

JOHN DEERE 220 TRACTOR-MOUNTED SPRAYER



JOHN DEERE

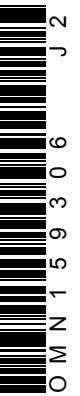
OPERATORS MANUAL

JOHN DEERE 220
TRACTOR-MOUNTED
SPRAYER

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ENGLISH





To the Purchaser


This new sprayer was carefully designed and manufactured to give years of dependable service. To keep it running efficiently, read the instructions in this operator's manual. Each section is clearly identified so you can easily find the information you need - whether it is operation, lubrication, or adjustments and service. Read the Table of Contents to learn where each section is located.

In addition to the equipment furnished with your sprayer, attachments are available to help you do a better job in special crop conditions. These are described in the special equipment section of this manual and can be purchased from your John Deere dealer.

"Right-hand" and "left-hand" sides are determined by facing in the forward direction of tractor travel.

Record your sprayer serial number in the space provided on page 55. Your dealer needs this information to give you prompt, efficient service when you order parts or attachments. If your sprayer requires replacement parts, go to your John Deere dealer where you can obtain genuine John Deere parts - accept no substitutes.

The warranty on this sprayer appears on your copy of the purchase order which you should have received from your dealer when you purchased the sprayer.

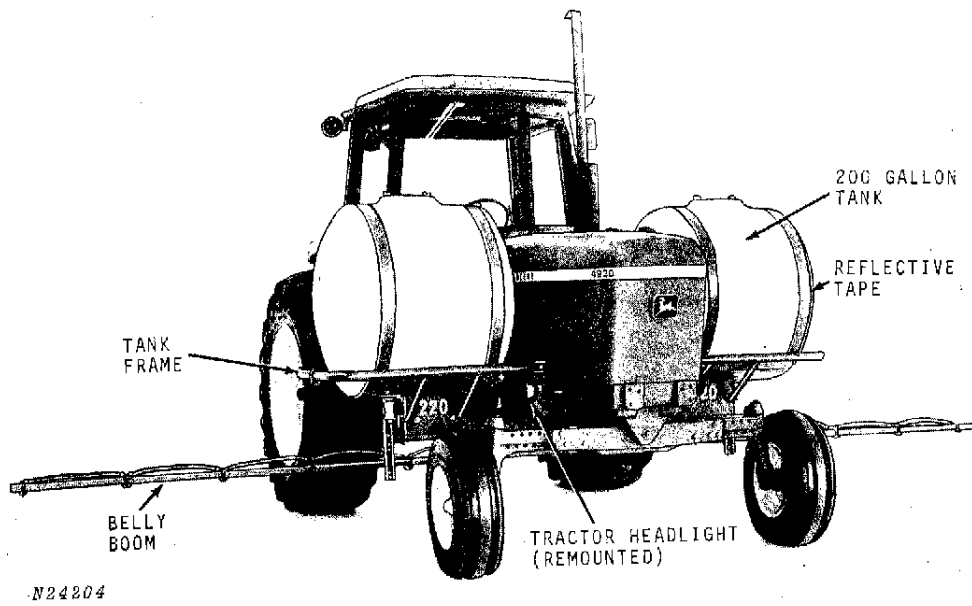
 This safety alert symbol identifies important safety messages in this manual. When you see this symbol, be alert to the possibility of personal injury and carefully read the message that follows.



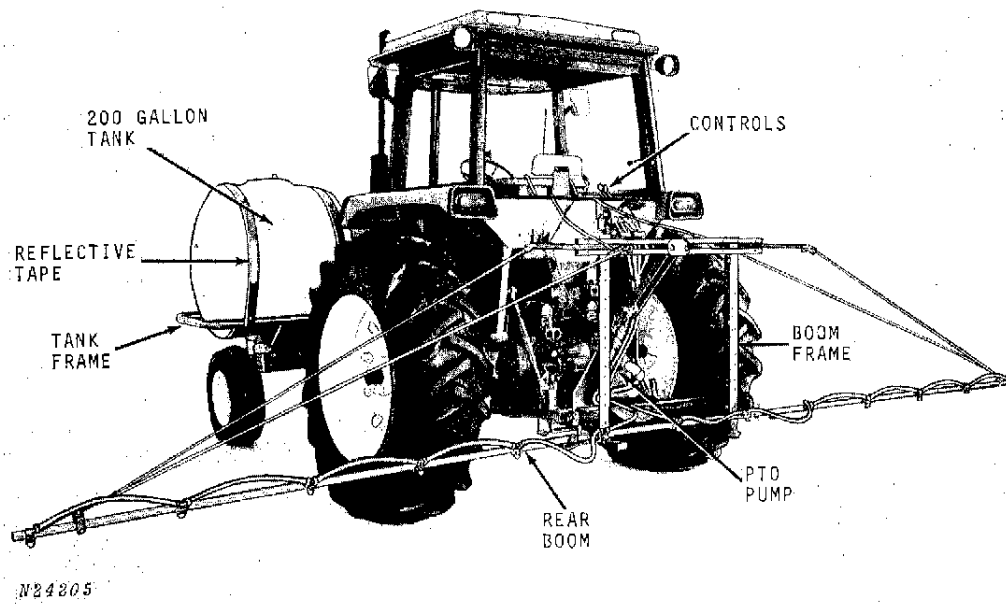
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2 Identification Views



John Deere 220 Sprayer with Belly Boom



John Deere 220 Sprayer with Rear-Mounted Boom on 4230 Tractor



Operation

PREPARING THE TRACTOR

Refer to your tractor operator's manual for information regarding recommended adjustments, tire inflation pressures, use of the hydraulic system and PTO, and any other information pertinent to tractor and implement use.

Read the Safety Suggestions in your tractor operator's manual and on page 16 of this manual.

Remote Cylinder Lever Lock (For Sprayers equipped with Hydraulic Motor Driven Pumps Only)

NOTE: The lever lock must be removed when operating other implements which require regular detent action.

4230, 4430, and 4630 Tractors

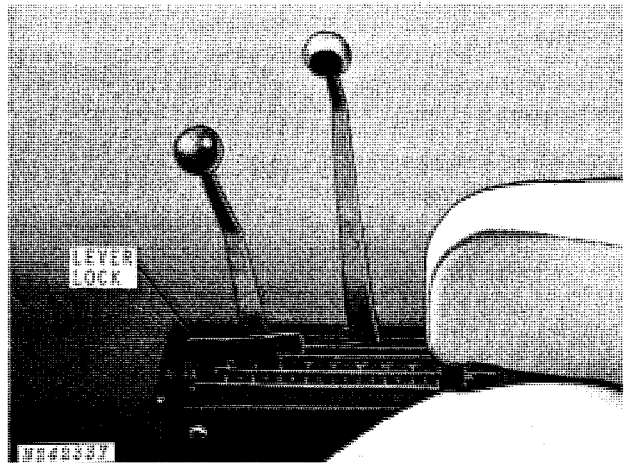


Squeeze the clip together slightly and insert it in the quadrant slot just behind the float lockout stop. Raise the stop slightly and slide the clip forward into position, then push the stop down to lock the clip in place.

Push the lever forward into the lever lock to operate the hydraulic motor.

To remove the clip, raise the float lockout stop first, then slide the clip rearward and remove it from the stop.

4020 Tractors Serial No. 201,000 and up, 4320, 4520, 4620, and 6030 Tractors.

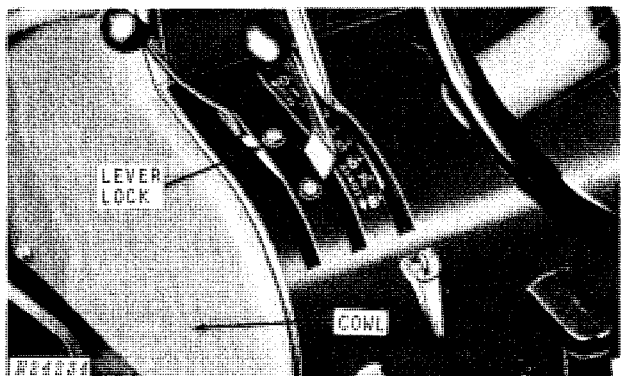


Insert front hook of clip into hole in console, then push rear tab down into front of slot in console.

Push lever forward into lever lock to operate motor.

To remove clip, pull tab up and out of slot in console, then unhook from hole in console.

4020 Tractors below Serial No. 201,000, and 5020 Tractors



Remove tractor cowl and install lever lock as shown. Replace cowl.

Push lever forward past the lever lock to hold it in the operating position. Pull lever to the left and toward the rear past the lever lock to stop the hydraulic motor.

To remove clip, remove tractor cowl and unbolt clip. Replace cowl.

PREPARING THE TRACTOR—Continued

Relocating Warning Light

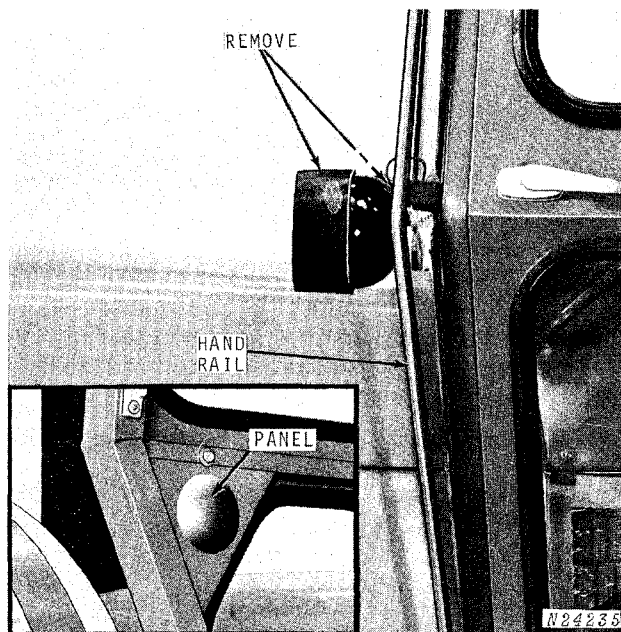
CAUTION: Flashing warning lights must be visible from the front and rear of the tractor at all times. When flashing warning lights are fender mounted, the sprayer tanks block the view from the front. Extension brackets are available to relocate the warning lights higher so they are visible from all directions.

Refer to Attachments, Page 17, for instructions for remounting the flashing warning lights.

Removing Headlights

Fender mounted or cab mounted headlights are blocked by the sprayer tanks when mounted. Parts and wiring are available to remount the lights in front of the tanks.

Refer to Attachments, Page 18, for instructions on remounting the headlights.



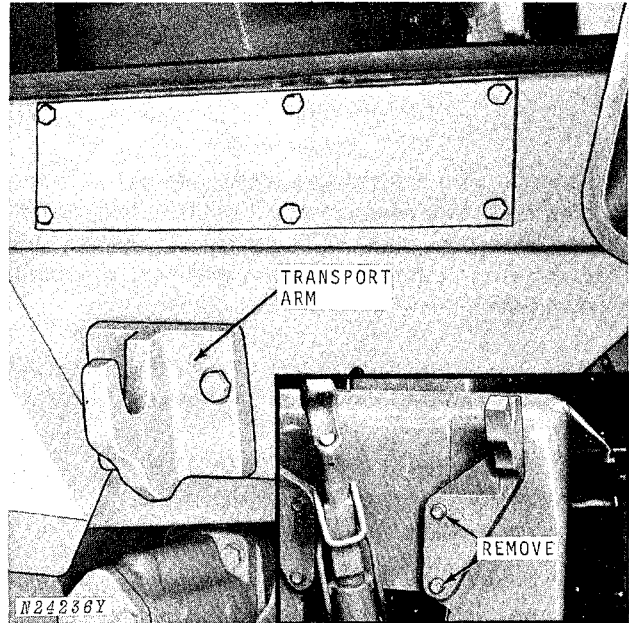
Remove headlights from cab or fenders. The panel behind the headlight in the Hinson Roll-Gard Cab must be removed to gain access to the headlight wires. See inset.

Remove cab handrail if necessary for tank clearance.

NOTE: It may be necessary to remove terminal housings on headlight wires when headlights are remounted. To remove housings, squeeze terminals together gently with needle nose pliers and pull off housing. AFTER headlights have been remounted, snap housings back over terminals. (See page 18).

Removing Right-Hand Remote Cylinder Transport Arm and Rear PTO Shield

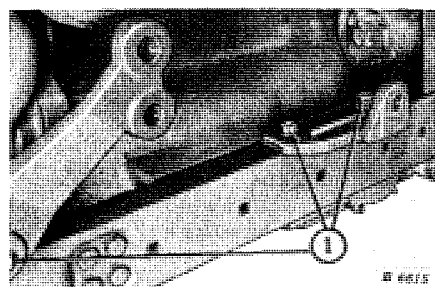
NOTE: Does not apply to 5020 or 6030 Tractor, or front mast-mounted controls.



Remove the right-hand remote cylinder transport arm and store. Keep bolts for later use.

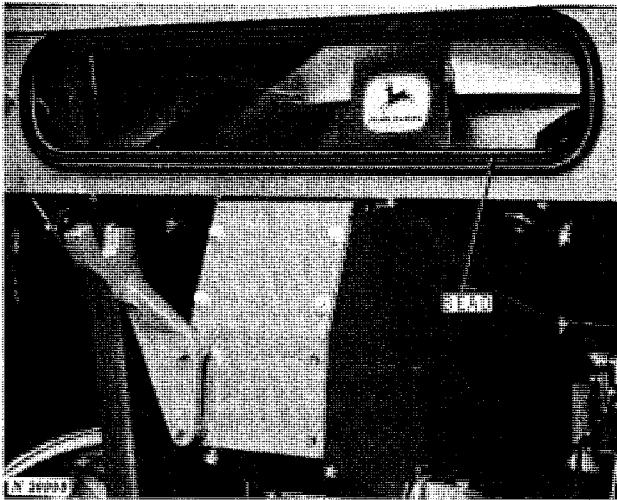
If PTO pump is used, remove rear PTO shield and store.

Removing Front Rockshaft



1. If tractor is equipped with front rockshaft, remove rockshaft and rear bracket.

Removing Lower Rear Window from Roll-Gard Cab (Stolper)

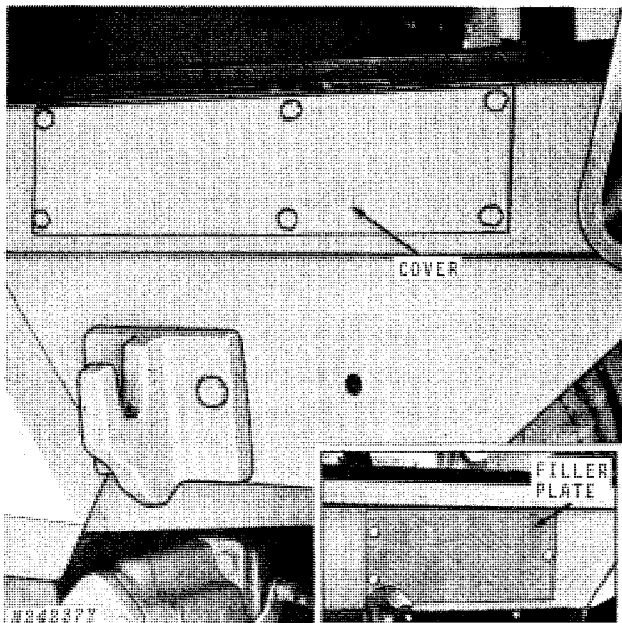


The lower rear cab window must be removed to provide an accessible location for the sprayer controls. Remove the window seal bead with a screw driver or bead tool.

Using care, remove the window glass. Do not remove the seal.

Store the glass for installation at end of spraying season.

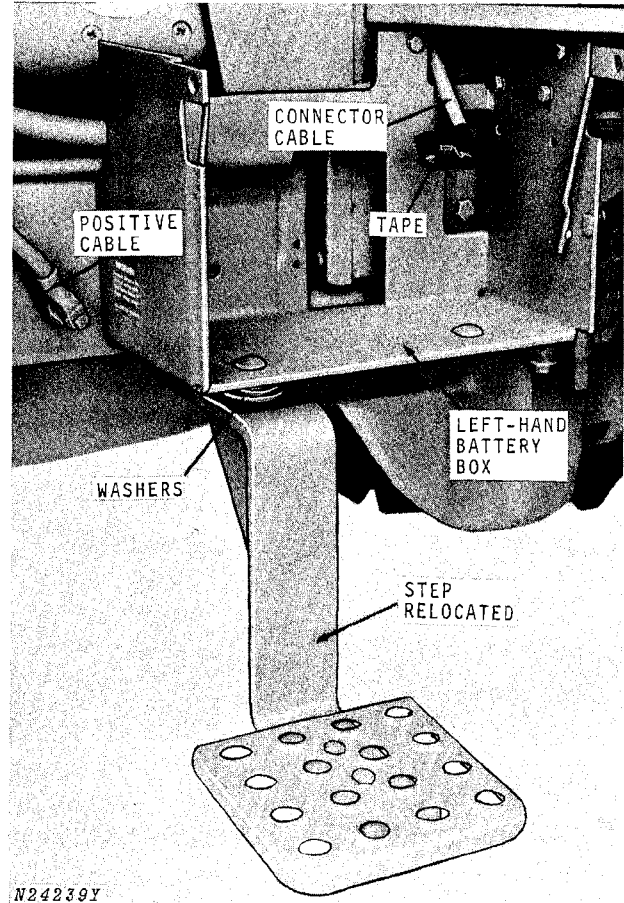
Removing Cover from Sound-Gard Body or Roll-Gard Cab (Hinson)



Remove cover from cutout in cab rear panel. Store the cover for installation at end of spraying season.

Relocating Step On 4230, 4430, and 4630 Tractors

NOTE: Not required on above tractors less Roll-Gard, or with two-post Roll-Gard.



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Diesel Tractor Illustrated

Remove battery box cover and side, then disconnect battery cables.

IMPORTANT: Tape connector cable on diesel tractor to prevent shorting right-hand battery to ground.

Remove tractor middle step and brace.

Relocate step as shown, using washers under battery box to level step. Attach inner end of step to hole in tractor left-hand main frame.

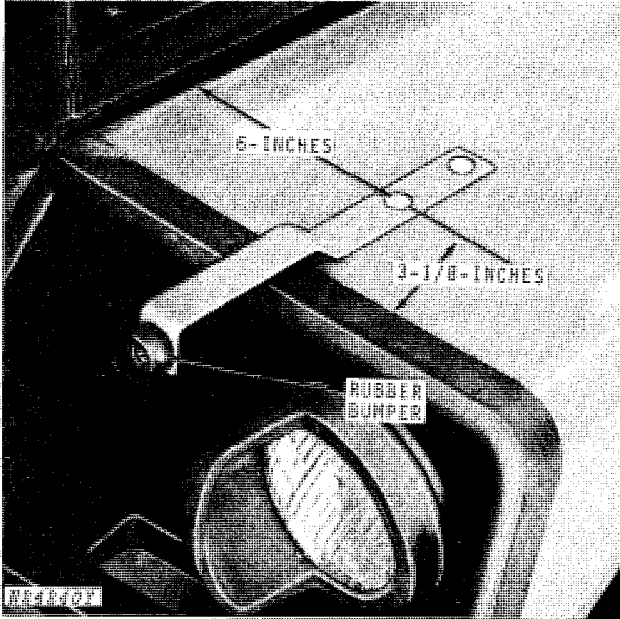
CAUTION: Tighten step mounting bolts securely.

Install battery.

Removing Door Stop Bar (Sound-Gard Body)

Remove cotter key from pin holding door stop to body, remove pin, and slide stop roller out of stop. Store parts in a convenient location for reinstallation when sprayer is removed from tractor.

Installing Door Stop on Fender



Using the door stop bracket as a template, locate bracket so that front hole is 6-inches from window molding and 3-1/8-inches from front edge of fender molding.

Drill two 5/16-inch holes through fender. Install stop with 1/4 x 1/2-inch cap screws and position so door contacts rubber bumper just before striking fender molding.

SPRAYER CONTROLS

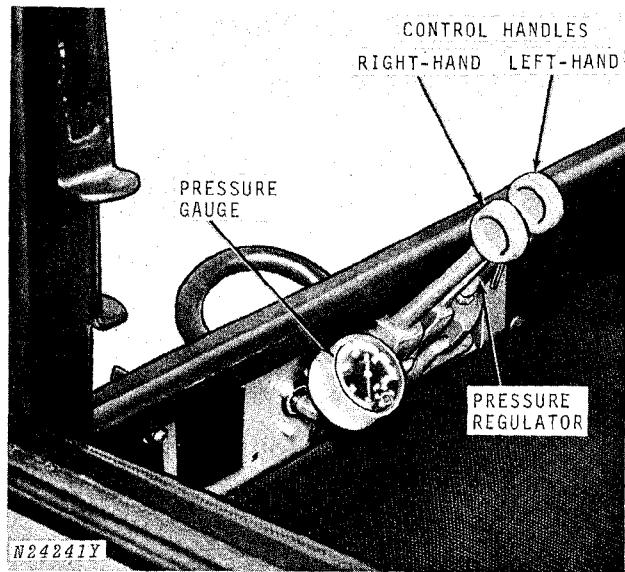
NOTE: Refer to the Assembly section of this manual for instructions for mounting the sprayer on the tractor.

Pump Drive

To operate the hydraulic motor driven pumps, engage the remote hydraulic control lever. See page 3.

To operate the PTO driven pumps, engage the tractor PTO. The PTO speed must be maintained at rated RPM (540 or 1,000) for proper pump operation.

Solution Controls



Rear-Mounted Dual Section Control Illustrated

Pull right-hand handle down, leave left-hand handle up, to operate right spray boom only.

Pull left-hand handle down, leave right-hand handle up, to operate left spray boom only.

Pull both handles down to operate entire boom.

NOTE: Lever designation is reversed for front-mounted control. If single section control (front-mounted only) is used, pulling lever down operates the entire boom.

Pressure

The pressure gauge shows the operating pressure.

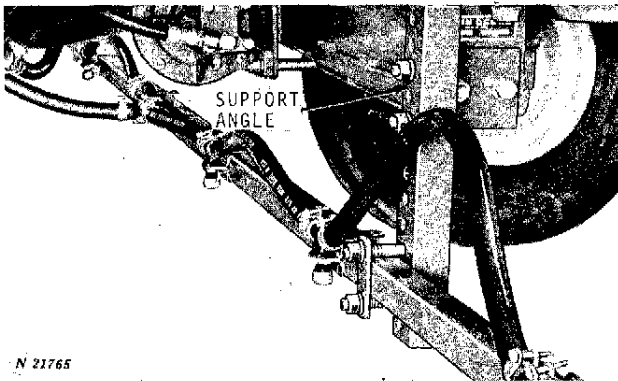
Regulate the operating pressure by turning the pressure regulator handle clockwise to increase the pressure, counterclockwise to decrease the pressure.

The PTO driven centrifugal pumps will operate at approximately 25 psi (JD Pump) or 18 psi (ACE Pump) minimum pressure, at rated RPM, when equipped with standard components supplied with the sprayer. To operate at lower pressures, a restriction must be introduced into the pressure line from the pump to the control valve.

A restrictor washer is furnished with the sprayer. Install this washer in the pressure line coupling at the control valve, to reduce pressure below the minimum rated pressure. Enlarge the hole in the washer to increase pressure as desired.

An alternate method of reducing pressure is to install a gate valve (not furnished) in the pressure line, using the valve to adjust the pressure to any value desired up to the minimum rated pressure.

ADJUSTING BOOMS



N 21765

The spraying height of the belly-mounted boom is adjustable from 13 to 24 inches. To obtain the desired spraying height, locate each boom support angle on the frame or change the position of the boom on the support angle.

The rear-mounted boom can be raised and lowered with the three point-hitch. Refer to Tractor manual for instructions on converting Category 3 hitch to Category 2 use.

DETERMINING AND ADJUSTING RATE OF APPLICATION

Manufacturers of chemicals recommend a definite amount of active ingredient of the particular chemical being used to be applied per acre. However, the chemical must be diluted for proper usage and easy handling.

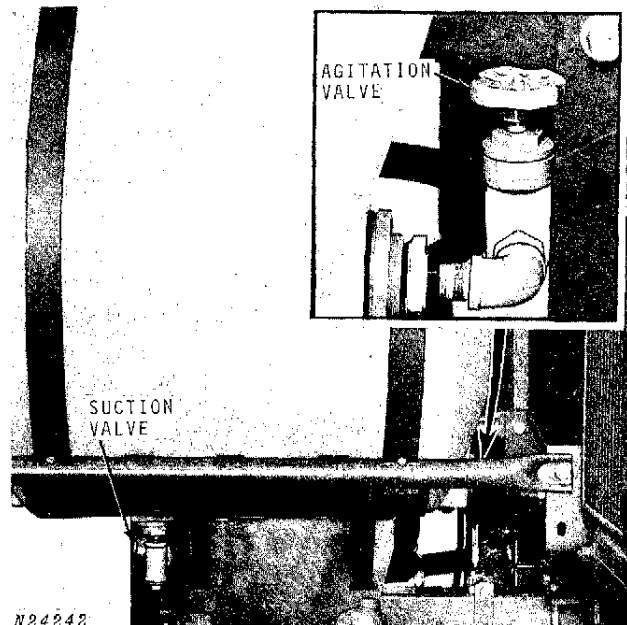
Follow the chemical manufacturers instructions for mixing the spray for the rate of application. See pages 10 thru 13.

FILLING THE TANKS

CAUTION: Read carefully the directions printed on the chemical manufacturers' labels before handling chemicals.

Instructions on the chemical manufacturer's container label, regarding mixing proportions, should be read and strictly followed. The concentrate should not be poured into the empty tank; fill the tank about one-half full with clean, clear water, add the chemical concentrate, and then complete filling the tank with water.

Keep spray material from skin. If spray material comes in contact with the body, wash off immediately with clean water and detergent.



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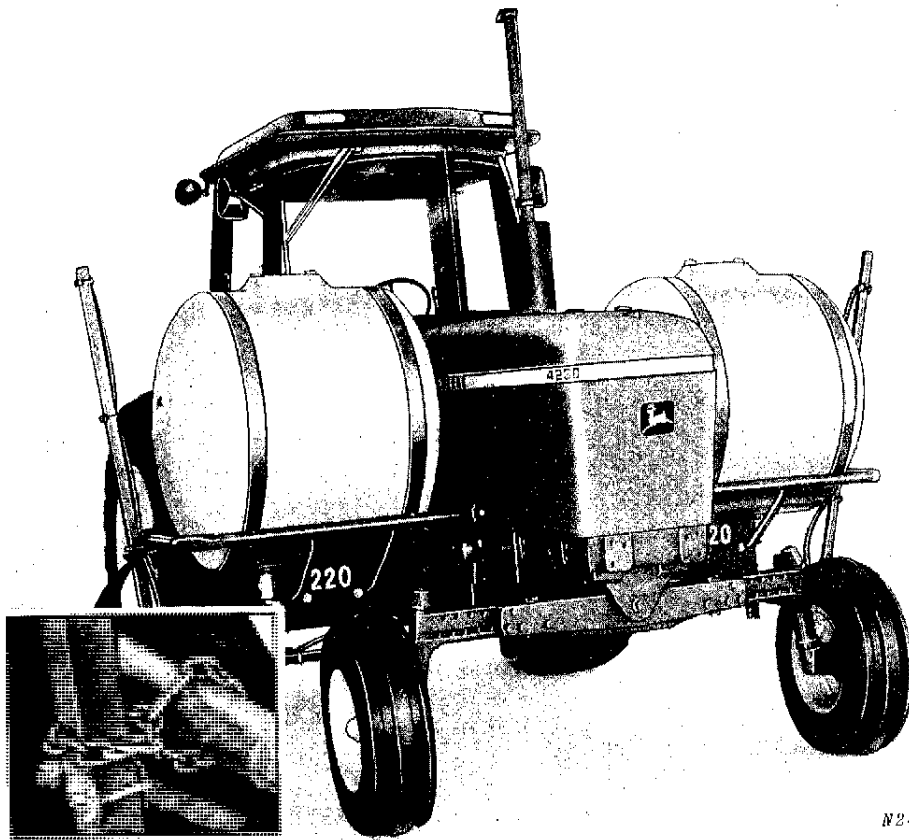
Open shut-off valves (agitation and suction) on both tanks to fill them simultaneously. Open lids and fill slowly on one side, adding chemical while filling. You may fill tanks separately by closing shut-off valves. If so, be sure to open both valves fully when tanks are full.

Close the lids and operate the pump to mix the chemicals thoroughly before operating spray booms.

NOTE: If tanks empty unevenly, turn down suction valve under tank with lowest level. Adjust in small increments until tanks empty evenly. Adjust agitation valve simultaneously to maintain desired amount of agitation.

To empty tanks COMPLETELY, it may be necessary to shut off the agitation valves.

TRANSPORTING

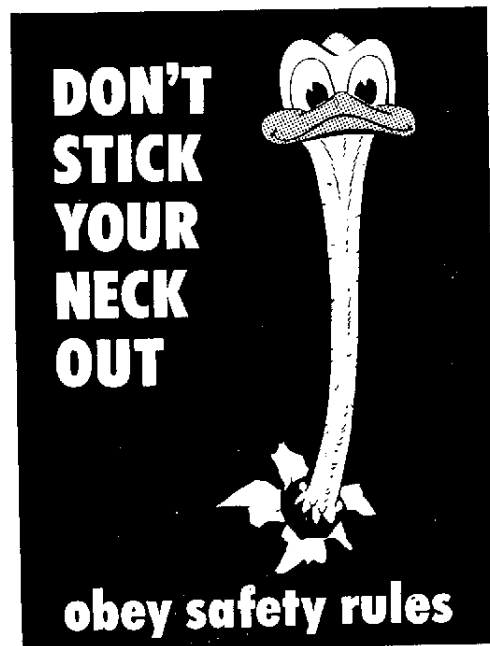


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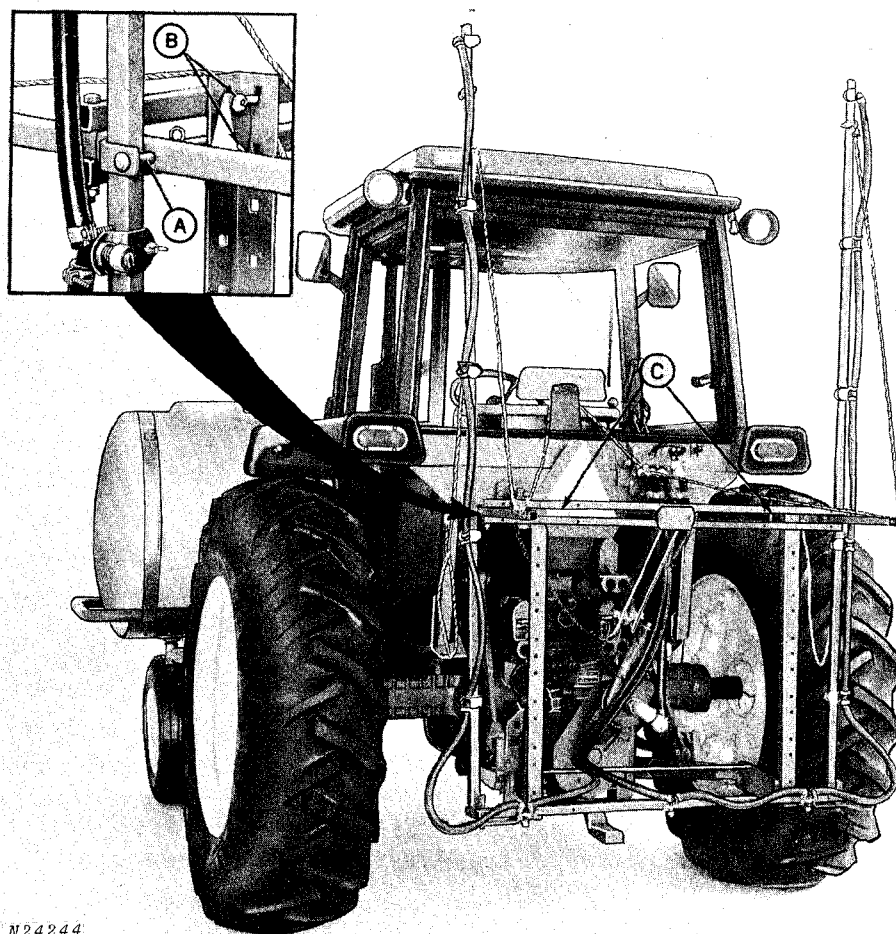
Belly-Mounted Boom in Transport Position

CAUTION: When transporting the sprayer on a road or highway at night or during the day, use accessory lights and devices for adequate warning to the operators of other vehicles. In this regard, check local government regulations. Various safety lights and devices are available from your John Deere dealer. See pages 17 and 18.

When transporting sprayer with belly-mounted boom, raise the outer boom sections straight up to the tank support frame and secure with boom transport chain. See illustration above.



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Rear-Mounted Boom in Transport Position

When transporting sprayer with rear-mounted boom, raise the outer boom sections straight up to the end of the boom frame and place them in the transport brackets. Secure the booms in place with pins at point "A."

When transporting short distances, or where the overhead clearance is low, use the 5-foot transport rope to swing rear booms back and up, then lash together with transport rope.

To position the booms straight back, remove the two thumb nuts at "B," pivot boom ends in and secure at "C" with drilled pins. Swing booms in and tie together with transport rope.

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