Lockout/Tagout Compliance Guide

[The Lockout/Tagout standard requires the adoption and implementation of practices and procedures to shut down equipment, isolate it from its energy source(s), and prevent the release of potentially hazardous energy to prevent injury while maintenance/servicing activities are being performed. It contains minimum performance requirements, and definitive criteria for establishing an effective program for the control of hazardous energy.]

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**Lockout/Tagout (LOTO) Compliance Guide**

**Prepared for \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**By \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_**

1. **Purpose and Scope**

The OSHA Control of Hazardous Energy (Lockout/Tagout) standard **(29 CFR** **1910.147)** covers the servicing and maintenance of machines or equipment in which the unexpected energization, startup of the machines or equipment, or release of stored energy could cause injury to employees. Energy sources may include: electrical, mechanical, hydraulic, pneumatic, chemical, nuclear, thermal or other energy.

1. **Applications**

This standard applies to the control of energy during servicing and maintenance of machines or equipment. Normal production operations are not covered by this standard. Servicing and maintenance which take place during normal production operations are covered by this standard if:

1. An employee is required to remove, bypass, or repair safety guard devices.

2. An employee is required to place any part of his or her body into an area on a machine or piece of equipment where work is actually performed upon the material being processed (point of operation) or where an associated danger zone exists during a machine operating cycle.

***Exclusions:***

1. *Minor servicing exceptions* include servicing activities which take place during normal production operations that are routine, repetitive and integral to the use of the equipment for production. The work must be performed using alternative measures which provide effective machine safeguarding protection.
2. *Cord and plug* connected electrical equipment when the employee performing the service or maintenance controls energization by unplugging the equipment from the energy source and by the plug being under his/her exclusive control.
3. *Hot tap operations* involving transmission and distribution systems from substances such as gas, steam, water or petroleum, when they are performed on pressurized pipelines, provided that the employer demonstrates that: continuity of service is essential, shutdown of the system is impractical, documented procedures are followed, and employees are effectively protected by special equipment.
4. **Assignment of Responsibility**
5. (*person/positions designated*) will be responsible for implementing the lockout/tagout program.
6. (*person/positions designated*) are responsible for enforcing the program and insuring compliance with the procedures.
7. (*person/positions designated*) is responsible for monitoring the compliance of this procedure and will conduct the annual inspection and certification of the authorized employees.(***See Form #1***)
8. Authorized employees are responsible for lockout/tagout procedures in his/her area of work.
9. Affected employees are responsible for insuring they do not attempt to restart or re-energize machines or equipment which are locked and tagged out.
10. **Energy Control Program**

The employer shall establish a program consisting of energy control procedures, employee training, and periodic inspections to ensure that any employee performing maintenance on equipment or machinery is knowledgeable on the proper procedures. The program should describe how to control unexpected energizing, startup, or release of stored energy that could occur and cause injury. All machinery or equipment will be isolated from the energy source and rendered inoperative before maintenance is conducted. (***See Appendix B***)

***Core components of the energy control program:***

1. Energy control procedures that detail and document the specific information that an authorized employee must know to accomplish lockout/tagout (i.e. scope, purpose, tools, locations, authorization rules, and techniques to be utilized for the control of hazardous energy).
2. Periodic inspections of the energy control procedures should occur regularly to ensure procedures and the requirements of the standard are being followed.
3. Employee training and retraining to ensure that the purpose and function of the energy control programs are understood by everyone.
4. **Energy Control Procedure**

Employers must develop, document, and use specific procedures to control potentially hazardous energy when employees are servicing equipment or machinery. The procedures must outline the scope, purpose, authorization, rules and techniques that the employer will use to control hazardous energy and must state the means to be used to enforce compliance. (***See Form #2***)

***At a minimum, the procedures must include:***

1. A specific statement of the intended use of the procedure.
2. Specific procedural steps for shutting down, isolating, blocking, and securing machines or equipment to control hazardous energy.
3. Specific procedural steps for the placement, removal, and transfer of lockout and tagout devices with a description of who has responsibility for them.
4. Specific requirements for testing a machine or piece of equipment to determine and verify the effectiveness of lockout and tagout devices.

***Documentation of the procedures is not required if****:*

1. The machine or equipment has no potential for stored, residual, or accumulated energy after shut down which could endanger employees.
2. The machine or equipment has a single energy source that can be readily identified, isolated, and completely de-energize/deactivate the machine or equipment.
3. The machine or equipment is isolated from that energy source and locked out during servicing or maintenance.
4. A single lockout device will achieve a locked out condition.
5. The lockout device is under the exclusive control of the authorized employee performing the servicing or maintenance.
6. The servicing or maintenance does not create hazards for other employees.
7. The employer has had no incidents involving the unexpected activation or re-energization of machines or equipment during servicing or maintenance.
8. **Periodic Inspection**

Periodic inspections must be conducted, at least annually, to ensure that the energy control procedures continue to be implemented properly. (***See Form #7***) Confirm employees are familiar with their responsibilities and that any deviations or procedural inadequacies that are observed are corrected. The person conducting the inspection should be an authorized employee not involved in the energy control procedure being inspected.

***The inspection should, at minimum, include the following:***

1. The employer must identify any deficiencies or deviations and correct them.
2. Where lockout is used, the inspector must review each authorized employee's responsibilities under the procedure with that employee (group meetings are acceptable).
3. The employer must certify that the periodic inspections have been performed.

***The inspection certificate should:***

1. Identify machine on which the procedure was utilized.
2. Date of inspection.
3. Identify the employees included in inspection.
4. Identify person who performed the inspection.
5. **Employee Training and Communication**

Employees must be trained so that they understand the purpose and function of the energy control program and acquire the knowledge and skills necessary for the safe application, usage and removal of the energy controls.

***The following employees require training:***

1. Authorized employees must receive training on the recognition of applicable hazardous energy sources, the type and magnitude of the energy available in the workplace, and the methods and means necessary for energy isolation and control. (***See Form #4***)
2. Affected employees must receive training on the purpose and use of the energy control procedure. (***See Form #5***)
3. Other employees (those whose work activities are or may be in an area where energy control procedures may be utilized) must be instructed about the procedure and about the exclusion relating to attempts to restart or reenergize machines or equipment that are locked out or tagged out. (***See Form #6***)

***Employers must also train employees in the following limitations of tags:***

1. Tags are essentially warning devices affixed to energy isolating devices and do not provide the physical restraint on energy isolating devices that is provided by a lock. (Additional tools such as a hasp may be needed with lockout/tagout to properly isolate energy device.)
2. Tags must be legible and understandable by all employees.
3. Tags and their means of attachment must be made of materials, which will withstand the environmental conditions encountered in the workplace.
4. Tags may evoke a false sense of security and their meaning needs to be understood as part of the overall energy control program.
5. Tags must be securely attached so that they cannot be inadvertently or accidentally detached during use.

***Retraining shall be provided for all authorized employees and affected employees whenever:***

1. There is a change in their job assignments.
2. A change in machines, equipment or processes that present a new hazard.
3. When there is a change in the employer's Lockout/Tagout program.
4. Whenever a periodic inspection reveals noncompliance.
5. Whenever the employer has reason to believe that there are deviations from or inadequacies in the employee’s knowledge or use of the energy control procedures. The retraining shall reestablish employee knowledge and introduce new or revised control methods and procedures.
6. The employer shall certify that employee training has been accomplished and is being kept up to date.
7. **Notification of Employees**

 Affected employees shall be notified by the employer or authorized employee of the application and removal of lockout and tagout devices. Notification shall be given before the controls are applied, and after they are removed before starting the machine or equipment.

1. **Application of Energy Control**

To safely apply energy control to machines or equipment using lockout and tagout devices, authorized employees must perform certain procedures in a specific order.

1. *Preparation for shutdown*: Before an authorized or affected employee turns off a machine or equipment, the authorized employee must have knowledge of the type and magnitude of the energy, the hazards of the energy to be controlled, and the method or means to control the energy.
2. *Machine or equipment shutdown*: The machine or equipment must be turned off or shut down using the procedures established for it to avoid any additional or increased hazards to employees as a result of the machine or equipment stoppage.
3. *Machine or equipment isolation*: All energy isolating devices that are needed to control the machine's energy source must be located. These devices must then be used to isolate the machine or equipment from its energy source.

***Lockout and tagout device application*:**

* 1. Authorized employees must affix lockout and tagout devices to each energy-isolating device.
	2. Each authorized employee shall place his/her own personal lockout and tagout device on the energy isolating device(s).
	3. When an energy-isolating device cannot accept multiple locks and tags, a group lockout or tagout device may be used.
	4. If group lockout is used, a single lock may be used to lockout the machine or equipment with the key being placed in a group lockout box or cabinet which allows the use of multiple locks to secure the box or cabinet.
	5. Each authorized employee will then use his/her own lock to secure the box or cabinet.
	6. Lockout devices when used must be affixed in a manner that will hold the energy isolating devices in a "safe" or "off" position.
1. *Stored energy*: After the energy isolating device has been locked and tagged out, all potentially hazardous stored or residual energy must be relieved, disconnected, restrained, or otherwise rendered safe. If there is a possibility of re-accumulation of stored energy to a hazardous level, verification of isolation shall be continued until the servicing or maintenance is completed, or until the possibility of such accumulation no longer exists.
2. *Verification of isolation*: Before any work begins on machines or equipment that have been locked and tagged out, an authorized employee must verify that the machine or equipment has been properly isolated and de-energized.
3. **Equipment for Lockout/Tagout**

For the purpose of achieving lockout/tagout, employees will be provided with appropriate lockout equipment. Equipment shall include, but not be limited to:

**Padlocks Lockout Hasps**

**Lockout tags/devices Circuit breaker lockout**

 **Group Lockbox Valve Lockout**

1. *Padlocks* - One or more padlocks will be issued to each authorized employee. Each employee will have an individual key. Only one key per lock shall be issued. These locks may be used only for lockout purposes. Locks will be identified by a number assigned to each employee and/or by the use of a nametag. Only the authorized person may apply and remove the lock, and the key may never be given to another person.

**NOTE**: A second or master key for each lock may be kept in a lock box and controlled by the Lockout/Tagout Program Administrator in the event of a lost or damaged key.

1. *Lockout Hasps* - These devices are designed to accommodate more than one lockout padlock when more than one person is working on de-activated equipment. Each person, to assure his or her safety, will apply a lock and warning tag and remove it when the task is completed.
2. *Warning Tags* - Authorized employees will be issued warning tags which must be used in conjunction with a padlock.

***Tag legends may include, but are not limited to:***

 **DANGER:** Do Not Start **DANGER:** Do Not Energize

 **DANGER:** Do Not Open **DANGER:** Do Not Operate

 **DANGER:** Do Not Close **DANGER:** Do Not Touch

Warning signs must comply with ANSI-Z535 standards. Warning tags shall bear the name of the authorized person and the date of application. Tags must be durable, weather proof and not easily damaged.

1. **Release from Lockout/Tagout**

The Lockout/Tagout standard includes requirements for releasing machines or equipment that have been locked and tagged out prior to restoring energy to the equipment and using it. Before lockout and tagout devices are removed and energy restored the authorized employee must complete certain procedures.

1. *Machine/equipment inspection*: The work area must be inspected to ensure that nonessential items (e.g., tools, spare parts) have been removed and that all of the machine or equipment components are operationally intact.
2. *Positioning of employees*: The work area must be checked to ensure that all employees have been safely positioned or have cleared the area. In addition, all affected employees must be notified that the lockout and tagout devices have been removed before the equipment is started.
3. *Lockout and tagout device removal*: Each lockout and tagout device must be removed from the energy-isolating device by the employee who applied the device.

***When can******an employee other than the one who applied the lockout/tagout device remove the device?***

When the authorized employee who applied the lockout and tagout device is not available to remove it, that device may be removed under the direction of the employer, provided that specific procedures and training for such removal have been developed, documented, and incorporated into the employer's energy control program. (***See Form #3***)

***Steps to be taken (by employees other than the one who applied the lockout/tagout device) to remove the device:***

1. The employer must verify that the authorized employee who applied the device is not at the facility.
2. The employer must make all reasonable efforts to contact the authorized employee to inform him/her that his/her lockout and tagout device has been removed.
3. The employer must ensure that the authorized employees know that the lockout device has been removed before he/she resumes work at the facility.

1. **Temporary Removal of Lockout and Tagout Devices**

In some circumstances, employees need to temporarily restore energy to a machine or piece of equipment during servicing or maintenance to test and /or reposition the machine or piece of equipment. Lockout and tagout devices may be removed temporarily in order to perform these tasks.

***Sequence of action for temporary removal of the lockout/tagout devices:***

1. The machine or equipment must be cleared of tools and materials.
2. Employees must be removed from the machine or equipment area.
3. All lockout and tagout devices may then be removed.
4. Authorized employees may then proceed to energize and test or position the equipment or machinery.
5. Following testing or positioning, all systems must be de-energized and energy control measures reapplied to continue the servicing and /or maintenance.

***Restoring Equipment to Service***

When servicing or maintenance is completed and the machine or equipment is ready to return to normal operating condition, the following steps shall be taken by the authorized person:

1. Visually inspect the machine or equipment and the immediate area around the machine or equipment to ensure that nonessential items have been removed and that the machine or equipment components are operationally intact.
2. Visually inspect the work area to ensure that all employees have been safely positioned or removed from the area.
3. Verify that the controls are in neutral.
4. Remove the lockout device(s) and re-energize the machine or equipment.
5. Notify affected employees that the servicing or maintenance is completed and the machine or equipment is ready to use.
6. **Group Lockout/Tagout Procedure**

If more than one authorized employee is required to lockout and tagout equipment, the following organizational procedures shall be followed:

1. Each authorized employee shall affix a personal lockout and tagout device to the group lockout device, group lockbox, or comparable mechanism when he or she begins work and shall remove those devices when he or she stops working on the machine or equipment being serviced or maintained.
2. A primary authorized employee shall be designated to exercise primary responsibility for implementation and coordination of the lockout/tagout of hazardous energy sources and for the equipment to be serviced.
3. The primary authorized employee would coordinate with equipment operators before and after completion of servicing and maintenance operations that require lockout/tagout.
4. A verification system would be implemented to ensure the continued isolation and de-energization of hazardous energy sources during maintenance and servicing operations.
5. Each authorized employee will be assured of his/her right to verify individually that the hazardous energy has been isolated and/or de-energized.
6. When more than one crew, craft, department, etc. is involved, each separate group of servicing/maintenance personnel would be accounted for by a principal authorized employee from each group. **NOTE:** The principal authorized employee is an authorized employee who oversees or leads a group of servicing or maintenance workers such as plumbers or electricians. Each principal authorized employee is responsible to the primary authorized employee for maintaining accountability of each worker in that specific group. No authorized employee may attach or remove another authorized person's lock/tag unless the provisions of the exception to 29 CFR1910.147 (e)(3) are met.

***Maintaining continuity of Lockout/Tagout protection during shift or personnel changes:***

Employers must ensure the protection of employees by providing for the orderly transfer of lockout or tagout device protection between off going and incoming employees. This will help to minimize exposure to hazards from the unexpected energization or startup of the machine or equipment or the release of stored energy. Reference 29 CFR 1910.147(f)(4).

1. **Outside Personnel (Contractors)**

Outside personnel/contractors shall be instructed by the company to enforce the use of lockout/tagout procedures. They will be informed about the use of locks and tags. They shall also be notified to refrain from any attempts to restart or re-energize machines or equipment that are locked out and tagged out.

The company will obtain information from the outside personnel/contractor about their lockout/tagout procedures and relay said information to affected company employees.

The outside personnel/contractor will be required to sign a certification form. (***See Form #8***) If outside personnel/contractor has previously signed a certification that is on file, additional signed certification is not necessary.

1. **Requirements for Lockout/Tagout Devices**
2. Must be durable so that they are capable of withstanding the environment to which they are exposed to for the maximum period of time work takes place.
3. Must be singularly identified.
4. Must be the only devices used for controlling energy.
5. Must not be used for other purposes.
6. Must be standardized within the facility in at least one of the following criteria: color, shape, or size. Additionally, tagout devices must be standardized as to print and format.
7. Must be identifiable, in that it indicates the identity of the employee applying the devices.

***Durability requirements for lockout devices:***

1. Lockout equipment must be substantial enough to prevent removal without the use of excessive force or unusual techniques such as with the use of bolt cutters or other metal cutting tools.

***Hardware requirements for tagout:***

1. Must be constructed and printed so that exposure to weather conditions or wet and damp locations will not cause the tag to deteriorate or the message on the tag to become illegible.
2. Must not deteriorate when used in corrosive environments such as areas where acid and alkali chemicals are handled and stored.
3. Must be standardized in print and format.
4. Must be substantial to prevent inadvertent or accidental removal.
5. Must have an attachment means of a non-reusable type, attachable by hand, self-locking, and non-releasable with a minimum unlocking strength of no less than 50 pounds and having the general design and basic characteristics of being at least equivalent to a one piece all environment tolerant nylon cable tie.
6. Must warn against hazardous conditions if the machine or equipment is energized.
7. Must include a legend such as: Do Not Start, Do Not Open, Do Not Close, Do Not Energize, and Do Not Operate.

**This written program has been developed by the Bureau of State Risk Management, Department of Administration and is available for download. It may be adapted to fit the particular needs of your facility. The program was adapted from a written program originally developed by the Occupational Safety and Health Administration (OSHA).**

 **Appendix A - Definitions**

Affected Employee - an employee whose job requires him/her to operate or use a machine/equipment on which servicing or maintenance is being performed under lockout and tagout procedures.

Authorized Employee - an employee who locks and tags out machines or equipment in order to perform servicing or maintenance on that machine or equipment.

Capable of being locked out. An energy isolating device is capable of being locked out if it has a hasp or other means of attachment to which, or through which, a lock can be affixed, or it has a locking mechanism built into it. Other energy isolating devices are capable of being locked out, if lockout can be achieved without the need to dismantle, rebuild, or replace the energy isolating device or permanently alter its energy control capability.

 Energized - Connected to an energy source or containing residual or stored energy.

Energy Isolating Device - a mechanical device that physically prevents the transmission or release of energy. Manually operated disconnect switches, line valves, blocks and slide gates are examples of energy control devices that provide visible indication of the position of the device. “On/off” buttons, selector switches and other control circuit devices are not energy control devices.

Energy Sources - any electrical, mechanical, hydraulic, pneumatic, chemical, nuclear, thermal or other energy.

Hot tap - A procedure used in the repair, maintenance and services activities which involves welding on a piece of equipment (pipelines, vessels or tanks) under pressure, in order to install connections or appurtenances. It is commonly used to replace or add sections of pipeline without the interruption of service for air, gas, water, steam, and petrochemical distribution systems.

Lockout - The placement of a lockout device on an energy isolating device, in accordance with an established procedure, ensuring that the energy isolating device and the equipment being controlled cannot be operated until the lockout device is removed.

Lockout Device - a device that utilizes a positive means, such as lock, either key or combination, to hold an energy isolating device in a safe position and prevent energization of a machine or equipment.

Normal production operations - The utilization of a machine or equipment to perform its intended production function.

Servicing and/or maintenance - Workplace activities such as constructing, installing, setting up, adjusting, inspecting, modifying, and maintaining and/or servicing machines or equipment. These activities include lubrication, cleaning or unjamming of machines or equipment and making adjustments or tool changes, where the employee may be exposed to the unexpected energization or startup of the equipment or release of hazardous energy.

Setting up - Any work performed to prepare a machine or equipment to perform its normal production operation.

Tagout Device - a prominent warning device, such as a tag, which can be securely fastened to a lockout device on an energy isolating device in accordance with an established procedure, to indicate that the energy isolating device and the equipment being controlled may not be operated until the lockout/tagout device has been removed.

| Equipment: |      **Appendix B – Machine Specific LOTO Development Procedure**  | Model #: |       | Serial #: |       |
| --- | --- | --- | --- | --- | --- |
| Location: |       | Scope of Work: |       |
| Prepared By: |       | Date: |       | Signature: |       |
| **STEP 1: Identify energy sources:** (check all that apply) |
| **Identify all energy sources** |  | **Identify types of stored or residual energy** |
| Electrical:  | [ ]  Pneumatic | [ ]  Hydraulic |  | [ ]  Stored electrical (capacitors) | [ ]  Hydraulic/Pneumatic |
| [ ]  110V | [ ]  Mechanical | [ ]  Other: - Specify: |  | [ ]  Pressured Line | [ ]  Suspended equipment |
| [ ]  220/440V | [ ]  Chemical |  |  | [ ]  Spring | [ ]  Other: |  |
| [ ]  Other: (list) |       | [ ]  Thermal |  |  |  |  |  |  |
| Is there a possibility of energy re-accumulation? | [ ]  No [ ]  Yes – Explain: |       |
|  |  |  |
| **STEP 2: Shut down equipment following normal procedures** |
| (Consult equipment manual, manual location: |  | ; or contact supervisor if shutdown instructions are needed) |
|  |  |  |
| **STEP 3: Complete the following for each energy source** (If more space is needed to document other energy sources, please list on back): |
| 1. **Isolate energy source (list location):**
 |       |
| **Method:** |
| [ ]  Shut off manual electric circuit breakers | [ ]  Disconnect switches | [ ]  Remove fuses | [ ]  Block hydraulic/pneumatic | [ ]  Bleed pressurized line |
| [ ]  Valves: [ ]  Close [ ]  Open | [ ]  Ground electrical | [ ]  Remove batteries | [ ]  Release spring tension | [ ]  Reposition suspended equipment |
| [ ]  Other – Specify: |       |
|  |  |
| **Apply lockout devices:** |
| [ ] Lockout lock with identifier | [ ]  Gate valve cover | [ ]  Fuse lockout | [ ]  Chain and lock | [ ]  Lockout hasp | [ ]  Block | [ ]  Blank flange |
| [ ] Ball valve lockout | [ ]  Pneumatic port valve lockout | [ ]  Wall switch lockout | [ ]  Cable and lock | [ ]  Circuit breaker cover-up | [ ]  Wedge | [ ]  Slip blind |
| [ ] Butterfly valve lockout | [ ]  Inline lockout valve | [ ]  Plug lockout | [ ]  Power cord lock | [ ]  Lower item down to lowest state | [ ]  Pins | [ ]  None required |
| [ ]  Other: |       |  |  |
| [ ]  Verify Zero energy state by: |       |
|  |  |
| 1. **Isolate energy source (list location):**
 |       |
| **Method:** |
| [ ]  Shut off manual electric circuit breakers | [ ]  Disconnect switches | [ ]  Remove fuses | [ ]  Block hydraulic/pneumatic | [ ]  Bleed pressurized line |
| [ ]  Valves: [ ]  Close [ ]  Open | [ ]  Ground electrical | [ ]  Remove batteries | [ ]  Release spring tension | [ ]  Reposition suspended equipment |
| [ ]  Other – Specify: |       |
|  |  |
| **Apply lockout devices:** |
| [ ] Lockout lock with identifier | [ ]  Gate valve cover | [ ]  Fuse lockout | [ ]  Chain and lock | [ ]  Lockout hasp | [ ]  Block | [ ]  Blank flange |
| [ ] Ball valve lockout | [ ]  Pneumatic port valve lockout | [ ]  Wall switch lockout | [ ]  Cable and lock | [ ]  Circuit breaker cover-up | [ ]  Wedge | [ ]  Slip blind |
| [ ] Butterfly valve lockout | [ ]  Inline lockout valve | [ ]  Plug lockout | [ ]  Power cord lock | [ ]  Lower item down to lowest state | [ ]  Pins | [ ]  None required |
| [ ]  Other: |       |  |  |
| [ ]  Verify Zero energy state by: |       |

| Equipment: |       | Model #: |       | Serial #: |       |
| --- | --- | --- | --- | --- | --- |
| Location: |       | Scope of Work: |       |
| Prepared By: |       | Date: |       | Signature: |       |
| 1. **Isolate energy source (list location):**
 |       |
| **Method:** |
| [ ]  Shut off manual electric circuit breakers | [ ]  Disconnect switches | [ ]  Remove fuses | [ ]  Block hydraulic/pneumatic | [ ]  Bleed pressurized line |
| [ ]  Valves: [ ]  Close [ ]  Open | [ ]  Ground electrical | [ ]  Remove batteries | [ ]  Release spring tension | [ ]  Reposition suspended equipment |
| [ ]  Other – Specify: |       |
|  |  |
| **Apply lockout devices:** |
| [ ] Lockout lock with identifier | [ ]  Gate valve cover | [ ]  Fuse lockout | [ ]  Chain and lock | [ ]  Lockout hasp | [ ]  Block | [ ]  Blank flange |
| [ ] Ball valve lockout | [ ]  Pneumatic port valve lockout | [ ]  Wall switch lockout | [ ]  Cable and lock | [ ]  Circuit breaker cover-up | [ ]  Wedge | [ ]  Slip blind |
| [ ] Butterfly valve lockout | [ ]  Inline lockout valve | [ ]  Plug lockout | [ ]  Power cord lock | [ ]  Lower item down to lowest state | [ ]  Pins | [ ]  None required |
| [ ]  Other: |       |  |  |
| [ ]  Verify Zero energy state by: |       |
|  |  |
| 1. **Isolate energy source (list location):**
 |       |
| **Method:** |
| [ ]  Shut off manual electric circuit breakers | [ ]  Disconnect switches | [ ]  Remove fuses | [ ]  Block hydraulic/pneumatic | [ ]  Bleed pressurized line |
| [ ]  Valves: [ ]  Close [ ]  Open | [ ]  Ground electrical | [ ]  Remove batteries | [ ]  Release spring tension | [ ]  Reposition suspended equipment |
| [ ]  Other – Specify: |       |
|  |  |
| **Apply lockout devices:** |
| [ ] Lockout lock with identifier | [ ]  Gate valve cover | [ ]  Fuse lockout | [ ]  Chain and lock | [ ]  Lockout hasp | [ ]  Block | [ ]  Blank flange |
| [ ] Ball valve lockout | [ ]  Pneumatic port valve lockout | [ ]  Wall switch lockout | [ ]  Cable and lock | [ ]  Circuit breaker cover-up | [ ]  Wedge | [ ]  Slip blind |
| [ ] Butterfly valve lockout | [ ]  Inline lockout valve | [ ]  Plug lockout | [ ]  Power cord lock | [ ]  Lower item down to lowest state | [ ]  Pins | [ ]  None required |
| [ ]  Other: |       |  |  |
| [ ]  Verify Zero energy state by: |       |
|  |  |
|  |

|  |
| --- |
| **STEP 4: Verify zero energy state** |
| [ ]  Try to start the equipment using normal operating controls and return controls to “off” position | [ ]  Try to operate panel |
| [ ]  Other: |       |
|  |  |
| **CHECK FOR:** |
| [ ] Employees are located in a safe place | [ ]  Observe, listen |
| [ ]  Inspect movable parts to ensure they are immobile | [ ]  No re-energization |
| [ ]  No electrical energy | [ ]  All operating circuits are off and cannot be reactivated |
| [ ]  Control panel lights are off | [ ]  If hazard is not in sight range of startup or energy isolation device, use buddy system |
| [ ]  Check for a remote energy source | [ ]  No pressure build-up |
| [ ]  Other |       |
|  |  |  |
| **STEP 5: Proceed with work on machine or equipment** |
| * Ensure that employees are protected from potential hazards if lockout devices must be temporarily removed **to test** equipment.
 |
| * After testing equipment, **lockout equipment again** following the same initial equipment-specific procedure before putting yourself into a potential danger zone.
 |
|  |  |  |
| **STEP 6: Release equipment from lockout** |
| [ ]  Remove locks, tags and blocking devices in their proper order | **1** |       | **2** |       | **3** |       | **4** |       | **5** |       |
| [ ]  Equipment is operationally intact |
|

|  |
| --- |
| **List the names and titles of the Authorized Employees qualified to service or maintain this machine or equipment.** |
| **Name** | **Title** | **Date** |  | **Name** | **Title** | **Date** |
|       |       |       |  |       |       |       |
|       |       |       |  |       |       |       |
|       |       |       |  |       |       |       |
|       |       |       |  |       |       |       |

[ ]  Affected employees are notified |

| Equipment: |       | Model #: |       | Serial #: |       |
| --- | --- | --- | --- | --- | --- |
| Location: |       | Scope of Work: |       |
| Prepared By: |       | Date: |       | Signature: |       |

**Form #1**

**Annual Program Evaluation Report**

**Company/Institution: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Contact Person: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Phone Number: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

 **YES NO COMPLETION DATE**

**1. Equipment, machinery and personnel:**

 a. A current list of equipment and machines that

 need to be locked out has been developed. \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 b. All machinery has the ability to accept a

 lockout device. \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_­­­­\_\_

 c. Current specific written Energy Control

 Procedures are developed and used for each

 piece of equipment. \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 d. A current list of all authorized employees has

 been developed. \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 e. A current list of all affected employees has

 been developed. \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 f. A current list of all other employees has been

 developed. \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**2. Energy Control Program:**

 a. A written Energy Control Program

has been developed. \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 b. Does the written program state the methods

of compliance, including the:

* Intended use of procedures. \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Steps for shut down, isolating,

blocking and securing energy. \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* Steps for placement, removal,

and transfer of lockout/tagout

 devices. \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* Requirements for testing to

verify effectiveness of lockout/tagout. \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Compliance with energy control procedures

is verified at least annually. The results of the

inspection are certified and kept on file. \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

d. Lockout/tagout devices are provided.

(locks, hasps, tags, etc.). \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

e. Lockout devices are singularly identified,

 durable, standardized, substantial and

 employee identifiable. \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

f. Lockout devices are used only for energy

 control. \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

g. Tagout devices are located at the same

 location as lockout devices. \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

h. Tagout devices warn against hazardous

 conditions such as Do Not Start, Do Not Open. \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

i. Energy isolation is performed ONLY by

 authorized employees. \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

j. Affected employees are notified before and

 after lockout/tagout. \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

k. Group lockout/tagout procedures are

used when needed. \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

l. Information about each other’s' lockout

program is exchanged with contractors. \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 m. Continuity of lockout/tagout is provided

 during shift change and personnel changes. \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**3. Training requirements:**

 a. Authorized employees - recognition of energy

 sources, type and magnitude of energy and

methods and procedures necessary for isolation

and control. \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 b. Affected employees - purpose and use of

 energy control procedures. \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 c. Other employees - instructed on the procedures

 locked or tagged out. \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 d. Retraining - when change in job, assignment,

 equipment, process, procedure or the result of an

 inspection. \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 e. Training is certified with names and dates. \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Comments:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Signature/Title Date**

**Form #2**

 **MACHINE SPECIFIC ENERGY CONTROL PROCEDURES**

 **Effective Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Plant Number:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

 **Department:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Room Number: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

 **Machine Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Inventory Number:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

 **Prepared By:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Reviewed By:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. Notify All Affected Employees servicing/maintenance is required on machines/equipment and must be shut down and locked out.

2. Preparations for Shutdown.

1. Verify all needed materials, tools, and lockout equipment required is available.
2. Inspect machine for any hazardous conditions that may be affected by de-energization.

3. Machine and Equipment Shutdown.

1. List specific procedures for normal equipment shutdown. (Depress the stop button, open switch, close valve, etc.)

4. Machine or Equipment Isolation.

1. List specific procedures to control machine energy sources and isolating devices. (Turn main disconnect to off position. Apply hasp, lock, and tag.)

5. Release Stored Energy. List specific procedures to release any possible re-accumulation of stored energy. (Ex: rotating flywheels, hydraulic systems, air, gas, steam, water pressure.)

6. Verification of Isolation. List specific procedures to verify machine has been properly isolated and de-energized. (Ex: Ensure no personnel are exposed, verify the isolation of the equipment by operating the push button or other normal operating controls.) Ensure equipment controls are returned to “off” positions.

7. Perform Servicing/Maintenance.

8. Restore Equipment to Service Inspection. Ensure all essential items have been recovered and all machine components are intact. Verify all employees are safety positioned.

 9. Notify affected employees that lockout devices are being removed.

10. Removal of the Lockout Devices.

1. Verify controls are in neutral.
2. List specific procedures to re-energize machine/equipment.

11. Return the Machine to Operation and Notify Affected Employees.

**Form #3**

**DOCUMENTATION FOR REMOVING LOCKS/TAGS**

**Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Name of Authorized Employee lockout being removed: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Name of Authorized Contractor/ Company whose lockout is being removed:\_\_\_\_\_\_\_\_\_\_\_\_\_**

 **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. **Check the machine/equipment to be sure it is operationally intact, tools have been removed, and guards have been replaced.**
2. **Has the Authorized Person been contacted?**

**Yes No (**If no, answer the following**)**

1. **Has verification been made that the Authorized Person is not at the facility?**

**Yes No (**If no discontinue removal**)**

1. **Have all reasonable efforts been made to contact the Authorized Person and inform him or her that their lock has been removed?**

**Yes No (**If no discontinue removal**)**

1. **List of locations where a requirement to contact the Shift Supervisor has been placed:**

**6. Reason for Lockout/Tagout Removal:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

 **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

 **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**I have taken responsibility for the emergency removal of the authorized person’s lockout device and have restored the machine or equipment to normal production or set up. I will ensure that the authorized person will have knowledge of the lockout removal before resuming work.**

**Signature/Title Date**

**Form #4**

**"AUTHORIZED" EMPLOYEE TRAINING CERTIFICATION**

**Date of Training: / /**

**Instructor:**

**Signature:**

**The following employees have received "AUTHORIZED" employee training on lockout/tagout procedures:**

**Employee Name (Please Print) Employee Signature**

**Form #5**

**"AFFECTED" EMPLOYEE TRAINING CERTIFICATION**

**Date of Training: / /**

**Instructor:**

**Signature:**

**The following employees have received "AFFECTED" employee training on lockout/tagout procedures:**

**Employee Name (Please Print) Employee Signature**

**Form #6**

**"OTHER" EMPLOYEE TRAINING CERTIFICATION**

**Date of Training: / /**

**Instructor:**

**Signature:**

**The following employees have received "OTHER" employee training on lockout/tagout procedures:**

**Employee Name (Please Print) Employee Signature**

**Form #7**

**ANNUAL LOCKOUT/TAGOUT AUDIT**

**Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Organization: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Machine/Equipment Name(s):\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Review with Employee(s) performing service or maintenance on the following:**

 **Have you had lockout training? Yes No**

 **Do you have Lockout/tagout Equipment? Yes No**

 **Are lockout procedures for the above**

 **machine/equipment available and/or posted? Yes No**

 **Do you know and understand your**

 **lockout responsibilities? Yes No**

 **Have you ever been injured on the job? Yes\_\_\_\_ No\_\_\_\_**

**Observation:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Were lockout procedures followed? Yes No**

**List deviation(s) or inadequacies observed:**

**Corrections/Changes/Comments:**

**Employee(s) Observed:**

**Name: Dept.:**

**Name: Dept.:**

**Name: Dept.:**

**Inspected by:**

**Name:**

**Job Title:**

**Form #8**

**Documentation of Information Given to Contractors**

**Pertaining to Lockout/Tagout Procedures**

|  |  |  |  |
| --- | --- | --- | --- |
| **Date** | **Contractor** | **Signature** | **Information Given** |
|  |  |  |  |
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**Contractor's Signature: Date:**

**Authorized Employee Signature: Date:**

**Authorized Supervisor's Signature: Date:**