



# 210 AND 220 TRACTOR MOUNTED SPRAYERS



JOHN DEERE

## OPERATORS MANUAL 210 AND 220 TRACTOR MOUNTED SPRAYERS

OMN159491 I8 English

**OMN159491 I8**

LITHO IN THE U.S.A.  
ENGLISH





## To the Purchaser

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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 68. 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.

Because John Deere sells its products world-wide, U.S. units of measure are shown with their respective Metric equivalents throughout this operator's manual. These equivalents are the SI (International System) Units of Measure.



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# Safety Suggestions

**!** Make your farm a safer place to live and work by observing the safety suggestions below and insisting that they be followed by those working for you or with you.

## General

Only one person - the operator - should be permitted on the tractor platform when the tractor and sprayer are in operation.

Be careful when operating on hillsides because the tractor may tip sideways if it strikes a hole, ditch or other irregularity.

Refuel the tractor only when the engine has been shut off. Do not smoke when working around flammable fuel, especially when refueling the tractor.

Escaping hydraulic oil under pressure can have sufficient force to penetrate the skin, causing serious personal injury. Before disconnecting lines, be sure to relieve all pressure. Before applying pressure to the system, be sure all connections are tight and that lines, pipes and hoses are not damaged.

Oil escaping from a very small hole can be almost invisible. Use a piece of cardboard or wood, rather than hands, to search for suspected leaks.

If injured by escaping hydraulic fluid see a doctor at once. Serious infection or reaction can develop if proper medical treatment is not administered immediately.

Shut off tractor engine and remove switch key before servicing sprayer.

Prolonged exposure to loud noise can cause impairment or loss of hearing.

Wearing protective devices (such as ear muffs or plugs) can effectively protect against loud noises.

When you are exposed to loud noise which is objectionable or uncomfortable, it is recommended you wear a suitable hearing protective device.

## Safety Equipment

When mixing, calibrating or working around pesticides, wear protective clothing that covers the body. Be sure to wear a cap, gloves, and adequate footwear. Also wear goggles and a respirator. Have clean water and detergent ready to wash any exposed parts of the body.

## Preparing for Operation

Select an area where you can safely fill, flush, calibrate, and decontaminate the sprayer without pesticides drifting or running off to contaminate people, animals, vegetation, or a water supply. Select an area where it will be impossible for children to come into contact with pesticides.

Use a sturdy ladder or step when filling tanks.

If spray material comes in contact with the body, wash off IMMEDIATELY with clean water and detergent.

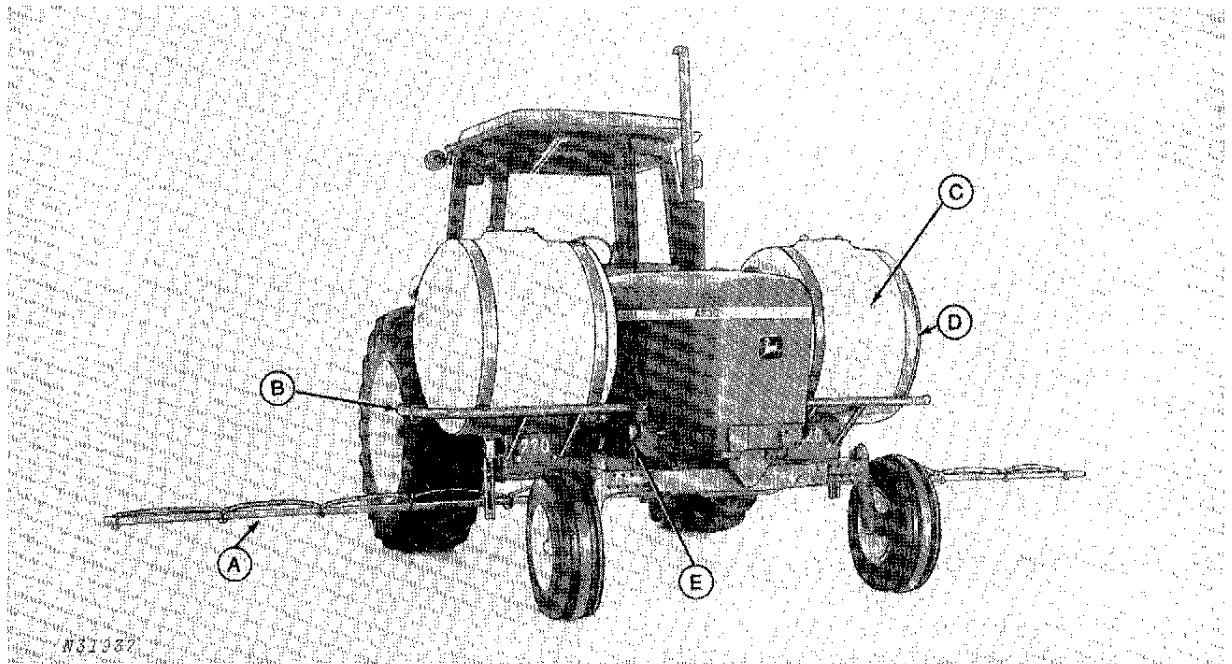
## Operation

In event of nozzle clogging or other system malfunctions, shut down sprayer and pump, and release pressure from system.

Never place nozzle tips or other parts to lips to blow out contamination. Have spare tips available for replacement.

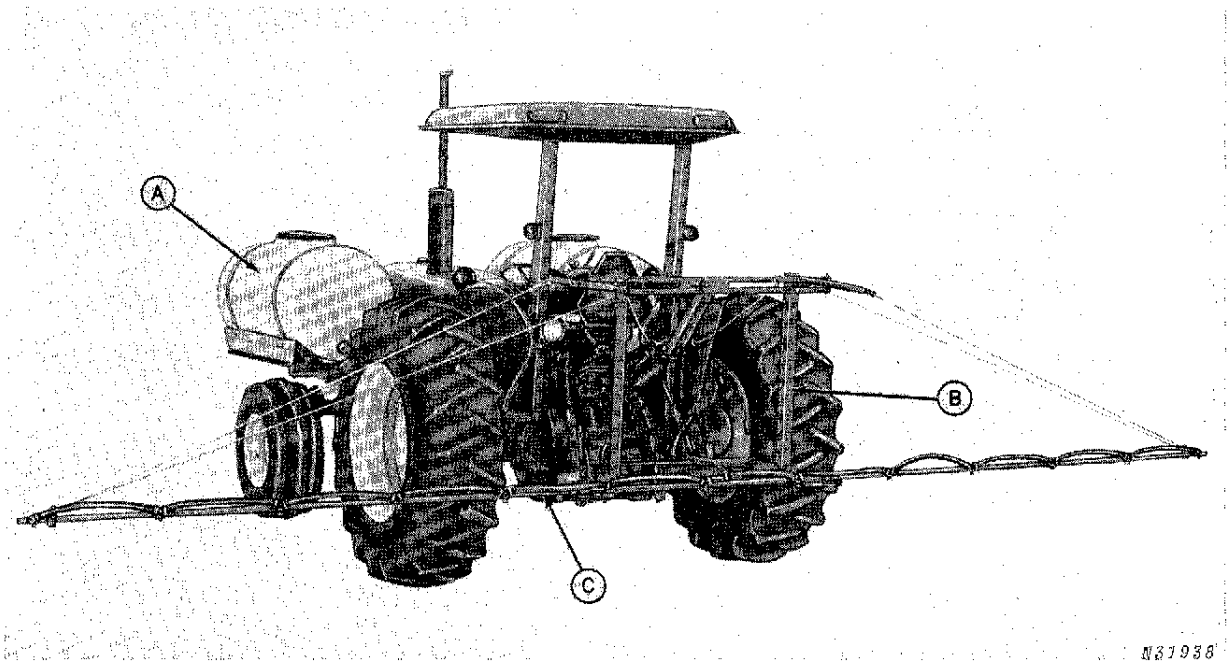
To minimize spray drift hazards:

- Use large nozzle tips operated at lower pressures.
- Do not operate sprayer at pressures over 50 psi (3.4 bar) (3.5 k/cm<sup>2</sup>)
- Do not make spray applications when winds exceed 10 mph (16.1 km/h).



A—Belly Boom    B—Tank Frame    C—200 Gallon (757 l) Tank    D—Reflective Tape    E—Tractor Headlight-Relocated

*John Deere 220 Sprayer with Belly Boom*



A—100-Gallon (378 l) Tank    B—Boom Frame    C—Rear Boom

*John Deere 210 Sprayer with Rear-Mounted Rope Supported Boom on 2640 Tractor*



# Operation

## PREPARING THE TRACTOR

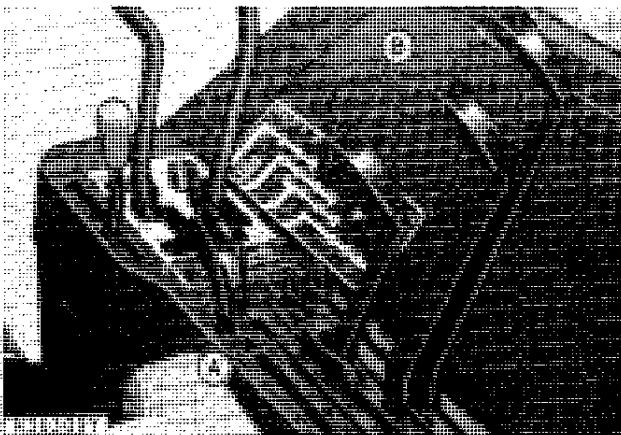
Refer to your tractor operator's manual for information regarding recommended adjustments, tire inflation pressures, use of the hydraulic system and PTO, and any other information pertinent to tractor and implement use.

Read the Safety Suggestions in your tractor operator's manual and on page 2 of this manual.

### Remote Cylinder Lever Lock

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

**4230, 4430, 4630, 4040, 4240, 4440, 4640, and 4840 Tractors**



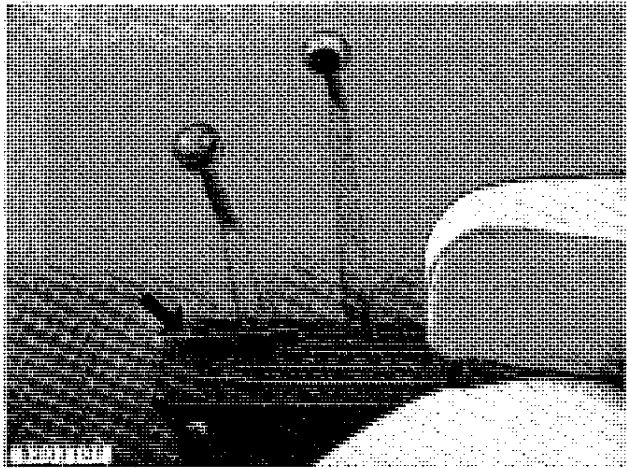
**A—Lever Lock**      **B—Lever Locked in Operating Position**

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 (A) 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, and 4620 Tractors.**

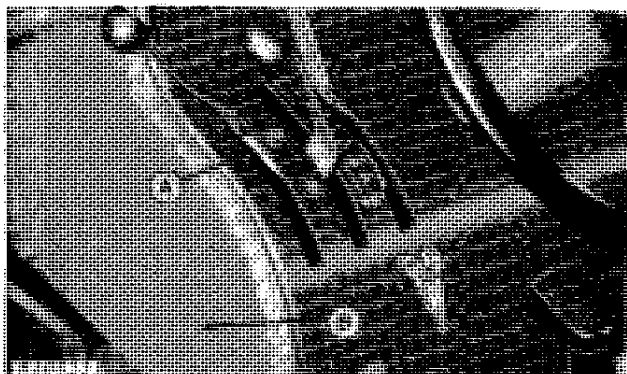


Insert front hook of clip into hole in console, then push rear tab down into front of slot in console.

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**



**A—Lever Lock**      **B—Cowl**

Remove tractor cowl (B) and install lever lock (A) 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.

## Relocating Warning Light

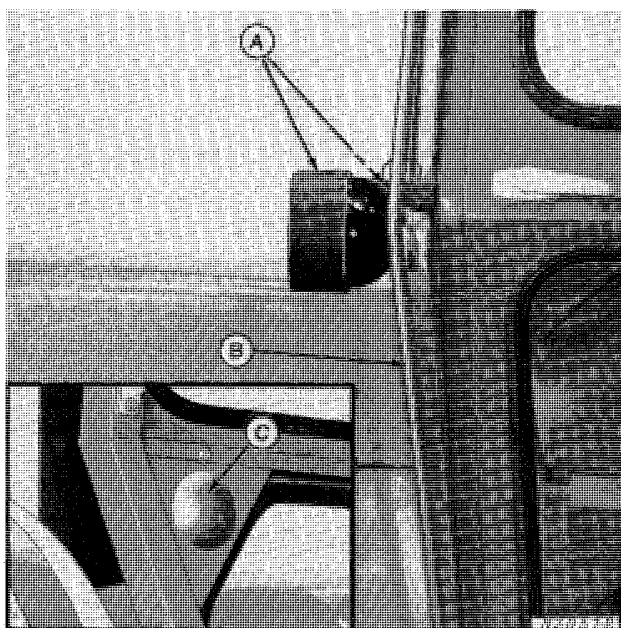
**⚠ CAUTION:** Flashing warning lights must be visible from the front and rear of the tractor at all times. When flashing warning lights are fender mounted, the sprayer tanks block the view from the front. Extension brackets are available to relocate the warning lights higher so they are visible from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

Refer to Attachments, page 20, 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 20, for instructions on remounting the headlights.



A—Headlight  
B—Hand Rail

C—Panel

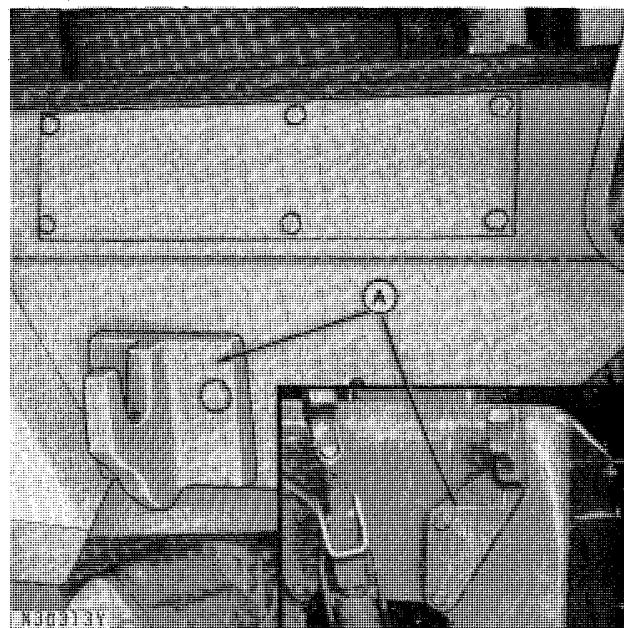
Remove headlights (A) from cab or fenders. The panel (C) behind the headlight in the Hinson Roll-Gard Cab must be removed to gain access to the headlight wires. See inset.

Remove cab handrail (B) if necessary for tank clearance.

*NOTE:* It may be necessary to remove terminal housings on headlight wires when headlights are re-mounted. 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.

## Removing Right-Hand Remote Cylinder Transport Arm

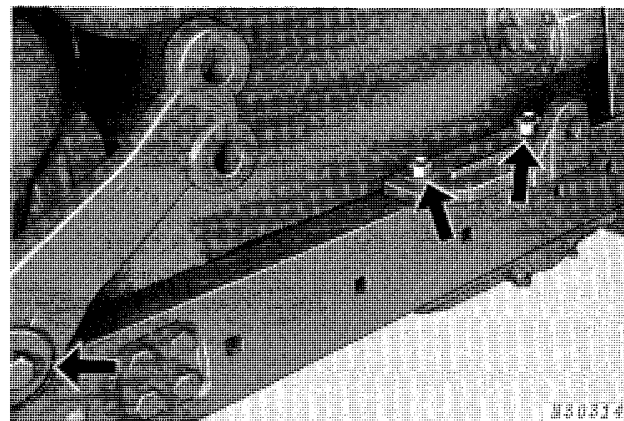
*NOTE:* Does not apply to front mast-mounted controls, or 5020 or 6030 Tractors.



A—Transport Arm

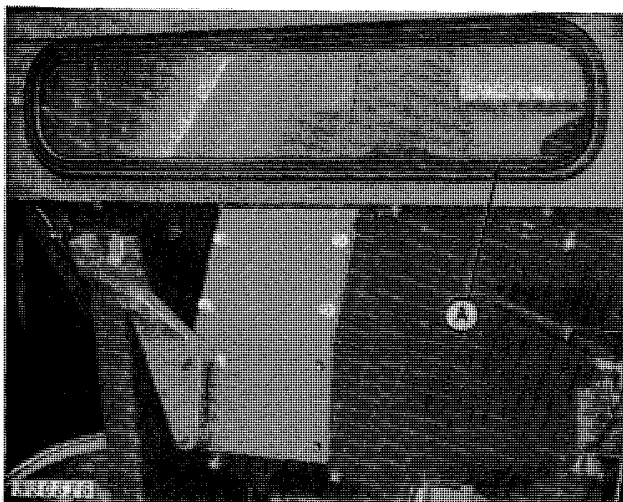
Remove the right-hand remote cylinder transport arm (A) and store. Keep bolts for later use.

## Removing Front Rockshaft



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

**PREPARING THE TRACTOR—Continued  
Removing Lower Rear Window from  
Roll-Gard Cab (Stolper)**



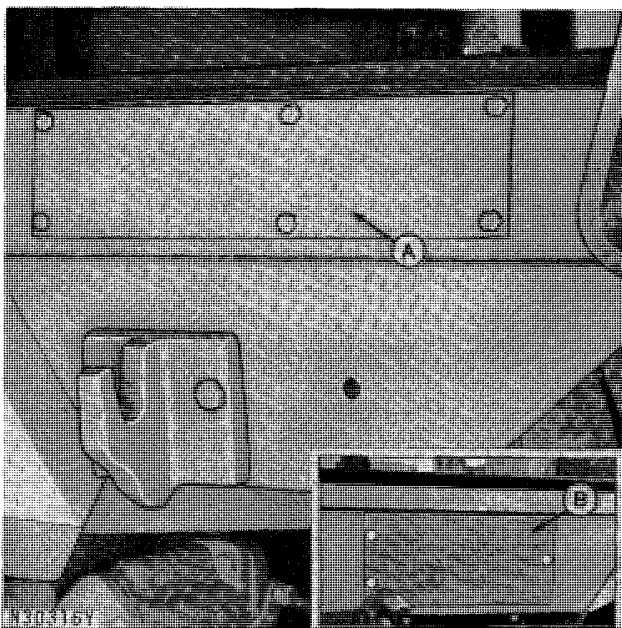
**A—Bead**

The lower rear cab window must be removed to provide an accessible location for the sprayer controls. Remove the window seal bead (A) 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)**



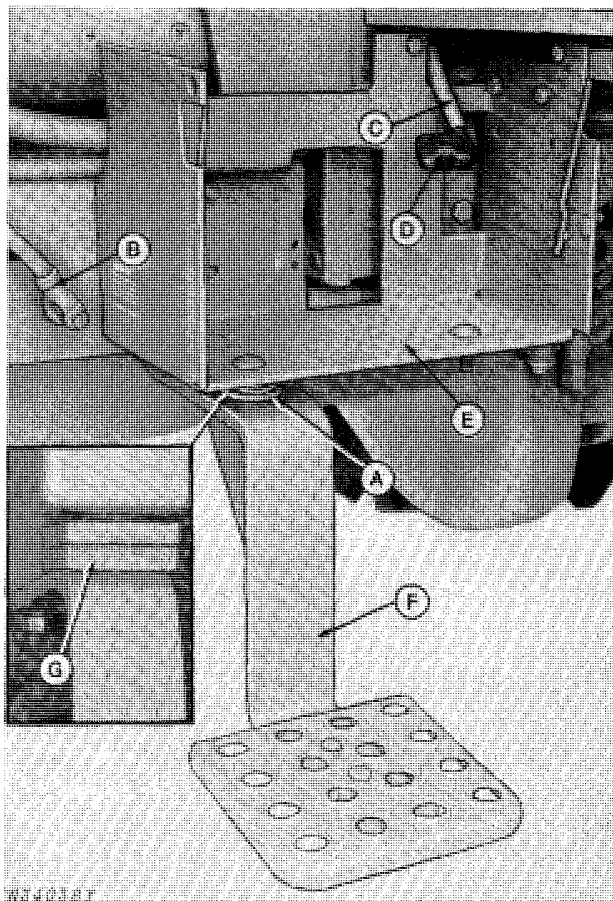
**A—Cover**

**B—Filler Plate**

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

**Relocating Step on 4230, 4430, 4630, 4040,  
4240, 4440, 4640, and 4840 Tractors.**

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



**A—Washers  
B—Positive Cable  
C—Connector Cable**

**D—Tape  
E—Battery Box - L.H.  
F—Step-Relocated  
G—Spacers**

*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 (A) to level step on 4230, 4430, and 4630 tractors and square spacers (G) on 4040, 4240, 4440, 4640, and 4840 tractors. 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.

## SPRAYER CONTROLS

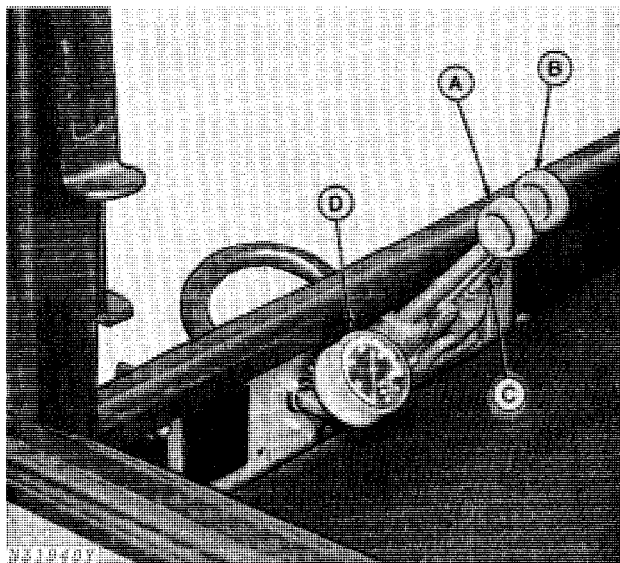
**NOTE:** Refer to the Assembly section of this manual for instructions for mounting the sprayer on the tractor.

### Pump Drive

To operate the hydraulic motor driven pumps, engage the remote hydraulic control lever. (See page 4.)

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



A—Control Handle, R.H.  
B—Control Handle, L.H.

C—Pressure Regulator  
D—Pressure Gauge

*Rear-Mounted Dual Section Control Illustrated*

### 220 Sprayer—

Pull right-hand handle (A) down, leave left-hand handle (B) 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.

### 210 Sprayer—

The rear mounted controls have two levers, one valve must be plugged for single valve operation. The front mounted controls are of single valve construction.

Pulling the lever opens the valve, allowing pressurized solution to flow to the nozzles.

### Pressure

The pressure gauge (D) shows the operating pressure.

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

The PTO driven centrifugal pumps will operate at approximately 25 psi (1.7 bar) (1.7 kg/cm<sup>2</sup>) minimum pressure, at rated RPM, when equipped with standard components supplied with the sprayer. To operate at lower pressures, a restriction must be installed 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.

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