



Heavy equipment and struck-by injuries

You may think it never happens, but it does. When heavy equipment such as excavators, backhoes, and cranes are hoisting loads, things can come loose and fall if the necessary safety precautions are not taken. Someone could be hit and seriously injured or even killed.

Boom extensions (jibs)

An example of this type of struck-by injury occurred recently when a boom extension or jib detached unexpectedly from a telescopic boom mobile crane and hit a worker. This can happen during installation or stowage of the jib on the crane. To prevent this kind of accident, it is essential that jibs be installed and stowed in accordance with the operator's manual.

When operating a crane, follow these safe work practices.

- Operate, inspect, and maintain cranes in accordance with the manufacturer's instructions contained in the operator's manual and with the regulatory requirements under the *Occupational Health and Safety Act* and any other legislation.
- Make sure that all crane operators are qualified and competent to operate a crane in accordance with the *Occupational Health and Safety Act*.
- Make sure all workers who are assigned to help the operator stow or install the jib are receiving step-by-step directions from the crane operator.
- Never allow workers to stand under the jib at any point throughout the installation and stowage procedure.
- Never hoist a load over other workers.
- Never unpin any connection before making sure that the jib is secure and all the steps have been performed correctly up to this point.
- Re-check every pin, electronic connection, and wire-rope routing BEFORE moving or operating the crane.

Quick couplers

Another recent struck-by injury happened when a quick coupler unexpectedly released, causing an attachment to fall and strike a worker. When they are not installed or maintained correctly, heavy equipment

attachments—various-sized buckets, ripping teeth, hammers, and other tools attached by quick couplers instead of traditional pins—may release and fall. When that happens, it's usually because the quick coupler was not properly engaged and locked. To make sure quick couplers are fully engaged and locked, the heavy equipment operator should do a ground test (also called a bump test).

To perform a ground test,

1. Place the connected attachment on the ground.
2. Using the equipment, apply pressure to the attachment. If the attachment is not securely connected, it should become obvious when you apply pressure.

Operators must also follow the rules contained in the construction regulation. They include the following:

- The operator (who must be a competent worker) must inspect the equipment before each use to make sure that there are no defects and that it is not in a dangerous condition.
- A supervisor or a competent person appointed by the supervisor must also inspect the equipment to ensure that it is not in a condition that will endanger a worker.
- No worker may operate the equipment unless he or she is competent to do so.

Working on the ground

If you are working on a jobsite where cranes or other types of heavy equipment are in operation, make sure you are aware of your surroundings. Never walk under a load. Even if a crane or excavator isn't lifting anything, part of the equipment might dislodge and fall on you. Make sure everyone on the jobsite knows where cranes and excavators are working. If you need to enter those areas, always make eye contact with the operator to ensure that he or she knows where you are at all times. Simple measures can make all the difference.

Visit [ihsa.ca/news_events](https://www.ihsa.ca/news_events) to download safety advisories on boom extensions and quick couplers. Share them with everyone on your jobsite.