Backhoe and Loader Safety

BEFORE USING THE MACHINE

- Read the owner's manual to learn the characteristics of the machine.
- For your personal protection you will need to wear some or all of the following:
  - sturdy pants and shirt
  - safety shoes
  - hard hat
  - safety goggles or glasses
  - gloves
  - hearing protection
  - respirator for dusty conditions.
- Sunscreen protection is vital in bright sunshine if not under a roof.
- Check the loader/backhoe for the presence of the following safety devices in good working order:
  - rollover protective structure (ROPS)
  - seat belt (if ROPS equipped)
  - guards
  - shields
  - back-up warning system
  - lights
  - mirrors.
- Fill the fuel tank while engine is off and cool. Never fill inside a building. Do not smoke, while fueling. Wipe up any spills immediately.
- Check the machine daily for broken, missing, or damaged parts. Make the necessary repairs or replacements.
- Keep the machine clean -- especially steps, handrails, pedals, grab irons, and floor of the cab. Slippery surfaces are very hazardous.
- Remove or secure loose items in the cab that could interfere with operating the controls.
- Check the work area for hidden holes, obstacles, drop-offs, etc. Clear children, pets, and bystanders from the area.
- Check overhead for utility lines, roofs, and other obstacles.
- Call Missouri One Call System, Inc at 1-800-DIG-RITE to locate underground cables, gas lines, water, and sewer lines before digging. You need to request this service in advance.
- Always use the handrails, ladders, and steps provided when mounting the machine; never grab controls or the steering wheel.
- The cab was designed for one person -- allow no riders, especially children.
OPERATING THE LOADER

- Adjust the seat, fasten the seat belt, set the brake, and place transmission in park or neutral before starting the engine.
- If machine is in a garage be sure ventilation is adequate. CARBON MONOXIDE KILLS!
- Start the engine and check all controls for proper function. Check horn and backup alarm. Do not use if anything is faulty.
- If the backhoe is still attached, be sure to use chains and locks to prevent it from swinging.
- If the backhoe is removed, you may have to use counterweights. Check your owner's manual.
- Keep the working area as level and clean as possible. Use the bucket to grade the area frequently.
- Always carry the bucket low for good visibility and maximum stability.
- Use extreme caution when backfilling to avoid collapsing the wall of the trench.
- When undercutting high banks or material piles be alert for falling rocks and/or cave-ins.

OPERATING THE BACKHOE

- Keep the loader bucket on the ground.
- Level the machine for maximum stability.
- Operate the backhoe only from the seat.
- Never swing the bucket over a truck cab.
- Dump the bucket uphill if possible when operating on a slope. If you must dump downhill swing slowly to avoid tipping the machine.
- If using the backhoe as a hoist, do so with the weight over the back of the machine -- NEVER THE SIDE -- to avoid tipping.
- Be sure the load you are lifting is balanced, and move the boom slowly to avoid swaying the load.

SAFE STOPPING PROCEDURE

- Park the machine on level ground if possible and set the parking brake. Place transmission in park if so equipped.
- Lower the loader and backhoe buckets to the ground.
- Stop the engine and remove the key.
- Work the hydraulic controls to relieve pressure.
- Wait until all motion has stopped and then dismount carefully using steps and safety holds.
- Do not jump from the machine.
BACK HOE SAFETY

Backhoes are one of the most common types of construction equipment found today. Their versatility and maneuverability make the backhoe the equipment of choice for most construction jobs. Backhoe loaders can dig, scrape, load material, lift, and with specialized attachments do almost any required task.

No one should operate a backhoe unless specifically trained and authorized by the company. Backhoe operators are skilled professionals responsible for an expensive piece of equipment as well as the safety of those working on the project. Backhoe operators need a few items for personal safety. Safety shoes, hardhat, safety glasses, heavy gloves, reflective clothing, hearing protection and quite possibly a respirator where necessary.

Backhoe loaders are complicated machines. Be sure to know your equipment's capabilities and limitations such as its load capacity, stability speed, braking and steering before operating the equipment. Check to make sure you have an operator's manual before you use the equipment. Inspect your backhoe for protective devices. Are seat belts provided? Seat belts are required for backhoes or any equipment, which has rollover protection. Inspect your lights, warning lights, and audible buzzer or signal to make sure they are working. Double-check the instruments and controls. The operator maintenance inspection procedure is really very important before you operate the equipment. Breakdowns can be disastrous. You can get more dependability of the equipment if you take care of it and the first step is operator maintenance. Check the hydraulic system for leaks. Check all the fluid levels, oil, water, battery, transmission and fuel. Check hoses and fittings for leaks or damage. Inspect the condition of the tires for proper pressure and any noticeable cuts or damage. OK, the equipment is in good operating condition - you're ready to go.

Use the handrail or steps when mounting the machine. Don't use the controls as handholds. Put your seat belt on snugly, set the controls in neutral or park with the parking brake on. Never start the backhoe from any position other than from the driver's seat. After the vehicle is started and warming up, check your brakes and other equipment to make sure it's functioning properly.

One of the first safety rules we'll discuss is riders. Absolutely no riders on backhoe loader equipment. When driving, slow speed is a safe speed. Often 5 miles per hour is posted on the job site but use your good judgment and drive slowly for the conditions. There are always people walking around so take it slow. Be aware that braking conditions may vary due to mud, loose gravel or other conditions. There are always obstacles on the job such as rocks, stones and debris. Soft soil conditions exist around edges and deep holes. When operating the loader be sure the backhoe is secured in the upright position and carry the loader bucket low, close to the ground. This allows maximum visibility and stability. Stay in gear when traveling downhill. Use the engine's RPM to help maintain control.

Before beginning the backhoe digging process, lower the stabilizers so the wheels are off the ground leveling the unit. Check the boom swings to avoid hitting anyone or anything that may be in the boom path. Remember, you're permitted to operate the backhoe loader only
from the driver's position. Never when you're on the ground. When operating on a slope, be sure the unit is level with the stabilizers. Swing loads uphill to avoid a balance problem while on the slope and place soil well away from the edge of the trench.

When loading dump trucks, the dump truck driver must be out of the cab and away from the process. Never swing a load over the cab. Prior to digging be sure all utilities have been located and pot-holed to make their location. Hitting a power line is extremely hazardous and costly. If you're not sure, check with your foreman before digging. Damage to water mains, telephone, or cable TV lines have a tendency to make headlines and headaches.

If you must use a road or highway be sure your slow moving sign is in place and always hand or turn signals. Follow the rules of the road. If traffic gets backed up behind you, pull over and let them pass. When transporting your backhoe, refer to the manufacturer's manual for proper tie-down and loading procedures. Will the trailer or truck handle the load? Be sure to check the tie down chains for worn or damaged links. Low binders have always been an accident waiting to happen. Avoid using the traditional snap binders, as they require a cheater-bar to tighten. Cheater bars are not authorized and they tend to cause accidents. Use a ratchet-type binder.

Backhoes get a lot of wear and tear and maintenance is required from time to time. Be sure the boom is adequately blocked to avoid a serious injury in case it falls. Never rely upon hydraulics to hold the boom. It must be blocked to avoid a fall. Chalk the tires when working on the vehicle and keep the bucket teeth in good shape. Naturally, never smoke when refueling or handling fuel and turn the engine off as well as electrical or spark producing motors. Ground the fuel nozzle or funnel against the filler neck to avoid static electricity. Check the fire extinguishers that are located in the cab. Be sure it is charged and ready for emergencies. Safety is a big deal especially on construction projects with people performing their jobs, back hoes, dump trucks, just a lot of activity. Backhoe loaders are important pieces of equipment. They save time, money, effort and make everyone's job easier. The people who operate this equipment are professionals and they do a great job. A short program on safety doesn't tell the whole story. The experience of the backhoe operators and their attention to safety on the job is what really counts.