

Rubber Track System



JOHN DEERE

OPERATORS MANUAL

Rubber Track System

OMH175273 Issue C1 English

John Deere Harvester Works

OMH175273 Issue C1

(This manual replaces OMH168684 H9)

LITHO IN U.S.A.
ENGLISH



Introduction

Foreword

READ THIS MANUAL carefully to learn how to operate and service your machine correctly. This manual describes operations and procedures unique to Track Drive Combines and is to be used in conjunction with your Combine Operator's Manual. Failure to do so could result in personal injury or equipment damage.

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

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

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

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

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

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



H46255 -UN-14DEC94

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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.



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.

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

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

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



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

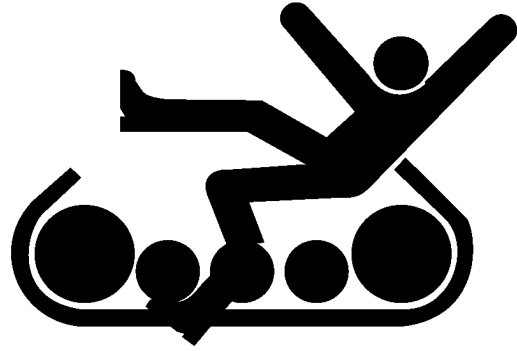
TS201 -UN-23AUG88

Safe Operating Practices

DO NOT stand near track when combine is running.

Safe operating practices of track drive combines are no different than wheel drive combines.

ALWAYS refer to your Combine Operator's Manual, and review Safety section, before operating machine. The Combine Operator's Manual details safe operating practices that must be followed to protect you and others from accidental death and/or injury.



H48148 -UN-12DEC96

HX,TRDRC,A1 -19-11DEC96-1/1

Practice Safe Maintenance

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

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

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

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

On self-propelled equipment, disconnect battery ground cable (-) before making adjustments on electrical systems or welding on machine.

On towed implements, disconnect wiring harnesses from tractor before servicing electrical system components or welding on machine.



TS218 -UN-23AUG88

DX,SERV -19-17FEB99-1/1

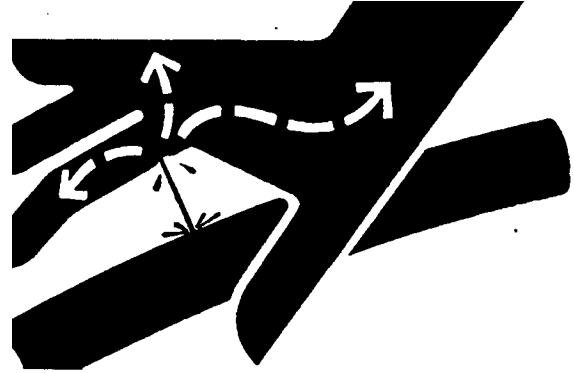
Avoid High-Pressure Fluids

Escaping fluid under pressure can penetrate the skin causing serious injury.

Avoid the hazard by relieving pressure before disconnecting hydraulic or other lines. Tighten all connections before applying pressure.

Search for leaks with a piece of cardboard. Protect hands and body from high pressure fluids.

If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be surgically removed within a few hours or gangrene may result. Doctors unfamiliar with this type of injury should reference a knowledgeable medical source. Such information is available from Deere & Company Medical Department in Moline, Illinois, U.S.A.



X9811 -UN-23AUG88

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

Dispose of Waste Properly

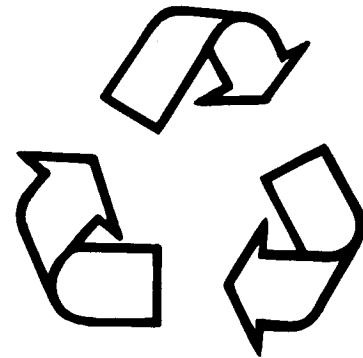
Improperly disposing of waste can threaten the environment and ecology. Potentially harmful waste used with John Deere equipment include such items as oil, fuel, coolant, brake fluid, filters, and batteries.

Use leakproof containers when draining fluids. Do not use food or beverage containers that may mislead someone into drinking from them.

Do not pour waste onto the ground, down a drain, or into any water source.

Air conditioning refrigerants escaping into the air can damage the Earth's atmosphere. Government regulations may require a certified air conditioning service center to recover and recycle used air conditioning refrigerants.

Inquire on the proper way to recycle or dispose of waste from your local environmental or recycling center, or from your John Deere dealer.



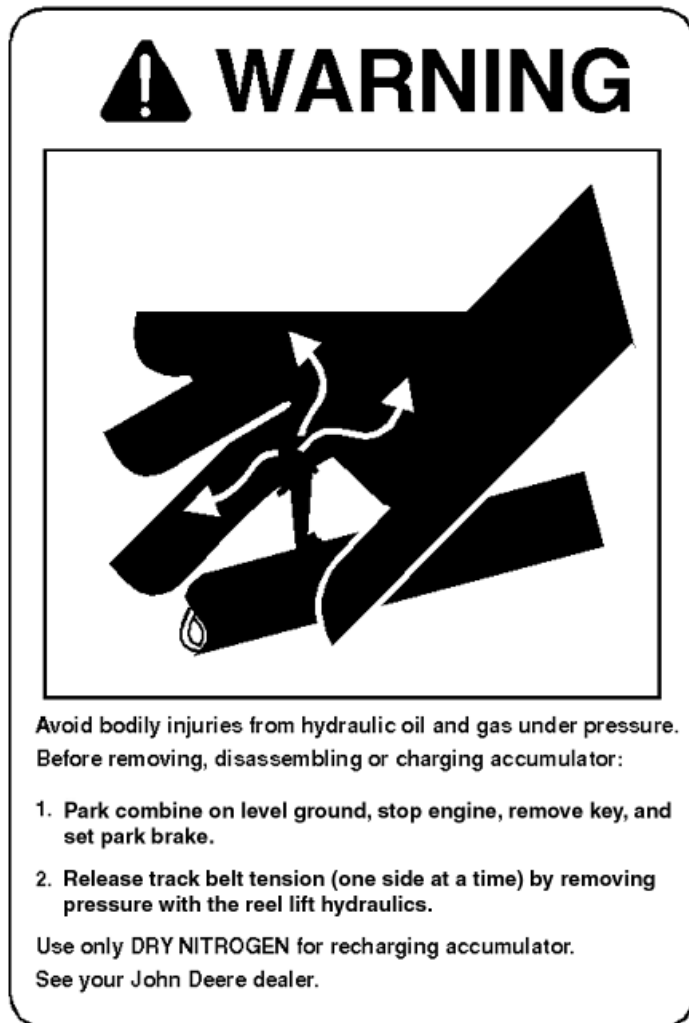
TS1133 -UN-26NOV90

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

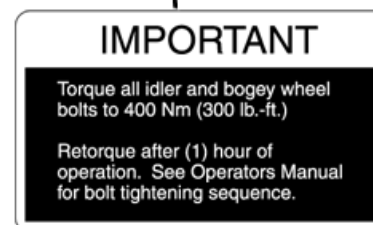
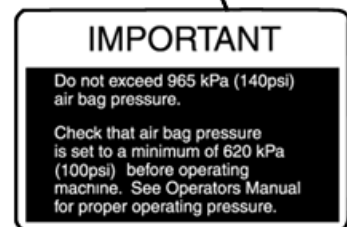
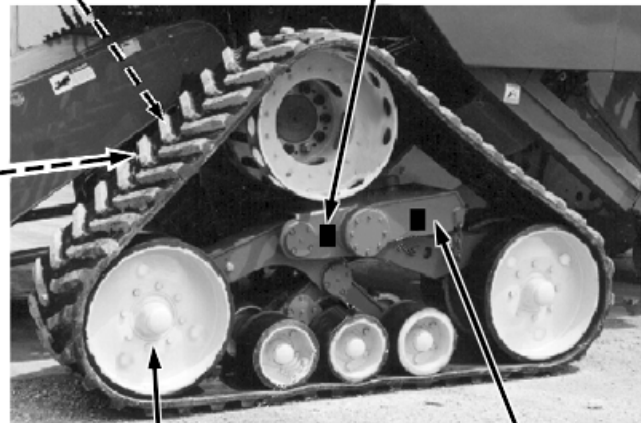
Safety Signs



AT ACCUMULATOR



AT ACCUMULATOR



H66278 -19-13FEB01

Operating Track Drive Combine

Combine Operations



H48150 -UN-10DEC96

Combine operations remain the same as described in your Combine Operator's Manual, with the following exceptions.

Operations and procedures specific to, or impacted by track drives are:

- Adding Ballast Weight
- Inflating Air Suspension
- Tensioning Track Belts

Refer to Combine Operator's Manual for operational information not related to track drives.

HX,TRDRJ,A1 -19-13FEB97-1/1

Adding Ballast Weight

MINIMUM BALLAST RECOMMENDATION		
Header	Weight	Description
920 Rigid	None needed	
920 Flex	129 Kg (284 lb.)	Outer weights or fluid
925 Rigid	129 Kg (284 lb.)	Outer weights or fluid
925 Flex	258 Kg (569 lb.)	Outer and auxiliary weights or fluid
930 Rigid	730 Kg (1609 lb.)	Fluid
930 Flex	828 Kg (1825 lb.)	Fluid and weights, if needed
643/693	129 Kg (284 lb.)	Outer weights or fluid
843/844/893/894	258 Kg (569 lb.)	Outer and auxiliary weights or fluid
1243/1253/1290/1293	1086 Kg (2394 lb.)	Fluid and weights, if needed
MAX Fluid Fill Weights With 1.59 Kg (3.5 lb.) CaCl₂ (2 Tires):		
18.4 x 26	730 Kg (1609 lb.)	
18.4 x 30	828 Kg (1825 lb.)	
28L x 26	1440 Kg (3175 lb.)	

NOTE: Ballast recommendations are intended to enhance steering performance and eliminate "power hop" when powered rear wheels drive. More ballast is typically needed with tracks than with tires.

HX,TRDRJ,A2 -19-17FEB97-1/1

Inflate Air Suspension

1. Remove inflation port cover cap (A).
2. Remove valve cap (B).
3. Check inflation pressure using gauge.

NOTE: Recheck inflation pressure with the cutting head attached to the combine. Depending on machine and cutting head weight best suspension qualities may be realized at higher inflation pressure of approximately 896 kPa (9 bar) (130 psi). Inflation pressure is correct when suspension chains hang straight down, and almost tight. Do not exceed 1034 kPa (10 bar) (150 psi).

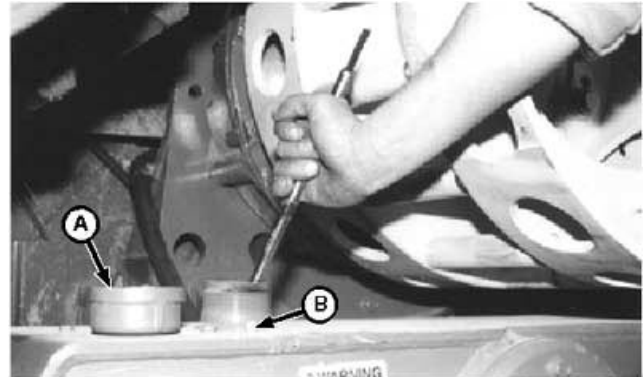
To more easily add air or achieve the desired pressure, it may be necessary to jack the combine up to remove weight from the suspension system.

4. Inflate air suspension to minimum pressure.

Specification

Air Suspension Bag—Pressure	
(Minimum).....	690 kPa
	(7 bar)
	(100 psi)

5. Repeat on opposite side.
6. Recheck inflation pressure after test drive.



H48151 -UN-10DEC96



H66272 -UN-09FEB01

Chain Tension

A—Inflation Port Cover Cap
B—Valve Cap

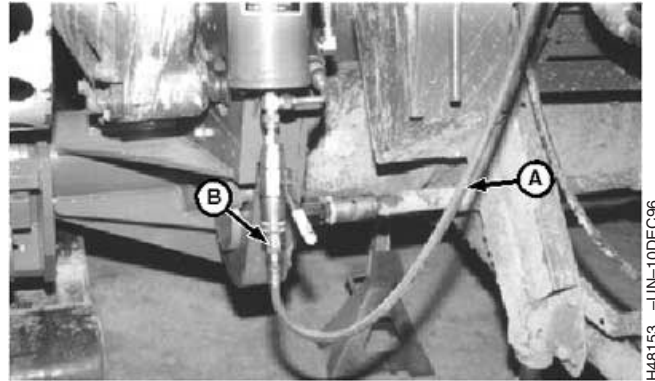
Tension Track Belt

IMPORTANT: The combine must be parked on level ground before tensioning belt.

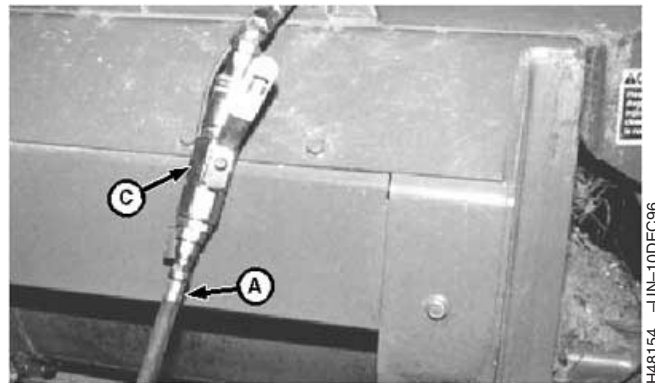
NOTE: This procedure requires two service technicians.

1. Set parking brake.
2. Attach hose assembly (A) (with gauge) to quick-couplers at accumulator (B) and reel lift hose (C).
3. Open both valves fully.

A—Hose Assembly
B—Accumulator
C—Reel Lift Hose



H48153 -UN-10DEC96



H48154 -UN-10DEC96

OUO6075.000140F -19-09FEB01-1/3

CAUTION: Do not exceed 11,721 kPa (117 bar) (1700 psi) tension pressure or machine damage may occur.

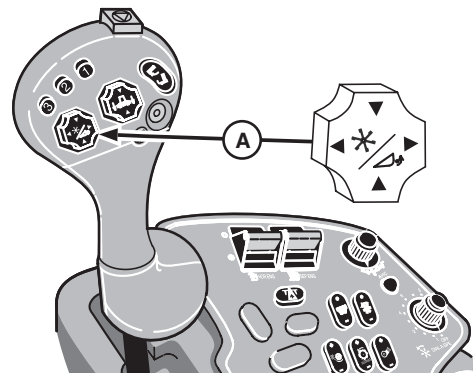
4. Start engine and allow to idle. Depress reel lift switch (A) while observing pressure gauge (B). Belt is properly tensioned when gauge meets specification.

Specification

Gauge—Pressure 10,342—11,721 kPa
(103—117 bar)
(1500—1700 psi)

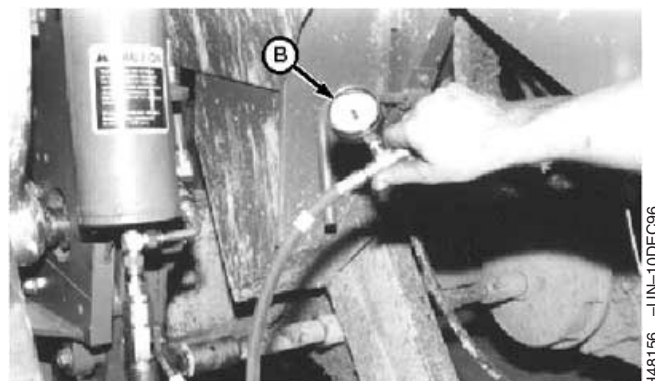
5. Shut-off engine, set parking brake and remove key.
6. Close accumulator valve and disconnect hose. Move hose end to opposite side accumulator and repeat steps to tension opposite track belt.

A—Reel Lift Switch
B—Pressure Gauge



50 Series Reel Lift Switch

H66259 -UN-16FEB01



H48156 -UN-10DEC96

Continued on next page

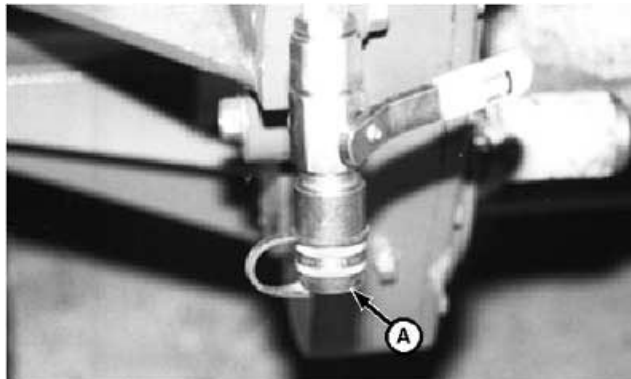
OUO6075.000140F -19-09FEB01-2/3

7. Close valves and remove hose. Install coupling plugs (A).

8. Recheck belt tension pressure after test drive.

IMPORTANT: Hose with gauge should be given to the customer when machine is delivered. Hose assembly is used by operator to make in-field tension adjustments or to relieve belt tension for service.

A—Coupling Plug



H48157 -UN-10DEC96

OUO6075,000140F -19-09FEB01-3/3

Break-In Service Interval—10 Hours

After the first 10 hours of operation:

Torque all bogey and idler wheel bolts (A) to specifications.

Specification

Wheel Bolts—Torque 400 N•m
(300 lb-ft)

Torque drive wheel bolts. (See Lubrication, Maintenance and Service Section for procedure.)

Inflate air suspension to specification. (Follow procedure in this section.)

Specification

Air Suspension Bag (Minimum
Pressure)—Pressure 690 kPa
(7 bar)
(100 psi)

Tension belt tracks to specifications. (Follow procedures in this section.)

Specification

Belt Tension—Pressure..... 10,342—11,721 kPa
(103—117 bar)
(1500—1700 psi)

Lubricate all pivot points. (See Lubrication, Maintenance and Service Section for locations and REGULAR lube interval.)

Lubricate transfer case output shaft. (See Lubrication, Maintenance and Service Section for location and REGULAR lube interval.)

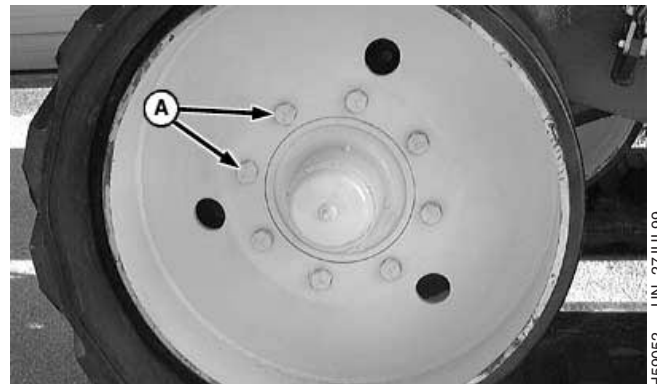
Check oil level in all bogey and idler wheel hubs. (See Lubrication, Maintenance and Service Section for procedure and REGULAR lube interval.)

Check and adjust belt tracking. (See Lubrication, Maintenance and Service Section for procedure and REGULAR adjustment interval.)

Clean mud from bogey wheel pivots, air suspension housing and all other moving parts.



Bogey Wheels



Front Idler Wheel

A—Wheel Bolts

IMPORTANT: Remove mud build-up daily, for proper track drive and suspension operations. Mud can dry to a cement-like hardness and damage track wheels and other components.

OUO6075,000140C -19-09FEB01-2/2

Troubleshooting

Track Belt

Symptom	Problem	Solution
Extremely worn drive lugs.	Belt not tracking properly.	Adjust belt tracking. See Service section.
	Damaged drive wheel or undercarriage.	See your John Deere dealer for repairs.
Drive cleats worn unevenly.	Inner half of cleat wears faster than outer half.	Exchange belts side-to-side to equalize wear.
Loose track belt.	Tension pressure lost.	Tension track belt. See Operating section.
	Tension cylinder damaged.	Repair or replace cylinder.
	Accumulator pre-charge lost.	See your John Deere dealer for re-charge.
	Accumulator damaged.	See your John Deere dealer for repair or replacement.

HX,TRDRO,A1 -19-17FEB97-1/1

Track Assembly

Symptom	Problem	Solution
Transfer case found hot to the touch.	Low oil level.	Check and add oil.
	Internal damage.	See your John Deere dealer for repairs.
Wheel hubs found hot to the touch.	Low oil level.	Check and add oil.
	Damaged oil seals.	Check for leaks; repair as needed.
Poor ride quality.	Deflated air suspension bag.	Inflate to proper pressure. See Operating section.
	Air bag damaged.	See your John Deere dealer for repairs.
Drive shafts and/or splined coupling worn or damaged.	Daily lubrication not done.	Grease transfer case output shaft EVERY 10 hours.
	Transfer case and final drive misaligned.	Check transfer case and final drive mounting and frame surfaces. Correct mounting problems to place shafts into near-perfect alignment.

HX,TRDRO,A2 -19-17FEB97-1/1

Track Drive Combine

Symptom	Problem	Solution
Incorrect speedometer reading.	Speedometer not programmed for "BELTED TRACKS".	See your John Deere dealer for re-programming.
Combine leaves double tracks and ridges.	Incorrect rear wheel spacing.	Adjust axle spacing to align rear wheels with tracks. See Service section.
Poor steering quality.	Combine too light.	Add ballast. See Operating section.
"Wheel Hop" at start-up.	Combine too light.	Add ballast. See Operating section.

HX,TRDRO,A3 -19-17FEB97-1/1

Lubrication, Maintenance and Service

Additional Service Information

This is not a detailed service manual. It contains only information needed for operation and routine maintenance. If you want more detailed service information, use the form in the back of this manual to order a Technical (Repair) Manual.



TS2224 -UN-17JAN89

HX,TRDRP,A1 -19-13FEB97-1/1

Bogey and Idler Wheel Oil

Use oil viscosity based on the expected air temperature range during the period between oil changes.

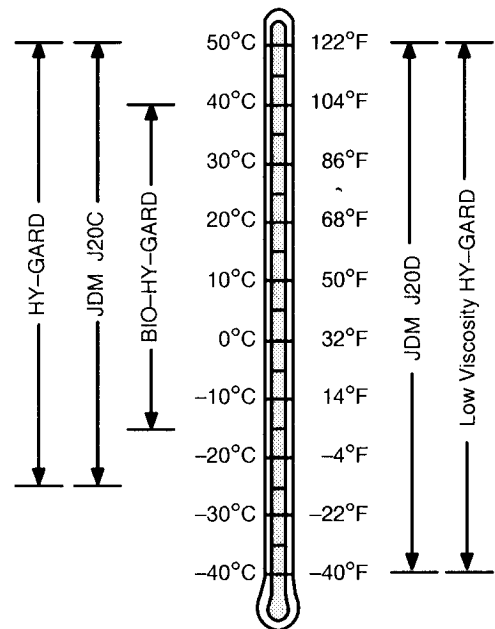
The following oils are preferred:

- John Deere HY-GARD®
- John Deere Low Viscosity HY-GARD®

Other oils may be used if they meet one of the following:

- John Deere Standard JDM J20C
- John Deere Standard JDM J20D

Use John Deere BIO-HY-GARD¹™ oil when a biodegradable fluid is required.



TS1652 -UN-14MAR96

*HY-GARD is a registered trademark of Deere & Company.
BIO-HY-GARD is a trademark of Deere & Company.*

¹ BIO-HY-GARD meets or exceeds the minimum biodegradability of 80% within 21 days according to CEC-L-33-T-82 test method. BIO-HY-GARD should not be mixed with mineral oils because this reduces the biodegradability and makes proper oil recycling impossible.

OOU6075.000156E -19-27FEB01-1/1

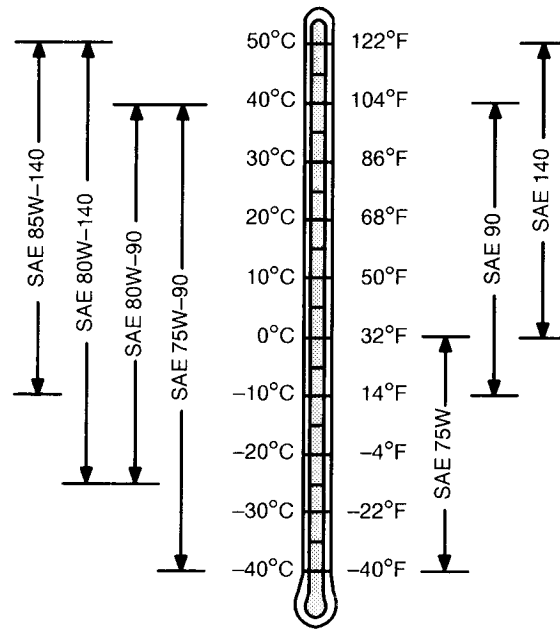
Final Drive and Transfer Case Gear Oil

Use oil viscosity based on the expected air temperature range during the period between oil changes.

The following oils are preferred:

- John Deere GL-5 GEAR LUBRICANT
- John Deere EXTREME-GARD™

Other oils may be used if they meet API Service Classification GL-5.



TS1653 -UN-14MAR96

EXTREME-GARD is a trademark of Deere & Company.

OUO6075,000156F -19-27FEB01-1/1

Grease

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

The following greases are preferred:

- John Deere SD POLYUREA GREASE

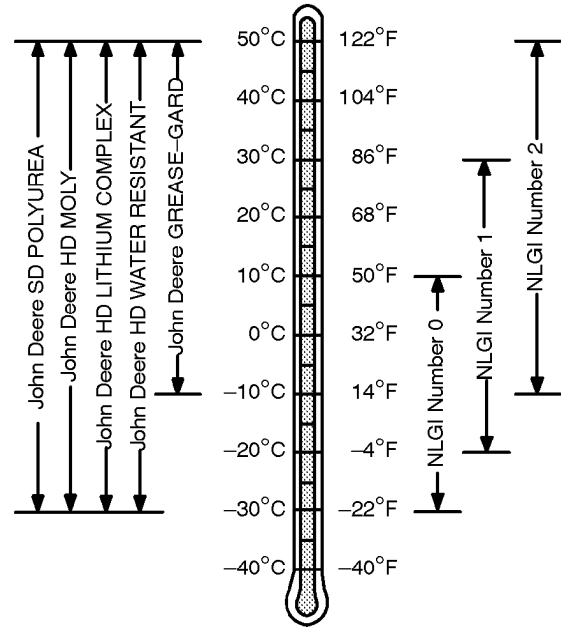
The following greases are also recommended:

- John Deere HD MOLY GREASE
- 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 thickener are not compatible with others. Consult your grease supplier before mixing different types of grease.



TS1667 -UN-30JUN99

DX,GREA1 -19-24JAN00-1/1

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 oils.

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

DX,ALTER -19-15JUN00-1/1

Lubricant Storage

Your equipment can operate at top efficiency only when clean lubricants are used.

Use clean containers to handle all lubricants.

Whenever possible, store lubricants and containers in an area protected from dust, moisture, and other contamination. Store containers on their side to avoid water and dirt accumulation.

Make certain that all containers are properly marked to identify their contents.

Properly dispose of all old containers and any residual lubricant they may contain.

DX,LUBST -19-18MAR96-1/1

Beginning and End of Season

Perform each lubrication and service illustrated in this section.

HX,TRDRN,A3 -19-11DEC96-1/1

Lubrication Symbols



Lubricate with high temperature grease at hourly interval indicated on symbol.

HX,TRDRN,A4 -19-13FEB97-1/1

Lubrication and Service Intervals

IMPORTANT: Recommended lubrication and service intervals should be followed when operating under “normal” conditions. Procedures should be performed more frequently when operating under harsh or severe conditions.

Lubrication procedures should be done daily when operating in extremely wet conditions (i.e.: rice).

Break-In Service — 10 Hours

- See listing in Operating Track Drive Combine Section.

Daily Service — 10 Hours

- Clean mud from bogey wheel pivots, air suspension housing and all other moving parts. Lubricate transfer case output shaft.

IMPORTANT: Remove mud build-up daily, for proper track drive and suspension operations. Mud can dry to a cement-like hardness and damage track wheels and other components.

- Lubricate track drive pivot points and final drive bearings.

Weekly Service — 50 Hours

- Adjust belt tracking.
- Check oil levels in wheel hubs.

Yearly Service — 400 Hours

- Check oil levels in transfer case and final drive.

2-Year Service — 800 Hours

Drain and fill final drives, transfer case and wheel hubs.

As Required

- Inspect track belt.
- Service nitrogen charged accumulator.

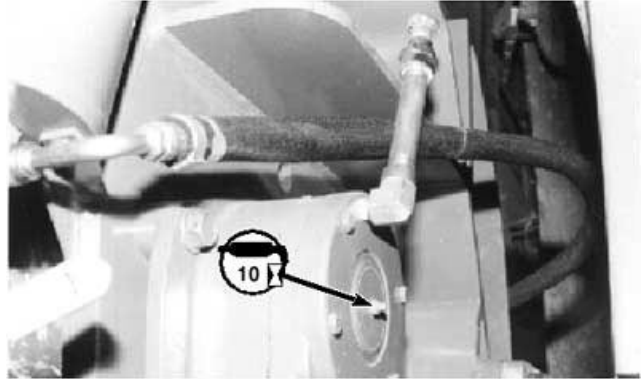
Refer to Combine Operator's Manual for lubrication and service information and intervals not related to track drives.

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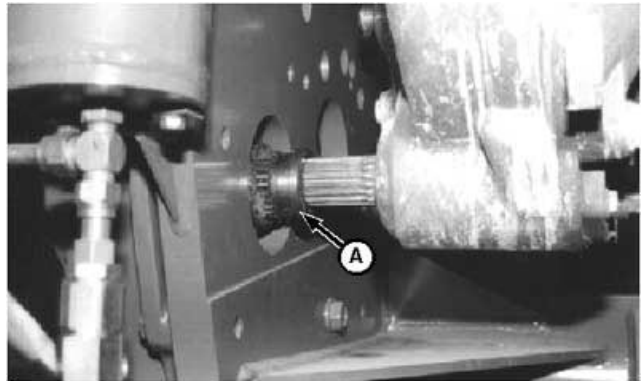
Lubricate Transfer Case Output Shaft—10 Hours

Pump output shaft full of moly high-temperature grease, until it flows from final drive coupling (A) on opposite side of frame.

A—Final Drive Coupling



H48161 -UN-18FEB97

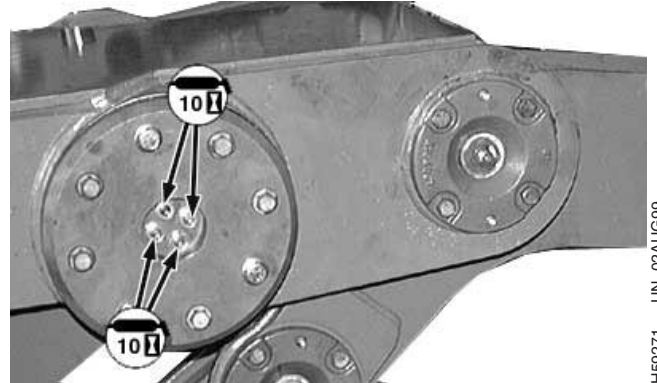


H48840 -UN-17FEB97

HX,TRDRN,A7 -19-17FEB97-1/1

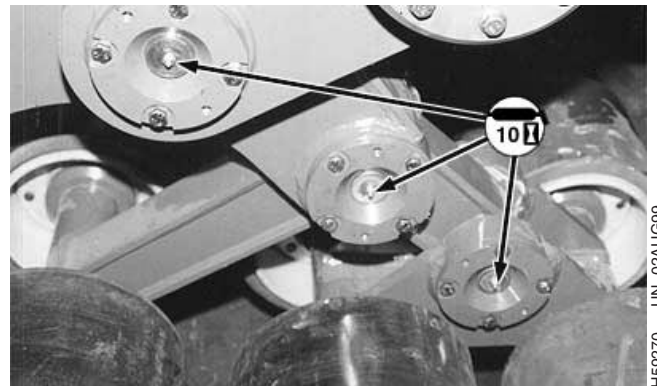
Lubricate Track Drive Pivot Points—10 Hours

Lubricate all pivot points with moly high-temperature grease.



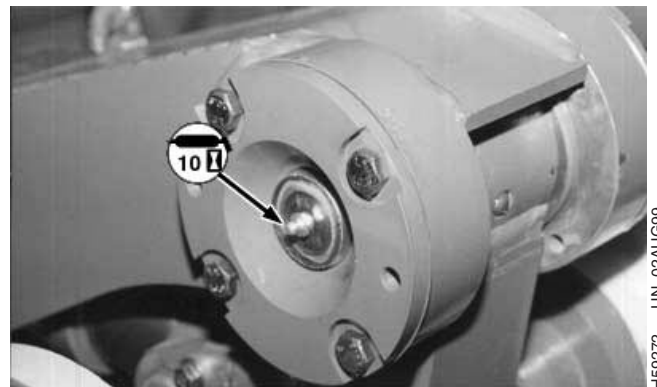
H59271 -UN-02AUG99

Right-Hand Drive Shown (S/N X 99 XXX XXXX—)



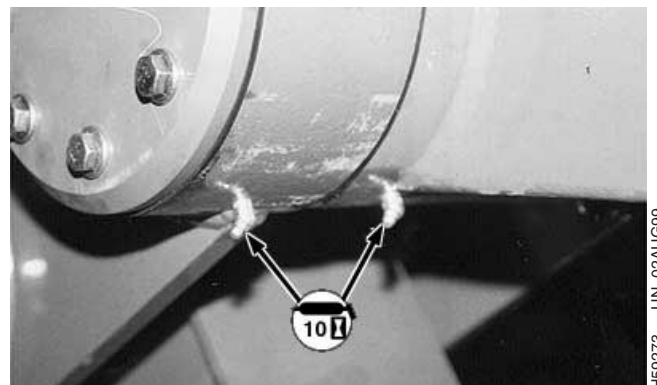
H59270 -UN-02AUG99

Front and Bogey Pivot Points



H59272 -UN-02AUG99

Rear Axle Pivot Point

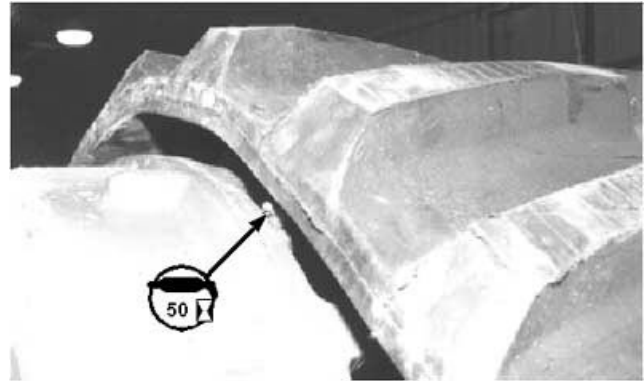


H59273 -UN-02AUG99

Center Frame Pivot—2 Not Shown (S/N —X 99 XXX XXXX)

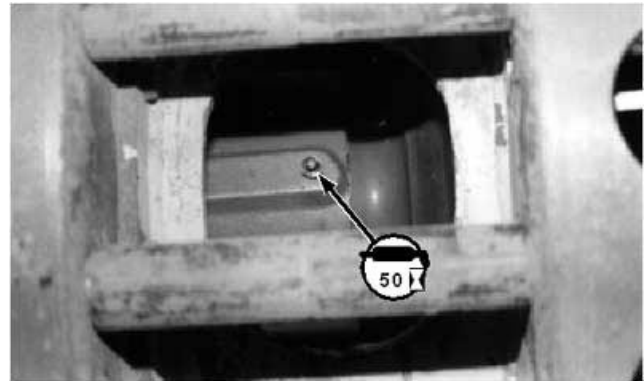
Lubricate Final Drive Bearings—50 Hours

Lubricate bearings with moly high-temperature grease.



Single Reduction Drive

H48162 -UN-10DEC96



Planetary Drive

H48841 -UN-17FEB97

HX,TRDRN,A8 -19-17FEB97-1/1

Checking Transfer Case Oil Level

Remove front plug (A) to check oil level. Oil level is correct when filled to bottom of hole.

If oil is needed, remove top breather (B) and add oil through breather tube.

To drain case, remove bottom plug (C).

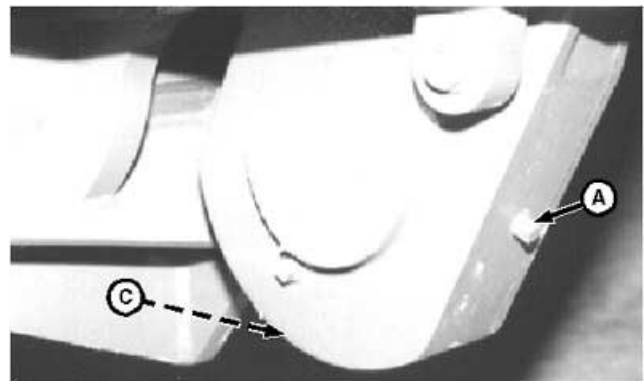
Service Intervals

Check Oil Level Every	400 Hours
Drain and Fill Every	800 Hours

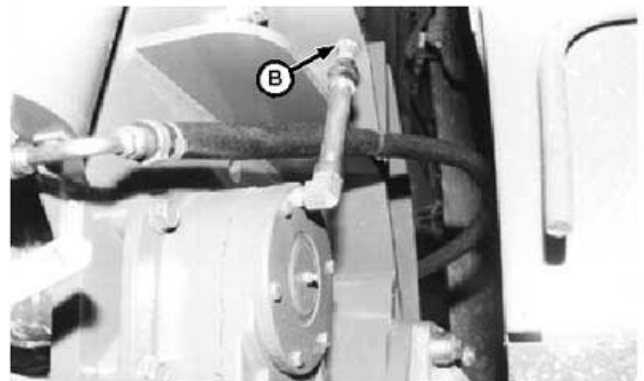
Specification

80w/90 GL5 Gear Oil—Capacity	1.42L (1.5 qt.)
------------------------------------	--------------------

- A—Front Plug
- B—Breather
- C—Bottom Plug



H48163 -UN-10DEC96



H48164 -UN-10DEC96

HX,TRDRN,A9 -19-13FEB97-1/1

Checking Final Drive Oil Level (Single Reduction and High Clearance Single Reduction)

Due to relocation from axle end to track assembly and rotated repositioning of drive housing, oil level (B), fill (A), and drain (C) plugs are in different positions than those shown in the Combine Operator's Manual. Oil quantity is also different for track-drive applications.

Specification

80w/90 GL5 Gear Oil—Capacity..... 3.82L
(4 qt.)

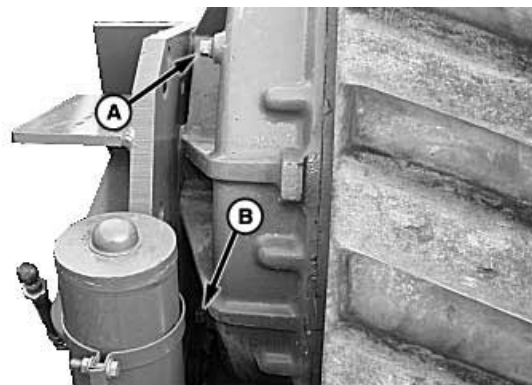
Use these photos to locate plugs.

Service Intervals

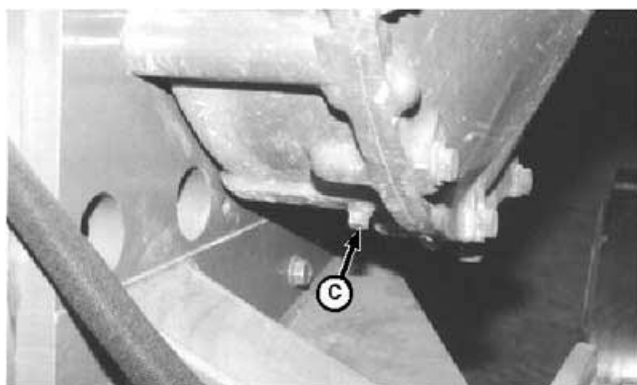
Check Oil Level Every 400 Hours
Drain and Fill Every 800 Hours

NOTE: Due to rotated position, housing will not empty completely when drained, but enough oil will drain to make change-out effective.

A—Breather/Fill Plug
B—Level Plug
C—Drain Plug



H66273 -UN-09FEB01



H48167 -UN-10DEC96

OUO6075,000140D -19-09FEB01-1/1

Checking Final Drive Oil Level (Planetary Drive)

Due to relocation from axle end to track assembly and rotated repositioning of drive housing, oil level/fill and drain plugs are in different positions than those shown in the Combine Operator's Manual. Oil quantity is also different for track-drive applications.

NOTE: To check oil level, a dipstick should be made from a flat, pliable piece of plastic. A new, unused tie strap works well as a dipstick.

Remove breather plug (A) to check oil level. Oil level is correct when filled to the bottom of breather tube/elbow hole.

When oil is needed, add it through breather tube.

To drain case, remove lower plug (B).

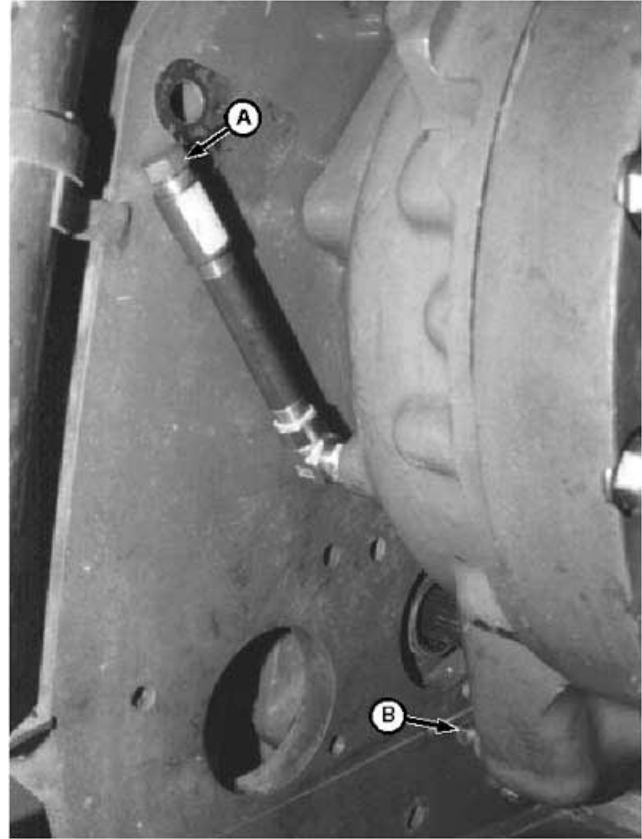
Specification

80w/90 GL5 Gear Oil—Capacity..... 3.1L
(3.25 qt.)

NOTE: Due to rotated position, housing will not empty completely when drained, but enough oil will drain to make change-out effective.

Service Intervals

Check Oil Level Every 50 Hours
Drain and Fill Every 800 Hours



A—Breather Plug
B—Lower Plug

H48168 —UN-17FEB97

HX,TRDRN,A11 —19-14FEB97-1/1

Checking Wheel Hub Oil Level (All Bogey and Idler Wheels)

Rotate hubs to position fill plug (A) at 12 o'clock and level plug (B) at 3 o'clock.

IF EQUIPPED: Remove plug (C) from center of hub cap.

Oil level is correct when hub is filled to the bottom of the level hole (B).

Check oil levels and add HY-GARD® oil as needed.

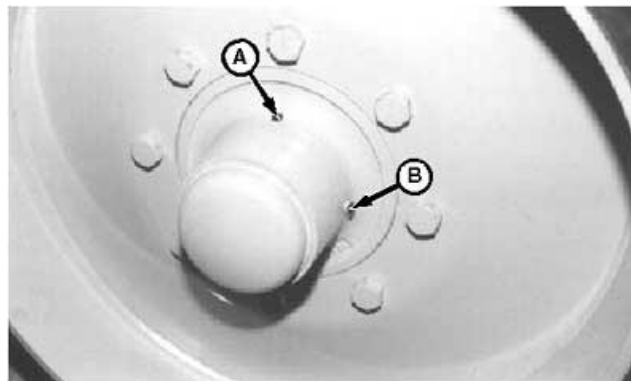
Specification

Bogey Wheel Hub—Capacity	236.6 mL (8 oz.)
Idler Wheel Hub—Capacity	414.0 mL (14 oz.)

Service Intervals

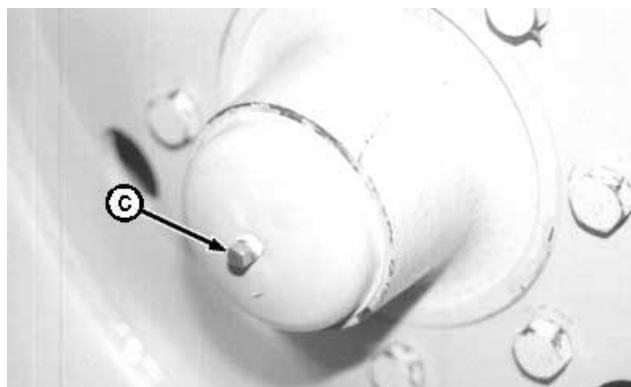
Check Oil Level Every	50 Hours
Drain and Fill Every	800 Hours

- A—Plug
- B—Level Plug
- C—Plug



H48169 -UN-10DEC96

Idler Wheel Shown



H50458 -UN-10OCT97

HY-GARD is a trademark of Deere & Company.

HX,TRDRN,A12 -19-17OCT97-1/1

Adjusting Belt Tracking—50 Hours

NOTE: If too difficult to adjust tracking with belt tensioned, relieve pressure from tension cylinder to slacken belt.

If, after running machine, inner edge of idler wheels and outer edge of drive lugs are found warm, belt tracking needs to be adjusted to eliminate friction and reduce wear on the drive lugs. Both front and rear idler wheels should be checked for contact and heat buildup. Even though adjustment is made at the front idlers, drive lug tracking between rear idlers is also impacted.

1. Remove hardware and lock plates (A) from both inside and outside adjustment bolts (B).

NOTE: Tracking adjustment is a lateral adjustment where front idler wheels are moved side-to-side, guiding belt away from contact with idler wheel. Belt tends to run to the side of least resistance.

Best adjustment has drive lugs centered between idler wheels with an equal gap on both sides.

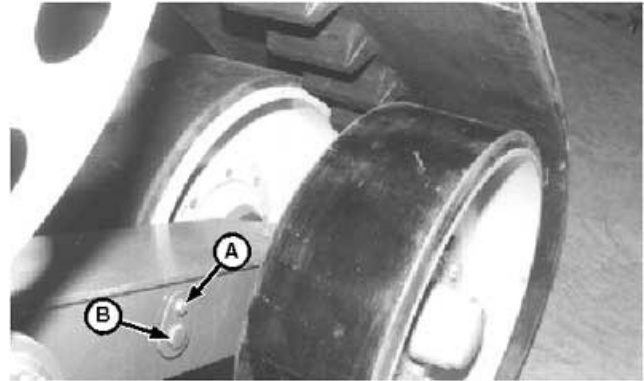
2. When inner wheel is warm, loosen outside adjustment bolt and tighten inside adjustment bolt, to guide belt to the outside and reduce contact with inner wheel.

When outer wheel is found warm, tighten outside adjustment bolt and loosen inside adjustment bolt, to guide belt to the inside and reduce contact with outer wheel.

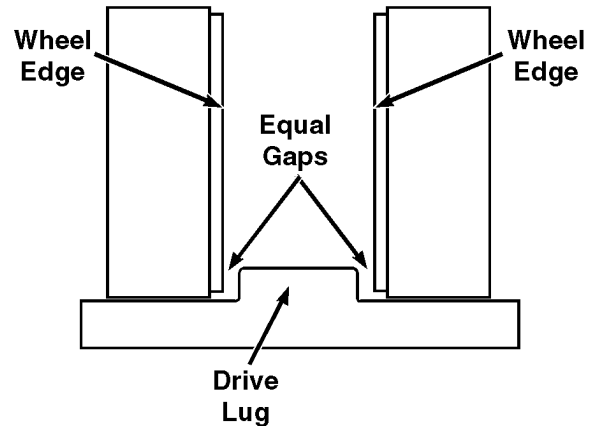
Tightening and loosening hardware pulls adjustment plate from side-to-side, to turn front axle on pivot pin and steer belt away from contact.

3. Install lock plates and hardware.
4. Results of tracking adjustment can be visually checked after just a few feet of belt travel.

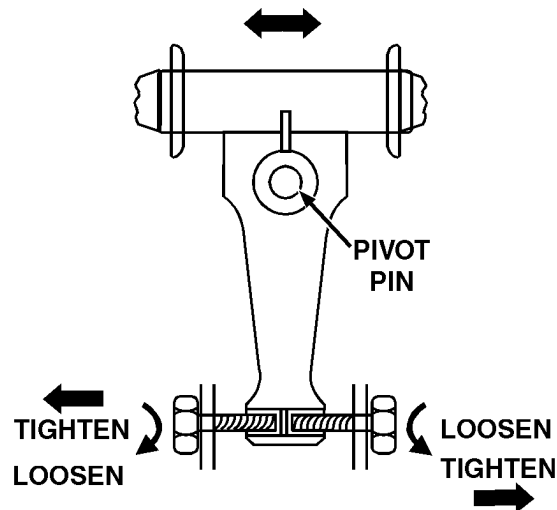
A—Lock Plate
B—Adjustment Bolts



H48170 -UN-10DEC96



H48171 -19-11DEC96



H48830 -19-17FEB97

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HX,TRDRN,A14 -19-17OCT97-1/3

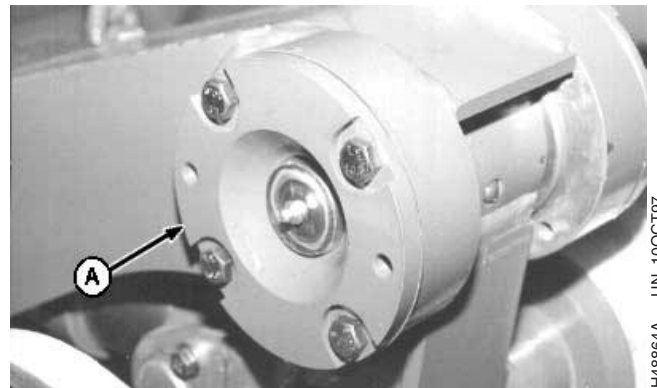
To be sure that adjustment has produced desired results, allow drive lugs and idler wheels to cool to normal temperature; then test drive and re-check for heated wheel edge and drive lugs. Readjust as necessary.

HX,TRDRN,A14 -19-17OCT97-2/3

If normal adjustment does not eliminate contact at rear idler wheels, rear axle can be repositioned to one side to improve tracking.

Remove all shims from “gap side” bearing cap and install under “contact side” bearing cap (A). Relocating shims will shift rear axle 1—3 mm (0.04—0.12 in.), and open gap on contact side.

A—Bearing Cap



H48864A -UN-10OCT97

HX,TRDRN,A14 -19-17OCT97-3/3

Inspecting Track Belt—As Required

Drive Lugs

Over a period of time, belt drive lugs will start to show a normal wear pattern. Surface wear on inside or outside of drive lugs is considered normal and not cause for replacement.

If extreme wear is found on one side or the other, beyond surface wear shown, belt is tracking to worn side and needs to be adjusted back to center to reduce friction and wear. See Adjusting Belt Tracking for further information and procedure.



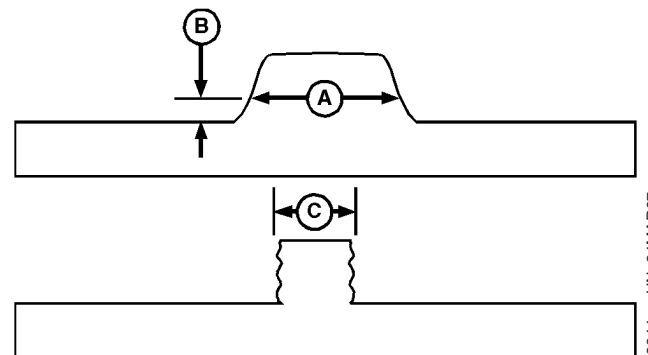
OOU6075,00003BA -19-09FEB01-1/4

On a new belt, drive lugs are 196 mm (7.7 in.) wide (A) when measured 12.7 mm (0.5 in.) (B) above the inner surface of the belt.

Extremely worn drive lugs (C) may indicate a problem with undercarriage or drive components and/or damaged tracking and alignment parts. Check these parts first, before replacing track belt.

Track belt replacement should be considered if:

- two or more consecutive drive lugs are missing,
- adjustment does not correct poor tracking,
- belt rolls off the undercarriage due to worn lugs.



A—Drive Lug Width 196 mm (7.7 in.)
B—Dimension 12.7 mm (0.5 in.)
C—Worn Drive Lugs

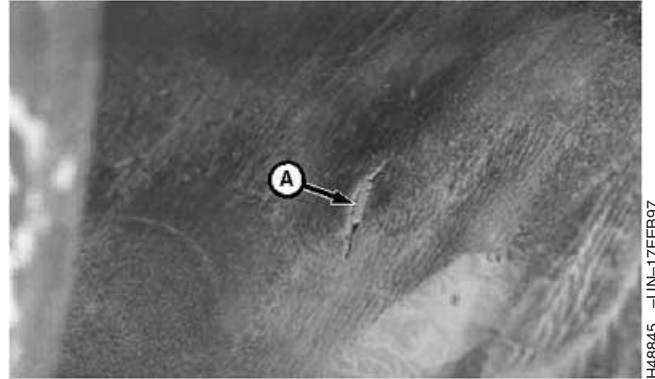
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OOU6075,00003BA -19-09FEB01-2/4

Belt Surface

Always remove imbedded stones (A) or debris from belt surface as soon as discovered. Imbedded debris can work its way deep into belt and damage cord.

A—Imbedded Stone



H48845 -UN-17FEB97

OUO6075,00003BA -19-09FEB01-3/4

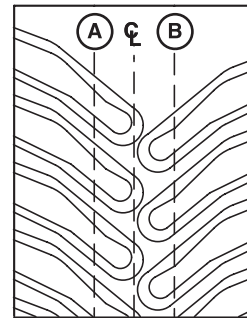
Outside Cleats

It is not uncommon to find more belt wear on the inside half of the belt. Periodically exchanging belts side-to-side will help equalize wear and extend service life (much like rotating tires on a car).

Measure height of cleats at mid-points (A and B) of inner and outer halves of belt and compare dimensions. When height difference of 3.17 mm (.125 in.) is found between inner half and outer half of drive cleats, belts should be exchanged from one side to the other.

A—Mid-point

B—Mid-point



H66256 -UN-13FEB01

OUO6075,00003BA -19-09FEB01-4/4

Relieving Track Belt Tension

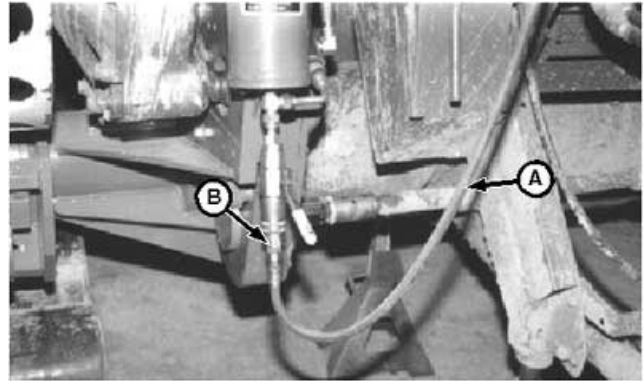
Follow this procedure when belt tension needs to be relieved for adjustment or service.

IMPORTANT: The combine must be parked on level ground before tensioning belt.

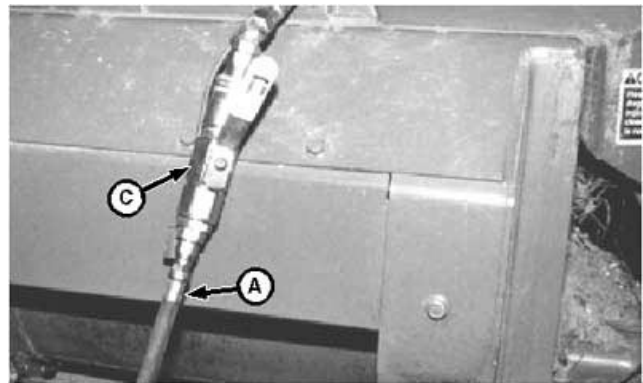
NOTE: This procedure requires two service technicians.

1. Attach hose assembly (A) (with gauge) to quick-couplers at accumulator (B) and reel lift hose (C).
2. Open both valves fully.

A—Hose Assembly
B—Accumulator
C—Reel Lift Hose



H48153 -UN-10DEC96

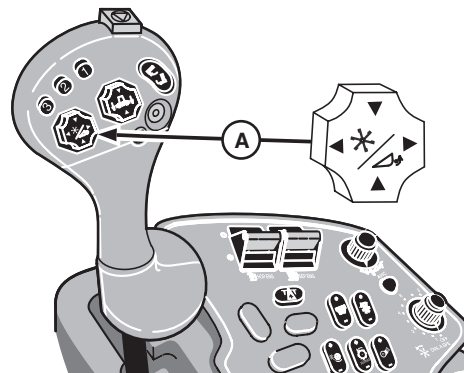


H48154 -UN-10DEC96

OUO6075,0001410 -19-09FEB01-1/3

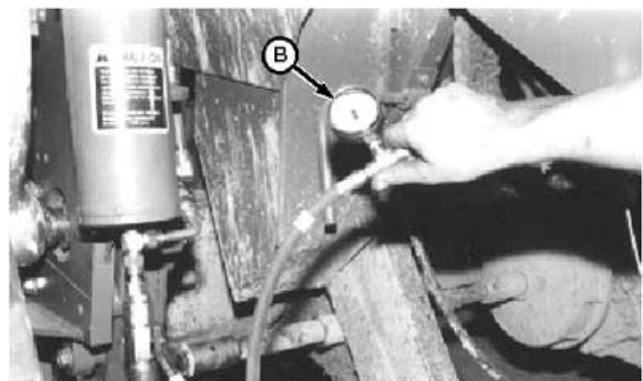
3. Start engine and allow to idle. Depress reel lower switch (A) while observing pressure gauge (B). Belt tension is relieved when gauge reads 0 (zero) pressure.
4. Shut-off engine, set parking brake and remove key.

A—Reel Lower Switch
B—Pressure Gauge



50 Series Combine Reel Lift Switch

H66259 -UN-16FEB01



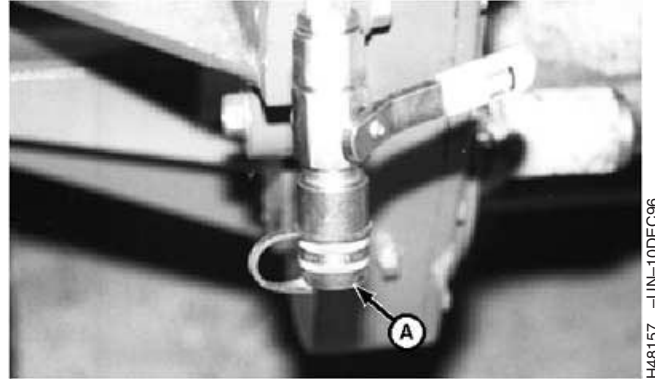
H48156 -UN-10DEC96

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OUO6075,0001410 -19-09FEB01-2/3

5. Close accumulator valve and disconnect hose. Move hose end to opposite side accumulator and repeat steps to relieve tension from opposite track belt.
6. Close valves and remove hose. Install coupling plugs (A).

A—Coupling Plugs



H48157 -UN-10DEC96

OUO6075,0001410 -19-09FEB01-3/3

Servicing Nitrogen Charged Accumulator



CAUTION: Avoid bodily injuries from hydraulic oil and gas under pressure. Before removing, disassembling or charging accumulator:

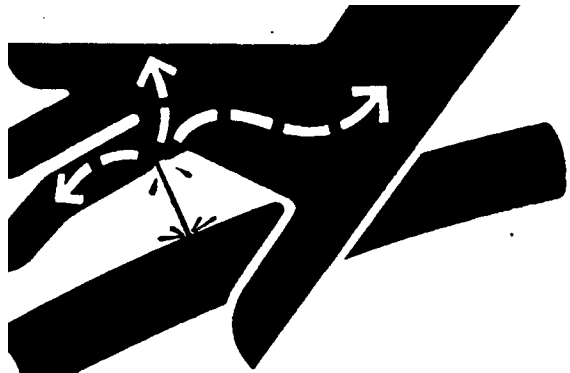
1. Release track belt tension by removing pressure with the reel lift hydraulics.
2. Stop engine, set parking brake and remove key.

Nitrogen charged accumulators (A) are NOT to be serviced by the customer.

Servicing of nitrogen charged accumulators requires special training and service tools.

See your John Deere dealer should accumulator need recharging or other service. John Deere Service Technicians have the training and tools to properly service your equipment.

A—Accumulator



X9811 -UN-23AUG88



H48843 -UN-17FEB97

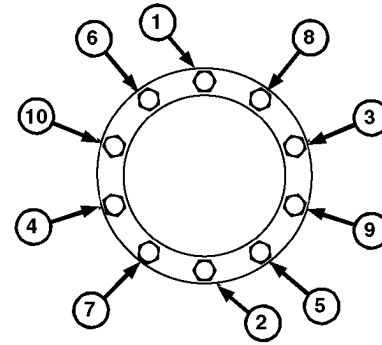
HX,TRDRN,A22 -19-19FEB97-1/1

Torquing Drive Wheel Bolts

IMPORTANT: Wheel bolts **MUST** be clean and oil-free when torquing. Torque values specified in the following steps are for clean, dry wheel bolts. Lubricating oil reduces friction and thread bite to overload bolts.

Initial Wheel Bolt Torque:

1. Using tightening sequence shown, torque wheel bolts to specification using criss/cross pattern to evenly pull wheel tight to hub.



Bolt Tightening Sequence

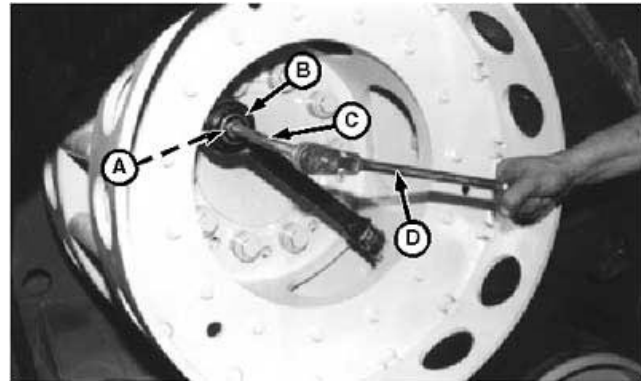
H48807 -UN-12DEC96

Specification

Wheel Bolts—Initial Torque..... 200 N•m
(150 lb-ft)

Final Wheel Bolt Torque:

IMPORTANT: Final wheel bolt torque is extremely high, approximately 949 N•m (700 lb-ft) and cannot be reached using common hand tools and torque wrench. A Four-To-One Torque Multiplier is required to meet final wheel bolt torque specifications. To achieve high torque results, final torquing must be done with drive shaft attached or track on ground and with multiplier handle against inside of wheel.



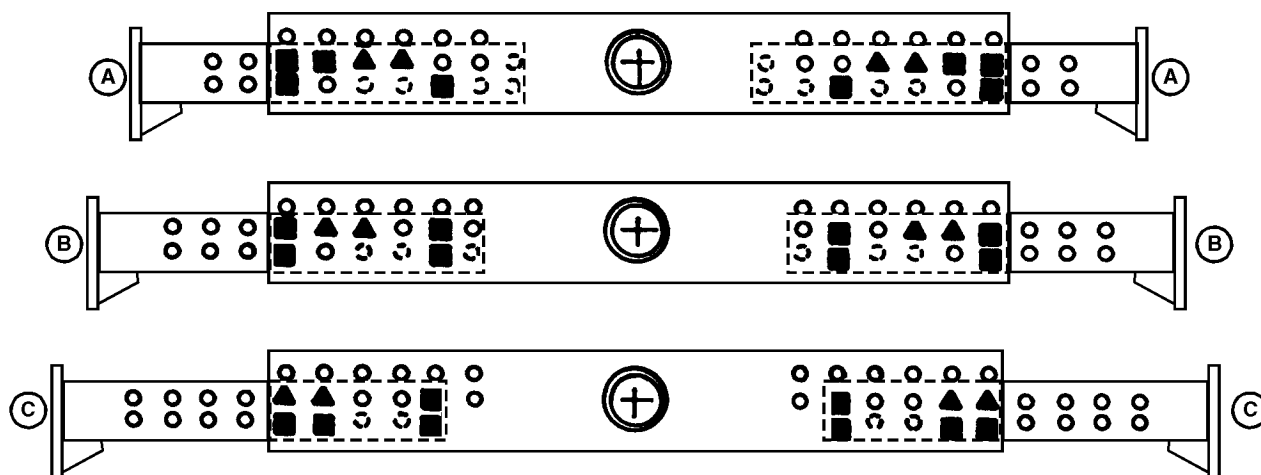
H48808 -UN-12DEC96

A—30 mm Socket
B—4-to-1 Torque Multiplier
C—Wrench Extension
D—Torque or Ratchet Wrench

2. Position tools (A—D) as shown, with Torque Multiplier handle against inside of rim. A longer extension will provide more leverage for reaching high torque specified.
3. Turn all BOLT HEADS an additional 1/4 turn, past initial torque. Due to 4-to-1 torque multiplier, torque wrench will make a full turn while bolt head makes a 1/4 turn.

HX,TRDRN,A23 -19-19FEB97-1/1

Rear Axle Wheel Spacing



A—C—Axle Position

Combine Model	Track Dimension Center-To-Center	Rear Tire Size	Recommended Rear Tire Dimension Center-To-Center	Use Axle Position
9500/9510/9550	3652 mm (144 In.)	28L x 26	3723 mm (147 In.)	A
9500/9510/9550	3652 mm (144 In.)	18.4-26 or 18.4-30	3697 mm (146 In.)	B
CTS/CTS-2/9550 CTS	3840 mm (151 In.)	28L x 26	3723 mm (147 In.)	A
CTS/CTS-2/9550 CTS	3840 mm (151 In.)	18.4-26 or 18.4-30	3697 mm (146 In.)	B
9600/9610/9650/9650	3985 mm (157 In.)	28L x 26	3927 mm (155 In.)	B
STS/9750 STS w/Heavy Duty				
9600/9610/9650/9650	3985 mm (157 In.)	18.4-26 or 18.4-30	3900 mm (154 In.)	C
STS/9750 STS w/Heavy Duty				
9600/9610 /9650 w/Single Red.	4091 mm (161 In.)	ALL	4140 mm (163 In.)	C

NOTE: Black Squares = Clamp Bolts

Black Triangles = Steering Cylinder Mounting Bolts

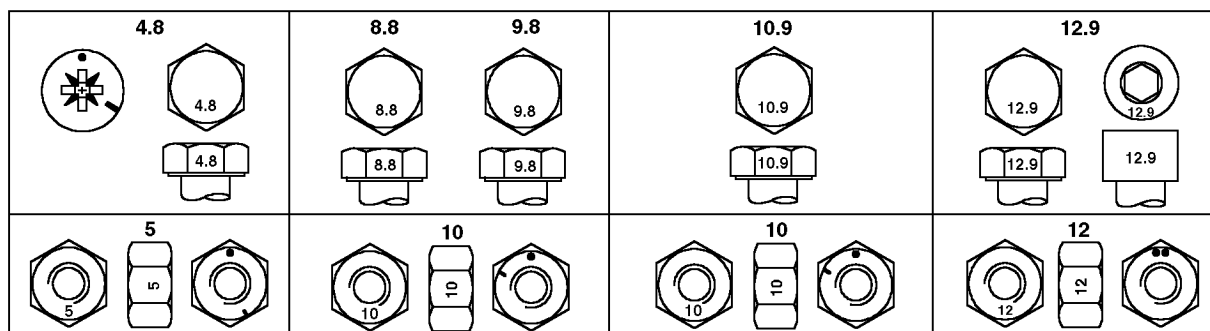
Tracks are not compatible with 9610 and CTS-2 combines equipped with heavy duty single reduction final drives (export combines).

HX,TRDRN,A24 -19-17OCT97-1/1

H48824 -UN-12DEC96

Specifications

Metric Bolt and Cap Screw Torque Values



Top, Property Class and Head Markings; Bottom, Property Class and Nut Markings

	Class 4.8		Class 8.8 or 9.8		Class 10.9		Class 12.9	
Size	Lubricated ^a N•m(lb-ft)	Dry ^b N•m(lb-ft)	Lubricated ^a N•m(lb-ft)	Dry ^b N•m(lb-ft)	Lubricated ^a N•m(lb-ft)	Dry ^b N•m(lb-ft)	Lubricated ^a N•m(lb-ft)	Dry ^b N•m(lb-ft)
M6	4.7 (3.5)	6 (4.4)	9 (6.6)	11.5 (8.5)	13 (9.5)	16.5 (12.2)	15.5 (11.5)	19.5 (14.5)
M8	11.5 (8.5)	14.5 (10.7)	22 (16)	28 (20.5)	32 (23.5)	40 (29.5)	37 (27.5)	47 (35)
M10	23 (17)	29 (21)	43 (32)	55 (40)	63 (46)	80 (59)	75 (55)	95 (70)
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)

^a "Lubricated" means coated with a lubricant such as engine oil, or fasteners with phosphate and oil coatings.

^b "Dry" means plain or zinc plated without any lubrication.

DO NOT use these values if a different torque value or tightening procedure is given for a specific application. Torque values listed are for general use only. Check tightness of fasteners periodically.

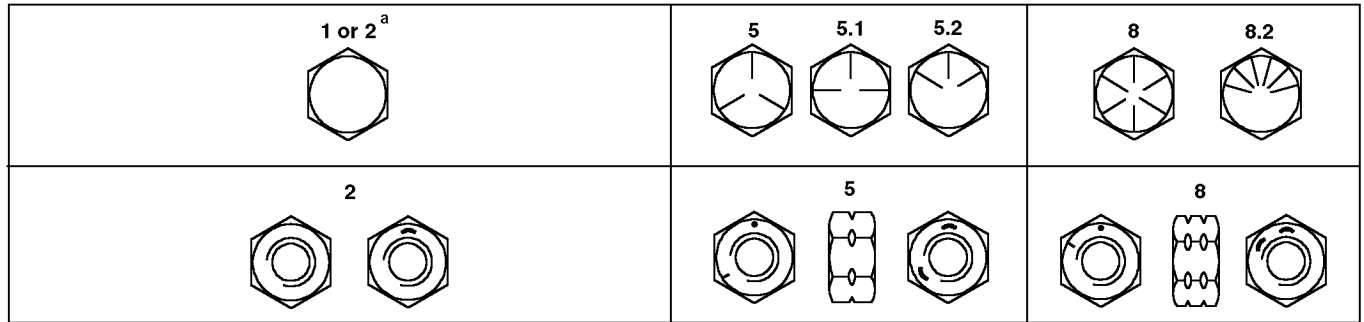
Shear bolts are designed to fail under predetermined loads. Always replace shear bolts with identical property class.

Fasteners should be replaced with the same or higher property class. If higher property class fasteners are used, these should only be tightened to the strength of the original.

Make sure fastener threads are clean and that you properly start thread engagement. This will prevent them from failing when tightening.

Tighten plastic insert or crimped steel-type lock nuts to approximately 50 percent of the dry torque shown in the chart, applied to the nut, not to the bolt head. Tighten toothed or serrated-type lock nuts to the full torque value.

Unified Inch Bolt and Cap Screw Torque Values



Top, SAE Grade and Head Markings; Bottom, SAE Grade and Nut Markings

Size	Grade 1 (No Mark)		Grade 2 ^a (No Mark)		Grade 5, 5.1 or 5.2		Grade 8 or 8.2	
	Lubricated ^b N•m(lb-ft)	Dry ^c N•m(lb-ft)	Lubricated ^b N•m(lb-ft)	Dry ^c N•m(lb-ft)	Lubricated ^b N•m(lb-ft)	Dry ^c N•m(lb-ft)	Lubricated ^b N•m(lb-ft)	Dry ^c N•m(lb-ft)
1/4	3.8 (2.8)	4.7 (3.5)	6 (4.4)	7.5 (5.5)	9.5 (7)	12 (9)	13.5 (10)	17 (12.5)
5/16	7.7 (5.7)	9.8 (7.2)	12 (9)	15.5 (11.5)	19.5 (14.5)	25 (18.5)	28 (20.5)	35 (26)
3/8	13.5 (10)	17.5 (13)	22 (16)	27.5 (20)	35 (26)	44 (32.5)	49 (36)	63 (46)
7/16	22 (16)	28 (20.5)	35 (26)	44 (32.5)	56 (41)	70 (52)	80 (59)	100 (74)
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)

^a Grade 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, or fasteners with phosphate and oil coatings.

^c "Dry" means plain or zinc plated without any lubrication.

DO NOT use these values if a different torque value or tightening procedure is given for a specific application. Torque values listed are for general use only. Check tightness of fasteners periodically.

Shear bolts are designed to fail under predetermined loads. Always replace shear bolts with identical grade.

Fasteners should be replaced with the same or higher grade. If higher grade fasteners are used, these should only be tightened to the strength of the original.

Make sure fastener threads are clean and that you properly start thread engagement. This will prevent them from failing when tightening.

Tighten plastic insert or crimped steel-type lock nuts to approximately 50 percent of the dry torque shown in the chart, applied to the nut, not to the bolt head. Tighten toothed or serrated-type lock nuts to the full torque value.

Specifications

Track Drive Specifications¹

Track Assembly	
Weight (each side)	2256 kg (4794 Lbs.)
Belt Width	863.6 mm (34 In.)
Contact Area	17,787 sq. cm (2757 Sq. In.)
Machine Width with Track Drive	
9500/9510/9550	4521 mm (178 In.)
CTS/CTS-2/9560 CTS	4699 mm (185 In.)
9600/9610/9650 Regular Duty and Heavy Duty Final Drives	4953 mm (195 In.)
9650 STS/9750 STS Heavy Duty Final Drives	4521 mm (178 in.)
9600/9610/ Planetary Final Drive (Includes 165 mm (6.5 In.) axle spacers)	4851 mm (191 in.)
Track Center-To-Center Dimension	
9500/9510/9550	3652 mm (144 In.)
CTS/CTS-2/9650 CTS	3840 mm (151 In.)
9600/9610/9650 Regular and Heavy Duty Final Drives	4091 mm (161 In.)
9650 STS/9750 STS Heavy Duty Final Drive	3652 mm (144 in.)
9600/9610 Planetary Final Drive (Includes 165 mm (6.5 In.) axle spacers)	3985 mm (157 in.)

¹(Specifications and design subject to change without notice.)

Lube Refill Capacities

Component	Oil Type	Qty. (each)
Transfer Case (2)	80w/90 GL5	1.42L (1.5 qt.)
Single Reduction Final Drive (2)	80w/90 GL5	3.82L (4 qt.)
Planetary Final Drive (2)	80w/90 GL5	3.1L (3.25 qt.)
Bogey Wheel Hubs (12)	HY-GARD®	236.6 mL (8 oz.)
Idler Wheel Hubs (8)	HY-GARD®	414.0 mL (14 oz.)

HY-GARD is a trademark of Deere & Company.

HX,TRDRS,A3 -19-17FEB97-1/1

Record Serial Numbers

Each track drive assembly has its own serial number (A) stamped into the top plate of the main pivot frame or located on serial number tag.

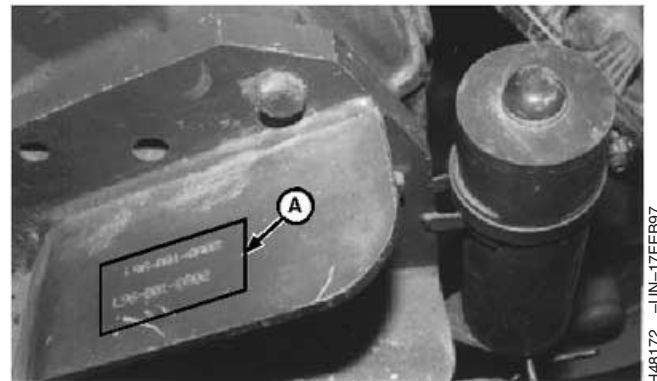
EXAMPLE: L 96 001 0822

In the example, "L" is left-hand, 96 year of manufacture, 001 sequential unit number, and 08 22 the date of manufacture.

Record these numbers in the spaces below. Provide numbers to your John Deere dealer when ordering repair parts or seeking product support services.

Right-Hand Track Assembly _____

Left-Hand Track Assembly _____



H48172 -UN-17FEB97

HX,TRDRS,A2 -19-13FEB97-1/1

Crime Prevention Tips

Help Prevent Crime

You can help take a bite out of crime by properly documenting ownership and discouraging theft.

**TAKE A BITE OUT OF
CRIME**
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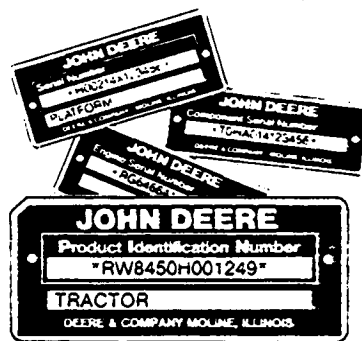


TS140 -19-07OCT88

DX,CRPRV,A -19-03MAR93-1/1

Record AG Identification Numbers

1. Mark your machines with your own unique numbering system.
2. Record the Product Identification Number (PIN) of the unit and also individual component identification numbers for engines, axles, pumps, etc. Include the PIN numbers on all documentation, such as insurance, financial, and warranty papers.

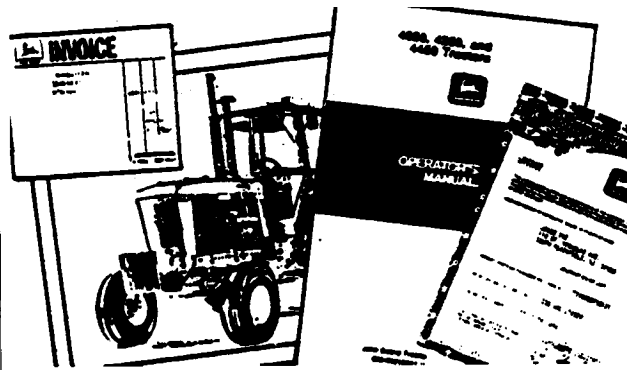


TS161 -UN-23MAR89

DX,CRPRV,B -19-03MAR93-1/1

Keep Proof of Ownership

1. Take color photographs from several angles of each machine.
2. Maintain an up-to-date inventory of all your machines.
3. Keep your documented identification numbers, color photographs, and inventory in a safe, secure location.



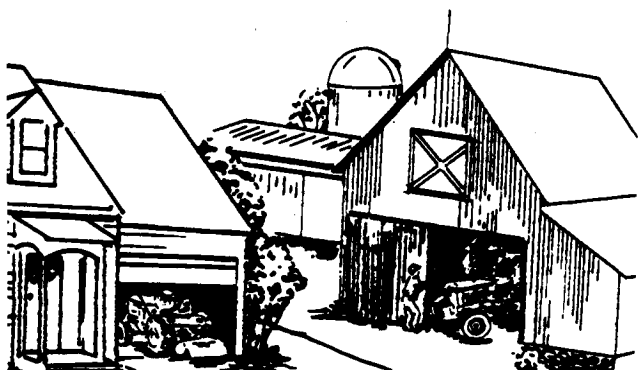
TS142 -UN-23MAR89

DX,CRPRV,C -19-03MAR93-1/1

Park Indoors Out of Sight

Make machines hard to move:

- Park large equipment in front of exits.
- Lower equipment to the ground. Remove key.
- Remove battery when unit is in storage.
- Lock cab doors, windows, and vandal-proof devices.
- Set wheels in widest position making loading more difficult. Lock building.



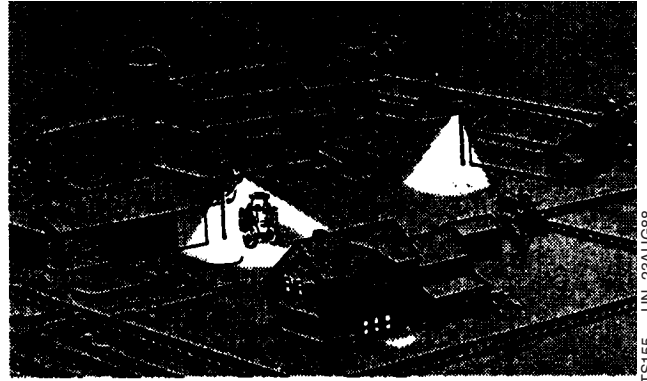
TS143 -UN-23AUG88

DX,CRPRV,D -19-03MAR93-1/1

When Parking Outdoors

Make machines hard to move:

- Park in a well-lighted, fenced area.
- Lower all equipment to the ground.
- Remove ignition key. Remove battery when unit is in storage.
- Lock cab doors, windows, and vandal-proof devices.
- Set wheels in widest position making loading more difficult.

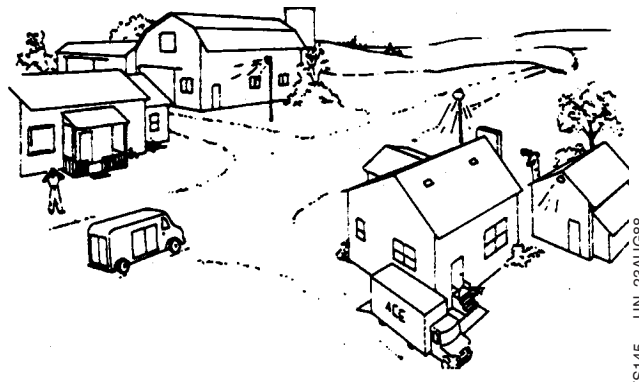


TS155 -UN-23AUG88

DX,CRPRV,E -19-03MAR93-1/1

Reduce Vandalism

1. Install vandal-proof devices.
2. Participate in a neighborhood watch program. Take written notes of suspicious vehicles or persons and report your findings to law enforcement agency.
3. Regularly verify that identification plates have not been removed. If they have, notify law enforcement agency. Order duplicate plates from your dealer.



TS145 -UN-23AUG88

DX,CRPRV,F -19-03MAR93-1/1

Report Thefts Immediately

1. Immediately notify your local law enforcement agency and insurance agent.
2. Provide a complete description of the machine, all of the documented identification numbers and color photographs.
3. Request verification of the identification numbers after they have been entered with any regional or national crime information center. Double check the numbers to be sure they are correct.
4. Notify your John Deere dealer of the theft and request that its loss be posted with full description and identification numbers.



TS146 -JUN-09JAN89

DX.CRPRV,G -19-03MAR93-1/1

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John Deere Service Literature Available

Technical Information

Technical information is available from John Deere. Some of this information is available in electronic as well as printed form. Order from your John Deere dealer or call **1-800-522-7448**. Please have available the model number, serial number, and name of the product.

Available information includes:

- **PARTS CATALOGS** list service parts available for your machine with exploded view illustrations to help you identify the correct parts. It is also useful in assembling and disassembling.
- **OPERATOR'S MANUALS** providing safety, operating, maintenance, and service information. These manuals and safety signs on your machine may also be available in other languages.
- **OPERATOR'S VIDEO TAPES** showing highlights of safety, operating, maintenance, and service information. These tapes may be available in multiple languages and formats.
- **TECHNICAL MANUALS** outlining service information for your machine. Included are specifications, illustrated assembly and disassembly procedures, hydraulic oil flow diagrams, and wiring diagrams. Some products have separate manuals for repair and diagnostic information. Some components, such as engines, are available in separate component technical manuals
- **FUNDAMENTAL MANUALS** detailing basic information regardless of manufacturer:
 - Agricultural Primer series covers technology in farming and ranching, featuring subjects like computers, the Internet, and precision farming.
 - Farm Business Management series examines "real-world" problems and offers practical solutions in the areas of marketing, financing, equipment selection, and compliance.
 - Fundamentals of Services manuals show you how to repair and maintain off-road equipment.
 - Fundamentals of Machine Operation manuals explain machine capacities and adjustments, how to improve machine performance, and how to eliminate unnecessary field operations.



TS189 -UN-17JAN89



TS191 -UN-02DEC88



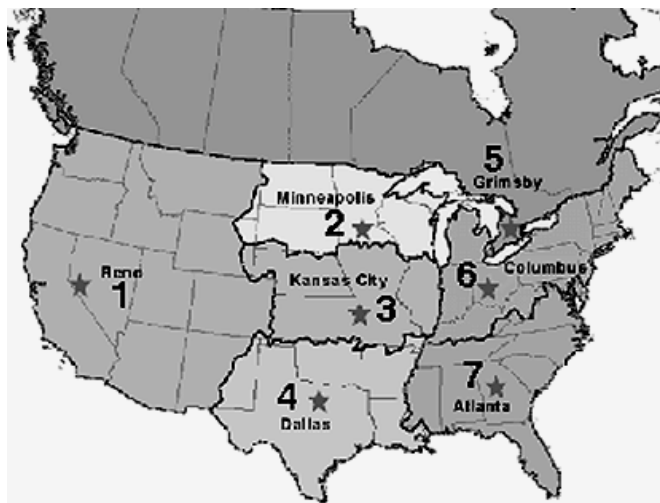
TS224 -UN-17JAN89



TS1663 -UN-10OCT97

John Deere Service Keeps You On The Job

John Deere Is At Your Service When You Need It



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6. JOHN DEERE COMPANY
701 Georgesville Road
Columbus, OH 43228-2499
Phone: 614-275-1500
Fax: 614-275-1450

CUSTOMER SATISFACTION is important to John Deere. Our dealers strive to provide you with prompt, efficient parts and service.

This includes:

- Maintenance and service parts to support your equipment.
- Trained service technicians and the necessary diagnostic and repair tools to service your equipment.

CUSTOMER SATISFACTION PROBLEM RESOLUTION PROCESS

Your John Deere dealer is dedicated to supporting your equipment and resolving any problem you may experience.

1. When contacting your dealer, be prepared with the following information:

- Machine model and product identification number
- Date of purchase
- Nature of problem

2. Discuss problem with dealer service manager.

3. If unable to resolve, explain problem to dealership manager and request assistance.

4. If you have a persistent problem your dealership is unable to resolve, ask your dealer to contact John Deere for assistance.

5. If a problem is not resolved to your satisfaction, contact the appropriate John Deere sales location for your area shown in map and ask to speak with customer service.

