



Training Solutions, Delivered!

HIGH-IMPACT LOCKOUT/TAGOUT

Non-Graphic

**Leader's Guide, Fact Sheet
& Quiz**

Item Number: 1432
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This easy-to-use Leader's Guide is provided to assist in conducting a successful presentation.

PREPARING FOR THE MEETING

Here are a few suggestions for using this program:

- a) Review the contents of the Fact Sheet that immediately follows this page to familiarize yourself with the program topic and the training points discussed in the program. The Fact Sheet also includes a list of Program Objectives that details the information that participants should learn from watching the program.
- b) If required by your organization, make an attendance record to be signed by each participant to document the training to be conducted.
- c) Prepare the area and equipment to be used for the training. Make sure the watching environment is comfortable and free from outside distractions. Also, ensure that participants can see and hear the TV screen or computer monitor without obstructions.
- d) Make copies of the Review Quiz included at the end of this Leader's Guide to be completed by participants at the conclusion of the presentation. Be aware that the page containing the answers to the quiz comes before the quiz itself, which is on the final page.

CONDUCTING THE PRESENTATION

- a) Begin the meeting by welcoming the participants. Introduce yourself and give each person an opportunity to become acquainted if there are new people joining the training session.
- b) Introduce the program by its title and explain to participants what they are expected to learn as stated in the Program Objectives of the Fact Sheet.
- c) Play the program without interruption. Upon completion, lead discussions about your organization's specific policies regarding the subject matter. Make sure to note any unique hazards associated with the program's topic that participants may encounter while performing their job duties at your facility.
- d) Hand out copies of the review quiz to all of the participants and make sure each one completes it before concluding the training session.

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FACT SHEET

LENGTH: 19 MINUTES

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.

PROGRAM OBJECTIVES:

After watching the video, 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.

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:
 - 1) What a lockout/tagout means;
 - 2) The reasons why the procedure is in process;
 - 3) 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

the 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.

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ANSWERS TO THE REVIEW QUIZ

1. a

2. c

3. d

4. c

5. b

6. b

7. a

8. d

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REVIEW QUIZ

The following questions are provided to determine how well you understand the information presented in this program.

Name _____ Date _____

1. To perform lockout/tagout procedures, you must be trained and authorized.
 - a. True
 - b. False

2. The worker that was crushed by the sectional door while trying to pry it loose failed to account for _____.
 - a. The door's electrical power source
 - b. His co-worker's whereabouts
 - c. The force of gravity

3. When you are issued a key for a lock to be used in a lockout procedure, _____ will also have a key for your lock.
 - a. Your supervisor
 - b. The plant manager
 - c. All workers involved in the lockout process
 - D. No one

4. The workers attempting to replace the leaking steam jumpers in the chemical unloading area failed to _____.
 - a. Obtain a line breaking permit
 - b. Check the company lockout plan
 - c. Both answers a and b
 - d. Neither answer a or b

5. Situations where groups are affected by lockout/tagout require _____ to coordinate the job.
 - a. Supervisors
 - b. Authorized personnel
 - c. Affected personnel

6. During shift changes, the oncoming shift applies their locks _____ the outgoing shift removes theirs.
 - a. At the same time
 - b. Before
 - c. After

7. When returning locked out equipment back to production, reverse the lockout process according to _____.
 - a. The company's written plan
 - b. Your supervisor
 - c. The equipment operator's manual

8. Which of the following should all persons affected by lockout/tagout know?
 - a. What lockout/tagout means
 - b. The reasons why the procedure is in progress
 - c. What to do and not to do upon encountering a lockout/tagout device
 - d. All of the above