

1850K

Crawler dozer

Operator's Manual

Print no. 6-32261



WARNING

STUDY THIS MANUAL BEFORE STARTING, OPERATING, MAINTAINING, FUELLING OR SERVICING THE MACHINE.



This alert symbol signals important messages involving your safety. It means: WARNING! BE ALERT! IT INVOLVES YOUR SAFETY.



Read and heed carefully all safety instructions identified by the key words WARNING and DANGER.



The safety plates applied to this machine are color coded yellow with black edges and wording for the points to which ATTENTION must be paid and red colored with white edges and wording for DANGER points.

TABLE OF CONTENTS

SUBJECT	PAGE
SAFETY RULES	I-VII
Decommissioning the machine	VII
Foreword	VIII
Identification data	2
Quantitative sides of comfort	3
GENERAL SPECIFICATIONS	4
Main dimensions	6
List and location of safety decals	9
Preliminary instructions and break-in period	17
OPERATION RULES	18
CONTROLS AND INSTRUMENTS	20
OPERATION INSTRUCTIONS	31
General information	31
Prior to starting	31
Engine starting	31
Stopping the machine	33
Stopping the engine	34
Operator's seat adjustment	34
Fuel reservoir	35
Blade adjustment	35
Cab tilting	36
Lowering the cab	37
Oil refilling and bleeding of the cab tilting system	37
Brakes disengagement	38
Towing the machine	39
Moving the machine with outside means	40
Instructions for lowering the equipment to the ground with engine inoperative	41
Transporting the machine	41
Long storage of the machine	42
Cold climate precautions	42
Starting the machine at low temperatures	43
Starting the machine with booster batteries	43
MACHINE OPERATION	44
CAB	53
MAINTENANCE	57
Maintenance operations	58
Walk around inspection	58
List of programmed maintenance	59
Every 10 hours work	60
Every 50 hours work	63
Every 100 hours work	63
Every 250 hours work	64
Every 500 hours work	67
Every 1000 hours work	70
Every 2000 hours work	73
When required	75
Operations to be performed when required	77
ELECTRICAL SYSTEM	79
Electrical diagram of protection tree	80
TABLES OF FLUID CAPACITIES	81

SAFETY RULES

GENERALITIES

Carefully study this manual before starting, operating, maintaining, fuelling or servicing the machine.

Read and heed all safety rules before any intervention.

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

Do not operate the machine if not feeling well or fatigued.

Do not wear rings, wrist watches, jewellery, loose or hanging apparels, such as ties, torn clothing, scarves, unbuttoned or unzipped jackets that can catch on moving parts. Wear proper safety equipment as recommended for the job. Examples: hard hat, heavy gloves, ear protection, safety glasses or goggles, reflector vests, respirator. Consult your employer for specific safety equipment requirements.

Keep operator's compartment, stepping points, grab-rails and handles clear of foreign objects, oil, grease, mud or snow accumulation to minimise 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 the machine. Keep two hands and one foot, or two feet and one hand in contact with step, grab rails and handles at all times.

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

Never attempt to operate the machine or its tools from any position other 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. Wear safety boots or shoes that have a high slip resistant sole material.

Do not leave the machine until it is completely stopped.

Check the seat safety belt at least twice a year. If there are signs of wear or fraying or other signs of weakness that could lead to failure, replace it.

STARTING

NEVER START OR OPERATE AN UNSAFE MACHINE. Before operating a machine, always ensure that any unsafe condition has been repaired.

Check brakes, steering and attachment controls before moving. Advise the proper maintenance authority of any malfunctioning part or system.

Be sure all protective guards or panels are in place, and all safety devices provided are in place and in good operating conditions.

Be sure exposed personnel in the area of operation are clear of the machine before moving it or its attachments. **WALK COMPLETELY AROUND** the machine before mounting. Sound horn.

Before starting machine, check, adjust and lock the operator's seat for maximum comfort and control of the machine.

Fasten your seat belt.

Obey all flag signals and signs.

Due to the presence of flammable fluids, on the machine never check or fill fuel reservoirs or batteries near open flames, smoking materials or sparks.

REMEMBER THAT STARTING FLUID IS FLAMMABLE. Follow the recommendations printed on containers and in the Operation and Maintenance Manual.

DO NOT PUNCTURE OR BURN CONTAINERS.

Containers must be stored in fresh, well ventilated places, out of reach of unauthorised persons. Follow the instructions provided by the Manufacturer.

Never use these products near open flames, smoking materials or sparks

OPERATION

Do not run the engine in closed areas without proper ventilation to remove deadly exhaust gases.

Roll Over Protective Structures are required on loaders, dozers, graders, excavators. **NEVER OPERATE** machines without ROPS.

Make sure the Operator's compartment is free of foreign objects, especially if not firmly secured. Never use the machine to transport objects, unless proper securing points are provided.

Check monitoring instruments at start-up and frequently during operations. The brake pressure gauge shows a pressure lower than the minimum operating pressure, stop the machine immediately.

DO NOT CARRY RIDERS ON MACHINE.

Study and familiarize with escape routes alternate to normal exit routes.

Seat belts are required by current regulations to be provided with Roll Over Protection Structures or cabs. Keep safety belts fastened around you during operation.

For your personal protection, do not climb on or off machine while machine is running.

Make sure that exposed persons in the area of operation are clear of the machine, before starting the engine and operating the equipment. Sound horn. Obey all indications provided by flags and signals.

SAFETY RULES

NEVER COAST the machine down grades and slopes with the transmission in neutral or neutralized.

Choose and shift into the most appropriate gear to keep the speed required, thus preventing any loss of control.

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

Do not operate machine with brakes out of adjustment.

Operate the machine at speeds slow enough to ensure complete control at all times.

Travel slowly over rough terrain, on slopes or near drop-offs, 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. STOP THE MACHINE.

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 areas of travel or work. Keep cab windows clean and repaired.

When pulling or towing through a cable or chain, do not start suddenly at full throttle; take-up slack carefully.

Inspect carefully for flaws or troubles before using.

Avoid kinking chains or cables. Do not pull through a kinked chain or cable to the high stresses and possibility of failure of the kinked area. Always wear heavy gloves when handling chains or cables.

Be sure chains and cables are anchored and the anchor points are strong enough to handle the expected load. Keep exposed personnel clear of anchor points and cables or chains.

DO NOT PULL UNLESS OPERATOR'S COMPARTMENT OF MACHINES INVOLVED ARE PROPERLY GUARDED AGAINST POTENTIAL CABLE OR CHAIN BACKLASH.

Be alert to soft ground conditions close to newly constructed walls. The fill material and weight of the 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 area of restricted visibility.

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

On machines supplied with suction radiator fans, be sure to periodically check engine exhaust parts for leaks, as exhaust fumes are dangerous to the operator.

In case of closed type cabs, always keep an opening with the outside, to ensure a constant air circulation.

Operators must thoroughly know the performances of the machine they are operating. When working on slopes or near sudden level drops of the terrain, avoid areas where ground is loose or soft since rolling-over or loss of control of machine could result.

Where noise exposure exceeds 90 dBA for 8 hours, wear approved ear protection.

When counterweights are provided, do not work machine if they have been removed.

Overtaking maneuver must be performed only when absolutely necessary and unavoidable. Beware of possible uneven terrains, poor visibility conditions, the presence of other machinery or persons out of sight.

Operate the machine at a speed adequate to the working conditions in the site and slow enough to ensure complete control at all times.

Never use the machine as a work platform or scaffolding, nor other inappropriate operations (i.e. pushing railway cars, trucks or other machines).

Be alert of people in the operating area of the machine.

When operating a machine, know in advance what clearances will be encountered, overhead doors, cables, pipes, bearing load limitations of ground, bridges, floors or ramps.

When roading, find-out what conditions are likely to be encountered, clearances, traffic congestion, type of road surfacing, etc. Beware of fog, smoke or dust elements that obscure visibility.

When crossing gullies or ditches, move at an angle with reduced speed after ensuring ground conditions will permit a safe traverse.

Explore the working area to identify potential risks such as: slopes, overhangs, pits, demolition rubble, fires, ravines, ditches, soft terrain, heavy traffic, crowded parking areas, closed ambients. In such conditions, proceed with extreme care.

Whenever possible, avoid going over obstacles such as rough terrain, rocks, logs highly irregular ground, steps, ditches, railroad tracks. When obstructions must be crossed, do so with extreme care at an angle, if possible. Reduce speed, shift-down. Ease up to the break over point, pass the balance point slowly on the obstruction and ease down on the other side.

In steep down-hill operation, do not allow engine to over-speed. Select proper gear before starting down grade.

Avoid side hill travel, whenever possible. Drive up and down the slope. Should the machine slipping sideways, turn it immediately downhill.

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

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

SAFETY RULES

Avoid operating equipment too close to an overhang or high wall, either above or below the machine. Be on the look-out for caving edges, falling objects and slides. Beware of concealment by brush and undergrowth of these danger.

When pushing-over trees, the machine must be equipped with 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.

When pushing trees with dead limbs, proceed with extreme care. Avoid brush piles, logs or rocks.

NEVER DRIVE OVER THEM or other surface irregularities that brake traction with the ground, especially when on slopes or near drop-offs.

Be alert to avoid changes in traction conditions that could cause loss of control. DO NOT DRIVE on ice or frozen ground conditions when working the machine on steep slopes or near drop-offs.

Working in virgin and rough terrains is characterised by the presence of all the perils and risks listed above. In these conditions, it is emphasised the danger represented by large tree limbs (possibly falling on the machine), large roots (acting as a leverage under the machine when up-rooted causing roll-over of the unit) etc...

STOPPING

When the machine is stopped for whatever reason, follow the instructions of chapters "Stopping the machine" and "Stopping the engine" of the Operation and Maintenance Instruction Manual.

Always remember to position the transmission drive control in neutral and engage the control lock to secure the machine.

The parking brake is automatically set.

NEVER LEAVE THE MACHINE UNATTENDED with the engine running.

Always, before leaving the operator's seat and after making sure all people are clear of the machine, slowly lower the attachments or tools flat to the ground in a positive ground support position.

Return the controls to rest position. Place the gearshift lever in neutral. Turn the switch starts to off and extract the key.

See the relevant chapter in this Manual.

Park in a non-operating and no-traffic area or as instructed. Park on firm level ground if possible. Where not possible, position machine at a right angle to the slope, making sure there is no danger of uncontrolled sliding movements.

If parking in traffic lanes cannot be avoided, provide appropriate flags, barriers, flares and signals as required. Also provide advance warning signals in the traffic lane of approaching traffic.

Keep head, body, limbs, feet, fingers or hands away from bucket, blade or ripper when in raised position.

Always disconnect the master switch before any intervention (i.e. cleaning, repairing, maintaining, refuelling etc.). Do the same when parking for prolonged periods of time to avoid accidental or unauthorised starting.

Never lower attachments or tools other than seated in operator's seat. Sound horn. Make sure area near the attachment is clear. Lower the attachment slowly. DO NOT USE FLOAT POSITION of hydraulic system.

Place master switch in OFF, securely block the machine and lock it every time you leave it unattended. Return keys to authorised security. Heed all shut-down operations of the Operation and Maintenance Instruction Manual are followed.

MAINTENANCE

GENERALITIES

Before operating or performing any intervention on the machine:

- read carefully all the rules contained by this Manual,
- read and obey all safety related plates and instructions located on the machine.

Do not allow unauthorised personnel to perform any maintenance operation. Do not perform maintenance operation without prior authorisation. Follow all recommended maintenance and service procedures.

Keep operator's compartment free of all loose objects.

Do not wear rings, wrist watches, jewellery, loose or hanging apparels, such as ties, torn clothing, scarves, unbuttoned or unzipped jackets that can catch on moving parts. Wear proper safety equipment as recommended for the job. Examples: hard hat, heavy gloves, ear protection, safety glasses or goggles, reflector vests, respirator. Consult your employer for specific safety equipment requirements.

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

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

Do not perform any service operation on the machine with a person seated in the operator's compartment, unless he is an authorised operator co-operating in the operation to be performed.

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

SAFETY RULES

Keep shoes free of mud or grease before climbing or driving the machine.

Never attempt to operate the machine or its tools from any position other than seated in the operator's seat.

When maintenance operations require moving hydraulically operated attachments by means of machine's hydraulic system remember that all manoeuvres must be made only when seated in the operator's seat. Before starting machine or moving attachment or tools, set brakes, sound horn and call for an all clear. Raise attachment slowly.

Always block booms or parts of the machine which must be raised to perform interventions under them with external devices. Do not allow persons to move into the vicinities nor standing under equipment not being blocked. Unless you are totally sure about your safety, avoid staying under raised equipment, even in case it is blocked.

Do not place the body, limbs or fingers into sharp articulation uncontrolled openings of the machine and without proper protections, unless they are blocked in a safe manner.

Never perform interventions with engine running, except as called for in a Manual. Do not wear loose clothing or jewellery near moving parts.

When servicing or maintenance require access to areas that cannot be reached from the ground, use a ladder or step platform that meet local and national regulations, to reach the service point. If such ladder or platform are not available, use the machine hand holds and steps as provided. Perform all service or maintenance carefully.

Shop and/or field service platforms or ladders must be constructed and maintained in accordance with local and national regulations.

Disconnect batteries and tag all controls according to current regulations to warn that work is in progress. Block machine and all attachments that must be raised according to current regulations.

Due to the presence of flammable fluids, never check or fill fuel tanks, batteries, nor use starting fluid near lighted smoking materials or open flames.

BRAKES ARE INOPERATIVE when manually released for servicing. Provisions must be made to maintain control of the machine by blocking or other means.

The fuel filling nose must be kept constantly inside the filling neck. Keep this contact from the beginning to the end of the fuelling operation to avoid the possibility that sparks due to static electricity are generated.

Use only designated towing or attaching points. Use care in making attachments. Make sure pins and/or locks are secure before pulling. Stay clear of drawbars, cables or chains under load.

To move a disabled machine, use a trailer or a low-boy, if available. In case towing is needed, use all necessary signals required by local and national regulations, and follow the directions provided in this Manual.

To load/unload a machine from transporter, choose a level surface ensuring firm support to the wheels of truck or trailer. Use strong access ramps, with adequate height and angle. Keep surface free of mud, oil or slippery materials.

Anchor the machine securely to the bed of truck or trailer and block wheels or tracks with appropriate wedges.

Never align holes with fingers or hands; always use appropriate aligning tools.

Eliminate all sharp edges and burrs from re-worked parts.

Use only approved grounded auxiliary power sources for heaters, chargers, pumps and similar equipment to reduce the hazards of electrical shocks.

Lift and handle heavy parts with a lifting device of proper capacity. Be sure parts are supported by proper slings and hooks. Use lifting eyes if provided. Watch-out for people in the vicinity.

Never pour gasoline or diesel fuel into open, wide and low containers. Never use gasoline, solvent or other flammable fluid to clean parts. Use exclusively qualified, non-flammable, non-toxic commercial solvents.

When using compressed air for cleaning parts, use safety glasses with side shields or goggles. Limit pressure to 2 bar, in accordance with local and national regulations.

Do not run the engine in closed areas without proper ventilation to remove deadly exhaust fumes.

Do not smoke or permit any open flames or spark near when re-fuelling or handling flammable materials.

Do not use an open flame as a light source to look for leaks or for inspection anywhere on the machine.

Make sure that all mechanic's tools are in good conditions. NEVER USE tools with mushroomed heads or frayed. Always wear eye protections.

Move with extreme care when working under the machine, its attachments and or on or near them. Always wear protective safety equipment as required, such as hard hat, goggles, safety shoes, ear plugs.

When performing operations requiring running of the engine, have a qualified operator in the operator's seat at all times with the mechanic on sight. Place the transmission in neutral and set the brakes and safety lock.

KEEP HANDS AND CLOTHING AWAY FROM MOVING PARTS.

For field service, move machine to level ground, if possible, and block it. If work on an incline is absolutely necessary, first block machine and its attachments securely, than move it to level ground as soon as possible.

Do not trust worn and /or kinked chains and cables: do not use them for lifting or pulling operations. To handle them, always use heavy gloves.

Be sure chains and cables are anchored and the anchor points are strong enough to handle the expected load.

Keep exposed personnel clear of anchor points and cables or chains.

No bystanders are allowed near the hooking points, chains or cables.

SAFETY RULES

DO NOT PULL UNLESS OPERATOR'S COMPARTMENT OF MACHINES INVOLVED ARE PROPERLY GUARDED AGAINST POTENTIAL CABLE OR CHAIN BACKLASH.

Keep the area where maintenance operations are performed CLEAN and DRY. Immediately clear all fluid spillages.

Do not pile oily or greasy rags; they represent a fire hazard. Store in closed metal container.

Before starting machine, check, adjust and lock the operator's seat for maximum comfort and control of the machine. Be sure exposed personnel in the area of operation are clear of the machine before moving it or its attachments. Sound horn.

Rust inhibitors are volatile and flammable Use only in well ventilated areas. Keep open flames away - DO NOT SMOKE - Store containers in a cool well ventilated place, secure against unauthorised personnel.

Do not carry loose objects in pockets that might fall unnoticed into open compartments.

Wear proper protective equipment such as safety goggles or safety glasses with side shields, hard hat, safety shoes, heavy gloves when metal or other particles are apt to fly or fall.

Wear welders protective equipment such as dark safety glasses, helmets, protective clothing, gloves and safety shoes, when welding or burning. Wear dark safety glasses near welding zones. DO NOT LOOK AT ARC WITHOUT PROPER EYE PROTECTION.

Know your jacking equipment and its capacity. Be sure the jacking point used on the machine is appropriate for the load to be applied. Be sure the support of the jack at the machine and under jack is appropriate and stable.

The load lifted by jacks is always dangerous: it is necessary to transfer loads to appropriate blocking as a safety measure, before proceeding with service or maintenance work, according to local or national regulations.

Steel cables are frayed after prolonged use; always wear appropriate protections (heavy gloves, goggles etc.).

Handle all parts carefully. Keep hands and fingers away from structures, gears or moving parts.

Compressed air systems can have water deposits created by moisture condensation due to changes of atmospheric conditions. If required, discharge deposits, as instructed.

STARTING

Do not run the engine in closed areas without proper ventilation to remove deadly exhaust fumes.

Do not place head, body, limbs, feet, hands or fingers, near rotating fans or belts. Be especially alert near pusher fans.

STARTING FLUID IS HIGHLY FLAMMABLE. Follow strictly the recommendations printed on containers and in the Operation and Maintenance Manual. Containers must be stored in fresh, well ventilated places, out of reach of unauthorised persons. DO NOT PUNCTURE OR BURN CONTAINERS.

ENGINE

Loosen the radiator cap very slowly, to release pressure from the system, before removing it. All coolant level top-ups must be performed with engine OFF.

Do not run engine when refuelling and use care if the engine is hot due to the increased possibility of a fire if fuel is spilled.

Never attempt to check or adjust fan belts when engine is running.

Do not adjust engine fuel pump when machine is moving.

Do not lubricate the machine with engine running.

Do not run the engine with air intakes, door or protections open.

ELECTRICAL SYSTEM

Always disconnect batteries prior to any intervention on machine or electrical system (cleaning, repair, maintenance).

Should booster batteries be used, remember to connect both ends of the booster cables in the proper manner (+) with (+) and (-) with (-). Avoid short-circuits of the terminals. Follow thoroughly the instructions of this Manual.

Before any intervention, make sure that the main switch is OFF.

BATTERY GAS IS HIGHLY FLAMMABLE. Leave battery box open to improve ventilation when recharging batteries. Never check charge by placing metal objects across the posts. Keep sparks or open flames away from batteries. Do not smoke near battery to guard against the possibility of causing an explosion.

Before any intervention, make sure that there are no fuel or electrolyte leakages; eliminate them before proceeding with further work. When recharging batteries in closed ambients, make sure that there is appropriate ventilation to prevent possible accidental explosions due to the accumulation of gases generated during the recharge.

SAFETY RULES

HYDRAULIC SYSTEM

Fluid escaping under pressure from a very small hole can be almost invisible and can have sufficient force to penetrate the skin. Use a piece of cardboard or wood to search for suspected pressure leaks. **DO NOT USE HANDS.** If injured by escaping fluid, see a doctor at once. Serious infection or reaction can develop if proper medical treatment is not administered immediately.

Stop the engine and release all pressures in the system before removing panels, housings, plugs or covers.

In case pressures must be measured, use instruments of adequate capacity. Always follow the recommended procedures.

EQUIPMENT

Keep head, body, limbs, feet, fingers or hands away from bucket, blade or ripper when in raised position.

Prior to any intervention, install all safety devices according to current rules and regulations.

In case equipment on the machine must be operated by hydraulic systems, remember to proceed only after seating in the operator's compartment. Make sure that there are no persons in the operating area of the machine. Alert people before operating using the horn and by voice. Move the equipment very carefully.

Do not use machine to transport loose objects, unless proper devices for this purpose are provided.

Clutches and brakes of this machine and eventual auxiliary equipment and attachments (such as operating cylinder or winches control valves) must always be properly adjusted in accordance with the instructions provided by the Manuals of the Manufacturer.

Never perform adjustments with engine running, except when called for by the above instructions.

When changing work shift, check that wheel or rim securing screws and brackets are not loosen; if necessary, retighten to the prescribed torque.

SAFETY RULES



WARNING

On machines having hydraulically, mechanically, and/or cable controlled equipment (such as shovels, loaders, dozers, excavators 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.

DECOMMISSIONING THE MACHINE

For the decommissioning of the machine, the availability of particular tooling (hoists, hydraulic presses, containers for liquids etc.) is required as well as specific tools listed in the Repair Manuals, available from **CASE** Dealers.

This has the purpose of avoiding that during disassembly operations, dangerous situations may arise both for the personnel involved and the environment.

In the machine are present:

- Fluids under pressure (hydraulic system, cooling system etc.)
- Gases (air conditioning system and accumulator, if installed)
- Mechanical devices mounted under pressure (track tensioner etc.)
- Acid (battery)
- Heavy machine components (frames, blades, buckets etc.)

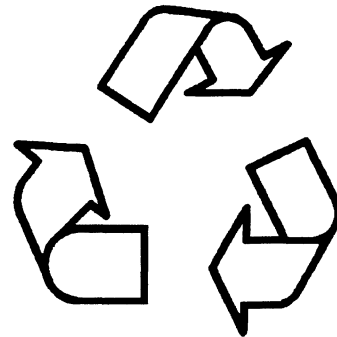
DISPOSE OF WASTES IN AN APPROPRIATE MANNER

- The improper disposal of waste is a menace for the environment. Potentially dangerous wastes used on **CASE** machines include lubricants, coolant, fuel, filters and batteries.
 - Use sealed containers when draining fluids; do not use containers for food or drinks which could be erroneously used for drinking.
 - Recycle all waste.
 - Seek information about the appropriate manners of re-cycling or disposing of waste from local authorities or waste management centres, or from your Dealer.



WARNING

- *The decommissioning of the machine must be performed exclusively by personnel trained, qualified and authorised to perform such operation.*
- *Start the disassembly of hydraulic components only after, the hydraulic oil and lubricants have fully cooled-off and after all residual pressures have been released, as described by the Repair Instruction Manual.*
- *Prior to proceeding with disassembly operations, comply with the GENERAL SAFETY RULES and drain each components of the machine filled with fluids, both in the reservoirs and the relevant systems.*



FOREWORD

This manual is designed to serve as a guidance for correct and safe operation of the machine and its system servicing.

The continued observance of the instructions provided herein will ensure the best possible performance, operation economy and long life of the machine and will avoid the most common causes of accidents which may occur during work or maintenance operations.

As regards safety in particular, carefully read the general rules given on pages I through VII.

The repair procedures for this machine are described in separate service publications obtainable from the Manufacturer's Organization.

Each machine is supplied with a copy of this manual. The descriptions and illustrations appearing in this manual are not binding; thus **CASE** reserves the right, while retaining the basic features of the model herein described and illustrated, to make at any time, and without necessarily bringing this manual up-to-date, any alteration to units, parts, accessories or their supply, deemed necessary for improvement or for any manufacturing or commercial reason. For any clarification, refer to your Dealer who will provide any information you may need.

<p>The information provided by this Manual is valid at the time of publication. Since CASE is constantly improving its products, some information may not be up-to date. In the event discrepancies are experienced, consult the Sales and Service Organization.</p>
