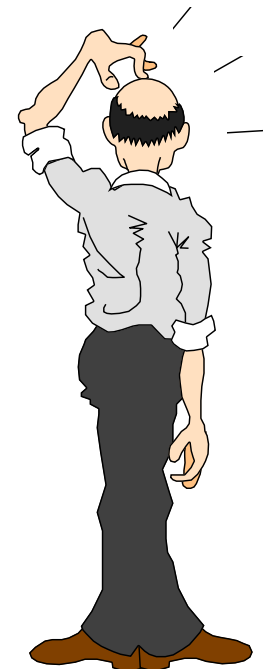


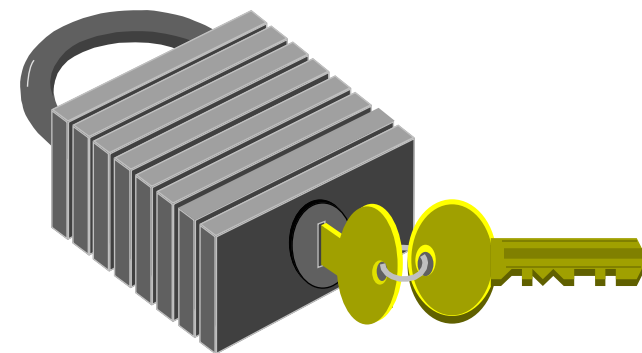
Lockout/Tagout Standard

Proper Lockout Procedure
The Ohio State University/OARDC/ATI
Environmental Health and Safety



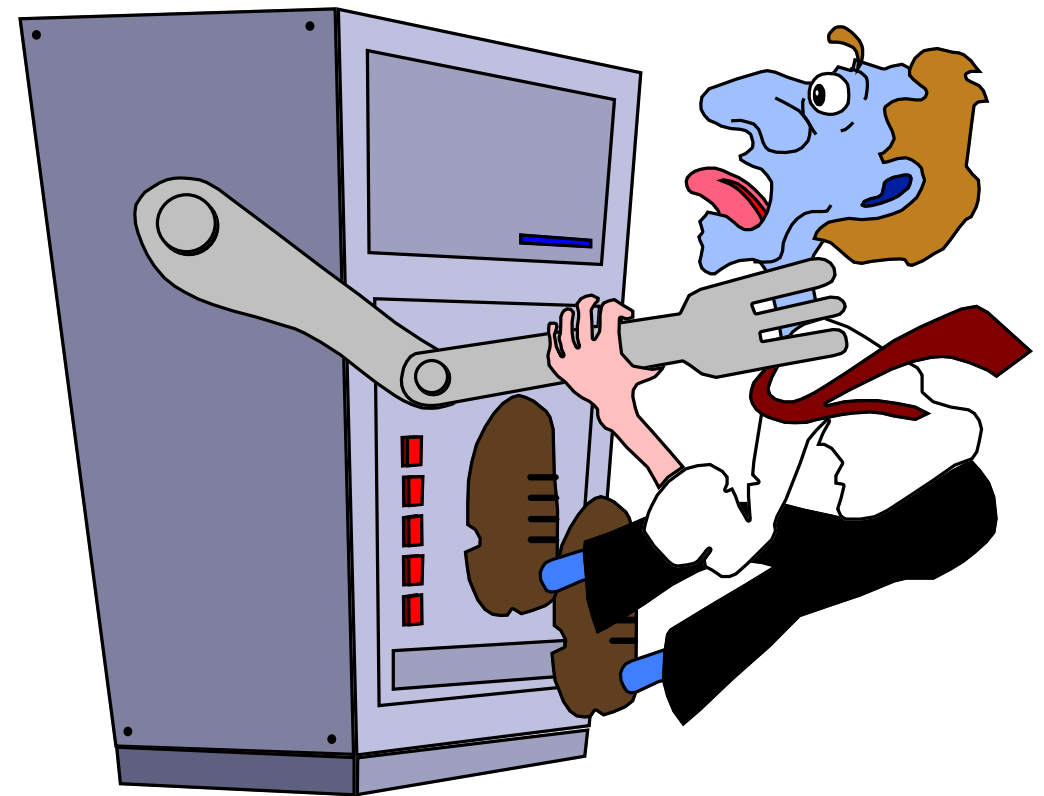
Lockout

- Lockout is a technique used to prevent the release of hazardous energy, or to prevent the hazardous energy from escaping.
- A padlock is placed on the appropriate energy isolating device that is in the off or closed position.



The “Fatal Five” Main Causes of Lockout/Tagout Injuries

- ⦿ Failure to stop equipment
- ⦿ Failure to disconnect from power source
- ⦿ Failure to dissipate (bleed, neutralize) residual energy
- ⦿ Accidental restarting of equipment
- ⦿ Failure to clear work areas before restarting



Definitions

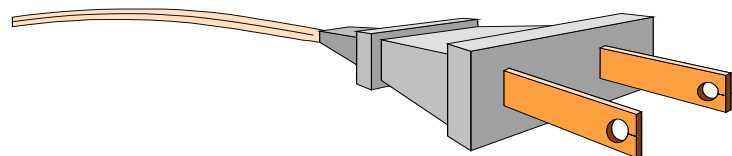
- **Authorized Employee** - one who locks out machines or equipment in order to perform the servicing or maintenance on that machine or equipment.
- **Affected Employee** - one whose job requires him/her to operate or use a machine or equipment on which servicing or maintenance is being performed under lockout, or whose job requires him/her to work in an area in which such servicing or maintenance is being performed.

Definitions, cont.

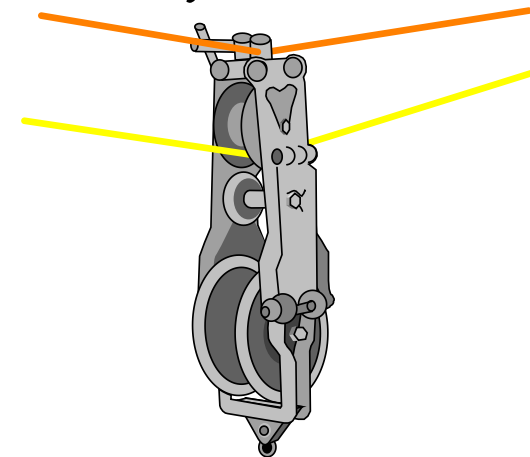
- **Energy Isolating Device** - A mechanical device that physically prevents the transmission or release of energy.
- **Energy Control Procedure** - Safety program adopted by the employer that includes energy control procedures plus provisions for inspecting the procedures and training employees for lockout/tagout.

Hazardous Energy Sources Found in the Workplace

- Electrical
 - Generated
 - Static
- Mechanical
 - Transitional
 - Rotational
- Thermal
 - Machines or Equipment
 - Chemical Reactions



- Potential
 - Pressure
 - Hydraulic
 - Pneumatic
 - Vacuum
 - Springs
 - Gravity



Types of Lockout Devices

⇒ Plug Locks

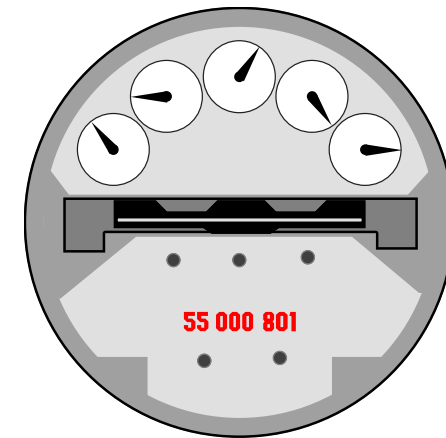
⇒ Ball Valve Lockout

⇒ Gate Valve Lockout

⇒ Group Lockout Hasp

⇒ Electrical

⇒ Hydraulic, pneumatic, and other pressurized systems



Lockout Procedure

- ① Alert the operator (s) that power is being disconnected.
- ② Preparation for Shutdown
- ③ Equipment Shutdown
- ④ Equipment Isolation
- ⑤ Application of Lockout Devices
- ⑥ Control of Stored Energy
- ⑦ Equipment Isolation-Verification

Removal of Lockout

- ★ Ensure equipment is safe to operate
- ★ Safeguard all employees
- ★ Remove lockout/tagout devices. Except in emergencies, each device must be **removed by the person who put it on.**
- ★ Last person to take off lock
- ★ Follow checklist

Temporarily Reactivating Equipment

- ➔ Remove unnecessary tools from the work area and make sure everyone is clear of the equipment
- ➔ Remove lockout/tagout devices and re-energize the system
- ➔ As soon as the energy is no longer needed, isolate the equipment and re-apply lockout/tagout, using the six step procedure.

Special Situations

- Servicing lasts longer than one shift.
- Contractors are performing service or maintenance at your workplace
- Worker who applied lock is not available



Tidbits of Info.

- ❁ Never attempt lockout/tagout procedures unless you have been trained and certified by your employer under an approved Energy Control Program.
- ❁ Never loan or share your lock, combination, or key with anybody else.
- ❁ Always be sure all lockout/tagout devices are compatible with the environment in which they will be used i.e. corrosive, humid, etc.

Lock out Tagout Quiz

NAME _____

DATE _____

- 1. Lockout/tagout prevents accidents by shutting off power and energy before machine repair, cleaning, or maintenance.
- True or False
- 2. Only authorized employees are those permitted to use machines and repair machines.
- True or False
- 3. Lockout/tagout has to follow specific steps.
- True or False
- 4. Lockout/tagout steps include releasing energy stored in springs, pressure systems, etc.
- True or False
- 5. You lock out a machine before turning off the power.
- True or False
- 6. Locks and tags are equally good choices for lockout/tagout.
- True or False
- 7. Once equipment is locked out, it has to be tested to be sure it can't start accidentally.
- True or False
- 8. You are permitted to skip lockout/tagout for emergency repairs.
- True or False
- 9. Lockout/tagout procedures are common sense and don't require special training.
- True or False
- Key: T, T, T, T, F (Turn off the machine and main power source), F (Tags are for warning only. They don't assume that energy is shut off), T, F (No one is permitted to ignore or bypass a lock or tag), F (OSHA requires lockout/tagout training)
- **Please print and place in supervisors training records.**

Any Questions?

- **Contact EHS 330-263-3663**

