

Howard Talks Tech

LOTO Essentials

Lock-out and tag-out (LOTO) is a critical part of a strong all-around safety program. In LOTO, maintenance employees work to positively prevent all forms of hazardous energy from causing harm.



Hazardous energy comes in many forms. Electrical energy can cause electrocution and burns, provide ignition to flammable atmospheres, and activate mechanical equipment. Steam can cause burns or initiate hazardous reactions. Nitrogen can cause asphyxiation. Chemical flow can cause uncontrolled reaction and injury. When a piece of equipment is being worked on, all sources of hazardous energy must be securely and positively locked out until the equipment is operational.

Basics of LOTO - Summarized here are the bare essentials of a good LOTO program.

- ❑ Have a corporate-wide LOTO policy that is mandatory at all sites
- ❑ Train affected employees in proper LOTO procedures, and retrain regularly
- ❑ Assign authorized employees to ensure that LOTO procedures are thoroughly followed
- ❑ Identify all sources of hazardous energy potentially impacting a piece of equipment and lock out all sources
- ❑ Make sure each person working on a piece of equipment applies his personal lock to the lockout device
- ❑ Apply a tag to the lockout point using a fastener that cannot be easily or accidentally removed. Use a tag that is not easily torn or defaced.
- ❑ Make sure that any stored energy has been released. This includes electrical capacitance, pressure, residual fluids and hazardous atmospheres, and pent up mechanical and potential energy.
- ❑ Once the locks and tags are place, try to operate the equipment to ensure that no lock-outs have been missed

Take care when troubleshooting

Sometimes LOTO might seem inconvenient, for example if you need to have parts of a machine or process energized for troubleshooting. In such cases, lock out the process completely, determine which lock-outs need to be removed to do the energized tests, evaluate the potential hazards carefully, and take the additional precautions. Only then remove the lock-outs. As soon as the need for the equipment to be energized has passed, the process should be locked out again.