

SX-MD16E
SX-MD18E Electric Sprayer
SX-MD20E

User's Manual

Problems	Cause	Solutions
Tighten the joint	• Tighten the joint	• Turn the joint clockwise to tighten the pressure.
Recharge the battery	• Battery short of power	• Recharge the battery
Remove the base	• One inlet valve or outlet valve of the pump has been damaged or blocked	• Replace
Pump clean water while knocking at the pump head gently;	• Pump head gently; pump housing to repair	• Replace the pump head gently; pump housing to repair
Disassemble the pump housing to repair	• Pump head gently; pump housing to repair	• Replace the pump head gently; pump housing to repair

SN	Description	Unit	Qty	Remarks
1	Sprayer Body	1	1	In addition, refer to the manual.
2	User's Manual	1	1	
3	Four hole adjustable	1	1	Refer to the manual.
4	Four hole adjustable	1	1	Refer to the manual.
5	Four hole adjustable	1	1	Refer to the manual.
6	Four hole adjustable	1	1	Refer to the manual.
7	Four hole adjustable	1	1	Refer to the manual.
8	Four hole adjustable	1	1	Refer to the manual.
9	Four hole adjustable	1	1	Refer to the manual.
10	Four hole adjustable	1	1	Refer to the manual.
11	Four hole adjustable	1	1	Refer to the manual.
12	Four hole adjustable	1	1	Refer to the manual.

User's Manual

SX-MD30E
SX-MD18E Electric Sprayer
SX-MD16E

Notice to Users

The User's Manual is a part of the Sprayer. Please keep it in good conditions. In order to utilize and maintain the product in good manner, please read the User's Manual carefully before operation. If you have any doubt, contact the supplier.

The Sprayer shall be operated, maintained and repaired by persons who are familiar with its performance and know how to operate in a safe manner.

The manufacturer shall not be liable for decreased reliability, machine damage and human injury arising from unauthorized modification of the Sprayer.

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I. Product Overview

This Sprayer is one of our electric sprayer series elaborately designed to reduce labor and increase spraying performance in a bid to meet the demands of market. Thanks to its novel design, unique appearance , smooth outline , safe and high-performance operation, in addition to easy carrying either by dragging or back-mounting, the Sprayer is a an ideal upgraded and updated product of traditional sprayers , especially fit for pest-controlling of various crops, flowers and garden plants, cleaning of public places as well as hygiene and disease control of fowl and livestock houses.

The Sprayer is equipped with a micro diaphragm pump and a 12V/7Ah battery as the power source to reduce the labor significantly and attain an efficacy 3~4times higher than that of manpower , amongst other advantages such as its high pressure, uniform atomization, high penetration and attachment of droplets .

II. Structure and Features

Structure: The Sprayer is composed of a spray tank, a back cover, a battery, a diaphragm pump, spraying parts (rubber hose, switch, spray boom and spraying nozzle), a strap, a trailer, etc.

Features:

- ① The spray tank is designed to be concise and elegant, capable of mating with the trailer, easy to disassemble and assemble.
- ② Come with a high-pressure and large flow pump to work with nozzles of various functions and an easy pressure-regulation unit to vary the atomization pressure between 2-4.5 bar, so as to satisfy the demands of various operation types and various nozzles, and attain the purpose of cost-saving and high efficiency.
- ③ Come with a micro diaphragm pump of compact size, light weight, high pressure, even atomization, good penetrability, high adhesion ratio, extended service life

as well as a reliable overload protection.

- ④ Come with a high-precision voltmeter and low-battery alarm circuit for precise and clear indication of battery voltage. The alarm will give warning when the battery voltage falls below 10.8-10.5V, so as to prevent against lower-power working or power-free storage of battery, and keep the battery pole plate from getting degraded, contributing to the extended service life of battery.

- ⑤ Come with a dedicated charger of three-stage charging type (constant current/constant voltage/maintaining)

with short circuit/over current/reverse connection protection. The indicator lamp : red—charging; green—full/stand-by

- ⑥ Designed to be human-friendly to allow for being carried on back or on a trailer. When being carried on a trailer, the height of handle bar can be varied depending on the human height for easy operation.

III. Technical Parameters

- Type:** Knapsack and trailer type
- Overall Size :** 340×300×730mm
- Net Weight:** 8.3kg (trailer: 2.2kg)
- Capacity of Tank:** 16L
- Pump:** Micro diaphragm pump
- Working Pressure :** 2.0~4.5 bar
- limit of pump pressure:** 4.5-5.0 bar
- battery :** 12V7Ah (fully-enclosed, maintenance free)
- Charger:** Input AC100-240V~50/60Hz

Output DC12V 1.3A

Spraying nozzle type	Pressure bar	Flow L/min	Spraying nozzle type	Pressure bar	Flow L/min
Cone spraying nozzle	3.0~4.5	0.70~0.90	Fan spraying nozzle	0.20~0.40	0.60~1.10
Double spraying nozzle	2.5~4.0	1.30~1.60	Four-hole adjustable spraying nozzle	0.20~0.40	0.60~1.10

IV. Precautions

- In addition to strictly following the safety instructions given in the Manual, the operator is required to :

1. Never spray special working liquid;
2. Observe the Safety Instruction given by its manufacturer while operating the pesticide.

Hazards



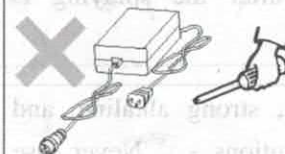
You are required to read this Manual and follow the instructions for purpose of proper operation.



The operator shall wear a mask, operation hat, protection clothes, water-proof glove and rubber boot etc. in the process of spraying.



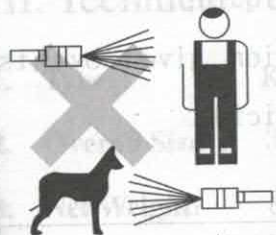
Warehousing and maintaining of pesticide. It shall be kept out of the reach of children. Disposal of pesticide shall follow the safety instructions furnished by its manufacturer.



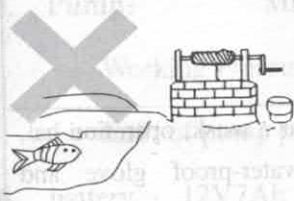
Disassembly and repairing of charger by non-professionals is prohibited. In case of failure, please contact the distributor.



In case of inhaling: Immediately leave the poisonous place to a well-ventilated place to lie down for a rest. In case of intoxication via skin contact, please rinse with water immediately; In case of ingestion, induce vomiting with clean water or salt water and go to hospital as soon as possible.



Never spray at human beings or animals. Never operate against adverse wind.



The residual chemical shall be kept in a container instead of being poured onto the field, ground and rivers. The empty bottles and bags shall either be collected and sent to the manufacturer for proper disposal or buried a barren land with deep under-ground water level and small rainfall far from living areas and water sources.

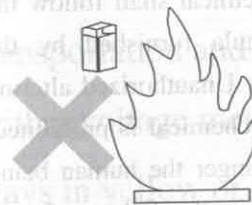
Warning



Persons affected by fatigue, poor health, injury, pesticide allergy or during pregnancy shall never engage in pesticide dispensing. Alcohol drinking immediately after the spraying is prohibited.



Never use strong acid, strong alkaline, and other inflammable solutions. ; Never use highly-toxic and highly-persistent pesticide for pest control of vegetables, melon crops, fruit trees, tee, herbal medicines etc. And the harvesting time after pesticide application shall be long enough.



Never dispose of used batteries in a fire or disassemble them. They shall be collected and sent to the manufacturer or relevant environment protection departments for recycling or proper disposal.



Don't keep at a public place unattended which may endanger public security.

Precautions



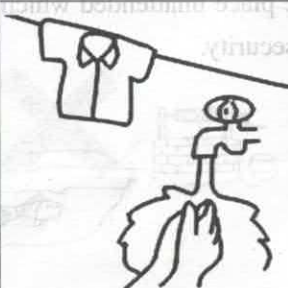
The chemical for application in this Sprayer shall not exceed 45°C. Operation in an ambience over 45°C or below -10°C shall be avoided.



Trial spraying with clean water, a check of various joints for possible leakage and a check for atomization condition are required prior to initial operation. Make sure everything is ok before preparing the chemical liquid.



The preparation of chemical shall follow the instructions and formula furnished by the pesticide manufacturer. Unauthorized altering of the dilution rate of chemical is prohibited, which may either endanger the human being and animal, or result in the failure of pest control.



Upon the finish of operation, you shall change clothes and wash those exposed part of body such as hands and face. In case of highly toxic pesticide and germicide, a shower after operation is required to ensure safety.

V. How to Operate the Sprayer

1. Operation of Charger

Make sure that the input parameters of charger comply with the AC parameters of mains supply. If not, please contact the distributor.

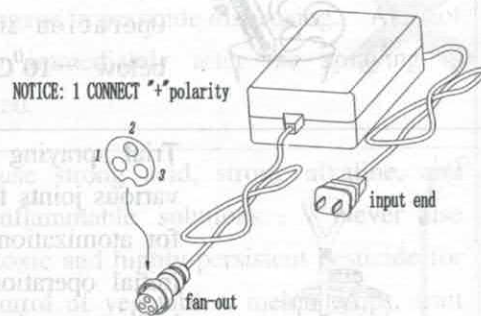


Fig. 1

The battery of sprayer has been fully charged before

being delivered. But due to self-discharge during transportation and storage, you shall check the power level with a voltage meter before operation. If the indicator stays in yellow or red area, (i.e. $\leq 12V$), a supplementary charging is required.

The battery can be charged only by plugging the

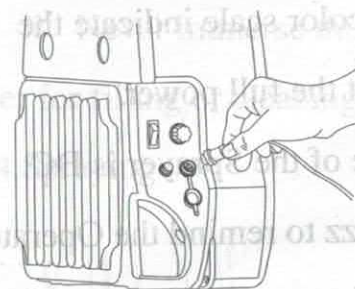


Fig. 2

charger's plug into the

charging socket without

being removed from the

Sprayer. If the charging

indicator lamp turns green,

it indicates that the battery

has been fully charged. The no-load voltage of full-power battery is 13.8V or so.

2. Voltmeter (Fig. 3)

the Sprayer is equipped with a high-precision voltmeter measuring voltage of 11V~15V. The green area of color scale indicates full battery, fit for normal

operation; Yellow area indicates insufficient voltage but the system can still keep working; The red area on the left indicates extremely low power requiring immediate recharging. The

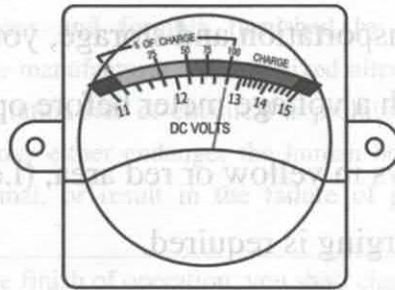


Fig. 3

graduation and value above the color scale indicate the percent of residual power against the full power.

The lowest working voltage of the Sprayer is DC 10.5~10.8V. The alarm will buzz to remind the Operator of charging when the voltage of batter reaches or falls below this value.

The charger shall be operated indoors at a dry, well-ventilated and safe place over 50cm above the ground.

If the Sprayer has been utilized for a short time, it is unnecessary to charge. If it has been laid aside for a long time, it shall be fully discharged before being fully charged with a regular interval (such as one month or two months)

in a bid to maintain the capacity and service life of the battery.

3. Filling of chemical. Remove the lid of spray tank to fill the spray tank with chemical through the strainer slowly, before tightening the lid of spray tank. (Fig. 4)



Fig. 4

※ Never immerse this Sprayer in water for filling or cleaning.

4. Spraying

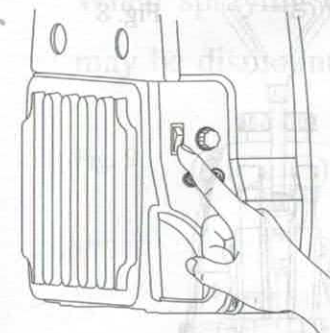


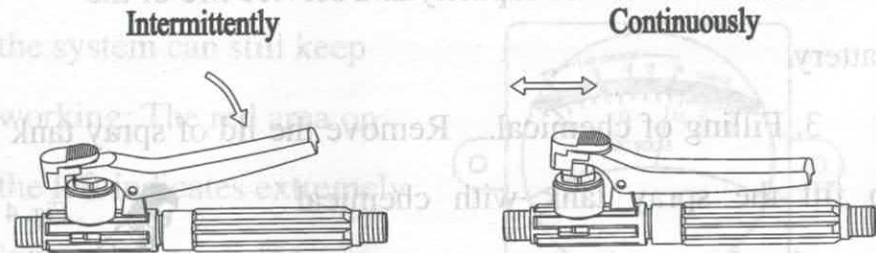
Fig. 5

Pull the Sprayer to destination area. Turn on the power switch (“-“ indicates ON, “O” indicates OFF). Point the nozzle to the crops and hold down the switch bar to start spraying.

(I) Control of water switch (Fig. 6)

(1) After the spraying starts, the operator shall pull the trailer on its right and move forward as planned while swinging the spray boom. Never fix at one place which

Fig. 6



(II) Spraying on the trailer.

Upon initial spraying, the pull bar shall be varied to cater for the height of operator. (Fig. 7) The front end of strap shall be folded to let falling into the tray. (Fig. 8)

Fig. 7

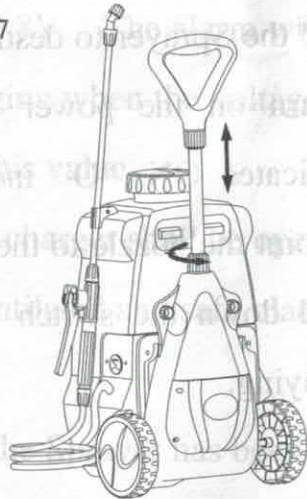
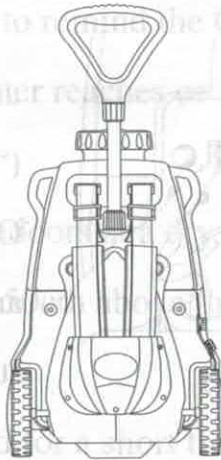


Fig. 8



- (1) After the spraying starts, the operator shall pull the trailer on its right and move forward as planned while swinging the spray boom. Never fix at one place which

may lead to chemical injury.

- (2) The spraying shall be conducted on sides. The operator shall move forward at constant speed to avoid over-spraying or missing, in a direction depending on the wind direction, generally vertical to or in an angle not less than 45° with the wind. The operator shall be at the upper drift position and the spraying part at the lower position.

(III) Spraying on the back:

- (1) Dismounting of trailer.

When spraying on fields not fit for trailer, the trailer may be dismounted and the Sprayer may be mounted

Fig. 9

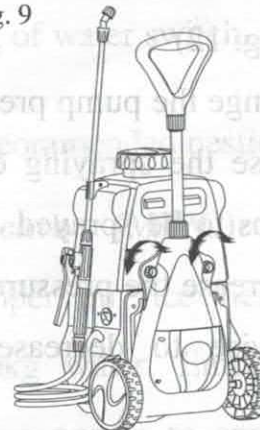


Fig. 10



on the Operator's back.

Refer to Fig. 9 for dismounting of trailer. Turn the two

locking nuts on the upper part of trailer anti-clockwise to separate the trailer from the Sprayer by lifting the Sprayer. (Fig. 10)

(2) Fixing and adjustment of strap (Fig. 11)

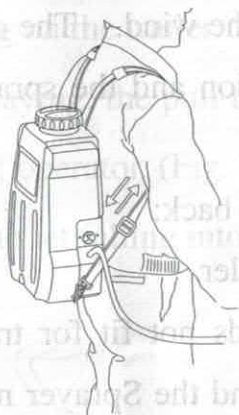


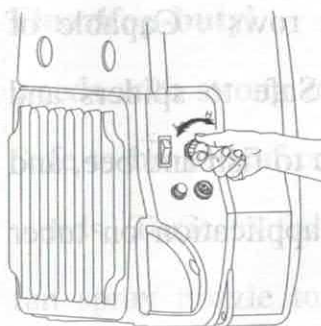
Fig. 11

(IV). Regulating of pressure (Fig. 12)

Turn the regulating knob to change the pump pressure, vary the atomizing size and increase the spraying effect depending on the nozzle or the crops to be sprayed. Turn the regulating knob clockwise to increase the pressure and decrease the size and anticlockwise to decrease the pressure and increase the size.

The Sprayer has overload protection. When the water switch is closed or the nozzle is blocked, the pump will

relief the pressure automatically.



※ Never use the voltage-regulating potentiometer as the power switch. When the

Fig. 12

spraying operation finishes, the power switch shall be turned off.

(V) Stop

To stop the Spraying, you shall press the power switch to turn off the pump power, followed by pushing forward the limit cap of water switch to release the switch bar for closing of water switch.

VI. Recommended pesticide and spraying nozzle

Isoprocab (MIPC): For control of planthopper, leafhopper on rice fields. Mix 150-200ml MIPC with 75-100kg water. Employ the cone nozzle to spray evenly with the wind on



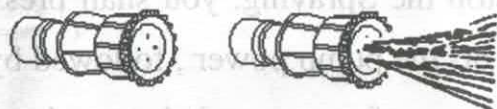
Fig. 13

Conical spray head

one side and crossly spray in multi rows . Capable of killing common thrips and leeches. Safe to spiders and natural predators of planthopper. Toxic to fish and bee, and be harmful to tuber crops. Unfit for application on tuber crops.

Chlorothalonil: For prevention of stalk rot on wheat by mixing 11 g 75% wettable powder with 6 kg water for each 100 square meters; For prevention of leaf mold and spot blight on vegetable by mixing 135-150 g wettable powder with 60-80 kg water.

Employ the cone nozzle to spray evenly with the wind,



Four hole adjustable spraying nozzle

Fig. 14

on one side and crossly spray in multi-row. For prevention of downy mildew on fruit trees by mixing 75-100 g 75% wettable powder with 30-40 kg water. Employ the adjustable spray nozzle with four apertures to spray evenly with the wind, accompanied by significant loss of chemical. Being toxic to fish, please operate far away from fish pond.

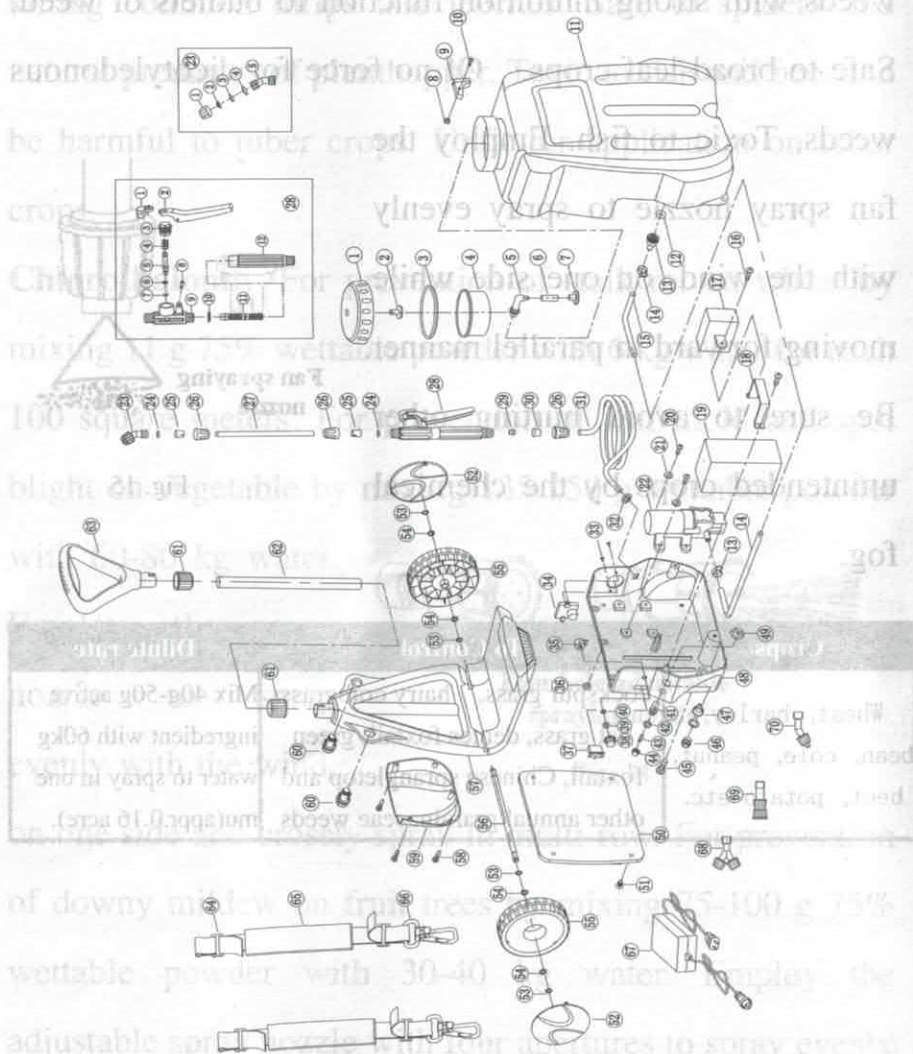
Fluazifop-butyl : Applicable for annual graminaceae weeds with strong inhibition function to budlets of weed. Safe to broad-leaf crops. Of no force for dicotyledonous weeds. Toxic to fish. Employ the fan spray nozzle to spray evenly with the wind, on one side while moving forward in parallel manner. Be sure to avoid hurting other unintended crops by the chemical fog.



Fig. 15

Crops	To Control	Dilute rate
Wheat, barley, bean, cole, peanut, beet, potato etc.	cockspur grass, hairy crabgrass, oat grass, dentes foxtail, green foxtail, Chinese sprangletop and other annual graminaceae weeds	Mix 40g-50g active ingredient with 60kg water to spray in one mu(appr.0.16 acre).

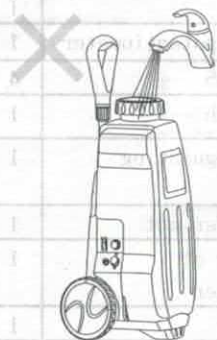
VII. Structural Diagram and Schedule



SN	Description	Qty	SN	Description	Qty
1	Spray tank cap	1	26	Spray boom nut	3
2	Inlet valve	1	27	Spray boom	1
3	seal ring	1	28	water switch	1
4	big strainer	1	28-1	limit cap	1
5	inlet bend	1	28-2	switch bar	1
6	hose	1	28-3	switch nut	1
7	small strainer	1	28-4	switch spring	1
8	hex nut M4	1	28-5	valve plug	1
9	spray boom clamp	1	28-6	valve plug O-ring ø9.5×1.9	1
10	cross recessed pan head screw M4×12	1	28-7	seal ring ø8.2×ø4×2.5	1
11	spray tank	1	28-8	switch pin	1
12	O-ring Ø20.6×3	1	28-9	switch body	1
13	Rubber tube joint	1	28-10	O-ring Ø20.6×2.65	1
14	Pipe-clip 10-16	3	28-11	switch strainer	1
15	Inlet Pipe	1	28-12	Handle	1
16	cross recessed pan head tapping screw ST4.8×25	2	29	Flared sheath	1
17	Control Module	1	30	rubber hose sheath	1
18	Battery Press Plate	1	31	rubber hose	1
19	Battery 12v7AH	1	32	jacket	1
20	cross recessed pan head screw M5×15	4	33	countersunk head tapping screws ST2.9×14	2
21	Flat washer	4	34	voltmeter	1
22	diaphragm pump	1	35	adjustable potentiometer	1
23	cone spray head	1	36	hex nut M5	4
23-1	Spray head cap	1	37	power switch	1
23-2	cone spray sheet	1	38	pressure-regulating throb	1
23-3	split sheet	1	39	potentiometer nut	1
23-4	seal gasket ø16×ø11×2	1	40	flat washer of potentiometer	1
23-5	bend	1	41	fuse holder	1
24	Spray boom O-ring Ø15×3	2	42	hexagon thin nut	1
25	Fastening sleeve	2	43	Fuse ø5×20 5A	1

SN	Description	Qty	SN	Description	Qty
44	Fuse cap	1	58	cross recessed pan head self-tapping screw ST2.9×16	5
45	cross recessed pan head screw M6×12	6	59	tray	1
46	Charging socket	1	60	locking nut	2
47	water-shield	1	61	locking cap	2
48	end-cover	1	62	pull rod	1
49	socket nut	1	63	Handle	1
50	back pad	1	64	strap lock	4
51	back pad buckle	4	65	strap	2
52	wheel cover	2	66	strap hook	2
57	trailer frame	1	67	Charger 12 V	1
53	circlip for shaft 10	2	68	30° dual spray head	1
54	flat washer 10	2	69	Four-hole adjustable spray head	1
55	wheel	2	70	Cone spray head	1
56	wheel shaft	1			

VIII. Cleaning and Maintenance



After every spraying operation, the Sprayer shall be cleaned to avoid corrosion of tool and blocking of sprinkler caused by pesticide liquor. In addition, The cleaning can also avoid reducing the effects of spraying operation or bringing harm to crops

Fig. 16

when the constituent of the remaining pesticide liquor is different from that of the pesticide liquor of next operation

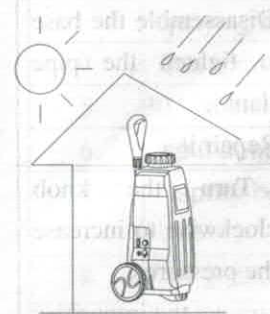
How to clean:

- clean the surface of the Sprayer with a wet cloth.

Shake the sprayer after filling it with water , and then turn on the power switch to spray the cleaning water via nozzle.

- Switch strainer and spray tank strainer can be disassembled for cleaning with water.

VIII. Warehousing



The Sprayer should be stored in a dry place indoor out of reach of children. Don't keep it upside down for a long time which may damage the battery .

IX. Troubleshooting

Problems	Causes	Solutions
The motor fails to run after being powered on.	<ul style="list-style-type: none"> The pump pressure has been set at the min. value. • fuse burn-out • Battery out of power • Power switch has been damaged • Power wires come off • Motor damaged Potentiometer has been damaged. 	<ul style="list-style-type: none"> • Turn the knob clockwise to increase the pressure. • Replace • Recharge • Replace the switch • Disassemble the base to reconnect the wires. • Replace the motor Replace the potentiometer.
Abnormal sounds heard while the motor rotates	• The fastening screws of pump loosen	• Tighten the screws
Leakage occurs to the underside of the base	• The inlet and outlet pipes of the pump loosen or break.	• Disassemble the base to tighten the pipe clam ; Repair it.
Poor atomization results	<ul style="list-style-type: none"> • Extra-low pump pressure • The holes inside the sprinkler sheet are blocked. • The spraying hole and split sheet wears out. • The spraying sheet has 	<ul style="list-style-type: none"> • Turn the knob clockwise to increase the pressure. • Remove the impurities • Replace the sheets. • Correct it

	been inversely assembled. • pipe joints may loosen. • Battery short of power • One inlet valve or outlet valve of the pump has been jammed to reduce the pressure by 50%.	• Tighten the joint • Recharge the battery. • Remove the base . Pump clean water while knocking at the pump head gently; Disassemble the pump housing to repair.
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X. Packing List

S/N	Description	Unit	Qty.	Remarks
1	Sprayer Body	unit	1	In addition, telescopic rods and multi-purpose spraying nozzles are available for purchasing separately
2	User's Manual	Pc(s)	1	
3	Four hole adjustable spraying nozzle	Pc(s)	1	
4	Fan spraying nozzle	Pc(s)	1	
5	30° Double spraying nozzle	Pc(s)	1	
6	split coupling	Pc(s)	2	
7	spray boom O-ring ø15×3	Pc(s)	2	
8	O-RING ø20.6×3	Pc(s)	1	
9	Valve plug O-RING ø9.5×1.9	Pc(s)	1	
10	Seal Gasket Ø16×Ø11×2	Pc(s)	2	
11	Seal Ring ø8.2×ø4×2.5	Pc(s)	1	
12	Fuse Ø5*20 5A	Pc(s)	1	