

Appendix A

Generic Procedure for Lockout/Tagout

1. Identify all energy sources (e.g. electrical, steam, hydraulic, etc.) and their magnitude (e.g. 120 volts, 60 psi steam, etc.). Look for hidden energy sources such as springs, capacitors, elevated parts, etc. The equipment may contain more than one type of energy.
2. Notify individuals who use the equipment that it will be taken out of service.
3. Stop the equipment by its normal shut down procedure.
4. Isolate the equipment from its energy source. This typically involves closing valves, opening switches or operating other energy isolation devices. Note - an on/off switch or run/stop switch are not energy isolation devices.
5. Dissipate or secure stored energy. This may involve repositioning, blocking, bleeding, braking, etc.
6. Apply your lock to the energy isolation device. Always provide a completed tag with your lock. A tag alone can only be used where it is infeasible to lockout an energy source. Additional precautions must be followed if only a tag is used. Each individual working on the equipment must install their lock. It may be necessary to use a multiple lock hasp.
7. Ensure that no one is exposed to danger, and then as a check to be sure that all energy sources are isolated, activate the equipment's normal controls to make certain the equipment will not operate. Check to make sure you any test equipment (e.g. multi- meter) is working as designed.

CAUTION: Always return the controls to the "neutral" or "off" position after this test. Only when the equipment is locked and/or tagged out may work proceed.

Temporary Removal of Lockout for Testing or Adjustments

1. Clear equipment of tools, etc.
2. Remove employees from danger zone
3. Remove lock and/or tag
4. Proceed with test by energizing the equipment
5. De-energize equipment (following steps three through seven above)

Restoring the Equipment After Work is Completed

1. Check the area around the equipment to insure that no one is exposed to danger after servicing or maintenance is complete
2. Remove all tools, loose parts, etc. from the equipment
3. Replace all guards, shields or other safety features
4. Remove the tag and lockout devices. Each person must remove their own lock
5. Operate the energy isolation device to restore energy to the equipment

Shift Changes and Prolonged Lockout/Tagout

When a shift change is occurring and the out-going shift will be removing their lockout/tagout and the incoming shift will be applying their lockout/tagout, at least one employee from each shift must be present at the equipment for the change. The incoming shift shall apply their lockout/tagout before the outgoing shift leaves.

It is acceptable to maintain a lockout continuously for an indefinite period of time.

Questions regarding the lockout/tagout policy should be addressed to EHS at safety@utk.edu or 974-5084.