

## ENERGY ISOLATION

### Lockout/Tagout/Tryout

What is Lockout/Tagout/Tryout? Lockout/Tagout/Tryout (LOTO) protects a worker by preventing others from turning on equipment or from a release of energy while working on or servicing equipment & machinery. LOTO controls hazardous energy.

### How it works

All power sources must be disconnected and locked in the off position. Each person involved locks out the power with their own personal lock and key, so they have control of the energy source. They place a tag on the lock to warn others and to identify who is responsible. Before beginning work, each person tries the energy source to ensure it is locked out. No one else can remove another's lock. Therefore, no one can accidentally turn on the equipment.

At Innovations Manufacturing only designated employees can lockout power sources and/or an alternative group lockout process is used.



### Injury Example

**INJURY EXAMPLE:** Sam was cleaning a press punch. He decided to take the guard off and clean the small parts with his fingers. He reached into the press punch when somehow the punch was actuated, and his finger was severed. Sam had seen a disconnect nearby and saw it was off. Sam did not realize that disconnect was for another piece of equipment. If Sam had locked and tagged out the punch and then tried to actuate the punch before placing his hands in the danger point, he would not have suffered the amputation injury.

### Identify all Power Sources

Identify the equipment or machinery that needs to be shut down and ALL its energy sources.

- Electrical, mechanical, gravitational, thermal, hydraulic, pneumatic, and chemical. }
- Determine if there are any stored energy sources: Capacitors, springs; elevated components; rotating flywheels; hydraulic systems; air, gas, steam, water pressure; piles that can shift; etc.
- Properly shut down equipment and machines: Notify affected workers about the shutdown - those who work on the machines or equipment or work in area where LOTO will be done.
- Shut off the power sources.

### Lockout/Tagout

- Apply locks & tags to the power sources so the machine/equipment cannot be started.

### Try Out

- Test to see if the equipment is properly locked out by trying to start it.
- After the work is completed, remove all tools.
- Notify all affected employees that the locks will be removed and the equipment will be restarted.

### Remove Locks & Tags

When the work is complete, all tools are removed and accounted for, unguarded moving parts have been covered and protected from human access, and all affected workers have approved the restart of equipment, you can remove the locks and tags and place the equipment back into service.

- Only the person who applies the lock and tag are authorized to remove the locks and tags.

### When do we need LOTO?

- Before any repairs, maintenance, or service on equipment.
- Before any work on equipment that requires a person to place any part of their body in or near the point of operation.

### Summary:

- Lock out all energy sources.
- Put on a tag to warn others & identify you as the responsible person.
- Test to make sure the equipment is locked out.
- ONLY the person who put on the lock and tag removes it.