

Because of their power and versatility, excavators are common on projects of all types including construction, demolition, road work, forestry or agricultural work, and mining.

All heavy equipment poses serious, and potentially fatal, risks to equipment operators and other workers nearby on the jobsite.

- Equipment operators should be trained and authorized to use the equipment they are assigned to operate at the job site.
- No riders allowed! No one should ever ride in the bucket, hang or ride on the arm, or ride as an additional person in the cab. Excavators have only one seat which is meant for the operator.
- Never attempt to operate the excavator unless you are sitting in the cab and in full control.
- Use a reliable communication method between the equipment operator and the ground crew.
- Excavators with known operational malfunctions must be tagged and removed from service.



0001782

## **An excavator operator died after being struck in the chest by a section of 16-inch gas pipeline.**

*Two excavator operators were using a tandem lift procedure to transport a 128-foot section of the pipe from a construction area (top of hill) to an installation area (bottom of hill). Both excavators were attached to the pipe with slings, approximately 20 feet from each end of the pipe.*

*During maneuvers to begin the transport the pipe suddenly plunged through the front windshield of one of the excavator cabs striking the operator in the chest.*

*After emergency personnel arrived the operator was pronounced dead at the scene.*

NIOSH FACE Report 2013-05

Because of the complexity of the maneuver being attempted, this incident could have been prevented with the preparation of a documented lift plan that ensures the pipe wouldn't swing directly in front of the cab.

- Confirm there is a written procedure in place for a safe work method for tandem lifting operations and that excavator operators review and understand the plan before starting the lift.
- Ensure that the equipment being used provides the highest level of physical protection for the operators and is the most appropriate for the work being done.

## **A worker died after being struck by excavator bucket.**

*Workers were using an excavator equipped with a quick-disconnect bucket coupler to load concrete manhole sections onto a truck. One worker was on the ground connecting the manhole sections to the excavator so they could be lifted into the truck. During this operation the bucket suddenly disconnected from the excavator stick and dropped onto the worker who was on the ground.*

*Emergency responders were called immediately but he was pronounced dead on site from blunt trauma to the head.*

NIOSH In-house FACE Report 2001-09

Examination of the excavator after the incident identified several operational faults that contributed to this preventable loss.

- Conduct an operational check of all excavator functions including cycling the coupler mechanism and curling the bucket to identify equipment malfunctions before workers are exposed to injury risks.
- Ensure workers on foot remain outside of hydraulic excavator swing areas and clear of attachments when using the machines for hoisting materials.
- Equipment fixtures and their operating systems must be installed according to the manufacturer's recommendations.

## **COPYRIGHT AND DISCLAIMER**

This material is the copyrighted property of Weeklysafety.com, LLC. Purchase of this material from Weeklysafety.com, LLC grants the owner the right to use this material for workplace safety and education purposes only. Use of this material for any other purpose, particularly commercial use, is prohibited. This material, including the photos, may not be resold. Weeklysafety.com, LLC does not warrant or assume any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed in these materials. Photos shown in this presentation may depict situations that are not in compliance with applicable Occupational Safety and Health Administration (OSHA) safety requirements. These materials are meant for informational purposes only and it is not the intent of Weeklysafety.com, LLC to provide compliance-based training. The intent is more to address hazard awareness in the construction and related industries, and to recognize the potential hazards present in many workplaces. These materials are intended to discuss Federal Regulations only, as individual State requirements may be more stringent. Many states operate their own state OSHA and may have standards that are different from information presented in this training. It is the responsibility of the employer and its employees to comply with all pertinent OSHA safety rules and regulations in the jurisdiction in which they work.

## **PHOTO ACKNOWLEDGMENTS**

Unless specified below, all photos are the copyrighted property of Weeklysafety.com, LLC and may not be used in any other training materials or resold for any purpose.

- 0001782 Shutterstock License for Weeklysafety.com

## **INCIDENT REPORTS**

- NIOSH FACE Report 2013-05; [cdc.gov/niosh/face/in-house/full201305.html](http://cdc.gov/niosh/face/in-house/full201305.html)
- NIOSH In-house FACE Report 2001-09; [cdc.gov/niosh/face/In-house/full200109.html](http://cdc.gov/niosh/face/In-house/full200109.html)

For more information on this weekly safety topic, other topics that are available and the full list of FAQs please visit [www.weeklysafety.com](http://www.weeklysafety.com) or email [safety@weeklysafety.com](mailto:safety@weeklysafety.com).