



WARNING

Do not operate the machine without first reading this Manual

Most job accidents are due to neglect of simple safety rules or precautions and can be avoided by taking appropriate preventive actions. No device or protective system, however well designed, can prevent accidents more effectively than will caution and alertness on the machine. Look for the safety rules in this Manual.



WARNING _

On machines having hydraulically, mechanically, and/or cable controlled equipment (such as shovels, loaders, dozers, scrapers, etc.) be certain the equipment is lowered to the ground before servicing, adjusting and/or repairing. If it is necessary to have the hydraulically, mechanically, and/or cable controlled equipment partially or fully raised to gain access to certain items, be sure the equipment is suitably supported by means other than the hydraulic lift cylinders, cable and/or mechanical devices used for controlling the equipment.

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crawler loader

Operation and maintenance instructions

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WARNING

STUDY THE OPERATION AND MAINTENANCE INSTRUCTION MANUAL THROUGH BEFORE STARTING, OPERATING, MAINTAINING, FUELING OR SERVICING THIS MACHINE.



This symbol is your safety alert sign. It means ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED.



Read and heed all safety instructions carrying the signal words WARNING and DANGER.

Machine mounted safety signs have been color coded yellow with black borders and lettering for warning and red with white borders and lettering for danger points.

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SAFETY RULES

GENERAL

Study the Operation and Maintenance Instruction Manual before starting, operating, maintaining, fueling, or servicing machine.

Read and heed all machine-mounted safety signs before starting, operating, maintaining, fueling or servicing machine.

Machine mounted safety signs have been color coded yellow with black borders and lettering for warning and red with white borders and lettering for danger points.

Do not allow unauthorized personnel to operate, service or maintain this machine.

Do not wear rings, wrist watches, jewelry, loose or hanging apparel, such as ties, torn clothing, scarves, unbuttoned, or unzipped jackets that can catch on moving parts. Wear proper safety equipment as authorized for the job. Examples: hard hats, safety shoes, heavy gloves, ear protectors, safety glasses or goggles, reflector vests, or respirators. Consult your employer for specific safety equipment requirements.

Keep operator's compartment, stepping points, grab rails and handles clean and free from foreign objects, oil, grease, mud or snow accumulation to minimize the danger of slipping or stumbling. Clean mud or grease from shoes before attempting to mount or operate the machine.

Do not jump on or off machine. Keep two hands and one foot, or two feet and one hand, in contact with steps and grab rails and handles at all times.

Do not use controls or hoses as handholds when climbing on or off machine. Hoses and controls are movable and do not provide a solid support. Controls also may be moved inadvertently causing accidental machine or equipment movement.

Never attempt to operate the machine or its tools from any other position than seated in the operator's seat. Keep head, body, limbs, hands and feet inside operator's compartment at all times to reduce exposure to hazards outside the operator's compartment.

Be careful of slippery conditions on stepping points, hand rails, and on the ground.

Get off machine only when it is fully stopped.

START UP

Do not start or operate an unsafe machine.

Before working the machine, be sure that any unsafe condition has been satisfactorily remedied. Check brakes and steering and attachment controls before moving. Advise the proper maintenance authority of any malfunctioning part or system.

Be sure all protection guards or panels are in place and all safety devices provided are in place and in good operating conditions. Before starting machine, check, adjust and lock the operator's seat for maximum comfort and control of the machine. Be sure all people in the area are clear of the unit before releasing the parking brake or moving the machine or its attachments. **Walk completely around** machine before mounting. Sound horn.

Obey flagman, safety signals and signs.

Due to the presence of flammable fluid, never check or fill fuel tanks, storage batteries, or use starter fluid near lighted smoking materials or open flame or sparks.

Starting fluid is flammable. Follow the recommendations as outlined in the Operation and Maintenance Instruction Manual and as marked on the containers. Store containers in cool, well-ventilated place secure from unauthorized personnel. Do not puncture or burn containers. Follow the recommendations of the manufacturer for storage and disposal.

Never use starter fluid near lighted smoking materials or open flame or sparks due to the presence of flammable fluid.

OPERATING

Do not run the engine of this machine in closed area without proper ventilation to remove deadly exhaust gases.

Roll Over Protective Structures are required on wheel loaders, dozer tractors, track type loaders, graders and scrapers by local and national requirements. **Do not** operate this machine without a Roll Over Protective Structure.

Keep operator's compartment clear of loose objects. Do not use machine to carry loose objects by means other than attachments designed for such objects.

Do not carry riders unless the machine is equipped for carrying people to reduce personal exposure to being thrown off.

Observe and know the mechanics of alternate exit routes. Seat belts are required to be provided with roll over protective structures or roll protection cabs by local and national requirements. Keep the safety belt fastened around you during operation.

For your personal protection, do not attempt to climb on or off machine while machine is in motion.

Be sure exposed personnel in the area of operation are clear of the unit before moving the machine or its attachments. Sound horn. Obey flagman, safety signals and signs.

Never coast the machine down grades and slopes with the transmission in neutral on power shift machines, or clutch disengaged on manually shifted machines.

To reduce the danger of an uncontrolled machine choose a gear speed before proceeding down grade that will hold machine to proper speed for conditions. Operate at speeds slow enough to insure complete control at all times. Travel slowly over rough ground, on slopes or near dropoffs, in congested areas or on ice or slippery surfaces.

When backing, always look to where the machine is to be moved. Be alert to the position of exposed personnel. **Do not operate** if exposed personnel enter the immediate work area.

Maintain a safe distance from other machines. Provide sufficient clearance for ground and visibility conditions. Yield right-of-way to loaded machines.

Maintain clear vision of all areas of travel or work. Keep cab windows clean and repaired. Carry blade low for maximum visibility while traveling. Obtain and use fan blast deflectors where tractors are used as pusher tractors in tandem.

When pulling or towing through a cable or chain, do not start suddenly at full throttle. Take up slack carefully. Guard against kinking chains or cables. Inspect carefully for flaws before using. Do not pull through a kinked chain or cable due to the high stresses and possibility of failure of the kinked area. Always wear heavy gloves when handling chain or cable.

Be sure cables are anchored and the anchor point is strong enough to handle the expected load. Keep exposed personnel clear of anchor point and cable or chain. Do not pull or tow unless operators compartments of machines involved are guarded against potential cable or chain backlash.

Be alert to soft ground conditions close to newly constructed walls. The fill material and weight of machine may cause the wall to collapse under the machine.

In darkness, check area of operation carefully before moving in with machine. Use all lights provided. Do not move into areas of restricted visibility.

If engine has a tendency to stall for any reason under load or idle, report this for adjustment to a proper maintenance authority immediately. Do not continue to operate machine until condition has been corrected.

On machines equipped with suction radiator fans, be sure to periodically check all engine exhaust parts for leaks as exhaust gases are dangerous to the operator. Keep a vent open to outside air at times when operating within a closed cab.

An operator must know the machine's capabilities. When working on slopes or near dropoffs be alert and avoid loose or soft conditions that could cause sudden tipping or loss of control.

Where noise exposure exceeds 90 dBA for 8 hours, wear authorized ear protective equipement per local and other national requirements that apply.

Do not operate machinery in a condition of extreme fatigue or illness. Be especially careful towards the end of the shift

Do not operate a machine with brakes out of adjustment.

See the Operation and Maintenance Instruction Manual. When counterweights have been provided, do not work machine if they have been removed unless the equivalent weight has been replaced. See the Operation and Maintenance Instruction Manual.

During operation always carry ripper in full raised position when not in use and lower to ground when parked.

When operating machine know what clearances will be encountered, overhead doors, wires, pipes, aisles, roadways; also weight limitations of ground, floors, and ramps. When roading find out what conditions are likely to be met – clearances, congestion, type of surface, etc. Be aware of fog, smoke or dust elements that obscure visibility.

Cross gullies or ditches at an angle with reduced speed after insuring ground conditions will permit a safe traverse.

Always check work area for dangerous features. The following are examples of dangerous work areas: slopes, overhangs, timber, demolitions, fire, high walls, dropoffs, backfills, rough terrain, ditches, excavations, heavy traffic, crowded parking, crowded maintenance and closed areas. Use extreme care when in areas such as these. Avoid going over obstacles such as rough terrain, rocks,

logs, curbs, ditches, ridges, and railroad tracks whenever possible. When obstructions must be crossed, do so with extreme case at an angle if possible. Reduce speed – downshift. Ease up to the breakover point – pass the balance point slowly on the obstruction and ease down on the other side. In steep downhill operation, do not allow engine to overspeed. Select proper gear before starting downgrade.

Avoid sidehill travel whenever possible. Drive up and down the slope. Should the machine start slipping sideways on a grade, turn it immediately downhill.

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

There is no substitute for good judgement when working on slopes.

Know the principles of cross steering of crawler loaders. Read section in Operation and Maintenance Instruction Manual on cross steering.

Avoid operating equipment too close to an overhang or highwall either above or below the machine. Be on the lookout for caving edges, falling objects and slides. Beware of concealment by brush and undergrowth of these dangers.

When pushing over trees, the machine must be equipped with a proper overhead guarding. Never allow a machine to climb up on the root structure particularly while the tree is being felled. Use extreme care when pushing over any tree with dead branches. Avoid brushpiles, logs or rocks. Do not drive the machine onto brushpiles, logs, large rocks or other surface irregularities that break traction with the ground especially when on slopes or near dro-