Excavator Quick Coupler Device Safety Meeting Kit

Excavators are some of the most common pieces of heavy machinery found in the average construction site.

These devices were designed to make life easier for the average construction worker. More specifically, those who are working with an excavator. These devices are designed to quickly change out the tool being used by the excavator. While these devices have made life easier, they also have created a significant threat.

THE DANGERS OF QUICK COUPLER DEVICES

It has been known for many years now that quick couplers can pose a danger to ground workers who are working around the excavator. There have been multiple fatalities due to the unexpected release of a bucket due to the quick coupler device opening up or failing.

COMMON EXCAVATOR HAZARDS

Machine Rollovers

Machine rollovers can occur at any moment if the operator isn’t being safe. The ground giving out beneath the machine can cause rollovers. Other causes include traveling too quickly, traveling on a too-steep slope, and traveling with the attachments improperly lowered.

Contact with Power Lines

While regulations dictate that machines must stay at least 20 feet away from nearby power lines, electrocution still kills many excavator operators. Generally, contact occurs when operators fail to check if they have enough overhead clearance.

When a worker strikes a power line, they might panic and let go of the controls for a moment. When they attempt to touch the controls

again or exit the machine, they get electrocuted.

Maintenance Errors

When operators fail to properly maintain their machines, they put themselves and those nearby at risk. Even a misplaced lock pin could make a heavy component come loose and crush someone.

Trenching Accidents

Trenching accidents occur when the ground cannot support the changes in pressure caused by excavation. The weight of the machine can cause loose dirt to shift, which in turn can tip the machine.

Other trenching accidents result from improper trenching techniques or unskilled workers trying too complicated techniques. These can include attempting to straddle a trench or using the bucket arm to climb down the side of a trench.

Debris

Falling debris poses a significant risk to both the excavator operator and nearby pedestrians. Material from a load could dislodge and strike workers or civilians located too close to the machine.

Buckets

Besides the falling debris, buckets can pose a serious threat to safety and well-being. An operator unaware of a nearby pedestrian could strike or crush them when turning or lowering the bucket arm. An operator could also put themselves at risk by attempting to leave an active machine with the bucket arm lowered.

HOW TO AVOID INJURY WHEN WORKING WITH A QUICK COUPLER

The number of incidents involving quick coupler devices has decreased significantly in recent years. This is because manufacturers have gone out of their way to make the devices safer

to use. Most manufacturers of these devices have come up with some type of locking pins that do not allow for an unexpected release. **Some other precautions include:**

- Follow manufacturer's recommendations for installation, maintenance, and use for these devices.
- Inspect quick coupler devices before use. Look for locking pins or other safety devices that will prevent an unexpected release of a bucket or attachment.
- Never work directly under or close to an excavator bucket or attachment, even if there are safety pins in the quick coupler device.
- Communicate to fellow coworkers when quick coupler devices are used.

OSHA OFFERS THESE SAFETY TIPS WHEN USING QUICK COUPLERS ON THE JOBSITE:

- Inspect all quick couplers to determine if the one you are using is subject to unexpected release hazards. Determine if manually installed locking pins and installation procedures have been provided by the manufacturer.
- If necessary, obtain and install retrofits recommended by the manufacturer.
- Be sure to include positive locking pins and other devices that need to be manually installed.
- Consider using newer models of quick couplers that have been specifically designed to prevent the unintended release of attachments.
- Follow the manufacturer's recommendations for maintenance of the quick coupler to prevent malfunction.
- Follow the manufacturer's installation procedures and recommendations on testing quick coupler and attachment connections every time an attachment is made.
- Train employees how to properly use a quick coupler. Include training on how to make visual inspections.
- Require employees to use the proper procedures for engaging excavation attachments and incorporate the procedures into the company's safety and health program.

FINAL WORD

While the prevalence of these incidents have been greatly reduced through better design, unexpected releases can still occur. Take the necessary steps to ensure that these devices are properly functioning. Protect ground workers further by forbidding any work to be done underneath or near the bucket of an excavator.