CONTRACT SERVICES

M LOCKOUT/TAGOUT

English:
If you do not comprehend English, and you require Safety Pass training in a language other than English, please send notification in writing to 2710 Winona Avenue, Burbank, CA 91504. Please provide your name, along with contact information, and specify the language you comprehend. Thank you.

Spanish:
Si usted no comprende inglés y requiere la capacitación Safety Pass en un idioma diferente al inglés, por favor envíe una notificación por escrito a 2710 Winona Avenue, Burbank, CA 91504. Por favor provea su nombre, junto con la información de contacto, y especifique el idioma que usted comprende. Gracias.

Korean:
영어를 이해하지 못하시고 영어가 아닌 다른 언어로 **Safety Pass** 훈련을 받으셔야 한다면, 서면 통지를 **2710 Winona Avenue, Burbank, CA 91504** 로 보내주시기 바랍니다. 귀하의 성함과 연락처를 기재하시고 이해하실 수 있는 언어를 명시해주십시오. 감사합니다.

Armenian:
Եթե դուք անգլերեն չեք հասկանում և ձեզ հարկավոր է **Safety Pass**-ի մարզում անգլերենից տարբեր լեզվով, խնդրում ենք գրավոր ծանուցագիր ուղարկել հետևյալ հասցեով՝ **2710 Winona Avenue, Burbank, CA 91504**: Խնդրում ենք ներկայացնել ձեր անունը, ինչպես նաև կապի տեղեկությունը, հատկապես նշելով ձեր հասկացած լեզուն: Շնորհակալություն:

Contract Services Administration Training Trust Fund
2710 Winona Avenue
Burbank, CA 91504

Safety Pass Training Program

The Entertainment Industry is committed to maintaining a safe and healthful working environment. To that end, all major studios have a safety representative on staff. In addition, all employers have a safety program in force. This Safety Pass Program has been designed to further promote safety and health and to prevent injuries, illnesses, and accidents on all productions, both on-lot and off-lot.

Studios and production companies may have more restrictive safety requirements than those mandated by local, state, or federal laws or regulations. They also may assign different duties or responsibilities to employees. Therefore, in addition to this Safety Pass training course, employees should refer to the safety manual and materials provided by their employers.

Employees must adhere to all safety rules and regulations. Failure of any employee to follow safety rules and regulations can lead to disciplinary action, up to and including discharge. However, no employee shall be discharged or otherwise disciplined for refusing to perform work that the individual reasonably believes is unsafe.

No safety training can comprehensively cover all possible unsafe work practices. Each production and its employees, therefore, should fully promote each employee's personal obligation to work safely in order to prevent accidents involving, and injuries to, the employee and to his/her fellow employees.

The Safety Pass Program derives from Federal and California Occupational Safety and Health Administration (OSHA) safety regulations. However, the material included in this workbook and its accompanying presentation should be used only as a general guideline. It is not intended as a legal interpretation of any federal, state, or local safety standard.

During the course of your employment, you may be acting as a supervisor or manager.In California, individuals with management authority and actual authority for the safety of a business practice could be convicted of a crime if they have actual knowledge of a serious concealed danger and fail to warn the affected employees and report the hazard. If a hazard exists, immediately notify the employer or studio safety department of the hazard and insure that potentially affected employees are informed of the danger and that steps are taken immediately to mitigate it.

Although the information contained in this training program has been compiled from sources believed to be reliable, the Alliance of Motion Picture and Television Producers, Contract Services Administration Trust Fund, Contract Services Administration Training Trust Fund, and the instructor make no guarantee nor warranty as to, and assume no responsibility for, the accuracy, sufficiency, or completeness of such information.

The Entertainment Industry is committed to maintaining a safe and healthful working environment.

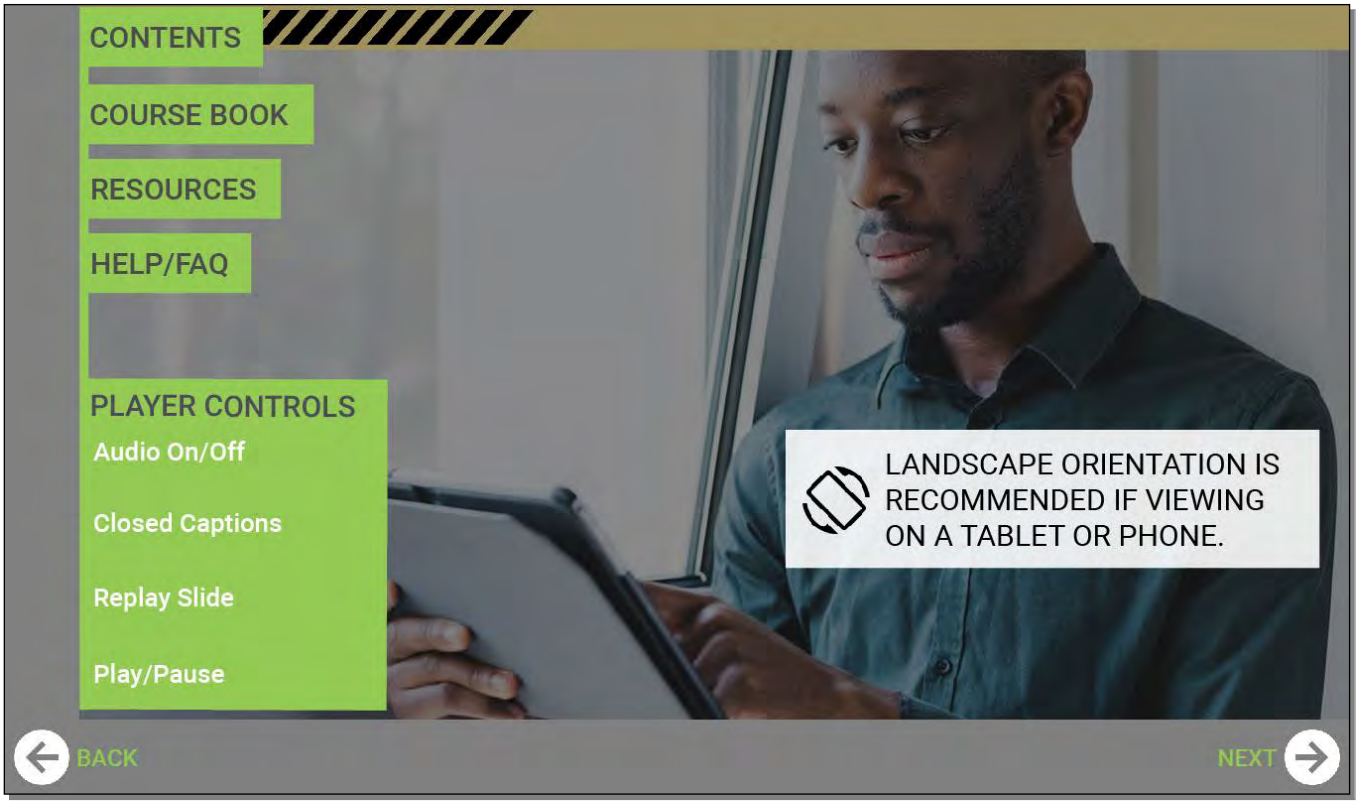
Slide 1. WELCOME

Hello, and welcome to course M, *Lockout/Tagout*. This 60-minute course is part of the Safety Pass training program for the motion picture and television industry, presented by Contract Services.

At the end of the presentation, there will be a test. You must score at least 70 percent on the test to pass the course.

Click START to begin.

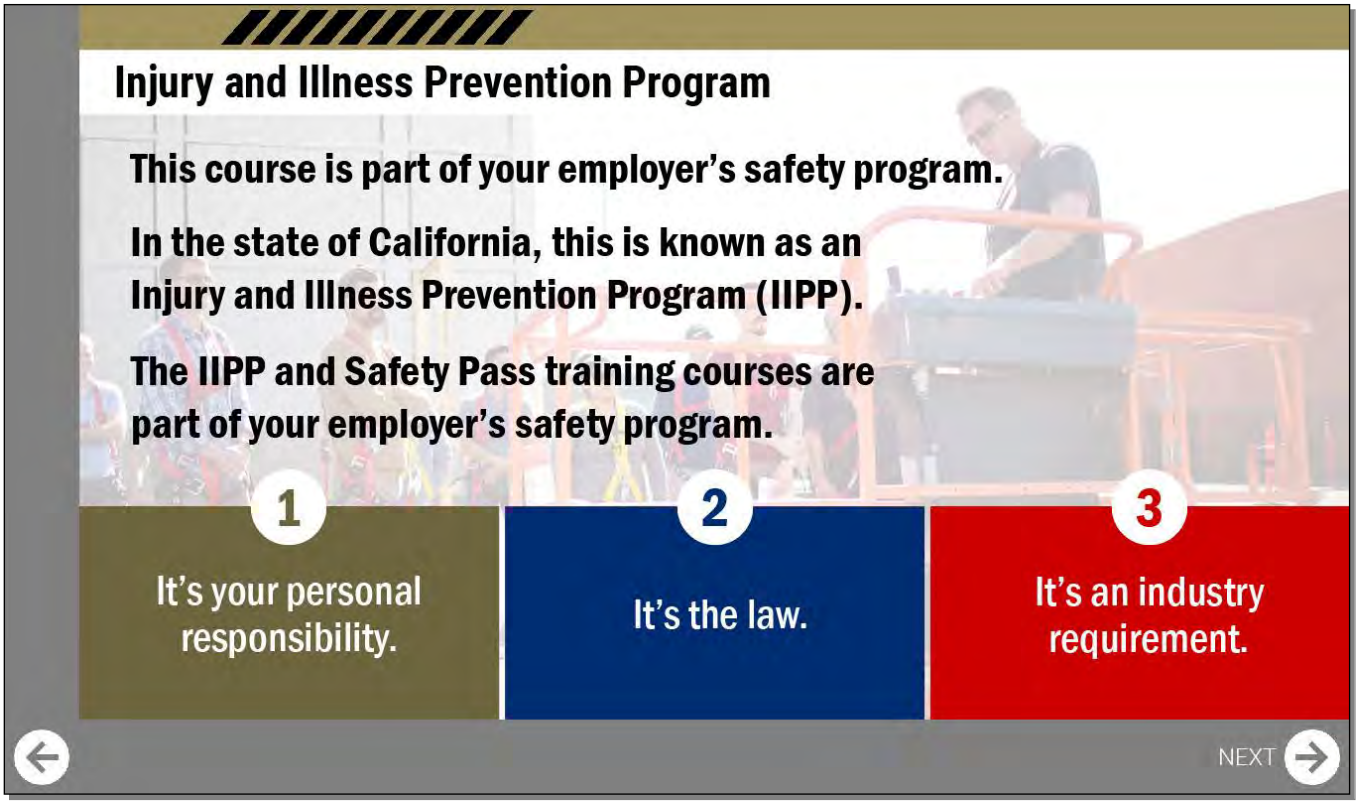
Slide 2. Course Navigation



At any time during the presentation, you can use the buttons on the side of the player window to view the Table of Contents, open the course book PDF, link to course references and resources, get technical support or help from an instructor about course content, and control the player.

When you're ready to continue, select the NEXT arrow.

Slide 3. IIPP



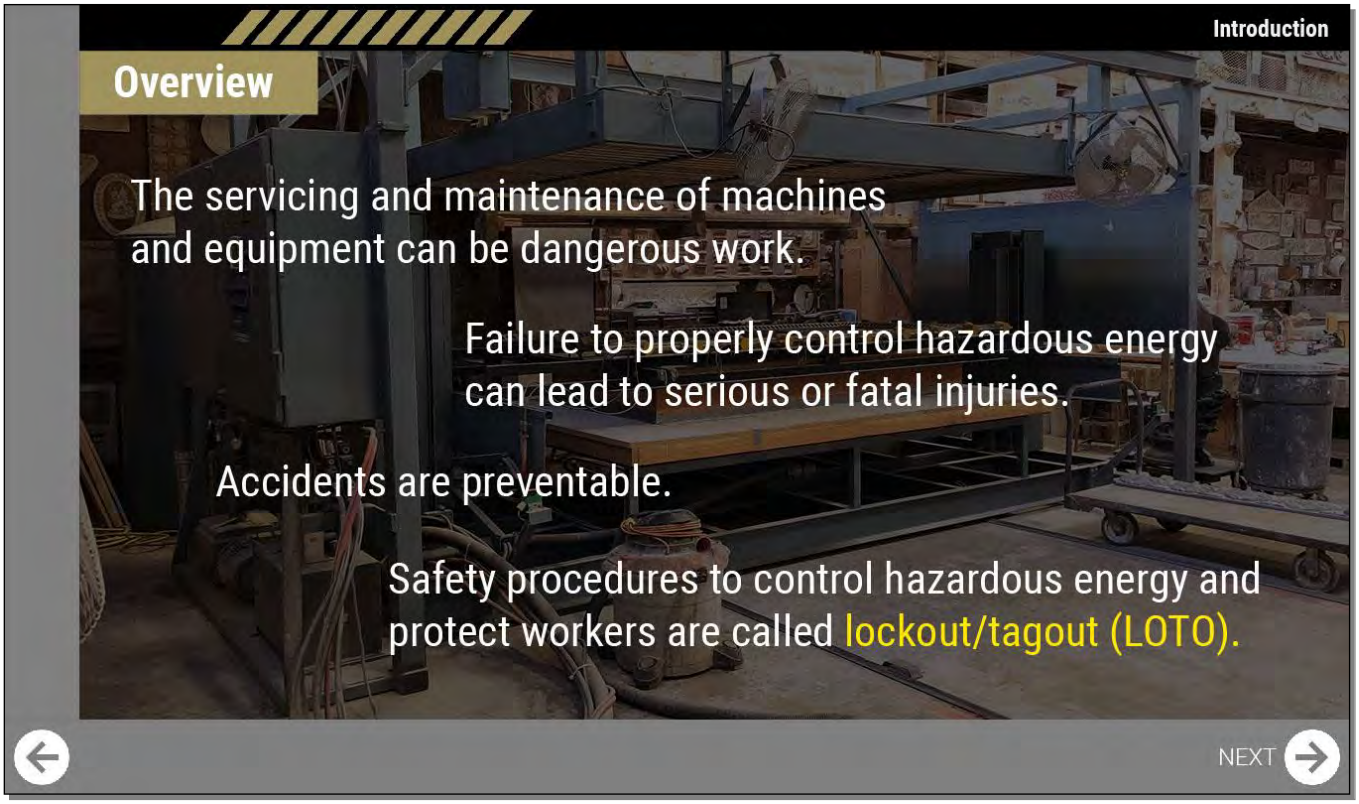
This course is part of your employer's safety program. In the State of California, this is known as an Injury and Illness Prevention Program (or IIPP). The IIPP and Safety Pass training courses are part of your employer's safety program.

There are three reasons to get safety training: First, you are personally responsible for your safety. You owe it to yourself and your coworkers to avoid accidents and injuries. The way you make a living and your quality of life depend on it. Second, it is the law. Occupational safety and health standards guarantee the right to a safe workplace and require employers to train their employees in safety. And third, the industry requires it. This course is part of a cooperative commitment between major motion picture and television studios and industry labor unions to deliver safety training.

Slide 4. INTRODUCTION

Introduction.

Slide 5. Overview



Though it may seem routine, the servicing and maintenance of machines and equipment can be dangerous work. Failure to properly control hazardous energy can lead to serious or fatal injuries to both the person performing the work and those nearby. However, when proper safety procedures are followed, accidents are preventable.

The safety procedures to control hazardous energy and protect workers are called lockout/tagout, often abbreviated as L-O-T-O.

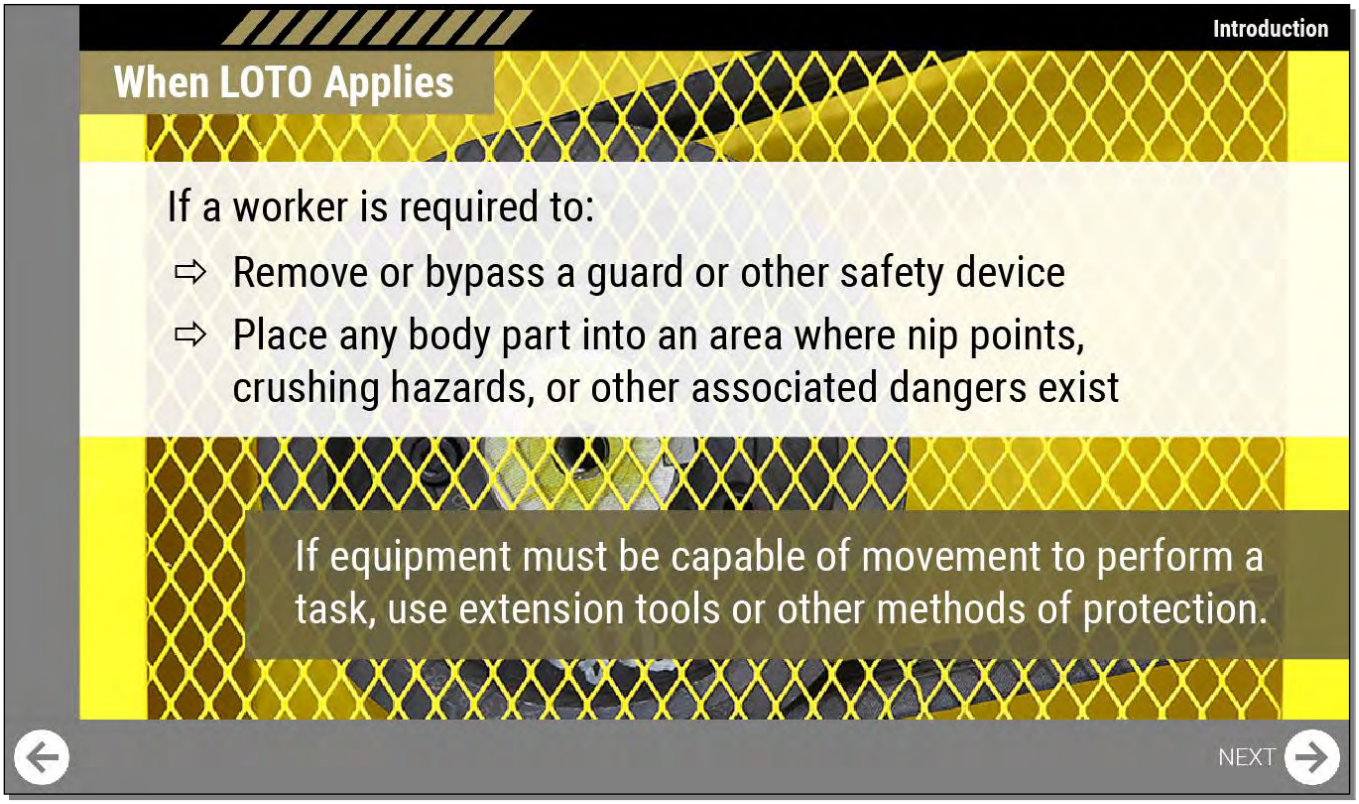
Slide 6. When LOTO Applies 1

Lockout/tagout procedures cover servicing or maintenance activities where the unexpected energization or start-up of a machine or equipment, or release of stored energy, could harm workers.

Slide 7. When LOTO Applies 2

Servicing and maintenance activities include construction, installation, set-up, repair, adjustments, modifications, inspection, cleaning, unjamming, lubrication, and tool changes.

Slide 8. When LOTO Applies 3



Lockout/tagout must also be used if a servicing or maintenance task requires a worker to remove or bypass a guard or another safety device or place any part of their body into an area where nip points, crushing hazards, or other associated dangers exist.

However, if the equipment must be capable of movement to perform a certain task, the employer will require and provide extension tools or other methods of protection.

Slide 9. Industry Examples 1

A few examples of machines and equipment common in our industry that may use lockout/tagout during servicing and maintenance include vehicles and lifts, permanently installed tools in a studio mill,

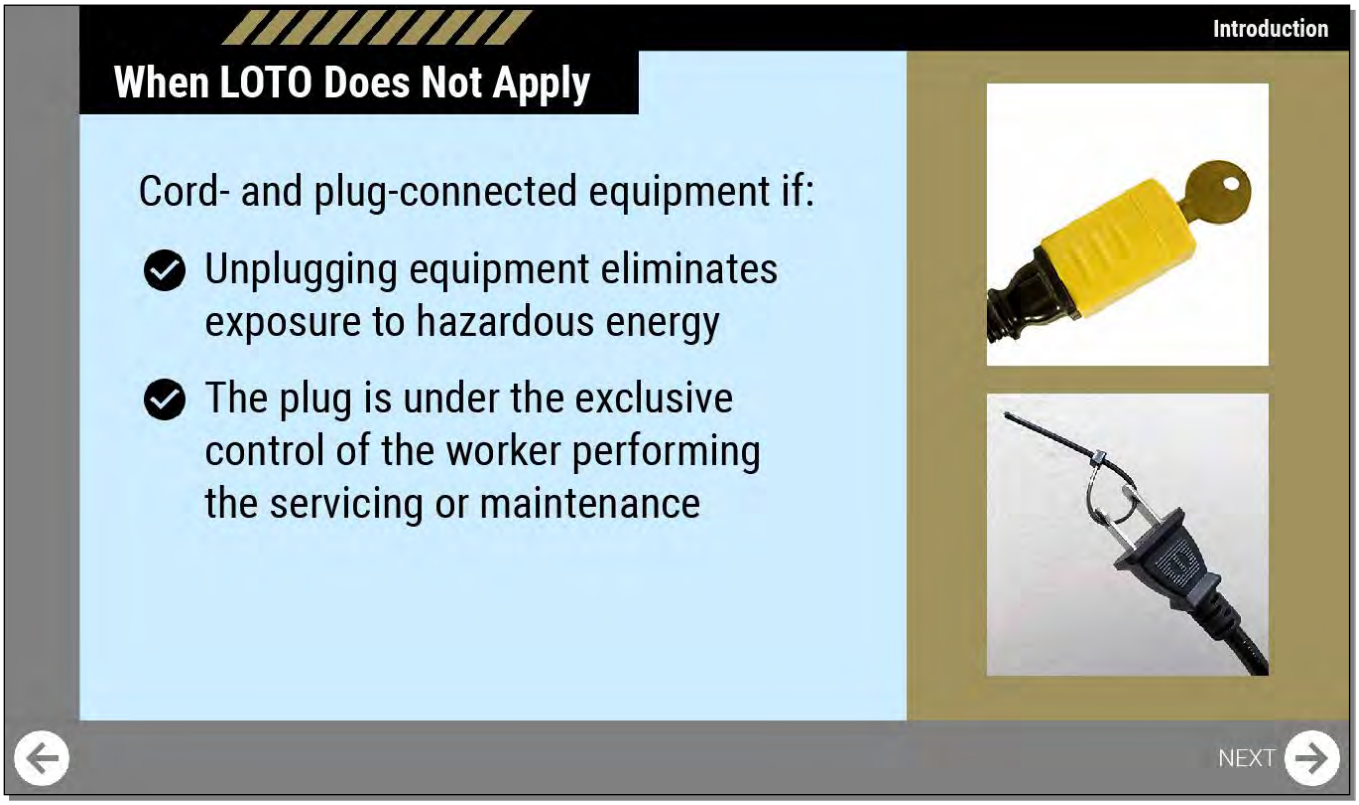
Slide 10. Industry Examples 2

electrical systems and air conditioning units of studio buildings and sound stages, and special effects equipment like gimbals and steam boilers.

Slide 11. When LOTO Does Not Apply 1

Lockout/tagout does not apply to minor servicing activities like tool changes and adjustments that need to be conducted during normal production operations and are routine and repeated tasks integral to the use of the equipment. In these cases, workers must use effective, alternative protective measures.

Slide 12. When LOTO Does Not Apply 2



Additionally, lockout/tagout does not apply to electrical equipment connected by a single cord and plug *if* unplugging the equipment eliminates exposure to hazardous energy *and* the plug is under the exclusive control of the worker performing the servicing or maintenance.

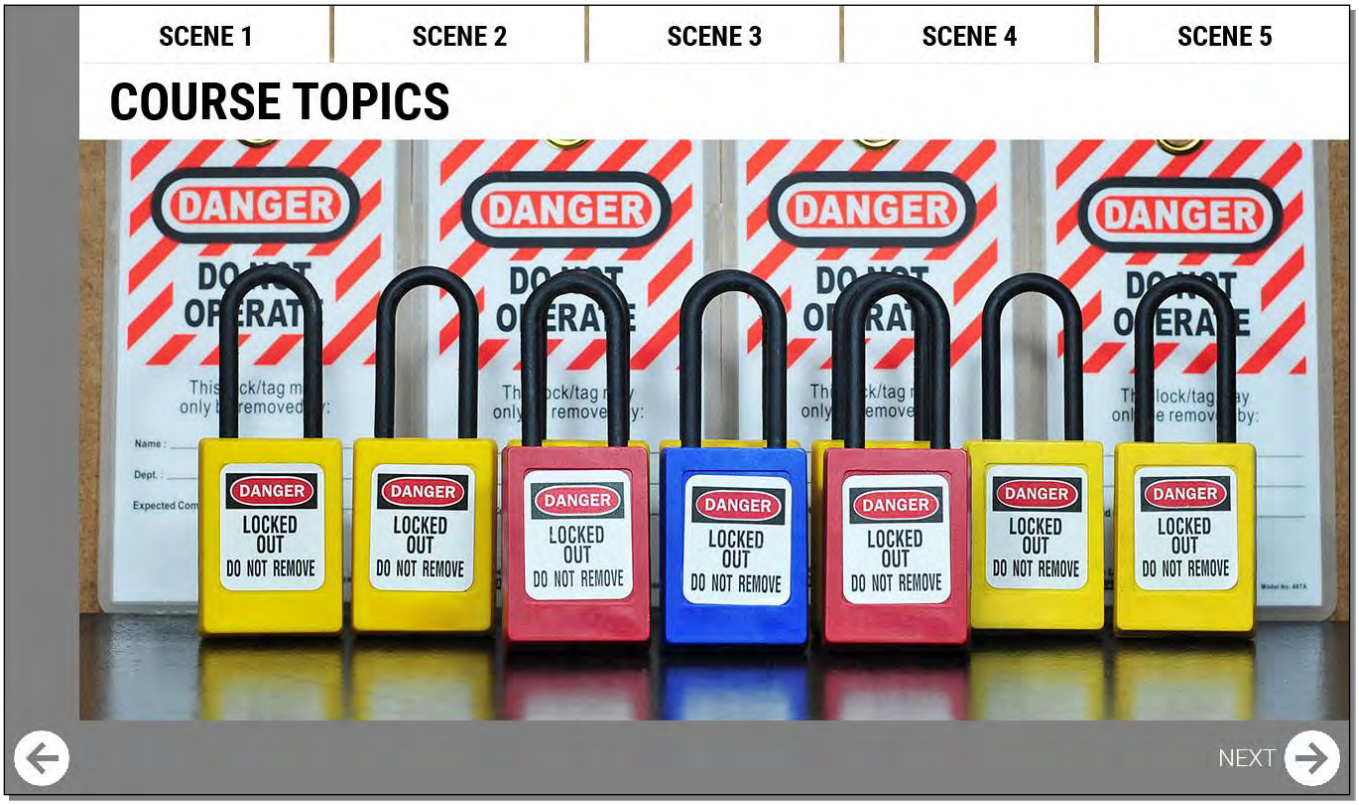
However, protection from unauthorized or accidental use of such equipment can be prevented at any time by placing a lock box on the plug or by putting a zip tie through the holes of the plug prongs, for example. Such practices can be a safe way to let others know if a piece of equipment is damaged or should not be used.

Slide 13. Course Objectives

Your objectives for this course are to gain a clear understanding of the elements of an effective lockout/tagout program, be able to recognize lockout/tagout in progress, and be familiar with the basic procedural steps for lockout/tagout.

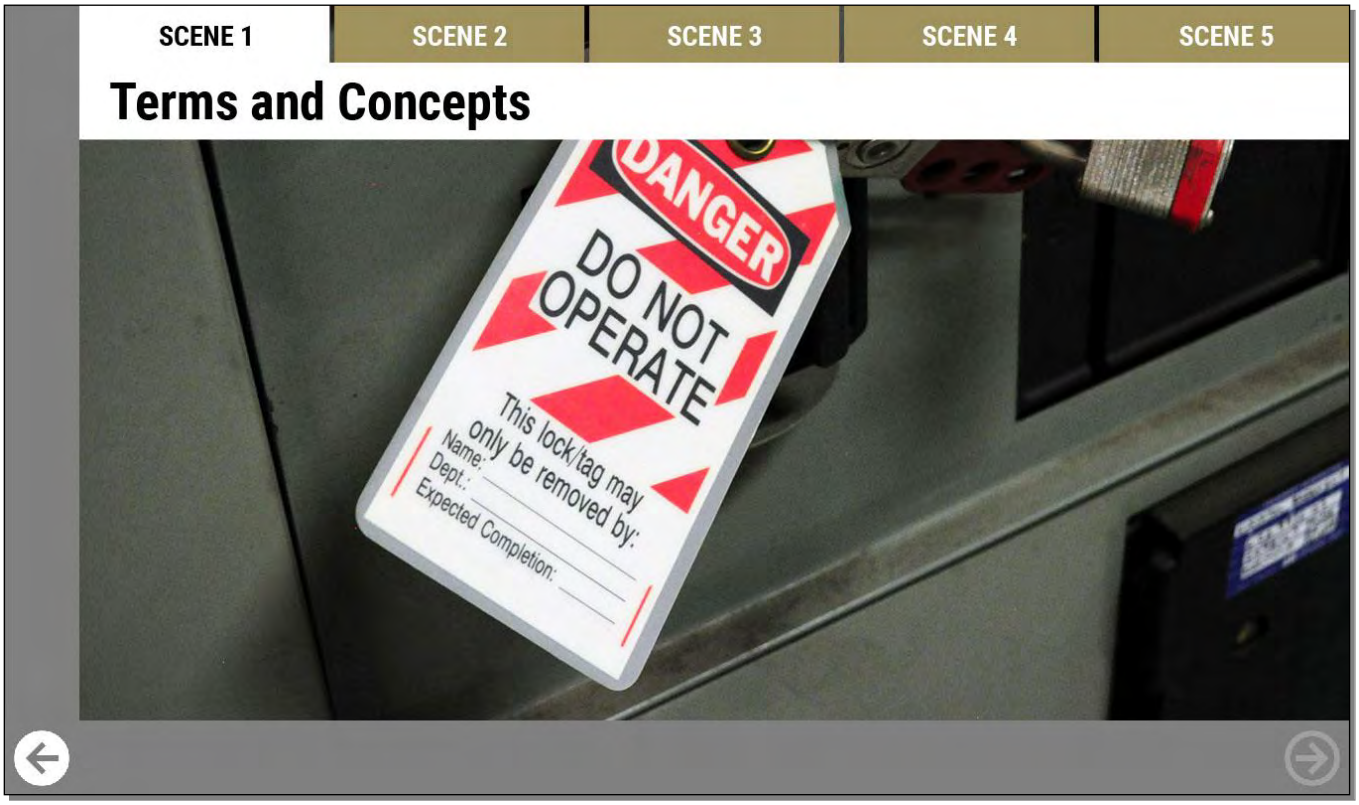
If your job duties require you to perform lockout/tagout, your employer will provide additional training on their specific equipment and procedures.

Slide 14. Course Topics



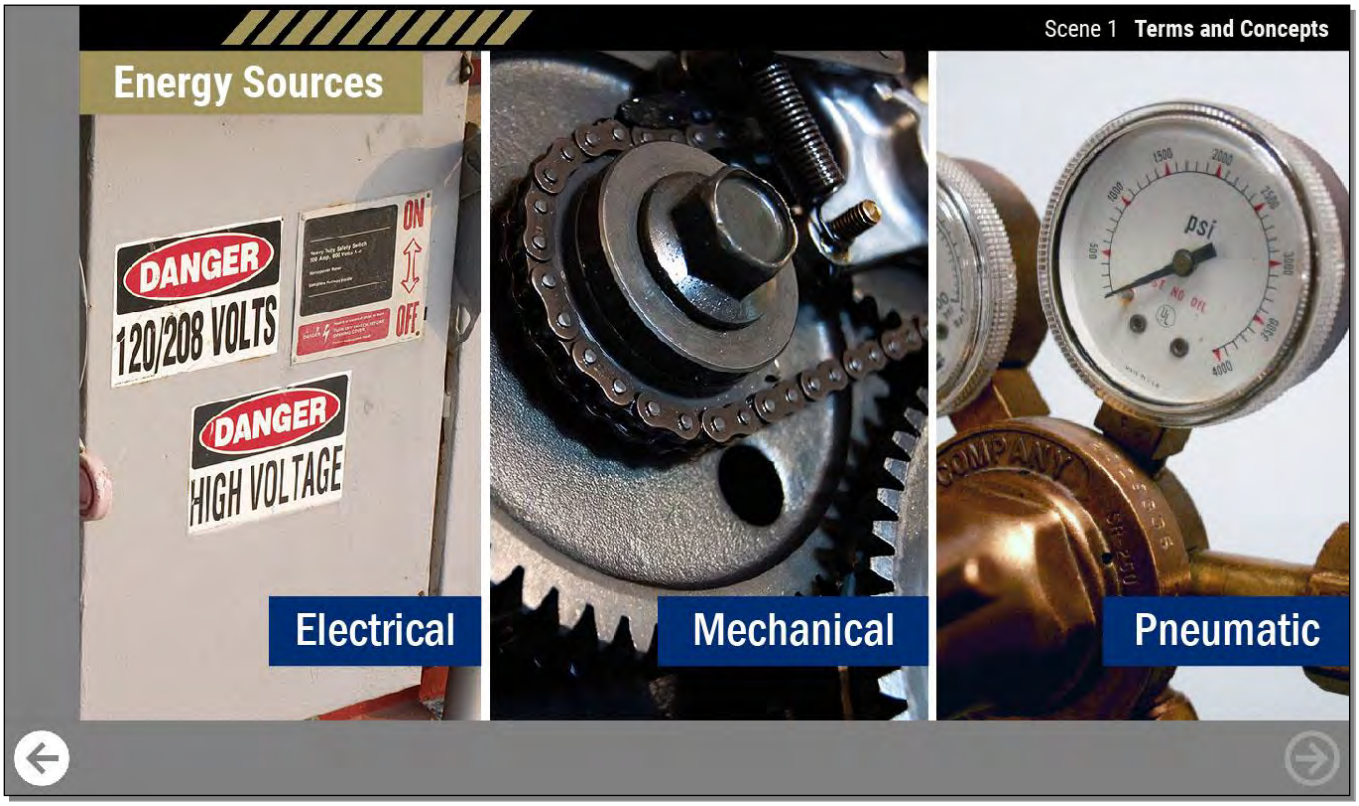
The topics we'll cover in this course are basic terms and concepts, components of an energy control program, physical requirements for lockout and tagout devices, rules and procedural steps to control hazardous energy, and requirements for specific circumstances like shift changes and working with contractors.

Slide 15. SCENE 1 – TERMS AND CONCEPTS



Scene One, Terms and Concepts.

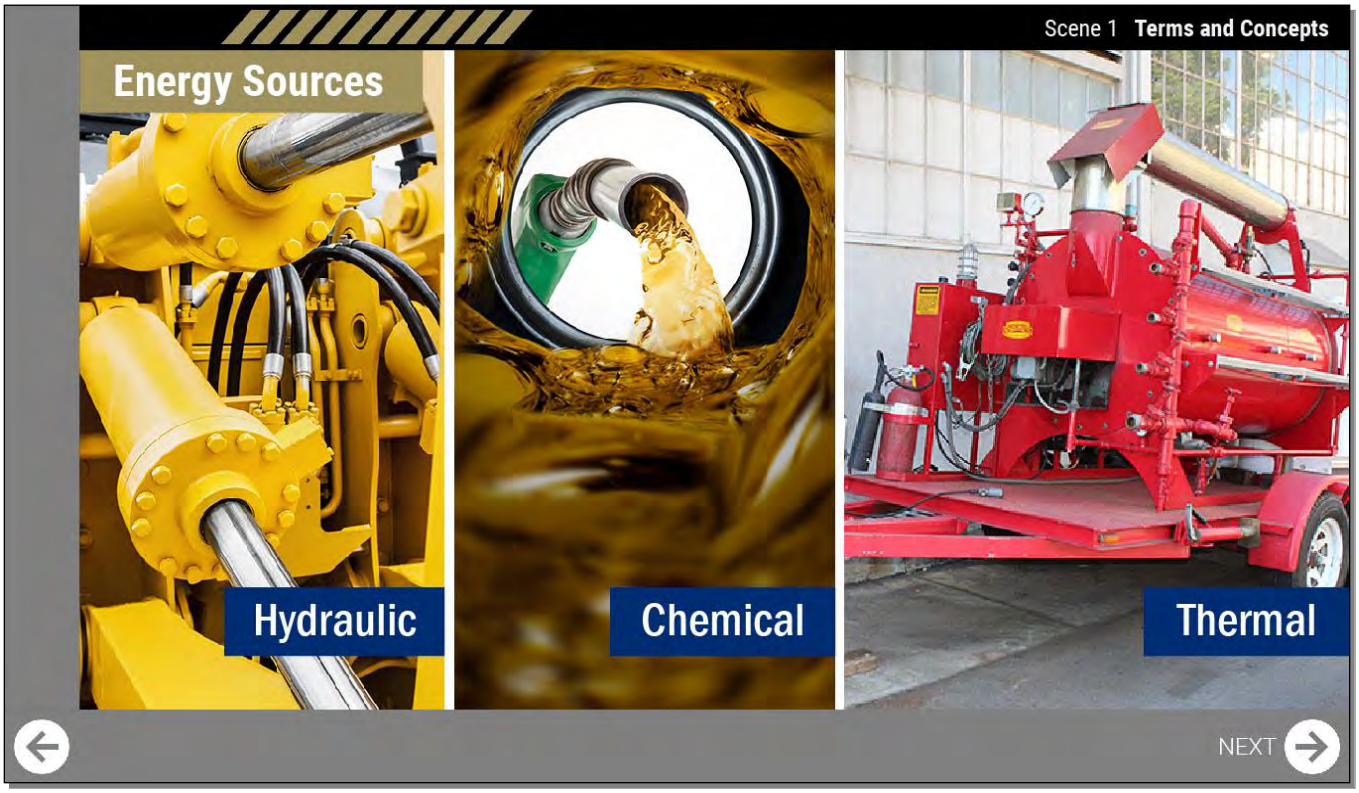
Slide 16. Energy Sources 1



In order to effectively perform lockout/tagout on a specific piece of equipment or machinery, you need to know what type of energy is powering it.

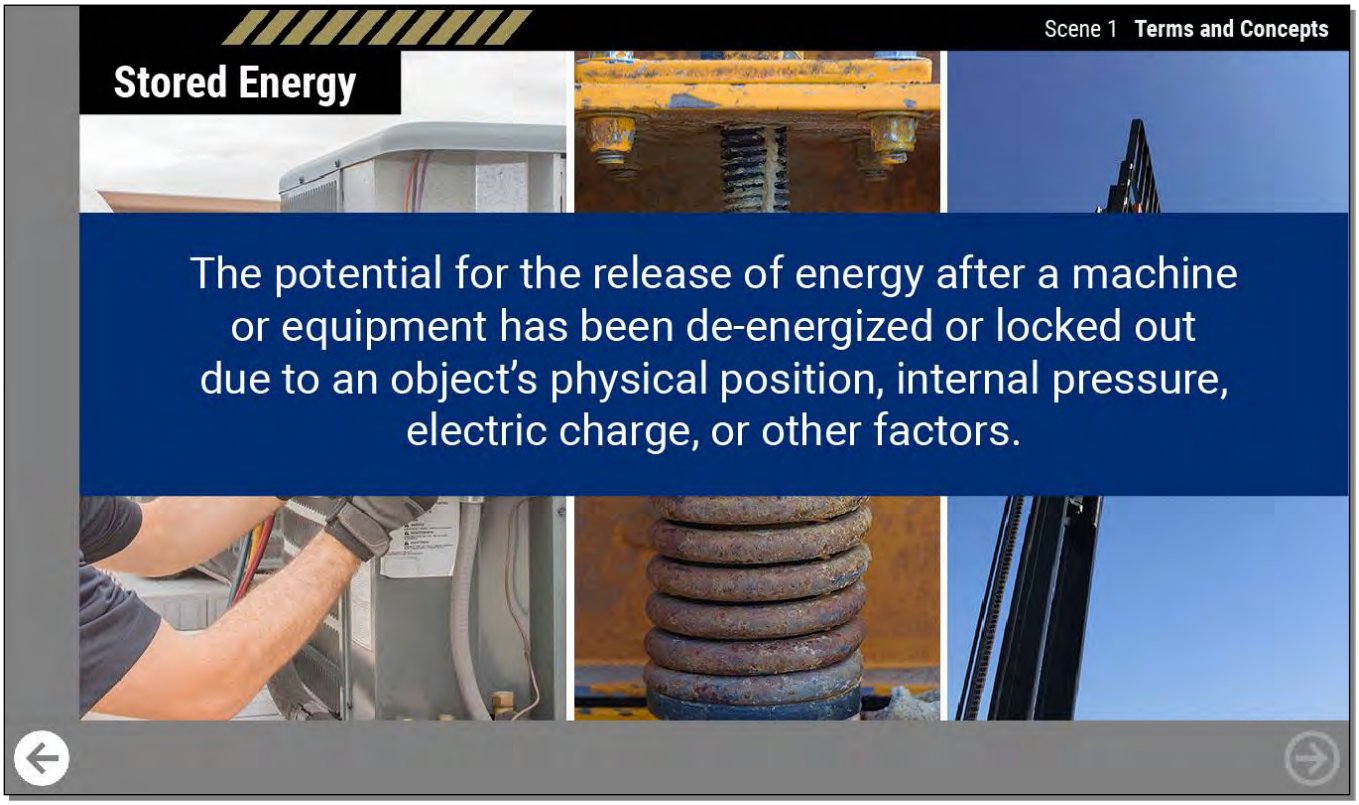
There are many types of energy sources. Electrical, mechanical, pneumatic,

Slide 17. Energy Sources 2



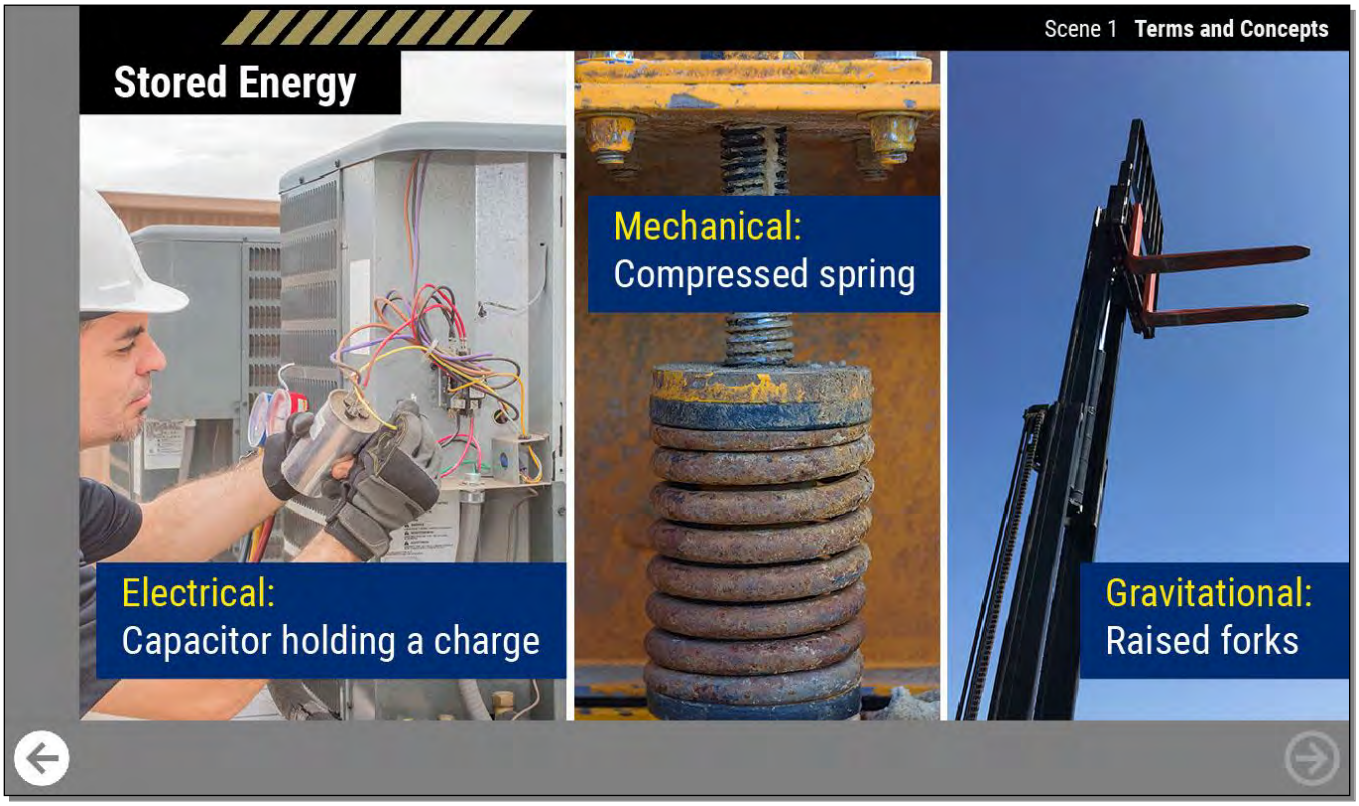
hydraulic, chemical, and thermal are a few common examples.

Slide 18. Stored Energy 1



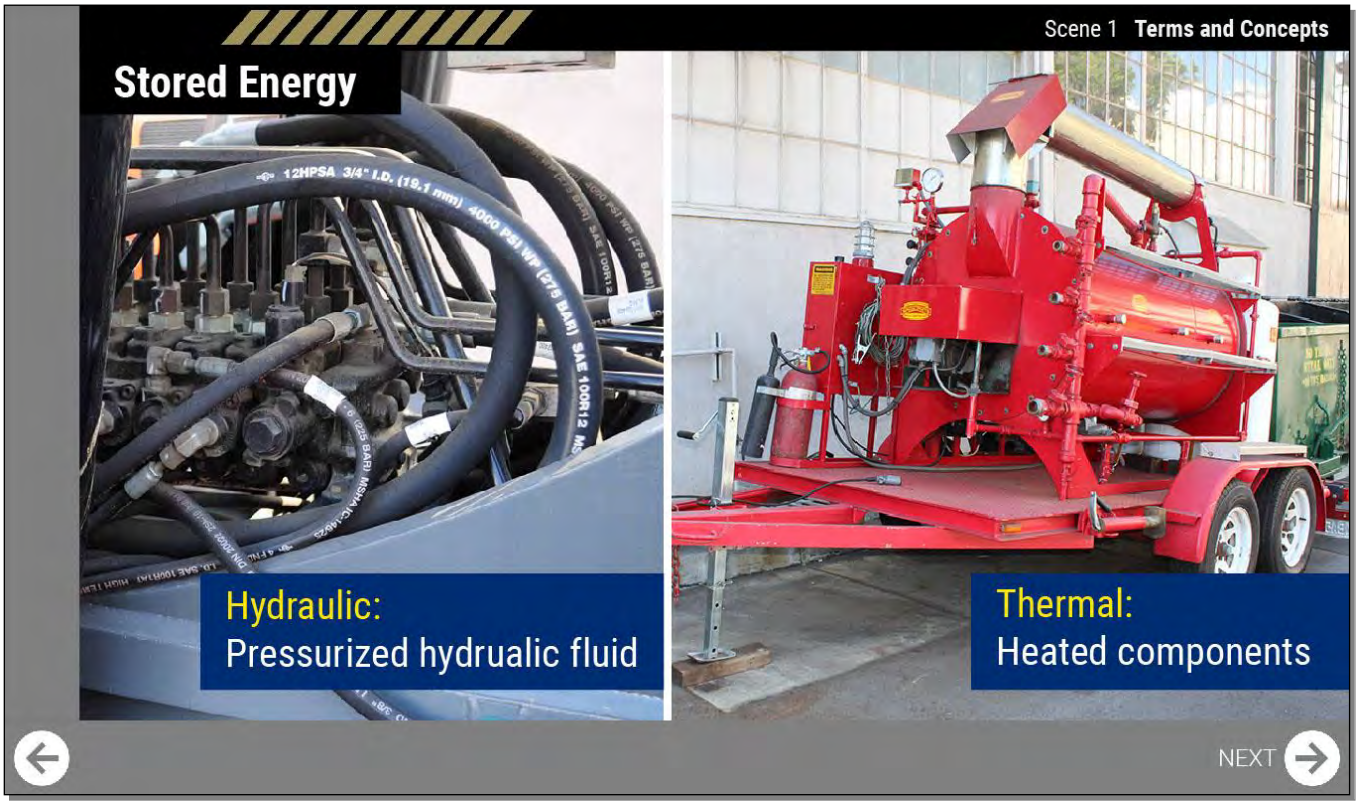
Another type of energy is stored energy—the potential for the release of energy after a machine or equipment has been de-energized or locked out due to an object's physical position, internal pressure, electric charge, or other factors. Let's look at a few forms of stored energy.

Slide 19. Stored Energy 2



A capacitor holding a charge is stored electrical energy. A compressed spring is stored mechanical energy. Stored gravitational energy means that an object is subject to movement caused by gravity, like raised forks, even if the motion-inducing device has been locked out.

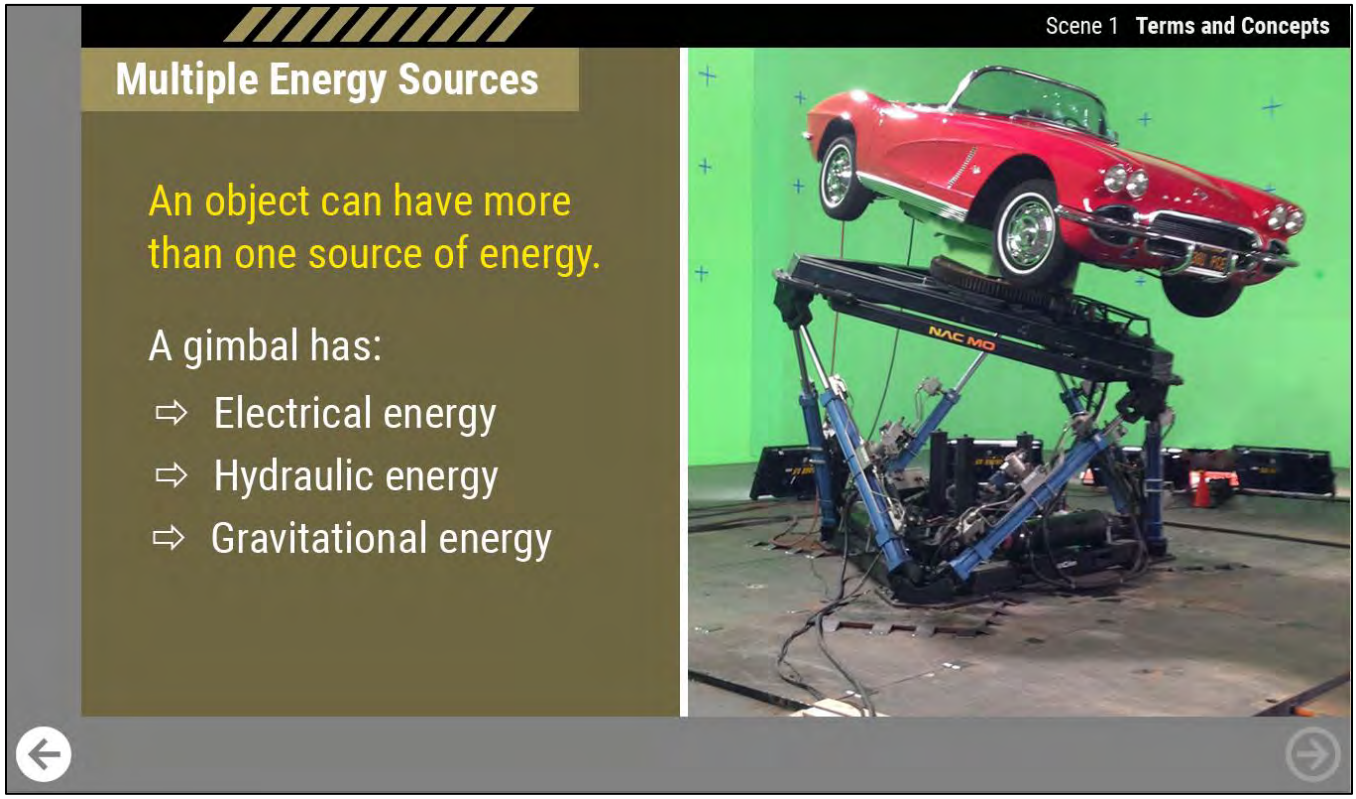
Slide 20. Stored Energy 3



Pressurized hydraulic fluid can exist as stored hydraulic energy in cylinder or accumulator circuits and could cause unexpected motion. And, heated components can be stored thermal energy.

It is essential that all potential sources of stored energy are identified, and that during lockout/tagout, controls are implemented to prevent the unintentional release of that energy.

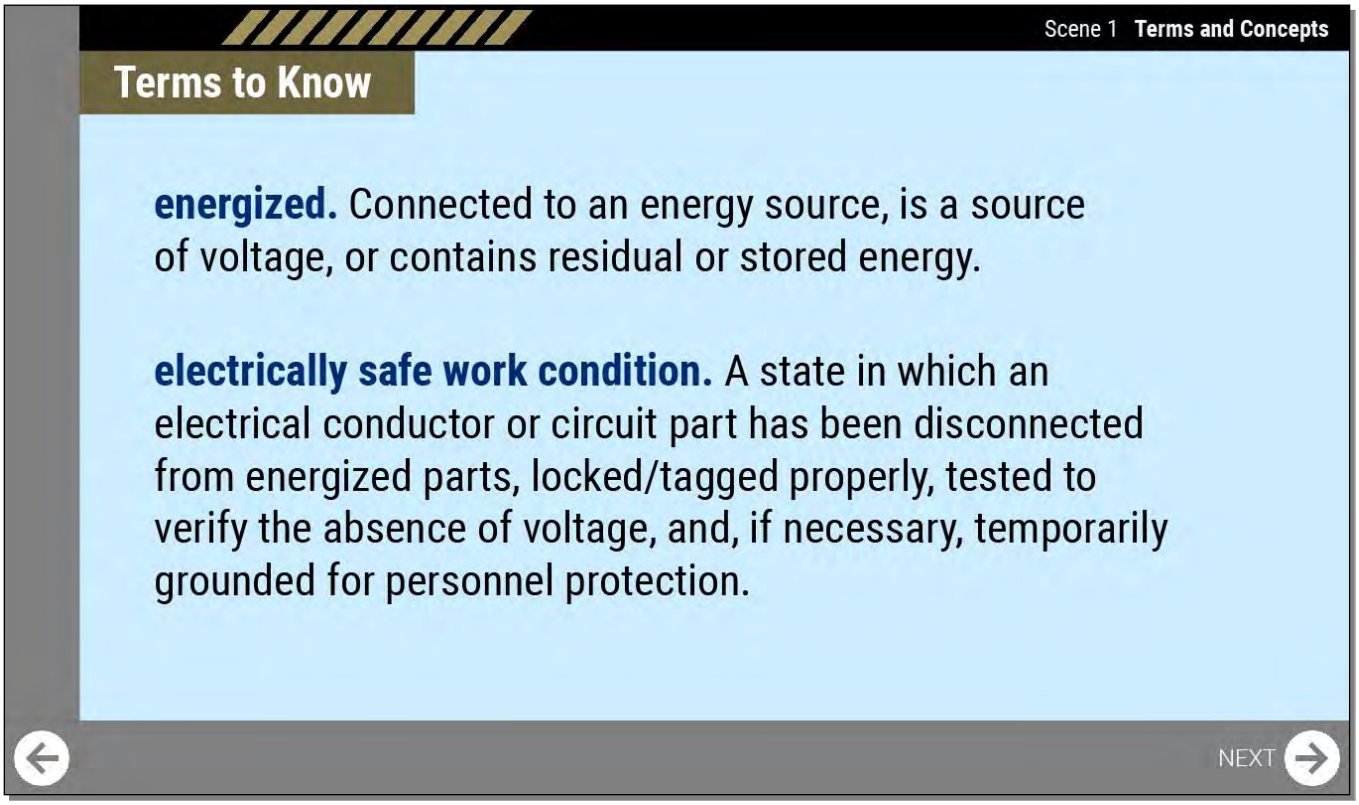
Slide 21. Multiple Energy Sources



Also, keep in mind that it is possible for an object to have more than one source of energy.

For example, a gimbal is powered by electrical energy and uses hydraulic energy to move the platform. After the platform is de-energized, the cylinders may contain pressurized hydraulic fluid. If that pressure is released unexpectedly, gravitational stored energy can cause the platform to drop suddenly, potentially harming personnel doing work under the platform.

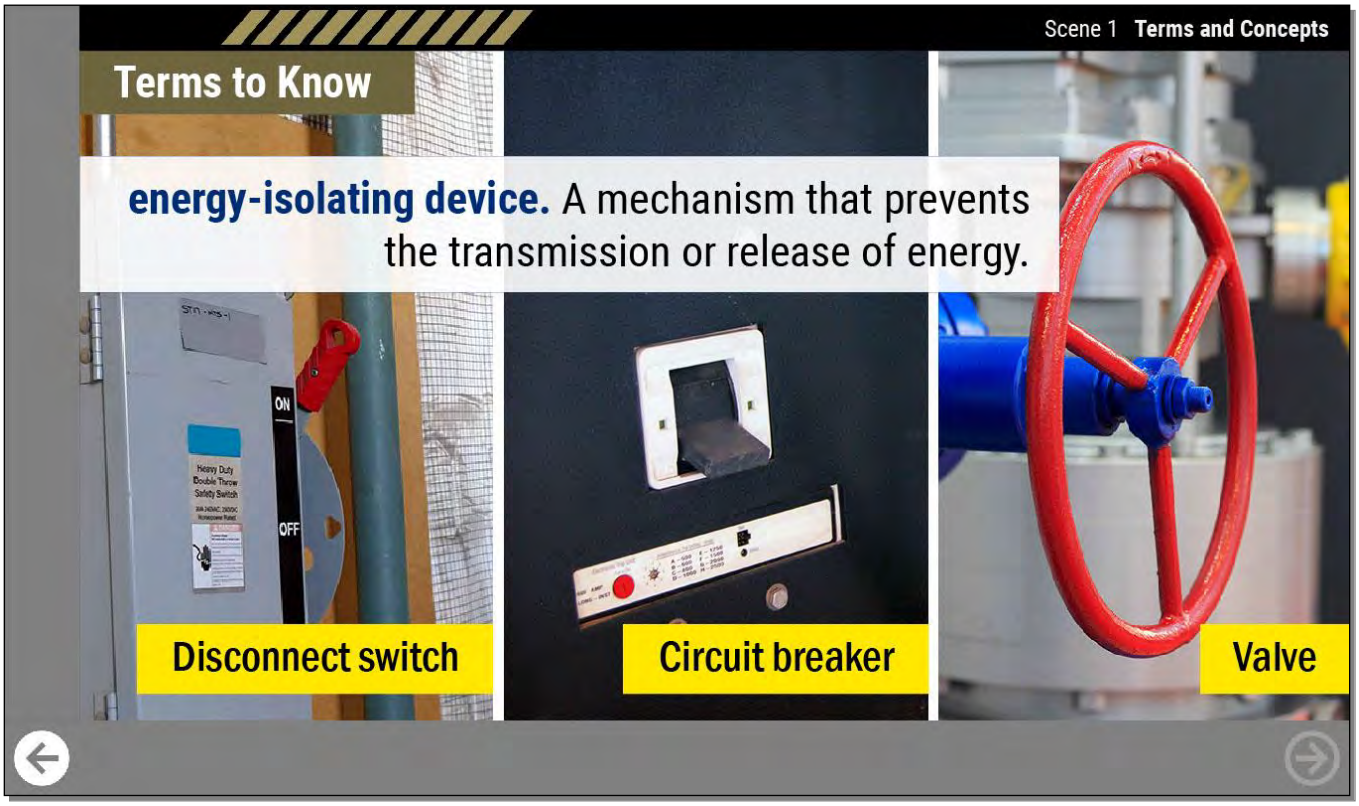
Slide 22. Terms to Know 1



Energized means that a machine or equipment is connected to an energy source, is a source of voltage, or contains residual or stored energy.

An *electrically safe work condition* is a state in which an electrical conductor or circuit part has been disconnected from energized parts, locked and tagged properly, tested to verify the absence of voltage, and, if necessary, temporarily grounded for personnel protection.

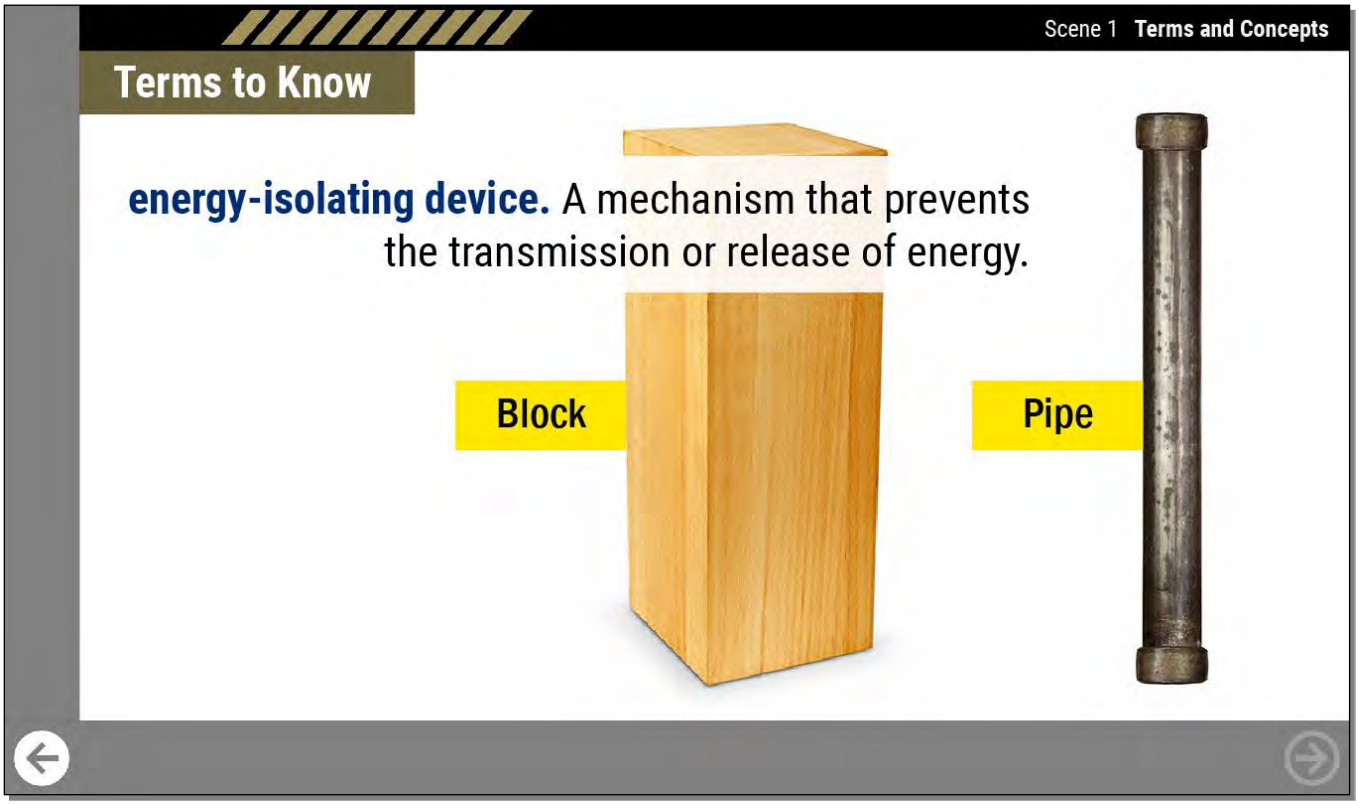
Slide 23. Terms to Know 2



An *energy-isolating device* is a mechanism that physically prevents the transmission or release of energy.

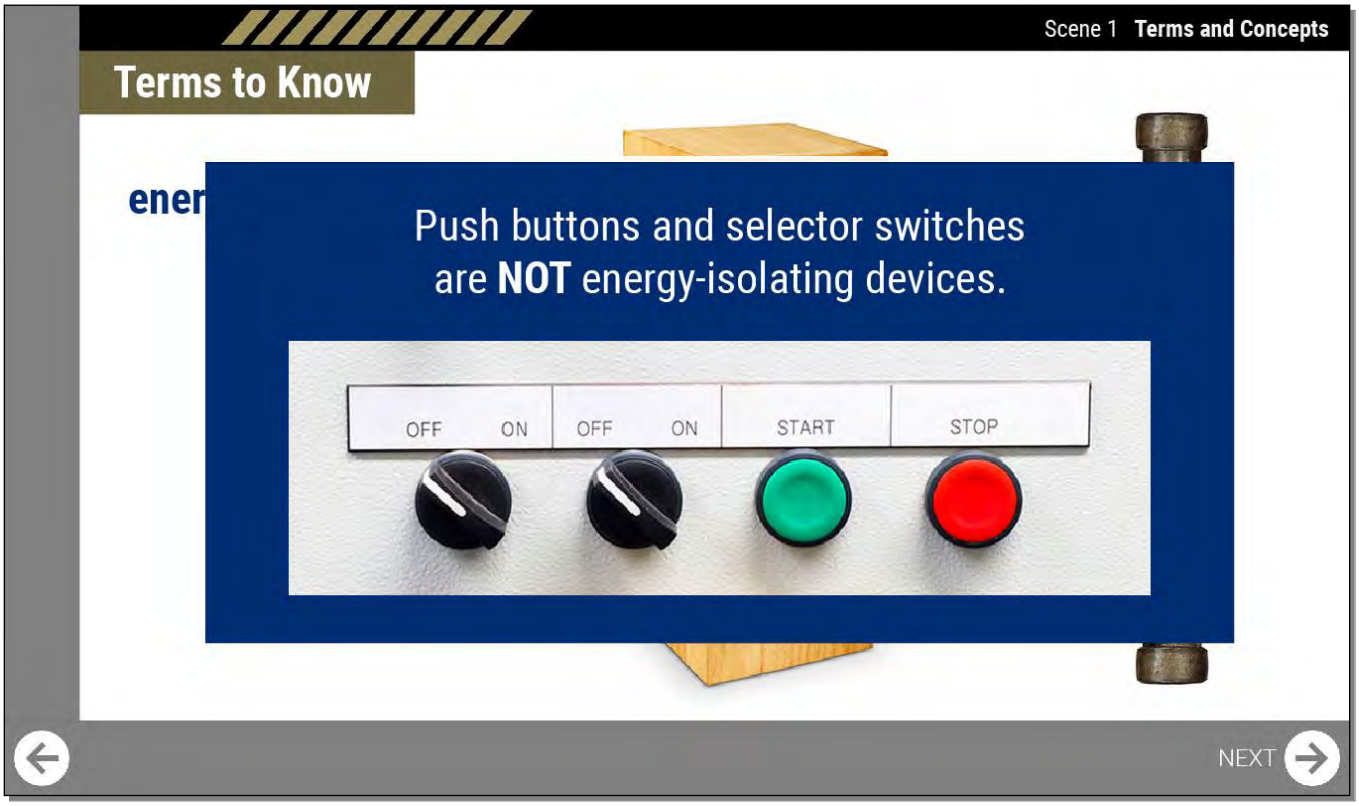
Some examples are disconnect switches, circuit breakers, valves,

Slide 24. Terms to Know 2.1



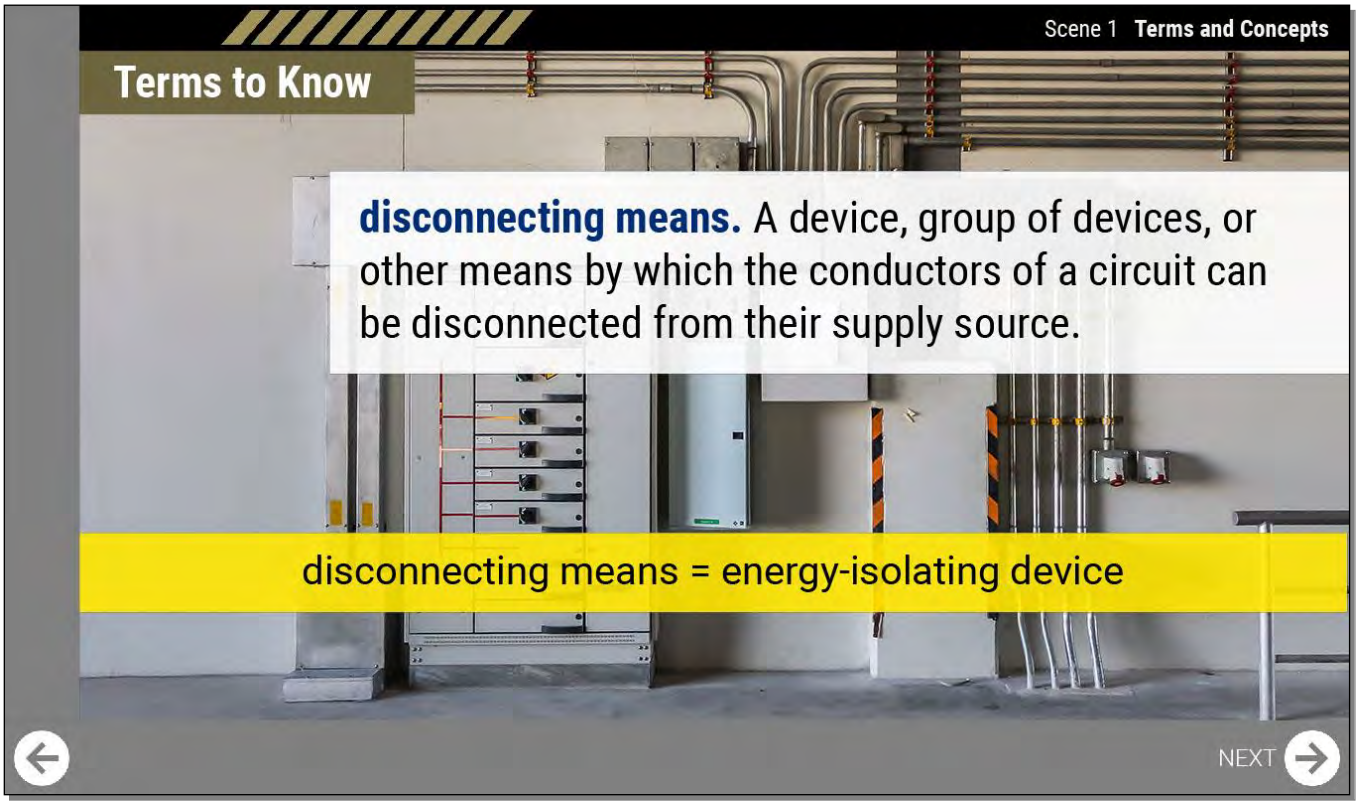
and even simple wooden blocks and metal pipes used to prevent the movement of machine parts.

Slide 25. Terms to Know 2.2



Controls such as push buttons and selector switches are not energy-isolating devices.

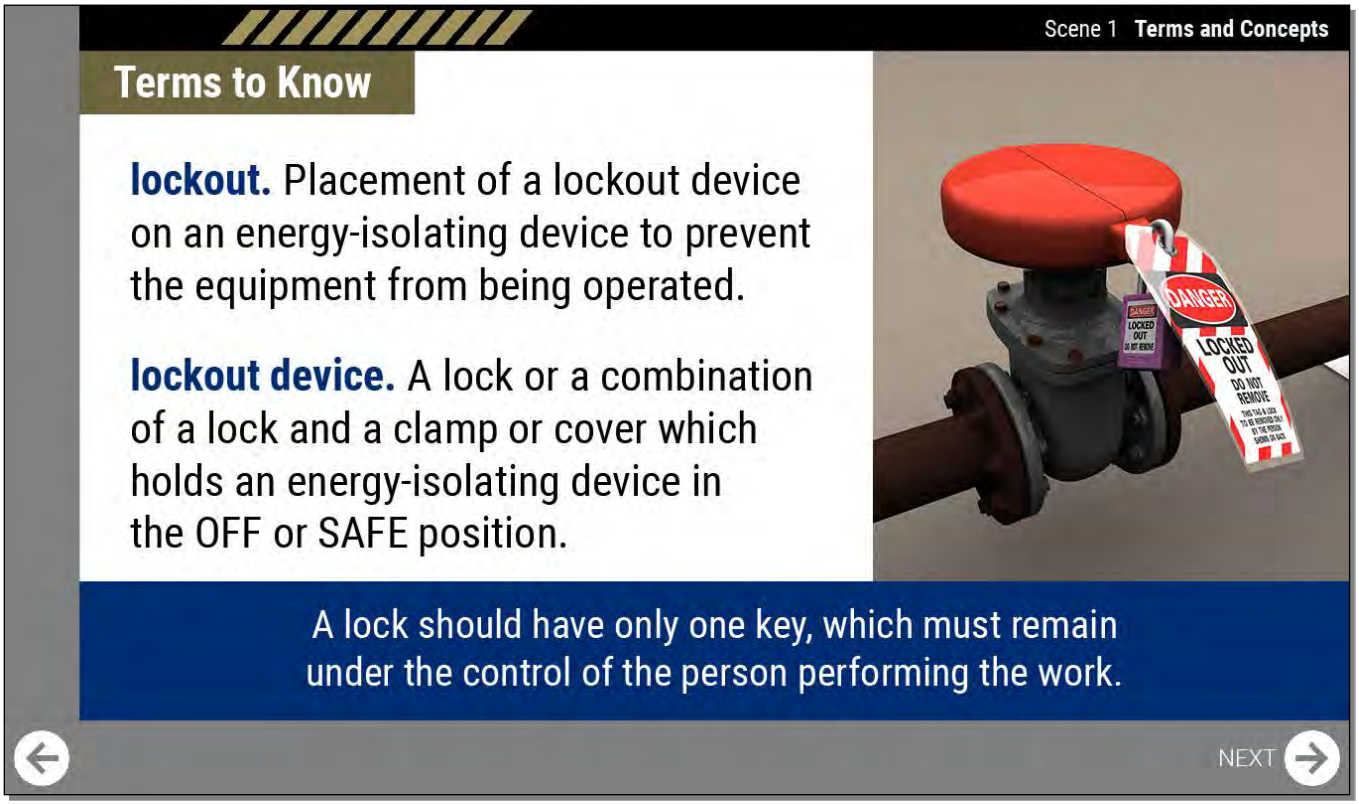
Slide 26. Terms to Know 3



A *disconnecting means* is a device, group of devices, or other means by which the conductors of a circuit can be disconnected from their supply source. A disconnecting means is an energy-isolating device for electrical components such as disconnect switches and circuit breakers.

Some people may use these terms interchangeably.

Slide 27. Terms to Know 4

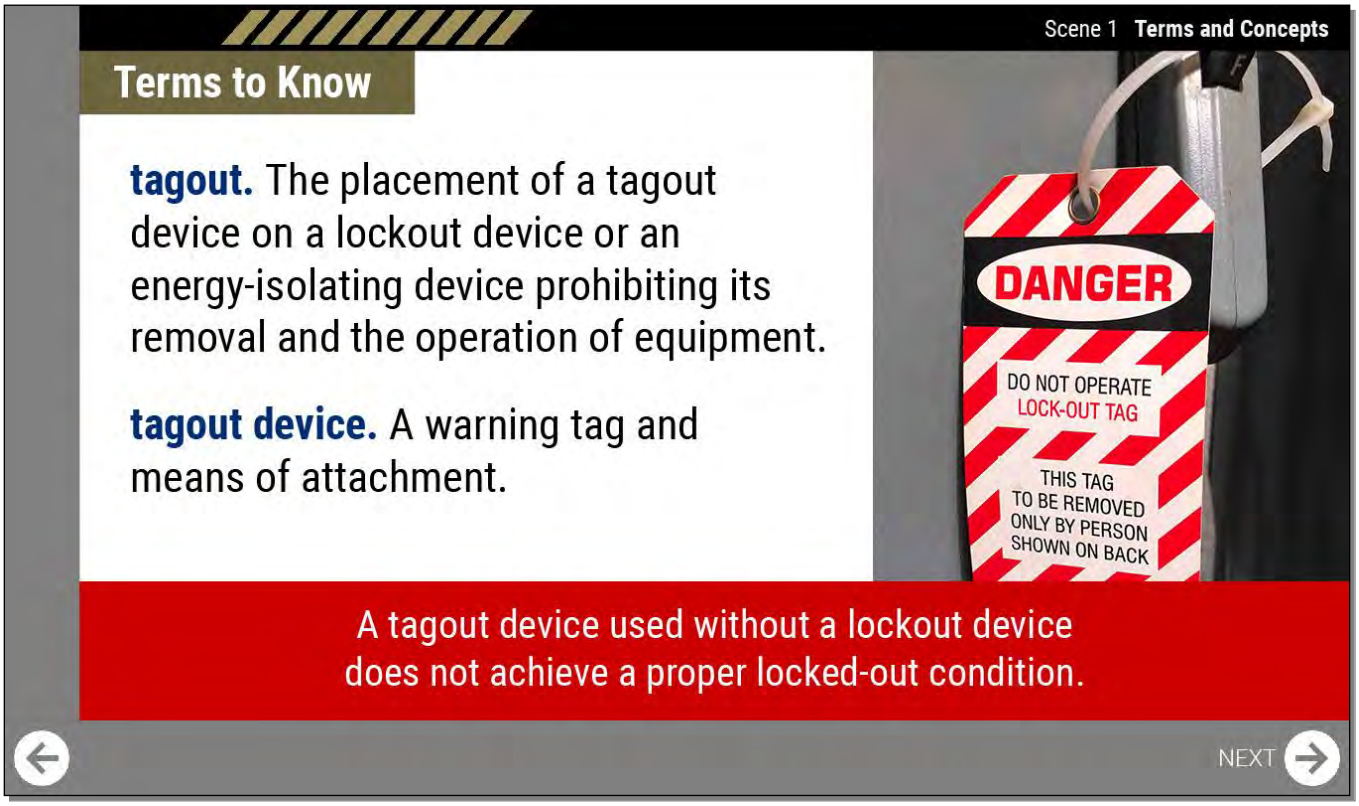


Lockout refers to the placement of a lockout device on an energy-isolating device to prevent the equipment from being operated.

A *lockout device* is a lock or a combination of a lock and a clamp or cover which holds an energy-isolating device in the OFF or SAFE position.

A lock should have only one key, which must remain under the control of the person performing the work.

Slide 28. Terms to Know 5

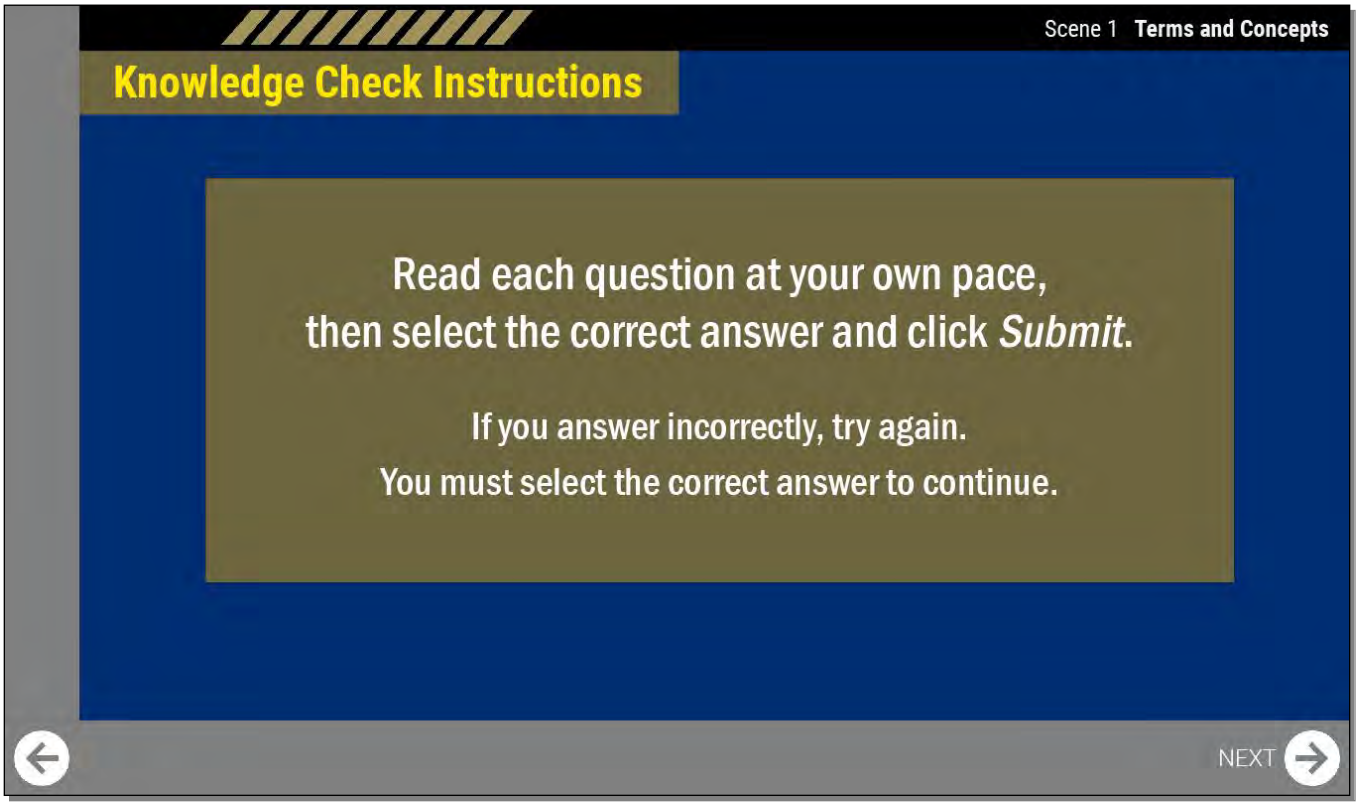


Tagout refers to the placement of a tagout device on a lockout or an energy-isolating device prohibiting the removal of the tagout device and operation of the equipment.

A *tagout device* is a warning tag and means of attachment. Most often, the means of attachment is a zip tie.

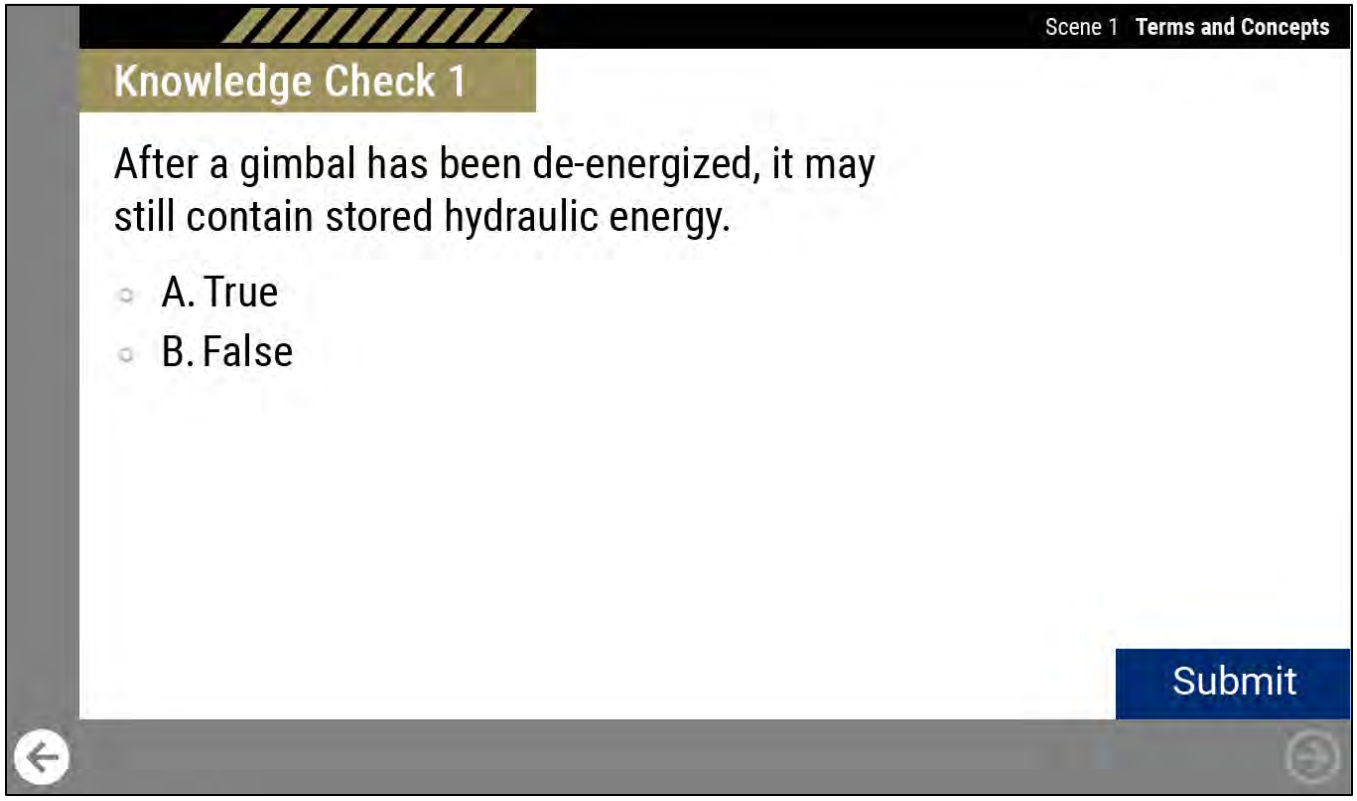
A tagout device used without a lockout device does not achieve a proper locked-out condition. We'll talk more about this later in the course.

Slide 29. Knowledge Check Instructions

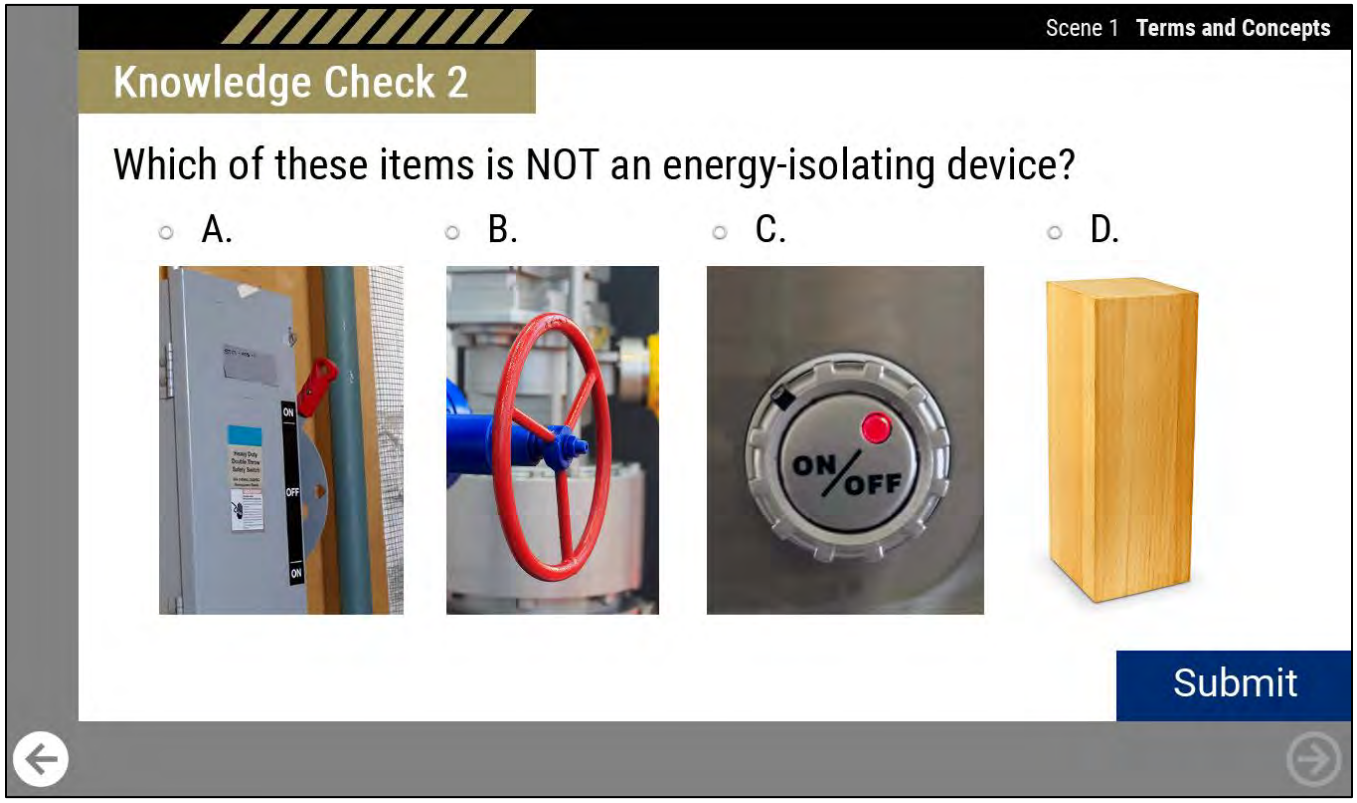


Okay. Let's review a few key points from this scene. Read each question at your own pace, then select the correct answer and click *Submit*. If you answer incorrectly, try again. You must select the correct answer to continue the course.

Slide 30. Knowledge Check 1



Slide 31. Knowledge Check 2



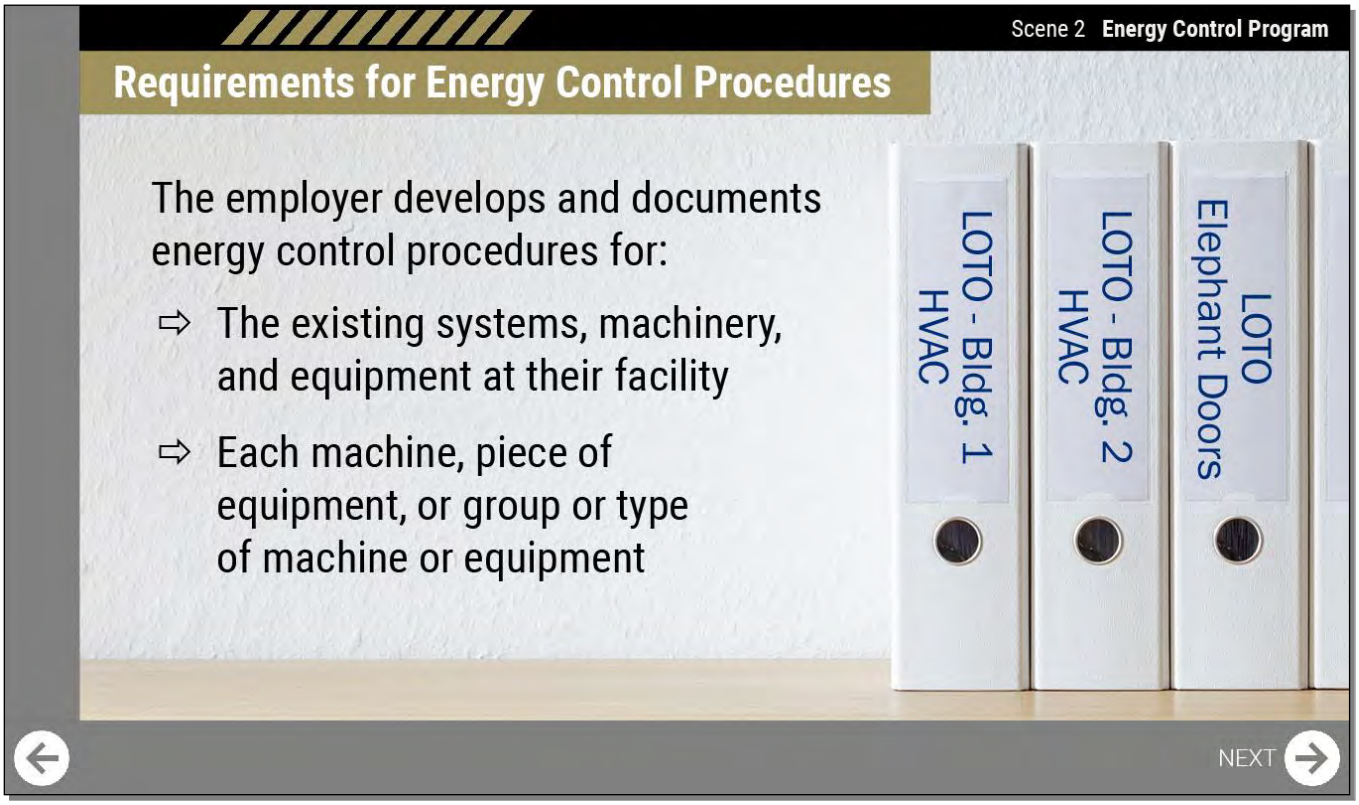
Slide 32. SCENE 2 – ENERGY CONTROL PROGRAM

Scene Two, Energy Control Program.

Slide 33. Employer Responsibilities

Employers are required to have a documented and implemented energy control program consisting of energy control procedures, periodic inspections, and worker training. We'll talk about these three components in this scene.

Slide 34. Requirements for Energy Control Procedures 1



The energy control program will include procedures designed to protect workers from hazardous energy. The employer develops and documents energy control procedures for the existing systems, machinery, and equipment at their facility.

There will be a separate procedure for each machine, piece of equipment, or group or type of machine or equipment.

Talk to your employer if you have questions or concerns about facility equipment or a lockout/tagout procedure.

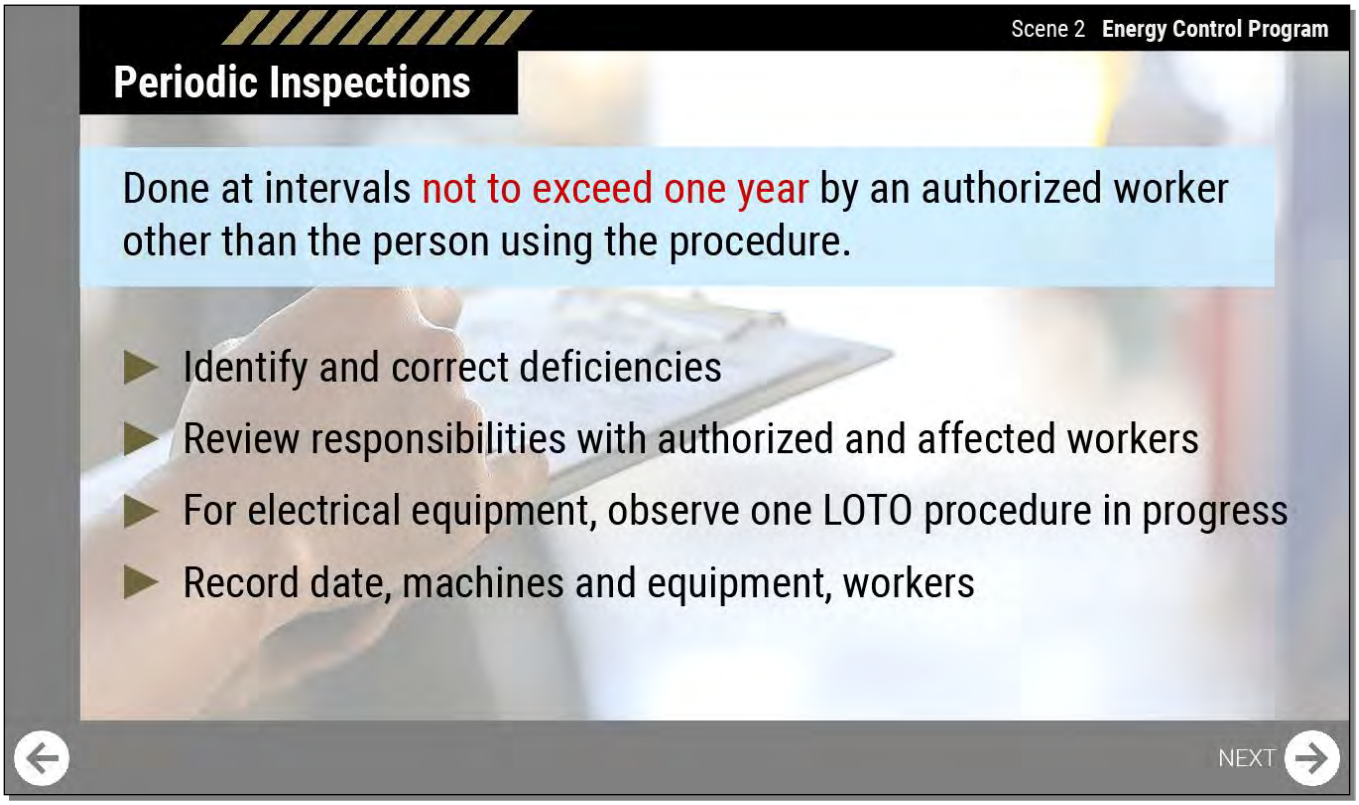
Slide 35. Requirements for Energy Control Procedures 2

Energy control procedures are more than a set of instructions, but rather a thorough plan for the control of energy.

In any one procedure, you can see its scope and purpose; who is authorized to perform various procedural tasks; the rules and techniques used to control hazardous energy and keep impacted workers safe; and procedural steps for shutting down, isolating, blocking, and securing a machine or equipment; placing, removing, and, when there is a personnel change, transferring lockout/tagout devices; and returning equipment back to operational status when the job is complete.

The procedure will also list requirements for testing to verify that a machine or equipment is de-energized and that lockout and block out are effective.

Slide 36. Periodic Inspections



The next required component of an energy control program is periodic inspections, also called audits.

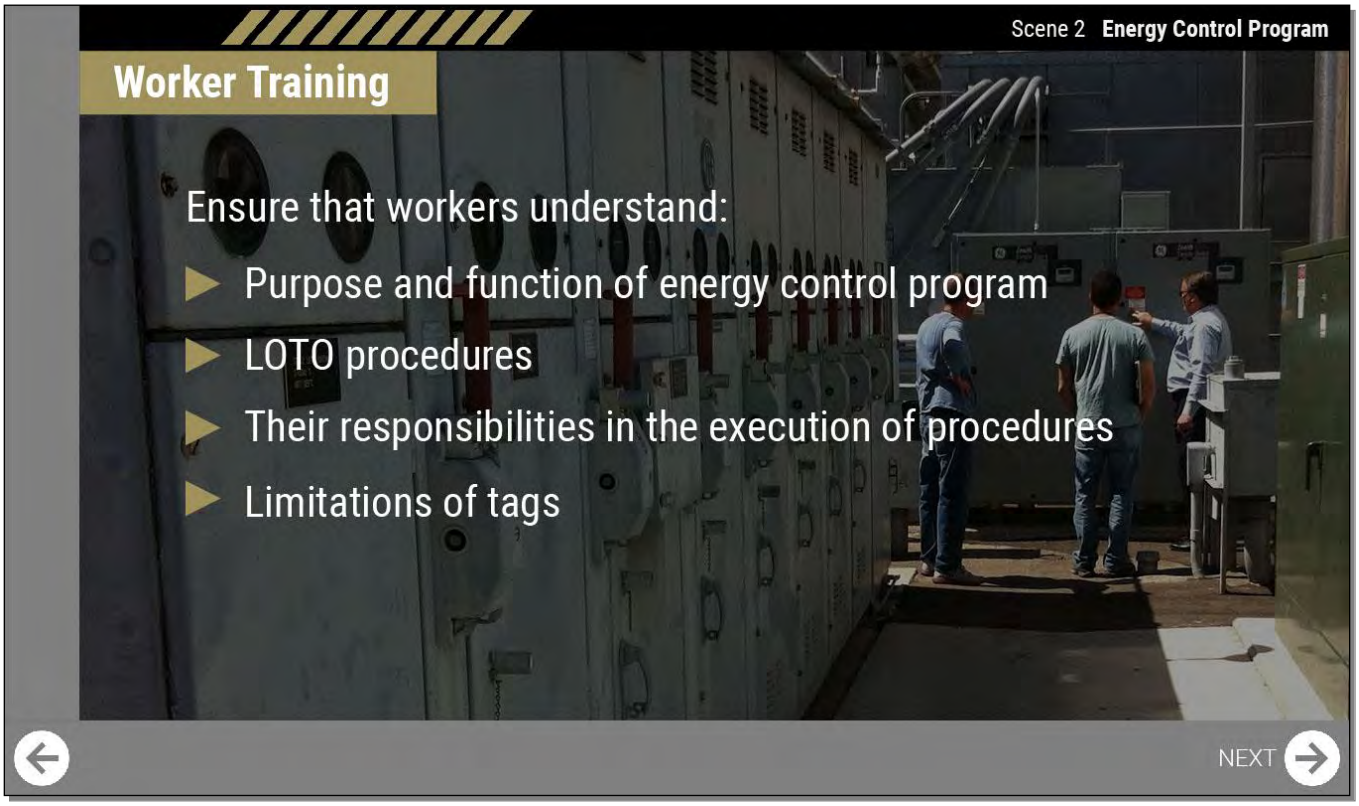
Periodic inspections are done at intervals not to exceed one year by an authorized worker other than the person using the energy control procedure.

The inspector identifies and corrects deficiencies in the energy control program, individual procedures, worker execution of procedures, and worker training.

They will review the lockout and tagout responsibilities with each authorized and affected worker using that procedure, and, for electrical equipment, observe at least one lockout/tagout procedure in progress.

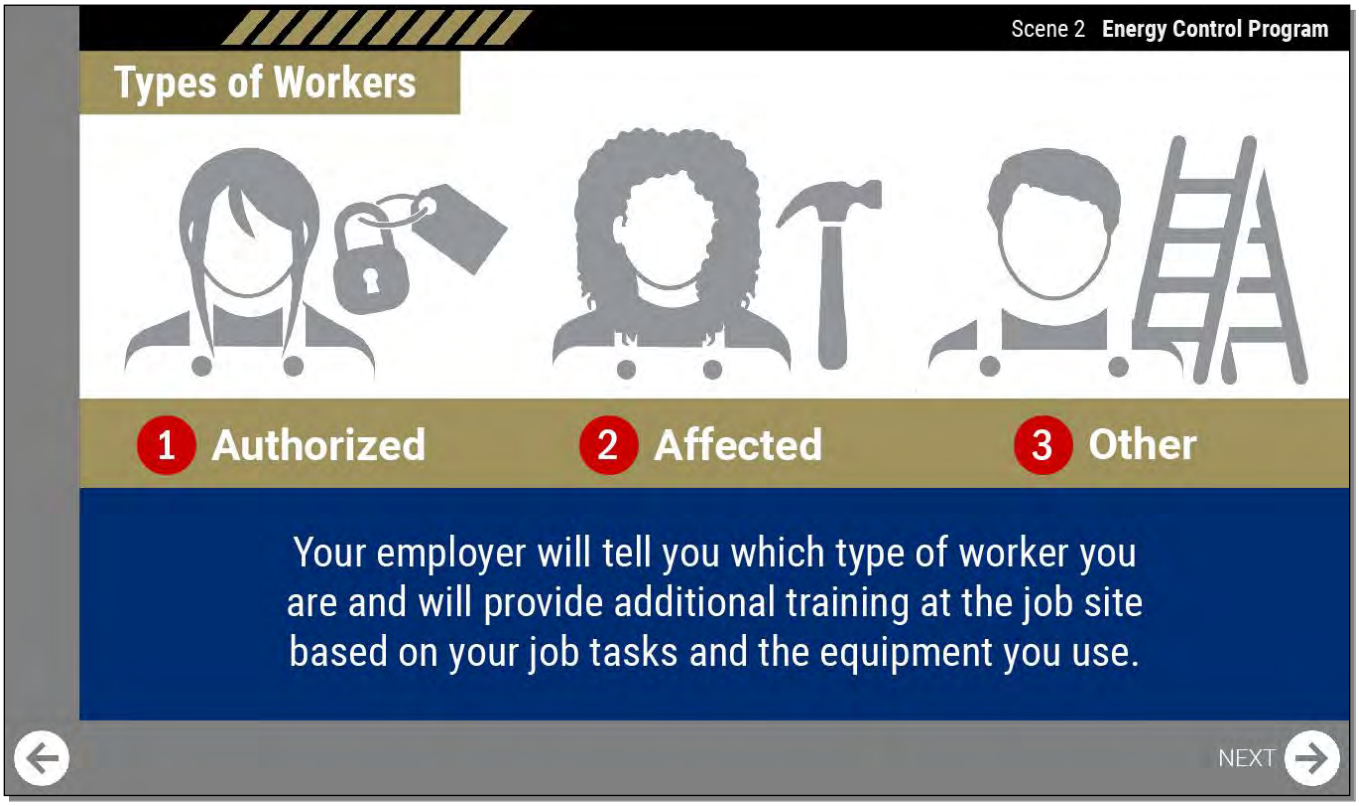
The date of the inspection, the names of machines and equipment inspected, as well as the names of all workers involved, including their own, must be recorded.

Slide 37. Worker Training



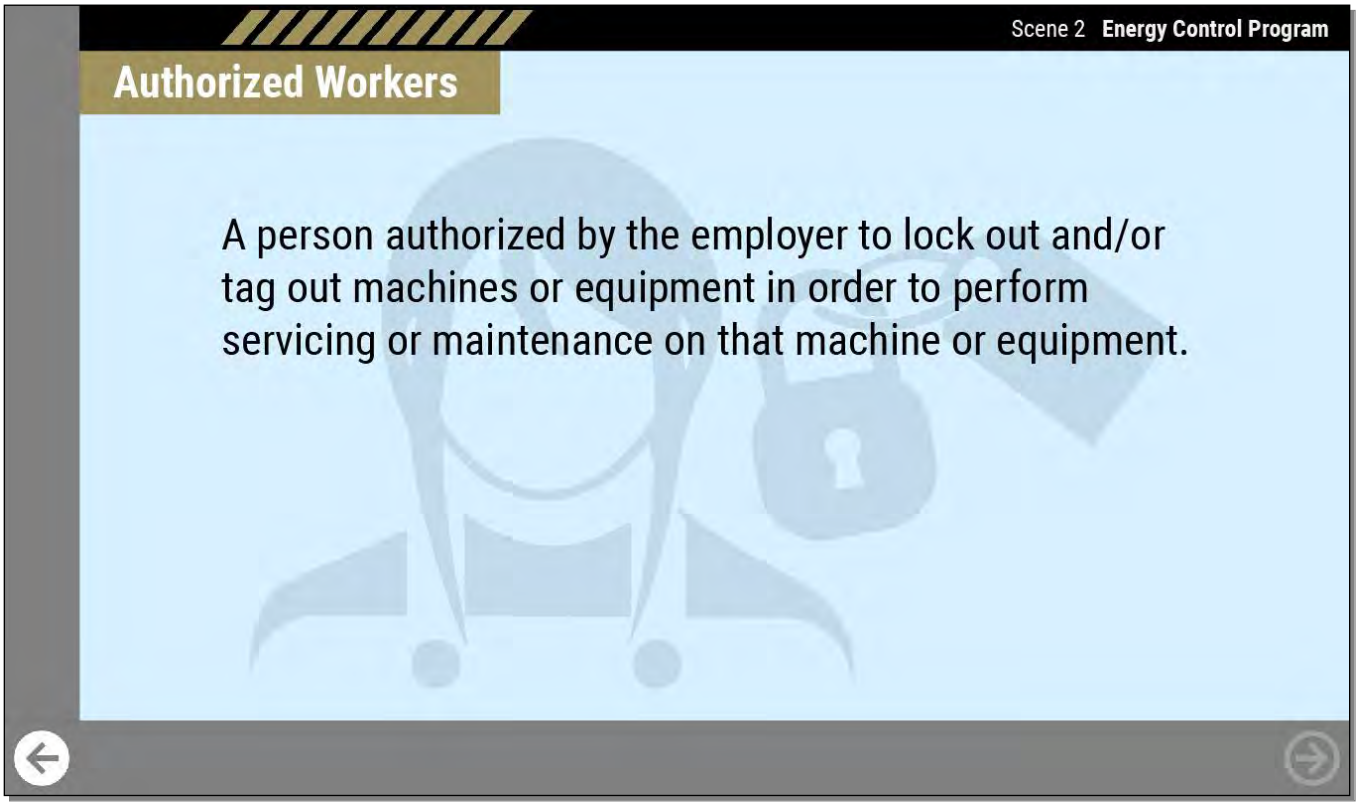
The goal of worker training is to ensure that everyone involved in or impacted by lockout/tagout understands the purpose and function of the energy control program, lockout/tagout procedures, their own responsibilities in the execution of these procedures, and the limitations of tags.

Slide 38. Types of Workers



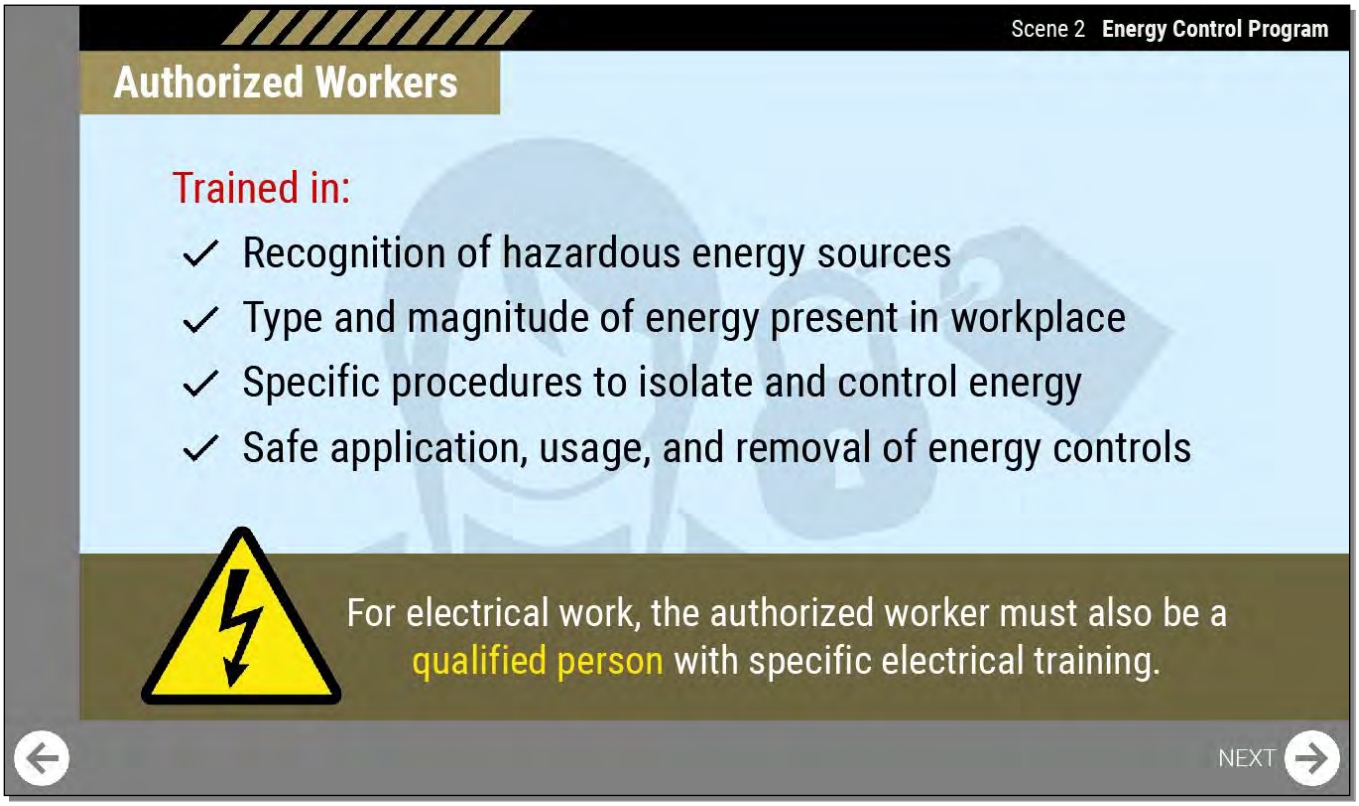
With regard to lockout/tagout, there are three different types of workers: authorized, affected, and other. Your employer will tell you which type of worker you are and will provide additional training at the job site based on your job tasks and the equipment you use.

Slide 39. Authorized Worker 1



An *authorized worker* is a person authorized by the employer to lock out and/or tag out machines or equipment in order to perform servicing or maintenance on that machine or equipment.

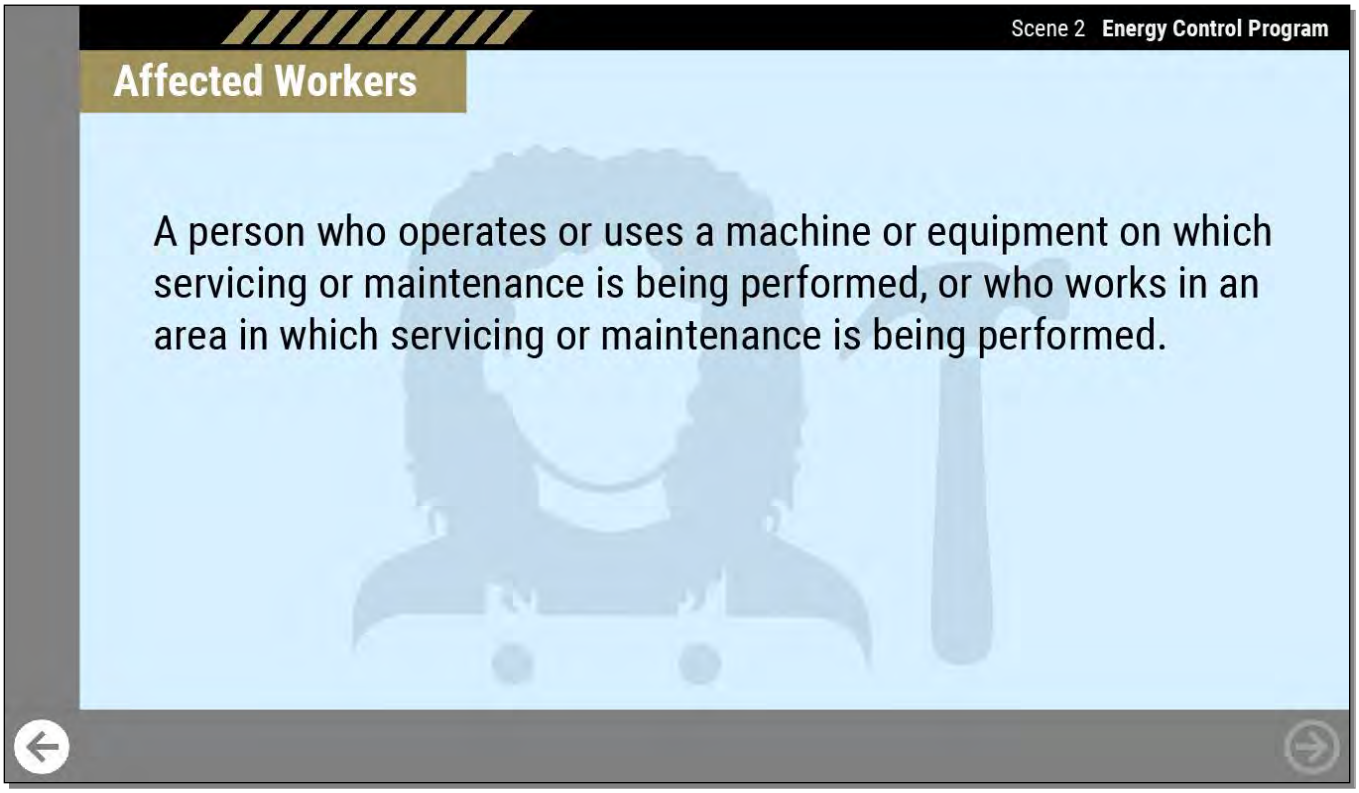
Slide 40. Authorized Worker 2



Authorized workers must be trained in the recognition of hazardous energy sources, the type and magnitude of energy present in the workplace, specific procedures to isolate and control energy, and the methods and means to safely apply, use, and remove energy controls.

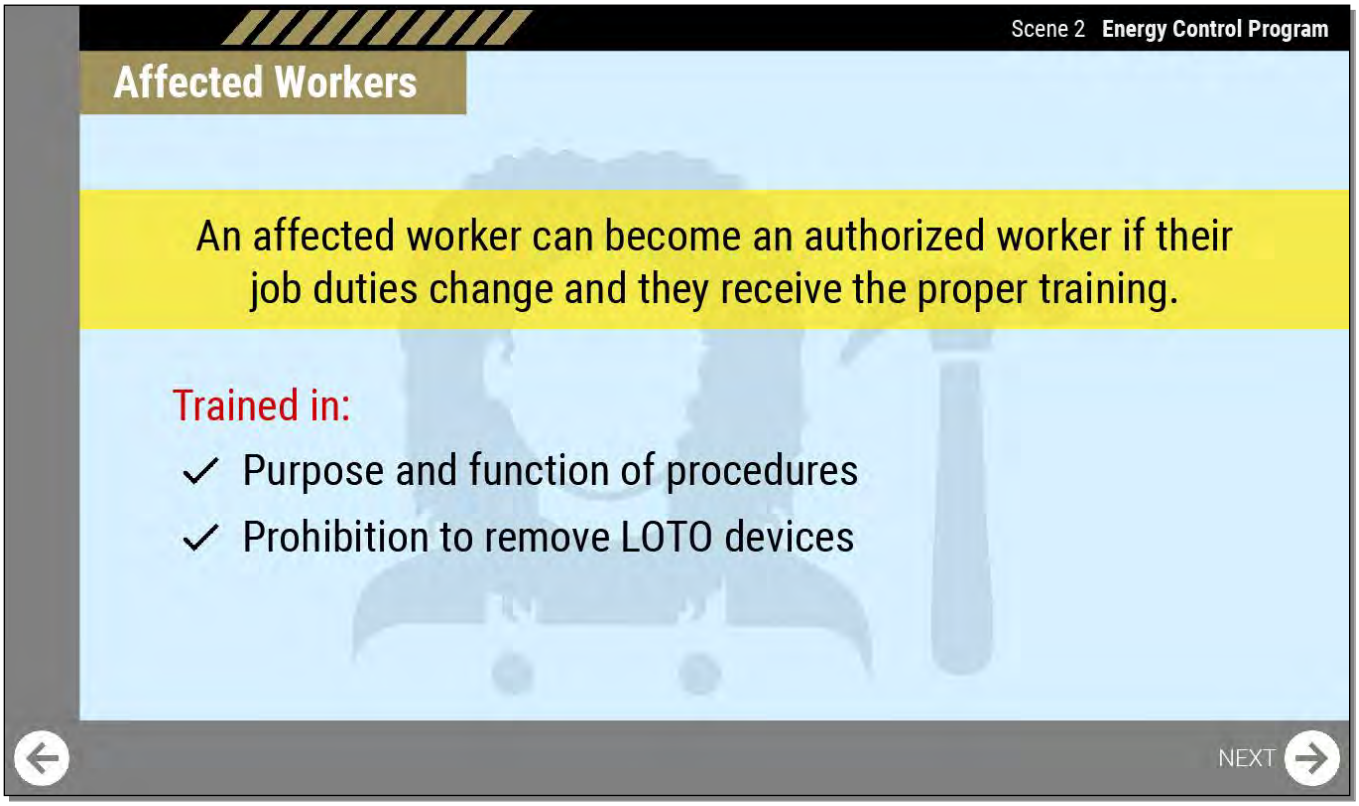
For lockout/tagout performed for electrical work, the authorized worker must also be a qualified person, meaning they have specific electrical training.

Slide 41. Affected Worker 1



An *affected worker* operates or uses a machine or equipment on which servicing or maintenance is being performed or simply works in an area in which servicing or maintenance is being performed.

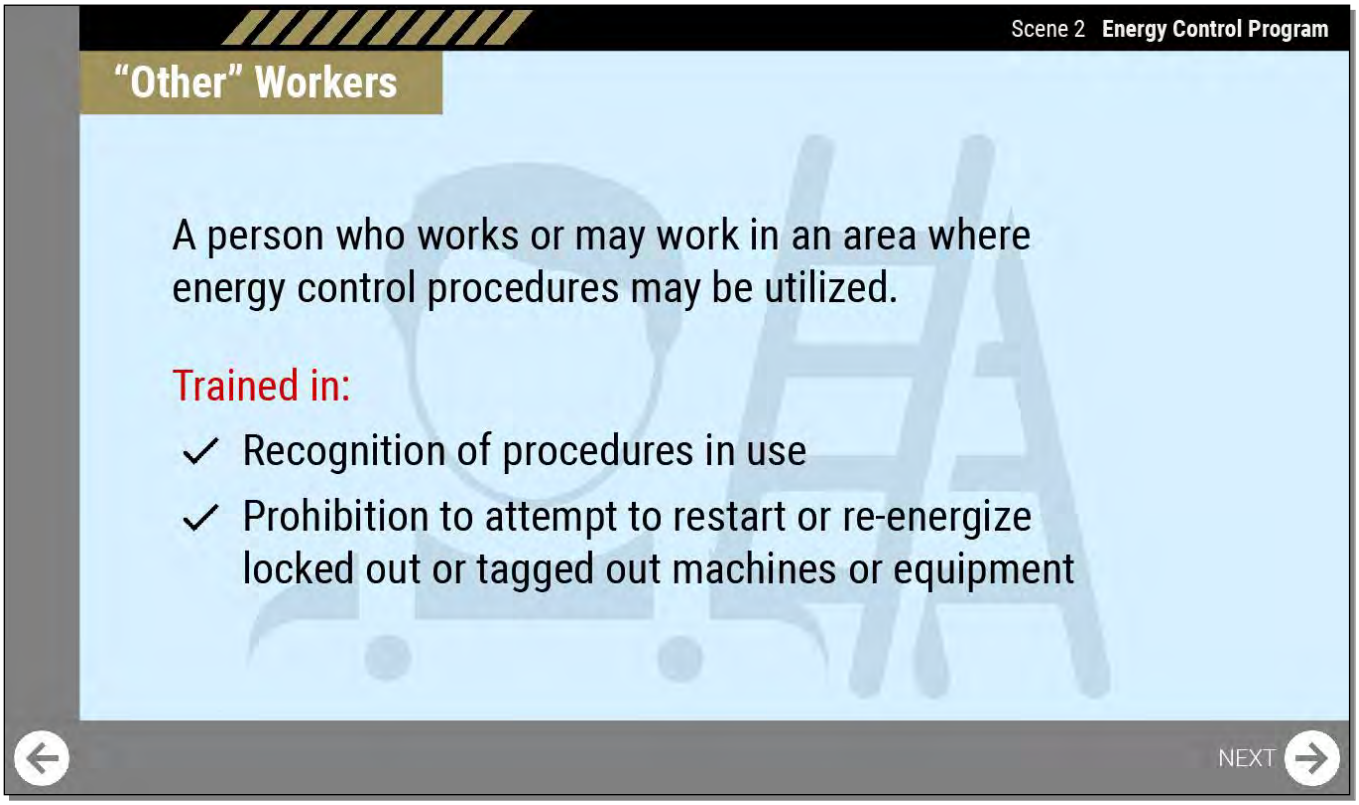
Slide 42. Affected Worker 2



An authorized worker may also be an affected worker, but an affected worker can only become an authorized worker if their job duties change to include servicing or maintenance and they receive the proper training.

Training topics for affected workers must include the purpose and function of energy control procedures and the prohibition to remove lockout/tagout devices.

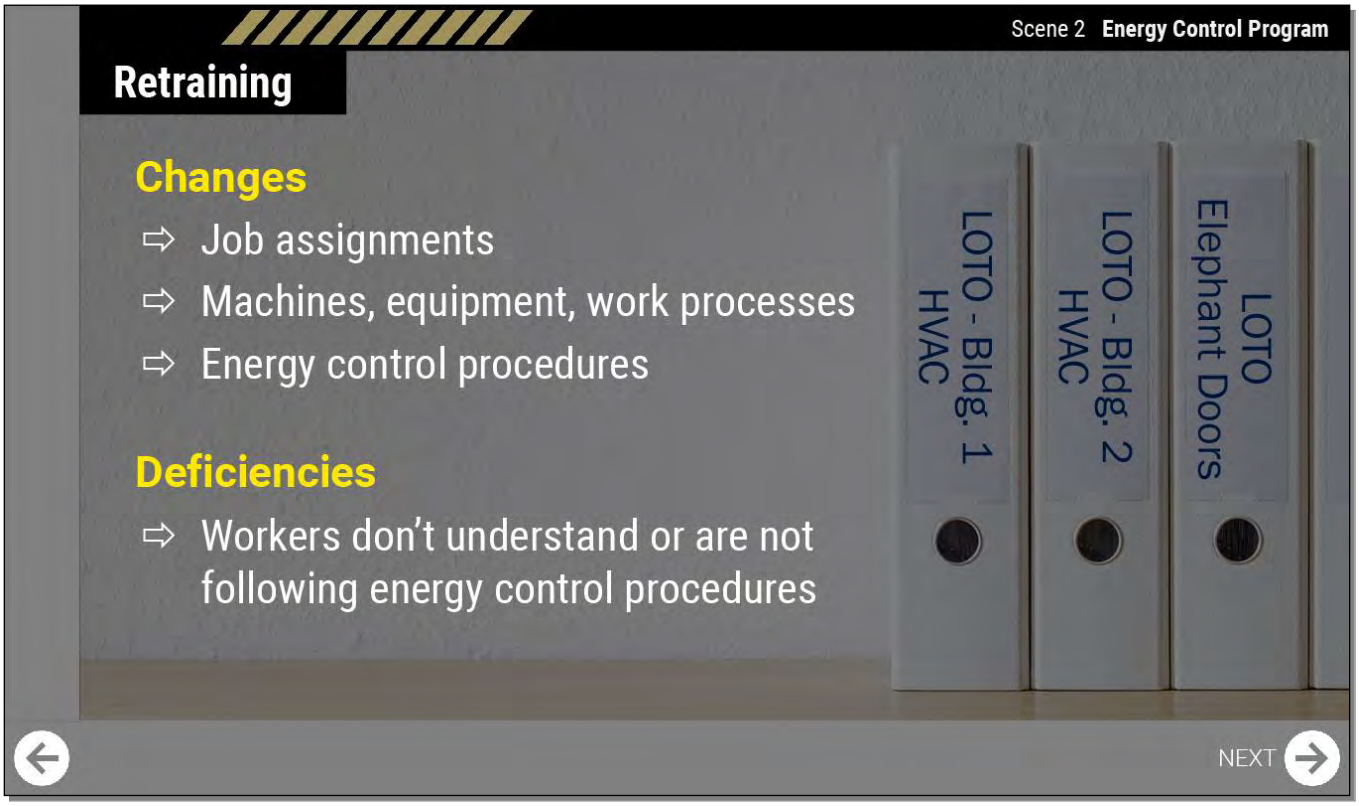
Slide 43. Other Worker



A worker classified as *"other"* works or may work in an area where energy control procedures may be utilized.

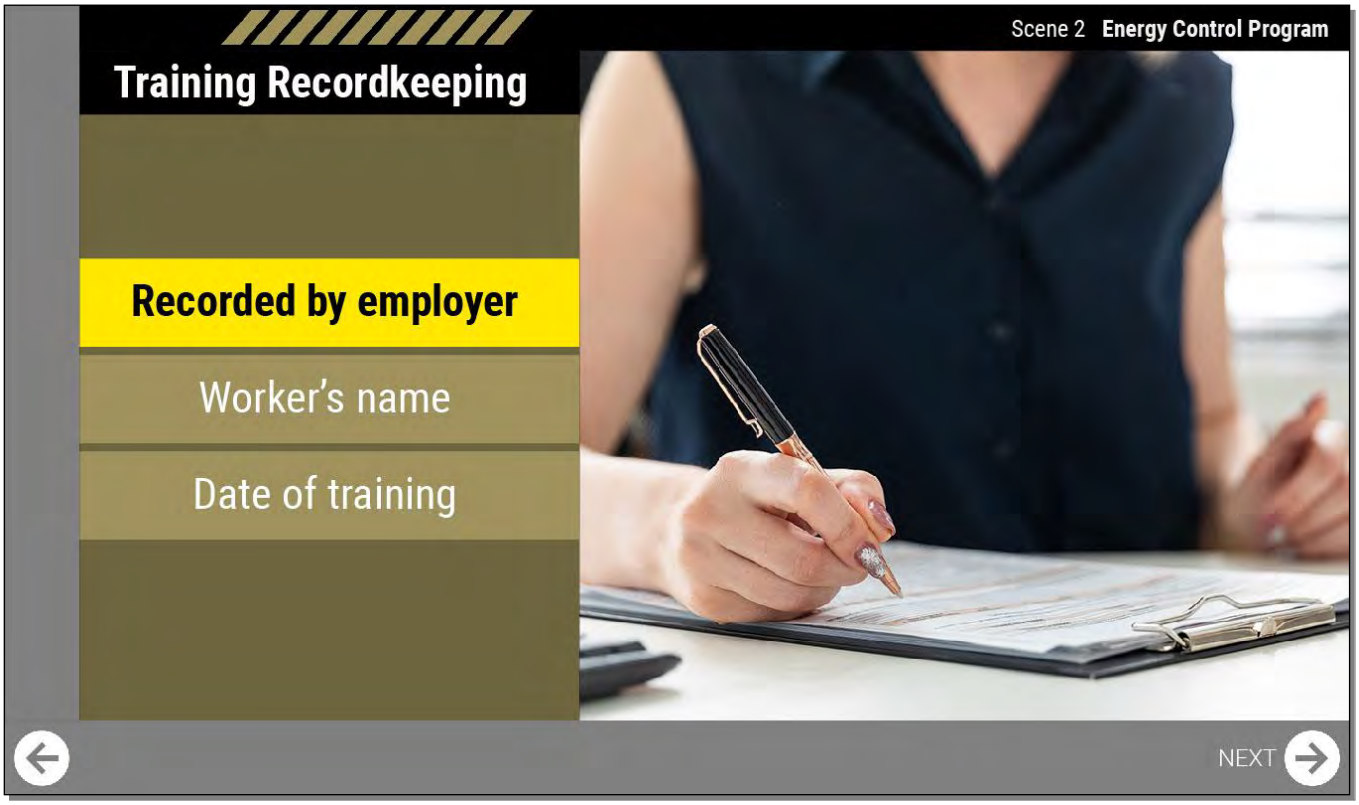
These workers must be trained to recognize when energy control procedures are in use and to never restart or re-energize machines or equipment that have been locked out or tagged out.

Slide 44. Retraining



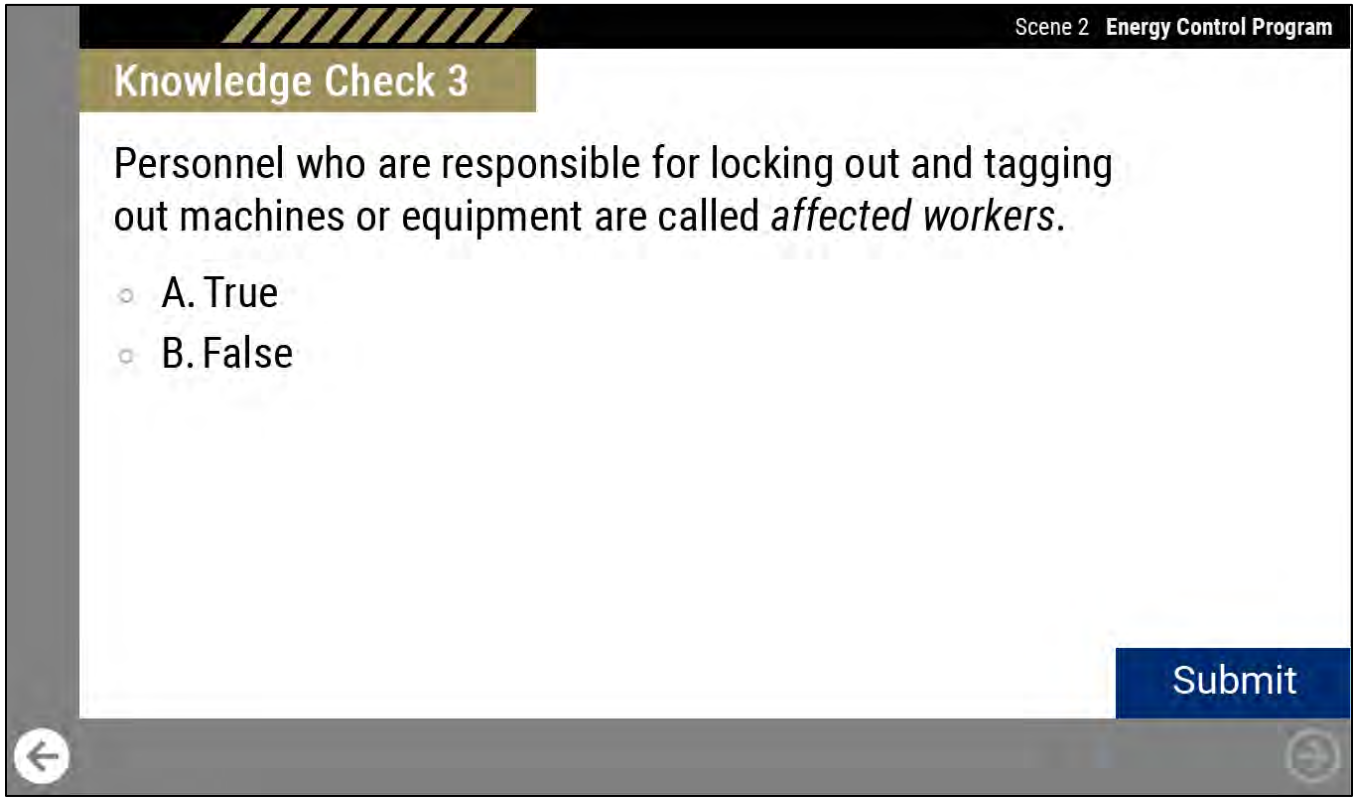
Retraining is required when there is a change in job assignments, machines, equipment, work processes, or energy control procedures or if workers do not understand or are not following energy control procedures.

Slide 45. Training Recordkeeping



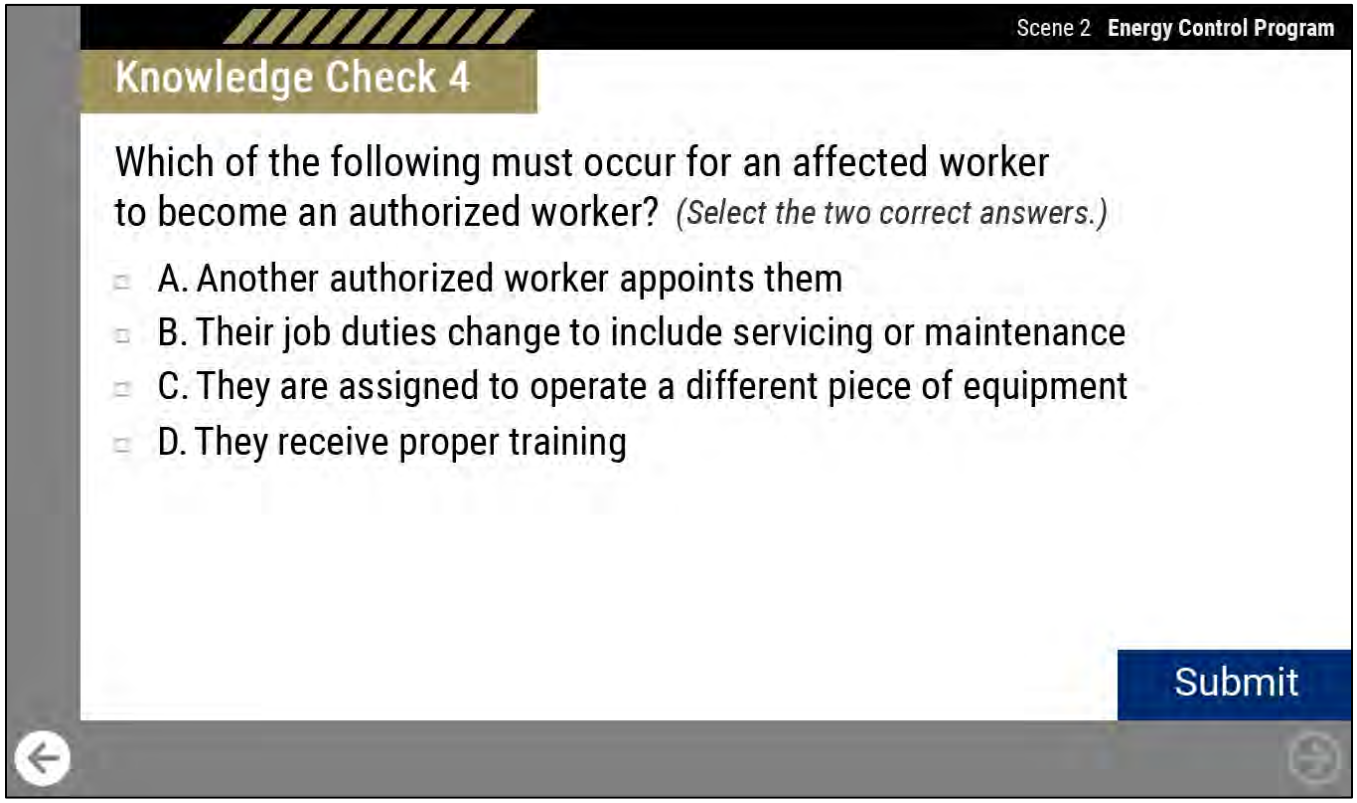
A confirmation of training is recorded by the employer and includes the worker's name and the date of training.

Slide 46. Knowledge Check 3

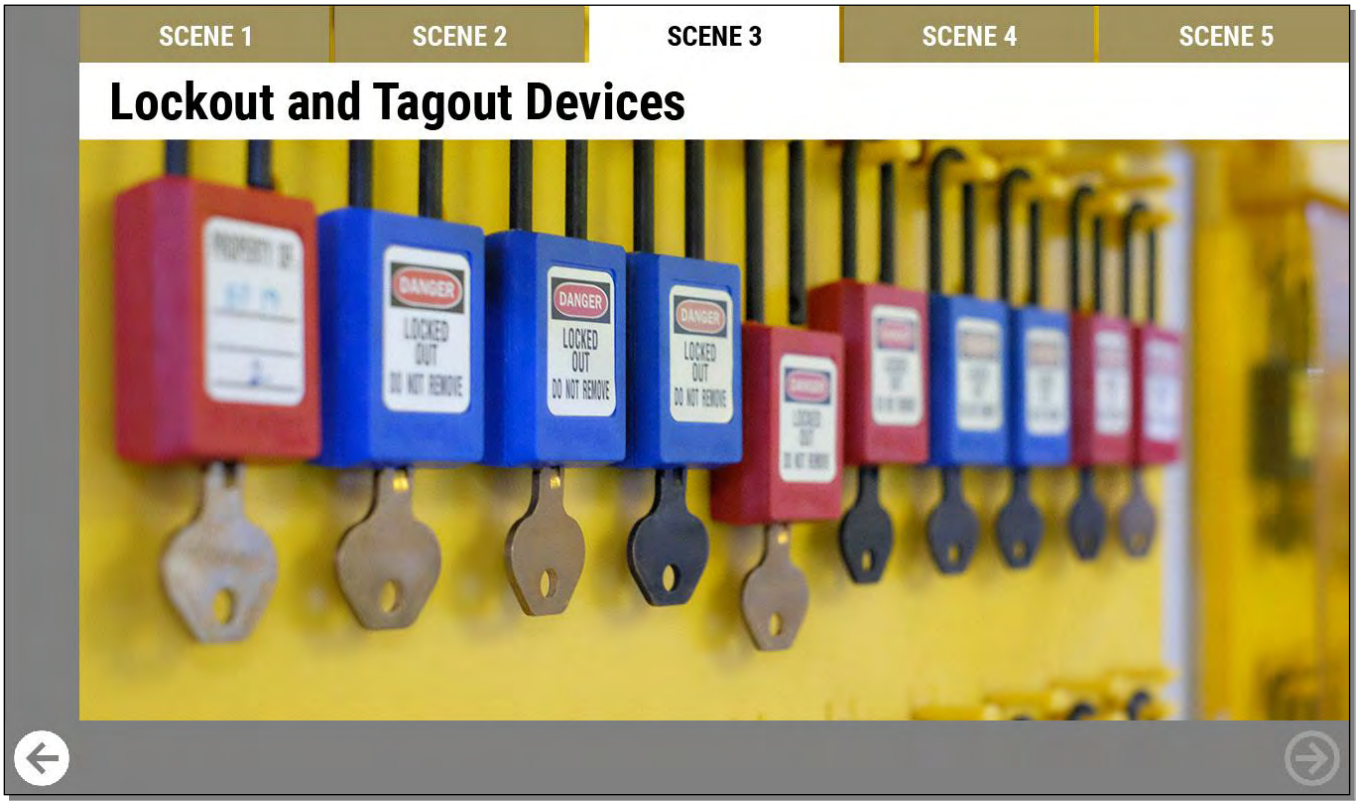


Okay. Let's check your knowledge.

Slide 47. Knowledge Check 4



Slide 48. SCENE 3 – LOCKOUT AND TAGOUT DEVICES

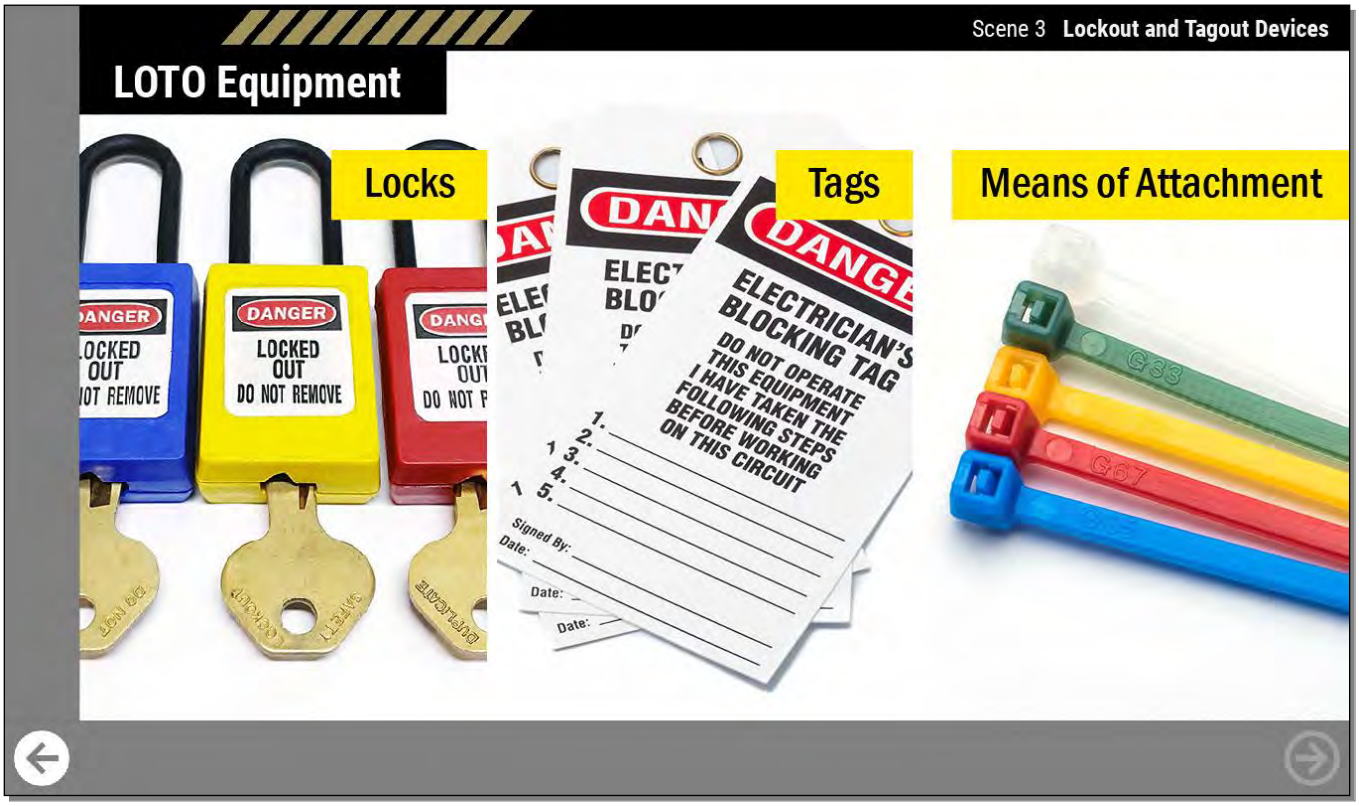


Scene Three, Lockout and Tagout Devices.

Slide 49. In This Scene

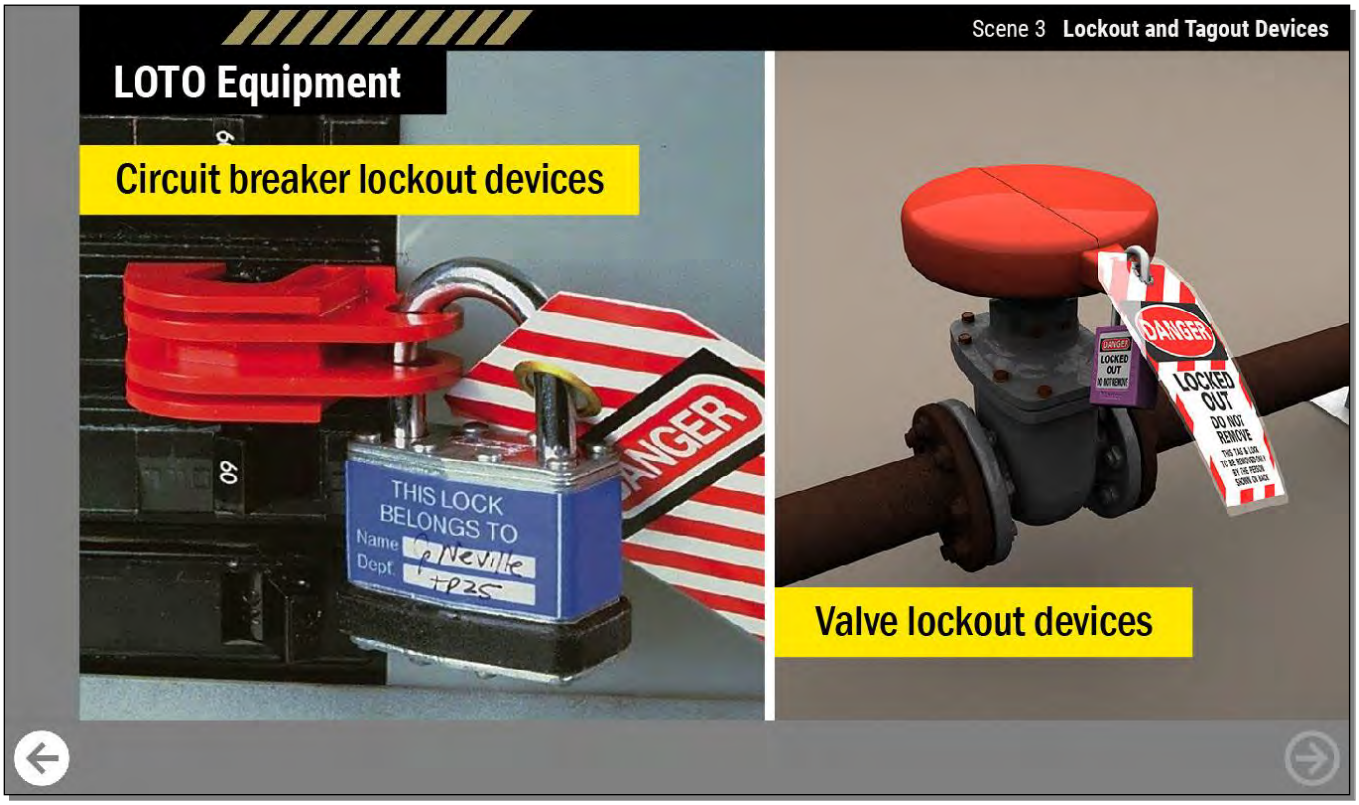
This scene talks about the requirements for lockout and tagout devices and tag warning messages.

Slide 50. LOTO Equipment 1



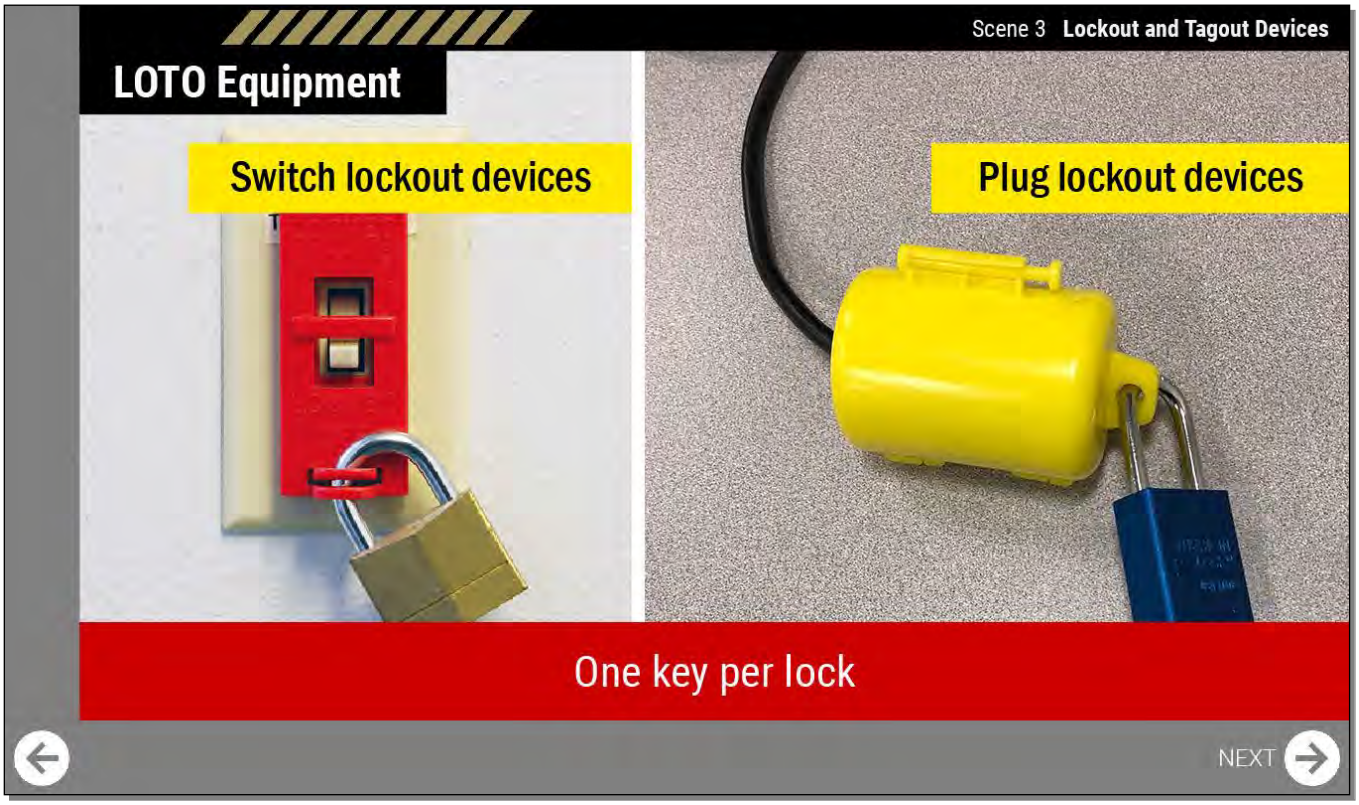
Some examples of lockout/tagout gear you may see or use include locks, tags, a tag's means of attachment,

Slide 51. LOTO Equipment 2



circuit breaker lockout devices, valve lockout devices,

Slide 52. LOTO Equipment 3



and wall switch and plug lockout devices.

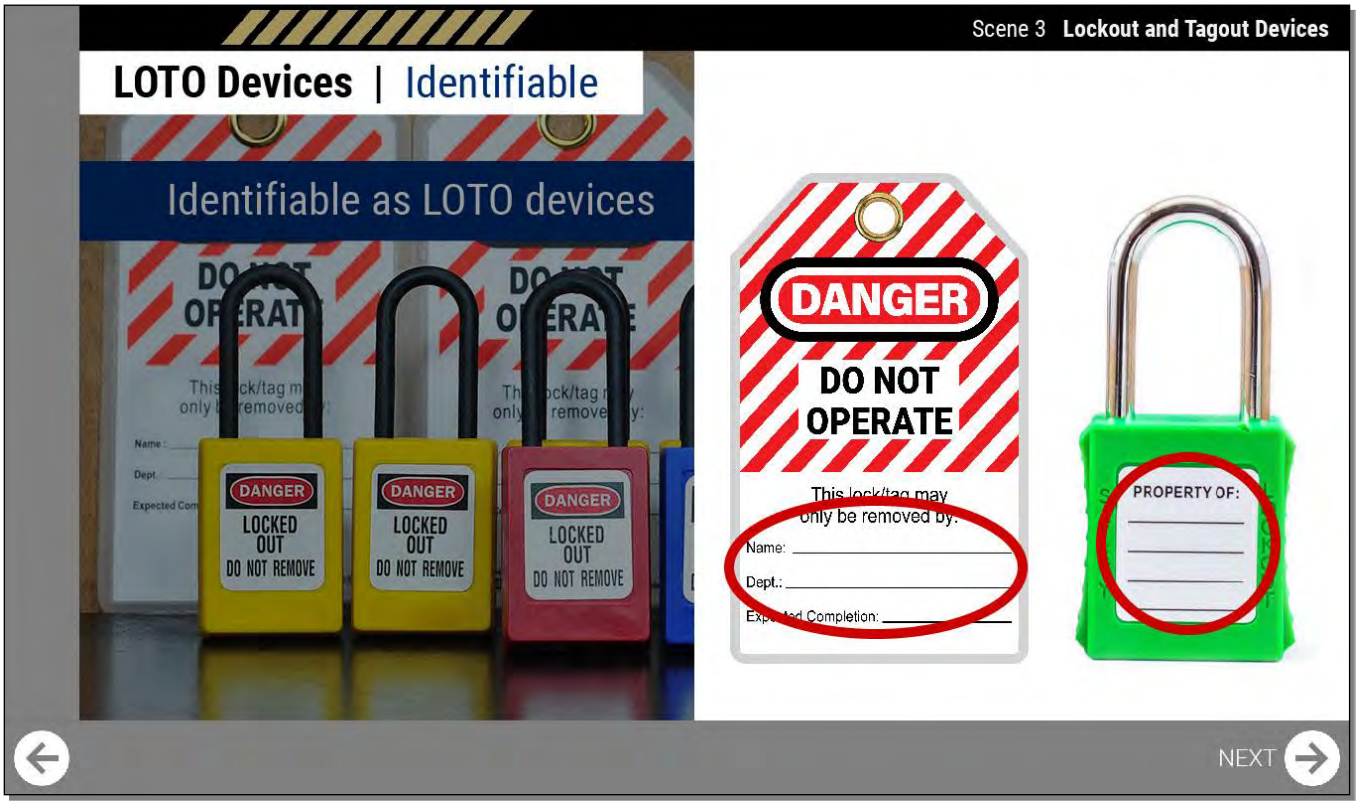
Remember, there should be only one key per lock.

The employer will provide all materials and hardware used in the lockout/tagout process.

Slide 53. LOTO Devices | Identifiable 1

Locks and tags used for lockout/tagout must be uniquely identifiable, meaning that they can't look like any other type of lock or tag used on site. They must also identify the authorized worker who applied them.

Slide 54. LOTO Devices | Identifiable 2

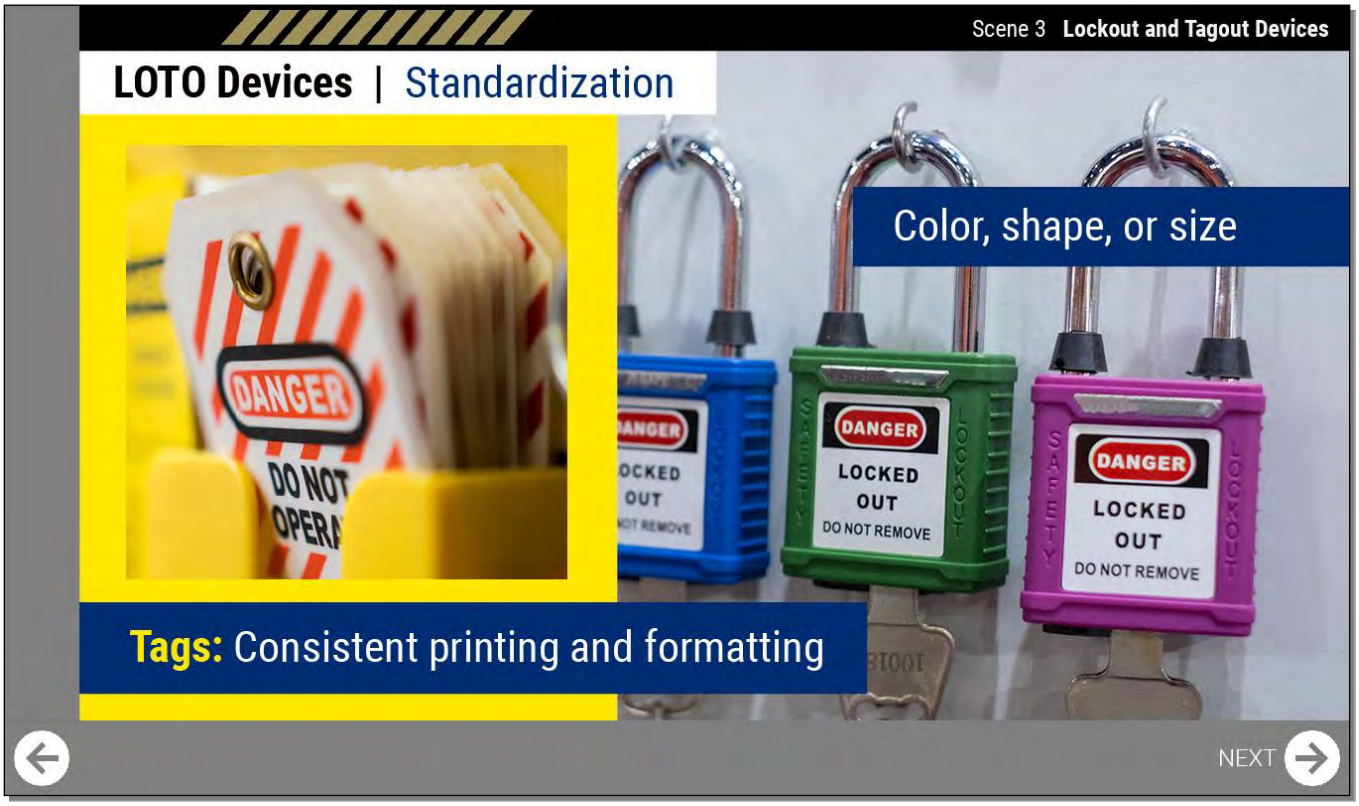


A tag will have a place to record the worker's name. Many locks will have a place for the worker's name, but it is not required as long as the lock is used with a tag. We'll talk more about this in the next scene.

Slide 55. LOTO Devices | Use

The devices specified for lockout/tagout are to be used at a work site only for the control of energy. For example, a lock brought from home cannot be used for lockout/tagout. And, lockout/tagout devices cannot be used for any other purpose besides lockout/tagout. So, an official lockout/tagout device cannot be put on a personal toolbox or locker.

Slide 56. LOTO Devices | Standardization

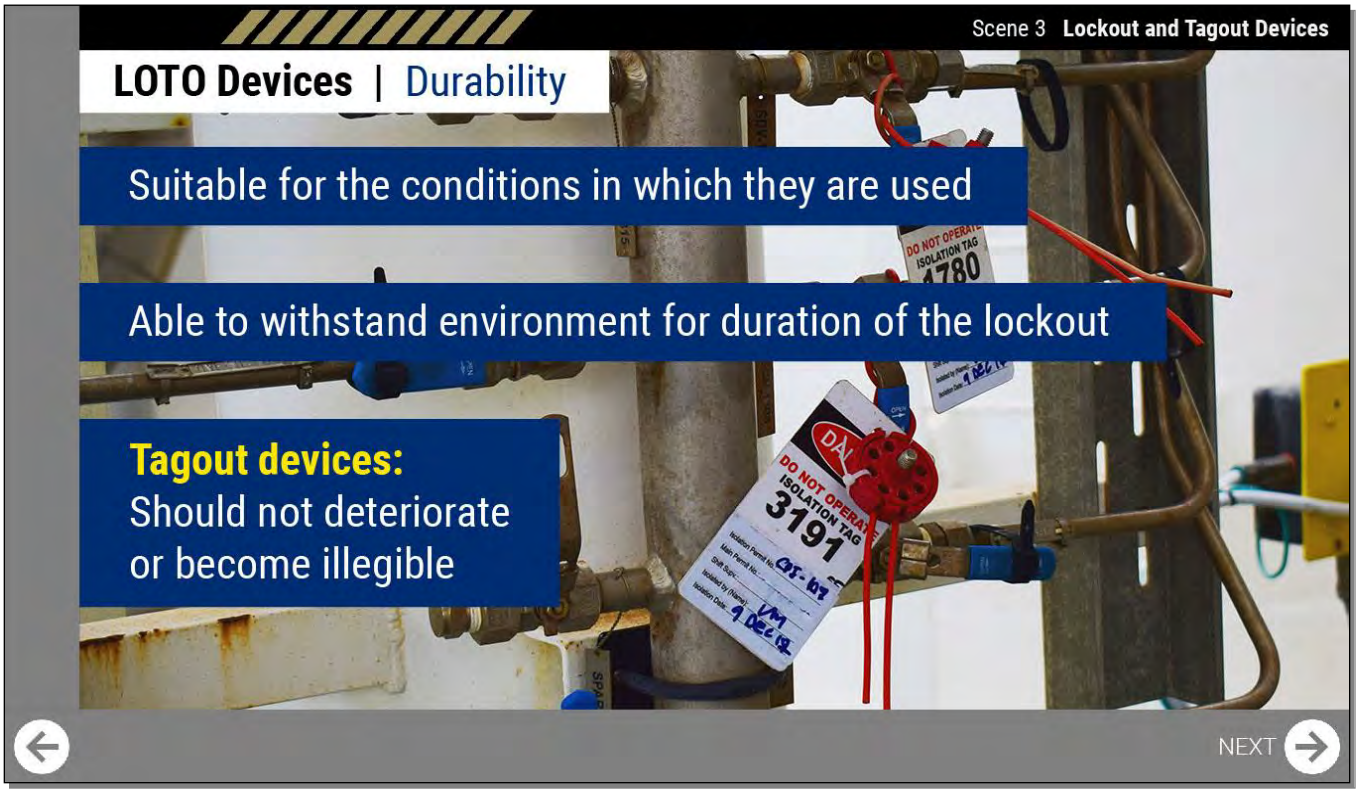


Next, the devices must have some form of standardization in terms of color, shape, or size.

Tags should also have a consistent style of printing and formatting.

It is up to the employer to decide how standardization will be implemented on the job site.

Slide 57. LOTO Devices | Durability



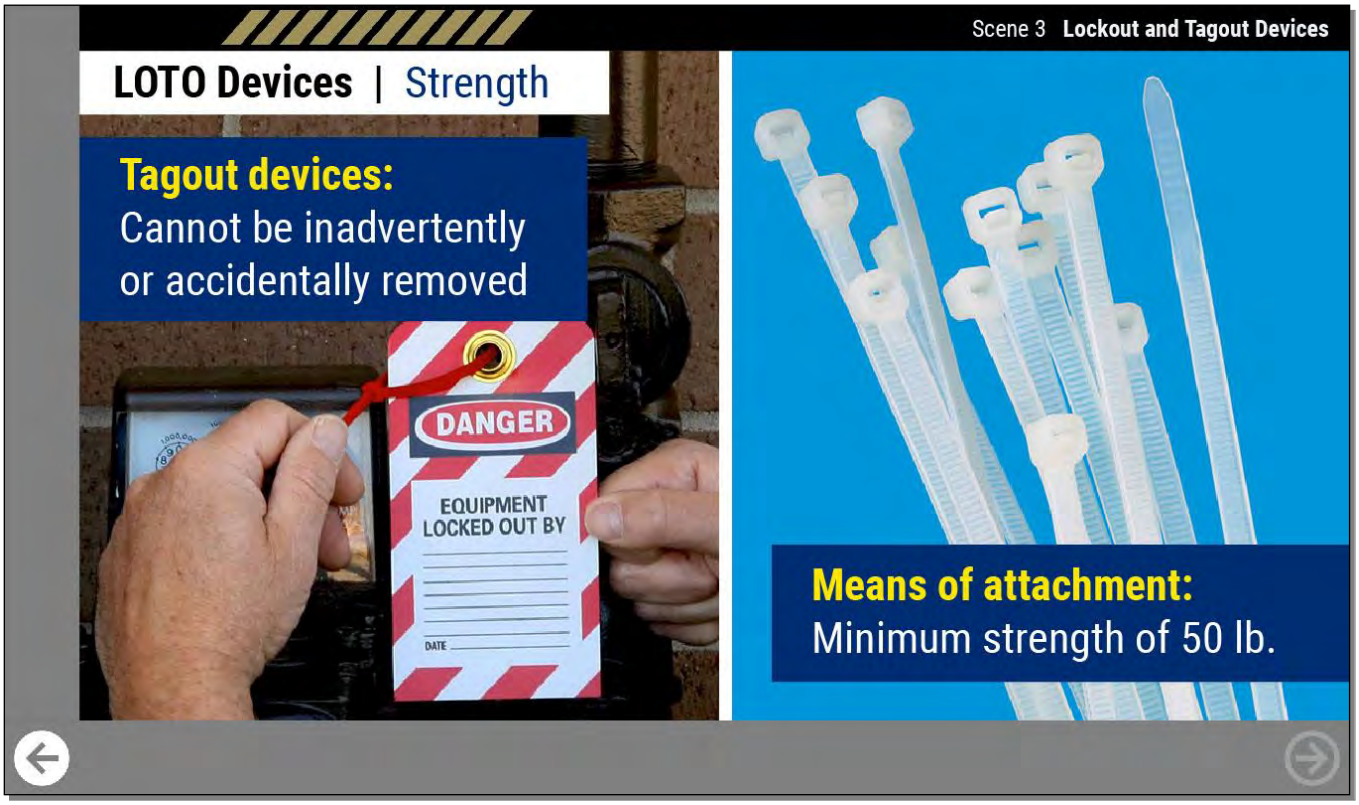
Lockout and tagout devices must be suitable for the conditions in which they are used such as severe weather, excessive heat or cold, wet or damp locations, or corrosive environments and must be able to withstand the environment for the maximum period of time usage is expected.

Environmental conditions should not cause the tagout device to deteriorate or the message to become illegible.

Slide 58. LOTO Devices | Strength 1

Lockout devices need to be strong enough so that they cannot be removed without using excessive force or specialized tools such as bolt cutters.

Slide 59. LOTO Devices | Strength 2



Tagout devices need to be strong enough so that they cannot be inadvertently or accidentally removed. A tag's means of attachment must have a minimum unlocking strength of no less than fifty pounds.

Slide 60. A Tag's Means of Attachment

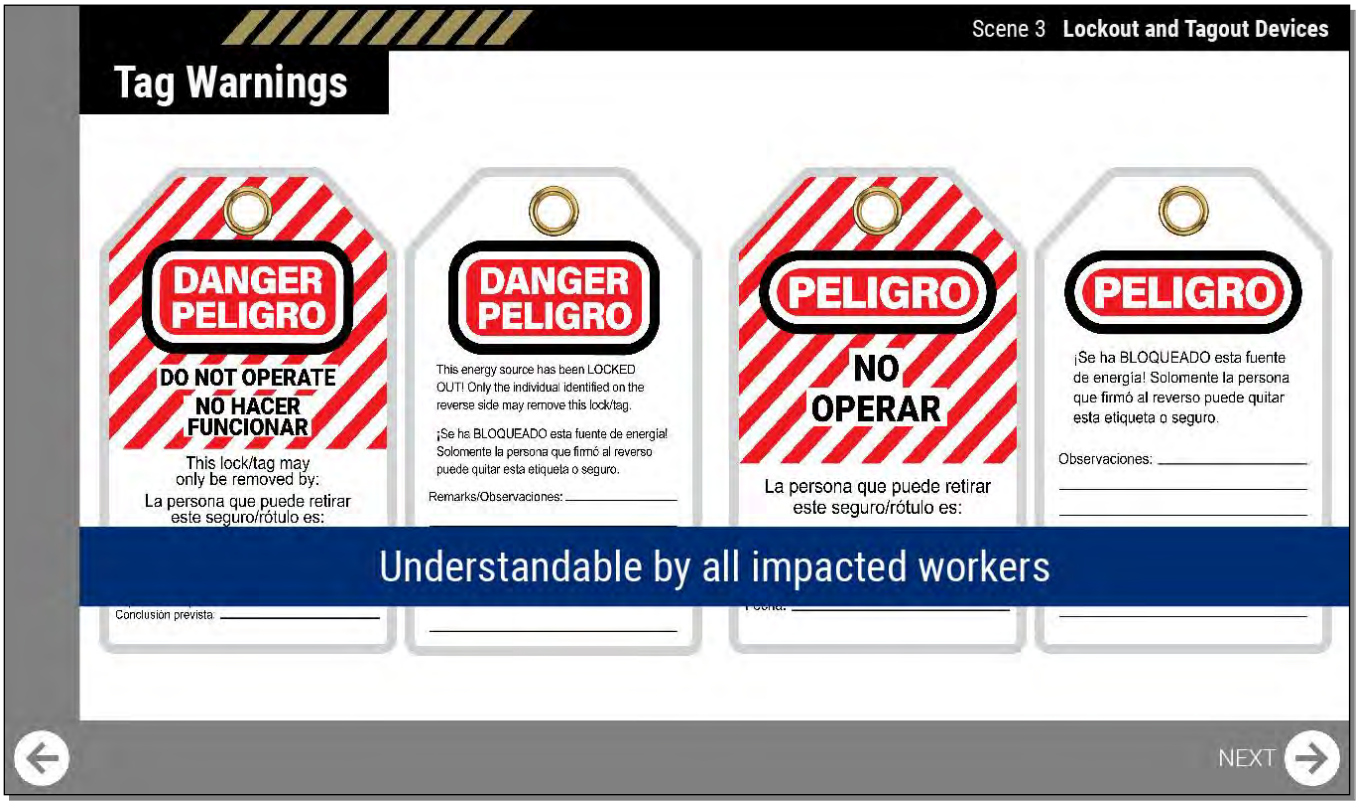
It also needs to be non-reusable, non-releasable, attachable by hand, and self-locking.

A means of attachment is not always necessary. Many tags have grommets which hold the tag securely to the lock.

Slide 61. Tag Warnings 1

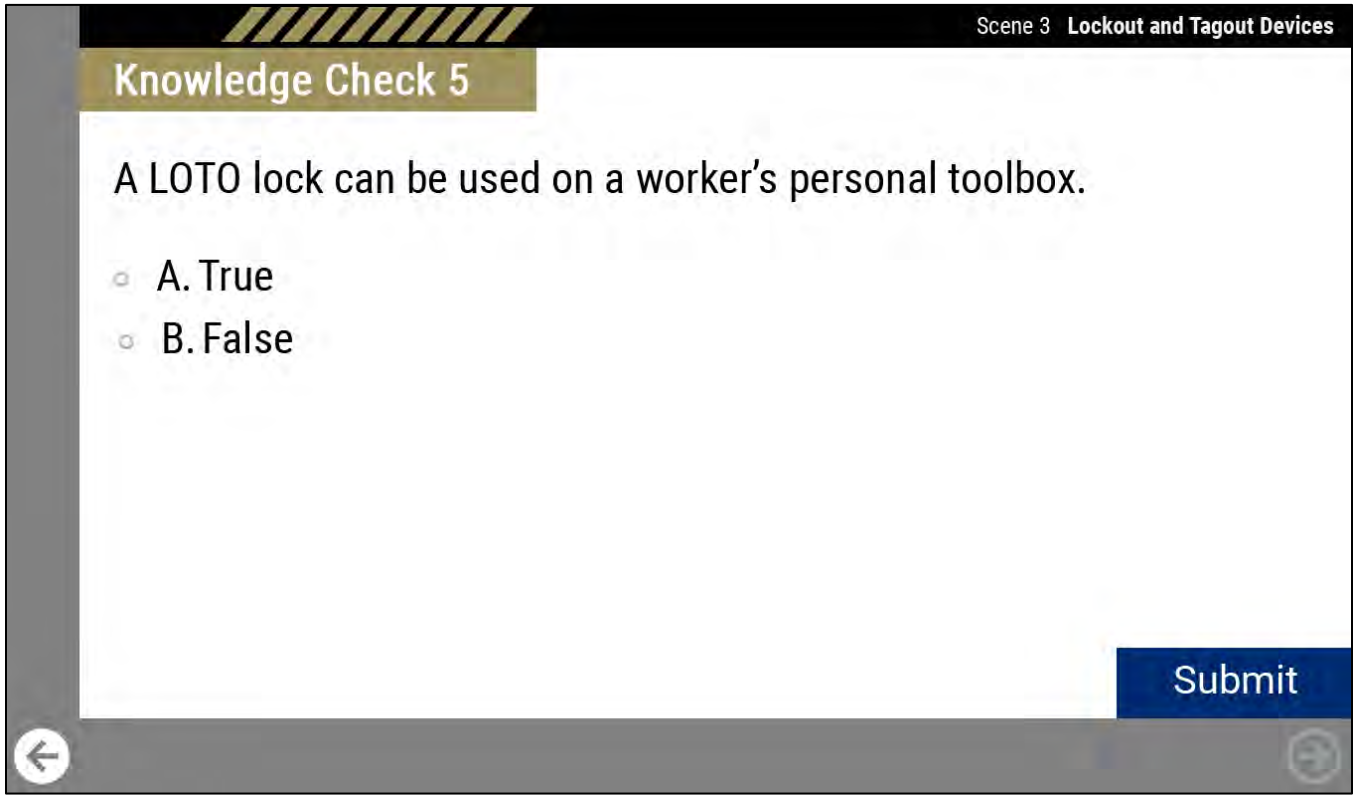
Tags are required to have written warnings that prohibit their removal and unauthorized operation of the energy-isolating device. The warning message can vary but should communicate a clear directive such as Do Not Operate, Do Not Start, Do Not Open, Do Not Close, or Do Not Energize.

Slide 62. Tag Warnings 2



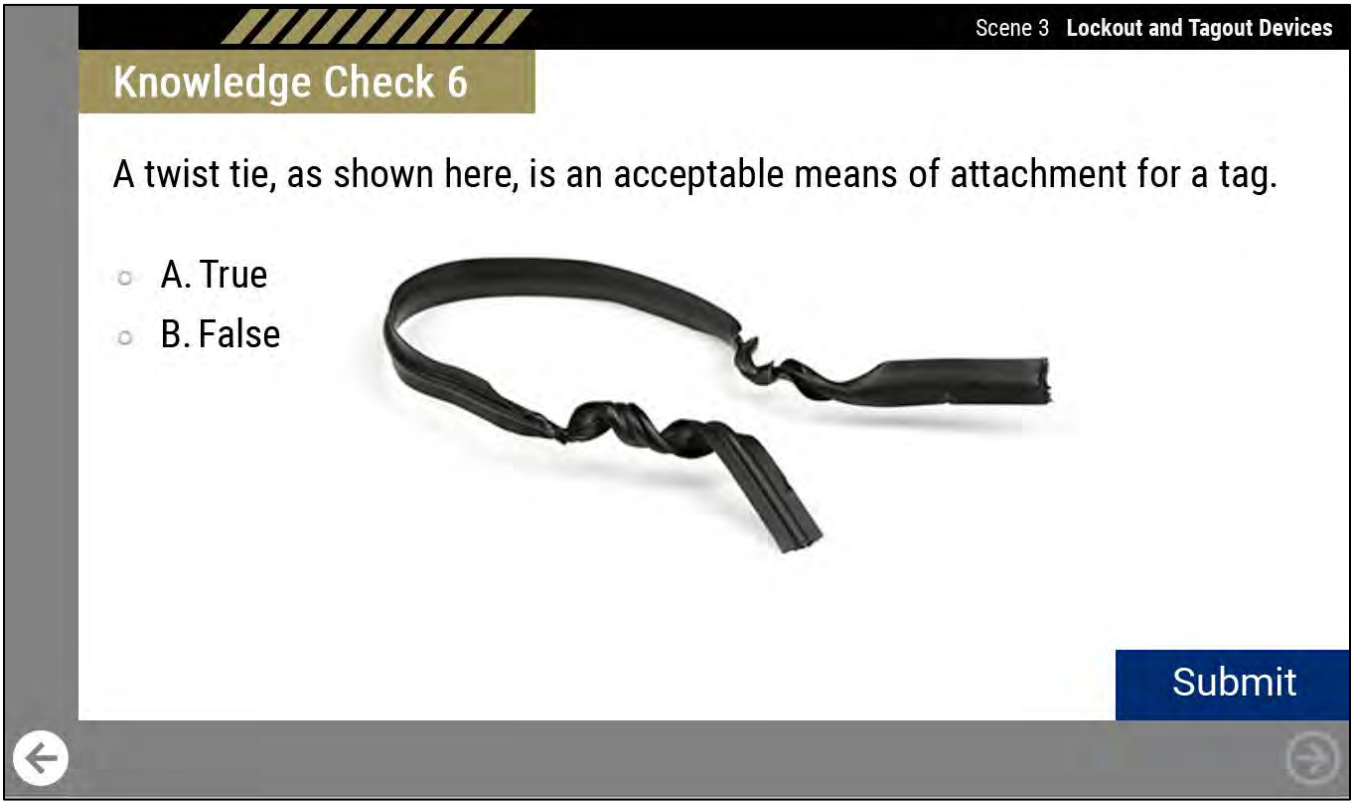
Tags must be understandable by all impacted workers. Depending on the workforce, tags in multiple languages may be needed.

Slide 63. Knowledge Check 5

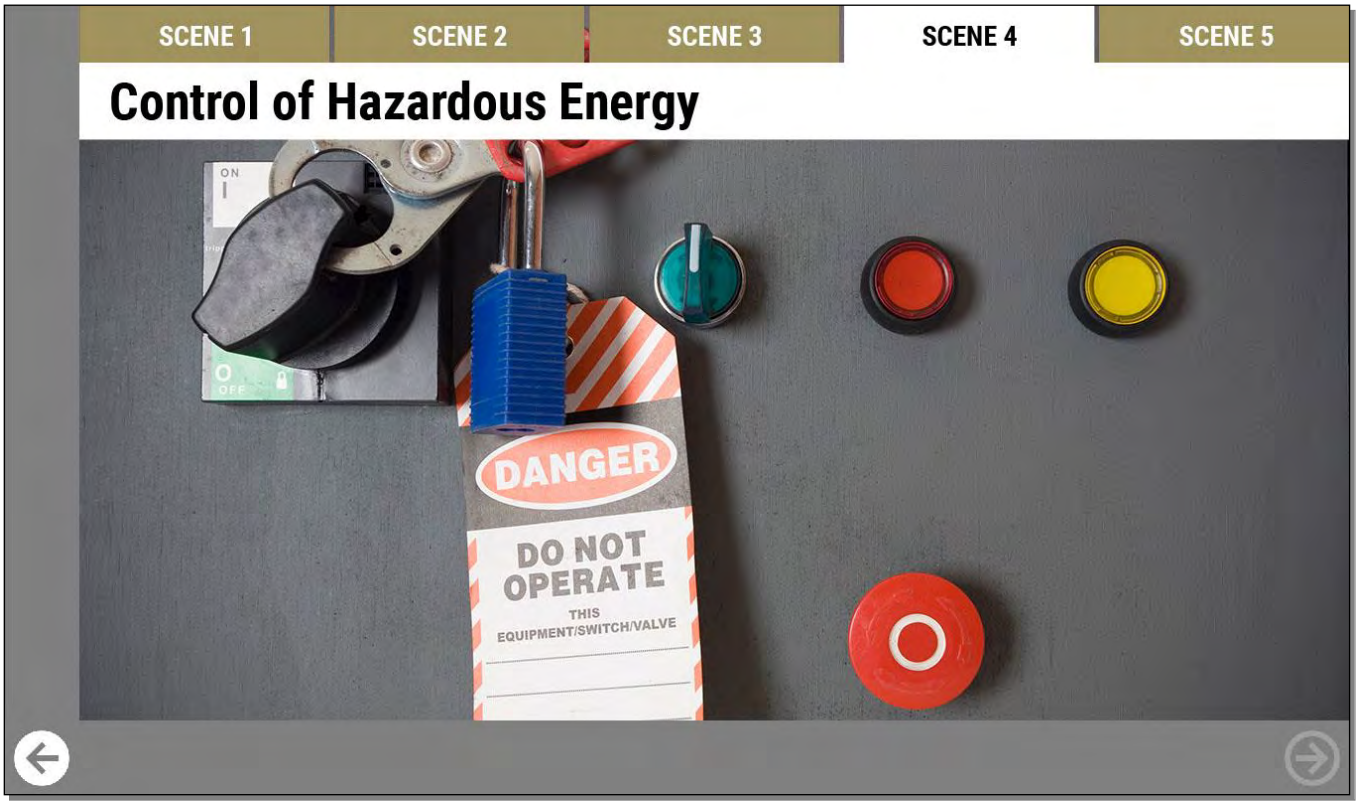


Let's do a couple of review questions.

Slide 64. Knowledge Check 6

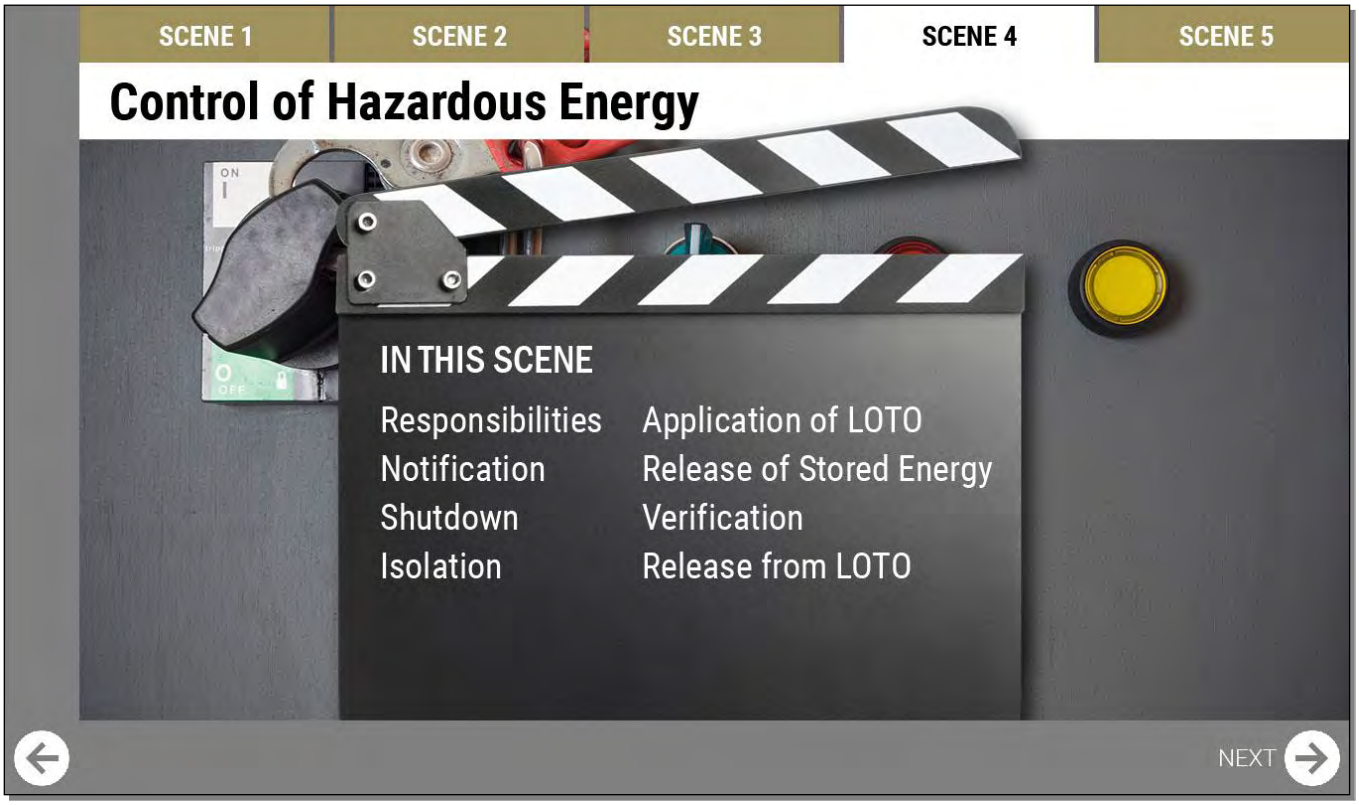


Slide 65. SCENE 4 – CONTROL OF HAZARDOUS ENERGY



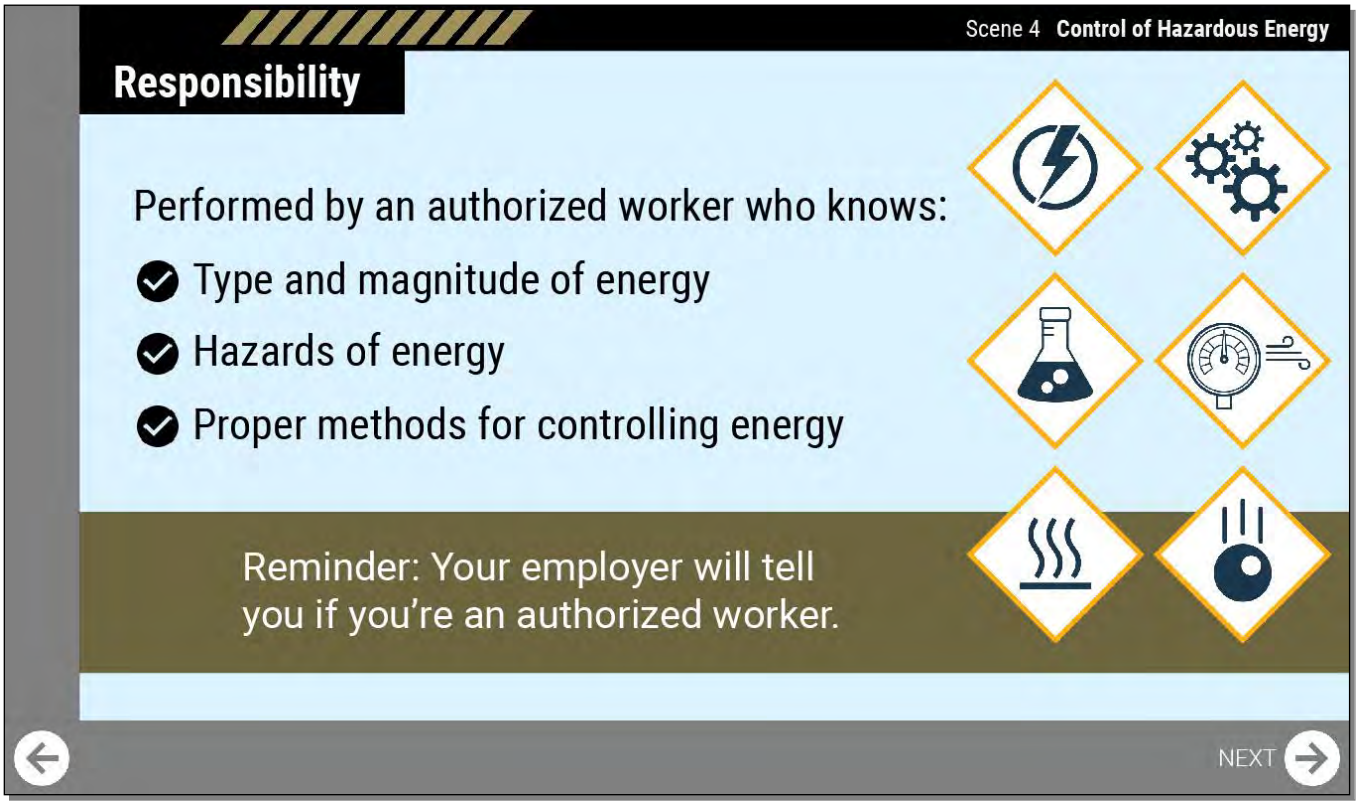
Scene Four, Control of Hazardous Energy.

Slide 66. In This Scene



In this scene, we'll talk about the different elements of energy control and the order in which to execute them. First, we'll look at who has responsibility for carrying out energy control procedures, and then we'll move into the rules for worker notification, machine and equipment shutdown and isolation, the application of lockout/tagout devices, the release of stored energy, the verification of energy isolation, and release from lockout/tagout.

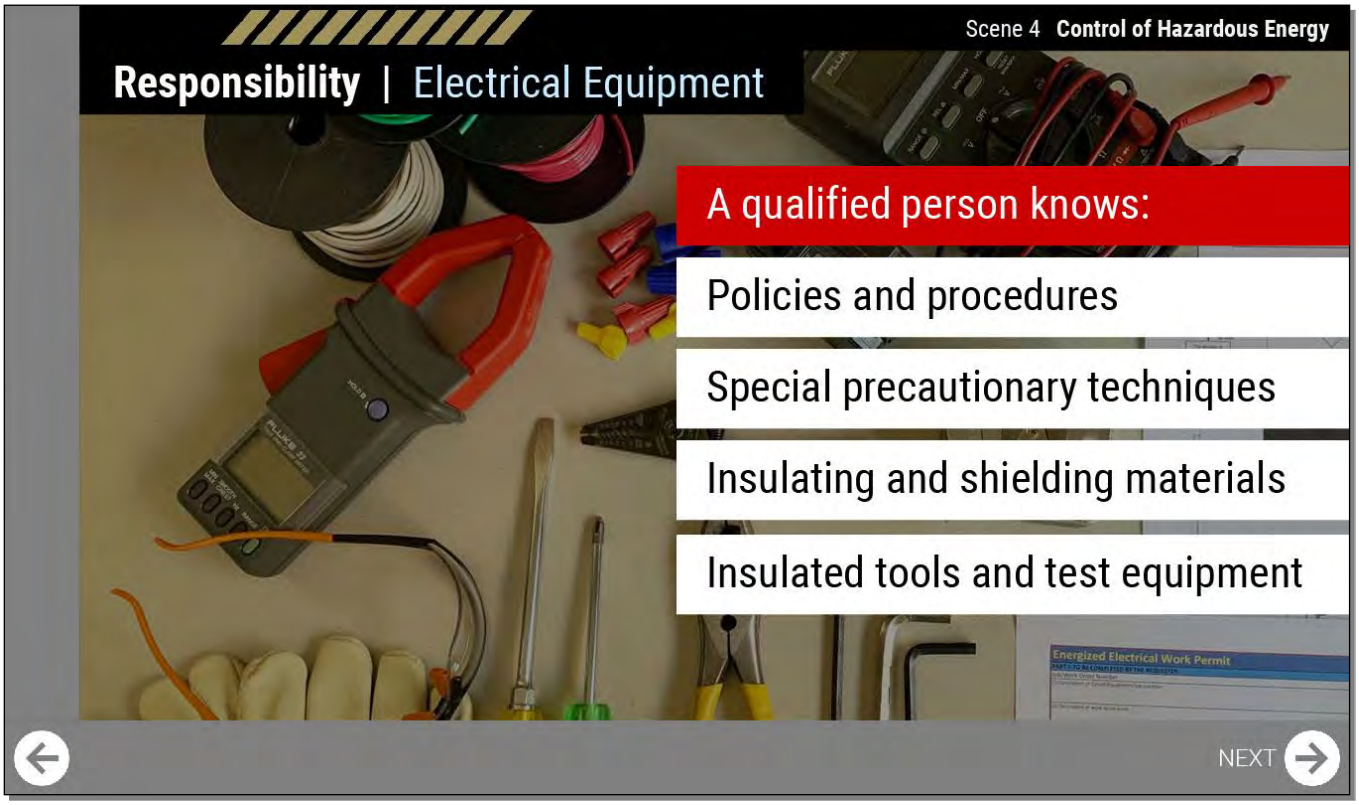
Slide 67. Responsibilities 1



Before energy control procedures begin, the authorized worker will have thorough knowledge of the type and magnitude of the energy to be controlled, the hazards of the energy, and the proper methods for controlling the energy.

Again, your employer will tell you if you're an authorized worker and will train you on lockout/tagout topics specific to authorized workers.

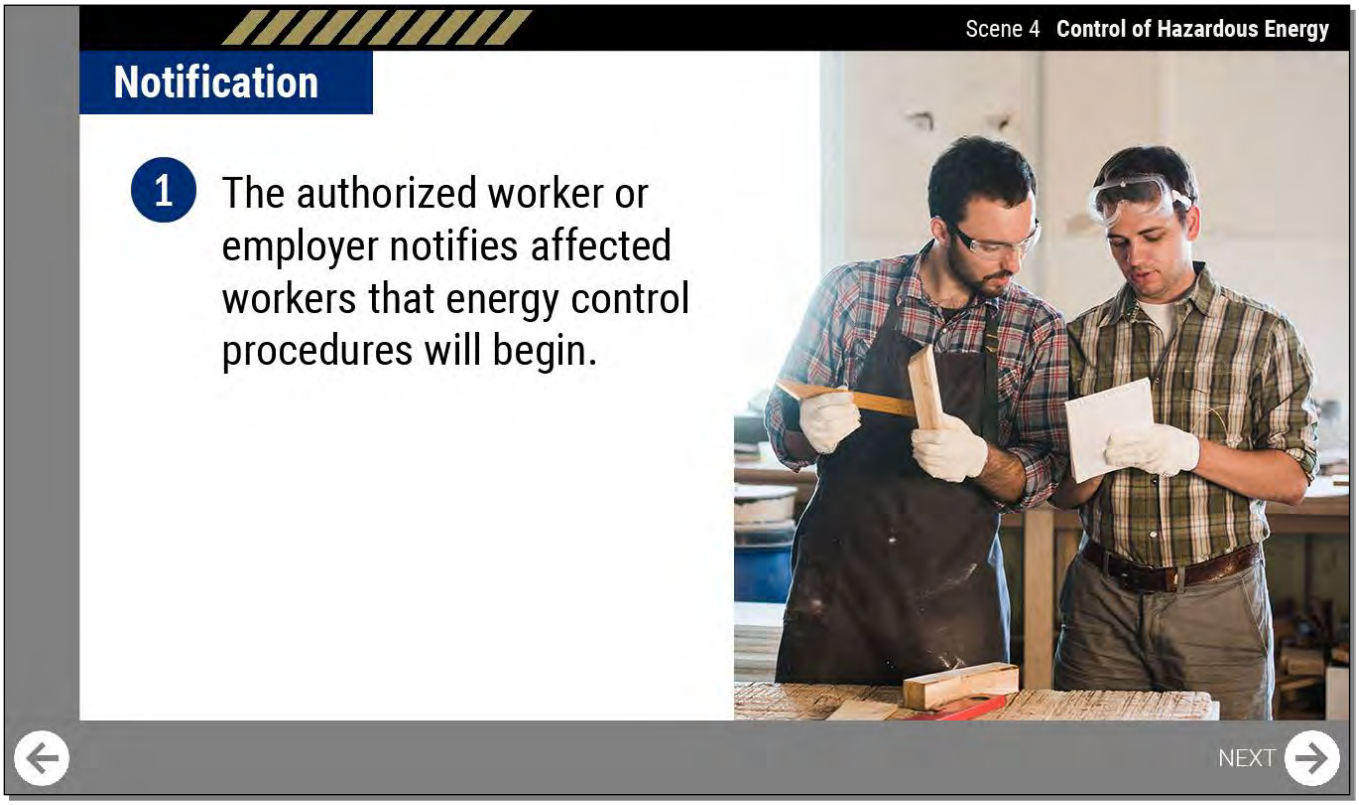
Slide 68. Responsibilities 2



Remember that for electrical equipment, the authorized worker who performs energy control procedures must be a qualified person.

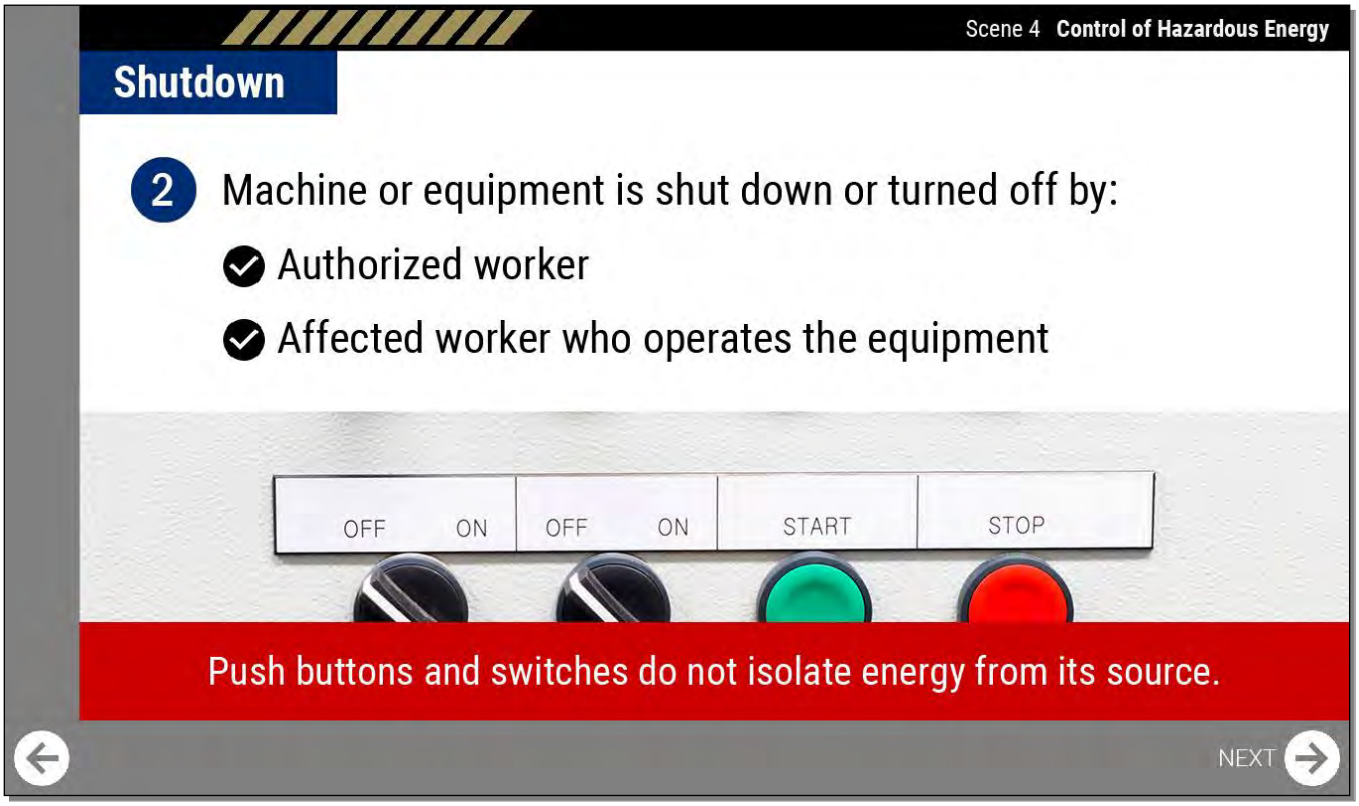
A qualified person knows the electrical policies and procedures specific to their workplace, as well as special precautionary techniques for working with electrical equipment, the insulating and shielding materials to use, and the insulated tools and test equipment to use.

Slide 69. Notification



The first step of the lockout/tagout procedure is for the authorized worker or employer to notify affected workers that energy control procedures will begin.

Slide 70. Shutdown

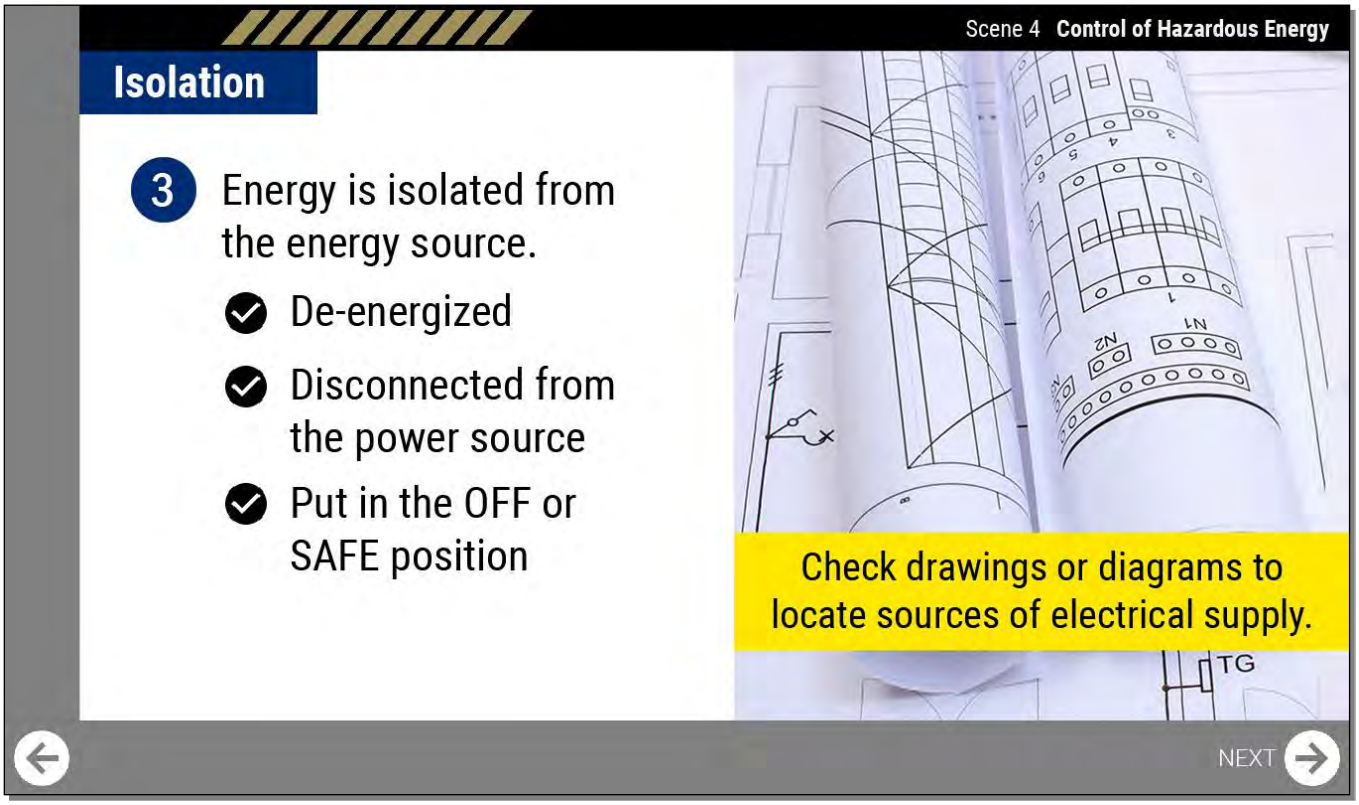


Next, the machine or equipment is shut down or turned off by the authorized worker or by the affected worker who normally operates the equipment.

This is the point at which a button is pushed or a selector switch is turned. Remember, these types of controls do not isolate energy from its source.

Equipment shutdown and restart are the only energy control tasks that can be done by someone besides the authorized worker.

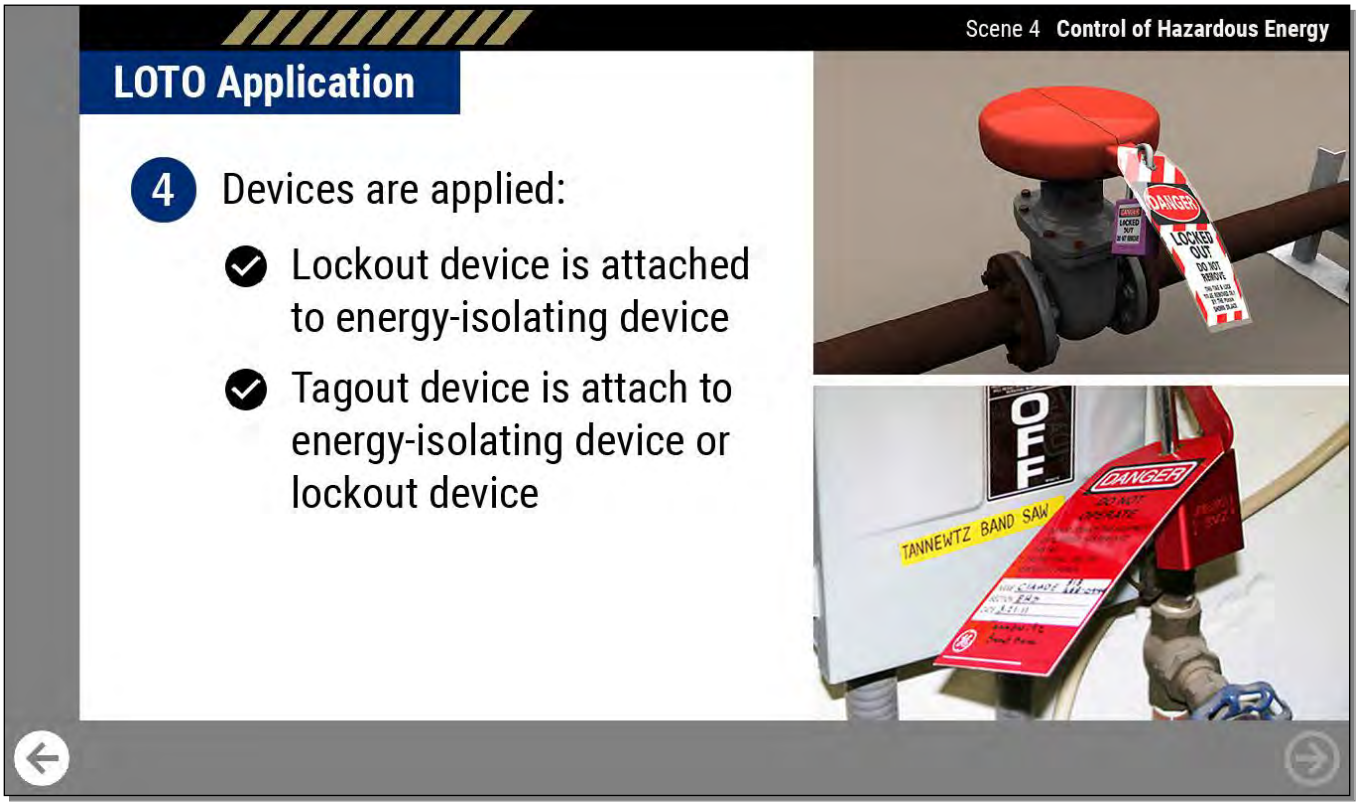
Slide 71. Isolation



Step three is to isolate energy from its source. Equipment will be de-energized, disconnected from the power source, or put in the OFF or SAFE position.

Qualified persons working on electrical components may need to check drawings or diagrams to locate all sources of electrical supply.

Slide 72. LOTO Application

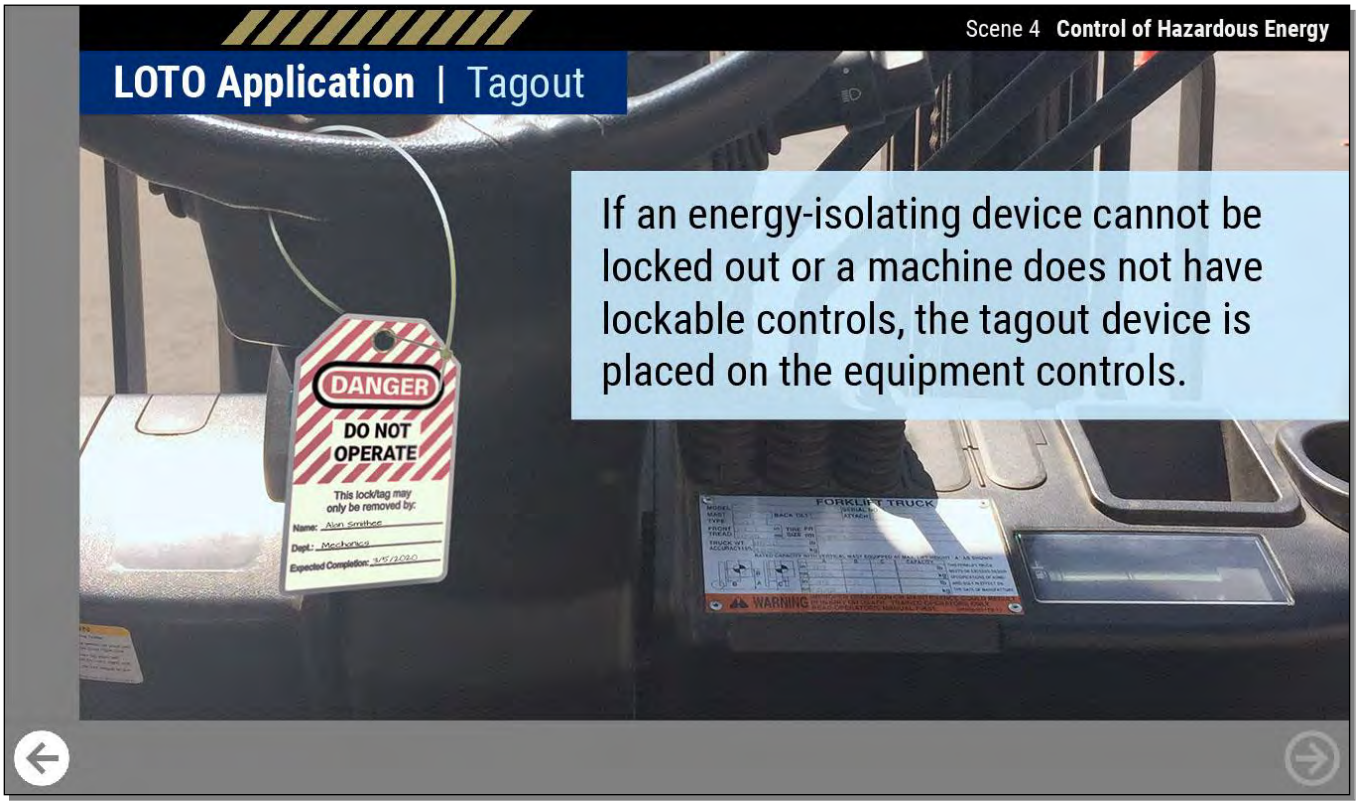


Step four is the application of lockout/tagout devices. The lockout device is attached to the energy-isolating device. The tagout device is attached to the energy-isolating device or the lockout device.

Slide 73. LOTO Application | Lockout

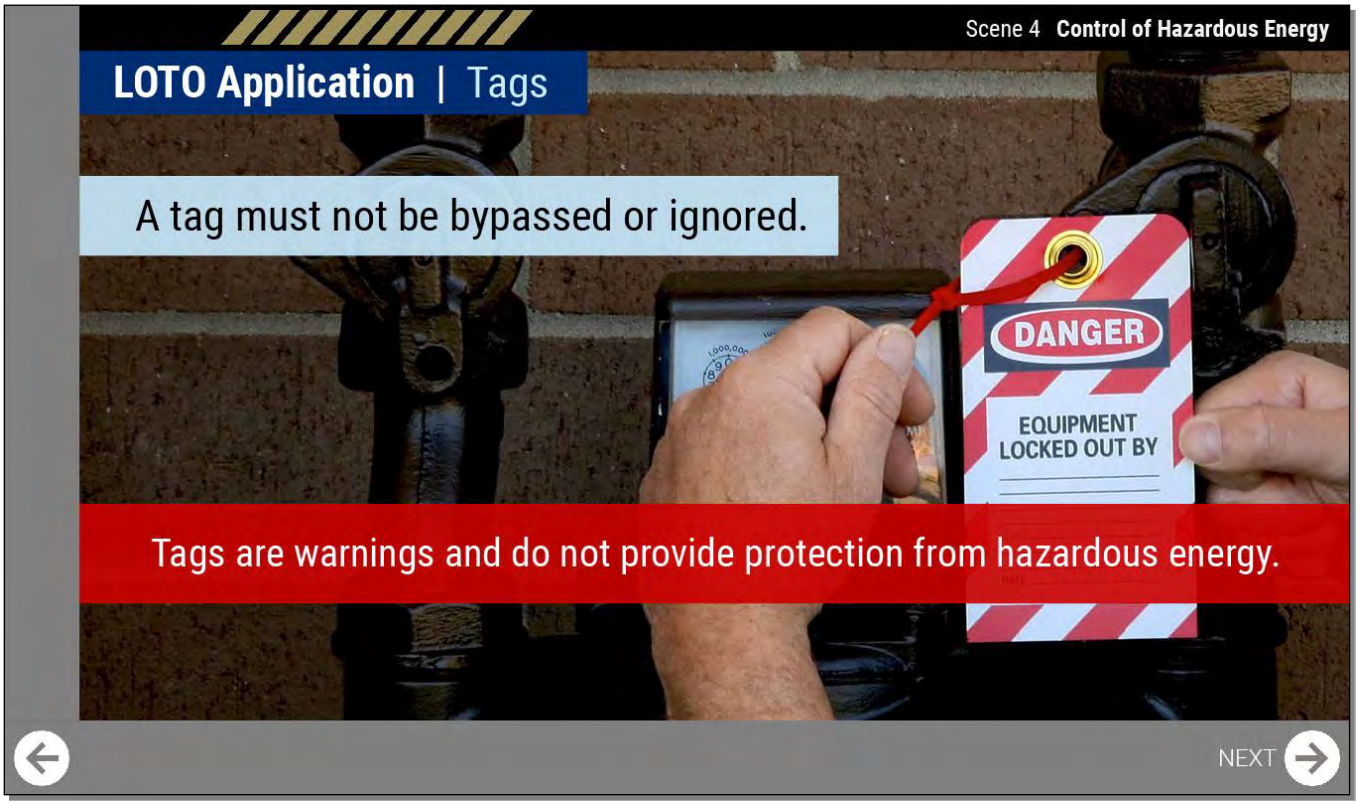
However, a tag is not required if the lockout device identifies the authorized worker and is attached to the energy-isolating device.

Slide 74. LOTO Application | Tagout



If a piece of equipment does not have an energy-isolating device capable of being locked out or a power-driven machine, such as a forklift, does not have lockable controls, the tagout device is placed on the equipment controls.

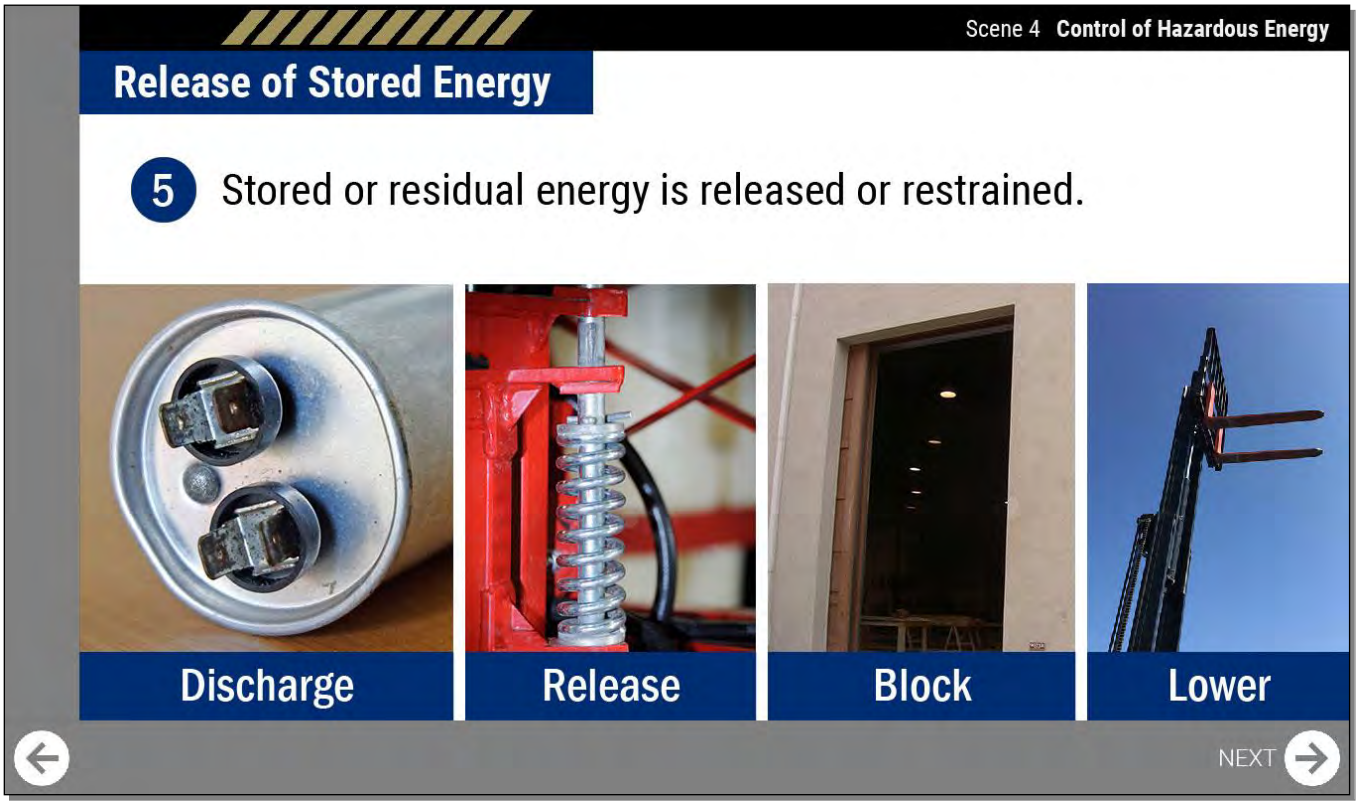
Slide 75. LOTO Application | Tags



A tag must not be bypassed or ignored.

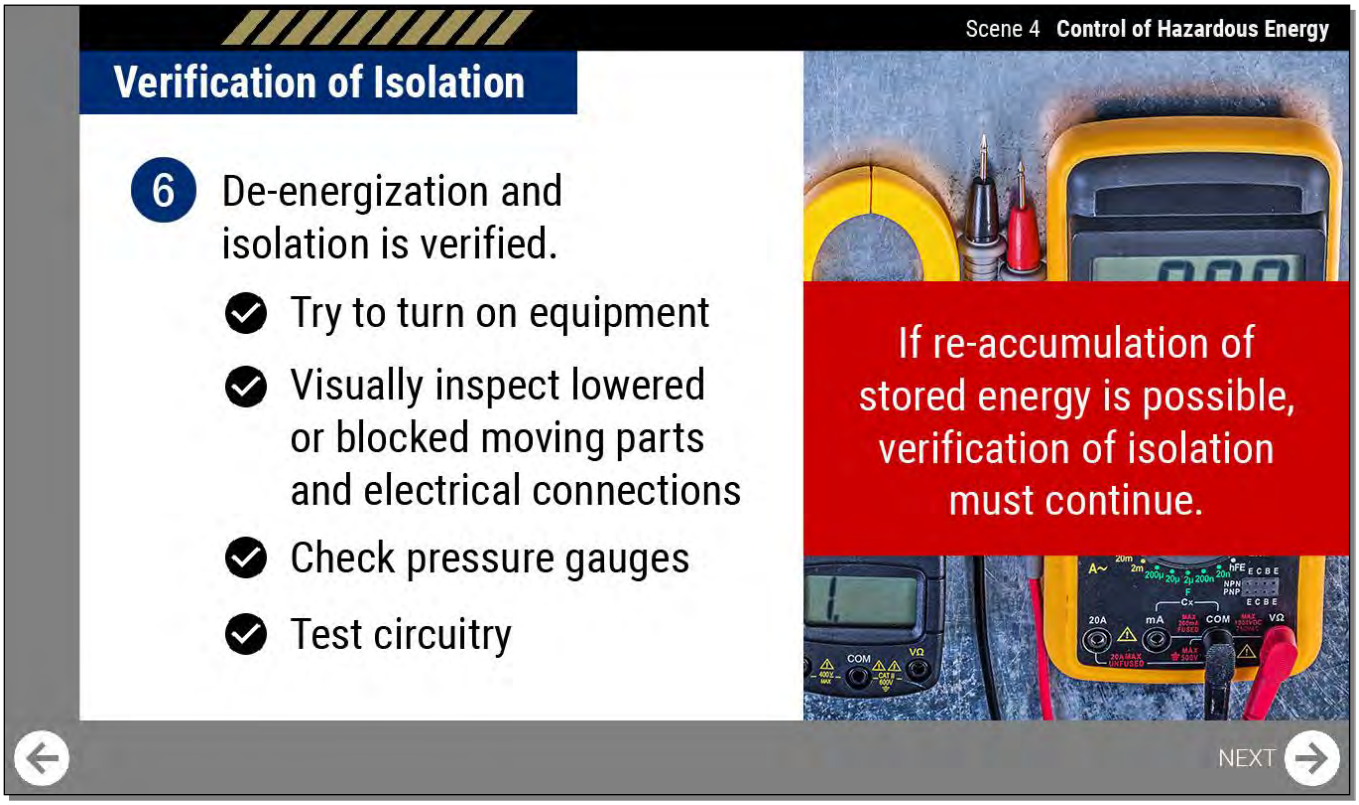
Remember, tags are simply warnings and do not provide protection from hazardous energy.

Slide 76. Release of Stored Energy



After lockout/tagout devices have been applied, all potentially hazardous stored or residual energy is released, restrained, or otherwise made safe. For example, energy in capacitors should be discharged, compressed springs that could cause equipment to move should be released, elephant doors and other equipment or tools with moving parts should be blocked, and equipment that is at height should be lowered to the ground.

Slide 77. Verification of Isolation

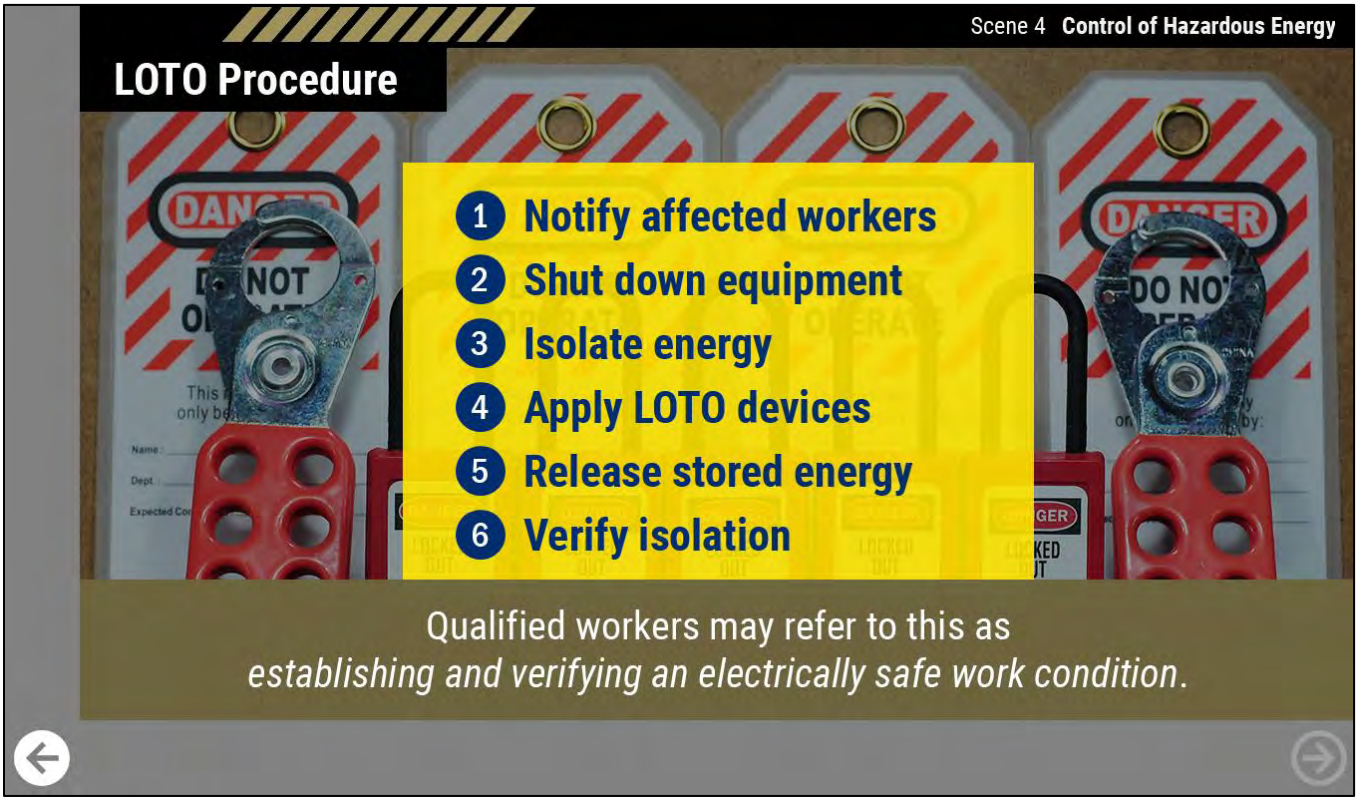


The last step before servicing or maintenance begins is for the authorized worker to verify that the equipment has been de-energized and isolated and that it cannot be restarted, there is no voltage present, and stored energy has been released or blocked.

Verification can take place in several ways: by pushing the start button or turning the selector switch on to see if there is any response; by visually inspecting moving parts to make sure they are lowered or blocked and electrical connections to make sure they are disconnected; by checking pressure gauges to make sure hydraulic and pneumatic potential energy has been removed; and, by testing circuitry for voltage.

Additionally, if there is the possibility of re-accumulation of stored energy to a hazardous level, the authorized worker will continue to verify energy isolation until servicing or maintenance is complete or until the possibility of accumulation no longer exists.

Slide 78. LOTO Procedure

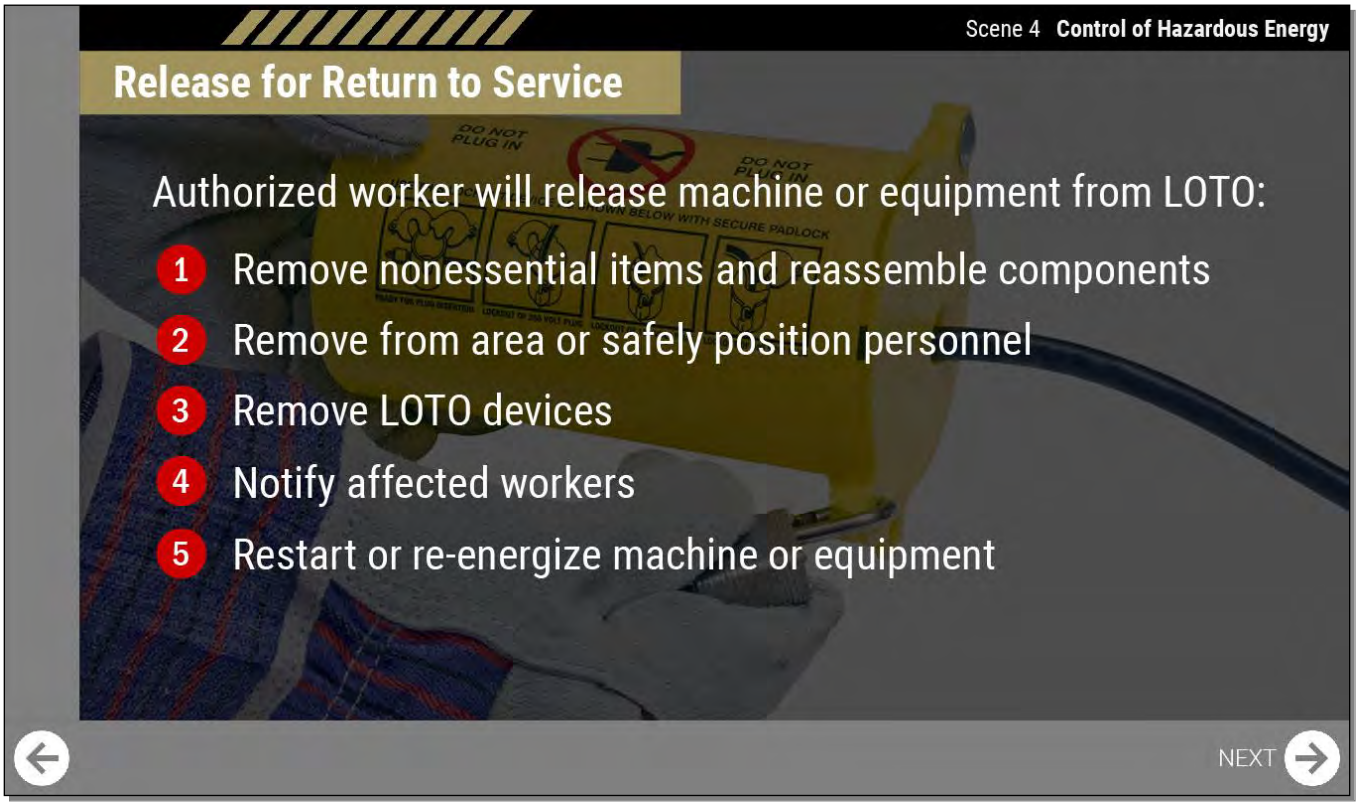


Okay, let’s do a quick review of the lockout/tagout procedure.

One: Notify affected workers. Two: Shut down the equipment. Three: Isolate energy. Four: Apply lockout/tagout devices. Five: Release or restrain stored energy. And, six: Verify isolation.

Those working with electrical systems or components may refer to the lockout/tagout procedure as establishing and verifying an electrically safe work condition.

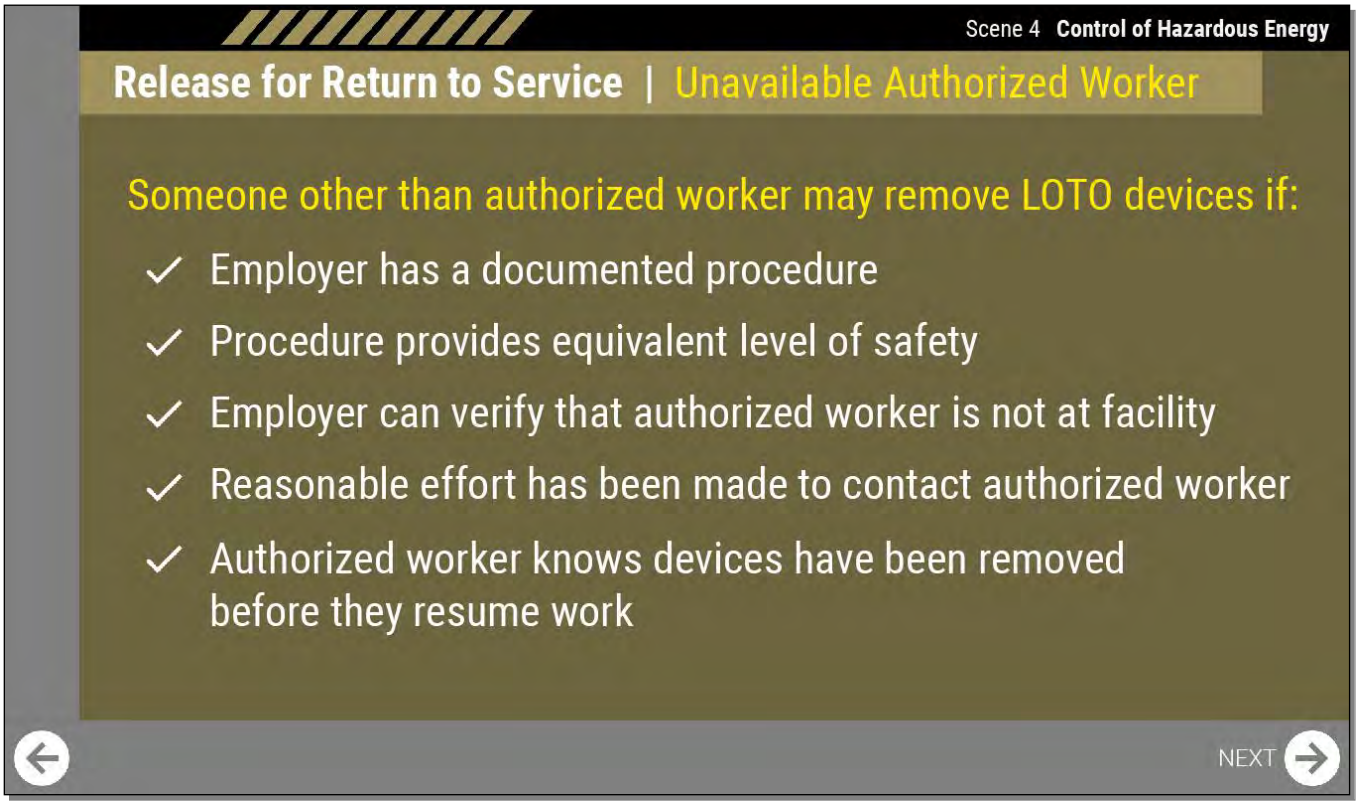
Slide 79. Release for Return to Service



When servicing or maintenance is complete, the authorized worker will follow these steps to release the machine or equipment from lockout/tagout status and return it to service: Remove nonessential items from the work area and reassemble equipment components like machine guards; remove personnel from the area or position them in a safe location; remove lockout/tagout devices; notify affected workers that lockout/tagout devices have been removed; and, restart or re-energize the machine or equipment.

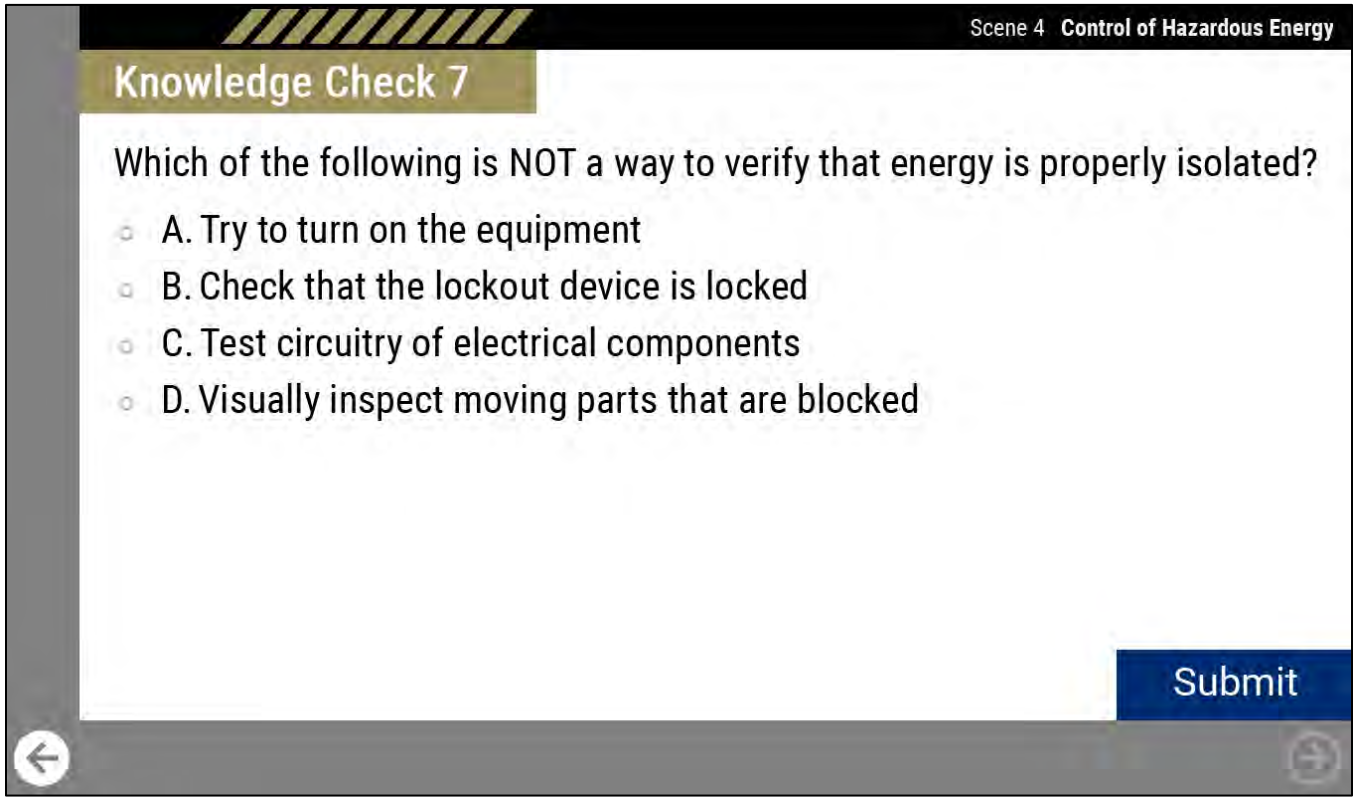
When necessary, the affected worker who usually operates the machine or equipment can help with this last task.

Slide 80. Unavailable Authorized Worker



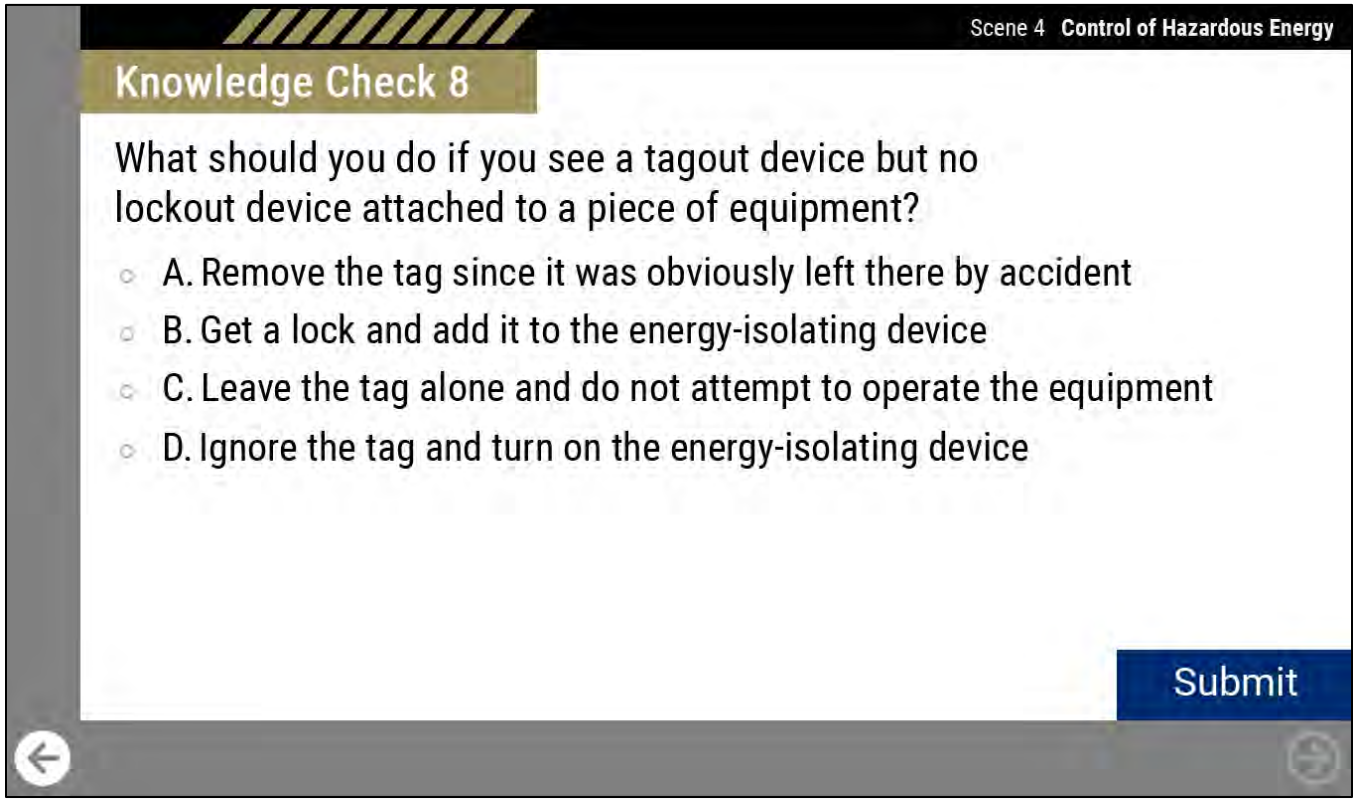
There may be times when the authorized worker is not available when servicing or maintenance is complete. On these rare occasions, someone other than the authorized worker who applied the lockout/tagout devices is allowed to remove them, provided that all of these conditions are met: The employer has a documented procedure for this situation that is part of their energy control program; the procedure provides a level of safety equivalent to the device being removed by the authorized worker; the employer can verify that the authorized worker is not at the facility; a reasonable effort has been made to contact the authorized worker to tell them that their lockout/tagout devices have been removed; and the employer can ensure that the authorized worker knows that the devices have been removed before they resume work.

Slide 81. Knowledge Check 7

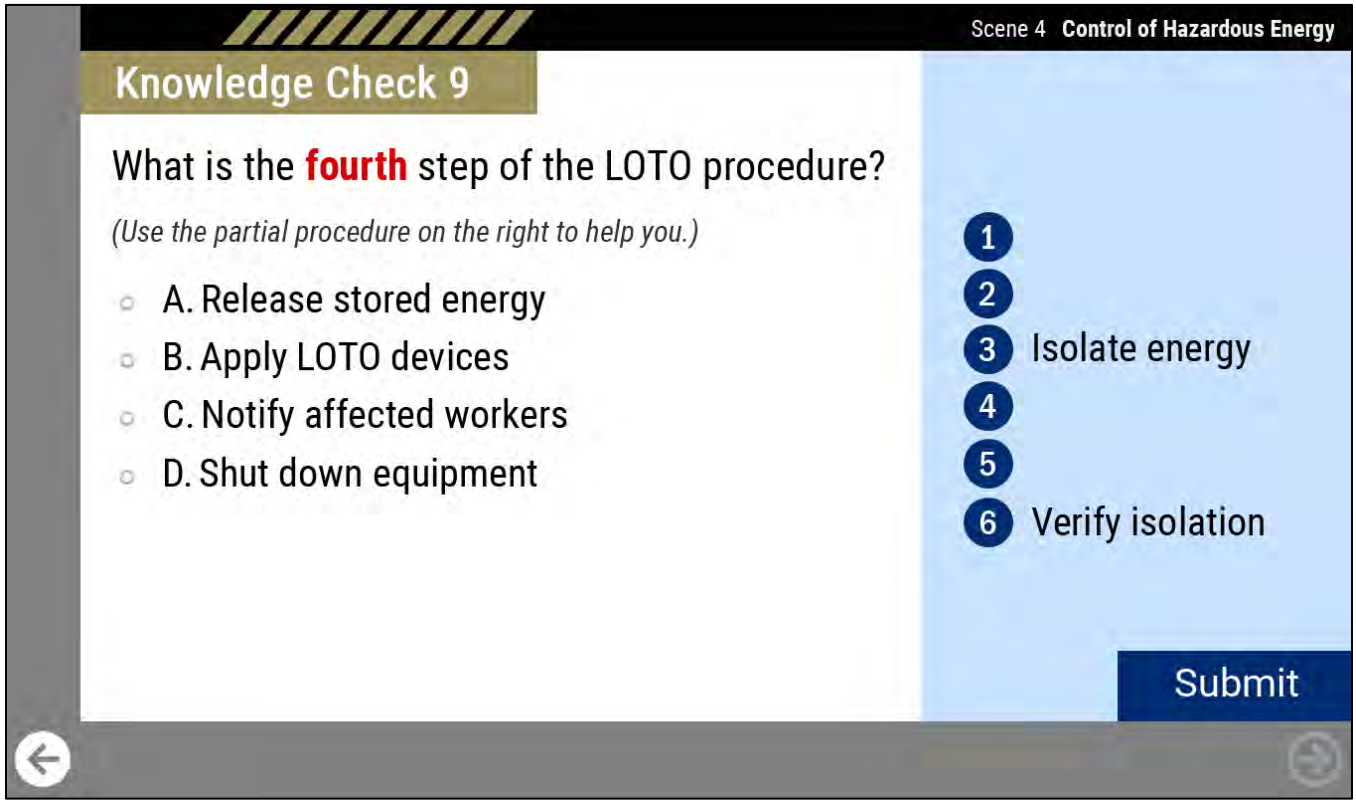


Let’s wrap up this scene with some knowledge checks.

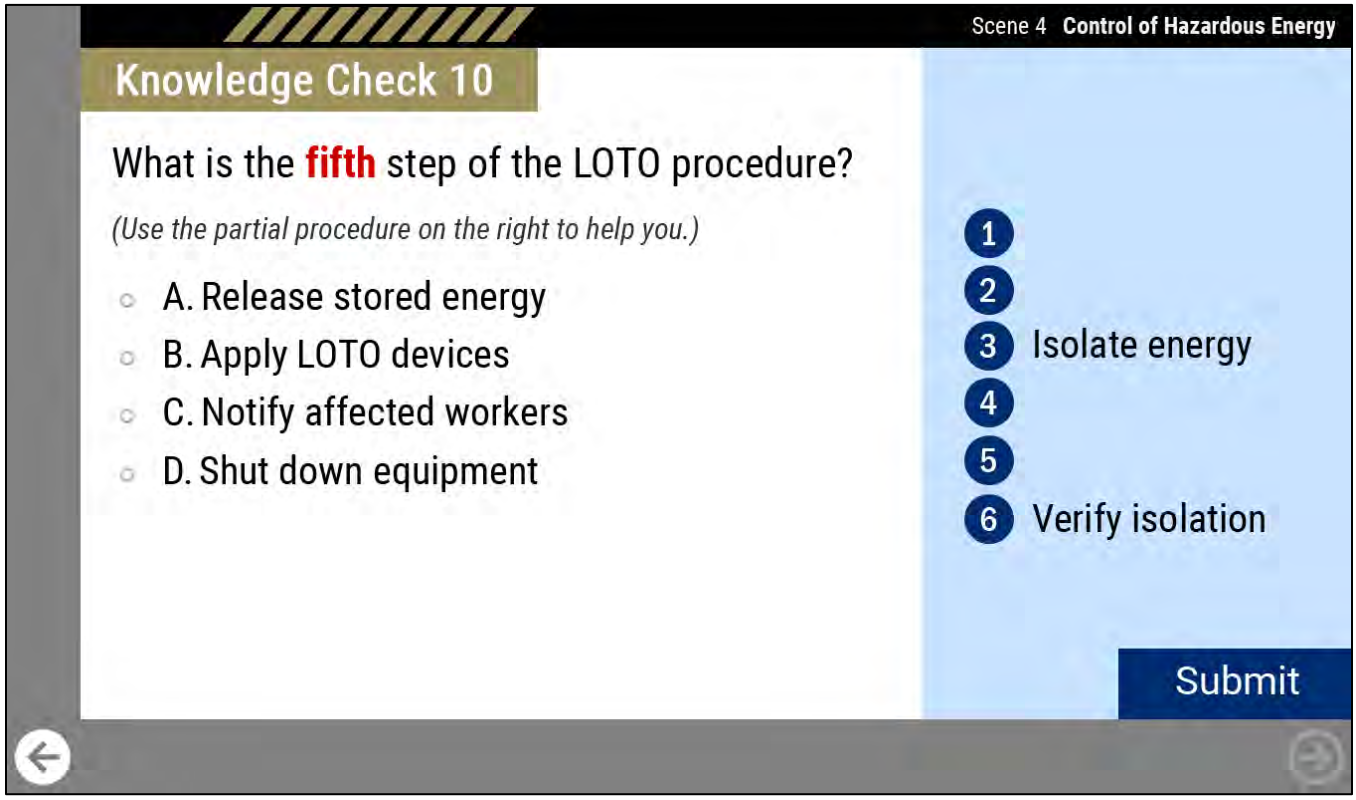
Slide 82. Knowledge Check 8



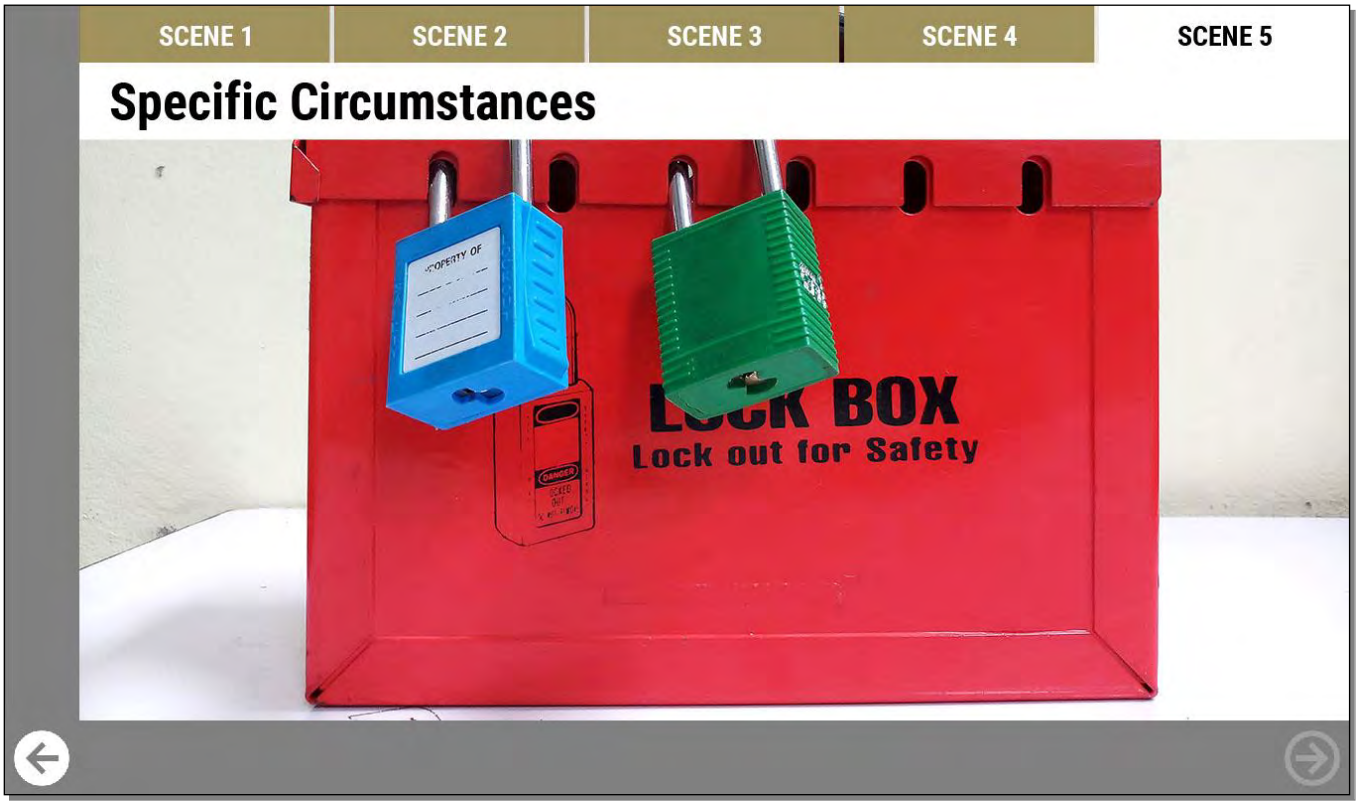
Slide 83. Knowledge Check 9



Slide 84. Knowledge Check 10



Slide 85. SCENE 5 – SPECIFIC CIRCUMSTANCES

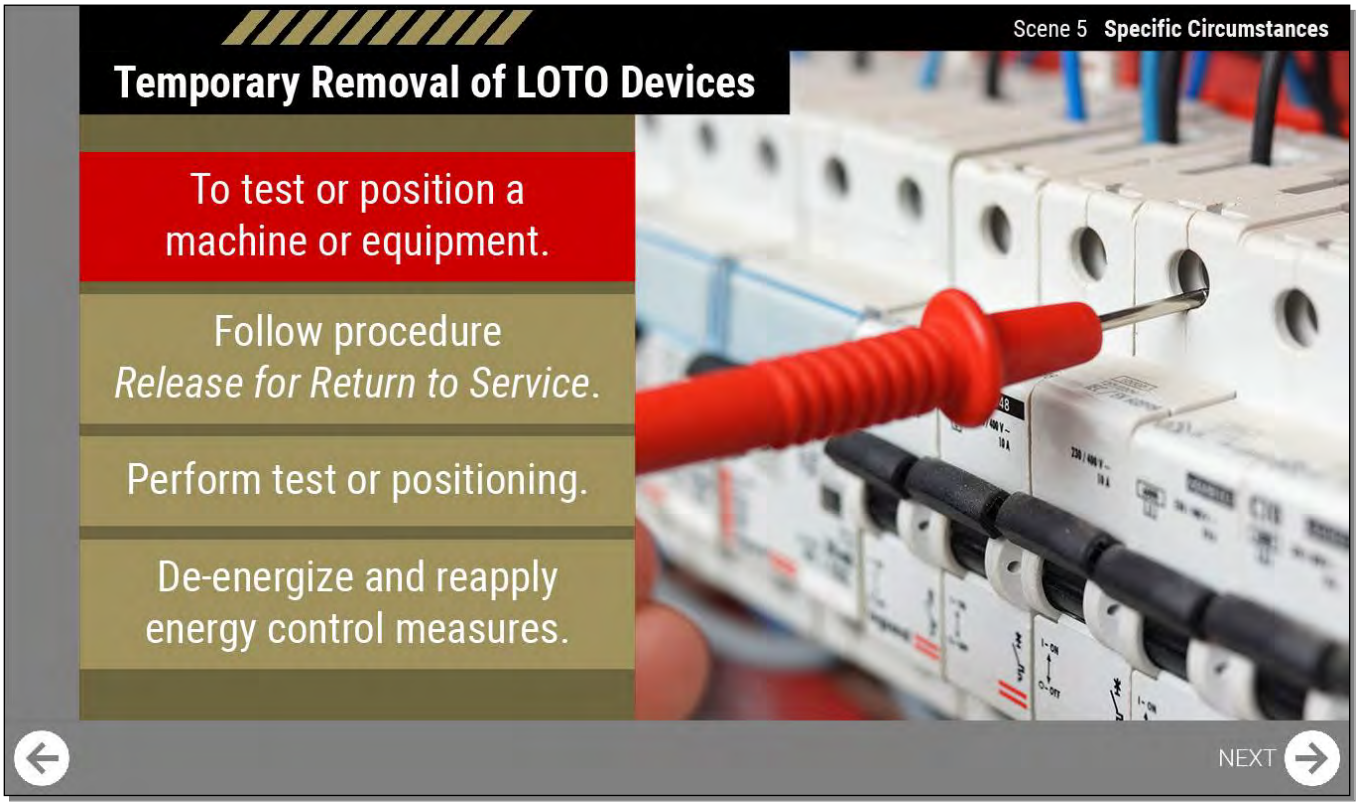


Scene Five, Specific Circumstances.

Slide 86. In This Scene

In this scene, we'll talk about the lockout/tagout requirements for a few specific circumstances: the temporary removal of lockout/tagout devices for testing and positioning; working with contractors (or third parties); using group lockout/tagout; and dealing with shift or personnel changes.

Slide 87. Temporary Removal of LOTO Devices



It may be necessary to temporarily remove lockout/tagout devices and restore energy to test or position a machine or piece of equipment.

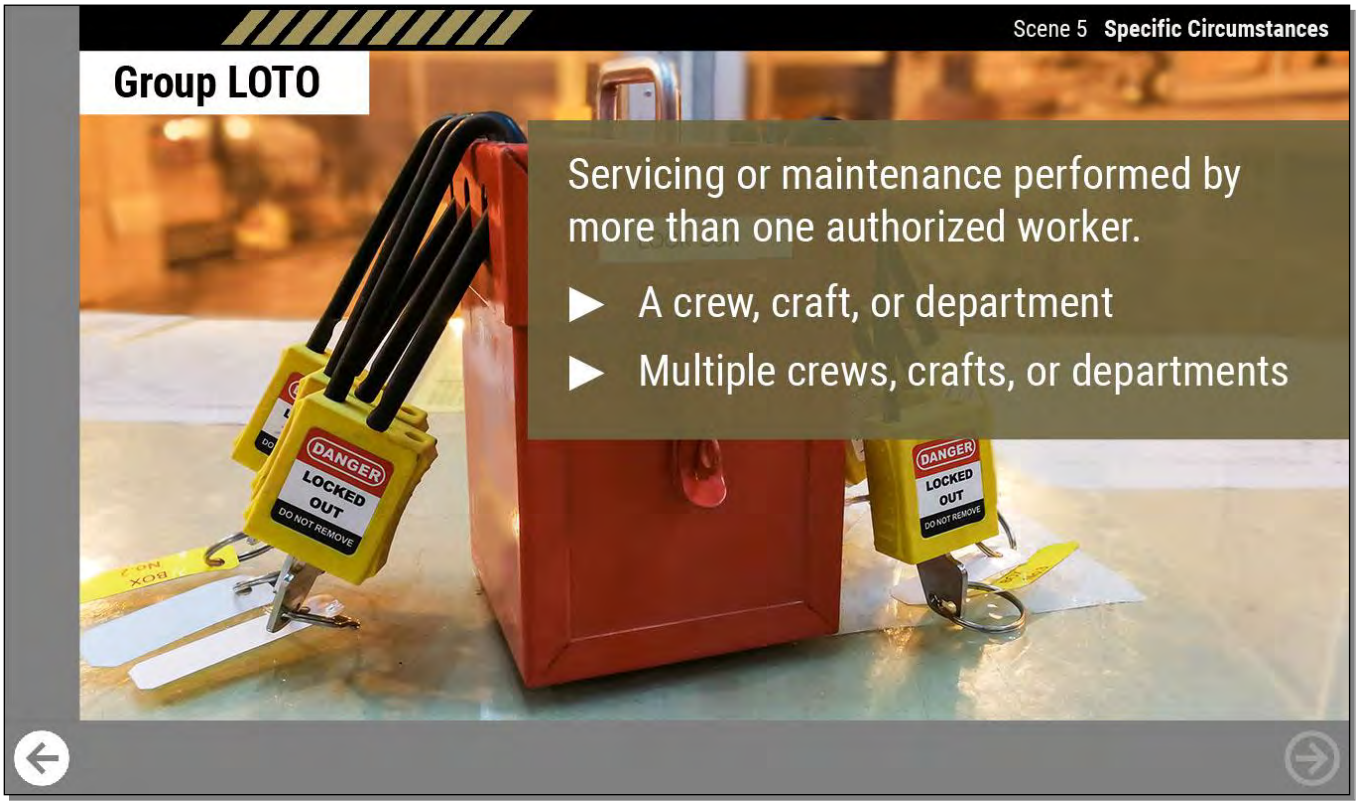
Authorized workers will follow the *Release for Return to Service* procedure that was covered in the previous scene. After the equipment is restarted or re-energized, they will perform the test or positioning, then de-energize the equipment again and reapply energy control measures, as specified by the lockout/tagout procedure for that machine or piece of equipment.

Slide 88. Working with Contractors

When working with contractors, also referred to as third parties or outside employers, the on-site employer and the outside employer must inform each other of their procedures for the control of energy.

If working under California regulations, the on-site employer's procedures are followed. If working under federal regulations, the outside employer's procedures are followed.

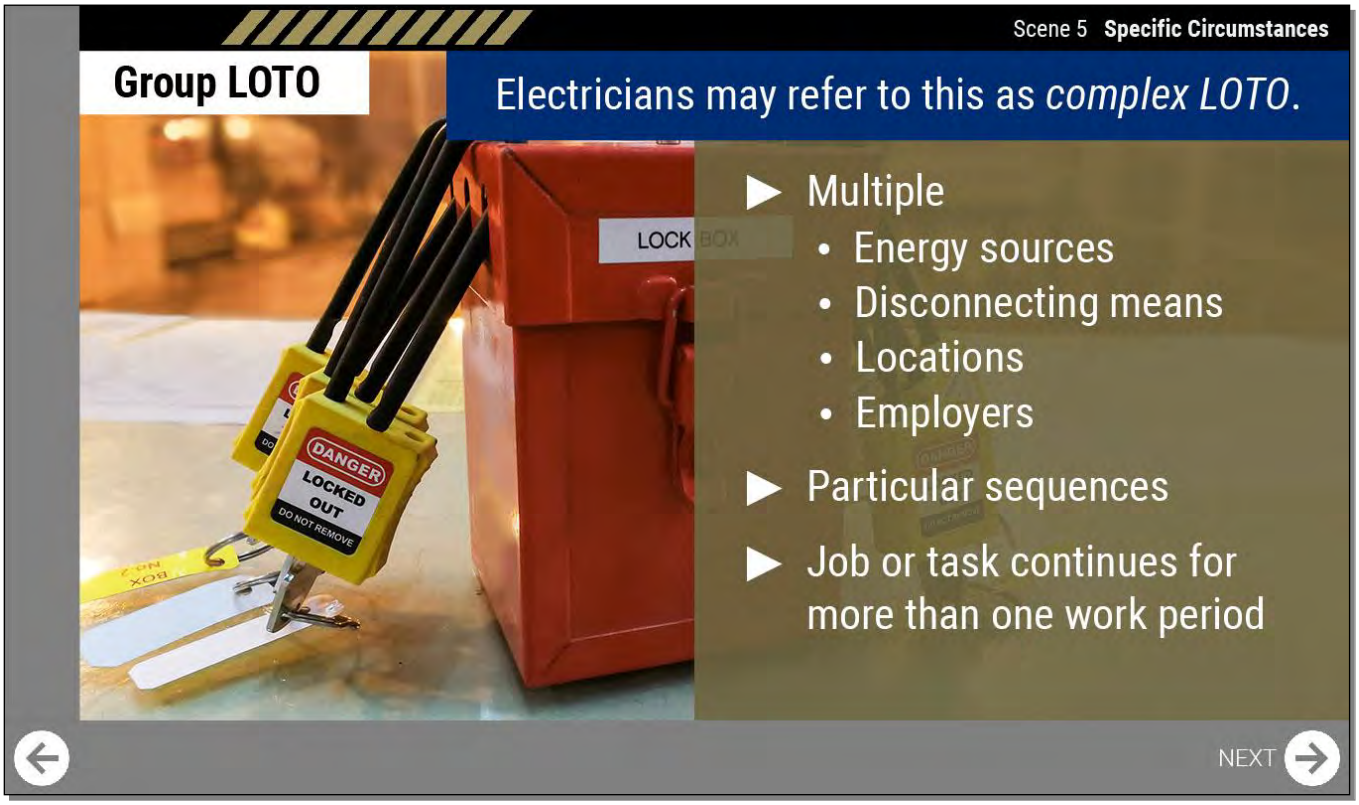
Slide 89. Group LOTO 1



Group lockout/tagout refers to servicing or maintenance work where more than one authorized worker uses lockout/tagout on the same piece of equipment.

It is used when a job or task is performed by a group, such as a crew, craft, or department or by multiple crews, crafts, or departments.

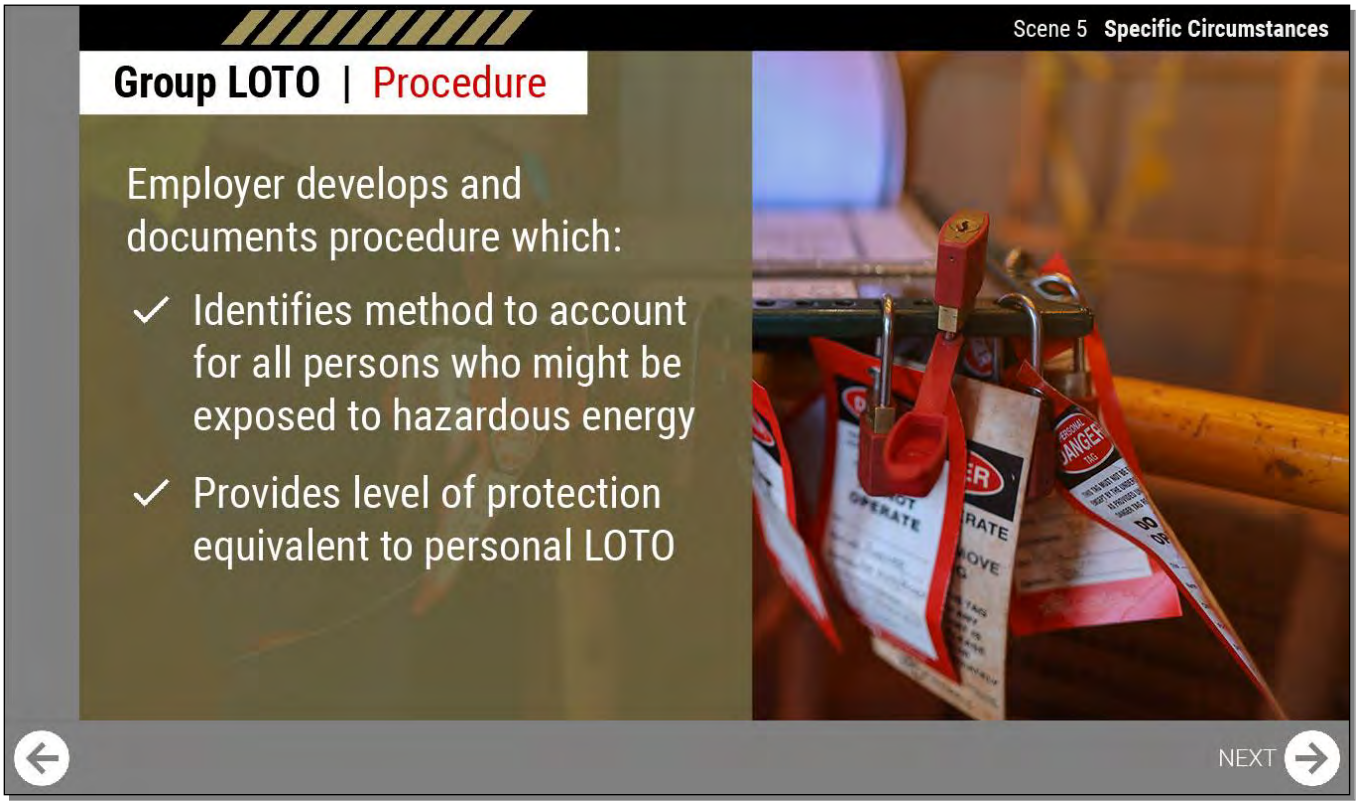
Slide 90. Group LOTO 2



Group lockout/tagout is also used when there are multiple energy sources, disconnecting means, locations, or employers; when particular sequences of operation are necessary to establish a safe locked-out condition; or when the job or task continues for more than one work period.

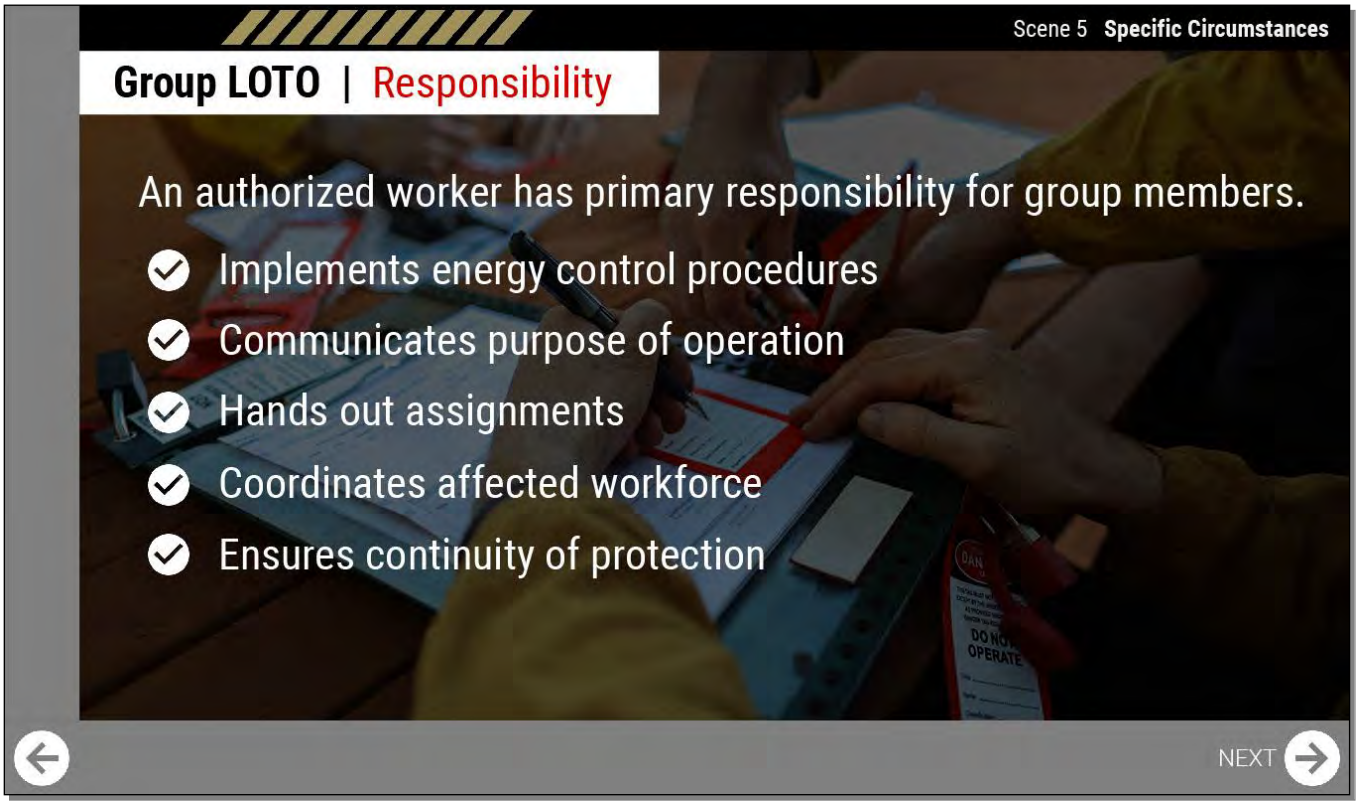
Those working with electrical systems or components may refer to group lockout/tagout as *complex lockout/tagout*.

Slide 91. Group LOTO Procedure



Any group lockout/tagout scenario must follow a group lockout/tagout procedure developed and documented by the employer which identifies a method to account for all persons who might be exposed to hazardous energy in the course of a lockout/tagout operation and provides the same level of protection as personal lockout/tagout.

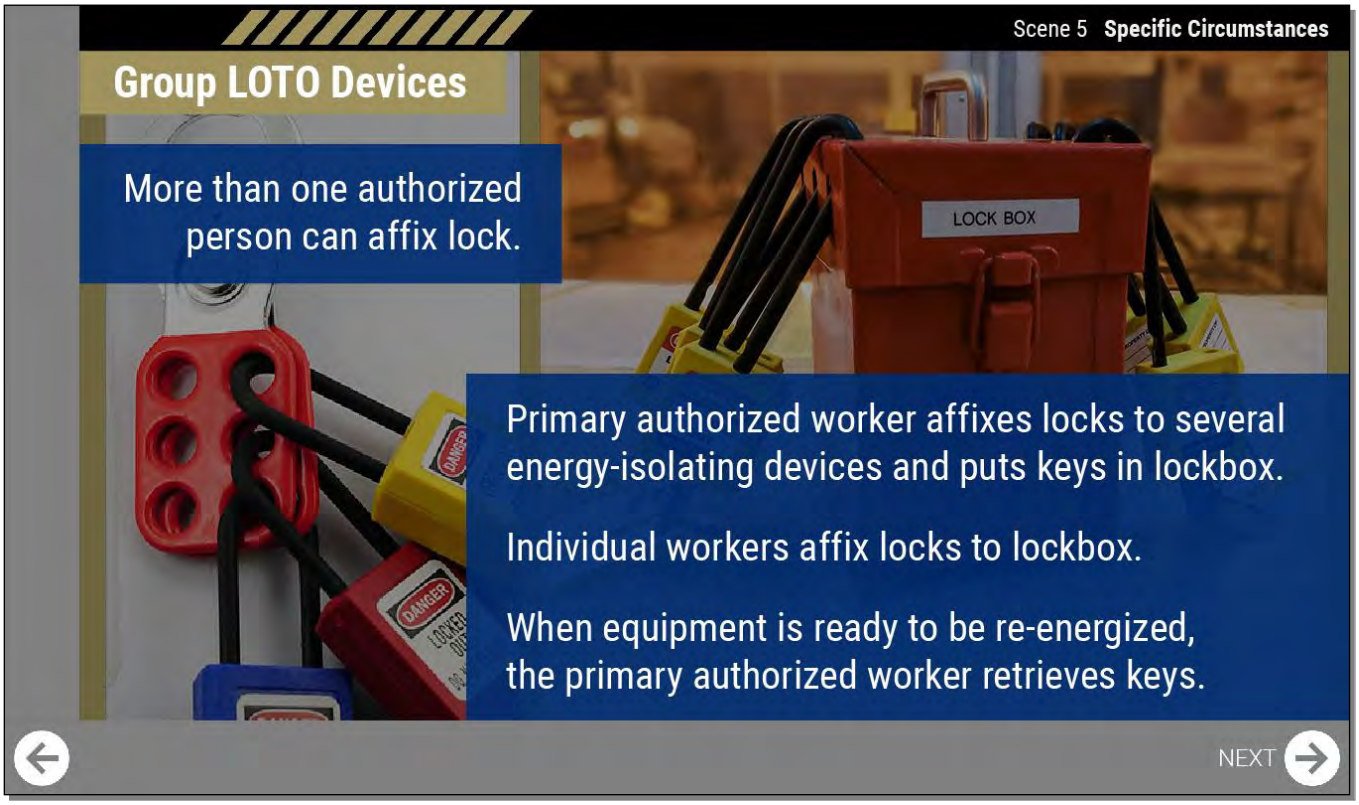
Slide 92. Group LOTO Responsibility



An authorized worker is given primary responsibility for those working under the protection of group lockout/tagout.

This person implements the energy control procedures, communicates the purpose of the operation to group members and other impacted workers, hands out assignments, coordinates the affected workforce, and ensures the continuity of protection.

Slide 93. Group LOTO Devices 1

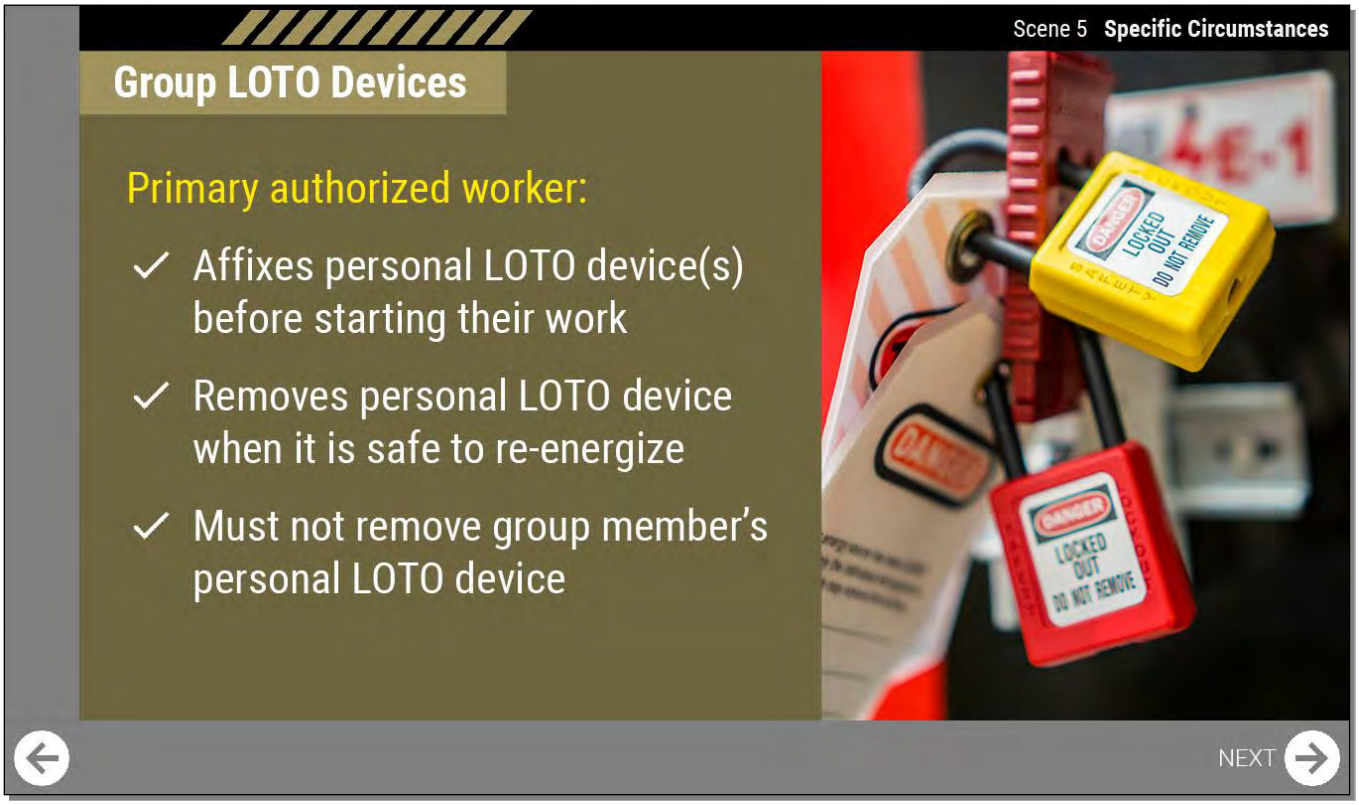


Group lockout/tagout requires a group lockout/tagout device, such as a hasp or a group lockbox. A hasp allows more than one authorized person to affix their personal lockout/tagout device to the same energy-isolating device.

A group lockbox is designed to let the primary authorized worker lock out several energy-isolating devices, and then put the keys to all those locks inside the lockbox. Individual workers affix their own locks to the lockbox.

When the last worker removes their lock from the lockbox and the equipment is ready to be re-energized, the primary authorized worker can then retrieve the keys to the locks attached to the energy-isolating devices.

Slide 94. Group LOTO Devices 2



The primary authorized worker affixes their lockout/tagout device or devices before starting their work and removes them when it is safe to re-energize the machine or equipment. They must not remove another group member's personal lockout/tagout device.

Slide 95. Group LOTO Devices 3

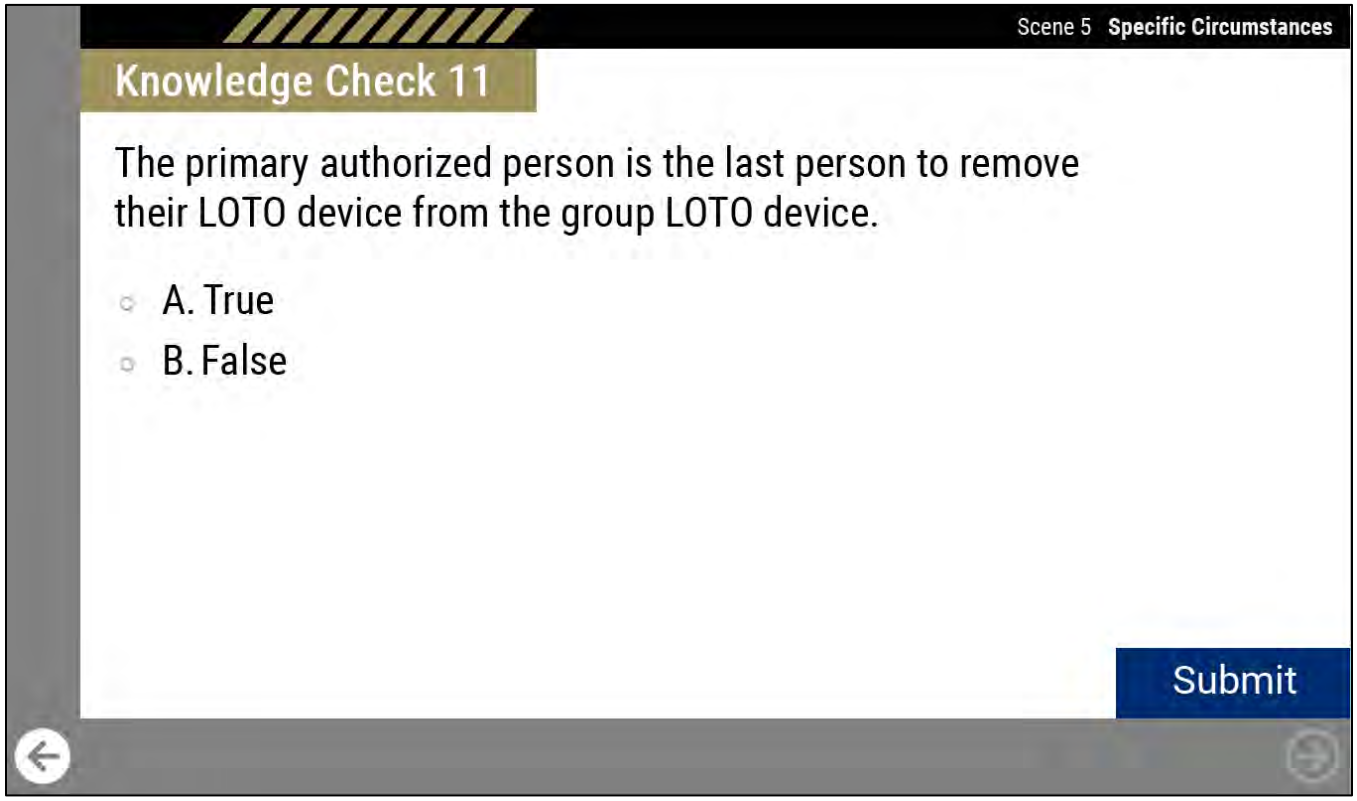
Each group member affixes their personal lockout/tagout device to the group lockout device before staring work and removes it when their work is complete.

Slide 96. Shift or Personnel Changes

Our last specific circumstance deals with shift or personnel changes.

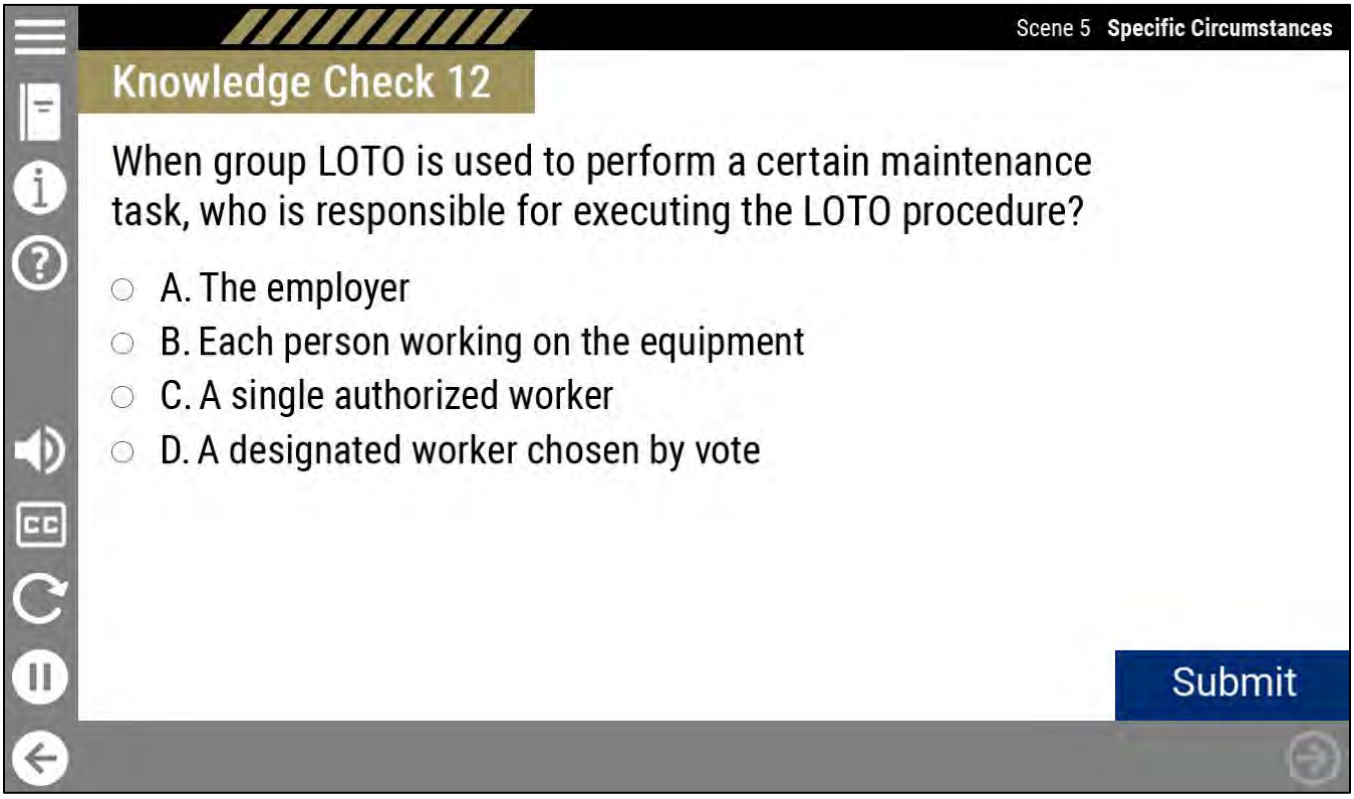
When a lockout/tagout operation extends beyond one shift or has a change in personnel, lockout/tagout protection must continue. A specific procedure developed and documented by the employer will detail how primary responsibility is transferred to another authorized person and how lockout/tagout device protection is transferred between outgoing and incoming workers.

Slide 97. Knowledge Check 11

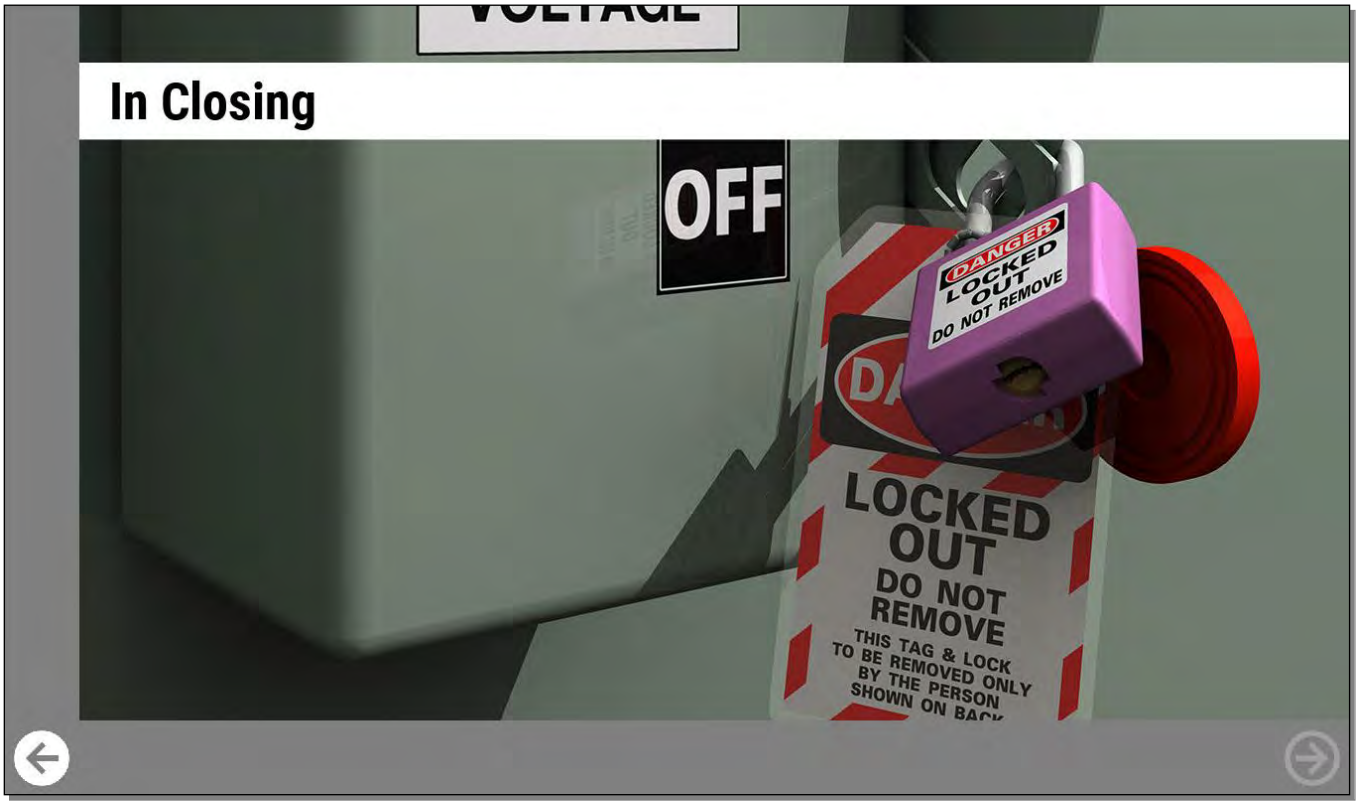


We're at our last couple of knowledge checks. Let's see how you do.

Slide 98. Knowledge Check 12

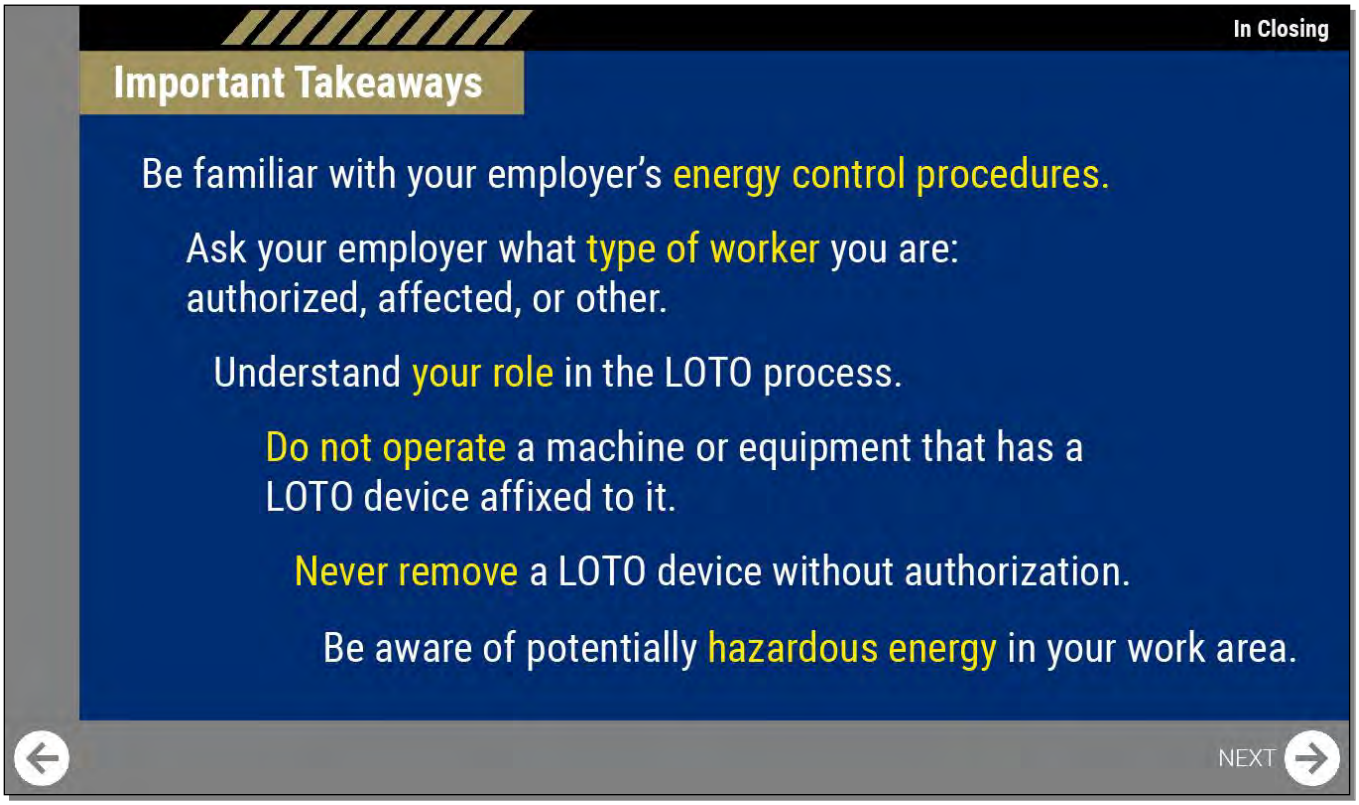


Slide 99. In Closing



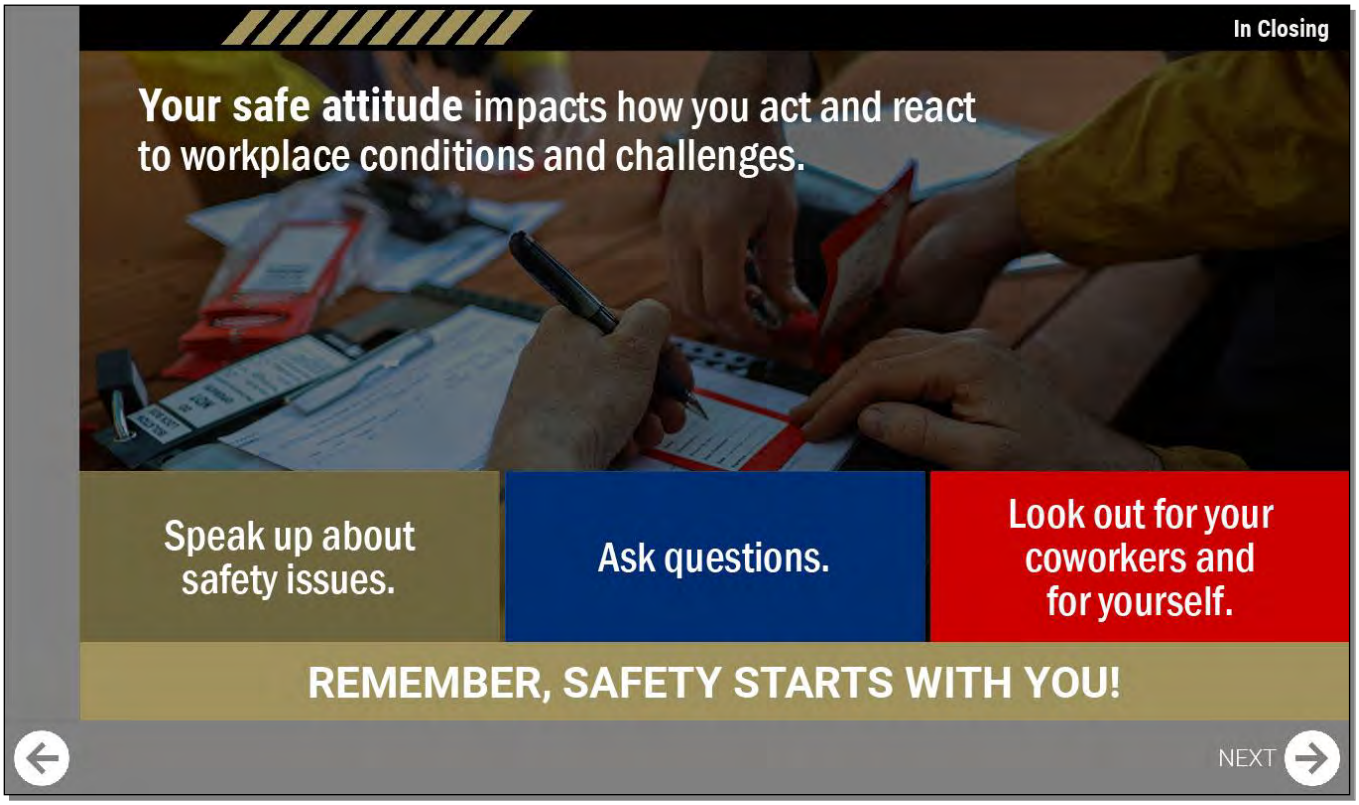
We've reached the end of the presentation. Let's review some important points.

Slide 100. Important Points



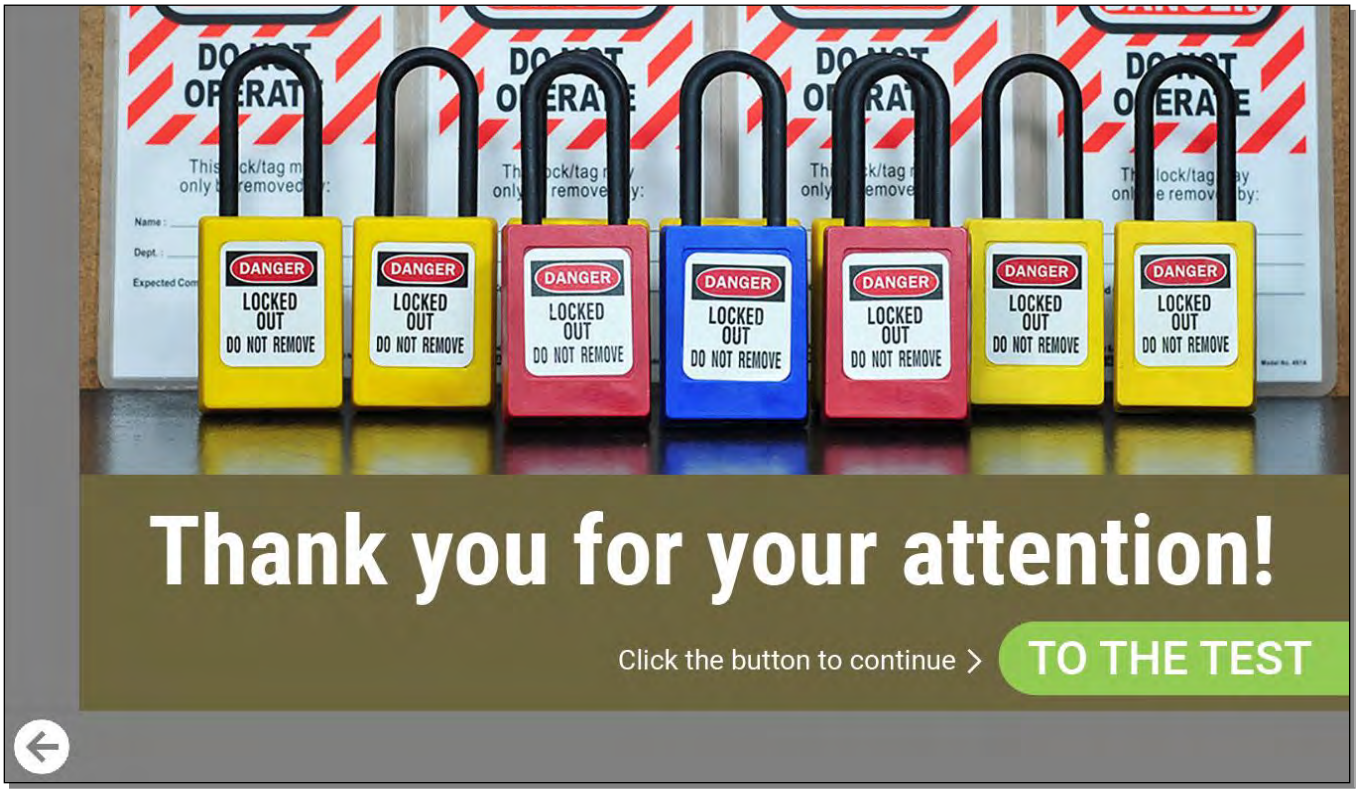
Be familiar with your employer's energy control procedures. Check with your employer to see what type of worker you are: authorized, affected, or other. Understand your role in the lockout/tagout process. Do not try to operate a machine or equipment that has a lockout/tagout device affixed to it. Never remove a lockout/tagout device without authorization. And, be aware of potentially hazardous energy in your work area.

Slide 101. Your Safe Attitude



Your safe attitude impacts how you act and react to workplace conditions and challenges. Speak up about safety issues. Ask questions. Look out for your coworkers and for yourself. Remember, safety starts with you.

Slide 102. To the Test



Thank you for your attention. The course test is up next. Once you successfully complete the test, you'll receive credit for the course.