

**BY ORDER OF THE COMMANDER
TYNDALL AIR FORCE BASE**

**TYNDALL AIR FORCE BASE
INSTRUCTION 21-462**



13 JULY 2023

Maintenance

***IN-SHOP HANDLING AND
MAINTENANCE PROCEDURES FOR
JAMMED GUNS AND AMMUNITION
LOADING SYSTEMS***

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This instruction supplements DESR 6055.09_AFMAN 91-201, Explosive Safety Standards. This instruction establishes general policies and procedures for safe handling/maintenance operations of jammed aircraft gun/ammunition loading systems to include general safety precautions, operating procedures/locations, personnel limits, equipment safety items, and emergency procedures. This instruction is applicable all units and/or personnel assigned to the to the 325th Maintenance Group as well as visiting units attached to 53d Weapons Evaluation Group who are qualified to perform maintenance on jammed aircraft gun/loading systems. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with Air Force Instruction (AFI) 33-322, Management of Records, and disposed of in accordance with Air Force Records Information Management System Records Disposition Schedule (RDS). Refer recommended changes and questions about this publication to the Office of Primary Responsibility using the AF Form 847, Recommendation for Change of Publication; route AF Forms 847 from the field through the appropriate functional chain of command.

SUMMARY OF CHANGES

This instruction has been substantially revised and should be completely reviewed in its entirety. It incorporates numerous changes including explosive operating locations.

1. Roles and Responsibilities.

- 1.1. Personnel limits apply only to the direct work areas involved in the operations as established by this instruction.
- 1.2. Supervisors: Minimum of one, maximum of 2.
- 1.3. Workers: Minimum of two, maximum of 3.
- 1.4. Casuals: Maximum of two (i.e. Safety/Quality Assurance personnel).
- 1.5. Operations will cease immediately upon arrival of visitors.

2. Location.

- 2.1. The clearing of gun systems (25mm and below) and/or ammunition loading systems containing live ammunition is strictly limited to the 7062 Pad or other approved locations. Access to the maintenance location will be restricted while clearing operations are in progress.

3. Safety Requirements.

- 3.1. The senior qualified maintenance member will provide an Explosive Safety Briefing to all personnel associated with the operation and fill out the Specific Safety Requirements (see [Attachment 2](#)). Anytime a new individual enters the work area they will receive a safety briefing. All personnel involved are responsible for ensuring that all safety precautions are strictly adhered to.
- 3.2. Post appropriate fire symbols at the designated maintenance location as required. Notify the Maintenance Operation Control Center (MOCC) at 283-4032, Fire Department at 283-4777 and Munitions Control at 283-3535 are notified when a gun system (25mm and below) and/or loading system with ammunition is transported to the 7062 Pad or approved location.
- 3.3. Ensure two fire extinguishers (2A:10BC) are readily available during all operations.
- 3.4. A minimum of two personnel will be present during any operation involving live ammunition (one supervisor and one worker).
- 3.5. When electrically primed ammunition is present, guns, loading systems, and storage containers containing electrically primed ammunition will be grounded. Visually inspect static grounding systems prior to use, including verifying currency of inspections and tests required by AFMAN 32-1065. Visual inspections are not required to be documented.
- 3.6. Storage/maintenance area will be kept clean and free of obstructions.
- 3.7. All downloaded ammunition once removed, will be returned to building 7020 Munitions Conventional Maintenance as soon as possible. Under no circumstances will ammunition be stored or left unattended.
- 3.8. No more than one jammed gun system (25mm and below) and one loading system containing ammunition will be present on the pad at any given time. Gun barrels will be pointed in the least hazardous direction. Specifically away from the flightline, AMMO road, and away from inhabited structures in the 7000 Area.

4. Emergency Procedures.

- 4.1. Supervisors will brief all personnel and visitors on emergency procedures to follow and agencies to be notified if a mishap or fire occurs.

4.2. In the event of a fire involving 20mm or 25mm ammunition, the maintenance member in charge of the scene will ensure the following is accomplished:

4.2.1. Notify MOCC, the Fire Department, and Weapons Safety at DSN: 523-3206 Cell: 850-774-6960 of the type, quantity, and location of munitions involved.

4.2.2. Evacuate non-essential personnel in accordance with **Table A2.1**”. Personnel shall reassemble at a designated location for accountability.

4.2.3. Direct personnel in controlling the fire, using available firefighting equipment. If fire engulfs explosives or becomes so large that it cannot safely be extinguished with the available equipment on hand, personnel will evacuate the area.

4.2.4. Report the status of the fire to the first emergency responder arriving on scene.

4.2.5. All munitions not involved in the fire will be removed from the area, if safely possible.

4.3. In the event of a hazardous condition involving 20mm or 25mm ammunition all operations will cease. Munitions Control and Explosive Ordnance Disposal personnel will be notified.

4.4. In the event of severe weather the applicable procedures outlined in the wing emergency action checklist will be followed.

5. Maintenance Operations. Note: GAU-22/A Gun Jam Clearing Procedures, F35-AAA-A1988011000-170A-A designates location and action for flight line personnel to resolve jammed 25mm guns and remove ammunition from the gun system.

5.1. Guns containing 25mm ammunition will be required to have a rotor lock tool or locking wrench vise grips properly installed at all times or until Joint Technical Data (JTD) specifically requires the removal of either safing device.

5.2. Hoisting or manual transportation of the ammunition handling set or ammunition container requires a minimum of 3 people. Per JTD procedures, 4 personnel will be utilized for bulk loader magazine removal.

5.3. Maintenance personnel will disassemble gun system or loading system components as far as necessary to safely remove all live ammunition, in accordance with applicable technical data.

5.4. Should rounds be found chambered in barrels, there will be no attempt by maintenance personnel to remove them. Explosive Ordnance Disposal will be contacted and upon their arrival, the barrels with rounds will be turned over to them.

5.5. Contact Munitions Control and request a sufficient number of ammunition cans to be delivered to the operating location.

5.6. All ammunition will be removed and placed in ammunition cans and turned into the 325 Munitions Squadron.

5.7. Ammunition will be identified by: aircraft tail number and/or loading system serial number it was removed from, quantity of rounds, and type of ammunition. This information will be documented on an AFTO Form 350 tag and attached to each ammunition can.

- 5.8. Damaged rounds will be kept separate from serviceable rounds.
 - 5.8.1. Spray loose propellant with non-flammable lubricating oil.
 - 5.8.2. Clean up all loose propellant using an oil soaking rag (non-static producing type).
 - 5.8.3. Turn in propellant contaminated rags to explosive ordinance disposal for disposal.
 - 5.8.4. Place masking tape or similar type tape over holes in punctured ammo cases to prevent further loss of propellant.
- 5.9. Expended ammunition cartridge cases will be separated from live rounds and turned into the 325 Munitions Squadron.
- 5.10. Contact Munitions Control (Primary 850-293-3535 and Alternate 850-283-4711) to coordinate immediate pick-up of download ammunition.
- 5.11. Notify MOCC and Fire Department once clearing operations are complete and ammunition has been picked-up by 325 Munitions Squadron.

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Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

DESR 6055.09_AFMAN 91-201, Explosives Safety Standards, 27 May 2020

AFI 33-322, *Records Management and Information Governance Program*, 27 July 2021

Adopted Forms

AF Form 847, *Recommendation for Change of Publication*

AFTO Form 350, *Reparable Item Processing Tag*

Abbreviations and Acronyms

MOCC—Maintenance Operations Control Center

MXS—Maintenance Squadron

Attachment 2

EXPLOSIVE SAFETY BRIEFING

Table A2.1. Withdrawal Distance

Nomenclature	Withdrawal Distance (FT) Nonessential Personnel	Fire Symbol
20mm/25mm HEI/HEIT/INC/SAP HEI	2500	2
20mm/25mm TP/TPT	300	4

Figure A2.2. Specific Safety Requirements**SPECIFIC SAFETY REQUIREMENTS**

Personnel will periodically touch a grounded surface or a grounding bar in order to dissipate any accumulated static electricity prior to handling ammunition. Ensure all personal emitters are removed. Avoid contact with primers and exposed powder to the maximum extent possible. In the event of a lightning watch/warning all operations will cease. The maintenance bay involved with the exposed EEDs/ammunition will be vacated. Personnel will convene in non-maintenance administrative area until termination of lightning warning/watch. Sited explosives limits are posted at the explosives operating location. Operation explosive limits. May be expressed in terms of specific explosives items, see reference in 'rationale'

1. Call MOCC _____ Fire Dept. _____ Muns Control _____ and give location/fire symbol _____ equipment serial number _____.
2. Entry Control Point established/restrict facility access.
3. Post building fire symbol placards/ensure two fire extinguishers are stationed.
4. Personnel Limits involved in operation:
Supervisors _____ Workers _____ Casuals _____.
5. Call Muns Control/Request delivery of ammo cans.
6. Barrier set up (If applicable)/equipment grounded.
7. Call Muns Control for pickup of ammunition.
8. Call MOCC Fire Dept. for completion of operation once ammunition has been picked up.
9. In case of fire/emergency.
 - 9.1. Call MOCC _____ give location _____.
 - 9.2. Evacuate nonessential personnel distance/location _____.
 - 9.3. Record time ~~0000~~ enveloped _____. Give to on scene commander.