 Heavy Construction Contractors Association 

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# *Toolbox Talk – Work safely with heavy equipment*

Although all of your employees went through training before they could work on site, it's never a bad idea to refresh your memories and review safety practices. Heavy equipment, such as an excavator or crane, is especially dangerous due to its size, weight, and complex operating procedures. With this Toolbox Talk, you can make sure your employees operate and work around heavy machinery with safety as their top priority.



**Guidelines for discussion:**

Heavy equipment is common while working on a construction site. Heavy equipment is an integral part of many processes, especially in the creation and maintenance of roads. These are the different types of heavy equipment you may encounter on the job:

* Excavation equipment - This includes backhoes, excavators, and front loaders.
* Lifting equipment: the most common lifting equipment is a crane.
* Loading / Hauling Equipment - This includes loaders, excavators, scrapers, dump trucks, and railcars.
* Compaction equipment: includes different types of rollers.
* Sorting / Finishing Equipment - This includes different types of sorters.
* Paving / Coating Equipment - This includes aggregate spreaders, asphalt spreaders, blowers, and pavement profilers.

Heavy equipment is dangerous due to its size, weight, and complex operating procedures. However, these dangers can be greatly reduced through proper awareness and training. Some common hazards of heavy machinery include:

* Poor repairs or obsolete equipment
* Dirty or broken windows (can obstruct the operator's view)
* Bumping / trapping can occur in / between accidents, in which surrounding workers are struck by equipment or caught between equipment and another environmental object / accessory
* Traveling empty at high speeds
* Passengers falling off the equipment
* Equipment dump
* Machines out of control (either due to not locking the wheels when parking or due to the operator's inability to control)
* Electric shock due to contact with overhead or underground power lines
* Collision with people, buildings, vehicles or environmental facilities.

Remember, only authorized persons can operate heavy equipment. A worker is authorized by receiving training or acquiring a license. If you are an operator, you are responsible for knowing and understanding the limitations of the machinery. Always follow safe operating procedures, use available safety features, and read manufacturer's warnings. If you are an operator and are ill, fatigued, or otherwise unable to perform your job, you must notify your supervisor. Never try to overcome a physical or mental condition that affects your ability to work; this represents an unnecessary risk to you and everyone around you.

**Before the start of each shift, the on-site operator should use the following checklist:**

* Walk completely around the equipment and check for hazards (this includes flat tires, damaged structure, or environmental accessories that could affect the machine).
* Check equipment lights, steering and suspension system, fluid levels, and external hoses and filters. Look for unprotected moving parts or other unsafe conditions.
* Get into the booth and remove the trash. Make sure all windows are clean, adjust mirrors, check fire extinguisher, turn on all exterior lights, and make sure seat belt is ready for use.
* Start the engine, check gauges and warning lights, and listen to the engine for any unfamiliar sounds.
* Before moving, notify people in the surrounding area.
* Test the movements of the equipment and ensure that the backup alarms can be heard.

**Even if you are not an operator, there are special safety protocols that you must follow when working around heavy equipment:**

* Wear high visibility clothing.
* Don't assume the operators can see you; be careful where you are.
* Designate a signal person to assist the operator.
* Learn and use standardized hand signals.
* Use walkie-talkies or other communication equipment between the ground and the operator.
* Pay attention to backup alarms and notify operator immediately if backup alarms do not work.