BY ORDER OF THE COMMANDER
AIR COMBAT COMMAND

AIR COMBAT COMMAND
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Maintenance

AIR FORCE TECHNICAL APPLICATIONS CENTER (AFTAC) MAINTENANCE MANAGEMENT

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This instruction implements AFPD 21-1, *Maintenance of Military Materiel* and provides guidance to the Air Force Technical Application Center (AFTAC). It provides essential guidance and procedures for effectively maintaining, servicing, and repairing AFTAC equipment. It applies to all personnel assigned to the AFTAC, its detachments and individual mobilization augmentees, except for the 21 SURS/Det 1. DAFI 21-101, *Aircraft and Equipment Maintenance Management* is applicable to 21 SURS/Det 1. This instruction does not apply to Air Force Reserve Command and other individual reservists administered by Headquarters AFRC or to the Air National Guard. This instruction does not apply to the United States Space Force. Ensure all records generated as a result of processes prescribed in this publication adhere to AFI 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. Contact supporting records managers as required. The authorities to waive wing, unit, level requirements in this publication are identified with a Tier ("T-0, T-1, T-2, T3") number following the compliance statement. Submit requests for waivers through the chain of command to the appropriate Tier waiver approval authority, or alternately, to the publication OPR for non-tiered compliance items. See DAFMAN 90-161, *Publishing Processes and Procedures*, for a description of the authorities associated with the tier numbers. For questions on interpreting this instruction, first contact your MAJCOM maintenance functional activity. Units may publish a single supplement to consolidate local policies mandated by this instruction. Supplements must be written IAW DAFI 90-160, *Publications and Forms Management* and DAFMAN 90-161. Refer recommended changes and questions about this publication to the OPR using the DAF Form 847,

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SUMMARY OF CHANGES

This publication has been substantially revised and should be completely reviewed. Major changes include: changes to Technical Orders (TO) and Department of the Air Force Instructions reference designations as well as verbiage to compliance statements and associated tiering. Additionally, various roles and responsibilities have been changed, added, or deleted.

Chapter 1

MANAGEMENT OVERVIEW, SUPPORTING CONCEPTS AND REQUIREMENTS

1.1. Introduction. This instruction prescribes basic maintenance management policy implementation and procedures used throughout AFTAC to perform mission-required functions.

1.2. Organization. AF organizations are structured according to AFI 38-101, *Manpower and Organization*, or as authorized by AF/A1M, Air Force Directorate of Manpower, Organization and Resources. Contracted maintenance functions are not required to organize IAW AFI 38-101 but will implement the organization as outlined in their proposal as accepted by the government.

1.3. Maintenance Concept. Per AFPD 21-1, organizational, intermediate and depot maintenance capabilities for operational readiness will be maintained to ensure effective and timely response to peacetime operations, mobilizations, national defense contingencies and other emergencies.

1.3.1. As a minimum each capability will be able to:

1.3.1.1. Organizational: Sustain daily operation of mission equipment, maintain and repair materiel coded for organizational level repair.

1.3.1.2. Intermediate: Repair materiel coded for organizational and intermediate level repair in back shops and/or centralized repair facilities.

1.3.1.3. Depot: Repair materiel coded for organizational, intermediate and depot; overhaul; rebuild; modify and manufacture.

1.3.2. AFTAC maintenance is organized into two mutually supporting networks, the Mission Generation Network (MGN) and the Repair Network (RN). The MGN is optimized for mission generation at the wing level and consists of authorized "on-equipment" and "off-equipment" maintenance capabilities required to field, configure, inspect and repair AFTAC systems and equipment. The RN supports the MGN by providing maintenance required to fulfill operational needs outside the capability and/or capacity of MGN activities. For the purposes of this instruction, the MGN is AFTAC. The RN consists of all outside agencies, such as Precision Measurement Equipment Laboratory (PMEL) and Cryptologic and Cyber Systems Division (CCSD). The interface between the two networks takes place when AFTAC relinquishes control of repairable assets to the RN activity (e.g. supply counter turn in) or changing an end item possession code from an operational activity to a RN activity (e.g. depot maintenance). AFTAC possesses a complement of equipment and supplies to perform on-equipment and off-equipment maintenance.

1.3.2.1. RN units may reside at bases that perform mission generation. RN requirements and processes are identified in DAFI 20-117, *Repair Network Management.*

1.3.3. Requests for Assistance. If a maintenance activity requires assistance for evaluation and/or repair beyond unit capability, requests are made IAW DAFI 21-103, *Equipment Inventory, Status and Utilization Reporting*; TO 00-25-107, *Maintenance Assistance*; and TO 00-20-14, *Air Force Metrology and Calibration Program*, or automated process.

1.4. Readiness. The maintenance function ensures assigned equipment is safe, serviceable, and properly configured to meet mission needs. Maintenance actions include, but are not limited to,

inspection, repair, overhaul, modification, preservation, refurbishment, troubleshooting, testing, analyzing condition, and performance and maintenance documentation. All levels of supervision need to place emphasis on safety, quality, and timeliness in the performance of maintenance. The concept of quality maintenance must be fostered by each supervisor and technician to ensure the integrity and skill of each maintainer is not degraded. To the greatest extent possible, maintenance is accomplished on a preplanned scheduled basis. Planning provides the most effective and efficient use of people, facilities, and equipment, reduces unscheduled maintenance, and allows for progressive actions toward maintaining and returning equipment to safe operating condition. Exploiting RN capability and maintaining visibility of repair cycle assets throughout the maintenance cycle are also critical elements of the equipment maintenance program.

1.4.1. Units implement and manage the tasks specified in the scheduled recurring maintenance program for their assigned equipment. Preventive maintenance is achieved through the inspection requirement concepts described in TO 00-20-1, *Aerospace Equipment Maintenance Inspection, Documentation, Policy, and Procedures,* and applicable equipment -6 TO/TI.

1.5. Maintenance Discipline. It is the responsibility of all maintenance personnel to comply with all written guidance to ensure required repairs, inspections, and documentation are completed in a compliant, safe, timely, and effective manner. Supervisors are responsible for enforcing and establishing a climate that promotes maintenance and supply discipline.

1.5.1. Compliance Terminology. For the purposes of this instruction, the following definitions apply:

1.5.1.1. **Must and Will** - Indicates mandatory requirements. **Note:** "Will" is also used to express a declaration of purpose for a future event.

1.5.1.2. **Should** - Indicates a preferred method of accomplishment.

1.5.1.3. **May** - Indicates an acceptable or suggested means of accomplishment.

1.5.2. Use of TOs, TIs, Standard Operating Procedures (SOP) and Supplements. Use of the prescribed technical data to maintain equipment is mandatory. **(T-2)** All personnel will enforce compliance with technical data. **(T-2)**

1.6. Communications Security (COMSEC)/Controlled Cryptographic Item (CCI) Accountability. The Air Force COMSEC/Central CCI Authority is the Cryptologic and Cyber Systems Division, Joint Base San Antonio-Lackland, Texas. COMSEC/CCI accountability is accomplished IAW AFI 23-101, *Materiel Management Policy*. Questions concerning COMSEC/CCI accountability can be directed to the Cryptologic and Cyber Systems Division's COMSEC Policy Office (AFLCMC/HNCLS).

1.7. Environmental Compliance. It is the responsibility of all personnel to comply with all written guidance to ensure compliance with hazardous material, hazardous waste management and air emissions record keeping as required for environmental compliance IAW AFI 90-801, *Environment, Safety, and Occupational Health Councils,* installation Environmental Safety and Occupational Health (ESOH) Management System/Environmental Management System (EMS) policy/guidance and applicable environmental requirements and guidance.

1.8. Maintenance Training. Maintenance training provides initial, recurring and advanced proficiency, qualification, or certification skills needed by a technician to perform duties in their primary AF Specialty Code (AFSC), Reporting Identifier (RI), Civilian Job Series, host contract,

or Memorandum of Agreement/Understanding. Maintenance training carries an equal priority with the operational mission. For maintenance training policy and guidance, refer to AFI 36-2650, *Maintenance Training*, as well as MAJCOM and AFTAC supplements.

1.9. Modification Management. A modification proposal is a recommendation to change the operation, use, or appearance of AFTAC equipment. Modifications (temporary, permanent, or safety) to equipment are expressly prohibited without Program Manager (PM) approval. **Note:** PM is used in this publication as defined in DoDD 5000.01, The *Defense Acquisition System*. Refer to AFI 63-101/20-101, *Integrated Life Cycle Management*, for modification management procedures.

1.10. Maintenance Information Systems (MIS). MIS refers to automated maintenance information systems that support and enable maintenance business processes. MIS is used to document maintenance actions and track fleet health. The information entered into the MIS is accomplished IAW TO 00-20-2, *Maintenance Data Documentation* and match the content of the forms used. MIS data entries do not have to be accomplished by the same individual who documented the maintenance forms, but employee numbers/man numbers/USERIDs of individuals accomplishing the actual work are entered into the MIS.

1.11. General Safety Guidance. Personnel are exposed to a large variety of hazardous situations, machinery, equipment, and chemicals. Most hazardous situations can be avoided by following approved procedures, asking for help when needed, and using Personal Protective Equipment (PPE).

1.11.1. Safety "Knock It Off" and Risk Management. Due to the inherent danger to life, limb, and property associated with maintenance operations, personnel are empowered to terminate an operation or situation which they perceive is unsafe or too dangerous. When supervisors/crew leaders become task-focused, junior personnel are often better able to assess the danger; however, deferring to the experience and judgment of the crew leader, they may choose to remain silent, missing an opportunity to break the mishap sequence chain. Commanders and supervisors are responsible to foster a culture in their units so that a simple, but recognizable "audible" from anyone can prevent a potential mishap. **Note:** See AFI 90-802, *Risk Management*, and DAFPAM 90-803, *Risk Management (RM) Guidelines and Tools*, for additional information.

1.11.2. Visitors. Units will not permit visitors to operate any equipment unless they are qualified to operate such equipment and are doing so in the performance of their assigned official duties.

1.12. Duty Shifts and Rest Periods. Maintenance personnel duty hours are aligned to provide optimal mission support.

1.12.1. Supervision at all levels will be equitably distributed to cover all duty periods. **(T-2)**

1.12.2. Supervisors will not schedule personnel for more than 12 hours of continuous duty time. **(T-2)** Duty time begins when personnel report for duty and ends when their supervisor releases them. Time spent in exercise/contingency deployment processing lines and in-transit counts toward the total duty day.

1.12.2.1. The Squadron CC, or designated representative, is the final approval authority for duty time extensions exceeding 12-hour limit up to a maximum of 16 hours.

1.12.3. Commanders and supervisors will provide a rest period after each shift. **(T-2)** A rest period is a block of time that gives a person the opportunity for 8 hours of uninterrupted sleep in a 24-hour period.

1.12.4. Commanders and supervisors will ensure individuals are afforded adequate duty rest periods and breaks to prevent fatigue or thermal injury. **(T-2)** Stop anyone if fatigue may jeopardize safety. In all cases, commanders and supervisors ensure personnel are not required to perform duty when they have reached the point of physical or mental fatigue rendering them incapable of performing their assigned duties safely and reliably.

1.13. Maintenance Repair Priorities. Maintenance repair priorities are listed in **Table 1.1**. This does not prohibit the Production Superintendent (Pro Super), in coordination with the Maintenance Operations Control Center (MOCC), from changing the maintenance repair priority when warranted. The maintenance repair priority and the Logistics Readiness Squadron (LRS) delivery priorities (listed in AFH 23-123V1, *Materiel Management Reference Information*) are normally identical. Raising or lowering maintenance repair priorities does not necessarily require a corresponding change in the LRS delivery priority. However, the Pro Super may authorize the use of a less responsive LRS delivery priority. See DAFI 21-101, *Aircraft Maintenance and Equipment Maintenance Management* for a more complete Air Force level list of priority designations.

Table 1.1. Maintenance Repair Priority Designators.

PRIORITY	APPLICATION
1	Primary mission equipment undergoing scheduled or unscheduled maintenance, which if not performed or repaired will prevent or delay mission accomplishment.
2	Inspection, maintenance, and Time Compliance Technical Order (TCTO) compliance of Mission Support Kit (MSK) or Mobility Readiness Spares Package (MRSP) materiel. Scheduled calibration and unscheduled repairs on Precision Measurement Equipment (PME). Scheduled maintenance to include periodic inspections, routine TCTO, Master Configuration Lists, Grounding, and Time Change Items (TCIs). Equipment supported/owned by ATAF for use by AETC needed to prevent training deficiency.
3	Bench stock requirements. Fabrication and repair of items not carrying a higher priority
4	Repair cycle asset shortages required to fill a peacetime operating stock authorization
	Equipment supported/owned by AFTAC for use by AETC not carrying a higher priority.

5	Spares/repair cycle assets excess to base requirements. Maintenance or fabrication of items for routine lifecycle maintenance projects and upgrades.
NOTE:	TCTIs have the same priority as TCTOs

Chapter 2

ROLES AND RESPONSIBILITIES

2.1. General. This chapter outlines responsibilities for commanders and key leaders involved in maintenance activities.

2.2. AFTAC Commander (AFTAC/CC) Responsibilities. The AFTAC/CC allocates resources to meet all mission requirements. The AFTAC/CC will:

2.2.1. Ensure that maintenance organizations are not overtasked with augmentation duties outside maintenance functional areas. **(T-2)**

2.2.2. Conduct a "Wing Standup" meeting at least twice a week. **(T-2)** Responsibility for this meeting may be delegated to the Support Group Commander. The intent of the meeting is to drive mission production decisions focusing on the maintenance status.

2.2.3. Designate AFTAC Environmental Coordinator IAW AFI 32-7001, *Environmental Management.* **(T-2)** Refer to AFI 90-801, DAFMAN 91-203, *Air Force Occupational Safety, Fire, and Health Standards,* AFMAN 32-7002, *Environmental Compliance and Pollution Prevention,* for additional guidance.

2.3. Support Group Commander (SPTG/CC) Responsibilities. The Support Group Commander (or equivalent) will:

2.3.1. Advocate maintenance planning and funding requirements for AFTAC mission equipment related to assigned responsibilities. **(T-2)**

2.3.2. Ensure the Maintenance Standardization and Evaluation Program (MSEP) requirements are implemented IAW **Chapter 4** of this instruction. **(T-2)**

2.3.3. Establish Acceptable Quality Levels (AQLs) for tasks/inspections IAW **Chapter 4** of this instruction. **(T-2)**

2.3.4. Develop/approve Support Group Routine Inspection Lists (RIL). **(T-2)** A Key Task List (KTL) may be developed.

2.3.5. Establish maintenance training program IAW DAFI 36-2670, *Total Force Development,* and AFI 36-2650. **(T-2)**

2.3.5.1. Ensure training practices are standardized across like mission sets. **(T-2)**

2.3.5.2. Review Special Experience Identifier (SEI) management program IAW the AFMAN 36-2100, *Military Utilization and Classification,* and the Air *Force Enlisted Classification Directory* (Located on myFSS). **(T-2)**

2.3.6. Ensure adequate Personal Wireless Communications Systems (PWCS) are available to support mission requirements. **(T-2)**

2.3.7. Ensure repair cost evaluations are performed and appropriate levels of review and repair authorization are established in squadrons, flights, and repair sections IAW TO 00-20-3, *Maintenance Processing of Repairable Property and The Repair Cycle Asset Control System*, TO 00-25-240, *Uniform Repair/Replacement Criteria for Selected USAF Support Equipment (SE).* **(T-2)**

2.3.8. Ensure procedures are followed to properly turn in recoverable and consumable items IAW AFI 23-101. **(T-2)**

2.3.9. Ensure an orientation program is developed and conducted for all personnel newly assigned to Support Group maintenance/activities IAW DAFI 36-2670. **(T-2)**

2.3.10. Establish procedures and controls for locally manufactured items. **(T-2)** Establish Minimum Equipment Levels (MELs) for essential maintenance assets, advocate and reconcile authorized shortfalls and overages. **(T-2)** Coordinate with the applicable MAJCOM functional to advocate with the respective Program Manager to address any requests to change authorized quantities.

2.3.11. Coordinate with AFTAC Program Office and Configuration Control Board to approve all technical documentation proposed for mission equipment before it is accepted for use on AFTAC systems. **(T-2)**

2.3.12. Coordinate with AFTAC Program Office on the sustainability of new systems prior to fielding. **(T-2)**

2.3.13. Establish housekeeping and contamination procedures which protect the health of workers and maintain areas as free as practical from surface contamination. **(T-2)**

2.3.13.1. Ensure Bioenvironmental Engineering approved workplace-housekeeping procedures are employed to prevent the spread of contamination within a work center. **(T-2)**

2.3.13.2. Emphasize controlling the source of the contamination and ensure workplace personnel follow proper work procedures, PPE use, and hygiene practices. **(T-2)**

2.3.13.3. Ensure housekeeping procedures will account for the dangers and hazard exposures found in the work center and will be consistent with mitigation methods outlined in DAFMAN 91-203. **(T-2)**

2.3.14. As needed, delegate day to day workings of responsibilities to 709 TMXS/CC. **(T-2)**

2.4. Support Group Senior Enlisted Leader (SEL) Responsibilities. The Support Group SEL is responsible to the Support Group Commander (or equivalent) and will advise and assist the Support Group Commander (or equivalent) on their responsibilities as outlined in this chapter **(T-2)**. The Support Group SEL will:

2.4.1. Conduct a quarterly manning meeting with Squadron SELs to review Support Group manning status and ensure manning resources are strategically distributed to provide the greatest possibility for mission success. **(T-2)**

2.4.1.1. Support Group SEL will provide Support Group coordinated manning recommendations that develop enlisted individual experience and knowledge for consideration. **(T-2)**

2.5. Technical Maintenance Squadron Commander (TMXS/CC) Responsibilities. The TMXS/CC will:

2.5.1. Establish procedures to ensure annual reviews of Site Jacket Files. **(T-2)**

2.5.2. Ensure compliance with AFI 90-821, *Hazard Communication (HAZCOM)* Program, DAFI 91-202, *The US Air Force Mishap Prevention Program*, and DAFMAN 91-203. **(T-2)**

2.5.3. Ensure maintenance qualification programs emphasize quality and are not primarily focused on meeting minimum time frames. **(T-2)**

2.5.4. Establish and administer squadron training programs IAW DAFI 36-2670. **(T-2)**

2.5.5. Ensure a contingency operations plan is established and adhered to for all maintenance work centers. **(T-2)**

2.5.6. Chair and designate mandatory attendees for the regularly scheduled production meeting. **(T-2)** The purpose of this meeting is to verify equipment utilization and scheduled maintenance requirements for the next week, establish work priorities, and coordinate schedule changes. Responsibility to chair the meeting may be delegated no lower than the Sq/DO.

2.5.6.1. Topics reviewed will include as a minimum: system status, repair cycle status, maintenance schedule execution, remaining portion of the current month's schedule, previous week's maintenance schedule deviations to the published schedule, prioritizing equipment requiring/competing for shared resources, and review Special Inspections (SIs), Time Change Items (TCI), Time Compliance Technical Orders (TCTO), Time Compliance Technical Instructions (TCTI), Depot Field Team/Contract Field Team schedules as applicable. **(T-2)**

2.5.7. Establish Squadron Corrosion Control Program IAW applicable TOs and instructions. **(T-2)**

2.5.8. Designates Mission Systems Managers (MSMs). **(T-2)**

2.5.9. Develop written procedures and assign responsibilities to ensure system forms, equipment forms, and MIS documentation are complete, accurate, and establish a schedule to accomplish a thorough review. **(T-2)** Documented procedures as a minimum will include:

2.5.9.1. The process to ensure system and equipment status is correctly reflected in maintenance forms and the MIS IAW TO 00-20- series publications.

2.5.10. Establish local procedures for management and maintenance of assigned training equipment to ensure they remain useful and safe. **(T-2)**

2.5.11. Implement and enforce use of MAJCOM approved MIS. **(T-2)**

2.5.12. Ensure maintenance is only performed by personnel who are trained and qualified. **(T-2)**

2.5.12.1. If required, remote maintenance by unqualified host technicians must be guided by qualified personnel. **(T-2)**

2.5.13. Ensure standardization of maintenance discipline, procedures, organizational structures, compliance, and management philosophy. **(T-2)**

2.5.14. Establish a central electronic storage for historical maintenance documentation for the maintenance flights. **(T-2)**

2.5.15. As needed, delegate day to day workings of responsibilities to 709 TMXS/DO. **(T-2)**

2.6. Technical Maintenance Squadron Deputy Responsibilities. The TMXS Deputy manages the manning, facilities, support agreements, and deployment functions for the squadron. The TMXS Deputy will:

2.6.1. Coordinate with the TMXS SEL to manage manpower authorizations. **(T-2)**

2.6.2. Manage process for local, functional or host country unique support. **(T-2)**

2.6.3. Attend or ensure the correct squadron Subject Matter Experts (SMEs) attend Integrated Product Meetings chaired by the SD and other meetings to ensure proper SD support to the field. **(T-2)**

2.7. Technical Maintenance Squadron Senior Enlisted Leader (SEL) Responsibilities. The SEL will advise and assist the TMXS/CC on their responsibilities as outlined in this chapter **(T-2)**. Additionally, the SEL will:

2.7.1. Ensure supervision and manning are balanced across all shifts and work centers to safely and efficiently accomplish the mission. **(T-2)**

2.7.2. Participate in a quarterly manning meeting with Squadron SELs/Group SELs to ensure manpower requirements and SEI coded billets are strategically distributed. **(T-2)**

2.7.2.1. Meeting will include a review and evaluation of the impact of personnel actions such as: work center/organizational manpower Authorization Change Requests (ACR), re-training, special duty requests, special assignment actions (SWAP, Palace Chase, etc.), SEI balance, DEROS extensions/ IPCOT requests, physical profile changes and personnel rotation plans to enhance mission effectiveness.

2.7.2.2. The Squadron SEL will provide the TMXS/CC coordinated manning recommendations that develop enlisted individual experience and knowledge for consideration. **(T-2)**

2.7.3. Ensure a sufficient number of personnel are qualified to perform mission critical tasks listed on the Special Experience Identifier (SEI) list. Refer to the applicable entry in AFMAN 36-2100 for details. Maintenance Supervision will review and approve individuals for addition to the SEI roster. **(T-2)**

2.7.4. Ensure adequate levels of supervision and manning are balanced across all shifts to safely and efficiently accomplish the mission. **(T-2)**

2.8. Technical Maintenance Squadron Maintenance Supervision Responsibilities. Maintenance Supervision consists of the Director of Operations (DO) and the Operations Superintendent. Maintenance Supervision advise the TMXS/CC on technical matters, lead a mission-focused maintenance effort, and manage resources necessary to accomplish the mission. They provide necessary administration to manage assigned responsibilities and control maintenance through Pro Supers, Flight CC/SUPT, and Section NCOICs/Chiefs in coordination with the Mission Systems Managers (MSM). Maintenance Supervision will:

2.8.1. Ensure systems and equipment are available to support unit training objectives. **(T-2)**

2.8.2. Ensure distribution of maintenance information & policies to all members. **(T-2)**

2.8.3. Review & evaluate management and production effectiveness. **(T-2)**

2.8.4. Ensure squadron Corrosion Control Program is implemented & managed IAW TO 1-1-8, *Application and Removal of Organic Coatings, Aerospace and Non-Aerospace Equipment*; TO 35-1-3, *Corrosion Prevention and Control, Cleaning, Painting, and Marking of USAF*

Support Equipment; TO 1-1-691, *Cleaning and Corrosion Prevention and Control, Aerospace and Non Aerospace Equipment*. **(T-2)**

2.8.5. Review supply products to monitor supply discipline. **(T-2)**

2.8.6. Monitor Due-In From Maintenance (DIFM) IAW AFI 23-101. **(T-2)**

2.8.7. Ensure Reports of Survey are completed IAW applicable guidance. **(T-2)**

2.8.8. Monitor requirements for special tools and Support Equipment (SE). **(T-2)**

2.8.9. Review monthly maintenance plan inputs provided by Plans, Scheduling, Documentation, and Analysis (PSD&A) prior to publication. **(T-2)**

2.8.10. Function as the primary AFTAC point of contact for all non-administrative interactions external to the squadron. **(T-2)**

2.8.11. Utilize Condition Based Maintenance (CBM+) component status to ensure proactive equipment maintenance practices. **(T-2)**

2.8.12. Ensure equipment is available to support squadron training objectives. Each maintenance work center will ensure adequate training aids are available to provide an appropriate learning environment without risking operational systems. **(T-2)**

2.8.13. Maintenance Training (MT). Maintenance Training assists the TMXS/CC by providing Additional Duty Unit Training Managers to manage the enlisted specialty training program. MT will:

2.8.13.1. Schedule initial proficiency and qualification training needed IAW DAFI 36-2670. **(T-2)**

2.8.13.2. Utilize the approved training management software platform to document all training actions. **(T-2)**

2.8.13.3. Serve as point of contact for all training matters. **(T-2)**

2.8.13.4. Develop and maintain standardized master task listing, Master Training Plans (MTPs), and Task Training Guides (TTGs) for maintenance work centers. **(T-2)**

2.8.13.5. Coordinate with work centers on Status of Training (SOT). **(T-2)**

2.8.13.5.1. Brief TMXS/CC on SOT at least quarterly. **(T-2)**

2.8.13.5.1.1. At a minimum, the SOT briefing contents will include items identified in DAFI 36-2670.

2.8.13.6. Ensure initial skills review of newly assigned personnel are performed and documented IAW DAFI 36-2670. **(T-2)**

2.8.13.7. Ensure task evaluations are performed on all maintenance technicians within 6 months of assignment and follow-up evaluations at least every 24 months. **(T-2)**

2.8.13.7.1. Identify critical tasks from the work center master task listing. **(T-2)** Critical tasks are tasks that could have a significant impact on mission completion or safety of personnel or equipment.

2.8.13.7.2. Task evaluations will be logged in member's training journal entries and will include any strength, weaknesses, areas of improvement, and GO/NOGO status. **(T-2)**

2.9. TMXS Flight Chief or Detachment Commander/Chief Responsibilities. The Flight Chief or Det CC/Chief is directly responsible for the well-being of personnel under their command. The Flight Chief or Det CC/Chief will:

2.9.1. Provide management and oversight and ensure each section is adequately resourced to efficiently execute their mission. **(T-2)**

2.9.2. Advise the Squadron SEL of any factors limiting the maintenance capability, to include any work and workforce planning factors. **(T-2)**

2.9.3. Ensure an annual scheduled maintenance plan is developed and reconciled with operational mission requirements and budgetary restraints and execute scheduled maintenance plans, and send to PSD&A for inclusion in annual schedule **(T-2)**

2.9.4. Implement the squadron's Mishap Prevention Program for the work center IAW DAFI 91-202 and **Chapter 1** of this instruction and other governing directives. **(T-2)**

2.9.5. Coordinate occupational and environmental health risk assessments with Bioenvironmental Engineering (BE) IAW DAFMAN 91-203 to identify proper PPE and facility requirements. **(T-2)**

2.9.5.1. Monitor and ensure environmental and applicable health requirements, physicals and respirator training, initial and recurring requirements, etc., are accomplished when required for assigned personnel IAW DAFMAN 91-203; DAFI 48-137, *Respiratory Protection Program;* and DAFI 48-127, *Occupational Noise and Hearing Conservation Program*. **(T-2)**

2.9.6. Ensure use of the TO/TI improvement program and ensure work center TO/TI files are maintained IAW TO 00-5-1, *Air Force Technical Ordering System*, and TI 00-5-12, *Specification for Preparation of Technical Instruction Publications*. **(T-2)**

2.9.7. Evaluate maintenance quality, personnel qualifications, and training of assigned personnel. **(T-2)**

2.9.8. Ensure training requirements are executed to support established training plan and individual AFSC Career Field Education and Training Plan IAW DAFI 36-2670. **(T-2)**

2.9.9. Review PSD&A, QA, and other management reports to determine appropriate management actions to meet new workloads, target deficiencies, and identify and correct root causes. **(T-2)**

2.9.10. Establish flight/detachment specific emergency action procedures to respond to disaster control and severe weather and forward to the TMXS/CC and MOCC. **(T-2)**

2.9.11. Establish and enforce a flight/detachment Precious Metals Recovery Program, as applicable, IAW AFI 23-101 and TO 00-25-113, *Conservation and Segregation of Critical Alloy and Precious Metal Bearing Parts and Scrap.* **(T-2)**

2.9.12. Implement an effective Corrosion Prevention and Control Program IAW TO 1-1-8, TO 35-1-3 and TO 1-1-691. **(T-2)**

2.9.13. Ensure proper asset management by reviewing MIS data records and other pertinent products to minimize shortfalls. **(T-2)**

2.9.14. Ensure repairable/non-repairable parts are processed through repair channels within the required time frame IAW AFI 23-101. **(T-2)**

2.9.15. Manage DIFMs IAW AFI 23-101 and **Chapter 7** of this publication. **(T-2)**

2.9.16. Manage requirements for bench stocks IAW AFMAN 23-122, *Materiel Management Procedures*. **(T-2)**

2.9.17. Ensure adequate levels of supervision and manning are balanced across all shifts to safely and efficiently accomplish the mission. **(T-2)**

2.9.18. Establish a Work Center Safety Program IAW DAFI 91-202, DAFMAN 91-203 and include any locally prescribed safety requirements (if applicable). **(T-2)**

2.9.19. Appoint Supply Liaisons in writing and establish assigned responsibilities. Appointment letters will be sent to and kept on file with the 709 SPTS/MSL section. **(T-2)**

2.10. Maintenance Operations Control Center (MOCC). The MOCC monitors and coordinates maintenance production, and execution of the operations and maintenance schedules. The MOCC will:

2.10.1. Communicate priorities to the field for expedited or delayed maintenance/shipping requests based on daily operations schedule and mission priorities. **(T-2)**

2.10.2. Provide 24/7 monitoring and repair of AFTAC mission equipment, networks, and field maintenance operations. **(T-2)**

2.10.3. Act as the point of contact for all field maintenance teams and geographically separated maintenance personnel. **(T-2)**

2.10.4. Monitor and coordinate maintenance actions, mission system outages, and execution of the operations and maintenance schedules while maintaining visibility of mission network health indicators. **(T-2)**

2.10.5. Brief the TMXS/CC and Maintenance Supervision as required. **(T-2)**

2.10.6. Maintain a list of OPRs, POCs, on-call technicians, and chains of command for work centers, contractors, international partners, and customers that MOCC interacts with. **(T-2)**

2.10.7. Ensure that maintenance actions, supply ordering, and shipping are documented in the MIS, for each shift. **(T-2)**

2.10.8. Develop and manage Outage Notification program. Outage requests may be related to any mission equipment, communications circuit, or network that MOCC monitors. **(T-2)**

2.10.9. Notify applicable work centers when operational status changes. **(T-2)**

2.10.10. Verify equipment status and ETICs with the maintenance work centers and ensure they are documented in the MIS. **(T-2)**

2.10.11. Develop, implement, and maintain checklists to verify and troubleshoot issues with mission equipment. **(T-2)**

2.10.12. Monitor and display the status of mission equipment as directed by the TMXS/DO including Status of Health (SOH), Estimated Time in Commission (ETIC), data interruptions, and maintenance actions. **(T-2)**

2.10.13. Complete supply requests for customers without access to standard supply systems. **(T-2)**.

2.10.14. Act as the primary POC for discrepancies reported from supported work centers, and maintenance units in the field in coordination with MSM. **(T-2)**

2.10.15. MOCC Manager Responsibilities. The MOCC Manager drives the daily operations of the MOCC. The MOCC Manager will:

2.10.15.1. Act as the SME for all MOCC related issues. **(T-2)**

2.10.15.2. Review TO/TI and checklist change requests submitted by MOCC. **(T-2)**

2.10.15.3. Represent MOCC during program reviews, evaluations, and technical discussions for software system upgrades and modifications. **(T-2)**

2.10.15.4. Evaluate proposed engineering actions for potential impacts to operations and maintenance activities. **(T-2)**

2.10.15.5. Brief TMXS/DO on software issues, and proposed solutions as they relate to system administration on equipment in the field or under development. **(T-2)**

2.10.15.6. Represent TMXS for system acceptance, operational, and prototype testing, or system upgrades pertaining to MOCC. **(T-2)**

2.11. Mission Support Sections (MXS). The Mission Support Sections will maintain continuity of the fielded systems, networks, and assist development of new systems for the assigned mission areas. The Mission Support Sections consists of the MSM, the Pro Super, other necessary personnel as needed, and will:

2.11.1. Direct maintenance activities through host country personnel, contractors, and other Department of Defense components. **(T-2)**

2.11.2. Deploy to field locations to troubleshoot system problems beyond the capability of site personnel, analyze causes of deficiency and provide on-the-spot corrective action. **(T-2)**

2.11.3. Support AFTAC/CC, Systems Integration Directorate, and Systems Development Directorate with new mission system and software development. **(T-2)**

2.11.3.1. Test, verify, and validate equipment, software, and documentation. **(T-2)**

2.11.3.2. Develop training plans and programs in coordination with the Maintenance Training section. **(T-2)**

2.11.4. Chair mission systems working group meetings to outline issues and plan future development. **(T-2)**

2.11.5. Coordinate with contractor support for mission system software development and upgrades. **(T-2)**

2.11.6. Provide field support for troubleshooting discrepancies, as requested. **(T-2)**

2.11.7. Participate in Configuration Control Board (CCB) discussions/meetings. **(T-2)**

2.11.8. Liaise with foreign partners and hosts on maintenance related issues and outages. **(T-2)**

2.11.9. Process Technical Assistance Requests (TAR) and Maintenance Assistance Requests (MAR) IAW TO 00-5-1, TO 00-25-107, TO 00-25-108, *Communications-Electronics (C-E) Depot Support,* and other applicable guidance for Geophysical Fielded Systems (GFS) system. **(T-2)**

2.11.10. Processes and reviews AFTO Form 22s, *Technical manual Change Recommendation and Reply* for assigned mission systems as the Lead Command Control Point (CCP) IAW TO 00-5-1. **(T-2)**

2.11.11. Process and report on data quality and calibrations. **(T-2)**

2.11.12. Perform field system calibrations and compare with expected results. **(T-2)**

2.11.13. Perform seismic data quality review after equipment replacement and periodically on all other data channels. **(T-2)**

2.11.14. Evaluate any events beyond their scheduled start date and time and provide a recommendation to the Flight CC/Chief for closure, rescheduling, or deferral as appropriate. **(T-2)**

2.11.15. Remotely troubleshoot data aggregators. **(T-2)**

2.11.16. Assist with GFS troubleshooting when required. **(T-2)**

2.11.17. Perform Public Key Infrastructure (PKI) operator for US IMS sites and other sites as nominated. **(T-2)**

2.11.18. Deploy to field sites during GFS installation and upgrade functions. **(T-2)**

2.11.19. Perform configuration and testing of spare data acquisition systems prior to shipment to field sites. **(T-2)**

2.11.20. Reconfigure field systems, as needed, to accommodate network infrastructure, and the United States National Data Center (USNDC) data acquisition system changes. **(T-2)**

2.11.21. Maintain USNDC master metadata files for all geophysical stations (~300), to include instrument response files. **(T-2)**

2.11.21.1. Includes: making updates to existing stations, adding new stations, reformatting source metadata to match USNDC file formats, coordinate creation and modification of instrument response files, and initiate USNDC station update process.

2.11.22. Evaluate candidate systems for future field system upgrades. Includes testing data acquisition, calibration performance to determine if systems meet requirements. **(T-2)**

2.11.23. Perform special studies, as requests, on seismometer performance, and field data acquisition system performance. **(T-2)**

2.11.24. Write scripts for field data acquisition systems to assist host and MOCC personnel in controlling data flow, troubleshooting outages, and providing additional functions not available with the provided software. **(T-2)**

2.11.25. Write and maintain software used to produce data availability statistics used by customers to evaluate contractor performance, and trend maintenance actions/issues. **(T-2)**

2.11.26. Maintain USNDC testbed used to test new and updated station acquisition. **(T-2)**

2.11.27. Initiate firewall change process when changes to data flow from fields sites to the USNDC are needed. **(T-2)**

2.11.28. Advise field technicians on potential maintenance actions when system performance has degraded or system components have failed. **(T-2)**

2.11.29. Maintenance Plans, Scheduling, Documentation and Analysis (PSD&A)

2.11.29.1. Responsibilities**.** PSD&A is responsible for coordinating equipment maintenance requirements and utilization scheduling between maintenance, operations, and external agencies. PSD&A also tracks, analyzes, and presents information to help senior leadership assess the health of the units' mission systems and equipment. They also act as the group POC for MIS issues and perform data analysis to assess and improve unit performance. PSD&A will:

2.11.29.1.1. Oversee AFTAC's maintenance scheduling and analysis effort. **(T-2)**

2.11.29.1.1.1. Notify applicable Maintenance Supervision of scheduling process discrepancies and recommended courses of action. **(T-2)**

2.11.29.2. Maintain historical documents and maintenance data essential for the development of maintenance plans, schedules, and analysis of historical maintenance events. **(T-2)**

2.11.29.3. Develop maintenance plans using work center input, periodic maintenance requirements, time compliance technical instruction/order requirements, and system historical data. **(T-2)**

2.11.29.3.1. Serve as the centralized point of contact for MIS change requests. **(T-2)**

2.11.29.3.2. Grant MIS access as it pertains to system sustainment functions and retain DD Form 2875, *System Authorization Access Request (SAAR).*

2.11.29.3.3. Serve as Office of Primary Responsibility (OPR) for DIT. **(T-2)**

2.11.29.3.4. Ensure assigned DIT members are trained in the use of MIS applicable programs in accordance with locally developed procedures. **(T-2)**

2.11.29.3.5. Audit JDD (JDD) entries in the MIS to verify corrective action narratives match the action taken codes, and the Work Unit Code (WUC) utilized most accurately identifies the affected system. **(T-2)**

2.11.29.4. Serve as SME on maintenance scheduling issues, MIS issues, maintenance data documentation and all equipment historical documents, for QA during inspections/evaluations. **(T-2)**

2.11.29.5. Evaluate the following functions quarterly: **(T-2)**

2.11.29.5.1. TCTO/TCTI, Periodic Maintenance Routine (PMR). **(T-2)**

2.11.29.5.2. Annual maintenance schedule accomplishment. **(T-2)**

2.11.29.6. Inform Maintenance Supervision of maintenance capabilities or limiting factors that could affect maintenance production. **(T-2)**

2.11.29.7. Develop and maintain a standardized master Site Jacket File. **(T-2)**

2.11.29.7.1. Review all master Site Jacket Files annually using a locally developed PSD&A checklist. **(T-2)**

2.11.29.7.2. PSD&A will ensure Site Jacket Files are available to all work centers. **(T-2)**

2.11.29.7.3. Work centers will provide information in the Site Jacket File. **(T-2)**

2.11.29.8. Provide assistance for data extraction and interpretation from MIS. **(T-2)**

2.11.29.9. Review historical and maintenance data for anomalies and identify areas requiring further study. **(T-2)**

2.11.29.9.1. Provide presentations, reports, studies/analysis, and briefings for joint scientific committees if requested by the MSM. **(T-2)**

2.11.29.9.2. Analyze equipment performance trends to identify problems affecting the unit mission. **(T-2)**

2.11.29.9.3. Provide predictive analytical information and recommendations to Maintenance Supervision. **(T-2)**

2.11.29.10. Manage MIS Job Data Documentation subsystems and maintenance code listings IAW TO 00-20-2. **(T-2)**

2.11.29.10.1. Review status, inventory and utilization transactions for accuracy and coordinate corrections with applicable work centers for AFTAC owned and controlled equipment. **(T-2)**

2.11.29.11. Conduct periodic maintenance production meetings per **paragraph 2.5.5**. **(T-2)**

2.11.30. Production Superintendent (Pro Super) Responsibilities. The Pro Super will be a SNCO responsible for maintenance production in their assigned mission area. The Pro Super should possess an SEI from their assigned mission area. The Production Superintendent will:

2.11.30.1. Direct the overall maintenance effort of their unit. **(T-2)**

2.11.30.2. Review and evaluate mission and maintenance effectiveness. **(T-2)**

2.11.30.3. Analyze personnel and equipment performance history and report findings to Maintenance Supervision as required. **(T-2)**

2.11.30.4. Initiate management actions to meet new workloads or correct reported/perceived deficiencies. **(T-2)**

2.11.30.5. Assist in development of an annual scheduled maintenance plan. Manage deferred maintenance and back-ordered parts. **(T-2)**

2.11.30.6. Enforce supply discipline in accordance with 23-Series AFIs. **(T-2)**

2.11.30.7. Monitor maintenance operations and coordinate support and priority with specialist sections and MOCC. **(T-2)**

2.11.30.8. Identify production requirements and shortfalls to Maintenance Supervision. **(T-2)**

2.11.30.9. Participate in developing and executing the monthly and weekly maintenance schedules/plans. **(T-2)**

2.11.30.10. Manage the maintenance production effort by assigning priorities to meet the maintenance schedules. **(T-2)**

2.11.30.11. Provide MOCC with mission systems status updates as required. **(T-2)**

2.12. Support Squadron Commander (SPTS/CC) Responsibilities. The SPTS/CC will:

2.12.1. Develop procedures for the implementation of the repair enterprise core management processes. **(T-2)**

2.12.2. Establish repair enterprise workload review process. **(T-2)**

2.12.3. Develop metrics and coordinate key metric standards with affected AFTAC techniques. **(T-2)**

2.12.4. Establish a standardized methodology for providing input to the repair requirements computation process, and review information being provided to requirements generator(s). **(T-2)**

2.12.5. Assign Node Manager (NM) for CRF management. **(T-2)**

2.12.6. Establish procedures to ensure the rapid movement of sustainment assets between CRF and MGN supported units. **(T-2)**

2.12.7. Establish a Vehicle Control Program IAW AFI 24-302, *Vehicle Management* as required. **(T-2)**

2.13. Support Squadron Senior Enlisted Leader (SEL) Responsibilities. The Support Squadron SEL will:

2.13.1. Incorporate approved changes to the Planning, Programming, Budgeting, and Execution (PPB&E) process. **(T-2)**

2.13.2. Ensure assignment of qualified workforce necessary to meet mission objectives. **(T-2)**

2.14. Section Chief/NCOIC Responsibilities. Is responsible to the Flight Chief or Det CC/Chief for the leadership, supervision, and training of assigned personnel. The Section NCOIC/Chief is a first-line supervisor of maintenance production, as the technical authority and advisor. The Section NCOIC/Chief will:

2.14.1. Monitor requirements for hand tools, special tools, and SE and take necessary action to ensure availability, as required IAW **Chapter 6** of this instruction. **(T-2)**

2.14.2. Monitor, track, and ensure occupational safety, fire prevention, occupational and environmental health requirements are accomplished for assigned personnel. **(T-2)**

2.14.3. Manage supply programs (e.g., bench stocks, and operating stocks) IAW **Chapter 7** of this instruction. **(T-2)**

2.14.4. Manage the section's Repair Cycle Program. **(T-2)**

2.14.5. Manage Hazardous Material (HAZMAT) and ESOH items IAW AFI 90-801 and AFMAN 32-7002. **(T-2)**

2.14.6. Executes maintenance activities to meet mission requirements IAW directives from Maintenance Supervision. **(T-2)**

2.15. Logistics Manager Responsibilities. The Logistics Manager will:

2.15.1. Review proposed metrics to ensure accuracy and relevance to production requirements. **(T-2)**

2.15.2. Monitor CRF operations and provide supply chain and funding guidance to CRF IAW applicable instructions. **(T-2)**

2.15.3. Liaison with SPTG to ensure CRF capabilities are included in crisis action, contingency, and wartime planning. **(T-2)**

2.15.4. Manage CRF and supply chain management planning. **(T-2)**

2.15.5. Ensure activity level changes that drive environmental program impacts are coordinated through the SPTS Facilities function supporting the organizational commander. **(T-2)**

2.16. Mission Systems Manager (MSM) Responsibilities. Mission System Managers are appointed by the TMXS/CC and lead their mission related Mission Support Sections (MXS). The MSM will:

2.16.1. Exercise operational control over assigned mission systems and maintenance work centers and provide mobile maintenance repair capabilities as requested. **(T-2)**

2.16.2. Approve waivers for periodic maintenance routine extensions that exceeds 90 days. **(T-2)**

2.16.3. Act as AFTAC Subject Matter Expert (SME) for all issues related to assigned mission systems. **(T-2)**

2.16.4. Advise on assigned mission systems life cycle management to include new system fielding recommendations. **(T-2)**

2.16.5. Review/validate appropriate stock levels for bench stock, shop stock, and operating stock for assigned mission systems, standardizing across work centers to the extent possible. **(T-2)**

2.16.6. Coordinate with assigned Item Managers to determine appropriate Forward Supply Point levels. **(T-2)**

2.16.7. Review Technical Assistance Requests (TAR) and Maintenance Assistance Requests (MAR) to determine appropriate ALC 107 routing IAW TO 00-5-1, *AF Technical Order System,* TO 00-25-107, and TO 00-25-108. **(T-2)**

2.16.8. Assist Surveillance and Analysis Group evaluators in data interpretation, problem resolution, and MIS accuracy. **(T-2)**

2.16.9. Direct actions related to deployment, relocation, and deactivation of mission system equipment and locations. **(T-2)**

2.16.10. Assist Item Managers with identification of individual supply assets requiring function check, calibration, or programming calibration or operational check before use. **(T-2)**

2.16.11. Manage coordination of site surveys for equipment locations. **(T-2)**

2.16.11.1. Will maintain copies of the surveys. **(T-2)**

2.17. Centralized Repair Facility (CRF) Flight CC/Chief Responsibilities. The CRF Flight CC/Chief will:

2.17.1. Ensure RN is integrated, synchronized, and is working efficiently with other segments of the supply chain. **(T-2)**

2.17.2. Oversee maintenance facilities, SE procurement and maintenance, resolve conflicting maintenance requirements between units, and in coordination with unit leadership. **(T-2)**

2.17.3. Assist SPTS/CC in establishing policies and procedures for CRF training, inventory control, and maintenance documentation. **(T-2)**

2.17.4. Assist SPTS/CC in coordinating with program office engineers to apply process discipline to the production of technical documentation and site configuration control. **(T-2)**

2.17.5. Ensure repair cost evaluations are performed and establish appropriate levels of review and repair authorization in repair sections IAW TO 00-20-3, TO 00-25-240, and TO 35-1-24, *Air Force Economic Repair/Replacement Criteria for Selected Warner Robins Air Logistics Complex (ALC) Managed Support Equipment (SE)*. **(T-2)**

2.17.6. Approve/determine appropriate CRF stock levels for bench stock, shop stock, and operating stock. **(T-2)**

2.18. CRF Section Chief Responsibilities.

2.18.1. Provide liaison between the staff and production supervisors. **(T-2)**

2.18.2. Advise the SPTS/CC on problems not identified through maintenance data systems or QA inspection reports. **(T-2)**

2.18.3. Manage the section’s Repair Cycle Program. **(T-2)**

Chapter 3

MAINTENANCE WORK CENTERS

3.1. General. Provides centralized field maintenance support and performs maintenance tasks that are assigned to mission equipment. Perform system functional checks, calibrations, programming calibrations or operational checks before use. Maintenance Work Centers consist of both Subsurface and Materials Flights/Detachments. Maintenance Work Centers will:

3.1.1. Complete Maintenance Data Documentation IAW TO 00-20-2, and record maintenance actions in the MIS. **(T-2)**

3.1.2. Report problems which impact personnel safety or endanger mission completion to the TMXS/CC and DO. **(T-2)**

3.1.3. Coordinate proposed field activities with PSD&A, MOCC, and Maintenance Supervision. **(T-2)**

3.1.4. Enforce Corrosion Control Program IAW TO 1-1-8, TO 35-1-3, and Equipment Specific TO/TIs. **(T-2)**

3.1.5. Manage stock levels for bench stock, shop stock, operating stock, and work order residue. **(T-2)**

3.1.6. Coordinate with PSD&A to develop a Temporary Duty (TDY) schedule to ensure maintenance actions are accomplished. **(T-2)**

3.1.7. Comply with work center safety program IAW DAFI 91-202, DAFMAN 91-203, and other applicable safety directives. **(T-2)**

3.1.8. Ensure that maintenance actions, supply ordering, and shipping are documented in the in accordance with guidance provided by PSD&A. **(T-2)**

3.1.9. Review all discrepancies in the MIS to monitor scheduled and deferred events. **(T-2)**.

3.1.10. Submit Outage Notification Requests for any maintenance action meeting reportable criteria specified by MOCC. **(T-2)**.

3.1.11. Provide MOCC with maintenance technician on-call schedules and contact information. **(T-2)**.

3.1.12. Review completed maintenance data documentation to maintain accuracy. **(T-2)**.

3.1.13. Identify and report logistics requirements and shortfalls to Maintenance Supervision. **(T-2)**.

3.1.14. Coordinate with the Maintenance Training section to establish training program requirements and conduct reviews IAW DAFI 36-2670. **(T-2)**.

3.1.15. Assist MSM with project planning and oversight for new equipment installation/testing, as required. **(T-2)**.

3.1.16. Generate deficiency reports whenever deficient equipment is found in the work-center or field locations. Coordinate reports with QA to enable trending of mission equipment. **(T-2)**

3.1.17. Nominate a Data Integrity Team (DIT) monitor responsible for reviewing data prior to submission to PSD&A. **(T-2)**

Chapter 4

QUALITY ASSURANCE

4.1. General. Maintenance quality and equipment reliability is the responsibility of all maintenance personnel. The combined efforts of Quality Assurance (QA) personnel, maintenance leaders, and technicians are necessary to ensure high quality maintenance production and equipment reliability. The QA staff evaluates the quality of maintenance accomplished, the quality of maintenance procedures, and performs necessary functions to manage the MSEP. Personnel assigned to QA are not an extension of the work force and will not be tasked to perform equipment inspections (e.g., perform In-Process Inspections (IPI), run MSEP checklists). QA serves as the primary technical advisory agency in the maintenance organization, assisting maintenance supervision at all levels to identify, validate and/or resolve workmanship, proficiency and/or compliance issues impacting mission generation. The evaluation and analysis of deficiencies and problem areas identified are key functions of QA that highlight and reveal underlying causes of poor quality in the maintenance production effort. Equipment condition and personnel proficiency are validated through the MSEP and be recorded using a MAJCOM approved QA database. Civil service and contracted personnel are to follow requirements established in their respective civilian position description/contract and accepted quality assessment system.

4.1.1. For functions inherent to AFTAC Maintenance, QA will have at a minimum one 962 Subsurface Maintenance and one 963 Materials Maintenance SEI.

4.1.2. For functions not inherent to maintenance personnel, or for which there is a dedicated inspection office (i.e. Safety, or Training), QA should request the OPR to assist with assessments for materiel management functions.

4.2. Responsibilities. QA Inspectors have the authority to observe, correct and document applicable maintenance activities performed within the SPTG. QA will:

4.2.1. Implement and administer the MSEP, Product Improvement Program (PIP) and other inspection programs as applicable. **(T-2)**

4.2.2. Review and analyze any incident involving damage to equipment or injury of personnel to determine if trend analysis or MSEP focus is warranted. **(T-2)**

4.2.3. Enforce TCTO and TCTI Program requirements IAW, TI 00-5-12, TO 00-5-1 and TO 00-5-15, *Air Force Time Compliance Technical Order System*. **(T-2)**

4.2.4. Manage OTIs. **(T-2)**

4.2.5. Augment evaluations at the request of the work center. **(T-2)**

4.2.6. Evaluate unit maintenance management procedures, including locally developed forms, publications, OIs, checklists etc., for accuracy, intent, and necessity. **(T-2)**

4.3. QA Superintendent Responsibilities. In addition to the applicable Flight CC/Chief duties outlined in **Chapter 2**, the QA Superintendent will:

4.3.1. Develop and maintain a master training plan to train all QA Inspectors, and include augmentees, if applicable. **(T-2)**

4.3.2. Ensure that a MSEP is developed, and local inspections are conducted to ensure their programs, processes, maintenance technician proficiency, equipment condition and other focus areas are in compliance with AF, MAJCOM, AFTAC, and local directives. **(T-2)**

4.3.2.1. The MSEP will be developed in conjunction with inputs from Maintenance Supervision and Group Leadership. **(T-2)**

4.3.3. Notify the appropriate agencies when deficiencies are found in any instructions. **(T-2)**

4.3.4. Review maintenance-related instructions, supplements, operating instructions, forms and local/functional checklists every two years or when source data changes, for accuracy, intent and necessity. **(T-2)**

4.3.4.1. The QA Superintendent will document the review once complete. **(T-2)**

4.3.5. Ensure management and special inspections are performed. **(T-2)**

4.3.6. Coordinate on all requests for locally manufactured, developed, and modified tools and or equipment to be used on mission equipment and maintain records for approved requests. **(T-2)**

4.3.6.1. This includes pictures or drawings and a description of the use for each item.

4.3.6.1.1. If a TO/TI contains the option for these tools or equipment, QA does not need to coordinate or maintain the records on that tool as long as the tool remains approved by the TO/TI.

4.3.7. Verify IPI requirements from Mission System Managers and sources outlined in TO 00-20-1 and publish combined Support Group IPI listing every 2 years as a minimum or when source data changes. **(T-2)**

4.3.8. Develop KTLs/RILs in conjunction with the Mission System Managers and Support Group SEL (if required). **(T-2)**

4.3.8.1. Provide copies of approved KTL/RIL to all affected organizations.

4.3.9. Ensure AQL standards are developed for all tasks including key tasks and routine inspections not included on the MAJCOM AQL. **(T-2)**

4.3.10. Ensure agendas and presentations are compiled for the MSEP summary. **(T-2)**

4.3.11. Designate a Chief Inspector. **(T-2)**

4.3.12. Designate individual to be the Product Improvement Manager (PIM). **(T-2)**

4.3.13. Ensure QA Representatives are appointed for geographically separated work centers. **(T-2)**

4.3.14. In coordination with Maintenance Supervision, the QA Superintendent establishes QA augmentee duties.

4.4. Chief Inspector Responsibilities. The Chief Inspector is responsible to the QA Superintendent for ensuring functions listed below are performed and is responsible for applicable Section NCOIC/Chief duties in **Chapter 2** of this instruction. The Chief Inspector will:

4.4.1. Use assigned inspectors to provide on-the-spot assistance to correct problems. **(T-2)**

4.4.2. Spot-check TOs/TIs, inspection work cards, checklists, and job guides during evaluations and inspections for currency and serviceability. **(T-2)**

4.4.3. Review QA database and MSEP inspection summary inputs for accuracy and content. **(T-2)**

4.4.4. Initiate actions when additional attention is required to resolve adverse maintenance trends or training problems. **(T-2)**

4.4.5. Review and compile inputs for updating the IPI listing. **(T-2)**

4.4.5.1. Maintain a copy of the Support Group approved IPI listing with the signature and date of review/certification.

4.4.6. Review Category II major discrepancies for trends quarterly. **(T-2)**

4.4.6.1. If frequency or severity of identified discrepancies warrant inclusion of that item into a specific TO/TI governing an action or inspection, the QA Chief Inspector must submit an AFTO Form 22 or develop a local work card, local page supplement or checklist IAW TO 00-5-1.

4.4.7. Establish procedures for QA Inspectors to document completed inspections. **(T-2)**

4.4.8. Review MSEP data annually to identify high-missed carded items from PEs and Quality Verification Inspections (QVI). **(T-2)** A high-missed carded item is defined as any work card item missed at least three times during a one-year period.

4.4.8.1. Include this data in the monthly MSEP summary. **(T-2)**

4.4.9. Conduct Evaluator Proficiency Evaluation (EPE) on each inspector. **(T-2)**

4.4.9.1. EPEs will be conducted while the Chief Inspector assesses one Personnel Evaluation (PE) and one technical inspection (QVI/SI).

4.4.9.2. Each QA Inspector, permanent or augmentee, must pass both EPEs prior to performing unsupervised evaluations and inspections.

4.4.9.2.1. QA augmentees require an annual EPE on either a PE or technical inspection.

4.4.9.3. Document QA Inspector training in AF approved electronic training records.

4.5. QA Inspector Responsibilities. QA Inspectors will:

4.5.1. Evaluate maintenance tasks and inspections to include items identified by the KTL/RIL. **(T-2)**

4.5.2. Enter inspection and evaluation reports into the MAJCOM-approved QA database. **(T-2)**.

4.5.3. Perform QA review of TCTOs/TCTIs, OTIs, modification proposals, Deficiency Reports (DRs), AFTO Form 22s, instructions and supplements. **(T-2)**

4.5.4. Provide training/instruction as applicable to address deficiencies identified during evaluations/inspections. **(T-2)**

4.5.5. Evaluate maintenance documentation and Site Jacket Files annually, in coordination with PSD&A. **(T-2)**.

4.6. QA Representative (QAR) Responsibilities. QARs are appointed by the QA Superintendent to perform inspections and evaluations at geographically separated locations.

4.7. QA Inspector Training. As a minimum, the local QA Inspector Training Plan will include the applicable items listed below to ensure QA program standardization.

4.7.1. Training must cover inspection and evaluation techniques, documenting inspection worksheets and actions to prevent personnel injury or property/equipment damage.

4.7.2. All EPEs must be documented in the MIS and/or MAJCOM-approved QA database.

4.7.3. QA Inspectors inspecting outside of their AFSC will be task qualified on a Work Center Job Qualification Standard (WJQS) in the AF approved electronic training records for the KTL requirements they evaluate. **(T-2)**

4.7.3.1. Chief Inspectors will identify other critical tasks requiring DAF Form 797, *Job Qualification Standard Continuation/Command JQS* qualification (QA WJQS) within the AF approved electronic training records as required. **(T-2)**

4.7.4. QA Inspectors may evaluate welding operations and processes. However, QA Inspectors will not evaluate completed welds unless certified IAW TO 00-25-252, *Intermediate and Depot Level Maintenance Instructions, Aeronautical Equipment Welding*. **(T-2)**

4.7.5. QA Augmentation. If a functional area does not warrant a full-time position in QA, but specialized expertise is required, qualified technicians may be selected to perform augmentee duties. QA must maintain a listing of current augmentees.

4.8. Maintenance Standardization and Evaluation Program (MSEP). The purpose of the MSEP is to provide units with a method of evaluating technical compliance and to measure how well they comply with established standards.

4.8.1. A MSEP will be developed and executed to ensure programs, processes, maintenance technician proficiency, equipment condition and other focus areas are in compliance with AF, MAJCOM and local directives. The MSEP is not applicable to contract maintenance activities unless required by the contract Statement of Work or Performance Work Statement.

4.8.1.1. The MSEP will be developed in conjunction with inputs from assigned Maintenance Supervision and Group Leadership and will be executed by QA.

4.8.1.2. The Support Group Commander will focus the program on problem areas where improvements are needed. **(T-2)**

4.8.1.3. The following types of evaluations, inspections and observations support the MSEP: PEs, QVIs, SIs, Management Inspection (MI)s, Detected Safety Violation (DSV)s, Technical Data Violation (TDV)s, Unsatisfactory Condition Report (UCR)s, and when directed, other inspections.

4.8.1.3.1. These inspection terms may differ based on MAJCOM-approved QA databases. If so, AFTAC will provide terms and definitions.

4.8.2. MSEP Focus Areas. QA will assess how units are meeting compliance goals and will identify areas of opportunity for improvement. **(T-2)** The MSEP will focus on:

4.8.2.1. Compliance with and currency of TO/TIs and directives.

4.8.2.1.1. Ensure personnel at all levels are responsible and accountable for enforcing mandatory standards and ensuring all applicable TO/TIs and directives are complete, current and used.

4.8.2.2. Equipment forms documentation.

4.8.2.2.1. Ensure forms used to document any maintenance related action is documented IAW 00-20 series TOs, specific equipment TO/TI requirements, and other applicable directives and supplements.

4.8.2.3. Equipment Inspections.

4.8.2.3.1. Ensure equipment is inspected IAW TOs/TIs and directives.

4.8.2.4. Compliance and Management of Safety, Environmental, Bioenvironmental and Housekeeping Programs.

4.8.2.4.1. Personnel at all levels are responsible for minimizing risk to equipment, personnel and the environment.

4.8.2.5. Training.

4.8.2.5.1. Verify training is correctly documented and ensure individuals are qualified/certified to perform evaluated tasks.

4.8.2.6. Unit-Directed Programs.

4.8.2.6.1. Verify units' programs are in compliance with local directives.

4.8.2.7. Key Task List (KTL). The KTL is an AF, MAJCOM or SPTG developed list of required inspections that cover tasks that are complex and tasks affecting safety of personnel and mission equipment.

4.8.2.7.1. All maintenance actions/functions listed on the KTL require mandatory call-in to QA each time the maintenance action/function is accomplished.

4.8.2.7.1.1. QA evaluators will respond and perform an evaluation. **(T-2) Exception:** The SPTG/CC or designated representative may waive the inspection.

4.8.2.7.1.2. QA will track all KTLs called in, waived or completed and maintain a list of Support Group-designated KTL waiver authorities. **(T-2)**

4.8.2.7.2. QA will review and update the KTL list at least every 2 years to ensure it encompasses those maintenance actions/functions directly affecting quality of maintenance. **(T-2)**

4.8.2.8. Routine Inspection List. The RIL is an AF, MAJCOM, or SPTG developed list of routine inspections that must be performed. Frequency is determined by SPTG/CC.

4.8.2.8.1. QA will consolidate Maintenance Supervision inputs/suggested changes to the RIL and obtain SPTG/CC approval. **(T-2)**

4.8.2.8.2. Tasks will not be removed from the RIL without issuing authorities' approval (e.g., AF, MAJCOM, SPTG/CC).

4.8.2.8.3. The RIL must contain the following if applicable to the unit:

4.8.2.8.3.1. Equipment forms/MIS documentation.

4.8.2.8.3.2. Technical data.

4.8.2.8.3.3. CTK Program.

4.8.2.8.3.4. TMDE calibrations when the performing work center is not a PMEL IAW TO 00-20-14.

4.8.2.8.3.5. Housekeeping.

4.8.2.8.3.6. Vehicles.

4.8.2.8.3.7. Supply discipline (e.g., TNB, DIFM).

4.8.2.8.3.8. Equipment washes/ equipment corrosion inspections.

4.8.2.8.3.9. Environmental compliance.

4.8.2.8.3.10. TCTO Program.

4.8.2.8.3.11. Time-Change Program.

4.8.2.8.3.12. Maintenance Cyber Discipline.

4.8.2.9. Routine Inspection List (RIL) will be evaluated at least quarterly. QA must review and update the list at least annually. **(T-2)** Refer to Lead Command RIL for additional focus items: **https://usaf.dps.mil/teams/10679/SitePages/Home.aspx?RootFolder=%2Fteams%2F10679%2FAFKN%5FDocs%2FACC%20LEAP%20Data&FolderCTID=0x012000B93593353BACCF4BBAC102440DE68E50&View=%7B0130BABB%2D5483%2D4C6B%2D83A6%2D2288B4FA4D6F%7D**.

4.8.2.10. ACC standardized Acceptable Quality Levels (AQL) are found at: **https://usaf.dps.mil/teams/10679/SitePages/Home.aspx?RootFolder=%2Fteams%2F10679%2FAFKN%5FDocs%2FACC%20LEAP%20Data&FolderCTID=0x012000B93593353BACCF4BBAC102440DE68E50&View=%7B0130BABB%2D5483%2D4C6B%2D83A6%2D2288B4FA4D6F%7D** and will not be adjusted without ACC/A4PM concurrence.

4.8.3. MSEP Evaluation and Inspection (E&I) Plan. QA will develop an E&I Plan showing areas, types and numbers of inspections and evaluations to complete during the month. **(T-2)**

4.8.3.1. The E&I Plan, and changes to it, will be coordinated through Maintenance Supervision and approved by the SPTG/CC.

4.8.3.2. The E&I Plan will be reviewed and updated monthly based on trends in the maintenance complex and will be adjusted to meet the SPTG/CC focus areas.

4.8.3.3. When developing the E&I Plan, the QA Superintendent will:

4.8.3.3.1. Address areas of concern identified by maintenance managers. **(T-2)**

4.8.3.3.2. Tailor the plan for each squadron, flight or section. **(T-2)**

4.8.3.3.3. Coordinate and distribute the E&I Plan. **(T-2)**

4.8.4. Evaluation Criteria.

4.8.4.1. Acceptable Quality Levels. AQLs denotes the maximum allowable number of minor findings that a process or product may be charged for the task to be rated "Pass" and are used to minimize subjectivity in assessing tasks identified by the MSEP.

4.8.4.1.1. AFTAC AQLs are standardized by equipment system and maintained by QA.

4.8.4.1.2. Support Group Commander will establish AQLs for tasks/inspections not included on the MAJCOM AQL listing. **(T-2)**

4.8.4.1.2.1. AQLs need to be derived/revised from QA performance-based data.

4.8.4.2. Discrepancy Categories.

4.8.4.2.1. Category I (CAT I). A required inspection/TO/AFI procedural item missed or improperly completed. This category is a specific AFI requirement, work card item or TO step, note, caution or warning for a specific condition or action. Use subclassifications of major or minor to indicate the discrepancy's relative severity.

4.8.4.2.2. Category II (CAT II). An obvious defect, which could have been readily detected by a technician or supervisor, but is not a specific AFI requirement, work card item or TO step, note, caution or warning for that specific evaluated task. Use sub-classification of major or minor to indicate the discrepancy's relative severity.

4.8.4.2.2.1. QA reviews CAT II major discrepancies quarterly to determine if frequency of items identified warrants inclusion in TOs. **(T-2)** If so, QA submits an AFTO Form 22 or electronic equivalent when using Integrated Management Information System (IMIS).

4.8.4.3. Findings.

4.8.4.3.1. A major finding is defined as a condition that would endanger personnel, jeopardize equipment or system reliability or warrant discontinuing the process or equipment operation.

4.8.4.3.1.1. Any major discrepancy will result in an automatic inspection failure.

4.8.4.3.1.2. The QA Inspector will intercede and declare a major finding when one additional action "would" result in one of the following: endanger personnel, jeopardize equipment or system reliability or warrant discontinuing the process or equipment operation. **(T-2)**

4.8.4.3.1.2.1. The QA Inspector will write up the major finding even though the jeopardizing action was never taken due to their intercession.

4.8.4.3.2. A minor finding is defined as an unsatisfactory condition that requires repair or correction, but does not endanger personnel, jeopardize equipment reliability or warrant discontinuing a process or equipment operation.

4.8.4.3.2.1. CAT II minor findings will be documented for trends but are not to be counted against the AQL.

4.8.5. Observations. This category represents observed events or conditions with safety implications or technical violations not related to an evaluation or inspection, are considered unsafe, in violation of established procedures, or in the case of equipment, unfit for operations.

Observations include: DSVs, TDVs, and UCRs. The MAJCOM-approved QA database is used to document any of the following conditions:

4.8.5.1. DSV. An observed unsafe act by an individual.

4.8.5.1.1. The QA Inspector must stop the unsafe act immediately. **(T-2)**

4.8.5.1.2. The QA Inspector will not document a separate DSV on an individual undergoing a PE since the unsafe act automatically results in a "Fail" rating on the PE. **(T-2)**

4.8.5.1.3. The QA Inspector will use DSV verbiage in the PE summary when a safety violation is committed during a PE. **(T-2)**

4.8.5.2. TDV. An observation of any person performing maintenance without the proper technical data available, available but not in use or not following the correct sequence of steps (if directed).

4.8.5.2.1. The technician must have knowledge of all general directives associated with the job prior to performing the task. **(T-2)** However, those general directives need not be present at the job site.

4.8.5.2.2. Do not document a separate TDV on an individual undergoing a PE, but use TDV verbiage in the PE summary since failure to use technical data automatically results in a "Fail" rating.

4.8.5.3. UCR. An unsafe or unsatisfactory condition, other than a DSV, chargeable to the work center supervisor.

4.8.5.3.1. UCRs will be documented even when it is not possible to determine who created the condition.

4.8.6. Evaluations. An evaluation represents the direct evaluation of a logistics action, inspection, or training conducted/performed by an individual or team. Evaluations are used to evaluate job proficiency, degree of training, and compliance with technical data or instructions.

4.8.6.1. Personnel Evaluations. A PE is an over-the-shoulder (direct) evaluation of a maintenance action or inspection. Individuals performing, supervising or evaluating maintenance tasks are subject to a PE. PEs may be performed on individuals working alone or as part of a team.

4.8.6.1.1. Rate PEs “Pass or Fail” based on established AQLs/standards.

4.8.6.1.2. Document the PE in the MAJCOM-approved database.

4.8.6.1.3. PEs will be accomplished on all technicians who perform maintenance based on the established frequency.

4.8.6.1.4. Types of PEs.

4.8.6.1.4.1. Individual Evaluations. This is a QA over-the-shoulder (direct) evaluation of a technician or supervisor performing a job.

4.8.6.1.4.2. Team Evaluations. This is a QA over-the-shoulder (direct) evaluation of technicians and supervisors performing a team task.

4.8.6.1.4.2.1. A team task is one requiring more than one person to complete

the task.

4.8.6.1.4.2.2. Team evaluations must accurately assess the proficiency of each individual under evaluation.

4.8.6.1.4.2.3. Errors committed by the team member(s) and not detected by the team chief will also be attributed to the team chief. Team evaluations are rated the same as PEs.

4.8.6.2. Performing a PE. When performing a PE, the QA Inspector will brief the individual or team on the evaluation and how it will be rated. **(T-2)**

4.8.6.2.1. The QA inspector will determine what task will be evaluated. **(T-2)**

4.8.6.2.2. The PE will include an evaluation of: the individual's training records, SCR (if task requires), toolbox, TMDE, and TOs/TIs used to perform the task.

4.8.6.2.3. The evaluation starts when the individual or team begins the task, or portion of the task to be evaluated, and is completed when the task or previously determined portion of the task is finished.

4.8.6.2.4. Provide feedback to the individual or team and supervision upon completion.

4.8.6.3. Rating PEs. QA Inspectors rate each evaluation based on AQLs/standards. The rating applies only to the specific task evaluated and not to other tasks that a technician or supervisor is qualified to perform. Upon completion of a failed evaluation, the QA Inspector must provide on-the-spot feedback. **(T-2)** Determine ratings as follows:

4.8.6.3.1. Pass: Number of discrepancies does not exceed AQL/standards.

4.8.6.3.2. Fail: An evaluation that results in any of the following:

4.8.6.3.2.1. Number of discrepancies exceeds the established AQL/standards.

4.8.6.3.2.2. A technician fails to detect a major discrepancy while complying with an inspection or TO requirement.

4.8.6.3.2.3. A technician fails to comply with a technical data step that could affect the performance of the equipment involved or cause injury to personnel.

4.8.6.3.2.3.1. QA Inspectors will notify individuals immediately during the PE that a TDV was committed. **(T-2)**

4.8.6.3.2.3.2. Do not document a separate TDV on an individual undergoing a PE, since failure to use technical data automatically results in a "Fail" rating.

4.8.6.3.2.4. A technician demonstrates a lack of technical proficiency, system knowledge or demonstrated knowledge commensurate with skill grade.

4.8.6.3.2.5. Training/certification not documented.

4.8.6.3.2.6. A technician commits a safety violation.

4.8.6.3.2.6.1. Use the word "Safety" when a safety violation is committed during a PE.

4.8.6.3.2.6.2. Do not document a separate DSV on an individual undergoing a PE since the unsafe act automatically results in a "Fail" rating on the PE.

4.8.6.3.2.7. A technician fails to document maintenance actions in appropriate equipment records.

4.8.7. Inspections: An inspection represents inspections of equipment, programs and processes to ensure compliance with established standards. Inspections are rated as “Pass” or “Fail”. Inspections include:

4.8.7.1. Quality Verification Inspections. A QVI is an inspection of equipment condition, or a maintenance process, an assessment following a maintenance inspection, servicing or repair action, or verification that a technician or supervisor properly completed an inspection or repair action.

4.8.7.1.1. QVIs will not be conducted after equipment operation when such operation could invalidate indications of proper job accomplishment.

4.8.7.1.2. Limit QVIs to the same inspection card deck or technical data required for the job. This inspection does not require disassembling parts, removing stress panels or like actions.

4.8.7.1.3. A QVI required for -6 TO inspections may be accomplished by checking a portion of the required card or area.

4.8.7.1.4. The QVI report should reflect deficiencies by the individual who accomplished the task and identify specific discrepancies.

4.8.7.1.5. Rate QVIs “Pass” or “Fail” by comparing the number of discrepancies with the established AQLs/standards.

4.8.7.1.5.1. Pass: Number of discrepancies does not exceed established AQL/standard.

4.8.7.1.5.2. Fail: An inspection that results in any of the following:

4.8.7.1.5.2.1. A technician fails to detect a major discrepancy while complying with an inspection or TO/TI requirement.

4.8.7.1.5.2.2. Number of CAT I minor discrepancies exceeds the established AQL/standard.

4.8.7.1.5.2.3. A technician is not signed off in training records as task qualified.

4.8.7.1.5.3. Document the QVI in the MAJCOM-approved QA database.

4.8.7.1.5.3.1. Each QVI is chargeable to the technician or supervisor who signed off/cleared the “corrected by” block or “inspected by” block of the applicable maintenance form or equipment record.

4.8.7.1.5.3.2. When evaluating a technician who signed off the “inspected by” block on AFTO Form 781A, evaluate only the items relating to the discrepancy.

4.8.7.1.5.3.3. Only one evaluation is scored for each inspection.

4.8.7.2. Management Inspection (MI). Perform these inspections to follow-up on trends, conduct investigations or conduct research to get to the root cause of problems. Mission Support Group Commander or equivalent, SQ/CCs or work center supervisors may request MIs. MIs may encompass PE/QVI trends and other inspection data, Non Mission Capable

(NMC) causes, high component or system failure rates, suspected training deficiencies, and tasks outlined in -6 TOs/TIs. MI results are reported to the requester. MIs can be non-rated and may be counted in QA trends. The MAJCOM-approved QA database will be used to document MIs.

4.8.7.3. Special Inspections (SI). SIs are inspections not covered by QVIs, PEs or MIs. SIs may include, but are not limited to, equipment forms inspections, document file inspections, CTK, TO files, vehicle inspections, housekeeping, safety practices, etc. SIs may be condition, procedural or compliance oriented.

4.8.7.3.1. The MAJCOM-approved QA database will be used to document special inspections.

4.8.7.3.2. When rating an SI, rate as “Pass” or “Fail” based on established AQLs/standards.

4.8.7.4. Managerial Evaluations (ME). MEs are SIs which provide leadership with factual, objective assessments of a section’s ability to meet mission requirements. SAVs, Inspector General inspections, and other assessments (unit self-assessments, etc.) do not replace MSEP managerial evaluations.

4.8.7.4.1. Perform managerial evaluations on each maintenance staff function and work center at least every 24 months as determined by the SPTG/CC.

4.8.7.4.2. Before beginning MEs, review reports of previous MEs. Review other evaluation reports such as administrative files evaluations, IG evaluations, operational evaluations, SAV reports, maintenance analysis trend data, and any other relevant management indicators.

4.8.7.4.3. Make impartial, factual, pertinent, and complete observations to identify deficiencies. Identify commendable practices and programs, especially those that may be useful to other work centers.

4.8.7.4.4. Demonstrate proper procedures and provide assistance to help work center and staff personnel meet mission requirements.

4.8.7.4.5. Ensure affected supervisors fully understand findings before formal evaluation reports are written.

4.8.7.4.6. Evaluate subject areas in enough depth to ensure the results indicate the actual condition of the activity. Not all areas require 100 percent evaluation for the evaluator to make this determination.

4.8.7.4.7. Determine how well work centers and support functions meet production and management requirements and if established procedures are followed. The minimum evaluation items include, if applicable:

4.8.7.4.7.1. Compliance with this instruction, associated and local directives, safety and security rules, and procedures as they pertain to the maintenance activities.

4.8.7.4.7.2. Equipment and system condition and performance.

4.8.7.4.7.3. Compliance with the PMRs.

4.8.7.4.7.4. Compliance with the HAZMAT and HAZCOM programs.

4.8.7.4.7.5. Compliance with local, state, federal, and host nation environmental policy and guidance.

4.8.7.4.7.6. Cannibalization procedures and documentation.

4.8.7.4.7.7. Corrosion prevention and control program.

4.8.7.4.7.8. Compliance with Electro-Static Discharge (ESD) practices, where applicable, IAW TO 00-25-234, *General Shop Practice Requirements for the Repair, Maintenance, and Test of Electrical Equipment*.

4.8.7.4.7.9. Adequacy of training plans and training materials. Check training documentation, progression, and task coverage.

4.8.7.4.7.10. Compliance with job documentation and data accuracy.

4.8.7.4.7.11. TMDE management to include availability of required TMDE, limited and special calibration requirements, condition and calibration status, storage, handling, etc.

4.8.7.4.7.12. Supply management to include supply discipline, bench stock, supply point, adjusted stock level management, and repairable processing.

4.8.7.4.7.13. Technical data to include maintenance of TO/TI files, availability, and use of required technical and commercial data.

4.8.7.4.7.14. Work center systems installation and equipment records.

4.8.7.4.7.15. Adequacy and accuracy of system or equipment historical files.

4.8.7.4.7.16. General housekeeping practices to include the condition of facilities and non-mission equipment.

4.8.8. Discrepancy Reporting. Report all discrepancies to the applicable work centers.

4.8.8.1. QA will provide an authoritative source reference for all reported discrepancies (e.g. work cards, job guides, WUC manuals, checklists, occupational safety requirements, TOs, TIs, and other applicable references). **(T-2)**

4.8.9. Units will grade their MSEP evaluations using objective ratings based on the following five-tier rating system: **(T-2)**

4.8.9.1. Outstanding: 95-100%

4.8.9.2. Excellent: 90-94.99%

4.8.9.3. Satisfactory: 80-89.99%

4.8.9.4. Marginal: 70-79.99%

4.8.9.5. Unsatisfactory: 0-69.99%

4.8.9.6. Inspections and evaluations performed (e.g., PE, SI, QVI) are rated “Pass/Fail”.

4.8.9.7. Ratings are calculated by dividing the total number of inspections passed by total completed. For example, QA inspects 10 maintenance procedures with the following

results: 9 “passes” and 1 “failure”. Divide the total “passes” by the total inspections (9/10=0.90) 90 percent for an “Excellent” rating.

4.8.9.7.1. Deduct 0.5 percentage points from overall percentage grade for each TDV, DSV, and UCR. For example, a squadron earns an overall rating of 90 percent, “Excellent”, however, QA observed 4 TDVs and 3 DSVs. Multiply the sum (7) by 0.5 and subtract the product (3.5) from the original 90 percent. The adjusted total is 86.5 percent; therefore, the squadron is rated “Satisfactory”.

4.8.10. A cumulative score will be determined by dividing the total number of inspections and evaluations passed by the total inspections and evaluations completed.

4.8.10.1. Deduct 0.5 percentage points for each TDV, DSV, and UCR from the overall percentage grade.

4.8.11. Annual Summary. QA will publish and distribute the annual summary to the SPTG/CC and inspected organizations. **(T-2)**

4.8.11.1. For security purposes, classified portions of the MSEP will be published separately from the main summary.

4.8.11.2. QA will compile the summary from inspection data.

4.8.11.2.1. The MSEP summary should include visual information, graphs, narratives, quality trends identified through inspections and evaluations, discussion of common problem areas and descriptions of successful programs or initiatives.

4.8.11.2.2. The following areas must be addressed in the summary:

4.8.11.2.2.1. Compliance with and currency of TOs/TIs and directives to include unit.

4.8.11.2.2.2. Equipment forms documentation.

4.8.11.2.2.3. Compliance and management of Safety, Environmental, and Housekeeping Programs.

4.8.11.2.2.4. Training Program.

4.8.11.2.2.5. KTLs.

4.8.11.2.2.6. RILs.

4.8.11.2.2.7. DSVs, TDVs, and UCRs.

4.8.11.2.2.8. High-missed carded items.

4.8.11.2.2.8.1. A high-missed carded item is defined as any work card item missed at least three times during a one-year period.

4.8.11.2.2.8.2. Units should use the high-missed carded items to enhance maintenance training programs, detect trends and improve the quality of maintenance.

4.8.11.2.2.8.3. PSD&A will review items to identify any relationships or trends. **(T-2)**

4.8.11.2.2.9. Narrative Report: The annual narrative report must contain an

analysis of the MSEP results, a summary of significant CAT I and II discrepancies, technical inspections and recommendations for improvement.

4.8.11.2.2.9.1. Prior to preparing the narrative report, QA will conduct a study of trends. **(T-2)**

4.8.11.2.2.10. Trend Analysis. QA will review previous reports to determine if inspected areas have improved or declined. **(T-2)**

4.8.11.2.2.10.1. Consistent high scores in any category may indicate the programs emphasis is not focused on the unit's actual problem areas. Low scoring areas may require a reassessment of the corrective actions taken by management. Continuous communication between Maintenance Management Analysis, unit leadership, maintenance supervision, and QA personnel is essential.

4.8.11.2.2.10.2. Highlight trends and root causes in the summary.

4.8.12. MSEP Meetings. SPTG/CC will conduct annual meetings to review a summary of the last year of MSEP data. **(T-2)**

4.8.12.1. The SPTG/CC or designated representative will chair the meeting. **(T-2)**

4.8.12.2. Attendees must include, as a minimum, TMXS/CC, Maintenance Supervision, Chief Inspector, and PSD&A. **(T-2)**

4.9. Logistics Evaluation Assurance Program (LEAP) Database. Units will use the LEAP QA database to capture MSEP data. The LEAP User's Manual provides information on registration, site management, and evaluation/inspection input and can be found at: **https://leap.disa.mil/mi/LEAPQA/Account/Login.aspx?ReturnUrl=%2fmi%2fLEAPQA%2fDefault.aspx**.

4.10. LEAP Roles and Responsibilities. Roles in LEAP are assigned based on each user's authorized level of control needed. The roles themselves operate in a hierarchal manner with each successively higher role possessing all of the rights of the subordinate roles. Only one role will be assigned to a LEAP user at any given time. LEAP operates as a "need to know" database, so users should be limited to personnel who will access the database at least once every 30 days (60 days for Traditional Guardsmen/Reservists).

4.10.1. Application Administrator. This role is limited to Defense Information System Administration (DISA) programming staff and Program Management Office (PMO) personnel only. They perform Department of the Air Force-wide database management and modification.

4.10.2. Functional Administrator. LEAP Functional Administrators provide overall database management and typically operate at the MAJCOM level. Usually assigned to a MAJCOM's policy section, they ensure proper use and alignment of the database with current policy guidelines. They also operate as the primary focal point for all LEAP-related issues within their MAJCOM and coordinate directly with the LEAP PMO.

4.10.3. Site Manager. LEAP Site Managers provide local oversight for their respective Group (or equivalent). Possessing "base level" control, they are able to approve and modify LEAP Users and assign roles up to and including other Site Managers. While there is no limitation to how many Site Managers can be assigned per site, the level of control available should

warrant assignment based on appropriate rank/position (typically, QA Superintendent and Chief Inspector). LEAP Site Managers will:

4.10.3.1. Manage access to LEAP by coordinating new user documentation with their assigned G081 Manager and approving accounts in LEAP after user registration. **(T-2)**

4.10.3.2. Modify user accounts according to need.

4.10.3.3. Ensure LEAP users are deactivated or downgraded in LEAP when out processing the QA office.

4.10.3.4. Create Flights and Sections in LEAP to which evaluations will be assigned.

4.10.3.5. Assign Command/Site Task Lists (STL) (i.e. RIL) to their respective sites.

4.10.3.6. Build and manage the E&I Plan (if used) in LEAP.

4.10.4. Chief Evaluator. LEAP Chief Evaluators serve as "LEAP Supervisors" within the database. With the ability to modify, delete, and validate evaluations, the role is typically assigned to QA office supervisors/leadership. However, there is no limitation to how many Chief Evaluators can exist at any given site. LEAP Chief Evaluators will:

4.10.4.1. Review and validate inspections. **(T-2)**

4.10.4.2. Perform evaluations. **(T-2)**

4.10.4.3. Update or delete evaluations as necessary. **(T-2)**

4.10.5. Evaluator. LEAP Evaluators perform evaluations and ensure accurate documentation into the database.

4.10.6. Read-Only Guest. LEAP Read-Only Guests are intended to be supervisory personnel and unit leadership who require regular access to LEAP Reports and Evaluation documentation.

4.11. Product Improvement Program (PIP). PIP resides within the QA office. The Product Improvement Manager (PIM) monitors and reviews maintenance data to identify opportunities to improve R&M of AFTAC equipment. The PIP includes the following programs:

4.11.1. Deficiency Reporting.

4.11.2. AFTO Form 22.

4.11.3. Source, Maintenance, Recoverability code change request(s).

4.11.4. Product Improvement Manager. The SPTG/CC will assign a PIM within their organization with responsibilities as specified in this chapter. **(T-2)** The PIM promotes deficiency reporting and provides a sound PIP based on inputs from maintenance activities. The PIM interacts with engineering personnel, Field Maintenance Representatives and Mission System Managers as applicable to remain cognizant of ongoing and new improvement initiatives. The PIM emphasizes and promotes product improvement initiatives and ensures maintenance personnel are familiar with them by circulating flyers/newsletters, visiting commander's calls, presenting the program at maintenance orientation briefings and making routine visits to maintenance areas.

4.11.5. Deficiency Reporting. DR is the process of reporting prescribed by TO 00-35D-54, *USAF Deficiency Reporting, Investigation, and Resolution*. Maintenance processing of warranty items is located in TO 00-20-3. The PIM's will:

4.11.5.1. Monitor the DR process to ensure items are properly loaded in the MIS database. **(T-2)**

4.11.5.2. Ensure compliance with acceptance inspection reporting requirements on DRs for equipment returning from depot level or contractor maintenance. **(T-2)**

4.11.5.3. Review the DR prior to releasing to appropriate repair authority IAW TO 00-35D-54. **(T-2)**

4.11.5.4. Verify each report against pertinent publications and assign the appropriate precedence and category. **(T-2)**

4.11.5.5. Screen reported deficiencies for possible unit-unique contributing factors and initiate management action on unsatisfactory conditions resulting from local procedures or a lack of technical capability. **(T-2)**

4.11.5.6. Perform/coordinate a technical review of DRs returned to the unit without an adequate response to determine whether resubmitting with additional information is warranted. **(T-2)**

4.11.6. TO/TI Improvement Program (AFTO Form 22). The PIM will:

4.11.6.1. Ensure proper evaluation is performed and forms are properly filled out and processed IAW TO 00-5-1. **(T-2)**

4.11.6.2. Ensure control numbers are assigned and forward all AFTO Form 22s via email transmission to the appropriate action agency and provide a courtesy copy to the initiator. **(T-2)**

4.11.6.3. Maintain an AFTO Form 22 suspense file. **(T-2)**. Note: An approved AFTO Form 22 does not provide authority to deviate from current TO/TI procedures; TO/TI changes must be posted to implement approved AFTO Form 22s.

4.11.6.4. Conduct a technical review of disapproved AFTO Form 22 to determine whether to resubmit with additional information. **(T-2)**

Chapter 5

CENTRALIZED REPAIR FACILITY (CRF)

5.1. General. CRFs focus on efficiently providing maintenance, repair, and/or overhaul capabilities, support RN efficiencies and will be integrated into the supply chain as much as possible. The core concept of Repair Network Integration is to optimize organizational maintenance to operate as a single, seamless repair operation that spans the AF Enterprise.

5.1.1. The SPTS/MXD is AFTAC's Centralized Repair Facility. MXD provides personnel, training, and direction to host maintenance teams, organic maintenance, maintenance engineering, CRF maintenance, and technical services needed to accomplish the upgrade, periodic maintenance, equipment evaluation, on/off equipment repair, and integration testing of new geophysical systems.

5.1.2. IAW TO 00-25-108, Communications-Electronics Depot Support, the CRF will provide Depot Maintenance Support for all subsurface Communications Electronics (C-E) systems and equipment in operational use and logistically supported by AFTAC. **(T-2)**

5.1.3. The CRF will organize and facilitate collaboration activities to address enterprise repair constraints by linking key stakeholders (e.g., maintenance, materiel management and engineering). **(T-2)**

5.1.4. CRF will develop and/or approve preventative maintenance routines for assigned assets. **(T-2)**

5.1.5. The CRF must be involved in the test and evaluation of forwards/backwards compatibility of new geophysical system components with existing geophysical components and infrastructure. **(T-2)**

5.1.6. Organic Depot Field Team responsibilities will be accomplished by the CRF IAW DAFI 20-117, at OLs/Detachments and with advanced maintenance practices and new systems/equipment. **(T-2)**

5.1.7. Organic Depot Manufacturing, when custom/non-COTS GFS items are required the CRF must be consulted to determine if the item can be manufactured organically. **(T-3)**

5.1.8. The CRF will perform R&D, assessment and maintenance of assigned Support Equipment (SE). **(T-2)**

5.1.9. All Subsurface Maintenance Initial Skills Airmen assigned to Patrick SFB should be assigned to the CRF for a minimum of 6-18 months to complete Phase I, In-processing, Mission Orientation and Maintenance Refresher; Phase II, Continuation Training; and Phase III, Special Qualification Training. To ensure continuity and accuracy of training the CRF should be part of any 9S100 TPT, STRT and U&TW.

5.2. CRF Enterprise Information Management. Managers require accurate and timely enterprise repair data to make CRF command and control and production decisions. NMs will utilize systems, processes, and business rules prescribed by governing instructions to provide repair data and ensure enterprise visibility.

5.3. Mission Generation Network Support. CRFs will maintain the level of organizational level repair capability necessary to sustain MGN operations. **(T-2)**

5.3.1. The Repair Network Manager will establish and approve the subsurface equipment matrix for organizational, intermediate and depot level repair. **(T-2)**

5.3.2. The CRF will ensure a contingency operations plan is established and adhered to for logistics support and RN maintenance capabilities of the subsurface mission. **(T-2)**

5.4. Documentation. The CRF will maintain all required status, inventory, and historical record documentation on CRF-repaired assets, IAW TO 00-20-series, and other applicable guidance. **(T-2)**

Chapter 6

TOOL AND EQUIPMENT MANAGEMENT

6.1. Tool and Equipment Management. The objective of the Tool and Equipment Management Program is to reduce costs through strict effective control and accountability of assets. To ensure standardization among maintenance units, commanders and key leaders are responsible for executing an effective tool program.

6.2. Guidelines for Program Management. The SPTG/CC will document procedures for the control and management of all tools/equipment used for maintenance for all AFTAC organizations in a wing level publication IAW DAFI 90-160. **(T-2)**. The SPTG/CC is the OPR for development of this publication and will coordinate with all wing organizations that work in, or enter, the above-mentioned areas to ensure they have established tool/equipment control procedures documented in the wing publication. **(T-2)** As a minimum, guidance will address the following:

6.2.1. Standardized procedures for security, control, and accountability of tools and equipment.

6.2.1.1. The use of chits as a means of tool/equipment control is authorized.

6.2.2. Inventory requirements. As a minimum, units will conduct and document an annual inventory of all tools and equipment. **(T-2)**

6.2.3. Procedures for warranted tool management.

6.2.3.1. Procedures to tag/segregate unserviceable warranty tools.

6.2.4. Procedures for control and management of replacement, expendable and consumable hand tools, HAZMATs, and other items contained in CTKs.

6.2.5. Procedures for lost or missing tools.

6.2.6. Procedures to limit numbers of personnel authorized to procure tools.

6.2.7. Procedures for control of locally manufactured or developed tools and equipment.

6.2.8. Standardized procedures and responsibilities for decentralizing CTKs, tools, and equipment outside tool room/support section to meet mission requirements.

6.2.8.1. Inventory and accountability requirements described in this ACCI apply equally to all decentralized CTKs tools, and equipment.

6.2.9. Procedures for control of tools and equipment permanently stored/located in trailers, vehicles, or Equipment Locations.

6.3. General Program Guidelines.

6.3.1. The Flight CC/SUPT or Det CC/Chief will designate CTK custodians. **(T-2)**

6.3.1.1. CTK custodians are responsible for tool accountability and control.

6.3.2. Flight CC/SUPT or Det CC/Chief will determine the type, size, and number of CTKs required for their work centers. **(T-2)**

6.3.3. Design CTKs to provide for quick inventory and accountability of tools. (Follow guidance below).

6.3.4. CTK contents will be standardized to the maximum extent possible within functional elements of a work center that has similar missions (such as, Seismic and C&D's).

6.3.5. Each tool, item of equipment, or consumable contained in a CTK will have an assigned location and should be identified either by inlay cuts in the shape of the item, shadowed layout, label, or silhouette.

6.3.5.1. No more than one item will be stored in a cutout, shadow, or silhouette except for tools too small to be etched individually may be place in CTKs as a set (such as, drill bits, allen wrenches, apexes, or paired items like gloves, booties).

6.3.6. A Master Inventory List (MIL) will be required for each CTK or series of identical CTKs.

6.3.6.1. When items such as dispatchable support equipment or dispatchable special tools are issued separately (not contained in a CTK) and contain multiple parts that are required for its use (such as, cartridges containing consumables, cables, hoses, adapters), a MIL of all the items will be provided with the support equipment or special tools to facilitate positive accountability of all items during checkout, transfer, and check in.

6.3.6.2. The MIL should reside in a share drive, but a hard copy of the signed MIL must reside with each CTK to provide the ability to verify the inventory regardless of location.

6.3.6.3. Consumables may be placed in CTKs. If so, they will be identified on the MIL as consumables. Examples of consumables include; safety wire, adhesive, wire bundle lacing, solder.

6.3.6.3.1. Do not include common hardware items such as bolts, nuts, and/or screws unless they are required for the tool to perform its intended function. Cartridges or equivalents containing consumable items whether disposable or not will be accounted for.

6.3.6.4. Tool sets placed within a CTK will be identified on the CTK MIL by total number of items in the set (such as, Allen wrench set - 9 each Allen wrenches + container for a total of 10).

6.3.6.5. Missing, removed and/or broken tools/items will be documented in the MIL if they cannot be replaced immediately.

6.3.6.5.1. In addition, for dispatchable CTKs, dispatchable support equipment, and dispatchable special tools containing multiple parts, missing, removed and/or broken tools/items will be documented on a MAJCOM/locally generated form, or on the hard copy MIL.

6.3.6.5.1.1. If a MAJCOM/locally generated form is used, the form will be kept with each dispatchable CTK, dispatchable support equipment and dispatchable special tools.

6.3.6.5.1.2. Pencil/pen may be used for hard copy MIL documentation and erased/lined through when cleared.

6.3.6.5.2. A permanently removed (without planned replacement) item/tool constitutes a change to the inventory and requires a new MIL.

6.3.6.5.3. The CTK custodian has the authority to interchange "like" (form, fit, function) items.

6.3.7. As a minimum, designated locations will be labeled to identify the contents.

6.3.8. Industrial shop machinery accessories/attachments (example, blades, arbors, chucks, gears, clamps, vices) need not be controlled as tools; however, these items will be maintained in designated storage locations for accountability.

6.3.8.1. As a minimum, storage cabinets/drawers will be labeled to identify the contents.

6.3.9. Tools not controlled through CTK procedures are NOT authorized to be used on Air Force equipment (for example, personal Mini Maglite® flashlights, Leatherman®, Buck Knives®).

6.3.9.1. Units will mark and control equipment that a work center assigns/issues to an individual IAW MAJCOM supplements. **(T-2)**

6.3.9.2. Personally purchased tools are not authorized.

6.4. Test, Measurement, and Diagnostic Equipment (TMDE) Management Guidelines. Flight CC/SUPT or Det CC/Chief will designate a TMDE Monitor who will act as the focal point with the designated servicing PMEL (whether on-base or off-base) for managing the TMDE calibrations requirements for the owning work center. **(T-2)** The TMDE Monitor will:

6.4.1. Establish procedures for turn-in and pick-up of TMDE requiring calibration. **(T-3)**

6.4.2. Coordinate emergency calibration requirements. **(T-3)**

6.4.3. Review quarterly TMDE schedules and annual master identification (ID) lists within 5 duty days of receipt from servicing PMEL. **(T-3)**

6.4.3.1. Forward any corrections to the servicing PMEL within 3 duty days to have the PMEL Automated Management System/MIS updated.

6.4.4. Take necessary actions to minimize the late delivery of TMDE for scheduled calibration. **(T-3)**

6.4.5. Ensure TMDE submitted for calibration has all required documentation complete, the AFTO Form 350, *Repairable item Processing Tag*, (as applicable) provides adequate malfunction description and accessories/ items required for calibration accompany the TMDE to include batteries (as applicable). **(T-2)**

6.4.6. Ensure TMDE shipped off base for calibration or repair and return is shipped by traceable means and IAW DAFI 24-602V2, *Cargo Movement*. **(T-2)**

6.4.6.1. Safeguard any IUID marks during calibration/TMDE activities to the extent possible. In the event the UII is damaged during calibration activities, the TMDE Monitor will notify the responsible Equipment Custodian and/or EAE to replace the mark with the same UII. **(T-2)**

6.5. Tool Accountability. Flight CC/SUPT's or Det CC/Chief's, through CTK Custodians, are responsible for tool and equipment accountability and control (knowing where tools are and who has responsibility for them). When a person signs for a tool or piece of equipment, they are

considered the user and accountable for the item until it is returned to the CTK and accountability transfers back to the CTK Custodian (or a representative).

6.5.1. At least annually or when the CTK Custodian changes, conduct a comprehensive inventory of all dispatchable/decentralized tools, non-Custodian Authorization/Custody Receipt Listing (CA/CRL) equipment, and CTKs.

6.5.1.1. The purpose of this inventory is to perform an extensive inspection of all tools and non-CA/CRL equipment, to include condition, and accuracy of the MIL/CRL Supplemental Listing.

6.5.1.2. CTK Custodians must ensure all tools are inspected for serviceability IAW TO 32-1-101, *Use and Care of Hand Tools and Measuring Tools*. **(T-2)**

6.5.1.3. CTK Custodians will document these inventories and maintain the most current inventory. **(T-2)**

6.5.2. Users will perform a visual inventory of all dispatchable/decentralized CTKs when issued for use and when returned to the tool storage facility. **(T-2)**

6.5.2.1. Users will ensure dispatchable tools, equipment, and CTKs are locked and/or secured when left unattended. **(T-2)**

6.6. Locally Manufactured, Developed, or Modified Tools and Equipment. All locally manufactured, developed, or modified tools and equipment used on AFTAC equipment must be approved by the SPTG/CC, their equivalent, or a designated representative and meet the requirements described in Chapter 8 of DAFI 21-101, *Aircraft and Equipment Maintenance Management*.

6.6.1. This procedure does not apply to fixtures and jigs developed in industrial machine/fabrication shop for the sole purpose of locally manufacturing parts and components.

6.6.1.1. Fixtures and Jigs developed for local manufacture of parts and components will be labeled with intended manufacturing process/part nomenclature and stored in appropriate tool storage location.

6.6.2. Work centers will review items and requirements annually for applicability and current configuration. **(T-2)**

6.6.3. All LME must meet applicable DAFMAN 91-203 and USAF standards.

6.6.3.1. AFTO Form 244, *Industrial/Support Equipment Record*, or equivalent, must be maintained for all LME items (racks, stands, adapters) except hand tools.

6.7. Composite Tool Kit (CTK) Operations and Security.

6.7.1. CTKs will be set up to ensure accountability.

6.7.1.1. Procedures will be established to ensure custodial control.

6.7.1.2. Tools will not be issued individually from dispatchable CTKs.

6.7.1.2.1. When a recurring need exists for common tools to be issued individually, (such as, hammers, screwdrivers, pliers, drills, wrenches) individual issue bins/drawers may be established as a CTK within the tool room.

6.7.1.3. Process reports for tools that are lost, damaged, or destroyed, due to neglect IAW AFI 23-101.

6.7.2. Security.

6.7.2.1. CTKs must be capable of being locked and/or positive control maintained when not in use.

6.7.2.1.1. Locks are not required on CTKs and equipment that are stored within secured tool rooms or work centers.

6.8. Lost Item/Tool Procedures.

6.8.1. Supervisors will ensure all assigned personnel are familiar with lost item/tool procedures. If an item/tool or a portion of a broken item/tool is discovered missing, the following procedures apply:

6.8.1.1. The person identifying the missing item/tool will search the immediate work area for the item/tool. **(T-2)**

6.8.1.1.1. If not found, after completing an initial search the individual will notify the Sq/DO.

6.8.1.1.2. Initiate a thorough search for the item/tool.

6.8.1.1.3. Initiate the lost tool report if tool is not located during initial search.

6.8.1.2. The Flight CC/SUPT or Det CC/Chief will determine when the search for the lost item/tool may be discontinued. **(T-2)** If the item/tool is not found:

6.8.1.2.1. Notify the Technical Content Manager when the search for the lost item/tool has been discontinued.

6.8.1.2.2. Ensure a Financial Liability Investigation (Formerly known as a Report of Survey) is completed, if applicable, IAW DoD 7000.14-R, *Financial Management Regulation*, Volume 12, *Special Accounts, Funds and Programs*, Chapter 7, *Financial Liability for Government Property Lost, Damaged, Destroyed, or Stolen,* and locally established procedures.

6.8.1.2.3. If applicable, ensure the MIL is documented IAW **Paragraph 6.3.6.5** of this instruction.

Chapter 7

MATERIEL MANAGEMENT

7.1. General. The critical nature of direct interaction between maintenance and materiel management activities at the point of maintenance provides units direct access to accurately identify, communicate, acquire or disposition materiel management support necessary to maximize capabilities. The SPTG/CC will ensure direct mission support focuses on readiness and the unit's ability to execute daily operations at home and abroad. **(T-2)**. This chapter, coupled with 23-series publications, provides the minimum materiel management support requirements necessary to provide the best possible opportunity for success in meeting mission requirements. This predominantly applies to GFS, however there are portions that cover the Cryptological and Cyber System Division (CCSD) field responsivities as well.

7.2. Supply Liaisons. Supply Liaison support guidance applies to positions authorized to handle supply stock within the maintenance flights when it is impractical to receive support from an AF Logistics Readiness Squadron (LRS)/Materiel Management Activity. Supply Liaison responsibilities will be assigned by the Flight or Detachment CC/Chief to any Flight or Detachment member. Any individual assigned Supply Liaison responsibilities is referred to as Supply Liaison and will be responsible for coordinating maintenance and supply actions for their assigned flight.

7.2.1. Supply Liaison personnel will provide the following support functions to their assigned flight: monitor and track assets in the repair cycle, resolve supply support problems, and report parts status to maintenance supervision.

7.2.1.1. Supply Liaison personnel also support maintenance in processing issue requests, researching sources of supply, entering manual requisitions (part number only), updating exception code lists, and resolving other peculiar maintenance supply problems.

7.2.2. Supply Liaisons will manage processes, in addition to those previously described, such as parts ordering, backorder review and validation. **(T-2)**

7.2.3. Details of all Materiel Management tasks and/or processes are outlined in 23-series guidance.

7.3. Supply Discipline. Supply discipline is the responsibility of all military and civilian personnel regardless of grade or position. Personnel at all levels will ensure the practice of good supply discipline IAW DoDI 5000.64_DAFI 23-111, *Accountability and Management of DOD Equipment and Other Accountable Property.*

7.4. Parts Ordering. To minimize record discrepancies, all parts ordering will be logged within the appropriate MIS. Request supply assistance from the Logistics Flight or host base LRS/materiel management activity for further guidance. Supply Liaisons will:

7.4.1. Backorder Review and Validation. Supply Liaisons will verify and monitor backordered requests to prevent unwarranted mission limiting conditions, cannibalization, priority abuses and wasted money and track DIFMs. **(T-2)**

7.5. Parts Processing. Supply Liaisons will:

7.5.1. Process reparable items IAW guidance provided by the assigned program office as applicable. **(T-2)**

7.5.2. Process metals IAW the Precious Metals Recovery Program outlined in AFI 23-101. **(T-2)**

7.5.3. Turn in excess supply parts and materiel as required.

7.6. Bench Stock. Examples of bench stock items include but are not limited to nuts, bolts, pipe fittings, washers, resistors, capacitors, light bulbs, sealants and batteries. Bench stock levels are managed and based predominantly on consumption. A thorough review of these levels is extremely important to ensure that bench stock supports the mission efficiently and economically. Do not include items coded TCTO, unacceptable for AF use, critical, classified or sensitive in bench stocks. Maintain a master inventory of items. **Note:** Assets cannot be commingled (i.e., parts with differing NSNs, Part Numbers, or nomenclatures in the same bin), and there must be a clear delineation between bench stock and other supply categories.

7.6.1. Maintenance Supervision will ensure a semi-annual bench stock review is accomplished with host base Customer Support LRS.

7.6.1.1. During these reviews, special emphasis needs to be given to items with no demands in the past year and items with excessive quantities not supported by demands. The continuance of stocking such items is the exception and not the normative process. See AFMAN 23-122 for further details. **(T-2)**

7.6.2. Supply Liaisons will:

7.6.2.1. Set up fixed or mobile bench stocks to provide quick and easy access to the most commonly used items needed to support maintenance efforts. **(T-2)**

7.6.2.2. Establish control procedures for the issue and turn-in of hazardous materials/items on bench stock listings. **(T-2)**

7.6.2.3. Control and secure any precious metals displayed. **(T-2)**

7.6.3. All maintenance personnel will:

7.6.3.1. Mark bins containing 50 percent or less of the authorized quantity to facilitate monthly inventories. **(T-2)**

7.6.3.2. Maintain environmentally sensitive items in their original container. If removed from original container, place items in a sealed package and clearly mark them to prevent misidentification and misuse (e.g., seals, desiccant, filters, circuit cards, sealants). **(T-2)**

7.6.3.3. Remove unidentifiable items or items whose serviceability is unknown, from bench stock bins and process them as shop scrap.

7.7. Shop Stock. Shop stock includes gas cylinders, random length bar stock, sheet metal, plastic, fabric, electrical wire, and similar items not normally included in bench stocks. Maintain shop stock for day-to-day operations. Monitor shop stock to prevent materiel from becoming excessive or outdated. Shop stock should not normally exceed 90-days usage, or the unit of issue or unit pack, whichever is greater. Store shop stock near/adjacent to bench stock items, if practical, but do not mix them together. Clearly identify materiel as “Shop Stock” and label them with noun, national stock number or part number, unit of issue, and shelf-life, if applicable. Maintain a master

inventory of items. **Note:** Assets cannot be commingled (i.e., parts with differing NSNs, Part Numbers, or nomenclatures in the same bin), and there must be a clear delineation between shop stock and other supply categories.

7.8. Operating Stock. Operating stock includes connector dust covers, caps/plugs, and similar items that are normally recovered after use and re-used. Store operating stock near/adjacent to bench stock items, if practical, but do not mix them together. Monitor operating stock to prevent it from becoming excessive or outdated. Clearly identify items as "Operating Stock" and label them with noun, NSN or part number, unit of issue, and shelf-life as applicable. Maintain a master inventory of items. **Note:** Assets cannot be commingled (i.e., parts with differing NSNs, part numbers, or nomenclatures in the same bin), and there must be a clear delineation between operating stock and other supply categories.

7.8.1. Retain partially used bench stock items in bench stock and not in operating stock. Identify, tag, and turn in items with no forecasted use IAW AFI 23-101. Clearly identify items as "Operating Stock" and label them with noun, national stock number or part number, unit of issue, and shelf-life as applicable.

7.9. Work Order Residue. Work order residue includes expendable bit/piece items left over from maintenance work orders or bench stock deletions. Store work order residue near/adjacent to bench stock items, if practical, but do not mix them together. Ensure excesses are consolidated for turn-in at least annually as needed. Clearly identify items as "Work Order Residue" and label them with noun, national stock number or part number, unit of issue, and shelf-life as applicable.

7.9.1. Items identified on any active inventory controlled by the owning work center may not be stored in work order residue bins.

7.10. Stock Levels. Stock levels for items supported by LRS/materiel management are managed by the supporting LRS/materiel management activity. All other stock levels are set by Maintenance Supervision in conjunction with the respective program managers.

7.10.1. Stock levels may be adjusted as needed. A single occurrence of a mission limiting status should not be used as reason to adjust stock levels, but should result in an activity review of demand data for accuracy.

7.10.1.1. When stock levels need to be adjusted, the using work center will prepare a request IAW AFMAN 23-122 with assistance from the supporting LRS/materiel management activity for Air Force managed assets **(T-2)**

7.10.1.2. Non-Air Force managed stock levels will be reviewed and updated annually through a joint meeting between AFTAC Headquarter Logistics Flight, program managers, and maintenance personnel.

7.11. Shelf-life Items. Using work centers will control the quantity and inspect (Type I and Type II) shelf-life items kept in unit bench stock, operating/shop stock and work order residue IAW AFMAN 23-122. Personnel managing bench, shop, or operating stocks will:

7.11.1. Identify serviceable shelf-life items/locations with a colored and/or highlighted label that clearly states the items expiration date. **(T-2)**

7.11.2. Check expiration dates on issued items and do not accept outdated items. **(T-2)** Refer to AFMAN 23-122 for outdated and/or unserviceable shelf-life items. **(T-2)**

7.11.3. Not open shelf-life containers until needed and use the oldest items first. **(T-2)**

7.11.4. Ensure shelf-life materiel stored in other than original containers are marked with original shelf-life expiration codes. **(T-2)**

7.11.5. Recycle, reclaim, or turn-in for disposal, shelf-life items which are loose in the bin and expiration dates cannot be determined. **(T-2)**

7.11.6. Organize items with an expiration date using the FIFO method and remove/replace expired items during inventory IAW AFMAN 23-122. **(T-2)**

7.12. Equipment Items. Maintenance Supervision will review equipment items listed on a CA/CRL as needed for mission accomplishment IAW AFI 23-101. **(T-2)** Refer to AFMAN 23-122**,** for the required procedures to order and deploy equipment items.

7.13. Time Compliance Technical Instruction (TCTI) Kit Procedures. TCTI kits will be developed and provided by the assigned respective program managers or CRF.

7.13.1. Initiate requests for kits, parts and special tool requirements IAW TO 00-5-15.

7.14. Forward Supply Points. Forward supply points may be established by individual work centers at geographically separated locations when time or resources required for transportation dictate the need to do so.

7.14.1. Maintenance flights will maintain control of supply point assets. **(T-2)**

7.14.2. Supply points inventories must be reconciled annually. **Exception:** Geographically separated supply points do not have a reconciliation schedule and must be reconciled during each site visit or at least annually.

7.15. Due-In From Maintenance (DIFM) Management. DIFM will be managed IAW AFI 23-series publications.

7.15.1. Supply Liaisons will monitor the status of repair cycle assets. **(T-2)**

7.15.1.1. To the greatest extent possible, DIFM assets will be returned to the assigned repair facility regardless of if a serviceable replacement was issued (i.e. credit turn in). This policy will enhance the repair cycle and ensure unserviceable assets get repaired as soon as possible.

7.15.1.2. Units will establish local procedures for the control of repair cycle assets throughout the maintenance repair cycle IAW AFI 23-101 and AFMAN 23-122.

7.15.1.3. Supply Liaisons will provide updated DIFM status to Maintenance Supervision and PSD&A. **(T-3)**

7.15.2. Maintenance Turn-In to Supply.

7.15.2.1. Work centers must properly tag and secure repair cycle assets and place items in a leak–proof containment liner (no leaks/stains/tears/punctures), as required.

7.15.2.1.1. To prevent spillage, any item containing any type of residual fluid, regardless of hazard classification, will be drained, purged, preserved, capped, plugged and placed in a leak-proof containment liner before placement into a serviceable reusable container for storage or shipment.

7.15.2.1.2. The work center must comply with packaging, environmental control, purge and preservation requirements as specified in applicable TOs/TIs, DAFI 24-602V2, AFMAN 24-604, *Preparing Hazardous Materials for Military Air Shipments* and place the proper documentation with the container. **(T-2)**

7.15.2.2. Include a correctly filled out AFTO Form 350, Parts I and II IAW 00-20-2, and a condition tag or label with all items turned into the assigned repair facility. **Note:** Some DIFM assets may require additional tags.

7.15.2.2.1. A detailed description of the fault/failure along with any troubleshooting steps taken will be documented on the condition tag. **Note:** "Broken" (or similar) is not an adequate description of the problem.

7.15.2.2.2. Enter the correct action taken code on AFTO Form 350, Part II.

7.16. Bench Check and Repair Policy. Maintenance sections bench check items as part of the off-equipment troubleshooting process. When workload requires, the Section NCOIC/Chief determines the priority for bench check actions. Specific procedures for bench check and repair policy are provided in TO 00-20-3.

7.17. Supply Assets Requiring Function Check, Calibration, or Programming. Maintenance work centers must identify items requiring functional checks, calibration, or programming prior to use. **(T-2)**

7.18. Deficiency Report Exhibits. Deficiency Report exhibit procedures for issue, turn-in, and storage are contained in TO 00-35D-54 and AFI 23-101.

Chapter 8

ADDITIONAL MAINTENANCE REQUIREMENTS AND PROGRAMS

8.1. Communication Management. Reliable, redundant, and effective communication is essential for effective and efficient maintenance. AFTAC Directors and Commanders have the overall responsibility to ensure maintenance technicians have adequate communication available to them when TDY or deployed.

8.1.1. Personal Wireless Communications Systems (PWCS). These systems should provide accurate, timely, secure, programmable frequency and jam resistant communications needed to accomplish the maintenance mission in a fully deployed and isolated mode. PWCS management will be accomplished IAW AFI 17-210, *Radio Management*, DAFI 17-220, *Spectrum Management*, AFI 17-130, *Cybersecurity Program Management,* and AFH 23-123V3, *Air Force Equipment Management*.

8.2. Cannibalization Program. Cannibalization actions may be necessary when a condition prevents the accomplishment of a mission, and the required assets are not immediately available from supply. Prior to performing a cannibalization action, verify the required component cannot be sourced from CCSD, LRS or the CRF. When authorizing a cannibalization, the expenditure of man-hours and potential damage to equipment need to be weighed against the expected benefit. High risk cannibalizations should not be performed unless priority mission equipment is involved, or lack of ready equipment will impede mission accomplishment.

8.2.1. MSMs, in coordination with CCSD and CRF, are the default Cannibalization Authorities (CA). Delegation of CA duties/responsibilities is not allowed. Additional CAs may be approved by the SPTG/CC.

8.2.2. If an assembly is cannibalized to satisfy a condition caused by lack of bits and pieces (e.g., washers, nuts, and bolts), the assembly is counted as a cannibalization and the bits and pieces are considered transfer actions. Bits and pieces removed from an end item (without removing the assembly) for installation on another end item are considered individual cannibalization actions.

8.2.3. When a required part cannot be delivered and installed on time, the CA may approve the cannibalization of parts before the initiation of cannibalization documentation. The CA will give this approval only after confirming the part is not readily available in CCSD, LRS, forward supply points, or the CRF. **(T-2)**

8.2.3.1. The CA will validate documentation is completed for each cannibalized action. **(T-2)**

8.2.4. The performing work center will document Cannibalization Actions in the MIS. **(T-2)**.

8.3. Decommissioning Procedures. Mission equipment is decommissioned only at the direction of the MSM. Specific decommissioning guidance will be generated by Maintenance Supervision with coordination from all interested parties. **(T-2)**

JENNIFER HAMMERSTEDT, Brig Gen, USAF
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Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

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DAF Form 847, *Recommendation for Change of Publication*

DD Form 2875, System Authorization Access Request (SAAR)

Abbreviations and Acronyms

AFSC—Air Force Specialty Code

AFTAC—Air Force Technical Application Center

AQL—Acceptable Quality Level

CA—Cannibalization Authority

CA/CRL—Custodian Authorization/Custody Receipt Listing

CC—Commander

CCI—Controlled Cryptographic Item

CCSD—Cryptologic and Cyber Systems Division

COMSEC—Communications Security

CRF—Centralized Repair Facility

CTK—Composite Tool Kit

DEROS—Date Estimated Return from Overseas

DET—Detachment

DIFM—Due-In From Maintenance

DIT—Data Integrity Team

DSV—Detected Safety Violation

E&I—Evaluation and Inspection

ERRC—Expendability, Recoverability, Reparability Category

ESOH—Environmental, Safety, and Occupational Health

EPE—Evaluator Proficiency Evaluation

HAZMAT—Hazardous Materials

IPCOT—In Place Continuous Overseas Tour

IPI—In-Process Inspection

RIL—Routine Inspection List

KTL—Key Task List

MGN—Mission Generation Network

MI—Management Inspection

MIL—Master Inventory List

MIS—Maintenance Information System

MOCC—Maintenance Operations Control Center

MSEP—Maintenance Standardization and Evaluation Program

MSM—Mission System Manager

NCOIC—Non-Commissioned Officer in Charge

NM—Node Manager

NMC—Non-Mission Capable

PE—Personnel Evaluation

PIM—Product Improvement Manager

PIP—Product Improvement Program

PMEL—Precision Measurement Equipment Laboratory

PPE—Personal Protective Equipment

PWCS—Personal Wireless Communications System

QA—Quality Assurance

QVI—Quality Verification Inspection

RN—Repair Network

SE—Support Equipment

SEI—Special Experience Identifier

SI—Special Inspection

SME—Subject Matter Expert

TCTI—Time Compliance Technical Instruction

TCTO—Time Compliance Technical Order

TDV—Technical Data Violation

TDY—Temporary Duty

TI—Technical Instruction

TMDE—Test Measurement and Diagnostic Equipment

TO—Technical Order

UCR—Unsatisfactory Condition Report

USNDC—United States National Data Center

WJQS—Work Center Job Qualification Standard

WUC—Work Unit Code

Office Symbols

ACC/A4PM—Air Combat Command Maintenance Manpower, Policy, Training and Contract Branch

AF/A1M—Air Force Directorate of Manpower, Organization and Resources

Terms

Bench Stocks—Stores of ERRC codedXB3 items kept on-hand in a work center to enhance maintenance productivity.

Cannibalization—Authorized removals of a specific assembly, subassembly, or part from one weapons system, system, support system, or equipment end-item for installation on another end item to meet priority mission requirements with an obligation to replace the removed item.

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.

Delayed or Deferred Discrepancies—Malfunctions or discrepancies not creating a NMC status that are not immediately corrected.

Equipment Custodian—Individual responsible for all in-use equipment at the organizational level whose duties include requisitioning, receiving, and controlling of all equipment assets.

Flight Chief—NCO responsible to the maintenance officer or SEL for management, supervision, and training of assigned personnel.

Functional Checklist—locally developed checklists used to identify the steps required to react to specific events. Functional checklists are required for use by functional area(s) during actions such as severe weather warning or evacuation, self-inspections, etc.

In-Process Inspection (IPI)—Inspection performed during the assembly or reassembly of systems, subsystems, or components with applicable TOs.

Intermediate-Level Maintenance—Maintenance consisting of those tasks normally performed by AFTAC maintenance personnel at an operating location or at a centralized intermediate repair facility.

Maintenance—All action taken to retain materiel in a serviceable condition or to restore it to serviceability. It includes inspection, testing, servicing, classification as to serviceability, repair, rebuilding and reclamation.

Materiel—All items necessary to equip, operate, maintain, and support military activities without distinction as to its application for administrative or combat purposes.

Maintenance Training—Any proficiency, qualification, or certification tasking required by a technician to perform duties in their primary AFSC.

Master Inventory List (MIL)—Primary source document for inventory of CTKs. The MIL indicates the total number of items in each drawer or section of the tool kit. MIL may be automated.

Mission Generation Network—The MGN supports all Organizational-level, on-equipment and off-equipment maintenance and is optimized at the Wing-level across the USAF. MGN consists of the cumulative effort required to generate and sustain mission production to meet assigned mission requirements.

Off-Equipment Maintenance—Maintenance tasks that are not or cannot be effectively accomplished on or at the weapon system or end-item of equipment but require the removal of the component to a shop or facility for repair.

On-Equipment Maintenance—Maintenance tasks that are or can be effectively performed on or at the weapon system or end-item of equipment.

Operating Stock—The bits and pieces needed to support a maintenance work center that does not meet the criteria of bench stock. It includes reusable items such as dust covers, hydraulic line covers, caps, items leftover from work orders, TCTOs. Items deleted from bench stock that are less than a full unit of issue are not considered operating stock but may be retained as work order residue.

Organizational Level Maintenance—Maintenance consisting of those on-equipment tasks normally performed using the resources of an operating command at an operating location.

Personnel Protective Equipment (PPE)—Equipment required to do a job or task in a safe manner.

Plan—A forecasted scheme of sequenced and timed events for accomplishing broad objectives. The plan is the product of annual, quarterly, and monthly planning of scalable operations and maintenance activities necessary to achieve long-term mission requirements.

Property—Military equipment and other accountable property (e.g., administrative property, special tools, special test equipment). Other types of personal property, such as supplies, material, and records, are not included unless expressly stated as being included.

Quality Assurance (QA)—Office or individual who monitors maintenance (organic or contractor) on a daily basis.

Reliability Centered Maintenance Program—A logical discipline for developing a scheduled maintenance program that will realize the inherent reliability levels of complex equipment at minimum cost.

Repair Cycle Asset—Any recoverable item with an ERRC code of XD or XF.

Schedule—Planned events that result in final review and agreement of how to execute a proposed plan of sequenced and timed events. Results in a binding commitment captured in writing and approved by signature between operations and maintenance to complete activities required to accomplish agreed upon objectives. Refers to the execution phase of weekly and daily operations and maintenance activities.

Shop Stock—Includes items such as sheet metal, electrical wire, fabric, and metal stock, used and stored within a maintenance work center to facilitate maintenance.

Spares—Serviceable assets that are available for future use and in the logistics pipeline. The term "spare" carries the assumption that there are already enough assets in the AF inventory to satisfy end item or quantity requirements.

Subject Matter Expert—A person with expert technical knowledge about the duties and responsibilities of a specific area or in performing a specialized job, task, or skill.

Technical Documentation—All publications utilized for maintenance purposes that contain operational or maintenance instructions, parts lists or parts breakdown, or other related technical information or procedures (exclusive of administrative procedures) for any item procured by DoD.

Time Compliance Technical Instruction (TCTI)—Authorized method of directing and providing instructions for modifying equipment and performing or initially establishing OTIs.

Tool—Any object used to perform maintenance on AF equipment unless covered by other guidance.

Work Order Residue—Expendable bit/piece items left over from maintenance work orders or bench stock deletions.