

Lockout/Tagout Program

Purpose

The purpose of the Lockout/Tagout procedure is to state clearly the responsibilities of those persons who will be involved in the installation, repair, inspection and maintenance upkeep of equipment where the unexpected start up or release of stored energy could occur and could cause personal injury.

Under this procedure, persons working on equipment or machinery without the protection of lockout devices and/or individualized safety tags, or the unauthorized removal of tags and locks, starting or operating equipment or valves without all parties removing their tags and locks prior to starting, will result in disciplinary action and could result in dismissal.

General

Each department is expected to maintain an adequate supply of safety/danger tags to supply the workers in their area. Individuals who will be authorized to perform work on operational equipment will be issued a number of individualized locks. Spare locks will be maintained by the section supervisors. The supervisor will maintain a lock common to an Authorized Supervisor(s) on the other shift(s).

Each individual working on a machine or piece of equipment will be responsible for placing his/her lock and tag on valves, switches or other items to insure the equipment they are working on cannot be energized while the work is being performed.

Tagout

- All personnel who are responsible for inspecting, maintaining, installing or removing equipment from service are required to install a tag on valves, power disconnects, switches or other devices that are used to shut off an energy source during the time when that individual is exposed to a potentially hazardous condition.
- Additional tags may be placed on the equipment for the purpose of informing would-be users of the equipment that a present or potential hazard exists if the equipment is operated.
- When shutting down and tagging equipment make certain that all pressurized or energized lines and all mechanical devices that could pose a danger to the worker performing the repairs, are shut down properly and tested to assure that it is in a "de-energized state" before continuing the work.

- The tags placed on the equipment should have the name of the employee placing the tag and the date and time the tag was applied.
- The equipment should only be considered safe when all lines into and out of the equipment are isolated in such a way as to prevent the possibility of the employee working on the equipment from being exposed to potentially hazardous energy sources (Such as steam, electrical discharge, gas, chemicals, rotating mechanical equipment etc.)
- Some equipment which is maintained such as fume hoods, equipment that supports research projects and/or other processes may cause additional safety hazards if correct procedure for notification of department or users of the equipment are not followed. Specific guidelines are written for posted Radiation, Chemical and Biohazard areas. Shut down of equipment that might directly endanger the life limb or property of other persons should only be done with supervisory approval and with prior notification of affected parties.
- Persons applying danger tags should notify their appropriate supervisor that they will be tagging or have tagged a piece of equipment even if the tag is only going to be in place for a short duration. Effective communication is a large part of maintaining a safe working environment.

Safety Lockouts

- Safety locks will be installed by the employee to isolate valves, switches, circuit breakers and other devices as necessary to insure that those devices cannot be adjusted, removed, energized, de-energized or otherwise altered during the time that personnel can be exposed to potential hazards associated with the equipment being serviced.
- If a safety lock is installed it must have with it a safety or danger tag, properly filled out.
- Electrical circuits will only be considered locked out when the disconnecting means (safety switch, circuit breaker, etc.) has been placed in the off position, tagged, locked and the key removed from the lock. The circuit should then be tested (electrical instrument) by the service personnel to assure that it is de-energized.
- Circuits carrying voltages above 480 volts and equipment carrying voltages above 480 volts will be serviced by the Electrical Shop only, unless specifically authorized by the Electrical Supervisor. Lockouts of such circuits will only be performed in the presence of and with the authorization of the Electrical Department.
- If authorized maintenance is to be performed on de-energized circuits which would

normally carry a voltage of greater than 480 volts persons performing that maintenance will apply their locks in addition to the lock of the Electrical Supervisor while the work is being performed. The Electrical Supervisor will assure that all safety measures and grounding of the de-energized high voltage circuit is properly performed before the work will commence.

- If additional equipment is interlocked with the piece of equipment being locked out in such a way that the interlocking circuits could cause the piece of equipment being locked out to operate or be energized during service operations, the auxiliary or interlocked equipment must also be tagged and locked off. It is the responsibility of the service personnel to properly test the equipment to assure that the potential hazards are controlled so as not to endanger themselves or others during the service operations. If the service personnel is not familiar with the proper de-energization of a piece of equipment he/she should notify the Supervisor so the proper methods can be demonstrated.
- If more than one employee is involved in the maintenance, installation or removal of a piece of equipment, each employee that is involved with that operation or would be exposed to safety hazards do to the inadvertent energization of that equipment should also place his/her lock and tag on the appropriate equipment.
- All tags must be properly signed and dated.
- Anytime a piece of equipment is determined to be unsafe to operate it will be tagged and locked out.
- Safety tags and locks will be used whenever a piece of equipment is being repaired, serviced, adjusted or inspected unless for troubleshooting purposes that equipment must be left in the energized state to determine a problem cause. Once the problem cause has been determined and prior to repairs being made to correct the problem the machine will be tagged and locked out.
- If there is no provision for locking out a piece of equipment a Safety Tag will be used without a lock, however, other safety measures should be taken to insure the safety of the service personnel, such as, removing the valve handle, removing the circuit wires and taping them or installing a mechanical block to prevent the service personnel from being exposed to potential hazards from the inadvertent energization of equipment. The equipment must not be capable of energizing during service or maintenance operations.

- Additional tags may be utilized at a work sight such as the PM Trouble Indicator or Danger Do Not Operate tags where it is deemed necessary by the equipment operator, service personnel or supervisor.
- When repairs, adjustments, inspections or other maintenance operations are completed, each individual who has tagged or locked out a piece of equipment will be responsible for removing his/her individual lock and tag. Once that individual's tag and/or lock is removed he/she should not reenter the equipment area where he/she will be exposed to potential hazard unless the tag and lock are re-installed.
- When maintenance operations are complete the machine or equipment should be restored to full operating condition and all locking and tagging devices should be removed from the area.
DO NOT LEAVE TAGS ON EQUIPMENT WHEN THE WORK IS COMPLETED.

Supervisory Responsibility

- Each supervisor is responsible for the safety of his/her employees. Supervisors of other shops or departments that are working on the same job site may require that locks and tags be placed in addition to and/or on additional equipment that may be interlocked with another piece under maintenance repair. It will be the policy of the department that personnel lock and tag out devices regardless of lead shop or personnel that are already engaged in service, maintenance or inspection of a piece of equipment if personnel will be assisting or for separate reasons performing work in said equipment.
- The immediate shift supervisor of personnel performing maintenance operations on a piece of equipment will install his/her tag and lock on equipment for equipment which will be shut down for extended periods beyond his/her immediate shift.
- If the responsibility for the repair of the equipment tagged and locked out will be transferred to another shift or another shop contact will be made with the appropriate department head, shop supervisor or other responsible party and provisions will be made for the transfer of responsibility for the tag and lock. This action will be documented by the supervisor initiating the transfer.

- If a lock and tag is left on a piece of equipment that must be energized and the employee who placed the tag and lock has left work, an effort will be made by the supervisor to contact the individual at his/her residence. If contact cannot be established with the party that installed the lock and tag, it will be the responsibility of the supervisor to inspect the equipment and area of the equipment to assure that all personnel are safely out of the hazard area before authorizing the removal of the lock and tag and energization of the equipment. The supervisor must be present during the removal of the tag and lock and start up of the equipment when the installer is not available.

Conclusion

- This program will only protect the affected employees if those employees follow the guidelines given and participate in the carrying out of these procedure in a responsible manner. *EACH AND EVERY INDIVIDUAL EMPLOYEE IS IN THE END RESPONSIBLE FOR HIS OR HER OWN SAFETY ON THE JOB.* Your supervisor is responsible for not only your safety in performing the jobs you do, but also is responsible for seeing to it that you are properly informed of safety measures that you can take to protect yourself on the job.
- If you are not informed of the safety rules or feel that you have not been adequately provided with other information that is necessary for the safe and efficient performance of your job, please communicate these needs to your supervisor, department head or to the Environment, Health and Safety Dept. at 864-4089.
- Additionally if you have suggestions or constructive complaints about the methods or procedure used please let your management know. You work with the equipment your ideas are valuable. We all are working for a injury free workplace.