

Excavator Operation Best Practices

for Supervisory Personnel, Operators and Workers

Best Practices for Supervisory Personnel

Pre-Operation

- Acquire proper excavation drawings.
- Ensure there is an appropriate Emergency Action Plan.
- Ensure there is a Trenching and Excavation program.
- Ensure there is a Confined Space program in place.



Best Practices for Supervisory Personnel

Pre-Operation continued

- Verify that the **"Dial Before You Dig"** call has been made and that the utilities are marked and depth verified .
- Ensure high visibility markings of all foreign underground crossing .
- Verify all overhead lines are identified and marked.
- Ensure a competent person has been appointed



Best Practices for Supervisory Personnel

Pre-Operation continued

- Do a Job Safety Analysis (JSA) and communicate it with your working team
- Ensure availability and use of appropriate personal protective equipment (PPE)
- Review the excavator operator manual for unique operational requirements.
- Verify the fire extinguisher location.
- Communicate to all employees their assigned tasks and responsibilities.



Best Practices for Supervisory Personnel

Operation

- Ensure there is a competent person on site.
- Ensure policies will be followed when excavating across utilities and underground structures.
- Ensure proper benching, sloping and shoring practices
- Ensure proper protection and support of existing utilities and structures.



Best Practices for Supervisory Personnel

Operation continued

- Verify that sufficient room is available to keep the spoil pile at least two feet from the edge.
- Ensure a spotter is used if there are utilities or tight working conditions in the work area.
- Ensure proper communication clearly indicating that all necessary personnel are prohibited from entering the work area.
- Ensure that hand signals are given by one person and understood by all personnel on site.
- Only qualified personnel shall operate equipment.



Best Practices for Supervisory Personnel

Operation Continued

- **Verify that the “Dial Before You Dig”** call has been made and that the utilities have been marked and depth verified.
- Confirm that the equipment is kept as far away as practical from the side of excavation.
- Verify that all unnecessary personnel are prohibited from the work area.



Best Practices for Supervisory Personnel

Post Operation Activities

- Ensure that all open excavations are barricaded at the end of the work day.
- Ensure that prior to backfilling all equipment, materials, or other debris have been removed from the area.
- Verify equipment is properly parked, parking break set, and chock and block when needed.



Best Practices for Operators

Pre-Operation

- Verify that the “Dial Before You Dig” call has been made and that the utilities have been marked and depth verified.
- Verify the installation of high visibility markings of all underground crossing and structures.
- Ensure the public will be protected.
- Wear appropriate PPE.



Best Practices for Operators

Pre-operation continued

- Read, understand, and follow the operators manual.
- Use appropriate PPE for the task being performed
- Ensure you are qualified to operate the equipment.
- Conduct a walk around equipment inspection.
- Under no load perform a pre-operation function check until you are familiar with the controls.



Best Practices for Operators

Pre-Operation continued

- When refueling, bond the supply tank with the fuel tank.
- Make sure all warning labels are legible.
- Verify that any attachments that have quick couplers are properly connected.
- Remove debris and clutter in the cab that would prevent safe operation.



VIRGINIA LAW

Virginia specific overhead power line sticker

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Best Practices for Operators

Operation

- Use 3-points of contact to enter the machine
- Get on the machine only at locations that have steps and/or handholds.
- Do not use any controls as handholds when entering or existing the operators compartment.
- Always wear the seatbelt when operating the piece of equipment.



Best Practices for Operators

Operation continued

- Check that the controls are in the proper setting before starting the machine.
- When the equipment is in operation, the doors, if installed, must be closed or secured by the latch in the open position.
- No personnel shall be under the bucket.



Best Practices for Operators

Operation continued

- Follow the policies of the governing agency when crossing foreign utilities.
- Ensure a spotter is used when near utilities.
- Assure that proper sloping, benching, or shoring techniques are utilized.



Best Practices for Operators

Operation continued

- Only qualified personnel shall operate equipment.
- Ensure that a spotter has been used when working around utilities, and in tight working conditions.
- Ensure there is enough room for the swing radius.



Best Practices for Operators

Operation continued

- Equipment shall be kept as far away as practical from the side of excavation.
- Verify that sufficient room is available to keep spoil pile at an approved distance from the side.
- If the operator leaves the seat of the equipment, the hydraulics shall be lowered to the ground, parking brake set, chock and block if necessary and turn the machine off.
- All unnecessary personnel shall be prohibited from the work area.



Best Practices for Operators

Operation continued

- Hand signals shall be given by one person and must be understood by all personnel on site.
- When moving an excavator, proper rigging and lifting techniques shall be used.
- No riders shall be permitted and no personnel shall be lifted or carried in the bucket.
- Do not operate this piece of equipment during storming conditions.
- When moving the excavator, the bucket shall be lowered and curled in.



Equipment operations will often occur in difficult to maneuver spaces

It is the signal person's responsibility to watch the load

The operator's responsibility is to ensure they can see the signal person and are able to acknowledge the signals given

Before operating, the signal person and operator must review and agree on what signals will be used

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Best Practices for Operators

Post Operation

- Park, set parking brake, chock and block as necessary.
- Lower the hydraulics.
- Shut engine off, remove key, lock doors and engage the security system if available
- Use 3 points of contact to exit the machine.



Best Practice for Workers

- Always follow all company safety and health rules and regulations.
- Stay clear of pinch points created by operating equipment.
- Never get under a load or between the load and the machine.
- During an electrical storm, stay away from the vicinity of the machine.



Best Practice for Workers continued

- Wear appropriate PPE as required by the task being performed and as required by regulations.
- Be aware of suspended loads, counter weights, and pinch points. Maintain eye contact with the operator at all times.
- Be aware of and listen for the backup alarm operation.
- You may be asked to act as a spotter if there are overhead power lines, underground utilities, or tight working conditions.



Best Practice for Workers continued

- No personnel shall be under the bucket.
- All unnecessary personnel shall be prohibited from the work area.
- Hand signals shall be given by one person and must be understood by all personnel on site.
- No riders shall be permitted.
- Know the location of the nearest fire extinguisher.



Summary

- Always be aware of and adhere to the rules and regulations for the jurisdiction where operations will take place.
- Ensure all Inspections are completed before operation.
- Understand the safety features of your particular unit.
- Be aware of the factors that affect the stability of a excavator.
- Follow best practices as they relate to your role in safe operating procedures.

Questions?

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