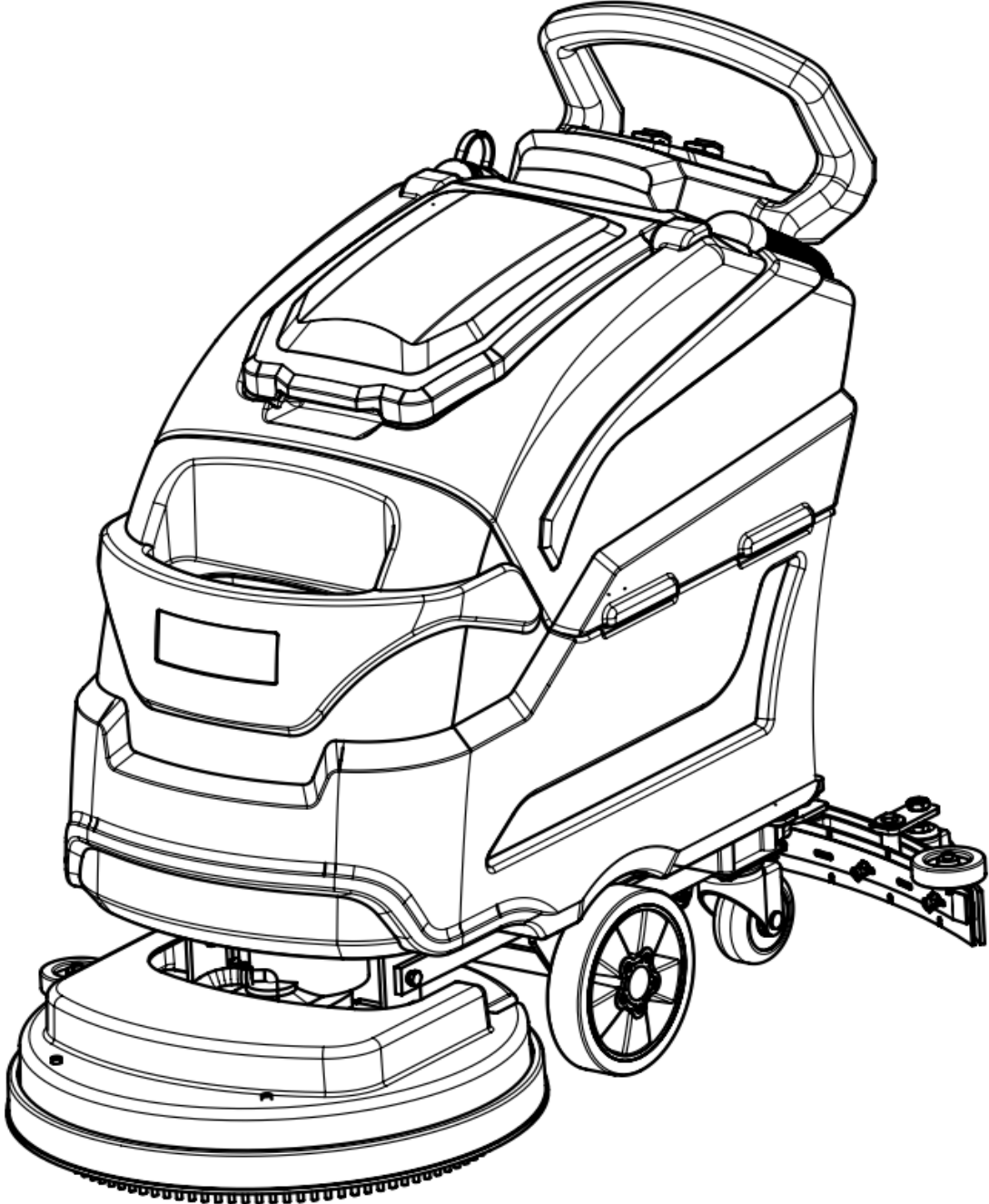




STAR5100B-E (Battery type)

Hand push type Automatic Floor Scrubber Manual



Please read this manual carefully before using the product .

STAR TEKNİK SERVİS HİZMETLERİ SAN. TİC. LTD. ŞTİ.

1.0 OVERVIEW



ATTENTION : Please read this manual carefully before using

5100B/5100E

INTRODUCTION

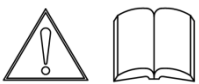
5100B/5100E Hand push type Automatic Floor Scrubber is a machine which uses the mechanical movement of the disc brush and the chemical action of water and detergent solution to clean the hard floor with various stains and at the same time it can collect both the removed stains and the detergent solution not absorbed by the floor.

RANGE OF APPLICATION

This machine is suitable for quick mechanized floor cleaning of small office buildings, hotels, restaurants and workshops, which makes cleaning operations more efficient and faster.

This device is not suitable for using in the rain or under a water gun. It is strictly forbidden to use this equipment to collect dangerous dust or flammable liquid in a flammable and explosive environment. In addition, the device is not suitable for using as a transport vehicle.

2.0 SUMMARY OF SAFETY MATTERS



ATTENTION: The operator should read this manual carefully.

- Be familiar with all the design, control methods, and functions of the scrubber before starting any work.
- When using the scrubber for the first time, the operator should place it in an open area to understand its various functions.
- Before starting any operation, check the status of the scrubber and its components under normal conditions and during operation.
- If the scrubber is not working properly, the device cannot be used.
- The operator must use it in the appropriate application area (cleaning the hard floor) when operating the scrubber.
- Pay attention to obstacles in the workplace, such as stairs, shelves, etc., and pay attention to the surrounding people, especially children.
- Use a suitable cleaning agent (When cleaning the scrubber, use the cleaning agent only in accordance with the manufacturer's instructions for use, and use the cleaning agent at the appropriate dosage and limit.

- This scrubber should only be maintained and serviced by suitably trained personnel using appropriate tools.
- Turn off the power or remove the battery when cleaning or maintaining the scrubber.
- Do not use high pressure water or steam equipment to clean the scrubber.
- Prevent electrical components from entering the water.



ATTENTION: Do not use this scrubber to clean flammable liquids, solvents, fuel oil, reactive metal water vapor or flammable dust.

3.0 TECHNICAL PARAMETERS FOR THE PRODUCT

Item	Parameters
Rated voltage	(5100E) 220V; (5100B) 24V
Working width	510mm
Water absorption width	760mm
Work efficiency	2000 m²/h
Disc brush diameter	510mm
Disc brush rotation rate	150rpm
Disc brush motor	(SC5100E) 220V: 750W; (SC5100B) 24V: 550W
Disc brush pressure	30kg
Water absorption motor	(SC5100E) 220V: 600W; (SC5100B) 24V: 500W
Vacuum degree	180mbar
Turning radius	600mm
Clean water tank capacity	47L
Sewage tank capacity	50L

Noise level	65dB
Battery pack	2×DC12V 100Ah
Battery weight	60 kg
Machine weight (without batteries)	75kg
Wire long	25m

4.0 Packaging and disassembly of the machine

4.1 Packing - this equipment is specially packed with wooden pallets for forklift handling. The package size is as follows: 1230mm long, 610mm wide and 1200mm high

4.2 Remove -- (1) tear off the wrapping film, (2) cut off the packaging tape, (3) remove the packaging board, (4) remove the accessories, (5) use the slope to slide the machine down from the wooden pallet.

5.0 The assembly instructions

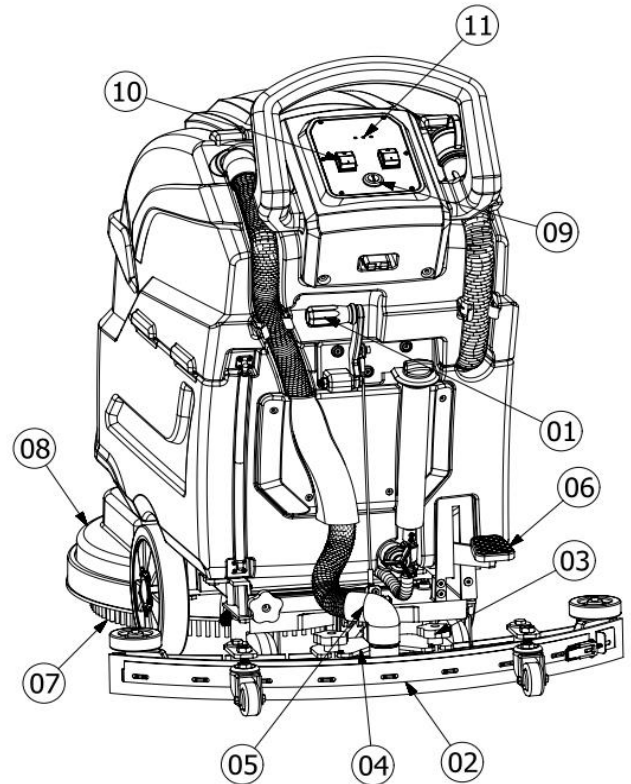
5.1 Assembly of suction squeegee

- Lift the lifting handle (01) of the squeegee.
- Turn on the two knobs (03) of the suction (02).
- Hang the squeegee on the fixed palm (04) and tighten the two knobs.
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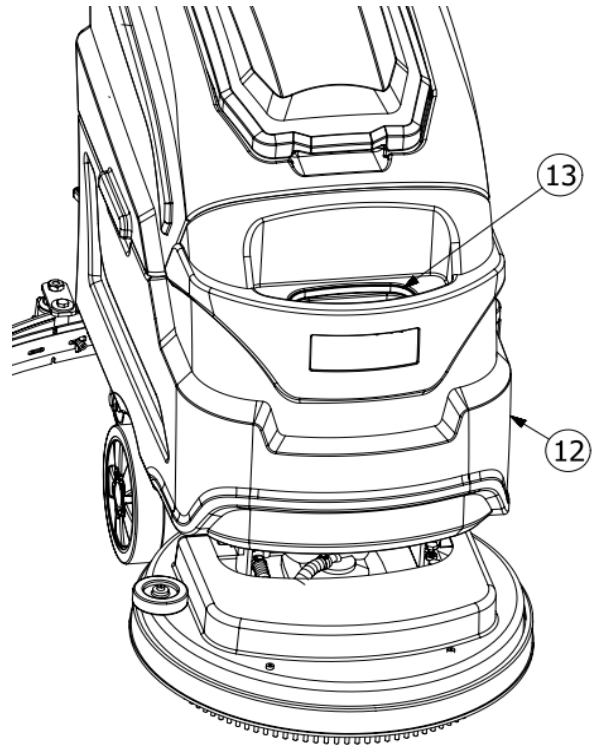
Connect the end of the suction hose (05) to the suction rack.

5.2 Installation of brush, hundred-cleaning pad and needle holder

- Step on the foot pedal (06) and lean against the left position, and the nose of the front end will follow.
- Place the brush (07) or hundred-cleaning pad and needle holder under the center of the head cover (08).
- Step on the foot pedal (06) to move out of the location of the loose foot will automatically raise the head will also automatically lower the pressure on the brush
- Turn on the power lock (09), when the power indicator (11) is on, press the "I" key of the brush plate motor switch (10), and the brush plate will be installed automatically.



6.0 Operation preparation



6.1 Accessories choosing

- Nylon brush: suitable for cleaning rough, irregular or smooth ground
- Hundred-cleaning pad and needle holder brush: suitable for flat polished ground

6.2 Fill the clean water tank with water

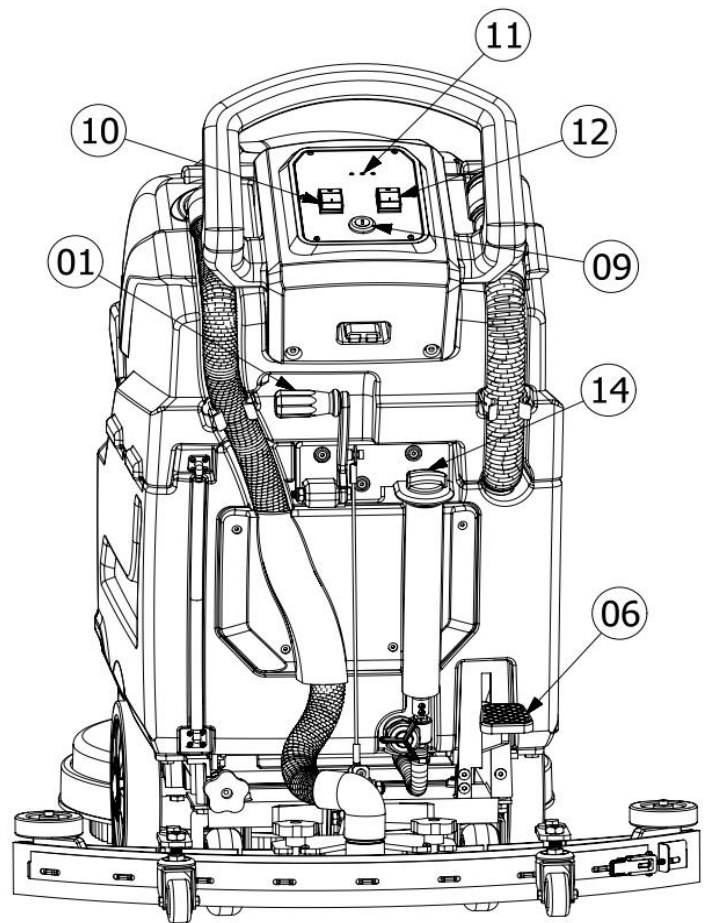
- The front end of the 5100B/5100E scrubber clean water tank (12) is provided with a water injection port (13), which can be directly filled with water
- According to the situation of dirt on the ground, inject clean water and appropriate amount of cleaner into the water tank.

✧ **Warning! If the used cleaner has too much foam, it means that the cleaner is not suitable for the use of automatic floor washer. Please replace the cleaner, otherwise it will burn down the suction motor**

7.0 Manipulation of the instructions

7.1 Correct operation instructions for machine startup

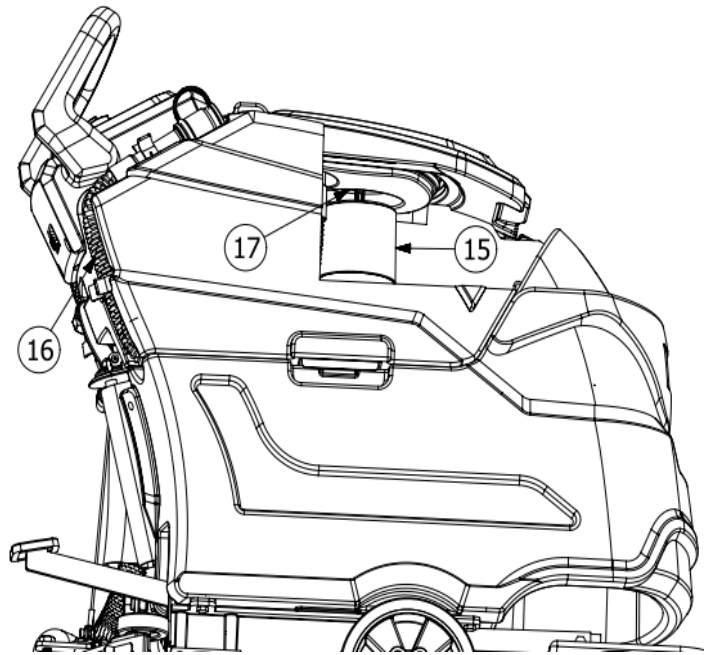
- Pull and step handle (1) and pedal (6) respectively to lower the squeegee and brush plate to the ground.
- Observe and confirm or press the "O" button of the water suction motor switch (10) and the brush disk motor switch (12) to be in the "press" state to close
- Turn on the power lock switch clockwise with the key (09). The indicator light is on(11)
- Press the "I" button of switch (10) and switch (12) successively to start the machine normally
- Adjust the amount of water as required (14)



7.2 Warning and operation instructions of full water in sewage tank

- When the sewage level in the sewage tank is close to the maximum limit water level, the buoy (15) will jump up and block the air outlet (17), so that the vacuum motor cannot work properly and make different noises. (The suction trap will drain the water off the ground)
- Turn off the suction motor and the brush motor immediately
- Lift the brush tray and squeegee

- Move the machine to the location of sewage discharge, remove the sewage hose (16) from the bracket clamp, and remove the pipe cover in the opposite direction to drain the sewage.
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8.0 Common faults and handling methods

8.1 Fault analysis and processing form

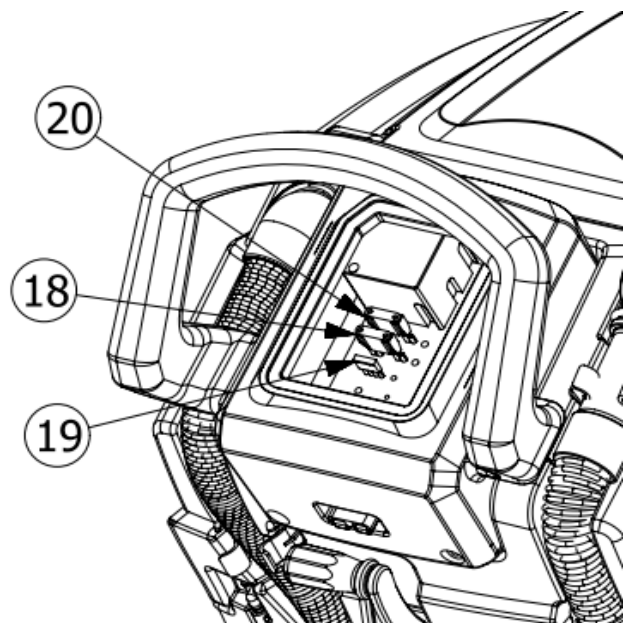
Malfunction	Analysis	Methods
Machine doesn' t work	Did not open the power switch	Please turn on the power switch
	Power cord broken	Check and connect
	Overload protector jumps off	Check and press reset
	Electronic centrifugal switch, capacitor damage	Contact the manufacturer for replacement
	Relay damage	Contact the manufacturer for replacement
Brush motor doesn' t work	Power switch damage	Contact the manufacturer for replacement
	The switch damaged	Replace
	Brush motor damage and its wiring damage	Contact the manufacturer
Suction motor doesn' t work	Relay damage	Contact the manufacturer
	Switch damage	Replace
	Suction motor and its circuit damage	Contact the manufacturer
	Suction motor carbon brush badly worn	Contact the manufacturer
	Relay damage	Contact the manufacturer
	The ball valve is opened too small or	Adjust flow switch

The solution has little or no flow	closed	
	The set of flow switch is too small or the flow switch is off	Adjust flow switch
	Solution hose or filter clogged	Rinse the water pipe or strainer with clean water
	Drain solenoid valve is blocked	Disassemble the discharge solenoid valve and clean it
Poor water absorption	Sewage tank full	Drain the sewage tank
	The plug of the drain pipe has come loose	Tighten the drain plug
	Water scraper assembly blocked	Clean the water scraper
	Water wipers wear out	Turn to use or replace
	The scraper is not in the correct position	Adjust the height of the scraper and the ground
	The suction pipe is not reliably connected to the wiper assembly	Connect the suction pipe reliably
	The suction pipe is blocked	Clear the blockage
	Suction pipe damage	Replace suction pipe
	The cover of the sewage tank is not properly closed	Close the cover
	The seal strip of sewage tank cover is damaged	Replace the strip
	Suction motor damage	Contact the manufacturer

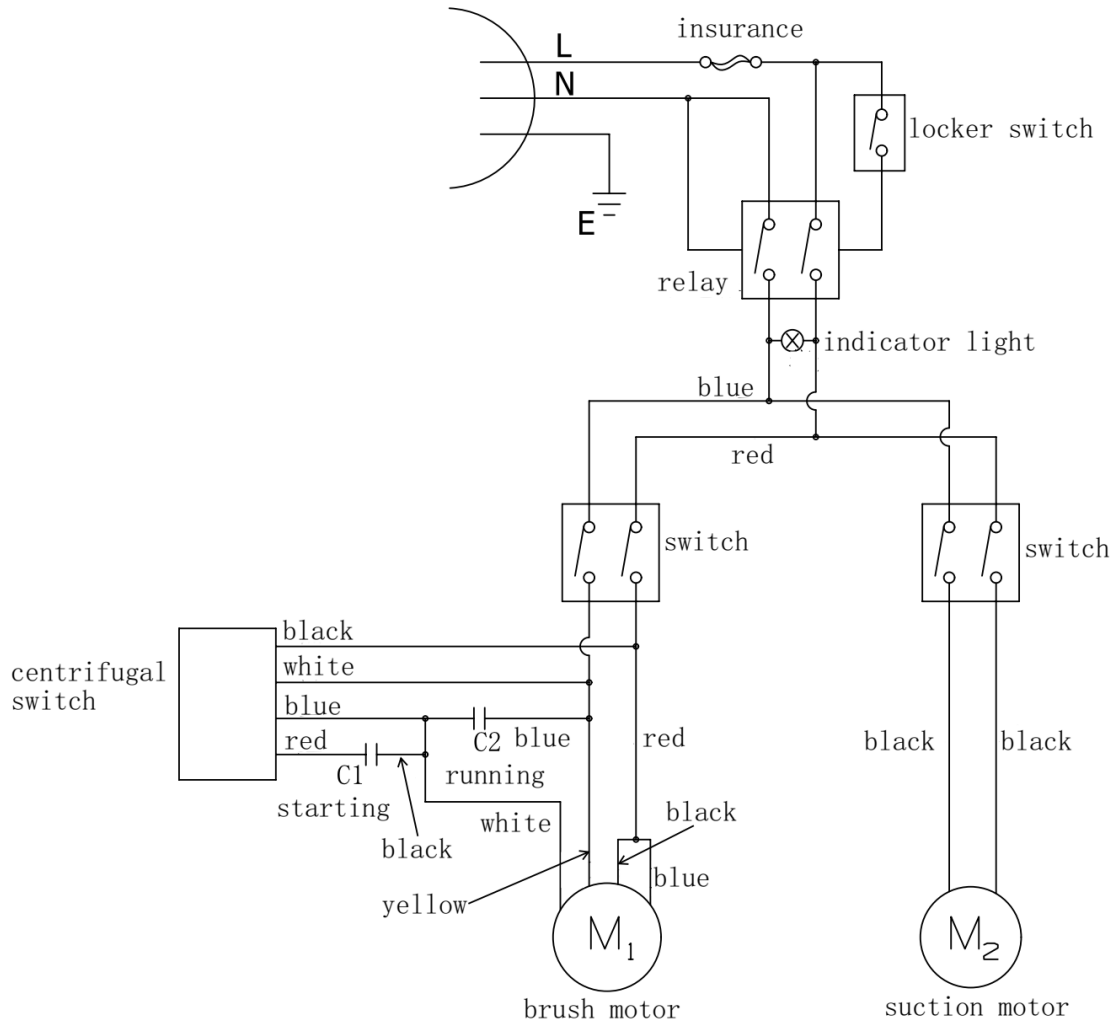
8.2 Preliminary inspection instructions

- When the machine fails to operate

 - the power lock is turned on, the three battery indicator does not light up. First check whether the 3A fuse (19) is blown, and check whether the power lock is broken after troubleshooting. Finally, the circuit board may be broken.
 - or lights are on, press the "I" relay of the brush motor switch (10) to act, it may be that the 50A fuse (20) is blown.
 - press the "I" relay of the water suction motor switch (12) to act, it may be that the 30A fuse (18) is blown.



8.3 5100E Circuit diagram



YL-5100B Circuit diagram

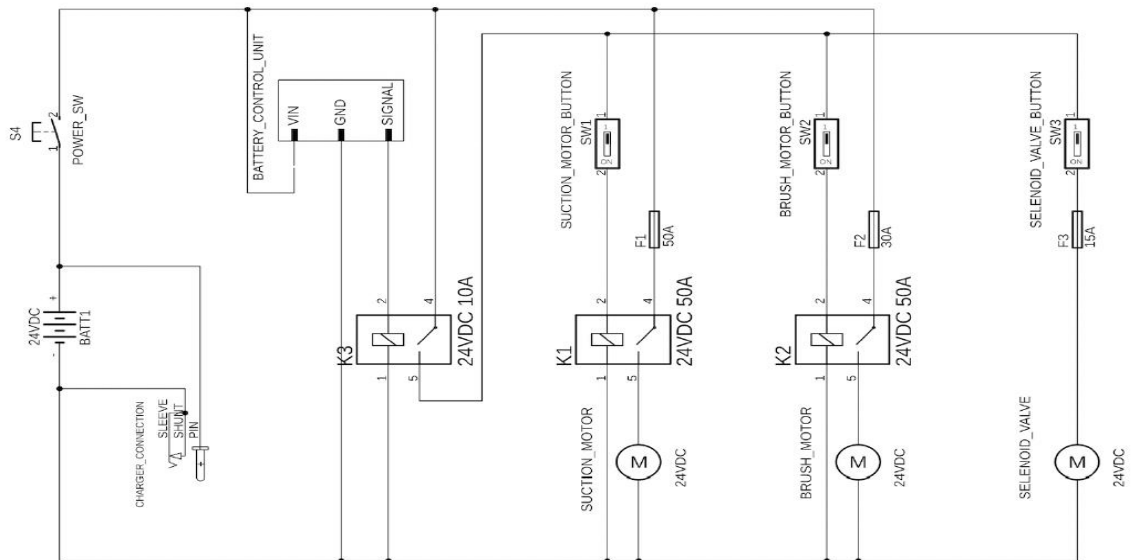
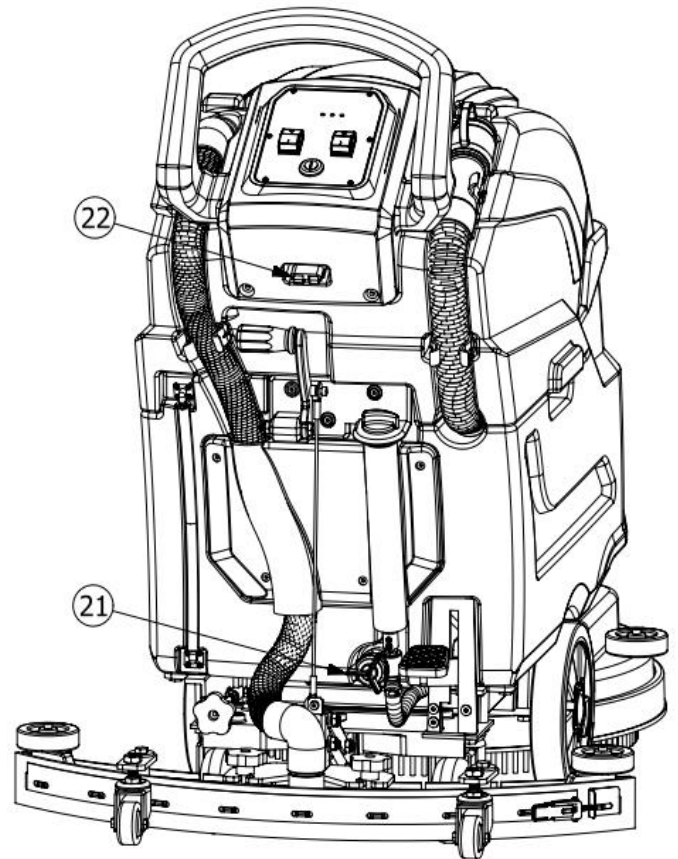


Figure 1.1 Electrical Wiring Schematic

9.1 Daily maintenance and repair

- (1) Remove the pin holder/brush tray and wipe with a specific cleaner.
- (2) Drain the sump and rinse with clean water. Check the sewage tank for debris. Remove it immediately. In addition, the remaining solvent in the water tank should be discharged clean. [Twist open water discharge plug (21) discharge]
- (3) Lift the wiper assembly off the floor and wipe the wiper strip with a wet towel.
- (4) Remove the vacuum suction screen device and rinse with clean water.
- (5) Wipe the machine clean with a special cleaner.
- (7) Check if the edge of the blade is sharp. If it is damaged, turn it around or replace it.



9.2 Monthly maintenance

- (1) Check the seal strip of the sewage tank cover. If there is any damage, please replace it
- (2) Lubricate all lubrication parts and shafts with a specified lubricant.
- (3) Check whether the fasteners are loose.
- (4) Check the water tank for leaks.

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9.4 Battery maintenance

- (1) Please follow the battery charging chapter in the operation manual of each manufacturer for maintenance.
- (2) The top of the battery and the electrode must be corrosion-proof. Soda water can be used to prevent corrosion, so this solution must not enter the battery.
- (3) Use a brush moistened with soda water to wipe the battery and the battery connection line.
- (4) Regularly check whether the battery cable is worn out and whether the contacts are loose, replace it if necessary.

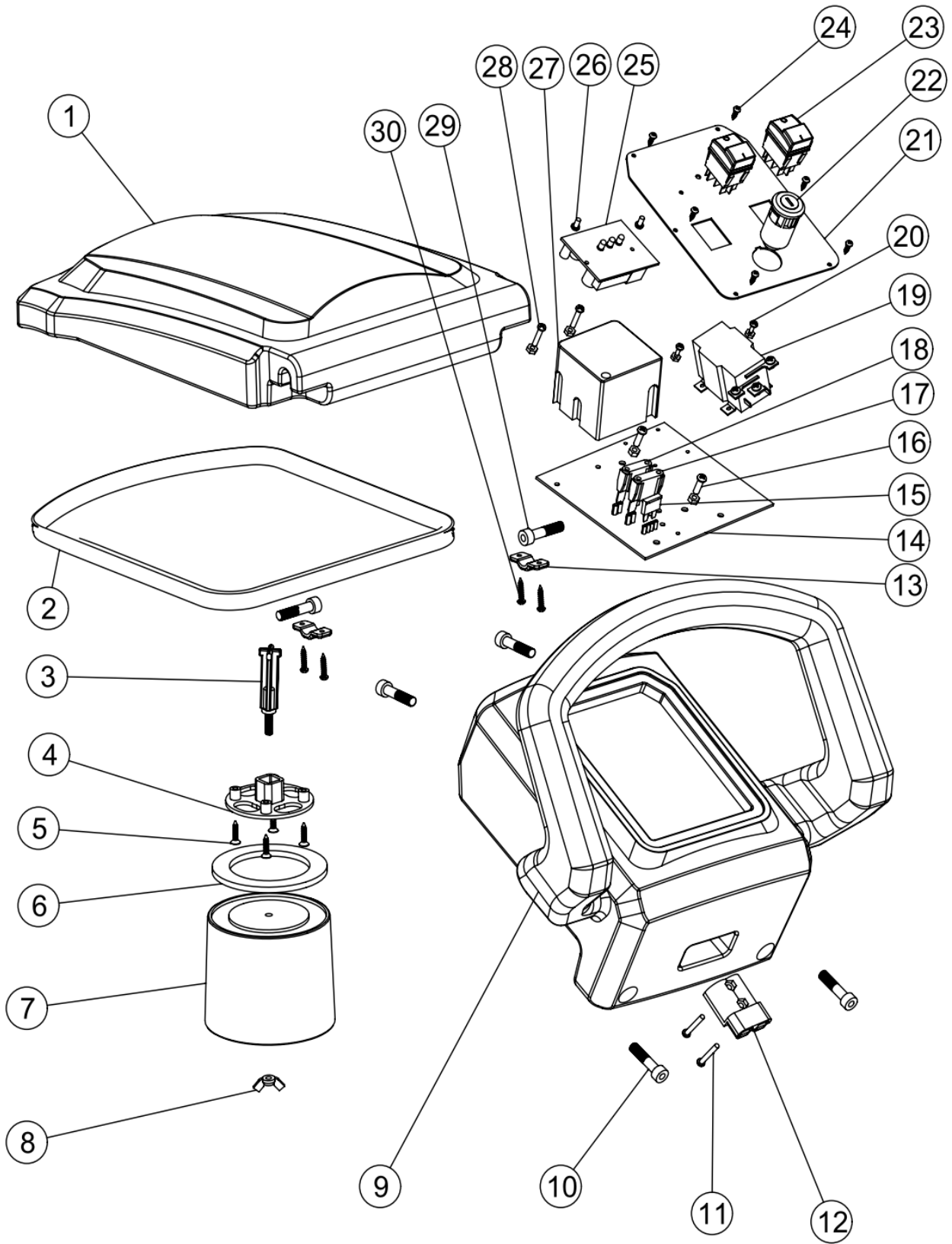
9.5 Machine storage

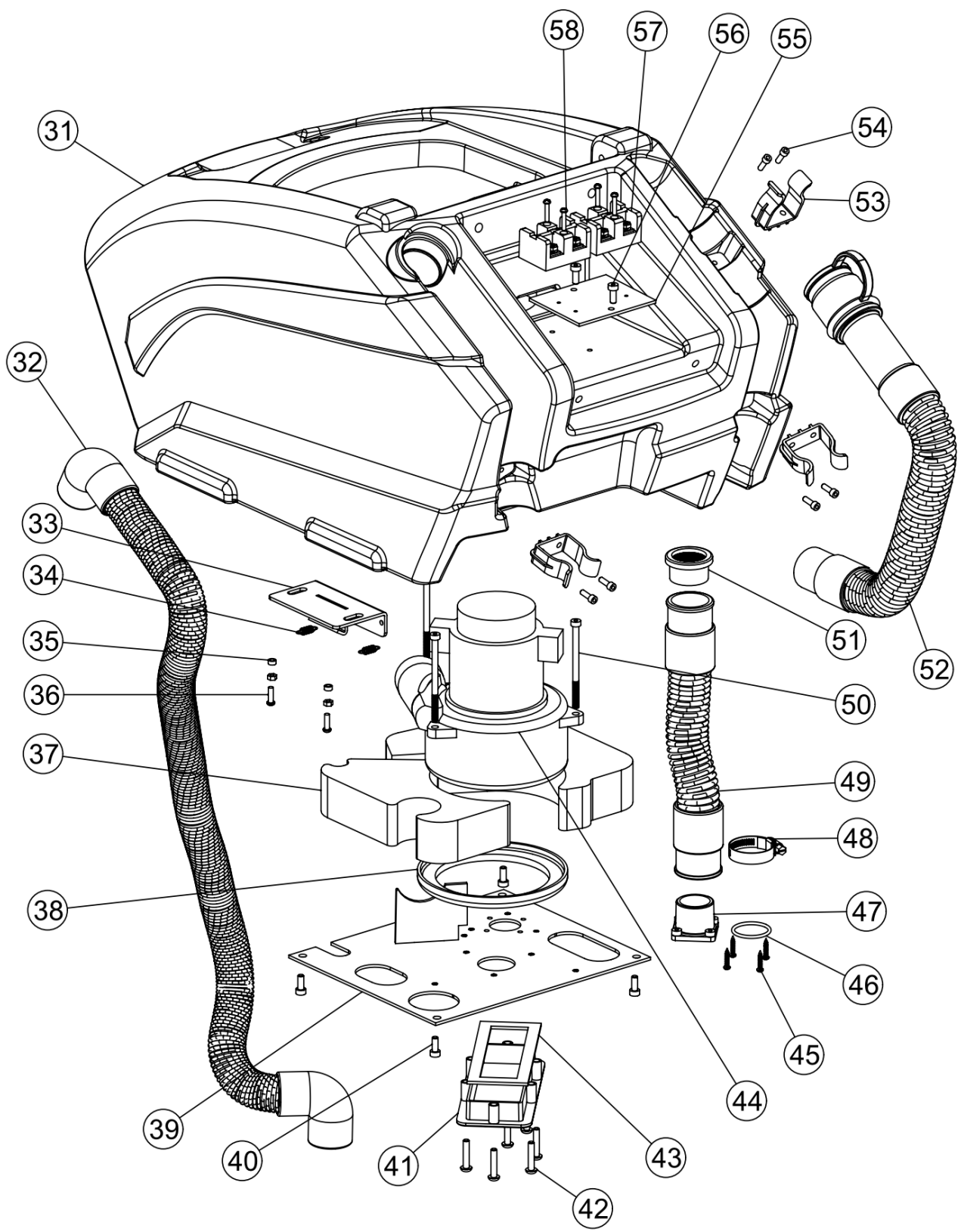
9.3 Maintenance of motors

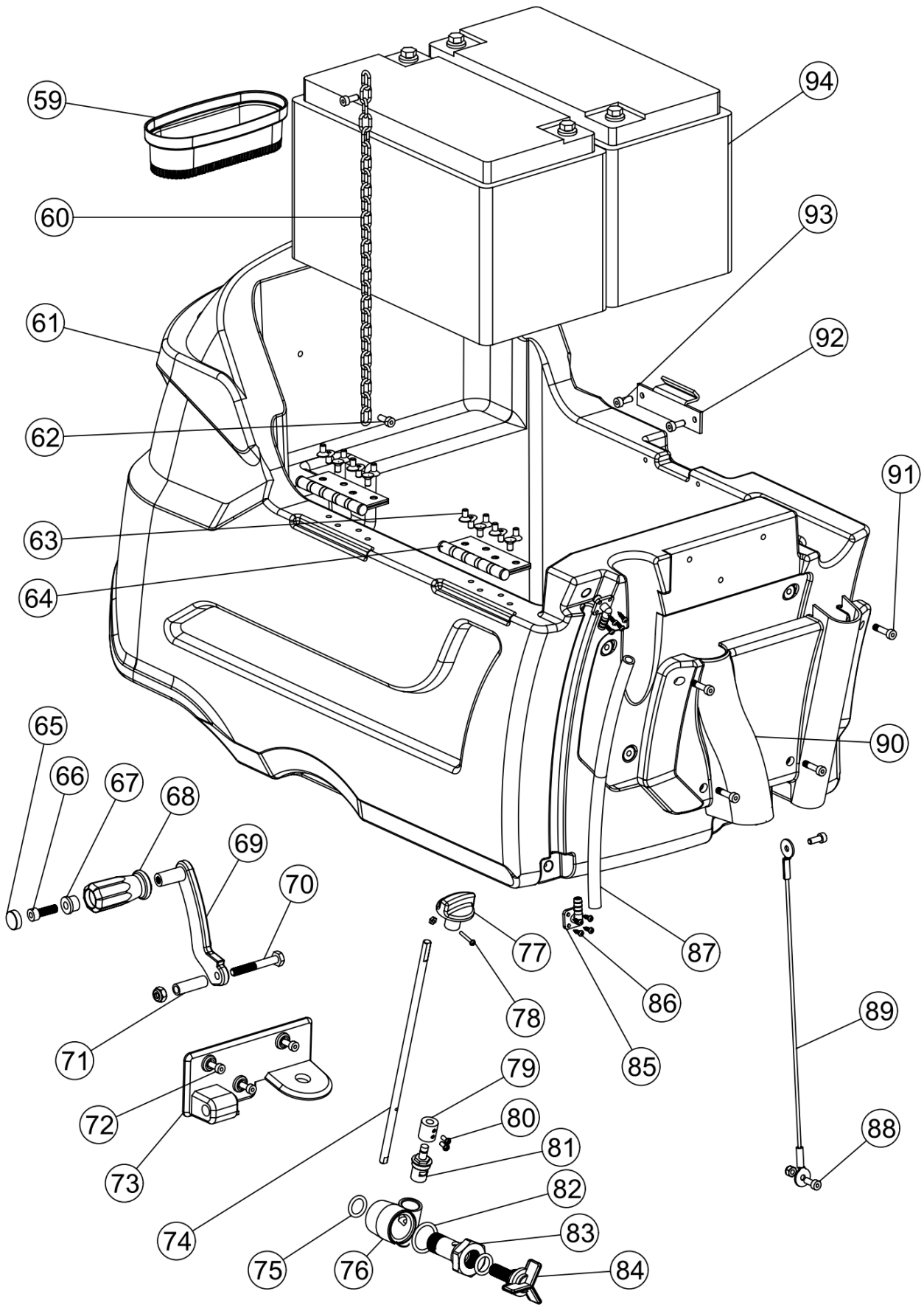
- (1) For motor maintenance, please contact the manufacturer of automatic floor washer.
- (2) Check the motor carbon brush every 250 hours after use. If the carbon brush wear seriously, please contact the manufacturer to replace.

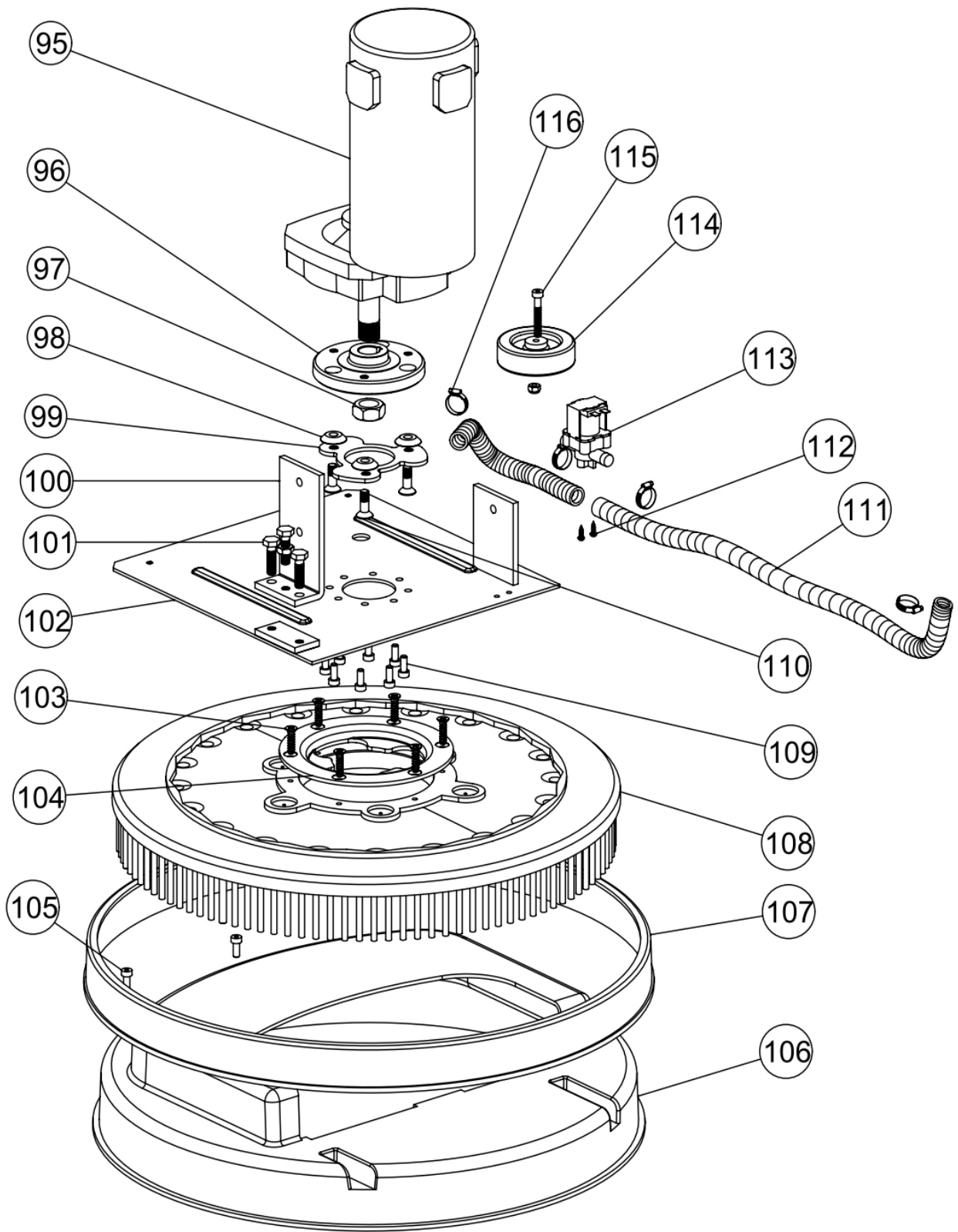
- (1) Stored indoors and in a dry place.
- (2) Store upright.
- (3) Lift the brush plate off the ground.
- (4) Lift the wiper assembly away from the ground.
- (5) If the storage place is extremely cold, keep the machine completely dry before storing it to avoid damage caused by low temperature.
- (6) Drain the sewage tank and clean water tank.

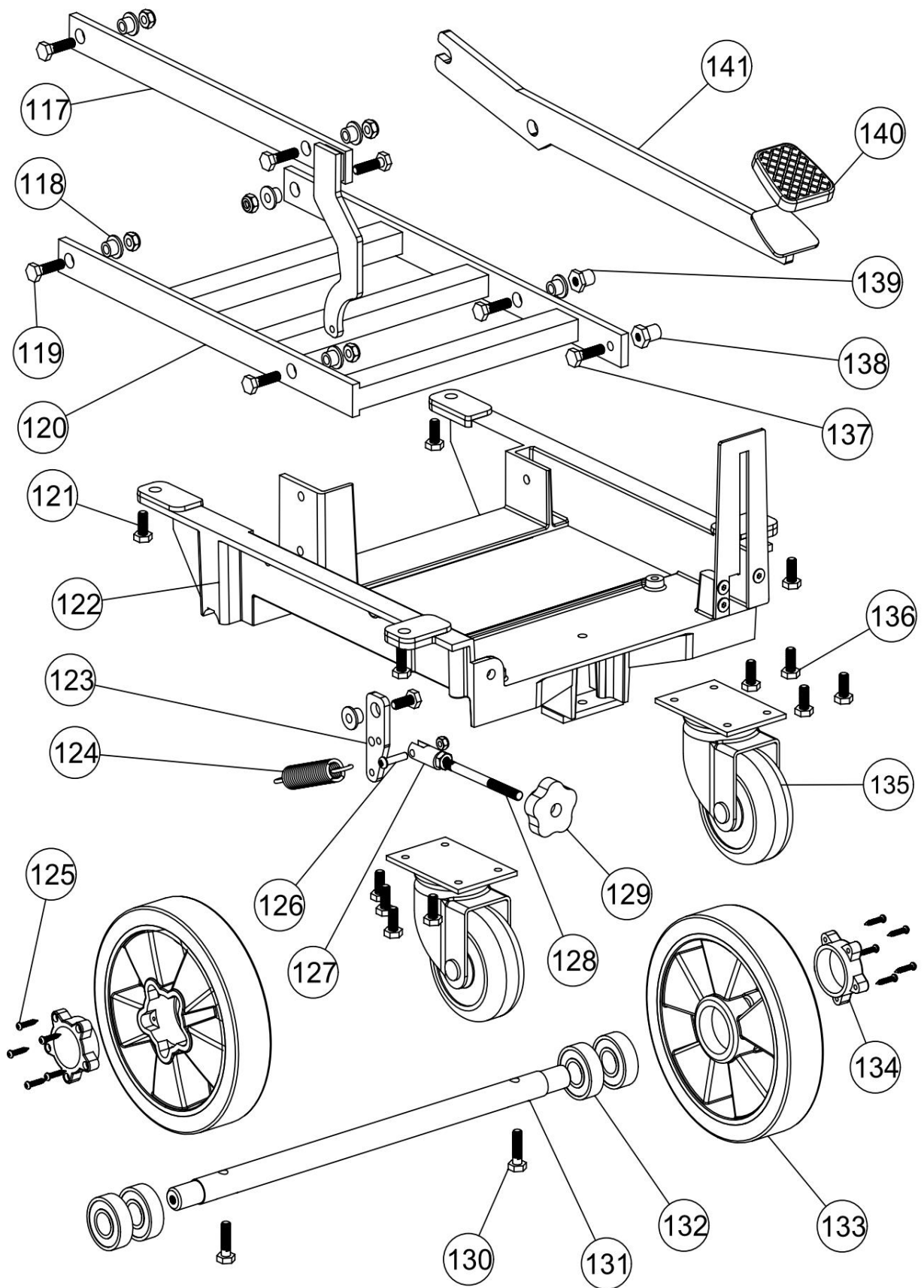
10.0 Exploded view



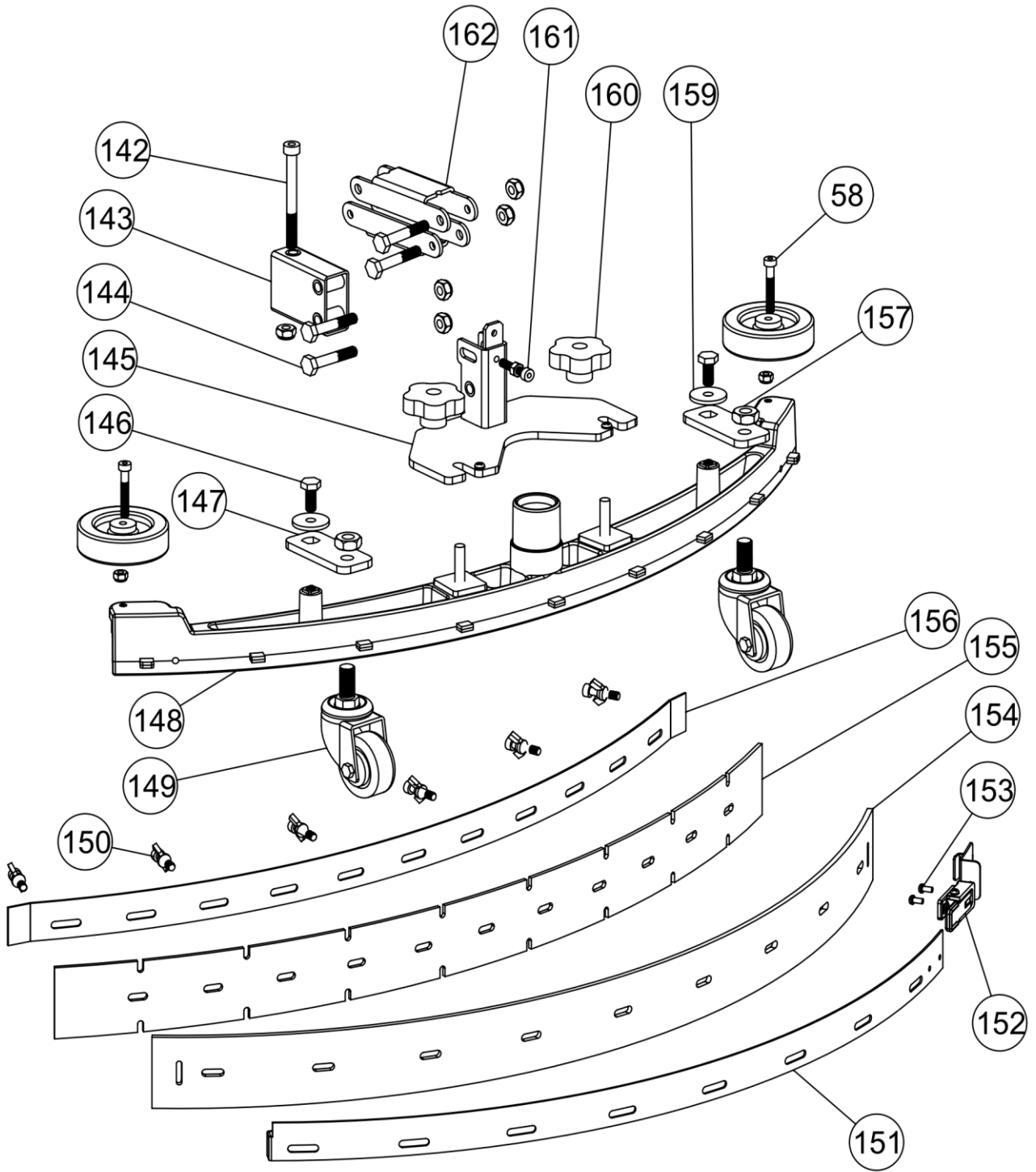








5100B



5100B Exploded list

Number	Name	Quantity	Remarks
1	Radiator cap	1	
2	seal	1	
3	Float guide pin	1	
4	Guide pin positioning frame	1	
5	4X25 countersunk head tapping screws	4	
6	Float soft washer	1	
7	float	1	
8	M6 wing nut	1	
9	Handle box	1	
10	M8X40 cylindrical head hexagon socket screw	2	
11	4X35 pan head tapping screws	2	
12	Charging socket	1	
13	Water tank cover fixing plate	2	
14	Electrical installation board	1	
15	3A fuse plug (circuit board fuse)	1	
16	M5X20 pan head screw (with nut)	2	
17	30A insurance plug (suction motor insurance)	1	
18	50A insurance plug (brush plate motor insurance)	1	
19	50A relay	1	
20	M3X8 pan head screw (with nut)	2	
21	panel	1	
22	Power lock	1	
23	button	2	
24	3X10 pan head tapping screws	6	
25	Circuit board	1	
26	M4X10 pan head screw	2	
27	120A relay	1	
28	M4X20 pan head screw (with nut)	2	
29	M8X45 cylindrical head hexagon socket screw	2	
30	4X20 pan head tapping screws	4	
31	Sewage tank	1	
32	straw	1	
33	Activity button	1	
34	Movable buckle spring	2	
35	Movable buckle washer	2	
36	M5X20 pan head screw (with nut)	2	
37	Muffler sponge	2	
38	Water suction motor gasket	1	
39	Suction motor mounting plate	1	
40	M6X16 hexagon socket head screw	4	
41	Bellows	1	

42	M6X30 cylindrical head hexagon socket screw	6	
43	Bellows soft rubber pad	1	
44	Water suction motor	1	
45	5X20 pan head tapping screws	4	
46	40X3 "O" ring	1	
47	Suction pipe joint	1	
48	27-51 hose clamp	1	
49	Suction pipe	1	
50	M6X90 cylindrical head hexagon socket screw	3	
51	Suction pipe net cover	1	
52	Sewage pipe	1	
53	Pipe clamp	3	
54	M5X16 cylindrical head hexagon socket screw	6	
55	Junction box fixing plate	1	
56	M5X16 cylindrical head hexagon socket screw	2	
57	Junction Box	2	
58	M4X20 pan head screw	4	
59	Clean water filter cover	1	
60	Water tank positioning zipper	1	
61	Clean water tank	1	
62	M6X20 cylindrical head hexagon socket screw	2	
63	M6X12 countersunk screw	16	
64	4 inch stainless steel hinge	2	
65	Lifting handle glove end cap	1	
66	M8X25 cylindrical head hexagon socket screw	1	
67	Lifting glove accessories	1	
68	Lifting gloves	1	
69	Squeegee lift handle	1	
70	M8X60 Hexagon Screw (with nut)	1	
71	Lifting handle glove sleeve	1	
72	M6X16 hexagon socket head screw	3	
73	Lifting handle holder	1	
74	Water adjustment lever	1	
75	24X3.5 "O" ring	2	
76	Water valve housing	1	
77	Water volume adjustment knob	1	
78	M3X20 countersunk head screw (with nut)	1	
79	Adjusting rod connector	1	
80	M4X12 pan head screw	1	
81	Water valve core	1	
82	34X3.5 "O" ring	1	
83	Water valve fasteners	1	
84	Water valve filter element	1	
85	Water ruler elbow tap	2	
86	4X20 pan head tapping screws	8	

87	14X10 transparent hose	1	
88	M6X20 cylindrical head hexagon socket screw	1	
89	Squeegee cable	1	
90	Decorative back cover	1	
91	M6X2 cylindrical head hexagon socket screws	4	
92	Fixed buckle	1	
93	M5X16 cylindrical head hexagon socket screw	2	
94	12V-100aH battery	2	
95	Brush motor	1	
96	Transmission buckle aluminum parts	1	
97	M20X1.5 nut	1	
98	Bevel meson	3	
99	Three blades	1	
100	Brush plate level adjustment piece	1	
101	M8X30 Hexagon Screw	3	
102	Brush motor fixing plate	1	
103	6.4X25 countersunk head tapping screws	6	
104	Brush buckle	1	
105	M6X16 hexagon socket head screw	2	
106	Brush cover	1	
107	Water retaining ring	1	
108	brush	1	
109	M6X12 cylindrical head hexagon socket screw	8	
110	M8X25 countersunk screw	3	
111	18X12PVC soft hose	2	
112	4X10 round head tapping screws	2	
113	The electromagnetic valve	1	
114	Side wheel	3	
115	M6X40 cylindrical head hexagon socket screw (with nut)	1	
116	13-20 hose clamp	1	
117	Pressure rod	1	
118	Bracket movable copper sleeve	7	
119	M8X30 Hexagon screw (with nut)	5	
120	Brush tray lifting bracket	1	
121	M8X20 Hexagon Screw	4	
122	Frame	1	
123	Spring aid	1	
124	Compression spring	1	
125	4X20 pan head tapping screws	1	
126	M6X25 pan head screw (with nut)	1	
127	Fork lever	1	
128	M8X120 stud bolt	1	
129	M8 plum nut	1	
130	M8X35 Hexagon Screw	2	

131	axle	1	
132	6204 bearing	4	
133	8-inch wheel	2	
134	Wheel cover	2	
135	4 inch universal wheel	2	
136	M8X20 Hexagon Screw	8	
137	M8X30 Hexagon Screw	2	
138	Foot lever positioning piece A	1	
139	Foot lever positioning piece B	1	
140	Pedal pads	1	
141	Foot lever	1	
142	M8X80 cylindrical head hexagon socket screw (with nut)	1	
143	Squeegee swing	1	
144	M8X45 hex screw (with nut)	4	
145	Squeegee fixed palm	1	
146	M8X20 Hexagon Screw	1	
147	Adjust wheel support plate	2	
148	Squeegee main frame	1	
149	Squeegee height adjustment wheel	2	
150	M6X25 cylindrical head hexagon socket screw	6	
151	Rear pressure plate of squeegee	1	
152	Pressure plate pull buckle assembly	1	
153	M4X6 round head screw (with nut)	4	
154	After the squeegee	1	
155	Front strip	1	
156	Front pressure plate of squeegee	1	
157	M12 nut	2	
158	M6X40 cylindrical head hexagon socket screw (with nut)	2	
159	8X30X3 meson	2	
160	M8 plum nut	2	
161	M6X30 cylindrical head hexagon socket screw (with nut)	1	
162	Squeegee hinge	2	