

PERFORMING REPAIR AND MAINTENANCE ON INDUSTRIAL EQUIPMENT CAN BE AS DANGEROUS AS USING IT.

Even when they're not in operation, machines that are attached to an energy source like electricity, steam, or compressed air hold the risk of releasing hazardous energy during repair.

An accidental release of energy during maintenance or repair can cause catastrophic injuries like electrical shock or dismemberment, or even death.

To prevent these type of injuries, OSHA requires facilities to follow a lockout/tagout program. This system of shutting down power sources with carefully labeled sets of locks prevents the accidental release of hazardous energy during repair and maintenance operations.

The following steps can be used to create a safe lockout/tagout procedure for your workplace.

1. WRITE A FORMAL PROCEDURE



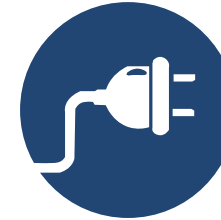
Write down your lockout procedure from beginning to end, ideally with pictures to illustrate. Identify the equipment in question and list the proper steps for shutting down and restarting the equipment. Be sure to consider all primary and secondary energy sources.

2. NOTIFY AFFECTED EMPLOYEES



Notify all employees that will be impacted by the LOTO. Make sure backup work procedures are in place so they know how to proceed while the equipment is locked out.

3. SHUT DOWN EQUIPMENT



Shut down all primary and secondary power sources according to your formal written lockout/tagout procedure.

4. LOCK OUT



Lock out equipment at all primary and secondary power sources. If multiple workers are working on a repair, they must each add their lock to the equipment. Tags should be clearly labeled to easily identify who is performing the repair.

5. RELEASE ANY STORED ENERGY



Release any stored energy from secondary energy sources. This can include draining valves, releasing hydraulic pressure, and blocking moving parts to ensure that hazardous energy isn't released during repair.

6. TEST THE LOCKOUT



Review your written procedure to make sure no steps were missed, and make sure the lockout worked properly by attempting to turn the equipment on. After verifying that it does not come online, switch the equipment back to the off position.

7. MAINTAIN LOCKOUT DURING SHIFT CHANGES



A high percentage of accidents occur shortly after shift changes due to communication errors about the status of a lockout. If a worker removes their lock to leave for the end of their shift, the person replacing their shift must place their lock first.

8. BRING THE EQUIPMENT BACK ON LINE



When work is finished, bring the equipment back into operation. Each worker must remove their own lock and tag. Before turning on the equipment, make sure that all workers are safely out of the way of hazards. Bring the equipment back on line and notify all affected workers that the lockout/tagout is complete.

Each workplace has specific needs that need to be addressed in its LOTO procedures.

Be aware when writing your procedure that your lockout/tagout program may need to exceed the standards set by OSHA in order to keep your employees safe.

