TMG INDUSTRIAL®

TMG-PSTB160H
PRODUCT MANUAL
v.2026.07.18

160 Gal Hydraulic Sprayer



⚠ WARNING



Please read and understand the product manual completely before assembly
- Check the parts list to make sure all parts are received.
- Wear safety goggles or other protective gear while assembling.
- Do not return products to dealers, who are not equipped to handle returns.

Missing parts or have questions on assembly?
Email: cs@tmgindustrial.com
Or visit: tmgindustrial.com

Table of Contents

1.Safety Warnings 3

2.Product Introduction 5

3.Product Features 5

4.Technical Specifications 6

5.Structure And Principle 7

6.Operation Instructions 8

7.Maintenance 24

8.Trouble Shooting 27

1.Safety Warnings

The proper use of the machine is based on the safe operations. Please comply with the instructions described in this chapter strictly.

A. When placing the machine on the ground, please confirm in advance the place is smooth, non-sloped and solid.

B. Make sure that the power engine is stopped before installation of drive shaft or other operations.

C. While the drive shaft is running, it is strictly forbidden to do any repair or maintenance work for the.

D. Keep your hands and other body parts away from the moving parts when folding and spreading the spray arms to avoid possible injuries.

E. Only trained, alert operators who are physically capable of safely operating the machine may use it.

F. When using and dealing with chemicals, the operator should carefully read and strictly comply with the safety instructions provided by the chemical manufacturer.

G. It is strictly prohibited to use inflammable, explosive, strong acid, strong alkali, and other special liquids.

H. The tractor driver should have the driving license approved by related traffic and safety department.

I. The manufacturer is not responsible for the accidents caused by any modifications of the machine or any improper operations of the machine.

In this manual and on the machine you will find the following warning signs for different security attentions. When seeing these signs, you should take precautions for possible risks and injuries. Read carefully the information under these signs and inform the other persons related.

Explanations of these safety symbols:

	Read the manual
	Protect your hearing
	Use a mask
	Use protective clothing
	Use gloves
	Warning: Risk of injury

	Cardan shaft caution
	Toxic
	Max. pressure
	Max. speed 550RPM
	No passing
	Do not remove safety mechanisms
	Do not clean or lubricate while running
	No smoking
	Do not enter in the tank
	Driving speed max. 30km/h
	Circuit washer Non-drinking water
	Hand washer Non-drinking water

2.Product Introduction

This mounted type boom sprayer is designed to be driven by a tractor with rear-set 1"3/8 power take-off, runs at 540RPM. It is used for spraying insecticides, herbicides, fungicides, liquid fertilizers for field crops such as corn, wheat, beans, potatoes etc.

3.Product Features

1. Technically the machine is designed with features of rational structure, simple operation, easy maintenance, light weight. It can be coupled with the tractor's rear mounted 3-point elevator quickly and conveniently. It has high work efficiency, good treatment effect and needs less labor.
2. The liquid pump is of diaphragm type characterized by high pressure, stable flow, permission of dry run, long service life, etc.
3. The machine is fitted with anti-drip nozzles, which distribute even droplets. The user can choose nozzle tips of different spray volumes (such as 1.6 and 2.0L/min) according to demands of different crops to achieve better spray treatment effects.
4. Fitted with integrated tanks, including chemical tank, circuit washing tank, hand washing tank, with good-looking appearance, long durability, good resistance to chemical corrosion. The chemical tank is fitted with a transparent level indicator so that the user can know the liquid level inside easily and clearly.
5. Simple connection between the tank chassis and the spray arms increases interchangeability and free adjustment space. The spray arms are designed to be folded in a simple way and equipped with anti-collision mechanism. Sprayers with boom length of 12M and above also provided with four-link balance system, greatly enhancing the properties of boom flexibility, self-return and larger lifting room which makes the machine to be more reliable, more practical and more convenient for users.
6. The water circuits adopts multi-section control, users can choose different spraying areas according to different terrains and different requirements, thus reducing chemical dosage, enhancing crop safety and protecting the environment.
7. The chemical tank is internally equipped with a stirring system which makes the chemicals to be mixed quickly and completely during filling the tank and during the spray treatment.
8. This series of sprayers adopts four-stage filtration, the number of meshes of the filter is gradually increased (for example 18 mesh/in, 30 mesh/in, 40 mesh/in, 80 mesh/in) which ensures fine spray droplets and good spray uniformity under different water sources and chemical solvents.

4.Technical Specifications

Model		PSTB160H
Type		mounted
Power supply	Power input	Tractor PTO shaft
	Mating power	⩾50Hp
Boom type	Folding method	Cross style
	Lifting method	Hydraulic
	Balance & shock absorption system	Four-link mechanism
Spray system	Water circuits	Separate control
	Nozzle type	Anti-drip fan nozzles
	Spray width (m)	12
	Nozzle number	24 Pcs
	Spray pressure (MPa)	0.3~0.5
	Effective spray height	0.5m
Pump	Type	diaphragm
	Suction (L/min)	78
	Work pressure (MPa)	0~4.0
	Max. speed (r/min)	540 (6-teeth spline shaft)
Tanks	Chemical tank (L)	600
	Circuit washing tank (L)	80
	Hand washing tank (L)	15
Driving speed (km/h)		⩽30
Dimension (L×W×H)		75”x100”x107” (190.5x253x271cm)
Weight		1190 lbs (540kg)

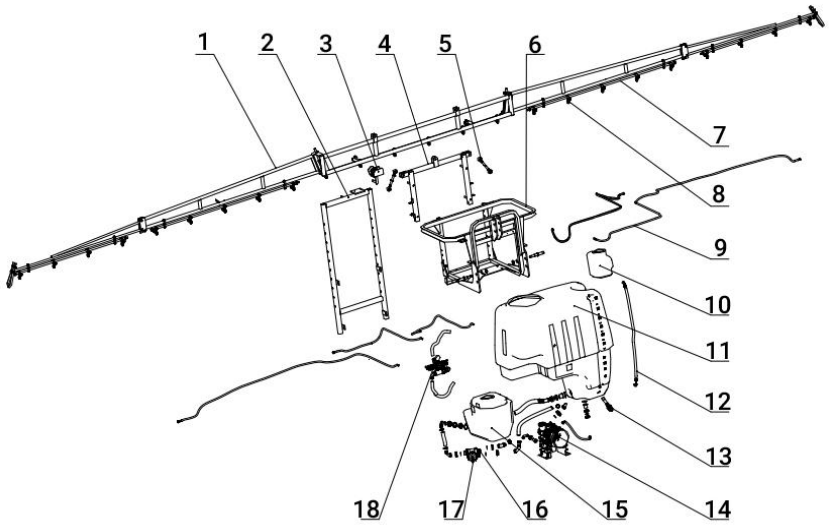
5.Structure and Principle

5.1 Composition

The PSTB160H series boom sprayers consist of five main parts: spray arm assembly, plumbing system, mounting frame, lifting portal frame and four-link buffer and balance mechanism.

The plumbing system is composed of integrated tanks (chemical tank, circuit washing tank, hand washing tank), diaphragm pump, 3-way ball valve, suction filter, distributor, delivery hoses, spray tubes, nozzles, etc. The chemical tank is fitted with a pressure stirrer for mixing the chemical liquid inside. The mounting frame is for coupling with the tractor which outputs power to drive the pump so that to do spraying jobs. Illustrations as shown below:

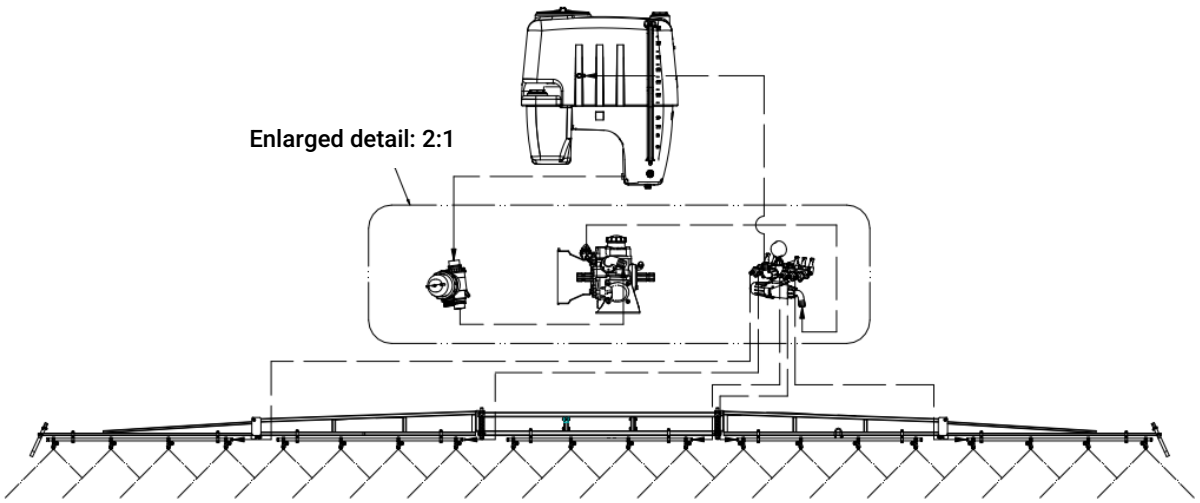
Equipment Structure



1.Spray arm assy	2.Big portal frame	3.Winch	4.Small portal frame	5.Adjustable link bar
6.Mounting frame	7.Spray tube	8.Anti-drip nozzle	9.Delivery hose	10.Hand-washing tank
11.Chemical tank	12.Liquid level pipe	13.Stirrer	14.Pump	15.Circuit rinsing tank
16. 3-way ball valve	17.Suction filter	18.Distributor		

5.2 Work principle

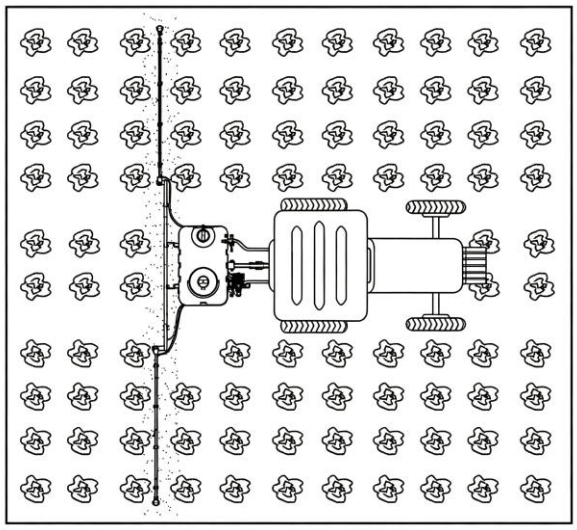
Through the cardan shaft, the pump is driven by the tractor power take-off. The liquid is sucked into the pump through the suction filter from the chemical tank, and is pressurized, then enters in to the spray booms through the section valves of distributor, and atomized by the nozzles. And then the fog droplets are blown out onto the target. The surplus of liquid flows back to the chemical tank through the overflow pipe of the distributor and stirs the liquid.



6.Operation Instructions

6.1 Working illustrations

This equipment is coupled with a tractor with rear-set 1"3/8 power take-off, runs at 540rpm.



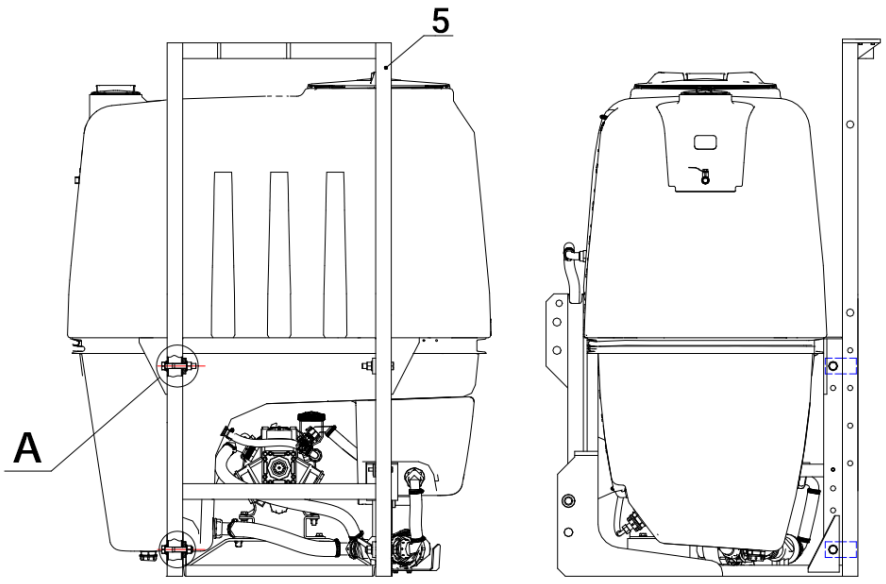
6.2 Installation and use

6.2.1 Preparations:

For transportation purpose the machine is disassembled into components and parts (tank and frame assy., spray arms, distributor, hoses, etc.). Place all the components and parts in a solid and even place and prepare some commonly used tools and lubricants (grease).

6.2.2 Assembling:

Installation of mounting frame and middle spray arm.



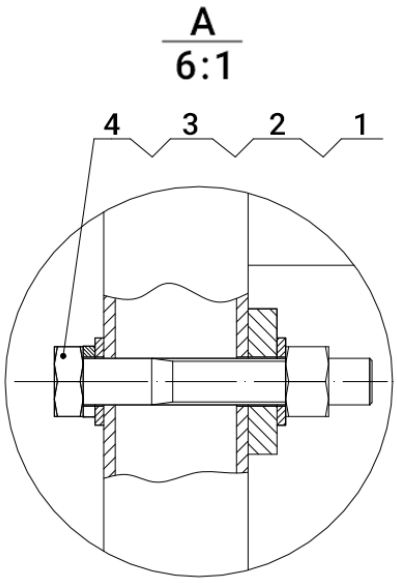
1.Bolt M16×90

2.Spring washer M16

3.Plain washer M16

4.Nut M16

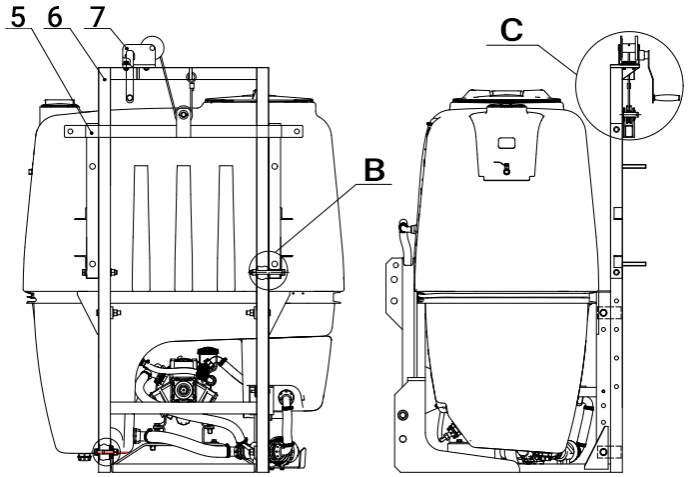
5.Big portal frame

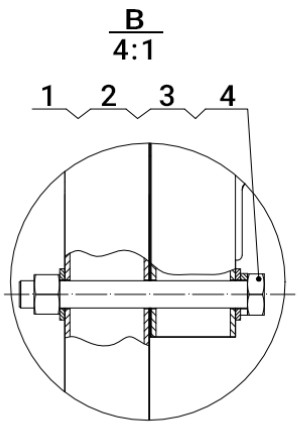


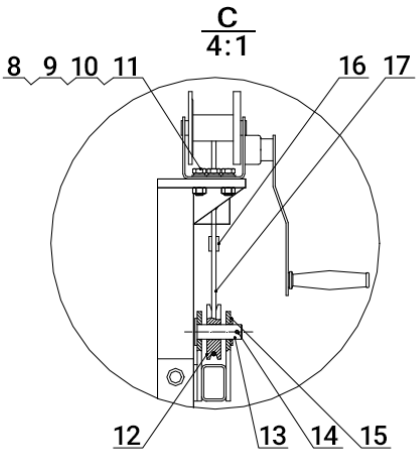
a. Align the 4 holes of the big portal frame and the holes of the mounting frame and insert the spring washers, plain washers, M16 bolts and screw on the M16 nut and tighten them moderately.

b. Adjust the horizontality and verticality of the big portal frame with the ground and the mounting frame. The overall deviation should be ≤ 2mm.

c. After adjustment, tighten all bolts securely to ensure no loosening during operation.







1.Bolt M16×135	2.Spring washer M16	3.Plain washer M16	4.Nut M16	5.Small portal frame
6.Big portal frame	7.Winch	8.Nut M8×30	9.Spring washer M8	10.Plain washer M8
11.Nut M8	12.Lifting pulley	13.Pin Ø 20×75	14.Elastic cylindrical pinØ5×35	15.Plain washer M20
16.Wire rope clamp 5	17.Steel wire			

a. Predetermine the required height, align the 4 holes of the small portal frame and the holes of the big portal frame and insert the spring washers, plain washers, M16 bolts and screw on the M16 nuts and tighten them moderately.

b. Adjust the horizontality and verticality of the small portal frame. The overall deviation should be ≤ 2mm.

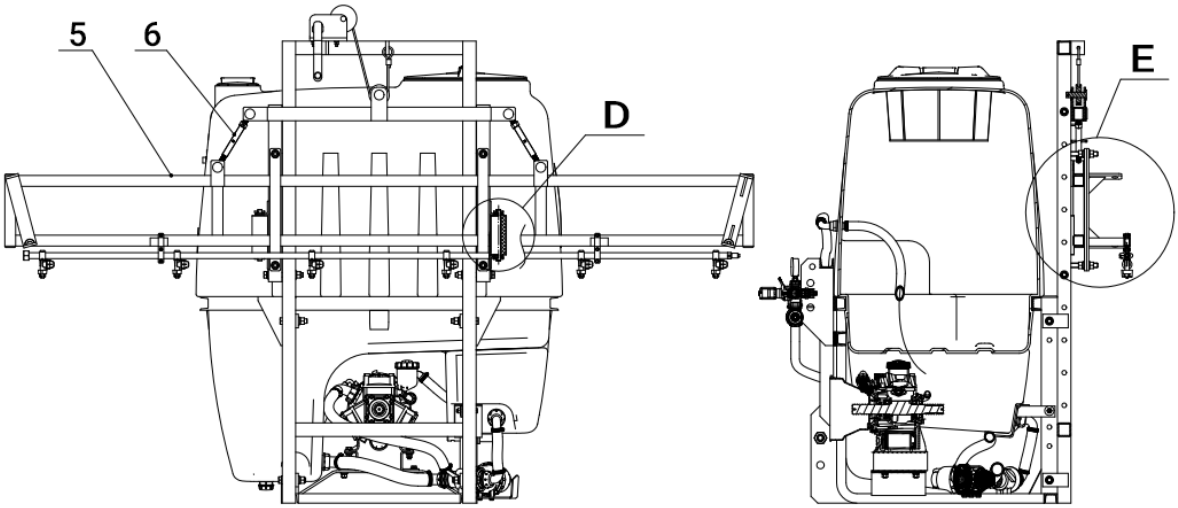
c. After adjustment, tighten all bolts securely to ensure no loosening during operation.

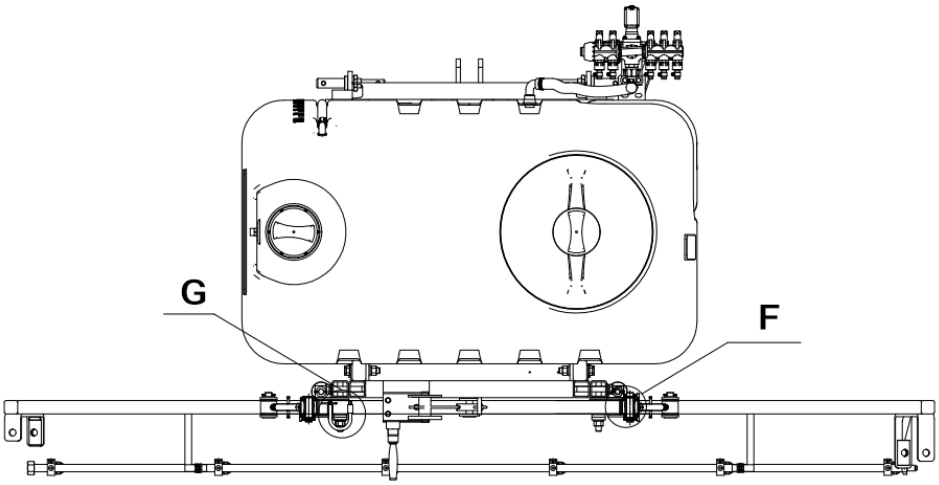
d. Install the winch. Use bolts M8, spring washers, plain washers, nuts to fix the winch on the big portal frame.

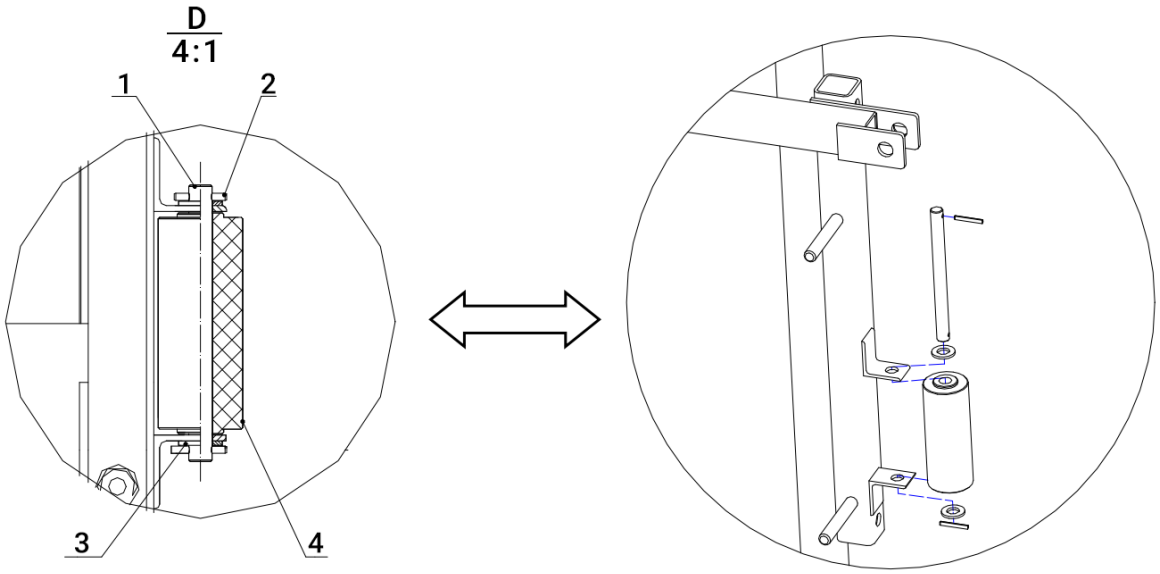
e. Install the lifting pulley. Use Ø20×75 pin, M20 plain washer, elastic cylindrical pin Ø5×35 to fix the pulley on the small portal frame. Ensure the lifting pulley rotates flexibly.

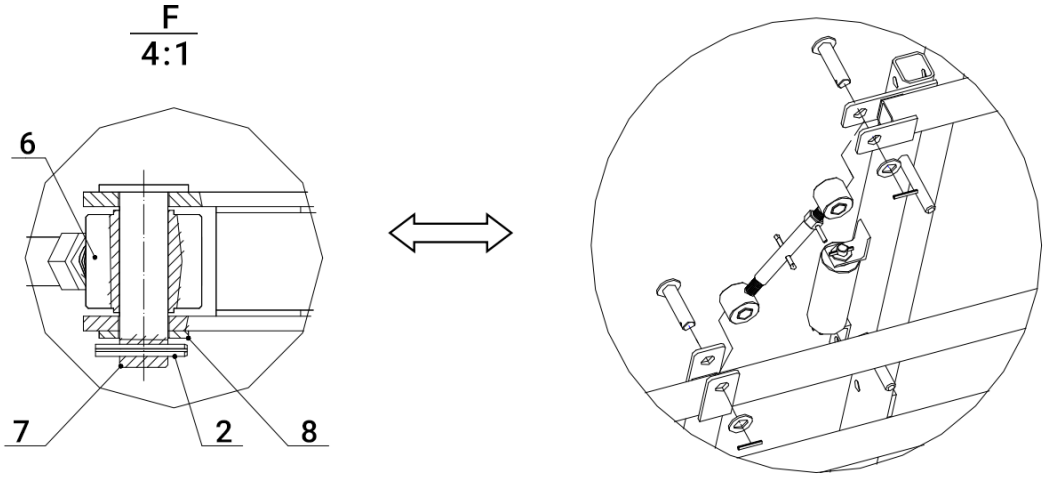
f. Guide the free end of the steel wire on the winch to pass through the lifting pulley groove, and then pass through the specified hole on the big portal frame. A suitable and effective length of the free end of the steel wire rope should be retained. Then use the clamp 5 to fasten the wire rope to ensure that there is no loosening during work.

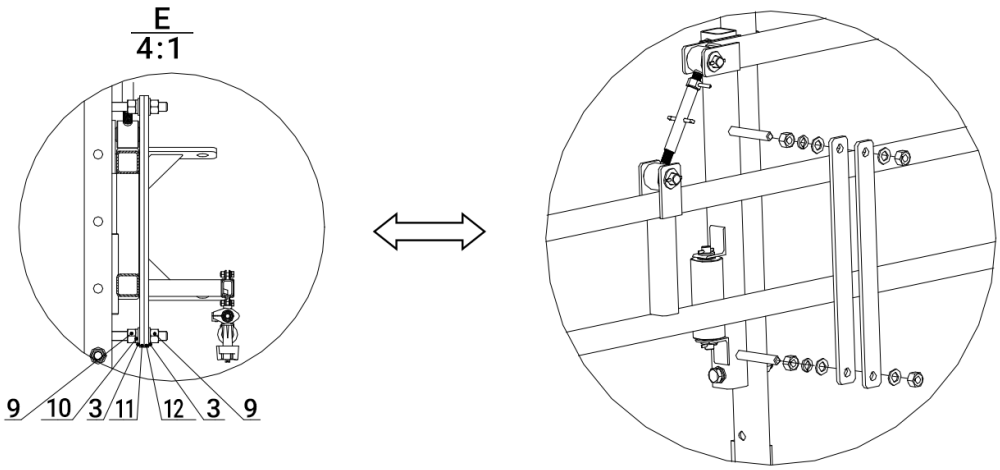
g. Rotate the handle of the winch to test the winch condition and the wire rope connection and confirm all are in good order. Apply appropriate lubricant to the sliding parts of the winch, wire rope and lifting pulley.

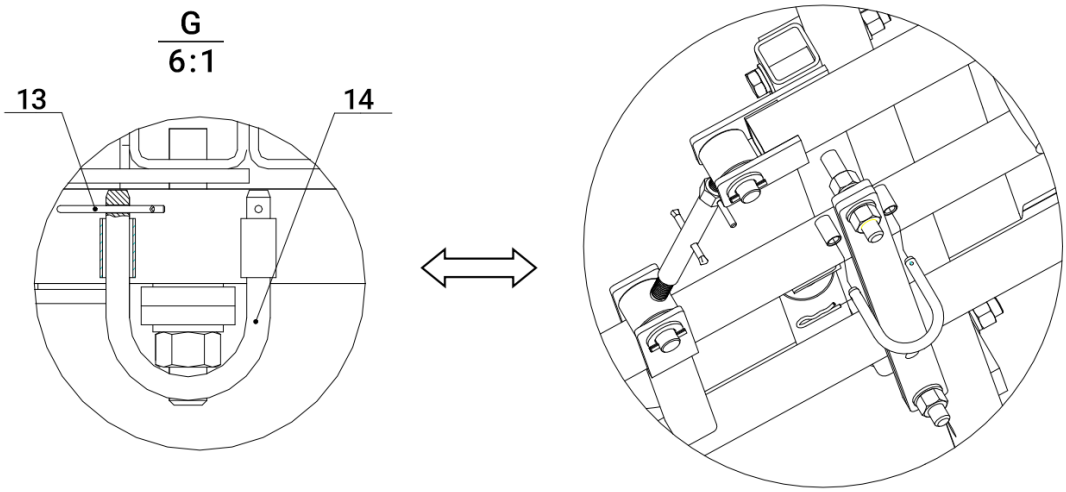





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1.Axis pin Ø16×188	2.Elastic cylindrical pin Ø5×35	3.Plain washer M16	4.Balance roller
5.Middle spray arm	6.Adjustable link rod assy	7.Pin Ø20×75	8.Plain washer M20
9.Nut M16	10.Spring washer M16	11.Sliding plate 450	12.Backing plate 450
13.R type split pin	14.U type pin 60		

a. Fix the balance roller on the small portal frame and make sure it can rotate flexibly.

b. Connect the adjustable link rod and insert pinØ20×75 to assemble the middle spray arm on the small portal frame. Pay attention to the direction and symmetry of middle arm and link rod to ensure that the movable parts can move freely and no loosening during work.

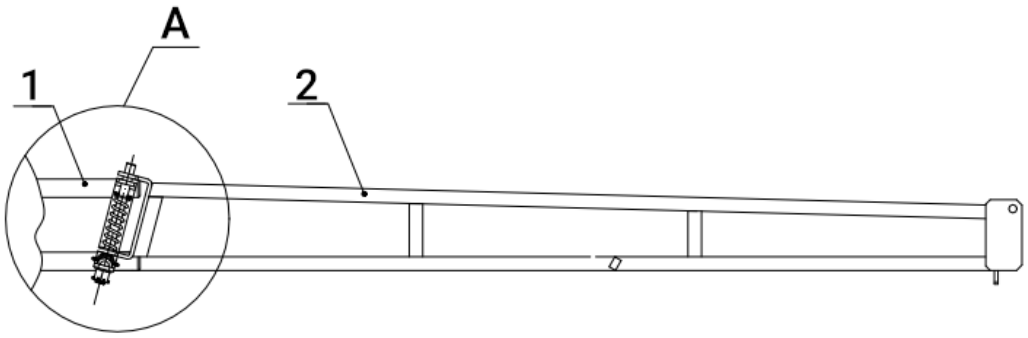
c. Firstly screw the nut M16 on the bolt of the small portal frame, and put on spring washer, plain washer, and then install the sliding plate 450, backing plate 450, plain washer and nut M16 in turn.

d. Through the nut M16 adjust the gap between the middle arm and the small portal frame and the sliding plate 450 to ensure that the middle arm is stable, flexible, and free of interference during the swing process.

e. Put on the U type pin 60 and R type split pin so that the following installations can be made safely (and also during transportation). During the insertion of the pins if there is pin hole deviation, it is necessary to re-adjust the link rods on both sides. (Note: the U type pin 60 must be pulled out during spray operation and inserted into the specified position so that the spray arms can swing freely.).

f. After all are in good order, apply appropriate lubricant onto the relative moving parts.

6.2.3 Installation of middle spray arm and side spray arm



1.Middle spray arm

2.Side spray arm

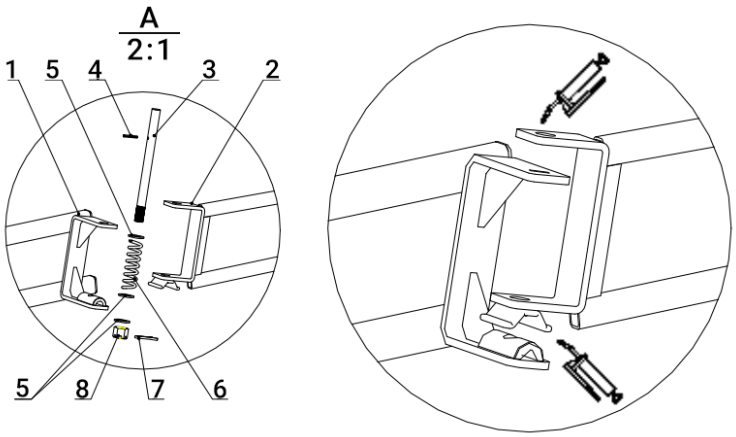
3.Rotating shaft

4.Elastic cylindrical pin Ø5×35

5.Plain washer M20

7.Split pin Ø5×35

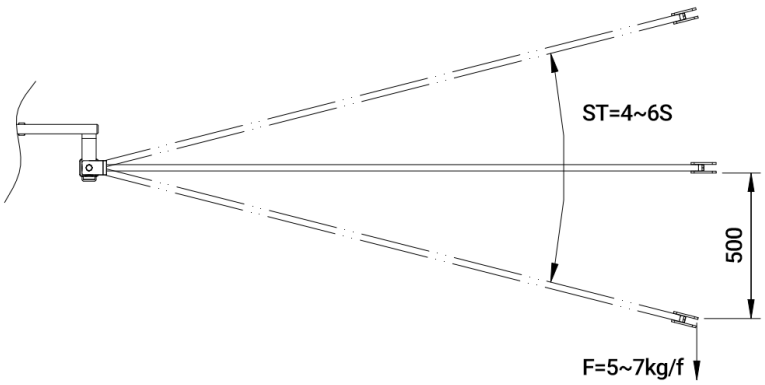
8.Locking nut M20



a. First, apply appropriate lubricant to the connecting halves of middle arm and side arm and the connecting holes.

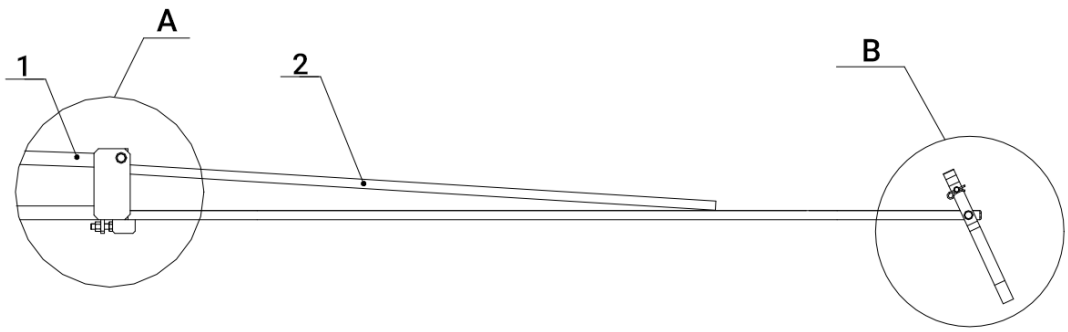
b. Combine the half of middle arm and that of side arm, insert the rotating shaft through the upper connecting hole, put on plain washer and return spring, then insert fully through the lower connecting hole.

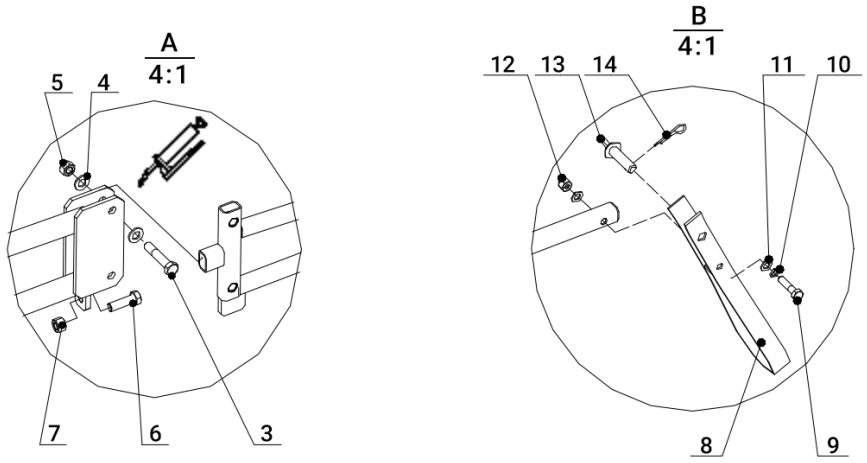
c. Insert the elastic cylindrical pin Ø5×35 into the hole of the rotating shaft, gently swing the side arm so that the mounted parts are in a natural flexible state, then screw on the locking nut M20. When the return spring is compressed under 5-7kgf condition, pull the furthermost point of the side arm by hand and let it leave away from the horizontal line 500mm. It is the best that the side arm, under the action of the return spring, comes back to the horizontal position after 4-6 seconds of moving back and forth. If there is a big deviation, please adjust the relevant parts, especially the position of the locking nut M20.



d. After adjustment, insert the split pin Ø5×35 into the hole of the rotating shaft and thread against the locking nut M20, then bend its end to prevent it from falling off during work.

6.2.4 Installation of side spray arm and outer side spray arm





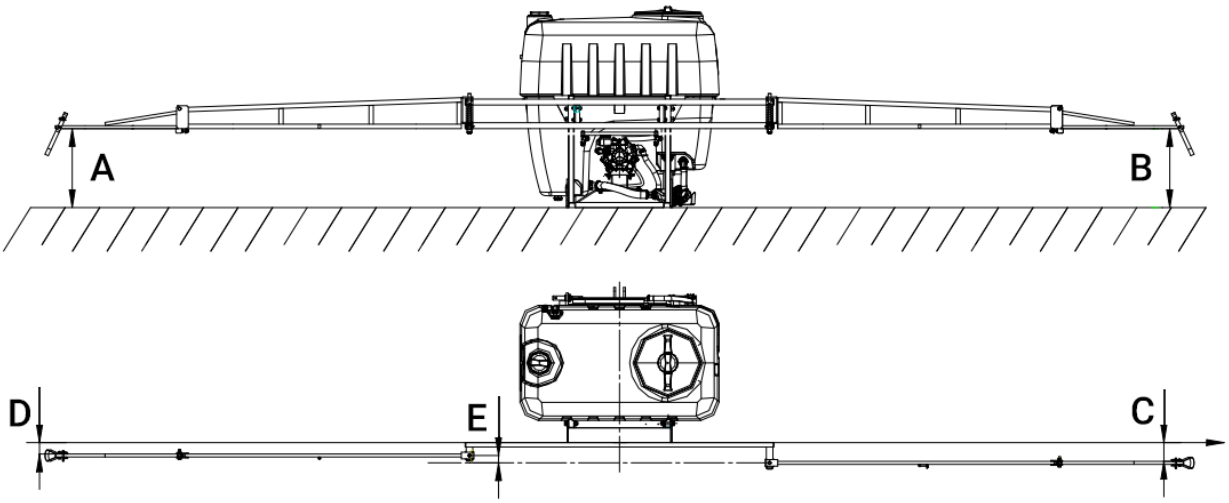
1.Side spray arm	2.Outer side spray arm	3.Bolt M12×60	4.Plain washer M12
5.Lock nut M12	6.Bolt M12×35	7.Nut M12	8.Protection ring
9.Bolt M8×35	10.Spring washer M8	11.Plain washer M8	12.Cap nut M8
13.Welded pin 45×Ø12	14.R type split pin 45×Ø12		

a. Apply lubricant to the inner wall of the connecting plate and put it into the outer side arm connecting end. Align the holes and insert the bolt M12×60 with plain washer, and screw on the lock nut M12 with plain washer. The right degree of tightness will allow the outer side arm to rotate freely and there is no swing in the side direction.

b. Align the hole of the protection ring and that on the outer end of the outer side arm, insert spring washer, plain washer and bolt M8×35, and screw on cap nut M8 to ensure that there is no loosening during operation.

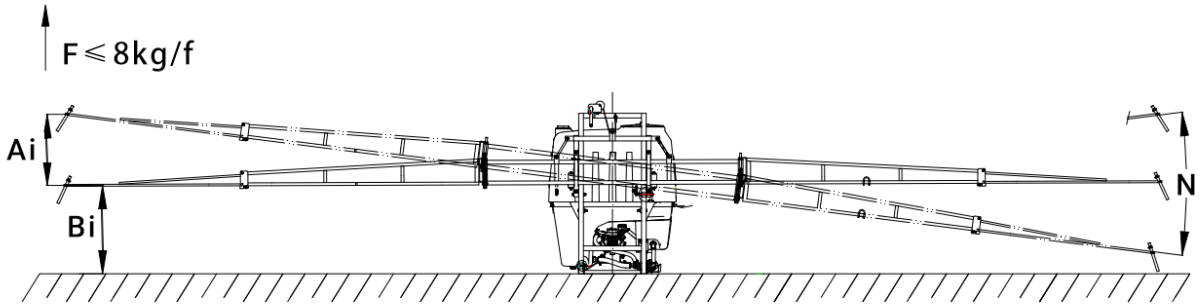
c. Insert the spare pin 45×Ø12 into the protection ring and insert the R-shaped split pin so that they will be used for fixing the outer side arm when it is folded.

6.2.5 Leveling test of spray arm assembly



Model	Horizontal difference	Standard (mm)	Note
PSTB160H	A-B = X	X≤100	If there is any deviation, re-adjust the relevant parts of the joints of spray arms and also the adjustable link rod (if equipped with).
	C-D-E = Y	Y≤100	

6.2.6 Flexibility test of balance mechanism



Model	F	Ai			T	N	Li			H
		A1	A2	A3			L1	L2	L3	
PSTB160H	≤8kg/f	400	500	600	≤5S	≥1	B-B1	B-B2	B-B3	≤50 mm

Note:

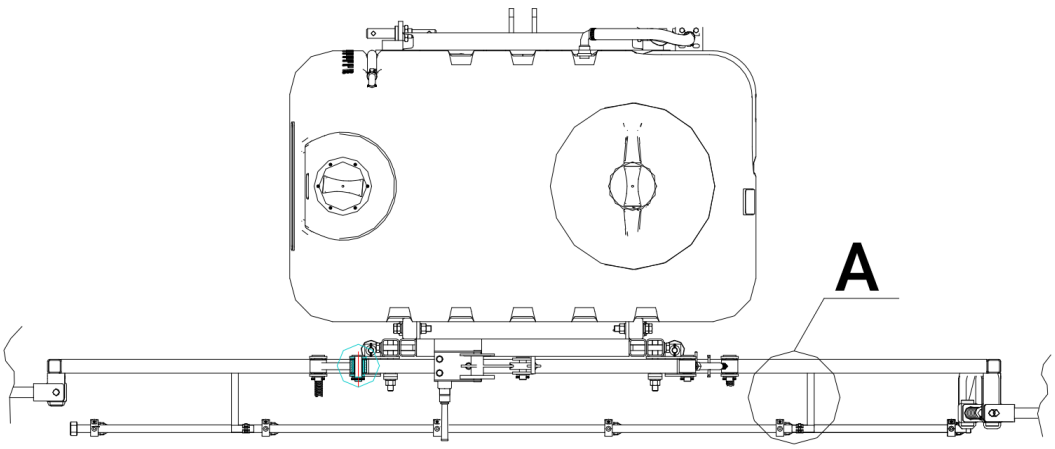
1. F indicates the force of lifting.
2. A indicates the height of each lift.
3. T indicates the time required to return back from reciprocating motion.
4. N indicates the number of reciprocating motions.
5. B indicates the height from the reference surface when horizontal.
6. Bi indicates the different height values returned by each lift.
7. Li indicates the absolute value of the difference in height of each return (Li = B-Bi).
8. H represents the allowable range of the absolute value of the height difference of each return.

6.2.7 Spray arms matching

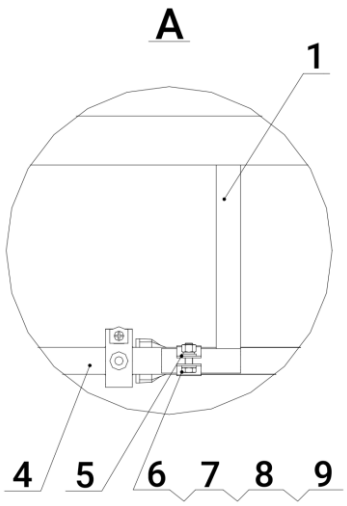
For some models, the spray arms and parts are interchangeable. If related information is needed users can inquire the supplier.

6.2.8 Installation of water circuits

Installation of middle spray tube



1. Middle spray arm
2. spray tube assy.
3. Pipe clamp
4. Bolt M6x20
5. Spring washer M6
6. Plain washer M6
7. Nut M6

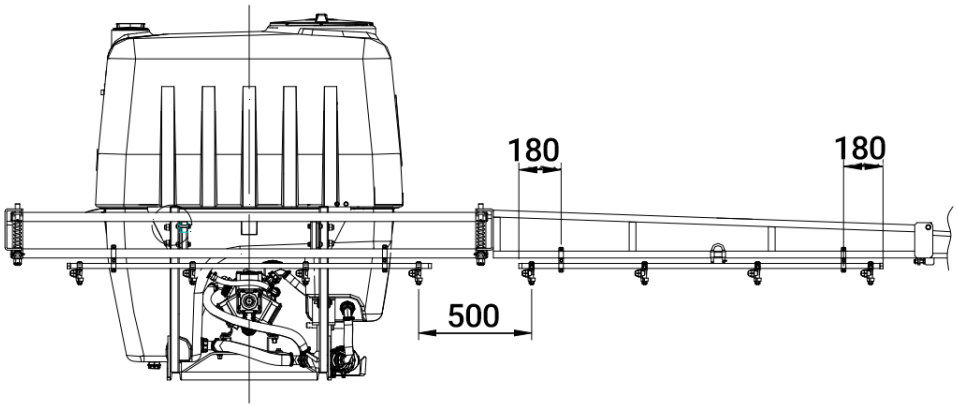


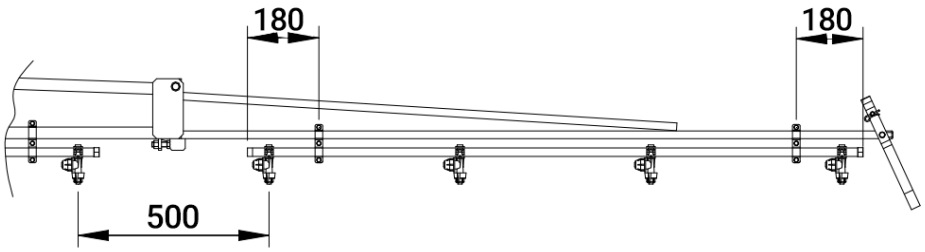
a) Fix the spray tube assy. on the middle spray arm by pipe clamps and tighten them with bolts and nuts.

b) Make sure that the pipe clamps and the middle spray arm are properly positioned.

c) Make sure that the spray tube assy. is placed in the center position of the middle spray arm.

Installation of side spray tubes





a. Fix the spray tube assy. on the side spray arm by the pipe clamps and tighten them with bolts and nuts.

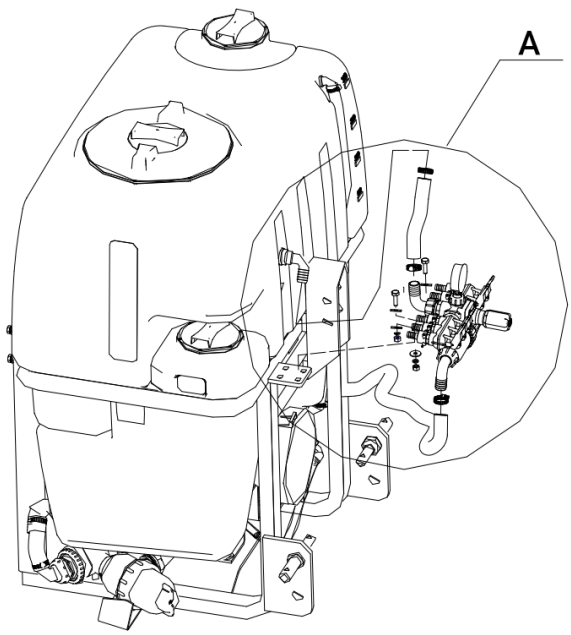
b. When assembling, make sure that the distance between the pipe clamp and each end of the spray tube is about 180mm.

c. Make sure the distance between the two nozzles of the two spray tubes is 500mm.

d. Pay attention to the installation direction of the spray tube.

e. Make sure that all anti-drip nozzles are in the same direction.

Installation of distributor



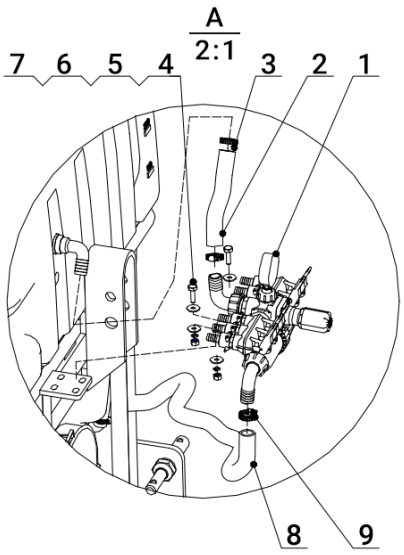
1.Distributor 2.Overflow hose

3.ClampØ22 -Ø32 4. Bolt M8×30

5.Washer 8 6.Spring washer 8

7.Nut M8 8.Pump outlet hose 850

9.ClampØ40×2

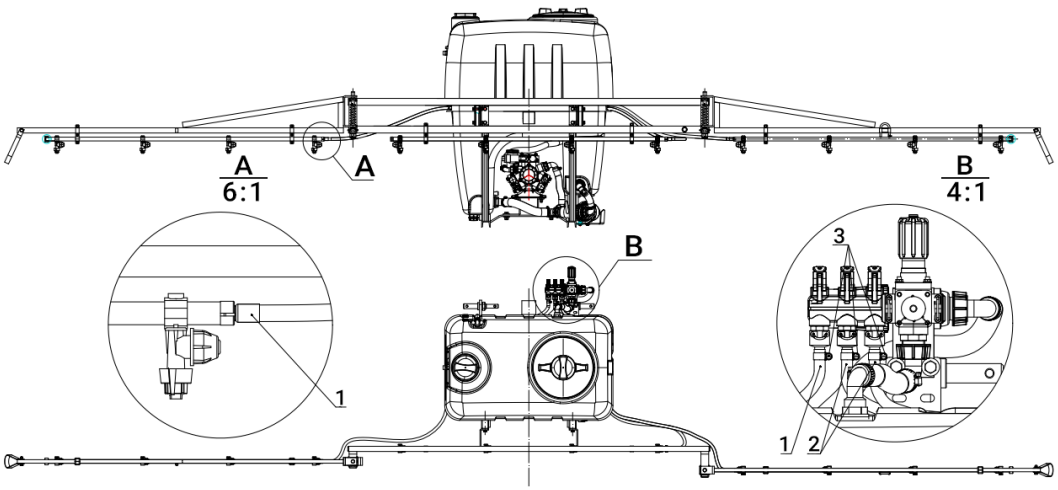


a. Install the distributor on the mounting frame.

b. Connect the overflow hose to the fitting of chemical tank and the overflow fitting of distributor, and lock it with clampØ22-Ø32 and ensure its tightness.

c. Connect the pump outlet hose to the pump outlet fitting and the inlet fitting of distributor, and lock it with the steel wire clampØ40×2 and ensure its tightness.

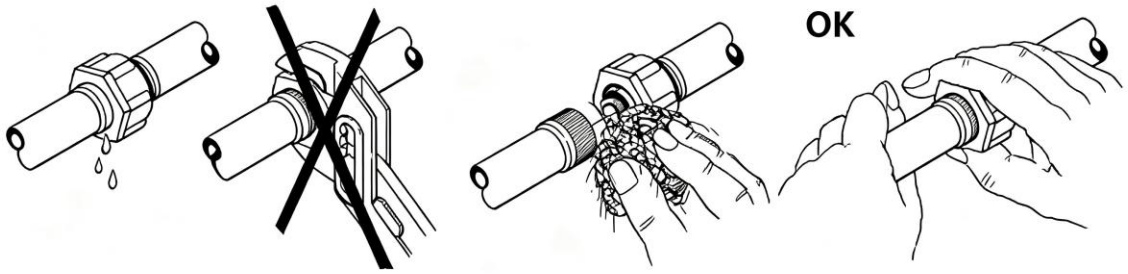
Connection of spray hoses



1, 2. Spray hoseØ10 orØ13 (length will be 2200, 2600, 3500, 4000, 5000mm, 6000mm according to different models) 3. Hose clampØ12-Ø19.

a. One by one, connect the hose (the end without nut) to the hose tail of distributor and tighten it by clamp and ensure good sealing.

b. In turn, connect the hose end with swivel nut to the inlet end of steel spray tube. To ensure no leakage, it is just enough to tighten it by hand. Please do not use tools.



Spray tubes and nozzles

1.Spray tube No.2 2.Spray tube No.4

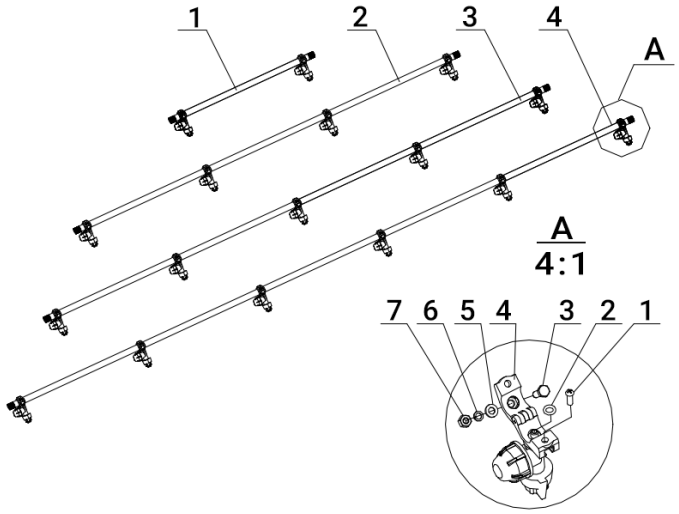
3.Spray tube No.5 4.Spray tube No.6

5.Tapping screw 6.O-ring

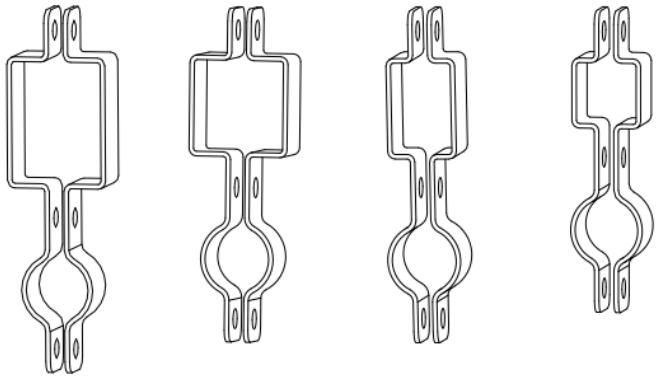
7.Bolt 6×20 8.Anti-drip nozzle

9.Plain washer M6 10.Spring washer M6

11.Nut M6

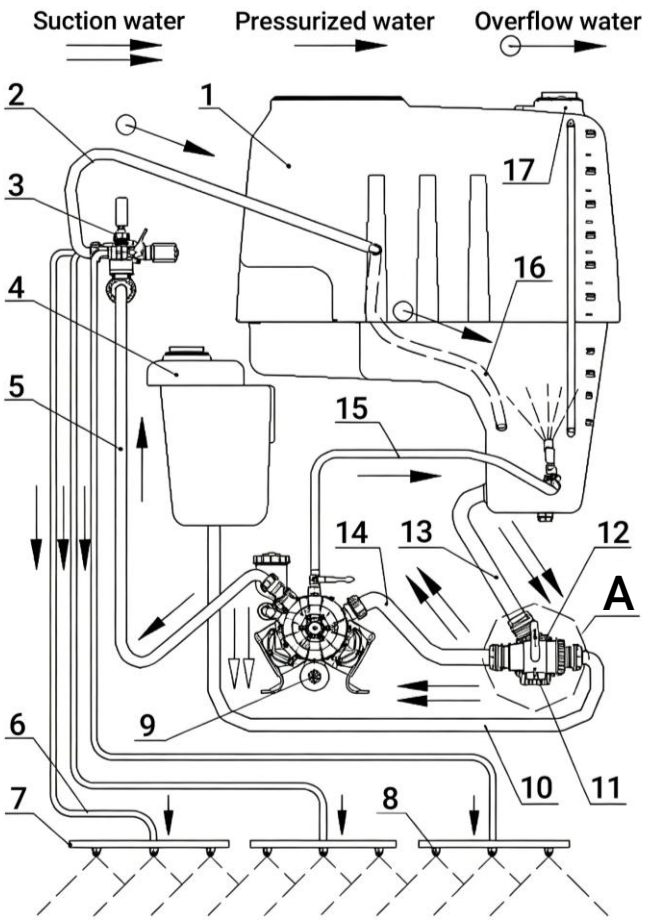


Clamps



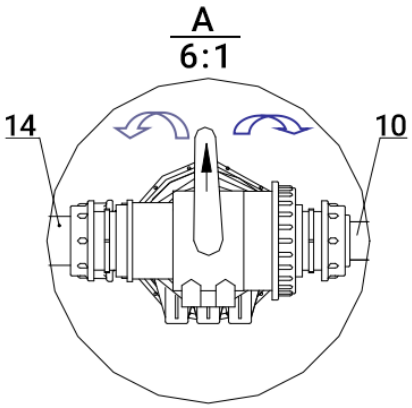
6.2.9 Illustrations of plumbing system

1.Chemical tank
2.Overflow hose
3.Distributor
4.Circuit rinsing tank
5.Pump outlet hose
6.Spray hose
7.Spray tube
8.Anti-drip nozzle
9.Diaphragm pump
10.Rinsing tank outlet hose
11.3-way ball valve
12.Suction filter
13.Chemical tank outlet hose
14.Pump suction hose
15.Hose for stirrer
16.Overflow hose inside tank
17.Hand washing tank

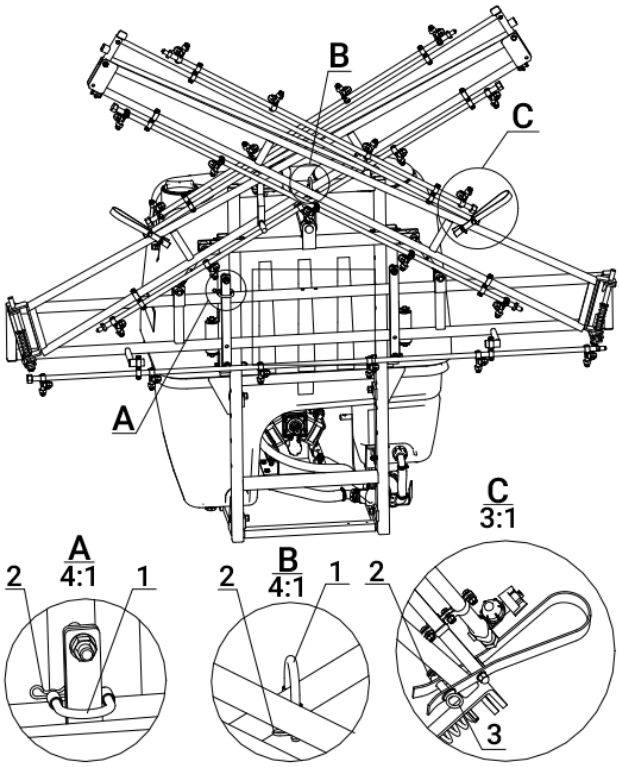


Note:

During spraying operation, switch the handle of 3-way ball valve to the side of pump suction hose, and when doing circuit cleaning, switch the handle to the side of circuit rinsing tank outlet hose.



6.2.10 Spray arms folding and locking



1.U type pin

2.R type split pin

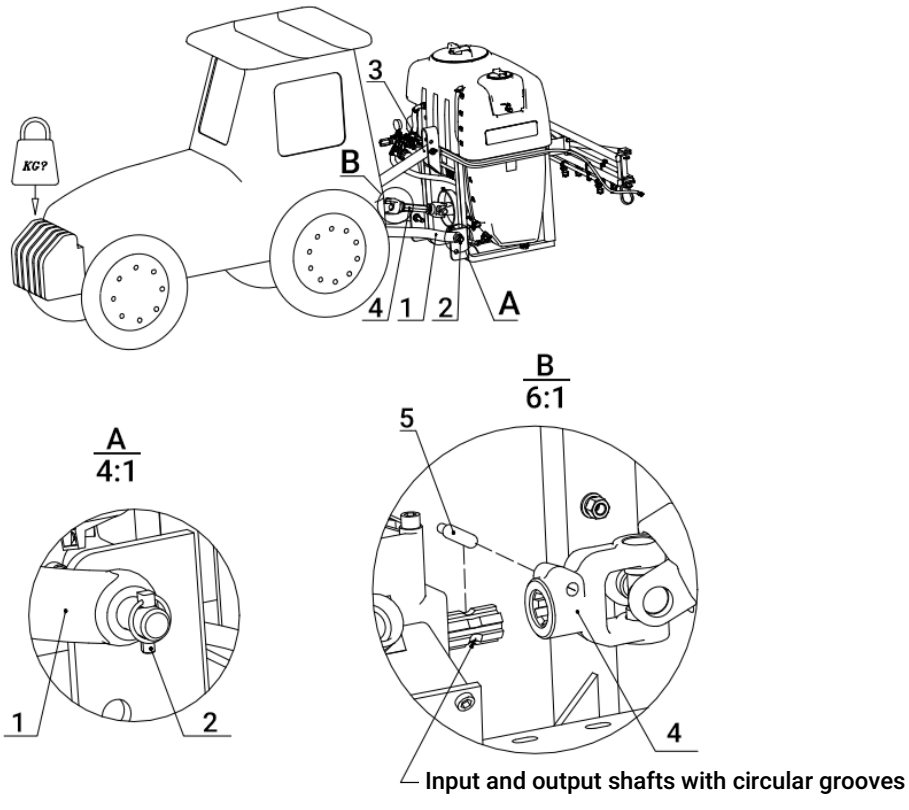
3.Lock pin 45×Ø12

6.3 Tractor coupling

6.3.1 Preparations

Choose a solid and smooth ground, place the tractor and sprayer in the correct direction and with proper distance. Prepare some common tools and lubricants. Please note that the spray arms should be in folded and locked state before installation. And choose suitable tractor ballast according to the sprayer model.

6.3.2 Coupling



Input and output shafts with circular grooves

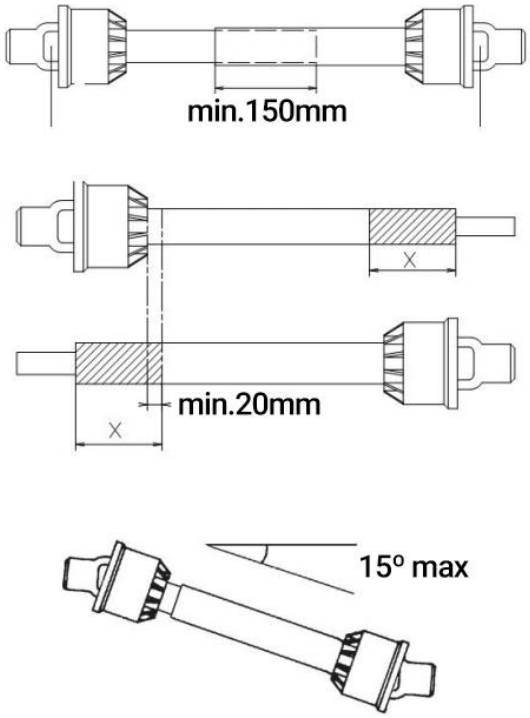
1.Lower tie-rod 2.Safety pin 3.Upper tie-rod 4.Drive shaft 5.Lock pin

WARNING

Make sure there are no persons or things near the sprayer before starting the machine and while you are using it.

a. Connect the tractor upper tie-rod and lower tie-rods to the coupling pins of the mounting frame and lock them with the safety pins.

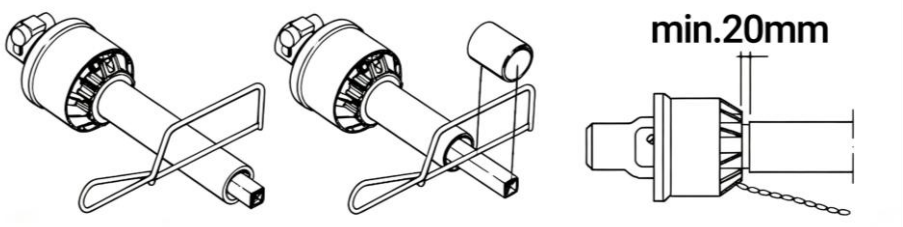
b. Before the initial installation of the drive shaft, it is necessary to determine its proper length. The installation angle should be less than 15 degrees, the drive shaft overlap distance should not be less than 150mm, the end gap should not be less than 20mm.



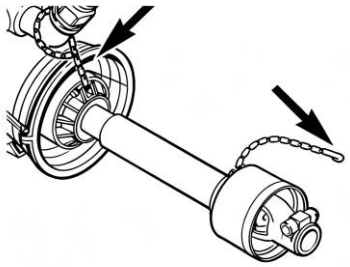
c. After the equipment is attached to the tractor, do not connect the drive shaft to the tractor instantly. Raise the equipment first so that the pump shaft and the power output shaft of the tractor are on the same horizontal line. Now it is the shortest dimension of the drive shaft. This dimension less 20-50mm will be the actual proper size of the drive shaft (20 to 50 mm is the amount of misalignment of the inner shaft and the outer sleeve of the drive shaft). If the length of the drive shaft is too long, the inner shaft should be cut, and same length of the sleeve should be cut.

Note:

If not operate in this way, the liquid pump may be struck and broken easily!



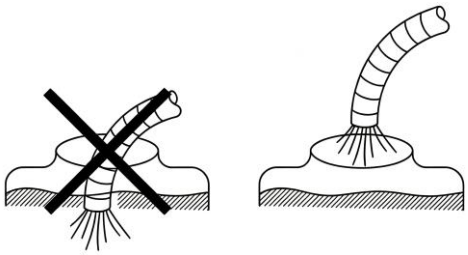
d. While the engine is stopped, connect the drive shaft to the pump shaft and the tractor output shaft respectively. Make sure the lock-pin to be positioned in the round groove of the drive shaft, and the chains attached to the drive shaft must be fixed to suitable positions of the tractor and the mounting frame.



6.4 Test with clean water

a. It is good practice to do a test with clean water before the first treatment to make sure the sprayer is working properly and get to know the control units.

b. Fill clean water into the chemical tank through the tank strainer until 1/4 volume place.

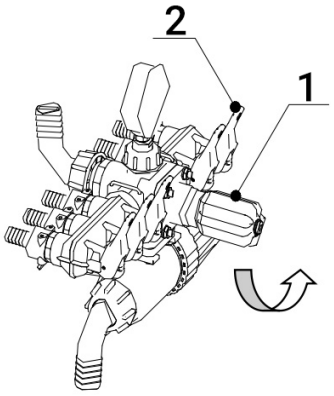


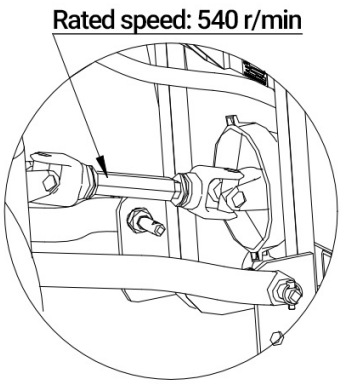
Then fill in the circuit washer tank with clean water And fill in the hand washer tank with clean water.

c. Remove the locking pins of the folded spray arms, and then open the left and right side arms and outer arms and spread them horizontally. Make sure that the delivery hoses and nozzles are not interfered.

d. Turn the adjustment handle of the distributor counterclockwise to the lowest pressure position. Fully open the section valves and also the stirrer outlet tap on the pump.

1. Adjustment handle
2. Section valves





e. Start the tractor engine to run at the rated speed 540 r/min. After a few minutes, adjust slowly the distributor handle to set the pressure at 0.3 ~ 0.5 M Pa and observe the spray conditions of each nozzle and check if any leakage in the circuits. Then shut off the section valves one by one and observe if any leakage from the pressure gauge, water circuits and observe the anti-drip situation of the nozzles. When all section valves are closed adjust the pressure to be 0.6 MPa, all the circuits should be in a good state.

6.5 Inspection before spray operation

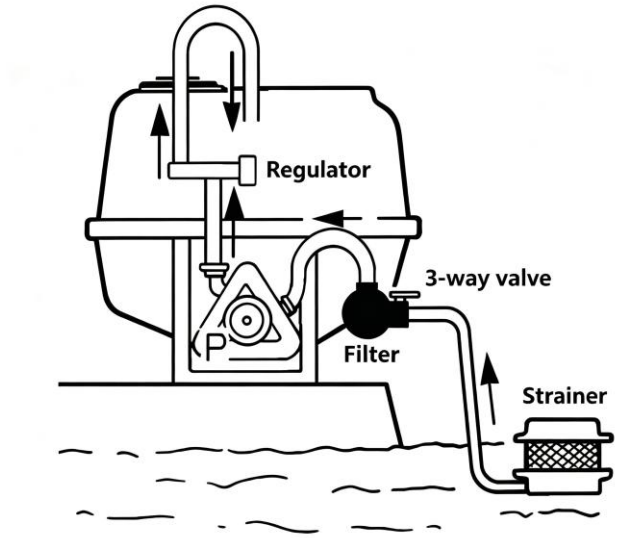
a. Lift up the equipment, adjust the tie-rod of the tractor lifting device to make the tank axis vertical to the ground. Activate the tractor PTO and observe whether all the moving devices are running properly, whether there are abnormal noises, whether the pump is solid.

b. In the process of walking and jolting, observe the overall condition of the equipment such as parallelism and verticality, especially the reliability of free return of the spray arm which is equipped with buffer and balance mechanism.

6.6 Spray operations

a. Drive the sprayer to the water sources nearby the treatment place. Through the tank strainer, firstly fill in water and then add chemicals until the rated tank capacity.

Also you can fill the tank by running the pump: through the pump suction filter by using a pipe with coupling (G1 1/2).



b. Drive the machine to the field. Open the stirrer outlet tap on the pump to run the stirrer to blend the liquid in the tank for about 10-15 minutes.

c. Determine the suitable driving gear and throttle (350-540 rpm), when arriving at the target, turn on the section valves quickly to do the spraying.

d. The nozzles needed to be opened can be controlled by the section valves according to growth of crops and the nozzle distance to the ground can be adjusted according to different heights of crops. The distribution volume should be adjusted by regulating the work pressure, changing the size of nozzle, or driving speed.

e. When the chemical liquid is sprayed over, you should turn off the section valves of the distributor, get the spray arms folded and locked, change the machine to transportation state, and drive to the water sources and refill water and chemicals.

7.Maintenance

7.1 Daily inspection and maintenance before treatment

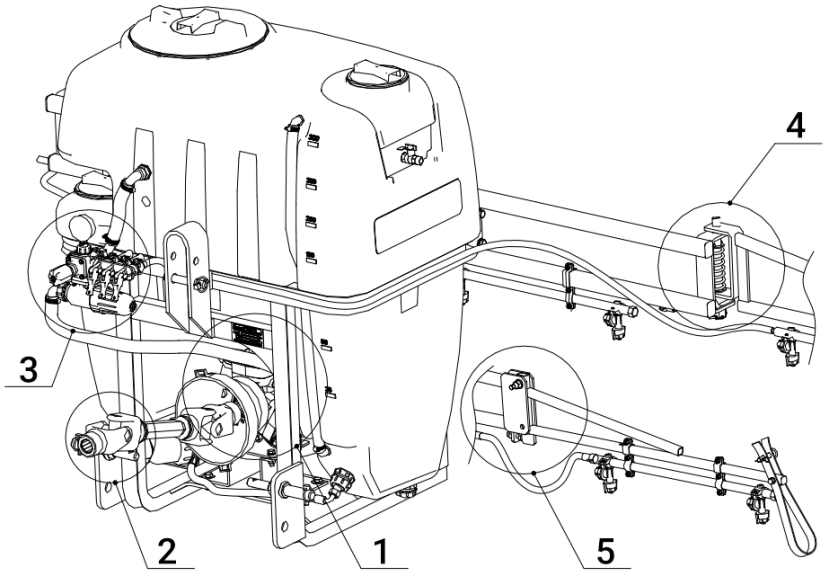
Check all fasteners on the machine, if any are loose, tighten them timely. Check oil level in the diaphragm pump, if lack of oil, refill timely. Check whether any of the nozzles are lost or damaged, if lost or damaged, replace timely. Check whether any residues in the chemical tank, if any, drain out. Clean the filter cartridge and tank strainer, clean them if needed.

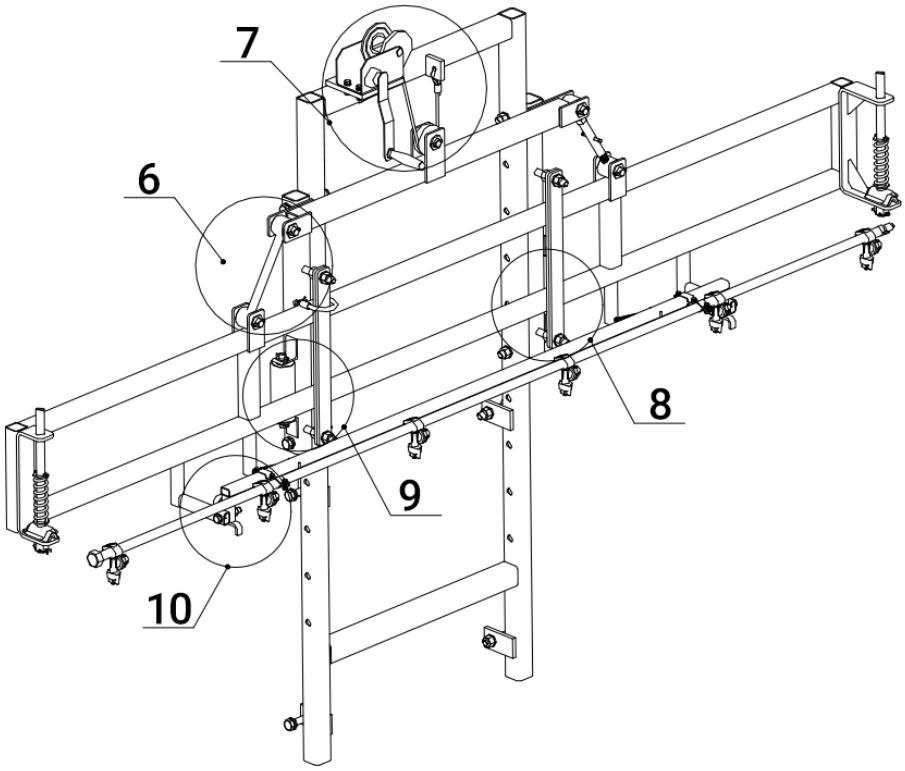
7.2 Change lubricating oil regularly

After accumulated working for 100 hours, drain out the oil from the pump and replace with clean oil (SAE 30). Subsequently, replace the oil every 300 working hours.

Lubrication of moving parts

a. Illustrations :





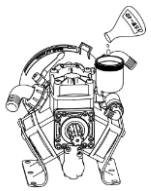
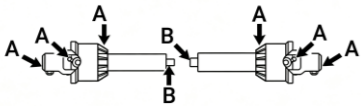
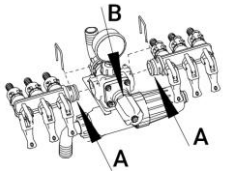
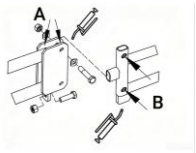
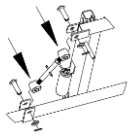
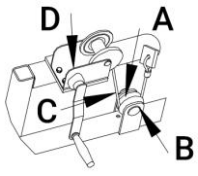
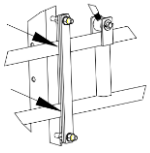
b. Signs

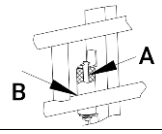
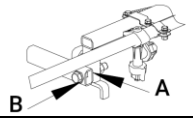
 **Engine oil**

 **Working time**

 **Grease**

 **Reference page**

POS				Diagram	
1	√				7
2 A B		√ √	12 40		21
3 A B		√ √	200 100		17
4		√ √	10		13
5 A B		√	40		14
6		√	40		14
7 A B C D		√ √ √ √	40 40 40 60		9
8	√ √		40		10-12

9 A B		√ √	40 40		10-12
10 A B		√ √	50 50		16

7.3 Cleaning and maintenance

At the end of each treatment, switch the handle of 3-way ball valve to the circuit washer position, run the pump to rinse the chemical tank and the circuit completely, and then discharge all the residues in the whole system.

Then loosen the pressure adjustment handle of the distributor and put the machine in a safe place.

Note: Do not discharge the residues of washing in the environment without precautions. Distribute the residues in the field or on the crops where they won't cause any damage.

Regularly clean the suction filter and the nozzle filters. If the water has impurities, make cleanings more often.

After one seasonal use, wash the machine thoroughly inside and out, clean and air it, store the machine in a garage dry and closed, away from acids, alkalis and other chemicals.

For questions relating to the pump, please read the pump manual carefully.

Table of Programmed Maintenance

Operation	8H	50H	300H	Season end
Check the level and state of the oil	0			
Check the accumulator pressure		0		
Check the suction (hoses, pipes, unions)		0		
Check and clean the suction filter	0			
Check the pump fixing feet and screws in good state		0		
Check the diaphragm and the oil and change if necessary			X (1)	X (2)
Check the suction / delivery valves			X	X
Check the pump screws and bolts are tight				X
Check and clean the nozzles and the anti-drip diaphragm	0			
Check the wear of the nozzles			0	
Check the hydraulic oil level		0		
Check any failures or cracking of the welds, especially on the herbicide booms				0
Grease the articulated joints and the wheel hubs		0		
Check the tire pressure		0		
Note: 0 Operation to be carried out by the operator X Operation to be carried out by a specialized technician or in an authorized workshop (1) First oil change (2) Change oil and at the same time the diaphragm.				

8.Trouble Shooting

Common Faults and Causes and Solutions

Faults	Causes	Solutions
Pump does not charge or discharges little	Air leak in the suction circuit	Inspect all the joints if all the gaskets are in good state and tighten them
	Circuits blocked by foreign matters	Inspect and clear
	The valve slices of pump inlet and outlet valves stuck or worn	Inspect and replace (*)
	Valve spring broken	Replace spring (*)
	Suction filter clogged	Clean filter screen
The pump doesn't reach the set pressure	Foreign matters into the regulator (between valve slice and valve seat)	Remove foreign matters (*)
	Regulator spring broken	Replace spring (*)
	Low pump speed	Speed up to correct rpm. (350-540 rpm)
	Nozzles used are worn or have too big orifices	Replace
Excessive vibrations at delivery	Pressure accumulator discharged or incorrect air pressure	Bring the air pressure back up to the right value (see pump manual) (*)
	Pressure accumulator diaphragm broken	Replace (*)
Water in the oil	Breakage of diaphragms	Inspect and replace (*)
	Diaphragm gland loose	Inspect and tighten (*)
	For above two cases, must drain out the oil and water mixture and clean the pump inside completely. Suggest to inspect the work diaphragm for every 100 working hours, and change the diaphragm for every 300 hours so that to avoid the liquid entering the pump and causing damages of the components.	
Note: (*) to be carried out by a specialized technician or in an authorized workshop.		

WARRANTY INFORMATION: Please refer to our website for detailed warranty conditions and coverage.
For the most up-to-date and comprehensive warranty information, visit **www.tmgindustrial.com**