



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS AIR FORCE SPACE COMMAND

AFSPCI21-108_AFSPCGM2016-01

4 MARCH 2016

MEMORANDUM FOR ALL AFSPC UNITS

FROM: HQ AFSPC/A4

SUBJECT: Air Force Space Command Guidance Memorandum on Chief of Maintenance (CoM) Waiver Process

1. By Order of the Air Force Space Command Director of Logistics, Engineering, and Force Protection, this Guidance Memorandum immediately implements changes to Air Force Space Command Instruction (AFSPCI) 21-108, *Space Systems Maintenance Management*. Compliance with this memorandum is mandatory. To the extent its directions are inconsistent with other Air Force publications, the information herein prevails, in accordance with AFI33-360, *Publications and Forms Management*.
2. In advance of publishing the revised AFSPCI 21-108, *Space Systems Maintenance Management*, this Memorandum provides guidance that is effective immediately for all AFSPC units.
3. This memorandum becomes void after one-year has elapsed from the date of this memorandum, or upon publication of an Interim Change or rewrite of the affected publication, whichever is earlier. Direct any questions to Mr. Donald Daley, DSN 692-5360.

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SES, DAF
Director of Logistics, Engineering,
and Force Protection

Attachment:
Revision to AFSPCI 21-108

Attachment to AFSPCI 21-108_AFSPCGM2016-01

Revision to AFSPCI 21-108

2.5.2.5.1. Delete paragraph and replace with: Although Chief of Maintenance (CoM) authority, accountability, and responsibilities reside with the operations group commander, day-to-day execution can reside at the squadron level. (T-2)

2.6.3. Delete paragraph and replace with: OG/NOG is the Chief of Maintenance and will establish roles and responsibilities to ensure effective implementation of maintenance management guidance requirements.

3.1. Delete paragraph and replace with: The CoM functionally directs and controls the maintenance effort, and has overall responsibility for accomplishing the maintenance mission.

**BY ORDER OF THE COMMANDER
AIR FORCE SPACE COMMAND**

**AIR FORCE SPACE COMMAND
INSTRUCTION 21-108**



18 AUGUST 2014

Maintenance

**SPACE SYSTEMS MAINTENANCE
MANAGEMENT**

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This instruction implements Air Force Policy Directive (AFPD) 21-1, *Air and Space Maintenance*, Air Force Instruction (AFI) 10-1201. It establishes Air Force Space Command (AFSPC) roles and responsibilities relating to space systems maintenance activities. This instruction is consistent with Air Force Occupational Safety and Health (AFOSH) standards and Department of Labor Occupational Safety and Health Act (OSHA) standards. It applies to: Headquarters Air Force Space Command (HQ AFSPC); Space and Missile Systems Center (SMC); Air Force Life Cycle Management Center (AFLCMC) for those systems owned and operated by AFSPC, and acquired or maintained by AFLCMC for AFSPC or under the Space Program Executive Officer (PEO); 14th Air Force (14 AF); the 21st Space Wing (21 SW), 30th Space Wing (30 SW), 45th Space Wing (45 SW), 50th Space Wing (50 SW), and 460th Space Wing (460 SW), Air Force Reserve and Air National Guard. It also applies to all military, government service, and applicable contractor personnel whose duties directly relate to the management, operations, maintenance, mission assurance, preparation, and conduct of activities required in support of AFSPC space mission areas. This instruction does not apply to the 30th and 45th Launch Group activities. This instruction will be updated every four years, or as needed, to reflect the most current roles and responsibilities as future capabilities and concepts become operational. Wherever this instruction is inconsistent with current contracts that support AFSPC's mission, the contract shall govern but will be changed at the first opportunity to comply with this AFSPCI. For a glossary, list of references, and acronyms, see **Attachment 1**, Glossary of References and Supporting Information. **NOTE:** Information contained in the following publications is useful to the space communication-electronics community. **Attachment 1** is not inclusive of all required directives, but is an excellent starting point to find needed information. Send comments and suggested improvements on an AF Form 847,

Recommendation for Change of Publication, through appropriate command channels to HQ AFSPC A4SP, 150 Vandenberg Street, Suite 1105, Peterson AFB, CO 80914 with an informational copy to 14 AF (as appropriate). Organizations requesting document changes should ensure all units that could be affected by the change are included as informational addressees. The authorities to waive wing/unit level requirements in this publication are identified with a Tier (“T-0, T-1, T-2, T-3”) number following the compliance statement. See AFI 33-360, *Publications and Forms Management*, Table 1.1 for a description of the authorities associated with the Tier numbers. Submit requests for waivers through the chain of command to the appropriate Tier waiver approval authority, or alternately, to the Publication OPR for non-tiered compliance items. Subordinate organizations are encouraged to supplement this instruction. Supplements will not lessen the requirements nor change the basic content or intent of this instruction. Coordinate all supplements with appropriate Major Command (MAJCOM) Office of Primary Responsibility (OPR). Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with (IAW) Air Force Manual (AFMAN) 33-363, *Management of Records*, and disposed of IAW the Air Force Records Disposition Schedule (RDS).

SUMMARY OF CHANGES

This document has been substantially revised and must be completely reviewed. Major changes include identifying Operations Group Commander (OG) as Chief of Maintenance (COM) for Space organizations. Aligns roles and responsibilities with AFI 21-101 and T.O. 00-33A-1001.

Chapter 1—SPACE MAINTENANCE MANAGEMENT GUIDANCE	5
1.1. Introduction.	5
1.2. Maintenance Definition and Levels.	5
1.3. Organization.	6
1.4. Equipment Status Reporting (ESR) and Maintenance Data Documentation (MDD).	6
1.5. Reliability, Availability, and Maintainability (RAM) Metrics Analysis.	7
1.6. Skip-echelon.	7
1.7. Configuration Control.	8
1.8. Use of Technical Orders (TO) and TO Supplements.	8
1.9. Deficiency Reporting.	8
1.10. Maintenance Training.	8
1.11. Publications.	8
Chapter 2—RESPONSIBILITIES	9
2.1. Directorate of Logistics, Installations and Mission Support (HQ AFSPC/A4/A7):	9
2.2. Space Sustainment Division (A4S):	9

2.3.	HQ AFSPC Directorates (A1, A3, A6, A8/9, FM) as required:	11
2.4.	14 AF A4/6/7:	11
2.5.	Space Wing (SW), Joint Space Operations Center (JSPOC) Responsibilities:	11
2.6.	Operations Group Commander/ Network Operations Group Commander:	12
2.7.	Operations/Warning/Range Management Squadron Responsibilities:	13
2.8.	Maintenance Flight/Workcenter Responsibilities:	13
2.9.	Space and Missile Systems Center (SMC) Program Manager/Product Support Manager (PM/PSM) Responsibilities:	13
Chapter 3—CHIEF OF MAINTENANCE (COM) RESPONSIBILITIES:		15
3.1.	The COM functionally directs and controls the maintenance effort:	15
3.2.	The COM will:	15
3.3.	Develops and implements standardized maintenance/mission assurance policies, procedures, and instructions.	15
3.4.	The COM shall ensure all maintenance work centers:	16
3.5.	Supervises/directs the MOC.	16
3.6.	Establishes processes to review IMDS maintenance documentation and equipment status:	16
3.7.	Submits proposed PIWG agenda items:	16
3.8.	Maintains LCSE for assigned systems:	17
3.9.	Submits monthly metrics input to:	17
3.10.	Ensures squadrons are aware of changes:	17
3.11.	Provides wing oversight:	17
3.12.	Ensures training plans are developed:	17
3.13.	The COM shall ensure:	17
3.14.	Ensure effective safety and radiation protection practices:	18
3.15.	The COM shall Be responsible for developing written deployed maintenance management guidance for any assigned systems/equipment with a deployment/mobility mission.	18
3.16.	Establish and implement a maintenance plan.	18
Chapter 4—MAINTENANCE OPERATIONS CENTER (MOC) RESPONSIBILITIES		20
4.1.	The MOC is responsible for control of:	20
4.2.	MOC personnel:	22
4.3.	Government civilian and military MOC personnel will:	22
Chapter 5—QUALITY ASSURANCE (QA)		23

5.1. The QA program is designed to: 23

5.2. Training Requirements: 25

Chapter 6—SUPPORT OFFICER RESPONSIBILITIES: 26

6.1. Space wings may: 26

Chapter 7—MAINTENANCE WORKCENTER RESPONSIBILITIES: 28

7.1. Maintenance work centers: 28

Attachment 1—GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION 34

Attachment 2—SAMPLE MAINTENANCE PLAN 44

Chapter 1

SPACE MAINTENANCE MANAGEMENT GUIDANCE

1.1. Introduction. AFSPC must maintain a safe, secure, and modern space capability to meet warfighter and other national security mission needs. All levels of leadership and management within AFSPC must strive to meet this basic requirement for all missions and resources under their control. The primary purpose of maintenance is to ensure space systems are available and able to support AFSPC mission requirements. For purposes of this instruction space systems are defined as: satellites; ground stations; data links among spacecraft; mission or user terminals, which may include initial reception, processing, and exploitation; range systems; and systems directly supporting infrastructure, which may include space surveillance, battle management, and/or command, control, communications and computers.

1.2. Maintenance Definition and Levels. Maintenance is defined as all actions required to restore or maintain a system's operational capacity. The AF-preferred maintenance concept per AFI 21-129, *Two Level Maintenance and Regional Repair of AF Weapon Systems and Equipment*, is two levels of maintenance; organizational and depot. Maintenance categories include on-equipment and off-equipment.

1.2.1. Organizational Level Maintenance. The primary focus of organizational level maintenance is maintaining operations through scheduled preventive actions and quick restoral of the system once a failure occurs. Organizational level maintenance activities shall include but not be limited to fault detection, isolation, and replacement of failed Line Replaceable Units (LRU), accomplishment of scheduled preventive maintenance actions, identification of system improvements and modifications, and configuration control of system baseline. Organizational maintenance includes on- and off-equipment maintenance tasks and both scheduled and unscheduled maintenance. Software maintenance at this level has the primary responsibility of file and database maintenance, installation of approved updates and configuration control of the software baseline. Organizational level maintenance will be conducted within the limits established in approved system and equipment maintenance technical data.

1.2.2. Depot Level Maintenance. Depot level maintenance includes both scheduled and unscheduled events on both on-and off-equipment hardware and software activities requiring specialized equipment, skills, and if needed, special facilities that are not available at the organizational level. Depot level maintenance can include both scheduled and unscheduled maintenance events.

1.2.2.1. Depot level software maintenance refers to actions used to maintain current weapon system software capabilities by correcting, preventing or adapting software to correct anomalies.

1.2.2.1.1. Corrective maintenance which successfully repairs faults discovered in the software.

1.2.2.1.2. Preventive maintenance which detects and corrects latent faults in the software.

1.2.2.1.3. Adaptive maintenance which incorporates enhancements made necessary by modifications in the software or hardware (operational) environment of the program. As an example this would include a hardware change which facilitates need for software update.

1.2.3. On-Equipment Maintenance. On-equipment maintenance tasks are those maintenance tasks that are, or that can effectively be, performed on or at the system level. Maintenance is performed while the equipment remains in the equipment racks or operational configuration.

1.2.4. Off-Equipment Maintenance. Off-equipment maintenance tasks are those maintenance tasks that are not, or cannot be, effectively accomplished on or at the system or end-item level of equipment and require removal for repair.

1.3. Organization. Space wings will organize according to AFI 38-101, *Air Force Organization*, or as authorized by HQ USAF/A1M. Contractor and civil service maintenance functions are not required to organize IAW AFI 38-101, but will implement the organization as outlined in their contract as accepted by the government. (T-2).

1.3.1. Contract Maintenance Management. Space systems employ a mix of AF, non-Department of Defense (DOD) government agencies and contracted agencies to support maintenance and operations activities. To ensure proper mission conduct and contractor compliance, Air Force (AF) personnel should understand Government rights and responsibilities embodied in contracts and their provisions. A general understanding of the contract between the AF and the contractor is of particular importance for commanders and mission personnel. Organization Commanders owning maintenance activities are responsible for ensuring maintenance management actions and activities comply with DOD, AF and AFSPC instructions and directives regardless if maintenance is performed by military, civilian or contractor.

1.3.1.1. AFSPC organizations utilizing contract maintenance, including OCONUS locations, will ensure the quality assurance surveillance plan (QASP) is developed IAW AFI 63-138, *Acquisition of Services*. The QASP shall include performance metrics to enable accurate assessment of contractor performance. Contracting Officer's Representative (COR) should have sufficient knowledge and experience necessary to provide technical oversight of contractor performance. (T-2).

1.4. Equipment Status Reporting (ESR) and Maintenance Data Documentation (MDD). The Program Manager (PM) is responsible for ensuring that maintenance planning sufficiently addresses how ESR and MDD will be accomplished including compliance with all applicable DOD, AF, and AFSPC instructions. PMs managing systems with classified maintenance data will present MDD solutions to AFSPC A4/7 for approval prior to initiating development of program unique Maintenance Information Systems (MIS) and/or MDD processes. (T-2).

1.4.1. Accurate ESR and MDD are critical for situational awareness of mission capability and ability to accurately identify negative trends and issues as part of Reliability & Maintainability (R&M) metrics analysis. The Integrated Maintenance Data System (IMDS) is the AF standard maintenance data collection (MDC) system and is mandatory for use for AFSPC systems/equipment. Maintenance organizations will accomplish MDD IAW Technical Order (TO) 00-20-2, *Maintenance Data Documentation*, and ESR IAW AFI 21-

103, *Equipment Inventory, Status, and Utilization Reporting*. Requested deviations or waivers to IMDS shall be submitted to HQ AFSPC/A4S and should include sufficient justification and explanation of why the deviation or waiver is required. An approved waiver for IMDS does not cover the maintenance documentation processes contained in TO 00-20-2; a separate waiver request must be submitted for this purpose. Requested waivers to MDD requirements within TO 00-20-2 shall be submitted through HQ AFSPC/A4S and will only be approved under exceptional circumstances. **(T-2)**.

1.4.2. Do not input classified data into the IMDS. Data within IMDS is classified as "FOUO". Programs with classified maintenance data are still required to submit an IMDS deviation or waiver request to formally document and approve the exemption due to security classification reasons. Programs with classified maintenance data are not exempt from the MDD procedures contained in TO 00-20-2.

1.5. Reliability, Availability, and Maintainability (RAM) Metrics Analysis. Maintaining high readiness levels is dependent on having a robust RAM program enabling the ability to identify system deficiencies and negative trends before they impact operational capability. Both HQ AFSPC and system program offices are responsible for accomplishing RAM metrics analysis for assigned systems/programs. In addition to internal periodic reviews, RAM metrics shall be included as part of the following meetings/conferences:

1.5.1. Product Improvement Working Group (PIWG). AFI 21-118, *Improving Air and Space Equipment Reliability and Maintainability*, outlines the requirements for conducting a PIWG. The PIWG is designed to bring all organizations responsible for product support together to address R&M issues beyond the scope of field organizations to resolve and require a coordinated approach between multiple organizations. After any Interim Contractor Support (ICS) periods, space programs will conduct a PIWG at least annually unless a waiver is granted by the MAJCOM co-chair. PIWG co-chairs will be HQ AFSPC/A4S (or delegated official) and the system PM (or delegated official). **(T-2)**.

1.5.1.1. As a minimum, the PIWG agenda should include the following items: **(T-2)**.

1.5.1.1.1. Old action items (deficiencies).

1.5.1.1.2. New agenda items (deficiencies).

1.5.1.1.3. Current modifications.

1.5.1.1.4. Sustainment (RAM) metrics.

1.5.1.1.5. Bad actor review (review of supply assets with chronic failure rates).

1.5.1.1.6. Software releases.

1.5.1.1.7. Sustaining engineering efforts.

1.5.1.1.8. Sustainment issues and ranking.

1.5.1.1.9. Scheduling of next PIWG (location/date).

1.5.1.1.10. Other items as requested by the PIWG co-chairs.

1.6. Skip-echelon. Maintenance functions will make maximum use of skip-echelon processes. Under the skip-echelon concept maintenance management functions are consolidated at the MAJCOM. Wing maintenance activities shall communicate directly with MAJCOM elements

via Chief of Maintenance (COM) or designee for assistance with maintenance and sustainment issues. MAJCOM organizations shall communicate directly with wing maintenance organizations via COM or designee on issues related to maintenance management and weapon system sustainment. The component Numbered Air Force (NAF) maintenance function should be included in an “information only” capacity in any skip-echelon communications in order to maintain awareness of any issues having operational impact.

1.7. Configuration Control. Maintaining system configuration is critical to meeting Life Cycle Systems Engineering (LCSE) requirements. Maintenance organizations/personnel shall not make changes to the system configuration without prior approval IAW AFI 63-131, *Modification Management*. Following all appropriate modification management guidance is vital to ensuring sound configuration control practices are employed consistently by all organizations with maintenance management responsibilities.

1.8. Use of Technical Orders (TO) and TO Supplements. Maintenance personnel will perform maintenance IAW system technical orders or approved locally developed procedures and will report any technical order improvements or corrections IAW TO 00-5-1, *AF Technical Order System*. Use of the prescribed technical data to maintain equipment is mandatory. **(T-1)**.

1.9. Deficiency Reporting. Maintenance organizations shall submit deficiency reports IAW TO 00-35D-54. **(T-1)**.

1.10. Maintenance Training. Training is essential to ensure personnel safety, prevent equipment damage, and support system availability. Maintenance organizations at all levels shall ensure personnel (including contractor support personnel) are trained and qualified on the maintenance tasks they are performing. **(T-1)**.

1.10.1. Supervisors at all levels are directly responsible for ensuring AF military and civilian maintenance personnel are trained and qualified on maintenance tasks they are performing. **(T-1)**.

1.11. Publications. Organizations supplementing this instruction must tailor procedures to the unique aspects of their own maintenance operation and publish directives, instructions, supplements and operating instructions for areas where more detailed guidance or specific procedures will ensure smooth and efficient operations.

1.11.1. Coordinate directives with all appropriate agencies.

1.11.2. Supplements to this instruction must be coordinated through the OPR.

1.11.3. The Wing may publish maintenance operating instructions (MOI) as required covering maintenance routines. MOIs cannot be used to change or supplement TOs. **(T-2)**.

Chapter 2

RESPONSIBILITIES

2.1. Directorate of Logistics, Installations and Mission Support (HQ AFSPC/A4/A7):

2.1.1. Provides direct support to AFSPC/CC on space systems maintenance issues, as required.

2.1.2. Provides assistance to subordinate organizations, as required, to subordinate organizations implementing DOD, AF, and AFSPC maintenance and logistics management directives and instructions.

2.1.3. Approves AFSPC maintenance and logistics policy.

2.1.4. Manage/oversee the Logistics Requirements Determination Process (LRDP) used to plan, budget and execute Depot Purchased Equipment Maintenance (DPEM); Sustaining Engineering (SE); Technical Orders (TO) and Contractor Logistics Support (CLS) requirements.

2.1.4.1. The LRDP, developed by the Air Force Materiel Command (AFMC) Centralized Asset Management (CAM) Office, outlines the end-to-end logistics requirements and costing process for the Air Force. The process is simplified, integrated, standardized and repeatable, and allows for trade-offs (optimization) at the AF-level vice at the MAJCOM level. The results of the LRDP are validated, prioritized, and utilized in AF sustainment requirements.

2.2. Space Sustainment Division (A4S):

2.2.1. Develops, implements, and reviews standardized policy and guidance for AFSPC organizations supporting space systems maintenance and provides assistance to subordinate organizations with compliance instructions when resolution is beyond their scope and/or resources.

2.2.1.1. Provides direction, advocates and supports subordinate organizations (e.g. Wings, NAF, and Center) as required ensuring successful implementation of maintenance management functions and long term sustainment of AFSPC space systems.

2.2.2. Advocates for the necessary resources (equipment, manpower, etc.) to sustain AFSPC space systems capabilities, and provide support to other external agencies and users as required by directive, regulation, and Public Law.

2.2.3. Command functional manager for Precision Measurement Equipment Laboratory (PMEL).

2.2.4. Supports and augments AFSPC/IG, as required for maintenance management functions.

2.2.5. Supports AFSPC/A8/9 as requested (e.g., Integrated Planning Process (IPP) activities, Program Objective Memorandum (POM). This could involve providing PIWG and/or SLR results for use in IPP-related Capability Needs Analysis (CNA) activities and/or analysis supporting POM funding recommendations.

- 2.2.6. Reviews, comments, and coordinates on Wing maintenance operating instructions (OI) and supplements to AFSPC maintenance guidance.
- 2.2.7. Reviews published logistics and maintenance management policy and guidance; updates MAJCOM specific guidance as required.
- 2.2.8. Reviews and coordinates on proposed space systems maintenance government manpower strength and grade adjustments.
- 2.2.9. Reviews equipment status, mission status, evaluations, and analysis reports to identify and analyze systems or equipment deficiency trends.
 - 2.2.9.1. Performs trend analyses and special studies on fielded systems and equipment to identify adverse equipment performance.
 - 2.2.9.2. Reviews system metrics.
- 2.2.10. Develops maintenance management and logistics inspection checklists.
- 2.2.11. Attends Utilization and Training Workshop (U&TW) as required.
- 2.2.12. Develops supplemental policy, procedures and directives for equipment status and maintenance data reporting for classified systems.
- 2.2.13. Monitors space system deficiency reporting; ensure Deficiency Reports (DRs) are investigated fully, resolved effectively and closed in a timely manner IAW procedures defined in TO 00-35D-54.
- 2.2.14. Reviews/coordinates maintenance planning and management requirements addressed in the Life Cycle Sustainment Plans, prepared by PM/PSM, for assigned programs/systems.
- 2.2.15. Co-chairs PIWG conferences, and participate in other logistics meetings as appropriate.
 - 2.2.15.1. Sends data call to wings with respective space program responsibilities no later than 75 days prior to the scheduled PIWG.
- 2.2.16. Monitors Programmed and Mobile Depot Maintenance to include Urgent and Emergency Depot Level Maintenance IAW TO 00-25-108, *Communications-Electronics Depot Support*.
 - 2.2.16.1. Reviews and approves new/updated scheduled depot maintenance requests.
 - 2.2.16.2. Reviews scheduled depot maintenance with depot maintenance providers.
- 2.2.17. Reviews and approves/disapproves IMDS and TO 00-20-2 waiver requests.
 - 2.2.17.1. Submits approved waivers for final approval IAW TO 00-20-2.
 - 2.2.17.2. Reviews and approves/disapproves classified MDC solutions submitted by the system program office.
- 2.2.18. Reviews and approves AFTO Form 22's, *Technical Manual (TM) Change Recommendation and Reply*, to ensure TOs are updated IAW T.O. 00-5-1.

2.3. HQ AFSPC Directorates (A1, A3, A6, A8/9, FM) as required:

- 2.3.1. Advocates for the necessary resources (equipment, manpower, etc.) to sustain AFSPC space systems capabilities, and provide support to other external agencies and users as required by directive, regulation, and Public Law.
- 2.3.2. Reviews Weapon System Sustainment (WSS) requirements for space programs utilizing current AF/A4/7 LRDP, and CAM processes/guidance.
- 2.3.3. Reviews, as required, maintenance planning and management included in program LCSP as required by AFI 63-101/20-101, *Integrated Life Cycle Management*.
- 2.3.4. Monitors space system deficiency reporting; ensure DRs are investigated fully, resolved effectively and closed in a timely manner IAW procedures defined in TO 00-35D-54, *USAF Deficiency Reporting, Investigating and Resolution*.
- 2.3.5. Participate in PIWG for assigned systems/programs. **(T-2)**.

2.4. 14 AF A4/6/7:

- 2.4.1. Monitors space maintenance activities and equipment status to ensure required space capabilities are available and able to support mission needs.
- 2.4.2. Identifies, coordinates and monitors logistics requirements to ensure deployed forces are sustained.
- 2.4.3. Reviews, implements, and supplements space operational, maintenance and contingency policies and requirements established by DOD, AF, and AFSPC directives and instructions. **(T-1)**.
 - 2.4.3.1. Coordinates all space systems maintenance implementing directives with HQ AFSPC A4/7.
- 2.4.4. Support subordinate organizations' (e.g. Wings) ability to communicate directly with HQ AFSPC/A4/7 for assistance in implementing maintenance and logistics management and execution functions which are beyond the scope of day-to-day execution of maintenance and operations.
- 2.4.5. Advocates for maintenance and logistics standardization initiatives for space maintenance organizations.
- 2.4.6. Supports PIWGs for applicable systems as required.

2.5. Space Wing (SW), Joint Space Operations Center (JSPOC) Responsibilities:

- 2.5.1. Commander, Space Wing (SW/CC): Space Wing Commanders are accountable and responsible for operations, maintenance, safety and resource protection for all personnel, systems, government facilities, and equipment for space systems under their control.
- 2.5.2. Space Wings, JSPOC shall:
 - 2.5.2.1. Implement and supplement policies and requirements established by DOD, AF, and AFSPC directives and instructions, and ensure effective management and quality control of all maintenance activities for assigned systems. **(T-2)**.
 - 2.5.2.2. Require strict adherence to technical data and all other written management procedures.

2.5.2.3. Enforce sound maintenance, supply discipline, and financial management practices.

2.5.2.4. Supervise subordinate maintenance activities, ensuring operational effectiveness. Provide assistance on compliance issues to subordinate organizations when resolution is beyond their scope and/or resources.

2.5.2.5. Assign COM responsibilities to Operations Group Commander (OG/CC) or Network Operations Group Commander NOG/CC) where two Operations Groups exist. Ensure COM is appointed and designated in writing by the WG/CC to serve as the single focal point for space maintenance issues for possessed systems. **(T-2)**.

2.5.2.5.1. Although COM responsibilities and accountability reside with OG/CC execution can be delegated to squadron CC level but not below 0-5 or civilian equivalent unless waived by HQ AFSPC A4/7. Provide letter designating COM to HQ AFSPC/A4/7 and courtesy copy 14 AF A/4/6/7. **(T-2)**.

2.5.2.6. Submit requests for modifications to the AFSPC Modification Control Point using procedures published in AFI 63-131, Modifications to Systems and Implementation Approval Process. **(T-2)**.

2.5.2.7. Submit requests for revisions to maintenance procedures IAW applicable instructions. **(T-2)**.

2.5.3. Ensure maintenance organizations, including wing-managed contractors and contractors aligned vertically under the applicable program office, comply with maintenance and supply data documentation and equipment status reporting requirements IAW TO 00-20-2, TO 00-35D-54, AFI 21-103, AFMAN 23-110, USAF Supply Manual, AFMAN 23-122, *Material Management Procedures*, and AFH 23-123, *Material Management Reference Information*.

2.5.4. Ensure maintenance organizations comply with DOD, AF and AFSPC maintenance and maintenance management directives and instructions.

2.5.4.1. Ensure performance work statements (PWS) for contracted maintenance comply with DOD, AF and AFSPC maintenance policies.

2.5.5. Identify maintenance funding shortfalls or issues to Command leadership through the SLR, A4S, Program Element Monitor, or FM for inclusion in planning, programming and budgeting documents.

2.5.6. For Space Wings that own flight line operations, develop and manage the base Crash Damaged Disabled Aircraft Recovery (CDDAR) program IAW AFI 21-101, *Aircraft and Equipment Maintenance Management* and AFI 10-206, *Operational Reporting*. **(T-1)**.

2.6. Operations Group Commander/ Network Operations Group Commander:

2.6.1. Incorporates space system maintenance requirements into IPP-related CNA activities by utilizing information received from forums such as PIWGs and SLRs.

2.6.2. Ensures weapon system sustainment priorities are provided to the AFSPC Corporate Structure for consideration during POM/APOM deliberations.

2.6.3. OG/NOG Is the Chief of Maintenance. Execution delegable (see [paragraph 2.5.2.1](#)).

2.7. Operations/Warning/Range Management Squadron Responsibilities:

- 2.7.1. Ensure there are adequate levels of supervision on all shifts.
- 2.7.2. Ensure compliance with the Environment Safety and Occupational Health Management System (ESOHMS) programs as identified in AFPD 90-8, *Environmental, Safety & Occupational Health Management and Risk Management*, the AFI 90-8XX series of ESOH instructions, AFPD 91-2, Occupational, Safety, and Health, AFI 91-202, and the AFI 32-70XX series environmental instructions. **(T-2)**.
- 2.7.3. Ensure strict adherence to technical data and all other written management procedures.
- 2.7.4. Ensure the UMD is consistent with the organizational structure in AFI 38-101.

2.8. Maintenance Flight/Workcenter Responsibilities:

- 2.8.1. This section is the primary work center responsible for maintaining assigned systems and equipment. This section performs tasks to include servicing, scheduled and unscheduled maintenance, special inspections, corrosion control, cleaning, troubleshooting and adjustment, on-equipment repairs and component removal and replacement, and documents maintenance actions.
- 2.8.2. Maintenance technicians manage and maintain assigned space systems and equipment. Maintenance technicians will:
 - 2.8.2.1. Enforce strict adherence to and comply with technical data and management procedures. Advocates the importance of using current technical data IAW AFI 63-101/20-101 and use of the TO improvement program IAW TO 00-5-1.
 - 2.8.2.2. Ensure space systems and equipment documentation and Maintenance Information System (MIS) documentation are completed, accurate and accomplished IAW 00-20-2, *Maintenance Data Documentation* series TOs. Ensure system status is accurately reported to Maintenance Operation Center (MOC).
 - 2.8.2.3. Ensure replacement parts are requisitioned and documentation is accurately completed.
 - 2.8.2.4. Coordinate with MOC and OPS center for downtime to accomplish scheduled and unscheduled maintenance.
 - 2.8.2.5. Conduct OJT training/certifying as required.

2.9. Space and Missile Systems Center (SMC) Program Manager/Product Support Manager (PM/PSM) Responsibilities:

- 2.9.1. Responsible for the sustainment portion of an assigned system's lifecycle in support of PM. The PM retains overall responsibility for lifecycle sustainment however may delegate the following required functions to the PSM: **(T-3)**.
 - 2.9.1.1. Perform acquisition and sustainment program management for assigned systems. Perform LCSE oversight, system engineering cognizant oversight and approval, product design/configuration baseline management, technical/engineering data/TO approval, requirements analysis and materiel solution development, modification program execution, supply support management, depot maintenance management and execution as

assigned, and other SM responsibilities per applicable DOD, Air Force and AFSPC policy. **(T-1)**.

2.9.2. Ensures space systems meet LCSE requirements IAW AFI 63-101/20-101. **(T-1)**.

2.9.3. Executes Deficiency Reporting, Investigation and Resolution (DRI&R) program pursuant to TO 00-35D-54 for all space systems. SMC Single Point of Contact Office (SPOCO) administers the center's DRI&R program and ensures compliance with TO 00-35-54 processes. **(T-1)**.

2.9.4. Implements/schedules programmed and mobile depot maintenance IAW TO 00-25-108. **(T-2)**.

2.9.5. Supports emergency and urgent depot maintenance requests for assigned systems IAW TO 00-25-108. **(T-2)**.

2.9.6. Plans/programs depot sustainment activities/requirements for assigned systems. **(T-2)**.

2.9.6.1. Prepares and submits WSS requirements for assigned programs utilizing current AF/A4/7 LRDP, and CAM processes/guidance. **(T-2)**.

2.9.7. Reviews and updates, as required, maintenance planning and management included in program LCSP as required by AFI 63-101/20-101. Ensure maintenance planning accurately reflects implementation of all levels of maintenance.

2.9.8. PM or PSM co-chairs PIWG with HQ AFSPC A4S. **(T-2)**.

2.9.8.1. PM/PSM develop solutions to correct reliability and maintainability issues identified during PIWG.

2.9.9. Monitors compliance with depot maintenance data for assigned programs/systems IAW TO 00-20-2. **(T-2)**.

2.9.10. Analyzes maintenance data to identify reliability, maintainability and availability issues and develop corrective actions IAW AFI 21-118. **(T-2)**.

2.9.11. Develops/utilizes Diminishing Manufacturing Sources and Material Shortage (DMSMS) program to identify, track, analyze and resolve materiel obsolescence issues for assigned programs/systems. **(T-2)**.

2.9.12. Ensures processes and POCs are established to manage deficiency reporting for assigned systems/programs IAW TO 00-35D-54. **(T-1)**.

2.9.13. Develops/utilizes requirement to process suspected counterfeit materiel to GIDEP using the DR/PQDR process IAW AFI 23-101, *Air Force Materiel Management* and TO 00-35D-54. **(T-1)**.

2.9.14. Ensures that depot maintenance requirements are identified through the LRDP process.

Chapter 3

CHIEF OF MAINTENANCE (COM) RESPONSIBILITIES:

3.1. The COM functionally directs and controls the maintenance effort: And if delegated is responsible to the OG/NOG for accomplishing the maintenance mission.

3.2. The COM will: Be the single focal point for all required flightline maintenance activities IAW AFI 21-101 for units with active airfields/runways. **(T-2).**

3.2.1. Coordinates actions to resolve maintenance management, system and equipment deficiencies with HQ AFSPC A4/7 for issues that exceed the scope of wing resources.

3.2.1.1. Communicates directly (skip echelon) as required to AFSPC/A4/7 divisions for support in resolving issues with implementing day-to-day maintenance, logistics, and supply chain management and execution functions. Include 14 AF A4/6/7 on any skip echelon communications for situational awareness purposes. **(T-2).**

3.2.1.2. Establishes depot level and radome maintenance requirement submission program (AFTO Form 227, C-E Depot Maintenance Requirements and Schedule process) for assigned systems IAW TO 00-25-108. **(T-2).**

3.2.1.2.1. Validates and submits requests for unscheduled depot maintenance, Emergency Depot Level Maintenance (EDLM) and Unscheduled Depot Level Maintenance (UDLM) support IAW TO 00-25-108 for outages that require special tools, facilities or knowledge/procedures which are beyond the scope of organizational level maintenance. **(T-2).**

3.3. Develops and implements standardized maintenance/mission assurance policies, procedures, and instructions.

3.3.1. Develops and approves MOIs as necessary to delineate maintenance responsibilities for assigned systems.

3.3.2. The COM may publish Local Work Cards (LWCs) when PMIs are not published in the TO system or available in other locally developed maintenance procedures. Refer to TO 00-5-1 and TO 00-20-1, *Aerospace Equipment Maintenance Inspection, Documentation, Policies, and Procedures* for additional guidance on LWC development and limitations on their use. **(T-3).**

3.3.2.1. The COM approves and publishes Quality Assurance (QA)-validated LWCs prior to use. The COM approves LWCs for publication and use by signing the LWC title page. **(T-2).**

3.3.2.2. LWCs cannot modify existing PMIs, must comply with all parent TO procedures and will not introduce new requirements for tools or test equipment. Locally prepared technical instructions must not be used to circumvent centrally-managed responsibilities.

3.3.3. Ensures maintenance practices comply with DOD, AF and AFSPC directives and instructions governing maintenance and maintenance management activities. **(T-1).**

3.3.4. Reviews contractor PWS and Statements of Work (SOW) to ensure they include requirements to comply with maintenance, training, and logistics management policies. Any

deviations from standard maintenance management processes contained in DOD, AF and AFSPC directives and instructions shall be coordinated with HQ AFSPC A4/7 for approval prior to finalizing the PWS and/or SOW. (T-2).

3.3.5. Ensures QASP is in place for surveillance of contracted maintenance functions IAW AFI 63-138 and COR duties are accomplished IAW AFI 21-101. (T-1).

3.3.6. Ensures weapon system sustainment priorities are considered during budget and execution year planning and distribution, and provided to the AFSPC Corporate Structure for consideration during execution year reviews and unfunded exercises. (T-2).

3.3.7. Shall designate a primary and alternate product improvement manager (PIM) to perform PIWG functions IAW AFI 21-118, and AFTO Form 22, processing for systems operated and maintained by Wing organizations IAW TO 00-5-1. (T-2).

3.4. The COM shall ensure all maintenance work centers: Manage assigned supply point and bench stock assets accounts IAW AFI 23-101, AFMAN 23-122 and AFH 23-123. (T-1).

3.4.1. The COM will ensure maintenance work centers designate personnel in writing to manage supply points and bench stock accounts and ensure personnel are trained appropriately to execute assigned responsibilities IAW AFMAN 23-122 and AFH 23-123. (T-2).

3.4.2. The COM will ensure maintenance work centers order/requisition parts IAW procedures in AFI 23-101, AFMAN 23-122 and AFH 23-123. (T-1).

3.5. Supervises/directs the MOC. Ensures MOC personnel are properly trained and qualified to perform MOC duties. Ensure the MOC establishes processes to control all maintenance actions that cause creation of an equipment status report according to guidance contained in AFI 21-103. (T-2).

3.5.1. Approves cannibalization requests submitted by the MOC. (T-2).

3.6. Establishes processes to review IMDS maintenance documentation and equipment status: Reporting to identify and correct errors through a Data Integrity Team (DIT) if applicable. (T-2).

3.6.1. Ensures maintenance work centers accomplish maintenance historical documentation IAW TO 00-20-1.

3.6.2. Ensures maintenance work center accomplishes Time Compliance Technical Orders (TCTO) IAW 00-20-1 *Aerospace Equipment Maintenance Inspection, Documentation, Policies, and Procedures*, 00-5-1 *Air Force Technical Order System* and AFI 33-150 *Management of Communications Activities*

3.7. Submits proposed PIWG agenda items: For assigned systems in response to PIWG call for agenda items. (T-2)

3.7.1. Format proposed agenda items according to AFI 21-118 guidance. (T-2)

3.7.2. Coordinates proposed PIWG agenda items through Wing PIM for submission to MAJCOM POC. (T-2)

3.8. Maintains LCSE for assigned systems: By ensuring no system configuration or maintenance procedure changes are made without proper approval IAW AFI 63-101/20-101, AFI 63-131, *Modification Management*.

3.8.1. Provides Wing data input and participate in HQ AFSPC command-level SLR.

3.9. Submits monthly metrics input to: Assigned Command Logistics Managers and MAJCOM maintenance management analysts (HQ AFSPC/A4SP (T-2))

3.9.1. Metric inputs will be provided in the format prescribed by HQ AFSPC/A4SP.

3.10. Ensures squadrons are aware of changes: To applicable DOD, AF and AFSPC policy, instructions and other directives.

3.11. Provides wing oversight: For technical management function for daily maintenance operations, and of assigned systems (i.e. space lift range systems, satellite processing, ordnance services, mission critical range communications, mission critical satellite communications).

3.12. Ensures training plans are developed: For maintenance organizations and only trained personnel perform maintenance actions on assigned systems. (T-2)

3.12.1. Ensures effective training programs are established in work centers, MOC, Material Control, QA and other assigned maintenance staff functions. For non-CLS maintenance the COM is responsible for the identification of training requirements and will ensure completion of training is documented according to applicable training instructions, Career Field Education and Training Plans (CFETP), Air Force Job Qualification Standards (AFJQS), and local Job Qualification Standards (JQS), or contractor specific instructions. For CLS maintenance, the COM is responsible for ensuring training and training documentation requirements are adequately identified in CLS contracts.

3.12.2. Maintainer training requirements (if any) for performance of operational tasks and associated documentation of training accomplishment, will be identified in System Training Plans (STP) and CLS contracts as appropriate.

3.13. The COM shall ensure: Test Measuring and Diagnostic Equipment (TMDE) management is accomplished IAW AFI 21-113, *Air Force Metrology And Calibration (AFMETCAL) Management*, TO 00-20-14, *Air Force Metrology and Calibration Program*, and TO 33-1-27, *Logistic Support of Precision Measurement Equipment*. (T-1).

3.13.1. Ensure maintenance work centers possessing AF TMDE comply with the requirements detailed in TO 00-20-14 and have TMDE calibrated IAW published calibration schedules, TO 33K-1-100-1, *Calibration Procedure for Maintenance Data Collection Codes and Calibration Measurement Summaries*, TO 33K-1-100-2, *TMDE Calibration Interval, Technical Order and Work Unit Code Reference Guide*, and/or applicable Calibration and Measurement Summaries. (T-2).

3.13.2. The COM shall appoint a TMDE coordinator to act as the focal point between the maintenance activity and PMEL to address and resolve any TMDE calibration and repair support problems. In addition, the TMDE coordinator will forward TMDE calibration schedules to the appropriate work centers and establish procedures for TMDE turn-in and pick-up. (T-2).

3.14. Ensure effective safety and radiation protection practices: Are established IAW Air Force Safety and Health Standard (AFOSHSTD) 48-series, AFI 91-203, and TO 31Z-10-4, *Electromagnetic Radiation Hazards*, Appendix A.

3.15. The COM shall” Be responsible for developing written deployed maintenance management guidance for any assigned systems/equipment with a deployment/mobility mission. At a minimum, deployed maintenance management planning should address the following: **(T-3)**.

3.15.1. Describe procedures for planning, scheduling, controlling and documenting maintenance actions during equipment deployment.

3.15.1.1. Ensure equipment status reporting and maintenance documentation is accomplished. Include procedures for manual documentation when IMDS or government approved MIS is unavailable for use and describe process for loading data once maintenance information systems are available.

3.15.2. Ensure all system spares and assigned support equipment are managed and accounted for IAW AFI 23-101, AFMAN 23-122 and AFH 23-123. **(T-1)**.

3.15.2.1. Ensure Readiness Spares Package (RSP) storage availability, issue and turn-in procedures are followed, and establish procedures for RSP replenishment at deployed locations as applicable. Refer to AFI 23-101, AFMAN 23-122 and AFH 23-123 for additional information. **(T-1)**.

3.15.3. Ensure technical data, tools and other support items are available and ready to support system deployment. **(T-2)**.

3.16. Establish and implement a maintenance plan.

3.16.1. The maintenance plan is a schedule of known or predicted future maintenance events/actions. A sample maintenance plan is attached as **Attachment 3**.

3.16.2. Publish the maintenance plan at least quarterly. **(T-2)**.

3.16.3. The chief of maintenance or designee determines the content of the maintenance plan, how it is to be published, and the additional contents of the plan; however, the mandatory areas listed in this appendix are required to be documented regularly. The maintenance plan is maintained by the MOC with input from other work centers such as QA.

3.16.3.1. Mandatory items include deferred PMIs, mission communications link outages, other formal scheduled outages, schedule mission down times, preplanned and time change requirements, modification schedule, depot support, QA evaluations schedule, and overdue QA evaluations.

3.16.3.2. Optional areas to include in maintenance plan may include scheduled PMIs, TMDE schedule, technical order management information, training updates and reports, scheduled training courses, parts status information, system and equipment metrics, safety related information, MIS Procedure Review, scheduled staff assistance visits and Inspector General (IG) inspections, special interest items, cross-feed information, noticeable trends/concerns, status of AFTO Form 22, Source Maintenance and Recoverability (SMR) change requests, modifications proposal statuses, recurring

suspenses, lost/missing tool reports, best practices, and other relevant communications-related information. **(T-2)**.

3.16.3.2.1. An Air Force-approved centrally managed MIS is the tool used to track outages and other crucial data to help manage the equipment/system cradle to grave. AF-approved MIS is IMDS and is directed for use (unless a waiver is granted by the appointed approving authority to document all maintenance, logistics, trouble tickets, and jobs).

3.16.4. Ensures coordination of maintenance, modification, upgrade and testing activity down-time access with the operational schedule requirements. Establish wing-level requirements in a wing-level maintenance operating instruction.

3.16.5. The COM will determine if PMIs are to be accomplished in absence of commercial manuals or publications. Refer to TO 00-5-1, TO 00-20-1 and **paragraph 5.3**. Consider specifications for mean-time-failure, operational requirements, corrosion control, and other checks. **(T-2)**.

Chapter 4

MAINTENANCE OPERATIONS CENTER (MOC) RESPONSIBILITIES

4.1. The MOC is responsible for control of: All maintenance actions that requires Mission Capability (MICAP) reporting or causes the creation of an Equipment Status Reporting (ESR) according to AFI 21-103. The MOC will maintain status visibility for space systems assigned to their respective Wing. Each Wing shall establish a MOC under the direct supervision of the COM. If the wing also has a Communication Focal Point (CFP) it can be combined within the MOC responsibilities IAW AFI 21-103. The MOC personnel (or Maintenance Data System Analyst if assigned) shall: **(T-2)**.

4.1.1. Control all maintenance actions that impact an assigned mission system from meeting mission requirements (i.e. cause creation of an ESR, SITREP, MICAP reportable condition, scheduled and unscheduled maintenance, system modifications, etc.).

4.1.1.1. Will establish local reporting procedures for non-reportable equipment or missions, provided the reporting level is set to local only (IMDS reporting level R). **(T-2)**.

4.1.2. Establish an after duty hours contact point to perform MOC duties when a 24-hour MOC is not used. **(T-3)**.

4.1.2.1. Provide detailed local written procedures for the after duty hours function.

4.1.3. Maintain visibility of current system status.

4.1.3.1. Enter and update ESR data as events occur.

4.1.3.2. Establish reporting procedures for tracking non-ESR system outages and maintenance actions. **(T-2)**.

4.1.3.3. Review IMDS management products (e.g., Communications-Electronics (C-E) Open Incident List, C-E Status Summary, etc.) for accuracy to ensure usable data is available for analysis and management decisions. **(T-2)**.

4.1.3.4. Correct ESR errors. **NOTE:** ESR corrections are limited to the previous 33-day time period.

4.1.3.5. Maintain the status of all active and deferred discrepancies. Reconcile deferred Job Control Numbers (JCNs) in Awaiting Parts (AWP) status with the maintaining organization or material control activity. Ensure Estimated Delivery Date (EDD) is current and verify Urgency Justification Code (UJC).

4.1.3.6. Maintain a current inventory of all mission critical end items maintained by Wing organizations. **(T-2)**.

4.1.4. Maintain the status of all on-call technicians and dispatch as required to respond to system outages. **(T-2)**.

4.1.5. Control and document approved cannibalization actions according to TO 00-20-2.

4.1.5.1. Ensure a demand is placed on the supply system and verify the part is not available prior to recommending cannibalization action to COM.

4.1.5.2. Present cannibalization action to COM for approval.

4.1.6. Ensure all JCNs are properly assigned. Refer to TO 00-20-2 for additional guidance on the construction, assignment and use of JCNs. **(T-2)**.

4.1.6.1. Blocks of local JCNs may be allocated to work centers for work that does not require control by the MOC. When a work center controlled maintenance action changes the system or equipment status, the JCN and control of the maintenance effort reverts to the MOC.

4.1.7. Assist the work centers in developing requests for depot maintenance assistance according to TO 00-25-108.

4.1.8. Coordinate scheduled mission downtime with the appropriate operations organization and the affected maintenance work center. Coordination may be delegated to the maintenance work center if appropriate.

4.1.9. Use IMDS to initiate and control maintenance actions that change equipment status. Use locally generated means if IMDS is temporarily unavailable and update in IMDS once the system becomes available. **(T-2)**.

4.1.9.1. Use the approved system to initiate and control maintenance actions for any systems or equipment items which have an approved waiver to use a system other than IMDS.

4.1.10. Prepare and maintain a master PMI schedule. Send the applicable PMI schedule, annotated with JCNs, to the affected maintenance work centers, or use IMDS auto scheduling.

4.1.11. Notify the performing work centers for scheduled TCTO, time change items and other anticipated maintenance actions which require documentation according to TO 00-20-2.

4.1.11.1. When kits, parts, or tools are required, the MOC enters the TCTO into IMDS and fills out section I of AF IMT 2001, *Notification of TCTO Kit Requirements*. The MOC retains one copy of the AF IMT 2001 and sends three copies along with a copy of the TCTO to the Material Control function.

4.1.11.1.1. If a material control function and/or IMDS/SBSS interface is not available the COM will establish local procedures for ordering and processing TCTOs.

4.1.11.1.2. Creates a work order in IMDS for each item in stock or assigned to the Wing that requires TCTO accomplishment.

4.1.11.2. When kits, parts or tools are not required, the MOC enters the TCTO into IMDS and creates a work order for each item assigned to the Wing or kept in the base supply stock that requires TCTO accomplishment.

4.1.11.3. When the TCTO is a repair, inspection or modification, enter the TCTO into IMDS.

4.1.11.4. Ensure work center supervisors complete proper TCTO documentation in IMDS.

4.2. MOC personnel: (or Maintenance Data System Analyst if assigned) serve as the IMDS focal point for all IMDS database issues. The IMDS focal point will: **(T-2)**.

4.2.1. Comply with host database policies for background processing. **(T-2)**.

4.2.2. Notify work centers of scheduled IMDS system downtime and other outages as required.

4.2.3. Assign local work center codes and mnemonics according to TO 00-20-2.

4.2.4. Process and distribute Maintenance Action Review Report to work centers and coordinate error correction. **NOTE:** Job Data Documentation corrections are limited to the previous 10-day time period.

4.2.5. Consolidate work center maintenance documentation errors to identify trends.

4.2.5.1. Meet with work centers' representatives monthly to review maintenance documentation errors and establish corrective actions.

4.2.6. Perform equipment maintenance status and inventory reporting according to AFI 21-103 procedures.

4.3. Government civilian and military MOC personnel will: Accomplish AFJQS 2EXXX-201F, *Maintenance Control*, and other applicable AFJQSs (e.g., IMDS and Database Managers) training resources for task qualification and duty position training. **(T-2)**.

Chapter 5

QUALITY ASSURANCE (QA)

5.1. The QA program is designed to: Standardize and improve processes, assess personnel proficiency, ensure effectiveness of space systems maintenance management and provide feedback to supervision. The evaluation and analysis of deficiencies and problems are key functions of QA that highlight and identify underlying causes of degraded quality and processes. QA validates use of effective training programs, proven maintenance processes, safety procedures, supply discipline, security procedures, and good housekeeping standards for maintenance work centers. As a minimum, QA will:

5.1.1. Provide help, advice, and authoritative references to work center supervisors and the COM.

5.1.2. Establish and maintain a technical publications program IAW TO 33A-1001, *General Cyberspace Support Activities Management Procedures and Practice Requirements*. **(T-2)**.

5.1.2.1. Establish a Technical Order Distribution Office (TODO) and ensure the adequacy and accuracy of TO files in the maintenance activity according to TO 00-5-1. QA ensures current method and procedures TOs, TCTOs, work cards, work unit code manuals, and other required TOs are available to the entire maintenance activity. **(T-2)**.

5.1.2.1.1. TODO Responsibilities. The TODO will ensure the adequacy and accuracy of TO files in the maintenance activity according to TO 00-5-1. TODOs will: **(T-2)**.

5.1.2.2. QA initiates TCTO processing actions IAW TO 00-5-15, *Air Force Time Compliance Technical Order Process*. Review each incoming TCTO and advise the MOC on its applicability. Ensure copies of each TCTO are distributed to the MOC, supply management function, and affected work centers.

5.1.2.3. Processing TO deficiencies. The PIM serves as the focal point for processing AFTO Form 22, between the MAJCOM Command Control Point (CCP) and the Wing. For additional detail on Wing PIM AFTO Form 22 responsibilities refer to TO 00-5-1. **(T-2)**.

5.1.2.3.1. Any questions regarding the status of a particular AFTO Form 22 TO change request shall go through the PIM to the MAJCOM CCP.

5.1.2.3.1.1. Maintain records of Computer Program Identification Number System (CPINS) and Automated Computer Program Identification Number System (ACPINS) or other approved AF system (i.e. Joint Computer-Aided Acquisition & Logistics Support (JCALS) or Enhanced Technical Management System (ETIMS) using 00-5-series TOs. **(T-2)**.

5.1.2.3.1.2. Set up software subaccounts with each appropriate work center/section/Unit Type Code (UTC) and ensure each work center/section/UTC has the most current software on hand. **(T-2)**. Include CPINS/ACPINS in the routine and annual checks required by TO 00-5-1.

5.1.2.3.1.3. Provide special attention to all electronically transmitted TCTOs and

TOs due to the urgent nature of this type of change.

5.1.2.3.1.4. Ensure current methods and procedures TOs, TCTOs, evaluation work cards, work unit code manuals, and other TMs are available to the entire communications activity. The primary consideration is availability of TOs, with minimum duplication. For more information on each of these publications, review TO 00-5-1. **NOTE:** The Organization is not required to keep duplicate copies of technical publications maintained by another work center/agency.

5.1.2.3.1.5. Limit use of LWC, LJC, LPS or LCL to accomplish maintenance on assigned equipment. The TODO must review and manage all locally developed products in accordance with MIL-PRFs, AFI 61-204, *Disseminating Scientific and Technical Information*, TO 00-5-1, and MAJCOM supplements for formatting technical data.

5.1.2.3.2. The Wing PIM also serves as the focal point for gathering submitted PIWG agenda items in response to a PIWG data call for assigned systems/programs. The PIM will provide proposed PIWG agenda items back to the CLM no later than 60 days prior to the scheduled PIWG. Proposed agenda items shall be submitted in the format in AFI 21-118. For additional detail on PIM duties supporting the PIWG refer to AFI 21-118.

5.1.3. QA shall establish a deficiency analysis program for identifying patterns of errors and deficiencies found during all forms of evaluations. **(T-2).**

5.1.3.1. QA personnel, in conjunction with the affected work center supervisor, shall attempt to identify the underlying problem or cause and provide a recommended corrective action.

5.1.3.2. QA will provide the COM a deficiency analysis summary quarterly unless waived. The deficiency summary should at a minimum identify the following: **(T-2).**

5.1.3.2.1. Trends and deficiency patterns from evaluation results.

5.1.3.2.2. Identify the underlying cause of the deficiency or trend.

5.1.3.2.3. The impact of any identified deficiencies or trends.

5.1.3.2.4. Identification of any corrective actions already taken to resolve or correct the deficiency or trend.

5.1.3.2.5. Any recommended management action(s) to permanently correct deficiencies or trends.

5.1.3.2.6. A comparison of the current quarter's trends and deficiencies with those presented during previous summary reports.

5.1.4. Processing material deficiencies: The QA will perform originating point responsibilities IAW TO 00-35D-54. Supply Discrepancy Report (SDR) IAW AFI 23-101, AFMAN 23-122 and AFH 23-123. **(T-2).**

5.1.5. Review work center facility, system installation and equipment records management.

5.1.6. Serve as the Corrosion Control Lead for the Corrosion Prevention and Control Program according to AFI 20-114, *Air and Space Equipment Structural Maintenance*, and TO 33A-100. **(T-2)**.

5.1.7. Serve as the focal point for electrostatic discharge (ESD) control, and conduct work area ESD control surveys according to TO 00-25-234, *General Shop Practice Requirements for the Repair, Maintenance, and Test of Electrical Equipment* and TO 33A-1001.

5.1.8. Validate MOIs and assist in the development as needed. **(T-2)**.

5.1.9. QA validates LWCs and assists in the development as needed IAW TO 33A-1001.

5.1.9.1. TO 00-5-1 procedures for LWCs apply.

5.1.10. Ensure government personnel are fully trained and certified to support assigned UTC taskings. **(T-2)**.

5.1.11. QA inspectors will perform personnel and equipment evaluation IAW MPTO 00-33A-1001, *General Cyberspace Support Activities Management Procedures and Practice Requirements*. **(T-2)**.

5.2. Training Requirements: QA and QA Representatives (QARs) will complete the following training requirements once selected. **(T-2)**.

5.2.1. Personnel assigned to QA offices or appointed as QAR supporting a QA office will be trained by experienced QA personnel on evaluation procedures.

5.2.2. QA personnel will complete AFJQS 3DXXX-201G, *Quality Assurance*, and use it as a guide for training QARs. If the QA personnel and/or the QAR is a 5-level, completion of Air Force Qualification Training Plan (AFQTP) 3DXXX-232A, *Communications and Information Work Center Supervisor's Handbook*, is required within 180 days of assignment.

5.2.3. Training will cover these minimum areas:

5.2.3.1. Management procedures.

5.2.3.2. Objectivity.

5.2.3.3. Evaluation methods.

5.2.3.4. Root cause analysis techniques.

5.2.4. QA personnel and CORs are encouraged to attend Contract Officer Responsible Evaluator (CORE) training to ensure compliance with the AF contract review requirements.

Chapter 6

SUPPORT OFFICER RESPONSIBILITIES:

6.1. Space wings may: Have maintenance organized under the various squadron commanders. The squadron commanders have appointed Support Officer (SO) to direct and control their respective squadron's maintenance effort. The SO bridges space systems maintenance and operations with the wing COM function. In order to de-conflict the SO's role with those of the COM responsibilities while assuring maintenance effectiveness the SO, along with the responsibilities assigned within the respective squadrons, shall be responsible for:

- 6.1.1. Implement and comply with maintenance responsibilities defined in the COM MOI.
- 6.1.2. Ensure work center supervisors have a thorough knowledge of their duties and comply with applicable maintenance directives and TOs.
- 6.1.3. Ensure compliance with maintenance schedules. **(T-2).**
- 6.1.4. Ensure upgrade training and maintenance on-the-job training programs are established and effectively managed. **(T-2).**
- 6.1.5. Ensure observed or reported training deficiencies are corrected.
- 6.1.6. Ensure accurate maintenance data documentation is accomplished by assigned work centers and chair their respective DIT. **(T-2).**
 - 6.1.6.1. The purposes of the DIT include: (1) Ensuring the unit has complete and accurate data in the MIS, (2) identifying and quantifying problems within the unit preventing complete and accurate documentation, and (3) identifying and correcting the root causes for poor data integrity. The DIT is established to evaluate/isolate/eliminate documentation problems in IMDS-MIS. The DIT will include, at a minimum, one representative from each squadron under the COM. It will include participation from MOC, maintenance workcenter, MSL/LRS, and QA.
 - 6.1.6.1.1. Develop a system to track the number of errors by work center and squadron. **(T-2).**
 - 6.1.6.1.2. Establish five day suspense to correct errors and report back to the DIT. **(T-2).**
 - 6.1.6.1.3. Maintain cumulative uncorrected and corrected error rate databases. Analyze the error rate data and prepare reports of rates and identify where errors are occurring. Error rates and causes will be briefed to the COM monthly. **(T-2).**
 - 6.1.6.2. Ensures work centers comply with maintenance documentation and equipment status review process established by the COM.
- 6.1.7. Inform the COM of problems that are beyond the capability to solve at the work center level.
- 6.1.8. Advise and assist the COM and work center supervisors in managing and administering maintenance programs.

6.1.9. Ensures QASP surveillance of contracted maintenance functions is accomplished IAW AFI 63-138 and AFI 21-101. **(T-2)**.

Chapter 7

MAINTENANCE WORK CENTER RESPONSIBILITIES:

7.1. Maintenance work centers: Are the production elements responsible for accomplishing all assigned maintenance. Maintenance work centers are directly responsible to the maintenance superintendent; maintenance supervisors will ensure the following:

7.1.1. Work center Safety.

7.1.1.1. Work center supervisors will enforce safety practices according to Air Force directives, AFSPC instructions, and 48-series and 91-series AFOSH standards. **(T-1).**

7.1.1.1.1. Implement and effectively manage the work center Radio Frequency Radiation Protection program according to AFOSHSTD 48-9 and TO 31Z-10-4, Appendix A. **(T-2).**

7.1.1.1.2. Implement and effectively manage the work center Hazardous Material (HAZMAT) and Hazard Communications (HAZCOM) programs IAW AFI 90-821, *Hazard Communication (HAZCOM) Program*. **(T-2).**

7.1.1.1.3. Implement and effectively manage the work center Confined Space program according to AFOSHSTD 91-25, *Confined Spaces*. **(T-2).**

7.1.1.1.4. Implement and effectively manage climbing safety training IAW AFI 91-203, *Air Force Occupational and Environmental Safety, Fire Protection, and Health (AFOSH) Program*, TO 31W3-10-19C1, *Air Force Communications Service (E-I Standard) -- Standard Installation Practices, Telephone, Outside Plant Installation, Pole Line* and TO 31-10-3, *Air Force Communications Command (E-I Standard) -- Standard Installation Practices -- Outside Plant Installation* as applicable. **(T-2).**

7.1.1.1.5. Implement and effectively manage the work center corrosion prevention and control program IAW TO 1-1-689, *Cleaning and Corrosion Control - Corrosion Program and Corrosion Theory (Vol 1)*. **(T-2).**

7.1.1.1.6. Ensure compliance with Electrostatic Discharge practices, where applicable IAW TO 00-25-234.

7.1.1.1.7. Ensure Base Civil Engineer performs facility and systems grounding and lightning protection checks IAW AFI 32-1065, *Grounding Systems*. Ensure physical/visual grounding and lightning protection inspections are performed as part of PMIs and required site inspections.

7.1.2. Work Center Supply Management will:

7.1.2.1. Use IMDS or government approved MIS to directly requisition parts whenever possible. **(T-2).**

7.1.2.1.1. Use the direct call-in method between the work center and LRS customer service/demand processing when IMDS or government approved MIS is not available.

7.1.2.2. Use AF Form 2005, *Issue/Turn-In Request*, AF Form 2413, *Supply Control Log*, or any other control register to document requests for direct demands on supply.

Automated supply log from IMDS is authorized. Verify UND “A” and “B” requests prior to call-in IAW AFMAN 23-122 and AFH 23-123. **(T-2)**.

7.1.2.3. Ensure repair cycle assets are properly managed IAW 00-20-3. **(T-2)**.

7.1.2.4. Process repairable property under warranty or guarantee IAW TO 00-35D-54 and AFI 23-101.

7.1.2.5. Submit TRNs IAW TO 00-20-3, AFMAN 23-122 and AFH 23-123. **(T-1)**

7.1.2.6. Coordinate with LRS to ensure RSP assets requiring functional checks are identified. Notify LRS when functional checks are completed. **(T-2)**

7.1.2.7. Submit deficiency reports or reports of discrepancy when deficient material is received according to TO 00- 35D-54. For items not addressed in TO 00-35D-54, follow the manufacturer’s instructions. Organizational Refusals will be IAW AFI 23-101, AFMAN 23-122 and AFH 23-123 **(T-1)**

7.1.2.7.1. The organization can refuse the asset if the asset is physically damaged. See AFI 23-101, AFMAN 23-122 and AFH 23-123 for guidance.

7.1.2.8. Monitor and control bench stock according to AFI 23-101, AFMAN 23-122 and AFH 23-123. **(T-1)**

7.1.2.9. Review applicable Allowance Standards (AS) to identify additions, deletions, and changes to work center support equipment authorizations. Perform AS review semiannually. Submit recommended changes according to AFI 23-101, AFMAN 23-122 and AFH 23-123. **(T-1)**

7.1.2.10. Notify equipment custodians when TCTO actions result in equipment stock number changes and initiate AFTO Form 22, as applicable.

7.1.2.11. Identify preplanned items, time change items, and TCTOs. Complete required actions when scheduled.

7.1.2.11.1. Ensure TCTO kits are correct and complete when received from the LRS according to AFI 23-101, AFMAN 23-122 and AFH 23-123. **(T-1)**.

7.1.2.12. When authorized by the COM, establish and manage work order residue. Maintain a list of items on work order residue and develop procedures to encourage consumption of work order residue prior to using bench stock.

7.1.2.13. Develop written guidance to monitor and control shop/operating stocks according to IAW AFI 21-101 and 23-111. **(T-2)**.

7.1.2.13.1. Shop/operating stocks are defined as those items (i.e., Government Services Administration (GSA) purchased cable stocks, connectors, hardware, etc.) purchased with AF funds to fulfill mission requirements (i.e., Preventive Maintenance Inspections (PMIs), equipment maintenance, jobs, etc.) that cannot be loaded on bench stock or other accounts IAW AFI 21-101.

7.1.2.13.2. Ensure items critical to deploying equipment are stocked, maintained, and secured. These items should not be used for in-garrison requirements. **(T-2)**.

7.1.2.13.3. Ensure forward supply point assets are managed according to IAW AFI 23-101, AFMAN 23-122 and AFH 23-123.

7.1.2.13.4. Coordinate with the local LRS, Equipment Accountability Element (EAE), and work center personnel to identify deploying assets IAW AFI 23-101, AFMAN 23-122 and AFH 23-123.

7.1.2.13.4.1. Identify all deploying assets to the applicable base-level EAE upon receipt of mission tasking order during the pre-deployment actions. For IT assets, follow the local procedures from the Base EAE. For supply assets, follow the LRS procedures IAW AFI 23-101, AFMAN 23-122 and AFH 23-123.

7.1.2.13.4.2. Ensure lists of deploying assets accompany the UTCs and the deploying equipment custodian to the area of responsibility (AOR). Start asset transfers as soon as possible depending on the AOR policy and mission-tasking instructions. Custodians will complete the required training prior to deploying. **(T-2)**.

7.1.2.13.4.3. Upon return to in garrison status, identify the assets that were returned to the LRS and ECO IAW AFI 23-101, AFMAN 23-122 and AFH 23-123. **(T-1)**.

7.1.3. Production Work Center Management.

7.1.3.1. A production work center will: **(T-2)**.

7.1.3.1.1. Be aware of all maintenance jobs and their statuses and ensure completion of tasks, to include control and timely reporting. Success depends on the ability to manage and use available resources.

7.1.3.1.2. Review/comply with time change management orders/items (i.e., TCTO, TCNO, FCO, etc.) according to AFI 33-138 and TO 00-5-15. **(T-1)**.

7.1.3.1.3. Review SITREP/OPREPs as required and ensure updates are forwarded to the appropriate personnel. **(T-2)**.

7.1.3.1.4. Advise the MOC and COM of jobs that cannot be completed within established capabilities, due to timeliness, manpower or capacity, etc.

7.1.3.1.5. Perform review of data documentation in the approved MIS to identify and resolve documentation errors on a daily basis. **(T-2)**.

7.1.3.1.6. Provide work center personnel availability and on-call schedules to the MOC for the next month by the 25th of every month. For example, the May 2010 schedule is due to MOC by 25 April 2010. If changes are made to the schedule, provide an updated schedule as soon as possible.

7.1.3.1.7. Ensure all antenna systems and all equipment assigned an SRD are listed on the EIL and master PMI schedule in the approved MIS.

7.1.3.1.8. Assist MOC with coordinating with the system manager for assistance from a depot support function according to TO 00-25-108.

7.1.3.1.9. Document completion of jobs and update statuses (e.g., deferred/delayed) in the approved MIS. **(T-2)**.

- 7.1.3.1.10. Dispatch personnel with the technical data and support items needed to troubleshoot, repair, and restore systems based on local developed outage reporting criteria.
- 7.1.3.1.11. Ensure work center personnel comply with standards and schedules and promptly respond to scheduled and unscheduled support requirements.
- 7.1.3.1.12. Expeditiously provide the MOC with an initial status report and preliminary Estimated Time for Return to Operation (ETRO) when the nature of the malfunction/failure is verified on all critical jobs. **(T-2)**.
- 7.1.3.1.13. Complete, at a minimum annually, the EIL and master PMI review. **(T-2)**.
- 7.1.3.1.14. Notify the MOC if work center controlled jobs change to Partial Mission Capable (PMC) or Non-Mission Capable (NMC) status. The MOC assumes management of these jobs.
- 7.1.3.1.15. Coordinate downtime with applicable agencies/organizations and notify MOC of approved downtime.
- 7.1.3.1.16. Manage respective system depot support program IAW TO 00-25-108. **(T-2)**.
- 7.1.3.1.17. Maintain a current inventory of all mission critical end items/systems and reportable missions, to include COTS/Government-Off-The-Shelf (GOTS) items (i.e., TDC, AOC, etc.). Production work centers shall use an Air Force-approved MIS unless a waiver is approved. **(T-2)**.
- 7.1.3.1.18. Submit deviations/waiver requests with proper justification to the HQ AFSPC/A4SP. **(T-2)**.
- 7.1.3.2. Implement and manage equipment inspection program.
- 7.1.3.2.1. Scheduled maintenance inspections for space systems and equipment include periodic, Programmed Depot Maintenance (PDM) IAW TO 00-25-108, and transfer inspections. They are accomplished in accordance with the applicable inspection manuals, inspection work cards, repair manuals or commercial manuals. **(T-2)**.
- 7.1.3.2.2. The COM establishes the necessary controls to ensure that periodic inspections are accomplished at or near the scheduled due time and is only authorized to deviate from the organization inspection schedules as required. **(T-3)**.
- 7.1.3.2.3. Modified inspection work cards will be designed for use during a limited period of time as authorized by the MAJCOM. Submit request via e-mail through HQ AFSPC/A4S for approval.
- 7.1.3.2.4. The COM will determine if local checklists and/or work cards are required for this equipment, and if so, ensure that they are developed in accordance with the instructions contained in this manual, TO 00-5-1, and the 00-20- series manuals. **(T-3)**.

7.1.3.2.5. Additional Guidance for AF-Procured Equipment Items. AF-procured equipment that does not have an AF-dictated PMI schedule must still be inspected on a recurring basis. These items should also be inspected to ensure they are serviceable before they are initially placed in storage.

7.1.3.2.6. Re-inspect these items at 12-month intervals if the items are stored in environmentally controlled conditions. If the equipment is stored in uncontrolled conditions, such as outside storage, then re-inspect at a minimum of six-month intervals. **(T-2)**.

7.1.3.2.7. Some systems, especially electronic components, are bought COTS and do not have PMIs published in the TO System. In this event, follow manufacturer's recommended maintenance schedules provided in the technical guidance or complete PMIs per the COM's or designee's direction. Local work cards may be developed.

7.1.3.2.7.1. Work centers must ensure LWCs, LJGs, LPSs and LCLs are reviewed for currency when source references change, or at least annually, and annotate the review on the inside cover according to AFI 33-360. **(T-3)**.

7.1.3.2.8. The majority of assets procured through commercial sources will have commercial manuals that will dictate the PMI requirements. If commercial PMI (or equivalent) schedules are available, follow the guidance in the commercial manual. Document completed inspections and re-inspections on the appropriate condition tags or in approved MIS.

7.1.3.2.9. Items/assets not in use where the inspection requirements are not governed by AF guidance must be maintained in serviceable condition and available when needed to meet your mission requirements. Organizations should establish local procedures to ensure these assets are inspected for service ability every 24 months if the items are stored in environmentally controlled conditions.

7.1.3.2.10. If the equipment is stored in uncontrolled conditions, such as outside storage, then re-inspect at a minimum of 18-month intervals. Consider using more frequent cycles based on deployment cycles, local weather conditions or if corrosive items are being stored.

7.1.3.2.11. Submit waivers to inspection requirements to the HQ AFSPC/A4SP for approval.

7.1.4. Work Center TMDE Management will: **(T-2)**.

7.1.4.1. Implement an effective TMDE program IAW TO 00-20-1, 33-K-1-100-1 and 33K-1-100-2.

7.1.5. Work Center Tools Management will: **(T-2)**.

7.1.5.1. Implement and effectively manage work center tools for accountability, serviceability and proper usage IAW AFI 21-101, TO 00-25-234. *General Shop Practice Requirements for the Repair, Maintenance and Test of Electrical Equipment*, TO 32-1-101, *Use and Care of Hand Tools and Measuring Tools*. **(T-2)**.

7.1.5.2. For maintenance purposes, tool kits are defined as all government-purchased tools, to include tools provided by government-paid contractor, utilized to perform

maintenance (restore/sustain/maintain systems) as defined in AFI 21-101. In this publication, the term “tool” refers to all types of tool kits as well as a basic tool (i.e., Xcelite kits, drill, sockets kits, eTools, etc.).

7.1.5.3. Space systems modification proposals will be managed and processed IAW AFI 63-131.

7.1.6. Work Center Publications Management will:

7.1.6.1. Implement and effectively manage the work center publications by ensuring availability and strictly enforcing adherence to and compliance with instructions, technical publications, and supplements. **(T-2)**.

7.1.6.1.1. Establish procedures for shipping instructions, technical publications, and supplements to support mobility requirements. **(T-2)**.

7.1.6.1.2. Manage U.S. Air Force Instructions and MAJCOM Instructions IAW AFI 33-360.

7.1.6.1.2.1. Wing-level instructions or polices that impact missions outside the wing’s control will be coordinated to HQ AFSPC/A4S for review.

7.1.6.1.3. Manage system technical orders IAW TO 00-5-1 and 00-5-1, AFSPC Supplement 1. **(T-2)**.

7.1.6.2. Submit technical order waiver requests with proper justification to HQ AFSPC/A4SP.

7.1.6.3. Submit requests for permanent changes to prescribed inspection requirements, as well as changes to inspection intervals or concepts, through HQ AFSPC/A4S to the System Sustainment Manager for review and approval.

7.1.7. Work Center Software Management will:

7.1.7.1. Implement and effectively manage software accountability for in-garrison and deployed systems IAW AFMAN 33-153, *Information Technology (IT) Asset Management (ITAM)*. **(T-2)**.

SCOTT M. ANDERSON, SES, DAF
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Attachment 1**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION***References*

- AFDD 1**, *Air Force Basic Doctrine*, 17 November 2003
- AFDD 2-2**, *Space Operations*, 27 November 2006
- AFH 23-123**, *Material Management Reference Information*. 8 August 2013
- AFI 10-1201**, *Space Operations*, 25 July 1994
- AFI 10-206**, *Operational Reporting*, 11 June 2014
- AFI 10-206_AFSPCSUP_I**, *Operational Reporting*, 1 May 2013
- AFI 10-601**, *Capabilities Based Requirements Development*, 6 November 2013
- AFI 20-114**, *Air and Space Equipment Structural Maintenance*, 7 June 2011
- AFI 21-101**, *Aircraft and Equipment Maintenance Management*, 26 July 2010
- AFI 21-103**, *Equipment Inventory, Status, and Utilization Reporting*, 26 January 2012
- AFI 21-113**, *Air Force Metrology and Calibration (AFMETCAL) Management*, 12 November 2008
- AFI 21-118**, *Improving Air and Space Equipment Reliability and Maintainability*, 2 October 2003
- AFI 21-129**, *Two Level Maintenance and Regional Repair of AF Weapon Systems and Equipment*, 1 May 1998
- AFI 23-101**, *Air Force Materiel Management*, 8 August 2013
- AFI 32-1065**, *Grounding Systems*, 1 October 1998
- AFI 33-138**, *Enterprise Network Operations Notification and Tracking*, 28 November 2005
- AFI 33-360**, *Publications and Forms Management*, 25 September 2013
- AFI 38-101**, *Air Force Organization*, 16 March 2011
- AFI 61-204**, *Disseminating Scientific and Technical Information*, 30 August 2002
- AFI 63-101/20-101**, *Integrated Life Cycle Management*, 7 March 2013
- AFI 63-131**, *Modification Management*, 19 March 2013
- AFI 63-138**, *Acquisition of Services*, 21 May 2013
- AFI 90-821**, *Hazard Communication (HAZCOM) Program*, 27 January 2014
- AFI 91-202**, *The US Air Force Mishap Prevention Program*, 5 August 2011
- AFI 91-202_AFSPCSUP_I**, *The USAF Mishap Prevention Program*, 26 June 2012
- AFI 91-204**, *Safety Investigations and Reports*, 12 February 2014

AFI 91-301, *Air Force Occupational and Environmental Safety, Fire Protection, and Health (AFOSH) Program*, 1 June 1996

AFMAN 23-122, *Material Management Procedures*, 8 August 2013

AFMAN 33-153, *Information Technology (IT) Asset Management (ITAM)*, 19 March 2014

AFMAN 33-363, *Management of Records*, 1 March 2008

AFMAN 91-222_AFSPCSUP, *Space Safety Investigations and Reports*, 2 January 2007

AFOSHSTD 48-9, *Radio Frequency Radiation (RFR) Safety Program*, 14 December 2011

AFOSHSTD 91-25, *Confined Spaces*, 1 February 1998

AFOSHSTD 91-50, *Communications Cable, Antenna, and Communications-Electronic (C-E) Systems*, 1 August 1998

AFOSHSTD 91-501, *Air Force Consolidated Occupational Safety Standard*, 7 July 2004

AFPD 10-9, *Lead Command Designation and Responsibilities for Weapon Systems*, 8 March 2007

AFPD 10-28, *Air Force Concept Development*, 15 September 2003

AFPD 21-1, *Air and Space Maintenance*, 25 February 2003

AFPD 21-3, *Air Force Policy Directive, Technical Orders*, 10 July 2006

AFPD 90-8, *Environmental, Safety & Occupational Health Management and Risk Management*, 2 February 2012

AFPD 91-2, *Safety Programs*, 24 July 2012

AFSPCI 36-2202, *Mission Ready Training, Evaluation and Standardization Programs*, 3 February 2003

AFSPCI 36-2203V1, *14 AF Training and Evaluation Performance Standards (TEPS)*, 3 September 2002

DoDD 3200.11, *Major Range and Test Facility Base*, 27 December 2007

DoDD 3230.3, *DOD Support for Commercial Space Launch Activities*, Change 1, 7 March 1988

DoDD 5000.01, *The Defense Acquisition System*, 12 May 2003

DoDD 8500.1, *Information Assurance (IA)*, 24 October 2002

DoDI 3100.12, *Space Support*, 14 September 2000

DoDI 5000.2, *Operation of the Defense Acquisition System*, 25 November 2013

DoDI 8500.2, *Information Assurance (IA) Implementation*, 6 February 2003

DoDI 8510.01, *Department of Defense Information Assurance Certification and Accreditation Process (DIACAP)*, 28 November 2007

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TO 00-5-3, *AF Tech Order Life Cycle Management*, 1 January 2012

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- TO 00-5-18**, AF Technical Order Numbering System, 31 December 2006
- TO 00-20-1**, *Aerospace Equipment Maintenance Inspection, Documentation, Policies, and Procedures*, 1 April 2013
- TO 00-20-2**, *Maintenance Data Documentation*, Change 1, 15 August 2004
- TO 00-20-14**, *Air Force Metrology and Calibration Program*, 30 October 2007
- TO 00-25-108**, *Communications-Electronics Depot Support*, Change 2, 5 May 2003
- TO 00-25-108**, *Depot Support*, 7 August 2012
- TO 00-25-234**, *General Shop Practice Requirements for the Repair, Maintenance, and Test of Electrical Equipment*, 8 July 2008
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- TO 1-1-689**, *Cleaning and Corrosion Control - Corrosion Program and Corrosion Theory (Vol 1)*, 1 March 2005
- TO 31Z-10-4**, *Electromagnetic Radiation Hazards*, 1 February 2005
- TO 33-1-27**, *Logistic Support of Precision Measurement Equipment*, 1 October 1994
- TO 33K-1-100-1**, *Calibration Procedure for Maintenance Data Collection Codes and Calibration Measurement Summaries*, 30 May 2008
- TO 33K-1-100-2**, *TMDE Calibration Interval, Technical Order and Work Unit Code Reference Guide*, 30 November 2008
- TO 00-35D-54**, *USAF Deficiency Reporting, Investigating and Resolution*, 1 May 2007
- TO 32-1-101**, *Use and Care of Hand Tools and Measuring Tools*, 1 December 2004
- TO 33A-1001**, *General Cyberspace Support Activities Management Procedures and Practice Requirements*, 1 May 2014

Prescribed Forms

This instruction does not include any prescribed forms.

Adopted Forms

AF 847, *Recommendation for Change of Publication*

AF 2001, *Notification of TCTO Kit Requirements*

AF 2005, *Issue/Turn-In Request*

AF Form 2413, *Supply Control Log*

AFTO Form 22, *Technical Manual (TM) Change Recommendation and Reply*

Abbreviations and Acronyms

ACPINS—Automated Computer Program Identification Number System

AF—Air Force

AFI—Air Force Instruction
AFJQS—Air Force Job Qualification Standard
AFLCMC I—Air Force Logistics Life Cycle Management Center
AFMAN—Air Force Manual
AFMC—Air Force Materiel Command
AFOSH—Air Force Occupational Safety and Health
AFOSHSTD—Air Force Safety and Health Standard
AFPD—Air Force Policy Directive
AFQTP—Air Force Qualification Training Plan
AFSPC—Air Force Space Command
AFSPCI—Air Force Space Command Instruction
AGE—Aerospace Ground Equipment
AOR—Area of Responsibility
AWP—Awaiting Parts
CAM—Centralized Asset Management
CC—Commander
CCP—Command Control Point
CDDAR—Crash Damaged Disabled Aircraft Recovery
CLS—Contractor Logistics Support
CAN—Capabilities Needs Analysis
CFP—Communication Focal Point
CAN—Capability Needs Analysis
COCOM—Combatant Command
COM—Chief of Maintenance
COR—Contracting Officer Representative
CORE—Contract Officer Responsible Evaluator
CPINS—Computer Program Identification Number System
CSEP—Communications Standardization and Evaluation Program
DIT—Data Integrity Team
DMSMS—Diminishing Manufacturing Sources and Material Shortages
DOD—Department of Defense
DPEM—Depot Purchased Equipment Maintenance

DR—Deficiency Report
DRI&R—Deficiency Reporting, Investigation and Resolution
EAE—Equipment Accountability Element
EDD—Estimated Delivery Date
EDLM—Emergency Depot Level Maintenance
ESD—Electrostatic Discharge
ESOHMS—Environment Safety and Occupational Health Management System
ESR—Equipment Status Report
ETIMS—Enhanced Technical Management System
ETRO—Estimated Time for Return to Operation
GOTS—Government-Off-The-Shelf
HAZCOM—Hazardous Communications
HAZMAT—Hazardous Material
HQ—Headquarters
HQ AFSPC—Headquarters Air Force Space Command
IAW—In Accordance With
ICS—Interim Contractor Support
IG—Inspector General
IMDS—Integrated Maintenance Data System
IPP—Integrated Program Planning
IV&V—Independent Validation and Verification
JCALs—Joint Computer-Aided Acquisition & Logistics Support
JCN—Job Control Number
LCSE—Life Cycle Systems Engineering
LCSP—Life Cycle Sustainment Plan
LRDP—Logistics Requirements Determination Process
LRU—Line Replaceable Units
LWC—Local Work Cards
MAJCOM—Major Command
MDC—Maintenance Data Collection
MDD—Maintenance Data Documentation
MICAP—Mission Capability

MIS—Maintenance Information System
MIPRB—Material Improvement Program Review Board
MOA—Memoranda of Agreement
MOC—Maintenance Operations Center
MOI—Maintenance Operating Instruction
MPTO—Methods and Procedures Technical Order
MS—Mission Support
NAF—Numbered Air Force
NMC—Non-Mission Capable
NOG/CC—Network Operations Group Commander
OG/CC—Operations Group Commander
OI—Organizational Instruction
OL—Operating Location
O&M—Operations and Maintenance
OPR—Office of Primary Responsibility
OSHA—Occupational Safety and Health Act
OSSE—Operational Safety, Suitability, and Effectiveness
PAT—Process Action Team
PDM—Programmed Depot Maintenance
PEM—Program Element Monitor
PEO—Program Executive Officer
PIM—Product Improvement Manager
PIWG—Product Improvement Working Group
PM—Program Manager
PMC—Partial Mission Capable
PMEL—Precision Measurement Equipment Laboratory
POC—Point of Contact
POM—Program Objective Memorandum
PP—Performance Plan
PSM—Program Support Manager
PWS—Performance Work Statement
QA—Quality Assurance

QAR—Quality Assurance Representatives
QASP—Quality Assurance Surveillance Plan
RDS—Records Disposition Schedule
R&M—Reliability & Maintainability
RAM—Reliability, Availability, and Maintainability
RP—Real Property
RPIE—Real Property Installed Equipment
RSP—Readiness Spares Package
SAV—Staff Assistance Visit
SE—Support Equipment
SE—Sustaining Engineering
SLR—Space Logistics Review
SMC—Space and Missile Systems Center
SMR—Source Maintainability and Recoverability
SO—Support Officer
SOW—Statement of Work
SPM—System Program Manager
SPO—System Program Office
SPOCO—Single Point of Contact Office
SSM—System Sustainment Manager
SW—Space Wing
TCTO—Time Compliance Technical Order
TO—Technical Order
TODO—Technical Order Distribution Office
TMDE—Test Measuring and Diagnostic Equipment
UDLM—Unscheduled Depot Level Maintenance
UCI—Unit Compliance Inspection
UJC—Urgency Justification Code
UTC—Unit Type Code
US—United States
U&TW—Utilization and Training Workshop
USAF—United States Air Force

WSS—Weapon System Sustainment

Terms

Aerospace Ground Equipment (AGE)—Ground processing end items that are required to make a space system operational, not designated as Special Tooling or other production tooling defined as being allocated to an airborne configuration item, and not designated as Real Property Installed Equipment.

Annual—When used as a requirement, the term “annual” refers to a 12-month interval.

Approval—Approval signifies AFSPC approval/acceptance/coordination IAW AFSPC instructions and Memorandum of Agreements.

Combatant Command (COCOM)—Nontransferable authority established by Title 10, United States Code, Section 164, exercised only by commanders of unified or specified combatant commands. COCOM (command authority) is the authority of a Combatant Commander to perform those functions of command over assigned forces involving organizing and employing commands and forces, assigning tasks, designating objectives, and giving authoritative direction over all aspects of military operations, joint training, and logistics necessary to accomplish the missions assigned to the command.

Contract Administration/Surveillance—Active surveillance of contractor performance to ensure compliance with various contract or statement of work requirements. Examples include safety, quality assurance, security, property management, and base support. Surveillance tasks may be performed by the contracting office or delegated to another Government office, which has resident expertise and/or is co-located with contractor operations.

Contract Management—Active management of the contract and/or contractor by the contracting officer for the purpose of ensuring satisfactory delivery of end items meeting USAF requirements. This includes such activities as contract negotiation and business clearance, as delegated by SMC or AFLCMC.

Direct Support—Provide a comprehensive, structured, support process to bring workable systems to the customers. Maximize support of HQ functions to promote operational and administrative effectiveness.

Discrepancy—An unexpected or unplanned condition that does not meet system performance parameters but which can be corrected by organizational maintenance resources in accordance with validated procedures at the organizational level.

Independent Validation and Verification (IV&V)—An independent technical review performed by an organization that is technically, managerially, and financially independent of the development organization.

Insight—The Government gaining an understanding of the contractor’s progress to meet their contract’s requirements through watchful observation.

Mission Assurance—Accomplished through the contractor’s demonstration of their production, operation, maintenance, and problem resolution processes with Government personnel performing surveillance to ensure these processes result in an acceptable level of mission risk to the government.

Maintenance—all actions required to retain an item in, or restore it to, a specified condition. This includes diagnosis, repair and inspection.

Maintenance Functions—Transportation, assembly, checkout, preparation, corrective maintenance, and preventative maintenance inspections of space lift vehicles, payloads, space launch complexes, support equipment (SE), command and control equipment, tracking and communications complexes; and real property (RP) that support launch, surveillance, warning and on-orbit activities.

Maintenance Surveillance—Observations, risk analysis and activities conducted by maintenance personnel to include Contract Surveillance, which are used to ensure/determine if space systems system assets are reliable and ready for operation by ensuring adherence to technical procedures, general maintenance practices, safety requirements, security guidelines, environmental compliance, efficient utilization of resources, and resource safety to include directing an immediate halt to actions detrimental to personnel or equipment.

Mission Support (MS)—MS personnel (e.g., communications, intelligence, safety personnel) who provide critical mission support, designated by the organization commander, will be certified in their unique duty requirements. In these cases, the organization commander will determine certification requirements. At a minimum, the certification requirements must include: an annual training plan identifying applicable job requirements, recurring training requirements, procedures for placement on/removal from restricted status, and procedures for decertification/recertification. The organization commander or next senior commander or deputy in the operational chain of command certifies the individual.

Observation—Direct Government observation of the execution and recording (if applicable) of a test procedure or task. An “Observed” test procedure or task is one in which all steps (or certain pre-defined steps) have been completed, all anomalies have been noted (with appropriate documentation generated), and all applicable data captured while being observed by a Government representative. Observed test procedures or tasks are typically those that must be accomplished correctly, cannot be easily verified by data review or post-test, and include a high risk of inducing collateral damage that could remain undetected.

Operational Safety, Suitability, and Effectiveness (OSS&E)/Mission Assurance—Process for establishing and preserving the safety, suitability, and effectiveness of Air Force systems and end-items over the entire operational life by preserving technical integrity via prudent use of disciplined engineering practices, assurance of proper operations and maintenance, effective supply systems, and field utilization and maintenance trends feedback to systems program offices.

Oversight—Maintaining watchful care or supervision over projects, processes, information, systems, and/or services.

Performance Plan (PP)—Wing service contracts subject to delegations/support requests operate under PPs. This plan describes how contractor performance will be measured and assessed against performance standards. The PP should also outline the acceptance process and state how acceptance of services will occur and describe how performance results will be captured and documented so that the data gathered can later serve as past performance information.

Public Safety—Safety involving risks to the general public of the United States or foreign countries and/ or their property.

Real Property (RP)—Land, buildings, structures, utilities, improvements and appurtenances thereto. Includes equipment attached to, and made part of, buildings and structures but not movable equipment. Primarily consisting of facilities and other non-equipment support system infrastructure.

Real Property Installed Equipment (RPIE)—Government-owned or leased support equipment, apparatus and fixtures that are essential to the function of the real property and permanently attached to, integrated into or on Government-owned or leased property.

Resource Safety/Protection—The protection of Air Force facilities, support equipment, or other property from damage due to mishaps.

System Program Manager—In accordance with DoDD 5000.01, *The Defense Acquisition System*, the SPM is the Air Force designated individual with responsibility for and authority to accomplish system objectives for development, production, and sustainment to meet the user's operational needs.

System Sustainment Manager—The individual with functional responsibility for the sustainment portion of a system's life cycle in support of a SPM.

Support Equipment (SE)—All equipment (i.e., Aerospace Ground Equipment (AGE), RPIE, etc.) required to make or keep a space or space related system, subsystem or item of support equipment operational in its intended environment.

Verify—To review, inspect, test, check, measure, audit or otherwise confirm that products, processes, or documents conform to specified requirements. Verification may be performed after work completion, e.g., safety wiring.

Attachment 2

SAMPLE MAINTENANCE PLAN

Table A2.1. Sample of Maintenance Plan

Mandatory areas are indicated with an asterisk (*).

XXX (unit designation) Maintenance Plan

1. Flight Commander/Chief
 - a. Comments/Opening Remarks/Words of Wisdom
 - b. Focus Areas
2. Maintenance Operations Center (MOC)
 - a. MOC Comments
 - b. Deferred PMIs *
 - c. TCTO/TCNO/FCO Schedule *
 - d. Schedule Mission Downtime
 - e. Preplanned and Time Change Requirements *
 - f. Modifications Schedule
 - g. Schedule Depot Maintenance *
 - h. Other Scheduled Events/Actions *
 - i. Schedules PMIs
 - j. Equipment/System Metrics
 - k. MIS Procedure Review
3. Quality Assurance (QA)
 - a. QA Comments
 - b. QA Evaluations Schedule *
 - i. Personnel Evaluations *
 - ii. Equipment Evaluations *
 - iii. Managerial Evaluations *
 - iv. Noticeable Trends/Concerns
 - c. Overdue QA Evaluations *
 - d. Status of AFTO Forms 22, and SMR change requests
 - e. Modifications Proposals

4. Training
 - a. Various Training Reports
 - b. Scheduled Training Courses
5. LRS Liaison
 - a. Parts Statuses
 - b. TRN Procedures and Statuses
 - c. DIFM Procedures and Review
6. Safety
7. TODO Comments
8. TMDE Schedule
9. Recurring Suspenses
10. Cross feed Information
11. Special Interest Items
12. Schedule of Staff Assistance Visits and IG Inspections