LEADER’S GUIDE

1029-LDG-E

LOCKOUT/TAGOUT: YOU HOLD THE KEY

Quality Safety and Health Products, for Today...and Tomorrow
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INTRODUCTION

Ensuring that your company’s employees take personal responsibility for following proper lockout/tagout procedures can make the difference between a safe workplace and one where accidents, injuries, and even death are more likely to occur.

In fact, OSHA, the Occupational Safety and Health Administration, estimates that lockout/tagout compliance prevents approximately 122 deaths and 60,000 injuries each year. On the other hand, failure to comply with OSHA’s lockout/tagout standard can cost a company millions of dollars in fines—and result in plant shutdowns and job loss for both management and workers. So ensuring compliance with OSHA’s lockout/tagout standard protects both lives and livelihoods.

This video meeting session will help you inform your organization’s employees about this important standard, its purpose and benefits, and the essential role they all must personally play in complying with the standard—whether they are “authorized employees” or “affected employees” as defined by the standard.

PREPARATION

Your organization’s employees will get the most out of this training session if you take the time to prepare for the meeting. Here’s a suggested plan:

- **Preview the video**, noting any specific information you’d like to emphasize during the discussion.

- **Review this Leader’s Guide**. In addition to the video’s main points, this guide contains questions, exercises and a reproducible quiz that will help you guide your group’s discussion and activities during the training session.

- **Consider what department- or company-specific safety information** employees should know. Write this information in the appropriate spaces throughout this Leader’s Guide, and be prepared to discuss these important points during the meeting.
• Make appropriate preparations for a lockout/tagout demonstration during your training session. You may want to conclude your session with an actual demonstration of proper lockout/tagout procedures on one of your organization’s machines. Therefore, before your session, take any necessary steps to select the exact piece of equipment for the demonstration, obtain written lockout/tagout procedures for that particular machine, procure proper lockout/tagout devices, and make necessary logistical arrangements with appropriate managers and employees (timing, entering the specific work area with meeting attendees safely, etc.).

• Make sure that you’re prepared for your meeting session by quickly going through the following materials checklist:
  - VCR
  - Video entitled “Lockout/Tagout: You Hold the Key”
  - Flip chart and makers
  - Copies of OSHA’s “Control of Hazardous Energy” (Lockout/Tagout) Standard
  - Copies of your organization’s written energy control procedures
  - Copies of any other specific policies and guidelines that employees should have on hand
  - Copies of the Lockout/Tagout: You Hold the Key Quiz (which appears on pages 13 and 14 of this Leader’s Guide)
  - Company lockout/tagout devices
INTRODUCE THE VIDEO

You may choose to begin your video meeting session by reading or paraphrasing the following speech. Or you may choose to use an opening speech that you’ve created. One way or the other, it’s important to open your video session with some kind of introduction. This way, employees will know what to expect from the video and the rest of the session—and will understand and appreciate the session’s purpose.

“Lockout/tagout”: It’s a commonly used term for OSHA’s “Control of Hazardous Energy” Standard. But not matter what you call it, it’s a lifesaver. Compliance with lockout/tagout prevents approximately 122 deaths and 60,000 injuries ever year. And by following the regulations, organizations prevent millions of dollars in fines—fines that could lead to plant shutdowns and the loss of countless jobs.

What exactly does OSHA’s lockout/tagout standard require? Are you an “authorized employee” or an “affected employee” as defined by the standard—and what does that mean for you concerning your personal role in ensuring compliance? The video we’re about to see will answer these and other important questions concerning the standard. Afterward, we’ll review the video’s points and discuss the steps we all must take to comply with OSHA’s lockout/tagout standard in our organization.
LEAD THE DISCUSSION

Once you’ve read your introductory speech and shown meeting attendees the video, you’re ready to begin the discussion. The purpose of this discussion is to reinforce the key issues dealt with in the video, to review important areas of OSHA’s lockout/tagout standard, and to discuss the steps your organization’s employees must take to ensure compliance. During your session, be sure to encourage all attendees to participate in the discussion. You may choose to write on your flip chart any points that you consider particularly important for your organization’s workers.

NOTE: At the beginning of the discussion session, you may wish to distribute copies of OSHA’s “Control of Hazardous Energy (Lockout/Tagout)” Standard to employees. Or you simply remind them where your company and/or various departments keep copies of OSHA’s standard so that it is accessible to all employees.

- What is the essential purpose of following proper lockout/tagout procedures?
  
  Answer: To prevent the unexpected start-up of moving machine parts or the release of stored energy that could cause injury or even death.

- OSHA’s lockout/tagout standard applies during the routine servicing and maintenance of machines and equipment. It also applies during production if any servicing activity takes place. What work tasks are considered servicing or maintenance activities—and are therefore covered under this essential OSHA standard?

  Answers: Servicing and maintenance activities may include…
  - Installing…
  - Setting up…
  - Adjusting…
  - Repairing…
  - Inspecting…
  - Modifying…
  - Cleaning…
- Lubricating...
- Unjamming...
- Or changing tools on... machinery or equipment.

- If certain circumstances will occur during service, maintenance, or repair operations, the workers performing these operations are covered by lockout/tagout. What are these circumstances?

  **Answers:**
  - When workers remove or bypass machine guards or other safety devices, resulting in exposure to hazards.
  - When employees make—or are close to establishing—bodily contact with the equipment’s point of operation.
  - When the workers’ bodies are in a danger zone associated with a machine operating cycle.

- What are the basic purposes of locks and tags?

  **Answer:** Locks are used to block the flow of energy from a power source to the machinery or equipment. Tags are warnings to anyone passing through the work area not turn the power on.

- According to OSHA’s lockout/tagout standard, workers are either “authorized employees” or “affected employees.” How does the standard define “authorized employees”—and what are their responsibilities?

  **Answers:**
  - “Authorized employees” are those who service or maintain machines and equipment and are actually authorized to use locks and tags.
  - Authorized employees need to know when lockout/tagout must be performed, the exact procedures for conducting lockout/tagout, and the proper steps for safely restarting equipment and machinery after service or maintenance has been completed.
• How does the standard define an “affected employee”?

**Answer:** “Affected employees” operate or use equipment that may be locked and tagged out. Or their job requires them to work in areas that contain machinery or equipment that may be locked and tagged out.

• Since affected employees don’t actually have to perform lockout/tagout procedures, why do they have to understand the standard and our company’s procedures for complying with it?

**Answer:** If affected employees aren’t familiar with the standard or our company’s lockout/tagout procedures, they may mistakenly restore energy to equipment, unaware that it’s being maintained or serviced. The result could be a serious accident or injury.

• OSHA’s lockout/tagout standard is actually called the “Control of Hazardous Energy” Standard. How would you define “hazardous energy”?

**Answer:** “Hazardous energy” is unexpected or stored energy that could cause injury to employees while they are repairing, servicing, or maintaining equipment or machinery.

• What are the kinds of energy that can in fact be hazardous?

**Answers:** All types of energy can be hazardous if they aren’t controlled, such as:
- Electrical energy
- Mechanical energy
- Chemical energy (i.e. a gas or liquid chemical)
- Hydraulic energy (i.e. pressurized fluid)
- Pneumatic energy (i.e. compressed air)
- Thermal energy (i.e. steam)
• An employee who services or maintains equipment—that is, an authorized employee—must know all the equipment’s energy sources: both direct and hidden. Why does having this knowledge play an essential in ensuring proper lockout/tagout?

**Answers:** A single piece of machinery or equipment may be powered by more than one type of energy. Properly performing lockout/tagout requires:
- Controlling and isolating all the equipment’s sources of energy
- Releasing any stored energy so that the machine is at a zero state of energy

• **Exercise: Before** your session, use the following space to list those types of machinery and equipment that organization’s employees regularly use. Then describe each piece of equipment’s direct and hidden energy source(s). **During** the session, ask the following:

**Questions:**
- What are the types of machinery and equipment you commonly use on the job? (**NOTE:** As employees give their responses, jot down their answers on your flip chart.)
- Now, can you name the direct and hidden energy sources for these pieces of equipment?

**Equipment/Direct Energy Source/Hidden Energy Source**

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Answers: If any incorrect responses are given, or if employees don’t always know their machinery’s direct and/or hidden energy sources, first provide the correct information. Then stress the importance that knowing this information plays in…

- Complying with OSHA’s lockout/tagout standard as either an authorized or an affected employee
- Preventing the unexpected start-up of moving machine parts or the release of stored energy that could cause injury or even death to employees

- The exact procedures that must be followed to control and isolate energy sources and to release stored energy depend upon the machine in question. We’ll discuss these specific procedures later. However, the general concepts surrounding lockout and tagout are the same. First, what exactly is “lockout,” and what is its purpose?

Answer: “Lockout” essentially means installing a lock to physically prevent the unexpected start-up of machinery or the release of stored energy while the machine is being serviced or maintained.

- Where is a lock usually placed?

Answer: A lock is typically placed on an energy-isolating device, such as a circuit breaker, shut-off switch, or valve.

- What exactly is “tagout,” and what is its purpose?

Answer: “Tagout” means putting a label or tag on that energy-isolating device to warn other employees that the equipment or machine must not be operated.

- Is it ever appropriate to use tags by themselves?

Answer: The best means of protection is to use both locks and tags. However, because it may be physically impossible to lock out certain pieces of equipment, a tag may be used by itself in such situations. But remember: although tags can notify other employees about possible dangers, they are not as effective as lockout devices.
Locks that are used during lockout/tagout procedures are usually the key type. They can also be used with a variety of lockout devices. What are some appropriate lockout devices that might be used during this procedure?

**Answers:**
- Hasps
- Chains
- Gate valves
- Plug lockout devices
- Other:

Briefly show and discuss any specific locks and lockout devices that your organization’s employees should use with certain pieces of equipment or machinery. Review any company guidelines and policies concerning the use of locks and lockout devices. (Use the space below to help you prepare notes for this part of your discussion.)
• OSHA’s standard has several requirements for tags and tagout devices. What are they?

**Answer:** Tags and tagout devices must...
- Be standardized for content and format.
- Have a place for the authorized employee’s name.
- Be legible and understandable by all employees.
- Be durable and able to withstand environmental conditions.
- Be able to be securely attached to the equipment or machinery in question.
- Include a clear and conspicuous warning.

• What are some examples of the types of warnings that might be included on tags?

**Answers:**
- Do not open.
- Do not start.
- Do not energize.
- Do not operate.

• **Briefly show and discuss** the specific tags and tagout devices that your organization’s employees should use with certain pieces of equipment or machinery. Review any company guidelines and policies concerning the use of such tags and devices. (Use the space below to help you prepare notes for this part of your discussion.)

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
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• Who within the company should have locks and tags?

**Answer:** Authorized employees will have their own lock and tag for the equipment they service or maintain.

• OSHA’s standard requires six basic steps that must form the basis of any company’s lockout/tagout procedures. Let’s quickly review them one by one.

1. What is the first general step that an authorized employee must take?
   **Answer:** Prepare for shutdown by notifying affected employees that lockout/tagout is about to occur and which equipment will be involved.

2. What’s the second step that authorized employees must follow?
   **Answer:** Actually shut down the machine by using the normal stopping or run-down procedures for that piece of equipment.

3. The authorized employee must then isolate the machine or equipment from all its energy sources. What are some examples of what this third step might involve?
   **Answers:**
   - Turning off the operating…
   - Switch
   - Circuit
   - Valve

4. What must the authorized employee do next?
   **Answer:** Apply appropriate lockout/tagout devices to the machine’s or equipment’s energy-isolating devices.
What are some examples of what this step might involve?

**Answers:**
- Placing a padlock through holes so that the “on/off” switch handle cannot be moved
- Putting a lockout device on a circuit breaker to keep it in an “off” position

5. The fifth step entails safely releasing all potentially hazardous stored or residual energy. In other words, it basically consists of ensuring that the machinery or equipment is in a zero state of energy. The specific steps to follow depend upon what factors?

**Answers:**
- The type(s) of energy involved
- How the energy is stored

Again, can you give some examples of how you might accomplish this?

**Answers:**
- Return springs to a normal position.
- Bleed down hydraulic systems.
- Discharge capacitors.
- Release built-up pressure.
- Ground circuits.

6. The authorized employee must follow one more step to properly perform OSHA’s required lockout/tagout procedures. What is this sixth step?

**Answer:** Verify that the equipment cannot be turned on before starting necessary service, maintenance or repairs.
• How can the authorized employee fulfill this step to ensure that such steps won’t activate the equipment?

   **Answers:**
   - Try to put the switch back to the “on” position.
   - Press the start button.
   - [Blank]
   - [Blank]

• Remember: Safe start-ups are just as important as safe shutdowns. Therefore, what steps should authorized employees follow before they remove lockout/tagout devices and restart and test the equipment?

   **Answers:**
   - Ensure that the equipment components are operationally intact, that lines have been reconnected, and that all safeguards are reinstalled or reconnected.
   - Notify affected employees that lockout/tagout devices are going to be removed.
   - Ensure that affected employees are safely positioned away from the reach of moving machine parts.
   - Check to make sure that no tools or materials are in the path of moving parts.
   - Make sure that all switches, valves and energy controls are still in the “off” position.
   - Remove lockout/tagout devices.
   - Test equipment to be sure of safe operation.

• **Review your organization’s written energy control procedures.** (OSHA’s lockout/tagout standard requires that your organization’s Energy Control Program include such written energy control procedures.) You may wish to distribute copies of the procedures to employees at this time, should they not yet have a copy or not have the most current draft. Use your company’s written procedures as a guide to help you review the following procedures with employees during this section of the discussion.
Your company has different lockout/tagout procedures for each type of machinery and equipment used by workers. Review the detailed lockout/tagout procedures that authorized employees must follow for specific types of machinery before they perform repairs, service or maintenance. (If necessary, use the following chart to help you prepare notes for this part of your discussion. Feel free to photocopy this chart if you’d like to use it as a template to summarize specific lockout/tagout procedures for different types of machinery.)

Type of Equipment: __________________________________________________________
________________________________________________________________________

Location(s) of Equipment: __________________________________________________
________________________________________________________________________
________________________________________________________________________

Direct Energy Source(s): ____________________________________________________
________________________________________________________________________
________________________________________________________________________

Hidden Energy Source(s): __________________________________________________
________________________________________________________________________
________________________________________________________________________

Required Lock, Tag and Devices: _____________________________________________
________________________________________________________________________
________________________________________________________________________

Specific Lockout/Tagout Procedures: _________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
• **Review** your company’s procedures concerning the safe placement, removal, and transfer of lockout/tagout devices, and who has the responsibility for them. (If necessary, use the space below to help you prepare notes for this part of your discussion.)

• **Review** your company’s policy concerning the requirements for testing to determine the effectiveness of locks, tags, and devices. (If necessary, use the space below to help you prepare notes for this part of your discussion.)

• **Review** your company’s policy concerning the steps authorized employees must follow to notify affected employees before devices are applied—and after they are removed from the equipment. (If necessary, use the following space to help you prepare notes for this part of your discussion.)
To ensure true compliance with OSHA’s lockout/tagout standard, everyone must know what to do in all situations—including unexpected ones. For example, what steps should affected employees follow if an unexpected equipment stoppage occurs?

**Answers:**
- If you are not the authorized employee, don’t try to fix the problem yourself.
- Contact the appropriate person to unjam the machine, lubricate it, or make the necessary repair.
- *Use the space below to indicate any company-specific procedures your employees must follow in such a situation:*

**CONDUCT THE QUIZ**

*At this time, distribute copies of this guide’s quiz to all meeting attendees. The quiz can be found on pages 13 and 14.*

- Explain that the purpose of the quiz is to reinforce the important information meeting attendees have learned during your safety meeting.
- Allow approximately 5 minutes for them to take the quiz.
- Read the answers to the quiz.
- Ask employees if they have any questions.
- Answer any questions by referring to and reinforcing the appropriate information in the video, this meeting guide, and your company’s energy control procedures.
Please note:
- Permission to duplicate the quiz in this guide is given to you as a purchaser of this program.
- You may want to use meeting attendees’ completed quizzes to help satisfy OSHA’s requirements for documentation of training. After you have reviewed the appropriate answers, collect the quizzes and keep them on record. You may also be required to provide proof of training during an OSHA inspection.

CONDUCT THE DEMONSTRATION

You may wish to conclude your discussion session with a demonstration of appropriate, company-specific lockout/tagout procedures on one of your organization’s machines.

- Explain to meeting attendees that such a demonstration will now take place.
- Bring meeting attendees to the specific machine that was selected for the demonstration, following any logistical arrangements you’ve made before your meeting session.
- Whether you or another manager or supervisor is performing the demonstration, ensure that these steps are followed:
  - All the equipment’s direct and hidden energy sources are discussed.
  - Any lock, tag, or device that is being used is shown and explained.
  - All specific lockout/tagout steps are explained as they are being performed.
Use the following chart to help you prepare for the demonstration.

Date and Time of Demonstration: ________________________________

Trainer: ______________________________________________________

Involved Personnel (if applicable): ______________________________

Logistics (i.e. specific work area; safe, orderly entry into work area):

________________________________________________________________

Exact Equipment Selected for Demonstration: _______________________

________________________________________________________________

Direct Energy Source(s): _________________________________________

________________________________________________________________

Hidden Energy Source(s): _________________________________________

________________________________________________________________

Required Lock, Tag, and Devices: _________________________________

________________________________________________________________

Specific Lockout/Tagout Procedures: ______________________________

________________________________________________________________
CONCLUDING SPEECH

After the lockout/tagout demonstration, you may choose to conclude your session by reading or paraphrasing the following speech. Or you may choose to use a concluding speech that you’ve created.

Thank you for your interest and participation today. In conclusion, I’d simply like to say this: Always remember OSHA’s six basic steps to lockout/tagout, our organization’s specific energy control procedures, and the essential role you all play in ensuring compliance as authorized or affected employees. After all, by fulfilling our responsibilities under OSHA’s lockout/tagout standard, we’re preventing accidents and injuries, protecting ourselves and our co-workers, and making our workplace safer for everyone.
QUIZ

Employee Name: ____________________________________________

Signature: __________________________ Date: ________________

ID Number: ___________________ Department: __________________

Trainer: __________________________

Signature: __________________________

1. Lockout means
   A. placing a notice on the power source to warn co-workers and others not to turn the power on
   B. blocking the flow of energy from the power source to the equipment.
   C. making sure no one can enter your work area.

2. The information on a tag might include the name of the worker who put it there, the date and time the work began, and the type of work being performed.
   _____ True
   _____ False

3. Lockout/tagout rules must be followed
   A. whenever you clean, repair, or service a machine.
   B. only when you’re on the job.
   C. if you feel they are necessary.

4. If the circumstances warrant it, you can rely on a co-worker’s lock while you’re doing routine maintenance on a machine.
   _____ True
   _____ False

5. The first step in lockout/tagout is to
   A. tag out at the disconnect point.
   B. turn off the equipment and disconnect the energy source.
   C. lock out energy sources.
6. To lock out energy sources safely,
   A. pull the fuse or flip the circuit breaker.
   B. close all valves completely and turn off all switches.
   C. make it impossible for the flow of energy to be reestablished without your knowledge by attaching a lockout/tagout device.

7. Releasing residual energy may require you to discharge capacitors, ground circuits, bleed lines, or release built-up pressure.
   ______ True
   ______ False

8. Once you’ve released residual electricity from a machine, it’s okay to start your repairs or maintenance.
   ______ True
   ______ False

9. If you come across a closed valve or switch that has been turned off but doesn’t have a lock, you should
   A. find out why the source of energy has been turned off before you restore power.
   B. assume that it’s safe to turn the power on.
   C. ask those in the immediate area if it’s okay to turn the power on.

10. When you’ve completed work on a machine and you’ve removed your lock and tag, you can immediately start the machine.
    ______ True
    ______ False
ANSWER KEY

1. B.
2. True
3. A.
4. False
5. B.
6. C.
7. True
8. False
9. A.
10. False