

G-III and D Series Skidders Repair (S.N. 586337—)

TECHNICAL MANUAL G-III and D Series Skidders Repair (Serial No. 586337—)

TM2111 30MAY03 (ENGLISH)

For complete service information also see:

G-III and D Series Skidders Operation and Tests (S.N. 586337—)	TM2110
TEAMMATE™ II 1200, 1400, and 1600 Series Inboard Planetary Axles	CTM43
POWERTECH® 4.5 L & 6.8 L Diesel Engines, Base Engine	CTM104
POWERTECH® 4.5 L & 6.8 L Diesel Engines, Level 12 Electronic Fuel System with DE10 STANADYNE® Pump	CTM331
POWERTECH® 8.1L Diesel Engines, Base Engine	CTM86
POWERTECH® 8.1 L Diesel Engines, Level 9 Electronic Fuel System With High Pressure Common Rail	CTM255
Starting Motors and Alternators	CTM77
40 and 4000 Winches	CTM25
60 and 6000 Winches	CTM41
120 Series Hydraulic Cylinders	TMH120A


**Worldwide Construction
And Forestry Division**

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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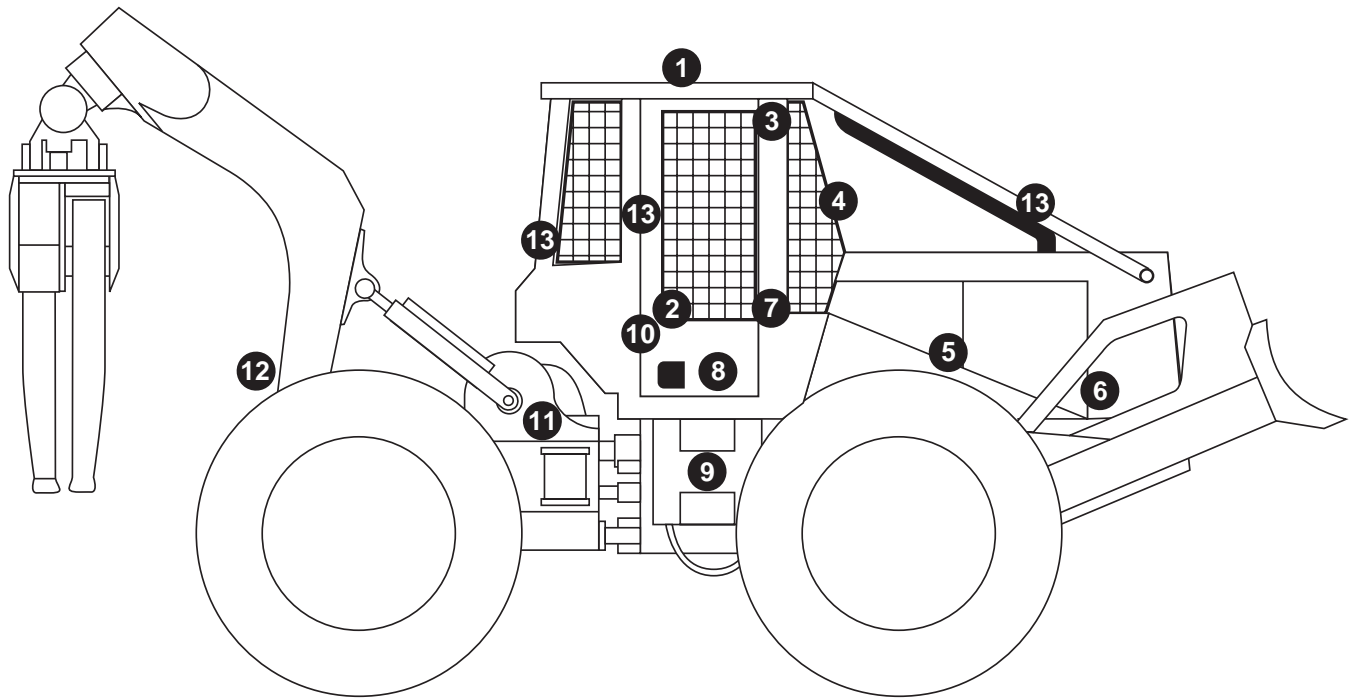
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General Information

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Skidder Safety Features



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

1. **ROPS/OPS.** Structures designed to help protect the operator are certified to ISO, SAE, and OSHA. Enclosures also deflect sun and rain.
2. **Parking Brake.** Is easily engaged simply by moving the transmission control to the "park" position or pushing the park brake switch. The parking brake engages automatically whenever the engine is stopped.
Engine Start Protection. A neutral start switch allows the engine to start only when the transmission is out-of-gear and the park brake is engaged. The park brake is always engaged during start-up.
3. **Interior Rearview Mirror.** Offers the operator a view of activity behind him.
4. **Front Windshield Wiper.** Wiper cleans windshield area, improving operator visibility in poor weather conditions.

5. **Bypass Start Protection.** Shielding over the starter helps prevent dangerous bypassing starting.
6. **Engine Fan Guard.** A secondary fan guard inside the engine compartment helps prevent contact with the rotating fan blades.
7. **Fire Extinguisher.** A fire extinguisher is provided in the cab.
8. **Operator Manual Holder.** A sealed manual holder keeps manual on machine clean and dry.
9. **Steps.** Wide, skid-resistant provide excellent footing while getting in or out of the operator's station.
10. **Seatbelt Retractors.** Seatbelt retractors help keep belts clean and convenient to use.
11. **Articulation Locking Bar.** A self storing locking bar can be positioned to prevent articulation during servicing or transport.
12. **Backup Alarm.** Alerts bystanders when reverse travel direction is selected by operator.
13. **Handholds.** Large conveniently placed handholds make it easy to enter or exit the operator's station.

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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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Follow Safety Instructions

Read the safety messages in this manual and on the machine. Follow these warnings and instructions carefully. Review them frequently.

Be sure all operators of this machine understand every safety message. Replace operator's manual and safety labels immediately if missing or damaged.



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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.

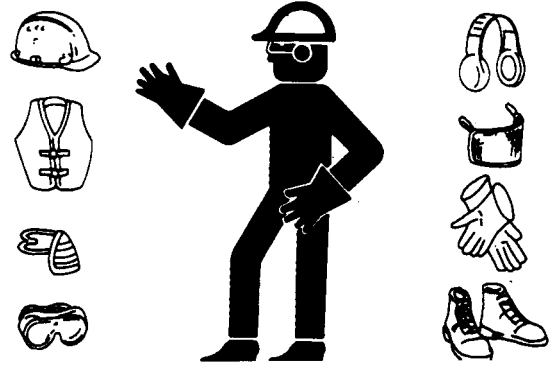
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Wear Protective Equipment

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

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

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.



TS206 -JUN-23AUG88

TX03679,00016D0 -19-30OCT00-1/1

Avoid Unauthorized Machine Modifications

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.

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.

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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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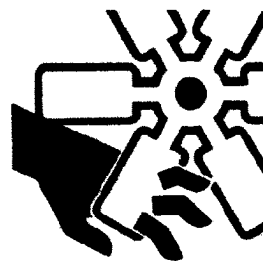
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Stay Clear Of Moving Parts

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

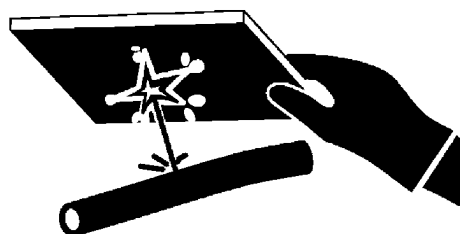
This machine uses a high-pressure hydraulic system. Escaping fluid under pressure can penetrate the skin causing serious injury.

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

If hydraulic fluid penetrates your skin, see a doctor immediately. Injected fluid 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.



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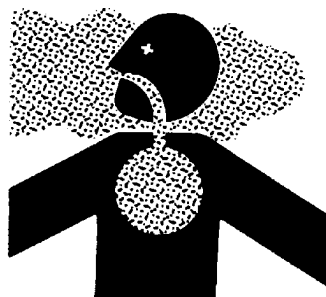
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Beware Of Exhaust Fumes

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

If you must operate in a building, provide adequate ventilation. Use an exhaust pipe extension to remove the exhaust fumes or open doors and windows to bring outside air into the area.



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Prevent Fires

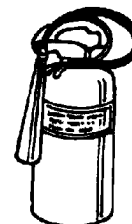
Handle Fuel Safely: Store flammable fluids away from fire hazards. Never refuel machine while smoking or when near sparks or flame.

Clean Machine Regularly: Keep trash, debris, grease and oil from accumulating in engine compartment, around fuel lines, hydraulic lines and electrical wiring. Store rags and other combustible materials in a safe, fireproof location. Use only nonflammable products for cleaning the machine or components.

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.

Remove Debris And Clean The Surrounding Area: Before starting repair work, such as welding, clear the area of any debris or flammable material.

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



T133552 -UN-14SEP00

T133553 -UN-07SEP00

T133554 -UN-07SEP00

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Handle Starting Fluid Safely

Starting fluid is highly flammable.

Keep all sparks and flame away when using it. Keep starting fluid away from batteries and cables.

To prevent accidental discharge when storing the pressurized can, keep the cap on the container, and store in a cool, protected location.

Do not incinerate or puncture a starting fluid container.



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Prevent Battery Explosions

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

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

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



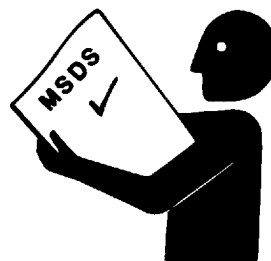
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Handle Chemical Products Safely

Exposure to hazardous chemicals can cause serious injury. Under certain conditions, lubricants, coolants, paints and adhesives used with this machine may be hazardous.

If uncertain about safe handling or use of these chemical products, contact your authorized dealer for a Material Safety Data Sheet (MSDS). The MSDS describes physical and health hazards, safe use procedures, and emergency response techniques for chemical substances. Follow MSDS recommendations to handle chemical products safely.



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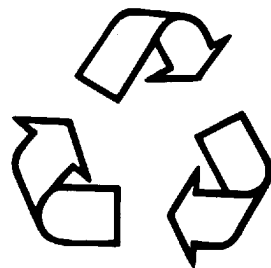
Dispose of Waste Properly

Improper disposal of waste can threaten the environment. Fuel, oils, coolants, filters and batteries used with this machine may be harmful if not disposed of properly.

Never pour waste onto the ground, down a drain, or into any water source.

Air conditioning refrigerants can damage the atmosphere. Government regulations may require using a certified service center to recover and recycle used refrigerants.

If uncertain about the safe disposal of waste, contact your local environmental or recycling center or your dealer for more information.



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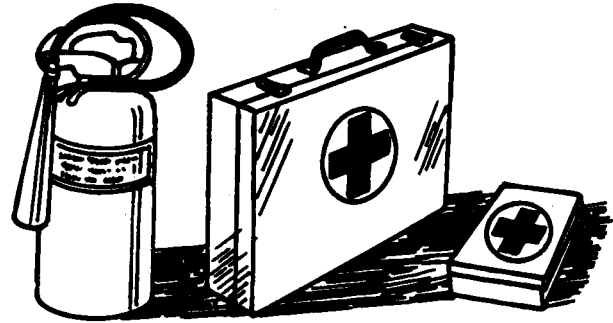
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Prepare for Emergencies

Be prepared if an emergency occurs or 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.



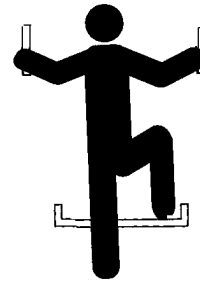
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Use Steps And Handholds Correctly

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.



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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

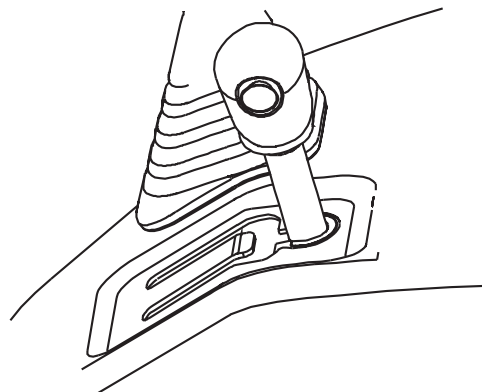
Be careful not to accidentally actuate controls. Move transmission out of gear and lower all equipment to the ground during work interruptions. Follow these steps before allowing co-workers to approach the machine, before standing up, leaving the operator's seat, or exiting the machine:

For machines with transmission lever “park” position:

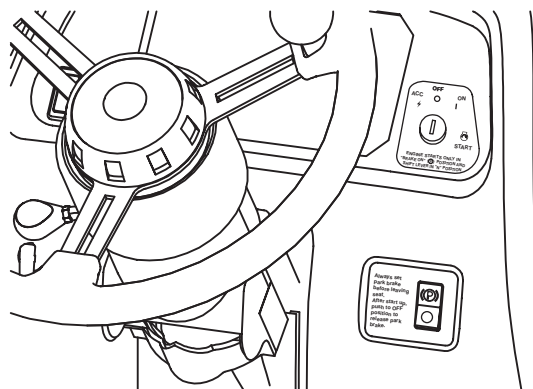
- Lower equipment to the ground
- Move transmission lever to “park”
- Be sure locking sleeve engages console
- Stop the engine

For machines with separate “park brake” switch:

- Lower equipment to the ground
- Move gear selector to neutral position
- Press park brake switch to “on”
- Stop the engine



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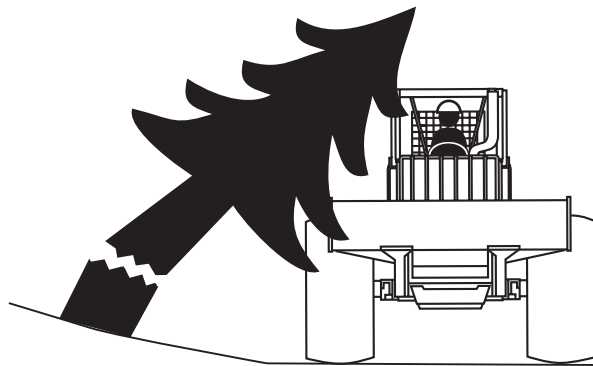
Avoid Work Site Hazards

Plan your operation before starting work. Check skidding trails and landings for stumps, large rocks, drop-offs, muddy areas and standing water. Carefully examine overhead for trees and branches that might fall or strike the operator's station. Take precautions to avoid these hazards.

Be sure co-workers and bystanders are clear of machine before operating. Keep co-workers a safe distance away when skidding, because logs may kick-out unexpectedly.

Use extra care if you must drive over logs or saplings that may be dislodged or spring-up against the machine or bystanders.

Do not operate under low-hanging electrical wires. Contact may cause serious injury or death by electrocution.



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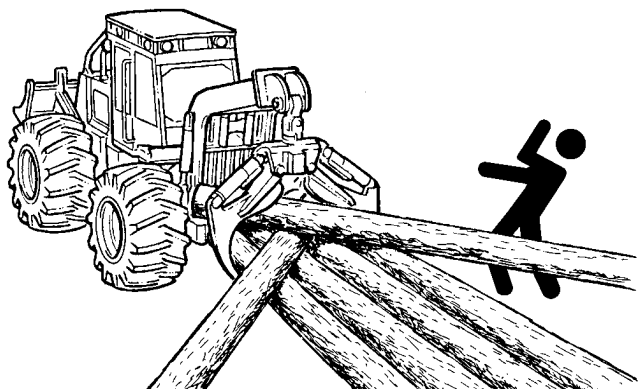
Operate Machine Safely

Wear the seat belt when operating this machine. Do not operate the machine if all elements of the operator protective structure (OPS) are not in place and in good repair.

Use extra care around landings where bystanders are more likely to be present. Do not skid logs past people that are not a safe distance away from logs that may swing or kick-out.

Use extra care when backing-up with logs attached. Make sure the delimbing grate is in good repair and bystanders are a safe distance away.

Be careful when operating in muddy or frozen conditions because the machine may slide or tip more easily. Avoid side slopes when possible. Drive straight up or down slopes to reduce the possibility of tipping.



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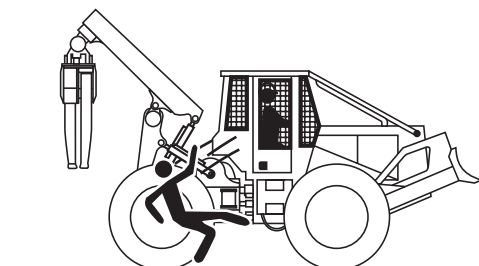
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Keep Riders Off Machine

Only allow operator on machine.

Riders are subject to injury. They may fall from machine, be caught between machine parts, or be struck by foreign objects.

Riders may obstruct operator's view or impair his ability to operate machine safely.



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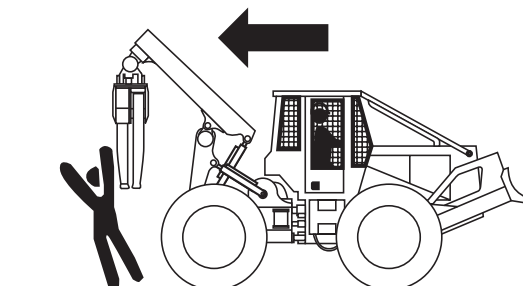
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Avoid Backover Accidents

Before moving machine, be sure all persons are clear of machine path. Turn around and look directly for best visibility. Use mirror to assist in checking around machine. Keep windows and mirror clean, adjusted, and in good repair.

Be certain reverse warning alarm is working properly.

Use a signal person when backing if view is obstructed or when in close quarters. Keep signal person in view at all times. Use prearranged hand signals to communicate.



T145264 -UN-06SEP01

TX03679,0001801 -19-31OCT01-1/1

Avoid Machine Tip Over

Use seat belt at all times.

Do not jump if the machine tips. You will be unlikely to jump clear and the machine may crush you.

Load and unload from trucks or trailers carefully. Be sure truck is wide enough and on a firm level surface. Use loading ramps and attach them properly to truck bed.

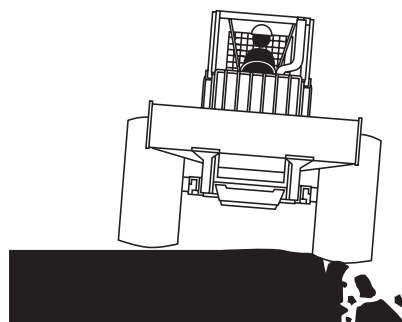
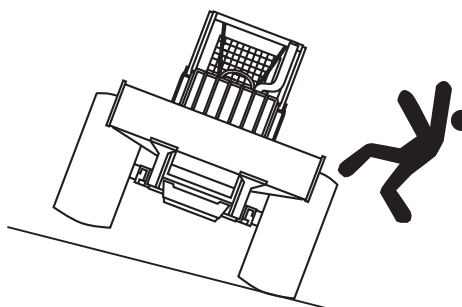
Be careful on slopes. Avoid sharp turns. Avoid stumps, rocks and drop-offs when possible. Use extra care on soft, uneven or frozen ground.

Do not overload. Know the capacity of the machine. Be careful with heavy loads which may affect machine stability.

Ensure solid footing. Use extra care in soft ground conditions that may not uniformly support the wheels. Do not operate close to banks that may cave in and cause machine to tip or fall.



USE SEAT BELT



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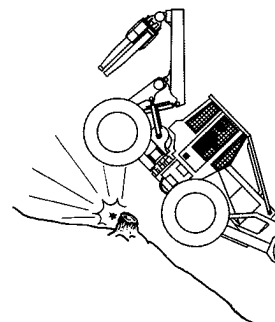
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Operating on Slopes

Avoid side slope travel whenever possible. When working on steep slopes, travel as straight up and down as possible to prevent machine tip over.

Select low gear speed before starting down slope. The slope on which you can operate safely will be limited by ground condition and the load being handled. Use service brakes to control speed.



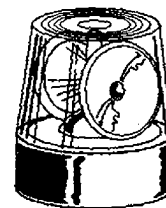
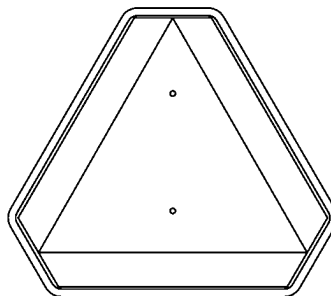
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Operating Or Traveling On Public Roads

Machines that work near vehicle traffic or travel slower than normal highway speeds must have proper lighting and markings to assure they are visible to other drivers.

Install additional lights, beacons, slow moving vehicle (SMV) emblems, or other devices and use as required to make the machine visible and identify it as a work machine. Check state and local regulations to assure compliance. Keep these devices clean and in working condition.



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Inspect and Maintain ROPS

A damaged roll-over protective structure (ROPS) should be replaced, not reused.

The protection offered by ROPS will be impaired if ROPS is subjected to structural damage, is involved in an overturn incident, or is in any way altered by welding, bending, drilling, or cutting.

If ROPS was loosened or removed for any reason, inspect it carefully before operating the machine again.

To maintain the ROPS:

- Replace missing hardware using correct grade hardware.
- Check hardware torque.
- Check isolation mounts for damage, looseness or wear; replace them if necessary.
- Check ROPS for cracks or physical damage.

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