

Let's Talk Lockout/Tagout - Bin Entry



What is Lockout/Tagout for Bin Entry?

Lockout/Tagout (LOTO) is used during bin entry to disconnect power sources to the unloading and conveying equipment of the bin. LOTO before entry protects entrants from engulfment and entanglement hazards associated with flowing grain, unloading augers and sweep augers.

How does it work?

Grain bins are emptied by a combination of gravitational and mechanical forces. Grain bins have openings in the bottom or along the sides often referred to as sump holes. When these holes are open, gravity pulls the grain downward through the holes into a conveyor or auger which moves the grain. When gravity no longer works, a sweep auger located in the middle of the bin rotates around to force grain into the sump holes, if equipped.

INJURY EXAMPLES:

#1 Glen entered the grain bin with the unloading equipment running to break the corn loose. When the clog cleared, the corn quickly began to flow, pulling Glen downward until he was completely under the grain. He suffocated and died.

#2 John was by himself cleaning out a grain bin. John stepped into a sump hole and fell. Another employee turned on the bottom unloading auger to unload the piles John had swept up. John's foot became caught in the auger and sustained massive injury.

What are the hazards?

Engulfment hazards are caused by flowing grain. As grain flows downward toward an open sump it forms a funnel. The pull of the funnel quickly draws a person down, entrapping the worker. An adult male can be engulfed by flowing grain within one minute.

Entanglement hazards most often occur with the unloading conveyors/augers. During unloading the sump holes are often unguarded exposing the moving conveyor or auger. When working inside a bin, a worker may inadvertently step into a sump hole or is drawn into the sump hole with the flowing grain and becomes caught in the conveyor or auger. Sweep augers have exposed moving parts due to their operation. Some portable sweep augers have exposed power transmission sources. Workers can accidentally come into contact with the moving parts.

How could have these incidents been avoided? *Lockout and tagout all unloading equipment prior to bin entry.*

What other preventive measures should be taken during bin entry?

1. Always have an observer positioned outside the bin.
2. Guard sump holes upon entering if permanent guards are not in place.
3. Use a lifeline to prevent being engulfed more than waist deep.

Let's Talk about our Worksite

1. What are the LOTO procedures our workers are supposed to use prior to bin entry?
2. Who is responsible for ensuring LOTO is performed? How does an entrant ensure LOTO has been done prior to entry?
3. How do we protect each person involved in the bin entry process with LOTO?



LOCKOUT/TAGOUT FOR BIN ENTRY

PREVENT

Engulfment & Entanglement Hazards

Lockout & Tagout
all unloading &
conveying equipment
BEFORE
any bin entry.



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