

TITLE: 9604 HIGH-IMPACT LOCKOUT/TAGOUT SAFETY

VIDEO PLAYING TIME: 19 MINUTES

YEAR PRODUCED: 1996

PROGRAM SYNOPSIS:

Lockout/tagout procedures are a sequence of events that are executed to control the release of unwanted hazardous energy. The lockout/tagout system provides protection for everyone in the plant; its success depends upon each individual's knowledge and understanding of locks and tags used on the job.

This program features eight accident re-creations that demonstrate the importance of following all prescribed lockout/tagout procedures. The viewer will also learn the responsibilities and safe work procedures of those who are affected by lockout/tagout as well as those who are authorized to service machines and perform lockout/tagout procedures.

SHOOTING LOCATIONS: Chemical processing plant, automobile assembly operation, smelting facility, manufacturing operation and other industrial sites

PROGRAM OBJECTIVES: After watching the videotape program, the viewer will be able to identify the following:

- The responsibilities of workers who are affected by lockout/tagout as well as the responsibilities of those who are authorized to perform lockout procedures.
- Electrical lockout, line-breaking and isolation of other forms of energy.
- The use of locks and tags, group lockout procedures and returning locked out equipment to production.

PROGRAM COMPONENTS: Videotape and leader's guide

INSTRUCTIONAL CONTENT:

BACKGROUND

- Lockout/tagout is a set of linking steps we follow to reduce equipment or process lines to a "zero energy state."
- All persons who are affected by lockout/tagout in the workplace must know these three things:
 - ❶ What a lockout/tagout means;
 - ❷ The reasons why the procedure is in process;
 - ❸ What to do and not do upon encountering a lockout/tagout device.
- If you have any doubts about whether this procedure affects you, ask your supervisor.
- While lockout/tagout procedures are easy to understand, it is important to remember that all potential energy as well as kinetic energy must be released or blocked.

AUTHORIZED WORKERS

- You must be authorized by your company to perform lockout/tagout procedures while servicing, maintaining or adjusting equipment.
- You must understand the type and magnitude of energy to be isolated and how to control it.
- Because lockout procedures vary with the type of energy, it is important to know and understand the procedure for the specific equipment or process line you intend to de-energize and lockout.
- You must know the proper sequence and steps in performing the lockout procedure.
- You must understand the hazards of the machine and the energy related to the equipment you intend to service.

LOCKS AND TAGS

- The locks used in the lockout/tagout procedure must be authorized by the company.
- The locks must have the appropriate identification and there must be only one key in circulation.
- If a lock and key are issued to you, they are your responsibility; they serve as your assurance that a locked out power source stays locked out.
- Tags are used in conjunction with locks and must be sturdy enough to withstand the elements that are present.
- They must bear warning signs such as "do not operate" and other appropriate information, including the name of the person placing the lock and tag.

ELECTRICAL LOCKOUT

- After stopping the machine or process line, de-energize all electrical circuits, lock and tag the electrical disconnects and then try to start the machine to verify that the voltage has been removed.
- Be sure to return the power switch to the “off” position or another position that indicates the machine is inoperative after the test.
- Remember that on-off controls and interlock switches are not substitutes for energy controls.
- You must also discharge any stored electrical energy such as that contained in capacitors.
- During all electrical operations, verify your actions with a meter that is rated for the service and authorized by the company.
- Don’t forget to check the surrounding circuits to verify your findings and your meter.

LINE-BREAKING

- Lockout procedures are an integral part of chemical, hydraulic and pneumatic line-breaking; it’s the only safe way to bring a process line to a zero energy state.
- Secure a line-breaking permit and check the lockout procedure before working with valves.
- Any valves placed in open or closed positions must be locked and tagged.
- Be sure to bleed all residual energy appropriately. Leaving a line or a reservoir under pressure can lead to an accident.

RETURNING EQUIPMENT TO PRODUCTION

- When the job is finished, make sure all tools and excess materials are cleared from machines and the immediate area.
- Alert everyone concerned that the machine is about to be re-energized.
- Make sure the “off-on” or “run” controls are in the “off” or “stop” position and all the guards have been replaced.
- Reverse the lockout process as prescribed in the written plan; this usually proceeds from the source of energy to its destination.
- After testing to verify that the repair was successful, inform concerned persons that the machine or process line is back in service.

GROUP LOCKOUT/TAGOUT PROCEDURES

- Situations where groups are working together are often complex and require an authorized person to coordinate the job.
- The authorized person is responsible for the group’s safety and usually maintains a “key lock-box” or other multiple lockout device.
- Each worker places his lock and tag on this control unit and it will contain the keys to all the lockout devices on the machine or process line.
- After the job is completed, each person that placed a lock on the control device removes it. Only when all locks have been removed is the master key available to unlock the energy sources.
- During shift changes, the on-coming shift applies new locks and tags before the out-going shift removes theirs to ensure a continual lockout procedure.
- When working with off-site contractors, make sure you understand the company’s lockout/tagout procedures and what all the locks and tags mean.
- There may be different styles and types of equipment; ask your supervisor before the job starts if you have any questions.

LOCKOUT/TAGOUT SAFETY TIPS

- Always check the written procedure if you have any doubt about a job; if a power source can be locked out, it must be locked out.
- Make sure you know the sequence of events necessary to de-energize the parts within the machine or process line.
- Remember that lockout involves all energy sources, not just electricity.
- Be aware of objects and equipment with stored energy such as capacitors, springs, counterweights, rams and objects suspended in air.
- If a machine’s function needs to be checked while work is in process, the lockout procedure must be reversed with each person removing his own lock and tag.
- After the tests to check the function are performed, the energy sources must be de-energized again and the lockout process repeated.
- Don’t take short cuts in an effort to do a good job or try to get the machine on-line sooner. Always follow all necessary lockout procedures.