

## Lockout / tagout

### Introduction:

Lockout/tagout refers to practices used to protect you from unexpected energization or startup of machinery, or the release of hazardous energy during service or maintenance.

- Compliance prevents approximately 120 fatalities and 50,000 injuries each year.
- Workers injured from exposure to hazardous energy miss an average of 24 workdays for recuperation.

### Hazards to watch for:

- Working on unfamiliar equipment and/or energy sources.
- Failure to identify all energy sources involved.
- Not utilizing proper LO/TO devices.
- Failure to verify energy isolation.

### Forms of Hazardous Energy:

- Kinetic (mechanical) energy in the moving parts of mechanical systems.
- Potential energy stored in pressure vessels, gas tanks, hydraulic or pneumatic systems, and springs.
- Electrical energy from generated electrical power, static sources, or electrical storage devices (such as batteries or capacitors)
- Thermal energy (high or low temperature) resulting from mechanical work, radiation, chemical reaction, or electrical resistance.

### Safe procedures:

#### De-energize equipment:

- 1) Notify all “affected employees” that the equipment will be shut down.
- 2) Shut down the equipment by normal stopping procedures.
- 3) “Isolate” all the equipment’s energy sources.
- 4) Apply the appropriate Lockout/tagout device, using assigned, individual locks.
- 5) Release or restrain any stored energy by grounding, blocking or bleeding down.
- 6) Assure that no one is exposed. Then try out the equipment to make sure it won’t operate.

#### Restore equipment to service:

- 1) Clear the equipment or machinery of all tools and materials.
- 2) Make sure all employees are clear and notified.
- 3) Remove lockout /tagout devices.
- 4) Re-energize machine or equipment carefully
- 5) Notify employees that servicing is complete and equipment is ready for use.

### In conclusion:

Stay Safe—Lockout/tagout & try out!

Your limbs or life may depend on it.