23
INTEGRAL SPRAYER

JOHN DEERE

OPERATORS MANUAL

23
INTEGRAL SPRAYER

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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 contains information on the proper operation, adjustment, and maintenance of your new sprayer.

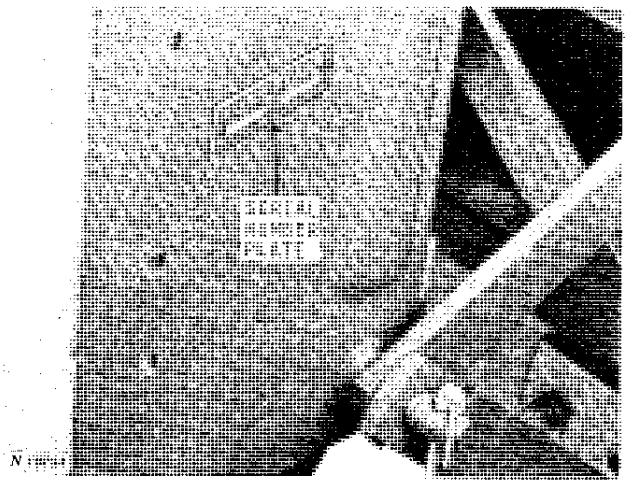
When in need of parts see your John Deere dealer. He will furnish genuine John Deere parts and prompt and efficient service in the field or in the shop.

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.

Information concerning warranty on this sprayer appears on your copy of the delivery receipt which you should have received from your dealer when the sprayer was delivered to you.

SERIAL NUMBER



The sprayer serial number is on a plate located on the left-hand tank frame.

Write this serial number in the space provided below, for handy reference later.

SPRAYER SERIAL NUMBER. . . . . .

DATE PURCHASED. . . . . .

John Deere 23 Integral Sprayer

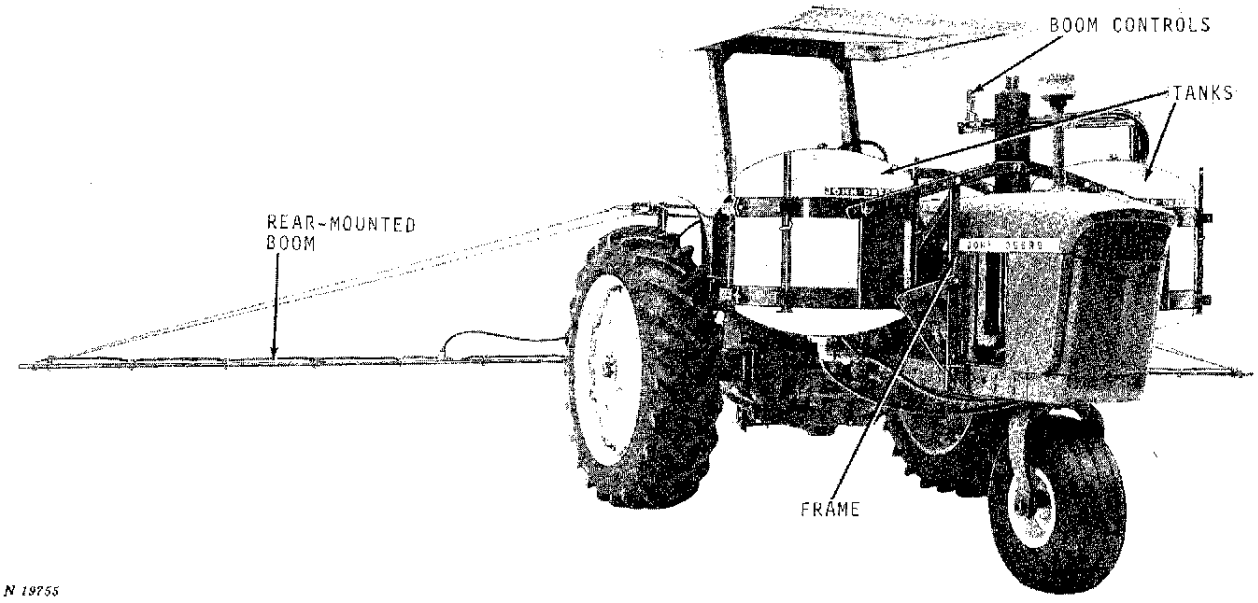
Tank
- 100 Gallon. . . . . ☐
- 150 Gallon. . . . . ☐

Booms
- 6-Row . . . . . ☐
- 8-Row . . . . . ☐
- 8-Row Heavy-Duty . . . . . ☐
- 12-Row (40-Ft.) . . . . . ☐

Pump
- Centrifugal Pump . . . . . ☐

(To be filled in by Purchaser)

CONTENTS



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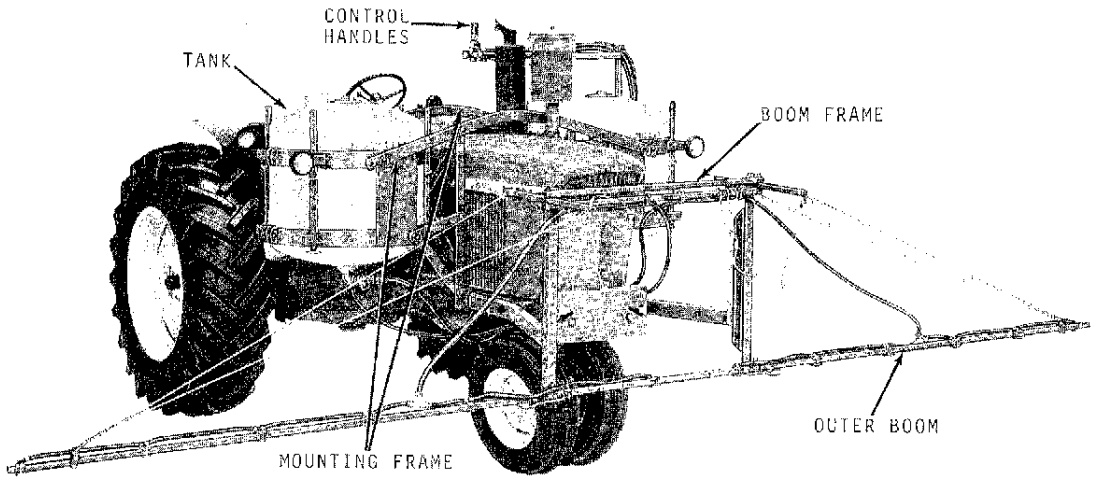
John Deere 23 Sprayer with Rear-Mounted Booms on 4020 Tractor



B 6271

John Deere 23 Sprayer with Front-Mounted Booms on 4020 Tractor

SPECIFICATIONS

TYPE

The 23 Sprayer is an integral sprayer with front or rear-mounted booms.

TANK

100-Gallon tank - for 4020 Tractor.

150-Gallon tank - for 5020 Tractor.

BOOMS

6-row booms - 20 feet 4-1/2 inches - to cover six 40-inch rows.

8-row booms - standard or heavy-duty - 27 feet 1/2 inch - to cover eight 40-inch rows.

12-row booms - 40 feet 4-1/2 inches - to cover twelve 40-inch rows.

Booms are made of square tubing. Nylon nozzles are clamped to the booms. Rubber hoses are connected to the nozzles.

The nozzle clamps are adjustable for row widths of 24 to 40 inches. Spacing between nozzles can be adjusted from 12 to 20 inches. Booms are made in three sections with the center section stationary and the outer sections mounted on four-way hinges.

EIGHT-ROW BOOM EXTENSIONS

The boom extensions may be used with the eight-row booms to make twelve-row (30-inch rows) booms.

PUMP

The pump is a hydraulic motor-driven centrifugal pump.

BOOM CONTROL

The boom control is a two-position selector valve. Either half of the total boom coverage may be operated independently of the other half.

NOZZLES

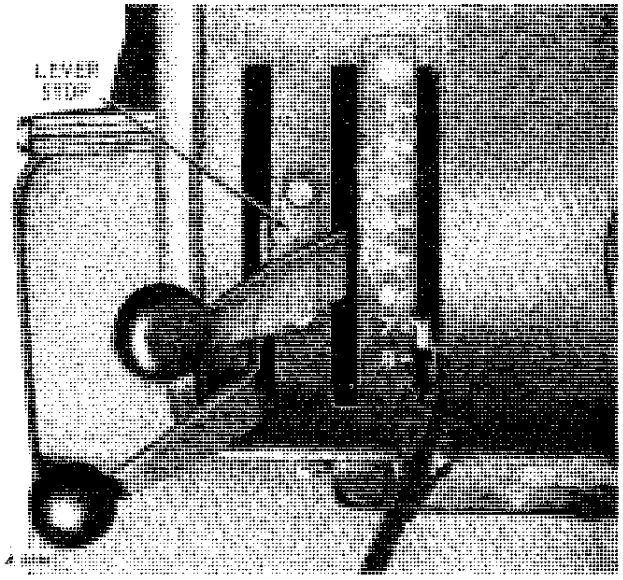
The nozzle bodies, nozzle caps and strainer bodies are made of nylon. The nozzles and line strainer screens are made of stainless steel. The nozzle tips are made of stainless steel or brass.

(Specifications and design subject to change without notice.)

OPERATION

PREPARING THE TRACTOR

LEVER STOP



To operate the hydraulic motor-driven pump, it is necessary to keep the tractor remote cylinder operating lever in the operating position to provide constant hydraulic pressure.

A lever stop must be attached to the tractor as shown above. Installation instructions are given on page 23.

FRONT END WEIGHTING

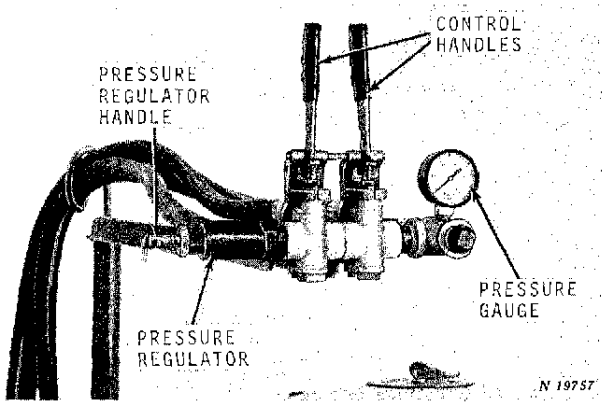
When used with front-mounted booms, side weights and one front end weight must be used. See your tractor operator's manual for additional weight requirements when used with other equipment.

FILLING THE TANK

Open the lids and fill each tank with water. Add the chemical to be used as each tank is being filled. Close the lids.

NOTE: If one tank is filled slowly the other tank will fill automatically to the same level. If one tank is filled with large capacity hose, the second tank may not fill at the same rate. If filling tanks separately, close valve under the tank. Be certain to open valve before operating sprayer.

CONTROLS



After tanks are filled, operate the pump to mix chemical thoroughly in each tank.

The spray delivery to either half of the sprayer is regulated by the control handles. When both handles are forward and horizontal, both sides of the sprayer are in operation.

When the right-hand handle is forward and horizontal and the left-hand handle is vertical, the right side of the sprayer is in operation.

When the left-hand handle is forward and horizontal and the right-hand handle is vertical, the left side of the sprayer is in operation.

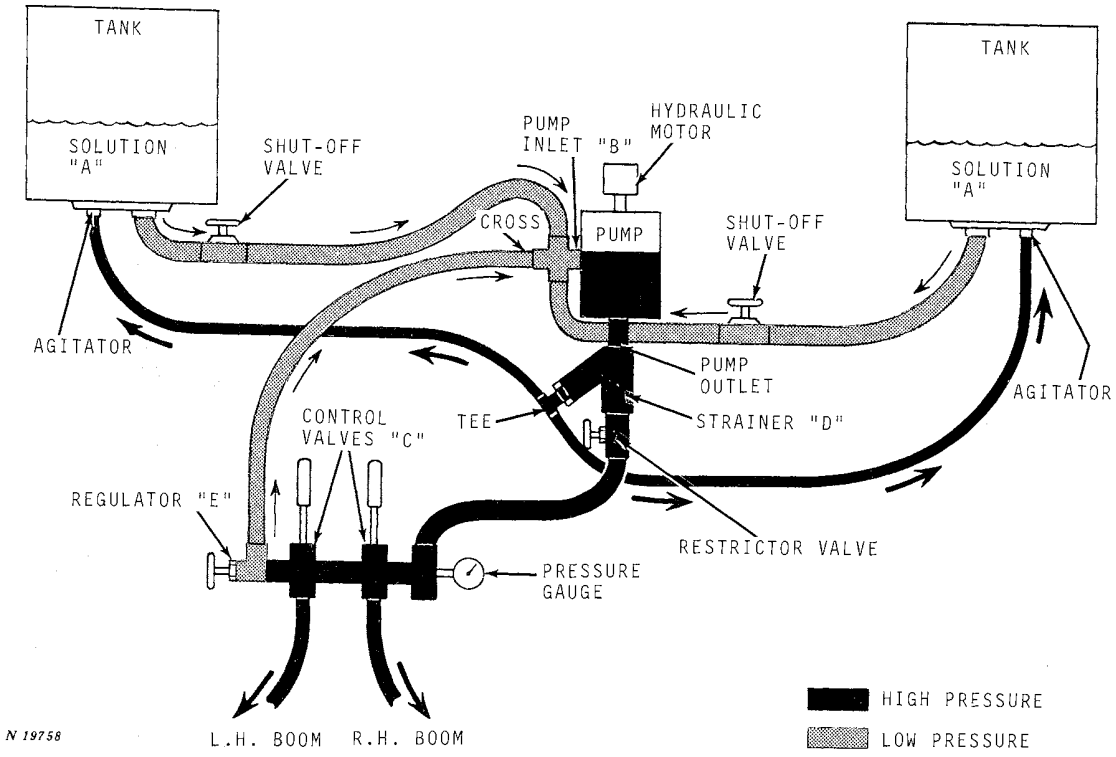
Placing both handles in the vertical position shuts off the sprayer.

The pressure gauge shows the operating pressure.

Regulate the operating pressure by turning the pressure regulator handle clockwise to increase the pressure and counterclockwise to decrease the pressure.

If the pressure regulator will not reduce pressure to desired setting, turn the restrictor valve at the strainer until the pressure drops below desired setting. This will then provide an operating range that may be controlled by the pressure regulator.

SOLUTION FLOW



Flow Diagram of Solution

The solution gravity feeds from the tank "A" through the shut-off valve to the pump inlet "B."

The solution is then pumped through the strainer, where all impurities are removed, to the boom control valves "C."

Some of the solution flushes the strainer "D" and goes back to the tank through the agitation ports in the bottom of the tank, which keeps the solution agitated in tanks.

At boom controls "C" the valves are opened and the solution flows to the nozzles and then to the ground under pressure.

Some solution will go through the pressure regulator "E" and flow back through the pump inlet "B" and repeat process. The pressure regulator controls pressures to booms.

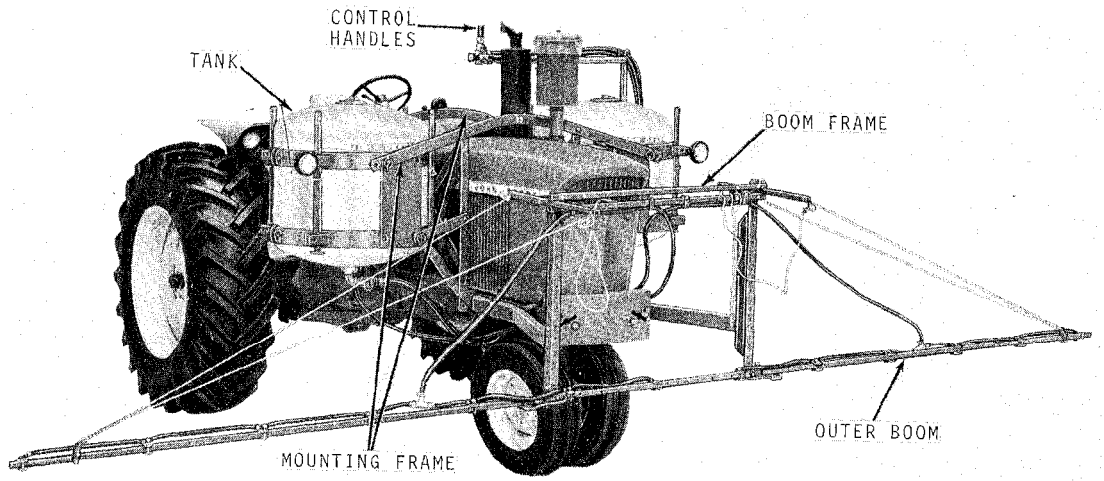
PUMP

IMPORTANT: Never run pump dry as excessive heat may damage seals in pump.

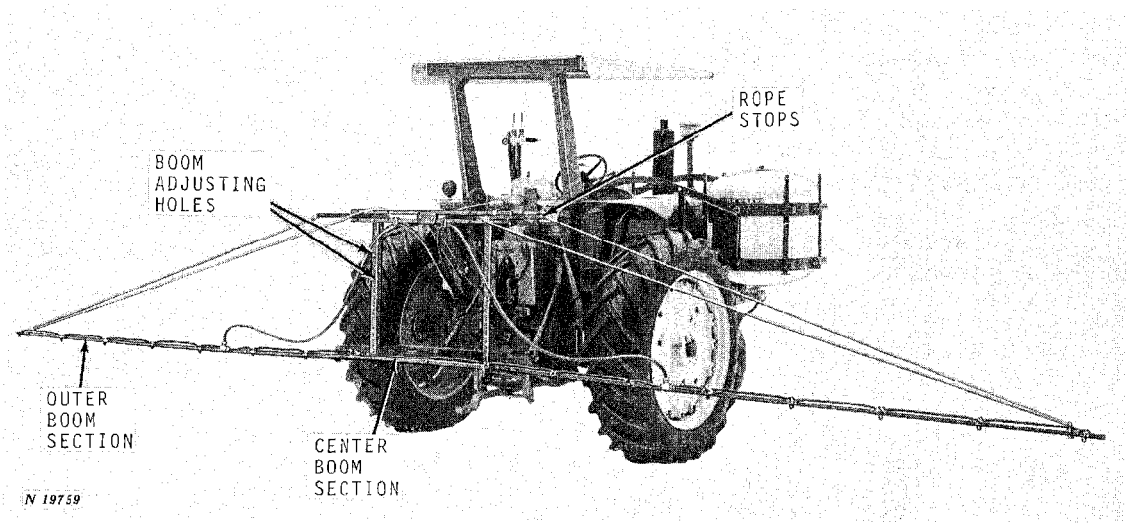
LINE STRAINER

IMPORTANT: Check line strainer daily or after tankful and clean if necessary.

BOOMS



Front-Mounted Booms



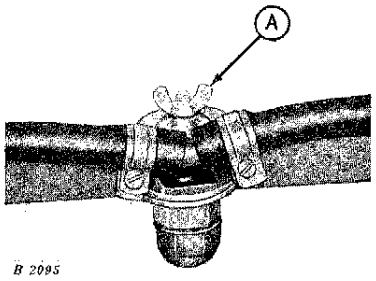
Rear-Mounted Booms

Adjust the booms to the operating height which is approximately 18 inches clearance between the nozzle tips and surface to be sprayed.

Adjust the rope stops on the boom support ropes so the booms are level and the outer booms are in line with the center boom section.

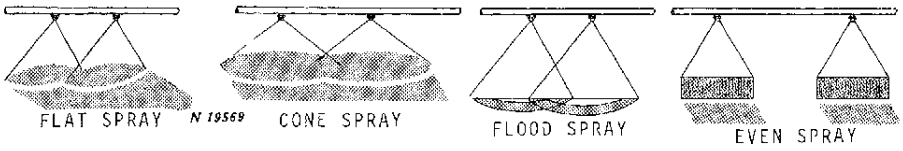
NOZZLES

NOZZLE ADJUSTMENT



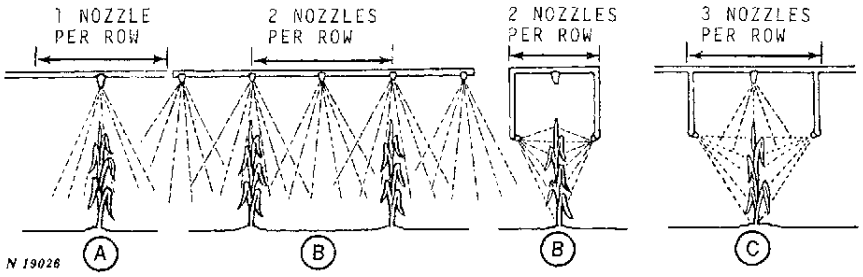
The nozzles may be adjusted for different row spacings. Loosen nut "A," and slide the nozzle clamp on the boom to the desired spacing and tighten nut "A."

NOZZLE TIPS



Nozzle tips are available in four types: flat, cone, flood or even spray patterns as shown in the illustration above. These tips are available in a number of different hole or orifice sizes to provide a variety of rate applications. Flat nozzles are normally used for weed control, broadcast applications or pre-emergence applications. Cone nozzles are normally used for insect control and even nozzles are used for banding. Flood nozzles are used for broadcast spraying.

Adjust the even or flat spray nozzles so that the slot in the bottom of each nozzle is at right angles to the direction of travel.



The above illustrations show the various nozzle combinations which can be used. See Nozzle Tip Selection Chart.

IMPORTANT

A series of studies have recently been conducted by the Departments of Agronomy and Agricultural Engineering at some of our leading universities to determine variations in spray volume or distribution pattern due to nozzle tip wear.

The results of the studies indicate that both volume and pattern may vary considerably particularly when wettable powders are used.

We suggest that the sprayer be calibrated daily and that operating pressures be gradually lowered to compensate for wear until such time that nozzle tips require replacement.

Stainless steel tips are much more resistant to wear than brass tips.

Thank you so much for reading.

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