BY ORDER OF THE COMMANDER,
354TH FIGHTER WING

PACAF INSTRUCTION 21-101

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Supplement 1

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Maintenance

OBJECTIVE WING AIRCRAFT MAINTENANCE

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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PACAFI 21-101, 16 March 2001, is supplemented as follows:

This publication implements AFPD 21-1, *Managing Aerospace Equipment Maintenance* and supplements PACAFI 21-101, *Objective Wing Aircraft Maintenance.* Squadron commanders, maintenance officers, and supervisors will ensure compliance with the requirements and procedures of this supplement. This supplement applies to all personnel assigned, attached, and tenant to Eielson Air Force Base, Alaska. It does not apply to Air National Guard or US Air Force Reserve units and members except where indicated.

SUMMARY OF REVISIONS

This document is substantially revised and must be completely reviewed.

This revision incorporates guidance formerly published in 354 FWI's 21-102, 21-104, 21-105, 21-106, 21-107, 21-108, 21-109, 21-111, 21-112, 21-113, 21-114, 21-115, 21-116, 21-117, 21-118, 21-119, 21-120, 21-121, 21-122, 21-126, 21-127, 21-128, 21-129, 21-130, 21-131, 21-132, 21-133, 21-134, 21-201, 21-203 and 354 OG OI's, 21-102, 21-103, 21-104, 21-105, 21-106, 21-107, 21-108, 21-109, 21-110, 21-112, 21-114, 21-115, 21-116, and 36-2801.

2.3.25. **Ground Training Aircraft Responsibilities.** See paragraph **22.48.1.5. (Added)**

For management of non-operational ground training aircraft A-10, 78-0305.

2.3.29.1.1. (Added) **Core Automated Maintenance System (CAMS)** CAMS will be the primary source of data used in Cannibalization (CANN) data compilations. The maintenance systems analysis section chief will use standard Air Force algorithms in accordance with TO 00-20-2, *Maintenance Data Documentation* for reporting data to key maintenance managers and higher headquarters.

2.3.29.1.2. (Added) CANNs will be controlled by CANN control logs and CAMS. CANN logs will contain at a minimum: CANN sequence number, Job Control Number (JCN), aircraft tail number or end item part was cannibalized from, the aircraft tail number or end item part was cannibalized to, the approving authority, supply document number, nomenclature, date transaction initiated, and date transaction completed.

2.3.29.1.3. (Added) Squadron maintenance officer/superintendent:

2.3.29.1.3.1. Acts as the central point for control and overall manager for on-equipment CANN program. Ensures personnel follow procedures in accordance with this instruction, AFI 21-101, *Maintenance Management of Aircraft,* and TO 00-20-2.

2.3.29.1.3.2. Ensures production superintendents and supply/support section personnel comply with established CANN procedures between FS and 354 MXS personnel for engine-to-aircraft, gun-to-aircraft, avionics-to-aircraft, etc., CANNs.

2.3.29.1.3.3. Ensures minimization of single-hit CANN aircraft.

2.3.29.1.4. (Added) FS production superintendent:

2.3.29.1.4.1. Authorizes all CANNs unless mandated otherwise (e.g., hangar princess, hangar queen, and training aircraft). **NOTE:** The expenditure of man-hours and potential damage to equipment must be weighed against the expected benefit when authorizing a CANN. Units should identify all CANNs considered high-risk.

2.3.29.1.4.2. Coordinates with squadron maintenance officer/superintendent and higher authority when CANNs are needed off hangar princess, hangar queen, and training aircraft to meet mission requirements.

2.3.29.1.4.3. Coordinates CANN source (e.g., aircraft, engine-to-aircraft, gun-to-aircraft, etc.).

2.3.29.1.4.3.1. Notifies supply/support section of source.

2.3.29.1.4.3.2. Notifies MOC of Mission Capable (MICAP) start and stop times.

2.3.29.1.4.4. Works with production personnel of deployed units participating in Cope Thunder exercises to establish CANN procedures for deployed aircraft.

2.3.29.1.4.5. Coordinates with Propulsion Flight Support Section (PFSS) for engine-to-aircraft CANNs, and ensures AF Form 2005, **Issue/Turn in Request**, and CANN# are forwarded to PFSS prior to issue of assets.

2.3.29.1.4.6. Ensures CANNs are logged and reconciled with supply/support prior to end of shift.

2.3.29.1.5. (Added) Flightline expediters:

2.3.29.1.5.1. Receives CANN JCN from supply/support.

2.3.29.1.5.2. Ensures JCN, CANN number, and document number are entered in aircraft AFTO Form 781A.

2.3.29.1.6. (Added) FS supply/support section:

2.3.29.1.6.1. Maintains and documents CANN control log.

2.3.29.1.6.2. Inputs CANN authorization into CAMS upon approval from production superintendent.

2.3.29.1.6.3. Uses AFTO Form 349s as a manual backup during CAMS downtime.

2.3.29.1.6.4. Reconciles CANNs in CAMS.

2.3.29.1.6.5. Assigns JCNs, CANN numbers, and supply document numbers.

2.3.29.1.6.6. Notifies FS supply/support section of all CANNs and assigned JCN for updating supply records.

2.3.29.1.6.7. Coordinates "Mark for" changes and supply documentation needs with other organizations when required.

2.3.29.1.7. (Added) FS aircraft section chief:

2.3.29.1.7.1. Reviews weekly list provided by supply/support section to ensure proper aircraft forms documentation and CAMS documentation.

2.3.29.1.7.2. Ensures "T" actions are complete prior to entering the installation of the cannibalized item.

2.3.29.1.7.3. Generates both "T' and "U" action CAMS snapshot, maintenance data collection record, for each CANN within their CAMS system or manually if the computer is down.

2.3.29.1.7.4. Performs a review and reconciliation of CAMS screen #98, with aircraft 781 series forms on a weekly basis.

2.3.29.1.7.5. Ensures timely turn-in of DIFM items and completion of PQDR actions if applicable.

2.3.29.1.8. (Added) Propulsion flight Supervision/JEIM:

2.3.29.1.8.1. Acts as approval authority for engine-to-aircraft CANNs.

2.3.29.1.8.3. Validates CANN JCNs with FS supply/support section. Does not issue part to requesting organization until PFSS has received the AF Form 2005, and a valid CANN number.

2.3.29.1.8.4. Forwards to engine management section copies of the "T" and "U" action CAMS snapshot for serially controlled and engine time change items.

2.3.29.1.8.5. Determines if parts are available for CANN and give engine serial number to the PFSS.

2.3.29.1.8.6. Completes "T" actions.

2.3.29.1.8.7. Removes CANN part(s).

2.3.29.1.8.8. Schedules "U" action when new part is received.

2.3.29.1.8.9. Ensures timely turn-in of DIFM items and completion of PQDR actions if applicable.

2.3.29.1.9. (Added) PFSS:

2.3.29.1.9.1. Maintains and documents CANN log.

2.3.29.1.9.2. Validates all document numbers with FS supply/support section.

2.3.29.1.9.3. Coordinates with Supervision/JEIM for part availability and CANN engine serial number.

2.3.29.1.9.4. Informs requester of CANN engine serial number.

2.3.29.1.9.5. Issues CANN part to the requester.

2.3.29.1.9.6. Informs JEIM when parts are received and available for "U" action scheduling.

2.3.29.1.10. (Added) (345FW). Propulsion flight in-shop CANN procedures:

2.3.29.1.10.1. Determine end item to be cannibalized from.

2.3.29.1.10.2. Remove and document part removal and add supply document number to engine work package.

2.3.29.1.10.3. Make a "Mark for" change in CAMS and take a copy to PFSS.

2.3.29.1.10.4. Install CANN part on engine and document work package.

2.3.29.1.11. (Added) On in-shop cannibalizations, PFSS will:

2.3.29.1.11.1. Ensure "Mark for" change is processed through supply.

2.3.29.1.11.2. Annotate CANN log.

2.3.29.1.12. (Added) Avionics flight:

2.3.29.1.12.1. Develops internal procedures to govern in-shop CANNs.

2.3.29.1.13. (Added) The dedicated analyst will perform a monthly review of CANN documentation to inform squadron maintenance officer/superintendent of its accuracy.

2.3.29.1.14. (Added) CANNs from training aircraft A-10; 78-0305 require OG/CC approval.

2.6.33.3.1. (Added) Review AFTO Form 781 series documents to for legibility, proper symbols, accuracy, serviceability of binder, and workable delayed discrepancies.

4.1.2. See PACAF 21-101 paragraph 2.3.27.

4.1.3.1. (Added) **Repeat, Recurring, and, Cannot Duplicate (CND) Discrepancies. Terms.**

4.1.3.1.1. Repeat Discrepancy: Occurs on the next sortie or attempted sortie after corrective action has been taken and the system or subsystem is used and indicates the same malfunction.

4.1.3.1.2. Recurring Discrepancy: Occurs on the second through forth sortie or attempted sortie after corrective action has been taken and the system or subsystem is used and indicates the same malfunction.

4.1.3.1.3. Cannot Duplicate (CND) Discrepancy: A discrepancy reported by an aircrew or maintenance personnel that cannot be duplicated by operational checks of the system.

4.1.3.1.4. Corrective Action: Occurs when parts are removed, replaced, or repaired or when any form of troubleshooting, or cleaning of contacts is accomplished.

4.1.3.2. (Added) Responsibilities.

4.1.3.2.1. Maintenance debriefing will document the repeat/recur condition in CAMS in accordance with AFM 66-279, Vol II, *CAMS Users Manual* and on the AFTO Form 781A, **Maintenance Discrepancy and Work Document** in the aircraft records.

4.1.3.3. (Added) **Repeat discrepancies.**

4.1.3.3.1. If the discrepancy is a first-time repeat, maintenance debriefing will enter in bold red print or stamp, “Repeat 1” in the “Discrepancy” block of the AFTO Form 781A. As a minimum, the individual clearing the “Repeat 1” must be a 7 skill level or higher. When satisfied with all corrective actions, the individual will sign the “Inspected by” block appropriately and place their last name initial over the symbol.

4.1.3.3.2. If the discrepancy is a second-time repeat, maintenance debriefing will enter in bold red print or stamp, “Repeat 2” in the “Discrepancy” block of the AFTO Form 781A. This will require a 7-level or higher to review the corrective action. Prior to next flight.

4.1.3.3.2.1. After notification of second-time repeat discrepancy, maintenance debriefing will enter the following statement into the next open discrepancy block of AFTO Form 781A on a “Red dash” symbol: “Squadron maintenance officer/superintendent review of discrepancy, corrective action(s) due prior to flight.”

4.1.3.3.3. If the discrepancy is a third-time repeat (code III discrepancies) the aircraft will be impounded. Maintenance debriefing will enter in bold red print or stamp, “Repeat 3” in the discrepancy block of the AFTO Form 781A. **Exception:** Aircraft placed on a “Red X” in accordance with “Red X” criteria checklist will be impounded after third consecutive occurrence; second-time repeat, unless otherwise mandatory.

4.1.3.4. (Added) **Recurring discrepancies.**

4.1.3.4.1. If the discrepancy is recurring, maintenance debriefing will enter in bold red print or stamp, “Recur” in the “Discrepancy” block of the AFTO Form 781A. As a minimum the individual clearing the “Recur” discrepancy must be a 7 skill level or higher. When satisfied with all corrective actions, the individual will sign the “Inspected by” block appropriately and place their last name initial over the symbol.

4.1.3.4.2. After notification of second-time and subsequent recurring discrepancies, maintenance debriefing will enter the following statement into the next open discrepancy block of AFTO Form 781A on a “Red dash” symbol: “Squadron maintenance officer/superintendent review of discrepancy, corrective action(s) due prior to flight.” FS personnel will follow impoundment guidelines in this instruction.

4.1.3.5. (Added) **Cannot Duplicate (CND) discrepancies.**

4.1.3.5.1. Clear CND discrepancies by entering “CND” with all actions taken during troubleshooting in the “Corrective action” block. As a minimum the individual clearing the CND discrepancy must be a 7 skill level or higher. The 7 skill level or higher will review the corrective action, sign the “Inspected by” block, and appropriately place their last name initial over the symbol.

4.1.3.5.1.1. Do not sign of corrective action as reseated, tightened, cleaned, etc., if the discrepancy was never duplicated. Clear the discrepancy as CND, even if the part most likely causing the discrepancy was changed. In this case, annotate the “Corrective action” block as “CND”; removed and replaced (component) as most likely cause of discrepancy, system ops checked satisfactory in accordance with applicable TO or function number.

4.1.3.5.2. Bench check if capability exists, parts removed for most probable cause of discrepancy. Technicians will affix a red-bordered AFTO Form 350 to all parts sent in for bench check with detailed description of discrepancy.

4.1.3.6. (Added) General procedures.

4.1.3.6.1. Aircraft may fly with open “Code 2” repeat/recurring discrepancies provided discrepancies do not affect safety of flight, or will not cause additional equipment or system damage. Aircraft flown with open repeat/recurring discrepancies require the following actions prior to flight:

4.1.3.6.1.1. The sortie generation squadron maintenance officer/9 level will enter “Not safety of flight, flyable” in the original discrepancy block with minimum signature and employee # just underneath.

4.1.3.6.2. The performance of an in-flight operational checkout is restricted to components that cannot be functionally checked and/or if pilot reported discrepancy cannot be duplicated on the ground. In-flight operational checkouts require the lead production superintendent's approval, and he/she will be responsible for thoroughly briefing aircrew on all in-flight requirement(s) prior to takeoff. The use of an in-flight operational checkout for verification of maintenance will not nullify Operational Check Flight (OCF) procedures if more appropriate.

4.1.3.6.3. Maintenance debriefing will notify OG/QA of all second-time repeat discrepancies, and all engine related or safety of flight repeat/recurring discrepancies.

4.1.5. **Refer to paragraph 7.17.1.1. (Added) of this instruction for Dedicated Crew Chief (DCC) program guidance.**

4.1.6. **The Flight Control Program.** Strictly adhered to following procedures for all serious or recurring flight control discrepancies. FS maintenance supervision forms Flight Control Maintenance Team (FCMT) to troubleshoot and repair aircraft experiencing serious or recurring flight control malfunctions.

4.1.6.1. (Added) Uncommanded /unexplained flight maneuver is defined as an aircraft motion that is uncommanded/unexpected by the pilot and is not related to jet wash, possible wind shear, or turbulence; and, that is usually not accompanied by caution lights that could explain aircraft motion.

4.1.6.2. Chronic/high number of recurring flight control malfunctions are defined as flight control malfunctions that happen sporadically, intermittently, and may not be exactly the same malfunction.

4.1.6.3. (Added) All maintenance to include positioning of cockpit switches is prohibited unless aircraft is released for maintenance by the impoundment official. **Exception:** Time-critical servicing, safing operations, and Crash Survivable Flight Data Recorder (CFSDR) download of the F-16 aircraft.

4.1.6.4. (Added) Personnel identified as flight control team chiefs and team members will be designated in writing by the OG/CC and tracked on the SCR using the following CAMS course codes: For the A/OA-10 aircraft: 534, **Team Chief,** and 532, **Team Member.** For the F-16 aircraft: 320, **Team Chief,** and 321, **Team Member.** Certified personnel possessing CAMS course codes: 071, **Flight Control Rigging,** 302, **Clear "Red X" White Area,** 313, **Inspector White Area, and** 314 **White Area Technician** must also considered for A/OA-10 FCMT.

4.1.6.5. (Added) The FCMT will report directly to the impoundment official and consist of the following team members:

4.1.6.5.1. (Added) **A-10 FCMT:**

4.1.6.5.1.1. 2A471/2A373J, A-10 flight control maintenance team chief.

4.1.6.5.1.2. 2A3X3J, tactical aircraft maintenance technician.

4.1.6.5.1.3. 2A3X3J, tactical aircraft maintenance technician with aero repair experience, if necessary.

4.1.6.5.1.4. 2A4X1, guidance and control system technician.

4.1.6.5.1.5. 2A6X6, tactical electrical and environmental system technician.

4.1.6.5.2. (Added) **F-16 FCMT** :

4.1.6.5.2.1. 2A372/2A373B, F-16 flight control maintenance team chief.

4.1.6.5.2.2. 2A3X3B, tactical aircraft maintenance technician.

4.1.6.5.2.3. 2A3X2B, integrated avionics technician.

4.1.6.5.2.4. 2A6X6, tactical electrical and environmental system technician.

4.1.6.6. (Added) The team chief will be a highly qualified 7 skill level supervisor with a minimum of one year experience on MDS, and be authorized to clear flight control system "Red X" discrepancies. The team chief will report directly to the impoundment official.

4.1.6.7. (Added) FCMT members may be a 5 or 7-skill level with a minimum of one-year experience on affected aircraft.

4.1.6.8. (Added) FCMTs should employ 3 skill level personnel as trainees to the greatest extent possible.

4.1.6.9. (Added) FCMTs should employ AFETS personnel to assist or act as technical advisors to the greatest extent possible.

4.1.6.10. (Added) One FCMT per impounded aircraft will be dedicated to the repair of the aircraft for the duration to ensure the integrity of maintenance. The FCMT will work together on a single shift. Only specific maintenance actions that are directed by the team chief, after coordination with the impounding official, may be accomplished after the shift.

4.1.6.11. (Added) As a minimum, the designated FCMT chief, impoundment official, production superintendent, and QA will assemble in the maintenance debriefing section and participate in actual aircrew debriefing using an uncommanded flight control debriefing checklist. The FCMT chief will ensure the AFTO Form 781A, abort/incident investigation record, and the uncommanded flight control debriefing checklist are thoroughly documented. file the checklist in the 781 series forms binder. **NOTE:** The maintenance debriefer is responsible for immediately notifying OG/QA of incident.

4.1.6.12. (Added) A Technical Assistance Organization (TAO) checklist will be initiated during aircrew debriefing for uncommanded flight control inputs on the F-16 aircraft. Unit will forward a copy of the checklist with CSFDR download data to the OG/QA chief inspector. TAO checklists are available on the web at **http://f16.wpafb.af.mil** under "Falcon Hotline" selection or by contacting QA.

4.1.6.13. (Added) Product Quality Deficiency Reports (PQDR) are required on component(s) found to contribute to the flight control malfunction. "Bad actor" components are components that bench check satisfactory however, check unsatisfactory in the aircraft. Follow "Bad actor" maintenance procedures in accordance with TO 00-20-1, *Aerospace Equipment Maintenance General Policies and Procedures.* The flight control team chief will closely monitor component(s) removed from the aircraft that require functional checkout.

4.1.6.14. (Added) If the flight control malfunction cannot be duplicated on the ground, an FCF should be performed. However, as a minimum, perform an OCF before returning the aircraft to normal service. The OG/CC or designee will determine the course of action.

4.1.6.15. (Added) The OG/CC may elect to initiate a one-time inspection or generate a maintenance crosstell depending on the FCMTs outcome.

5.1.10. **354 FW weapons recognition program.**

5.1.10.1. (Added) FS load crew of the month.

5.1.10.1.1. Evaluation criteria:

5.1.10.1.1.1. A designated Minimum Proficiency Requirement Load (MPRL) for the month will be scored.

5.1.10.1.1.2. Maintain crew integrity, broken crews will not be eligible.

5.1.10.1.1.3. Load crews failing the monthly competition load will result in automatic disqualification.

5.1.10.1.1.4. A 15-question test will be given, 1 point per question, with the total based on the total score of all crewmembers for a maximum of 45 points. All formed load crews will take the test.

5.1.10.1.1.5. Additional factors when determining the winners are duty performance, Weapons Standardization (WS) evaluations, quality assurance evaluations, disciplinary actions, etc. The FS weapons section chiefs have the final authority in selecting the squadron load crew of the month.

5.1.10.1.1.6. WS will supply each FS with a completed load crew of the month score sheet at the end of the competition.

5.1.10.2. (Added) FS load crew of the quarter.

5.1.10.2.1. The FS weapons section chief will determine the squadron load crew of the quarter based on overall performance for the quarter.

5.1.10.2.2. In the event a squadron should need a load-off to determine the load crew of the quarter, WS will schedule the load-off.

5.1.10.2.3. Use wing load crew of the quarter evaluation criteria when evaluating squadron load crew of the quarter load off competitions.

5.1.10.2.4. Set the load crew of the quarter completion to coincide with the calendar year.

5.1.10.2.5. Load crews are responsible for supplying all required tools and equipment.

5.1.10.3. (Added) Wing load crew of the quarter/year.

5.1.10.3.1. Evaluation and scoring criteria: SEE **Attachment 1**, of this supplement.

5.1.10.3.1.1. A load off between the 18 FS and 355 FS load crew of the quarter winners will determine the 354 FW Load Crew of the Quarter/Year.

5.1.10.3.1.2. The ranking WS person or guest inspector will perform a dress and appearance inspection prior to the load.

5.1.10.3.1.3. Maintain crew integrity to the maximum extent possible. Any crewmember may be replaced on a load crew, if clearly shown, every effort was made to maintain crew integrity.

5.1.10.3.1.4. WS will select a load configuration for the competition, which will be the same for both the 18 FS and 355 FS. WS will notify both FS's on selected configuration at least 15 days in advance.

5.1.10.3.1.5. WS will adjust load time standards for the quarterly competition.

5.1.10.3.1.6. Each squadron will submit a written nomination for Load Crew of the Year on an AF Form 1206, **Nomination for Award,** in accordance with PACAFI 36-2801, *NLT* 15 January of each year to the Wing Weapons Manager.

5.1.10.4. If a load off cannot be accomplished. The wing weapons manager will select the 354 FW Load Crew of the Quarter/Year based on the Quarterly/annual MPRL and Quarterly Evaluations (QE), and nomination package for annual only.

5.1.10.5. (Added) Arbitration.

5.1.10.5.1. In the event of a load off, the wing weapons manager will review results and be the validation authority for final results.

5.1.10.6. (Added) Awards.

5.1.10.6.1. Each FS will determine recognition for the squadron-level winners.

5.1.10.6.2. A certificate of appreciation, a 3-day pass to be coordinated with supervisor, and a certificate of recognition with 354 OG coin will be presented to the 354 FW Load Crew of the Quarter. A traveling trophy will be presented for display in the winning squadron.

5.1.10.6.3. The wing weapons manager will determine the load crew of the year awards. As a minimum, they will receive a certificate of appreciation signed by the wing commander, a 3-day pass to be coordinated with supervisor, and a memento procured by the 354 OG. A traveling trophy will be presented for display in the winning squadron.

5.1.10.7. (Added) Armament flight will establish monthly/quarterly/annual armament systems flight incentive programs for the Combat Armament Support Team (CAST) and other individuals e.g., armament support section.

5.1.10.7.1. All sections will begin with a 1000-point baseline and points will be added or subtracted, as necessary. Use QA Personnel Evaluations (PE), Quality Verification Inspections (QVI), and Special Inspections (SPI) to calculate points for personnel proficiency and equipment condition. If evaluation disparity exists between CAST's, use the first equal number of evaluations performed to determine the point values. Monthly points will be cumulative towards quarterly and annual awards. Add January and February points to March points to determine the quarterly award winner. Add the first, second, and third quarter point totals to the fourth quarter points to determine the annual award winner.

5.1.10.7.2. Collect points from the internal post inspection sheet, 7 skill level evaluation sheets, and QA evaluations.

5.1.10.7.3. Monthly winners will receive a compensatory day off, taken during the month directly following the award period. Quarterly and annual winners will receive three-day pass, taken during the month directly following the award period. Recognize all award winners on the armament flight perpetual award plaque.

5.1.14.1. (Added) All 18 FS weapons load crews will be certified on MK-82/MK-84 air and GBU-31 support munitions, in addition to the primary munitions on the unit committed munitions list. Other than the A-10 aircraft Load Standardization Crews (LSC) and Squadron Lead Crews (SLC), no 355 FS weapons load crews require certification on their support munitions.

5.1.15.4. (Added) **EOR and weapons arming** General Procedures (refer to **Attachment 11 (Added)** and **Attachment 12 (Added)**).

5.1.15.4.1. The Supervisor of Flying (SOF) in coordination with the 18 FS/355 FS Top 3 will determine arming/de-arming location.

5.1.15.4.2. Arming/De-arming. Aircraft munitions will be armed/de-armed only in designated arm/de-arm areas. The first aircraft taxiing will pull into the first spot available when entering the arming area. **Exception:** When snow/ice is present, pilots will pull into "outside" spots so as not to turn "inside" of other aircraft. Turning inside another aircraft is authorized however; there must be an empty space between aircraft. If snow obscures the taxi line, advise the SOF who will coordinate snow removal. Personnel, aircraft, vehicles, or equipment will not stand or park in the potential line of fire when arming for-

ward-firing ordnance. **NOTE:** With OG/CC approval, FS's can perform EOR/arming in chocks during local/higher headquarters-directed exercises, sortie surges, mass launches, or contingencies.

5.1.15.4.3. Immediate supervisors will ensure only qualified personnel perform End of Runway (EOR), arm, and de-arm functions. As a minimum, the following personnel are required:

5.1.15.4.3.1. EOR and weapons arming:

5.1.15.4.3.1.1. Team chief: 7 skill level 2A373X qualified individual as the arm supervisor. The OG/CC may waive this requirement down to a 5 skill level.

5.1.15.4.3.1.2. Aircraft assistant: Any qualified individual.

5.1.15.4.3.1.3. Weapons: Two 2W1X1 qualified individuals, one being at least a 5 skill level and checklist qualified.

5.1.15.4.3.2. Aircraft recovery and weapons de-arming:

5.1.15.4.3.2.1. Team chief: A 5 skill level 2A353X aircraft marshaling qualified individual in charge of aircraft recovery.

5.1.15.4.3.2.2. Weapons: Two 2W1X1 personnel, one being at least a 5 skill level and checklist qualified. **NOTE:** The ranking 2W1X1 individual is the de-arm supervisor.

5.1.15.4.4. The aircraft marshaling qualified individual will ensure a hot brake check is performed, maintain interphone contact with the pilot, and clear the aircraft for taxi after dearming completion.

5.1.15.5. (Added) EOR supervisor responsibilities.

5.1.15.5.1. Ensures aircraft last chance inspections and arm/de-arm are accomplished in accordance with applicable TOs and this instruction.

5.1.15.5.2. Briefs all team members on safety and proper procedures prior to starting operations.

5.1.15.5.3. Ensures required equipment is available for EOR and arm/de-arming operations.

5.1.15.5.4. Ensures aircraft marshaling personnel wear reflective vests.

5.1.15.5.5. Not allow vehicles to park directly behind, or directly in front of, aircraft armed with forward or rearward firing munitions.

5.1.15.5.6. Not allow arming of forward firing ordnance when aircraft is pointed at other aircraft or vehicles in line with ordnance.

5.1.15.5.7. Keeps EOR work areas clean, Foreign Object (FO) free, and equipment secured when not in use.

5.1.15.5.8. Not leave items unattended on the taxiways at any time.

5.1.15.5.9. Ensures all Aerospace Ground Equipment (AGE) and/or support equipment is removed from the EOR arm/de-arm areas at the end of the flying period.

5.1.15.5.10. Ensures an authorized area is used marked by appropriate taxiway markings.

5.1.15.5.11. Signals pilot immediately if an emergency arises requiring engine(s) shutdown and pilot evacuation. Rapidly assists pilot in egressing the cockpit. Notifies appropriate authorities of situation via the fastest means possible.

5.1.15.5.12. Not allow anyone to perform Immediately Prior to Launch (IPL)/safing procedures unless fully qualified to perform the task. **NOTE:** No Individual will perform any portion of the conventional weapons loading checklist that pertains to IPL and safing procedures until they have been trained and qualified by WS to include, documentation of training records.

5.1.15.5.13. Directs hot brake check on aircraft, prior to aircraft exiting de-arm area. **WARNING:** Approach wheel and tire only from the front or rear to prevent injury to personnel. In the event of hot brakes, notify the pilot and evacuate ground crew to a minimum safe distance of 300 feet, not on perpendicular line with wheel.

5.1.15.5.14. Notifies the MOC of all emergency situations encountered. Passes on to the MOC by radio or dials 377-1205 with the number of personnel, type of aircraft, and equipment involved ASAP.

5.1.15.5.14.1. Acts as on scene commander until relieved by a competent authority e.g., fire chief, explosive ordnance disposal supervisor, or weapons supervisor.

5.1.15.6. (Added) EOR/recovery locations (refer to **Attachment 11 (Added)** and **Attachment 12 (Added)**).

5.1.15.6.1. Arming specifics:

5.1.15.6.1.1. Taxiway Alpha; heading 310 degrees, Cope Thunder Romeo row; when no aircraft on Sierra row, taxiway Echo; heading 130 and 180 degrees, and taxiway Foxtrot; heading 130 to 220 degrees.

5.1.15.6.1.2. A/OA-10s and F-16s can also arm in-front of the Combat Alert Center (CAC) 1 and 2; heading 270 degrees, and in front of the CAC, spots 3 and 4; heading 220 degrees.

5.1.15.6.1.3. EOR/arming personnel will be in place one hour prior to first scheduled takeoff time.

5.1.15.6.1.4. F-16 only: An aircraft-boarding ladder will be available in the EOR/arming inspection area.

5.1.15.6.1.5. When flying live bombs, an MJ-1, MHU-83 or Manually Operated Lift Truck (MOLT) will be present in the de-arming inspection area.

5.1.15.6.1.6. Ground crews will use light carts during hours of darkness. Position light carts with brakes set, outside the taxiway line and lights aimed downwards to prevent pilot disorientation/flash blindness.

5.1.15.6.1.7. Perform maintenance and servicing at the direction of the production superintendent, with “Red ball” maintenance procedures in effect.

5.1.15.6.2. De-arming specifics:

5.1.15.6.2.1. When aircraft arrive in the de-arm area, the de-arm crew will perform a thorough inspection of all munitions to ensure no armed/unsafe condition exist. If a condition is found that the arm/de-arm crew is uncertain about, they will request assistance from at a minimum a 7 skill level weapons supervisor. Immediately notify the MOC if munitions cannot be safed, and evacuate the area. Do not reenter until Explosive Ordnance Disposal (EOD) has remedied the situation.

5.1.15.6.2.2. All tactical aircraft will be de-armed/hot brake checked prior to proceeding into mass parking area.

5.1.15.6.2.3. F-16 only: De-arm on taxiway Alpha; heading 310 degrees, or south of taxiway Bravo on Romeo row when no aircraft are on Sierra row for aircraft landing runway 31, taxiway Echo; heading 130 degrees for aircraft landing runway 13. Taxiway Foxtrot; headings 130-220 degrees, just south of taxiway Delta is an alternate F-16 de-arming area.

5.1.15.6.2.4. A/OA-10 only: De-arm on taxiway Charlie; heading 310 degrees, for aircraft landing both runway 31 and 13. Taxiway Foxtrot; heading 130-220 degrees, just north of taxiway Delta is an alternate A/OA-10 de-arming area.

5.1.15.6.2.5. Aircraft de-arming personnel will be in place thirty minutes prior to first land time.

5.1.15.6.2.6. F-16 only: An aircraft boarding ladder will be available in the de-arming inspection area.

5.1.15.6.2.7. Ground crews will use light carts during hours of darkness. Position light carts with brakes set, outside the taxiway line and lights aimed downwards to prevent pilot disorientation/flash blindness.

5.1.15.7. (Added) Emergency Procedures (refer to **Attachment 11 (Added)** and **Attachment 12 (Added)**).

5.1.15.7.1. Hung free-fall ordnance. Ordnance that fails to release or jettison due to a system malfunction when properly commanded by the pilot. **NOTE:** For munitions sustaining damage during flight e.g., bird strike, hail storm, etc., apply hung free-fall ordnance criteria.

5.1.15.7.1.1. Recover aircraft in the normal de-arm area. The de-arm crew will perform a thorough inspection of all munitions to ensure no armed or unsafe condition exists. If a condition is found that the de-arm crew is uncertain about, they will request assistance from as a minimum a 7 skill level weapons supervisor. If munitions are unsafe, notify the MOC immediately and evacuate the area. Do not reenter area until all munitions have been safed by EOD. If all munitions can be safed and pinned, allow the aircraft to taxi back to parking spot.

5.1.15.7.1.2. When the inspection of an aircraft reveals a munition hanging by one lug, after safing all other munitions, the MHU-194/E (MOLT), MJ-1, or MHU-83/E will be utilized to attempt to lock the bomb back into the rack. If the munition cannot be locked back into rack, then a fully qualified/certified weapons load crew will remove the munition.

5.1.15.7.2. Hung forward-firing ordnance. Ordnance that fails to launch, fire, or jettison when properly commanded by the pilot.

5.1.15.7.2.1. Recovery will be at taxiway Echo. Park aircraft in de-arm slot nearest the runway; heading 130 degrees, if available. Avoid pointing aircraft at other aircraft, structures, or personnel. If de-arm crew is unsuccessful at safing the forward firing ordnance, the aircraft will be chocked and shut down. **WARNING:** On AGM-65 missiles, the possibility exists of fuselage door blown from missile within 10-40 minutes after activation. Fuselage door will give off toxic fumes and cadmium dust. **WARNING:** AGM-65 missiles that fail to launch when commanded will have fuselage door checked for evidence of battery activation. In the event of an activated battery, immediately evacuate all personnel a minimum of 15 feet and notify EOD to render battery safe. AGM-65 missiles motor igniter cables will be disconnected, all safety pins installed at taxiway Echo, chocked, and shut down. The area will be evacuated immediately and remain so until EOD renders the munition(s) safe for downloading.

5.1.15.7.2.2. SUU-25:

5.1.15.7.2.2.1. During de-arm procedures the SUU-25 dispenser will be inspected for any broken, cracked or missing forward retaining shear pins on any tube still containing a live LUU-1 or LUU-2 flare.

5.1.15.7.2.2.2. When a broken or missing forward shear pin is discovered, the de-arm crew will use a flashlight to look down the tube and inspect the flare for damage, and initiate a ground emergency if flare damage is discovered. Do not reenter the area until EOD has safed the pod/flare.

5.1.15.7.2.2.3. When no damage to the flare is evident, the flare will be considered unsecured versus unsafe. The load crew will then use a BSU-49 air lanyard pin, diaper pin style only, and pin-up the rear flipper on the pod. Taxi the aircraft back to the spot to download the pod. Place the pod on the hung SUU-25 trailer and transport it to gun berm for EOD involvement.

5.1.15.7.2.2.4. If the shear pin is still intact and serviceable, the flare is not hung regardless of whether the pilot attempted to fire it or not. Instead, treat the incident as a system malfunction and apply normal download procedures. Turn the pod into munitions for repair at the earliest opportunity.

5.1.15.7.2.3. LAU-131:

5.1.15.7.2.3.1. The aircraft will taxi to the de-arm area on taxiway Echo. The de-arm crew will inspect the rockets for evidence of motor firing, broken inner rocket seal, or unsecured rockets that have slid forward of the LAU-131 detent, and have become unsecured.

5.1.15.7.2.3.1.1. If any conditions from above are met, a ground emergency will be declared and EOD personnel will respond. If none of these conditions exist, it is a system malfunction, with no ground emergency declared.

5.1.15.7.2.4. ALE-40/47 Chaff/Flare:

5.1.15.7.2.4.1. At the de-arm area, flare modules will be inspected for partially ejected flares, or flares with damaged end caps, and if conditions are met, declare a ground emergency and evacuate area as directed by the fire chief. EOD will respond to safe system and download flares, as required.

5.1.15.7.2.5. Unsafe/System Stoppage/Jammed Gun (M61A1): SEE para **22.117.39.** Impoundment Procedures.

5.1.15.7.2.5.1. Only by highly knowledgeable and experienced personnel as designated by 354 MXS/LGM, will attempt to safe the gun if the lock/un-lock firing cam and or safing cam is broken or missing.

5.1.15.7.2.5.2. Recovery will be at taxiway Echo. Park in de-arm slot nearest the runway (heading 130 degrees), if available. The MOC will notify the weapons expediter and armament maintenance section personnel of all in-flight emergencies involving the gun. The weapons expediter will dispatch personnel to install safety pins, and attempt to clear the gun. **WARNING:** Personnel will not attempt to clear rounds from the gun when system stoppage (jam) occurred in flight. Direct the aircraft to the gun berm, if the crew cannot pin the gun, or suspect there are live rounds in the gun. **NOTE:** Use the gun berm if possible, even if it requires removing an aircraft (non-jammed gun) from the berm. In a situation where two aircraft have jammed guns or an aircraft is on the berm and cannot be moved, the OG/CC or designated representative may direct that taxiway Echo de-arm area be used to clear/safe a jammed gun. (When hot gun operations are scheduled, the designated de-arm crew from each FS will perform a FOD inspection of the gun berm and Echo de-arm area prior to the landing of the first scheduled sortie.) The de-arm crew will also ensure proper fire fighting equipment is present at each location. Weapons and TAMS expediters in each FS will be prepared with necessary tool/equipment/personnel to respond to any hung/jammed gun scenario.

5.1.15.7.2.5.3. If an aircraft is returning with a suspected gun jam, verify with pilot whether the gun had system stoppage (jam) in-flight. De-arm personnel will attempt to install the gun safety pin and verify no rounds are in the firing cam. If the gun pin can be installed and gun verified clear, return aircraft to parking area. If unsuccessful, direct the pilot to taxi the aircraft to the gun berm and shut down to be electrically and mechanically safed to the maximum extent possible. If clear cannot be verified, download all

live munitions first, if applicable, and then continue with gun clearing maintenance in accordance with TO 1F-16CG-2-94JG-50-1.

5.1.15.7.2.5.4. Gun system sudden stoppages that occur during firing require the entire gun system removed for an in-shop inspection.

5.1.15.7.2.5.5. During normal de-arm operations, if the gun cannot be pinned or suspected live rounds are in a gun that cannot be cleared, the pilot will be directed to declare a ground emergency and taxi the aircraft to the gun berm. The de-arm crew will notify the MOC as soon as possible of the unsafe/jammed gun. Download all live munitions first, if applicable, and then continue with gun clearing maintenance.

5.1.15.7.2.5.6. If a gun should jam during loading operations; the weapons load crew will perform the required maintenance for clearing the gun in accordance with TO 1F-16CG-2-94JG-50-1. If personnel are unable to clear the gun, call armament maintenance section personnel for assistance. 18 FS Weapons maintenance personnel may remove the gun system or necessary components if required to facilitate clearing operations.

5.1.15.7.2.6. Unsafe/System Stoppage/Jam Gun (GAU-8A). SEE para **22.117.39.** Impoundment Procedures.

5.1.15.7.2.6.1. Only by highly knowledgeable and experienced personnel as designated by 354 MXS/LGM, will attempt to safe the gun if the lock/un-lock firing cam and or safing cam is broken or missing.

5.1.15.7.2.6.2. Recovery will be at taxiway Echo. Park in de-arm slot nearest the runway (heading 130 degrees), if available. The MOC will notify the weapons expediter and armament maintenance section personnel of all in-flight emergencies involving the gun. The weapons expediter will dispatch personnel to install safety pins, and attempt to clear the gun. A hot gun qualified weapons 7-level will supervise/perform all gun clearing operations. The hot gun supervisor will know the gun system status (e.g., is the gun jammed, and are there live rounds in the gun) before attempting maintenance. **WARNING:** Personnel will not attempt to clear rounds from the gun when system stoppage (jam) occurred in flight. Direct the aircraft to the gun berm, if the crew cannot pin the gun, or suspect there are live rounds in the gun. **NOTE:** Use the gun berm if possible, even if it requires removing an aircraft (non-jammed gun) from the berm. In a situation where two aircraft have jammed guns or an aircraft is on the berm and cannot be moved, the OG/CC or designated representative may direct that taxiway Echo de-arm area be used to clear/safe a jammed gun.

5.1.15.7.2.6.3. Verify with pilot whether the gun had system stoppage (jam) in flight.

5.1.15.7.2.6.4. If pilot verifies that no system stoppage occurred in-flight and has an UNSAFE GUN LIGHT, pin the gun and attempt to clear any live rounds out of the gun by manually hand-cranking gun in reverse direction only. If the gun cannot be pinned or live rounds cleared out of the gun, inform the pilot to taxi to the gun berm for shutdown. If the gun pin can be installed and gun verified clear, return aircraft to parking area. Armament maintenance section personnel will clear rounds or remove gun, as applicable.

5.1.15.7.2.6.5. During clearing operations, personnel will not rotate the gun without the gun safing pin installed, if gun safing pin cannot be installed, reference TO 1A-10A-2-94JG-6, section 5.

5.1.15.7.2.6.6. Personnel will not attempt to disassemble any major gun assembly to gain access to live rounds unless specified in TOs 1A-10A-2-94JG-6 and 11W1-7-12-2, if jammed to the point that live rounds cannot be taken out by normal methods.

5.1.15.7.2.6.7. Do not use hydraulic or electrical power to clear an unsafe gun.

5.1.15.7.2.6.8. Gun system sudden stoppages that occur during firing require the entire gun system removed for an in-shop inspection.

5.1.15.7.2.6.9. If a gun should jam during loading operations; the weapons load crew will perform the required maintenance for clearing the gun in accordance with TO 1A-10A-2-94JG-6. If personnel are unable to clear the gun, call armament maintenance section personnel for assistance. 355 FS Weapons maintenance personnel may remove the gun system or necessary components if required to facilitate clearing operations.

5.1.15.7.2.7. Inadvertent release. The release of any store or munition from the aircraft not commanded by the pilot. Aircraft will recover in applicable de-arm area, and safed prior to taxiing into mass parking area. SEE para 22.116.1.15. Impoundment Procedures.

5.1.15.7.2.8. Multiple release. The release of more ordnance from the aircraft than commanded by the pilot. Aircraft will recover in applicable de-arm area, and safed prior to taxiing into mass parking area. . SEE para 22.116.1.15. Impoundment Procedures.

5.1.15.7.2.9. Hot brakes. If brake channels are glowing hot or smoke exists, do not approach brakes. Deflation of the main landing gear tire indicates melting of thermal plugs and hot brake condition. Notify the pilot and evacuate area immediately to a minimum safe of 300 feet and notify the MOC of the situation. The MOC will notify appropriate personnel to include the aircrew. Prepare to move the de-arm operation to an alternate area as designated by the SOF. MOC will relay to the de-arm crew and applicable production superintendent of alternate de-arm area.

5.1.15.8. (Added) **Ice FOD procedures.**

5.1.15.8.1. The EOR supervisor will visually inspect the aircraft for the presence of ice, paying particular attention to the engine intake lip area. If ice accumulation is severe the aircraft will be shutdown and towed back to mass parking area. (additional guidance refer to para **22.29.29.8.**)

5.1.15.8.2. F-16 & A/OA-10: If an aircraft had an inflight engine malfunction due to suspected icing and ice is present on the lip of the intake, chock and shutdown the aircraft in the de-arm area. Immediately notify applicable production superintendent for further instructions.

5.1.15.8.3. Ground crews will use light carts during hours of darkness. Position light carts with brakes set, outside the taxiway line and lights aimed downwards to prevent pilot disorientation/flash blindness.

5.1.15.9. (Added) Cope Thunder exercises (refer to **Attachment 11 (Added)** and **Attachment 12 (Added)**).

5.1.15.9.1. Units participating in Cope Thunder or other exercises under the control of the 353 CTS will adhere to this instruction with the following guidelines:

5.1.15.9.1.1. Perform arming; inert munitions only, and Radar Warning Receiver (RWR) system checks on taxiway Golf when using runway 31; south end, and perform de-arm in the chocks on the Cope Thunder ramp. **Exception:** De-arm all aircraft loaded with live and forward-firing munitions on taxiway Alpha/Echo. During exercise contingencies de-arm will be accomplished on taxiway Charlie for A/OA-10 aircraft.

5.1.15.9.1.2. Perform arming in the chocks; inert munitions only, due to limited space on taxiway Alpha when using runway 13; north end, and perform de-arm on taxiway Golf. **Exception:** De-arm all aircraft loaded with live and forward-firing munitions on taxiway Alpha/Echo. RWR checks will be coordinated with 353 CTS Avionics section.

5.1.15.9.1.2.1. De-arm procedures for 1.3 and 1.4 munitions may be accomplished in chocks for aircraft participating in 353CTS sponsored exercises with 353CTS/CC, 354FW/SEW and 354FW OG/CC approval. Initiator for approval will be the 353CTS/LGW.

5.1.15.9.1.3. Hung free-fall ordinance. See paragraph **5.1.15.7.1.**

5.1.15.9.1.4. Hung forward-firing ordinance. See paragraph **5.1.15.7.2.**

5.1.15.9.1.5. Unsafe/system stoppage (jam) gun. See paragraph **5.1.15.7.2.5.**

5.1.15.10. (Added) EOR arm/de-arm equipment.

5.1.15.10.1. Minimum equipment requirement listing for EOR arm/de-arm:

5.1.15.10.1.1. One 150 lb. Halon flight line extinguisher in the immediate vicinity.

5.1.15.10.1.2. Wands, as required.

5.1.15.10.1.3. Flashlights for each team member, as required.

5.1.15.10.1.4. Reflective vest/belts.

5.1.15.10.1.5. Rope chocks or authorized equivalent.

5.1.15.10.1.6. Radio.

5.1.15.10.1.7. Headsets and ground communication cord.

5.1.15.10.1.8. Double hearing protection.

5.1.15.10.1.9. Applicable checklists/workcards.

5.1.15.10.1.10. Applicable portion of this instruction marked “For reference use only”.

5.1.15.10.1.11. When full-scale weapons are being flown with the intent to drop, a MOLT, MJ-1 or MHU-83/E will be present in the appropriate de-arm area.

5.1.15.10.1.12. One vehicle for emergencies.

5.1.15.10.1.13. EOR Consolidated Tool Kit (CTK).

5.1.15.10.2. Any equipment that becomes unserviceable will be replaced ASAP.

5.1.26.1. (Added) **WS, 355 FS Weapons Section, 18 FS Weapons Section and 354 MXS Armament Flight** will provide monthly equipment, tester and AME availability, weapons release rates, weapons related malfunctions, and manning information to wing weapons manager no later than the 3rd of each month.

5.2.2.12. See paragraph 5.22.2.1.

5.6.2.1. (Added) **Weapons Load Training (WLT) aircraft requirement.**

5.6.2.1.1. Schedule aircraft load crew training on a weekly basis. FS’s will perform scheduled aircraft change outs after the last load training shift of the week, and prior to the first load training shift of the following week. Any other aircraft change outs will be coordinated through the WS.

5.6.2.1.2. 18 FS Sortie Generation Flight:

5.6.2.1.2.1. Ensures aircraft 781 series forms accompany the aircraft.

5.6.2.1.2.2. Ensures aircraft is safed for maintenance in accordance with TO 1F-16CG-2-10JG-00-1.

5.6.2.1.2.3. Ensures serviceable aircraft boarding ladder accompanies aircraft.

5.6.2.1.2.4. Ensures F-16 aircraft hangaring checklist is complete, see **Attachment 6 (Added)**.

5.6.2.1.2.5. Ensures all weapons release and gun systems are fully operational.

5.6.2.1.2.6. Ensures all exterior aircraft panels installed to the maximum extent possible.

5.6.2.1.2.7. Ensures aircraft intercommunications system is operational.

5.6.2.1.2.8. Ensures aircraft can accept external power and cooling air.

5.6.2.1.2.9. Ensures aircraft ejection seat is serviceable.

5.6.2.1.2.10. Ensures minimum covers are installed in accordance with –6 TOs.

5.6.2.1.2.11. Ensures aircraft is configured with two 370-gallon wing tanks or a 300-gallon centerline tank, and sufficiently defueled as to prevent any leaks caused by temperature changes or overflow from additional weight on one wing during WLT.

5.6.2.1.2.12. Ensures station 3 and 7 armament pylons are installed with cart retainers sealed, station 1 and 9 LAU-129's are installed, and station 2 and 8 AIM-9 missile launchers are installed.

5.6.2.1.2.13. Ensures chaff and flare stations have empty modules or cover panels installed.

5.6.2.1.2.14. Ensures aircraft gun system is empty.

5.6.2.1.2.15. Ensures final position of aircraft rests on towlines.

5.6.2.1.2.16. Ensures hangar doors are closed.

5.6.2.1.3. 355 FS Sortie Generation Flight:

5.6.2.1.3.1. Ensures aircraft 781 series forms accompany the aircraft.

5.6.2.1.3.2. Ensures aircraft is safed for maintenance in accordance with TO 1A-10A-2-4JG-1.

5.6.2.1.3.3. Ensure serviceable ladder door and boarding ladder.

5.6.2.1.3.4. Ensures A-10 aircraft hangaring checklist is complete, see **Attachment 6 (Added)**.

5.6.2.1.3.5. Ensures all weapons release and gun systems are fully operational.

5.6.2.1.3.6. Ensures all exterior aircraft panels installed.

5.6.2.1.3.7. Ensures aircraft intercommunications system is operational.

5.6.2.1.3.8. Ensures aircraft can accept external power and cooling air.

5.6.2.1.3.9. Ensures aircraft ejection seat is serviceable.

5.6.2.1.3.10. Ensures minimum covers are installed in accordance with –6 TOs.

5.6.2.1.3.11. Ensures armament pylons will have cart retainers sealed and 2 LAU-105 launchers on station 1 or 11.

5.6.2.1.3.12. Ensures chaff and flare stations will have empty modules or panels installed.

5.6.2.1.3.13. Ensures aircraft gun system is empty.

5.6.2.1.3.14. Ensures final position of aircraft rests on towlines.

5.6.2.1.3.15. Ensures hangar doors are closed.

5.6.2.2. (Added) WLT will be the only scheduled maintenance performed on the aircraft. Emergency action Time Compliance Technical Orders (TCTO), One Time Inspections (OTI), CANNs, and other exceptions must be coordinated with the WS superintendent prior to units performing any maintenance.

5.6.2.3. (Added) Any exceptions to normal aircraft configuration e.g., canopy removed, engine removed, etc., must be approved by the WS superintendent prior to positioning the aircraft in hangar.

5.17.1. (Added) WS is the wing focal point for armament system servicing on transient aircraft. They will provide on-equipment servicing, technical data, and training, as necessary. WS will coordinate with transient alert to procure applicable safety devices in sufficient quantities to support Mission Design Series (MDS) aircraft known to transit Eielson AFB. Transient alert will coordinate with WS anytime a transient aircraft requires munitions arming/de-arming or loading/unloading.

5.17.2. (Added) The LSC, SLC, and any F-16C/D or A/OA-10A weapons load crew assigned to the 354 FW may arm, de-arm, load, and unload any munition/equipment for which they are certified or qualified on transient F-16C/D or A/OA-10A aircraft.

5.17.3. (Added) The LSC and SLC crews may arm, de-arm, load, and unload transient F-15C/D/E aircraft subject to the following restrictions.

5.17.3.1. The LSC and SLC team chiefs from Eielson AFB will attend semiannual training at Elmendorf AFB on F-15 aircraft. This training consists of:

5.17.3.1.1. Technical data familiarization.

5.17.3.1.2. Aircraft familiarization.

5.17.3.1.3. Suspension equipment familiarization.

5.17.3.1.4. Munitions preparation procedures.

5.17.3.1.5. Arming, de-arming, loading, and unloading of applicable munitions to include 20mm ammunition.

5.17.3.2. 354 FW weapons personnel will not perform any procedures requiring functional/stray voltage checks on the F-15 aircraft due to the fact that these checks require an A/E24T-199, armament circuits' preload test set. Personnel may arm the F-15 aircraft with impulse cartridges, as long as the 30-day functional check is current. Contact the owning F-15 unit if maintenance and/or reconfiguration are required on the aircraft armament system.

5.17.3.3. Any munition requiring special tools or equipment not available on station may not be armed, de-armed, loaded, or unloaded, as applicable.

5.17.3.4. Any munition for which the LSC/SLC is not currently certified or qualified, or for which they have not received familiarization training, may be armed, de-armed, or unloaded only when directed by the OG/CC. In all cases appropriate technical data will be available and the aircrew should be available to brief munition peculiarities.

5.17.4. (Added) Arming, de-arming, or unloading of aircraft other than those MDS listed above will be accomplished by the LSC/SLC only when directed by the OG/CC. The aircrew must be available to brief aircraft/munitions peculiarities, and appropriate technical data will be available.

5.17.5. (Added) Impulse cartridges removed from transient aircraft will be stored in one of the FS's cartridge storage lockers, coordinated by WS. Place these cartridges in a container identified as "Transient

aircraft carts." WS will notify the applicable weapons section chief or expediter when storing transient aircraft cartridges in the cart locker.

Table 5.5. (Added) F-16 CG Load Time Standards

Munitions	**PACAF** Single/Add Store includes wiring/ fusing and full functional check	**354 FW** Single/Add Store includes wiring/ fusing and full functional check
AIM-9	30 min / 7 min	25 min / 5 min
AGM-65 (LAU-117)	35 min / 15 min	35 min / 15 min
AGM-65 (LAU-88 preloaded)	45 min	45 min / 15 min
AGM-65 (LAU-88 slide)	50 min	50 min / 15 min
CBU-87/89/97	35 min / 7 min	30 min / 5 min
MK-82/84AIR & LD	35 min / 7 min	30 min / 5 min
AIM-120	35 min / 7 min	30 min / 7 min
GBU-10/12	35 min / 15 min	35 min / 15 min
GBU-24	35 min / 15 min	35 min / 15 min
GBU-10	35 min / 15 min	35 min / 15 min
ALE-50	20 min / 7 min	20 min / 5 min
2.75 ROCKETS	35 min / 7 min*	30 min / 7 min*
CHAFF / FLARE	10 min / 5 min	7 min / 3 min
20MM AMMO	30 min	25 min

*Time is for seven rockets; Additional time is for another seven rockets.

LOADING NOTES:

1. All loads include a full functional check and a full munitions preparation (Fuse and Wire during the load).

2. Subtract 5 Minutes for loads performed without functional checks; except AIM-9 and AGM-65 subtract 10 minutes.

3. Subtract 5 Minutes for Pre-fused Munitions.

4. Add 15 minutes for loads performed in CWDE.

5. Time Standards for Integrated loads are as follows: 80% of cumulative time. (example-1x MK-84 / 30 min. + 1x AIM-9 / 25 min. =55 min. x 80%= 44 minutes Integrated)

Table 5.7. (Added) A/OA-10A Load Time Standards

Munitions	**PACAF** Single/Add Store includes wiring/ fusing and full functional check	354 FW Single/Add Store includes wiring/ fusing and full functional check
AIM-9 L/M	30 min / 7 min	25 min / 5 min
AGM-65 (LAU-117)	35 min / 15 min	35 min / 15 min
AGM-65 (LAU-88 preloaded)	45 min	45 min / 15 min
AGM-65 (LAU-88 slide)	50 min	50 min / 15 min
CBU-87/89/97	35 min / 7 min	30 min / 5 min
MK-82AIR/LD MK-84LD / M129	35 min / 7 min	30 min / 5 min
GBU-12	35 min / 7 min	35 min / 5 min
SUU-25	30 min / 7 min	25 min / 5 min
2.75 ROCKETS	35 min / 7 min*	30 min / 7 min*
CHAFF / FLARE	20 min / 5 min**	20 min / 5 min**

* Time is for seven rockets; Additional time is for another seven rockets.

** Time is for one magazine with stray volt check

LOADING NOTES:

1. All loads include a full functional check or stray voltage check, and a full munitions preparation (Fuse and Wire during the load).

2. Subtract 5 Minutes for loads that Functional checks are not performed.

3. Subtract 5 Minutes for Pre-fused Munitions.

4. Add 15 Minutes when loading in CWDE.

5. Time Standards for Integrated loads are as follows: 80% of cumulative time.(example-1x MK-84 / 30 min. + 1x AIM-9 / 25 min. =55 min. x 80%= 44 minutes Integrated)

6.2. **Current Operations Flight**

6.2.6.1. (Added) Develop a cover sheet for each generation/regeneration flow plan indicating its effective date. Ensure final coordination with all affected agencies is complete. **NOTE:** Dated flow plans will be in effect until revised or rewritten and coordinated though GP/CCs, squadron commander and/or squadron maintenance officer/superintendent, lead production superintendent, munitions control, and fuels control center.

6.2.6.2. (Added) Ensure flow plans are coordinated with all affected agencies and not changed without prior coordination. **NOTE:** When actual start/stop time fields are filled in the generation/regeneration flow plans (AF Form 2408s) are classified as "Secret". Otherwise, all flow plan forms will be "For official use only".

6.2.6.3. (Added) Submit flow plans to OG/CC for approval and publishing.

6.2.6.4. (Added) Review each finalized flow plan and load into classified system.

6.2.6.5. (Added) Ensure correct flow plan version is coordinated/implemented through the MOC during generation and regeneration taskings.

6.2.6.6. (Added) Maintain the most current copy of generation/regeneration flow plan for all squadrons, to be used in case of computer outage.

6.2.7. Use the following forms during Serene Byte/Pacer Ware implementation:

6.2.7.1. (Added) 354FW Form 025, **Electronic Warfare Integrated Reprogramming Checklist**.

6.2.7.2. (Added) 354FW Form 026, **Serene Byte/Pacer Checklist**.

6.3.4.1. (Added) OSS PS&D section:

6.3.4.1.1. Serves as the single point of contact for reporting the wing's annual flying hour program to HQ PACAF/DOT. Officially reports flying hour utilization using CAMS. **NOTE:** The source document for aircraft flying hours is the AFTO Form 781. FS debriefing and FS resource managers are jointly responsible for the accuracy of utilization data as recorded on the AFTO Form 781 and input into CAMS.

6.3.4.1.2. Monitors the wing's annual flying hour program via CAMS and recommend adjustments when goals are greatly exceeded or unrealistic. Continuously keeps commanders informed of status of the wing flying hour program.

6.3.4.1.3. Coordinates with CAMS/Data Base Manager (DBM) via E-Mail Accomplishment Utilization Report (AUR) to the appropriate squadron. **NOTE:** Both the 18 FS and 355 FS will use AUR to verify previous day's utilization data entered into CAMS.

6.3.4.1.4. Coordinates with CAMS/DBM monthly to run AUR, *NLT* the 3d calendar day of the month. Both the 18 FS and 355 FS will use AUR to verify monthly utilization data entered into CAMS. **NOTE:** Produce final AUR "C and B's" on the 5th calendar day of each month to report the previous month's utilization data to HQ PACAF/ DOTT via e-mail. Maintain copy of AUR "C and B" on file for one year in accordance with AFM 37-139, *Records Disposition Schedule.*

6.3.4.1.5. Coordinates wing's flying hour program changes to HQ PACAF/DOTT, as directed.

6.3.4.2. (Added) FS operations officer:

6.3.4.2.1. Ensures aircrew members FAX completed AFTO Form 781 to FS operations resource managers/debrief personnel upon delivery of an aircraft to a depot facility or during off station/cross-country sorties. If a FAX is not available, call the information in ASAP.

6.3.4.3. (Added) FS operations resource managers:

6.3.4.3.1. Verifies daily and monthly all information on AFTO Form 781 received from maintenance debriefing is correct. Corrects existing discrepancies and extract pertinent data for input into the Air Force Operations Resource Management System (AFORMS). Maintains original AFTO Form 781s in accordance with AFM 37-139.

6.3.4.3.2. Validates daily the previous day's total hours and sorties flown. Uses the AFTO Form 781 as the source document. The CAMS AUR annotating all discrepancies found on the AUR. Gives/forwards one copy to the maintenance debriefing section and forwards validated AUR to OSS MDSA section ASAP, but *NLT the* end of the duty day. **NOTE:** It is imperative the utilization data on the AFTO Forms 781 match in CAMS and AFORMS.

6.3.4.3.3. Verifies weekly total cumulative hours and sorties with CAMS AUR. Forward a copy to OSS MDSA section ASAP.

6.3.4.3.4. Uses the AFTO Form 781 as the source document to verify the previous months total hours and sorties flown listed on the monthly AUR with maintenance debriefing *NLT* the 3rd calendar day of each month. Certifies the report and return it to OSS PS&D section *NLT* the next duty day.

6.3.4.4. (Added) FS debrief section:

6.3.4.4.1. Verifies the accuracy of the utilization data on the AFTO Form 781 received from aircrew and initials block 33.

6.3.4.4.2. Inputs flying hour data into CAMS in accordance with AFCSM21-565, volume 2. Forwards the initialed AFTO Forms 781 to FS operations resource manager after utilization data is input into CAMS. **NOTE:** If CAMS is down for an extended period, make a duplicate copy of the AF Form 781 and forward the original to FS operations. Identify and destroy duplicate AFTO Form 781 after entry into CAMS.

6.3.4.4.3. Verifies daily, the total hours and sorties flown for the previous day and total hours and sorties flown for the month with FS operations resource management personnel. Makes necessary correction in CAMS using the AUR, and notifies OSS MDSA section *NLT* close of business the following duty day.

6.3.4.4.4. Updates monthly, the CAMS using AUR "B" provided from the FS operations resource manager, correcting or loading flying hours and sorties for the previous month *NLT* the 3rd calendar day of each month, which will be reported by OSS PS&D section to HQ PACAF by the 5th calendar day of each month.

6.3.8.1. (Added) Serves as the focal point for all aircraft using the corrosion control facility and chairs the quarterly aircraft paint scheduling meeting.

6.3.16.1. (Added) Pre-dock inspection meeting procedures.

6.3.16.1.1. The squadron maintenance officer/superintendent will ensure as a minimum, the following individuals are in attendance at the pre-dock inspection meeting:

6.3.16.1.1.1. The phase section dock chief, production superintendent, aircraft section chief, DCC, supply/support, EM representative, and OS PS&D section.

6.3.16.1.2. OS PS&D section:

6.3.16.1.2.1. Uses an AF Form 2410, **Inspection/TCTO Planning Checklist**, as an aid in planning for, and conducting the pre-dock inspection meeting. Lists the pre-dock inspection meeting attendees in block 14 and any significant discussion items presented in the meeting. Lists additional specialist support tasks in block 15.

6.3.16.1.2.2. Incorporates all requirements against the aircraft into a work package prior to the meeting. Schedules all known requirements to include deferred discrepancies using CAMS screen 86, and transcribes the JCNs to the AF Form 2410.

6.3.16.1.2.3. Informs representatives of the inspection schedule, to include input/output dates, type or number of phase inspection due, TCTOs, Time Change Inspections (TCI), special inspections, deferred discrepancies, and any other special instructions.

6.3.16.1.2.4. For F-16 aircraft only. Provides the dock chief with an actual/approved configuration set-up data sheet, identifying those items out of configuration using CAMS screen 942. **NOTE:** The dock chief must visually check and verify all items identified as out of configuration.

6.3.16.1.2.5. For A-10 aircraft only. Provides the dock chief with Part/Serial Number (PSN) verification sheet and include any missing or questionable TCIs, as necessary.

6.3.16.1.2.6. Provides a completed copy of the AF Form 2410 with signatures to the dock chief and maintains a duplicate suspense copy, to be used as an aid in conducting the post-dock meeting.

6.3.16.1.3. Pre-dock inspection meeting attendees will inform OS PS&D of any limiting factors, which might affect the scheduled output date and provide possible solutions/recommendations. Attendees will sign block 14 of the AF Form 2410 to indicate acknowledgment of their responsibilities. Once signed, the completed AF Form 2410 is a contract between the phase inspection and OS PS&D sections.

6.3.16.2. (Added) Post-dock inspection meeting procedures.

6.3.16.2.1. Agencies attending the post-dock inspection meeting should be the same as those attending the pre-dock inspection meeting.

6.3.16.2.2. The dock chief:

6.3.16.2.2.1. Verifies completion of all inspection requirements and transcribe all open discrepancies to the active AFTO Form 781A and CAMS. Changes delivery destination of all parts ordered, yet not received during the inspection.

6.3.16.2.2.2. Ensures all automated events are complete in CAMS, and presents completed CAMS screen 122 printout of aircraft and engine phase events to OS PS&D section for filing.

6.3.16.2.2.3. Provides OS PS&D section with verified actual configuration set-up management data sheet (F-16), at the post-dock meeting.

6.3.16.2.2.4. Ensures the production superintendent is informed of all open/deferred discrepancies, and helps formulate a fix plan, as necessary.

6.3.16.2.2.5. Ensures all attendees sign the AF Form 2410 signifying phase inspection completion, with pertinent remarks, as applicable.

6.3.16.2.3. (Added) OS PS&D section:

6.3.16.2.3.1. Files completed work package, AF Form 2410, and computer-generated listing of completed on-line work orders and CAMS screen 123 snap shot in the affected aircraft jacket file.

6.3.16.2.3.2. Ensures owning work centers correct actual configuration set-up data sheet (F-16), or PSN information (A/OA-10) in CAMS.

6.3.18. SI, TCI, TCTO procedures. The following is a step-by-step instruction outlining procedures and requirements for Cartridge/Propellant Activated Device (CAD/PAD), survival kit and parachute, and standard TCI management on Block 40 F-16C/D and A/OA-10 aircraft. Refer to CAMS TRIC Code RII; screen # 904 menu, to inquire for a list of Generic Configuration Status and Accounting Subsystem (GCSAS) approved part numbers for Block 40 F-16C/D aircraft. The CAMS/DBM will ensure only per-

sonnel that have coordinated a suspense validation; TRIC QVR, authorization letter will be authorized to process suspense actions in CAMS. The validation letter must be coordinated through OSS PS&D section, who will ensure personnel gaining access to the required CAMS screens understand the importance of timely and accurate data processing. OSS PS&D section will perform periodic reviews of installed-on chains, and identify any errors or misconfigurations. Owning work center personnel will make corrections to the CAMS database, with OS PS&D section validation for accuracy. OS PS&D section will perform periodic reviews of the TRIC QVR to ensure work centers are processing their suspense actions in a timely manner.

6.3.18.1. (Added) Coordinates with HQ PACAF/LGMF and DBM on updates and corrections to the F-16C/D RII table for approved part numbers.

6.3.18.2. (Added) Provides CAMS training for PS&D related work center events, as required.

6.3.18.3. (Added) Ensures CAMS TRIC background products (PRA, TDI, JML, work center ELT, etc.) are provided to by work centers at least quarterly for use as working tools to ensure data accuracy.

6.3.18.4. (Added) Ensures TCI forecast requirements are in accordance with TO 00-20-9, *Forecasting Replacement Requirements for Selected Calendar and Hourly Time Change Items,* and this instruction.

6.3.18.5. (Added) Establishes job standard events for TCIs in accordance with applicable -6 and commodity technical orders.

6.3.18.6. (Added) Reviews CAMS GCSAS screen # 690 daily, for F-16 component errors and ensures correction, as required.

6.3.18.7. (Added) Assists OS PS&D section when established due-in for parts is past aircraft and equipment ground dates.

6.3.18.8. (Added) OS PS&D section:

6.3.18.8.1. Refines TCI quarterly forecast, monthly to include all TCIs *NLT* 45 days prior to the affected month.

6.3.18.8.2. Reviews weekly, Planning Requirements (PRA) background product to ensure data accuracy, and makes corrections, as necessary.

6.3.18.8.3. Reviews daily, all PSN installation data using CAMS screen 128, and validates all suspense(s).

6.3.18.8.4. Reviews CAMS/GCSAS screen 690 daily for F-16 aircraft component errors and contacts OSS PS&D section for proper solutions.

6.3.18.8.5. Informs the affected work center of missing or incorrectly loaded PSNs for correction.

6.3.18.8.6. Verifies accuracy of installed TCIs during phase, acceptance, and other major inspections through use of automated products.

6.3.18.8.7. Performs initial PSN item loads on newly assigned aircraft and on components changed at depot, except egress and life support TCIs.

6.3.18.8.8. Provides OS PS&D section with justification for emergency issue requests. Coordinates all justifications through the affected FS squadron maintenance officer/superintendent. **NOTE:** Due date extension requests to the applicable item manager should be submitted at least 30 days prior to aircraft grounding for non-availability of parts.

6.3.18.8.8.1. OS PS&D will schedule all Time Compliance Items.

6.3.18.9. (Added) Affected maintenance sections:

6.3.18.9.1. Updates scheduled/unscheduled time change replacements in CAMS.

6.3.18.9.2. Forwards installed component(s) new AFTO Form 95, if received, to OS PS&D section. Forwards removed component(s) old AFTO 95 with the part to the affected supply agency.

6.3.18.11. (Added) FS life support section:

6.3.18.11.1. Maintains CAMS data accuracy for survival kits and components, kit and chute installed locations, and corrects any detected errors.

6.3.18.11.2. Maintains an AFTO Form 338, **Survival Kit Record,** for each survival kit with PSN, lot number, DOM, DOI, inspection and time change due dates, and current installed location.

6.3.18.11.3. Provides TCI forecast information for all locking cord cutters (including spares) to OSS/OS PS&D sections in accordance with TO 00-20-9-1.

6.3.18.11.4. Loads, installs, and establishes time change and/or inspection intervals for each survival kit component installed or replaced using appropriate CAMS screens, and corrects errors, as necessary.

6.3.18.11.5. Verifies parachute and survival kit PSNs when removing and reinstalling these components to facilitate other Maintenance (FOM), and corrects CAMS information when errors are detected.

6.3.18.11.6. Reviews CAMS/GCSAS screen 690 daily, for F-16 aircraft component errors generated by shop remote identifications, contacts OS PS&D section for correct solutions, and provides new PSN information to OS PS&D section as suspense is validated.

6.3.18.12. (Added) Egress section:

6.3.18.12.1. Initiates and maintain current inventory of all egress TCIs by aircraft canopy and seat to include noun, PSN, lot number, Date of Manufacture (DOM), Date of Installation (DOI), due dates, and position.

6.3.18.12.2. Monitors monthly, egress item PRA and corrects errors, as required.

6.3.18.12.3. Performs hands-on inventory of all CAD/PAD items every 36 months as well as during aircraft acceptance inspection (in conjunction with seat and canopy 36-month inspection).

6.3.18.12.4. Loads, installs, and establishes time change or inspection interval for each replacement PSN item, using the Job Standard (JST) number (DOM, DOI) that comes due first.

6.3.18.12.5. Reviews CAMS screen 690 daily for GCSAS errors on F-16 aircraft components created from shop remote identifications, and contacts OS PS&D section for correct resolutions.

6.3.18.12.6. Coordinates with OS PS&D section for any removal and replacements of time change items that were damaged or found defective.

6.3.18.12.7. Provides a CAD/PAD verification sheet to OS PS&D section for updates to egress configuration TCI data.

6.3.18.13. (Added) Survival equipment section:

6.3.18.13.1. Maintains AFTO Form 392, **Drogue Parachute Repack, Inspection and Component Record,** or equivalent on each parachute with PSN, lot number, DOM, DOI, due date, and installed position.

Loads, installs, and establishes time change and/or inspection intervals for each drogue parachute component installed or replaced using appropriate CAMS screens.

6.3.18.13.3. Performs hands-on inventory of all drogue parachute components when they are taken to the shop for maintenance, and correct errors detected in CAMS

6.3.18.13.4. Verifies PSN data on each drogue chute prior to repacking and corrects CAMS errors, as required.

6.3.18.13.5. Provides time change forecast requirements for all drogue parachute components (including spares) to OSS PS&D section in accordance with TO 00-20-9 and 00-20-9-1.

6.3.19.2. JMLs for off-equipment items procedures: 354 MXS Owning Work Centers (OWC) will maintain Job Standard Master Listing (JML) for their assigned equipment.

6.3.19.2.1. (Added) The following PS&D sections will assist OWCs in loading and establishing equipment requirements into CAMS:

6.3.19.2.1.1. 354 OSS/OSCP (aircraft related items e.g., fuel, hydraulic, electro/environmental, egress shops, etc.).

6.3.19.2.1.2. 354 LSS/EM (engines).

6.3.19.2.1.3. 354 MXS/LGMR (armament).

6.3.19.2.1.4. 354 MXS/LGMTA (PMEL).

6.3.19.2.1.5. 354 MXS/LGMG (aerospace ground equipment).

6.3.19.2.2. (Added) 354 MXS OWCs:

6.3.19.2.2.1. Maintains all required inspection, time change items, and Job Flow Packages (JFP) in accordance with applicable technical directives (e.g., engine removal/installation packages, wheel and brake removal/replacement packages).

6.3.19.2.2.2. Loads and establishes new equipment items into CAMS within 5 duty days of receipt.

6.3.19.2.2.3. Contacts QA and applicable PS&D section when CAMS JFP or JST requires update.

6.3.19.2.2.4. Maintains a current copy of JML on file.

6.3.19.2.2.5. Schedules JCN in CAMS using established job standards for assigned equipment.

6.3.19.2.3. (Added) OSS PS&D section:

6.3.19.2.3.1. Supports all MXS back shops when not assigned with a 2R1X1 maintenance scheduler.

6.3.19.2.3.2. Loads, changes, deletes JFP and JSTs for required back shop maintenance actions as changes occur.

6.3.19.2.3.3. Ensures monthly JML, CAMS background report, is ran by CAMS database manager and distributed by 5th of every month.

6.3.26.1. As time changes, TCTOs, and recurring inspections occur, all maintenance scheduling sections will manually annotate changes on paper copies of CAMS products until new products are printed. For OS PS&D, PRAs, TDIs and TSS products will reflect real-time data as suspenses are cleared.

6.5.1. Procedures for manual input of JCNs during CAMS downtime and deployment processing can be found in paragraphs 6.18.3., and 6.19.18.1.

6.5.2. (Added) Supervision at all levels will comply with JCN assignment rules in accordance TO 00-20-2, section IV and paragraph 4-2.

6.5.3. (Added) The JCN will consist of nine characters with "M" as the first character and the last digit of the year as the second character. The third through fifth character will be the Julian date. Assign the last four digits in accordance with **Attachment 7 (Added)**.

6.5.4. (Added) Use JCNs to record support general and other recurring tasks. All agencies requiring JCNs will use only those JCNs assigned to their area of responsibility.

6.7.1. Refer to paragraphs 6.3.16., **6.3.18.**, and 6.11.4., for aircraft configuration management procedures.

6.7.3. (Added) **Documents review and validation procedures specifics.**

6.7.3.1. At a minimum, the following individuals will review the squadron developed coordination sheet: DCC/assistant, aircraft section chief, OS PS&D section, supply/support section, and the sortie generation flight chief/commander.

6.7.3.2. Use Automated Records Check (ARC) during prolonged CAMS downtime.

6.7.3.3. Document Reviews (DR) should follow established squadron routing procedures.

6.7.3.4. Accomplish aircraft document reviews and validations prior to aircraft deploying, transferring, or acceptance of assigned aircraft.

6.7.3.5. During deployments where no OS PS&D section is present, the aircraft section chief will assume verification procedures, update CAMS, and initial off OS PS&D block of AFTO Form 781A.

6.7.3.5.1. During short (less than 14 day) deployments where there is no OS PS&D personnel and CAMS is not available; records checks will be accomplished before departure.

6.7.3.6. OS PS&D section:

6.7.3.6.1. Schedules aircraft DR in CAMS and in the weekly maintenance plan.

6.7.3.6.2. Provides the following on-line CAMS screens to the aircraft section chief as a complete package: FS developed coordination cover/sign off sheet; CAMS 380/documented maintenance list, option 6 with supply data; CAMS 525/TCTO data code inquiry, option 4; CAMS 700/operating time print; CAMS 726/shop equipment operational inquiry, options U & H for prior 14 day time period; CAMS 701/insp./TCI/TCTO forecast, options D & H; and CAMS 713/on-line engine inquiry, option 1.

6.7.3.6.3. Reviews the AFTO Form 781F/A/J/K and on-line printouts, or ARC to ensure all entries match CAMS. 6.7.3.6.4. Contacts Engine Management (EM) section if disparity exists between CAMS and aircraft records.

6.7.3.6.5. Annotates differences in CAMS versus aircraft forms on the CAMS on-line print out.

6.7.3.6.6. Ensures FS developed coordination cover/sign off sheet is completed. **NOTE:** CAMS GCSAS screen # 690 will be reviewed when F-16 aircraft component errors are found, and corrected as necessary.

6.7.3.6.7. Completes the Work Center Event (WCE) to the scheduled event document. Reviews work order using CAMS screens 907, 914 and AFTO Form 781A entry.

6.7.3.6.8. Files the completed DR package in the applicable aircraft jacket file until replaced by the next document review.

6.7.3.7. (Added) The DCC or assistant:

6.7.3.7.1. Initiates aircraft DR by reviewing AFTO Form 781 series documents for compliance with TO 00-20-5, *Aerospace Vehicle Inspection and Documentation.*

6.7.3.7.2. Makes the following AFTO Form 781A entry in the aircraft forms using a red dash: "14 or 7 day aircraft documents review due", depending on the circumstance.

6.7.3.7.3. Hand carries the aircraft forms and CAMS products listed in **6.7.3.6.2.**, to the supply/support section and OS PS&D section for DR accomplishment.

6.7.3.7.4. Completes the WCE to the scheduled JCN. Reviews the work order using CAMS screens 907, 914, and AFTO Form 781A entry in accordance with TO 00-20-2.

6.7.3.7.5. Ensures aircraft time, engine serial number(s), deferred discrepancy event identification with narratives, supply document numbers, and inspection/time change due dates correspond with CAMS using following on-line CAMS screens: 700, 713, 701, 514, 525, and 380 using option 6 requesting supply data or ARC.

6.7.3.7.6. F-16 only. Verifies aircraft meets configuration management requirements by utilizing CAMS screen 990 and rectifies items identified as missing.

6.7.3.7.7. Calls Oil Analysis Program (OAP) lab to ensure aircraft engine(s) times correspond with their records.

6.7.3.7.8. Ensures deferred event identification numbers and discrepancies listed on AFTO Form 781A/781K agree with those listed on CAMS products.

6.7.3.7.9. Signs off the AFTO Form 781A entry when all portions of DR is completed.

6.7.3.7.10. Returns completed copy of ARC or on-line products to OS PS&D section for filing.

6.7.3.8. (Added) Supply/support section:

6.7.3.8.1. Ensures all aircraft discrepancies requiring parts in the AFTO 781A/K have a valid due-out supply document number and matches the CAMS 380 screen data.

6.7.3.8.2. Notifies the crew chief of on-hand parts in TNB.

6.7.3.8.3. Changes the aircraft discrepancy deferred code in CAMS to Awaiting Maintenance (AWM) status for parts received.

6.7.3.8.4. Signs coversheet completing supply/support portion of DR.

6.8.2.1. (Added) OS PS&D section will send with the aircraft, the complete jacket file when deploying for 30 days or more. The jacket file will also include all historical documents and TRIC TRE, PRA, ARC, and TRIC SHD CAMS products. For deployments less than 30 days follow guidance in paragraph 6.8.2.

6.8.2.2. (Added) Ensure all work centers deliver AFTO Form 95s for new parts to OS PS&D. OS PS&D section will be the focal point for compiling aircraft historical records from all applicable maintenance activities ensure copies of originals are sent with the deploying aircraft and annotated on DD Form 290.

6.8.2.2.1. Ensure original AFTO 95 historical documents are maintained until aircraft returns.

6.8.2.3. (Added) Ensure original documents are sent with the aircraft for Programmed Depot Maintenance (PDM) inputs.

6.8.2.3.1. Upon aircraft return, inspect aircraft jacket file and annotate local checklist coversheet. Return all decentralized historical records to the applicable maintenance activity.

6.8.3.1. (Added) In the event of a "Class A" flight mishap involving an aircraft assigned to the 354 FW, the command post will contact the CAMS/DBM and request applicable aircraft history stored in the database.

6.8.3.1.1. Immediately following notification from the command post, the CAMS/DBM will place the system in File Update Mode (FUD), and a save of the database will be performed. The Maintenance Data System Analysis (MDSA) section will provide three copies of aircraft historical data information to OG/QA ASAP.

6.8.3.1.2. OG/QA will notify the affected OS PS&D section of the event, which will contact all agencies that maintain records for affected aircraft to freeze records.

6.8.3.1.3. OS PS&D section will consolidate affected aircraft records for OG/QA, who will deliver them to local safety office/mishap board when tasked to do so.

6.8.3.1.4. OSS PS&D section will change mishap aircraft CAMS possession purpose identifier code, and bring CAMS out of FUD mode for normal processing after product generation.

6.8.3.2. (Added) If requested, for all other mishap classifications, products will be run in triplicate, and copies provided to the local safety office.

6.11.4.1. (Added) OS PS&D section will maintain electronic copies of pre/post-phase actual configuration set-up until next scheduled phase.

6.16.12.1. (Added) When available, use Defense Data Network (DDN) or INFOCONNECT to transmit CAMS data back to Eielson. Use the following procedures to establish DDN/INFOCONNECT connectivity to the Eielson mainframe:

6.16.12.1.1. The unit will make a formal request for DDN/INFOCONNECT access by coming to the host DBM office and filling out the request form *NLT* 30 workdays prior to the in-place date.

6.16.12.1.2. The Eielson CAMS DBM will contact either his/her counterpart or the Air Force Network Control Center (AFNCC) CAMS monitor at the remote site. Remote site personnel will verify DDN/INFOCONNECT capability exists, necessary equipment is in place, and provide the Eielson DBM with a list of DDN/INFOCONNECT terminal identifications.

6.16.12.1.3. *NLT* 14 calendar days prior to implementation, the DBM will notify the Defense Mega Center (DMC) to load the site IDs to the NAPZ00 table to assign Page Identifier Numbers (PID) to the DDN/INFOCONNECT terminal identifiers. The CAMS DBM will provide this information to the remote site CAMS DBM and data automation CAMS monitor.

After all modifications have been accomplished to establish DDN/INFOCONNECT connectivity; deployed personnel must use the following command sequence to access CAMS at Eielson:

Table 6.1. (Added) Infoconnect CAMS Sessions – Settings.

Paths	Environments	Connections
Terminal ID = Assigned ID	Application = APPL01	TSAP = TIPCSU
Device Type = UTS 60	Initial Transaction is Blank	IP Address = EIHLC.OGDEN.DISA.MIL
Initial Transaction	Link to Internal Connection is Selected	
Environment = TIP	Connection Name is OGDEN	
Auto-Connect is Checked	TCPIP Connection Type = HLC	

6.16.13. Work center mnemonic codes provide the capability to correlate or summarize maintenance, scheduling, and/or man-hour data by work center. This information is essential to the management of maintenance resources. The MDSA section will establish work center codes and mnemonics within CAMS in accordance with TO 00-20-2. See **Attachment 7 (Added)**.

6.16.13.1. (Added) The DBM will approve all changes, additions, or deletions to designators. CAMS users will be notified of all approved work center mnemonic changes, via a system broadcast and posted message in CAMS.

6.18.3.3. (Added) When assigned equipment is worked on away from Eielson and INFOCONNECT is not available; all work will be documented on manual forms (e.g., AFTO Form 349 or copies of CAMS screens). These forms will be input into CAMS by the responsible workcenter *NLT* 3 duty days after return to home station. If the temporary duty exceeds 10 days, the forms will be sent to the home station by the fastest means available (e.g., fax, e-mail, courier, etc.), until 5 days before return. Transactions from the final 5 days will be hand carried to Eielson and input within 3 duty days by the responsible workcenter.

6.18.3.4. (Added) All engine data will be provided to the EM section so CAMS can be updated for transmittal to the Central Data Base (CDB) at Tinker AFB within 3 workdays upon return.

6.18.3.5. (Added) Serially controlled, time change, and locally tracked items will be input within 1 duty day upon return to home station.

6.18.3.6. (Added) FS supply/support section will manage CANNs performed away from home station in accordance with paragraph **2.3.29.1.6. (Added)**

6.19.6. No deviations to PACAF 21-101 at this time.

6.19.8. The CAMS/DBM will backup the CAMS database to tape daily, with CAMS downtime for approximately 1 hour during this timeframe. Scheduled system backups from 0300 - 0400 however, are subject to change based on mission requirements. CAMS/DBM will coordinate with OGDEN on any changes to the schedule.

6.19.10.1. (Added) CAMS Periodic Maintenance (PM) time is scheduled for the 2nd Monday of each month 0300 – 0500.

6.19.18.1.1. (Added) Notifies the following points of contact during periods of extended downtime (exceeding 24 hours), and inform them CAMS back-up procedures are in effect (AFCSM 21-256, volume 2).

6.19.18.1.1.1. MOCC.

6.19.18.1.1.2. OSS PS&D.

6.19.18.1.1.3. EM.

6.19.18.1.1.4. Squadron supervision (including 354 MXS).

6.19.18.1.1.5. Debriefing.

6.19.18.1.1.6. Communications squadron job control.

6.19.18.1.1.7. Training management.

6.19.18.2.1. (Added) All data requiring records action (e.g., TCTOs, inspections, and time changes), will be hand carried to the appropriate agency *NLT* the close of business on the duty day after the job is accomplished.

6.19.18.3. (Added) Recovery operations. The DBM will coordinate all long recovery actions with DMC personnel as required. In this process, the Audit Trail Tape (ATT) will recover all transactions since the last system backup, to the moment of system failure. Should the automated recovery fail, the following priorities are in effect when CAMS comes back on-line:

6.19.18.3.1. Priority 1 - Aircraft status (AFI 21-103, *Equipment Inventory, Status, and Utilization Reporting*) and input of open discrepancies - MDC.

6.19.18.3.2. Priority 2 - Aircraft sorties and flying hours - Debriefing.

6.19.18.3.3. Priority 3 - All scheduled maintenance actions, (e.g., all input and deferred discrepancies that are AWM) - OS PS&D section.

6.19.18.3.4. Priority 4 - All inputs and deferred discrepancies that are AWP - FS supply/support section.

6.19.18.3.5. Priority 5 - All remaining closed discrepancies. Workcenters are responsible for their shop inputs.

6.19.18.4. (Added) All discrepancies that were closed during the downtime should be documented on CAMS screen number 907 as the starting point. After-the-fact documentation is acceptable for jobs not issued JCNs in advance. For jobs that were manually assigned JCNs, input the JCN in the applicable field of CAMS screen number 907.

6.19.19.1. (Added) Units must identify to DBM by letter, recurring requirements for CAMS background products. A printed copy of the CAMS screen input must accompany the request, along with the requester's name, grade, office symbol, duty phone, frequency, entire TRIC image, and number of copies required. The DBM will then generate the report at the proper interval.

6.19.19.2. (Added) For one-time CAMS background requests, supply a copy of the necessary screen to theDBM with the requester's name, grade, office symbol, duty phone, and number of copies required. The DBM will produce these products as soon as possible.

6.19.30.1. (Added) The host DBM will follow these steps in case of an aircraft accident.

6.19.30.1.1. Put the CAMS into File Update Mode (FUD).

6.19.30.1.2. Record all available information: Aircraft tail number, location, time and date, name, number, and title of person to contact for additional information

6.19.30.1.3. Do an ACOPY to copy the live database to 2FS.

6.19.30.1.4. Run the following products and provide them to QA, PS&D, and the investigation team: PRA, QMH,

PRD, QRE, ARC, and SHD.

6.19.30.1.5. Using the means given to DBM, transfer the aircraft in CAMS.

6.19.30.1.6. Process screen 931 to put a freeze on all of the aircrafts records.

6.19.30.1.7. Coordinate with OSS PS&D on the aircraft status.

6.19.31. (Added) Restricts the use of any TRIC/SCREEN that the OPR requests. Subsystems OPRs must designate, in writing, the TRIC/SCREEN, option and man number authorized to use them.

6.19.32. (Added) Serves as the unit OPR for the Reliability and Maintenance Information System (REMIS).

6.20.5.4. (Added) Ensures newly assigned personnel complete Defense Information Security Agency (DISA) Form 41, **System Authorization Access Request,** and submits to the CAMS database manager.

6.20.5.4.1. The DBM loads the user-identification into individual CAMS personnel records via CAMS screen number 887.

6.20.5.4.2. The DBM will send the form to Base Network Control Center (BNCC).

6.20.5.4.3. BNCC creates CAMS user-identifications and loads into DISA security file.

6.20.5.4.4. (Added) Retrieves user-identification with CAMS screen 589, option 5.

6.21. Maintenance personnel will use the proper Maintenance Data Collection (MDC) codes (action taken, type maintenance, work unit code, etc.) in accordance with 00-20-2 and applicable –06 technical manuals to document the work performed and associated components or equipment they worked on. They will use complete, descriptive narrative corrective actions. Also when finished with a CAMS session, they will clear the screen and enter IDLE <transmit>. This closes the terminal to inputs however, allows messages to still be received. Subsequent users should clear the screen, enter ENT transmit> or $$OPEN transmit>.

6.21.1. (Added) Training management responsibilities.

6.21.1.1. Coordinates CAMS familiarization course for assigned maintenance personnel within 6 weeks of initial duty assignment, when applicable.

6.21.1.2. Requests training products from the host DBM section, as necessary.

6.21.2. (Added) Supply/support section responsibilities, as applicable.

6.21.2.1. Creates and schedules all cannibalizations.

6.21.2.2. Loads all supply document numbers to CAMS.

6.21.2.3. Deletes supply document numbers from CAMS when parts issue, or when Not Repairable This Station (NRTS) actions are completed.

6.21.2.4. Loads all parts entered into the Tail Number Bin (TNB) with a delivery location specified as “ATNB.”

6.21.2.5. Coordinates with OS PS&D section to reconcile deferred events and delayed discrepancies that are AWP.

6.22. CAMS currently consist of 22 subsystems. Use of all subsystems is mandatory. Subsystem OPRs must identify, by letter to the host DBM, all CAMS TRICs/screens and options that require restriction. Subsystem OPRs will be responsible for all facets of their subsystems. They will become familiar with CAMS screens/TRICs contained in the subsystem and will provide assistance to the users. The system OPR, not the user, will direct technical questions beyond their capability to the CAMS/DBM.

6.23.1. (Added) Tenant DBM responsibilities.

6.23.1.1. Provide to the host DBM a list of all required background products needed by their unit any time the computer is down for extended periods of time.

6.23.1.2. Ensure their unit is informed of all methods available for inputting data during computer outage (manual, pseudo processing).

6.23.1.2.1. If manual method is chosen, ensure the data is tracked in chronological order.

6.23.1.2.2. If pseudo processing is chosen, ensure the data is in proper format, chronological order, and complete prior to asking the host to process the file.

6.23.1.3. Will pick up customer-requested products from the host DBM.

6.23.1.4. Will be the point of contact for adding, changing, and deleting work center codes and mnemonics for their organizations, and will coordinate with host DBM, as applicable.

6.26. Data Integrity Procedures. Each flight will provide as a minimum, two formal Data Integrity Team (DIT) representatives, one primary and one alternate. FS and 354 MXS will also have one DIT POC per section. Other DIT representatives will include a primary and alternate from OSS PS&D, MOC, EMB, and QA. Appoint members/points of contact by letter, and forwarded to 354 OSS/OSCA. After reviewing work center CAMS data entries for the previous day, and all preceding non-duty days, for job accuracy and completeness, (CAMS screen 100), the Section chief will retain reviewed data entries on file until corrected work center TRIC QBR is turn back to the flight DIT representative.

6.26.1.1. (Added) QA will perform aircraft forms/CAMS comparisons. At a minimum, check one aircraft per squadron, per week. QA will be responsible for the identification of any forms/CAMS disparities found, and documenting results on an AF Form 2419. QA will provide a copy of the results to 354 OSS/OSCA by COB every Monday.

6.26.3.1. (Added) MDSA section will process TRIC QBRs two days after CAMS input.

6.26.4.1. (Added) The MDSA Section will e-mail the TRIC QBR to flight DIT representatives from the 18 FS, 355 FS, and 354 MXS, *NLT* 0830 daily. Squadron DIT representatives will perform TRIC QBR audits. All entries found to be in error will be marked, classified by type of error, and annotated on a data integrity spreadsheet for tracking purposes. Flight representatives will then distribute the TRIC QBR errors to the affected section for correction. Once the corrections are updated in CAMS, the flight DIT representatives will send the corrected and uncorrected data back to the squadron DIT representatives to be recorded on their spreadsheet. A copy of the spreadsheet will be sent 354 OSS/OSCA by COB Tuesdays.

6.26.5. Refer to paragraph **6.26.4.1. (Added)**

6.26.6.1. (Added) MSDA section should create and maintain a spreadsheet to track the number of errors by type.

6.26.7.1. (Added) Squadrons will have 5 calendar days to correct errors in CAMS and have their DIT representative return the original TRIC QBR listing to MDSA *NLT* 1600, on the 5th day. The returned copy must reflect the corrected entries.

6.26.9. Accomplished by paragraph **6.26.6.1. (Added)**, and by validation of the corrected TRIC QBR returned to MDSA. The MSDA Section will validate in CAMS corrections made on the TRIC QBR. The spreadsheet will contain all errors corrected in CAMS by the respective section. This last check will enable MDSA to calculate and present both the uncorrected and the corrected error rates.

6.26.10. Accomplished through utilization of the data maintained in the spreadsheet discussed in paragraphs **6.26.6.1. (Added)**, and **6.26.9.** Since there is no published command standard, the 354 FW goal is 3 percent for uncorrected errors. The MSDA Section will inform squadrons on a weekly basis of their cumulative monthly error rate. Flight DIT representative(s) may be required to attend a weekly DIT meeting, scheduled as necessary, if their respective squadron's uncorrected error rate exceeds the 3 percent goal.

6.26.13. (Added) Flight DIT representatives will receive DIT training from MDSA section on an annual basis and/or when new flight DIT representatives are appointed.

6.26.14. (Added) Squadrons may request data integrity training from the MDSA section on an as needed basis.

6.26.15. (Added) The MDSA section will distribute data integrity rules to all flight representatives for placement in CAMS terminal areas. The MDSA section will update data integrity rules, as required.

6.43. (Added) Automatic Data Processing Equipment (ADPE) Custodian. The ADPE account custodian is responsible for all devices within their section connected to the Unisys 2200/50 mainframe. These devices will be ADPE accountable and serially controlled. Each unit will identify an ADPE account custodian and alternate to provide physical security of all CAMS assets. The name, grade, and duty number of the primary will be replaced *NLT* 30 days prior to PCS or PCA reassignment.

7.2.17. (Added) Ensures maintenance schedulers, production superintendents, and an operations representative develops specific generation/regeneration flow plans for individual unit tasks. **NOTE:** Each plan should not exceed its resource capability (e.g., load crews, equipment, convoys per hour, supervision, etc.).

7.5.3.1. (Added) Loads the oncoming weekly flying schedule *NLT* than close of business on the Friday prior.

7.5.7.1. (Added) Coordinates quarterly aircraft paint schedule with the structural maintenance section chief and OSS PS&D section.

7.5.7.2. (Added) Maintains CAMS to indicate the due dates for aircraft washes and paints.

7.5.15. (Added) Creates scheduled maintenance events in CAMS.

7.5.16. (Added) Reviews suspense files daily and will process and/or deletes file as required.

7.5.17. (Added) Helps reconcile discrepancies that exist between AFTO 781 series forms and CAMS before signing off 14-day record checks.

7.5.18. (Added) Works closely with armament flight scheduling and supervision to schedule gun inspections for rounds fired or calendar inspection requirements.

7.5.19. (Added) Forwards all weapons Alternate Mission Equipment (AME) and gun AFTO Forms 95 to the armament flight.

7.5.20. (Added) **Generation flow plans.**

7.5.20.1. Coordinates generation flow plans with affected agencies not directly assigned to unit (e.g., fuels operations flight and munitions).

7.5.20.2. Ensures current flow plans are available/used in the Excel program of TBMS.

7.5.20.3. Provides a master copy of each plan to OSS PS&D section within 14 days of rewrite or completion of new flow for filing, loading, or changing information to the Excel program in TBMS.

7.5.20.4. Reviews, updates, and coordinates each flow plan annually.

7.6.4.4. (Added) Specific OS PS&D section requirements for document review and validation.

7.6.4.4.1. Be the last stop for aircraft document review.

7.6.4.4.2. Ensure entries on AFTO Forms 781H, 781J, and CAMS reflect current airframe operating time and engine times.

7.6.4.4.3. Ensure entries on AFTO Form 781K, block A, aerospace inspection status, and block B engine data is current.

7.6.4.4.4. Verify deferred event ID numbers and discrepancies listed in AFTO Form 781A/781K agree with those listed in CAMS products.

7.6.4.4.5. Ensure no inspections or TCIs are due or overdue. Schedule into CAMS as required.

7.6.4.4.6. Ensure delayed discrepancies requiring depot-level repair are coordinated through QA for evaluation and deferred against a work center mnemonic for depot (F-16; FDEP, A/OA-10; ODEP).

7.6.4.4.7. Ensure all active TCTOs are in correct status code in CAMS and documented on AFTO Form 781K.

7.6.4.4.8. Complete a review of all on-line products used to ensure requirements are verified and corrected before crew chief clears documents review JCN in CAMS.

7.6.4.4.9. Annotate in red the following on the AFTO Form 781J: "Aircraft documents review C/W, engine & oil times verified, or corrected".

7.6.4.4.10. Make updates as required in CAMS, (e.g., Jet Fuel Starter (JFS) starts), and initial off maintenance scheduler corrective action block of AFTO Form 781A.

7.6.4.4.11. File pre/post-dock document reviews in aircraft jacket file with phase package.

7.7.4.1. Request CAMS/DBM run screen 942, actual configuration set-up for F-16 aircraft entering phase.

7.7.4.2. Give copy of actual configuration set-up to phase dock chief at pre-dock meeting, for verification and/or correction in CAMS of all items found out of configuration during phase inspection.

7.7.5.1. Obtain post-phase actual configuration set-up data sheet from phase dock chief at post-dock, and forward (e-mail) a copy to OSS PS&D.

7.7.5.2. Retain paper copies of pre/post-phase actual configuration set-up products in phase package until next scheduled phase.

7.9.2.6.1. (Added) Use alpha character code to identify each event, with start and stop times on generation/regeneration flow plan.

7.11.2.1. (Added) Debriefing Guide. The debriefing section will have access to the following publications/checklists, and be on identification for listed TOs. Listed products will be part of the units debriefing guide.

7.11.2.1.1. AFI 21-103, PACAF Supplement 1, Attachment 1, Mission Essential Subsystems Listing (MESL).

7.11.2.1.2. AFI 63-1001, ***Aircraft Structural Integrity Program***, R 80-13 PACAF Supplement 1.

7.11.2.1.3. AFCSM 21-556 Vol 1, ***CAMS DSD: G054/FS (PA) Software Center Operator Manual***, PACAF Supplement 1.

7.11.2.1.4. AFCSCM 21-574 Vol 2, ***CAMS Automated Debriefing.***

7.11.2.1.6. F-16 only: TO 1F-16CG-2-00FR-00-1, ***Fault Reporting Manual***.

7.11.2.1.7. F-16 only: TO 1F-16CG-34-1-1, ***Non-Nuclear Munitions Delivery Flight Crew Procedures.***

7.11.2.1.8. Applicable aircraft –06, ***Work Unit Code Manual.***

7.11.2.1.9. Applicable –1, ***Flight Manual.***

7.11.2.1.10. Applicable debriefing forms.

7.11.2.1.11. Low Altitude Navigation Targeting Infrared for Night (LANTIRN), weapons malfunction, bird / Foreign Object Damage (FOD), Emergency Power Unit (EPU) activation, engine related malfunction, uncommanded flight control, gun rotation malfunction, fuel imbalance/trapped sheets, and F-16 TAO checklists.

7.11.3. "Red X" criteria check sheets (**Table 7.1. (Added)** and **Table 7.2. (Added)**) does not preclude maintenance and aircrew subjective judgment on any safety of flight condition serious enough to warrant use of "Red X" under the guidelines of TO 00-20-5 criteria for "Red X" entries. These check sheets do not substitute for quality aircrew debriefing by experienced maintenance personnel. Check MESL, and impoundment portion of this supplement for additional mandatory "Red X" conditions.

Table 7.1. (Added) F-16 Aircraft Debriefing "Red X" Criteria Check sheet

04100 – Special Inspection

Major over G

FO in cockpit (knobs lost in flight and so forth)

Hard landing

Aircraft failed to rotate

Smoke/Flames in cockpit

Landing gear over speed

11000 – Airframe

Panels lost or missing

Any unusual airframe vibration

Bird strike

Aircraft structural damage

12000 – Crew Station System

Canopy damage and distortion

Canopy warning system discrepancies indicating locking problems

Loose components

Ejection seat discrepancies

13000 – Landing Gear System

Failure of gear to retract or extend

Loud thump on retraction of gear

Gear slow to retract

Unsafe conditions

Nose landing gear shimmy

Damage to struts

Flat strut

Nose wheel steering inoperative, fail indication or uncommanded inputs

Landing gear door failure to close

Tire damage beyond normal wear

Anti-skid failure

14000 – Flight Controls

Any aircraft motions resulting in an unexplained change of flight altitude, or heading that are not expected (formally called uncommanded inputs)

Any flight control response causing control surface transients

Dual flight control failure

Any FLCS system lights or PFLs that illuminate after reset action or do not reset

24000 – EPU/JFS

Any malfunction of secondary power system affecting operation

Uncommanded/inadvertent EPU activation

JFS failure to start after second attempt

27000 – Turbine Power Plant

Engine flameout or major engine component failure

Damage to engine for any reason, including FOD

After Burner (AB) hard light, blowout, anomaly

Engine power loss, thrust loss

Compressor stall/stagnation

Engine overtemp/fire

Engine instrumentation malfunction

Engine vibration, rumble or unusual noise

Any engine light or PFL that doesn't reset

41000 – Environmental Control System

Any malfunction in:

Pressurization

Air conditioning, excluding auto temp control

Anti-ice valve hard fail

Extreme cockpit temperatures

42000 – Electrical Power Supply

Generator fails to come on or reset

Weak/dead battery

Aircraft battery fail light

FLCS PMG failure

Main/standby generator failure

44000 – Lighting System

Anti-collision lights or position lights (total failure)

Advisory warning system (master caution light on)

Total interior light failure

Both taxi lights inoperative

Both landing lights inoperative

Either inlet light inoperative

45000 – Hydraulic and Pneumatic Power Supply System

Any leaks out of tolerance

Any hydraulic system malfunction

Any pneumatic system malfunction

Indication malfunction

46000 – Fuel System

External tanks no feed

Fuel indication malfunction beyond tolerance

Trapped fuel or imbalance

Un-programmed fuel loss

47000 – Oxygen

Oxygen regulator, low PSI

Fumes, odors present in oxygen

Oxygen pressure fluctuation

Difficulty to inhale or exhale

Oxygen low quantity

49000 – Fire Detection

Fire/overheat indication or indicator failure

51000 – Instruments

Pitot static failure

Malfunction of primary flight and navigational instruments

Central Air Data Computer (CADC) failure

63000 – Ultra High Frequency (UHF) Communication

No transmit or receive

Weak reception

Loud squeal

65000 – In Flight Friend or Foe (IFF)

Inoperative Mode 3 and/or C

71000 – TACAN/ILS

TACAN and ILS inoperative

74000 – Fire Control System

Heads-up display (HUD) inoperative (no green symbology)

Fire control radar - inoperative

Inertial Navigation System (INS) inoperative, dumps in flight or won't align properly

GAC inoperative

Both MFDs blank or inoperative

75000 – Weapons Delivery

Gun malfunction (inadvertent firing or failed to clear/jam)

All inadvertent releases

All uncommanded releases

All lost suspension items

All hung munitions

Stores Management System (SMS) blank/inoperative

97000 – Aircraft Explosives

Any accidental use of system component.

OTHER

System malfunctions of a chronic repeat/recurring nature

Items lost in flight

Any discrepancy causing an aircraft ground abort, air abort or in flight emergency

Any discrepancy causing an aircraft accident, incident or mishap

Foreign object lost or unaccounted for

Fire or explosion on the aircraft

Physiological incident

When a red cap for OAP is requested

When an aircraft is inadvertently serviced with the wrong grade type of fuel, oil or hydraulic fluids

Lightning strike

Pilot encountered extreme icing/rime icing in-flight

Table 7.2. (Added) A/OA-10 Aircraft Debriefing "Red X" Criteria Check Sheet

11000 – Airframe

FO suspected, missing, or unaccounted for items, lost or missing fasteners, panels lost or missing (includes dropped objects), bird strike, or any aircraft structural damage

Any unusual aircraft noise or vibration

Windshield damage or distortion

Major over G or suspected over G

12000 – Cockpit and Fuselage Compartment

FO in cockpit, loose components

Canopy damage, distortion, malfunction, or warning system malfunctions

Ejection seat discrepancies

13000 – Landing Gear

Abnormal noise or failure to retract or extend

Unsafe gear

Nose wheel steering malfunction or nose landing gear shimmy

Damage to tires, struts, or flat struts

Landing gear is lowered in excess of 200 knots airspeed

Dragging brakes, hot brakes or brake anti-skid malfunctions

14000 – Flight Controls

Any flight control malfunction resulting in an unexpected or uncommanded, hazardous change in flight attitude or heading.

23000 – Turbofan Power Plant System

Engine power loss, failure, shutdown, flameout, no starts, compressor stalls, overtemps, or fires

Lack of response to throttle

Engine vibration or rumbling

Instrument failure

Fluid leaks

Three percent below expected fan speed

24000 – Auxiliary Power Plant (APU)

Any failure of APU to operate within allowable limits

See 23000

Auto shut down of APU

41000 – Air Conditioning/Pressurization

Failure of both automatic and manual cockpit air temperature

Failure of cockpit pressurization system, if required

Smoke/fumes in cockpit

Windshield hot light

Canopy seal failure

42000 – Electrical System

Any generator fails to come on or reset within 3 tries

No battery power

Power surges/power fluctuations/warning or caution light malfunctions

44000 – Lighting System

Failure of landing, taxi, any position light, or main instrument lights if flying at night.

Failure of 2 of the 3 strobe lights.

45000 – Hydraulic/Pneumatic System

Any leaks out of tolerance levels

Any hydraulic/pneumatic system failures or indicator malfunctions

46000 – Fuel System

Internal fuel quantity indication malfunctions or feed problems

Suspected or confirmed fuel foam fires

Fuel leaks or un-programmed fuel loss/trapped fuel or imbalance

External tanks no feed

47000 – Oxygen System

Oxygen regulator, low PSI

Fumes/odors present in oxygen

Oxygen pressure fluctuation

Difficulty with inhaling/exhaling

Oxygen low quantity

49000 – Fire Detection and Overheat System

Any fire or overheat detection malfunction

51000 – Instruments

Cabin pressure attitude indicator malfunction, if required

Pitot/static system, airspeed, or altimeter indicator failure

Attitude heading system (HARS), CADC inoperative

Aerial warning tone inoperative, Angle of Attack (AOA) malfunctions

52000 – Autopilot System

Stability Augmentation System (SAS) malfunction

Uncommanded input with system engaged.

55000 – Turbine Engine Monitoring System

Status codes 1-14, 37, 39, and 51-52

63000 – UHF Communications

UHF inoperative, unusable, unreadable, no transmit, or loud squeal

Weak reception = pilot discretion

65000 – IFF

Inoperative mode three and/or C

71000 – TACAN

TACAN inoperative

74000 – Fire Control

HUD inoperative in both primary and standby

75000 – Weapons Delivery

All hung, inadvertent, uncommanded, or multiple release of munitions

Fails to select proper station, fails to arm, fails to safe

Gun jam/unsafe gun

All lost suspended items (dropped objects)

91000 – Emergency Equipment

Pilot emergency, survival equipment or emergency oxygen system malfunction

96000 – Personnel and Miscellaneous Equipment

Any failure to operate correctly

97000 – Aircraft Explosive Items

Any accidental or intentional use of system components

OTHER

System malfunctions of a chronic repeat/recurring nature

Items lost in flight

Any discrepancy causing an aircraft ground abort, air abort or in flight emergency

Any discrepancy causing an aircraft accident, incident or mishap

Foreign object lost or unaccounted for

Fire or explosion on the aircraft

Physiological incident

When a red cap for OAP is requested

When an aircraft is inadvertently serviced with wrong type grade of fuel, oil or hydraulic fluids

Lightning strike

Pilot encountered extreme icing/rime icing in-flight

7.11.4.1. (Added) Aircrew debriefing personnel will use CAMS operational/utilization update screens to input airframe flying time information. If corrections are necessary, inform squadron maintenance/operations schedulers, and wing analysis.

7.11.5.1. (Added) Debrief will assign and load into CAMS, JCNs for red ball maintenance. The affected flightline expediter will give the following information, Refer to para **22.119.1. (Added)**

7.11.5.1.1. Aircraft tail number.

7.11.5.1.2. Aircraft sortie number.

7.11.5.1.3. Aircrew discrepancy.

7.11.5.1.4. Whether the aircraft is flyable with this discrepancy.

7.11.5.2. (Added) If the aircraft ground aborts, debriefers will upgrade the capability code and show the sortie as a ground abort.

7.12.7.3.1. (Added) **Debriefing Procedures.** Debrief will manually review CAMS screen #174, or equivalent, for repeat/recur discrepancies.

7.12.12. (Added) Debriefers will used a PACAF Form 297, **Weekly/Daily Aircraft Flight Schedule,** or a 354 FW Form 028, **Sortie Maintenance Debriefing** to debrief aircrews. The locally developed form if used, will contain tail numbers listed by sortie number, ZULU take-off/landing times, sortie duration, and status of aircraft/discrepancies (code 1, 2, 3, repeat/recur, air and ground aborts). One copy will be kept in the debrief section and another copy will give the production superintendent who will use it to reconcile sorties, hours, and deviations with the operations schedulers at the end of the flying period. Debrief section will retain a copy of the daily flight schedule and sortie recap for a minimum of 90 days.

7.12.12.1. (Added) The MOC will coordinate with the OS debriefer on all changes and deviations to the daily flying schedule to assist in determining correct debriefing status codes. The MOC will review the on-line CAMS debriefed sortie recap and the CAMS daily background product Accomplishment Utilization Report (AUR), deviation detail listing, and deviation summary reports each day to ensure accuracy of deviation reporting.

7.13.4. (Added) Regardless of rank, a permanently assigned debriefer (regular or augmentee) will be the senior debriefer while deployed and will be responsible for compliance with all debriefing requirements.

7.13.5. (Added) The debriefer will forward aircraft landing status to home station MOC at least once every flying day, if MOC personnel are not deployed. If CAMS is available, status will be available as each debrief is loaded, if CAMS is not available, send status to home station MOC by fax. If fax is not available, call in status to home station MOC by telephone or any available means. Maintain Communications Security (COMSEC) at all times.

7.13.6. (Added) Follow local data procedures for each sortie and entered into CAMS if tied into the home station main frame. When CAMS is deployed and tied into the home station main frame, all debriefs will be loaded ASAP. If CAMS is not available at the deployed location, the debriefer will fax all appropriate flight data and PACAF Form 297 or 354 FW Form 028, **Sortie Maintenance Debriefing,** to home station for entry into CAMS. Retain all flight data in the aircraft forms while deployed, unless filed separately in the aircraft debriefing section.

7.13.7. (Added) Debriefing will be the central collection point for all MDC forms to include, but not limited to:

7.13.7.1. AFTO Form 349, Maintenance Data Collection Record.

7.13.7.2. 354 FW Form 028, **Sortie Maintenance Debriefing**

7.13.7.3. Applicable system malfunction guides/checklists.

7.13.7.4. 354 FW Form 027, **Dropped Object Report.**

7.15.3.1. (Added) Debrief will forward refuel documents from non-DoD refuelings to the squadron resource advisor for accounting/finance.

7.16.3. (Added) Coordinate one supervisor and two crewmembers to wash aircraft. Supervisor performs cleanliness inspection after wash.

7.17.1.1. (Added) **Dedicated Crew Chief (DCC).** Unit training monitors will schedule F-16 aircraft DCCs for CAMS course code 054, **F16 Advanced Crew Chief,** ASAP after arrival on station, if not previously complied with.

7.17.2.2.1. (Added) Ensures minor discrepancies are deferred in CAMS *NLT* 5 days after discovered and transferred from AFTO Form 781A, **Maintenance Discrepancy and Work Document***,* to AFTO Form 781K, **Aerospace Vehicle Inspection, Engine Data, Calendar Item Inspection and Delayed Discrepancy Document**.

7.17.2.16. (Added) Acts as wash supervisor; ensures AFTO Form 781A and CAMS contain all entries required for wash, lubrication, installed protective covers, and masking materials.

7.17.2.17. (Added) Performs post-wash lubrications of aircraft.

7.17.2.18. (Added) Prepares aircraft for wash and paint procedures in accordance with paragraph 16.2.11.

7.17.2.19. (Added) Oversees aircraft paint preparation; ensures all agreed upon external hanging equipment is removed prior to painting (e.g., pave penny pods, ECM pods, TERS, fuel tanks, navigation/targeting pods, etc.). **NOTE:** A-10 aircraft will have flaps in full down position; F-16 aircraft will have all weapons pylons removed.

7.25.15.1. (Added) **Weapons Section. General.** Perform weapons system functional checks every 30 days. The scheduled 30 day functional check, will as a minimum, include the following in accordance with TO IF-16C-33-1-2 or TO 1A-10A-33-1-2: Bomb rack, external fuel tank jettison (if installed), AIM-9/129 missile launcher, internal gun, and ALE-50 launcher/controller, if installed.

7.25.15.2. (Added) Minimum aircraft Normally Installed Equipment (NIE) configuration will be 4 missile launchers and 2 wing weapons pylons. **NOTE**: It is acceptable to perform a wing disconnect check using a 501tester if an aircraft is configured without wing weapons pylons.

7.25.15.3. (Added) Remove all AME to include: SUU-20s, TER-9As, LAU-117s, and LAU-88s when performing bomb rack solenoid checks.

7.25.15.4. (Added) In addition to the scheduled 30-day functional checks also perform functional checks on the following:

7.25.15.4.1. Wing weapons pylons, AIM-9/129 missile launcher, LAU-105, LAU-131, TER all stations, SUU-20 all stations, preloaded LAU-88, and LAU-117 missile launcher in accordance with TO 1F-16C/CG-33-1-2 or TO 1A-10A-33-1-2 upon installation. **NOTE**: These items will not be functional checked

for reconfiguration purposes during normally scheduled ICTs. However, installed items will be functional checked after ICT stop, if to remain on-board for flight. During exercises and contingencies, perform functional checks on AME after installation

7.25.15.4.2. Bomb rack, TER, AIM-9/129 missile launcher, and LAU-105 prior to the loading of live munitions in accordance with TO 1F-16C/CG-33-1-2 and TO 1A-10A-33-1-2 during peacetime operations. **NOTE** 1: Not required for subsequent same day or next day sorties, as long as previous sortie released successfully, and no major maintenance or reconfiguration changes occurred on the aircraft. **NOTE** 2: Not required during local or higher headquarters exercises/inspections, or real world contingencies, as long as 30-day functional check is current.

7.25.15.4.3. Umbilical check for preloaded LAU-88 and LAU-117 loaded with live missiles in accordance with TO 1F-16C/CG-33-1-2 and TO 1A-10A-33-1-2 during peacetime operations.

7.25.15.5. (Added) Weapons system 30 day functional check inspections will be part of the AFTO Form 781K, and transcribed to the AFTO Form 781A when due. All other functional check inspections will be annotated in the aircraft AFTO Form 781A.

7.25.17.1. (Added) AME cables will be controlled by locally assigned number and turned into Armament Flight with applicable item of AME when due inspection or for malfunction. Armament flight will functional check, pin-to-pin check, and perform visual inspection of cable as part of AME inspection.

7.25.19.1. (Added) ***F-16 aircraft will fly with CATM-120 to the maximum extent possible giving CATM-120s priority over ACMI and or AMA use. Wing aircraft are still authorized the use of AMA pods when desired if stations are available. However, flying AMAs when CATM-120s are available and not loaded is unacceptable. Waiver authority resides with the OG/CC.***

7.25.28. (Added) Ensures AME is delivered to 345 MXS Armament Flight *NLT* 2400 on the Friday prior to scheduled input date.

7.25.29. (Added) Ensures all equipment turned in for scheduled and unscheduled maintenance:

7.25.29.1. Is properly tagged and includes all associated safety gear and protective covers. **NOTE:** The Armament flight will not accept equipment without safety gear and protective covers.

7.25.29.2. Basic Post Flight (BPO) inspection has been accomplished on all equipment prior to turn in, except equipment that is impounded or has Pilot Reported Discrepancy (PRD).

7.25.29.2.1. In addition, the following specific guidelines will be followed:

7.25.29.2.1.1. Wing Weapons Pylons (WWP) will include an MAU-12 bomb rack with orifices, Advanced Conventional Remote Interface Unit (ACRIU), in-flight lockout bolt and mounting hardware.

7.25.29.2.1.2. Centerline Pylons (CLP) will include a MAU-12 bomb rack with orifices and in-flight lockout bolt.

7.25.29.2.1.3. Removal of ACRIUs and MAU-12 bomb racks from the WWP/CLP are restricted to the armament flight. Remove the pylons and transport to the armament flight for the appropriate action.

7.25.29.2.1.4. AIM-9 missile launchers (S210) will include an Advanced Missile Remote Interface Unit (AMRIU) detent pin and all appropriate dust caps.

7.25.29.2.1.5. LAU–129 missile launchers will include an AMRIU.

7.25.29.2.1.6. Removal of AMRIUs from the S210 and LAU 129 missile launcher is restricted to the armament flight. Remove the missile launchers and transport to armament flight for appropriate action.

7.25.29.2.1.7. TER will include guns and breeches. Turn TERs into the armament flight in either heavy or practice bomb configuration. Weapons sections are responsible for maintaining reconfiguration equipment removed from TERs.

7.25.30. (Added) Ensures all malfunctioning equipment is delivered to the armament flight ASAP. **NOTE:** Remove impulse cartridges and turn in adapter cables with item.

7.25.30.1. Weapons sections turning in equipment requiring unscheduled maintenance will create a JCN with the discrepancy clearly annotated in CAMS. Annotate the JCN on the AFTO Form 350, with a CAMS Screen 122, maintenance snapshot attached.

7.25.31. (Added) Tracks malfunctions, corrective actions, and coordinates with armament flight to perform maintenance on associated equipment.

7.25.32. (Added) Establishes procedures to control AME taken on deployments in accordance with AFI 21-103.

7.25.32.1. 48 hours prior to all deployments provide armament flight a serial number list of all AME scheduled to depart with the aircraft to ensure no inspections become overdue.

7.25.32.2. Informs armament flight within 48 hours of return of all AME replaced by serial number at the deployed location. **NOTE:** This does not apply to normally reconfigured aircraft, only replacement of home station assets left at or turned into the host unit/supply for NRTS action.

7.25.33. (Added) Ensures armament malfunction worksheet is completed and turned in with malfunctioning equipment.

7.25.34. (Added) Performs a semiannual inventory of all assigned AME with the armament flight AME section, and signs hand receipt.

7.25.35. (Added) Establishes a Special Purpose Recoverables Authorized Maintenance (SPRAM) account for chaff and flare magazines in accordance with AFI 21-103 and AFMAN 23-110, Volume 2, Part 13.

7.25.35.1. Appoints by letter, a technical sergeant or above as the chaff and flare magazine account custodian.

7.25.35.2. Ensures account custodian accounts for all magazine quantities specified in the respective aircraft -21 TO.

7.25.35.3. 354 MXS Munitions Flight will preload all chaff and flare magazines to support mission, as required.

7.25.35.4. 354 MXS Munitions Flight will turn in to owning account custodian all unserviceable magazines, as necessary.

7.25.35.5. The owning account custodian will ensure all unserviceable magazines are repaired or replaced, as required.

7.25.35.6. (Added) The 354FW and 354MXS munitions flight representative will document all issue and turn-in transactions on the joint inventory document.

7.25.35.7. (Added) The 354FW will issue all serviceable chaff/flare magazines to the 354MXS munitions flight.

7.25.35.8. (Added) Each magazine will have reflective tape added and a local serial number assigned which will be stenciled on each module. The F-16 magazines will be painted with blue local serial numbers, and the A-10 magazines will be painted with red local serial numbers.

7.25.35.9. (Added) Magazines will not be cross utilized between squadrons unless a document turn-in and issue occur with all organizations concurring with the transfer. This type of transaction will be recorded on the joint inventory document transaction register.

7.25.35.10. (Added) The 354FW and 354MXS representatives will inventory the chaff/flare magazines at a minimum semiannually in conjunction with the 354MXS munitions flight inventory IAW AFI 36-2217.

7.25.35.11. (Added) The representative will validate the inventory by signing a joint inventory document.

7.25.35.12. (Added) The inventory document will identify each chaff/flare magazine by actual serial number, and color code. It will include the serviceability status and location of each magazine as of the date of the inventory.

7.25.35.13. (Added) All transactions, turn-ins, and issues will be documented on the joint inventory document transaction register as they occur. All transactions recorded on the register require telephonic confirmation with all organizations effected.

7.25.35.14. (Added) The joint inventory document transaction register will be superseded by the next inventory (conducted at least semiannually) of magazines. The previous inventory will be kept on file until the next inventory is conducted.

7.25.36. (Added) Manages explosive safety of impulse cartridges in accordance with AFMAN 91-201, *Explosive Safety Standards.*

7.25.36.1. Explosive Limits.

Table 7.1. (Added) 18 FS Explosive Limits.

CLASS/ DIVISION	COMP GRP(S)	NOMENCLATURE	NSN	TOTAL QTY	FIRE SYM
1.4	C	Aircraft Impulse Cartridges (ARD 863-1)	1377-00-585-9291	2000 ea.	4
1.4	C	Aircraft Impulse Cartridges (ARD 446-1)	1377-00-516-9924	300 ea.	4

Table 7.2. (Added) 355 FS Explosive Limits.

CLASS/ DIVISION	COMP GRP(S)	NOMENCLATURE	NSN	TOTAL QTY	FIRE SYM
1.4	C	Aircraft Impulse Cartridges (ARD 863-1)	1377-00-585-9291	800 ea.	4
1.4	C	Aircraft Impulse Cartridges (ARD 446-1)	1377-00-516-9925	200 ea.	4
1.4	S	Cartridge, Fire Extinguisher A-10	1377-01-044-6367	12 ea.	4

7.25.36.2. All item are hazards class 1.4 munitions.

7.25.36.3. For transient aircraft cartridges see paragraph **5.17.5. (Added)**

7.25.36.4. Personnel limits: 2 supervisors, 3 workers, and 4 casuals.

7.25.36.6. Emergency Procedures.

7.25.36.6.1. Fire: Call 911 or notify the MOC, building occupants, and evacuate all nonessential personnel. Attempt to contain the fire if there is no risk to personnel and it does not involve explosives. Move the explosives away from the fire, if possible.

7.25.36.6.2. In the event of an explosive mishap, notify the MOC. Inform the MOC as to type and location of accident/incident and if any emergency aid is required (e.g., fire, ambulance, EOD, etc.).

7.25.36.7. Storage procedures.

7.25.36.7.1. Store and secure impulse cartridges in authorized storage lockers with double locks.

7.25.36.7.2. Store serviceable, unserviceable, and transient aircraft impulse cartridges in separate areas within the locker.

7.25.36.7.3. Impulse carts not in the locker or installed in the aircraft will not be left unsecured at any time.

7.25.36.8. Key control.

7.25.36.8.1. Each FS will maintain two keys for their impulse cartridge storage locker in a secured area, preferably a safe or the tool room key storage locker.

7.25.36.8.2. Each squadron maintenance officer/superintendent will designate by letter, who is authorized access to the storage area, and have the respective squadron commander endorse it. The weapons section will keep the original letter on file, and post a copy on the storage locker.

7.25.36.9. Accountability.

7.25.36.9.1. Inventory impulse cartridges at each shift change, and perform a 100 percent physical inventory at the end of the flying week. Errors found during the inventory, will cause suspension of further issues of impulse cartridges until inventory checks out.

7.25.36.9.2. Shift inventory will include how many carts are in the locker, the truck, expended cartridges, and the quantity installed in aircraft. These totals must equal the inventory total from the day before.

7.25.36.9.3. Any impulse carts that are installed in aircraft will be indicated on the AF Form 2434 or local expenditure form, regardless of intent to expend.

7.25.36.10. Transportation.

7.25.36.10.1. Metro-type vehicles may transport impulse cartridges in passenger area.

7.25.36.10.2. Keep impulse cartridges in a lockable container, in egg crate type boards (not loose), and secured at all times.

7.25.36.10.3. Equip vehicles at a minimum with two 2A10BC rated portable fire extinguishers. Mount one on the outside of the cab and the other inside the cab.

7.25.36.10.4. All other safety criteria regarding transportation of class 1.4 munitions as outlined in AFM 91-201 will be strictly adhered to.

7.25.36.11. Inspection and testing.

7.25.36.11.1. Inspect, test, and document lockers containing impulse cartridges (e.g., visual inspection and continuity checks) in accordance with AFI 32-1065, *Grounding Systems.*

7.32.5. (Added) The F-16 aircraft phase inspection section will verify and correct in CAMS, all items identified as out of configuration on the actual configuration set-up product given out at phase inspection pre-dock meeting. The dock chief will hand updated actual configuration set-up product to OS PS&D at the phase inspection post-dock meeting.

8.1.7. (Added) **For procedures to reconcile training munitions issued for flight line IAW AFI 36-2217, See paragraph 2.3.27.**

9.5.14.1. (Added) **LSS Engine Management (EM) Section.** EM section receives daily data downloads via a Local Area Network (LAN) connection from each FS, for all engines flown on previous day. Download forwarding action is complied with by each FS with a PC workstation-to-server; home station, and PC workstation-to-email; deployed location. EM section will receive the downloaded data in the Comprehensive Engine Trending and Diagnostic System (CETADS) server located in the EM section, and extracts the data to a floppy disk. **NOTE:** CAMS Forwarding Program (CFP) forwards data to both

CAMS and Comprehensive Engine Management System (CEMS) simultaneously via a LAN connection in accordance with this instruction and TO 00-25-254-1, ***Comprehensive Engine Management System Engine Configuration, Status, and TCTO Reporting Procedures.*** Therefore, daily connectivity to a LAN system is absolutely necessary to comply with these directives.

9.5.14.2. (Added) In the event that this connectivity cannot be achieved, the following action will be taken:

9.5.14.2.1. At home station, each FS will forward data downloads to EM section; bldg 1346, room 105, on floppy disk. EM section will store the data in date time order for processing at the earliest connection. EM section forwards the data file to CEMS and CAMS using the CFP at the first available opportunity, after achieving connectivity.

9.5.14.2.2. At a deployed location, the deployed FS engine manager will forward data downloads to EM section on a floppy disk; this data will then be received into the CETADS server by EM Section. EM section will store the data in date time order for processing at the earliest connection. EM section forwards the data file to CEMS and CAMS using the CFP at the first available opportunity, after achieving connectivity.

9.5.15.1. (Added) The deployed engine manager will have preprinted engine/part removal, and installation data forms as apart of his/her deployment package. The Engine Manager's Data List (EMDL) will be run daily in order to immediately correct errors and variances.

9.6.2.3. (Added) Engine TCI, TCTO, and inspection policies.

9.6.2.3.1. For engines being placed in spare status awaiting issue, EM section will verify with current data from (CAMS screen #713, option 1) no discrepancies exists between the AFTO Form 781K and CAMS. This verification also applies if new engine inspection criteria become applicable between the time the engine is placed in spare status and the time of issue.

9.6.2.3.2. Time change replacement items on engines with 20 estimated flying hours or less will be monitored daily. EM section will provide an update at the daily production meeting. This applies to "Critical engine status" items; parts/engines requiring replacement with zero over-fly criteria. These daily updates will include the estimated flying hours and TACs; F110, remaining as computed by CEMS.

9.6.2.3.3. For required engine inspections; EM section will run appropriate automated products on Tuesdays and Thursdays (twice a week) to assist FS in the management of engine inspections. When an engine has no more than 10 hours of time remaining to inspection, EM section will schedule the appropriate inspection in CAMS. In addition to the 10-hour cutoff, the FS production superintendent may request engine inspections be scheduled by EMS in support of deployments, aircraft phase inspections, or other special situations as required.

10.3.8. **For procedures or required weapons loading actions on transient aircraft, storage of transient aircraft impulse cartridges, and requisition and maintenance of weapons safing equipment for common transient types of aircraft, See paragraph 5.17.1. (Added)** .

11.8.5.1. (Added) **Jet, Turboprop, Turbo-shaft Engine Intermediate Maintenance (JEIM) section.** Uses a locally developed PSN inventory sheet any time an engine is received or released by the section.

12.5.4.1. (Added) **.** Drop TMDE from the master identification listing if TMDE is overdue calibration by more than 45 days. Treat deleted equipment as an initial calibration if further support is required.

12.5.4.1.1. TMDE deleted due to overdue status will require an explanation letter from the OWC's flight chief/commander giving reason to reload equipment identification into PAMS database. **NOTE:** All responsibility for using overdue equipment rest with OWCs and their command structure if deleted from the PAMS database.

12.5.6.1. (Added) To ensure an even workload balance, production control will accept unit TMDE due calibration through unit's next appointment date. Initial calibrations and unscheduled maintenance will be coordinated with the TMDE production control section prior to delivery of the items.

12.5.6.2. OWCs will present hand receipts issued by TMDE schedulers for pickup of TMDE. If a customer hand receipt was lost or misplaced, a letter of explanation from the OWC's flight chief/commander certifying ownership and Custodian Authorization/Custody Receipt Listing (CA/CRL) account number may be required by the TMDE scheduler.

12.6.12.5. (Added) Priority Maintenance Calibration. The priority justification letter must clearly indicate the actual mission impact, deployment, or exercise and the date the equipment is required. OWC supervisors will coordinate with TMDE production control section as soon as possible prior to known mission changes, exercises, deployments, or inspections. Prior coordination will allow time to plan support requirements and services necessary to meet customers needs, eliminate the need for last-minute priority requests, and prevent possible system downtime due to lack of support equipment.

12.6.12.5.1. The following procedures apply to requests for priority maintenance:

12.6.12.5.1.1. The TMDE flight chief or laboratory chief is the approval authority for priority work requests. Once the mission essential priority repair/calibration is completed, the OWC must pickup the equipment within a reasonable timeframe (2 hours) of notification. Emergency calibrations will be picked up immediately upon notification.

12.6.12.5.1.2. During normal duty hours, requests for priority processing will be routed through the TMDE production scheduling function. After duty hours, the 354 MXS Production Superintendent will handle "Emergency priorities".

12.6.12.6. (Added) Early Calibration of TMDE. Support personnel or individuals carrying TMDE to their deployed location will, as part of their deployment preparation ensures the TMDE calibration interval fully covers the deployment period. Contact the TMDE production control section for input dates well in advance to allow enough time for calibration and/or repair prior to departure. The Eielson AFB TMDE production-scheduling function will be notified for PAMS update purposes, if re-certification is accomplished by another PMEL after deploying.

12.7.4.1. (Added) Notifies OWCs by letter, of TMDE in AWP status for more than 45 days. OWCs will determine appropriate action to take on TMDE based on their mission requirements. Consider NRTS, replacement, or mission impact statements. May return TMDE to OWC for disposition if in AWP status for more than 120 days if parts status is still bad.

13.14.1. (Added) Coordinates with armament flight when an ACRiu or Amriu requires NRTS action.

14.3.1.1. (Added) **Egress system maintenance.**

14.3.1.1.1. Egress explosive maintenance will only be performed in the following areas: The Loop, Cope Thunder ramp, buildings 1227/1228 (A-10 pens), building 1232 (nose dock 7), Lima row, building 1338/1335 (F-16 bays), and the maintenance/storage area listed on the AF Form 1247.

14.3.1.1.2. Flightline personnel will not start work in the aircraft cockpit until the egress personnel have completed explosive maintenance task.

14.3.1.1.3. Do not interrupt egress personnel once step-by-step procedures have begun.

14.3.1.1.4. Egress personnel will not dispatch to another task unless an emergency arises.

14.3.1.1.5. Units will not refuel, service LOX/GOX, or apply electrical power to aircraft during egress system maintenance.

14.3.1.1.6. At no time will Advance Concept Ejection Seats II (ACES II) seats be removed/installed outside of a sheltered area. Aircraft should be inside sheltered areas for seat raises when the possibility of inclement weather (snow, rain, gusty wind) exists.

14.3.1.1.7. Do not perform egress system maintenance while aircraft is jacked.

14.3.1.1.8. Cease egress system maintenance when lightning has been determined within 5 miles of the base.

14.3.1.1.9. In the event of an unsafe condition involving an egress system, stop maintenance and notify the egress section chief or egress shift supervisor. Maintenance will not resume until unsafe condition is corrected.

14.3.1.2. (Added) Explosive Mishap.

14.3.1.2.1. In the event of an explosive mishap, the egress section chief or ranking individual on duty will notify the MOC and accessories flight chief, who will notify the following personnel/agencies:

14.3.1.2.1.1. Wing weapons safety office (377-1821/4318).

14.3.1.2.1.2. OG/LG QA.

14.3.1.2.1.3. 354 MXS Maintenance Supervisor/Superintendent.

14.3.1.3. (Added) Fire.

14.3.1.3.1. In the event of a fire, personnel will:

14.3.1.3.1.1. Extinguish the fire, if possible.

14.3.1.3.1.2. Activate the manual pull station fire alarm.

14.3.1.3.1.3. Notify the fire department (911) and the MOC.

14.3.1.3.1.4. Evacuate nonessential personnel a minimum of 600 feet.

14.3.1.3.1.5. Record exact time the explosives were engulfed in flames.

14.3.1.3.1.6. The ranking individual will secure the area to prevent further injury, damage, or tampering with possible evidence for mishap investigation. Personnel involved will remain on scene until relieved by competent authority unless medical attention is necessary.

14.3.1.4. (Added) Explosive limits.

14.3.1.4.1. Net Explosive Weight (NEW) will not exceed that authorized on the AF Form 2047, **Explosive Facility License,** (100 pounds NEW class 1.3/1.4 explosives). Explosives installed on ejection seat assemblies do not count against the NEW limit.

14.3.1.5. (Added) Handling/safety.

14.3.1.5.1. All maintenance actions on explosive items will require a minimum of two personnel. Maximum number of personnel allowed in the immediate area will not exceed the limits established on the AF Form 2047.

14.3.1.5.2. Smoking and the use of spark producing devices are not allowed in the explosive storage area, designated maintenance area, or any egress vehicle.

14.3.1.6. (Added) Storage/security.

14.3.1.6.1. The explosive room door will remain closed and locked at all times.

14.3.1.6.2. Secure the storage locker with a changeable combination lock.

14.3.1.6.3. Change lock combinations annually, when personnel PCS, or are no longer authorized access.

14.3.1.6.4. Only egress personnel will be authorized access to combinations and unescorted entrance into the explosive storage/work areas of the egress facilities.

14.3.1.6.5. Upon receipt of explosive items, the storage room control board will be updated. Information must include aircraft serial number, noun, date, and name of person who received the item.

14.3.1.6.6. The shift supervisor will conduct and document a daily/shift inventory of explosives on the explosive room control board.

14.3.1.6.7. Post the appropriate fire symbols at all interior entrances to the affected room when explosives are stored in the storage room or workroom. Notify the MOC and the fire department when fire symbols change, and annotate symbol changes on the storage room control board.

14.3.1.7. (Added) Transport.

14.3.1.7.1. A minimum of two personnel are required to pick up and turn-in explosive items. A two-way radio will be available while transporting explosive items to or from the munitions storage area.

14.3.1.7.2. Never leave explosive laden vehicles unattended.

14.3.1.7.3. Egress vehicles must be equipped with at least two ABC dry chemical fire extinguishers.

14.3.1.7.4. Explosives must be stable and secure before any vehicle movement.

14.3.1.7.5. Egress vehicles must use the primary munitions delivery route when picking up or turning in explosive items. Contact munitions control for permission to use alternate routes.

14.3.1.8. (Added) CAD/PAD inventory

14.3.1.8.1. Conduct 100 percent CAD/PAD inventory of ACES II seats during aircraft or seat phase, when explosives are removed from the seat for major repairs, and during aircraft acceptance inspections.

14.4.2.1. (Added) **Fuel Systems Section** Entry into Fuel Systems Repair Facility (FSRF).

14.4.2.1.1. Personnel requiring entry into any fuel systems repair or hydrazine maintenance areas will get clearance from the fuel systems supervisor on duty prior to entry. The fuel systems supervisor will ensure personnel are properly clothed and all spark-producing materials left in the office area prior to entry.

14.4.2.2. (Added) Safety.

14.4.2.2.1. Aircraft will not taxi into any fuel cell repair area, and not operate when engine blast might reach any portion of the fuel system repair area.

14.4.2.2.2. All FSRFs will be clearly marked with warning signs "DANGER, OPEN FUEL TANKS, UNAUTHORIZED PERSONNEL KEEP OUT." Those areas of the FSRF that are normally open and are intended to control foot traffic into the dock area will be cordoned off 50 feet from all points of the aircraft. All areas will be set up and controlled in accordance with TO 1-1-3, *Inspection and Repair of Integral Tanks and Fuel Cells,* and the fuel systems hangar checklist.

14.4.2.2.3. Open fuel system operations shall be suspended when thunderstorms or lightning are within a five-mile radius of the fuel systems repair/site in accordance with TO 1-1-3. Notification of adverse weather conditions will come from the MOC.

14.4.2.2.4. Aircraft radar equipment operation and the FSRF will have a minimum separation distance of 300 feet.

14.4.2.2.5. FS personnel will ensure all aircraft have properly configured fuel loads in accordance with the hangar entry checklist. Attach completed/signed checklist to the aircraft.

14.4.2.2.6. Affected FS will initially drain necessary aircraft fuel tanks prior to hangar entry, the fuel systems section using approved drain containers and methods will accomplish any additional draining.

14.4.2.2.7. The tow supervisor will notify the MOC prior to moving any aircraft in or out of the FSRF.

14.4.2.3. (Added) Fuel Systems Maintenance Areas.

14.4.2.3.1. Building 1344 is the primary FSRF, certified for all fuel system maintenance. All fuel system repairs, with the exception of the repairs listed in paragraph **14.4.2.4. (Added)**, will be accomplished in this facility unless it is unavailable for use. Positioning of aircraft in this hangar will be coordinated through the fuel systems shift supervisor, or 354 MXS Maintenance Supervision.

14.4.2.3.2. Building 1338 (Bay 8) is the temporary FSRF, re-designed to accommodate fuel systems maintenance. Use building 1338 (Bay 8) only when building 1344 is unavailable or, during peak workload periods to prevent mission degradation, as determined by the 354 MXS Production Superintendent. Prior to using building 1338 (Bay 8), the fuel systems shift supervisor will ensure all installed equipment meets the requirements of TO 1-1-3. Use of building 1338 (Bay 8) will be coordinated through the fuel systems shift supervisor, the 354 MXS Production Superintendent, and the 18 FS Production Superintendent. Priority disputes will be resolved through discussions between Fighter squadrons, Maintenance squadrons and the OG/CM.

14.4.2.3.3. When using bay 8 of building 1338 as a fuel repair dock, bay 7 will be empty of powered aerospace ground equipment. Configure aircraft in bay 7 for fuel systems maintenance in accordance with TO 1-1-3 and the fuel systems hangar checklist, as applicable.

14.4.2.3.4. The temporary FSRF (bldg. 1338, bay 8) doors will remain open during purging and depuddling operations until a fire safe condition is reached and maintained. Extend the blower outlets to the outside of the repair facility, and positioned so that fuel vapors do not accumulate. During periods of cold weather (32 degrees Fahrenheit or colder) the following rules will apply to prevent freezing of pipes and maintenance equipment: From 32 to 0 degrees Fahrenheit the door may remain open for 30 minutes. Below zero degrees Fahrenheit the door may remain open for 15 minutes maximum.

14.4.2.3.5. Open Fuel Systems Repair Areas. Maintenance in open fuel systems repair areas is highly dependent on weather conditions and availability of authorized portable equipment. Set-up all open areas in accordance with TO 1-1-3. Aircraft will not operate under their own power within 100 feet of the repair

area, and be limited from operating where engine blast could affect safety. The open fuel systems repair areas are:

14.4.2.3.5.1. The asphalt pad directly in front of building 1344. Use this area primarily for fuel system troubleshooting and minor maintenance.

14.4.2.3.5.2. Alpha Row in the aircraft maintenance loop area. Careful consideration and additional safety precautions will be taken due to taxiing aircraft, possible radar operations, and increased vehicular and personnel traffic.

14.4.2.4. (Added) The following components (by aircraft) and fuel panels may be changed/opened on the aircraft if it is parked away from taxiing aircraft in accordance with

TO 1-1-3.

14.4.2.4.1. A-10 aircraft:

14.4.2.4.1.1. Left/right engine shut-off valve Actuators.

14.4.2.4.1.2. Left/right engine cross feed valve actuator.

14.4.2.4.1.3. Defuel shut-off valve actuator.

14.4.2.4.1.4. Engine fuel quick disconnect.

14.4.2.4.1.5. Left/right engine feed manifold.

14.4.2.4.1.6. Externally mounted pressure switches.

14.4.2.4.1.7. External vent manifolds.

14.4.2.4.1.8. External tanks pressure regulator.

14.4.2.4.1.9. Regulator air check valves.

14.4.2.4.1.10. Service air check valves.

14.4.2.4.1.11. Left/right/fuselage external tank pressure vent valves.

14.4.2.4.1.12. Single point refueling assembly.

14.4.2.4.1.13. Fuel probes; forward/aft main.

14.4.2.4.1.14. In-flight refueling receptacle.

14.4.2.4.1.15. All in-flight refueling manifolds forward of the refueling check valve.

14.4.2.4.1.16. Dual check valve.

14.4.2.4.1.17. DC start pump.

14.4.2.4.2. F-16 aircraft:

14.4.2.4.2.1. Fuel flow transmitter.

14.4.2.4.2.2. Engine feed line.

14.4.2.4.2.3. Externally mounted pressure switches.

14.4.2.4.2.4. Engine Electronic Control (EEC) valve.

14.4.2.4.2.5. Main fuel shut-off actuator.

14.4.2.4.2.6. Refuel/defuel receptacles.

14.4.2.4.2.7. Center line and wing fuel/air quick disconnect.

14.4.2.4.2.8. Ground air source connectors and check valves.

14.4.2.4.2.9. Fuel drain valves.

14.4.2.4.2.10. Resealing (dripping) screws.

14.4.2.4.2.11. Turbine pump panels, wing shut-off valve panels, and applicable probe panels on the wings.

14.4.2.5. (Added) **F-16 EPU maintenance area.**

14.4.2.5.1. Accomplish EPU maintenance only in areas designated and authorized by TO 1F-16CG-2-49GS-00-1. **NOTE:** The F-16 EPU system contains hydrazine, a hazardous liquid that requires special handling in accordance with TO 1F-16CG-2-49GS-00-1.

14.4.2.5.2. Building 1344 is identified as the primary hydrazine maintenance and servicing facility.

14.4.2.5.3. Building 1338 and 1335 (Bays 3 thru 8 and 9 thru 12) are authorized full time EPU hook up facilities. Conduct EPU system purging in building 1344, unless unavailable. Vacate adjacent hanger bays of personnel and post warning signs if using secondary facilities during purging or hook up procedures.

14.4.2.5.4. Loop taxiway area (Fox Hardstand), if isolated from mass parking area. EPU maintenance in this area is restricted to the concrete pads, and only used when an indoor facility is unavailable.

14.4.2.5.5. Charlie row unless aircraft are loaded with live munitions then Alpha Row, if isolated from mass parking area. EPU maintenance in this area is restricted to the concrete pads, and only used when an indoor facility is unavailable.

14.4.5.1. (Added) If a hydrazine leak or spill occurs during maintenance, use Local Checklist (LCL) 354FW-20-4.

14.4.8.1.5. (Added) **External Fuel Tank Storage and maintenance.** Ensures external fuel tanks in the FSRF and Fuel Tank Storage Facility (FTSF) are properly stored, have standpipes and cannon plugs covered, and grounded when required, in accordance with TO 1-1-3 and TO 00-25-172, *Ground Servicing of Aircraft and Static Bonding/Grounding.*

14.4.8.1.6. (Added) Maintains status of external fuel tanks and ensures all fuel tanks inside FTSF have condition tags/AFTO Form 350 attached.

14.4.8.1.7. (Added) Documents required inspections and maintenance. Maintains AFTO Form 95 for all external fuel tanks.

14.4.8.1.8. (Added) Transports external fuel tanks from the FSRF to the FTSF.

14.4.8.1.9. (Added) Ensures FTSF is clean and organized to include snow removal around exterior of facility.

14.4.8.1.10. (Added) Performs exterior inspection on external fuel tanks received from the flightline with AFTO Form 350/condition tag attached and documented.

14.4.8.1.11. (Added) Coordinates with FS and 354 MXS Structural Maintenance section to ensure external tanks are with aircraft during paint. Transports external tanks to the corrosion control facility.

14.4.10. (Added) **18 FS and 355 FS Sortie Generation Flight external fuel tank responsibilities.**

14.4.10.1. Uploads/downloads external fuel tanks on/from aircraft.

14.4.10.2. Transports serviceable tanks between the aircraft and the FTSF.

14.4.10.3. 355 FS only: Stores and performs minor maintenance on external fuel quantity indicating cable assemblies. Routes cable assemblies to Gold Flag as required.

14.4.10.4. Stores and protects external fuel tanks kept in aircraft bays.

14.4.10.5. Tags unserviceable and serviceable tanks with condition tag/AFTO Form 350. **NOTE:** Completely drain all tanks after removal from aircraft, and prior to delivery to the FTSF or the FSRF. Delivers all unserviceable tanks directly to the FSRF for maintenance repair.

14.4.10.6. Enters tank discrepancies into the CAMS and attaches completed maintenance snapshot inquiry (CAMS Screen 122) to the tank when processing for maintenance repair.

14.4.10.7. Performs minor repairs (e.g., A-10 standpipe seals). **NOTE:** Only perform electrical repairs with assistance from a fuel system technician.

14.4.10.8. 18 FS only: Notifies FSRF of aircraft paint schedule to ensure tanks requiring extensive corrosion treatment and painting accompany aircraft.

14.4.10.9. 355 FS only: Transports two external fuel tanks selected by fuel systems section to and from corrosion control facility with aircraft.

14.4.11. (Added) **354 MXS external fuel tank responsibilities.**

14.4.11.1. Performs corrosion control treatment of external fuel tanks and racks.

14.4.11.2. Maintains tank transport trailers, excluding cradles (maintained by the FSRF).

14.4.12. (Added) **Loss/jettison of external fuel tanks in-flight.**

14.4.12.1. Debrief section will ensure aircrew fills out appropriate debriefing paperwork, and forward a copy to the FSRF. Entries made on the AFTO Form 781A will include serial numbers of the lost tanks.

14.4.12.2. A Letter of Initial Issue (LOII) is required for each tank lost. LOIIs will have a copy of the applicable AFTO Form 781A attached with annotation to indicate either jettisoned or lost inflight. The affected FS will submit the LOII, sign by the squadron maintenance officer/superintendent.

16.2.5.1. (Added) **Aircraft Structural Maintenance (ASM) section.** Ensures units do not bring additional cleaning compounds into the facility.

16.2.7.1. (Added) Provides sortie generation flight chief/commander with an aircraft paint scoring sheet quarterly to insure a sound paint program for both appearance and corrosion prevention.

16.2.7.2. (Added) Coordinates with sortie generation and production personnel to prioritize aircraft requiring full paint or touch-up.

16.2.9.1. (Added) Coordinates with munitions flight for scheduled corrosion maintenance of support equipment to included cleaning, paint preparation, and removal of all reflective tape and non-essential items.

16.2.11.1. (Added) **Aircraft Wash.**

16.2.11.1.1. When outside temperature is 0 degrees Fahrenheit or colder, aircraft will be positioned in the wash rack at least 6 hours prior to the scheduled wash time.

16.2.11.1.2. To prevent freeze up during severe cold weather, aircraft will be allowed ample time to drain prior to removal from the corrosion hangar. When outside temperatures are 32 degrees to 0 degrees Fahrenheit, aircraft will remain indoors for a period of 24 hours after the wash. If temperatures are colder than 0 degrees Fahrenheit, aircraft will remain indoors for at least 48 hours.

16.2.11.1.3. Structural maintenance personnel will give a wash rack safety briefing prior to the wash.

16.2.11.1.4. Affected FS maintenance personnel will prep aircraft for wash.

16.2.11.1.5. After the wash, FS maintenance personnel will remove all protective covers, masking tape, plugs, etc., dispose of all trash, and store aircraft protective covers/personnel protective gear as directed by the facility manager. A corrosion inspection will be accomplished by a corrosion technician.

16.2.11.2. (Added) **Aircraft Painting.**

16.2.11.2.1. Schedule aircraft paint slots on a quarterly basis providing nine consecutive workdays to the 355 FS and 6 consecutive workdays to the 18 FS, subject to mission requirements. A-10 aircraft require 9 working days for a full paint; F-16 aircraft require 6 days. 18 FS and 355 FS can utilize their scheduled slots for full paints or for paint touch-ups, whichever the sortie generation flight chief/commander deem most appropriate with input from structural maintenance personnel.

16.2.11.2.2. Personnel will wash aircraft prior to scheduled input for full paint. Aircraft washes for touch-up painting will be on an as-needed basis, coordinated with the structural maintenance section chief.

16.2.11.2.3. Aircraft will be in position by 2400 hours the day prior to scheduled paint input.

16.2.11.2.4. Before the first day of scheduled paint begins (full paint), applicable flight controls will be removed from the A-10 aircraft.

16.2.11.2.5. Units will deliver external fuel tanks requiring paint (full or touch-up) *NLT* the 1st day of the scheduled full paint of aircraft.

16.2.11.2.6. F-16 aircraft require jacking with gear retracted, during full paints. The structural maintenance section chief will coordinate with FS production personnel to accomplish the task.

16.2.13.1. (Added) Train and certify aircraft structural maintenance personnel annually on procedures for aircraft intake, engine inlet and exhaust maintenance for masking/de-masking of inlet/exhaust during painting operations and intake rivet replacement.

16.2.13.2. (Added) A locally developed training guide will be used for each MDS assigned.

16.2.13.3. (Added) Aircraft structural maintenance personnel serving in the grade of MSgt and above will train and certify personnel on tasks listed in paragraph **16.2.13.1. (Added)**

18.2.10. **For the Armament Flight Recognition program, See paragraph 5.1.10.7. (Added)**

18.2.13. (Added) **Armament Flight Maintenance Section.** Establishes procedures for in-shop maintenance/handling of 20mm and 30mm ammunition gun malfunctions. **NOTE:** Follow procedures outlined in TOs 11W1-12-4-32, 11W1-7-16-2, 35D30-4-10-1, and 35D30-4-15-1, for the removal of ammunition and inspection of the gun barrels/handling systems. Handle ammunition and explosive residue in accordance with AFM 91-201.

18.2.13.1. Personnel limits.

18.2.13.1.1. Maximum: One supervisor, three technicians, and two visitors.

18.2.13.1.2. Minimum: One supervisor and two technicians.

18.2.13.2. Explosive limits for building 1353.

18.2.13.2.1. 20mm High Explosive Incendiary (HEI)/Armor Piercing Incendiary (API) ammunition - 1,750 rounds, 30mm HEI/API ammunition 490 rounds or the equivalent of class 1.2 ammunition NEW 49.99.

18.2.13.2.2. 2,700 rounds 20mm TP ammunition, 1,058 rounds 30mm TP ammunition class 1.4, NEW N/A.

18.2.13.3. Equipment Requirements.

18.2.13.3.1. Gun safing devices.

18.2.13.3.2. Gun/drum maintenance stands.

18.2.13.3.3. 30mm/20mm ammunition containers.

18.2.13.3.4. Pneumatic loader/hand crank.

18.2.13.3.5. Ground wires.

18.2.13.3.6. Composite tool kit.

18.2.13.3.7. Rubber/foam mats.

18.2.13.4. Safety Precautions.

18.2.13.4.1. A safety briefing will be given by the supervisor to include all safety items in this instruction.

18.2.13.4.2. Use proper explosive safety precautions when handling 20mm/30mm ammunition. Do not throw, drop, or allow ammunition to free-fall into ammunition cans. Personnel will be restricted from handling more than one round of ammunition per hand at any one time.

18.2.13.4.3. Personnel will not wear jewelry (e.g., watches, rings, necklaces).

18.2.13.4.4. Personnel will adhere to explosive limits.

18.2.13.4.5. A minimum of two personnel will handle the M61A1 gun or drum during placement on a work stand or while using the hoist.

18.2.13.4.6. Work jammed drums, UALS, and Ammunition Loading Assemblies (ALA) immediately upon arrival in building 1353.

18.2.13.4.7. At no time will the GAU-8A gun be brought into the armament systems maintenance section with live rounds in the gun.

18.2.13.4.8. Maintain good housekeeping throughout the clearing operation.

18.2.13.5. Sequence of Operations.

18.2.13.5.1. A safety briefing will be given prior to starting any clearing operation.

18.2.13.5.2. Notify the MOC immediately and informed them explosives are located in building 1353. Post fire symbol signs on the building as to the type of ammunition in use. Symbol 2 for HEI and symbol 4 for TP and API.

18.2.13.5.3. Two B/C fire extinguishers will be readily available and inspected prior to beginning of operations.

18.2.13.5.4. Ground drums, UALS, and storage cans containing 20mm ammunition immediately upon entry into the building.

18.2.13.5.5. M61A1 Gun System. Prior to any maintenance check the gun to ensure it is safe, and safety pin and holdback tool is installed. If possible, rotate the gun to ensure the breech bolts are in the rear clearing cam path.

18.2.13.5.6. Before handling 20mm ammunition and at frequent intervals while handling; each individual will touch a ground device to discharge any static electricity potential.

18.2.13.5.7. Prior to clearing a jam on an ALA, rubber foam pads will be placed under the load and container interface unit heads, when clearing a jam on a 30mm ammunition drum, rubber foam pads will be placed under the entrance and exit ends.

18.2.13.5.8. With regard to ALAs, live rounds could possibly be in the download side of the loader between the load head and the unfired round sensor. Remove these rounds when they appear in the top of the load head to prevent accidental drop.

18.2.13.5.9. Separate live rounds from the spent brass and placed them in 20mm ammunition cans. Mark cans with lot number, quantity, aircraft, and UALS/ALAs serial numbers.

18.2.13.5.10. Place explosive residue (spilled propellant) in self-closing lid type cans, that contain water. The container will be clearly marked "SCRAP EXPLOSIVES".

18.2.13.5.11. The munitions delivery element will transport ammunition and spent cases. Personnel will not leave ammunition unattended, and call for removal from the armament flight facility as soon as possible. Remove fire symbol signs from the building as soon as the facility is clear of ammunition/scrap explosives.

18.2.13.5.12. Notify the MOC when clearing operation is complete and ammunition/scrap explosives have been removed from building 1353.

18.2.13.6. Emergency Procedures.

18.2.13.6.1. Immediately upon encountering an abnormal condition the supervisor will stop the operation. If necessary, he/she will direct evacuation of the operating site and notify the appropriate emergency response agency (MOC, fire department, wing safety, and QA), as required.

18.2.13.6.2. In the event of fire, notify the fire department and MOC. Dial 911 for the fire department, give name, building number, location of fire, and leave phone off the hook. The MOC will make all necessary notifications according to applicable emergency action checklist. If TP, API, or Armor Piercing Tracer (APT) ammunition is involved, fight fire until fire department arrives. If HEI is involved, evacuate all personnel to 2,500 feet as soon as flames engulf ammunition. Note time flames envelope ammunition and pass it to the fire department.

18.2.13.6.3. When notified of an electrical storm in the area, all personnel will cease operations and evacuate the gun room in building 1353. The MOC is responsible for notifying the armament flight of the proximity of the electrical storm.

18.4.1. **Alternate Mission Equipment Section.** 354 MXS Armament Flight is responsible for accountability of all applicable weapons pylons, MAU-12, MAU-40, and MAU-50 racks, missile launchers, to include the dual rail assembly, TERs, SUU-20 dispensers, ACRIUs, AMRIUs, under wing adapters, and ALE-50 pylons.

18.4.2. (Added) One complete F-16 and A-10 gun system will be maintained on the Special Purpose Recoverables Authorized to Maintenance (SPRAMS) account. These guns will be maintained by the 354th Armament flight and will be primarily used to replace in-flight gun malfunctions that cannot be immediately repaired. However, if available, the SPRAMS gun ***may*** be used to replace guns pulled for scheduled maintenance when the following conditions exist: A) The gun is the only NM driver, B) All applicable gun bay inspections have been performed and C) The scheduled gun will not be turned in within allotted time for inspection due to a lack of parts and the parts have been MICAP'd through the fighter squadron. (Allotted time for inspection is, F-16 72 hours, A-10 96 hours)

18.4.6. (Added) Maintains equipment historical documents AFTO Form 95, **Significant Historical Data**, for assigned AME. **NOTE:** Hard copy files of historical records are not required if automated, however, section must maintain a backup file system.

18.4.7. (Added) Schedules assigned AME and gun systems/components for all off-equipment periodic inspections.

18.4.8. (Added) Ensures F-16 aircraft centerline pylons and A-10/F-16 gun systems are given priority in the maintenance workflow to the maximum extent possible, unless directed otherwise by 18 FS and 355 FS production personnel.

18.4.9. (Added) Includes AME/NIE schedules in the monthly and weekly maintenance plans.

18.4.10. (Added) Provides storage and control for AME that is:

18.4.10.1. In ready or extended storage.

18.4.10.2. Undergoing scheduled inspections.

18.4.10.3. Undergoing maintenance.

18.4.10.4. Awaiting Parts (AWP).

18.4.11. (Added) Issues all equipment using AF Form 1297, **Temporary Issue Receipt**, or automated equivalent.

18.4.12. (Added) Performs AME acceptance inspections.

18.4.12.1. Ensures shipping documents reflect correct equipment ordered.

18.4.12.2. Prepares equipment for inspection and use. **NOTE:** Inspections required for accepting equipment is determined on in-use/on aircraft, ready storage, and extended storage. Check equipment's operation and maintenance TO for requirement.

18.4.12.3. Checks technical manuals for any TCI requirements on equipment received from supply.

18.4.12.4. Checks condition tags accompanying equipment.

18.4.12.5. Checks historical records for compliance of existing TCTOs or TCIs. **NOTE:** If no record exists, verify or complete TCTO/TCI and update history in CAMS and AFTO Form 95.

18.4.12.6. Schedules TMDE for initial calibration.

19.8.22.1. (Added) **Quality Assurance Superintendent responsibilities.** QA web administrator will place wing In Process Inspection (IPI) listing on intraweb.

19.8.28.1. (Added) Depot replies to technical assistance requests via e-mail or DESTRAP 202 are official. If depot approves repair of items beyond existing TO procedures or capabilities, the authorization will remain with the aircraft or equipment historical records until any waived or deferred maintenance action is complete.

19.8.28.2. (Added) The OG/LG CC or designee must receive a copy of the 107 request or DESTRAP 202 complete with depot comments from the requesting FS/MXS supervision for the 107/DESTRAP 202 to be authorized.

19.8.28.3. (Added) 354 OSS/OSCP:

19.8.28.3.1. Acts as the point of contact for the depot field team arrival and departure information. **NOTE:** Once the team arrives on base, 354 OSS/OSCP will initiate an arrival e-mail addressed to the Major Command (MAJCOM) receiving assistance and the Air Logistics Center. They will also be responsible for initiating team departure e-mail to the same organizations in accordance with TO 00-25-107, *Maintenance Assistance*, paragraph 9.

19.8.28.3.2. Completes coordination after QA review, of the request e-mail from the requesting unit and obtain release from the appropriate GP/CC or designated representative.

19.8.28.3.3. Changes the aircraft possession code to appropriate code utilizing the date time group of the transmitted e-mail if required and return aircraft to the appropriate code after completion of repairs.

19.8.28.4. (Added) Requesting unit:

19.8.28.4.1. Drafts the 107 e-mail form/DESTRAP 202 requesting depot level assistance and forwards the link to the specific DESTRAP request web page to QA for coordination. QA forwards the draft to OSS/OSCP to complete the coordination process and obtain release from the OG/CC or LG/CC or designee.

19.8.28.4.2. Makes all necessary arrangements for arriving technicians to include tools, test equipment, hangar space, security clearances, transportation, and billeting.

19.8.28.4.3. Notifies QA, OSS/OSCP, OG/CM, and LG/CD of the team's arrival, work status, and departure.

19.8.28.5. (Added) **Specific guidance for technical assistance.**

19.8.28.5.1. Affected FS or MXS will contact QA and Air Force Engineering and Technical Service (AFETS) representative once it has been determined that repairs are beyond TO limits but are within wing repair capabilities. Examples illustrating the intent of this paragraph are: Repair or blend aircraft skin gouges and or cracks, disbonding of air-craft panel surfaces, and boring or over sizing of aircraft bushing or fixtures.

19.8.28.5.2. Requesting FS/MXS/AFETS can communicate with depot technical representatives to discuss proposed disposition/course of repair via email or DESTRAP 202. All correspondence (outgoing and incoming) will be courtesy copied to QA, OG/CM, and LG/CD. To receive valid disposition/repair

instructions a 107 form/DESTRAP 202 requests must be used. Requesting unit will send initial draft (107 request) to QA for review, which will forward to OSS/OSCP to complete the coordination process and obtain release from the OG/CC or LG/CC or designee. The DESTRAP request will be placed on the DESTRAP web site and a link will be sent to QA for coordination.

19.8.28.6. (Added) Specific guidance for un-programmed depot level maintenance.

19.8.28.6.1. Affected FS or 354 MXS will contact QA and AFETS once it has been determined that repairs are beyond TO limits and are not within wing repair capabilities. Examples illustrating the intent of this paragraph are: Aircraft crash repairs, aircraft fire damage repairs, major structural damage.

19.8.28.6.2. The requesting FS/MXS supervision/AFETS will be the 354 FW points of contact with the appropriate depot for TO 00-25-107 requests. The requesting workcenter will write the formal 107/ DESTRAP 202 request and forward to QA and OSS/OSCP for coordination prior to release by the OG/ CC or LG/CC or designee. The request will be courtesy copied to: OG/CM, LG/CD, OG/CEM, LG/CEM, MXS/MA, and affected FS/MA.

19.8.28.7. (Added) Unit will use guidance in **Attachment 8 (Added)** when drafting 107 requests. DESTRAP 202 requests will follow the format spelled out in the web site.

19.15.7. (Added) QA web administrator will place the evaluation and inspection plan on intraweb.

19.29.1. (Added) OG/QA will also forward weekly summary report to the OG/CM and OG/CEM.

19.31.2. (Added) QA will forward the Quality Assurance Program (QAP) summary to the 611 ASUS/LG at Elmendorf AFB AK.

19.31.3. (Added) QA web administrator will place QAP summary on intraweb.

19.33.1. (Added) QA web administrator will place QA monthly review on intraweb.

19.42.3.1. (Added) The 354 LG/Technical Order Distribution Office (TODO) is the point of contact for all issues pertaining to local work cards, job guides, page supplements, and checklists.

19.42.3.1.1. The TODO will send out an AF Form 1382, **Request For Review Of Publication And/Or Form(s),** annually for each local work card, job guide, page supplement, and checklist. Send form to affected TODA for distribution to the OPR. The OPR will review local data for currency, change the data if required, and provide a copy to the TODO for coordination and publication.

19.42.6.1. (Added) TODO will rate semiannual inspections as either satisfactory or unsatisfactory. The TODO will call and schedule all annual account inspections on the last week of the month prior to the month the inspection is due. Strongly recommend that both the primary and alternate account custodians are present for the inspection. If either custodian is not available (temporary duty, leave, etc.), then someone with full knowledge of responsibilities will be present. All inspections performed by the TODO will be done during day shift hours (0700-1600) unless mission needs dictate otherwise. TODO will rate Technical Order Distribution Activity (TODA) according to the number of different TOs in their file. Refer to 354 FW Quality Assurance Inspection and Evaluation Plan, Special Inspections for TO file ratings and criteria ratings. Repeat findings will automatically be counted as a major discrepancy, regardless of the previous rating given.

19.42.7. (Added) **TCTO Distribution.**

19.42.7.1. Units will not implement TCTOs until coordinated through OSS PS&D and QA.

19.42.7.2. Forward two copies to the Product Improvement Manager (PIM) for distribution to 354 SUPS Flight Service Center if any stocked items are affected by the TCTO. TODO will establish initial distribution for each account affected by the TCTO.

19.42.7.3. Upon receipt of a TCTO that affects assigned equipment other than armament, munitions, aircraft engines, or AGE, the TODO will send one copy to each affected account, one copy to the QA TCTO file, two copies to PIM if required, and any remaining copies to OSS PS&D.

19.42.7.4. Upon receipt of a TCTO that affects AGE, the TODO will send one copy to AGE account, two copies to PIM if required, one in QA TCTO file, and remaining copies to the AGE scheduler.

19.42.7.5. Upon receipt of a TCTO that affects aircraft engines, the TODO will send one copy to engine shop, one copy to QA TCTO file, two copies to PIM if required, one copy to each affected account, remaining copies to 354 LSS/LGLO.

19.42.7.6. Upon receipt of a TCTO that affects armament, the TODO will place one copy in the QA TCTO file, two copies will be given to PIM if required, and remaining copies will be sent to the armament scheduler.

19.42.7.7. Upon receipt of a TCTO that affects munitions, the TODO will place one copy in the QA TCTO file, and the remaining copies will be sent to munitions control TCTO scheduler.

19.42.8. (Added) Policies, Practices and Procedures. The TODO is the single point between a unit and the TO system for identification, ordering and distribution of required TOs.

19.42.8.1. **Section chief responsibilities.**

19.42.8.1.1. Ensures each TODA has a primary and at least one alternate monitor assigned. These individuals must complete the computer based TO general training **(course code J6AZU00066-038**) available at the education center with a passing score, or have proof of prior training from another base/unit (CAMS run, training certificate, etc.), and be familiar with TO 00-5-2, **Technical Order Distribution System**. Submit an appointment letter for all appointed primary/alternate custodians. If an account has classified TOs, the unit security manager needs to verify the security clearance of account custodians and print and sign his or her name in the appropriate section of the appointment letter.

19.42.8.1.2. Ensures accounts have a primary and alternate custodian replacement identified and trained no later than 45 days prior to the current custodian's PCA/PCS to ensure continuity of account affairs.

19.42.8.1.3. Ensures daily pick up of TO distribution from building 1347.

19.42.8.2. **TODA responsibilities.**

19.42.8.2.1. Informs TODO of any changes in account location, custodians, telephone numbers, office symbol, e-mail addresses or custodian's security clearance.

19.42.8.2.2. Checks TO distribution daily from TODO in building 1347 room 150.

19.42.8.2.3. Provides TODO with an e-mail address so TODO can forward quarterly Automated Technical Order Management System (ATOMS) listings and any other pertinent information.

19.42.8.2.4. Reviews daily distribution notice to ensure receipt of applicable items on the notice. Contacts the TODO if discrepancies exist. Once reviewed, discard the notice or place it in Tab D of continuity book for future reference.

19.42.8.2.5. Reviews TO receipt list for TODO 3242, published in the 354 FW Weekly Operation & Maintenance Schedule.

19.42.8.2.6. Reviews TODO 3242 index of local work cards, job guides, page supplements, and check-lists published in the QAP summary.

19.42.8.3. Technical order continuity folder.

19.42.8.3.1. To maintain consistency throughout TODO account 3242; the following information will be kept in each TODA continuity binder.

19.42.8.3.1.1. TAB A: Copy of completed appointment letter for each assigned primary and alternate account custodian.

19.42.8.3.1.2. TAB B: Annual review documents, monthly T.O. catalog review schedule.

19.42.8.3.1.3. TAB C: Cross-reference sheet (if used), account inventory listing (ATOMS run/ ATOMS run disk, or cross-reference sheet for ATOMS run).

19.42.8.3.1.4. TAB D: Daily distribution notice, if retained.

19.42.8.3.1.5. TAB E: Requisition records (AFTO Form 187, **Technical Order Publication Request**, quarterly requisition listing, etc.).

19.42.8.3.1.6. TAB F: TODO letters, info to sub-account letters, and other general information.

19.42.8.3.2. Do not file changes, supplements or technical data within the TODA continuity book. Use a separate binder to hold technical data until needed. If saving outdated supplements, changes or TOs mark "For reference use only" and file somewhere other than the operational TO library.

19.42.8.4. **Account inventory listing management.**

19.42.8.4.1. The TODA has the choice to maintain their ATOMS run either electronically or through the use of a paper copy. The following paragraphs dictate how the paper version will be maintained; the electronic version will meet the same requirements outlined in this supplement as the paper copy and will be easily available to any QA inspector or TODO personnel who asks to see the document.

19.42.8.4.1.1. Neatly annotate all newly received changes, revisions, supplements and Technical Order Page Supplement (TOPS) pages in the "TO/increment" column on the ATOMS run. When updating information on the ATOMS run, use a single line to draw through the old information.

19.42.8.4.1.2. Annotate the date of the revision, change, supplement or TOPS in the "pub date" column.

19.42.8.4.1.3. Line through any superseded revision, change, supplement, or TOPS.

19.42.8.4.1.4. Annotate changes in TOs required and/or on hand in "Identification qty", "on hand" and "on order" columns when these requirements change through requisitions.

19.42.8.4.1.5. Upon receipt of a new account inventory compare it with the old inventory. If there are no discrepancies, discard the old inventory and any old daily distribution notices. Contact the TODO if discrepancies exist. Accounts also have the option of maintaining an electronic version of the inventory versus paper copy. If this option is used, TODAs must keep a disk with the current ATOMS run on it filed in their continuity book in place of the paper copy, or a cross-reference sheet showing exact location (e.g., which computer and file location). The format of the electronic version will remain the same as one received from the TODO.

19.42.8.5. **Account management.**

19.42.8.5.1. Post all TO changes, and supplements within 5 workdays from TODO date stamp on title page. Post safety supplements within 3 workdays of TODO date stamp. File supplements to TOs in Compact Disc (CD) format with the CD in the same order as if the CD were a paper TO. If the CD has multiple TOs on it, file supplements in TO number sequence with each individual TO's supplements in the same order as if the TOs were paper copies. See TO 00-5-2, **Technical Order Distribution System**, for more information.

19.42.8.5.2. Upon receipt of a change or revision, the person posting the change or revision will perform an List of Effective Page (LEP) check to ensure all pages were received. Annotate the LEP with the type of check performed (change or revision), "LEP check C/W", date completed, and initials of person posting change. TOPS will also have an LEP check completed prior to posting, and the LEP check will be documented on the TOPS title page with the following: "LEP check C/W," date completed, and initials of person performing LEP check. The revised LEP will have the annual LEP check date transferred to the new LEP without initials. Complete the LEP check within 5 duty days of the TODO date stamp on the title page. Additionally, update the annual inspection schedule in Tab B of the TODA continuity book to reflect the new date.

19.42.8.5.3. File all instructions, non-technical order publications, and TCTOs separately from operational TO libraries. If space is limited, they may be stored together, but the TO binders must be numbered independently. Exception: PACAF Supplement 1 to AFI 11-215, *Flight Manuals Program,* requires flight crew information file libraries to have specific TOs and other publications filed together (applies to accounts 17, 24, and 28 only).

19.42.8.5.4. Use an Optional Form 21 and/or cross-reference sheet to show location and accountability of TOs issued filed and stored away from the main library. If single Optional Form 21 binder is used, number binder as last book in the library in accordance with TO 00-5-2, PACAF Supplement 1.

19.42.8.5.5. Do not number TOs in sequence with the main library if is used as workbooks. A workbook is multiple TOs grouped together in the same binder, out of sequence with the main TO library, and used for a specific task. Number these TOs separately from the main library.

19.42.8.5.6. If sub-accounts receive any TOs, TCTOs, supplements, or Automated Computer Program Identification Number System (ACPINS) software through the internet, e-mail, regular mail, fax, or any other means outside the normal technical order distribution process, notify the TODO so the data can be accounted for in ATOMS and any other affected accounts can receive copies for their use. The TODO will date stamp this material before posting.

19.42.8.5.7. Account custodians or other designated persons must pick up classified materials within one hour of notification, if possible. Submit an appointment letter to the TODO to designate personnel authorized to pick up classified materials. The designee's security clearance must equal or be higher than the materials signed for. Personnel picking up classified information will present their identification card for security clearance verification. The TODO will turn away anyone without a valid security clearance who attempts to pick up classified materials.

19.42.8.5.8. Maintaining information to sub-account letters is strongly recommended until TO discrepancy has been resolved by the ALC through publication of a change, supplement, or revision. If retained they will be kept under TAB F of the TODA continuity binder.

19.42.8.5.9. Only TOs and quantities listed on the ATOMS run will be filed within the active library. This is to ensure the account receives all necessary updates as required.

19.42.8.6. Conducting annual check of files.

19.42.8.6.1. Account custodians will establish a schedule to ensure each TO's LEP is checked annually. Arrange the schedule by TO index, TO binder, or individual TO, provided that every TO in the account is included. This schedule will identify when the annual check is due, the date the check was completed and initials of the individual who performed the check. Keep this schedule under TAB B of the TODA continuity binder.

19.42.8.6.2. Document the annual check on the LEP with the following information: "Annual LEP check C/W", date check was performed, and initials of person performing check. When a TO does not have a LEP to check, annotate the title page with "Annual check C/W", date check was performed, and initials of person performing the check. Units may perform the annual inspection any day during the month due.

19.42.8.6.3. If the annual LEP is performed in conjunction with the change LEP, annotate "Annual and change LEP check C/W", date check was performed, and initials of person performing the LEP checks.

19.42.8.6.4. Accomplish annual checks on CD-ROM TOs (00-CD-1, 0-1-CD-1, 33K-1-100-CD-1, etc.) as follows: Check the basic TO date on the CD-ROM with the basic TO date on the ATOMS listing and verify that it matches. Verify with the ATOMS listing any applicable supplements to the CD-ROM are on hand, ensure the supplement dates are correct, and they have a TODO date stamp. Annotate completion of this check on the annual review schedule under TAB B of the continuity folder.

19.42.8.6.5. Any discrepancies between the LEP and the pages being checked will be annotated on the LEP and brought to the attention of the TODO as soon as they are discovered. When the problem has been resolved, the TODO will send out an information to sub-account letter to all affected accounts explaining the problem and corrective action that needs to be taken.

19.42.8.6.6. The account custodian will review monthly the Internet "TO Catalog Updates" (**URL: https://toindex-s.robins.af.mi./TOINDEX/**) for new, updated, rescinded, superseded, and renumbered TO publications that affect their account. Document compliance with this check by establishing a schedule that lists individual TO's (for smaller accounts) or TO series (best for larger accounts). The person doing the monthly check will initial next to each TO or TO Series as it is checked against the TO Catalog. Refer to TO 00-5-2, para. 3-14 for more information.

19.42.8.7. **Electronic TOs management.**

19.42.8.7.1. TODO will inform accounts about updates to the web based TOs depending on their previously established identification requirements. These TOs will appear on the ATOMS listing and the daily distribution letter as WEB- (TO number). The daily distribution letter is only to inform accounts of updates ready for download. The TODO will not distribute paper copies for any of the web based TOs.

19.42.8.7.2. Download these TOs to computer hard drives as necessary. Mark hard copy "For reference use only" if printed in full or part. Units will not file these TOs within the main TO library, but file them in a reference library if they choose. If a copy of a web based TO is needed for any reason, they may be copied onto a 3 ½" floppy or writeable compact disk, and marked "For reference use only". It is the TODA's responsibility to ensure the most current technical data is available.

19.42.8.8. **ACPINS Management.**

19.42.8.8.1. Manage ACPINS as TOs to the extent that they are ordered through the TODO office and tracked on the ATOMS run. The annual check will consist at a minimum, checking the revision to that listed on the ATOMS run to ensure the correct revision is on hand. Do not file ACPINS within the main library, nor is a cross-reference sheet required within the main library to show the location of the ACPINS.

19.42.8.8.2. Do not make backup copies of any ACPINS software. Treat this software like regular technical orders. Any account with extra copies of this software must be on initial distribution for those copies, to ensure proper accountability in ATOMS.

19.42.8.9. **Technical order requisitions.**

19.42.8.9.1. Submit all TO requisitions on an AFTO Form 187, or through electronic means provided for on the TODO web page. Submit ACPINS requisitions on an AFTO Form 157, **Computer Software Configuration Item Request**. Contact TODO for assistance, if needed.

19.42.8.9.2. All TODAs will keep track of their account requisitions. Accomplish this by using the original copy of the AFTO Form 187 or the electronic TO ordering form for a requisition, or the TODA may develop their own requisition tracking system. As a minimum tracking system will include TO numbers and quantities ordered, date requisitioned and date received. When the TODA receives a new ATOMS listing from the TODO, they will check it to ensure all unfilled requisitions show up in the "On order" section of the ATOMS listing. Contact the TODO if discrepancies exist.

19.42.8.9.3. Account custodians who wish to delete or add ten or more TOs will provide a justification letter signed by their respective flight chief. The request is subject to approval by the wing PIM to reduce instances of waste and to prevent abuse.

19.42.8.9.4. Emergency requisition TOs only when there is a critical safety hazard or a work stoppage. Submit emergency requisitions on AFTO Form 187 for regular TOs or AFTO Form 157 for ACPINS software. Attach a justification letter signed at flight level minimum to the requisition form.

19.42.8.9.5. Sponsor-approval TOs are technical orders that have limited distribution authority. Requisition sponsor-approval TOs on an AFTO Form 187s for TOs or AFTO Form 157 for ACPINS software. Attach a justification letter signed at flight level minimum to the requisition form.

19.42.8.10. TODO will provide a quarterly account inventory and requisition status listing for each account during the months of January, April, July, and October.

19.42.8.11. TODO will correct any TO discrepancies through coordination with the applicable Technical Order Distribution Control Activity (TODCA) and other agencies to ensure accuracy of technical data.

19.43.1.1. (Added) **The QA Weight and Balance** (W&B) manager or technician(s) are responsible for accomplishing W&B "Chart "A" inventory, ensuring aircraft is correctly configured prior to weigh, weighing aircraft, updating aircraft W&B records to include, CAMS, and creating a coversheet for FS annual review of aircraft W&B records.

19.43.1.2. (Added) Affected FS:

19.43.1.2.1. Notifies the QA W&B manager with sufficient time to re-compute the center of gravity limits when planning on flying an aircraft with a "Chart A" listed item removed, and when the item is reinstalled. The QA W&B manager will update program data.

19.43.1.2.2. Notifies the QA W&B manager at least 1 week in advance to compute the DD Form 365-4 when planning on flying an aircraft with a configuration not filed with the CANNED DD Form 365-4's (Form F's). Reviews annually, in conjunction the FS weapons officer, all CANNED DD Form 365-4's (Form F's) on file in the QA office for currency and accuracy.

19.43.1.2.3. Provides qualified personnel for assistance with "Chart A" inventories, jacking, leveling, towing, and other tasks necessary to weigh aircraft.

19.43.1.2.4. Notifies the QA W&B manager of any reported flight control abnormality that may be associated with improper aircraft W&B.

19.43.1.2.5. Notifies the QA W&B manager when scheduled aircraft configurations are not listed in the current standard conventional load listing, or applicable –1 flight manual. **NOTE:** The 18 FS and 355 FS Weapons Officers are responsible for ensuring aircraft configurations are legal in accordance with –1 flight manuals, and will also generate "*Seek Eagle"* requesting aircraft flight clearance as required.

19.43.1.2.6. Maintains aircraft weighing equipment, and notifies the QA chief inspector or W&B manager prior to loaning out any weighing equipment.

19.43.1.2.7. Notifies the QA W&B Manager prior to load cell kit being sent to PMEL for calibration to ensure that no aircraft are going to be due a weigh while the kit is being calibrated.

19.43.3.1. (Added) OS PS&D section:

19.43.3.1.1. Includes aircraft requiring weigh in the quarterly, monthly, and weekly maintenance plan.

19.43.3.1.2. Notifies the QA W&B manager of aircraft departing to programmed depot maintenance at least 5 days in advance, to allow for timely update of W&B records. QA will deliver W&B records to OS PS&D section.

19.43.3.1.3. Schedules aircraft W&B in CAMS, not to exceed –5 and –6 requirements.

19.43.3.1.4. Schedules aircraft for wash and reconfiguration downtime in advance of weigh.

19.43.3.1.5. Schedules aircraft for "Chart A" inventory 1 day prior to weigh, or 1 day prior to entering corrosion control facility for paint.

19.43.4.1. (Added) The affected OS PS&D section TCTO monitor notifies the QA W&B manager of all TCTOs and modifications over two pounds on aircraft with a basic weight under 25,000 pounds, and items over five pounds on all other aircraft with a basic weight above 25,000 pounds.

19.43.9. (Added) The training aircraft (A-10, 78-0305) is weighed in accordance with W&B directives to ensure safe movement, jacking, and lifting of aircraft.

19.43.10. (Added) **Preliminary procedures for weighing aircraft (refer to Attachment 13 (Added)).**

19.43.10.1. Thoroughly wash and dry aircraft.

19.43.10.2. Aircraft will be in a clean configuration with no ammunition. The A-10 aircraft will have all of the weapons pylons installed, and the F-16 aircraft require wing tip launchers only.

19.43.10.3. "Chart A" inventory will have applicable panels and doors opened per locally developed checklist.

19.43.10.4. Defuel and drain aircraft fuel system in accordance with TO 1F-16CG-5-2 for F-16 aircraft and TO 1A-10A-2-12JG-1 and TO1A-10A-5 for A-10 aircraft. Defueling procedures not in accordance

with listed TOs will result in an erroneous remaining fuel quantity. QA will be present during F-16 aircraft defuel and A-10 aircraft depuddle to verify accuracy of procedures.

19.43.10.5. All other aircraft systems (hydraulics, engine oil, nitrogen, etc.) will be fully serviced in accordance with applicable servicing job guide. Remove liquid oxygen converter.

19.43.10.6. Turn off heater blowers and close hangar doors to eliminate wind influences on the scale readings at least 20 minutes prior to the aircraft weigh. As applicable, aircraft panels and doors will be completely installed/closed, trailing edge flaps retracted, leading edge slats extended, speed brakes, canopy, and in flight refueling door closed, chaff/flare canisters empty, and aircraft boarding ladder retracted. Weigh aircraft in accordance with applicable -5 TO.

19.44.5. (Added) **Wire/Harness Chaffing Program.** QA will inspect aircraft for existence of chafing, after replacing, piggybacking, or rerouting any wire harness as well as the replacement or repositioning of any tubing.

19.45.1.1.4. The OG/CC or designated representative will be immediately available, thru the SOF, for the duration of the FCF.

19.45.1.3.3.5.1. Due to the vast area and number of MOA's where Eielson AFB perform FCF/OCF flights, maps and charts of those areas will be maintained in the fighter squadrons.

19.45.1.3.4. (Added) OG/QA will perform a preflight QVI on all aircraft requiring FCFs. **NOTE:** Normally only an initial preflight QVI will be accomplished unless the QA chief inspector determines the requirement for another due to extenuating circumstances, (e.g. length of time between preflight inspections or extent of maintenance accomplished). At a minimum, QA will review maintenance performed on aircraft that were non-release previous.

19.45.1.3.5. (Added) Review corrective actions of all discrepancies found during the FCF.

19.45.1.3.6. Coordinate with the FCF OIC to develop transient FCF requirements as needed. Consider local and host base requirements.

19.45.2.2.1. Squadron Commanders will nominate only highly qualified personnel for FCF upgrade training and submits those names to the OG/CC for approval.

19.45.2.3.1. (Added) The normal A/OA-10 configuration is clean (pylons installed), full internal fuel, and five variable ballast plates installed to achieve a Center of Gravity (CG) between 25.0 to 29.6 Mean Aerodynamic Cord (MAC) optimal being 27.3 MAC. **NOTE:** In instances where additional weight is required, use a combination of 30mm ammunition (TP or dummy) and variable ballast plates.

19.45.2.3.2. (Added) The normal F-16 configuration is clean, all pylons removed (wing tip launchers installed) and full internal fuel. Install TP ammunition if necessary, to achieve the ideal CG in accordance with TO 1A-16CG-5-2.

19.45.2.14.1. Perform a detailed debrief with maintenance debrief and OG/QA. Debrief will forward completed FCF checklist to OS PS&D section for placement into aircraft jacket file and will ensure all FCF generated discrepancies are properly debriefed and entered in CAMS.

19.45.2.16.2. Any time additional controls are considered necessary in the operational check out of aircraft systems.

NOTE: Do not fly OCFs to check out safety of flight systems (e.g., primary flight controls) instead, use FCF control measures.

19.45.2.16.3. Operations Squadron Maintenance will:

19.45.2.16.3.1. (Added) Determine if an aircraft requires an OCF.

19.45.2.16.3.2. (Added) Ensure all ground maintenance actions have been exhausted prior to recommending an aircraft for an OCF.

19.45.2.16.3.3. (Added) Notify QA of aircraft tail number, reason for OCF, brief time and location, and scheduled takeoff time.

19.45.2.16.4. The Squadron Commander will be the minimum authorizing authority for all squadron OCFs except as indicated in paragraph **4.1.6.14. (Added)**

19.45.2.16.5. (Added) The Fighter Squadron will:

19.45.2.16.5.1. Ensure a pilot identified as experienced on the squadron's letter of X's, flies the OCF.

19.45.2.16.5.2. Ensure procedures are developed for checkout of the discrepancy in flight, and the conduct of the flight after the discrepancy checkout portion of the sortie is accomplished (i.e. should the sortie continue as part of a mission or return to base).

19.45.2.16.6. (Added) OG/QA will

19.45.2.16.6.1. Perform all applicable functions required for an FCF except as noted:

19.45.2.16.6.2. Conduct a forms review to ensure valid measures have been taken to preclude further recurrence.

19.45.2.16.6.3. Enter approved OCF pre-prints into AFTO 781A that includes the following:

"OCF due for _____ Authorized by_____".

19.45.2.16.6.4. Meet with squadron maintenance to review maintenance corrective actions prior to OCF.

19.45.2.16.6.5. Meet with pilot and thoroughly briefs reason for OCF and maintenance corrective actions that were taken connected to the discrepancy, also brief the requirement to sign off the OCF due discrepancy upon completion of the sortie.

19.45.2.16.6.6. Tracks the aircraft and/or equipment until discrepancy that forced the OCF is no longer valid.

19.45.2.16.6.7. Notify the group or deputy commander of the OCF, the pilots name and the scheduled take off time.

19.45.2.16.7. (Added) Once the squadron determines an aircraft requires an OCF; it cannot be removed from this status until the discrepancy that generated OCF is cleared, or if waived by the OG/CC.

19.45.2.17. (Added) Squadron maintenance will notify QA ASAP to obtain aircraft W&B clearance, and coordinate time for FCF preflight QVI**,** FCF brief, and FCF takeoff.

19.45.3.2.1. (Added) A minimum of two FCF pilots per FS will be qualified to perform FCFs.

19.45.3.2.2. Attachment 16 is an example letter showing the minimum documentation requirements for pilot certification. A completed letter will be forwarded to the FCF OIC.

19.45.4.3.1. This will be accomplished prior to the chased FCF flight.

19.45.4.3.2. The FCF pilots will perform an adequate brief, to include performance standards, and debrief each ATD and FCF training flight.

19.45.3.12. FCF pilots will annually:

19.45.3.12.1. Retake the FCF certification test.

19.45.3.12.2. Complete a CFT/ UTD with another FCF pilot, emphasizing FCF procedures.

19.45.4.6.2. (Added) FCF checks will be performed in VMC and in accordance with the following weather conditions.

19.45.4.6.2.1. Minimum required weather for take off and landing is 3000/5.

19.45.4.6.2.2. Climbs and descents through IMC may be performed, provided that all instruments required for IMC flight have been checked and found fully operational, and it is approved by the 354 OG/ CC.

19.45.4.6.2.3. FCFs performed at temperatures below -20 degrees (F) will be by exception only, and will be approved by the 354 OG/CC. See 354FWI 10-203 para 2.5.3

19.45.4.12. (Added) FCF pilots will follow local procedures in accordance with 354 FW A-10 *In-flight Guide;* 354 FW *Viper Guide;* AFI 11-2A/O10 Volume 3, Chapter 8/354 OG Supplement 1; AFI 11-2 F16 Volume 3, Chapter 8/354 OG Supplement 1; 354 FWI 13-203, *Air Traffic Control Procedures and Airfield Operations;* and 354 FWI 10-203 *Adverse Weather Procedures,* as applicable.

19.45.4.13. Local F-16 FCF profiles may include an afterburner maximum performance (vertical) climb provided Visual Meteorological Condition (VMC) can be maintained until first immediate level off. If Instrument Meteorological Condition (IMC) will be encountered on climb out, an afterburner takeoff with an optimum mil power climb schedule will be utilized with aircraft attitude not to exceed 60 degrees nose high.

19.45.4.14. (Added) The FCF pilot will

19.45.4.14.1. Obtain approval from the OG/CC prior to takeoff.

19.45.4.14.2. Schedule the required range/ MOA, check weather, inform the SOF, and perform all other applicable tasks required of a normal flight.

19.45.5. Any changes or amendments to this supplement, while awaiting inclusion into a change to this supplement, will be in letter form, signed by the FCF OIC, with a copy maintained by the OIC, QA rep, and both fighter squadrons.

19.47.3. (Added) FCFs will be performed in lieu of high-speed taxi checks (faster than normal taxi speed).

19.48. (Added) **QA Grams.** QA publishes QA grams to identify known or suspected problem areas, aid in clarifying procedures, and to quickly distribute new guidance. Work center supervisors are responsible for the timely dissemination of QA gram information.

19.49. (Added) **Maintenance Crosstells.** QA will act on all incoming maintenance crosstells if applicable, and make recommendation to appropriate GP/CC on further course of action.

19.49.1. Unless mandated otherwise, OG/QA will inspect a minimum of four aircraft to verify the existence of suspected conditions or malfunctions. If samplings are positive, QA will recommend GP/CC initiate a fleet-wide one-time inspection.

20.2.3.1. (Added) **Composite Tool Kit (CTK) Management.** The CTK custodian will develop and maintain a CTK continuity book for the tool room or work center. The folder will contain the following:

Tab A, appointment letters; Tab B, Master CTK content listings and an approved listing by noun and quantity of all spare tools; Tab C, Inspection schedule and history documents, and completed PACAF Form 140a's, (to be kept for a period of one year from the date of initiation); Tab D, Blank PACAF Form 140a's, a missing/removed tools and equipment listing, and a color chit register (If Applicable); Tab E, Applicable extracts of PACAFI21-101 (marked "for reference only") and any approved Local procedures of minor deviations from this instruction.

20.2.5.1.1. (Added) **.** The number of shadows and cutouts will match the quantity of tools listed on the Master Inventory List (MIL). If a tool has removable pieces, there will be a piece count included in the nomenclature column on the MIL.

20.2.6.1.1. (Added) The number of shadows and cutouts will match the quantity of tools listed on the MIL. If a tool has removable pieces, there will be a piece count included in the nomenclature column on the MIL.

20.2.7.1.1. (Added) The number of shadows and cutouts will match the quantity of tools listed on the MIL. If a tool has removable pieces, there will be a piece count included in the nomenclature column on the MIL.

20.4.1.1. **Guidelines for Tool Room Management.** See **Attachment 5 (Added)** for tool kit identification numbers.

20.4.1.1.1. (Added) LG/CC is the approving authority for tool identification numbers. Squadrons will designate own identification numbers and forward request through LG/QA to prevent duplication.

20.4.1.2.1. (Added) Aircraft affected.

20.4.1.2.1.1. Once an individual notices a lost tool/item from his/her area of responsibility, it will be immediately reported the expediter, production superintendent, or flight chief/commander who will ensure/direct an initial search and inform the MOC. The MOC will notify the Wing Operations Center (WOC), QA, the wing Foreign Object Damaged (FOD) prevention manager, and broadcast out lost tool/item details (description, unit, CTK number, etc.) on available nets. The production superintendent or flight chief/commander will appoint a senior investigating official (E-7 or above) to ensure compliance with this instruction. The MOC will assign a lost tool/item control number.

20.4.1.2.1.2. A second search will be conducted by the individual who misplaced the tool/item with the senior investigating official. If the tool/item is not found within a reasonable timeframe or the aircraft is due to taxi or takeoff within this period, a "Red X" will be entered in the AFTO Form 781A, **Maintenance and Discrepancy Work Document**, with a brief description of the item and CTK number if applicable, approximate time and area the item was lost, and the missing tool/lost item control number.

20.4.1.2.1.3. If the item was not found after the second search, the aircraft will be impounded and investigated in accordance with wing impoundment procedures.

20.4.1.2.1.4. If an aircraft has already taxied, the WOC, through the SOF will hold the aircraft from taking off until a search is completed, direct aircraft to park if the tool/item cannot be found. The SOF will initiate aircraft recall procedures if the aircraft is already airborne, and it was reasonably determined the tool/item was used or lost on the aircraft.

20.4.1.2.1.5. At the moment the tool/item was first noticed lost, units will complete a PACAF Form 140a, **Lost Tool-Chit Investigation Worksheet.** File one copy with the AFTO Form 781A of the affected aircraft, and the original in the tool room or work center CTK continuity folder. Forward a copy of the com-

pleted PACAF Form 140A to the Wing FOD Manager within 1 duty day of completion. Units will retain PACAF Form 140a for a minimum of 12 months.

20.4.1.2.2. (Added) Aircraft **not** affected.

20.4.1.2.2.1. Once an individual notices a lost tool/item from his/her area of responsibility, it will be immediately reported the section supervisor and flight chief/commander. Sections dispatched to the flightline will contact the MOC, who will issue a control number and notify QA and the wing FOD prevention manager. The section supervisor and/or flight chief/commander will notify flightline production superintendent when applicable.

20.4.1.2.2.2. At the moment the tool/item was first noticed lost, units will complete a PACAF Form 140a, **Lost Tool-Chit Investigation Worksheet.** Forward a copy of the completed PACAF Form 140A to the Wing FOD Manager within 1 duty day of completion. File the original in the tool room or work center CTK continuity folder. Units will retain PACAF Form 140a for a minimum of 12 months.

20.4.1.2.2.3. The using individual and supervisor will conduct a search. If the missing tool/lost item was in a shop and aircraft components were involved, inspect the applicable components. Apply procedures started in paragraph **20.4.1.2.1. (Added)**, if the unit has already been installed on an aircraft. If the suspected item was lost on a piece of AGE, follow impoundment procedures for equipment. Terminate the search upon request of the section supervisor with concurrence of the flight chief/commander.

20.4.1.3. (Added) Each support/work center will track all broken warranted tools to identify negative trends.

20.4.1.4. Individual issued aircrew and life support items will be marked with unit assigned identification number.

20.4.1.5.1. (Added) An accounting system will be established for issuing spare or replacement tools. Each spare/replacement tool will have an inventory card or automated database identifying the noun, stock number or part number, issued to, quantity issued, quantity on hand, and warranty tool information. The section supervisor will approve the list and kept in a continuity folder.

20.4.1.6. Transfer of CTK's/equipment at the job site. When mission dictates, local procedures will be developed by each FS to account for all property being turned over to the next shift. As a minimum use AF Form 1297, **Temporary Issue Receipt,** or computer generated equivalent to show the transferring and accountability of property to the following shift.

20.4.1.7. Individual issue equipment will be marked with the individual's squadron, office symbol, employee number and name.

20.4.1.10. (Added) The same person will only sign out and sign in a tool kit during the same shift if they are the only person on shift. If this occurs, a production supervisor, or equivalent, will verify CTK contents. A different person will inventory and sign out the kit when next used.

20.5.2.1. (Added) **Guidelines for CTK Set-up.** These items will be stored in an Individual Issue Bins (IIB).

20.5.5.1. (Added) Consumables will be etched/marked with CTK number, and controlled. If item is too small to be etched or cannot be etched it will be maintained in a container marked with the CTK number and quantity, the Master Inventory List will reflect the item and quantity.

20.6.1.1. (Added) **Equipment Security Guidelines.** At no time will tools/equipment be left unsecured and unattended.

20.8.4.1. (Added) **Tool Identification, Marking, and Etching.** Items issued, as a set will have one position designator and stored together in one shadowed or cutout location. List the total number of pieces in the nomenclature column on the MIL.

20.8.5. (Added) List the TMDE identification number on the MIL if the item is not marked with the CTK number.

20.9.3. (Added) **Tool Accountability and Control.** Individuals will not remove tools from a dispatchable CTK and use them at another job site, unless local procedures are developed in checklist form approved by the OG/CC. The checklist will be used when sub-components of a CTK are dispatched to a remote site. The checklist will be used to verify a complete CTK inventory is accomplished at the completion of each task. The checklist is not to be used to dispatch tools from both a main CTK and a "sub CTK" simultaneously.

20.9.4. (Added) Individual will inventory dispatchable CTK's immediately after use. Once a CTK is in use on a specific aircraft, it will be inventoried at the job site when the job is completed. Tools will not be used or loaned for use on another aircraft

20.11.1. (Added) **Tool Replacement Procedures.** List by noun and authorized quantity of all spare/replacement tools. This list will be approved by the section supervisor of support NCOIC and kept in the CTK continuity binder.

20.11.2. (Added) An accounting system will be established for issuing spare/replacement tools. Each tool will have designated location and an inventory card (or automated database) identifying the Noun, Stock Number, Issued to, Quantity Issued, Quantity on hand, and Warranty tool information.

20.12.4. (Added) **Rag Control Procedures.** Base laundry will clean shop rags as needed. It is the responsibility of the OWC to bundle dirty rags and transfer them to and from the base laundry. Accountability of all rags is the responsibility of the owning organization.

20.12.5. (Added) Control shop rags in the same manner as tools, with the exception of identifying rags with a CTK number. Issue rags individually or packaged in a suitable container in specific quantities. Bagged soiled rags, will be removed and exchanged for clean ones at turn-in. Treat soiled rags containing hazardous materials as hazardous waste, and turn in accordingly.

20.14.1. (Added) **Locally Manufactured Tools and Equipment.** Local manufacturing is a viable part of Air Force maintenance support. The end item TO identifies items subject to this method of supply.

20.14.2. (Added) Local manufacture requests determined mission essential are automatically approved if authorized by the item manager, depot engineers, supply coded, or identified in technical data as local manufacture.

20.14.3. (Added) For items that are MICAP, the fabrication flight chief or 354 MXS Production Superintendent may verbally approve local manufacture while documentation is being routed. However, JCN must be loaded in CAMS prior to start of local manufacture.

20.14.4. (Added) Local manufacture requiring supply processing.

20.14.4.1. Requester responsibilities.

20.14.4.1.1. Ensures the local manufacture is JBD/SMR source coded local manufacture, and places on order.

20.14.4.1.2. Contacts the fabricating section to determine if the part can be locally manufactured. If yes, requester creates a JCN.

20.14.4.1.3. Delivers all data to the Local Manufacture Manager (LMM) in the Flight Service Center (FSC)

20.14.5. (Added) Respective shops will maintain a copy of approved request as long as tool is in service

20.14.6. (Added) Manufacturer responsibilities.

20.14.6.1. Assists the requester in the design, material specifications, and quantity of required materials.

20.14.6.2. Maintains a log of all local manufacture transactions.

20.14.6.3. Coordinates local manufacture request to the next approval authority.

20.14.6.4. Prioritizes manufacture once approved, and when all materials are received. **NOTE:** 354 MXS LGM may direct priority based on mission requirements.

20.14.6.5. Provides LMM with the actual cost of the local manufacture.

20.14.7. (Added) **LMM responsibilities.**

20.14.7.1. Assists requestor in obtaining required documents and processing supply transactions. 06 is the priority for LM unless a higher priority can be justified.

20.14.7.2. Verifies the item is coded as (JBD) and non-procurable.

20.14.7.3. Develops a system to track local manufacture packages through the approval process.

20.14.7.4. Generates a 9-place tracking number. The first two characters identify the fabricating activity, the next four the Julian date of the request, and the last three the number of the local manufacture. (Example: MT1201047 indicates metals technology, processed the 201 day, and is the 47 request for 2001).

20.14.7.5. Forwards local manufacture package to the manufacturer and inputs transaction in the tracking system. LMM, establishes a six-part folder to include the following information:

20.14.7.5.1. TAB A: 354 FW Form 20, **Local manufacture request.**

20.14.7.5.2. TAB B: DD Form 1348-6/AF Form 2005, **Issue/Turn-in Request.**

20.14.7.5.3. TAB C: Drawings and/or blueprints, depot/item manager approval.

20.14.7.5.4. TAB D: Supply/purchase order documents for materials.

20.14.7.5.5. TAB E: Received material receipts.

20.14.7.5.6. TAB F: Notes.

20.14.7.6. Coordinates with the fabricating activity on a weekly basis to update status of local manufacture.

20.14.7.7. Maintains copies of local manufacture documents for 1 year after completion. If the requesting organization suspects that a local manufacture will be a recurring requirement,they will inform the LMM to indefinitely maintain manufacturing documents, including prints and drawings, until the requirement no longer exists.

21.26.8.8.1. A/OA-10 annual Auxiliary Power Unit (APU) recertification will consist of a practical evaluation by and APU qualified certifying official.

22.6.1.4. (Added) **Definition for Hangar Princess** : An aircraft that has not flown for more than 40 consecutive days.

22.8.1.7. (Added) Brief the status of hangar queen aircraft at daily maintenance/scheduling meeting and weekly OG maintenance/scheduling meeting until the aircraft is released for flight.

22.8.3.5.2. (Added) Ensure an experienced (FCF/IP caliber) aircrew is used for the flight after recovery from hanger queen status.

22.8.4. (Added) **Hangar princess responsibilities.**

22.8.4.1. Upon entering hangar princess status, the aircraft will receive senior maintenance management attention.

22.8.4.2. The sortie generation flight chief/commander will ensure strict management, control, and documentation of all cannibalizations, with authorization at the squadron maintenance officer/superintendent level.

22.8.4.3. Being compiling documentation and review past maintenance action to include Total Non Mission Capable Supply and Maintenance (TNMCS and TNMCM) time, and any other information relevant to the aircraft entering hanger princess status.

22.8.4.4. Coordinate with squadron operations and Quality Assurance (QA) on Operational Check Flight (OCF) and Functional Check Flight (FCF) requirements.

22.8.4.5. Operational check flights are highly encouraged for hanger princess aircraft.

22.10.2.2.1. (Added) As a minimum, every 7 days.

22.10.2.3.1. (Added) To read as follows: Ensure 30 or 90 day calendar inspection requirements have been accomplished IAW Technical Order (T.O.) 00-20-5 paragraph 2-18 and the AFTO Form 781K, Aerospace Vehicle Inspection, Engine Data, Calendar Inspection and Delayed Discrepancy Document, block C is documented IAW T.O. 00-20-5 paragraph 3-20.4.

22.10.2.4. (Added) The DCC will conduct a DR of aircraft entering into hangar princess status *NLT* the 40th consecutive down day, and every 7 days thereafter, until the aircraft is released for flight.

22.11.2. (Added) Hot Pit Refueling Program. OG/QA is 354 FW point of contact for all matters concerning the hot pit refueling program. Hot pit refueling will be accomplished in accordance with TOs 00-25-172; 00-25-172CL-4, *Aircraft Servicing with USAF R-5, R-9, and R-11 Servicing Vehicles;* 11A-1-33, *Handling & Maintenance of Explosives Loaded Aircraft;* 1A-10A-2-12JG-1; 1F-16CG-2-12JG-00-1; and LCL 354FW-00-2, *Hot Pit Refueling Supervisor and Hot Pad Supervisor Checklist.*

22.11.3. (Added) When temperature is at or below -30 degrees Fahrenheit ECT terminate hot pit refueling operations. Production personnel will rotate hot pit refueling team members frequently in sub-zero conditions to prevent exposure and frostbite.

22.11.4. (Added) Terms.

22.11.4.1. Simultaneous Hot Refuel Operations. Anytime two or more aircraft, like or mixed MDS, are refueled on same hot refueling pad.

22.11.4.2. Cursory Area. A designated area outside hot pit refueling pad radius where aircraft are checked for proper safing, hot brakes, and battle damage. Locate the cursory area in close proximately to hot pit refueling pad, to prevent aircraft from potentially entering the refueling zone with hot brakes due to prolonged taxi distance. Units have the option to combine the de-arm and cursory area during contingency operations and combat employment readiness exercises/inspections, provided it is established well outside of the Combat Turnaround Area (CTA).

22.11.4.3. Hot Pit Refueling Area/Fuel Servicing Safety Zone (FSSZ). The portion of the hot refueling pad extending 50 feet from any part of aircraft or refueling equipment. Taxiing aircraft may pass within 50 feet of refuel operation, as long as operating engine of taxiing aircraft does not enter FSSZ of any single operation.

22.11.4.4. Hot Pit Refueling Pad. The overall area where actual refuel operations are performed.

22.11.4.5. Cursory Crew: A two-man crew that performs hot refueling pre-entry checks. The crew will consist of a highly knowledgeable 5 skill level launch and recovery qualified individual familiar with hot refueling operations, and another individual qualified to install ground safety pins, check for hot brakes, and perform aircraft damage assessment.

22.11.5. (Added) Squadron program mangers:

22.11.5.1. Keeps track of initial and reoccurring training certification, proficiency, and special requirements.

22.11.5.2. Coordinates with OG/QA for evaluations, when required.

22.11.5.3. Ensures squadron maintains a minimum of one primary and one alternate hot pit refueling certifier. The squadron maintenance officer/superintendent and fuels management flight chief/commander will appoint these individuals in writing, and forward a copy to OG/QA.

22.11.6. (Added) FS lead production superintendent:

22.11.6.1. Builds hot pit refueling events into quarterly, monthly, and weekly maintenance plan.

22.11.6.2. Coordinates between squadrons for dual hot pit training and proficiency opportunities required to meet real world and exercise requirements.

22.11.6.3. Coordinates hot refueling events at least one week in advance with airfield management and fuels management flight to ensure no limiting factors exist.

22.11.6.4. Ensures hot pit refueling area is set up a minimum of 30 minutes prior to scheduled arrival of first aircraft. Coordinates with affected agencies at earliest convenience if aircraft might land early or late to prevent excessive delays.

22.11.6.5. Ensures the MOC has notified fire department and fuels management flight 30 minutes prior to scheduled arrival of first aircraft. **NOTE:** Position fire fighting and refueling equipment in accordance with TO 00-25-172.

22.12.7.1. (Added) 18 FS and 355 FS will ensure a minimum of 6 personnel are dual-MDS qualified at all times to meet mission requirements.

22.13.9. (Added) Certified hot pit refueling areas on Eielson AFB are Charlie and Oscar rows, and Echo, Fox, Golf, Hotel hardstands. OG/QA will keep certification documentation on file. **NOTE:** No restrictions exists on Eielson AFB regarding aircraft loaded with munitions during hot pit refueling operations in areas certified.

22.14.7. (Added) Safety Requirements.

22.14.7.1. A safety briefing will be given by the hot pit refuel supervisor (A-Member) to all team members prior to arrival of aircraft, the hot pad supervisor will give the safety briefing if simultaneous refueling operations are conducted.

22.14.7.2. All personnel will wear double hearing protection at all times when working around aircraft with engines operating.

22.14.7.3. Hot pit refueling team members will not carry any spark/flame producing devices while engaged in hot refueling operations.

22.14.7.4. If the fire truck departs hot refueling pad for an emergency, only those refueling's already in progress may be completed if, two serviceable 150 pound Halon fire bottles are in refueling area (two for each FSSZ in operation). No other refueling tasks may begin until fire truck is back on status.

22.14.7.5. All personnel will remove hats, jewelry, line badges and protruding objects from pockets. **Exception in cold weather operations.**

22.14.7.6. Personnel will ground themselves to discharge any laden static electricity prior to entering the FSSZ. Personnel will ground themselves frequently during refueling operation to prevent buildup of static electricity.

22.15.1.1.1. (Added) 354 LSS/LGLT and 354 SUPS/LGSF are the OPRs for Phase 1: "Familiarization" and Phase 2: "Hands-on" training phases to include, training record documentation and CAMS update.

22.15.1.3.1. (Added) Phase 3 is the responsibility of each FS. After phase 1 and 2 are complete, individuals must perform a minimum of 1 hot pit refuel in presence of a trainer. Only after the trainee is fully proficient can the squadron certifier certify them. The squadron certifier and trainer cannot be one in the same. Under other than normal circumstances, a QA certifier may perform certification in place of squadron certifier. **NOTE:** Notify OG/QA one day in advance of scheduled event to allow time to verify completion of prerequisite training.

22.15.1.4. (Added) Training lesson plans will be reviewed by OG/QA for technical accuracy and completeness prior to use, and annually thereafter.

22.15.4.1.1. (Added) Duty positions. Document the cursory, A-member, B-member, C-member, and hot pad supervisor positions individually on AF Form 797 if not listed in Job Qualification Standard (JQS).

22.15.5. (Added) A QA certifier is a QA inspector who is hot pit qualified and certified in all positions and can perform certifications on hot pit members and squadron certifiers (excluding one-time Evaluator Proficiency Evaluation (EPE) on squadron certifiers). QA hot pit certifiers will be given an annual EPE by QA superintendent or chief inspector.

Table 22.3. (Added) Training Course Codes for Hot Pits.

Cams Course Code Requirements for all Hot Pit Team Members						
Position	**Academics/One Time**		**Semi-annual**		**Annual**	
	A-10	***F-16***	***A-10***	***F-16***	***A-10***	***F-16***
QA/ Squadron Certifier	527 Initial EPE and current with all A Member requirements		Current with A Member Requirements		529 Annual EPE	529 Annual EPE
Pad Supervisor	Current with A Member requirements		490	928	530	938
A Member	533	923	491	924	570	950
B Member	533	923	492	925	571	951
C Member	923 or 523 will satisfy requirements for both MDS		Not Required		531	

22.19.1.1. (Added) **Acceptance Inspections.** QA will review all equipment documents to identify recent major repair accomplished prior to "Chart A" inventory.

22.19.1.2. (Added) QA will monitor the acceptance inspection and comply with "Chart A" inventory in accordance with TOs 1F-16CG-5-1 and 1A-10A-5 with the assistance of the owning unit. QA will also report to depot and owning unit any critical and/or major defects as a result of depot level maintenance in accordance with TO 00-35D-54, *USAF Deficiency Reporting and Investigation System.*

22.19.8. (Added) In addition to paragraph 22.19.7., OS PS&D section will:

22.19.8.1. Review all applicable forms on return of aircraft and update and/or schedule inspection requirements as required.

22.19.8.2. Check AFTO Form 95, **Significant Historical Data**, items for correct PSNs.

22.19.8.3. Update automated AFTO Form 95 in CAMS for work accomplished at the depot.

22.19.8.3. Inform 354 OSS Aerospace Vehicle Distribution Office (AVDO) to establish actual transfer and "BT" possession start time.

22.19.8.4. Provide maintenance a list of PSNs to verify.

22.19.8.5. Create acceptance profile in CAMS.

22.19.8.6. Review all workable TCTOs and inform performing work centers prior to inspection start.

22.19.8.7. Manually update airframe sorties/hours (and JFS starts for F-16s) in CAMS for depot flown jets.

22.19.9. (Added) Acceptance inspection flow.

22.19.9.1. Perform BPO inspection and document all noted discrepancies.

22.19.9.2. Remove gun system for periodic maintenance inspection, as required.

22.19.9.3. Perform "Chart A" inventory and associated equipment inspections.

22.19.9.4. Record PSNs of items identified by OS PS&D section.

22.19.9.5. Record any critical and/or major defects discovered as a result of depot level maintenance.

22.25. **Mode IV/Mode C Reliability.** An avionics inspector from OG/QA will be designated as the wing MODE IV/MODE-C program manager. Each FS will also appoint a squadron MODE IV/MODE-C program manager in writing, and forward copy to QA.

22.25.3.1. MODE IV/MODE-C checks will be conducted on aircraft prior to taxi to EOR or at designated RWR roll through pit if set up.

22.25.3.2. Specialist personnel will inform aircrew of MODE IV/MODE-C results prior to takeoff, hand signals may be used.

22.25.3.3. MODE IV code insertion will be documented in the aircraft AFTO Form 781A as an "Informational note".

22.25.3.4. The squadron MODE IV/MODE-C program manager will send a report summarizing MODE IV/MODE-C checks by the 5th day of the forthcoming month to the sortie generation flight chief/commander, squadron maintenance officer/superintendent, and QA.

22.25.4. (Added) The squadron MODE IV/MODE-C program manager will maintain a continuity book containing the following information as a minimum: Appointment letter, applicable extracts from this instruction marked "For reference use only", MODE IV/MODE-C worksheets, and summary reports.

22.26. **Radar Warning Receiver (RWR) Testing.** Each FS will also appoint a squadron RWR/RTHW program manager in writing, and forward a copy to QA.

22.26.1.2. (Added) Perform RWR/RTHW roll through tests in accordance with LCL354FW-53-4.

22.26.3.1. Conduct RWR/RTHW checks in a pre-designated roll through pit.

22.26.3.2. Specialist personnel will inform aircrew of RWR/RTHW results prior to takeoff, hand signals may be used.

22.26.3.3. Aircrew will be responsible for debriefing all discrepancies (ground/air), and entering applicable write-up in aircraft AFTO Form 781A.

22.26.3.4. The squadron RWR/RTHW program manager will send a report summarizing RWR/RTHW checks by the 5th day of the forthcoming month to the sortie generation flight chief/commander, squadron maintenance officer/superintendent, and QA.

22.26.4. (Added) The squadron RWR/RTHW program manager will maintain a continuity book containing the following information as a minimum: Appointment letter, applicable extracts from this instruction, RWR/RTHW worksheets, and summary reports.

22.29.1.1. (Added) **Foreign Object Damage Prevention.** Maintenance personnel will police up their work areas prior to leaving the job site for any reason.

22.29.1.2. (Added) Maintenance personnel may wear FOD pouches while on the flightline.

22.29.5.1. (Added) **Intake/Exhaust Inspections.** Inspect anti-personnel guards and bell mouth screens for FOD and serviceability prior to all ground maintenance engine runs. This pre-use/pre-engine run

inspection will be documented on the AFTO Form 781A on a "Red X" entry, along with the engine run screen number.

22.29.5.2. (Added) Personnel will perform post engine run inspections (ground/flight) ASAP after engine shutdown. Inspection priority includes engines scheduled for replacement. Any damage found will be reported to the unit FOD monitor who will notify the wing FOD prevention manager.

22.29.5.3. (Added) Report all engine FOD to the wing FOD prevention manager or alternate.

22.29.5.4. (Added) An engine intake FOD inspection will be accomplished before and after initial engine motoring, as well as those required by current instructions and technical orders.

22.29.5.5. (Added) Engine intake and exhaust, pitot, and air data probe (if applicable) covers will be installed whether aircraft is sheltered or not.

22.29.9.1. (Added) **A-10 Inlet Maintenance/Control Procedures**

22.29.9.1.1. This applies to all Aircraft Structural Maintenance personnel performing inlet maintenance/ rivet replacement in A-10 inlet.

22.29.9.1.2. Any maintenance required or rivets found to be loose or suspected loose in A-10 inlet rings will be annotated on the aircraft 781 forms.

22.29.9.1.2.1. Discrepancy will be entered in the AFTO Form 781A on a red "X".

22.29.9.1.2.2. Suspected loose rivets will be entered in the AFTO Form 781A on a red dash until verified by an Aircraft Structural Maintenance technician who will upgrade the symbol if confirmed loose.

22.29.9.1.2.3. A-10 Inlet Maintenance/Rivet Replacement Checklist located at Aircraft Structural Maintenance Section will be used for any inlet rivet maintenance. Documentation on the checklist will be made as each item is accomplished.

22.29.9.1.3. Replacement procedures: Forms documentation will take place prior to any inlet maintenance as listed in inlet rivet replacement checklist.

22.29.9.1.4. Foreign Object (FO) barrier: A barrier will be installed blocking the fan blades.

22.29.9.1.4.1. The barrier will be composed of barrier paper and/or plastic and will be taped to the inlet surface to ensure no FO can migrate towards the engine.

22.29.9.1.4.2. If the area requiring maintenance is too close to the engine to allow installation of the barrier, rivet maintenance will not continue until the engine is removed.

22.29.9.1.4.3. This barrier is not to be removed until all required FO checks and tool inventories have been completed.

22.29.9.1.5. Maintenance procedures: Positive rivet control will always be maintained as specified in paragraph **22.29.9.1.6.**

22.29.9.1.5.1. A two-person maintenance policy will be followed for tool and FO accountability.

22.29.9.1.5.2. Surface preparation: The A-10 inlet coating must be removed IAW applicable technical order 1A-10A-3-1.

22.29.9.1.5.3. Rivet replacement: IAW A-10 Inlet Maintenance/Rivet Replacement Checklist and technical orders 1A-10A-3-1and 1-1A-8.

22.29.9.1.6. Rivet control procedures: When rivets are required to be replaced in A-10 inlets, all removable pieces of the old rivets and all replacement rivets must be accounted for to eliminate the possibility of engine FO damage. All F.O. will be placed in a ziploc bag and attached to the inlet maintenance checklist and be filed for a period of no less than 90 days.

22.29.9.1.6.1. Old rivet removal: Due to location and removal of rivets, all or some portion of any given rivet removed from the A-10 inlet may not be salvageable. Information concerning the accessibility of area surrounding the inlet can be found in technical orders or by contacting Ogden Air Logistics Center through AFETS.

22.29.9.1.6.2. 7-Level Tool and FO check: To ensure control of all potential FOD, individuals performing inlet rivet maintenance will show all removable pieces of the old rivet and all stems and/or collars to a qualified intake inspector who will then inspect the inlet. The 7-level will annotate the checklist and sign off the red "X" in the aircraft 781A for a FO inspection.

22.29.9.1.6.3. Tool Checks: Both members of the team performing the inlet maintenance will perform separate Consolidated Tool Kit (CTK) inventories on each CTK/tool item. CTK inventories will be performed at the beginning and completion of the job and will be documented on the A-10 Inlet Maintenance/Rivet Replacement Checklist.

22.29.9.2. **F-16 Intake Maintenance/Control Procedures**

22.29.9.2.1. This applies to all Aircraft Structural Maintenance personnel performing intake maintenance/rivet replacement in F-16 inlet.

22.29.9.2.2. Any maintenance required or rivets found to be loose or suspected loose in F-16 intakes to include maintenance on or around the heated strut will be annotated on the aircraft 781 forms.

22.29.9.2.2.1. Loose rivets will be entered in the AFTO Form 781A on a red "X".

22.29.9.2.2.2. Suspected loose rivets will be entered in the AFTO Form 781A on a red dash until verified by an Aircraft Structural Maintenance technician who will upgrade the symbol if confirmed loose.

22.29.9.2.2.3. F-16 Intake Maintenance/Rivet Replacement Checklist located at Aircraft Structural Maintenance Section will be used for any intake rivet maintenance. Documentation on the checklist will be made as each item is accomplished.

22.29.9.2.3. Replacement procedures: Forms documentation will take place prior to any intake maintenance as listed in intake rivet replacement checklist.

22.29.9.2.4. Foreign Object (FO) barrier: A barrier will be installed between the point of maintenance and the engine.

22.29.9.2.4.1. The barrier will be composed of barrier paper and/or plastic and will be taped to the intake surface to ensure no FO can migrate towards the engine.

22.29.9.2.4.2. If the area requiring maintenance is too close to the engine to allow installation of the barrier, rivet maintenance will not continue until the engine is removed.

22.29.9.2.4.3. This barrier is not to be removed until all required FO checks and tool inventories have been completed.

22.29.9.2.5. Maintenance procedures: Positive rivet control will always be maintained as specified in paragraph **22.29.9.2.6.**

22.29.9.2.5.1. A two-person policy will be followed; one person will remain outside the intake and pass tools and supplies to the person inside the intake.

22.29.9.2.5.2. Surface preparation: The F-16 inlet coating must be removed IAW applicable technical order 1F-16CG-3-1 and 1F16CG-3-3 as stated in attached checklist.

22.29.9.2.5.3. Rivet replacement: IAW F-16 Intake Maintenance/Rivet Replacement Checklist and technical order 1F-16CG-3-1 and 16F-16CG-3-3.

22.29.9.2.6. Rivet control procedures: When rivets are required to be replaced in F-16 intakes, all removable pieces of the old rivets and all replacement rivets must be accounted for to eliminate the possibility of engine FO damage. All F.O. will be placed in a ziploc bag and attached to the intake maintenance checklist and be filed for a period of no less than 90 days.

22.29.9.2.6.1. Old rivet removal: Due to location and removal of rivets, all or some portion of any given rivet removed from the F-16 intake may not be salvageable. Information concerning the accessibility of area surrounding the intake can be found in technical orders or by contacting Ogden Air Logistics Center through AFETS.

22.29.9.2.6.2. 7-Level Tool and FO check: To ensure control of all potential FOD, individuals performing intake rivet maintenance will show all removable pieces of the old rivet and all stems and/or collars to a qualified intake inspector who will then inspect the inlet. The 7-level will annotate the checklist and sign off the red “X” in the aircraft 781A for a FO inspection.

22.29.9.2.6.3. Tool Checks: Both members of the team performing the intake maintenance will perform separate Consolidated Tool Kit (CTK) inventories on each CTK/tool item. CTK inventories will be performed at the beginning and completion of the job and will be documented on the F-16 Intake Maintenance/Rivet Replacement Checklist.

22.29.12.1. (Added) **FOD Containers.** Secure FOD containers to the vehicle in a manner that would prevent the container from tipping over while the vehicle is in motion. Secure the lid to prevent the container from inadvertently opening. List the FOD container on the AF Form 1800,**Operator's Inspection Guide and Trouble Report (General Purpose Vehicles),** or AF Form 1806, **Operator's Inspection Guide and Trouble Report (Aircraft Towing, Base Maintenance Deicers, High Reach and Snow Removal),** if not permanently affixed to the vehicle. Add “Empty FOD container daily” to an available “Other” block on the AF Form 1800/1806.

22.29.12.2. (Added) A minimum of one trash can with a lid, will be available in each maintenance work area or aircraft-parking bay.

22.29.13.1. (Added) **Aircraft /Weapons safety Pins.** At no time will aircraft/weapons safety pins be left unsecured on aircraft parking ramp/movement areas.

22.29.13.2. (Added) F-16 only: Aircraft ground safety pins, except SUU/TER pins, will be attached to the streamer by a brazed, welded, or silver soldered retaining ring. **NOTE:** If P/N 19-100C ring is utilized, brazing requirement is optional. Streamers attached to nose landing gear, EPU, and gun pins will be at least 8 but not longer than 12 inches, and will not have swedged cables attached. FS will be responsible for maintaining pins in proper configuration while installed on aircraft. Gun and EPU safing pin retaining ring part number is IT324, NSN 5300-00-825-3915.

22.29.15.2. (Added) Lost object search procedures.

22.29.15.2.1. Interview all technicians involved determining if more than a single aircraft is affected.

22.29.15.2.2. Ensure the discrepancy does not exist in the active AFTO Form 781 K or has been filed as historical in the aircraft jacket file, located in OS PS&D section, and not properly carried forward to the active aircraft forms.

22.29.15.2.3. Initiate the PACAF Form 140a, and coordinate with the appropriate agencies.

22.29.15.2.4. If the affected aircraft or equipment is to be impounded, the impoundment official will determine the extent of the areas to be exposed for inspection.

22.29.15.2.5. Perform a 5-level FO inspection of affected areas.

22.29.15.2.6. Perform a 7-level FO inspection of affected areas.

22.29.15.2.7. When all attempts to recover FO is exhausted coordinate with QA to release aircraft or equipment from impoundment.

22.29.19.2. (Added) **The Wear of Hats on the Flight line.** Remove hats when working on or transiting the flightline. **Exception:** Issue-type winter headwear worn during cold weather operations. Personnel will exercise extreme care when wearing winter headwear around operating aircraft engines to prevent ingestion.

22.29.23. (Added) **Flightline vehicle operations and management.**

22.29.23.1. The FOD prevention representative from the airfield operations flight will ensure the drivers' training program stresses the importance of FOD prevention and control applicable to vehicle operations on the flightline.

22.29.23.2. Vehicles will only access the aircraft parking areas, taxiways and runway by entry points approved by airfield management. Accomplish FOD checks on vehicles and towed trailers or equipment at these entry points prior to entering the airfield. If leaving a paved surface becomes necessary, re-check all tires for debris before re-entering. Deposit debris in vehicle FOD can or tossed to the side, clear of the pavement area. DO NOT leave removed debris on access road. Security forces will assist in monitoring for compliance of FOD tire checks.

22.29.23.3. Fire department personnel will complete a FOD check on all vehicles on standby status in the fire station bays. Vehicles returning to the fire station or airfield taxiways from unpaved or broken pavement areas will have a FOD check performed by the vehicle operator.

22.29.23.4. Except for emergency response vehicles, magnets are mandatory on all pickups, step vans and bobtail vehicles (munitions bobtails are exempt) used daily on the flightline. Use magnets year round, affixing them 3 to 5 inches above pavement surface. Flip the magnet up or remove it when snow accumulation exceeds clearance. Vehicles utilizing magnets will add "Clean magnet daily" to an available "Other" block of AF Form 1800/1806.

22.29.23.5. FOD picking tools and a serviceable flashlight are mandatory for all vehicles that operate on the flightline. In addition, etch FOD picking tools and flashlights with the vehicle identification number. Attach a tag or streamer to easily spot if lost. Annotate FOD picking tools and flashlights on the vehicle AF Form 1800/1806. Security forces vehicles will be exempt from having to maintain a flashlight in their vehicles due to their requirement to have one on person during daily execution of their duties.

22.29.23.6. All items permanently assigned to a vehicle (seasonal or not) will be marked with the vehicle identification number and annotated on the vehicle AF Form 1800/1806 to ensure accountability. Vehicle

rope chocks are exempt from the marking requirement. If lost or misplaced, these items will be reported in accordance with lost tool/items procedures and annotated on a PACAF Form 140A.

22.29.23.7. All pintle hooks will have cotter pin installed whether open or closed, and pin will be secured to vehicle or support equipment by means of chain or wire rope.

22.29.23.8. Personnel will annotate vehicle chocks on the AF Form 1800/1806 and if lost or misplaced, initiate a PACAF Form 140a. Chocks will be stored securely inside the vehicle or in the truck bed when not in use.

22.29.23.9. Units will not use studded tires due to composition of Eielson AFB taxiways. Also, minimize the use of tire chains. Airfield management will authorize units to use tire chains based on mission requirements.

22.29.23.10. Flightline vehicles or flightline support equipment are not authorized to have metal valve caps installed. Metal valve caps will be disposed of and replaced with plastic caps.

22.29.24. (Added) **Consumable control/operating stock.**

22.29.24.1. Consumables are hardware and materials utilized or expended during the course of maintenance, repair, or manufacturing. Consumable material managers will enforce strict control on access to consumables, and will exercise methods to reduce excess material usage. Personnel will prevent co-mingling in supply bins, and store excess stock in a controlled/secured area until needed.

22.29.24.2. Work centers utilizing consumable stock (e.g., operating stock/bench stock) are subject to inspection in an effort to curb end-item FOD.

22.29.25. (Added) **Panel removal.**

22.29.25.1. As screws/fasteners are removed from the aircraft, screw bags or foam templates will be used.

22.29.25.2. If a panel/door is tacked on the aircraft, attaching hardware will be put in a screw bag and attached to the outside of the panel/door. If the panel/door is not tacked on the aircraft, attaching hardware will be put in a screw bag marked with specific aircraft tail number and attached to the outside of the panel/door.

22.29.26. (Added) **FOD walks.**

22.29.26.1. FS and temporary duty units will perform FOD walks at the start of each flying day and during the day as needed, in their assigned aircraft parking areas, hangering spaces, and the taxiways adjacent to them.

22.29.26.2. MXS will be responsible for FOD walks around their maintenance facilities adjacent to aircraft taxiways. Transient alert will be responsible for the areas occupied by transient aircraft.

22.29.26.3. The fire chief will ensure ramp access from fire station to main taxiway is inspected daily and remains FOD free.

22.29.26.4. Airfield management is responsible for the daily inspection of aircraft pavement surfaces, runway monitoring and taxiway sweeping schedules, and coordinating on special requests for sweepers during normal duty hours.

22.29.27. (Added) **FOD prevention inspections.**

22.29.27.1. The Wing FOD prevention manager will perform weekly FOD spot checks of aircraft parking areas, adjacent taxiways, hangaring spaces, and arming/de-arming areas. The manager will also conduct monthly spot checks of maintenance facilities. Document spot checks on an AF Form 2419, however, do not include them with the QA statistics.

22.29.27.1.1. Refer to the 354 FW Evaluation and Inspection Plan for rating a FOD prevention inspection.

22.29.28. (Added) **FO in inaccessible areas.**

22.29.28.1. If FO falls into an inaccessible area on an aircraft, refer to 20.10.4.3., for additional instructions.

22.29.28.2. If FO falls into an inaccessible area on a piece of equipment, not involving aircraft, the affected maintenance supervision, wing FOD prevention manager, and QA chief inspector will be consulted. If they all agree there is no possibility of the item damaging a system or other equipment by remaining in or falling out of the unit, the object may remain in equipment.

22.29.29. (Added) **Ice FOD alert procedures.**

22.29.29.1. The weather flight will notify the Maintenance Operations Center(MOC)/Command Post (CP) and base agencies of an ice FOD alert by Automated Weather Distribution System (AWDS). If maintenance personnel suspect ice FOD conditions, they will inform the production superintendent who will confirm and notify the MOC. The weather flight will send ice FOD alerts as observed weather advisories and update as required.

22.29.29.2. F-16 atmospheric conditions for ice FOD is when the ambient temperature is below 45 degrees Fahrenheit and standing water or a mixture of water and ice/snow is on the ground, and/or when the dew point is between 25 and 45 degrees Fahrenheit and temperature/dew point spread of less than 9 degrees Fahrenheit, and/or when the temperature is between 20 and 45 degrees Fahrenheit and precipitation is present.

22.29.29.2.1. Upon notification of an ice FOD alert, only the 18 FS Commander, squadron maintenance officer/superintendent, or production superintendent will approve ground maintenance runs for F-16 aircraft engines. **CAUTION:** Do not use engine anti-personnel screens under ice FOD alert or conditions, instead, position a qualified individual to safely observe the engine inlet for ice build-up during the ground maintenance run. This individual will be in clear view of the run supervisor at all times, in order to signal for immediate shutdown should ice form on the inlet lip. Hush house runs require 354 MXS Commander, maintenance supervisor/superintendent, or production superintendent approval.

22.29.29.3. A-10 atmospheric conditions for ice FOD are when the temperature is between 40 and -19 degrees Fahrenheit and the temperature/dew point spread is less than 9 degrees.

22.29.29.3.1. Upon notification of an ice FOD alert, only the 355 FS Commander, squadron maintenance officer/superintendent, or production superintendent will approve ground maintenance runs for A-10 aircraft engines. Position a qualified individual to safely observe the engine inlet for ice build-up during the ground maintenance run. This individual will be in clear view of the run supervisor at all times in order to signal for immediate shutdown should ice build-up on the inlet lip. Use two observers if both engines are to operate simultaneously. Hush house runs require 354 MXS Commander, maintenance supervisor/superintendent, or production superintendent approval.

22.29.29.4. If an aircraft has to be shutdown for inlet icing, the observer will immediately notify the production superintendent who will notify the CP through the MOC to announce an ice FOD alert.

22.29.29.5. The CP will notify the following when an ice FOD alert is initiated or terminated:

22.29.29.5.1. 354 FW CC or CV.

22.29.29.5.2. 354 OG/LG CCs.

22.29.29.5.3. SOF

22.29.29.5.4. Control tower

22.29.29.5.5. FS operations desk.

22.29.29.5.6. All production superintendents (354 MXS/355 FS/18 FS/MOC).

22.29.29.6. During ice FOD alert conditions, and before issuing aircraft taxi clearance, the SOF will coordinate with tower personnel. Air traffic control operations will incorporate the ice FOD alert into the Automated Terminal Information System (ATIS), as they occur.

22.29.29.7. FS "Top three" personnel will ensure aircrews are aware of an ice FOD alert prior to flight via locally established procedures (e.g., step brief, UHF, etc.).

22.29.29.8. Fighter squadron commanders will ensure all pilots comply with the engine anti-ice procedures found in the following: 1F-16CG-1 or 1A-10A-1 (Flight Manual); MCI 11-F16, Vol.3, Chapter 8, 354 FW Supplement 1, F-16 Pilot Operational Procedures; and this instruction. If "inlet icing" light illuminates while aircraft is on the ground, a visual inspection must be accomplished prior to taxing of take-off. If in-flight of ground icing is encountered, pilots will make informational entry in the AFTO Forms 781A. If aircraft icing greater than trace is detected after flight, notify production super of the situation and a determination will be made by supervision to taxi the aircraft to parking or to shut down and tow to parking. Consideration will be given as to the most expeditious manner of engine shut down. Any chunking of ice on the aircraft is cause for immediate shut down. For cross-country flights, the pilot will brief transient maintenance on the possibility of inlet ice formation when the ambient temperature is less than 45 degrees Fahrenheit. Anytime inlet icing has occurred, the aircraft will be shut down and the occurrence will be documented in the aircraft forms.

22.29.30. (Added) **Airfield sweeping.**

22.29.30.1. The CES Operations Flight is the office of primary responsibility for implementing and following the sweeping plan. Airfield management is responsible for inspecting and reporting FOD to the operations flight. Airfield management has the authority to establish flightline sweeping priorities to facilitate aircraft operations or to expedite the clean up of a serious FOD hazard. The flightline sweepers will follow the general guidelines set in the sweeping plan when airfield management does not establish priorities.

22.29.30.2. Flightline sweepers will operate and respond to airfield management sweeping requests 24 hours per day during the summer months. Airfield management sweeping requests are considered a priority. Airfield management establishes request priority if more than one is generated simultaneously. The operations flight will notify airfield management when flightline sweepers are down for maintenance or any reason they cannot respond to a sweeping request within 15 minutes. Sweeper operators should make every effort to cover all surfaces of taxiways and runway, not just yellow taxi lines. The following is EAFB sweeper schedule for non-winter conditions:

22.29.30.2.1. Every weekday prior to first aircraft takeoff until after last aircraft downtime.

22.29.30.2.1.1. All primary taxiway centerlines double-pass each side of yellow taxi line.

22.29.30.2.1.2. All operational airfield vehicle access/entry points.

22.29.30.2.1.3. F-16/A/OA-10 aircraft parking area including Alpha, Baker, Charlie, Delta rows, and front/back loop parking spots.

22.29.30.2.1.4. Cope Thunder aircraft parking area when operational (Papa/Quebec/Romeo/Sierra).

22.29.30.2.1.5. Arm/de-arm parking spots dictated by base operations.

22.29.30.2.2. Sunday/Thursday:

22.29.30.2.2.1. Gun berm.

22.29.30.2.2.2. Thunder Dome north and south hangar ramps.

22.29.30.2.2.3. Nose dock 1 and 2 aircraft parking ramps.

22.29.30.2.2.4. Building 1176 north side and west side.

22.29.30.2.3. Monday/Friday:

22.29.30.2.3.1. Base operations aircraft parking ramp.

22.29.30.2.3.2. Nose dock 7 aircraft-parking ramp.

22.29.30.2.3.3. Aircraft parking pads in front of buildings 1350, 1348, 1346, 1344, and 1340.

22.29.30.2.4. Tuesday:

22.29.30.2.4.1. Lima and Oscar rows.

22.29.30.2.4.2. Echo, Fox, Golf, and Hotel hardstands.

22.29.30.3. Sweeper drivers may exercise discretion and deviate from this plan if they discover a potential FOD hazard elsewhere on the airfield that requires immediate attention. If the FOD hazard is significant contact airfield management so they can temporarily close that area to taxiing aircraft.

22.29.30.4. Sweep runway, runway edges and barrier shoulders upon airfield management request. Exercise caution when operating near barrier cables.

22.29.30.5. Maintain a 25-foot distance from parked aircraft and avoid jet blast. When ramps are full of aircraft, (e.g., Cope Thunder) skip that area and move to the next available area. Return to the skipped area ASAP and sweep it accordingly.

22.31.9. (Added) **Unit FOD prevention representatives.**

22.31.9.1. Set-up and maintain a FOD continuity binder as follows:

22.31.9.1.1. Tab A: Copies of letters of appointment for the wing and unit FOD prevention representatives.

22.31.9.1.2. Tab B: Current copy of PACAFI 21-101 (Optional Form 21, **Cross Reference,** may be used to show location).

22.31.9.1.3. Tab C: Copies of AF Forms 2419, showing results of spot checks.

22.31.9.1.4. Tab D: Miscellaneous.

22.31.9.2. Each unit will maintain a FOD bulletin board. One centrally located board (may be shared) may cover all shops located in a single building. Placement is at the discretion of the individual squadron/ flight, but the location must provide the greatest visual access to all personnel. The squadrons/flights are responsible for obtaining and maintaining the bulletin board. Display the following items:

22.31.9.2.1. Most recent FOD GRAM published by the wing FOD prevention manager.

22.31.9.2.2. Copy of the most recent FOD committee meeting minutes.

22.31.9.2.3. FOD prevention point of contact visual aid.

22.31.9.2.4. Posters, pictures, and other items pertaining to FOD prevention.

22.31.9.3. When flight chiefs appoint flight FOD representatives to assist the unit representative, letters of appointment for those flight representatives will be maintained under Tab A of the unit continuity binder.

22.31.9.4. Unit and flight FOD representatives will attend the scheduled junior FOD committee meetings. Members unable to attend junior FOD committee meetings will send an alternate and/or notify the wing FOD prevention manager by phone or e-mail prior to the meeting.

22.32.1.1. (Added) **FOD Fighter nominations and Awards.** Units will nominate for the monthly FOD fighter award, individuals they feel made the most significant contribution to FOD prevention within their unit (see **Attachment 1**).

22.32.1.2. (Added) The wing FOD prevention manager will choose a monthly winner from each group. These individuals will receive a one-day pass and a gift certificate from the 354 Services Squadron. The wing FOD prevention manager will forward the monthly awards to the recipient's squadron for presentation at commander's call or other suitable venue.

22.32.1.3. (Added) The wing FOD prevention manager will choose one quarterly winner from each group's monthly winners. This individual will receive a 3-day pass and various gift certificates from the 354 Services Squadron. The vice wing commander or acting chairperson will present the award at the wing FOD prevention committee meeting. If the individual cannot attend due to temporary duty, leave, or shift conflict, the wing FOD prevention manager will forward the award to the recipient's squadron for presentation at commander's call or other suitable venue.

22.32.1.4. (Added) The wing FOD prevention manager will judge all submitted original FOD prevention posters quarterly. The wing FOD prevention m will publish the winning poster in the meeting minutes, and units will subsequently post on FOD bulletin boards. The creator of the winning poster will receive a three-day pass, and a gift certificate from 354 Services Squadron. All FOD awards are subject to change based upon the availability of sponsors and funding. All passes will be coordinated with the individual's supervisor.

22.32.1.5. (Added) The wing FOD prevention manager will administer the "Golden Bolt" program. The wing FOD prevention manager or QA will place the "Golden Bolt" in a maintenance area, preferably during a FOD walk, and monitor. QA will forward the name of the individual recovering the golden bolt to the wing FOD prevention manager for awards. Recipients will receive a one-day pass and a wing certificate of excellence.

22.34.1. **Wing FOD Prevention Committee. Table 22.4. (Added)** Lists those individuals appointed as members of the wing FOD prevention committee. Personnel occupying these positions or their alternates

will attend all meetings. Committee members unable to attend are required to send a representative and/or notify the wing FOD prevention manager by phone or e-mail prior to the meeting.

Table 22.4. (Added) FOD Prevention Committee Members.

Vice Wing Commander	Wing Safety Office, Flight Safety Officer
Operations Group Commander	Chief, Airfield Management
Logistics Group Commander	Maintenance Squadron Commander
Support Group Commander	Logistics Support Squadron Commander
Chief of Security Police	Base Civil Engineer
Transportation Squadron Commander	Chief of Supply
Operations Support Squadron Commander	Logistics Group Quality Assurance Chief
18th Fighter Squadron Commander	Operations Group Quality Assurance Chief
355th Fighter Squadron Commander	168th Air Refueling Wing Quality Assurance Chief
353d Combat Training Squadron Commander	Wing FOD Prevention Manager

22.34.4. (Added) Squadron commanders on the committee will forward a copy of the letter appointing their unit FOD prevention representative and alternate containing the individual's name, rank, duty phone, e-mail address (or a POC) and DEROS to the wing FOD prevention manager.

22.36.2.1. (Added) **Dropped Object Prevention Program.** 354 LSS/LGLT will conduct panel/fastener care and Dropped Object Prevention Program (DOPP) awareness training as part of initial/block training.

22.36.3. (Added) The wing DOPP monitor will maintain a DOPP continuity binder set up as follows:

22.36.3.1. Tab A: Copies of appointment letters for the wing and unit DOPP representatives.

22.36.3.2. Tab B: Current copies of applicable instructions (AFI, PACAFI, and wing supplements).

22.36.3.3. Tab C: Blank copies of 354 FW Form 027, **Dropped Object Report**.

22.36.3.4. Tab D: DOPP log for current fiscal year.

22.36.3.5. Tab E: Copies of completed 354 FW Form 027 for current fiscal year.

22.36.3.6. Tab F: Other related information.

22.36.4. (Added) The 18 FS, 355 FS, 354 MXS, and 353 CTS will appoint by memorandum, primary and alternate DOPP monitors and forward a copy to the DOPP monitor (354 FW/CVF). Unit DOPP monitors will maintain a continuity book with identical tabs as the wing DOPP monitor.

22.36.5. (Added) Unit DOPP monitors will complete 354 FW Form 027, for all DOPP incidents, and forward to wing DOPP monitor.

22.38.1. (Added) OG/QA will report preventable/non-preventable investigation results to the wing DOPP monitor. The wing DOPP monitor will include a summary of all dropped objects in the wing quarterly FOD prevention meeting.

2.39.1.1. (Added) The following steps will be accomplished anytime a dropped object situation occurs:

22.39.1.1.1. Unit will notify the MOC.

22.39.1.1.2. The MOC will notify OG/QA, safety, and wing DOPP monitor.

22.39.1.1.3. The CP will brief 354 FW/CV for determination of reporting OPREP-3 home-lines.

22.39.1.1.4. The wing DOPP monitor will notify the OG/LG CCs at first available opportunity.

22.40.2.1.1. **Aircraft Structural Integrity Program.** 18 FS, 355 FS, and 354 MXS NDI will appoint ASIP monitors in writing, and forward copy to QA.

22.40.4. (Added) 18 FS ASIP monitor:

22.40.4.1. Downloads and maintains CSFDR system data.

22.40.4.2. Maintains an ASIP continuity book that will as a minimum contain:

22.40.4.2.1. Individual aircraft CSFDR status, ASIP procedures and directives, and download status summaries.

22.40.4.2.2. Appointment letter of squadron ASIP monitor.

22.40.4.2.3. Copies of ASIP control point inspection worksheets from the Non-Destructive Inspection (NDI) section. **NOTE:** Keep records for a period of one year.

22.40.4.3. Ensures trained and qualified personnel are responsible for maintaining ASIP systems. Documents training in personnel training records.

22.40.4.4. Provides a monthly report to the unit ASIP project officer. The report will as a minimum contain the following for each assigned aircraft:

22.40.4.4.1. Aircraft serial number, Signal Acquisition Unit (SAU) serial number, date SAU was installed, serviceability status, parts on order, and status of backordered parts.

22.40.4.5. Downloads information from Enhanced Diagnostic Aid (EDNA) and forwards electronically *NLT* 3rd workday of each month to OC-ALC, Tinker AFB, OK.

22.40.4.6. Reviews download status each month. **NOTE:** Status is available at **http://asip.tinker.af.mil**.

22.40.4.7. Takes appropriate steps to reconcile erroneous data to maintain ASIP data integrity.

22.40.4.8. Ensures NDI personnel perform ASIP control point inspection in accordance with 1F-16CG-6-11, Section II, Part E, during aircraft phase inspections, as required.

22.40.9. 18FS asip monitor will be responsible for sending the control point inspection off base as well as providing copies to 18FS PS&D and 354OG/OGQ

22.40.5. (Added) 355 FS ASIP monitor:

22.40.5.1. Ensures counting accelerometer data is recorded on each AFTO Form 278, **A-10 Flight Log (Aircraft Structural Integrity Program),** after every flight, and input information into automated flight history database.

22.40.5.1.1. Forwards electronically *NLT* the 3rd workday of each month to OC-ALC, Tinker AFB, OK, all automated flight history data.

22.40.5.2. Ensures trained and qualified personnel are responsible for maintaining ASIP systems. Documents training in personnel training records.

22.40.5.3. Maintains an ASIP continuity book that will as a minimum contain:

22.40.5.3.1. ASIP procedures and directives, appointment letter of squadron ASIP monitor, serial numbers of VGH components, if applicable.

22.40.5.4. Maintains at least 3 months worth of pulled AFTO Form 278s.

22.40.5.5. Provides a monthly report to the unit ASIP project officer. The report will contain, as a minimum, the following for each assigned aircraft:

22.40.5.5.1. Aircraft serial number, SAU serial number, date SAU was installed, serviceability status, parts on order, and status of backordered parts.

22.40.6. (Added) QA ASIP monitor:

22.40.6.1. Maintains a continuity book that will contain:

22.40.6.1.1. ASIP procedures and directives, appointment letters of squadron and QA ASIP project officer. 22.40.6.2. Reviews each squadron ASIP program status at least annually.

22.40.7. (Added) NDI section:

22.40.7.1. Performs ASIP control point inspections in accordance with 1F-16CG-6-11, Section II, Part E. **NOTE:** TO supplements will be issued approximately every six months to update aircraft hours due). Copies appropriate ASIP worksheet from TO 1F-16C-38 and fills out in accordance with paragraph 4-5 for each inspection performed. Submits ASIP inspection worksheets to address in TO 1F-16C-38, paragraph 4-6, and provides a copy of worksheet to the unit ASIP project officer and 18 FS ASIP monitor. Retains copies of worksheets for a period of one year. NDI will also maintain a continuity book containing the appointment letter and the reports.

22.48.1.5. (Added) **Management of Assigned Ground Training Aircraft.** 355 FS responsibilities.

22.48.1.5.1. Manages, requisitions part for, and maintains the training aircraft (A-10 78-0305).

22.48.1.5.2. Ensures a historical review has been accomplished on all parts required for cannibalization.

22.48.1.5.3. Ensures qualified personnel are available for necessary repairs/maintenance and will be the primary source for on-equipment specialist support to repair/maintain aircraft systems.

22.48.1.5.4. Dispatches personnel to perform repairs or maintenance on the aircraft when required and coordinate with the dedicated/assistant crew chief(s) whenever repair/maintenance is to be performed.

22.48.1.5.5. Dispatches personnel to tow/move the aircraft whenever training requirements warrant.

22.48.1.5.6. Ensures completion of TCTOs required for training purposes. Accomplish only TCTOs that affect training.

22.48.1.5.7. Ensures completion of inspection/lubrication requirements as necessary (e.g., gun, pylons, landing gear, etc.).

22.48.1.5.8. Purges aircraft forms on a monthly basis.

22.48.1.5.8.1. Forwards aircraft records to OS PS&D section for filing.

22.48.1.5.9. Ensures items removed from the aircraft for maintenance or repair are reinstalled ASAP. 354 MXS will coordinate with the 355 FS lead production superintendent whenever performing egress or fuel work on the aircraft.

22.48.1.6. (Added) The MOC will coordinate static display requirements with 355 FS production personnel.

22.48.1.7. (Added) WS will be responsible for configuring the training aircraft if utilized for static displays.

22.48.1.8. (Added) Units will coordinate maintenance training on the aircraft through 355 FS PS&D section.

22.48.1.9. (Added) Assigned JCNs for training aircraft are: 7000 through 7010.

22.49.1. (Added) **Oil Analysis Program (OAP) Responsibilities and Requirements.** All organizations requiring OAP support will:

22.49.1.1. Provide current OAP monitor appointment letters. Update letters annually or when a new monitor is appointed. **NOTE:** Personnel appointed will be the points of contact for consultation on OAP matters.

22.49.1.2. Ensure appointed monitors receive proper OAP training from the OAP lab, and training is documented on appointment letter.

22.49.1.3. Ensure aerospace ground oil servicing units have oil samples taken when the following occurs:

22.49.1.3.1. Any time oil holding tank is replenished with new oil.

22.49.1.3.2. After drain and flush associated with confirmed contamination.

22.49.1.3.3. Following periodic maintenance.

22.51.2. The wing OAP manager is the 354OG/CM, with program administration executed by the NDI/OAP lab section chief.

22.55.14. (Added) Ensures “Red cap” or special oil sample is taken:

22.55.14.1. When requested by OAP lab.

22.55.14.2. In event engine(s) shutdown in-flight for reasons other than normal procedures.

22.55.14.3. After FCF due to engine change or major maintenance affecting oil-wetted components.

22.55.14.4. After completion of ground operational checkout runs for installed replacement engine(s).

22.55.14.5. Immediately following first flight after engine installation.

22.55.14.6. After every flight for 10 total flight hours for engine(s) surveillance coded (code C, E, etc.). TF34-GE-100A engines will be placed on applicable surveillance codes after oil wetted system maintenance, oil change, or abnormal trend analysis.

22.55.15. (Added) Ensures engines removed as a result of OAP sample analysis recommendation, are documented on AFTO Form 350, **Repairable Item Processing Tag**, “U” (oil analysis) in the “When discovered block” and “916” (impending or incipient failure indicated by OAP) in the “How malfunction code” box.

22.55.16. (Added) Ensures oil sample containers are marked legibly with engine position number. **NOTE:** Multiple oil samples submitted from the same engine to include, test cell run-ups will be packaged together. The package will be marked sequentially with the aircraft serial number and engine posi-

tion number (A-10). Each sample submitted will have a properly documented DD Form 2026, **Oil Analysis Request.**

22.55.17. (Added) Ensures AFTO Form 781J, **Aerospace Vehicle-Engine Flight Document** is the method used to track excessive engine oil consumption.

22.55.18. (Added) Ensures aircraft projected for cross-country/deployment flights have historical oil analysis records signed out of the OAP lab and placed in aircraft forms binder. Units will immediately return historical oil analysis records to the OAP lab for data review and reconciliation after aircraft returns to home station.

22.55.19. (Added) Ensures OS PS&D section:

22.55.19.1. Requests computer generated DD Form 2027, **Oil Analysis Record**, from the OAP lab at least two hours prior to transferring aircraft to another operating location.

22.55.19.1.1. Signs for DD Form 2027 or automated product, and ensures aircraft and/or engine historical oil analysis records are transferred with aircraft forms.

22.55.19.3. Forwards a copy of aircraft historical oil analysis records to the OAP lab when transferred to Eielson AFB.

22.55.19.4. Crosschecks aircraft records check information with the OAP lab for data verification and input into main oil analysis database.

22.56.8. (Added) Ensures “Red cap” or special oil sample is taken after the following occurs:

22.56.8.1. After oil-wetted area maintenance is performed.

22.56.8.2. After OAP lab recommended system drain and flush.

22.56.9. (Added) Before engine is removed from test bed ensures OAP sample results are known.

22.56.10. (Added) Notifies the OAP lab of engines removed from service as a result of excessive oil consumption.

22.56.11. (Added) Makes final decisions affecting engines as a result of OAP lab recommendations.

22.56.12. (Added) Requests computer generated DD Form 2027, **Oil Analysis Record**, from the OAP lab when transferring an engine to another operating location.

22.56.12.1. Signs for DD Form 2027 or automated product, and ensures engine historical oil analysis records are transferred with engine.

22.56.13. (Added) Forwards a copy of aircraft or engine historical oil analysis records to the OAP lab when transferred to Eielson AFB.

22.57.4. (Added) Contacts the OAP lab prior to daily flying to reconcile printed schedule changes. Also notifies the lab in event a schedule change has occurred at any point during the flying period.

22.57.5. (Added) Notifies the following personnel immediately of any aircraft/engine grounding conditions, or maintenance abort recommendations from the OAP lab: Affected squadron maintenance officer/superintendent, affected production superintendent, 354 MXS Maintenance Supervisor/Superintendent, and the propulsion flight chief.

22.57.6. (Added) Calls affected flightline expediter when OAP lab requests a "Red cap" or special oil sample. **NOTE:** The affected production superintendent will not release the aircraft for flight until notified of positive results through the MOC.

22.57.7. (Added) Coordinates all requested OAP support during non-duty hours.

22.57.8. (Added) Notifies the OAP lab upon return of cross country/deployed aircraft.

22.57.9. (Added) Initiates follow-up action when notified of an aircraft returning from a cross-country flight without historical oil analysis records on-board.

22.58.10. (Added) Ensures a qualified oil analysis supervisor/evaluator is available during the flying window.

22.58.11. (Added) Ensures qualified OAP evaluators are available on standby at all times after normal duty hours.

22.58.12. (Added) Ensures OAP lab supervisor monitors the daily flying schedule for oil sample requirements and to reconcile schedule changes with the MOC.

22.58.13. (Added) Ensures any abnormal oil analysis trends or indications are verified and findings are reported to the MOC and propulsion flight.

22.58.14. (Added) Maintains a daily sample receipt log where all received samples will be annotated.

22.58.15. (Added) Notifies immediately, transient aircraft home station OAP lab, transient alert personnel, and base operations of any abnormal OAP trends or indications.

22.58.16. (Added) Provides oil analysis monitor training in accordance with TO 33-1-37-1.

22.58.17. (Added) Ensures all oil analysis requests with DD Form 2026 documentation errors are immediately placed on Code "D"; "Oil analysis request form documentation error, do not fly until error corrected".

22.58.18. (Added) Relocates one portable oil analysis spectrometer as necessary to support combat employment readiness exercises.

22.60.10. (Added) While 354 FW aircraft are cross-country or in transit to a deployed location, the aircraft commander will:

22.60.10.1. Maintain positive control of historical oil analysis records.

22.61.6. (Added) Transient alert personnel will give OAP lab projected departure time of aircraft. OAP lab will base priority on time given.

22.70.1. **Production Inspectors.** The GP/CC is the waiver authority for authorizing selected 5 skill level personnel in the rank of SrA or higher to perform production inspector duties in their primary AFSC.

22.113.1. (Added) Impoundment Procedures. **At the first indication of a possible impoundment, an impoundment authority will place the aircraft, engine, AGE, equipment, or component in a restricted, controlled and/or isolated area. Only mandatory safing and servicing actions may be accomplished prior to the initiation of an investigation. It is important to preserve evidence through isolation and control of personnel. An impoundment sign will be posted and remain with the impounded asset(s) at all times. Impoundment criteria and conditions are found in Attachment 1. Under no circumstances will impounded aircraft, engine(s), AGE, equipment, or component(s) be**

cannibalized or used for training purposes unless specifically authorized by the impoundment release authority.

22.113.2. Aircraft and equipment may be impounded for a multitude of reasons. Personnel involved should evaluate the problem and recommend impounding the aircraft or equipment to the impoundment authority whenever circumstances exist that warrant intensified management.

22.113.3. Supervisors at all levels will ensure personnel are fully aware of additional impoundment guidance in AFI 21-101, ***Maintenance Management of Aircraft***, and AFI 91-204, ***Safety Investigation and Reports***.

22.115.8. (Added) The OS production superintendent will coordinate with MXS production superintendent prior to the impoundment of or the transfer of an impoundment for backshop equipment ie engine/ gun systems etc.

22.115.9. If an aircraft engine is involved, the engine work package coversheet will be annotated and a copy of the impoundment letter will be placed at the front of the work package.

22.115.10. The impoundment official will use approved QA-established checklists where applicable, to document the sequence of actions taken.

22.115.11. Aircraft and/or equipment records will be quarantined at the discretion of the impoundment official.

22.115.12. Obtain and secure the current aircraft forms and centralized /decentralized AFTO Form 95s, **Significant Historical Dat**a, for aircraft, or AFTO Forms 244/engine work package for equipment.

22.115.13. Parts will be controlled and marked as impounded with a red-bordered AFTO Form 350, **Reparable Item Processing Ta**g. This is to ensure that parts, once confirmed as the cause for impoundment, are available to be processed for deficiency report exhibits.

22.115.14. The impoundment official determines the need for a one-time flight, functional check-flight, operational check-flight, or high-speed taxi check, and requests authorization from the GP/CC, or their designated representative.

22.115.15. The impoundment release authority will also sign the release authority block of the 354 FW Form 14, **Quality Assurance Impoundment Review Worksheet**.

22.115.16. **Transient Aircraft Impoundment.** The aircraft commander of transient aircraft on Eielson AFB should report impoundment conditions to transient alert, who will then notify the 354 FW/MOC.

22.115.17. The MOC will notify:

22.115.18. The 354 OG/CC and LG/CC or designated representative.

22.115.19. 354 OG/LG QA.

22.115.20. 354 MXS production superintendent.

22.115.21. The transient aircraft home-station command post.

22.115.22. The 354 OG/LG QA will coordinate with maintenance crews and local maintenance organizations and monitor impoundment proceedings, where appropriate.

22.115.23. **Deployed Aircraft Impoundment** When an aircraft is away from home station and encounters a problem warranting impoundment per **Attachment 1**, the senior maintenance representative will:

22.115.24. Notify the local MOC, local QA, and the deployed CC, ensuring adequate COMSEC is maintained.

22.115.25. Notify the home-station MOC/command post, which will then notify OG/LG QA and the 354 OG/CC or designated representative.

22.115.26. Coordinate with local QA for local impoundment procedures, where applicable.

22.115.27. Determine and coordinate local repair capability, if available.

22.115.28. Coordinate with local QA to accomplish a forms review.

22.115.29. Refer to paragraph **22.115.8. (Added)**and **22.115.15.** for release procedures.

22.115.30. Complete all forms and debriefing for functional check-flight of impoundment aircraft, if applicable.

22.116.2.1. (Added) **Responsibilities** QA is the office of primary responsibility for impoundment procedures. QA will initiate the 354 FW Form 14, **Quality Assurance Impoundment Review Worksheet**, and develop local checklists, where applicable.

22.116.3. The impoundment official ensures only authorized personnel have access to the impounded aircraft or equipment. The impoundment official also ensures that parts removed from impounded aircraft or equipment are carefully controlled to ensure that parts, once confirmed as the cause for impoundment, are available to be processed as deficiency report exhibits.

22.116.4. If the cause of the discrepancy could affect other aircraft or equipment in the fleet, QA notifies the affected squadron, impoundment release authority and the MAJCOM weapon system manager. The MAJCOM weapon system manager will notify the lead command. The lead command will notify the system program director or product group manager when a discrepancy could affect other aircraft/equipment in the fleet.

22.117.1.5. (Added) **Impoundment of Records after Aircraft Mishap** In the event of an inflight or ground mishap, the following documents will be impounded and turned over to QA.

22.117.5. The aircraft active forms and the central/decentralized document file from the OS plans, scheduling and documentation office.

22.117.6. The training records (AF Form 623) of all personnel who have performed maintenance on the aircraft prior to the mishap, as indicated in the active aircraft records.

22.117.7. The ground station software files and printouts of the mishap engine, if applicable.

22.117.8. The time compliance technical order history of the mishap aircraft and/or engine(s), as required.

22.117.9. The engine records from 354 LSS Engine Management Office, if applicable.

22.117.10. The serial numbers of all suspension equipment and classified components, as required.

22.117.11. All shop logs pertaining to the mishap aircraft.

22.117.12. DBM will lockout CAMS and consolidated engine management system (CEMS) records.

22.117.13. QA representative will hand-carry the impounded records and documents to the disaster control group designated assembly area.

22.117.14. **Reasons for Impoundment of Aircraft or Equipment.** Aircraft and equipment may be impounded for many reasons. Personnel should evaluate the problem and recommend impoundment to the Impoundment authority. The following circumstances require Impoundment.

22.117.15. **When engine anomalies occur, to include but not limited to:**

22.117.16. Stalls, flameouts, rollbacks, or stagnation (flightline).

22.117.17. Loss of thrust sufficient to prevent maintaining level flight at a safe altitude.

22.117.18. In-flight vibration or abnormal noise.

22.117.19. No throttles response or binding throttle.

22.117.20. Confirmed foreign object damage from an unknown source (flightline/test cell). Exception is nicked blades that are blendable and within TO limits.

22.117.21. Repeat auto-transfer to secondary in-flight

22.117.22. **Flight controls:**

22.117.23. Uncommanded departure from controlled flight for any reason.

22.117.24. Any F-16 dual flight control failure (two or more branches).

22.117.25. When an aircraft flight control malfunction (including autopilot or trim) results in a hazardous flight condition.

22.117.26. Any repeat discrepancy affecting secondary flight control system (not resulting in a hazardous flight condition).

22.117.27. When an aircraft experiences an in-flight loss of all pitot-static system instruments or all gyro-stabilized attitude or direction indicators.

22.117.28. Simultaneous loss of more than one electronic display (e.g.; multi-function display) showing attitude, altitude, airspeed, or heading.

22.117.29. In-flight loss of both primary and standby attitude indicators.

22.117.30. Aircraft side stick controller interference from any source or for any reason.

22.117.31. **Landing gear:**

22.117.32. Repeat an aircraft landing gear that fails to extend or retract.

22.117.33. Repeat nose wheel steering fail during taxi.

22.117.34. Total loss of braking action on one or both of the wheels, or loss of both channels in F-16 aircraft.

22.117.35. **Weapons on-equipment:**

22.117.36. Uncommanded release or firing of explosive ordnance or training devices in-flight.

22.117.37. Multiple release or firing of explosive ordnance or training devices should also be considered for possible impoundment.

22.117.38. Uncommanded gun rotation (ground/air).

22.117.39. In-flight Gun jam or any sudden stoppage

22.117.40. Suspected or confirmed lost item(s) or FOD during gun system maintenance.

22.117.41. Ground mishap related to explosives.

22.117.42. **All other impoundment determinations.** Impoundment authorities will determine if impoundment is warranted when:

22.117.43. The investigation of a component or equipment is required to gather evidence in support of ground or flight incidents as defined in AFI 91-204.

22.117.44. Any repeat or recurring discrepancy determined significant by the GP/CC, their designated representative, or an impoundment authority.

22.117.45. Any third-time repeat or recurring code 3 discrepancy.

22.117.46. When an item is lost or suspected lost within the immediate vicinity, in or around an aircraft, aerospace ground equipment, engine on test cell, or a gun removed to armament shop, the asset will be immediately grounded and lost item checklist procedures will be initiated. If the item is not found after a 1-hour search period, the asset will be impounded.

22.117.47. Gun jam or any sudden stoppage (on ground)

22.117.48. Any uncommanded activation of the emergency power unit (EPU) and any failure of the EPU to operate as required (normal system activation will not require impoundment).

22.117.49. Total loss of hydraulic pressure in both hydraulic systems.

22.117.50. F-16 hydrazine leaks.

22.117.51. Suspected or confirmed fuel contamination.

22.117.52. In-flight illumination of fire or overheat lights.

22.117.53. Anytime the GP/CC, their designated representative, or an impoundment authority determines extraordinary measures are needed to ensure safe operating condition of a specific aircraft or piece of equipment.

22.117.54. **Cockpit Lost Object Search Procedures:**

22.117.55. If it is determined an item is lost and cannot be found after a visual inspection of the cockpit and surrounding area, the following procedures apply, as necessary.

22.117.56. Interview aircrew member(s) to determine the course of events request they search their personal equipment (e.g., helmet bag, flight suit pockets, etc.)

22.117.57. If the item is part of the aircraft, interview the person who performed the last work card inspection to determine the approximate time the item was lost or discovered missing.

22.117.58. Ensure that the discrepancy does not exist in the active AFTO Form 781 **K, Aerospace Vehicle Inspection, Engine Data, Calendar Inspection and Delayed Discrepancy Document**, or has been filed as a historical document in the aircraft jacket file located in the plans, scheduling and documentation office, and not properly carried forward to the active aircraft forms.

22.117.59. For lost tools/equipment initiate a PACAF Form 140A, **Lost Tool-Chit Investigation Worksheet,** and coordinate with the appropriate agencies.

22.117.60. After a reasonable search period (1 hour maximum), impound affected aircraft. **NOT**E: No maintenance shall be performed on affected equipment or aircraft until released for maintenance by the impoundment official.

22.117.61. Perform a visual inspection of the cockpit(s) and canopy area.

22.117.62. Have egress personnel raise and/or tilt the ejection seat(s) to the maintenance position for further access.

22.117.63. F-16 only: Remove the Data Entry Electronic Unit (DEEU) for further access if necessary.

22.117.64. Remove foreign object curtains under the ejection seat(s).

22.117.65. Unfasten access panels or console panels for further inspection.

22.117.66. F-16 only: Remove all kick panels. A-10 only: Remove floorboards for further access.

22.117.67. **White Area Maintenance and Inspection on A/OA-10A Aircraf** t.

22.117.68. A-10 only: Raise windscreen, if necessary.

22.117.69. Perform a 5-level cockpit foreign object inspection and vacuum affected areas retaining any debris retrieved.

22.117.70. Perform a 7-level cockpit foreign object inspection of affected areas.

22.117.71. Perform a borescope inspection of affected areas.

22.117.72. Remove the aircraft canopy and seat(s) for further access.

22.117.73. Re-accomplish borescope inspection of affected areas as necessary.

22.117.74. When all attempts to recover foreign object(s) are exhausted, coordinate with QA to release aircraft impoundment.

22.118.1.5. (Added) MOC will run the applicable emergency action checklist to notify key personnel.

22.118.2.5. (Added) MOC will run the applicable emergency action checklist to notify key personnel.

22.119.1. (Added) **Red Ball Maintenance Procedures.** Normal aircraft status reporting will apply to "Red ball" maintenance when malfunction degrades aircraft status in accordance with MESL.

22.119.2. (Added) The production superintendent will ensure personnel dispatched to perform "Red ball" maintenance use correct technical data, wear appropriate safety gear, and render aircraft safe for maintenance.

22.119.2.1. Appropriate entries will be made in aircraft/equipment records.

22.119.3. (Added) The production superintendent will ensure repeat/recur and "Red X" discrepancies are troubleshot by highly qualified individuals. Individuals must be able to make go/no-go determinations if discrepancies cannot be corrected. Debrief and production personnel will work together to develop procedures to quickly identify repeat/recur discrepancies.

22.119.4. (Added) The pilot will be briefed on all entries made in the aircraft forms during "Red ball" maintenance. An individual authorized to re-sign the exceptional release will clear the aircraft for flight.

22.132.2. See **Attachment 4 (Added)** for Land Mobile Radio (LMR) communication call signs.

22.135.1. (Added) **Combat Sortie Tracking.** The MOC will load Reference Start Times (RST) and tail numbers for each generation or regeneration in Excel program in TBMS.

22.135.2. (Added) The MOC will monitor and update event completion times in TBMS.

22.150.4. (Added) **Combat Sortie Generation.** The procedures utilized incorporate a higher degree of risk than those associated with nonintegrated loads, and are to be used only by personnel who are qualified to perform aircraft servicing, maintenance, and munitions loading according to applicable F-16/A-10 aircraft -2 and -33 series manuals. (SEE **Attachment 15** emergency procedures).

22.151.4.9.1. The 354th Operations Group defines a complex SCL as the loading of any combination of three of more primary munitions or the loading of two or more primary munitions when one is a Guided Bomb Unit (GBU) or an AIM-120 series missile loaded out of the casket. Major configuration changes are defined as the removal/installation of fuel tanks, wing weapons pylons, and AIM-9/AIM-120 missile launchers. Time standard for a complex SCL is 60 minutes.

Section 22EE–(Added) Hangaring of Aircraft.

22.160. (Added) Policy. Unit schedulers through OSS PS&D section will coordinate scheduled use of space within maintenance hangars and nose docks. The production superintendents through the MOC will coordinate unscheduled use of hangar facilities. Mission priority will dictate space allocation. Scheduling of hangar floor space in building 1140 (Thunder Dome) will be coordinated through 353 CTS MOC, 377-6187, during exercises, or through the facility manager, 377-3337, during all other times.

22.161. Responsibilities.

22.161.1. Squadron maintenance officer/superintendent will establish emergency procedures to remove aircraft from hangars in case of fire or other hazards.

22.161.2. Personnel will observe ground safety, and practice good housekeeping at all times. Units will ensure area is clean and facility secure immediately after removal of aircraft.

22.161.3. Facility custodians will ensure:

22.161.3.1. Fire prevention and safety measures are in place.

22.161.4. Section supervisors will establish procedures to train and qualify personnel to operate electrically driven hangar doors. Place authorized operators in CAMS using course code 221, **Hangar Door Operation**. Include a safety briefing in the training to address emergency evacuation plan and manual mode door operation at a minimum. **NOTE:** 353 CTS MOC will maintain a list of qualified operators for units deployed to 353 CTS. 353 CTS will train Advance Echelon (ADVON) personnel on hangar door operation procedures. ADVON personnel will train their unit personnel. 353 CTS will monitor hangar door operations.

22.161.5. Prior to aircraft entering facilities, maintenance and production supervisors will ensure all aircraft requirements governing munitions, fuel loads, and physical security are complied with.

22.161.6. Tow team supervisor will ensure the hangar entry checklist (**Attachment 6 (Added)**) is complete and displayed on the forward left side of the aircraft.

22.162. General Procedures.

22.162.1. Requests for movement of aircraft to or from these facilities will be coordinated with the MOC except in case of emergency. During Cope Thunder exercises, movement of aircraft to and from building 1140 will be coordinated with 353 CTS MOC, extension 377-6187.

22.162.2. When extreme cold conditions exist, fuel capacity will not exceed the maximum allowable load, minus 2 percent while inside heated hangars. This will allow for fuel expansion and reduce fuel-venting problems during winter operations

Table 22.5. (Added) Winter Fuel Capacity for Hangaring of F-16C Aircraft.

NUMBER AND TYPE OF FUEL TANK	MAX LOAD (in pounds)	-2 PERCENT OF MAX LOAD (in pounds)
No tanks	7,496	7,347
C/L tank	9,538	9,348
2 X 370 tanks	12,534	12,284
Both C/L and 370s	14,576	14,283

Table 22.6 (Added) Winter Fuel Capacity for Hangaring of F-16D Aircraft.

NUMBER AND TYPE OF FUEL TANK	MAX LOAD (in pounds)	-2 PERCENT OF MAX LOAD (in pounds)
No tanks	6,244	6,120
C/L tank	8,286	8,121
2X 370 tanks	11,282	11,057
Both C/L and 370s	13,324	13,058

Table 22.7 (Added) Winter Fuel Capacity for Hangaring of A/OA-10 Aircraft.

NUMBER AND TYPE OF FUEL TANK	MAX LOAD (in pounds)	-2 PERCENT OF MAX LOAD (in pounds)
No tanks	10,924	10,706
C/L tank	14,944	14,646
2X wing tanks	18,964	18,585
Both C/L and wing tanks	22,984	22,525

22.162.3. Control of spot positioning of aircraft entering hangars will be the joint responsibility of the tow supervisor and facility supervisor.

22.162.3.1. Place aircraft in hangar so that quick evacuation can be made in case of emergency.

22.162.3.1.1. Each aircraft inside the hangar will have a tow bar or locally manufactured emergency snatch bar in the area for emergency removal. The owning unit will provide an emergency tow bar or emergency snatch bar when their aircraft is parked inside building 1140 (Thunder Dome). An aircraft in one of the designated FSRFs will have a tow bar or emergency snatch bar attached to it and an operational

tow vehicle available.

22.162.3.2. Aircraft scheduled for extensive maintenance will not impair movement of other aircraft.

22.162.4. Specific maintenance and training, such as fuel cell repair, major fuel system repair, hydrazine maintenance, and aircraft painting will only be accomplished in specifically authorized facilities.

22.162.4.1. Aircraft entering FSRF require the removal of all munitions and ammunition, to include target practice ammunition, prior to entry.

22.162.4.2. All personnel will adhere to local cold weather guidance pertaining to duration limits on open hangar doors during extreme cold conditions. Contact 353 CTS personnel for Thunder Dome door operation.

Table 22.8. (Added) 18 FS - Hangar Door Operating Limits.

TEMPERATURE (Fahrenheit)	MAXIMUM OPEN TIME (minutes)
Zero to 32 degrees	*30
Below zero degrees	*15
*Bay doors must remain closed for a minimum of 15 minutes before reopening.	

Table 22.9. (Added) 353 CTS - "Thunder Dome" Door Operating Limits.

TEMPERATURE (Fahrenheit)	MAXIMUM OPEN TIME (minutes)
Zero to 32 degrees	*30
Below zero degrees	*15
*Doors will remain closed until hangar temperature reaches 40 degrees. Thermometer is located at each door control.	

Table 22.10. (Added) 355 FS - Hangar Door Operating Limits.

TEMPERATURE (Fahrenheit)	MAXIMUM OPEN TIME (minutes)
Zero to 32 degrees	60
Below zero degrees	30

Table 22.11. (Added) 354 MXS - Hangar Door Operating Limits.

TEMPERATURE (Fahrenheit)	MAXIMUM OPEN TIME (minutes)
Below zero degrees	*15
*Doors will remain closed until hangar temperature reaches 40 degrees. The corrosion control hangar cannot be opened if there is aircraft paint in progress (will ruin the paint). As always, the production superintendent should make a call if an unusual circumstance arises.	

Section 22FF–(Added) A/OA 10 White Area Maintenance and Inspection Program

22.163. Definition. TO 1A-10A-2-27MS-1, figure 1-1 defines the A/OA-10 white area. OG/QA will be the point of contact for the white area program.

22.164. Policy.

22.164.1. Anytime a portion or panel of the white area is opened, white area program criteria will apply and a white area inspection will be conducted in accordance with TO 1A-10A-2-27MS-1, and this supplement. **Exceptions:** Opening and closing the rig pin hole covers at the base of the stick for rig checks and removal of the stick boot. If either of these two areas are left open and unattended by white area certified personnel (Aero Repair (AR) or QA), white area inspection criteria will apply.

22.165. White Area Control and Safeguards.

22.165.1. All aircraft undergoing white area maintenance will be placed in a hangar under strict control. Access will be restricted to AR certified personnel, unless escorted. AR personnel will post signs and cordoned off open white area with rope, at a minimum. Extend cordon from the aft of the drum bay to the front of the nose section, encompassing the entire forward fuselage and immediate area.

22.165.2. Use a two-person maintenance concept to the maximum extent possible with specific emphasis on positive FO control.

22.165.3. All personnel will be briefed on positive tool and FO procedures prior to maintenance or inspection. AR will escort non-certified personnel performing inspections or maintenance.

22.165.4. White area certified personnel will perform stick boot maintenance or replacement. Stick shaker repair or replacement will require a white area technician present to open and close the stick boot and monitor the maintenance.

22.165.5. Personnel engaged in white area maintenance or inspection will remove all jewelry, and all items from pockets and hair, as well as wear coveralls without pockets, buttons, snaps etc.

22.165.6. Inspect all maintenance stands needed in the cordoned area for condition, and clean of any debris, prior to entry.

22.166. Personnel Qualifications.

22.166.1. White area inspectors will be thoroughly familiar with A/OA-10A aircraft and all guidance applicable to white area maintenance. Have at least 12 months experience as an AR technician and possess a 7-skill level. They also must demonstrate proficiency by inspecting 3 white areas under the supervision of qualified/certified white area inspector.

22.166.2. White area technicians will be thoroughly familiar with A/OA-10A aircraft and all guidance applicable to white area maintenance. Have at least 12 months experience as an A/R technician and possess a 5-skill level.

22.166.3. QA white area inspectors will be thoroughly familiar with A/OA-10A aircraft and all guidance applicable to white area maintenance. Be appointed in writing by the OG/QA superintendent, have a working knowledge of A-10 flight controls, and possess a 7-level within their AFSC. They must also demonstrate their proficiency by conducting at least 2 white area inspections under the supervision of a qualified/certified QA white area inspector.

22.166.4. Personnel identified as white area inspectors and technicians will be designated in writing by the squadron maintenance officer/superintendent and tracked on the SCR using the following CAMS course codes: 302, **Clear "Red X" White Area,** 313, **Inspector White Area,** or 314, **Technician White Area.** Unit will forward a copy of the appointment letter to OG/QA.

22.167. Documentation Requirements.

22.167.1. Document the affected aircraft AFTO Form 781A for all white area maintenance and inspections.

22.167.2. Minimum entries are: “Red X's” stating the reason the white area is to be opened, the panel(s) and components removed to gain access to the white area, and FO inspection due by a white area inspector prior to closure.

22.167.3. If the white area is to be opened in the cockpit, make an additional “Red dash” entry stating: “Cockpit due inspection for loose or missing items prior to opening of white area”.

22.167.4. If the stick boot area is opened for any reason, make an additional “Red X” entry stating: “Forward white area due FO inspection by a white area inspector prior to closure”.

22.167.5. A/R personnel will document all white area maintenance and inspections on the affected aircraft AFTO Form 95. The A/R shop will maintain all flight control related AFTO Form 95s as a permanent part of the aircraft historical record. List the following information for each inspection:

22.167.5.1. Date.

22.167.5.2. Airframe time.

22.167.5.3. Place.

22.167.5.4. Detailed description of maintenance performed.

22.167.5.5. Rank/name of inspector and technicians who inspected and performed white area maintenance.

22.168. Inspection Procedures.

22.168.1. After completed maintenance, and prior to installation of shrouds, panels, and/or seals, technicians will inspect all white areas forward of the aft compartment with a mirror and the brightest white light source available. Inspect all other areas in accordance with TO 1A-10A-2-27MS-1.

22.168.2. Notify QA prior to sealing and closing the white area, at that time QA will make a determination if a QVI is required. The QVI will consist of at a minimum, opened white area compartment for proper maintenance, FO check, and the CTK for tool accountability. **NOTE:** QA has the authority to require additional opening of the white area compartment, as necessary.

Section 22GG–(Added) Tire Replacement Criteria for Wet Weather Conditions

22.169.

Section 22HH–(Added) Engine Runs During Quiet Hours

22.170. Engine Runs During Quiet Hours Policy (Added) (354FW)**.** Eielson AFB quiet hours are between 2200L and 0700L. Maintenance will not conduct engine runs at any position on the airfield during quiet hours without OG/CC approval, unless indicated below.

22.171. Exceptions. OG/CC approval is not required for the following conditions:

22.171.1. A-10 aircraft personnel may run-up engine(s) to 80 percent RPM maximum in the A-10 maintenance bays.

22.171.2. F-16 aircraft personnel may run-up engine to 80 percent maximum in the loop area.

22.171.3. A-10 or F-16 aircraft personnel may run-up engines greater than 80 percent RPM maximum in the hush house. **NOTE:** The OG/CC approval outside this policy will be limited to aircraft deemed mission essential (e.g., on next day's flying schedule), and only if all other possibilities are exhausted.

Section 22II–(Added) Magnetic Chip Detector Debris Analysis Program (MCDDAP)

22.172. (Added) . General. This section establishes procedures for the management of the aircraft engine MCDDAP for all assigned F110-100/-129 aircraft engines.

22.172.1. The NDI section chief is the point of contact for all MCDDAP related matters.

22.172.2. All organizations requiring recurring chip detector analysis shall identify by letter primary and alternate MCDDAP monitors for their unit. Letters will include the phone numbers of both the primary and alternate monitors. Update the letter annually or when personnel or phone numbers change.

22.172.3. All newly assigned MCDDAP monitors will attend a briefing by OAP lab personnel. This briefing will cover the duties and responsibilities of all MCDDAP monitors.

22.172.4. MCDDAP monitors will ensure:

22.172.4.1. Personnel submit MCDs for debris analysis for their assigned aircraft and engines in accordance with applicable TO.

22.172.4.2. 354 FW Form 029, **Magnetic Chip Detector Debris Analysis Request***,* is forwarded to OAP lab with the following information: Squadron, rank/name, aircraft serial number, engine serial number, MCD number, total engine hours, date/time, visual chips, reason for analysis request, and sortie number.

22.172.4.3. Unit correct all magnetic chip detector debris analysis documentation errors ASAP when notified of the error by the OAP lab.

22.172.5. Unit follows visual inspection procedures in accordance with applicable TO in the event aircraft deploy to a location where chip detector analysis is unavailable.

22.173. Responsibilities.

22.173.1. NDI section:

22.173.1.1. Notifies the MOC of the results of all MCD analyses. **NOTE:** If sample analysis indicates significant levels of M50, MOC will contact the affected squadron to arrange for immediate recall of aircraft.

22.173.1.2. Notifies the MOC immediately of analysis results for engines in test cell.

22.173.1.3. Notifies the MOC and MAJCOM propulsion and NDI functional managers during periods of OAP lab downtime that prevent MCD analysis.

22.173.1.4. Assigns, etches, and tracks sequential numbers on all MCDs.

22.173.1.5. Provides an after hour MCD drop off point. This drop box will be located in front of, or near the OAP lab. Units will deliver MCDs directly to OAP personnel during normal duty hours. NDI section will provide a standby technician when after hours support is necessary. Units requiring after hours MCDDAP support will coordinate their request through MOC.

22.173.1.6. Maintains a log of MCDs turned in for analysis and number of MCDs returned to the FS.

22.173.1.7. Conducts a monthly MCDDAP review, to be held in conjunction with the monthly OAP meeting. The NDI section will brief the number of analyses performed, total number of adverse trend recommendations, and documentation errors noted on the MCDDAP analysis request forms.

22.173.1.8. Provides FS with MCDDAP analysis history for aircraft generation, cross-country sorties, deployments, depot inputs, and aircraft transfers.

22.173.1.9. Reports by serial number, jet scan warning level to the MOC for all engines analyzed.

22.173.2. FS squadron maintenance officer/superintendent:

22.173.2.1. Oversees FS MCDDAP.

22.173.2.2. Ensures replacement MCDs are clean and serviceable prior to installation in aircraft.

22.173.2.3. Ensures MCD visual inspections are in accordance with applicable TO.

22.173.2.4. Ensures MCDs are collected within 75 minutes after engine shutdown and submitted for analysis ASAP.

22.173.2.5. Ensures a “Red dash” entry is made in the aircraft forms stating: “MCD due analysis after completion of ground maintenance runs”.

22.173.2.6. Ensures unit logs/maintains current jet scan warning level codes per assigned aircraft engine, as applicable.

22.173.2.7. Ensures all personnel responsible for MCD collection are properly trained on collection techniques.

22.173.2.8. Ensures only MCDs submitted for analysis after normal duty hours, or when OAP lab is closed, are taken to the after hours drop off point. Personnel will enter drop off time and date on the outside of the bag, if MCDs are dropped off.

22.173.2.9. Ensures a “Red X” entry is made in the aircraft forms stating: “ MCD removed for analysis”, if a replacement (clean spare) is not immediately available.

22.173.2.10. Ensures MCDDAP history is with aircraft during generation, cross-country sorties, deployments, depot inputs, and aircraft transfers.

22.173.2.11. Directs personnel to remove, transport, and reinstall MCDs on all transient aircraft requiring analysis until current transient alert personnel contract is changed.

22.173.3. The MOC:

22.173.3.1. Serves as primary communication link for transfer of MCDDAP information between the OAP lab and its customers.

22.173.3.2. Reports, by serial number, jet scan warning levels to the 18 FS and/or test cell, as applicable, for all engines analyzed.

22.173.3.3. Reports to OAP lab information regarding engine changes on and off station as they occur, but *NLT* 0800 the next duty day.

22.173.3.4. Informs transient aircraft owning unit if MCD analysis results indicate any level of action.

22.173.3.5. Contacts 354 MXS Production Superintendent for after hour MCDDAP support.

22.173.4. Propulsion flight:

22.173.4.1. Notifies OAP lab ASAP of all engines prepare for transferred or depot input, to include engine serial number and MCD number.

22.173.4.2. Ensures MCDDAP history is with engine when sent to depot or transferred.

22.173.4.3. Notifies OAP lab ASAP of all engines received, to include MCD number, if available. NDI section will assign a number to MCDs without one.

22.173.5. Engine test cell section chief:

22.173.5.1. Ensures MCD is sent to the OAP lab for analysis, after all engine test cell runs are completed.

22.173.5.2. Ensures an entry is made in the engine work package stating: "MCD due analysis after completion of ground maintenance runs".

22.173.6. 353 CTS:

22.173.6.1. Advises all incoming units requiring MCD analysis of NDI section capabilities.

22.173.6.2. Advises all incoming units requiring MCD analysis to bring enough supplies/materials and personnel to properly accomplish analyses.

22.173.6.3. Acts as liaison between Eielson AFB and units participating in Cope Thunder exercises requiring MCD analysis.

22.173.7. Transient alert:

22.173.7.1. Coordinates with the MOC for MCD removal, transportation, analysis, and reinstallation on all transient aircraft requiring analysis, according to governing contracts. Places a printed copy of the analysis report in the aircraft forms.

22.174. MCD Collection, Analysis, and Return.

22.174.1. FS:

22.174.1.1. Removes the MCD from applicable engine and covers the end of the MCD with the plastic cap provided after engine shutdown. **CAUTION:** FS will exercise extreme care to prevent contaminating the sample. FS must acknowledge dropped, damaged, or contaminated MCDs at time of submission for analysis. Completes a 354 FW Form 029 for each MCD submitted for analysis.

22.174.1.2. Places each MCD and 354 FW Form 029 in a clean, sealable bag or other suitable container. Transports all MCDs from the most recent sortie to the OAP lab at the same time, if practical.

22.174.2. OAP lab:

22.174.2.1. Records all MCDs submitted for analysis in the OAP lab MCD log.

22.174.2.2. Ensures no submitted MCDs have exceeded TO limits of .020". Identifies those that do on the 354 FW Form 029, and analyzes immediately.

22.174.2.3. Notifies the MOC and the 354 MXS Production Superintendent immediately of any samples requiring action. Annotate MCDs requiring action in the MCD log.

22.174.2.4. Discards 354 FW Form 029 after analysis.

22.174.2.5. Tests each MCD for serviceability/magnetism in accordance with TO 2J-F110-6-3 WP 007, to include any MCD dropped or damaged.22.174.3. MDC Analysis.

22.174.3.1. Uncap the MCD and cleanse all debris from cap, and remove oil from the MCD by submerging it into two separate containers of dry cleaning solvent, P-D-680, type II, or equivalent, in succession. **NOTE:** Only the head of the MCD needs submersion. Allow the MCD to dry thoroughly. Repeat procedure for all MCDs requiring analysis.

22.174.3.2. Place strips of aluminum tape across the sample holder, over positions A1 to A6, B1 to B6, C1 to C6 and D1 to D6. Fold the end of each strip under itself, for about 2mm. The tape must be properly aligned and make contact with either side of the testing block row. Press down firmly ensuring electrical contact is made with each testing block position. Place the appropriate number of carbon tabs onto the aluminum tape in the positions represented by the individual squares, and leave the white plastic covers in place. **NOTE:** Positions A6, B6, C6 and D6 are not used; do not place a carbon tab in these positions.

22.174.3.3. Remove the white cover from the carbon tab to be used for the current sample. Use a 10X magnifying glass and magnetic pick or fine bristled brush to remove all debris from MCD surface. Place the magnet squarely on carbon tab to aid in removal of particles, and position any large chunks/flakes of debris in the center of each of the four quadrants on the carbon tab. Ensure the MCD cap is free of metal particles. If metal particles are present, remove them with the pick or brush and place on the carbon tab for affected MCD.

22.174.3.4. Annotate the MCD number on the MCD sample preparation sheet in the appropriate spot.

22.174.3.5. Repeat paragraphs **22.174.3.1.** through **22.174.3.3.**, for all MCDs requiring analysis.

22.174.3.6. Analyze samples according to jet scan operating procedures.

22.174.4. **Return of MCDs.**

22.174.4.1. OAP lab will ensure all submitted MCDs are clean and free of oil/solvent.

22.174.4.2. OAP lab will place a clean cap on each MCD and put each one into its own clean sealable bag or other suitable container.

22.174.4.3. OAP lab will place all MCDs together in one sealable bag or other suitable container for delivery to FS.

22.174.4.4. OAP lab will notify the MOC and the 354 MXS Production Superintendent MCDs are ready for pick up.

22.174.4.5. OAP lab will record time and person picking up MCDs in MCD log.

Section 22JJ–(Added) ALE 50 Active Towed Decoy (ATD) maintenance concept

22.175. General. ***This section establishes procedures for the management of the F-16 aircraft ALE-50 ATD system. During non-contingency operations, normal procedure is to fly the system on the aircraft with the launcher controller and empty magazine installed. Disconnect the connectors from the launcher controller and stowe in the pylon to enable core software simulation capability for aircrew training. State, "Connectors disconnected for training" on an "Informational note" entry in the aircraft forms.***

22.176. Responsibilities.

22.176.1. 18 FS Weapons Section:

22.176.1.1. Maintains the magazines on a SPRAM account.

22.176.1.2. Performs on-equipment maintenance of the pylon such as upload, download, and functional checks.

22.176.1.3. Performs magazine removal and replacement, as necessary.

22.176.1.4. Troubleshoots and maintains the system to the magazine level.

22.176.1.5. Conducts preload and post flight inspections.

22.176.1.6. Trains and certifies on installation and removal of the 16S350 pylon.

22.176.1.7. Coordinates replenishment and reconciliation of magazines with 354 MXS Munitions Flight personnel.

22.176.2. 18 FS Specialist Section:

22.176.2.1. Maintains the launcher controllers on a SPRAM account.

22.176.2.2. Performs system troubleshooting and maintenance to the interface level to include: Reprogramming, 90-day corrosion control inspections, post-firing cleaning, and Line Replaceable Unit (LRU) removal and replacement, as necessary.

22.176.2.3. Completes 18-month launcher controller inspections.

22.176.2.4. Connects electrical connectors and perform functional check of system prior to decoy loading for aircraft generations.

22.176.2.5. Conducts Serene Byte/Pacer Ware reprogramming.

22.176.2.6. Conducts in-house training of the ATD system.

22.176.2.7. Obtains necessary tooling and maintain bench stock of LRU fasteners.

22.176.2.8. Provides secure storage of LRUs, as necessary.

22.176.3. 354 MXS Armament Flight:

22.176.3.1. Maintains the 16S350 pylons on a SPRAM account.

22.176.3.2. Conducts all off equipment 16S350 pylon scheduled and unscheduled maintenance.

22.176.3.3. Maintains bench stock for commonly used pylon hardware.

22.176.4. 354 MXS Munitions Flight:

22.176.4.1. Stores consumables (decoys/squibs).

22.176.4.2. Stores War Reserve Materiel (WRM) assets assembled and ready for delivery.

22.176.4.3. Assembles magazines, deliver, and replenish magazines as requested by the 18 FS.

22.176.4.4. Conducts post-fire cleaning and inspection of magazines.

22.176.5. 354 OG WS:

22.176.5.1. Trains and qualifies weapons load crews on functional checks, removal, and installation of magazines.

22.176.6. 354 OSS Electronic Warfare Officer:

22.176.6.1. Directs Serene Byte/Pacer Ware activities, as necessary.

22.176.6.2. Determines decoy loading and employment requirements.

22.176.6.3. Establishes a decoy controlled jettison policy.

22.176.6.4. Coordinates decoy recovery activities with EOD.

22.177. Forms Prescribed. The following are prescribed by this supplement:

354 FW Form 14, ***Quality Assurance Impoundment Review Worksheet.***

354 FW Form 20, *Local Manufacture Request.*

354 FW Form 025, *Electronic Warfare Integrated Reprogramming Checklist.*

354 FW Form 026, *Serene Byte/Pacer Checklist.*

354 FW Form 027, *Dropped Object Report*.

354 FW Form 028, *Sortie Maintenance Debriefing*

354 FW Form 029, *Magnetic Chip Detector (MCD) Debris Analysis Request*.

Attachment 1

354TH OPERATIONAL GROUP

WEAPONS LOAD CREW COMPETITION SCORE SHEET

DATE: AIRCRAFT #:_____

TYPE OF COMPETITION

CREW #:	TEST SCORES
#1:	
#2:	
#3:	

MUNITION(S) LOADED:

DISCREPANCIES:			**DISCREPANCIES #:**		**STARTING SCORE 2000**
SAFETY	-300	X		=	
RELIABILTIY	-300	X		=	
T.O.	-20	X		=	
LATE	-50	X		=	
(LCQ / LCY) 36-2903	-5	X		=	
TEST *+1 For Each Correct Quest.*		X		=	
OVERTIME *(PER MINUTE OVER)*	-5	X		=	
UNDER TIME *(PER MINUTE UNDER))*	+5	X		=	
TOTAL SCORE				=	

TIME STAND:

LOAD TIME:

COMMENTS:

OBSERVED BY:_____

Attachment 2 (Added)

SAMPLE FOD FIGHTER NOMINATION

(Date)

MEMORANDUM FOR 354 CVF (Wing FOD Prevention NCO)

FROM: SQ/OFF SYM

SUBJECT: FOD Fighter Nomination

1. Personal Information:

a. NAME: Doe, John A.

b. GRADE: SrA

c. DUTY TITLE: F-1X Weapons load team member

d. SUPERVISOR: TSgt Roe

e. BRIEF JOB DESCRIPTION: Positions, prepares, loads and unloads air-to-air and air-to-ground munitions on the F-16 aircraft.

2. JUSTIFICATION: (Describe how the individual contributed to FOD prevention) After performing a launch assist, SrA Doe noted a shiny object laying on the ramp between rows 33 and 34. Upon further investigation, the object turned out to be a stainless steel plug from an aircraft grounding cable. He turned the plug over to the production supervisor. SrA Doe's action averted a potential major FOD incident that could have cost the Air Force thousands of dollars in engine damage.

(Signature Block of Supervisor)

Attachment 3 (Added)

SAMPLE IMPOUNDMENT SIGN/PLACARD

Size: 11” by 8 1/2”

Background Color: Red

Lettering: Black

IMPOUNDED

This aircraft/engine/gun/AGE/equipment has been impounded

(Placard will state appropriate nomenclature)

IMPOUNDED

SERIAL/ID#

CONTROL#

SAMPLE ONLY

Attachment 4 (Added)

GLOSSARY OF ABBREVIATIONS AND ACRONYMS

Abbreviations and Acronyms

AFNCC	Air Force Network Control Center
AFORMS	Air Force Operations Resource Management System
API	Armor Piercing Incendiary
APT	Armor Piercing Tracer
ATIS	Automated Terminal Information System
ATT	Audit Trail Tape
AWDS	Automated Weather Distribution System
BNCC	Base Network Control Center
CAC	Combat Alert Center
CAS-B	Combat Ammunition System-Base
CETADS	Comprehensive Engine Tending and Diagnostics System
CTS	Combat Turnaround Site
CSFDR	Crash Survivable Flight Data Recorder
DDN	Defense Data Network
DISA	Defense Information Security Agency
DMC	Defense Mega Center
EMDL	Engine Manager Data List
FCMT	Flight Control Maintenance Team
FSRF	Fuel Systems Repair Facility
FSSZ	Fuel Servicing Safety Zone
FTSF	Fuel Tank Storage Facility
FUD	File Update Mode
IMC	Instrument Meteorological Condition
IPL	Immediately Prior to Launch
JFP	Job Flow package
JST	Job Standard
LEP	List of Effective Pages
LMM	Local Manufacture Manager
LOII	Letter of Initial Issue

MAC	Mean Aerodynamic Chord
MACA	Munitions Account Custody Agreement
MCD	Magnetic Chip Detector
MCDDAP	Magnetic Chip Detector Debris Analysis Program
MRPL	Minimum Requirement Proficiency Load
MOLT	Manually Operated Lift Truck
MRT	Maintenance Recovery Team
NEW	Net Explosive Weight
PID	Page Identifier Numbers
PFSS	Propulsion Flight Support Section
RST	Reference Start Time
SLC	Squadron Lead Crew
TAC	Total Accumulated Cycles
TAO	Technical Assistance Organization
TBMS	Theater Battle Management System
TOPS	Technical Order Page Supplement
TP	Target Practice
UALS	Universal Ammunition Loaders
VMC	Visual Meteorological Condition
WLT	Weapons Load Training

Attachment 5 (Added)

LOCAL RADIO CALL SIGNS

Table A4.1. Operations Net Activity

Wing Commander	**ICEMAN 1**
Vice Commander	**ICEMAN 2**
Operations Group (OG) Commander	**ICEMAN 3**
OG Deputy Commander	**ICEMAN 4**
OG CEM	**OG CHIEF**
Support Group (SG) Commander	**ICEMAN 5**
SG Deputy Commander	**ICEMAN 6**
SG CEM	**SG CHIEF**
Logistics Group (LG) Commander	**ICEMAN 7**
LG Deputy Commander	**ICEMAN 8**
LG CEM	**LG CHIEF**
Med Group (MG) Commander	**ICEMAN 9**
Maintenance Operations Center (CPM)	**MOC**
Alternate MOC	**KENNY**
MOC Superintendent	**KENNY 1**
Senior MOC Coordinator	**KENNY 2**
Exercise/ Contingency MOC Coordinator	**KENNY 3 – 5**
OG Quality Assurance (QA) Superintendent	**QA 1**
QA Inspectors	**QA 2-13**
Base Operations	**BASE OPS**
Transient Alert	**TA 1 - 4**
Wing Weapons Manager	**Weapons Chief**
Weapons Standardization Supt.	**WS Super**
Weapons Standardization	**WS**
Crash Recovery	RECOVERY 1 - 4

Table A4.2. 18th Fighter Squadron Net Activity

Operations Duty Desk	FOX DEN
Commander	FOX 1
Squadron Maintenance Officer	FOX LEAD
Maintenance Superintendent	FOX CHIEF
Sortie Generation Flight Chief/Commander	FOX 2
Production Superintendent	FOX SUPER
APG Expediters	FOX 3 and FOX 4
APG Section Chiefs	FOX 3-1 and FOX 4-1
Specialist Expediter	FOX 5
Specialist Section Chief	FOX 5-1
Weapons Loading Expediter	FOX 6
Weapons Section Chief	FOX 6-1
Weapons Maintenance Expediter	FOX 7
End of Runway (De-arming Crew)	FOX 8
End of Runway (Arming Crew)	FOX 9
COSO, Support Section	FOX 11
Debrief Section	FOX 12
Inspection Section	FOX 13
Hot Pit Super	EXXON
Hard Broke	HARD BROKE
	EXERCISE CALL SIGNS
Area Turn Supervisors / Generation Cell Directors	VIPER 1 – 4
OPS / Maintenance Liaison	UCC
RWR Pits	RWR PITS
Production Superintendent Backup	SHADOW
Push Back Crews	TOW 1 and TOW 2

Table A4.3. 355th Fighter Squadron Net Activity

Commander	FALCON 1
Chief of Maintenance	LIGHTNING 1
Maintenance Superintendent	LIGHTNING 2
Sortie Generation Flight Chief/Commander	THUNDER 1
Production Superintendent	THUNDER 2
APG Expediters	THUNDER 3/THUNDER 4
Specialist Expediter	THUNDER 5
Weapons Super	THUNDER 6-1
Weapons Loading Expediter	THUNDER 6
Weapons Maintenance Expediter	THUNDER 6A
A/R	THUNDER 7
COSO	THUNDER 11
Crew Bus	HOG WHEELS
Hot Pit Super	EXXON
End of Runway (De-arming Crew)	CURSORY
End of Runway (Arming Crew)	THUNDER 9
Tow Team One	COLEMAN 1
Tow Team Two	COLEMAN 2
Tow Team Three	COLEMAN 3
Debrief	DEBRIEF
Operations Duty Desk	HOG PIT
UCC	UCC
	EXERCISE CALL SIGNS
Fox Row Super	FOX SUPER
Echo Row Super	ECHO SUPER
Golf Row Super	GOLF SUPER
Hotel Row Super	HOTEL SUPER
Hotel Support	HOTEL SUPPORT
Echo Support	ECHO SUPPORT

Table A4.4. 354th Maintenance Squadron Net Activity

Commander	MAINTENANCE 1
Squadron Maintenance Officer/Superintendent	MAINTENANCE 2
Production Superintendent	MAINTENANCE 3
Production Superintendent (Consolidated Maintenance)	MAINTENANCE BASE
MXS Unit Control Center	MAINTENANCE UCC
Accessories Flight Chief	ACCESSORIES 1
Egress	EGRESS
Fuels	FUELS
Hydrazine Response Team	HRT
Electrics	ELECTRICS
Crash Recovery (Primary Vehicle)	RECOVERY 1
Crash Tow Vehicle	RECOVERY 2
Crash Crane	RECOVERY 3
Crash Trailer	RECOVERY 4
Fabrication Flight Chief	FAB 1
Metals Tech	METALS
NDI	NDI
Structures	STRUCTURES
AGE Flight Chief	RANGER 1
AGE Shop	AGE BASE
18 FS CAT	FOX AGE
355 FS CAT	THUNDER AGE
354 Wing CAT	BASE AGE
Jet Engine Intermediate Maintenance	JET 1
Propulsion Test Cell	TEST CELL
Armament	ARMAMENT
Avionics Flight Chief	AVIONICS
Electronic Warfare	RAVEN
Sensors / LANTRIN	SENSORS
Automated Test Station	ATS
Munitions Control	MUNITIONS CONTROL
Munitions Flight Commander	AMMO 1
Munitions Flight Chief	AMMO 2

Line Delivery NCOIC	AMMO 6
Munitions Storage	GRIZ
Precision Guided Munitions (PGM)	MAVERICK
Conventional Maintenance Section	WOLF
Munitions Inspection Section	EAGLE
Munitions Equipment Maintenance	BADGER
Transient Alert	TA

Attachment 6 (Added)

TOOL KIT IDENTIFICATION NUMBERS

Table A5.1. Assigned Numbers.

ORGANIZATION	IDENTIFICATION NUMBER
354th Operations Group	
Quality Assurance	QA
Weapons Standardization	AL
18th Fighter Squadron	
Sortie Support Flight	AD
Phase	AI
Life Support	LSAD
355th Fighter Squadron	
Sortie Support	AF
Life Support	LSAF
353d Combat Training Squadron	
Maintenance Division	CT
Range	CR
Life Support	LSCT
354th Logistics Group	
354th Maintenance Squadron	
Maintenance Flight	EOM
	ERR
AGE Flight	EM
Fabrication Flight	EF
	MF
Armament Flight	WPN
Avionics Flight	CA
Propulsion Flight	MC

TMDE Flight	CP
	MP
Munitions Flight	EEMS
	EMSM
	EMSL
	EEGM
	EMSS
	EOA
	ET
Accessory Flight	CF
354th Supply Squadron	
Fuels Management Flight	SFM
354th Transportation Squadron	
Vehicle Maintenance Flight	VM
Traffic Management Flight	TM
354th Support Group	
354th Civil Engineering Squadron	
Air Base Operability Flight	CEX
EOD Flight	CED
Fire Prevention Flight	CEF
Operations Flight	CEO
Environmental Flight	CEV
354th Communications Squadron	CS
168th Air Refueling Wing	
168th Consolidated Aircraft Maintenance Squadron	
Avionics Section	AV
AGE Section	AG

Aerospace Section	RR
	EL
	HS
	FS
Engine Section	ES
Inspection Section	PI
Flightline Section	FL
Support Equipment Section	SE
Structural Repair Section	SR
	FAB
Alert Section	AE
Survival Equipment Section	PS
Metals Technology Section	MS
NDI Section	NI

Attachment 7 (Added)

HANGAR ENTRY CHECKLIST

AIRCRAFT SERIAL #_____
SECTION A -- ACTIONS PRIOR TO HANGAR ENTRY
CREW CHIEF: AIRCRAFT SAFE/PREPARED FOR MAINTENANCE
Circle appropriate answer
1. Seat pins installed. **YES NO N/A**
2. Landing gear pins installed. **YES NO N/A**
3. Arresting hook up and pin installed. **YES NO N/A**
4. EPU safety pin installed, switch off and guard down. **YES NO N/A**
5. Engine inlet and exhaust covers installed. **YES NO N/A**
6. Pitot and AOA vane covers installed. **YES NO N/A**
7. LOX converter removed and lines capped (phase, fuel cell maintenance). **YES NO N/A**
8. EPU nitrogen charge depleted to "0" PSI (phase, fuel cell maintenance, weapons load training). **YES NO N/A**
9. Aircraft defueled/depuddled as required (phase, fuel cell maintenance) *During cold weather ensure winter fuel loads are used for hangaring in a heated facility.* **YES NO N/A**
10. External tanks configured as required (phase, fuel cell maintenance, weapons load training). **YES NO N/A**
11. External pods removed as required. **YES NO N/A**
WEAPONS:
1. Confirm all weapons systems switches are off, safe, or normal. **YES NO N/A**
2. Weapons pylons/ejector rack safety pins installed. **YES NO N/A**
3. Impulse cartridges and chaff/flare modules removed. **YES NO N/A**
a. Captive AIM-9 umbilical disconnected and a shorting cap installed. **YES NO N/A**
b. Captive AIM-9 missiles are downloaded for fuel cell maintenance. **YES NO N/A**
4. All required munitions downloaded for fuel cell maintenance, phase, weapons load training, FTD/LTF training, and gun system maintenance/removal. **YES NO N/A**
5. Gun safety pin installed. **YES NO N/A**
6. Gun clearing sector hold back tool installed. **YES NO N/A**
7. If ammunition is installed, gun system rotated one complete revolution with hand crank. **YES NO N/A**
a. Gun system rounds limiter switch set to 990/on. **YES NO N/A**

SECTION B -- AFTER HANGAR ENTRY IS ACCOMPLISHED
TOW TEAM SUPERVISOR:
1. Aircraft properly chocked, grounded, and all covers installed. **YES NO N/A**
2. Fire fighting equipment positioned. **YES NO N/A**
3. Aircraft ladder available. **YES NO N/A**
4. Aircraft forms located on aircraft. **YES NO N/A**
5. WARNING/CAUTION signs or cones displayed as required. **YES NO N/A**
6. Drip pans positioned as required. **YES NO N/A**
7. Emergency tow bar available (must be left connected for fuel cell maintenance). **YES NO N/A**
8. Aircraft battery disconnected (fuel cell maintenance). **YES NO N/A**
9. During cold weather, winter fuel load was used for hangaring in a heated facility. **YES NO N/A**
REMARKS: The tow team supervisor is responsible for ensuring this checklist is complete and displayed on the forward left side of aircraft.
TOW TEAM SUPERVISOR: _____ _____ Name/Rank/Employee # Date

Attachment 8 (Added)

ASSIGNMENT OF MANUAL JOB CONTROL NUMBER (JCNS)

A8.1. This attachment provides assignment of manual JCNs by individual work centers for data collection purposes during extended periods of computer down time (e.g., 30 minutes or more).

Table A8.1. 18 FS.

Work Section	JCNs
PS&D	2001-2050
Debriefing	2051-2150
Expediter	2151-2199
Aircraft “A”	2200-2310
Aircraft “B”	2311-2410
Specialist	2411-2510
Weapons	2511-2610
Support	2611-2700
Life Support	2701-2749
F-16 Elect/Environmental	2750-2799
F-16 Engines	2800-2849
F-16 Structural Repair	2850-2899
Red Ball Discrepancies	R001-R050

Table A8.2. 355 FS.

Work Section	JCNs
PS&D	3000-3050
Debriefing	3051-3150
Expediter	3151-3199
Aircraft “O”	3200-3410
Specialist	3411-3510
Weapons	3511-3610
Support	3611-3700
Life Support	3701-3749
Red Ball Discrepancies	R051-R099

Table A8.3. 354 MXS.

Work Section	JCNs
Electronic Warfare	4000-4050
ATS	4051-4099
Photo-Sensor	4100-4150
PMEL- Type II	4151-4250
PMEL-Type IV	4251-4299
Propulsion	4300-4399
Support General	4451-4499
Fuels	4500-4599
Elect/Environmental	4600-4650
Fuel Systems	4651-4699
Egress	4700-4799
Pneudraulics	4800-4850
Wheel and Tire	4851-4899
Armament	4900-4950
AGE - 354 CAT	4951-4999
Metals	5000-5050
Structural Maint/Corrosion	5050-5099
NDI	5100-5150
Survival Equipment	5151-5199
AGE - 18 FS CAT	5200-5250
AGE - 355 FS CAT	5251-5299
Munitions Control	5300-5399
Transient Alert	5400-5499

Table A8.4. A/OA-10/F-16 Phase.

Phase	Phase JCN	Discrepancy JCNs
A-10 #1	A001	A002-A499
A-10 #2	B001	B002-B499
F-16 #1	A500	A501-A999

Table A8.5. Deployment JCNs.

100L-299L
100M-299M
100N-299N

NOTE: Call OSS PS&D for assignment of these numbers.

Table A8.6. 354 OSS.

Work Section	JCNs
PS&D	6000-6099
Life Support	6100-6199
Quality Assurance	6200-6299
FTD	6300-6350

NOTE: Assignment of JCNs for FCFs will be by OG/QA. Assignment of separate JCNs for discrepancies found during the FCF will be by debriefing.

Table A8.7. 354 LSS.

Work Section	JCNs
Engine Management	6660-6699
Quality Assurance	6700-6799

Attachment 9 (Added)

REQUEST FOR DEPOT LEVEL MAINTENANCE ASSISTANCE ASSISTANCE.

REQUEST FOR: **1**) DEPOT TECHNICAL ASSISTANCE or **2**) ORGANIZATIONAL AND INTERMEDIATE LEVEL MAINTENANCE **or 3**)UNPROGRAMMED DEPOT LEVEL MAINTENANCE

1.1. Summarize detailed description of discrepancy and maintenance requirement as possible, to include: Left/right, forward/aft, upper/lower, inboard/outboard; dimensions (length/width/depth); plus applicable TO, figure and index, and part/stock number. **NOTE:** Provide all information concerning aircraft transfers, planned deployments, PDM, upcoming major phase inspections, etc.:

1.2. For all requests, list MDS to include, aircraft serial number, or type, model, series of the equipment involved (include the serial number for serialized items). In addition, for equipment, LRUs, etc., list the NSN and nomenclature:

1.3. Number of end items involved:

1.4. Beginning date and estimated length of time for which assistance is required and if overtime or multiple shifts are required:

1.5. AFSC or skills, special tools, equipment, material, and number of personnel required:

1.6. The base or specific facility at which the work is to be accomplished and the name, rank, phone number and office symbol of the point of contact or organization to be notified upon arrival of the team:

1.7. Availability of adequate quarters, messing, and transportation at the base or facility at which work is to be accomplished:

1.8. Applicable security requirements (e.g., degree of clearance and escort requirements):

1.9. Two-man policy (no lone zone) applicability:

1.10. AFI 36-2104, *Nuclear Weapons Personnel Reliability Program* applicability:

1.11. Name and phone number of the ALC engineer, equipment specialist, or production management specialist previously contacted for assistance on this maintenance requirement:

Attachment 10 (Added)

OUT OF CYCLE JUSTIFICATION OR EMERGENCY ISSUE REQUEST

DATE

MEMORANDUM FOR 354 LG/CC

FROM: FS/MA

SUBJECT: Out of Cycle Justification or Emergency Issue Request

The following out of cycle or emergency issue time change item is requested for the following reason: "Due to an oversight."

ACFT	P/N	FSN	QTY	NOMENCLATURE
XX-XXXX	XXXXXX	XXXX-XX-XXX-XXXX	XX	Squib

Squadron Maintenance Officer

DATE

1st Ind, 354 LG/CC

MEMORANDUM FOR 354 MXS/LGMWM

Approved/disapproved

Commander, 354 Logistics Group

Attachment 11 (Added)

TIME CHANGE ASSISTANCE REQUEST

DATE

MEMORANDUM FOR 354 OSS/OSCP

FROM: _ _ OS PS&D

SUBJECT: Time Change Assistance Request

1. Request assistance in obtaining the following item(s) and or an extension of the due date to prevent grounding an aircraft.

TIME CHANGE ITEM:

AIRCRAFT SERIAL NUMBER:

PART NUMBER:

STOCK NUMBER:

SERIAL NUMBER OF PART:

DATE OF MANUFACTURE (DOM): MM/YY

DATE OF INSTALLATION (DOI): DD/MM/YY

GROUND DATE: DD/MM/YY

SUPPLY DUE-IN DATE: DD/MM/YY

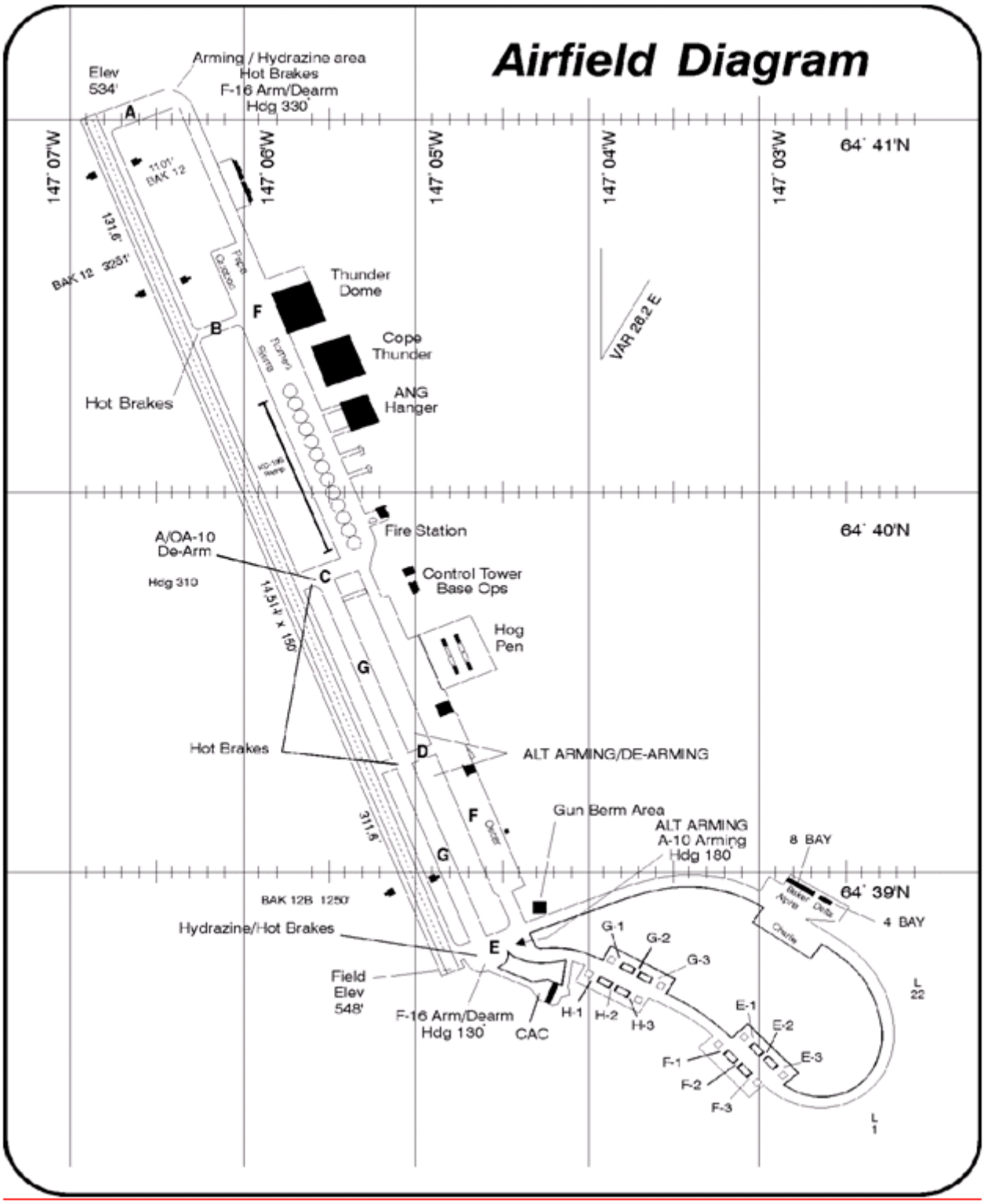
DOCUMENT NUMBER:

OFF BASE REQUISITION NUMBER: FB

(OS PS&D signature)

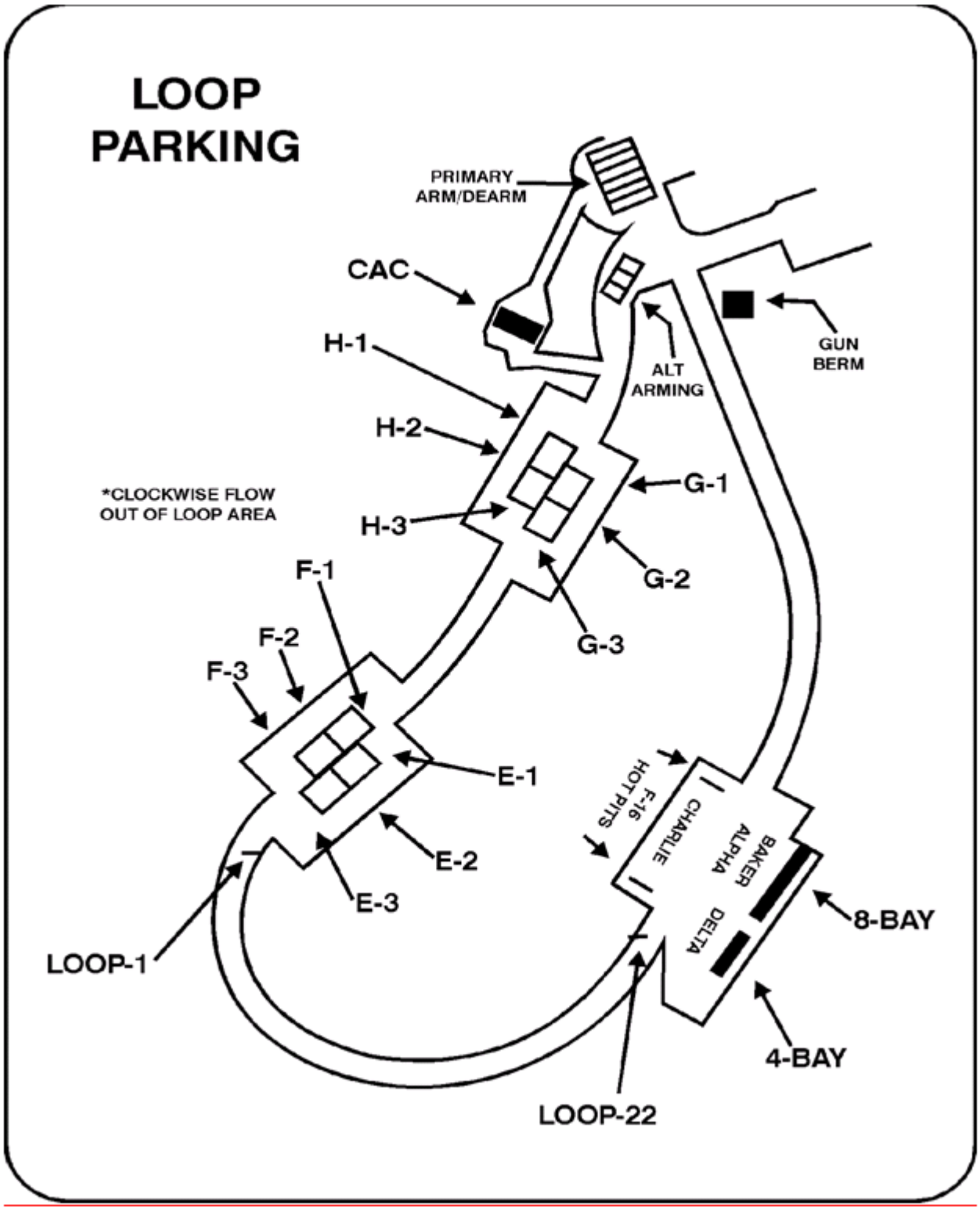
Attachment 12 (Added)

AIRFIELD DIAGRAM



Attachment 13 (Added)

LOOP DIAGRAM



Attachment 14 (Added)

AIRCRAFT WEIGHING PREPARATION CHECKLIST

_____ _____ _____ *AIRCRAFT:* *DATE:* *JCN:*	YES	NO	N/A
1. "Chart A" weight and balance inventory complete and signed off			
2. Facility door closed/air blowers off			
3. Aircraft cleaned and dry			
4. Aircraft defueled			
5. Fuel tanks and manifolds drained (QA must supervise)			
6. Weapons downloaded			
7. Ammunition removed			
8. Chaff/flare empty			
9. Variable ballasts removed (A-10)			
10. Pave penny pod removed (A-10)			
11. All door and panels closed			
12. Flaps retracted/slats extended (A-10)			
13. Speed brakes closed			
14. Hydraulics full			
15. Flight controls neutral			
16. –21 gear removed			
17. Windshield wash tank full or empty (A-10)			
18. LOX bottle removed			
19. Emergency accumulator bottles charged to 3,000 PSI (A-10)			
20. UARRSI closed			
21. Publications removed			
22. Canopy closed (A-10)			
23. Ladder and door closed (A-10)			
24. All weapons pylons installed (A-10), all but wing tip pylons removed (F-16)			

Attachment 15

FCF PILOT CERTIFICATION LETTER EXAMPLE

(DATE)

MEMORANDUM FOR 354 OG/CC

FROM: XX FS/CC

SUBJECT: FCF Pilot Training/ Certification

NAME/RANK: _____

MDS Hours: _____ Total Hours: _____

INITIALS	DATE	
Publication Review	_____	_____
T.O. 1-1-300		
T.O. 11MDS-6CF-1/-2		
AFI 11-101 Section 12.20		
PACAF 11-101 Section 19.45		
PACAF 21-101, 354 FW Sup		
FCF Examination	_____	_____
FCF CFT/UTD (w/ FCF pilot)	_____	_____
FCF Flight (IAW PACAFI 21-101)	_____	_____

2. The above named individual having completed the FCF pilot training program is hereby nominated to perform FCF duties.

_____

XX FS Commander

1st Ind, 354 OG/CC

MEMORANDUM FOR 354 OG/OGQ

This is to certify the above named individual is hereby to perform duties as a F-16/OA-10 FCF pilot.

Approved/disapproved

_____

354 OG Commander

cc: 354 OG/OGQ

BOB D. DULANEY, Brigadier General, USAF
Commander