One Hour Safety Presentation

The main goal of the Division of Safety & Hygiene is the reduction of accidents and illnesses in the workplace. Toward this goal, the *One Hour Safety Presentation* is designed to support the delivery of a presentation to co-workers in your workplace to help them understand and promote safer and healthier work environments. It is recommended that you take the DSH Training Center course as a background for using *One Hour Safety Presentation* to train others at your workplace. Call 1-800-OHIOBWC, option 2, 2, 3, for class dates and locations.

The *One Hour Safety Presentation* contains:

- **Transparency Masters** from which films can be made to use on an overhead projector,
- **Instructor Notes** which gives the instructor suggestions and script notations to use during the presentation, and
- **Student Handouts** which can be copied for those attending the presentation.

Materials are included for a one-hour presentation on each of these topics:

- ✓ Accident Analysis
- ✓ Bloodborne Pathogens
- ✓ Developing an Ergonomics Process
- ✓ Hazard Communication
- ✓ Lockout/Tagout
- ✓ Respiratory Protection
- ✓ Violence in the Workplace

Applications used:

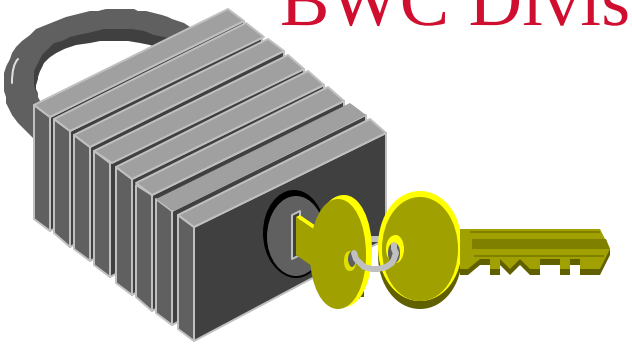
1) Text documents (ending in **.txt**) can be opened with any word processing program.
2) Microsoft PowerPoint slides (ending in **.ppt**) can be opened with the Microsoft PowerPoint program. If you do not have PowerPoint and you do have Windows 95, 98, 2000 or Windows NT operating system, you can view the PowerPoint slides by downloading a free PowerPoint Viewer from the following website: http://office.microsoft.com/downloads/default.aspx?Product=PowerPoint&Version=95|97|98|2000|2002&Type=Converter|Viewer
3) Adobe Reader document (ending in **.pdf**) contains the *One Hour Safety Presentation* in read-only format. It can be opened when you download Adobe Reader, which is available free of charge at the following website: http://www.adobe.com/products/acrobat/readstep2.html

If you have comments or questions about these materials for *One Hour Safety Presentation*, please e-mail us: OCOSHTrng@bwc.state.oh.us

Transparency Masters

Elements of a Lockout/Tagout Program

BWC Division of Safety & Hygiene



Lockout Devices

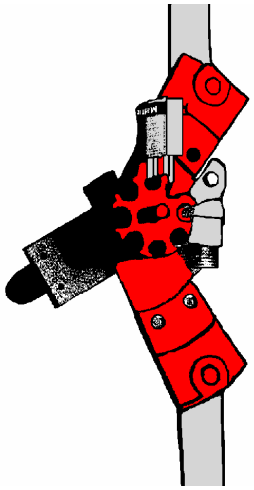
- Standardize All Locks and Tags.
- Identify The User.
- Must Be Durable.
- Used Only For Lockout/Tagout.

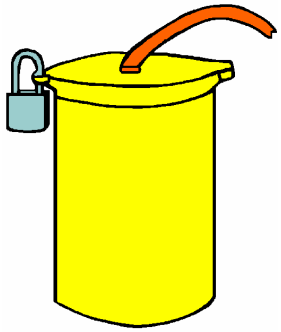
Identify Different Personnel

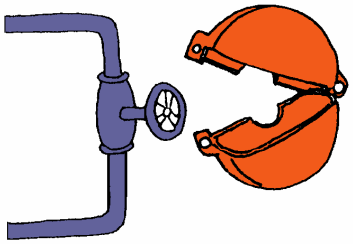
- Authorized
- Affected
- Other

Training Of Authorized Employees.

- Types of Energy.
- Magnitude Of Energy Sources
- Locations & How to Lockout Energy Sources.
- Types of Devices to Be Used.







List & Identify all Sources Of Energy

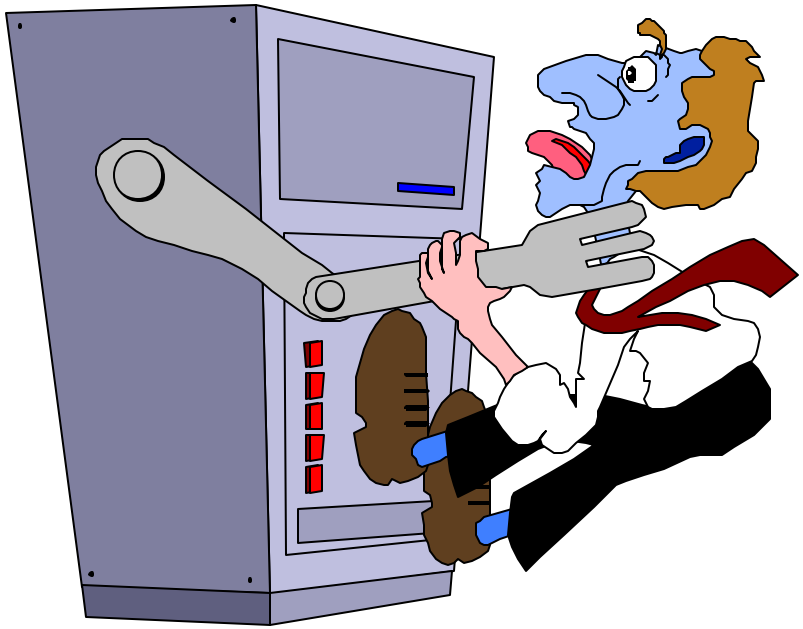
- Electrical
- Hydraulic
- Pneumatic
- Thermal
- Chemical
- Mechanical
- Cord & Plug Equip.
- Other Types

Safe Procedures for Energy Control Program

- Steps for Shutting down all energy sources.
- Steps for Placement, Removal & Transfer Of LO/TO Devices.
- Steps for testing to verify LO/TO.
- Enforcement Policy.

Procedures For Each Piece Of Equipment

- Written procedures must be documented for each piece of equipment.
- If machinery or pieces of equipment are similar, just one procedure will cover all like pieces.



Lockout / Tagout
Energy Source Identification

Machine: Compressor **Date:** 12 - 30 - 97
Location: Auto Shop **Dept.:** Maintenance
Person Identifying Sources: John Doe, Maintenance Supervisor

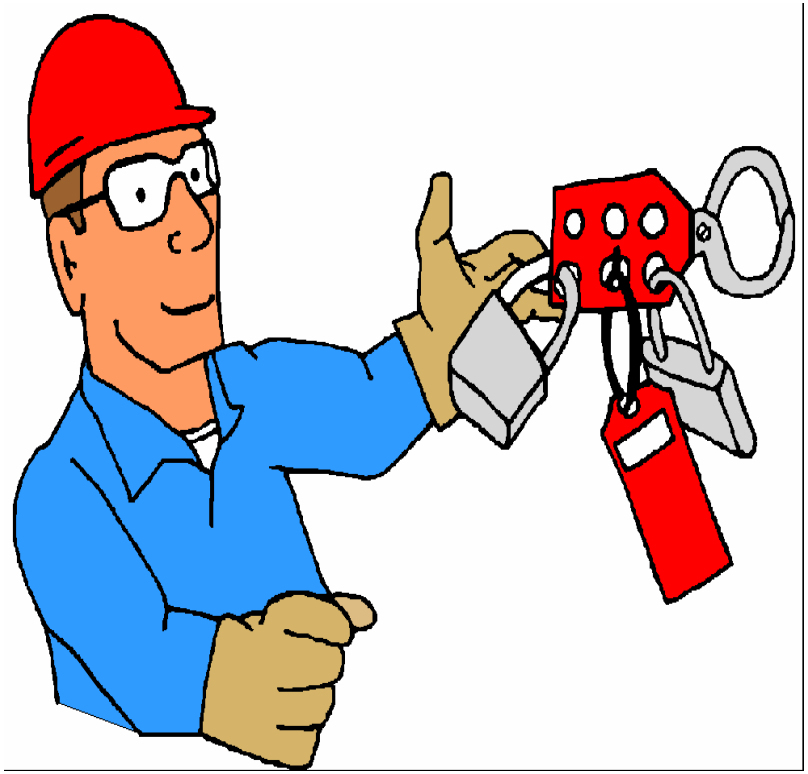
Type Of Energy	Yes	No	Method, Device or System Selected to De-energize. Quantity of Energy Source (i.e. Voltage, Velocity, PSI, etc.
Electrical	X		Close disconnect on wall behind unit & lockout. Check with tester. 480 Volts.
Hydraulic	X		Close valve on left end. Open pressure release valve below it. Allow pressure to escape(15 minutes). 150 PSI Lockout
Pneumatic (Air)	X		Shut valve on right end and open bleeder valve, lockout, wait 15 minutes for pressure to bleed down. 300 PSI
Chemical		X	
Thermal		X	
Mechanical		X	
Cord & Plug Connected		X	
Engulfment Hazard		X	
Other		X	

Training Affected & Other Employees

- Purpose Of The Energy Control Program.
- Types & How to Identify Lockout Devices.
- To Understand That They Should Not Tamper With Any Devices Used In Lockout/Tagout Procedures.

Shift & Personnel Changes

- How to transfer locks at the end of shifts.
- How to transfer locks when personnel leave.



Develop Procedures on how you will Communicate with Contractors on LO/TO.

- Who
- What
- When
- Where
- How

Group Lockout Procedures

Procedures on how you will handle more than one individual working on the same piece of equipment.

Miscellaneous Items in Your Program.

- Procedures for removal of a lock when that person is not present.
- Notifying affected employees when locks are to be applied or removed.

Annual Inspection of Your Procedures

- Date of Inspection.
- Machine or Process to review Identified.
- Names of persons involved in LO/TO.
- Name of person doing Inspection.
- Copy of Inspection kept on record.

Other Things To Consider

- When do You Retrain Personnel?
- What must you do when you identify problems?
- When do you have to make changes to your written procedures?

Instructor Notes

Initial dialogue to class:

The purpose and scope of this class can best be explained by reading the OSHA regulations (Standards - 29 CFR) Lockout and tagging of circuits - 1926.417 and Electrical - Safety Related Work Practices 1910.331.

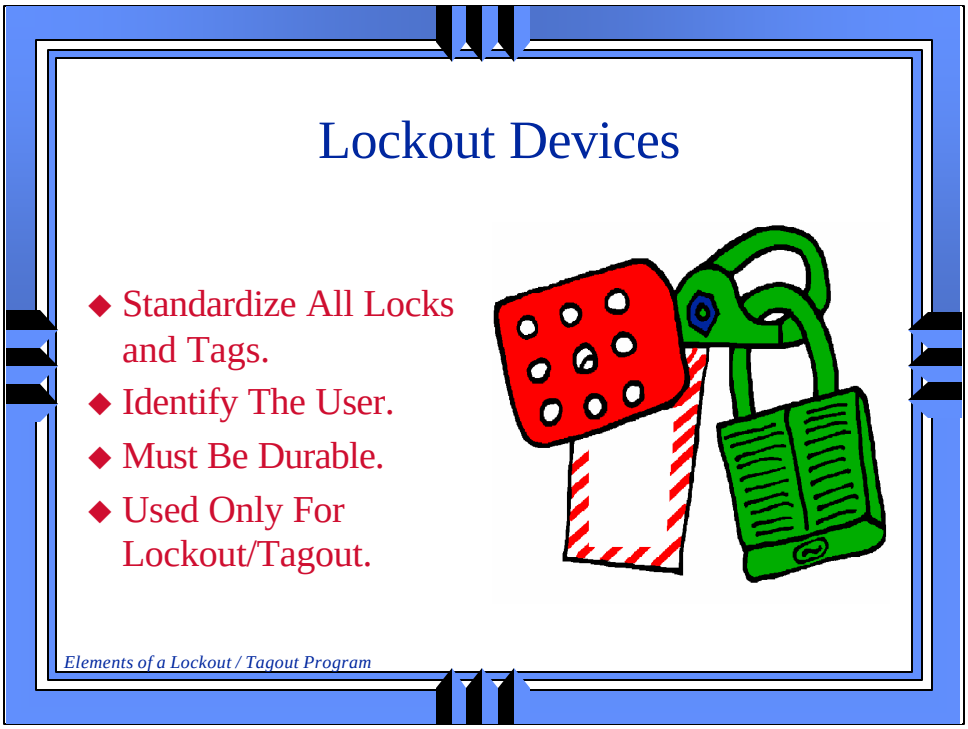
I urge you to at least read through these to better understand the value of this training that we are having today.

This training will be about the equipment we use at our company, therefore we will use specific equipment that you use everyday.

I encourage your input and will ask you to participate so I know you understand our company policy along with what we are obligated to comply with in order to have a safe work environment.

In a few moments I will need a volunteer to work through a specific example of what we are about to learn.

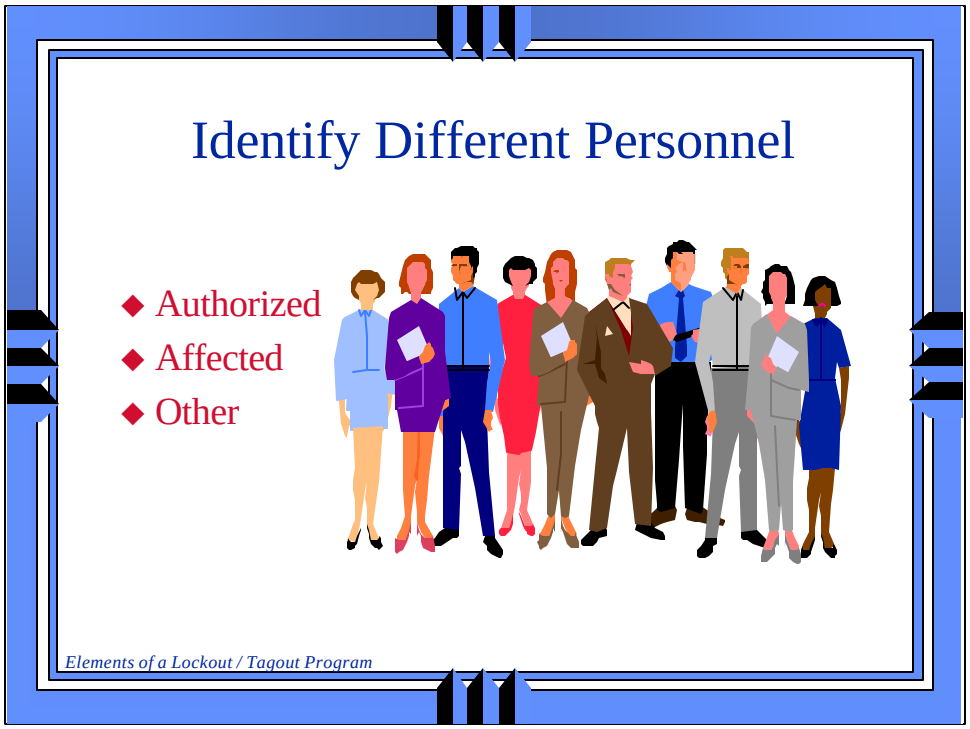
(Offer some sort of give-away/ prize to the volunteer *after* they volunteer. This will help you get participation next time you teach a class).



This would be a good time to pass around the specific devices that you use at your company.

Emphasizing the identity of the user, point out the fact of who should have the keys to these locks.

A tag by itself should have a pull strength of 50 lbs.



Authorized:

The person who is trained and responsible for these locks

Who might these folks be?

Maintenance person

Set-up person

Affected:

Who ?

Anyone

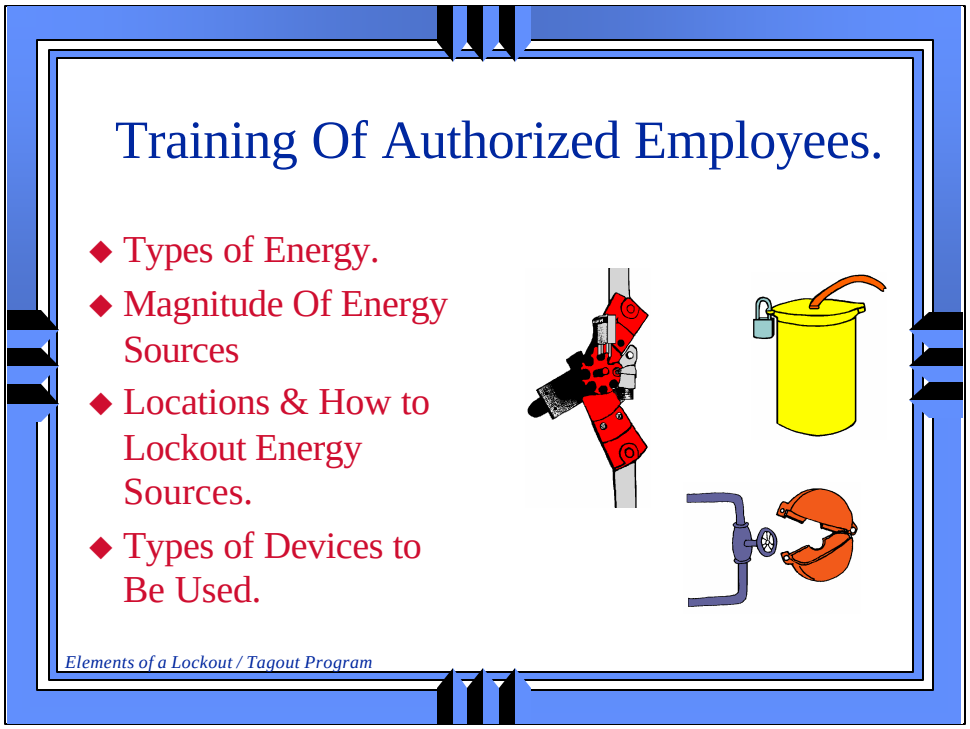
Other:

Who?

Customer

Vendor

You can refer to the frequently asked question section if you need more information.



Types of energy:

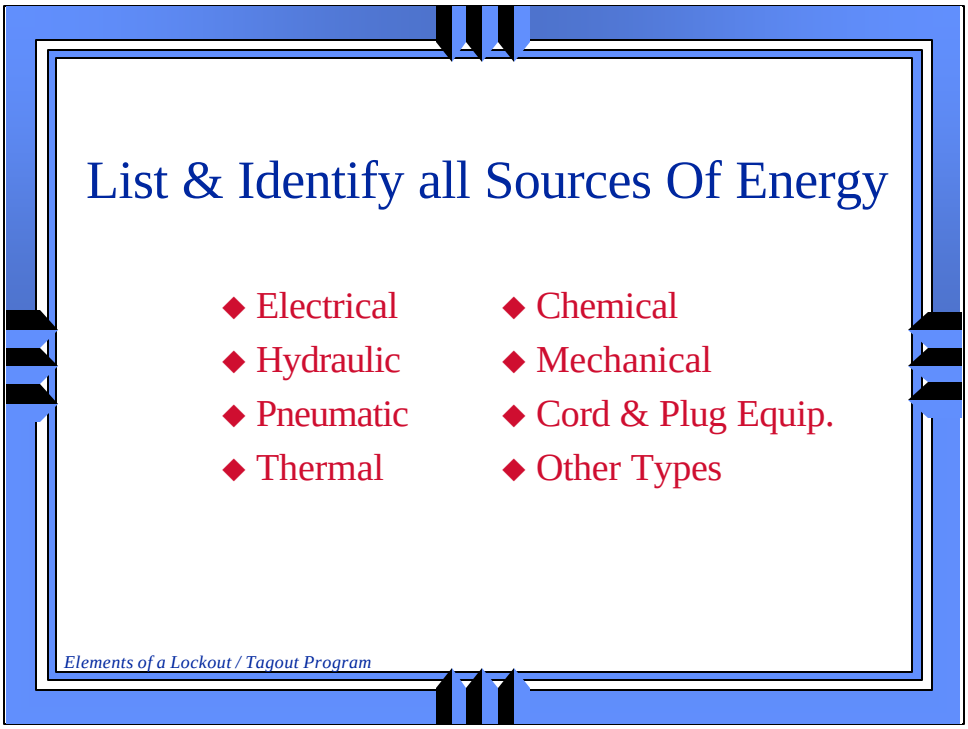
They have to be trained to know all forms of energy that can have an effect on the particular piece of equipment. (on next slide)

All Locations.

Remote sources that include control panels located in a different location other than the piece of equipment itself.

Ask yourself: “Can this be reset from any other location.?”

Show the specific lock that is used for the example piece of equipment that you are discussing.



Ask what other sources might have an effect

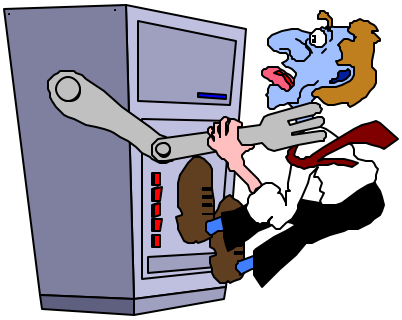
Gravity ?

Utilize the site specific equipment procedure as an example of this process.

Mention your disciplinary action or means of accountability.

Procedures For Each Piece Of Equipment

- Written procedures must be documented for each piece of equipment.
- If machinery or pieces of equipment are similar, just one procedure will cover all like pieces.



Involve the operator of the equipment

Lockout / Tagout
Energy Source Identification

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Mechanical		X	
Cord & Plug Connected		X	
Engulfment Hazard		X	
Other		X	

Elements of a Lockout / Tagout Program

You can use this as a possible handout.

Training Affected & Other Employees

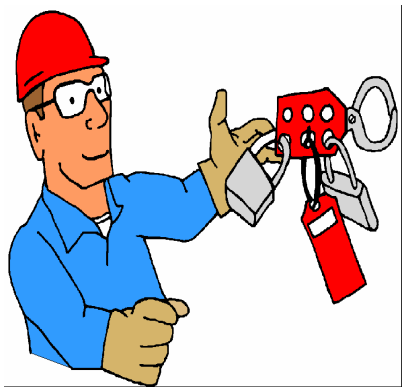
- Purpose Of The Energy Control Program.
- Types & How to Identify Lockout Devices.
- To Understand That They Should Not Tamper With Any Devices Used In Lockout/Tagout Procedures.

Authorized personal should be ready to explain any of these above items.

Review who is suppose to remove the locks and how it is done.

Shift & Personnel Changes

- How to transfer locks at the end of shifts.
- How to transfer locks when personnel leave.



Elements of a Lockout / Tagout Program

Explain your process of changing the locks upon completion of a shift and or the transfer of responsibility.

Is there transfer of responsibility ?

Develop Procedures on how you will Communicate with Contractors on LO/TO.

- Who
- What
- When
- Where
- How

Group Lockout Procedures

Procedures on how you will handle more than one individual working on the same piece of equipment.

Your Company policy

Miscellaneous Items in Your Program.

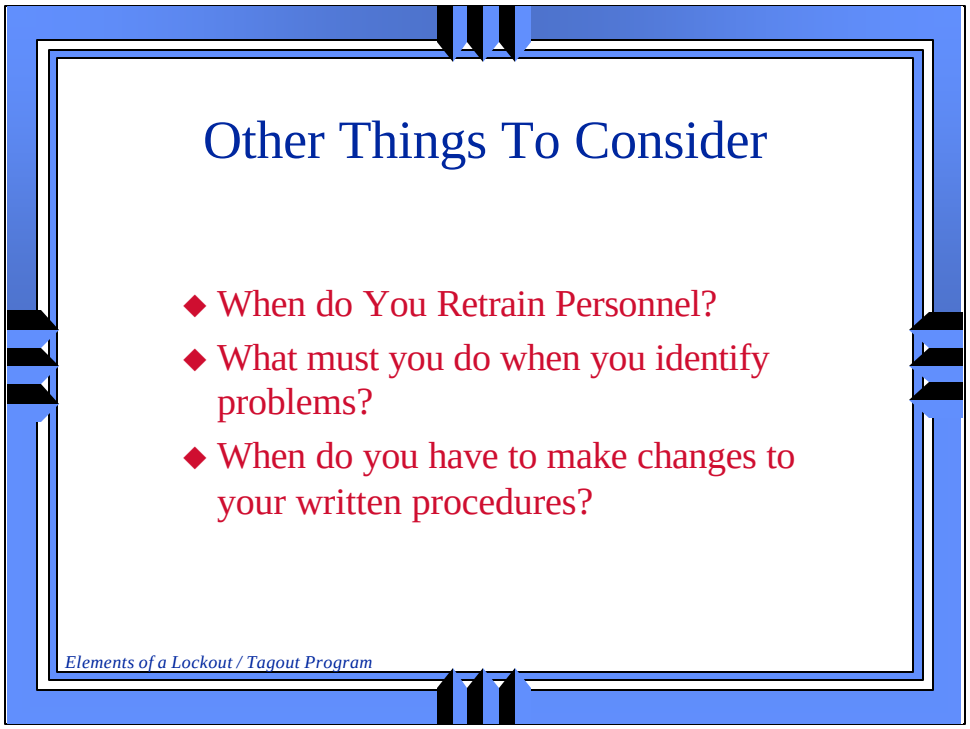
- Procedures for removal of a lock when that person is not present.
- Notifying affected employees when locks are to be applied or removed.

Your Company policy.

Annual Inspection of Your Procedures

- Date of Inspection.
- Machine or Process to review Identified.
- Names of persons involved in LO/TO.
- Name of person doing Inspection.
- Copy of Inspection kept on record.

You should use a person to inspect the equipment that is not involved in the Lockout Tagout program of the equipment.



Any time a modification to a piece of equipment is made.

Any time the process has been changed.

Frequently Asked Questions

The standard requires different levels of training for the three categories of employees; what are the differences in the training required for the three categories?

- Authorized employees must receive training on the recognition of applicable hazardous energy sources, the type and magnitude of the energy available in the workplace, and the methods and means necessary for energy isolation and control.
- Affected employees must receive training on the purpose and use of the energy control procedure.
- Other employees (those whose work activities are or may be in an area where energy control procedures may be utilized) must be instructed about the procedure and about the prohibition relating to attempts to restart or reenergize machines or equipment that are locked out or tagged out.

How often must the inspection take place?

At least annually.

Who performs the periodic inspection?

An authorized employee not involved in the energy control procedure being inspected.

What does the periodic inspection entail?

- The employer must identify any deficiencies or deviations and correct them.
  Where lockout is used, the inspector must review each authorized employee's responsibilities under the procedure with that employee (group meetings are acceptable).
- Where tagout is used, the inspector must review **both** the authorized and affected employee's responsibilities with those employees for the energy control procedure being inspected, and the additional training responsibilities of 1910.147(c)(7)(ii).
- The employer must certify that the periodic inspections have been performed.

What must the certification identify?

- Identify machine on which the procedure was utilized.
- Date of inspection.
- Identify the employees included in inspection.
- Identify person who performed the inspection.

If an energy isolating device is not capable of being locked out, can the employer use a tagout system?

Yes, if an energy isolating device is not capable of being locked out, the employer's energy control program must use a tagout system.

If an energy isolating device is capable of being locked out, must the employer use a lock out system?

Yes. Unless the employer can demonstrate that the tagout system will provide full employee protection, as described in paragraph (c)(3) of the standard.

(The employer may choose to use a tagout system as long as the requirements for additional training and periodic inspections are met.)

What procedures must be followed that, when a group is performing servicing and/or maintenance, will offer group employees the same protection that the standard provides to individual employees?

- Protection must be utilized which affords the employees a level of protection equivalent to that provided by the implementation of a personal lockout or tagout device.
- Primary responsibility for a set number of employees working under the protection of a group lockout or tagout device must be vested in a single authorized employee.
- The single authorized employee must determine the exposure status of individual group members.
- If there will be more than one crew, department, or group involved in the activity, a single authorized employee must be designated to coordinate affected workforces and to ensure continuity of protection.
- Each authorized employee must affix a personal lockout or tagout device to the machine or equipment when work begins and remove it when work is completed.

Glossary

Affected employee - An employee who performs the duties of his or her job in an area in which the energy control procedure is implemented and servicing or maintenance operations are performed. An authorized employee and an affected employee may be the same person when the affected employee's duties also involve performing maintenance or service on a machine or equipment that must be locked or a tagout system implemented. An effected employee does not perform servicing or maintenance on machines or equipment and, consequently, is not responsible for implementing the energy control procedure. An affected employee becomes an "authorized" employee whenever he or she performs servicing or maintenance functions on machines or equipment that must be locked or tagged.

Authorized employee - An employee who performs servicing or maintenance on machines and equipment. Lockout or tagout is used by these employees for their self-protection.

Capable of being locked out - An energy-isolating device is considered capable of being locked out if it meets one of the following requirements:

- It is designed with a hasp to which a lock can be attached;

- It is designed with any other integral part through which a lock can be affixed;
- It has a locking mechanism built into it; or
- It can be locked without dismantling, rebuilding, or replacing the energy isolating device or permanently altering its energy control capability.

Energized - Machines and equipment are energized when (1) they are connected to an energy source or (2) they contain residual or stored energy.

Energy-isolating device - Any mechanical device that physically prevents the transmission or release of energy. These include, but are not limited to, manually operated electrical circuit breakers, disconnect switches, line valves, and blocks.

Energy source - Any source of electrical, mechanical, hydraulic, pneumatic, chemical, thermal, or other energy.

Energy control procedure - A written document that contains those items of information an authorized employee needs to know in order to safely control hazardous energy during servicing or maintenance of machines or equipment. (A more comprehensive explanation is provided elsewhere in this booklet.)

Energy control program - A program intended to prevent the unexpected energizing or the release of stored energy in machines or equipment. The program consists of energy control procedure(s), an employee-training program, and periodic inspections.

Lockout - The placement of a lockout device on an energy-isolating device, in accordance with an established procedure, ensuring that the energy-isolating device and the equipment being controlled cannot be operated until the lockout device is removed.

Lockout device - Any device that uses positive means such as a lock, either key or combination type, to hold an energy-isolating device in a safe position, thereby preventing the energizing of machinery or equipment. When properly installed, a blank flange or bolted slip blind are considered equivalent to lockout devices.

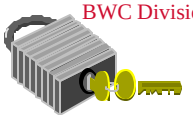
Tagout - The placement of a tagout device on energy-isolating device, in accordance with an established procedure, to indicate that the energy-isolating device and the equipment being controlled may <u>not</u> be operated until the tagout device is removed.

Tagout device - Any prominent warning device, such as tag and a means of attachment, that can be securely fastened to an energy-isolating device in accordance with an established procedure. The tag indicates that the machine or equipment to which it is attached is not to be operated until the tagout device is removed in accordance with the energy control procedure.

Student Handouts

Elements of a Lockout/Tagout Program

BWC Division of Safety & Hygiene



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Training Of Authorized Employees.

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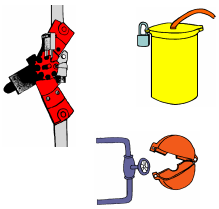

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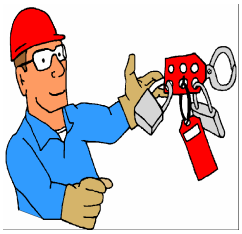

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