

# 748H Skidder Repair

(Serial No. 630436 - )

## TECHNICAL MANUAL

### 748H Skidder Repair (S.N. 630436— )

TM11813 13OCT10 (ENGLISH)

For complete service information also see:

748H Skidder Operation and Test (S.N. 630436— ).....	TM11797
H-Series Skidder Operator's Manual (S.N. 630436— ).....	OMT255825
PowerTech™ 4.5L & 6.8L Diesel Engines - Base Engine.....	CTM104
PowerTech™ Plus 4.5L & 6.8L Diesel Engines—Level 14 Electronic Fuel System With Denso HPCR.....	CTM320
TeamMate™ IV Axles 1200 - 1400 Series Inboard Planetary Axles.....	CTM442
40 and 4000 Winches .....	CTM25
60 and 6000 Winches .....	CTM41
DF180 Series Powershift Transmission Repair Manual .....	CTM308
120 Series Cylinders .....	CTM114319
125 Series Cylinders .....	CTM109319
JDLink™ / ZXLink™ Machine Monitoring System.....	CTM10006
Specifications Manual.....	SP458

**Worldwide Construction  
And Forestry Division**

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# 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.

.0004E4A -19-08SEP08-1/1

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**THANK YOU!**

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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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General Information**

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### Recognize Safety Information

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

Follow the precautions and safe operating practices highlighted by this symbol.

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

On your machine, DANGER signs are red in color, WARNING signs are orange, and CAUTION signs are yellow. DANGER and WARNING signs are located near specific hazards. General precautions are on CAUTION labels.



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T133568 —19—28AUG00

TX03679,00016CC -19-03NOV08-1/1

### 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.

TS201 —UN—23AUG88

DX,READ -19-16JUN09-1/1

### Operate Only If Qualified

Do not operate this machine unless you have read the operator's manual carefully and you have been qualified by supervised training and instruction.

Familiarize yourself with the job site and your surroundings before operating. Try all controls and machine functions with the machine in an open area before starting to work.

Know and observe all safety rules that may apply to your work situation and your work site.

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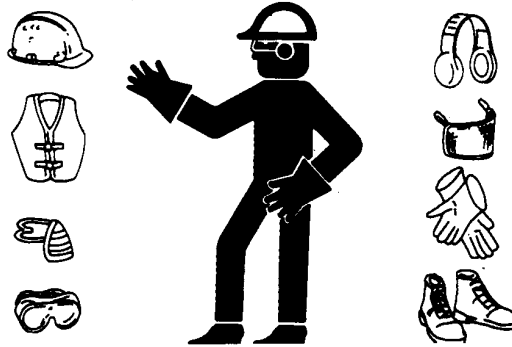
### Wear Protective Equipment

Guard against injury from flying pieces or metal or debris; wear goggles or safety glasses.

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

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

Prolonged exposure to loud noise can cause impairment or loss of hearing. Wear suitable hearing protection such as earmuffs or earplugs to protect against objectionable or uncomfortable loud noises. Radio or music headphones are not suitable to use for hearing protection.



TS206—UN—23AUG88

OUT4001,0000570 -19-12FEB10-1/1

### Avoid Unauthorized Machine Modifications

John Deere recommends using only genuine John Deere replacement parts to ensure machine performance. Never substitute genuine John Deere parts with alternate parts not intended for the application as these can create hazardous situations or hazardous performance. Non-John Deere parts, or any damage or failures resulting from their use are not covered by any John Deere warranty.

Modifications of this machine, or addition of unapproved products or attachments, may affect machine stability or

reliability, and may create a hazard for the operator or others near the machine. The installer of any modification which may affect the electronic controls of this machine is responsible for establishing that the modification does not adversely affect the machine or its performance.

Always contact an authorized dealer before making machine modifications that change the intended use, weight or balance of the machine, or that alter machine controls, performance or reliability.

AM40430,00000A9 -19-20AUG09-1/1

### Inspect Machine

Inspect machine carefully each day by walking around it before starting.

Keep all guards and shields in good condition and properly installed. Fix damage and replace worn or broken parts immediately. Pay special attention to hydraulic hoses and electrical wiring.



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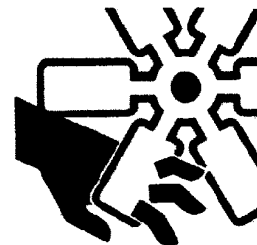
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### Stay Clear of Moving Parts

Entanglements in moving parts can cause serious injury.

Stop engine before examining, adjusting or maintaining any part of machine with moving parts.

Keep guards and shields in place. Replace any guard or shield that has been removed for access as soon as service or repair is complete.



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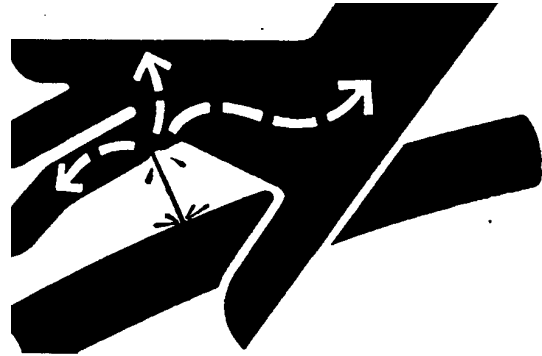
### Avoid High-Pressure Fluids

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 in English from Deere & Company Medical Department in



Moline, Illinois, U.S.A., by calling 1-800-822-8262 or +1 309-748-5636.

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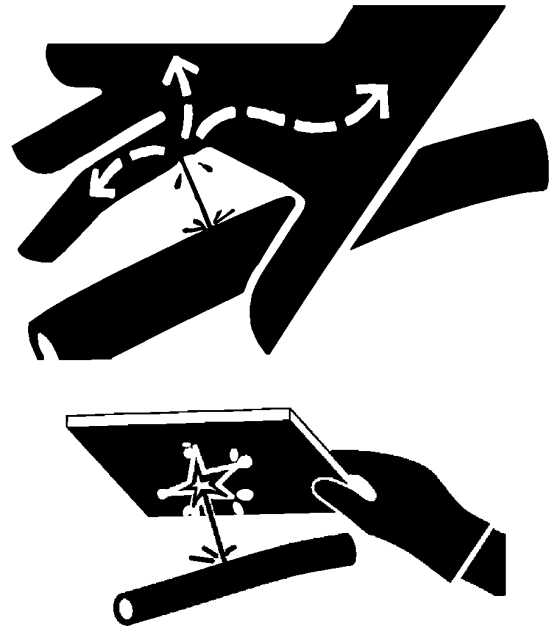
DX,FLUID -19-20AUG09-1/1

### Avoid High-Pressure Oils

This machine uses a high-pressure hydraulic system. Escaping oil under pressure can penetrate the skin causing serious injury.

**Never search for leaks with your hands.** Protect hands. Use a piece of cardboard to find location of escaping oil. Stop engine and relieve pressure before disconnecting lines or working on hydraulic system.

**If hydraulic oil penetrates your skin, see a doctor immediately. Injected oil must be removed surgically within hours or gangrene may result.** Contact a knowledgeable medical source or the Deere & Company Medical Department in Moline, Illinois, U.S.A.



T133509 —UN—17MAR06

T133840 —UN—20SEP00

TX03679,00016D3 -19-03NOV08-1/1

### Do Not Use Starting Fluid

**IMPORTANT: Avoid an explosion or fire. Machine is equipped with electrical cold start assist system. Do not use starting fluid of any type on the machine.**

This machine is equipped with a Tier III engine. Fire, explosion or engine damage will result from using starting fluids of any type on this machine.



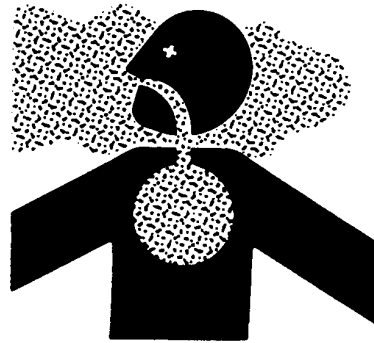
T145705 —UN—18SEP01

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### Work In Ventilated Area

Engine exhaust fumes can cause sickness or death. If it is necessary to run an engine in an enclosed area, remove the exhaust fumes from the area with an exhaust pipe extension.

If you do not have an exhaust pipe extension, open the doors and get outside air into the area.



TS220—UN—23AUG88

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

### Prevent Fires

**Handle Fuel Safely:** Store flammable fluids away from fire hazards. Never refuel machine while smoking or when near sparks or flame.

**Clean Machine Regularly:** Keep trash, debris, grease and oil from accumulating in engine compartment, around fuel lines, hydraulic lines, exhaust components, and electrical wiring. Never store oily rags or flammable materials inside a machine compartment.

**Maintain Hoses and Wiring:** Replace hydraulic hoses immediately if they begin to leak, and clean up any oil spills. Examine electrical wiring and connectors frequently for damage.

**Keep A Fire Extinguisher Available:** Always keep a multipurpose fire extinguisher on or near the machine. Know how to use extinguisher properly.



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T133552—UN—14SEP00



T133554—UN—07SEP00



TX03679,00016F5 -19-03NOV08-1/1

### 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).



TS204 —UN—23AUG88

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

### 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 -19-03MAR93-1/1

### Dispose of Waste Properly

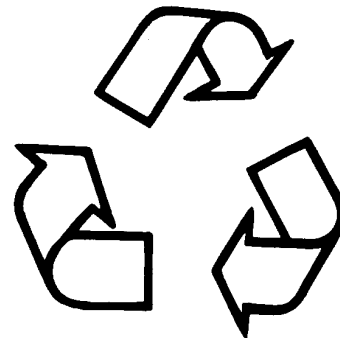
Improperly disposing of waste can threaten the environment and ecology. Potentially harmful waste used with John Deere equipment include such items as oil, fuel, coolant, brake fluid, filters, and batteries.

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.



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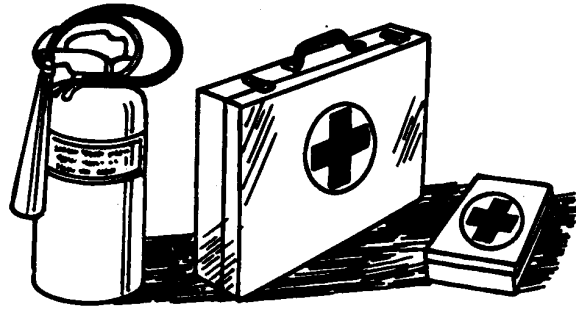
DX,DRAIN -19-03MAR93-1/1

### 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.



TS291—UN—23AUG88

DX,FIRE2 -19-03MAR93-1/1

### Clean Debris from Machine

Keep engine compartment, radiator, batteries, hydraulic lines, exhaust components, fuel tank, and operator's station clean and free of debris.

Clean any oil spills or fuel spills on machine surfaces.

Temperature in engine compartment may go up immediately after engine is stopped. **BE ON GUARD FOR FIRES DURING THIS PERIOD.**

Open access door(s) to cool the engine faster, and clean engine compartment.



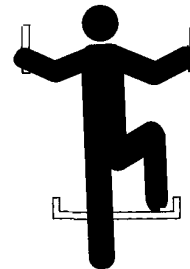
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### Use Steps and Handholds Correctly

Prevent falls by facing the machine when you get on and off. Maintain 3-point contact with steps and handrails. Never use machine controls as handholds.

Use extra care when mud, snow, or moisture present slippery conditions. Keep steps clean and free of grease or oil. Never jump when exiting machine. Never mount or dismount a moving machine.



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### Start Only From Operator's Seat

Avoid unexpected machine movement. Start engine only while sitting in operator's seat. Ensure all controls and working tools are in proper position for a parked machine.

Never attempt to start engine from the ground. Do not attempt to start engine by shorting across the starter solenoid terminals.



T133715—UN—07SEP00

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### Use and Maintain Seat Belt

**Use seat belt when operating machine.** Remember to fasten seat belt when loading and unloading from trucks and during other uses.

Examine seat belt frequently. Be sure webbing is not cut or torn. Replace seat belt immediately if any part is damaged or does not function properly.

**The complete seat belt assembly should be replaced every three years, regardless of appearance.**



# USE SEAT BELT

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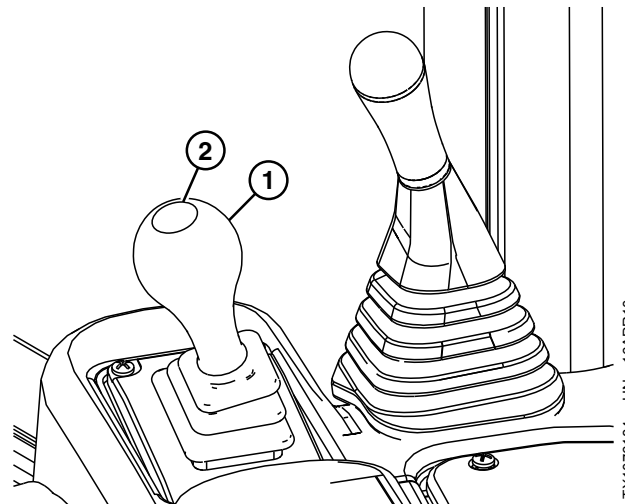
### Prevent Unintended Machine Movement

Be careful not to accidentally actuate controls. Move transmission out of gear and lower all equipment to the ground during work interruptions. Follow these steps before allowing coworkers to approach the machine, before standing up, leaving the operator's seat, or exiting the machine:

- Lower equipment to the ground
- Move transmission gear selector to neutral position
- Engage park brake by pressing park brake switch. Verify park brake indicator light on the standard display monitor comes on.
- Stop the engine

1— Gear Selector  
2— Gear Enable/Differential Lock Switch

3— Park Brake Switch



Gear Enable/Differential Lock Switch

TX1076184 —UN—16APR10



Park Brake Switch

TX1076187A —UN—16APR10

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Click on the image link below for the full version of the service manual

