Since 2005, 28 metal and nonmetal miners have died in electrical and machinery accidents in which power was not disconnected and locked out before work was begun on power circuits or equipment.

Lockout - Tagout - Tryout procedures (LOTO) ensure that all energy sources are isolated before electrical or mechanical work is performed. LOTO protects miners from the dangers of uncontrolled, unplanned release of energy (movement of equipment or materials; electrical, hydraulic or pneumatic), or toxic materials.

1. Stop the equipment, disconnect power and lock the switch.
2. Attach your identifying tag.
3. With miners in the clear, try to start the equipment or test for power.

IT’S NOT LOCKED OUT UNTIL YOU’VE TRIED IT OUT!

MSHA’s LOTO standards address electrical and mechanical hazards

- Electrical lockout
  - 30 CFR §§56/57.12006 - Distribution boxes
  - 30 CFR §§56/57.12016 - Work on electrically powered equipment
  - 30 CFR §§56/57.12017 - Work on power circuits
- Mechanical lockout
  - 30 CFR §§56/57.14105 - Procedures during repairs or maintenance

Best practices for an effective Lock - Tag - Try Program

1. Use Lock - Tag - Try whenever:
   - Removing or bypassing a guard or other safety device for maintenance, repair, cleaning, or clearing jammed mechanisms.
   - Placing any part of one’s body where it could be injured by moving machinery parts or release of stored energy (hydraulic or pneumatic pressure, steam, springs, objects that could fall or pivot), or
   - Placing any part of one’s body into an electrical energy or hazardous substances danger zone.
2. Identify and control stored energy: mechanical, electrical, hydraulic, pneumatic, gravity, chemical, thermal.
3. Identify proper lockout locations - disconnect main or circuit power sources, not on/off switches, interlocks, emergency stops or selector switches.
4. Develop machine-specific lockout procedures.
5. Each person uses his/her personal, unique lock and tag (no duplicate locks or keys.)
6. Clearly defined group lockout procedures may be used for complex jobs involving multiple miners, equipment or energy sources.
7. Each person affixes and removes one’s own lock and tag. Verify mechanical equipment is isolated by trying to start or operate it. Electricians verify electrical circuits are deenergized by testing. Keep miners clear of equipment and hazards during the “try out” process.
8. Use locks only for lockout, not for securing toolboxes or lockers.
9. Train all miners who use locks and tags on proper procedures. Provide awareness training to other miners.
10. Address contractor responsibilities and procedures.
11. Periodically review lockout program. Add or modify procedures when new equipment is installed or procedures. Retrain miners as needed.

Lock It Out -- Tag It Out -- Try It Out

It’s not locked out until you’ve tried it out!