7450/7455 Cotton Stripper

For complete service information also see:

6059 Engine	CTM8
6068 Engine	CTM104
Starting Motors and Alternators	CTM77
Electronic Fuel Injection Systems	CTM68

John Deere Des Moines Works TM1586 (22MAY97)

LITHO IN U.S.A. ENGLISH

Introduction

FOREWORD

This manual is written for an experienced technician. Essential tools required in performing certain service work are identified in this manual and are recommended for use.

Live with safety: Read the safety messages in the introduction of this manual and the cautions presented throughout the text of the manual.



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

Technical manuals are divided in two parts: repair and operation and tests. Repair sections tell how to repair the components. Operation and tests sections help you identify the majority of routine failures quickly. Information is organized in groups for the various components requiring service instruction. At the beginning of each group are summary listings of all applicable essential tools, service equipment and tools, other materials needed to do the job, service parts kits, specifications, wear tolerances, and torque values.

Technical Manuals are concise guides for specific machines. They are on-the-job guides containing only the vital information needed for diagnosis, analysis, testing, and repair.

Fundamental service information is available from other sources covering basic theory of operation, fundamentals of troubleshooting, general maintenance, and basic type of failures and their causes.

DX,TMIFC -19-22MAY92

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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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Moline, Illinois

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FOLLOW SAFE PROCEDURES

Unsafe work practices are dangerous. Understand service procedure before doing work; do not attempt shortcuts.



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HANDLE FLUIDS SAFELY—AVOID FIRES

When you work around fuel, do not smoke or work near heaters or other fire hazards.

Store flammable fluids away from fire hazards. Do not incinerate or puncture pressurized containers.

Make sure machine is clean of trash, grease, and debris.

Do not store oily rags; they can ignite and burn spontaneously.



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DX,FLAME

-19-04JUN90

PREVENT BATTERY EXPLOSIONS

Keep sparks, lighted matches, and open flame away from the top of battery. Battery gas can explode.

Never check battery charge by placing a metal object across the posts. Use a volt-meter or hydrometer.

Do not charge a frozen battery; it may explode. Warm battery to 16°C (60°F).



DX,SPARKS

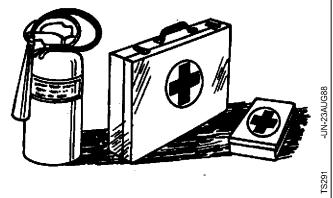
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PREPARE FOR EMERGENCIES

Be prepared if a fire starts.

Keep a first aid kit and fire extinguisher handy.

Keep emergency numbers for doctors, ambulance service, hospital, and fire department near your telephone.



DX,FIRE2 -19-03MAR93

PREVENT ACID BURNS

Sulfuric acid in battery electrolyte is poisonous. It is strong enough to burn skin, eat holes in clothing, and cause blindness if splashed into eyes.

Avoid the hazard by:

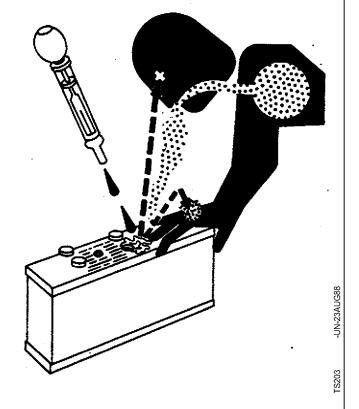
- 1. Filling batteries in a well-ventilated area.
- 2. Wearing eye protection and rubber gloves.
- 3. Avoiding breathing fumes when electrolyte is added.
- 4. Avoiding spilling or dripping electrolyte.
- 5. Use proper jump start procedure.

If you spill acid on yourself:

- 1. Flush your skin with water.
- 2. Apply baking soda or lime to help neutralize the acid.
- 3. Flush your eyes with water for 15—30 minutes. Get medical attention immediately.

If acid is swallowed:

- 1. Do not induce vomiting.
- 2. Drink large amounts of water or milk, but do not exceed 2 L (2 quarts).
- 3. Get medical attention immediately.



X,POISON -19-21APR93

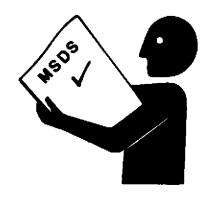
HANDLE CHEMICAL PRODUCTS SAFELY

Direct exposure to hazardous chemicals can cause serious injury. Potentially hazardous chemicals used with John Deere equipment include such items as lubricants, coolants, paints, and adhesives.

A Material Safety Data Sheet (MSDS) provides specific details on chemical products: physical and health hazards, safety procedures, and emergency response techniques.

Check the MSDS before you start any job using a hazardous chemical. That way you will know exactly what the risks are and how to do the job safely. Then follow procedures and recommended equipment.

(See your John Deere dealer for MSDS's on chemical products used with John Deere equipment.)



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DX,MSDS,NA -19-03MAR93

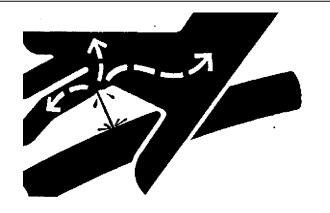
AVOID HIGH-PRESSURE FLUIDS

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

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

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

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



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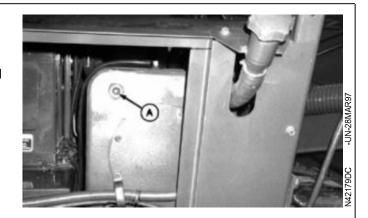
DX,FLUID -19-03MAR93

REMOVE AND INSTALL HYDROSTATIC DRIVE MOTOR

1. With units lowered and engine stopped, check oil level in reservoir (7455 shown). If oil level is visible in sight glass (A) you may need to drain a little oil out of the reservoir to prevent it from getting sucked through the vacuum pump.

Install Vacuum Pump and JT07085 Adapter Kit on reservoir. This will allow removal of the hydrostatic motor without draining the reservoir. Pump can be attached without use of the adapter kit by attaching to the reservoir overflow hose.

If vacuum pump is not available, drain reservoir. Capacity is 68 L (18 gal).



NX1586,5005,C2 -19-30APR97

50 05 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.

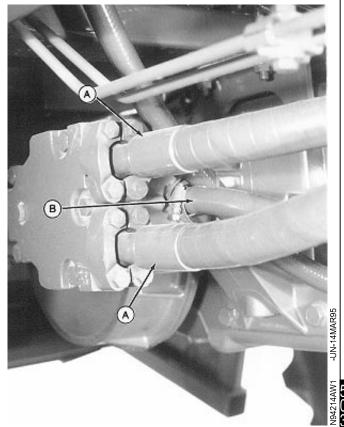
If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be surgically removed within a few hours or gangrene may result. Doctors unfamiliar with this type of injury should reference a knowledgeable medical source. Such information is available from Deere & Company Medical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

IMPORTANT: When disconnecting a line, hose, or transfer tube from a hydrostatic component, always mark end and port from which it was removed so that it can be connected to proper port when reassembling.

Also, when disconnecting a line, hose, or transfer tube from a component, always plug them and the component to keep dirt out of the system. Use a plastic plug or plastic bag. NEVER use a cloth. Cloth contains lint which can damage the hydrostatic system.

High pressure hoses have clamp-type bolted fittings with O-rings. When this type of fitting is disassembled, inner surfaces must be cleaned thoroughly and new O-rings installed. This is to insure a tight seal and reduce possibility of leakage.

- 2. Clean outside of hydrostatic drive motor thoroughly. Either steam clean or wash with solvent. Clean surrounding area so dirt will not get into system when hoses and line are disconnected.
- 3. Disconnect high-pressure lines (A).
- 4. Disconnect case connecting hose (B).
- 5. Wire hoses out of the way.



7450



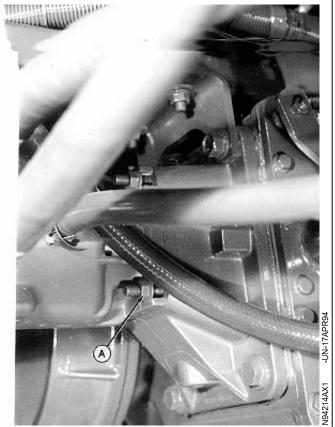
7455

NX1586,5010,F1 -19-30APR97



CAUTION: Motor weights approximately 26 kg (57 lb). Use care to avoid damage or personal injury when removing motor.

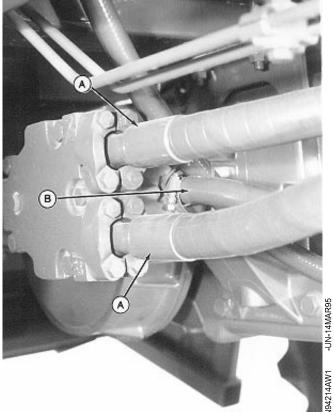
- 6. Support motor using service jack and adapters. Hold motor to service jack with a chain.
- 7. Remove four nuts (A) attaching motor to mounting bracket.
- 8. Pull motor straight out of transmission case, then lower.



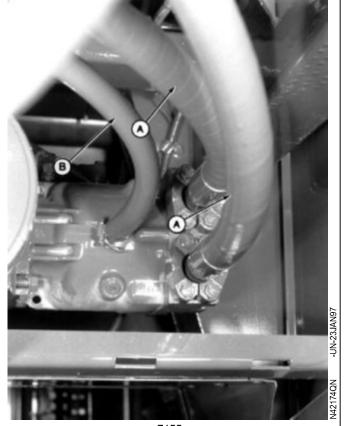
NX1586,5010,G1 -19-17MAR97

- 10. Install hydrostatic motor. During installation of motor:
- Coat a new motor O-ring with multipurpose grease, then install on mounting flange of motor.
- Tighten motor-to-transmission mounting bracket nuts to specified torque.
- Replace O-rings on high-pressure hose ends.
- Install high-pressure hoses (A) by placing one-half of clamp on motor to hold hose in place while installing other half. Pinch clamps together before tightening clamp cap screws. Uniformly tighten clamp screws. Final tighten clamp screws to specified torque.
- Install case connecting hose (B).
- 11. If hydrostatic motor failed internally and failure could have caused metal particles to contaminate the system's oil, perform the following tasks:
- Drain the hydrostatic system.
- · Replace reservoir filter.
- Fill reservoir with John Deere HY-GARD transmission and hydraulic oil.
- 12. Start engine and purge air from system. (See Start-Up Procedure After Filling Reservoir in this section.)
- 13. Check for leaks.

Torque Specifications



7450



7455

NX1586,5005,D1 -19-30APR97

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REMOVE AND INSTALL HYDROSTATIC **DRIVE PUMP**

1. With units lowered and engine stopped, check oil level in reservoir. If oil level is visible in sight glass (A) you may need to drain a little oil out of the reservoir to prevent it from getting sucked through the vacuum pump.

Install Vacuum Pump and JT07085 Adapter Kit on reservoir. This will allow removal of the hydrostatic motor without draining the reservoir. Pump can be attached without use of the adapter kit by attaching to the reservoir overflow hose.

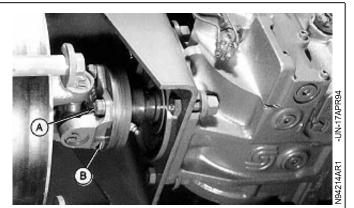
If vacuum pump is not available, drain reservoir. Capacity is 68 L (18 gal).



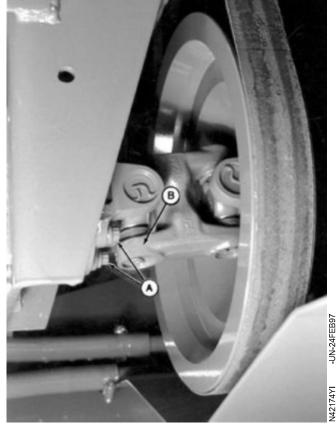
NX1586,5005,E2 -19-30APR97

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- 2. Remove driveline cap screws (A) and lock washers.
- 3. Leave coupler (B) on hydrostatic pump drive shaft. It can be removed when pump is loose from mounting and moved forward.



7450



7455

NX1586,5005,F1 -19-17MAR97



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 should reference a knowledgeable medical source. Such information is available from Deere & Company Medical Department in Moline, Illinois, U.S.A.



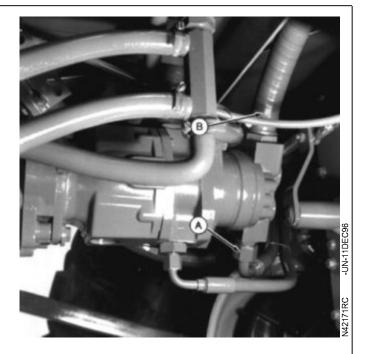
IMPORTANT: When disconnecting a line, hose, or transfer tube from a hydrostatic component, always mark end and port from which it was removed so that it can be connected to proper port when reassembling.

Also, when disconnecting a line, hose, or transfer tube from a component, always plug them and the component to keep dirt out of the system. Use a plastic plug or plastic bag. NEVER use a cloth. Cloth contains lint which can damage the hydrostatic system.

High pressure hoses have clamp-type bolted fittings with O-rings. When this type of fitting is disassembled, inner surfaces must be cleaned thoroughly and new O-rings installed. This is to insure a tight seal and reduce possibility of leakage.

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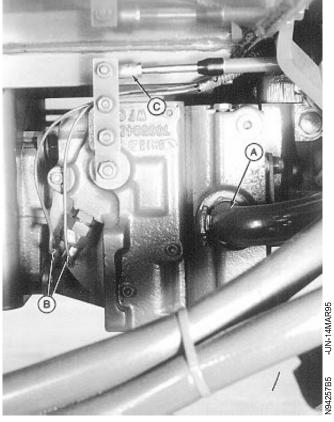
- 4. Clean pump and surrounding area using steam or solvent.
- 5. Disconnect hydraulic pump pressure hose (A) from
- 6. Loosen supply hose (B) hose clamps. Leave hose barb in hose and unscrew from pump.



NX1586,5005,G2 -19-30APR97

- 7. Disconnect hydrostatic pump case drain (A).
- 8. Disconnect control cable (C) from control valve arm.
- 9. Disconnect neutral start wires (B) from switch.

TM1586 (22MAY97)

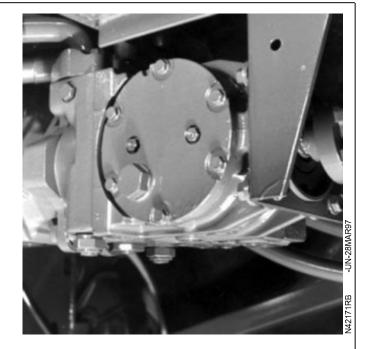


NX1586,5005,H1 -19-17MAR97



CAUTION: To avoid personal injury and damage to hydraulic/hydrostatic pumps, use appropriate lifting equipment for removal. Pumps weigh approximately 84 kg (185 lb) when together.

- 10. Place D05070ST Service Jack with adapters under pumps.
- 11. Remove attaching hardware.



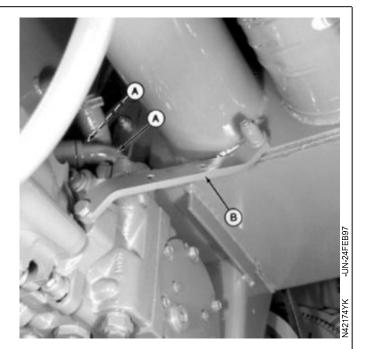
NX1586,5005,J1 -19-08MAY97

12. Disconnect hydrostatic supply hose (A) from reservoir.



NX1586,5005,J2 -19-17MAR97

- 13. Remove cap screws attaching support brackets (B) to pumps.
- 14. Slide pumps back and then lower until high pressure hose clamp hardware can be accessed.
- 15. Disconnect high pressure lines (A).
- 16. Lower pumps completely and remove from under machine.
- 17. Separate hydraulic pump from hydrostatic pump.
- 18. Repair hydrostatic pump. (See instructions in this section.



NX1586,5005,J4 -19-30APR97

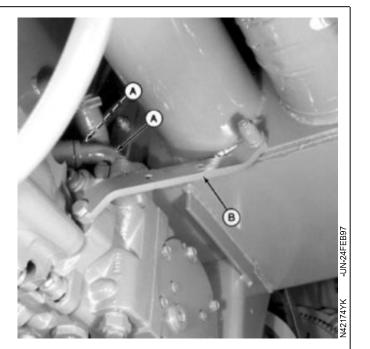
- 19. When installing hydrostatic/hydraulic pumps:
- · Replace O-rings on high-pressure hose ends.
- Install high-pressure hoses (A) by placing one-half of clamp on motor to hold hose in place while installing other half. Pinch clamps together before tightening clamp cap screws. Uniformly tighten clamp screws. Final tighten clamp screws to specified torque.
- · Install support brackets (B).
- 20. If hydrostatic pump failed internally and failure could have caused metal particles to contaminate the system's oil, perform the following tasks:
- · Drain the hydrostatic system.
- · Replace reservoir filter.
- Fill reservoir with John Deere HY-GARD transmission and hydraulic oil.

IMPORTANT: Avoid damage to hydraulic/hydrostatic reservoir by not overpressurizing when using pump.

- 21. If D15032NU Pump was used to keep oil in reservoir, reverse the hoses on the pump to apply a slight amount of pressure to system. This pressure will push hydraulic oil back in to some of the hydraulic components.
- 22. Start engine and purge air from system. (See Start-Up Procedure After Filling Reservoir in this section.)
- 23. Check hydraulic and hydrostatic pumps for leaks.

Torque Specifications

 $\label{eq:hydrostatic} \mbox{ Hydrostatic Pump-to-Mounting Nuts} \qquad \qquad \mbox{115 N·m (85 lb-ft)} \\ \mbox{ High Pressure Hose Clamp Screws} \qquad \qquad \mbox{47 N·m (35 lb-ft)} \\$



NX1586,5005,L2 -19-02MAY97

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START-UP PROCEDURE AFTER HYDROSTATIC SYSTEM REPAIR

- 1. Fill system with John Deere HY-GARD transmission and hydraulic oil and leave cap off reservoir.
- 2. Remove 5-amp or 10-amp FUEL/START AID/ALT fuse (A) (on side of console). (This prevents engine from starting.)

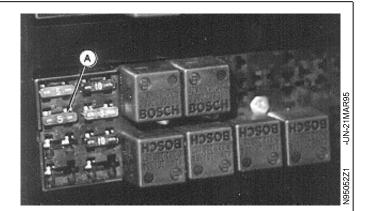
IMPORTANT: Avoid engine damage. Do not crank engine for more than 10 seconds in each minute.

- 3. Crank engine with starting motor several times at one minute intervals. (This starts oil flowing into the hydraulic and hydrostatic pumps.)
- 4. Install FUEL/START AID/ALT fuse.



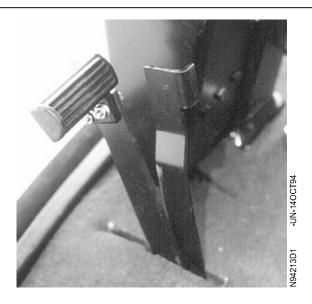
CAUTION: To avoid injury or death to others, keep all bystanders away from machine while performing start-up procedure. Machine may move unexpectedly.

- 5. Start engine.
- 6. Run engine at slow idle speed for five minutes. (This bleeds air from the system.)



NX1586,5005,M1 -19-17MAR97

- 7. Set park brake.
- 8. Move hydro lever very slightly forward, out of neutral. After 30 seconds, return hydro lever to neutral position.
- 9. Move hydro lever very slightly into reverse travel. After 30 seconds, return hydro lever to neutral position.
- 10. Repeat Steps 8 and 9 until maximum forward and reverse travel are reached.
- 11. Release park brake.
- 12. Increase engine speed to full throttle.
- 13. Shift transmission to second gear and run machine forward and in reverse several times to check the drive system.
- 14. Check for system leaks, fill reservoir with oil and install reservoir cap.



NX1586,5005,N -19-08MAY97