

风送喷雾机使用手册

Manual for air blast sprayer

Model			3WFX-400	3WFX-500Y	3WFQ-1200
Matching tractor power (KW)			≥40	≥40	≥40
Spraying width (m)			12	12	22
volume of spray (L/min)			32-48	32-48	80-100
wind speed (m/s)			14.2	14.2	14.2
Transmission parts	telescopic shaft	collapsing length (mm)	≥70	≥70	≥70
	Input shaft speed (r/min)		540	540	540
	consumed power	Fan (kw)	3.5	3.5	3.5
		diaphragm pump (kw)	5.5	5.5	5.5
Dimension	Total length (m) (Including telescopic shaft)		1.1	1.1	3.1
	total width (m)		1.2	1.2	1.4
	total height (m)		1.45	1.45	1.5
	empty weight (kg)		/	/	/
Fan	Calibration power/speed		3.5KW/1650r/min	3.5KW/1650r/min	3.5KW/1700r/min
	Fan type		axial flow	axial flow	axial flow
	Fan exhibition Angle		axial Angle 90°	axial Angle 90°	axial Angle 90°
			radial Angle 220°	radial Angle 220°	radial Angle 220°
impeller diameter (mm)		790	790	800	
Tank	Capacity (L)		400	500	1200
Wash tank	Capacity (L)		15	15	/
Pump	Calibration power/speed kw/ (r/min)		550-650	550-650	550-650
	pumping flow (L/min)		32-48	32-48	80-100
	working pressure (Mpa)		0.6-0.8	0.6-0.8	0.8-1.0

一. 喷药前的准备

1. 检查各紧固件是否牢固,
2. 检查各连接是否锁紧,
3. 检查柱塞油位是否合适 (油位观察孔的 2/3 处为宜)。

One. Preparation before spraying

1. Check whether the fasteners are firm,
2. Check whether the connections are locked,
3. Check whether the plunger oil level is appropriate (2/3 of the oil level observation hole is appropriate).

二. 药箱加液

1. 为避免对泵造成损害, 药箱中必须加有足够的水, 不能使泵无水空运转,
2. 加液前, 清洗吸入过滤器和其他过滤器。

Two. Adding liquid into tank

1. In order to avoid damage to the pump, the tank must be filled with enough water to prevent the pump from running without water.
2. Clean the suction filter and other filters before adding liquid.

三. 喷雾机与拖拉机挂接

1. 将喷雾机水平放置, 主轴中心与拖拉机输出轴中心保持一线。
2. 将拖拉机悬挂机构的左右提升杆的上下位置调整一致后, 将其端部的关节轴与喷雾机三点悬挂板用锁轴连接并插入挡销。
3. 将拖拉机悬挂机构的限位套管调整一致, 将拖拉机输出轴和喷雾机主轴用传动轴连接, 将限位销锁紧, 传动轴角度应 $<10^{\circ}$ 。
4. 将伸缩轴一头内花键与传动轴外花键连接。另一头与拖拉机外花键连接, 保证伸缩轴伸缩量 $\geq 7\text{cm}$ 。

Three. Connect the sprayer to the tractor

1. Place the sprayer horizontally and keep its spindle center in line with the tractor output shaft center.
2. After adjusting the upper and lower positions of the tractor suspension mechanism left & right lifting rods, connect the joint shaft at its end with the lock shaft of the sprayer three-point suspension plate and insert the stop pin.
3. Adjust the limit sleeve of the tractor suspension mechanism, connect the tractor output shaft and the sprayer main shaft with the transmission shaft, lock the limit pin, and the transmission shaft angle shall be $< 10^{\circ}$.
4. Connect the internal spline at one end of the telescopic shaft with the external spline of the transmission shaft. The other end is connected with the tractor external spline to ensure that the stretching amount of the telescopic shaft is $\geq 7\text{cm}$.

四. 压力调节

启动拖拉机 PTO 轴，逐渐加速到 550-650 转/分钟，调节泵安全阀，调节把手，使表指示压力 0.6-0.8MPa 即可使用。若表指示压力 > 1.2-1.5MPa 应停机检查安全阀是否堵塞，排除故障后再运行。

Four. Pressure regulation

Start the tractor PTO shaft, gradually accelerate to 550-650 RPM, adjust the safety valve of the pump, adjust the handle, and make the pressure indicator 0.6-0.8mpa ready for use. If the pressure indicator > 1.2-1.5mpa, stop the machine to check whether the safety valve is blocked, and operate after trouble shooting.

五. 喷药作业

1. 选择理想喷洒时间，最好在早上和下午凉爽无风的天气下进行，这样可减少农药的挥发和漂移，提高防治效果。
2. 喷洒前运行机器 5-10 分钟，待药液均匀后再进行喷洒作业。
3. 拖拉机要尽可能逆风行驶。
4. 在喷洒作业过程中，应保持喷量不变。
5. 大转弯时，应将拖拉机输出轴置于空档。
6. 遵守先开风机后送水，先断水后停风机的原则。

Five. Spraying operations

1. Choose the ideal spraying time, preferably in the cool and windless weather in the morning and afternoon, so as to reduce the volatilization and drift of pesticides and improve the prevention effect.
2. Run the machine for 5-10 minutes before spraying, and spray after stir the liquid well.
3. The tractor drive against the wind as far as possible.
4. During the spraying operation, the spraying amount should be kept unchanged.
5. When making a big turn, put the tractor output shaft in neutral.
6. Follow the principle of starting the fan before sending water, and cutting off the water before stopping the fan.

六. 喷头选用与更换

本机设计的喷头是可依照实际状况更换的。旋开喷头快速压帽，再更换上合适的喷头。喷头使用过久，喷头的孔径会因水压的冲击力而磨损变大。当发现喷洒的药液不够细腻时（雾化效果不良），请更换新的喷头。过于磨损的喷头会造成喷药过量，对于作物可能会导致药伤，或造成环境污染。

Six. Sprinkler head selection and replacement

The sprinkler head of this machine can be replaced according to the actual

situation. Unscrew the nozzle quick cap, and then replace the appropriate nozzle. If the nozzle is used too long, the aperture of the nozzle will become larger due to the impact of water pressure. When it is found that the spray liquid is not fine enough (the atomization effect is not good), please replace with a new nozzle. Over worn sprinkler heads can cause excessive spraying, which can lead to damage to crops or environmental pollution.

七. 故障及排除方法

Seven. Failure and solution

1. Nozzle no spray water

possible reasons	solution
A. PTO don't rotate	Check whether the tractor is connected to the PTO shaft well
B. Tank is short of liquid	Check and add liquid
C. filter has dirt things	Clean filter
D. Tube is blocked	Check all the tube

2. Underpressure

possible reasons	solution
A. PTO speed isn't enough	correct speed is 500~600 RPM
B. switch valve is not fully open	Open switch valve
C. suction tube is partially blocked	Clean the filter to make it clear
D. pump speed is low	Check the pump belt

八. 维护与保养

Eight. Maintenance

1、管路维护

- (1) 每天结束喷药后，要在药箱中加入清水，卸下喷嘴并运转喷雾机排空。
- (2) 然后将喷嘴清洗干净并重新装上。
- (3) 每天或者在需要时清洗各级过滤器保持管路畅通。
- (4) 检查所有管路是否变形、老化、开裂。检查所有阀门、接头是否跑、冒、滴、漏等，如有应及时更换。

1. Line maintenance

- (1) every day after spraying, add clean water in the tank, unload nozzle and run sprayer to be empty.
- (2) then clean and load nozzle again.
- (3) every day or as needed, clean filter at various levels to keep clear of line pipe
- (4) Check all piping whether deformation, aging and cracking. Check all valves and joints whether run, drip, leak, etc., if any, please replace in time.

2、传动系统保养

- (1) 检查传动系统各零部件是否损坏、松动，发现有损坏的零部件应及时更换，应及时拧紧松动的紧固件。
- (2) 三角带如果有松动现象，应及时更换，并保持同一组三角带长度相等。

2. Transmission system maintenance

- (1) check the parts of the transmission system whether damaged and loose, replace if damaged, tighten the loose fasteners in time.
- (2) if the triangular belt is loose, replace it in time, and keep the same set triangular belt with the same length.

3. 按时给各润滑点加油。

3 Oil each lubrication point on time.

油品	位置	容量	时间	参数
润滑油	隔膜泵	0.7L	首次更换: 30 小时后每 100 小时更换	46#
	各油杯处		4 小时	
润滑脂	轮毂处		500 小时	
	各轴承座			

oils	place	capacity	Time	parameter
lubricating oil	diaphragm pump	0.7L	First replacement: every 100 hours after 30 hours	46#
	oil cup		4 hours	
lubricating grease	wheel hub		500 hours	
	bearing seat			

4、冬季有冻结危险时，喷雾机的存放要求：

在冬季温度降到零度或零度以下的地区，喷雾机在使用后或长期不使用时，应将整机用清水清洗干净，并将水排尽，以防将喷雾机冻坏。

4. Storage requirements for sprayers in winter when there is a risk of freezing

In the winter temperature falls to zero or below zero, after using or not use for a long time, the whole machine should be cleaned with water, and empty water, in order to prevent the spray machine frozen.

5、隔膜泵的使用注意事项

(1) 在使用泵之前，请仔细阅读使用说明书中的操作指南，确信你已安全理解泵及泵相配机器的工作原理和操作步骤。

(2) 使用泵时要小心且注意力集中，有责任确信使用者读过说明书并熟悉泵的操作，否则不允许他人使用泵，泵不能被儿童及未授权的人使用。

(3) 有以下情况不能使用泵：
泵被撞破；明显漏油，漏水；出水管或喷枪已损坏；有上述情况应由专业人员进行检测和维修

(4) 在操作期间，人绝对不能离开，确定不会被儿童和动物接触。

(5) 在使用前应穿戴好必要的防护用具，避免农药造成对人体的伤害。

(6) 确定泵的移动部件有足够的保护，使其不易接近其他人。

(7) 不要卸除泵运动部位的安全装置。

(8) 不要在泵运动时维修。

(9) 要遵照使用范围说明使用。

(10) 不要改变泵的安装条件，特别是它的附加装置及各管路连接接头。

(11) 泵的动力设备要由有资格的电工安装，如果动力设备是内燃机，那么不能在封闭场合使用。

5. Precautions for the use of diaphragm pump

(1). before using the pump, please carefully read the operating instructions, make sure you have understand the pump and pump matching machine

operating principles and procedures.

(2). be careful and attentive when using the pump, and it is your responsibility to ensure that the user has read the instructions and is familiar with the operation of the pump. The pump shall not be used by children or unauthorized persons.

(3) the pump shall not be used under the following circumstances:
The pump was smashed; obvious oil or water leakage; the outlet pipe or spray gun is damaged; In the case of the above, professional personnel shall carry out testing and maintenance

(4). during the operation, people must not leave, make sure that children and animals will not contact.

(5). before use, it is necessary to wear protective equipment to avoid harm to human body caused by pesticides.

(6). make sure that the moving parts of the pump have sufficient protection to prevent them from approaching other people.

(7). do not remove the safety device of the moving part of the pump.

(8). do not repair during pump movement.

(9). use in accordance with the scope of use instructions.

(10). do not change the installation conditions of the pump, especially its additional devices and pipe connections.

(11) the power equipment of the pump shall be installed by a qualified electrician. If the power equipment is an internal combustion engine, it shall not be used in closed occasion.