

# **CX75SR Tier 3 Hydraulic Excavator**

## **Operator's Manual**

**Print No. 84301821**

English 02/10

*Replaces 87729467*

**CASE**  
CONSTRUCTION

# CX75SR TIER 3 HYDRAULIC EXCAVATOR

## OPERATOR'S MANUAL

Part Number: 84301821

### **CASE TECHNICAL MANUALS**

Manuals are available from your Dealer for the operation, service, and repair of your machine. For prompt convenient service, contact your Dealer for assistance in obtaining the manuals for your machine.

Your Dealer can expedite your order for Operator's Manuals, Parts Catalogs, Service Manuals, and Maintenance records.

Always give the Machine Name, Model, and P.I.N. (Product Identification Number) or S.N. (Serial Number) of your machine so your Dealer can provide the correct manuals for your machine.

**NOTE:** *CNH America LLC reserves the right to make improvements in design or changes in specifications at any time without incurring any obligation to install them on units previously sold.*






*THIS SAFETY ALERT SYMBOL INDICATES IMPORTANT SAFETY MESSAGES IN THIS MANUAL. WHEN YOU SEE THIS SYMBOL, CAREFULLY READ THE MESSAGE THAT FOLLOWS AND BE ALERT TO THE POSSIBILITY OF DEATH OR SERIOUS INJURY*

M171D

Safety Decals on this machine use the words **Danger, Warning, or Caution**, which are defined as follows:

- **DANGER:** Indicates an immediate hazardous situation that, if not avoided, will result in death or serious injury. The color associated with Danger is RED.
- **WARNING:** Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury. The color associated with Warning is ORANGE.
- **CAUTION:** Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices. The color associated with Caution is YELLOW.

Safety Decals on this machine are ISO two panel Pictorial, decals are defined as follows:

- The first panel indicates the nature of the hazard.
- The second panel indicates the appropriate avoidance of the hazard.
- Background color is YELLOW
- Prohibition symbols such as   and  if used, are RED.



# WARNING

IMPROPER OPERATION OF THIS MACHINE CAN CAUSE DEATH OR SERIOUS INJURY. BEFORE USING THIS MACHINE, MAKE CERTAIN THAT EVERY OPERATOR:

- Is instructed in safe and proper use of the machine.
- Reads and understands the Manual(s) pertaining to the machine.
- Reads and understands ALL Safety Decals on the machine.
- Clears the area of other persons.
- Learns and practices safe use of machine controls in a safe, clear area before operating this machine on a job site.

It is your responsibility to observe pertinent laws and regulations and follow Case Corporation instructions on machine operation and maintenance.

WARNING\_01\_NA

## CALIFORNIA

### PROPOSITION 65 WARNING

Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects, and other reproductive harm.

Battery post, terminals and related accessories contain lead and lead compounds.  
Wash hands after handling.

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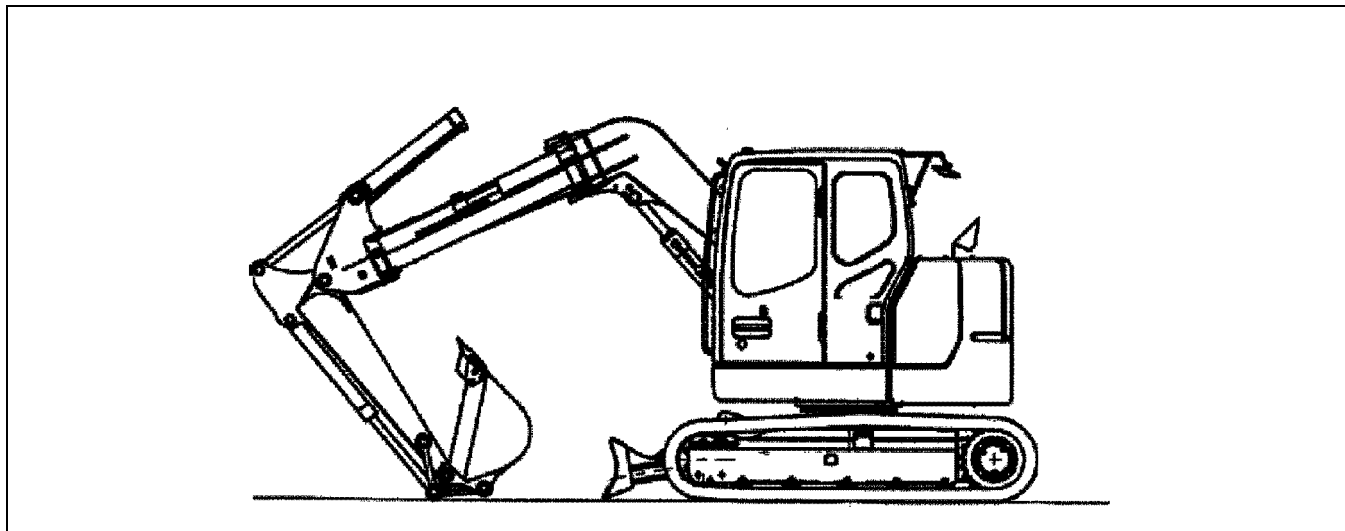
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## Chapter 1 GENERAL INFORMATION

### TO THE OWNER



CT07K021

Figure 1

**CX75SR HYDRAULIC EXCAVATOR**

Your machine has been designed and built to the highest standards of quality. It conforms to all current safety regulations. However, the risk of accidents can never be completely excluded. That is why it is essential to observe elementary safety rules and precautions.

Read this manual carefully, paying particular attention to the instructions concerning safety, operation and maintenance to avoid the risk of injury while operating or servicing the machine.

Use this manual as a guide. Your machine will remain a reliable working tool provided it is kept in good working condition and serviced properly.

The standard attachments and equipment available for use with this machine are intended for general earth moving purposes, material handling, etc. If the machine is to be used for handling loads, (tubing, concrete pipe sections, shoring material, etc.), make sure the machine is suitably equipped for this type of work.

Do not use this machine for any application or purpose other than those described in this manual. If the machine is to be used for work involving the use of special attachments, accessories or equipment, consult your CASE Dealer in order to make sure that any adaptations or modifications made are in keeping with the machine's technical specifications and with prevailing safety requirements. Strictly adhere to all legal requirements.

Any modification or adaptation which is not approved by the manufacturer may invalidate the machine's initial conformity with safety requirements and warranty.

Do not operate or permit anyone to operate or service this machine until you or the other persons have read and understand the safety, operation, and maintenance instructions in this manual. Use only trained operators who have demonstrated the ability to operate and service this machine correctly and safely. All persons who will be operating this machine shall possess a valid local vehicle operating permit and/or other applicable local age work permit.

The information in this manual is provided on the basis of information that was available at the time the manual was written. Settings, procedures, part numbers, software and other items can change. These changes can affect the service that is given to the machine. Ensure that you have complete and current information from you dealer before you start any machine operation.

Always keep this manual in the operator's compartment (in the seat back, behind the operator's seat). Make sure it is complete and in good condition. If you wish to obtain additional copies, or copies in languages other than that of the country of use, consult your authorized dealer.

**NOTICE:**

The machine must undergo regular inspections, the frequency of which varies according to the type of use. Consult your CASE Dealer.

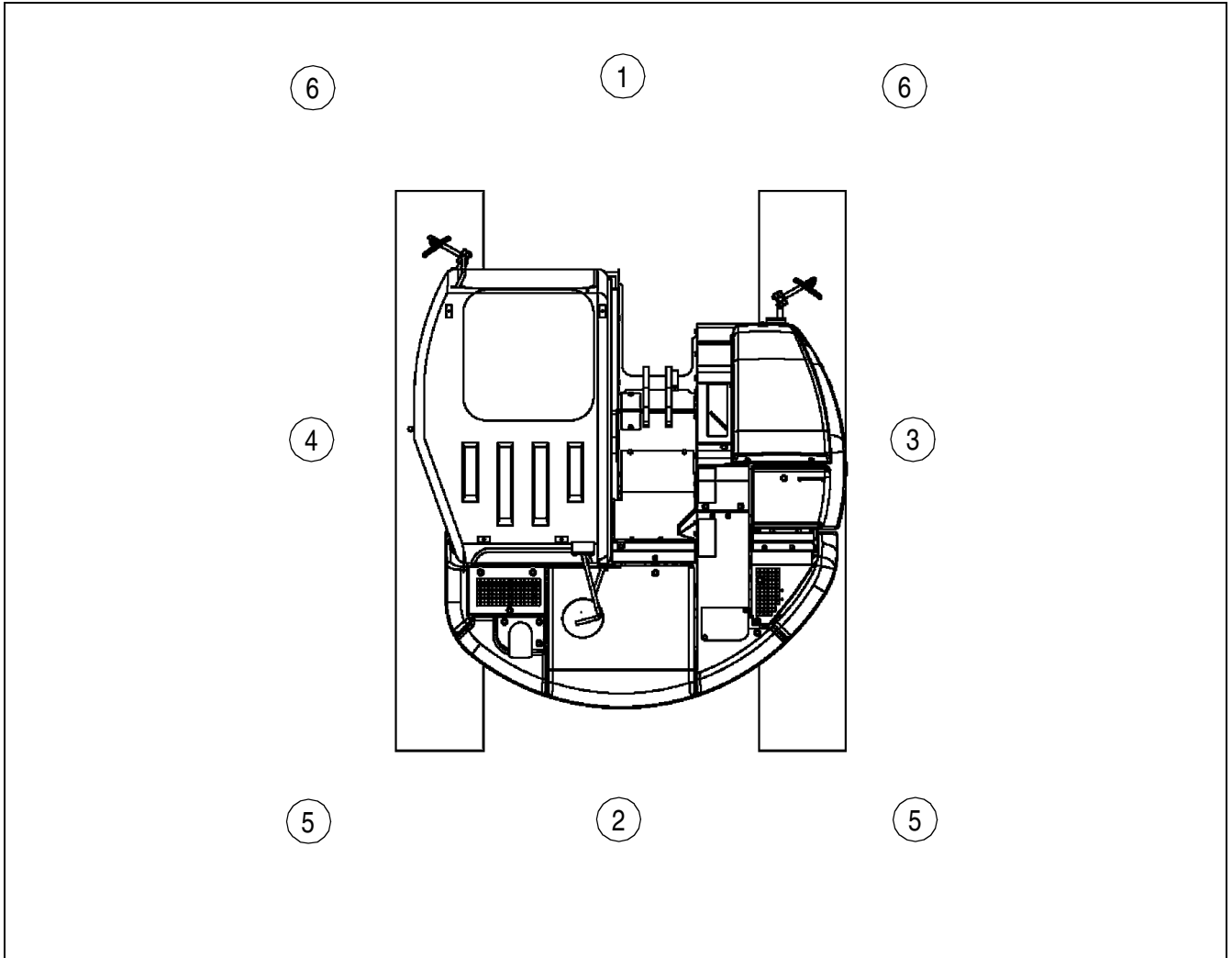
Before permitting a new operator on this machine, make sure:

- That the operator has received the necessary training on how to operate the machine correctly and safely.
- That the operator has the necessary permits and licenses to operate this machine.
- That the operator has read and understands the instructions given in this manual.

### RIGHT, LEFT, FRONT, AND REAR OF THE MACHINE

The terms "Right", "Left", "Front" and "Rear" are used in this manual to indicate the sides as they are seen from the operator's seat when the cab is over the idler.

The illustration below shows the machine in normal TRAVEL position. In normal TRAVEL position, the cab is over the idler. The travel reduction gears are at the rear of the upper structure.



CS99A820

Figure 2

1. FRONT  
2. REAR

3. RIGHT-HAND SIDE  
4. LEFT-HAND SIDE

5. TRAVEL REDUCTION GEARS  
6. IDLER



## IDENTIFICATION NUMBERS

Write your machine model number, Product Identification Number (P.I.N.) and serial numbers on the lines provided below. If needed, give these numbers to your dealer when you need parts or information for your machine.

Make a record of the numbers. Keep the record and your Manufacturer's Statement of Origin in a safe place. If the machine is stolen, report the numbers to your local law enforcement agency.

Machine	
➤ _____	Machine Model and Type
➤ _____	Product Identification Number: P.I.N.
➤ _____	Year of Build
Component Serial Numbers	
➤ _____	Engine Serial Number
➤ _____	Transmission and Serial Number
➤ _____	ROPS Cab or Canopy Serial Number
➤ _____	Attachment Serial Number
➤ _____	

Figure 4

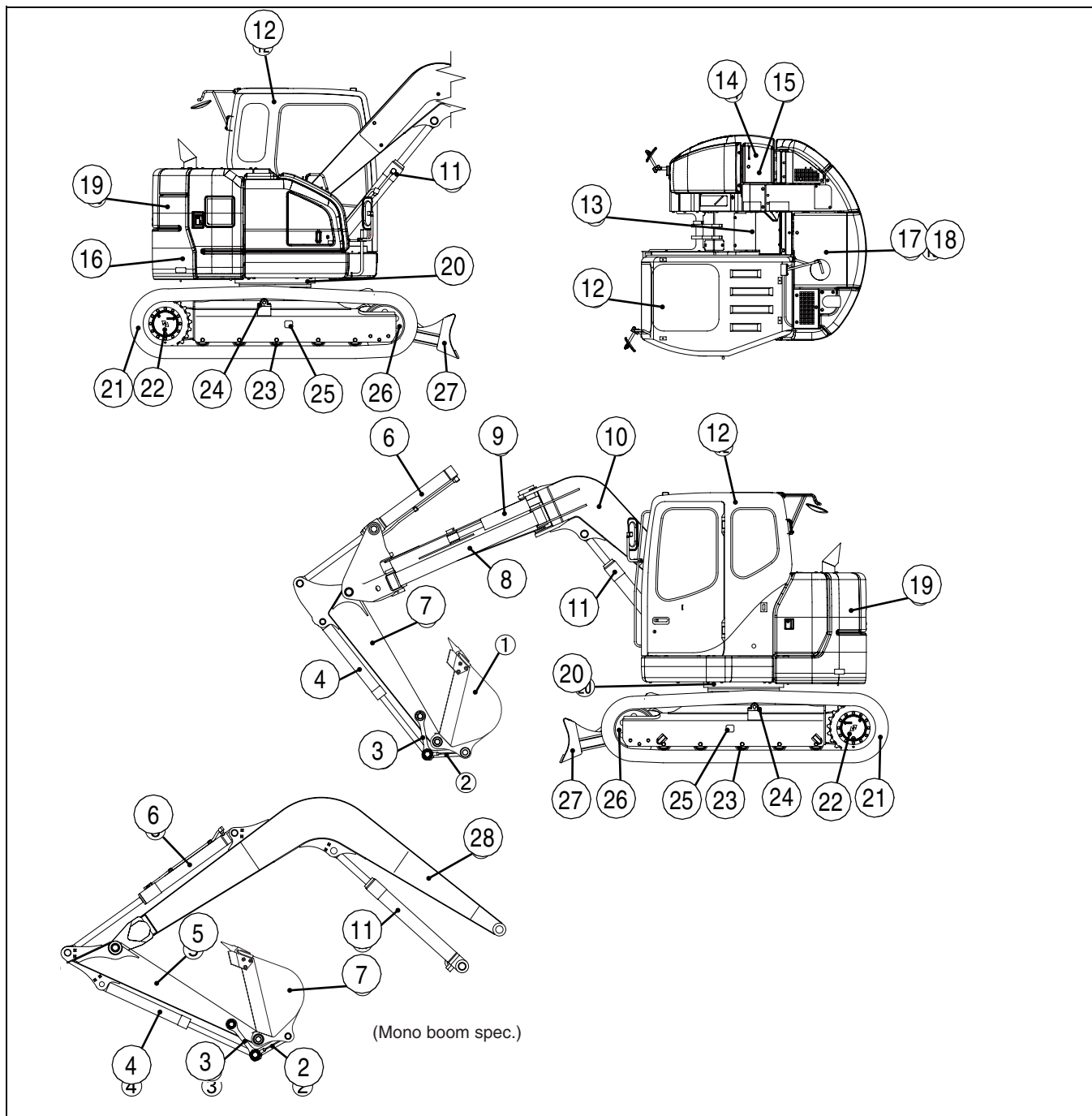


CT04D014B

Figure 3

### ENGINE IDENTIFICATION PLATE

MACHINE COMPONENTS



BD02H141

Figure 5

- |                     |                            |                        |
|---------------------|----------------------------|------------------------|
| 1. Bucket           | 11. Boom Cylinder          | 21. Crawler            |
| 2. Bucket link      | 12. Operator's Compartment | 22. Travel unit        |
| 3. Arm link         | 13. Swing unit             | 23. Lower roller       |
| 4. Bucket cylinder  | 14. Fuel tank              | 24. Upper roller       |
| 5. Arm              | 15. Hydraulic oil tank     | 25. Track tension unit |
| 6. Arm cylinder     | 16. Battery                | 26. Take up roller     |
| 7. Off Set Arm      | 17. Air Cleaner            | 27. Blade              |
| 8. Off Set Boom     | 18. Engine and radiator    | 28. Boom               |
| 9. Off Set Cylinder | 19. Counterweight          |                        |
| 10. Base Boom       | 20. Turntable Bearing      |                        |

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**SAFETY AND DECALS**

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**NOTES**

## SAFETY RULES

### ⚠ WARNING ⚠

*This safety alert symbol indicates important safety messages in this manual. When you see this symbol, carefully read the message that follows and be alert to the possibility of death or serious injury.*

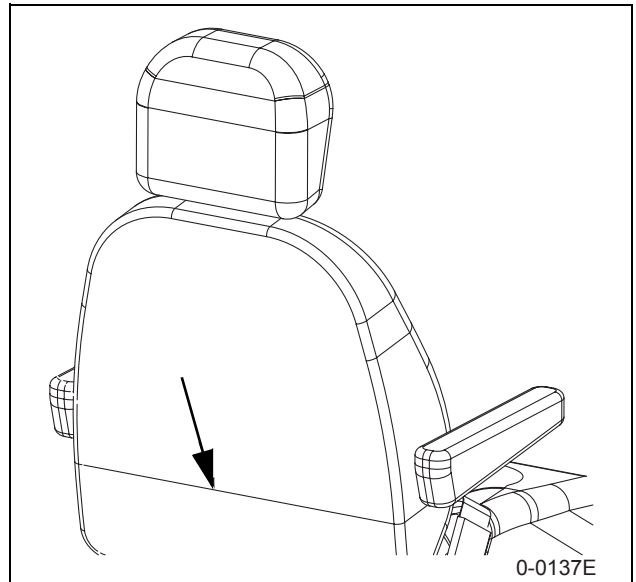
M171C

Most accidents involving machine operation and maintenance can be avoided by following basic safety rules and precautions. Read and understand all the safety messages in this manual, the safety manual, and the safety decals on the machine before you operate or service the machine. See your dealer if you have any questions.

**READ THIS MANUAL COMPLETELY** and make sure you understand the controls. All equipment has a limit. Make sure you understand the speed, stopping, steering, stability and load characteristics of this machine before you start to operate.

Do not remove this manual or the safety manual from the machine. See your dealer for additional manuals.

The safety information given in this manual does not replace safety codes, insurance needs, or federal, state, and local laws. Make sure your machine has the correct equipment according to these rules or laws.



0-0137E

Figure 1

#### OPERATOR'S MANUAL LOCATION AND STORAGE

**NOTICE:** Safety messages in this section point out situations which can be encountered during the normal operation and maintenance of your machine. These safety messages also give possible ways of dealing with these conditions.

**NOTICE:** Additional safety messages are used in the text of the manual to show specific safety hazards.

The safety information contained in this publication does not replace safety codes, insurance needs, federal, state, or local laws. Make certain that your machine has the correct equipment according to these rules or laws.

**UTILITY SAFETY**

Safety precautions **MUST** be followed when working near buried utility lines.

During operation it is likely that you will be working around or near buried utility lines which may include, but are not limited to:

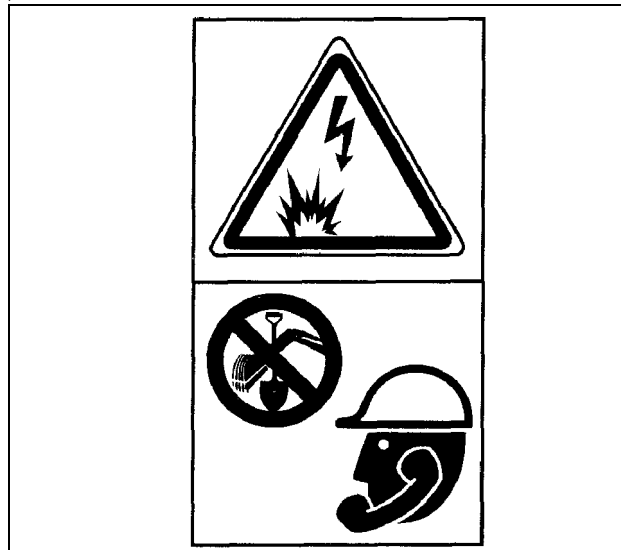
- Electrical Power Line
- Gas Line
- Water Line
- Communication Line - Telephone or Cable Television

**Before beginning any trenching, or other construction work it is your responsibility to be aware of all such utility lines buried in the area of your project and to avoid them.**

ALWAYS have all local utility companies mark the location of their lines.

In U.S.A. and Canada call one of many One Call System Directory services. If you do not know the local number, call the national number (U.S.A. and Canada only): 1-888-258-0808.

Check with local authorities for laws, regulations and/or strict penalties requiring you to locate and avoid existing utilities.



RH99G001

Figure 2

**CALL ALL LOCAL UTILITY COMPANIES BEFORE YOU PERFORM ANY MACHINE OPERATION**




Know the utility color code (U.S.A. and Canada):

- Electric. . . . . Red
- Gas, Oil, or Petroleum . . . . . Yellow
- Communication, Telephone, Television . . . . . Orange
- Water. . . . . Blue
- Sewer . . . . . Green/Brown
- Proposed Excavation. . . . . White
- Surveying . . . . . Pink
- Reclaimed Water and Slurry . . . . . Purple

After locating the utility lines, carefully dig a hole by hand and/or automatic vacuum equipment to the utility line to verify the location and depth of the line.

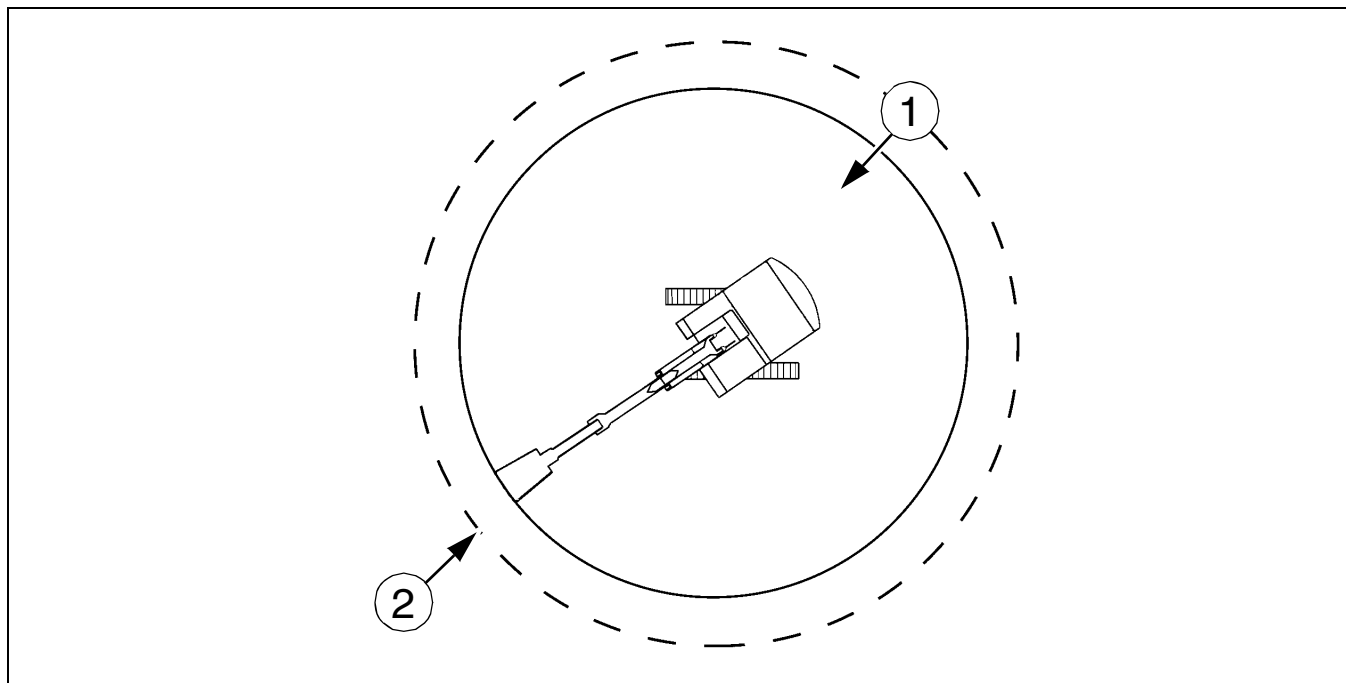
**PERSONAL SAFETY**

ISO two panel pictorial symbol decals are defined as follows:

- The first panel indicates the nature of the hazard.
- The second panel indicates the appropriate method in order to avoid the hazard.
- Background color is YELLOW.
- Prohibition symbols such as   and  if used are RED.

**! SAFETY AREA !**

The safety area is the space necessary for the machine to operate at the maximum range of the tool and a full 360° swing plus 6 feet (2 meters).



CS97M019

Figure 3

1. WORKING AREA
2. SAFETY AREA



## MACHINE OPERATION

- Check all controls in a clear area and make sure the machine is operating correctly.
- Do not permit other persons to ride on the machine. Other persons can fall or can cause an accident.
- Dust, fog, smoke, etc., can decrease your vision and cause an accident. Stop the machine or decrease the speed until you can see everything around you in the work area.
- Contact with high voltage lines, underground cables, etc., can cause serious injury or death from electrocution.
- Before you drive or operate in an area with high voltage power lines or cables, tell the power or utility company what you are going to do. You **MUST HAVE THE POWER DISCONNECTED OR KEEP A SAFE WORKING DISTANCE** from the lines or cables. You must know the safe working distance from the high voltage power equipment and must know any federal, state/provincial or local safety codes or regulations that apply to the job site.
- Electrical cables, gas pipes, water pipes, sewers, or other underground objects can cause injury or death. Learn the location of underground hazards before you operate your machine in a new area.
- When the machine is traveling forward or backward an alarm will sound.
- Inspect the seat belt mounting bolts on a daily basis to insure their integrity.
- Operate the machine controls from the operator's seat only. Always fasten the seat belt and keep it securely fastened when operating the machine.
- If this machine rolls over, you can be injured or killed. You must make a judgment if weather, road, or earth conditions will permit safe operation on a hill, ramp, or rough ground.
- Stay away from hazardous areas such as ditches, overhangs, etc. Walk around the work area before you start and look for hazards.
- Be alert and always know the location of all workers in your area. Keep all other persons completely away from your machine. Injury or death can result if you do not follow these instructions.

## PERSONAL SAFETY

- Be prepared for emergencies. Always have a first aid kit and a working fire extinguisher with you and know how to use each.
- Avoid loose fitting clothing, loose or uncovered long hair, jewelry and loose personal articles.
- Know and use the protective equipment that is to be worn when operating this machine. Hard hats, protective glasses, protective shoes, gloves, reflector type vests, respirators and ear protection are examples of types of equipment that may be required.
- Certain protective equipment should be replaced and renewed upon age and wear. Old hard hats may not afford the proper protection required. Faded and soiled vests are no longer as highly visible as their original intent. See the manufacturer's recommendation.
- Know and use the hand signals required for particular jobs and know who has the responsibility for signaling.

## GENERAL

- It is the responsibility of the operator to read and understand the Operator's Manual and other information provided and use the correct operating procedure. Machines should be operated only by qualified operators.
- Do not operate this machine or perform maintenance work if you have not had appropriate training and have read and fully understand the instructions and warnings in this manual.
- Do not permit riders on the machine.
- Make sure that all protective guards, canopies, doors, etc. are in place and secure.
- Remove all loose objects stored in the machine. Remove all objects which do not belong in or on the machine and its equipment.
- Do not use the machine as a manlift.

**PROPER ENTRY AND EXIT**

- Use the recommended hand holds and steps with at least three points of support when getting on and off the machine. Keep steps and platform clean.
- Do not jump off the machine.
- Do not dismount while the machine is in motion.
- Foreign material or grease on the steps and hand holds can cause an accident. Keep the steps and hand holds clean.

**STARTING AND STOPPING PRECAUTIONS**

- Walk around the machine and warn all personnel who may be servicing the machine or are in the machine path prior to starting. Do not start until all personnel are clearly away from the machine. Sound the horn before starting.
- Walk around the machine's tool, attachment, or furthest contact point to view operation danger area from the work site personnel view and angle. This is the safety area necessary for the machine to operate at the maximum range of the tool plus 6 feet (2 meters).
- Check that the parking device is applied, place the ground drive controls in neutral and check that the auxiliary controls or switches are in neutral or off positions.
- Adjust, secure and latch the seat and fasten the seat belt before starting the machine.
- Start and operate the machine only from the operator's station.
- Do not bypass the machine's interlock system. The interlock system must be repaired if it malfunctions.
- Use battery booster cables only in the recommended manner. Improper use can result in battery explosion or unexpected machine motion. Ventilate the battery area before using jumper cables. Make sure that using battery booster cables will not interfere with or harm electronic processing or computer devices.
- Do not operate the engine in an enclosed area without adequate ventilation.
- Park the machine on level ground whenever possible and apply the parking brake. On grades, park the machine with the track securely blocked.
- Before leaving the operator's station, lower the equipment to the ground, shut off the engine and place the function cancellation lever into the locked position.

- Remove the starter key when leaving the machine parked or unattended.

**OPERATING PRECAUTIONS**

- Check steering and other machine control devices in accordance with the manufacturer's instructions prior to starting operation. Observe all gauges or warning instruments for proper operation. Operate all controls to insure proper operation. If any malfunctions are found, remove the starter key or disconnect switch key. Place a Do Not Operate tag on the machine until the malfunction is corrected.
- If a failure that causes loss of control such as steering, service brakes or engine occurs, stop the machine motion as quickly as possible, remove the starter key or disconnect switch key. Place a Do Not Operate tag on the machine, and keep it securely parked until the malfunction is corrected or the machine can be safely moved.
- Understand the machine limitations and keep the machine under control.
- Operate and drive the machine with care and at speed compatible with conditions. Use extra caution when operating over rough ground, on slopes, and when turning.
- Note and avoid all hazards and obstructions such as ditches, underground lines, trees, cliffs, overhead electrical wires or areas where there is danger of a slide.
- Carry loads in recommended positions for maximum stability.
- Never lift loads in excess of capacity.
- Use the recommended machine ballast and counterweighting.
- Know and understand the job site traffic flow patterns, and obey signalmen, road signs and flagmen.
- Know and understand that job site conditions may change on an hourly basis. Hills of dirt, debris or obstructions may grow and change from the time you began the day. It is your responsibility to monitor the changes, and keep the machine, tools and attachments, etc. a safe distance.
- Watch for bystanders, and never allow anyone to be under or to reach through the machine and its equipment while operating.
- Select a gear that will prevent excessive speed when going downhill. Do not coast downhill.

- Use proper transport devices when roading the machine. Proper marking (reflectors, slow moving vehicle emblem, etc.) lights, flashers, signals and beacons may be required. Follow local, state and federal regulations.
- Use the approved attachment point when using the machine for towing. If a cable or chain is used, keep people away from the tow line.
- Before you operate at night, check that all lamps illuminate.
- Make sure that all windows are clean and that the windshield wipers work correctly.
- Engine exhaust fumes can cause death. If you operate this machine in an enclosed area, make sure there is ventilation to replace the exhaust fumes with fresh air.
- Check all controls in a clear area and make sure the machine is operating correctly.
- Dust, fog, smoke, etc., can decrease your vision and cause an accident. Stop the machine or decrease the speed until you can see.
- Contact with high voltage power lines, underground cables, etc., can cause serious injury or death from electrocution.
- Before you drive or operate in an area with high voltage lines, cables, or a power station, tell the power or utility company what you are going to do. You **MUST HAVE THE POWER DISCONNECTED OR KEEP A SAFE WORKING DISTANCE** from the lines, cables, or power station. Keep all parts of the machine a safe distance away from the power source. You must also know any federal, state/provincial, or local safety codes or regulations that apply to the job site.

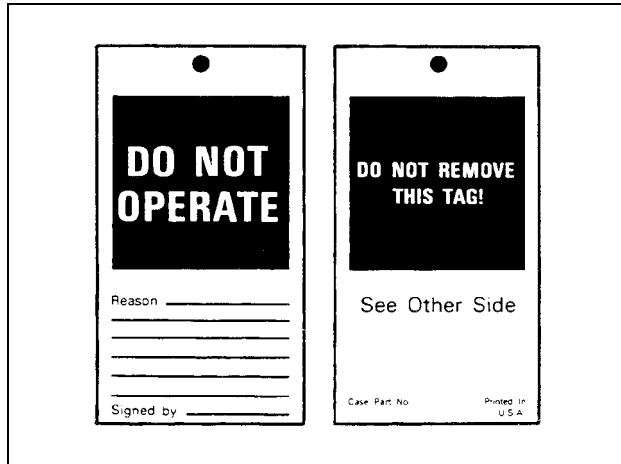
If a part of the machine touches high voltage power:

1. Warn other workers **NOT TO TOUCH THE MACHINE** and to stay away from the machine.
2. If you can break contact, reverse the operation that caused contact with the high voltage power, and move the machine away from the danger area. If you cannot break contact stay in the machine until the utility company de-energizes the line and tells you that the power is off.
3. If you have extreme conditions, such as a fire, etc., and you are forced to leave the machine, do not step off the machine. Jump as far from the machine as possible with your feet together and do not touch the ground with your hands.

- Do not operate the machine if you do not feel well. This can be dangerous for you and for the people around you.
- You must make a judgment if weather, road, or earth conditions will permit safe operation on a hill, ramp, or rough ground.
- Stay away from hazardous areas such as ditches, overhangs, etc. Walk around the work area before you start and look for hazards.
- Be alert and always know the location of all workers in your area. Keep all other persons completely away from your machine. Injury or death can result if you do not follow these instructions.
- Develop fluid and smooth operating techniques and maintain the surface condition where the machine travels in order to control vibration transfer to the operator.

**MAINTENANCE PRECAUTIONS**

- Do not attempt repairs unless trained. Refer to manuals and experienced repair personnel for help.



321-4614

Figure 4

- Before you service the machine, put a Do Not Operate tag on the key switch. Make sure that the machine is clearly “tagged out”. A Do Not Operate tag is included in this machine’s Operator Manual packet.
- Wear protective glasses and other required safety equipment when servicing or repairing the machine.
- Wear gloves to protect hands when handling cable.
- Disconnect the battery before working on the electrical system. Know the consequences of disconnecting any electronic or computer devices.
- Avoid lubrication or mechanical adjustments with the machine in motion or the engine operating. If the engine must be in operation to make certain adjustments, place the transmission in neutral, apply the parking device, place the equipment in a safe position, securely block the tracks and use extreme caution.
- Securely block the machine or any component that may fall before working on the machine or component. If possible, use a back up or secondary blocking device, also.
- To prevent unexpected movement, securely block working elements when repairing or changing working tool parts such as cutting edges.
- Never make repairs on pressurized components, fluid, gas or mechanical until the pressure has been relieved according to the manufacturer’s instructions.
- Use extreme caution when removing radiator caps, drain plugs, grease fittings or pressure taps. Park the machine and let it cool down before opening a pressurized tank.
- Release all pressure before working on systems which have an accumulator.
- Use a piece of cardboard, newspaper, or wood to check for pressurized leaks to prevent fluid penetrating the skin. Pressurize accumulators with the proper gas according to manufacturer’s recommendations.
- Towing this machine is **not** recommended.
- Observe the proper maintenance procedures.
- Whenever servicing or replacing hardened pins, etc., use a brass drift or other suitable material between the hammer and pin. Alternative: Use a brass hammer, drift or suitable material on the pin, etc.
- Keep the brakes and steering systems in good operating condition.
- Replace all missing, illegible or damaged safety signs/decals. Keep all safety signs/decals clean.

**FUEL HANDLING PRECAUTIONS**

- Do not smoke or permit open flames while fueling or near fueling operations.
- Never remove the fuel cap or refuel gasoline engine powered machines with the engine running or hot. Never allow fuel to spill on hot machine components. Never allow fuel to spill on the environment.
- To avoid spilling fuel, maintain control of the fuel filler nozzle when filling the tank.
- Do not fill the fuel tank completely to the top. Allow room for expansion.
- Clean up spilled fuel immediately, and dispose of contaminated material in an environmentally correct manner.
- Tighten the fuel tank cap securely. Should the fuel cap be lost, replace it only with the original manufacturer’s approved cap. Use of a non-approved cap without proper venting may result in pressurization of the tank.
- Never use fuel for cleaning purposes.
- Use the correct fuel grade for the operating season.

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