

## **BASICS OF LOCKOUT/TAGOUT (CONTROL OF HAZARDOUS ENERGY)**

*A repair worker began fixing a machine in room 2 after turning off its circuit breaker located in room 3. A coworker in room 3 saw the circuit breaker, which was usually on, now turned off. Hoping to do a good deed, he turned it on, which resulted in the accidental electrocution of the repair worker. Your repair & maintenance workers can be injured or killed if someone turns on the power to a machine or wiring that is being fixed. To reduce the chance of this at your premises or jobsite, you should implement & enforce a *Lockout/Tagout* program.*

**Lockout** protects your workers from unexpected releases of hazardous energy & makes moving parts immobile. It blocks the flow of energy from a switch, valve, lever, etc. on wiring, a machine, pipe, or equipment. This is done by turning a switch off, closing a valve, or placing a lever in the *off* position & securing it in that position with a padlock or other locking device. Only authorized workers can remove the locking device. This prevents inadvertent re-energizing before repair/maintenance is done.

**Tagout** warns others to leave a switch, circuit breaker, valve, lever, etc. in the *off* or *closed* position. This is ***NOT*** a safe substitute for lockout. Your repair/maintenance workers should use ***BOTH*** lockout & tagout when working on devices that involve hazardous energy. The warning may be a tag or sign placed upon the lockout device whose message may be: ***DANGER Do not turn switch on - machine being repaired.***

**Hazardous energy** includes electricity, steam, hydraulic fluids, flow of heat, air pressure (*pneumatic*), & stored energy (*e.g. fan blade that continues to move after power is shut off*).

### **Some Situations needing lockout/tagout:**

- Worker must remove or bypass a guard in order to replace table saw blade
- Worker must place body where it could be caught by moving parts
- Worker must clear a jammed item from a conveyor belt
- Worker is installing additional electrical outlet on a circuit
- Worker must replace a piece of steam pipe
- Worker must clean or lubricate moving parts

*If a worker can unplug an electric item from an electrical outlet & has exclusive control over the plug so that no one else may plug the item in, then lockout/tagout is not needed.*

**Safety equipment suppliers** can help you select the lockout & tagout items you need to protect your workers. These may include padlocks, locks to fit over circuit breakers, locks that fit over plugs of electrical cords, & locking devices that fit over pipe valves.

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**Training all of your workers** when & how to use lockout/tagout devices will protect them further. Teach them why the devices are needed & why only authorized people should remove them. Retrain them when you assign new tasks, modify a source of hazardous energy (*e.g. alter a machine*), or obtain new hazardous energy sources (*e.g. new machinery*). Put your lockout/tagout policy & training program in writing & give a copy to all workers.