

JOHN DEERE 31 TRAILER SPRAYER



OPERATORS MANUAL JOHN DEERE 31 TRAILER SPRAYER

OMB73260 (01FEB60) English

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ENGLISH



TO THE PURCHASER

Your new John Deere Sprayer is efficient and dependable. It will give long and efficient service if given proper care and operation.

This Operator's Manual is provided to furnish information on the proper operation, adjustment, and maintenance of your new sprayer. A parts list, with illustrations, is provided.

When in need of parts, see your John Deere dealer. He will furnish genuine John Deere Parts and prompt and efficient service in the field or in the shop.

Right-hand and left-hand reference is determined by standing at the rear of the sprayer and facing the direction of travel.



Study this manual carefully. Keep it handy, in a safe place, for future reference.

JOHN DEERE 31 TRAILER SPRAYER

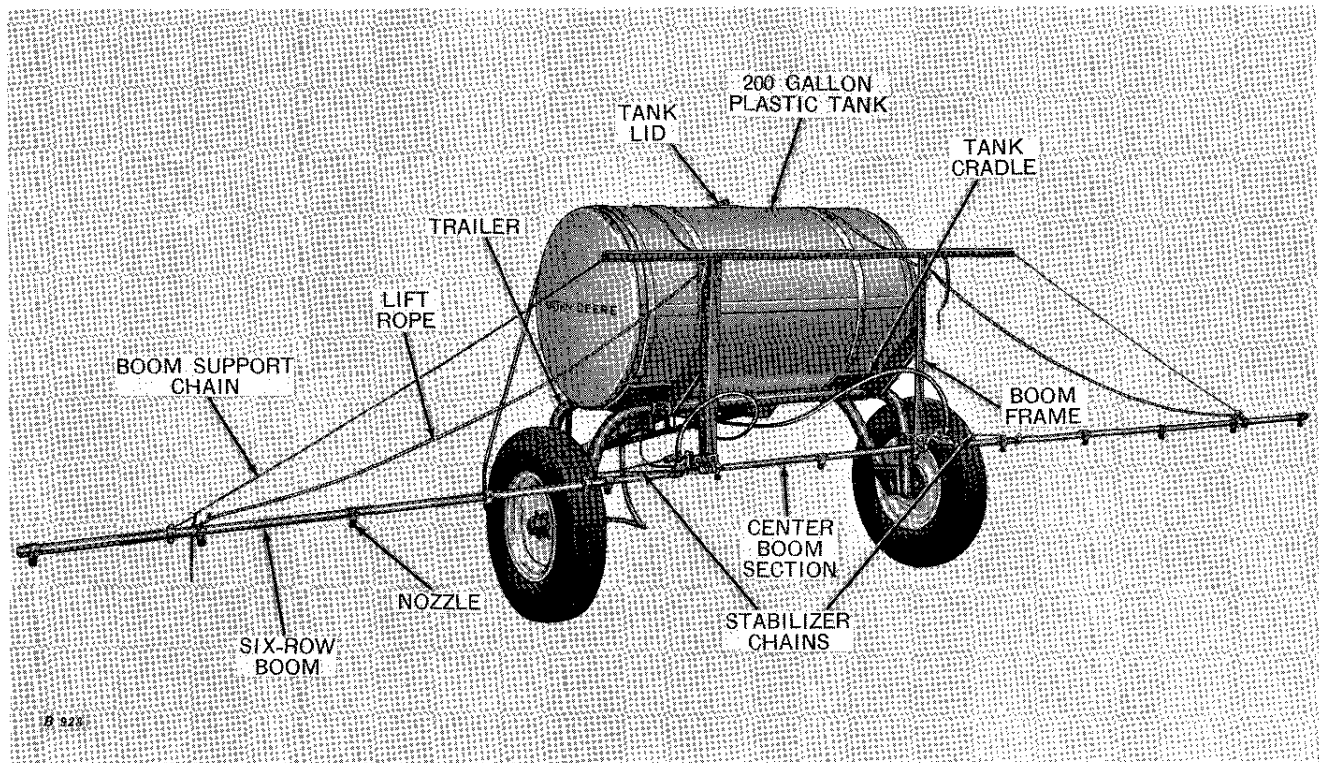
Date Purchased

- | | |
|-------------------------------------|--------------------------|
| 200-Gallon Plastic Tank | <input type="checkbox"/> |
| Barrel Frame | <input type="checkbox"/> |
| Booms | |
| 6-Row | <input type="checkbox"/> |
| 8-Row | <input type="checkbox"/> |
| 12-Row (40 Feet) | <input type="checkbox"/> |
| PTO PUMP | |
| 8-Roller Ni-Resist | <input type="checkbox"/> |
| 6-Roller Ni-Resist | <input type="checkbox"/> |
| 6-Roller Grey Iron | <input type="checkbox"/> |
| WIDE-SPRAY JET | <input type="checkbox"/> |
| ROW-CROP DROPS | |
| 18 Inches Long | <input type="checkbox"/> |
| 30 Inches Long | <input type="checkbox"/> |
| HAND GUN | |
| 25-Foot Hose | <input type="checkbox"/> |
| 50-Foot Hose | <input type="checkbox"/> |
| High Pressure Hand Gun | <input type="checkbox"/> |
| BOOM EXTENSION NOZZLES | <input type="checkbox"/> |

(To be filled in by purchaser)

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31 Sprayer with Six-Row Booms in Working Position

SPECIFICATIONS

The 31 Sprayer is a two-wheel pull-type sprayer.

TANK

Regular—200-gallon, translucent plastic, reinforced with fiber glass, tank.

Optional—Barrel frame for three 55-gallon barrels. (Barrels are not furnished).

BOOMS

Regular—8-row booms (28-foot 4-inch) to cover eight 40-inch rows.

Optional—6-row booms (21-foot 8-inch) to cover six 40-inch rows; 12-row booms (40-foot) to cover twelve 40-inch rows.

All booms are 3/4-inch aluminum pipe and the nozzles are spaced 20 inches apart. The booms are made in three sections with the center section stationary and the outer sections mounted on four-way spring stabilized hinges.

WIDE-SPRAY JET

A wide-spray jet is available as optional equipment in lieu of the booms and boom control. It is used for broadcast spraying. (The wide-spray jet is shipped less nozzle tips but there are two sets of tips available. See page 15.)

PTO PUMP

Regular—Ni-Resist (nickel-iron alloy) eight-roller pump.

Optional—Ni-Resist (nickel-iron alloy) six-roller pump or a grey iron six-roller pump.

TRAILER CLEARANCE

30-3/4 inches with 7.60 x 15 tires.

Distance from nozzle tip to ground when boom is in working position:

Minimum—12 inches

Maximum—36 inches

TRANSPORT HEIGHT

8-Row Booms

Minimum—12 feet 6 inches

Maximum—14 feet 6 inches

6-Row Booms

Minimum—9 feet 6 inches

Maximum—11 feet 2 inches

BOOM CONTROL

The boom control is a seven position selector valve which controls the spray delivery at any one of the three boom sections or at any combination of the sections. The selector valve handle is also the control for turning "ON" or "OFF" in any of the selected positions. Spraying pressure regulator controlled.

NOZZLES

The nozzle bodies, nozzle caps and strainer bodies are made of nylon for better chemical resistance. The nozzle and line strainer screen are made of stainless steel. The nozzle tips are made of brass or stainless steel. (The nozzle tips must be ordered as required. See page 9.)

HAND GUN

A hand gun with 25- or 50-feet of hose is available as an attachment and may be used with either the boom type or wide-spray jet sprayer. The hand gun can be used for spraying small fields, animals, fence rows, spot weed control, buildings and fire fighting. A high pressure hand gun with 25 feet of hose is also available.

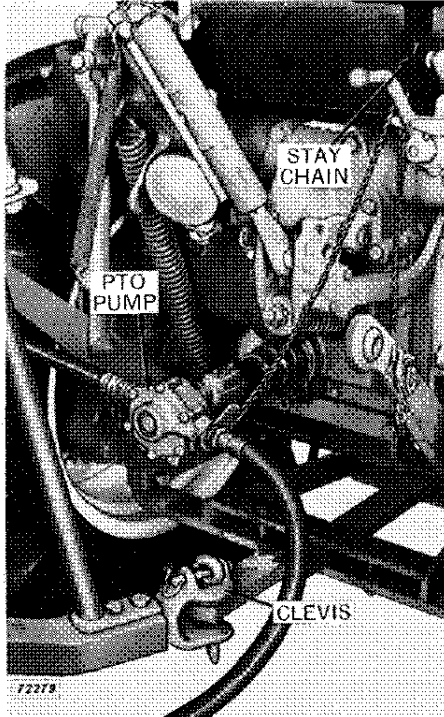
ROW-CROP DROPS

Row-crop drops for the six- or eight-row booms are available as an attachment. Each row-crop drop has two nozzles which can be turned up to spray the underside of the leaves, or down to spray the ground between the leaves. The row-crop drops are 18 inches long. Extra row-crop drops are 30 inches long.

(Specifications and design subject to change without notice)

OPERATION

HITCHING TO TRACTOR



Adjust the tractor drawbar height to approximately 15 inches.

Attach the drawbar clevis to the tractor drawbar.

Install the pump on the tractor PTO shaft.

Arrows on the pump ports indicate proper rotation.

Place the key between the splines on the PTO shaft and tighten the set screws against the key to secure pump on shaft.

Attach the stay chain to some fixed point on the tractor and adjust the length so it will hold pump in a horizontal position.

WARNING

To Avoid Backward Tip-Over:

- (1) Hitch Trailer Drawbar to Tractor Before Filling Tank (S).
- (2) On Unhitching Trailer Drawbar from Tractor with Liquid in Tank (S), Hold and Handle Drawbar as Firmly and as Close to Ground as Possible.

FILLING TANK OR BARRELS WITH THE PTO PUMP

The PTO pump can be used to fill the tank or the barrels.

FILLING THE TANK

Turn the shut-off valve to the "OFF" position.

Disconnect the suction hose from the PTO pump.

Obtain one length of 3/4-inch hose, not over 50 feet long, with a female hose connection on one end and a strainer (AB11079B) on the other end. Connect the female hose connection to the PTO pump where the suction hose was removed. Place the end of the hose with the strainer into the water reservoir or supply.

Disconnect the discharge hose from the PTO pump.

Obtain one length of 3/4-inch hose with a female hose connection on one end. Connect the female hose connection to the PTO pump where the discharge hose was removed. Place the other end of the hose in the tank. Start the PTO pump.

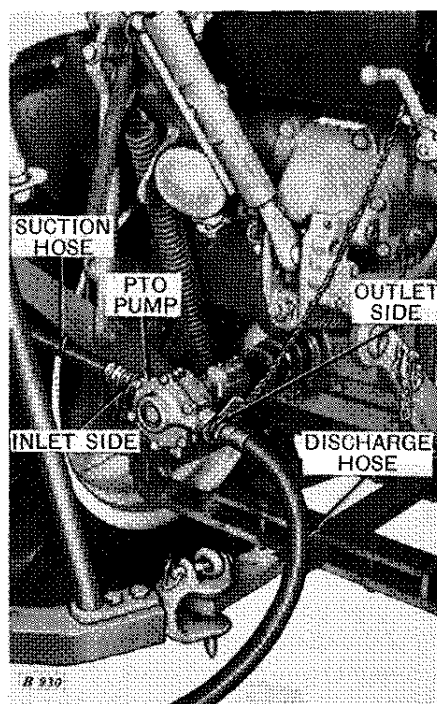
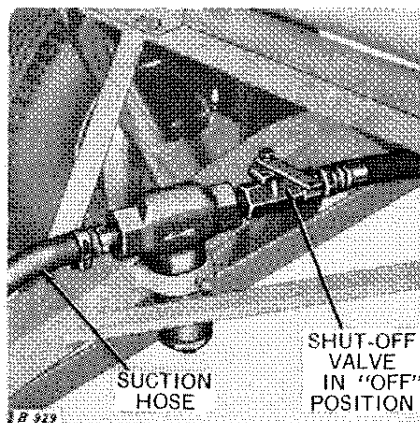
NOTE: The hoses used for filling the tank do not have to be chemical resistant.

FILLING THE BARRELS

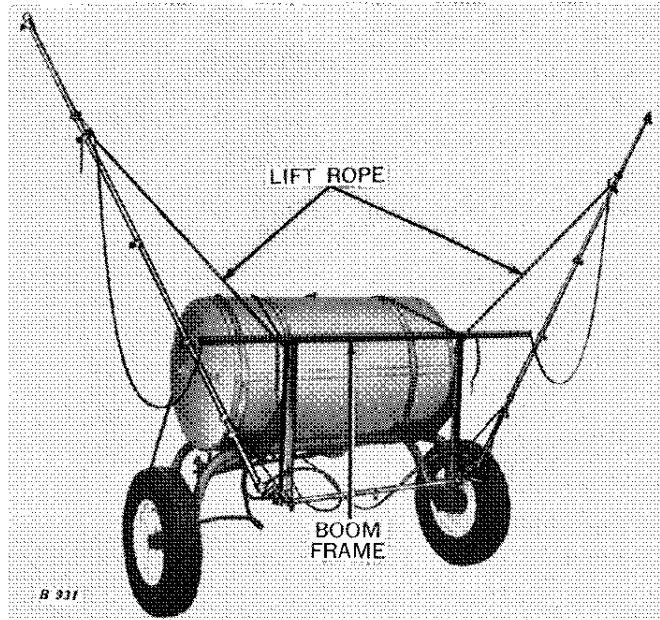
Remove the suction hose with the strainer from one of the barrels. Place the strainer into the water reservoir or supply. Turn the control handle to the "OFF" position. Start the PTO pump.

NOTE: If a length of hose is added to the suction hose it should be chemical resistant.

CAUTION: The resins in the plastic tank will deteriorate by prolonged exposure to strong alkaline materials such as aqua-ammonia. After strong alkaline materials are used, immediately flush out the tank and remove the lid until all vapors have escaped.



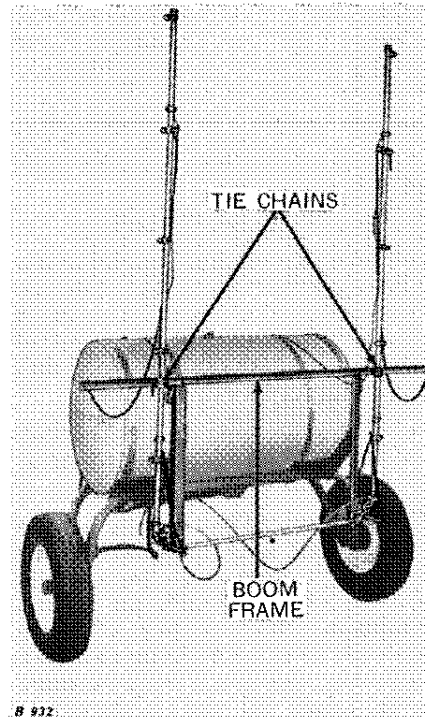
TRANSPORTING—6- OR 8-ROW BOOMS ONLY

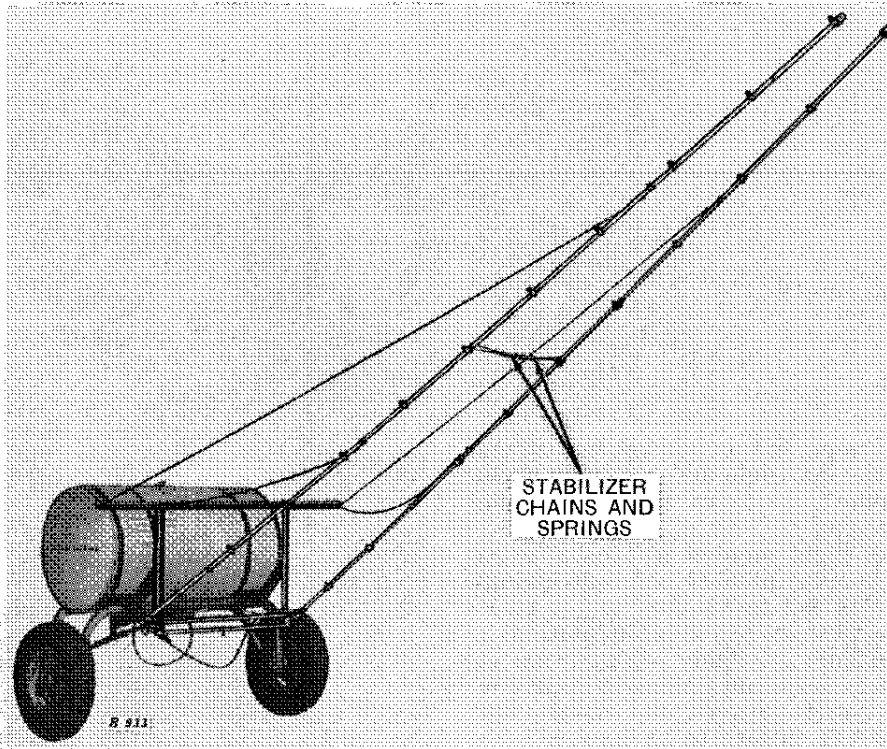


Pull the booms up with the lift rope and position the knots in the lift rope, so that when the knots are inserted in the notches of the lift rope bracket, the booms will just clear the ends of the boom frame.

When transporting the sprayer over rough ground, or for a long distance, secure the booms to the boom frames as follows:

Raise the outer boom sections straight up behind the boom support rail. Slide the plastic hose on the tie chain up tight against the rail. Wrap the chain tightly around the boom pipe twice, so the covered section of the chain is between the boom pipe and the support rail. This will prevent wear on the boom. Pull the chain through the hole in the rail and secure tightly with the spring locking pin.



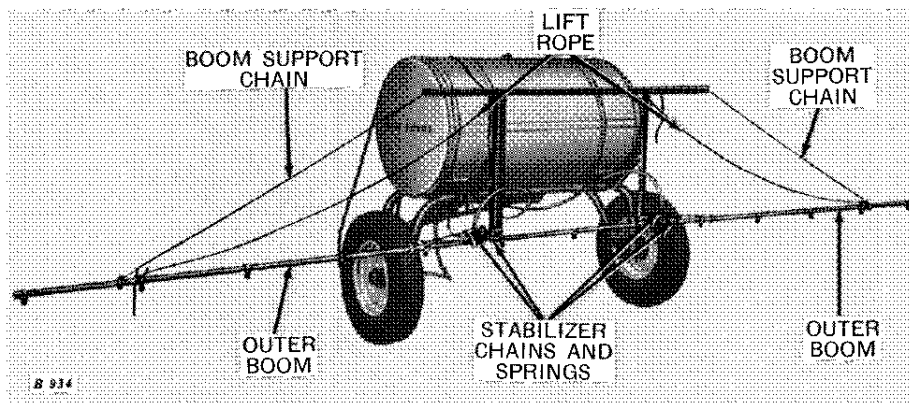
TRANSPORTING—12-ROW (40-FT.) BOOMS ONLY

Remove the stabilizer springs and chains from the booms.

Swing the booms rearward and tie the booms together with the stabilizer springs and chains as shown.

SAFETY  **FIRST**

BOOMS AND CONTROLS



Lower the outer booms to the operating height and adjust the boom support chains so that the booms are level.

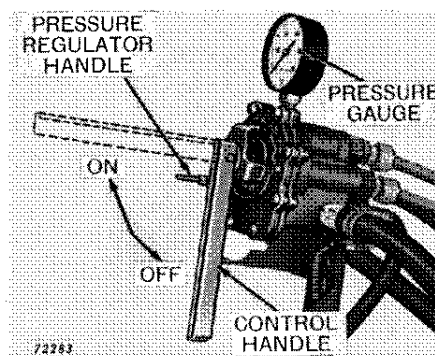
A slight amount of tension must be kept on the stabilizer chain springs on the booms so they will stay in line with the center boom section.

Adjust the height of the booms so there is approximately 18 inches of clearance between the nozzle tips and the surface to be sprayed.

The spray delivery by any of the three boom sections, or any combinations of the sections, can be obtained by turning the control handle to the position indicated on the control housing. The control handle also controls the on-off valve. The operating positions are marked as follows:

- L —Outer left-hand boom.
- LR —Outer left- and right-hand booms.
- LCR—All three booms operating.
- C —Center boom.
- LC —Outer left-hand and center booms.
- CR —Center and outer right-hand booms.
- R —Outer right-hand boom.

The operating pressure may be regulated by turning the pressure regulator handle clockwise to increase the pressure, and counter-clockwise to decrease the pressure.



CAUTION: Never regulate the pressure unless the sprayer is in operation. Do not operate the sprayer at pressures so high that the maximum pressure gauge capacity will be exceeded when the flow to the booms is shut off.

JET AGITATOR—(FOR SPRAYERS WITH 200-GAL. TANKS ONLY)

If the gauge pressure cannot be adjusted to the minimum pressure desired, the jet agitator orifices in the tank inlet are restricting too much of the flow and should be larger. The diameter of the orifice openings should not be increased more than 1/32-inch at one time. Enlarge one orifice at a time until the desired pressure can be obtained.

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