MISSISSIPPI STATE UNIVERSITY™
MS AGRICULTURAL AND FORESTRY EXPERIMENT STATION

MAFES DAWG TRACKS

Locking or tagging out equipment is a way to control a potential situation, protecting a person against the release of hazardous energy.

What is hazardous energy?

Energy sources including electrical, mechanical, hydraulic, pneumatic, chemical, thermal, or other sources in machines and equipment can be hazardous to workers. Hazardous energy also includes blocking/securing items that can rotate or fall simply from the law of gravity. During the servicing and maintenance of machines and equipment, the unexpected startup or release of stored energy can result in a devastating outcome to workers.

What are the consequences?

Workers servicing or maintaining equipment may be seriously injured or killed if hazardous energy is not properly controlled. Injuries may include electrocution, burns, crushing, cutting, lacerating, amputating, or fracturing body parts, and others.

- An ON button is pushed causing equipment to start up entangling a maintenance worker inside when the electrical disconnect was not locked out.
- A lawn mower falls crushing a man underneath as he changes blades by only using a jack & not also blocking it up (using jack stands).
- The screwdriver slips while replacing an electrical outlet & electrocutes the worker when the breaker was not turned off to that circuit & locked-out.

For more info contact:
Leslie Woolington
MAFES/MSU-ES Risk Mgmt.
LHW4@msstate.edu
662.325.3204

What can be done to control hazardous energy and protect employees?

- ✓ Implement lockout/tagout (LOTO), securing, and blocking practices and procedures.
- ✓ Use true locking devices for equipment that can be locked out. Tags may be used in lieu of lockout devices only if the tagout program provides employee protection equivalent to that provided through a lockout program.
- ✓ Ensure that new or overhauled equipment is capable of being locked out.
- ✓ Use only lockout/tagout devices that are durable, standardized, and substantial.
- ✓ Ensure that lockout/tagout devices identify the individual users.
- ✓ Only the employee who applied a lockout/tagout device can remove it.
- ✓ Train all employees to recognizes what a lockout/tagout device is and train on specific procedures for those using these devices.

The following is a basic outline necessary to disable equipment to prevent a hazardous energy release:

1. Scene survey – identify all potential hazards.
2. Notify affected people of LOTO and reason for it.
3. Shut machine down with normal procedures.
4. Isolate from source – turn off disconnects, breakers, valves; dissipated stored energy or restrain (blocking/ bleed-down…)
5. Lockout/tagout – use assigned lock/tag; key must remain with person who applied lock.
6. Test – operate normal controls to ensure equip will not operate; use meter to verify electrical circuits.
7. Proceed with work or repairs.
8. Remove all tools from work area, reinstall guards, & ensure everyone is clear.
9. Remove LOTO and restore energy.
10. Proceed with normal start up.

Sources:

https://www.osha.gov/SLTC/controlhazardousenergy/
https://www.osha.gov/OshDoc/data_General_Facts/factsheet-lockout-tagout.pdf