

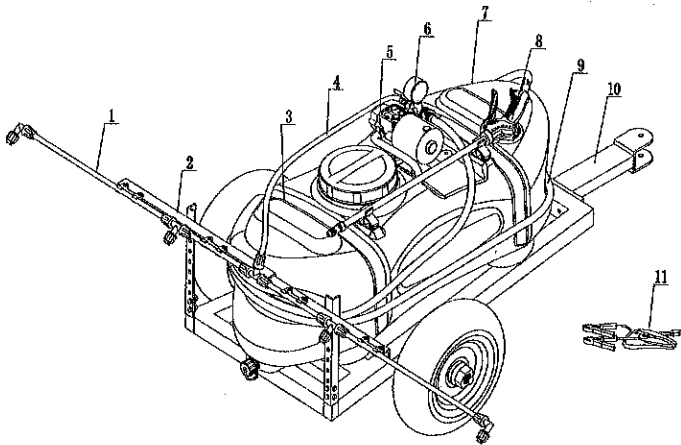
SX-CZ60D/SX-CZ100D  
On-Vehicle Electric Sprayer

**User' s Manual**

## 1. Purposes and Features

on-vehicle electric sprayer is designed for pest control, herbicides/growth regulators and liquid fertilizer spraying on farmland, nursery, garden, lawn, shrubs and grasses fences. The sprayer comes with a chassis and wheels for being towed by a small engine. The chemical pump is powered by on-vehicle 12V power supply. The sprayer may be equipped with a gun or a lance to spray. It's simple in structure, easy to operate, characterized by high working efficiency and being labor/time/effort efficient. Come with a high-quality diaphragm pump to offer steady flow and high pressure. Designed with a pressure-limiting switch for extended service life and high reliability. Running without water for a short time is allowed. The chemical tank made of high-density polyethylene plastic ensures rigidity and resistance to pesticide corrosion. Two-step filtration is available to prevent against foreign substances' entry to the nozzle so as to ensure spray quality.

## 2. Technical Parameters



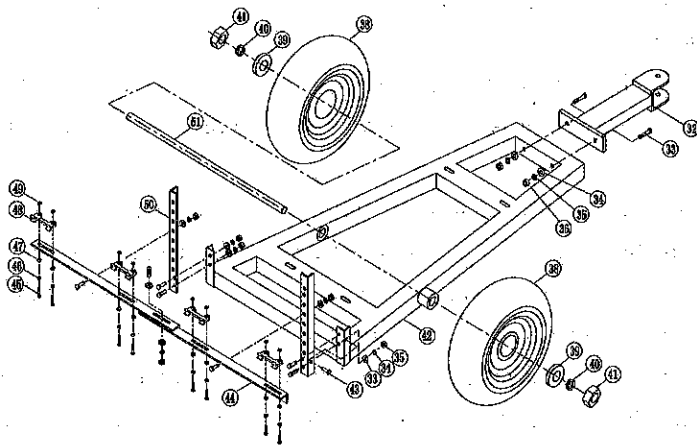
- 1.Spray lance,    2.Beam,    3. Bundling belt    4.. Connection hose  
5.Diaphragm pump    6.Manometer    7.Tank    8. Adjustable Spray lance  
9.outlet hose    10.Chassis    11..Power cord

Sprayer Type		Pump Type	Max. Pump Press.	Rated Voltage	Motor Power
On-Vehicle		diaphragm pump	9bar	12VDC	65W
Tank Capacity		Length of Power cord		Length of Outlet Hose	Length of Bundling Belt
60L	100L	5M		5M	5M
spray gun	spray	Press	5.5bar		
		Flow	2.1L/min		
	stream	Press	3.5bar		
		Flow	3.1L/min		
		level range	8m		
Spray Lance	Press.	4.5bar			
	Flow	2.6L/min			

### 3. How to Operate the Sprayer

#### i. Mount the Sprayer

1. For initial use, please check the components in the package upon unpacking to make sure all that on the packing list are included before proceeding to mount as instructed in the Diagram. (Refer to Explosive view for serial number and description)



2. Place the tank on the assembled chassis and fastened with 5/16-18X16 screws and bundling belt ;

3. Assemble the spray lance in series and fasten with the nut. Connect the lance to hose through a T-shaped Tee.

4. Press the assembled spray lance into the groove of clamp on the beam. Adjust the spray angle to a preferred position so that the four nozzles shall be on the same plane, and outward inclined for a certain angle. Meanwhile the spray fan area shall have an angle of 5-10 degrees with the spray lance to prevent against spraying to the vehicle chassis and maximize the chemical spray onto the crops ;

6 The spray lance shall be installed to be parallel to the ground with a proper height. Insufficient height likely causes missing due to terrain impact; Excessive height may lead to uniform distribution due to influence of wind. The preferred height of nozzle in case of spraying herbicide or soil treatment is 50 cm. The preferred height of nozzle in case of spraying insecticides, fungicides and growth regulators is 30 cm.

#### ii. Operating Instructions

\* You'd better carry out spraying job of pesticides in the morning or afternoon of a cool, windless day , so as to reduce volatilization and drifting of pesticides.

\* For initial use, please make a trial spray with water , check the diaphragm pump for possible fault and make sure the joints are free of leakage.

1. Close the two shut-off valves. Fill the tank with prepared chemical solution through a large strainer, and then tighten the tank lid;

2. Start the motor. Arrange the whole unit according to the scheduled route. An extra-large spraying area should be divided into a number of plots, and the routes shall be determined according to the wind direction. Generally, the sprayer advancing direction shall be wholly or partially perpendicular to

the wind direction.

3. Insert the output end of the power cord into the input end of diaphragm pump, and connect the two wire clamps on the input end of the power cord to the positive and negative output terminals of the battery or the output end of vehicle's magneto (red line is positive, black is negative) respectively. Now the diaphragm pump starts working;

4. Start up the engine to move forward in accordance with the predetermined route, while opening the shut-off valve of the gun or the lance to start spraying.

### iii. Precautions

**1. Prohibit the use of some special chemical**

**2. Handling of agriculture chemicals should comply with the safety instructions provided by the manufacturer.**

3. Check the terrain, slope, ground roughness, crop growth and make sure no obstacle in the operation area before the sprayer moves forward..

4. In case of level spraying with spray lances, the sprayer shall move forward at a rate of no more than 8km / h.

5. The spray fan angle shall be complete, unbranched, and free of dripping. Try to maintain a uniform flow and steady spray.

6. Diaphragm pump comes with a pressure protection switch and allows for short-term non-water running. However, when the pump is intended to be put idle for a long time, or in the process of water-filling, you'd better disconnect the power cord to avoid undesired battery power consumption and prolong pump life.

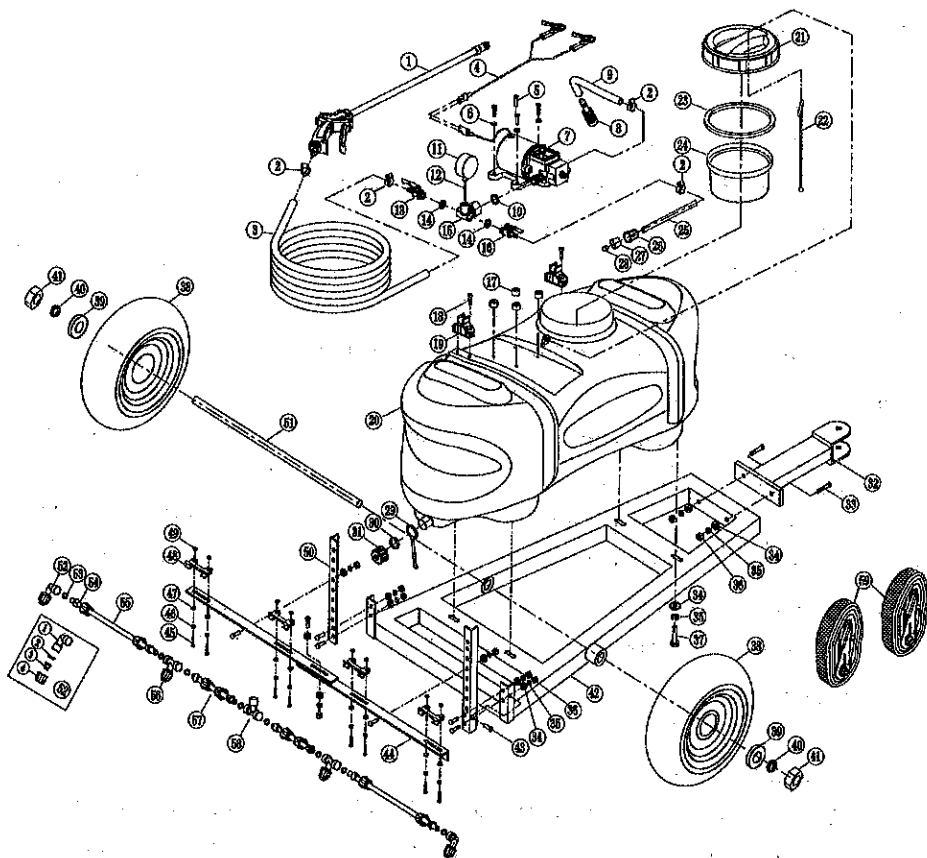
### iv. Cleaning and warehousing

After operation, the sprayer should be cleaned at an allowed place. Cleaning method: Fill the sprayer with fresh water and start the diaphragm pump to spray out; For external surfaces, clean with a damp cloth.

Note: The diaphragm pump shall never be immersed in water for cleaning.


The cleaned machine should be placed in a dry, ventilated room, out of the reach of children. The spray lance may be disassembled for separate cleaning and kept in a box after drying.

#### IV. Explosive View and Detailed List



S/N	Description	Qty.	S/N	Description	Qty.
1	Adjustable Spray Gun	1	33	Hex bolt M8x60	2
2	Stainless Steel Clamp	4	34	Flat washer 8	14
3	Outlet Hose	1	35	Spring washer 8	14
4	Power Cord	1	36	Hex nut M8	10
5	Screw M5X20	4	37	stainless steel screw bolt 5/16-18x16	4
6	Flat washer 5	4	38	Wheel	2
7	Diaphragm pump	1	39	Flat washer 16	2
8	filter	1	40	Spring washer 16	2
9	Suction hose	1	41	Hex nut M16	2
10	Pump opening gasket	1	42	Chassis	1
11	manometer	1	43	Hex bolt M8x15	8
12	seal	2	44	Beam	2
13	Big opening shut-off valve	1	45	Hex bolt M5x15	9
14	Valve seal	2	46	Spring washer 5	9
15	Cross Tee assembly	1	47	Flat washer 5	10
16	Small opening shut-off valve	1	48	Spray lance clamp	4
17	Damping sleeve	4	49	Hex nut M5	9
18	Screw set M5X16,	2	50	Upright Post	2
19	Spray lance clamp	2	51	Wheel shaft	1
20	Chemical tank	1	52	Square nozzle	2
21	Tank lid	1	52-1	Square Bend	1
22	Anti-release rope	1	52-2	Nozzle gasket	1
23	Seal ring	1	52-3	Fan nozzle	1
24	Big filter	1	52-4	nozzle cap	1
25	Connection hose	1	53	O-ring $\Phi$ 15X3	8
26	Spray lance nut	9	54	Fastening sleeve	8
27	Tube sleeve	1	55	Long Spray Lance	2
28	Protection sleeve	1	56	T-nozzle	2
29	Anti-release belt	1	57	Short spray lance	2
30	Flat washer	1	58	Tee	1
31	Bleeder	1	59	Bundling belt	2
32	Traction frame	1			

## V. Troubleshooting

Problem	Possible Causes	Likely Solutions
Unit does not spray	1.Power not connected. 2.Internal hose detached. 3.Not enough liquid in tank. 4.Spray fluid contains particles or sand. 5.Nozzle and /or Inlet filter clogged with mineral buildup.	1.Connect power. 2.Reattach Hose. 3.Add liquid to tank. 4.Disassemble,clean,then reassemble Nozzle and/or Inlet Filter. Empty, clean,then refill tank with properly strained fluid. 5.Disassemble, clean,then reassemble nozzle and /or inlet filter.
Spray pattern is uneven	1.Nozzle needs adjustment. 2.Spray fluid contains particles or sand. 3.Nozzle and/or inlet filter clogged with mineral buildup.	1.Adjust Nozzle. 2.Disassemble,clean,then reassemble nozzle and/or inlet filter. Empty, clean, then refill tank with properly strained fluid. 3.Disassemble,clean,then reassemble nozzle and/or inlet filter.
 Follow all safety precautions whenever diagnosing or servicing the sprayer.		

## VI. Packing List

S/N	Description	Unit	Qty.	Remarks
1	Sprayer body	Unit	1	
2	Chassis	Pc(s)	1	
3	Towing frame	Pc(s)	1	
4	axle	Pc(s)	1	
5	wheel	Pc(s)	2	



6	beam	Pc(s)	2	
7	column	Pc(s)	2	
8	Four-nozzle lance	Pc(s)	1	Packaged in a plastic bag
9	T-shaped Tee	Pc(s)	1	Packaged together with the spray lance
10	Bundling belt	Pc(s)	2	
11	Power cord	Pc(s)	1	
12	Kit	Pc(s)	1	4 O-ring $\Phi 15X3$ , 4 fan nozzles, 4 nozzle gaskets, 2 stainless steel hose clamp, 1 pump opening gasket, 1 valve gasket, 1 nozzle O-ring
13	Bolts pack	pc	1	Hexagon bolt assembly M8X60 2 sets; hexagonal bolt assembly M8X15 8 sets; hexagonal bolt assembly M5X15 9 sets; flat washer 16 2pcs; Spring washer 16 2pcs; hexagonal nut 16 2pcs; stainless steel screw bolt 5/16-18X16 4pcs ; flat washer 8 4pcs; spring washer 8 4 pcs; flat washer 5 1pc.
14	tool kit	pc	1	spanner 8X10, 12X14, 22X24
15	User's Manual	Pc	1	