DEPARTMENT OF THE AIR FORCE
HEADQUARTERS UNITED STATES AIR FORCE
WASHINGTON, DC

AFMAN21-206 AFGM2025-01
29 January 2025

MEMORANDUM FOR DISTRIBUTION_C
MAJCOMs/FLDCOMs/FOAs/DRUs

FROM: USAF A4/A4L
1030 Air Force Pentagon
Washington, DC 20330-1030

SUBJECT: Air Force Guidance Memorandum (AFGM) to Air Force Manual (AFMAN) 21-206, *Aircraft Armament Systems Management*

By Order of the Secretary of the Air Force, this Guidance Memorandum immediately implements changes to AFMAN 21-206. Changes incorporate updated wing weapons manager, flight and section leadership roles and responsibilities, Unit Committed Munitions List authority, introduce Competent Familiarity Loading (CFL) to complement expanded munitions loading certifications and proficiency requirements, and changes to the Loading Standardization and Evaluation Program (LSEP) summary. Compliance with this memorandum is mandatory. To the extent its directions are inconsistent with other Air Force publications the information herein prevails, in accordance with Department of the Air Force Instruction (DAFI) 90-160, *Publications and Forms Management*. Ensure all records generated as a result of processes prescribed in this publication adhere to Air Force Instruction (AFI) 33-322, *Records Management and Information Governance Program*, and are disposed of in accordance with the Air Force Records Disposition Schedule (RDS) located in the Air Force Records Information Management System.

This memorandum includes significant changes and must be reviewed in its entirety This publication applies to all civilian employees and uniformed members of the Regular Air Force, the Air Force Reserve, the Air National Guard, and those who are contractually obligated to comply with Department of the Air Force publications. This publication does not apply to the United States Space Force. There are no releasability restrictions on this publication.

The authorities to waive wing/unit level requirements in this GM are identified with a Tier ("T-0, T-1, T-2, T-3") number following each compliance statement. See DAFMAN 90-161, *Publishing Processes and Procedures*, for a description of the authorities associated with the Tier designators. Submit requests for waivers through the chain of command to the appropriate Tier waiver approval authority, or alternately, to the GM's OPR for non-tiered compliance items, as applicable.

Units have 180 days from date of publication to comply with this memorandum. This memorandum becomes void after one year has elapsed from the date of this memorandum, or upon publication of an interim change (IC) or rewrite of AFMAN 21-206, whichever is earlier.

TOM D. MILLER
Lieutenant General, USAF
DCS/Logistics, Engineering & Force Protection

Attachment: Changes to AFMAN 21-206, 4 November 2022

AFMAN21-206_AFGM2025-01

Attachment
Changes to AFMAN 21-206, 4 November 2022

2.1.2.2. **(Changed)** Manage Global Force Management for aircraft armament taskings.

2.2.1. **(Changed)** Maintenance Group Commander (MXG/CC) or equivalent. In addition to the munitions-related responsibilities found in AFI 21-1XX and AFMAN 21-2XX series, the MXG/CC (or equivalent) will:

2.2.1.2.6. **(Changed)** Ensure the Wing Weapons Manager will be a CMSgt 2W100 (6652 for Air Reserve Component (ARC)) assigned directly to the MXG/CC or equivalent.

2.2.1.2.7. **(Changed)** In units where 2W1X1 personnel are assigned but no 2W100 authorization exists, the MXG/CC or equivalent will appoint the most qualified 2W1X1 to fulfill WWM responsibilities outlined in Paragraph 2.2.2 of this chapter.

2.2.1.2.8. **(Changed)** ARC, the Senior Weapons Loading Supervisor serves as the WWM and does not require assignment to the MXG/CC or equivalent staff.

2.2.2. **(Changed)** Wing Weapons Manager (WWM). The WWM is assigned directly to the MXG/CC or equivalent, and must be, as a minimum, a CMSgt 2W100 (6652 for ARC). The WWM is the installation's focal point for all weapons loading, aircraft armament systems related matters, and informs wing-level tactics, real world or exercise, involving these functions. The WWM's primary efforts focus on compliance, continuity, standardization and readiness. The WWM serves as the installation 2W1X1 functional manager and point of contact for all 2W1X1 manpower issues and has the authority to cross wing, group, and squadron functional lines. Weapons activities required to support the generation of peacetime test and training sorties generally do not reinforce primary combat skills; therefore, the WWM plays a key role in ensuring that the unit is able to produce safe and reliable combat loaded and/or test/training loaded aircraft. The WWM is charged with providing technical and managerial advice to wing senior leaders in matters of weapons loading and armament systems. In addition, the WWM will:

2.2.2.7. **(Changed)** Determine need for aircraft/munitions AFSCs to receive Competent Familiarity Loading (CFL) to support Agile Combat Employment (ACE) mission requirements.

2.2.2.8. **(Changed)** Monitor overall load crew status and advise the MXG/CC or equivalent when the number of certified load crews fall below the UCML or TTML minimum requirements.

2.2.2.8.1. **(Changed)** Determine when Armament Flight personnel are required to perform load crew duties or related certifiable tasks in coordination with EMS/MXS/MUNS and MXG/CC or equivalent concurrence.

2.2.2.8.2. **(Changed)** Coordinate with EMS/MXS/MUNS and MXG/CC or equivalent to determine certifiable tasks.

2.2.2.9. **(Changed)** Annually, or upon being notified of a revision, review Designed Operational Capability (DOC) Statements, OPLANs, Syllabus, Ready Aircrew Program tasking memorandum, UCML/TTMLs, Aviation Unit Preparation Message, unit-tasked UTC requirements (for equipment and personnel) and UMD to identify any disconnects or problems for weapons. Coordinate changes and appendices with the Wing Weapons and Tactics Officer and the Munitions Squadron/Flight and report any findings to the MAJCOM.

2.2.2.10. **(Changed)** Ensure no shortfalls exist by aligning required skill level, grade, line remarks and Career Field Education and Training Plan (CFETP) qualifications against tasked UTCs to include force presentation for all assigned 2W1X1 personnel. The WWM will coordinate with units to initiate a training program to eliminate any identified shortfalls.

2.2.2.21. **(Changed)** Inform the MAJCOM, within 24 hours of any significant weapons or armament related issues such as dropped/hung munitions, equipment and aircraft release reliability or deficiency problems, and weapons safety or mishap issues.

2.2.2.26. **(Added)** Cleared for all mission-required access/clearances including but not limited to Top Secret/Sensitive Compartmented Information (TS/SCI), Alternative Compensatory Control Measures, and Special Access Programs (SAP) relating to aircraft armament systems to ensure wing senior leaders are informed on combat generation timelines and/or risk to assigned missions.

2.2.2.27. **(Added)** Establishes procedures in coordination with the WG/CC and GP/CCs or equivalents formalizing unit combat sortie generation concepts, e.g., Integrated Combat Turnaround (ICT), Dual Loading Operation (DLO)
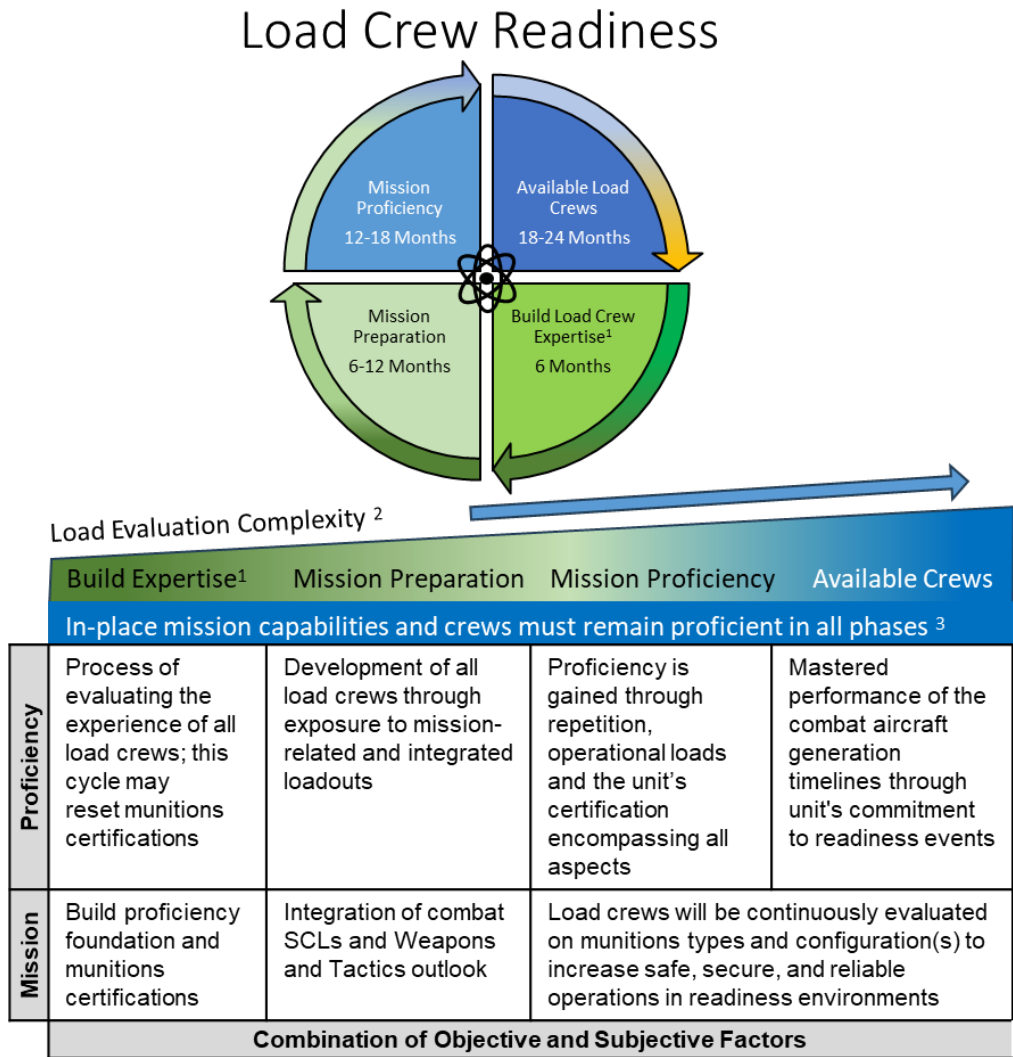
programs. Ensures these programs are thoroughly planned and choreographed to meet combat sortie production needs.

2.2.2.28. **(Added)** Authority for unit weapons loading certification and proficiency schedules.

2.2.2.29. **(Added)** Ensure WS Superintendent is the focal point for the ICT program.

2.2.2.30. **(Added)** Figure 2.1. represents a load crew outlook model and the WWM and WS Superintendent's focus on total load crew readiness. The management of load crew development is highly dynamic and requires flexibility to ensure mission readiness. Proficiency and load crew expertise start with developing individual load crew members noted in Figure 2.1, typically in the first six months. Mission preparation phase exposes load crews to various aircraft configurations and operational integrated load outs. Mission proficiency is the alignment of individual load crew member proficiency and load crew readiness with the deployable unit's timelines, ensuring load crews are exposed to increasingly complex load outs and situations that align with Commanders' assessment of mission requirements. Ready, available load crews require a balance of Weapons Standardization evaluations and repeated organizational combat aircraft generations that apply all phases of load crew readiness and combat generation principles.

Figure 2.1. (Added) Load Crew Readiness.

Load Crew Readiness

Mission Proficiency 12-18 Months	Available Load Crews 18-24 Months
Mission Preparation 6-12 Months	Build Load Crew Expertise[1] 6 Months

Load Evaluation Complexity [2]

Build Expertise[1]	Mission Preparation	Mission Proficiency	Available Crews
In-place mission capabilities and crews must remain proficient in all phases [3]			

	Proficiency			
Proficiency	Process of evaluating the experience of all load crews; this cycle may reset munitions certifications	Development of all load crews through exposure to mission-related and integrated loadouts	Proficiency is gained through repetition, operational loads and the unit's certification encompassing all aspects	Mastered performance of the combat aircraft generation timelines through unit's commitment to readiness events
Mission	Build proficiency foundation and munitions certifications	Integration of combat SCLs and Weapons and Tactics outlook	Load crews will be continuously evaluated on munitions types and configuration(s) to increase safe, secure, and reliable operations in readiness environments	
Combination of Objective and Subjective Factors				

2.2.3.1. **(Changed)** In coordination with WWM, measured units will report certified load crew capability against Core Mission Essential Task List (METL) in Defense Readiness Reporting System (DRRS) in accordance with AFI 10-201, *Force Readiness Reporting*.

2.2.3.2. **(Changed)** AMXS/FGS/Bomber Generation Squadron (BGS) nuclear tasked units will document minimum nuclear certified load crews on unit DOC Statement as determined by WWM and MXG/CC or equivalent.

3.2.4.1. **(Changed)** Units will start their UCML/TTML validation in February and have a coordinated input to the MAJCOM Munitions or Maintenance Division in April. **(T-2)** MAJCOMs will supply approved UCML/TTML to the units in May. **(T-2)**

3.2.4.2. **(Changed)** Unit changes to the UCML/TTML will be justified by Wing Weapons and Tactics, coordinated and processed through the WWM, Munitions Squadron/Flight, MXG/CC, OG/CC or equivalents and approved by the WG/CC before sending it to the MAJCOM. **(T-2)**

3.3. **(Changed) Designating UCML/TTML Minimum Certified Load Crews.** The minimum number of load crews depicted on the UCML are the only personnel certified/qualified to load/unload munitions on aircraft except for those weapons task qualifications outlined in paragraph 7.13. Load Crew minimums should be based on supporting the initial/lead UTC requirements. Additionally, follow-on UTCs tasked simultaneously with the initial/lead UTC will be considered. The minimum number of load crews depicted on the TTML should be based on supporting training unit syllabus and/or test unit mission requirements.

3.3.1. **(Changed)** In coordination with the MXG/CC or equivalent, the WWM will:

5.1. **(Changed) Armament Flight.** The armament flight, when formed, will be part of either MXS, EMS, or MUNS. Performs off-equipment maintenance for assigned aircraft armament systems, guns, pylons, racks, launchers, adapters, and on-equipment maintenance for assigned MMHE, testers, ammunition loading assemblies/systems. **(T-3)** An AFSC 2S0X1, Materiel Management, may be assigned to the flight if mission dictates and respective SQ/CC and MXG/CC or equivalent concurs. **(T-3)** The armament flight normally consists of three sections: Armament maintenance section, AME section, and support section.

5.1.1. **(Changed)** The WWM, with MXG/CC or equivalent concurrence, determines when armament systems personnel are required to perform weapons loading certifications. **(T-3)**

5.1.4. **(Added)** May be weapons task qualified to support combat coded operations squadrons. Coordinates with Weapons Section Chiefs and the WWM to establish standard minimum weapons task qualifications, certifications and on-equipment maintenance. **(T-2)** Qualification may include installation and removal of all assigned aircraft NIE and AME. During unit reset periods, if applicable, the WWM, Weapons Section Chief and Armament Flight Chief coordinate manning requirements to support readiness exercises, training events and contingencies. **(T-2)**

6.2.1.1. **(Added)** Ensure enough serviceable load crew training munitions are available to support both load crew and ICT/DLO programs. **(T-3)**

6.3.4. **(Changed)** Perform quarterly evaluations on all certified load crews in accordance with **Chapter 7** of this manual. **(T-1)**

6.7.1. **(Changed)** Authorized quantities of training munitions can be referenced in the *Air Force Standard for Non-Expendable Air-Munitions Training* located on the Air Force Conventional Munitions SharePoint® site at **https://usaf.dps.mil/teams/AMMO2W10027/Training%20Tools%20%20Guides/Forms/AllItems.aspx**. These numbers reflect the maximum munitions required exclusively for weapons load crew certification and recurring training.

7.1. **(Changed) Loading Standardization and Evaluation Program (LSEP).** The LSEP ensures all individuals and weapons load crew members obtain and maintain the certification/qualification and proficiency needed to effectively meet safe, secure, and efficient munitions loading/unloading operations supporting their unit's mission. The objective of the LSEP is to develop and maintain a high state of mission readiness for immediate and effective generation/employment of munitions loaded aircraft. LSEP provides the basis for accomplishing peacetime missions while maintaining critical wartime capability. LSEP is managed and governed by Weapons Standardization under the authority of the MXG/CC or equivalent. The LSEP is comprised of academic training, practical training, weapons loading certification, quarterly evaluations, proficiency evaluations, flightline evaluations and weapons task qualification.

7.6. **(Changed) Weapons Loading Certification, Weapons Task Qualification and Competent Familiarity Loading.** Individual/load crew certification and qualification is the foundation of the LSEP. Therefore, only individuals with 2W1X1 AFSC (contractor or civilian equivalent) are certified/qualified to load/unload munitions items on aircraft unless authorized in accordance with provisions in this chapter. **(T-1)** A listing of

certified/qualification munitions can be referenced in the *Air Force Certified/Qualification Munitions and Proficiency Time Standards* located on the Air Force Aircraft Armament Portal SharePoint® site at: https://usaf.dps.mil/sites/12231/Air%20Force%20CertifiedQualification%20Munitions%20and%20Pro.

7.6.1.4. **(Added)** Competent Familiarity Loading (CFL). The loading of a munition which requires only a satisfactory fundamental knowledge of the loading operation. The performance of CFLs only set a basic level of proficiency to make future certification easier.

Figure 7.1. (Changed) Certification/Qualification Basic Fundamental Overview.
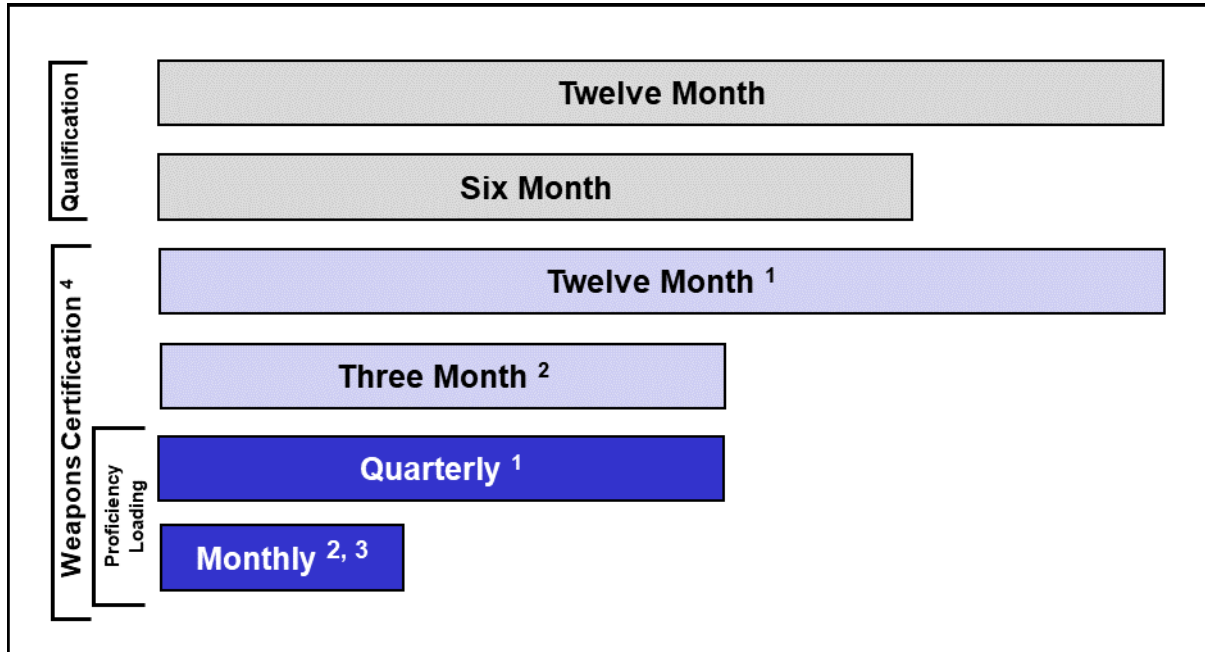
[1] Only Traditional Reservist / Drills Status Guard members

[2] Proficiency Review through quarterly evaluation (QE)

[3] Nuclear Primary Munitions

[4] Weapons certification is required for each primary munition type and configurations

7.8.1. **(Changed)** Ensure load crews demonstrate proficiency on each type of aircraft rack and station prior to certification/qualification on that munition. **(T-2) Note**: Units may certify/qualify by munition loading methods, (e.g., AGM-158 EXT, AGM-158 INT, powered/non-powered loads).

7.8.5. **(Added)** Competent Familiarity Loading (CFL). In the event load crew personnel are not certified on munitions listed on the UCML/TTML, e.g. primary, support and/or limited-use munitions, personnel require annual practical training on the inert/training version for familiarization, and it will be tracked in WLCMT as a qualification in accordance with Paragraph 7.17. **Note:** CFLs are not a substitution for certification.

7.8.5.1. **(Added)** Non-2W1X1 Competent Familiarity Loading will follow policy and procedures in accordance with provisions in this chapter. **(T-2)** In addition, the following minimum conditions will be met (if implemented):

7.8.5.1.1. **(Added)** Ensure non-2W1X1 AFSC possess 5-skill level in their primary AFSC. **(T-2)**

7.8.5.1.2 **(Added)** Ensure non-2W1X1 AFSC receive CFL in only Weapons Load Crew Member positions. **(T-2)**

7.8.5.1.3. **(Added)** Only approve aircraft maintenance/munitions AFSCs for CFL. **(T-1)**

7.8.5.1.4. **(Added)** WWM will approve a list of authorized tasked munitions. **Note**: Ensure non-2W1X1 AFSC CFL does not impede UCML/TTML minimum certified load crews required to meet unit requirements. **(T-2)**

7.9. **(Changed) Weapons Loading Certification Specific Requirements.** Consists of initial certification, quarterly and proficiency evaluations. Load crew integrity must be used to the maximum extent possible. Certification requirements are as follows:

7.9.5. **(Changed)** Personnel must be certified before loading live conventional munitions, unless loading under the direct supervision of a minimum of two certifying officials with coordination of WWM and approval of the MXG/CC or equivalent. **(T-1)**

7.9.8. **(Changed)** WS will develop an annual munitions schedule to ensure rotation of QEs and MRPLs are rotated in accordance with provision in this chapter. **(T-2)**

7.9.8.3. **(Added)** Units will alternate Air-to-Air missile loading configurations (e.g., All Up Round Container).

7.9.10. **(Changed)** Certified Weapons Load Crew Chiefs may perform QE/MRPLs in any position provided they load under the supervision of LSC or SLC using inert conventional training munitions only. This requirement applies at home station only. No QE/MRPL credit is given to those individuals during evaluations unless loading in the position for which they are certified.

7.9.11.2. **(Changed)** Multiple-MDS certification is authorized for LSC, F-15 SLCs, Test Wing personnel only. **(T-2)**

7.9.11.2.2. **(Changed)** Load crews will comply with MRPL and QE requirements for all aircraft for which they are certified; they will not alternate between the aircraft. **(T-1)**

7.9.12. **(Deleted)**

7.9.12.1. **(Deleted)**

7.9.12.2. **(Deleted)**
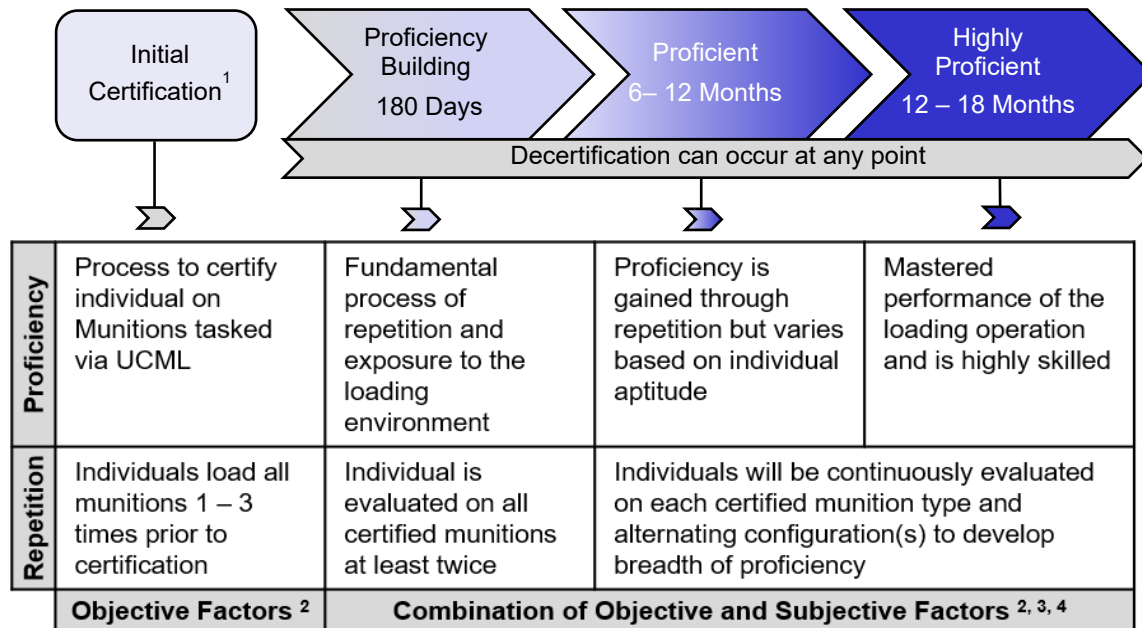
7.9.12.3. **(Deleted)**

7.9.12.4. **(Deleted)**

7.10. **(Changed) Quarterly Evaluation (QE).** QE ensures the integrity, quality and standardization of the LSEP. The QE is an evaluation and not considered a training event. SLC member(s) may assist during a QE; however, at least one member of the LSC must be present. **(T-2) Note**: QEs are not required for LSC and SLCs.

7.10.1. **(Changed)** QE will be conducted on an integrated load during initial certification. **(T-1)** After initially certifying, evaluate each load crew once every 90-days on an integrated load. All unit primary munitions will be used on a rotating basis. **(T-2)**

7.10.2. **(Changed)** There is no need to document both QE and MRPL for an integrated load, (e.g., AIM-9 MRPL, GBU-38 QE).

Figure 7.2. (Changed) Weapons Loading Proficiency Model.

Proficiency	Process to certify individual on Munitions tasked via UCML	Fundamental process of repetition and exposure to the loading environment	Proficiency is gained through repetition but varies based on individual aptitude	Mastered performance of the loading operation and is highly skilled
Repetition	Individuals load all munitions 1 – 3 times prior to certification	Individual is evaluated on all certified munitions at least twice	Individuals will be continuously evaluated on each certified munition type and alternating configuration(s) to develop breadth of proficiency	
	Objective Factors [2]	**Combination of Objective and Subjective Factors [2, 3, 4]**		

[1] Fighter MDS initial certification may require 30 days, depending on mission. Bomber MDS initial certification may require 45 – 60 days, depending on mission

[2] Objective factors are established pass/fail criteria (go/no-go), e.g., safety, reliability, time standard or exceeding more than three technical order errors

[3] Subjective factors are a lack of technical proficiency or system knowledge based on the discretion of the certifying official's technical expertise

[4] Wing Weapons Manager in coordination with Weapons Standardization determine if specific munition(s) proficiency should be increased based on taskings and/or metrics

7.11.1. **(Changed)** Individual Proficiency Model. Figure 7.2. represents an individual proficiency model. Proficiency informs load crew readiness and occurs after initial certification, which is gained through repeated exposure to the loading environment and different munition types. In a member's first six months of loading, the primary focus is developing the individual load crew member's understanding of the loading environment, different munition types, and both explosive and occupational safety factors. This requires repetition and is the most formative experience that sets the foundation for proficiency, which is measured through integrated loads and QEs. Interrupting this phase may increase risk. The following six months enables a gradual transition to focusing and understanding the entire crew's performance to complete loading operations in a safe, secure, and reliable manner. Transitioning from proficiency building to proficiency is fundamental for employable forces. Through repetition, execution of integrated loads in all mission-required aircraft configurations, members may become highly proficient in the performance of combat aircraft generations to meet required timelines.

7.11.2.1. **(Changed)** Each munition an individual is certified to load, regardless of if it is a primary, support or limited use munition will be loaded at least once within a 90-day period. **(T-1)** Note: Six-month period for Traditional Reservist.

7.11.2.2. **(Changed)** One third of the required munitions will be loaded monthly to provide a monthly evaluation of load crew proficiency. (one quarter of required munitions will be loaded quarterly for Traditional Reservist/Drill Status Guard members) to demonstrate crew proficiency. **(T-1)**

7.11.2.3. **(Changed)** Load crews in ACA (NORAD committed)/air superiority units (e.g., F-15C and F-16 Aggressor) will perform proficiency loads monthly using all committed primary munitions. **(T-2)**

7.11.2.5. **(Changed)** MRPL credit may be given during any certified loading operations on the flightline provided complete MRPL requirements are performed and evaluated by WS personnel. **Note:** MPRL will include the following procedures: Aircraft Preparation, Munitions Preparation, Loading, Cartridge Installation (if required), Postloading, and Delayed Flight/Alert. Immediately Prior to Launch (IPL) can be included or performed as a separate evaluation. **(T-1)**

7.11.2.5.1. **(Added)** MPRL credit may be given to load crews performing ICTs/DLOs.

7.11.2.5.1.1. **(Added)** Only one ICT per quarter may be used to satisfy MRPL requirements. The required number of evaluators, equipment and all other requirements must be met to receive credit for these type evaluations. **(T-1)**

7.14.2. **(Changed)** QE. All load crews exceeding semi-annual interval will not load certified munitions until QE is accomplished. **(T-1)**

7.15.1. **(Changed)** WS will manage certifications, qualifications, QE and MRPLs by means of the WLCMT or MAJCOM approved equivalent. **(T-2)**

7.15.3.1.2. **(Changed)** Type Eval. Enter one of the following: EPE, Facilitate, Initial, Flightline, MRPL, Recert, QE Qual, Academics or Training. **(T-1)**

7.15.3.3.6. **(Changed)** Enter date in the month column when QE, Certification, Decertification, MRPL, Qualification or Disqualification was performed. **(T-1)**

7.15.3.3.7. **(Changed)** QE. The letter "E" will be placed after the date for the QE regardless of rating. **(T-1)**

7.18. **(Changed) Passed Versus Failed Evaluations.** Report each evaluated load crew operation as pass or fail to accurately measure the unit's mission effectiveness. Units will use the Weapons Dashboard located at **weapons dashboard_v1_SP_source - Power BI**. **(T-1)** The following areas pass/fail percentages will be calculated:

7.18.1. **(Changed)** Overall pass rate by MDS. **(T-1)**

7.18.2. **(Changed)** Overall pass rate by number of Munitions. **(T-1)**

7.18.3. **(Changed)** Number of Integrated versus Single Munitions Loads. **(T-1)**

7.18.4. **(Added)** Pass Rate of Integrated versus Single Munition Loads. **(T-1)**

Abbreviations and Acronyms

(Added) BGS—Bomber Generation Squadron

(Added) CFL—Competent Familiarity Loading

(Added) QE—Quarterly Evaluation

(Deleted) SAE—Semi-Annual Evaluations

(Changed) Integrated Load—The loading of two or more different types or same type of certified munitions in an authorized configuration during a single operation.

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

This publication implements Air Force Policy Directive (AFPD) 21-2, *Munitions,* and is consistent with AFPD 13-5, *Air Force Nuclear Mission.* It provides Air Force aircraft armament systems management and loading standardization and evaluation program policies to be applied at the tactical, operational and strategic levels, in peacetime and wartime. This publication applies to the Regular Air Force, the Air Force Reserve, the Air National Guard, and those with a contractual obligation to abide by the terms of Department of the Air Force (DAF) issuances. This publication does not apply to the United States Space Force. Supplements must identify required deviations (applicability, variance, and/or differences in organizational placement of responsibilities/processes) on the supplement with the abbreviation "(DEV)" directly preceding the affected paragraph number. Only supplements and addendums containing deviations must be submitted to Headquarters Air Force, Logistics, Engineering and Force Protection, Directorate of Logistics, Nuclear Weapons, Missiles and Munitions Division (AF/A4LW) for approval. The authorities to waive wing/unit level requirements in this publication are identified with a Tier ("T-0, T-1, T-2, T-3") number following the compliance statement. See Air Force Instruction (DAFI) 90-160, *Publications and Forms Management* and DAF Manual (DAFMAN) 90-161, *Publishing Processes and Procedures* for a description of the authorities associated with the Tier numbers. Submit requests for waivers through the chain of command to the appropriate Tier waiver approval authority, or alternately, to the requestors commander for non-tiered compliance items. MAJCOM-directed supplements to this publication must be routed to the Office of Primary Responsibility (OPR) of this publication for coordination prior to certification and approval. Units below MAJCOMs should publish a supplement to this publication. Ensure all records generated as a result of processes prescribed in this publication adhere to Air Force Instruction 33-322, Records

Management and Information Governance Program, and are disposed in accordance with the Air Force Records Disposition Schedule, which is located in the Air Force Records Information Management System. Refer recommended changes and questions about this publication to the office of primary responsibility (OPR) using the DAF Forms 847, *Recommendation for Change of Publication*; route DAF Forms 847 from the field through the appropriate functional chain of command.

Chapter 1

GENERAL

1.1. Purpose and Guidance.

1.1.1. Purpose**.** This manual provides guidance, delineates responsibilities, establishes aircraft armament system management and Loading Standardization and Evaluation Program (LSEP) procedures.

1.1.2. Guidance**.** General aircraft maintenance and equipment responsibilities and procedures are located in DAFI 21-101, *Aircraft and Equipment Maintenance Management.* General munitions maintenance responsibilities and procedures are located in AFMAN 21-200, *Munitions and Missile Maintenance Management*. Conventional munitions accountability and Nuclear Weapons Related Material procedures are located in DAFMAN 21-201, *Munitions Management*. Nuclear accountability guidance is located in AFMAN 21-203, *Nuclear Accountability Procedures*. Command disablement procedures are located in AFI 21-205-S, *Command Disable System (CDS).*

1.2. General.

1.2.1. Aircraft munitions operations and armament systems maintenance support both aircraft weapon systems reliability and loading/unloading of nuclear and non-nuclear munitions. Special consideration is required to ensure safe, secure and reliable operations during aircraft armament systems maintenance, munitions handling and operational employment of weapons.

1.2.1.1. Personnel directly involved in nuclear and non-nuclear munition operations are expected to perform at the highest possible level of adherence to standards, attention to detail, maintenance discipline and weapons loading proficiency.

1.2.1.2. Any other performance level is unacceptable and must result in immediate disqualification/decertification from duties.

Chapter 2

ROLES AND RESPONSIBILITIES

2.1. Major Commands (MAJCOMs).

2.1.1. MAJCOM Munitions/Maintenance Division will:

2.1.1.1. Execute AFPD 21-1, *Maintenance of Military Materiel,* and AFPD 21-2, to provide manpower, resources and training through Armament/Maintenance Support Branch.

2.1.1.1.1. Organize, Train and Equip (OT&E) the command through applicable command's Mission Directive (MD).

2.1.1.1.2. Develop and implement policy supporting combat aircraft generation, peacetime test and training sorties within established requirements. This includes Air Force Manuals/Instructions and organizational/intermediate level technical procedures for aircraft nuclear and non-nuclear loading, including Technical Order (TO) validation and verifications.

2.1.1.1.3. Validate and coordinate command's annual/out-of-cycle Unit Committed Munitions List (UCML) and Test & Training Munitions list (TTML).

2.1.1.1.4. Monitor command's overall load crew status when number of certified load crews falls below UCML/TTML minimum requirements. MAJCOM will coordinate unit's secure message via SIPR to AF/A4LW at **usaf.pentagon.af-a4.mbx.a4lw-workflow@mail.mil** if this occurs and cannot be corrected within 30 days. **(T-1)**.

2.1.1.1.5. Coordinate technical support and provide guidance on issues beyond unit capabilities through the Air Force Technical Order (AFTO) waiver process and technical data assistance requests.

2.1.1.1.6. Validate accuracy of aircraft armament systems maintenance and weapons loading technical data in accordance with TO 00-5-3, *Air Force Technical Order Life Cycle Management* and MIL-DTL-9977, *Manuals, Technical and Checklist: Munitions/Weapons Loading Procedures, Nonnuclear Munitions and Nuclear and Packages, Standard Data: Munitions Loading Procedures, Nonnuclear.*

2.1.1.1.7. In coordination with the unit, schedule most eligible individuals for Advanced Aircraft Armament Superintendent course.

2.1.1.1.8. Execute armament equipment readiness reviews, and establishment of Allowance Standards.

2.1.1.1.9. Monitor readiness and repair contracts of aircraft armament alternate mission equipment (AME)/normally installed equipment (NIE), support equipment and testers and Interface and collaborate with program managers to execute maintenance strategies to sustain armament system capabilities.

2.1.1.1.10. Assist Command Equipment Management Office (CEMO) with armament equipment redistribution orders (RDO), and coordinate, collaborate or authorize (lead

commands only) mission design series (MDS) -21 TO aircraft armament variances as applicable.

2.1.1.1.11. Interface with Defense Logistics Agency (DLA) for aircraft armament parts availability and deficiency resolution.

2.1.1.1.12. Serve as Command Munitions User Functional Manager (MUFM) for armament munitions allocations in accordance with DAFMAN 21-201.

2.1.1.1.13. Perform as focal point for armament logistics support and test plan management.

2.1.1.1.14. Provide subject matter expertise to the aircraft Weapons System Team (WST) and status of aircraft armament equipment modifications, weapons system tests, and armament malfunctions and/or incidents.

2.1.1.1.15. Provide readiness and capability reviews of aircraft armament unit type code (UTC) personnel and equipment, and manage command's 2W1X1, *Aircraft Armament Systems,* deployment taskings, if applicable.

2.1.1.1.16. Enable Integrated Life Cycle Management (ILCM) by advocating for modernization of armament equipment, infrastructure and systems support in accordance with AFI 20-101_63-101, *Integrated Lifecycle Management*. Additional ILCM functions include supporting Preliminary Technical Orders (PTO), Special Access Programs (SAP) and modification management.

2.1.1.1.17. Provide training of personnel and maintenance of allocated Armament Information Technology (IT) resources.

2.1.1.1.18. Conduct staff assistance visits (SAV) as required to evaluate the unit's effectiveness and provide assistance with a focus on aircraft armament systems processes, utilization of people and resources. **(T-2)**.

2.1.2. Air Combat Command (ACC) Additional Responsibilities**.** ACC Directorate of Logistics, Munitions Division (A4W) will:

2.1.2.1. Plan and execute aircraft armament information technology solutions, Hazards of Electromagnetic Radiation to Ordnance (HERO) certification, development and program funding (excluding funding for ANG and AFR). **(T-2)**

2.1.2.2. Manage Global Force Management for Agile Combat Support aircraft armament taskings. **(T-2)**

2.2. Unit Responsibilities.

2.2.1. Maintenance Group Commander (MXG/CC). In addition to the munitions-related responsibilities found in AFI 21-1XX and AFMAN 21-2XX series, the MXG/CC (or equivalent) will:

2.2.1.1. Coordinate all weapons loading and armament systems related matters with the Wing Weapons Manager.

2.2.1.2. Inform applicable MAJCOM if units do not meet minimum Unit Committed Munitions Listing/Test & Training Munitions List weapons load crew requirements. **(T-1)** If this occurs and cannot be corrected within 30 days, a secure message will be sent via

Secret Internet Protocol Router (SIPR) to the appropriate MAJCOM Munitions or Maintenance Division. **(T-1) Note**: All 2W1X1s working outside their respective work center or Duty Air Force Specialty Code (AFSC) will be certified to fill load crew shortfalls before sending a message to the MAJCOM. **(T-2)** The message will include:

2.2.1.2.1. Number of 2W1X1 personnel authorized and assigned by work center, skill level (primary AFSC) and grade for the entire wing. Include all work centers to which 2W1X1 personnel are assigned. **(T-1)**

2.2.1.2.2. Number of 2W1X1 personnel working outside the AFSC/work center. **(T-1)**

2.2.1.2.3. Number of 2W1X1s not able to perform primary duties and the reason. **(T-1)**

2.2.1.2.4. Number of fully certified crews. Include corrective action, get well date, and 30/60-day load crew status projection. If the standard cannot be reached in 60 days, provide the reason. **(T-1)**

2.2.1.2.5. Remarks: List limiting factors, equipment shortages, availability of training aircraft. **(T-1)**

2.2.1.2.6. Ensure the Wing Weapons Manager will be a CMSgt 2W100 (6652 for Air Reserve Component (ARC)) assigned directly to the MXG/CC. **(T-2)**

2.2.1.2.7. In units where 2W1X1 personnel are assigned but no 2W100 authorization exists, the MXG/CC will appoint the most qualified 2W1X1 to fulfill WWM responsibilities outlined in **Paragraph 2.2.2** of this chapter. **(T-2)**

2.2.1.2.8. ARC, the Senior Weapons Loading Supervisor serves as the WWM and does not require assignment to the MXG/CC staff.

2.2.1.2.9. Develop an installation publication or supplement to this manual for explosive-loaded aircraft in coordination with AMXS, FGS, RGS, EMS/MXS/munitions squadron/flight, WWM, wing safety, airfield operations flight, and quality assurance. **(T-1)** Procedures include:

2.2.1.2.10. Explosive-loaded aircraft parking, launch and recovery, end-of-runway procedures (as applicable), hung stores and jammed gun system safing. **(T-1)**

2.2.1.2.11. Circumstances warranting impoundment of aircraft with hung ordnance, delayed release or jammed gun systems. **(T-1)**

2.2.1.2.12. Authorization for IPL and safing procedures performed in the aircraft parking area for contingencies, unit exercises, and daily training missions. **(T-3)**

2.2.1.2.13. Ensure LSEP is conducted in a facility dedicated to load crew training that is sufficient size and adequate to accommodate required aircraft, training munitions and associated support equipment. **(T-1)** Adequate office space and classroom with appropriate heating, cooling and ventilation are required in the academic and practical training area. For additional information, see **https://www.wbdg.org/ffc/af-afcec/manuals-afm/afman-32-1084**.

2.2.2. Wing Weapons Manager (WWM). The WWM is assigned directly to the MXG/CC, and must be, as a minimum, a CMSgt 2W100 (6652 for ARC). **(T-2)** The WWM is the wing's focal point for all weapons loading and armament systems related matters. The WWM's primary efforts focus on compliance, continuity, standardization and readiness. The WWM serves as the 2W1X1 functional manager and point of contact for all 2W1X1 manpower issues and has the authority to cross group and squadron functional lines. Weapons activities required to support the generation of peacetime test and training sorties generally do not reinforce primary combat skills; therefore, the WWM plays a key role in ensuring that the unit is able to produce safe and reliable combat loaded and/or test/training loaded aircraft. The WWM is charged with providing technical and managerial advice to wing senior leaders in matters of weapons loading and armament systems. In addition, the WWM will:

2.2.2.1. Serve as LSEP senior certifying official/evaluator, and designate Weapons Standardization certifying officials and primary weapons academics instructor in writing. **(T-3)**

2.2.2.2. Coordinate for all 2W1X1 Unit Manpower Document(s) (UMD) and manpower issues to include coordination on all manning (AFSC, grade and skill level) changes, work center and organizational changes. (**T-3**) Ensure assignment of new arrivals, and existing 2W1X1 personnel are properly assigned on the UMD to balance 2W1X1 grades, experience and skill levels between all 2W1X1 work centers across the wing. **(T-3)**

2.2.2.3. Coordinate on aircraft armament related support agreements and provide support for geographically separated units. **(T-3)**

2.2.2.4. Coordinate with the AMXS/FGS, Munitions Squadron/Flight, Wing Safety, Nuclear Executive Manager, Wing Weapons and Tactics Officer, and other agencies on weapons related matters. **(T-3)**

2.2.2.5. Ensure all wing 2W1X1 personnel regardless of duty position receive initial and recurring weapons academics prior to performing duties (as applicable to work center). **(T-3)**

2.2.2.6. Determine the minimum number of certified load crews depicted on the UCML/TTML in accordance with **Paragraph 3.3** of this manual. **(T-3)**

2.2.2.7. Determine need for certifying and reporting non-2W1X1 AFSC to support Agile Combat Employment (ACE) mission requirements and approved by Wing Commander (WG/CC). **(T-2)** The WG/CC at their discretion, may delegate approval authority no lower than MXG/CC or equivalent. If required, non-2W1X1 AFSC certification will be established per **Paragraph 7.9** of this manual. **Note**: Non-2W1X1 AFSC certified weapons load crew members will be accounted for separately and not be included in authorized 2W1X1 load crew status reporting.

2.2.2.8. Monitor overall load crew status and advise the MXG/CC when the number of certified load crews fall below the UCML or TTML minimum requirements. **(T-3)**

2.2.2.8.1. Determine when armament flight personnel are required to perform load crew duties. **(T-3)**

2.2.2.8.2. Coordinate with EMS/MXS/MUNS and MXG/CC to determine certifiable tasks. **(T-3)**

2.2.2.9. Annually review Designed Operational Capability (DOC) Statements, OPLANs, Syllabus, Ready Aircrew Program tasking memorandum, UCML/TTMLs, Aviation Unit Preparation Message, unit-tasked UTC requirements (for equipment and personnel) and UMD to identify any disconnects or problems for weapons. **(T-2)** Coordinate changes and appendices with the Wing Weapons and Tactics Officer and the Munitions Squadron/Flight and report any findings to the MAJCOM. **(T-2)**

2.2.2.10. Ensure no shortfalls exist by aligning required skill level, grade, line remarks and career field education and training plan (CFETP) qualifications against tasked UTCs to include Aerospace Expeditionary Force taskings for all assigned 2W1X1 personnel. **(T-3)** The WWM will coordinate with units to initiate a training program to eliminate any identified shortfalls. **(T-3)**

2.2.2.11. Monitor war reserve material (WRM) rack, adapter, pylons, and guns/components status to ensure required assets are available to support OPLAN taskings. **(T-2)**

2.2.2.12. Provide input during development of local exercises involving weapons loading and armament functions and serve as senior weapons advisor/evaluator to the Wing Inspection Team (WIT). **(T-3)**

2.2.2.13. Establish a recognition program for aircraft armament systems personnel. **(T-3)**

2.2.2.14. Ensure standardization of load crew Composite Tool Kit (CTK) by aircraft MDS to the maximum extent possible to provide interoperability of load crews. **(T-3)** In coordination with the Weapons Section Chief and WS Superintendent (SUPT), determine the number of load crew CTKs required and approve CTK contents **(T-3)**

2.2.2.15. Coordinate an installation publication or supplement to this manual for explosive-loaded aircraft accordance with **Paragraph 2.2.1.2.9**. **(T-3)**

2.2.2.16. Ensure compliance with local accountability procedures in accordance with AFMAN 11-212, *Requirements for Aircrew Munitions*, and DAFMAN 21-201. **(T-1)** In conjunction with the weapons section(s) and munitions flight, the WWM will develop a standard local format for the AF Form 2434, *Munitions Configuration and Expenditure Document*. **(T-3)** A computer-generated product may be used if it contains all required information.

2.2.2.17. Coordinate with Maintenance Supervision, Munitions Squadron/Flight, Operations Support Squadron (OSS) Operations Plans, and Wing Safety in developing nuclear weapons operations procedures (such as, convoy, custody transfer, no-lone-zone), if applicable. **(T-3)**

2.2.2.18. Conduct a quarterly meeting with representatives from weapons standardization, wing safety, quality assurance, munitions squadron/flight, armament flight, and weapons section(s) to discuss and resolve any weapons-related issues, concerns or problems. **(T-3)** Wing Weapons and Tactics Officer, Nuclear Executive Manager and Weapons Air Force Engineering and Technical Service (AFETS) are highly encouraged to attend.

2.2.2.19. Ensure enroute training requirements for inbound 2W1X1 personnel are identified and requested through the MAJCOM, as applicable. **(T-3)**

2.2.2.20. Update World-Wide Weapons Report (W3R) (Formerly 9405 Report) located on the Air Force Aircraft Armament Portal SharePoint® site at **https://usaf.dps.mil/sites/12231/SitePages/Home.aspx** no later than the 5th of each month. **(T-3)**

2.2.2.21. Inform the MAJCOM, within 24 hours, of any significant weapons or armament related issues such as dropped/hung munitions, equipment and aircraft release reliability or deficiency problems, and weapons safety or mishap issues. **(T-2) Note**: Units follow MAJCOM and local reporting instructions.

2.2.2.21.1. If a unit has an incident, it is important to preserve the evidence to the maximum extent allowable by operational requirements and safety. An example would be segregating an aircraft gun versus destroying it if it poses no immediate danger. This allows for evaluation of all the evidence and the ability to recreate the mishap conditions.

2.2.2.21.2. Monitor weapons release/gun fire-out rates, malfunctions and corrective actions to assess weapons and armament systems reliability. **(T-2)**

2.2.2.21.3. Weapons release reliability rates are calculated by dividing the number of successful releases by the number of attempts.

2.2.2.21.4. The gun fire-out rate is calculated by dividing the number of successful bursts by the number attempted. Once a malfunction occurs, any further attempts for the purpose of clearing the malfunction should not be counted as attempts.

2.2.2.21.5. Monitor the status of armament and weapons systems support equipment and testers for serviceability, accountability and status of TCTO modifications. **(T-3)**

2.2.2.21.6. Ensure requirements for submitting AFTO Form 375, *Selected Support Equipment Repair Cost Estimate*, on all weapons support equipment identified in TO 35-1-24, *Air Force Economic Repair/Replacement Criteria for Selected Warner Robins Air Logistics (ALC) Managed Support Equipment (SE),* are accomplished. **(T-3)**

2.2.2.22. Utilize and involve AFETS and/or contractors in weapons and armament related issues and meetings in accordance with Chapter 11 of DAFI 21-101. **(T-3)**

2.2.2.23. Ensure at least two certified WS personnel are included on TDY where live munitions will be expended and on deployments exceeding 30 days to provide minimum required proficiency load (MRPL) and recertification capability. **(T-3)** The WWM is the approval authority for exceptions.

2.2.2.24. Perform an annual assessment to evaluate programs and technical proficiency of personnel assigned to the weapons section(s), armament flight, weapons standardization, and AFSC 2W1X1 personnel assigned to quality assurance. **(T-2)** Ensure the assessment incorporates a process to document findings and track corrective actions. **(T-2)**

2.2.2.25. Determine need for a formal supervisory postload program. If required, a training program and procedures will be established in accordance with **Paragraph 7.13.5** of this manual. **(T-3)**

2.2.3. Squadron Commander (SQ/CC). In addition to the munitions-related responsibilities found in AFI 21-1XX and AFMAN 21-2XX series, the SQ/CC (or equivalent) will:

2.2.3.1. In coordination with WWM, measured units will report certified load crew capability against Core Mission Essential Task List (METL) in Defense Readiness Reporting System-Strategic (DRRS-S) in accordance with AFI 10-201, *Force Readiness Reporting*. **(T-3)**

2.2.3.2. AMXS/FGS nuclear tasked units will document minimum nuclear certified load crews on unit DOC Statement as determined by WWM and MXG/CC. **(T-1)**

2.2.3.3. Ensure eTools involved in explosive operations are compliant with HERO certification in accordance with DESR6055.09_AFMAN 91-201, *Explosive Safety Standards* and AFI 91-208 *Hazards of Electromagnetic Hazards Radiation to Ordnance (HERO) Certification and Management* **(T-1)**

Chapter 3

MUNITIONS POLICY

3.1. Air Force Munitions Policy.

3.1.1. Live and inert missiles (or electrical simulators) of the same type (e.g., CATM-9 with Live AIM-9M/X) must not be loaded or flown together on an aircraft. **(T-2)** Live and inert (to include training or practice) bombs must not be loaded and flown together in/on the same dispenser/rack. **(T-2)** Any request to deviate from or waiver to this policy must be coordinated through the WWM, and must be submitted via official message to the MAJCOM Munitions or Maintenance Division, MAJCOM Weapons Safety, and MAJCOM Operations Weapons and Tactics/Training Divisions. **(T-2) Note**: Units that fly rocket pods will not fly TP rockets with any combination of live rockets. **(T-2) Note**: With Program Office/Seek Eagle approval, configurations with inert Air-to-Ground Missiles (AGM) can be flown with all types of bombs and rockets. The MAJCOM Operations Weapons and Tactics/Training Divisions is the sole approval authority for these deviations/waivers.

3.1.1.1. Units performing test operations Developmental Test (DT)/Operational Test (OT) in accordance with an approved test directive may load and fly live and inert munitions on the same aircraft for test missions only. **(T-2)** The test directive's flight profile must be obtained through a full Safety Review Board process with flight clearance through the applicable Program Office/Seek Eagle office. **(T-2)**

3.1.1.2. Units under 83 FWS/86 FWS Tactical Control (TACON) are authorized to load live and inert in any configuration provided a safety review board has been performed.

3.1.2. Request for waiver of, or deviation to, this policy will include as a minimum: (1), a risk assessment report and proposed controls to mitigate or eliminate hazards to personnel, damage to aircraft and support equipment or inadvertent employment of live ordnance, and (2), a signed copy of the Test Requirement Plan, Test Plan, or Concept Employment Plan. **(T-2)** Approved requests will remain valid only for the event requested and will not exceed 60 days. **(T-2)**

3.1.3. Captive Air Training Munitions (CATM)**.** Safety pins/streamers for arming keys/safe-arm handles on CATMs may be removed for daily training/flying operations provided positive control and accountability is maintained for these items.

3.1.3.1. CATM-9M arming handles will be permanently removed. **(T-1)** These components are removed for foreign or dropped object prevention.

3.1.3.2. Any CATM missile used for exercises, load crew training and inspections should be configured to the maximum extent possible with safety devices and components to mirror the parent tactical munitions. **(T-2)**

3.2. Unit Committed Munitions List (UCML)/Test & Training Munitions List (TTML). The UCML/TTML is a list of Primary Munitions (PM), Support Munitions (SM), Limited-use Munitions (LM), and qualification munitions necessary to meet unit operational/test/training requirements and is published in accordance with this manual. The UCML/TTML is the base document for aircrew and load crew training munitions forecasts, authorizations and operations. As a minimum, UCML/TTMLs will:

3.2.1. Operational units will use UCMLs and Test/Training units will use TTMLs unless they require a UCML, (for example Aerospace Control Alert (ACA) North American Aerospace Defense Command (NORAD) Committed). **(T-2)**

3.2.2. List of PM will not include more than 15 individual munitions combined per MDS assigned. **(T-2) Note**: Munitions with multiple variants/models does not count toward total, (e.g., GBU-31V1, GBU-31V3, GBU-31V5). List of SM and LM will not exceed 10 individual munitions **(T-2)**

3.2.3. Specifies the minimum certified load crews required to meet unit requirements. MAJCOMS may supplement UCML/TTML processing, coordination and appendix requirements. **(T-2) Note**: UCML/TTML not applicable to Aircraft Defensive Systems Loading Program units where no 2W1X1 AFSC is authorized/assigned.

3.2.4. Updated annually to identify all munitions tasked and/or required to support test/training or OPLANs, DOC Statements, and Ready Aircrew Program tasking memorandum. **(T-1)** Additional munitions may be included on the UCML/TTML as SM or LM munitions if required by the unit or designated by the MAJCOM to support test, training, or deployment.

> 3.2.4.1. Units will start their UCML/TTML validation in July, and have a coordinated input to the MAJCOM Munitions or Maintenance Division in August. **(T-2)** MAJCOMs will supply approved UCML/TTML to the units in September. **(T-2)**

> 3.2.4.2. Unit changes to the UCML/TTML will be justified by Wing Weapons and Tactics, coordinated and processed through the WWM, Munitions Squadron/Flight, MXG/CC and OG/CC before sending it to the MAJCOM. **(T-2)**

> 3.2.4.3. Standard Conventional Load lists are not part of the UCML/TTML. They are stand-alone documents.

3.3. Designating UCML/TTML Minimum Certified Load Crews. The minimum number of load crews depicted on the UCML should be based on supporting the initial/lead UTC requirements. Additionally, follow-on UTCs tasked simultaneously with the initial/lead UTC will be considered. The minimum number of load crews depicted on the TTML should be based on supporting training unit syllabus and/or test unit mission requirements.

> 3.3.1. In coordination with the MXG/CC, the WWM will:

> > 3.3.1.1. Determine the minimum number of certified load crews, including Squadron Lead Crews (SLC), depicted on the UCML/TTML. **(T-3)**

> > 3.3.1.2. In nuclear-tasked units, determine the minimum number of load crews required to be certified on applicable nuclear weapons in support of OPLANs. **(T-3)**

> > 3.3.1.3. Other than the Loading Standardization Crew (LSC) and SLC, determine the minimum number of load crews to be certified on SMs or LMs. **(T-3)**

Chapter 4

WEAPONS SECTION

4.1. Weapons Section. The weapons section is responsible for supporting flightline munitions loading/unloading and weapon maintenance operations. The weapons section may consist of two elements: weapons loading and weapons maintenance. Weapons section personnel are trained and utilized in both functions as needed to maximize both mission capability and develop individual functional expertise. The Weapons Section may be comprised of a Weapons Section Chief, Weapons Expediters, Noncommissioned Officer in Charge (NCOIC) for Weapons Loading, Load Crew personnel and a NCOIC for Weapons Maintenance and Weapons Maintenance personnel. When units are deployed where no AFSC 2W100 is assigned, the senior ranking 2W1 is the WWM. MAJCOMs will determine applicable portions of the Weapons Section responsibilities for contract organizations. Contract units are organized according to their respective contract.

4.2. Weapons Section Chief. The Weapons Section Chief is the focal point for all weapons loading and armament systems related matters within the unit. The Weapons Section Chief's primary efforts focus on weapons section compliance, continuity, standardization and readiness. They work closely with the WWM, WS SUPT and Armament Flight Chief to support this effort. The Weapons Section Chief is charged with providing technical and managerial advice to unit leaders in matters of weapons loading and armament systems. They also educate unit leaders on the Weapons activities required to support the generation of safe and reliable combat loaded and/or test/training loaded aircraft. In addition to the applicable Section NCOIC/Chief responsibilities in Chapter 2 of DAFI 21-101, the Weapons Section Chief will:

4.2.1. Assist the WWM in recommending distribution of wing 2W1X1 personnel to satisfy flightline munitions loading/unloading and weapons maintenance operations. **(T-3)**

4.2.2. Review status of weapons section's positions on Unit Personnel Management Roster (UPMR) and advise WWM and unit leadership on personnel concerns. **(T-3)**

4.2.3. Provide the WWM monthly status of assigned authorized/on-hand quantities and serviceability of AME/NIE/WRM, armament testers, support equipment and load crew status by the first of each month, for the previous month. **(T-3)**

   4.2.3.1. Monitor load crew, equipment and tester availability to include PRP status (if applicable).

   4.2.3.2. Advise the Director of Operations/OIC/Supt and WWM regarding factors which affect training, weapons loading or maintenance capabilities, personnel actions impacting manning levels or other key weapons related issues. **(T-3)**

4.2.4. In coordination with the WS SUPT, identify and select the best qualified personnel to be loading standardization and squadron lead crew members. **(T-3)**

4.2.5. Ensure the minimum UCML/TTML number of load crews are certified to perform the mission, and maintain load crew integrity during training and evaluations to the maximum extent possible. **(T-3)**

4.2.6. Ensure personnel complete required prerequisite training before entering initial load crew certification or performing flightline operations (cockpit familiarization, firefighting, AGE). The WWM is the approval authority for exceptions **(T-3)**

4.2.7. Annually review UCML/TTMLs and the unit tasked UTCs (for equipment and personnel) and UMD to identify any shortfalls. **(T-3)**

4.2.8. Maintain a visual aid or automated product depicting the current status of assigned load crews and members. **(T-3)**

4.2.9. Ensure weapons load training aircraft requirements in coordination with the WS SUPT, are developed and included in the weekly and monthly maintenance plans. **(T-3)**

4.2.10. Review and apply the LSEP, and be familiar with local munition loading/maintenance areas. **(T-3)**

4.2.11. Review all AF Form 2419, *Routing and Review of Quality Control Reports*, load crew training, certifications, and qualification documentation. **(T-3)**

4.2.12. Ensure overall quantity of load crew CTKs are equal to the minimum number of required load crews listed on the UCML. **(T-3)** For bomber units and those that support developmental/operational test and evaluation, Remotely Piloted Aircraft (RPA) units, or training operations, coordinate with the WWM in determining the number of required load crew CTKs. **(T-3)**

4.2.13. Ensure a checklist for each UCML/TTML munition is on hand for each assigned load crew CTK. **(T-3) Exception**: Not applicable in units using electronic media devices (such as, eTools); test units are authorized reduced quantities.

4.2.14. Review all TO Recommended Changes (RC) or equivalent prior to submission. Route all weapons loading related requests, (for example, -16, -33 TOs or equivalent to WS and WWM for review). **(T-3)**

4.2.15. Ensure Locally Manufactured Equipment (LME) and Munitions Materiel Handling Equipment (MMHE) meet requirements outlined in Chapter 8 of DAFI 21-101. **(T-3)**

4.2.16. Ensure Tamper Detection Indicators for nuclear applications are controlled in accordance with DAFI 91-101, *Air Force Nuclear Weapons Surety Program*. **(T-1)**

4.2.17. Track assigned AME and NIE. **(T-3)** If installed, track in MIS by aircraft tail number and position. Track uninstalled equipment in either the MIS, program directed, (e.g., Alternate Mission Equipment Tracking System (AMETS)) or another equivalent means approved by the WWM**.**

4.2.18. Ensure positive control/accountability/serviceability for suspension equipment accessories (cables, fittings, adapters). **(T-3)**

4.2.19. Coordinate with WS SUPT to ensure MRPL and recertification capability exists on TDYs where live munitions will be expended and on deployments exceeding 30 days. Exceptions must be approved by the WWM. **(T-3)**

4.2.20. Establish a munitions custody account for dummy test rounds (as applicable, if not tracked by armament flight). **(T-3)**

4.2.21. Ensure prior to loading live and inert munitions that all requirements in **Chapter 7** of this manual have been met and the WWM is aware of any changes that affect the munitions policy requirements. **(T-3)**

4.2.22. Notify squadron leadership and the WWM within 24 hours of any significant issues such as dropped/hung munitions, aircraft armament system or equipment malfunctions and mishaps. **(T-3)** Take appropriate follow up actions and provide updates until corrective actions have been taken. Monitor actions taken by supporting agencies on dispensers, suspension equipment, and/or training munitions, which were involved with system malfunctions. **(T-3)**

4.2.23. Ensure requirements for submitting AFTO Form 375 on all weapons support equipment identified in TO 35-1-24 are accomplished. **(T-3)**

4.2.24. Establish, monitor, and verify supervisory inspections on elements assigned with equipment and CTKs are completed. **(T-3)**

4.2.25. Inspect 25 percent of assigned CTKs, armament test and support equipment for serviceability at least quarterly, and initiates corrective action as required. **(T-3)** Schedules and tracks inspections to ensure 100 percent of CTKs, test, and support equipment will be checked over a one-year timeframe. **(T-3)** Document inspection results and use for follow-up action and reference as necessary. **(T-3)**

4.3. Weapons Expediter. The Weapons Expediter reports to the Weapons Section Chief and is responsible for managing all munitions loading and armament systems maintenance operations to include monitoring the safety of flightline weapons operations. The Weapons Expediter must be, at a minimum, a 2W171, knowledgeable of the assigned MDS maintenance and loading tasks and completed the Weapons Expediter Course provided by WS. **(T-2)** The Weapons Expediter coordinates maintenance priorities with the Pro Super and Flightline Expediters. The Weapons Expediter will:

4.3.1. Remain on the flightline during all munitions loading/unloading, during launch and recovery of aircraft, and to the maximum extent possible, when maintenance operations are being performed. **(T-3)** Ensure only certified weapons loading personnel load and unload munitions in support of aircraft operations **(T-3)**

4.3.2. Supervise and provide technical guidance to individuals during weapons release system fault isolation, troubleshooting, and maintenance actions. **(T-3)**

4.3.3. Maintain copies of the following items in the Weapons Expediter's vehicle (if assigned): flying schedule, emergency action checklists, base grid map with cordon overlay identifying flightline Live Ordnance Loading Area, In-Process Inspection (IPI) listings, Minimum Essential Subsystems List (MESL) or MDS equivalent, QRL (if developed) and/or WUC manual or MDS equivalent. **(T-3)**

4.3.4. Track status and configuration of aircraft, suspension equipment, and weapons. **(T-3)**. Ensure accountability of in use AME/NIE by location and status, whether installed or stored. **(T-3)**

4.3.5. Maintain a separate daily AF Form 2430, *Specialist Dispatch Control Log* or locally produced standardized form with WWM approval, for each shift. **(T-3)** The Weapons Expediter will ensure all required documentation is complete and accurate. **(T-3)** As a minimum, the following fields of the AF Form 2430 will be completed: "AS OF" (date), "JOB CONTROL" (filled out for maintenance actions that have a JCN, such as, 18-month inspections, Pilot Reported Discrepancies), not required for weapons loading tasks, Aircraft "(ACFT)/TRAINER"(MDS), "SERIAL" (tail number/serial number of component), "TIME"

(("Required" = start time, "Dispatched" = time completed, "Completed" = status code, (C/W, C/F, CANX)), "SPECIALIST(S) DISPATCHED" (load/maintenance crew number/name), "DISCREPANCY & REMARKS" (discrepancy/task performed). **(T-3)** Transcribe any actions not complied with to the next shift's AF Form 2430. **(T-3)**

4.3.5.1. Retain completed copies of AF Form 2430 (or equivalent) on file for six months. **(T-3)**

4.3.5.2. Units may maintain one single AF Form 2430 (or equivalent) for weekly scheduled maintenance, in addition to the daily shift AF Form 2430 (or equivalent). **(T-3)** Transcribe any actions not complied with to the next week's scheduled maintenance AF Form 2430 (or equivalent). **(T-3)**

4.3.6. Manage munitions assets expenditures as follows:

4.3.6.1. Fill out an AF Form 2434, or locally produced form, on all aircraft configured with munitions (includes impulse cartridges and chaff/flare). **(T-2)** Record by serial number and location or position all armament related AME, NIE, or support equipment from which munitions items are expended. **(T-2) Note**: Record NIE serial numbers only when munitions are loaded directly on the NIE versus the AME. **Exception**: Nuclear units are not required to fill out AF Form 2434 during nuclear generations.

4.3.6.2. Comply with flightline munitions accountability requirements outlined in DAFMAN 21-201. **(T-2)** The Weapons Expediter will provide copies of final expenditure documents to Plans, Scheduling, and Documentation (PS&D), the munitions flight, and armament flight. **(T-2)**

4.3.7. Coordinate with the Maintenance Operations Center or Munitions Control for the delivery and pick-up of munitions items. **(T-3)**

4.3.8. Inspect at least 25 percent of conventional loaded aircraft to meet scheduled front-lines (and spares) to validate safety/security of aircraft prior to flight; document inspection on AF Form 2430 (or equivalent). **(T-3)** If negative trends are apparent, identify the trend and inspect remaining flyers prior to flight. Inform Weapons Section Chief on the negative trend that is identified during inspection.

4.3.9. Ensure inspection requirements are carried forward/documented for all items that have specific periodic inspections **(T-3)** Inform PS&D when actions affect the aircraft inspection schedule.

4.3.10. Ensure aircraft and equipment forms and MIS documentation is complete, accurate and accomplished. **(T-1)**

4.3.11. Coordinate accomplishment of all scheduled and unscheduled maintenance and inspections with the Pro Super/Flightline Expediter. **(T-3)** Inform the Pro Super/Flightline Expediter of all start and stop times, status changes, delays and extensions.

4.3.12. Ensure all mission specific safing gear is controlled and accounted for to preclude loss and potential Foreign Object Damage (FOD). **(T-2)**

4.3.13. Ensure CATM missile devices are managed in accordance with the munitions policy requirements outlined in **Chapter 3** of this manual (if applicable). **(T-1)**

4.3.14. Track acceleration monitor assemblies by serial number, aircraft tail number and installed position. **(T-3)**

4.4. Weapons Loading Element. The Weapons Loading Element is responsible for munitions loading and unloading during daily aircraft training, operational test and evaluations, and contingency operations. If a Weapons Maintenance Element is not formed, the Weapons Loading Element is responsible to perform all on-equipment armament system maintenance. The Weapons Loading Element consists of an NCOIC and Weapons Load Crews.

4.4.1. Weapons Loading Element NCOIC**.** The Weapons Loading Element NCOIC is responsible to the Weapons Section Chief. If an NCOIC of loading is not designated, the requirements below will be the responsibility of the Weapons Section Chief. The Weapons Loading Element NCOIC will:

4.4.1.1. Advise Weapons Section Chief on load crew status and take action to resolve load crew member concerns and issues related, but not limited to scheduling, training, certification, qualification, and load crew personnel issues. **(T-3)**

4.4.1.2. Employ and enforce the LSEP and use of munitions loading areas. **(T-3)**

4.4.1.3. Review all AF Form 2419 load crew training, certifications, and qualification documentation. **(T-3)**

4.4.1.4. For nuclear tasked units, ensure loading supervisors and load crew members are trained to perform weapon system fault isolations and troubleshooting in accordance with DAFI 91-101. **(T-1)**

4.5. Weapons Load Crew Chief. The Weapons Load Crew Chief is responsible to the Weapons Expediter for munitions loading and armament systems maintenance (if applicable). Weapons Load Crew Chiefs are typically NCOs (SSgt Select or above); however, Senior Airmen may perform conventional munition Weapons Load Crew Chief duties with concurrence of the WWM in writing. **(T-2)** The Weapons Load Crew Chief will:

4.5.1. Supervise the loading and/or unloading of only one aircraft at a time. **(T-3) Exception**: Unless operating within an approved cross-loading program.

4.5.2. Control all actions during the munitions load/unload operations environment and ensure the number of personnel in the area during explosives handling operations are kept to a minimum. **(T-3) Exception**: During simultaneous loading/unloading and refueling/servicing operations (e.g., Integrated Combat Turnarounds) the Area Turn Supervisor is the on-site supervisor.

4.5.2.1. The Weapons Load Crew Chief may authorize other individuals to work on the aircraft provided they are briefed on emergency procedures, perform no maintenance or inspections which may jeopardize safety, hamper munition loading operations, or violate technical data. **(T-3)**

4.5.2.2. Access to the cockpit and/or applying power to the aircraft by other than the load crew during loading operations is prohibited unless coordinated through and approved by the Weapons Load Crew Chief. **(T-3)**

4.5.3. Ensure compliance with DAFI 91-101 when responding to maintenance actions on nuclear loaded aircraft. **(T-1)**

4.6. Weapons Maintenance Element. The Weapons Maintenance Element is responsible for on-equipment weapons maintenance, to include fault isolation and troubleshooting. The Weapons Maintenance Element may be required to perform munition loading/unloading operations as determined by Weapons Section Chief. **Note**: If the Weapons Maintenance Element is not formed, these tasks are performed by loading personnel.

4.6.1. Weapons Maintenance Element NCOIC**.** The Weapons Maintenance Element NCOIC is responsible to the Weapons Section Chief. The Weapons Maintenance Element NCOIC will:

4.6.1.1. Advise Weapons Section Chief on maintenance concerns and take action to resolve issues related, but not limited to Quality Assurance reports/metrics, maintenance training, certification, qualification, and maintenance personnel issues. **(T-3)**

4.6.1.2. Monitor overall aircraft armament systems status in accordance with applicable MDS-specific MESL or equivalent to ensure unit's combat, test and training readiness. **(T-3)**

4.6.1.2.1. Coordinate maintenance repair plan with Weapons Expediter and aircraft production section. **(T-3)**

4.6.1.2.2. Include AFETS and/or contractors as required.

4.6.1.3. Coordinates dash-6 maintenance inspections with PS&D and interface with armament flight for on/off-equipment scheduling inspections. **(T-3)** Attend applicable aircraft maintenance scheduling, production and aircraft armament TCTO meetings. **(T-3)**

4.6.1.4. Perform AME Accountability in F-22, F-35, and RPA units in accordance with **Paragraph 5.4** of this manual. **(T-3)**

4.6.1.5. Manage aircraft armament support equipment to include testers, MMHE, and LME to ensure serviceability and unit mission readiness. Report status to Weapons Section Chief. **(T-3)**

4.6.1.6. Review all aircraft armament maintenance actions, but not limited to AF Form 2430, screen #100/380/810 or equivalent. **(T-3)**

4.6.2. Weapons Maintenance Personnel. Responsible to the Weapons Expediter for armament systems maintenance and munition loading (if applicable). **Note**: Weapons maintenance personnel may be certified as load crew members, at direction of Weapons Section Chief. Weapons maintenance personnel will:

4.6.2.1. Perform aircraft armament systems functional checks, troubleshooting, repair actions, gun boresight and dash-6 inspection requirements. **(T-3)**

4.6.2.2. Install and remove armament related suspension equipment, launchers, adapters, to support configuration requirements for daily and contingency operations. **(T-3)**

4.6.2.3. Install and remove armament AME and NIE to Facilitate Other Maintenance (FOM) or for repair actions. **(T-3)**

4.6.2.4. Maintain equipment historical records (AFTO Form 95, *Significant Historical Data*, or equivalent) for AME, and weapons system NIE, if equipment is not assigned to armament flight. **(T-3)**

4.6.2.5. Perform on-equipment TCTOs and weapons time change items. **(T-3)**

4.7. Non-Standard Weapons Sections. CV-22 and helicopter units may organize into a consolidated weapons section, which will be a composite of both the weapons section and armament flight and perform armament flight responsibilities contained in **chapter 5** of this manual. **(T-3)**. Contract units are organized according to their respective contract. The Weapons Section Chief must also comply with the applicable requirements of the section chief responsibilities listed in Chapter 2 of DAFI 21-101, to include **Paragraph 4.2** Weapons Section and **Paragraph 5.1** Armament flight responsibilities of this manual. **(T-3) Note**: When no WWM or WS SUPT is assigned, the Weapons Section Chief will perform the duties of the WWM and WS SUPT.

4.7.1. Personnel will be formed into maintenance/load crews and will be qualified to perform on/off equipment maintenance and munitions loading. **(T-3)** Personnel may perform rescue/guillotine hoist arm and de-arm procedures**. (T-3)**

4.7.2. Coordinate with WWM to ensure sufficient quantities of qualified WS personnel are included on TDYs where live munitions will be expended and on deployments exceeding 30 days to provide certification and qualification capability. **(T-3)**

4.7.3. When Weapon Expediter manpower authorizations do not exist, the WWM will coordinate with the Squadron or equivalent to select and appoint a 2W171 individual(s) to perform weapons expediter duties within **Paragraph 4.3** of this manual. **(T-3)**

4.7.4. Weapons section will track and issue small arms for armory security, maintenance security and courier operations for assigned and qualified weapons personnel only when required by unit commander authorization. **(T-2)**

4.7.4.1. Weapons Section Chief will ensure personnel are trained to perform security of high risk weapons at home station and deployed locations. **(T-3)**

4.7.4.2. Training will as a minimum include armory, anti-robbery, theft, recovery and resource protection procedures in accordance with AFI 31-101. **(T-3)**

4.7.5. Weapons section does not repair, maintain, or issue aircrew/mobility small arms weapons, (for example, M9 and M4). **(T-2)**

4.7.6. Personnel will not load ammunition on weapons systems where the special mission aviator performs this task, (e.g., CV-22 and Helicopters). **(T-3)**

4.7.7. Personnel will not sign custody of any munitions/ammunition they do not load on the aircraft, (e.g., Helicopters). **(T-3)**

4.7.8. Geographically-Separated weapons sections**.** If a weapons section is geographically separated (determined locally) from the squadron support section, then items listed in **Paragraph 5.5** of this manual (Armament Support Section) must be available to support the geographically separated Weapons Section. **(T-3)**

Chapter 5

ARMAMENT FLIGHT

5.1. Armament Flight. The armament flight, when formed, will be part of either MXS, EMS, or MUNS. Performs off-equipment maintenance for assigned aircraft armament systems, guns, pylons, racks, launchers, adapters, and on-equipment maintenance for assigned MMHE, testers, ammunition loading assemblies/systems. **(T-3)** An AFSC 2S0X1, *Materiel Management,* may be assigned to the flight if mission dictates and respective SQ/CC and MXG/CC concurs. **(T-3)**. The armament flight normally consists of three sections: Armament maintenance section, AME section, and support section.

5.1.1. The WWM, with MXG/CC concurrence, determines when armament systems personnel are required to perform weapons loading certifications. **(T-3)**

5.1.2. The WWM with Armament Flight Chief and Weapons Section Chief concurrence, determine if armament flight personnel will perform certain on-equipment tasks and weapons task qualifications to support exercise/contingency operations. **(T-3)**

5.1.3. When more than one unit is supported, combat armament support teams (CAST) may be formed. If the maintenance section is organized into CASTs, each will be aligned with a specific unit. CASTs provide exclusive support (to the maximum extent possible) to the unit with which they are aligned. If applicable, show CAST alignment on UMDs and establish separate MIS work centers for each. Divide tools and equipment proportionally and jointly use scarce or one-of-a-kind items; do not exceed AS quantities. Equally divide maintenance responsibilities for joint-use equipment between CASTs. As a minimum, CAST Chiefs will be 7-skill level NCOs and are responsible to the maintenance section chief for all maintenance actions performed by their respective team (flight chief may waive CAST chief requirements). **(T-2)** The CAST maintenance concept is not intended to prohibit a unified or consolidated armament flight effort to meet the overall production goals.

5.2. Armament Flight Chief. The Armament Flight Chief is the focal point for Aircraft Armament System off-equipment maintenance, applicable on-equipment maintenance, and primary efforts focus on compliance, continuity, standardization and readiness. Works closely with the WWM, WS SUPT, Weapons Section Chief(s) and coordinates with MAJCOMs to support this effort. The Armament Flight Chief is charged with providing technical and managerial advice to unit leaders regarding armament flight production and mission support. The Armament Flight Chief plays a key role in ensuring the unit has the required AME capability and trained/certified personnel to support the unit's mission to produce safe and reliable combat and/or test/training loaded aircraft. In addition to the applicable Flight Supervision responsibilities outlined in Chapter 2 of DAFI 21-101 the Armament Flight Chief will:

5.2.1. Assist the WWM in recommending distribution of AFSC 2W1X1 personnel to satisfy on-and off-equipment weapons release and gun system maintenance. **(T-3)**

5.2.2. Advise the Director of Operations/MX SUPT and the WWM on armament related issues that affect training, maintenance, equipment capability or manning levels. **(T-3)**

5.2.3. Coordinate with SQ/CC and WWM to develop and monitor minimum essential listing (MEL) for weapons release equipment, ammunition loading systems and gun systems to support unit taskings and take action to resolve shortfalls. **(T-3)** Use DOC Statements,

OPLANs, Aviation Unit Preparation Messages, Syllabus, Ready Aircrew Program tasking memorandum, UCML/TTMLs, unit-tasked UTC requirements to determine quantities. **(T-3)**

5.2.4. Ensure assigned AME, SPRAM, and accessories (cables, fittings, adapters) accountability and control requirements are met in accordance with AFI 21-103, *Equipment Inventory, Status and Utilization Reporting*. **(T-3)**

5.2.5. If applicable, support WRM rack, adapter, pylon, launcher and gun ammunition loading assemblies/systems maintenance requirements in accordance with AFI 25-101, *War Reserve Materiel (WRM)*. **(T-3)**

5.2.6. Provide the WWM monthly status of assigned authorized/on-hand quantities and serviceability of AME/NIE/WRM, armament testers, and support equipment by the first of each month, for the previous month. **(T-3)**

5.2.7. Establish and monitor gunroom security in accordance with DoDM 5100.76_DAFMAN 31-101 *V2 Physical Security of Sensitive Conventional Arms, Ammunition, & Explosives* (AA&E). **(T-2)**

5.2.8. Ensure armament flight procedures for hung ordnance, jammed gun systems and ammunition loading assemblies/systems are established in accordance with **Chapter 2** of this manual and personnel are qualified. **(T-3)**

5.2.9. Establish procedures to ensure items requiring explosive-free certification in accordance with TO 11A-1-60, *General Instructions Inspection of Reusable Munitions Containers and Scrap Material Generated From Items Exposed to, or Containing Explosives,* are properly inspected, marked and certified prior to shipment. **(T-2)**

5.2.10. Inspect 25% of assigned CTKs, armament test and support equipment for serviceability at least quarterly, and initiates corrective action as required. **(T-3)** Schedules and tracks inspections to ensure 100% of CTKs, test, and support equipment will be checked over a one-year timeframe. **(T-3)** Document inspection results and use for follow-up action and reference as necessary. **(T-3)**

5.2.11. If no 2R1X1, *Maintenance Management Production*, personnel are assigned, ensure armament personnel performing scheduling functions are trained in day-to-day scheduling tasks. Coordinate training with the PS&D Section Chief and document on an AF Form 797, *Job Qualification Standard Continuation Sheet,* or equivalent. **(T-3)**

5.2.12. Ensure requirements for submitting AFTO Form 375 on all weapons support equipment identified in TO 35-1-24 are accomplished. **(T-3)**

5.2.13. Establish a munitions account for dummy test rounds IAW DAFMAN 21-201, if required. **(T-3)**

5.3. Armament Maintenance Section. The Armament Maintenance Section performs TCTOs, inspection and maintenance for assigned off-equipment aircraft armament systems, guns, pylons, racks, launchers, adapters, and assigned on-equipment ammunition loading assemblies/systems.

5.3.1. Armament Maintenance Section Chief. If Armament Maintenance Section Chief is not designated, the requirements below will be the responsibility of the Armament Flight Chief. In addition to the applicable Section NCOIC/Chief responsibilities outlined in Chapter 2 of DAFI 21-101, the Armament Maintenance Section Chief will:

5.3.1.1. Advise Armament Flight Chief on maintenance concerns and take action to resolve issues related, but not limited to scheduling, Quality Assurance reports/metrics, maintenance training, certification, qualification, and maintenance personnel issues. **(T-3)**

5.3.1.2. In coordination with PS&D, ensure inspections, TCTOs, time changes, maintenance, and repair actions for aircraft armament systems suspension and release components and AME, including AME items preloaded with munitions for contingencies are scheduled and performed. **(T-3)**

5.3.1.3. Ensure the off-equipment portion of major inspections is performed, and in bomber and special mission aircraft units, assist with the on-equipment portion of major aircraft inspections that pertain to the armament system. **(T-3)**

5.3.1.4. Ensure WRM assets are maintained, if applicable. **(T-3)**

5.3.1.5. Ensure equipment historical records (AFTO Form 95 or equivalent) for AME, aircraft guns, and weapons system NIE are maintained. **(T-3)**

5.3.1.6. Ensure ammunition loading assemblies and systems are maintained and inspected. **(T-3) Note**: The munitions flight maintains the chassis portion

5.3.2. Armament Maintenance Floor Supervisor. The Armament Maintenance Floor Supervisor reports to the Armament Maintenance Section Chief and is responsible for managing all armament systems maintenance operations. The Floor Supervisor must be, as a minimum, a 2W171, knowledgeable of the assigned MDS maintenance tasks. **(T-2)** The Floor Supervisor coordinates maintenance priorities with the Armament Maintenance Section Chief, Armament Flight Chief and production superintendents. The Armament Maintenance Floor Supervisor will:

5.3.2.1. Monitor the safety of armament maintenance operations and remain on shop floors to the maximum extent possible, when maintenance operations are being performed. **(T-3)**

5.3.2.2. Supervise and provide technical guidance to individuals during release system fault isolation, troubleshooting, and maintenance actions as needed. **(T-3)**

5.3.2.3. Control all actions once the jammed gun systems and/or ammunition loading assemblies/systems are transferred to the Armament light and ensure the number of personnel in the area during explosives handling operations are kept to a minimum. **(T-3)**

5.3.2.4. Enforce compliance with facility and housekeeping/contamination control requirements in accordance with Chapter 11 of DAFI 21-101, DAFI 90-821, *Hazard Communication (HAZCOM) Program, installation Environment, Safety, and Occupational Health Management System/Environment Management System (ESOHMS/EMS)* policy/guidance and applicable environmental requirements and guidance. **(T-3)**

5.3.2.5. Ensure access to current copies of the following items: Flying/armament maintenance schedule, emergency action checklists applicable to jammed gun systems, and/or ammunition loading assemblies/systems, IPI listings. **(T-3)**

5.3.2.6. Maintain a separate daily AF Form 2430 or locally produced standardized form with WWM approval, for each shift. **(T-3)** The Floor Supervisor will ensure all required documentation is complete and accurate. **(T-3)** As applicable, the following fields of the AF Form 2430 will be completed: "AS OF" (date), "JOB CONTROL" (filled out for

maintenance actions that have a JCN, such as, 18-month inspections, Pilot Reported Discrepancies), ACFT/TRAINER/EQUIP/MDS" (Equipment Type), "SERIAL" (serial number of component), "TIME" (("Required" = start time, "Dispatched" = time completed, "Completed" = status code, (C/W, C/F, CANX)), "SPECIALIST(S) DISPATCHED" (armament crew number/name), "DISCREPANCY & REMARKS" (discrepancy/task performed). **(T-3)** Transcribe any actions not complied with to the next shift's AF Form 2430.

5.3.2.6.1. Retain completed copies of AF Form 2430 (or equivalent) on file for six months. **(T-3)**

5.3.2.6.2. Units may maintain one single AF Form 2430 (or equivalent) for weekly scheduled maintenance, in addition to the daily shift AF Form 2430 (or equivalent). **(T-3)** Transcribe any actions not complied with to the next week's scheduled maintenance AF Form 2430 (or equivalent). **(T-3)**

5.3.2.7. Ensure aircraft (if applicable) and equipment forms and MIS documentation is complete, accurate and accomplished. **(T-3)**

5.3.3. Armament Maintenance Supervisor. The Armament Maintenance Supervisor is responsible to the Armament Maintenance Floor Supervisor. The Armament Maintenance Supervisor will:

5.3.3.1. Supervise and perform maintenance/repair actions on armament related suspension equipment, ammunition loading assemblies/systems, guns, launchers and adapters, to support configuration requirements and generation capabilities. **(T-3)**

5.3.3.2. Respond to supported organizations e.g., flightline or munitions flight as required to resolve armament equipment issues. **(T-3)**

5.3.3.3. Update MIS for all maintenance and repair actions. **(T-3)**

5.4. Alternate Mission Equipment (AME) Section. The AME Section accounts for, stores and controls assigned AME, SPRAM, accessories (cables, fittings, adapters), and applicable munition assets, (e.g., LAU-131 launchers). If not formed, the responsibilities detailed in this section will be accomplished by the Armament Maintenance Section and/or Armament Support Section.

5.4.1. AME Section Chief. AME Section Chief reports to the Armament Flight Chief. The AME Section Chief must be, as a minimum, a 2W171 and knowledgeable of aircraft armament equipment management. **(T-2)** In addition to the applicable Section NCOIC/Chief responsibilities outlined in Chapter 2 of DAFI 21-101, the AME Section Chief will:

5.4.1.1. Develop procedures in accordance with AFI 21-103 governing accountability and control of AME in coordination with Armament Flight Chief, Weapons Section Chief, and WWM. **(T-3)**

5.4.1.2. Ensure SPRAM accounts are maintained in accordance with AFI 21-103 and AFMAN 23-122, *Materiel Management Procedures*. **(T-2)**

5.4.1.3. Ensure accountability and maintain assigned F-2/utility type trailers designed to transport/store aircraft armament equipment, (e.g., AME and gun systems). **(T-3)**

5.4.1.4. Unpacks and packs assigned AME in storage and delivers it to the maintenance section for inspection. **(T-3)**

5.5. Armament Support Section. The Support Section stores and maintains CTKs/special tools, eTools, test equipment, TOs, Land Mobile Radios (LMR) and manages the supply, bench stock and Hazardous Material (HAZMAT)/ESOH functions for armament flight. support section must standardize procedures for security, control, and accountability of equipment.

5.5.1. Armament Support Section Chief. Armament Support Section Chief reports to the Armament Flight Chief. The Armament Support Section Chief must be, as a minimum, a 2W171 and knowledgeable of aircraft armament, tools and equipment management. **(T-2)** In addition to the applicable Section NCOIC/Chief responsibilities outlined in Chapter 2 of DAFI 21-101, the Armament Support Section Chief will:

5.5.1.1. Maintain and manage tools, CTKs, Test Measurement and Diagnostic Equipment (TMDE) and equipment in accordance with Chapter 8 of DAFI 21-101. **(T-3)**

5.5.1.2. Monitor the status of armament support equipment and testers for serviceability, accountability and status of TCTO modifications. **(T-3)** Support Section will provide monthly support equipment status update to the Armament Flight Chief. **(T-3)**

5.5.1.3. Maintain TOs in accordance with TO 00-5-1, *AF Technical Order System.* **(T-3)**

5.5.1.4. Maintain and manage LMR in accordance with Chapter 11 of DAFI 21-101, if applicable. **(T-3)**

5.5.1.5. Ensure compliance with materiel management support in accordance with Chapter 9 of DAFI 21-101. **(T-3)**

5.5.1.6. Manage facility and housekeeping/contamination control requirements in accordance with Chapter 11 of DAFI 21-101. **(T-3)**

5.5.1.7. Serve as focal point for HAZMAT/ESOHMS/EMS programs in accordance with AFI 90-8XX series and AFI 32-70XX series environmental instructions. **(T-3)**

Chapter 6

WEAPONS STANDARDIZATION

6.1. Weapons Standardization (WS). WS serves as the primary authority and has sole responsibility for training, certification, proficiency evaluations and qualifications required to load munitions on aircraft. Provides weapons loading Subject Matter Expertise (SME) to maintenance supervision at all levels and Wing Inspection Team (WIT) to identify, validate and/or resolve proficiency, compliance and standardization issues impacting mission readiness. WS plans and conducts nuclear and conventional weapons load certification, qualification, training requirements and flightline evaluations to support unit tasking and operational plans. WS records and tracks certifications and qualifications through the Weapons Load Crew Management Tool (WLCMT) and reports through the LSEP. WS is comprised of the Superintendent, Loading Standardization Crew (LSC), Squadron Lead Crew (SLC), and a Weapons Academic Instructor.

6.2. WS Superintendent. The WS SUPT reports and is assigned directly to the WWM. The WS SUPT must be, as a minimum, a 2W191 and should be knowledgeable of the assigned MDS aircraft armament operations. **(T-2)** WS SUPT is the focal point for Weapons Standardization and the LSEP. Sets standards, develops local policies, procedures and interprets all applicable technical data/directives governing the LSEP. WS SUPT produces certified load crews to generate safe and reliable combat and/or test/training loaded aircraft. Works closely with the WWM, Armament Flight Chief, Weapons Section Chief(s) and coordinates with MAJCOMs to support this effort. WS SUPT serves as gatekeeper for maintenance leadership to coordinate internal and external resource utilization requests impacting LSEP scheduling and operations. **Exception**: ARC and Air Force Special Operations Command (AFSOC) WS SUPT responsibilities may be performed by the LSC Team Chief. In addition to applicable Section NCOIC/Chief responsibilities outlined in Chapter 2 of DAFI 21-101 the WS SUPT will:

6.2.1. Ensure required quantities of load crew training munitions are forecasted for in accordance with DAFMAN 21-201. **(T-3)** Review and validate all munitions forecasts submitted by WS prior to submission to MAJCOM. **(T-3)**

6.2.2. Ensure Weapons Load Training (WLT) munitions are managed in accordance with this chapter. **(T-3)**

6.2.3. Assist WWM as weapons inspector on the Wing Inspection Team (WIT). Provide input during development of local exercises involving weapons loading. **(T-3)**

6.2.4. Select personnel to perform special certification tasks in accordance with DAFI 21-101, Chapter 11 and Table 11.1. Forward names to WWM for approval and addition to the Special Certification Roster (SCR). **(T-3)**

6.2.5. Provide the WWM monthly status of assigned authorized/on-hand quantities and serviceability of AME/NIE/WRM, armament testers, support equipment and load crew status by the first of each month, for the previous month. **(T-3)**

6.2.6. Inspects 25 percent of assigned CTKs, armament test and support equipment and for serviceability, at least quarterly, and initiates corrective action as required. **(T-3)** Schedules and tracks inspections to ensure 100 percent of CTKs, test, and support equipment will be checked over a one-year timeframe. **(T-3)** Documents inspection results and uses for follow-up action and reference as necessary. **(T-3)**

6.3. Loading Standardization Crew (LSC). LSC consists of the LSC Team Chief and LSC Members and reports to the WS SUPT. The LSC Team Chief must be, as a minimum, a TSgt 2W171. **(T-2)** The LSC administers the LSEP and should be highly knowledgeable of the assigned MDS aircraft loading operations. Works closely with WWM, WS SUPT and weapons section(s). Provides technical expertise to maintenance leadership and interprets all loading technical data and procedures governing the LSEP. The LSC evaluates the SLC(s) in performance of duties to ensure standardization and integrity of the LSEP. The LSC will:

6.3.1. Conduct, monitor and validate training/evaluations within the maintenance complex to ensure load crews maintain a high degree of proficiency to generate safe and reliable combat and/or test/training loaded aircraft. **(T-3)**

6.3.2. Review and monitor certification, qualification and recurring training documents for accuracy. **(T-3)**

6.3.3. Ensure all individuals/load crews are scheduled for and complete required proficiency and academic training. **(T-3)** Coordinate with weapons section(s) to prevent overdue certifications and qualifications. Take decertification and/or disqualification action if requirements are not met. **(T-3)**

6.3.4. Perform semi-annual evaluations on all certified load crews in accordance with **Chapter 7** of this manual. **(T-1)**

6.3.5. Review and coordinate on all weapons loading related TO Recommended Changes (RC) or equivalent in accordance with TO 00-5-1. **(T-3)**

6.3.6. Monitor unit(s) flying schedule and perform spot inspections and evaluations of flightline munitions/explosive handling, loading and postloading operations in accordance with **Chapter 7** of this manual. **(T-3)**

6.3.7. Augment as weapons inspector on the WIT. **(T-3)** Assist WS SUPT with development of local exercises involving weapons loading. **(T-3)**

6.4. Weapons Academic Instructor. Weapons Academics Instructor will be assigned and must be, as a minimum, a 2W171 and knowledgeable of the assigned MDS aircraft armament operations and UCML/TTML assigned munitions. **Note:** When Weapons Academics Instructor manpower authorization does not exist, WS member will perform these duties. **(T-2)** The weapons academics instructor is not considered a maintenance instructor**.** The Weapons Academics Instructor will:

6.4.1. Manage the Weapons Academics Training Program and associated material, and document initial and recurring academics training. **(T-2)**

6.4.2. Review the Weapons Academics Training Program annually in accordance with AFI 36-2650, *Maintenance Training*. **(T-2)**

6.5. Squadron Lead Crew (SLC). The SLC(s) are assigned to the WS and assist the LSC in training, certifying and evaluating unit load crews in safe and reliable munitions loading procedures. The SLC executes the LSEP and should be highly knowledgeable of the assigned MDS aircraft loading and theory of operations. One SLC is normally formed for each AMU/FGS, but additional SLCs can be formed as needed. The SLC will:

6.5.1. Initiate and maintain load crew certification and qualification documents. **(T-3)**

6.5.2. Perform spot inspections and evaluations of flightline munitions/explosive handling, loading and postloading operations in accordance with **Chapter 7** of this manual. **(T-3)**

6.5.3. Return to an AMU/FGS for contingencies, deployments, generations and exercises, as determined by WWM. **(T-3)** Perform WS functions to the maximum extent possible when not involved in aircraft generation. **(T-3)**

6.6. Tool and Equipment Management. If assigned, WS stores and maintains CTKs/special tools, eTools, test equipment, TOs, LMRs and manages HAZMAT/ESOH functions in accordance with Chapter 8 and Chapter 11 of DAFI 21-101. WS SUPT must standardize procedures for security, control, and accountability of equipment. **(T-3)**

6.7. Training Munitions. WS will manage non-expendable training munitions, components, and accessories and ensure load crew training munitions are maintained to the same standard as the parent munitions to the maximum extent possible and assets are serviceable to support LSEP. **(T-2)** The UCML/TTML will be the source document for WLT munitions requirements and authorizations and the WS must request and ensure correct munition variants are available to support unit taskings.

6.7.1. Authorized quantities of training munitions can be referenced in the *Air Force Standard for Non-Expendable Air-Munitions Training* located on the Air Force Conventional Munitions SharePoint® site at **https://usaf.dps.mil/teams/AMMO2W10027/Tools%20%20Guides/Forms/AllItems.aspx**. These numbers reflect the maximum munitions required exclusively for weapons load crew certification and recurring training.

6.7.2. WS will forecast required quantities of load crew training munitions assigned to weapons load training (W1) accounts in accordance with DAFMAN 21-201. **(T-2)**

6.7.3. If a situation exists where the WLT facilities are physically separated and the WWM determines it negatively impacts load crew training to move munitions from one to the other, then each facility will be authorized the minimum number of tasked training munitions.

6.7.4. WS will develop a formal agreement with the munitions flight/Squadron addressing periodic inspection, maintenance, and refurbishment requirements in accordance with DAFMAN 21-201. **(T-2)**

6.7.5. WS will inspect load crew training munitions, containers and components on a 90-day interval. **(T-3)** Those having discrepancies, which affect safety, reliability, or detract from load crew training are not used for WLT, and they will be turned in to the munition's flight/squadron for maintenance or replacement. **(T-3)**

6.8. Training Facilities/Aircraft. Conduct practical and academic training in a facility dedicated for LSEP that is sufficient size and adequate to accommodate required aircraft, training munitions, and associated support equipment.

6.8.1. Develop and coordinate weekly and monthly load training aircraft requirements with PS&D, as applicable. **(T-3)**

6.8.2. Ensure aircraft have a fully configured and operational (electrical and mechanical) weapons system for load training purposes. **(T-3)**

6.8.3. Ensure if a permanent load trainer (Armament Systems Trainer and/or Ground Instructional Training Aircraft) is assigned, it also will have a fully configured and operational weapons system. **(T-2)** WS will develop a schedule for periodic maintenance to weapons system components. **(T-3)**

Chapter 7

LOADING STANDARDIZATION AND EVALUATION PROGRAM

7.1. Loading Standardization and Evaluation Program (LSEP). The LSEP ensures all individuals and weapons load crew members obtain and maintain the certification/qualification and proficiency needed to effectively meet safe, secure, and efficient munitions loading/unloading operations supporting their unit's mission. The objective of the LSEP is to develop and maintain a high state of mission readiness for immediate and effective generation/employment of munitions loaded aircraft. LSEP provides the basis for accomplishing peacetime missions while maintaining critical wartime capability. LSEP is managed and governed by Weapons Standardization under the authority of the MXG/CC or equivalent. The LSEP is comprised of academic training, practical training, weapons loading certification, semi-annual evaluations, proficiency evaluations, flightline evaluations and weapons task qualification.

7.2. Academic Training. Weapons Academics Instructor administers academic training to each individual/load crew member certified, qualified and/or supervising aircraft armament systems maintenance/operations. Academic training will be conducted in an office space or classroom with approved course control documents in accordance with AFI 36-2650. **(T-3)**

7.2.1. Weapons Academics Training**.** All 2W1X1s (contractor or civilian equivalent) assigned to a wing regardless of duty position, and non-2W1X1 personnel who are certified and/or weapons task qualified will complete weapons academic training. **(T-1)** Weapons academic training may fulfill the requirements for explosive safety and nuclear surety training if requirements of DAFI 91-101 and DESR6055.09_AFMAN 91-201 are met.

7.2.1.1. Complete initial weapons academic training before the start of any practical training, or armament systems maintenance/operation. Complete recurring weapons academic training not exceeding a 15-month interval. **(T-1)**

7.2.1.2. Complete a test with a minimum score of 80 percent. **(T-2)** Individuals will require retraining and retesting if they score below 80 percent with a different test. **(T-2)**

7.2.2. Weapons Academics Course Overview and Course Control Documents**.** Coordinate training requirements, course control documents and nuclear surety training lesson plans annually through Wing Safety and Maintenance Training (MT). **(T-2)** The WWM is the final approval authority for course documents. Initial and recurring course outlines may be combined. Weapons academics training course control documents are tailored to unit and contingency needs and, as a minimum, will include the following items:

7.2.2.1. Local publications that prescribe weapons related operating procedures or directives. **(T-2)**

7.2.2.2. Safety (occupational and explosive) and security. **(T-2)**

7.2.2.3. Aircraft, munitions, AGE, SE, TMDE, and munitions trailer familiarization. **(T-2)**

7.2.2.4. Testers, handling equipment and special tools. **(T-2)**

7.2.2.5. Airfield operations areas involving munitions, (e.g., live ordnance loading area, revetments/protective aircraft shelters, End of Runway locations, Hung ordnance locations and procedures). **(T-2)**

7.2.2.6. Weapons storage and security system vaults, if applicable. **(T-2)**

7.2.2.7. Task Assignment List (TAL) and applicable -16/-33 or equivalent TOs. **(T-3)**

7.2.2.8. Explain Master Nuclear Certification List, DULL SWORD definition and reporting procedures in accordance with AFMAN 91-221, *Weapons Safety Investigations and Reports*, and other related directives (applies to all units with nuclear certified equipment regardless of mission). **(T-2)**

7.2.2.9. Explain nuclear weapons system's fault isolation, troubleshooting procedures, and Weapons System Safety Rules, if applicable. **(T-2)**

7.2.2.10. Explain procedures for operations involving nuclear weapons, to include safety wiring and sealing, Tamper Detection Indicators, two-person concept, no-lone zone, PRP, and AF Form 504, Weapons Custody Transfer Document, custody transfer procedures, if applicable. **(T-2)**

7.2.2.11. Explain accident, incident and deficiency reporting. Include in this training: DULL SWORD, BENT SPEAR, BROKEN ARROW, NUCFLASH, EMPTY QUIVER, Weapons Custody and Control Procedures, and Command Disablement Systems, if applicable. **(T-2)**

7.2.3. Weapons Expediter Training. Weapons Expediter training is conducted to ready individuals for managing aircraft flightline loading, unloading and armament systems maintenance while ensuring safety, compliance and accurate documentation. The Weapons Academic Instructor will conduct this training. Documented completion of this training is required prior to performing Weapons Expediter duties. Weapons Expediter training will address the following subject areas:

7.2.3.1. Basic Weapons Expediter duties within this manual. **(T-2)**

7.2.3.2. AF Forms 2430 and AF Form 2434 documentation. **(T-2)**

7.2.3.3. Flightline munitions accountability. **(T-2)**

7.2.3.4. Emergency procedures (use of emergency action checklist, base grid map with cordon overlay as a minimum). **(T-2)**

7.2.3.5. NET Explosive Weight/Combat Aircraft Parking Area. **(T-2)**

7.2.3.6. Review and monitor JSTs (screen #100/122/469 or equivalent as a minimum). **(T-2)**

7.2.3.7. Aircraft MESL or equivalent. **(T-2)**

7.2.3.8. Maintenance on conventional and nuclear explosive loaded aircraft. **(T-2)**

7.2.3.9. MNCL management and Dull Sword reporting, if required. **(T-2)**

7.2.3.10. Nuclear policies pertaining to flightline activity, if required. **(T-2)**

7.3. Practical Training. Practical training starts when academic training is complete. Practical training is the initial hands-on procedural training given to each individual/load crew member on

required aircraft and munitions. The LSC or SLCs administer practical training. They ensure practical training duplicates operational conditions to the maximum extent possible and stress requirements such as loading/unloading with various types of munitions trailers and stands (with applicable accessories), two-person concept, safety wiring and sealing/roto sealing, tool accountability procedures, controlled access and weapon custody receipt and transfer procedures, as required.

7.4. Task Assignment List. A TAL is a functional grouping of standardized procedural steps from applicable -16/-33 series or equivalent TOs, by crew position. TALS are only used to facilitate initial certification/qualification training of each crew member except for tasks with published job-oriented procedures.

7.4.1. Ensures TALs will include single, cross-loading and integrated munitions loading procedures (including gun and chaff/flare loading) as applicable. **(T-3)** Develop separate TALs for weapons qualification tasks performed by non-2W1X1 personnel. **(T-3)**

7.4.2. Units may develop TALs for aircraft armament electrical functional checks. WS will review TALs annually. **(T-3)**

7.5. Weapons Load Crew Composition. Minimum responsibilities of each load crew position:

7.5.1. Two-member load crews (CV-22, MC-130, and HH-60).

7.5.1.1. Crew member number one will be the weapons load crew chief and is in charge of the loading operation. **(T-1)**

7.5.1.2. Crew member number two will assist crew member number one in performing the aircraft preparation and loading munitions. **(T-1)**

7.5.2. Three-member load crews (AC-130, A-10, F-15, F-16, F-22, F-35, and MQ-9).

7.5.2.1. Crew member number one will be the weapons load crew chief and is in charge of the loading operation. **(T-1)**

7.5.2.2. Crew member number two will perform aircraft preparation, load munitions, and assist as required. **(T-1)**

7.5.2.3. Crew member number three will perform munitions preparation, operate the bomb lift truck, and assist as required. **(T-1)**

7.5.3. Four-member load crews (B-1, B-2, and B-52).

7.5.3.1. Crew member number one will be the weapons load crew chief and is in charge of the loading operation. **(T-1)**

7.5.3.2. Crew member number two will perform the aircraft preparation and assist, as required. **(T-1)**

7.5.3.3. Crew member number three will perform munitions preparation and assist, as required. **(T-1)**

7.5.3.4. Crew member number four will operate the bomb lift truck and assist, as required. **(T-1)**

7.6. Weapons Loading Certification and Weapons Task Qualification. Individual/load crew certification and qualification is the foundation of the LSEP. Therefore, only individuals with

2W1X1 AFSC (contractor or civilian equivalent) are certified/qualified to load/unload munitions items on aircraft unless authorized in accordance with provisions in this chapter. **(T-2)** A listing of certified/qualification munitions can be referenced in the *Air Force Certified/Qualification Munitions and Proficiency Time Standards* located on the Air Force Aircraft Armament Portal SharePoint®   site   at: **https://usaf.dps.mil/sites/12231/Air%20Force%20CertifiedQualification%20Munitions%20and%20Pro**.

7.6.1. Certification/Qualification Basic Fundamental Overview.

7.6.1.1. Weapons Certification**.** The independent verification of munitions loading proficiency and quality of performance that satisfies the elevated safety and reliability requirements of arming aircraft to ensure mission effectiveness.

7.6.1.2. Proficiency Loading. The act of validating/sustaining weapons certification, achieved by performing MRPL. Repetitive proficiency loading reinforces the high degree of technical competence to increase proficiency level to reliably perform within established standards.

7.6.1.3. Weapons Task Qualification (WTQ). Munitions-related task or operation that does not require certification to include certain inert/training munitions, (e.g., countermeasures, CATM-9 missiles or immediately prior to launch).

Figure 7.1. Certification/Qualification Basic Fundamental Overview.
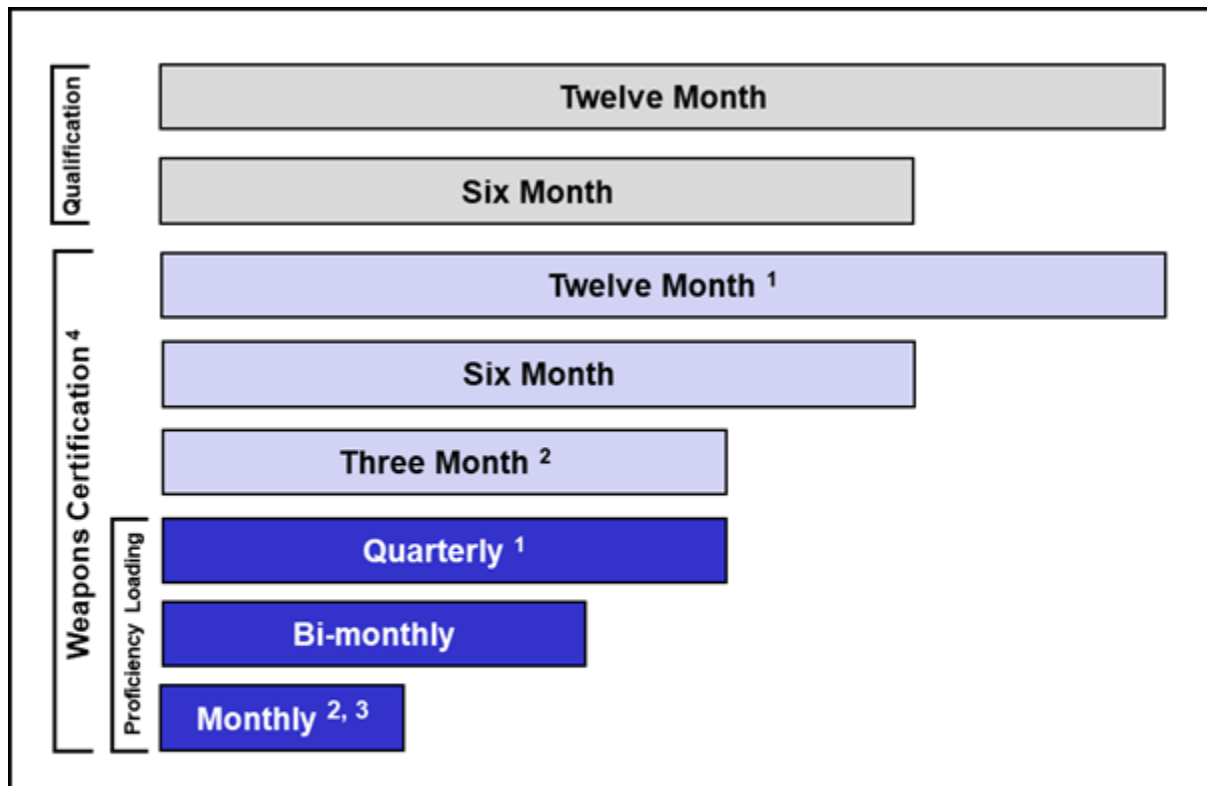
¹ Only Traditional Reservist / Drills Status Guard members

² Proficiency Review

³ Nuclear Primary Munitions

⁴ Weapons certification is required for each primary munition type and configurations

7.7. Certifying Officials.

7.7.1. The WWM is the senior certifying official/evaluator, and will designate Weapons Standardization certifying officials and weapons academics instructor in writing. **(T-2)**

7.7.2. Minimum number of certifying officials required to evaluate weapons load crews:

7.7.2.1. One certifying official is required for two-member load crews. **(T-1)**

7.7.2.2. Two certifying officials are required for three and four-member load crews. **(T-1)**

7.7.3. In TFI-associated units, the WWM will ensure ARC/RegAF LSC (minimum of two certifying officials) are available to cover weekend loading evaluations. **(T-2)**. This arrangement must be in writing with certifiers identified by name/grade and reviewed on an annual basis. **(T-2)**

7.7.4. Evaluator Proficiency Evaluation (EPE). WS SUPT will ensure EPEs are performed on each LSC/SLC member at least semi-annually to validate standardization of the LSEP. **(T-2)**. An overdue EPE does not invalidate a certifier from evaluator duties but will be documented against scheduling effectiveness. WWMs and WS SUPT do not require EPEs.

7.7.4.1. Document results on the AF Form 2419 and maintain within the WLCMT. **(T-3)**

7.7.4.2. WWM and/or WS SUPT will perform EPEs on LSC members during load crew evaluations. **(T-1)**

7.7.4.3. LSC members will perform EPEs on SLC members during load crew evaluations. **(T-1)**

7.8. Weapons Loading Certification and Weapons Task Qualification General Requirements:

7.8.1. Ensure load crews demonstrate proficiency on each type of aircraft rack and station prior to certification/qualification on that munition. **(T-2) Note**: Units may certify/qualify by munition loading methods, (e.g., AGM-158 EXT, AGM-158 INT, AGM-65 LAU-88, AGM-65 LAU-117).

7.8.1.1. For conventional munitions, aircraft parent station and multiple carriage loading are required. **(T-2)**

7.8.1.2. For nuclear weapons, only the aircraft stations that are maintained in nuclear certified status are loaded. **(T-2)**

7.8.1.3. Ensure all applicable munitions trailers, stands, and accessories are utilized during initial certification and at least annually during proficiency/qualification weapons load training. **(T-2)**

7.8.2. Ensure load crews are familiar with fuze inspection, installation and wiring in accordance with MDS-33 series or equivalent TO procedures or TO 11A-1-63, *Munitions Assembly Procedures—Inspection and Assembly of Conventional Munitions*. Conduct this training during initial certification. **(T-2)**

7.8.3. If a specific munition training asset does not exist (e.g., CBU-105), any similar munition may be loaded in its place. Conduct difference training by loading the munition type only once to satisfy all similar munition variants. Document difference training during initial certification and recurring practical training in the general notes/evaluation summary of AF Form 2419. **(T-2)**

7.8.4. If load crew personnel are certified on a munition, they are considered qualified on its inert version, (e.g., BDU-50/TGM-65/CATM-120).

7.8.4.1. Weapons Load Crew Chiefs may perform in any crew member position when loading inert/training munitions if certified on the parent munition.

7.8.4.2. Weapons Load Crew Members can only perform in those positions for which they are certified or qualified unless exempted in accordance with provisions in this chapter. **(T-2)**

7.9. Weapons Loading Certification Specific Requirements. Consists of initial certification, semi-annual and proficiency evaluations. Load crew integrity must be used to the maximum extent possible. Certification requirements are as follows:

7.9.1. LSC, SLCs and load crews will not be certified on more than the PM, SM and LM total combined individual munitions in accordance with **Paragraph 3.2**. **(T-2) Exception:** LSC may be certified on more than 10 individual SM and LM when authorized by the WWM.

7.9.2. LSC, SLCs and load crews will be certified by position. **(T-1)**

7.9.3. LSC, SLCs and load crews will be certified on all PMs. **(T-1) Exception**: Nuclear-tasked units follow **Paragraph 3.3.1.2** of this manual for nuclear PM requirements **(T-1)**

7.9.4. LSC and SLCs will be certified on all SMs and LMs to provide the cadre for future certification of unit load crews. **(T-2)**

7.9.5. Personnel must be certified before loading live conventional munitions, unless loading under the direct supervision of a minimum of two certifying officials with coordination of WWM and approval of the MXG/CC. **(T-1)**

7.9.6. Personnel must be certified before loading war reserve nuclear weapons. **(T-0)**

7.9.7. Certified load crews may be evaluated by using war reserve weapons if the weapons are scheduled for loading or movement. **(T-1)**

7.9.8. WS will develop an annual munitions schedule to ensure rotation of SAE and MRPLs are rotated in accordance with provision in this chapter. **(T-2)**

7.9.8.1. Units will alternate loading operations on different AME/NIE configurations for same munitions. **(T-2)**

7.9.8.2. Units that load/unload GBU-39/53 on the BRU-61 and do not utilize the BRU-61 loading adapter will train asymmetrical or unbalanced center of gravity loadouts, (for example, BRU-61 with 1-3 GBU-39/53s loaded). **(T-1)**

7.9.9. Personnel certified to load nuclear weapons on aircraft, will perform weapons transfer and tie-down procedures to and from trailers, Weapons Storage and Security System vaults, and support stands for which load standardization training has been established and conducted in accordance with this manual. **(T-2)** These actions are not required as separate certification items.

7.9.10. Certified Weapons Load Crew Chiefs may perform SAEs/MRPLs in any position provided they load under the supervision of LSC or SLC using inert conventional training munitions only. This requirement applies at home station only. No SAE/MRPL credit is given to those individuals during evaluations unless loading in the position for which they are certified.

7.9.11. Dual Position and Multiple-MDS Certification.

7.9.11.1. Dual position certification is authorized for LSC and SLCs only. **(T-2)**

7.9.11.1.1. LSC and SLCs will comply with MRPL requirements in both positions for which they are certified; they will not alternate between the two. **(T-2)**

7.9.11.1.2. LSC and SLCs will not be certified on more than 10 individual UCML/TTML primary munitions. **(T-2)**

7.9.11.1.3. LSC and SLCs will only dual certify on the munitions required to meet mission requirements. **(T-2)**

7.9.11.2. Multiple-MDS certification is authorized for LSC, F-15C/D/E SLCs, Test Wing personnel only. **(T-2)**

7.9.11.2.1. Load crews will not be certified on more than 10 individual UCML/TTML primary munitions. **(T-1) Exception**: Test Wing personnel may be certified on more

than 10 individual TTML primary, support and limited munitions when authorized by the WWM.

7.9.11.2.2. Load crews will comply with MRPL and SAE requirements for all aircraft for which they are certified; they will not alternate between the aircraft. **(T-1)**

7.9.11.2.3. Load crews will only certify on the munitions required to meet multi-MDS mission requirements. **(T-1)**

7.9.12. Non-2W1X1 Certification**.** When non-2W1X1 AFSC weapons certification is approved by the WG/CC or delegated approval authority, it will follow policy and procedures in accordance with provisions in this chapter. **(T-2)** In addition, the following minimum conditions will be met (if implemented):

7.9.12.1. Ensure non-2W1X1 AFSC possess 5-skill level in their primary AFSC. **(T-2)**

7.9.12.2. Ensure non-2W1X1 AFSC are only certified in the Weapons Load Crew Member position. **(T-2)**

7.9.12.3. WG/CC will identify and authorize each non-2W1X1 career field subdivision, (e.g., 2A3). **Note**: Consider certifying aircraft maintenance/munitions AFSC prior to certifying any other AFSC. **(T-2)**

7.9.12.4. WG/CC will approve a list of authorized tasked munitions. **Note**: Ensure non-2W1X1 AFSC certification does not impede UCML/TTML minimum certified load crews required to meet unit requirements**. (T-2)**
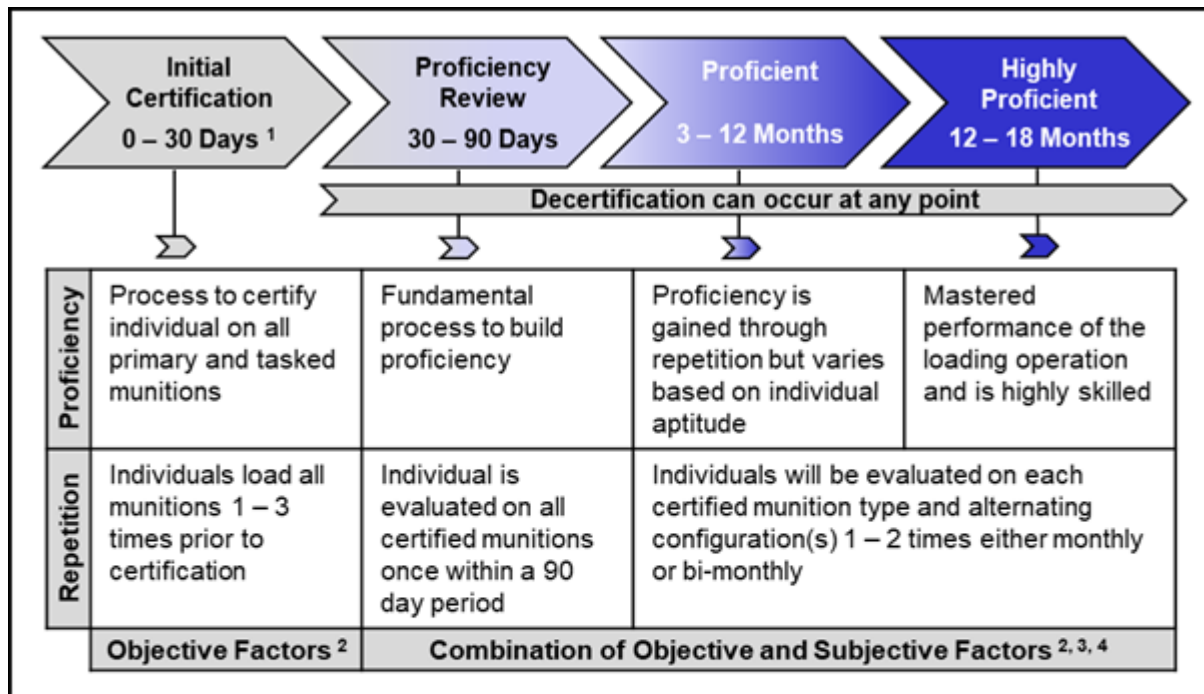
7.10. Semi-Annual Evaluations (SAE). SAE ensures the integrity, quality and standardization of the LSEP. The SAE is an evaluation and not considered a training event. SLC member(s) may assist during a SAE; however, at least one member of the LSC must be present. **(T-2)**. **Note**: SAEs are not required for LSC and SLCs.

7.10.1. SAE will be conducted on at least one of the unit's primary munitions during initial certification. **(T-1)** After initially certifying, evaluate each load crew once semi-annually on at least one of the unit primary munitions. All unit primary munitions will be used on a rotating basis. **(T-3)**

7.10.2. There is no need to document both SAE and MRPL for an integrated load, (e.g., AIM-9 MRPL, GBU-12 SAE).

7.11. Proficiency Evaluations. Proficiency evaluations measure the level of expertise and overall performance of certified weapons load crews within established time standards and provide the repetitions to build proficiency. Proficiency loading is an evaluation and not considered a training event.

Figure 7.2. Weapons Loading Proficiency Model.

	Initial Certification 0 – 30 Days [1]	Proficiency Review 30 – 90 Days	Proficient 3 – 12 Months	Highly Proficient 12 – 18 Months
	Decertification can occur at any point			
Proficiency	Process to certify individual on all primary and tasked munitions	Fundamental process to build proficiency	Proficiency is gained through repetition but varies based on individual aptitude	Mastered performance of the loading operation and is highly skilled
Repetition	Individuals load all munitions 1 – 3 times prior to certification	Individual is evaluated on all certified munitions once within a 90 day period	Individuals will be evaluated on each certified munition type and alternating configuration(s) 1 – 2 times either monthly or bi-monthly	
	Objective Factors [2]	Combination of Objective and Subjective Factors [2, 3, 4]		

[1] Bomber MDS initial certification may require 45 – 60 days, depending on mission

[2] Objective factors is established pass/fail criteria (go/no-go), e.g., safety, reliability, time standard or exceeding more than three technical order errors

[3] Subjective factors is lack of technical proficiency or system knowledge based on the discretion of the certifying official's technical expertise

[4] Wing Weapons Manager incoordination with Weapons Standardization determine if specific munition(s) proficiency should be increased based on taskings and/or metrics

7.11.1. Proficiency Review Period**.** Immediately following initial certification, LSC, SLCs and load crews will load one-third of all munitions monthly for a minimum of three months. **(T-1)** Upon completion, the LSC or SLC will conduct a review of overall load crew proficiency and recommend to the WS SUPT if the load crew has the proficiency required for placement on a normal bi-monthly evaluation cycle. **(T-2)** If WS SUPT and Weapons Loading NCOIC concur, LSC will update the load crew evaluation cycle. (NA for Traditional Reservist/Drill Status Guard members). **(T-1)**

7.11.2. Minimum Required Proficiency Load (MRPL). All certified load crews will perform proficiency loads evaluated by the LSC or a SLC **(T-1) Note**: WWM and/or WS SUPT will evaluate LSC. **(T-1)**

7.11.2.1. Each munition an individual is certified to load, regardless if it is a primary, support or limited use munition, will be loaded at least once within a six-month period (twelve-month period for Traditional Reservist/Drill Status Guard members). **(T-1)**

7.11.2.2. One third of the required munitions will be loaded bi-monthly (one quarter of required munitions will be loaded quarterly for Traditional Reservist/Drill Status Guard members) to demonstrate crew proficiency. **(T-1)**

7.11.2.3. Load crews in ACA (NORAD committed)/air superiority units (e.g., F-15C and F-16 Aggressor) will perform proficiency loads bi-monthly using all committed primary munitions. **(T-2)**

7.11.2.4. Nuclear-tasked units. LSC, SLC, and load crews will load at least one type of nuclear PM monthly. **(T-1)**

7.11.2.5. MRPL credit may be given during any certified loading operations on the flightline provided complete MRPL requirements are performed and evaluated by WS personnel.

7.12. Flightline Evaluations. Assess unit's LSEP discipline while generating safe and reliable combat and/or test/training loaded aircraft. WS will perform spot inspections and evaluate flightline munitions/explosive handling, loading and postloading operations. **(T-3)** WS should provide MRPL/qualification credit to the maximum extent possible. WS SUPT in coordination with weapons section(s) and WWM will determine minimum evaluation frequency. **(T-3)**

7.13. Weapons Task Qualification (WTQ) Specific Requirements. Individuals are required to be current on weapons academics prior to practical qualification training for these tasks **(T-2)** WTQ training will be documented in the WLCMT as a qualification. Recurring WTQ should be conducted during normal flightline operations to the maximum extent possible. Qualification tasks are to be evaluated every 12 months. **(T-2)**

7.13.1. Checklist Qualification**.** Indicates that the person with the checklist is trained, knowledgeable and qualified to be in-charge of the loading operation or task.

7.13.1.1. Members must possess a minimum 5-skill level to be checklist qualified. **(T-2)**

7.13.1.2. Members will only perform tasks listed in **Paragraph 7.16.1** and **Paragraph 7.16.2** of this chapter. **(T-2)**

7.13.2. Two or More Qualified Personnel in AFSC 2W1X1 (Contractor or Civilian Equivalent) Shall Load and unload BDU-33s.

7.13.3. Two or More Qualified Personnel in any Aircraft Maintenance/Munitions AFSC**.** May be required to perform the following tasks. Members must be qualified in all aspects of task to be performed. **(T-1)**

7.13.3.1. Install and remove impulse cartridges. **(T-3)**

7.13.3.2. Load and unload chaff and flare magazines and other defensive countermeasures. **(T-3)**

7.13.3.3. Perform portions of the conventional loading checklist pertaining to delayed-flight or alert, and Immediately Prior to Launch (IPL)/Safing procedures. **(T-3) Note**: Removal of dome/Target Designator cover(s) is not considered IPL and does not require WTQ.

7.13.3.4. Perform munitions/missile isolation procedures to facilitate other maintenance on conventional loaded aircraft only. **(T-3)**

7.13.3.5. Install and remove Captive Air Training Munitions/Dummy Air Training -9 missiles (must have three personnel minimum and one person must be checklist qualified). **(T-3)**

7.13.4. Load crews will annually perform an evaluated load while wearing the ground crew Chemical Warfare Defense Equipment (CWDE) using 33-1-2/33-2-1 or equivalent procedures as determined by the WWM to meet unit mission requirements and taskings. **(T-3)** Credit may be given during exercises provided operations are evaluated by WS personnel. **(T-3)**

7.13.5. Supervisory Postload Program. Intended to qualify non-certified supervisors (weapons expediters, shift supervisors, section NCOICs) with a minimum 7-skill level to perform postload inspections of explosive loaded aircraft. **(T-2)**

> 7.13.5.1. Weapons Standardization will establish a program to ensure standardization between units as determined by the WWM. **(T-3)**

> 7.13.5.2. Document training in either the WLCMT or MIS as a qualification, not on Special Certification Roster (SCR). **(T-3)**

7.13.6. Cross-Loading Program. Cross-loading operations is the movement of a munition from one aircraft to another and only applicable to conventional loading operations. Ensure fully qualified personnel receive recurring evaluations every 12-months. **(T-2)** MAJCOMs will determine the need for cross-loading program and establish minimum procedures. **(T-2)**

7.13.7. Integrated Combat Turnaround (ICT). ICT is a simultaneous aircraft fueling, servicing, and loading operation as approved by the Systems Safety Engineer Analysis. A "Hot" ICT is performed with at least one engine running; a "Cold" ICT is performed when all aircraft engines are shut down. ICT is performed by trained and qualified personnel using approved MDS-ICT checklists/tech data procedures under the direct supervision of an Aircraft Turnaround Supervisor. With the exception of Hot Pit refueling, it is a start-to-stop operation conducted in a single location/aircraft parking spot. The ability to integrate weapons loading, refueling, minor inspections/servicing, and aircraft preparation tasks is key to enhancing aircraft availability during combat operations. General procedures are in TO 00-25-172, *Ground Servicing of Aircraft and Static Grounding/Bonding*. Ensure fully qualified personnel receive recurring evaluations every 6-months. **(T-2)** MAJCOMs will determine the need for ICT program and establish minimum procedures. **(T-2)**

7.13.8. Dual Loading Operations (DLO). DLO is the primary method for rapid munitions loading/unloading on bomber aircraft. Weapons load crews conduct independent loading operations from single or separate trailers. **Note**: Loading and fueling operations must not be performed simultaneously due to the hazard of the aircraft settling. Ensure fully qualified personnel receive recurring evaluations every 12-months. **(T-2)** MAJCOMs will determine the need for DLO program and establish minimum procedures. **(T-2)**

7.14. Decertification/Disqualification. Document decertification and/or disqualification actions in the WLCMT or MIS. **(T-1)** Accomplish certification/qualifications no later than the end of the month in which they are due. **(T-1)** Decertify and/or disqualify individuals/load crew members if they:

7.14.1. Fail to accomplish recurring weapons academic training unless exempted in accordance with provisions in this chapter. **(T-1)**

> 7.14.1.1. All personnel exceeding the 15-month interval will not operate, handle, transport, maintain, or load munitions until weapons academic training is accomplished. **(T-1)**

7.14.1.2. Fail to complete a required evaluation listed below unless exempted in accordance with provisions in this chapter. **(T-1)**

7.14.2. **SAE.** All load crews exceeding semi-annual interval will not load certified munitions until SAE is accomplished. **(T-1)**

7.14.3. MRPL. Decertify load crews on individual munition(s) exceeding applicable monthly/bi-monthly/quarterly proficiency interval. **(T-1)**

7.14.4. Qualification. Disqualify individual/load crews on individual munition/task exceeding 12-month interval (6-month for ICT). **(T-1)**

7.14.5. Decertify/disqualify individual/load crews on individual munition/task exceeding 7-month code outs. **(T-1)**

7.14.6. Fail an evaluation due to the following criteria:

7.14.6.1. Safety. A violation of safety publications, TO warnings, any unsafe act (personal injury or death). Evaluators will immediately intervene to prevent such acts. **(T-1)**

7.14.6.2. Reliability. A violation of TO requirements that could reasonably lead to damage/premature failure of equipment, prevent safe reliable operation of weapons system or weapon release, or intervention by the evaluator to prevent such violations. **(T-1)**

7.14.6.3. Proficiency. Any load crew member failing to demonstrate technical proficiency results in a failed rating at the discretion of the certifying official. **(T-1)**

7.14.6.3.1. A crew member exceeding three technical order errors results in a fail rating for lack of technical proficiency. **(T-1)**

7.14.6.3.2. For integrated loads, a crew member is allowed one additional technical order error for each munition type, (e.g., AIM-9 and AGM-158 equals 4 technical order errors). **(T-1)**

7.14.6.4. Time. Exceeded time standard results in a failed rating for the weapons load crew chief. **(T-1)**

7.14.6.4.1. If the time standard is exceeded for other load crew member's lack of technical proficiency, the Weapons Load Crew Chief does not need to be decertified.

7.14.6.4.2. Time standard will not be applied to flightline or qualification evaluations. **(T-1)**

7.14.7. For integrated loads, the evaluator may decertify on all munitions or a specific munition loaded. When the same rating is not applied to all munitions loaded during an integrated load, the load crew records will be annotated accordingly. **(T-2)**

7.14.8. A failure for safety or reliability does not result in complete retraining/recertification for the loading task. At the discretion of the evaluator, sub-task retraining or thorough critique may be used to satisfy retraining/recertification requirements. **(T-1)**

7.15. Documenting Certification/Qualification Munitions/Tasks.

7.15.1. WS will manage certifications, qualifications, SAEs and MRPLs by means of the WLCMT or MAJCOM approved equivalent. **(T-2)**

7.15.2. Document and track Weapons Academic training in a MIS or WLCMT. **(T-2)**

7.15.3. Document all certification/qualification munitions/tasks including decertification and subsequent recertification actions on AF Form 2419 and AF Form 2435 *Load Training and Certification Document* unless exempted in accordance with provisions in this chapter. **(T-1)**

7.15.3.1. Complete AF Form 2419 following each evaluation:

7.15.3.1.1. Blocks I – III, self-explanatory.

7.15.3.1.2. Type Eval. Enter one of the following: EPE, Facilitate, Initial, Flightline, MRPL, Recert, SAE, Qual, Academics or Training. **(T-1)**

7.15.3.1.3. Type Rating. Enter one of the following: Fail, Not Rated or Pass. **(T-1)**

7.15.3.2. Route AF Form 2419 after semi-annual evaluations to the Weapons Loading NCOIC, Weapons Section Chief, AMU OIC/Superintendent, Director of Operations/MX SUPT, WS SUPT, and the WWM. **(T-2)**

7.15.3.3. Complete AF Form 2435 following each AF Form 2419. **Note**: Not required for training evaluations:

7.15.3.3.1. Blocks 1-8, self-explanatory. **Note**: Units may certify by munition loading methods, (e.g., AGM-86/B Pylon, B-61/83 S/B, AGM-158 INT).

7.15.3.3.2. Block 9, enter decertification date. Not applicable for qualification tasks.

7.15.3.3.3. Block 10, enter one of the following decertification: Safety, Reliability, Proficiency, Time, Lack of MRPL or Administrative. **(T-1)**

7.15.3.3.4. Block 11, enter certifying official's signature. **Note**: Digital signature is authorized.

7.15.3.3.5. Block 12, enter munition/task from block 7. **(T-1) Note**: Aircraft parent station, multiple carriage, difference training and asymmetrical loads will be documented on both AF Form 2419 and AF Form 2435.

7.15.3.3.6. Enter date in the month column an SAE, Certification, Decertification, MRPL, Qualification or Disqualification was performed. **(T-1)**

7.15.3.3.7. SAE. The letter "E" will be placed after the date for the SAE regardless of rating. **(T-1)**

7.15.3.3.8. Decertification. An "*" will be placed after the date for decertification. **(T-1)**

7.15.3.3.9. Code out. Enter one of the following codes in the month column, as applicable, if required evaluations are not completed and provisions of this chapter apply: Temporary Duty (TD), Emergency Leave (LV), Incapacitated (ED), Exercises/Contingency (EX), or Weather (WX), Other Events (OE). **(T-1)**

7.15.4. Load Crew Status (LCS). WS will maintain LCS product via WLCMT or MAJCOM approved equivalent to provide current individual/load crew certification/qualification status to the unit. **(T-2)**

7.15.4.1. Send LCS printouts from WLCMT with the unit to deployed/TDY locations if internet connectivity will not be present. **(T-3)**

7.15.4.1.1. Add the following statement after the last entry on each product: "AF Form 2435 reviewed; the member is certified/qualified on the items listed on this product." **(T-3)**

7.15.4.1.2. This statement is followed by the signature and date of a WS certifying official.

7.15.4.2. Load crew member certification/qualification is valid worldwide with gaining WWMs concurrence. Reassignment does not necessarily require recertification/qualification by the gaining unit if the individual is certified/qualified on the same munitions, aircraft, and load crew position; and if MRPL/SAE requirements are current.

7.15.4.3. Units will develop procedures to ensure load crew certification/qualification status is provided to the individual prior to Permanent Change of Station (PCS) departure for evaluation by gaining unit for potential certification/qualification on same MDS/Munitions. **(T-3)**

7.15.5. **Code Outs.** Code outs provide units the flexibility to maintain individual/load crew certification/qualification while ensuring the wing can meet its primary mission. Code outs are used for conditions outside the unit's control, but will not be used as a substitute for ineffective scheduling. WWM is the final approval for code outs.

7.15.5.1. Do not decertify/disqualify an individual/load crew member if: TDY, emergency leave, incapacitated, involved in an unannounced local or higher headquarters exercise/contingency operation, weather conditions and/or other events preventing completion of required evaluations. **(T-3)**.

7.15.5.1.1. Individual/load crew member must complete current SAE/MRPL/Qualification requirements (plus all past-due evaluations) within one month of returning to duty (two months for Traditional Reservist/Drill Status Guard members). **(T-2)**

7.15.5.1.2. Code outs will not exceed 7-months from last evaluation. At which time, individual/load crew member will be decertified/disqualified on applicable munition/task. **(T-3)**

7.16. Munition Proficiency Time Standards. A measure of proficiency that represents the minimum acceptable timeframe to certify weapons load crews under WS evaluation in controlled conditions. **Note:** Do not use munition proficiency time standards to determine generation timelines.

7.16.1. Authorized munition load time standards can be referenced in the *Air Force Certified/Qualification Munitions and Proficiency Time Standards* located on the Air Force Aircraft Armament Portal SharePoint® site at: **https://usaf.dps.mil/sites/12231/Air%20Force%20CertifiedQualification%20Munitions%20and%20Pro**.

7.16.2. WS SUPT shall establish load time standards for loads performed wearing the CWDE, as applicable **(T-3)**

7.17. LSEP Summary. WS will submit monthly LSEP summary for inclusion in the Maintenance Standardization Evaluation Program (MSEP). **(T-1)** LSEP summary should include

graphs, narratives, trends identified through evaluations, and descriptions of successful programs or initiatives. The following areas must be addressed in the summary:

7.18. Passed Versus Failed Evaluations. Report each evaluated munition by individual load crew member to accurately grade the unit's effectiveness, problems and trends. **Note:** Each category below will be calculated/reported separately. Units should use WLCMT *Maintenance Standardization Evaluation Report* for calculating pass/fail percentage.

7.18.1. SAE. **(T-1)**

7.18.2. MRPL. **(T-1)**

7.18.3. Flightline. **(T-1)**

7.19. Scheduling Effectiveness Rate. This rate reflects how well the unit(s) scheduled load crew members certification/qualifications for LSEP. Compute this by dividing the number of evaluations performed by the amount of evaluations scheduled, for the desired reporting period, and multiply by 100 to express as a percent. **(T-1)**

7.20. Aircraft Loading Utilization Rate. This rate reflects how well the unit(s) utilized aircraft/trainers that were allocated for LSEP. Compute this by dividing the number of periods utilized, by the number of periods scheduled, for the desired reporting period, and multiply by 100 to express as a percent. **(T-1)**

7.21. Problems/Trends. Report problems/trends effecting LSEP, (e.g., high-missed TO items, not fully configured/operational weapons system). **(T-1)**

TOM D. MILLER,
Lieutenant General, USAF
DCS/Logistics, Engineering & Force Protection

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

AFI 10-201, *Force Readiness Reporting,* 22 December 2020

AFI 20-101_63-101, *Integrated Lifecycle Management,* 30 June 2020

AFI 21-103, *Equipment Inventory, Status and Utilization Reporting,* 30 April 2020

AFI 21-205-S, *Command Disable Systems (CDS),* 21 May 2019

AFI 25-101, *War Reserve Materiel (WRM),* 27 August 2019

AFI 33-322, *Records Management and Information Governance Program,* 23 March 2020

AFI 36-2650, *Maintenance Training,* 2 May 2019

AFI 91-202, *The US Air Force Mishap Prevention Program,* 12 March 2020

AFI 91-208, *Hazards of Electromagnetic Hazards Radiation to Ordnance (HERO) Certification and Management,* 24 October 2019

AFMAN 11-212, *Requirements for Aircrew Munitions,* 25 June 2020

AFMAN 21-200, *Munitions and Missile Maintenance Management,* 9 August 2018

AFMAN 21-203, *Nuclear Accountability Procedures,* 29 September 2021

AFMAN 23-122, *Materiel Management Procedures,* 27 October 2020

AFMAN 91-221, *Weapons Safety Investigations and Reports,* 26 March 2020

AFPD 13-5, *Air Force Nuclear Mission,* 17 July 2018

AFPD 21-1, *Maintenance of Military Materiel*, 1 August 2018

AFPD 21-2, *Munitions,* 6 October 2020

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

DAFI 90-160, *Publications and Forms Management,* 14 April 2022

DAFI 90-821, *Hazard Communication (HAZCOM) Program, installation Environment, Safety, and Occupational Health Management System/Environment Management System (ESOHMS/EMS),* 13 May 2019

DAFI 91-101, *Air Force Nuclear Weapons Surety Program,* 26 March 2020

DoDM 5100.76_DAFMAN 31-101 *V2 Physical Security of Sensitive Conventional Arms, Ammunition, & Explosives (AA&E)*, 17 December 2021

DAFMAN 21-201, *Munitions Management,* 26 March 2019

DAFMAN 90-161, *Publishing Processes and Procedures,* 15 April 2022

DESR6055.09_AFMAN 91-201, *Explosive Safety Standards,* 28 May 2020

MIL-DTL-9977, *Manuals, Technical and Checklist: Munitions/Weapons Loading Procedures, Nonnuclear Munitions and Nuclear and Packages, Standard Data: Munitions Loading Procedures, Nonnuclear,* 31 January 2020

TO 00-5-1, *AF Technical Order System,* 25 January 2021

TO 00-5-3, *Air Force Technical Order Life Cycle Management,* 16 March 2021

TO 00-25-172, *Ground Servicing of Aircraft and Static Grounding/Bonding,* 6 September 2019

TO 11A-1-60, *General Instructions Inspection of Reusable Munitions Containers and Scrap Material Generated From Items Exposed to, or Containing Explosives,* 27 November 2018

TO 11A-1-63, *Munitions Assembly Procedures—Inspection and Assembly of Conventional Munitions,* 25 March 2021

TO 35-1-24, *Air Force Economic Repair/Replacement Criteria for Selected Warner Robins Air Logistics (ALC) Managed Support Equipment (SE),* 27 October 2017

Prescribed Forms

None

Adopted Forms

AF Form 2407, *Weekly/Daily Flying Schedule Coordination*

AF Form 2434, *Munitions Configuration and Expenditure Document*

AF Form 2435, *Load Training and Certification Document*

AF Form 2419, *Routing and Review of Quality Control Reports*

AF Form 2430, *Specialist Dispatch Control Log*

AF Form 504, *Weapons Custody Transfer Document*

AF Form 797, *Job Qualification Standard Continuation Sheet*

AFTO Form 375, *Selected Support Equipment Repair Cost Estimate*

AFTO Form 95, *Significant Historical Data*

Abbreviations and Acronyms

A/A—Air-to-Air

ACA—Aerospace Control Alert

ACC—Air Combat Command

ACE—Agile Combat Employment

AFETS—Air Force Engineering and Technical Service

AFI—Air Force Instruction

AFMAN—Air Force Manual

AFPD—Air Force Policy Directive

AFSC—Air Force Specialty Code

AFSOC—Air Force Special Operations Command

AGM—Air-to-Ground Missile

A/G—Air-to-Ground

ANG—Air National Guard

ARC—Air Reserve Component

BDU—Bomb Dummy Unit

BRU—Bomb Release Unit

CAST—Combat Armament Support Team

CATM—Captive Air Training Munition

CBU—Cluster Bomb Unit

CEMO—Command Equipment Management Office

CFETP—Career Field Education and Training Plan

CTK—Composite Tool Kit

CWDE—Chemical Warfare Defense Equipment

DATM—Dummy Air Training Missiles

DLA—Defense Logistics Agency

DLO—Dual Loading Operation

DOC—Designed Operational Capability

DPAS—Defense Property Accountability System

DRRS-S—Defense Readiness Reporting System-Strategic

DT—Developmental Test

EMS—Environment Management System

EPE—Evaluator Proficiency Evaluation

ESOHMS—Environment, Safety, and Occupational Health Management System

FOD—Foreign Object Damage

FOM—Facilitate Other Maintenance

GBU—Guided Bomb Unit

HAZCOM—Hazard Communication

HAZMAT—Hazardous Material

HERO—Hazards of Electromagnetic Radiation to Ordnance

ICT—Integrated Combat Turnaround

ILCM—Integrated Life Cycle Management

IPI—In-Process Inspection

IT—Information Technology

LCS—Load Crew Status

LM—Limited-Use Munition

LMR—Land Mobile Radio

LSC—Loading Standardization Crew

LSEP—Loading Standardization and Evaluation Program (Formerly Weapons Load Crew Training Program)

MDS—Mission Design Series

MESL—Minimum Essential Subsystems List

METL—Mission Essential Task List

MMHE—Munitions Materiel Handling Equipment

MRPL—Minimum Required Proficiency Load

MSEP—Maintenance Standardization Evaluation Program

MUFM—Munitions User Functional Manager

NCE—Nuclear Certified Equipment

NCOIC—Noncommissioned Officer in Charge

NIE—Normally Installed Equipment

NORAD—North American Aerospace Defense Command

OT—Operational Test

PCS—Permanent Change of Station

PS&D—Plans, Scheduling, and Documentation

PTO—Preliminary Technical Order

QRL—Quick Reference List

RDO—Redistribution Order

RGS—Rescue Generation Squadron

SAE—Semi-Annual Evaluations

SAP—Special Access Program

SAV—Staff Assistance Visit

SM—Support Munitions

SLC—Squadron Lead Crew

SUPT—Superintendent

TACON—Tactical Control

TAL—Task Assignment List

TGM—Training Guided Missile

TMDE—Test Measurement and Diagnostic Equipment

TTML—Test & Training Munitions List

UCML—Unit Committed Munitions List

UTC—Unit Type Code

W3R—World-Wide Weapons Report (Formerly 9405 Report)

WLCMT—Weapons Load Crew Management Tool

WLT—Weapons Load Training

WR—War Reserve

WRM—War Reserve Material

WS—Weapons Standardization

WS3—Weapons Storage and Security System

WST—Weapons System Team

WTQ—Weapons Task Qualification

WUC—Work Unit Code

WWM—Wing Weapons Manager

Terms

Composite Tool Kit (CTK)—A controlled area or container used to store tools or equipment and maintain order, positive control, and ease of inventory. CTKs are assembled as a kit and designed to provide quick, easy visual inventory and accountability of all tools and equipment. CTKs may be in the form of a toolbox, a shadow board, shelves, system of drawers (Stanley Vidmar®, Lista®, etc.), cabinets, or other similar areas or containers. The CTK contains tools and equipment necessary to accomplish maintenance tasks, troubleshooting, and repair.

Difference Training—Using an existing munition with similar features (e.g., shape and weight) to train a load crew on the physical differences (e.g., fuze location/type, wiring) to satisfy certification/qualification requirements when no training asset exists.

Evaluator Proficiency Evaluation (EPE)—An over-the-shoulder assessment of LSEP certifying officials to validate the standardization of load crew evaluation practices and procedures.

Hung Ordnance—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 millimeter 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—Uncommanded fired or dropped ordnance. 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.

Integrated Load—The loading of two or more different types of munitions in an authorized configuration during a single operation.

Limited Use Munition (LM)—A munition of which aircrews require familiarity or can be used for firepower demonstrations, test, training and like operations.

Loading Method—A method to load a munition with multiple configurations, (e.g., AGM-158 internal and external). Loading method enables units to accurately identify and/or report capability versus munition type only.

No-Lone Zone—Area where the two-person concept must be enforced because it contains a nuclear weapon, nuclear weapon systems, or certified critical component.

Preload—A complete munition and suspension equipment package ready for loading, (e.g., Rotary Launcher Assembly).

Postload Checks—Power-on checks and/or tasks required by technical data prior to declaring munitions-loaded on aircraft mission ready.

Primary Munition (PM)—Munitions which will be the primary weapons used by the unit to execute test/training or their DOC war plan and are designated on the UCML/TTML.

Standard Conventional Load (SCL)—The designation, which includes the number, type and configuration of authorized munitions, required for a specific mission and aircraft load.

Support Munition (SM)—A munition normally used in support of contingency plans or directives and is designated on the UCML/TTML.

Weapons Locally-Manufactured Equipment (LME)—All equipment that measures, tests, or verifies system, subsystem, component, or item integrity. It also includes equipment such as handling dollies, storage racks (except storage shelves), maintenance stands, or transport adapters. It does not include simple adapter cables and plugs constructed as troubleshooting aids to replace pin-to-pin jumper wires specified in TOs.

World-Wide Weapons Report (W3R)—Wing Weapons Manager tool to track/monitor load crew status, weapons release and gun reliability rates, equipment, and tester availability to meet combat and/or test/training mission. Does not replace Air Force program of records, (e.g., Defense Property Accountability System (DPAS).