

Liberty Electric Incorporated's Lockout / Tagout Program

Lockout / Tagout (LOTO) refers to specific practices and procedures to safeguard employees from the unexpected energization or startup of machinery and equipment, or the release of hazardous energy during service or maintenance activities. This requires that a designated individual turns off and disconnects the machinery or equipment from its energy source(s) before performing service or maintenance and that the authorized employee(s) either lock or tag the energy-isolating device(s) to prevent the release of hazardous energy and take steps to verify that the energy has been isolated effectively.



Approximately 3 million workers service equipment and face the greatest risk of injury if LOTO is not properly implemented. Compliance with the LOTO standard (29 CFR 1910.147) prevents an estimated 120 fatalities and 50,000 injuries each year. Workers injured on the job from exposure to hazardous energy lose an average of 24 workdays for recuperation. In a study conducted by the United Auto Workers (UAW), 20% of the fatalities (83 of 414) that occurred among their members between 1973 and 1995 were attributed to inadequate hazardous energy control procedures specifically, LOTO procedures.

OSHA CFR 29 1910.147 provides regulations on LOTO and 25 states have their own approved LOTO programs. Liberty Electric's LOTO program will help prevent injuries and accidents associated with equipment that should be LOTO and help your facility meet OSHA and State regulations for LOTO.

OBJECTIVES OF LOTO PROGRAM

1. Identify Equipment that is subject to LOTO
2. Develop written LOTO procedures for each specific piece of equipment
3. Attach LOTO procedures (Placards) on all required equipment
4. Inform management and workers of the results
5. Provide LOTO training to those that need it

LOTO DELIVERABLES

The following are the deliverables of the LOTO program for your facility:

- Equipment Specific LOTO procedures
- Application of LOTO procedure placards
- Electronic files of all LOTO procedures
- Liberty Electric's LOTO procedure template (if desired)
- LOTO training to those that need it

SCOPE OF WORK

LOTO procedures to be developed includes the isolation of any prime movers, machinery and equipment from electrical, mechanical, hydraulic, pneumatic, chemical, or even water energy sources.

LOTO procedures are to be developed in compliance with OSHA CFR 29 1910.147 and with any state OSHA regulations, including:

- The hazardous energy control procedures shall be documented in writing.
- The hazardous energy control procedure shall include separate procedural steps for the safe LOTO of each machine or piece of equipment affected by the hazardous energy control procedure.
 - The procedural steps for the safe LOTO of prime movers, machinery or equipment may be used for a group or type of machinery or equipment, when either of the following two conditions exists:
 1. (a) The operational controls named in the procedural steps are configured in a similar manner, and
 - (b) The locations of disconnect points (energy isolating devices) are identified, and
 - (c) The sequence of steps to safely lockout or tagout the machinery or equipment is similar.
 - 2. The machinery or equipment has a single energy supply that is readily identified and isolated and has no stored or residual hazardous energy.

PHASE I – EQUIPMENT & ENERGY SOURCE IDENTIFICATION

The first phase of any LOTO program is to identify all equipment subject to LOTO regulations and the energy sources that feed the equipment. Phase I is the labor intensive phase of the LOTO program, typically taking at least half to three quarters of the total effort required to complete the program.

Liberty Electric will survey equipment on-site by a LOTO field engineer experienced

and knowledgeable of LOTO processes as well as electrical, mechanical, hydraulic, pneumatic and thermal equipment. We will:

- Identify and document each piece of equipment requiring LOTO procedures
 - Take photographs of the equipment
- Identify and document all power sources and isolation points feeding the equipment
 - Take photographs of the feed equipment and isolation points as needed.
- Identify and document proper process for turning off/disconnecting power sources to the equipment.

Most often all data collection can be collected without disturbing any facility operations.

PHASE II – DEVELOPMENT OF YOUR LOTO PROCEDURES

Using the information from the survey in Phase I, LOTO procedures are developed for each piece of equipment in accordance with OSHA CFR 29 1910.147 and applicable state regulations. The procedures for each piece of equipment shall clearly and specifically outline the scope, purpose, authorization, rules, and techniques to be utilized for the control of hazardous energy, and the means to enforce compliance, including but not limited to, the following:

- (B) A statement of the intended use of the LOTO procedure;
- (C) The procedural steps for shutting down, isolating, blocking and securing machines or equipment to control hazardous energy;
- (D) The procedural steps for the placement, removal and transfer of lockout devices and tagout devices and responsibilities; and,
- (E) The requirements for testing a machine or equipment, to determine and verify the effectiveness of lockout devices, tagout devices and other hazardous energy control devices.

Most procedures shall be accompanied by photographs for visual instruction and identification. The procedures are written and implemented into all of the following programs.

- MS Word format, PDF format and LOCK OUT PRO template
- The MS Word format will allow changes by the customer if

needed in the future.

PHASE III – CUSTOMER REVIEW

After the completion of Phase II, the LOTO procedures will be sent to the customer (PDF format) for review and sign-off before completing and printing the procedures.

PHASE IV – PRINTING OF LOTO PROCEDURES

After the LOTO procedures have been reviewed and approved by the customer, they will be printed and laminated.

PHASE V – LOTO LABELING

LOTO process placards/informational sheets will be applied to the appropriate equipment by Liberty Electric Inc.

PHASE VI – LOTO TRAINING & CONSULTATION

After the LOTO procedures have been implemented, Liberty Electric will provide LOTO training for those who need it.

For more information on how Liberty Electric Inc. can help you make your facility safer and OSHA compliant with a new/revised Lock-Out/Tag-Out Program use Liberty Electric's Contact Tab on our home page.