

JOHN DEERE
WORLDWIDE COMMERCIAL & CONSUMER
EQUIPMENT DIVISION

Sprayer - 60 Gallon
LP33813, LP33814, LP33815,
LP33816, LP33817, LP33818
OMLVU24593 B1
OPERATOR'S MANUAL



JOHN DEERE

Original Instruction

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Consumer Equipment Division**

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North American Version

Litho in U.S.A.

Introduction

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Introduction

Using Your Operator's Manual

Read this entire operator's manual, especially the safety information, before operating.

This manual is an important part of your machine. Keep all manuals in a convenient location so they can be accessed easily.

Use the safety and operating information in the attachment operator's manual, along with the machine operator's manual, to operate and service the attachment safely and correctly.

If your attachment manual has a section called Preparing the Machine, it means that you will have to do something to your tractor or vehicle before you can install the attachment. The Assembly and Installation sections of this manual provide information to assemble and install the attachment to your tractor or vehicle. Use the Service section to make any needed adjustments and routine service to your attachment.

If you have any questions or concerns with the assembly, installation, or operation of this attachment, see your local John Deere dealer or call the John Deere Customer Contact Center at 1-800-537-8233 for assistance.

Warranty information on this John Deere attachment can be found in the warranty that came with your John Deere tractor or vehicle.

Product Identification

Product Compatibility

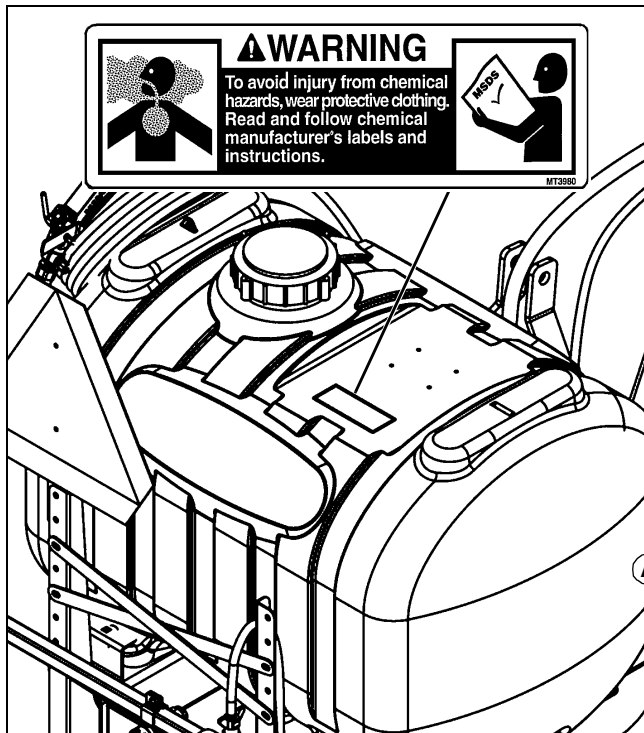
This Sprayer is compatible with Compact Utility Tractors:

2305, 2320, 2520, 2720, 3032E, 3038E, 3203, 3120, 3320, 3520, 3720, 4005, 4105, 4120, 4320, 4520, 4720

Safety Labels

Safety Labels

Safety Label Location



A- WARNING - MT3980



Understanding The Machine Safety Labels

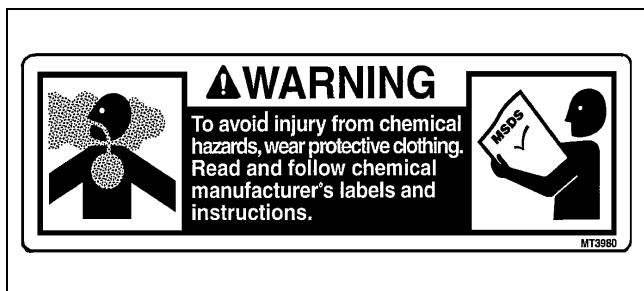
The machine safety labels shown in this section are placed in important areas on your machine to draw attention to potential safety hazards.

On your machine safety labels, the words DANGER, WARNING, and CAUTION are used with this safety-alert symbol. DANGER identifies the most serious hazards.

The operator's manual also explains any potential safety hazards whenever necessary in special safety messages that are identified with the word, CAUTION, and the safety-alert symbol.

There can be additional safety information contained on parts and components sourced from suppliers that is not reproduced in this operator's manual.

WARNING MT3980



MT3980

- To avoid injury from chemical hazards, wear protective clothing. Read and follow chemical manufacturer's labels and instructions.

Safety

Read Safety in Machine Operator's Manual

Read the general safety operating precautions in your machine operator's manual for additional safety information.

Operate Safely

- Read the machine and attachment operator's manual carefully. Be thoroughly familiar with the controls and the proper use of the equipment. Know how to stop the machine and disengage the controls quickly.
- Do not let children or an untrained person operate machine.
- Make any necessary adjustments before you operate. Never attempt to make any adjustments while the engine is running, unless if recommended in adjustment procedure.
- Take all possible precautions when leaving the machine unattended. Shut off the engine before making any repairs, adjustments, or inspections. Lower the attachment, lock the parking brake, stop the engine, and remove the key.
- Look behind machine before you back up. Back up carefully.
- Do not let anyone, especially children, ride on machine or attachment. Riders are subject to injury such as being struck by foreign objects and being thrown off. Riders may also obstruct the operator's view, resulting in the machine being operated in an unsafe manner.
- Use only attachments and accessories approved by the manufacturer of this product.
- If the machine vibrates abnormally, stop the engine and check immediately for the cause. Vibration is generally a warning of trouble.
- Always refer to the Storage section of the operator's manual for important details if storing this product for a long period of time.
- Keep people and pets out of the work area. Stop machine if anyone enters the area.
- If you hit an object, stop the machine and inspect it. Make repairs before you operate. Keep machine properly maintained and in good working order. Keep all shields and guards in place.
- Always inspect the sprayer completely before and after each use. Before pressurizing the system, check to be sure all fittings and hoses are tightly installed. Be sure guards and shields are in good condition and fastened in place. Make any necessary adjustments before you operate.
- Never use the sprayer during windy conditions.
- Always release pressure in the system before filling, cleaning or servicing the sprayer.
- Do not put nozzle tip or other sprayer parts to your lips to blow out dirt. Use compressed air.
- If the sprayer is mounted to the bed of a utility vehicle, never raise the bed with the sprayer installed. Empty the sprayer and remove it from the bed if you need to raise the bed for any reason.

Parking Safely

1. Stop vehicle on a level surface, not on a slope.
2. Lock park brake.
3. Stop engine.
4. Remove key.
5. Before you leave the operator's seat, wait for engine and all moving parts to stop.

Safety

6. Disconnect the negative battery cable or remove the spark plug wire (for gasoline engines) before servicing the machine.

Mix and Handle Chemicals Safely

- It is best to wear full cover clothing and always wear protective goggles and rubber gloves to protect yourself while handling chemicals.
- Follow instructions on chemical container labels.
- Open all chemical containers carefully, using proper tools.
- Open, pour, weigh and mix chemicals in a well-ventilated area.
- Reserve all equipment used for the application of chemicals exclusively for that purpose.
- Prohibit all smoking, drinking and eating food in chemical-handling area.
- It is a good practice to take a soapy shower immediately after the using the sprayer to apply chemicals.
- Wash all clothing worn when using chemicals separately in the laundry after spraying is completed.

Read Chemical Container Label

- Chemicals can be dangerous. Improper selection or use can injure persons, animals, plants, soils or other property. Select the right chemical for the job and handle and apply with care.
- Read the instructions, precautions, and warnings on the container label before opening. Use the product strictly according to label directions for specific applications, in the amounts specified, at the times specified and only when needed.
- Keep the container closed tightly except when preparing the mix.
- Do not remove labels from chemical containers. Store all chemicals in their original containers.
- Do not mix chemicals unless stated on the container label.
- Store chemicals when not in use according to the container label.

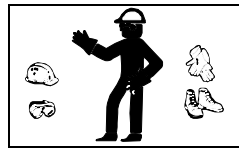
Handle Chemical Products Safely

- Direct exposure to hazardous chemicals can cause serious injury. Potentially hazardous chemicals used with John Deere equipment include pesticides, herbicides and fungicides.
- A Material Safety Data Sheet (MSDS) provides specific details on chemical products: physical and health hazards, safety procedures, and emergency response techniques.
- The MSDS should be obtained from the chemical dealer at the time of the chemical purchase.
- Check the MSDS before beginning any job using a hazardous chemical. Know exactly what the risks are and how to do the job safely. Always wear recommended personal protection equipment.

Practice Safe Maintenance

- Only qualified, trained adults should service this machine.
- Understand service procedure before doing work. Keep area clean and dry.
- Do not operate the engine in a confined space where dangerous carbon monoxide fumes can collect.
- Never lubricate, service or adjust the machine or attachment while it is moving. Keep safety devices in place and in working condition. Keep hardware tight.
- Keep hands, feet, clothing, jewelry, and long hair away from any moving parts, to prevent them from getting caught.

- Lower any attachment completely to the ground or to an existing attachment mechanical stop before servicing the attachment. Disengage all power and stop the engine. Lock park brake and remove the key. Let machine cool.
- Disconnect battery or remove spark plug wire (for gasoline engines) before making any repairs.
- Before servicing machine or attachment, carefully release pressure from any components with stored energy, such as hydraulic components and springs.
- Release hydraulic pressure by lowering attachment or cutting units to the ground or to a mechanical stop and move hydraulic control levers.
- Securely support any machine or attachment elements that must be raised for service work. Use jack stands or lock service latches to support components when needed.
- Never run engine unless park brake is locked.
- Keep all parts in good condition and properly installed. Fix damage immediately. Replace worn or broken parts. Replace all worn or damaged safety and instruction decals.
- Check all hardware at frequent intervals to be sure the equipment is in safe working condition.
- Do not modify machine or safety devices. Unauthorized modifications to the machine or attachment may impair its function and safety.



Wear Appropriate Clothing

- Wear close fitting clothing and safety equipment appropriate for the job.
- Certain operating conditions may dictate that the operator and any passenger wear appropriate safety equipment while operating the vehicle. Be prepared for any existing and potential conditions before operating machine.
- Local safety or insurance regulations may require additional safety equipment such as eye protection or a hard hat.
- Always wear substantial footwear and long trousers. Do not operate the equipment when barefoot or wearing open sandals.
- Wear proper clothing and safety equipment while handling chemicals or using the sprayer. Refer to the MSDS for the chemicals being used to be sure the proper personal protection equipment is being used.



Avoid High Pressure Fluids

- Hydraulic hoses and lines can fail due to physical damage, kinks, age, and exposure. Check hoses and lines regularly. Replace damaged hoses and lines.
- Hydraulic fluid connections can loosen due to physical damage and vibration. Check connections regularly. Tighten loose connections.
- Escaping fluid under pressure can penetrate the skin causing serious injury. Avoid the hazard by relieving pressure before disconnecting hydraulic or other lines. Tighten all connections before applying pressure.
- Search for leaks with a piece of cardboard. Protect hands and body from high pressure fluids.
- If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be surgically removed within a few hours or gangrene may result. Doctors unfamiliar with this type of injury should reference a knowledgeable medical source. Such information is available from Deere & Company Medical Department in Moline, Illinois, U.S.A. Information may be obtained in the United States and Canada only by calling 1-800-822-8262.

Assembly

Dispose of Chemicals Properly

- Proper disposal of excess spray material is very important. If you have excess tank solution, it is best to dilute it with water and apply it to the area you previously treated.
- Never dump solution into a drain or near a lake or stream.
- Chemicals containers should be triple-rinsed, with the rinse water added to the sprayer tank. Do not burn empty chemical containers. Dispose of containers at recycling centers.

Handling Waste Product and Chemicals

Waste products, such as, used oil, fuel, coolant, brake fluid, and batteries, can harm the environment and people:

- Do not use beverage containers for waste fluids - someone may drink from them.
- See your local Recycling Center or authorized dealer to learn how to recycle or get rid of waste products.
- A Material Safety Data Sheet (MSDS) provides specific details on chemical products: physical and health hazards, safety procedures, and emergency response techniques. The seller of the chemical products used with your machine is responsible for providing the MSDS for that product.

Assembly

Parts in Kit

Qty.	Description
1	Sprayer Assembly (On Pallet)
1	SMV Sign
1	Boom Assembly (Boxed Separately)

Hardware Bag

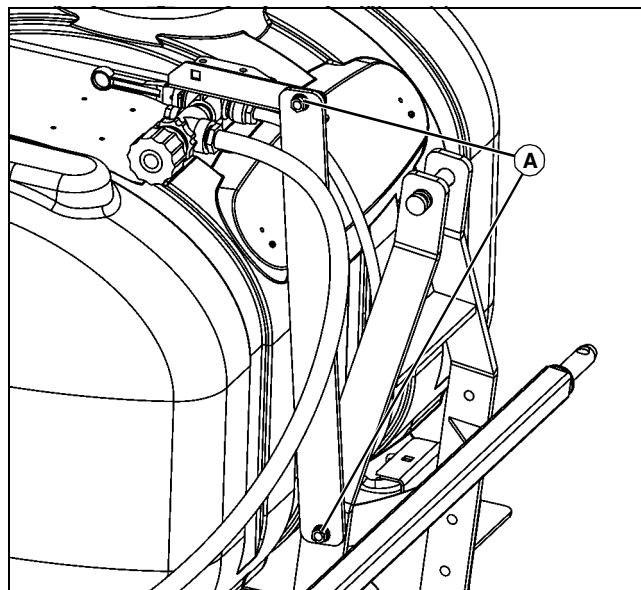
Qty.	Description
3	Hose Clamp, 1/2 in. (18 ft. boom only)
3	U-Bolt, 5/16 in. Square
6	Nut, 5/16 in.

Remove Sprayer from Shipping Crate

NOTE: When removing plastic wrap use caution, the hoses are contained inside the wrap.

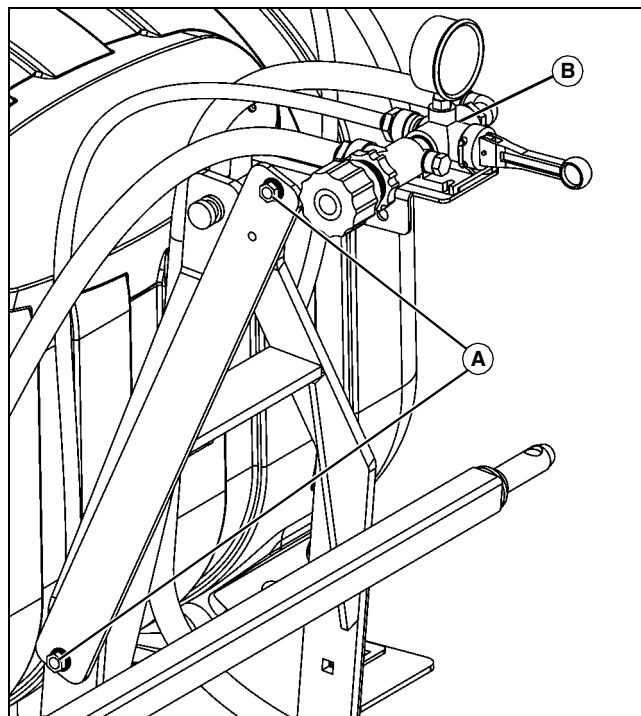
1. Remove plastic wrap from sprayer.
2. Remove hardware securing sprayer assembly to shipping crate, and remove sprayer assembly.
3. Inspect unit for shipping damage. Inventory parts prior to assembly. If parts are missing or damaged, call 1-888-867-2238.

Control Valve Assembly



MX48398

1. Loosen bolts (A).

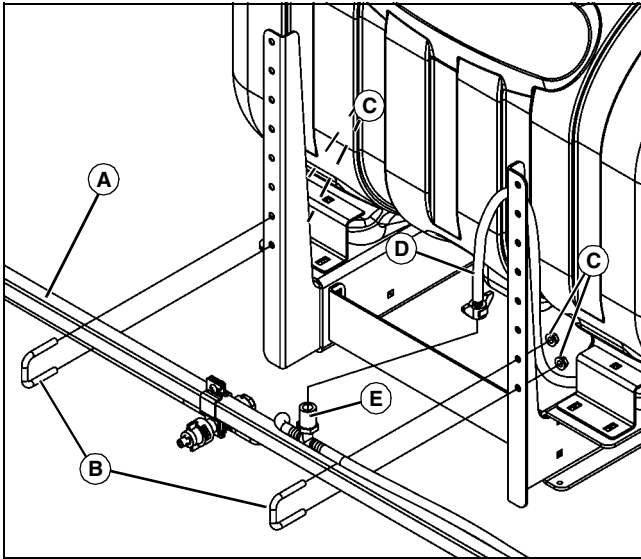


MX48399

2. Rotate the control valve (B) to a position where it can be reached from the tractor seat. Tighten bolts (A).

Installing

Install Boom

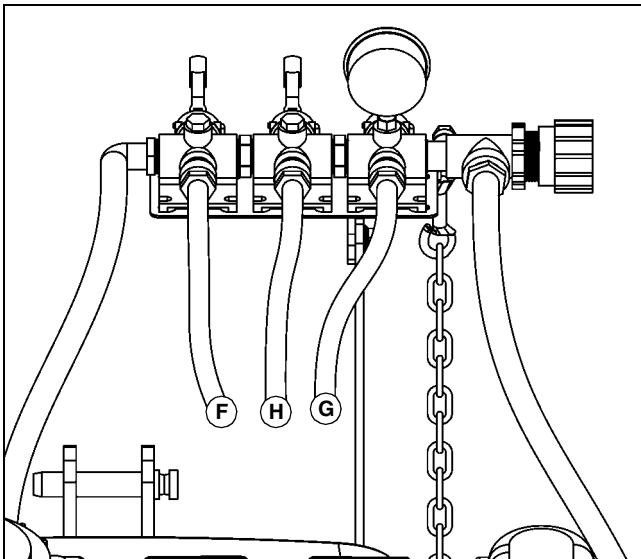


1. Center the boom (A) on the rear of the sprayer at the height desired.
2. Bolt to the boom support brackets using two 5/16 in. square U-bolts (B) and four 5/16 in. flange nuts (C).
3. Connect hoses:

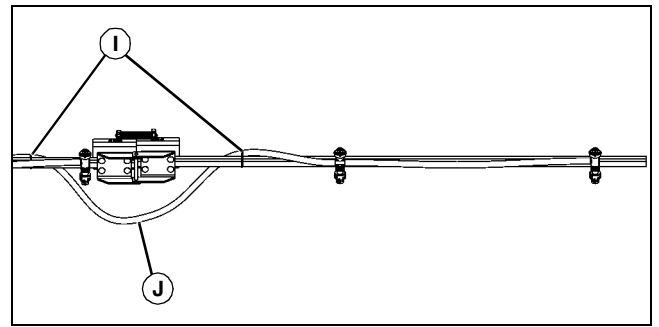
For 150 Precision Boom and Boomless Nozzles:

- Connect and tighten the wingnut on the hose (D) from the valve to the threaded fitting (E) in the center of the boom.

For 18 ft. Boom:

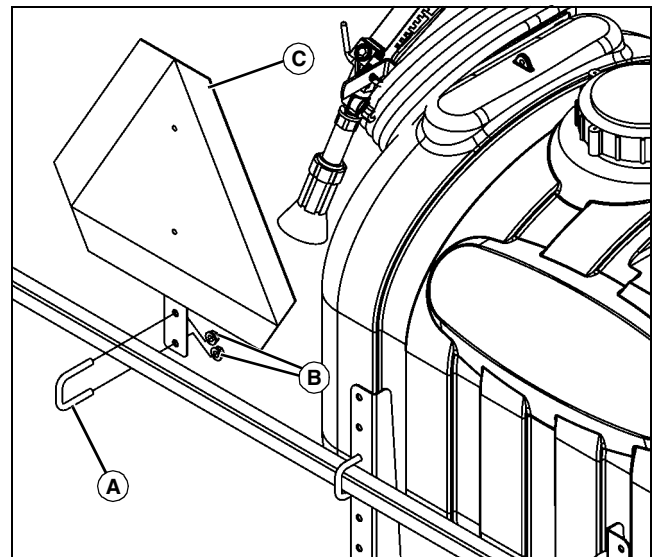


- Connect the hoses from the valves to the appropriate sections of the boom. (F) to the left boom, (G) to the right boom and (H) to the center using 1/2 in. hose clamps.



4. For the two outside booms, use tie straps (I) to secure hoses to the back of the booms about 1 foot away from the hinge on either side leaving all the slack (J) at the hinge. Be sure the hose does not kink when the boom is folded and does not interfere with spray.

Install SMV (Slow Moving Vehicle) Sign



1. Use 5/16 in. U-bolt (A) and two 5/16 in. flange nuts (B) to attach SMV (C) to left side of boom as shown.

Installing

Installing Ballast



CAUTION: Avoid injury! Machine can become unstable when operating with attachment. Ballast is required when the attachment is installed.

When the attachment is removed, also remove any ballast that was added to the machine.

Use only attachments and accessories recommended by the manufacturer.

Compact Utility Tractors

See Ballasting Machine in your tractor operator's manual to determine the number of front weights required to ballast the tractor.

Use the following table to ballast these tractor models:

Removing and Storing

Tractor Model	No. of Weights	Weight (kg/lb)	Implement Code
2305 HST	9	18 kg (40 lb)	30
2320 HST	7	18 kg (40 lb)	30
2520 HST	5	18 kg (40 lb)	30
3120, 3320, 3520, 3720	0	0	0
4120, 4320, 4520, 4720	0	0	0
4005	2	18 kg (40 lb)	20
4105	front weight bracket		30
3032E, 3038E	3	32 kg (70 lb)	30
	5	19 kg (42 lb)	30

Mounting the Pump

Correct mounting of the pump will insure safe pumping operation. The preferred method for mounting torque arm and pump to tractor is with the chain vertical to support the pump.

NOTE: Do not attach torque arm to movable linkages.

1. Mount pump and torque arm to PTO shaft using coupler.
2. Attach torque chain to tractor frame with arm in horizontal position.

It is permissible to mount torque arm with chain in downward position. To do this, mount arm to pump in reverse position. Do not use tension spring or chain.

Attaching Sprayer to Tractor

1. Park machine safely. (See Parking Safely in Safety section.)
2. Lower tractor lift link to lowest position.
3. Mount sprayer on 3-point hitch.

Removing and Storing

Removing Sprayer From Tractor

1. Park the machine safely. (See Parking Safely in Safety section.)
2. Empty the sprayer tank.
3. Lower tractor lift link to lowest position.
4. Disconnect sprayer from tractor 3-point hitch.



CAUTION: Avoid injury! Machine can become unstable when operating with attachment. Ballast is required when the attachment is installed.

When the attachment is removed, also remove any ballast that was added to the machine.

Use only attachments and accessories recommended by the manufacturer.

5. Remove any added front ballast from machine.

Store Sprayer Safely



CAUTION: Avoid injury! To avoid chemical injury:

- Wear protective clothes, gloves and goggles when handling sprayer.
- Do not store sprayer with chemicals in tank.
- If spray comes in contact with your body, immediately follow directions on chemical container pertaining to spray material.

1. Pump all spray material from tank. (See Dispose of Chemicals Properly in the SAFETY section.)
2. Rinse tank, pump, spray wand and all hoses thoroughly with fresh clean water.
3. Repeat step 2 several times.
4. Wipe out sump with a clean cloth or paper towel.
5. Drain hoses and pump filter.
6. Check sprayer for worn or damaged parts. Replace parts as needed.
7. Tighten loose hardware.
8. Store sprayer in a place where it will not freeze.

Operating

Operating

Filling Sprayer Tank



CAUTION: Avoid injury! Chemicals can be dangerous. Avoid injury to operator or bystanders:

- Read chemical container label for mixing and handling instructions. A Material Safety Data Sheet (MSDS) should be supplied by the chemical dealer and provides proper safety information.
- Wear proper clothing and safety equipment while handling or applying spray chemicals.
- Wear a full covering of clothing, protective goggles and rubber gloves.
- Prohibit all smoking, drinking, and eating around chemicals.
- When filling tank, never allow end of water hose to contact chemical mixture.

IMPORTANT: Avoid damage! Clean any spills immediately with clean water prior to operating the sprayer.

NOTE: There is no drain plug provided for draining sprayer tank. When filling tank, consider the area to be sprayed and amount of solution required to complete the task.

1. Clean area around tank filler cap to prevent tank contamination.
2. Remove tank filler cap and fill tank.
3. Install tank filler cap.

Draining and Cleaning Sprayer Tank

IMPORTANT: Avoid damage!

- Proper disposal of excess spray is very important. Dilute it with water and apply it to area previously treated.
- Never dump excess into a storm drain or near a lake or stream.

1. To quickly empty the tank of excess material, remove the brass spray tip from the spray wand and pump the material into a container.
 - Empty remaining solution into an appropriated container for proper disposal.
 - Dilute remaining solution with water and apply it to the area previously treated.
2. Spray all inside surfaces of tank with low pressure garden hose to remove any remaining solution. Rinse sprayer tank, pump, sprayer wand and all hoses thoroughly with fresh clean water. Rinse several times to make sure sprayer tank is clean and free of chemicals.
3. Once the tank is empty, wipe out inside of sprayer tank with a clean cloth or paper towel.
4. Install filler cap.

Calibrating the Sprayer

When spraying with boom, sprayer must be calibrated to ensure proper spray coverage and to combat over-application or under-application. The calibration process is simplified when broken into three steps:

- calculate speed of tractor
- determine nozzle size and consult calibration chart for desired or

instructed gallon per acre (GPA)

- set pressure using relief valve

Calculating the Speed

It is important to determine what speed tractor will be traveling while spraying. Even if tractor has a speedometer, it is still recommended that speed be checked for accuracy. Perform following steps to determine speed:

1. Measure a 200 or 300 foot distance on a field or surface similar to where sprayer will be used.
2. Drive tractor with half full sprayer across measured distance at a constant and comfortable speed for spraying. There can be no changes in speed while measuring time.
3. When using a gear driven tractor, select a gear where PTO is at or near 540 RPM. This is important for pump to provide adequate pressure to sprayer when spraying.
4. Determine amount of time, in seconds, it takes to travel the measured distance.
5. Speed can be determined by entering data into the following equation:

$$\text{speed (mph)} = (\text{distance (ft)} \times 60) / (\text{time (sec)} \times 88)$$

or by consulting the following table:

Speed in MPH	Time (sec) required to travel a distance of:	
	200 ft.	300 ft.
1	136	205
1.5	91	136
2	68	102
2.5	55	82
3	45	68
3.5	39	58
4	34	51
4.5	30	45
5	27	41
5.5	25	37
6	23	34
6.5	21	31
7	19	29

NOTE: If using boomless nozzles, use the Boomless Nozzle Calibration Chart.

Operating

Determining Nozzle Size and Using Calibration Chart

150 IN. STANDARD / PRECISION BOOM						
Tip Size	PSI	GPM one nozzle	GPA 30 inch spacing			
			2 mph	3 mph	4 mph	5 mph
TF-VP3	10	0.30	29.70	19.80	14.85	11.88
	20	0.42	41.58	27.72	20.79	16.63
	30	0.52	51.48	34.32	25.74	20.59
	40	0.60	59.40	39.60	29.70	23.76

18 FT PRECISION BOOM CALIBRATION CHART						
Tip Size	PSI	GPM of one nozzle	GPA			
			3 mph	4 mph	5 mph	6 mph
XRC11004	15	0.24	23.8	17.8	14.3	11.9
	20	0.28	27.8	21.0	16.6	13.9
	30	0.35	34.6	26.0	21.0	17.3
	40	0.40	39.6	30.0	24.0	19.8
	50	0.45	44.0	33.0	27.0	22.0
	60	0.49	48.0	36.0	29.0	24.0

The spray nozzles on your sprayer are XRC11004, which match up with the calibration chart. Refer to the calibration chart. Using tractor speed, nozzle size, and desired gallons per acre (GPA), find pressure (psi) necessary to achieve your GPA. It is important to note that lower pressure settings will result in less spray drift.

Example:

Assume tractor speed is determined to be 4 mph, nozzles are red (XRC11004), and desired GPA is 20 GPA. The calibration charts shows that you should set sprayer's pressure at about 20 psi in order to apply 20 GPA.

Nozzle Size for Boomless Nozzles

BOOMLESS CALIBRATION CHART (24-IN HEIGHT)						
PSI	Cap 3 Nozzle GPM	Spray Width (ft)	GPA			
			4 mph	6 mph	8 mph	10 mph
20	3.65	23	12	8	6.1	4.9
30	4.19	25	12.9	8.6	6.5	5.2
40	4.8	28	13.7	9.1	6.8	5.5

BOOMLESS CALIBRATION CHART (36-IN HEIGHT)						
PSI	Cap 3 Nozzle GPM	Spray Width (ft)	GPA			
			4 mph	6 mph	8 mph	10 mph
20	3.65	25	11.5	7.6	5.7	4.7
30	4.19	28	11.9	7.9	5.9	4.8

BOOMLESS CALIBRATION CHART (36-IN HEIGHT)						
40	4.8	30	12.2	8.2	6.1	4.9

Useful Formulas

GPA	=	gallons per acre
GPM	=	gallons per minute
MPH	=	miles per hour
GAL/1000ft ²	=	gallons per 1000 sq. ft.
W	=	nozzle spacing in inches

$$\text{GPM/per nozzle} = \text{gpa} \times \text{mph} \times \text{w} / 5940$$

$$\text{GPM/per nozzle} = \text{gal}/1000\text{ft}^2 \times \text{mph} \times \text{w} / 136$$

$$\text{GPA} = 5940 \times \text{gpm (per nozzle)} / \text{mph} \times \text{w}$$

$$\text{GPA} = \text{gallons per 1000 sq. ft.} / .023$$

$$\text{GAL}/1000\text{ft}^2 = 136 \times \text{gpm (per nozzle)} / \text{mph} \times \text{w}$$

RATES OF FLOW (Calibration of Spray Tips)

GPM	Seconds to collect 1 qt	GPM	Seconds to collect 1 qt
0.05	300	0.20	75
0.06	250	0.23	67
0.07	214	0.25	60
0.08	188	0.30	50
0.09	167	0.35	40
0.10	150	0.40	35
0.11	136	0.50	30
0.12	125	0.60	25
0.13	115	0.70	20
0.14	107	0.80	15
0.15	100	0.90	17
0.17	80	1.00	15

NOTICE: Avoid contamination when switching from one chemical to another chemical in the sprayer where contamination must be prevented. Wash with tank cleaner and water throughout the tank, pump, and all hoses. Flush with water two to three times. Herbicides such as 2-4D are hard to remove. Follow instructions on procedures noted on all labels.

Service

Operating the Sprayer

Pump Safety Precautions



CAUTION: Avoid injury! Chemicals can be dangerous. Avoid injury to operator or bystanders:

- Read chemical container label for mixing and handling instructions. A Material Safety Data Sheet (MSDS) should be supplied by the chemical dealer and provides proper safety information.
- Wear proper clothing and safety equipment while handling or applying spray chemicals.
- Wear a full covering of clothing, protective goggles and rubber gloves.
- Prohibit all smoking, drinking, and eating around chemicals.
- When filling tank, never allow end of water hose to contact chemical mixture.

IMPORTANT: Avoid damage!

- Do not pump flammable or explosive fluids such as gasoline, fuel oil, kerosene, etc.
- Do not pump acids (i.e. acid fertilizer) with super rollers. For acid fertilizer, Hypro recommends Silver Series castings with Teflon rollers.
- Do not run pump dry! Do not pump faster or above maximum recommended speed and pressure (1200 RPM, 300 PSI).
- Do not pump liquids at temperatures higher than recommended maximum temperature (60°C, 140°F).
- Disconnect power, release all pressure and drain all liquids before servicing pump.

Spraying with the Boom

1. Calibrate the sprayer to achieve the desired gallons per acre (GPA). Refer to Calibrating the Sprayer and the Calibration Chart to determine the correct pressure settings.
2. Connect pump PTO coupler to PTO shaft.
3. Fill tank with water to set pressure and test for leaks.
4. Prepare to spray by opening ball valve on inlet line from tank and closing control valve handle. Handle must be in horizontal position.
5. Start tractor and engage pump. For adequate spraying pressure and tank agitation, PTO should be running at or near 540 RPM. Ensure pump is primed and there are no leaks in any lines.
6. Use relief valve to adjust sprayer pressure to pressure rating determined during sprayer calibration. When opening control valve, it may be necessary to adjust pressure again.
7. Ensure that tractor PTO is disengaged. Fill tank with amount of water and chemicals recommended by chemical being used. After filling tank, engage pump and allow ample amount of time for jet agitator to mix water and chemicals.

NOTE: Do not start sprayer operation until chemicals and water are mixed for the recommended time listed on the chemical instructions.

8. At spraying location, open booms, engage pump, and make sure pressure setting is correct. While spraying, maintain a constant level of speed and RPM (rates determined when calibrated).

Service

Servicing Sprayer Safely



CAUTION: Avoid injury! To avoid chemical injury:

- Wear protective clothes, gloves and goggles when handling sprayer.
- Do not put the nozzle tips or other parts to your lips to blow out dirt.
- If spray comes in contact with your body, immediately follow directions on chemical container pertaining to spray material.

Servicing the Pump

Follow all pump safety precautions and warnings. Following these guidelines will help to ensure many years of smooth and trouble-free sprayer operation.

- Flush pump out with fresh water after every use.
- Winterize pump to prevent freezing and corrosion. Refer to Winterizing Sprayer for instructions.
- Change seals and rollers if pump is leaking or has a noticeable decrease in performance.

Winterizing Sprayer

It is important to winterize sprayer to avoid damage from freezing and corrosion before temperatures reach freezing levels.

1. Empty and rinse tank.



CAUTION: Avoid injury! Do not use standard antifreeze. Standard antifreeze can be harmful to humans, animals, crops and the environment.

2. Put one to two gallons of RV nontoxic antifreeze in tank.
3. Engage pump and spray with boom and subsequently spray gun (if applicable). Ensure that antifreeze has been pumped through entire system including all spray nozzles.
4. Store sprayer in a dry location away from elements.

Placing Sprayer Back in Service after Winterizing

1. Flush sprayer with fresh water to clean out all antifreeze and any other buildup.
2. Do a thorough inspection of all components before spraying.

Troubleshooting

Using Troubleshooting Chart

If you are experiencing a problem that is not listed in this chart, see your authorized dealer for service.

When you have checked all the possible causes listed and you are still experiencing the problem, see your authorized dealer.

Specifications

Using Troubleshooting Chart

IF	CHECK
Pump Loses Suction.	Clean Pump suction screen. Check tank fill level. Fill tank. Clean or replace pump. Check for loose pump fittings.
Pump Capacity Decreased.	Clean pump suction screen. Clean spray nozzle(s). Selection lever is not completely turned on, or is in the OFF position.
Poor Spray Pattern.	Clean spray nozzles. Adjust nozzle height. Align spray tips with boom.
Pump Vibrates or Spray Pulses.	Adjust pump.
Pump Does Not Work.	Check wiring connections. Check machine battery. Clean debris from pump. Check pump switch. Check pump motor. Check fuse on 12 volt plug adapter harness. Adjust pump.

Getting Quality Service

John Deere Quality Continues with Quality Service

John Deere provides a process to handle your questions or problems, should they arise, to ensure that product quality continues with your John Deere dealer's parts and service support.

Follow the steps below to get answers to any questions you may have about your product.

1. Refer to the appropriate attachment, machine or equipment operator manuals.
2. Contact your John Deere dealer with unanswered questions.

Specifications

60 Gallon, 3-Point Hitch Sprayer

Pump

Model	Series 6500C or 6500XL
Type	Six Roller Pump
Manufacturer	Hypro
Max Pressure	2068 kPa (300 psi)
Max Flow Rate:	.22 gpm
Max RPM:	1200 rpm
Ports:	.3/4 in. NPT Inlet and Outlet, 1 in. Hose Barb Included
Continuous Operation	689 kPa (100 psi)
Intermittent Operation	1379 kPa (200 psi)

Sprayer Tank

Capacity	227 L (60 gal)
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Spraying Width

7 Tip Precision Boom	5.5 m (18 ft)
5 Tip Precision Boom	4 m (12.5 ft)
Boomless	9 m (30 ft)

Weight (Excluding Boom):

Empty	50 kg (110 lb)
Full	277 kg (610 lb)

Notes
