MIOSHA Fact Sheet

Machine-Specific Lockout

What is machine-specific lockout?

Machine-specific lockout is a step-by-step procedure to lockout a specific machine or piece of equipment. This is opposed to a single lockout procedure that can be used uniformly across all machines and equipment in the facility.

Lockout is used during repair, maintenance, and associated activities on a machine, piece of equipment, or process. Lockout isolates the machine or equipment from all the energy sources, dissipates any stored energy, and renders it inoperative. Lockout prevents unexpected machine or equipment start up or movement that could injure or kill the employee servicing the machine. Lockout prevents employee contact with electricity and other hazardous sources of energy.

Specific procedures for lockout are required by General Industry Safety and Health Standard Part 85. The Control of Hazardous Energy Sources (Part 85). Typically, specificity means that the procedures need to be unique to each machine or piece of equipment.

Machine-specific lockout is not required for cordand-plug machines or equipment when the source of energy is controlled by simply unplugging the equipment, and in addition, the "plug" is under the exclusive control of the employee performing the work.

I have one written procedure that applies to all the machines and equipment in the facility. Is that good enough?

Probably not. It would be considered sufficient only if all the machines and equipment in your facility have:



- The same magnitude and sources of energy,
- Identical locations to apply lockout devices, and
- Identical steps needed to verify energy isolation.

If that is the case, one written procedure may be adequate. Otherwise, the lockout procedures will need to address each machine or piece of equipment in the facility separately. One procedure may be acceptable for a small group of machines if they share the traits outlined above.

Describe a machine-specific procedure.

A machine-specific procedure is an easy-to-follow document, tag, or placard that gives step-by-step instructions for controlling energy on a specific machine or piece of equipment. The procedure provides control of all the various energy sources for that machine or equipment: electrical, mechanical, hydraulic, pneumatic, chemical, thermal, gravity, and other forms of stored or potential energy.

The procedure will usually start with text. Adding photos and graphics can be critical in training employees. Some options are:

- Color-coding pictures of the equipment to identify the various energy sources and lock locations.
- Photographs of the equipment with text boxes and arrows to identify the lockout points.
- A combination of color-coding and text to identify the energy sources and lockout points.

How specific does the procedure have to be?

The machine-specific procedure must outline the scope, purpose, authorization, rules, and techniques utilized to control hazardous energy. It must have:

LEO is an equal opportunity employer/program.





- The specific procedural steps for shutting down, isolating, blocking and securing machines or equipment to control hazardous energy;
- The specific procedural steps for the placement, removal, and transfer of lockout devices or tagout devices and the responsibility for them; and
- The specific requirements for testing a machine or equipment to determine and verify the effectiveness of lockout devices, tagout devices, and other energy control measures.

It must be specific enough so that the instructions are clearly understood by the authorized employee performing the work.

How does an employer begin creating machine-specific procedures?

The process of creating a procedure begins with an assessment of the potential hazardous energy sources in the equipment or machine:

- What are the types of energy present?
- Where does the energy enter the machine or equipment?
- What is the magnitude of the energy?
- How can the energy be blocked or isolated?
- Can the machine or equipment store energy?
- In what sequence does the energy need to be isolated?
- Which device is needed to lockout the energy?
- How is any stored energy dissipated?
- Where is the lockout device applied?
- How is energy isolation verified?
- When do I notify affected employees of the lockout?

How do I know if the machine-specific lockout procedure is good enough?

The proof is in the performance of the procedure by the authorized employee. The periodic inspection performed at least annually by the employer is an opportunity to evaluate the energy control program on several levels:

• Ensure accountability in the procedure.

- Assess the procedure for accuracy.
- Evaluate the employee's training by observing their ability to achieve a zero-energy state in the machines and equipment.
- Re-train employees who deviate from the procedure or show inadequacies in the performance of the procedures.

What MIOSHA standards require lockout?

In addition to Part 85, many other general industry safety standards require lockout such as:

- General Industry Safety and Health Standard, Part 14. Conveyors
- General Industry Safety and Health Standard, Part 17. Refuse Packer Units
- General Industry Safety and Health Standard, Part 18. Overhead and Gantry Cranes
- General Industry Safety and Health Standard, Part 26. Metalworking Machinery
- General Industry Safety and Health Standard, Part 40. Safety-Related Work Practices (Part 40)
- General Industry Safety and Health Standard, Part 42. Forging
- General Industry Safety and Health Standard, Part 45. Die Casting
- General Industry Safety and Health Standard, Part 52. Sawmills
- General Industry Safety and Health Standard, <u>Part 57. Oil and Gas Drilling and Servicing</u> <u>Operations</u>
- General Industry Safety and Health Standard, <u>Part 62. Plastic Molding</u>
- General Industry Safety and Health Standard, <u>Part 63. Pulp, Paper, and Paperboard Mills</u>
- General Industry Safety and Health Standard, <u>Part 65. Mills and Calenders for Rubber and Plastic</u>
- General Industry Safety and Health Standard, <u>Part 72. Automotive Service Operations</u>

Part 40 and Part 85 are called horizontal standards and apply to most general industry workplaces. Part 40 applies to employees working on the electrical components of machines and equipment and contains requirements in addition to Part 85. The other standards listed here are called vertical

standards and are specific to the industry referenced in the title.