

200CX Loader
(Serial No. 50000 -)

OPERATOR'S MANUAL

200CX Loader

OMW56435 ISSUE F2 (ENGLISH)

CALIFORNIA

Proposition 65 Warning

Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects, and other reproductive harm.

If this product contains a gasoline engine:

⚠ WARNING

The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

The State of California requires the above two warnings.

Additional Proposition 65 Warnings can be found in this manual.

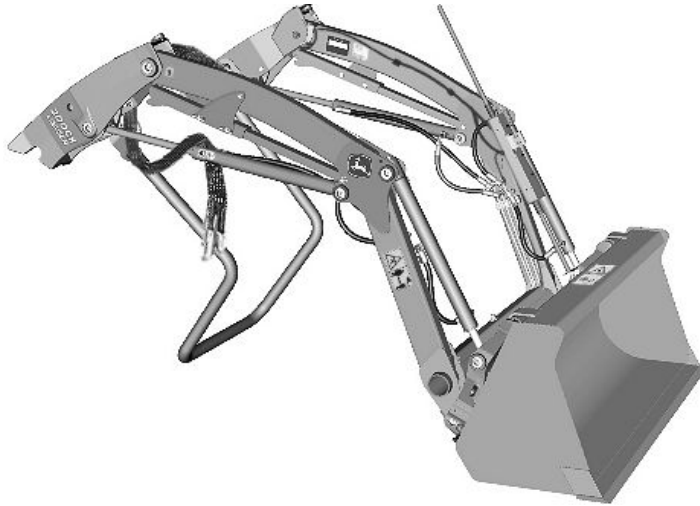
Industrias John Deere S.A. de C.V.

Australia Edition
LITHO IN U.S.A.



Introduction

Foreword



W22497—UN—21MAY12

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 and safety signs on your machine may also be available in other languages (see your John Deere dealer to order).

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 given in both metric and customary U.S. unit equivalents. Use only correct replacement parts and fasteners. Metric and inch fasteners may require a specific metric or inch wrench.

RIGHT-HAND AND LEFT-HAND sides are determined by facing the direction the implement will travel when going forward.

WRITE PRODUCT IDENTIFICATION NUMBERS (P.I.N.) in this 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. File the identification numbers in a secure place off the machine.

BEFORE DELIVERING THIS MACHINE, your dealer performed a predelivery inspection.

THIS LOADER IS DESIGNED SOLELY for use in customary agricultural or similar operations ("INTENDED USE"). Use in any other way is considered as contrary to the intended use. The manufacturer accepts no liability for damage or injury resulting from this misuse, and these risks must be borne solely by the user. Compliance with and strict adherence to the conditions of operation, service and repair as specified by the manufacturer also constitute essential elements for the intended use.

THIS LOADER SHOULD BE OPERATED, serviced and repaired only by persons familiar with all its particular characteristics and acquainted with the relevant safety rules (accident prevention). The accident prevention regulations, all other generally recognized regulations on safety and occupational medicine and the road traffic regulations must be observed at all times. Any arbitrary modifications carried out on this loader will relieve the manufacturer of all liability for any resulting damage or injury.

If you are not the original owner of this machine, it is in your interest to contact your local John Deere dealer to inform them of this unit's serial number. This will help John Deere notify you of any issues or product improvements.

OUO6038,00020C4 -19-10MAY12-1/1

Dealer's Record

Owner's Name _____ Date Sold _____
 Address _____ Model _____
 City _____ Serial Number _____
 State/Prov _____ Zip/Mail Code _____

OUO1078,000002D -19-01FEB08-1/1

Predelivery

After the loader has been completely set up, inspect it to be sure it is in good working condition before delivering it to the customer. The following checklist is a reminder of important points to inspect. Check off each item as it is found satisfactory or after proper adjustment has been made.

- ☐ Loader has been assembled correctly.
- ☐ **Mounting frame hardware is tightened to correct torque.**
- ☐ Tractor is properly ballasted.
- ☐ Wheel tread is properly set.
- ☐ Loader has been lubricated.
- ☐ Loader responds correctly to controls.

- ☐ Hydraulic connections do not leak.
- ☐ Tractor transmission/hydraulic oil level is correct.
- ☐ All decals are in place and readable.
- ☐ Loader responds correctly to the Anti-Spill System.
- ☐ Scratches are painted.
- ☐ Hoses do not contact any sharp edges or hang too low below tractor.
- ☐ This loader has been inspected and checked. To the best of my knowledge, it is ready for delivery to the customer.

(Date Set Up) _____

(Signature) _____

OUO6038,00020D5 -19-18MAY12-1/1

Delivery

The following checklist is a reminder of very important information which should be conveyed to the customer at the time the loader is delivered. Check off each item as it is fully explained to the customer.

- ☐ John Deere warranty.
- ☐ Safe and correct operation and service.
- ☐ Daily and periodic inspections.
- ☐ Servicing machine regularly and correctly, **including tightening of loader and mounting frame hardware, pivot pins and weight bracket/hood guard hardware after first 10 hours and every 50 hours.**
- ☐ Loader controls and operation. (*NOTE: FAST DUMP feature on single lever control.*)
- ☐ Give the Operator's Manual to the customer and encourage customer to read entire manual.
- ☐ Review Anti-Spill System operation.
- ☐ Advise customer of safety precautions that must be observed while using this loader.
- ☐ Review information on how to prepare the loader.

- ☐ Review recommended procedures for attaching to or detaching from tractor.
- ☐ Recommended transporting information.
- ☐ Review loader operation.
- ☐ Make customer aware of all optional equipment offered for this machine.
- ☐ Recommended lubricants.
- ☐ Review service intervals and lubrication points.
- ☐ Review all adjustments.
- ☐ Recommended machine storage/parking.
- ☐ Have customer record machine serial number in the Introduction section.
- ☐ John Deere parts and service.
- ☐ Remove and file this page.

(Date Delivered) _____

(Signature) _____

OUO6038,00020D6 -19-18MAY12-1/1

After-Sale

It is suggested the following items be checked after the loader has been operated for approximately 50 hours.

- ☐ Go over entire machine for loose or missing hardware.

Mounting frame hardware is tightened to correct torque.

- ☐ Check for broken or damaged parts. Repair as necessary.
- ☐ Decals intact and legible.
- ☐ Acquaint the customer with any special attachments that will help do a better job.
- ☐ Check with the customer as to the performance of the machine.

- ☐ Operate the loader to see if it is functioning properly.
- ☐ Hydraulic hoses routed correctly and connections do not leak.
- ☐ Tractor transmission/hydraulic oil level is correct.
- ☐ Review the entire Operator's Manual with the customer and stress the importance of proper and regular lubrication and safety precautions.

(Date Checked)_____

(Signature)_____

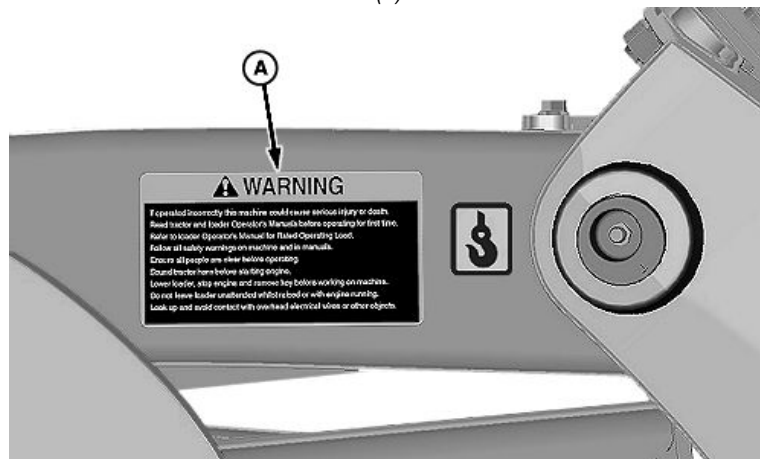
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To the Dealer

! WARNING

If operated incorrectly this machine could cause serious injury or death.
 Read tractor and loader Operator's Manuals before operating for first time.
 Refer to loader Operator's Manual for Rated Operating Load.
 Follow all safety warnings on machine and in manuals.
 Ensure all people are clear before operating.
 Sound tractor horn before starting engine.
 Lower loader, stop engine and remove key before working on machine.
 Do not leave loader unattended whilst raised or with engine running.
 Look up and avoid contact with overhead electrical wires or other objects.

(A)



Left-Hand Side Boom

NOTE: This decal is required by the Australian Code of Practice for the manufacture and supply of front end loaders for use on agricultural tractors in Australia.

Complete the Dealer Record, Pre-Delivery and Delivery checklists of the Operator's Manual with the purchaser.

- Both the purchaser and dealer need to sign the document.

- Make a copy of the completed and signed checklist.
 - Original will remain in the purchaser's Operator's Manual.
 - Dealer retains the copy.

OUO6038,00020C2 -19-10MAY12-1/1

W08186 —19—12SEP06

W22492 —UN—09MAY12

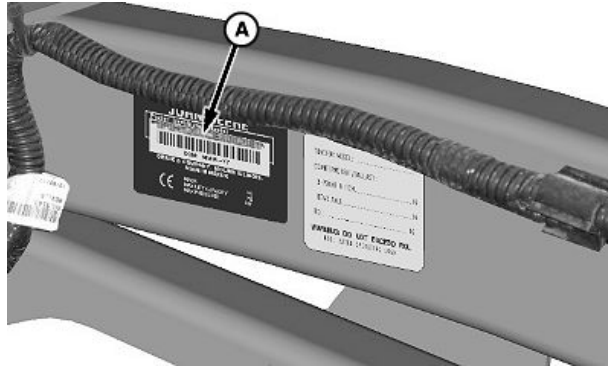
Record Product Identification Number

Each machine has an identification label. The letters and numbers identify a component or assembly. ALL these characters are needed when ordering parts or identifying a machine for any John Deere product support program. When ordering parts, always furnish model and serial number as given on serial number label. It will assist your John Deere dealer in giving you prompt and efficient service. If the loader is ever stolen, they are needed by law enforcement to trace your machine.

Loader serial number label is located on inside of left-hand boom at mast.

Record the serial number (A) in the space provided.

Serial Number: _____



A—Serial Number

OUO6038,00020C1 -19-10MAY12-1/1

W22495—UN—10MAY12

Record Tractor Information

The tractor information plate (A) is required by the NSW Australian Code of Practice. Identification plate is located on the loader next to the serial number plate. Verify that accurate tractor information is recorded on the plate and record the information here. (See Prepare Tractor section for tractor set-up information.) If loader is installed on a different tractor, update the information on this page and replace and update the plate. (See your John Deere™ dealer.)

A—Identification Plate



TRACTOR MODEL: _____

COUNTERWEIGHT/BALLAST:

3-POINT HITCH _____ **KG**

REAR AXLE _____ **KG**

ROL: _____ **KG**

WARNING: DO NOT EXCEED ROL

ROL: RATED OPERATING LOAD

(A)

John Deere is a trademark of Deere & Company

OUO6038,00020C3 -19-10MAY12-1/1

W22496—UN—10MAY12

W21913—UN—25JAN12

Keep Proof of Ownership

1. Maintain in a secure location an up-to-date inventory of all product and component serial numbers.
2. Regularly verify that identification plates have not been removed. Report any evidence of tampering to law enforcement agencies and order duplicate plates.
3. Other steps you can take:
 - Mark your machine with your own numbering system
 - Take color photographs from several angles of each machine

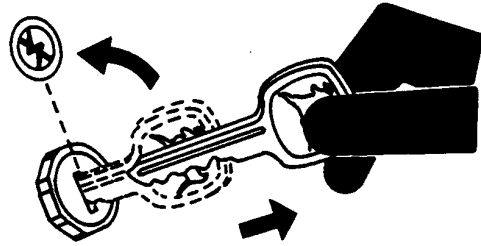


DX,SECURE1 -19-18NOV03-1/1

TS1680 —UN—09DEC03

Keep Machines Secure

1. Install vandal-proof devices.
2. When machine is in storage:
 - Lower equipment to the ground
 - Set wheels to widest position to make loading more difficult
 - Remove any keys and batteries
3. When parking indoors, put large equipment in front of exits and lock your storage buildings.
4. When parking outdoors, store in a well-lighted and fenced area.
5. Make note of suspicious activity and report any thefts immediately to law enforcement agencies.
6. Notify your John Deere dealer of any losses.



DX,SECURE2 -19-18NOV03-1/1

TS230 —UN—24MAY89

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Original Instructions. 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.

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Safety

Recognize Safety Information

This is a 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 -19-29SEP98-1/1

T81389 —UN—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.

 **DANGER**

 **WARNING**

 **CAUTION**

DX,SIGNAL -19-03MAR93-1/1

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.

There can be additional safety information contained on parts and components sourced from suppliers that is not reproduced in this operator's manual.

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 -19-16JUN09-1/1

TS201 —UN—23AUG88

Protect People and Animals

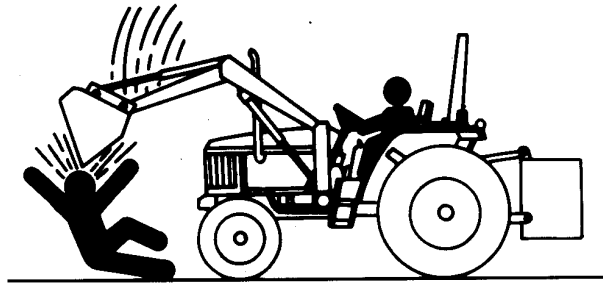
Never allow anyone to walk or work under a raised loader.

Be sure that people, livestock, or pets are not standing near the machine while in operation.

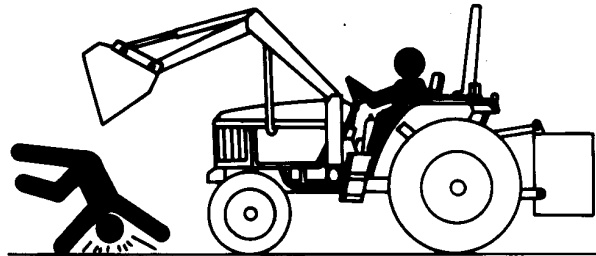
Do not use the loader as a work platform.

Do not lift or carry anyone on loader, in bucket or on any attachment.

Lower loader to the ground before leaving operator's station.



W01140 —UN—12AUG93



W01150 —UN—12AUG93

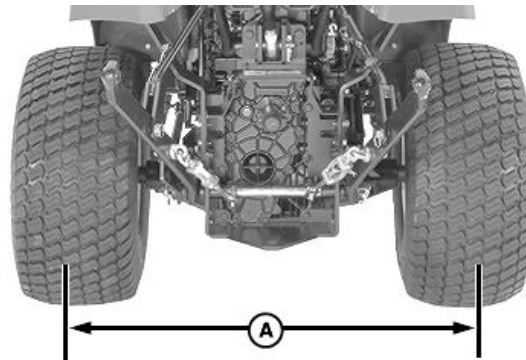
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Help Prevent Rollovers

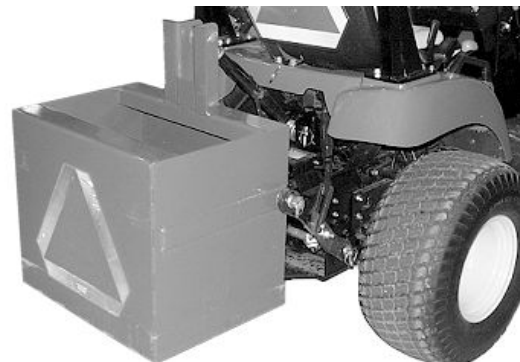
Use widest rear wheel tread setting (A) to maximize stability.

Install required rear ballast on tractor for stability.

A—Rear Tread Width



W05551 —UN—05AUG02



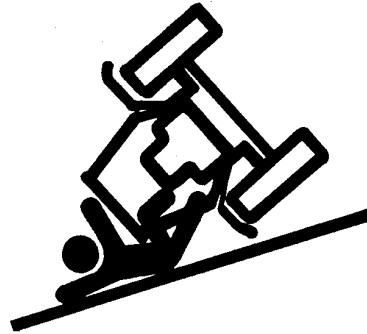
W05533 —UN—31JUL02

OOU06077,00015C2 -19-23JUL02-1/1

Avoid Injury or Death from Rollover Accidents

To help prevent rollovers:

- Equip tractor with a rollover protective structure (ROPS). Wear your seat belt.
- Be sure tractor tire spacing and rear ballast is correct before using loader.
- Stop loader gradually when lowering or lifting loads.
- Be careful when operating on a slope.
- Avoid holes, ditches and obstructions which may cause tractor and loader to tip over.
- Balance loads so weight is evenly distributed and load is stable.
- Carry loads close to the ground to aid visibility and lower center of gravity.
- Know capacity of loader. Do not overload.
- Reduce speed before turning. Avoid sharp turns.



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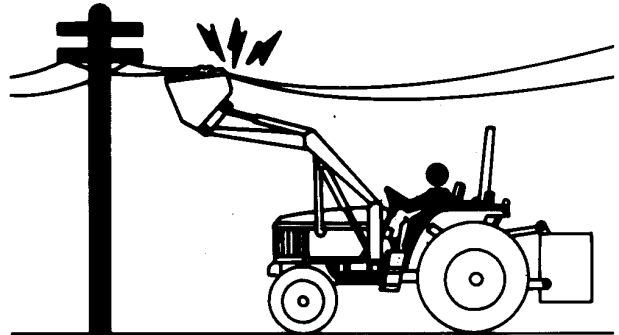
RW13093 —UN—07DEC88

Avoid Power Lines

Serious injury or death can result if tractor or loader contacts electrical lines.

Check lift height clearance before raising loader.

Do not leave the operator's seat if any part of tractor or loader contacts lines.



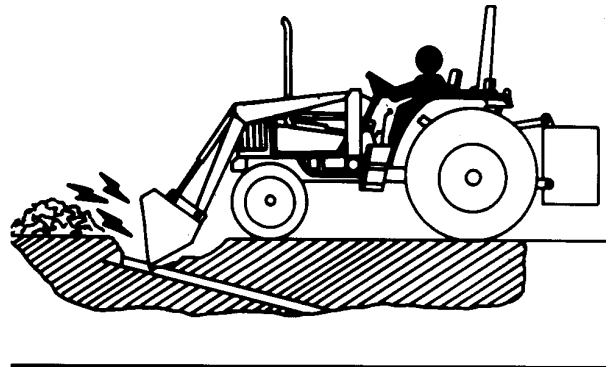
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W01145 —UN—12AUG93

Dig Safely

Before digging, check for location of underground cables, gas lines and water mains.

Do not leave the operator's seat if any part of tractor or loader contacts lines.



OUO1078,0000058 -19-11JAN01-1/1

W01149 —UN—12AUG93

Detach Loader Safely

Detach loader on a hard level surface.

Before disconnecting hydraulic hoses relieve all hydraulic pressure.



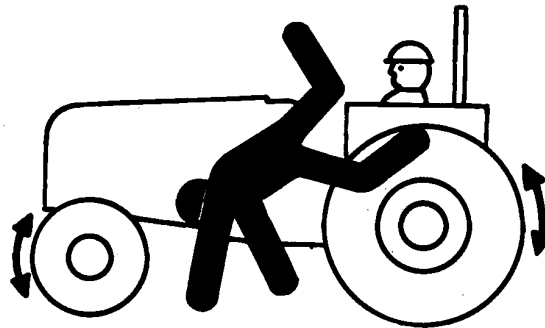
W14000 —UN—05OCT88

OOU01078,0000059 -19-11JAN01-1/1

Keep Riders Off Machine

Only allow the operator on the machine. Keep riders off.

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



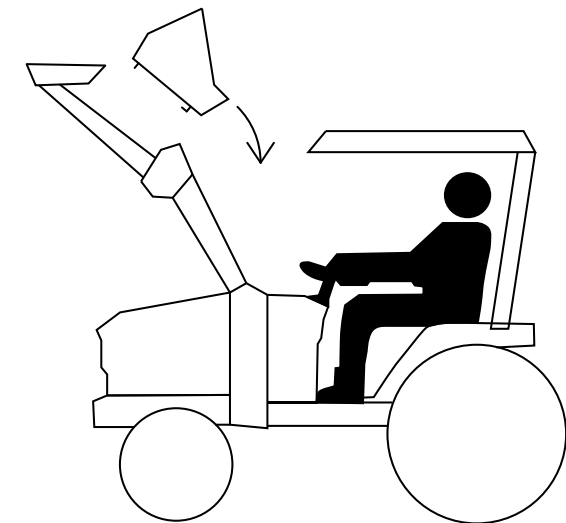
TS290 —UN—23AUG88

DX,RIDER -19-03MAR93-1/1

Operate Bucket/Attachment Safely

CAUTION: To avoid personal injury, make sure bucket/attachment is properly secured to carrier.

Before operating loader, always make sure that bucket/attachment is properly secured to carrier. (See ATTACHING AND DETACHING ATTACHMENT in Operating Loader section.)



W08424 —UN—14DEC06

OOU06038,0001D90 -19-28JAN08-1/1

Carry Materials Safely

Be sure anyone operating the loader is aware of safe operation and potential hazards.

See the tractor Operator's Manual for safe operational practices.

Do not exceed lift capacity of loader.

Be sure tractor is ballasted correctly.

Carry load low at all times.

If tractor is equipped with 4-WD, be sure it is engaged during loader operation.

Stop loader gradually when lowering or lifting loads.

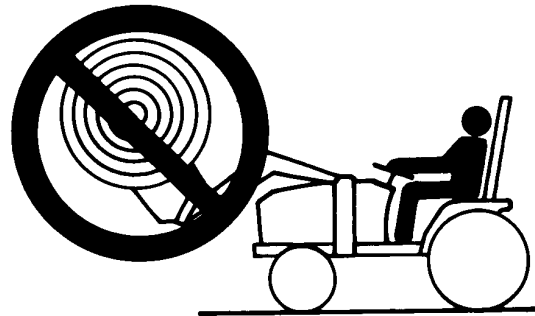
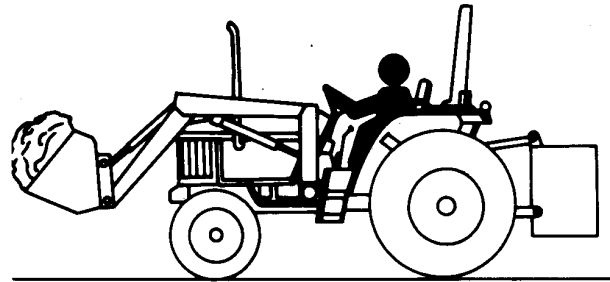
To help prevent loss of control, do not use "FLOAT" position to lower loader.

DO NOT HANDLE ROUND OR LARGE SQUARE BALES.
The loader is not approved for bale handling attachments.

Avoid handling loose or shiftable loads.

Reduce tractor ground speed when traveling over rough ground or when making turns.

Drive slowly through gates and doors.



OUO1078,000005B -19-11JAN01-1/1

W01146 —UN—12AUG93

W02902 —UN—17SEP97

Safe Loader Operation on Slopes

Be sure loader is properly ballasted. (See Prepare the Tractor section.)

Carry load low to the ground.

Avoid traveling across slopes.

If tractor is equipped with 4-WD, be sure it is engaged during loader operation.

Use low tractor speed.

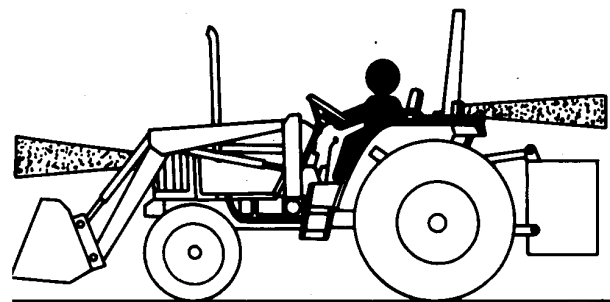
Refer to the tractor Operator's Manual for safe operational practices.

OUO6038,000188F -19-17NOV09-1/1

Driving on Public Roads

While driving tractor and loader, follow these precautions:

- Carry loads close to the ground to aid visibility and to lower center of gravity.
- Allow for additional length of loader on tractor while turning.
- Balance loads so weight is evenly distributed and load is stable.
- Drive slowly if carrying materials. Rough conditions may cause material to spill.
- Avoid carrying materials wider than the bucket/attachment or tractor.



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W01141 —UN—12AUG93

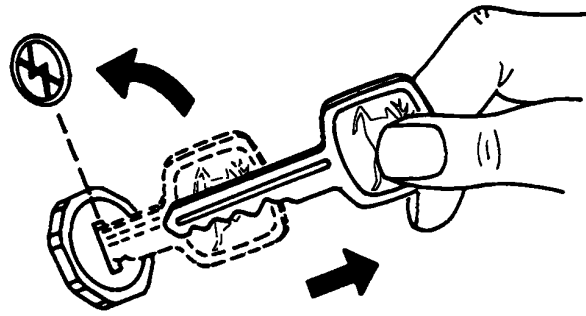
Service Loader Safely

Always engage parking brake or place transmission in **PARK**, lower loader to ground, shut off engine and remove key before servicing.

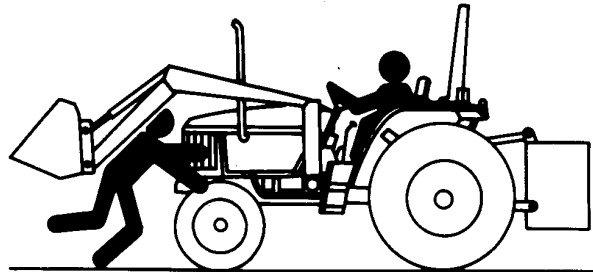
Do not walk or perform service under a raised loader, bucket or attachment unless it is securely blocked or held in position.

Keep all parts in good condition and properly installed. Repair any damage immediately and repair or replace any worn or broken parts.

Before disconnecting hydraulic hoses, relieve hydraulic pressure. (See procedure in your tractor Operator's Manual.)



E50083 —UN—08AUG01



W01151 —UN—12AUG93

OUO1078,000005E -19-16AUG07-1/1

Check Hoses for Damage

Hydraulic hoses can fail due to physical damage, kinks, age and exposure.

Check hoses regularly.

Replace damaged hoses.

OUO1078,000005F -19-11JAN01-1/1

Avoid High-Pressure Fluids

Inspect hydraulic hoses periodically – at least once per year – for leakage, kinking, cuts, cracks, abrasion, blisters, corrosion, exposed wire braid or any other signs of wear or damage.

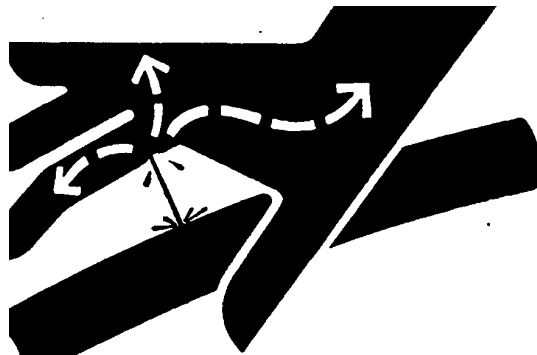
Replace worn or damaged hose assemblies immediately with John Deere approved replacement parts.

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



X9811 —UN—23AUG88

with this type of injury should reference a knowledgeable medical source. Such information is available in English from Deere & Company Medical Department in Moline, Illinois, U.S.A., by calling 1-800-822-8262 or +1 309-748-5636.

DX,FLUID -19-12OCT11-1/1

Store Attachments Safely

Stored attachments and loaders can fall and cause serious injury or death.

Securely store attachments and implements to prevent falling. Keep playing children and bystanders away from storage area.



TSS219 —UN—23AUG88

OUMX005,0001455 -19-02OCT01-1/1

Safety Signs

Pictorial Safety Signs

At several important places of this machine safety signs are affixed intended to signify potential danger. The hazard is identified by a pictorial in a warning triangle. An adjacent pictorial provides information how to avoid personal injury. These safety signs, their placement on the machine and a brief explanatory text are shown below.



TS231 —19—07OCT88

FX,WBZ -19-19NOV91-1/1

Replace Safety Signs

Replace missing or damaged safety signs. Use this operator's manual for correct safety sign placement.

There can be additional safety information contained on parts and components sourced from suppliers that is not reproduced in this operator's manual.



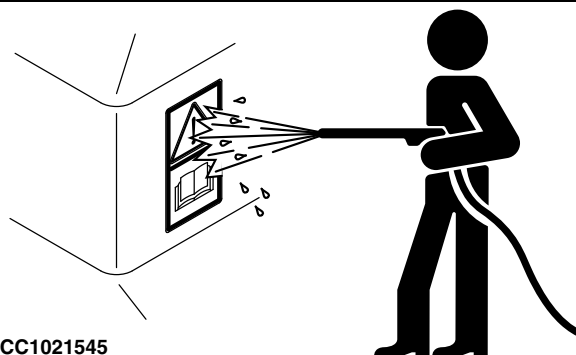
TS201 —UN—23AUG88

DX,SIGNS -19-18AUG09-1/1

Avoid High-Pressure Spray on Safety Decals

Pressurized water can remove or damage safety decals. Avoid directing high-pressure spray on safety decals.

Immediately replace missing or damaged safety decals. (See your John Deere dealer for replacement decals.)

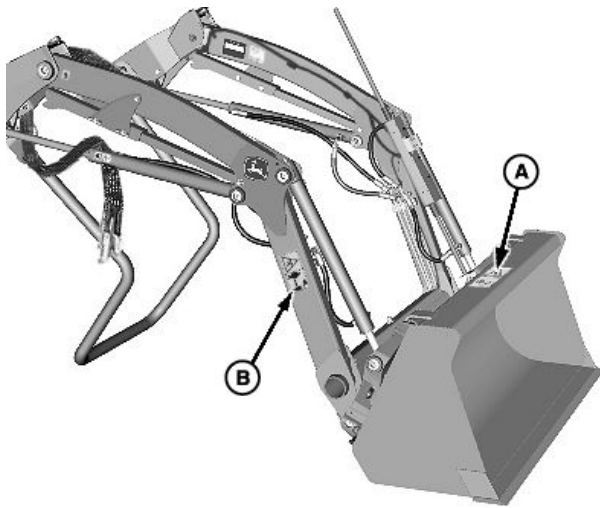


CC1021545

CC1021545 —UN—23APR02

OUO6038,0001F04 -19-28JUL10-1/1

Safety Sign Locations



Decal Locations

W22491 —UN—18MAY12



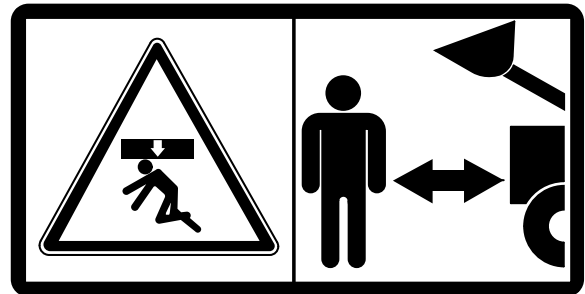
(A) (Top of Bucket)

A—Keep Riders Off Attachment

- Do not use loader as a work platform.
- Do not lift or carry anyone on loader or in bucket or attachment.

B—Maintain Safe Distance from Raised Loader

- Never allow anyone to walk or work under a raised loader.
- Be sure that bystanders are not standing near the machine while operating.



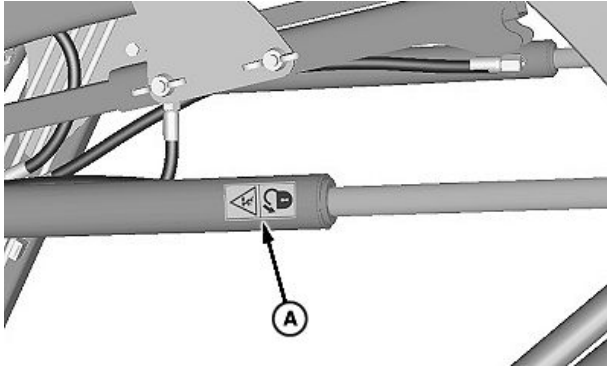
(B) (Both Sides)

W06755 —UN—17MAR04

W06756 —UN—17MAR04

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OUC6038,00020C0 -19-10MAY12-1/5



Lift Cylinder (Left-Hand Side Shown)

W22493 —UN—09MAY12



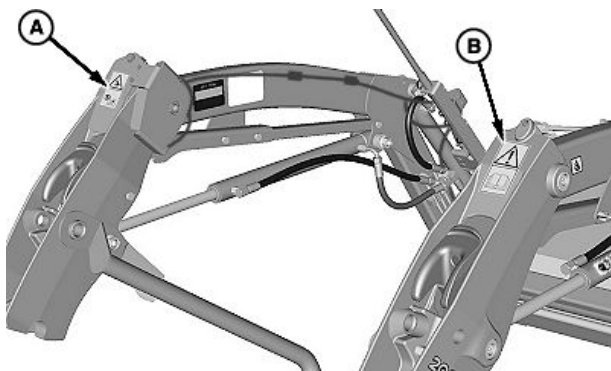
(A) (Both Sides)

W21935 —UN—10FEB12

A—Warning Use service locks when performing service under raised loader.

Continued on next page

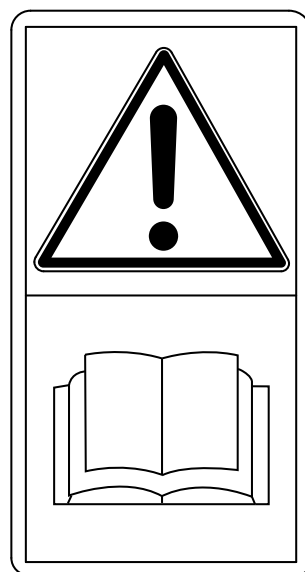
OJ06038,00020C0 -19-10MAY12-2/5



W22494 —UN—18MAY12



(A)



(B)

A—Danger Serious injury or death can result from rollovers.

- Do not handle round or large square bales.
- Use ROPS and seat belt at all times.
- Add required rear ballast.
- Move wheels to widest recommended setting.
- Operate tractor at low speed.

B—Caution

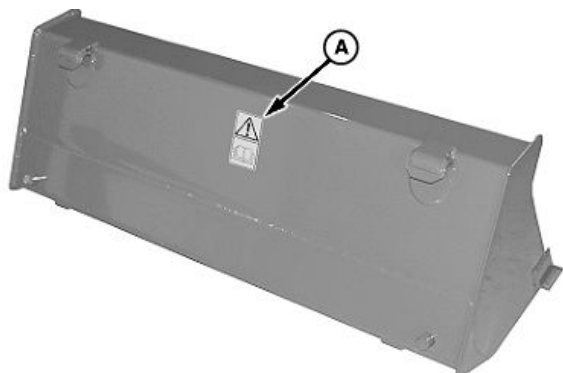
- Lock loader latches before operating.
- Before servicing, adjusting equipment, or disconnecting oil lines:
 - a) Lower loader to ground or support lift arms.
 - b) Shut off engine and relieve hydraulic pressure.
- Observe safety recommendations in Loader Operator's Manual.

W06755 —UN—17MAR04

W07157 —UN—06DEC04

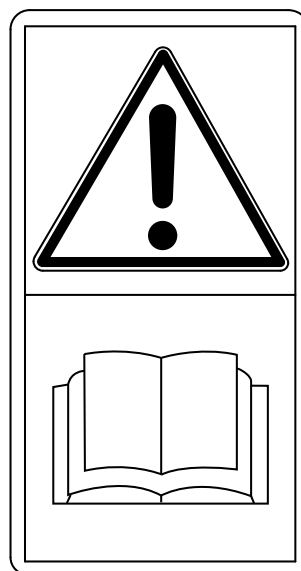
Continued on next page

OUC6038,00020C0 -19-10MAY12-3/5



Backside of Bucket

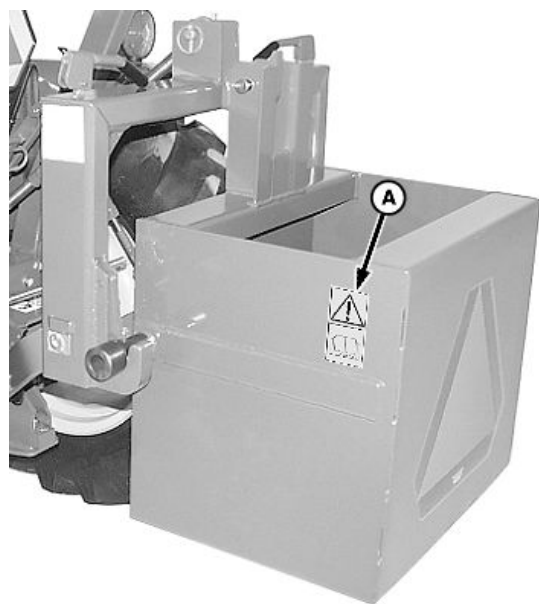
W22498 —UN—16MAY12



W07157 —UN—06DEC04

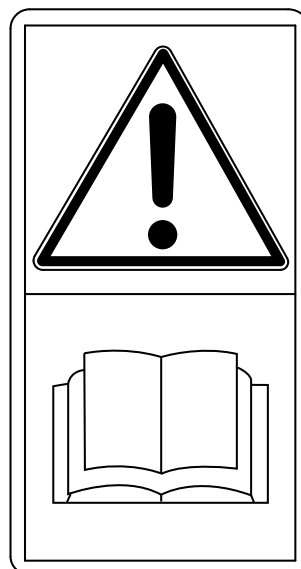
Warning To avoid injury or death caused by falling attachment, quick lock pins must be installed at all times.

OUC6038,00020C0 -19-10MAY12-4/5



Ballast Box

W21126 —UN—22OCT10



W07157 —UN—06DEC04

(A)

A—Warning Tractor instability or loss of steering control can result if ballast box is installed without loader. To

avoid injury, do not operate tractor with ballast box unless loader is installed.

OUC6038,00020C0 -19-10MAY12-5/5

Prepare the Tractor

Approved Tractors

The 200CX Loader is designed for use on 2305, 2320, 2520, and 2720 Compact Utility Tractors.



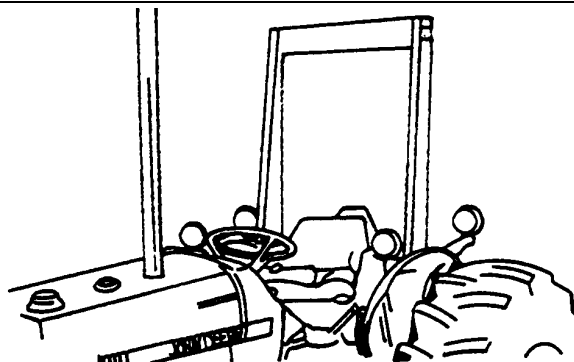
2520 Tractor Shown

OUO6038,00020C6 -19-06JUN12-1/1

W07404 —UN—05MAY05

Using Roll-Over Protective Structure (ROPS)

CAUTION: To help prevent personal injury or death caused by tractor roll-over, be sure tractor is equipped with roll-over protective structure (ROPS) and use approved seat belt. Adding rear ballast is also recommended.



OUO6038,0000224 -19-24SEP04-1/1

W11507 —UN—06OCT88

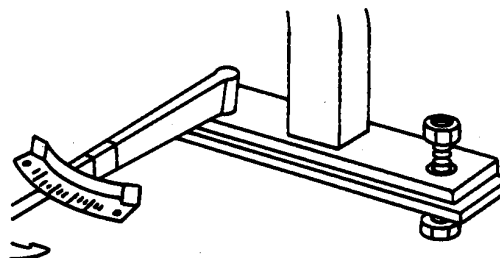
Keep ROPS Installed Properly

Make certain all parts are reinstalled correctly if the roll-over protective structure (ROPS) is loosened or removed for any reason. Tighten mounting bolts to proper torque.

The protection offered by ROPS will be impaired if ROPS is subjected to structural damage, is involved in an overturn incident, or is in any way altered by welding, bending, drilling, or cutting. A damaged ROPS should be replaced, not reused.

The seat is part of the ROPS safety zone. Replace only with John Deere seat approved for your tractor.

Any alteration of the ROPS must be approved by the manufacturer.



DX,ROPS3 -19-12OCT11-1/1

TS212 —UN—23AUG88

Remove Front Weights

IMPORTANT: To prevent interference with loader, remove all weights.

NOTE: Front weight bracket "EXTENSIONS" are NOT compatible with the loader.

Remove all front weights (A).

A—Weights



2305 Tractor Shown

W22508 —JUN—18MAY12

OUC6038,00020D7 -19-18MAY12-1/1

Approved Front Tires

IMPORTANT: Tires are approved on their rated load capacity. Tires of similar size with equal to or greater load rating may be used.

TRACTOR	APPROVED TIRES	TIRE TYPE	LOAD INDEX	PLY RATING
2305	18 x 8.50-10	R1	74	4
	18 x 8.50-10	R3	74	4
2320	7.00-12	R1	69	4
	23 x 8.5-12	R3	79	4
	23 x 8.5-12	R4	93	6
2520 and 2720	7.00-12	R1	69	4
	24 x 8.50-14	R3	82	4
	23 x 8.5-12	R3	79	4
	23 x 8.5-12	R4	93	6

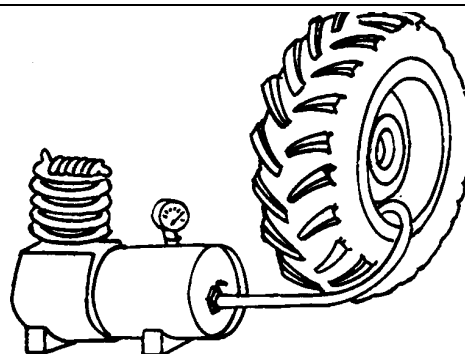
OUC6038,00020C5 -19-10MAY12-1/1

Inflating Front Tires

Inflate regular tires to pressure recommended for heavy front-mounted equipment.

Inflate 4-WD tires 27.6 kPa (0.3 bar) (4 psi) above pressure recommended for heavy front-mounted equipment.

See your tractor Operator's Manual.



W11375 —JUN—06OCT88

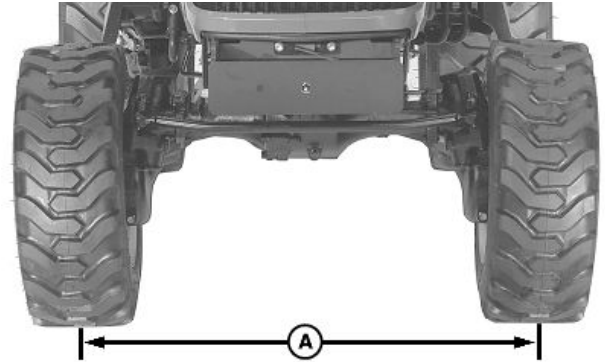
OUC1078,0000066 -19-06OCT10-1/1

Set Front Tread Width

Front tread width (A) should be set to the same tread width as rear tires whenever possible. (See SELECTING REAR TREAD WIDTH in this section.)

There are no minimum tread settings.

A—Tread Width



W22509 —UN—18MAY12

OUC06038,00020D8 -19-18MAY12-1/1

Checking Front Wheel Hardware

IMPORTANT: Avoid damage to tractor caused by loose hardware. After the first 4 hours and 8 hours of operation, retighten front wheel hardware. Recheck and tighten frequently during the first 100 hours of operation.

See your tractor Operator's Manual.



W14767 —UN—19JAN89

OUC1078,0000068 -19-11JAN01-1/1

Approved Rear Tires

TRACTOR	APPROVED TIRES
2305	26 x 12.00-12 4PR R4
2320	9.5-16, 4PR (R1) 31 x 13.50-15 4PR (R3) 12-16.5 4PR (R4)
2520 and 2720	36 x 13.50-15 4PR (R3) 12-16.5 4PR (R4) 14-17.5 6PR (R4)

The tires listed are recommended when used in conjunction with front tires recommended in your tractor Operator's Manual. (Also, see APPROVED FRONT TIRES in this section.)

NOTE: Liquid ballast is recommended in all rear tires as part of required total ballast. Fill tires 3/4 full using a calcium chloride mixture of 1.6 kg (3.5 lb) per 4 L (1 U.S. gal) of water.

OUC06038,00020C7 -19-10MAY12-1/1

Selecting Rear Tread Width

CAUTION: To help prevent bodily injury or death from tractor/loader roll-over, use the widest rear tread setting possible. (See ADDING BALLAST TO REAR WHEELS and ADDING BALLAST TO 3-POINT HITCH in this

section.) Use particular care when operating on inclines and/or rough terrain.

Refer to your tractor Operator's Manual for tread settings available on the tractor.

OUC06038,0001B46 -19-02DEC04-1/1

Required Minimum Tractor Ballast

CAUTION: To help prevent the possibility of personal injury or death caused by tractor/loader roll over, **DO NOT** operate tractor/loader unless it is equipped with proper ballast.

The amount of ballast listed in the chart is the minimum required for normal loader operation.

For some operations, additional ballast may be required to maximize stability.

IMPORTANT: When adding ballast, do not exceed maximum tire carrying capacity shown on sidewall.

REQUIRED MINIMUM BALLAST	
1	Fluid-filled rear tires and 350 kg (772 lb) of 3-Point Hitch Ballast ^a
2	Three rear wheel weights per wheel and 350 kg (772 lb) of 3-Point Hitch Ballast ^a
If loader is equipped with pallet fork attachment, 85 kg (187 lb) of additional ballast is required.	

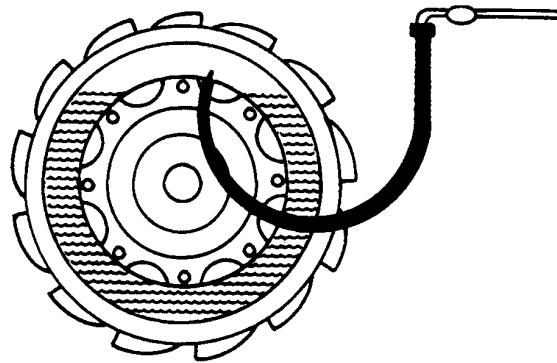
^aSee **ADDING BALLAST TO 3-POINT HITCH** in this section.

OOU6038,00020C8 -19-18MAY12-1/1

Adding Ballast to Rear Wheels

CAUTION: To help prevent bodily injury or death from tractor/loader rollover, add required amount of ballast to tractor.

Refer to your tractor Operator's Manual to add ballast required to rear wheels.



OUMX005,0001CB0 -19-06OCT10-1/1

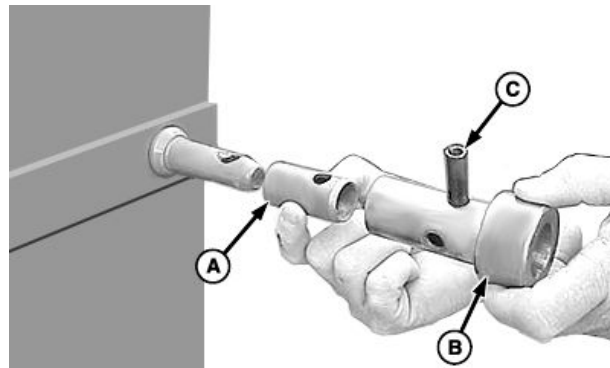
Installing Hitch Pin Bushings on Ballast Box for Category 1 Quick Coupler Hitch

NOTE: Install bushings on both hitch pins.
Right-hand side shown.

1. Install bushing (A) over hitch pin with cross hole as shown.
2. Install bushing (B) as shown.
3. Align holes in bushings with hole in hitch pin and install spring pin (C).

A—Bushings
B—Bushings

C—Spring Pin



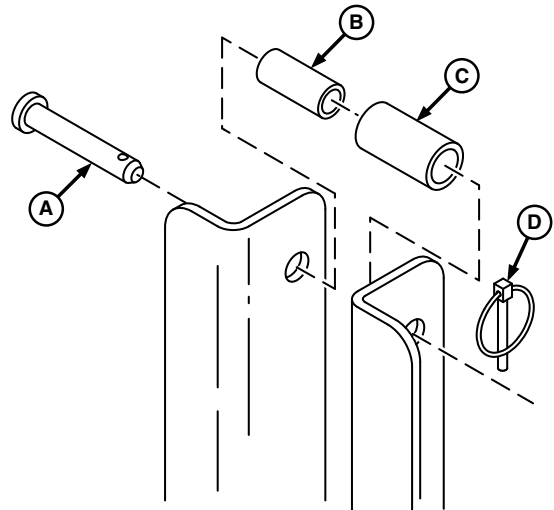
Continued on next page

OOU6038,0001573 -19-15MAR02-1/2

4. Assemble bushings (B and C).
5. Insert center link pin (A) through ballast box mast and bushing assembly. Fasten with quick-lock pin (D).

A—Center Link Pin
B—Bushing (Small)

C—Bushing (Large)
D—Quick-Lock Pin



OUC6038,0001573 -19-15MAR02-2/2

W05063—UN—05FEB02

Attaching Ballast Box to Tractor with Three-Point Hitch

CAUTION: To help prevent personal injury from tractor instability, be sure to attach ballast box before attempting to attach loader.

To avoid bodily injury or machine damage whenever the ballast box is attached, put transmission in **PARK** position and check the full range of hitch for interference or binding.

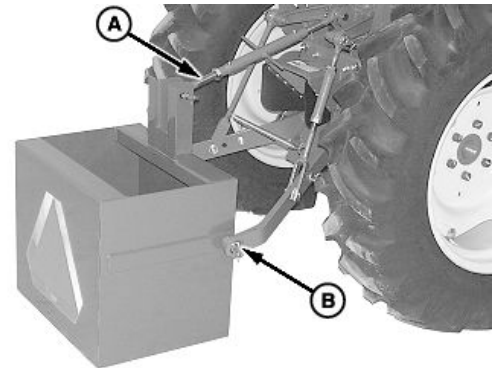
Do not stand between tractor and ballast box.

NOTE: 4000 Series Tractor shown. All other tractors are similar.

1. Back up tractor to ballast box with hitch points approximately in alignment.
2. Engage tractor parking brake and/or place transmission in **PARK**.
3. Shut off tractor engine and remove key.
4. Attach tractor draft links. Fasten with quick-lock pins (B) (stored on tractor draft links).
5. Align center link with upper hole in ballast box mounting straps and install center link mounting hardware (A).
6. Start tractor engine.
7. Slowly pull hitch control lever to raise ballast box. Check for interference. Lower hitch to ground and adjust center link and/or lift links if necessary. (See procedures in your tractor Operator's Manual.)

A—Center Link Mounting Hardware

B—Quick-Lock Pin (2 used)



OUC6077,0001A8A -19-13AUG10-1/1

W05200—UN—08MAR02

Attaching Ballast Box to Tractor with Quick Coupler Hitch

CAUTION: To help prevent personal injury from tractor instability, be sure to attach ballast box before attempting to attach loader.

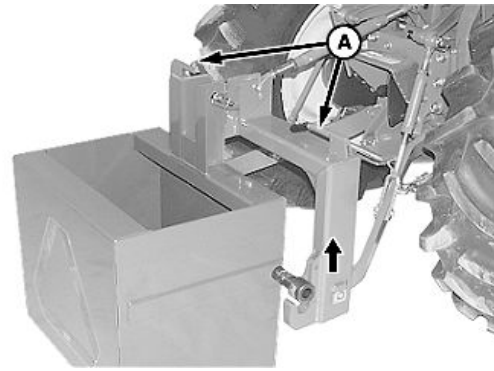
To avoid bodily injury or machine damage whenever the ballast box is attached, put transmission in **PARK** position and check the full range of hitch for interference or binding.

Do not stand between tractor and ballast box.

1. Slowly push hitch control lever to lower hitch until quick coupler hooks are lower than ballast box hitch pins.
2. Back up tractor to ballast box.

IMPORTANT: Check spring loaded clips on quick coupler to be sure latches are free and working properly.

3. Make sure latch control levers (A) are down (as shown).



A—Latch Control Levers

4. Slowly pull hitch control lever to engage ballast box hitch pins in quick coupler hooks. Raise ballast box and check for interference. Lower ballast box to ground and adjust if necessary.

W07487—JUN—15JUL05

OUO6077,0001A8B -19-15JUL05-1/1

Adding Ballast to 3-Point Hitch

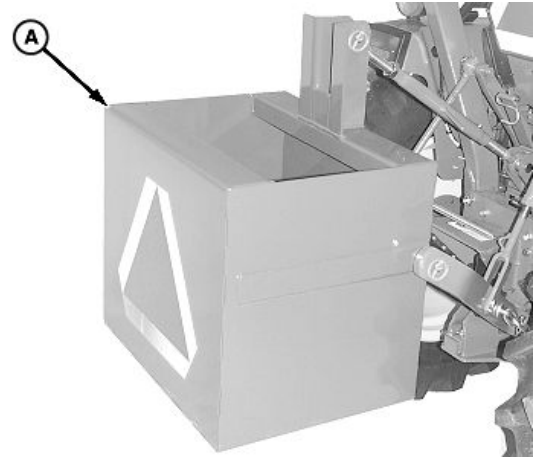
Weight can be added to the ballast box (A) by adding material such as sand or concrete. If more weight is required, tractor Quik-tach weights may be used.

NOTE: A ballast box extension is available to increase capacity of box. (See your John Deere dealer.)

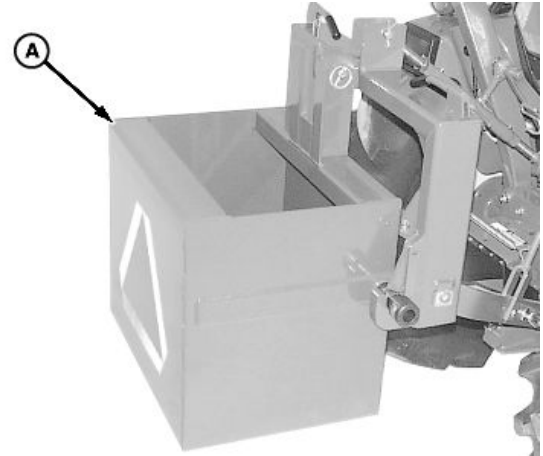
A 3-Point Hitch mounted implement may be used as ballast, but it must meet weight requirements of the ballast chart. (See your John Deere dealer.)

CALCULATED BALLAST kg (lb)		
	SAND (Dry)	CONCRETE
Ballast Box without Extension		
Volume: 0.14 cu m (4.94 cu ft) (0.18 cu yd)		
Material	217.5 (480)	315.5 (695)
Empty Box	58.5 (129)	58.5 (129)
Total Weight	276 (608)	374 (824)
Ballast Box with Extension		
Volume: 0.17 cu m (6.00 cu ft) (0.23 cu yd)		
Material	306.5 (676)	443.5 (977)
Empty Box	72.5 (160)	72.5 (160)
Total Weight	379 (835)	516 (1137)

A—Ballast Box



3-Point Hitch with Ballast Box



Quick Coupler with Ballast Box

OUO6038,0001B6E -19-06OCT10-1/1

W05950 —UN—24MAR03

W05951 —UN—24MAR03

Detach Loader

Removing Ballast Box

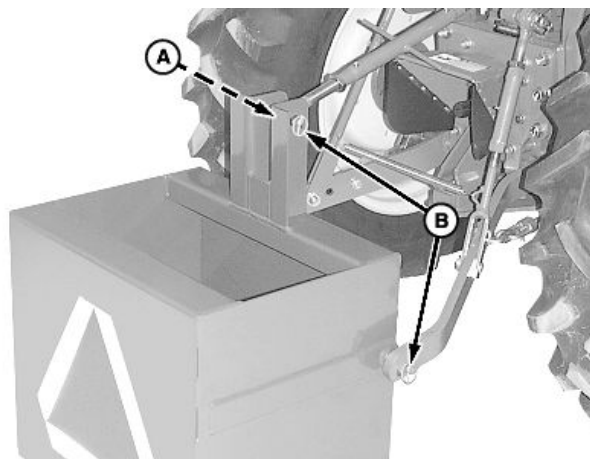
CAUTION: To prevent personal injury from tractor instability, remove ballast box from hitch before detaching loader.

To prevent personal injury caused by unexpected movement:

1. Park machine on a level surface.
2. Engage tractor parking brake and/or place transmission in PARK.
3. Disengage PTO.
4. Shut off tractor engine and remove key.

Ballast Box with Three-Point Hitch

1. Slowly push hitch control lever to lower ballast box to the ground.
2. Remove quick-lock pins (B) from hitch pins and install in storage position on tractor draft links.
3. Remove tractor draft links from ballast box hitch pins.
4. Remove quick-lock pin (B) from center link (A). Position tractor center link in transport location. Reinstall center link pin/hardware.
5. Carefully drive tractor away.



A—Center Link

B—Quick-Lock Pins (3 used)

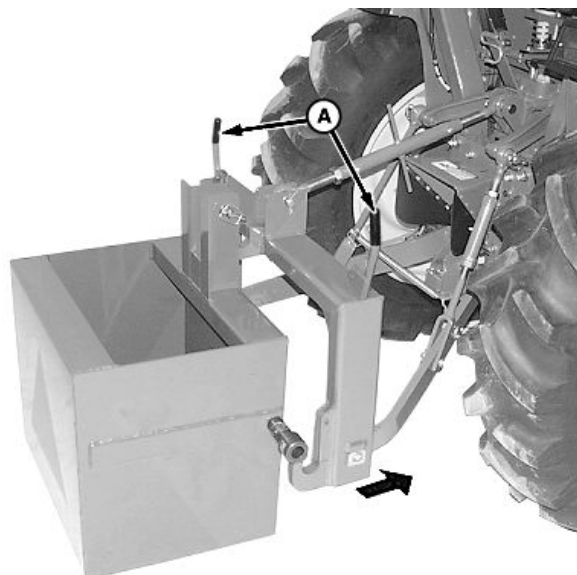
W05958 —UN—27MAR03

OUC6038,00018A1 -19-01NOV06-1/2

Ballast Box with Quick Coupler

1. Slowly push hitch control lever to lower ballast box close to the ground.
2. Raise both latch control levers (A) on quick coupler.
3. Start tractor engine.
4. Lower ballast box to the ground. Continue lowering quick coupler until hooks clear ballast box hitch pins.
5. Carefully drive tractor away.

A—Latch Control Levers



W05201 —UN—06MAR02

OUC6038,00018A1 -19-01NOV06-2/2

Detach Loader

CAUTION: To help prevent personal injury caused by falling or shifting loader, always detach loader on a hard level surface. Do not detach loader equipped with a pallet fork. Use of a materials bucket is recommended.

1. Remove ballast box. (See procedure in this section.)
2. Be sure loader is equipped with a materials bucket.
3. Start tractor engine.
4. Release parking brake and/or place transmission in **NEUTRAL**.
5. Dump bucket 10—20° and lower to ground.
6. Retract lift cylinders, raising front wheels 25—50 mm (1—2 in.) off the ground.

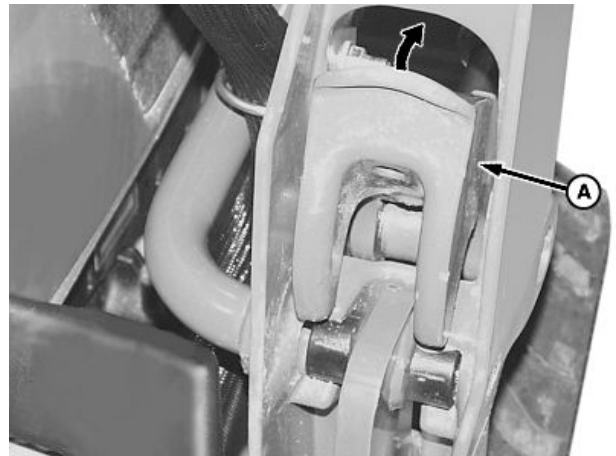


W14000 —UN—05OCT88

OUC6038,00020C9 -19-29MAY12-1/8

7. Move both loader mast latches (A) upward into UNLOCKED position.

A—Latch (1 each side)



Right-Hand Side Shown

W22499 —UN—14MAY12

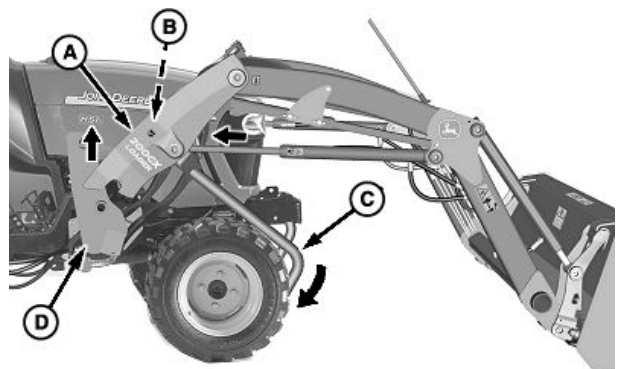
OUC6038,00020C9 -19-29MAY12-2/8

CAUTION: Avoid injury from latch closure. Make sure latches are closed before leaving loader unattended.

8. Extend loader lift cylinders until parking stand (C) contacts ground, masts (A) completely lift off frames (D) and latches (B) automatically snap into locked position.
9. Engage tractor parking brake and/or place transmission in **PARK**.
10. Shut off tractor engine and remove key.

A—Mast
B—Latch

C—Parking Stand
D—Frame



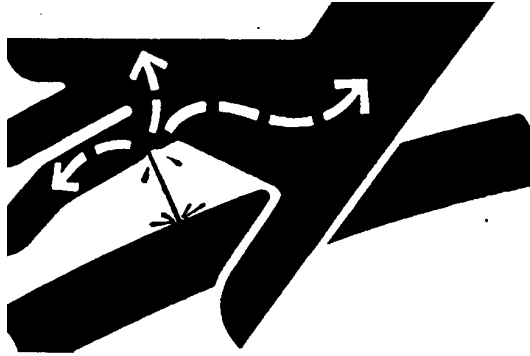
W22500 —UN—16MAY12

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OUC6038,00020C9 -19-29MAY12-3/8

CAUTION: To help prevent injury from escaping hydraulic oil under pressure, relieve pressure in the system.

11. Move control lever(s) back and forth and side-to-side (if applicable) several times. (See your tractor Operator's Manual.)



X9811 —UN—23AUG88

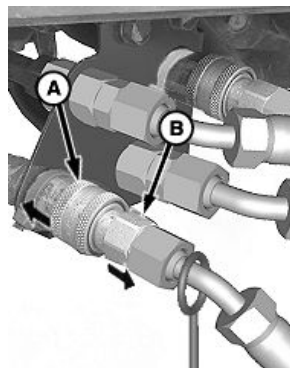
OUC6038,00020C9 -19-29MAY12-4/8

12. Disconnect hydraulic hoses from tractor:

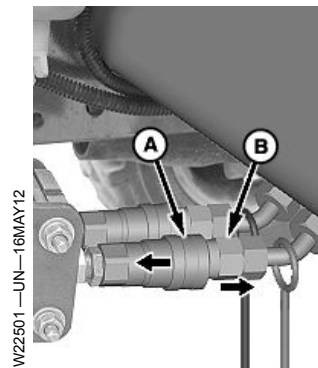
- a. Push back collar (A) on female coupler and pull out male coupler (B).
- b. Install dust plug in female coupler and dust cap on male coupler.
- c. Repeat Steps (a and b) for remaining couplers.

A—Collar, Female Coupler

B—Coupler, Male



Couplers (Tractor)



Couplers (Valves)

W22501 —UN—16MAY12

W22502 —UN—16MAY12

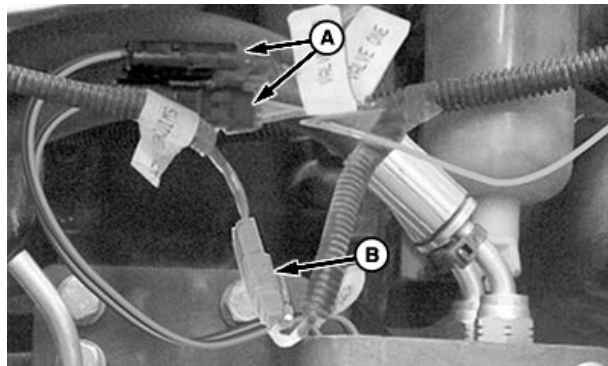
OUC6038,00020C9 -19-29MAY12-5/8

IMPORTANT: To prevent damage to the wiring harness, make sure harness is disconnected and clear of any protruding objects when backing tractor away from loader.

13. Disconnect anti-spill power connector (B) and valve connectors (A).

A—Connectors, Valves

B—Connector, Power



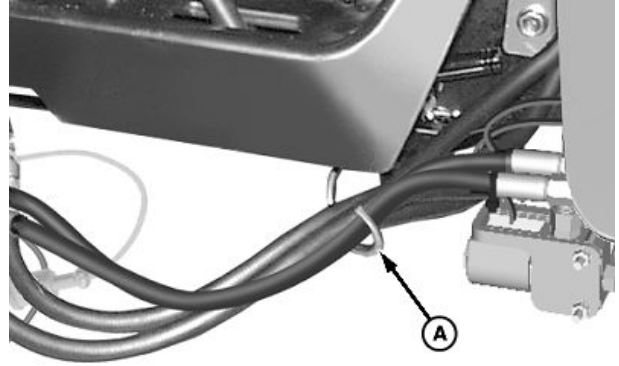
W22503 —UN—16MAY12

Continued on next page

OUC6038,00020C9 -19-29MAY12-6/8

14. Remove hydraulic hoses from guide (A).

A—Hose Guide



OUO6038,00020C9 -19-29MAY12-7/8

W22507 —UN—21MAY12

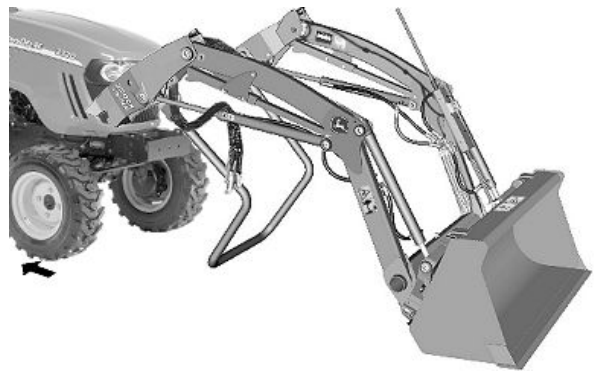
IMPORTANT: If loader will be parked outside, cover electrical connectors on wiring harness with a plastic bag and tape bag closed with electrical tape.

15. Store hoses and wiring harness on lift cylinder. DO NOT lay hoses and harness bundle on the ground.

16. Start tractor engine.

IMPORTANT: Avoid damaging hoses. Make sure hoses do not interfere with tractor when backing away from loader.

17. Disengage tractor parking brake, place transmission in **REVERSE** and slowly move tractor away from loader.



OUO6038,00020C9 -19-29MAY12-8/8

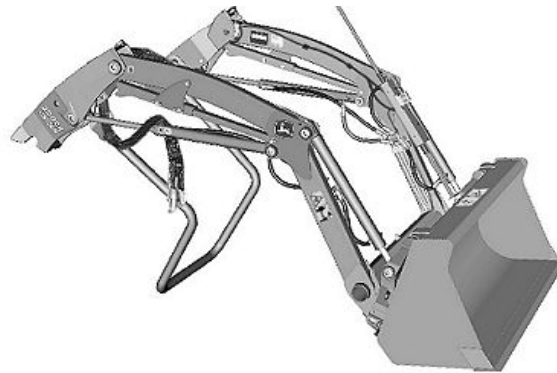
W22506 —UN—21MAY12

Attach Loader

Preparing to Attach Loader

⚠ CAUTION: To help prevent personal injury from tractor instability, be sure to prepare tractor for loader operation as outlined in **Preparing the Tractor** section.

1. Make sure tractor is prepared for loader operation. (See **Preparing the Tractor** section.)
2. Check loader for any damaged or missing parts.
3. Be sure all hydraulic fittings on loader and tractor are free of dirt.

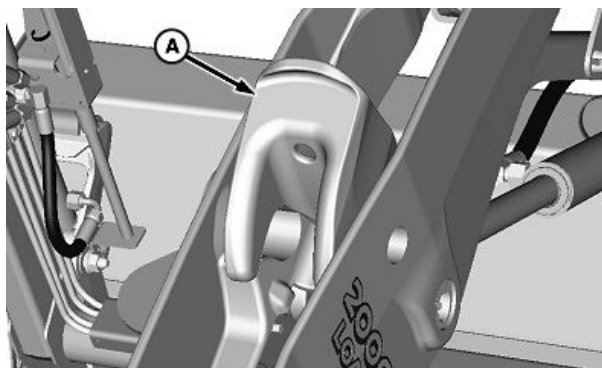


W22586—UN—04JUN12

OUC6038,00020D4 -19-04JUN12-1/2

4. Latches (A) should be in LOCKED position, as shown.

A—Latch (1 each side)



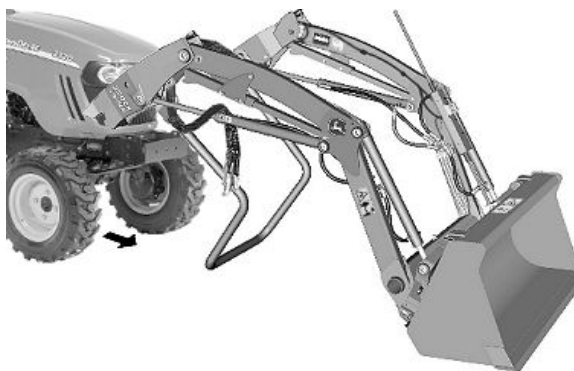
Right-Hand Side Shown

W22505—UN—18MAY12

OUC6038,00020D4 -19-04JUN12-2/2

Attach Loader

1. Drive tractor slowly, straight into loader.
2. Align masts with mounting frames.
3. Engage tractor parking brake and/or place transmission in **PARK**.
4. Shut off tractor engine and remove key.



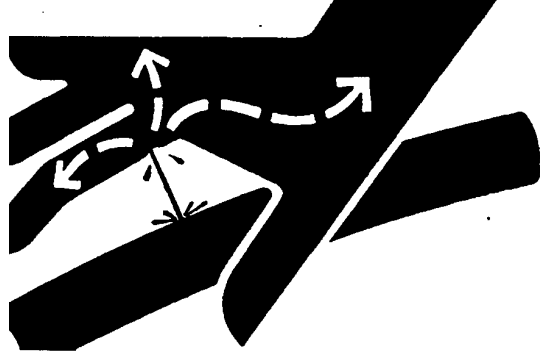
W22560—UN—21MAY12

Continued on next page

OUC6038,00020D3 -19-06JUN12-1/9

CAUTION: To help prevent injury from escaping hydraulic oil under pressure, relieve pressure in the system.

5. Move control lever(s) back and forth and side-to-side (if applicable) several times. (See your tractor Operator's Manual.)

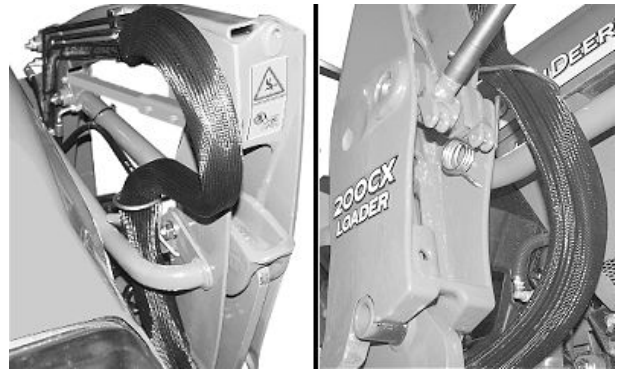


X9811 —UN—23AUG88

OUO6038,00020D3 -19-06JUN12-2/9

6. Make sure hoses and wiring harness are routed through hose guide (A), as shown.

A—Hose Guide



W22561 —UN—21MAY12

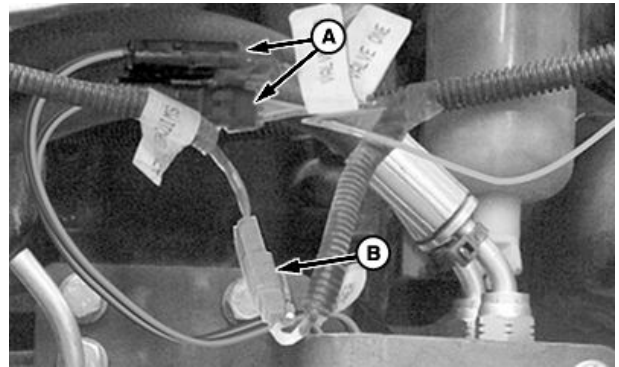
OUO6038,00020D3 -19-06JUN12-3/9

IMPORTANT: To prevent damage to the wiring harness, make sure harness is and clear of any protruding objects when driving tractor forward into loader.

7. Connect anti-spill power connector (B) and valve connectors (A).

A—Connectors, Valves

B—Connector, Power



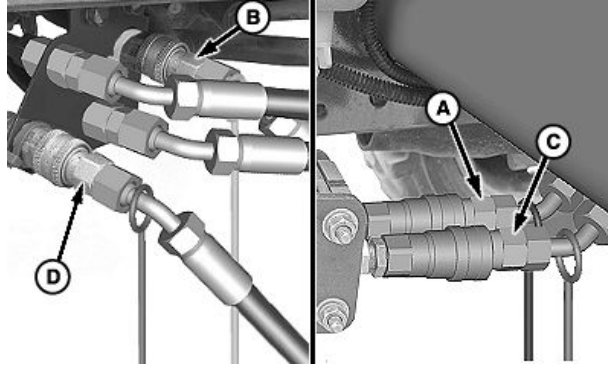
W22503 —UN—16MAY12

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OUO6038,00020D3 -19-06JUN12-4/9

8. Connect hoses by matching color-coded dust caps, plugs or tie bands.

Key	Color	Hydraulic Function
A	Black	Bucket Cylinder—Rod End
B	Yellow	Bucket Cylinder—Head End
C	Blue	Lift Cylinder—Head End
D	Red	Lift Cylinder—Rod End



W22578 —UN—01JUN12

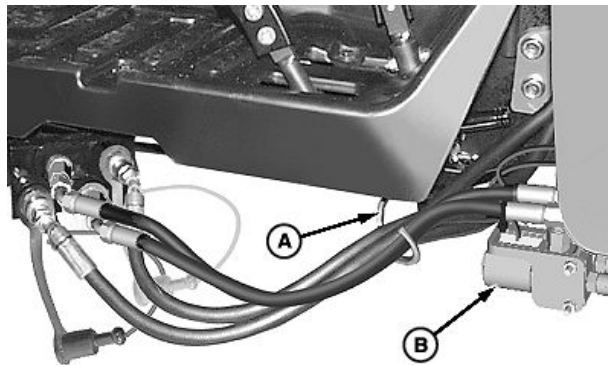
OOU6038,00020D3 -19-06JUN12-5/9

CAUTION: Help prevent personal injury caused by unexpected loader movement. Anticipated loader movement responds to control lever only if hoses are connected correctly.

NOTE: Hose connections are identified by matching the color-coded cap on the hose end with the same color-coded plug on the control valve coupler. If caps are missing, see IDENTIFYING HOSE CONNECTIONS in Service section.

9. Route hoses from loader and valve assembly (B) through hose guide (A).

A—Hose Guide



W22562 —UN—21MAY12

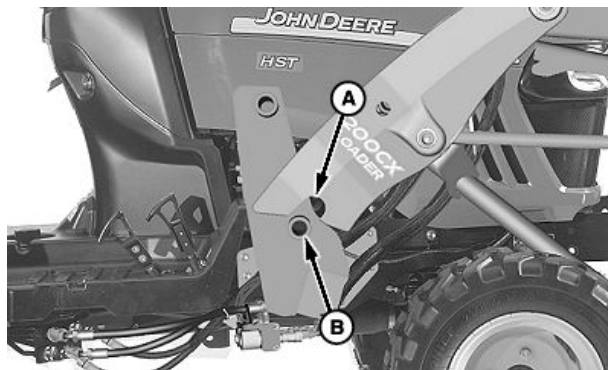
OOU6038,00020D3 -19-06JUN12-6/9

NOTE: It may be necessary to drive tractor forward slowly to keep masts/frames in line while performing the following procedures.

- Be sure bushing (B) on mounting frame is aligned with notch (A) in masts.
- Start tractor engine.
- Release parking brake and/or place transmission in **NEUTRAL**.

A—Notch

B—Bushing



Right-Hand Side Shown

W22563 —UN—04JUN12

Continued on next page

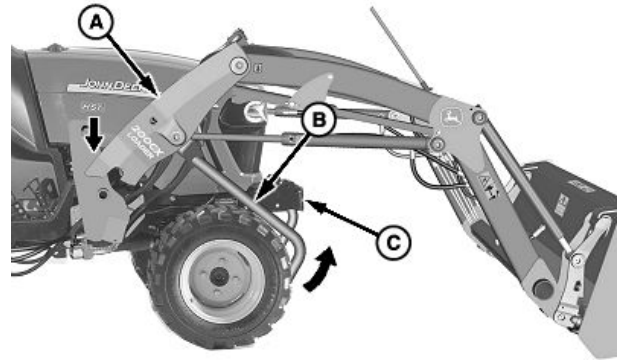
OOU6038,00020D3 -19-06JUN12-7/9

IMPORTANT: Make sure masts are fully seated on mounting frames.

13. Slowly retract lift cylinders. Masts (A) will lower onto mounting frames and parking stand (B) will raise up below weight bracket (C).

A—Mast
B—Parking Stand

C—Weight Bracket



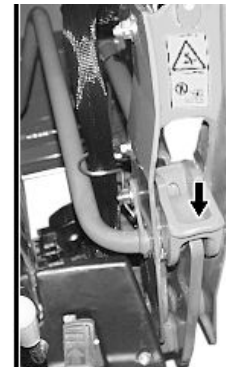
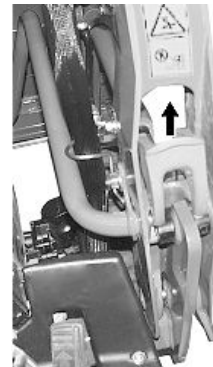
W22564 —UN—21MAY12

OUC6038,00020D3 -19-06JUN12-8/9

14. Dump bucket 10—20° and retract lift cylinders until loader masts move back and latches lock over mounting frame bushings.
15. Extend lift cylinders and lift bucket from ground to ensure loader is properly mounted.
16. Add appropriate ballast. (See Preparing the Tractor section.)
17. Engage tractor parking brake and/or place transmission in **PARK**.
18. Shut off tractor engine and remove key.



W22566 —UN—22MAY12



W22567 —UN—22MAY12

OUC6038,00020D3 -19-06JUN12-9/9

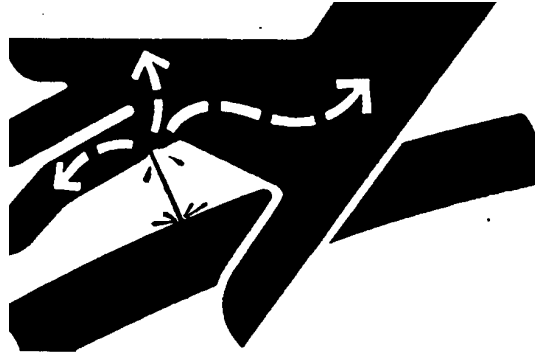
Checking Loader Operation

⚠ CAUTION: Escaping fluid under pressure can penetrate the skin causing serious injury. Relieve pressure before disconnecting hydraulic or other lines. Tighten all connections before applying pressure. Keep hands and body away from pinholes and nozzles which eject fluids under high pressure. Use a piece of cardboard or wood to search for leaks. Do not use your hand.

If ANY fluid is injected into the skin, it must be surgically removed within a few hours by a doctor familiar with this type of injury or gangrene may result.

1. Hydraulic hoses can fail due to physical damage, kinks, age and exposure. Check hoses regularly. Replace damaged hoses.
2. Cycle loader.
3. Ensure loader reacts correctly to control lever movement. (See your tractor Operator's Manual.)

⚠ CAUTION: To help prevent injury from escaping hydraulic oil under pressure, relieve



system pressure by stopping the engine and operating control lever(s).

4. Check for hydraulic oil leaks.
5. Check tractor transmission/hydraulic oil level. (See your tractor Operator's Manual.)

X9811 —UN—23AUG88

OUC6077,0001A8E -19-15JUL05-1/1

Transport Loader

Carrying Loads

CAUTION: When transporting machine on a road or highway at night or during the day, use accessory lights and devices for adequate warning to operators of other vehicles. Check local governmental regulations. Various safety devices are available from your John Deere dealer. Keep safety items in good condition. Replace missing or damaged items.

1. Carrying large loads may reduce visibility. Use extra caution.
2. Drive slowly if carrying loose materials. Rough conditions may cause material to spill.
3. Avoid carrying material wider than the bucket.



W22569 —UN—22MAY12

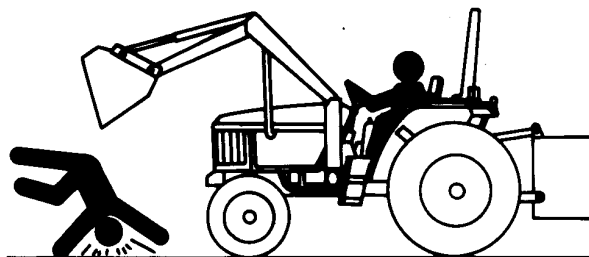
4. Loader makes a large arc when turning. Reduce travel speed.

OUO6038,00020D9 -19-22MAY12-1/1

Keep Riders Off Machine

CAUTION:
Only allow the operator on the tractor.
Keep all riders off.

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



W01150 —UN—12AUG93

OUO6077,0001389 -19-13FEB01-1/1

Driving on Public Roads

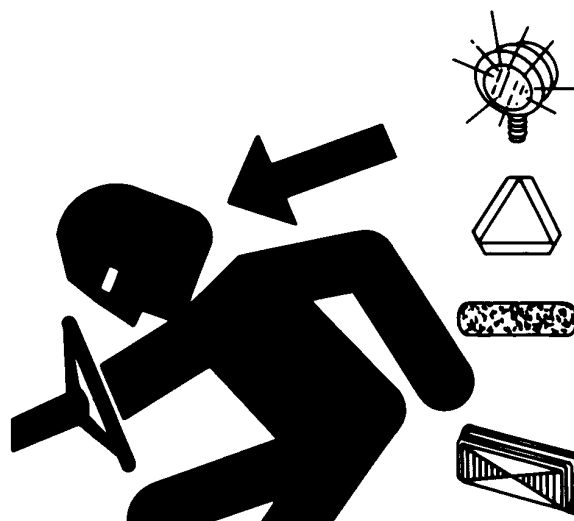
⚠ CAUTION: Slow moving tractors, self-propelled equipment and towed implements or attachments can create a hazard when driven on public roads. They are difficult to see, especially at night. Avoid personal injury or death resulting from collision with a vehicle.

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.

While driving tractor and loader, follow these precautions:

- Carry loads close to the ground to aid visibility and to lower center of gravity.
- Roll bucket or attachment back.
- Allow for additional length of loader on tractor while turning.
- Balance loads so weight is evenly distributed and load is stable.
- Drive slowly if carrying materials. Rough conditions may cause material to spill.
- Avoid carrying materials wider than the tractor.



TS951—UN—12APR90

W07488—UN—15JUL05

OUC6077,0001A8F -19-15JUL05-1/1

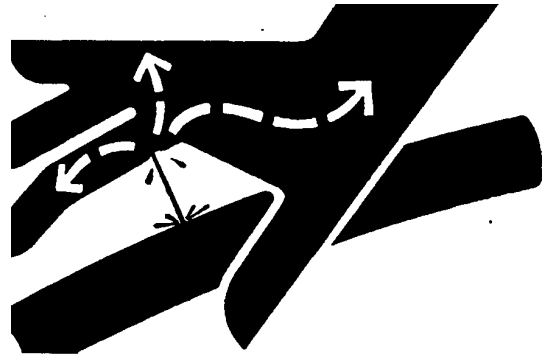
Operate Loader

Preoperating Checks

CAUTION: Escaping fluid under pressure can penetrate the skin causing serious injury. Relieve pressure before disconnecting hydraulic or other lines. Tighten all connections before applying pressure. Keep hands and body away from pinholes and nozzles which eject fluids under high pressure. Use a piece of cardboard or paper to search for leaks. Do not use your hand.

If ANY fluid is injected into the skin, it must be surgically removed within a few hours by a doctor familiar with this type of injury or gangrene may result.

1. Check for loose hydraulic fittings.
2. Hydraulic hoses can fail due to physical damage, kinks, age and exposure. Check hoses regularly. Replace damaged hoses.



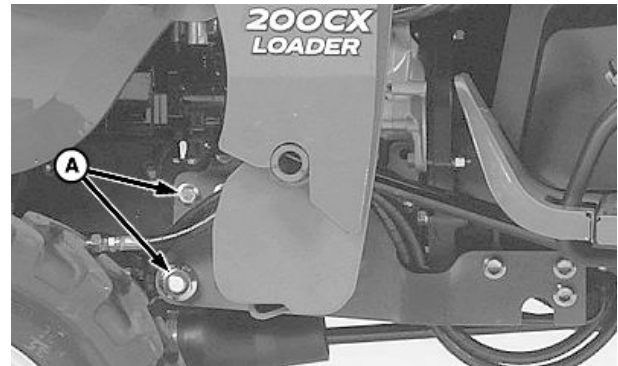
X9811—UN—23AUG88

3. Check for hydraulic oil leaks. (See TIGHTENING PROCEDURE FOR FITTINGS in Service section.)

OUO6038,00020DA -19-23MAY12-1/2

4. Check for missing or loose hardware (A). (See EVERY 50 HOURS in Lubrication and Maintenance section for correct hardware torque.)
5. Check tractor transmission/hydraulic fluid level. (See your tractor Operator's Manual.)
6. Lubricate the loader. (See Lubrication and Maintenance section.)

A—Hardware



2520 Mounting Frame (Left-Hand Side Shown)

W22570—UN—23MAY12

OUO6038,00020DA -19-23MAY12-2/2

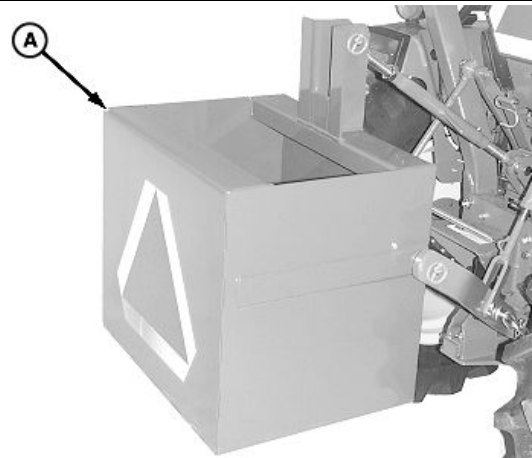
Using Ballast Box

CAUTION: To help prevent bodily injury or death from tractor/loader rollover, add required amount of ballast to tractor. (See Preparing the Tractor section.)

Check Prepare the Tractor section for complete instructions for proper ballasting of tractor for loader operation.

Use ballast box (A) in the rear-most position (approximately 610 mm [24 in.] off the ground).

A—Ballast Box



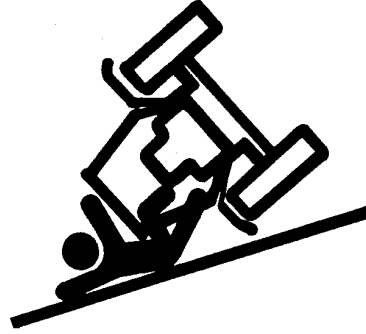
W05950—UN—24MAR03

OUO6038,00018A6 -19-06OCT10-1/1

Avoid Rollover Accidents

⚠ CAUTION: To help prevent personal injury or death caused by tractor rollover, install rollover protective structure (ROPS) and add proper ballast to tractor.

- Equip tractor with rollover protective structure (ROPS) and wear your seatbelt.
- Be sure tractor tread widths and rear ballast is correct before using the loader.
- If tractor is equipped with 4-WD, be sure it is engaged during loader operation.
- Carry load low to the ground.
- Use low tractor speeds.
- Stop loader gradually when lowering or lifting loads.
- Avoid traveling across slopes.



- Refer to the tractor Operator's Manual for safe operating practices.

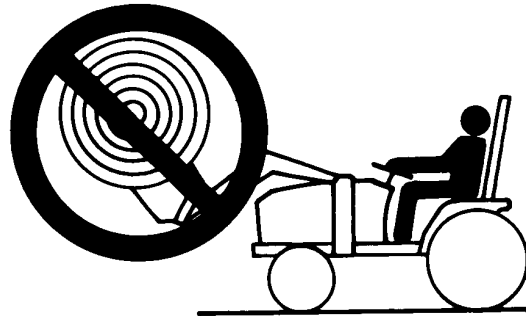
OUC1078,000007C -19-11JAN01-1/1

RW13093 —UN—07DEC88

Do Not Handle Round or Large Square Bales

⚠ CAUTION: To help prevent bodily injury or death from falling bales or tractor/loader roll over, **DO NOT** handle bales with Loader.

DO NOT HANDLE round or square bales with Loader. Bale handling attachments are NOT approved for use on this loader.



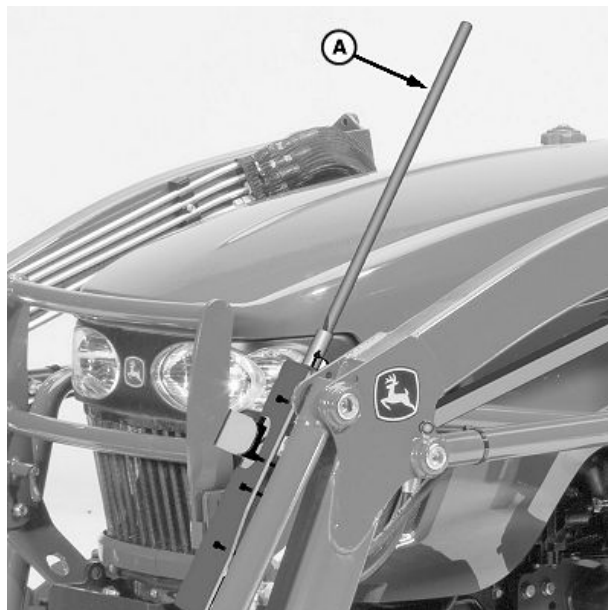
OUC6038,000158E -19-19MAR02-1/1

W02902 —UN—17SEP97

Using Bucket Level Indicator

Cleaning concrete surfaces causes rapid bucket wear. Bucket level indicator (A) helps to ensure bucket rides on wear pads.

A—Bucket Level Indicator



OUC6038,00020CA -19-17MAY12-1/1

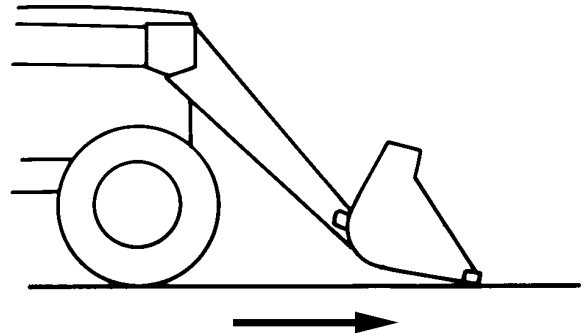
W22504 —UN—17MAY12

Leveling and Scraping Forward

IMPORTANT: To avoid damage to loader or bending the bucket cutting edge on a solid object while scraping forward, position the bucket level or just below level. Use FLOAT to reduce wear on cutting edge and damage to concrete when scraping concrete.

To level or scrape forward, position bucket level or slightly below level.

Use FLOAT to reduce down pressure and wear on cutting edge when scraping concrete. Using FLOAT also reduces damage to concrete surface.



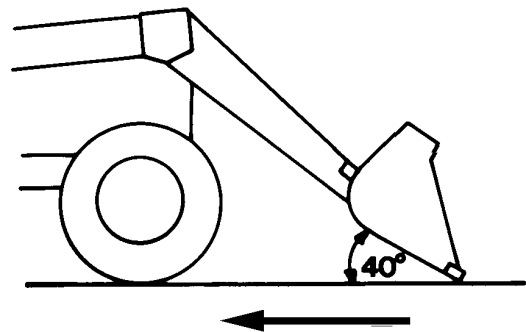
OUO6038,0001590 -19-06OCT10-1/1

W01785—UN—07JAN97

Leveling in Reverse

IMPORTANT: To avoid damage to loader or bending the bucket cutting edge on a solid object while leveling in reverse, position the bucket less than 40° below level. Use FLOAT to reduce down pressure.

1. Position bucket 40° or less below level.
2. When possible, use "FLOAT" to reduce down pressure on bucket.
3. Back up slowly.



OUO6038,000192F -19-06OCT10-1/1

W01786—UN—07JAN97

Carrying Material

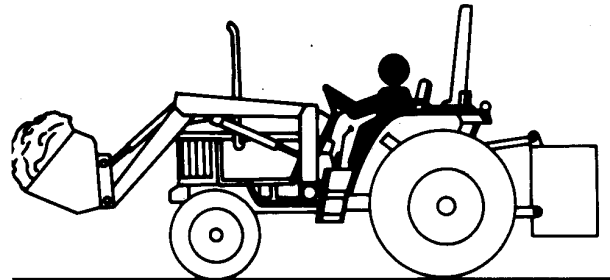
Do not exceed lift capacity of loader.

Carry load low.

Travel slowly over rough ground or when making turns.

Drive slowly through gates and doors.

Avoid carrying loose or shiftable loads.



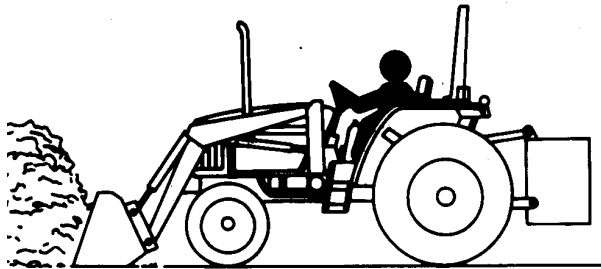
OUO1078,0000081 -19-06OCT10-1/1

W01146—UN—12AUG93

Removing Material from a Pile

Approach and enter pile with a level bucket. If the pile is high, remove the top first.

NOTE: Bucket top is parallel to bottom. Bucket is level when top is level. A bucket level indicator attachment is also included.

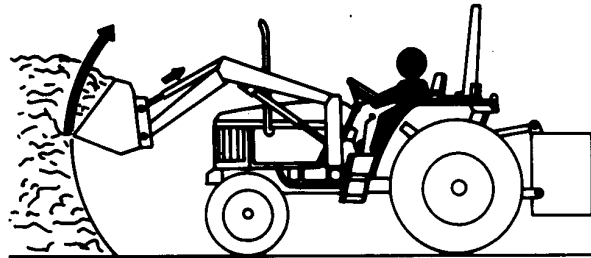


W01143 —UN—12AUG93

OUO1078,0000082 -19-06OCT10-1/2

Move forward slowly, lifting the loader and rolling back bucket.

NOTE: Overfilling the bucket in heavy or packed material, may cause the loader to stall. If loader stalls, back tractor up or take less material.



W01142 —UN—12AUG93

OUO1078,0000082 -19-06OCT10-2/2

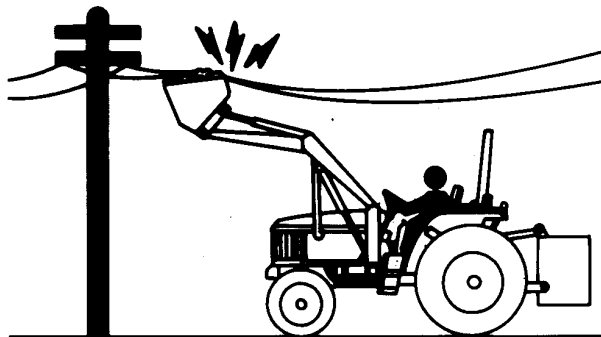
Loading Operations

⚠ CAUTION: Help prevent bodily injury or death from electrical contact. Beware of lift clearance when raising loader to maximum height. Beware of low electrical wires when loader is raised. Do not dismount from tractor if loader is in contact with electrical source.

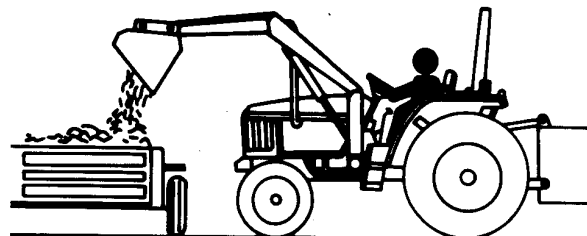
1. Carry load low to help prevent spillage and increase tractor-loader stability.
2. Raise loader to required height with bucket rolled back.
3. Dump load.

⚠ CAUTION: Do not move the loader control lever to "FLOAT" to lower the loader. Loss of control results and the loader will fall to the ground due to its own weight.

4. Lower heavy load slowly to avoid possible tractor or loader damage.



W01145 —UN—12AUG93



W01144 —UN—12AUG93

OUO1078,0000083 -19-06OCT10-1/1

Using Service Locks

Install Service Locks

1. Remove any load from bucket or attachment.

IMPORTANT: Avoid machine damage. Do not lower loader onto service locks with hydraulic pressure applied or with load in bucket.

2. Engage parking brake or place transmission in **PARK**.
3. Start tractor and raise loader to maximum height.
4. Shut off tractor engine and remove key.

CAUTION: Avoid injury or death. Do not stand under a raised loader. Lift service lock around the leveling link while standing to side of tractor and loader.

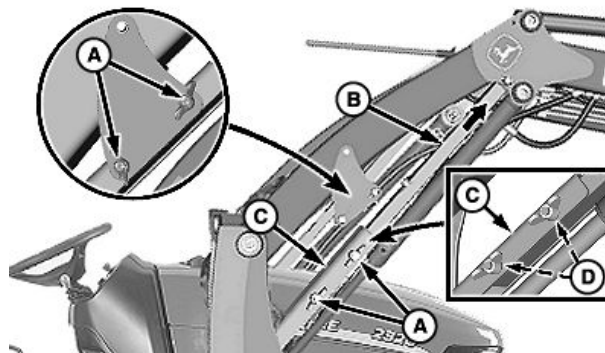
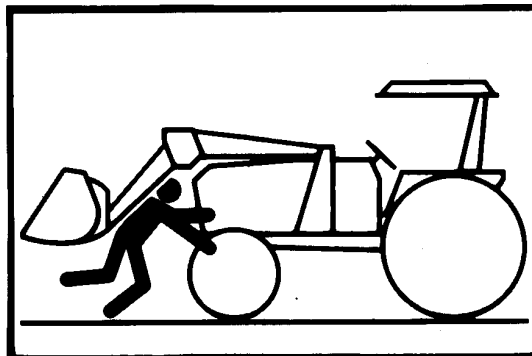
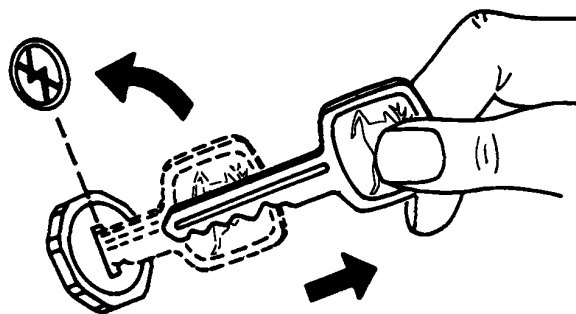
5. Remove wing nuts, lock washers, and cap screws (A) from storage bracket on service lock.

CAUTION: To safely support weight of raised loader, make sure cap screws (A) are installed through holes in outer sleeve (C) and last two holes (D) in extension (B).

6. Pivot service lock down and align holes on outer sleeve (C) with last two holes (D) in extension (B).
7. Install cap screws, lock washers, and wing nuts (A) as shown.
8. Dump bucket or attachment to relieve pressure.
9. Slowly relieve pressure in lift cylinders until booms lower and come to rest on service locks. (See procedure in your tractor Operator's Manual.)

A—Cap Screw, Lock Washer, Wing Nut (2 per side)
B—Extension (1 each side)

C—Outer Sleeve
D—Holes (end of Extension)



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OUC6038,00020CB -19-05JUN12-1/2

E50093 —UN—08AUG01

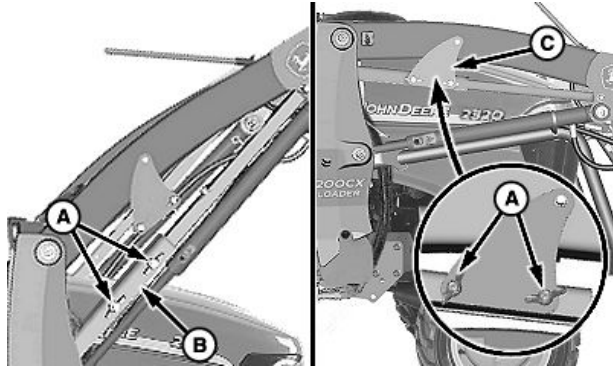
W00278 —UN—04DEC91

W22571 —UN—05JUN12

Remove and Store Service Locks

CAUTION: Avoid injury or death. Do not stand under a raised loader. Lift service lock around the leveling link while standing to side of tractor and loader.

1. Level the attachment with the ground then raise loader to maximum height.
2. Lock multi-function control lever, shut off tractor engine and remove key.
3. Remove wing nuts, lock washers, and cap screws (A).
4. Align extension (B) with inner set of holes.
5. Align service lock with bracket (C) and install cap screws, lock washers, and wing nuts (A).
6. Slowly lower loader by releasing pressure.



A—Cap Screw, Lock Washer, and Wing Nut (2 per side)
B—Extension (1 each side)

C—Bracket (1 each side)

OUC6038,00020CB -19-05JUN12-2/2

W22572—UN—22MAY12

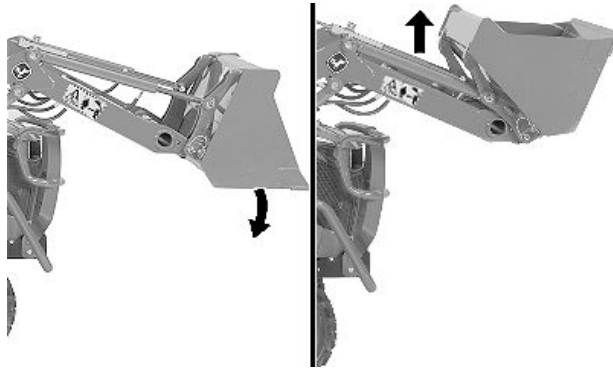
Anti-Spill System

The anti-spill system prevents damage to the machine and injury to the operator by using a system of cams and switches to control the hydraulic valves responsible for boom height and bucket or attachment angle.

To achieve maximum height of the boom there are two positions at which the anti-spill system stops the raise function of the boom. The bucket or attachment must then be tilted forward within the range of safe operation to continue the raising process.

To raise loader to its highest point, perform the following operations:

1. Raise the boom, the anti-spill system automatically stops the raise and rollback function when a tilt function must be made.
2. Tilt the bucket or attachment forward until the raise function resumes.
3. Repeat until desired boom height is acquired.



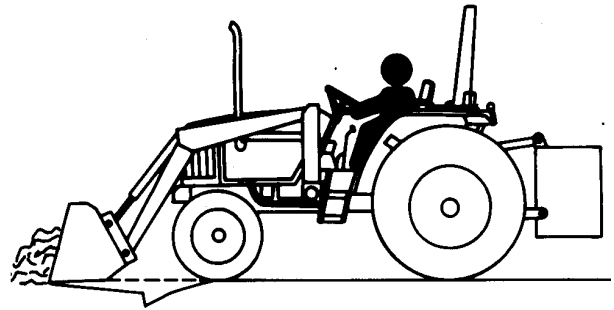
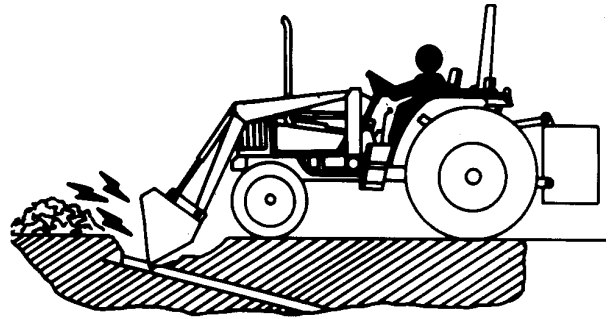
OUC6038,00020CC -19-17MAY12-1/1

W22384—UN—02MAY12

Digging

CAUTION: To help prevent bodily injury or death from underground utilities rupturing, check for utility locations before digging. Do not dismount from tractor if loader is in contact with electrical source.

1. Before digging, check for location of cables, gas lines and water lines.
2. Angle bucket slightly below ground level.
3. When bucket has penetrated material, level bucket and continue forward motion until bucket is full.



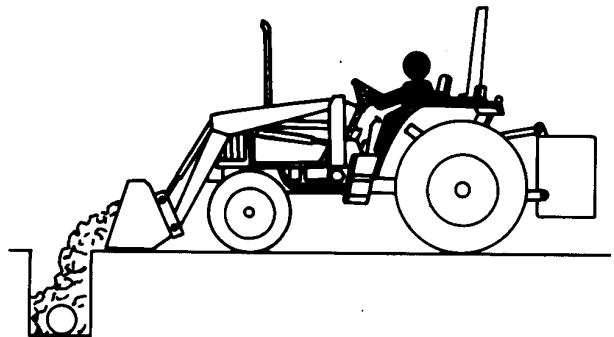
OUO1078,0000084 -19-06OCT10-1/1

W01149 —UN—12AUG93

W01148 —UN—12AUG93

Backfilling

1. When backfilling from a large pile, shovel off the top of the pile, pushing toward the excavation. Drag some soil back to form a work ramp of convenient grade.
2. Approach the pile with a level bucket. Actuate the lift and bucket controls to determine the amount of material to be pushed.



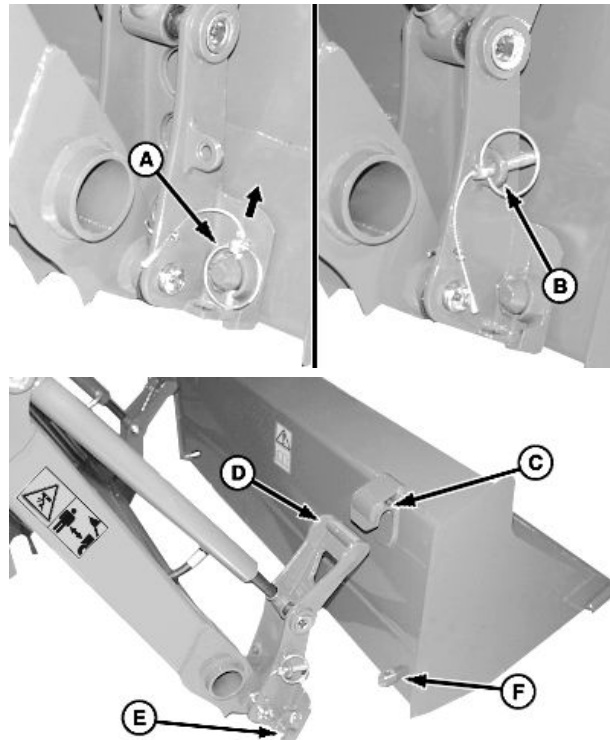
OUO1078,0000085 -19-06OCT10-1/1

W01147 —UN—12AUG93

Attaching and Detaching Attachment

*NOTE: Procedure is the same for all attachments.
Bucket attachment shown.*

1. Start tractor engine.
2. Release parking brake and/or place transmission in **NEUTRAL**.
3. Roll attachment back slightly and raise boom approximately 460 mm (18 in.) above ground level.
4. Engage tractor parking brake and/or place transmission in **PARK**. Shut off tractor engine and remove key.
5. Remove quick-lock pin (A) from each side of attachment.
6. Store pins in storage position (B).
7. Start tractor engine.
8. Extend bucket cylinders until pin (F) releases from holder strap (E) on each side of attachment.
9. Lower loader boom, place transmission in **REVERSE** and move away from attachment. Holder (D) will release from hook (C) on each side of attachment.
10. Set parking brake and/or place transmission in **PARK**. Shut off tractor engine and remove key.
11. Attach attachment in reverse order of detaching.



A—Quick-Lock Pin
B—Storage Position
C—Hook

D—Holder
E—Holder Strap
F—Bucket Pin

W07260 —UN—28FEB05

W22483 —UN—04MAY12

OUO6038,00020DB -19-23MAY12-1/1

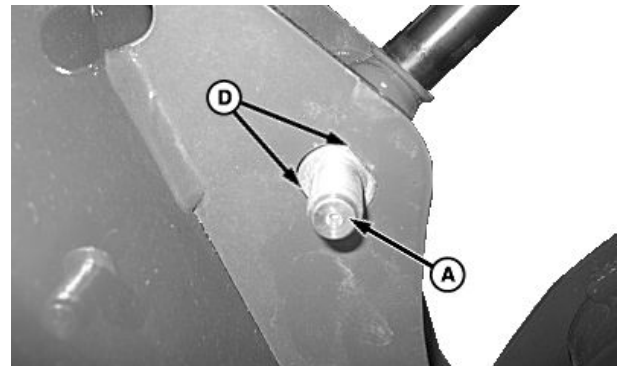
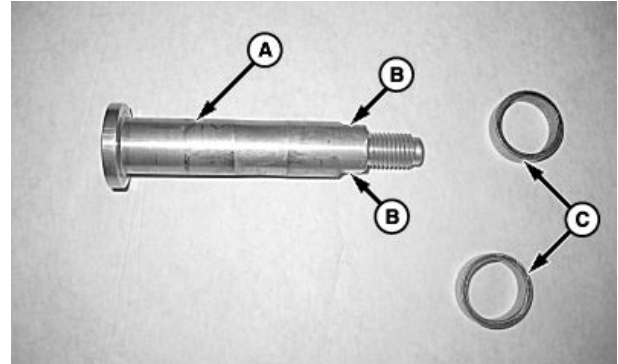
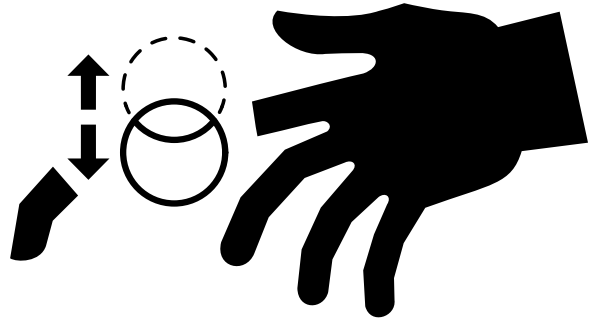
Attach and Detach Pin-On Bucket (If Equipped)

CAUTION: Avoid injury. Keep hands clear of all moving parts. Use tapered pin or drift to help align holes.

1. Bucket pins (A) have two flat sides (B) that must align with inner bucket hole (D). Spacers (C) install on each side of top cylinder rods.

A—Bucket Pin
B—Flat Sides

C—Spacers (Top pin only, 2 on each pin)
D—Inside of Bucket Bracket (Flat Edges)



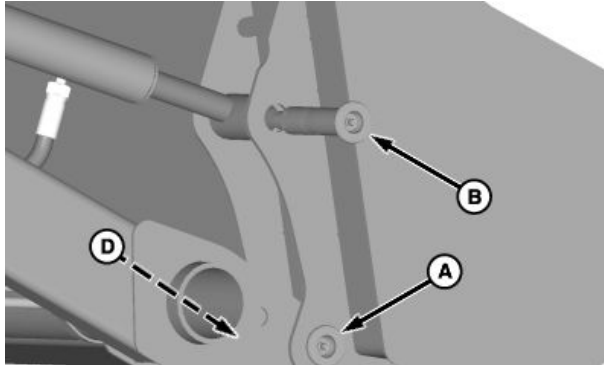
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LD45720,00002D0 -19-06OCT10-1/2

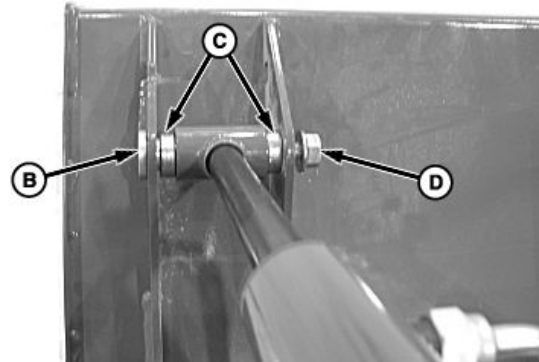
W20683 —UN—17FEB10

W20855 —UN—04MAY10

W20856 —UN—06OCT10

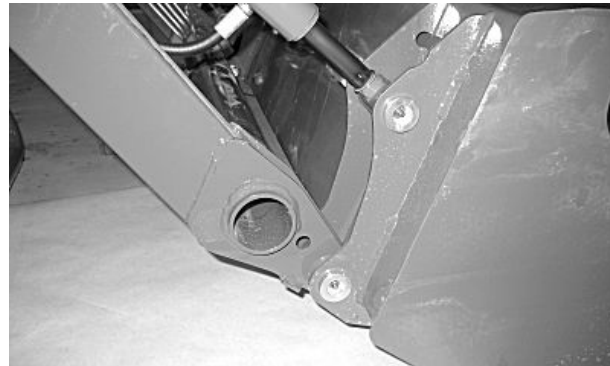


W20788B—UN—05MAY10



W20857—UN—05MAY10

2. Position tractor so loader boom aligns with lower pin holes. Engage tractor parking brake and place transmission in **PARK**. Shut off tractor engine and remove key.
3. Install lower bucket pin (A) and flange nut (D).
4. Start tractor. Use loader control to align cylinder rod with upper hole.
5. Shut off tractor engine.
6. Install upper pin (B) with spacers (C) on each side of cylinder rod. Tighten hardware to specification.



W20858—UN—04MAY10

Specification

Flange Nuts—Torque..... 150 N·m
(110 lb.-ft.)

A—Lower Bucket Pin
B—Upper Bucket Pin

C—Spacers (2 each, top pin only)
D—Flange Nut

7. Start tractor and verify operation of bucket functions.
8. Detach bucket in reverse order.

LD45720,00002D0 -19-06OCT10-2/2

Attachments Available

John Deere and Frontier attachments are available for this loader. See your John Deere dealer to purchase approved attachments.

NOTE: When ordering an attachment/bundle, make sure to request the Installation Instructions and operating information from your John Deere dealer.

Installation instructions are available online to John Deere dealers.

OUO6077,00019A6 -19-28JAN08-1/1

Lubrication and Maintenance

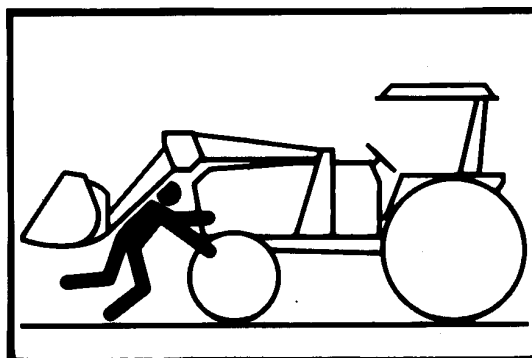
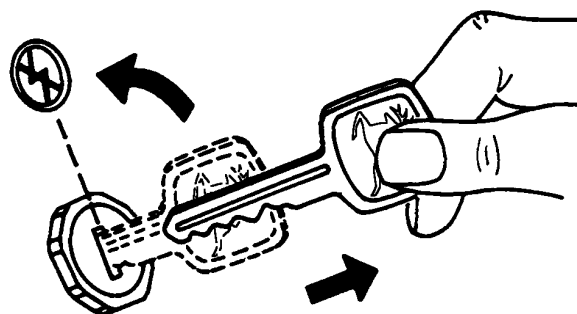
Lubricate and Maintain Loader Safely

CAUTION: Help prevent bodily injury from accidental lowering of loader. Do not perform service around front of tractor with loader elevated and unsupported. Before lubricating or servicing the loader or tractor, perform the following:

1. Engage parking brake or place transmission in **PARK**.
2. Lower loader to ground or install service locks (A) on both boom cylinders. (See **USING SERVICE LOCKS** in Operate Loader section.)
3. Shut off tractor engine.
4. Slowly relieve pressure in hydraulic system. (See procedure in your tractor Operator's Manual.)

IMPORTANT: Avoid machine damage. Do not lower loader onto service locks with hydraulic pressure applied or with load in bucket.

A—Service Lock (1 each side)



OUO6038,00020CD -19-23MAY12-1/1

W22573 —UN—04JUN12

E50093 —UN—08AUG01

W00278 —UN—04DEC91

Perform Lubrication and Maintenance

IMPORTANT: The recommended service intervals are based on normal/average conditions. Severe or unusual conditions may require more frequent lubrication.

Perform each lubrication and service illustrated in this section before and after storage.

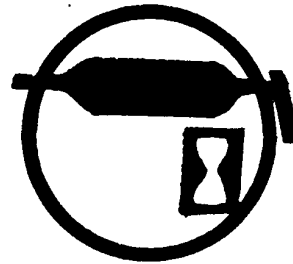
Clean lubrication fittings before using grease gun. Replace lost or broken fittings immediately. If a new fitting fails to take grease, remove and check for failure of adjoining parts.

Using tractor hour meter as a guide, perform services at the hourly intervals indicated on following pages.

OUO1078,0000094 -19-11JAN01-1/1

Observe Lubrication Symbols

Lubricate with John Deere SD POLYUREA GREASE or an equivalent SAE multipurpose-type grease (unless otherwise specified) at hourly intervals indicated on the symbols.



W11368 —UN—07OCT88

OUO1078,0000047 -19-13DEC00-1/1

Grease

Use grease based on NLGI consistency numbers and the expected air temperature range during the service interval.

John Deere SD Polyurea Grease is preferred.

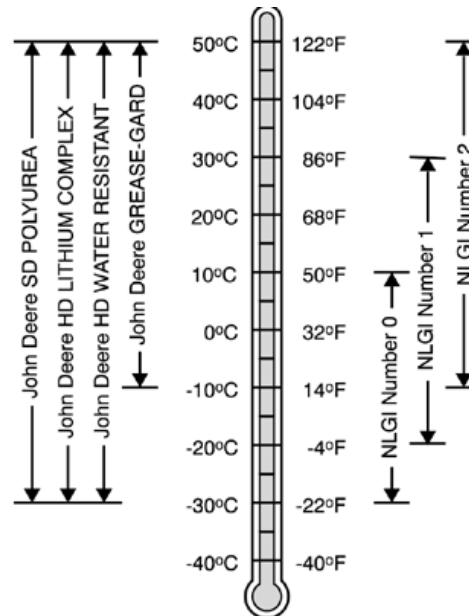
The following greases are also recommended:

- John Deere HD Lithium Complex Grease
- John Deere HD Water Resistant Grease
- John Deere GREASE-GARD™

Other greases may be used if they meet the following:

- NLGI Performance Classification GC-LB

IMPORTANT: Some types of grease thickeners are not compatible with others. Consult your grease supplier before mixing different types of grease.



Greases for Air Temperature Ranges

TS1673 —UN—31OCT03

GREASE-GARD is a trademark of Deere & Company

DX,GREAI -19-14APR11-1/1

Alternative and Synthetic Lubricants

Conditions in certain geographical areas may require lubricant recommendations different from those printed in this manual.

Some John Deere brand coolants and lubricants may not be available in your location.

Consult your John Deere dealer to obtain information and recommendations.

Synthetic lubricants may be used if they meet the performance requirements as shown in this manual.

The temperature limits and service intervals shown in this manual apply to both conventional and synthetic lubricants.

Re-refined base stock products may be used if the finished lubricant meets the performance requirements.

DX,ALTER -19-11APR11-1/1

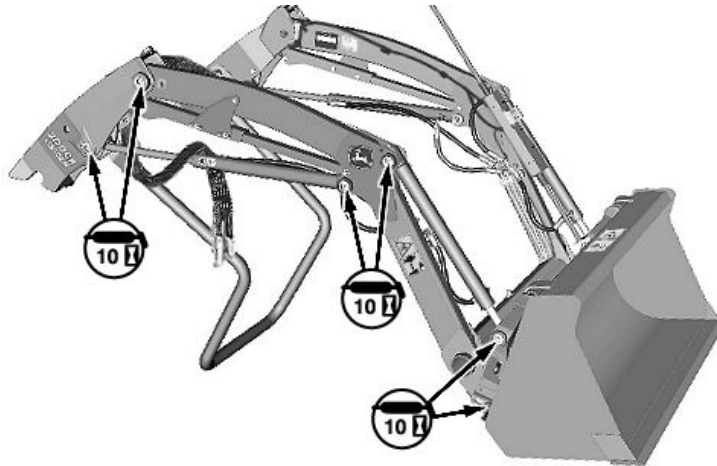
First 10 Hours

☐ Lubricate fittings on each side of loader. (See procedure in EVERY 10 HOURS in this section.)

- ☐ Tighten mounting frame hardware on both sides. (See procedure in EVERY 50 HOURS in this section.)
- ☐ Tighten nuts on pivot pins on both sides of loader. (See procedure in EVERY 50 HOURS in this section.)

OJ06077,00019AA -19-06OCT10-1/1

Every 10 Hours



Lubricate twelve fittings, six on each side of loader.

OJ06038,00020DE -19-29MAY12-1/1

W22574—UN—23MAY12

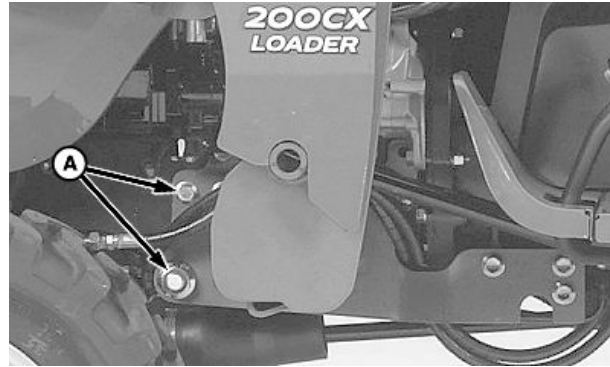
Every 50 Hours

Check and Tighten Hardware

1. Tighten mounting frame hardware (A) on both sides to specifications.

Tractor	Hardware	Torque Specification
2305	Cap Screws, M12 Tie Bar Nuts, M12	120 N•m (90 lb-ft) 80 N•m (59 lb-ft)
2320	Cap Screws, M12	120 N•m (90 lb-ft)
2520	Cap Screws, M12 Threaded Rod Nuts, M20	140 N•m (103 lb-ft) 270 N•m (199 lb-ft)
2720	Cap Screws, M12	140 N•m (103 lb-ft)

A—Mounting Frame Hardware



2520 Mounting Frame (Left-Hand Side Shown)

OUC6038,0001D97 -19-29MAY12-1/3

W22570—UN—23MAY12

2. Tighten eight pivot pin flange lock nuts (A), four on both sides of loader (inside frame), to specification.

Specification

Flange Lock Nuts

(A)—Torque..... 150 N•m
(110 lb-ft)

3. Tighten flange lock nuts (B), on attachment pivot pins, on both sides of loader, to specification.

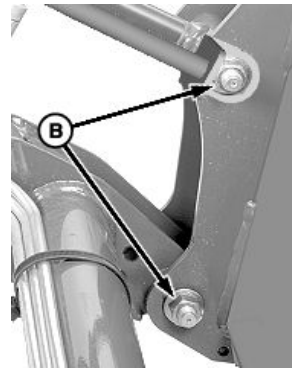
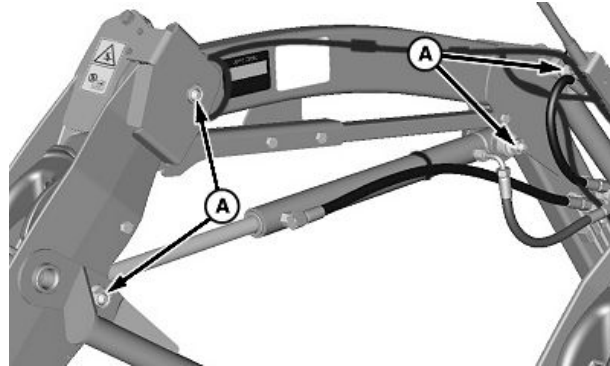
Specification

Flange Lock Nuts

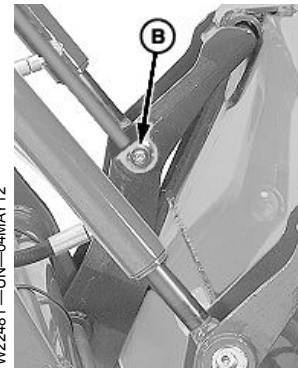
(B)—Torque..... 150 N•m
(110 lb.-ft.)

**A—Flange Lock Nuts, M16
(Frame)**

**B—Flange Lock Nuts, M16
(Attachment)**



Pivot Pins (Pin-On Attachment)



Pivot Pins (QuickChange Attachment)

Continued on next page

OUC6038,0001D97 -19-29MAY12-2/3

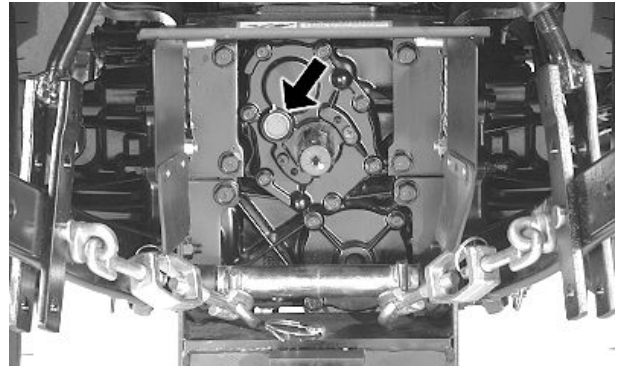
W22575—UN—23MAY12

W22481—UN—04MAY12

W22482—UN—04MAY12

Check Transmission/Hydraulic Oil Level

1. Cycle all cylinders three or four times.
2. Retract bucket cylinders completely and lower loader to ground.
3. Shut off tractor engine and remove key.
4. Check transmission/hydraulic oil level. (See your tractor Operator's Manual).



W07490 —UN—15JUL05

OUO6038,0001D97 -19-29MAY12-3/3

Service

Servicing Loader or Tractor Safely (Loader Attached)

⚠ CAUTION: Help prevent bodily injury from accidental lowering of loader. Do not perform service around front of tractor with loader elevated and unsupported.

Before lubricating or servicing the loader or tractor, perform the following:

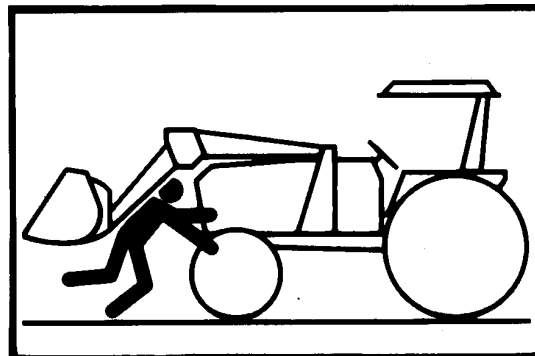
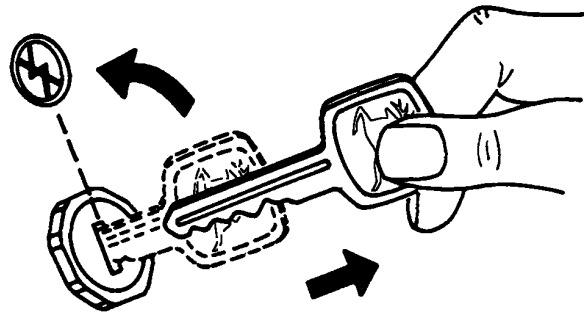
1. Engage parking brake or place transmission in PARK.
2. Lower loader to ground or install service locks (A) on both boom cylinders. (See USING SERVICE LOCKS in Operate Loader section.)
3. Shut off tractor engine.
4. Slowly relieve pressure in hydraulic system. (See procedure in your tractor Operator's Manual.)

IMPORTANT: Avoid machine damage. Do not lower loader onto service locks with hydraulic pressure applied or with load in bucket.

A—Service Lock (One Each Side)



Service Locks Installed



OUO6038,00020CF -19-23MAY12-1/1

W22573—UN—04JUN12

E50093—UN—08AUG01

W00278—UN—04DEC91

Keep Service Area Clean

CAUTION: To help prevent personal injury, keep the service area clean and dry. Wet or oily floors are slippery. Wet spots can be dangerous when working with electrical equipment.

Be sure all electrical outlets and tools are properly grounded.

Use adequate light for the job at hand.

Never lubricate or service machine when it is moving. Keep hands, feet and clothing away from power-driven parts. Disengage all power and operate controls to relieve pressure.

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

Understand service procedure before doing work.

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

Disconnect battery ground cable (—) before doing any welding on machine.



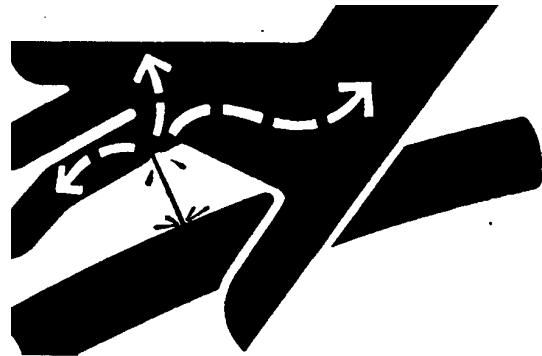
TS218 —UN—23AUG88

OUO1078,000009A -19-11JAN01-1/1

Avoid High-Pressure Fluids

CAUTION: 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 may call the Deere & Company Medical Department in Moline, Illinois, or other knowledgeable medical source.



Hydraulic hoses can fail due to physical damage, kinks, age and exposure. Check hoses regularly. Replace damaged hoses.

X9811 —UN—23AUG88

OUO1078,000009D -19-11JAN01-1/1

O-Ring Installation

1. Inspect groove (A) and/or seat (B).
2. **Flat face O-ring seal (A):** Apply petroleum jelly to O-ring and place in groove.
O-ring boss (B): Install O-ring carefully over threads.
3. Install fittings by hand until snug, position adjustable fittings by unscrewing no more than one turn.
4. Tighten according to specifications. (See TIGHTENING PROCEDURE FOR FITTINGS in this section.)



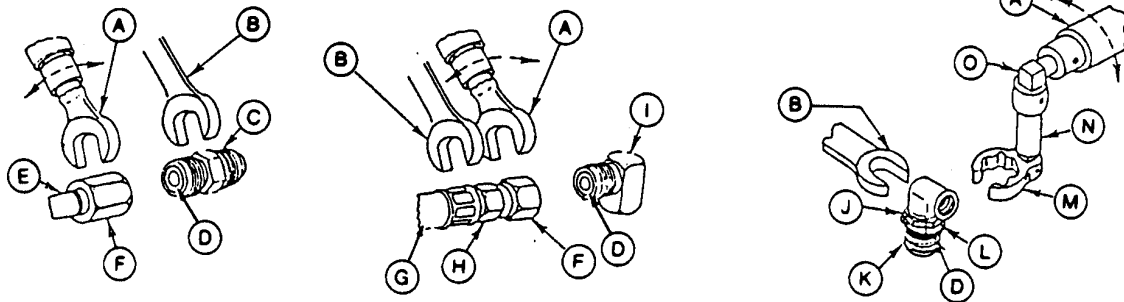
A—Groove

B—Seat

W14815—UN—03OCT01

OUMX005,0001565 -19-19OCT04-1/1

Tightening Procedure for Fittings



A—Torque Wrench
B—Open-End Wrench
C—Union
D—O-Ring

E—Metal Line
F—Swivel Nut
G—Hose Connection
H—Back-Up Nut

I—Fitting
J—Jam Nut
K—Angle Fitting
L—Washer
M—Crowfoot

N—Extension
O—Drive

IMPORTANT: Kinking or twisting hoses during installation shortens hose life drastically. Be sure to follow proper procedure.

Tighten fitting or nut to torque value shown. Use one wrench to hold body and one to tighten nut.

In the case of a hose, it may be necessary to use three wrenches to prevent twist; one on body, one on nut, and one on hose fitting.

Flat Face O-Ring Seal—Specification

11/16-16
Fitting—Torque..... 24 N•m
(212 lb-in.)

13/16-16

Fitting—Torque..... 50 N•m
(37 lb-ft)

O-Ring Boss Seal—Specification

9/16-18 Fitting—Torque..... 37 N•m
(27 lb-ft)

3/4-16 Fitting—Torque..... 50 N•m
(37 lb-ft)

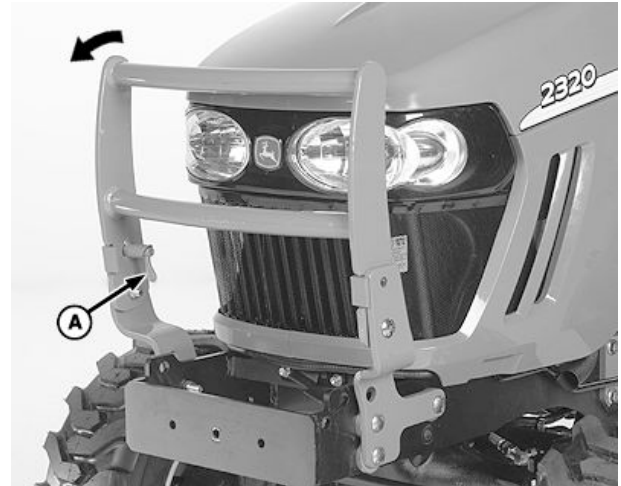
W14816—UN—24JAN89

OUMX005,0001563 -19-16SEP02-1/1

Accessing Front of Tractor with Hood Guard

Turn lever (A) and pivot hood guard forward to gain access to front of tractor.

A—Lever



OUO6038,00020D1 -19-17MAY12-1/1

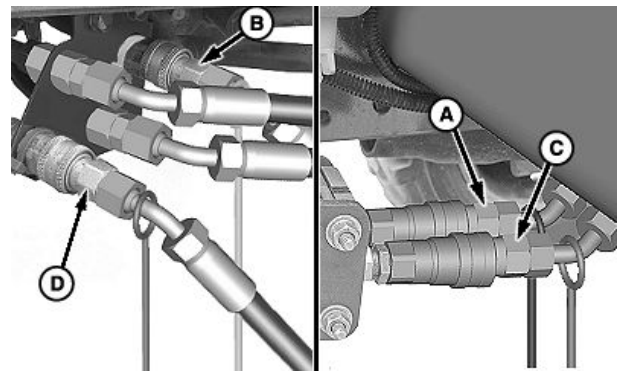
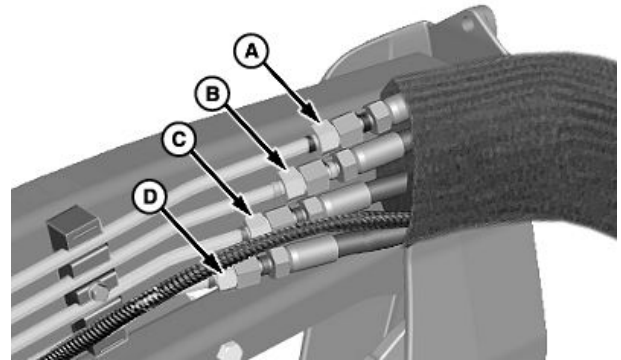
W07408 —UN—27JUN05

Identify Hose Connections

NOTE: Protective sleeve pulled back for illustration purposes.

Identify hoses by color-coded caps on end of hoses and tie bands.

Key	Color	Hydraulic Function
A	Black	Bucket Cylinder—Rod End
B	Yellow	Bucket Cylinder—Head End
C	Blue	Lift Cylinder—Head End
D	Red	Lift Cylinder—Rod End



OUO6038,00020D2 -19-06JUN12-1/1

W22577 —UN—23MAY12

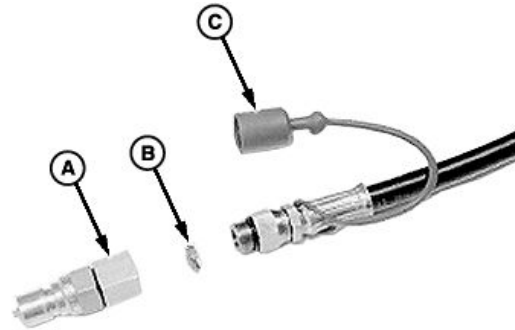
W22578 —UN—01JUN12

Replacing Orifice

IMPORTANT: Orifice (B) must be in place for more efficient use of tractor hydraulics. The lift circuit orifice slows the lowering and improves control of lift arms.

Orifice (B), is in the head-end lift cylinder fitting with cap (C) color-coded BLUE.

Flat face of orifice must be against inside of adapter fitting (A).



A—Adapter Fitting
B—Orifice

C—Cap, (BLUE)

W09274 —UN—26JAN08

OUC6038,0001E50 -19-10NOV09-1/1

Check and Adjust Anti-Spill System Limit Switches

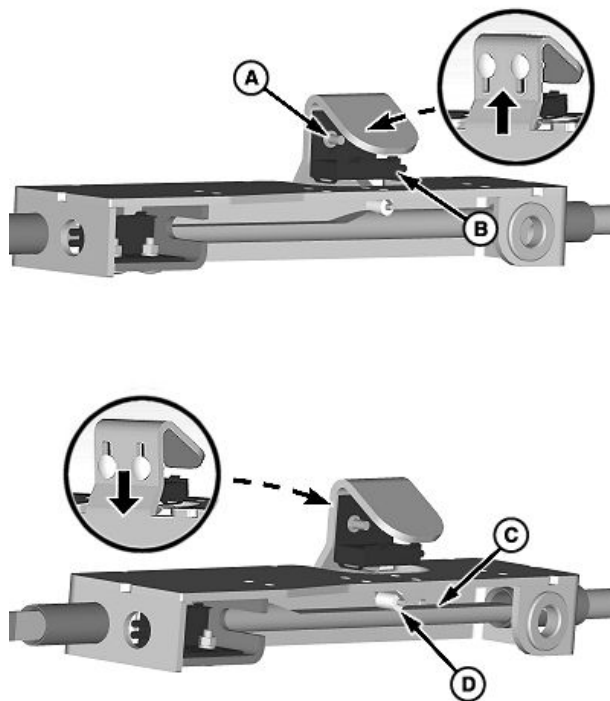
Bucket Anti-Spill Limit Switches

NOTE: Anti-spill system shown removed for illustrative purposes.

1. Loosen nuts (A) and adjust switch (B) until roller (D) contacts sensor bar (C) and switch arm is compressed.
2. Using a continuity tester, confirm switch is closed (has continuity) when switch actuator is compressed.
3. Tighten nuts (A).
4. Move sensor bar until cam indentation on bar is centered under switch.
5. Using a continuity tester, confirm switch is open (no continuity) when switch actuator is extended.
6. Repeat Steps 1—5 for remaining switch.

A—Round-Head Bolts,
Washers, and Nuts (2 per
switch)
B—Switch

C—Sensor Bar
D—Roller



W22289 —UN—26APR12

W22290 —UN—26APR12

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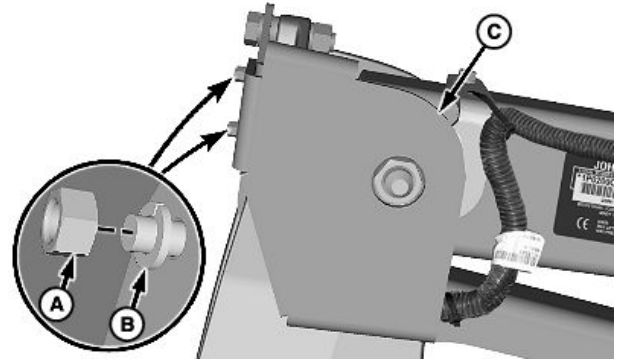
OUC6038,00020D0 -19-06JUN12-1/6

Boom Anti-Spill Limit Switches

1. Remove and retain nuts (A), washers (B) and outer cover (C).

A—Nut (2 used)
B—Washer (2 used)

C—Cover



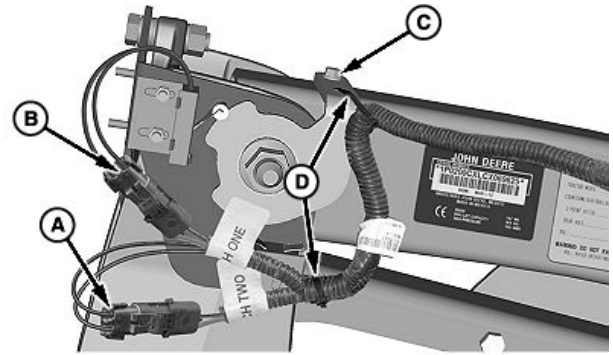
OUO6038,00020D0 -19-06JUN12-2/6

W22580 —UN—06JUN12

2. Disconnect switch plugs (A and B) from wiring harness connectors.
3. Remove and retain self-tapping screw (C).
4. Cut tie bands (D).

A—Plug (Switch Two)
B—Plug (Switch One)

C—Flange Head Self-Tapping
Screw
D—Tie Bands



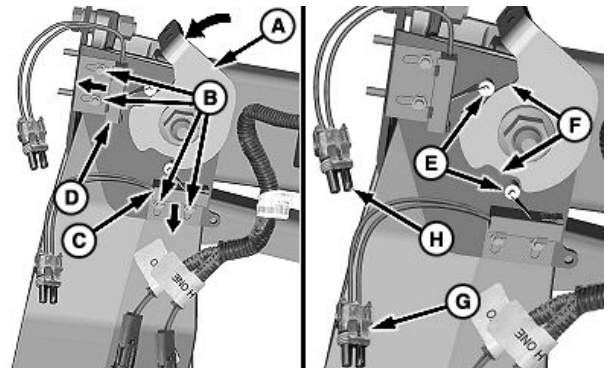
OUO6038,00020D0 -19-06JUN12-3/6

W22581 —UN—01JUN12

5. Loosen nuts (B) and slide switches (C and D) to end of slots.
6. Rotate cam arm (A) upward until both switch rollers (E) are centered in cam indentations (F), as shown.
7. Slide each switch until roller (E) contacts center of cam indentation (F) and tighten nuts.
8. Using a continuity tester on plugs (G and H), confirm switch contacts are OPEN (no continuity) with cam arm raised.

A—Cam Arm
B—Nuts
C—Switch Two

D—Switch One
E—Indentations
F—Rollers



Continued on next page

OUO6038,00020D0 -19-06JUN12-4/6

W22582 —UN—06JUN12

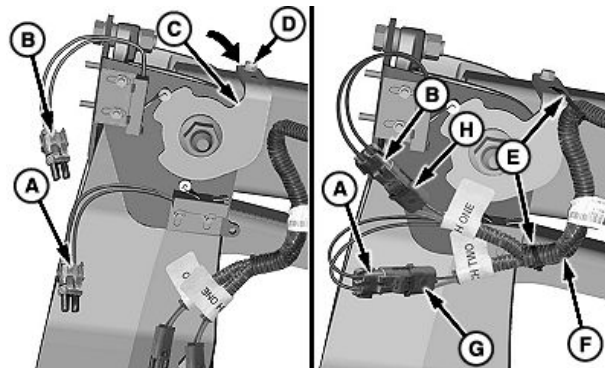
9. Lower cam arm (C).
10. Install flange head self-tapping screw (D) through cam arm and into boom.

11. Using a continuity tester on plugs (A and B), confirm switch contacts are CLOSED (shows continuity) with cam arm down.

IMPORTANT: Make sure plugs (A and B) are correctly installed to connectors (G and H).

12. Install plugs (A and B) into switch connectors (G and H) as shown.

13. Install new tie bands (E) around wiring harness (F) at locations shown.



A—Plug (Switch Two)
B—Plug (Switch One)
C—Cam Arm
D—Flange Head Self-Tapping Screw

E—Tie Bands
F—Wiring Harness
G—Connector (Switch Two)
H—Connector (Switch One)

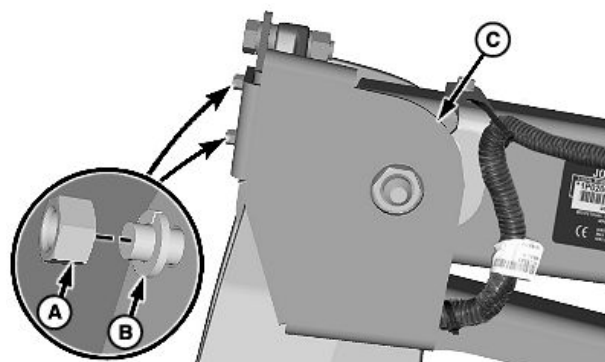
OUC6038,00020D0 -19-06JUN12-5/6

W22583 —UN—01JUN12

14. Install cover (C) and fasten using nuts (A) and washers (B).

A—Nut (2 used)
B—Washer (2 used)

C—Cover

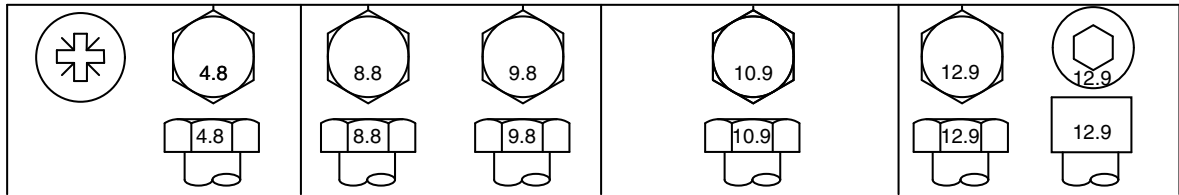


OUC6038,00020D0 -19-06JUN12-6/6

W22580 —UN—06JUN12

Metric Bolt and Screw Torque Values

TS1670 —UN—01MAY03



Bolt or Screw Size	Class 4.8				Class 8.8 or 9.8				Class 10.9				Class 12.9			
	Lubricated ^a		Dry ^b		Lubricated ^a		Dry ^b		Lubricated ^a		Dry ^b		Lubricated ^a		Dry ^b	
	N·m	lb.-in.	N·m	lb.-in.	N·m	lb.-in.	N·m	lb.-in.	N·m	lb.-in.	N·m	lb.-in.	N·m	lb.-in.	N·m	lb.-in.
M6	4.7	42	6	53	8.9	79	11.3	100	13	115	16.5	146	15.5	137	19.5	172
									N·m	lb.-ft.	N·m	lb.-ft.	N·m	lb.-ft.	N·m	lb.-ft.
M8	11.5	102	14.5	128	22	194	27.5	243	32	23.5	40	29.5	37	27.5	47	35
			N·m	lb.-ft.	N·m	lb.-ft.	N·m	lb.-ft.								
M10	23	204	29	21	43	32	55	40	63	46	80	59	75	55	95	70
	N·m	lb.-ft.														
M12	40	29.5	50	37	75	55	95	70	110	80	140	105	130	95	165	120
M14	63	46	80	59	120	88	150	110	175	130	220	165	205	150	260	190
M16	100	74	125	92	190	140	240	175	275	200	350	255	320	235	400	300
M18	135	100	170	125	265	195	330	245	375	275	475	350	440	325	560	410
M20	190	140	245	180	375	275	475	350	530	390	675	500	625	460	790	580
M22	265	195	330	245	510	375	650	480	725	535	920	680	850	625	1080	800
M24	330	245	425	315	650	480	820	600	920	680	1150	850	1080	800	1350	1000
M27	490	360	625	460	950	700	1200	885	1350	1000	1700	1250	1580	1160	2000	1475
M30	660	490	850	625	1290	950	1630	1200	1850	1350	2300	1700	2140	1580	2700	2000
M33	900	665	1150	850	1750	1300	2200	1625	2500	1850	3150	2325	2900	2150	3700	2730
M36	1150	850	1450	1075	2250	1650	2850	2100	3200	2350	4050	3000	3750	2770	4750	3500

Torque values listed are for general use only, based on the strength of the bolt or screw. DO NOT use these values if a different torque value or tightening procedure is given for a specific application. For stainless steel fasteners or for nuts on U-bolts, see the tightening instructions for the specific application. Tighten plastic insert or crimped steel type lock nuts by turning the nut to the dry torque shown in the chart, unless different instructions are given for the specific application.

Shear bolts are designed to fail under predetermined loads. Always replace shear bolts with identical property class. Replace fasteners with the same or higher property class. If higher property class fasteners are used, tighten these to the strength of the original. Make sure fastener threads are clean and that you properly start thread engagement. When possible, lubricate plain or zinc plated fasteners other than lock nuts, wheel bolts or wheel nuts, unless different instructions are given for the specific application.

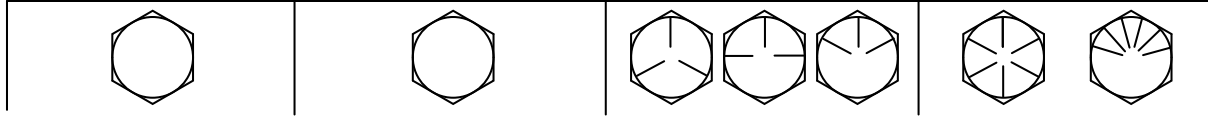
^a"Lubricated" means coated with a lubricant such as engine oil, fasteners with phosphate and oil coatings, or M20 and larger fasteners with JDM F13C, F13F or F13J zinc flake coating.

^b"Dry" means plain or zinc plated without any lubrication, or M6 to M18 fasteners with JDM F13B, F13E or F13H zinc flake coating.

DX,TORQ2 -19-12JAN11-1/1

Unified Inch Bolt and Screw Torque Values

TS1671 —UN—01MAY03



Bolt or Screw Size	SAE Grade 1				SAE Grade 2 ^a				SAE Grade 5, 5.1 or 5.2				SAE Grade 8 or 8.2			
	Lubricated ^b		Dry ^c		Lubricated ^b		Dry ^c		Lubricated ^b		Dry ^c		Lubricated ^b		Dry ^c	
	N·m	lb.-in.	N·m	lb.-in.	N·m	lb.-in.	N·m	lb.-in.	N·m	lb.-in.	N·m	lb.-in.	N·m	lb.-in.	N·m	lb.-in.
1/4	3.7	33	4.7	42	6	53	7.5	66	9.5	84	12	106	13.5	120	17	150
													N·m	lb.-ft.	N·m	lb.-ft.
5/16	7.7	68	9.8	86	12	106	15.5	137	19.5	172	25	221	28	20.5	35	26
									N·m	lb.-ft.	N·m	lb.-ft.				
3/8	13.5	120	17.5	155	22	194	27	240	35	26	44	32.5	49	36	63	46
			N·m	lb.-ft.	N·m	lb.-ft.	N·m	lb.-ft.								
7/16	22	194	28	20.5	35	26	44	32.5	56	41	70	52	80	59	100	74
	N·m	lb.-ft.														
1/2	34	25	42	31	53	39	67	49	85	63	110	80	120	88	155	115
9/16	48	35.5	60	45	76	56	95	70	125	92	155	115	175	130	220	165
5/8	67	49	85	63	105	77	135	100	170	125	215	160	240	175	305	225
3/4	120	88	150	110	190	140	240	175	300	220	380	280	425	315	540	400
7/8	190	140	240	175	190	140	240	175	490	360	615	455	690	510	870	640
1	285	210	360	265	285	210	360	265	730	540	920	680	1030	760	1300	960
1-1/8	400	300	510	375	400	300	510	375	910	670	1150	850	1450	1075	1850	1350
1-1/4	570	420	725	535	570	420	725	535	1280	945	1630	1200	2050	1500	2600	1920
1-3/8	750	550	950	700	750	550	950	700	1700	1250	2140	1580	2700	2000	3400	2500
1-1/2	990	730	1250	930	990	730	1250	930	2250	1650	2850	2100	3600	2650	4550	3350

Torque values listed are for general use only, based on the strength of the bolt or screw. DO NOT use these values if a different torque value or tightening procedure is given for a specific application. For plastic insert or crimped steel type lock nuts, for stainless steel fasteners, or for nuts on U-bolts, see the tightening instructions for the specific application. Shear bolts are designed to fail under predetermined loads. Always replace shear bolts with identical grade.

Replace fasteners with the same or higher grade. If higher grade fasteners are used, tighten these to the strength of the original. Make sure fastener threads are clean and that you properly start thread engagement. When possible, lubricate plain or zinc plated fasteners other than lock nuts, wheel bolts or wheel nuts, unless different instructions are given for the specific application.

^aGrade 2 applies for hex cap screws (not hex bolts) up to 6 in. (152 mm) long. Grade 1 applies for hex cap screws over 6 in. (152 mm) long, and for all other types of bolts and screws of any length.

^b"Lubricated" means coated with a lubricant such as engine oil, fasteners with phosphate and oil coatings, or 7/8 in. and larger fasteners with JDM F13C, F13F or F13J zinc flake coating.

^c"Dry" means plain or zinc plated without any lubrication, or 1/4 to 3/4 in. fasteners with JDM F13B, F13E or F13H zinc flake coating.

DX,TORQ1 -19-12JAN11-1/1

Assembly

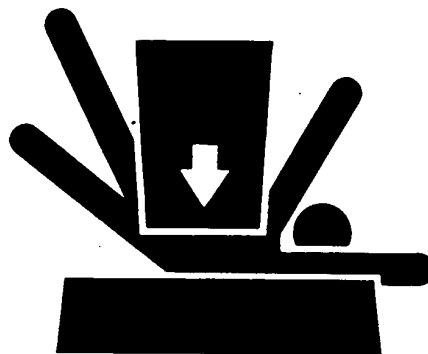
Perform Predelivery Service Safely

CAUTION: Understand the predelivery procedure before doing the work.

During the assembly, and adjustment procedures, it may be necessary to operate drives and hydraulic systems. Stay clear of machine elements when raising or lowering loader, and during operation of hydraulics.

Practice good communication with other service technicians. Be aware of their actions and alert them to potential hazards.

Never lubricate, service, or adjust machine while it is running. Keep hands, feet, and clothing away from power-driven or hydraulically operated parts. If it is necessary to inspect



the machine while it is in operation, be alert to moving parts in the immediate area.

OUO6038,0001923 -19-10APR03-1/1

TS229 —UN—23AUG88

Installation Instructions Available Online to John Deere Dealers

Bundles may not contain printed (paper) Installation Instructions. For the latest up-to-date information, go to mypathways.deere.com and type in Installation Instructions within the Search field.

Select the desired site and follow the information shown. Bundle and Installation Instruction numbers are listed on packing list/bill of materials.

View, download and/or print as necessary.

If unable to locate an Installation Instruction online, contact your John Deere dealer for assistance.

OUMX005,0001DA2 -19-01NOV06-1/1

Prepare For Assembly

1. Remove loader and parts from shipping pallet.

CAUTION: To help prevent bodily injury from falling loader, support with overhead hoist during disassembly and assembly.

IMPORTANT: Avoid crushing oil lines. DO NOT wrap chains around torque tube. Chain will crush oil lines making replacement necessary.

2. Using chains or straps, position loader on a hard level surface.
3. DO NOT cut wires on cylinders or parking mechanism at this time.



OUO6038,0001D98 -19-29JAN08-1/1

TS219 —UN—23AUG88

Recommended Set Up/Assembly Sequence

1. Prepare the tractor.
 - a. See Preparing the Tractor section.
 - b. Install mounting frames.
 - c. Install hood guard.
2. Prepare the loader.
 - a. Remove shipping banding, wire and dunnage.
- b. Install bucket/attachment.
- c. Install hydraulic hoses.
- d. Position loader to mount on tractor.
3. Attach loader to tractor. (See Attach Loader section.)
4. Perform final inspection and adjustments.
5. Install optional equipment/attachments.

OUO6077,00019B1 -19-16DEC09-1/1

Prepare the Tractor

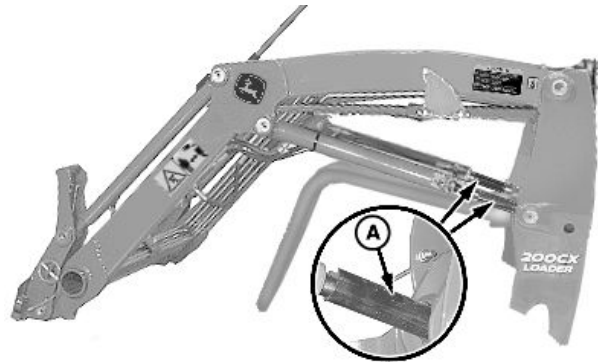
1. Prepare the tractor for the loader. Refer to Preparing the Tractor section for the following:
 - Approved tractors
 - Removing front weights
 - Tire requirements
 - Tread settings
- Rear ballast requirements
2. Install mounting frames. (Refer to Installation Instructions available online to John Deere dealers.)
3. Install hood guard. (Refer to Installation Instructions available online to John Deere dealers.)

OUO6077,00019B2 -19-03MAR08-1/1

Prepare the Loader

1. Remove loader from pallet and lay loader flat on ground, as shown.
2. Remove shipping banding and wire.
3. Remove and discard spacers (A) from lift cylinder rod ends.

A—Spacer (2 used)

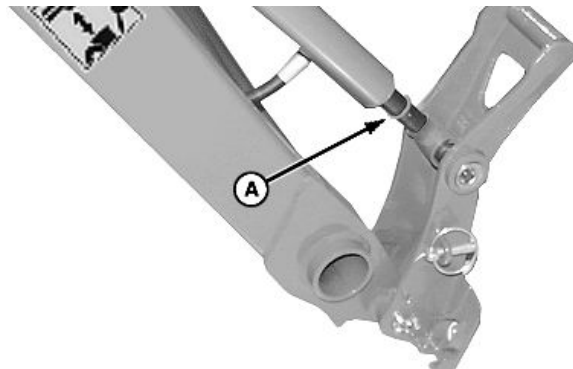


W22547—UN—01JUN12

OUO6038,00020DF -19-01JUN12-1/3

4. Cut paint mask rings (A) off all cylinders.

A—Paint Mask Rings



W22546—UN—01JUN12

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OUO6038,00020DF -19-01JUN12-2/3

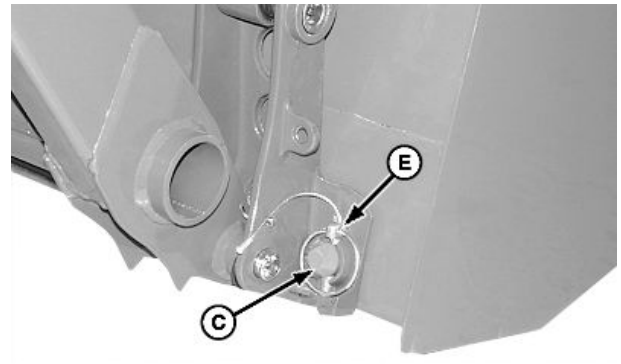
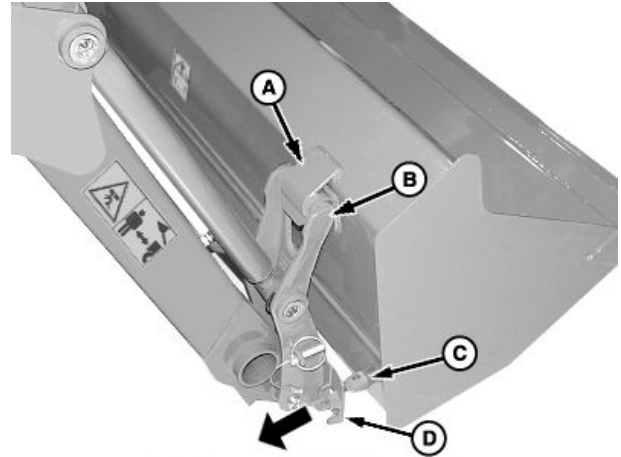
Install Bucket/Attachment

1. Roll top of bucket/attachment back and align hook (A) with holder (B).
2. Using lifting straps, raise front of loader high enough to allow pin (C) to locate into holder strap (D) on each side of attachment.
3. Remove quick lock pin (E) from storage position and install into pin (C) on each side of attachment.

Install Hydraulic Hoses

Install loader-to-tractor hydraulic hoses. (Refer to Installation Instructions available online to John Deere dealers.)

- | | |
|-------------------------|------------------|
| A—Hook | D—Holder Strap |
| B—Holder | E—Quick Lock Pin |
| C—Bucket/Attachment Pin | |



OUC6038,00020DF -19-01JUN12-3/3

W22584 —UN—01JUN12

W07273 —UN—08MAR05

Install Optional Pin-On Bucket

Refer to ATTACH AND DETACH PIN-ON BUCKET in Operate Loader section.

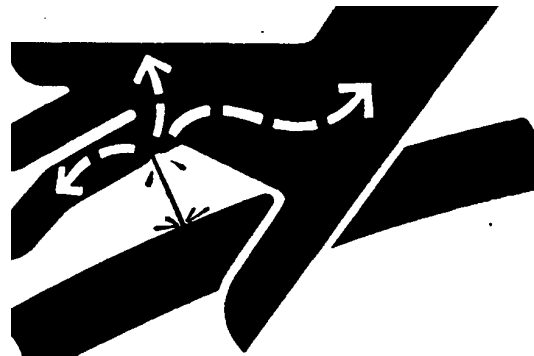
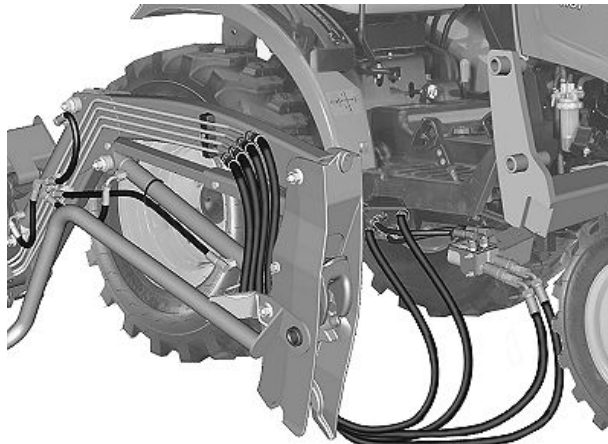
LD45720,00002D3 -19-06JUN12-1/1

Prepare Loader For Attachment To Tractor

1. Start tractor engine.
2. Drive tractor slowly to right-hand side of loader.
3. Engage tractor parking brake and place transmission in **PARK**.
4. Shut off tractor engine and remove key.

CAUTION: To help prevent injury from escaping hydraulic oil under pressure, relieve pressure in the system.

5. Move control levers back and forth and side-to-side (if applicable) several times. (See your tractor Operator's Manual.)
6. Connect hydraulic hoses to couplers on tractor using color-coded caps on hoses to match numbers or colors on decal by coupler plate. (See IDENTIFY HOSE CONNECTIONS in Service section.)
7. Start tractor engine.



W22468 —UN—01JUN12

X9811 —UN—23AUG88

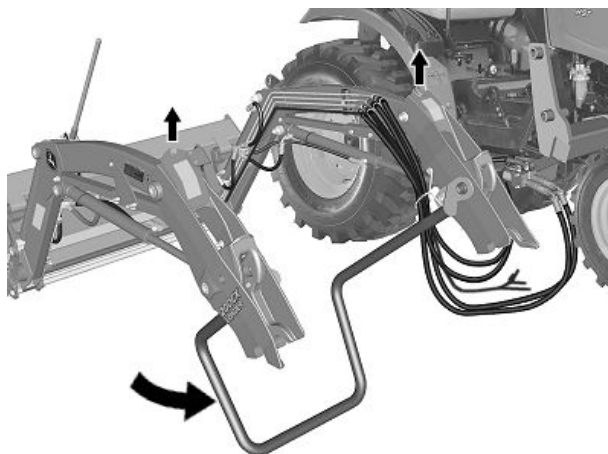
OOU6038,00020E0 -19-01JUN12-1/2

8. Raise loader from ground by extending lift cylinders. Parking stand should contact ground and extend rearward toward tractor.

9. Shut off tractor engine and remove key.

CAUTION: To help prevent injury from escaping hydraulic oil under pressure, relieve pressure in the system.

10. Move control levers back and forth and side-to-side (if applicable) several times. (See your tractor Operator's Manual.)
11. Disconnect hydraulic hoses.
12. Attach loader to tractor. (See ATTACH LOADER in Attach Loader section.)



W22585 —UN—06JUN12

OOU6038,00020E0 -19-01JUN12-2/2

Final Inspection and Adjustments

IMPORTANT: Hardware torque MUST be checked after the first 10 hours and every 50 hours thereafter.

1. Check mounting frame and loader hardware. (See FIRST 10 HOURS in Lubrication and Maintenance section.)
2. Make sure hose bundle is routed to avoid contact with tractor.
3. Start tractor engine and check loader operation. (See procedure in Attaching Loader section.)
4. Cycle all cylinders three or four times.
5. Retract bucket cylinders completely and lower to the ground.
6. Shut off tractor and remove key.
7. Check tractor transmission/hydraulic oil level. (See your tractor Operator's Manual.)

OUO6038,0001D9A -19-29JAN08-1/1

Install Optional Equipment/Attachments

Refer to Installation Instructions available online to John Deere dealers.

OUO6038,0001C8D -19-21OCT08-1/1

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DX,IBC,A -19-04JUN90-1/1

TS100 —UN—23AUG88

The Right Tools

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TS101 —UN—23AUG88

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School is never out for John Deere service technicians.

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Experience you can count on!



DX,IBC,C -19-04JUN90-1/1

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DX,IBC,D -19-04JUN90-1/1

TS103 —UN—23AUG88

