

**BY ORDER OF THE COMMANDER  
19TH AIRLIFT WING (AMC)**

**LITTLE ROCK AIR FORCE BASE  
INSTRUCTION 21-125**



**15 APRIL 2021**

**Maintenance**

**LARGE AIRCRAFT INFRARED  
COUNTERMEASURES (LAIRCM)  
LASER OPERATION PROCEDURES**

**COMPLIANCE WITH THIS PUBLICATION IS MANDATORY**

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This instruction establishes specific guidelines for 19 AW, 314 AW (as required), and the 189 AW in reference to the Large Aircraft Infrared Countermeasures (LAIRCM) system operational check and stray voltage procedures for LAIRCM modified aircraft IAW TCTO 1C-130-1818. These procedures require special safety handling and coordination for a Class 4 laser. The following procedures must be accomplished to ensure the safety of personnel is observed on any aircraft on Little Rock AFB (LRAFB) or at a deployed location, due to the operation of lasers. All personnel qualified to perform maintenance on LAIRCM aircraft must be trained and familiar with the hazards involved and with the requirements of Air Force Instruction (AFI) 48-139, *Laser and Optical Radiation Protection Program* and ANSI Standard Z136.1. Any maintenance performed on and operation of LAIRCM systems will be in compliance with Technical Orders 1C-130H-2-99JG-10-6 and 1C-130J-2-99JG-10-2. Air Force Manual (AFMAN) 48-148, *Ionizing Radiation Protection*. Ensure that all records created as a result of processes prescribed in this publication are maintained In Accordance With (IAW) AFI 33-322, *Records Management and Information Governance Program*, and disposed of IAW the Air Force Records Information Management System (AFRIMS) located at <https://www.my.af.mil/gcss-af61a/afirms/afirms/>. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the AF Form 847, *Recommendation for Change of Publication*; route AF Form 847s from the field through the appropriate functional managers chain of command. No Technical Order (TO), AFI standard, or Operating Instruction (OI) can possibly address every hazard or potential hazard that may arise from a specific task or combination of tasks. Where situations exist that do

not appear to be adequately covered by existing directives, use a Risk Management (RM) process to assess risk associated with those situations and determine adequate safeguards or procedures to manage the risk. NOTE: The RM process may not be used to violate directives or other regulatory guidance. Normal waiver or variance procedures must be followed in all cases (refer to the first paragraph on page).

## ***SUMMARY OF CHANGES***

This document has had minor administrative changes.

### **1. General Guidelines:**

- 1.1. The 19th and 314<sup>th</sup> (as required) Aircraft Maintenance Squadron (AMXS) Commanders will appoint a qualified CCNS technician as the designated Unit Laser Safety Officer (ULSO).
- 1.2. ULSOs manage unit's laser and optical radiation safety program IAW AFI 48-139, *Laser and Optical Radiation Protection Program*, AFI 48-148, *Ionizing Radiation Protection*, and this OI.

### **2. Laser Safety Training:**

- 2.1. Laser safety training shall be provided initially and annually to ground maintenance personnel (military, civil servant, and contract) qualified to operate LAIRCM IAW training requirements in AFI 48-139 and AFI 48-148. Unit laser safety training will be conducted by each USLO. General laser safety awareness training will be provided through Block Training for all other maintenance personnel who have access to the flightline.
- 2.2. Work centers will use the Integrated Maintenance Data System (IMDS)/GO81 code SAFE00007 to document training. AF Form 55, Employee Safety and Health Record will be annotated.
  - 2.2.1. The Bioenvironmental Engineering Section will provide newly assigned ULSO's their initial training.
- 2.3. Maintenance personnel (military, civil servant, and contract) qualified to operate LAIRCM and any appointed augmentees must receive an initial laser ocular examination. IAW AFI 48-148.
- 2.4. Follow the Public Health guidelines for providing laser ocular examination to newly assigned personnel, this exam must be performed prior to personnel performing work with the LAIRCM system.

### **3. Procedures For Operational Checks and Stray Voltage Checks of LAIRCM Aircraft:**

- 3.1. Refer to the following technical orders for procedures, safety guidance, and requirements: 1C-130J-2-99JG-10-2, and 1C-130J-33-1-2CL-1.
- 3.2. Parking Spots: Operational checks will be conducted on any row, parking spots 3, 4, or 5.
- 3.3. During flare upload procedures the nominal hazard zone (NHZ) be enforced and clearly marked off during the stray voltage check portion. IAW the applicable job guide. After the stray voltage check is complete and the AAQ-24 is turned off, the standard upload zone is required per TO 1C-130A-33-1-2CL-9 and 1C-130J-33-1-2CL-1.

3.4. Maximum Personnel Limits: One team leader, one safety observer, two workers and two casuals.

3.5. Minimum Personnel Limits: One team leader, one safety observer, and one worker.

3.6. A safety observer will be required to ensure that there is no encroachment and no unauthorized personnel in the NHZ.

#### **4. Team Leader Responsibilities:**

4.1. Ensure safety observer prevents non-essential personnel from entering the NHZ safety area.

4.2. Ensure all personnel working within the NHZ safety area are wearing only specifically marked laser eye protection (Optical Density 3+) and long-sleeved tightly woven clothing, as approved by Bioenvironmental Engineering (e.g. Airman Battle Uniform (ABU) shirt), to protect from skin hazards.

4.3. Monitor the maintenance radio for any calls from the Maintenance Operations Center (MOC).

4.4. Perform the following notifications prior to beginning operational checks and at the completion of operational checks:

4.4.1. MOC; give aircraft tail number, parking location, and estimated completion time.

4.5. Set up laser safety area barriers and/or warning signs.

#### **5. MOC Responsibilities:**

5.1. Notify Security Forces, Fire Department, Air Traffic Control Tower, and LRS/Fuels, that LAIRCM operational checks will be starting/stopping. Announce tail number and parking location.

5.2. Notify the expediter/production supervisor to inform personnel working adjacent aircraft to vacate the area prior to conducting operational checks.

#### **6. Alleged or Suspected Exposures to Laser Radiation.** Whenever a suspected exposure to laser radiation occurs, the following steps will be taken without delay:

6.1. Personnel exposed must seek medical attention immediately. The Laser hotline (800-473-3549) should be called as soon as possible (ASAP) because immediate care is critical.

6.2. The Production Superintendent or Expediter will be notified immediately and ensure action is taken to prevent injury to other personnel.

6.3. The Production Superintendent or Expediter will immediately notify the Unit Commander, Unit Safety Representative, Wing Ground Safety Officer, and the Bioenvironmental Engineer section.

JOHN M. SCHUTTE, Colonel, USAF  
Commander

**Attachment 1****GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

AFI 21-101\_AMCSUP, *Aircraft and Equipment Maintenance Management*, 3 August 2020  
AFI 33-322, *Records Management and Information Governance Program*, 23 March 2020  
AFMAN 48-148, *Ionizing Radiation Protection*, 20 July 2020  
AFPD 21-1, *Maintenance of Military Material*, 1 August 2018  
ANSI Z136.1, *American National Standard for Safe Use of Lasers*, 2014  
ANSI Z136.6, *American National Standard for Safe Use of Laser Outdoors*, 2015  
AFMAN 91-203, *Air Force Occupational Safety, Fire and Health Standards*, 11 Dec 2018  
T.O. 1C-130H-2-99JG-10-6, AN/AAQ-24(V) 13, *Large Aircraft Infrared Countermeasures (LAIRCM) System*, 15 Oct 2017  
T.O. 1C-130J-2-99JG-10-2, *Large Aircraft Infrared Countermeasures System*, 1 Jan 2020  
T.O. 1C-130J-33-1-2CL-1, AN/ALE-47(V), *Nonnuclear Munitions Loading Procedures*, 1 Jul 2016

***Adopted Forms***

AF Form 847, *Recommendation for Change of Publication*  
AF Form 55, *Employee Safety and Health Record*

***Abbreviations and Acronyms***

**ABU**—Airman Battle Uniform  
**AFRIMS**—Air Force Records Information Management System  
**AGE**—Aerospace Ground Equipment  
**AMXS**—Aircraft Maintenance Squadron  
**ANSI**—American National Standards Institute  
**CCNS**—Communication/Countermeasure/Navigational Systems  
**IMDS**—Integrated Maintenance Data System  
**LAIRCM**—Large Aircraft Infrared Countermeasures  
**ULSO**—Unit Laser Safety Officer  
**MOC**—Maintenance Operations Center  
**NHZ**—Nominal Hazard Zone  
**OI**—Operating Instruction  
**OPR**—Office of Primary Responsibility

**RM—Risk Management**