

**BY ORDER OF THE COMMANDER  
AIR COMBAT COMMAND**

**AIR FORCE INSTRUCTION 91-203**



**AIR COMBAT COMMAND  
Supplement**

**27 MARCH 2014**

**Safety**

**AIR FORCE CONSOLIDATED  
OCCUPATIONAL SAFETY INSTRUCTION**

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AFI 91-203, *AF Consolidated Occupational Safety Instruction* is supplemented as follows: It applies to commanders, functional managers, supervisors, and all other ACC personnel. It does not apply to Air National Guard (ANG) or Air Force Reserve Command (AFRC) units and members. Forward recommended changes on AF Form 847, *Recommendation for Change of Publication*, to this instruction to HQ ACC/SEGO, 220 Sweeney Blvd, Langley AFB VA 23665-2714. Note: The inclusion of any specific commercial product, commodity, or service in this publication is for information purposes only and does not imply endorsement by the Air Force. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with Air Force Manual (AFMAN) 33-363, *Management of Records*, and disposed of in accordance with Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS). Contact supporting records managers as required. This publication may be supplemented at any level, but all direct Supplements must be routed to the OPR of this publication for coordination prior to certification and approval.

## ***SUMMARY OF CHANGES***

This document is substantially revised and must be completely reviewed. This supplement realigns previous ACC Supplements to 91-series AFOSH Standards to match the revised parent Air Force Instruction 91-203.

**7.5.2.5.16.4.** [Exception] For B-1 bomb loading operations only. Units may continue to use step ladders as required to accomplish bomb loading activities. Personnel must be thoroughly trained in operational requirements and risks associated with the nonstandard use of these ladders.

11.2.6. **(Added)** In the event of lightning and severe weather, adhere to procedures in AFMAN 91-201 for explosives handling, loading, and maintenance operations at all locations.

12.6.3. Contact the local Weapons Safety Manager for location purchasing and licensing requirements.

21.6.1. Unit Safety Representative (USR) shall ensure compliance with all program elements during unit self-inspections.

21.6.2. Lockout/Tagout procedures will be reviewed during the annual inspection performed by a full-time ground safety professional and incorporated into the annual report. For units that accomplish a stand alone inspection of Lockout/Tagout, results of this inspection will be incorporated into each annual unit inspection report where applicable.

**21.7. Sample Lockout/Tagout Procedures.** The LOTO procedures shall be coordinated through the safety office. For ACC units without full-time safety personnel on non-ACC bases, coordinate with the host base safety office for assistance.

24.2.4. For additional information regarding lifting and handling requirements, consult MIL-STD-1472G, DOD Design Criteria Standard Human Engineering, and AFI 91-203, Chapter 35, Materials Handling Equipment.

24.2.6.2. **(Added)** When storing full or partially full aircraft oxygen converters on the flight line, the same distance criteria in TO 00-25-172 for LOX cart parking or storing will apply.

24.3.2. All electrical receptacles required for fuel servicing operations, (e.g., alert or special operations aircraft) that are located within a Fuel Servicing Safety Zone (FSSZ) as described in TO 00-25-172, will be UL-listed, explosion proof, and approved for use in Class 1 Division 1 and/or Class 1 Division 2 locations.

24.3.3. Additional guidance may be provided by Air Force Engineering Technical Letters. Safety, Civil Engineering, and Fire Prevention personnel will be contacted for specific guidance.

24.3.3.1. Approval documentation for equipment not meeting requirements will be maintained within the immediate work area and at the Fire Department. Written requirements and procedures for use of temporarily approved equipment are required to be maintained with the equipment and will follow the general restrictions referred to in paragraph 24.15.8., Note: These provisions are to be used when an actual

environment meeting Class I, Division 1 or Class I, Division 2, exists or could exist while the equipment is energized.

24.3.3.1.1. **(Added)** Non-explosion proof and non-intrinsically safe computers, NDI equipment, and electrical test equipment may be used in Class I, Division 1 and Class I, Division 2 designated hangars on JP-8/Jet A aircraft as long as the following requirements are met:

24.3.3.1.1.1. **(Added)** Non-explosion proof and non-intrinsically safe computers, NDI equipment, and electrical test equipment will not be used within the fuel servicing safety zone as described in TO 00-25-172.

24.3.3.1.1.2. **(Added)** Before and while equipment is energized (see TO 1-1-3, para 2-7.5.6), air samples will be taken with appropriate instruments to assure that no explosive/hazardous environment exists before equipment is used IAW TO 1-1-3.

24.3.3.1.1.3. **(Added)** Use on JP-4 aircraft is not permitted.

24.3.3.3. Additional guidance for hot refueling operations is contained in AFI 21-101, *Aircraft and Equipment Maintenance Management*.

24.3.3.4.4. **(Added)** Containers utilized to dispose of contaminated waste will be properly marked to identify contents. Certain contaminated wastes may also be hazardous wastes, which require special handling and disposal under hazardous waste laws. All ACC bases have established procedures which must be followed for the storage and disposal of hazardous waste. Contact your Civil Engineering Installation Management Flight, Environmental Management Office, or unit hazardous waste monitor for additional guidance regarding disposal of hazardous waste/materials. Safety and Bioenvironmental engineers may also be contacted for assistance.

24.3.5. **(Added)** Temporary Obstruction: These items must be highlighted with flashing lights, lanterns, or other appropriate devices approved by airfield management/operations and coordinated with the safety office and fire protection personnel.

24.7.2.2. Wing walkers will be used when towing an aircraft out of a hangar.

24.7.8. Personnel with chocks will walk within the vicinity of the main gear (not under the aircraft, unless directed by a TO) and be prepared to chock the wheels upon command of the supervisor.

24.7.21.4. On large aircraft where more than one marshaller and several ground personnel are utilized, the lead marshaller will wear a reflective vest.

24.11.1.3. **(Added)** Local procedures will be developed to ensure Safety, Bioenvironmental Engineering, Civil Engineering Installation Management Flight, and Environmental Management Office are advised of spills in accordance with the base Spill Plan.

24.11.2.3. Flammable and combustible storage areas will be properly identified and placarded in accordance with Chapters 22 and 29 of this standard and base Fire Department guidance.

- 24.13.4.1. **(Added)** No more than one aircraft engine will be towed at a time behind a tow vehicle.
- 24.13.11.2. Turn on parking lights or emergency flashers regardless of the time of day.
- 24.14.2.2. For fuel system maintenance see TO 1-1-3.
- 24.14.15. Emergency aircraft removal plans will be coordinated with the base Ground Safety Manager and Fire Chief. Each evaluating official will sign the plan.
- 24.15.3.1.1.1. **(Added)** Appropriate warning signs shall be posted where flammable liquids are stored or handled in accordance with Chapters 22 and 29 of this standard.
- 24.15.4. This applies to all AGE.
- 24.15.4.1. Pintle hook safety pins will be installed at all times to prevent possible disconnect of equipment, and accidental loss of pin, creating potential FOD. Safety lock pins shall be of proper size in length and be attached with a chain in accordance with TO 36-1-121.
- 24.15.4.2.3. **(Added)** AGE operation requirements are:
- 24.15.4.2.3.1. **(Added)** Only qualified and authorized personnel will start and operate ground-power and auxiliary-power units. Operators will review maintenance and inspection records and perform operator inspection IAW TO 00-20-1 for leaks and damage before operation. Equipment found to be defective will be removed from service until repaired or made safe to operate.
- 24.15.4.2.3.2. **(Added)** Note: Running equipment attached to aircraft requires an operator present on the aircrafts parking location. If malfunction occurs during operation, the equipment will be immediately shut down, removed from service, and repaired or replaced.
- 24.15.10. **(Added)** Concrete Floor Coatings. Concrete floors will not be painted or have any coating applied simply for aesthetic purposes. If applied, the following procedures will apply:
- 24.15.10.1. **(Added)** Request for coating of concrete floors will be submitted to the Base Civil Engineer for validation.
- 24.15.10.2. **(Added)** Each reviewing agency will ensure all procedures for applying coatings comply with the requirements established in applicable occupational and environmental safety and health standards and regulations whether the work is accomplished by contract, by in-house maintenance, or by a self-help project.
- 24.15.10.3. **(Added)** The method for removal of existing coatings must be coordinated with Bioenvironmental Engineering, Installation Management Flight, Fire Protection personnel, and Safety.
- 24.15.10.4. **(Added)** Overall approval for coating concrete floors is at the discretion of the senior installation commander.

24.15.11. **(Added)** Flashlights. Flashlights that are used Class 1, Division 1, and Class 1, Division 2 environments, will be explosion-proof or intrinsically-safe. Mag lights that are 6 volts and less are naturally intrinsically safe due to their low battery voltages, but will not be used within ten feet of a fuel spill, open-port receptacle, open fuel tank maintenance, a fuel vent outlet of an aircraft being refueled, or support equipment, e.g., fuel truck.

29.3. Requirements. Signs/tags will not be used instead of required guards and/or other protective safety devices. Supervisors will ensure unsafe machines/equipment are removed from service until repaired or rendered safe.

29.3.1. Specifications For and Usage of Signs. The color of signs, which are specifically color coded for mishap prevention purposes, i.e., Danger (Red), Caution (Yellow), Warning (Orange), etc., will comply with governing directives (reference manual on Uniform Traffic Control Devices, ANSI Standards, AFOSH/OSHA Standards, Air Force Directives to include TOs; also paragraph 29.3.1. of this standard). For specific signs and color code markings in storage and material handling areas, consult AFJMAN 23-210, *Joint Services Manual (JSM) for Storage and Material Handling*.

29.3.5.14. Signs and requirements for display of signs will be in accordance with AFI 40-201, Managing Radioactive Materials, in the US Air Force, (available in the BEE office) and local BEE evaluation and recommendations. BEE personnel will provide recommendations and guidance on procurement and placement of the proper signs.

29.3.5.15. **(Added)** Laser hazard signs will be posted in accordance with AFI 48-139, *Laser and Optical Radiation Protection Program*, ANSI Z136.1, *Safe Use of Lasers*, Z535-series (available in the BEE office), and local BEE evaluation and recommendations. BEE personnel will assist in procurement and placement of the proper signs.

31.2.5.1. When designing a new battery shop, provisions for automatic cutoff of charging equipment in case of ventilation blower or fan failure will be included in the plans.

J. ALAN MARSHALL, Colonel, USAF  
Director of Safety (ACC)

## Attachment 1

### GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

#### *References*

- AFMAN 91-201, *Explosives Safety Standards*, 12 Jan 2011
- MIL-STD-1472D, *Human Engineering Design Criteria for Military Systems, Equipment, and Facilities*, 1 Mar 1989
- TO 00-25-172, *Ground Servicing of Aircraft and Static Grounding/Bonding*, 9 Aug 2013
- TO 1-1-3, *Inspection and Repair of Aircraft Integral Tanks and Fuel Cells*, 20 Jun 2013
- AFI 21-101, *Aircraft and Equipment Maintenance Management*, 26 Jul 2010
- AFI 91-202, *The US Air Force Mishap Prevention Program*, 5 Aug 2011
- TO 00-20-1, *Aerospace Equipment Maintenance Inspection, Documentation, Policies, and Procedures*, 15 Jun 2013
- TO 00-80G-1, *Make Safe Procedures for Public Static Display*, 30 Nov 2002
- AFJMAN 23-210, *Joint Services Manual (JSM) for Storage and Material Handling*, 12 Apr 1994
- AFI 40-201, *Managing Radioactive Materials in the US Air Force*, 16 Mar 2011
- AFI 48-139, *Laser and Optical Radiation Protection Program*, 25 Jul 2012
- ANSI Z136.1, *Safe Use of Lasers*, 6 Jun 1980

#### *Prescribed Forms*

This supplement does not prescribe any forms.

#### *Adopted Forms*

AF Form 847, *Recommendation for Change of Publication*

#### *Abbreviations and Acronyms*

- ACC**—Air Combat Command
- ACC/SEGO**—Ground Safety Operations Branch
- AFMAN**—Air Force Manual
- AFRC**—Air Force Reserve Command
- AGE**—Aerospace Ground Equipment
- ANG**—Air National Guard
- ANSI**—American National Standards Institute
- BEE**—Bioenvironmental Engineering
- CAMS**—Core-Automated Maintenance System
- CO**—Carbon Monoxide

**LOX**—Liquid Oxygen

**TO**—Technical Order

**UL**—Underwriter Laboratories

***Terms***

None