



**DEPARTMENT OF THE AIR FORCE
UNITED STATES AIR FORCES IN EUROPE
UNITED STATES AIR FORCES AFRICA**

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MEMORANDUM FOR DISTRIBUTION

FROM: HQ USAFE-AFAFRICA/A4
Unit 3276
APO AE 09094-3276

SUBJECT: USAFE-AFAFRICA Guidance Memorandum (GM) for AFI 21-101

RELEASABILITY: There are no releasability restrictions on this publication.

1. By Order of the Commander, United States Air Forces in Europe, this Guidance Memorandum (GM) immediately supplements AFI 21-101. Compliance with this memorandum is mandatory. To the extent its direction is inconsistent with other United States Air Forces in Europe instructions or guidance, the information herein prevails, in accordance with (IAW) AFI 33-360, Publications and Forms Management. This publication may not be supplemented or further implemented/extended. This publication does not apply to the Air National Guard (ANG) and Air Force Reserve Command (AFRC) units; however, ANG/AFRC personnel directly supporting USAFE units will comply with the guidance provided within this supplement.

2. Ensure all records created as a result of processes prescribed in this Memorandum are maintained in accordance with Air Force Manual (AFMAN) 33-363, *Management of Records*, and disposed of IAW the Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS).

3. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the AF Form 847, *Recommendation for Change of Publication*; route AF Form 847 from the field through the appropriate functional chain of command. 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. This Memorandum becomes void after one year has elapsed from the date of this Memorandum, or upon publishing of a new publication permanently establishing this guidance, whichever is earlier.

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Attachment

USAFE Guidance to Air Force Instruction 21-101, *Aircraft and Equipment Maintenance Management*

1.2.1. (Added) Structure For Deployed Aircraft Maintenance Forces. Structure the deployed combat support operation to accomplish mission requirements as follows:

1.2.2. (Added) Flightline and backshop maintenance may be separated to fulfill the mission at the discretion of the senior maintainer at the deployed location. Units deploying to locations with established infrastructures (i.e., U.S. installations or presence at OCONUS locations) shall, with host wing and lead wing coordination, organize into the CWO. Deployed maintenance personnel shall integrate into the existing MXG. All deployed maintenance organizations shall coordinate maintenance actions through the host wing as well as attend appropriate maintenance meetings scheduled by the host wing.

1.7.2. (Added) Use of Technical Orders (TO) and TO Supplements. Ensure electronic devices (eTools, commercial mobile devices, etc.) used for TO viewing in or around classified mission aircraft are administratively disabled from using wireless network connections, microphones, and cameras. **(T-2)**.

1.7.2.1. (Added) Mark devices to clearly identify that wireless, cameras, and microphones are disabled. **(T-2)**.

1.15.1. Government Commercial mobile devices are authorized. Device operations/limitations vary by weapon system and location. MXG/CC must identify these operations/limitations and will publish guidance to ensure compliance. **(T-2)**.

1.15.1.2. (Added) Personal electronic and communication (Commercial mobile) devices restrictions vary by weapon system and location. MXG/CC will publish guidance for use and control. **(T-2)**.

1.18.1.1. HQ USAFE focal points are:

1.18.1.1.1. (Added) USAFE/A4MA for specific weapons system, contracts, engine management and PMEL

1.18.1.1.2. (Added) USAFE/A4MQ for Transient alert, maintenance training, eTools and Maintenance Management.

2.2.6. (Added) Review the monthly MSEP summaries distributed by QA to stay abreast of maintenance issues. **(T-2)**.

2.2.7. (Added) Approve all aircraft marking/paint waiver requests IAW AFI 21-105 USAFE Sup before submittal to USAFE/A4MA for final approval. **(T-2)**.

2.4. MXG/CC responsibilities at units that do not have an MXG/CC will fall under the senior officer possessing overall responsibility for maintenance (e.g. test units, DRUs, GSUs, Recon Groups, etc.). **(T-2)**.

2.4.15. Establish MELs for portable test equipment such as borescopes, boresighting, EW reprogramming/test equipment, etc., as applicable, and review serviceability and repair status on a monthly basis. **(T-2)**.

2.4.28. Ensure all transient maintainers performing maintenance on the flight line are informed of all local maintenance operating procedures as applicable. **(T-2)**.

2.4.39.1. (Added) Establish annual recertification requirements for proficiency.

2.4.55. (Added) GP/CCs will jointly develop and publish parameters for use in day-to-day operations. Parameters will include the following as applicable: standard flying hour window, standard duty day, standard turn times, turn patterns, number of aircraft devoted to the flying schedule, average phase time remaining standard, and minimum equipment levels for essential maintenance assets. **(T-2)**.

2.4.56. (Added) Conduct a daily "MXG Standup" meeting separate from the daily production/scheduling meeting. **(T-2)**. The meeting topics should include, as a minimum; previous/current/next day flying, aircraft status, impounded & hangar queen aircraft, flying & maintenance schedule shortfalls/deviations and MICAP review. Mandatory minimum attendees include AMU Supervision, Operations Officer/Maintenance Superintendent, MOC, PS&D, Analysis and QA. **(T-3)**.

2.4.57. (Added) The MXG/CC is the waiver authority for deploying Scanning Electron Microscope/Energy Dispersive X-Ray (SEM/EDX) machines.

2.4.58. (Added) MXG/CC, or equivalent, will limit enlisted maintenance staff tours (e.g. Unit/Group Safety NCO, MOC, QA, Mobility) to no more than 2 years. **(T-3)**. Staff tour length waiver extensions will be documented and not exceed 4 years.

2.4.59. (Added) Certification official for unit level welding examination. May delegate responsibility according to TO 00-25-252.

2.4.60. (Added) Ensure adequate facilities, equipment, material, and funding are available to support a sound corrosion prevention and control program IAW Chapter 11. **(T-2)**.

2.4.61. (Added) Ensure an effective Flash Blindness Protective Device Maintenance Program is accomplished, if applicable, IAW Chapter 11 of this instruction. **(T-2)**.

2.4.62. (Added) Determine organization responsible for management of aircraft wash facility. **(T-3)**.

2.4.63. (Added) Report any aircraft wash overdue with official memo to possessing MAJCOM Corrosion Control Program Manager. **(T-2)**. Within this memo include aircraft tail number(s), date of last wash, reason for overdue condition, and corrective action taken to prevent further occurrences. **(T-2)**.

2.4.64. (Added) Appoint Multi Point Refueling System (MPRS) program manager for units that possess KC-135 MPRS aircraft. See chapter 11 for MPRS program manager duties. **(T-2)**.

2.4.65. (Added) Provide maintenance cross-tell information IAW chapter 6 of this instruction.

2.4.66. (Added) Appoint a Wing Corrosion Program Manager (2A773 or 2A775). **(T-2)**.

2.4.68. (Added) Ensure local policies are coordinated with applicable local labor unions for understanding of operational requirements. **(T-3)**.

2.4.69. (Added) Establish PAS management program. **(T-2)**.

2.4.70. (Added) Submit executive level narrative with comments on unit aircraft mission capability, not mission capable maintenance and supply performance indicators from the

previous month. Provide comments on significant negative issues that affected your monthly rates. Include any corrective actions taken or planned to be taken to correct negative issues. These comments should be drafted by maintenance officers who are intimately familiar with negative issues impacting operations. These comments are crucial in preparing the executive summary for the HQ AMC Commander's HOF. Information provided addressing manpower, training, parts, and facilities that adversely influence rates are more meaningful than status drivers because headquarters pulls that information by weapon system directly from the database.

2.4.70.1 (Added) MAF Units: Comments are due to both HQ AMC/A4M and USAFE-AFAFRICA/A4MQ NLT than 1700 Central Standard Time (CST) on the 10th calendar day of the following month. If the 10th calendar day falls on a non-duty day, it is due by 1700 CST on the duty day preceding. When a unit cannot meet the 10th calendar day suspense, it must report the reason for the delay.

2.4.70.2 (Added) CAF Units: The 9302 report is submitted to HQ ACC/A4QJ and USAFE-AFAFRICA/A4MQ monthly by the eighth calendar day. Executive summaries are submitted by the tenth calendar day. Please email the 9302 to the USAFE-AFAFRICA/A4MQ org box.

2.5. Deputy MXG/CC responsibilities at units that do not have an Deputy MXG/CC will fall under the senior officer possessing overall responsibility for maintenance (e.g. test units, GSUs, Recon Groups, etc.). **(T-2)**.

2.5.1.2.7. (Added) Review the status of TNB items held over 30 days. **(T-2)**.

2.5.1.2.8. (Added) Act as the lowest level approval authority for cannibalization of Hangar Queen Category 1 aircraft. **(T-2)**.

2.5.1.2.9. (Added) Oversee development of weekly, monthly, and quarterly flying schedule. **(T-2)**.

2.5.1.2.10. (Added) Ensure emergency action (including severe weather) procedures are established and adhered to with regard to movement of aircraft, support equipment, and evacuation of flightline/in-shop personnel. **(T-2)**.

2.6.2. (Added) Approve the selection of maintenance training instructors. **(T-2)**.

2.7.16. Units will utilize the weapons incident reporting tool located on the AF Armament SharePoint: <https://cs1.eis.af.mil/sites/HAFARMAMENT/SitePages/Home.aspx> **(T-2)**.

2.7.23.2. (Added) Report weapons release reliability and gun fire-out rates: along with corrective actions if required, near real-time (NLT 48 hours) using the 9405 report on the AF Armament SharePoint site <https://cs1.eis.af.mil/sites/HAFARMAMENT/SitePages/Home.aspx> **(T-2)**.

2.7.29.1. (Added) For AFTO Form 375, management and reporting, units will utilize the 9405 report on the AF Armament SharePoint site:

<https://cs1.eis.af.mil/sites/HAFARMAMENT/SitePages/Home.aspx> **(T-2)**.

2.8.2.1. (Added) Maintenance officer training. Squadron commanders are the primary focal point for maintenance officer training and will ensure assigned officers, to include crossflow 61A/E and 63A personnel, are adequately trained IAW current 21A CFETP and documented in TBA.

2.8.2.1.1. (Added) The Flightline Maintenance Officer / Pro Super Course (ACC or AMC) attendance is highly encouraged. Unless approved through formal training, this course will be unit funded.

2.8.15. (Added) Ensure funding is available for personnel who will be certified at an Air Logistics Complex (ALC) to perform welding operations. **(T-2)**.

2.8.16. (Added) Appoint resource advisor and monitor unit budgets (e.g., baseline, flying hour, OCO) to ensure accounts are properly executed. Review spending plan quarterly.

2.9.1. Maintenance Pro Super Course attendance is highly encouraged and will be unit funded.

2.9.1.1. (Added) Coordinate with other squadrons to develop and execute a rotation plan for all applicable AFSCs to balance grade, skill level and experience of personnel between AMU/MXS as required. **(T-2)**. The WWM will perform this function for AFSC 2W1X1.

2.9.1.2. (Added) Coordinates with WWM on all issues affecting AFSC 2W1X1 personnel to include: work center/organizational manpower authorization change requests (ACR), AFSC changes, re-training, special duty requests, special assignment actions (SWAP, Palace Chase, etc.), overseas DEROS extensions/IPCOT requests and physical profile changes. **(T-2)**.

2.9.20. (Added) Review monthly maintenance plan inputs and forward to PS&D for publication. **(T-2)**.

2.9.21. (Added) Review UMD manpower authorizations, changes to authorizations, functional activity codes (FAC) and workcenter alignment. **(T-2)**.

2.9.22. (Added) Be aware of all aspects of ramp and parking area construction/renovation, snow/ice conditions, and obstructions, and will coordinate with the Programs & Resources Flight, MOC, and QA in verifying that all conditions are safe prior to use and aircraft movement. **(T-3)**.

2.10.31. (Added) Review support agreements, if applicable, to help assess limits of internal unit capabilities, and coordinate with the host unit for resources over and above those possessed. **(T-3)**.

2.11.1. (Added) Prior to assuming the roles of a Pro Super, individuals will complete the ACC Production Superintendent Course CBT available at <https://367trss.hil.af.mil/Home/Index>. **(T-2)**. Individuals who have completed previous in-resident or MTT version equivalent (MRTC or MAF MSPC) Pro Super courses are not required to complete the CBT.

2.11.1.1. (Added) Course completion will be documented in the MIS.

2.11.2. (Added) Establish ETIC for PMC and NMC conditions. Identify to MOC if an ETIC is for troubleshooting or repair. **(T-2)**.

2.12.29. (Added) Previous day/shift maintenance documentation data will be checked, errors flagged and corrections made. G081 units will review maintenance data collection (MDC) using the 'SUPERVISOR' role of G081 screen 9154 (Supervisor MDC Review / Error Correction). IMDS units will utilize screen 100. **(T-2)**.

3.6.12. (Added) Attend local, MTS-instructed, Expediter Course prior to performing expediter duties. **(T-2)**.

3.6.12.1. (Added) Course completion will be documented in the MIS.

3.7.1. Print a copy or disk back-up of the automated debriefing sortie recap for each sortie, including a separate printout for each leg of cross-country missions, and file in the aircraft record or locally managed electronic file. **(T-2)**.

3.7.1.2. (Added) Aircraft with full Contractor Logistic Support (CLS) will debrief IAW Contractor Statement of Work (CSOW), Performance Work Statement (PWS) or as directed by the contracting officer or designated representative. **(T-3)**.

3.7.1.3. (Added) Locally developed debrief or published forms (ex. AFTO 781) will be used when MIS is unavailable. The completed form will remain with the aircraft forms until MIS is updated. When TDY, the form must be kept with the aircraft until the aircraft returns to home station. **(T-2)**.

3.7.3. When an aircraft returns from Depot or Contractor maintenance, debrief will ensure all sorties and flying hours are updated in MIS. **(T-2)**.

3.7.4.1. (Added) When deployed, all servicing documents/receipts will be collected during the off-station period and returned to home station debriefing section. **(T-2)**. Additional guidance is referenced in AFI 11-253.

3.7.5.1. (Added) The AFTO Form 781, *ARMS Aircrew/Mission Flight Data Document*, will remain in the aircraft forms binder until the aircraft returns to home station. **(T-2)**.

3.7.5.2. (Added) Ensure discrepancies are recorded in maintenance forms using the proper symbols, units will develop a QA-approved mandatory "Red X" listing and keep it in each debrief section. **(T-2)**. This listing identifies minimum discrepancies requiring mandatory entry as a "Red X" condition. Wings will have a standardized "Red X" listing for each AMU with the same Mission Design Series (MDS). **(T-2)**.

3.7.9. See attachment 11 for flying scheduling reporting procedures.

3.7.12. (Added) Document downloaded aircraft fault recording codes on aircraft equipped with on-board recording and diagnostics systems (e.g. CITS, DTADS). At a minimum, aircraft data will be downloaded after the last sortie of the day. **(T-2)**. Refer to applicable TO guidance for identification of valid vs. non-valid recorded discrepancies. All valid recorded discrepancies will be entered in the MIS, AFTO Form 781-series, and debrief reports. **(T-2)**.

3.7.13. (Added) Accept MDS specific electronic flight data records and will forward to the appropriate agency, as applicable. **(T-2)**.

3.8.1.4. (Added) Perform scheduled document reviews/records checks using applicable MIS and automated aircraft forms.

3.9.2.1. Update World Wide Navigation Database (WWNDB) and Terrain Awareness and Warning System/Enhanced Ground Proximity Warning System (TAWS/EGPWS) when directed by TCTO, aircraft technical orders, or A4M (weapons system manager).

3.9.2.2. (Added) Perform IFF checks IAW Chapter 11.

3.9.2.3. (Added) Verify operation of the installed RWR/RTHW systems, as applicable. **(T-2)**.

3.9.3.4. (Added) Develop an EWS assessment program to verify system operation IAW applicable aircraft and system TOs, as applicable. **(T-2)**.

3.10.1.6. Ensure introductory training is provided to newly assigned personnel on aircraft familiarization, safe for maintenance, explosive safety, weapons release and gun systems safety prior to performing duties (included in Master Training Plan). **(T-2)**.

3.10.1.23. Report weapons release reliability and gun fire-out rates; along with corrective if required, real-time (NLT 48 hours) using the 9405 report to the HAF Armament SharePoint site: <https://cs1.eis.af.mil/sites/HAFARMAMENT/SitePages/Home.aspx>. **(T-2)**.

3.10.1.24.1. (Added) For AME/NIE/WRM, armament testers and support equipment, units will provide near real-time updates (NLT 48 hours), using the 9405 report on the AF Armament SharePoint site: <https://cs1.eis.af.mil/sites/HAFARMAMENT/SitePages/Home.aspx>. **(T-2)**.

3.10.1.25.1. (Added) For AFTO Form 375 management and reporting, units will utilize the 9405 report on the AF Armament SharePoint:

<https://cs1.eis.af.mil/sites/HAFARMAMENT/SitePages/Home.aspx>. **(T-2)**.

3.10.1.27. (Added) Ensure AME and SPRAM accountability and control requirements are met IAW AFI 21-103 and AF 23 series publications. **(T-2)**.

3.10.1.28. (Added) (F-15E) Establish a SPRAM account to track encoder/decoders and power supplies (as applicable, if not tracked by Armament Systems Flight). **(T-2)**.

3.10.1.29. (Added) (F-16) Establish a SPRAM account to track ruggedized nuclear/special care remote interface units (as applicable, if not tracked by Armament Systems Flight). **(T-2)**.

3.10.2.5. Retain copies of completed AF IMT 2430s Specialist Dispatch Control Log, (or equivalent) on file for 6 months. **(T-2)**.

3.10.2.6.1. Locally produced 2434 will be approved by the WWM. **(T-2)**.

3.10.2.6.3. (Added) Retain copies of completed AF IMT 2434 (or Equivalent) on file for 6 months. **(T-2)**.

3.10.2.8.1. (Added) Inspect all nuclear loaded aircraft to validate safety/security of aircraft prior to flight; document inspection on AF Form 2430 (or equivalent). Inform Weapons Section NCOIC/Chief on any negative trends. **(T-1)**.

3.10.3.4. (Added) Maintain current copy of task assignment listing (TAL) for assigned aircraft. Ensure individuals review TAL and applicable -16/-33 series TOs prior to reporting for initial and recurring weapons load training. **(T-2)**.

3.10.5.7.1. (Added) Weapons personnel will not sign custody of any munitions/ammunition that they do not load on the aircraft (e.g. HH-60). **(T-2)**.

3.12.1.1. (Added) For units using G081, the Aircraft Parts Store or AMU supply support function (at non-AMC locations) will process G081 interface reconciliation report 67022 monthly and correct conflicting information between G081 and SBSS IAW AFI 23-101 AMCSUP I. **(T-2)**.

3.12.7.1. (Added) Coordinate with Maintenance Analysis on the execution of IMDS/SBSS Reconciliation program NFS540 monthly. Mismatches/errors identified by the program will be corrected with applicable agencies within 5 duty days of the program execution **(T-2)**.

3.12.8.1. (Added) DMS personnel will support Maintenance Analysis with reconciliation/clearing of errant document numbers generated during execution of program NFS120 **(T-2)**.

3.13. (Added) Contingency Response Group (CRG) Maintenance Operations.

3.13.1. (Added) CRG crew chiefs form a deployable core of trained maintenance technicians who rapidly establish and/or integrate with an existing maintenance presence.

3.13.2. (Added) CRG leadership will ensure all personnel are dual-qualified C-130/C-17 to rapidly deploy in support of contingency operations. If training is required, it will be unit funded. AETC available courses for upgrade or dual qualification should be sourced through USAFE and charged to AETC in the normal annual training reservation process.

3.13.2.1. (Added) The minimum criteria for dual qualification are defined as all capabilities required for quick-turn maintenance. Personnel must upgrade in their primary weapon system prior to start of dual qualification at the same level. CRG personnel are encouraged to receive C-5 training for quick turn maintenance, after C-130/C-17 dual qualification requirements are met. CRG personnel must meet additional CRG specific training per AMCI 10-202, Vol 4, *Expeditionary Air Mobility Support Operation*.

3.13.3. (Added) Garrison operations.

3.13.3.1. (Added) CRG aircraft maintenance personnel achieve and maintain weapon system skill qualifications through participation in the host wing aircraft Maintenance Qualification Program (MQP), Training Detachment or TDY to locations with available MDS (training will be unit funded).

3.13.3.1.1. (Added) The CRG commander will implement a training plan to ensure all training and proficiency requirements are met. **(T-3)**.

3.13.3.1.2. (Added) At home station, proficiency is achieved and maintained by integrating CRG aircraft maintenance personnel with the host unit maintenance training and production organization for the daily launch, recovery, servicing, inspection, and repair of aircraft.

3.13.3.1.2.1. (Added) When in-garrison, CRG maintenance personnel will maintain proficiency on their assigned weapon system by training and working with the host maintenance community. **(T-3)**.

3.13.3.2. (Added) CRG maintenance leadership will dispatch personnel to the host unit. These personnel integrate with the host unit, work with the host unit production managers, participate in daily aircraft generation, training activities and tasks to maintain and enhance their skills to the maximum extent possible. **(T-3)**.

3.13.3.3. (Added) CRG maintenance personnel will participate in local surge exercises and mobility training to the greatest extent possible to facilitate maintaining weapon system proficiency. In addition, CRG maintenance personnel complete deployment training requirements per AFI 10-403. **(T-3)**.

3.13.3.4. (Added) CRG personnel do not normally perform maintenance recovery team (MRT) recovery duties, but are not prohibited from doing if tasked by 603 AOC/AMD.

3.13.4. (Added) Deployed operations.

3.13.4.1. (Added) CRG maintenance personnel deploy with personal equipment, CTKs, mobility bags, etc. CRG maintenance personnel deploy as teams defined by tasked UTCs to expand, integrate with, and augment existing enroute units. They form the operating core in the expansion of the enroute system.

3.13.4.1.1. (Added) The enroute mission, for aircraft maintenance, is the in-place inspection, servicing, and generation of aircraft and repair capability when augmented by MDS specific specialist UTCs. At an existing enroute location, CRG and specialist support team personnel integrate with the existing structure.

3.13.4.1.2. (Added) To incorporate team integrity to the greatest extent possible, CRG maintenance personnel will deploy and redeploy as a team. **(T-3)**.

3.13.4.2. (Added) CRG personnel establish forward operating locations and expand global reach capabilities including bare base operations.

3.13.4.3. (Added) Taskings for aircraft support equipment for deployed personnel is provided IAW AFI 10-401.

3.13.4.4. (Added) Specialists Augmentation from the wings forms a readily deployable capability to augment CRG maintenance personnel at deployed locations.

3.13.5. (Added) Wing Specialist Support.

3.13.5.1. (Added) Wing specialist tasked to deploy in CRG support UTCs must meet all airframe specific skill level requirements and all PTM task qualifications as specified in AMCI 10-202, Vol 4. **(T-3)**.

3.13.5.1.1. (Added) Specialists filling CRG support UTCs must meet standard mobility qualifications per AFI 10-403 and AMCI 10-202, Vol 4.

3.13.5.1.2. (Added) Specialists will not be qualified on multiple weapon systems for the purpose of meeting CRG UTC taskings. **(T-3)**.

3.13.5.2. (Added) Units ensure sufficient numbers of personnel obtain both civilian and military passports at government expense to fill all UTC requirements. **(T-3)**.

3.13.5.3. (Added) For wings tasked with CRG specialist support UTCs, the MO Programs and Resources Flight section will be the MXG liaison to coordinate CRG specific issues between the wing and the CRG. Programs and Resources Flight section will in-turn coordinate CRG specific issues between the wing and the CRG. **(T-3)**.

3.13.5.3.1. (Added) CRGs and host wings will establish MOAs to meet additional home station maintenance requirements not inherent within established CRG resources. **(T-2)**.

4.2.8. (Added) Ensure CND and "Bad Actor" Programs and procedures are established to communicate information to each AMU. **(T-3)**.

4.4.1.4. (Added) Monitor and report status of aircraft liquid and gaseous servicing carts in repair status to MOO/Mx Supt. **(T-3)**.

4.4.2.3. Maintain historical records on oxygen/nitrogen gaseous and cryogenic servicing units IAW AFMAN 33-363, *Management of Records* and TO 42B6-1-1, *Quality Control of Aviator's Breathing Oxygen*.

4.4.2.4. Portable breathing oxygen cylinders (portable walk around bottles) may be stored in E&E, -21 shops, or support sections.

4.4.2.5. Portable High Altitude High Pressure Oxygen System (HPOS) included. **(T-2)**. AFE is the owning shop for HPOS bottles and performs repairs on quick release straps, harness and webbing.

4.4.3.1.5. (Added) Egress facilities will have limited access to ensure safety. **(T-2)**.

4.4.3.1.5.1. (Added) Only egress section personnel will be authorized unescorted entrance to the egress licensed explosive location. **(T-2)**.

4.4.3.2.6.2.1. Non-egress personnel must successfully complete an AETC egress technician course for the specific aircraft to be maintained. After completing the AETC technician course, non-egress personnel will be initially certified in accordance with paragraph 4.4.3.2.6.

EXCEPTION: AFE personnel do not have to complete the technician course unless they are to be employed as egress augmentees. **(T-2)**.

4.4.3.2.6.2.2. (Added) Civil service and contractor egress maintenance personnel who possess, as a minimum, 1 year of experience within the last 3 years performing egress intermediate- and organizational-level maintenance, repair, inspections, etc., may be considered for a waiver of classification training requirements. Waiver requests will be submitted to the applicable 2A6X3 MAJCOM functional manager for review then forwarded to the 2A6X3 Career Field Manager for final approval/disapproval. If waiver is disapproved, individuals must complete classification training. **(T-2)**.

4.4.3.2.6.2.3. (Added) Personnel are certified to perform egress systems maintenance by demonstrating adequate proficiency to a designated certifying official in the egress systems workcenter. Certification pass/fail criteria will be established by the egress workcenter supervisor. Document certification in accordance with AFI 36-2201. Retrain any individual who fails the practical evaluation until the individual demonstrates adequate proficiency or withdraw the individual from training. If egress personnel are withdrawn from training, retrain in accordance with AFI 36-2201. **(T-2)**.

4.4.3.2.6.4.1. The purpose of recertification is to ensure personnel still maintain the required knowledge and skills to safely maintain and/or inspect egress systems. Recertify non-egress personnel at least every 180 days. **(T-2)**.

4.4.3.2.6.4.3. (Added) COR personnel exclusively performing contract surveillance do not have to be recertified. If these personnel are performing egress maintenance, they must be recertified. **(T-2)**.

4.4.3.2.6.4.4. (Added) Recertification procedures are identical to initial certification procedures and will be accomplished IAW paragraph 4.4.3.2.6. Document recertification IAW AFI 36-2201. **(T-2)**.

4.4.3.2.11. (Added) Newly assigned uncertified egress personnel may assist in performing egress systems maintenance. These personnel will never clear (sign off) AFTO Form 781-series entries, MIS or condition tags. **(T-2)**.

4.4.4.1.1. Establish notification procedures to inform the base fire department when open fuel tank maintenance is in progress and when maintenance is complete. **(T-2)**.

4.4.4.1.1.2.1. (Added) Within the MOA/MOU, Local units with approval from MXG/CC (or equivalent) will designate which squadron(s) is responsible for management of external fuel tanks, CFT's, WBT's, SPRAM account(s)/assets per AFI 23-101. **(T-2)**.

4.4.4.2.5.1. (Added) Coordinate with PS&D to schedule aircraft with non-grounding fuel leaks through the fuel systems repair facility to prevent further deterioration. **(T-3)**.

4.4.4.3. (Added) Nestable Fuel Tank Build Up (NFTBU) Team Members and Training. The fuel systems section NCOIC identifies 2A6X4 personnel as NFTBU cadre members and establishes a training program. **(T-2)**. The NFTBU team will be augmented by non-2A6X4 personnel in the wing during build up operations. **(T-3)**. NFTBU Cadre team members will:

4.4.4.3.1. (Added) Attend initial NFTBU training at an AETC Training Detachment. While awaiting course attendance, 2A6X4 personnel may perform tank buildup duties, per applicable skill level and training. **(T-2)**.

4.4.4.3.2. (Added) Conduct annual refresher NFTBU training for all fuel systems section personnel tasked for any UTC and document completed training in the MIS. **(T-2)**. Conduct “just in time” training for augmentees immediately prior to performing NFTBU operations. **(T-2)**.

4.4.4.3.3. (Added) Review UTC MISCAP statement as it applies to the unit’s tasking and ensure availability of trained fuel systems personnel and serviceable equipment/tools to support requirements. **(T-2)**. Units are no longer required to maintain ready-trained augmentees. Commanders must provide NFTBU augmentees to fill UTC requirements at the time of tasking.

4.5. Organizational team concept authorized when approved by MXG/CC.

4.5.1.1. Using organizations are responsible for equipment not cited on authorized allowance standards. Users are also required to inspect/service oil and hydraulic servicing carts prior to use and monitor oxygen/nitrogen cart contents (quantity/pressure levels). **(T-3)**.

4.5.1.1.1. (Added) AGE does not maintain Non-powered MMHE (with the exception of LMHA, MOLT, and Ram Assemblies), Propulsion SE, Vehicle SE, Non-powered Dock Stands, and Avionics SE.

4.5.1.2.1. (Added) AGE does not dispatch operator dispatched equipment (e.g., Bomblifts and Powered Munitions Trailers).

4.5.2.2.1.1. (Added) All units with enroute responsibilities will provide status to AMC maintenance supervision whenever equipment falls below the MEL or whenever SE deficiencies directly impact aircraft maintenance repair capability. **(T-2)**.

4.5.2.9.1. (Added) Obtain QPLs from wing corrosion control manager every 6 months and use them in conjunction with applicable TOs to verify all compounds on-hand are authorized for use on designated equipment. **(T-2)**.

4.5.2.15. (Added) Provide semiannual equipment management records review reports to the USAFE AGE Functional Manager no later than the 15th day of April and 15th day of October each year. **(T-2)**.

4.6.1.6.1. (Added) For AME/NIE/WRM, armament testers and support equipment, units will provide near real-time updates (NLT 48 hours), using the 9405 report on the AF Armament SharePoint: <https://cs1.eis.af.mil/sites/HAFARMAMENT/SitePages/Home.aspx>. **(T-2)**.

4.6.1.7.1. (Added) For AFTO Form 375 management and reporting, units will utilize the 9405 report on the AF Armament SharePoint site:

<https://cs1.eis.af.mil/sites/HAFARMAMENT/SitePages/Home.aspx>. **(T-2)**

4.7.7. Wings will establish avionics sections and responsibilities to match their mission requirements and MDS.

4.8.1.4. (Added) Ensure all journeyman, craftsman or civilian equivalent welders assigned to the AMT section are certified IAW TO 00-25-252 to perform welding operations in the following base metal groups: I (Carbon and Low Alloy Steel), II (Stainless Steels), III (Nickel-Base Alloys), IV (Aluminum-base Alloys), V (Magnesium-Base Alloys), VI (Titanium-Base Alloys), VII (Cobalt-Base Alloys). **(T-2)**.

4.8.2.7. (Added) Responsible for wash rack facilities: Appoints a qualified 2A753/2A755 or higher technician, or civilian equivalent, as the wash rack facility manager. This manager will ensure proper cleaning materials, equipment, and supplies are maintained in accordance with applicable technical orders, AFI 21-101 and MAJCOM supplements. **(T-2)**.

4.8.3.4. (Added) Initiate support request from MXG or ALC personnel to qualify welders. Validate x-ray capabilities with NDI. **(T-2)**.

4.8.3.5. (Added) On the DD Form 2757, Welding Examination Record, the Examiner(s) shall only perform tests for which they are qualified. Visual examination must be conducted by a 7-level Metals Technician or civilian equivalent welder. Radiographic examinations must be conducted by a qualified NDI technician or civilian equivalent. All Examiner(s) will sign and date block 18, verifying that the examinations were performed IAW TO 00-25-252.

4.8.3.5.1. (Added) Ensure Journeyman are certified NLT 12 months following award of 5-skill level. **(T-2)**.

4.8.4.11. (Added) Forecast funding for personnel to attend training courses and participate in applicable NDI conferences or working groups. **(T-3)**.

4.8.4.12. (Added) Ensure quarterly SEM/EDX reports are submitted to Air Force OAP office. **(T-2)**.

4.8.4.13. (Added) Ensure no unauthorized modifications to OAP or SEM/EDX (software/hardware) is conducted. **(T-2)**. Costs associated with repair of unauthorized modification will be levied on the owning unit.

4.9. May include CDDAR section.

4.9.1.1. (Added) Ensure compliance with CDDAR program responsibilities IAW Chapter 11. **(T-2)**.

4.9.5.3.3. Track the following information for in-progress and scheduled inspections. **(T-2)**:

4.9.5.3.3.1. (Added) Inspection type and when due (sequence).

4.9.5.3.3.2. (Added) Scheduled in (date and time).

4.9.5.3.3.3. (Added) Actual start (date and time).

4.9.5.3.3.4. (Added) Scheduled out (date and time).

4.9.5.3.3.5. (Added) Remarks (status of aircraft, delays, possible MICAP conditions, etc.).

4.9.5.3.3.6. (Added) Safety/danger considerations (power/hydraulic applications, stress panels removed, aircraft on jacks, W&B, etc.)

4.9.6. (Added) The MXG/CC may establish a Propulsion Element within the Inspection Section if there is no Propulsion Flight assigned. The Propulsion Element will accomplish duties outlined in paragraph 4.11 of the basic AFI. **(T-2)**.

4.11.1.18. (Added) Approve scheduled/unscheduled engine changes.

4.11.1.19. (Added) Determine if pre-maintenance test cell runs are required for all engines removed, if applicable. **(T-2)**.

5.2.2.1.1.1.3 (Added) Use visual aids to provide ready access to critical data. Computer terminals may be used in place of visual aids. If this option is used, develop procedures to retrieve printed products on a regular basis in case of system failure. **(T-2)**. Visual aids will display the following:

5.2.2.1.1.1.3.1. (Added) Aircraft Status: In EMOC display aircraft status in the following columns: serial number, location, priority, status, DOC limitations/remarks, ETIC, configuration, OAP status codes, munitions load, and fuel load. Units having only one standard configuration or fuel load may omit these columns. Units may use 'remark' or 'narrative' portions of the screen for items not listed by specific title. Show DOC limitations against FSL and the BSL as itemized on the aircraft specific AFI 21-103 MESL. Discrepancy narratives in the 'DOC limitations/remarks' column should be clear, concise, accurate, and include all pertinent data (e.g., document numbers). **(T-2)**.

5.2.2.1.1.1.3.2. (Added) Include Work Unit Code (WUC) and landing status code in the discrepancy narrative. **(T-2)**.

5.2.2.1.1.1.3. (Added) Flying Schedule. Display the individual aircraft scheduled for flight each day with the following information columns, as a minimum: aircraft serial number, scheduled takeoff, actual takeoff, scheduled landing, actual landing, sortie configuration, call sign and remarks. **(T-2)**.

5.2.2.1.2. For aircraft broken off station where no MIS capability exists, the home station MOC will input discrepancies in the MIS and close them out when the aircraft returns to mission capable status. **(T-2)**. KC-135 and C-130 units will contact TACC, as applicable.

5.2.2.1.5. (Added) Input and review MIS data to coordinate use of maintenance resources, track all maintenance and services on possessed aircraft and related support equipment, and track accomplishment of scheduled and unscheduled maintenance. **(T-2)**.

5.2.2.1.7.2. (Added) When MIS information cannot be updated in a timely manner or is unavailable, MOC will inform leadership of C2 data (e.g. aircraft status, ETIC, servicing data, parking location) and discrepancies that affect the status of the aircraft. Once MIS becomes available, it must be checked to ensure all updates are current. **(T-2)**.

5.2.2.1.6.1. See attachment 11 for flying scheduling reporting procedures.

5.2.2.1.14. Ensure aircraft boards are conspicuously marked to show Hangar Queen status and include date of last flight, ETIC, and expected fly date. **(T-2)**.

5.2.2.1.18. (Added) Be experienced with the MIS and must be qualified on at least one of the assigned weapons systems, or have completed all local Qualification Training tasks for assigned AFSC. **(T-3)**.

5.2.2.1.19. (Added) Track Crew Ready, Crew Show, Engine Start and Taxi. **(T-2)**.

5.2.2.1.20. (Added) Maintenance actions required to generate aircraft in the time sequence to meet mission requirements. Units may use AF 2408, *Generation Maintenance Plan*, and the AF 2409, *Generation Sequence Action Schedule* or electronic equivalent. **(T-2)**.

5.2.2.1.21. (Added) Maintain overall management and control of the MIS location subsystem and aircraft status reporting. **(T-2)**.

5.2.2.1.22. (Added) Be aware of all aspects of ramp and parking area construction. **(T-3)**.

5.2.2.1.23. (Added) Notify the MXG/CC, SQ/CC, and applicable maintenance operations for all maintenance duty related incidents. MOC will also up channel to command post. **(T-2)**.

5.2.2.1.24. (Added) Notify appropriate agencies (e.g., Pro Super, flightline expeditors, fuel cell maintenance, munitions control, hush house/test cell, etc.) of severe weather warnings. **(T-2)**.

5.2.2.1.25. (Added) Notify the wing safety office, QA, and wing FOD monitor of mishaps involving aircraft FOD, aircraft damage, or injuries resulting from aircraft maintenance. **(T-2)**.

5.2.2.3. (Added) MRT and recovery action support.

5.2.2.3.1 (Added) Coordinate with squadrons to support tasked MRTs and recovery actions. **(T-2)**.

5.2.2.3.2. (Added) Coordinate the required support details to ensure all required discrepancies are addressed and understood.

5.2.5.1.8.1. Workcenter codes in TO 00-20-2 will be utilized. G081 units will follow AMC guidance on work center mnemonics.

5.2.5.1.11. (Added) Perform a daily validation of status, code-3 breaks, fix time, aborts, cannibalizations, and repeat/recurs. Identify erroneous or missing data to the responsible agency for correction or completion.

5.2.5.3.3.3. Support requirements will be identified in a MOA or Host Tenant Support Agreement and signed by the supported and supporting MXG/CC. **(T-2)**.

5.2.5.3.3.13. (Added) Database Management (IMDS Units). The DBM will:

5.2.5.3.3.13.1. (Added) Be aware of when Delete History (DLH) is processed monthly and fix all errors to allow the deleted parts to be removed from the database. The DBM should also review DUM, SHM, RIS, and TSY.

5.2.5.3.3.13.1.1. (Added) Process JDD Delete History (SHM) monthly using the input image: SHMX U. Review the output files and clear events that have not archived.

5.2.5.3.3.13.2. (Added) Delete terminal ID's not utilized for more than 180 days.

5.2.5.3.3.13.3. (Added) Develop procedures to monitor accounts placed into loss status and delete accounts that have not been gained from another unit within 120 days of the loss date.

5.2.5.3.3.13.4. (Added) Perform an annual verification of equipment loaded to the owning unit. Request assistance from workcenters to determine if equipment is still possessed. Verify the equipment is loaded with the correct equipment designator / SRD and is reporting to REMIS, if required. Perform loss action / delete equipment no longer possessed.

5.2.5.3.3.13.4.1. (Added) Utilize an SRD report to verify REMIS reporting requirements and update the AFI 21-103 reportable field on screen 43. Utilize the REMIS ERP4130 report to verify equipment match between IMDS and REMIS.

5.2.5.3.3.13.5. (Added) Maintain access letters from subsystem POCs (e.g. Training, MOC, etc.).

5.2.5.3.3.14. (Added) System Management (G081 units). The G081 system manager will:

5.2.5.3.3.14.1. (Added) Coordinate with the FAO on all G081 and Global Reach issues beyond their control. **(T-2)**. G081 users must contact their base G081 manager and provide full screen shots, with as much detailed explanation of the problem for resolution. **(T-3)**.

5.2.5.3.3.14.2. (Added) Coordinate, submit, and monitor the submissions of G081 automated form 529 or Deficiency Reporting Systems via screen 9038. **(T-2)**.

5.2.5.3.3.14.3. (Added) Control access to specific G081 programs by loading correct L-Terms to each user ID when created. **(T-1)**.

5.2.5.3.3.14.4. (Added) Ensure deploy indicator is updated using G081 screen 9141 when aircraft are deployed. If no deployed analyst is available, then MOC personnel will perform this function. **(T-3)**.

5.2.5.3.3.14.5. (Added) Issue, maintain, and troubleshoot all G081 printer issues (IP printers and Print-to-File). Coordinate issues beyond MMAs control with FAO. **(T-2)**.

5.2.5.3.5.2. DIT representatives will ensure squadron/workcenter members are made aware of common errors and instructed on proper MDC documentation IAW TO 00-20-2. **(T-3)**.

5.2.5.3.5.3. Data Integrity Team meetings will be held, at a minimum, quarterly and document minutes. **(T-3)**.

5.2.5.3.5.6. (Added) G081 units will utilize the following additional DIT requirements.

5.2.5.3.5.6.1. (Added) If comparison is accomplished, G081 users will request a D23 report from LRS and compare to G081 report 67026.

5.2.5.3.5.6.2. (Added) Units using G081 will utilize screen 9153 (DIT MDC / Error Correction) to review documented MDC and identify errors by users. Units will not use or develop local automated programs to accomplish this process. **(T-2)**.

5.2.5.3.5.6.3. (Added) All DIT members will run a Global Reach "Status vs MDC WUC/REFDES Mismatch Report" for their respective unit on the first duty day of each week. All mismatches will be validated with the AMXS Production Superintendent, and if required the MXS Production Superintendent. Once validated, any required aircraft status history changes will be coordinated with and completed by the MOC. If the wrong WUC is utilized on the MDC record, repair will be completed by the owning unit. **(T-2)**.

5.2.5.3.5.6.4. (Added) Identify suspected errors using G081 screen 9153. All data will be checked, errors flagged and corrections made using this process. **(T-2)**.

5.2.5.3.5.6.5. (Added) Errors identified using G081 screen 9153 will have 5 day suspense set in the MIS for the users to correct errors. Errors not corrected in this timeframe will be counted in Data Integrity Adjusted Error Rate that is reported to unit leadership and HQ AMC.

5.2.5.3.5.6.6. (Added) Required tracking and report capabilities are provided using the Supervisor/DIT Selector reports on Global Reach.

5.2.5.3.5.6.7. (Added) Errors flagged by DIT members will be corrected by the user who made the error whenever possible. This will be done using the 'USER' role on G081 screen 9154 (Supervisor MDC Review/Error Correction). **(T-2)**.

5.2.5.3.5.6.8. (Added) MDC entries reviewed, errors identified and corrected using G081 screen 9153 and 9154 will be stored on the mainframe and readily available via Global Reach Data Integrity reports for data analysis and monthly tracking of required statistics by the units and HQ AMC.

5.2.5.4.1 (Added) Monthly Performance Indicator reporting: USAFE units will follow lead command requirements when submitting monthly reports. In addition, units are required to submit their monthly reports to USAFE/A4MQ to email address: USAFE.A4MQ@us.af.mil.

6.2. For munitions units not aligned under a maintenance group or geographically separated from parent group, the QA munitions inspectors may be directly responsible to the assigned squadron commander. This will be documented by a delegation letter from the group commander. **(T-2)**.

6.2.10. (Added) Assist the MXG/CC when coordinating with HHQ, AFMC, Defense Contract Management Agency (DCMA), and other outside agencies. **(T-2)**.

6.2.11. (Added) Develop local procedures for units to properly track, report and account for all lost tools IAW para 8.9.2.3.2. Inform the Wing FOD monitor when lost tools are found.

6.2.12. (Added) Evaluate the Mobility Aircraft Defensive Systems Loading program, if applicable. **(T-2)**.

6.4.5.1. All fleet generated cross-tell will be submitted to USAFE/A4MA.

6.4.6.1. TO directed IPIs are not required to be included in the MXG/CC consolidated IPI listing.

6.4.13.2. QA inspectors and augmentees require an annual EPE on either a PE or technical inspection. **(T-2)**. The results will be documented.

6.4.15. (Added) Review and approve debrief Red X checksheets IAW Para 3.7.5.2 of this instruction. **(T-2)**.

6.6.3.2.1. QA inspectors may evaluate chaff/flare loading/unloading procedures when not accomplished by 2W1 personnel.

6.6.10. (Added) Quality Assurance Augmentation. If a functional area does not warrant a full-time position in QA, but specialized expertise is required, select qualified technicians that are recommended by their MOO/Mx Supt to be augmentees. **(T-2)**. Each QA must maintain a listing of current augmentees. **(T-2)**. In coordination with the MOO/MX SUPT, the QA Superintendent establishes augmentee duties.

6.7.2.7.1. As a minimum, KTL includes all tasks that would require an FCF as specified in the applicable MDS technical data. Key tasks will be identified on the RIL for each MDS. **(T-2)**. KTL inspections may only be waived with MXG/CC approval. **(T-2)**.

6.7.2.8. QA must review and update the list at least annually. **(T-2)**.

6.7.4.2.2.1. (Added) Zonal observation items are CAT II.

6.7.4.2.2.2. (Added) QA reviews CAT II major discrepancies quarterly to determine if frequency of items identified warrants inclusion in technical orders. **(T-2)**. If so, QA submits an AFTO Form 22, *Technical Manual Change Recommendation and Reply*.

6.7.4.4.2. This includes FO in vehicles dispatchable to the flightline.

6.7.6.1.3. The MXG/CC will establish the frequency, not to exceed 18 months. **(T-2)**.

6.8. Units may use any database that captures all mandatory requirements (e.g. QA2000, QATTA 98, Mustang/Logistics Evaluation Assurance Program (LEAP)).

6.8.7. The Assessment Sub-Category may be adjusted to each different airframe, but the main categories will remain the same throughout the command. **(T-2)**. Those categories are: A=Ground Handling, B=On-Aircraft Inspection, C=Off-Aircraft Inspection, D=On-Equipment Maintenance, E=Off-Equipment Maintenance, F=Support Equipment, G=Aerospace Ground Equipment, H=Munitions, I=Management Programs (such as Hangar Queen, Forms, etc.), J=Environmental Compliance, K=Training, L=Technical Order Distribution Account, M= Other Inspection/ Observation.

6.8.13. Correlates with the "Malfunction Codes" in the -06 manual, but is more general in nature since it is not used to report maintenance actions in IMDS-CDB. **(T-2)**. These categories are: 1=Safety, 2=Foreign Object, 3=Leak, 4=Loose or Missing Hardware, 5=Broken or Damaged, 6=Chafed or Worn, 7=Out of Tolerance, 8=Incorrect Servicing, 9=Incorrect Installation or Application, 10=Corroded, 11=Cut or Punctured, 12=Dirty or Contaminated, 13=Binding, Stuck or Jammed, 14=Overdue, 15=Documentation Error, 16=Failed to Operate, 17=Unsafe or Unfit to Operate, 18=No Defect, 19=Lack of Technical Proficiency/System Knowledge, 20=Failed to comply with TO steps/Instructions, 21=Failed to detect a Major Discrepancy.

6.9.5.4. (Added) The Air Force Airmen Powered by Innovation. The Product Improvement Manager (PIM) processes and monitors maintenance related suggestions according to AFI 38-402, *Airmen Powered by Innovation*. **(T-2)**.

6.11. MXG/CC will determine which organization will manage the 11N-series technical data. **(T-2)**.

6.13. CRG in deployed location will contact 618 AOC (TACC)/XOCL and the owning aircraft QA office to resolve issues pertaining to FCFs, OCFs and high speed taxi check when required

6.13.1. For Contract Logistics Support (CLS) aircraft, follow FCF guidance contained in the Contract Statement of Work, and any other applicable publications. **(T-2)**.

6.13.6. Coordinate required FCF through off-station transient alert and off-station QA sections. If none exist, owning MXG/CC and owning OG/CC will issue guidance directly to aircraft commander and off-station maintenance personnel. **(T-2)**.

6.16. CRG will contact the owning aircraft QA office for W&B to resolve W&B issues.

6.16.3.3. Organizational and intermediate level TCTOs, and permanent or temporary modifications may affect the basic aircraft weight and moment. Inspect W&B documents before the first flight, review computations for accuracy, and ensure applicable W&B records are properly documented. **(T-2)**.

6.16.3.8. (Added) Verify weight and moment calculations on all newly assigned aircraft before the first flight. In addition, verify weight and moment calculations on aircraft that return from repairs at a depot/contractor facility before the first flight. **(T-2)**.

7.2.2.2. (Added) Geographically Separated Units constitute a dual absence; therefore, the parent MXG/CC may appoint by name and for a definite period an impound release official. The

individual appointed as the impound release official cannot delegate this responsibility. The MXG/CC retains fleet health accountability. **(T-2)**.

7.5.12. (Added). Any lost tool/item suspected in the flight deck/cockpit, engine bay/inlet, or flight control linkage area/surface that isn't found within an hour after a search has been conducted to recover the lost tool/item.

7.6.10. Wings supporting transient aircraft will coordinate with owning unit to facilitate impound/release process.

8.2.1. TC-Max will be used to restrict access to specialized tool and equipment, e.g. Weapons Load Crew crimpers, dye, lead seals, engine blade blending kits/blue dye, borescopes. **(T-2)**.
Note: This list is not all inclusive.

8.2.4.1. (Added) A stock of spare tools is authorized. These tools are used to replace broken, worn, or missing tools to prevent unnecessary work delays. Spare and consumable tools are high pilferage items, and pose a significant potential for fraud, waste, and abuse. CTK custodians will authorize the tools and quantities to be maintained. Perform and document inventory replacement tool stocks quarterly. During the quarterly inventory, the CTK custodian will validate the quantity of tools/items within each bin. Control and inventory each tool/item separately by type and size. Access to spare tools will be limited to CTK custodians and select shift leads designated in writing. **(T-2)**.

8.2.4.2. (Added) Do not issue replacement tools without a turn-in of the unserviceable tool or completed CAF Form 145, *Lost Tool/Object Report*. **(T-2)**.

8.2.6. Procedures will include tools suspected of being onboard aircraft that have already taxied or are currently flying. **(T-2)**.

8.2.8. Mark all individually issued equipment with the owner's first initial, last name, and employee number. Units will develop local procedures for control of this equipment. Personally purchased protective equipment such as gloves and ear protection are not authorized on the flightline unless local procedures govern their use and control. If authorized they will be marked IAW these guidelines. **(T-2)**.

8.3.5. Special purpose CTKs that are kept in carrying bags or cases (e.g. marshalling kits, recovery kits, etc.) because of the nature of contents or type of container are not required to have identified inlay cuts, shadowed layout, label, or silhouette in the shape of the item. An inventory of items in the kit is required. **(T-1)**.

8.3.6. Contents are identified on the MIL by drawer/section indicating the number and type of each item in the CTK and total number of all items in each drawer/section. **(T-2)**.

8.3.6.7.1. If a local form is used, it will be standardized within the MXG. **(T-2)**.

8.3.10. Annotate removed items on MIL and in TC-Max. **(T-2)**.

8.3.13. (Added) Units may use Individual Issue Bins. These bins are used for tools and equipment that are available for individual sign-out but stored in the tool room. These storage bins may be cabinets, shelves, etc. Items in these bins will be identified by one of the following: inlays cut in the shape of the tool, shadowed layout, divided sections, or any combination. The contents of the compartment will be labeled. The tools or equipment items issued from these bins will have an Equipment Identification Designator (EID). **(T-2)**.

8.5.1. TC-Max is the USAFE approved tool accountability system. Units requiring additional licenses will contact USAFE/A4MQ. Contacting the software manufacturer, other than for system training/help, is not authorized.

8.5.1.3. When TC-Max is not available or with MXG/CC approval during temporary conditions such as local generation exercises, units may use the CAF Form 140. The CAF Form 140 is maintained for each CTK and remains in the tool room support section or workcenter. The form is used to record CTK/tool transactions (check-in/check-out). Completion of each line of the CAF Form 140 denotes a complete inventory of contents. The "out time/signature" block is annotated by the person signing out/assuming responsibility for the CTK/equipment. The "in" block is annotated by the tool CTK custodian/alternates or designated representative when the CTK/equipment is returned by the user. The person annotating the "out" block is not the same person annotating the "in" block. **(T-2)**.

8.6.1.2. QA will maintain a list of each unit's EID. The MXG/CC is the EID approval authority. Tenant units will coordinate with their host unit for EID approval if applicable. **(T-2)**.

8.9.2.1.1. When an item/tool is discovered missing after an aircraft has taxied, the unit will follow the wing established guidelines in paragraph 8.2.6 of this instruction. **(T-2)**.

8.9.2.2. Impound aircraft as applicable to Chapter 7 of this instruction.

8.9.2.3.2. A CAF Form 145 will be initiated if the item is not found within 1 hour of initial notification. **Note:** Once initiated, the CAF Form 145 must be completed even if the lost tool/item is found. **(T-2)**.

8.9.2.5.1.1. Ensure AFTO Form 103, Aircraft/Missile Condition Data, is annotated for depot to remove the item/tool. **(T-2)**.

8.9.2.7. (Added) CTK custodians will inform QA when lost tools are found after the CAF Form 145 has been closed out. **(T-2)**.

9.6.2. Parts cancellations will also be processed in the MIS. **(T-2)**.

9.8.1. Maintain a master inventory of items. Assets cannot be commingled. **(T-2)**.

9.10. Maintain a master inventory of items. Assets cannot be commingled. **(T-2)**.

9.11. Maintain a master inventory of items. Assets cannot be commingled. **(T-2)**.

9.12. Maintain a master inventory of items. Assets cannot be commingled. **(T-2)**.

9.18. Supply TCTO Kit Monitor will schedule and chair a monthly TCTO kit reconciliation meeting with wing TCTO monitors. **(T-3)**.

9.21. DIFM will be managed IAW AF 23 series publications.

9.22.1. The designation for AGE due-out release items is Hold Bin.

9.22.6. (Added) G081 units will use G081 screens 9006, 8044 and 8057 to update and query TNB data.

9.30. (Added) Parts Holding Bin (PHB).

9.30.1. (Added) PHB are storage locations established to control and store parts and hardware removed from LRUs.

9.30.2. (Added) For units utilizing PHB, they will be identified with the following. (T-2):

9.30.3. (Added) Parts placed in PHB will have appropriate tag (i.e. DD Form 1574, 1577, 1577-2, or AFTO Form 350) attached and annotated IAW TO 00-20-1.

9.30.3.1. (Added) Minor hardware placed in PHB will be stored in a containment device identified with:

9.30.3.1.1. (Added) Identity of next higher assembly.

9.30.3.1.2. (Added) Nomenclature

9.30.3.1.3. (Added) Quantity

9.31. (Added) Repair Network Enhancement Program (RNEP). MXG/CC is the OPR for the RNEP program. RNEP provides maintenance leadership a forum to evaluate current aircraft weapons systems resource and support status, highlight specific problem areas, focus on local repair initiatives to include the AFREP processes and discuss ways to improve the overall repair cycle process.

9.31.1. (Added) RNEP. The MXG/CC will, at least quarterly, focus efforts on supply logistics to increase aircraft availability. Recommended maintenance and logistics specialists include: LRS, maintenance units representatives, maintenance analysis, AFREP (if applicable), QA and others, as determined by the MXG/CC. The responsible asset manager should be the focal point to lead the discussion of the key data about a specific part or process.

9.31.1.1. (Added) Subject Matter Review. One of the objectives of RNEP is to increase overall base self-sufficiency for repair and reduce the overall cost of operations. Topics discussed vary based on local requirements, but should include key elements of asset management and associated costs.

9.31.1.1.1. (Added) Asset Profile/Top Projected MICAP Situations. An asset profile is an in-depth review of an asset identified as critical to mission accomplishment or that causes frequent MICAP situations. Data in an asset profile may include number authorized and on-hand, number repaired and not repaired, number of MICAPs, average repair cycle days, average AWP days, monthly demand, item cost, and financial value of assets in the repair cycle. The overall health of the assets should include reasons for MICAP situations and solutions to resolve them.

9.31.1.1.2. (Added) Test Station Equipment Profile. Test station in-commission time is critical to efficient repair cycle output. TMDE and other shop deficiencies may have a negative effect on the base repair cycle process. The group should focus on actions which maximize test station capability.

9.31.1.1.3. (Added) Wing Self-Sufficiency Initiatives. Initiatives include discussion of new wing, group and squadron AFREP initiatives and other local self-sufficiency repairs. Discussions should include how initiative is cross-fed to appropriate depot, Lead Command and all other like-MDS bases.

9.31.1.1.4. (Added) High Cost Maintenance. Unit funded TCTOs/modifications, high cost work centers, SPRAM back orders, financial value of parts in the repair cycle, etc.

9.31.1.1.5. (Added) Top CANN Items. Items with significant CANN histories. Review information driving high CANN rates, average CANN occurrences over the last 3 months and projected get well dates.

9.31.1.1.6. (Added) Unit Aircraft Engine Status Review. A status review summary should include number in work, projected production date and work stoppage supply drivers.

9.31.1.1.7. (Added) Repair Cycle Throughput. Throughput is the average time it takes to move individual items through the repair cycle. USAFE delinquent criteria for DIFM details in issue status is one duty day from issue date of the serviceable asset, unless asset is inducted into a local back shop repair facility or asset is authorized another valid DIFM status code. To the greatest extent possible, DIFM assets will be returned to the Logistics Readiness Squadron's FSC regardless of if a serviceable replacement asset was issued (i.e. credit turn-in). This policy is intended to enhance repair cycle throughput and ensure unserviceable assets are repaired as soon as possible.

9.31.1.1.8. (Added) Discuss product improvement initiatives and maintenance related to Innovation Development through Employee Awareness (IDEA) submissions, Lean initiatives, etc.

10.8. Recurring academic training is a 12-month requirement in nuclear units. **(T-2).**

10.8.3.11. Nuclear weapons systems fault isolation and troubleshooting procedures covered in separate Nuclear Surety Training Course may be used to fulfill this requirement (if applicable).

10.8.3.14. (Added) CAS AIT procedures (after beddown is complete). **(T-2).**

11.3.6.1. Units may use locally selected form. **(T-2).**

11.3.8. (Added) For civilian equivalents addressed in Table 11.1 refer to Para 2.1 of this instruction. **(T-2).**

Table 11.1. Mandatory SCR and Prerequisites. (T-2).

	A	B
ITEM	Mandatory SCR Item Titles	Prerequisites
5	Installed Engine Run Certifier	Includes AFSC 2A374/5
21	Aircraft Inlet/Intake/Exhaust Certifications	Includes AFSC 2A354/5
37 Added	Tow Team Supervisor	SrA or higher, minimum 5-level, AFSC 2AXXX with minimum 6 months weapons systems experience (Note 2)
38 Added	MICAP Approval	MSgt or higher, minimum 7-level (or civilian equivalent) (Note 2)
39 Added	NRTS and Serviceability Tag	SSgt or higher, minimum 7-level (or civilian equivalent) (Notes 2 and 3)
40 Added	Gear Retraction supervisor on -135 variants, -130 variants (This is the only person that can authorize gear handle movement)	SSgt of higher, minimum 7-skill level (or civilian equivalent), and 6 months of flightline experience. (Note 2)

41 Added	Jacking supervisor on -135 variants, -130 variants.	SSgt or higher, minimum 7-skill level (or civilian equivalent), and 6 months of flightline experience. (Note 2)
42 Added	Wash Crew Supervisor	5-level or above
43 Added	Jacking Manifold Operator	Minimum 5-skill level (or civilian equivalent) with a minimum of 6 months weapon system experience (Note 2)
44 Added	Night Vision Goggle (NVG) Ground Operations	CRG/MASOP (Only if UTC requirement)
45 Added	Crane Vehicle Trainer/Certifier	SSgt or higher and minimum 5-skill level (or civilian equivalent)
46 Added	Crane Vehicle Operator	SrA or higher and minimum 5-skill level (or civilian equivalent)
Notes: 1----Approved by MXG/CC 2----Approved by MOO/MX SUPT 3----MOO/MX SUPT may delegate approval authority to the AMU OIC/NCOIC or Flight commander/chief.		

11.4.2.1.1. Forward recommendation to USAFE/A4MA.

11.6.6. (Added) TOs, tools, rags, parts, unused supplies and checklists will be accounted for before the aircraft is allowed to taxi/takeoff. **(T-2)**.

11.6.7. (Added) Emphasis will be placed on FOD awareness/prevention during this critical maintenance operation. **(T-2)**.

11.6.8. (Added) If aircraft engines are operating, a safety observer (maintenance or aircrew member) will maintain interphone communications or remain in full view of the flight crew and be positioned to maintain overall surveillance of the aircraft and personnel performing maintenance. **(T-2)**.

11.6.9. (Added) Weapons loaded aircraft will have munitions safed IAW applicable MDS and/or weapons specific technical data. **(T-2)**.

11.7. Units will tailor response requirements in coordination with USAFE/A4MA.

11.8. Foreign Object Damage (FOD) Prevention Program. USAFE Munitions Support Squadrons and Geographical Separated Units will comply with Host Installation FOD Policy. **(T-2)**.

11.8.2. Domestic Object Damage: Any damage to an aircraft engine, aircraft system or equipment caused by internal failure of a component.

11.8.3.3. Affix red "REMOVE BEFORE FLIGHT" streamers to covers and safety pins. **(T-2)**.

11.8.3.6.2. Remove/stow restricted area badge within 25 feet of an operating engine. **(T-2)**. Ensure line badge clips are secured to prevent loss. **(T-2)**. EXCEPTION: Line badges completely secured inside of an armband pouch do not need to be removed.

11.8.3.9. Establish and tailor intake maintenance procedures (e.g. fasteners, structural repair, LO material replacement, etc.) for local operation of assigned weapons systems. **(T-2)**. Include them as part of the FOD orientation/familiarization for personnel working in these areas. **(T-2)**. Include workorder residue control procedures for all maintenance performed in and around intake areas. **(T-2)**.

11.8.3.9.1. (Added) ASM/LOASM sections will develop local instruction checklists for repair or replacement of hardware or LO materials in aircraft intakes. **(T-2)**. All parts and pieces installed and removed from the aircraft will be documented and verified by a 7-level. **(T-2)**. The checklist will be completed on the job site and turned into QA within 24 hours of repair completion. **(T-2)**. ASM/LOASM technicians are not required to meet the training requirements of Para 14.4.

11.8.3.11. Units will conduct a FOD walk prior to the first flight of the day. Exception: -130, -135 and HH-60 units will conduct a minimum of one FOD walk per week. Tenant units will follow the host base requirements. The wing FOD monitor or GSU equivalent will develop a FOD walk plan that includes unit areas of responsibility. **(T-2)**. Airfield managers are responsible for controlled movement area (CMA) FOD inspections.

11.8.3.16. If FOD check points are not illuminated during periods of darkness, vehicle operators will use a flashlight during vehicle FOD inspections. **(T-3)**.

11.8.3.18. Use of magnetic bars on the flightline is recommended for fighter wings. **(T-2)**. Each AMU should assign designated vehicles to be equipped with magnetic bars. **(T-3)**. During inclement weather, these bars may be removed if considered a hazard.

11.8.3.21. When any FO is suspected to be in an inaccessible area follow procedures for inaccessible item/tool in Chapter 8. **(T-2)**.

11.8.3.22. (Added) Prior to engine start and after engine shutdown on maintenance and test cell runs, and after any engine intake maintenance, each affected engine intake and exhaust will receive a FOD (intake/inlet/exhaust) inspection. **(T-2)**. The FOD inspection will be documented with a Red X symbol in the applicable form (AFTO Form 781A and the MIS). **(T-2)**. FOD inspections performed on uninstalled test cell engines will be documented on the test cell worksheet. **(T-2)**. This is not required on engines shut down for "Red Ball" maintenance.

11.8.3.23. (Added) Aircraft Installed Engine Run Hush House Operation Worksheet. Prior to engine start in the hush house, the aircraft run supervisor will ensure the pretest procedures listed in applicable hush house (T-10/11) TO (e.g. TO 33D4-6-645-1, *Enclosed Noise Suppressor System, Aircraft/Engine (Hush House)*) are complied with. **(T-2)**. Engine run personnel will complete the worksheet and the engine run supervisor will ensure all items are complied with and documented prior to engine start. **(T-2)**. This document will be developed and maintained by the Propulsion Flight Test Cell Section Chief. **(T-3)**. Contact supporting records manager as required for records maintenance. Completed worksheets will be retained in accordance with the RDS. At a minimum, the worksheet will include the following headings. **(T-2)**:

11.8.3.23.1. (Added) Aircraft TMS.

11.8.3.23.2. (Added) Engine(s) Serial Number.

11.8.3.23.3. (Added) JCN.

11.8.3.23.4. (Added) Remarks.

11.8.3.23.5. (Added) Pre-run Emergency Briefing Accomplished with run supervisors name, employee number, signature, and date accomplished sections.

11.8.3.23.6. (Added) Area Inspection with technician's name, employee number, signature, and date accomplished sections. **Note:** At a minimum, Area Section Inspections will include: Inlet FOD/FO inspection; Exhaust FOD/FO inspection; Aircraft Exterior for FO; General Engine Serviceability; Test Stand/Thrust Bed/Test Equipment for FO; CTK Inventory C/W (ensure all CTK and test equipment is accounted for and is in its proper storage space after every maintenance action and before each engine start); Engine Servicing Check; all preliminary aircraft engine run requirements C/W; serviceable fire extinguisher on hand. Units may add additional inspection areas/steps as appropriate.

11.8.4.2.7. (Added) Budget for and allocate funds to support the wing's FOD program. **(T-2).**

11.8.4.2.8. (Added) Ensure a Wing FOD monitor is appointed and FOD prevention programs are enforced during deployed operation. **(T-2).**

11.8.5. The Wing CV is the approving authority for FOD monitor additional duties. **(T-2).**

11.8.5.6. (Added) Ensure evaluated or repaired FOD is documented in CEMS automated history (E407) or AFTO FORM 95, IAW TO 00-20-1. **(T-2).**

11.8.5.7. (Added) Develop a deployable FOD program and train selected deployable FOD Monitors. **(T-2).**

11.8.6.1.2. (Added) If internal engine FOD is confirmed, the engine will be impounded IAW Chapter 7 of this instruction. **(T-2).**

11.8.6.3.2. Submit DR/mishap report(s) IAW AFI 91-204 and TO 00-35D-54. **(T-2).**

11.8.6.3.5. (Added) Found during JEIM maintenance for module/component time-change.

11.8.6.4.4. FOD incidences leading to blade blending are reported IAW para 11.8.6.17.

11.8.6.5. Preventable FOD incurred at test cell will be chargeable towards rate regardless of cost. **(T-2).**

11.8.6.7. Wing FOD monitors will submit FOD/DOP report within 3 duty days of any FOD incident to the applicable MDS Lead Command. Reports will be maintained for 24 months. **(T-2).**

11.8.6.7.2. FOD standards are determined by applicable MDS Lead Command.

11.8.6.7.2.1. (Added) Each unit will establish their own FOD control number(s) as follows: wing designator, fiscal year, and a three-digit number; for example, 33FW07001. **(T-2).**

11.8.6.9. (Added) FOD accountability will be in accordance with the following guidance. **(T-2):**

11.8.6.9.1. (Added) When transient/deployed aircraft incur FOD, the host unit will conduct the investigation and notify the owning organization within 72 hours. If the owning organization's maintainers are deployed with the aircraft and the FOD appears to be a direct result of transient/deployed unit negligence, the owning organization will conduct the investigation and will report to owning organization FOD monitor. MAJCOM will assign accountability in those instances where conflicting/peculiar circumstances occur. During deployed operations where mixed unit crews are flying or maintaining aircraft, FOD incidents will be charged to unit receiving flying hour credit.

11.8.6.9.2. (Added) The owning organization is responsible for FOD incidents on transient aircraft/engines when one of the following conditions applies:

11.8.6.9.2.1. (Added) FOD discovered upon arrival at a transient base with no intermediate stops or prior to any engine run.

11.8.6.9.2.2. (Added) FOD found during initial tear down on CRF engines.

11.8.6.9.2.3. (Added) Aircraft is maintained on transient/TDY base by owning organization maintenance personnel.

11.8.6.10. (Added) The preventable FOD standard is 1.0. **Note:** Tenant units will use their parent unit FOD standard.

11.8.6.11. (Added) The wing safety office in coordination with the wing FOD monitor will submit mishap reports IAW AFI 91-204. **(T-2).**

11.8.6.12. (Added) For Class A/B/C/D and other mishaps, investigation personnel must coordinate with the wing or base safety office to ensure the requirements of AFI 91-204 are met. **(T-2).**

11.8.6.13. (Added) FOD discovered by transient alert facilities or by depot and contractor facilities during acceptance inspections will be charged to the base from which the aircraft last departed if a FOD inspection was not accomplished/documented. The owning organization will be charged if there were no intermediate stops. FOD incidents caused by transit bases, depot or contractors, will be referred to the responsible command for determination of accountability.

11.8.6.14. (Added) Perform inspection using a borescope when any of the following occur. **(T-2):**

11.8.6.14.1. (Added) Engine is determined to have FO damage that requires blending by applicable technical data.

11.8.6.14.2. (Added) Hardware/material forward of engine inlet is found missing and damage to the first or second stage blades.

11.8.6.14.3. (Added) A bird strike has occurred forward of and near the aircraft engine intake unless specific tech data addresses bird strike borescope requirements.

11.8.6.15. (Added) Wings will submit maintenance cross-tell reports by message to HQ USAFE/A4MA and to all units with like MDSs for those incidents that have FOD potential for the fleet. **(T-2).**

11.8.6.16. (Added) Blade blending reporting procedures for installed/uninstalled engines/modules:

11.8.6.16.1. (Added) Notify the Wing/Center FOD Monitor prior to blade blending anytime FOD is identified, other than for minor sand nicks or scratches blended with emery cloth. **(T-2).**

11.8.6.16.2. (Added) Fill out Blade Blending/FOD Damage worksheet or applicable form with the following information; engine serial number, stage number, number of blades blended, depth of damage before and after blend, area of damage and employee number/stamp number of maintenance personnel. **(T-2).**

11.8.6.16.3. (Added) Notify EM section and forward Blade Blending/FOD Damage worksheet or applicable form to EM section for filing. **(T-2).** The EM section will transcribe information

provided in the Blade Blending/FOD Damage worksheet into the applicable engine/module records (i.e., AFTO 95; if applicable) and CEMS, IAW TO 00-20-1. **(T-2)**.

11.8.7. FOD Prevention Committee Meeting will be conducted quarterly. Associate Units will be part of the host base program and will not establish an independent FOD program. The FOD meeting may be combined with other meetings. **(T-2)**.

11.8.7.1. Minimum attendee representation will include a representative from each affected maintenance unit.

11.9. Dropped Object Prevention (DOP) Program. The plastic portion of a static eliminator is not considered a dropped object unless the entire static eliminator is missing. If any portion of the base (non-plastic portion, or any metal piece) of the static eliminator is missing, a report must be completed. Minor hardware such as rivets and screws are not considered a dropped object unless they lead to damage or point to a systemic problem or other discrepancy. **(T-2)**.

11.9.1.1. Lead Command for the applicable MDS is the OPR for the DOP program.

11.9.1.3. (Added) The wing DOP monitor will be administratively assigned to QA. **(T-2)**.

11.9.1.4. (Added) Conduct quarterly DOP program meetings chaired by the WG/CV. The DOP program meeting may be combined with other quarterly meetings (e.g., FOD). The meeting will include review of previous dropped objects for corrective actions and future prevention and will develop opportunities for product improvement. The meeting will also include a review of like-MDS dropped objects. **(T-2)**.

11.9.2.3. (Added) Dropped object incidents will be immediately brought to the attention of the wing DOP monitor and QA. **(T-2)**. Quality Assurance will assist the Wing DOP monitor with dropped object incident investigations. **(T-2)**.

11.9.2.4. (Added) DOP Incidents are classified as preventable and non-preventable, both are reportable. All preventable incidents will be chargeable. DOPs are considered preventable except those listed below:

11.9.2.4.1. (Added) Caused by natural environmental factors or wildlife. This includes hail, ice, animals, insects, sand, and birds. Report this type of damage IAW AFI 91-204, *Safety Investigations and Reports*. Do not include these in the DOP rates. **(T-2)**.

11.9.2.4.2. (Added) Caused by materiel failure of an aircraft component if the component failure is reported as a DR using the combined mishap DR reporting procedures of AFI 91-204 and TO 00-35D-54.

11.9.2.4.3. (Added) Airframe damage caused by gunnery or rocket mission ricochets is considered non-preventable provided mission parameters were not exceeded and range cleaning was sufficient.

11.9.2.4.4. (Added) C-130 damage caused by rocks, stones, wood, or other objects during unimproved runway operations are considered non-preventable, provided mission parameters were not exceeded.

11.9.3.2. (Added) Units will follow Lead Command DOP program reporting procedures.

11.10.1. Units will follow Lead Command directives per MDS. **Note:** Classified ASIP will be managed with Lead Command-approved procedures.

11.10.4. (Added) PS&D will ensure ASIP inspections are loaded in the MIS and scheduled, MDS applicable. **(T-2)**.

11.11.1. 5th Generation aircraft will follow specific guidance from applicable addendum.

11.11.1.1. All aircraft will be checked prior to placement on alert status. **(T-2)**.

11.11.1.2. (Added) Additionally, units will ensure fully operational IFF Mode IV systems by performing checks on all aircraft:

11.11.1.2.1. (Added) Departing the Continental United States (CONUS) to overseas locations. **(T-2)**.

11.11.1.2.2. (Added) Flying overseas theater to theater missions (does not include intra-theater flying by overseas based aircraft). **(T-2)**.

11.11.1.2.3. (Added) Flying outside US airspace and returning to CONUS. **(T-2)**. (Missions that originate in Alaska, Hawaii, or U.S. Territories and do not depart U.S. controlled airspace are viewed as if they are missions remaining in CONUS).

11.11.2.1. Enter all checks in MIS. **Note:** IFF systems keyed and validated by operators IAW MDS specific flight manual do not require maintenance performed integrity checks or IMDS documentation.

11.12.1. 5th Generation aircraft are equipped with enhanced on-board diagnostics and internal testing capabilities and are exempt. **(T-2)**.

11.12.1.1. For non-contingency missions RWR/RTHW test will be accomplished through aircraft specific -6 TO (EW system testing). **(T-2)**.

11.12.2.3. (Added) The RWR/RTHW manager will brief -6 testing results to the MXG/CC quarterly **(T-2)**. This brief will include number of tests completed, tests passed, tests failed, corrective actions for failed tests, and number of open delayed discrepancies. **(T-2)**.

11.14.5. (Added) When an aircraft becomes identified as a Hangar Queen, management must intensify their efforts to alleviate the condition as soon as possible (e.g., mission impact letters, USAFE and item manager assistance). Aircraft last fly day shall be accessible through the AF Portal LIMS-EV Fleet Asset Status.

11.14.5.1. (Added) Category 1 Hangar Queen: MXG will establish and manage a maintenance recovery plan. **(T-2)**. Ensure strict management, control, and documentation of all CANNs, transfer and diversion actions from Hangar Queen aircraft. **(T-2)**.

11.14.5.1.1. (Added) The MXG/CD (or higher) is the approval authority for cannibalization of Hangar Queen Category 1 aircraft. **(T-2)**.

11.14.5.1.2. (Added) Ensure applicable Dash-6 and 00-20 series TO requirements and TCTOs are accomplished. **(T-2)**.

11.14.5.1.3. (Added) QA will perform a final review of all aircraft forms prior to the first flight. **(T-3)**.

11.14.5.2. (Added) Category 2 Hangar Queen: comply with all Category 1 requirements and brief aircraft maintenance/supply status at the daily wing standup meeting. An Operational Check Flight is mandatory prior to release from hangar queen status. **(T-2)**.

11.14.5.2.1. (Added) The MXG/CC or designated representative must approve any further CANNs, transfer, and diversion actions from the Hangar Queen aircraft. **(T-2)**.

11.14.5.2.2. (Added) MXG will report all Hangar Queen aircraft 7 calendar days prior to entering status (see attachment 10) via message/coordinated email to the USAFE/A4MA.

11.14.5.3. (Added) Category 3 Hangar Queen: comply with all Category 2 requirements, cease all CANN actions and make aircraft rebuild a priority. Determine the feasibility of cannibalizing parts to return the aircraft to flying status. **(T-2)**. If all required parts are feasible cannibalizations, then cannibalize all parts needed to return the aircraft to airworthy status. If a required part is an unfeasible cannibalization, then the MXG/CC will determine if other required parts should be cannibalized. **(T-2)**.

11.14.5.3.1. (Added) USAFE/A4M or designated representative must approve any further CANNs, transfer, and diversion actions from the Hangar Queen aircraft. **(T-2)**.

11.14.5.3.2. (Added) MXG/CC and OG/CC will determine the need for an FCF (if not otherwise required by the aircraft specific TO). **(T-2)**.

11.14.5.3.3. (Added) MXG will report all Hangar Queen aircraft 7 calendar days prior to entering status (see attachment 10) via message/coordinated email to the USAFE/A4MA.

11.14.5.4. (Added) Exceptions.

11.14.5.4.1. (Added) Aircraft in "PJ", "PR" or "TJ" possession identifier code are exempt from hangar queen reporting. **(T-2)**. Aircraft regained from possession code PJ, PR or TJ and aircraft being removed from alert or immediate response are authorized a 10 calendar day grace period for hangar queen reporting. **(T-2)**. **Note:** MAJCOM AVDO is the approval authority for use of the "TJ" status code. "TJ" status may only be assigned to the first aircraft that arrives on location during initial beddown of a new MDS. The aircraft will not remain in "TJ" status for more than 90 days. **(T-2)**.

11.14.5.4.2. (Added) Aircraft permanently assigned and possessed in TX code or with a "G" prefix are exempt from hangar queen reporting. **(T-2)**.

11.14.5.4.3. (Added) Aircraft in non-unit possession codes are excluded from hangar queen reporting but are not excluded from local hangar queen management procedures. **(T-2)**.

11.14.5.4.4. (Added) Aircraft regained from depot possession which have not flown for 30 consecutive days and fall within the 10 day grace period are still locally managed as hangar queens. **(T-2)**.

11.15.3. Only report inventory in the MIS for permanently grounded GITA.

11.15.4.2.12.5.1. The designated individual will:

11.15.4.2.12.5.3. (Added) Ensure the aircraft has a current set of AFTO Form 781-series forms maintained IAW TO 00-20-1. **(T-2)**.

11.15.4.2.12.5.4. (Added) Document a forms review a minimum of every 30 days. **(T-2)**.

11.15.4.2.12.5.5. (Added) Ensure aircraft is scheduled for and undergoes preventive maintenance requirements established by the MXG/CC. **(T-2)**.

11.15.4.2.12.5.6. (Added) Monitor the status of removed parts and parts on order. **(T-2)**.

11.15.4.2.12.5.7. (Added) Maintain required -21 equipment. **(T-3)**.

11.15.4.2.14. (Added) Ensure QA performs a non-rated management inspection on ground trainers semi-annually. **(T-2)**. Inspection will include, as a minimum, AFTO Form 781-series forms review, a walk-around and thru-flight inspection. **(T-2)**. Submit report to the MXG/CC.

11.15.4.2.15. (Added) Establish written minimum operational systems guidelines and general maintenance requirements (wash interval, paint interval, etc.) for group training aircraft. **(T-2)**.

11.16.3. (Added) All MXGs will have an installed and uninstalled aircraft/engine intake/inlet/exhaust training and certification program. **(T-2)**. This includes propeller-driven aircraft/helicopters. MTFs will develop a comprehensive training program to ensure personnel are knowledgeable and proficient in the performance of intake/inlet/exhaust inspections. Certifiers will be appointed by the MXG/CC and tracked on the SCR IAW Table 11.1 of this instruction. **(T-2)**.

11.16.4. (Added) Formal Training. MT/TD in coordination with the SME will develop and conduct training. **(T-2)**. As a minimum, courses will include dangers associated with the intake/inlet/exhaust, care and handling of equipment, applicable technical data, FOD prevention, inspection criteria, fault isolation/damage assessment, techniques required to inspect engine intakes, inlets and exhausts and performance of an engine intake/inlet/exhaust inspection. **(T-2)**. Formal training and certification are mandatory prior to placement on the SCR. **(T-2)**. MT or unit appointed training monitor will load training and certifications in the MIS. **(T-2)**.

11.16.5. (Added) Certification Criteria. Upon completion of formal training, individuals are task evaluated by a certifying official (an individual other than the instructor who administered the course), and placed on the SCR. **(T-2)**. Certifying officials will be appointed by the MXG/CC IAW Table 11.1. **(T-2)**. Units will limit the number of certifiers to a minimum to ensure standardized training and certification. **(T-2)**. Certifying officials will maintain proficiency in the same manner as other technicians; certifying officials will recertify each other. **(T-2)**.

11.16.5.1. (Added) Annual PE. Each certified technician requires an annual personal evaluation from QA. **(T-2)**. This annual PE is in addition to the 12 month requirement addressed in Paragraph 6.7.6.1.3. **(T-2)**.

11.17.5.1.1. Installation and removal of aircraft restraining devices (if applicable).

11.17.5.1.6. A minimum of 25 questions between the two parts (emergency and normal procedures), covering all subject areas. **(T-2)**.

11.17.5.3. Phase 3 Practical Demonstration will be evaluated by a certifying official who did not teach Phase 1 or Phase 2 to the trainee. **(T-2)**.

11.17.5.4. (Added) Certified individuals who PCS to the same MDS, different engine TMSM may be approved by the SQ/CC (or equivalent) to attend abbreviated version (locally determined, while meeting all three phases) of current MT/FTD approved course.

11.17.8. To maintain proficiency, personnel qualified to run installed engines will perform at least one engine run every 90 days. **(T-2)**. Certifying officials must also meet the 90-day proficiency requirements. **(T-2)**.

11.17.12. There is no proficiency requirement for APU operation, however recertification requirements do apply.

11.17.14.4. Engine run proficiency will include engine trim (if applicable), troubleshooting, leak checks, operational checks, emergency procedures, fire control panel operations, and test stand/engine preparation (including proper restraint). **(T-2)**.

11.17.14.4.1.7. Tests are developed by the test cell/small gas section chief or AFETS/CETS. **(T-2)**. The tests are controlled by the MT. **(T-2)**. A minimum of 25 questions between the two parts (emergency and normal procedures), covering all subject areas. **(T-2)**. This test will be developed and controlled using the same criteria as other test developed for use by the MT. **(T-2)**.

11.17.14.4.3. Phase 3 Practical Demonstration will be evaluated by a certifying official who did not teach Phase 1 or Phase 2 to the trainee. **(T-2)**.

11.17.14.4.3.6. (Added) Engine trim, troubleshooting, and leak check procedures. **(T-2)**.

11.17.14.4.3.7. (Added) Fire control panel operations IAW Para 14.17.15. of this instruction. **(T-2)**.

11.17.14.4.3.8. (Added) Test stand/engine preparation (including proper restraint. **(T-2)**.

11.17.14.6. To maintain proficiency, personnel qualified to run uninstalled engines on test stands and test cells (includes JFS/APU/GTC uninstalled operations) will perform at least one uninstalled engine run on a test stand or test cell (includes JFS/APU/GTC uninstalled operations) every 90 days. **(T-2)**. Certifying officials must also meet the 90-day proficiency requirements. **(T-2)**. Track proficiency requirements in the MIS. **(T-2)**.

11.17.14.7. (Added) Documentation. Qualifications of uninstalled engine run certifiers and uninstalled engine run certified personnel will be documented in the MIS and entered on the SCR. **(T-2)**.

11.17.14.8. (Added) Crew Size. The minimum requirements for uninstalled engine run crew are:

11.17.14.8.1. (Added) Minimum crew size is three personnel, except for small gas test stand that requires a minimum of two personnel. **(T-2)**.

11.17.14.8.1.1. (Added) One crew member must be engine run certified and will be responsible for engine operation/trim. **(T-2)**.

11.17.14.8.1.2. (Added) One individual, other than the engine run certified person, is test stand operator qualified and fire control panel trained. **(T-2)**.

11.17.14.8.1.3. (Added) Others, if not test stand/small gas test stand qualified, are briefed by the engine run certified person. As a minimum, the briefing includes emergency procedures and hazardous areas such as intake, exhaust, turbine/starter plane of rotation, high voltages, etc. **(T-2)**.

11.18.3.4. (Added) Initial engine blade blending certification. **(T-2)**.

11.18.5. (Added) Units will limit the number of certifiers to a minimum to ensure standardized training and certification. **(T-2)**. Certifying officials will maintain proficiency in the same manner as other technicians; certifying officials will recertify each other. **(T-2)**. **Note:** If applicable, assigned AFETS/CETS should be used to certify other certifying officials.

11.18.5.1. (Added) Certified individuals who PCS to the same MDS and engine TMSM may bypass formal training course. These individuals will be re-certified by a certifier prior to being

added to the SCR. **(T-2)**. Carry over date of original class completion from previous documentation (certificate, training record, MIS printout). **(T-2)**.

11.18.5.2. (Added) Upon completion of the formal training, individuals are task evaluated by the certifying official (an individual other than the instructor who administered the course), and placed on the SCR. **(T-2)**.

11.18.6. (Added) Annual Recertification. Recertification is accomplished by having the technician demonstrate they can perform the task(s). A QA PE may be used to satisfy this requirement if the QA evaluator is a certifying official.

11.19.2.2.1. (Added) Initial Certification Criteria. Certifying officials will be the most qualified 5-, 7-, and 9-levels 2A3X3/7/8, 2A5X1/2/4, and 2A6X1, or AFETS/CETS. **(T-2)**. Certifying officials will be approved by the MXG/CC and tracked on the SCR. **(T-2)**. The number of certifying officials will be limited to the amount needed to meet certification requirements and mission demands. **(T-2)**. Certifying officials will maintain proficiency in the same manner as other technicians; certifying officials will recertify each other. **(T-2)**. Upon completion of formal training, individuals are task evaluated by the certifying official (an individual other than the instructor who administered the course), and placed on the SCR. **(T-2)**.

11.19.2.3.1. (Added) Certified individuals who PCS to the same MDS and engine TMSM may by-pass the formal training course. These individuals must be re-certified by a certifier prior to being added to the SCR. **(T-2)**. Carry over the date of original class completion from previous documentation (certificate, training record, MIS printout). **(T-2)**. **Note:** If applicable, assigned AFETS/CETS should be used to certify other certifying officials.

11.19.3. (Added) Documentation. After completing formal training, the instructor signs off the individual's ITP within TBA. **(T-2)**.

11.19.4. (Added) UTMs will ensure the following course codes are tracked in the MIS. **(T-2)**:

11.19.4.1. (Added) Formal training borescope course.

11.19.4.2. (Added) Proficiency requirement.

11.19.4.3. (Added) Annual certification.

11.19.5. (Added) Proficiency Requirements. As a minimum, fighter aircraft personnel bound by TO requirements for flexible borescope inspections must perform one flexible borescope inspection every 120 days to maintain proficiency. **(T-2)**. Work center supervisors ensure personnel who do not meet minimum requirements are decertified and must be recertified by completing annual recertification requirements. **(T-2)**.

11.19.5.1. (Added) Borescope proficiency for personnel maintaining aircraft with event-driven inspections only is 180 days. **(T-2)**.

11.19.6. (Added) Annual Recertification. Each borescope-qualified technician is required to be recertified by a certifying official. **(T-2)**. This is accomplished by having technicians demonstrate proper inspection requirements, as well as, use and care of equipment. **(T-2)**.

11.20.5.3. USAFE/A4MA manages the FCC program.

11.20.5.6.2. Requests for FCC support on operational missions will be from the wing current operations office. FCC support will be based on mission priority and FCC manning. The

AMXS/CC, after coordination with the Operations Squadron/CC, is the final approval authority for missions when FCCs are requested, but not required. **(T-2)**.

11.20.5.6.2.1. (Added) An FCC may accompany the aircraft to all locations away from home station, where MDS qualified maintenance does not exist, if the aircraft is expected to remain off station overnight. **(T-2)**.

11.20.5.6.2.2. (Added) When there are no FCCs available, commanders may send qualified maintenance personnel in MEP status to accomplish ground duties in order to meet mandatory aircraft support requirements.

11.20.5.7.4. Units will break down C-coded authorizations to reflect how many FCCs are in each flight line AFSC. **(T-2)**.

11.20.5.7.9. Process orders as outlined in AFI 65-103, *Temporary Duty Orders*. **(T-2)**. Ensure FCC TDY orders specify the following:

11.20.5.7.9.1. (Added) FCCs are authorized billeting/quarters with aircrew. FCC will not share a room with aircrew members as they are subject to calls concerning maintenance related matters to ensure aircrew receive their required rest.

11.20.5.7.9.2. (Added) State "Variations Authorized" in itinerary, except when blanket orders are used (refer to AFI 65-103). **(T-2)**.

11.20.5.7.9.3. (Added) Ensure MEP approval authority statement is annotated on travel orders. **(T-2)**.

11.20.5.10.4. (Added) Provide feedback, as required, on the FCC using supplement attachment 14 and return it to the squadron FCC Program Manager upon return to home station.

11.20.5.11.2.1. (Added) If a grounding maintenance discrepancy occurs, the FCC will provide home station, responsible C2 element, transient alert, the local MOC, and enroute supervision (if applicable) with a valid phone number in addition to identifying any known parts, special tools, and equipment requirements. Once maintenance recovery actions have started, the FCC will notify responsible C2 element of job start/stop time and updates on job status at a minimum interval of every 12 hours where MOC does not reside. **(T-2)**.

11.20.6.1.2.2. Includes qualified to transfer fuel if applicable. **(T-2)**.

11.20.6.1.2.10.1. (Added) Chaff/flare qualified, if applicable.

11.20.6.1.2.10.2. (Added) Thrust reverse deactivation, if applicable.

11.20.6.1.2.10.3. (Added) High Risk Capture (HRC) training as required.

11.20.7.3.3. (Added) Section NCOICs will grant Compensatory Time Off (CTO) to FCCs dependent on length and conditions of missions. **(T-3)**.

11.20.10. (Added) FCC responsibilities include:

11.20.10.1. (Added) Coordinate travel and provide the appropriate flying squadron current operations office with FCC information to be listed on the aircrew flight authorization if applicable. **(T-2)**. If the FCC assigned aircraft has a crew change, the FCC will need to obtain billeting using normal TDY orders process.

11.20.10.2. (Added) Provide travel orders to the AC or appropriate command and control agency to facilitate billeting, clearances, etc. **(T-2)**.

11.20.10.3. (Added) As a minimum, the FCC will communicate aircraft status with responsible C2 Element and home station MOC. **(T-3)**.

11.20.10.4. (Added) FCCs will complete a unit mission report following mission completion utilizing the AMC Form 170 or a locally developed product. **(T-3)**.

11.20.11. (Added) Wartime and Contingency Operations:

11.20.11.1. (Added) FCCs are classified as MEP and may be authorized altitude chamber training, or survival/combat training. In addition, they may be authorized life support equipment, integrated survival vest/body armor, or Aircrew Eye Respiratory Protection (AERO) equipment as prescribed in AFI 11-301V1, *Aircrew Flight Equipment (AFE) Program* (based on mission requirements). Any mobility, equipment if required, (e.g., flak vests, Kevlar helmets) may be obtained from the unit mobility section.

11.20.11.2. (Added) Units will authorize FCCs M9 qualification to minimize weapons storage onboard aircraft when accompanying aircraft into theater of operations unless mission taskings require M-4s. **(T-2)**.

11.20.12. (Added) Alert FCC Program.

11.20.12.1. (Added) Designated crew chiefs performing alert duty will fly with their assigned aircraft.

11.20.12.2. (Added) Two crew chiefs will fly on FLAG/dispersal sorties, and both crew chiefs will fly when the aircraft launches in response to applicable OPLANs. **(T-2)**.

11.20.12.3. (Added) Alert FCCs are classified as mission essential ground personnel (MEP) in the event of dispersal launches. **(T-2)**.

11.20.12.4. (Added) Squadron maintenance operations ensures personnel selected to perform Alert FCC duty are qualified and meet minimum FCC requirements.

11.20.12.5. (Added) Maintenance supervision will ensure Alert FCCs:

11.20.12.5.1. (Added) Have an Alert Bag. Minimum Alert Bag contents include: one cold weather flight jacket, two flight suits, and one pair of flight gloves. Deploy with the Alert Bag on all dispersal sorties. **(T-2)**.

11.20.12.5.2. (Added) Deploy with the C Bag on all dispersal sorties. **(T-2)**.

11.21.2. (Added) The MXG/CC is responsible for defining responsibilities and maintaining an effective aircraft thermal protective device program IAW applicable aircraft TOs. **(T-2)**.

11.22.3. (Added) Bases with a NFTBU requirement will maintain the equipment/tools required to perform tank build-up, develop a plan/capability to form/train tank build-up teams. **(T-2)**. Bases which have built-up/nested WRM tanks will maintain them according to applicable technical orders unless they are designated as training assets. **(T-2)**.

11.23. Protective Aircraft Shelters (PAS). The MXG/CC is responsible for PAS management at bases with permanently assigned aircraft, unless otherwise stipulated in contracting arrangements. **(T-2)**. If a PAS is used for other than its designed purpose, the using activity will return each PAS to its required readiness condition prior to receiving aircraft. **(T-2)**. Electrical

equipment used for quality of life purposes must be designed for Class I Division 2 requirements as specified by the National Electrical Code. **(T-2)**. Equipment not meeting these requirements may be used only if they are powered by a dedicated circuit that can be de-energized during aircraft refueling by a single Class I Division 2 switch. **(T-2)**.

11.23.1. PAS Marking. Develop permanent floor plans to reflect positions for fuel truck, aircraft, chocks, equipment, personnel cubicle, dispersed weapons, etc., for each style of PAS used. **(T-2)**. When double-stuffing aircraft, use a MXG/CC-approved option for aircraft positioning. **(T-2)**.

11.23.1.1. (Added) Develop floor plans for augmentation forces and include in the units procedures supplementing this instruction. **(T-2)**.

11.23.1.2. (Added) Paint aircraft taxi lines on the shelter access pad and continue into the PAS. **(T-2)**. Paint a yellow or red safety guideline for positioning fuel vehicles. **(T-2)**. Paint the safety guideline to align with the driver's side of the vehicle, considering that the refuel vehicle will always be backed into the PAS. **(T-2)**.

11.23.2. Electrical Requirements. Refer to TO 00-25-172, for second-and third-generation PAS. For first- and modified first-generation PAS, with aircraft placed on centerline in either nose-in or -out configuration, leave electrical power and wall lights on. **(T-2)**. Do not change switch position until refueling is completed. **(T-2)**. Leave wall lights and under wing lights on if these lights are explosive-proof and the PAS is equipped with an operating ventilator. **(T-2)**.

11.23.3. Refueling/Defueling Operations. Complete refuel/defuel servicing IAW technical data and criteria established in TO 00-25-172. During F-15 operations, the fuel truck may be positioned into the shelter during ammunition loading with the aircraft's left engine running (nose-out configuration only), as long as no part of the fuel truck is directly in front of the F-15 gun firing line. **(T-2)**. Do not connect the fuel hose to the aircraft until the engine is shut down and the fuel truck is properly grounded. **(T-2)**.

11.23.4. Shelter Doors. Do not open PAS aircraft doors until ice, snow and debris is removed from the roller guide track and door roller path. **(T-3)**. Opening PAS aircraft doors with clogged door roller guides can cause severe damage to the door and door drive system. Ensure personnel have shelter door operating training before authorizing to operate. **(T-2)**.

11.23.4.1. (Added) Fully open all PAS and exhaust/blast doors prior to aircraft engine operation. **(T-2)**. Paint markings on the shelter walls/floors to indicate when at the fully open position. **(T-2)**.

11.23.4.2. (Added) During real world situations when force protection measures dictate, or as directed by commanders, keep all PAS and exhaust/blast doors closed and secured to the greatest extent possible to protect critical assets. **(T-2)**.

11.23.4.3. (Added) During strike-mission weapons loading operations for local exercises and higher HQ inspections, open PAS doors to the 10 foot mark, if applicable (depending on the style of door) and open one of the exhaust/blast doors while powered AGE or bomb lift vehicles are operating. **(T-2)**. If a PAS protecting critical assets is equipped with ventilation fans, BE will evaluate the local exhaust ventilation systems for predetermined operations inside a PAS with the doors closed to ensure no health hazard to personnel exists, then the PAS and exhaust/blast doors may be closed while powered AGE or bomb lift vehicles are operating. **(T-2)**.

11.23.4.4. (Added) During normal operations, open PAS doors as specified in wing procedures, to facilitate safety, refueling, conventional loading and ventilating hazardous exhaust vapors and fumes. **(T-2)**. Additionally, open PAS and exhaust/blast doors at least 50 percent when powered AGE is operated inside. **(T-2)**. With the approval of Wing Safety, PAS and exhaust/blast doors may remain closed during periods of inclement weather provided there is no safety risk, no refueling operation, no powered AGE operation, and no hazardous vapors/fumes risk within the PAS. **(T-2)**.

11.23.5. Aircraft Engine Operation. Perform engine maintenance operations IAW MDS-specific guidance not to exceed 85 percent in the PAS. **(T-2)**. When performing engine ground operations on the apron outside the shelter, do not direct engine exhaust into the shelter. **(T-2)**.

11.23.6. Aircraft Positioning inside the PAS. When positioning aircraft in a PAS for engine operations ensure aircraft is correctly positioned to accommodate safe operations and optimum engine performance. **(T-2)**.

11.23.7. Aircraft Winching (Hot/Cold). Cold winch (aircraft engines not running) aircraft into the shelter using the appropriate aircraft technical data. If aircraft specific TOs do not exist, units will forward proposed cold-winch checklists to Lead Command for approval prior to implementing. **(T-2)**. Hot-winch (aircraft engines are operating) is authorized provided an SSEA has been accomplished. **(T-2)**.

11.23.7.1. (Added) Base CE will set the winch configuration for the shelter based upon the primary assigned aircraft. **(T-2)**. Host units will develop a PAS facility maintenance program to ensure safe and efficient operations. **(T-2)**.

11.23.7.2. (Added) Ensure personnel are not permitted aft of the aircraft main landing gear. **(T-2)**. This is considered a danger zone due to the possibility of winch cable breakage.

11.23.8. Placement and Storage of Munitions in the PAS. Permit the placement or storage of munitions in a PAS only after carefully determining operational advantages to mission accomplishment. **(T-3)**. Site the PAS for explosives IAW AFMAN 91-201, and DoD 6055.9-STD, *DoD Ammunition and Explosive Safety Standards*. **(T-2)**. Determine the amount of munitions placed in a PAS based upon expected peacetime, exercise, and wartime taskings. **(T-2)**. In no case will the sited net explosive weight (NEW) limits be exceeded. **(T-2)**. Additional guidance on explosive compatibility, angled storage of munitions, and missile separation distances is in AFMAN 91-201, DoD 6055.9-STD, and AFI 91-112, *Safety Rules for US/NATO Strike Fighters*.

11.23.8.1. (Added) In the United Kingdom, each PAS must be licensed by the Royal Air Force in addition to complying with the requirements of AFMAN 91-201, and DOD 6055.9-STD. **(T-2)**. Elsewhere, obtain host-government concurrence, if necessary, before implementation. **(T-2)**.

11.23.8.1.1. (Added) Before placing munitions inside a PAS, develop wing procedures to govern storage and movement operations. **(T-2)**. Group commanders jointly coordinate on wing procedures. **(T-2)**. The security police, CE, munitions flight, and weapons and explosives safety officers will assist in preparation of the wing guidance. **(T-2)**. The WG/CC and host nation commander, where applicable, will approve the procedures. **(T-2)**. Units will forward a courtesy copy of the procedures to applicable MAJCOM. **(T-2)**. Munitions will not be positioned inside a PAS until wing procedures have been approved. **(T-2)**.

11.23.8.2. (Added) Conventional Munitions in the PAS. In addition to the requirements in AFMAN 91-201 and DoD 6055.9-STD, the following conditions also apply:

11.23.8.2.1. (Added) General purpose bombs and cluster bomb units may be stored in a PAS. Fuze limited quantities (sufficient to meet minimum wartime taskings) provided they are periodically verified as "safe" by qualified munitions personnel (2W1XX). **(T-2)**. Verify the safety of fused munitions as follows:

11.23.8.2.1.1. (Added) Upon initial delivery and positioning of munitions in PAS. **(T-2)**.

11.23.8.2.1.2. (Added) After every download from an aircraft. **(T-2)**.

11.23.8.3. (Added) Maintenance Actions for Emitting Electromagnetic Radiation (EMR).

11.23.8.3.1. (Added) Do not conduct aircraft maintenance requiring antenna radiation while AGM-88 missiles are located inside the PAS or located inside another PAS that is in line with the aircraft transmitting antenna. **(T-2)**.

11.23.8.3.2. (Added) Comply with the safety requirements of technical data for electro-explosive devices, cluster bomb units, guided bombs, electronic fuses, missiles, etc., to prevent detonation from EMR. **(T-2)**.

11.23.8.4. (Added) Secure low-risk and medium-risk munitions stored in PAS IAW AFI 31-101, *Integrated Defense (FOUO)* and AFI 31-118, *Security Forces Standards and Procedures*.

11.23.8.4.1. (Added) Do not place missiles or munitions inside the PAS in direct line of the aircraft exhaust or within 5 feet of the PAS exhaust port opening. **(T-2)**. Place missiles in PAS on MMHE-approved missile stands (limit quantities to meet minimum wartime taskings), all up-round containers, or on munitions trailers. **(T-2)**.

11.23.8.4.2. (Added) Munitions pre-positioning for one SCL of air-to-ground or air-to-air munitions can be accommodated by available floor space within every PAS. Place munitions on Y-stands, wooden dunnage, or specially designed racks. **(T-2)**. Maximum total munitions to be pre-positioned within any PAS is dependent upon the NEW restriction for that PAS. **(T-2)**. The unit's SCL governs the types of munitions pre-positioned in shelters.

11.23.8.4.3. (Added) Quantities of air-to-air and air-to-ground missile racks vary, depending on the type of PAS. Generally, four missile racks (eight missiles) will fit into a first generation shelter. Eight missile racks will fit into a modified first-, second-, or third-generation shelter (total 16 missiles per shelter). **Note:** Missile racks must possess loading adapter straps providing durable, adjustable, positive locking for holding all types of missiles. **(T-2)**. Mount these racks to a single surface (PAS wall or PAS floor; not both) within the shelter. **(T-2)**. Secure missiles with straps at all times. **(T-2)**.

11.23.8.4.4. (Added) If pre-positioned in approved shelters, chaff or flare mods and impulse carts will be placed on a non-conductive material (e.g. rubber mats, wood, etc.).

11.23.8.4.5. (Added) Place missiles on MMHE-approved missile racks with the nose pointing toward the rear of the shelter. **(T-2)**. Maintain missile warhead separations IAW AFMAN 91-201 and DoD 6055.9-STD. **(T-2)**. If missile warhead separation cannot be maintained, alternate missile positions; that is, nose-to-rear, nose-to-front. **(T-2)**. This should provide proper warhead alignment IAW AFMAN 91-201 and DoD 6055.9-STD and preclude any violations to sited

NEW. **Note:** Descriptions identifying differences between PAS generations are in TO 00-25-172. Position missile racks as follows:

11.23.8.4.5.1. (Added) In first generation shelters, position AIM-9 racks near the aircraft wings and forward of AIM-9 Launchers. **(T-2)**. This will enable the bomb lift truck to maneuver between the racks and the aircraft.

11.23.8.4.5.2. (Added) In modified first generation shelters, position AIM-9 missile racks closest to the aircraft wings. **(T-2)**. The AIM-120 racks are positioned forward of the AIM-9 racks.

11.23.8.4.5.3. (Added) In second and third generation shelters, position five to seven missile racks along the right wall and one missile rack along the left wall. **(T-2)**. Locate AIM-9 missile racks closest to the aircraft. **(T-2)**.

11.23.9. Collocating Nuclear and Conventional Munitions (AF Munitions). Peacetime collocation of conventional munitions and nuclear weapons is not permitted. **(T-2)**. This does not include aircraft configured in an authorized strike configuration for a nuclear generation or alert operation. Refer to AFI 91-101 and applicable AFI 91-series for Weapons System Safety rules.

11.23.10.1. (Added) All serviceable external fuel tanks will be stored within the designated external tank storage area when not in use. **(T-2)**.

11.23.10.1.1. (Added) Serviceable aircraft fuel tanks may be stored within aircraft shelters on fuel tank racks. **(T-3)**.

11.23.10.2. (Added) Uninstalled external tanks at a minimum will have. **(T-2)**:

11.23.10.2.1. (Added) Condition tags.

11.23.10.2.2. (Added) Environmental covers.

11.23.10.2.3. (Added) Securing straps (if required).

11.23.10.2.4. (Added) Grounding wires .

11.23.10.3. (Added) Unserviceable tanks will not be stored in aircraft shelters, tanks must be taken to the external tank repair area for repairs by the next duty day. **(T-3)**.

11.24.2. (Added) Combat Sortie Generation Exercises. These exercises are mandatory training events to demonstrate the unit's capability to generate a continuous sustained flow of combat sorties. **(T-2)**. MXG/CCs will review assigned taskings (e.g. OPLANS/DOC statement) to determine requirements. **(T-2)**.

11.24.2.1. (Added) For units with a requirement, proficiency exercises will be conducted semi-annually. **(T-2)**.

11.25.1. Main operating bases, if OPLAN-tasked, must keep sites certified for hot refueling even if they do not have an active program. **(T-2)**. For MXGs that do not maintain hot refueling for assigned aircraft, the MSG will manage the hot refueling program. **(T-2)**.

11.25.1.3.12. (Added) Does the site certification address all OPLAN tasked missions/sorties? **(T-2)**.

11.25.1.3.13.(Added) Is the refueling equipment used approved for hot refueling (e.g., hose carts, truck)? **(T-2)**.

11.25.1.3.14. (Added) Are all violations to the distance requirements addressed? **(T-2)**.

11.25.1.3.15. (Added) Are the unit-approved sites identified on the aircraft parking plan? CE, QA, and Airfield Operations maintain copies of hot refueling sites on file. **(T-2)**.

11.25.1.3.16. (Added) Do all hot refueling areas comply with the quantity-distance separation requirements of AFMAN 91-201 in relation to surrounding exposed sites/potential explosion sites? **(T-2)**.

11.25.1.4.1. QA will maintain all consolidated hot pit site certification listings. **(T-2)**.

11.25.1.5. MXG CC will serve as the approval authority. **(T-2)**.

11.25.3. Unit checklist will contain maps of the hot refueling area, with details for set-up. **(T-2)**. Checklist map(s) will mirror the site certification map. **(T-2)**. Checklists will not duplicate MDS specific TOs. **(T-2)**.

11.25.3.1. MXG CC will serve as the approval authority. **(T-2)**.

11.25.8. MT is the training OPR for the program. **(T-2)**.

11.25.8.3 Squadron Certifiers. Evaluates and certifies unit personnel. **(T-2)**. Individual will possess a 7-level or higher qualification in an aircraft maintenance AFSC and have 1 year of MDS maintenance experience. **(T-2)**.

11.25.11. Training and certification requirements for hot refuel team members are outlined in Table 11.2. **(T-2)**.

11.25.11.1. (Added) Failure to meet any proficiency or special requirements IAW Table 11.2 will result in decertification. **(T-2)**. The hot refueling certifier will not re-certify technicians until applicable training is re-accomplished. **(T-2)**.

Table 11.2. (Added) Hot/Aircraft-to-Aircraft Refueling Training/Certification Requirements. (T-2).

Position	Required Training	Proficiency Requirements	Special Requirements
Hot Refueling Certifier	I, II, III	One Hot Refuel Semi-Annually	One time PE by QA hot refuel certifier; thereafter, annual recertification by any hot refueling certifier.
Pad Supervisor	I, II, III	One Multiple Hot Refuel Semi-Annually	Annual recertification by hot refueling certifier
Refuel Member	I, II, III	One Hot Refuel Semi-Annually	Annual recertification by hot refueling certifier
Fuels Specialist (2F0X1)	I, II, III	One Hot Refuel Annually	Annual recertification by Fuels 7-level Supervisor

Decertified Certifier	Repeat II, III	N/A	Recertification must be started within 90 days or Phase I will also be completed. Recertification by another hot refueling certifier or QA Chief Inspector
Decertified (Other than certifier)	Repeat II, III	N/A	Recertification must be started within 90 days or Phase I will also be completed. Recertification by hot refueling certifier.

11.26.1. Rapid/hot defueling is authorized for aircraft identified in TO 00-25-172. MXG/CC designates a unit OPR for rapid/hot defueling training. **(T-2)**.

11.26.2. (Added) All rapid defueling ground crew members will be qualified to perform rapid/hot defueling operations by a qualified trainer. **(T-2)**. Training will be documented in the individual training plan in the WJQS or JQS. **(T-2)**. These individuals also require annual refresher training. **(T-2)**. Recurring training will be tracked in the applicable MIS. **(T-2)**. The rapid/hot defuel supervisor will be certified annually and tracked on the SCR. **(T-2)**.

11.28.2.1.2. CDDAR OPR is USAFE/A4MQ.

11.28.2.1.2.1. Lead Command Weapon System Team (WST) manages equipment allowance standards, inventories, and reporting. WST will inform USAFE/A4MQ of shortfalls/overages. **(T-2)**.

11.28.2.4.1.2. (Added) Publication will also address:

11.28.2.4.1.2.1. (Added) Personnel positions required for CDDAR operations including communications procedures for initial response. **(T-2)**.

11.28.2.4.1.2.2. (Added) Procedures for procurement of equipment (e.g., cranes, dollies, jacks, tow vehicles) through lateral or contract sources (e.g., host support, local heavy equipment operators) if not organically possessed. **(T-2)**.

11.28.2.4.1.3. (Added) For enroutes and other tenant units, ensure the support agreement (SA) addresses responsibilities. **(T-2)**.

11.28.2.4.1.4. (Added) Review SAs (if applicable) to help assess limits of internal unit capabilities and coordinate with the host for resources over and above that possessed. Maintenance operations will ensure personnel are prepared to assist and provide expertise in CDDAR situations. As a minimum, ensure personnel are trained on procedures for responding to more common incidents that would require CDDAR, e.g. blown/flat tires, aircraft departing prepared surfaces, and major fuel spills. **(T-2)**.

11.28.2.4.3. Enroute locations are not required to maintain a full CDDAR capability for all transient aircraft at their location. Main Operating Bases (MOBs) will be prepared to rapidly

deploy crash recovery equipment and personnel for their MDS as directed in order to recover assets. **(T-2)**.

11.28.2.6.2. (Added) Formal CDDAR training for all team members is essential to good maintenance practices. Units should make every effort to schedule team members for CDDAR training within 6 months of assumption of duties. Contact USAFE/A4MQ for assistance. Exception: Augmentees are not required to attend formal training course.

11.28.2.6.3. (Added) Develop annual unit training plan for CDDAR team members.

11.28.2.6.3.1. (Added) Previously qualified as CDDAR team members who are being reassigned to these responsibilities must complete unit training within 6 months of being assigned. **(T-2)**.

11.29.1.3.1. USAFE/A4MA is the POC for ABDR.

11.34. (Added). KC-135 MPRS Manager. A MPRS Manager will be appointed within earned manpower requirements at units that possess KC-135 MPRS aircraft. **(T-2)**. The MPRS Manager keeps the MXG/CC informed of the health of assigned MPRS aircraft and equipment and serves as liaison to the WSM and other agencies as required. Additionally the MPRS Manager will:

11.34.1. (Added) Coordinate with the AMU and P&S to plan and schedule MPRS pods/pylons maintenance, TCIs, SIs, TCTOs and modifications. **(T-3)**.

11.34.2. (Added) Communicate with the WSM, QA, and other MPRS Managers to identify trends and resolve MPRS deficiencies. **(T-2)**.

11.34.3. (Added) Coordinate with support elements to ensure sufficient support equipment is available at home station and ensure support equipment scheduled maintenance is performed and properly documented. **(T-3)**.

11.34.4. (Added) Prepare and submit MPRS Engineering and Technical Assistance Requests through QA. Maintain records of approved requests with pod/pylon historical records. **(T-3)**.

11.34.5. (Added) Ensure deployed MPRS monitors are identified and trained to perform duties while deployed. **(T-3)**.

11.34.5.1. (Added) Ensure procedures are developed for documenting pod/pylon removal/installation and reporting procedures for CANNs. **(T-3)**.

11.34.5.2. (Added) Ensure all deployed maintenance is accurately input into the MIS and reported weekly to home station for inclusion in reports to the MXG/CC and the WSM. **(T-3)**.

11.34.6. (Added) Conduct record reviews to ensure all pod/pylon information and historical data loaded in G081 is accurate after installation, major inspections, prior to aircraft deployment and prior to aircraft transfer. **(T-3)**.

11.34.7. (Added) Ensure AFTO form 95 and AFTO 781D information is accurate and current. **(T-3)**.

11.34.8. (Added) Provide annual MPRS support equipment inventory to HQ AMC/A4MYD. **(T-2)**.

11.35. (Added) Scanning Electron Microscope/Energy Dispersive X-Ray (SEM/EDX) Master Chip Detector Analysis Program (MCDP).

11.35.1. (Added) General. This section establishes procedures for management of the Aircraft Engine Magnetic Chip Detector Debris Program for units with SEM/EDX machines, for all assigned F110-GE-100/-129 engines.

11.35.2. (Added) The NDI section NCOIC will be the POC for SEM/EDX related matters. **(T-2)**.

11.35.3. (Added) All organizations requiring recurring chip detector analysis service shall identify by letter a primary and alternate MCDP monitor for their unit. **(T-2)**. Letters will include the phone numbers of both the primary and alternate monitors. **(T-2)**. The letter will be updated annually or when personnel or phone numbers change. **(T-2)**.

11.35.3.1. (Added) All newly assigned MCDP monitors will attend a briefing by NDI lab. **(T-2)**. This briefing will cover the duties and responsibilities of all MCDP monitors. **(T-2)**.

11.35.4. (Added) All MCDP Monitors or their representatives will ensure the following:

11.35.4.1. (Added) Magnetic Chip Detectors (MCD) are submitted for debris analysis for their aircraft and assigned engines IAW TOs. **(T-2)**.

11.35.4.2. (Added) Ensure MCD debris analysis is forwarded with the following information: AMU, rank/name, aircraft serial number, engine serial number, engine hours, date/time, visual chips, and reason for analysis request. **(T-2)**. This information will be annotated on DD Form 2026. **(T-2)**.

11.35.4.3. (Added) Ensure all MCD debris analysis documentation errors are corrected as soon as possible when notified of the error by the NDI lab. **(T-2)**.

11.35.5. (Added) The NDI lab will:

11.35.5.1. (Added) Complete analysis and notify MOC of results in sufficient time to meet TO directed notification intervals. **(T-2)**.

11.35.5.2. (Added) MCD analysis indicating significant levels of M50 or other critical materials will be immediately reported to the MOC. **(T-2)**. MOC will in-turn contact the owning AMU to coordinate immediate return of affected aircraft to home station. **(T-2)**.

11.35.5.3. (Added) Immediately notify test cell personnel of analysis results for engines in the test cell. **(T-2)**.

11.35.5.4. (Added) Provide AMUs with one clean MCD for each detector submitted for analysis. **(T-2)**.

11.35.5.5. (Added) Notify the MOC, Maintenance Supervision, Propulsion Flight, owning Lead Command NDI and Propulsion Functional Managers when a SEM/EDX unit becomes inoperable and when unit has been repaired. **(T-2)**. Immediately notify AF Oil Analysis Program Office (AFLCMC/LPZ) to initiate repair action. **(T-2)**.

11.35.6. (Added) MOO/MX SUPT will:

11.35.6.1. (Added) Be responsible for monitoring the MCDP on the flightline. **(T-2)**.

11.35.6.2. (Added) Ensure visual inspection of the MCD is performed IAW applicable TOs. **(T-2)**.

11.35.6.2.1. (Added) Ensure a Red dash entry is made in the aircraft forms when a visual MCD inspection is due. **(T-2)**.

11.35.6.3. (Added) Ensure MCDs are submitted for analysis within 75 minutes after engine shutdown. **(T-2)**.

11.35.6.4. (Added) Ensure current SEM/EDX levels are maintained for each aircraft serial number to indicate aircraft status relative to MCD analysis results. **(T-2)**.

11.35.6.5. (Added) Coordinate with MOC to recall aircraft determined to be flying with unacceptable levels of debris. **(T-2)**.

11.35.7. (Added) The MOC will:

11.35.7.1. (Added) Serve as primary communication link for transfer of SEM/EDX information between the NDI lab and affected activities. **(T-2)**.

11.35.7.2. (Added) Ensure current SEM/EDX levels are maintained for each aircraft serial number to indicate aircraft status relative to MCD analysis results, IAW system technical data. **(T-2)**.

11.35.7.3. (Added) Immediately notify the owning AMU when MCD analysis indicates unacceptable levels of debris so they can coordinate recall of affected aircraft. **(T-2)**.

11.35.8. (Added) Cross Country/Deployed MCDP Analysis Requirements.

11.35.8.1. (Added) NDI will be notified prior to deployment to determine if MCDP support is available at the deployed location. **(T-2)**.

11.35.8.2. (Added) If it is determined that MCDP is not available, visual MCD inspections will be performed IAW applicable engine directives.

11.35.9. (Added) SEM/EDX Interactive Multimedia Instruction (IMI) Training Requirements. This training is required in addition to qualification training (CFETP). **(T-2)**. The requirements are located at <https://367trss.hill.af.mil>.

11.35.9.1. (Added) F110 Engine Oil System Awareness Training (OSAT) is required for all 2A3X3, 2A6X1, and 2A7X2 personnel performing maintenance on F110 engines -- flightline, phase and backshop. **(T-2)**. Course is Interactive Multimedia Instruction through local Maintenance Training Section and must be completed within 90 days of assignment and annually. **(T-2)**.

11.36. (Added) Oil Analysis Program Responsibilities and Requirements (OAP)

11.36.1. (Added) MAJCOM A4M Responsibilities.

11.36.1.1. (Added) The Fabrication FAM is the OAP POC. **(T-2)**.

11.36.2. (Added) MXG/CC Responsibilities.

11.36.2.1. (Added) Appoint a Wing OAP Manager and alternate. **(T-2)**.

11.36.2.2. (Added) Ensure the NDI/OAP facility is on a priority repair list with base Civil Engineer. **(T-2)**.

11.36.2.3. (Added) Ensure base Civil Engineer maintains an alternate power source of sufficient voltage capacity at the OAP Lab to be used in times of power outage. **(T-2)**. This will allow the OAP process to continue without delay.

11.36.2.4. (Added) Ensure the NDI/OAP facility has a telephone to contact MOC to expedite the reporting of abnormal wear-metal trends. **(T-2)**.

11.36.3. (Added) Wing OAP Manager Responsibilities.

11.36.3.1. (Added) Manage the OAP IAW TO 33-1-37-1/2/3, *Joint Oil Analysis Program Manual*, AFI 21-124, *Oil Analysis Program*, and other applicable directives.

11.36.3.2. (Added) Develop procedures to establish policy and requirements for the wing OAP. **(T-2)**. Include a standardized method to ensure the total oil serviced since last OAP sample can be tracked and accurately entered on the DD Form 2026, *Oil Analysis Request*. **(T-2)**.

11.36.3.3. (Added) Ensure all organizations requiring OAP support appoint an OAP Manager and alternate using an appointment letter. **(T-2)**.

11.36.3.4. (Added) Provide consolidated quarterly OAP data report to the MXG/CC, the squadron operations officer/maintenance superintendent, Propulsion Flight Chief, all organization OAP Managers, and the NDI Section Chief. As a minimum, the following information will be included in the quarterly report:

11.36.3.4.1. (Added) Number of OAP samples processed. **(T-2)**.

11.36.3.4.2. (Added) Number and percentage of DD Form 2026 errors. **(T-2)**. **Note:** Count each DD Form 2026 that has any errors as one error, then divide the number of discrepant DD Form 2026s by the total number of OAP samples processed for the error percentage. **(T-2)**.

11.36.3.4.3. (Added) Number of OAP laboratory maintenance recommendations. **(T-2)**.

11.36.3.4.4. (Added) Average OAP sample response time (SRT). **(T-2)**. **Note:** Enter SRT to the nearest tenth of an hour and do not include the time when the OAP lab is not manned. **(T-2)**.

11.36.3.4.5. (Added) Number and percentage of OAP samples that exceeded required sample response times. **(T-2)**. Obtain the percentage by dividing the number of OAP samples exceeding required sample response time by the total OAP samples processed. **(T-2)**.

11.36.3.4.6. (Added) Number and percentage of aircraft engines not sampled as required by applicable technical order. **(T-2)**. Accomplish this by dividing the number of aircraft engines not sample as required by the total OAP samples processed. **(T-2)**.

11.36.3.4.7. (Added) Number of OAP lab maintenance recommendations confirmed by physical finding of abnormal wear or potential for catastrophic failure "hits". **(T-2)**.

11.36.3.4.8. (Added) For SEM/EDX equipped bases add the following data:

11.36.3.4.8.1. (Added) Number of Magnetic Chip Detector (MCD) analyzed. **(T-2)**.

11.36.3.4.8.2. (Added) Number and percentage of Level 1, 2, and 3 warnings by material type. **(T-2)**.

11.36.3.4.8.3. (Added) Number of unserviceable MCDs found. **(T-2)**.

11.36.3.4.8.4. (Added) Number and percentage of DD Form 2026 errors. **(T-2)**. **Note:** Count each DD Form 2026 that has any errors as one error, and then divide the number of discrepancies DD Form 2026s by the total number of MCDs analyzed for the error percentage. **(T-2)**.

11.36.3.4.8.5. (Added) Average SEM/EDX analysis response time. **(T-2)**. **Note:** This is the time from when the MCD is pulled to the time results are reported to the MOC. **(T-2)**. Enter the

response time to the nearest tenth of an hour and do not include the time when the OAP lab is not manned. **(T-2)**.

11.36.3.4.8.6. (Added) Number and percentage of MCDs that exceeded required delivery time. **(T-2)**. Obtain the percentage by dividing the number of MCDs exceeding required delivery time by the total number of MCDs processed. **(T-2)**.

11.36.4. (Added) Operations Officer/Maintenance Superintendent Responsibilities.

11.36.4.1. (Added) Ensure all assigned aircraft are sampled IAW the applicable aircraft TO **(T-2)**.

11.36.4.2. (Added) Ensure OAP samples are delivered to the OAP lab with a DD Form 2026 filled out IAW TO 33-1-37-1. **(T-2)**.

11.36.4.3. (Added) Ensure flightline personnel verify with the OAP lab that the information entered in the Oil Analysis Record matches during scheduled aircraft records checks. **(T-2)**. Verify, as a minimum, engine hours, time since oil change, oil serviced since last records check/OAP sample, engine serial number(s) and aircraft serial number. **(T-2)**. **Note:** MXG/CC or equivalent may waive verification of OAP records against aircraft records when aircraft are deployed and the scheduled aircraft records check is due.

11.36.4.4. (Added) Identify an NCO as AMU OAP Manager and alternates by appointment letter and forward to the Wing OAP Manager and the OAP laboratory. **(T-2)**. OAP manager will serve as the primary liaison between their AMU and the OAP lab and attend all OAP meetings involving their AMU. **(T-2)**.

11.36.4.5. (Added) Ensure all aircraft engines under special OAP codes IAW TO 33-1-37 are not flown until results of the OAP sample(s) are known. **(T-2)**. Ensure no aircraft engines are operated until the following DD Form 2026 discrepancies are corrected and verified with the OAP lab: equipment and/or end item serial number error, hours (EOT or EFH) since overhaul error, oil change error, and oil added since last sample error. **(T-2)**. These items are essential to oil analysis trending and require removal of that engine from service until the discrepancy is corrected.

11.36.4.6. (Added) Ensure DD Form 2026 with equipment and/or end item serial number error, hours since overhaul error and oil added since last sample error are corrected immediately. **(T-2)**.

11.36.4.7. (Added) Ensure all maintenance actions affecting oil-wetted engine components are provided to the OAP lab using the DD Form 2026 remarks section or a suitable local form. **(T-2)**.

11.36.5. (Added) Propulsion Flight Chief Responsibilities. **Note:** When Propulsion Flight doesn't perform maintenance on the affected oil-wetted system, the MXG/CC or designated representative or equivalent assumes these responsibilities. **(T-2)**.

11.36.5.1. (Added) Ensure accurate and timely deficiency reports are submitted through the unit PIM to the applicable ALC engine program offices on all engines requiring tear down or overhaul due to an OAP laboratory maintenance recommendation and on all oil-wetted component failures. **(T-2)**.

11.36.5.2. (Added) Ensure a copy of the Oil Analysis Record is provided to the applicable repair facility for each engine undergoing scheduled maintenance or overhaul. **(T-2)**.

11.36.5.3. (Added) Make the final decision regarding all OAP engine maintenance action recommendations. **(T-2)**.

11.36.5.4. (Added) Ensure all Propulsion Flight maintenance actions which affect oil-wetted engine components are provided to the OAP lab. **(T-2)**. This will be done by using the remarks section of the DD Form 2026 submitted with the OAP sample. **(T-2)**.

11.36.5.5. (Added) Appoint OAP Managers by appointment letter to the Wing OAP Manager and the OAP lab. Ensure OAP Managers or alternates attend all OAP meetings. **(T-2)**.

11.36.6. (Added) MOC Responsibilities.

11.36.6.1. (Added) Maintain an OAP status on each assigned aircraft showing all lab recommendation codes next to the aircraft serial number. Prior to commencing the flying day, verify status of aircraft or engines on special surveillance. **(T-2)**.

11.36.6.2. (Added) Relay to the OAP lab information regarding engine changes on- and off-station as they occur but no later than 0800 the next duty day. **(T-2)**.

11.36.6.3. (Added) Notify the OAP lab when the cross country/deployed aircraft return. **(T-2)**.

11.36.6.4. (Added) Initiate follow-up action when the oil analysis record from cross country/deployed aircraft is not returned to the OAP lab. **(T-2)**.

11.36.7. (Added) NDI/OAP lab NCOIC Responsibilities.

11.36.7.1. (Added) Ensure the scheduled aircraft records check is documented on the affected engine's Oil Analysis Record with the date the check was accomplished and OAP lab person's initials. **(T-2)**.

11.36.7.2. (Added) Ensure a copy of the Oil Analysis Record or a suitable automated form is provided to the propulsion flight for each engine undergoing scheduled maintenance or overhaul at depot, JEIM or CRF. **(T-2)**.

11.36.7.3. (Added) Immediately notify MOC and the propulsion flight chief when an installed engine is restricted from operation or is placed on special sampling. **(T-2)**.

11.36.7.4. (Added) Ensure analysis results on all installed engines are provided to MOC after analysis of the OAP sample is complete. **(T-2)**.

11.36.7.5. (Added) Immediately notify test cell and the propulsion flight chief when abnormal OAP results are discovered on test cell engines. **(T-2)**.

11.36.7.6. (Added) Ensure DD Form 2026s with equipment and/or end item serial number error, hours since overhaul error and oil added since last sample error are corrected immediately. **(T-2)**.

11.36.7.7. (Added) Track aircraft OAP sample response times for all assigned aircraft to ensure response time compliance. **(T-2)**.

11.36.7.8. (Added) Maintain a current appointment letter of all customer OAP managers. **(T-2)**.

11.36.8. (Added) OAP Sample Response Time Requirements for Routine OAP Samples. **Note:** The OAP sample response time begins at the time the OAP sample is taken and ends at the time the oil analysis results are reported to the MOC. **(T-2)**.

11.36.8.1. (Added) Two and one half-hours for one and two engine aircraft. **(T-2)**. Deliver the sample to the OAP lab within 75 minutes of engine shutdown. **(T-2)**. MXG/CC may adjust the 2

1/2 hour rule as needed to accommodate flying windows. **(T-2)**. When the OAP lab is not manned, they shall provide results to the MOC NLT 2 hours after the beginning of the next shift. **(T-2)**. **Note:** OAP response time does not apply to aircraft that are geographically separated from the supporting OAP lab; however, aircraft WILL NOT fly beyond the applicable -6 TO sampling interval. **(T-2)**.

11.36.8.2. (Added) Five hours for all other aircraft. **(T-2)**. When the OAP Lab is not manned, they shall provide results to the MOC NLT 2 hours after the beginning of the next shift. **(T-2)**. **Note:** OAP response time does not apply to aircraft that are geographically separated from the supporting OAP lab; however, aircraft WILL NOT fly beyond the applicable -6 TO sampling interval. **(T-2)**.

11.36.8.3. (Added) Four hours for engine ground/trim and test cell runs. **(T-2)**.

11.36.8.4. (Added) Immediately process/analyzes special "Red Cap" samples after drawing the sample. **(T-2)**. The OAP lab will assign priority to "Red Caps" over routine samples and expedite results to MOC.

11.36.9. (Added) OAP Requirements For Cross-Country Flights/Deployments.

11.36.9. (Added) Flightline personnel place an Oil Analysis Record in the aircraft AFTO Form 781-series forms jacket prior to departure. **(T-2)**.

11.36.9.1. (Added) The OAP lab personnel ensure the Oil Analysis Record contains at least the last 10 analyses. **(T-2)**. The flightline expediter or pro super notifies the OAP lab in advance for cross-country documents. **(T-2)**.

11.36.9.2. (Added) Flightline personnel sign for the Oil Analysis Record at the OAP lab and return it to the lab the day the aircraft returns to home station. **(T-2)**.

11.36.9.3. (Added) The OAP lab notifies MOC if the Oil Analysis Record is not returned. **(T-2)**.

11.36.9.4. (Added) The OAP lab reviews the returned Oil Analysis Record for adverse trends and takes necessary action. **(T-2)**.

11.36.9.5. (Added) Deployed OAP personnel shall have telephone or radio communication with MOC and the AMU to expedite reporting of abnormal OAP trends. **(T-2)**.

11.36.10. (Added) OAP Requirements for Transient Aircraft.

11.36.10.1. (Added) Transient maintenance personnel sample aircraft as required by this section and applicable -6 technical order. **(T-2)**.

11.36.10.2. (Added) Transient maintenance personnel draw the OAP sample and make a Red Dash entry on the AFTO Form 781A indicating, "Engine oil analysis results due". **(T-2)**.

11.36.10.3. (Added) When OAP capability exists at a transient location and an OAP sample is required, the OAP sample results will be known prior to aircraft departure. **(T-2)**.

11.36.10.4. (Added) Transient bases without OAP capability shall take required OAP samples and ensure samples are given to aircrew for processing at next base. **(T-2)**.

11.36.10.5. (Added) If OAP sample results are not provided before aircraft departure, the results shall be forwarded via FAX, e-mail or most expeditious manner by the local MOC or transient maintenance to the aircraft's next destination (either MOC, TA, or base operations). **(T-2)**.

11.37. (Added) Cold Weather Hangar Door Policy

11.37.1. (Added) Aqueous film forming foam (AFFF) pipes and deluge valves can freeze if hangar doors are left open for a prolonged period. The freezing and thawing action of water in the system can spontaneously trigger the AFFF system which may result in damage to an aircraft. This situation can be avoided if hangar doors are closed whenever possible during periods of extremely cold weather.

11.37.2. (Added) MXG responsibilities:

11.37.2.1. (Added) Each maintenance group shall write a cold weather hangar/PAS door closure procedure that prevents the fire suppression system from freezing. **(T-2)**. This procedure shall include triggers for execution and be approved by the local civil engineer squadron CC and ground safety. **(T-2)**.

11.38. (Added) Deicing/Anti-icing Training. Units that perform deicing/anti-icing operations will track personnel qualified by MDS. **(T-2)**. Personnel qualified can be from any maintenance related career field. In addition to MDS specific technical data, personnel will refer to TO 42C-1-2, *Anti-icing Deicing and Defrosting of Parked Aircraft*, for general procedures, fluid types, and mix ratio.

11.39. (Added) Unit Corrosion Control Program Requirements.

11.39.1. (Added) Provide a facility/facilities for preparation and maintenance painting of assigned aircraft on a year round basis, support equipment (SE), and aircraft small parts, IAW Unified Facilities Criteria (UFC) 4-211-02, *Aircraft Corrosion Control and Paint Facilities* and AFI 32-1024, *Standard Facility Requirements*. **(T-2)**.

11.39.2. (Added) Ensure facility meets local, federal, and host-nation environmental protection requirements in conjunction with current emission standards. **(T-2)**.

11.39.3. (Added) Ensure facilities are available to wash aircraft on a year around basis, approved by base bioenvironmental flight and Civil Engineering. **(T-2)**.

11.39.4. (Added) Owning activities shall wash and clean their aircraft and support equipment. **(T-2)**.

11.39.5. (Added) Only ASM/LOASM personnel shall perform aircraft inspection work cards specified for accomplishment by ASM/LOASM in the -6 TO **(T-2)**. All maintenance personnel, regardless of AFSC, shall examine each part removed and inspect the inside of all exposed areas for corrosion. **(T-2)**. Maintenance personnel shall inspect the electrical connectors of line replaceable units (LRUs), inside equipment drawers, and so forth, for corrosion. **(T-2)**.

11.40. (Added) Mobile Crane Operation Training and Qualification Program.

11.40.1. (Added) Personnel must be minimum SrA or civilian equivalent with minimum 5-skill level. **(T-2)**.

11.40.2. (Added) Trainers will hold the rank of at least SSgt or civilian equivalent and have a minimum one year mobile crane operator experience or attain familiarization training from either vendor or lending unit. **(T-2)**.

11.40.3. (Added) All maintenance personnel must be re-qualified every 24 months, documented in the MIS, and entered on the SCR to be authorized to operate mobile cranes. **(T-2)**.

11.41. (Added) Hydraulic Fluid Purification (HFP):

11.41.1. (Added) AGE personnel will purify all Hydraulic test Stands (HTS) that are designated for use on aircraft requiring purification by aircraft technical orders. Purification will be accomplished IAW prescribed technical procedures for 1 hour after all major hydraulic system maintenance and following phase inspections. . (T-2)

13.4.5. USAFE/A4MA is the CRF POC.

14.2.1. Contract Logistics Support (CLS) Programs. Units under CLS (C-20, C-21, C-37, and C-40 aircraft) are authorized dedicated CORs. CLS is used to supplement organic AF capabilities in such areas as aircraft maintenance, supply spares (through a contractor operated and maintained base supply, or COMBS), and maintenance training systems. CORs serve as the MXG/CC POC for CLS contract issues. Issues that cannot be resolved at base level will be brought to the attention of USAFE/A4MA, contracting officer or designated representative and government program office for resolution. CORs will be assigned to QA. **(T-3)**.

14.2.1.1. (Added) CORs who oversee CLS contracts for training systems may be assigned to the MT. **(T-3)**.

14.2.4.4. Use AETC form 448 to document CARs and see attachment 13 for activity template.

14.2.5. FC may appoint COR and government representatives, as applicable, if required for contracts not managed by the MAJCOM. See AFI 10-220/DCMA 8210.1.

14.2.5.14.1. (Added) The Chief COR or COR supervisor will solicit input from the contracting officer or designated representative when doing an assessment on the CORs performance. **(T-3)**.

14.2.5.16. CORs will be knowledgeable of the tasks they oversee and are duty-position qualified to inspect, monitor, and observe according to the requirements in this instruction and other applicable directives. CORs are not required to be certified on specific tasks unless determined as required by the section they are assigned to. **(T-3)**.

14.2.5.32. (Added) CORs are not exempt from additional duties, but will not be assigned additional duties that interfere with their ability to fully meet requirements of contract surveillance. **(T-3)**.

14.3.1. Potential CORs are selected based on experience in the career field, weapon system experience, and quality force issues. Authorizations will be, as a minimum, 7-level, or civilian equivalent. Potential CORs are nominated through local organization policies. **(T-2)**.

14.3.1.1. (Added) After being appointed and before assuming their duties, CORs will receive an assessment of training needs by the section they are assigned to. The evaluation will include maintenance fundamental refresher training (e.g., forms documentation procedures, MAJCOM, AFI, and TO supplemental policies related to maintenance, review maintenance related AFOSH standards, flight line safety, driving procedures, as applicable to contract surveillance). **(T-2)**.

14.3.3. CORs will be familiar with the safety requirements as it relates to inspecting the task, but are not required to be task certified unless required by the section they are assigned to. **(T-2)**.

14.5.1. For the following technical inspections, use requirements, frequencies and rating criteria as determined in the QASP, performance plan (PPLAN) or surveillance summary developed by the MFT and/or the section initiating/administering the contract. Contracts currently in effect

will continue to be executed using inspection methods in the current PWS until the contract is re-bid/rewritten. **(T-3)**.

14.5.2.1. The contracting officer will determine minimum In-progress (IP) surveillance requirements/frequencies, and rating criteria.

14.5.2.2. The contracting officer will determine minimum Equipment Condition (EC) inspection surveillance requirements/frequencies, and rating criteria.

14.5.2.3. The contracting officer will determine minimum Quality Control (QC) evaluation inspection surveillance requirements/frequencies, and rating criteria.

14.5.4. CORs will determine the scope and applicability of Customer Comment (CC) inspections.

14.5.5. The Chief COR will determine the scope, applicability, and documentation procedures of “as observed” inspections.

15.1.2.1.1. Units will maintain Time Compliance Technical Order (TCTO) folders and monthly/weekly utilization and maintenance schedules

15.1.2.1.2. Units will verify configuration items during ISOs, HSCs, HPOs, CANN, and letter checks. **(T-2)**.

15.1.2.1.3. Units will determine whether to ship removed engines to depot or induct into CRF repair, based on specific MDS and CRF capability.

15.1.2.1.4. Units will determine routing and approval for AF Form 2407.

15.1.4.3. PS&D will provide functional guidance and SAV personnel executing scheduling duties in AGE/Armament/Munitions. PS&D is responsible for notifying the MXG/CC of fleet health and management issues that may jeopardize mission success. **(T-2)**.

15.1.4.4. Ensure personnel performing scheduling functions in sections where 2R1X1 personnel are not assigned either permanently or temporarily (e.g., armament, munitions, AGE) are trained in day-to-day scheduling tasks. Ensure a WJQS for each required area is developed, and ensure training is provided and documented. The PS&D Section Chief will establish training procedures and ensure coordination is accomplished with the maintenance complex. **(T-2)**.

15.1.4.4.1. Units will develop familiarization training for 2R personnel that outlines the weapon system functionality and squadron and back shop responsibilities. Coordinate with MT personnel to provide training that achieves outlined objectives. **(T-2)**.

15.1.5.2.1. Forward copies of all schedules and changes to the USAFE AVDO. **(T-2)**.

15.1.6.4.1. See attachment 8 for MSE procedures. **(T-2)**.

15.2.1.2. Units will automate new AFTO Form 95s and maintain them in the MIS. This approach eliminates duplication and provides a single source repository. If current AFTO Form 95 documents are partially automated, then complete automation is highly encouraged. When the AFTO Forms are completely automated and reconciled for 100% accuracy, destroy the duplicate hard copies. Units that choose to maintain the original hard copies will annotate —History automated as of this date and maintained in the MIS. Additionally, the first entry of the continuation/automated AFTO Form 95 will be —Previous history as of this date maintained in the aircraft jacket file or decentralized file. **(T-2)**.

15.2.1.3. Initiate new historical forms IAW TO 00-20-1 when a system or component is received. **(T-2)**. Retain as listed in para 15.2.1.2.

15.2.2.2.1.2. PS&D will use the DD Form 2861 to cross-reference that the “pulled” 781 series forms are decentralized from PS&D and maintained at the AMU. **(T-2)**.

15.2.2.4. IMDS units only. Automated AFTO Form 95 items will be reconciled to ensure all required items are tracked and loaded with a historical header using IMDS screen 390. **(T-2)**.

15.2.3. The DCC or alternate will transcribe forms IAW TO 00-20-1 and print a new set of automated Aircraft AFTO Form 781-series forms prior to starting the ADR process. ADR procedures will assign responsibilities to ensure discrepancies with a scheduled start date and time greater than 5 days after the date of discovery are deferred, all TCTOs are entered on the AFTO Form 781K IAW TO 00-20-1, aircraft hours and engine times match data in IMDS-CDB, modular engine flying hours and manual cycles are verified with EM section, and entries on the front of the AFTO Form 781K are made IAW TO 00-20-1. **(T-2)**.

15.2.3.1. G081 units: The recommended medium for completion of ADRs on AMC aircraft is use of the command’s automated, online ADR tool. The link for this tool is located under the Plans and Scheduling section of the Global Reach Logistics/A4 Information home page. IMDS units will print an Automated Records Check (Screen 418) or equivalent IMDS screens to perform the ADR. In addition, the following screens will be processed:

#713 - Tracked Engine Inquiry (OEI)

#726 - Shop Equipment Operational Inquiry (SAE)

#810 - Parts Tracked Inquiry (PTI)

#990 - Actual Configuration Tracked Item Inquiry (ICT)

15.2.3.4.3. PS&D will monitor the aircraft fleet’s TCI/SI/TCTO programs weekly and MOC will reconcile uncompleted sorties daily. During the 30 day ADR process assistance will be provided to the DCC or Alternate if discrepancies are noted in which they cannot resolve. PS&D will continue to review automated 781-series forms during pre/post dock inspections, PDM input and prior to aircraft deployments. **(T-2)**.

15.2.3.4.6. (Added) Aircraft Technicians, Section NCOIC and Flight Chiefs will reconcile the automated MIS products with Aircraft AFTO Form 781-series to ensure the forms and MIS match. Take the necessary actions to correct discrepancies, sign off the ADR JCN in the MIS and forward to the Flight Chief for filing. Replace the old ADR with the most current ADR. **(T-2)**.

15.2.4.1.1. (MXG/CC is the waiver authority for pre- and post-dock meeting requirements for inspections with less than 200 hours/200 calendar day cycles.

15.2.4.3.5.10. (Added) PS&D will provide the inspection dock chief with a serial number verification worksheet. **(T-2)**. The worksheet is a tool to verify the serial numbers of installed serially controlled items that are accessible during the inspection.

15.2.4.3.5.10.1. (Added) Units will accomplish part/serial number verification at ISO, HPO, HSC and letter check inspections. **(T-2)**.

15.2.5. The purpose of the post dock meeting is to verify that those maintenance actions listed on the AF Form 2410 and agreed upon at the pre dock meeting, were completed and documented

correctly. If maintenance actions were not completed, an agreed upon plan will be developed to complete these maintenance actions and documented on the AF Form 2410. **(T-2)**.

15.2.5.1.1. Unresolved Aircraft Configuration Management issues/Time Change items with established life limits/TCTO items with unresolved issues will be briefed to maintenance supervision for immediate resolution. **(T-2)**.

15.2.6. PS&D and MMA will develop manual JCN block assignment and procedures.

15.3.2. MXG/CC is responsible for proper ACM and safety of flight. PS&D will notify the MXG/CC of ACM, TCI and safety of flight issues that require immediate resolution. **(T-2)**.

15.3.2.6. (Added) Tracked items that have an established service life limit will be highlighted to the MXG/CD for action if the issue cannot be resolved immediately. (T-2).

15.3.2.7. (Added) IMDS only. The work unit code and standard reporting designator validation report (WUH) will be processed and corrected monthly. Follow procedures in AFCSM 21-571v2, para 2.6.1.

15.3.3.1. Aircrew protection (*Life support*) items not managed as installed on-equipment will be managed by the wing life support function. **(T-2)**.

15.3.3.2.2.2.1. (Added) Determine the QA initial TCTO evaluation date and annotate this information on AF Form 2410. **(T-2)**.

15.3.3.2.2.2.2. (Added) Annotate on AF Form 2410 the prime work center. **(T-2)**.

15.3.3.2.3.1. Units may use digitized TCTO folders.

15.3.3.2.16. Place the TCTO in a workable status as soon as kits/parts/tools are received. The TCTO must be completed before the expiration of the operating time/compliance period/ground date whichever comes first. **(T-2)**.

15.3.4.1.1. Schedulers will monitor -6 and associated technical orders to ensure time change/inspection frequencies align and support the weapon system maintenance concept. **(T-2)**.

15.3.4.2. IMDS units will maintain the TCI and SI matrix using MSAT. **(T-2)**.

15.3.4.2.2. HQ AMC Weapons System Manager will maintain master -6 requirements in G081 in the event the aircraft System Program Manager (SPM) elects not to perform this function. PS&D will load locally tracked items in G081. HQ AMC schedulers have the option to maintain Job Standard Master Listing.

15.3.4.2.4.1. Units have the option to load JSTs with frequencies less than 30 days/50 hours. It may be more efficient to track these repetitive tasks on the AFTO Form 781-series forms and allow the production superintendent to coordinate inspection compliance. Regardless of option, PS&D and production superintendent must agree on the most efficient method to track and complete these repetitive inspections and job data documentation (JDD) is paramount. **(T-2)**.

15.3.4.2.4.3.1. IMDS units will use MSAT during reviews and ensure accurate data in the MIS. **(T-2)**.

15.3.4.3.2.3. (Added) For Aircrew Life Support Equipment (ALSE) items, only items installed in the aircraft and listed in TO 00-20-9 (except for batteries) will be tracked/scheduled in MIS (i.e., parachute components and the survival kit cutter cord are loaded in MIS). If ALSE is installed on aircraft and is considered an end item (e.g. back style parachutes, survival kit, multi-place raft

kits, quick don masks, life preservers, and anti-exposure suits), the item will be loaded against the aircraft in MIS. If the item is a component of a larger item, only the larger item is loaded in MIS, not the components (i.e. life rafts installed inside survival kits which are loaded, will not be loaded independently). Load the earliest due date of the larger item or installed sub-component, as the due date in MIS. **(T-2)**.

15.3.4.3.3. AFE Section and PS&D will ensure all aircraft installed AFE data in the MIS mirrors FERMS or the equivalent approved tracking system data. **(T-2)**.

15.3.4.3.10.1.1. PS&D maintains a copy of all waivers until no longer required. **(T-2)**.

15.3.6.2.2.1. Special IMDS procedures are required to minimize loss of data associated with aircraft transfer/data migration. The TBE process is used for unit-to-unit transfers, NFS3W0 process is used for PDM-to-unit transfers and unique IMDS procedures are required when PDM visits result in a MDS/SRD change. Contact Gunter's Field Service Center (FSC) for current System Area Network (SAN) message/procedures. **(T-2)**.

15.4.1.2.5. Inspections tracked by flight hours must also be loaded in CEMS. **(T-2)**.

15.5.1. Airframe Capability and Scheduling. To ensure accurate projection of operations and maintenance capacity, units will compute airframe capabilities using only the number of Primary Aircraft Inventory (PAI) aircraft; do not include Backup Aircraft Inventory (BAI) or Attrition Reserve aircraft (AR). Operational and training schedules will be based on the capability of PAI aircraft to execute the schedule. The OG/CC and MXG/CC will ensure BAI and AR aircraft are not computed when building the flying program. **(T-2)**. **See attachment 11 for flying scheduling reporting procedures.**

15.5.1.3. NLT 5 duty-days after OSS/OSO receives the "Proposed FHP" message, OSS/OSO will provide PS&D a copy of "Proposed FHP" message and a breakdown of operational requirements to include at a minimum the O&M days, sorties/hours (hourly & Sortie) required (programmed), sorties/hours scheduled (programmed + attrition provided by MMA and based on 4 years of historical data), and the average sorties per O&M day. **(T-2)**.

15.5.2.3. PS&D will refine the initial MMA airframe capability by applying projected maintenance requirements to the historical data. PS&D will provide copies of the capability study to each Operating Squadron (OS) operations scheduling AMU OIC/NCOIC, AMXS/CC/MOO and to MXS/CC/MOO. **(T-2)**.

15.5.2.3.1. NLT 15 duty days after OSS/OSO receives the "Proposed FHP" message, PS&D will provide Proposed FHP maintenance capability projections in a monthly format to OS operations officer, AMU OIC/NCOIC, AMXS/CC/MOO. Projections include "Proposed FHP" operational requirements, an assessment of maintenance's ability to support the monthly contract requirements, and an overall assessment of the unit's maintenance capability to meet the annual flying hour program. **(T-2)**.

15.5.2.4.1. NLT 25 duty days after OSS/OSO receives the "Proposed FHP" message, PS&D will gather the AMXS and OS coordinated responses to the Proposed FHP message and forward them to OSS Current Operations Flight operations scheduling section for consolidation into a comprehensive package that includes a breakdown of the following items by OS/AMU, Utilization (UTE) rates, Hourly UTE (HUTE) rates, and Sortie UTE (SUTE) rates. **(T-2)**.

15.5.2.5.1. (Added) NLT 30 duty days after OSS/OSO receives the “Proposed FHP” message, PS&D and OSS/OSO will co-chair a Proposed FHP meeting with all required agencies. Agencies will include but are not limited to AMXS, MXS, MUNS, MSG (i.e. Fuels) and OS. Capability studies and operational requirements will be discussed and reviewed. Any maintenance, operational, or support shortfall will be noted and briefed to the MXG, OG and MSG CCs. **(T-2)**.

15.5.2.5.2. (Added) PS&D and OSS/OSO will compile the airframe, personnel, and facility capability studies, operational requirements, and any noted shortfall. A package will be prepared and briefed to group commanders (OG/MXG/MSG) prior to Wing/CC final approval. Once approved, the OG and MXG will provide ACC/A3T/A4Q and USAFE/A4MA a coordinated “Proposed FHP” response message. The message will depict the operational requirements by month for the next fiscal year and provide an overall capability statement of the unit’s ability to meet the plan. Maintenance and operational shortfalls will be noted and explained. **(T-2)**.

15.5.2.5.3. (Added) NLT 35 duty days after OSS/OSO receives the “Proposed FHP” message, once compiled, packages will be presented to the MSG, OG and MXG/CCs (or equivalents) before being presented to the WG/CC for final approval. PS&D will review the comprehensive package submitted to OSS Current Operations Flight operations scheduling section and provide feedback to AMU OIC/NCOIC, AMXS/CC/MOO and MXG/CC if required. Final assessments of maintenance capabilities to support the operations "Proposed FHP" projections are then sent to ACC/A3TB/A4Q and USAFE/A4MA. The “Proposed FHP” response message is due to ACC/A3T NLT the “Propose FHP” message suspense date.

15.5.2.5.3.1. (Added) Once COMACC approves a unit’s Proposed FHP response, the ACC Baseline Allocation message will become the contract between ACC and the unit. This message will be forwarded to the unit **NLT 1 Sep** each year and will be the basis for the unit’s annual flying and maintenance planning process. **Note:** Except for emergencies or HHQ tasking at year-end (e.g., hurricane evacuations or air sovereignty scrambles), **UNIT FLYING HOUR PROGRAMS WILL NOT BE OVERFLOWN WITHOUT ACC/A3 APPROVAL**. Unit commanders are not required to "zero out" their annual flying hour program at the end of the fiscal year. The last flying day of the year should be planned and flown as a normal flying day keeping in mind that the program cannot be overflown. **(T-2)**.

15.5.3. PS&D and OSS/OSO lead the development of their wing’s annual plan. Both maintenance and operations are required to refine their requirements and re-evaluate their capability to support the FHP. PS&D will identify all major maintenance impacting airframe availability using MIS products, such as Time Distribution Index (TDI), Planning Requirements (PRA), and Workable TCTO Report background products to determine long-range maintenance requirements. PS&D & MMA will review capability studies for accuracy. OSS/OSO will validate O&M days and their requirements for accuracy. **(T-2)**.

15.5.3.1.1. PS&D and OSS/OSO will ensure the annual planning process is initiated NLT **15 March** and their Final Flying Hour Program (Proposed FHP response) message is submitted to ACC/A3T/A4Q & USAFE/A4MQ NLT the “Propose FHP” message suspense date. **(T-2)**.

15.5.3.2.1. PS&D and MMA build and validate all capability studies which include airframe, personnel, facility and phase/ISO dock projections. AMXS/MXS Flight chiefs will compile personnel data and forward to MMA for inclusion into the personnel capability portion of the study. PS&D will provide all known major maintenance which includes Programmed Depot

Maintenance (PDM), Phase/ISO, Refurbishment, and major modification schedules. Capability shortfalls will be noted and briefed to the MXG/CC. **(T-2)**.

15.5.3.2.2.6. (Added) Exercise schedules (if known). **(T-2)**.

15.5.3.2.2.7. (Added) Safety, training, UTE, family, and all non-O&M days. **(T-2)**.

15.5.3.2.2.8. (Added) O&M days. **(T-2)**.

15.5.3.2.2.9. (Added) Sorties/hours required (programmed). Yearly requirement's broken out by month. **(T-2)**.

15.5.3.2.2.10. (Added) Sorties/hours Scheduled (programmed + attrition). Attrition is based on 4 years of historical data provided by MO/MMA unless operations empirical data exists. Yearly requirement's broken out by month. **(T-2)**.

15.5.3.2.2.11. (Added) Average sorties per O&M day. **(T-2)**.

15.5.3.2.2.12. (Added) Suggested turn pattern. **(T-2)**.

15.5.3.3.1. PS&D will calculate and provide an average aircraft availability per month and projected UTE rate. **(T-2)**.

15.5.3.3.5. MMA will provide updated attrition factors to PS&D and OSS/OSO using a minimum of 4 years of historical local data. If a unit does not have 4 years of historical data to compute attrition, contact ACC/A4QJ for further guidance. **(T-2)**.

15.5.3.3.8. (Added) NLT 15 duty days after OSS/OSO receives the "Proposed FHP" message, MO/PS&D and OSS/OSO will chair an annual planning meeting with all required agencies. Agencies will include but are not limited to AMXS, MXS, MUNS, OS and MSG (i.e., Fuels servicing). Capability studies, operational requirements and planning factors will be reviewed and validated during this meeting. Maintenance and operational shortfalls will be noted and briefed to the MXG/CC and OG/CC. **(T-2)**.

15.5.3.3.9. (Added) NLT 30 duty days after OSS/OSO receives the "Proposed FHP" message, MO/PS&D and OSS/OSO will prepare and brief the wing's annual maintenance and flying hour program to the group commanders (MXG/OG/MSG) prior to Wing/CC approval. Once Wing/CC approved, the OG and MXG will provide ACC/A3T/A4QJ and USAFE/A4MA a coordinated final Flying Hour Program message. The message will depict the operational requirements by month for the next fiscal year and provide an overall capability statement of the unit's ability to meet the plan. **Note:** If maintenance or operational capability does not exist to meet peacetime operational requirements due to split peacetime/AEF operations, or if an operational event impacts a unit's ability to execute, the unit has the option to revise their Flying Hour Program. This can be accomplished when submitting their annual plan or they can reflow sorties/hours quarterly, as required. Changes to the total hours/sorties on the ACC Baseline allocation message require justification by the unit. **(T-2)**.

15.5.3.3.10. (Added) OSS Current Operations Flight presents the AMXS and OS coordinated annual plans to the OSS, MXS, MOS, MXG and OG CCs for coordination prior to final approval from the wing commander. Approved plans are forwarded to the MAJCOM and serve as the annual flying hour program contract. **(T-2)**.

15.5.4.5. The OG/CC and MXG/CC jointly chair a quarterly meeting (calendar quarter, Oct - Dec, Jan - Mar, Apr - Jun, Jul - Sep) NLT the monthly meeting (can be held in conjunction with)

prior to the effective quarter and may be held in conjunction with the weekly scheduling meeting. The intent of the quarterly meeting is to ensure both operations and maintenance are continuing to look past the current month, not to add an additional meeting. A rolling 3-month plan briefed each month meets the intent of the quarterly scheduling process. **(T-2)**.

15.5.4.5.2. When changes to the quarterly plan are required to achieve the unit objectives, make necessary adjustments to the monthly and weekly plans while keeping within unit capabilities

15.5.5.2.1. The sortie/flying hour contract specifies the number of sorties and hours required to be flown. The contract is the final resolved product between operational requirements and maintenance capabilities. The total forecasted attrition factor will be considered and added to the required sorties to ensure fulfillment of the contract. The annual required sorties for the month, plus the historical attrition factor (MXG approved revised attrition is also permitted), is the basis for the development of the monthly flying and maintenance schedules. Attrition sorties are not substitutes for capability shortfalls; they are figured against the contract. The monthly flying schedule will reflect the number of sorties contracted, the number of attrition sorties added, and the number of sorties scheduled for each unit. **Note:** Each unit may hold scheduling meetings at times during the week/month convenient to the organization, as long as the timelines in this instruction are met. **(T-2)**.

15.5.5.2.4. It is not mandatory for the letter "F" (F2, F3, etc...) to be printed on the AF Form 2401 or computer generated form to reflect the number of sorties each aircraft is scheduled to fly. If the unit does not use this option, the schedulers must ensure that prime and spare aircraft are available to support the scheduled requirements. As a minimum, automated forms must reflect all required entries and standardized for each MDS. **(T-2)**.

15.5.5.2.9. Include the following statement in the schedule for units with munitions: "The types and quantities of munitions listed in this schedule, plus previous expenditures, do not exceed AFI 11-212, *Munitions Requirements for Aircrew Training*, authorized allowances."

15.5.5.2.14. (Added) QA scheduled inspections listed by type and quantity unless published separately by QA. **(T-2)**.

15.5.5.2.15. (Added) If known as confirmed requirements, include special activities, UTA weekends and other unit formations. **(T-2)**.

15.5.5.3. The OS operations officers and AMU OIC/NCOIC will review their applicable portion of the monthly and weekly schedule prior to submission to PS&D. To optimize aircraft and munitions support, MXS, AMXS and OS commanders will ensure the number of aircraft committed to the schedule and/or munitions configurations are minimized and standardized. **(T-2)**.

15.5.5.3.1.2. If the take-off and landing times are unknown, block turn patterns are required. **(T-2)**.

15.5.5.3.3. MUN control NCOIC/ Munitions officer tells the OPS officer whether munitions requirements can be met or limitations exist. Make adjustments to the proposed monthly flying and maintenance plan to satisfy maintenance and operational requirements. **(T-2)**.

15.5.5.3.4. All agencies will submit their monthly plan inputs to PS&D before presentation to the WG/CC. When the proposed monthly flying schedule contract is agreed upon and approved by the WG/CC, it is included as a portion of the monthly flying and maintenance schedule. The

monthly flying and maintenance schedule is published/distributed NLT 5 duty days prior to the beginning of the effective month. Automated methods are acceptable. **(T-2)**.

15.5.5.4.2. AMU/AMXS outline projected maintenance capability, and aircraft/equipment availability. MUNS control NCOIC/Munitions officer outlines projected munitions supportability. **(T-2)**.

15.5.6.1. Weekly scheduling meetings will be conducted at the group and wing level as follows:

15.5.6.1.2 (Added) The OG/CC and MXG/CC, or their designated representatives, will chair the group meeting to consolidate and review proposed flying and maintenance plans. **(T-2)**.

15.5.6.1.3. (Added) The WG/CC will chair a weekly scheduling meeting at which the OG and MXG/CCs will present the flying and maintenance plan for approval; the MSG/CC or representative should be afforded an opportunity to attend the meeting for situational awareness. PS&D ensures a completed (paper or electronic) copy is submitted to the WG/CC (or equivalent) at the weekly scheduling meeting. **(T-2)**.

15.5.6.2.12. PS&D will ensure all mission unique requirements are annotated by OS Operations Officers on the weekly and daily flying schedule, for example; increased LOX requirements, secure voice, chaff & flares, FM immunity, extra oxygen bottles, TCAS, aircrew signs & plaques, special air show requirements, unimproved runway preparation, DIP clearance aircraft, etc. **(T-2)**.

15.5.6.3. Dedicated AMU Schedulers will deconflict the flying and maintenance pages with the AF Form 2402, *Weekly Equipment Utilization and Maintenance Schedule*/AF Form 2401, *Equipment Utilization and Maintenance Schedule*, for accuracy prior to submission to PS&D. The published AF Form 2402/2401 will reflect the unit's planned action for each aircraft each day. Maintain AF Forms in accordance with the RDS. **(T-2)**.

15.5.6.3.3. Hours remaining to phase/ISO. **(T-2)**.

15.5.6.3.8.1. (Added) Pen-and-Ink. **The pen-and-ink AF Form 2407 is not intended to be used as a tool to extend the scheduling process by another day.** Pen-and-ink changes made to next week's schedule, submitted to the MOC by 1600 hours Friday prior to the affected week, or at the daily maintenance scheduling/production meeting, whichever occurs first are authorized (exception: NLT 2 hours after the last landing during printed wing night flying weeks). They are non-reportable and become part of the printed weekly flying schedule. An AF Form 2407 (either hard copy or electronic version) is required stating the changes are pen-and-ink. AF Form 2407s that fail to meet these deadlines will not be considered pen-and-ink. **Note:** The intent of the pen-and-ink AF Form 2407 is to correct minor errors and not complete revisions of the previously Wing/CC approved schedule. Approved pen-and ink changes are non-reportable and become part of the printed weekly flying and maintenance schedule. An AF Form 2407 or electronic substitution is required stating the changes are pen-and-ink. **(T-2)**.

15.5.6.3.9. AF Form 2407 Approval Authority. All AF Form 2407 changes that add aircraft and/or sorties or increase the flying window require OG and MXG commander (or group level representative, designated in writing by group commander) approval. All other AF Form 2407 changes will be approved by the affected squadron commander(s) (or designated representative). The MOC will coordinate higher headquarters directed taskings that require immediate execution. **(T-2)**. Electronic coordination is acceptable provided receipt is acknowledged and the sender enters the name of the person notified and the date/time on the AF Form 2407. **Note:**

Pen-and-ink AF Form 2407 also requires OG and MXG approval. The group approved pen-and-ink AF Form 2407 is required because pen-and-ink AF Form 2407 change the schedule/contract signed at the weekly scheduling meeting and becomes the new basis for deviation recording. **(T-2)**.

15.5.6.3.9.2. The agency requesting the change initiates the AF Form 2407 and coordinates it through the affected production superintendent, AMU OIC/NCOIC, AMXS maintenance operations, operations squadron operations officer, operations group, Munitions Control, maintenance group, and wing staff agencies, as applicable (i.e., MOC, PS&D, etc.). Coordinate changes affecting munitions requirements with Munitions Control to ensure proposed munitions changes can be met. The requested changes should be coordinated prior to the daily maintenance production meeting to allow sufficient time to determine supportability of the change. **(T-2)**.

15.5.6.3.9.2.1. (Added) After coordination, a copy of the AF Form 2407 is filed in the MOC. The MOC will ensure MMA receives all AF Form 2407s for deviation accounting. AF Forms 2407 will be disposed of IAW RDS. **(T-2)**.

15.5.6.3.9.2.2. (Added) PS&D will input all pen-and-ink changes in the MIS operational events subsystem. After the Friday daily maintenance production meeting, MOC will input all changes (non-pen-and-ink). Maintenance Debrief will input utilization data for all sorties considered "flown as scheduled" (i.e. FCF/OCF, X/C returns, surge second and subsequent goes). Any AF Form 2407 coordinated changes made after pen-and-inks have been made and posted to the MIS by PS&D will be input by MOC into the MIS. **Note:** Use of the AF Form 2407 does not negate the recording of deviations. **(T-2)**.

15.5.6.7. The weekly schedule will be signed NLT 1500L Friday. The MOC reports flying scheduling deviations. **(T-2)**.

15.5.6.8. PS&D ensures distribution of the schedule to each appropriate activity and workcenter NLT 1600L Friday. **(T-2)**.

15.5.6.9. (Added) Maintenance Scheduling Effectiveness (MSE) Rate. PS&D will develop written procedures for reviewing and recording scheduled maintenance actions daily. See attachment 8 for MSE guidelines and computations.

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

AFI 10-220, *Contractor's Flight and Ground Operations*, 21 Aug 2013
AFI 11-102 ACC SUP, *Flying Hour Program Management*, 07 Jun 2007
AFI 11-253, *Managing Off-Station Purchases of Aviation Fuel and Ground Services*, 19 Aug 2013
AFI 21-105 USAFE SUP, *Fabrication Program*, N/A
AFI 23-101 AMCSUP I., *Air Force Materiel Management*, 09 Dec 2013
AFI 31-118, *Security Forces Standards and Procedures*, 05 Mar 2014
AFI 32-1024, *Standard Facility Requirements*, 14 Jul 2011
AFI 33-324, *The Air Force Information Collections and Reports Management Program*, 06 Mar 2013
AFI 38-402, *Airmen Powered by Innovation*, 05 Feb 2015
AFI 65-103, *Temporary Duty Orders*, 05 Aug 2005
AFI 91-112, *Safety Rules for US/NATO Strike Fighters*, 01 Apr 2015
AFI AMCI 10-202, Vol 4, *Expeditionary Air Mobility Support Operation*, 02 Dec 2009
TO 33D4-6-645-1, *Enclosed Noise Suppressor System, Aircraft/Engine (Hush House)*, 21 Nov 14
TO 42B6-1-1, *Quality Control Aviators Breathing Oxygen and Aviators Gaseous Breathing Oxygen*, 6 Mar 2012
TO 42C-1-2, *Anti-icing Deicing and Defrosting of Parked Aircraft*, 19 May 2014
DoD 6055.9-STD, *DoD Ammunitions and Explosives Safety Standards*, 5 Oct 2004

Adopted Forms

AETC Form 448, *Corrective Action Request (CAR)*
AF Form 2401, *Equipment Utilization and Maintenance Schedule*
AF Form 2402, *Weekly Equipment Utilization and Maintenance Schedule*
AF Form 2403, *Weekly Aircraft Utilization/Maintenance Schedule*
AF Form 2407, *Weekly/Daily Flying Schedule Coordination*
AF Form 2408, *Generation Maintenance Plan*
AF Form 2409, *Generation Sequence Action Schedule*
AF Form 2410, *Inspection/TCTO Planning Checklist*
AF Form 2430, *Specialist Dispatch Control Log*
AF Form 847, *Recommendation for Change of Publication*
AFTO 781, *Arms Aircrew/Mission Flight Data Document*
AFTO Form 103, *Aircraft/Missile Condition Data*
AFTO Form 22, *Technical Manual (TM) Change Recommendation and Reply*
AFTO Form 350, *Reparable Item Tag*
AFTO Form 95, *Significant Historical Data*
AMC Form 170, *Flying Crew Chief Mission Report*
CAF Form 140, *CTK Inventory and Control Log*
CAF Form 145, *Lost Tool/Object Report*
DD Form 2757, *Welding Examination Record*
DD Form 2026, *Oil Analysis Request*
DD Form 2861, *Cross-Reference*

Attachment 7 (Added)

FLYING SCHEDULING EFFECTIVENESS

A7.1. Purpose. This chapter defines flying schedule deviations and provides formulas for computing FSE. FSE is a tool to identify those processes within the wing's control that can be improved to help drive down turbulence for both the operator and maintainer.

A7.1.1. A cornerstone of successful flying scheduling and execution is an understanding of how the schedule is executed versus how it was planned to be executed. These differences in scheduled versus actual events are only recorded in the execution phase of the scheduling process and are called deviations. Deviation data must be recorded so that follow-up analysis can identify the appropriate corrective actions if any are needed. Without deviation data, this analysis is impossible. Deviation data recording and analysis is the beginning of the process that will in the end, improve unit's flying operations. The unit is responsible for documenting deviations to the weekly flying and maintenance schedule and determining the cause for each deviation. Deviations must be coordinated with the appropriate squadron/AMU before being assigned to a specific category. Schedule deviations that result from a sequence of events will be assigned a primary cause. A determination of the primary cause will be made by the parties involved to arrive at a unit position.

A7.1.1.1. The OS, AMU OIC/AMXS and MO operations officers or enlisted equivalents, will monitor deviations to ensure they meet the criteria in this publication. **(T-2)**. When conflicts arise, leadership of involved units will resolve them at the lowest level. All deviations will be recorded as described in this publication.

A7.1.2. Flying Scheduling Effectiveness (FSE). This leading indicator is a measure of how well the unit planned and executed the weekly flying schedule. The flying scheduled developed by tail number is the baseline upon which the FSE is derived by comparing each day's deviations. Deviations that decrease the FSE from 100% include: Scheduled sorties not flown because of maintenance, supply, operations; adds, deletes, and ground aborts; scheduled sorties that take-off more than 30 minutes prior to scheduled take-off; scheduled sorties that take-off more than 15 minutes after their scheduled take-off time. Disruptions to the flying schedule can cause turmoil on the flightline, send a ripple effect throughout other agencies, and adversely impact scheduled maintenance actions.

A7.1.3. Standards and goals assist commanders in assessing the effectiveness of unit performance. Overall FSE rate is measured using recorded deviation data as outlined in this attachment. Operations and Maintenance (O&M) FSE rate includes deviations only in the maintenance and operations categories. **(T-2)**.

A7.2. Requirements. Flying scheduling effectiveness computation and deviation recording are required for assigned CC coded aircraft. Reporting procedures are contained in this attachment.

A7.3. Flying Schedule Deviations.

A7.3.1. Schedule deviations apply to the printed weekly flying and maintenance schedule, even though a coordinated change is accomplished using an AF Form 2407. When a unit coordinates a change to the printed weekly flying schedule, using an AF Form 2407, the unit is informing everyone of the changed information and deviations will be recorded as appropriate. **Multiple deviations against a single line entry will not count towards FSE except for (a)**

additions that air or ground abort, (b) additions that cancel, (c) added aircraft/sorties that take-off late, and (d) late take-offs that air abort.

A7.3.1.1. The AFTO Form 781, *ARMS Aircrew/Mission Flight Data Document*, is the official source document for take-off and landing data. **(T-2)**

A7.3.1.2. For all deviations, the person recording the deviations in IMDS will provide a detailed explanation in the remarks section and a Job Control Number/Event ID in IMDS (screen 350) or MIS for all maintenance CX, GAA, GAB, GAC, AA, AI, and FE. Flying schedule deviations fall into one of the following categories:

A7.3.2. Ground Deviations. Ground deviations are events occurring before aircraft take-off. All ground deviations are recorded in IMDS and used in flying scheduling effectiveness calculations unless otherwise noted. Specific ground deviations are:

A7.3.2.1. Ground Abort (GA). An aircraft that cannot take off due to maintenance. A third alpha character is added to further define the deviation:

A7.3.2.1.1. (GAA). Ground abort, before engine start, maintenance.

A7.3.2.1.2. (GAB). Ground abort, after engine start, before taxi, maintenance.

A7.3.2.1.3. (GAC). Ground abort, after taxi, maintenance.

A7.3.2.2. Addition (AD). A sortie or aircraft added to the schedule not previously printed on the weekly schedule will be recorded against the agency (OP, MX, HQ) requesting the additional sortie or aircraft. Sorties added to the schedule will be used in Total Sorties Scheduled for Flying Scheduling Effectiveness computation. Aircraft added to the schedule will not be used as a part of the Total Sorties Scheduled for Flying Scheduling Effectiveness computation; however, aircraft adds (i.e. added spares) will be captured in the FSE Calculated-Deviations computation. **Note:** All additions will be coordinated using the AF Form 2407 and approved IAW Chapter 15.

A7.3.2.3. Functional Check Flights (FCF) and Operational Check Flights (OCF) whose primary purpose is to perform maintenance checks are not addition deviations but will be coordinated using AF Form 2407. **(T-2)**. FCF/OCF sorties and sorties originating off-station without home-unit support will be considered “flown as scheduled” without recording deviations. FCF “chase” aircraft, when accompanying FCF/OCF training or checkout sortie for single seat MDS will be considered “flown as scheduled” without recording deviations. The FCF “chase” is for FCF qualified operator to conduct and/or evaluate training/checkout only.

A7.3.2.4. Cancellation (CX). An aircraft or sortie removed from the printed schedule for any reason prior to crew show. **For hard line sorties (sorties supporting other defense customers), cancellations occur when it is determined the originally scheduled mission cannot be met.** For training sorties, if the sortie can launch and recover during the squadron’s flying window and perform its original mission, a cancellation is not recorded. If any sortie does not launch within the late take-off criteria, a late take-off is recorded.

A7.3.2.5. Early Take-off (ET). An early take-off is a scheduled sortie launching more than 30 minutes prior to the published take-off time. **EXCEPTION:** Do not record early take-off deviations for hot pit turn sorties. **(T-2)**.

A7.3.2.6. Late Take-off (LT). A late take-off occurs when a scheduled sortie becomes airborne more than 15 minutes after the scheduled take-off time. **(T-2)**. If the printed tail number is a ground abort and is replaced with a spare that takes off late, only the late take-off is computed in FSE. Another example is if an aircraft landed late, after the published landing time, and subsequently takes off late due to insufficient time to turn the aircraft, the late take-off deviation is recorded to the original cause for the late landing, such as, operations. Commanders must consider the impact when a sortie takes off late and the aircraft is scheduled to turn to another sortie that day. It may be best to shorten the sortie duration after a late take-off and land at the scheduled landing time, rather than fly the scheduled duration, due to a higher priority mission later in the day.

A7.3.2.7. Spare (SP). A spare is a designated aircraft on the printed schedule to be used in case a scheduled primary aircraft cannot fly its scheduled sortie. Spare aircraft can also include aircraft that are scheduled to fly in sorties later in the day, have aborted from an earlier sortie, have flown earlier or released after FCF/OCF. Do not count printed spares flown in scheduled lines as deviations when computing FSE.

A7.3.2.8 Tail Number Swap (TS). Tail swaps are changes to the printed flying schedule involving aircraft tail numbers printed on that day's schedule. Tail swaps may be made up to crew show time. Tail swaps made after crew show are recorded as spare. The MOC must be notified of all tail swaps and record all tail swaps in IMDS. **(T-2)**. Do not count Tail Number Swaps as deviations when computing FSE. Below are specific examples of tail swaps:

A7.3.2.8.1. Changing aircraft in printed line numbers with printed spare aircraft.

A7.3.2.8.2. Changing aircraft in printed line numbers to different printed line numbers.

A7.3.2.8.3. Changing aircraft in printed line numbers to any previously flown aircraft. For example, tail swaps are allowed for aircraft after release from OCF/FCF or XC return aircraft.

A7.3.3. Air Deviations. Air deviations are events occurring after take-off. They are recorded in IMDS but are not included in FSE calculations. **(T-2)**. Ground deviations take precedence over air deviations. Air deviations fall into the following categories:

A7.3.3.1. Air Abort (AA). An air abort is an aircraft/sortie that cannot complete its mission for any reason. Air aborts are considered a sortie flown against the flying hour program when reporting total sorties flown, but may not be considered a successful sortie based on mission effectiveness by operations to meet RAP/training/contingency requirements. Air aborts will be coded to the agency or condition that caused the aborted mission. **(T-2)**.

Note: Effective mission decisions will be made by operations; however, a non-effective mission decision by operations does not necessarily mean an air abort occurred as defined in ACCI 21-118. For example, if one planned mission task out of a planned five tasks is not completed or operations flies an alternate mission (adversary, drone, etc.) and does not return the aircraft immediately to maintenance, the sortie should not be coded as an air abort if operations later determines, based on the original mission profile, the sortie was non-effective. The Air Abort rate is a maintenance indicator and as a measure of re-work (sorties reflown).

A7.3.3.2. Air Abort, IFE (AI). An air aborted aircraft/sortie with a situation resulting in an in-flight emergency declared by the aircrew.

A7.3.3.3. Early Landing (EL). An early landing is an aircraft/sortie landing more than 30 minutes before the scheduled landing time. Early Landing deviations are not used when computing FSE.

A7.3.3.4. IFE (FE). An aircraft/sortie with a situation resulting in an in-flight emergency declared by the aircrew after the mission is accomplished.

A7.3.3.5. Late Landing (LL). A late landing is an aircraft/sortie landing more than 15 minutes after the scheduled landing time. If the sortie originated on time, record any subsequent late take-off or cancellation against the agency that caused the late landing. If the extended sortie did not originate on time, record any subsequent sortie deviation against the agency that caused the original delay. Late landings are not included in FSE calculations.

A7.3.4. Ground Aborts. A ground abort by itself is not a deviation from the flying schedule, but can cause a deviation such as lost sortie or late take-off. A ground abort is an event after crew show time preventing a “crew ready” aircraft from becoming airborne. Ground aborts will be recorded to the responsible agency or condition that caused the aircraft to abort. Ground aborts are categorized as GAA, GAB, GAC, operations, HHQ, weather, sympathy, other, etc. For maintenance ground aborts do not use cause code MTx, only use GAA, GAB, or GAC. (**T-2**). For example, if an aircraft ground aborts and the sortie is not replaced by a spare, the lost sortie is a deviation towards FSE. Ground aborts on FCFs or OCFs will be recorded in IMDS, but not used when computing FSE.

A7.3.4.1. If a ground aborted aircraft is replaced by a spare, and the spare can meet the mission requirements, the original aircraft will be coded as a **“spare ground abort.”** **Note:** This is not used in computing FSE.

A7.3.4.2. If the original aborted aircraft is launched on the original scheduled mission, but exceeds the 15-minute late take-off criteria, the sortie will be recorded as a late take-off.

A7.3.4.3. If the aircraft lands, takes fuel via the hot pits, incurs an NMC condition after completion of hot pit refueling (receptacle disconnected) and can no longer continue, a ground abort is recorded.

A7.3.4.4. If an aircraft ground aborts and is replaced by a spare and the spare ground aborts causing the sortie not to be flown, both ground aborts will be counted in the overall ground abort rate, the lost sortie will be considered cancelled and included as the deviation in FSE. The first ground abort would not be used in computing FSE.

Table A7.1. Common Flying Scheduling Effectiveness Deviation Determination Matrix.

Event	Is the deviation		Remarks
	Recorded in MIS?	Calculated in FSE?	
Pen-and-Ink changes to the schedule are made on an AF Form 2407 (IAW Chapter 15)	No	No	Pen-and-Ink changes are not deviations and are considered part of the printed schedule. See Chapter 15

Take-off or landing time is changed after approved Pen-and-Ink submissions via AF Form 2407	Yes	Yes	See paragraphs Chapter 15 Calculation in FSE is determined by late and early criteria
Aircraft configuration is changed after approved Pen-and-Ink submissions via AF Form 2407	No	No	These changes will be tracked locally to prevent reoccurrence and get a true picture of the total scheduling turmoil.
A sortie is added to the flying schedule (excluding OCFs/FCFs, XC return)	Yes	Yes	
A sortie is added for an OCF/FCF/OCF/FCF "Chase"	No	No	These are considered flown as scheduled.
A sortie is canceled	Yes	Yes	Once the decision is made to cancel the sortie, it is a cancel. If a decision is made after the cancel to go ahead and fly the sortie, it becomes an added line.
A sortie is determined to be non-effective	No	No	Not a deviation. The determination is made by operations and has no bearing on FSE.
A take-off is determined to be late	Yes	Yes	
A take-off is determined to be early	Yes	Yes	
A landing is determined to be early or late	Yes	No	A late landing may result in a late take-off on a subsequent sortie.
During a surge, more sorties are flown than were printed and the statement "Sortie Surge" is NOT printed in the remarks section of the affected day's flying schedule	Yes	Yes	Sorties printed in the weekly schedule will be flown as printed. Additional sorties not printed will be considered added lines.

During a surge, more sorties are flown than were printed and the weekly schedule contains "Sortie Surge" in the remarks section of the affected day	No	No	During planned and printed surges and combat sortie generations, additional lines are considered flown as scheduled.
During a surge, an aircraft turn sortie takes off early or late	No	No	Units should track late take-offs of turn sorties locally during surges to prevent reoccurrence. Late take-offs are recorded for surge first go sorties.
Maintenance is performed during a stop in a continuation sortie and the mission continues	Yes	Yes	An "add" is recorded for the subsequent sortie. Be sure the added line is designated as a continuation sortie to prevent further deviations for other scheduled stops.
A sortie is added to the schedule for weather attrition	Yes	No	
A sortie is canceled at any time due to weather	Yes	Yes	Prior to crew show it is a cancel, after crew show, it is a weather abort.
A spare aircraft printed on the flying schedule is used in a printed line.	Yes	No	
An aircraft in the printed schedule is swapped with an aircraft in another printed line	Yes	No	
An aircraft not printed in the flying schedule is used in a printed line. (excluding aircraft already flown that day such as OCF/FCF, X-Country returns)	Yes	Yes	One deviation is recorded for the added aircraft. The result is the same as adding an aircraft as a spare, then tail swapping it into a printed line.

An aircraft not on the printed flying schedule is added as a spare.	No	Yes	Counts as a FSE deviation even if the aircraft does not fly. This has to be manually done by MMA because there is no required IMDS/MIS transaction that captures this.
An aircraft not printed in the flying schedule that has flown that day is flown/used in a printed line	Yes	No	Examples include previously flown FCF/OCF aircraft as well as cross country returns.
A ground abort is replaced with a another aircraft/spare on the printed schedule	Yes	No	Both the ground abort and spare action will be recorded in IMDS/MIS. If the replacement aircraft takes-off on time, no deviation is recorded.
A printed aircraft ground aborts and is replaced with an aircraft NOT on the printed schedule and the second aircraft also ground aborts and the original aircraft is fixed, takes off late, and flies the sortie.	Yes	Yes	The original aircraft is recorded as a ground abort and late take-off. The second aircraft is recorded as an “add” and a ground abort. Ground aborts in themselves are not deviations calculated in the FSE rate, but are calculated in the ground abort rate.

A7.3.5. Deviation Causes. Deviations will be assigned a primary cause. Deviations will be assigned one of the following causes:

A7.3.5.1. Maintenance (MT_). Deviations resulting from aircraft discrepancies, unscheduled maintenance, or for actions taken for maintenance consideration.

A7.3.5.2. Operations (OP_). Deviations resulting from operations/aircrew actions, mission changes causing an early/late take-off, or cancellation including substitution/aircrew illness (including short notice aircrew physical/mental disqualification), and over-stressing the aircraft. OP_ are also deviations resulting from unit controlled operations factors including those caused by mission/load planning, life support, intelligence, base operations, range scheduling, and passengers.

A7.3.5.3. Supply (SU_). Deviations resulting from a Partially Mission Capable Supply or Not Mission Capable Supply condition or for late Supply or POL delivery. See AFI 23-101, *Air Force Materiel Management*.

A7.3.5.4. Higher Headquarters (HHQ). Deviations resulting from a higher headquarters tasking including closing of low level routes/ranges or external customer driven mission change. When an aircraft that was scheduled for a higher headquarters directed alert or off-base mission is replaced by a spare refer to this attachment for unit options.

A7.3.5.5. Weather (WX). Deviations resulting from weather conditions such as sorties canceled because of severe weather conditions. For example, if an aircraft taxied to the end of runway and the wing commander cancels all flying due to weather, the deviation is a weather abort. Sorties/Aircraft cancelled prior to crew show are weather cancels.

A7.3.5.6. Sympathy (SY). Deviations occurring when a flight of two or more aircraft, under the command of a flight leader or instructor pilot are canceled, aborted, or late due to a cancellation, abort, or delay of one of the aircraft in the flight or a supporting flight. Flights engaged in Dissimilar Air Combat Tactics training that are delayed by the other flight will record the delay as sympathy. Sorties, which are to replace sympathy aborts or cancellations on the same day, will be recorded as sympathy additions. Sorties lost caused by the aircraft's scheduled mated tanker/receiver/mission event will be recorded as sympathy. Examples of mission events are: loss of release times, tanker support, Minimum Interval Take-Off causing take-off delay or cancellation, deviations caused by another unit's or command's support should be coded as SY deviations.

Note: Deviations caused by aircraft/missions earlier scheduled lines will be assigned to the cause of the earlier deviation, not SY.

A7.3.5.7. Air Traffic Control (AT). Deviations resulting from air traffic control problems (for example, flight clearance delays, tower communication failure, conflicting air traffic, runway change, or runway closure).

A7.3.5.8. Other (OT). Deviations resulting from unusual circumstances not covered by other causes listed. OT may include:

A7.3.5.8.1. Malfunctions, failures, or necessary adjustments to equipment undergoing tests or evaluations associated with Operational Testing and Evaluation (OT&E), Development Testing and Evaluation (DT&E), or Initial Operational Testing and Evaluation (IOT&E).

A7.3.5.8.2. Unusual circumstances such as bird strikes, damage during air refueling, and unscheduled alert swap out.

A7.3.5.8.3. Equipment, non-USAFE. Deviations caused by National Airborne Operations Center or Air Intelligence Agency or Air Force Material Command equipment, and other non-USAFE support and equipment.

A7.3.5.8.4. Utilization Day (UTE). Commander's authorized management deletions IAW paragraph A7.3.6.3.

A7.3.5.8.5. Exercise, Higher Headquarters (XEH). Deviations resulting from higher headquarters directed exercises, including alarm/force protection conditions.

A7.3.5.8.6. Exercise, Local (XEL). Deviations resulting from wing/unit directed exercises, including alarm/force protection conditions.

A7.3.6 Scheduling Exceptions:

A7.3.6.1. Limited Number of Possessed Aircraft. AMUs with 11 or fewer possessed aircraft of a particular MDS, or 50% of their possessed aircraft deployed, are authorized to schedule tail numbers daily. Units may consider alert/IR aircraft and aircraft in possession code PJ or PR as non-possessed when applying the 11 or less rules. Units will print aircraft tail numbers in the weekly schedule. Aircraft tail numbers may be changed at the daily maintenance production meeting using AF Form 2407 without recording deviations (sorties Added or canceled are chargeable). Immediately following the daily maintenance production meeting, the selected aircraft tail numbers for the next day's flying schedule will be entered in IMDS/MIS. Once tail numbers are selected at the daily maintenance production meeting, normal deviations will be recorded. Although aircraft tail numbers may be changed at the daily meeting, maintenance and flying scheduling effectiveness is measured against the printed weekly schedule. Aircraft tail number changes will be chargeable against FSE after tail numbers are confirmed during the daily maintenance production meeting. **(T-2).**

Note: No additional sorties may be added under this scheduling option without addition deviation rules being applied as applicable in this attachment. **(T-2).**

A7.3.6.2. Adverse Weather. Units may add sorties to the flying schedule to make up for weather losses. Sorties will only be added to the schedule when the planned weather attrition for the month, prorated daily, has been exceeded for that month. **(T-2).** The number of sorties added will not exceed the difference between the planned weather attrition and actual weather losses. Sorties added for weather that do not exceed prorated weather attrition, are not included in OP-MT-FSE-Rate. **(EXAMPLE:** Planned weather attrition for the month equals 30 sorties. On the 10th O&M day of the month (of 20) a unit's weather losses are already 30 sorties. The unit may add 15 sorties (weather "adds"). The maintenance schedule and the ability of maintenance to support the additional requirements must be carefully considered before adding sorties. Under no circumstances will the number of sorties added for weather exceed the difference between actual weather losses and the prorated expected weather losses for the month. (See paragraph A12.3 for example of computing weather attrition for the flying schedule).

A7.3.6.3. Achievement of Utilization (UTE) Rate. Utilization management is accomplished throughout the month. Attrition should be closely monitored and a determination to adjust the number of sorties required should be made before each weekly schedule is developed. This practice ensures an even sortie flow, eliminates excessive maintenance actions and limits the number of sorties canceled. The OG/CC is responsible for the flying program and, in coordination with the MXG/CC, can add or cancel sorties anytime during the month. However, flying scheduling effectiveness will be recorded when changing the weekly schedule. The OG/CC, in coordination with MXG/CC and MSG/CC, is encouraged to modify or cancel all or part of the schedule when they are reasonably assured the UTE rate goal for the month will be met. Sorties may be cancelled for UTE management during the last five O&M days of the month and will be recorded as "UTE." Sorties cancelled for UTE are not included in FSE. See AFI 11-102 ACCSUP for UTE rate development policy.

A7.3.6.4. Year End Closeout. During the last 15 O&M days of the fiscal year, units are permitted to selectively add/cancel scheduled sorties to manage the end-of-year flying hour closeout. These additions/cancellations will be recorded as "UTE." This provision is intended to help units gradually close out end-of-year flying without creating hangar queen aircraft and unintentionally exceeding the UTE rate. Sorties cancelled for UTE are not included in FSE. However, sorties requiring munitions support should be evenly distributed throughout the fiscal

year to preclude a high demand for munitions support during the month of September. IAW AFI 21-201, *Munitions Management*, semi-annual inventories must be started and finished in the months of March and September.

A7.3.7. Combat Sortie Generation. Combat sortie generations are conducted to exercise the wing's ability to meet to the unit's combat sortie generation tasking under current war plans and contingency operations.

A7.3.7.1. For scheduled combat sortie generations, publish the weekly flying schedule as a normal schedule. On the days the unit plans to exercise annotate scheduled exercise on the flying schedule and AF Form 2402, AF Form 2403 or electronic version. If an unannounced exercise is initiated, the remainder of the printed weekly schedule may be canceled and may be deleted from IMDS/MIS by the AMU PS&D.

A7.3.7.2. Combat sortie generation will usually include operations using Air Tasking Orders.

A7.3.7.3. When a scramble launch scenario is used, a launch "window" will be established for each line number or block of line numbers. Normal deviations will be assessed against all sorties.

A7.3.7.4. Sorties lost due to required scenario responses such as chemical warfare condition black, airfield attacks, etc., will be recorded as "XEH or XEL."

A7.3.7.5. If more sorties are flown than line numbers printed, those sorties will be considered flown as scheduled.

A7.3.7.6. Once the objectives established by higher headquarters or the commander have been met, the remainder of that day's schedule may be canceled/deleted from MIS by the PS&D.

A7.3.7.7. At the termination of the combat sortie generation, the unit's originally printed weekly flying schedule may be revised, canceled, or replaced with a new weekly schedule without recording deviations. If revised or replaced, the flying schedule must be coordinated before resuming normal operations. Normal deviation reporting procedures will apply once finalized.

A7.3.8. Air Tasking Order. The Air Tasking Order (ATO) can contain mission numbers, on-status time/time on target and configurations. A daily flying schedule, including aircraft tail numbers for the first lines and spares, will be finalized and confirmed to operations and the maintenance operations center not later than 2 hours prior to the first on-status/take-off time. The new published schedule derived from the ATO, is applicable to all affected organizations and no AF Form 2407 is required to implement the new schedule. All changes after the new schedule has been published, up to the first unit crew show time, will be documented and coordinated on an AF Form 2407. Unlike a planned sortie surge, early and late take-offs are recorded on second and subsequent sorties, unless an ops change is made to the ATO. Normal deviations will be recorded against all sorties using the new published schedule derived from the ATO. **(T-2)**.

Note: All sorties (to include exercise ATOs published via SIPR net) launched under "Classified ATOs" will be considered flown as scheduled. Classified ATO lines that are missed will be recorded as cancels in the MIS. Cancellations will be loaded into the MIS once the sortie is declared cancelled regardless of actual scheduled take-off time and ground aborts will be recorded in MIS.

A7.3.8.1. Alert Sorties. Sorties flown from alert because of a higher headquarters exercise, active air or practice scramble, or committed to fly from alert on the printed weekly schedule will

be considered sorties flown as scheduled. Ground aborts will be recorded in MIS however no deviation is recorded against FSE, but the ground abort is recorded in MIS.

A7.3.9. Unscheduled Tasking. When a unit is tasked with an unscheduled higher headquarters tasking or self-initiated tasking (mobility exercises or weather evacuations), or other services tasking which significantly impacts the printed weekly flying schedule, the printed schedule may be revised or deleted from IMDS/MIS by PS&D and replaced with a new weekly schedule without recording deviations. For weather evacuations, the schedule will be cancelled in IMDS/MIS, not deleted, so the data is available for historical attrition.

A7.3.9.1. If the schedule is revised or canceled and reprinted; the following procedures will be used:

A7.3.9.1.1. Normal deviation reporting procedures will be followed once the revised/reprinted schedule has been finalized. The revised schedule will be finalized a minimum of 2 hours before the first scheduled launch.

A7.3.9.1.2. Once the tasking terminates, the original schedule may be used or it may be revised for the tasking period, as required. If the schedule is revised, the coordinated schedule must be completed prior to resuming normal operations. Normal deviation reporting is used once the revised or reprinted schedule is finalized.

A7.3.9.1.3. Normal deviation reporting procedures will be followed after a take-off time is established to a tasking by higher headquarters or other services.

A7.3.9.1.4. If the unscheduled tasking has an adverse impact on the monthly UTE rate goal, the commander has the option to adjust the monthly sortie UTE rate goal.

A7.3.10. Test and Evaluation. Wings responsible for the scheduling of OT&E, DT&E, or IOT&E aircraft are authorized to deviate from the published schedule for aircraft, which are engaged in these programs without incurring a deviation. They may adjust, formalize the test requirements, and select aircraft tail numbers up to 12 hours before the first scheduled OT&E/DT&E/IOT&E launch of the day. Deviations will be recorded based on the adjusted daily test schedule and as prescribed in this publication. **(T-2)**.

A7.3.11. Scheduling Options to Maximize Sortie Production.

A7.3.11.1. Planned Sortie Surge. Units may plan to produce sorties at a higher than normal rate. A unit may also use a planned sortie surge when the rest of the unit is deployed to a different location. A planned sortie surge is not considered a combat sortie generation or an unscheduled tasking. It should be conducted in a manner that takes full advantage of training opportunities inherent in a period of increased operations and maintenance activity. The number of sorties will be determined by training objectives and established by the OS and AMXS commanders. Printed sortie surge rates will exceed the daily sortie rate (average contracted sortie per O&M day based on the applicable monthly sortie/flying hour contract) of the unit by at least 50 percent, but not less than the contract required sorties scheduled on the monthly contract/plan. For example, if a unit normally flies 22 sorties in a day, to qualify for a surge, that same unit would schedule at least 33 sorties for the surge day. The statement "Sortie Surge" must be printed in the remarks section of the affected day's flying schedule to add sorties without incurring deviations. This option is for surge operations only; units will NOT use this option solely to provide take-off and land flexibility. **(T-2)**.

A7.3.11.2. Surge scheduling scenarios should task maintenance and flying organizations realistically. For example, flat lining a surge is often not a feasible option. For example, scheduling a 12-ship to reach 60 sorties by turning the same 12 aircraft to fly 5 goes (12- ship turned 5 times) is often an unfeasible plan. Units should plan to get the maximum number of sorties possible from each aircraft committed to the schedule. **(T-2)**.

A7.3.11.2.1. Units should be cognizant of historical break rates and spare constraints when scheduling surges. Spares are quickly used up during surges and once spares are exhausted the capability to meet surge goals is severely limited. **(T-2)**.

A7.3.11.3. Extreme care must be exercised to avoid creating a backlog of unscheduled maintenance actions when scheduling sortie surges. **(T-2)**.

A7.3.11.4. Aircraft tail numbers, take-off times, line numbers, and configurations will be printed in the weekly schedule for each aircraft's first sorties of each day. Include the statement "sortie surge" in the remarks section for each affected day. **(T-2)**.

A7.3.11.5. Only line numbers are required on the weekly schedule for subsequent sorties (i.e., the total number of sorties/line numbers the unit intends to fly). Other data such as take-off times, configurations, and missions may be printed as required by the unit. To the greatest extent possible, the day prior, units should try to confirm subsequent sorties NLT the daily maintenance production meeting. **(T-2)**.

A7.3.11.5.1. However, early and late take-offs are not recorded on second and subsequent sorties. For all other deviations, normal deviation reporting applies.

A7.3.11.6. If more sorties are flown than what was intended (i.e., line numbers printed), these sorties will be considered flown as scheduled. All line numbers printed in the weekly schedule must be flown or normal deviation will be applied.

A7.3.12. Continuation Sortie. A continuation sortie is a sortie containing scheduled operations stops. Maintenance provides support limited to chocking the aircraft and fire/safety observer and the aircraft engines/Auxiliary Power Unit (APU) must remain running. **EXCEPTION:** C-130 aircraft, engines may be shut down to upload/download aircrew. Continuation sorties are designed to accommodate training events, optimize aircraft use and minimize maintenance manpower expenditure. Continuation sorties will be clearly identified in the published weekly flying schedule. This scheduling option is intended to allow the exchange of aircrew/passengers with minimal maintenance participation and aircraft possession does not return to maintenance. The initial crew on the sortie will brief the follow-on crew at the aircraft. Units may add continuation sorties onto scheduled sorties to make up for sorties lost earlier in the same week without recording deviations. Do not include these added continuation sorties in FSE unless there were no lost sorties earlier in the week. If no sorties were lost in the same week, the added continuation sortie will be an "add" deviation in FSE. **(T-2)**. **Note:** No maintenance or servicing is performed during the stop. Returning the aircraft to maintenance terminates the continuation sortie. This scheduling option is not applicable to fighter and attack aircraft.

A7.3.13. Engine Running Crew Change (ERCC). The ERCC sortie is used to optimize aircraft use. It involves turnaround of an aircraft incorporating partial or full crew change between two separate sorties. The difference between ERCC and continuation sorties is minor maintenance and servicing can be performed between sorties and since each is a separate sortie, deviations apply to each sortie. An aircraft is scheduled to fly an ERCC sortie in the published weekly

schedule, upon landing, crew members are changed at the aircraft with at least one engine running. Minimum ground time should be scheduled between sorties. The crew of the first sortie must brief the crew of the second sortie at the aircraft. Other aircraft on the published flying schedule or previously flown aircraft not on the flying schedule (OCF, FCF, adds) can be tail swapped into the second sortie. For example, if two aircraft are scheduled to land at approximately the same time, either aircraft could ERCC to the later sortie. **EXCEPTION:** C-130 aircraft, engines may be shut down to upload/download aircrew. **Note:** This scheduling option is not applicable to fighter and attack aircraft.

A7.3.14. Flying Scheduling Effectiveness Computations. Compute monthly flying scheduling effectiveness rate by aircraft mission and design using the formulas below:

A7.3.14.1. Total Sorties Scheduled = Total sorties flown plus (+) cancellations minus (-) Additions (added sorties only).

A7.3.14.2. Adjusted-Sorties-Scheduled = Sum of total sorties scheduled (home base, off station or deployed) minus (-) UTE cancellations.

A7.3.14.3. Calculated-Deviations = Sum of all deviations (including added aircraft) minus (-) air deviations, aircraft tail swaps, aircraft printed spare actions, ground aborted sorties flown by spare aircraft (on-time), and UTE cancellations/additions.

A7.3.14.4. OP/MT-Deviations = Sum of all Calculated-Deviations recorded using OP_ or MT_ as the deviation cause code (include GAA, GAB and GAC).

A7.3.14.5. Overall-FSE-Rate = Adjusted-Sorties-Scheduled minus (-) Calculated-Deviations divided by Adjusted-Sorties-Scheduled times 100.

A7.3.14.6. OP-MT-FSE-Rate = OP/MT-Deviations divided (/) by Adjusted-Sorties-Scheduled times (*) 100.

Attachment 8 (Added)

MAINTENANCE SCHEDULING EFFECTIVENESS

A8.1. Purpose. Maintenance Schedule Effectiveness (MSE). This is a leading indicator that measures the unit's ability to plan and complete scheduled maintenance events (i.e. inspections, periodic maintenance, etc.) and scheduled use of maintenance resources (Static/IR/Alert Prep, Training Aircraft, etc.) on-time per the maintenance plan. The goal for MSE is 95 percent. A low MSE rate may indicate a unit is experiencing a high rate of turbulence on the flightline or in the back shops. This indicator is primarily used as reliability indicator for maintenance managers assessing the unit's capacity to execute the scheduled maintenance plan.

A8.1.1. A cornerstone of successful maintenance scheduling and execution is an understanding of how the schedule is executed versus how it was scheduled to be executed. These differences in scheduled versus actual events are only recorded in the execution phase of the scheduling process and are called deviations. Deviation data must be recorded so that follow-up analysis can identify the appropriate corrective actions if any are needed. Without deviation data, analysis is impossible. Deviation data recording and analysis is the beginning of the process to continually improve the scheduling and execution process that leads to improved unit flying operations. The unit is responsible for documenting deviations to the weekly flying and maintenance schedule and determining the cause for each deviation. Deviations must be coordinated with the appropriate squadron/AMU before being assigned to a specific category. Schedule deviations that result from a sequence of events will be assigned a primary cause. A determination of the primary cause will be made by the parties involved to arrive at a unit position. The squadron operations officer and the AMU OIC/AMXS maintenance operations, along with MO, will monitor deviations to ensure they meet the criteria in this publication. When conflicts arise, leadership of involved units will resolve them at the lowest level. All deviations will be recorded as described in this publication.

A8.2. Computations:

A8.2.1. Compute the aircraft MSE using scheduled maintenance events in the printed weekly schedule. In order to make this data valuable it is important that the integrity of the data be maintained. The MIS will be used to determine whether or not the maintenance actions were completed on time. For example, if a maintenance event is scheduled in the weekly flying and maintenance schedule for Monday through Wednesday, MIS must show completed before Thursday for credit. For maintenance events extending into the next week, credit for completion is based on the last day of the scheduled event (to 2400 on the last day of the scheduled event). Note: Periodic, Phase and ISO inspection completion will be measured using the completion date of the inspection as noted on the maintenance page. AMXS and MXS supervision will standardize the scheduled duration of the inspection for each MDS based upon the work card deck and fix phase critical path data determined from 4 years of MIS historical data provided by MMA and Phase/ISO supervision assessments. Standardized durations will be documented and forwarded to PS&D. Special inspections identified on an AF Form 2410 and scheduled for completion during an Isochronal Inspection, Home Station Check or A-Check will not be utilized in the MSE rate, only the ISO/HSC/A-check will count. This does not eliminate the responsibility for PS&D to track the special inspections to ensure timely completion during the ISO/HSC/A-check.

A8.2.1.1. The MXG/CCs may select additional areas (such as Aerospace Ground Equipment, Avionics Intermediate Shop, Alternate Mission Equipment, static, training aircraft etc.) for local

scheduling effectiveness tracking. The unit will establish standards for these additions. When reported to HHQ these locally selected areas will not be included in aircraft MSE rates.

A8.2.2. PS&D will implement procedures for reviewing and recording scheduled maintenance actions daily, forward this data to maintenance analysis weekly for computation and publication. Daily review will be accomplished by PS&D and will not be delegated. **(T-2)**.

A8.2.3. When a unit is tasked with a combat sortie generation, unscheduled tasking, unannounced exercise/real world contingency, or HHQ exercise that significantly impacts the printed weekly maintenance schedule, the plan may be revised or reprinted without incurring deviations. Utilizing MSE deviation Table A8.1, normal deviation reporting procedures will be followed once the revised or reprinted plan is finalized. **(T-2)**. The unaccomplished portion of the original maintenance schedule that was revised will not be included in the scheduling effectiveness formula.

A8.2.3.1. Units may revise or reprint the following day's or remainder of that week's maintenance schedule to compensate for adverse weather. This adjustment should be used only in extreme cases and recorded on an AF Form 2407. Once changed, normal deviation reporting procedures will apply. **(T-2)**.

A8.2.4. Squadron commanders will coordinate to cancel and reschedule maintenance actions to coincide with the portion of the flying schedule that was canceled after the unit or OS has achieved the UTE rate goal for the month. These canceled maintenance actions will not be included in MSE computations.

Table A8.1. Deviation Codes.

DEVIATION	FUNCTION
Maintenance (MX)	Actions canceled to adding aircraft to the flying schedule, lack of manpower, equipment or as a result of mismanagement.
Operations (OP)	Actions cancelled or not completed on-time for operational considerations or as a result of adding aircraft to the flying and maintenance schedule to meet operations requirements. This also includes maintenance events not completed due to operations group actions. For example, Life Support Section not completing scheduled maintenance as published in the wing weekly flying and maintenance schedule.
Higher Headquarters (HHQ)	Actions canceled or not completed as a result of higher headquarters tasking from outside of the wing.
Weather (WX)	Actions canceled or not completed as a result of weather conditions.
Supply (SU)	Deviations that result from verified parts back order condition.
Other (OT).	Aircraft impounded after publication of the weekly schedule, unscheduled major maintenance where the scheduled maintenance action cannot be accomplished because of tech data restrictions, aircraft off base and unable to return or as a result of Productivity/Utilization Goal Days
Low Observable (LO)	Scheduled maintenance events not accomplished specifically because LO restoration exceeded the original ETIC; actions not completed due to inaccessibility or not power capable

EXCEPTION: Any scheduled maintenance for an aircraft that is possessed by depot/PDM/CFT/DFT, that is not complied with because the aircraft is not released for possession as scheduled to the owning unit does not count toward MSE computations.

A8.2.5. Formula: Overall MSE Rate = total points earned divided by total points possible x 100.

A8.2.5.1. To obtain only the OP-MX MSE rate, treat events with deviations in categories other than OP or MX as if they were not missed.

Table A8.2. Maintenance Scheduling Effectiveness Computation.

Scheduled Event	A Weighted Points	B Number of Events	C Possible Points (A x B)	D Completed Scheduled	E Points Earned (A x D)
Periodic/Isochronal/Phase Inspections	5				
Home Station Checks/Hourly Post Flights	5				
Engine Changes	5				
Time Changes	4				
TCTOs	4				
Corrosion Control / Wash / Paint	4				
Special Inspections	3				
Document Reviews	2				
Delayed Discrepancies	1				
Total Points Possible:			Total Points Earned:		
Total O&M Points Possible:			Total O&M Points Earned:		

Attachment 9 (Added)

DEPLOYED OPERATIONS AND OFF-STATION SORTIES

A9.1. Purpose. This chapter establishes rules and procedures used in planning, executing, evaluating, and reporting of unit flying and maintenance schedules at deployed locations where unit maintenance is provided. Sorties flown at deployed locations where no parent unit maintenance is provided are considered off-station sorties. If parent unit support is deployed, this is considered the same as home station support and normal deviation reporting applies. (T-2). Limited launch support is not considered parent unit maintenance.

A9.2. General. Normal deviation reporting applies to deployed operations except as noted in this chapter. Data from deployed operations will be transmitted or forwarded back to home station and included in unit totals. (T-2).

A9.3. Scheduling. In addition to the procedures for home station scheduling and reporting, deployed units will use the following procedures when developing a weekly flying schedule and reporting deviations:

A9.3.1. Separate block(s) of sortie sequence numbers will be assigned for deployment location(s).

A9.3.2. When a spare aircraft is launched for a scheduled deployment to a Forward Operating Location (FOL), the options in paragraph A9.5.1 apply to the home station and deployment location flying and maintenance schedules.

A9.3.3. Additions and cancellations at deployed locations, which are required to accomplish specific aircrew training requirements and make optimum use of available range time, are considered flown as scheduled. This does not relieve operations and maintenance from developing a viable and realistic flying schedule at the deployed location. The primary purpose of this flexibility is to allow the unit to make up non-effective sorties to ensure accomplishment of the deployment training plan. Procedures for changing the weekly schedule in Chapter 15 apply to deployment location flying and maintenance schedules. Additions and cancellations caused by ineffective planning are recorded. (T-2).

A9.3.4. When operating at a deployed location using a daily ATO, follow procedures outlined in paragraph 15.5.6 of this instruction.

A9.4. Deployed Daily Activity Report. Required information for deployed units will be transmitted to home station IAW applicable unit deployment plans.

A9.5 Off-Station Sorties. Off-station sorties are those sorties flown from other than home station and parent unit maintenance is not provided (e.g., cross-country sorties). Units will publish sorties planned while off station. Take-off and landing times may be TBD when supporting another unit and the specific times are unknown at the time of publishing. (T-2). The following paragraphs outline the rules that apply to higher headquarters alert or off-station sorties:

A9.5.1 When a spare is launched to the off-station/cross country location in place of the originally intended aircraft, one of the following options applies.

A9.5.1.1. The originally scheduled prime aircraft, which remained on base, may fly the sorties of the departed aircraft for the remainder of the week without recording FSE deviations. However, maintenance scheduling effectiveness is based on the published weekly schedule.

A9.5.1.2. The sorties may be tail-swapped with a printed spare aircraft on each day's schedule.

A9.5.2. When an aircraft is off-station and cannot return to home station for its scheduled sortie, a deviation will be recorded for the reason the aircraft was unable to return. The reasons will be specific, i.e., maintenance, operations, weather, etc. **Note:** If the off-station aircraft can fly its scheduled mission from its location, no deviation is recorded.

A9.6. Deployed PS&D Support Operations.

A9.6.1. Homestation AVDOs will perform AVDO duties on deployed aircraft unless the possession changes to the deployed location. With homestation AVDO approval, CENTAF PS&D will make MIS inventory/status transactions and coordinate message requirements with homestation AVDOs. If possession changes, CENTAF, PS&D will perform all AVDO duties. **(T-2)**.

A9.6.1. When deploying or deployed to the CENTAF AOR, units will follow all applicable AOR guidance.

Attachment 10 (Added)

HANGAR QUEEN MESSAGE SAMPLE
POTENTIAL CAT II HANGAR QUEEN STATUS AIRCRAFT XX-XXXX

Aircraft MDS: F-15E
Aircraft tail number: XX-XXXX
Owning unit: XX FW
Date last flown: 19 June 2015
Reason for hangar queen: CANN REBUILD

20 JUNE 2015 – FMC

23 JUNE 2015 – NMCMC / RT RUDDER LK

23 JUNE 2015 – NMCSE / RT RUDDER REM

29 JULY 2015 – NMCBA / CANN / RT CFT REM / PACS & MULTISTORES DUE

**11 AUG 2015 – NMCMC / CANN REBUILD / RT CFT REM / PACS & MULTISTORES
DUE**

Status: NMCBA
Pacing action: NONE
Parts required: N/A
Estimated fly date: 13 Aug 2015
Total Not Mission Capable Supply (TNMCS): 1286.5
EDD(s):
WUC(s):
NSN(s):
Document Number(s):
Requisition Number(s):
Off base requisition(s):
Identify any assistance required from USAFE/A4M:
Point of contact and telephone number:
Plan for recovery: C/W CANN REBUILD
Days No Fly: 53

Official CAT II date: 18 Aug 2015

Attachment 11 (Added)

FLYING SCHEDULING REPORTING PROCEDURES

A11.1. Purpose. This chapter provides instructions on flying scheduling reporting procedures. The flying schedule must be loaded in MIS to track scheduling and deviation data. Once loaded, the MIS Daily Mission Schedule background report or proposed maintenance plan background report (IMDS screen 361) provides detailed base-level retrieval of flying and maintenance schedule retrieved from MIS. MIS will also be used to provide higher headquarters reporting of aircraft utilization.

A11.2. Responsibilities:

A11.2.1. The MXG/CC will ensure procedures are established to verify the accuracy of all scheduling and deviation data.

A11.2.2. PS&D section will publish the weekly flying schedule IAW Chapter 15 of this publication on AF Forms 2400 series or computer generated products. The PS&D will load the weekly flying schedule into MIS by 1600L Friday (exception: 2 hours after the squadrons last landing during printed wing night flying weeks and 1600L). Refer to paragraph A7.3.6.1. of this instruction for daily tail number scheduling procedures.

A11.2.3. The MOC will review the on-line IMDS debriefed sortie recap, screen 174, and the IMDS background products daily *Accomplishment Utilization Report (Screen 362)*, *Deviation Detail Listing (Screen 181)*, *Deviation Summary Inquiry (Screen 173)* and *Uncompleted Operational Events (Screen 719)*, daily to ensure accuracy of deviation reporting. The MOC will also review Uncompleted Operational Events, IMDS screen 719, daily to ensure uncompleted sortie lines are deleted using Operational Events Delete IMDS screen 883, if necessary after coordination with debrief section and PS&D. The MOC will record additions, cancellations before crew show, late and early take-offs and landings, and Tail Swaps in IMDS as deviations occur.

A11.2.3.1. The debrief section will record aborts and in-flight emergency incidents in IMDS during the IMDS automated debriefing process. After a primary aircraft ground aborts and is replaced by a spare, debrief sections will ensure that the deviation code is recorded as a Spare deviation with the appropriate cause code {SP/GAA (GAB, GAC)} against the original aircraft; debrief sections will not record the deviation as a Ground Abort {GA/GAA (GAB, GAC)} against the original aircraft that was replaced by a spare. Analysis will count SP/GAA (GAB, GAC) as one ground abort deviation but will not count this against FSE. For all other spare and ground abort deviations procedures debrief will follow procedures in Attachment 7. Weapons systems not utilizing IMDS will use the applicable MIS to make appropriate inputs and to retrieve required data.

A11.2.3.2. The MOC will coordinate with both the flying squadron and AMU on all changes and deviations to the daily flying schedule to assist in determining correct debriefing status codes. The MOC will provide sortie sequence numbers and sortie numbers to the squadron/AMU for all additions and cross-country sorties. Sortie numbers assigned to a specific tail number must be in sequential order (for example sortie Number 101 must be used on a specific tail number before sortie number 102). Unique sortie sequence numbers will be developed for deployed sorties.

A11.2.4. The following instructions apply to IMDS screen 474, *Cause Code Table*; 342, *Operational Event Cancellation*; 343, *Operational Event Tail Number Swap/Tail Number Spare*; and 350, *Deviation, Start/Stop/Correction Abort/Delete*. The Ground Deviation Code block

cannot be blank. Enter one of the following codes or one of the ground deviation codes in AFCSM 21-565V2:

Table A11.1. Category Codes and Functions.

CODE	FUNCTION
C	Chargeable Deviations for FSE (all deviations are recorded, but not all are chargeable against the FSE see Attachment A7)
N	Non-chargeable Deviation for FSE, see Attachment A7

A11.2.5. Cause Code. Enter one of the following codes to indicate the reason for a deviation or the agency, which caused a deviation. These codes must be entered into the IMDS Cause Code table as outlined in AFCSM 21-565V2. The maintenance indicator block is left blank when loading the following Cause Codes. For maintenance ground aborts do not use cause code MTx, only use GAA, GAB, or GAC.

Table A11.2. Cause Codes and Functions.

CODE	FUNCTION
ATx	Air Traffic
XEH	Exercise, HHQ
XEL	Exercise, Local
GAA	Ground Abort, before engine start, maintenance
GAB	Ground Abort, after engine start, before taxi, maintenance
GAC	Ground Abort, after taxi, maintenance
HQT	Higher Headquarters, MAJCOM (non-exercise)
HQN	Higher Headquarters, NAF (non-exercise)
HQP	Higher Headquarters, other (non-exercise)
MTx	Maintenance
OPx	Operations
SUx	Supply
SYx	Sympathy
XUT	UTE Cancel
WXx	Weather
OTx	Other
Xxx	Local Option
	Note: Use x for any character for local use.

A11.2.6. Air Deviation Code. Enter one of the following codes or one of the air deviation codes in AFCSM 21-565V2 for each deviation that occurs after aircraft take-off: Air Deviations are not included in FSE rate computations, but must be recorded

Table A11.3. Air Deviation Codes and Functions.

CODE	FUNCTION
AA	Air Abort (includes operations, weather, sympathy, ATC, Non-IFE, and other)
AI	Air Abort, IFE
EL	Early Landing
FE	IFE
FI	In-flight Incident
LL	Late Landing

Attachment 12 (Added)

ATTRITION AND SPARES

A12.1. Attrition. Attrition factors represent historical percentage of scheduled sorties lost to causes outside unit control. Maintenance and Operations schedulers add attrition sorties to monthly contracts to ensure mission goals are met. Units may make a conscious decision, with USAFE/A4MQ approval, to use different attrition factors from statistical attrition rates calculated by MMA.

A12.1.1. Attrition sorties are not substitutes for unit capability shortfalls, they are added to the contract to mitigate scheduling turbulence to facilitate that unit's mission goals are met. Attrition sorties are planned for based on historical sortie losses captured and measured by MMA. The monthly flying and maintenance plan will clearly identify attrition sorties for planning purposes and can be applied to the contract sorties daily, weekly or monthly to project scheduled sortie requirements. It is important to maintain consistency in application to minimize fluctuations in required sorties. If attrition is less or more than planned, adjustments to the weekly flying and maintenance schedule will be made to prevent over- extending maintenance or exceeding the unit's contract. A sortie lost will normally be flown in the same month the loss occurred. If at the end of a quarter combined losses exceed attrition figures, the OG and MXG/CCs will negotiate a resolution to the shortfall.

A12.1.2. The factors used to compute attrition will be MXx, OPx, SUx, WXx, ATx, SYx, OTx, EXH, EXL, and HQx cancels. Include unsparred ground aborts when computing Mx cancels. Attrition and spare factors will be computed for and applied to each flying squadron. Monthly statistical attrition anomalies should be identified, documented and factored out of attrition calculations if necessary. MMA will compute attrition factors monthly for each OS/AMU and provide the results to PS&D and OSS Current Operations. During the annual "Proposed FHP", MMA will provide attrition factors by month for the entire next fiscal year.

A12.2. Attrition Factor Application

A12.2.1. Attrition computation is based on unit historical data from previous similar flying months. For example, when computing attrition for Jan 12, use historical data for Jan 11, Jan 10, Jan 09, Jan 08, etc. Use minimum of 4 years of historical data ensuring seasonal variations are considered to determine a basis for attrition. When computing attrition, use the total sorties lost in a particular category. Do not use the difference between the sorties lost and those sorties added to make up for the losses. The formula for computing the attrition factor is Historical Sorties Lost divided by Historical Sorties Scheduled.

Table A12.1. Attrition Computation Example.

Cancels:	
MX Cancels	.02
OP Cancels	.01
SU Cancels	.01
OT Cancels	.01

AT Cancels:	.01
SY Cancels:	.01
EXH Cancels:	.00
EXL Cancels:	.01
HQ Cancels:	<u>.01</u>
Cancels attrition factor:	.09
WX Cancels:	<u>.03</u>
Total attrition factor:	.12
Overall attrition factor is .12 or 12%	

Table A12.2. Sample Application of Total Attrition Factor:

Sorties Required	1000
Subtract attrition factor from 1:	$(1-.12) = .88$
Divide	1000 by .88
Required sorties to schedule 1,136.36, round up to 1137.	
Based on historical attrition of .12%, the unit can expect to lose 137 sorties to meet the required 1000 sorties.	

A12.3. Prorated Weather Attrition:

A12.3.1. Computation. Weather attrition sorties will only be used when sorties are lost because of weather. Weather attrition sorties will not be carried over into another month. Using the weather attrition factor, compute the number of anticipated sortie losses for weather. Divide the number of weather losses by the O&M days. This will determine the prorated weather attrition.

Table A12.3. Sample Application of Prorated Weather Attrition Factor:

Sorties Required	500
Subtract the weather attrition factor from 1	$(1-.03) = .97$
Divide 500 by .97	$500/.97$
Equals Required Sorties to Schedule	516
Minus Sorties Required	<u>500</u>
Expected Weather Losses	16
Divide 16 by O&M Days (20 for this exercise)	$16/20$
Expected Sortie Losses per O&M Day	.75
<p>A unit would expect .75 sorties lost each O&M day in the month for weather. Thus, a total of 16 sortie losses (.75 sorties x 20 O&M days) would be expected for that month. Whenever weather losses exceed the total projected weather losses (number of O&M days to date x .75, round up to the next whole number), a unit may add sorties not to exceed the difference between the sorties lost due to weather and the total projected weather losses. For example on the 11th O&M day of the month, a unit lost a total of 15 sorties to-date due to weather. The expected prorated weather sorties lost to-date is 9 (1.55 .75 times 11 equal 8.25, round up). The unit also added 2 weather sorties earlier in the month. The unit could add up to 4 sorties (15 sorties lost to date due to weather minus 9 prorated losses minus 2 weather adds equals 4 weather adds available).</p>	

A12.4. Spares. The spare requirements will not exceed 20 percent of aircraft committed to the flying schedule, rounded up to the next whole aircraft. **Note:** During Planned Sortie Surges the MXG/CC determines the amount of spares that will be committed. However, leadership must consider health of the fleet when authorizing scheduled spares above 40 percent. **Note:** Units should be cognizant of their historical break rates and spare constraints when scheduling surges. Spares can be quickly used during surges and once spares are exhausted the capability to meet surge goals is severely limited.

A12.4.1. MMA computes annual spare aircraft requirements by month, using historical aircraft first sortie logistics losses and provides this information to the PS&D for use in computing spare aircraft requirements. Spare computation is based on unit historical data from previous similar flying months. For example, when computing spares for Jan 06, use historical data for Jan 05, Jan 04, Jan 03, Jan 02, Jan 01, etc. Use a minimum of 4 years historical data to ensure seasonal variations are included to determine a basis. The formula for computing spare factors is Historical First Sortie Deletions/Cancellation divided by historical first sorties scheduled.

A12.4.1.1. A first sortie is defined as a sortie flown by an aircraft that has not previously flown for the day (0001-2400 flying period). For example, if 8 aircraft are committed to the schedule and there are 14 total sorties scheduled, the first 8 sortie line numbers (i.e., 101-108) should reflect all 8 committed aircraft tail numbers before they are re-scheduled (turned) against the last 6 (i.e., 109-114). This would be reflected as an 8 x 6 and will not be reflected as a 6 x 8 because of scheduled take-off times. Additionally lines are listed in sequential order with take-off times that reflect this order.

A12.4.1.1.1. Operations may define first sorties or turns by mission profile, take-off times, but for the purposes of this instruction the sortie turn pattern is defined against initial aircraft flown and scheduled turns of the same or a portion of the same aircraft.

Table 12.4. Sample Application of Spare Factors.

1st Sortie Maintenance Cancellations	.10
1st Sortie Supply Cancellations	.03
1st Sortie Ground Aborts	.05
Spare factor	.18 or 18%
A sample figure of 12 first sorties is used in the following computation:	
Spare aircraft required equals 1st sorties scheduled times the spare factor and rounded up to the next whole number.	
12 x .18 = 2.16	Spares Required is 3
Spare aircraft required equals 1st sorties scheduled times the spare factor and rounded up to the next whole number.	
12 x .18 = 2.16	Spares required is 3

12.4.1 The computed spare requirement may be adjusted to compensate for multiple configurations and syllabus constraints. When additional spares are added for multiple configurations, units will not exceed one spare per configuration.

12.4.1.1 Additional spares are authorized to support higher headquarters taskings and special missions (if required by the tasking).

12.4.1.2 At least one spare aircraft is authorized per MDS for each flying day.

12.4.1.3 Unmanned Aerial Systems training missions are authorized an additional spare to support increased aircrew training requirements due to crew size ratio.

Attachment 13 (Added)
SAMPLE MONTHLY ACTIVITY REPORT

Date

MEMORANDUM FOR (Office symbol for Contracting Office)

(Office symbol for Quality Assurance Function)

(Office symbol for Program Management Office)

FROM: (Office symbol for Chief Quality Assurance Evaluator)

SUBJECT: Monthly Activity Report for Month, Year

1. Site Audit Report(s): (Synopsis of functional area audit)

Insert audit reports here, if applicable.

2. Technical Inspections:

Insert spreadsheet with all inspection results

Provide summary of results:

Technical Inspections 50 ea.

Personnel evaluation 6 ea.

Total 56 ea.

Unsatisfactory 5 ea.

4. Deficiency Reports/Summary:

Summarize the audit/evaluation/inspection results and identify any trends within the month or from previous months.

5. CAR Status Report:

Update status from any current or previously issued CAR here.

6. Charts:

If applicable, insert any data analysis here.

7. Special Interest Items (SII):

Insert the findings from Special Interest Items here.

8. Action Items:

If analysis of the audit/evaluation/inspection results identifies adverse trends, develop an action plan and insert here.

9. COR Comments:

Insert COR comments here.

10. Summary of Business Relationship:

Insert any comments that characterize the nature of the business relationship between CORs and the contractor here.

SIGNATURE BLOCK, Rank, USAF
Contracting Officer Representative

Attachment 14 (Added)

FCC PERFORMANCE FEEDBACK FORM

Date

MEMORANDUM FOR (Unit Designation/Office Symbol)

FROM:

SUBJECT: Enroute/Transient Supervisor's Feedback of the Flying Crew Chief (FCC)

1. Mission Number _____ . Aircraft Type and Tail Number _____
2. Did the FCC participate in the aircraft debrief? Yes No
3. Did the FCC brief specialists on past repeat/recurring discrepancies? Yes No
4. Did the FCC request the required specialists (if applicable)? Yes No
5. Was the FCC involved with the servicing of the aircraft? Yes No
6. Did the FCC provide maintenance support for the aircraft? Yes No
7. Did the FCC provide MOC a billeting building and room number, and a phone number after check in? Yes No
8. Was the FCC allowed the opportunity for a minimum of 8 hours of rest in a 24-hour period? Yes No
9. Rate the FCCs overall performance. Excellent Good Fair Poor
10. Remarks:

<Sign>

Enroute/Transient Supervisor