

MÁQUINAS AGRÍCOLAS JACTO S.A. shall warrant the equipment described in this manual and shall repair or replace parts and components which, under normal operation and wear, in accordance with technical recommendations, show DEFECTS IN MATERIAL OR WORKMANSHIP, based on the following conditions.

WARRANT Y PERIOD

- 01 (one) year from the date of sale to the original purchaser.

WARRANTY APPLICATION

- JACTO shall honor this warranty, free of charge, if any part or component shows defect in MATERIAL OR WORKMANSHIP, after final analysis at the factory.

THIS WARRANTY SHALL BE NULL & VOID IN CASE OF:

- Misuse of the equipment against specifications in the OPERATOR'S MANUAL, overwork or accidents. Preventive/remedial maintenance performed by unauthorized people.
- Use of parts and components not supplied by JACTO. Modification of the equipment or any characteristic of the original design.

THIS WARRANTY SHALL EXCLUDE:

- Parts which show wear and tear due to use, UNLESS THEY SHOW DEFECTS IN WORKMANSHIP, ASSEMBLY OR MATERIAL.
- Damages resulting from accidents.
- Transportation or freight of the equipment, parts and components in case such warranty is not approved.

GENERAL INFORMATION:

- Parts replaced within the warranty period shall be property of JACTO.
- The warranty on replaced parts and components shall expire together with the equipment warranty period.
- Eventual delays in performing services shall not give the owner right either to indemnity or to extension of the warranty period.
- JACTO reserves the right to modify its products or to interrupt the manufacture without prior notice.



JACTO SP 312 / SP 416

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Operator's manual

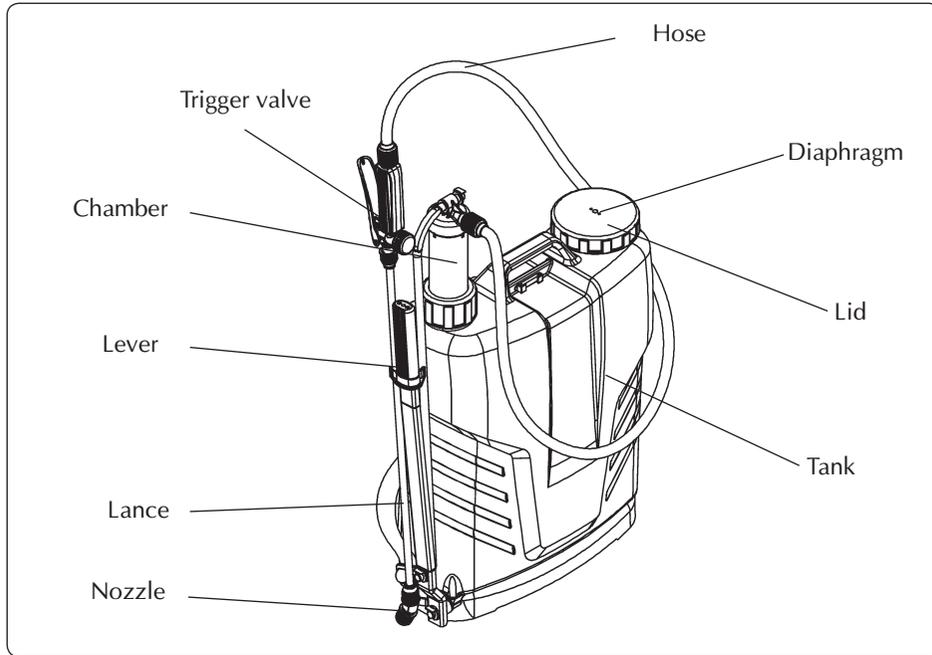


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Made in Thailand

This manual contains information for the proper assembly, operation and care of your sprayer.

Carefully read and follow the instructions contained in this manual before using your sprayer.

> Presentation of the sprayer

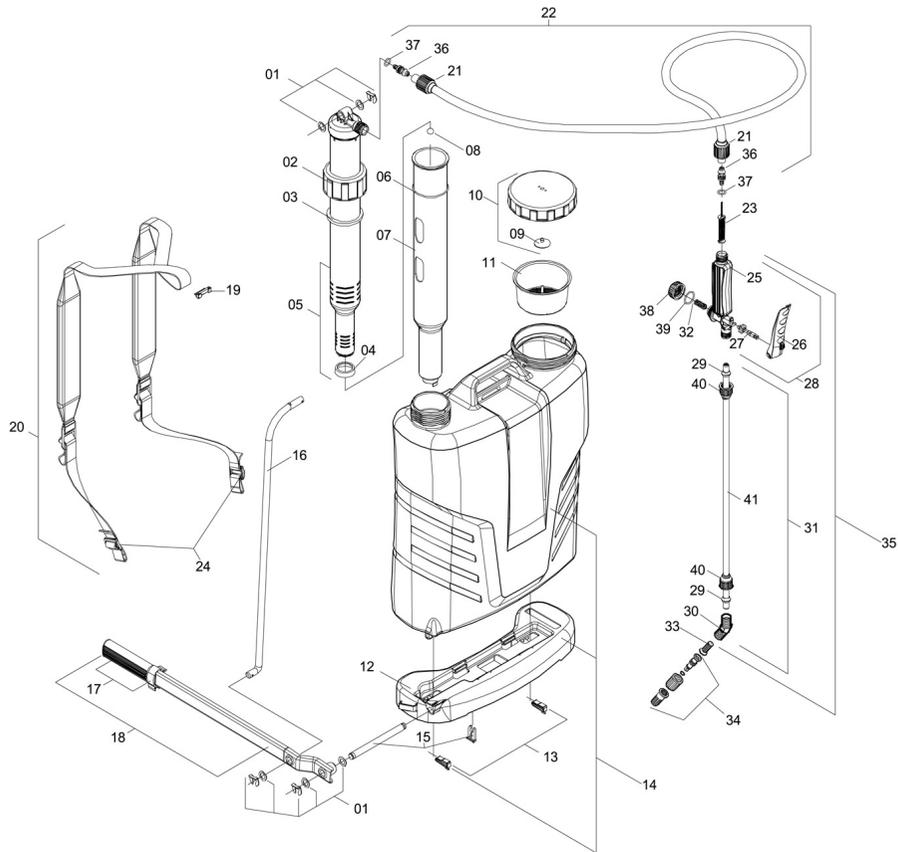


> Specifications

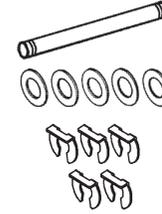
- **Model**SP 312-SP 416
- **Net weight** ..7.7 / 7.9 Lbs
- **Tank**
Capacity3 / 4 (Gallons)
MaterialPolyethylene
Fill opening Ø...3.9 inches
- **Pump**
Type Piston
MaterialHigh Density Polypropylene
Pressure.....130 psi
- **Lance length.** 23.6 inches
- **Hose length..**65 inches
- **Nozzle fitted..**Blue adjustable cone

N.	P/N	DESCRIPTION	Qty	N.	P/N	DESCRIPTION	Qty
1	1198800	Washers and cotter pins set (repair)	1	30	635276	Elbow with cone packing	1
2	1168408	Gasket holder SP	1	31	1168423	Lance LP-3	1
3	1168409	Gasket (felt)	1	32	1180613	Spring	1
4	1168407	Piston cup (Santoprene™)	1	33	592139	Nozzle filter (40 mesh)	1
5	1168406	Chamber with piston cup	1	34	325787	Blue adjustable cone nozzle	1
6	323576	O-ring ORi-033	1	35	1185540	Lance LP-3 (complete)	1
7	1168405	Chamber cylinder	1	36	942201	Outlet tube	2
8	358234	Stainless steel ball 1/2"	1	37	231845	O-ring 110	2
9	560573	Lid diaphragm	1	38	229732	Trigger valve cap	1
10	1168411	Lid with diaphragm SP	1	39	229781	O-ring 019	1
11	1168414	Strainer SP	1	40	915744	Screw cap	2
12	1168396	Tank base	1	41	1167985	Lance tube LP-3	1
13	1168397	Base lock	1				
14	1176796	Tank SP 312 with lock	1				
14A	1176808	Tank SP 416 with lock	1				
15	883108	Axle with lock	1				
16	1198602	Pumping rod (black)	1				
17	1194579	Handgrip assembly	1				
18	661363	Lever assembly (black)	1				
19	635664	Strap lock	1				
20	1176504	Complete strap SP (soft shouder pad)	1				
21	942193	Screw cap S20	2				
22	1168403	Hose assembly SP	1				
23	1168418	Filter LP-3	1				
24	502757	Strap buckle	2				
25	1168420	Trigger valve body LP-3	1				
26	1168421	Lever assembly LP-3	1				
27	1168422	Trigger valve LP-3 complete	1				
28	1168419	Trigger valve assembly LP-3	1				
29	909309	Cone packing	2				

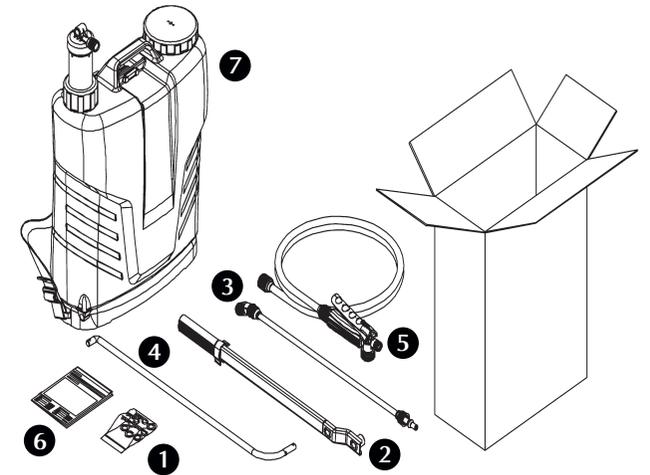
LLM-359



Contents of the assembly bag



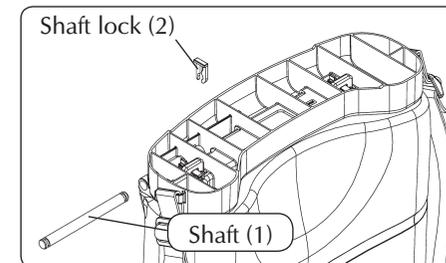
- 1 • Assembly bag
- 2 • Lever
- 3 • Lance
- 4 • Rod
- 5 • Trigger valve
- 6 • Manual
- 7 • Tank



ATTENTION!

Be careful when taking the sprayer out of the carton because the lever is shipped loose and can cause damage.

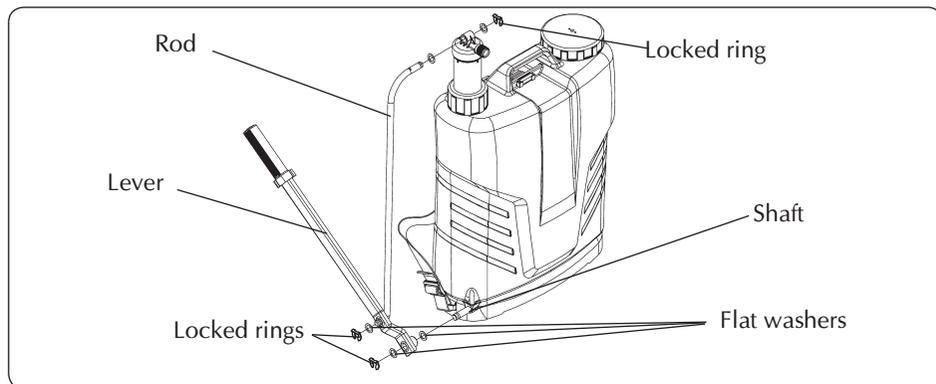
> Installing the shaft



Install the shaft (1) in the free opening on the tank base (on the same side of the chamber). Install the shaft lock (2).

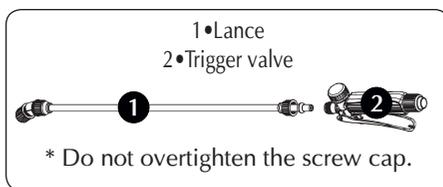
> Installing the pump lever

- Lightly grease the orifice on the chamber top.
- Install a flat washer on the shaft and rod.
- For easy assembly, install the lever on the shaft and the rod on the chamber top at the same time.
- Install the other flat washers on the shaft rod and lock with the locked ring.



> Attaching the lance to the trigger valve

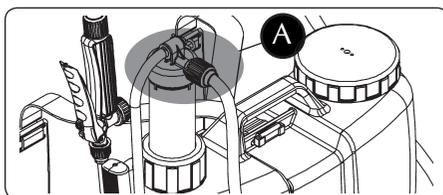
Push the lance into the trigger valve and secure it with the screw cap.



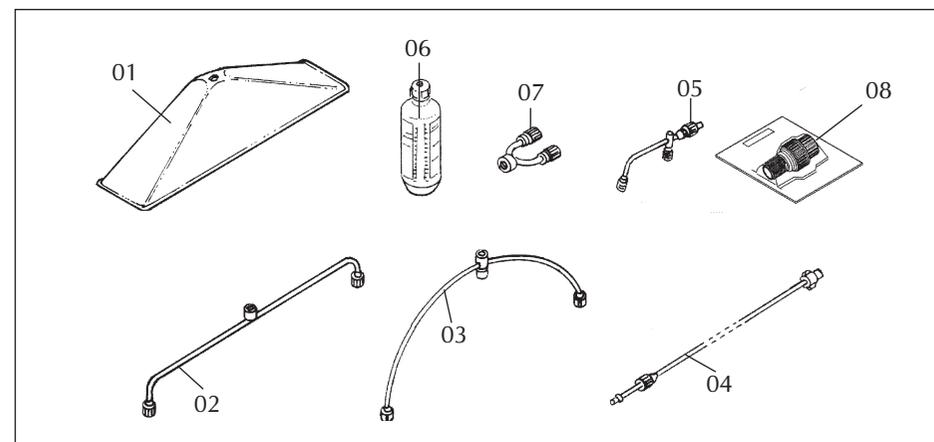
> Tightening the fastening nut

Before using the equipment, tighten the fastening nut (A).

IMPORTANT: This operation must be done by the hand. Do not use any type of tool.



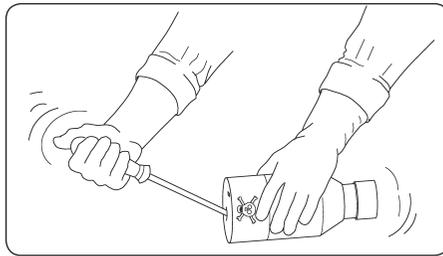
Item number	Part number	Recommended use
01	761882	Spray hood: prevents nonselective herbicides from drifting.
02	902296	Boom 500: improves the coverage and increases the productivity.
03	907873	Flexible boom: holds the required shape for better coverage.
04	728139	Wand extension 600
05	100016	Double nozzle holder
06	834309	Flow calibration bottle
07	336115	Y nozzle
08	1197164 1197163	Ecovalve: Green (1,0 kgf/cm ²) Ecovalve: Blue (2,0 kgf/cm ²)



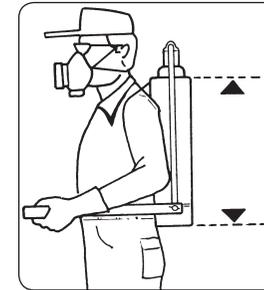
- 5• Continue holding the container over the spray tank opening for approximately 30 seconds or until it stops dripping.
- 6• REPEAT this operation twice more. This way you complete the TRIPLE WASH.
- 7• Make the plastic and metallic containers useless by piercing the containers bottom with a pointed instrument. By doing this the labels are not damaged for identification purposes.
- 8• The useless containers can be stored temporarily in an appropriate place, until final destination.
- 9• With mid and large size container (15, 25 and 50 gallons), add appropriate volume (1/4 of the total) of water and install the cap, roll it on the ground for approximately 30 seconds.
- 10• Next in the upright position complete the agitation by moving back and forth for approximately 30 seconds.
- 11• Then, empty the container by pouring the rinse water into the spray tank.
- 12• REPEAT this operation twice more. At the last time, completely empty the containers rinse.

- 13• The least amount of rinse water that remains in the container, from one wash to the next, the better decontamination will be.
- 14• When performing the TRIPLE WASH, do not use a water volume either much lower or much higher than 1/4 of the container capacity.
- 15• The TRIPLE WASH must be done IMMEDIATELY AFTER emptying the container, during the preparation of the solution.

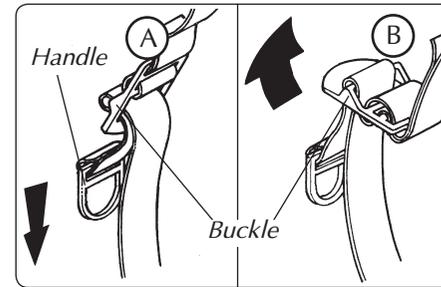
SOURCE - ANDEF (NATIONAL ASSOCIATION OF VEGETAL DEFENSE - BRAZIL)



> Adjusting the shoulder strap



The tank is contoured for the operator comfort. The shoulder straps can be quickly adjusted to properly position the sprayer on the operator's back.



TIGHTENING

Hold the strap buckle firmly with one hand, and pull the handle downward with the other hand.

LOOSENING

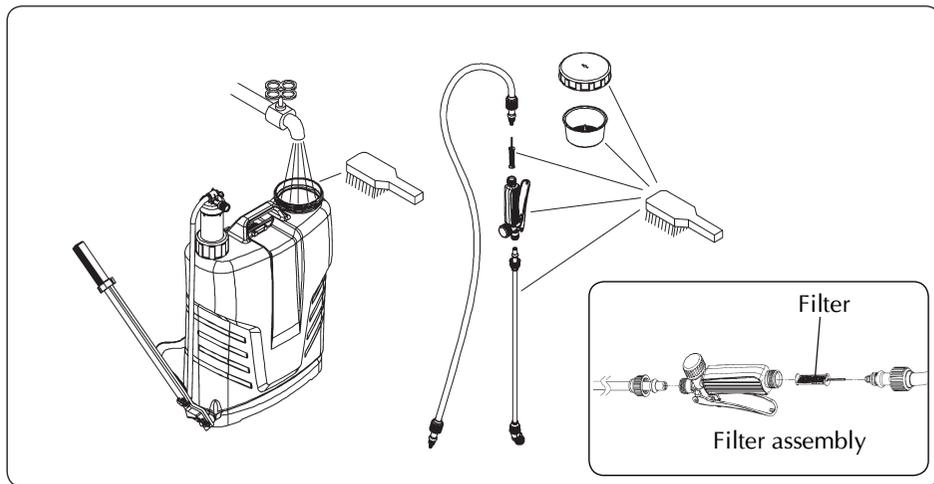
Hold the buckle firmly with one hand, and pull the strap upward with the other hand.



ATTENTION!

After assembling the sprayer, fill the tank with clean water and pressure-check the tank lid, diaphragm, tank bottom, lance and trigger valve for leaks. Most leaks can be stopped by retightening the appropriate connections and fittings. Any leakage must be repaired before returning to service.

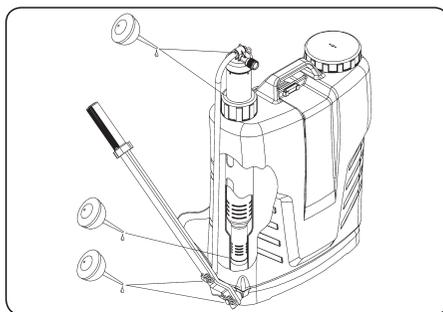
After finishing the application, clean and wash all equipment in an approved decontamination area.



ATTENTION!

Remove all chemicals before storing the sprayer. Chemical products have different reactions and can damage the sprayer components and environment as well as cause personal injury.

Every 40 hours, clean and lubricate the chamber and components, as shown. Remove the chamber and lubricate the piston cups. Jacto recommends graphite base grease but silicone based grease or vaseline are also acceptable. Do not apply grease excessively to avoid clogging and impurities build-up.



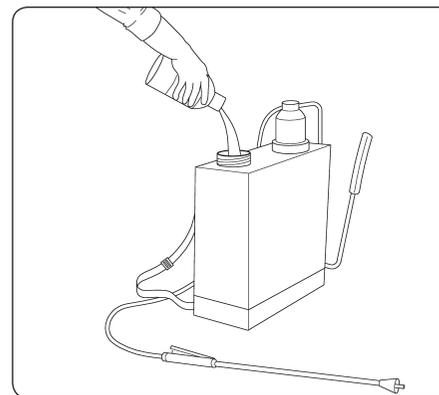
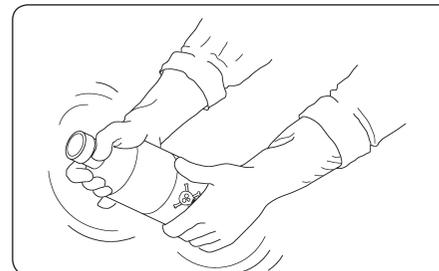
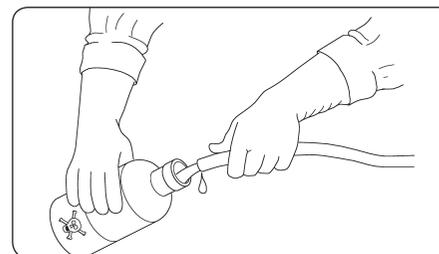
> Triple wash of empty agrochemicals containers

Even the containers considered empty, still contain chemical residues. Some publications show that approximately 0.3% of the chemicals remains in the container after being used. Therefore, discarding the containers without washing out the residues is extremely dangerous to man, animals and environment.

In the case of metal, plastic and glass chemical containers, each container must be rinsed three times to ensure the residues are completely removed. This manual describes how to perform the TRIPLE WASH in a correct, safe and effective way.

During the TRIPLE WASH, you must use appropriate protective clothing, such as: gloves, apron, boots, goggles and protective masks with appropriate filters.

IMMEDIATELY AFTER emptying the container, keep it upside down over the sprayer tank opening or over the bucket that you are using to prepare the chemical mixture for at least 30 seconds or until no residue is left in the container, when the drops are falling in long intervals.



1• Next, hold the container in the upright position and fill it with water. For example: in a 4 gallon container, put 1 gallon of water.

2• Fit the container cap and tight it enough to avoid leakage during the agitation.

3• Agitate the container strongly in all ways (horizontal and vertical), during approximately 30 seconds to remove the residues that are stuck to the container internal walls.

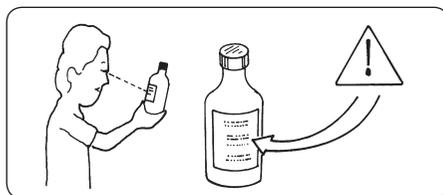
4• Carefully remove the container cap and pour the rinse water into the sprayer tank.



ATTENTION!

Read carefully the chemicals manufacturer's labels.
Wash hands and other parts of the body that have touched chemicals before starting to spray.

Put 1 gallon of water in a bucket and add the chemical product. Stir until it becomes an homogeneous mixture and pour the solution into the tank while filling with water.



Carefully read the chemicals manufacturer's label.

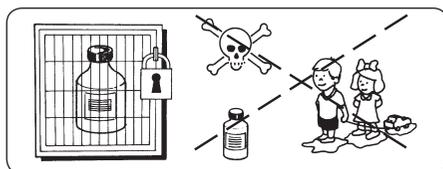
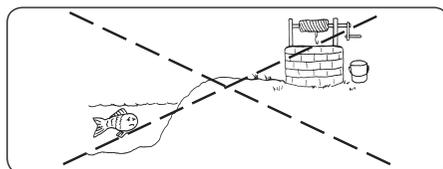
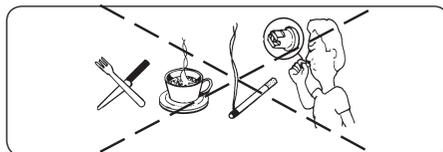
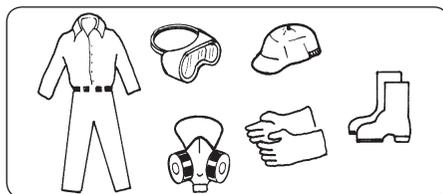
Use of individual protective clothing and safety equipment is recommended.

Do not eat, drink or smoke while spraying.

Do not pollute the environment.

Keep all products out of reach of children and animals. Lock up the chemical products to prevent untrained persons to handling them.

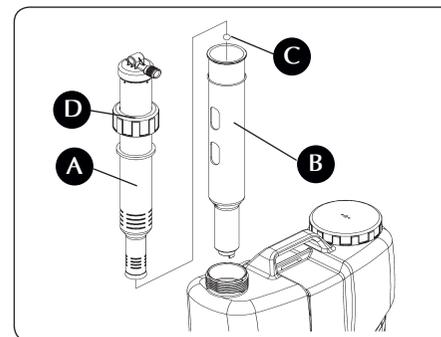
After finishing the spray application, take a shower with plenty of water and soap. Put on clean clothes.



ATTENTION!

The clothing used during the application must be washed separate from other clothes of ordinary use.
In case of intoxication, see a doctor immediately and show him the chemicals manufacturer's label.

> Cylinder maintenance



Remove the pumping rod from the chamber. Loosen the gasket holder and remove the assembly.

Remove the chamber (A) from the cylinder (B). Clean the ball (C) and the piston cup (D); replace them if necessary.

> Troubleshooting procedure

Put about 0.5 gallon of water in the tank. While operating the pumping lever, look into the tank.

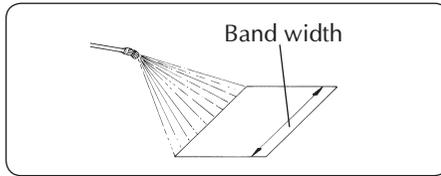
Refer to the table and diagram below.

PROBLEM	CAUSES	CORRECTIONS
Leak on the upper portion of the cylinder.	Worn or dried out piston cup.	Replace or lubricate the piston cup.
After pumping and pressurizing the chamber the pumping lever falls.	Cylinder valve not sealing properly due to wear or impurities.	Clean or replace the valve.
After pumping and pressurizing the chamber, the lever rises slowly when released.	Chamber valve not sealing properly due to wear or impurities.	Clean or replace the chamber.

> Calibration of manual backpack sprayer

USING CALIBRATOR BOTTLE (optional)

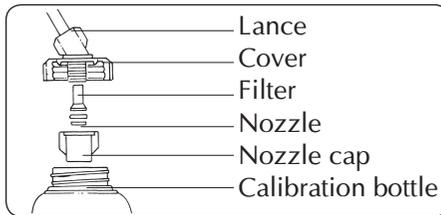
Hold the lance at the working height and spray to measure the application band width. Based on the band width, calculate the total walking distance required to spray the desired area 269.1 ft².



Band width (feet)	1.6	2.2	3.2	3.9	4.9
Distance to walk (feet)	164	117.1	82	68.2	54.7

Attach the calibrator bottle to the lance as shown:

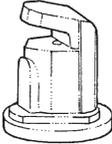
- A - Remove the cap, nozzle and filter.
- B - Mount the calibrator cover to the lance.
- C - Reinstall the filter, nozzle and cap.
- D - Screw the calibrator onto the cover.



Hold the lance at the normal working height and spray into the bottle while walking the distance required to spray an area corresponding to 269.1 ft².

Place the bottle on a level surface and observe the liquid level visible through the side of the bottle. Match the liquid level to the corresponding scale on the calibrator bottle.

Empty the bottle and repeat this operation to determine the average of two or more readings.

NOZZLE TYPE	IDENTIFICATION	PRESSURE (psi)	FLOW RATE (gallons/minute)
 FLAT FAN	1197535 - JEF 110015 GREEN	45	0.16
	1197536 - 11002 YELLOW	45	0.21
	1197538 - JEF 11003 BLUE	45	0.33
 CONE	717942 - JD 10A	45	0.08
	217174 - JD 12P	45	0.16
 CONE	1197565 - JHC 02 YELLOW	45	0.22
	1198892 - JHC 04 RED	45	0.44
	1198893 - JHC 05 BROWN	45	0.54
 DEFLECTOR	1197486 - JDF 04 RED	15	0.25
	1197487 - JDF 05 BROWN	15	0.31
	1197488 - JDF 06 GRAY	15	0.41
 ADJUSTABLE CONE	323725 - YELLOW	45	0.08
	015024 - RED	45	0.17
	325787 -BLUE	45	0.18

*** ATTENTION:** This sprayer is supplied with the Blue adjustable cone nozzle fitted in the lance. Other nozzles mentioned in this manual are optional and purchased separately.