

19.3: Energy Isolation

Energy Isolation

Lockout or tagout shall be performed only by the authorized employees who are performing the servicing or maintenance.

Affected employees

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

Elements of the procedure

The established procedures for the application of energy control (the lockout or tagout procedures) shall cover the following elements and actions and shall be done in the following sequence:

1. **Preparation for shutdown.** Before an authorized or affected employee turns off a machine or equipment, the authorized employee shall 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 shall be turned off or shut down using the procedures established for the machine or equipment. An orderly shutdown must be utilized to avoid any additional or increased hazard(s) to employees as a result of the equipment stoppage.
3. **Machine or equipment isolation.** All energy isolating devices that are needed to control the energy to the machine or equipment shall be physically located and operated in such a manner as to isolate the machine or equipment from the energy source(s).
4. **Lockout or tagout device application.** A Lockout or tagout device shall be affixed to each energy isolating device by an authorized employee. Lockout devices, where used, shall be affixed in a manner to that will hold the energy isolating devices in a "safe" or "off" position. Tagout devices, where used, shall be affixed in such a manner as will clearly indicate that the operation or movement of energy isolating devices from the "safe" or "off" position is prohibited. Where tagout devices are used with energy isolating devices designed with the capability of being locked, the tag attachment shall be fastened at the same point at which the lock would have been attached. Where a tag cannot be affixed directly to the energy isolating device, the tag shall be located as close as safely possible to the device, in a position that will be immediately obvious to anyone attempting to operate the device.
5. **Stored energy.** Following the application of logout or tagout devices to energy isolating devices, all potentially hazardous stored or residual energy shall be relieved, disconnected restrained, and otherwise rendered safe. If there is a possibility of reaccumulation 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.
6. **Verification of isolation.** Prior to starting work on machines or equipment that have been locked out or tagged out; the authorized employee shall verify that isolation and de-energization of the machine or equipment have been accomplished.

Release From Lockout or Tagout

Before lockout or tagout devices are removed and energy is restored to the machine or equipment, procedures shall be followed and actions taken by the authorized employee(s) to ensure the following:

1. **The machine or equipment.** The work area shall be inspected to ensure that nonessential items have been removed and to ensure that machine or equipment components are operationally intact.
2. **Employees.** The work area shall be checked to ensure that all employees have been safely positioned or removed. Before lockout or tagout devices are removed and before machines or equipment are energized, affected employees shall be notified that the lockout or tagout devices have been removed. After lockout or tagout devices have been removed and before a machine or equipment is started, affected employees shall be notified that the lockout or tagout device(s) have been removed.
3. **Lockout or tagout devices removal.** Each lockout or tagout device shall be removed from each energy isolating device by the employee who applied the device. When the authorized employee who applied the lockout or 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. The employer shall demonstrate that the specific procedure shall include at least the following elements:

- Verification by the employer that the authorized employee who applied the device is not at the facility;
- Making all reasonable efforts to contact the authorized employee to inform him/her that his/her lockout or tagout device has been removed; and
- Ensuring that the authorized employee has this knowledge before he/she resumes work at that facility.

Outside Personnel (Contractors, etc.)

Communication

Whenever outside servicing personnel are to be engaged in activities covered by the scope and application of this standard, the on-site employer and the outside employer shall inform each other of their respective lockout or tag out procedures.

The on-site employer shall ensure that his/her employees understand and comply with the restrictions and prohibitions of the outside employer energy control program.

Group Lockout or Tagout

When servicing and/or maintenance is performed by a crew, craft department or other group, they shall utilize a procedure which affords the employees a level of protection equivalent to that provided by the implementation of a personal lockout or tagout device.

Requirements

Group lockout or tagout devices shall be used in accordance with the energy control procedures covered above. They shall include, but not necessarily be limited to, the following specific requirements:

1. Primary responsibility is vested in an authorized employee for a set number of employees working under the protection of a group lockout or tagout device (such as an operations lock);
2. Provision for the authorized employee to ascertain the exposure status of individual group members with regard to the lockout or tagout of the machine or equipment and;
3. When more than one crew, craft, department, etc. is involved assignment of overall job-associated lockout or tagged control responsibility to an authorized employee designated to coordinate affected work forces and ensure continuity of protection; and
4. Each authorized employee shall affix a personal lockout or 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.

Shift or Personnel Changes

Specific procedures shall be utilized during shift or personnel changes to ensure the continuity of lockout or tagout protection, including provision for the orderly transfer of lockout or tagout device protection between off-going and oncoming employees, to minimize exposure to hazards from the unexpected energizing or startup of the machine or equipment, or the release of stored energy.

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