General Information
Thank you for purchasing this product. The purpose of this manual is to assist you in operating and maintaining your 3-Point Sprayer.

Retain a copy of your receipt for your unit, as it will be required to validate any warranty service. Products are warranted against manufacturer or workmanship defects for one year from date of purchase for home owner usage and 90 days for commercial usage.

For technical assistance, visit our website @ www.fimcoindustries.com or call: TOLL FREE @ 1-800-831-0027. Our Technical Support Representatives will be happy to help you. To obtain prompt, efficient service, always remember to give the following information...

- Correct Part Description and/or part number
- Model #/Serial # of your sprayer

Part descriptions and numbers can be obtained from the illustrated parts list section(s) of this manual.

Model: 300-3PT-5880 (5300827)
(300 Gallon 3-Point Sprayer w/5880 'BoomJet' [Brass] Nozzle)

Assembly Instructions
1. Install the directo valve sub-assembly to the 3-point carrier valve mount and position as shown in the exploded view.
2. Slip the 5/8” bypass hose (from the relief valve) over the fitting on the bottom of the tank. Slide the hose clamp to the end of the hose and secure.
3. Find the 1” x 36” pump feeder hose. Using a good quality thread sealant, carefully thread the 1” fitting into the strainer and the 3/4” fitting into the inlet side of the pump. Slip the hose all the way onto the fittings and secure with the hose clamps.
4. Attach the 3/4” hose coming off the valve assembly to the output side of the pump by threading the 3/4” fitting into the pump and securing with the hose clamp. Remember to use sealant.
5. The roller pump is NOT included with the assembly. Attach the adapter, the torque chain and S-hook to a pump as needed. It is intended for your pump to be mounted directly to the tractor PTO. The torque chain needs to be secured to the tractor to keep your pump from spinning.
6. Remove the plug from the top of the directo valve and using sealant, thread the gauge into the valve.
7. There is another 3/4” hose coming off the output side of the Directo-Valve. This hose needs to be connected to the fitting on the BoomJet nozzle assembly. Move the coupling mount into an upright position and fasten with the (2) 1/2” bolts provided.
Information About the Sprayer

Roller pumps are positive displacement pumps, which means that the entire solution being pumped must go somewhere or the pump will break. In this roller pumping system, solution is drawn from the tank and forced to a planned source, such as boom nozzles or hand-gun. The pressure is controlled by a pressure relief valve, which is a spring-loaded device that controls the amount of fluid bypassed (recirculated) to the tank. The gray handle is to be tightened to increase pressure and loosened to decrease pressure. The ‘directo-valve’ is the on/off control which allows the operator to manually control the solution going to the boom.

IMPORTANT: Remove tank lid and be sure the tank is clean and free of any foreign material. Rinse tank out of any tank residue before filling with water to test.

Tip Information

Important note about tips: When you refer to the rate charts found in this owner’s manual, these rates are based on water. Please read this tip selection section carefully before attempting to operate your boom assembly.

The selection of proper tips for the boom is determined by the gallon per acre (GPA) requirement which is specified on the chemical label. The following characteristics also have a determining factor and must be considered.

1. Speed of spraying (MPH).
2. Boom nozzle spacing (specified in inches).
3. Solution weight and conversion factor (CF)
4. Gallons of solution to be sprayed per acre.
5. Spraying pressure.

Useful Formulas:

GPM = Gallons Per Minute
GPA = Gallons Per Acre
MPH = Miles Per Hour

Calibration

Chemical labels may show application rates in gallons per acre, gallons per 1000 square feet or gallons per 100 square feet. You will note that the chart (later in this manual) shows gallons per acre. Once you know how much you are going to spray, then determine (from the tip chart) the spraying pressure (PSI), and the spraying speed (MPH). Determining the proper speed of the pulling vehicle can be done by marking off 100, 200 & 300 feet. The speed chart indicates the number of seconds it takes to travel the distances. Set the throttle and with a running start, travel the distances. Adjust the throttle until you travel the distances in the number of seconds indicated by the speed chart. Once you have reached the throttle setting needed, mark the throttle location so you can stop and go again, returning to the same speed.

Add water and proper amount of chemical to the tank and drive to the starting place for spraying.

Using the Boom Nozzles

Four things must be considered before spraying with the boom.

1. How much chemical must be mixed in the tank.
2. Rate of spray (gallons per acre to be sprayed).
3. What pressure (p.s.i.) will be used.
4. Speed traveled (mph) while spraying.

* Refer to the chemical label to determine your chemical mixture
* See the tip chart to determine the pressure to be used. The chart will also show the speed used when spraying.
* Start the pump and open the valve to the boom nozzles.
* Check the spray pattern. Usually you can see the coverage better on a solid concrete surface, such as a driveway.

Spraying Solutions Other Than Water

Since all the tabulations are based on spraying water, which weighs 8.34 lbs. per USA gallon, conversion factors must be used when spraying solutions which are heavier or lighter than water. To determine the proper size nozzle for the solution to be sprayed, first multiply the desired GPM or GPA of solution by the rate conversion factor. Then use the new converted GPM or GPA to select the proper size nozzle.

Example: Desired application rate is 20 GPA of 28% Nitrogen. Determine the correct nozzle size as follows:

GPA (Solution) x Conversion Factor = GPA

20 GPA (28%) x 1.13 + 22.6 GPA (Water)

The applicator should choose a nozzle size that will supply 22.6 GPA of water at the desired pressure.

<table>
<thead>
<tr>
<th>Weight of Solution</th>
<th>Specific Gravity</th>
<th>Conversion Factors</th>
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<tr>
<td>7.0 lbs. per gallon</td>
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<tr>
<td>6.0 lbs. per gallon</td>
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<td>8.345 lbs. per gallon (Water)</td>
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<td>9.0 lbs. per gallon</td>
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<tr>
<td>14.0 lbs. per gallon</td>
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Miscellaneous Conversion Factors

One Acre = 43,560 square feet = 0.405 Hectare
One Hectare = 2.471 Acres
One Gallon Per Acre = 9.35 Liters Per Hectare
One Mile = 5,280 Feet = 1,610 Meters = 1.61 Kilometers
One Gallon = 128 Fluid Ounces = 8 Pints = 4 Quarts = 3.79 Liters = 0.83 Imperial Gallons
One Pound Per Square Inch = 0.069 bar. = 6.895 Kilopascals
One Mile Per Hour = 1.609 Kilometers Per Hour

Higher pressure not only increases the flow rate of the nozzle, but it also influences the droplet size and the rate of orifice wear. As pressure is increased, the droplet size decreases and the rate of orifice wear is increased.

The values given in the tabulation section of this owner’s manual indicate the most commonly used pressure ranges for the associated spray tips.
**Testing the Sprayer**

Attach the sprayer to the tractor 3 point hitch. Mount the pump to the PTO and affix the torque chain.

**NOTE:** It is important for to test your sprayer with plain water before actual spraying is attempted. This will enable you to familiarize yourself and check for leaks without the possibility of losing any expensive chemicals.

Fill the tank about 1/2 full with plain water.

Before starting, open the suction line valve (located underneath the carrier frame), turn the relief valve handle out to lower the line pressure. This will help prime the pump.

**CAUTION:** Always be sure that the water (or solution) has reached the pump before starting your sprayer. If the pump is allowed to run dry, serious damage to the pump will result.

Always have the pressure line open to the tips so that the air which may be trapped in the line will be forced (or purged) out.

Start the tractor PTO. Check the entire system for leaks. Once the pump is primed, the pressure may be increased by turning the handle of the pressure relief valve in. Keep the pressure line open to the tips when setting the pressure. Set the pressure and then lock the relief valve handle in place. Shutoff the directo-valve and check for leaks again. Pressure will increase when the pressure line valve is closed and then return to the preset pressure when the valve is opened again.

During the testing period, be sure to observe the spray pattern given by the spray nozzles. If there is any pattern distortion, it will be necessary to remove and clean the affected tips.

Conditions of weather and terrain must be considered when setting the sprayer. Do not spray on windy days. Protective clothing must be worn in some cases.

**Be sure to read the chemical label(s) before application!**

**Operation**

The performance of any agricultural chemical depends upon the proper application.

Always fill the tank with a desired amount of water first and then add the chemical slowly, mixing as you pour the chemical into the tank. You may use the handgun to spray into the solution in order to mix the chemical and water.

The speed and pressure charts shown indicate the rates can be changed considerably by changing speed and pressure. The pumping system draws solution from the tank through the strainer/filter and to the pump. The pump forces the solution under pressure to the boom nozzles.

**Tank Care & Maintenance**

**Warning:** Do not use the tank as a container for fuel oils, kerosene, gasoline or any other petroleum distillate product. All polyolefins are softened and permeated by such products. In an enclosed area the vaporization of these materials from the outside surface of the tank could create a dangerous condition.

The tank should not be used as a pressure vessel nor used with chemicals or solutions having a weight of more than 12 pounds per gallon.

Store the tank in a dry dark place when not in use. Storage out of sunlight will prolong the life of the tank.

Do not drop, strike or kick the tank, especially at low temperatures. Tanks become brittle and are subject to cracking at temperatures below 20° Fahrenheit.

Always flush the tank with water and a neutralizing agent (such as ‘Nutra-Sol’) at the end of each use, to prevent contamination of solutions.

**Maintenance During/After Spraying**

Periodically close the suction line valve and check the strainer and clean the screen.

Proper care and maintenance will prolong the life of your sprayer.

After use, fill the sprayer tank part way with water. Start the sprayer and allow the clear water to be pumped through the plumbing system and out through the spray nozzles. Refill the tank about half full with plain water and use FIMCO Tank Neutralizer and Cleaner and repeat cleaning instructions above (if no tank cleaner is available, you may substitute dish soap for this step, about 1-2 oz. per gallon). Flush the entire sprayer with the neutralizing/cleaning agent, then flush out one more time with plain water. Follow the chemical manufacturer’s disposal instructions of all wash or rinsing water. For the boom (if applicable) remove the tips and screens from the nozzle assemblies. Wash these items out thoroughly. Blow the orifice clean and dry. If the orifice remains clogged, clean it with a fine bristle (NOT WIRE) brush or with a toothpick. Do not damage the orifice. Water rinse and dry the tips before storing.

**WARNING:** Some chemicals will damage the pump valves if allowed to soak untreated for a length of time! ALWAYS flush the pump as instructed after each use. DO NOT allow chemicals to sit in the pump for extended times of idleness. Follow the chemical manufacturer's instructions on disposal of all waste water from the sprayer.

**Winter Storage**

Drain all water out of your sprayer, paying special attention to the pump, handgun and valve(s). These items are especially prone to damage from chemicals and freezing weather. The sprayer should be winterized before storage by pumping a solution of automotive antifreeze (containing a rust inhibitor) through the entire plumbing system. This antifreeze solution should remain in the plumbing system during the winter months. When spring time comes and you are preparing your sprayer for the spray season, rinse the entire plumbing system out, clearing the lines of the antifreeze solution. Proper care and maintenance will prolong the life of your sprayer.

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**Strap/Buckle Detail**

**Strap Attachment to a "Bent" Buckle**

The nylon straps are to be inserted in and out of the slots in the buckle, as shown. Be sure the straps are snug before tightening the hook bolts. In most cases, it will be necessary to re-tighten the straps after filling the tank with liquid.

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**Torque Chain Attachment to a Roller Pump**

A torque chain, ‘S’ hook, nut and bolt are included in this assembly to secure your pump during operation.

1. Attach one end of the torque chain over the threaded stem of the bolt.
2. Thread the whiz nut onto the bolt. Hand-tighten.
3. Thread the bolt, chain and nut 'pre-assembly' into the threaded hole on the underside of the pump. Tighten sufficiently.
4. Affix the ‘S’ Hook to your frame (or hitch). Wrap the chain around the frame or hitch and ‘S-Hook’ it in place. Make sure this connection is very secure! Not having a good, tight connection may result in the pump spinning on your PTO shaft and damaging some components of your sprayer.

*** Insure that this connection point will not allow the roller pump to spin on the PTO shaft ***

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Page 3
‘Directo Valve’ - Manually Operated Control Valve

- Corrosion Resistant Materials: Wetted Parts Polypropylene, 316SS and Polyethylene
- Maximum Pressure = 150 p.s.i.
- Large Capacity - 12.5 G.P.M. @ 5 p.s.i. Pressure Drop
- 3/4” NPT (F) Inlet Connection
- 1/2” NPT (F) Spray Line Connection
- 3/4” NPT (F) Continuous By-Pass Connection
- Valves may be connected w/close nipples for multiple section spray control

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Piston Type Pressure Relief/Regulating Valves

Bypasses excess fluid. Adjustable to maintain control of line pressure at any pressure within the valve operating range. Selected pressure setting firmly held in place by locknut. Extra large passages to handle large flows.

- Polypropylene with stainless steel spring
- Excellent chemical resistance
- EPDM O-Rings
- Fore pressure to 150 p.s.i.
- 1/4” port for pressure gauge
- Choice of 1/2” or 3/4” NPT (M) inlet & (F) outlet connections

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<td>CP38725-SS</td>
<td>#10-24 x 5/16&quot; Phillips Truss Head Machine Screw</td>
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* * Available only in Repair Kit
♦ ♦: Only Available in Complete Assembly
Exploded View:
300-3PT-5880
(5300827)
Refer to the parts list next page for part numbers.
The 5880 BoomJet nozzle combines (2) off-center tips and (3) VeeJet nozzles to produce an overall wide swath flat spray. The nozzle assembly provides a good distribution for the wide pattern coverage obtained. It is also furnished with (1) additional 1/4" NPT pipe plug and (1) blank tip for allowing the BoomJet to spray to one side only.

\[ W = \text{Maximum effective coverage with nozzle mounted at 36" height.} \]
LIMITED WARRANTY FOR NEW FIMCO, INC.

WHO MAY USE THIS LIMITED WARRANTY. This limited warranty (the “Limited Warranty”) is provided by Fimco, Inc. to the original purchaser (“you”) of the Equipment (as defined below) from Fimco, Inc. or one of Fimco, Inc.’s authorized dealers. This Limited Warranty does not apply to any subsequent owner or other transferee of the Equipment. THIS LIMITED WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE.

WHAT THIS LIMITED WARRANTY COVERS AND FOR HOW LONG. Fimco, Ind. warrants that any new Equipment will be free from defects in material and workmanship for a period of one (1) year (homeowner), 90 days (commercial user), after delivery of the Equipment to you (the “Warranty Period”). The Warranty Period is not extended if Fimco, Ind. repairs or replaces the Equipment.

WHAT IS NOT COVERED BY THIS LIMITED WARRANTY. This Limited Warranty does not apply to: (1) used Equipment; (2) any Equipment that has been altered, changed, repaired or treated since its delivery to you, other than by Fimco, Inc. or its authorized dealers; (3) damage or depreciation due to normal wear and tear; (4) defects or damage due to failure to follow Fimco, Inc.’s operator’s manual, specifications or other written instructions, or improper storage, operation, maintenance, application or installation of parts; (5) defects or damage due to misuse, accident or neglect, “acts of God” or other events beyond Fimco, Inc.’s reasonable control; (6) accessories, attachments, tools or parts that were not manufactured by Fimco, Inc., whether or not sold or operated with the Equipment; or (7) rubber parts, such as tires, hoses and grommets.

HOW TO OBTAIN WARRANTY SERVICE. To obtain warranty service under this Limited Warranty, you must (1) provide written notice to Fimco, Inc. of the defect during the Warranty Period and within thirty (30) days after the defect becomes apparent or the repair becomes necessary, at the following address: Fimco, Inc., 1000 Fimco Lane, North Sioux City, SD 57049; and (2) make the Equipment available to Fimco, Inc. or an authorized dealer within a reasonable period of time. For more information about this Limited Warranty, please call: 800-831-0027

WHAT REMEDIES ARE AVAILABLE UNDER THIS LIMITED WARRANTY. If the conditions set forth above are fulfilled and the Equipment or any part thereof is found to be defective, Fimco, Inc. shall, at its own cost, and at its option, either repair or replace the defective Equipment or part. Fimco, Inc. will pay for shipping and handling fees to return the repaired or replacement Equipment or part to you.

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