

**BY ORDER OF THE COMMANDER
36TH WING (PACAF)**

36TH WING INSTRUCTION 91-102

21 JANUARY 2025



Safety

**LAUNCH AND RECOVERY OF
EXPLOSIVE LOADED AIRCRAFT**

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This instruction implements AFI 91-102, *Nuclear Weapon System Safety Studies, Operational Safety Reviews and Safety Rules* and establishes responsibilities and procedures to be used by Operators and Maintainers while assigned to Andersen Air Force Base (AFB). The purpose is to ensure safe launch and recovery of explosive loaded aircraft. Commanders and supervisors will ensure full compliance with this instruction. This publication applies to all Regular Air Force, Air National Guard (ANG)/Air Force Reserve Command (AFRC) who are deployed/ Temporary Duty (TDY) to Andersen AFB. This publication does not apply to United States Space Force, Air Force Reserve, or Air National Guard units. Deployed units will use home station procedures if not specifically addressed in this instruction. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with AFI 33-322, *Records Management and Information Governance Program*, and disposed of in accordance with the Air Force Records Disposition Schedule (RDS) located at <https://www.my.af.mil/gcss-af61a/afrims/afrims>. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the DAF 847, *Recommendation for Change of Publication*; route DAF 847s from the field through the appropriate functional chain of command. Submit requests for waivers through the chain of command to the appropriate waiver approval authority, through the publication OPR. These procedures are designed to provide safety protection for personnel and equipment while arming/launching and de-arming/safing/recovering aircraft, to include hung weapons. The 36th Wing Weapons Manager (WWM) will be the final authority for determining the appropriate aircraft End of Runway (EOR), Immediately Prior to Launch (IPL)/safe, arm/de- arm, loading/unloading, hung ordnance/gun system malfunction procedures when Major Command directives do not address the situation.

SUMMARY OF CHANGES

This document has been substantially revised and needs to be completely reviewed.

Chapter 1

AIRCRAFT PARKING/ARM/DE-ARM AND LAUNCH/RECOVERY PROCEDURES

1.1. Overview. The following munitions can be uploaded and downloaded at any designated aircraft parking area located on the South, Center or North ramps provided that the quantity of munitions being loaded or unloaded is limited to a single aircraft load: 1.2.2 internal gun ammunition (30 mm or less), 1.3 installed aircraft defensive flares, 1.4 munitions and inert munitions. All other explosive loaded aircraft must be parked in accordance with (IAW) the airfield explosive site map.

1.2. Arm/De-arm Locations. The following procedures shall be used to arm weapons and launch aircraft for daily missions. Arm/De-arm areas are located on Taxiway F, South Ramp 7, pads S97 and S95. When heavy aircraft are present, use pads S96 and S98. Taxiway K can also be used as an alternate location to perform EOR.

1.3. Documentation. Once an aircraft is loaded with munitions, an entry will be made in the aircraft forms indicating the quantity, type, status, location and fuze settings of munitions loaded. No additional maintenance shall be accomplished prior to weapons being safed or aircraft is placed into pre-maintenance status.

1.4. Personnel Requirements. If applicable, during IPL/Safing procedures, one qualified 2A3X3 and two qualified 2W1X1 weapons personnel (one of which must be checklist qualified) shall be utilized. For live munitions other than chaff/flare, a certified Load Crew Chief must be present.

1.5. Arm/De-arm in Chocks. IPL/Safing procedures may be performed in the aircraft parking spots for the following munitions items: Captive Missiles protective gear (safety pins and devices), chaff and flare safety pins, all inert hard bombs, cold gun and BDU-33.

1.6. Real World Procedures. IPL procedures may be accomplished on spots FS-1 through FS-12 for Operation NOBLE EAGLE real world defense of Guam missions using HC/D 1.1 and 1.2 Forward Firing Ordnance (FFO) provided the following conditions are met:

1.6.1. Aircraft parking areas directly across from armed aircraft will not be utilized, including aircraft parking, AGE storage, or any other use of these areas.

1.6.2. All airfield operations will be suspended directly in front of aircraft during IPL procedures to include vehicle, pedestrian or aircraft traffic.

1.6.3. Any other deviations for sister or foreign services from IPL/EOR procedures contained in this instruction require coordination with 36th Wing Safety and 36th Wing Commander's approval.

Chapter 2

END OF RUNWAY

2.1. Aircraft Positioning. The first aircraft will be marshaled into a spot farthest from the active runway. All aircraft will be positioned for IPL/de-arm on Taxiway F, SR 7 or use the alternate location Taxiway K (IAW 36 WGI 13-204, *Airfield Operations Instructions*). Trailing aircraft need not be marshaled into their parking spots. Aircraft carrying live Forward Firing Ordnance (FFO), other than designated in paragraph 3.6, will be positioned for IPL/safing as follows: Arm/De-arm areas located on Taxiway F, FFO positioned 300 degrees; on SR 7, FFO positioned 150 degrees. Taxiway K is not an approved FFO location.

2.2. Prior to Arming. The EOR marshaller will establish communication with the aircrew to ensure all armament switches are in the off/safe/normal position and their hands are visible to the marshaller or Weapons Crew Chief during IPL/arming operations.

2.3. Prior to De-arming. The use of ground communication during de-arm is optional only if the aircrew have hands in view of the de-arm crew chief. The EOR marshaller will establish hand signals with the aircrew to ensure all armament switches are in the off/safe and normal position and their hands are visible to the marshaller or weapons crew chief during de-arm/safing operations.

Chapter 3

HUNG WEAPON PROCEDURES

3.1. Overview. If a weapon is hung, aircrews shall comply with procedures in AFMAN 11-214, *Air Operations Rules and Procedures*, applicable MDS (Mission Design Series) DAFI 11-2X- XX Vol. 3, local or home station chapter 8, 36 WGI 13-204, *Airfield Operations Instructions* and this instruction. Maintenance personnel will comply with procedures in DAFI 21-101, *Aircraft and Equipment Maintenance Management* and this instruction. If EOD is required at the de-arm area, the pilot must declare an emergency. Aircrews will alert the Supervisor of Flying (SOF) (if available), command post, aircraft operations and Air Traffic Control (ATC). Aircrews will identify the type, quantity and location of the hung store and whether it is live or inert. Additionally, the aircrew will identify any retained weapons by type, quantity, and location.

3.1.1. Aircraft landing with hung ordnance will park at C-4 or C-68. Fighters with guns on spot C-4 will point on a magnetic heading of 290 degrees. If on spot C-68, point east to northeast. Aircraft carrying hung live Forward Firing Ordnance (FFO) will be positioned as follows: Arm/De-arm areas for FFO located on Taxiway F, position FFO 300 degrees; on SR7, FFO shall be positioned 150 degrees. Airfield construction may cause changes in parking locations for hung ordnance. The Airfield Manager will provide guidance on parking if access to the hung ordnance spots is restricted or unavailable.

3.1.2. The Tower, in coordination with the SOF, Deployed/Temporary Duty Travel assigned Maintenance Operations Center (MOC) and Deployed/Temporary Duty Travel Production Superintendent shall direct aircraft returning with hung ordnance to the appropriate location and notify the fire department.

3.1.3. After parking, the aircrew shall remain in the aircraft with engines running until the Weapons Expediter arrives to conduct a ground weapons check and provide further instructions. The aircrew will not open the weapons bay doors, if applicable, unless directed to do so by the Weapons Expediter.

3.2. Maintenance Operations Center. Deployed/Temporary Duty Travel MOC.

3.2.1. After notification from the operations desk, command post or ATC that an aircraft is landing with hung ordnance, Deployed/Temporary Duty Travel will initiate hung store Emergency Action Checklist.

3.2.2. Ensure applicable Aerospace Ground Equipment (AGE) is available for immediate dispatch to the aircraft parking location.

3.3. Explosive Safety. For hung ordnance, every effort must be made to ensure the minimum number of people are present at the aircraft.

3.3.1. For recoveries, the senior fire official will establish the safe distance holding point and control entry to the area around the aircraft with declared hung ordnance. The senior fire representative and reserve responding vehicles will position at Taxiway H.

3.3.2. A Weapons Expediter, a certified weapons load crew and aircraft crew chiefs will be dispatched to the aircraft. The weapons load crew will respond with a CTK, munitions lift truck (with ram assembly installed if applicable) and required technical data. Aircraft crew chiefs will respond with a tow vehicle and any tools, equipment, and technical data required to safe the aircraft for maintenance. A senior representative of the responding ground maintenance crew will report to the senior fire official at the scene (usually the "Chief 2" vehicle) for clearance to survey the aircraft and to relay conditions found by responding maintenance personnel.

3.3.2.1. The Deployed/Temporary Duty Travel Weapons Expediter/Production Superintendent will recommend to the senior fire official the maximum number of personnel allowed to enter the recovery area. All other personnel will remain at the determined safe distance until cleared to approach by the Weapons Expediter, or after the aircraft weapons system is safed and the hung ordnance recovery is complete. Wing Safety, Quality Assurance, Wing Weapons Officer, and Wing Weapons Manager (or equivalent) are not restricted from monitoring safing procedures.

3.3.2.2. Deployed/Temporary Duty Travel Aircraft crew chief and Weapons Expediter will establish communication with the aircrew to determine aircraft status and to verify release attempts on retained and/or hung stores. Weapons Expediter will verify elapsed time on Joint Stand-Off Weapon (JSOW)/Joint Air-To-Surface Standoff Missile (JASSM) thermal battery with aircrew, if applicable.

3.3.2.3. If applicable, qualified weapons personnel will open weapons bay doors slightly (if possible) to conduct a visual inspection of the weapons bay. Notify the senior fire official and EOD if abnormal conditions are observed. EOD will determine weapons status and coordinate further course of recovery actions with the senior weapons representative.

3.3.2.4. The weapons load crew team chief will verify the condition of all weapons and determine if the weapons can be safed. If possible, weapons will be safed (ejector racks pinned). If ejector racks cannot be properly safed (immediately), instruct aircrew to shut down aircraft engines using normal shut down checklist. All hung munitions that cannot be safed will be downloaded at the current parked location.

3.4. Safing Verification. The Weapons Expediter will determine when the aircraft weapons system is safed and the hung ordnance recovery is complete, and will notify the senior fire official and Production Superintendent.

3.5. Impoundment. Aircraft and suspension equipment involved with hung ordnance will be impounded IAW DAFI 21-101, *Aircraft and Equipment Maintenance Management*.

Chapter 4

GUN MALFUNCTION

4.1. Purpose. Commanders and supervisors will ensure all personnel safing/clearing gun malfunctions are familiar with guidance within this instruction. Personnel will be kept to the minimum number necessary to complete the job safely according to applicable technical data. The responding senior fire official will function as the Incident Commander.

4.2. Overview. Weapons Section/Armament Section Chief must ensure highly qualified and knowledgeable 2W1X1 maintenance technicians are dispatched to gun malfunctions. Personnel will get clearance from the Incident Commander to enter the area, establish communication with the aircrew, and begin safing all other munitions prior to taking action on the unsafe gun. The gun maintenance crew will proceed to install the electrical and/or mechanical gun safing pins and ensure ammunition is cleared from the gun barrels.

4.3. Successful Safing. If gun safing procedures are successful, the aircraft may taxi to the normal aircraft parking location where the gun stoppage supervisor, weapons maintenance crew, and an Armament Flight 7-level (if necessary) will continue to work the pilot-reported discrepancy (if necessary).

4.4. Unsuccessful Safing. If gun safing procedures are unsuccessful, aircrew will be directed to shut down engines prior to any attempt to troubleshoot the malfunction. Specific unsafe gun procedures shall be followed.

4.5. Gun Maintenance Team. Weapons/Armament Section personnel will work as a Gun Maintenance Team (GMT) until a point is reached that the gun is rendered safe. If jammed/broken rounds cannot be removed, the GMT, IAW applicable technical data, may proceed to disassemble necessary gun system components in an effort to safe/clear the gun.

4.6. Notifying Agencies. Notify Maintenance Group (MXG) Quality Assurance, Munitions Control, Armament Systems Flight, MOC as necessary. Notify EOD of all gun malfunctions with loose propellant.

Chapter 5

IMPOUNDMENT OF AIRCRAFT WITH HUNG ORDNANCE/JAMMED GUNS/ INADVERTENT RELEASE

5.1. Overview. When aircraft impoundment is directly related to weapons suspension equipment or a jammed gun system, the suspension equipment or gun system will be removed from the aircraft and impound transferred to an Armament Flight impoundment official. Basic post-flight procedures will not be performed on equipment involved in an inadvertent or multiple releases. The armament section impoundment official will select technicians (preferably 7-skill level), to form an Armament Impoundment Team to assist in investigating the cause of the malfunction.

5.2. Documentation. Malfunctioned munitions items or suspension equipment and cables must have an AFTO Form 350, *Reparable Item Processing Tag* and an Integrated Maintenance Data System (IMDS) screen 122 printout attached. The AFTO Form 350 will have a red border to signify the impoundment and the suspect item will be returned to the Armament Flight for investigation and possible deficiency reporting.

5.3. Follow-up. Carry out follow-up actions on suspected suspension or munitions items until a cause can be determined. The item owning agency will determine the final problem and submit an appropriate Deficiency Report (DR).

Chapter 6

ALA/UAL/LALS CLEARING PROCEDURES

6.1. Notifying Agencies. Notify MXG Quality Assurance, Munitions Control, Armament Systems Flight, MOC as necessary. Notify EOD of all jammed ALA/ Universal Ammunition Loading System (UALS)/ Linkless Ammunition Loading System (LALS) with loose propellant.

6.2. Munitions Control. Notify Munitions Control at extension 366-6099 and order delivery of empty ammunition storage cans. Ensure enough ammunition cans are ordered for the number of rounds to be downloaded if applicable.

6.3. Preparation for Transport. Remove all live ammunition rounds from the ALA/UALS/LALS prior to delivery to Armament Flight (if possible). If system cannot be cleared, notify Armament Flight for assistance.

6.4. Ammunition. Separate all rounds into three categories: serviceable (inspection required) rounds, damaged rounds, and spent brass. Store in separate ammunition cans, affix an AFTO 350 tag to each can stating category and number of rounds or brass in each can. Notify the Munitions Control when the ammunition cans are ready for pickup.

Chapter 7

GROUND EMERGENCIES INVOLVING MUNITIONS

7.1. Ground Emergencies Involving Munitions. When a mishap occurs or an unknown or unsafe condition is detected involving munitions, flight line personnel will declare a ground emergency and notify the MOC.

7.2. Incident Commander. The senior fire official is the Incident Commander and will control access to aircraft or munitions involved in the incident.

7.3. EOD Procedures. EOD will inspect the munitions involved and will dispose of unsafe munitions or release munitions back to weapons personnel for download or movement. No one will handle affected munitions until EOD has made an assessment.

7.4. Withdrawal Distance. For fires involving explosives, follow the minimum withdrawal distances outlined in DESR6055.09_DAFMAN91-201, *Explosive Safety Standards*. The Incident Commander may further adjust withdrawal distances or direct other evacuations as required. Termination of the ground emergency will be declared by the Incident Commander.

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Commander

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

AFI 91-102, *Nuclear Weapon System Safety Studies, Operational Safety Reviews and Safety Rules*, 23 May 2023

AFI 33-322, *Management of Records*, 21 July 2016

DESR6055.09_AFMAN91-201, *Explosive Safety Standards*, 28 May 2020

TO 11A-1-33, *Handling and Maintenance of Explosives-Loaded Aircraft*, 26 Oct 2022

DAFI 21-101, *Aircraft and Equipment Maintenance Management*, 16 Jan 2020

36 WGI 13-204, *Andersen AFB Airfield Operations*, 13 Jul 2023

AFMAN 11-214, *Air Operations Rules and Procedures*, 29 Nov 2022

Prescribed Forms

None

Adopted Forms

AFTO Form 350, *Reparable Item Processing Tag*

DAF Form 847, *Recommendation for Change of Publication*

Abbreviations and Acronyms

AB—Air Base

AF—Air Force

AFB—Air Force Base

DAFI—Department of Air Force Instruction

DAFMAN—Department of Air Force Manual

AFOSH—Air Force Occupational Safety and Health

AFTO—Air Force Technical Order

AGE—Aerospace Ground Equipment

AGM—Air to Ground Missile

ALA—Ammunition Loading Assembly

AMU—Aircraft Maintenance Unit

AMXS—Aircraft Maintenance Squadron

ATC—Air Traffic Control

BDU—Bomb Dummy Unit

CALCM—Conventional Air Launched Cruise Missile
CBP—Continuous Bomber Presence
CONOPS—Concept of Operations or Contingency Operations
CTK—Composite Tool Kit
DR—Deficiency Report
EAMXS—Expeditionary Aircraft Maintenance Squadron
EOD—Explosive Ordnance Disposal
EOR—End of Runway
FFO—Forward Firing Ordnance
FMC—Fully Mission Capable
FOD—Foreign Object Damage
FOIA—Freedom of Information Act
FOUO—For Official Use Only
FPCON—Force Protection Condition
FS—Fighter Squadron
FW—Fighter Wing
GMT—Gun Maintenance Team
GPS—Global Positioning System
HAF—Headquarters Air Force
HAZMAT—Hazardous Materials
HQ—Headquarters
IAW—In Accordance With
IFE—In Flight Emergency
IMDS—Integrated Maintenance Data System
IPL—Immediately Prior to Launch
JASSM—Joint Air-To-Surface Standoff Missile
JDAM—Joint Direct Attack Munitions
JSOW—Joint Stand-Off Weapon
LALS—Linkless Ammunition Loading System
MAJCOM—Major Command
MDS—Mission Design Series
MOC—Maintenance Operations Center

MXG—Maintenance Group
NMC—Non-Mission Capable
OG—Operations Group
OI—Operating Instruction
OSHA—Occupational Safety and Health Administration
PACAF—Pacific Air Forces
PACOM—Pacific Command
QA—Quality Assurance
RCO—Range Control Officer
RDS—Records Disposition Schedule
SME—Subject Matter Expert
SOF—Supervisor of Flying
TO—Technical Order
UALS—Universal Ammunition Loading System
US—United States
USAF—United States Air Force
WGI—Wing Instruction
WWM—Wing Weapons Manager

Terms

Delivered Weapon—A delivered weapon is a weapon confirmed released or jettisoned by the aircrew using the mission management system (MMS), Range Control Officer (RCO) or chase aircraft.

Explosives Loaded Aircraft—An aircraft is "explosives-loaded" when it carries munitions or explosives, internally or externally. The term does not include explosive components of aircrew escape systems or pyrotechnics installed in survival and rescue kits.

Forward Firing Ordnance—A munition that is propelled forward from the aircraft or that is propelled forward from the aircraft after separation—i.e. rockets, missiles, guns (AGM-158 is not considered a forward firing munition).

Ground Weapons Check—A visual inspection used to verify weapons status, required after an inadvertent release or hung ordnance.

Hung Weapon—Any item attached to the aircraft for the purpose of dropping or firing which has malfunctioned or failed to release. In addition, hung ordnance includes the following items: (1) External fuel tanks after unsuccessful jettison attempt; (2) Remaining ordnance after an inadvertent release; (3) 20/30 mm ammunition after a gun malfunction (no fire, unplanned cease fire, runaway gun, or gun unsafe indication); (4) Any stores determined to be in an unsafe condition.

Inadvertent Release—An uncommanded launch or release of a store or ordnance, or launch/release of a store/ordnance other than those selected when a launch/release command was generated (i.e.; system malfunction); does not include an unintentional release. If commanding a single release, do not consider a double bomb release as an inadvertent release if the releases occur from a practice bomb dispenser.

Inert—Contains no explosives, active chemicals, or pyrotechnics, but is not necessarily noncombustible.

Installed Explosives—Explosives items installed on aircraft or contained in survival and rescue kits such as flares, signals, egress system components, squibs, and detonators for jettisoning external stores, engine-starter cartridges, fire extinguisher cartridges, destructors in electronic equipment, explosives components of emergency equipment, and other such items or materials necessary for safe flight operations.

Live Ordnance—A munition that contains an explosive filler capable of producing a high order detonation; an explosive that can be expected to explode.

Release Attempt—A release attempt occurs when the aircraft issues a release pulse in either automatic or manual mode with all switches positioned correctly.

Retained Ordnance—A retained weapon for which no release was attempted, or a weapon that was not released due to procedural or switch errors committed by the aircrew.

Unintentional Release—Store or ordnance launched or released through pilot error.