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### No Warranty On Electrical Motor / Electrical Parts / Battery Etc.

**Incidental / Consequential Loss:** KisanKraft Limited or its manufacturers will not be liable for general damages, including bodily injuries, or for incidental or consequential damages including, but not limited to, loss of use, loss of profits, loss of production, expense of substitute equipment or other commercial loss or damage.

**Limitation of Liability:** This limited warranty is in lieu of all other express warranties, obligations, or liabilities. Any implied warranties, obligations or liabilities, including, but not limited to, any implied warranty of merchantability shall be limited in duration to the applicable warranty period. Any action for breach of any warranty hereunder, including, but not limited to, any implied warranty of merchantability must be brought within the applicable warranty period.

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<b>Our Products</b>	<ul style="list-style-type: none"> <li>◆Chainsaws◆Brush Cutters and Accessories◆Harvesters◆</li> <li>◆Engines and Water Pumps◆Hand Tools◆Garden Tools◆</li> <li>◆Cultivators and Accessories◆Sprayers and Accessories◆</li> <li>◆Transplanter and Post Hole Digger ◆Milking Machines◆</li> </ul>
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**KisanKraft Limited** (formerly known as KisanKraft Machine Tools P Ltd)

🌐: www.kisankraft.com

✉: info@kisankraft.com

☎: +91.80.22330318

Product	<b>Sprayer- Mister</b>	KisanKraft Invoice Date	
Brand	<b>KisanKraft</b>	KisanKraft Invoice No.	
Model	<input type="checkbox"/> KK-MDS-11 <input type="checkbox"/> KK-MDS-14		
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Many of our products have BIS: ISI certification.



# Operation Manual



## ***KisanKraft Limited.***

Sri Huchhanna Tower, #4,1<sup>st</sup> Main,7-A Cross, Maruthi Layout, Dasarahalli,  
HAF Post, Hebbal, Bangalore 560024,Karnataka,INDIA

- ♦ Bangalore (HO) ♦ Ahmedabad ♦ Bhopal ♦ Bhubaneswar ♦ Coimbatore ♦
- ♦ Ernakulam ♦ Guwahati ♦ Patna ♦ Hinudpur ♦ Hubli ♦ Hyderabad ♦
- ♦ Jaipur ♦ Karnal ♦ Kolkata ♦ Lucknow ♦ Nagpur ♦ Pune ♦ Raipur ♦ Shimla ♦

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KisanKraft has a large range of products to serve the farmers. A list of our products is given below:

<p><b>Brush Cutters and Accessories</b></p> <ul style="list-style-type: none"> <li>Brush Cutter/Power Weeder</li> <li>Backpack Brush Cutter</li> <li>Tea Pruner</li> <li>Pole pruner with Engine</li> <li>Reaper Attachment</li> <li>Blades-Circular</li> <li>Blades (2 &amp; 3 points)</li> <li>Baffle</li> <li>Nylon Rope</li> <li>Tap &amp; Go</li> </ul> <p><b>Chainsaws</b></p> <ul style="list-style-type: none"> <li>Petrol Chainsaw</li> <li>Electric Chainsaw</li> <li>Chain Sharpening Machine</li> </ul> <p><b>Engines and Water Pumps</b></p> <ul style="list-style-type: none"> <li>Engine –Diesel-(Horizontal)</li> <li>Engine –Diesel(Vertical)</li> <li>Engine-Kerosene</li> <li>Water Pump with Petrol Engine</li> <li>Water Pump with Kerosene Engine</li> <li>Water Pump with Diesel Engine</li> </ul> <p><b>Hand Tools</b></p> <ul style="list-style-type: none"> <li>Secateurs</li> <li>Folding Saw</li> <li>Garden Rake</li> <li>Garden Shovel</li> <li>Hedge Shear</li> <li>Lopper</li> <li>Telescopic Hedge Shear</li> <li>Telescopic Lopping Shear</li> <li>Tree Pruner</li> <li>Telescopic Steel Pipe &amp; Fruit Picker Bag</li> <li>Sheep Shear</li> </ul> <p><b>Garden Tools</b></p> <ul style="list-style-type: none"> <li>Electric Pressure Washer</li> <li>Hedge Trimmer</li> <li>Lawn Mower (Electric, Petrol &amp; Manual)</li> <li>Leaf Blower</li> </ul>	<p><b>Cultivators and Accessories</b></p> <ul style="list-style-type: none"> <li>Petrol and Diesel</li> </ul> <p><b>Sprayers and Accessories</b></p> <ul style="list-style-type: none"> <li>Battery Sprayer</li> <li>Portable Power Sprayer</li> <li>Trolley Sprayer</li> <li>Manual Knapsack Sprayer</li> <li>Manual Pressure Sprayer</li> <li>Rose Cans</li> <li>Hose Crimping Machine</li> <li>HTP Sprayer</li> <li>HTP Delivery Hose</li> <li>HTP Hose Reel</li> <li>HTP Stand</li> <li>HTP Gun / Lance(Brass Rod)</li> <li>Knapsack Power Sprayer</li> <li>Mister / Duster / Granuel Spreader</li> <li>HTP Sprayer Set with Diesel Engine</li> <li>HTP Sprayer Set with Kerosene Engine</li> <li>Fogging Machine</li> </ul> <p><b>Milking Machine</b></p> <ul style="list-style-type: none"> <li>Wood Shredder</li> <li>Fodder Ensiling Chaff Cutter</li> <li>Fodder Grinder Chaff Cutter</li> <li>Fodder Mini Chaff Cutter</li> </ul> <p><b>Harvester</b></p> <ul style="list-style-type: none"> <li>Maize Sheller</li> <li>Maize Sheller + Dehusker</li> <li>Maize Combine Harvester</li> <li>Onion Digger Carlotti Italy</li> <li>Tea Leaf Harvester</li> <li>Sugarcane Combine Harvester</li> <li>Sugarcane Leaf Stripper</li> </ul> <p><b>Transplanter and Post Hole Digger</b></p> <ul style="list-style-type: none"> <li>Paddy Transplanter (2 &amp; 8 Rows)</li> <li>Transplanter-Vegetable &amp; Tobacco</li> <li>Post Hole Digger(4" to 14" Augers)</li> </ul>
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Part No	Part Name	Part No	Part Name
B-28	Volute case	B-79	Gasket Fuel Filter
B-29	Buy-E-01	B-80	Fuel Filter
B-30	Buy-E-02	B-81	Gasket FuelTank Lid
B-31	Buy-E-03	B-83	Fuel tank lid
B-32	Rubber pillar(Single Bolt)	B-87	Pipe 14"
B-33	Impeller	B-88	Filter( Chemical Tank)
B-39	Volute case(Engine Side)	B-89	Breather Lid
B-40	Screw M5x25(Star)	B-90	Gasket Chemical Tank Lid
B-41	Holder (chemical tank)	B-91	Chemical Tank Lid
B-43	Screw & Washer M5x12(Star)	B-97	Bolt M6x16 Hex
B-44	Nut M-5	B-100	Bolt M 6x16 Hex
B-45	Screw M5x20(Star)	B-102	Washer-6 Plain
B-49	Bend pipe(Small Hose)		

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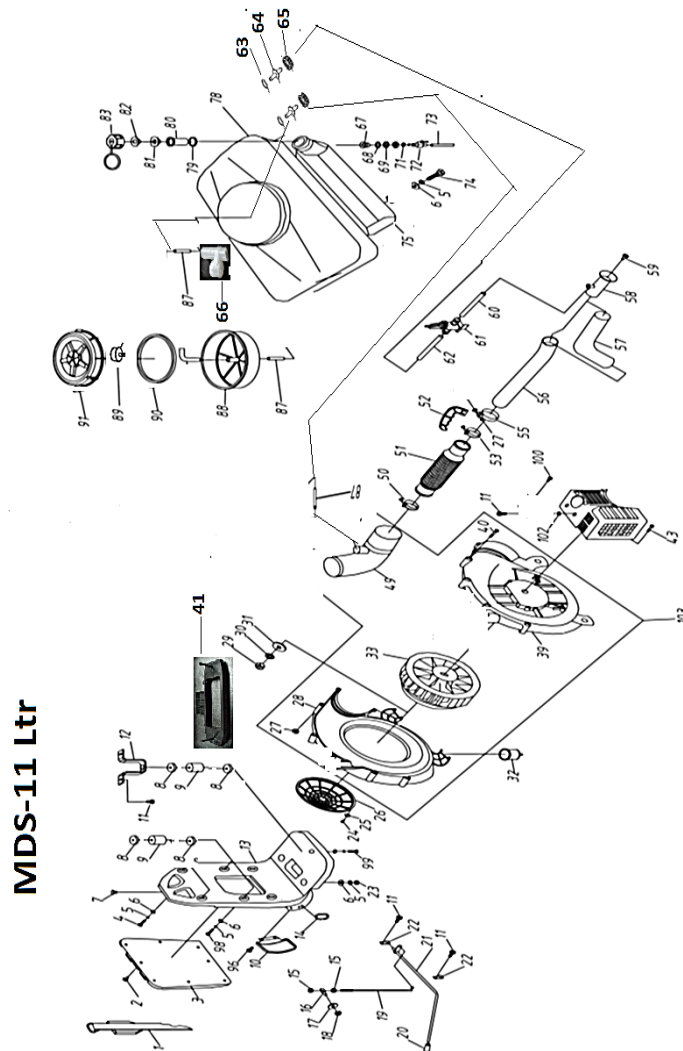
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**KisanKraft Machine Tools Private Limited**

### BODY PARTS LIST-MDS-11

Part No	Part Name	Part No	Part Name
B-1	Shoulder Belt	B-50	Big Hose Clip No.2
B-2	Back mat clip	B-51	Big Hose
B-3	Back Mat	B-52	Handle
B-4	Bolt M6x16(HEX)	B-53	Big Hose Clip No.3
B-5	Washer-6 Spring	B-55	Handle clip
B-6	Washer-6 Plain	B-56	Long straight pipe
B-8	Nut-M6	B-57	Bend Pipe
B-9	Rubber pillar(Two Bolt)	B-58	Nozzle
B-10	Graduator	B-59	Nozzle Fan
B-11	Bolt M6x16(Hex/Star)	B-60	Pipe 34"
B-12	Engine Support	B-61	Tap
B-13	Frame	B-62	Pipe 17"
B-14	Belt Hook	B-63	Washer Connector Lid
B-15	Nut M-4	B-64	Connector
B-16	Pin for Pulling rod Throttle	B-65	Connector Lid
B-17	Washer-5 Plain	B-66	Pipe Connector
B-18	Nut M-5	B-67	Adopter(Fuel Cock)
B-19	Pulling rod(Throttle)	B-68	Sealing washer(Adopter)
B-20	Knob(Throttle)	B-69	Adopter Nut(Fuel Cock)
B-21	Throttle rod	B-71	Sealing washer(Fuel Cock)
B-22	Clamp (Throttle rod)	B-72	Fuel cock
B-23	Nut M-6	B-73	Fuel Pipe 12"
B-24	Screw & Washer M 4x10(Star)	B-74	Screw M5x16 Star
B-26	Cover(Impeller)	B-75	Fuel Tank
B-27	Nut m-5	B-78	Chemical tank

### BODY PARTS-DIAGRAM-MDS-11



### BEFORE GETTING STARTED

Please read and follow the instructions in this manual before using the machine. The user should be familiar with the safety notices, machine performance, and maintenance, etc. The operation manual will be used later in case of any repair, accessories replacement, and accessories procurement, so preserve it carefully.

### SAFETY INSTRUCTIONS

1. Read this manual carefully .Be sure you understand how to operate this machine properly before you use it.
2. **Protective Clothing:**

- Wear flanged cap.
- Wear dirt/fog-proof glasses.
- Wear gauze mask.
- Wear long gloves.
- Wear coat guarding against poisons.
- Wear boots.



3. Following personnel should not use the machine:
  - Mentally challenged.
  - Drunk.
  - Under the age of 18 or older people.
  - Person with no knowledge of the machine.
  - Tired person or patient and others who cannot operate the machine normally.
  - A person who has just exercised strenuously or has not slept enough.
  - Women feeding breast milk to the baby or is pregnant.
4. **In order to prevent fire:**
  - Never fire or smoke near the machine.
  - Never refuel the machine when it is hot or running.
  - Never pour fuel on the machine. If you do, clean them off.
  - Always tighten the fuel tank lid properly.
  - Keep at least 10 feet distance from the fuel container before starting the machine.

### 5. Starting the engine:

- Put the dust gate handle to the lowest position before starting the engine, otherwise chemical will be jetted when starting the engine.
- It is prohibited to stand in front of the nozzle. Even though dust gate is closed, residual dust in pipe will be blown out.



### 6. Misting/Dusting:

- It is fine to carry out the operation during cool weather with little wind. For example, early in the morning or late in the afternoon. This can reduce the evaporation and drift of chemicals and improve the protecting effect.
- Operator should move windward.
- If your mouth or eyes are spattered with chemicals, wash them with clean water and then consult a doctor immediately.
- If the operator has a headache or dizziness, stop working at once and consult a doctor immediately.
- For the operator's safety, misting/dusting must be carried out strictly according to the instruction of the chemicals and agricultural requirements.

### 7. Warning to Users:

- The engine must use mixed fuel. The ratio between gasoline and oil is determined by referring to the oil directions, the gasoline is NO.90 and the oil should be 2 stroke oil for gasoline engine (It is strictly prohibited to use the other kind of oil).
- The engine should run without load for 3-5 minutes after starting or before stopping. It is strictly prohibited to run the engine runs at high speed without load in order to avoid the damage of the engine parts and the harm to the body. It is also prohibited to stop the engine suddenly at high speed.
- To prevent fire, the engine must stop and be far away from the fire sources when adding the fuel. Smoking is strictly prohibited.
- The surface of the muffler and cylinder is very hot, never touch them once the engine has started to run.
- The starter wheel is outside component, when the engine is running, do not touch it and stay away from the outside component, especially children.

## APPLICATION

Knapsack power sprayer-duster is a portable, flexible and high efficient equipment for plant protection. It is suitable for use in prevention of plant disease and controlling pests in large plantation and crop field like cotton, wheat, paddy, fruit trees, tea trees etc., It can also be used for applying herbicides, sanitation and epidemic prevention, spreading granular fertilizer and granular, etc. This machine can also be suited for use in mountain areas, hilly land and odd pieces of land.

Part No	Part Name	Part No	Part Name
B-26	Cover(Impeller)	B-77-1	Charging Valve
B-27	Nut m-5	B-78	Chemical tank
B-28	Volute case	B-79	Gasket Fuel Filter
B-29	Nut -M12X1	B-80	Fuel Filter
B-30	Washer-12 spring	B-81	Gasket Fuel Tank Lid
B-31	Washer-12 Plain	B-82	N/A
B-32	Rubber pillar(Single Bolt)	B-83	Fuel tank lid
B-33	Impeller	B-84	Blowing duster tube
B-34	Air valve (Blower)	B-85	Wind board( duster tube)
B-35	Air valve (Blower)	B-86	Screw ST
B-36	Air valve (Blower)	B-87	Pipe 14"
B-37	Air valve (Blower)	B-88	Filter( Chemical Tank)
B-38	Air valve (Blower)	B-89	Breather Lid
B-39	Volute case(Engine Side)	B-90	Gasket Chemical Tank Lid
B-40	Screw M5x35(Star)	B-91	Chemical Tank Lid
B-41	Support (chemical tank)	B-92	Split Pin
B-42	N/A	B-93	Pulling rod(Dust)
B-43	Screw & Washer M5x20(Star)	B-94	Screw & Nut M4x25
B-44	Nut M-5	B-95	Connector(Dust Rod)
B-45	Screw M5x20(Star)	B-96	Clamp (Dust rod)
B-46	Small hose clip	B-97	Bolt M6x16 Hex
B-47	Small Flexible hose	B-98	Dust rod
B-48	Dust mouth rubber plug	B-99	N/A
B-49	Bend pipe(Small Hose)	B-100	Bolt M 6x16 Hex
B-50	Big Hose Clip No.2	B-101	N/A
B-51	Big Hose	B-102	Washer-6 Plain
B-52	Handle	B-103	N/A



### BODY PARTS LIST-MDS-14

Part No	Part Name	Part No	Part Name
B-1	Shoulder Belt	B-53	Big Hose Clip No.3
B-2	Back mat clip	B-54	Bracket for Bend Pipe
B-3	Back Mat	B-55	Handle clip
B-4	Bolt M6x16(HEX)	B-56	Long straight pipe
B-5	Washer-6 Spring	B-57	Bend Pipe
B-6	Washer-6 Plain	B-58	Nozzle
B-7	N/A	B-59	Nozzle Fan
B-8	Nut-M6	B-60	Pipe 34"
B-9	Rubber pillar(Two Bolt)	B-61	Tap
B-10	Graduator	B-62	Pipe 17"
B-11	Bolt M6x16(Hex/Star)	B-63	Outlet water plug
B-12	Engine Support	B-64	Outlet water plug washer
B-13	Frame	B-65	Duster body
B-14	Belt Hook	B-66	Duster body washer
B-15	Nut M-4	B-66-1	Nut Duster Body
B-16	Pin for Pulling rod Throttle	B-67	Adopter(Fuel Cock)
B-17	Washer-5 Plain	B-68	Sealing washer(Adopter)
B-18	Nut M-5	B-69	Adopter Nut(Fuel Cock)
B-19	Pulling rod(Throttle)	B-71	Sealing washer(Fuel Cock)
B-20	Knob(Throttle)	B-72	Fuel cock
B-21	Throttle rod	B-73	Fuel Pipe 12"
B-22	Clamp (Throttle rod)	B-74	Screw M6x15 Star
B-23	Nut M-6	B-75	Fuel tank
B-24	Screw & Washer M 4x10	B-76	Hose pipe(Air valve)
B-25	N/A	B-77	Washer (Charging Valve)

### MAIN FEATURES

1. The construction and design of the machine is modern, unique and is protected by many patents.
2. The work principle of the machine is sending dust by airflow and sending liquid by pressure.
3. Most parts of the machine are all made up of plastic and light aluminium alloy, hence the machine is lighter, anti-corrosive and portable.
4. As the fog droplet is tiny and leaves can be sprayed on both either sides, high concentration and small discharge for chemicals can be used, saving both chemical and water.

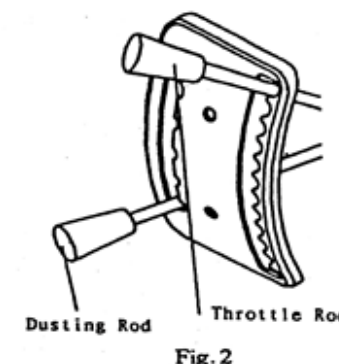
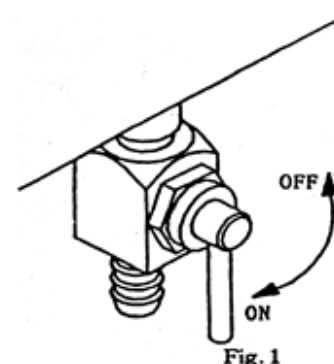
### OPERATION

#### Preparation before starting:

1. Check the whole machine for any loose connection or improper fitting.
2. For a new or stored machine, the first thing to do is to remove the machine oil sealed in the cylinder.  
**Method of removal of oil:** Remove the spark plug, with the thumb of the left hand slightly plugging up the spark plug socket, pull the starting rope with the right hand several times so as to let the surplus oil eject out.
3. Check if plug can fire, generally presence of blue sparks indicates correctness.

#### Starting the engine:

1. **Fueling:** The gasoline engine is of single-cylinder, two-stroke type. Fuel is the mixture of gasoline and oil. A measuring bottle for blending gasoline and oil is provided to blend till the specified level. Shake the bottle to let gasoline-oil blend up uniformly and leave it for a while to allow any impurities to settle down, finally pour the clean mixture into the fuel tank.
2. **Opening the fuel tank tap:** Turning the handle upright means "ON", while turning it an angle of 90° means "OFF". (See fig.1).



3. Open the throttle operating rod. (see fig.2)

4. **Regulating the choke**(see fig.3).When starting the engine in cold weather or starting it for the first time, pull the choke handle out to shut up the air passage; When starting a hot engine, leave the choke fully opened.
5. Wind the starting rope clockwise on the starting pulley and pull it slowly for several times to allow the mixture fuel into the cylinder, then pull it smoothly and quickly to start the engine (see fig.4)

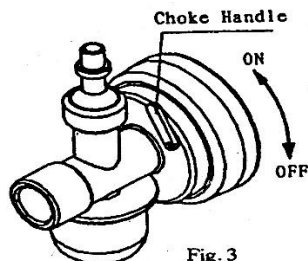


Fig. 3

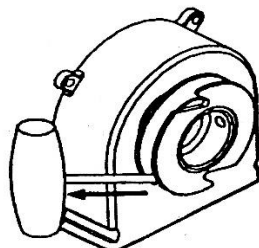


Fig. 4

6. Keep the choke open all the way after the engine has been started, then keep the engine running at low speed for 3-5 minutes before working.

### Spraying and dusting operations

#### Spraying:

1. Set the machine in the spraying state
2. **Filling the liquid chemical:**  
Before filling the liquid chemical, make a trial spraying with clear water to check for any leakage. Fill the liquid chemical into the tank not too fast and not too full. The liquid chemical used must be clean for avoiding any clogging up at nozzle tip. After filling up the tank must be covered tight with its lid. Filling maybe carried out with the machine but only at low speed.
3. **Spraying:**  
With the machine carried on the back, turn the arm shaft; Open the choke plate(see fig.5)regulate the throttle operating rod to keep the engine running at a speed of about 5000 rpm. Open the liquid switch (see fig.6), then work.

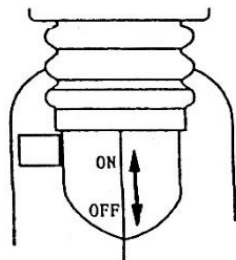


Fig. 5

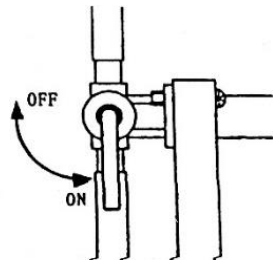
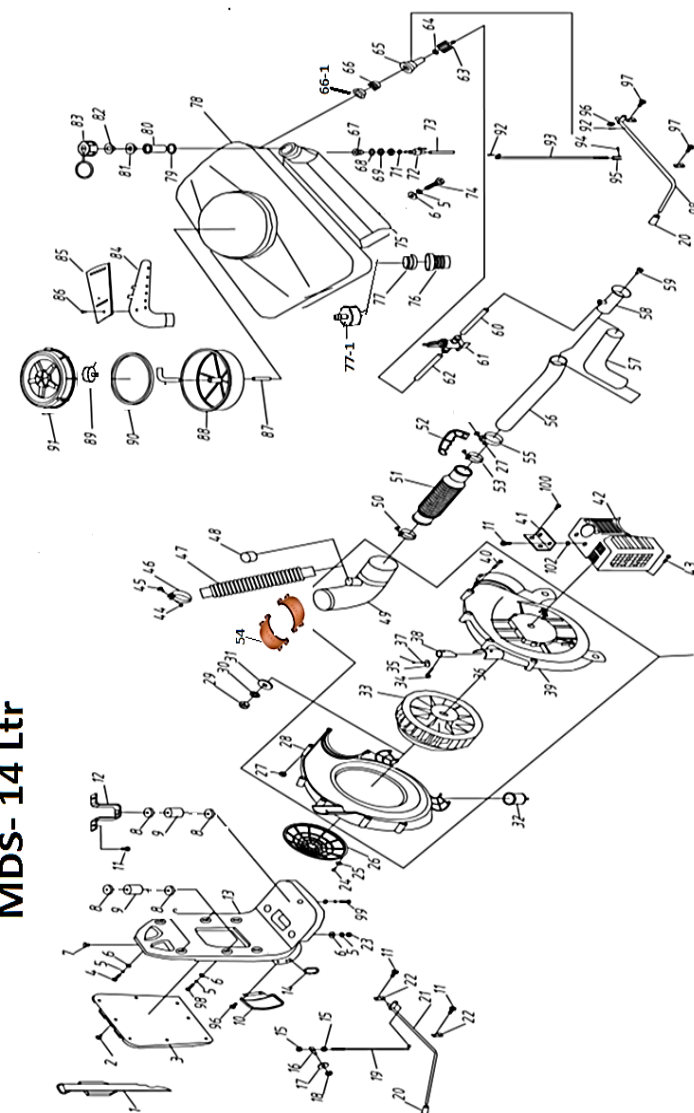


Fig. 6

Pay attention to the follow aspects while spraying:

### BODY PARTS DIAGRAM - MDS-14



Part No	Part Name	Part No	Part Name
E-8	Crank Case (Big)	E-55	Starter Rope
E-9	Bearing	E-56	Screw Washer M5 X 20(Star)
E-10	Key B4 X 18 (Fan)	E-69	Starter Assy
E-11	Crank Shaft	E-70	Wave Washer
E-12	Key (Rotor)	E-71	Starter Handle
E-13	Circlip Piston Pin	E-72	Nut (Start Reel)SPL
E-14	Piston Pin	E-73	Screw Washer 5 X 20(Star)
E-15	Piston	E-74	Gasket Insulator
E-16	Piston Ring	E-75	Insulator
E-17	Gasket Cylinder	E-76	Flange Carburetor
E-18	Bolt M 6x65	E-77	Carburetor Assy
E-19	Cylinder	E-78	Screw M5x16(Star)
E-20	Gasket Cylinder Head	E-79	N/A
E-21	Cylinder Head	E-80	Nut M5 (Square)
E-22	Pivot bolt	E-81	Clip Carburetor
E-23	Spark Plug	E-82	Needle Clip
E-24	Stud 6x105	E-83	Throttle Valve Piston
E-25	Washer 6 Plain	E-84	Needle Retaining Washer
E-26	Washer 6 Spring	E-85	N/A
E-27	Nut M-6 SPL	E-86	Needle
E-28	Screw & Washer M5 X 10 (Star)	E-87	Screw Washer M4 X 12(Star)
E-29	Ratchet guide	E-88	Spring Throttle Valve Piston
E-30	Ratchet	E-89	Chamber Lid
E-31	Guide Cover	E-90	Throttle Cable
E-32	Washer 6 Spring	E-93	Carburetor Body
E-33	Washer 6 Plain	E-94	Air Filter Inside Cover
E-34	Screw M6 X 20 (Hex)	E-95	Air Filter Sponge
E-35	Ratchet Spring	E-96	Air Filter Outside Cover
E-36	Needle bearing (piston pin)	E-97	Screw Washer M4 X 20(Star)
E-37	GASKET MUFFLER (SMALL)	E-98	Lever Throttle cable
E-38	Muffler	E-99	N/A
E-39	Muffler Gasket	E-100	N/A
E-40	Crank Case (Small)	E-101	N/A
E-41	N/A	E-102	N/A
E-42	N/A	E-103	Pin Float Lever
E-43	Bolt M6 X 32 (Hex)	E-104	Float
E-44	Friction Spring	E-105	Gasket Float Chamber
E-45	Start Reel	E-106	Float Chamber
E-46	Rotor/Fly Wheel	E-107	Needle Valve
E-47	Ignition Coil	E-108	Float Lever
E-48	Rope Reel	E-121	Screw M5 X 30 (Star)

- Swing the nozzle as soon as the spraying tap is opened, it is forbidden to let the chemical spray on only one spot.
- In the course of spraying, keep swinging the nozzle leftward and rightward so as to widen the spraying area. The walking speed should be kept in pace with the rate of swinging the nozzle so as to minimize or prevent any unsprayed area.
- The quantity of chemical sprayed per unit area can be regulated either by the walking speed or by turning the spraying switch knob (see fig.7).

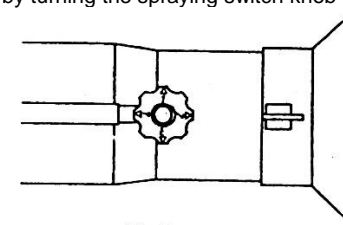
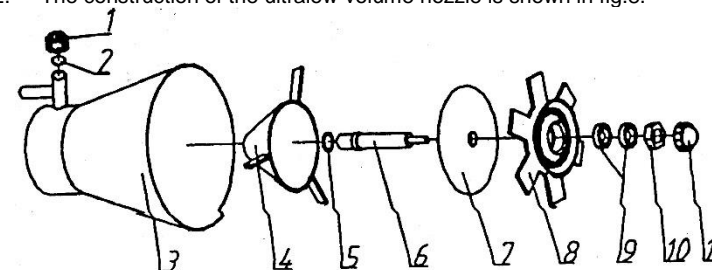


Fig. 7

- For spraying over bushes such as tea trees, turn the opening of the bent tube downward, this can prevent any flying away of the mist particles upward.
- As the mist particles sprayed out are extremely tiny, it is very hard to see the spraying performance. Generally when the foliage of the tree is seen swinging by the spraying current, it shows that the mist particles have reached the foliage.

### Ultralow-volume spraying

- The ultralow-volume nozzle is not provided with the machine, the user should place an order for separately if needed.
- The construction of the ultralow-volume nozzle is shown in fig.8.



1. Bonnet 2. Washer 3. Nozzle 4. Shutting cone 5. Washer 6. Nozzle shaft  
7. Lid 8. Gear plate 9. Bearing 10. Nut 11. Bearing lid

Fig. 8

- Feature
  - Simple in construction, convention in operation and efficient it service.
  - The droplets are tiny and well distributed, the average diameter of the droplets is in the range of 15~75um.

- Spraying quantity is generally 1000~2000ml solvent containing 25~50% chemical per square hectometer without using water.
  - Deposit drift spraying: The nozzle does not aim at crops, chemical on crops is formed by deposit.
  - Low operation cost.
  - Good effect.
  - Oil solvent containing chemical can last long and endure rain washing due to its greater adhesiveness and tiny.
4. Method of operation:
- Replace the nozzle assembly with the special ultralow-volume nozzle.
- The operator's walking direction is determined by the wind direction (see fig.9). The walking speed is about 0.7~1.1m/s and spraying width is about 10~15m.

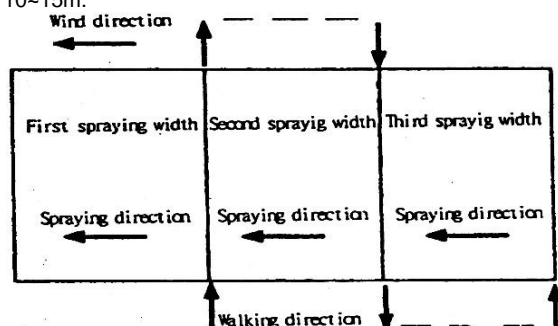


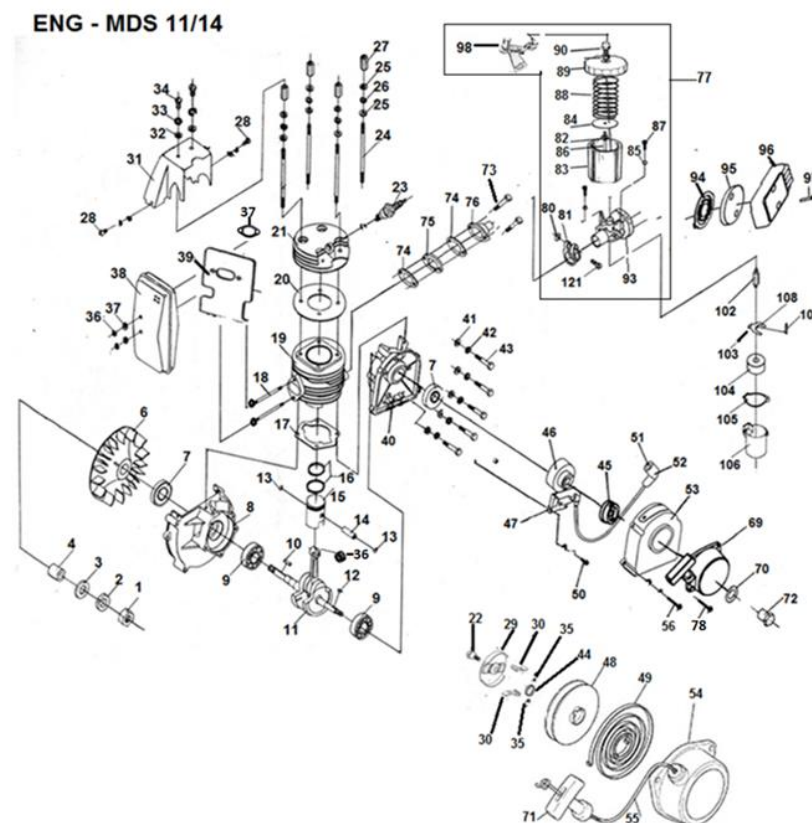
Fig. 9

- In the distance that the dotted line represents, the user should shut the chemical switch and reduce the engine speed.
  - Clean completion of a full day's work, in addition to the above claimed, clean out any residual liquid chemical in the container, then remove the bearing from the toothed disk, wash it with diesel oil and lubricate it with spindle oil when assembling. Take off the element of the quantity regulating switch and wash its holes to ensure a free passage for liquid chemical.
5. Spraying is not allowed in the following cases.
- Severely poisonous chemicals such as 1605.
  - Wind speed > 5m/s.
  - Strong ascending air movement.
  - The deviation angle of route from the wind direction is less than 45°.
  - When there are dew on the leaf surface of the crop.

### Dusting operation:

1. Set the machine in spraying state.
2. Filling the powder chemical: The powder should be dry. Do not use wet powder. The powder used should be free from foreign matter such as grass and it

### ENGINE DIAGRAM (MDS-11/14)



### ENGINE PARTS LIST (MDS-11/14)

Part No	Part Name	Part No	Part Name
E-1	Nut M12 X 1	E-49	Recoil Spring
E-2	Washer 12 (Spring)	E-50	Screw & Washer M4 X 30 (Star)
E-3	Washer 12 (Plain)	E-51	Spring Sparkplug
E-4	Shaft Sleeve	E-52	Cap Sparkplug
E-6	Fan	E-53	Rotor/Fly wheel Cover
E-7	Oil seal 17x30x7	E-54	Starter Cover

Problem	Probable Cause	Remedy
Impeller rubbing the impeller case	Fitting clearance is not correct	Regulate it by adding or removing the shims

### MAINTENANCE

#### Daily maintenance of the machine.

1. Do clean out any residual liquid or powder in the chemical tank.
2. Clean the oil contamination and dirt, especially after dusting or granule spraying.
3. Wash and brush the tank and other rubber parts with clean water, do not wash the engine with water.
4. Check for any fuel leakage or liquid at the connections and resolve the problem if found any immediately.
5. Check whether all the screws are tight, if not tighten them. Also replace the missing screws.
6. Immediately after dusting, clean the carburetor
7. After completion of maintenance work, store the machine in a dry and well-ventilated place. Keep off the machine from fire and direct sunshine.
8. Never allow any dusting powder to remain in the membranous dusting pipe. Before dismantling it from the engine, let the machine run idly for 1-2minutes, which can help to blow out any residual power remaining in the pipe.

### STORAGE

The machine should be sealed off for a long time by the method as follows.

1. Seal off the gasoline as per the instruction manual for engine.
2. Take apart all the machine parts and clean them carefully to remove any oil stains and dirt.
3. Use soda or soap water to wash and clean the chemical tank blower and pipes, then rinse them with clean water.
4. All plastics and rubber parts must be kept away from long exposure under the sunshine.
5. Cover the whole machine with a plastic. Film and store it in a dry and well ventilated place.

should also be free from clogged lumps. The charging valve should be closed at the time of filling.(see fig.5)

3. After completion of filling, turn the tank lid and open the charging valve.
4. With the machine carried on the back, regulate the dust valve and proceed for the dusting operation (see fig.2)
5. When using the membranous dusting hose, jerk the hose from time to time to prevent powder accumulating.

### Shutting down the engine

1. Close the dust valve or the spraying tap.
2. Slow down the engine speed and let it run at low speeds for 3~5minutes. Then close the fuel switch to bring the engine to standstill.

**Note:** While the engine is running, the hose must be mounted to the machine, other-wise, cooling air will be reduced and may damage the engine.

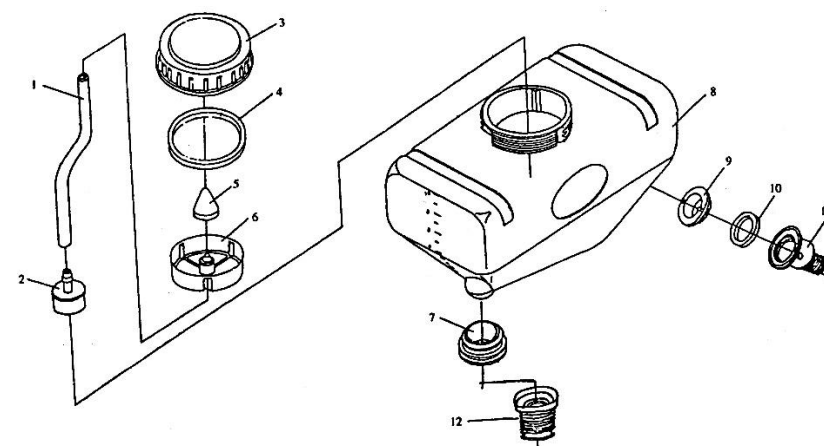


Fig. 10 Tank assembly in spraying state

1. Pipe 2. Changing valve 3. Tank lid 4. Washer 5. Lid 6. Fitter net frame  
7. Nobber washer 8. Chemical tank 9. Pressing nut 10. Washer  
11. Pusting valve 12. Pipe

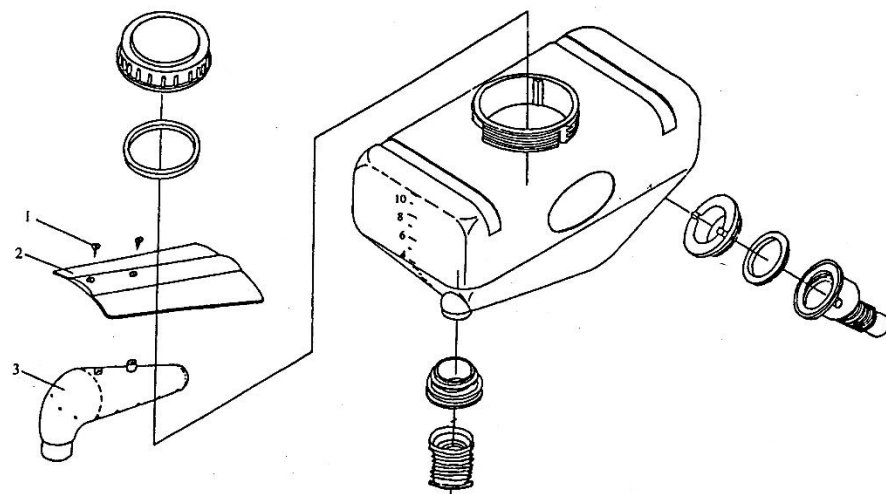


Fig. 11 Tank assembly in dusting state  
1.Screw M3×12 2.Plate for controlling dust 3.Pipe for blowing dust

## TECHNICAL SPECIFICATION

Product Code	KK-MDS 11L	KK-MDS 14L
HP	1.6 hp	
CC	50 cc	
Engine Type	2- stroke	
RPM/Out Put Pressure	5000	6000
Fuel Used	Petrol	
Liquid Tank Capacity	11 Litres	14 Litres
Fuel Tank Capacity	1.5 Litres	
Oil (Mixing)	40ml (2T) oil per 1 Litre of Petrol	
Consumption /Out Put Capacity	500ml (Engine)/hour, 420 Litres /hour(Liquid Output) & 3kg/hour (Powder Output)	

## TROUBLESHOOTING

Problem	Probable Cause	Remedy
The quantity of mist spray is reduced or unable to give mist spraying	Nozzle clogged up	Clean the nozzle
	Spraying tap chocked	Clean the spraying tap.
	Chock plate not opened	Open the chock Plate
	Air leakage at tank speed	Make sure the rubber seal is tight
	Lowering of engine speed	Check the engine for the cause and remedy
	Vent tube in the tank is twisted	Reassemble the vent tube.
	Strainer is clogged	Clear it
On mist spray when shooting upwards	The nozzle head is raised too high	Tilt the lance for a certain angle
Leakage of liquid chemical at pipe connection	Aging of the plastic pipes	Replace the pipes
Water leakage from the tank lid	Lid is not screwed tight	Tighten the screw
	Washer not place home or become worn	Refit or replace it
Spraying tap leakage	Tap not fitted tightly.	Turn the bonnet tight
Power Discharge Quantity few	Dust valve not fully opened	Open it wide
	Powder too wet	Replace with dry powder
	Dust valve clogged	Clean the dust valve.
	Charging valve is not open	Open it fully
	Engine speed is not adequate	Check the petrol engine
Leaking powder from the tank	Lid not screwed tightly	Tighten the screw
	Washer is placed improperly	Refit the washer.
	Washer worn out.	Replace the washer with a new one.