

644H and 644H MH Loader Repair

TECHNICAL MANUAL 644H and 644H MH Loader Repair TM1638

TM1638 15JAN04 (ENGLISH)

For complete service information also see:

644H and 644H MH Loader Operation and Test	TM1637
8.1 L Engine Repair	CTM86
8.1 L Engine Operation and Diagnostics ...	CTM134
Alternators and Starting Motors	CTM77
Electronic Fuel Injection Systems	CTM68


**Worldwide Construction
And Forestry Division**
LITHO IN U.S.A.

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 -19-29SEP98-1/1

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THANK YOU!

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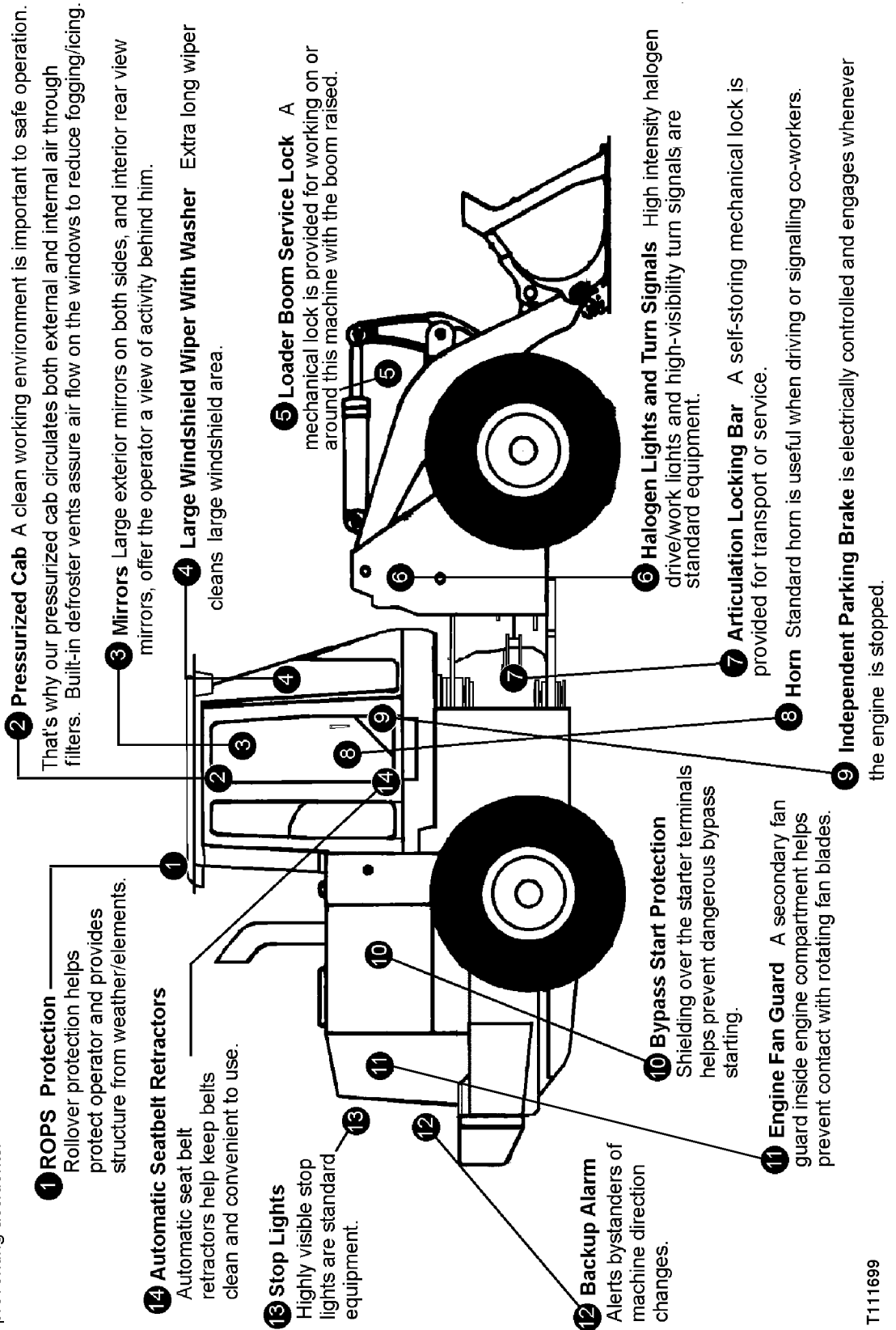
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4WD Loader Safety Features

JOHN DEERE 4WD LOADER SAFETY FEATURES

Please remember, the operator is the key to preventing accidents.



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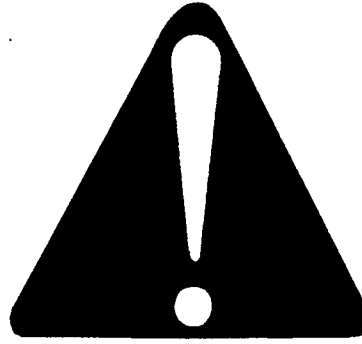
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Recognize Safety Information

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

TS1389 -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

Avoid Injury from Rollover Accidents

Wear Your Seat Belt

Do Not Attempt to Jump Clear of Tipping Machine—Serious or Fatal Crushing Injuries Will Result

Machine Will Tip Over Faster Than You Can Jump Free

To avoid rollovers:

Be careful when operating on a slope.

Avoid sharp turns.

Balance loads so weight is evenly distributed and load is stable.

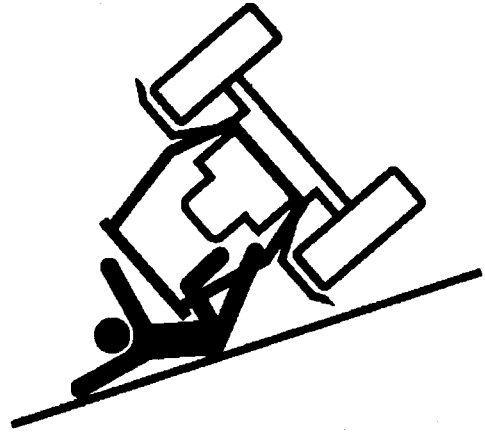
Carry tools and loads close to the ground to aid visibility and lower center of gravity.

Reduce speed before turning or swinging load.

Know capacity of machine. Do not overload.

Be careful when operating at the edge of an excavation, trench, or drop-off, and loading or unloading from a trailer.

Read and understand the operating instructions in this operator's manual.



**USE
SEAT
BELT**

T7242EA -19-22FEB90

TX,05,DH1525 -19-21JUN91-1/1

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Avoid Injury from Backover Accidents

Before Moving Machine, Be Sure All Persons are Clear of Area

Always Be Alert for Bystanders Moving into the Work Area. Use Horn or Other Signal to Warn Bystanders Before Moving Machine

When Using a Signal Person, Keep Person in View at all Times. Be Sure Signal Person is Clear Before Backing Up



T7241AY -UN-21FEB90

To avoid backover accidents:

Always look around before you back up. Be sure that everyone is in the clear.

Keep bystanders away from pivot area of an articulated machine.

Keep reverse warning alarm in working condition, if equipped.

Use a signal person when backing up if view is obstructed. Always keep signal person in view.

Learn the meaning of all flags, signs, and markings used on the job, and who has the responsibility for signaling.

Keep windows, mirrors, and lights clean and in good condition.

Dust, heavy rain, fog, etc., can reduce visibility. As visibility decreases, reduce speed and use proper lighting.

Read and understand the operating instructions in this operator's manual.

TX.05,DH1573 -19-18MAR91-1/1

Avoid Injury from Rollaway Accidents

To Prevent Rollaway, Always Make Sure Machine is Properly Secured Before Leaving Operator's Seat

Death or Serious Injury May Result if You Attempt to Mount or Stop a Moving Machine

To avoid rollaways:

Select level ground when possible to park machine.

Move transmission control lever to neutral "N", engage neutral lock, and push park brake switch to ON.

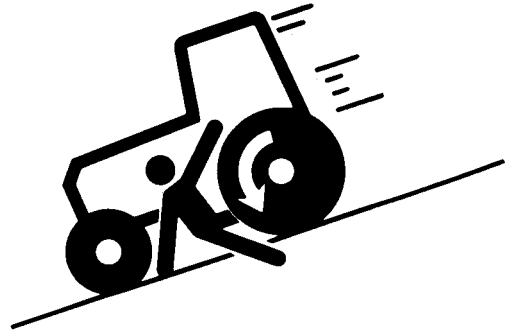
Lower all equipment to ground.

Stop the engine.

Block all wheels if you must park on a grade. Position machine to prevent rolling.

Park a reasonable distance from other machines.

Read and understand the operating instructions in this operator's manual.



T7241AZ -UN-21FEB90

TX,05,JC1888 -19-18FEB97-1/1

Inspect Machine

Inspect your machine carefully each day by walking around it before you start it. (See Pre-Start Inspection Chapter.)



T6607AQ -UN-18OCT88

T82,BHSA,CL -19-14MAR90-1/1

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Use Handholds and Steps

Falling is one of the major causes of personal injury.

When you get on and off the machine, always maintain a three point contact with the steps and handrails, and face the machine. Do not use the steering wheel or any controls as handholds.

Never jump on or off the machine. Never mount or dismount a moving machine.

Be careful of slippery conditions on platforms, steps, and handrails when leaving the machine.



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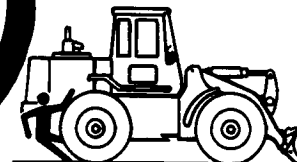
TX,05,DH553 -19-18MAR91-1/1

Prevent Machine Runaway

Avoid possible injury or death from a runaway machine.

DO NOT start engine by shorting across starter terminals. Machine will start in gear if normal circuitry is bypassed.

Never start engine while standing on ground. Start engine only from operator's seat with transmission control lever locked in neutral and park brake engaged.



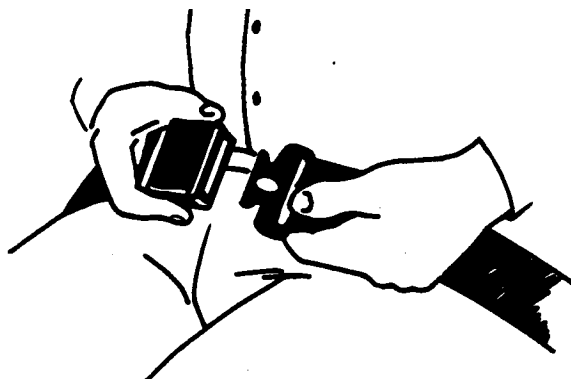
T6642EB -UN-20OCT88

TX,05,DH2281 -19-06OCT92-1/1

Use Seat Belt Properly

Overturns may occur if proper operating instructions are not followed.

Use your seat belt.



TS175 -UN-23AUG88

TX,05,JC1044 -19-12JAN96-1/1

Maintain Seat Belt

It is important to use the seat belt on ROPS equipped machines to minimize the chance of injury from an accident such as an overturn. Keep the seat belt in good condition.

The complete seat belt assembly should be replaced after three years of usage, regardless of appearance.

Between replacement intervals:

Carefully examine buckle, webbing, and attaching hardware.

Be sure that the retractor, if equipped, locks to prevent belt extension after latching buckle.

Be sure that attaching hardware is in place. Tighten, if necessary.

Replace the seat belt if it does not operate properly, or if it is damaged, worn, or deteriorated.

TX,05,JC242 -19-03MAR95-1/1

Secondary Exits

Machines equipped with cabs are equipped with secondary exits. For additional secondary exit information, see "Opening Side Window/Secondary Exit" in chapter 10 of this manual.

TX,05,JC1753 -19-09DEC96-1/1

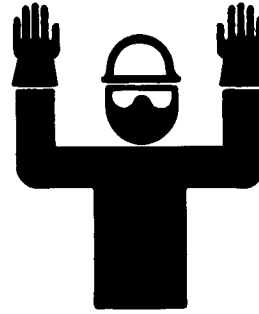
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Travel Safely

Know the location of bystanders before moving the machine.

Always keep the reverse warning alarm in working condition. It warns people when the machine starts to move in reverse.

Use a signal person when moving the machine in congested areas. Coordinate hand signals before starting the machine.



T6964AD -UN-20DEC88

TX,05,DH496 -19-02AUG89-1/1

Drive Machine Safely

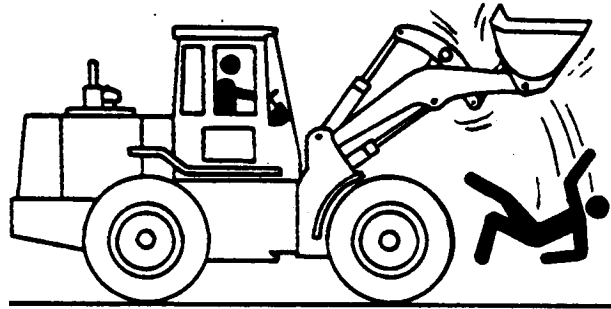
Walk around machine to clear all persons from area of operation and machine movement.

Always check area to rear before shifting to reverse.

Drive carefully in congested areas, over rough ground, near ditches for excavations, and on slopes or curves.

Keep machine in gear when going down hills.

Use accessory lights and devices to warn operators of other vehicles.



T6582AS -UN-25OCT88

TX,05,DH1931 -19-21JUN91-1/1

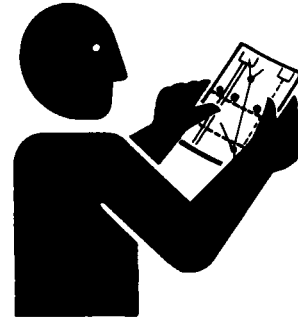
Operate Machine with Caution

Check location of cables, gas lines, and water mains before digging.

Keep loading area smooth.

Never lower a loaded bucket with the boom and bucket control lever in the float position.

Increase the power gradually when pulling a heavy load or when driving out of a ditch or excavation.



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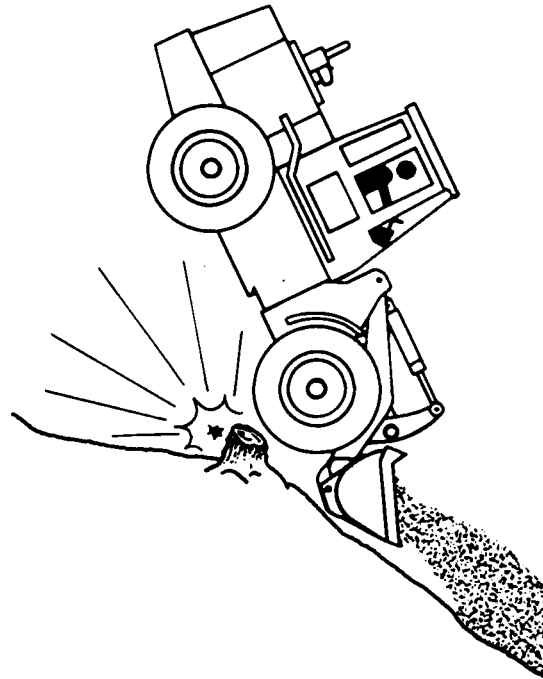
TX,05,DH1932 -19-06JUN91-1/1

Operating on Slopes

Avoid side slope travel whenever possible. Drive up slope in forward and down in reverse. The danger of tipping is always present.

In steep slope operation, do not allow engine to overspeed. Select low gear speed before starting down slope.

The grade of the slope you should attempt will be limited by such factors as ground condition, and load being handled.



T7050AB -JUN-03AUG89

TX,05,RR,171 -19-27APR89-1/1

Safety Information

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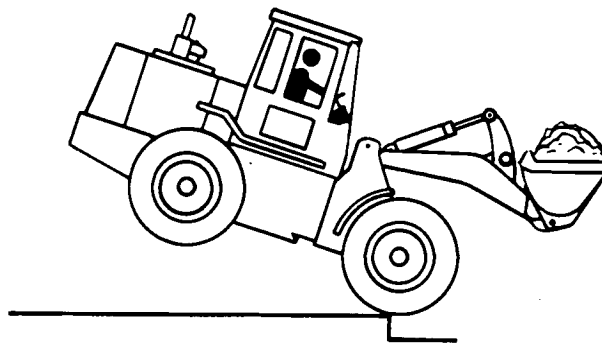
Carrying Loads

Carry loader bucket as low as possible for better stability and visibility.

Handle only those loads which are properly arranged. Do not overload.

Do not start, stop, or turn quickly when transporting a load.

Do not change forward or reverse directions quickly when carrying a load.



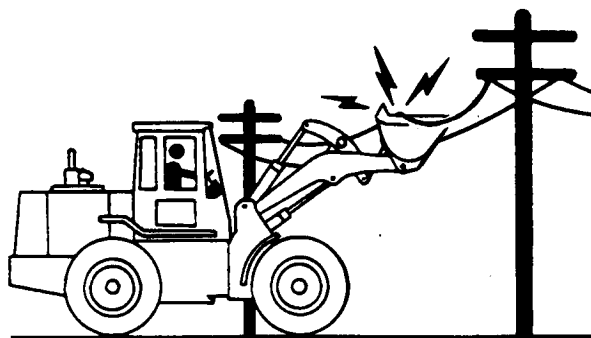
T7050AA -UN-03AUG89

TX,05,RR,172 -19-03JUN92-1/1

Avoid Power Lines

Serious injury or death can result from contact with electric lines.

Never move any part of the machine or load closer to electric line than 3 m (10 ft) plus twice the line insulator length.



T6642EG -UN-20JUN89

02T,05,J18 -19-06JUN91-1/1

Beware of Exhaust Fumes

Prevent asphyxiation. Engine exhaust fumes can cause sickness or death.

If you must operate in a building, be sure there is adequate ventilation. Either use an exhaust pipe extension to remove the exhaust fumes or open doors and windows to bring enough outside air into the area.



T6458AO -UN-18OCT88

TX,DH,2 -19-09FEB89-1/1