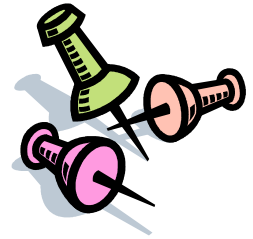




Safety Note

UNIVERSITY OF CALIFORNIA
AGRICULTURE AND NATURAL RESOURCES
ENVIRONMENTAL HEALTH AND SAFETY



Safety Note #36

GENERAL BACKHOE SAFETY



Data available from the Bureau of Labor Statistics indicates an average of 24 backhoe excavating fatalities occur every year. Information from the National Institute for Occupational Safety and Health (NIOSH) indicates the primary causes of backhoe injuries include being struck by a moving backhoe or quick-disconnect bucket, swinging excavator arms, rollovers, and electrocutions.

Pre-Use Activities

- Thoroughly review and understand information provided in the backhoe operator's manual with particular attention given to descriptions of safety procedures.
- Always perform a pre-shift backhoe inspection, including checking fluid levels, lights and signals, tires, hydraulic cylinders/lines, loader bucket/excavator connections, and guards and shields. Inspect backhoe for worn or loose parts such as lynch/cotter pins or lug nuts.
- If a backhoe fails the pre-shift inspection, notify your supervisor and remove the backhoe from service by attaching a red tag that states "DO NOT USE." Complete red tag with appropriate information.
- Annual backhoe training is required by California regulations (Title 8, Section 3664 b) and should incorporate both general backhoe training and specific training review on the backhoe that employees may use.

Operating Precautions

- Before starting and while operating a backhoe, look for people or obstructions in the vicinity of the backhoe.
- Employees working within an area where a backhoe is operating must wear flagging garments (i.e., orange vests) and at least, a hard hat, steel-toed boots, and long pants.
- Never carry passengers on a backhoe.
- Prior to starting, learn the locations of underground and overhead utility lines, ditches, stumps, boulders, and other hazards or obstructions in the work area.
- Always extend the backhoe stabilizers prior to starting an excavation task.
- Never exceed the engine, excavator, or lift capacities of the backhoe.
- Always swing the backhoe arm uphill when excavating on a hillside.
- When transporting material in a loader bucket, keep the loader bucket as low to the ground as possible to maintain backhoe stability.
- Only raise the loader bucket for the purpose of dumping material.
- Reduce speed when turning, crossing slopes, or driving on rough, slick, or muddy surfaces.
- Only dismount (or mount) a backhoe when the engine is shut off.
- Never adjust or work on a backhoe unless the engine is shut off and hydraulic pressure has been deenergized.
- In order, backhoe shutdown procedures are: (1) turn off the engine; (2) lower the loader bucket and backhoe arm; (3) and set the parking brake.

This safety note is to be used in conjunction with the backhoe safety video available for loan from the ANR EH&S Library at (530) 752-3933 or http://danrec.ucdavis.edu/ehs/safety_training/index.html.