

LOCK OUT

When we clean, repair, adjust or maintain systems or mechanical equipment, we have to follow procedures for locking out that equipment.

It doesn't matter how short or simple the job is. When we work on equipment like conveyors, presses, roasters, hoppers, and meat slicers, the first step is to lock out the system.

Many of the injuries that occur during equipment service and maintenance are caused by machine parts that move because they were not locked out.

The usual excuse is that lockout procedures are complicated and take too long. Ask yourself this question: **would you rather spend time locking out equipment or lying in a hospital bed, missing limbs, or worse?**

Locking out means bringing every power source in a machine or system down to a Zero Energy State.

Some equipment can simply be switched off and locked out of service, but in many cases, the system involves several energy sources.

For example, a press may be hydraulically powered, but electronically controlled. Locking out the hydraulic power is not safe enough. Locking out the electricity may not even be safe enough. Gravity can still cause a raised arm to drop because of its own weight. There may also be stored energy in pistons or springs.

It makes sense to follow your workplace's established procedures for locking out equipment. In many cases, these procedures have been tested and proven by time and experience.

There are four basic actions in any lockout procedure:

1. Identify all energy sources connected with the work.
2. Disable, redirect, or stop all energy from doing what it normally does.
3. Confirm that you've reached a zero energy state.
4. Apply restraint devices to prevent the system from starting up while you work on it.

When you put your multiple lock device ("scissors clamp"), chain, or block on a piece of equipment, you also have to lock and tag it.

The lock is your personal security device that can only be removed by you, with your own key.

The tag indicates who locked out the machine, it directs people not to start or operate the machine, and it notes when the lockout procedure was applied.

[Instructor shows sample lockout devices and tags.]

In some situations, there may be a generic lockout procedure that is not specific to the machine on which you will be working.

In that case, a procedure will have to be written for the machine involved. To write the procedure properly, the machine should be inspected to identify all energy sources, and to determine the most effective method of locking it out.

It may be necessary to trace wires, lines, and piping in and out of the equipment in order to identify all energy sources.

It helps to refer to specifications, drawings, operating manuals, and similar information, if available.

Once each energy source has been identified and de-energized, you must test the equipment to check that it's in a zero energy state.

When it is not appropriate to lock out a machine, the employer, in consultation with employees, must develop a code of practice so that the work can be carried out safely.

One last point...

Lockout procedures are not just for complicated machines and systems. Here are a few examples where you can use simple steps to protect yourself and others:

- Put blocking under the arm of a backhoe while you replace a hydraulic cylinder.
- Lock out the electrical plug of a meat slicer while you clean it, either by placing a small lock through the hole in one of the prongs of the plug, by placing the plug in a lockout device, or by simply putting the plug in your pocket while you work on the machine.
- Must write a code a practice as per section 240 in order to use plug in pocket procedure rather than lock and key as required by section 239.
- Lock out an electrical panel while you relocate lighting stringers.

Remember...

Don't take chances. When in doubt, lock it out.

[Instructor explains lockout procedures currently in use. Identify situations on site where locking out would be necessary before working on machines or equipment. Review recent applications of lockout procedures.]

In New Brunswick, the law regarding Lock Out can be found in *General Regulation 91-191* under the *Occupational Health and Safety Act*, sections 239 and 240.

For more information, or to see an online version of the *Occupational Health and Safety Act*, visit our website at www.whscc.nb.ca.