

## Lock Out Hazardous Energy

Just because a piece of equipment is standing silent and motionless doesn't mean it's safe. What you don't see or hear could kill or maim you.

You must take steps to prevent equipment from becoming energized while it is being worked on. The energy can be pneumatic, electrical, mechanical, hydraulic, chemical or thermal. There can be other sources as well — gravity, for example.

The best way to prevent release of hazardous energy is with a lockout/tagout procedure. Machines and equipment might be connected directly to an energy source or they might contain "stored energy." This energy waiting to be released can be electrical, such as in generators, hydraulic or mechanical.

Employees doing service or maintenance must be trained to ensure they know, understand and follow a written procedure for controlling hazardous energy.

### That procedure should include:

- Use of lockout devices to render the machinery or equipment inoperable or to isolate an energy source.
- Use of tags or other warning devices to indicate that the equipment being controlled must not be used until the tagout device is removed.
- An effective tagout program for machines or equipment that are not capable of being locked out. Tagout should be used instead of lockout devices only if it provides protection equal to that of the lockout program.

Only those lockout/tagout devices that are authorized for a particular piece of machinery should be used. The lockout/tagout should be

done only by authorized personnel, who should be identified on the devices.

### An energy-isolating device is considered capable of being locked out if it:

- Is designed with a hasp or other means by which a lock can be attached
- Has a locking mechanism built into it
- Can be locked without dismantling, rebuilding or replacing the energy-isolating device or permanently altering its energy control capability

### An energy-isolating device is one that physically prevents the transmission or release of energy. It could be:

- A manually-operated electrical circuit breaker
- A disconnect switch
- A manually-operated switch that can disconnect the conductors of a circuit from all underground supply conductors
- A line valves
- Any similar device that can block or isolate energy. (Push buttons, selector switches and other control circuit-type devices are not energy-isolating devices.)

### CONCLUSION

*Conducting a lockout procedure takes training, supervision and documentation. Make sure you know what you are doing if you are assigned to do a lockout.*

**TEST YOUR KNOWLEDGE**

1. If equipment is silent and motionless, it's safe.
  - True
  - False
2. Many forms of energy need to be controlled during maintenance procedures.
  - True
  - False
3. The best way to prevent release of hazardous energy is with a lockout/tagout procedure.
  - True
  - False
4. Stored energy that is suddenly released has caused many serious workplace accidents.
  - True
  - False
5. People doing maintenance on equipment needn't take any safety training.
  - True
  - False
6. Who should be locking out and tagging out equipment?
  - a. the coffee guys
  - b. janitorial staff
  - c. only authorized personnel
  - d. the plumber
7. An energy-isolating device is considered capable of being locked out if it is equipped with a hasp or has a built-in locking mechanism.
  - True
  - False
8. A manually-operated electrical circuit breaker is one example of an energy-isolating device.
  - True
  - False
9. Push buttons and selector switches are energy-isolating devices.
  - True
  - False
10. Lockout procedures require training, supervision and documentation.
  - False
  - True

**BEFORE THE TALK – PREPARATION TIPS**

Refer to the "Tips For Safety Talks!" for ideas on planning this safety meeting. Read through the article ahead of time to help you with your presentation. Add further questions to those we have provided at the end of this talk.

- Many workplace accidents occur during machine maintenance when lockout procedures are not followed correctly. Gather accident reports and discuss these with workers.
- Organize a demonstration of a lockout/tagout procedure and invite workers to critique it and offer suggested improvements.
- Find a short, captivating video depicting the dangers of hazardous energy and the graphic consequences of not locking out machines and equipment.
- Give your workers a short, written test to determine how much information they retained from the talk

**AFTER THE TALK - CHECKLIST**

The workers who obtained poor results in the questionnaire were followed up.

Name: \_\_\_\_\_  
Date: \_\_\_\_\_

**Observed workers**

Task (s): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
  
Date: \_\_\_\_\_

**Refresher training**

Topic (s): \_\_\_\_\_  
Date: \_\_\_\_\_  
Others(describe): \_\_\_\_\_  
Meeting Date: \_\_\_\_\_  
Location: \_\_\_\_\_  
Directed by: \_\_\_\_\_

**NOTES**

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**Meeting material to go:**  
Safety meeting materials such as presentation tips, PowerPoint presentations, quiz answers and more are downloadable at [www.SafetySmart.com](http://www.SafetySmart.com)

**ANSWERS:**

- |          |          |
|----------|----------|
| 1. False | 6. C     |
| 2. True  | 7. True  |
| 3. True  | 8. True  |
| 4. True  | 9. False |
| 5. False | 10. True |