

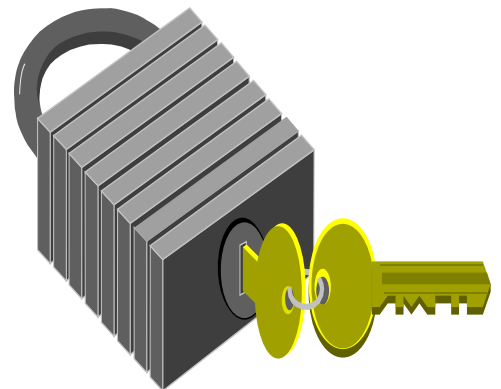
Lockout/Tagout Standard

Proper Lockout
Procedure



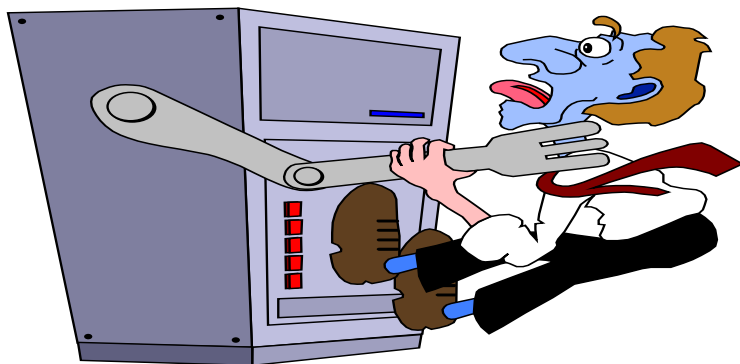
Lockout

- 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

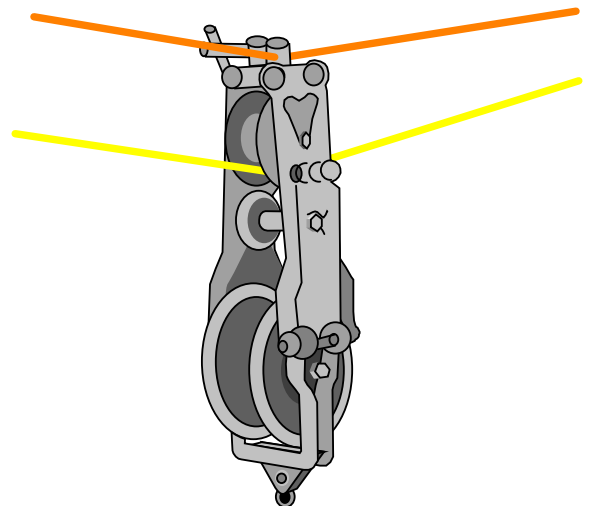
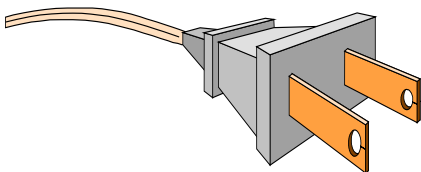
❖ Potential

❖ Pressure

- ◆ Hydraulic
- ◆ Pneumatic
- ◆ Vacuum

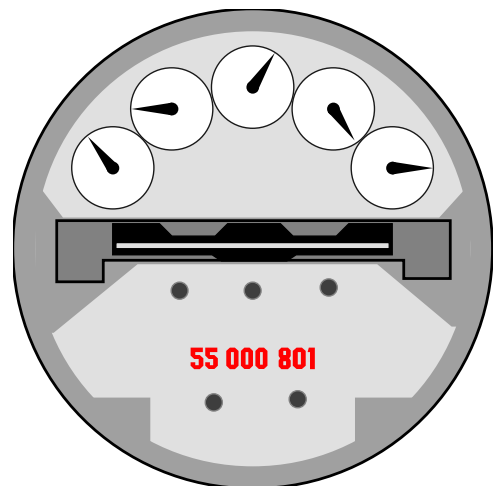
❖ Springs

❖ 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

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

Removal of Lockout

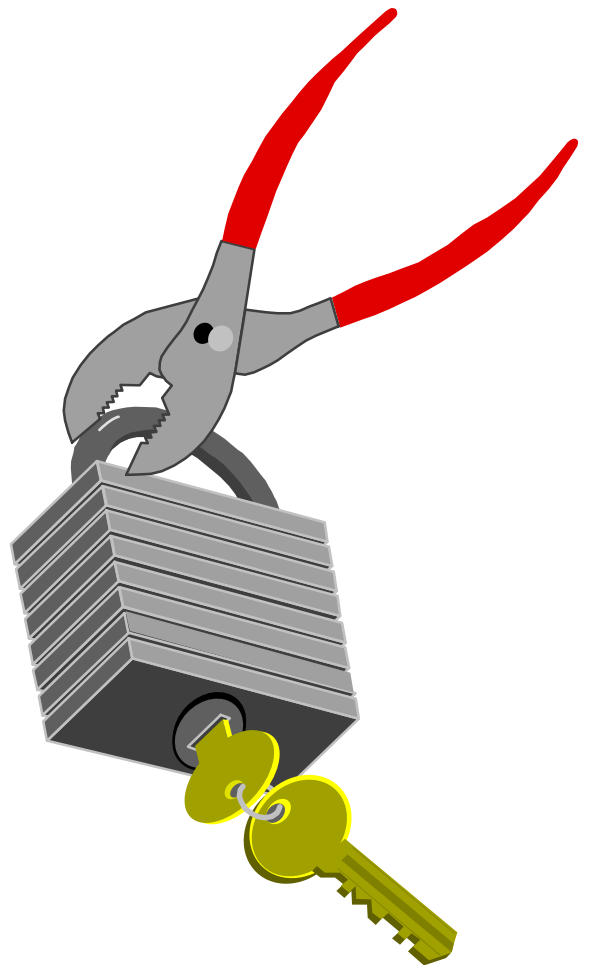
- * Ensure equipment is safe to operate
- * Safeguard all employees
- * Remove lockout/tagout devices. Except in emergencies, each device must be **removed by the person who put it on.**
- * Last person to take off lock
- * Follow checklist

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.

Any Questions?

