



# 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.

**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.