*BY ORDER OF THE COMMANDER*
*926TH FIGHTER WING*

*926th FIGHTER WING INSTRUCTION 21-135*

*6 November 1998*

*Safety*

# *LOCKOUT/TAGOUT OF HAZARDOUS ENERGY SOURCES*

**COMPLIANCE WITH THIS PUBLICATION IS MANDATORY**

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OPR: 926LG/LGQ (SMSgt Randal B. McGee) Certified by: 926LG/CC (LtCol Anthony Gonzales)
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This Fighter Wing Instruction (FWI) establishes general operating procedures and methods of isolating machines or equipment from their energy source. This ensures when performing inspections, service or maintenance, the machine and equipment will not start unexpectedly. This instruction applies to all LG & FSM personnel and implements Air Force Policy Directive 21-101, *Managing Aerospace Equipment Maintenance.*

**1. References:**

1.1. 29 CFR Part 1910.

1.2. AFOSH STD 127-12.

1.3. AFOSH STD 127-45, AFI 21-101.

**2. Basic Rules for Using Lockout or Tagout System Procedures.** All machine/equipment are locked and tagged out to prevent accidental or inadvertent operation, which when energized would cause injury to personnel. Do not attempt to operate any switch, valve or other energy isolating device when it is locked or tagged out. The lockout devices are not to be used for any other purpose than isolating machines/equipment.

**3. General** . A combination of lockout and tagout procedures is mandatory if possible. Equipment/ machines using a wall plug as the power source are unplugged, tagged, and controlled by the supervisor or operator. When maintenance is completed only the same authorized employee installing the lock or tag may remove it. Tagouts are used when the machine/equipment will not accept a lock. A tag is placed on the machine/equipment with a self-locking non-releasable attachment by the individual discovering the discrepancy (See Atch 1 for contents and conditions of kit).

**4. Authorized Personnel** . Authorized personnel performing lockout/tagout procedures are trained and certified in all aspects of the program. Certified individuals are also qualified to instruct individuals newly assigned or transferred and other personnel in the work area. Supervisors ensure that only the individuals issued a lock are provided a key to that lock.

**5. Training Requirements:**

5.1. Supervisors of each affected shop must develop a written plan of instruction on lockout/tagout procedures for all affected equipment in their workcenter (See Atch 2 for minimum requirements of training plan).

5.2. Supervisors establish clear and concise shift change procedures in their shop training plan. The individual using a lock from the lockout kit signs the lockout sheet prior to placing the lock on the machine/equipment. During shift change the locks and keys are transferred to the individuals on the next shift. Transferring the locks and keys to the second shift are accomplished by the first shift employees completing the numbered line entry on the lockout sheet. The second shift employees annotate the next line with the same lock and hasp number. A group lockout device may be used if more than one person is performing maintenance or if the supervisor chooses to review machine/ equipment before restart.

5.3. After initial training and certification of shop personnel, annual retraining is required. This training is tracked in Core Automated Maintenance System (CAMS). Document all initial training in Section V of the AF Form 55, **Employee Safety and Health Record**. Certified individuals will have their AF Form 55, Section V annotated with “Certified Lockout/Tagout.”

**6. Lockout/Tagout Kit:**

6.1. Appropriate work centers will establish a lockout/tagout kit with the minimum contents identified in attachment 1. All items in the kit will be shadowed and each item that is a potential FOD item will be etched with the work center pneumonic.

**7. Sequence of Lockout of Tagout Procedures** :

7.1. Notify all personnel in the shop or work area when initiating lockout/tagout procedures and state the reason. Individuals are knowledgeable of the type and magnitude of energy the machine/equipment uses and understand the hazards it represents.

**NOTE:** Annotate the applicable equipment record indicating the appropriate lock and tag installed. Enter a Red “X" in the next open block of the AFTO Form 244/245, Industrial/Support Equipment Record, of the equipment affected referencing the applicable discrepancy. Document accomplishment of this wing instruction in CAMS by adding a work center event (WCE).

7.2. If the machine or equipment is operating, shut it down by the normal stopping procedures by depressing the stop button or opening a toggle switch.

7.3. Shutoff the switch, valve or other energy-isolating device to isolate the machine/equipment from it’s energy source. The supervisor ensures stored energy in springs, elevated machine members, rotating flywheels, hydraulic system, accumulators, etc., are restrained/relieved by methods of repositioning blocking, bleeding, etc.

7.4. Lockout and tagout the energy isolating devices only with the following tags: AF Form 979, **Danger Tag**; or AF Form 982, **Do Not Start Tag**.

7.5. After checking all disconnected energy sources and ensuring personnel are not near equipment, operate the start button to verify the machine/equipment will not operate. ***CAUTION:*** Return operating controls to neutral or off position after the test.

7.6. When the machine/equipment is locked and tagged out, perform the necessary service or maintenance.

**8. Restoring Machine/Equipment to Normal Production** . Notify area personnel before lockout/tagout devices are removed. Ensure all tools are removed from the machine/equipment, reinstall guards, and clear personnel, remove all locks and tags. Operate the energy-isolating device to restore energy to the machine/equipment and notify all personnel that the equipment is serviceable.

**9. Periodic Self-Inspection** . The self-inspection identifies the machines/equipment on which the lockout/tagout program is used. Review each individual's responsibilities under the program annually, and all necessary training that has been conducted and documented. The inspection is designed to correct any deviation or inadequacy observed. Document self-inspections to include date and person performing the self-inspection.

JIM G. MILLS, Colonel, USAFR
Commander

## Attachment 1

## LOCKOUT/TAGOUT KIT CONTENT

**A1.1.** INVENTORY LOCATED IN KIT

**A1.2.** TWO HASPS

**A1.3.** TWO LOCKS

**A1.4.** TEN TAGS (5 - AF FORM 979, **DANGER TAG**, AND 5 - AF FORM 982**, DO NOT START TAG**)

**A1.5.** TEN PLASTIC STRAPS

**Attachment 2**

**MINIMUM TRAINING REQUIREMENTS**

**A2.1.** LIST OF PERSONNEL IN WORKCENTER

**A2.2.** LIST OF CERTIFIED EMPLOYEES

**A2.3.** LOCATION AND TYPE OF ENERGY SOURCE FOR MACHINE/EQUIPMENT

**A2.4.** MACHINE/EQUIPMENT NOT ACCEPTING LOCKS (TAGS ONLY)

**A2.5.** LOCATION OF OTHER SOURCES TO DEACTIVATE MACHINE/EQUIPMENT

**A2.6.** AMOUNT OF VOLTAGE AND TYPE OF POWER SUPPLIED TO MACHINES/EQUIPMENT

**A2.7.** LIST WAYS OF POSSIBLY DISSIPATING OR RESTRAINING STORED ENERGY ON APPLICABLE MACHINE/EQUIPMENT

**A2.8.** SHIFT CHANGE PROCEDURES

**A2.9.** PROOF OF PERIODIC SELF INSPECTION