

**787**  
**Air Seeding**  
**System**  
**(Serial No.**  
**NO0787X000516-)**



**JOHN DEERE**

**OPERATORS MANUAL**  
787 Air Seeding System (Serial No.  
NO0787X000516-)

OMN200424 Issue J3 English

**John Deere Des Moines Works**

**OMN200424 Issue J3**

(Mark old manual OMN200371 I2 for  
machines up to Serial No. NO0787X000515)

LITHO IN U.S.A.  
ENGLISH



# Introduction

READ THIS MANUAL carefully to learn how to operate and service your machine correctly. Failure to do so could result in personal injury or equipment damage.

THIS MANUAL SHOULD BE CONSIDERED a permanent part of your machine and should remain with the machine when you sell it.

MEASUREMENTS in this manual are metric with the customary U.S. measurement following.

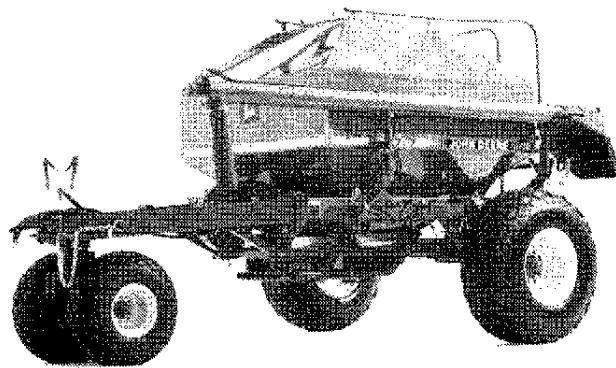
RIGHT-HAND AND LEFT-HAND sides are determined by facing in the direction of forward travel.

WRITE PRODUCT IDENTIFICATION NUMBERS in the Specifications section. Accurately record all the numbers to help in tracing the machine should it be stolen. Your dealer also needs these numbers when you order parts. If this manual is kept on the machine, also file the identification numbers in a secure place off the machine.

WARRANTY is provided as part of John Deere's support program for customers who operate and maintain their equipment as described in this manual. The warranty is explained on the warranty certificate which you should have received from your dealer.

This warranty provides you the assurance that John Deere will back its products where defects appear within the warranty period. In some circumstances, John Deere also provides field improvements, often without charge to the customer, even if the product is out of warranty. Should the equipment be abused, or modified to change its performance beyond the original factory specifications, the warranty will become void and field improvements may be denied. Setting fuel delivery above specifications or otherwise overpowering machines will result in such action.

THE TIRE MANUFACTURER'S warranty supplied with your machine may not apply outside the U.S.



*787 Tow-Behind Seed Cart*

N43821  
-UN-28OCT91

# Contents

	Page		Page
<b>Safety</b> .....	05-1	Adjusting Plenum Dampers and Manifold Valves (Double Shoot) .....	20-21
<b>Safety Signs</b> .....	10-1	Setting Meter Rate .....	20-22
<b>Preparing the Tractor</b>		Product Listing .....	20-23
Determining Tractor Requirements .....	15-1	Rate Charts	
Tractor Hydraulic System Requirements .....	15-2	Fine Roller .....	20-24
Securing 3-Point Hitch .....	15-3	Coarse Roller .....	20-34
Adjusting Metering Valves .....	15-3	Calculating Equivalent Rate (Air Velocity) .....	20-44
Install Lever Lock Clip .....	15-3	Using Air Velocity Chart .....	20-45
Positioning Drawbar .....	15-4	Air Velocity Chart	
Convenience Outlet—55 and 60 Series Tractors .....	15-5	11-51-0 Fertilizer .....	20-46
Checking Monitor and Switch Unit .....	15-6	46-0-0 Fertilizer .....	20-47
		Wheat .....	20-48
		Canola .....	20-49
		Lentils .....	20-50
		Peas .....	20-51
<b>Preparing the Machine</b>		<b>Preparing and Operating Monitor</b>	
Check Tire Pressure—Air Seeder Cart .....	20-1	Identifying Monitor Switches .....	25-1
Checking Wheel Attaching Hardware and Bearings .....	20-1	Identifying Monitor Displays .....	25-2
Clean Fan Screen .....	20-1	Monitor	
Changing Tillage Equipment .....	20-2	Preparing .....	25-3
Determine Sprocket Set Ratio .....	20-3	Start-Up .....	25-5
Checking Air Dampers and Manifold Valves—Single Shoot .....	20-4	Preparing—Units of Measure .....	25-6
Checking Air Manifolds, Meter Boxes and Rollers .....	20-4	Preparing—Implement Width .....	25-7
Preparing To Operate Auger .....	20-9	Determining Ground Speed Value—Field Calibration .....	25-8
Adjusting Product Divider Blades .....	20-9	Preparing Monitor	
Understanding Meter Settings .....	20-11	Speed Calibration Value .....	25-9
Using Pounds of Seed Per Acre Chart .....	20-13	Confirming Bin Depth Value	
Pounds of Seed Per Acre—Soybeans .....	20-15	Front .....	25-10
Seeds Per Foot of Row—Soybeans .....	20-15	Rear .....	25-10
Pounds of Seed Per Acre For Desired Plants Per Acre—Sunflowers .....	20-16	Calibrating Bin Level Indicators .....	25-11
Adjusting For Seed Germination—Soybeans and Sunflowers .....	20-16	Understanding Air Flow Alarms .....	25-11
Determining Meter Rate Setting .....	20-17	Disabling/Enabling Air Flow Alarms .....	25-12
Confirming Meter Rate Setting .....	20-18	Preparing Monitor	
Measuring Product Density .....	20-19	Single/Double Shoot .....	25-13
Using Front and Rear Tanks .....	20-20	Tow-Between/Tow-Behind .....	25-14
		Adjusting Air Flow Alarm Set	
		Point—Double or Single Shoot	
		Front .....	25-15
		Rear .....	25-15

Continued on next page

*All information, illustrations and specifications in this manual are based on the latest information available at the time of publication. The right is reserved to make changes at any time without notice.*

OMN200424 J3-19-15CCT93

COPYRIGHT® 1993  
DEERE & COMPANY  
Moline, Illinois  
All rights reserved  
A John Deere ILLUSTRATION™ Manual

**<https://www.ebooklibonline.com>**

Hello dear friend!

Thank you very much for reading.

Enter the link into your browser.

The full manual is available for immediate download.

**<https://www.ebooklibonline.com>**

## Contents

	Page		Page
Disabling Alarms . . . . .	25-16	<b>Attaching and Detaching</b>	
Disabling/Enabling		Attaching	
Front Alarm . . . . .	25-16	Machine to Tractor (Seeding Tool or	
Rear Alarm . . . . .	25-17	Tow Between Cart) . . . . .	30-1
Setting Fan Speed Alarm Threshold		Air Seeder to Seeding Tool (Tow	
High . . . . .	25-18	Behind Cart) . . . . .	30-4
Low . . . . .	25-19	Hand Signals . . . . .	30-6
Monitoring Product Application Rates . . . . .	25-20	Attaching Seeding Tool to Air Seeder	
Disabling/Enabling		(Tow Between Cart) . . . . .	30-7
Front Application Rate (Delivery) Alarm . . . . .	25-21	Connecting Remote Seeder Switch	
Programming Monitor For Application		Wiring—Tow Between Cart . . . . .	30-9
Rate Display		Connecting Disk Lowering Solenoid	
Front Product Type . . . . .	25-22	Wiring (730 Air Disk Drill) . . . . .	30-10
Front Product Density . . . . .	25-22	Raising and Lowering Parking	
Adjusting Rate Display—Front . . . . .	25-23	Stands—730 Air Disk Drill . . . . .	30-11
Front Roller Type . . . . .	25-23	Opening and Closing Transport Lock-Up	
Front Number of Runs . . . . .	25-24	Valve—730 Air Disk Drill . . . . .	30-11
Calculating Rate Display Setting . . . . .	25-24	Checking Depth Control Operation . . . . .	30-12
Disabling/Enabling Rear Application Rate		Checking Fan Operation . . . . .	30-12
(Delivery) Alarm . . . . .	25-25	Setting Fold/Marker Selector Valve—730	
Programming Monitor for Application Rate		Air Disk Drill (if Equipped) . . . . .	30-13
Display		Checking Wing Fold Operation . . . . .	30-14
Rear Product Type . . . . .	25-26	Detaching . . . . .	30-15
Rear Product Density . . . . .	25-26	<b>Transporting</b>	
Adjusting Rate Display—Rear . . . . .	25-27	Attach Safety Chain to Tractor . . . . .	35-1
Rear Roller Type . . . . .	25-27	Using Warning Lights . . . . .	35-1
Rear Number of Runs . . . . .	25-28	Keep Riders Off Machine . . . . .	35-1
Reprogramming Monitor to Display Meter		Follow Safe Transport Procedures . . . . .	35-2
Shaft RPM . . . . .	25-28	Transport Auger . . . . .	35-3
Monitor Seed Cart Activity . . . . .	25-29	Positioning Hitch Jack for Transport	
Displaying and Clearing Accumulated		Tow Between Cart . . . . .	35-3
Area and Sub-Area . . . . .	25-30	Tow Behind Cart . . . . .	35-3
Understanding Air Flow Readings . . . . .	25-31	Raising and Lowering Parking	
Understanding Alarms and Error Codes . . . . .	25-32	Stands—730 Air Disk Drill . . . . .	35-4
Receiving Simultaneous Alarms and		Opening and Closing Transport Lock-Up	
Recalling Past Alarms . . . . .	25-33	Valve—730 Air Disk Drill . . . . .	35-4
Error Codes		Locking Up Depth Control . . . . .	35-4
Communication . . . . .	25-34	<b>Operating the Machine</b>	
Sensor Failure . . . . .	25-34	Checking Metering	
Monitor . . . . .	25-35	Stationary Test . . . . .	40-2
Remote Module . . . . .	25-35	Field Test . . . . .	40-6
Digital Display Codes . . . . .	25-36	Tank Capacity By Weight—100% Full . . . . .	40-7
Confirming Bin Depth Value		Filling Seed Tanks . . . . .	40-7
		Emptying Seed Tanks . . . . .	40-9
		Setting Fold/Marker Selector Valve—730	
		Air Disk Drill (If Equipped) . . . . .	40-12
		Operating Guidelines . . . . .	40-13
		Setting Selector Valve . . . . .	40-14

Continued on next page

## Contents

	Page		Page
Preparing to Operate Machine In Field . . . . .	40-14		
Determining Fan Speed . . . . .	40-14		
Setting Fan Speed . . . . .	40-15		
Operating Seeder Switches . . . . .	40-16		
Remote Seeder Switch . . . . .	40-16		
Operating In the Field . . . . .	40-17		
<b>Lubrication and Maintenance . . . . .</b>	<b>45-1</b>		
<b>Troubleshooting . . . . .</b>	<b>50-1</b>		
<b>Service</b>			
Using Safe Service Procedures . . . . .	55-1		
Stay Clear of Air Hoses . . . . .	55-1		
Keep Shields In Place . . . . .	55-1		
Keep Service Area Clean . . . . .	55-2		
Tightening Hardware . . . . .	55-2		
Unified Inch Bolt and Cap Screw Torque Values . . . . .	55-3		
Metric Bolt and Cap Screw Torque Values . . . . .	55-4		
Checking Wheel Attaching Hardware and Bearings . . . . .	55-5		
Service Tires Safely . . . . .	55-5		
Common Circuit Test . . . . .	55-6		
Monitor and Switch Unit Wiring Diagram . . . . .	55-7		
Diagnose Monitor System Power Problems . . . . .	55-8		
Wire Color Code . . . . .	55-11		
Wiring Harnesses			
Tractor . . . . .	55-12		
Seeding Tool Extension (Tow-Behind Only) . . . . .	55-13		
Hitch (Early Version) . . . . .	55-14		
Hitch (Later Version) . . . . .	55-15		
Seeder Frame . . . . .	55-16		
Testing			
Fan RPM Sensor . . . . .	55-17		
Ground Speed/Area Sensor . . . . .	55-18		
Meter Shaft RPM Sensors . . . . .	55-19		
Air Flow Sensors . . . . .	55-20		
Bin Level Sensors . . . . .	55-21		
Main Electric Clutch . . . . .	55-22		
Interdrive Solenoids . . . . .	55-23		
Remote Seeder Switch . . . . .	55-24		
Prevent Hydraulic System Contamination . . . . .	55-25		
Repair Fan/Auger Selector Valve . . . . .	55-26		
		Disassemble, Inspect and Repair	
			55-28
			55-30
			55-32
			55-34
			55-35
			55-36
			<b>60-1</b>
			65-1
			65-2
			65-3
			65-4
			65-4
			<b>70-1</b>

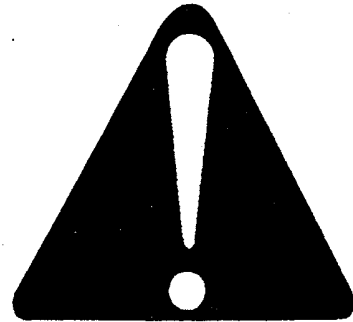


# Safety

## RECOGNIZE SAFETY INFORMATION

This is the safety-alert symbol. When you see this symbol on your machine or in this manual, be alert to the potential for personal injury.

Follow recommended precautions and safe operating practices.



DX,ALERT -19-03MAR93

T81389 -JUN-07DEC88

## UNDERSTAND SIGNAL WORDS

A signal word—DANGER, WARNING, or CAUTION—is used with the safety-alert symbol. DANGER identifies the most serious hazards.

DANGER or WARNING safety signs are located near specific hazards. General precautions are listed on CAUTION safety signs. CAUTION also calls attention to safety messages in this manual.



DX,SIGNAL -19-03MAR93

TS187 -19-30SEP88

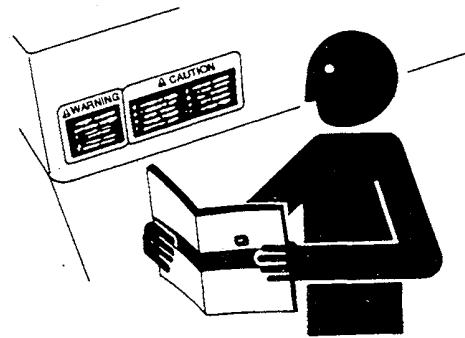
## FOLLOW SAFETY INSTRUCTIONS

Carefully read all safety messages in this manual and on your machine safety signs. Keep safety signs in good condition. Replace missing or damaged safety signs. Be sure new equipment components and repair parts include the current safety signs. Replacement safety signs are available from your John Deere dealer.

Learn how to operate the machine and how to use controls properly. Do not let anyone operate without instruction.

Keep your machine in proper working condition. Unauthorized modifications to the machine may impair the function and/or safety and affect machine life.

If you do not understand any part of this manual and need assistance, contact your John Deere dealer.



DX,READ -19-03MAR93

TS201 -JUN-23AUG88



## OPERATE SAFELY

Clear area around machine before raising or lowering machine or wings.

Stop tractor on level ground when raising or lowering wings.

DO NOT enter tank unless another person is present and hydraulic hoses are disconnected from tractor.

Operate machine from the tractor seat only.

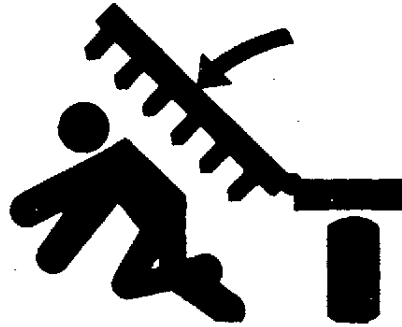
Lock auger in transport position before operating in the field.

Do not operate with wings raised.

Do not operate close to a ditch or creek.

Slow down when turning or traveling over rough ground.

Shut off tractor and shift to "Park" or set brakes when leaving tractor. Remove key when leaving tractor unattended.



N69647 -UN-06OCT88

1N4,777C,A28 -19-18DEC91

## STAY CLEAR OF AIR HOSES

Stay clear of hoses when air seeder fan is running. Seed or fertilizer blowing out at high speed can cause blindness and other personal injuries.

Never attempt to clear blockage from air hoses or seeding tool boots while fan is running.



TS265 -UN-23AUG86

1N4,610STC,A18 -19-14OCT86



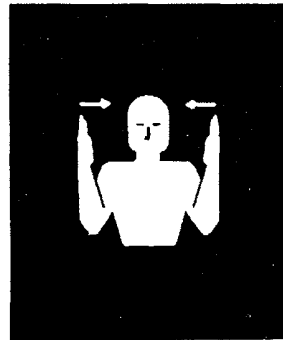
## USE A SIGNAL PERSON

Use a signal person to direct movement of the tractor/seed cart/seeding tool combination, whenever the tractor operator's view is obstructed.

Designate one individual as THE signal person. Always have signal person stand in clear view. Be sure signal person stays a safe distance away from the machine when it is moving.

Prior to starting the tractor, discuss hand signals and what each signal means to avoid misunderstandings and confusion which could result in a serious injury or fatal accident for someone.

Keep all bystanders away whenever the machine is moved.



-UN-11DEC91

N43984

NX,787C,A2 -19-18DEC91

## KEEP SHIELDS IN PLACE

Do not operate air seeder without safety shields in place.

Rotating parts can crush or dismember causing death or personal injury.

Shut off tractor and disconnect hydraulic hose before remove shields for adjustment or service.



-UN-23AUG88  
TS266

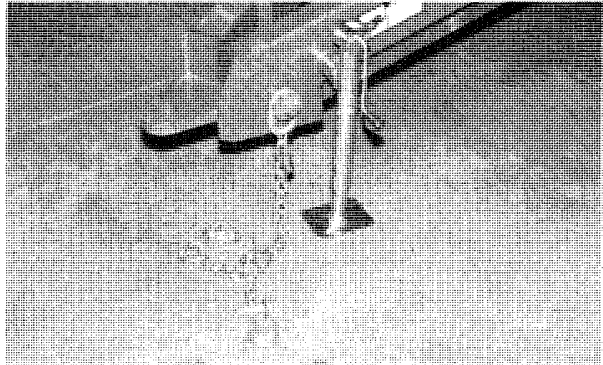
1N4,777C,A32 -19-01FEB89



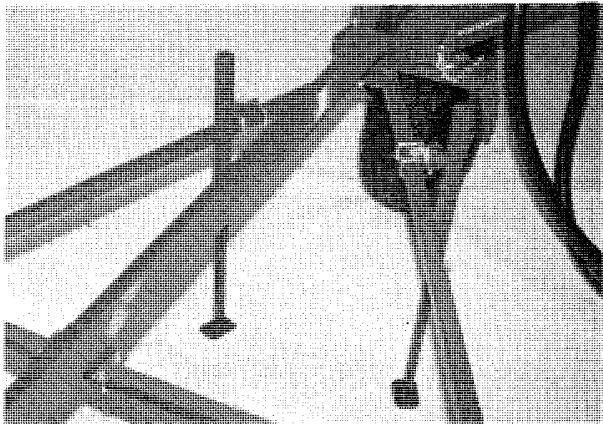
## PARK SAFELY

Park machine on a level surface and block wheels.

Secure hitch jack(s) with pin(s).



*Tow Between*



*Tow Behind*

N43909 -UN-28OCT91

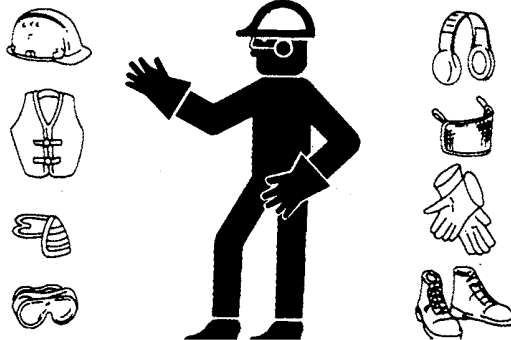
N40768 -UN-26NOV90

NX,787C,A1 -19-25OCT91

## WEAR PROTECTIVE CLOTHING

Wear close fitting clothing and safety equipment appropriate to the job.

Operating equipment safely requires the full attention of the operator. Do not wear radio or music headphones while operating machine.



DX,WEAR2 -19-03MAR93

TS,206 -UN-23AUG88



## HANDLE PESTICIDES AND FERTILIZERS CAREFULLY

Keep dust away from skin and hair.

Keep containers low when pouring.

Let the wind blow fumes away from you when mixing with seed or when filling tank.

Wear a filtered respirator if you cannot avoid dust.

Wear goggles to protect your eyes.

Wash exposed skin areas frequently—do not leave pesticide on your skin.

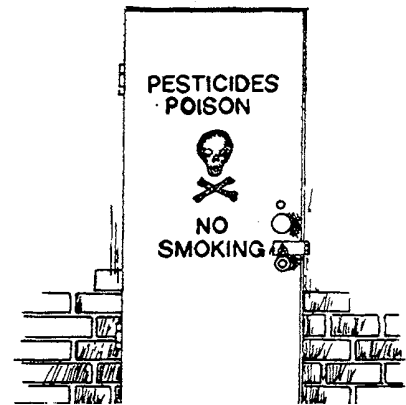
Do not smoke while handling pesticides.

Properly dispose of pesticide container, unused pesticide and left-over treated seed and fertilizer.

Read and observe manufacturers recommendations.

Store pesticides in a separate, plainly marked LOCKED building.

Store pesticides in original containers with labels intact.



-JUN-04OCT88

N35988

-JUN-04OCT88

N35989

-19-31JAN89

N33983

N04,655C,A -19-05APR84



## KEEP RIDERS OFF MACHINE

Keep riders off.

Riders are subject to injury such as being struck by foreign objects and being thrown off the machine. Riders also obstruct the operator's view resulting in the machine being operated in an unsafe manner.



-JUN-28SEP88

N40002

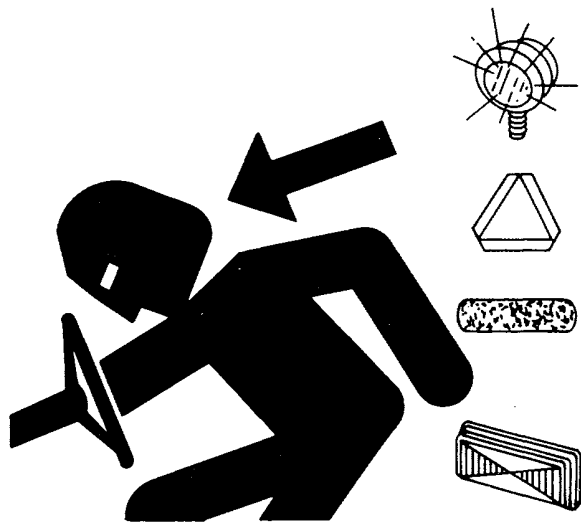
1N4,610C,A2 -19-21JUN88

## USE SAFETY LIGHTS AND DEVICES

Slow moving tractors, self-propelled equipment and towed implements or attachments can create a hazard when driven on public roads. They are difficult to see, especially at night. Avoid personal injury or death resulting from collision with a vehicle.

Whenever driving on public roads, use flashing warning lights and turn signal according to local regulation. To increase visibility, use the lights and devices provided with your machine. For some equipment, install extra flashing warning lights.

Keep safety items in good condition. Replace missing or damaged items. An implement safety lighting kit is available from your John Deere dealer.



-JUN-12APR90

TS951

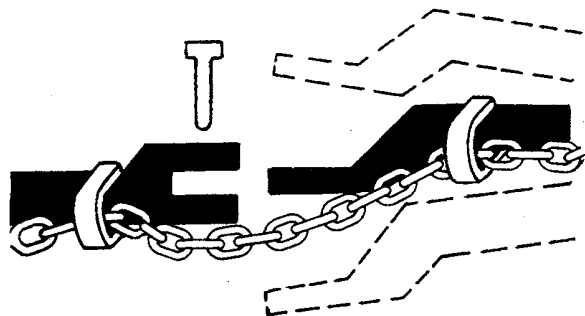
DX,FLASH -19-15MAR93

## USE A SAFETY CHAIN

A safety chain will help control drawn equipment should it accidentally separate from the drawbar.

Using the appropriate adapter parts, attach the chain to the tractor drawbar support or other specified anchor location. Provide only enough slack in the chain to permit turning.

See your John Deere dealer for a chain with a strength rating equal to or greater than the gross weight of the towed machine. Do not use safety chain for towing.



-JUN-23AUG88

TS217

DX,CHAIN -19-03MAR93



## TRANSPORT SAFELY

Keep away from overhead power lines. Serious injury or death may result. Know the transport height of your machine.

Always fold wings fully. If wing fold cylinders are removed, chain wings together to prevent accidental lowering.

Install transport lockups on depth control cylinders.

ALWAYS travel at a reasonable and safe speed.

Use transport hitch when traveling without seeding tool (tow behind models).

DO NOT use transport hitch with material in tank.

NEVER transport with air seeder fan running.

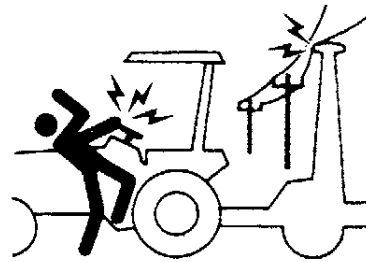
ALWAYS lock auger in transport position.

NEVER transport with meter shafts engaged.

Shift the tractor into a lower gear when transporting down steep slopes or hills.

Latch the tractor brakes together.

Stop slowly.



N99994 -UN-08OCT88

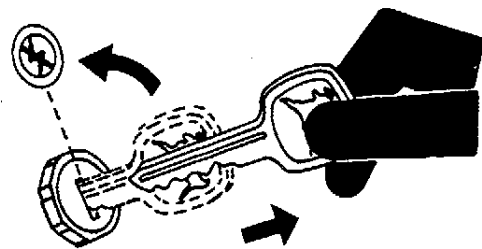
1N4,777C,A30A -19-09SEP91

## SERVICE MACHINE SAFELY

To help prevent personal injury caused by unexpected movement, be sure to service machine on level surface.

If machine is connected to tractor, engage parking brake and/or place transmission in "PARK", shut off engine and remove key.

If machine is detached from tractor, block wheels and use safety stands to prevent movement.



TS230 -UN-24MAY89

1N4,777C,A31 -19-11FEB88



**Suggest:**

**For more complete manuals. Please go to the home page.**

**<https://www.ebooklibonline.com>**

**If the above button click is invalid. Please download this document first, and then click the above link to download the complete manual.**

**Thank you so much for reading**



## PRACTICE SAFE MAINTENANCE

Understand service procedure before doing work. Keep area clean and dry.

Never lubricate, service, or adjust machine while it is moving. Keep hands, feet, and clothing from power-driven parts. Disengage all power and operate controls to relieve pressure. Lower equipment to the ground. Stop the engine. Remove the key. Allow machine to cool.

Securely support any machine elements that must be raised for service work.

Keep all parts in good condition and properly installed. Fix damage immediately. Replace worn or broken parts. Remove any buildup of grease, oil, or debris.

Disconnect battery ground cable (-) before making adjustments on electrical systems or welding on machine.



-JUN-23AUG88

TS218

DX,SERV -19-03MAR93

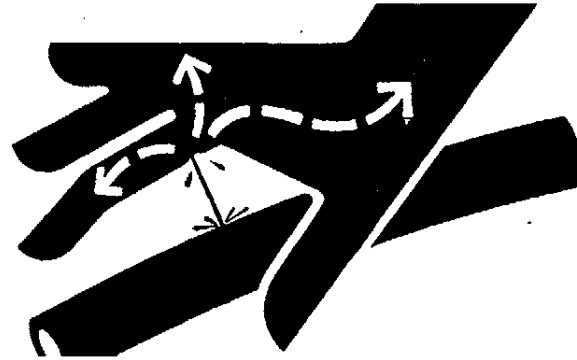
## AVOID HIGH-PRESSURE FLUIDS

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.



-JUN-23AUG88

X9811

DX,FLUID -19-02MAR93



## SERVICE TIRES SAFELY

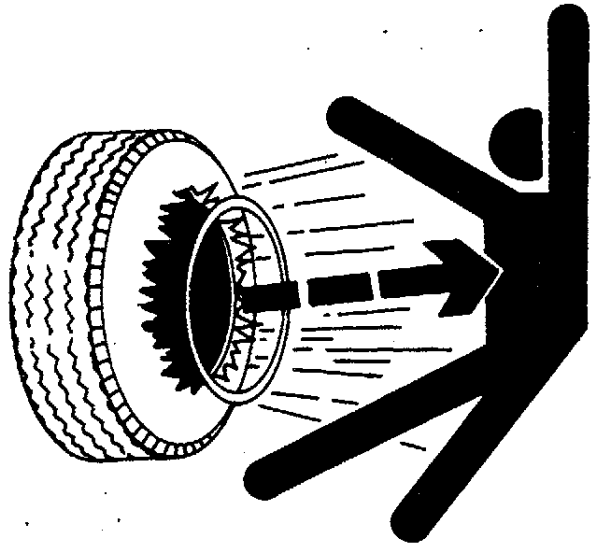
Explosive separation of a tire and rim parts can cause serious injury or death.

Do not attempt to mount a tire unless you have the proper equipment and experience to perform the job.

Always maintain the correct tire pressure. Do not inflate the tires above the recommended pressure. Never weld or heat a wheel and tire assembly. The heat can cause an increase in air pressure resulting in a tire explosion. Welding can structurally weaken or deform the wheel.

When inflating tires, use a clip-on chuck and extension hose long enough to allow you to stand to one side and NOT in front of or over the tire assembly. Use a safety cage if available.

Check wheels for low pressure, cuts, bubbles, damaged rims or missing lug bolts and nuts.



DX,RIM

-19-24AUG90

TS211 -UN-23AUG88

**<https://www.ebooklibonline.com>**

Hello dear friend!

Thank you very much for reading.

Enter the link into your browser.

The full manual is available for immediate download.

**<https://www.ebooklibonline.com>**