

JOB AID

**Lockout/Tagout (LOTO) Programs
and Procedures**

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Energy powers industrial machines and systems. Many people may hear the word “energy” and think of electricity. However, many other forms of energy are hazardous. For example, energy may be electrical, mechanical, hydraulic, pneumatic, radiation, thermal or chemical. See your supervisor or safety professional or review lockout/tagout procedures to learn about forms of hazardous energy where you work.

An **energy-isolating device** physically prevents the transmission or release of energy by blocking or isolating it. Examples include a manually operated electrical circuit breaker, a disconnect switch, a conductor switch, a line valve, a block, a blank flange, or a bolted slip blind. The power button is NOT an energy-isolating device.

Lockout is locking the energy-isolating device so that people CANNOT operate the equipment or restore power until the lockout device is removed. A lockout device holds an energy-isolating device in a safe position. Examples include padlocks and hasps.

Tagout is tagging the equipment to indicate that people MAY NOT operate it or restore power until the tagout device is removed. Tagout is not a physical restraint. Use tagout devices in addition to lockout devices. When lockout is not possible, we must still tag out. Tagout devices must be legible, durable and secure. Attach tagout devices to (or as close as possible to) the energy-isolating device.

Lockout and tagout devices must be durable (able to withstand environment/use), standardized (consistent in color, shape, size, print and format), substantial (able to withstand 50 lbs or 23 kg of force, hard to accidentally remove or miss) and identifiable (easy to recognize and understand).

Energy Control Program

Employers use an **energy control program** to ensure that equipment is de-energized and isolated from its energy sources before people perform service and maintenance. The program includes information that employees need to know so they may safely perform lockout/tagout. Programs are written to meet the needs of the workplace and the types of equipment people will maintain or service.

Energy control programs include:

- **Energy control procedures** including how to use the procedure; steps to shut down, isolate, block and secure equipment; steps to place, remove and transfer lockout/tagout devices; responsibilities during procedures; and requirements for testing equipment to verify energy control.
- **Inspection requirements.** At least once per year, employers conduct formal inspections of their energy control procedures to make sure they are effective, and that people are using them appropriately. The inspection may include reviewing procedures and responsibilities with employees to ensure their understanding of the energy control program. Inspection documentation include the name of the inspector, the date of the inspection, and the equipment and people included in the inspection. The inspector and responsible people note any defects, correct those defects and document their corrective actions, per their employer's requirements.

- **Training requirements.** Energy control programs outline training and retraining requirements employees must meet depending on their exposure to equipment, types of energy and hazards. In addition to refresher training, employees receive training when inspections reveal defects and when assignments, equipment or procedures change.

As you are using the energy control program, if you identify a problem, you must stop. Make sure you or a qualified person addresses any issues before you continue working.

Applying Locks and Tags

Please use your employer's specific energy control program and procedures. Only authorized employees apply locks and tags. If you have any questions about your authorization or the energy control program, please ask your supervisor. The authorized employee will:

1. Notify affected employees.
2. Prepare for shutdown.
3. Shut down equipment.
4. Isolate energy.
5. Apply locks and tags.
6. Make stored/residual energy safe.
7. Verify de-energization.

Removing Locks and Tags

Please follow your employer's specific energy control program and procedures when removing lockout/tagout devices. Only the authorized employee who installed the locks and tags can remove locks and tags. In rare cases in which the authorized employee is not available/reachable, follow the energy control program guidance to identify a designee to remove the locks and tags and inform the original installer.

The authorized employee will:

1. Inspect the work area.
2. Keep people away.
3. Remove lockout/tagout devices.
4. Notify affected people.

Other Considerations for Lockout/Tagout

There are some situations when your energy control program will have unique procedures you must follow.

These may include:

- **Energization required for testing.** Some servicing or maintenance operations may require equipment or components to be energized. In these cases, the energy control program may require the authorized person to clear the area, remove the devices, test the equipment and then, eventually, reapply locks and tags using standard procedures.
- **Outside personnel being on-site.** When outside personnel, such as contractors, are on-site, the employers should inform each other of their respective lockout or tagout procedures. Each employer ensures that their employees understand and comply with all the procedures, restrictions and prohibitions in their energy control programs.
- **Shift changes.** Use the procedures in the energy control program during shift or personnel changes to ensure the continuity of lockout or tagout protection.
- **Group lockout/tagout procedures.** Please consult your employer's energy control program for procedures for group lockout/tagout. These may include identifying a person responsible for group lockout/tagout; describing personal lockout or tagout device and processes; and using a group lockbox or lockout device