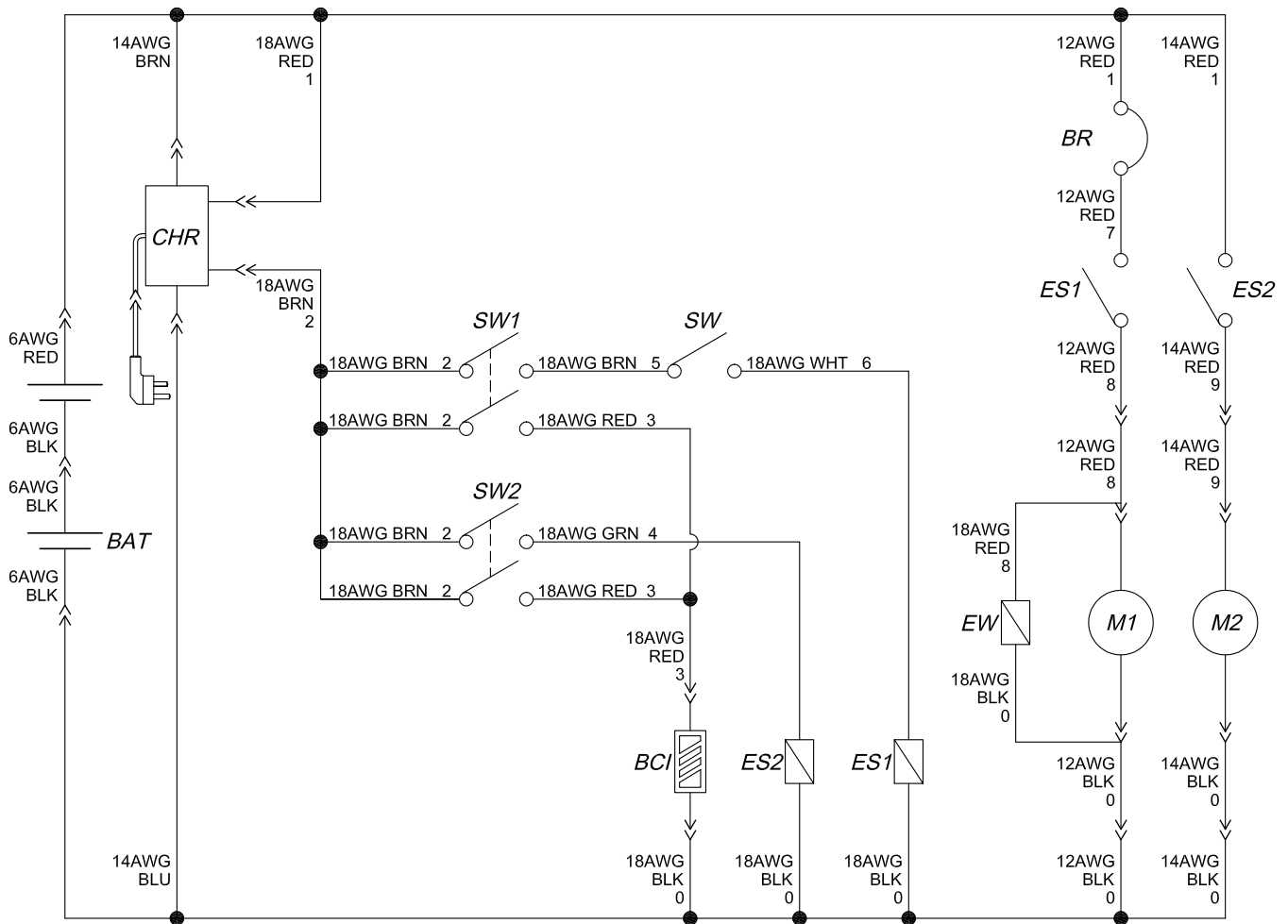
<b>DIA NO.</b>	<b>PART NUMBER</b>	<b>DESCRIPTION</b>	<b>NO. REQ'D</b>
1	8119005	BALL VALVE, G1/2	1
2	8119007	ELBOW G1/2	1
3	1962016	CLAMP	10
4	8050901	TUBING ID=12MM L=85MM	2
5	8119002	ELBOW, TUBING BARB	2
6	8050902	TUBING ID=12MM L=230MM	1
7	8119100	FILTER ASSEMBLY, 70 MESH	1
8	8119101	BASE, FILTER ASSEMBLY	1
9	1622760	O RING	1
10	8119103	SCREEN, FILTER, 70 MESH	1
11	8119102	CAP, FILTER ASSEMBLY	1
12	1421409	FLAT WASHER M4×DIA9×0.8	2
13	1221412	PAN HEAD SCREW M4×12	2
14	8050903	TUBING ID=12MM L=120MM	1
15	8018007	SOLENOID VALVE, 24VDC	1
16	8018004	TUBING	1
17	8015060	INLET, TUBING	1

**WEARABLE PARTS**

<b>DIA NO.</b>	<b>PART NUMBER</b>	<b>DESCRIPTION</b>	<b>NO. REQ'D</b>
1	8115200	WHEEL, 8 INCH, WITH BEARINGS	2
2	8116009	BUMPER, ROLLER	3
3	8118400	CASTER, 2 INCH	2
4	8118001	FRONT SQUEEGEE BLADE, PU	1
	8118021	FRONT SQUEEGEE BLADE, LINATEX	1
5	8118002	REAR SQUEEGEE BLADE, PU	1
	8118022	REAR SQUEEGEE BLADE, LINATEX	1
6	9040017	PAD HOLDER, 17 INCH	1
7	9050018	BRUSH, 18 INCH	1
8	8015090	SPLASH GUARD, SCRUB HEAD	1

# WIRING DIAGRAM

## WIRING DIAGRAM



- BAT: 2-12V battery
- CHR: On board charger
- SW: Control handle switch
- SW1: Brush motor switch
- SW2: Vacuum motor switch
- ES1: Brush motor solenoid switch
- ES2: Vacuum motor relay
- BCI: Battery capacity indicator
- BR: Circuit breaker
- EW: Solution solenoid valve
- M1: Brush motor
- M2: Vacuum motor

- BLK: Black
- BLU: Blue
- BRN: Brown
- GRN: Green
- RED: Red
- WHT: White
- YEW: Yellow